



Catalog  
D 50.1

Edition  
August  
2022











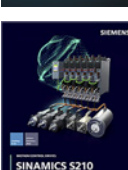

MOTION CONTROL

## **SIMOGEAR** **Geared Motors**

Helical, parallel shaft, bevel, helical worm,  
worm geared motors and  
electric-monorail geared motors

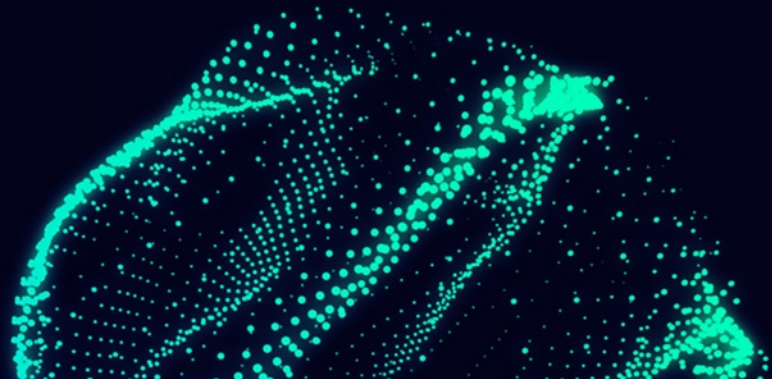
[siemens.com/gearedmotors](https://www.siemens.com/gearedmotors)

## Related catalogs

<p><b>SIMOGEAR</b> MD 50.11 Gearboxes with adapter</p> <p>E86060-K5250-A211-A4-7600</p>		<p><b>SIMOTICS NEMA Motors</b> D 81.2 Low Voltage AC Motors Selection and Pricing Guide</p> <p>Further details available on the internet at: <a href="http://www.siemens.com/nema-motors">www.siemens.com/nema-motors</a></p>	
<p><b>SIMOTICS GP, SD, XP, DP</b> D 81.1 <b>Low-Voltage Motors</b> Type series 1FP1, 1LE1, 1LE5, 1MB1, 1MB5, 1PC1 Frame sizes 63 to 450 Power range 0.09 to 1000 kW PDF (E86060-K5581-A111-B5-7600)</p>		<p><b>Industrial Communication</b> IK PI SIMATIC NET</p> <p>E86060-K6710-A101-B8-7600</p>	
<p><b>Motion Control Drives</b> D 31.1 SINAMICS Converters for Single-Axis Drives Built-In Units</p> <p>PDF (E86060-K5531-A111-A2-7600)</p>		<p><b>Industry Mall</b> Information and Ordering Platform on the Internet:</p> <p><a href="http://www.siemens.com/industrymall">www.siemens.com/industrymall</a></p>	
<p><b>Motion Control Drives</b> D 31.2 SINAMICS Converters for Single-Axis Drives Distributed Converters</p> <p>PDF (E86060-K5531-A121-A2-7600)</p>		<p><b>Additional documentation</b></p> <p>You will find all information material, such as brochures, catalogs, manuals and operating instructions for standard drive systems up-to-date on the internet at the address: <a href="http://www.siemens.com/gearedmotors">www.siemens.com/gearedmotors</a></p> <p>You can order the listed documentation or download it in common file formats (PDF, ZIP).</p>	
<p><b>Motion Control Drives</b> D 31.5 SINAMICS Converters for Single-Axis Drives SINAMICS G120X infrastructure converters for HVAC/Water/Wastewater</p> <p>PDF (E86060-K5531-A151-A4-7600)</p>			
<p><b>Motion Control Drives</b> D 32 SINAMICS S210 Servo Drive System</p> <p>PDF (E86060-K5532-A101-A7-7600)</p>			
<p><b>SIMOTICS S-1FG1</b> D 41 <b>Servo geared motors</b> Helical, Parallel shaft, Bevel and Helical worm geared motors</p> <p>PDF (E86060-K5541-A101-A5-7600)</p>			

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## MOTION CONTROL

# SIMOGEAR

## Geared Motors

[siemens.com/gearedmotors](https://www.siemens.com/gearedmotors)

Dear Customer,

We are happy to present the new edition of Catalog D 50.1 · August 2022. The catalog provides a comprehensive overview of the 2KJ3 SIMOGEAR geared motor series.

In addition to updates and technical modifications, the new edition of the catalog has also been supplemented with the new Converter World Motor up to a motor power of 55 kW. Together with SINAMICS converters, this motor is suitable for worldwide use.

The motors with Premium Efficiency IE3 can now also be ordered from the motor power of 0.12 kW.

In addition, the electric-monorail geared motors have been integrated into this catalog.

The products listed in this catalog are also included in the Industry Mall.

Please contact your local Siemens office if you want to obtain more information.

Current information about SIMOGEAR geared motors is available on the internet at [www.siemens.com/gearedmotors](https://www.siemens.com/gearedmotors)

You can access our Industry Mall on the internet at [www.siemens.com/industrymall](https://www.siemens.com/industrymall)

Your personal contact will be glad to receive your suggestions and recommendations for improvement.

You can find your representative in our contact person database at [www.siemens.com/automation-contact](https://www.siemens.com/automation-contact)

We hope that you will often use our Catalog D 50.1 · August 2022 as a selection and ordering reference document, and wish you every success with our products and solutions.

With kind regards,

Dr. Axel Maximilian Dietrich  
Head of Product Management for Geared Motors  
Siemens AG, Digital Industries, Motion Control, General Motion Control



# SIMOGEAR Geared Motors

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Helical, parallel shaft, bevel, helical worm, worm geared motors and electric-monorail geared motors

Motion Control



**Catalog D 50.1 · August 2022**

Supersedes:  
Catalog D 50.1 · December 2021  
Catalog MD 50.8 · 2017

Refer to the Industry Mall for current updates of this catalog:

[www.siemens.com/industrymall](http://www.siemens.com/industrymall)

Please contact your local Siemens branch.

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Introduction	1
Configuring guide	2
Helical geared motors	3
Parallel shaft geared motors	4
Bevel geared motors	5
Helical worm geared motors	6
Worm geared motors	7
Electric-monorail geared motors	8
Motors	9
Gearbox options	10
Motor options	11
General options	12
SIMOGEAR geared motors and SIMOTICS motors	13
Appendix	14



The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with EN ISO 9001 (Certified Registration No. DE-409908 QM08). The certificate is recognized by all IQNet countries.

# Digitalization in drive technology

## From the digital world to the real world

[siemens.com/digital-drives](https://www.siemens.com/digital-drives)

### *Increase your transparency and productivity by digitalizing your drive technology*

Many drives are used in the manufacturing and process industries. They produce lots of data anyway – why not use them to increase the availability and productivity of machines and plants?

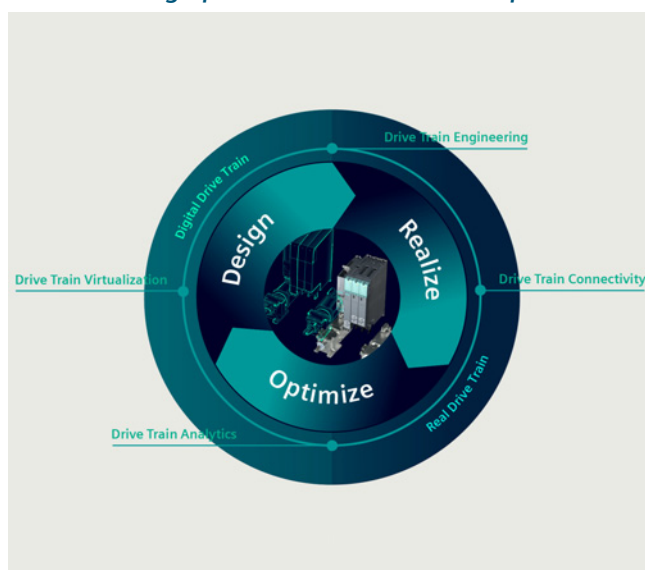
Drive technology offers the ideal entry point into the world of digitalization – for plant and machine builders as well as for users.

The digitalization portfolio for the drive train spans over the complete life cycle – from the design phase to realization and optimization – in the digital and the real world.

Our portfolio contains drive simulation solutions and efficient engineering tools, comprehensive connectivity that allows drives to be easily linked to the relevant platforms as well as smart analytics (e.g. cloud and edge apps) and drive system services.

These solutions enable you to gain a better understanding of processes, states and utilization. The health status of the drive train can be monitored and analyzing drive data enables an early detection of anomalies and reduces downtimes. This way, availability and productivity of machines and plants can be increased and the actual maintenance demand can be identified. Furthermore, data-based business models and service offerings are facilitated.

### *Our digitalization portfolio covers all phases of the life cycle: from the design phase to realization and optimization. It covers the digital and the real drive train.*



**Design:** By creating a digital twin of the drives, machine builders can shorten their time-to-market since they can design, simulate and optimize their machine before ordering any material or products. Together with other tools from the engineering box, simulation can also speed up the engineering phase of drives and entire machines, for example by virtual commissioning of the PLC.

**Realize:** Once the machine is in operation, the drives can be connected to other platforms, for example to the cloud and Industrial Edge. This creates transparency in terms of what is going on inside the drive train, e.g. with regard to the actual current, torque and speed.

**Optimize:** To understand the collected data, our drive train analytics portfolio provides algorithms and analysis tools to unlock the potential of the data and turn the gained transparency into insights and valuable knowledge. These insights can then again be used in the design phase of the next life cycle, thus closing the loop.

## Benefits of drive train digitalization

### Machine builders



#### Availability



Increase the availability of your machines

#### Speed



Shorten time-to-market

#### Business models



Develop new service and business models

### Machine operators



#### Productivity



Increase the productivity of your production

#### Flexibility



Increase the flexibility of your production

#### Efficiency



Identify potential for optimization

### Benefits for machine and plant builders

- Increased availability of machines and plants – thanks to digital options for checking and implementing design improvements and comprehensive monitoring of drive systems
- Shorter time-to-market and faster development times – thanks to practical software tools and a continuous database for concurrent development processes as well as virtual simulations, tests, and commissioning of machines and plants
- New options for future service and business models – ranging from customized application solutions and digital services to contractually guaranteed availabilities of machines and plants

### Benefits for machine and plant operators

- Increased availability and productivity of production, fewer unscheduled downtimes – through the early detection of deviations and emerging risks thanks to digital drive monitoring
- More flexible production down to batch size 1 – through more effective use of knowledge from existing production lines thanks to transparent utilization, states, locations, and capacities down to the drive level
- Identification of potential for optimization to make production faster, better, and more efficient thanks to data-based transparency – for example, for faster modifications, simpler quality control, and the early prediction of maintenance demand as well as demand-oriented maintenance

# TIA Selection Tool – quick, easy, smart configuration

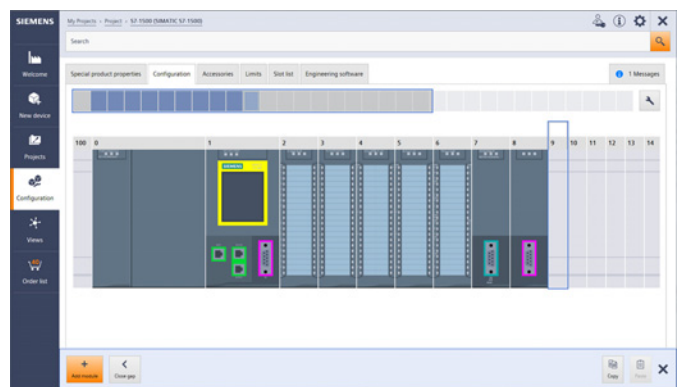
For you to get the most out of our portfolio quickly and easily.

Do you always need the optimum configuration for planning your project?

For your application we offer the TIA Selection Tool to support all project planners, beginners and experts alike.

No detailed portfolio knowledge is necessary.

TIA Selection Tool is available for download as a free desktop version or a cloud variant.



## Your Advantages

### Quick

- Configure a complete project with just a few entries – without a manual, without special knowledge
- Import and export of hardware configuration to TIA Portal or other systems
- Ideal visualization of the projects to be configured

### Easy

- Tool download either as desktop version or web-based cloud version
- Technically always up-to-date about product portfolio and innovative approaches
- Highly flexible, secure, cross-team work in the cloud
- Direct ordering in the Siemens Industry Mall

### Smart

- Smart selection wizard for error-free configuration and ordering
- Configuration options can be tested and simulated in advance
- Library for archiving sample configurations

The TIA Selection Tool is a completely paperless solution.

Download it now:

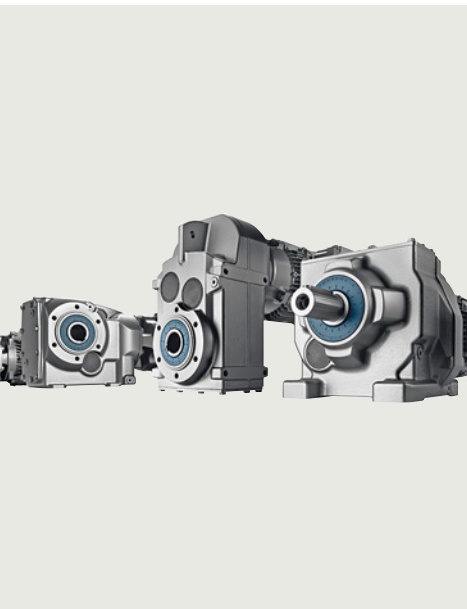
[www.siemens.com/tst](http://www.siemens.com/tst)

For more  
information,  
scan the  
QR code





## Introduction



<b>1/2</b>	<b>Orientation</b>
	<u>Geared motors</u>
1/2	Overview
1/4	Benefits
1/7	Integration
1/8	Configuration
<b>1/9</b>	<b>Guidelines for selection and ordering</b>
1/9	Article No. code
1/11	Type designation
1/13	Designs
	<u>Notes on selection tables</u>
1/19	Structure of the tables for geared motors up to 55 kW
1/19	Structure of the tables for transmission ratios and torques
1/20	Structure of the tables for efficiencies for helical worm geared motors
1/20	Structure of the tables for motors
	<u>Notes on the dimensional drawings</u>
1/24	Overview
<b>1/25</b>	<b>General technical specifications</b>
	<u>Geared motors for use worldwide</u>
1/25	Overview
1/26	Converter World Motor
1/26	Motors for the North American market
1/26	Motors for the Chinese market
1/27	Motors for the Eurasian Customs Union
1/27	Motors for the Indian market
1/27	Without CE, UKCA marking for export
	<u>EU directives</u>
1/27	WEEE directive
1/27	European RoHS directive
1/28	<u>Explosion protection according to ATEX</u>
1/28	Overview
	<u>General information regarding efficiency in accordance with International Efficiency</u>
1/29	Efficiency classes for converter operation according to IEC 60034-30-2
1/29	Efficiency classes and efficiencies according to IEC 60034-30-1
	<u>Noise</u>
1/31	Geared motor noise
1/31	Motor noise in line operation
	<u>Direction of rotation</u>
1/31	Overview

## Introduction

### Orientation

#### Geared motors

1

#### Overview

SIMOGEAR is the new generation of geared motors from Siemens. SIMOGEAR gearboxes are available as helical, parallel shaft, bevel, helical worm, and worm geared motors.

State-of-the-art production technology and improved testing methods ensure the highest degree of quality and reliability.

SIMOGEAR geared motors listed in this catalog are dimensioned up to a motor power of 55 kW. When an adapter is mounted, a motor power of up to 200 kW is possible.

[More information about gearboxes with adapter mounting is provided in Catalog MD 50.11 as well as the Industry Mall.](#)

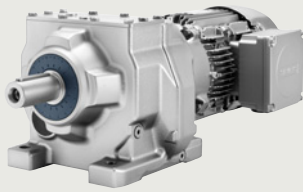
Gearbox type	Gearbox designation	Number of sizes	Maximum output torque $T_{2N}$ Nm	Transmission ratio $i$ -	Maximum motor power <sup>1)</sup> $P_1$ kW
<b>Helical geared motors</b>					
	Z19 ... Z189 (2-stage)	13	100 ... 19000	3.4 ... 62.48	200
	D19 ... D189 (3-stage)	13	100 ... 19000	36 ... 328	200
	Cooling tower geared motors ZK89 ... ZK189	6	1060 ... 19000	3.85 ... 62.48	200

Fig. 1/1 Helical geared motor Z/D

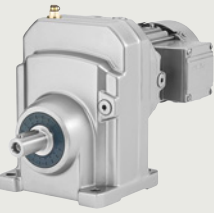
	E39 ... E149 (1-stage)	7	30 ... 1490	1.29 ... 9.79	90
	Cooling tower geared motors EK89 ... EK149	4	280 ... 1490	1.3 ... 9.79	90

Fig. 1/2 Helical geared motor E

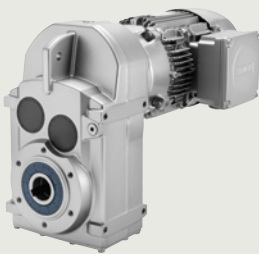
<b>Parallel shaft geared motors</b>					
	FZ29 ... FZ189 (2-stage)	11	150 ... 19000	3.5 ... 70.74	200
	FD29 ... FD189 (3-stage)	11	150 ... 19000	32 ... 413	200

Fig. 1/3 Parallel shaft geared motor FD/FZ

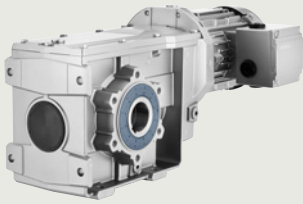
<b>Bevel geared motors</b>					
	B19 ... B49 (2-stage)	4	50 ... 450	3.5 ... 59	7.5

Fig. 1/4 Bevel geared motor B

	K39 ... K189 (3-stage)	10	150 ... 19500	5.17 ... 244	200
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Fig. 1/5 Bevel geared motor K

<sup>1)</sup> With 4-pole motor up to 55 kW for a 50 Hz line frequency in integral type of construction. An adapter must be mounted for a motor power > 55 kW.

## Overview

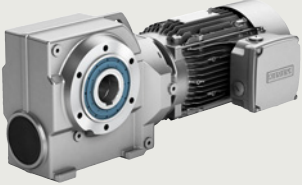
Gearbox type	Gearbox designation	Number of sizes	Maximum output torque $T_{2N}$ Nm	Transmission ratio $i$ -	Maximum motor power <sup>1)</sup> $P_1$ kW
<b>Helical worm geared motors</b>					
	C29 ... C89 (2-stage)	5	61 ... 1450	6.48 ... 363	7.5

Fig. 1/6 Helical worm geared motor C

## Worm geared motors

	S09 ... S29 (1-stage)	3	33 ... 116	5.0 ... 100	0.37
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Fig. 1/7 Worm geared motor S

## Electric-monorail geared motors EHB

	BH29 ... BH.39	2	90 ... 200	7.32 ... 60.21	3
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Fig. 1/8 Electric-monorail geared motors for light-load applications

	KHF49 ... KHF79	3	420 ... 820	10.27 ... 244.25	7.5
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Fig. 1/9 Electric-monorail geared motors for heavy-load applications

## Tandem geared motors


	D.29-Z19 ... D.189-D69 (4 to 6-stage)	12	140 ... 19000	325 ... 27816	7.5
	FZ.29-Z19 ... FD.189-D69 (4 to 6-stage)	11	150 ... 19000	274 ... 29900	7.5
	K.39-Z/D19 ... K.189-Z/D69 (5 or 6-stage)	10	220 ... 19500	170 ... 14900	7.5
	C.29-Z/D19 ... C.89-Z/D39 (4 or 5-stage)	5	80 ... 1310	270 ... 19000	7.5

Fig. 1/10 Example of a tandem geared motor

<sup>1)</sup> With 4-pole motor up to 55 kW for a 50 Hz line frequency in integral type of construction. An adapter must be mounted for a motor power > 55 kW.

# Introduction

## Orientation

### Geared motors

1

#### Overview

##### Torque classes

SIMOGEAR geared motors are classified according to fixed torque steps. Within a torque class, for the various gearbox types, almost the same output torques are achieved.

Helical gearboxes Z and D (2-stage and 3-stage)															
Size	-	19	29	39	49	59	69	79	89	109	129	149	169	189	
Maximum output torque	Nm	-	100	140	200	320	450	600	840	1680	3100	5000	8000	14000	19000
Cooling tower gearboxes ZK (2-stage)															
Maximum output torque	Nm	-	-	-	-	-	-	-	-	1680	3100	5000	8000	14000	19000
Helical gearbox E (1-stage)															
Size	-	-	-	39	49	-	69	-	89	109	129	149	-	-	
Maximum output torque	Nm	-	-	65	108	-	205	-	365	565	800	1490	-	-	
Cooling tower gearboxes EK (1-stage)															
Maximum output torque	Nm	-	-	-	-	-	-	-	365	565	800	1490	-	-	
Parallel shaft gearboxes FZ and FD (2-stage and 3-stage)															
Size	-	-	29	39	-	49	69	79	89	109	129	149	169	189	
Maximum output torque	Nm	-	-	150	290	-	480	600	1000	1850	3100	4850	8000	13600	19000
Bevel gearbox B (2-stage)															
Size	-	19	29	39	-	49	-	-	-	-	-	-	-	-	
Maximum output torque	Nm	-	50	110	250	-	450	-	-	-	-	-	-	-	
Bevel gearbox K (3-stage)															
Size	-	-	-	39	-	49	69	79	89	109	129	149	169	189	
Maximum output torque	Nm	-	-	220	-	420	600	820	1600	2900	4400	8000	13000	19500	
Helical worm gearbox C (2-stage)															
Size	-	-	29	39A	-	49	69	-	89	-	-	-	-	-	
Maximum output torque	Nm	-	-	110	235	-	400	675	-	1450	-	-	-	-	
Worm gearbox S (1-stage)															
Size	09	19	29	-	-	-	-	-	-	-	-	-	-	-	
Maximum output torque	Nm	33	72	116	-	-	-	-	-	-	-	-	-	-	
Electric-monorail geared motors EHB (light-load and heavy-load applications)															
Size	-	-	29	39	-	49	69	79	-	-	-	-	-	-	
Maximum output torque	Nm	-	-	90	200	-	420	600	820	-	-	-	-	-	

#### Benefits

##### High energy efficiency for a fast return on investment

When developing SIMOGEAR geared motors, significant emphasis was placed on achieving the highest possible energy efficiency.

Using the plug-on pinion principle in the first SIMOGEAR gearbox stage, higher transmission ratios are achieved when compared to gearboxes with slip-on pinion.

This means that frequently instead of 3-stage gearboxes with an efficiency of approx. 94 %, 2-stage helical and parallel shaft gearboxes with a high efficiency of  $\geq 96$  % can be used.

The 2-stage SIMOGEAR bevel geared motors B have a mechanical efficiency of  $\geq 96$  %. With a range of transmission ratios from  $i = 3.5$  to 60, they have been specifically designed to address the requirements in conveyor technology.

Together with the new Siemens 1LE1 motors for efficiency classes IE2 (High Efficiency) and IE3 (Premium Efficiency), SIMOGEAR geared motors allow a high amount of energy to be saved and reduce the stress on our environment.

##### Extremely compact and low weight for easy handling in the machine or system in the smallest space

An integrated end shield instead of an adapter plate and end shield reduces the weight and space required in your machine or system.

In addition, interfaces and sealing joints are reduced as a result of the integrated end shield.

With the SIMOGEAR bevel gearboxes, the length was able to be significantly reduced through an optimized bearing design.

SIMOGEAR helical gearboxes Z/D19 to Z/D39 (200 Nm), parallel shaft gearboxes F29 (150 Nm) and bevel gearboxes B19 to B49 (450 Nm) as well as helical worm gearboxes C29 and 39A (235 Nm) have an aluminum gearbox housing.

##### Harmoniously coordinated modular system to provide the optimum solution for your particular drive task

The fine size graduations of SIMOGEAR gearboxes provide you the optimum drive for every application regarding gearbox type, rated output torque and transmission ratio.

When developing SIMOGEAR geared motors, significant emphasis was placed on achieving well-balanced gearbox properties.

With SIMOGEAR geared motors you can depend on harmonized and coordinated properties regarding:

- Maximum output torque
- Permissible radial force
- Output shaft diameter
- Bearing service life
- Housing stiffness
- Gearing reliability (fatigue endurable)
- Shaft strength (fatigue endurable)

**Benefits*****Fine ratio stages  
to always obtain the output speed required***

With their wide range of transmission ratios, from very low up to very high, SIMOGEAR geared motors provide the necessary flexibility for your drive application.

As a result of the wide ratio range, 4-pole induction motors can be mainly used – the most cost-effective solution.

Further, the gearboxes are quieter as a result of the lower circumferential velocity of the first gearbox stage.

***Intelligent sealing concept  
for a high degree of maintenance friendliness***

An optimally coordinated sealing concept is available for the SIMOGEAR gearbox output shaft to address the various application areas and ambient conditions.

Gearbox sizes 19 and 29 are lubricated for life. All SIMOGEAR geared motors with venting have as standard a pressure breather valve.

***The MODULOG modular principle  
for outstanding flexibility***

The motors used for the SIMOGEAR geared motors have a modular design using our well-proven MODULOG modular principle.

At the heart of the system is a basic motor dimensioned for international line supply conditions with power ratings extending from 0.09 to 55 kW (2/4/6/8-pole).

At the non-drive end (NDE), you have an individually configurable MODULOG modular system, e.g. for brakes, backstop, rotary pulse encoder, separately driven fan, and canopy.

This guarantees high availability as well as short delivery times.

***Motors for converter operation***Converter World Motor

The Converter World Motor has been designed for worldwide use, taking into account the worldwide voltage networks and different converters. Since no derating has to be taken into account for line voltages in the range of 380 V to 480 V, the full rated power is always available during the configuration.

VSD10 line motors and synchronous reluctance motors

The VSD10 line motors and the synchronous reluctance motors have been specifically designed for converter operation.

The motors have compact dimensions in a surface-cooled, enclosed version with self-ventilation.

The high power density and compact design ensure low space requirements combined with low weight.

An optimally harmonized drive system is achieved because the motor is optimally coordinated and harmonized with the converters, e.g. no derating of the converter is required or low temperature rise.

***Explosion-protected motors***

Explosion protection has been fully harmonized by directive 2014/34/EU in Germany and in the other member states of the European Union.

SIMOGEAR explosion-protected geared motors are designed and built according to directive 2014/34/EU and comply with the requirements for using equipment in hazardous zones.

The plant manufacturer or plant operating company is responsible for correct selection and proper usage of the equipment.

Many selectable motor options are available for the explosion-protected motors (gas and dust protection, Zone 2 and Zone 22).

***SIMOGEAR motor systems***

Flexible combinations of SIMOTICS motors and SIMOGEAR gearboxes with adapters can be configured in the TIA Selection Tool.

In addition to the separate order of the gearbox-adapter unit and the motor, it is also possible to order assembled gearbox-adapter-motor combinations.

The order can directly be placed thanks to the direct connection of the TIA Selection Tool to the Industry Mall.

You can find additional information about the TIA Selection Tool at:

[www.siemens.com/tia-selection-tool](http://www.siemens.com/tia-selection-tool)

## Introduction

### Orientation

#### Geared motors

1

#### Benefits

##### **Electric-monorail systems**

Electric-monorail systems (suspended monorail) are a modern and cost-effective transport system for handling internal material flows.

Typical applications for these systems include the transport of light loads (such as components used in the assembly of domestic appliances) and the movement of heavy loads (vehicles in the automotive industry, for example).

Electric-monorail systems are already well established in many industrial sectors:

- Automotive industry
- Domestic appliance industry
- Storage and distribution centers
- Passenger transport
- Food processing technology

Thanks to electric-monorail systems, it is possible to utilize the "third dimension", i.e. the ceiling area. As a result, the floor area remains unobstructed so that many hazards associated with material transport can be avoided. They also offer a host of other advantages:

- Flexible routing
- Fast, flexible transport speed
- High availability; each vehicle has its own independent drive
- Low maintenance costs due to minimal wear
- Easy expansion of plant by addition of further trolleys
- High overall efficiency

Electric-monorail systems comprise the following components:

- Electric-monorail geared motor with or without distributed converter technology
- Controller
- Frequency converter

SIMOGEAR electric-monorail bevel geared motors are based on the modular system of SIMOGEAR geared motors. As a result, the motors can be equipped with a large number of options.

A special feature of SIMOGEAR electric-monorail drives which essentially differentiates them from other products in the range is their mechanical clutch that releases the traction between the drive and the conveyor system. The mechanical clutch can be used to perform the following tasks:

- To commission the plant in the early stages before electrical power is available. In this case, the trolleys can be moved manually in the uncoupled state along the conveyor rails.
- To move or redirect the trolley manually in the event of a fault to prevent a collision with the next trolley.
- To move the trolley along steep upward or downward gradients, e.g. using a chain conveyor.

SIEMENS electric-monorail systems are mainly characterized by the seamless integration of their components and a host of other advantages at product level.

Further information about electric-monorail systems can be found at:

[www.siemens.com/conveyor-technology](http://www.siemens.com/conveyor-technology)

## Integration

SIMOGEAR geared motors are part of the Siemens Integrated Drive System (IDS).

Siemens Integrated Drive System (IDS) stands for standardized, tailored, and modular components, systems, and services. It encompasses the world's most extensive portfolio – from geared motors through motor starters and converters, identification systems and switchgear up to the automation.

The complete portfolio is exhaustively tested – also in the field – for maximum availability. The components are harmonized and

coordinated with one another with standard interfaces and power bus systems.

Siemens Integrated Drive System (IDS) therefore allows you to reduce your installation and commissioning costs, and at the same time increase flexibility and system availability.

Energy-efficient motors, motor starters, soft-starters, and converters as well as the Power Management system based on SIMATIC PCS 7, SIMATIC WinCC, and multi-function measuring devices ensure a high energy saving potential.

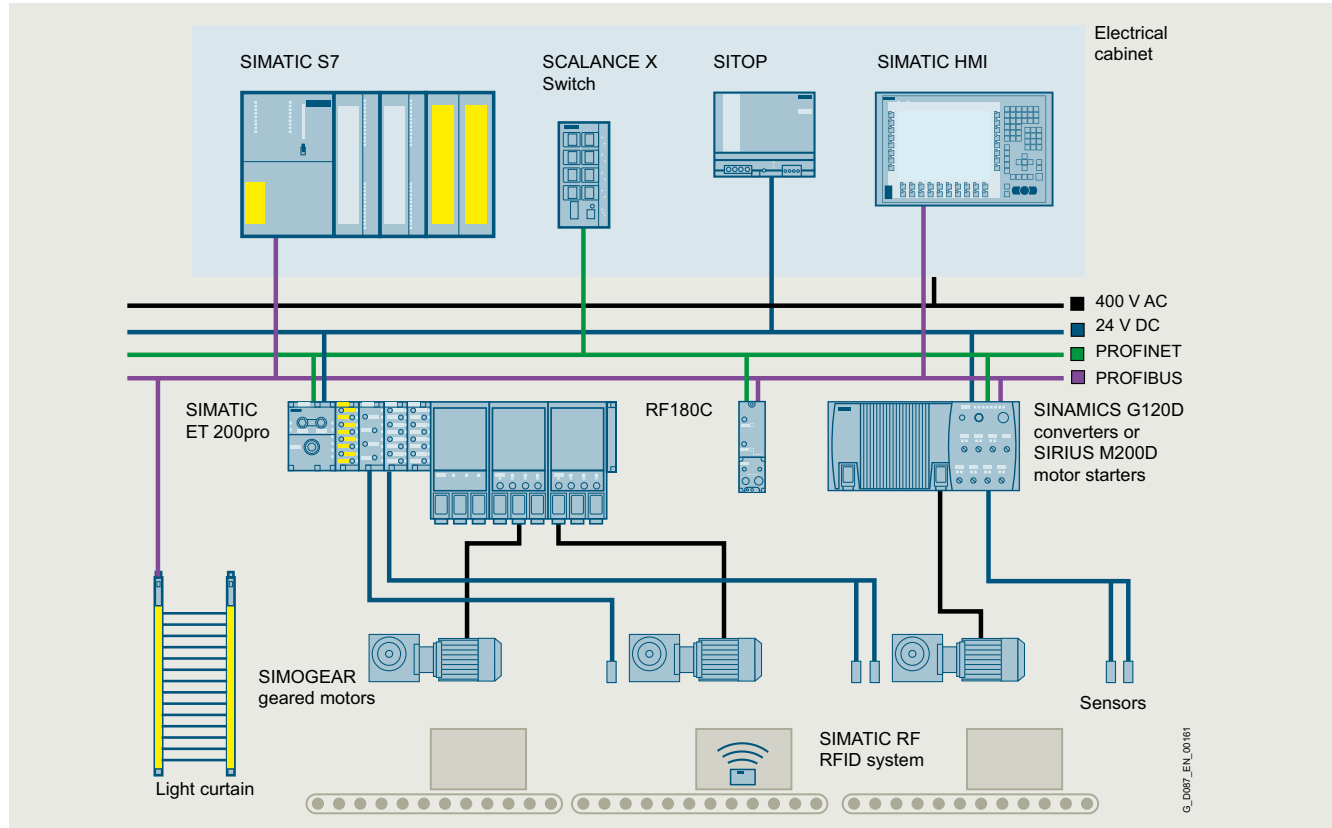


Fig. 1/11 Example of the Siemens Integrated Drive System (IDS) for sophisticated conveyor applications

## Introduction

### Orientation

### Geared motors

1

### Configuration

#### **Siemens Product Configurator**

The Siemens Product Configurator supports you when configuring the optimum drive technology products for a number of applications – from gearboxes, motors, converters as well as the associated options and components through to controllers, software licenses and connection systems.

The Siemens Product Configurator can be used on the internet without requiring any installation. The Siemens Product Configurator can be found in the Siemens Industry Mall at the following address:  
[www.siemens.com/spc](http://www.siemens.com/spc)

#### **TIA Selection Tool**

[Selection guide and configurator for automation technology](#)

Error-free configuration without expert knowledge through intelligent configurators and selection wizards. Desktop and cloud versions enable cross-team collaboration with maximum flexibility.

More information about the TIA Selection Tool is provided at:  
[www.siemens.com/tia-selection-tool](http://www.siemens.com/tia-selection-tool)

#### **STARTER commissioning tool**

The STARTER commissioning tool allows menu-prompted commissioning, optimization and diagnostics. Apart from the SINAMICS drives, STARTER is also suitable for MICROMASTER 4 devices.

Additional information about the STARTER commissioning tool is available on the internet at:  
[www.siemens.com/starter](http://www.siemens.com/starter)

#### **SINAMICS Startdrive commissioning tool**

SINAMICS Startdrive is a tool for configuring, commissioning and diagnosing the SINAMICS converter family and is integrated into TIA Portal (V15.1 or higher).

The SINAMICS Startdrive Basic commissioning tool is available for free on the internet at:  
[www.siemens.com/startdrive](http://www.siemens.com/startdrive)

#### **More information**

The latest technical documentation (catalogs, dimensional drawings, certificates, manuals and operating instructions as well as further technical specifications) are available on the internet at:

[www.siemens.com/gearedmotors](http://www.siemens.com/gearedmotors)

and in the Siemens Product Configurator:  
[www.siemens.com/spc](http://www.siemens.com/spc)



### Overview

The Article No. comprises a combination of digits and letters. To obtain a better overview, the Article No. is split up into three, hyphenated blocks.

Example:

2KJ3105-1EM22-2AS1-Z +D01+M55

The first block (data positions 1 to 7) designates the gearbox type; the second (data positions 8 to 12) designates the output shaft and the motor type; and additional design characteristics are coded in the third block (data positions 13 to 16).

### Ordering data

- Complete Article No. with a **-Z** suffix, and order code(s) or plain text.
- If a quotation has been requested, please specify the quotation number in addition to the Article No.
- When ordering a complete geared motor as a replacement unit, the serial number of the original geared motor must be specified.

### Structure of the Article No.

Position of the Article No.	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16	-	Z	
<b>SIMOGEAR geared motors</b>																					
<b>1st to 5th position:</b>	Helical gearbox E, 1-stage																				
Digit, letter,	Helical gearbox Z, 2-stage																				
letter, digit, digit	Helical gearbox D, 3-stage																				
	Parallel shaft gearbox FZ, 2-stage																				
	Parallel shaft gearbox FD, 3-stage																				
	Bevel gearbox B, 2-stage																				
	Bevel gearbox K, 3-stage																				
	Helical worm gearbox C, 2-stage																				
	Worm gearbox S, 1-stage																				
	Electric-monorail gearbox EHB																				
<b>6th to 7th position:</b>	Gearbox size																				
Digit, digit																					
<b>8th position:</b>	Output shaft																				
Digit																					
<b>9th to 10th position:</b>	Motor frame size																				
Letter, letter																					
<b>11th position:</b>	Converter World Motor										1										
Digit	Induction motor LE General Purpose (aluminum)										2										
	Induction motor LES Severe Duty; Basic Line (cast iron)										3										
	Explosion-protected motors MB (gas and dust protection, Zone 2 and Zone 22)										7										
<b>12th position:</b>	Motor with improved efficiency (Standard Efficiency IE1)										1										
Digit	Motor with high efficiency (High Efficiency IE2)										2										
	Motor with premium efficiency (Premium Efficiency IE3)										3										
	Synchronous reluctance motors for converter operation IE4 (Super Premium Efficiency)										7										
	VSD10 line motors for converter operation										8										
<b>13th position:</b>	Frequency, voltage										- 2, 4, 9										
Digit	With Article No. 9, additional order code required										9										
	Converter World Motor, star connection										6										
	Converter World Motor, delta connection										7										
<b>14th position:</b>	Foot-mounted design										A										
Letter	Foot/flange-mounted design										B										
	Torque arm Bevel gearbox K										C										
	Torque arm Parallel shaft gearbox F, Bevel gearbox B										D										
	Helical worm gearbox C																				
	Worm gearbox S																				
	Flange-mounted design										F										
	Housing flange design										H										
<b>15th to 16th position:</b>	Transmission ratio																				
Letter, digit																					
<b>Special designs</b>																					
Coded	Order code required																			-	Z
Non-coded	Plain text required																				

## Introduction

### Guidelines for selection and ordering

1

#### Article No. code

#### Overview

##### Ordering example

A helical geared motor is required:

- Gearbox type, size Z59
- Motor 1.5 kW, 4-pole with 50 Hz line frequency
- Output speed 49, transmission ratio  $i = 28.89$
- Solid shaft V35 x 70
- Mounting position M1
- Terminal box position 1A

This results in the following Article No. with order codes:

Position of the Article No.		1	2	3	4	5	6	7	8	9	10	11	12	-	13	14	15	16	-	Z	+	Order codes			
Selection criteria	Requirements																								
Gearbox type	Helical gearbox Z, 2-stage	2	K	J	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
Gearbox size	Size 59	2	K	J	3	1	0	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
Output shaft	Solid shaft V35 x 70	2	K	J	3	1	0	5	-	1	.	.	.	.	.	.	.	.	.	.	.	.	.		
Motor frame size	Frame size 90; 1.5 kW; 4-pole	2	K	J	3	1	0	5	-	1	E	M	.	.	.	.	.	.	.	.	.	.	.		
Motor type	Induction motor LE General Purpose	2	K	J	3	1	0	5	-	1	E	M	2	.	.	.	.	.	.	.	.	.	.		
Motor efficiency	High Efficiency IE2	2	K	J	3	1	0	5	-	1	E	M	2	2	.	.	.	.	.	.	.	.	.		
Line voltage, frequency	230 V Δ/400 V Y // 460 V Y, 50/60 Hz	2	K	J	3	1	0	5	-	1	E	M	2	2	-	2	.	.	.	.	.	.	.		
Mounting type	Foot-mounted design	2	K	J	3	1	0	5	-	1	E	M	2	2	-	2	A	.	.	.	.	.	.		
Transmission ratio	$i = 28.89$	2	K	J	3	1	0	5	-	1	E	M	2	2	-	2	A	S	1	.	.	.	.		
Mounting position	M1	2	K	J	3	1	0	5	-	1	E	M	2	2	-	2	A	S	1	-	Z	+	D01		
Terminal box position	1A	2	K	J	3	1	0	5	-	1	E	M	2	2	-	2	A	S	1	-	Z	+	D01	+	M55

**Type designation of the gearboxes**

The type designation is a meaningful name for SIMOGEAR geared motors. It provides information about the fundamental design of the geared motor and its main technical features.

Example of gearbox type designation:		F	D	A	F	S		89	-	Z	39
<b>Gearbox type</b>	Helical gearbox	-									
	Cooling tower gearbox, 1-stage	EKF									
	Cooling tower gearbox, 2-stage	ZKF									
	Parallel shaft gearbox	F									
	Bevel gearbox, 2-stage	B									
	Bevel gearbox, 3-stage	K									
	Helical worm gearbox	C									
	Worm gearbox	S									
	Electric-monorail gearbox light-load	BH									
	Electric-monorail gearbox heavy-load	KH									
<b>Stage</b>	1-stage (for helical gearbox only)		E								
	2-stage		Z								
	3-stage		D								
<b>Type</b>											
<b>Shaft</b>	Solid shaft			-							
	Hollow shaft			A							
	Plug-in shaft			E							
<b>Mounting</b>	Foot-mounted design				-						
	Foot/flange-mounted design				B						
	Flange-mounted design				F						
	Housing flange design				Z						
	Torque arm				D						
<b>Connection</b>	Feather key/without feather key					-					
	Shrink disk					S					
	Splined shaft					T					
	SIMOLOC assembly system					R					
<b>Special features</b>	Reduced-backlash version						W				
<b>Gearbox size</b>	Helical gearbox, 1-stage							39 ... 149			
	Helical gearbox, 2-stage/3-stage							19 ... 189			
	Cooling tower gearbox, 1-stage							89 ... 149			
	Cooling tower gearbox, 2-stage							89 ... 189			
	Parallel shaft gearbox, 2-stage/3-stage							29 ... 189			
	Bevel gearbox, 2-stage							19 ... 49			
	Bevel gearbox, 3-stage							39 ... 189			
	Helical worm gearbox, 2-stage							29 ... 89			
	Worm gearbox, 1-stage							09 ... 29			
	Electric-monorail gearbox light-load							29 ... 39			
	Electric-monorail gearbox heavy-load							49 ... 79			
<b>Gearbox type - intermediate gearbox</b>											
<b>Gearbox type</b>	Helical gearbox									-	
<b>Stage - intermediate gearbox</b>	2-stage									Z	
	3-stage									D	
<b>Gearbox size</b>	Helical gearbox 2-stage/3-stage										19 ... 69

## Introduction

### Guidelines for selection and ordering

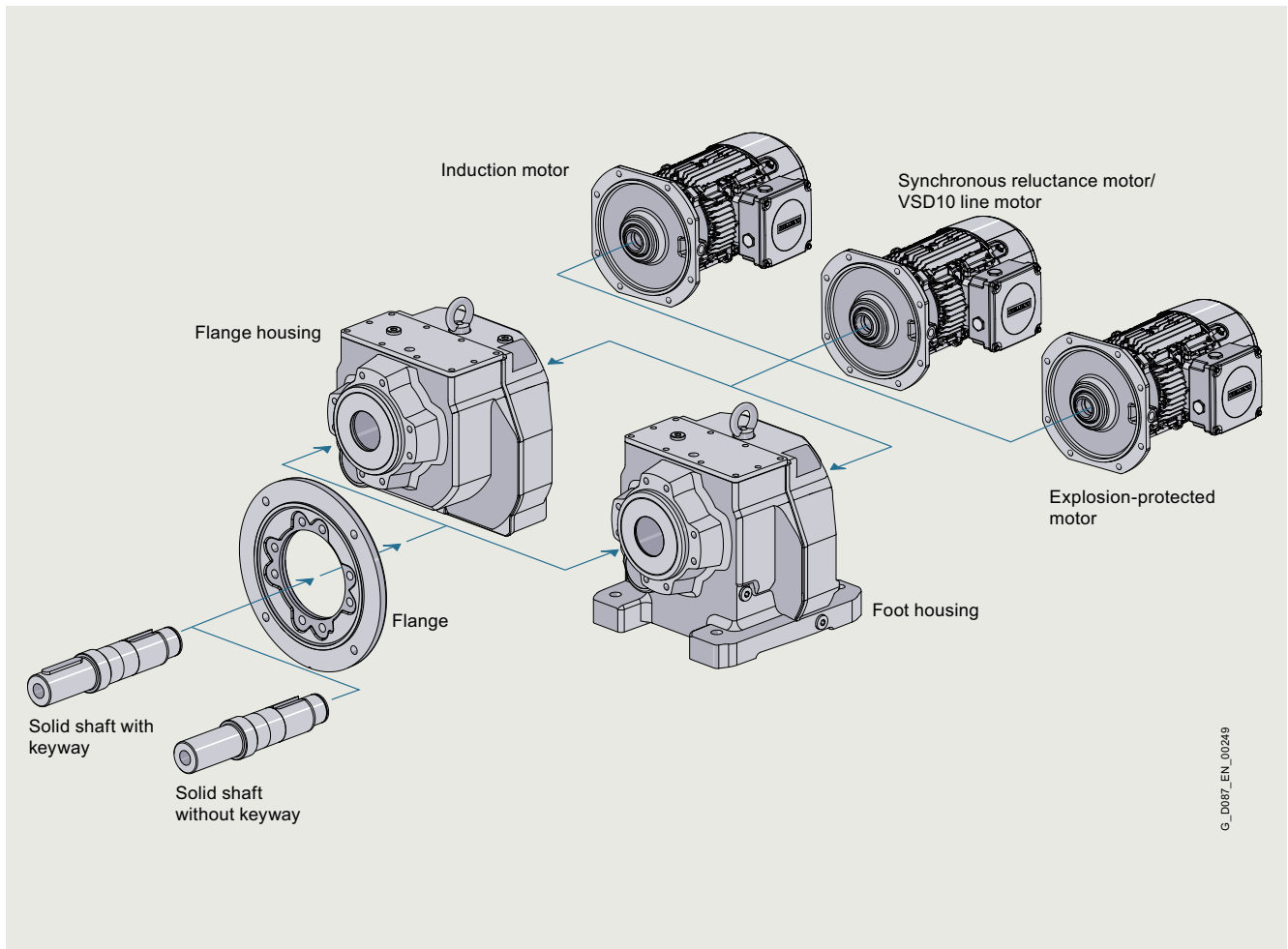
#### Type designation

1

#### Type designation of the motors

Example of motor type designation:			LE	90	ZLT	4	SV	-	FW	L	32/14	MN	-	IA	SI04
<b>Motor</b>															
<b>Motor type</b>	Three-phase motor	Aluminum housing	LE												
		Cast-iron housing	LES												
	Explosion-protected motor	Aluminum housing	MB												
		Cast-iron housing	MBS												
<b>Type</b>	Integral mounting		-												
	IEC B14 flange		I												
<b>Motor frame size</b>	Defined according to EN 50347			63...250											
<b>Overall length</b>	Extended housing				Z, Y										
	Overall length defined according to EN 50347				S, L, M										
	Packet length/power value				A ... Z										
<b>Number of poles</b>	2-pole					2									
	4-pole					4									
	6-pole					6									
	8-pole					8									
<b>Special features</b>															
<b>Efficiency class</b>	Different to IE2 or IE3						-								
	IE2 (High Efficiency)						E								
	IE3 (Premium Efficiency)						P								
	IE4 (Super Premium Efficiency)						S								
<b>Design</b>	Converter World Motor						PV								
	Synchronous reluctance motors						SV								
	VSD10 line motors						V								
<b>Ventilation</b>	Self ventilation							-							
	Forced ventilation							F							
	High inertia fan							I							
<b>Canopy</b>	With protective cover							W							
<b>Handwheel</b>	With handwheel							D							
<b>Backstop</b>	With backstop							X							
<b>Options</b>															
<b>Brake type</b>	DC brake									L, LS, FDX					
<b>Rated braking torque</b>	L brakes										4 ... 400				
	LS brake										4 ... 400				
	FDX brakes										30, 40				
	Adjusted braking torque										/1.4 ... 1000				
<b>Brake options</b>	Microswitch for monitoring brake release											M			
	Standard version											N			
	Enclosed brake											G			
	Manual brake release											H			
	Manual brake release with locking mechanism											HA			
<b>Encoder</b>	Absolute encoder singleturn (DRIVE-CLiQ)													AS	
	Absolute encoder multiturn (DRIVE-CLiQ)													AM	
	Incremental encoder													IN	
	Absolute encoder													IA	
	Prepared for encoder mounting													IV	
	Functionally safe rotary encoder														SI04

## Overview

**Helical geared motors**

G\_D087\_EN\_00249

Fig. 1/12 Modular system, helical geared motor

SIMOGEAR helical geared motors are available in the following versions for mounting in any position:

- 2 or 3 stages
- 1 stage for high output speeds
- 4 to 6 stages for especially low output speeds
- Foot-mounted design
- Flange-mounted design
- Flange-mounted design with VLplus and XLplus reinforced bearing systems
- Design with integrated housing flange
- Combined foot/flange-mounted design (frame size 29 to 89)
- Cooling tower design
- Solid shaft design with and without feather key

**Typical applications**

Helical gearboxes are used where there is sufficient axial space and efficient and low-cost drives are required:

- Roller conveyors, belt conveyors, chain conveyors
- Pumping systems
- Fan systems
- Water/wastewater systems
- Agitators
- Cooling tower drives

## Introduction

Guidelines for selection and ordering

### Designs

#### Overview

#### Parallel shaft geared motors

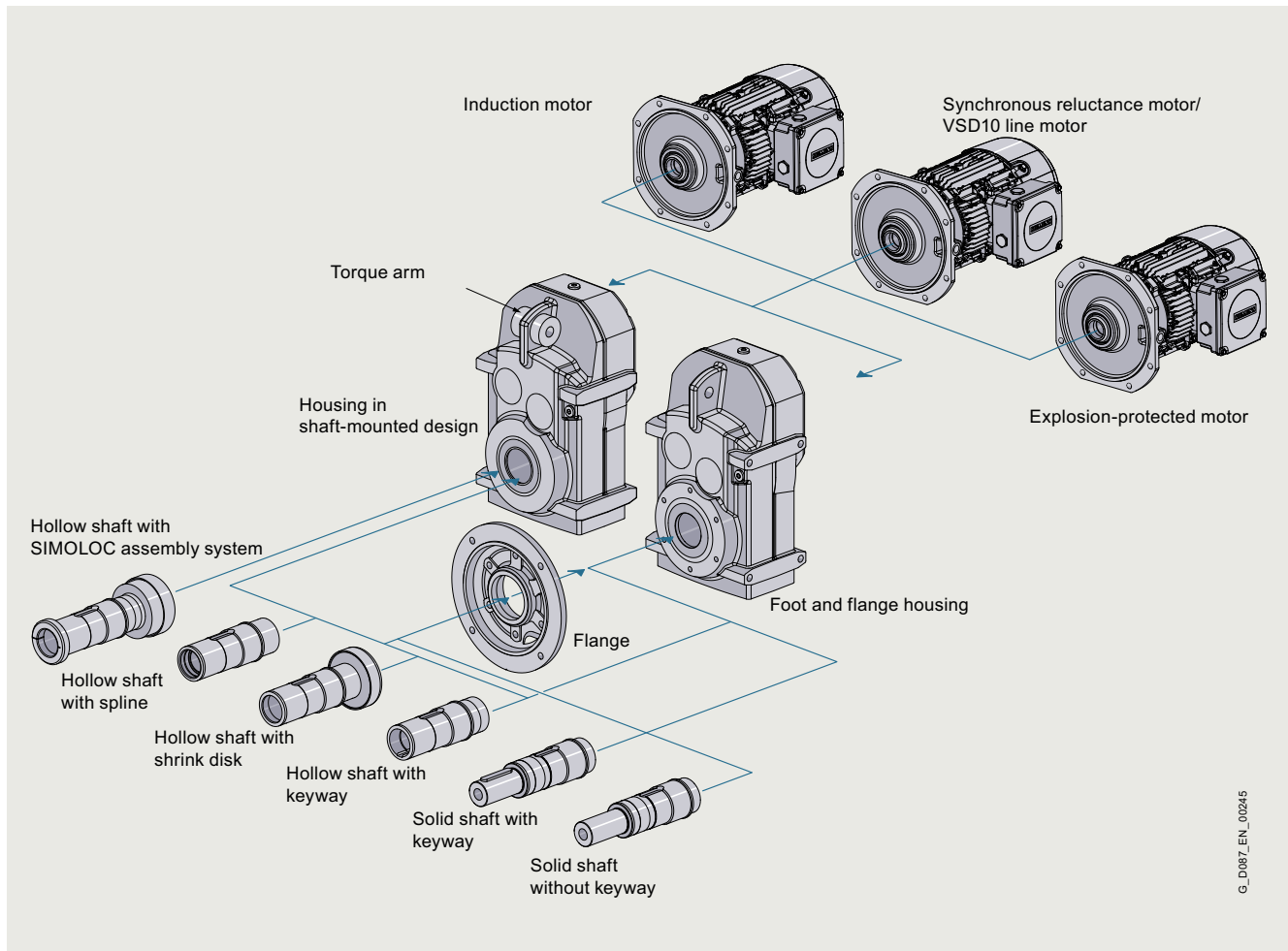


Fig. 1/13 Modular system, parallel shaft geared motor

SIMOGEAR parallel shaft geared motors are available in the following versions for mounting in any position:

- 2 or 3 stages
- 4 to 6 stages for especially low output speeds
- Shaft-mounted design with torque arm
- Flange-mounted design
- Flange-mounted design with VLplus reinforced bearing system
- Design with integrated housing flange
- Foot-mounted design
- Hollow shaft design with feather key, splined shaft, shrink disk or SIMOLOC assembly system
- Solid shaft design with and without feather key

#### Typical applications

The parallel shaft gearboxes are mainly used in applications where compact geared motors are required which are fitted to the drive shaft of the machine:

- Chain conveyors, belt & bucket elevators, belt conveyors, roller conveyors
- Screw conveyors
- Pumping systems
- Fan systems
- Agitators
- Extruders
- Cooling tower drives

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## Overview

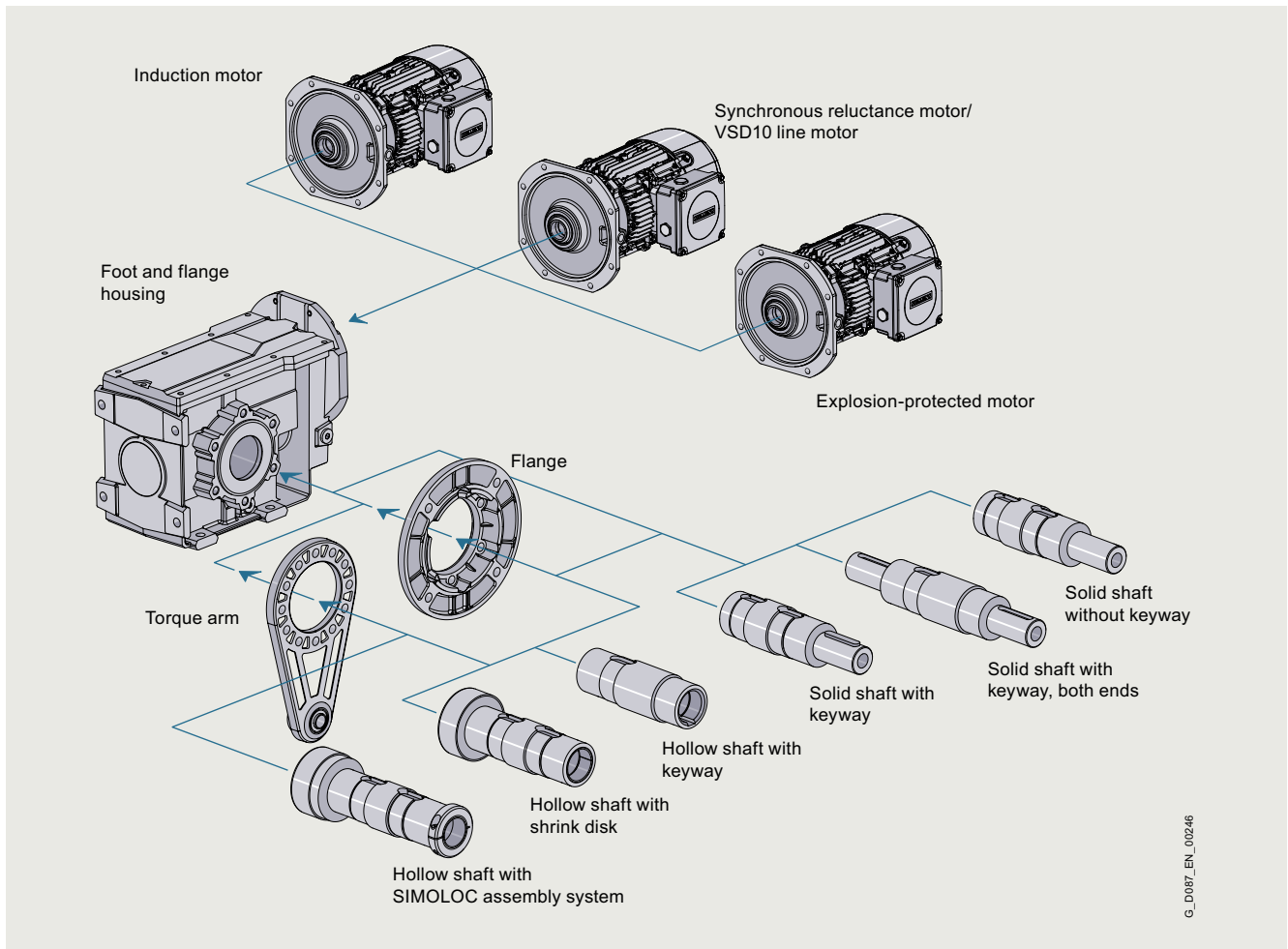
**Bevel geared motors B**

Fig. 1/14 Modular system, bevel geared motor B

SIMOGEAR bevel geared motors B are available in the following versions for mounting in any position:

- 2 stages
- Shaft-mounted design with torque arm
- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design
- Hollow shaft design with feather key, splined shaft, shrink disk or SIMOLOC assembly system
- Solid shaft design with and without feather key (at one end or both ends)

For 2-stage bevel gearboxes B, the torque arm is supplied loose to enable it to be mounted as required on site. The position of the torque arm can be freely selected.

**Typical applications**

The 2-stage right-angle gear units with maximum efficiency are used when there is little axial space available:

- Airport industry
- Automotive industry (electric overhead conveyors)
- General conveyor technology (general cargo and bulk goods)
- Agitators
- Cooling tower drives

G\_D087\_EN\_00246

## Introduction

Guidelines for selection and ordering

### Designs

#### Overview

#### Bevel geared motors K

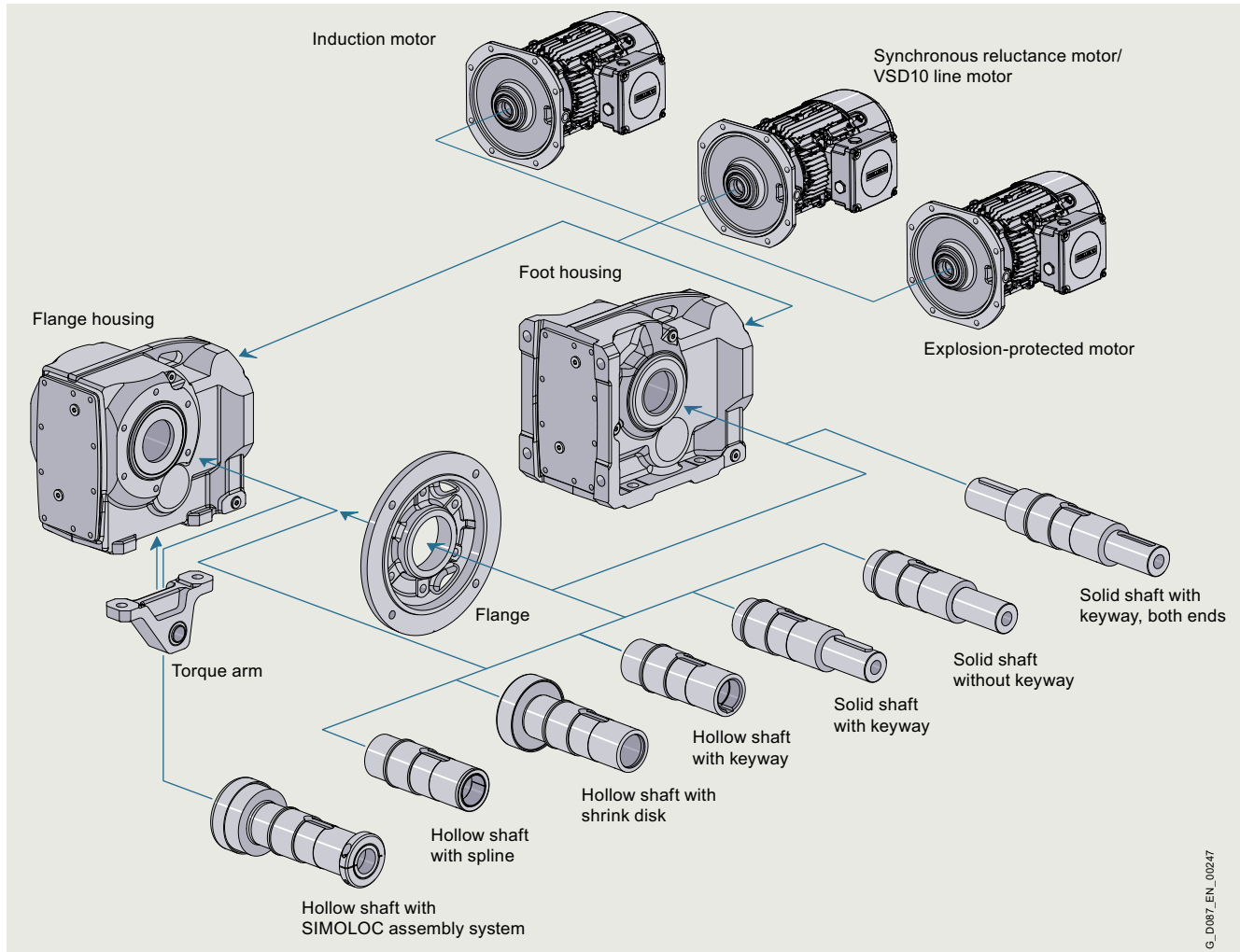


Fig. 1/15 Modular system, bevel geared motor K

SIMOGEAR bevel geared motors K are available in the following versions for mounting in any position:

- 3 stages
- 5 or 6 stages for very low output speeds
- Shaft-mounted design with torque arm
- Flange-mounted design
- Flange-mounted design with VLplus reinforced bearing system
- Design with integrated housing flange
- Foot-mounted design
- Hollow shaft design with feather key, splined shaft, shrink disk or SIMOLOC assembly system
- Solid shaft design with and without feather key (at one end or both ends)

#### Typical applications

The 3-stage right-angle gear units with high efficiency are used when there is little axial space available:

- Automotive industry (electric overhead conveyors)
- General conveyor technology (general cargo and bulk goods), pallet conveyor, belt conveyor, chain conveyor
- Hoisting gear
- Drives in storage and retrieval machines
- Agitators
- Cooling tower drives

G\_D087\_EN\_00247



## Overview

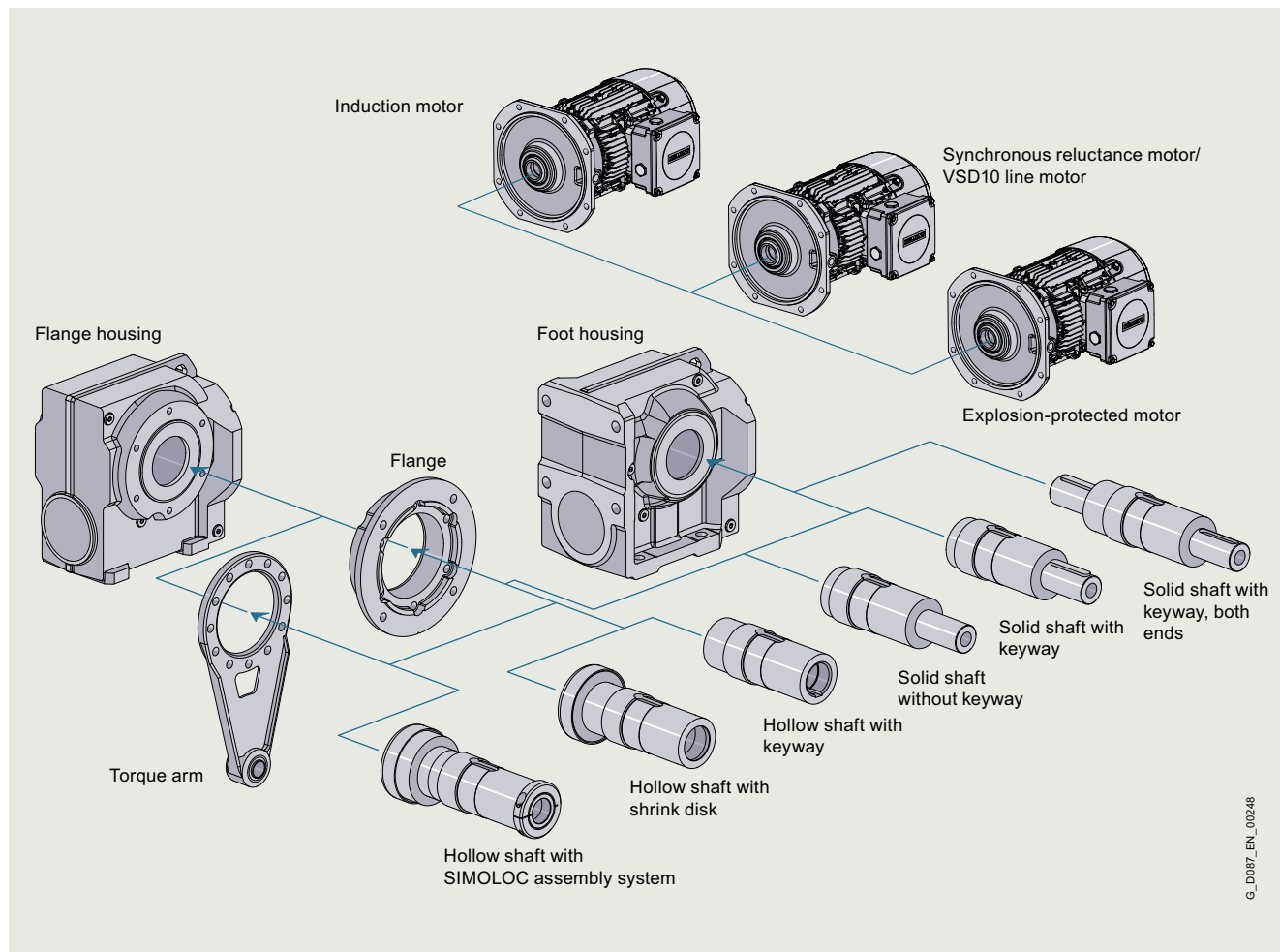
**Helical worm geared motors**

Fig. 1/16 Modular system, helical worm gearbox

SIMOGEAR helical worm gearboxes are available in the following versions for mounting in any position:

- 2 stages
- 4 or 5 stages for very low output speeds
- Shaft-mounted design with torque arm
- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design
- Hollow shaft design with feather key, shrink disk or SIMOLOC assembly system
- Solid shaft design with and without feather key (at one end or both ends)

For helical worm gearboxes, the torque arm is supplied loose to enable it to be mounted as required on site. The position of the torque arm can be freely selected.

**Typical applications**

The 2-stage helical worm gearboxes are used when compact and smooth-running right-angle gear units are required.

- Conveyor technology
- Rotary tables
- Drives in stage/theater applications

G\_D087\_EN\_00248

## Introduction

Guidelines for selection and ordering

### Designs

#### Overview

#### Worm geared motors

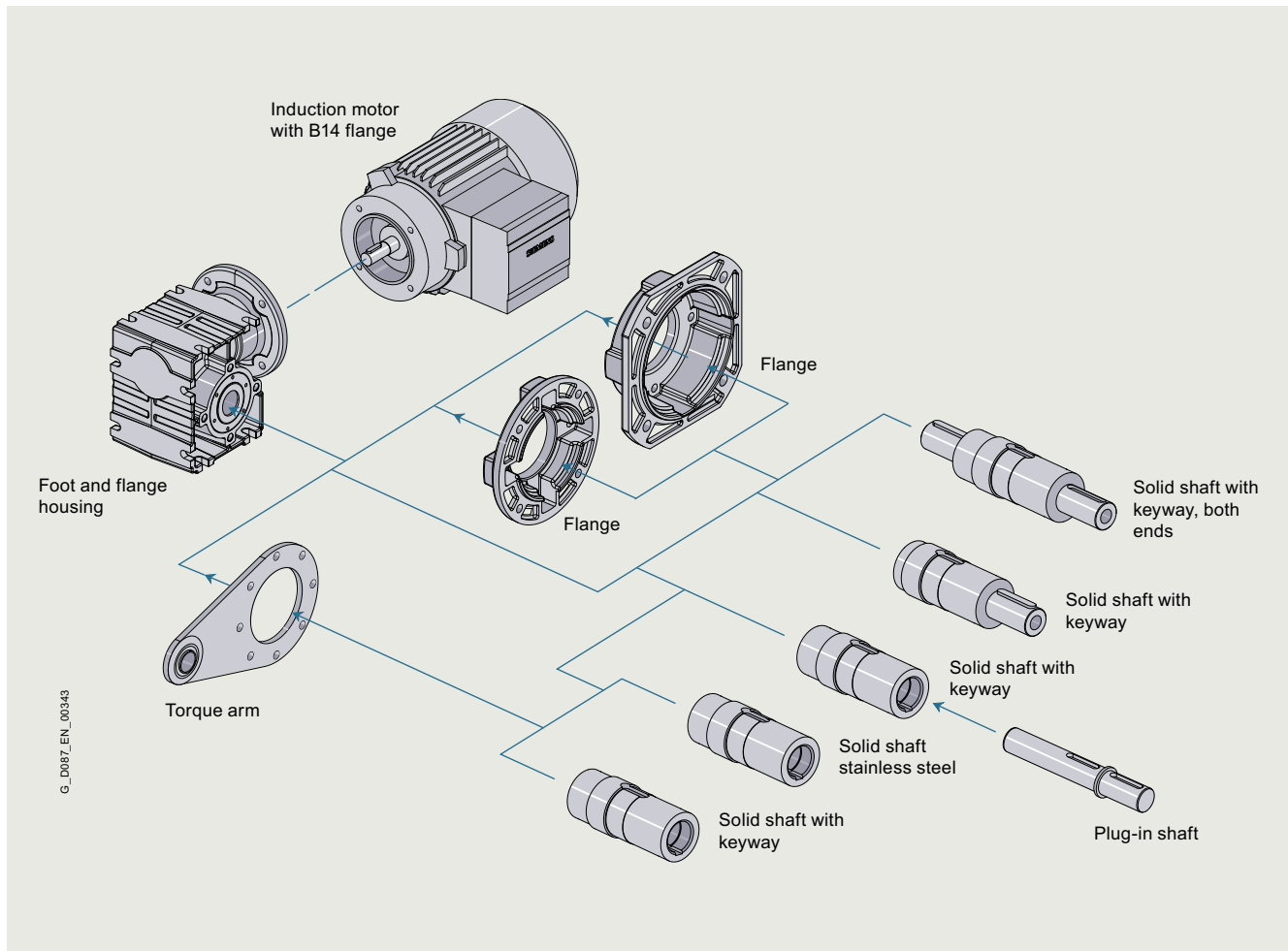


Fig. 1/17 Modular system, worm gearbox

SIMOGEAR worm gearboxes are available in the following versions for mounting in any position:

- 1 stage
- Shaft-mounted design with torque arm
- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design
- Solid shaft design with feather key (at one end or both ends)
- Hollow shaft design with feather key
- Hollow shaft design with plug-in shaft

For worm gearboxes, the torque arm is supplied loose to enable it to be mounted as required on site. The position of the torque arm can be freely selected.

#### Typical applications

The 1-stage worm gearboxes are mainly used in tight spaces where a low-cost and smooth-running drive is required:

- Small conveyor belts
- Rotary tables
- Corner transfer conveyors
- Agitators
- Drives in stage/theater applications

**Structure of the tables for geared motors up to 55 kW**

In the selection tables you will find the most frequently used versions and combinations of geared motors sorted according to the motor power.

Additional combinations can be selected with our [Siemens Product Configurator](#).

The power ratings and torques specified in the catalog refer to mounting position M1 and comparable types of construction, where the input stage does not run completely immersed in oil.

Further, standard equipment and standard lubrication of the geared motors as well as normal ambient conditions are assumed.

The specified output speeds are guide values.

You can calculate the rated input speed based on the rated motor speed and the transmission ratio. Please note that the actual output speed will depend on the motor load and the line supply conditions.

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	Number of poles
<b>0.75</b>	<b>K.89-LE80ZMQ4P</b>							
	6.3	1140	231.80	18100	1.4	62	<b>2KJ3510-</b>	<b>DF23-</b>
							<b>K2</b>	<b>-Z</b>
								<b>-</b>

↓	↓	↓	↓	↓	↓	↓	↓	↓
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

- |   |  |
|---|--|
| (1) Rated motor power at 50 Hz  | (6) Service factor   |
| (2) Geared motor output speed   | (7) Drive weight without any oil                           |
| (3) Geared motor output torque  | (8) Article No.  |
| (4) Transmission ratio  | (9) Additional identification code for the number of poles |
| (5) Permissible radial force at the center of shaft extension<br>The radial force applies to foot-mounted design with solid shaft "1" (2KJ3...-1...-...), see Shaft designs as of <a href="#">page 10/48</a> ). |  |

**Structure of the tables for transmission ratios and torques**

In the selection tables for transmission ratios and torques, the gearboxes are sorted according to gearbox type and ratio.

$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\varphi$	$J_G$	$R_{ex}$	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>Type designation D.59</b>																		
<b>76.38</b>	19	450	7660	7.0	0.59	611/8	✓	✓	✓	✓	✓	✓	✓					<b>2KJ3205 -</b>
																		<b>E1</b>

↓	↓	↓	↓	↓	↓	↓	↓	↓
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

- |   |   |
|---|---|
| (1) Transmission ratio  | (6) Moment of inertia of the gearbox reduced to the input shaft |
| (2) Geared motor output speed at a motor speed of 1450 rpm  | (7) Ratio, number of teeth                                      |
| (3) Maximum gearbox output torque with service factor of $f_B = 1$  | (8) Geometrically possible geared motor combination             |
| (4) Permissible radial force at the center of shaft extension<br>The radial force applies to foot-mounted design with solid shaft "1" (2KJ3...-1...-...), see Shaft designs as of <a href="#">page 10/48</a> ).   | (9) Article No.   |
| (5) Torsional backlash in minutes of arc for reduced-backlash version (order code G99)<br>If torsional backlash is not specified, option "reduced-backlash version" is not possible with this transmission ratio. |   |



## Structure of the tables for motors

## Motors with Premium Efficiency IE3

## Left-hand side

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 50 Hz: 400 V A	$\cos \varphi$	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{St}/I_N$	$T_{St}/T_N$	$T_{Bk}/T_N$
							4/4 load %	3/4 load %	2/4 load %				
<b>50 Hz power</b>													
<b>4-pole, 1500 rpm</b>													
80	LE80MH4P	0.55	1440	3.65	1.26	0.78	80.8	81.5	79.8	IE3	5.9	2.1	3.1
	LE80ZMQ4P	0.75	1450	4.95	1.75	0.75	82.5	82.3	80.1	IE3	7.1	2.7	3.9
<b>2-pole, 3000 rpm</b>													
80	LE80ME2P	0.75	2850	2.50	1.56	0.86	80.7	82.2	81.9	IE3	6.2	2.6	3.0
	LE80ZMJ2P	1.1	2885	3.65	2.25	0.85	82.7	83.9	83.1	IE3	7.1	3.0	3.3

↓ (1)      ↓ (2)      ↓ (3)      ↓ (4)      ↓ (5)      ↓ (6)      ↓ (7)      ↓ (8)      ↓ (8)      ↓ (8)      ↓ (9)      ↓ (10)      ↓ (11)      ↓ (12)

- |                       |                                |
|-----------------------|--------------------------------|
| (1) Motor frame size  | (7) Power factor               |
| (2) Motor designation | (8) Efficiency                 |
| (3) Rated power       | (9) Marking efficiency class   |
| (4) Rated speed       | (10) Relative starting current |
| (5) Rated torque      | (11) Relative starting torque  |
| (6) Rated current     | (12) Relative breakdown torque |

For different voltages, the starting, average acceleration and breakdown torque change acc. to a square law from their rated value.

## Right-hand side

Frame size	Motor	$T_A/T_N$	$L_{pFA}$ dB (A)	$L_{WA}$ dB (A)	$Z_0$ 1/h	$J_{mot}$ $10^{-4}$ kgm <sup>2</sup>	$m_{mot}$ kg	9th to 12th position of the Article No.	Additional identification code -Z with order code
								2KJ3... - . ■ ■ ■ ■ - .... -Z	Number of poles
<b>50 Hz power</b>									
<b>4-pole, 1500 rpm</b>									
80	LE80MH4P	2.3	52	60	15000	21	9	2KJ3... - . <b>D C 2 3</b> - ....	-
	LE80ZMQ4P	3.0	58	66	15000	29	10	2KJ3... - . <b>D F 2 3</b> - ....	-
<b>2-pole, 3000 rpm</b>									
80	LE80ME2P	2.9	60	71	5100	11	9.3	2KJ3... - . <b>D B 2 3</b> - ....	<b>P00</b>
	LE80ZMJ2P	3.3	60	71	8700	13	10	2KJ3... - . <b>D M 2 3</b> - ....	<b>P00</b>

↓ (1)      ↓ (2)      ↓ (3)      ↓ (4)      ↓ (5)      ↓ (6)      ↓ (7)      ↓ (8)      ↓ (9) ↓ (9) ↓ (10) ↓ (11)      ↓ (12)

- |  |   |
|--|---|
| (1) Motor frame size                       | (7) Moment of inertia                                       |
| (2) Motor designation                      | (8) Weight (without end shield at DE)                       |
| (3) Relative average acceleration torque   | (9) Article No. of the motor frame size                     |
| (4) Measuring surface sound pressure level | (10) Article No. of the motor type                          |
| (5) Sound power level                      | (11) Article No. of the motor series                        |
| (6) No-load switching frequency            | (12) Additional identification code for the number of poles |

## Introduction

Guidelines for selection and ordering

### Notes on selection tables

#### Structure of the tables for motors

##### VSD10 line and synchronous reluctance motors for converter operation

###### Left-hand side

Frame size	Motor	$P_N$	Connection	$f_N$	$T_N$	$I_N$	$\cos \varphi$	$\eta$	$L_{pA}$	$L_{WA}$
		kW		Hz	Nm	50/87 Hz: 400 V 60 Hz: 460 V A	-	4/4 load %	dB (A)	dB (A)

###### 50 Hz power

###### 4-pole, 1500 rpm

112	LE112ME4V	4	Y	52.3	25.5	8.6	0.85	83.1	77.4	89.4
-----	-----------	---	---	------	------	-----	------	------	------	------

###### 60 Hz power

###### 4-pole, 1800 rpm

112	LE112ME4V	4.55	Y	62.2	24.0	8.3	0.85	85.0	77.2	89.2
-----	-----------	------	---	------	------	-----	------	------	------	------

↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

- (1) Motor frame size
- (2) Motor designation
- (3) Rated power
- (4) Connection
- (5) Rated speed
- (6) Rated torque

- (7) Rated current
- (8) Power factor
- (9) Efficiency
- (10) Measuring surface sound pressure level
- (11) Sound power level

For different voltages, the starting, average acceleration and breakdown torque change acc. to a square law from their rated value.

###### Right-hand side

Frame size	Motor	Mech. speed limit	$J_{mot}$	$m_{mot}$	Preferred SINAMCS G120-PM240 Other SINAMCS converters also possible	Frame size	IES class acc. to EN 50598-2	9th to 12th position of the Article No.	Additional identification code -Z with order code
		rpm	$10^{-4}$ kgm <sup>2</sup>	kg	Type			2KJ3... - . ■ ■ ■ ■ - .... -Z	Power

###### 50 Hz power

###### 4-pole, 1500 rpm

112	LE112ME4V	4200	100	27	6SL3210-1PE21-1.L0	FSB	IES1	2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
-----	-----------	------	-----	----	--------------------	-----	------	-----------------------------------	------------

###### 60 Hz power

###### 4-pole, 1800 rpm

112	LE112ME4V	4200	100	27	6SL3210-1PE21-1.L0	FSB	IES1	2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
-----	-----------	------	-----	----	--------------------	-----	------	-----------------------------------	------------

↓	↓			↓	↓	↓	↓	↓ ↓ ↓ ↓	↓
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) (9) (10) (11)	(12)

- (1) Motor frame size
- (2) Motor designation
- (3) Mechanical speed limit
- (4) Moment of inertia
- (5) Weight (without end shield at DE)
- (6) Preferred SINAMCS G120-PM240

- (7) Frame size
- (8) IES class acc. to EN 50598-2
- (9) Article No. of the motor frame size
- (10) Article No. of the motor type
- (11) Article No. of the motor series
- (12) Order code for power

**Structure of the tables for motors**

**Motors according to UL and CSA standards**

Left-hand side

Frame size	Motor	$P_N$		$n_N$	$T_N$	EISA	$I_N$	$\cos \varphi$	$\eta$			$I_{St}/I_N$	$T_{St}/T_N$
		kW	hp						rpm	Nm	CC No. CC032A		

60 Hz, 50 Hz power

**4-pole, 1800 rpm**

90	LE90SM4P	1.1	1.5	1750	6.00	✓	2.15	0.75	86.5	86.4	84.2	8.2	3.4
----	----------	-----	-----	------	------	---	------	------	------	------	------	-----	-----

**2-pole, 3600 rpm**

90	LE90SM2P	1.5	2	3525	4.05	✓	2.60	0.84	85.5	84.8	82.3	9.8	3.1
----	----------	-----	---	------	------	---	------	------	------	------	------	-----	-----

↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
(1)	(2)	(3)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9)	(9)	(10)	(11)

- (1) Motor frame size
- (2) Motor designation
- (3) Rated power
- (4) Rated speed
- (5) Rated torque
- (6) Energy Independence and Security Act
- (7) Rated current
- (8) Power factor
- (9) Efficiency
- (10) Starting current
- (11) Relative starting torque

For different voltages, the starting, average acceleration and breakdown torque change acc. to a square law from their rated value.

Right-hand side

Frame size	Motor	$T_{Br}/T_N$	$T_A/T_N$	$L_{ptA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No.	Additional identification code -Z with order code	
										Number of poles	Specification
		-	-	dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg	2KJ3... - . ■ ■ ■ ■ - .... -Z		UL-R/CSA

60 Hz, 50 Hz power

**4-pole, 1800 rpm**

90	LE90SM4P	4.4	3.7	O. R.	O. R.	O. R.	36	12	2KJ3... - . <b>E K 2 3</b> - ....	-	<b>N38</b>
----	----------	-----	-----	-------	-------	-------	----	----	-----------------------------------	---	------------

**2-pole, 3600 rpm**

90	LE90SM2P	4.9	3.4	O. R.	O. R.	O. R.	21.0	12	2KJ3... - . <b>E K 2 3</b> - ....	<b>P00</b>	<b>N38</b>
----	----------	-----	-----	-------	-------	-------	------	----	-----------------------------------	------------	------------

↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) (10) (11) (12)	(13)	(14)

- (1) Motor frame size
- (2) Motor designation
- (3) Relative breakdown torque
- (4) Relative average acceleration torque
- (5) Measuring surface sound pressure level
- (6) Sound power level
- (7) No-load switching frequency
- (8) Moment of inertia
- (9) Weight (without end shield at DE)
- (10) Article No. of the motor frame size
- (11) Article No. of the motor type
- (12) Article No. of the motor series
- (13) Order code for number of poles
- (14) Order code for special specifications














**Overview**

The following certificates are available for SIMOGEAR geared motors. You can select these individually, or combine them freely into a multi-certificate.

**Specifications**

Marking	Legal/normative requirements
Examples 	<b>Machinery directive 2006/42/EC</b>
	<b>United Kingdom Conformity Assessed</b> Supply of Machinery (Safety) Regulations 2008
	<b>Regulation (EU) 2019/1781</b> Requirements relating to electric motors and variable-speed controls according to guideline 2009/125/EC and change regulation (EU) 2021/341
<b>MG1-12</b>	<b>NEMA MG1 Table 12-12</b> National standard
	<b>UL 1004</b> Standard of the Underwriters Laboratories Inc. (testing and certification body)
<b>CC032 A</b>	<b>EISA</b> Energy Independence Security Act
	<b>CSA-C22.2 No. 100</b> Standard of the Canadian Standards Association
<b>Energy Verified</b>	<b>EER</b> Energy Efficiency Regulations
	<b>CCC</b> China Compulsory Certification
	<b>CEL – China Energy Label</b> based on the national standard GB 18613-2020
	<b>EAC</b> TR CU EAC declaration for the Eurasian customs union
	<b>BIS</b> Indian standard IS 12615:2018
	<b>ATEX</b> EU directive 2014/34/EU

## Introduction

### General technical specifications

#### Geared motors for use worldwide

##### Converter World Motor

The Converter World Motors are available in frame sizes 71 to 250 in accordance with IEC TS 60034-30-2.

The following specifications and options are integrated with the Converter World Motor and do not require any additional order codes:

- Design in accordance with CE / UKCA, UL-/CSA and EAC
- Pt-1000 winding temperature sensor

The Converter World Motor is designed exclusively for converter operation; the rated frequency of the induction motors is not 50 Hz; they therefore do not fall within the scope of the following certifications:

- China Compulsory Certification (CCC)
- China Energy Label (CEL)
- Bureau of Indian Standards (BIS)
- Korea Energy Management Corporation (KEMCO)

Converter World Motor	11th and 13th position of the Article No.	
	2KJ3... - ...	...-Z
Converter World Motor, star connection	1	6
Converter World Motor, delta connection	1	7

##### Motors for the North American market

Motors in frame sizes 63 to 250 are available in designs which meet the UL-R and CSA standards.

Motors for the North American market	Additional identification code -Z with order code	Order code
	2KJ3... - ...-Z	N38
Design in accordance with UL-R and CSA		

##### Note:

In the USA, a distinction is made between the rated voltage of the supply system and the rated voltage of the motor. See the table below for the assignment:

Country	Rated voltage of the supply system	Rated voltage of the motor
USA	208 V	200 V
	240 V	230 V
	480 V	460 V
Canada	600 V	575 V

##### UL-R – Underwriters Laboratories Inc.

The motors are listed for up to 600 V by Underwriters Laboratories Inc. ("Recognition Mark" = R/C). Motor voltages up to 600 V are certified according to UL. "UL Recognition Mark" is included on the rating plate of the motor.

Externally or internally mounted components such as:

- Motor protection
- Heating element
- Forced ventilation
- Brake
- Encoder
- Plug connection

are UL-R/C, CSA, or C-US listed or used by manufacturers in accordance with regulations. UL-R/C cable glands must be used for the cable entry.

##### CSA – Canadian Standard Association

The motors are approved for up to 690 V in accordance with the "Canadian Standard Association" (CSA). Externally or internally mounted components which are used are listed by CSA or are used by manufacturers in accordance with regulations. The CSA mark and the rated voltage are stamped on the rating plate.

There is no approval for explosion-protected motors.

##### Motors for the Chinese market

CCC-certified motors, frame sizes 63 to 90, are available for export to China.

The "China Energy Label" required for import into China is available for motors in frame sizes from 80 to 250.

The motors are marked according to the requirements with CCC, CEL or both specifications.

Motors for the Chinese market	Additional identification code -Z with order code	Order code
	2KJ3... - ...-Z	N67
Design for the Chinese market		

##### CCC – China Compulsory Certification

Motors with small powers (small power motors) that are exported to China must be certified up to a rated power of:

- 2-pole: ≤ 2.2 kW
- 4-pole: ≤ 1.1 kW
- 6-pole: ≤ 0.75 kW
- 8-pole: ≤ 0.55 kW

##### Note:

Chinese customs checks the need for certification of imported products by means of the commodity code.

The following do not need to be certified:

- Explosion-protected motors
- Multi-voltage motors
- Multi-speed motors with powers higher than those listed above
- Synchronous reluctance motors
- Repair parts

##### CEL – China Energy Label

According to the current CEL007-2021 directive, China has a mandatory energy efficiency labeling for electric motors.

The scope includes SIMOGEAR geared motors and explosion-protected geared motors:

- Line voltage: ≤ 1000 V
- Line frequency: 50 Hz
- Power range: 0.75 kW to 375 kW
- Number of poles: 2, 4, 6, 8-pole
- Continuous duty: S1, S3 ≥ 80%
- Self-ventilated

The motors for the SIMOGEAR gearboxes are classified according to the minimum requirements corresponding to the International Efficiency (IE) in the efficiency classes (Minimum allowable values of energy efficiency and values of efficiency grades for motors) defined in Chinese standard GB 18613-2020.

IEC IE class	GB 18613-2020
IE5	Grade 1
IE4	Grade 2
IE3	Grade 3

**Motors for the Eurasian Customs Union**

To import geared motors into the Eurasian Customs Union area, the TR CU EAC declaration (Russia, Belarus, Kazakhstan, Armenia, Kyrgyzstan) is required.

**TR CU = Technical Regulation Customs Union  
EAC = Eurasian Conformity**

The motors have the "EAC" logo marked on the rating plate and the packaging.

The "TR CU EAC declaration" must be available; however, it is generally not included with the delivery. The customs authorities use the motor article number to check the motor certification.

The following are available in the SIOS (Siemens Industry Online Support)

<https://support.industry.siemens.com/cs/ww/en/>

and the Siemens Product Configurator

[www.siemens.com/spc](http://www.siemens.com/spc):

- TR CU EAC declaration in line with the low-voltage directive
- Additional TR CU EAC declaration according to the EMC Directive.

The TR CU EAC declaration is valid for all geared motors. For gearboxes with adapters, the certificate is not necessary as the TR CU EAC declaration only refers to the motor.

Motors for the Eurasian Customs Union	Additional identification code -Z with order code	Order code
	2KJ3... -.....-.....-Z	<b>N30</b>
Design in accordance with EAC		

**Motors for the Indian market**

For export to India, the motors are available in accordance with the IS 12615:2018 standard. The IS 12615:2018 standard covers the efficiency classes IE2, IE3 and IE4 for operation at sinusoidal voltage sources. It is also valid for:

- 2, 4, 6 or 8-pole
- Rated power from 0.12 kW to 1000 kW
- Rated voltage up to 1000 V with rated frequency of 50 Hz
- Ambient temperature within -20 °C to +60 °C
- Operating mode S1 (continuous duty)  
Operating modes from S2 with comparably measured motors in operating mode S1 are also covered. The motors must be marked with the power corresponding to S1 and the associated IE class.
- Cooling method: IC411, IC511 and IC611

The motors must meet the requirements of the starting current limit from the IS 12615:2018 standard and are tested individually.

Motors for the Indian market	Additional identification code -Z with order code	Order code
	2KJ3... -.....-.....-Z	<b>N27</b>
Design in accordance with BIS		

**Without CE, UKCA marking for export**

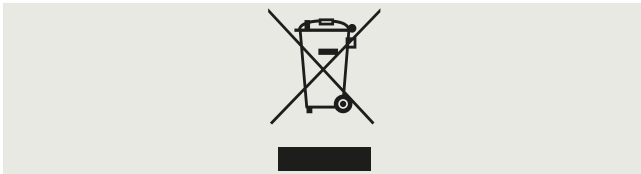
For geared motors to be exported outside the European Economic Area, the order option "without CE, UKCA marking for export" is available. The CE, UKCA marking is not displayed on the rating plate of these motors.

These geared motors may only be exported to countries outside the European economic area which do not require the CE, UKCA marking.

Motors without CE, UKCA marking for export	Additional identification code -Z with order code	Order code
	2KJ3... -.....-.....-Z	<b>N68</b>
Without CE, UKCA marking		

**EU directives****WEEE directive**Recycling and disposal of SIMOGEAR geared motors

EU directive 2012/19/EU governs the disposal of used electrical and electronic devices that are placed on the market in the EU. Since August 15, 2018, geared motors have also been subject to EU directive 2012/19/EU and are marked accordingly:



Information on proper disposal is provided in the latest operating instructions of the geared motors.

**European RoHS directive**

SIMOGEAR geared motors comply with the stipulations set up in the directive 2011/65/EU and "The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012" regarding the restriction of the use of certain hazardous substances.

## Introduction

### General technical specifications

## Explosion protection according to ATEX

### Overview

The motors and gearboxes for use in hazardous zones are designed and built according to the EU directive 2014/34/EU (ATEX), and are marked according to the following schematic: They are designed for use in hazardous zones. Suitable versions are available for many application conditions and hazardous zones, e.g. in explosive gas atmospheres in the chemical/ petrochemical sector or in explosive dust atmospheres in mining or food & beverage sectors. The explosion-protected geared motors are approved for use in Zone 2 (gases) and Zone 22 (dusts).

4-pole motors with efficiency classes IE3 and IE2 are available in the power range from 0.25 to 22 kW. Different types of construction, voltage versions and a wide variety of options/add-ons are available to precisely adapt the geared motors to application and customer-specific requirements.

#### Note:

The electric-monorail geared motors EHB are not available as explosion-protected geared motors.

Ex atmosphere / Zone		Category	Frequency	SIMOGEAR gearbox available
G (gas and steam)	D (dust)			
0	20	1	constantly or long-term	No
1	21	2	infrequently	Yes
2	22	3	rarely or briefly	Yes

Use in explosive atmospheres G (gases) is permissible for temperature classes T1 to T3. When used in explosive atmosphere D (dusts), it must be noted that the maximum permissible surface temperature for the gearbox is 120 °C. An oil level sensor can be integrated for monitoring in inaccessible areas.

### Designs for SIMOGEAR explosion-protected geared motors in Zone 2 and Zone 22

Explosive zone	Explosion group	Equipment category	Equipment protection level	Marking		Additional identification code -Z with order code	
				Gearbox type of protection	Motor type of protection	2KJ3... -.....-.....-Z	Order code
Gas (G) Zone 2 <sup>1)</sup>	IIC	3G	Gc	Ex II 3G Ex h IIC T4 Gc Ex II 3D Ex h IIIC T120 °C Dc	Ex II 3G Ex ec IIC T3 Gc		<b>K72 + K82</b> + K78 <sup>2)</sup>
	IIB	3G	Gc	Ex II 3G Ex h IIB T4 Gc Ex II 3D Ex h IIIB T120 °C Dc	Ex II 3G Ex ec IIB T3 Gc		<b>K72 + K81</b> + K78 <sup>2)</sup>
Dust (D) Zone 22	IIIB	3D	Dc	Ex II 3G Ex h IIB T4 Gc EX II 3D Ex h IIIB T120 °C Dc	EX II 3D Ex tc IIIB T120 °C Dc		<b>K74 + K81</b> + K75 <sup>3)</sup>

<sup>1)</sup> SIMOGEAR explosion-protected geared motors for use in hazardous Zone 2 (K72) may only be supplied with an electrically conductive paint finish or unpainted.

<sup>2)</sup> Explosion group IIC (K82) or IIB (K81) must be selected for hazardous Zone 2. It is not necessary to separately select the temperature class (K78). This is specified automatically.

<sup>3)</sup> With the selection of hazardous Zone 22, the additional order codes K75+K81 are specified. These indicate the explosion group and the temperature class. It is not necessary to separately select the temperature class.

**Efficiency classes for converter operation according to IEC 60034-30-2**

**Determination of the efficiency classes of converter-fed motors**

For the determination of the efficiency of the Converter World Motor, the method according to IEC 60034-2-3 is used. The efficiency class (IE) is defined in accordance with IEC TS 60034-30-2.

The motor is part of a frequency-variable drive system (PDS). Due to the operation on the converter, there are various motor losses:

- Fundamental frequency (e.g. iron, friction, ventilation, rotor winding, stator winding and additional losses)
- Harmonics due to the clock frequency of the feeding converter

When the measuring data is determined, the motor is fed by a SINAMICS drive converter (S120 or G120 with standard parameterization) that matches the motor size.

As converter-fed motors can be operated at different speeds, the so-called PDS90 measurement is defined by seven characteristic load points (see figure). The operating point decisive for the efficiency class is that of 90 % speed and rated torque (100 %).

Frequency converters usually have a voltage drop, so the maximum voltage at the motor terminals is lower than the line-side input voltage of the converter. The standard accommodates this and demands efficiency with the reduced speed of 90 %

rated speed compared to line motors or converter motors, which are defined according to the IES class.

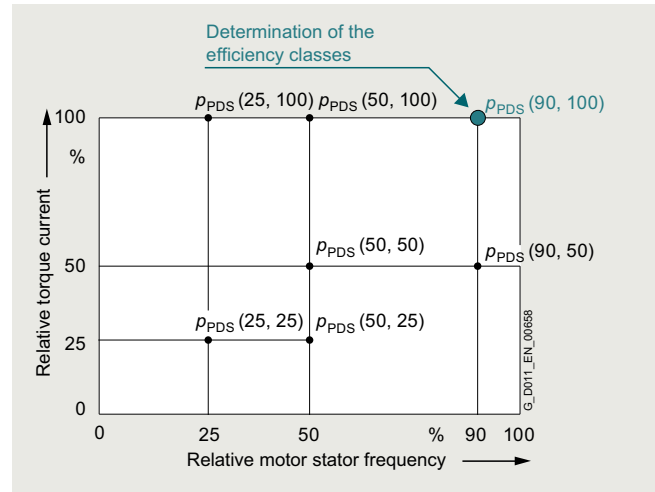


Fig. 1/19 Power Drive System (PDS) – Determination of the efficiency class

**Efficiency classes and efficiencies according to IEC 60034-30-1**

**Harmonization of the efficiency classes**

Various energy efficiency standards exist worldwide for induction motors. To promote global standardization, the international standard IEC 60034-30-1:2014 (Rotating electrical machines – Part 30-1: Efficiency classes of single-speed, three-phase, cage-induction motors (IE code)) was drawn up.

Applicability (excerpt)

- Low-voltage motors up to 1000 V (50/60 Hz for line operation)
- Power rating: 0.12 to 1000 kW; 2, 4, 6, or 8 poles
- Operating mode: S1

The efficiencies in IEC 60034-30-1 are based on the method for determining losses according to IEC 60034-2-1:2014.

**IE efficiency classes**

The efficiency classes are grouped according to the following nomenclature (IE = International Efficiency):

- IE1 (Standard Efficiency)
- IE2 (High Efficiency)
- IE3 (Premium Efficiency)
- IE4 (Super Premium Efficiency)

IEC 60034-30-1 EU and other countries	NEMA MG1	GB 18613-2020
IE4 <sup>1)</sup>		Grade 1 (IE5)
IE3	Premium Efficient (60 Hz)	Grade 2 (IE4)
IE2	Energy Efficient (60 Hz)	Grade 3 (IE3)

<sup>1)</sup> Defined in IEC/TS 60034-31.

**Note:**

All efficiency classes are stated with reference to 50 Hz data (unless specified otherwise).

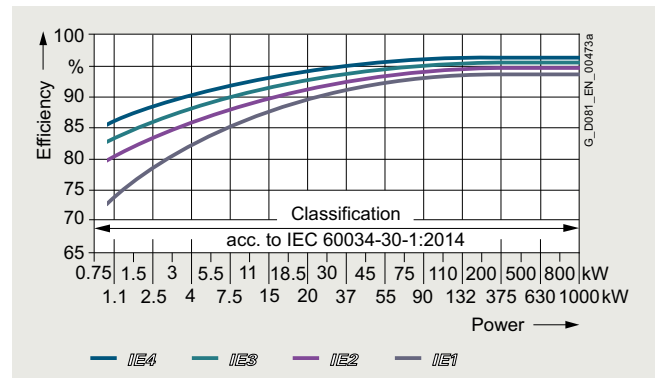
**Measuring method according to IEC 60034-2-1:2014 for determining the efficiency**

With this measuring method, motor losses are no longer applied as a percentage, but are determined by standard methods. The nominal efficiencies are therefore reduced from EFF1 to IE2 and from EFF2 to IE1, even though there have been no technical or physical changes to the motors.

Previously:  $P_{LL} = 0.5 \% \text{ of } P_1$  (consumed power; IEC 60034-2)

Now:  $P_{LL} = \text{individual measurement (IEC 60034-1)}$

$P_{LL}$  = Load-dependent supplementary losses



## Introduction

### General technical specifications

#### General information regarding efficiency in accordance with International Efficiency

#### Efficiency classes and efficiencies according to IEC 60034-30-1

Minimum efficiency according to IEC 60034-30-1:2014

Rated power $P_N$ kW	Efficiency $\eta$ in % IEC IE class							
	IE1 Standard Efficiency				IE2 High Efficiency			
	2-pole	4-pole	6-pole	8-pole	2-pole	4-pole	6-pole	8-pole
0.18	52.8	57.0	45.5	38.0	60.4	64.7	56.6	45.9
0.20	54.6	58.5	47.6	39.7	61.9	65.9	58.2	47.4
0.25	58.2	61.5	52.1	43.4	64.8	68.5	61.6	50.6
0.37	63.9	66.0	59.7	49.7	69.5	72.7	67.6	56.1
0.40	64.9	66.8	61.1	50.9	70.4	73.5	68.8	57.2
0.55	69.0	70.0	65.8	56.1	74.1	77.1	73.1	61.7
0.75	72.1	72.1	70.0	61.2	77.4	79.6	75.9	66.2
1.1	75.0	75.0	72.9	66.5	79.6	81.4	78.1	70.8
1.5	77.2	77.2	75.2	70.2	81.3	82.8	79.8	74.1
2.2	79.7	79.7	77.7	74.2	83.2	84.3	81.8	77.6
3.0	81.5	81.5	79.7	77.0	84.6	85.5	83.3	80.0
4.0	83.1	83.1	81.4	79.2	85.8	86.6	84.6	81.9
5.5	84.7	84.7	83.1	81.4	87.0	87.7	86.0	83.8
7.5	86.0	86.0	84.7	83.1	88.1	88.7	87.2	85.3
11	87.6	87.6	86.4	85.0	89.4	89.8	88.7	86.9
15	88.7	88.7	87.7	86.2	90.3	90.6	89.7	88.0
18.5	89.3	89.3	88.6	86.9	90.9	91.2	90.4	88.6
22	89.9	89.9	89.2	87.4	91.3	91.6	90.9	89.1
30	90.7	90.7	90.2	88.3	92.0	92.3	91.7	89.8
37	91.2	91.2	90.8	88.8	92.5	92.7	92.2	90.3
45	91.7	91.7	91.4	89.2	92.9	93.1	92.7	90.7
55	92.1	92.1	91.9	89.7	93.2	93.5	93.1	91.0
75	92.7	92.7	92.6	90.3	93.8	94.0	93.7	91.6
90	93.0	93.0	92.9	90.7	94.1	94.2	94.0	91.9
110	93.3	93.3	93.3	91.1	94.3	94.5	94.3	92.3
132	93.5	93.5	93.5	91.5	94.6	94.7	94.6	92.6
160	93.8	93.8	93.8	91.9	94.8	94.9	94.8	93.0
200 ... 375	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5

Rated power $P_N$ kW	Efficiency $\eta$ in % IEC IE class							
	IE3 Premium Efficiency				IE4 Super Premium Efficiency			
	2-pole	4-pole	6-pole	8-pole	2-pole	4-pole	6-pole	8-pole
0.18	65.9	69.9	63.9	58.7	70.8	74.7	70.1	67.2
0.20	67.2	71.1	65.4	60.6	71.9	75.8	71.4	68.4
0.25	69.7	73.5	68.6	64.1	74.3	77.9	74.1	70.8
0.37	73.8	77.3	73.5	69.3	78.1	81.1	78.0	74.3
0.40	74.6	78.0	74.4	70.1	78.9	81.7	78.7	74.9
0.55	77.8	80.8	77.2	73.0	81.5	83.9	80.9	77.0
0.75	80.7	82.5	78.9	75.0	83.5	85.7	82.7	78.4
1.1	82.7	84.1	81.0	77.7	85.2	87.2	84.5	80.8
1.5	84.2	85.3	82.5	79.7	86.5	88.2	85.9	82.6
2.2	85.9	86.7	84.3	81.9	88.0	89.5	87.4	84.5
3.0	87.1	87.7	85.6	83.5	89.1	90.4	88.6	85.9
4.0	88.1	88.6	86.8	84.8	90.0	91.1	89.5	87.1
5.5	89.2	89.6	88.0	86.2	90.9	91.9	90.5	88.3
7.5	90.1	90.4	89.1	87.3	91.7	92.6	91.3	89.3
11	91.2	91.4	90.3	88.6	92.6	93.3	92.3	90.4
15	91.9	92.1	91.2	89.6	93.3	93.9	92.9	91.2
18.5	92.4	92.6	91.7	90.1	93.7	94.2	93.4	91.7
22	92.7	93.0	92.2	90.6	94.0	94.5	93.7	92.1
30	93.3	93.6	92.9	91.3	94.5	94.9	94.2	92.7
37	93.7	93.9	93.3	91.8	94.8	95.2	94.5	93.1
45	94.0	94.2	93.7	92.2	95.0	95.4	94.8	93.4
55	94.3	94.6	94.1	92.5	95.3	95.7	95.1	93.7
75	94.7	95.0	94.6	93.1	95.6	96.0	95.4	94.2
90	95.0	95.2	94.9	93.4	95.8	96.1	95.6	94.4
110	95.2	95.4	95.1	93.7	96.0	96.3	95.8	94.7
132	95.4	95.6	95.4	94.0	96.2	96.4	96.0	94.9
160	95.6	95.8	95.6	94.3	96.3	96.6	96.2	95.1
200 ... 375	95.8	96.0	95.8	94.6	96.5	96.7	96.3	95.4

#### Background information

Comprehensive laws have been introduced in the European Union (EU) with the objective of reducing energy consumption and therefore CO<sub>2</sub> emissions. EU directive 2019/1781 handles the energy consumption or efficiency of induction motors in the industrial environment. This regulation is in force in every country of the European Economic Area. The main contents of and exceptions are explained below.

For more information on internationally applicable standards and legal requirements, visit:

[www.siemens.com/international-efficiency](http://www.siemens.com/international-efficiency)

#### Regulation (EU) 2019/1781

##### Exceptions

- Motors that are designed to be operated totally submerged in a liquid
- Motors fully integrated into a product (e.g. a gearbox, pump, fan or compressor) whose energy efficiency cannot be measured independently of this product
- Motors that are specially designed for operation under the following conditions:
  - At altitudes greater than 4000 meters above sea level
  - Where ambient temperatures exceed 60 °C
  - At maximum operating temperatures above 400 °C
  - At ambient temperatures below -30 °C
  - With cooling liquid temperatures at the product intake of below 0 °C or above 32 °C
  - Motors in hazardous zones in the sense of directive 2014/34/EU of the European Parliament and the Council that are designed and certified for mining applications
  - Motors with an integrated brake that is an integral part of the inner motor design and can neither be removed or powered from a separate source when testing the motor efficiency
  - Motors with an integrated speed control (compact drives), whose energy efficiency cannot be tested independently of the speed control

The following motors are not involved:

- Pole-changing motors
- Synchronous motors
- Totally enclosed, naturally ventilated motors (TENV motors);
- Motors specifically developed for converter operation according to IEC 60034-25

##### Note:

Different minimum efficiency class requirements apply in China, Korea, and Australia. Other countries will be available soon.

#### Motors for the North American market

The Energy Policy Act (EPA Act) was superseded in December 2010 by the Energy Independence Security Act (EISA).

The following motors must fulfill the NEMA Premium Efficient Level:

- 1 hp (0.75 kW) ... 500 hp (373 kW): 2 and 4-pole
- 1 hp (0.75 kW) ... 350 hp (261 kW): 6-pole
- 1 hp (0.75 kW) ... 250 hp (186 kW): 8-pole
- 2, 4, 6 and 8-pole
- ≤ 600 V
- NEMA Design A, B or C. IEC Design N or H

For details, see NEMA MG1 Table 12-12.1

#### Abbreviations

**NEMA:** National Electrical Manufacturers Association  
**IEC:** International Electrotechnical Commission

**Geared motor noise**

SIMOGEAR geared motors have noise levels below the permissible noise levels defined for gearboxes in VDI Guideline 2159 and for motors in IEC 60034-9.

When used in conjunction with gearboxes, the motor noise values  $L_{pFA}$  or  $L_{WA}$  increase on average by 3 to 5 dB (A).

The circumferential velocity of the motor pinion has a significant influence on the additional gearbox noise level. This is the reason that higher speeds or low transmission ratios result in higher noise.

Here, SIMOGEAR geared motors provide a decisive advantage, as the motor plug-on pinion allows transmission ratios of up to 12 in the input stage.

Code	Description	Unit
$L_{pFA}$	A-weighted measuring-surface sound pressure level	dB (A)
$L_{WA}$	Sound power level	dB (A)

**Motor noise in line operation**

The noise level is measured according to an ISO 1680 in a low-reflection room and is specified as an A-weighted measuring surface sound pressure level  $L_{pFA}$  in dB (A). This value is the spatial average value of the sound pressure levels measured at the measuring surface. The measuring surface is a cube 1 m away from the surface of the motor. The sound power level  $L_{WA}$  is also specified in dB (A).

The values specified in the motor selection tables apply to the motor without gearbox at 50 Hz

[Selection and ordering data, see page 9/18.](#)

The tolerance is +3 dB. At 60 Hz, the values are approximately 4 dB (A) higher. Noise values for converter operation on request.

**Direction of rotation**

**Overview**

All geared motors are connected as standard so that the motor rotates in the clockwise direction.

It is necessary to specify the desired direction of rotation of the output shaft when ordering a geared motor with backstop.

Note:

For bevel gearboxes B and K, helical worm gearboxes C, and worm gearboxes S, the direction of rotation must be specified when viewing the DE (A) or NDE (B).

The direction of rotation option cannot be selected for the electric-monorail geared motors.

Direction of rotation	Abbreviation	Description	Additional identification code -Z with order code 2KJ3... -.....-Z	Order code
<b>Clockwise</b>	CW	Clockwise direction of rotation (when viewing the input/output shaft)		<b>K18</b>
<b>Counterclockwise</b>	CCW	Counterclockwise direction of rotation (when viewing the input/output shaft)		<b>K19</b>

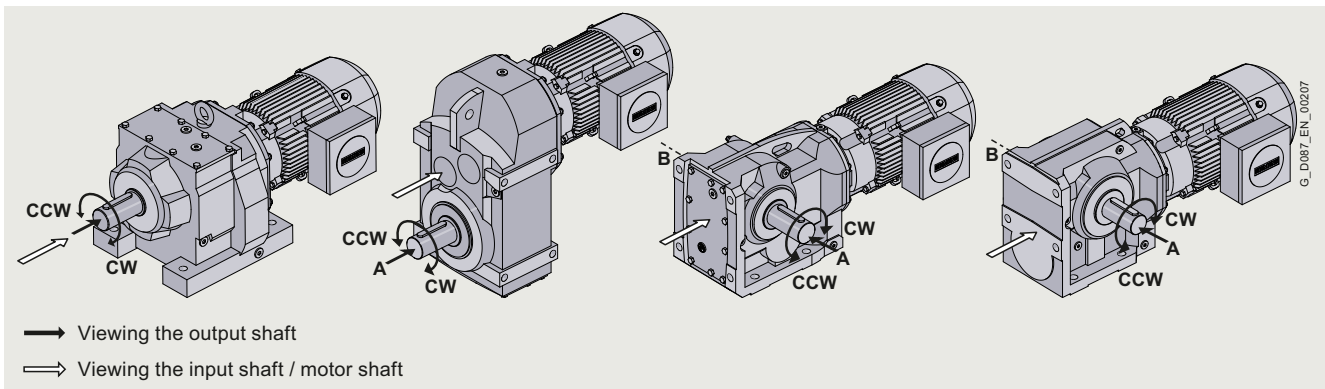


Fig. 1/20 Definition of the direction of rotation

**Direction of rotation, input to output**

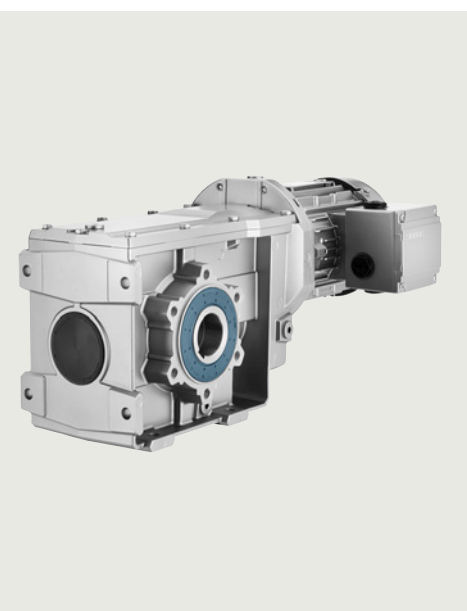
Gearbox type	Gearbox size	Gearbox stages	Output side	Direction of rotation	
				Input shaft	Output shaft
<b>Z</b>	19 ... 189	2	-	CW	CW
<b>D</b>	19 ... 189	3	-	CW	CCW
<b>FZ</b>	29 ... 189	2	-	CW	CW
<b>FD</b>	29 ... 189	3	-	CW	CCW
<b>B</b>	19 ... 49	2	A	CW	CW
			B	CW	CCW
<b>K</b>	39 ... 189	3	A	CW	CCW
			B	CW	CCW
<b>C</b>	29 ... 89	2	A	CW	CW
			B	CW	CCW
<b>S</b>	09 ... 29	1	A	CW	CCW
			B	CW	CW

## Introduction

### Notes

1



**2/2 Determining the drive data**

- 2/2 Configuring sequence
- 2/4 Checklist

**2/6 Configuring a gearbox**

- 2/6 Standards
- 2/6 Gearbox efficiency
- 2/6
  - Helical, parallel shaft and bevel gearboxes
- 2/6
  - Helical worm and worm gearboxes
- 2/6
  - Self-locking with worm gearboxes
- 2/6
  - Efficiency optimization
- 2/6
  - Splashing losses
- 2/7 Service factor
  - Determining the required service factor
  - Determining the service factor driven machine
- 2/7
  - Mass acceleration factor
- 2/8
  - Determining the service factor ambient temperature
- 2/8
  - Determining the service factor short-time duty
- 2/9 Torque
  - Required torque
  - Maximum motor torque
- 2/9 Input speed
- 2/9 Tandem gearboxes
  - Checking the maximum motor power
  - Protective measures
  - Brake motors
  - Preventing gearbox blockage
- 2/10 Gearbox fastening
- 2/11 Shaft load and bearing service life
  - Available radial force
  - Additional factor C for the transmission element type
- 2/11
  - Additional factor T for ambient temperature
- 2/11
  - Permissible radial force
- 2/11
  - Permissible axial force
- 2/11
  - Higher permissible radial and axial forces
- 2/12
  - Definition of the point of application of radial and axial forces
- 2/12
  - Radial force conversion for out-of-center force application point
- 2/14 Shaft load and bearing service life for electric-monorail gearboxes EHB
- 2/16 Permissible torque for SIMOLOC assembly system

**2/17 Configuring a three-phase motor**

- 2/17 Determining the duty type
- 2/20 Switching frequency
- 2/21 Additional moments of inertia
- 2/21 Line feeder cables
  - Undervoltage
- 2/21 Motor protection
  - Current-dependent protective devices
  - Temperature-dependent protective devices

**2/17 Configuring a three-phase motor**

- 2/21 Coolant temperature and installation altitude
- 2/22 Degrees of protection
- 2/22 Cooling and ventilation
  - Forced ventilation
- 2/22 Bearing system

**2/23 Configuring a brake**

- 2/23 Overview
- 2/23 Determining the braking torque
- 2/23 Braking torques as a function of the speed and permissible speed limits
- 2/23 Braking energy per braking operation
- 2/23 Service life of the brake lining
- 2/23 Brake service life
- 2/24 Brake control
  - Definition of switching times (VDI 2241)
  - Fast brake application
  - Fast brake release
- 2/24 Brake switching time
- 2/25 Braking distance and positioning accuracy
- 2/25 Cyclic duration factor
- 2/25 Rated torque and holding torque

**2/26 Configuring an encoder**

- 2/26 Incremental encoders
- 2/27 Absolute encoders

**2/28 Configuring the functionally safe mounted components**

- 2/28 Overview
- 2/28 Functionally safe brake
- 2/29 Functionally safe rotary encoders

**2/30 Configuring the motor for converter operation**

- 2/30 Operation of geared motors on a frequency converter
- 2/30 Motor characteristic
- 2/30 Utilization in accordance with temperature class F
  - 2/31 Peak load / acceleration torque
  - 2/31 Permissible voltage stress
  - 2/31 Bearing currents
  - 2/31 Mechanical load, grease service life

**2/32 Configuring a motor in an ATEX version**

- 2/32 Explosion-protected motors
  - Classification of zones
  - Types of protection
  - Device marking
  - Technical specifications
- 2/34
  - Type of protection Ex tc IIIB for use in Zone 22
  - Type of protection Ex ec for use in Zone 2
- 2/34 Converter operation
  - Order administration for MB motors for converter operation

# Configuring guide

## Determining the drive data

### Configuring sequence

#### Overview

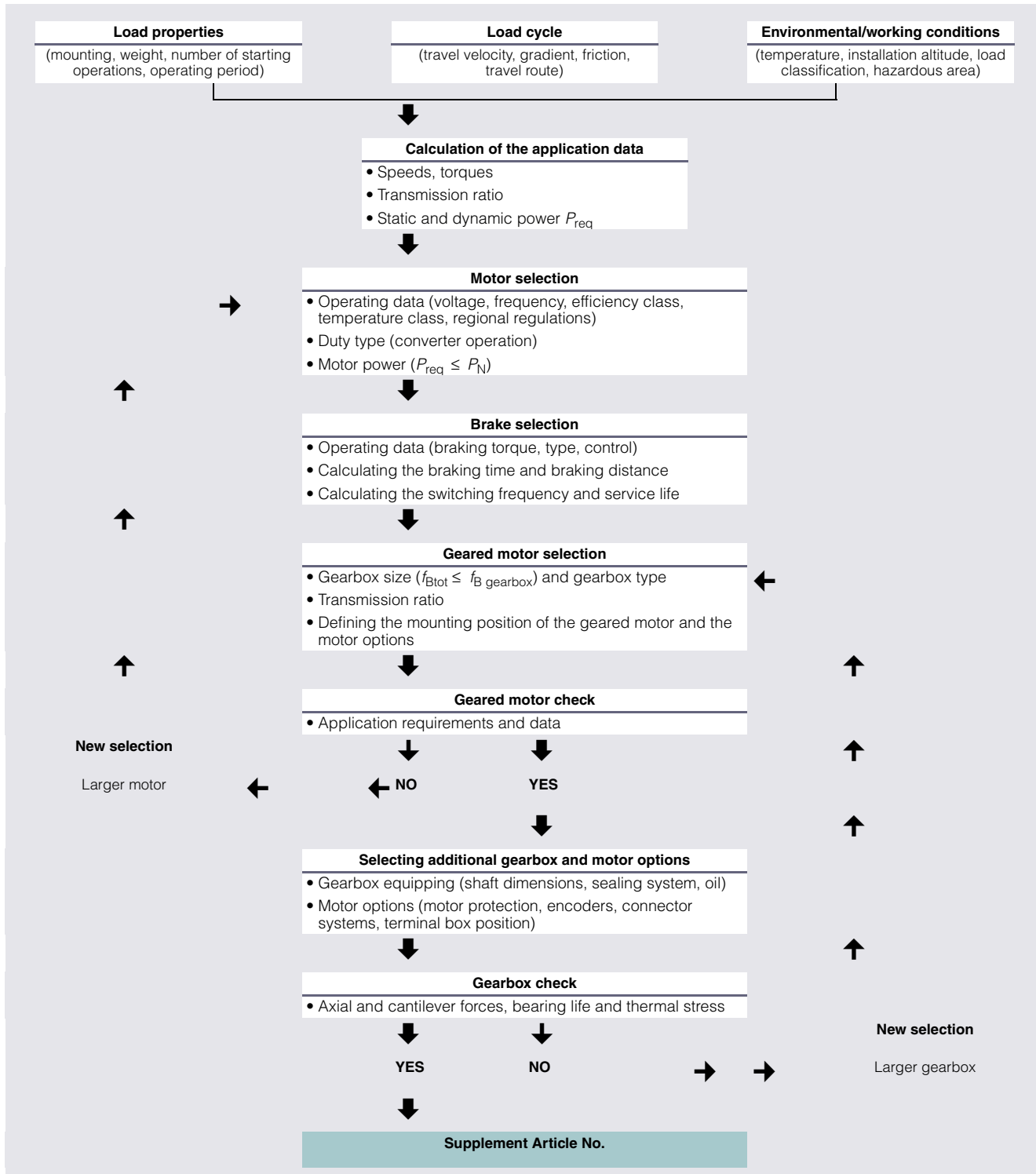
General configuring notes are provided for the standard versions in this catalog.

SIMOGEAR geared motors permit individual solutions to be created for a wide range of drive applications. In order to select the correct drive, specific data for the application must initially be known or determined.

For drives operating under special conditions, e.g. frequent reversing, short-time or intermittent duty, abnormal temperatures, reversal braking, extreme cantilever forces at the gearbox output shaft, etc. please contact your Siemens contact person with all of your technical questions.

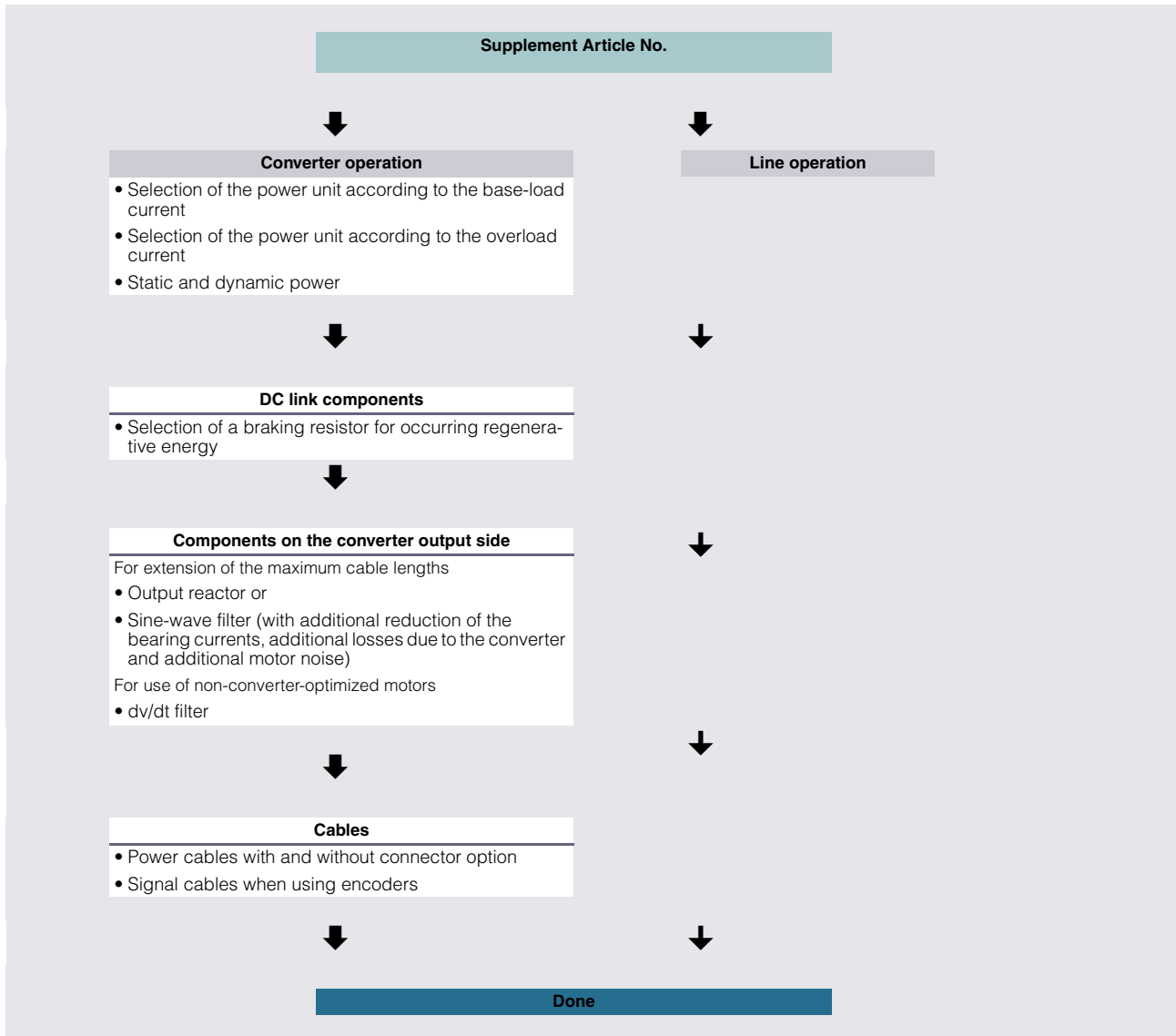
More information is available on the internet at: [www.siemens.com/gearedmotors](http://www.siemens.com/gearedmotors)

The flow diagram illustrates the process for selecting and dimensioning a geared motor using a traction drive as an example. However, the specific requirements and constraints associated with the application in question must always be taken into account.



Overview

2



## Configuring guide

### Determining the drive data

#### Checklist

2

General		Basic version and load data	
	<b>Gearbox type:</b>	<input type="checkbox"/> Helical gearbox <input type="checkbox"/> Parallel shaft gearbox <input type="checkbox"/> Bevel gearbox <input type="checkbox"/> Helical worm gearbox <input type="checkbox"/> Worm gearbox	
	<b>Power rating:</b>	_____ kW	
	<b>Max. output speed:</b>	_____ rpm	<b>Output torque:</b> _____ Nm
	<b>Service factor:</b>	_____	
	<b>Starting operations/hour:</b>	_____ s/h	
	<b>Line voltage:</b>	_____ V	
	<b>Line frequency:</b>	<input type="checkbox"/> 50 Hz <input type="checkbox"/> 60 Hz <input type="checkbox"/> For converter operation <input type="checkbox"/> Maximum frequency _____ Hz	
	<b>Operating period/day:</b>	<input type="checkbox"/> 8 hours <input type="checkbox"/> 16 hours <input type="checkbox"/> 24 hours	
General		Environmental conditions	
	<b>Explosion protection:</b>	<input type="checkbox"/> EU directive 2014/34/EU (ATEX) <input type="checkbox"/> Ex atmosphere gas <input type="checkbox"/> Ex atmosphere dust <input type="checkbox"/> Category 2 <input type="checkbox"/> IIB / <input type="checkbox"/> IIC explosion group <input type="checkbox"/> IIIB / <input type="checkbox"/> IIIC explosion group <input type="checkbox"/> Category 3 Temperature class T_____ Max. surface temperature _____ °C	
	<b>Installation altitude:</b>	_____ m	
	<b>Air humidity:</b>	_____ % <input type="checkbox"/> Outdoor operation <input type="checkbox"/> Increased environmental stress	
	<b>Temperature:</b>	from _____ to _____ °C <input type="checkbox"/> Normal environmental <input type="checkbox"/> Aggressive environmental stress	
	<b>Brief description of the system:</b> (e.g. sector, conveyor system, etc.)	_____	

Gearbox		Mounting and mounting position	
	<b>Mounting position:</b>	<input type="checkbox"/> M1 <input type="checkbox"/> M2 <input type="checkbox"/> M3 <input type="checkbox"/> M4 <input type="checkbox"/> M5 <input type="checkbox"/> M6 Terminal box position: _____ <input type="checkbox"/> Special mounting position Rotation angle: _____	
	<b>Mounting type:</b>	<input type="checkbox"/> Foot-mounted design <input type="checkbox"/> Flange-mounted design <input type="checkbox"/> Housing flange design <input type="checkbox"/> Shaft-mounted design <input type="checkbox"/> Foot/flange-mounted design	
Gearbox		Shafts	
	<b>Design:</b>	<input type="checkbox"/> Solid shaft with/without feather key <input type="checkbox"/> Hollow shaft with feather key <input type="checkbox"/> Hollow shaft with shrink disk <input type="checkbox"/> Hollow shaft with splines <input type="checkbox"/> SIMOLOC assembly system	
	<b>Shaft dimensions:</b> (d x l)	_____ x _____ mm	
	<b>Other options:</b> (e.g. axial/radial force)	_____	

Motor		Electrical version	
	<b>Motor protection:</b>	<input type="checkbox"/> PTC thermistor <input type="checkbox"/> Winding thermostat <input type="checkbox"/> Pt1000 resistance thermometer	
Motor		Mechanical version	
	<b>Degree of protection:</b>	<input type="checkbox"/> IP55 <input type="checkbox"/> IP65 <input type="checkbox"/> IP56 <b>Connection type:</b> <input type="checkbox"/> Star <input type="checkbox"/> Delta	
	<b>Cooling &amp; ventilation:</b>	<input type="checkbox"/> Self ventilation <input type="checkbox"/> Forced ventilation	
	<b>Motor plugs:</b>	<input type="checkbox"/> HAN 10E <input type="checkbox"/> HAN K4/4 <input type="checkbox"/> Others _____ <input type="checkbox"/> HAN Q8 <input type="checkbox"/> HAN Q12	
Motor		Mounted components	
	<b>Brake:</b>	<input type="checkbox"/> Brake <input type="checkbox"/> Safety-related brake <input type="checkbox"/> Manual brake release Voltage: _____ V	
	<b>Encoder:</b>	<input type="checkbox"/> Incremental encoder <input type="checkbox"/> Absolute encoder <input type="checkbox"/> Prepared for encoder mounting <input type="checkbox"/> Functionally safe rotary encoder	
	<b>Other options:</b>	_____	

General options		Surface treatment	
	<b>Surface protection:</b>	<input type="checkbox"/> C1 <input type="checkbox"/> C2 <input type="checkbox"/> C3 <input type="checkbox"/> C4 <input type="checkbox"/> C5 <input type="checkbox"/> unpainted <input type="checkbox"/> C3 primed <input type="checkbox"/> C4 primed <input type="checkbox"/> RAL color: _____	
	<b>Other options:</b>	_____	

**Basic version****Power rating:** \_\_\_\_\_**Number of starts/hour:** \_\_\_\_\_ s/h**Line voltage:** \_\_\_\_\_ V**Line frequency:**  50 Hz  60 Hz  87 Hz **Maximum frequency:** \_\_\_\_\_ Hz**Brief description of the system:****Environmental conditions****Installation altitude:** \_\_\_\_\_ m Outdoor operation  Increased environmental stress**Air humidity:** \_\_\_\_\_ % Normal environmental stress  Aggressive environmental stress**Temperature:** from \_\_\_\_\_ to \_\_\_\_\_ °C**Trolley****Type of trolley:**  Trolley type 1 Trolley type 2: Trolley type 3 Front running wheel, driven Rear running wheel, driven**Dimensions:****H** \_\_\_\_\_ mm (Vertical distance between running wheel axis and center of gravity)**L1** \_\_\_\_\_ mm (Distance between running wheels)**L2** \_\_\_\_\_ mm (Horizontal distance between running wheel and center of gravity)**L3** \_\_\_\_\_ mm (Distance between swivel joints)**S** \_\_\_\_\_ mm (Center of gravity)**Track****Max. upward gradient:** \_\_\_\_\_ °**Height difference upward gradient:** \_\_\_\_\_ mm**Max. downward gradient:** \_\_\_\_\_ °**Height difference downward gradient:** \_\_\_\_\_ mm**Min. curve radius:** \_\_\_\_\_ mm**Design data****Weight of trolley:** \_\_\_\_\_ kg**Weight of load:** \_\_\_\_\_ kg**Wheel load** (of driving wheel on rail): \_\_\_\_\_ N**Distance from shaft shoulder to force application point x** \_\_\_\_\_ mm**Running wheel diameter:** \_\_\_\_\_ mm**Running wheel material:**  Polyurethane Other \_\_\_\_\_**Cyclic duration factor:** \_\_\_\_\_ %**Deceleration:** \_\_\_\_\_ m/sec<sup>2</sup>Upward gradient \_\_\_\_\_ m/sec<sup>2</sup>Downward gradient \_\_\_\_\_ m/sec<sup>2</sup>**Acceleration:** \_\_\_\_\_ m/sec<sup>2</sup>Upward gradient \_\_\_\_\_ m/sec<sup>2</sup>Downward gradient \_\_\_\_\_ m/sec<sup>2</sup>**Travel velocity:** min. \_\_\_\_\_ m/sec

max. \_\_\_\_\_ m/sec

Upward/downward gradient m/sec

## Configuring guide

### Configuring a gearbox

2

#### Standards

DIN/ISO	
DIN 743	Output shafts
ISO 281, ISO 76	Bearings
DIN 7190	Interference fits
DIN 6892	Parallel key connection
DIN 3990	Cylindrical gear toothing
DIN 3991	Bevel gear toothing
DIN 3996	Worm gear toothing

Calculation to AGMA available on request.

#### Gearbox efficiency

The efficiency of the gearbox is determined in part by the gear teeth, the rolling-contact bearing friction and the shaft sealing ring friction.

##### **Helical, parallel shaft and bevel gearboxes**

SIMOGEAR helical, parallel shaft, and bevel geared motors have a very high efficiency. Generally, efficiencies of 96 % (2-stage) and 94 % (3-stage) can be assumed. These gearbox types can be operated with energy-efficient motors to create an excellent solution.

##### **Helical worm and worm gearboxes**

The first stage of the helical worm gearbox is designed as a helical stage. With the optimally tuned transmission ratios of the worm stage, the best possible overall efficiency is achieved, which is considerably higher than that of worm gearboxes alone.

Precise efficiency data can be found in the tables in chapter "Helical worm gearboxes".

Owing to the high degrees of efficiency, the SIMOGEAR helical worm gearboxes are not self-locking.

##### Run-in period

The tooth flanks on new helical worm and worm gearboxes will not yet be fully smoothed, meaning that the friction angle will be greater and efficiency lower during the run-in period. The higher the transmission ratio, the more pronounced the effect.

The running-in process should take approximately 24 hours of operation at full load. In most cases, the catalog values will then be reached.

##### **Self-locking with worm gearboxes**

In respect of restoring torques on worm gearboxes, the efficiency is considerably reduced in comparison to standard efficiency. The restoring efficiency can be calculated as follows:  $\eta' = 2 - 1/\eta$ . At a standard efficiency of  $\eta \leq 0.5$ , worm gearboxes are usually self-locking, which is determined by the particular lead angle of the worm gear teeth.

Self-locking only occurs with certain combinations of SIMOGEAR gearboxes and is not always of benefit, as the associated loss of efficiency is then relatively high, which in turn requires increased motor power.

A worm gearbox is "self-locking while stationary" (static self-locking), if it is not possible to start from stationary when the worm wheel is driving.

A worm gearbox is "self-braking while running" (dynamic self-locking), if it is not possible to continue running when the worm wheel is driving while the gearbox is running – that is, if the running gearbox comes to a stop while the worm wheel is driving.

Shocks can neutralize self-locking.

A self-locking gearbox is therefore no substitute for a brake or backstop. If you want to use the self-locking braking effect for a technical purpose, please contact us.

##### **Efficiency optimization**

As a result of the large range of transmission ratios, in many cases, instead of a 3-stage gearbox, a 2-stage SIMOGEAR gearbox can be used.

This means that the efficiency is improved by approximately 2 % when compared to conventional drives.

Further, the efficiency can be improved by optimizing the mounting position and the input speed.

##### **Splashing losses**

For certain gearbox types of construction, the first stage can be completely immersed in the gearbox oil. In the case of large gearboxes with a high input speed, particularly with vertical mounting positions, this may lead to increased splashing losses, which cannot be neglected.

If you wish to use gearboxes such as these, then please contact Siemens. If at all possible, you should choose horizontal types of construction in order to keep splashing losses to a minimum.

### Service factor

The service factor  $f_B$  is a safety factor for the gearboxes that takes the operating conditions of the drive into account.

The following applies to selecting a suitable drive:

$$f_B \geq f_{Breq}$$

The gearbox size or rated gearbox torque and the resulting service factor are not standardized and depend on the manufacturer.

### Service factor ( $f_B$ )

The service factor is calculated from the drive data you selected and can be obtained from the [Siemens Product Configurator](#).

### Determining the required service factor ( $f_{Breq}$ )

In normal operation, i.e. with a uniform load provided by the driven machine, small masses to be accelerated, and a low number of switching operations, the service factor of  $f_{Breq} = 1$  can be selected.

For operating conditions that deviate from this, the required service factor must be calculated using the following formulas.

For helical, parallel shaft and bevel gearboxes

$$f_{Breq} = f_{B1} \cdot f_{BT}$$

For helical worm and worm gearboxes

$$f_{Breq} = f_{B1} \cdot f_{B2} \cdot f_{BT}$$

### Determining the service factor driven machine ( $f_{B1}$ )

The service factor of the driven machine  $f_{B1}$  is determined from the load classification, switching frequency, and operating period per day.

Load groups of driven machines

Load classification	Mass acceleration factor ( $m_{AF}$ )	Driven machine (examples)
<b>I</b> Almost shock-free	$\leq 0.3$	Electric generators, belt conveyors, apron conveyors, screw conveyors, lightweight elevators, electric hoists, machine tool feed drives, turbo blowers, centrifugal compressors, mixers and agitators when mixing materials with uniform density
<b>II</b> Moderate shock loads	$\leq 3$	Machine tool main drives, heavy elevators, slewing gear, cranes, shaft ventilators, mixers and agitators when mixing materials with non-uniform densities, reciprocating pumps with multiple cylinders, metering pumps
<b>III</b> Heavy shock loads	$\leq 10$	Punching presses, shears, rubber kneaders, machinery used in rolling mills and the iron and steel industry, mechanical shovels, heavy centrifuges, heavyweight metering pumps, rotary drilling rigs, briquetting presses, pug mills

### Mass acceleration factor ( $m_{AF}$ )

The mass acceleration factor  $m_{AF}$  is calculated as follows:

$$m_{AF} = \frac{J_X}{(J_{mot} + J_B + J_Z)}$$

All external moments of inertia are moments of inertia of the driven machine and the gearbox, which are to be reduced to the motor speed.

The conversion is made using the following formula:

$$J_X = J_2 \cdot \left(\frac{n_2}{n_1}\right)^2 = \frac{J_2}{(i)^2}$$

In most cases the relatively insignificant moment of inertia of the gearbox can be ignored.

The mass acceleration factor  $m_{AF}$  is calculated as follows with reference to the gearbox and the adapter:

$$m_{AF} = \frac{J_X + J_G + J_{AD}}{(J_{mot} + J_B + J_Z)}$$

Code	Description	Unit
$f_B$	Service factor	-
$f_{B1}$	Service factor driven machine	-
$f_{B2}$	Service factor short-time duty	-
$f_{Breq}$	Required service factor	-
$f_{BT}$	Service factor ambient temperature	-
$i$	Transmission ratio	-
$J_2$	Moment of inertia of the load referred to the output speed of the gearbox	kgm <sup>2</sup>
$J_{AD}$	Moment of inertia of the adapter referred to the input speed	kgm <sup>2</sup>
$J_B$	Moment of inertia of the brake	kgm <sup>2</sup>
$J_G$	Moment of inertia of the gearbox referred to the input speed	kgm <sup>2</sup>
$J_{mot}$	Moment of inertia of the motor	kgm <sup>2</sup>
$J_X$	Moment of inertia of the load referred to the input speed	kgm <sup>2</sup>
$J_Z$	Additional moment of inertia of a high inertia fan	kgm <sup>2</sup>
$m_{AF}$	Mass acceleration factor	-
$n_1$	Input speed of the gearbox	rpm
$n_2$	Output speed of the gearbox	rpm

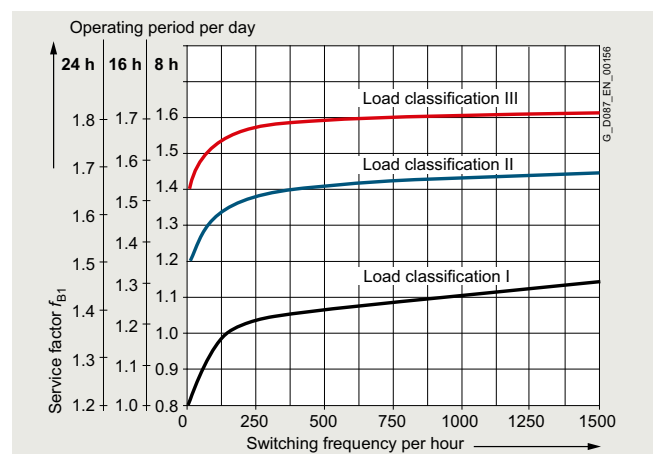


Fig. 2/1 Service factor  $f_{B1}$

## Configuring guide

### Configuring a gearbox

2

#### Service factor

##### Determining the service factor ambient temperature ( $f_{BT}$ )

If the drive warms up to an operating temperature above  $-20\text{ °C}$  at max. 70 % load,  $f_{BT} = 1$  can be set.

For helical, parallel shaft and bevel gearboxes

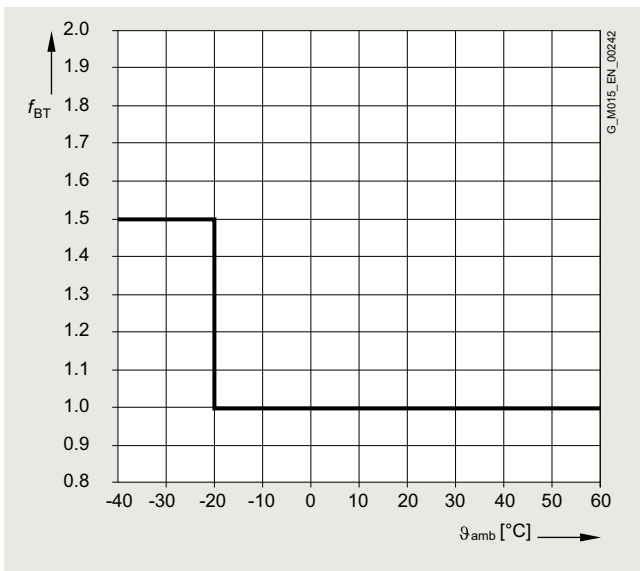


Fig. 2/2 Service factor ambient temperature

For helical worm and worm gearboxes

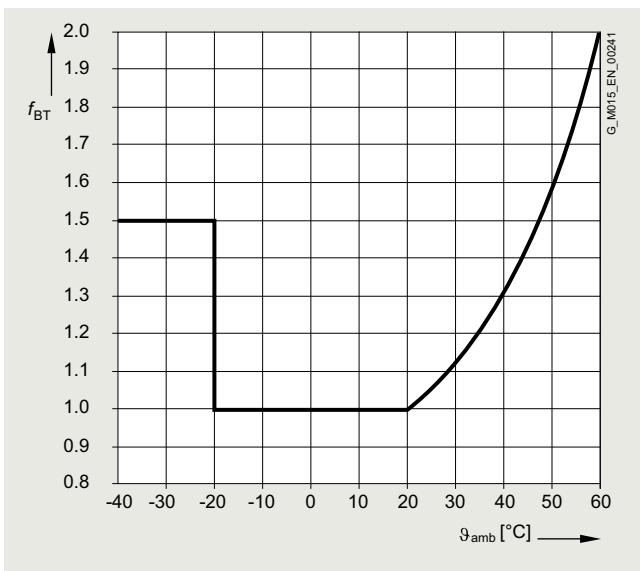


Fig. 2/3 Service factor ambient temperature for worm gearboxes

##### Determining the service factor short-time duty ( $f_{B2}$ )

For helical worm and worm gearboxes

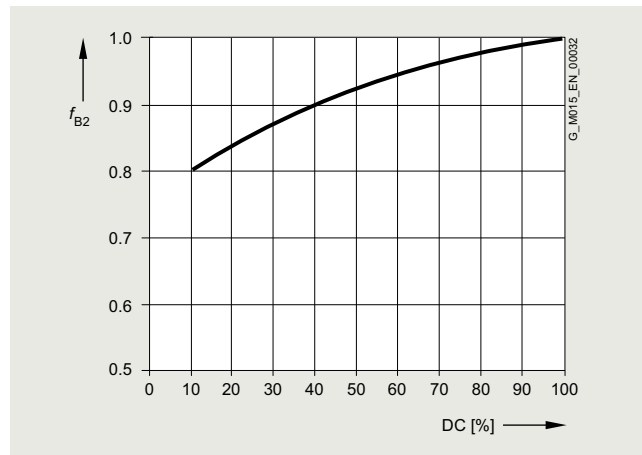


Fig. 2/4 Service factor short-time duty

##### Note:

When selecting and dimensioning drives with the following special application conditions, please contact Siemens:

- Frequent reversing
- Short-time and intermittent operation
- Abnormal temperatures
- Reversal braking
- Extreme and/or circulating radial forces at the gearbox output shaft
- Fluctuating loads



### Torque

#### Required torque

Once the load situation (drive data) and the service factor have been clarified, then the required output torque can be determined.

$$T_2 = \frac{P_{\text{mot}} \cdot 9550}{n_1 / (i \cdot \eta)} = \frac{P_{\text{mot}} \cdot 9550}{n_2} \cdot \eta$$

#### Maximum motor torque

The maximum output torque  $T_{2N}$  of the gearbox must not be exceeded. For this purpose, it must be checked that the maximum motor torque  $T_{1\text{max}}$  is below the resulting output torque of the gearbox:

$$T_{1\text{max}} \leq \frac{T_{2N}}{i \cdot \eta}$$

This test is particularly important for small service factors  $f_B < 1$ , gearboxes with high transmission ratios and tandem gearboxes.

Code	Description	Unit
$\eta$	Gearbox efficiency	%
$i$	Transmission ratio	-
$n_1$	Input speed of the gearbox	rpm
$n_2$	Output speed of the gearbox	rpm
$P_{\text{mot}}$	Motor power	kW
$T_{1\text{max}}$	Maximum permissible motor torque	Nm
$T_2$	Required output torque of the driven machine	Nm
$T_{2N}$	Maximum output torque of the gearbox	Nm

### Input speed

For an identical power and output speed, in the selection tables 4-pole geared motors have priority over 6-pole motors.

As result of the very wide range of transmission ratios of SIMOGEAR gearboxes, it is hardly necessary to use motors with other pole numbers. In addition to good availability worldwide, 4-pole motors generally offer the optimum solution regarding price, length, noise level and service life.

Further, from the modular system, motors with other pole numbers can be mounted. As a consequence, the following special combinations can be implemented:

- Extremely high output speeds (2-pole motors)
- Extremely low output speeds (8-pole motors)
- Lower noise solutions (6-pole or 8-pole motors)

For converter operation, the gearboxes are driven at variable speeds.

When configuring the system, we recommend that the maximum input speed in continuous operation is maintained, wherever possible, at 1500 rpm.

At higher motor speeds above 1500 rpm you will generally experience higher noise levels and a lower bearing service life. This depends to a large extent on the transmission ratio and gearbox size in question. Furthermore, higher speeds additionally influence the thermal properties, the service life of the shaft sealing rings and the service intervals of the gearbox.

### Tandem gearboxes

An additional helical gearbox is mounted in front of the main gearbox on tandem gearboxes, allowing the gear to generate very low output speeds.

The SIMOGEAR product portfolio includes four-stage, five-stage and six-stage gearboxes.

When a gearbox version with low output speeds is selected, additional checks may need to be carried out when the gearbox is configured.

#### Checking the maximum motor power

The maximum motor power  $P_N$  connected to the gearbox must be reduced according to the maximum output torque at the gearbox  $T_{2N}$ . For this purpose, the maximum permissible motor torque  $T_{1\text{max}}$  must be calculated and the relevant motor current value then determined.

#### Protective measures

The following precautions must be taken in order to ensure that the continuous current consumption of the motor never exceeds the calculated maximum motor torque  $T_{1\text{max}}$ :

- Line operation:  
Set the tripping current of the motor circuit breaker to this current value.
- Converter operation:  
Limit the output current of the converter according to the calculated motor current.

#### Brake motors

The braking torque  $T_{\text{br}}$  must be limited according to the maximum permissible motor torque  $T_{1\text{max}}$  for tandem geared motors with a brake.

In this case, the maximum permissible braking torque corresponds to twice the value of the motor torque. Please contact Siemens for advice about higher switching frequencies.

$$T_{\text{brmax}} = 2 \times T_{1\text{max}}$$

#### Preventing gearbox blockage

Tandem gearboxes must be protected against blockage at the output end. Blockage can result in indeterminable torques and shaft loads and cause irreparable damage to the gearbox. If the risk of blockage cannot be eliminated, you can install friction clutches, for example.

Code	Description	Unit
$P_N$	Rated motor power	kW
$T_{1\text{max}}$	Maximum permissible motor torque	Nm
$T_{2N}$	Maximum output torque of the gearbox	Nm
$T_{\text{brmax}}$	Maximum braking torque	Nm

## Configuring guide

### Configuring a gearbox

#### Gearbox fastening

Gearboxes and geared motors are normally secured by bolts of property 8.8.

When the largest possible motor frame size is attached to the gearbox and with a higher load classification, elevated levels of vibration and/or smaller service factors, further measures need to be taken for flange-mounted designs of gearboxes and geared motors.

Recommended bolt property class for DZ/ZZ and DF/ZF:

Helical gearboxes DZ/ZZ and DF/ZF with the smallest available output flanges must be bolted to the mounting surface with bolts of grade 10.9 (see table).

Gearbox type	Flange	Property class of bolt/nut
DZ/ZZ29 DF/ZF29	A120	10.9 <sup>1)</sup>
DZ/ZZ39 DF/ZF39	A120	10.9 <sup>1)</sup>
DZ/ZZ49 DF/ZF49	A140	10.9
DZ/ZZ59 DF/ZF59	A160	10.9
DZ/ZZ69 DF/ZF69	A200	10.9
DZ/ZZ79 DF/ZF79	A250	10.9
DZ/ZZ89 DF/ZF89	A300	10.9
DZ/ZZ109 DF/ZF109	A350	10.9
DZ/ZZ129 DF/ZF129	A350	10.9
DZ/ZZ149 DF/ZF149	A450	10.9
DZ/ZZ169 DF/ZF169	A450	10.9
DZ/ZZ189 DF/ZF189	A550	10.9

<sup>1)</sup> Use suitable washers underneath the bolt head

We recommend that you consider the following possibilities:

- Selection of a larger output flange
- Use of bolts of property class 10.9
- Use of an anaerobic adhesive to improve the friction lock between the gearbox and the mounting surface

Recommended bolt quality for FF/FAF and KF/KAF:

Parallel shaft gearboxes FF/FAF and bevel gearboxes KF/KAF in combination with larger motors must be bolted to the mounting surface with bolts of grade 10.9 (see table).

Gearbox type	Flange	Motor frame size												
		63	71	80	90	100	112	132	160	180	200	225	250	
FF/FAF39 KF/KAF39	A160	8.8	8.8	8.8	10.9	10.9								
FF/FAF49 KF/KAF49	A200	8.8	8.8	8.8	8.8	10.9	10.9							
FF/FAF69 KF/KAF69	A250	8.8	8.8	8.8	8.8	8.8	8.8	10.9						
FF/FAF79 KF/KAF79	A250	8.8	8.8	8.8	8.8	8.8	8.8	10.9						
FF/FAF89 KF/KAF89	A300		8.8	8.8	8.8	8.8	10.9	10.9	10.9					
FF/FAF109 KF/KAF109	A350			8.8	8.8	8.8	8.8	8.8	10.9	10.9				
FF/FAF129 KF/KAF129	A450				8.8	8.8	8.8	8.8	8.8	8.8	8.8			
FF/FAF149 KF/KAF149	A450				8.8	8.8	8.8	8.8	8.8	8.8	10.9	10.9	10.9	
FF/FAF169 KF/KAF169	A550					8.8	8.8	8.8	8.8	8.8	10.9	10.9	10.9	10.9
FF/FAF189 KF/KAF189	A660							8.8	8.8	8.8	8.8	8.8	8.8	10.9

### Shaft load and bearing service life

#### Available radial force

The radial forces either come from the driven machine (mixer, hoisting gear) or they are caused by the transmission elements.

The available radial force  $F_{Ravail}$  at the output shaft is obtained as follows:

- The required geared motor output torque  $T_2$
- Average diameter of the mounted transmission elements  $d_0$
- Transmission element type, e.g. sprocket wheel

The transmission element type determines the additional factor  $C$  (see table).

The ambient temperature determines the additional factor  $T$ .

$$F_{Ravail} = 2000 \cdot \frac{T_2}{d_0} \cdot C \cdot T$$

#### Additional factor C for the transmission element type

Transmission element	Explanation	Additional factor C
Gear wheel	> 17 teeth	1.00
	≤ 17 teeth	1.15
Sprocket wheel	≥ 20 teeth	1.00
	14 ... 19 teeth	1.25
	≤ 13 teeth	1.40
Toothed belts	Preloading force	1.50
V-belts	Preloading force	2.00
Flat belts	Preloading force	2.50
Agitator/mixer	Rotating radial force	2.50

#### Additional factor T for ambient temperature

Temperature range	Low-temperature factor T
-20 °C ... +60 °C	1.0
-21 °C ... -40 °C	1.5

#### Permissible radial force

The permissible radial force  $F_{R2}$  is determined by the required bearing service life, among other things. The nominal service life  $L_{h10}$  is determined in accordance with ISO 281. Normally, calculating the nominal bearing service life is completely adequate.

The bearing service life can be calculated for special operating conditions and in special cases on request, based on the modified service life  $L_{na}$ .

The selection tables specify the permissible radial force  $F_{R2}$  for the output shafts of the foot-mounted design with solid shaft "1" (see shaft designs from page 10/46). These table values refer to the force application point at the center of the shaft extension and are minimum values, which apply under the most unfavorable conditions (force application angle, mounting position, direction of rotation).

If the values in the table are not sufficient, or if other gearbox designs are being used, then please contact Siemens.

#### Permissible axial force

If no radial force is present, then max. 50 % of the permissible radial force can be applied as a permissible axial force  $F_{ax}$  (tension or compression).

#### Higher permissible radial and axial forces

The permissible radial force load can be increased, taking the force application angle  $\alpha$  and the direction of rotation into account. Installing reinforced bearings also means that higher loads are permitted on the output shaft.

If higher radial or axial forces or combined loads comprising radial and axial forces occur, then please contact Siemens.

#### Note:

Bevel gearboxes B and K and helical worm gearboxes C in type of construction M1 with foot mounting on the face side: A maximum of 50 % of the radial force  $F_{R2}$  specified in the tables is permissible.

Helical geared motors ZB and DB in foot/flange-mounted designs:

When transmitting torque through the flange surface, a maximum of 50 % of the radial force  $F_{R2}$  specified in the tables is permissible.

#### Variables for defining shaft load and bearing service life

Code	Description	Unit
$\alpha$	Force application angle	°
a	Gearbox constant	kNmm
b, d, l, y, z	Gearbox constants	mm
C	Additional factor to calculate the radial force	-
$d_0$	Average diameter of the mounted transmission element	mm
$F_{ax}$	Permissible axial force	N
$F_x$	Permissible radial force from out of center force application point	N
$F_{xperm1}$	Permissible radial force, limited by the bearing service life, at a distance of x from the shaft shoulder	N
$F_{xperm2}$	Permissible radial force, limited by the shaft strength, at a distance of x from the shaft shoulder	N
$F_{Ravail}$	Available radial force from the mounted transmission element	N
$F_{R2}$	Permissible radial force at the center of shaft extension (l/2)	N
$L_{h10}$	Nominal bearing service life	h
$L_{na}$	Modified bearing service life	h
T	Additional factor for ambient temperature	-
$T_2$	Geared motor output torque	Nm
x	Distance from the shaft shoulder up to the point where force is applied	mm

## Configuring guide

### Configuring a gearbox

#### Shaft load and bearing service life

##### Definition of the point of application of radial and axial forces

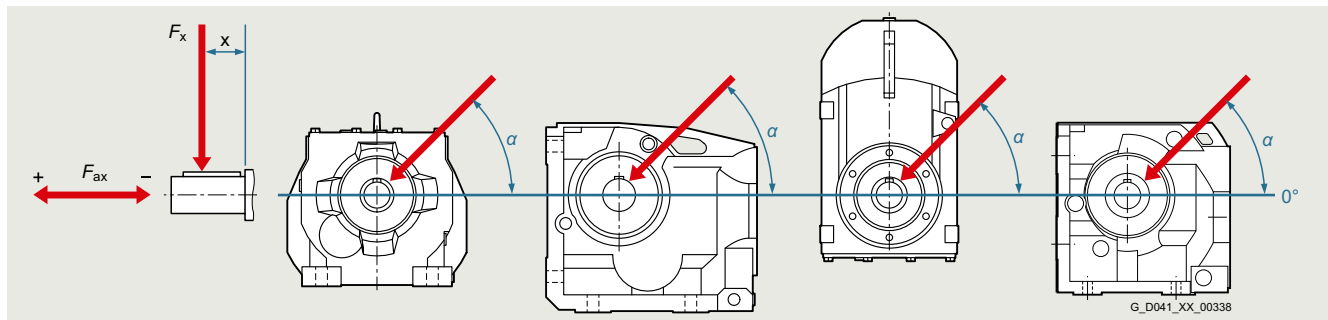


Fig. 2/5 Diagram showing force application point

##### Radial force conversion for out-of-center force application point

If the force is not applied at the center of the shaft extension, the permissible radial force must be calculated using the following formula.

The lower value of  $F_{xperm1}$  (bearing service life) and  $F_{xperm2}$  (strength) is the permissible radial force. The calculation is applicable without axial force.

Permissible radial force according to the bearing service life

$$F_{xperm1} = F_{R2} \cdot \frac{y}{(z + x)}$$

Permissible radial force according to the shaft strength

$$F_{xperm2} = \frac{a}{(b + x)}$$

Gearbox constants for calculating the radial force

Gearbox size	Constants			a kNmm	b mm	d mm	l mm
	y mm	z mm					
<b>Helical gearboxes Z and D</b>							
19	91	71		52.8	12	20	40
29	104	79		137	12	25	50
39	116	91		109	0	25	50
49	138	108		260	15	30	60
59	143.5	108.5		414	19	35	70
69	169	134		385	0	35	70
79	172.5	132.5		536	0	40	80
89	212.5	162.5		929	0	50	100
109	250	190		1212	0	60	120
129	297	227		2051	0	70	140
149	319	234		4930	0	90	170
169	398	293		7350	0	110	210
189	469	364		11235	0	120	210
<b>Helical gearboxes E</b>							
39	99.5	79.5		60	0	20	40
49	119.0	94.0		100	0	25	50
69	139.6	109.6		183	0	30	60
89	154.4	114.4		320	0	40	80
109	183.4	133.4		525	0	50	100
129	189.4	129.4		810	0	60	120
149	213.6	143.6		1120	0	70	140
<b>Parallel shaft gearboxes F</b>							
29	108.5	83.5		159	0	25	50
39	123.5	98.5		146	0	25	50
49	154.5	124.5		239	0	30	60
69	175	140		378	0	35	70
79	191	151		544	0	40	80
89	226	176		884	0	50	100
109	256	196		1500	0	60	120
129	324	254		2625	0	70	140
149	385	300		5525	0	90	170
169	460	355		7728	0	110	210
189	538	433		11655	0	120	210

### Shaft load and bearing service life

Gearbox constants for calculating the radial force

Gearbox size	Constants					
	y mm	z mm	a kNmm	b mm	d mm	l mm
<b>Bevel gearboxes B</b>						
19	97.5	77.5	38	0	20	40
29	117	97	83	0	20	40
39	143.5	113.5	209	0	30	60
49	175	140	392	0	35	70
<b>Bevel gearboxes K</b>						
39	123.5	98.5	152	0	25	50
49	154.5	124.5	235	0	30	60
69	175	140	378	0	35	70
79	191	151	556	0	40	80
89	226	176	916	0	50	100
109	256	196	1470	0	60	120
129	324	254	2800	0	70	140
149	385	300	5525	0	90	170
169	459.5	354.5	7350	0	110	210
189	538	433	10920	0	120	210
<b>Helical worm gearboxes C</b>						
29	117.5	97.5	84	0	20	40
39	123.5	98.5	157	0	25	50
49	154.5	124.5	236	0	30	60
69	171.5	136.5	410	0	35	70
89	220.0	175.0	736	0	45	90
<b>Worm gearboxes S</b>						
09	83.5	63.5	36	0	16	40
19	98.0	78.0	76	0	20	40
29	120.5	100.5	72	0	20	40

## Configuring guide

### Configuring a gearbox

2

#### Shaft load and bearing service life for electric-monorail gearboxes EHB

##### Available radial force EHB

The total available radial force comprises the force due to weight on the running wheel and the tangential force exerted by the torque. The weight distribution depends on the relevant trolley type and on the number of drives and running wheels. Forces are also exerted as a result of weight transfer during startup, braking and ascending travel. These forces must be taken into account in the available radial force calculation.

Your Siemens contact person will be pleased to provide configuring advice. In order to dimension the drive, we will need the completed [checklist on page 2/5](#).

##### Variables for defining shaft load and bearing service life

Code	Description	Unit
H	Vertical distance between running axis and center of gravity	mm
L1	Distance between running wheels	mm
L2	Horizontal distance between running wheel and center of gravity	mm
L3	Distance between swivel joints	mm
S	Center of gravity	mm

##### Trolley type 1

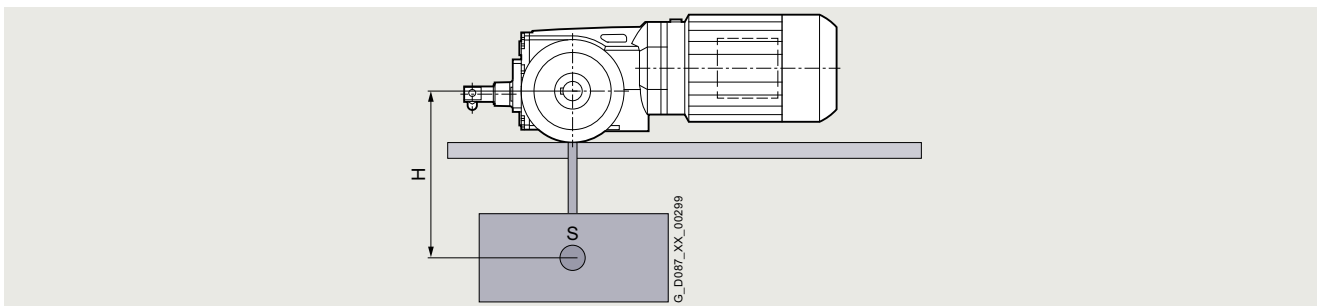


Fig. 2/6 Trolley type 1: 1 running wheel, one wheel is driven

##### Trolley type 2

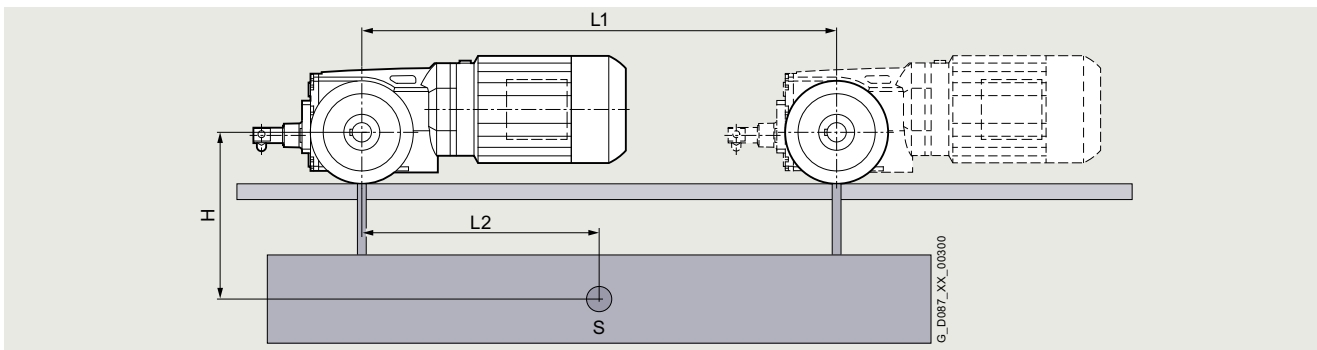


Fig. 2/7 Trolley type 2: 2 running wheels, one wheel at the front or rear is driven

##### Trolley type 3

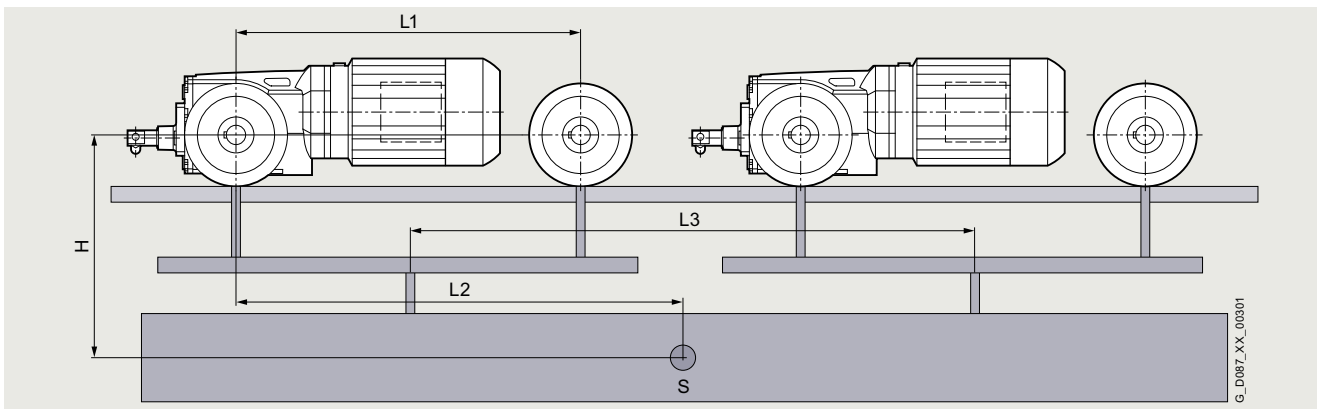


Fig. 2/8 Trolley type 3: 4 running wheels, 2 wheels are driven

### Shaft load and bearing service life for electric-monorail gearboxes EHB

#### Permissible radial force EHB

The selection tables specify the permissible radial force  $F_{R2}$ . The table values refer to the force application point  $x$ , see table "Gearbox constants for calculating the radial force" from page 2/12.

#### Note:

For BH.39 with 25 x 35 solid shaft, the permissible radial force  $F_x$  must always be calculated using the conversion below (even when  $x = 18$  mm), because the table values apply to a 30 x 50 solid shaft.

#### Radial force conversion for force application at distance other than $x$

When the distance  $x$  to the shaft shoulder is other than the value stated in the table, use the following formulas to convert the permissible radial force.

The lowest value of  $F_{xperm1}$  (bearing service life),  $F_{xperm2}$  (strength) and  $F_{Rmax}$  is the permissible radial force  $F_x$ . The calculation is applicable without axial force.

Permissible radial force according to the bearing service life

$$F_{xperm1} = F_{R2} \cdot \frac{y}{(z + x1)}$$

Permissible radial force according to the shaft strength

$$F_{xperm2} = \frac{a}{(b + x1)}$$

Permissible radial force for force application at distance other than  $x$

$$F_x \leq F_{xperm1}; F_{xperm2}; F_{R2max}$$

Condition: Available radial force  $\leq$  permissible radial force

Variables for defining shaft load and bearing service life

Code	Description	Unit
$\alpha$	Force application angle	°
a, b, d, l, y, z	Gearbox constants	Nmm / mm
$d_0$	Average diameter of the mounted transmission element	mm
$F_G$	Force due to weight	N
$F_{R2}$	Permissible radial force (from power table)	N
$F_{R2max}$	Maximum permissible radial force according to table "Gearbox constants for calculating the radial force" from page 2/12	N
$F_{Ravail}$	Available radial force	N
$F_x$	Permissible radial force from out of center force application point	N
$F_{xperm1}$	Permissible radial force, limited by the bearing service life, at a distance of $x$ from the shaft shoulder	N
$F_{xperm2}$	Permissible radial force, limited by the shaft strength, at a distance of $x$ from the shaft shoulder	N
RWC	Running wheel center	-
$x$	Distance from the shaft shoulder up to the force application point at running wheel center for $F_{R2}$ according to table "Gearbox constants for calculating the radial force" from page 2/12	mm
$x1$	Distance from the shaft shoulder up to the force application point at running wheel center for $F_x$	mm

#### Definition of the force application point EHB

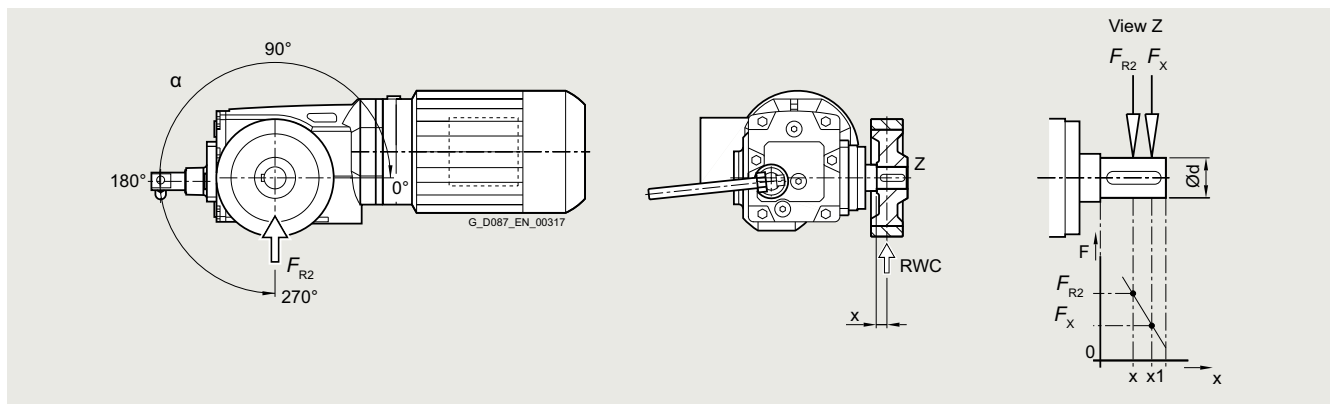


Fig. 2/9 Force application point

#### Gearbox constants for calculating the radial force

Gearbox size	Constants								Force application $x$ mm
	y	z	a	b	d	l	$T_2$	$F_{R2max}$	
	mm	mm	Nmm	mm	mm	mm	Nm	N	
<b>Light-load applications</b>									
BH.29	158	145	97 500	0	25	35	90	7 500	13
BH.39	170	162	216 000	0	25	35	200	12 000	18
BH.39	170	152	270 000	0	30	50	200	15 000	18
<b>Heavy-load applications</b>									
KH.49	199	171	333 000	0	30	60	420	18 500	18
KH.49	199	171	518 000	0	35	70	420	18 500	28
KH.69	239	211	700 000	0	45	90	600	25 000	28
KH.79	257	225	1 280 000	0	55	110	820	40 000	32

## Configuring guide

### Configuring a gearbox

2

#### Permissible torque for the SIMOLOC assembly system

It is important to note that the maximum permissible torque is dependent on the selected machine shaft diameter.

Diameter of customer's shaft	Max. permissible torque T2					
	Nm					
	29	39	49	69	79	89
<b>Metric shafts</b>						
20	115					
25	150	205				
30		290	375			
35			480	460	840	
40				600	1000	1110
50						1750
<b>Imperial shafts</b>						
0.75"	100					
1"	150	205				
1.1875"		290	375			
1.25"		290	415			
1.375"			480	460	840	
1.4375"			480	500	915	
1.5"				545	1000	
1.625"				600	1000	1180
1.75"						1375
1.9375"						1680
2"						1750



### Determining the duty type

The power ratings for continuous duty with constant load (duty type S1) are listed in the power tables. The motor power ratings listed in the catalog can be converted to the lower duty cycle using the corresponding  $k_{DC}$  factors for S1, S2, and S3 duty types.

$$P_{DC} = P_N \cdot k_{DC}$$

Code	Description	Unit
$P_{DC}$	Power for the new duty cycle	kW
$P_N$	Rated motor power	kW
$k_{DC}$	Factor for increased power	-

For increased power, you should note that the breakdown torque ratio must not fall below 1.6. This same regulation applies when differentiating between the following groups of duty types.

### Duty types according to EN 60034-1 (IEC 60034-1)

Duty type	Description	Information required	Factor for increased power $k_{DC}$	
<b>S1</b>	Continuous duty Cyclic duration factor = 100 %	-	-	
<b>S2</b>	Constant load for a brief time, e.g. S2 - 30 min	Load duration	60 min	1.10
			30 min	1.20
			10 min	1.40
<b>S3</b>	Intermittent periodic duty, where starting has no significant influence (cyclic operation), e.g. S3 - 40 %	Cyclic duration factor in % (referred to 10 min)	60 %	1.10
			40 %	1.15
			25 %	1.30
			15 %	1.40
<b>S4 ... S10</b>	Intermittent periodic duty with the influence of starting	Cyclic duration factor in % (referred to 10 min), starts per hour, load torque and moment of inertia  The duty type and motor power can be determined if the number of starting operations per hour, starting time, load duration, type of braking, braking time, idle time, cycle time, standstill time and required power are specified.	On request	-

### Duty types

#### S1

Continuous duty with constant load

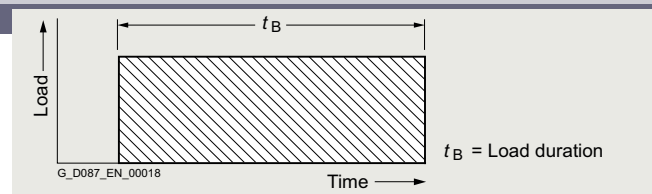


Fig. 2/10 Duty type S1

### Where starting and electrical braking do not affect the motor stator winding temperature rise:

#### S2

Short-time duty

Recommendation: Operating times 10, 30, 60 and 90 minutes

After each period of duty the motor remains at zero current until the winding has cooled down to the coolant temperature.

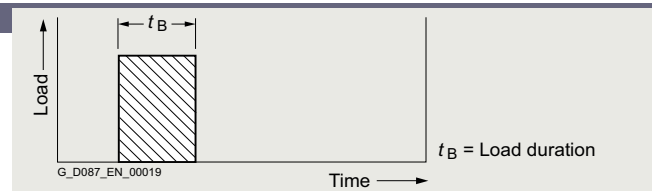


Fig. 2/11 Duty type S2

# Configuring guide

## Configuring a three-phase motor

### Determining the duty type

#### Duty types

Where starting and electrical braking do not affect the motor stator winding temperature rise:

#### S3

Intermittent duty

Where starting does not affect the temperature. Unless specified otherwise, the cycle duration is 10 minutes. Values of 15 %, 25 %, 40 % and 60 % are recommended for the cyclic duration factor.

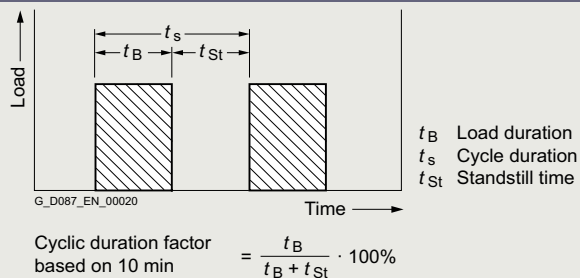


Fig. 2/12 Duty type S3

#### S6

Continuous duty with intermittent load

The cycle duration, if nothing else has been agreed, is 10 minutes. Values of 15 %, 25 %, 40 % and 60 % are recommended for the load duration factor.

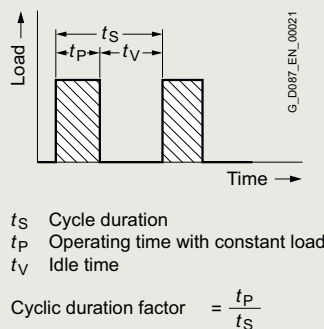


Fig. 2/13 Duty type S6

#### S10

Operation with discrete constant loads

In this case, a maximum of four discrete loads are available, where each load results in the thermal steady state. For this duty type, a load of the same value as the one used for the S1 duty type should be selected.

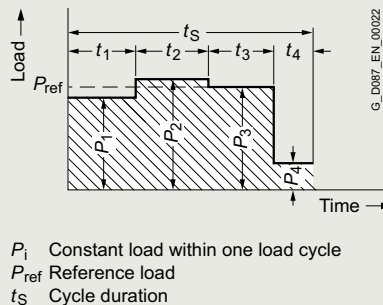


Fig. 2/14 Duty type S10

Starting and braking influence the temperature rise of the stator winding and the rotor cage:

#### S4

Intermittent duty where starting influences the temperature

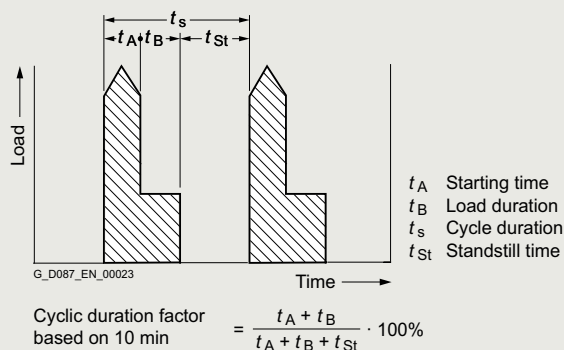


Fig. 2/15 Duty type S4

### Determining the duty type

#### Duty types

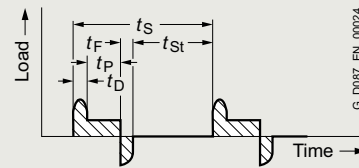
Starting and braking influence the temperature rise of the stator winding and the rotor cage:

#### S5

Intermittent duty where starting and braking influence the temperature

For the **S4** and **S5 duty types**, this code should be followed by the cyclic duration factor, the moment of inertia of the motor ( $J_{mot}$ ), and the moment of inertia of the load ( $J_L$ ), both referred to the motor shaft.

The cycle duration, if nothing else has been agreed, is 10 minutes. Values of 15 %, 25 %, 40 %, and 60 % are recommended for the cyclic duration factor.



$t_S$  Cycle duration  
 $t_D$  Starting time  
 $t_P$  Operating time with constant load  
 $t_F$  Time with electrical braking  
 $t_{St}$  Standstill time with windings at zero current

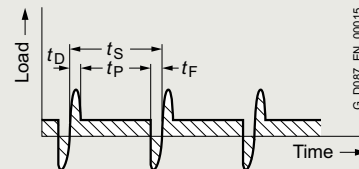
$$\text{Cyclic duration factor} = \frac{t_D + t_P + t_F}{t_S}$$

Fig. 2/16 Duty type S5

#### S7

Continuous duty with starting and braking

For S7 and S8 duty types, the moment of inertia of the load ( $J_L$ ) referred to the motor shaft must be known.



$t_S$  Cycle duration  
 $t_D$  Starting time  
 $t_P$  Operating time with constant load  
 $t_F$  Time with electrical braking

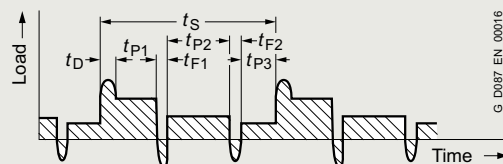
Cyclic duration factor = 1

Fig. 2/17 Duty type S7

#### S8

Continuous duty with non-periodic load and speed changes (converter operation)

Most of the intermittent operating conditions occurring in practice are a combination of the above mentioned duty types. All of the operating conditions must be known in order to precisely determine a suitable motor.



$t_S$  Cycle duration  
 $t_D$  Starting time  
 $t_P$  Operating time with constant load (P1, P2, P3)  
 $t_F$  Time with electrical braking (F1, F2)

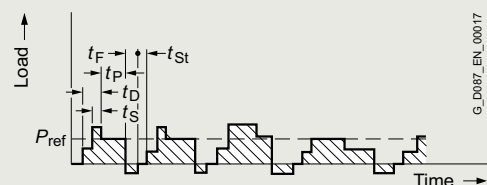
$$\text{Cyclic duration factor} = \frac{t_D + t_{P1}}{t_S} \cdot \frac{t_{F1} + t_{P2}}{t_S} \cdot \frac{t_{F2} + t_{P3}}{t_S}$$

Fig. 2/18 Duty type S8

#### S9

Continuous duty with non-periodic load and speed changes (converter operation)

Most of the intermittent operating conditions occurring in practice are a combination of the above mentioned duty types. All of the operating conditions must be known in order to precisely determine a suitable motor.



$t_D$  Starting time  
 $t_P$  Operating time with constant load  
 $t_F$  Time with electrical braking  
 $t_{St}$  Standstill time with windings at zero current  
 $t_S$  Time with overload

Fig. 2/19 Duty type S9

## Configuring guide

### Configuring a three-phase motor

2

#### Switching frequency

A higher switching frequency means that there is a higher number of starting operations per hour. This leads to a higher thermal load on the motor winding.

The permissible switching frequency  $Z_{\text{perm}}$  has to be determined for different operating cases.

This value is influenced by the corresponding load torque, the additional moment of inertia, the power requirement, and the cyclic duration factor. These can be evaluated using the factors  $k_M$ ,  $k_{FI}$  and  $k_P$ .

For 60 Hz operation, the calculated permissible switching frequency  $Z_{\text{perm}}$  must be reduced by 25 %. See the technical specifications for brakes in [chapter 11](#) for the permissible switching frequency for operation with function rectifiers.

The permissible no-load switching frequency  $Z_A$  for motors with brake L must be obtained from table "No-load switching frequency for brakes L/LS" on page 11/44.

$$Z_{\text{perm}} = Z_A \cdot k_M \cdot k_{FI} \cdot k_P$$

The permissible no-load switching frequency  $Z_0$  for motors without brakes must be obtained from the [Selection and ordering data in chapter 9](#).

$$Z_{\text{perm}} = Z_0 \cdot k_M \cdot k_{FI} \cdot k_P$$

Code	Description	Unit
DC	Cyclic duration factor	%
$J_{\text{mot}}$	Moment of inertia of motor and brake	kgm <sup>2</sup>
$J_Z$	Additional moment of inertia of a high inertia fan	kgm <sup>2</sup>
$J_X$	Reduced moment of inertia on motor shaft	kgm <sup>2</sup>
$J_{\text{add}}$	Additional moment of inertia	kgm <sup>2</sup>
$k_{FI}$	Factor for taking into account the additional moment of inertia	-
$k_M$	Factor for taking into account the load torque while accelerating	-
$k_P$	Factor for taking into account the required power and duty cycle	-
$P_S$	Actual steady-state power of the motor	kW
$P_N$	Rated motor power	kW
$T_A$	Acceleration torque of the motor	Nm
$T_N$	Rated motor torque	Nm
$T_x$	Reduced load torque	Nm
$t_R$	Duty cycle (decimal)	
$Z_0$	No-load switching frequency, motor without brake	1/h
$Z_A$	No-load switching frequency, motor with brake	1/h
$Z_{\text{perm}}$	Permissible switching frequency	1/h

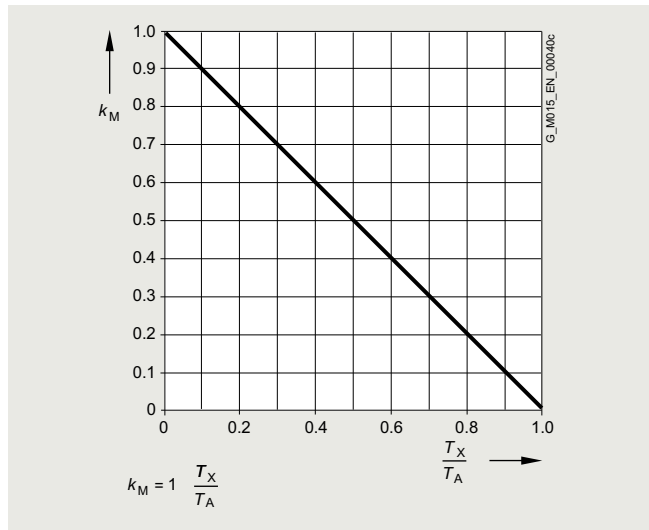


Fig. 2/20 Torque when accelerating

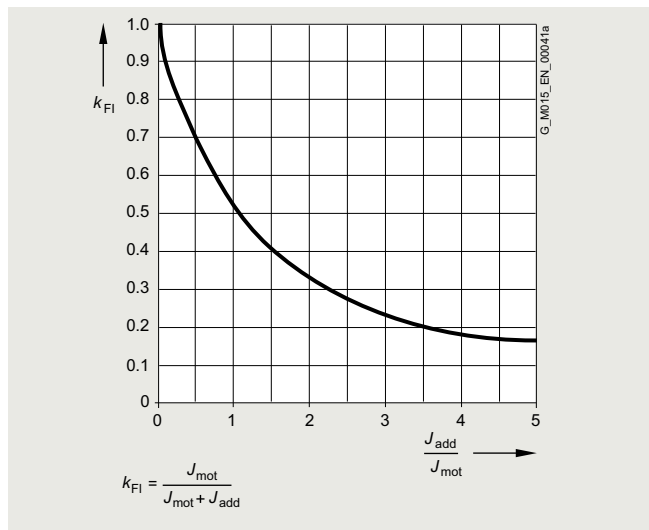


Fig. 2/21 Additional moment of inertia

$$J_{\text{add}} = J_X + J_Z$$

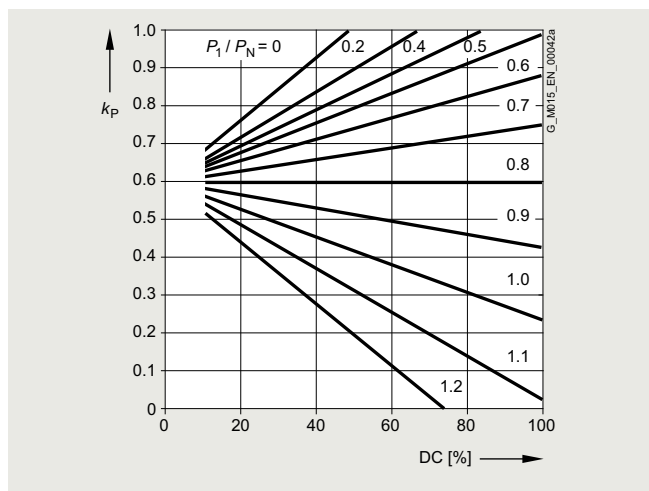


Fig. 2/22 Power requirement and duty cycle

$$k_P = t_R \cdot (1 - (P_S / P_N)^2) + 0.6 \cdot (1 - t_R) + 0.24 \cdot t_R$$

### Additional moments of inertia

The motor moment of inertia with standard fan is specified in the motor selection lists. The higher moment of inertia should be used for metal or high-inertia fans. This is also valid for mounted brakes, backstops and encoder systems.

### Line feeder cables

Line feeder cables must be adequately dimensioned. The number of required parallel (if applicable) feeder cables is determined by the maximum connectable conductor cross-section, the type of cable, the cable installation, the ambient temperature and the permissible current. In Germany, DIN VDE 0298 must be applied when dimensioning cables.

### Undervoltage

For an undervoltage condition as a result of weak line supplies, catalog values such as motor power, torque and speed are not reached. This is especially important when considering motor starting.

### Motor protection

A distinction is made between current-dependent and temperature-dependent protective devices for motors.

#### Current-dependent protective devices

**Fuses** are only used to protect line cables in the event of a short-circuit. They are not suitable for overload protection of the motor. The motors are usually protected by thermally delayed overload protection devices (circuit breakers for motor protection or overload relays).

This protection is current-dependent and is particularly effective in the case of a locked rotor. For normal operation with short starting operations, starting currents that are not excessive and for a low switching frequency, motor circuit breakers provide adequate protection. Motor circuit breakers are not suitable for heavy starting duty or high switching frequencies. Differences in the thermal time constants for the protective devices and the motor result in unnecessary early tripping when the circuit breaker is set to the rated current.

#### Temperature-dependent protective devices

Temperature-dependent protective devices are integrated in the motor winding and can be implemented as **temperature sensors** and **temperature switches**.

The number of temperature-dependent protective devices depends on the number of windings and their function.

The alarm is normally set to 10 K below the switch-off temperature. The rated response temperatures (NAT) of the protective devices depend on the thermal class of the motors.

In order to achieve full thermal protection, it is necessary to combine a thermally delayed overcurrent release and a PTC thermistor.

### Coolant temperature and installation altitude

The rated power specified in the [selection and ordering data in chapter 9](#) is valid for a coolant temperature of +40 °C and an installation altitude of 1000 m above sea level.

Please contact Siemens for higher coolant temperatures.

The table with correction factors provides a rough idea of the derating required if conditions are different.

This results in a permissible motor power of:

$$P_{\text{perm}} = P_N \cdot k_{\text{HT}}$$

Code	Description	Unit
$P_{\text{perm}}$	Permissible motor power	kW
$P_N$	Rated motor power	kW
$k_{\text{HT}}$	Factor for abnormal coolant temperature and installation altitude	-

### Factor $k_{\text{HT}}$ for different installation altitude and coolant temperature

Installation altitude SA	Coolant temperature CT					
	< +30 °C	+30 ... +40 °C	+45 °C	+50 °C	+55 °C	+60 °C
m						
1000	1.07	1.00	1.00	0.92	0.87	0.82
1500	1.04	0.97	0.93	0.89	0.84	0.79
2000	1.00	0.94	0.90	0.86	0.82	0.77
2500	0.96	0.90	0.86	0.83	0.78	0.74
3000	0.92	0.86	0.82	0.79	0.75	0.70
3500	0.88	0.82	0.79	0.75	0.71	0.67
4000	0.82	0.77	0.74	0.71	0.67	0.63

## Configuring guide

### Configuring a three-phase motor

2

#### Degrees of protection

The motors are supplied in IP55 to standard IEC 60034-5. They can be installed in dusty or humid environments. The motors are suitable for operation in tropical climates. Guide value below 60 % relative atmospheric humidity for a coolant temperature +40 °C.

Other requirements on request.

First code number	Brief description	Second code number	Brief description
4	The motor is protected against solid objects greater than 1 mm.	4	The motor is protected against water splashed from all sides.
5	The motor is protected against dust.	5	The motor is protected against jets of water.
6	The machine is dust-tight.	6	The motor is protected against "heavy seas" or powerful jets of water.
		7	The motor is protected against immersion.
		8	The motor is protected against long periods of immersion under pressure.

The first code number of the degree of protection indicates the degree to which an enclosure provides protection against contact and the ingress of foreign bodies.

The second code number indicates the protection that an enclosure offers regarding the ingress of water.

Increased corrosion protection as well as additional protective measures for the winding (protection against moisture and acid, corrosion protection in the motor) can support the selected degree of protection.

The degree of protection only refers to the motor. When selecting higher degrees of protection, the equipment on the gearbox side should be taken into account (seals, vents).

#### Cooling and ventilation

When the geared motor is mounted and the air intake is restricted, you must ensure that a minimum clearance is maintained between the fan cover and the wall and that the cooling air is not immediately drawn in again.

Further, it must be guaranteed that the cooling air flow to the gearbox is not obstructed. As a consequence, the gearbox operating temperature can be further reduced.

##### Forced ventilation

The use of a separately driven fan is recommended to increase motor utilization at low speeds and to limit noise generation at speeds significantly higher than the synchronous speed. Both are mainly used in conjunction with converter operation.

Typical areas of application for forced ventilation:

- High switching frequency
- Converter drives with a control range > 1:20
- Converter drives with rated torque at low speeds
- Noise reduction
- At high speeds

#### Bearing system

The bearing service life of motors with horizontal mounting is 40 000 hours if there is no additional axial loading at the coupling output and 20 000 hours when utilized according to the maximum admissible load. This assumes that the motor is operated at 50 Hz. The nominal bearing service life is reduced for converter operation at higher frequencies.

In order to achieve the calculated lifetime in continuous operation, the admissible vibration values (measured at the end shield) must be determined according to evaluation zones A and B stipulated in ISO 10816. If higher vibration velocities occur in operation, special measures must be taken.

Please contact Siemens in this regard.

### Overview

The brakes can be used as working brakes or holding brakes. A holding brake is suitable for holding masses and loads at a fixed position. A working brake is also capable of decelerating masses and loads.

The brakes are designed as fail-safe spring-operated brakes. When the brake is mounted, it increases the length of the motor. The dimensions are shown in the dimensional drawings. The spring-operated disk brakes are suitable for a standard ambient temperature range of -20 to +45 °C.

### Variables

Code	Description	Unit
$f_{br}$	Braking torque correction factor	-
$J_{AD}$	Moment of inertia of the adapter	kgm <sup>2</sup>
$J_B$	Moment of inertia of the brake	kgm <sup>2</sup>
$J_G$	Moment of inertia of the gearbox	kgm <sup>2</sup>
$J_{mot}$	Moment of inertia of the motor	kgm <sup>2</sup>
$J_X$	Moment of inertia of the load referred to the motor shaft	kgm <sup>2</sup>
$J_Z$	Additional moment of inertia of a high inertia fan	kgm <sup>2</sup>
$k$	Factor for taking into account operating conditions	-
$L_N$	Service life of the brake lining until readjustment	h
$L_{nmax}$	Service life of the brake lining until replacement	h
$n_{br}$	Braking speed	rpm
$\eta$	Efficiency (drive)	%
$Q_{perm}$	Permissible operating energy	J
$s_{br}$	Braking distance	m
$t_1$	Application time of the brake	ms
$t_{br}$	Braking time	s
$T_{br}$	Rated braking torque (rated torque $M_2$ )	Nm
$T_x$	Reduced load torque on the motor shaft	Nm
$v$	Travel velocity	m/s
$W_1$	Friction energy per braking operation	J
$W_{tot}$	Friction energy until the brake lining is replaced	MJ
$W_V$	Friction energy until the brake is readjusted	MJ
$Z$	Switching frequency	1/h

### Determining the braking torque

The braking torque must be selected in accordance with the particular drive application. The following criteria are decisive when it comes to making the selection:

- Static safety
- Required braking time
- Permissible brake delay
- Possible braking distance
- Brake wear

The braking torque is determined using the safety factor  $k$ , which can be selected in the range from 1.0 to 2.5. As a general rule of thumb, the factor for horizontal motion is approx. 1.0 to 1.5 and for vertical motion approx. 2.0 to 2.5. However, the precise braking torque depends to a large extent on the particular operating conditions.

The rated braking torque is referred to a speed of  $n = 100$  rpm and decreases with increasing motor speed. When calculating the braking torque, this is taken into account using the correction factor  $f_{br}$ . This means that the rated braking torque is applicable for most braking operations for converter operation.

For line operation, braking is directly from the motor speed. In addition, for vertical conveyors, the increased speed when moving downwards must be taken into account.

$$T_{br} > T_x \cdot k \cdot f_{br}$$

### Braking torques as a function of the speed and permissible speed limits

The braking torque available decreases with increasing motor speed.

The maximum permissible speeds from which emergency stops can be made are listed in the [table on page 11/40](#). These speeds should be considered as guide values and must be checked for the specific operating conditions.

The maximum permissible friction energy depends on the switching frequency and is shown for individual brakes in the [diagram "Permissible operating energy" on page 11/39](#). Increased wear can be expected when the brakes are used for emergency stops.

### Braking energy per braking operation

The braking energy  $W$  per braking operation comprises the energy of the moments of inertia to be braked and the energy which must be applied in order to brake against a load torque.

$T_x$  is positive if the load torque is working against the braking torque (horizontal motion, upward vertical motion).

$T_x$  is negative if it supports the brake (downward vertical motion).

The permissible operating energy  $Q_{perm}$  must be checked against the relevant switching frequency using the [diagram "Permissible operating energy" on page 11/39](#). This is of particular importance for emergency stop circuits.

$$W_1 = \frac{T_{br}}{T_{br} \pm T_x \cdot \eta} \cdot \frac{(J_G + J_{AD} + J_{mot} + J_Z + J_X + J_B \cdot \eta) \cdot n_{br}^2}{182.5}$$

$$W_1 < Q_{perm}$$

### Service life of the brake lining

The service life of the brake lining  $L_N$  until the air gap has to be readjusted depends on various factors. The main influencing factors include the masses to be braked, the motor speed, the switching frequency, and, therefore, the temperature at the friction surfaces.

This means it is not possible to specify a value for the friction energy until readjustment that is valid for all operating conditions.

However, a wear calculation can be made according to the friction energy, so that the service life can be defined in normal operation.

### Brake service life

The brake lining is subject to wear as a result of friction. As a consequence, the air gap increases and the brake application time lengthens. The air gap can be readjusted. The friction lining should be replaced after a certain number of readjustments.

Service life of the brake lining until readjustment

$$L_N = \frac{W_V}{W_1 \cdot Z}$$

Service life of the brake lining until replacement

$$L_{nmax} = \frac{W_{tot}}{W_1 \cdot Z}$$

## Configuring guide

### Configuring a brake

#### Brake control

##### Definition of switching times (VDI 2241)

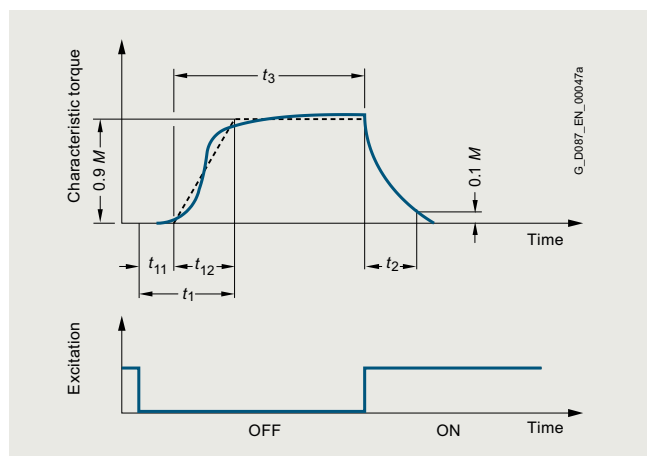


Fig. 2/23 Brake switching times

Switching times:

- $t_1$  Application time of the brake
- $t_2$  Disconnection time
- $t_3$  Slipping time
- $t_{11}$  Response time
- $t_{12}$  Rise time

##### Fast brake application

###### Disconnection on the AC side

If the brake is disconnected from the line supply, the brake is applied. With AC brake voltages, the brake application time is extended as a result of the inductance of the solenoid (disconnection on the AC side). This results in a considerable delay before the brake is mechanically applied. In order to achieve short brake application times, the circuit must also be disconnected on the DC side.

###### Rectifier for disconnection on the DC side

Electromagnetically released spring-operated disk brakes can be disconnected on the AC side and the DC side. Disconnection on the DC side means that the inductance and thus the magnetic field in the brake solenoid are reduced very quickly.

For disconnection on the DC side, a wire jumper can be removed from the rectifier and replaced by the contacts of an external switch. This enables significantly shorter application times to be achieved than those achieved for disconnection on the AC side.

##### Function rectifiers for fast brake application

If function rectifiers are used for fast brake application, then there is no need for an external switch and therefore less wiring is required.

###### Disconnection on the DC side using current sensing

One option of disconnecting on the DC side is to sense the motor current. If the motor current falls below the rectifier's sensor current when disconnected from the three-phase line supply, the brake solenoid is disconnected from the DC voltage electronically without any contacts.

Used in conjunction with disconnection on the DC side by means of current sensing, rectifiers are generally suitable for being connected in parallel with the motor connection, even in applications involving moving loads or large moments of inertia. Brakes controlled in this way are completely wired to the motor terminal board. Converter operation is not permissible.

###### Disconnection on the DC side using voltage sensing

Another option of disconnecting on the DC side is by sensing the rectifier supply voltage.

An integrated switching transistor switches off the load if the input voltage falls below a specified switching threshold. Used in conjunction with disconnection on the DC side using voltage sensing, rectifiers are generally suitable for operation with separate AC-side brake control using an additional switching contact.

Connection in parallel with the motor connection is also possible, but it is not recommended, as the rectifier disconnection response will be impaired by the influence of the motor winding. In addition, many applications involve driving loads or large moments of inertia. This can cause the no-load voltage generated when the motor coasts down to considerably delay brake application if the switching threshold for voltage sensing is not fallen below.

If connection in parallel with the motor connection is nevertheless desired or required, disconnection on the DC side using current sensing is recommended.

##### Fast brake release

###### Function rectifiers for fast brake release

###### Rectifiers with overexcitation (high-speed excitation)

Rectifiers with overexcitation operate for approximately  $300 \text{ ms} \pm 15 \%$  with bridge rectification, i.e. when being released, the brakes are supplied with twice the rated solenoid voltage.

After this time the rectifiers automatically switch from bridge to half-wave rectification and the brakes are operated with the rated solenoid voltage. This results in shorter release times and higher brake switching frequencies. The friction lining wear is also reduced, the permissible friction energy until the air gap is readjusted increases, and starting losses are reduced.

Rectifiers with overexcitation are generally suitable for being connected in parallel to the motor connection or for a separate circuit in the case of converter operation (note connection information for disconnection on the DC side).



### Brake switching time

The total time it takes the motor to come to a standstill comprises the following times:

- Brake application time  $t_1$
- Braking time  $t_{br}$

The first is the time it takes the brake to reach 90 % of its braking torque. This time may be circuit- and control-dependent.

The braking time is determined as follows:

$$t_{br} = \frac{(J_G + J_{AD} + J_{mot} + J_B + J_Z + J_X \cdot \eta) \cdot n_{br}}{9.55 \cdot (T_{br} \pm T_x \cdot \eta)}$$

If  $T_x$  supports the braking operation,  $T_x$  is positive; otherwise it is negative.

### Braking distance and positioning accuracy

Braking distance  $s_{br}$  is the distance traveled by the driven machine during braking time  $t_{br}$  and application time  $t_1$ .

With linear motion, a positioning accuracy of between  $\pm 12\%$  and  $\pm 15\%$  can be assumed. However, this can be heavily influenced by the condition of the brake.

The formula below applies to horizontal motion and upward vertical motion.

$$s_{br} = v \cdot \left( \frac{t_1}{1000} + 0.5 \cdot t_{br} \right)$$

### Cyclic duration factor

The cyclic duration factor  $DC$  is the ratio between the load duration and the cyclic duration. The cyclic duration is the sum of the ON times (operational periods) and the no-voltage periods.

$$DC = \frac{t_s}{t_s + t_o} \cdot 100$$

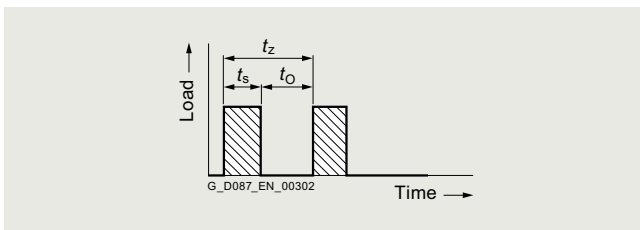


Fig. 2/24 Cyclic duration factor

Code	Description	Unit
$DC$	Cyclic duration factor	%
$t_s$	Close time (on-load factor)	s
$t_o$	Open time (off-load factor)	s
$t_z$	Cycle time (duty cycle time)	s

### Rated torque and holding torque

#### Rated torque

The rated torque  $M_2$  is the switching torque assigned by the manufacturer of the brake for identification. This is indicated on the rating plate when selecting a working brake.

#### Holding torque

The holding torque  $M_4$  is the highest torque with which the closed brake can be loaded without causing a slip. With the functionally safe holding brake, the holding torque  $M_4$  is indicated on the rating plate.

## Configuring guide

### Configuring an encoder

#### Incremental encoders

Incremental encoders are used to determine the position of rotor shafts and are used to approach a precisely defined angular position. This is achieved by photoelectrically scanning the graduation on an indexing disk. With incremental measuring methods, the graduation consists of a regular grid structure. The position information is obtained by counting the individual increments (measuring steps) from a set zero point. Since an absolute reference is required to determine positions, the indexing disks are provided with an additional track that has a reference mark. The absolute position determined by the reference mark is assigned exactly one measuring step. The reference mark must, therefore, be scanned before an absolute reference can be established or the last selected reference point found.

The incremental signals are transmitted as square-wave pulse train sequences  $U_{a1}$  (A) and  $U_{a2}$  (B), phase-shifted through  $90^\circ$  elec. The reference mark signal consists of a reference pulse  $U_{a0}$  (N), which is gated with the incremental signals.

In addition, the integrated electronics generate inverse signals  $\overline{U}_{a1}$  ( $\overline{A}$ ),  $\overline{U}_{a2}$  ( $\overline{B}$ ) and  $\overline{U}_{a0}$  ( $\overline{N}$ ) for noise-proof transmission. The illustrated sequence of output signals – with  $U_{a2}$  lagging behind  $U_{a1}$  – applies for clockwise rotation of the motor.

The fault-detection signal  $\overline{U}_{aS}$  indicates fault conditions such as breakage of the supply cables or failure of the light source, etc. It can be used to shut down machines in automated production environments.

The distance between two successive edges of the incremental signals  $U_{a1}$  and  $U_{a2}$  using 1-fold, 2-fold, or 4-fold evaluation is one measuring step.

The maximum permissible speed or travel velocity must never be exceeded, not even for a short time.

Incremental encoders are used with applications which require a precisely defined position to be approached/found again. In the case of incremental encoders, the machine must travel to a reference point after each power-off state, as the position is not usually stored in the controller, and movements of the machine while the power is off are not recorded.

For the technical specifications of the incremental encoder, please refer to chapter "Motor options" on [page 11/50](#).

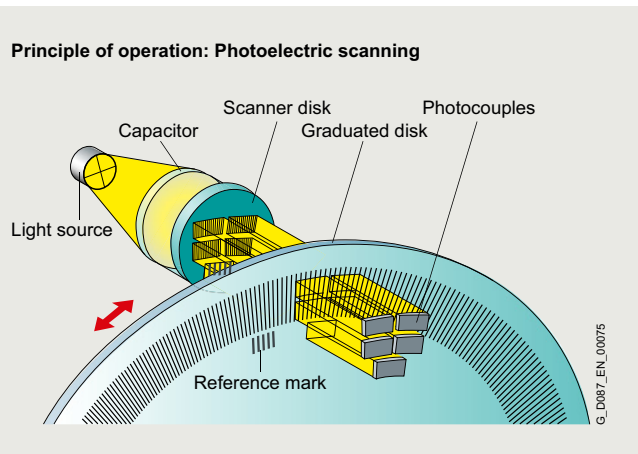


Fig. 2/25 Principle of operation, photoelectric scanning

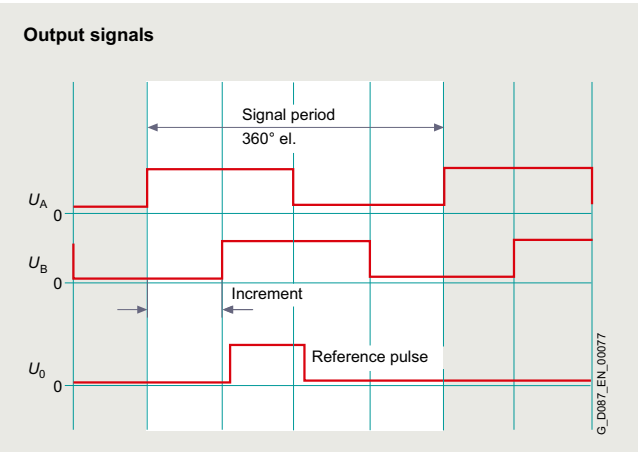


Fig. 2/26 Output signals

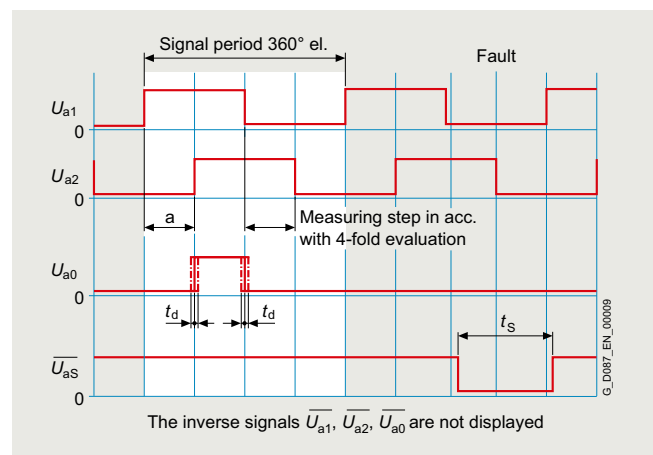


Fig. 2/27 Inverse output signals

### Absolute encoders

Absolute encoders are used to determine the position of rotor shafts and to approach a precisely defined angular position.

With the absolute measuring method, the position value is available from the encoder immediately after switch-on and can be called at any time by the subsequent electronics. There is no need to move the axes to find the reference position. The absolute position information is read from the graduation on the indexing disk, which consists of several parallel indexing tracks. The track with the finest scale division is interpolated for the position value and is used to generate an optional incremental signal at the same time. The indexing disks are photoelectrically scanned.

With singleturn rotary encoders, the absolute position information is repeated at each revolution. Multiturn rotary encoders can also differentiate between revolutions.

Absolute encoders are used with applications which require a precisely defined position to be approached/found again.

For the technical specifications of the absolute encoder, please refer to chapter "Motor options" on [page 11/51](#).

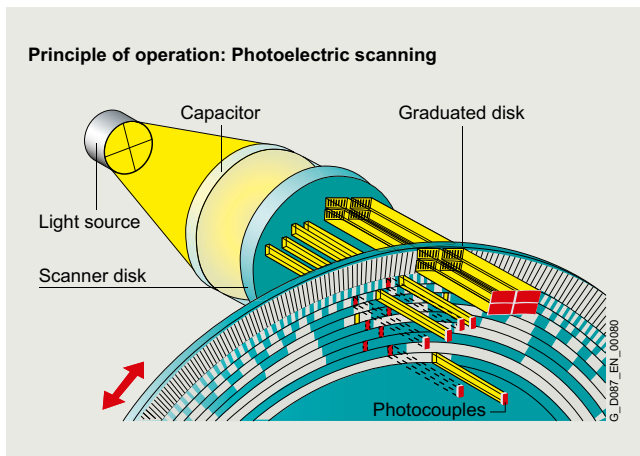


Fig. 2/28 Principle of operation, photoelectric scanning

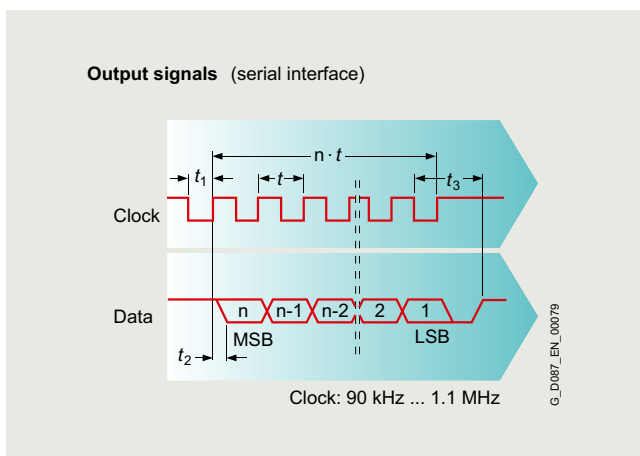


Fig. 2/29 Output signals

### Encoder systems with DRIVE-CLiQ interface

Motors with DRIVE-CLiQ encoder interface are provided for the SINAMICS S120 converter system. The signal transmission to the converter is digital. The DRIVE-CLiQ rotary encoder has an electronic nameplate that simplifies commissioning and diagnostics. Motor and encoder system are automatically identified and all motor parameters are set automatically, see SINAMICS Equipment Manual.

DRIVE-CLiQ rotary encoders for the SINAMICS drive system are equipped with an internal module that includes an electronic nameplate. The DRIVE-CLiQ rotary encoder is equipped with a cable with a length of 1 m with flange socket. The flange socket has a SPEED-CONNECT-READY M17 male thread with O-ring. This is called the DRIVE-CLiQ interface.

The technical data for the DRIVE-CLiQ rotary encoder can be found in the chapter "Motor options" on [page 11/47](#).

The signal connection between motor and Motor Module takes place via a pre-assembled MOTION-CONNECT DRIVE-CLiQ cable.

More information on the signal cables can be found in the chapter "Motor options" on [page 11/47](#).

## Configuring guide

### Configuring the functionally safe mounted components



#### Overview

##### Legal framework

The purpose of the Machinery Directive 2006/42/EC and "Supply of Machinery (Safety) Regulations 2008" is to ensure that all machines placed on the market within the European Economic Area meet common minimum safety requirements.

##### Functional safety - electric drives

The standards listed under the machinery directive define appropriate safety functions that must be implemented for electric, variable-speed drive systems. When viewed in this context, a drive train essentially comprises the elements "sensor – controller – actuator" which interact with one another to ensure functional safety.

The distributor or operator of the machine/installation bears responsibility for the required safety functions and their properties.

In cases where Siemens provides support with the definition of safety-relevant components at the project planning stage, Siemens shall not accept any responsibility for the selection of components or the implementation of safety functions.

##### Trend toward integrated safety systems

The trend toward greater complexity and higher modularity of machines has seen a shift in safety functions away from the classical central safety functions (for example, shutdown of the complete machine using a main disconnecting means) and into the machine control system and the drives. Frequently, this also significantly increases the productivity. This is because, for instance, equipping times can be reduced and during these setup times, depending on the machine type, other parts can still continue to produce.

##### Installation of SIMOGEAR geared motors

Geared motors must be installed such that the drive fastening elements in the machine are aligned uniformly and precisely. Vibration and resonance with rotational frequency and with multiples of the line frequency must be prevented. Care must be taken to ensure unobstructed ventilation (flow of cooling air and exhaust air must not be hindered).

##### Electrical connection of motors

The electrical connection of the motors must conform to the tolerance limits defined by EN 60034-1 for zone A (voltage  $\pm 5\%$ , frequency  $\pm 2\%$ ).

##### Environmental conditions

The functionally safe components are suitable for typical industrial environments, not for harsh industrial environments such as offshore or chemical industry.

When operating on a frequency converter and comparable power control devices, resonances must be avoided.

With respect to mechanical environmental conditions, the motors are approved for vibration and shock in accordance with EN 60721-3-3:1995 Class 3M3.

#### Functionally safe brake

##### ***The following must be observed for the use of the functionally safe brake:***

- The functionally safe brake can only be used as a holding brake with emergency stop function (max. 2000 emergency stops over the entire service life). The switching operations in normal operation must take place when the drive is at a standstill. A brake design must be carried out, the permissible limit values must be observed.
- For the design of the brakes, the holding torque of the brake ( $M_4$  torque) must be used.
- The safety characteristic values of the safe brake apply to system designs in which 80 % of the characteristic torque of the brake are sufficient for the safety function. This must be ensured when designing the brake.
- The use of the geared motor with functionally safe brake is approved for an ambient temperature of  $-20\text{ °C}$  to  $+40\text{ °C}$ .
- The motors must be designed in temperature class 155 (F) and equipped with thermal motor protection and a corresponding evaluation unit as standard.
- The maximum input speed can be found in the technical specifications, see [table "Braking torques as a function of speed and permissible speed limits with operating brake" on page 11/39](#).
- The functionally safe brakes must be operated with appropriate safe brake relays. Therefore, only DC voltage variants can be selected for the safe brakes.
- The function rectifiers (**C59** and **C60**) are not possible in combination with the functionally safe brake.
- In safety-relevant applications, the rotors must always be replaced after 10 years at the latest.
- When configuring the brake, the wear of the friction lining (e.g. due to emergency stops) must be taken into account.
- All specified restrictions apply to friction linings (permissible switching frequency, permissible friction energy, reactivation during operation as a holding brake, break loose torque after a prolonged idle time, temperature range, etc.).
- Increased corrosion protection (**C10**) must not be used in conjunction with the functionally safe brake.
- Not all torque variants of the standard version are also suitable for the safe brake.

##### Note:

Before you commission SIMOGEAR geared motors with the functionally safe brake, please read the information in the operating instructions BA 2332.



## Functionally safe rotary encoders



Fig. 2/30 Functionally safe rotary encoder IN 8.5834FS2

### Function

#### Safe actual value sensing with encoder

A drive monitor with encoder is necessary for operation of a series of safety functions.

Further information about safety functions can be found in the Safety Integrated Function Manual.

<https://support.industry.siemens.com/cs/document/109781722>

#### Safe actual value sensing with functionally safe rotary encoder

A functionally safe rotary encoder (sensor) must be used in conjunction with a suitable encoder evaluation system (controller) and a frequency converter (actuator) in order to implement certain safety functions.

#### Safety functions

For detailed descriptions of individual functions, please refer to Catalog D 31.2.

For the technical specifications of the functionally safe rotary encoder, please refer to chapter "Motor options" on page 11/59.

#### Note:

Before you commission SIMOGEAR geared motors with a functionally safe rotary encoder, please read the information in the operating instructions BA 2730 and BA 2331.

#### **Please note the following with respect to functionally safe rotary encoders:**

- Functional safety can be ensured only if the functionally safe rotary encoder is evaluated by a suitable control and evaluation unit.
- The motors must be designed with temperature class 155 (F) and equipped as standard with thermal motor protection and a suitable evaluation unit.
- The maximum permissible air gaps for brake motors with functionally safe rotary encoder are different, see table "Technical specifications of brake with functionally safe rotary encoder" on page 11/59.
- The motors are supplied as standard with the option "Encoder under cover" (Q95) as mechanical protection.
- The option "Manual brake release lever with locking mechanism" (C03) cannot be selected for the brake motors with the functionally safe rotary encoder IN 8.5834 (Q42 and Q43) and IA 8.5883 (Q77 and Q78).
- The function rectifiers (C59 and C60) cannot be combined with the functionally safe rotary encoder.
- The use of the geared motor with the functionally safe rotary encoder is approved for an ambient temperature of -30 °C to +50 °C.

#### Environmental conditions

With respect to mechanical environmental conditions, the motors are approved for vibration and shock in accordance with EN 60721-3-3:1995 Class 3M3.

#### Encoder connections

When connecting the encoders, care must be taken to ensure that suitable connecting cables are used:

- Incremental encoder IN 8.5834 (Q42 and Q43) and absolute encoder IA 8.5883 (Q77 and Q78), max. cable length of 50 m
- DRIVE-CLiQ encoder, max. cable length of 100 m

The shield of the connecting cables must be bonded over a large area/grounded at both ends (at the encoder and at the controller).

Further information on the signal cables can be found in the chapter "Motor options" on page 11/62.

## Configuring guide

### Configuring the motor for converter operation

#### Operation of geared motors on a converter

It is possible in principle to operate the geared motors on a frequency converter. The Converter World Motor is optimized and designed for operation on the frequency converter.

Please note the following supplementary conditions:

- Converter motors are not subject to the Regulation (EU) 2019/1781 or "Ecodesign for Energy-Related Products and Energy Information Regulations 2021 (UK)" because they are not intended for direct operation on the three-phase network.
- Maximum speed of the geared motor in the field-weakening range
- Maximum speed of the brake, see [page 11/39](#)
- Speed limits of the backstop, see [page 11/68](#)

#### Motor characteristic

During the acceleration process, converters shift the speed-torque characteristic of the three-phase asynchronous motor over the traversing range to enable jerk-free acceleration. This enables the motor to be operated at different speeds (e.g. rapid traverse/creep speed), but also protects the mechanical components of the plant and gearbox.

Two main motor operating ranges are applicable for converter operation:

##### Constant flux (constant torque)

For converters with an unregulated DC link (e.g. SINAMICS G115D) the output voltage can be as high as the line-side input voltage minus any voltage drops in the converter (for example, for SINAMICS G115D:  $U_{\text{Output}} = 0.87 \times U_{\text{Input}}$ ).

If the maximum output voltage has not yet been reached, the converter output voltage can be increased as the motor speed increases until **V/f = constant** applies. As a consequence, the magnetic flux, the motor current and therefore the transferred **continuous torque are constant** (provided that the motor is adequately cooled → in the case of self-cooling, the torque must be reduced in accordance with the motor characteristic at low speeds due to the reduced cooling). Alternatively, if a separately driven fan is used, the full motor torque can be utilized.

##### Field-weakening range

If the speed increases further when the maximum output voltage has been reached, then V/f does not remain constant.

The magnetic flux reduces with increasing motor speed, the motor current and therefore the transferred continuous torque reduces with respect to  $1/n$ , and the breakdown torque reduces according to  $1/n^2$  (see motor characteristic). The motor can be operated in the field-weakening range at constant power as far as the limit of stability (see point "Mechanical load, grease service life").

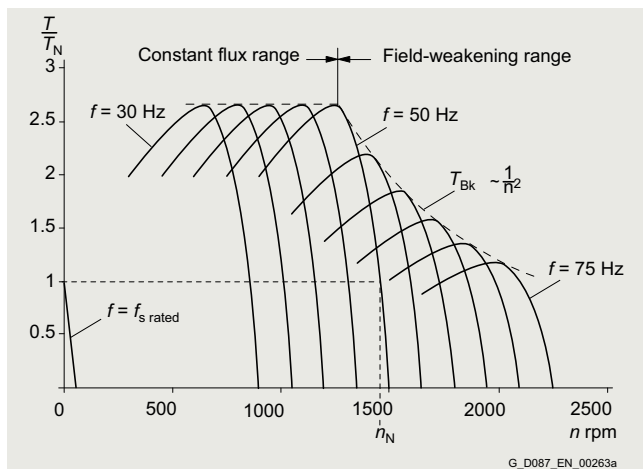


Fig. 2/31 Example for a 4-pole, three-phase asynchronous motor

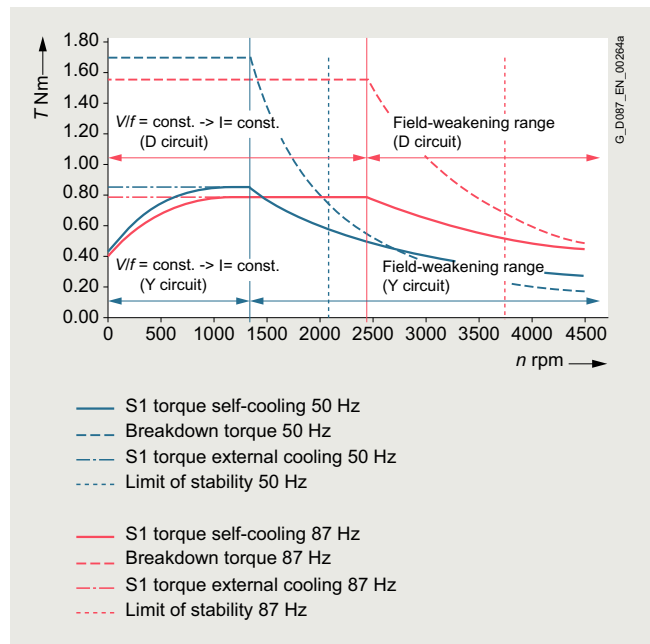


Fig. 2/32 Example of torque-speed characteristic of a 4-pole asynchronous motor

#### Utilization in accordance with temperature class F

For rated power and line operation, the motor is utilized in accordance with temperature class B (130 °C maximum permissible constant temperature referred to a maximum cooling air temperature of 40 °C).

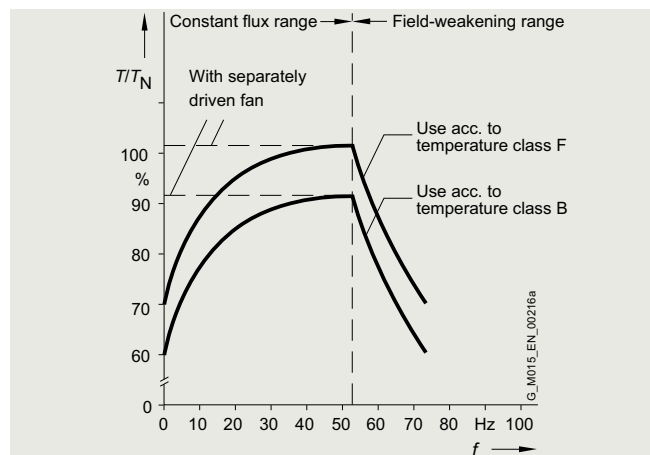
Siemens motors are designed as standard to temperature class F (155 °C maximum permissible constant temperature referred to a maximum cooling air temperature of 40 °C).

For converter operation at reduced output voltage, the power reserve of the motor can be used to achieve the rated power.

In this case, the rated torque is applied to the motor and the converter outputs a frequency at which the motor achieves rated speed.

At this operating point the slip and current consumption are higher than under line operation, so that the constant motor temperature increases accordingly. Prerequisite for utilizing the motor in accordance with temperature class F is that the converter is capable of providing a sufficiently high current:

$$I_{\text{FOutRated}} \geq I_{\text{Motor Rated inc}}$$



### Peak load / acceleration torque

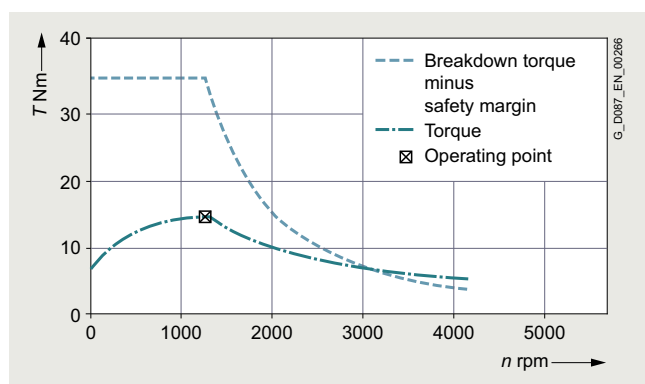
Based on experience, a safety margin of 30 % must be maintained from the breakdown torque:

$$T_{\max.} = 0.7 \times T_{Bk}$$

The engineering software "Sizer for Siemens Drives" incorporates a safety margin for the actual breakdown torque when the breakdown torque characteristic is displayed.

At a sufficiently high level of converter output current, the motor can therefore be accelerated with approximately 0.7 times its breakdown torque.

When operating with a high switching frequency, the motor's acceleration torque may have to be limited to its rated torque. As a general rule, the rms current must not exceed the rated motor current. It is recommended that the respective traversing cycle is entered in the engineering software "Sizer for Siemens Drives", because the rms values will then be calculated automatically and represented in combination with the respective motor characteristic.



### Permissible voltage stress

More stress is placed on the insulation of the motor winding with converter operation than with line operation. The voltage stress also depends on the type of converter used. The converter subjects the motor winding to stress specially as voltage pulses are quickly switched.

The maximum voltage is influenced by the rise time of the pulses, the cable length and the type of cable used between motor and converter.

Output filters at the converter can reduce the maximum motor voltage to uncritical values. When using output filters, the control type, pulse frequency, output frequency, and limit torque that can be realized need to be observed, among other factors.

With converters without output filters, impermissible voltage peaks can occur even with a relatively short motor cable. Regenerative operation, in particular, can stress the motor insulation. This stress occurs predominantly during vertical motion and is dependent on the line voltage, converter type, cable length, and cable type.

For further details, see [chapter "Motor options" on page 11/8](#).

### Bearing currents

Additional bearing currents can flow when motors are operated from converters. They are mainly caused by the steep voltage rises which occur during switching. Without output filters, significant voltage variations can occur at the winding terminals. This phenomenon mainly occurs for larger machines.

EMC-compliant installation of the drive system is a basic prerequisite for preventing premature bearing damage as a result of bearing currents.

Important measures for reducing bearing currents are:

- Using cables with a symmetrical cable cross-section.
- Using grounding cables with low impedance over a wide frequency range (0 Hz up to approximately 70 MHz), e.g. braided copper straps, HF finely-stranded conductors.
- Separate HF equipotential-bonding cable between motor housing and driven machine.
- Separate HF equipotential-bonding cable between motor housing and converter PE busbar.
- 360° HF contact of the cable shield at the motor housing and the converter PE busbar. This can be achieved using EMC glands at the motor and EMC shield clips at the converter, for example.
- Use of motor reactors.
- Common-mode filters at the converter output.
- Insulated motor bearing at the non-drive end (NDE).

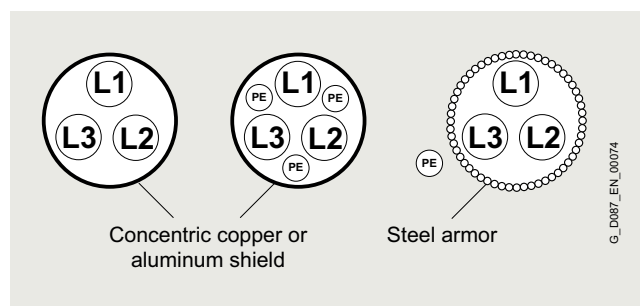


Fig. 2/33 Motors connected to a converter

### Mechanical load and grease service life

High speeds that exceed the rated speed and the resulting increased vibration alter the mechanical smooth running operation and the bearings are subject to increased mechanical stress. This reduces the grease service life and the bearing service life.

More detailed information on request.

## Configuring guide

### Configuring a motor in an ATEX version



#### Explosion-protected motors

2

In many industrial and public sectors, explosion protection and risk of explosion are ever-present, e.g. in the chemical industry, in refineries, on drilling platforms, at gas stations, in the production of animal feed and in sewage treatment plants.

The risk of explosion is always present when gases, fumes, mist or dust are mixed with oxygen in the air in an explosive ratio close to sources of ignition that are able to release the minimum ignition energy.

In the chemical and petrochemical industries in particular, when crude oil and natural gas are transported, or in mining, milling (e.g. grain and solids), this can result in serious injury and material damage.

To ensure maximum safety in these areas, legislators in most countries have implemented appropriate stipulations in the form of laws and regulations based on national and international standards.

Explosion-protected equipment is designed such that an explosion can be prevented when it is used properly.

The explosion-protected equipment can be designed in accordance with various types of protection.

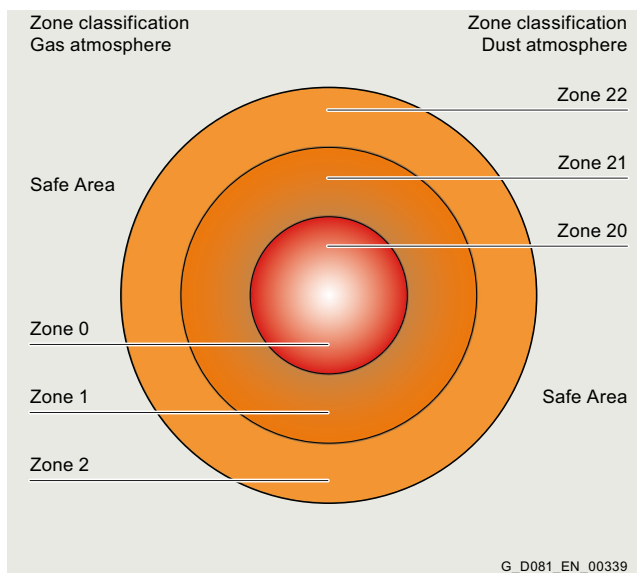
The local conditions must be subdivided into specified zones by the user with the assistance of the responsible authorities in accordance with the frequency of occurrence of an explosion hazard. Device (equipment) categories are assigned to these zones. The zones are then subdivided into possible types of protection and therefore into possible equipment (product) types.

#### Classification of zones

Explosive atmospheres are classified according to zones. Division into zones depends on the temporal and local probability of the presence of a hazardous, potentially explosive atmosphere. Information and specifications for classification of the zones are laid down in the following standards:

- IEC/EN 60079-10-1 for gas atmospheres
- IEC/EN 60079-10-2 for dust atmospheres

Further, a distinction is made between various explosion groups as well as temperature classes and these are included in the hazard assessment.



Depending on the particular zone and therefore the associated hazard, operating equipment must comply with defined minimum requirements regarding the type of protection. The different types of protection require corresponding measures to prevent ignition that should be implemented at the motor in order to prevent a surrounding explosive atmosphere from being ignited.

Zone	Zone definition according to	Assigned types of protection	Category acc. to 2014/34/EU	Equipment protection level acc. to IEC/EN 60079-0 of low-voltage motors	
Gas 1) 2)	Dust 1) 2)				
0	-	An area in which an explosive gas atmosphere is present <b>continuously, over a long period</b> or <b>frequently</b> .	Low-voltage motors and SIMOGEAR geared motors not permitted	1	Ga
1	-	An area in which it is expected that an explosive gas atmosphere will be present <b>occasionally</b> during normal operation.	Ex db eb, Ex db, h	2	Gb
2	-	An area in which it is expected that an explosive gas atmosphere will be present only <b>rarely</b> and then only <b>for a short period</b> during normal operation.	Ex ec, h	3	Gc
-	20	An area in which there is an explosive atmosphere comprising a dust-air mixture <b>continuously, over long periods</b> or <b>frequently</b> .	Low-voltage motors and SIMOGEAR geared motors not permitted	1	Da
-	21	An area in which it is expected that an explosive atmosphere comprising a dust-air mixture will be present <b>occasionally</b> during normal operation.	Ex tb, h	2	Db
-	22	An area in which it is expected that an explosive atmosphere in the form of a cloud of combustible dust in air will be present only <b>rarely</b> and then only <b>for a short period</b> during normal operation.	Ex tc <sup>3)</sup> , h	3	Dc

<sup>1)</sup> Motors of Zone 1 can also be used in Zone 2  
Zone 21 can also be used in Zone 22

<sup>2)</sup> Motors that are certified for gas or dust protection must not be used in hybrid mixtures! Hybrid mixtures: Explosive gas and dust atmospheres are present simultaneously.

<sup>3)</sup> Ex tc motors are not approved for operation in environments containing conductive dust.





### Explosion-protected motors

#### Types of protection

##### Type of protection "non-sparking" Ex ec acc. to IEC/EN 60079-7

Type of protection **Ex ec** ensures that a motor in normal operation as well as when operated under deviating conditions as specified in the standard is not able to ignite a surrounding explosive gas atmosphere.

MB motors are available in an **Ex ec** version.

##### Type of protection "dust explosion protection" Ex tc acc. to IEC/EN 60079-31

This type of protection applies for electrical equipment protected using a housing and with limited surface temperature for use in areas in which combustible dust can occur in concentration levels that could cause a fire or an explosion.

MB motors are available in an **Ex tc** version.

##### Explosion-protected motors for converter operation

In principle, explosion-protected motors (except for Ex eb) can be fed from converters. Particular attention must be paid to the interaction between the motor and converter in the overall system, especially with regard to the following aspects:

- The harmonic content of the supply voltage increases the motor temperature, so the motor power must be reduced.
- Less cooling of the motor at speeds below the rated speed
- Voltage stress on the motor winding
- Bearing currents

#### Device marking

The equipment group and category are specified in the device marking.

The device marking is defined as follows:

e.g. CE 0158 II 2G Ex eb IIC T3 Gb

- **CE** conformity marking  
CE stands for "Communautés Européennes" (European Communities)  
The manufacturer of the explosion-protected devices declares by means of CE marking that the relevant product has been manufactured in accordance with all applicable regulations and requirements of the EU and the requirements laid down in directive 2014/34/EU and the product has been subjected to the relevant conformity evaluation process.
- **0158** identification number of the inspecting authority (DEKRA)
- Marking for prevention of explosions in accordance with directive 2014/34/EU

#### Example "increased safety":

	CE	0158		II	3	G	Ex	ec	IIC	T3	Gc
CE marking											
Number of the certifying "notified" body (0158 = DEKRA)											
Explosion protection marking											
Equipment group: I = Underground II = All other areas											
Category: 2 (Zone 1/21) 3 (Zone 2/22)											
Ex atmosphere G = Gas D = Dust											
Explosion-protected equipment											
Type of protection Ex db, db eb, eb, ec, tb or tc (db eb = motor housing Ex db with terminal box Ex eb)											
Explosion group and explosion subgroup II = Gas (IIA, IIB or IIC) III = Dust (IIIA, IIIB or IIIC)											
Temperature class with max. surface temperature T1 = 450 °C T4 = 135 °C T2 = 300 °C T5 = 100 °C T3 = 200 °C T6 = 85 °C											
Equipment protection level (G = Gas; D = Dust): Ga = Very high protection, Da = Very high protection, Gb = High protection, Db = High protection, Gc = Increased protection, Dc = Increased protection											

## Configuring guide

Configuring a motor in an ATEX version



### Explosion-protected motors

#### Technical specifications

##### General information on explosion-protected motors

Explosion-protected motors (MB motors) are suitable for operation in electrical power systems with a voltage tolerance of  $\pm 10\%$ . In a vertical type of construction where the shaft extension points downward, motors must be equipped with a canopy. Operating instructions are supplied as standard with explosion-protected geared motors in English and German.

##### Motor connection

Certified metric cable glands/sealing plugs are included in the scope of supply of MB motors.

Certified circuit breakers / tripping units must always be used for motor protection, see Catalog IC 10.

#### Type of protection Ex tc IIIB for use in Zone 22

- Ex tc IIIB according to IEC/EN 60079-31
- Version for Zone 22 for non-conductive dust (IP55) and line operation.

The surface temperature is  $\leq 120\text{ °C}$  for rated operation. The motors are equipped with an external grounding terminal, a metal fan cover and a metal external fan.

##### Ambient temperature

Standard:  $-20$  to  $+40\text{ °C}$

##### Marking on the rating plate

Zone 22: II 3D Ex tc IIIB T120 °C Dc

#### Type of protection Ex ec for use in Zone 2

"Non-sparking" MB motors are suitable for use in hazardous areas of Zone 2 for temperature classes T1 to T3. The maximum surface temperature that can occur under normal operating conditions must lie below the temperature limit of the respective temperature class. The ventilation system must be in accordance with IEC/EN 60079-0. The motors are equipped with an external grounding terminal.

##### Ambient temperature

Standard:  $-20$  to  $+40\text{ °C}$

##### Marking on the rating plate

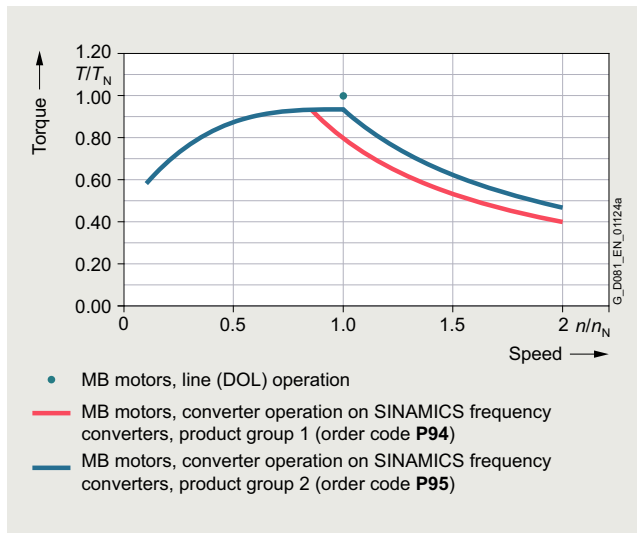
Zone 2: II 3G Ex ec IIC T3 Gc

#### Converter operation

##### General information

All the data listed in Catalog D 50.1 is applicable for a 50 Hz line supply. For converter operation, the reduced torques for constant torque and drives for fans, pumps and compressors must be observed due to the harmonic content of the supply.

This data is available in the Siemens Product Configurator: [www.siemens.com/spc](http://www.siemens.com/spc)



Higher noise levels must be expected than for 50 Hz line operation for motors operating with converters due to the harmonic content of the supply. The frequency limit of MB motors, frame sizes 71 to 180, is  $f_{\max} = 100\text{ Hz}$ .

##### Maximum voltage stress on the motor winding in converter operation

SIMOGEAR motor frame sizes 71 to 180:

- $\hat{U}_{\text{phase-phase}} \leq 1500\text{ V}$  (3000 V peak-peak values  $V_{\text{pk/pk}}$ )
- $\hat{U}_{\text{phase-ground}} \leq 1100\text{ V}$  (2200 V peak-peak values  $V_{\text{pk/pk}}$ )

The following generally applies to Siemens converters (SINAMICS):

- $U_{\text{line}}: \leq 480\text{ V} \pm 10\%$  (BLM = Basic Line Module; DFE = Direct Front End)
- $U_{\text{line}}: \leq 480\text{ V} \pm 10\%$  (ALM = Active Line Module; AFE = Active Front End);  $U_{\text{dc}} < 720\text{ V}$

Additional configuration notes are documented in the declaration of compliance with the order 2.1 and in the EU type-examination certificates.



#### Explosion-protected motors

##### **Order administration for explosion-protected motors (MB motors) for converter operation**

###### PTC thermistor

For converter operation, MB motors must always be equipped with PTC thermistors (**M10**). Certified tripping units are required for this purpose. See Catalog IC 10.

###### Selection of the converters

SINAMICS converters are categorized into 3 product groups. Each product group is a data set with motor operating data each assigned to one converter. The converter type is stamped on the additional rating plate.

- **Product group 1 (P94)**  
Design for converter operation in the basic version with operating data
- **Product group 2 (P95)**  
Design for converter operation in the basic version with operating data SINAMICS S120 (ALM)
- **Product group 3 (P96)**  
Design for converter operation in the basic version with operating data SINAMICS G120D PM250

###### Note:

To comply with the admissible temperature class 130 (B), the power must be reduced (derating) for converter operation in Zones 2 and 22! The operating data for SINAMICS converters from Siemens are on the rating plate – the torque is reduced when compared to line operation. The motor operating data for converter operation is available in the Siemens Product Configurator ([www.siemens.com/spc](http://www.siemens.com/spc)) selection and ordering tool. For converter operation, voltage codes/order codes are only admissible with one voltage only. When used in hazardous zones, a certified tripping unit is recommended for motors operated with converters, equipment Category 3 (Zones 2 and 22). Alternatively, an external, certified tripping unit can be used (see Catalog IC 10).

###### Rating plate

The operating data for line operation is specified on the rating plate - on an additional rating plate, according to the selected product, 4 rated operating points are possible in the following variants:

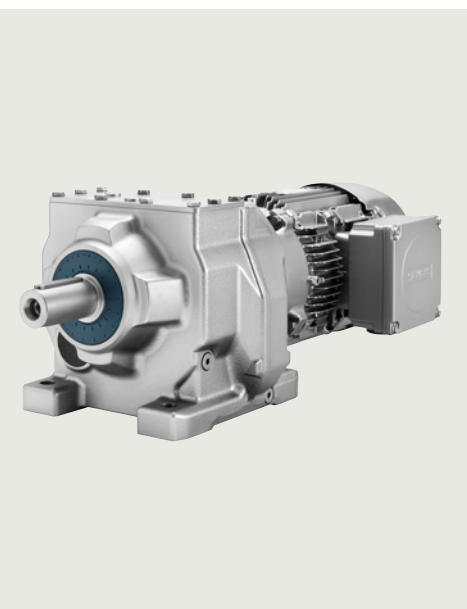
- 50 Hz field weakening range with rated operating points 5, 25, 50 and 100 Hz
- 60 Hz field weakening range with rated operating points 5, 30, 60 and 100 Hz
- 87 Hz characteristic with rated operating points 5, 25, 87 and 100 Hz; 87 Hz at 400 VΔ

## Configuring guide

### Notes

2

## Helical geared motors



<b>3/2</b>	<b>Orientation</b>
<b>3/3</b>	<b>Geared motors up to 55 kW</b>
3/3	Selection and ordering data
<b>3/68</b>	<b>Transmission ratios and torques</b>
3/68	Selection and ordering data
<b>3/81</b>	<b>Transmission ratios and torques for high speed</b>
3/81	Selection and ordering data
<b>3/85</b>	<b>Transmission ratios and torques for very low speed</b>
3/85	Selection and ordering data
<b>3/97</b>	<b>Dimensional drawings</b>
3/97	Overview
3/99	Helical geared motors Z./D.19
3/102	Helical geared motors Z./D.29
3/106	Helical geared motors Z./D.39
3/110	Helical geared motors Z./D.49
3/113	Helical geared motors Z./D.59
3/116	Helical geared motors Z./D.69
3/119	Helical geared motors Z./D.79
3/122	Helical geared motors Z./D.89
3/127	Helical geared motors Z./D.109
3/132	Helical geared motors Z./D.129
3/137	Helical geared motors Z./D.149
3/141	Helical geared motors Z./D.169
3/145	Helical geared motors Z./D.189
3/147	Helical geared motors E.39
3/150	Helical geared motors E.49
3/153	Helical geared motors E.69
3/156	Helical geared motors E.89
3/159	Helical geared motors E.109
3/162	Helical geared motors E.129
3/165	Helical geared motors E.149
3/168	Cooling tower geared motors ZKF
3/174	Cooling tower geared motors EKF
3/178	Helical tandem geared motors
3/180	Inner contour of the flange-mounted design

## SIMOGEAR geared motors

### Helical geared motors

#### Orientation

##### SIMOGEAR helical geared motor Z and D

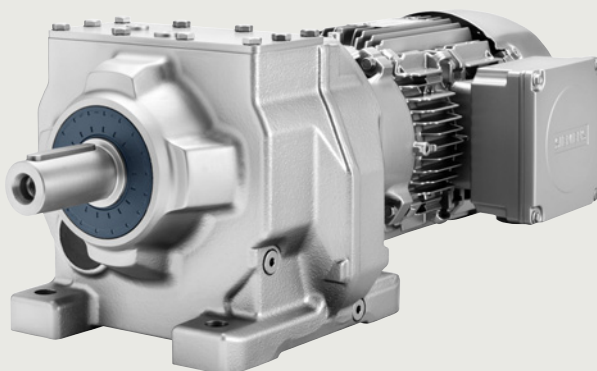


Fig. 3/1 Helical geared motor Z and D

##### SIMOGEAR helical geared motor E

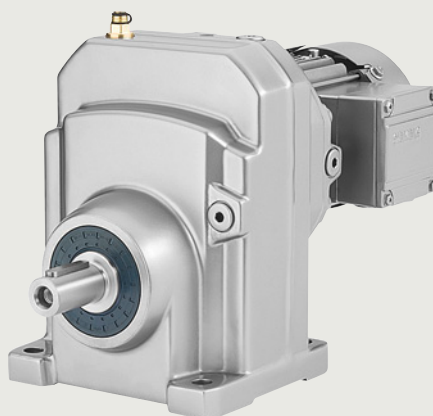


Fig. 3/2 Helical geared motor E

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		$T_{2N}$ Nm	$i$ -	$P_1$ kW
Z19 ... Z189 (2-stage)	13	100 ... 19000	3.4 ... 62.48	55
D19 ... D189 (3-stage)	13	100 ... 19000	36 ... 328	55
E39 ... E149 (1-stage)	7	30 ... 1490	1.29 ... 9.79	55
D.29-Z19 ... D.189-D69 (4 to 6-stage)	12	140 ... 19000	325 ... 27816	7.5

SIMOGEAR helical geared motors are available in the following versions:

#### Transmission stages

- 2 or 3-stage helical geared motors
- 1-stage helical geared motors for high output speeds
- 4 to 6-stage helical geared motors for especially low output speeds

#### Designs

- Foot-mounted design
- Flange-mounted design with or without VLplus and XLplus reinforced bearing systems
- Design with integrated housing flange
- Combined foot/flange-mounted design
- Cooling tower design

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.09</b>	<b>D.69-LE63MEB6</b>							
	2.7	315	328.49	11400	1.9	27	2KJ3206- ■ BD21- ■ ■ S1 -Z	P01
	<b>D.59-LE63MEB6</b>							
	2.9	295	307.02	7910	1.5	22	2KJ3205- ■ BD21- ■ ■ S1 -Z	P01
	3.3	260	272.99	7970	1.7	22	2KJ3205- ■ BD21- ■ ■ R1 -Z	P01
	3.7	230	239.70	8020	2	22	2KJ3205- ■ BD21- ■ ■ Q1 -Z	P01
	<b>D.49-LE63MEB6</b>							
	3.2	270	280.89	6000	1.2	20	2KJ3204- ■ BD21- ■ ■ S1 -Z	P01
	3.6	240	249.76	6060	1.3	20	2KJ3204- ■ BD21- ■ ■ R1 -Z	P01
	4.1	210	219.30	6120	1.5	20	2KJ3204- ■ BD21- ■ ■ Q1 -Z	P01
	4.5	191	199.36	6160	1.7	20	2KJ3204- ■ BD21- ■ ■ P1 -Z	P01
	<b>D.49-LE63MCA4</b>							
	5.0	171	280.89	6200	1.9	19	2KJ3204- ■ BB21- ■ ■ S1 -Z	-
	5.6	152	249.76	6240	2.1	19	2KJ3204- ■ BB21- ■ ■ R1 -Z	-
	<b>D.39-LE63MEB6</b>							
	3.8	225	235.29	3740	0.89	10	2KJ3203- ■ BD21- ■ ■ R1 -Z	P01
	4.3	200	208.69	4370	1	10	2KJ3203- ■ BD21- ■ ■ Q1 -Z	P01
	4.9	174	181.07	5010	1.2	10	2KJ3203- ■ BD21- ■ ■ P1 -Z	P01
	5.4	158	164.61	5410	1.3	10	2KJ3203- ■ BD21- ■ ■ N1 -Z	P01
	<b>D.39-LE63MCA4</b>							
	6.0	143	235.29	5790	1.4	10	2KJ3203- ■ BB21- ■ ■ R1 -Z	-
	6.8	127	208.69	5800	1.6	10	2KJ3203- ■ BB21- ■ ■ Q1 -Z	-
	7.8	110	181.07	5800	1.8	10	2KJ3203- ■ BB21- ■ ■ P1 -Z	-
	8.6	100	164.61	5800	2	10	2KJ3203- ■ BB21- ■ ■ N1 -Z	-
	<b>D.29-LE63MEB6</b>							
	5.3	161	167.63	3150	0.87	8	2KJ3202- ■ BD21- ■ ■ N1 -Z	P01
	5.9	146	152.39	3550	0.96	8	2KJ3202- ■ BD21- ■ ■ M1 -Z	P01
	<b>D.29-LE63MCA4</b>							
	6.5	133	217.89	3890	1.1	8	2KJ3202- ■ BB21- ■ ■ Q1 -Z	-
	7.3	118	192.93	4060	1.2	8	2KJ3202- ■ BB21- ■ ■ P1 -Z	-
	8.4	102	167.63	4060	1.4	8	2KJ3202- ■ BB21- ■ ■ N1 -Z	-
	9.3	93	152.39	4060	1.5	8	2KJ3202- ■ BB21- ■ ■ M1 -Z	-
	11	79	129.68	4060	1.8	8	2KJ3202- ■ BB21- ■ ■ L1 -Z	-
	12	72	117.89	4060	1.9	8	2KJ3202- ■ BB21- ■ ■ K1 -Z	-
	14	63	102.79	4060	2.2	8	2KJ3202- ■ BB21- ■ ■ J1 -Z	-
	15	56	92.01	4060	2.5	8	2KJ3202- ■ BB21- ■ ■ H1 -Z	-
	17	50	81.71	4060	2.8	8	2KJ3202- ■ BB21- ■ ■ G1 -Z	-
	19	46	75.42	4060	3.0	8	2KJ3202- ■ BB21- ■ ■ F1 -Z	-
	22	40	65.52	4060	3.5	8	2KJ3202- ■ BB21- ■ ■ E1 -Z	-
	25	35	56.93	4060	4.0	8	2KJ3202- ■ BB21- ■ ■ D1 -Z	-
	27	31	51.40	4060	4.5	8	2KJ3202- ■ BB21- ■ ■ C1 -Z	-
	29	30	48.37	4060	4.7	8	2KJ3202- ■ BB21- ■ ■ B1 -Z	-
	<b>Z.29-LE63MCA4</b>							
	34	25	41.40	4060	5.5	8	2KJ3102- ■ BB21- ■ ■ A2 -Z	-
	38	22	36.72	4060	6.3	8	2KJ3102- ■ BB21- ■ ■ X1 -Z	-
	44	19	31.86	4060	7.2	8	2KJ3102- ■ BB21- ■ ■ W1 -Z	-
	49	18	28.96	4060	7.9	8	2KJ3102- ■ BB21- ■ ■ V1 -Z	-
57	15	24.84	4060	9.2	8	2KJ3102- ■ BB21- ■ ■ U1 -Z	-	
62	14	22.58	4010	10	8	2KJ3102- ■ BB21- ■ ■ T1 -Z	-	
71	12	19.80	3840	12	8	2KJ3102- ■ BB21- ■ ■ S1 -Z	-	
80	11	17.67	3700	13	8	2KJ3102- ■ BB21- ■ ■ R1 -Z	-	
90	9.6	15.75	3570	15	8	2KJ3102- ■ BB21- ■ ■ Q1 -Z	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/48
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, B, F or H</b>	see page 10/42

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.09	<b>Z.29-LE63MCA4</b>							
	97	8.9	14.54	3480	14	8	2KJ3102- ■ BB21- ■ ■ P1 -Z -	-
	<b>D.19-LE63MEB6</b>							
	6.9	124	129.30	1160	0.81	7	2KJ3201- ■ BD21- ■ ■ M1 -Z P01	P01
	<b>D.19-LE63MCA4</b>							
	7.6	113	184.86	1390	0.89	7	2KJ3201- ■ BB21- ■ ■ Q1 -Z -	-
	8.6	100	163.69	1650	1.0	7	2KJ3201- ■ BB21- ■ ■ P1 -Z -	-
	9.9	87	142.23	1920	1.2	7	2KJ3201- ■ BB21- ■ ■ N1 -Z -	-
	11	79	129.30	2080	1.3	7	2KJ3201- ■ BB21- ■ ■ M1 -Z -	-
	13	67	110.02	2300	1.5	7	2KJ3201- ■ BB21- ■ ■ L1 -Z -	-
	14	61	100.02	2330	1.6	7	2KJ3201- ■ BB21- ■ ■ K1 -Z -	-
	16	53	87.21	2370	1.9	7	2KJ3201- ■ BB21- ■ ■ J1 -Z -	-
	18	48	78.07	2390	2.1	7	2KJ3201- ■ BB21- ■ ■ H1 -Z -	-
	20	42	69.32	2420	2.4	7	2KJ3201- ■ BB21- ■ ■ G1 -Z -	-
	22	39	63.99	2440	2.6	7	2KJ3201- ■ BB21- ■ ■ F1 -Z -	-
	25	34	55.59	2460	3.0	7	2KJ3201- ■ BB21- ■ ■ E1 -Z -	-
	29	29	48.30	2490	3.4	7	2KJ3201- ■ BB21- ■ ■ D1 -Z -	-
	32	27	43.61	2500	3.8	7	2KJ3201- ■ BB21- ■ ■ C1 -Z -	-
	34	25	41.04	2510	4.0	7	2KJ3201- ■ BB21- ■ ■ B1 -Z -	-
	<b>Z.19-LE63MCA4</b>							
	40	21	34.97	2530	4.7	6	2KJ3101- ■ BB21- ■ ■ W1 -Z -	-
	46	19	30.97	2540	5.3	6	2KJ3101- ■ BB21- ■ ■ V1 -Z -	-
	52	16	26.91	2550	6.1	6	2KJ3101- ■ BB21- ■ ■ U1 -Z -	-
	58	15	24.46	2560	6.7	6	2KJ3101- ■ BB21- ■ ■ T1 -Z -	-
	68	13	20.82	2570	7.9	6	2KJ3101- ■ BB21- ■ ■ S1 -Z -	-
	75	12	18.92	2520	8.7	6	2KJ3101- ■ BB21- ■ ■ R1 -Z -	-
	85	10	16.50	2420	9.8	6	2KJ3101- ■ BB21- ■ ■ Q1 -Z -	-
	95	9.0	14.77	2340	11	6	2KJ3101- ■ BB21- ■ ■ P1 -Z -	-
	107	8.0	13.12	2250	11	6	2KJ3101- ■ BB21- ■ ■ N1 -Z -	-
	116	7.4	12.11	2190	12	6	2KJ3101- ■ BB21- ■ ■ M1 -Z -	-
	134	6.4	10.52	2100	13	6	2KJ3101- ■ BB21- ■ ■ L1 -Z -	-
	154	5.6	9.14	2000	14	6	2KJ3101- ■ BB21- ■ ■ K1 -Z -	-
	171	5.0	8.25	1940	15	6	2KJ3101- ■ BB21- ■ ■ J1 -Z -	-
	182	4.7	7.76	1900	15	6	2KJ3101- ■ BB21- ■ ■ H1 -Z -	-
226	3.8	6.25	1760	15	6	2KJ3101- ■ BB21- ■ ■ F1 -Z -	-	
0.12	<b>D.59-LE63ZMH4P</b>							
	4.5	250	307.02	7990	1.8	24	2KJ3205- ■ BD23- ■ ■ S1 -Z -	-
	5.1	225	272.99	8030	2.0	24	2KJ3205- ■ BD23- ■ ■ R1 -Z -	-
	<b>D.49-LE63ZMH4P</b>							
	4.9	230	280.89	6080	1.4	21	2KJ3204- ■ BD23- ■ ■ S1 -Z -	-
	5.6	205	249.76	6140	1.6	21	2KJ3204- ■ BD23- ■ ■ R1 -Z -	-
	6.3	181	219.30	6180	1.8	21	2KJ3204- ■ BD23- ■ ■ Q1 -Z -	-
	7.0	164	199.36	6220	1.9	21	2KJ3204- ■ BD23- ■ ■ P1 -Z -	-
	<b>D.39-LE63ZMH4P</b>							
	5.9	194	235.29	4520	1.0	12	2KJ3203- ■ BD23- ■ ■ R1 -Z -	-
	6.7	172	208.69	5060	1.2	12	2KJ3203- ■ BD23- ■ ■ Q1 -Z -	-
	7.7	149	181.07	5640	1.3	12	2KJ3203- ■ BD23- ■ ■ P1 -Z -	-
	8.4	136	164.61	5800	1.5	12	2KJ3203- ■ BD23- ■ ■ N1 -Z -	-
	9.8	116	141.17	5800	1.7	12	2KJ3203- ■ BD23- ■ ■ M1 -Z -	-
	11	106	128.34	5800	1.9	12	2KJ3203- ■ BD23- ■ ■ L1 -Z -	-
	12	93	112.53	5800	2.2	12	2KJ3203- ■ BD23- ■ ■ K1 -Z -	-

## Article No. supplement

Shaft design	1 or 9	see page 10/48
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, B, F or H	see page 10/42



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.12</b>	<b>D.29-LE63ZMH4P</b>							
	7.2	159	192.93	3200	0.88	10	2KJ3202- ■ BD23- ■ ■ P1 -Z -	-
	8.3	138	167.63	3760	1.0	10	2KJ3202- ■ BD23- ■ ■ N1 -Z -	-
	9.1	126	152.39	4060	1.1	10	2KJ3202- ■ BD23- ■ ■ M1 -Z -	-
	11	107	129.68	4060	1.3	10	2KJ3202- ■ BD23- ■ ■ L1 -Z -	-
	12	97	117.89	4060	1.4	10	2KJ3202- ■ BD23- ■ ■ K1 -Z -	-
	14	85	102.79	4060	1.7	10	2KJ3202- ■ BD23- ■ ■ J1 -Z -	-
	15	76	92.01	4060	1.8	10	2KJ3202- ■ BD23- ■ ■ H1 -Z -	-
	17	67	81.71	4060	2.1	10	2KJ3202- ■ BD23- ■ ■ G1 -Z -	-
	18	62	75.42	4060	2.3	10	2KJ3202- ■ BD23- ■ ■ F1 -Z -	-
	21	54	65.52	4060	2.6	10	2KJ3202- ■ BD23- ■ ■ E1 -Z -	-
	24	47	56.93	4060	3	10	2KJ3202- ■ BD23- ■ ■ D1 -Z -	-
	27	42	51.40	4060	3.3	10	2KJ3202- ■ BD23- ■ ■ C1 -Z -	-
	29	40	48.37	4060	3.5	10	2KJ3202- ■ BD23- ■ ■ B1 -Z -	-
	<b>Z.29-LE63ZMH4P</b>							
34	34	41.40	4060	4.1	10	2KJ3102- ■ BD23- ■ ■ A2 -Z -	-	
38	30	36.72	4060	4.6	10	2KJ3102- ■ BD23- ■ ■ X1 -Z -	-	
44	26	31.86	4060	5.3	10	2KJ3102- ■ BD23- ■ ■ W1 -Z -	-	
48	24	28.96	4060	5.9	10	2KJ3102- ■ BD23- ■ ■ V1 -Z -	-	
56	20	24.84	4060	6.8	10	2KJ3102- ■ BD23- ■ ■ U1 -Z -	-	
62	19	22.58	4000	7.5	10	2KJ3102- ■ BD23- ■ ■ T1 -Z -	-	
70	16	19.80	3840	8.6	10	2KJ3102- ■ BD23- ■ ■ S1 -Z -	-	
79	15	17.67	3700	9.6	10	2KJ3102- ■ BD23- ■ ■ R1 -Z -	-	
88	13	15.75	3570	11	10	2KJ3102- ■ BD23- ■ ■ Q1 -Z -	-	
96	12	14.54	3480	10	10	2KJ3102- ■ BD23- ■ ■ P1 -Z -	-	
109	10	12.73	3340	13	10	2KJ3102- ■ BD23- ■ ■ N1 -Z -	-	
125	9.2	11.16	3190	15	10	2KJ3102- ■ BD23- ■ ■ M1 -Z -	-	
201	5.7	6.92	2730	13	10	2KJ3102- ■ BD23- ■ ■ G1 -Z -	-	
<b>D.19-LE63ZMH4P</b>								
9.8	117	142.23	1310	0.85	9	2KJ3201- ■ BD23- ■ ■ N1 -Z -	-	
11	107	129.30	1510	0.94	9	2KJ3201- ■ BD23- ■ ■ M1 -Z -	-	
13	91	110.02	1840	1.1	9	2KJ3201- ■ BD23- ■ ■ L1 -Z -	-	
14	82	100.02	2020	1.2	9	2KJ3201- ■ BD23- ■ ■ K1 -Z -	-	
16	72	87.21	2230	1.4	9	2KJ3201- ■ BD23- ■ ■ J1 -Z -	-	
18	64	78.07	2310	1.6	9	2KJ3201- ■ BD23- ■ ■ H1 -Z -	-	
20	57	69.32	2350	1.7	9	2KJ3201- ■ BD23- ■ ■ G1 -Z -	-	
22	53	63.99	2370	1.9	9	2KJ3201- ■ BD23- ■ ■ F1 -Z -	-	
25	46	55.59	2400	2.2	9	2KJ3201- ■ BD23- ■ ■ E1 -Z -	-	
29	40	48.30	2430	2.5	9	2KJ3201- ■ BD23- ■ ■ D1 -Z -	-	
32	36	43.61	2450	2.8	9	2KJ3201- ■ BD23- ■ ■ C1 -Z -	-	
34	34	41.04	2460	3.0	9	2KJ3201- ■ BD23- ■ ■ B1 -Z -	-	
<b>Z.19-LE63ZMH4P</b>								
40	29	34.97	2490	3.5	8	2KJ3101- ■ BD23- ■ ■ W1 -Z -	-	
45	26	30.97	2500	3.9	8	2KJ3101- ■ BD23- ■ ■ V1 -Z -	-	
52	22	26.91	2520	4.5	8	2KJ3101- ■ BD23- ■ ■ U1 -Z -	-	
57	20	24.46	2530	5.0	8	2KJ3101- ■ BD23- ■ ■ T1 -Z -	-	
67	17	20.82	2550	5.8	8	2KJ3101- ■ BD23- ■ ■ S1 -Z -	-	
73	16	18.92	2510	6.4	8	2KJ3101- ■ BD23- ■ ■ R1 -Z -	-	
84	14	16.50	2400	7.3	8	2KJ3101- ■ BD23- ■ ■ Q1 -Z -	-	
94	12	14.77	2330	7.8	8	2KJ3101- ■ BD23- ■ ■ P1 -Z -	-	
106	11	13.12	2240	8.4	8	2KJ3101- ■ BD23- ■ ■ N1 -Z -	-	
115	10	12.11	2180	8.8	8	2KJ3101- ■ BD23- ■ ■ M1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.12	<b>Z.19-LE63MEB4E</b>							
	132	8.7	10.52	2090	9.6	8	2KJ3101- ■ BD23- ■ ■ L1 -Z -	
	152	7.5	9.14	2000	10	8	2KJ3101- ■ BD23- ■ ■ K1 -Z -	
	168	6.8	8.25	1940	11	8	2KJ3101- ■ BD23- ■ ■ H1 -Z -	
	179	6.4	7.76	1900	11	8	2KJ3101- ■ BD23- ■ ■ J1 -Z -	
	205	5.6	6.77	1820	12	8	2KJ3101- ■ BD23- ■ ■ G1 -Z -	
	222	5.2	6.25	1750	11	8	2KJ3101- ■ BD23- ■ ■ F1 -Z -	
	256	4.5	5.43	1680	12	8	2KJ3101- ■ BD23- ■ ■ E1 -Z -	
	295	3.9	4.71	1600	13	8	2KJ3101- ■ BD23- ■ ■ D1 -Z -	
	326	3.5	4.26	1550	13	8	2KJ3101- ■ BD23- ■ ■ C1 -Z -	
	347	3.3	4.01	1520	14	8	2KJ3101- ■ BD23- ■ ■ B1 -Z -	
	<b>E.39-LE63MEB4E</b>							
	151	7.6	9.22	3000	3.9	11	2KJ3001- ■ BC22- ■ ■ S1 -Z -	
	0.18	<b>D.79-LE71ZMK6P</b>						
2.6		645	330.23	13600	1.3	39	2KJ3207- ■ CC23- ■ ■ S1 -Z P01	
2.9		590	300.21	13700	1.4	39	2KJ3207- ■ CC23- ■ ■ R1 -Z P01	
3.4		500	255.33	13800	1.7	39	2KJ3207- ■ CC23- ■ ■ Q1 -Z P01	
3.8		455	232.12	13900	1.8	39	2KJ3207- ■ CC23- ■ ■ P1 -Z P01	
<b>D.69-LE71ZMK6P</b>								
2.7		645	328.49	10900	0.93	29	2KJ3206- ■ CC23- ■ ■ S1 -Z P01	
3.0		570	292.08	11000	1.0	29	2KJ3206- ■ CC23- ■ ■ R1 -Z P01	
3.4		500	256.46	11100	1.2	29	2KJ3206- ■ CC23- ■ ■ Q1 -Z P01	
3.8		455	233.14	11200	1.3	29	2KJ3206- ■ CC23- ■ ■ P1 -Z P01	
<b>D.69-LE63ZMK4P</b>								
4.2		405	328.49	11300	1.5	28	2KJ3206- ■ BE23- ■ ■ S1 -Z -	
4.7		360	292.08	11300	1.7	28	2KJ3206- ■ BE23- ■ ■ R1 -Z -	
5.4		315	256.46	11400	1.9	28	2KJ3206- ■ BE23- ■ ■ Q1 -Z -	
5.9		285	233.14	11400	2.1	28	2KJ3206- ■ BE23- ■ ■ P1 -Z -	
<b>D.59-LE71ZMK6P</b>								
3.2		535	272.99	6580	0.84	24	2KJ3205- ■ CC23- ■ ■ R1 -Z P01	
3.7		470	239.70	7630	0.96	24	2KJ3205- ■ CC23- ■ ■ Q1 -Z P01	
4		425	217.91	7700	1.1	24	2KJ3205- ■ CC23- ■ ■ P1 -Z P01	
<b>D.59-LE63ZMK4P</b>								
4.5		380	307.02	7780	1.2	24	2KJ3205- ■ BE23- ■ ■ S1 -Z -	
5.1		335	272.99	7850	1.3	24	2KJ3205- ■ BE23- ■ ■ R1 -Z -	
5.8		295	239.70	7910	1.5	24	2KJ3205- ■ BE23- ■ ■ Q1 -Z -	
6.4		270	217.91	7950	1.7	24	2KJ3205- ■ BE23- ■ ■ P1 -Z -	
7.4		230	186.43	8020	1.9	24	2KJ3205- ■ BE23- ■ ■ N1 -Z -	
8.2		210	169.48	8050	2.1	24	2KJ3205- ■ BE23- ■ ■ M1 -Z -	
<b>D.49-LE71ZMK6P</b>								
4.4		390	199.36	4010	0.82	22	2KJ3204- ■ CC23- ■ ■ P1 -Z P01	
<b>D.49-LE63ZMK4P</b>								
4.9		345	280.89	5150	0.92	21	2KJ3204- ■ BE23- ■ ■ S1 -Z -	
5.5		310	249.76	5920	1	21	2KJ3204- ■ BE23- ■ ■ R1 -Z -	
6.3		270	219.30	6000	1.2	21	2KJ3204- ■ BE23- ■ ■ Q1 -Z -	
6.9	245	199.36	6050	1.3	21	2KJ3204- ■ BE23- ■ ■ P1 -Z -		
8.1	210	170.57	6120	1.5	21	2KJ3204- ■ BE23- ■ ■ N1 -Z -		
8.9	192	155.06	6160	1.7	21	2KJ3204- ■ BE23- ■ ■ M1 -Z -		
10	170	137.06	6210	1.9	21	2KJ3204- ■ BE23- ■ ■ L1 -Z -		
11	155	124.60	6240	2.1	21	2KJ3204- ■ BE23- ■ ■ K1 -Z -		
<b>D.39-LE63ZMK4P</b>								
7.6	225	181.07	3740	0.89	12	2KJ3203- ■ BE23- ■ ■ P1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.18</b>	<b>D.39-LE63ZMK4P</b>							
	8.4	200	164.61	4370	0.98	12	2KJ3203- ■ BE23- ■ ■ N1 -Z -	
	9.8	175	141.17	4990	1.1	12	2KJ3203- ■ BE23- ■ ■ M1 -Z -	
	11	159	128.34	5390	1.3	12	2KJ3203- ■ BE23- ■ ■ L1 -Z -	
	12	140	112.53	5800	1.4	12	2KJ3203- ■ BE23- ■ ■ K1 -Z -	
	14	125	100.44	5800	1.6	12	2KJ3203- ■ BE23- ■ ■ J1 -Z -	
	15	111	89.51	5800	1.8	12	2KJ3203- ■ BE23- ■ ■ H1 -Z -	
	17	103	82.63	5800	2	12	2KJ3203- ■ BE23- ■ ■ G1 -Z -	
	19	90	72.34	5800	2.2	12	2KJ3203- ■ BE23- ■ ■ F1 -Z -	
	<b>D.29-LE63ZMK4P</b>							
	11	161	129.68	3150	0.87	10	2KJ3202- ■ BE23- ■ ■ L1 -Z -	
	12	146	117.89	3550	0.96	10	2KJ3202- ■ BE23- ■ ■ K1 -Z -	
	13	128	102.79	4030	1.1	10	2KJ3202- ■ BE23- ■ ■ J1 -Z -	
	15	114	92.01	4060	1.2	10	2KJ3202- ■ BE23- ■ ■ H1 -Z -	
	17	101	81.71	4060	1.4	10	2KJ3202- ■ BE23- ■ ■ G1 -Z -	
	18	94	75.42	4060	1.5	10	2KJ3202- ■ BE23- ■ ■ F1 -Z -	
	21	81	65.52	4060	1.7	10	2KJ3202- ■ BE23- ■ ■ E1 -Z -	
	24	71	56.93	4060	2	10	2KJ3202- ■ BE23- ■ ■ D1 -Z -	
	27	64	51.40	4060	2.2	10	2KJ3202- ■ BE23- ■ ■ C1 -Z -	
	29	60	48.37	4060	2.3	10	2KJ3202- ■ BE23- ■ ■ B1 -Z -	
	<b>Z.29-LE63ZMK4P</b>							
	33	51	41.40	4060	2.7	10	2KJ3102- ■ BE23- ■ ■ A2 -Z -	
	38	46	36.72	4060	3.1	10	2KJ3102- ■ BE23- ■ ■ X1 -Z -	
	43	40	31.86	4060	3.5	10	2KJ3102- ■ BE23- ■ ■ W1 -Z -	
	48	36	28.96	4060	3.9	10	2KJ3102- ■ BE23- ■ ■ V1 -Z -	
	56	31	24.84	4060	4.5	10	2KJ3102- ■ BE23- ■ ■ U1 -Z -	
	61	28	22.58	3950	5	10	2KJ3102- ■ BE23- ■ ■ T1 -Z -	
	70	25	19.80	3790	5.7	10	2KJ3102- ■ BE23- ■ ■ S1 -Z -	
	78	22	17.67	3660	6.4	10	2KJ3102- ■ BE23- ■ ■ R1 -Z -	
	88	20	15.75	3530	7.2	10	2KJ3102- ■ BE23- ■ ■ Q1 -Z -	
	95	18	14.54	3450	6.6	10	2KJ3102- ■ BE23- ■ ■ P1 -Z -	
	109	16	12.73	3310	8.9	10	2KJ3102- ■ BE23- ■ ■ N1 -Z -	
	124	14	11.16	3170	10	10	2KJ3102- ■ BE23- ■ ■ M1 -Z -	
137	13	10.12	3070	11	10	2KJ3102- ■ BE23- ■ ■ L1 -Z -		
145	12	9.53	3020	12	10	2KJ3102- ■ BE23- ■ ■ K1 -Z -		
165	10	8.40	2900	13	10	2KJ3102- ■ BE23- ■ ■ J1 -Z -		
190	9	7.29	2770	14	10	2KJ3102- ■ BE23- ■ ■ H1 -Z -		
200	8.6	6.92	2710	8.7	10	2KJ3102- ■ BE23- ■ ■ G1 -Z -		
229	7.5	6.06	2600	13	10	2KJ3102- ■ BE23- ■ ■ F1 -Z -		
261	6.6	5.31	2490	14	10	2KJ3102- ■ BE23- ■ ■ E1 -Z -		
287	6	4.82	2410	14	10	2KJ3102- ■ BE23- ■ ■ D1 -Z -		
305	5.6	4.54	2370	15	10	2KJ3102- ■ BE23- ■ ■ C1 -Z -		
346	5	4.00	2270	15	10	2KJ3102- ■ BE23- ■ ■ B1 -Z -		
<b>Z.29-LE63MEB2P</b>								
161	11	17.67	2920	13	8	2KJ3102- ■ BC23- ■ ■ R1 -Z P00		
181	9.5	15.75	2810	15	8	2KJ3102- ■ BC23- ■ ■ Q1 -Z P00		
196	8.8	14.54	2740	14	8	2KJ3102- ■ BC23- ■ ■ P1 -Z P00		
<b>D.19-LE63ZMK4P</b>								
14	124	100.02	1160	0.81	9	2KJ3201- ■ BE23- ■ ■ K1 -Z -		
16	108	87.21	1490	0.92	9	2KJ3201- ■ BE23- ■ ■ J1 -Z -		
18	97	78.07	1710	1.0	9	2KJ3201- ■ BE23- ■ ■ H1 -Z -		
20	86	69.32	1940	1.2	9	2KJ3201- ■ BE23- ■ ■ G1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.18	<b>D.19-LE63ZMK4P</b>							
	22	79	63.99	2080	1.3	9	2KJ3201- ■ BE23- ■ ■ F1 -Z -	
	25	69	55.59	2290	1.4	9	2KJ3201- ■ BE23- ■ ■ E1 -Z -	
	29	60	48.30	2330	1.7	9	2KJ3201- ■ BE23- ■ ■ D1 -Z -	
	32	54	43.61	2360	1.8	9	2KJ3201- ■ BE23- ■ ■ C1 -Z -	
	34	51	41.04	2380	2.0	9	2KJ3201- ■ BE23- ■ ■ B1 -Z -	
	<b>Z.19-LE63ZMK4P</b>							
	40	43	34.97	2420	2.3	8	2KJ3101- ■ BE23- ■ ■ W1 -Z -	
	45	38	30.97	2440	2.6	8	2KJ3101- ■ BE23- ■ ■ V1 -Z -	
	51	33	26.91	2470	3	8	2KJ3101- ■ BE23- ■ ■ U1 -Z -	
	57	30	24.46	2480	3.3	8	2KJ3101- ■ BE23- ■ ■ T1 -Z -	
	67	26	20.82	2500	3.9	8	2KJ3101- ■ BE23- ■ ■ S1 -Z -	
	73	24	18.92	2450	4.3	8	2KJ3101- ■ BE23- ■ ■ R1 -Z -	
	84	20	16.50	2360	4.8	8	2KJ3101- ■ BE23- ■ ■ Q1 -Z -	
	94	18	14.77	2290	5.2	8	2KJ3101- ■ BE23- ■ ■ P1 -Z -	
	106	16	13.12	2210	5.6	8	2KJ3101- ■ BE23- ■ ■ N1 -Z -	
	114	15	12.11	2150	5.9	8	2KJ3101- ■ BE23- ■ ■ M1 -Z -	
	132	13	10.52	2060	6.4	8	2KJ3101- ■ BE23- ■ ■ L1 -Z -	
	152	11	9.14	1980	6.9	8	2KJ3101- ■ BE23- ■ ■ K1 -Z -	
	168	10	8.25	1920	7.2	8	2KJ3101- ■ BE23- ■ ■ J1 -Z -	
	178	9.6	7.76	1880	7.6	8	2KJ3101- ■ BE23- ■ ■ H1 -Z -	
	205	8.4	6.77	1800	8.1	8	2KJ3101- ■ BE23- ■ ■ G1 -Z -	
	222	7.8	6.25	1730	7.2	8	2KJ3101- ■ BE23- ■ ■ F1 -Z -	
	255	6.7	5.43	1660	7.9	8	2KJ3101- ■ BE23- ■ ■ E1 -Z -	
	294	5.8	4.71	1590	8.4	8	2KJ3101- ■ BE23- ■ ■ D1 -Z -	
	325	5.3	4.26	1540	8.9	8	2KJ3101- ■ BE23- ■ ■ C1 -Z -	
	345	5	4.01	1510	9.2	8	2KJ3101- ■ BE23- ■ ■ B1 -Z -	
	<b>Z.19-LE63MEB2P</b>							
	151	11	18.92	1980	8.8	7	2KJ3101- ■ BC23- ■ ■ R1 -Z P00	
	173	10	16.50	1900	9.9	7	2KJ3101- ■ BC23- ■ ■ Q1 -Z P00	
	193	8.9	14.77	1830	11	7	2KJ3101- ■ BC23- ■ ■ P1 -Z P00	
	217	7.9	13.12	1770	12	7	2KJ3101- ■ BC23- ■ ■ N1 -Z P00	
	235	7.3	12.11	1720	12	7	2KJ3101- ■ BC23- ■ ■ M1 -Z P00	
	271	6.3	10.52	1650	13	7	2KJ3101- ■ BC23- ■ ■ L1 -Z P00	
	312	5.5	9.14	1580	14	7	2KJ3101- ■ BC23- ■ ■ K1 -Z P00	
345	5.0	8.25	1530	15	7	2KJ3101- ■ BC23- ■ ■ J1 -Z P00		
456	3.8	6.25	1380	15	7	2KJ3101- ■ BC23- ■ ■ F1 -Z P00		
<b>E.39-LE63ZMK4P</b>								
150	11	9.22	3000	2.6	12	2KJ3001- ■ BE23- ■ ■ S1 -Z -		
169	10	8.20	3000	3.3	12	2KJ3001- ■ BE23- ■ ■ R1 -Z -		
0.25	<b>D.79-LE71YMS6P</b>							
	2.6	905	330.23	12900	0.93	40	2KJ3207- ■ CE23- ■ ■ S1 -Z P01	
	2.9	820	300.21	13400	1	40	2KJ3207- ■ CE23- ■ ■ R1 -Z P01	
	3.4	700	255.33	13600	1.2	40	2KJ3207- ■ CE23- ■ ■ Q1 -Z P01	
	3.7	635	232.12	13600	1.3	40	2KJ3207- ■ CE23- ■ ■ P1 -Z P01	
	<b>D.79-LE71ZMK4P</b>							
	4.2	565	330.23	13700	1.5	39	2KJ3207- ■ CC23- ■ ■ S1 -Z -	
	4.6	510	300.21	13800	1.6	39	2KJ3207- ■ CC23- ■ ■ R1 -Z -	
	5.5	435	255.33	13900	1.9	39	2KJ3207- ■ CC23- ■ ■ Q1 -Z -	
	6	395	232.12	14000	2.1	39	2KJ3207- ■ CC23- ■ ■ P1 -Z -	
	<b>D.69-LE71YMS6P</b>							
	3.4	700	256.46	10700	0.85	30	2KJ3206- ■ CE23- ■ ■ Q1 -Z P01	

## Article No. supplement

Shaft design	1 or 9	see page 10/48
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, B, F or H	see page 10/42

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.25</b>	<b>D.69-LE71YMS6P</b>							
	3.7	640	233.14	10900	0.94	30	2KJ3206- ■ CC23- ■ ■ P1 -Z P01	
	<b>D.69-LE71ZMK4P</b>							
	4.2	560	328.49	11000	1.1	29	2KJ3206- ■ CC23- ■ ■ S1 -Z -	
	4.8	500	292.08	11100	1.2	29	2KJ3206- ■ CC23- ■ ■ R1 -Z -	
	5.4	435	256.46	11200	1.4	29	2KJ3206- ■ CC23- ■ ■ Q1 -Z -	
	6	395	233.14	11300	1.5	29	2KJ3206- ■ CC23- ■ ■ P1 -Z -	
	7	340	199.47	11400	1.8	29	2KJ3206- ■ CC23- ■ ■ N1 -Z -	
	7.7	310	181.33	11400	1.9	29	2KJ3206- ■ CC23- ■ ■ M1 -Z -	
	<b>D.59-LE71ZMK4P</b>							
4.5	525	307.02	6760	0.86	24	2KJ3205- ■ CC23- ■ ■ S1 -Z -		
5.1	465	272.99	7640	0.96	24	2KJ3205- ■ CC23- ■ ■ R1 -Z -		
5.8	410	239.70	7730	1.1	24	2KJ3205- ■ CC23- ■ ■ Q1 -Z -		
6.4	370	217.91	7790	1.2	24	2KJ3205- ■ CC23- ■ ■ P1 -Z -		
7.5	315	186.43	7880	1.4	24	2KJ3205- ■ CC23- ■ ■ N1 -Z -		
8.2	290	169.48	7920	1.6	24	2KJ3205- ■ CC23- ■ ■ M1 -Z -		
9.3	255	149.81	7980	1.8	24	2KJ3205- ■ CC23- ■ ■ L1 -Z -		
10	230	136.19	8020	1.9	24	2KJ3205- ■ CC23- ■ ■ K1 -Z -		
12	200	119.30	8070	2.2	24	2KJ3205- ■ CC23- ■ ■ J1 -Z -		
<b>D.49-LE71ZMK4P</b>								
6.4	375	219.30	4390	0.85	22	2KJ3204- ■ CC23- ■ ■ Q1 -Z -		
7	340	199.36	5270	0.94	22	2KJ3204- ■ CC23- ■ ■ P1 -Z -		
8.2	290	170.57	5960	1.1	22	2KJ3204- ■ CC23- ■ ■ N1 -Z -		
9	265	155.06	6010	1.2	22	2KJ3204- ■ CC23- ■ ■ M1 -Z -		
10	235	137.06	6070	1.4	22	2KJ3204- ■ CC23- ■ ■ L1 -Z -		
11	210	124.60	6120	1.5	22	2KJ3204- ■ CC23- ■ ■ K1 -Z -		
13	187	109.14	6170	1.7	22	2KJ3204- ■ CC23- ■ ■ J1 -Z -		
14	172	100.75	6200	1.9	22	2KJ3204- ■ CC23- ■ ■ H1 -Z -		
16	153	89.20	6240	2.1	22	2KJ3204- ■ CC23- ■ ■ G1 -Z -		
<b>D.39-LE71ZMK4P</b>								
9.9	240	141.17	3360	0.83	12	2KJ3203- ■ CC23- ■ ■ M1 -Z -		
11	220	128.34	3870	0.91	12	2KJ3203- ■ CC23- ■ ■ L1 -Z -		
12	193	112.53	4540	1	12	2KJ3203- ■ CC23- ■ ■ K1 -Z -		
14	172	100.44	5060	1.2	12	2KJ3203- ■ CC23- ■ ■ J1 -Z -		
16	153	89.51	5540	1.3	12	2KJ3203- ■ CC23- ■ ■ H1 -Z -		
17	141	82.63	5800	1.4	12	2KJ3203- ■ CC23- ■ ■ G1 -Z -		
19	124	72.34	5800	1.6	12	2KJ3203- ■ CC23- ■ ■ F1 -Z -		
22	109	63.43	5800	1.8	12	2KJ3203- ■ CC23- ■ ■ E1 -Z -		
<b>Z.39-LE71ZMK4P</b>								
25	96	55.95	5800	2.1	12	2KJ3103- ■ CC23- ■ ■ A2 -Z -		
28	85	49.75	5800	2.3	12	2KJ3103- ■ CC23- ■ ■ X1 -Z -		
<b>D.29-LE71ZMK4P</b>								
14	176	102.79	2750	0.8	10	2KJ3202- ■ CC23- ■ ■ J1 -Z -		
15	157	92.01	3260	0.89	10	2KJ3202- ■ CC23- ■ ■ H1 -Z -		
17	140	81.71	3710	1	10	2KJ3202- ■ CC23- ■ ■ G1 -Z -		
18	129	75.42	4000	1.1	10	2KJ3202- ■ CC23- ■ ■ F1 -Z -		
21	112	65.52	4060	1.2	10	2KJ3202- ■ CC23- ■ ■ E1 -Z -		
25	97	56.93	4060	1.4	10	2KJ3202- ■ CC23- ■ ■ D1 -Z -		
27	88	51.40	4060	1.6	10	2KJ3202- ■ CC23- ■ ■ C1 -Z -		
29	83	48.37	4060	1.7	10	2KJ3202- ■ CC23- ■ ■ B1 -Z -		
<b>Z.29-LE71ZMK4P</b>								
34	71	41.40	4060	2	10	2KJ3102- ■ CC23- ■ ■ A2 -Z -		
38	63	36.72	4060	2.2	10	2KJ3102- ■ CC23- ■ ■ X1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.25</b>	<b>Z.29-LE71ZMK4P</b>							
	44	54	31.86	4060	2.6	10	2KJ3102- ■ CC23- ■ ■ W1 -Z -	-
	48	50	28.96	4060	2.8	10	2KJ3102- ■ CC23- ■ ■ V1 -Z -	-
	56	42	24.84	4000	3.3	10	2KJ3102- ■ CC23- ■ ■ U1 -Z -	-
	62	39	22.58	3880	3.6	10	2KJ3102- ■ CC23- ■ ■ T1 -Z -	-
	70	34	19.80	3730	4.1	10	2KJ3102- ■ CC23- ■ ■ S1 -Z -	-
	79	30	17.67	3610	4.6	10	2KJ3102- ■ CC23- ■ ■ R1 -Z -	-
	89	27	15.75	3480	5.2	10	2KJ3102- ■ CC23- ■ ■ Q1 -Z -	-
	96	25	14.54	3400	4.8	10	2KJ3102- ■ CC23- ■ ■ P1 -Z -	-
	110	22	12.73	3260	6.4	10	2KJ3102- ■ CC23- ■ ■ N1 -Z -	-
	125	19	11.16	3130	7.3	10	2KJ3102- ■ CC23- ■ ■ M1 -Z -	-
	138	17	10.12	3040	8.1	10	2KJ3102- ■ CC23- ■ ■ L1 -Z -	-
	146	16	9.53	2990	8.6	10	2KJ3102- ■ CC23- ■ ■ K1 -Z -	-
	166	14	8.40	2870	9.6	10	2KJ3102- ■ CC23- ■ ■ J1 -Z -	-
	191	12	7.29	2740	10	10	2KJ3102- ■ CC23- ■ ■ H1 -Z -	-
	202	12	6.92	2680	6.3	10	2KJ3102- ■ CC23- ■ ■ G1 -Z -	-
	230	10	6.06	2570	9.6	10	2KJ3102- ■ CC23- ■ ■ F1 -Z -	-
	263	9.1	5.31	2470	10	10	2KJ3102- ■ CC23- ■ ■ E1 -Z -	-
	289	8.2	4.82	2390	10	10	2KJ3102- ■ CC23- ■ ■ D1 -Z -	-
	307	7.8	4.54	2350	11	10	2KJ3102- ■ CC23- ■ ■ C1 -Z -	-
349	6.8	4.00	2250	11	10	2KJ3102- ■ CC23- ■ ■ B1 -Z -	-	
402	5.9	3.47	2150	12	10	2KJ3102- ■ CC23- ■ ■ A1 -Z -	-	
<b>Z.29-LE63ZMH2P</b>								
160	15	17.67	2900	9.4	10	2KJ3102- ■ BD23- ■ ■ R1 -Z	P00	
180	13	15.75	2800	11	10	2KJ3102- ■ BD23- ■ ■ Q1 -Z	P00	
195	12	14.54	2730	9.8	10	2KJ3102- ■ BD23- ■ ■ P1 -Z	P00	
223	11	12.73	2610	13	10	2KJ3102- ■ BD23- ■ ■ N1 -Z	P00	
254	9.4	11.16	2510	15	10	2KJ3102- ■ BD23- ■ ■ M1 -Z	P00	
410	5.8	6.92	2140	13	10	2KJ3102- ■ BD23- ■ ■ G1 -Z	P00	
<b>D.19-LE71ZMK4P</b>								
20	119	69.32	1260	0.84	9	2KJ3201- ■ CC23- ■ ■ G1 -Z	-	
22	110	63.99	1450	0.91	9	2KJ3201- ■ CC23- ■ ■ F1 -Z	-	
25	95	55.59	1760	1.1	9	2KJ3201- ■ CC23- ■ ■ E1 -Z	-	
29	83	48.30	2000	1.2	9	2KJ3201- ■ CC23- ■ ■ D1 -Z	-	
32	75	43.61	2160	1.3	9	2KJ3201- ■ CC23- ■ ■ C1 -Z	-	
34	70	41.04	2270	1.4	9	2KJ3201- ■ CC23- ■ ■ B1 -Z	-	
<b>Z.19-LE71ZMK4P</b>								
40	60	34.97	2330	1.7	9	2KJ3101- ■ CC23- ■ ■ W1 -Z	-	
45	53	30.97	2370	1.9	9	2KJ3101- ■ CC23- ■ ■ V1 -Z	-	
52	46	26.91	2400	2.2	9	2KJ3101- ■ CC23- ■ ■ U1 -Z	-	
57	42	24.46	2420	2.4	9	2KJ3101- ■ CC23- ■ ■ T1 -Z	-	
67	36	20.82	2450	2.8	9	2KJ3101- ■ CC23- ■ ■ S1 -Z	-	
74	32	18.92	2390	3.1	9	2KJ3101- ■ CC23- ■ ■ R1 -Z	-	
85	28	16.50	2300	3.5	9	2KJ3101- ■ CC23- ■ ■ Q1 -Z	-	
94	25	14.77	2230	3.8	9	2KJ3101- ■ CC23- ■ ■ P1 -Z	-	
106	22	13.12	2160	4.1	9	2KJ3101- ■ CC23- ■ ■ N1 -Z	-	
115	21	12.11	2110	4.2	9	2KJ3101- ■ CC23- ■ ■ M1 -Z	-	
133	18	10.52	2020	4.6	9	2KJ3101- ■ CC23- ■ ■ L1 -Z	-	
153	16	9.14	1940	5	9	2KJ3101- ■ CC23- ■ ■ K1 -Z	-	
169	14	8.25	1880	5.2	9	2KJ3101- ■ CC23- ■ ■ J1 -Z	-	
180	13	7.76	1850	5.5	9	2KJ3101- ■ CC23- ■ ■ H1 -Z	-	
206	12	6.77	1770	5.9	9	2KJ3101- ■ CC23- ■ ■ G1 -Z	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
0.25	<b>Z.19-LE71ZMK4P</b>								
	223	11	6.25	1690	5.2	9	2KJ3101- ■ CC23- ■ ■ F1 -Z -		
	257	9.3	5.43	1620	5.7	9	2KJ3101- ■ CC23- ■ ■ E1 -Z -		
	296	8.1	4.71	1560	6.1	9	2KJ3101- ■ CC23- ■ ■ D1 -Z -		
	327	7.3	4.26	1510	6.4	9	2KJ3101- ■ CC23- ■ ■ C1 -Z -		
	348	6.9	4.01	1480	6.7	9	2KJ3101- ■ CC23- ■ ■ B1 -Z -		
	<b>Z.19-LE63ZMH2P</b>								
	150	16	18.92	1950	6.3	8	2KJ3101- ■ BD23- ■ ■ R1 -Z P00		
	172	14	16.50	1870	7.1	8	2KJ3101- ■ BD23- ■ ■ Q1 -Z P00		
	192	12	14.77	1820	7.6	8	2KJ3101- ■ BD23- ■ ■ P1 -Z P00		
	216	11	13.12	1750	8.2	8	2KJ3101- ■ BD23- ■ ■ N1 -Z P00		
	234	10	12.11	1710	8.6	8	2KJ3101- ■ BD23- ■ ■ M1 -Z P00		
	269	8.9	10.52	1630	9.4	8	2KJ3101- ■ BD23- ■ ■ L1 -Z P00		
	310	7.7	9.14	1560	10	8	2KJ3101- ■ BD23- ■ ■ J1 -Z P00		
	344	6.9	8.25	1510	11	8	2KJ3101- ■ BD23- ■ ■ K1 -Z P00		
	365	6.5	7.76	1490	11	8	2KJ3101- ■ BD23- ■ ■ H1 -Z P00		
	419	5.7	6.77	1420	12	8	2KJ3101- ■ BD23- ■ ■ G1 -Z P00		
	454	5.3	6.25	1370	11	8	2KJ3101- ■ BD23- ■ ■ F1 -Z P00		
	522	4.6	5.43	1310	12	8	2KJ3101- ■ BD23- ■ ■ E1 -Z P00		
	602	4	4.71	1250	12	8	2KJ3101- ■ BD23- ■ ■ D1 -Z P00		
	665	3.6	4.26	1210	13	8	2KJ3101- ■ BD23- ■ ■ C1 -Z P00		
	707	3.4	4.01	1190	14	8	2KJ3101- ■ BD23- ■ ■ B1 -Z P00		
	<b>E.39-LE71ZMK4P</b>								
	151	16	9.22	3000	1.9	12	2KJ3001- ■ CC23- ■ ■ S1 -Z -		
	170	14	8.20	3000	2.4	12	2KJ3001- ■ CC23- ■ ■ R1 -Z -		
	194	12	7.20	3000	3.2	12	2KJ3001- ■ CC23- ■ ■ Q1 -Z -		
	213	11	6.55	3000	3.6	12	2KJ3001- ■ CC23- ■ ■ P1 -Z -		
	249	9.6	5.60	3000	4.2	12	2KJ3001- ■ CC23- ■ ■ N1 -Z -		
	274	8.7	5.09	3000	4.6	12	2KJ3001- ■ CC23- ■ ■ M1 -Z -		
	0.37	<b>D.89-LE80MK6P</b>							
		3	1190	311.60	18500	1.4	67	2KJ3208- ■ DE23- ■ ■ S1 -Z P01	
		3.3	1080	283.28	18500	1.6	67	2KJ3208- ■ DE23- ■ ■ R1 -Z P01	
		3.6	970	254.09	18500	1.7	67	2KJ3208- ■ DE23- ■ ■ Q1 -Z P01	
		4	870	228.45	18500	1.9	67	2KJ3208- ■ DE23- ■ ■ P1 -Z P01	
		<b>D.79-LE80MK6P</b>							
		3.6	975	255.33	11900	0.86	44	2KJ3207- ■ DE23- ■ ■ Q1 -Z P01	
		4	885	232.12	13200	0.95	44	2KJ3207- ■ DE23- ■ ■ P1 -Z P01	
<b>D.79-LE71YMS4P</b>									
4.2		845	330.23	13400	0.99	40	2KJ3207- ■ CE23- ■ ■ S1 -Z -		
4.6		765	300.21	13500	1.1	40	2KJ3207- ■ CE23- ■ ■ R1 -Z -		
5.4		650	255.33	13600	1.3	40	2KJ3207- ■ CE23- ■ ■ Q1 -Z -		
5.9		590	232.12	13700	1.4	40	2KJ3207- ■ CE23- ■ ■ P1 -Z -		
6.7		530	207.10	13800	1.6	40	2KJ3207- ■ CE23- ■ ■ N1 -Z -		
7.4		475	185.70	13900	1.8	40	2KJ3207- ■ CE23- ■ ■ M1 -Z -		
8.2		425	167.39	13900	2	40	2KJ3207- ■ CE23- ■ ■ L1 -Z -		
8.9		395	154.51	14000	2.1	40	2KJ3207- ■ CE23- ■ ■ K1 -Z -		
<b>D.69-LE71YMS4P</b>									
4.7		745	292.08	10600	0.8	30	2KJ3206- ■ CE23- ■ ■ R1 -Z -		
5.4		655	256.46	10900	0.91	30	2KJ3206- ■ CE23- ■ ■ Q1 -Z -		
5.9		595	233.14	11000	1	30	2KJ3206- ■ CE23- ■ ■ P1 -Z -		
6.9		510	199.47	11100	1.2	30	2KJ3206- ■ CE23- ■ ■ N1 -Z -		
7.6		460	181.33	11200	1.3	30	2KJ3206- ■ CE23- ■ ■ M1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.37</b>	<b>D.69-LE71YMS4P</b>							
	8.6	410	160.29	11300	1.5	30	2KJ3206- ■ CE23- ■ ■ L1 -Z -	-
	9.5	370	145.71	11300	1.6	30	2KJ3206- ■ CE23- ■ ■ K1 -Z -	-
	11	325	127.63	11400	1.8	30	2KJ3206- ■ CE23- ■ ■ H1 -Z -	-
	12	300	117.82	11400	2	30	2KJ3206- ■ CE23- ■ ■ J1 -Z -	-
	13	265	104.31	11500	2.2	30	2KJ3206- ■ CE23- ■ ■ G1 -Z -	-
	<b>D.59-LE71YMS4P</b>							
	6.3	555	217.91	6220	0.81	26	2KJ3205- ■ CE23- ■ ■ P1 -Z -	-
	7.4	475	186.43	7620	0.94	26	2KJ3205- ■ CE23- ■ ■ N1 -Z -	-
	8.1	430	169.48	7700	1	26	2KJ3205- ■ CE23- ■ ■ M1 -Z -	-
	9.2	380	149.81	7780	1.2	26	2KJ3205- ■ CE23- ■ ■ L1 -Z -	-
	10	345	136.19	7830	1.3	26	2KJ3205- ■ CE23- ■ ■ K1 -Z -	-
	12	305	119.30	7900	1.5	26	2KJ3205- ■ CE23- ■ ■ J1 -Z -	-
	13	280	110.12	7940	1.6	26	2KJ3205- ■ CE23- ■ ■ H1 -Z -	-
	14	250	97.50	7990	1.8	26	2KJ3205- ■ CE23- ■ ■ G1 -Z -	-
	17	205	81.15	8060	2.2	26	2KJ3205- ■ CE23- ■ ■ F1 -Z -	-
	18	196	76.38	8070	2.3	26	2KJ3205- ■ CE23- ■ ■ E1 -Z -	-
	<b>D.49-LE71YMS4P</b>							
	8.9	395	155.06	3880	0.81	23	2KJ3204- ■ CE23- ■ ■ M1 -Z -	-
	10	350	137.06	5020	0.91	23	2KJ3204- ■ CE23- ■ ■ L1 -Z -	-
	11	315	124.60	5910	1	23	2KJ3204- ■ CE23- ■ ■ K1 -Z -	-
	13	275	109.14	5990	1.1	23	2KJ3204- ■ CE23- ■ ■ J1 -Z -	-
	14	255	100.75	6030	1.2	23	2KJ3204- ■ CE23- ■ ■ H1 -Z -	-
	15	225	89.20	6090	1.4	23	2KJ3204- ■ CE23- ■ ■ G1 -Z -	-
	19	190	74.24	6170	1.7	23	2KJ3204- ■ CE23- ■ ■ F1 -Z -	-
	20	179	69.88	6190	1.8	23	2KJ3204- ■ CE23- ■ ■ E1 -Z -	-
	22	160	62.61	6230	2	23	2KJ3204- ■ CE23- ■ ■ D1 -Z -	-
<b>Z.49-LE71YMS4P</b>								
26	134	52.14	6280	2.4	23	2KJ3104- ■ CE23- ■ ■ B2 -Z -	-	
<b>D.39-LE71YMS4P</b>								
15	225	89.51	3740	0.87	13	2KJ3203- ■ CE23- ■ ■ H1 -Z -	-	
17	210	82.63	4120	0.95	13	2KJ3203- ■ CE23- ■ ■ G1 -Z -	-	
19	185	72.34	4740	1.1	13	2KJ3203- ■ CE23- ■ ■ F1 -Z -	-	
22	162	63.43	5320	1.2	13	2KJ3203- ■ CE23- ■ ■ E1 -Z -	-	
<b>Z.39-LE71YMS4P</b>								
25	143	55.95	5790	1.4	13	2KJ3103- ■ CE23- ■ ■ A2 -Z -	-	
28	127	49.75	5800	1.6	13	2KJ3103- ■ CE23- ■ ■ X1 -Z -	-	
32	112	43.68	5800	1.8	13	2KJ3103- ■ CE23- ■ ■ W1 -Z -	-	
35	102	39.71	5800	2	13	2KJ3103- ■ CE23- ■ ■ V1 -Z -	-	
41	87	33.97	5800	2.3	13	2KJ3103- ■ CE23- ■ ■ U1 -Z -	-	
45	79	30.88	5800	2.5	13	2KJ3103- ■ CE23- ■ ■ T1 -Z -	-	
<b>D.29-LE71YMS4P</b>								
21	168	65.52	2960	0.83	12	2KJ3202- ■ CE23- ■ ■ E1 -Z -	-	
24	146	56.93	3550	0.96	12	2KJ3202- ■ CE23- ■ ■ D1 -Z -	-	
27	132	51.40	3920	1.1	12	2KJ3202- ■ CE23- ■ ■ C1 -Z -	-	
29	124	48.37	4060	1.1	12	2KJ3202- ■ CE23- ■ ■ B1 -Z -	-	
<b>Z.29-LE71YMS4P</b>								
33	106	41.40	4060	1.3	12	2KJ3102- ■ CE23- ■ ■ A2 -Z -	-	
38	94	36.72	4060	1.5	12	2KJ3102- ■ CE23- ■ ■ X1 -Z -	-	
43	82	31.86	4060	1.7	12	2KJ3102- ■ CE23- ■ ■ W1 -Z -	-	
48	74	28.96	4050	1.9	12	2KJ3102- ■ CE23- ■ ■ V1 -Z -	-	
56	64	24.84	3890	2.2	12	2KJ3102- ■ CE23- ■ ■ U1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.37</b>	<b>Z.29-LE71YMS4P</b>							
	61	58	22.58	3790	2.4	12	2KJ3102- ■ CE23- ■ ■ T1 -Z -	-
	70	51	19.80	3650	2.8	12	2KJ3102- ■ CE23- ■ ■ S1 -Z -	-
	78	45	17.67	3540	3.1	12	2KJ3102- ■ CE23- ■ ■ R1 -Z -	-
	88	40	15.75	3420	3.5	12	2KJ3102- ■ CE23- ■ ■ Q1 -Z -	-
	95	37	14.54	3340	3.2	12	2KJ3102- ■ CE23- ■ ■ P1 -Z -	-
	108	33	12.73	3210	4.3	12	2KJ3102- ■ CE23- ■ ■ N1 -Z -	-
	124	29	11.16	3090	4.9	12	2KJ3102- ■ CE23- ■ ■ M1 -Z -	-
	136	26	10.12	3000	5.4	12	2KJ3102- ■ CE23- ■ ■ L1 -Z -	-
	145	24	9.53	2950	5.7	12	2KJ3102- ■ CE23- ■ ■ K1 -Z -	-
	164	22	8.40	2830	6.4	12	2KJ3102- ■ CE23- ■ ■ J1 -Z -	-
	189	19	7.29	2720	7	12	2KJ3102- ■ CE23- ■ ■ H1 -Z -	-
	199	18	6.92	2650	4.2	12	2KJ3102- ■ CE23- ■ ■ G1 -Z -	-
	228	16	6.06	2540	6.4	12	2KJ3102- ■ CE23- ■ ■ F1 -Z -	-
	260	14	5.31	2440	6.7	12	2KJ3102- ■ CE23- ■ ■ E1 -Z -	-
	286	12	4.82	2370	7	12	2KJ3102- ■ CE23- ■ ■ D1 -Z -	-
	304	12	4.54	2330	7.2	12	2KJ3102- ■ CE23- ■ ■ C1 -Z -	-
	345	10	4.00	2240	7.4	12	2KJ3102- ■ CE23- ■ ■ B1 -Z -	-
	398	8.9	3.47	2140	7.9	12	2KJ3102- ■ CE23- ■ ■ A1 -Z -	-
	<b>Z.29-LE71ZMH2P</b>							
	157	22	17.67	2880	6.2	9	2KJ3102- ■ CB23- ■ ■ R1 -Z	P00
	176	20	15.75	2780	7	9	2KJ3102- ■ CB23- ■ ■ Q1 -Z	P00
	191	18	14.54	2710	6.5	9	2KJ3102- ■ CB23- ■ ■ P1 -Z	P00
	218	16	12.73	2600	8.6	9	2KJ3102- ■ CB23- ■ ■ N1 -Z	P00
	248	14	11.16	2500	9.8	9	2KJ3102- ■ CB23- ■ ■ M1 -Z	P00
	274	13	10.12	2420	11	9	2KJ3102- ■ CB23- ■ ■ L1 -Z	P00
	291	12	9.53	2380	12	9	2KJ3102- ■ CB23- ■ ■ K1 -Z	P00
	330	11	8.40	2280	13	9	2KJ3102- ■ CB23- ■ ■ J1 -Z	P00
	380	9.3	7.29	2180	14	9	2KJ3102- ■ CB23- ■ ■ H1 -Z	P00
	400	8.8	6.92	2140	8.5	9	2KJ3102- ■ CB23- ■ ■ G1 -Z	P00
	457	7.7	6.06	2050	13	9	2KJ3102- ■ CB23- ■ ■ F1 -Z	P00
	522	6.8	5.31	1970	13	9	2KJ3102- ■ CB23- ■ ■ E1 -Z	P00
	575	6.1	4.82	1910	14	9	2KJ3102- ■ CB23- ■ ■ D1 -Z	P00
	610	5.8	4.54	1870	14	9	2KJ3102- ■ CB23- ■ ■ C1 -Z	P00
	692	5.1	4.00	1790	15	9	2KJ3102- ■ CB23- ■ ■ B1 -Z	P00
	<b>D.19-LE71YMS4P</b>							
	29	124	48.30	1160	0.81	10	2KJ3201- ■ CE23- ■ ■ D1 -Z	-
	32	112	43.61	1410	0.9	10	2KJ3201- ■ CE23- ■ ■ C1 -Z	-
	34	105	41.04	1550	0.95	10	2KJ3201- ■ CE23- ■ ■ B1 -Z	-
<b>Z.19-LE71YMS4P</b>								
39	90	34.97	1860	1.1	10	2KJ3101- ■ CE23- ■ ■ W1 -Z	-	
45	79	30.97	2080	1.3	10	2KJ3101- ■ CE23- ■ ■ V1 -Z	-	
51	69	26.91	2290	1.5	10	2KJ3101- ■ CE23- ■ ■ U1 -Z	-	
56	63	24.46	2320	1.6	10	2KJ3101- ■ CE23- ■ ■ T1 -Z	-	
66	53	20.82	2340	1.9	10	2KJ3101- ■ CE23- ■ ■ S1 -Z	-	
73	48	18.92	2290	2.1	10	2KJ3101- ■ CE23- ■ ■ R1 -Z	-	
84	42	16.50	2210	2.3	10	2KJ3101- ■ CE23- ■ ■ Q1 -Z	-	
93	38	14.77	2150	2.5	10	2KJ3101- ■ CE23- ■ ■ P1 -Z	-	
105	34	13.12	2080	2.7	10	2KJ3101- ■ CE23- ■ ■ N1 -Z	-	
114	31	12.11	2040	2.8	10	2KJ3101- ■ CE23- ■ ■ M1 -Z	-	
131	27	10.52	1970	3.1	10	2KJ3101- ■ CE23- ■ ■ L1 -Z	-	
151	23	9.14	1900	3.3	10	2KJ3101- ■ CE23- ■ ■ K1 -Z	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.37</b>	<b>Z.19-LE71YMS4P</b>							
	167	21	8.25	1840	3.5	10	2KJ3101- ■ CE23- ■ ■ J1 -Z -	-
	178	20	7.76	1810	3.7	10	2KJ3101- ■ CE23- ■ ■ H1 -Z -	-
	204	17	6.77	1740	3.9	10	2KJ3101- ■ CE23- ■ ■ G1 -Z -	-
	221	16	6.25	1640	3.5	10	2KJ3101- ■ CE23- ■ ■ F1 -Z -	-
	254	14	5.43	1580	3.8	10	2KJ3101- ■ CE23- ■ ■ E1 -Z -	-
	293	12	4.71	1520	4.1	10	2KJ3101- ■ CE23- ■ ■ D1 -Z -	-
	324	11	4.26	1480	4.3	10	2KJ3101- ■ CE23- ■ ■ C1 -Z -	-
	344	10	4.01	1460	4.5	10	2KJ3101- ■ CE23- ■ ■ B1 -Z -	-
	<b>Z.19-LE71ZMH2P</b>							
	168	21	16.50	1840	4.7	8	2KJ3101- ■ CB23- ■ ■ Q1 -Z	P00
	188	19	14.77	1780	5	8	2KJ3101- ■ CB23- ■ ■ P1 -Z	P00
	211	17	13.12	1720	5.4	8	2KJ3101- ■ CB23- ■ ■ N1 -Z	P00
	229	15	12.11	1690	5.7	8	2KJ3101- ■ CB23- ■ ■ M1 -Z	P00
	263	13	10.52	1620	6.2	8	2KJ3101- ■ CB23- ■ ■ L1 -Z	P00
	303	12	9.14	1550	6.7	8	2KJ3101- ■ CB23- ■ ■ K1 -Z	P00
	336	10	8.25	1510	7	8	2KJ3101- ■ CB23- ■ ■ J1 -Z	P00
	357	9.9	7.76	1470	7.4	8	2KJ3101- ■ CB23- ■ ■ H1 -Z	P00
	409	8.6	6.77	1410	7.9	8	2KJ3101- ■ CB23- ■ ■ G1 -Z	P00
	443	8	6.25	1350	7	8	2KJ3101- ■ CB23- ■ ■ F1 -Z	P00
	510	6.9	5.43	1300	7.7	8	2KJ3101- ■ CB23- ■ ■ E1 -Z	P00
	588	6	4.71	1240	8.2	8	2KJ3101- ■ CB23- ■ ■ D1 -Z	P00
	650	5.4	4.26	1210	8.6	8	2KJ3101- ■ CB23- ■ ■ C1 -Z	P00
	691	5.1	4.01	1180	9	8	2KJ3101- ■ CB23- ■ ■ B1 -Z	P00
	<b>E.49-LE71YMS4P</b>							
	142	25	9.70	4000	3.5	19	2KJ3002- ■ CE23- ■ ■ S1 -Z	-
	<b>E.39-LE71YMS4P</b>							
	150	24	9.22	3000	1.3	14	2KJ3001- ■ CE23- ■ ■ S1 -Z	-
	168	21	8.20	3000	1.6	14	2KJ3001- ■ CE23- ■ ■ R1 -Z	-
192	18	7.20	3000	2.2	14	2KJ3001- ■ CE23- ■ ■ Q1 -Z	-	
211	17	6.55	3000	2.4	14	2KJ3001- ■ CE23- ■ ■ P1 -Z	-	
246	14	5.60	3000	2.8	14	2KJ3001- ■ CE23- ■ ■ N1 -Z	-	
271	13	5.09	3000	3.1	14	2KJ3001- ■ CE23- ■ ■ M1 -Z	-	
307	12	4.50	3000	4.2	14	2KJ3001- ■ CE23- ■ ■ L1 -Z	-	
337	10	4.09	3000	4.6	14	2KJ3001- ■ CE23- ■ ■ K1 -Z	-	
<b>0.55</b>	<b>D.89-LE80ZMQ6P</b>							
	3	1750	311.60	18500	0.96	67	2KJ3208- ■ DF23- ■ ■ S1 -Z	P01
	3.3	1590	283.28	18500	1.1	67	2KJ3208- ■ DF23- ■ ■ R1 -Z	P01
	3.7	1420	254.09	18500	1.2	67	2KJ3208- ■ DF23- ■ ■ Q1 -Z	P01
	4.1	1280	228.45	18500	1.3	67	2KJ3208- ■ DF23- ■ ■ P1 -Z	P01
	<b>D.89-LE80MH4P</b>							
	4.6	1130	311.60	18500	1.5	68	2KJ3208- ■ DC23- ■ ■ S1 -Z	-
	5.1	1030	283.28	18500	1.6	68	2KJ3208- ■ DC23- ■ ■ R1 -Z	-
	5.7	925	254.09	18500	1.8	68	2KJ3208- ■ DC23- ■ ■ Q1 -Z	-
	6.3	830	228.45	18500	2	68	2KJ3208- ■ DC23- ■ ■ P1 -Z	-
	<b>D.79-LE80MH4P</b>							
	5.6	930	255.33	12600	0.9	45	2KJ3207- ■ DC23- ■ ■ Q1 -Z	-
	6.2	845	232.12	13400	0.99	45	2KJ3207- ■ DC23- ■ ■ P1 -Z	-
	7	755	207.10	13500	1.1	45	2KJ3207- ■ DC23- ■ ■ N1 -Z	-
	7.8	675	185.70	13600	1.2	45	2KJ3207- ■ DC23- ■ ■ M1 -Z	-
	8.6	610	167.39	13700	1.4	45	2KJ3207- ■ DC23- ■ ■ L1 -Z	-
	9.3	560	154.51	13700	1.5	45	2KJ3207- ■ DC23- ■ ■ K1 -Z	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.55</b>	<b>D.79-LE80MH4P</b>							
	10	510	141.04	13800	1.6	45	2KJ3207- ■ DC23- ■ ■ J1 -Z -	
	12	425	117.03	13900	2	45	2KJ3207- ■ DC23- ■ ■ H1 -Z -	
	13	400	110.14	13900	2.1	45	2KJ3207- ■ DC23- ■ ■ G1 -Z -	
	14	375	104.03	14000	2.2	45	2KJ3207- ■ DC23- ■ ■ F1 -Z -	
	<b>D.69-LE80MH4P</b>							
	7.2	725	199.47	10700	0.82	35	2KJ3206- ■ DC23- ■ ■ N1 -Z -	
	7.9	660	181.33	10800	0.91	35	2KJ3206- ■ DC23- ■ ■ M1 -Z -	
	9	585	160.29	11000	1	35	2KJ3206- ■ DC23- ■ ■ L1 -Z -	
	9.9	530	145.71	11100	1.1	35	2KJ3206- ■ DC23- ■ ■ K1 -Z -	
11	465	127.63	11200	1.3	35	2KJ3206- ■ DC23- ■ ■ J1 -Z -		
12	430	117.82	11200	1.4	35	2KJ3206- ■ DC23- ■ ■ H1 -Z -		
14	380	104.31	11300	1.6	35	2KJ3206- ■ DC23- ■ ■ G1 -Z -		
17	315	86.82	11400	1.9	35	2KJ3206- ■ DC23- ■ ■ F1 -Z -		
18	295	81.71	11400	2	35	2KJ3206- ■ DC23- ■ ■ E1 -Z -		
20	265	73.22	11500	2.2	35	2KJ3206- ■ DC23- ■ ■ D1 -Z -		
<b>D.59-LE80MH4P</b>								
9.6	545	149.81	6400	0.82	30	2KJ3205- ■ DC23- ■ ■ L1 -Z -		
11	495	136.19	7300	0.91	30	2KJ3205- ■ DC23- ■ ■ K1 -Z -		
12	435	119.30	7690	1	30	2KJ3205- ■ DC23- ■ ■ J1 -Z -		
13	400	110.12	7740	1.1	30	2KJ3205- ■ DC23- ■ ■ H1 -Z -		
15	355	97.50	7820	1.3	30	2KJ3205- ■ DC23- ■ ■ G1 -Z -		
18	295	81.15	7910	1.5	30	2KJ3205- ■ DC23- ■ ■ F1 -Z -		
19	275	76.38	7950	1.6	30	2KJ3205- ■ DC23- ■ ■ E1 -Z -		
21	250	68.43	7990	1.8	30	2KJ3205- ■ DC23- ■ ■ D1 -Z -		
<b>Z.59-LE80MH4P</b>								
25	205	56.99	8060	2.2	30	2KJ3105- ■ DC23- ■ ■ A2 -Z -		
28	189	51.81	8080	2.4	30	2KJ3105- ■ DC23- ■ ■ X1 -Z -		
<b>D.49-LE80MH4P</b>								
13	395	109.14	3880	0.8	28	2KJ3204- ■ DC23- ■ ■ J1 -Z -		
14	365	100.75	4640	0.87	28	2KJ3204- ■ DC23- ■ ■ H1 -Z -		
16	325	89.20	5660	0.98	28	2KJ3204- ■ DC23- ■ ■ G1 -Z -		
19	270	74.24	6000	1.2	28	2KJ3204- ■ DC23- ■ ■ F1 -Z -		
21	255	69.88	6030	1.3	28	2KJ3204- ■ DC23- ■ ■ E1 -Z -		
23	225	62.61	6090	1.4	28	2KJ3204- ■ DC23- ■ ■ D1 -Z -		
<b>Z.49-LE80MH4P</b>								
28	190	52.14	6170	1.7	28	2KJ3104- ■ DC23- ■ ■ B2 -Z -		
30	173	47.40	6200	1.9	28	2KJ3104- ■ DC23- ■ ■ A2 -Z -		
36	147	40.31	6250	2.2	28	2KJ3104- ■ DC23- ■ ■ X1 -Z -		
39	134	36.65	6280	2.4	28	2KJ3104- ■ DC23- ■ ■ W1 -Z -		
44	119	32.70	6310	2.7	28	2KJ3104- ■ DC23- ■ ■ V1 -Z -		
<b>D.39-LE80MH4P</b>								
23	230	63.43	3610	0.86	18	2KJ3203- ■ DC23- ■ ■ E1 -Z -		
25	210	57.54	4120	0.95	18	2KJ3203- ■ DC23- ■ ■ D1 -Z -		
<b>Z.39-LE80MH4P</b>								
29	181	49.75	4840	1.1	17	2KJ3103- ■ DC23- ■ ■ X1 -Z -		
33	159	43.68	5140	1.3	17	2KJ3103- ■ DC23- ■ ■ W1 -Z -		
36	145	39.71	5200	1.4	17	2KJ3103- ■ DC23- ■ ■ V1 -Z -		
42	124	33.97	5280	1.6	17	2KJ3103- ■ DC23- ■ ■ U1 -Z -		
47	113	30.88	5300	1.8	17	2KJ3103- ■ DC23- ■ ■ T1 -Z -		
53	100	27.30	5290	2	17	2KJ3103- ■ DC23- ■ ■ S1 -Z -		
58	90	24.82	5300	2.2	17	2KJ3103- ■ DC23- ■ ■ R1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
0.55	<b>Z.39-LE80MH4P</b>								
	66	79	21.74	5250	2.5	17	2KJ3103- ■ DC23- ■ ■ Q1 -Z -		
	72	73	20.07	5180	2.7	17	2KJ3103- ■ DC23- ■ ■ P1 -Z -		
	81	65	17.77	5000	3.1	17	2KJ3103- ■ DC23- ■ ■ N1 -Z -		
	<b>D.29-LE80MH4P</b>								
	34	154	42.17	3340	0.91	16	2KJ3202- ■ DC23- ■ ■ A1 -Z -		
	<b>Z.29-LE80MH4P</b>								
	39	134	36.72	3860	1	16	2KJ3102- ■ DC23- ■ ■ X1 -Z -		
	45	116	31.86	3900	1.2	16	2KJ3102- ■ DC23- ■ ■ W1 -Z -		
	50	106	28.96	3810	1.3	16	2KJ3102- ■ DC23- ■ ■ V1 -Z -		
	58	91	24.84	3670	1.5	16	2KJ3102- ■ DC23- ■ ■ U1 -Z -		
	64	82	22.58	3590	1.7	16	2KJ3102- ■ DC23- ■ ■ T1 -Z -		
	73	72	19.80	3480	1.9	16	2KJ3102- ■ DC23- ■ ■ S1 -Z -		
	81	64	17.67	3380	2.2	16	2KJ3102- ■ DC23- ■ ■ R1 -Z -		
	91	57	15.75	3280	2.4	16	2KJ3102- ■ DC23- ■ ■ Q1 -Z -		
	99	53	14.54	3200	2.3	16	2KJ3102- ■ DC23- ■ ■ P1 -Z -		
	113	46	12.73	3090	3	16	2KJ3102- ■ DC23- ■ ■ N1 -Z -		
	129	41	11.16	2980	3.4	16	2KJ3102- ■ DC23- ■ ■ M1 -Z -		
	142	37	10.12	2900	3.8	16	2KJ3102- ■ DC23- ■ ■ L1 -Z -		
	151	35	9.53	2850	4	16	2KJ3102- ■ DC23- ■ ■ K1 -Z -		
	208	25	6.92	2560	3	16	2KJ3102- ■ DC23- ■ ■ G1 -Z -		
	238	22	6.06	2460	4.5	16	2KJ3102- ■ DC23- ■ ■ F1 -Z -		
	271	19	5.31	2370	4.7	16	2KJ3102- ■ DC23- ■ ■ E1 -Z -		
	299	18	4.82	2300	4.9	16	2KJ3102- ■ DC23- ■ ■ D1 -Z -		
	317	17	4.54	2260	5.1	16	2KJ3102- ■ DC23- ■ ■ C1 -Z -		
	360	15	4.00	2170	5.2	16	2KJ3102- ■ DC23- ■ ■ B1 -Z -		
	415	13	3.47	2080	5.5	16	2KJ3102- ■ DC23- ■ ■ A1 -Z -		
	<b>Z.19-LE80MH4P</b>								
	46	113	30.97	1390	0.89	14	2KJ3101- ■ DC23- ■ ■ V1 -Z -		
	54	98	26.91	1690	1	14	2KJ3101- ■ DC23- ■ ■ U1 -Z -		
	59	89	24.46	1880	1.1	14	2KJ3101- ■ DC23- ■ ■ T1 -Z -		
	69	76	20.82	2140	1.3	14	2KJ3101- ■ DC23- ■ ■ S1 -Z -		
	76	69	18.92	2110	1.4	14	2KJ3101- ■ DC23- ■ ■ R1 -Z -		
87	60	16.50	2050	1.6	14	2KJ3101- ■ DC23- ■ ■ Q1 -Z -			
97	54	14.77	2010	1.8	14	2KJ3101- ■ DC23- ■ ■ P1 -Z -			
110	48	13.12	1950	1.9	14	2KJ3101- ■ DC23- ■ ■ N1 -Z -			
119	44	12.11	1920	2	14	2KJ3101- ■ DC23- ■ ■ M1 -Z -			
137	38	10.52	1860	2.2	14	2KJ3101- ■ DC23- ■ ■ L1 -Z -			
158	33	9.14	1800	2.3	14	2KJ3101- ■ DC23- ■ ■ K1 -Z -			
175	30	8.25	1750	2.5	14	2KJ3101- ■ DC23- ■ ■ J1 -Z -			
186	28	7.76	1730	2.6	14	2KJ3101- ■ DC23- ■ ■ H1 -Z -			
213	25	6.77	1660	2.8	14	2KJ3101- ■ DC23- ■ ■ G1 -Z -			
230	23	6.25	1540	2.5	14	2KJ3101- ■ DC23- ■ ■ F1 -Z -			
265	20	5.43	1490	2.7	14	2KJ3101- ■ DC23- ■ ■ E1 -Z -			
306	17	4.71	1450	2.9	14	2KJ3101- ■ DC23- ■ ■ D1 -Z -			
338	16	4.26	1400	3	14	2KJ3101- ■ DC23- ■ ■ C1 -Z -			
359	15	4.01	1380	3.1	14	2KJ3101- ■ DC23- ■ ■ B1 -Z -			
413	13	3.49	1330	3.4	14	2KJ3101- ■ DC23- ■ ■ A1 -Z -			
<b>Z.19-LE71ZMM2P</b>									
168	31	16.50	1770	3.2	10	2KJ3101- ■ CD23- ■ ■ Q1 -Z	P00		
188	28	14.77	1720	3.4	10	2KJ3101- ■ CD23- ■ ■ P1 -Z	P00		
212	25	13.12	1660	3.7	10	2KJ3101- ■ CD23- ■ ■ N1 -Z	P00		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>0.55</b>	<b>Z.19-LE71ZMM2P</b>								
	230	23	12.11	1630	3.8	10	2KJ3101- ■ CD23- ■ ■ M1 -Z P00		
	264	20	10.52	1570	4.2	10	2KJ3101- ■ CD23- ■ ■ L1 -Z P00		
	304	17	9.14	1510	4.5	10	2KJ3101- ■ CD23- ■ ■ K1 -Z P00		
	337	16	8.25	1460	4.7	10	2KJ3101- ■ CD23- ■ ■ J1 -Z P00		
	358	15	7.76	1440	5	10	2KJ3101- ■ CD23- ■ ■ H1 -Z P00		
	411	13	6.77	1380	5.3	10	2KJ3101- ■ CD23- ■ ■ G1 -Z P00		
	445	12	6.25	1310	4.7	10	2KJ3101- ■ CD23- ■ ■ F1 -Z P00		
	512	10	5.43	1260	5.2	10	2KJ3101- ■ CD23- ■ ■ E1 -Z P00		
	590	8.9	4.71	1210	5.5	10	2KJ3101- ■ CD23- ■ ■ D1 -Z P00		
	653	8	4.26	1180	5.8	10	2KJ3101- ■ CD23- ■ ■ C1 -Z P00		
	693	7.6	4.01	1160	6.1	10	2KJ3101- ■ CD23- ■ ■ B1 -Z P00		
	<b>E.69-LE80MH4P</b>								
	155	34	9.30	6100	3.5	31	2KJ3003- ■ DC23- ■ ■ S1 -Z -		
	170	31	8.45	6100	3.4	31	2KJ3003- ■ DC23- ■ ■ R1 -Z -		
	<b>E.49-LE80MH4P</b>								
	148	35	9.70	4000	2.4	24	2KJ3002- ■ DC23- ■ ■ S1 -Z -		
	163	32	8.82	4000	3.4	24	2KJ3002- ■ DC23- ■ ■ R1 -Z -		
	192	27	7.50	4000	3.9	24	2KJ3002- ■ DC23- ■ ■ Q1 -Z -		
	211	25	6.82	4000	4.2	24	2KJ3002- ■ DC23- ■ ■ P1 -Z -		
	<b>E.39-LE80MH4P</b>								
	176	30	8.20	3000	1.1	18	2KJ3001- ■ DC23- ■ ■ R1 -Z -		
	200	26	7.20	3000	1.5	18	2KJ3001- ■ DC23- ■ ■ Q1 -Z -		
	220	24	6.55	3000	1.7	18	2KJ3001- ■ DC23- ■ ■ P1 -Z -		
	257	20	5.60	3000	2	18	2KJ3001- ■ DC23- ■ ■ N1 -Z -		
	283	19	5.09	3000	2.2	18	2KJ3001- ■ DC23- ■ ■ M1 -Z -		
	320	16	4.50	3000	2.9	18	2KJ3001- ■ DC23- ■ ■ L1 -Z -		
	352	15	4.09	3000	3.2	18	2KJ3001- ■ DC23- ■ ■ K1 -Z -		
	402	13	3.58	3000	4.4	18	2KJ3001- ■ DC23- ■ ■ J1 -Z -		
	435	12	3.31	3000	4.8	18	2KJ3001- ■ DC23- ■ ■ H1 -Z -		
	<b>0.75</b>	<b>D.129-LE90SQ6P</b>							
		2.5	2820	373.00	28300	1.8	174	2KJ3211- ■ EC23- ■ ■ S1 -Z P01	
		2.7	2600	344.17	28400	1.9	174	2KJ3211- ■ EC23- ■ ■ R1 -Z P01	
<b>D.109-LE90SQ6P</b>									
2.7		2640	348.88	20200	1.2	111	2KJ3210- ■ EC23- ■ ■ T1 -Z P01		
3		2380	314.98	20200	1.3	111	2KJ3210- ■ EC23- ■ ■ S1 -Z P01		
3.3		2160	285.72	20200	1.4	111	2KJ3210- ■ EC23- ■ ■ R1 -Z P01		
3.6		1990	263.74	20200	1.6	111	2KJ3210- ■ EC23- ■ ■ Q1 -Z P01		
3.9		1810	239.75	20200	1.7	111	2KJ3210- ■ EC23- ■ ■ P1 -Z P01		
<b>D.89-LE90SQ6P</b>									
3.7		1920	254.09	18500	0.87	69	2KJ3208- ■ EC23- ■ ■ Q1 -Z P01		
4.1		1730	228.45	18500	0.97	69	2KJ3208- ■ EC23- ■ ■ P1 -Z P01		
<b>D.89-LE80ZMQ4P</b>									
4.7		1530	311.60	18500	1.1	67	2KJ3208- ■ DF23- ■ ■ S1 -Z -		
5.1		1390	283.28	18500	1.2	67	2KJ3208- ■ DF23- ■ ■ R1 -Z -		
5.7		1250	254.09	18500	1.3	67	2KJ3208- ■ DF23- ■ ■ Q1 -Z -		
6.3		1120	228.45	18500	1.5	67	2KJ3208- ■ DF23- ■ ■ P1 -Z -		
7		1020	206.62	18500	1.6	67	2KJ3208- ■ DF23- ■ ■ N1 -Z -		
7.6		940	190.73	18500	1.8	67	2KJ3208- ■ DF23- ■ ■ M1 -Z -		
8.3		860	174.71	18500	1.9	67	2KJ3208- ■ DF23- ■ ■ L1 -Z -		
<b>D.79-LE80ZMQ4P</b>									
7		1020	207.10	11200	0.82	44	2KJ3207- ■ DF23- ■ ■ N1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.75</b>	<b>D.79-LE80ZMQ4P</b>							
	7.8	915	185.70	12800	0.92	44	2KJ3207- ■ DF23- ■ ■ M1 -Z -	
	8.7	825	167.39	13400	1	44	2KJ3207- ■ DF23- ■ ■ L1 -Z -	
	9.4	760	154.51	13500	1.1	44	2KJ3207- ■ DF23- ■ ■ K1 -Z -	
	10	695	141.04	13600	1.2	44	2KJ3207- ■ DF23- ■ ■ J1 -Z -	
	12	575	117.03	13700	1.5	44	2KJ3207- ■ DF23- ■ ■ H1 -Z -	
	13	540	110.14	13800	1.5	44	2KJ3207- ■ DF23- ■ ■ G1 -Z -	
	14	510	104.03	13800	1.6	44	2KJ3207- ■ DF23- ■ ■ F1 -Z -	
	16	435	88.52	13900	1.9	44	2KJ3207- ■ DF23- ■ ■ E1 -Z -	
	19	375	75.83	14000	2.2	44	2KJ3207- ■ DF23- ■ ■ D1 -Z -	
	<b>D.69-LE80ZMQ4P</b>							
	10	720	145.71	10700	0.83	34	2KJ3206- ■ DF23- ■ ■ K1 -Z -	
	11	630	127.63	10900	0.95	34	2KJ3206- ■ DF23- ■ ■ J1 -Z -	
	12	580	117.82	11000	1	34	2KJ3206- ■ DF23- ■ ■ H1 -Z -	
	14	515	104.31	11100	1.2	34	2KJ3206- ■ DF23- ■ ■ G1 -Z -	
	17	425	86.82	11200	1.4	34	2KJ3206- ■ DF23- ■ ■ F1 -Z -	
	18	400	81.71	11300	1.5	34	2KJ3206- ■ DF23- ■ ■ E1 -Z -	
	20	360	73.22	11300	1.7	34	2KJ3206- ■ DF23- ■ ■ D1 -Z -	
	<b>Z.69-LE80ZMQ4P</b>							
24	300	60.97	11400	2	33	2KJ3106- ■ DF23- ■ ■ A2 -Z -		
26	270	55.43	11500	2.2	33	2KJ3106- ■ DF23- ■ ■ X1 -Z -		
<b>D.59-LE80ZMQ4P</b>								
13	540	110.12	6490	0.83	29	2KJ3205- ■ DF23- ■ ■ H1 -Z -		
15	480	97.50	7560	0.93	29	2KJ3205- ■ DF23- ■ ■ G1 -Z -		
18	400	81.15	7740	1.1	29	2KJ3205- ■ DF23- ■ ■ F1 -Z -		
19	375	76.38	7780	1.2	29	2KJ3205- ■ DF23- ■ ■ E1 -Z -		
21	335	68.43	7850	1.3	29	2KJ3205- ■ DF23- ■ ■ D1 -Z -		
<b>Z.59-LE80ZMQ4P</b>								
25	280	56.99	7940	1.6	29	2KJ3105- ■ DF23- ■ ■ A2 -Z -		
28	255	51.81	7980	1.8	29	2KJ3105- ■ DF23- ■ ■ X1 -Z -		
33	215	44.06	8040	2.1	29	2KJ3105- ■ DF23- ■ ■ W1 -Z -		
36	198	40.06	8040	2.3	29	2KJ3105- ■ DF23- ■ ■ V1 -Z -		
41	177	35.74	7790	2.5	29	2KJ3105- ■ DF23- ■ ■ U1 -Z -		
45	158	32.05	7560	2.8	29	2KJ3105- ■ DF23- ■ ■ T1 -Z -		
<b>D.49-LE80ZMQ4P</b>								
20	365	74.24	4640	0.87	27	2KJ3204- ■ DF23- ■ ■ F1 -Z -		
21	345	69.88	5150	0.93	27	2KJ3204- ■ DF23- ■ ■ E1 -Z -		
23	305	62.61	5930	1	27	2KJ3204- ■ DF23- ■ ■ D1 -Z -		
<b>Z.49-LE80ZMQ4P</b>								
28	255	52.14	6030	1.2	27	2KJ3104- ■ DF23- ■ ■ B2 -Z -		
31	230	47.40	6080	1.4	27	2KJ3104- ■ DF23- ■ ■ A2 -Z -		
36	199	40.31	6150	1.6	27	2KJ3104- ■ DF23- ■ ■ X1 -Z -		
40	181	36.65	6180	1.8	27	2KJ3104- ■ DF23- ■ ■ W1 -Z -		
44	162	32.70	6160	2	27	2KJ3104- ■ DF23- ■ ■ V1 -Z -		
49	145	29.32	5990	2.2	27	2KJ3104- ■ DF23- ■ ■ U1 -Z -		
55	131	26.43	5820	2.5	27	2KJ3104- ■ DF23- ■ ■ T1 -Z -		
59	120	24.39	5700	2.7	27	2KJ3104- ■ DF23- ■ ■ S1 -Z -		
65	110	22.27	5550	2.9	27	2KJ3104- ■ DF23- ■ ■ R1 -Z -		
<b>Z.39-LE80ZMQ4P</b>								
29	245	49.75	3240	0.81	16	2KJ3103- ■ DF23- ■ ■ X1 -Z -		
33	215	43.68	3720	0.93	16	2KJ3103- ■ DF23- ■ ■ W1 -Z -		
37	196	39.71	3910	1	16	2KJ3103- ■ DF23- ■ ■ V1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.75</b>	<b>Z.39-LE80ZMQ4P</b>							
	43	168	33.97	4160	1.2	16	2KJ3103- ■ DF23- ■ ■ U1 -Z -	-
	47	153	30.88	4280	1.3	16	2KJ3103- ■ DF23- ■ ■ T1 -Z -	-
	53	135	27.30	4400	1.5	16	2KJ3103- ■ DF23- ■ ■ S1 -Z -	-
	58	123	24.82	4460	1.6	16	2KJ3103- ■ DF23- ■ ■ R1 -Z -	-
	67	107	21.74	4530	1.9	16	2KJ3103- ■ DF23- ■ ■ Q1 -Z -	-
	72	99	20.07	4540	2	16	2KJ3103- ■ DF23- ■ ■ P1 -Z -	-
	82	88	17.77	4540	2.3	16	2KJ3103- ■ DF23- ■ ■ N1 -Z -	-
	98	73	14.79	4510	2.6	16	2KJ3103- ■ DF23- ■ ■ M1 -Z -	-
	104	69	13.92	4480	2.7	16	2KJ3103- ■ DF23- ■ ■ L1 -Z -	-
	116	62	12.47	4410	2.9	16	2KJ3103- ■ DF23- ■ ■ K1 -Z -	-
	137	52	10.62	4210	3.2	16	2KJ3103- ■ DF23- ■ ■ J1 -Z -	-
	159	45	9.10	4020	3.5	16	2KJ3103- ■ DF23- ■ ■ H1 -Z -	-
	185	39	7.84	3850	3.8	16	2KJ3103- ■ DF23- ■ ■ G1 -Z -	-
	224	32	6.46	3630	4.6	16	2KJ3103- ■ DF23- ■ ■ F1 -Z -	-
	<b>Z.29-LE80ZMQ4P</b>							
	46	157	31.86	2890	0.89	15	2KJ3102- ■ DF23- ■ ■ W1 -Z -	-
	50	143	28.96	3050	0.98	15	2KJ3102- ■ DF23- ■ ■ V1 -Z -	-
	58	123	24.84	3230	1.1	15	2KJ3102- ■ DF23- ■ ■ U1 -Z -	-
	64	112	22.58	3320	1.3	15	2KJ3102- ■ DF23- ■ ■ T1 -Z -	-
	73	98	19.80	3320	1.4	15	2KJ3102- ■ DF23- ■ ■ S1 -Z -	-
	82	87	17.67	3240	1.6	15	2KJ3102- ■ DF23- ■ ■ R1 -Z -	-
	92	78	15.75	3150	1.8	15	2KJ3102- ■ DF23- ■ ■ Q1 -Z -	-
	100	72	14.54	3090	1.7	15	2KJ3102- ■ DF23- ■ ■ P1 -Z -	-
	114	63	12.73	2990	2.2	15	2KJ3102- ■ DF23- ■ ■ N1 -Z -	-
	130	55	11.16	2890	2.5	15	2KJ3102- ■ DF23- ■ ■ M1 -Z -	-
	143	50	10.12	2810	2.8	15	2KJ3102- ■ DF23- ■ ■ L1 -Z -	-
	152	47	9.53	2770	3	15	2KJ3102- ■ DF23- ■ ■ K1 -Z -	-
	173	42	8.40	2670	3.3	15	2KJ3102- ■ DF23- ■ ■ J1 -Z -	-
	199	36	7.29	2570	3.6	15	2KJ3102- ■ DF23- ■ ■ H1 -Z -	-
	210	34	6.92	2490	2.2	15	2KJ3102- ■ DF23- ■ ■ G1 -Z -	-
	239	30	6.06	2400	3.3	15	2KJ3102- ■ DF23- ■ ■ F1 -Z -	-
	273	26	5.31	2320	3.5	15	2KJ3102- ■ DF23- ■ ■ E1 -Z -	-
	301	24	4.82	2250	3.6	15	2KJ3102- ■ DF23- ■ ■ D1 -Z -	-
	319	22	4.54	2220	3.7	15	2KJ3102- ■ DF23- ■ ■ C1 -Z -	-
	362	20	4.00	2130	3.8	15	2KJ3102- ■ DF23- ■ ■ B1 -Z -	-
418	17	3.47	2050	4.1	15	2KJ3102- ■ DF23- ■ ■ A1 -Z -	-	
	<b>Z.29-LE80ME2P</b>							
	161	44	17.67	2730	3.2	14	2KJ3102- ■ DB23- ■ ■ R1 -Z	P00
	181	40	15.75	2640	3.5	14	2KJ3102- ■ DB23- ■ ■ Q1 -Z	P00
	196	36	14.54	2590	3.3	14	2KJ3102- ■ DB23- ■ ■ P1 -Z	P00
	224	32	12.73	2490	4.4	14	2KJ3102- ■ DB23- ■ ■ N1 -Z	P00
	412	17	6.92	2060	4.3	14	2KJ3102- ■ DB23- ■ ■ G1 -Z	P00
	<b>Z.19-LE80ZMQ4P</b>							
	59	121	24.46	1220	0.83	13	2KJ3101- ■ DF23- ■ ■ T1 -Z -	-
	70	103	20.82	1590	0.97	13	2KJ3101- ■ DF23- ■ ■ S1 -Z -	-
	77	94	18.92	1770	1.1	13	2KJ3101- ■ DF23- ■ ■ R1 -Z -	-
	88	82	16.50	1900	1.2	13	2KJ3101- ■ DF23- ■ ■ Q1 -Z -	-
	98	73	14.77	1870	1.3	13	2KJ3101- ■ DF23- ■ ■ P1 -Z -	-
	111	65	13.12	1830	1.4	13	2KJ3101- ■ DF23- ■ ■ N1 -Z -	-
	120	60	12.11	1810	1.5	13	2KJ3101- ■ DF23- ■ ■ M1 -Z -	-
	138	52	10.52	1760	1.6	13	2KJ3101- ■ DF23- ■ ■ L1 -Z -	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
0.75	<b>Z.19-LE80ZMQ4P</b>							
	159	45	9.14	1710	1.7	13	2KJ3101- ■ DF23- ■ ■ K1 -Z -	-
	176	41	8.25	1670	1.8	13	2KJ3101- ■ DF23- ■ ■ J1 -Z -	-
	187	38	7.76	1650	1.9	13	2KJ3101- ■ DF23- ■ ■ H1 -Z -	-
	214	33	6.77	1600	2	13	2KJ3101- ■ DF23- ■ ■ G1 -Z -	-
	232	31	6.25	1460	1.8	13	2KJ3101- ■ DF23- ■ ■ F1 -Z -	-
	267	27	5.43	1420	2	13	2KJ3101- ■ DF23- ■ ■ E1 -Z -	-
	308	23	4.71	1380	2.1	13	2KJ3101- ■ DF23- ■ ■ D1 -Z -	-
	340	21	4.26	1350	2.2	13	2KJ3101- ■ DF23- ■ ■ C1 -Z -	-
	362	20	4.01	1330	2.3	13	2KJ3101- ■ DF23- ■ ■ B1 -Z -	-
	415	17	3.49	1290	2.5	13	2KJ3101- ■ DF23- ■ ■ A1 -Z -	-
	<b>Z.19-LE80ME2P</b>							
	151	48	18.92	1730	2.1	13	2KJ3101- ■ DB23- ■ ■ R1 -Z	P00
	173	42	16.50	1680	2.4	13	2KJ3101- ■ DB23- ■ ■ Q1 -Z	P00
	193	37	14.77	1640	2.6	13	2KJ3101- ■ DB23- ■ ■ P1 -Z	P00
	217	33	13.12	1590	2.8	13	2KJ3101- ■ DB23- ■ ■ N1 -Z	P00
	235	30	12.11	1560	2.9	13	2KJ3101- ■ DB23- ■ ■ M1 -Z	P00
	271	26	10.52	1510	3.1	13	2KJ3101- ■ DB23- ■ ■ L1 -Z	P00
	312	23	9.14	1450	3.4	13	2KJ3101- ■ DB23- ■ ■ K1 -Z	P00
	345	21	8.25	1410	3.6	13	2KJ3101- ■ DB23- ■ ■ J1 -Z	P00
	367	20	7.76	1390	3.7	13	2KJ3101- ■ DB23- ■ ■ H1 -Z	P00
	421	17	6.77	1340	4	13	2KJ3101- ■ DB23- ■ ■ G1 -Z	P00
	456	16	6.25	1250	3.6	13	2KJ3101- ■ DB23- ■ ■ F1 -Z	P00
	525	14	5.43	1210	3.9	13	2KJ3101- ■ DB23- ■ ■ E1 -Z	P00
	605	12	4.71	1170	4.1	13	2KJ3101- ■ DB23- ■ ■ D1 -Z	P00
	669	11	4.26	1130	4.4	13	2KJ3101- ■ DB23- ■ ■ C1 -Z	P00
	711	10	4.01	1120	4.6	13	2KJ3101- ■ DB23- ■ ■ B1 -Z	P00
	817	8.8	3.49	1080	4.9	13	2KJ3101- ■ DB23- ■ ■ A1 -Z	P00
	<b>E.69-LE80ZMQ4P</b>							
	156	46	9.30	6100	2.6	30	2KJ3003- ■ DF23- ■ ■ S1 -Z -	-
	172	42	8.45	6100	2.5	30	2KJ3003- ■ DF23- ■ ■ R1 -Z -	-
	<b>E.49-LE80ZMQ4P</b>							
	149	48	9.70	4000	1.8	23	2KJ3002- ■ DF23- ■ ■ S1 -Z -	-
164	44	8.82	4000	2.5	23	2KJ3002- ■ DF23- ■ ■ R1 -Z -	-	
193	37	7.50	4000	2.9	23	2KJ3002- ■ DF23- ■ ■ Q1 -Z -	-	
213	34	6.82	4000	3.1	23	2KJ3002- ■ DF23- ■ ■ P1 -Z -	-	
238	30	6.08	4000	3.5	23	2KJ3002- ■ DF23- ■ ■ N1 -Z -	-	
266	27	5.45	4000	3.8	23	2KJ3002- ■ DF23- ■ ■ M1 -Z -	-	
295	24	4.92	4000	4.2	23	2KJ3002- ■ DF23- ■ ■ L1 -Z -	-	
319	22	4.54	4000	4.5	23	2KJ3002- ■ DF23- ■ ■ K1 -Z -	-	
350	20	4.14	4000	5	23	2KJ3002- ■ DF23- ■ ■ J1 -Z -	-	
<b>E.39-LE80ZMQ4P</b>								
177	40	8.20	3000	0.84	17	2KJ3001- ■ DF23- ■ ■ R1 -Z -	-	
201	36	7.20	3000	1.1	17	2KJ3001- ■ DF23- ■ ■ Q1 -Z -	-	
221	32	6.55	3000	1.2	17	2KJ3001- ■ DF23- ■ ■ P1 -Z -	-	
259	28	5.60	3000	1.4	17	2KJ3001- ■ DF23- ■ ■ N1 -Z -	-	
285	25	5.09	3000	1.6	17	2KJ3001- ■ DF23- ■ ■ M1 -Z -	-	
322	22	4.50	3000	2.2	17	2KJ3001- ■ DF23- ■ ■ L1 -Z -	-	
355	20	4.09	3000	2.4	17	2KJ3001- ■ DF23- ■ ■ K1 -Z -	-	
405	18	3.58	3000	3.3	17	2KJ3001- ■ DF23- ■ ■ J1 -Z -	-	
438	16	3.31	3000	3.5	17	2KJ3001- ■ DF23- ■ ■ H1 -Z -	-	
495	14	2.93	3000	4.5	17	2KJ3001- ■ DF23- ■ ■ G1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.75</b>	<b>E.39-LE80ZMQ4P</b>							
	594	12	2.44	2980	5.4	17	2KJ3001- ■ DF23- ■ ■ F1 -Z -	
	633	11	2.29	2920	5.8	17	2KJ3001- ■ DF23- ■ ■ E1 -Z -	
<b>1.1</b>	<b>D.129-LE100ZLSA6P</b>							
	2.5	4120	373.00	27500	1.2	194	2KJ3211- ■ FN23- ■ ■ S1 -Z P01	
	2.8	3800	344.17	27700	1.3	194	2KJ3211- ■ FN23- ■ ■ R1 -Z P01	
	3	3500	316.90	27900	1.4	194	2KJ3211- ■ FN23- ■ ■ Q1 -Z P01	
	3.5	2980	270.24	28200	1.7	194	2KJ3211- ■ FN23- ■ ■ P1 -Z P01	
	3.7	2810	254.34	28300	1.8	194	2KJ3211- ■ FN23- ■ ■ N1 -Z P01	
	<b>D.129-LE90SM4P</b>							
	3.9	2720	373.00	28400	1.8	174	2KJ3211- ■ EK23- ■ ■ S1 -Z -	
	4.2	2510	344.17	28500	2	174	2KJ3211- ■ EK23- ■ ■ R1 -Z -	
	<b>D.109-LE100ZLSA6P</b>							
	2.7	3850	348.88	20000	0.8	130	2KJ3210- ■ FN23- ■ ■ T1 -Z P01	
	3	3480	314.98	20200	0.89	130	2KJ3210- ■ FN23- ■ ■ S1 -Z P01	
	3.3	3150	285.72	20200	0.98	130	2KJ3210- ■ FN23- ■ ■ R1 -Z P01	
	3.6	2910	263.74	20200	1.1	130	2KJ3210- ■ FN23- ■ ■ Q1 -Z P01	
	<b>D.109-LE90SM4P</b>							
	4.1	2540	348.88	20200	1.2	111	2KJ3210- ■ EK23- ■ ■ T1 -Z -	
	4.6	2290	314.98	20200	1.3	111	2KJ3210- ■ EK23- ■ ■ S1 -Z -	
	5	2080	285.72	20200	1.5	111	2KJ3210- ■ EK23- ■ ■ R1 -Z -	
	5.5	1920	263.74	20200	1.6	111	2KJ3210- ■ EK23- ■ ■ Q1 -Z -	
	6	1740	239.75	20200	1.8	111	2KJ3210- ■ EK23- ■ ■ P1 -Z -	
	7.1	1480	203.01	20200	2.1	111	2KJ3210- ■ EK23- ■ ■ N1 -Z -	
	<b>D.89-LE90SM4P</b>							
	5.1	2060	283.28	18100	0.81	69	2KJ3208- ■ EK23- ■ ■ R1 -Z -	
	5.7	1850	254.09	18500	0.91	69	2KJ3208- ■ EK23- ■ ■ Q1 -Z -	
	6.3	1660	228.45	18500	1	69	2KJ3208- ■ EK23- ■ ■ P1 -Z -	
	7	1500	206.62	18500	1.1	69	2KJ3208- ■ EK23- ■ ■ N1 -Z -	
	7.5	1390	190.73	18500	1.2	69	2KJ3208- ■ EK23- ■ ■ M1 -Z -	
8.2	1270	174.71	18500	1.3	69	2KJ3208- ■ EK23- ■ ■ L1 -Z -		
9.8	1060	146.59	18500	1.6	69	2KJ3208- ■ EK23- ■ ■ K1 -Z -		
10	1000	137.97	18500	1.7	69	2KJ3208- ■ EK23- ■ ■ J1 -Z -		
11	920	126.58	18500	1.8	69	2KJ3208- ■ EK23- ■ ■ H1 -Z -		
13	805	110.57	18500	2.1	69	2KJ3208- ■ EK23- ■ ■ G1 -Z -		
<b>D.79-LE90SM4P</b>								
10	1020	141.04	11200	0.82	46	2KJ3207- ■ EK23- ■ ■ J1 -Z -		
12	850	117.03	13400	0.98	46	2KJ3207- ■ EK23- ■ ■ H1 -Z -		
13	800	110.14	13400	1	46	2KJ3207- ■ EK23- ■ ■ G1 -Z -		
14	755	104.03	13500	1.1	46	2KJ3207- ■ EK23- ■ ■ F1 -Z -		
16	645	88.52	13600	1.3	46	2KJ3207- ■ EK23- ■ ■ E1 -Z -		
19	550	75.83	13800	1.5	46	2KJ3207- ■ EK23- ■ ■ D1 -Z -		
22	485	66.67	13800	1.7	46	2KJ3207- ■ EK23- ■ ■ C1 -Z -		
<b>Z.79-LE90SM4P</b>								
26	395	54.47	14000	2.1	45	2KJ3107- ■ EK23- ■ ■ A2 -Z -		
29	360	49.52	14000	2.3	45	2KJ3107- ■ EK23- ■ ■ X1 -Z -		
<b>D.69-LE90SM4P</b>								
17	630	86.82	10900	0.95	34	2KJ3206- ■ EK23- ■ ■ F1 -Z -		
18	595	81.71	11000	1	34	2KJ3206- ■ EK23- ■ ■ E1 -Z -		
20	530	73.22	11100	1.1	34	2KJ3206- ■ EK23- ■ ■ D1 -Z -		
<b>Z.69-LE90SM4P</b>								
24	445	60.97	11200	1.3	34	2KJ3106- ■ EK23- ■ ■ A2 -Z -		
26	400	55.43	11300	1.5	34	2KJ3106- ■ EK23- ■ ■ X1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/48
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, B, F or H</b>	see page 10/42

# SIMOGEAR geared motors

## Helical geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.1	<b>Z.69-LE90SM4P</b>							
	31	340	47.14	11400	1.7	34	2KJ3106- ■ EK23- ■ ■ W1 -Z -	
	34	310	42.86	11400	1.9	34	2KJ3106- ■ EK23- ■ ■ V1 -Z -	
	38	275	38.24	11500	2.2	34	2KJ3106- ■ EK23- ■ ■ U1 -Z -	
	42	250	34.29	11500	2.4	34	2KJ3106- ■ EK23- ■ ■ T1 -Z -	
	47	225	30.90	11500	2.7	34	2KJ3106- ■ EK23- ■ ■ S1 -Z -	
	<b>D.59-LE90SM4P</b>							
	19	555	76.38	6220	0.81	30	2KJ3205- ■ EK23- ■ ■ E1 -Z -	
	21	495	68.43	7300	0.9	30	2KJ3205- ■ EK23- ■ ■ D1 -Z -	
	<b>Z.59-LE90SM4P</b>							
	25	415	56.99	7720	1.1	29	2KJ3105- ■ EK23- ■ ■ A2 -Z -	
	28	375	51.81	7780	1.2	29	2KJ3105- ■ EK23- ■ ■ X1 -Z -	
	33	320	44.06	7860	1.4	29	2KJ3105- ■ EK23- ■ ■ W1 -Z -	
	36	290	40.06	7690	1.5	29	2KJ3105- ■ EK23- ■ ■ U1 -Z -	
	40	260	35.74	7480	1.7	29	2KJ3105- ■ EK23- ■ ■ V1 -Z -	
	45	230	32.05	7300	1.9	29	2KJ3105- ■ EK23- ■ ■ T1 -Z -	
	50	210	28.89	7100	2.1	29	2KJ3105- ■ EK23- ■ ■ S1 -Z -	
	54	194	26.66	6950	2.3	29	2KJ3105- ■ EK23- ■ ■ R1 -Z -	
	59	178	24.34	6780	2.5	29	2KJ3105- ■ EK23- ■ ■ Q1 -Z -	
71	147	20.20	6450	3.1	29	2KJ3105- ■ EK23- ■ ■ P1 -Z -		
76	139	19.01	6340	3.2	29	2KJ3105- ■ EK23- ■ ■ N1 -Z -		
<b>Z.49-LE90SM4P</b>								
28	380	52.14	5630	0.84	27	2KJ3104- ■ EK23- ■ ■ B2 -Z -		
30	345	47.40	5850	0.93	27	2KJ3104- ■ EK23- ■ ■ A2 -Z -		
36	290	40.31	5960	1.1	27	2KJ3104- ■ EK23- ■ ■ X1 -Z -		
39	265	36.65	6010	1.2	27	2KJ3104- ■ EK23- ■ ■ W1 -Z -		
44	235	32.70	5890	1.3	27	2KJ3104- ■ EK23- ■ ■ V1 -Z -		
49	210	29.32	5750	1.5	27	2KJ3104- ■ EK23- ■ ■ U1 -Z -		
54	193	26.43	5590	1.7	27	2KJ3104- ■ EK23- ■ ■ T1 -Z -		
59	178	24.39	5480	1.8	27	2KJ3104- ■ EK23- ■ ■ S1 -Z -		
65	162	22.27	5360	2	27	2KJ3104- ■ EK23- ■ ■ R1 -Z -		
78	135	18.48	5100	2.4	27	2KJ3104- ■ EK23- ■ ■ Q1 -Z -		
83	127	17.39	5020	2.5	27	2KJ3104- ■ EK23- ■ ■ P1 -Z -		
88	120	16.42	4950	2.7	27	2KJ3104- ■ EK23- ■ ■ N1 -Z -		
103	102	13.98	4730	3.1	27	2KJ3104- ■ EK23- ■ ■ M1 -Z -		
120	87	11.97	4530	3.7	27	2KJ3104- ■ EK23- ■ ■ L1 -Z -		
<b>Z.39-LE90SM4P</b>								
42	245	33.97	2260	0.81	18	2KJ3103- ■ EK23- ■ ■ U1 -Z -		
47	225	30.88	2500	0.89	18	2KJ3103- ■ EK23- ■ ■ T1 -Z -		
53	199	27.30	2820	1	18	2KJ3103- ■ EK23- ■ ■ S1 -Z -		
58	181	24.82	3020	1.1	18	2KJ3103- ■ EK23- ■ ■ R1 -Z -		
66	159	21.74	3250	1.3	18	2KJ3103- ■ EK23- ■ ■ Q1 -Z -		
72	146	20.07	3380	1.4	18	2KJ3103- ■ EK23- ■ ■ P1 -Z -		
81	130	17.77	3500	1.5	18	2KJ3103- ■ EK23- ■ ■ N1 -Z -		
97	108	14.79	3650	1.8	18	2KJ3103- ■ EK23- ■ ■ M1 -Z -		
103	102	13.92	3670	1.9	18	2KJ3103- ■ EK23- ■ ■ L1 -Z -		
115	91	12.47	3730	2	18	2KJ3103- ■ EK23- ■ ■ K1 -Z -		
136	78	10.62	3740	2.2	18	2KJ3103- ■ EK23- ■ ■ J1 -Z -		
158	66	9.10	3750	2.4	18	2KJ3103- ■ EK23- ■ ■ H1 -Z -		
184	57	7.84	3710	2.6	18	2KJ3103- ■ EK23- ■ ■ G1 -Z -		
223	47	6.46	3350	3.1	18	2KJ3103- ■ EK23- ■ ■ F1 -Z -		
237	44	6.08	3340	3.3	18	2KJ3103- ■ EK23- ■ ■ E1 -Z -		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.1</b>	<b>Z.39-LE90SM4P</b>							
	264	40	5.45	3300	3.5	18	2KJ3103- ■ EK23- ■ ■ D1 -Z -	
	310	34	4.64	3230	3.8	18	2KJ3103- ■ EK23- ■ ■ C1 -Z -	
	362	29	3.98	3090	4.2	18	2KJ3103- ■ EK23- ■ ■ B1 -Z -	
	420	25	3.43	2950	4.5	18	2KJ3103- ■ EK23- ■ ■ A1 -Z -	
	<b>Z.39-LE80ZMJ2P</b>							
	162	65	17.77	3730	3.1	16	2KJ3103- ■ DM23- ■ ■ N1 -Z P00	
	195	54	14.79	3690	3.6	16	2KJ3103- ■ DM23- ■ ■ M1 -Z P00	
	207	51	13.92	3630	3.7	16	2KJ3103- ■ DM23- ■ ■ L1 -Z P00	
	231	45	12.47	3530	4	16	2KJ3103- ■ DM23- ■ ■ K1 -Z P00	
272	39	10.62	3360	4.4	16	2KJ3103- ■ DM23- ■ ■ J1 -Z P00		
317	33	9.10	3210	4.8	16	2KJ3103- ■ DM23- ■ ■ H1 -Z P00		
368	28	7.84	3070	5.2	16	2KJ3103- ■ DM23- ■ ■ G1 -Z P00		
<b>Z.29-LE90SM4P</b>								
64	165	22.58	1930	0.85	17	2KJ3102- ■ EK23- ■ ■ T1 -Z -		
73	144	19.80	2220	0.97	17	2KJ3102- ■ EK23- ■ ■ S1 -Z -		
81	129	17.67	2390	1.1	17	2KJ3102- ■ EK23- ■ ■ R1 -Z -		
91	115	15.75	2540	1.2	17	2KJ3102- ■ EK23- ■ ■ Q1 -Z -		
99	106	14.54	2630	1.1	17	2KJ3102- ■ EK23- ■ ■ P1 -Z -		
113	93	12.73	2740	1.5	17	2KJ3102- ■ EK23- ■ ■ N1 -Z -		
129	81	11.16	2750	1.7	17	2KJ3102- ■ EK23- ■ ■ M1 -Z -		
142	74	10.12	2690	1.9	17	2KJ3102- ■ EK23- ■ ■ L1 -Z -		
151	70	9.53	2650	2	17	2KJ3102- ■ EK23- ■ ■ K1 -Z -		
171	61	8.40	2570	2.3	17	2KJ3102- ■ EK23- ■ ■ J1 -Z -		
198	53	7.29	2480	2.4	17	2KJ3102- ■ EK23- ■ ■ H1 -Z -		
208	50	6.92	2390	1.5	17	2KJ3102- ■ EK23- ■ ■ G1 -Z -		
238	44	6.06	2310	2.3	17	2KJ3102- ■ EK23- ■ ■ F1 -Z -		
271	39	5.31	2230	2.3	17	2KJ3102- ■ EK23- ■ ■ E1 -Z -		
299	35	4.82	2180	2.4	17	2KJ3102- ■ EK23- ■ ■ D1 -Z -		
317	33	4.54	2140	2.5	17	2KJ3102- ■ EK23- ■ ■ C1 -Z -		
360	29	4.00	2070	2.6	17	2KJ3102- ■ EK23- ■ ■ B1 -Z -		
415	25	3.47	2000	2.8	17	2KJ3102- ■ EK23- ■ ■ A1 -Z -		
<b>Z.29-LE80ZMJ2P</b>								
163	64	17.67	2600	2.2	15	2KJ3102- ■ DM23- ■ ■ R1 -Z P00		
183	57	15.75	2530	2.4	15	2KJ3102- ■ DM23- ■ ■ Q1 -Z P00		
198	53	14.54	2480	2.3	15	2KJ3102- ■ DM23- ■ ■ P1 -Z P00		
227	46	12.73	2400	3	15	2KJ3102- ■ DM23- ■ ■ N1 -Z P00		
259	41	11.16	2310	3.4	15	2KJ3102- ■ DM23- ■ ■ M1 -Z P00		
285	37	10.12	2250	3.8	15	2KJ3102- ■ DM23- ■ ■ L1 -Z P00		
303	35	9.53	2210	4	15	2KJ3102- ■ DM23- ■ ■ K1 -Z P00		
<b>Z.29-LE80ZMJ2P</b>								
343	31	8.40	2140	4.5	15	2KJ3102- ■ DM23- ■ ■ J1 -Z P00		
396	26	7.29	2060	4.9	15	2KJ3102- ■ DM23- ■ ■ H1 -Z P00		
417	25	6.92	1990	3	15	2KJ3102- ■ DM23- ■ ■ G1 -Z P00		
476	22	6.06	1920	4.5	15	2KJ3102- ■ DM23- ■ ■ F1 -Z P00		
543	19	5.31	1850	4.7	15	2KJ3102- ■ DM23- ■ ■ E1 -Z P00		
599	18	4.82	1800	4.9	15	2KJ3102- ■ DM23- ■ ■ D1 -Z P00		
635	16	4.54	1770	5.1	15	2KJ3102- ■ DM23- ■ ■ C1 -Z P00		
721	15	4.00	1700	5.2	15	2KJ3102- ■ DM23- ■ ■ B1 -Z P00		
831	13	3.47	1630	5.5	15	2KJ3102- ■ DM23- ■ ■ A1 -Z P00		
<b>Z.19-LE80ZMJ2P</b>								
152	69	18.92	1570	1.5	13	2KJ3101- ■ DM23- ■ ■ R1 -Z P00		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>1.1</b>	<b>Z.19-LE80ZMJ2P</b>							
	175	60	16.50	1540	1.6	13	2KJ3101- ■ DM23- ■ ■ Q1 -Z	P00
	195	54	14.77	1510	1.8	13	2KJ3101- ■ DM23- ■ ■ P1 -Z	P00
	220	48	13.12	1480	1.9	13	2KJ3101- ■ DM23- ■ ■ N1 -Z	P00
	238	44	12.11	1460	2	13	2KJ3101- ■ DM23- ■ ■ M1 -Z	P00
	274	38	10.52	1420	2.2	13	2KJ3101- ■ DM23- ■ ■ L1 -Z	P00
	316	33	9.14	1380	2.3	13	2KJ3101- ■ DM23- ■ ■ K1 -Z	P00
	350	30	8.25	1350	2.5	13	2KJ3101- ■ DM23- ■ ■ J1 -Z	P00
	372	28	7.76	1330	2.6	13	2KJ3101- ■ DM23- ■ ■ H1 -Z	P00
	426	25	6.77	1280	2.8	13	2KJ3101- ■ DM23- ■ ■ G1 -Z	P00
	462	23	6.25	1170	2.5	13	2KJ3101- ■ DM23- ■ ■ F1 -Z	P00
	531	20	5.43	1140	2.7	13	2KJ3101- ■ DM23- ■ ■ E1 -Z	P00
	613	17	4.71	1110	2.9	13	2KJ3101- ■ DM23- ■ ■ D1 -Z	P00
	677	16	4.26	1080	3	13	2KJ3101- ■ DM23- ■ ■ C1 -Z	P00
	719	15	4.01	1060	3.2	13	2KJ3101- ■ DM23- ■ ■ B1 -Z	P00
	827	13	3.49	1030	3.4	13	2KJ3101- ■ DM23- ■ ■ A1 -Z	P00
	<b>E.89-LE90SM4P</b>							
	149	70	9.67	8000	4	46	2KJ3004- ■ EK23- ■ ■ T1 -Z	-
	<b>E.69-LE90SM4P</b>							
	155	68	9.30	6100	1.8	30	2KJ3003- ■ EK23- ■ ■ S1 -Z	-
	170	62	8.45	6100	1.7	30	2KJ3003- ■ EK23- ■ ■ R1 -Z	-
	190	55	7.58	6100	3.7	30	2KJ3003- ■ EK23- ■ ■ Q1 -Z	-
	211	50	6.82	6100	3.4	30	2KJ3003- ■ EK23- ■ ■ P1 -Z	-
	233	45	6.17	6100	4.6	30	2KJ3003- ■ EK23- ■ ■ N1 -Z	-
	253	42	5.69	6100	4	30	2KJ3003- ■ EK23- ■ ■ M1 -Z	-
	<b>E.49-LE90SM4P</b>							
	148	71	9.70	4000	1.2	23	2KJ3002- ■ EK23- ■ ■ S1 -Z	-
	163	64	8.82	4000	1.7	23	2KJ3002- ■ EK23- ■ ■ R1 -Z	-
	192	55	7.50	4000	2	23	2KJ3002- ■ EK23- ■ ■ Q1 -Z	-
	211	50	6.82	4000	2.1	23	2KJ3002- ■ EK23- ■ ■ P1 -Z	-
	237	44	6.08	4000	2.3	23	2KJ3002- ■ EK23- ■ ■ N1 -Z	-
	264	40	5.45	4000	2.6	23	2KJ3002- ■ EK23- ■ ■ M1 -Z	-
	293	36	4.92	4000	2.8	23	2KJ3002- ■ EK23- ■ ■ L1 -Z	-
	317	33	4.54	4000	3.1	23	2KJ3002- ■ EK23- ■ ■ K1 -Z	-
	348	30	4.14	4000	3.4	23	2KJ3002- ■ EK23- ■ ■ J1 -Z	-
	419	25	3.44	4000	4	23	2KJ3002- ■ EK23- ■ ■ H1 -Z	-
	444	24	3.24	4000	4.3	23	2KJ3002- ■ EK23- ■ ■ G1 -Z	-
	471	22	3.06	4000	4.5	23	2KJ3002- ■ EK23- ■ ■ F1 -Z	-
	554	19	2.60	3920	5.4	23	2KJ3002- ■ EK23- ■ ■ E1 -Z	-
	<b>E.39-LE90SM4P</b>							
	220	48	6.55	3000	0.84	19	2KJ3001- ■ EK23- ■ ■ P1 -Z	-
	257	41	5.60	3000	0.98	19	2KJ3001- ■ EK23- ■ ■ N1 -Z	-
	283	37	5.09	3000	1.1	19	2KJ3001- ■ EK23- ■ ■ M1 -Z	-
	320	33	4.50	3000	1.5	19	2KJ3001- ■ EK23- ■ ■ L1 -Z	-
	352	30	4.09	3000	1.6	19	2KJ3001- ■ EK23- ■ ■ K1 -Z	-
	402	26	3.58	3000	2.2	19	2KJ3001- ■ EK23- ■ ■ J1 -Z	-
	435	24	3.31	3000	2.4	19	2KJ3001- ■ EK23- ■ ■ H1 -Z	-
	491	21	2.93	3000	3	19	2KJ3001- ■ EK23- ■ ■ G1 -Z	-
	590	18	2.44	2930	3.7	19	2KJ3001- ■ EK23- ■ ■ F1 -Z	-
	629	17	2.29	2880	4	19	2KJ3001- ■ EK23- ■ ■ E1 -Z	-
	699	15	2.06	2780	4.4	19	2KJ3001- ■ EK23- ■ ■ D1 -Z	-
	823	13	1.75	2640	5.2	19	2KJ3001- ■ EK23- ■ ■ C1 -Z	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.1	<b>E.39-LE90SM4P</b>							
	960	11	1.50	2520	5.6	19	2KJ3001- ■ EK23- ■ ■ B1 -Z -	
	1116	9.4	1.29	2410	5.7	19	2KJ3001- ■ EK23- ■ ■ A1 -Z -	
1.5	<b>D.149-LE112ZMKA6P</b>							
	3	4820	328.38	52700	1.7	280	2KJ3212- ■ GH23- ■ ■ W1 -Z P01	
	3.5	4120	281.04	53000	1.9	280	2KJ3212- ■ GH23- ■ ■ V1 -Z P01	
	<b>D.129-LE112ZMKA6P</b>							
	2.6	5480	373.00	26700	0.91	194	2KJ3211- ■ GH23- ■ ■ S1 -Z P01	
	2.8	5050	344.17	27000	0.99	194	2KJ3211- ■ GH23- ■ ■ R1 -Z P01	
	3.1	4650	316.90	27200	1.1	194	2KJ3211- ■ GH23- ■ ■ Q1 -Z P01	
	3.6	3970	270.24	27600	1.3	194	2KJ3211- ■ GH23- ■ ■ P1 -Z P01	
	<b>D.129-LE90ZLR4P</b>							
	3.9	3690	373.00	27800	1.4	177	2KJ3211- ■ EM23- ■ ■ S1 -Z -	
	4.2	3410	344.17	28000	1.5	177	2KJ3211- ■ EM23- ■ ■ R1 -Z -	
	4.6	3140	316.90	28100	1.6	177	2KJ3211- ■ EM23- ■ ■ Q1 -Z -	
	5.3	2670	270.24	28400	1.9	177	2KJ3211- ■ EM23- ■ ■ P1 -Z -	
	5.7	2520	254.34	28500	2	177	2KJ3211- ■ EM23- ■ ■ N1 -Z -	
	6.1	2340	236.03	28600	2.1	177	2KJ3211- ■ EM23- ■ ■ M1 -Z -	
	<b>D.109-LE112ZMKA6P</b>							
	3.7	3870	263.74	20000	0.8	130	2KJ3210- ■ GH23- ■ ■ Q1 -Z P01	
	<b>D.109-LE90ZLR4P</b>							
	4.1	3450	348.88	20200	0.9	114	2KJ3210- ■ EM23- ■ ■ T1 -Z -	
	4.6	3120	314.98	20200	0.99	114	2KJ3210- ■ EM23- ■ ■ S1 -Z -	
	5.1	2830	285.72	20200	1.1	114	2KJ3210- ■ EM23- ■ ■ R1 -Z -	
	5.5	2610	263.74	20200	1.2	114	2KJ3210- ■ EM23- ■ ■ Q1 -Z -	
	6	2370	239.75	20200	1.3	114	2KJ3210- ■ EM23- ■ ■ P1 -Z -	
	7.1	2010	203.01	20200	1.5	114	2KJ3210- ■ EM23- ■ ■ N1 -Z -	
	7.6	1890	191.07	20200	1.6	114	2KJ3210- ■ EM23- ■ ■ M1 -Z -	
	8.2	1740	176.45	20200	1.8	114	2KJ3210- ■ EM23- ■ ■ L1 -Z -	
	9.2	1550	157.00	20200	2	114	2KJ3210- ■ EM23- ■ ■ K1 -Z -	
	10	1380	139.44	20200	2.2	114	2KJ3210- ■ EM23- ■ ■ J1 -Z -	
	<b>D.89-LE90ZLR4P</b>							
	7	2040	206.62	18300	0.82	72	2KJ3208- ■ EM23- ■ ■ N1 -Z -	
	7.6	1890	190.73	18500	0.89	72	2KJ3208- ■ EM23- ■ ■ M1 -Z -	
	8.3	1730	174.71	18500	0.97	72	2KJ3208- ■ EM23- ■ ■ L1 -Z -	
	9.9	1450	146.59	18500	1.2	72	2KJ3208- ■ EM23- ■ ■ K1 -Z -	
	10	1360	137.97	18500	1.2	72	2KJ3208- ■ EM23- ■ ■ J1 -Z -	
	11	1250	126.58	18500	1.3	72	2KJ3208- ■ EM23- ■ ■ H1 -Z -	
	13	1090	110.57	18500	1.5	72	2KJ3208- ■ EM23- ■ ■ G1 -Z -	
	15	980	98.99	18500	1.7	72	2KJ3208- ■ EM23- ■ ■ F1 -Z -	
	17	855	86.56	18500	2	72	2KJ3208- ■ EM23- ■ ■ E1 -Z -	
	19	735	74.30	18500	2.3	72	2KJ3208- ■ EM23- ■ ■ D1 -Z -	
	<b>D.79-LE90ZLR4P</b>							
	14	1030	104.03	11000	0.81	49	2KJ3207- ■ EM23- ■ ■ F1 -Z -	
	16	875	88.52	13300	0.96	49	2KJ3207- ■ EM23- ■ ■ E1 -Z -	
	19	750	75.83	13500	1.1	49	2KJ3207- ■ EM23- ■ ■ D1 -Z -	
	22	660	66.67	13600	1.3	49	2KJ3207- ■ EM23- ■ ■ C1 -Z -	
	<b>Z.79-LE90ZLR4P</b>							
	27	540	54.47	13800	1.6	48	2KJ3107- ■ EM23- ■ ■ A2 -Z -	
	29	490	49.52	13800	1.7	48	2KJ3107- ■ EM23- ■ ■ X1 -Z -	
33	440	44.42	13900	1.9	48	2KJ3107- ■ EM23- ■ ■ W1 -Z -		
36	395	39.94	14000	2.1	48	2KJ3107- ■ EM23- ■ ■ V1 -Z -		
40	355	36.12	14000	2.3	48	2KJ3107- ■ EM23- ■ ■ U1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
1.5	<b>Z.79-LE90ZLR4P</b>							
	43	330	33.34	14000	2.5	48	2KJ3107- ■ EM23- ■ ■ T1 -Z -	-
	47	300	30.54	14100	2.8	48	2KJ3107- ■ EM23- ■ ■ S1 -Z -	-
	<b>D.69-LE90ZLR4P</b>							
	20	725	73.22	10700	0.83	37	2KJ3206- ■ EM23- ■ ■ D1 -Z -	-
	<b>Z.69-LE90ZLR4P</b>							
	24	600	60.97	11000	0.99	37	2KJ3106- ■ EM23- ■ ■ A2 -Z -	-
	26	550	55.43	11000	1.1	37	2KJ3106- ■ EM23- ■ ■ X1 -Z -	-
	31	465	47.14	11200	1.3	37	2KJ3106- ■ EM23- ■ ■ W1 -Z -	-
	34	425	42.86	11200	1.4	37	2KJ3106- ■ EM23- ■ ■ V1 -Z -	-
	38	375	38.24	11300	1.6	37	2KJ3106- ■ EM23- ■ ■ U1 -Z -	-
	42	340	34.29	11400	1.8	37	2KJ3106- ■ EM23- ■ ■ T1 -Z -	-
	47	305	30.90	11400	2	37	2KJ3106- ■ EM23- ■ ■ S1 -Z -	-
	51	280	28.53	11500	2.1	37	2KJ3106- ■ EM23- ■ ■ R1 -Z -	-
	55	255	26.04	11500	2.3	37	2KJ3106- ■ EM23- ■ ■ Q1 -Z -	-
	67	210	21.61	11600	2.8	37	2KJ3106- ■ EM23- ■ ■ P1 -Z -	-
	71	200	20.34	11600	3	37	2KJ3106- ■ EM23- ■ ■ N1 -Z -	-
	75	190	19.21	11600	3.2	37	2KJ3106- ■ EM23- ■ ■ M1 -Z -	-
	<b>Z.59-LE90ZLR4P</b>							
	25	565	56.99	7210	0.8	32	2KJ3105- ■ EM23- ■ ■ A2 -Z -	-
28	510	51.81	7570	0.88	32	2KJ3105- ■ EM23- ■ ■ X1 -Z -	-	
33	435	44.06	7400	1	32	2KJ3105- ■ EM23- ■ ■ W1 -Z -	-	
36	395	40.06	7270	1.1	32	2KJ3105- ■ EM23- ■ ■ U1 -Z -	-	
40	350	35.74	7120	1.3	32	2KJ3105- ■ EM23- ■ ■ V1 -Z -	-	
45	315	32.05	6950	1.4	32	2KJ3105- ■ EM23- ■ ■ T1 -Z -	-	
50	285	28.89	6790	1.6	32	2KJ3105- ■ EM23- ■ ■ S1 -Z -	-	
54	260	26.66	6680	1.7	32	2KJ3105- ■ EM23- ■ ■ R1 -Z -	-	
59	240	24.34	6530	1.9	32	2KJ3105- ■ EM23- ■ ■ Q1 -Z -	-	
72	200	20.20	6240	2.2	32	2KJ3105- ■ EM23- ■ ■ P1 -Z -	-	
76	188	19.01	6140	2.4	32	2KJ3105- ■ EM23- ■ ■ N1 -Z -	-	
81	178	17.95	6050	2.5	32	2KJ3105- ■ EM23- ■ ■ M1 -Z -	-	
95	151	15.27	5800	3	32	2KJ3105- ■ EM23- ■ ■ L1 -Z -	-	
110	130	13.09	5560	3.5	32	2KJ3105- ■ EM23- ■ ■ K1 -Z -	-	
<b>Z.49-LE90ZLR4P</b>								
36	400	40.31	5300	0.8	30	2KJ3104- ■ EM23- ■ ■ X1 -Z -	-	
39	360	36.65	5650	0.88	30	2KJ3104- ■ EM23- ■ ■ W1 -Z -	-	
44	320	32.70	5550	0.99	30	2KJ3104- ■ EM23- ■ ■ V1 -Z -	-	
49	290	29.32	5070	1.1	30	2KJ3104- ■ EM23- ■ ■ U1 -Z -	-	
55	260	26.43	5320	1.2	30	2KJ3104- ■ EM23- ■ ■ T1 -Z -	-	
59	240	24.39	5230	1.3	30	2KJ3104- ■ EM23- ■ ■ S1 -Z -	-	
65	220	22.27	5120	1.4	30	2KJ3104- ■ EM23- ■ ■ R1 -Z -	-	
78	183	18.48	4910	1.7	30	2KJ3104- ■ EM23- ■ ■ Q1 -Z -	-	
83	172	17.39	4840	1.9	30	2KJ3104- ■ EM23- ■ ■ P1 -Z -	-	
88	163	16.42	4770	2	30	2KJ3104- ■ EM23- ■ ■ N1 -Z -	-	
103	139	13.98	4580	2.3	30	2KJ3104- ■ EM23- ■ ■ M1 -Z -	-	
121	119	11.97	4400	2.7	30	2KJ3104- ■ EM23- ■ ■ L1 -Z -	-	
137	104	10.53	4260	3.1	30	2KJ3104- ■ EM23- ■ ■ K1 -Z -	-	
163	88	8.88	4060	3.6	30	2KJ3104- ■ EM23- ■ ■ J1 -Z -	-	
187	77	7.74	3910	4.2	30	2KJ3104- ■ EM23- ■ ■ H1 -Z -	-	
189	76	7.64	3870	3.9	30	2KJ3104- ■ EM23- ■ ■ G1 -Z -	-	
200	72	7.21	3800	4.1	30	2KJ3104- ■ EM23- ■ ■ F1 -Z -	-	
235	61	6.14	3640	4.4	30	2KJ3104- ■ EM23- ■ ■ E1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.5</b>	<b>Z.49-LE90ZLR4P</b>							
	275	52	5.26	3480	4.7	30	2KJ3104- ■ EM23- ■ ■ D1 -Z -	-
	313	46	4.62	3350	4.9	30	2KJ3104- ■ EM23- ■ ■ C1 -Z -	-
	371	39	3.90	3180	5.3	30	2KJ3104- ■ EM23- ■ ■ B1 -Z -	-
	<b>Z.49-LE90SM2P</b>							
	157	91	18.48	4100	3.5	27	2KJ3104- ■ EK23- ■ ■ Q1 -Z	P00
	167	86	17.39	4030	3.7	27	2KJ3104- ■ EK23- ■ ■ P1 -Z	P00
	177	81	16.42	3970	4	27	2KJ3104- ■ EK23- ■ ■ N1 -Z	P00
	<b>Z.39-LE90ZLR4P</b>							
	58	245	24.82	1420	0.81	21	2KJ3103- ■ EM23- ■ ■ R1 -Z -	-
	66	215	21.74	1840	0.93	21	2KJ3103- ■ EM23- ■ ■ Q1 -Z -	-
	72	199	20.07	2050	1	21	2KJ3103- ■ EM23- ■ ■ P1 -Z -	-
	81	176	17.77	2350	1.1	21	2KJ3103- ■ EM23- ■ ■ N1 -Z -	-
	98	147	14.79	2670	1.3	21	2KJ3103- ■ EM23- ■ ■ M1 -Z -	-
	104	138	13.92	2770	1.4	21	2KJ3103- ■ EM23- ■ ■ L1 -Z -	-
	116	124	12.47	2890	1.5	21	2KJ3103- ■ EM23- ■ ■ K1 -Z -	-
	136	105	10.62	3060	1.6	21	2KJ3103- ■ EM23- ■ ■ J1 -Z -	-
	159	90	9.10	3150	1.8	21	2KJ3103- ■ EM23- ■ ■ H1 -Z -	-
	184	78	7.84	3180	1.9	21	2KJ3103- ■ EM23- ■ ■ G1 -Z -	-
	224	64	6.46	2810	2.3	21	2KJ3103- ■ EM23- ■ ■ F1 -Z -	-
	238	60	6.08	2840	2.4	21	2KJ3103- ■ EM23- ■ ■ E1 -Z -	-
	265	54	5.45	2850	2.6	21	2KJ3103- ■ EM23- ■ ■ D1 -Z -	-
	311	46	4.64	2870	2.8	21	2KJ3103- ■ EM23- ■ ■ C1 -Z -	-
	363	40	3.98	2840	3.1	21	2KJ3103- ■ EM23- ■ ■ B1 -Z -	-
	421	34	3.43	2830	3.3	21	2KJ3103- ■ EM23- ■ ■ A1 -Z -	-
	<b>Z.39-LE90SM2P</b>							
	164	88	17.77	3140	2.3	18	2KJ3103- ■ EK23- ■ ■ N1 -Z	P00
	197	73	14.79	3200	2.7	18	2KJ3103- ■ EK23- ■ ■ M1 -Z	P00
	209	68	13.92	3220	2.8	18	2KJ3103- ■ EK23- ■ ■ L1 -Z	P00
	233	61	12.47	3220	2.9	18	2KJ3103- ■ EK23- ■ ■ K1 -Z	P00
	274	52	10.62	3200	3.2	18	2KJ3103- ■ EK23- ■ ■ J1 -Z	P00
	320	45	9.10	3140	3.5	18	2KJ3103- ■ EK23- ■ ■ H1 -Z	P00
	371	39	7.84	3010	3.8	18	2KJ3103- ■ EK23- ■ ■ G1 -Z	P00
	450	32	6.46	2810	4.6	18	2KJ3103- ■ EK23- ■ ■ F1 -Z	P00
	479	30	6.08	2790	4.9	18	2KJ3103- ■ EK23- ■ ■ E1 -Z	P00
	534	27	5.45	2700	5.2	18	2KJ3103- ■ EK23- ■ ■ D1 -Z	P00
627	23	4.64	2580	5.7	18	2KJ3103- ■ EK23- ■ ■ C1 -Z	P00	
731	20	3.98	2460	6.2	18	2KJ3103- ■ EK23- ■ ■ B1 -Z	P00	
<b>Z.29-LE90ZLR4P</b>								
82	175	17.67	1170	0.8	20	2KJ3102- ■ EM23- ■ ■ R1 -Z -	-	
92	156	15.75	1450	0.9	20	2KJ3102- ■ EM23- ■ ■ Q1 -Z -	-	
99	144	14.54	1620	0.83	20	2KJ3102- ■ EM23- ■ ■ P1 -Z -	-	
114	126	12.73	1860	1.1	20	2KJ3102- ■ EM23- ■ ■ N1 -Z -	-	
129	111	11.16	2040	1.3	20	2KJ3102- ■ EM23- ■ ■ M1 -Z -	-	
143	100	10.12	2170	1.4	20	2KJ3102- ■ EM23- ■ ■ L1 -Z -	-	
152	94	9.53	2230	1.5	20	2KJ3102- ■ EM23- ■ ■ K1 -Z -	-	
172	83	8.40	2330	1.7	20	2KJ3102- ■ EM23- ■ ■ J1 -Z -	-	
198	72	7.29	2370	1.8	20	2KJ3102- ■ EM23- ■ ■ H1 -Z -	-	
209	69	6.92	2100	1.1	20	2KJ3102- ■ EM23- ■ ■ G1 -Z -	-	
238	60	6.06	2190	1.7	20	2KJ3102- ■ EM23- ■ ■ F1 -Z -	-	
272	53	5.31	2130	1.7	20	2KJ3102- ■ EM23- ■ ■ E1 -Z -	-	
300	48	4.82	2090	1.8	20	2KJ3102- ■ EM23- ■ ■ D1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.5	<b>Z.29-LE90ZLR4P</b>							
	318	45	4.54	2060	1.9	20	2KJ3102- ■ EM23- ■ ■ C1 -Z -	-
	361	40	4.00	1990	1.9	20	2KJ3102- ■ EM23- ■ ■ B1 -Z -	-
	416	34	3.47	1930	2	20	2KJ3102- ■ EM23- ■ ■ A1 -Z -	-
	<b>Z.29-LE90SM2P</b>							
	165	87	17.67	2290	1.6	17	2KJ3102- ■ EK23- ■ ■ R1 -Z	P00
	185	78	15.75	2350	1.8	17	2KJ3102- ■ EK23- ■ ■ Q1 -Z	P00
	200	72	14.54	2360	1.7	17	2KJ3102- ■ EK23- ■ ■ P1 -Z	P00
	229	63	12.73	2290	2.2	17	2KJ3102- ■ EK23- ■ ■ N1 -Z	P00
	261	55	11.16	2220	2.5	17	2KJ3102- ■ EK23- ■ ■ M1 -Z	P00
	288	50	10.12	2170	2.8	17	2KJ3102- ■ EK23- ■ ■ L1 -Z	P00
	305	47	9.53	2140	3	17	2KJ3102- ■ EK23- ■ ■ K1 -Z	P00
	346	41	8.40	2070	3.3	17	2KJ3102- ■ EK23- ■ ■ J1 -Z	P00
	399	36	7.29	2000	3.6	17	2KJ3102- ■ EK23- ■ ■ H1 -Z	P00
	421	34	6.92	1920	2.2	17	2KJ3102- ■ EK23- ■ ■ G1 -Z	P00
480	30	6.06	1860	3.4	17	2KJ3102- ■ EK23- ■ ■ F1 -Z	P00	
548	26	5.31	1800	3.5	17	2KJ3102- ■ EK23- ■ ■ E1 -Z	P00	
604	24	4.82	1750	3.6	17	2KJ3102- ■ EK23- ■ ■ D1 -Z	P00	
641	22	4.54	1720	3.8	17	2KJ3102- ■ EK23- ■ ■ C1 -Z	P00	
728	20	4.00	1660	3.9	17	2KJ3102- ■ EK23- ■ ■ B1 -Z	P00	
839	17	3.47	1600	4.1	17	2KJ3102- ■ EK23- ■ ■ A1 -Z	P00	
<b>E.89-LE90ZLR4P</b>								
149	96	9.67	8000	2.9	49	2KJ3004- ■ EM23- ■ ■ T1 -Z	-	
166	86	8.73	8000	3.2	49	2KJ3004- ■ EM23- ■ ■ S1 -Z	-	
182	78	7.92	8000	3.6	49	2KJ3004- ■ EM23- ■ ■ R1 -Z	-	
198	72	7.31	8000	3.6	49	2KJ3004- ■ EM23- ■ ■ Q1 -Z	-	
218	66	6.64	8000	3.9	49	2KJ3004- ■ EM23- ■ ■ P1 -Z	-	
273	52	5.29	8000	4	49	2KJ3004- ■ EM23- ■ ■ M1 -Z	-	
<b>E.69-LE90ZLR4P</b>								
155	92	9.30	6100	1.3	33	2KJ3003- ■ EM23- ■ ■ S1 -Z	-	
171	84	8.45	6100	1.3	33	2KJ3003- ■ EM23- ■ ■ R1 -Z	-	
191	75	7.58	6100	2.7	33	2KJ3003- ■ EM23- ■ ■ Q1 -Z	-	
212	68	6.82	6100	2.5	33	2KJ3003- ■ EM23- ■ ■ P1 -Z	-	
234	61	6.17	6100	3.4	33	2KJ3003- ■ EM23- ■ ■ N1 -Z	-	
254	56	5.69	6100	2.9	33	2KJ3003- ■ EM23- ■ ■ M1 -Z	-	
277	52	5.21	6100	3.9	33	2KJ3003- ■ EM23- ■ ■ L1 -Z	-	
330	43	4.38	6100	4.6	33	2KJ3003- ■ EM23- ■ ■ K1 -Z	-	
351	41	4.12	6100	4	33	2KJ3003- ■ EM23- ■ ■ J1 -Z	-	
382	38	3.78	6100	5.3	33	2KJ3003- ■ EM23- ■ ■ H1 -Z	-	
<b>E.49-LE90ZLR4P</b>								
149	96	9.70	4000	0.89	26	2KJ3002- ■ EM23- ■ ■ S1 -Z	-	
164	87	8.82	4000	1.2	26	2KJ3002- ■ EM23- ■ ■ R1 -Z	-	
193	74	7.50	4000	1.4	26	2KJ3002- ■ EM23- ■ ■ Q1 -Z	-	
212	68	6.82	4000	1.5	26	2KJ3002- ■ EM23- ■ ■ P1 -Z	-	
238	60	6.08	4000	1.7	26	2KJ3002- ■ EM23- ■ ■ N1 -Z	-	
265	54	5.45	4000	1.9	26	2KJ3002- ■ EM23- ■ ■ M1 -Z	-	
294	49	4.92	4000	2.1	26	2KJ3002- ■ EM23- ■ ■ L1 -Z	-	
318	45	4.54	4000	2.3	26	2KJ3002- ■ EM23- ■ ■ K1 -Z	-	
349	41	4.14	4000	2.5	26	2KJ3002- ■ EM23- ■ ■ J1 -Z	-	
420	34	3.44	4000	3	26	2KJ3002- ■ EM23- ■ ■ H1 -Z	-	
446	32	3.24	4000	3.1	26	2KJ3002- ■ EM23- ■ ■ G1 -Z	-	
472	30	3.06	4000	3.3	26	2KJ3002- ■ EM23- ■ ■ F1 -Z	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>



# SIMOGEAR geared motors

## Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
1.5	<b>E.49-LE90ZLR4P</b>								
	556	26	2.60	3860	4	26	2KJ3002- ■ EM23- ■ ■ E1 -Z -		
	648	22	2.23	3690	4.6	26	2KJ3002- ■ EM23- ■ ■ D1 -Z -		
	737	19	1.96	3540	5.3	26	2KJ3002- ■ EM23- ■ ■ C1 -Z -		
	876	16	1.65	3360	6.3	26	2KJ3002- ■ EM23- ■ ■ B1 -Z -		
	<b>E.39-LE90ZLR4P</b>								
	321	45	4.50	3000	1.1	22	2KJ3001- ■ EM23- ■ ■ L1 -Z -		
	353	40	4.09	3000	1.2	22	2KJ3001- ■ EM23- ■ ■ K1 -Z -		
	404	36	3.58	3000	1.6	22	2KJ3001- ■ EM23- ■ ■ J1 -Z -		
	437	33	3.31	3000	1.8	22	2KJ3001- ■ EM23- ■ ■ H1 -Z -		
	493	29	2.93	3000	2.2	22	2KJ3001- ■ EM23- ■ ■ G1 -Z -		
	592	24	2.44	2870	2.7	22	2KJ3001- ■ EM23- ■ ■ F1 -Z -		
	631	23	2.29	2820	2.9	22	2KJ3001- ■ EM23- ■ ■ E1 -Z -		
	701	20	2.06	2730	3.2	22	2KJ3001- ■ EM23- ■ ■ D1 -Z -		
	826	17	1.75	2600	3.8	22	2KJ3001- ■ EM23- ■ ■ C1 -Z -		
	963	15	1.50	2480	4.1	22	2KJ3001- ■ EM23- ■ ■ B1 -Z -		
	1120	13	1.29	2370	4.2	22	2KJ3001- ■ EM23- ■ ■ A1 -Z -		
	2.2	<b>D.169-LE132SQA6P</b>							
		3	7050	327.18	72700	2	487	2KJ3213- ■ HG23- ■ ■ V1 -Z P01	
<b>D.149-LE132SQA6P</b>									
3		7070	328.38	51600	1.1	309	2KJ3212- ■ HG23- ■ ■ W1 -Z P01		
3.5		6050	281.04	52100	1.3	309	2KJ3212- ■ HG23- ■ ■ V1 -Z P01		
3.7		5700	264.51	52300	1.4	309	2KJ3212- ■ HG23- ■ ■ U1 -Z P01		
3.9		5340	247.95	52400	1.5	309	2KJ3212- ■ HG23- ■ ■ T1 -Z P01		
<b>D.149-LE100ZLSA4P</b>									
4.5		4700	328.38	52700	1.7	278	2KJ3212- ■ FN23- ■ ■ W1 -Z -		
5.2		4030	281.04	53100	2	278	2KJ3212- ■ FN23- ■ ■ V1 -Z -		
5.5		3790	264.51	53200	2.1	278	2KJ3212- ■ FN23- ■ ■ U1 -Z -		
<b>D.129-LE132SQA6P</b>									
3.6		5820	270.24	26500	0.86	224	2KJ3211- ■ HG23- ■ ■ P1 -Z P01		
<b>D.129-LE100ZLSA4P</b>									
3.9		5340	373.00	26800	0.93	194	2KJ3211- ■ FN23- ■ ■ S1 -Z -		
4.3		4930	344.17	27100	1	194	2KJ3211- ■ FN23- ■ ■ R1 -Z -		
4.6		4540	316.90	27300	1.1	194	2KJ3211- ■ FN23- ■ ■ Q1 -Z -		
5.4		3870	270.24	27700	1.3	194	2KJ3211- ■ FN23- ■ ■ P1 -Z -		
5.8		3640	254.34	27800	1.4	194	2KJ3211- ■ FN23- ■ ■ N1 -Z -		
6.2		3380	236.03	28000	1.5	194	2KJ3211- ■ FN23- ■ ■ M1 -Z -		
7		2990	208.67	28200	1.7	194	2KJ3211- ■ FN23- ■ ■ L1 -Z -		
7.9		2670	186.28	28400	1.9	194	2KJ3211- ■ FN23- ■ ■ K1 -Z -		
8.7		2400	167.63	28500	2.1	194	2KJ3211- ■ FN23- ■ ■ J1 -Z -		
<b>D.109-LE100ZLSA4P</b>									
5.6		3780	263.74	20100	0.82	130	2KJ3210- ■ FN23- ■ ■ Q1 -Z -		
6.1		3430	239.75	20200	0.9	130	2KJ3210- ■ FN23- ■ ■ P1 -Z -		
7.2		2910	203.01	20200	1.1	130	2KJ3210- ■ FN23- ■ ■ N1 -Z -		
7.7		2740	191.07	20200	1.1	130	2KJ3210- ■ FN23- ■ ■ M1 -Z -		
8.3		2530	176.45	20200	1.2	130	2KJ3210- ■ FN23- ■ ■ L1 -Z -		
9.3		2250	157.00	20200	1.4	130	2KJ3210- ■ FN23- ■ ■ K1 -Z -		
11		2000	139.44	20200	1.6	130	2KJ3210- ■ FN23- ■ ■ J1 -Z -		
12		1790	124.82	20200	1.7	130	2KJ3210- ■ FN23- ■ ■ H1 -Z -		
14		1530	106.70	20200	2	130	2KJ3210- ■ FN23- ■ ■ G1 -Z -		
<b>D.89-LE100ZLSA4P</b>									
10		2100	146.59	17900	0.8	88	2KJ3208- ■ FN23- ■ ■ K1 -Z -		
11		1970	137.97	18500	0.85	88	2KJ3208- ■ FN23- ■ ■ J1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>2.2</b>	<b>D.89-LE100ZLSA4P</b>							
	12	1810	126.58	18500	0.93	88	2KJ3208- ■ FN23- ■ ■ H1 -Z -	-
	13	1580	110.57	18500	1.1	88	2KJ3208- ■ FN23- ■ ■ G1 -Z -	-
	15	1420	98.99	18500	1.2	88	2KJ3208- ■ FN23- ■ ■ F1 -Z -	-
	17	1240	86.56	18500	1.4	88	2KJ3208- ■ FN23- ■ ■ E1 -Z -	-
	20	1060	74.30	18500	1.6	88	2KJ3208- ■ FN23- ■ ■ D1 -Z -	-
	22	940	65.67	18500	1.8	88	2KJ3208- ■ FN23- ■ ■ C1 -Z -	-
	<b>Z.89-LE100ZLSA4P</b>							
	26	820	57.36	18500	2	87	2KJ3108- ■ FN23- ■ ■ A2 -Z -	-
	28	740	51.78	18500	2.3	87	2KJ3108- ■ FN23- ■ ■ X1 -Z -	-
	31	670	46.97	18500	2.5	87	2KJ3108- ■ FN23- ■ ■ W1 -Z -	-
	<b>D.79-LE100ZLSA4P</b>							
	22	955	66.67	12200	0.88	65	2KJ3207- ■ FN23- ■ ■ C1 -Z -	-
	26	805	56.25	13400	1	65	2KJ3207- ■ FN23- ■ ■ B1 -Z -	-
	30	700	49.02	13600	1.2	65	2KJ3207- ■ FN23- ■ ■ A1 -Z -	-
	<b>Z.79-LE100ZLSA4P</b>							
	33	635	44.42	13600	1.3	64	2KJ3107- ■ FN23- ■ ■ W1 -Z -	-
	37	570	39.94	13700	1.5	64	2KJ3107- ■ FN23- ■ ■ V1 -Z -	-
	41	515	36.12	13800	1.6	64	2KJ3107- ■ FN23- ■ ■ U1 -Z -	-
	44	475	33.34	13900	1.8	64	2KJ3107- ■ FN23- ■ ■ T1 -Z -	-
	48	435	30.54	13900	1.9	64	2KJ3107- ■ FN23- ■ ■ S1 -Z -	-
	57	365	25.62	14000	2.3	64	2KJ3107- ■ FN23- ■ ■ R1 -Z -	-
	61	345	24.12	14000	2.4	64	2KJ3107- ■ FN23- ■ ■ Q1 -Z -	-
	66	315	22.13	14100	2.6	64	2KJ3107- ■ FN23- ■ ■ P1 -Z -	-
	76	275	19.33	13600	3	64	2KJ3107- ■ FN23- ■ ■ N1 -Z -	-
	<b>D.69-LE100ZLSA4P</b>							
	32	660	46.01	10800	0.91	55	2KJ3206- ■ FN23- ■ ■ A1 -Z -	-
<b>Z.69-LE100ZLSA4P</b>								
38	545	38.24	11100	1.1	55	2KJ3106- ■ FN23- ■ ■ U1 -Z -	-	
43	490	34.29	11100	1.2	55	2KJ3106- ■ FN23- ■ ■ T1 -Z -	-	
47	440	30.90	11200	1.4	55	2KJ3106- ■ FN23- ■ ■ S1 -Z -	-	
51	405	28.53	11300	1.5	55	2KJ3106- ■ FN23- ■ ■ R1 -Z -	-	
56	370	26.04	11300	1.6	55	2KJ3106- ■ FN23- ■ ■ Q1 -Z -	-	
68	310	21.61	11400	1.9	55	2KJ3106- ■ FN23- ■ ■ P1 -Z -	-	
72	290	20.34	11400	2.1	55	2KJ3106- ■ FN23- ■ ■ N1 -Z -	-	
76	275	19.21	11500	2.2	55	2KJ3106- ■ FN23- ■ ■ M1 -Z -	-	
90	230	16.34	11000	2.6	55	2KJ3106- ■ FN23- ■ ■ L1 -Z -	-	
105	200	14.00	10500	3	55	2KJ3106- ■ FN23- ■ ■ K1 -Z -	-	
119	177	12.31	10100	3.4	55	2KJ3106- ■ FN23- ■ ■ J1 -Z -	-	
172	122	8.50	9070	3.7	55	2KJ3106- ■ FN23- ■ ■ F1 -Z -	-	
203	104	7.23	8630	4.3	55	2KJ3106- ■ FN23- ■ ■ E1 -Z -	-	
<b>Z.59-LE100ZLSA4P</b>								
41	510	35.74	6450	0.88	50	2KJ3105- ■ FN23- ■ ■ U1 -Z -	-	
46	460	32.05	5980	0.98	50	2KJ3105- ■ FN23- ■ ■ T1 -Z -	-	
51	410	28.89	6260	1.1	50	2KJ3105- ■ FN23- ■ ■ S1 -Z -	-	
55	380	26.66	6170	1.2	50	2KJ3105- ■ FN23- ■ ■ R1 -Z -	-	
60	345	24.34	6080	1.3	50	2KJ3105- ■ FN23- ■ ■ Q1 -Z -	-	
73	290	20.20	5850	1.6	50	2KJ3105- ■ FN23- ■ ■ P1 -Z -	-	
77	270	19.01	5790	1.7	50	2KJ3105- ■ FN23- ■ ■ N1 -Z -	-	
82	255	17.95	5720	1.7	50	2KJ3105- ■ FN23- ■ ■ M1 -Z -	-	
96	215	15.27	5520	2.1	50	2KJ3105- ■ FN23- ■ ■ L1 -Z -	-	
112	188	13.09	5310	2.4	50	2KJ3105- ■ FN23- ■ ■ K1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>2.2</b>	<b>Z.59-LE100ZLSA4P</b>							
	127	165	11.51	5140	2.7	50	2KJ3105- ■ FN23- ■ ■ J1 -Z -	
	151	139	9.71	4930	3.2	50	2KJ3105- ■ FN23- ■ ■ H1 -Z -	
	173	121	8.46	4750	3.7	50	2KJ3105- ■ FN23- ■ ■ G1 -Z -	
	182	116	8.07	4660	3.5	50	2KJ3105- ■ FN23- ■ ■ F1 -Z -	
	214	98	6.86	4470	4.2	50	2KJ3105- ■ FN23- ■ ■ E1 -Z -	
	<b>Z.59-LE90ZLR2P</b>							
	153	137	19.01	4910	3.3	32	2KJ3105- ■ EM23- ■ ■ N1 -Z P00	
	162	130	17.95	4830	3.5	32	2KJ3105- ■ EM23- ■ ■ M1 -Z P00	
	191	110	15.27	4630	4.1	32	2KJ3105- ■ EM23- ■ ■ L1 -Z P00	
	<b>Z.49-LE100ZLSA4P</b>							
	55	375	26.43	4830	0.84	48	2KJ3104- ■ FN23- ■ ■ T1 -Z -	
	60	350	24.39	4770	0.91	48	2KJ3104- ■ FN23- ■ ■ S1 -Z -	
	66	315	22.27	4720	1	48	2KJ3104- ■ FN23- ■ ■ R1 -Z -	
	79	265	18.48	4560	1.2	48	2KJ3104- ■ FN23- ■ ■ Q1 -Z -	
	84	245	17.39	4170	1.3	48	2KJ3104- ■ FN23- ■ ■ P1 -Z -	
	89	235	16.42	4230	1.4	48	2KJ3104- ■ FN23- ■ ■ N1 -Z -	
	105	200	13.98	4320	1.6	48	2KJ3104- ■ FN23- ■ ■ M1 -Z -	
	122	172	11.97	4170	1.9	48	2KJ3104- ■ FN23- ■ ■ L1 -Z -	
	139	151	10.53	4050	2.1	48	2KJ3104- ■ FN23- ■ ■ K1 -Z -	
	165	127	8.88	3890	2.5	48	2KJ3104- ■ FN23- ■ ■ J1 -Z -	
	189	111	7.74	3750	2.9	48	2KJ3104- ■ FN23- ■ ■ H1 -Z -	
	192	110	7.64	3700	2.7	48	2KJ3104- ■ FN23- ■ ■ G1 -Z -	
	203	103	7.21	3650	2.8	48	2KJ3104- ■ FN23- ■ ■ F1 -Z -	
	239	88	6.14	3500	3	48	2KJ3104- ■ FN23- ■ ■ E1 -Z -	
	279	75	5.26	3360	3.2	48	2KJ3104- ■ FN23- ■ ■ D1 -Z -	
	317	66	4.62	3250	3.4	48	2KJ3104- ■ FN23- ■ ■ C1 -Z -	
376	56	3.90	3090	3.7	48	2KJ3104- ■ FN23- ■ ■ B1 -Z -		
431	49	3.40	2970	3.9	48	2KJ3104- ■ FN23- ■ ■ A1 -Z -		
<b>Z.49-LE90ZLR2P</b>								
157	133	18.48	3930	2.4	30	2KJ3104- ■ EM23- ■ ■ Q1 -Z P00		
167	126	17.39	3870	2.5	30	2KJ3104- ■ EM23- ■ ■ P1 -Z P00		
177	119	16.42	3820	2.7	30	2KJ3104- ■ EM23- ■ ■ N1 -Z P00		
208	101	13.98	3660	3.2	30	2KJ3104- ■ EM23- ■ ■ M1 -Z P00		
243	86	11.97	3520	3.7	30	2KJ3104- ■ EM23- ■ ■ L1 -Z P00		
276	76	10.53	3390	4.2	30	2KJ3104- ■ EM23- ■ ■ K1 -Z P00		
328	64	8.88	3240	5	30	2KJ3104- ■ EM23- ■ ■ J1 -Z P00		
381	55	7.64	3080	5.3	30	2KJ3104- ■ EM23- ■ ■ G1 -Z P00		
<b>Z.39-LE100ZLSA4P</b>								
99	210	14.79	1070	0.91	36	2KJ3103- ■ FN23- ■ ■ M1 -Z -		
105	200	13.92	1190	0.95	36	2KJ3103- ■ FN23- ■ ■ L1 -Z -		
117	179	12.47	1490	1	36	2KJ3103- ■ FN23- ■ ■ K1 -Z -		
138	152	10.62	1860	1.1	36	2KJ3103- ■ FN23- ■ ■ J1 -Z -		
161	131	9.10	2100	1.2	36	2KJ3103- ■ FN23- ■ ■ H1 -Z -		
187	112	7.84	2310	1.3	36	2KJ3103- ■ FN23- ■ ■ G1 -Z -		
227	93	6.46	1880	1.6	36	2KJ3103- ■ FN23- ■ ■ F1 -Z -		
241	87	6.08	1970	1.7	36	2KJ3103- ■ FN23- ■ ■ E1 -Z -		
269	78	5.45	2080	1.8	36	2KJ3103- ■ FN23- ■ ■ D1 -Z -		
316	66	4.64	2220	2	36	2KJ3103- ■ FN23- ■ ■ C1 -Z -		
368	57	3.98	2290	2.1	36	2KJ3103- ■ FN23- ■ ■ B1 -Z -		
427	49	3.43	2340	2.3	36	2KJ3103- ■ FN23- ■ ■ A1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>2.2</b>	<b>Z.39-LE90ZLR2P</b>							
	164	128	17.77	2140	1.6	21	2KJ3103- ■ EM23- ■ ■ N1 -Z	P00
	197	107	14.79	2350	1.8	21	2KJ3103- ■ EM23- ■ ■ M1 -Z	P00
	209	101	13.92	2400	1.9	21	2KJ3103- ■ EM23- ■ ■ L1 -Z	P00
	233	90	12.47	2500	2	21	2KJ3103- ■ EM23- ■ ■ K1 -Z	P00
	274	77	10.62	2570	2.2	21	2KJ3103- ■ EM23- ■ ■ J1 -Z	P00
	320	66	9.10	2620	2.4	21	2KJ3103- ■ EM23- ■ ■ H1 -Z	P00
	371	57	7.84	2640	2.6	21	2KJ3103- ■ EM23- ■ ■ G1 -Z	P00
	450	47	6.46	2340	3.1	21	2KJ3103- ■ EM23- ■ ■ F1 -Z	P00
	479	44	6.08	2350	3.3	21	2KJ3103- ■ EM23- ■ ■ E1 -Z	P00
	534	39	5.45	2380	3.6	21	2KJ3103- ■ EM23- ■ ■ D1 -Z	P00
	627	34	4.64	2350	3.9	21	2KJ3103- ■ EM23- ■ ■ C1 -Z	P00
	731	29	3.98	2330	4.2	21	2KJ3103- ■ EM23- ■ ■ B1 -Z	P00
	848	25	3.43	2300	4.5	21	2KJ3103- ■ EM23- ■ ■ A1 -Z	P00
		<b>Z.29-LE100ZLSA4P</b>						
131		160	11.16	715	0.87	34	2KJ3102- ■ FN23- ■ ■ M1 -Z	-
145		145	10.12	955	0.96	34	2KJ3102- ■ FN23- ■ ■ L1 -Z	-
154		137	9.53	1070	1	34	2KJ3102- ■ FN23- ■ ■ K1 -Z	-
174		120	8.40	1330	1.1	34	2KJ3102- ■ FN23- ■ ■ J1 -Z	-
201		105	7.29	1520	1.2	34	2KJ3102- ■ FN23- ■ ■ H1 -Z	-
242		87	6.06	1340	1.2	34	2KJ3102- ■ FN23- ■ ■ F1 -Z	-
276		76	5.31	1510	1.2	34	2KJ3102- ■ FN23- ■ ■ E1 -Z	-
304		69	4.82	1600	1.2	34	2KJ3102- ■ FN23- ■ ■ D1 -Z	-
323		65	4.54	1650	1.3	34	2KJ3102- ■ FN23- ■ ■ C1 -Z	-
366		57	4.00	1750	1.3	34	2KJ3102- ■ FN23- ■ ■ B1 -Z	-
422		50	3.47	1800	1.4	34	2KJ3102- ■ FN23- ■ ■ A1 -Z	-
	<b>Z.29-LE90ZLR2P</b>							
	165	128	17.67	1200	1.1	20	2KJ3102- ■ EM23- ■ ■ R1 -Z	P00
	185	114	15.75	1400	1.2	20	2KJ3102- ■ EM23- ■ ■ Q1 -Z	P00
	200	105	14.54	1520	1.1	20	2KJ3102- ■ EM23- ■ ■ P1 -Z	P00
	229	92	12.73	1680	1.5	20	2KJ3102- ■ EM23- ■ ■ N1 -Z	P00
	261	81	11.16	1790	1.7	20	2KJ3102- ■ EM23- ■ ■ M1 -Z	P00
	288	73	10.12	1880	1.9	20	2KJ3102- ■ EM23- ■ ■ L1 -Z	P00
	305	69	9.53	1910	2	20	2KJ3102- ■ EM23- ■ ■ K1 -Z	P00
	346	61	8.40	1960	2.3	20	2KJ3102- ■ EM23- ■ ■ J1 -Z	P00
	399	53	7.29	1900	2.5	20	2KJ3102- ■ EM23- ■ ■ H1 -Z	P00
	421	50	6.92	1810	1.5	20	2KJ3102- ■ EM23- ■ ■ G1 -Z	P00
	480	44	6.06	1760	2.3	20	2KJ3102- ■ EM23- ■ ■ F1 -Z	P00
	548	38	5.31	1710	2.4	20	2KJ3102- ■ EM23- ■ ■ E1 -Z	P00
	604	35	4.82	1670	2.5	20	2KJ3102- ■ EM23- ■ ■ D1 -Z	P00
	641	33	4.54	1650	2.6	20	2KJ3102- ■ EM23- ■ ■ C1 -Z	P00
	728	29	4.00	1600	2.6	20	2KJ3102- ■ EM23- ■ ■ B1 -Z	P00
	839	25	3.47	1540	2.8	20	2KJ3102- ■ EM23- ■ ■ A1 -Z	P00
		<b>E.89-LE100ZLSA4P</b>						
151		139	9.67	8000	2	65	2KJ3004- ■ FN23- ■ ■ T1 -Z	-
168		125	8.73	8000	2.2	65	2KJ3004- ■ FN23- ■ ■ S1 -Z	-
185		114	7.92	8000	2.5	65	2KJ3004- ■ FN23- ■ ■ R1 -Z	-
200		105	7.31	8000	2.5	65	2KJ3004- ■ FN23- ■ ■ Q1 -Z	-
221		95	6.64	8000	2.7	65	2KJ3004- ■ FN23- ■ ■ P1 -Z	-
261		81	5.62	8000	4	65	2KJ3004- ■ FN23- ■ ■ N1 -Z	-
277		76	5.29	8000	2.8	65	2KJ3004- ■ FN23- ■ ■ M1 -Z	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>2.2</b>	<b>E.69-LE100ZLSA4P</b>							
	193	109	7.58	6100	1.9	51	2KJ3003- ■ FN23- ■ ■ Q1 -Z -	-
	215	98	6.82	6100	1.7	51	2KJ3003- ■ FN23- ■ ■ P1 -Z -	-
	237	88	6.17	6100	2.3	51	2KJ3003- ■ FN23- ■ ■ N1 -Z -	-
	257	82	5.69	6100	2	51	2KJ3003- ■ FN23- ■ ■ M1 -Z -	-
	281	75	5.21	6100	2.7	51	2KJ3003- ■ FN23- ■ ■ L1 -Z -	-
	334	63	4.38	6100	3.2	51	2KJ3003- ■ FN23- ■ ■ K1 -Z -	-
	356	59	4.12	6100	2.8	51	2KJ3003- ■ FN23- ■ ■ J1 -Z -	-
	388	54	3.78	6100	3.7	51	2KJ3003- ■ FN23- ■ ■ H1 -Z -	-
	444	47	3.30	6100	4.2	51	2KJ3003- ■ FN23- ■ ■ G1 -Z -	-
	497	42	2.95	6100	4.7	51	2KJ3003- ■ FN23- ■ ■ F1 -Z -	-
	568	37	2.58	6100	5.3	51	2KJ3003- ■ FN23- ■ ■ E1 -Z -	-
	<b>E.49-LE100ZLSA4P</b>							
	241	87	6.08	4000	1.2	44	2KJ3002- ■ FN23- ■ ■ N1 -Z -	-
	269	78	5.45	4000	1.3	44	2KJ3002- ■ FN23- ■ ■ M1 -Z -	-
	298	71	4.92	4000	1.4	44	2KJ3002- ■ FN23- ■ ■ L1 -Z -	-
	323	65	4.54	4000	1.6	44	2KJ3002- ■ FN23- ■ ■ K1 -Z -	-
	354	59	4.14	4000	1.7	44	2KJ3002- ■ FN23- ■ ■ J1 -Z -	-
	426	49	3.44	4000	2	44	2KJ3002- ■ FN23- ■ ■ H1 -Z -	-
	452	46	3.24	4000	2.2	44	2KJ3002- ■ FN23- ■ ■ G1 -Z -	-
479	44	3.06	3950	2.3	44	2KJ3002- ■ FN23- ■ ■ F1 -Z -	-	
563	37	2.60	3770	2.7	44	2KJ3002- ■ FN23- ■ ■ E1 -Z -	-	
657	32	2.23	3590	3.2	44	2KJ3002- ■ FN23- ■ ■ D1 -Z -	-	
747	28	1.96	3460	3.7	44	2KJ3002- ■ FN23- ■ ■ C1 -Z -	-	
888	24	1.65	3280	4.4	44	2KJ3002- ■ FN23- ■ ■ B1 -Z -	-	
1017	21	1.44	3140	4.9	44	2KJ3002- ■ FN23- ■ ■ A1 -Z -	-	
<b>E.39-LE100ZLSA4P</b>								
358	59	4.09	2880	0.82	37	2KJ3001- ■ FN23- ■ ■ K1 -Z -	-	
409	51	3.58	2950	1.1	37	2KJ3001- ■ FN23- ■ ■ J1 -Z -	-	
443	48	3.31	2960	1.2	37	2KJ3001- ■ FN23- ■ ■ H1 -Z -	-	
500	42	2.93	2890	1.5	37	2KJ3001- ■ FN23- ■ ■ G1 -Z -	-	
600	35	2.44	2750	1.9	37	2KJ3001- ■ FN23- ■ ■ F1 -Z -	-	
640	33	2.29	2710	2	37	2KJ3001- ■ FN23- ■ ■ E1 -Z -	-	
711	30	2.06	2620	2.2	37	2KJ3001- ■ FN23- ■ ■ D1 -Z -	-	
837	25	1.75	2510	2.6	37	2KJ3001- ■ FN23- ■ ■ C1 -Z -	-	
977	22	1.50	2400	2.8	37	2KJ3001- ■ FN23- ■ ■ B1 -Z -	-	
1136	18	1.29	2300	2.9	37	2KJ3001- ■ FN23- ■ ■ A1 -Z -	-	
<b>3</b>	<b>D.169-LE132SQB6P</b>							
	3	9610	327.18	71800	1.5	485	2KJ3213- ■ HH23- ■ ■ V1 -Z	P01
	3.2	8970	305.28	72000	1.6	485	2KJ3213- ■ HH23- ■ ■ U1 -Z	P01
	3.6	7970	271.40	72400	1.8	485	2KJ3213- ■ HH23- ■ ■ T1 -Z	P01
	4	7160	243.68	72700	2	485	2KJ3213- ■ HH23- ■ ■ S1 -Z	P01
	<b>D.149-LE132SQB6P</b>							
	3	9640	328.38	50400	0.83	307	2KJ3212- ■ HH23- ■ ■ W1 -Z	P01
	3.5	8250	281.04	51000	0.97	307	2KJ3212- ■ HH23- ■ ■ V1 -Z	P01
	3.7	7770	264.51	51300	1	307	2KJ3212- ■ HH23- ■ ■ U1 -Z	P01
	3.9	7280	247.95	51500	1.1	307	2KJ3212- ■ HH23- ■ ■ T1 -Z	P01
	<b>D.149-LE100ZLSB4P</b>							
	4.4	6440	328.38	51900	1.2	278	2KJ3212- ■ FP23- ■ ■ W1 -Z	-
	5.2	5510	281.04	52400	1.5	278	2KJ3212- ■ FP23- ■ ■ V1 -Z	-
	5.5	5190	264.51	52500	1.5	278	2KJ3212- ■ FP23- ■ ■ U1 -Z	-
	5.9	4860	247.95	52700	1.6	278	2KJ3212- ■ FP23- ■ ■ T1 -Z	-

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>D.149-LE100ZLSB4P</b>							
	6.6	4310	219.80	52900	1.9	278	2KJ3212- ■ FP23- ■ ■ S1 -Z -	-
	7.5	3830	195.24	53100	2.1	278	2KJ3212- ■ FP23- ■ ■ R1 -Z -	-
<b>D.129-LE100ZLSB4P</b>								
	4.6	6210	316.90	26300	0.8	194	2KJ3211- ■ FP23- ■ ■ Q1 -Z -	-
	5.4	5300	270.24	26800	0.94	194	2KJ3211- ■ FP23- ■ ■ P1 -Z -	-
	5.7	4990	254.34	27000	1	194	2KJ3211- ■ FP23- ■ ■ N1 -Z -	-
	6.2	4630	236.03	27200	1.1	194	2KJ3211- ■ FP23- ■ ■ M1 -Z -	-
	7	4090	208.67	27600	1.2	194	2KJ3211- ■ FP23- ■ ■ L1 -Z -	-
	7.8	3650	186.28	27800	1.4	194	2KJ3211- ■ FP23- ■ ■ K1 -Z -	-
	8.7	3280	167.63	28000	1.5	194	2KJ3211- ■ FP23- ■ ■ J1 -Z -	-
	10	2850	145.49	28300	1.8	194	2KJ3211- ■ FP23- ■ ■ H1 -Z -	-
	11	2560	130.84	28400	1.9	194	2KJ3211- ■ FP23- ■ ■ G1 -Z -	-
	13	2240	114.36	28600	2.2	194	2KJ3211- ■ FP23- ■ ■ F1 -Z -	-
<b>D.109-LE100ZLSB4P</b>								
	7.6	3740	191.07	20100	0.83	130	2KJ3210- ■ FP23- ■ ■ M1 -Z -	-
	8.3	3460	176.45	20200	0.9	130	2KJ3210- ■ FP23- ■ ■ L1 -Z -	-
	9.3	3080	157.00	20200	1	130	2KJ3210- ■ FP23- ■ ■ K1 -Z -	-
	10	2730	139.44	20200	1.1	130	2KJ3210- ■ FP23- ■ ■ J1 -Z -	-
	12	2440	124.82	20200	1.3	130	2KJ3210- ■ FP23- ■ ■ H1 -Z -	-
	14	2090	106.70	20200	1.5	130	2KJ3210- ■ FP23- ■ ■ G1 -Z -	-
	15	1870	95.28	20200	1.7	130	2KJ3210- ■ FP23- ■ ■ F1 -Z -	-
	17	1650	84.21	20200	1.9	130	2KJ3210- ■ FP23- ■ ■ E1 -Z -	-
	20	1450	73.90	20200	2.1	130	2KJ3210- ■ FP23- ■ ■ D1 -Z -	-
<b>D.89-LE100ZLSB4P</b>								
	15	1940	98.99	18500	0.86	88	2KJ3208- ■ FP23- ■ ■ F1 -Z -	-
	17	1690	86.56	18500	0.99	88	2KJ3208- ■ FP23- ■ ■ E1 -Z -	-
	20	1450	74.30	18500	1.2	88	2KJ3208- ■ FP23- ■ ■ D1 -Z -	-
	22	1280	65.67	18500	1.3	88	2KJ3208- ■ FP23- ■ ■ C1 -Z -	-
<b>Z.89-LE100ZLSB4P</b>								
	25	1120	57.36	18500	1.5	87	2KJ3108- ■ FP23- ■ ■ A2 -Z -	-
	28	1010	51.78	18500	1.7	87	2KJ3108- ■ FP23- ■ ■ X1 -Z -	-
	31	920	46.97	18500	1.8	87	2KJ3108- ■ FP23- ■ ■ W1 -Z -	-
	34	850	43.36	18500	2	87	2KJ3108- ■ FP23- ■ ■ U1 -Z -	-
	37	770	39.41	18500	2.2	87	2KJ3108- ■ FP23- ■ ■ V1 -Z -	-
	44	655	33.38	18500	2.6	87	2KJ3108- ■ FP23- ■ ■ T1 -Z -	-
	46	615	31.41	18500	2.7	87	2KJ3108- ■ FP23- ■ ■ S1 -Z -	-
<b>D.79-LE100ZLSB4P</b>								
	30	960	49.02	10700	0.87	65	2KJ3207- ■ FP23- ■ ■ A1 -Z -	-
<b>Z.79-LE100ZLSB4P</b>								
	33	870	44.42	11300	0.96	64	2KJ3107- ■ FP23- ■ ■ W1 -Z -	-
	37	780	39.94	11800	1.1	64	2KJ3107- ■ FP23- ■ ■ V1 -Z -	-
	40	705	36.12	12100	1.2	64	2KJ3107- ■ FP23- ■ ■ U1 -Z -	-
	44	650	33.34	12400	1.3	64	2KJ3107- ■ FP23- ■ ■ T1 -Z -	-
	48	595	30.54	12600	1.4	64	2KJ3107- ■ FP23- ■ ■ S1 -Z -	-
	57	500	25.62	12800	1.7	64	2KJ3107- ■ FP23- ■ ■ R1 -Z -	-
	61	470	24.12	12800	1.8	64	2KJ3107- ■ FP23- ■ ■ Q1 -Z -	-
	66	430	22.13	12800	1.9	64	2KJ3107- ■ FP23- ■ ■ P1 -Z -	-
	76	375	19.33	12800	2.2	64	2KJ3107- ■ FP23- ■ ■ N1 -Z -	-
	84	340	17.31	12700	2.5	64	2KJ3107- ■ FP23- ■ ■ M1 -Z -	-
	96	295	15.13	12400	2.8	64	2KJ3107- ■ FP23- ■ ■ L1 -Z -	-
	112	255	12.99	11900	3.3	64	2KJ3107- ■ FP23- ■ ■ K1 -Z -	-
	127	225	11.48	11500	3.7	64	2KJ3107- ■ FP23- ■ ■ J1 -Z -	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>Z.69-LE100ZLSB4P</b>							
	38	750	38.24	9080	0.8	55	2KJ3106- ■ FP23- ■ ■ U1 -Z -	-
	43	670	34.29	9830	0.89	55	2KJ3106- ■ FP23- ■ ■ T1 -Z -	-
	47	605	30.90	10300	0.99	55	2KJ3106- ■ FP23- ■ ■ S1 -Z -	-
	51	560	28.53	10600	1.1	55	2KJ3106- ■ FP23- ■ ■ R1 -Z -	-
	56	510	26.04	11000	1.2	55	2KJ3106- ■ FP23- ■ ■ Q1 -Z -	-
	68	420	21.61	11200	1.4	55	2KJ3106- ■ FP23- ■ ■ P1 -Z -	-
	72	395	20.34	11300	1.5	55	2KJ3106- ■ FP23- ■ ■ N1 -Z -	-
	76	375	19.21	11200	1.6	55	2KJ3106- ■ FP23- ■ ■ M1 -Z -	-
	89	320	16.34	10700	1.9	55	2KJ3106- ■ FP23- ■ ■ L1 -Z -	-
	104	275	14.00	10300	2.2	55	2KJ3106- ■ FP23- ■ ■ K1 -Z -	-
	119	240	12.31	9960	2.5	55	2KJ3106- ■ FP23- ■ ■ J1 -Z -	-
	141	200	10.39	9490	2.9	55	2KJ3106- ■ FP23- ■ ■ H1 -Z -	-
	161	178	9.05	9110	3.3	55	2KJ3106- ■ FP23- ■ ■ G1 -Z -	-
	172	167	8.50	8930	2.7	55	2KJ3106- ■ FP23- ■ ■ F1 -Z -	-
	202	142	7.23	8520	3.2	55	2KJ3106- ■ FP23- ■ ■ E1 -Z -	-
	235	122	6.20	8130	3.7	55	2KJ3106- ■ FP23- ■ ■ D1 -Z -	-
	268	107	5.45	7820	4	55	2KJ3106- ■ FP23- ■ ■ C1 -Z -	-
	317	90	4.60	7430	4.9	55	2KJ3106- ■ FP23- ■ ■ B1 -Z -	-
	<b>Z.59-LE100ZLSB4P</b>							
	55	520	26.66	5630	0.86	50	2KJ3105- ■ FP23- ■ ■ R1 -Z -	-
	60	475	24.34	5580	0.94	50	2KJ3105- ■ FP23- ■ ■ Q1 -Z -	-
	72	395	20.20	5130	1.1	50	2KJ3105- ■ FP23- ■ ■ P1 -Z -	-
	77	370	19.01	5330	1.2	50	2KJ3105- ■ FP23- ■ ■ M1 -Z -	-
	81	350	17.95	5350	1.3	50	2KJ3105- ■ FP23- ■ ■ N1 -Z -	-
	96	300	15.27	5190	1.5	50	2KJ3105- ■ FP23- ■ ■ L1 -Z -	-
	112	255	13.09	5050	1.8	50	2KJ3105- ■ FP23- ■ ■ K1 -Z -	-
	127	225	11.51	4910	2	50	2KJ3105- ■ FP23- ■ ■ J1 -Z -	-
	150	191	9.71	4730	2.4	50	2KJ3105- ■ FP23- ■ ■ H1 -Z -	-
	173	166	8.46	4580	2.7	50	2KJ3105- ■ FP23- ■ ■ G1 -Z -	-
	181	158	8.07	4500	2.6	50	2KJ3105- ■ FP23- ■ ■ F1 -Z -	-
	213	135	6.86	4320	3	50	2KJ3105- ■ FP23- ■ ■ E1 -Z -	-
	248	115	5.88	4160	3.6	50	2KJ3105- ■ FP23- ■ ■ D1 -Z -	-
	282	101	5.17	4020	4	50	2KJ3105- ■ FP23- ■ ■ C1 -Z -	-
	335	86	4.36	3840	4.7	50	2KJ3105- ■ FP23- ■ ■ B1 -Z -	-
	384	75	3.80	3700	5.4	50	2KJ3105- ■ FP23- ■ ■ A1 -Z -	-
	<b>Z.49-LE100ZLSB4P</b>							
79	360	18.48	4190	0.88	48	2KJ3104- ■ FP23- ■ ■ Q1 -Z -	-	
84	340	17.39	4160	0.94	48	2KJ3104- ■ FP23- ■ ■ P1 -Z -	-	
89	320	16.42	4130	0.99	48	2KJ3104- ■ FP23- ■ ■ N1 -Z -	-	
104	270	13.98	4050	1.2	48	2KJ3104- ■ FP23- ■ ■ M1 -Z -	-	
122	235	11.97	3930	1.4	48	2KJ3104- ■ FP23- ■ ■ L1 -Z -	-	
139	205	10.53	3600	1.5	48	2KJ3104- ■ FP23- ■ ■ K1 -Z -	-	
164	174	8.88	3710	1.8	48	2KJ3104- ■ FP23- ■ ■ J1 -Z -	-	
189	152	7.74	3600	2.1	48	2KJ3104- ■ FP23- ■ ■ H1 -Z -	-	
191	150	7.64	3220	2	48	2KJ3104- ■ FP23- ■ ■ G1 -Z -	-	
202	141	7.21	3350	2	48	2KJ3104- ■ FP23- ■ ■ F1 -Z -	-	
238	120	6.14	3370	2.2	48	2KJ3104- ■ FP23- ■ ■ E1 -Z -	-	
278	103	5.26	3250	2.4	48	2KJ3104- ■ FP23- ■ ■ D1 -Z -	-	
316	91	4.62	3140	2.5	48	2KJ3104- ■ FP23- ■ ■ C1 -Z -	-	
374	76	3.90	3010	2.7	48	2KJ3104- ■ FP23- ■ ■ B1 -Z -	-	
429	67	3.40	2900	2.9	48	2KJ3104- ■ FP23- ■ ■ A1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>Z.39-LE100ZLSB4P</b>							
	137	205	10.62	540	0.81	36	2KJ3103- ■ FP23- ■ ■ J1 -Z -	-
	160	179	9.10	905	0.88	36	2KJ3103- ■ FP23- ■ ■ H1 -Z -	-
	186	154	7.84	1270	0.96	36	2KJ3103- ■ FP23- ■ ■ G1 -Z -	-
	226	127	6.46	820	1.2	36	2KJ3103- ■ FP23- ■ ■ F1 -Z -	-
	240	119	6.08	975	1.2	36	2KJ3103- ■ FP23- ■ ■ E1 -Z -	-
	268	107	5.45	1180	1.3	36	2KJ3103- ■ FP23- ■ ■ D1 -Z -	-
	315	91	4.64	1440	1.4	36	2KJ3103- ■ FP23- ■ ■ C1 -Z -	-
	367	78	3.98	1630	1.5	36	2KJ3103- ■ FP23- ■ ■ B1 -Z -	-
	426	67	3.43	1780	1.7	36	2KJ3103- ■ FP23- ■ ■ A1 -Z -	-
	<b>Z.29-LE100ZLSB4P</b>							
	174	165	8.40	145	0.84	34	2KJ3102- ■ FP23- ■ ■ J1 -Z -	-
	200	143	7.29	515	0.91	34	2KJ3102- ■ FP23- ■ ■ H1 -Z -	-
	241	119	6.06	355	0.84	34	2KJ3102- ■ FP23- ■ ■ F1 -Z -	-
	275	104	5.31	645	0.87	34	2KJ3102- ■ FP23- ■ ■ E1 -Z -	-
	303	95	4.82	800	0.91	34	2KJ3102- ■ FP23- ■ ■ D1 -Z -	-
	322	89	4.54	915	0.94	34	2KJ3102- ■ FP23- ■ ■ C1 -Z -	-
	365	78	4.00	1100	0.97	34	2KJ3102- ■ FP23- ■ ■ B1 -Z -	-
	421	68	3.47	1250	1	34	2KJ3102- ■ FP23- ■ ■ A1 -Z -	-
		<b>E.129-LE100ZLSB4P</b>						
149		192	9.79	13500	3.5	114	2KJ3006- ■ FP23- ■ ■ T1 -Z -	-
174		164	8.38	13500	4	114	2KJ3006- ■ FP23- ■ ■ S1 -Z -	-
185	155	7.88	13500	4.3	114	2KJ3006- ■ FP23- ■ ■ R1 -Z -	-	
	<b>E.109-LE100ZLSB4P</b>							
	203	141	7.19	10500	4	89	2KJ3005- ■ FP23- ■ ■ Q1 -Z -	-
	216	133	6.76	10500	4.3	89	2KJ3005- ■ FP23- ■ ■ P1 -Z -	-
232	123	6.28	10500	4.6	89	2KJ3005- ■ FP23- ■ ■ N1 -Z -	-	
	<b>E.89-LE100ZLSB4P</b>							
	151	190	9.67	8000	1.5	65	2KJ3004- ■ FP23- ■ ■ T1 -Z -	-
	167	171	8.73	8000	1.6	65	2KJ3004- ■ FP23- ■ ■ S1 -Z -	-
	184	155	7.92	8000	1.8	65	2KJ3004- ■ FP23- ■ ■ R1 -Z -	-
	200	143	7.31	8000	1.8	65	2KJ3004- ■ FP23- ■ ■ Q1 -Z -	-
	220	130	6.64	8000	2	65	2KJ3004- ■ FP23- ■ ■ P1 -Z -	-
	260	110	5.62	8000	2.9	65	2KJ3004- ■ FP23- ■ ■ M1 -Z -	-
	276	104	5.29	8000	2	65	2KJ3004- ■ FP23- ■ ■ N1 -Z -	-
	299	96	4.89	8000	3.8	65	2KJ3004- ■ FP23- ■ ■ L1 -Z -	-
	336	85	4.35	8000	4.2	65	2KJ3004- ■ FP23- ■ ■ K1 -Z -	-
	378	76	3.86	8000	4.8	65	2KJ3004- ■ FP23- ■ ■ J1 -Z -	-
	422	68	3.46	8000	5.4	65	2KJ3004- ■ FP23- ■ ■ H1 -Z -	-
	<b>E.69-LE100ZLSB4P</b>							
	193	149	7.58	6100	1.4	51	2KJ3003- ■ FP23- ■ ■ Q1 -Z -	-
	214	134	6.82	6100	1.3	51	2KJ3003- ■ FP23- ■ ■ P1 -Z -	-
	237	121	6.17	6100	1.7	51	2KJ3003- ■ FP23- ■ ■ N1 -Z -	-
	257	112	5.69	6100	1.5	51	2KJ3003- ■ FP23- ■ ■ M1 -Z -	-
	280	102	5.21	6100	2	51	2KJ3003- ■ FP23- ■ ■ L1 -Z -	-
	333	86	4.38	6100	2.3	51	2KJ3003- ■ FP23- ■ ■ K1 -Z -	-
	354	81	4.12	6100	2	51	2KJ3003- ■ FP23- ■ ■ J1 -Z -	-
	386	74	3.78	6100	2.7	51	2KJ3003- ■ FP23- ■ ■ H1 -Z -	-
	442	65	3.30	6100	3.1	51	2KJ3003- ■ FP23- ■ ■ G1 -Z -	-
	495	58	2.95	6100	3.5	51	2KJ3003- ■ FP23- ■ ■ F1 -Z -	-
	566	51	2.58	6100	3.9	51	2KJ3003- ■ FP23- ■ ■ E1 -Z -	-
	658	44	2.22	6100	4.5	51	2KJ3003- ■ FP23- ■ ■ D1 -Z -	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>



# SIMOGEAR geared motors

## Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>E.69-LE100ZLSB4P</b>							
	745	38	1.96	6100	5.1	51	2KJ3003- ■ FP23- ■ ■ C1 -Z -	-
	874	33	1.67	6100	6	51	2KJ3003- ■ FP23- ■ ■ B1 -Z -	-
	<b>E.49-LE100ZLSB4P</b>							
	240	119	6.08	4000	0.87	44	2KJ3002- ■ FP23- ■ ■ N1 -Z -	-
	268	107	5.45	4000	0.96	44	2KJ3002- ■ FP23- ■ ■ M1 -Z -	-
	297	96	4.92	4000	1.1	44	2KJ3002- ■ FP23- ■ ■ L1 -Z -	-
	322	89	4.54	4000	1.1	44	2KJ3002- ■ FP23- ■ ■ K1 -Z -	-
	353	81	4.14	4000	1.3	44	2KJ3002- ■ FP23- ■ ■ J1 -Z -	-
	424	68	3.44	3950	1.5	44	2KJ3002- ■ FP23- ■ ■ H1 -Z -	-
	451	64	3.24	3890	1.6	44	2KJ3002- ■ FP23- ■ ■ G1 -Z -	-
	477	60	3.06	3840	1.7	44	2KJ3002- ■ FP23- ■ ■ F1 -Z -	-
	562	51	2.60	3670	2	44	2KJ3002- ■ FP23- ■ ■ E1 -Z -	-
	655	44	2.23	3510	2.3	44	2KJ3002- ■ FP23- ■ ■ D1 -Z -	-
	745	38	1.96	3390	2.7	44	2KJ3002- ■ FP23- ■ ■ C1 -Z -	-
	885	32	1.65	3220	3.2	44	2KJ3002- ■ FP23- ■ ■ B1 -Z -	-
	1014	28	1.44	3090	3.6	44	2KJ3002- ■ FP23- ■ ■ A1 -Z -	-
	<b>E.39-LE100ZLSB4P</b>							
	408	70	3.58	1870	0.83	37	2KJ3001- ■ FP23- ■ ■ J1 -Z -	-
	441	65	3.31	2000	0.89	37	2KJ3001- ■ FP23- ■ ■ H1 -Z -	-
498	58	2.93	2030	1.1	37	2KJ3001- ■ FP23- ■ ■ G1 -Z -	-	
638	45	2.29	2260	1.5	37	2KJ3001- ■ FP23- ■ ■ E1 -Z -	-	
709	40	2.06	2270	1.6	37	2KJ3001- ■ FP23- ■ ■ D1 -Z -	-	
834	34	1.75	2290	1.9	37	2KJ3001- ■ FP23- ■ ■ C1 -Z -	-	
973	29	1.50	2300	2.1	37	2KJ3001- ■ FP23- ■ ■ B1 -Z -	-	
1132	25	1.29	2230	2.1	37	2KJ3001- ■ FP23- ■ ■ A1 -Z -	-	
<b>4</b>	<b>D.189-LE132MJ6P</b>							
	3.1	12200	313.63	107000	1.5	698	2KJ3214- ■ HK23- ■ ■ T1 -Z	P01
	3.5	10900	280.59	107000	1.7	698	2KJ3214- ■ HK23- ■ ■ S1 -Z	P01
	3.9	9910	253.06	107000	1.9	698	2KJ3214- ■ HK23- ■ ■ R1 -Z	P01
	<b>D.169-LE132MJ6P</b>							
	3	12800	327.18	70600	1.1	485	2KJ3213- ■ HK23- ■ ■ V1 -Z	P01
	3.2	11900	305.28	70900	1.2	485	2KJ3213- ■ HK23- ■ ■ U1 -Z	P01
	3.6	10600	271.40	71400	1.3	485	2KJ3213- ■ HK23- ■ ■ T1 -Z	P01
	4	9540	243.68	71800	1.5	485	2KJ3213- ■ HK23- ■ ■ S1 -Z	P01
	<b>D.169-LE112ZMKB4P</b>							
	4.5	8560	327.18	72200	1.6	458	2KJ3213- ■ GJ23- ■ ■ V1 -Z	-
	4.8	7980	305.28	72400	1.8	458	2KJ3213- ■ GJ23- ■ ■ U1 -Z	-
	5.4	7100	271.40	72700	2	458	2KJ3213- ■ GJ23- ■ ■ T1 -Z	-
	<b>D.149-LE132MJ6P</b>							
	3.9	9710	247.95	50300	0.82	307	2KJ3212- ■ HK23- ■ ■ T1 -Z	P01
	<b>D.149-LE112ZMKB4P</b>							
	4.4	8590	328.38	50900	0.93	280	2KJ3212- ■ GJ23- ■ ■ W1 -Z	-
	5.2	7350	281.04	51500	1.1	280	2KJ3212- ■ GJ23- ■ ■ V1 -Z	-
	5.5	6920	264.51	51700	1.2	280	2KJ3212- ■ GJ23- ■ ■ U1 -Z	-
	5.9	6480	247.95	51900	1.2	280	2KJ3212- ■ GJ23- ■ ■ T1 -Z	-
	6.6	5750	219.80	52200	1.4	280	2KJ3212- ■ GJ23- ■ ■ S1 -Z	-
	7.5	5100	195.24	52600	1.6	280	2KJ3212- ■ GJ23- ■ ■ R1 -Z	-
	8.3	4610	176.18	52800	1.7	280	2KJ3212- ■ GJ23- ■ ■ Q1 -Z	-
	9.4	4080	156.11	53000	2	280	2KJ3212- ■ GJ23- ■ ■ P1 -Z	-
	11	3610	138.26	53300	2.2	280	2KJ3212- ■ GJ23- ■ ■ N1 -Z	-
	<b>D.129-LE112ZMKB4P</b>							
	6.2	6170	236.03	26300	0.81	194	2KJ3211- ■ GJ23- ■ ■ M1 -Z	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>4</b>	<b>D.129-LE112ZMKB4P</b>							
	7	5460	208.67	26700	0.92	194	2KJ3211- ■ GJ23- ■ ■ L1 -Z -	-
	7.8	4870	186.28	27100	1	194	2KJ3211- ■ GJ23- ■ ■ K1 -Z -	-
	8.7	4380	167.63	27400	1.1	194	2KJ3211- ■ GJ23- ■ ■ H1 -Z -	-
	10	3800	145.49	27700	1.3	194	2KJ3211- ■ GJ23- ■ ■ J1 -Z -	-
	11	3420	130.84	27900	1.5	194	2KJ3211- ■ GJ23- ■ ■ G1 -Z -	-
	13	2990	114.36	28200	1.7	194	2KJ3211- ■ GJ23- ■ ■ F1 -Z -	-
	14	2670	102.05	28400	1.9	194	2KJ3211- ■ GJ23- ■ ■ E1 -Z -	-
16	2350	89.91	28600	2.1	194	2KJ3211- ■ GJ23- ■ ■ D1 -Z -	-	
<b>D.109-LE112ZMKB4P</b>								
10	3640	139.44	20200	0.85	130	2KJ3210- ■ GJ23- ■ ■ J1 -Z -	-	
12	3260	124.82	20200	0.95	130	2KJ3210- ■ GJ23- ■ ■ H1 -Z -	-	
14	2790	106.70	20200	1.1	130	2KJ3210- ■ GJ23- ■ ■ G1 -Z -	-	
15	2490	95.28	20200	1.2	130	2KJ3210- ■ GJ23- ■ ■ F1 -Z -	-	
17	2200	84.21	20200	1.4	130	2KJ3210- ■ GJ23- ■ ■ E1 -Z -	-	
20	1930	73.90	20200	1.6	130	2KJ3210- ■ GJ23- ■ ■ D1 -Z -	-	
23	1680	64.34	20200	1.8	130	2KJ3210- ■ GJ23- ■ ■ C1 -Z -	-	
<b>Z.109-LE112ZMKB4P</b>								
29	1330	51.17	20200	2.3	128	2KJ3110- ■ GJ23- ■ ■ X1 -Z -	-	
<b>D.89-LE112ZMKB4P</b>								
20	1940	74.30	18500	0.86	88	2KJ3208- ■ GJ23- ■ ■ D1 -Z -	-	
22	1710	65.67	18500	0.98	88	2KJ3208- ■ GJ23- ■ ■ C1 -Z -	-	
<b>Z.89-LE112ZMKB4P</b>								
25	1500	57.36	18500	1.1	87	2KJ3108- ■ GJ23- ■ ■ A2 -Z -	-	
28	1350	51.78	18500	1.2	87	2KJ3108- ■ GJ23- ■ ■ X1 -Z -	-	
31	1220	46.97	18500	1.4	87	2KJ3108- ■ GJ23- ■ ■ W1 -Z -	-	
34	1130	43.36	18500	1.5	87	2KJ3108- ■ GJ23- ■ ■ V1 -Z -	-	
37	1030	39.41	18500	1.6	87	2KJ3108- ■ GJ23- ■ ■ U1 -Z -	-	
44	870	33.38	18500	1.9	87	2KJ3108- ■ GJ23- ■ ■ T1 -Z -	-	
46	820	31.41	18500	2	87	2KJ3108- ■ GJ23- ■ ■ S1 -Z -	-	
50	755	29.01	18500	2.2	87	2KJ3108- ■ GJ23- ■ ■ R1 -Z -	-	
57	675	25.81	18500	2.5	87	2KJ3108- ■ GJ23- ■ ■ Q1 -Z -	-	
64	600	22.92	18500	2.8	87	2KJ3108- ■ GJ23- ■ ■ P1 -Z -	-	
71	535	20.52	18500	3.1	87	2KJ3108- ■ GJ23- ■ ■ N1 -Z -	-	
<b>Z.79-LE112ZMKB4P</b>								
37	1040	39.94	13100	0.8	65	2KJ3107- ■ GJ23- ■ ■ V1 -Z -	-	
40	945	36.12	13200	0.89	65	2KJ3107- ■ GJ23- ■ ■ U1 -Z -	-	
44	870	33.34	13300	0.96	65	2KJ3107- ■ GJ23- ■ ■ T1 -Z -	-	
48	795	30.54	13400	1.1	65	2KJ3107- ■ GJ23- ■ ■ S1 -Z -	-	
57	670	25.62	10200	1.3	65	2KJ3107- ■ GJ23- ■ ■ R1 -Z -	-	
61	630	24.12	10400	1.3	65	2KJ3107- ■ GJ23- ■ ■ Q1 -Z -	-	
66	575	22.13	10700	1.5	65	2KJ3107- ■ GJ23- ■ ■ P1 -Z -	-	
76	505	19.33	10900	1.7	65	2KJ3107- ■ GJ23- ■ ■ N1 -Z -	-	
84	450	17.31	11000	1.9	65	2KJ3107- ■ GJ23- ■ ■ M1 -Z -	-	
96	395	15.13	11100	2.1	65	2KJ3107- ■ GJ23- ■ ■ L1 -Z -	-	
112	340	12.99	11000	2.5	65	2KJ3107- ■ GJ23- ■ ■ K1 -Z -	-	
127	300	11.48	11000	2.8	65	2KJ3107- ■ GJ23- ■ ■ J1 -Z -	-	
150	255	9.76	10700	3.2	65	2KJ3107- ■ GJ23- ■ ■ H1 -Z -	-	
174	215	8.37	10300	3.6	65	2KJ3107- ■ GJ23- ■ ■ G1 -Z -	-	
178	210	8.19	10000	3.3	65	2KJ3107- ■ GJ23- ■ ■ F1 -Z -	-	
204	187	7.16	9780	3.9	65	2KJ3107- ■ GJ23- ■ ■ E1 -Z -	-	
237	161	6.15	9350	4.4	65	2KJ3107- ■ GJ23- ■ ■ D1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
4	<b>Z.79-LE112ZMKB4P</b>							
	269	142	5.43	9020	4.8	65	2KJ3107- ■ GJ23- ■ ■ C1 -Z -	
	<b>Z.69-LE112ZMKB4P</b>							
	51	745	28.53	10600	0.8	56	2KJ3106- ■ GJ23- ■ ■ R1 -Z -	
	56	680	26.04	7580	0.88	56	2KJ3106- ■ GJ23- ■ ■ Q1 -Z -	
	68	565	21.61	8620	1.1	56	2KJ3106- ■ GJ23- ■ ■ P1 -Z -	
	72	530	20.34	8930	1.1	56	2KJ3106- ■ GJ23- ■ ■ N1 -Z -	
	76	500	19.21	9160	1.2	56	2KJ3106- ■ GJ23- ■ ■ M1 -Z -	
	89	425	16.34	9670	1.4	56	2KJ3106- ■ GJ23- ■ ■ L1 -Z -	
	104	365	14.00	9960	1.6	56	2KJ3106- ■ GJ23- ■ ■ K1 -Z -	
	119	320	12.31	9700	1.9	56	2KJ3106- ■ GJ23- ■ ■ J1 -Z -	
	141	270	10.39	9270	2.2	56	2KJ3106- ■ GJ23- ■ ■ H1 -Z -	
	161	235	9.05	8930	2.5	56	2KJ3106- ■ GJ23- ■ ■ G1 -Z -	
	172	220	8.50	8750	2	56	2KJ3106- ■ GJ23- ■ ■ F1 -Z -	
	202	189	7.23	8360	2.4	56	2KJ3106- ■ GJ23- ■ ■ E1 -Z -	
	235	162	6.20	8000	2.7	56	2KJ3106- ■ GJ23- ■ ■ D1 -Z -	
	268	143	5.45	7700	3	56	2KJ3106- ■ GJ23- ■ ■ C1 -Z -	
	317	120	4.60	7330	3.7	56	2KJ3106- ■ GJ23- ■ ■ B1 -Z -	
	364	105	4.01	7030	4.2	56	2KJ3106- ■ GJ23- ■ ■ A1 -Z -	
	<b>Z.59-LE112ZMKB4P</b>							
	72	525	20.20	4930	0.85	51	2KJ3105- ■ GJ23- ■ ■ P1 -Z -	
	77	495	19.01	4910	0.9	51	2KJ3105- ■ GJ23- ■ ■ N1 -Z -	
	81	470	17.95	4880	0.96	51	2KJ3105- ■ GJ23- ■ ■ M1 -Z -	
	96	400	15.27	3960	1.1	51	2KJ3105- ■ GJ23- ■ ■ L1 -Z -	
	112	340	13.09	4470	1.3	51	2KJ3105- ■ GJ23- ■ ■ K1 -Z -	
	127	300	11.51	4620	1.5	51	2KJ3105- ■ GJ23- ■ ■ J1 -Z -	
	150	250	9.71	4500	1.8	51	2KJ3105- ■ GJ23- ■ ■ H1 -Z -	
	173	220	8.46	4370	2	51	2KJ3105- ■ GJ23- ■ ■ G1 -Z -	
	181	210	8.07	4280	1.9	51	2KJ3105- ■ GJ23- ■ ■ F1 -Z -	
	213	179	6.86	4140	2.3	51	2KJ3105- ■ GJ23- ■ ■ E1 -Z -	
	248	154	5.88	4000	2.7	51	2KJ3105- ■ GJ23- ■ ■ D1 -Z -	
	282	135	5.17	3880	3	51	2KJ3105- ■ GJ23- ■ ■ C1 -Z -	
	335	114	4.36	3720	3.6	51	2KJ3105- ■ GJ23- ■ ■ B1 -Z -	
	384	99	3.80	3600	4.1	51	2KJ3105- ■ GJ23- ■ ■ A1 -Z -	
	<b>Z.49-LE112ZMKB4P</b>							
	104	365	13.98	3670	0.87	49	2KJ3104- ■ GJ23- ■ ■ M1 -Z -	
	122	310	11.97	3630	1	49	2KJ3104- ■ GJ23- ■ ■ L1 -Z -	
	139	275	10.53	3560	1.2	49	2KJ3104- ■ GJ23- ■ ■ K1 -Z -	
	164	230	8.88	3490	1.4	49	2KJ3104- ■ GJ23- ■ ■ J1 -Z -	
	189	200	7.74	3410	1.6	49	2KJ3104- ■ GJ23- ■ ■ H1 -Z -	
	191	200	7.64	3320	1.5	49	2KJ3104- ■ GJ23- ■ ■ G1 -Z -	
	202	189	7.21	3290	1.5	49	2KJ3104- ■ GJ23- ■ ■ F1 -Z -	
	238	161	6.14	3190	1.6	49	2KJ3104- ■ GJ23- ■ ■ E1 -Z -	
	278	138	5.26	2670	1.8	49	2KJ3104- ■ GJ23- ■ ■ D1 -Z -	
	316	121	4.62	2900	1.9	49	2KJ3104- ■ GJ23- ■ ■ C1 -Z -	
	374	102	3.90	2900	2	49	2KJ3104- ■ GJ23- ■ ■ B1 -Z -	
	429	89	3.40	2810	2.1	49	2KJ3104- ■ GJ23- ■ ■ A1 -Z -	
<b>Z.39-LE112ZMKB4P</b>								
226	169	6.46	0	0.86	39	2KJ3103- ■ GJ23- ■ ■ F1 -Z -		
240	159	6.08	0	0.92	39	2KJ3103- ■ GJ23- ■ ■ E1 -Z -		
268	143	5.45	56	0.98	39	2KJ3103- ■ GJ23- ■ ■ D1 -Z -		
315	121	4.64	505	1.1	39	2KJ3103- ■ GJ23- ■ ■ C1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
4	<b>Z.39-LE112ZMKB4P</b>							
	367	104	3.98	825	1.2	39	2KJ3103- ■ GJ23- ■ ■ B1 -Z -	
	426	90	3.43	1060	1.2	39	2KJ3103- ■ GJ23- ■ ■ A1 -Z -	
	<b>E.129-LE112ZMKB4P</b>							
	149	255	9.79	13500	2.6	114	2KJ3006- ■ GJ23- ■ ■ T1 -Z -	
	174	215	8.38	13500	3	114	2KJ3006- ■ GJ23- ■ ■ S1 -Z -	
	185	205	7.88	13500	3.2	114	2KJ3006- ■ GJ23- ■ ■ R1 -Z -	
	198	193	7.39	13500	4.1	114	2KJ3006- ■ GJ23- ■ ■ Q1 -Z -	
	<b>E.109-LE112ZMKB4P</b>							
	203	188	7.19	10500	3	89	2KJ3005- ■ GJ23- ■ ■ Q1 -Z -	
216	177	6.76	10500	3.2	89	2KJ3005- ■ GJ23- ■ ■ P1 -Z -		
232	164	6.28	10500	3.4	89	2KJ3005- ■ GJ23- ■ ■ N1 -Z -		
263	145	5.55	10500	3.9	89	2KJ3005- ■ GJ23- ■ ■ M1 -Z -		
295	130	4.95	10500	4.3	89	2KJ3005- ■ GJ23- ■ ■ L1 -Z -		
327	117	4.46	10500	4.8	89	2KJ3005- ■ GJ23- ■ ■ K1 -Z -		
<b>E.89-LE112ZMKB4P</b>								
151	250	9.67	8000	1.1	65	2KJ3004- ■ GJ23- ■ ■ T1 -Z -		
167	225	8.73	8000	1.2	65	2KJ3004- ■ GJ23- ■ ■ S1 -Z -		
184	205	7.92	8000	1.4	65	2KJ3004- ■ GJ23- ■ ■ R1 -Z -		
200	191	7.31	8000	1.4	65	2KJ3004- ■ GJ23- ■ ■ Q1 -Z -		
220	174	6.64	8000	1.5	65	2KJ3004- ■ GJ23- ■ ■ P1 -Z -		
260	147	5.62	8000	2.2	65	2KJ3004- ■ GJ23- ■ ■ N1 -Z -		
276	138	5.29	8000	1.5	65	2KJ3004- ■ GJ23- ■ ■ M1 -Z -		
299	128	4.89	8000	2.8	65	2KJ3004- ■ GJ23- ■ ■ L1 -Z -		
336	114	4.35	8000	3.2	65	2KJ3004- ■ GJ23- ■ ■ K1 -Z -		
378	101	3.86	8000	3.6	65	2KJ3004- ■ GJ23- ■ ■ J1 -Z -		
422	90	3.46	8000	4	65	2KJ3004- ■ GJ23- ■ ■ H1 -Z -		
493	77	2.96	8000	4.6	65	2KJ3004- ■ GJ23- ■ ■ G1 -Z -		
553	69	2.64	8000	5.2	65	2KJ3004- ■ GJ23- ■ ■ F1 -Z -		
627	61	2.33	8000	5.9	65	2KJ3004- ■ GJ23- ■ ■ E1 -Z -		
<b>E.69-LE112ZMKB4P</b>								
193	198	7.58	6100	1	52	2KJ3003- ■ GJ23- ■ ■ Q1 -Z -		
214	178	6.82	6100	0.95	52	2KJ3003- ■ GJ23- ■ ■ P1 -Z -		
237	161	6.17	6100	1.3	52	2KJ3003- ■ GJ23- ■ ■ N1 -Z -		
257	149	5.69	6100	1.1	52	2KJ3003- ■ GJ23- ■ ■ M1 -Z -		
280	136	5.21	6100	1.5	52	2KJ3003- ■ GJ23- ■ ■ L1 -Z -		
333	115	4.38	6100	1.7	52	2KJ3003- ■ GJ23- ■ ■ K1 -Z -		
354	108	4.12	6100	1.5	52	2KJ3003- ■ GJ23- ■ ■ J1 -Z -		
386	99	3.78	6100	2	52	2KJ3003- ■ GJ23- ■ ■ H1 -Z -		
442	86	3.30	6100	2.3	52	2KJ3003- ■ GJ23- ■ ■ G1 -Z -		
495	77	2.95	6100	2.6	52	2KJ3003- ■ GJ23- ■ ■ F1 -Z -		
566	68	2.58	6100	2.9	52	2KJ3003- ■ GJ23- ■ ■ E1 -Z -		
658	58	2.22	6100	3.4	52	2KJ3003- ■ GJ23- ■ ■ D1 -Z -		
745	51	1.96	6100	3.8	52	2KJ3003- ■ GJ23- ■ ■ C1 -Z -		
874	44	1.67	6100	4.5	52	2KJ3003- ■ GJ23- ■ ■ B1 -Z -		
1021	37	1.43	6100	5.2	52	2KJ3003- ■ GJ23- ■ ■ A1 -Z -		
<b>E.49-LE112ZMKB4P</b>								
322	119	4.54	3790	0.86	45	2KJ3002- ■ GJ23- ■ ■ K1 -Z -		
353	108	4.14	3920	0.94	45	2KJ3002- ■ GJ23- ■ ■ J1 -Z -		
424	90	3.44	3800	1.1	45	2KJ3002- ■ GJ23- ■ ■ H1 -Z -		
451	85	3.24	3750	1.2	45	2KJ3002- ■ GJ23- ■ ■ G1 -Z -		
477	80	3.06	3700	1.3	45	2KJ3002- ■ GJ23- ■ ■ F1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
4	<b>E.49-LE112ZMKB4P</b>								
	562	68	2.60	3550	1.5	45	2KJ3002- ■ GJ23- ■ ■ E1 -Z -		
	655	58	2.23	3410	1.7	45	2KJ3002- ■ GJ23- ■ ■ D1 -Z -		
	745	51	1.96	3290	2	45	2KJ3002- ■ GJ23- ■ ■ C1 -Z -		
	885	43	1.65	3140	2.4	45	2KJ3002- ■ GJ23- ■ ■ B1 -Z -		
	1014	38	1.44	3010	2.7	45	2KJ3002- ■ GJ23- ■ ■ A1 -Z -		
	<b>E.39-LE112ZMKB4P</b>								
	498	77	2.93	905	0.85	40	2KJ3001- ■ GJ23- ■ ■ G1 -Z -		
	973	39	1.50	1580	1.6	40	2KJ3001- ■ GJ23- ■ ■ B1 -Z -		
	1132	34	1.29	1580	1.6	40	2KJ3001- ■ GJ23- ■ ■ A1 -Z -		
	5.5	<b>D.189-LE132ZMS6P</b>							
		3.1	16800	313.63	107000	1.1	700	2KJ3214- ■ HL23- ■ ■ T1 -Z P01	
		3.5	15100	280.59	107000	1.3	700	2KJ3214- ■ HL23- ■ ■ S1 -Z P01	
		3.9	13600	253.06	107000	1.4	700	2KJ3214- ■ HL23- ■ ■ R1 -Z P01	
		4.4	12000	223.66	107000	1.6	700	2KJ3214- ■ HL23- ■ ■ Q1 -Z P01	
<b>D.189-LE132ZST4P</b>									
4.7		11200	313.63	107000	1.7	700	2KJ3214- ■ HJ23- ■ ■ T1 -Z -		
5.2		10000	280.59	107000	1.9	700	2KJ3214- ■ HJ23- ■ ■ S1 -Z -		
5.8		9040	253.06	107000	2.1	700	2KJ3214- ■ HJ23- ■ ■ R1 -Z -		
<b>D.169-LE132ZMS6P</b>									
3.2		16400	305.28	69200	0.85	487	2KJ3213- ■ HL23- ■ ■ U1 -Z P01		
3.6		14600	271.40	69900	0.96	487	2KJ3213- ■ HL23- ■ ■ T1 -Z P01		
4		13100	243.68	70500	1.1	487	2KJ3213- ■ HL23- ■ ■ S1 -Z P01		
<b>D.169-LE132ZST4P</b>									
4.5		11600	327.18	71000	1.2	487	2KJ3213- ■ HJ23- ■ ■ V1 -Z -		
4.8		10900	305.28	71300	1.3	487	2KJ3213- ■ HJ23- ■ ■ U1 -Z -		
5.4		9690	271.40	71700	1.4	487	2KJ3213- ■ HJ23- ■ ■ T1 -Z -		
6		8700	243.68	72100	1.6	487	2KJ3213- ■ HJ23- ■ ■ S1 -Z -		
6.7		7880	220.58	72400	1.8	487	2KJ3213- ■ HJ23- ■ ■ R1 -Z -		
7.6		6920	193.75	72800	2	487	2KJ3213- ■ HJ23- ■ ■ Q1 -Z -		
<b>D.149-LE132ZST4P</b>									
5.2		10000	281.04	50200	0.8	309	2KJ3212- ■ HJ23- ■ ■ V1 -Z -		
5.6		9450	264.51	50500	0.85	309	2KJ3212- ■ HJ23- ■ ■ U1 -Z -		
5.9		8860	247.95	50800	0.9	309	2KJ3212- ■ HJ23- ■ ■ T1 -Z -		
6.7		7850	219.80	51200	1	309	2KJ3212- ■ HJ23- ■ ■ S1 -Z -		
7.5		6970	195.24	51600	1.1	309	2KJ3212- ■ HJ23- ■ ■ R1 -Z -		
8.3		6290	176.18	52000	1.3	309	2KJ3212- ■ HJ23- ■ ■ Q1 -Z -		
9.4		5570	156.11	52300	1.4	309	2KJ3212- ■ HJ23- ■ ■ P1 -Z -		
11		4940	138.26	52600	1.6	309	2KJ3212- ■ HJ23- ■ ■ N1 -Z -		
12		4390	123.04	52900	1.8	309	2KJ3212- ■ HJ23- ■ ■ M1 -Z -		
13		3940	110.26	53100	2	309	2KJ3212- ■ HJ23- ■ ■ L1 -Z -		
<b>D.129-LE132ZST4P</b>									
8.8		5990	167.63	26400	0.83	224	2KJ3211- ■ HJ23- ■ ■ J1 -Z -		
10		5190	145.49	26900	0.96	224	2KJ3211- ■ HJ23- ■ ■ H1 -Z -		
11		4670	130.84	27200	1.1	224	2KJ3211- ■ HJ23- ■ ■ G1 -Z -		
13		4080	114.36	27600	1.2	224	2KJ3211- ■ HJ23- ■ ■ F1 -Z -		
14		3640	102.05	27800	1.4	224	2KJ3211- ■ HJ23- ■ ■ E1 -Z -		
16		3210	89.91	28100	1.6	224	2KJ3211- ■ HJ23- ■ ■ D1 -Z -		
19		2810	78.78	28300	1.8	224	2KJ3211- ■ HJ23- ■ ■ C1 -Z -		
<b>Z.129-LE132ZST4P</b>									
24		2230	62.48	28600	2.2	220	2KJ3111- ■ HJ23- ■ ■ X1 -Z -		
<b>D.109-LE132ZST4P</b>									
14	3810	106.70	20000	0.81	160	2KJ3210- ■ HJ23- ■ ■ G1 -Z -			

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>5.5</b>	<b>D.109-LE132ZST4P</b>							
	15	3400	95.28	20200	0.91	160	2KJ3210- ■ HJ23- ■ ■ F1 -Z -	-
	17	3000	84.21	20200	1	160	2KJ3210- ■ HJ23- ■ ■ E1 -Z -	-
	20	2640	73.90	20200	1.2	160	2KJ3210- ■ HJ23- ■ ■ D1 -Z -	-
	23	2290	64.34	20200	1.3	160	2KJ3210- ■ HJ23- ■ ■ C1 -Z -	-
	<b>Z.109-LE132ZST4P</b>							
	29	1820	51.17	20200	1.7	158	2KJ3110- ■ HJ23- ■ ■ X1 -Z -	-
	34	1550	43.64	20200	2	158	2KJ3110- ■ HJ23- ■ ■ W1 -Z -	-
	36	1460	41.07	20200	2.1	158	2KJ3110- ■ HJ23- ■ ■ V1 -Z -	-
	39	1360	38.12	20200	2.3	158	2KJ3110- ■ HJ23- ■ ■ U1 -Z -	-
	44	1200	33.70	20200	2.6	158	2KJ3110- ■ HJ23- ■ ■ T1 -Z -	-
	<b>D.89-LE132ZST4P</b>							
	26	1990	55.84	18500	0.84	119	2KJ3208- ■ HJ23- ■ ■ B1 -Z -	-
	31	1710	47.87	18500	0.98	119	2KJ3208- ■ HJ23- ■ ■ A1 -Z -	-
	<b>Z.89-LE132ZST4P</b>							
	37	1400	39.41	18500	1.2	118	2KJ3108- ■ HJ23- ■ ■ U1 -Z -	-
	44	1190	33.38	18500	1.4	118	2KJ3108- ■ HJ23- ■ ■ T1 -Z -	-
	47	1120	31.41	18500	1.5	118	2KJ3108- ■ HJ23- ■ ■ S1 -Z -	-
	51	1030	29.01	18500	1.6	118	2KJ3108- ■ HJ23- ■ ■ R1 -Z -	-
	57	920	25.81	18500	1.8	118	2KJ3108- ■ HJ23- ■ ■ Q1 -Z -	-
64	815	22.92	18500	2.1	118	2KJ3108- ■ HJ23- ■ ■ P1 -Z -	-	
72	730	20.52	18500	2.3	118	2KJ3108- ■ HJ23- ■ ■ N1 -Z -	-	
84	625	17.54	18500	2.7	118	2KJ3108- ■ HJ23- ■ ■ M1 -Z -	-	
94	560	15.66	18400	3	118	2KJ3108- ■ HJ23- ■ ■ L1 -Z -	-	
106	495	13.84	17800	3.4	118	2KJ3108- ■ HJ23- ■ ■ K1 -Z -	-	
213	245	6.89	14600	4.3	118	2KJ3108- ■ HJ23- ■ ■ E1 -Z -	-	
<b>Z.79-LE132ZST4P</b>								
57	915	25.62	13100	0.92	96	2KJ3107- ■ HJ23- ■ ■ R1 -Z -	-	
61	860	24.12	12900	0.97	96	2KJ3107- ■ HJ23- ■ ■ Q1 -Z -	-	
66	790	22.13	12700	1.1	96	2KJ3107- ■ HJ23- ■ ■ P1 -Z -	-	
76	690	19.33	12300	1.2	96	2KJ3107- ■ HJ23- ■ ■ N1 -Z -	-	
85	615	17.31	8540	1.4	96	2KJ3107- ■ HJ23- ■ ■ M1 -Z -	-	
97	540	15.13	8890	1.6	96	2KJ3107- ■ HJ23- ■ ■ L1 -Z -	-	
113	460	12.99	9250	1.8	96	2KJ3107- ■ HJ23- ■ ■ K1 -Z -	-	
128	410	11.48	9350	2	96	2KJ3107- ■ HJ23- ■ ■ J1 -Z -	-	
151	345	9.76	9510	2.3	96	2KJ3107- ■ HJ23- ■ ■ H1 -Z -	-	
176	295	8.37	9530	2.6	96	2KJ3107- ■ HJ23- ■ ■ G1 -Z -	-	
179	290	8.19	8510	2.4	96	2KJ3107- ■ HJ23- ■ ■ F1 -Z -	-	
205	255	7.16	8550	2.9	96	2KJ3107- ■ HJ23- ■ ■ E1 -Z -	-	
239	220	6.15	8540	3.3	96	2KJ3107- ■ HJ23- ■ ■ D1 -Z -	-	
271	194	5.43	8510	3.5	96	2KJ3107- ■ HJ23- ■ ■ C1 -Z -	-	
318	165	4.62	8410	4.7	96	2KJ3107- ■ HJ23- ■ ■ B1 -Z -	-	
<b>Z.69-LE132ZST4P</b>								
72	725	20.34	10300	0.83	86	2KJ3106- ■ HJ23- ■ ■ N1 -Z -	-	
77	685	19.21	10200	0.87	86	2KJ3106- ■ HJ23- ■ ■ M1 -Z -	-	
90	580	16.34	9890	1	86	2KJ3106- ■ HJ23- ■ ■ L1 -Z -	-	
105	500	14.00	7190	1.2	86	2KJ3106- ■ HJ23- ■ ■ K1 -Z -	-	
119	440	12.31	7680	1.4	86	2KJ3106- ■ HJ23- ■ ■ J1 -Z -	-	
141	370	10.39	8180	1.6	86	2KJ3106- ■ HJ23- ■ ■ H1 -Z -	-	
162	320	9.05	8490	1.8	86	2KJ3106- ■ HJ23- ■ ■ G1 -Z -	-	
173	300	8.50	7200	1.5	86	2KJ3106- ■ HJ23- ■ ■ F1 -Z -	-	
203	255	7.23	7550	1.7	86	2KJ3106- ■ HJ23- ■ ■ E1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>5.5</b>	<b>Z.69-LE132ZST4P</b>							
	237	220	6.20	7720	2	86	2KJ3106- ■ HJ23- ■ ■ D1 -Z -	-
	270	195	5.45	7510	2.2	86	2KJ3106- ■ HJ23- ■ ■ C1 -Z -	-
	320	164	4.60	7160	2.7	86	2KJ3106- ■ HJ23- ■ ■ B1 -Z -	-
	367	143	4.01	6890	3.1	86	2KJ3106- ■ HJ23- ■ ■ A1 -Z -	-
	<b>Z.59-LE132ZST4P</b>							
	96	545	15.27	4210	0.82	81	2KJ3105- ■ HJ23- ■ ■ L1 -Z -	-
	112	465	13.09	4210	0.96	81	2KJ3105- ■ HJ23- ■ ■ K1 -Z -	-
	128	410	11.51	4170	1.1	81	2KJ3105- ■ HJ23- ■ ■ J1 -Z -	-
	151	345	9.71	3360	1.3	81	2KJ3105- ■ HJ23- ■ ■ H1 -Z -	-
	174	300	8.46	3740	1.5	81	2KJ3105- ■ HJ23- ■ ■ G1 -Z -	-
	182	285	8.07	2740	1.4	81	2KJ3105- ■ HJ23- ■ ■ F1 -Z -	-
	214	245	6.86	3140	1.7	81	2KJ3105- ■ HJ23- ■ ■ E1 -Z -	-
	250	210	5.88	3480	2	81	2KJ3105- ■ HJ23- ■ ■ D1 -Z -	-
	284	185	5.17	3660	2.2	81	2KJ3105- ■ HJ23- ■ ■ C1 -Z -	-
	337	156	4.36	3540	2.6	81	2KJ3105- ■ HJ23- ■ ■ B1 -Z -	-
	387	136	3.80	3430	3	81	2KJ3105- ■ HJ23- ■ ■ A1 -Z -	-
	<b>Z.49-LE132ZST4P</b>							
	140	375	10.53	3160	0.85	79	2KJ3104- ■ HJ23- ■ ■ K1 -Z -	-
	166	315	8.88	3140	1	79	2KJ3104- ■ HJ23- ■ ■ J1 -Z -	-
	190	275	7.74	3100	1.2	79	2KJ3104- ■ HJ23- ■ ■ H1 -Z -	-
	192	270	7.64	3010	1.1	79	2KJ3104- ■ HJ23- ■ ■ G1 -Z -	-
	204	255	7.21	2990	1.1	79	2KJ3104- ■ HJ23- ■ ■ F1 -Z -	-
	239	215	6.14	2950	1.2	79	2KJ3104- ■ HJ23- ■ ■ E1 -Z -	-
	279	188	5.26	2870	1.3	79	2KJ3104- ■ HJ23- ■ ■ D1 -Z -	-
	318	165	4.62	2820	1.4	79	2KJ3104- ■ HJ23- ■ ■ C1 -Z -	-
	377	139	3.90	2730	1.5	79	2KJ3104- ■ HJ23- ■ ■ B1 -Z -	-
	432	121	3.40	2240	1.6	79	2KJ3104- ■ HJ23- ■ ■ A1 -Z -	-
	<b>E.149-LE132ZST4P</b>							
	151	345	9.76	16000	3.4	182	2KJ3007- ■ HJ23- ■ ■ S1 -Z -	-
	161	325	9.11	16000	3.9	182	2KJ3007- ■ HJ23- ■ ■ R1 -Z -	-
	<b>E.129-LE132ZST4P</b>							
	150	350	9.79	13500	1.9	144	2KJ3006- ■ HJ23- ■ ■ T1 -Z -	-
	175	295	8.38	13500	2.2	144	2KJ3006- ■ HJ23- ■ ■ S1 -Z -	-
	187	280	7.88	13500	2.4	144	2KJ3006- ■ HJ23- ■ ■ R1 -Z -	-
	199	260	7.39	13500	3	144	2KJ3006- ■ HJ23- ■ ■ Q1 -Z -	-
224	230	6.55	13500	3.4	144	2KJ3006- ■ HJ23- ■ ■ P1 -Z -	-	
253	205	5.82	13500	3.8	144	2KJ3006- ■ HJ23- ■ ■ N1 -Z -	-	
280	188	5.25	13500	4.2	144	2KJ3006- ■ HJ23- ■ ■ M1 -Z -	-	
316	166	4.65	13500	4.8	144	2KJ3006- ■ HJ23- ■ ■ L1 -Z -	-	
357	147	4.12	13500	5.3	144	2KJ3006- ■ HJ23- ■ ■ K1 -Z -	-	
<b>E.109-LE132ZST4P</b>								
204	255	7.19	10500	2.2	119	2KJ3005- ■ HJ23- ■ ■ Q1 -Z -	-	
217	240	6.76	10500	2.3	119	2KJ3005- ■ HJ23- ■ ■ P1 -Z -	-	
234	220	6.28	10500	2.5	119	2KJ3005- ■ HJ23- ■ ■ N1 -Z -	-	
265	198	5.55	10500	2.8	119	2KJ3005- ■ HJ23- ■ ■ M1 -Z -	-	
297	177	4.95	10500	3.2	119	2KJ3005- ■ HJ23- ■ ■ L1 -Z -	-	
330	159	4.46	10500	3.5	119	2KJ3005- ■ HJ23- ■ ■ K1 -Z -	-	
380	138	3.87	10500	4	119	2KJ3005- ■ HJ23- ■ ■ J1 -Z -	-	
422	124	3.48	10500	4.4	119	2KJ3005- ■ HJ23- ■ ■ H1 -Z -	-	
484	109	3.04	10500	5	119	2KJ3005- ■ HJ23- ■ ■ G1 -Z -	-	
542	97	2.71	10500	5.6	119	2KJ3005- ■ HJ23- ■ ■ F1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
5.5	<b>E.89-LE132ZST4P</b>							
	221	235	6.64	8000	1.1	96	2KJ3004- ■ HJ23- ■ ■ P1 -Z -	-
	262	200	5.62	8000	1.6	96	2KJ3004- ■ HJ23- ■ ■ N1 -Z -	-
	278	189	5.29	8000	1.1	96	2KJ3004- ■ HJ23- ■ ■ M1 -Z -	-
	301	175	4.89	8000	2.1	96	2KJ3004- ■ HJ23- ■ ■ L1 -Z -	-
	338	155	4.35	8000	2.3	96	2KJ3004- ■ HJ23- ■ ■ K1 -Z -	-
	381	138	3.86	8000	2.6	96	2KJ3004- ■ HJ23- ■ ■ J1 -Z -	-
	425	124	3.46	8000	3	96	2KJ3004- ■ HJ23- ■ ■ H1 -Z -	-
	497	106	2.96	8000	3.4	96	2KJ3004- ■ HJ23- ■ ■ G1 -Z -	-
	557	94	2.64	8000	3.8	96	2KJ3004- ■ HJ23- ■ ■ F1 -Z -	-
	631	83	2.33	8000	4.3	96	2KJ3004- ■ HJ23- ■ ■ E1 -Z -	-
	717	73	2.05	7920	4.9	96	2KJ3004- ■ HJ23- ■ ■ D1 -Z -	-
	826	64	1.78	7630	5.7	96	2KJ3004- ■ HJ23- ■ ■ C1 -Z -	-
	967	54	1.52	7320	6.6	96	2KJ3004- ■ HJ23- ■ ■ B1 -Z -	-
	<b>E.69-LE132ZST4P</b>							
	282	186	5.21	6100	1.1	82	2KJ3003- ■ HJ23- ■ ■ L1 -Z -	-
	336	157	4.38	6100	1.3	82	2KJ3003- ■ HJ23- ■ ■ K1 -Z -	-
	357	147	4.12	6100	1.1	82	2KJ3003- ■ HJ23- ■ ■ J1 -Z -	-
	389	135	3.78	6100	1.5	82	2KJ3003- ■ HJ23- ■ ■ H1 -Z -	-
	445	118	3.30	6100	1.7	82	2KJ3003- ■ HJ23- ■ ■ G1 -Z -	-
	498	105	2.95	6100	1.9	82	2KJ3003- ■ HJ23- ■ ■ F1 -Z -	-
	570	92	2.58	6100	2.1	82	2KJ3003- ■ HJ23- ■ ■ E1 -Z -	-
	662	79	2.22	6100	2.5	82	2KJ3003- ■ HJ23- ■ ■ D1 -Z -	-
	750	70	1.96	6100	2.8	82	2KJ3003- ■ HJ23- ■ ■ C1 -Z -	-
	880	60	1.67	6100	3.3	82	2KJ3003- ■ HJ23- ■ ■ B1 -Z -	-
	1028	51	1.43	6100	3.8	82	2KJ3003- ■ HJ23- ■ ■ A1 -Z -	-
	<b>E.49-LE132ZST4P</b>							
	427	123	3.44	2530	0.82	75	2KJ3002- ■ HJ23- ■ ■ H1 -Z -	-
	454	116	3.24	2680	0.87	75	2KJ3002- ■ HJ23- ■ ■ G1 -Z -	-
	480	109	3.06	2840	0.92	75	2KJ3002- ■ HJ23- ■ ■ F1 -Z -	-
	565	93	2.60	2940	1.1	75	2KJ3002- ■ HJ23- ■ ■ E1 -Z -	-
	750	70	1.96	3050	1.5	75	2KJ3002- ■ HJ23- ■ ■ C1 -Z -	-
	891	59	1.65	3010	1.7	75	2KJ3002- ■ HJ23- ■ ■ B1 -Z -	-
1021	52	1.44	2900	2	75	2KJ3002- ■ HJ23- ■ ■ A1 -Z -	-	
7.5	<b>D.189-LE132ZMS4P</b>							
	4.7	15300	313.63	107000	1.2	700	2KJ3214- ■ HL23- ■ ■ T1 -Z -	-
	5.2	13700	280.59	107000	1.4	700	2KJ3214- ■ HL23- ■ ■ S1 -Z -	-
	5.8	12300	253.06	107000	1.5	700	2KJ3214- ■ HL23- ■ ■ R1 -Z -	-
	6.6	10900	223.66	107000	1.7	700	2KJ3214- ■ HL23- ■ ■ Q1 -Z -	-
	7.2	9990	204.44	107000	1.9	700	2KJ3214- ■ HL23- ■ ■ P1 -Z -	-
	8	8990	183.92	107000	2.1	700	2KJ3214- ■ HL23- ■ ■ N1 -Z -	-
	<b>D.169-LE132ZMS4P</b>							
	4.5	15900	327.18	69400	0.88	487	2KJ3213- ■ HL23- ■ ■ V1 -Z -	-
	4.8	14900	305.28	69800	0.94	487	2KJ3213- ■ HL23- ■ ■ U1 -Z -	-
	5.4	13200	271.40	70400	1.1	487	2KJ3213- ■ HL23- ■ ■ T1 -Z -	-
	6	11900	243.68	70900	1.2	487	2KJ3213- ■ HL23- ■ ■ S1 -Z -	-
	6.6	10700	220.58	71300	1.3	487	2KJ3213- ■ HL23- ■ ■ R1 -Z -	-
	7.6	9470	193.75	71800	1.5	487	2KJ3213- ■ HL23- ■ ■ Q1 -Z -	-
	8.3	8580	175.57	72100	1.6	487	2KJ3213- ■ HL23- ■ ■ P1 -Z -	-
	9.4	7640	156.36	72500	1.8	487	2KJ3213- ■ HL23- ■ ■ N1 -Z -	-
	10	6860	140.41	72800	2	487	2KJ3213- ■ HL23- ■ ■ M1 -Z -	-

## Article No. supplement

Shaft design	1 or 9	see page 10/48
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, B, F or H	see page 10/42



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>7.5</b>	<b>D.149-LE132ZMS4P</b>								
	7.5	9540	195.24	50400	0.84	309	2KJ3212- ■ HL23- ■ ■ R1 -Z -	-	
	8.3	8610	176.18	50900	0.93	309	2KJ3212- ■ HL23- ■ ■ Q1 -Z -	-	
	9.4	7630	156.11	51300	1	309	2KJ3212- ■ HL23- ■ ■ P1 -Z -	-	
	11	6760	138.26	51700	1.2	309	2KJ3212- ■ HL23- ■ ■ N1 -Z -	-	
	12	6010	123.04	52100	1.3	309	2KJ3212- ■ HL23- ■ ■ M1 -Z -	-	
	13	5390	110.26	52400	1.5	309	2KJ3212- ■ HL23- ■ ■ L1 -Z -	-	
	15	4770	97.75	52700	1.7	309	2KJ3212- ■ HL23- ■ ■ K1 -Z -	-	
	17	4210	86.29	53000	1.9	309	2KJ3212- ■ HL23- ■ ■ J1 -Z -	-	
	19	3700	75.87	53200	2.2	309	2KJ3212- ■ HL23- ■ ■ H1 -Z -	-	
	21	3350	68.71	53400	2.4	309	2KJ3212- ■ HL23- ■ ■ G1 -Z -	-	
	<b>D.129-LE132ZMS4P</b>								
	13	5590	114.36	26700		0.89	224	2KJ3211- ■ HL23- ■ ■ F1 -Z -	-
	14	4980	102.05	27000		1	224	2KJ3211- ■ HL23- ■ ■ E1 -Z -	-
	16	4390	89.91	27400		1.1	224	2KJ3211- ■ HL23- ■ ■ D1 -Z -	-
	19	3850	78.78	27700		1.3	224	2KJ3211- ■ HL23- ■ ■ C1 -Z -	-
	<b>Z.129-LE132ZMS4P</b>								
	23	3050	62.48	28200		1.6	220	2KJ3111- ■ HL23- ■ ■ X1 -Z -	-
	27	2610	53.47	28400		1.9	220	2KJ3111- ■ HL23- ■ ■ W1 -Z -	-
	29	2460	50.33	28500		2	220	2KJ3111- ■ HL23- ■ ■ V1 -Z -	-
	31	2300	47.18	28600		2.2	220	2KJ3111- ■ HL23- ■ ■ U1 -Z -	-
35	2040	41.82	28800		2.4	220	2KJ3111- ■ HL23- ■ ■ T1 -Z -	-	
<b>D.109-LE132ZMS4P</b>									
20	3610	73.90	20200		0.86	160	2KJ3210- ■ HL23- ■ ■ D1 -Z -	-	
23	3140	64.34	20200		0.99	160	2KJ3210- ■ HL23- ■ ■ C1 -Z -	-	
<b>Z.109-LE132ZMS4P</b>									
29	2500	51.17	20200		1.2	158	2KJ3110- ■ HL23- ■ ■ X1 -Z -	-	
34	2130	43.64	20200		1.5	158	2KJ3110- ■ HL23- ■ ■ W1 -Z -	-	
36	2000	41.07	20200		1.5	158	2KJ3110- ■ HL23- ■ ■ V1 -Z -	-	
38	1860	38.12	20200		1.7	158	2KJ3110- ■ HL23- ■ ■ U1 -Z -	-	
43	1640	33.70	20200		1.9	158	2KJ3110- ■ HL23- ■ ■ T1 -Z -	-	
49	1470	30.08	20200		2.1	158	2KJ3110- ■ HL23- ■ ■ S1 -Z -	-	
54	1320	27.07	20200		2.3	158	2KJ3110- ■ HL23- ■ ■ R1 -Z -	-	
62	1140	23.49	20200		2.5	158	2KJ3110- ■ HL23- ■ ■ Q1 -Z -	-	
69	1030	21.13	20200		2.7	158	2KJ3110- ■ HL23- ■ ■ P1 -Z -	-	
79	900	18.47	20200		3	158	2KJ3110- ■ HL23- ■ ■ N1 -Z -	-	
89	805	16.48	20200		3.3	158	2KJ3110- ■ HL23- ■ ■ M1 -Z -	-	
<b>Z.89-LE132ZMS4P</b>									
37	1920	39.41	18500		0.87	118	2KJ3108- ■ HL23- ■ ■ U1 -Z -	-	
44	1630	33.38	18500		1	118	2KJ3108- ■ HL23- ■ ■ T1 -Z -	-	
47	1530	31.41	18500		1.1	118	2KJ3108- ■ HL23- ■ ■ S1 -Z -	-	
50	1410	29.01	18500		1.2	118	2KJ3108- ■ HL23- ■ ■ R1 -Z -	-	
57	1260	25.81	18500		1.3	118	2KJ3108- ■ HL23- ■ ■ Q1 -Z -	-	
64	1120	22.92	18500		1.5	118	2KJ3108- ■ HL23- ■ ■ P1 -Z -	-	
71	1000	20.52	18500		1.7	118	2KJ3108- ■ HL23- ■ ■ N1 -Z -	-	
84	855	17.54	18400		2	118	2KJ3108- ■ HL23- ■ ■ M1 -Z -	-	
94	765	15.66	17800		2.2	118	2KJ3108- ■ HL23- ■ ■ L1 -Z -	-	
106	675	13.84	17300		2.5	118	2KJ3108- ■ HL23- ■ ■ K1 -Z -	-	
121	590	12.15	16700		2.7	118	2KJ3108- ■ HL23- ■ ■ J1 -Z -	-	
138	515	10.58	16100		3.1	118	2KJ3108- ■ HL23- ■ ■ H1 -Z -	-	
162	440	9.04	15400		3.5	118	2KJ3108- ■ HL23- ■ ■ G1 -Z -	-	
189	375	7.74	14800		4	118	2KJ3108- ■ HL23- ■ ■ F1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
7.5	<b>Z.89-LE132ZMS4P</b>							
	213	335	6.89	14400	3.1	118	2KJ3108- ■ HL23- ■ ■ E1 -Z -	-
	242	295	6.05	13800	3.6	118	2KJ3108- ■ HL23- ■ ■ D1 -Z -	-
	279	255	5.26	13200	4.1	118	2KJ3108- ■ HL23- ■ ■ C1 -Z -	-
	326	220	4.50	12600	4.8	118	2KJ3108- ■ HL23- ■ ■ B1 -Z -	-
	<b>Z.79-LE132ZMS4P</b>							
	76	945	19.33	11600	0.89	96	2KJ3107- ■ HL23- ■ ■ N1 -Z -	-
	85	845	17.31	11400	0.99	96	2KJ3107- ■ HL23- ■ ■ M1 -Z -	-
	97	740	15.13	11100	1.1	96	2KJ3107- ■ HL23- ■ ■ L1 -Z -	-
	113	635	12.99	10700	1.3	96	2KJ3107- ■ HL23- ■ ■ K1 -Z -	-
	128	560	11.48	10400	1.5	96	2KJ3107- ■ HL23- ■ ■ J1 -Z -	-
	150	475	9.76	10100	1.7	96	2KJ3107- ■ HL23- ■ ■ H1 -Z -	-
	175	405	8.37	7890	1.9	96	2KJ3107- ■ HL23- ■ ■ G1 -Z -	-
	179	400	8.19	6500	1.8	96	2KJ3107- ■ HL23- ■ ■ F1 -Z -	-
	205	350	7.16	6810	2.1	96	2KJ3107- ■ HL23- ■ ■ E1 -Z -	-
238	300	6.15	7080	2.4	96	2KJ3107- ■ HL23- ■ ■ D1 -Z -	-	
270	265	5.43	7220	2.6	96	2KJ3107- ■ HL23- ■ ■ C1 -Z -	-	
317	225	4.62	7320	3.4	96	2KJ3107- ■ HL23- ■ ■ B1 -Z -	-	
370	194	3.96	7310	4	96	2KJ3107- ■ HL23- ■ ■ A1 -Z -	-	
<b>Z.69-LE132ZMS4P</b>								
105	680	14.00	8990	0.88	86	2KJ3106- ■ HL23- ■ ■ K1 -Z -	-	
119	600	12.31	8780	1	86	2KJ3106- ■ HL23- ■ ■ J1 -Z -	-	
141	505	10.39	8490	1.2	86	2KJ3106- ■ HL23- ■ ■ H1 -Z -	-	
162	440	9.05	6080	1.3	86	2KJ3106- ■ HL23- ■ ■ G1 -Z -	-	
172	415	8.50	8090	1.1	86	2KJ3106- ■ HL23- ■ ■ F1 -Z -	-	
203	350	7.23	7810	1.3	86	2KJ3106- ■ HL23- ■ ■ E1 -Z -	-	
236	300	6.20	5750	1.5	86	2KJ3106- ■ HL23- ■ ■ D1 -Z -	-	
269	265	5.45	6060	1.6	86	2KJ3106- ■ HL23- ■ ■ C1 -Z -	-	
318	225	4.60	6360	2	86	2KJ3106- ■ HL23- ■ ■ B1 -Z -	-	
365	196	4.01	6540	2.3	86	2KJ3106- ■ HL23- ■ ■ A1 -Z -	-	
<b>Z.59-LE132ZMS4P</b>								
127	560	11.51	3590	0.8	81	2KJ3105- ■ HL23- ■ ■ J1 -Z -	-	
151	475	9.71	3600	0.95	81	2KJ3105- ■ HL23- ■ ■ H1 -Z -	-	
173	410	8.46	3610	1.1	81	2KJ3105- ■ HL23- ■ ■ G1 -Z -	-	
182	395	8.07	3500	1	81	2KJ3105- ■ HL23- ■ ■ F1 -Z -	-	
214	335	6.86	3480	1.2	81	2KJ3105- ■ HL23- ■ ■ E1 -Z -	-	
249	285	5.88	3440	1.4	81	2KJ3105- ■ HL23- ■ ■ D1 -Z -	-	
283	250	5.17	2280	1.6	81	2KJ3105- ■ HL23- ■ ■ C1 -Z -	-	
336	210	4.36	2720	1.9	81	2KJ3105- ■ HL23- ■ ■ B1 -Z -	-	
386	186	3.80	2920	2.2	81	2KJ3105- ■ HL23- ■ ■ A1 -Z -	-	
<b>Z.49-LE132ZMS4P</b>								
189	375	7.74	2710	0.85	79	2KJ3104- ■ HL23- ■ ■ H1 -Z -	-	
203	350	7.21	2590	0.82	79	2KJ3104- ■ HL23- ■ ■ F1 -Z -	-	
239	300	6.14	2590	0.88	79	2KJ3104- ■ HL23- ■ ■ E1 -Z -	-	
279	255	5.26	2590	0.95	79	2KJ3104- ■ HL23- ■ ■ D1 -Z -	-	
317	225	4.62	2560	1	79	2KJ3104- ■ HL23- ■ ■ C1 -Z -	-	
376	191	3.90	2510	1.1	79	2KJ3104- ■ HL23- ■ ■ B1 -Z -	-	
431	166	3.40	2470	1.1	79	2KJ3104- ■ HL23- ■ ■ A1 -Z -	-	
<b>E.149-LE132ZMS4P</b>								
150	475	9.76	16000	2.5	182	2KJ3007- ■ HL23- ■ ■ S1 -Z -	-	
161	445	9.11	16000	2.8	182	2KJ3007- ■ HL23- ■ ■ R1 -Z -	-	
181	395	8.10	16000	3.4	182	2KJ3007- ■ HL23- ■ ■ Q1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>7.5</b>	<b>E.149-LE132ZMS4P</b>							
	202	355	7.27	16000	3.8	182	<b>2KJ3007- HL23- P1 -Z -</b>	-
	223	320	6.58	16000	4.1	182	<b>2KJ3007- HL23- N1 -Z -</b>	-
	<b>E.129-LE132ZMS4P</b>							
	150	475	9.79	13500	1.4	144	<b>2KJ3006- HL23- T1 -Z -</b>	-
	175	410	8.38	13500	1.6	144	<b>2KJ3006- HL23- S1 -Z -</b>	-
	186	385	7.88	13500	1.7	144	<b>2KJ3006- HL23- R1 -Z -</b>	-
	198	360	7.39	13500	2.2	144	<b>2KJ3006- HL23- Q1 -Z -</b>	-
	224	320	6.55	13500	2.5	144	<b>2KJ3006- HL23- P1 -Z -</b>	-
	252	285	5.82	13500	2.8	144	<b>2KJ3006- HL23- N1 -Z -</b>	-
	279	255	5.25	13500	3.1	144	<b>2KJ3006- HL23- M1 -Z -</b>	-
	315	225	4.65	13500	3.5	144	<b>2KJ3006- HL23- L1 -Z -</b>	-
	356	200	4.12	13500	3.9	144	<b>2KJ3006- HL23- K1 -Z -</b>	-
	399	179	3.67	13500	4.3	144	<b>2KJ3006- HL23- J1 -Z -</b>	-
	445	161	3.29	13300	4.8	144	<b>2KJ3006- HL23- H1 -Z -</b>	-
	503	142	2.91	12800	5.4	144	<b>2KJ3006- HL23- G1 -Z -</b>	-
	<b>E.109-LE132ZMS4P</b>							
	204	350	7.19	10500	1.6	119	<b>2KJ3005- HL23- Q1 -Z -</b>	-
	217	330	6.76	10500	1.7	119	<b>2KJ3005- HL23- P1 -Z -</b>	-
	233	305	6.28	10500	1.8	119	<b>2KJ3005- HL23- N1 -Z -</b>	-
	264	270	5.55	10500	2.1	119	<b>2KJ3005- HL23- M1 -Z -</b>	-
	296	240	4.95	10500	2.3	119	<b>2KJ3005- HL23- L1 -Z -</b>	-
	328	215	4.46	10500	2.6	119	<b>2KJ3005- HL23- K1 -Z -</b>	-
	379	189	3.87	10500	2.9	119	<b>2KJ3005- HL23- J1 -Z -</b>	-
	421	170	3.48	10500	3.2	119	<b>2KJ3005- HL23- H1 -Z -</b>	-
	482	149	3.04	10500	3.7	119	<b>2KJ3005- HL23- G1 -Z -</b>	-
	541	132	2.71	10500	4.1	119	<b>2KJ3005- HL23- F1 -Z -</b>	-
	613	117	2.39	10500	4.6	119	<b>2KJ3005- HL23- E1 -Z -</b>	-
	698	103	2.10	10500	5.2	119	<b>2KJ3005- HL23- D1 -Z -</b>	-
	801	90	1.83	10100	5.9	119	<b>2KJ3005- HL23- C1 -Z -</b>	-
	877	82	1.67	9900	6.5	119	<b>2KJ3005- HL23- B1 -Z -</b>	-
	<b>E.89-LE132ZMS4P</b>							
	221	325	6.64	8000	0.8	96	<b>2KJ3004- HL23- P1 -Z -</b>	-
	261	275	5.62	8000	1.2	96	<b>2KJ3004- HL23- N1 -Z -</b>	-
	277	255	5.29	8000	0.81	96	<b>2KJ3004- HL23- M1 -Z -</b>	-
	300	235	4.89	8000	1.5	96	<b>2KJ3004- HL23- L1 -Z -</b>	-
	337	210	4.35	8000	1.7	96	<b>2KJ3004- HL23- K1 -Z -</b>	-
	380	189	3.86	8000	1.9	96	<b>2KJ3004- HL23- J1 -Z -</b>	-
	423	169	3.46	8000	2.2	96	<b>2KJ3004- HL23- H1 -Z -</b>	-
495	145	2.96	8000	2.5	96	<b>2KJ3004- HL23- G1 -Z -</b>	-	
555	129	2.64	8000	2.8	96	<b>2KJ3004- HL23- F1 -Z -</b>	-	
629	114	2.33	8000	3.2	96	<b>2KJ3004- HL23- E1 -Z -</b>	-	
715	100	2.05	7740	3.6	96	<b>2KJ3004- HL23- D1 -Z -</b>	-	
823	87	1.78	7470	4.2	96	<b>2KJ3004- HL23- C1 -Z -</b>	-	
964	74	1.52	7170	4.8	96	<b>2KJ3004- HL23- B1 -Z -</b>	-	
1127	64	1.30	6880	5.7	96	<b>2KJ3004- HL23- A1 -Z -</b>	-	
<b>E.69-LE132ZMS4P</b>								
334	210	4.38	6100	0.93	82	<b>2KJ3003- HL23- K1 -Z -</b>	-	
356	200	4.12	6100	0.82	82	<b>2KJ3003- HL23- J1 -Z -</b>	-	
388	185	3.78	6100	1.1	82	<b>2KJ3003- HL23- H1 -Z -</b>	-	
444	161	3.30	6100	1.2	82	<b>2KJ3003- HL23- G1 -Z -</b>	-	
497	144	2.95	6100	1.4	82	<b>2KJ3003- HL23- F1 -Z -</b>	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
7.5	<b>E.69-LE132ZMS4P</b>							
	568	126	2.58	6100	1.6	82	2KJ3003- ■ HL23- ■ ■ E1 -Z -	
	660	109	2.22	6100	1.8	82	2KJ3003- ■ HL23- ■ ■ D1 -Z -	
	747	96	1.96	6100	2	82	2KJ3003- ■ HL23- ■ ■ C1 -Z -	
	877	82	1.67	6100	2.4	82	2KJ3003- ■ HL23- ■ ■ B1 -Z -	
	1024	70	1.43	6100	2.8	82	2KJ3003- ■ HL23- ■ ■ A1 -Z -	
9.2	<b>E.49-LE132ZMS4P</b>							
	563	127	2.60	1390	0.8	75	2KJ3002- ■ HL23- ■ ■ E1 -Z -	
	<b>D.189-LE160MPA4P</b>							
	4.7	18600	313.63	107000	1	717	2KJ3214- ■ JQ23- ■ ■ T1 -Z -	
	5.3	16600	280.59	107000	1.1	717	2KJ3214- ■ JQ23- ■ ■ S1 -Z -	
	5.8	15000	253.06	107000	1.3	717	2KJ3214- ■ JQ23- ■ ■ R1 -Z -	
	6.6	13200	223.66	107000	1.4	717	2KJ3214- ■ JQ23- ■ ■ Q1 -Z -	
	7.2	12100	204.44	107000	1.6	717	2KJ3214- ■ JQ23- ■ ■ P1 -Z -	
	8	10900	183.92	107000	1.7	717	2KJ3214- ■ JQ23- ■ ■ N1 -Z -	
	9	9750	164.36	107000	1.9	717	2KJ3214- ■ JQ23- ■ ■ M1 -Z -	
	10	8820	148.63	107000	2.2	717	2KJ3214- ■ JQ23- ■ ■ L1 -Z -	
	<b>D.169-LE160MPA4P</b>							
	5.5	16100	271.40	69300	0.87	504	2KJ3213- ■ JQ23- ■ ■ T1 -Z -	
	6.1	14400	243.68	70000	0.97	504	2KJ3213- ■ JQ23- ■ ■ S1 -Z -	
	6.7	13000	220.58	70500	1.1	504	2KJ3213- ■ JQ23- ■ ■ R1 -Z -	
	7.6	11500	193.75	71000	1.2	504	2KJ3213- ■ JQ23- ■ ■ Q1 -Z -	
	8.4	10400	175.57	71500	1.3	504	2KJ3213- ■ JQ23- ■ ■ P1 -Z -	
	9.5	9280	156.36	71900	1.5	504	2KJ3213- ■ JQ23- ■ ■ N1 -Z -	
	11	8330	140.41	72200	1.7	504	2KJ3213- ■ JQ23- ■ ■ M1 -Z -	
	12	7430	125.28	72600	1.9	504	2KJ3213- ■ JQ23- ■ ■ L1 -Z -	
13	6630	111.69	72800	2.1	504	2KJ3213- ■ JQ23- ■ ■ K1 -Z -		
<b>D.149-LE160MPA4P</b>								
9.5	9260	156.11	50600	0.86	325	2KJ3212- ■ JQ23- ■ ■ P1 -Z -		
11	8200	138.26	51100	0.97	325	2KJ3212- ■ JQ23- ■ ■ N1 -Z -		
12	7300	123.04	51500	1.1	325	2KJ3212- ■ JQ23- ■ ■ M1 -Z -		
13	6540	110.26	51900	1.2	325	2KJ3212- ■ JQ23- ■ ■ L1 -Z -		
15	5800	97.75	52200	1.4	325	2KJ3212- ■ JQ23- ■ ■ K1 -Z -		
17	5120	86.29	52500	1.6	325	2KJ3212- ■ JQ23- ■ ■ J1 -Z -		
20	4500	75.87	52800	1.8	325	2KJ3212- ■ JQ23- ■ ■ H1 -Z -		
22	4070	68.71	53000	2	325	2KJ3212- ■ JQ23- ■ ■ G1 -Z -		
<b>Z.149-LE160MPA4P</b>								
26	3360	56.64	53400	2.4	319	2KJ3112- ■ JQ23- ■ ■ W1 -Z -		
28	3130	52.84	53500	2.5	319	2KJ3112- ■ JQ23- ■ ■ V1 -Z -		
<b>D.129-LE160MPA4P</b>								
15	6050	102.05	26400	0.83	241	2KJ3211- ■ JQ23- ■ ■ E1 -Z -		
16	5330	89.91	26800	0.94	241	2KJ3211- ■ JQ23- ■ ■ D1 -Z -		
19	4670	78.78	27200	1.1	241	2KJ3211- ■ JQ23- ■ ■ C1 -Z -		
<b>Z.129-LE160MPA4P</b>								
24	3700	62.48	27800	1.3	237	2KJ3111- ■ JQ23- ■ ■ X1 -Z -		
28	3170	53.47	28100	1.6	237	2KJ3111- ■ JQ23- ■ ■ W1 -Z -		
29	2980	50.33	28200	1.7	237	2KJ3111- ■ JQ23- ■ ■ V1 -Z -		
31	2800	47.18	28300	1.8	237	2KJ3111- ■ JQ23- ■ ■ U1 -Z -		
35	2480	41.82	28500	2	237	2KJ3111- ■ JQ23- ■ ■ T1 -Z -		
40	2200	37.15	28700	2.3	237	2KJ3111- ■ JQ23- ■ ■ S1 -Z -		
44	1990	33.52	28800	2.5	237	2KJ3111- ■ JQ23- ■ ■ R1 -Z -		
50	1760	29.70	28900	2.8	237	2KJ3111- ■ JQ23- ■ ■ Q1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>9.2</b>	<b>D.109-LE160MPA4P</b>							
	23	3820	64.34	20000	0.81	178	2KJ3210- ■ JQ23- ■ ■ C1 -Z -	
	<b>Z.109-LE160MPA4P</b>							
	29	3030	51.17	20200	1	175	2KJ3110- ■ JQ23- ■ ■ X1 -Z -	
	34	2590	43.64	20200	1.2	175	2KJ3110- ■ JQ23- ■ ■ W1 -Z -	
	36	2430	41.07	20200	1.3	175	2KJ3110- ■ JQ23- ■ ■ V1 -Z -	
	39	2260	38.12	20200	1.4	175	2KJ3110- ■ JQ23- ■ ■ U1 -Z -	
	44	2000	33.70	20200	1.5	175	2KJ3110- ■ JQ23- ■ ■ T1 -Z -	
	49	1780	30.08	20200	1.7	175	2KJ3110- ■ JQ23- ■ ■ S1 -Z -	
	55	1600	27.07	20200	1.9	175	2KJ3110- ■ JQ23- ■ ■ R1 -Z -	
	63	1390	23.49	20200	2.1	175	2KJ3110- ■ JQ23- ■ ■ Q1 -Z -	
	70	1250	21.13	20200	2.3	175	2KJ3110- ■ JQ23- ■ ■ P1 -Z -	
	80	1090	18.47	20200	2.5	175	2KJ3110- ■ JQ23- ■ ■ N1 -Z -	
	90	975	16.48	20200	2.7	175	2KJ3110- ■ JQ23- ■ ■ M1 -Z -	
	102	860	14.52	19800	3	175	2KJ3110- ■ JQ23- ■ ■ L1 -Z -	
116	755	12.72	19200	3.3	175	2KJ3110- ■ JQ23- ■ ■ K1 -Z -		
133	655	11.09	18500	3.7	175	2KJ3110- ■ JQ23- ■ ■ J1 -Z -		
146	600	10.12	18100	4	175	2KJ3110- ■ JQ23- ■ ■ H1 -Z -		
<b>Z.89-LE160MPA4P</b>								
44	1980	33.38	18500	0.85	137	2KJ3108- ■ JQ23- ■ ■ T1 -Z -		
47	1860	31.41	18500	0.9	137	2KJ3108- ■ JQ23- ■ ■ S1 -Z -		
51	1720	29.01	18500	0.98	137	2KJ3108- ■ JQ23- ■ ■ R1 -Z -		
57	1530	25.81	18500	1.1	137	2KJ3108- ■ JQ23- ■ ■ Q1 -Z -		
65	1360	22.92	18500	1.2	137	2KJ3108- ■ JQ23- ■ ■ P1 -Z -		
72	1210	20.52	18400	1.4	137	2KJ3108- ■ JQ23- ■ ■ N1 -Z -		
84	1040	17.54	17800	1.6	137	2KJ3108- ■ JQ23- ■ ■ M1 -Z -		
95	930	15.66	17300	1.8	137	2KJ3108- ■ JQ23- ■ ■ L1 -Z -		
107	820	13.84	16800	2	137	2KJ3108- ■ JQ23- ■ ■ K1 -Z -		
122	720	12.15	16300	2.3	137	2KJ3108- ■ JQ23- ■ ■ J1 -Z -		
140	625	10.58	15700	2.5	137	2KJ3108- ■ JQ23- ■ ■ H1 -Z -		
164	535	9.04	15100	2.9	137	2KJ3108- ■ JQ23- ■ ■ G1 -Z -		
191	455	7.74	14500	3.3	137	2KJ3108- ■ JQ23- ■ ■ F1 -Z -		
215	405	6.89	14100	2.6	137	2KJ3108- ■ JQ23- ■ ■ E1 -Z -		
245	355	6.05	13600	3	137	2KJ3108- ■ JQ23- ■ ■ D1 -Z -		
281	310	5.26	13100	3.4	137	2KJ3108- ■ JQ23- ■ ■ C1 -Z -		
329	265	4.50	12500	4	137	2KJ3108- ■ JQ23- ■ ■ B1 -Z -		
384	225	3.85	11900	4.6	137	2KJ3108- ■ JQ23- ■ ■ A1 -Z -		
<b>Z.79-LE160MPA4P</b>								
85	1020	17.31	10800	0.82	114	2KJ3107- ■ JQ23- ■ ■ M1 -Z -		
98	895	15.13	10500	0.94	114	2KJ3107- ■ JQ23- ■ ■ L1 -Z -		
114	770	12.99	10300	1.1	114	2KJ3107- ■ JQ23- ■ ■ K1 -Z -		
129	680	11.48	10000	1.2	114	2KJ3107- ■ JQ23- ■ ■ J1 -Z -		
152	575	9.76	9750	1.4	114	2KJ3107- ■ JQ23- ■ ■ H1 -Z -		
177	495	8.37	6480	1.6	114	2KJ3107- ■ JQ23- ■ ■ G1 -Z -		
181	485	8.19	4880	1.5	114	2KJ3107- ■ JQ23- ■ ■ F1 -Z -		
207	425	7.16	5380	1.7	114	2KJ3107- ■ JQ23- ■ ■ E1 -Z -		
241	365	6.15	5830	2	114	2KJ3107- ■ JQ23- ■ ■ D1 -Z -		
273	320	5.43	6160	2.1	114	2KJ3107- ■ JQ23- ■ ■ C1 -Z -		
320	270	4.62	6450	2.8	114	2KJ3107- ■ JQ23- ■ ■ B1 -Z -		
374	235	3.96	6520	3.3	114	2KJ3107- ■ JQ23- ■ ■ A1 -Z -		
<b>E.149-LE160MPA4P</b>								
152	575	9.76	16000	2.1	198	2KJ3007- ■ JQ23- ■ ■ S1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>9.2</b>	<b>E.149-LE160MPA4P</b>							
	162	540	9.11	16000	2.3	198	2KJ3007- ■ JQ23- ■ ■ R1 -Z -	
	183	480	8.10	16000	2.8	198	2KJ3007- ■ JQ23- ■ ■ Q1 -Z -	
	204	430	7.27	16000	3.1	198	2KJ3007- ■ JQ23- ■ ■ P1 -Z -	
	225	390	6.58	16000	3.4	198	2KJ3007- ■ JQ23- ■ ■ N1 -Z -	
	256	340	5.78	16000	4.3	198	2KJ3007- ■ JQ23- ■ ■ M1 -Z -	
	282	310	5.24	16000	4.8	198	2KJ3007- ■ JQ23- ■ ■ L1 -Z -	
	<b>E.129-LE160MPA4P</b>							
	151	580	9.79	13500	1.1	161	2KJ3006- ■ JQ23- ■ ■ T1 -Z -	
	177	495	8.38	13500	1.3	161	2KJ3006- ■ JQ23- ■ ■ S1 -Z -	
	188	465	7.88	13500	1.4	161	2KJ3006- ■ JQ23- ■ ■ R1 -Z -	
	200	435	7.39	13500	1.8	161	2KJ3006- ■ JQ23- ■ ■ Q1 -Z -	
	226	385	6.55	13500	2.1	161	2KJ3006- ■ JQ23- ■ ■ P1 -Z -	
	254	345	5.82	13500	2.3	161	2KJ3006- ■ JQ23- ■ ■ N1 -Z -	
	282	310	5.25	13500	2.6	161	2KJ3006- ■ JQ23- ■ ■ M1 -Z -	
	318	275	4.65	13500	2.9	161	2KJ3006- ■ JQ23- ■ ■ L1 -Z -	
	359	245	4.12	13500	3.2	161	2KJ3006- ■ JQ23- ■ ■ K1 -Z -	
	403	215	3.67	13400	3.6	161	2KJ3006- ■ JQ23- ■ ■ J1 -Z -	
	450	195	3.29	13000	4	161	2KJ3006- ■ JQ23- ■ ■ H1 -Z -	
	509	173	2.91	12600	4.5	161	2KJ3006- ■ JQ23- ■ ■ G1 -Z -	
	576	153	2.57	12200	5	161	2KJ3006- ■ JQ23- ■ ■ F1 -Z -	
	655	134	2.26	11800	5.7	161	2KJ3006- ■ JQ23- ■ ■ E1 -Z -	
	<b>E.109-LE160MPA4P</b>							
	206	425	7.19	10500	1.3	137	2KJ3005- ■ JQ23- ■ ■ Q1 -Z -	
	219	400	6.76	10500	1.4	137	2KJ3005- ■ JQ23- ■ ■ P1 -Z -	
	236	370	6.28	10500	1.5	137	2KJ3005- ■ JQ23- ■ ■ N1 -Z -	
	267	325	5.55	10500	1.7	137	2KJ3005- ■ JQ23- ■ ■ M1 -Z -	
	299	290	4.95	10500	1.9	137	2KJ3005- ■ JQ23- ■ ■ L1 -Z -	
	332	265	4.46	10500	2.1	137	2KJ3005- ■ JQ23- ■ ■ K1 -Z -	
	382	230	3.87	10500	2.4	137	2KJ3005- ■ JQ23- ■ ■ J1 -Z -	
	425	205	3.48	10500	2.7	137	2KJ3005- ■ JQ23- ■ ■ H1 -Z -	
	487	180	3.04	10500	3	137	2KJ3005- ■ JQ23- ■ ■ G1 -Z -	
	546	161	2.71	10500	3.4	137	2KJ3005- ■ JQ23- ■ ■ F1 -Z -	
	619	142	2.39	10500	3.8	137	2KJ3005- ■ JQ23- ■ ■ E1 -Z -	
	705	125	2.10	10300	4.3	137	2KJ3005- ■ JQ23- ■ ■ D1 -Z -	
	809	109	1.83	10000	4.9	137	2KJ3005- ■ JQ23- ■ ■ C1 -Z -	
	886	99	1.67	9760	5.3	137	2KJ3005- ■ JQ23- ■ ■ B1 -Z -	
	1035	85	1.43	9380	5.5	137	2KJ3005- ■ JQ23- ■ ■ A1 -Z -	
	<b>E.89-LE160MPA4P</b>							
	263	330	5.62	8000	0.96	115	2KJ3004- ■ JQ23- ■ ■ N1 -Z -	
	303	290	4.89	8000	1.2	115	2KJ3004- ■ JQ23- ■ ■ L1 -Z -	
	340	255	4.35	8000	1.4	115	2KJ3004- ■ JQ23- ■ ■ K1 -Z -	
	383	225	3.86	8000	1.6	115	2KJ3004- ■ JQ23- ■ ■ J1 -Z -	
	428	205	3.46	8000	1.8	115	2KJ3004- ■ JQ23- ■ ■ H1 -Z -	
	500	176	2.96	8000	2	115	2KJ3004- ■ JQ23- ■ ■ G1 -Z -	
	561	157	2.64	8000	2.3	115	2KJ3004- ■ JQ23- ■ ■ F1 -Z -	
	635	138	2.33	7800	2.6	115	2KJ3004- ■ JQ23- ■ ■ E1 -Z -	
	722	122	2.05	7560	3	115	2KJ3004- ■ JQ23- ■ ■ D1 -Z -	
	831	106	1.78	7310	3.5	115	2KJ3004- ■ JQ23- ■ ■ C1 -Z -	
	974	90	1.52	7030	4	115	2KJ3004- ■ JQ23- ■ ■ B1 -Z -	
	1138	77	1.30	6750	4.7	115	2KJ3004- ■ JQ23- ■ ■ A1 -Z -	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>9.2</b>	<b>E.69-LE160MPA4P</b>							
	392	220	3.78	6100	0.89	98	2KJ3003- ■ JQ23- ■ ■ H1 -Z -	
	448	196	3.30	6100	1	98	2KJ3003- ■ JQ23- ■ ■ G1 -Z -	
	502	175	2.95	6100	1.1	98	2KJ3003- ■ JQ23- ■ ■ F1 -Z -	
	667	132	2.22	6100	1.5	98	2KJ3003- ■ JQ23- ■ ■ D1 -Z -	
	755	116	1.96	6100	1.7	98	2KJ3003- ■ JQ23- ■ ■ C1 -Z -	
	886	99	1.67	6040	2	98	2KJ3003- ■ JQ23- ■ ■ B1 -Z -	
	1035	85	1.43	5910	2.3	98	2KJ3003- ■ JQ23- ■ ■ A1 -Z -	
<b>11</b>	<b>D.189-LE160MPB4P</b>							
	4.7	22300	313.63	107000	0.85	709	2KJ3214- ■ JR23- ■ ■ T1 -Z -	
	5.3	19900	280.59	107000	0.95	709	2KJ3214- ■ JR23- ■ ■ S1 -Z -	
	5.8	18000	253.06	107000	1.1	709	2KJ3214- ■ JR23- ■ ■ R1 -Z -	
	6.6	15900	223.66	107000	1.2	709	2KJ3214- ■ JR23- ■ ■ Q1 -Z -	
	7.2	14500	204.44	107000	1.3	709	2KJ3214- ■ JR23- ■ ■ P1 -Z -	
	8	13000	183.92	107000	1.5	709	2KJ3214- ■ JR23- ■ ■ N1 -Z -	
	9	11700	164.36	107000	1.6	709	2KJ3214- ■ JR23- ■ ■ M1 -Z -	
	9.9	10500	148.63	107000	1.8	709	2KJ3214- ■ JR23- ■ ■ L1 -Z -	
	11	9340	131.17	107000	2	709	2KJ3214- ■ JR23- ■ ■ K1 -Z -	
	<b>D.169-LE160MPB4P</b>							
	6.1	17300	243.68	68900	0.81	496	2KJ3213- ■ JR23- ■ ■ S1 -Z -	
	6.7	15700	220.58	69500	0.89	496	2KJ3213- ■ JR23- ■ ■ R1 -Z -	
	7.6	13700	193.75	70200	1	496	2KJ3213- ■ JR23- ■ ■ Q1 -Z -	
	8.4	12500	175.57	70700	1.1	496	2KJ3213- ■ JR23- ■ ■ P1 -Z -	
	9.4	11100	156.36	71200	1.3	496	2KJ3213- ■ JR23- ■ ■ N1 -Z -	
	11	10000	140.41	71600	1.4	496	2KJ3213- ■ JR23- ■ ■ M1 -Z -	
	12	8920	125.28	72000	1.6	496	2KJ3213- ■ JR23- ■ ■ L1 -Z -	
	13	7950	111.69	72400	1.8	496	2KJ3213- ■ JR23- ■ ■ K1 -Z -	
	15	7050	99.06	72700	2	496	2KJ3213- ■ JR23- ■ ■ J1 -Z -	
	16	6470	90.94	72900	2.2	496	2KJ3213- ■ JR23- ■ ■ H1 -Z -	
	<b>D.149-LE160MPB4P</b>							
	11	9840	138.26	50300	0.81	317	2KJ3212- ■ JR23- ■ ■ N1 -Z -	
	12	8760	123.04	50800	0.91	317	2KJ3212- ■ JR23- ■ ■ M1 -Z -	
	13	7850	110.26	51200	1	317	2KJ3212- ■ JR23- ■ ■ L1 -Z -	
	15	6960	97.75	51600	1.1	317	2KJ3212- ■ JR23- ■ ■ K1 -Z -	
	17	6140	86.29	52100	1.3	317	2KJ3212- ■ JR23- ■ ■ J1 -Z -	
	19	5400	75.87	52400	1.5	317	2KJ3212- ■ JR23- ■ ■ H1 -Z -	
	21	4890	68.71	52700	1.6	317	2KJ3212- ■ JR23- ■ ■ G1 -Z -	
	<b>Z.149-LE160MPB4P</b>							
	26	4030	56.64	53100	2	311	2KJ3112- ■ JR23- ■ ■ W1 -Z -	
	28	3760	52.84	53200	2	311	2KJ3112- ■ JR23- ■ ■ V1 -Z -	
	31	3340	46.98	53200	2.3	311	2KJ3112- ■ JR23- ■ ■ U1 -Z -	
	35	3000	42.18	51800	2.5	311	2KJ3112- ■ JR23- ■ ■ T1 -Z -	
	<b>D.129-LE160MPB4P</b>							
	19	5610	78.78	26700	0.89	233	2KJ3211- ■ JR23- ■ ■ C1 -Z -	
	<b>Z.129-LE160MPB4P</b>							
	24	4450	62.48	27300	1.1	229	2KJ3111- ■ JR23- ■ ■ X1 -Z -	
	28	3800	53.47	27700	1.3	229	2KJ3111- ■ JR23- ■ ■ W1 -Z -	
	29	3580	50.33	27900	1.4	229	2KJ3111- ■ JR23- ■ ■ V1 -Z -	
	31	3360	47.18	28000	1.5	229	2KJ3111- ■ JR23- ■ ■ U1 -Z -	
35	2970	41.82	28200	1.7	229	2KJ3111- ■ JR23- ■ ■ T1 -Z -		
40	2640	37.15	28400	1.9	229	2KJ3111- ■ JR23- ■ ■ S1 -Z -		
44	2380	33.52	28500	2.1	229	2KJ3111- ■ JR23- ■ ■ R1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
11	<b>Z.129-LE160MPB4P</b>							
	50	2110	29.70	28600	2.4	229	2KJ3111- ■ JR23- ■ ■ Q1 -Z -	
	56	1870	26.30	27800	2.7	229	2KJ3111- ■ JR23- ■ ■ P1 -Z -	
	63	1660	23.41	27100	3	229	2KJ3111- ■ JR23- ■ ■ N1 -Z -	
	<b>Z.109-LE160MPB4P</b>							
	29	3640	51.17	20200	0.85	167	2KJ3110- ■ JR23- ■ ■ X1 -Z -	
	34	3100	43.64	20200	1	167	2KJ3110- ■ JR23- ■ ■ W1 -Z -	
	36	2920	41.07	20200	1.1	167	2KJ3110- ■ JR23- ■ ■ V1 -Z -	
	39	2710	38.12	20200	1.1	167	2KJ3110- ■ JR23- ■ ■ U1 -Z -	
	44	2400	33.70	20200	1.3	167	2KJ3110- ■ JR23- ■ ■ T1 -Z -	
	49	2140	30.08	20200	1.4	167	2KJ3110- ■ JR23- ■ ■ S1 -Z -	
	54	1920	27.07	20200	1.6	167	2KJ3110- ■ JR23- ■ ■ R1 -Z -	
	63	1670	23.49	20200	1.7	167	2KJ3110- ■ JR23- ■ ■ Q1 -Z -	
	70	1500	21.13	20200	1.9	167	2KJ3110- ■ JR23- ■ ■ P1 -Z -	
	80	1310	18.47	20200	2.1	167	2KJ3110- ■ JR23- ■ ■ N1 -Z -	
	90	1170	16.48	19900	2.2	167	2KJ3110- ■ JR23- ■ ■ M1 -Z -	
	102	1030	14.52	19400	2.5	167	2KJ3110- ■ JR23- ■ ■ L1 -Z -	
	116	905	12.72	18800	2.8	167	2KJ3110- ■ JR23- ■ ■ K1 -Z -	
	133	790	11.09	18200	3.1	167	2KJ3110- ■ JR23- ■ ■ J1 -Z -	
	146	720	10.12	17900	3.4	167	2KJ3110- ■ JR23- ■ ■ H1 -Z -	
	169	620	8.71	17200	3.8	167	2KJ3110- ■ JR23- ■ ■ G1 -Z -	
	175	595	8.41	17000	3.8	167	2KJ3110- ■ JR23- ■ ■ F1 -Z -	
	199	525	7.41	16500	4.3	167	2KJ3110- ■ JR23- ■ ■ E1 -Z -	
	<b>Z.89-LE160MPB4P</b>							
	51	2060	29.01	15700	0.81	129	2KJ3108- ■ JR23- ■ ■ R1 -Z -	
	57	1830	25.81	17000	0.91	129	2KJ3108- ■ JR23- ■ ■ Q1 -Z -	
	64	1630	22.92	17900	1	129	2KJ3108- ■ JR23- ■ ■ P1 -Z -	
	72	1460	20.52	17700	1.1	129	2KJ3108- ■ JR23- ■ ■ N1 -Z -	
	84	1240	17.54	17200	1.3	129	2KJ3108- ■ JR23- ■ ■ M1 -Z -	
	94	1110	15.66	16800	1.5	129	2KJ3108- ■ JR23- ■ ■ L1 -Z -	
	107	985	13.84	16400	1.7	129	2KJ3108- ■ JR23- ■ ■ K1 -Z -	
	121	865	12.15	15900	1.9	129	2KJ3108- ■ JR23- ■ ■ J1 -Z -	
	139	750	10.58	15400	2.1	129	2KJ3108- ■ JR23- ■ ■ H1 -Z -	
163	640	9.04	14800	2.4	129	2KJ3108- ■ JR23- ■ ■ G1 -Z -		
191	550	7.74	14200	2.8	129	2KJ3108- ■ JR23- ■ ■ F1 -Z -		
214	490	6.89	13900	2.1	129	2KJ3108- ■ JR23- ■ ■ E1 -Z -		
244	430	6.05	13400	2.5	129	2KJ3108- ■ JR23- ■ ■ D1 -Z -		
280	375	5.26	12900	2.8	129	2KJ3108- ■ JR23- ■ ■ C1 -Z -		
328	320	4.50	12300	3.3	129	2KJ3108- ■ JR23- ■ ■ B1 -Z -		
383	270	3.85	11800	3.9	129	2KJ3108- ■ JR23- ■ ■ A1 -Z -		
<b>Z.79-LE160MPB4P</b>								
114	925	12.99	9850	0.91	106	2KJ3107- ■ JR23- ■ ■ K1 -Z -		
128	815	11.48	9680	1	106	2KJ3107- ■ JR23- ■ ■ J1 -Z -		
151	695	9.76	9400	1.2	106	2KJ3107- ■ JR23- ■ ■ H1 -Z -		
176	595	8.37	4990	1.3	106	2KJ3107- ■ JR23- ■ ■ G1 -Z -		
180	580	8.19	8880	1.2	106	2KJ3107- ■ JR23- ■ ■ F1 -Z -		
206	510	7.16	8650	1.4	106	2KJ3107- ■ JR23- ■ ■ E1 -Z -		
240	435	6.15	4550	1.6	106	2KJ3107- ■ JR23- ■ ■ D1 -Z -		
272	385	5.43	4970	1.8	106	2KJ3107- ■ JR23- ■ ■ C1 -Z -		
319	325	4.62	5440	2.4	106	2KJ3107- ■ JR23- ■ ■ B1 -Z -		
372	280	3.96	5700	2.7	106	2KJ3107- ■ JR23- ■ ■ A1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
11	<b>E.149-LE160MPB4P</b>							
	151	695	9.76	16000	1.7	190	2KJ3007- ■ JR23- ■ ■ S1 -Z -	-
	162	645	9.11	16000	1.9	190	2KJ3007- ■ JR23- ■ ■ R1 -Z -	-
	182	575	8.10	16000	2.3	190	2KJ3007- ■ JR23- ■ ■ Q1 -Z -	-
	203	515	7.27	16000	2.6	190	2KJ3007- ■ JR23- ■ ■ P1 -Z -	-
	224	465	6.58	16000	2.8	190	2KJ3007- ■ JR23- ■ ■ N1 -Z -	-
	255	410	5.78	16000	3.6	190	2KJ3007- ■ JR23- ■ ■ M1 -Z -	-
	281	370	5.24	16000	4	190	2KJ3007- ■ JR23- ■ ■ L1 -Z -	-
	316	330	4.67	16000	4.4	190	2KJ3007- ■ JR23- ■ ■ K1 -Z -	-
	352	295	4.19	15800	5	190	2KJ3007- ■ JR23- ■ ■ J1 -Z -	-
	<b>E.129-LE160MPB4P</b>							
	151	695	9.79	13500	0.95	153	2KJ3006- ■ JR23- ■ ■ T1 -Z -	-
	176	595	8.38	13500	1.1	153	2KJ3006- ■ JR23- ■ ■ S1 -Z -	-
	187	560	7.88	13500	1.2	153	2KJ3006- ■ JR23- ■ ■ R1 -Z -	-
	200	525	7.39	13500	1.5	153	2KJ3006- ■ JR23- ■ ■ Q1 -Z -	-
	225	465	6.55	13500	1.7	153	2KJ3006- ■ JR23- ■ ■ P1 -Z -	-
	253	415	5.82	13500	1.9	153	2KJ3006- ■ JR23- ■ ■ N1 -Z -	-
	281	370	5.25	13500	2.1	153	2KJ3006- ■ JR23- ■ ■ M1 -Z -	-
	317	330	4.65	13500	2.4	153	2KJ3006- ■ JR23- ■ ■ L1 -Z -	-
	358	290	4.12	13500	2.7	153	2KJ3006- ■ JR23- ■ ■ K1 -Z -	-
	402	260	3.67	13100	3	153	2KJ3006- ■ JR23- ■ ■ J1 -Z -	-
	448	230	3.29	12800	3.3	153	2KJ3006- ■ JR23- ■ ■ H1 -Z -	-
	507	205	2.91	12400	3.7	153	2KJ3006- ■ JR23- ■ ■ G1 -Z -	-
	574	183	2.57	12100	4.2	153	2KJ3006- ■ JR23- ■ ■ F1 -Z -	-
	653	161	2.26	11700	4.7	153	2KJ3006- ■ JR23- ■ ■ E1 -Z -	-
	720	146	2.05	11400	5.2	153	2KJ3006- ■ JR23- ■ ■ D1 -Z -	-
	829	127	1.78	11000	6	153	2KJ3006- ■ JR23- ■ ■ C1 -Z -	-
	<b>E.109-LE160MPB4P</b>							
	205	510	7.19	10500	1.1	129	2KJ3005- ■ JR23- ■ ■ Q1 -Z -	-
	218	480	6.76	10500	1.2	129	2KJ3005- ■ JR23- ■ ■ P1 -Z -	-
	235	445	6.28	10500	1.3	129	2KJ3005- ■ JR23- ■ ■ N1 -Z -	-
	266	395	5.55	10500	1.4	129	2KJ3005- ■ JR23- ■ ■ M1 -Z -	-
	298	350	4.95	10500	1.6	129	2KJ3005- ■ JR23- ■ ■ L1 -Z -	-
	331	315	4.46	10500	1.8	129	2KJ3005- ■ JR23- ■ ■ K1 -Z -	-
	381	275	3.87	10500	2	129	2KJ3005- ■ JR23- ■ ■ J1 -Z -	-
424	245	3.48	10500	2.2	129	2KJ3005- ■ JR23- ■ ■ H1 -Z -	-	
485	215	3.04	10500	2.5	129	2KJ3005- ■ JR23- ■ ■ G1 -Z -	-	
544	193	2.71	10500	2.8	129	2KJ3005- ■ JR23- ■ ■ F1 -Z -	-	
617	170	2.39	10500	3.2	129	2KJ3005- ■ JR23- ■ ■ E1 -Z -	-	
702	150	2.10	10200	3.6	129	2KJ3005- ■ JR23- ■ ■ D1 -Z -	-	
806	130	1.83	9890	4.1	129	2KJ3005- ■ JR23- ■ ■ C1 -Z -	-	
883	119	1.67	9650	4.5	129	2KJ3005- ■ JR23- ■ ■ B1 -Z -	-	
1031	102	1.43	9280	4.6	129	2KJ3005- ■ JR23- ■ ■ A1 -Z -	-	
<b>E.89-LE160MPB4P</b>								
262	400	5.62	8000	0.8	107	2KJ3004- ■ JR23- ■ ■ N1 -Z -	-	
302	345	4.89	8000	1	107	2KJ3004- ■ JR23- ■ ■ L1 -Z -	-	
339	310	4.35	8000	1.2	107	2KJ3004- ■ JR23- ■ ■ K1 -Z -	-	
382	275	3.86	8000	1.3	107	2KJ3004- ■ JR23- ■ ■ J1 -Z -	-	
426	245	3.46	8000	1.5	107	2KJ3004- ■ JR23- ■ ■ H1 -Z -	-	
498	210	2.96	8000	1.7	107	2KJ3004- ■ JR23- ■ ■ G1 -Z -	-	
559	188	2.64	7820	1.9	107	2KJ3004- ■ JR23- ■ ■ F1 -Z -	-	
633	166	2.33	7620	2.2	107	2KJ3004- ■ JR23- ■ ■ E1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles	
11	<b>E.89-LE160MPB4P</b>								
	720	146	2.05	7400	2.5	107	2KJ3004- ■ JR23- ■ ■ D1 -Z -	-	
	829	127	1.78	7160	2.9	107	2KJ3004- ■ JR23- ■ ■ C1 -Z -	-	
	970	108	1.52	6900	3.3	107	2KJ3004- ■ JR23- ■ ■ B1 -Z -	-	
	1135	93	1.30	6630	3.9	107	2KJ3004- ■ JR23- ■ ■ A1 -Z -	-	
	<b>E.69-LE160MPB4P</b>								
	447	235	3.30	5190	0.85	90	2KJ3003- ■ JR23- ■ ■ G1 -Z -	-	
	500	210	2.95	5390	0.95	90	2KJ3003- ■ JR23- ■ ■ F1 -Z -	-	
	883	119	1.67	5450	1.6	90	2KJ3003- ■ JR23- ■ ■ B1 -Z -	-	
	1031	102	1.43	5370	1.9	90	2KJ3003- ■ JR23- ■ ■ A1 -Z -	-	
	15	<b>D.189-LE160ZLL4P</b>							
		6.6	21700	223.66	107000	0.87	734	2KJ3214- ■ JU23- ■ ■ Q1 -Z -	-
		7.2	19800	204.44	107000	0.96	734	2KJ3214- ■ JU23- ■ ■ P1 -Z -	-
		8	17800	183.92	107000	1.1	734	2KJ3214- ■ JU23- ■ ■ M1 -Z -	-
9		15900	164.36	107000	1.2	734	2KJ3214- ■ JU23- ■ ■ N1 -Z -	-	
9.9		14400	148.63	107000	1.3	734	2KJ3214- ■ JU23- ■ ■ L1 -Z -	-	
11		12700	131.17	107000	1.5	734	2KJ3214- ■ JU23- ■ ■ K1 -Z -	-	
13		11300	116.88	107000	1.7	734	2KJ3214- ■ JU23- ■ ■ J1 -Z -	-	
14		10200	105.89	107000	1.8	734	2KJ3214- ■ JU23- ■ ■ H1 -Z -	-	
15		9250	95.24	107000	2.1	734	2KJ3214- ■ JU23- ■ ■ G1 -Z -	-	
<b>D.169-LE160ZLL4P</b>									
8.4		17000	175.57	69000	0.82	521	2KJ3213- ■ JU23- ■ ■ P1 -Z -	-	
9.4		15100	156.36	69700	0.92	521	2KJ3213- ■ JU23- ■ ■ N1 -Z -	-	
11		13600	140.41	70300	1	521	2KJ3213- ■ JU23- ■ ■ M1 -Z -	-	
12		12100	125.28	70800	1.2	521	2KJ3213- ■ JU23- ■ ■ L1 -Z -	-	
13		10800	111.69	71300	1.3	521	2KJ3213- ■ JU23- ■ ■ K1 -Z -	-	
15		9620	99.06	71800	1.5	521	2KJ3213- ■ JU23- ■ ■ J1 -Z -	-	
16		8830	90.94	72100	1.6	521	2KJ3213- ■ JU23- ■ ■ H1 -Z -	-	
18		7780	80.12	72400	1.8	521	2KJ3213- ■ JU23- ■ ■ G1 -Z -	-	
22		6380	65.72	72900	2.2	521	2KJ3213- ■ JU23- ■ ■ F1 -Z -	-	
<b>D.149-LE160ZLL4P</b>									
15		9490	97.75	50400	0.84	342	2KJ3212- ■ JU23- ■ ■ K1 -Z -	-	
17		8380	86.29	51000	0.95	342	2KJ3212- ■ JU23- ■ ■ J1 -Z -	-	
19		7360	75.87	51500	1.1	342	2KJ3212- ■ JU23- ■ ■ H1 -Z -	-	
21		6670	68.71	51800	1.2	342	2KJ3212- ■ JU23- ■ ■ G1 -Z -	-	
<b>Z.149-LE160ZLL4P</b>									
26		5500	56.64	52400	1.5	336	2KJ3112- ■ JU23- ■ ■ W1 -Z -	-	
28		5130	52.84	52500	1.5	336	2KJ3112- ■ JU23- ■ ■ V1 -Z -	-	
31		4560	46.98	51500	1.7	336	2KJ3112- ■ JU23- ■ ■ U1 -Z -	-	
35		4090	42.18	50300	1.9	336	2KJ3112- ■ JU23- ■ ■ T1 -Z -	-	
39	3700	38.18	49200	2	336	2KJ3112- ■ JU23- ■ ■ S1 -Z -	-		
44	3250	33.54	47700	2.5	336	2KJ3112- ■ JU23- ■ ■ R1 -Z -	-		
49	2950	30.39	46600	2.7	336	2KJ3112- ■ JU23- ■ ■ Q1 -Z -	-		
24	6060	62.48	26400	0.82	254	2KJ3111- ■ JU23- ■ ■ X1 -Z -	-		
28	5190	53.47	26900	0.96	254	2KJ3111- ■ JU23- ■ ■ W1 -Z -	-		
29	4880	50.33	27100	1	254	2KJ3111- ■ JU23- ■ ■ V1 -Z -	-		
31	4580	47.18	27300	1.1	254	2KJ3111- ■ JU23- ■ ■ U1 -Z -	-		
35	4060	41.82	27600	1.2	254	2KJ3111- ■ JU23- ■ ■ T1 -Z -	-		
40	3600	37.15	27800	1.4	254	2KJ3111- ■ JU23- ■ ■ S1 -Z -	-		
44	3250	33.52	27800	1.5	254	2KJ3111- ■ JU23- ■ ■ R1 -Z -	-		
50	2880	29.70	27300	1.7	254	2KJ3111- ■ JU23- ■ ■ Q1 -Z -	-		
56	2550	26.30	26700	2	254	2KJ3111- ■ JU23- ■ ■ P1 -Z -	-		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>15</b>	<b>Z.149-LE160ZLL4P</b>							
	63	2270	23.41	26100	2.2	254	2KJ3111- ■ JU23- ■ ■ N1 -Z -	-
	70	2030	20.98	25500	2.5	254	2KJ3111- ■ JU23- ■ ■ M1 -Z -	-
	79	1800	18.60	24900	2.8	254	2KJ3111- ■ JU23- ■ ■ L1 -Z -	-
	90	1590	16.42	24200	3.1	254	2KJ3111- ■ JU23- ■ ■ K1 -Z -	-
	102	1400	14.43	23500	3.5	254	2KJ3111- ■ JU23- ■ ■ J1 -Z -	-
	<b>Z.109-LE160ZLL4P</b>							
	39	3700	38.12	20100	0.84	192	2KJ3110- ■ JU23- ■ ■ U1 -Z -	-
	44	3270	33.70	20200	0.95	192	2KJ3110- ■ JU23- ■ ■ T1 -Z -	-
	49	2920	30.08	20200	1.1	192	2KJ3110- ■ JU23- ■ ■ S1 -Z -	-
	54	2620	27.07	20200	1.2	192	2KJ3110- ■ JU23- ■ ■ R1 -Z -	-
	63	2280	23.49	19900	1.3	192	2KJ3110- ■ JU23- ■ ■ Q1 -Z -	-
	70	2050	21.13	19600	1.4	192	2KJ3110- ■ JU23- ■ ■ P1 -Z -	-
	80	1790	18.47	19200	1.5	192	2KJ3110- ■ JU23- ■ ■ M1 -Z -	-
	90	1600	16.48	18900	1.6	192	2KJ3110- ■ JU23- ■ ■ N1 -Z -	-
102	1410	14.52	18500	1.8	192	2KJ3110- ■ JU23- ■ ■ L1 -Z -	-	
116	1230	12.72	18100	2	192	2KJ3110- ■ JU23- ■ ■ K1 -Z -	-	
133	1070	11.09	17600	2.3	192	2KJ3110- ■ JU23- ■ ■ J1 -Z -	-	
146	980	10.12	17300	2.5	192	2KJ3110- ■ JU23- ■ ■ H1 -Z -	-	
169	845	8.71	16700	2.8	192	2KJ3110- ■ JU23- ■ ■ G1 -Z -	-	
175	815	8.41	16400	2.8	192	2KJ3110- ■ JU23- ■ ■ F1 -Z -	-	
199	720	7.41	16000	3.2	192	2KJ3110- ■ JU23- ■ ■ E1 -Z -	-	
227	630	6.50	15500	3.6	192	2KJ3110- ■ JU23- ■ ■ D1 -Z -	-	
261	550	5.66	15000	4.2	192	2KJ3110- ■ JU23- ■ ■ C1 -Z -	-	
285	500	5.17	14700	4.5	192	2KJ3110- ■ JU23- ■ ■ B1 -Z -	-	
331	430	4.45	14200	5	192	2KJ3110- ■ JU23- ■ ■ A1 -Z -	-	
<b>Z.89-LE160ZLL4P</b>								
72	1990	20.52	12100	0.84	154	2KJ3108- ■ JU23- ■ ■ N1 -Z -	-	
84	1700	17.54	13800	0.99	154	2KJ3108- ■ JU23- ■ ■ M1 -Z -	-	
94	1520	15.66	14700	1.1	154	2KJ3108- ■ JU23- ■ ■ L1 -Z -	-	
107	1340	13.84	15300	1.2	154	2KJ3108- ■ JU23- ■ ■ K1 -Z -	-	
121	1180	12.15	15000	1.4	154	2KJ3108- ■ JU23- ■ ■ J1 -Z -	-	
139	1020	10.58	14600	1.5	154	2KJ3108- ■ JU23- ■ ■ H1 -Z -	-	
163	875	9.04	14100	1.8	154	2KJ3108- ■ JU23- ■ ■ G1 -Z -	-	
191	750	7.74	13600	2	154	2KJ3108- ■ JU23- ■ ■ F1 -Z -	-	
214	665	6.89	13400	1.6	154	2KJ3108- ■ JU23- ■ ■ E1 -Z -	-	
244	585	6.05	13000	1.8	154	2KJ3108- ■ JU23- ■ ■ D1 -Z -	-	
280	510	5.26	12500	2.1	154	2KJ3108- ■ JU23- ■ ■ C1 -Z -	-	
328	435	4.50	12000	2.4	154	2KJ3108- ■ JU23- ■ ■ B1 -Z -	-	
383	370	3.85	11500	2.8	154	2KJ3108- ■ JU23- ■ ■ A1 -Z -	-	
<b>Z.79-LE160ZLL4P</b>								
151	945	9.76	8640	0.86	131	2KJ3107- ■ JU23- ■ ■ H1 -Z -	-	
176	810	8.37	8480	0.97	131	2KJ3107- ■ JU23- ■ ■ G1 -Z -	-	
180	795	8.19	8150	0.9	131	2KJ3107- ■ JU23- ■ ■ F1 -Z -	-	
206	695	7.16	8020	1	131	2KJ3107- ■ JU23- ■ ■ E1 -Z -	-	
240	595	6.15	7840	1.2	131	2KJ3107- ■ JU23- ■ ■ D1 -Z -	-	
272	525	5.43	7680	1.3	131	2KJ3107- ■ JU23- ■ ■ C1 -Z -	-	
319	445	4.62	7460	1.7	131	2KJ3107- ■ JU23- ■ ■ B1 -Z -	-	
372	385	3.96	3760	2	131	2KJ3107- ■ JU23- ■ ■ A1 -Z -	-	
<b>E.149-LE160ZLL4P</b>								
151	945	9.76	16000	1.3	215	2KJ3007- ■ JU23- ■ ■ S1 -Z -	-	
162	885	9.11	16000	1.4	215	2KJ3007- ■ JU23- ■ ■ R1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
15	<b>E.149-LE160ZLL4P</b>							
	182	785	8.10	16000	1.7	215	2KJ3007- ■ JU23- ■ ■ Q1 -Z -	-
	203	705	7.27	16000	1.9	215	2KJ3007- ■ JU23- ■ ■ P1 -Z -	-
	224	635	6.58	16000	2.1	215	2KJ3007- ■ JU23- ■ ■ M1 -Z -	-
	255	560	5.78	16000	2.7	215	2KJ3007- ■ JU23- ■ ■ N1 -Z -	-
	281	505	5.24	16000	2.9	215	2KJ3007- ■ JU23- ■ ■ L1 -Z -	-
	316	450	4.67	15700	3.3	215	2KJ3007- ■ JU23- ■ ■ K1 -Z -	-
	352	405	4.19	15300	3.6	215	2KJ3007- ■ JU23- ■ ■ J1 -Z -	-
	394	360	3.74	14900	4.1	215	2KJ3007- ■ JU23- ■ ■ H1 -Z -	-
	443	320	3.33	14500	4.6	215	2KJ3007- ■ JU23- ■ ■ G1 -Z -	-
	498	285	2.96	14100	5.1	215	2KJ3007- ■ JU23- ■ ■ F1 -Z -	-
	544	260	2.71	13800	5.5	215	2KJ3007- ■ JU23- ■ ■ E1 -Z -	-
	<b>E.129-LE160ZLL4P</b>							
	176	810	8.38	13500	0.82	178	2KJ3006- ■ JU23- ■ ■ S1 -Z -	-
	187	765	7.88	13500	0.87	178	2KJ3006- ■ JU23- ■ ■ R1 -Z -	-
200	715	7.39	13500	1.1	178	2KJ3006- ■ JU23- ■ ■ Q1 -Z -	-	
225	635	6.55	13500	1.3	178	2KJ3006- ■ JU23- ■ ■ P1 -Z -	-	
253	565	5.82	13500	1.4	178	2KJ3006- ■ JU23- ■ ■ N1 -Z -	-	
281	510	5.25	13500	1.6	178	2KJ3006- ■ JU23- ■ ■ M1 -Z -	-	
317	450	4.65	13200	1.8	178	2KJ3006- ■ JU23- ■ ■ L1 -Z -	-	
358	400	4.12	12900	2	178	2KJ3006- ■ JU23- ■ ■ K1 -Z -	-	
402	355	3.67	12600	2.2	178	2KJ3006- ■ JU23- ■ ■ J1 -Z -	-	
448	320	3.29	12300	2.4	178	2KJ3006- ■ JU23- ■ ■ H1 -Z -	-	
507	280	2.91	12000	2.7	178	2KJ3006- ■ JU23- ■ ■ G1 -Z -	-	
574	250	2.57	11600	3.1	178	2KJ3006- ■ JU23- ■ ■ F1 -Z -	-	
653	215	2.26	11300	3.5	178	2KJ3006- ■ JU23- ■ ■ E1 -Z -	-	
720	199	2.05	11000	3.8	178	2KJ3006- ■ JU23- ■ ■ D1 -Z -	-	
829	173	1.78	10700	4.4	178	2KJ3006- ■ JU23- ■ ■ C1 -Z -	-	
1010	142	1.46	10100	5.3	178	2KJ3006- ■ JU23- ■ ■ B1 -Z -	-	
1190	120	1.24	9750	6.2	178	2KJ3006- ■ JU23- ■ ■ A1 -Z -	-	
<b>E.109-LE160ZLL4P</b>								
205	695	7.19	10500	0.81	154	2KJ3005- ■ JU23- ■ ■ Q1 -Z -	-	
218	655	6.76	10500	0.86	154	2KJ3005- ■ JU23- ■ ■ P1 -Z -	-	
235	610	6.28	10500	0.93	154	2KJ3005- ■ JU23- ■ ■ M1 -Z -	-	
266	535	5.55	10500	1	154	2KJ3005- ■ JU23- ■ ■ N1 -Z -	-	
298	480	4.95	10500	1.2	154	2KJ3005- ■ JU23- ■ ■ L1 -Z -	-	
331	430	4.46	10500	1.3	154	2KJ3005- ■ JU23- ■ ■ K1 -Z -	-	
381	375	3.87	10500	1.5	154	2KJ3005- ■ JU23- ■ ■ J1 -Z -	-	
424	335	3.48	10500	1.6	154	2KJ3005- ■ JU23- ■ ■ H1 -Z -	-	
485	295	3.04	10500	1.8	154	2KJ3005- ■ JU23- ■ ■ G1 -Z -	-	
544	260	2.71	10500	2.1	154	2KJ3005- ■ JU23- ■ ■ F1 -Z -	-	
617	230	2.39	10200	2.3	154	2KJ3005- ■ JU23- ■ ■ E1 -Z -	-	
702	200	2.10	9940	2.6	154	2KJ3005- ■ JU23- ■ ■ D1 -Z -	-	
806	178	1.83	9590	3	154	2KJ3005- ■ JU23- ■ ■ C1 -Z -	-	
883	162	1.67	9390	3.3	154	2KJ3005- ■ JU23- ■ ■ B1 -Z -	-	
1031	139	1.43	9040	3.3	154	2KJ3005- ■ JU23- ■ ■ A1 -Z -	-	
<b>E.89-LE160ZLL4P</b>								
339	420	4.35	7010	0.85	132	2KJ3004- ■ JU23- ■ ■ K1 -Z -	-	
382	375	3.86	7190	0.96	132	2KJ3004- ■ JU23- ■ ■ J1 -Z -	-	
426	335	3.46	7360	1.1	132	2KJ3004- ■ JU23- ■ ■ H1 -Z -	-	
498	285	2.96	7470	1.3	132	2KJ3004- ■ JU23- ■ ■ G1 -Z -	-	
559	255	2.64	7360	1.4	132	2KJ3004- ■ JU23- ■ ■ F1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>15</b>	<b>E.89-LE160ZLL4P</b>							
	633	225	2.33	7210	1.6	132	2KJ3004- ■ JU23- ■ ■ E1 -Z -	
	720	199	2.05	7020	1.8	132	2KJ3004- ■ JU23- ■ ■ D1 -Z -	
	829	173	1.78	6830	2.1	132	2KJ3004- ■ JU23- ■ ■ C1 -Z -	
	970	148	1.52	6600	2.4	132	2KJ3004- ■ JU23- ■ ■ B1 -Z -	
	1135	126	1.30	6370	2.9	132	2KJ3004- ■ JU23- ■ ■ A1 -Z -	
<b>18.5</b>	<b>D.189-LES180MQ4P</b>							
	8	22100	183.92	107000	0.86	809	2KJ3214- ■ KL33- ■ ■ N1 -Z -	
	8.9	19700	164.36	107000	0.96	809	2KJ3214- ■ KL33- ■ ■ M1 -Z -	
	9.9	17800	148.63	107000	1.1	809	2KJ3214- ■ KL33- ■ ■ L1 -Z -	
	11	15700	131.17	107000	1.2	809	2KJ3214- ■ KL33- ■ ■ K1 -Z -	
	13	14000	116.88	107000	1.4	809	2KJ3214- ■ KL33- ■ ■ J1 -Z -	
	14	12700	105.89	107000	1.5	809	2KJ3214- ■ KL33- ■ ■ H1 -Z -	
	15	11400	95.24	107000	1.7	809	2KJ3214- ■ KL33- ■ ■ G1 -Z -	
	19	9510	79.14	107000	2	809	2KJ3214- ■ KL33- ■ ■ F1 -Z -	
	21	8450	70.36	107000	2.2	809	2KJ3214- ■ KL33- ■ ■ E1 -Z -	
	<b>D.169-LES180MQ4P</b>							
	10	16800	140.41	69100	0.83	590	2KJ3213- ■ KL33- ■ ■ M1 -Z -	
	12	15000	125.28	69700	0.93	590	2KJ3213- ■ KL33- ■ ■ L1 -Z -	
	13	13400	111.69	70400	1	590	2KJ3213- ■ KL33- ■ ■ K1 -Z -	
	15	11900	99.06	70900	1.2	590	2KJ3213- ■ KL33- ■ ■ J1 -Z -	
	16	10900	90.94	71300	1.3	590	2KJ3213- ■ KL33- ■ ■ H1 -Z -	
	18	9620	80.12	71800	1.5	590	2KJ3213- ■ KL33- ■ ■ G1 -Z -	
	22	7890	65.72	72400	1.8	590	2KJ3213- ■ KL33- ■ ■ F1 -Z -	
	26	6920	57.63	72800	2	590	2KJ3213- ■ KL33- ■ ■ E1 -Z -	
	33	5410	45.06	73300	2.6	590	2KJ3213- ■ KL33- ■ ■ D1 -Z -	
	<b>D.149-LES180MQ4P</b>							
	19	9110	75.87	50600	0.88	421	2KJ3212- ■ KL33- ■ ■ H1 -Z -	
	21	8250	68.71	51000	0.97	421	2KJ3212- ■ KL33- ■ ■ G1 -Z -	
	25	7190	59.82	51600	1.1	421	2KJ3212- ■ KL33- ■ ■ F1 -Z -	
	30	5890	49.05	50500	1.4	421	2KJ3212- ■ KL33- ■ ■ E1 -Z -	
	34	5220	43.51	49300	1.5	421	2KJ3212- ■ KL33- ■ ■ D1 -Z -	
	37	4730	39.41	48400	1.7	421	2KJ3212- ■ KL33- ■ ■ C1 -Z -	
	43	4120	34.31	47000	1.9	421	2KJ3212- ■ KL33- ■ ■ B1 -Z -	
	<b>Z.149-LES180MQ4P</b>							
	48	3650	30.39	45700	2.2	415	2KJ3112- ■ KL33- ■ ■ Q1 -Z -	
	54	3250	27.07	44500	2.5	415	2KJ3112- ■ KL33- ■ ■ P1 -Z -	
	60	2920	24.30	43400	2.7	415	2KJ3112- ■ KL33- ■ ■ N1 -Z -	
	68	2600	21.69	42300	3.1	415	2KJ3112- ■ KL33- ■ ■ M1 -Z -	
<b>Z.129-LES180MQ4P</b>								
56	3160	26.30	25700	1.6	331	2KJ3111- ■ KL33- ■ ■ P1 -Z -		
63	2810	23.41	25200	1.8	331	2KJ3111- ■ KL33- ■ ■ N1 -Z -		
70	2520	20.98	24700	2	331	2KJ3111- ■ KL33- ■ ■ M1 -Z -		
79	2230	18.60	24200	2.2	331	2KJ3111- ■ KL33- ■ ■ L1 -Z -		
90	1970	16.42	23600	2.5	331	2KJ3111- ■ KL33- ■ ■ K1 -Z -		
102	1730	14.43	23000	2.8	331	2KJ3111- ■ KL33- ■ ■ J1 -Z -		
112	1570	13.07	22500	3.1	331	2KJ3111- ■ KL33- ■ ■ H1 -Z -		
129	1360	11.38	21800	3.5	331	2KJ3111- ■ KL33- ■ ■ G1 -Z -		
172	1020	8.53	20100	3.6	331	2KJ3111- ■ KL33- ■ ■ E1 -Z -		
196	900	7.50	19500	4	331	2KJ3111- ■ KL33- ■ ■ D1 -Z -		
216	815	6.79	19100	4.4	331	2KJ3111- ■ KL33- ■ ■ C1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/48
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, B, F or H</b>	see page 10/42

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>18.5</b>	<b>Z.109-LES180MQ4P</b>							
	70	2540	21.13	18500	1.1	271	2KJ3110- ■ KL33- ■ ■ P1 -Z -	-
	80	2220	18.47	18300	1.2	271	2KJ3110- ■ KL33- ■ ■ N1 -Z -	-
	89	1980	16.48	18000	1.3	271	2KJ3110- ■ KL33- ■ ■ M1 -Z -	-
	101	1740	14.52	17800	1.5	271	2KJ3110- ■ KL33- ■ ■ L1 -Z -	-
	116	1520	12.72	17400	1.6	271	2KJ3110- ■ KL33- ■ ■ K1 -Z -	-
	133	1330	11.09	17000	1.8	271	2KJ3110- ■ KL33- ■ ■ J1 -Z -	-
	145	1210	10.12	16700	2	271	2KJ3110- ■ KL33- ■ ■ H1 -Z -	-
	169	1040	8.71	16300	2.3	271	2KJ3110- ■ KL33- ■ ■ G1 -Z -	-
	175	1010	8.41	16000	2.3	271	2KJ3110- ■ KL33- ■ ■ F1 -Z -	-
	198	890	7.41	15600	2.6	271	2KJ3110- ■ KL33- ■ ■ E1 -Z -	-
	226	780	6.50	15200	2.9	271	2KJ3110- ■ KL33- ■ ■ D1 -Z -	-
	260	680	5.66	14700	3.4	271	2KJ3110- ■ KL33- ■ ■ C1 -Z -	-
	284	620	5.17	14400	3.7	271	2KJ3110- ■ KL33- ■ ■ B1 -Z -	-
	330	535	4.45	13900	4	271	2KJ3110- ■ KL33- ■ ■ A1 -Z -	-
	<b>Z.89-LES180MQ4P</b>							
	94	1880	15.66	10300	0.89	230	2KJ3108- ■ KL33- ■ ■ L1 -Z -	-
	106	1660	13.84	11700	1	230	2KJ3108- ■ KL33- ■ ■ K1 -Z -	-
	121	1460	12.15	12800	1.1	230	2KJ3108- ■ KL33- ■ ■ J1 -Z -	-
	139	1270	10.58	13700	1.3	230	2KJ3108- ■ KL33- ■ ■ H1 -Z -	-
	163	1080	9.04	13600	1.4	230	2KJ3108- ■ KL33- ■ ■ G1 -Z -	-
	190	930	7.74	13100	1.6	230	2KJ3108- ■ KL33- ■ ■ F1 -Z -	-
	213	825	6.89	12700	1.3	230	2KJ3108- ■ KL33- ■ ■ E1 -Z -	-
	243	725	6.05	12700	1.5	230	2KJ3108- ■ KL33- ■ ■ D1 -Z -	-
	279	630	5.26	12200	1.7	230	2KJ3108- ■ KL33- ■ ■ C1 -Z -	-
	327	540	4.50	11800	2	230	2KJ3108- ■ KL33- ■ ■ B1 -Z -	-
	382	460	3.85	11300	2.3	230	2KJ3108- ■ KL33- ■ ■ A1 -Z -	-
		<b>E.149-LES180MQ4P</b>						
281		630	5.24	15500	2.4	294	2KJ3007- ■ KL33- ■ ■ L1 -Z -	-
315		560	4.67	15200	2.6	294	2KJ3007- ■ KL33- ■ ■ K1 -Z -	-
351		500	4.19	14900	2.9	294	2KJ3007- ■ KL33- ■ ■ J1 -Z -	-
393		445	3.74	14500	3.3	294	2KJ3007- ■ KL33- ■ ■ H1 -Z -	-
441		400	3.33	14200	3.7	294	2KJ3007- ■ KL33- ■ ■ G1 -Z -	-
497		355	2.96	13800	4.1	294	2KJ3007- ■ KL33- ■ ■ F1 -Z -	-
542		325	2.71	13500	4.5	294	2KJ3007- ■ KL33- ■ ■ E1 -Z -	-
615		285	2.39	13100	5.1	294	2KJ3007- ■ KL33- ■ ■ D1 -Z -	-
750		235	1.96	12500	6.2	294	2KJ3007- ■ KL33- ■ ■ C1 -Z -	-
		<b>E.129-LES180MQ4P</b>						
	357	495	4.12	12400	1.6	255	2KJ3006- ■ KL33- ■ ■ K1 -Z -	-
	401	440	3.67	12100	1.8	255	2KJ3006- ■ KL33- ■ ■ J1 -Z -	-
	447	395	3.29	11900	2	255	2KJ3006- ■ KL33- ■ ■ H1 -Z -	-
	505	350	2.91	11600	2.2	255	2KJ3006- ■ KL33- ■ ■ G1 -Z -	-
	572	305	2.57	11300	2.5	255	2KJ3006- ■ KL33- ■ ■ F1 -Z -	-
	650	270	2.26	11000	2.8	255	2KJ3006- ■ KL33- ■ ■ E1 -Z -	-
	717	245	2.05	10800	3.1	255	2KJ3006- ■ KL33- ■ ■ D1 -Z -	-
	826	210	1.78	10400	3.6	255	2KJ3006- ■ KL33- ■ ■ C1 -Z -	-
	1007	175	1.46	9960	4.3	255	2KJ3006- ■ KL33- ■ ■ B1 -Z -	-
	1185	149	1.24	9560	5	255	2KJ3006- ■ KL33- ■ ■ A1 -Z -	-
	<b>E.109-LES180MQ4P</b>							
	422	415	3.48	10500	1.3	232	2KJ3005- ■ KL33- ■ ■ H1 -Z -	-
	484	365	3.04	10400	1.5	232	2KJ3005- ■ KL33- ■ ■ G1 -Z -	-
	542	325	2.71	10100	1.7	232	2KJ3005- ■ KL33- ■ ■ F1 -Z -	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
18.5	<b>E.109-LES180MQ4P</b>								
	615	285	2.39	9940	1.9	232	2KJ3005- ■ KL33- ■ ■ E1 -Z -		
	700	250	2.10	9660	2.1	232	2KJ3005- ■ KL33- ■ ■ D1 -Z -		
	803	220	1.83	9350	2.4	232	2KJ3005- ■ KL33- ■ ■ C1 -Z -		
	880	200	1.67	9160	2.6	232	2KJ3005- ■ KL33- ■ ■ B1 -Z -		
	1028	172	1.43	8840	2.7	232	2KJ3005- ■ KL33- ■ ■ A1 -Z -		
	<b>E.89-LES180MQ4P</b>								
	557	315	2.64	6300	1.1	208	2KJ3004- ■ KL33- ■ ■ F1 -Z -		
	717	245	2.05	6480	1.5	208	2KJ3004- ■ KL33- ■ ■ D1 -Z -		
	826	210	1.78	6570	1.7	208	2KJ3004- ■ KL33- ■ ■ C1 -Z -		
	967	183	1.52	6340	2	208	2KJ3004- ■ KL33- ■ ■ B1 -Z -		
	1131	156	1.30	6150	2.3	208	2KJ3004- ■ KL33- ■ ■ A1 -Z -		
	22	<b>D.189-LES180ZLN4P</b>							
		8.9	23400	164.36	107000	0.81	814	2KJ3214- ■ KN33- ■ ■ M1 -Z -	
9.9		21200	148.63	107000	0.89	814	2KJ3214- ■ KN33- ■ ■ L1 -Z -		
11		18700	131.17	107000	1	814	2KJ3214- ■ KN33- ■ ■ K1 -Z -		
13		16700	116.88	107000	1.1	814	2KJ3214- ■ KN33- ■ ■ J1 -Z -		
14		15100	105.89	107000	1.3	814	2KJ3214- ■ KN33- ■ ■ H1 -Z -		
15		13600	95.24	107000	1.4	814	2KJ3214- ■ KN33- ■ ■ G1 -Z -		
19		11300	79.14	107000	1.7	814	2KJ3214- ■ KN33- ■ ■ F1 -Z -		
21		10000	70.36	107000	1.9	814	2KJ3214- ■ KN33- ■ ■ E1 -Z -		
26		8010	56.08	107000	2.4	814	2KJ3214- ■ KN33- ■ ■ D1 -Z -		
<b>D.169-LES180ZLN4P</b>									
13		15900	111.69	69400	0.88	595	2KJ3213- ■ KN33- ■ ■ K1 -Z -		
15		14100	99.06	70100	0.99	595	2KJ3213- ■ KN33- ■ ■ J1 -Z -		
16		12900	90.94	70500	1.1	595	2KJ3213- ■ KN33- ■ ■ H1 -Z -		
18		11400	80.12	71000	1.2	595	2KJ3213- ■ KN33- ■ ■ G1 -Z -		
22		9390	65.72	71800	1.5	595	2KJ3213- ■ KN33- ■ ■ F1 -Z -		
26		8230	57.63	72300	1.7	595	2KJ3213- ■ KN33- ■ ■ E1 -Z -		
33		6440	45.06	72900	2.2	595	2KJ3213- ■ KN33- ■ ■ D1 -Z -		
35		5920	41.43	73100	2.4	595	2KJ3213- ■ KN33- ■ ■ C1 -Z -		
40		5190	36.33	73400	2.7	595	2KJ3213- ■ KN33- ■ ■ B1 -Z -		
<b>Z.169-LES180ZLN4P</b>									
40		5220	36.55	73400	2.3	558	2KJ3113- ■ KN33- ■ ■ Q1 -Z -		
<b>D.149-LES180ZLN4P</b>									
21		9820	68.71	50300	0.81	426	2KJ3212- ■ KN33- ■ ■ G1 -Z -		
25		8550	59.82	50500	0.94	426	2KJ3212- ■ KN33- ■ ■ F1 -Z -		
30		7010	49.05	49000	1.1	426	2KJ3212- ■ KN33- ■ ■ E1 -Z -		
34		6210	43.51	48000	1.3	426	2KJ3212- ■ KN33- ■ ■ D1 -Z -		
37		5630	39.41	47100	1.4	426	2KJ3212- ■ KN33- ■ ■ C1 -Z -		
43		4900	34.31	45900	1.6	426	2KJ3212- ■ KN33- ■ ■ B1 -Z -		
<b>Z.149-LES180ZLN4P</b>									
48		4340	30.39	44800	1.8	420	2KJ3112- ■ KN33- ■ ■ Q1 -Z -		
54		3860	27.07	43700	2.1	420	2KJ3112- ■ KN33- ■ ■ P1 -Z -		
60		3470	24.30	42700	2.3	420	2KJ3112- ■ KN33- ■ ■ N1 -Z -		
68	3100	21.69	41600	2.6	420	2KJ3112- ■ KN33- ■ ■ M1 -Z -			
76	2760	19.33	40500	2.9	420	2KJ3112- ■ KN33- ■ ■ L1 -Z -			
86	2450	17.15	39400	3.3	420	2KJ3112- ■ KN33- ■ ■ K1 -Z -			
<b>Z.129-LES180ZLN4P</b>									
56	3750	26.30	24600	1.3	336	2KJ3111- ■ KN33- ■ ■ P1 -Z -			
63	3340	23.41	24300	1.5	336	2KJ3111- ■ KN33- ■ ■ N1 -Z -			
70	2990	20.98	23900	1.7	336	2KJ3111- ■ KN33- ■ ■ M1 -Z -			

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
22	<b>Z.129-LES180ZLN4P</b>							
	79	2650	18.60	23500	1.9	336	2KJ3111- ■ KN33- ■ ■ L1 -Z -	-
	90	2340	16.42	23000	2.1	336	2KJ3111- ■ KN33- ■ ■ K1 -Z -	-
	102	2060	14.43	22400	2.4	336	2KJ3111- ■ KN33- ■ ■ J1 -Z -	-
	112	1860	13.07	22000	2.6	336	2KJ3111- ■ KN33- ■ ■ H1 -Z -	-
	129	1620	11.38	21400	2.9	336	2KJ3111- ■ KN33- ■ ■ G1 -Z -	-
	158	1330	9.33	20500	3.5	336	2KJ3111- ■ KN33- ■ ■ F1 -Z -	-
	172	1210	8.53	19800	3	336	2KJ3111- ■ KN33- ■ ■ E1 -Z -	-
	196	1070	7.50	19200	3.4	336	2KJ3111- ■ KN33- ■ ■ D1 -Z -	-
	216	970	6.79	18800	3.7	336	2KJ3111- ■ KN33- ■ ■ C1 -Z -	-
	249	845	5.91	18200	4.3	336	2KJ3111- ■ KN33- ■ ■ B1 -Z -	-
	303	690	4.85	17300	4.7	336	2KJ3111- ■ KN33- ■ ■ A1 -Z -	-
	<b>Z.109-LES180ZLN4P</b>							
	70	3020	21.13	17400	0.94	276	2KJ3110- ■ KN33- ■ ■ P1 -Z -	-
	80	2640	18.47	17300	1	276	2KJ3110- ■ KN33- ■ ■ N1 -Z -	-
	89	2350	16.48	17200	1.1	276	2KJ3110- ■ KN33- ■ ■ M1 -Z -	-
	101	2070	14.52	17000	1.2	276	2KJ3110- ■ KN33- ■ ■ L1 -Z -	-
	116	1810	12.72	16700	1.4	276	2KJ3110- ■ KN33- ■ ■ K1 -Z -	-
	133	1580	11.09	16400	1.6	276	2KJ3110- ■ KN33- ■ ■ J1 -Z -	-
	145	1440	10.12	16200	1.7	276	2KJ3110- ■ KN33- ■ ■ H1 -Z -	-
	169	1240	8.71	15800	1.9	276	2KJ3110- ■ KN33- ■ ■ G1 -Z -	-
	175	1200	8.41	15500	1.9	276	2KJ3110- ■ KN33- ■ ■ F1 -Z -	-
	198	1050	7.41	15200	2.2	276	2KJ3110- ■ KN33- ■ ■ E1 -Z -	-
	226	925	6.50	14800	2.5	276	2KJ3110- ■ KN33- ■ ■ D1 -Z -	-
	260	805	5.66	14400	2.8	276	2KJ3110- ■ KN33- ■ ■ C1 -Z -	-
	284	735	5.17	14100	3.1	276	2KJ3110- ■ KN33- ■ ■ B1 -Z -	-
	330	635	4.45	13700	3.4	276	2KJ3110- ■ KN33- ■ ■ A1 -Z -	-
	<b>Z.89-LES180ZLN4P</b>							
	106	1970	13.84	7850	0.85	235	2KJ3108- ■ KN33- ■ ■ K1 -Z -	-
	121	1730	12.15	9460	0.94	235	2KJ3108- ■ KN33- ■ ■ J1 -Z -	-
	139	1510	10.58	10800	1.1	235	2KJ3108- ■ KN33- ■ ■ H1 -Z -	-
	163	1290	9.04	12000	1.2	235	2KJ3108- ■ KN33- ■ ■ G1 -Z -	-
	190	1100	7.74	12700	1.4	235	2KJ3108- ■ KN33- ■ ■ F1 -Z -	-
213	985	6.89	10200	1.1	235	2KJ3108- ■ KN33- ■ ■ E1 -Z -	-	
243	865	6.05	10900	1.2	235	2KJ3108- ■ KN33- ■ ■ D1 -Z -	-	
279	750	5.26	11600	1.4	235	2KJ3108- ■ KN33- ■ ■ C1 -Z -	-	
327	640	4.50	11500	1.6	235	2KJ3108- ■ KN33- ■ ■ B1 -Z -	-	
382	550	3.85	11100	1.9	235	2KJ3108- ■ KN33- ■ ■ A1 -Z -	-	
<b>E.149-LES180ZLN4P</b>								
281	745	5.24	15000	2	299	2KJ3007- ■ KN33- ■ ■ L1 -Z -	-	
315	665	4.67	14700	2.2	299	2KJ3007- ■ KN33- ■ ■ K1 -Z -	-	
351	595	4.19	14500	2.5	299	2KJ3007- ■ KN33- ■ ■ J1 -Z -	-	
393	535	3.74	14100	2.8	299	2KJ3007- ■ KN33- ■ ■ H1 -Z -	-	
441	475	3.33	13800	3.1	299	2KJ3007- ■ KN33- ■ ■ G1 -Z -	-	
497	420	2.96	13500	3.5	299	2KJ3007- ■ KN33- ■ ■ F1 -Z -	-	
542	385	2.71	13200	3.8	299	2KJ3007- ■ KN33- ■ ■ E1 -Z -	-	
615	340	2.39	12800	4.3	299	2KJ3007- ■ KN33- ■ ■ D1 -Z -	-	
750	280	1.96	12200	5.2	299	2KJ3007- ■ KN33- ■ ■ C1 -Z -	-	
855	245	1.72	11900	5.9	299	2KJ3007- ■ KN33- ■ ■ B1 -Z -	-	
1097	192	1.34	11100	6.7	299	2KJ3007- ■ KN33- ■ ■ A1 -Z -	-	
<b>E.129-LES180ZLN4P</b>								
357	585	4.12	11900	1.3	260	2KJ3006- ■ KN33- ■ ■ K1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>22</b>	<b>E.129-LES180ZLN4P</b>							
	401	525	3.67	11600	1.5	260	2KJ3006- ■ KN33- ■ ■ J1 -Z -	-
	447	470	3.29	11400	1.7	260	2KJ3006- ■ KN33- ■ ■ H1 -Z -	-
	505	415	2.91	11200	1.9	260	2KJ3006- ■ KN33- ■ ■ G1 -Z -	-
	572	365	2.57	11000	2.1	260	2KJ3006- ■ KN33- ■ ■ F1 -Z -	-
	650	320	2.26	10700	2.4	260	2KJ3006- ■ KN33- ■ ■ E1 -Z -	-
	717	290	2.05	10500	2.6	260	2KJ3006- ■ KN33- ■ ■ D1 -Z -	-
	826	250	1.78	10200	3	260	2KJ3006- ■ KN33- ■ ■ C1 -Z -	-
	1007	205	1.46	9760	3.6	260	2KJ3006- ■ KN33- ■ ■ B1 -Z -	-
	1185	177	1.24	9360	4.2	260	2KJ3006- ■ KN33- ■ ■ A1 -Z -	-
	<b>E.109-LES180ZLN4P</b>							
	422	495	3.48	10200	1.1	237	2KJ3005- ■ KN33- ■ ■ H1 -Z -	-
	484	430	3.04	10000	1.3	237	2KJ3005- ■ KN33- ■ ■ G1 -Z -	-
	542	385	2.71	9850	1.4	237	2KJ3005- ■ KN33- ■ ■ F1 -Z -	-
	615	340	2.39	9620	1.6	237	2KJ3005- ■ KN33- ■ ■ E1 -Z -	-
	700	300	2.10	9360	1.8	237	2KJ3005- ■ KN33- ■ ■ D1 -Z -	-
	803	260	1.83	9110	2	237	2KJ3005- ■ KN33- ■ ■ C1 -Z -	-
	880	235	1.67	8950	2.2	237	2KJ3005- ■ KN33- ■ ■ B1 -Z -	-
	1028	200	1.43	8660	2.3	237	2KJ3005- ■ KN33- ■ ■ A1 -Z -	-
<b>E.89-LES180ZLN4P</b>								
557	375	2.64	5080	0.95	213	2KJ3004- ■ KN33- ■ ■ F1 -Z -	-	
967	215	1.52	5660	1.7	213	2KJ3004- ■ KN33- ■ ■ B1 -Z -	-	
1131	186	1.30	5600	1.9	213	2KJ3004- ■ KN33- ■ ■ A1 -Z -	-	
<b>30</b>	<b>D.189-LES200ZLU4P</b>							
	13	22700	116.88	107000	0.83	884	2KJ3214- ■ LN33- ■ ■ J1 -Z -	-
	14	20600	105.89	107000	0.92	884	2KJ3214- ■ LN33- ■ ■ H1 -Z -	-
	15	18500	95.24	107000	1	884	2KJ3214- ■ LN33- ■ ■ G1 -Z -	-
	19	15400	79.14	107000	1.2	884	2KJ3214- ■ LN33- ■ ■ F1 -Z -	-
	21	13700	70.36	107000	1.4	884	2KJ3214- ■ LN33- ■ ■ E1 -Z -	-
	26	10900	56.08	107000	1.7	884	2KJ3214- ■ LN33- ■ ■ D1 -Z -	-
	33	8690	44.63	107000	2.2	884	2KJ3214- ■ LN33- ■ ■ C1 -Z -	-
	40	7140	36.67	107000	2.7	884	2KJ3214- ■ LN33- ■ ■ B1 -Z -	-
	<b>D.169-LES200ZLU4P</b>							
	18	15600	80.12	69500	0.9	665	2KJ3213- ■ LN33- ■ ■ G1 -Z -	-
	22	12800	65.72	70600	1.1	665	2KJ3213- ■ LN33- ■ ■ F1 -Z -	-
	26	11200	57.63	71100	1.2	665	2KJ3213- ■ LN33- ■ ■ E1 -Z -	-
	33	8780	45.06	72100	1.6	665	2KJ3213- ■ LN33- ■ ■ D1 -Z -	-
	35	8070	41.43	72300	1.7	665	2KJ3213- ■ LN33- ■ ■ C1 -Z -	-
	40	7080	36.33	72700	2	665	2KJ3213- ■ LN33- ■ ■ B1 -Z -	-
	<b>Z.169-LES200ZLU4P</b>							
	45	6400	32.88	72900	2.2	634	2KJ3113- ■ LN33- ■ ■ P1 -Z -	-
	50	5720	29.38	73200	2.4	634	2KJ3113- ■ LN33- ■ ■ N1 -Z -	-
	55	5170	26.57	73400	2.7	634	2KJ3113- ■ LN33- ■ ■ M1 -Z -	-
	<b>D.149-LES200ZLU4P</b>							
	30	9560	49.05	45500	0.84	501	2KJ3212- ■ LN33- ■ ■ E1 -Z -	-
	34	8480	43.51	44900	0.94	501	2KJ3212- ■ LN33- ■ ■ D1 -Z -	-
	37	7680	39.41	44300	1	501	2KJ3212- ■ LN33- ■ ■ C1 -Z -	-
	43	6680	34.31	43500	1.2	501	2KJ3212- ■ LN33- ■ ■ B1 -Z -	-
	<b>Z.149-LES200ZLU4P</b>							
	54	5270	27.07	41800	1.5	494	2KJ3112- ■ LN33- ■ ■ P1 -Z -	-
60	4730	24.30	41000	1.7	494	2KJ3112- ■ LN33- ■ ■ N1 -Z -	-	
68	4220	21.69	40100	1.9	494	2KJ3112- ■ LN33- ■ ■ M1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>30</b>	<b>Z.149-LES200ZLU4P</b>							
	76	3760	19.33	39100	2.1	494	2KJ3112- ■ LN33- ■ ■ L1 -Z -	-
	86	3340	17.15	38100	2.4	494	2KJ3112- ■ LN33- ■ ■ K1 -Z -	-
	93	3060	15.74	37400	2.6	494	2KJ3112- ■ LN33- ■ ■ J1 -Z -	-
	106	2700	13.87	36400	3	494	2KJ3112- ■ LN33- ■ ■ H1 -Z -	-
	129	2210	11.38	34700	3.6	494	2KJ3112- ■ LN33- ■ ■ G1 -Z -	-
	202	1410	7.27	31200	3.4	494	2KJ3112- ■ LN33- ■ ■ D1 -Z -	-
	247	1160	5.96	29600	4.2	494	2KJ3112- ■ LN33- ■ ■ C1 -Z -	-
	281	1010	5.23	28600	4.8	494	2KJ3112- ■ LN33- ■ ■ B1 -Z -	-
	<b>Z.129-LES200ZLU4P</b>							
	63	4560	23.41	22200	1.1	411	2KJ3111- ■ LN33- ■ ■ N1 -Z -	-
	70	4080	20.98	22000	1.2	411	2KJ3111- ■ LN33- ■ ■ M1 -Z -	-
	79	3620	18.60	21800	1.4	411	2KJ3111- ■ LN33- ■ ■ L1 -Z -	-
	90	3200	16.42	21500	1.6	411	2KJ3111- ■ LN33- ■ ■ K1 -Z -	-
	102	2810	14.43	21100	1.8	411	2KJ3111- ■ LN33- ■ ■ J1 -Z -	-
	112	2540	13.07	20800	1.9	411	2KJ3111- ■ LN33- ■ ■ H1 -Z -	-
	129	2210	11.38	20400	2.1	411	2KJ3111- ■ LN33- ■ ■ G1 -Z -	-
	158	1810	9.33	19600	2.6	411	2KJ3111- ■ LN33- ■ ■ F1 -Z -	-
	172	1660	8.53	18900	2.2	411	2KJ3111- ■ LN33- ■ ■ E1 -Z -	-
	196	1460	7.50	18400	2.5	411	2KJ3111- ■ LN33- ■ ■ D1 -Z -	-
	216	1320	6.79	18100	2.7	411	2KJ3111- ■ LN33- ■ ■ C1 -Z -	-
	249	1150	5.91	17600	3.1	411	2KJ3111- ■ LN33- ■ ■ B1 -Z -	-
	303	945	4.85	16800	3.5	411	2KJ3111- ■ LN33- ■ ■ A1 -Z -	-
	<b>Z.109-LES200ZLU4P</b>							
	89	3210	16.48	15200	0.82	351	2KJ3110- ■ LN33- ■ ■ M1 -Z -	-
	101	2830	14.52	15200	0.91	351	2KJ3110- ■ LN33- ■ ■ L1 -Z -	-
	116	2470	12.72	15200	1	351	2KJ3110- ■ LN33- ■ ■ K1 -Z -	-
	133	2160	11.09	15100	1.1	351	2KJ3110- ■ LN33- ■ ■ J1 -Z -	-
145	1970	10.12	15000	1.2	351	2KJ3110- ■ LN33- ■ ■ H1 -Z -	-	
169	1690	8.71	14800	1.4	351	2KJ3110- ■ LN33- ■ ■ G1 -Z -	-	
175	1630	8.41	14400	1.4	351	2KJ3110- ■ LN33- ■ ■ F1 -Z -	-	
198	1440	7.41	14200	1.6	351	2KJ3110- ■ LN33- ■ ■ E1 -Z -	-	
226	1260	6.50	13900	1.8	351	2KJ3110- ■ LN33- ■ ■ D1 -Z -	-	
260	1100	5.66	13600	2.1	351	2KJ3110- ■ LN33- ■ ■ C1 -Z -	-	
284	1000	5.17	13500	2.3	351	2KJ3110- ■ LN33- ■ ■ B1 -Z -	-	
330	865	4.45	13100	2.5	351	2KJ3110- ■ LN33- ■ ■ A1 -Z -	-	
<b>E.149-LES200ZLU4P</b>								
315	910	4.67	13600	1.6	374	2KJ3007- ■ LN33- ■ ■ K1 -Z -	-	
351	815	4.19	13500	1.8	374	2KJ3007- ■ LN33- ■ ■ J1 -Z -	-	
393	725	3.74	13200	2	374	2KJ3007- ■ LN33- ■ ■ H1 -Z -	-	
441	645	3.33	13000	2.3	374	2KJ3007- ■ LN33- ■ ■ G1 -Z -	-	
497	575	2.96	12700	2.5	374	2KJ3007- ■ LN33- ■ ■ F1 -Z -	-	
542	525	2.71	12600	2.8	374	2KJ3007- ■ LN33- ■ ■ E1 -Z -	-	
615	465	2.39	12200	3.1	374	2KJ3007- ■ LN33- ■ ■ D1 -Z -	-	
750	380	1.96	11700	3.8	374	2KJ3007- ■ LN33- ■ ■ C1 -Z -	-	
855	335	1.72	11400	4.4	374	2KJ3007- ■ LN33- ■ ■ B1 -Z -	-	
1097	260	1.34	10800	4.9	374	2KJ3007- ■ LN33- ■ ■ A1 -Z -	-	
<b>E.129-LES200ZLU4P</b>								
401	715	3.67	10200	1.1	335	2KJ3006- ■ LN33- ■ ■ J1 -Z -	-	
447	640	3.29	10400	1.2	335	2KJ3006- ■ LN33- ■ ■ H1 -Z -	-	
505	565	2.91	10300	1.4	335	2KJ3006- ■ LN33- ■ ■ G1 -Z -	-	
572	500	2.57	10200	1.5	335	2KJ3006- ■ LN33- ■ ■ F1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
30	<b>E.129-LES200ZLU4P</b>								
	650	440	2.26	10000	1.7	335	2KJ3006- ■ LN33- ■ ■ E1 -Z -		
	717	400	2.05	9830	1.9	335	2KJ3006- ■ LN33- ■ ■ D1 -Z -		
	826	345	1.78	9610	2.2	335	2KJ3006- ■ LN33- ■ ■ C1 -Z -		
	1007	285	1.46	9220	2.7	335	2KJ3006- ■ LN33- ■ ■ B1 -Z -		
	1185	240	1.24	8910	3.1	335	2KJ3006- ■ LN33- ■ ■ A1 -Z -		
	<b>E.109-LES200ZLU4P</b>								
	484	590	3.04	7660	0.92	312	2KJ3005- ■ LN33- ■ ■ G1 -Z -		
	542	525	2.71	7980	1	312	2KJ3005- ■ LN33- ■ ■ F1 -Z -		
	803	355	1.83	8310	1.5	312	2KJ3005- ■ LN33- ■ ■ C1 -Z -		
	880	325	1.67	8320	1.6	312	2KJ3005- ■ LN33- ■ ■ B1 -Z -		
	1028	275	1.43	8180	1.7	312	2KJ3005- ■ LN33- ■ ■ A1 -Z -		
	37	<b>D.189-LES225SD4P</b>							
		16	22700	95.24	107000	0.83	935	2KJ3214- ■ MF33- ■ ■ G1 -Z -	
19		18900	79.14	107000	1	935	2KJ3214- ■ MF33- ■ ■ F1 -Z -		
21		16800	70.36	107000	1.1	935	2KJ3214- ■ MF33- ■ ■ E1 -Z -		
26		13400	56.08	107000	1.4	935	2KJ3214- ■ MF33- ■ ■ D1 -Z -		
33		10600	44.63	107000	1.8	935	2KJ3214- ■ MF33- ■ ■ C1 -Z -		
<b>Z.189-LES225SD4P</b>									
43		8180	34.25	107000	2.3	853	2KJ3114- ■ MF33- ■ ■ L1 -Z -		
48		7340	30.73	107000	2.6	853	2KJ3114- ■ MF33- ■ ■ K1 -Z -		
54		6560	27.46	105100	2.9	853	2KJ3114- ■ MF33- ■ ■ J1 -Z -		
<b>D.169-LES225SD4P</b>									
22		15700	65.72	69500	0.89	721	2KJ3213- ■ MF33- ■ ■ F1 -Z -		
26		13700	57.63	70200	1	721	2KJ3213- ■ MF33- ■ ■ E1 -Z -		
33		10700	45.06	71300	1.3	721	2KJ3213- ■ MF33- ■ ■ D1 -Z -		
36		9900	41.43	71700	1.4	721	2KJ3213- ■ MF33- ■ ■ C1 -Z -		
41		8680	36.33	72100	1.6	721	2KJ3213- ■ MF33- ■ ■ B1 -Z -		
<b>Z.169-LES225SD4P</b>									
50		7020	29.38	72700	2	677	2KJ3113- ■ MF33- ■ ■ N1 -Z -		
56		6350	26.57	72100	2.2	677	2KJ3113- ■ MF33- ■ ■ M1 -Z -		
63		5600	23.45	70000	2.5	677	2KJ3113- ■ MF33- ■ ■ L1 -Z -		
71		4990	20.90	68200	2.8	677	2KJ3113- ■ MF33- ■ ■ K1 -Z -		
78		4520	18.93	66600	3.1	677	2KJ3113- ■ MF33- ■ ■ J1 -Z -		
<b>D.149-LES225SD4P</b>									
38		9420	39.41	41900	0.85	546	2KJ3212- ■ MF33- ■ ■ C1 -Z -		
43		8200	34.31	41300	0.98	546	2KJ3212- ■ MF33- ■ ■ B1 -Z -		
53		6720	28.13	40300	1.2	546	2KJ3212- ■ MF33- ■ ■ A1 -Z -		
<b>Z.149-LES225SD4P</b>									
61		5800	24.30	39400	1.4	539	2KJ3112- ■ MF33- ■ ■ N1 -Z -		
68		5180	21.69	38700	1.5	539	2KJ3112- ■ MF33- ■ ■ M1 -Z -		
76		4620	19.33	37900	1.7	539	2KJ3112- ■ MF33- ■ ■ L1 -Z -		
86		4100	17.15	37000	2	539	2KJ3112- ■ MF33- ■ ■ K1 -Z -		
94		3760	15.74	36400	2.1	539	2KJ3112- ■ MF33- ■ ■ J1 -Z -		
107		3310	13.87	35500	2.4	539	2KJ3112- ■ MF33- ■ ■ H1 -Z -		
130		2720	11.38	34000	2.9	539	2KJ3112- ■ MF33- ■ ■ G1 -Z -		
148		2380	9.98	33000	3.4	539	2KJ3112- ■ MF33- ■ ■ F1 -Z -		
189		1860	7.80	31100	4.3	539	2KJ3112- ■ MF33- ■ ■ E1 -Z -		
203	1730	7.27	30700	2.8	539	2KJ3112- ■ MF33- ■ ■ D1 -Z -			
248	1420	5.96	29200	3.4	539	2KJ3112- ■ MF33- ■ ■ C1 -Z -			
283	1250	5.23	28200	3.9	539	2KJ3112- ■ MF33- ■ ■ B1 -Z -			
361	975	4.09	26400	5	539	2KJ3112- ■ MF33- ■ ■ A1 -Z -			

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
37	<b>Z.129-LES225SD4P</b>							
	70	5010	20.98	20400	1	455	2KJ3111- MF33- M1 -Z -	
	79	4440	18.60	20300	1.1	455	2KJ3111- MF33- L1 -Z -	
	90	3920	16.42	20200	1.3	455	2KJ3111- MF33- K1 -Z -	
	102	3450	14.43	20000	1.4	455	2KJ3111- MF33- J1 -Z -	
	113	3120	13.07	19800	1.6	455	2KJ3111- MF33- H1 -Z -	
	130	2720	11.38	19500	1.7	455	2KJ3111- MF33- G1 -Z -	
	158	2230	9.33	18900	2.1	455	2KJ3111- MF33- F1 -Z -	
	173	2030	8.53	18100	1.8	455	2KJ3111- MF33- E1 -Z -	
	197	1790	7.50	17800	2	455	2KJ3111- MF33- D1 -Z -	
	218	1620	6.79	17500	2.2	455	2KJ3111- MF33- C1 -Z -	
	250	1410	5.91	17000	2.6	455	2KJ3111- MF33- B1 -Z -	
	305	1160	4.85	16400	2.8	455	2KJ3111- MF33- A1 -Z -	
	<b>Z.109-LES225SD4P</b>							
	116	3040	12.72	13800	0.83	393	2KJ3110- MF33- K1 -Z -	
	133	2650	11.09	13900	0.93	393	2KJ3110- MF33- J1 -Z -	
	146	2410	10.12	13900	1	393	2KJ3110- MF33- H1 -Z -	
	170	2080	8.71	13800	1.1	393	2KJ3110- MF33- G1 -Z -	
	176	2010	8.41	13400	1.1	393	2KJ3110- MF33- F1 -Z -	
	199	1770	7.41	13300	1.3	393	2KJ3110- MF33- E1 -Z -	
	227	1550	6.50	13200	1.5	393	2KJ3110- MF33- D1 -Z -	
	261	1350	5.66	13000	1.7	393	2KJ3110- MF33- C1 -Z -	
	286	1230	5.17	12800	1.8	393	2KJ3110- MF33- B1 -Z -	
	332	1060	4.45	12600	2	393	2KJ3110- MF33- A1 -Z -	
	<b>E.149-LES225SD4P</b>							
	353	1000	4.19	12600	1.5	419	2KJ3007- MF33- J1 -Z -	
	395	890	3.74	12500	1.7	419	2KJ3007- MF33- H1 -Z -	
	444	795	3.33	12300	1.9	419	2KJ3007- MF33- G1 -Z -	
	499	705	2.96	12100	2.1	419	2KJ3007- MF33- F1 -Z -	
	545	645	2.71	12000	2.3	419	2KJ3007- MF33- E1 -Z -	
	618	570	2.39	11700	2.6	419	2KJ3007- MF33- D1 -Z -	
	754	465	1.96	11300	3.1	419	2KJ3007- MF33- C1 -Z -	
	859	410	1.72	11000	3.6	419	2KJ3007- MF33- B1 -Z -	
	1103	320	1.34	10400	4	419	2KJ3007- MF33- A1 -Z -	
	<b>E.129-LES225SD4P</b>							
	449	785	3.29	8430	0.99	379	2KJ3006- MF33- H1 -Z -	
	508	695	2.91	8760	1.1	379	2KJ3006- MF33- G1 -Z -	
721	490	2.05	9140	1.6	379	2KJ3006- MF33- D1 -Z -		
830	425	1.78	9070	1.8	379	2KJ3006- MF33- C1 -Z -		
1012	345	1.46	8790	2.2	379	2KJ3006- MF33- B1 -Z -		
1192	295	1.24	8500	2.5	379	2KJ3006- MF33- A1 -Z -		
<b>E.109-LES225SD4P</b>								
545	645	2.71	5910	0.84	354	2KJ3005- MF33- F1 -Z -		
45	<b>D.189-LES225YMF4P</b>							
	19	23000	79.14	107000	0.83	980	2KJ3214- MT33- F1 -Z -	
	21	20400	70.36	107000	0.93	980	2KJ3214- MT33- E1 -Z -	
	26	16300	56.08	107000	1.2	980	2KJ3214- MT33- D1 -Z -	
	33	12900	44.63	107000	1.5	980	2KJ3214- MT33- C1 -Z -	
	<b>Z.189-LES225YMF4P</b>							
	43	9950	34.25	107000	1.9	898	2KJ3114- MT33- L1 -Z -	
	48	8930	30.73	106700	2.1	898	2KJ3114- MT33- K1 -Z -	
	54	7980	27.46	103800	2.4	898	2KJ3114- MT33- J1 -Z -	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
45	<b>Z.189-LES225YMF4P</b>							
	60	7130	24.53	100900	2.7	898	2KJ3114- ■ MT33- ■ ■ H1 -Z -	-
	66	6520	22.44	98600	2.9	898	2KJ3114- ■ MT33- ■ ■ G1 -Z -	-
	<b>D.169-LES225YMF4P</b>							
	26	16700	57.63	69100	0.84	766	2KJ3213- ■ MT33- ■ ■ E1 -Z -	-
	33	13100	45.06	70500	1.1	766	2KJ3213- ■ MT33- ■ ■ D1 -Z -	-
	36	12000	41.43	70900	1.2	766	2KJ3213- ■ MT33- ■ ■ C1 -Z -	-
	41	10500	36.33	71400	1.3	766	2KJ3213- ■ MT33- ■ ■ B1 -Z -	-
	<b>Z.169-LES225YMF4P</b>							
	50	8540	29.38	71800	1.6	722	2KJ3113- ■ MT33- ■ ■ N1 -Z -	-
	56	7720	26.57	70400	1.8	722	2KJ3113- ■ MT33- ■ ■ M1 -Z -	-
	63	6810	23.45	68600	2.1	722	2KJ3113- ■ MT33- ■ ■ L1 -Z -	-
	71	6070	20.90	66900	2.3	722	2KJ3113- ■ MT33- ■ ■ K1 -Z -	-
	78	5500	18.93	65400	2.5	722	2KJ3113- ■ MT33- ■ ■ J1 -Z -	-
	87	4950	17.03	63800	2.8	722	2KJ3113- ■ MT33- ■ ■ H1 -Z -	-
	104	4110	14.15	61100	3.4	722	2KJ3113- ■ MT33- ■ ■ G1 -Z -	-
	201	2140	7.37	51700	3.7	722	2KJ3113- ■ MT33- ■ ■ C1 -Z -	-
	251	1710	5.88	48700	4.6	722	2KJ3113- ■ MT33- ■ ■ B1 -Z -	-
	<b>D.149-LES225YMF4P</b>							
	43	9970	34.31	38900	0.8	591	2KJ3212- ■ MT33- ■ ■ B1 -Z -	-
	53	8170	28.13	38300	0.98	591	2KJ3212- ■ MT33- ■ ■ A1 -Z -	-
	<b>Z.149-LES225YMF4P</b>							
	61	7060	24.30	37700	1.1	584	2KJ3112- ■ MT33- ■ ■ N1 -Z -	-
	68	6300	21.69	37100	1.3	584	2KJ3112- ■ MT33- ■ ■ M1 -Z -	-
	76	5620	19.33	36500	1.4	584	2KJ3112- ■ MT33- ■ ■ L1 -Z -	-
	86	4980	17.15	35800	1.6	584	2KJ3112- ■ MT33- ■ ■ K1 -Z -	-
	94	4570	15.74	35300	1.7	584	2KJ3112- ■ MT33- ■ ■ J1 -Z -	-
	107	4030	13.87	34500	2	584	2KJ3112- ■ MT33- ■ ■ H1 -Z -	-
	130	3300	11.38	33200	2.4	584	2KJ3112- ■ MT33- ■ ■ G1 -Z -	-
	148	2900	9.98	32300	2.8	584	2KJ3112- ■ MT33- ■ ■ F1 -Z -	-
	189	2260	7.80	30600	3.5	584	2KJ3112- ■ MT33- ■ ■ E1 -Z -	-
	203	2110	7.27	30200	2.3	584	2KJ3112- ■ MT33- ■ ■ D1 -Z -	-
	248	1730	5.96	28800	2.8	584	2KJ3112- ■ MT33- ■ ■ C1 -Z -	-
	283	1520	5.23	27900	3.2	584	2KJ3112- ■ MT33- ■ ■ B1 -Z -	-
	361	1180	4.09	26200	4.1	584	2KJ3112- ■ MT33- ■ ■ A1 -Z -	-
	<b>Z.129-LES225YMF4P</b>							
	70	6100	20.98	12900	0.82	500	2KJ3111- ■ MT33- ■ ■ M1 -Z -	-
	79	5400	18.60	16700	0.92	500	2KJ3111- ■ MT33- ■ ■ L1 -Z -	-
	90	4770	16.42	18700	1	500	2KJ3111- ■ MT33- ■ ■ K1 -Z -	-
	102	4190	14.43	18700	1.2	500	2KJ3111- ■ MT33- ■ ■ J1 -Z -	-
	113	3800	13.07	18600	1.3	500	2KJ3111- ■ MT33- ■ ■ H1 -Z -	-
	130	3300	11.38	18500	1.4	500	2KJ3111- ■ MT33- ■ ■ G1 -Z -	-
	158	2710	9.33	18100	1.7	500	2KJ3111- ■ MT33- ■ ■ F1 -Z -	-
	173	2480	8.53	17200	1.5	500	2KJ3111- ■ MT33- ■ ■ E1 -Z -	-
	197	2180	7.50	17000	1.7	500	2KJ3111- ■ MT33- ■ ■ D1 -Z -	-
	218	1970	6.79	16800	1.8	500	2KJ3111- ■ MT33- ■ ■ C1 -Z -	-
	250	1710	5.91	16400	2.1	500	2KJ3111- ■ MT33- ■ ■ B1 -Z -	-
	305	1410	4.85	15900	2.3	500	2KJ3111- ■ MT33- ■ ■ A1 -Z -	-
	<b>Z.109-LES225YMF4P</b>							
	146	2940	10.12	12700	0.83	438	2KJ3110- ■ MT33- ■ ■ H1 -Z -	-
	170	2530	8.71	12800	0.94	438	2KJ3110- ■ MT33- ■ ■ G1 -Z -	-
	176	2440	8.41	12300	0.94	438	2KJ3110- ■ MT33- ■ ■ F1 -Z -	-

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Helical geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
45	<b>Z.109-LES225YMF4P</b>								
	199	2150	7.41	12400	1.1	438	2KJ3110- ■ MT33- ■ ■ E1 -Z -	-	
	227	1890	6.50	12300	1.2	438	2KJ3110- ■ MT33- ■ ■ D1 -Z -	-	
	261	1640	5.66	12300	1.4	438	2KJ3110- ■ MT33- ■ ■ C1 -Z -	-	
	286	1500	5.17	12200	1.5	438	2KJ3110- ■ MT33- ■ ■ B1 -Z -	-	
	332	1290	4.45	12000	1.7	438	2KJ3110- ■ MT33- ■ ■ A1 -Z -	-	
	<b>E.149-LES225YMF4P</b>								
	353	1210	4.19	10600	1.2	464	2KJ3007- ■ MT33- ■ ■ J1 -Z -	-	
	395	1080	3.74	11000	1.4	464	2KJ3007- ■ MT33- ■ ■ H1 -Z -	-	
	444	965	3.33	11200	1.5	464	2KJ3007- ■ MT33- ■ ■ G1 -Z -	-	
	499	860	2.96	11400	1.7	464	2KJ3007- ■ MT33- ■ ■ F1 -Z -	-	
	545	785	2.71	11300	1.9	464	2KJ3007- ■ MT33- ■ ■ E1 -Z -	-	
	618	695	2.39	11100	2.1	464	2KJ3007- ■ MT33- ■ ■ D1 -Z -	-	
	754	570	1.96	10800	2.6	464	2KJ3007- ■ MT33- ■ ■ C1 -Z -	-	
	859	500	1.72	10500	2.9	464	2KJ3007- ■ MT33- ■ ■ B1 -Z -	-	
	1103	390	1.34	10000	3.3	464	2KJ3007- ■ MT33- ■ ■ A1 -Z -	-	
	<b>E.129-LES225YMF4P</b>								
	449	955	3.29	6110	0.82	424	2KJ3006- ■ MT33- ■ ■ H1 -Z -	-	
	508	845	2.91	6660	0.91	424	2KJ3006- ■ MT33- ■ ■ G1 -Z -	-	
	830	515	1.78	7770	1.5	424	2KJ3006- ■ MT33- ■ ■ C1 -Z -	-	
	1012	425	1.46	7830	1.8	424	2KJ3006- ■ MT33- ■ ■ B1 -Z -	-	
	1192	360	1.24	7830	2.1	424	2KJ3006- ■ MT33- ■ ■ A1 -Z -	-	
	55	<b>D.189-LES250MD4P</b>							
		26	19800	56.08	107000	0.96	1083	2KJ3214- ■ NM33- ■ ■ D1 -Z -	-
		33	15800	44.63	107000	1.2	1083	2KJ3214- ■ NM33- ■ ■ C1 -Z -	-
		40	12900	36.67	107000	1.5	1083	2KJ3214- ■ NM33- ■ ■ B1 -Z -	-
		<b>Z.189-LES250MD4P</b>							
54		9730	27.46	102100	2	1001	2KJ3114- ■ NM33- ■ ■ J1 -Z -	-	
60		8690	24.53	99400	2.2	1001	2KJ3114- ■ NM33- ■ ■ H1 -Z -	-	
66		7950	22.44	97200	2.4	1001	2KJ3114- ■ NM33- ■ ■ G1 -Z -	-	
74		7070	19.95	94400	2.7	1001	2KJ3114- ■ NM33- ■ ■ F1 -Z -	-	
88		6000	16.93	90500	3.2	1001	2KJ3114- ■ NM33- ■ ■ E1 -Z -	-	
<b>D.169-LES250MD4P</b>									
33		15900	45.06	69400	0.88	870	2KJ3213- ■ NM33- ■ ■ D1 -Z -	-	
36		14600	41.43	69900	0.95	870	2KJ3213- ■ NM33- ■ ■ C1 -Z -	-	
41		12800	36.33	70600	1.1	870	2KJ3213- ■ NM33- ■ ■ B1 -Z -	-	
52		10000	28.41	69100	1.4	870	2KJ3213- ■ NM33- ■ ■ A1 -Z -	-	
<b>Z.169-LES250MD4P</b>									
63		8310	23.45	66600	1.7	826	2KJ3113- ■ NM33- ■ ■ L1 -Z -	-	
71		7400	20.90	65100	1.9	826	2KJ3113- ■ NM33- ■ ■ K1 -Z -	-	
78		6700	18.93	63800	2.1	826	2KJ3113- ■ NM33- ■ ■ J1 -Z -	-	
87		6030	17.03	62400	2.3	826	2KJ3113- ■ NM33- ■ ■ H1 -Z -	-	
105		5010	14.15	59900	2.8	826	2KJ3113- ■ NM33- ■ ■ G1 -Z -	-	
118		4450	12.58	58300	3.1	826	2KJ3113- ■ NM33- ■ ■ F1 -Z -	-	
148		3550	10.03	55200	3.9	826	2KJ3113- ■ NM33- ■ ■ E1 -Z -	-	
201		2610	7.37	51100	3	826	2KJ3113- ■ NM33- ■ ■ C1 -Z -	-	
252		2080	5.88	48200	3.8	826	2KJ3113- ■ NM33- ■ ■ B1 -Z -	-	
317		1650	4.68	45300	4.7	826	2KJ3113- ■ NM33- ■ ■ A1 -Z -	-	
<b>D.149-LES250MD4P</b>									
53		9970	28.13	35800	0.8	693	2KJ3212- ■ NM33- ■ ■ A1 -Z -	-	
<b>Z.149-LES250MD4P</b>									
77		6850	19.33	34800	1.2	686	2KJ3112- ■ NM33- ■ ■ L1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>55</b>	<b>Z.149-LES250MD4P</b>							
	86	6070	17.15	34300	1.3	686	2KJ3112- ■ NM33- ■ ■ K1 -Z -	
	94	5570	15.74	33900	1.4	686	2KJ3112- ■ NM33- ■ ■ J1 -Z -	
	107	4910	13.87	33300	1.6	686	2KJ3112- ■ NM33- ■ ■ H1 -Z -	
	130	4030	11.38	32200	2	686	2KJ3112- ■ NM33- ■ ■ G1 -Z -	
	148	3530	9.98	31400	2.3	686	2KJ3112- ■ NM33- ■ ■ F1 -Z -	
	190	2760	7.80	29800	2.9	686	2KJ3112- ■ NM33- ■ ■ E1 -Z -	
	204	2570	7.27	29600	1.9	686	2KJ3112- ■ NM33- ■ ■ D1 -Z -	
	249	2110	5.96	28300	2.3	686	2KJ3112- ■ NM33- ■ ■ C1 -Z -	
	283	1850	5.23	27400	2.6	686	2KJ3112- ■ NM33- ■ ■ B1 -Z -	
	362	1450	4.09	25800	3.4	686	2KJ3112- ■ NM33- ■ ■ A1 -Z -	
	<b>Z.129-LES250MD4P</b>							
	90	5820	16.42	10600	0.86	601	2KJ3111- ■ NM33- ■ ■ K1 -Z -	
	103	5110	14.43	14500	0.97	601	2KJ3111- ■ NM33- ■ ■ J1 -Z -	
	113	4630	13.07	17000	1	601	2KJ3111- ■ NM33- ■ ■ H1 -Z -	
	130	4030	11.38	17200	1.2	601	2KJ3111- ■ NM33- ■ ■ G1 -Z -	
	159	3300	9.33	17000	1.4	601	2KJ3111- ■ NM33- ■ ■ F1 -Z -	
	174	3020	8.53	16200	1.2	601	2KJ3111- ■ NM33- ■ ■ E1 -Z -	
	198	2650	7.50	16100	1.4	601	2KJ3111- ■ NM33- ■ ■ D1 -Z -	
	218	2400	6.79	15900	1.5	601	2KJ3111- ■ NM33- ■ ■ C1 -Z -	
	251	2090	5.91	15700	1.7	601	2KJ3111- ■ NM33- ■ ■ B1 -Z -	
	306	1710	4.85	15300	1.9	601	2KJ3111- ■ NM33- ■ ■ A1 -Z -	
	<b>E.149-LES250MD4P</b>							
	445	1180	3.33	8970	1.3	566	2KJ3007- ■ NM33- ■ ■ G1 -Z -	
	501	1040	2.96	9450	1.4	566	2KJ3007- ■ NM33- ■ ■ F1 -Z -	
	547	960	2.71	9620	1.5	566	2KJ3007- ■ NM33- ■ ■ E1 -Z -	
	620	845	2.39	9880	1.7	566	2KJ3007- ■ NM33- ■ ■ D1 -Z -	
	756	695	1.96	9980	2.1	566	2KJ3007- ■ NM33- ■ ■ C1 -Z -	
	862	610	1.72	9990	2.4	566	2KJ3007- ■ NM33- ■ ■ B1 -Z -	
	1106	475	1.34	9620	2.7	566	2KJ3007- ■ NM33- ■ ■ A1 -Z -	
	<b>E.129-LES250MD4P</b>							
	1015	515	1.46	6300	1.5	525	2KJ3006- ■ NM33- ■ ■ B1 -Z -	
	1195	435	1.24	6480	1.7	525	2KJ3006- ■ NM33- ■ ■ A1 -Z -	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical geared motors

### Transmission ratios and torques

#### Selection and ordering data

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi^{1)}$	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>Z.19</b>																		
<b>34.97</b>	41	100	1650	12.6	0.02	1364/39	✓	✓								2KJ3101 - ■■■■■■ - ■■ W1		
<b>30.97</b>	47	100	1650	13.2	0.03	2013/65	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ V1		
<b>26.91</b>	54	100	1650	13.3	0.04	1749/65	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ U1		
<b>24.46</b>	59	100	1650	13.3	0.05	318/13	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ T1		
<b>20.82</b>	70	100	1650	13.5	0.06	1353/65	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ S1		
<b>18.92</b>	77	100	1790	13.5	0.08	246/13	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ R1		
<b>16.50</b>	88	99	1900	13.7	0.09	33/2	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ Q1		
<b>14.77</b>	98	95	1870	13.8	0.12	192/13	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ P1		
<b>13.12</b>	111	91	1830	13.9	0.15	341/26	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ N1		
<b>12.11</b>	120	88	1810	13.9	0.18	2046/169	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ M1		
<b>10.52</b>	138	82	1760	14.3	0.20	957/91	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ L1		
<b>9.14</b>	159	78	1710	13.9	0.21	594/65	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ K1		
<b>8.25</b>	176	74	1670	14.1	0.27	33/4	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ J1		
<b>7.76</b>	187	73	1650	14.1	0.32	132/17	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ H1		
<b>6.77</b>	214	68	1600	14.5	0.36	88/13	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ G1		
<b>6.25</b>	232	56	1460	20.3	0.19	1705/273	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ F1		
<b>5.43</b>	267	53	1420	21.0	0.22	1595/294	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ E1		
<b>4.71</b>	308	49	1380	20.3	0.22	33/7	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ D1		
<b>4.26</b>	340	47	1350	20.7	0.29	715/168	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ C1		
<b>4.01</b>	362	46	1330	20.7	0.32	1430/357	✓	✓	✓							2KJ3101 - ■■■■■■ - ■■ B1		
<b>3.49</b>	415	43	1290	21.5	0.39	220/63			✓							2KJ3101 - ■■■■■■ - ■■ A1		
<b>D.19</b>																		
<b>184.86</b>	7.8	100	1650	13.1	0.02	50468/273	✓	✓								2KJ3201 - ■■■■■■ - ■■ Q1		
<b>163.69</b>	8.9	100	1650	13.2	0.03	74481/455	✓	✓								2KJ3201 - ■■■■■■ - ■■ P1		
<b>142.23</b>	10	100	1650	13.2	0.04	64713/455	✓	✓								2KJ3201 - ■■■■■■ - ■■ N1		
<b>129.30</b>	11	100	1650	13.2	0.04	11766/91	✓	✓								2KJ3201 - ■■■■■■ - ■■ M1		
<b>110.02</b>	13	100	1650	13.2	0.06	50061/455	✓	✓								2KJ3201 - ■■■■■■ - ■■ L1		
<b>100.02</b>	14	100	1650	13.2	0.07	9102/91	✓	✓								2KJ3201 - ■■■■■■ - ■■ K1		
<b>87.21</b>	17	100	1650	13.3	0.08	1221/14	✓	✓								2KJ3201 - ■■■■■■ - ■■ J1		
<b>78.07</b>	19	100	1650	13.3	0.11	7104/91	✓	✓								2KJ3201 - ■■■■■■ - ■■ H1		
<b>69.32</b>	21	100	1650	13.3	0.13	12617/182	✓	✓								2KJ3201 - ■■■■■■ - ■■ G1		
<b>63.99</b>	23	100	1650	13.3	0.16	75702/1183	✓	✓								2KJ3201 - ■■■■■■ - ■■ F1		
<b>55.59</b>	26	100	1650	13.4	0.17	35409/637	✓	✓								2KJ3201 - ■■■■■■ - ■■ E1		
<b>48.30</b>	30	100	1650	13.3	0.18	21978/455	✓	✓								2KJ3201 - ■■■■■■ - ■■ D1		
<b>43.61</b>	33	100	1650	13.3	0.22	1221/28	✓	✓								2KJ3201 - ■■■■■■ - ■■ C1		
<b>41.04</b>	35	100	1650	13.3	0.26	4884/119	✓	✓								2KJ3201 - ■■■■■■ - ■■ B1		
<b>35.78</b>	41	100	1650	13.4	0.29	3256/91	✓	✓								2KJ3201 - ■■■■■■ - ■■ A1		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version



**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>Z.29</b>																		
<b>41.40</b>	35	140	3710	10.8	0.04	207/5	✓	✓									2KJ3102 - ■■■■■■ - ■■ A2	
<b>36.72</b>	39	140	3670	10.8	0.05	918/25	✓	✓	✓	✓							2KJ3102 - ■■■■■■ - ■■ X1	
<b>31.86</b>	46	140	3330	10.9	0.06	1593/50	✓	✓	✓	✓							2KJ3102 - ■■■■■■ - ■■ W1	
<b>28.96</b>	50	140	3110	10.9	0.07	1593/55	✓	✓	✓	✓							2KJ3102 - ■■■■■■ - ■■ V1	
<b>24.84</b>	58	140	2770	11.0	0.09	621/25	✓	✓	✓	✓							2KJ3102 - ■■■■■■ - ■■ U1	
<b>22.58</b>	64	140	2570	11.0	0.11	1242/55	✓	✓	✓	✓							2KJ3102 - ■■■■■■ - ■■ T1	
<b>19.80</b>	73	140	2300	11.2	0.13	99/5	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ S1	
<b>17.67</b>	82	140	2070	11.3	0.15	972/55	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ R1	
<b>15.75</b>	92	140	1850	11.4	0.18	63/4	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ Q1	
<b>14.54</b>	100	120	2240	11.4	0.23	189/13	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ P1	
<b>12.73</b>	114	140	1470	11.6	0.26	891/70	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ N1	
<b>11.16</b>	130	140	1250	11.9	0.27	279/25	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ M1	
<b>10.12</b>	143	140	1090	12.1	0.34	81/8	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ L1	
<b>9.53</b>	152	140	1000	12.1	0.40	162/17	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ K1	
<b>8.40</b>	173	138	855	11.7	0.45	42/5	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ J1	
<b>7.29</b>	199	130	860	11.9	0.60	729/100	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ H1	
<b>6.92</b>	210	75	1900	17.4	0.29	90/13	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ G1	
<b>6.06</b>	239	100	945	17.9	0.34	297/49	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ F1	
<b>5.31</b>	273	91	1050	18.6	0.37	186/35	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ E1	
<b>4.82</b>	301	86	1080	18.9	0.46	135/28	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ D1	
<b>4.54</b>	319	84	1070	18.9	0.54	540/119	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ C1	
<b>4.00</b>	362	76	1160	18.2	0.63	4/1	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ B1	
<b>3.47</b>	418	70	1240	18.5	0.84	243/70	✓	✓	✓	✓	✓						2KJ3102 - ■■■■■■ - ■■ A1	
<b>D.29</b>																		
<b>217.89</b>	6.7	140	3710	10.7	0.02	7626/35	✓	✓									2KJ3202 - ■■■■■■ - ■■ Q1	
<b>192.93</b>	7.5	140	3710	10.8	0.03	67527/350	✓	✓	✓	✓							2KJ3202 - ■■■■■■ - ■■ P1	
<b>167.63</b>	8.7	140	3710	10.8	0.04	58671/350	✓	✓	✓	✓							2KJ3202 - ■■■■■■ - ■■ N1	
<b>152.39</b>	9.5	140	3710	10.8	0.05	58671/385	✓	✓	✓	✓							2KJ3202 - ■■■■■■ - ■■ M1	
<b>129.68</b>	11	140	3710	10.9	0.06	45387/350	✓	✓	✓	✓							2KJ3202 - ■■■■■■ - ■■ L1	
<b>117.89</b>	12	140	3710	10.9	0.08	45387/385	✓	✓	✓	✓							2KJ3202 - ■■■■■■ - ■■ K1	
<b>102.79</b>	14	140	3710	10.9	0.09	14391/140	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ J1	
<b>92.01</b>	16	140	3710	10.9	0.12	35424/385	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ H1	
<b>81.71</b>	18	140	3710	10.9	0.14	11439/140	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ G1	
<b>75.42</b>	19	140	3710	10.9	0.17	34317/455	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ F1	
<b>65.52</b>	22	140	3710	11.0	0.19	32103/490	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ E1	
<b>56.93</b>	25	140	3710	10.9	0.19	9963/175	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ D1	
<b>51.40</b>	28	140	3710	11.0	0.25	14391/280	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ C1	
<b>48.37</b>	30	140	3710	11.0	0.29	28782/595	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ B1	
<b>42.17</b>	34	140	3710	11.0	0.33	1476/35	✓	✓	✓	✓	✓						2KJ3202 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>Z.39</b>																			
55.95	26	200	4370	7.7	0.06	7553/135	✓	✓								2KJ3103 - ■■■■■■ - ■■ A2			
49.75	29	200	4370	7.7	0.07	3731/75	✓	✓	✓	✓						2KJ3103 - ■■■■■■ - ■■ X1			
43.68	33	200	4070	7.8	0.08	1092/25	✓	✓	✓	✓						2KJ3103 - ■■■■■■ - ■■ W1			
39.71	37	200	3790	7.8	0.10	2184/55	✓	✓	✓	✓						2KJ3103 - ■■■■■■ - ■■ V1			
33.97	43	200	3340	7.9	0.12	2548/75	✓	✓	✓	✓						2KJ3103 - ■■■■■■ - ■■ U1			
30.88	47	200	3080	7.9	0.14	5096/165	✓	✓	✓	✓						2KJ3103 - ■■■■■■ - ■■ T1			
27.30	53	200	2760	8.0	0.17	273/10	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ S1			
24.82	58	200	2520	8.0	0.22	273/11	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ R1			
21.74	67	200	2190	8.1	0.25	3913/180	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ Q1			
20.07	72	200	2000	8.1	0.31	301/15	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ P1			
17.77	82	200	1720	8.3	0.36	533/30	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ N1			
14.79	98	193	1500	8.4	0.47	1183/80	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ M1			
13.92	104	189	1470	8.4	0.55	1183/85	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ L1			
12.47	116	180	1470	8.6	0.60	3367/270	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ K1			
10.62	137	169	1440	8.8	0.78	637/60	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ J1			
9.10	159	158	1430	9.0	1.02	91/10			✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ H1			
7.84	185	148	1420	9.3	1.30	2821/360			✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ G1			
6.46	224	146	225	13.4	0.57	2379/368	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ F1			
6.08	238	147	100	13.4	0.66	2379/391	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ E1			
5.45	266	140	150	13.8	0.74	2257/414	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ D1			
4.64	312	130	490	14.3	0.97	427/92	✓	✓	✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ C1			
3.98	364	121	820	14.8	1.28	183/46			✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ B1			
3.43	423	112	1070	15.4	1.65	1891/552			✓	✓	✓					2KJ3103 - ■■■■■■ - ■■ A1			
<b>D.39</b>																			
235.29	6.2	200	4370	8.1	0.03	179998/765	✓	✓								2KJ3203 - ■■■■■■ - ■■ R1			
208.69	6.9	200	4370	8.2	0.05	15652/75	✓	✓	✓	✓						2KJ3203 - ■■■■■■ - ■■ Q1			
181.07	8	200	4370	8.2	0.05	230867/1275	✓	✓	✓	✓						2KJ3203 - ■■■■■■ - ■■ P1			
164.61	8.8	200	4370	8.2	0.07	461734/2805	✓	✓	✓	✓						2KJ3203 - ■■■■■■ - ■■ N1			
141.17	10	200	4370	8.2	0.08	179998/1275	✓	✓	✓	✓						2KJ3203 - ■■■■■■ - ■■ M1			
128.34	11	200	4370	8.2	0.10	359996/2805	✓	✓	✓	✓						2KJ3203 - ■■■■■■ - ■■ L1			
112.53	13	200	4370	8.2	0.12	86086/765	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ K1			
100.44	14	200	4370	8.3	0.15	93912/935	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ J1			
89.51	16	200	4370	8.3	0.17	27391/306	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ H1			
82.63	18	200	4370	8.3	0.21	4214/51	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ G1			
72.34	20	200	4370	8.3	0.25	6149/85	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ F1			
63.43	23	200	4370	8.4	0.23	242606/3825	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ E1			
57.54	25	200	4370	8.4	0.33	3913/68	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ D1			
54.16	27	200	4370	8.4	0.39	15652/289	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ C1			
47.74	30	200	4350	8.3	0.43	109564/2295	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ B1			
41.43	35	200	3920	8.4	0.58	35217/850	✓	✓	✓	✓	✓					2KJ3203 - ■■■■■■ - ■■ A1			

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## Selection and ordering data

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>Z.49</b>																			
52.14	28	320	5900	7.0	0.17	4171/80	✓	✓	✓	✓							2KJ3104 - ■■■■■■ - ■■ B2		
47.40	31	320	5780	7.0	0.21	4171/88	✓	✓	✓	✓							2KJ3104 - ■■■■■■ - ■■ A2		
40.31	36	320	5650	7.1	0.25	645/16	✓	✓	✓	✓							2KJ3104 - ■■■■■■ - ■■ X1		
36.65	40	320	5220	7.1	0.31	3225/88	✓	✓	✓	✓							2KJ3104 - ■■■■■■ - ■■ W1		
32.70	44	320	5520	7.1	0.36	3139/96	✓	✓	✓	✓	✓	✓					2KJ3104 - ■■■■■■ - ■■ V1		
29.32	49	320	5280	7.2	0.43	645/22	✓	✓	✓	✓	✓	✓					2KJ3104 - ■■■■■■ - ■■ U1		
26.43	55	320	5060	7.2	0.50	2537/96	✓	✓	✓	✓	✓	✓					2KJ3104 - ■■■■■■ - ■■ T1		
24.39	59	320	4890	7.2	0.59	2537/104	✓	✓	✓	✓	✓	✓					2KJ3104 - ■■■■■■ - ■■ S1		
22.27	65	320	4710	7.2	0.71	1247/56	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ R1		
18.48	78	320	4350	7.4	0.90	2365/128	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ Q1		
17.39	83	320	4230	7.4	1.03	2365/136	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ P1		
16.42	88	320	4130	7.4	1.17	2365/144	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ N1		
13.98	104	320	3850	7.5	1.44	559/40	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ M1		
11.97	121	320	3590	7.5	1.76	2107/176			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ L1		
10.53	138	320	3390	7.5	2.10	2021/192			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ K1		
8.88	163	320	3130	7.8	2.70	817/92			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ J1		
7.74	187	320	3100	8.0	3.60	387/50			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ H1		
7.64	190	295	3000	11.8	1.18	649/85	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ G1		
7.21	201	290	2980	11.8	1.34	649/90	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ F1		
6.14	236	265	2940	12.2	1.67	767/125	✓	✓	✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ E1		
5.26	276	245	2880	12.2	2.10	2891/550			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ D1		
4.62	314	225	2820	12.2	2.60	2773/600			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ C1		
3.90	372	205	2740	12.2	3.30	2242/575			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ B1		
3.40	426	191	2210	12.2	4.40	2124/625			✓	✓	✓	✓	✓				2KJ3104 - ■■■■■■ - ■■ A1		
<b>D.49</b>																			
280.89	5.2	320	5780	7.3	0.06	60673/216	✓	✓									2KJ3204 - ■■■■■■ - ■■ S1		
249.76	5.8	320	5780	7.3	0.07	29971/120	✓	✓	✓	✓							2KJ3204 - ■■■■■■ - ■■ R1		
219.30	6.6	320	5780	7.4	0.08	2193/10	✓	✓	✓	✓							2KJ3204 - ■■■■■■ - ■■ Q1		
199.36	7.3	320	5780	7.4	0.10	2193/11	✓	✓	✓	✓							2KJ3204 - ■■■■■■ - ■■ P1		
170.57	8.5	320	5780	7.4	0.12	5117/30	✓	✓	✓	✓							2KJ3204 - ■■■■■■ - ■■ N1		
155.06	9.4	320	5780	7.4	0.14	5117/33	✓	✓	✓	✓							2KJ3204 - ■■■■■■ - ■■ M1		
137.06	11	320	5780	7.4	0.17	2193/16	✓	✓	✓	✓	✓	✓					2KJ3204 - ■■■■■■ - ■■ L1		
124.60	12	320	5780	7.4	0.22	10965/88	✓	✓	✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ K1		
109.14	13	320	5780	7.4	0.25	31433/288	✓	✓	✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ J1		
100.75	14	320	5780	7.4	0.31	31433/312	✓	✓	✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ H1		
89.20	16	320	5780	7.4	0.37	29971/336	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3204 - ■■■■■■ - ■■ G1		
74.24	20	320	5780	7.5	0.50	9503/128	✓	✓	✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ F1		
69.88	21	320	5780	7.5	0.58	559/8	✓	✓	✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ E1		
62.61	23	320	5780	7.5	0.65	27047/432	✓	✓	✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ D1		
53.30	27	320	5780	7.5	0.85	5117/96	✓	✓	✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ C1		
45.69	32	320	5780	7.6	1.12	731/16			✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ B1		
39.34	37	320	5540	7.6	1.43	22661/576			✓	✓	✓	✓	✓				2KJ3204 - ■■■■■■ - ■■ A1		

## Article No. supplement

Shaft design	1 or 9	see page 10/48
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, B, F or H	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques

## Selection and ordering data

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi^{1)}$	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	Motor frame size													Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250		
<b>Z.59</b>																				
<b>56.99</b>	25	450	7660	6.5	0.18	4559/80	✓	✓	✓	✓									2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ A2	
<b>51.81</b>	28	450	7660	6.5	0.21	4559/88	✓	✓	✓	✓									2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ X1	
<b>44.06</b>	33	450	7310	6.6	0.26	705/16	✓	✓	✓	✓									2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ W1	
<b>40.06</b>	36	450	7020	6.6	0.32	3525/88	✓	✓	✓	✓									2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ V1	
<b>35.74</b>	41	450	6690	6.6	0.37	3431/96	✓	✓	✓	✓	✓	✓							2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ U1	
<b>32.05</b>	45	450	6180	6.7	0.44	705/22	✓	✓	✓	✓	✓	✓							2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ T1	
<b>28.89</b>	50	450	5690	6.7	0.52	2773/96	✓	✓	✓	✓	✓	✓							2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ S1	
<b>26.66</b>	54	450	5330	6.7	0.62	2773/104	✓	✓	✓	✓	✓	✓							2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ R1	
<b>24.34</b>	60	450	4930	6.7	0.73	1363/56	✓	✓	✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ Q1	
<b>20.20</b>	72	450	5230	6.9	0.94	2585/128	✓	✓	✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ P1	
<b>19.01</b>	76	450	5090	6.9	1.08	2585/136	✓	✓	✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ N1	
<b>17.95</b>	81	450	4960	6.9	1.23	2585/144	✓	✓	✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ M1	
<b>15.27</b>	95	450	4600	7.0	1.51	611/40	✓	✓	✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ L1	
<b>13.09</b>	111	450	4280	7.2	1.85	2303/176			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ K1	
<b>11.51</b>	126	450	4030	7.3	2.30	2209/192			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ J1	
<b>9.71</b>	149	450	3710	7.5	2.90	893/92			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ H1	
<b>8.46</b>	171	450	3600	8.0	3.90	423/50			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ G1	
<b>8.07</b>	180	410	3500	10.6	1.45	121/15	✓	✓	✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ F1	
<b>6.86</b>	211	410	3480	11.0	1.81	858/125	✓	✓	✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ E1	
<b>5.88</b>	247	410	3440	11.3	2.30	147/25			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ D1	
<b>5.17</b>	280	410	2210	11.6	2.80	517/100			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ C1	
<b>4.36</b>	333	405	2650	12.0	3.60	2508/575			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ B1	
<b>3.80</b>	382	405	2920	13.4	4.90	2376/625			✓	✓	✓	✓	✓						2KJ3105 - ■ ■ ■ ■ ■ ■ - ■ ■ A1	
<b>D.59</b>																				
<b>307.02</b>	4.7	450	7660	6.8	0.06	66317/216	✓	✓											2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ S1	
<b>272.99</b>	5.3	450	7660	6.8	0.07	32759/120	✓	✓	✓	✓									2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ R1	
<b>239.70</b>	6	450	7660	6.8	0.08	2397/10	✓	✓	✓	✓									2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ Q1	
<b>217.91</b>	6.7	450	7660	6.8	0.10	2397/11	✓	✓	✓	✓									2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ P1	
<b>186.43</b>	7.8	450	7660	6.9	0.12	5593/30	✓	✓	✓	✓									2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ N1	
<b>169.48</b>	8.6	450	7660	6.9	0.14	5593/33	✓	✓	✓	✓									2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ M1	
<b>149.81</b>	9.7	450	7660	6.9	0.17	2397/16	✓	✓	✓	✓	✓	✓							2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ L1	
<b>136.19</b>	11	450	7660	6.9	0.22	11985/88	✓	✓	✓	✓	✓	✓							2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ K1	
<b>119.30</b>	12	450	7660	6.9	0.26	34357/288	✓	✓	✓	✓	✓	✓							2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ J1	
<b>110.12</b>	13	450	7660	6.9	0.31	34357/312	✓	✓	✓	✓	✓	✓							2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ H1	
<b>97.50</b>	15	450	7660	6.9	0.37	32759/336	✓	✓	✓	✓	✓	✓	✓						2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ G1	
<b>81.15</b>	18	450	7660	7.0	0.50	10387/128	✓	✓	✓	✓	✓	✓	✓						2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ F1	
<b>76.38</b>	19	450	7660	7.0	0.59	611/8	✓	✓	✓	✓	✓	✓	✓						2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ E1	
<b>68.43</b>	21	450	7660	7.0	0.65	29563/432	✓	✓	✓	✓	✓	✓	✓						2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ D1	
<b>58.26</b>	25	450	7660	7.0	0.85	5593/96	✓	✓	✓	✓	✓	✓	✓						2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ C1	
<b>49.94</b>	29	450	7660	7.1	1.12	799/16			✓	✓	✓	✓	✓						2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ B1	
<b>43.00</b>	34	450	7230	7.1	1.44	24769/576			✓	✓	✓	✓	✓						2KJ3205 - ■ ■ ■ ■ ■ ■ - ■ ■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>Z.69</b>																			
60.97	24	600	11000	6.2	0.18	2134/35	✓	✓	✓	✓								2KJ3106 - ■■■■■■ - ■■ A2	
55.43	26	600	11000	6.2	0.22	388/7	✓	✓	✓	✓								2KJ3106 - ■■■■■■ - ■■ X1	
47.14	31	600	11000	6.3	0.28	330/7	✓	✓	✓	✓								2KJ3106 - ■■■■■■ - ■■ W1	
42.86	34	600	11000	6.3	0.34	300/7	✓	✓	✓	✓								2KJ3106 - ■■■■■■ - ■■ V1	
38.24	38	600	11000	6.4	0.39	803/21	✓	✓	✓	✓	✓	✓						2KJ3106 - ■■■■■■ - ■■ U1	
34.29	42	600	11000	6.4	0.47	240/7	✓	✓	✓	✓	✓	✓						2KJ3106 - ■■■■■■ - ■■ T1	
30.90	47	600	10400	6.4	0.56	649/21	✓	✓	✓	✓	✓	✓						2KJ3106 - ■■■■■■ - ■■ S1	
28.53	51	600	9860	6.4	0.66	2596/91	✓	✓	✓	✓	✓	✓						2KJ3106 - ■■■■■■ - ■■ R1	
26.04	56	600	9200	6.5	0.79	1276/49	✓	✓	✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ Q1	
21.61	67	600	7910	6.6	1.01	605/28	✓	✓	✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ P1	
20.34	71	600	7510	6.6	1.16	2420/119	✓	✓	✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ N1	
19.21	75	600	7140	6.6	1.32	1210/63	✓	✓	✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ M1	
16.34	89	600	9850	6.7	1.64	572/35	✓	✓	✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ L1	
14.00	104	600	9260	6.8	2.00	14/1			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ K1	
12.31	118	600	8790	7.0	2.50	517/42			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ J1	
10.39	140	600	8200	7.1	3.20	1672/161			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ H1	
9.05	160	591	7920	7.7	4.30	1584/175			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ G1	
8.50	171	446	8000	10.0	1.67	1760/207	✓	✓	✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ F1	
7.23	201	447	7540	10.3	2.10	832/115	✓	✓	✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ E1	
6.20	234	445	7290	10.6	2.70	1568/253			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ D1	
5.45	266	429	7090	10.9	3.40	376/69			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ C1	
4.60	315	446	6810	11.3	4.40	2432/529			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ B1	
4.01	362	445	5440	11.6	5.80	2304/575			✓	✓	✓	✓	✓					2KJ3106 - ■■■■■■ - ■■ A1	
<b>D.69</b>																			
328.49	4.4	600	11000	6.5	0.06	62084/189	✓	✓										2KJ3206 - ■■■■■■ - ■■ S1	
292.08	5.0	600	11000	6.5	0.07	30668/105	✓	✓	✓	✓								2KJ3206 - ■■■■■■ - ■■ R1	
256.46	5.7	600	11000	6.6	0.08	8976/35	✓	✓	✓	✓								2KJ3206 - ■■■■■■ - ■■ Q1	
233.14	6.2	600	11000	6.6	0.10	1632/7	✓	✓	✓	✓								2KJ3206 - ■■■■■■ - ■■ P1	
199.47	7.3	600	11000	6.6	0.12	2992/15	✓	✓	✓	✓								2KJ3206 - ■■■■■■ - ■■ N1	
181.33	8	600	11000	6.6	0.14	544/3	✓	✓	✓	✓								2KJ3206 - ■■■■■■ - ■■ M1	
160.29	9	600	11000	6.6	0.17	1122/7	✓	✓	✓	✓	✓	✓						2KJ3206 - ■■■■■■ - ■■ L1	
145.71	10	600	11000	6.6	0.22	1020/7	✓	✓	✓	✓	✓	✓						2KJ3206 - ■■■■■■ - ■■ K1	
127.63	11	600	11000	6.6	0.26	8041/63	✓	✓	✓	✓	✓	✓						2KJ3206 - ■■■■■■ - ■■ J1	
117.82	12	600	11000	6.6	0.31	32164/273	✓	✓	✓	✓	✓	✓						2KJ3206 - ■■■■■■ - ■■ H1	
104.31	14	600	11000	6.6	0.37	15334/147	✓	✓	✓	✓	✓	✓	✓					2KJ3206 - ■■■■■■ - ■■ G1	
86.82	17	600	11000	6.7	0.50	2431/28	✓	✓	✓	✓	✓	✓	✓					2KJ3206 - ■■■■■■ - ■■ F1	
81.71	18	600	11000	6.7	0.59	572/7	✓	✓	✓	✓	✓	✓	✓					2KJ3206 - ■■■■■■ - ■■ E1	
73.22	20	600	11000	6.7	0.66	13838/189	✓	✓	✓	✓	✓	✓	✓					2KJ3206 - ■■■■■■ - ■■ D1	
62.33	23	600	11000	6.7	0.86	187/3	✓	✓	✓	✓	✓	✓	✓					2KJ3206 - ■■■■■■ - ■■ C1	
53.43	27	600	11000	6.7	1.14	374/7			✓	✓	✓	✓	✓					2KJ3206 - ■■■■■■ - ■■ B1	
46.01	32	600	11000	6.7	1.46	5797/126			✓	✓	✓	✓	✓					2KJ3206 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**SIMOGEAR geared motors**

## Helical geared motors

**Transmission ratios and torques****Selection and ordering data**

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>Z.79</b>																		
<b>54.47</b>	27	840	13400	6.1	0.43	3813/70	✓	✓	✓							2KJ3107 - ■■■■■■ - ■■ A2		
<b>49.52</b>	29	840	12600	6.1	0.53	3813/77	✓	✓	✓							2KJ3107 - ■■■■■■ - ■■ X1		
<b>44.42</b>	33	840	11700	6.2	0.73	533/12	✓	✓	✓	✓	✓					2KJ3107 - ■■■■■■ - ■■ W1		
<b>39.94</b>	36	840	10900	6.2	0.83	3075/77	✓	✓	✓	✓	✓					2KJ3107 - ■■■■■■ - ■■ V1		
<b>36.12</b>	40	840	10100	6.2	0.92	1517/42	✓	✓	✓	✓	✓					2KJ3107 - ■■■■■■ - ■■ U1		
<b>33.34</b>	43	840	13400	6.2	1.08	3034/91	✓	✓	✓	✓	✓					2KJ3107 - ■■■■■■ - ■■ T1		
<b>30.54</b>	47	840	13400	6.3	1.41	2993/98	✓	✓	✓	✓	✓	✓				2KJ3107 - ■■■■■■ - ■■ S1		
<b>25.62</b>	57	840	13300	6.0	1.52	205/8	✓	✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ R1		
<b>24.12</b>	60	840	13000	6.0	1.73	410/17	✓	✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ Q1		
<b>22.13</b>	66	840	12600	6.1	1.90	1394/63	✓	✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ P1		
<b>19.33</b>	75	840	11900	6.1	2.7	1353/70	✓	✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ N1		
<b>17.31</b>	84	840	11400	6.2	3.3	2665/154		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ M1		
<b>15.13</b>	96	840	10800	6.3	3.9	1271/84		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ L1		
<b>12.99</b>	112	840	10100	6.3	4.3	2091/161		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ K1		
<b>11.48</b>	126	840	9640	6.7	5.5	287/25		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ J1		
<b>9.76</b>	149	815	9080	6.9	7.0	205/21			✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ H1		
<b>8.37</b>	173	790	8580	7.1	9.3	410/49				✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ G1		
<b>8.19</b>	177	715	8460	9.2	4.0	3965/484		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ F1		
<b>7.16</b>	203	730	8030	9.4	4.8	1891/264		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ E1		
<b>6.15</b>	236	715	7850	9.6	5.4	3111/506		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ D1		
<b>5.43</b>	267	685	7690	10.5	6.9	2989/550		✓	✓	✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ C1		
<b>4.62</b>	314	775	7460	10.9	9.1	305/66				✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ B1		
<b>3.96</b>	366	775	3730	11.3	12.0	305/77				✓	✓	✓	✓			2KJ3107 - ■■■■■■ - ■■ A1		
<b>D.79</b>																		
<b>330.23</b>	4.4	840	13400	6.1	0.17	369861/1120	✓	✓	✓							2KJ3207 - ■■■■■■ - ■■ S1		
<b>300.21</b>	4.8	840	13400	6.1	0.20	369861/1232	✓	✓	✓							2KJ3207 - ■■■■■■ - ■■ R1		
<b>255.33</b>	5.7	840	13400	6.2	0.25	57195/224	✓	✓	✓							2KJ3207 - ■■■■■■ - ■■ Q1		
<b>232.12</b>	6.2	840	13400	6.2	0.30	285975/1232	✓	✓	✓							2KJ3207 - ■■■■■■ - ■■ P1		
<b>207.10</b>	7	840	13400	6.2	0.35	92783/448	✓	✓	✓	✓	✓					2KJ3207 - ■■■■■■ - ■■ N1		
<b>185.70</b>	7.8	840	13400	6.2	0.42	57195/308	✓	✓	✓	✓	✓					2KJ3207 - ■■■■■■ - ■■ M1		
<b>167.39</b>	8.7	840	13400	6.2	0.49	74989/448	✓	✓	✓	✓	✓					2KJ3207 - ■■■■■■ - ■■ L1		
<b>154.51</b>	9.4	840	13400	6.2	0.58	224967/1456	✓	✓	✓	✓	✓					2KJ3207 - ■■■■■■ - ■■ K1		
<b>141.04</b>	10	840	13400	6.2	0.69	110577/784	✓	✓	✓	✓	✓	✓				2KJ3207 - ■■■■■■ - ■■ J1		
<b>117.03</b>	12	840	13400	6.2	0.87	209715/1792	✓	✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ H1		
<b>110.14</b>	13	840	13400	6.2	1.00	209715/1904	✓	✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ G1		
<b>104.03</b>	14	840	13400	6.2	1.14	69905/672	✓	✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ F1		
<b>88.52</b>	16	840	13400	6.2	1.39	49569/560	✓	✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ E1		
<b>75.83</b>	19	840	13400	6.2	1.69	26691/352		✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ D1		
<b>66.67</b>	22	840	13400	6.2	2.10	59737/896		✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ C1		
<b>56.25</b>	26	840	13400	6.2	2.60	72447/1288		✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ B1		
<b>49.02</b>	30	840	12600	6.2	3.50	34317/700		✓	✓	✓	✓	✓	✓			2KJ3207 - ■■■■■■ - ■■ A1		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>Z.89</b>																		
57.36	25	1680	18500	5.4	1.34	2581/45			✓	✓	✓	✓				2KJ3108 - ■■■■■■ - ■■ A2		
51.78	28	1680	18500	5.4	1.46	2848/55			✓	✓	✓	✓				2KJ3108 - ■■■■■■ - ■■ X1		
46.97	31	1680	18500	5.4	1.71	1691/36			✓	✓	✓	✓				2KJ3108 - ■■■■■■ - ■■ W1		
43.36	33	1680	18500	5.4	2.0	1691/39			✓	✓	✓	✓				2KJ3108 - ■■■■■■ - ■■ V1		
39.41	37	1680	18500	5.5	2.3	2759/70			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ U1		
33.38	43	1680	18500	5.5	2.8	267/8			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ T1		
31.41	46	1680	18500	5.5	2.8	534/17			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ S1		
29.01	50	1680	18500	5.6	4.3	3916/135			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ R1		
25.81	56	1680	18500	5.6	5.3	2581/100			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ Q1		
22.92	63	1680	17400	5.6	6.4	1513/66			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ P1		
20.52	71	1680	16000	5.7	6.4	7387/360			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ N1		
17.54	83	1680	14200	5.7	7.5	6052/345			✓	✓	✓	✓	✓			2KJ3108 - ■■■■■■ - ■■ M1		
15.66	93	1680	12900	6.0	9.5	1958/125			✓	✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ L1		
13.84	105	1680	11500	6.1	11	623/45				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ K1		
12.15	119	1630	10700	5.9	15	3827/315				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ J1		
10.58	137	1590	10700	6.0	19	3649/345				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ H1		
9.04	160	1560	11900	6.1	24	2848/315				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ G1		
7.74	187	1530	12700	6.3	30	178/23				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ F1		
6.89	210	1050	10100	8.6	12	62/9				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ E1		
6.05	240	1060	10900	8.8	17	2666/441				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ D1		
5.26	276	1060	11600	9.0	21	2542/483				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ C1		
4.50	322	1060	11500	9.3	28	1984/441				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ B1		
3.85	377	1060	11100	9.7	35	620/161				✓	✓	✓	✓	✓		2KJ3108 - ■■■■■■ - ■■ A1		
<b>D.89</b>																		
311.60	4.7	1680	18500	5.7	0.41	132432/425			✓	✓						2KJ3208 - ■■■■■■ - ■■ S1		
283.28	5.1	1680	18500	5.7	0.50	264864/935			✓	✓						2KJ3208 - ■■■■■■ - ■■ R1		
254.09	5.7	1680	18500	5.7	0.70	64792/255			✓	✓	✓	✓				2KJ3208 - ■■■■■■ - ■■ Q1		
228.45	6.3	1680	18500	5.7	0.79	42720/187			✓	✓	✓	✓				2KJ3208 - ■■■■■■ - ■■ P1		
206.62	7	1680	18500	5.7	0.87	52688/255			✓	✓	✓	✓				2KJ3208 - ■■■■■■ - ■■ N1		
190.73	7.6	1680	18500	5.7	1.03	210752/1105			✓	✓	✓	✓				2KJ3208 - ■■■■■■ - ■■ M1		
174.71	8.3	1680	18500	5.7	1.35	103952/595			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ L1		
146.59	9.9	1680	18500	5.7	1.43	2492/17			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ K1		
137.97	11	1680	18500	5.7	1.63	39872/289			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ J1		
126.58	11	1680	18500	5.7	1.78	5696/45			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ H1		
110.57	13	1680	18500	5.7	2.5	46992/425			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ G1		
98.99	15	1680	18500	5.7	3.1	18512/187			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ F1		
86.56	17	1680	18500	5.7	3.7	22072/255			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ E1		
74.30	20	1680	18500	5.7	4.0	8544/115			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ D1		
65.67	22	1680	18500	5.7	5.0	139552/2125			✓	✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ C1		
55.84	26	1680	18500	5.7	6.4	2848/51				✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ B1		
47.87	30	1680	18500	5.7	8.5	5696/119				✓	✓	✓	✓			2KJ3208 - ■■■■■■ - ■■ A1		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/48
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, B, F or H</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>Z.109</b>																			
51.17	28	3100	20200	5.4	4.7	5015/98				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ X1		
43.64	33	3100	20200	5.4	6.0	9775/224				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ W1		
41.07	35	3100	20200	5.4	6.8	575/14				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ V1		
38.12	38	3100	20200	5.4	7.4	9605/252				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ U1		
33.70	43	3100	20200	5.4	9.0	1887/56				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ T1		
30.08	48	3100	20000	5.5	11	9265/308				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ S1		
27.07	54	3040	19300	5.5	13	9095/336				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ R1		
23.49	62	2920	18400	5.5	15	7565/322				✓	✓	✓	✓	✓			2KJ3110 - ■■■■■■ - ■■ Q1		
21.13	69	2830	17900	5.7	18	1479/70				✓	✓	✓	✓	✓	✓		2KJ3110 - ■■■■■■ - ■■ P1		
18.47	79	2720	17100	5.8	21	6205/336				✓	✓	✓	✓	✓	✓		2KJ3110 - ■■■■■■ - ■■ N1		
16.48	88	2630	16600	5.8	25	1615/98				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ M1		
14.52	100	2570	15900	5.9	30	4675/322				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ L1		
12.72	114	2510	15100	6.0	37	1870/147				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ K1		
11.09	131	2460	14400	6.1	44	255/23				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ J1		
10.12	143	2430	13900	6.1	51	425/42				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ H1		
8.71	166	2380	13200	6.3	64	2805/322						✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ G1		
8.41	172	2290	12800	8.6	29	589/70				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ F1		
7.41	196	2280	12300	8.7	34	341/46				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ E1		
6.50	223	2280	12300	8.8	42	682/105				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ D1		
5.66	256	2290	12200	9.0	51	651/115				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ C1		
5.17	280	2280	12200	9.1	60	31/6				✓	✓	✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ B1		
4.45	326	2150	12000	9.4	75	1023/230						✓	✓	✓	✓	✓	2KJ3110 - ■■■■■■ - ■■ A1		
<b>D.109</b>																			
348.88	4.2	3100	20200	5.5	1.27	263755/756				✓	✓	✓					2KJ3210 - ■■■■■■ - ■■ T1		
314.98	4.6	3100	20200	5.5	1.36	72760/231				✓	✓	✓					2KJ3210 - ■■■■■■ - ■■ S1		
285.72	5.1	3100	20200	5.5	1.60	864025/3024				✓	✓	✓					2KJ3210 - ■■■■■■ - ■■ R1		
263.74	5.5	3100	20200	5.5	1.88	864025/3276				✓	✓	✓					2KJ3210 - ■■■■■■ - ■■ Q1		
239.75	6	3100	20200	5.5	2.1	281945/1176				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ P1		
203.01	7.1	3100	20200	5.5	2.6	45475/224				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ N1		
191.07	7.6	3100	20200	5.5	2.6	2675/14				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ M1		
176.45	8.2	3100	20200	5.6	4.0	100045/567				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ L1		
157.00	9.2	3100	20200	5.6	5.0	52751/336				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ K1		
139.44	10	3100	20200	5.6	5.9	773075/5544				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ J1		
124.82	12	3100	20200	5.6	5.8	754885/6048				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ H1		
106.70	14	3100	20200	5.6	6.7	154615/1449				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ G1		
95.28	15	3100	20200	5.6	8.5	20009/210				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ F1		
84.21	17	3100	20200	5.6	9.6	9095/108				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ E1		
73.90	20	3100	20200	5.6	13	391085/5292				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ D1		
64.34	23	3100	20200	5.6	16	372895/5796				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ C1		
55.00	26	3090	20200	5.6	20	72760/1323				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ B1		
47.08	31	2930	20200	5.7	25	45475/966				✓	✓	✓	✓	✓			2KJ3210 - ■■■■■■ - ■■ A1		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version



## SIMOGEAR geared motors

### Helical geared motors

#### Transmission ratios and torques

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)																					
							63	71	80	90	100	112	132	160	180	200		225	250																			
<b>Z.129</b>																																						
<b>62.48</b>	23	5000	27000	6.2	7.5	11371/182				✓	✓	✓	✓	✓																					2KJ3111 - ■■■■■■ - ■■ X1			
<b>53.47</b>	27	5000	27000	6.2	9.5	5561/104				✓	✓	✓	✓	✓																					2KJ3111 - ■■■■■■ - ■■ W1			
<b>50.33</b>	29	5000	27000	6.2	11	11122/221				✓	✓	✓	✓	✓																						2KJ3111 - ■■■■■■ - ■■ V1		
<b>47.18</b>	31	5000	27000	6.2	12	11039/234				✓	✓	✓	✓	✓																						2KJ3111 - ■■■■■■ - ■■ U1		
<b>41.82</b>	35	5000	27000	6.3	14	10873/260				✓	✓	✓	✓	✓																						2KJ3111 - ■■■■■■ - ■■ T1		
<b>37.15</b>	39	5000	26000	6.3	17	5312/143				✓	✓	✓	✓	✓																						2KJ3111 - ■■■■■■ - ■■ S1		
<b>33.52</b>	43	5000	24900	6.3	20	1743/52				✓	✓	✓	✓	✓																						2KJ3111 - ■■■■■■ - ■■ R1		
<b>29.70</b>	49	5000	23700	6.3	25	8881/299				✓	✓	✓	✓	✓																						2KJ3111 - ■■■■■■ - ■■ Q1		
<b>26.30</b>	55	5000	22600	6.4	28	8549/325				✓	✓	✓	✓	✓	✓																					2KJ3111 - ■■■■■■ - ■■ P1		
<b>23.41</b>	62	5000	21500	6.4	33	913/39					✓	✓	✓	✓	✓	✓																				2KJ3111 - ■■■■■■ - ■■ N1		
<b>20.98</b>	69	5000	20500	6.5	40	1909/91					✓	✓	✓	✓	✓	✓	✓																			2KJ3111 - ■■■■■■ - ■■ M1		
<b>18.60</b>	78	5000	19500	6.5	47	5561/299					✓	✓	✓	✓	✓	✓	✓																			2KJ3111 - ■■■■■■ - ■■ L1		
<b>16.42</b>	88	5000	18100	6.6	57	1494/91					✓	✓	✓	✓	✓	✓	✓	✓																			2KJ3111 - ■■■■■■ - ■■ K1	
<b>14.43</b>	100	4940	16200	6.6	69	332/23					✓	✓	✓	✓	✓	✓	✓	✓	✓																		2KJ3111 - ■■■■■■ - ■■ J1	
<b>13.07</b>	111	4850	16600	6.6	78	3569/273					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																	2KJ3111 - ■■■■■■ - ■■ H1	
<b>11.38</b>	127	4760	17200	6.6	95	3403/299						✓	✓	✓	✓	✓	✓	✓	✓	✓																	2KJ3111 - ■■■■■■ - ■■ G1	
<b>9.33</b>	155	4660	17000	6.7	126	1577/169							✓	✓	✓	✓	✓	✓	✓	✓	✓															2KJ3111 - ■■■■■■ - ■■ F1		
<b>8.53</b>	170	3640	16200	7.4	66	162/19					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																2KJ3111 - ■■■■■■ - ■■ E1	
<b>7.50</b>	193	3630	16100	8.3	80	3276/437						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓															2KJ3111 - ■■■■■■ - ■■ D1	
<b>6.79</b>	214	3630	15900	8.3	91	129/19						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓															2KJ3111 - ■■■■■■ - ■■ C1	
<b>5.91</b>	245	3610	15700	8.5	112	2583/437							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓															2KJ3111 - ■■■■■■ - ■■ B1	
<b>4.85</b>	299	3270	15300	8.8	151	63/13								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓														2KJ3111 - ■■■■■■ - ■■ A1	
<b>D.129</b>																																						
<b>373.00</b>	3.9	5000	27000	6.4	3.3	523481/1404				✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ S1		
<b>344.17</b>	4.2	5000	27000	6.4	3.9	523481/1521				✓	✓	✓																									2KJ3211 - ■■■■■■ - ■■ R1	
<b>316.90</b>	4.6	5000	27000	6.4	4.5	259541/819				✓	✓	✓	✓	✓																							2KJ3211 - ■■■■■■ - ■■ Q1	
<b>270.24</b>	5.4	5000	27000	6.4	5.6	505885/1872				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ P1
<b>254.34</b>	5.7	5000	27000	6.4	6.4	505885/1989				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ N1
<b>236.03</b>	6.1	5000	27000	6.4	6.9	497087/2106				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ M1
<b>208.67</b>	6.9	5000	27000	6.4	8.4	162763/780				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ L1
<b>186.28</b>	7.8	5000	27000	6.4	9.9	479491/2574				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ K1
<b>167.63</b>	8.7	5000	27000	6.4	12	470693/2808				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ J1
<b>145.49</b>	10	5000	27000	6.4	14	391511/2691				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ H1
<b>130.84</b>	11	5000	27000	6.4	16	127571/975				✓	✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ G1
<b>114.36</b>	13	5000	27000	6.5	19	321127/2808					✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ F1
<b>102.05</b>	14	5000	27000	6.5	23	83581/819					✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ E1
<b>89.91</b>	16	5000	27000	6.5	27	241945/2691					✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ D1
<b>78.78</b>	18	5000	27000	6.5	31	193556/2457					✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ C1
<b>68.66</b>	21	5000	27000	6.5	37	61586/897					✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ B1
<b>62.66</b>	23	5000	27000	6.5	44	21995/351					✓	✓	✓	✓																								2KJ3211 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design **1 or 9** [see page 10/48](#)

Motor frame size, motor type, efficiency class [see chapter 9](#)

Frequency and voltage **2 or 9** [see page 11/2](#)

Gearbox mounting type **A, B, F or H** [see page 10/42](#)

<sup>1)</sup> Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

## Helical geared motors

### Transmission ratios and torques

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>Z.149</b>																			
56.64	26	8000	50300	5.2	19	4814/85				✓	✓	✓	✓				2KJ3112 - ■■■■■■ - ■■ W1		
52.84	27	7710	49500	5.2	21	2378/45				✓	✓	✓	✓				2KJ3112 - ■■■■■■ - ■■ V1		
46.98	31	7570	47600	5.2	25	2349/50				✓	✓	✓	✓				2KJ3112 - ■■■■■■ - ■■ U1		
42.18	34	7660	45600	5.2	30	464/11				✓	✓	✓	✓				2KJ3112 - ■■■■■■ - ■■ T1		
38.18	38	7550	44100	5.2	35	2291/60				✓	✓	✓	✓				2KJ3112 - ■■■■■■ - ■■ S1		
33.54	43	8000	41400	5.2	43	3857/115				✓	✓	✓	✓				2KJ3112 - ■■■■■■ - ■■ R1		
30.39	48	8000	39900	5.2	50	3799/125				✓	✓	✓	✓	✓			2KJ3112 - ■■■■■■ - ■■ Q1		
27.07	54	8000	38100	5.3	59	406/15				✓	✓	✓	✓	✓	✓		2KJ3112 - ■■■■■■ - ■■ P1		
24.30	60	8000	36600	5.3	70	2552/105				✓	✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ N1		
21.69	67	8000	35000	5.3	81	2494/115				✓	✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ M1		
19.33	75	8000	33400	5.4	96	58/3				✓	✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ L1		
17.15	85	8000	31900	5.4	113	1972/115				✓	✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ K1		
15.74	92	8000	30800	5.4	127	551/35				✓	✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ J1		
13.87	105	8000	29200	5.5	150	319/23					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ H1		
11.38	127	8000	28700	5.5	203	1479/130					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ G1		
9.98	145	8000	28300	5.6	227	1247/125					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ F1		
7.80	186	8000	27500	5.9	360	39/5					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ E1		
7.27	199	4880	27500	7.5	173	836/115					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ D1		
5.96	243	4870	26600	7.7	237	1938/325					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ C1		
5.23	277	4870	26000	7.7	273	3268/625					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ B1		
4.09	355	4870	24700	7.7	432	2964/725					✓	✓	✓	✓	✓	✓	2KJ3112 - ■■■■■■ - ■■ A1		
<b>D.149</b>																			
328.38	4.4	8000	51200	5.5	7.1	321813/980				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ W1		
281.04	5.2	8000	51200	5.5	9	157383/560				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ V1		
264.51	5.5	8000	51200	5.5	10	157383/595				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ U1		
247.95	5.8	8000	51200	5.5	11	4959/20				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ T1		
219.80	6.6	8000	51200	5.5	14	307719/1400				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ S1		
195.24	7.4	8000	51200	5.5	16	75168/385				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ R1		
176.18	8.2	8000	51200	5.5	19	7047/40				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ Q1		
156.11	9.3	8000	51200	5.5	23	251343/1610				✓	✓	✓	✓				2KJ3212 - ■■■■■■ - ■■ P1		
138.26	10	8000	51200	5.5	26	241947/1750				✓	✓	✓	✓	✓			2KJ3212 - ■■■■■■ - ■■ N1		
123.04	12	8000	51200	5.5	31	8613/70				✓	✓	✓	✓	✓	✓		2KJ3212 - ■■■■■■ - ■■ M1		
110.26	13	8000	51200	5.5	37	54027/490				✓	✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ L1		
97.75	15	8000	51200	5.5	43	157383/1610				✓	✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ K1		
86.29	17	8000	51200	5.5	52	21141/245				✓	✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ J1		
75.87	19	8000	51200	5.5	63	61074/805				✓	✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ H1		
68.71	21	8000	51200	5.6	70	33669/490				✓	✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ G1		
59.82	24	8000	51200	5.6	85	96309/1610					✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ F1		
49.05	30	8000	47700	5.6	110	44631/910					✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ E1		
43.51	33	8000	45700	5.8	72	55042/1265				✓	✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ D1		
39.41	37	8000	44000	5.8	82	91031/2310				✓	✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ C1		
34.31	42	8000	41800	5.8	101	86797/2530					✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ B1		
28.13	52	8000	38700	5.9	133	40223/1430					✓	✓	✓	✓	✓	✓	2KJ3212 - ■■■■■■ - ■■ A1		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/48
Motor frame size, motor type, efficiency class		see chapter 9
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Gearbox mounting type	<b>A, B, F or H</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>Z.169</b>																	
<b>36.55</b>	40	12100	70800	4.7	79	13706/375					✓	✓	✓	✓			2KJ3113 - ■■■■■■ - ■■ Q1
<b>32.88</b>	44	14000	68200	4.7	94	11837/360					✓	✓	✓	✓	✓		2KJ3113 - ■■■■■■ - ■■ P1
<b>29.38</b>	49	14000	65300	4.8	109	9256/315					✓	✓	✓	✓	✓		2KJ3113 - ■■■■■■ - ■■ N1
<b>26.57</b>	55	14000	62900	4.8	131	9167/345					✓	✓	✓	✓	✓		2KJ3113 - ■■■■■■ - ■■ M1
<b>23.45</b>	62	14000	60200	4.8	154	7387/315					✓	✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ L1
<b>20.90</b>	69	14000	59400	4.8	183	2403/115					✓	✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ K1
<b>18.93</b>	77	14000	58600	4.8	203	5963/315					✓	✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ J1
<b>17.03</b>	85	14000	57800	4.8	245	1958/115					✓	✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ H1
<b>14.15</b>	102	14000	56100	4.8	308	2759/195					✓	✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ G1
<b>12.58</b>	115	13900	54900	4.8	377	4717/375					✓	✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ F1
<b>10.03</b>	145	13900	52600	5.1	521	4361/435					✓	✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ E1
<b>7.98</b>	182	13800	50100	5.3	689	1157/145							✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ D1
<b>7.37</b>	197	7960	49100	7.0	409	848/115						✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ C1
<b>5.88</b>	247	7900	46700	7.1	571	3920/667						✓	✓	✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ B1
<b>4.68</b>	310	7820	44200	7.3	768	3120/667								✓	✓	✓	2KJ3113 - ■■■■■■ - ■■ A1
<b>D.169</b>																	
<b>327.18</b>	4.4	14000	70100	5.0	18	472768 / 1445					✓	✓	✓				2KJ3213 - ■■■■■■ - ■■ V1
<b>305.28</b>	4.7	14000	70100	5.0	19	233536 / 765					✓	✓	✓				2KJ3213 - ■■■■■■ - ■■ U1
<b>271.40</b>	5.3	14000	70100	5.0	23	115344 / 425					✓	✓	✓				2KJ3213 - ■■■■■■ - ■■ T1
<b>243.68</b>	6.0	14000	70100	5.0	28	45568 / 187					✓	✓	✓				2KJ3213 - ■■■■■■ - ■■ S1
<b>220.58</b>	6.6	14000	70100	5.0	33	56248 / 255					✓	✓	✓				2KJ3213 - ■■■■■■ - ■■ R1
<b>193.75</b>	7.5	14000	70100	5.0	40	378784 / 1955					✓	✓	✓				2KJ3213 - ■■■■■■ - ■■ Q1
<b>175.57</b>	8.3	14000	70100	5.0	46	373088 / 2125					✓	✓	✓	✓			2KJ3213 - ■■■■■■ - ■■ P1
<b>156.36</b>	9.3	14000	70100	5.0	54	39872 / 255					✓	✓	✓	✓	✓		2KJ3213 - ■■■■■■ - ■■ N1
<b>140.41</b>	10	14000	70100	5.0	64	250624 / 1785					✓	✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ M1
<b>125.28</b>	12	14000	70100	5.0	74	244928 / 1955					✓	✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ L1
<b>111.69</b>	13	14000	70100	5.0	85	5696 / 51					✓	✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ K1
<b>99.06</b>	15	14000	70100	5.0	101	11392 / 115					✓	✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ J1
<b>90.94</b>	16	14000	70100	5.0	112	54112 / 595					✓	✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ H1
<b>80.12</b>	18	14000	70100	5.0	132	31328 / 391						✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ G1
<b>65.72</b>	22	14000	70100	5.1	176	4272 / 65						✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ F1
<b>57.63</b>	25	14000	70100	5.1	193	122464 / 2125						✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ E1
<b>45.06</b>	32	14000	70100	5.1	301	111072 / 2465						✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ D1
<b>41.43</b>	35	14000	70100	5.2	200	134657 / 3250						✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ C1
<b>36.33</b>	40	14000	70500	5.2	225	340603 / 9375						✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ B1
<b>28.41</b>	51	14000	69200	5.3	353	102973 / 3625						✓	✓	✓	✓	✓	2KJ3213 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

## Helical geared motors

### Transmission ratios and torques

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup> °	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>Z.189</b>																	
<b>34.25</b>	42	19000	101700	4.5	140	3596/105					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ L1
<b>30.73</b>	47	19000	97900	4.5	166	3534/115					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ K1
<b>27.46</b>	53	19000	94100	4.6	199	961/35					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ J1
<b>24.53</b>	59	19000	90400	4.6	236	2821/115					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ H1
<b>22.44</b>	65	19000	87500	4.6	262	2356/105					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ G1
<b>19.95</b>	73	19000	83900	4.6	314	2294/115					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ F1
<b>16.93</b>	86	19000	79000	4.6	400	2201/130					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ E1
<b>14.63</b>	99	19000	74900	4.7	481	1829/125					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ D1
<b>11.97</b>	121	19000	72500	4.8	666	1736/145					✓	✓	✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ C1
<b>9.83</b>	148	18800	70100	4.8	875	1426/145							✓	✓	✓	✓	2KJ3114 - ■■■■■■ - ■■ B1
<b>7.65</b>	190	16000	66800	4.8	1283	1147/150										✓	2KJ3114 - ■■■■■■ - ■■ A1
<b>D.189</b>																	
<b>313.63</b>	4.6	19000	107000	4.7	36	533169/1700					✓	✓	✓				2KJ3214 - ■■■■■■ - ■■ T1
<b>280.59</b>	5.2	19000	107000	4.7	43	262353/935					✓	✓	✓				2KJ3214 - ■■■■■■ - ■■ S1
<b>253.06</b>	5.7	19000	107000	4.7	49	172081/680					✓	✓	✓				2KJ3214 - ■■■■■■ - ■■ R1
<b>223.66</b>	6.5	19000	107000	4.7	61	87451/391					✓	✓	✓				2KJ3214 - ■■■■■■ - ■■ Q1
<b>204.44</b>	7.1	19000	107000	4.7	71	434434/2125					✓	✓	✓	✓			2KJ3214 - ■■■■■■ - ■■ P1
<b>183.92</b>	7.9	19000	107000	4.7	84	375193/2040					✓	✓	✓	✓	✓		2KJ3214 - ■■■■■■ - ■■ N1
<b>164.36</b>	8.8	19000	107000	4.7	98	41912/255					✓	✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ M1
<b>148.63</b>	9.8	19000	107000	4.7	116	290563/1955					✓	✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ L1
<b>131.17</b>	11	19000	107000	4.7	136	33449/255					✓	✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ K1
<b>116.88</b>	12	19000	107000	4.7	160	228501/1955					✓	✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ J1
<b>105.89</b>	14	19000	107000	4.7	175	27001/255					✓	✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ H1
<b>95.24</b>	15	19000	107000	4.7	210	186186/1955						✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ G1
<b>79.14</b>	18	19000	107000	4.7	257	6727/85						✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ F1
<b>70.36</b>	21	19000	107000	4.7	314	149513/2125						✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ E1
<b>56.08</b>	26	19000	107000	4.7	421	138229/2465						✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ D1
<b>44.63</b>	32	19000	107000	4.8	531	110019/2465							✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ C1
<b>36.67</b>	40	19000	104200	4.8	475	10633/290						✓	✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ B1
<b>29.18</b>	50	19000	97800	4.8	617	8463/290							✓	✓	✓	✓	2KJ3214 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi^{1)}$	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>E.39</b>																		
<b>9.22</b>	157	30	3000	-	0.001	83/9	✓	✓									2KJ3001 - ■■■■■■ - ■■ S1	
<b>8.20</b>	177	34	3000	-	0.001	41/5	✓	✓	✓	✓							2KJ3001 - ■■■■■■ - ■■ R1	
<b>7.20</b>	201	40	3000	-	0.003	36/5	✓	✓	✓	✓							2KJ3001 - ■■■■■■ - ■■ Q1	
<b>6.55</b>	221	40	3000	-	0.004	72/11	✓	✓	✓	✓							2KJ3001 - ■■■■■■ - ■■ P1	
<b>5.60</b>	259	40	3000	-	0.007	28/5	✓	✓	✓	✓							2KJ3001 - ■■■■■■ - ■■ N1	
<b>5.09</b>	285	40	3000	-	0.01	56/11	✓	✓	✓	✓							2KJ3001 - ■■■■■■ - ■■ M1	
<b>4.50</b>	322	48	3000	-	0.02	9/2	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ L1	
<b>4.09</b>	355	48	3000	-	0.02	45/11	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ K1	
<b>3.58</b>	405	58	2550	-	0.03	43/12	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ J1	
<b>3.31</b>	438	58	2400	-	0.05	43/13	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ H1	
<b>2.93</b>	495	65	1620	-	0.07	41/14	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ G1	
<b>2.44</b>	594	65	1200	-	0.13	39/16	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ F1	
<b>2.29</b>	633	66	1330	-	0.16	39/17	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ E1	
<b>2.06</b>	704	66	1370	-	0.19	37/18	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ D1	
<b>1.75</b>	829	66	1490	-	0.29	7/4	✓	✓	✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ C1	
<b>1.50</b>	967	61	1560	-	0.45	3/2			✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ B1	
<b>1.29</b>	1124	54	1600	-	0.64	31/24			✓	✓	✓	✓					2KJ3001 - ■■■■■■ - ■■ A1	
<b>E.49</b>																		
<b>9.70</b>	149	86	4000	-	0.003	97/10	✓	✓	✓	✓							2KJ3002 - ■■■■■■ - ■■ S1	
<b>8.82</b>	164	108	4000	-	0.004	97/11	✓	✓	✓	✓							2KJ3002 - ■■■■■■ - ■■ R1	
<b>7.50</b>	193	107	4000	-	0.007	15/2	✓	✓	✓	✓							2KJ3002 - ■■■■■■ - ■■ Q1	
<b>6.82</b>	213	104	4000	-	0.01	75/11	✓	✓	✓	✓							2KJ3002 - ■■■■■■ - ■■ P1	
<b>6.08</b>	238	104	4000	-	0.02	73/12	✓	✓	✓	✓	✓	✓					2KJ3002 - ■■■■■■ - ■■ N1	
<b>5.45</b>	266	103	4000	-	0.02	60/11	✓	✓	✓	✓	✓	✓					2KJ3002 - ■■■■■■ - ■■ M1	
<b>4.92</b>	295	102	4000	-	0.03	59/12	✓	✓	✓	✓	✓	✓					2KJ3002 - ■■■■■■ - ■■ L1	
<b>4.54</b>	319	102	4000	-	0.05	59/13	✓	✓	✓	✓	✓	✓					2KJ3002 - ■■■■■■ - ■■ K1	
<b>4.14</b>	350	102	4000	-	0.09	29/7	✓	✓	✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ J1	
<b>3.44</b>	422	101	3510	-	0.15	55/16	✓	✓	✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ H1	
<b>3.24</b>	448	101	3350	-	0.19	55/17	✓	✓	✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ G1	
<b>3.06</b>	474	101	3200	-	0.23	55/18	✓	✓	✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ F1	
<b>2.60</b>	558	102	2540	-	0.36	13/5	✓	✓	✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ E1	
<b>2.23</b>	650	102	1930	-	0.55	49/22			✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ D1	
<b>1.96</b>	740	103	1420	-	0.78	47/24			✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ C1	
<b>1.65</b>	879	103	975	-	1.1	38/23			✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ B1	
<b>1.44</b>	1007	102	1140	-	1.81	36/25			✓	✓	✓	✓	✓				2KJ3002 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques for high speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>E.69</b>																			
9.30	156	120	6100	-	0.007	93/10	✓	✓	✓							2KJ3003 - ■■■■■■ - ■■ S1			
8.45	172	105	6100	-	0.01	93/11	✓	✓	✓							2KJ3003 - ■■■■■■ - ■■ R1			
7.58	191	205	6100	-	0.02	91/12	✓	✓	✓	✓	✓					2KJ3003 - ■■■■■■ - ■■ Q1			
6.82	213	170	6100	-	0.02	75/11	✓	✓	✓	✓	✓					2KJ3003 - ■■■■■■ - ■■ P1			
6.17	235	205	6100	-	0.03	37/6	✓	✓	✓	✓	✓					2KJ3003 - ■■■■■■ - ■■ N1			
5.69	255	165	6100	-	0.05	74/13	✓	✓	✓	✓	✓					2KJ3003 - ■■■■■■ - ■■ M1			
5.21	278	200	6100	-	0.09	73/14	✓	✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ L1			
4.38	331	200	6100	-	0.15	35/8	✓	✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ K1			
4.12	352	165	6100	-	0.19	70/17	✓	✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ J1			
3.78	384	200	6100	-	0.23	34/9	✓	✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ H1			
3.30	439	200	6100	-	0.36	33/10	✓	✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ G1			
2.95	492	200	5680	-	0.55	65/22		✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ F1			
2.58	562	197	5120	-	0.78	31/12		✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ E1			
2.22	653	196	4500	-	1.10	51/23		✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ D1			
1.96	740	196	4050	-	1.81	49/25		✓	✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ C1			
1.67	868	196	4130	-	2.6	5/3			✓	✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ B1			
1.43	1014	195	4170	-	3.7	10/7				✓	✓	✓	✓			2KJ3003 - ■■■■■■ - ■■ A1			
<b>E.89</b>																			
9.67	150	280	8000	-	0.02	29/3		✓	✓	✓	✓					2KJ3004 - ■■■■■■ - ■■ T1			
8.73	166	280	8000	-	0.02	96/11		✓	✓	✓	✓					2KJ3004 - ■■■■■■ - ■■ S1			
7.92	183	280	8000	-	0.03	95/12		✓	✓	✓	✓					2KJ3004 - ■■■■■■ - ■■ R1			
7.31	198	260	8000	-	0.05	95/13		✓	✓	✓	✓					2KJ3004 - ■■■■■■ - ■■ Q1			
6.64	218	260	8000	-	0.09	93/14		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ P1			
5.62	258	320	8000	-	0.15	45/8		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ N1			
5.29	274	210	8000	-	0.19	90/17		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ M1			
4.89	297	360	8000	-	0.23	44/9		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ L1			
4.35	333	360	8000	-	0.36	87/20		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ K1			
3.86	376	360	7520	-	0.55	85/22		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ J1			
3.46	419	365	6830	-	0.78	83/24		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ H1			
2.96	490	360	6030	-	1.1	68/23		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ G1			
2.64	549	360	5410	-	1.81	66/25		✓	✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ F1			
2.33	622	360	5260	-	2.6	7/3			✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ E1			
2.05	707	360	5430	-	3.7	43/21			✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ D1			
1.78	815	365	5550	-	5.4	41/23			✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ C1			
1.52	954	360	5580	-	7.6	32/21			✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ B1			
1.3	1115	360	5580	-	11	30/23			✓	✓	✓	✓	✓			2KJ3004 - ■■■■■■ - ■■ A1			

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>E.109</b>																			
<b>7.19</b>	202	565	10500	-	0.15	115/16			✓	✓	✓	✓	✓			2KJ3005 - ■■■■■■ - ■■ Q1			
<b>6.76</b>	214	565	10500	-	0.19	115/17			✓	✓	✓	✓	✓			2KJ3005 - ■■■■■■ - ■■ P1			
<b>6.28</b>	231	565	10500	-	0.23	113/18			✓	✓	✓	✓	✓			2KJ3005 - ■■■■■■ - ■■ N1			
<b>5.55</b>	261	560	10500	-	0.36	111/20			✓	✓	✓	✓	✓			2KJ3005 - ■■■■■■ - ■■ M1			
<b>4.95</b>	293	560	10500	-	0.55	109/22			✓	✓	✓	✓	✓			2KJ3005 - ■■■■■■ - ■■ L1			
<b>4.46</b>	325	560	10500	-	0.78	107/24			✓	✓	✓	✓	✓			2KJ3005 - ■■■■■■ - ■■ K1			
<b>3.87</b>	375	555	10000	-	1.10	89/23			✓	✓	✓	✓	✓			2KJ3005 - ■■■■■■ - ■■ J1			
<b>3.48</b>	417	550	9390	-	1.81	87/25			✓	✓	✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ H1			
<b>3.04</b>	477	545	8440	-	2.6	73/24			✓	✓	✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ G1			
<b>2.71</b>	535	545	7670	-	3.7	19/7			✓	✓	✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ F1			
<b>2.39</b>	607	540	6850	-	5.4	55/23			✓	✓	✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ E1			
<b>2.10</b>	690	535	5980	-	7.8	44/21			✓	✓	✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ D1			
<b>1.83</b>	792	530	5060	-	11	42/23			✓	✓	✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ C1			
<b>1.67</b>	868	530	5170	-	14	5/3			✓	✓	✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ B1			
<b>1.43</b>	1014	465	5420	-	21	33/23					✓	✓	✓	✓		2KJ3005 - ■■■■■■ - ■■ A1			
<b>E.129</b>																			
<b>9.79</b>	148	665	13500	-	0.09	137/14			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ T1			
<b>8.38</b>	173	665	13500	-	0.15	67/8			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ S1			
<b>7.88</b>	184	665	13500	-	0.19	134/17			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ R1			
<b>7.39</b>	196	800	13500	-	0.23	133/18			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ Q1			
<b>6.55</b>	221	800	13100	-	0.36	131/20			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ P1			
<b>5.82</b>	249	800	12500	-	0.55	64/11			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ N1			
<b>5.25</b>	276	795	12000	-	0.78	21/4			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ M1			
<b>4.65</b>	312	795	11100	-	1.10	107/23			✓	✓	✓	✓	✓			2KJ3006 - ■■■■■■ - ■■ L1			
<b>4.12</b>	352	785	10200	-	1.81	103/25			✓	✓	✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ K1			
<b>3.67</b>	395	780	9380	-	2.6	11/3			✓	✓	✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ J1			
<b>3.29</b>	441	780	8570	-	3.7	23/7			✓	✓	✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ H1			
<b>2.91</b>	498	770	7780	-	5.4	67/23			✓	✓	✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ G1			
<b>2.57</b>	564	765	6880	-	9.5	18/7			✓	✓	✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ F1			
<b>2.26</b>	642	760	5930	-	14	52/23			✓	✓	✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ E1			
<b>2.05</b>	707	765	5450	-	18	43/21			✓	✓	✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ D1			
<b>1.78</b>	815	760	5830	-	25	41/23					✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ C1			
<b>1.46</b>	993	755	6190	-	40	19/13					✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ B1			
<b>1.24</b>	1169	745	6350	-	66	31/25					✓	✓	✓	✓		2KJ3006 - ■■■■■■ - ■■ A1			

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

### Helical geared motors

#### Transmission ratios and torques for high speeds

##### Selection and ordering data

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	Motor frame size										Article No. (Article No. supplement, see below)		
							63	71	80	90	100	112	132	160	180	200		225	250
<b>E.149</b>																			
<b>9.76</b>	149	1200	16000	-	0.17	166/17					✓	✓	✓	✓					2KJ3007 - ■■■■■■ - ■■ S1
<b>9.11</b>	159	1260	16000	-	0.22	82/9					✓	✓	✓	✓					2KJ3007 - ■■■■■■ - ■■ R1
<b>8.10</b>	179	1330	15200	-	0.33	81/10					✓	✓	✓	✓					2KJ3007 - ■■■■■■ - ■■ Q1
<b>7.27</b>	199	1350	14300	-	0.5	80/11					✓	✓	✓	✓					2KJ3007 - ■■■■■■ - ■■ P1
<b>6.58</b>	220	1330	13500	-	0.69	79/12					✓	✓	✓	✓					2KJ3007 - ■■■■■■ - ■■ N1
<b>5.78</b>	251	1490	10800	-	1.08	133/23					✓	✓	✓	✓					2KJ3007 - ■■■■■■ - ■■ M1
<b>5.24</b>	277	1490	9900	-	1.58	131/25					✓	✓	✓	✓	✓				2KJ3007 - ■■■■■■ - ■■ L1
<b>4.67</b>	310	1480	8900	-	2.3	14/3					✓	✓	✓	✓	✓	✓			2KJ3007 - ■■■■■■ - ■■ K1
<b>4.19</b>	346	1480	7940	-	4.0	88/21					✓	✓	✓	✓	✓	✓	✓		2KJ3007 - ■■■■■■ - ■■ J1
<b>3.74</b>	388	1480	6890	-	4.6	86/23					✓	✓	✓	✓	✓	✓	✓		2KJ3007 - ■■■■■■ - ■■ H1
<b>3.33</b>	435	1480	5850	-	6.7	10/3					✓	✓	✓	✓	✓	✓	✓	✓	2KJ3007 - ■■■■■■ - ■■ G1
<b>2.96</b>	490	1460	4950	-	9.6	68/23					✓	✓	✓	✓	✓	✓	✓	✓	2KJ3007 - ■■■■■■ - ■■ F1
<b>2.71</b>	535	1460	4140	-	12	19/7					✓	✓	✓	✓	✓	✓	✓	✓	2KJ3007 - ■■■■■■ - ■■ E1
<b>2.39</b>	607	1460	3530	-	18	55/23						✓	✓	✓	✓	✓	✓	✓	2KJ3007 - ■■■■■■ - ■■ D1
<b>1.96</b>	740	1470	4840	-	9.6	51/26						✓	✓	✓	✓	✓	✓	✓	2KJ3007 - ■■■■■■ - ■■ C1
<b>1.72</b>	843	1460	5130	-	42	43/25						✓	✓	✓	✓	✓	✓	✓	2KJ3007 - ■■■■■■ - ■■ B1
<b>1.34</b>	1082	1280	5810	-	119	39/29						✓	✓	✓	✓	✓	✓	✓	2KJ3007 - ■■■■■■ - ■■ A1

##### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version



**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>Z.29-Z19</b>															
<b>1114</b>	1.3	140	3710	-	0.02	362142/325	✓	✓							2KJ3120 - ■■■■■■ - ■■ P1
<b>987</b>	1.5	140	3710	-	0.03	3206709/3250	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ N1
<b>857</b>	1.7	140	3710	-	0.04	2786157/3250	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ M1
<b>779</b>	1.9	140	3710	-	0.05	253287/325	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ L1
<b>663</b>	2.2	140	3710	-	0.07	2155329/3250	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ K1
<b>603</b>	2.4	140	3710	-	0.08	195939/325	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ J1
<b>526</b>	2.8	140	3710	-	0.09	52569/100	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ H1
<b>471</b>	3.1	140	3710	-	0.12	152928/325	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ G1
<b>418</b>	3.5	140	3710	-	0.15	543213/1300	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ F1
<b>386</b>	3.8	140	3710	-	0.18	1629639/4225	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ E1
<b>335.06</b>	4.3	140	3710	-	0.20	1524501/4550	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ D1
<b>291.15</b>	5.0	140	3710	-	0.21	473121/1625	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ C1
<b>262.85</b>	5.5	140	3710	-	0.27	52569/200	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ B1
<b>247.38</b>	5.9	140	3710	-	0.32	105138/425	✓	✓	✓						2KJ3120 - ■■■■■■ - ■■ A1
<b>Z.29-D19</b>															
<b>5890</b>	0.25	140	3710	-	0.02	13399254/2275	✓	✓							2KJ3121 - ■■■■■■ - ■■ P1
<b>5215</b>	0.28	140	3710	-	0.03	118648233/22750	✓	✓							2KJ3121 - ■■■■■■ - ■■ N1
<b>4531</b>	0.32	140	3710	-	0.04	103087809/22750	✓	✓							2KJ3121 - ■■■■■■ - ■■ M1
<b>4119</b>	0.35	140	3710	-	0.04	9371619/2275	✓	✓							2KJ3121 - ■■■■■■ - ■■ L1
<b>3505</b>	0.41	140	3710	-	0.06	79747173/22750	✓	✓							2KJ3121 - ■■■■■■ - ■■ K1
<b>3187</b>	0.45	140	3710	-	0.07	7249743/2275	✓	✓							2KJ3121 - ■■■■■■ - ■■ J1
<b>2779</b>	0.52	140	3710	-	0.08	1945053/700	✓	✓							2KJ3121 - ■■■■■■ - ■■ H1
<b>2487</b>	0.58	140	3710	-	0.11	5658336/2275	✓	✓							2KJ3121 - ■■■■■■ - ■■ G1
<b>2209</b>	0.66	140	3710	-	0.13	20098881/9100	✓	✓							2KJ3121 - ■■■■■■ - ■■ F1
<b>2039</b>	0.71	140	3710	-	0.16	60296643/29575	✓	✓							2KJ3121 - ■■■■■■ - ■■ E1
<b>1771</b>	0.82	140	3710	-	0.17	56406537/31850	✓	✓							2KJ3121 - ■■■■■■ - ■■ D1
<b>1539</b>	0.94	140	3710	-	0.18	17505477/11375	✓	✓							2KJ3121 - ■■■■■■ - ■■ C1
<b>1389</b>	1.0	140	3710	-	0.22	1945053/1400	✓	✓							2KJ3121 - ■■■■■■ - ■■ B1
<b>1308</b>	1.1	140	3710	-	0.26	3890106/2975	✓	✓							2KJ3121 - ■■■■■■ - ■■ A1
<b>D.29-D19</b>															
<b>8025</b>	0.18	140	3710	-	0.08	1966032/245	✓	✓							2KJ3221 - ■■■■■■ - ■■ C1
<b>7183</b>	0.20	140	3710	-	0.11	251652096/35035	✓	✓							2KJ3221 - ■■■■■■ - ■■ B1
<b>6379</b>	0.23	140	3710	-	0.13	20315664/3185	✓	✓							2KJ3221 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

## Helical geared motors

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup> °	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	
<b>Z.39-Z19</b>														
1528	0.95	200	4370	-	0.02	38192/25	✓	✓						2KJ3122 - ■■■■■■ - ■■ S1
1353	1.1	200	4370	-	0.03	169092/125	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ R1
1175	1.2	200	4370	-	0.04	146916/125	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ Q1
1068	1.4	200	4370	-	0.05	26712/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ P1
909	1.6	200	4370	-	0.07	113652/125	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ N1
827	1.8	200	4370	-	0.08	20664/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ M1
721	2.0	200	4370	-	0.09	18018/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ L1
645	2.2	200	4370	-	0.12	16128/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ K1
573	2.5	200	4370	-	0.15	14322/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ J1
529	2.7	200	4370	-	0.18	171864/325	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ H1
459	3.2	200	4370	-	0.20	11484/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ G1
399	3.6	200	4370	-	0.21	49896/125	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ F1
360	4.0	200	4370	-	0.27	9009/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ E1
339.16	4.3	200	4370	-	0.32	144144/425	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ D1
295.68	4.9	200	4370	-	0.36	7392/25	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ C1
272.80	5.3	200	4370	-	0.19	1364/5	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ B1
236.97	6.1	200	4370	-	0.22	8294/35	✓	✓	✓					2KJ3122 - ■■■■■■ - ■■ A1
<b>Z.39-D19</b>														
8075	0.18	200	4370	-	0.02	201872/25	✓	✓						2KJ3123 - ■■■■■■ - ■■ P1
7150	0.20	200	4370	-	0.03	893772/125	✓	✓						2KJ3123 - ■■■■■■ - ■■ N1
6212	0.23	200	4370	-	0.04	776556/125	✓	✓						2KJ3123 - ■■■■■■ - ■■ M1
5648	0.26	200	4370	-	0.04	141192/25	✓	✓						2KJ3123 - ■■■■■■ - ■■ L1
4806	0.30	200	4370	-	0.06	600732/125	✓	✓						2KJ3123 - ■■■■■■ - ■■ K1
4369	0.33	200	4370	-	0.07	109224/25	✓	✓						2KJ3123 - ■■■■■■ - ■■ J1
3810	0.38	200	4370	-	0.08	95238/25	✓	✓						2KJ3123 - ■■■■■■ - ■■ H1
3410	0.43	200	4370	-	0.11	85248/25	✓	✓						2KJ3123 - ■■■■■■ - ■■ G1
3028	0.48	200	4370	-	0.13	75702/25	✓	✓						2KJ3123 - ■■■■■■ - ■■ F1
2795	0.52	200	4370	-	0.16	908424/325	✓	✓						2KJ3123 - ■■■■■■ - ■■ E1
2428	0.60	200	4370	-	0.17	424908/175	✓	✓						2KJ3123 - ■■■■■■ - ■■ D1
2110	0.69	200	4370	-	0.18	263736/125	✓	✓						2KJ3123 - ■■■■■■ - ■■ C1
1905	0.76	200	4370	-	0.22	47619/25	✓	✓						2KJ3123 - ■■■■■■ - ■■ B1
1793	0.81	200	4370	-	0.26	761904/425	✓	✓						2KJ3123 - ■■■■■■ - ■■ A1
<b>D.39-D19</b>														
8760	0.17	200	4370	-	0.08	744588/85	✓	✓						2KJ3223 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup> °	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size							Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	
<b>Z.49-Z19</b>														
1823	0.80	320	5900	-	0.02	1422311/780	✓	✓						2KJ3124 - ■■■■■■ - ■■ S1
1615	0.90	320	5900	-	0.03	8396223/5200	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ R1
1403	1.0	320	5900	-	0.04	7295079/5200	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ Q1
1275	1.1	320	5900	-	0.05	663189/520	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ P1
1085	1.3	320	5900	-	0.07	5643363/5200	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ N1
987	1.5	320	5900	-	0.08	513033/520	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ M1
860	1.7	320	5900	-	0.09	137643/160	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ L1
770	1.9	320	5900	-	0.12	50052/65	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ K1
684	2.1	320	5900	-	0.15	1422311/2080	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ J1
631	2.3	320	5900	-	0.18	4266933/6760	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ H1
548	2.6	320	5900	-	0.20	3991647/7280	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ G1
476	3.0	320	5900	-	0.21	1238787/2600	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ F1
430	3.4	320	5900	-	0.27	137643/320	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ E1
405	3.6	320	5900	-	0.32	137643/340	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ D1
353	4.1	320	5900	-	0.36	45881/130	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ C1
325.62	4.5	320	5900	-	0.19	1422311/4368	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ B1
282.85	5.1	320	5900	-	0.22	1330549/4704	✓	✓	✓					2KJ3124 - ■■■■■■ - ■■ A1
<b>Z.49-D19</b>														
9638	0.15	320	5900	-	0.02	52625507/5460	✓	✓						2KJ3125 - ■■■■■■ - ■■ P1
8535	0.17	320	5900	-	0.03	310660251/36400	✓	✓						2KJ3125 - ■■■■■■ - ■■ N1
7415	0.20	320	5900	-	0.04	269917923/36400	✓	✓						2KJ3125 - ■■■■■■ - ■■ M1
6741	0.22	320	5900	-	0.04	24537993/3640	✓	✓						2KJ3125 - ■■■■■■ - ■■ L1
5736	0.25	320	5900	-	0.06	208804431/36400	✓	✓						2KJ3125 - ■■■■■■ - ■■ K1
5215	0.28	320	5900	-	0.07	18982221/3640	✓	✓						2KJ3125 - ■■■■■■ - ■■ J1
4547	0.32	320	5900	-	0.08	5092791/1120	✓	✓						2KJ3125 - ■■■■■■ - ■■ H1
4070	0.36	320	5900	-	0.11	1851924/455	✓	✓						2KJ3125 - ■■■■■■ - ■■ G1
3614	0.40	320	5900	-	0.13	52625507/14560	✓	✓						2KJ3125 - ■■■■■■ - ■■ F1
3336	0.43	320	5900	-	0.16	157876521/47320	✓	✓						2KJ3125 - ■■■■■■ - ■■ E1
2898	0.50	320	5900	-	0.17	147690939/50960	✓	✓						2KJ3125 - ■■■■■■ - ■■ D1
2518	0.58	320	5900	-	0.18	45835119/18200	✓	✓						2KJ3125 - ■■■■■■ - ■■ C1
2274	0.64	320	5900	-	0.22	5092791/2240	✓	✓						2KJ3125 - ■■■■■■ - ■■ B1
2140	0.68	320	5900	-	0.26	5092791/2380	✓	✓						2KJ3125 - ■■■■■■ - ■■ A1
<b>D.49-D19</b>														
13709	0.11	320	5780	-	0.06	9980343/728	✓	✓						2KJ3225 - ■■■■■■ - ■■ D1
12463	0.12	320	5780	-	0.07	49901715/4004	✓	✓						2KJ3225 - ■■■■■■ - ■■ C1
10867	0.13	320	5780	-	0.08	1217115/112	✓	✓						2KJ3225 - ■■■■■■ - ■■ B1
9727	0.15	320	5780	-	0.11	9736920/1001	✓	✓						2KJ3225 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

1) Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup> °	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	
<b>Z.59-Z19</b>														
1812	0.80	450	7660	-	0.02	141329/78	✓	✓						2KJ3126 - ■■■■■■ - ■■ G1
1604	0.90	450	7660	-	0.03	834297/520	✓	✓	✓					2KJ3126 - ■■■■■■ - ■■ F1
1394	1.0	450	7660	-	0.04	724881/520	✓	✓	✓					2KJ3126 - ■■■■■■ - ■■ E1
1267	1.1	450	7660	-	0.05	724881/572	✓	✓	✓					2KJ3126 - ■■■■■■ - ■■ D1
1078	1.3	450	7660	-	0.07	560757/520	✓	✓	✓					2KJ3126 - ■■■■■■ - ■■ C1
980	1.5	450	7660	-	0.08	560757/572	✓	✓	✓					2KJ3126 - ■■■■■■ - ■■ B1
855	1.7	450	7660	-	0.09	13677/16	✓	✓	✓					2KJ3126 - ■■■■■■ - ■■ A1
<b>Z.59-D19</b>														
9577	0.15	450	7660	-	0.02	5229173/546	✓	✓						2KJ3127 - ■■■■■■ - ■■ P1
8480	0.17	450	7660	-	0.03	30868989/3640	✓	✓						2KJ3127 - ■■■■■■ - ■■ N1
7368	0.20	450	7660	-	0.04	26820597/3640	✓	✓						2KJ3127 - ■■■■■■ - ■■ M1
6698	0.22	450	7660	-	0.04	26820597/4004	✓	✓						2KJ3127 - ■■■■■■ - ■■ L1
5700	0.25	450	7660	-	0.06	20748009/3640	✓	✓						2KJ3127 - ■■■■■■ - ■■ K1
5182	0.28	450	7660	-	0.07	20748009/4004	✓	✓						2KJ3127 - ■■■■■■ - ■■ J1
4518	0.32	450	7660	-	0.08	506049/112	✓	✓						2KJ3127 - ■■■■■■ - ■■ H1
4044	0.36	450	7660	-	0.11	4048392/1001	✓	✓						2KJ3127 - ■■■■■■ - ■■ G1
3591	0.40	450	7660	-	0.13	5229173/1456	✓	✓						2KJ3127 - ■■■■■■ - ■■ F1
3315	0.44	450	7660	-	0.16	15687519/4732	✓	✓						2KJ3127 - ■■■■■■ - ■■ E1
2880	0.50	450	7660	-	0.17	14675421/5096	✓	✓						2KJ3127 - ■■■■■■ - ■■ D1
2502	0.58	450	7660	-	0.18	4554441/1820	✓	✓						2KJ3127 - ■■■■■■ - ■■ C1
2259	0.64	450	7660	-	0.22	506049/224	✓	✓						2KJ3127 - ■■■■■■ - ■■ B1
2126	0.68	450	7660	-	0.26	506049/238	✓	✓						2KJ3127 - ■■■■■■ - ■■ A1
<b>D.59-Z19</b>														
739	2.0	450	7660	-	0.22	579275/784	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ J1
642	2.3	450	7660	-	0.23	35955/56	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ H1
580	2.5	450	7660	-	0.30	259675/448	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ G1
546	2.7	450	7660	-	0.35	15275/28	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ F1
507	2.9	450	7660	-	0.20	1362295/2688	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ E1
440	3.3	450	7660	-	0.23	16567265/37632	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ D1
383	3.8	450	7660	-	0.24	342771/896	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ C1
345.36	4.2	450	7660	-	0.31	7426705/21504	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ B1
325.05	4.5	450	7660	-	0.37	436865/1344	✓	✓	✓					2KJ3226 - ■■■■■■ - ■■ A1
<b>D.59-D19</b>														
14985	0.10	450	7660	-	0.06	10908747/728	✓	✓						2KJ3227 - ■■■■■■ - ■■ D1
13622	0.11	450	7660	-	0.07	54543735/4004	✓	✓						2KJ3227 - ■■■■■■ - ■■ C1
11878	0.12	450	7660	-	0.08	1330335/112	✓	✓						2KJ3227 - ■■■■■■ - ■■ B1
10632	0.14	450	7660	-	0.11	10642680/1001	✓	✓						2KJ3227 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>Z.69-Z19</b>															
1939	0.75	600	11000	-	0.02	529232/273	✓	✓						2KJ3128 - ■■■■■■ - ■■ B1	
1717	0.84	600	11000	-	0.03	781044/455	✓	✓	✓					2KJ3128 - ■■■■■■ - ■■ A1	
<b>Z.69-D19</b>															
10247	0.14	600	11000	-	0.02	19581584/1911	✓	✓						2KJ3130 - ■■■■■■ - ■■ Q1	
9073	0.16	600	11000	-	0.03	28898628/3185	✓	✓						2KJ3130 - ■■■■■■ - ■■ P1	
7883	0.18	600	11000	-	0.04	25108644/3185	✓	✓						2KJ3130 - ■■■■■■ - ■■ N1	
7167	0.20	600	11000	-	0.04	4565208/637	✓	✓						2KJ3130 - ■■■■■■ - ■■ M1	
6098	0.24	600	11000	-	0.06	19423668/3185	✓	✓						2KJ3130 - ■■■■■■ - ■■ L1	
5544	0.26	600	11000	-	0.07	3531576/637	✓	✓						2KJ3130 - ■■■■■■ - ■■ K1	
4834	0.30	600	11000	-	0.08	236874/49	✓	✓						2KJ3130 - ■■■■■■ - ■■ J1	
4327	0.34	600	11000	-	0.11	2756352/637	✓	✓						2KJ3130 - ■■■■■■ - ■■ H1	
3843	0.38	600	11000	-	0.13	2447698/637	✓	✓						2KJ3130 - ■■■■■■ - ■■ G1	
3547	0.41	600	11000	-	0.16	29372376/8281	✓	✓						2KJ3130 - ■■■■■■ - ■■ F1	
3081	0.47	600	11000	-	0.17	13738692/4459	✓	✓						2KJ3130 - ■■■■■■ - ■■ E1	
2677	0.54	600	11000	-	0.18	8527464/3185	✓	✓						2KJ3130 - ■■■■■■ - ■■ D1	
2417	0.60	600	11000	-	0.22	118437/49	✓	✓						2KJ3130 - ■■■■■■ - ■■ C1	
2275	0.64	600	11000	-	0.26	1894992/833	✓	✓						2KJ3130 - ■■■■■■ - ■■ B1	
1983	0.73	600	11000	-	0.29	1263328/637	✓	✓						2KJ3130 - ■■■■■■ - ■■ A1	
<b>D.69-Z19</b>															
1532	0.95	600	11000	-	0.20	976140/637	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ Q1	
1332	1.1	600	11000	-	0.21	121176/91	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ P1	
1202	1.2	600	11000	-	0.27	8415/7	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ N1	
1131	1.3	600	11000	-	0.32	7920/7	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ M1	
986	1.5	600	11000	-	0.37	89760/91	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ L1	
910	1.6	600	11000	-	0.19	579700/637	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ K1	
791	1.8	600	11000	-	0.22	271150/343	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ J1	
687	2.1	600	11000	-	0.23	33660/49	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ H1	
620	2.3	600	11000	-	0.30	60775/98	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ G1	
584	2.5	600	11000	-	0.35	28600/49	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ F1	
542	2.7	600	11000	-	0.20	318835/588	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ E1	
471	3.1	600	11000	-	0.23	3877445/8232	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ D1	
409	3.5	600	11000	-	0.24	80223/196	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ C1	
370	3.9	600	11000	-	0.31	1738165/4704	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ B1	
347.77	4.2	600	11000	-	0.37	102245/294	✓	✓	✓					2KJ3228 - ■■■■■■ - ■■ A1	
<b>D.69-D19</b>															
14575	0.10	600	11000	-	0.07	9284040/637	✓	✓						2KJ3230 - ■■■■■■ - ■■ C1	
12708	0.11	600	11000	-	0.08	622710/49	✓	✓						2KJ3230 - ■■■■■■ - ■■ B1	
11375	0.13	600	11000	-	0.11	7246080/637	✓	✓						2KJ3230 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

1) Only in conjunction with reduced-backlash version

**SIMOGEAR geared motors**

## Helical geared motors

**Transmission ratios and torques for very low speeds****Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size							Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	
<b>Z.79-Z39</b>														
2485	0.58	840	13400	-	0.06	4025749/1620	✓	✓						2KJ3131 - ■■■■■■ - ■■ T1
2210	0.66	840	13400	-	0.07	1988623/900	✓	✓	✓	✓				2KJ3131 - ■■■■■■ - ■■ S1
1940	0.75	840	13400	-	0.08	48503/25	✓	✓	✓	✓				2KJ3131 - ■■■■■■ - ■■ R1
1764	0.82	840	13400	-	0.10	97006/55	✓	✓	✓	✓				2KJ3131 - ■■■■■■ - ■■ Q1
1509	0.96	840	13400	-	0.12	339521/225	✓	✓	✓	✓				2KJ3131 - ■■■■■■ - ■■ P1
1372	1.1	840	13400	-	0.14	679042/495	✓	✓	✓	✓				2KJ3131 - ■■■■■■ - ■■ N1
1213	1.2	840	13400	-	0.17	48503/40	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ M1
1102	1.3	840	13400	-	0.22	48503/44	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ L1
966	1.5	840	13400	-	0.26	2085629/2160	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ K1
891	1.6	840	13400	-	0.31	160433/180	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ J1
789	1.8	840	13400	-	0.36	284089/360	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ H1
657	2.2	840	13400	-	0.48	630539/960	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ G1
618	2.3	840	13400	-	0.56	630539/1020	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ F1
554	2.6	840	13400	-	0.61	1794611/3240	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ E1
472	3.1	840	13400	-	0.79	339521/720	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ D1
455	3.2	840	13400	-	0.36	21853/48	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ C1
379	3.8	840	13400	-	0.48	48503/128	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ B1
357	4.1	840	13400	-	0.56	48503/136	✓	✓	✓	✓	✓	✓		2KJ3131 - ■■■■■■ - ■■ A1
<b>Z.79-D39</b>														
10451	0.14	840	13400	-	0.03	47969467/4590	✓	✓						2KJ3132 - ■■■■■■ - ■■ R1
9269	0.16	840	13400	-	0.05	2085629/225	✓	✓	✓	✓				2KJ3132 - ■■■■■■ - ■■ Q1
8043	0.18	840	13400	-	0.05	123052111/15300	✓	✓	✓	✓				2KJ3132 - ■■■■■■ - ■■ P1
7311	0.20	840	13400	-	0.07	123052111/16830	✓	✓	✓	✓				2KJ3132 - ■■■■■■ - ■■ N1
6271	0.23	840	13400	-	0.08	47969467/7650	✓	✓	✓	✓				2KJ3132 - ■■■■■■ - ■■ M1
5700	0.25	840	13400	-	0.10	47969467/8415	✓	✓	✓	✓				2KJ3132 - ■■■■■■ - ■■ L1
4998	0.29	840	13400	-	0.12	22941919/4590	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ K1
4461	0.33	840	13400	-	0.15	4171258/935	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ J1
3976	0.36	840	13400	-	0.17	14599403/3672	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ H1
3670	0.40	840	13400	-	0.21	1123031/306	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ G1
3213	0.45	840	13400	-	0.25	3277417/1020	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ F1
2817	0.51	840	13400	-	0.23	64654499/22950	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ E1
2556	0.57	840	13400	-	0.33	2085629/816	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ D1
2406	0.60	840	13400	-	0.39	2085629/867	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ C1
2120	0.68	840	13400	-	0.43	14599403/6885	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ B1
1840	0.79	840	13400	-	0.58	6256887/3400	✓	✓	✓	✓	✓	✓		2KJ3132 - ■■■■■■ - ■■ A1
<b>D.79-D39</b>														
15344	0.09	840	13400	-	0.21	5738565/374	✓	✓	✓	✓	✓	✓		2KJ3232 - ■■■■■■ - ■■ D1
13434	0.11	840	13400	-	0.25	6394401/476	✓	✓	✓	✓	✓	✓		2KJ3232 - ■■■■■■ - ■■ C1
11778	0.12	840	13400	-	0.23	22025159/1870	✓	✓	✓	✓	✓	✓		2KJ3232 - ■■■■■■ - ■■ B1
10686	0.14	840	13400	-	0.33	31972005/2992	✓	✓	✓	✓	✓	✓		2KJ3232 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/48
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, B, F or H</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size						Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	
<b>Z.89-Z39</b>													
<b>3209</b>	0.45	1680	18500	-	0.06	19494293/6075	✓	✓					2KJ3133 - ■■■■■■ - ■■ N1
<b>2853</b>	0.51	1680	18500	-	0.07	9629711/3375	✓	✓	✓	✓			2KJ3133 - ■■■■■■ - ■■ M1
<b>2505</b>	0.58	1680	18500	-	0.08	939484/375	✓	✓	✓	✓			2KJ3133 - ■■■■■■ - ■■ .L1
<b>2278</b>	0.64	1680	18500	-	0.10	1878968/825	✓	✓	✓	✓			2KJ3133 - ■■■■■■ - ■■ K1
<b>1949</b>	0.74	1680	18500	-	0.12	6576388/3375	✓	✓	✓	✓			2KJ3133 - ■■■■■■ - ■■ J1
<b>1771</b>	0.82	1680	18500	-	0.14	13152776/7425	✓	✓	✓	✓			2KJ3133 - ■■■■■■ - ■■ H1
<b>1566</b>	0.93	1680	18500	-	0.17	234871/150	✓	✓	✓	✓	✓	✓	2KJ3133 - ■■■■■■ - ■■ G1
<b>1423</b>	1.0	1680	18500	-	0.22	234871/165	✓	✓	✓	✓	✓	✓	2KJ3133 - ■■■■■■ - ■■ F1
<b>1247</b>	1.2	1680	18500	-	0.26	10099453/8100	✓	✓	✓	✓	✓	✓	2KJ3133 - ■■■■■■ - ■■ E1
<b>1151</b>	1.3	1680	18500	-	0.31	776881/675	✓	✓	✓	✓	✓	✓	2KJ3133 - ■■■■■■ - ■■ D1
<b>1019</b>	1.4	1680	18500	-	0.36	1375673/1350	✓	✓	✓	✓	✓	✓	2KJ3133 - ■■■■■■ - ■■ C1
<b>848</b>	1.7	1680	18500	-	0.48	3053323/3600	✓	✓	✓	✓	✓	✓	2KJ3133 - ■■■■■■ - ■■ B1
<b>798</b>	1.8	1680	18500	-	0.56	3053323/3825	✓	✓	✓	✓	✓	✓	2KJ3133 - ■■■■■■ - ■■ A1
<b>Z.89-D39</b>													
<b>13495</b>	0.11	1680	18500	-	0.03	464574838/34425	✓	✓					2KJ3134 - ■■■■■■ - ■■ N1
<b>11970</b>	0.12	1680	18500	-	0.05	40397812/3375	✓	✓	✓	✓			2KJ3134 - ■■■■■■ - ■■ M1
<b>10385</b>	0.14	1680	18500	-	0.05	595867727/57375	✓	✓	✓	✓			2KJ3134 - ■■■■■■ - ■■ .L1
<b>9441</b>	0.15	1680	18500	-	0.07	1191735454/126225	✓	✓	✓	✓			2KJ3134 - ■■■■■■ - ■■ K1
<b>8097</b>	0.18	1680	18500	-	0.08	464574838/57375	✓	✓	✓	✓			2KJ3134 - ■■■■■■ - ■■ J1
<b>7361</b>	0.20	1680	18500	-	0.1	929149676/126225	✓	✓	✓	✓			2KJ3134 - ■■■■■■ - ■■ H1
<b>6454</b>	0.22	1680	18500	-	0.12	222187966/34425	✓	✓	✓	✓	✓	✓	2KJ3134 - ■■■■■■ - ■■ G1
<b>5761</b>	0.25	1680	18500	-	0.15	80795624/14025	✓	✓	✓	✓	✓	✓	2KJ3134 - ■■■■■■ - ■■ F1
<b>5134</b>	0.28	1680	18500	-	0.17	70696171/13770	✓	✓	✓	✓	✓	✓	2KJ3134 - ■■■■■■ - ■■ E1
<b>4739</b>	0.31	1680	18500	-	0.21	10876334/2295	✓	✓	✓	✓	✓	✓	2KJ3134 - ■■■■■■ - ■■ D1
<b>4149</b>	0.35	1680	18500	-	0.25	15870569/3825	✓	✓	✓	✓	✓	✓	2KJ3134 - ■■■■■■ - ■■ C1
<b>3638</b>	0.40	1680	18500	-	0.23	626166086/172125	✓	✓	✓	✓	✓	✓	2KJ3134 - ■■■■■■ - ■■ B1
<b>3300</b>	0.44	1680	18500	-	0.33	10099453/3060	✓	✓	✓	✓	✓	✓	2KJ3134 - ■■■■■■ - ■■ A1
<b>D.89-Z39</b>													
<b>715</b>	2.0	1680	18500	-	0.63	6987123/9775	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ H1
<b>673</b>	2.2	1680	18500	-	0.73	111793968/166175	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ G1
<b>603</b>	2.4	1680	18500	-	0.83	17676824/29325	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ F1
<b>513</b>	2.8	1680	18500	-	1.09	5016396/9775	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ E1
<b>480</b>	3.0	1680	18500	-	0.66	1270386/2645	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ D1
<b>452</b>	3.2	1680	18500	-	0.77	20326176/44965	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ C1
<b>405</b>	3.6	1680	18500	-	0.87	3213968/7935	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ B1
<b>344.83</b>	4.2	1680	18500	-	1.15	912072/2645	✓	✓	✓	✓	✓	✓	2KJ3233 - ■■■■■■ - ■■ A1
<b>D.89-D39</b>													
<b>16496</b>	0.09	1680	18500	-	0.12	214526312/13005	✓	✓	✓	✓	✓	✓	2KJ3234 - ■■■■■■ - ■■ B1
<b>14723</b>	0.10	1680	18500	-	0.15	234028704/15895	✓	✓	✓	✓	✓	✓	2KJ3234 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/48
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, B, F or H</b>	see page 10/42

1) Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup> °	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size						Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	
<b>D.109-Z39</b>													
5970	0.24	3100	20200	-	0.06	33365917/5589	✓	✓					2KJ3235 - ■■■■■■ - ■■ A2
5308	0.27	3100	20200	-	0.07	16481959/3105	✓	✓	✓	✓			2KJ3235 - ■■■■■■ - ■■ X1
4661	0.31	3100	20200	-	0.09	1607996/345	✓	✓	✓	✓			2KJ3235 - ■■■■■■ - ■■ W1
4237	0.34	3100	20200	-	0.10	3215992/759	✓	✓	✓	✓			2KJ3235 - ■■■■■■ - ■■ V1
3625	0.40	3100	20200	-	0.12	11255972/3105	✓	✓	✓	✓			2KJ3235 - ■■■■■■ - ■■ U1
3296	0.44	3100	20200	-	0.15	22511944/6831	✓	✓	✓	✓			2KJ3235 - ■■■■■■ - ■■ T1
2913	0.50	3100	20200	-	0.17	401999/138	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ S1
2648	0.55	3100	20200	-	0.23	2009995/759	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ R1
2320	0.62	3100	20200	-	0.27	17285957/7452	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ Q1
2141	0.68	3100	20200	-	0.32	1329689/621	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ P1
1896	0.76	3100	20200	-	0.38	16481959/8694	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ N1
1578	0.92	3100	20200	-	0.50	5225987/3312	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ M1
1485	0.98	3100	20200	-	0.59	307411/207	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ L1
1331	1.1	3100	20200	-	0.64	14873963/11178	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ K1
1133	1.3	3100	20200	-	0.84	2813993/2484	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ J1
971	1.5	3100	20200	-	1.10	401999/414			✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ H1
836	1.7	3100	20200	-	1.40	12461969/14904			✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ G1
690	2.1	3100	20200	-	0.73	122609695/177744	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ F1
649	2.2	3100	20200	-	0.84	7212335/11109	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ E1
582	2.5	3100	20200	-	0.96	348966055/599886	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ D1
495	2.9	3100	20200	-	1.28	9431515/19044	✓	✓	✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ C1
424	3.4	3100	20200	-	1.69	9431515/22218			✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ B1
366	4.0	3100	20200	-	2.20	292376965/799848			✓	✓	✓	✓	2KJ3235 - ■■■■■■ - ■■ A1
<b>D.109-D39</b>													
19321	0.08	3100	20200	-	0.05	59992439/3105	✓	✓	✓	✓			2KJ3236 - ■■■■■■ - ■■ T1
17565	0.08	3100	20200	-	0.07	119984878/6831	✓	✓	✓	✓			2KJ3236 - ■■■■■■ - ■■ S1
15064	0.10	3100	20200	-	0.08	2033642/135	✓	✓	✓	✓			2KJ3236 - ■■■■■■ - ■■ R1
13695	0.11	3100	20200	-	0.10	4067284/297	✓	✓	✓	✓			2KJ3236 - ■■■■■■ - ■■ Q1
12008	0.12	3100	20200	-	0.12	22370062/1863	✓	✓	✓	✓	✓	✓	2KJ3236 - ■■■■■■ - ■■ P1
10717	0.14	3100	20200	-	0.15	8134568/759	✓	✓	✓	✓	✓	✓	2KJ3236 - ■■■■■■ - ■■ N1
9551	0.15	3100	20200	-	0.18	35588735/3726	✓	✓	✓	✓	✓	✓	2KJ3236 - ■■■■■■ - ■■ M1
8817	0.16	3100	20200	-	0.21	5475190/621	✓	✓	✓	✓	✓	✓	2KJ3236 - ■■■■■■ - ■■ L1
7719	0.19	3100	20200	-	0.25	11185031/1449	✓	✓	✓	✓	✓	✓	2KJ3236 - ■■■■■■ - ■■ K1
6768	0.21	3100	20200	-	0.23	63042902/9315	✓	✓	✓	✓	✓	✓	2KJ3236 - ■■■■■■ - ■■ J1
6140	0.24	3100	20200	-	0.33	5084105/828	✓	✓	✓	✓	✓	✓	2KJ3236 - ■■■■■■ - ■■ H1

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version



## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>D.129-Z49</b>															
5963	0.24	5000	27000	-	0.18	1339420717/224640	✓	✓	✓	✓				2KJ3237 - ■■■■■■ - ■■ B2	
5420	0.27	5000	27000	-	0.21	1339420717/247104	✓	✓	✓	✓				2KJ3237 - ■■■■■■ - ■■ A2	
4610	0.31	5000	27000	-	0.27	69042305/14976	✓	✓	✓	✓				2KJ3237 - ■■■■■■ - ■■ X1	
4191	0.35	5000	27000	-	0.32	345211525/82368	✓	✓	✓	✓				2KJ3237 - ■■■■■■ - ■■ W1	
3739	0.39	5000	27000	-	0.37	1008017653/269568	✓	✓	✓	✓	✓			2KJ3237 - ■■■■■■ - ■■ V1	
3353	0.43	5000	27000	-	0.45	69042305/20592	✓	✓	✓	✓	✓			2KJ3237 - ■■■■■■ - ■■ U1	
3022	0.48	5000	27000	-	0.53	814699199/269568	✓	✓	✓	✓	✓			2KJ3237 - ■■■■■■ - ■■ T1	
2790	0.52	5000	27000	-	0.63	814699199/292032	✓	✓	✓	✓	✓			2KJ3237 - ■■■■■■ - ■■ S1	
2547	0.57	5000	27000	-	0.74	400445369/157248	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ R1	
2113	0.69	5000	27000	-	0.95	759465355/359424	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ Q1	
1989	0.73	5000	27000	-	1.09	759465355/381888	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ P1	
1878	0.77	5000	27000	-	1.24	759465355/404352	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ N1	
1598	0.91	5000	27000	-	1.53	13808461/8640	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ M1	
1369	1.1	5000	27000	-	1.89	676614589/494208			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ L1	
1204	1.2	5000	27000	-	2.3	648997667/539136			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ K1	
1016	1.4	5000	27000	-	2.9	262360759/258336			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ J1	
885	1.6	5000	27000	-	3.9	13808461/15600			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ H1	
873	1.7	5000	27000	-	1.51	208411423/238680	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ G1	
825	1.8	5000	27000	-	1.71	208411423/252720	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ F1	
702	2.1	5000	27000	-	2.2	18946493/27000	✓	✓	✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ E1	
601	2.4	5000	27000	-	2.8	928378157/1544400			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ D1	
529	2.7	5000	27000	-	3.4	890485171/1684800			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ C1	
446	3.3	5000	27000	-	4.5	359983367/807300			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ B1	
389	3.7	5000	27000	-	6.0	18946493/48750			✓	✓	✓	✓		2KJ3237 - ■■■■■■ - ■■ A1	
<b>D.129-D49</b>															
19506	0.07	5000	27000	-	0.12	1643206859/84240	✓	✓	✓	✓				2KJ3238 - ■■■■■■ - ■■ L1	
17733	0.08	5000	27000	-	0.14	1643206859/92664	✓	✓	✓	✓				2KJ3238 - ■■■■■■ - ■■ K1	
15675	0.09	5000	27000	-	0.17	234743837/14976	✓	✓	✓	✓	✓			2KJ3238 - ■■■■■■ - ■■ J1	
14250	0.10	5000	27000	-	0.22	1173719185/82368	✓	✓	✓	✓	✓			2KJ3238 - ■■■■■■ - ■■ H1	
12482	0.12	5000	27000	-	0.26	10093984991/808704	✓	✓	✓	✓	✓			2KJ3238 - ■■■■■■ - ■■ G1	
11522	0.13	5000	27000	-	0.31	10093984991/876096	✓	✓	✓	✓	✓			2KJ3238 - ■■■■■■ - ■■ F1	
10201	0.14	5000	27000	-	0.37	9624497317/943488	✓	✓	✓	✓	✓	✓		2KJ3238 - ■■■■■■ - ■■ E1	
8490	0.17	5000	27000	-	0.50	234743837/27648	✓	✓	✓	✓	✓	✓		2KJ3238 - ■■■■■■ - ■■ D1	
7991	0.18	5000	27000	-	0.59	13808461/1728	✓	✓	✓	✓	✓	✓		2KJ3238 - ■■■■■■ - ■■ C1	
7160	0.2	5000	27000	-	0.65	8685521969/1213056	✓	✓	✓	✓	✓	✓		2KJ3238 - ■■■■■■ - ■■ B1	
6096	0.24	5000	27000	-	0.85	1643206859/269568	✓	✓	✓	✓	✓	✓		2KJ3238 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, B, F or H	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>D.149-Z49</b>															
5749	0.25	8000	51200	-	0.18	225346617/39200	✓	✓	✓	✓				2KJ3240 - ■■■■■■ - ■■ B2	
5226	0.28	8000	51200	-	0.22	225346617/43120	✓	✓	✓	✓				2KJ3240 - ■■■■■■ - ■■ A2	
4445	0.33	8000	51200	-	0.28	6969483/1568	✓	✓	✓	✓				2KJ3240 - ■■■■■■ - ■■ X1	
4041	0.36	8000	51200	-	0.34	34847415/8624	✓	✓	✓	✓				2KJ3240 - ■■■■■■ - ■■ W1	
3605	0.40	8000	51200	-	0.39	56530251/15680	✓	✓	✓	✓	✓			2KJ3240 - ■■■■■■ - ■■ V1	
3233	0.45	8000	51200	-	0.47	6969483/2156	✓	✓	✓	✓	✓			2KJ3240 - ■■■■■■ - ■■ U1	
2914	0.50	8000	51200	-	0.55	45688833/15680	✓	✓	✓	✓	✓			2KJ3240 - ■■■■■■ - ■■ T1	
2690	0.54	8000	51200	-	0.66	137066499/50960	✓	✓	✓	✓	✓			2KJ3240 - ■■■■■■ - ■■ S1	
2455	0.59	8000	51200	-	0.78	67371669/27440	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ R1	
2037	0.71	8000	51200	-	1.0	25554771/12544	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ Q1	
1917	0.76	8000	51200	-	1.16	25554771/13328	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ P1	
1811	0.80	8000	51200	-	1.31	2839419/1568	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ N1	
1541	0.94	8000	51200	-	1.62	30201093/19600	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ M1	
1320	1.1	8000	51200	-	2.0	2323161/1760			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ L1	
1161	1.2	8000	51200	-	2.5	36396189/31360			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ K1	
979	1.5	8000	51200	-	3.2	1919133/1960			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ J1	
853	1.7	8000	51200	-	4.2	20908449/24500			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ H1	
842	1.7	8000	51200	-	1.81	35063523/41650	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ G1	
795	1.8	8000	51200	-	2.0	3895947/4900	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ F1	
677	2.1	8000	51200	-	2.6	41438709/61250	✓	✓	✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ E1	
580	2.5	8000	51200	-	3.4	3187593/5500			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ D1	
510	2.8	8000	51200	-	4.3	49938957/98000			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ C1	
430	3.4	8000	51200	-	5.7	2633229/6125			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ B1	
375	3.9	8000	51200	-	7.5	57376674/153125			✓	✓	✓	✓		2KJ3240 - ■■■■■■ - ■■ A1	
<b>D.149-D49</b>															
24180	0.06	8000	51200	-	0.08	118481211/4900	✓	✓	✓	✓				2KJ3241 - ■■■■■■ - ■■ N1	
21982	0.07	8000	51200	-	0.10	118481211/5390	✓	✓	✓	✓				2KJ3241 - ■■■■■■ - ■■ M1	
18807	0.08	8000	51200	-	0.12	13164579/700	✓	✓	✓	✓				2KJ3241 - ■■■■■■ - ■■ L1	
17097	0.08	8000	51200	-	0.14	13164579/770	✓	✓	✓	✓				2KJ3241 - ■■■■■■ - ■■ K1	
15112	0.10	8000	51200	-	0.17	118481211/7840	✓	✓	✓	✓	✓			2KJ3241 - ■■■■■■ - ■■ J1	
13739	0.11	8000	51200	-	0.22	118481211/8624	✓	✓	✓	✓	✓			2KJ3241 - ■■■■■■ - ■■ H1	
12034	0.12	8000	51200	-	0.26	188692299/15680	✓	✓	✓	✓	✓			2KJ3241 - ■■■■■■ - ■■ G1	
11108	0.13	8000	51200	-	0.31	566076897/50960	✓	✓	✓	✓	✓			2KJ3241 - ■■■■■■ - ■■ F1	
9835	0.15	8000	51200	-	0.37	539747739/54880	✓	✓	✓	✓	✓	✓		2KJ3241 - ■■■■■■ - ■■ E1	
8186	0.18	8000	51200	-	0.50	513418581/62720	✓	✓	✓	✓	✓	✓		2KJ3241 - ■■■■■■ - ■■ D1	
7704	0.19	8000	51200	-	0.59	30201093/3920	✓	✓	✓	✓	✓	✓		2KJ3241 - ■■■■■■ - ■■ C1	
6903	0.21	8000	51200	-	0.66	54121047/7840	✓	✓	✓	✓	✓	✓		2KJ3241 - ■■■■■■ - ■■ B1	
5877	0.25	8000	51200	-	0.86	13164579/2240	✓	✓	✓	✓	✓	✓		2KJ3241 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>D.169-Z.69</b>															
5545	0.26	14000	70100	-	0.21	115475008/20825	✓	✓	✓	✓				2KJ3242 - ■■■■■■ - ■■ A2	
5041	0.29	14000	70100	-	0.26	20995456/4165	✓	✓	✓	✓				2KJ3242 - ■■■■■■ - ■■ X1	
4287	0.34	14000	70100	-	0.33	3571392/833	✓	✓	✓	✓				2KJ3242 - ■■■■■■ - ■■ W1	
3898	0.37	14000	70100	-	0.40	3246720/833	✓	✓	✓	✓				2KJ3242 - ■■■■■■ - ■■ V1	
3478	0.42	14000	70100	-	0.47	43451936/12495	✓	✓	✓	✓	✓	✓		2KJ3242 - ■■■■■■ - ■■ U1	
3118	0.47	14000	70100	-	0.57	2597376/833	✓	✓	✓	✓	✓	✓		2KJ3242 - ■■■■■■ - ■■ T1	
2811	0.52	14000	70100	-	0.67	35118688/12495	✓	✓	✓	✓	✓	✓		2KJ3242 - ■■■■■■ - ■■ S1	
2594	0.56	14000	70100	-	0.8	140474752/54145	✓	✓	✓	✓	✓	✓		2KJ3242 - ■■■■■■ - ■■ R1	
2368	0.61	14000	70100	-	0.95	69046912/29155	✓	✓	✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ Q1	
1965	0.74	14000	70100	-	1.25	1636888/833	✓	✓	✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ P1	
1849	0.78	14000	70100	-	1.44	26190208/14161	✓	✓	✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ N1	
1747	0.83	14000	70100	-	1.62	13095104/7497	✓	✓	✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ M1	
1486	0.98	14000	70100	-	2.1	30952064/20825	✓	✓	✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ L1	
1273	1.1	14000	70100	-	2.6	108224/85			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ K1	
1119	1.3	14000	70100	-	3.2	13987952/12495			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ J1	
944	1.5	14000	70100	-	4.2	90475264/95795			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ H1	
823	1.8	14000	70100	-	5.7	85713408/104125			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ G1	
773	1.9	14000	70100	-	3.2	19047424/24633	✓	✓	✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ F1	
658	2.2	14000	70100	-	4.3	45021184/68425	✓	✓	✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ E1	
564	2.6	14000	70100	-	5.6	12121088/21505			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ D1	
496	2.9	14000	70100	-	7.1	20346112/41055			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ C1	
418	3.5	14000	70100	-	9.7	131600384/314755			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ B1	
364	4.0	14000	70100	-	13	124674048/342125			✓	✓	✓	✓	✓	2KJ3242 - ■■■■■■ - ■■ A1	
<b>D.169-D69</b>															
23323	0.06	14000	70100	-	0.08	28571136/1225	✓	✓	✓	✓				2KJ3243 - ■■■■■■ - ■■ N1	
21203	0.07	14000	70100	-	0.10	5194752/245	✓	✓	✓	✓				2KJ3243 - ■■■■■■ - ■■ M1	
18140	0.08	14000	70100	-	0.12	9523712/525	✓	✓	✓	✓				2KJ3243 - ■■■■■■ - ■■ L1	
16491	0.09	14000	70100	-	0.15	1731584/105	✓	✓	✓	✓				2KJ3243 - ■■■■■■ - ■■ K1	
14577	0.10	14000	70100	-	0.17	3571392/245	✓	✓	✓	✓	✓	✓		2KJ3243 - ■■■■■■ - ■■ J1	
13252	0.11	14000	70100	-	0.23	649344/49	✓	✓	✓	✓	✓	✓		2KJ3243 - ■■■■■■ - ■■ H1	
11608	0.12	14000	70100	-	0.26	25594976/2205	✓	✓	✓	✓	✓	✓		2KJ3243 - ■■■■■■ - ■■ G1	
10715	0.14	14000	70100	-	0.32	102379904/9555	✓	✓	✓	✓	✓	✓		2KJ3243 - ■■■■■■ - ■■ F1	
9487	0.15	14000	70100	-	0.39	48809024/5145	✓	✓	✓	✓	✓	✓	✓	2KJ3243 - ■■■■■■ - ■■ E1	
7896	0.18	14000	70100	-	0.52	1934504/245	✓	✓	✓	✓	✓	✓	✓	2KJ3243 - ■■■■■■ - ■■ D1	
7431	0.20	14000	70100	-	0.61	30952064/4165	✓	✓	✓	✓	✓	✓	✓	2KJ3243 - ■■■■■■ - ■■ C1	
6659	0.22	14000	70100	-	0.68	44047168/6615	✓	✓	✓	✓	✓	✓	✓	2KJ3243 - ■■■■■■ - ■■ B1	
5669	0.26	14000	70100	-	0.89	595232/105	✓	✓	✓	✓	✓	✓	✓	2KJ3243 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Helical geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup> °	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>D.189-Z69</b>															
5807	0.25	19000	107000	-	0.24	56760132/9775	✓	✓	✓	✓					2KJ3244 - ■■■■■■ - ■■ A2
5279	0.27	19000	107000	-	0.29	10320024/1955	✓	✓	✓	✓					2KJ3244 - ■■■■■■ - ■■ X1
4490	0.32	19000	107000	-	0.37	1755468/391	✓	✓	✓	✓					2KJ3244 - ■■■■■■ - ■■ W1
4082	0.36	19000	107000	-	0.45	1595880/391	✓	✓	✓	✓					2KJ3244 - ■■■■■■ - ■■ V1
3642	0.40	19000	107000	-	0.53	7119398/1955	✓	✓	✓	✓	✓	✓			2KJ3244 - ■■■■■■ - ■■ U1
3265	0.44	19000	107000	-	0.64	1276704/391	✓	✓	✓	✓	✓	✓			2KJ3244 - ■■■■■■ - ■■ T1
2943	0.49	19000	107000	-	0.77	5754034/1955	✓	✓	✓	✓	✓	✓			2KJ3244 - ■■■■■■ - ■■ S1
2717	0.53	19000	107000	-	0.91	5311416/1955	✓	✓	✓	✓	✓	✓			2KJ3244 - ■■■■■■ - ■■ R1
2480	0.58	19000	107000	-	1.08	33939048/13685	✓	✓	✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ Q1
2058	0.70	19000	107000	-	1.45	1609179/782	✓	✓	✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ P1
1937	0.75	19000	107000	-	1.65	12873432/6647	✓	✓	✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ N1
1829	0.79	19000	107000	-	1.87	2145572/1173	✓	✓	✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ M1
1556	0.93	19000	107000	-	2.4	15214056/9775	✓	✓	✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ L1
1333	1.1	19000	107000	-	3.1	2606604/1955			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ K1
1172	1.2	19000	107000	-	3.8	2291861/1955			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ J1
989	1.5	19000	107000	-	5.1	44471856/44965			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ H1
862	1.7	19000	107000	-	6.8	42131232/48875			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ G1
810	1.8	19000	107000	-	4.5	21845824/26979	✓	✓	✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ F1
689	2.1	19000	107000	-	6	154906752/224825	✓	✓	✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ E1
590	2.5	19000	107000	-	8	26539968/44965			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ D1
519	2.8	19000	107000	-	10	23335312/44965			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ C1
438	3.3	19000	107000	-	14	452804352/1034195			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ B1
382	3.8	19000	107000	-	18	428972544/1124125			✓	✓	✓	✓	✓		2KJ3244 - ■■■■■■ - ■■ A1
<b>D.189-D69</b>															
27816	0.05	19000	107000	-	0.07	15994264/575	✓	✓	✓	✓					2KJ3245 - ■■■■■■ - ■■ P1
24424	0.06	19000	107000	-	0.09	14043744/575	✓	✓	✓	✓					2KJ3245 - ■■■■■■ - ■■ N1
22204	0.07	19000	107000	-	0.11	2553408/115	✓	✓	✓	✓					2KJ3245 - ■■■■■■ - ■■ M1
18996	0.08	19000	107000	-	0.12	10922912/575	✓	✓	✓	✓					2KJ3245 - ■■■■■■ - ■■ L1
17269	0.08	19000	107000	-	0.15	1985984/115	✓	✓	✓	✓					2KJ3245 - ■■■■■■ - ■■ K1
15265	0.09	19000	107000	-	0.18	1755468/115	✓	✓	✓	✓	✓	✓			2KJ3245 - ■■■■■■ - ■■ J1
13877	0.10	19000	107000	-	0.23	319176/23	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ H1
12155	0.12	19000	107000	-	0.27	4193618/345	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ G1
11220	0.13	19000	107000	-	0.32	1290344/115	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ F1
9934	0.15	19000	107000	-	0.39	7997132/805	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ E1
8269	0.18	19000	107000	-	0.53	1901757/230	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ D1
7782	0.19	19000	107000	-	0.62	15214056/1955	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ C1
6973	0.21	19000	107000	-	0.69	7216924/1035	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ B1
5936	0.24	19000	107000	-	0.91	682682/115	✓	✓	✓	✓	✓	✓	✓		2KJ3245 - ■■■■■■ - ■■ A1

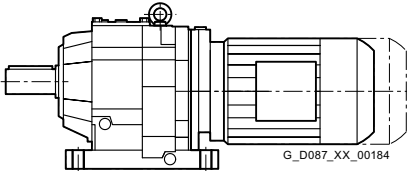
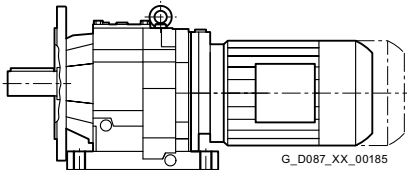
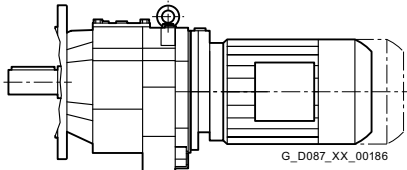
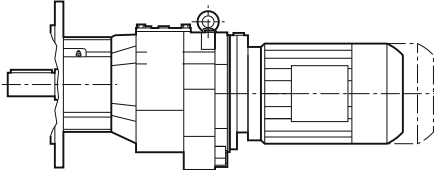
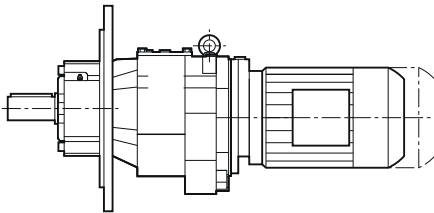
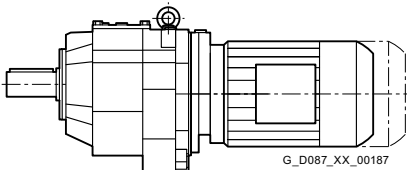
## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/48</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, B, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Overview**

 Notes on the dimensional drawings are provided in chapter [Introduction on page 1/24](#).

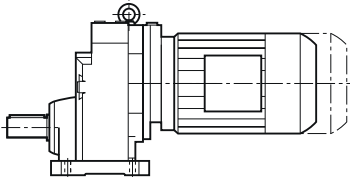
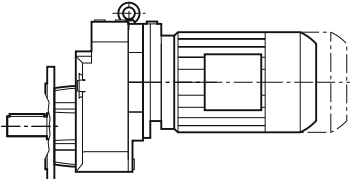
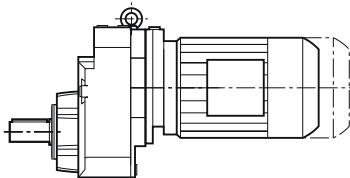
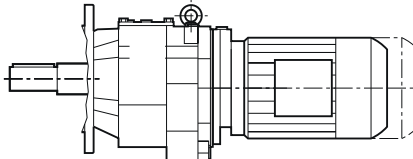
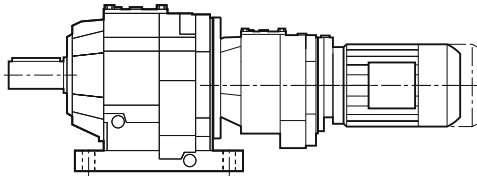
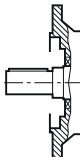
Design	Frame size	Dimensional drawing, see page
<b>Helical geared motor Z and D</b>		
<b>Foot-mounted design</b>		
	Z/D19	3/99
	Z/D29	3/102
	Z/D39	3/106
	Z/D49	3/110
	Z/D59	3/113
	Z/D69	3/116
	Z/D79	3/119
	Z/D89	3/122
	Z/D109	3/127
	Z/D129	3/132
	Z/D149	3/137
	Z/D169	3/141
	Z/D189	3/145
<b>Foot/flange-mounted design</b>		
	ZB/DB29	3/103
	ZB/DB39	3/107
	ZB/DB49	3/110
	ZB/DB59	3/113
	ZB/DB69	3/116
	ZB/DB79	3/119
ZB/DB89	3/122	
<b>Flange-mounted design</b>		
	ZF/DF19	3/100
	ZF/DF29	3/104
	ZF/DF39	3/108
	ZF/DF49	3/111
	ZF/DF59	3/114
	ZF/DF69	3/117
	ZF/DF79	3/120
	ZF/DF89	3/123
	ZF/DF109	3/128
	ZF/DF129	3/133
	ZF/DF149	3/138
	ZF/DF169	3/142
	ZF/DF189	3/146
<b>Flange-mounted design with VLplus reinforced bearing system</b>		
	ZF/DF89	3/124
	ZF/DF109	3/129
	ZF/DF129	3/134
	ZF/DF149	3/139
	ZF/DF169	3/143
<b>Flange-mounted design with XLplus reinforced bearing system</b>		
	ZF/DF89	3/125
	ZF/DF109	3/130
	ZF/DF129	3/135
	ZF/DF149	3/140
	ZF/DF169	3/144
<b>Housing flange design</b>		
	ZZ/DZ19	3/101
	ZZ/DZ29	3/105
	ZZ/DZ39	3/109
	ZZ/DZ49	3/112
	ZZ/DZ59	3/115
	ZZ/DZ69	3/118
	ZZ/DZ79	3/121
	ZZ/DZ89	3/126
	ZZ/DZ109	3/131
	ZZ/DZ129	3/136

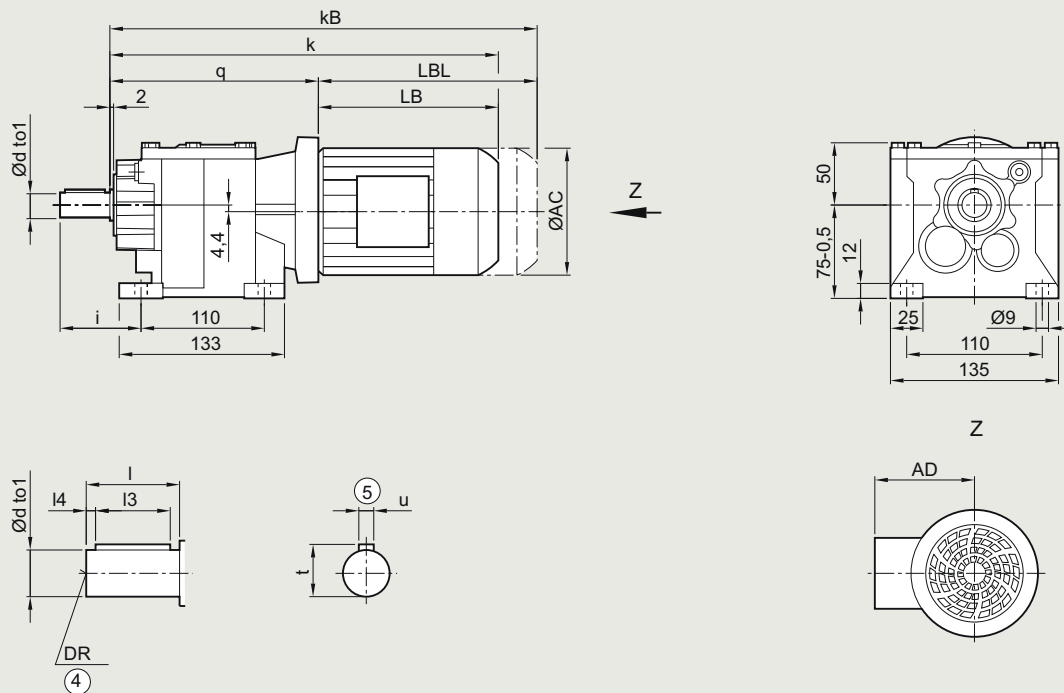
# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Overview

Design	Frame size	Dimensional drawing, see page
<b>Helical geared motor E</b>		
<i>Foot-mounted design</i>		
	E39	3/147
	E49	3/150
	E69	3/153
	E89	3/156
	E109	3/159
	E129	3/162
	E149	3/165
<i>Flange-mounted design</i>		
	EF39	3/148
	EF49	3/151
	EF69	3/154
	EF89	3/157
	EF109	3/160
	EF129	3/163
	EF149	3/166
<i>Housing flange design</i>		
	EZ39	3/149
	EZ49	3/152
	EZ69	3/155
	EZ89	3/158
	EZ109	3/161
	EZ129	3/164
	EZ149	3/167
<b>Cooling tower geared motor</b>		
	ZKF89	3/168
	ZKF109	3/169
	ZKF129	3/170
	ZKF149	3/171
	ZKF169	3/172
	ZKF189	3/173
	EKF89	3/174
	EKF109	3/175
	EKF129	3/176
	EKF149	3/177
<b>Helical tandem geared motor</b>		
	Z./D.29-Z/D19 ... D.189-Z/D69	3/178
<b>Additional versions and options</b>		
<i>Inner contour of the flange-mounted design</i>		
	ZF/DF19 ... ZF/DF189, ZB/DB29 ... ZB/DB89	3/180
	EF39 ... EF149	3/182
	ZKF89 ... ZKF189	3/183
	EKF89 ... EKF149	3/183

**Gearbox Z/D19 in a foot-mounted design**
**DZ030**
**Z/D19**


Shaft	d	to1	l	l3	l4	t	u	i	DR
	16	k6	28	22	3	18.0	5	46	M5
	16	k6	40	32	4	18.0	5	58	M8
	20	k6	40	32	4	22.5	6	58t	M6x16
Motor	LE 63	63Z	71	71Z	71Y	80	80Z		
q	159.5	159.5	167.5	167.5	167.5	168.0	168.0		
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3		
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2		
k	320.0	346.0	352.0	371.0	411.0	408.0	443.0		
kB	364.5	390.5	407.0	426.0	466.0	468.0	503.0		
LB	160.5	186.5	184.5	203.5	243.5	240.0	275.0		
LBL	205.0	231.0	239.5	258.5	298.5	300.0	335.0		

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

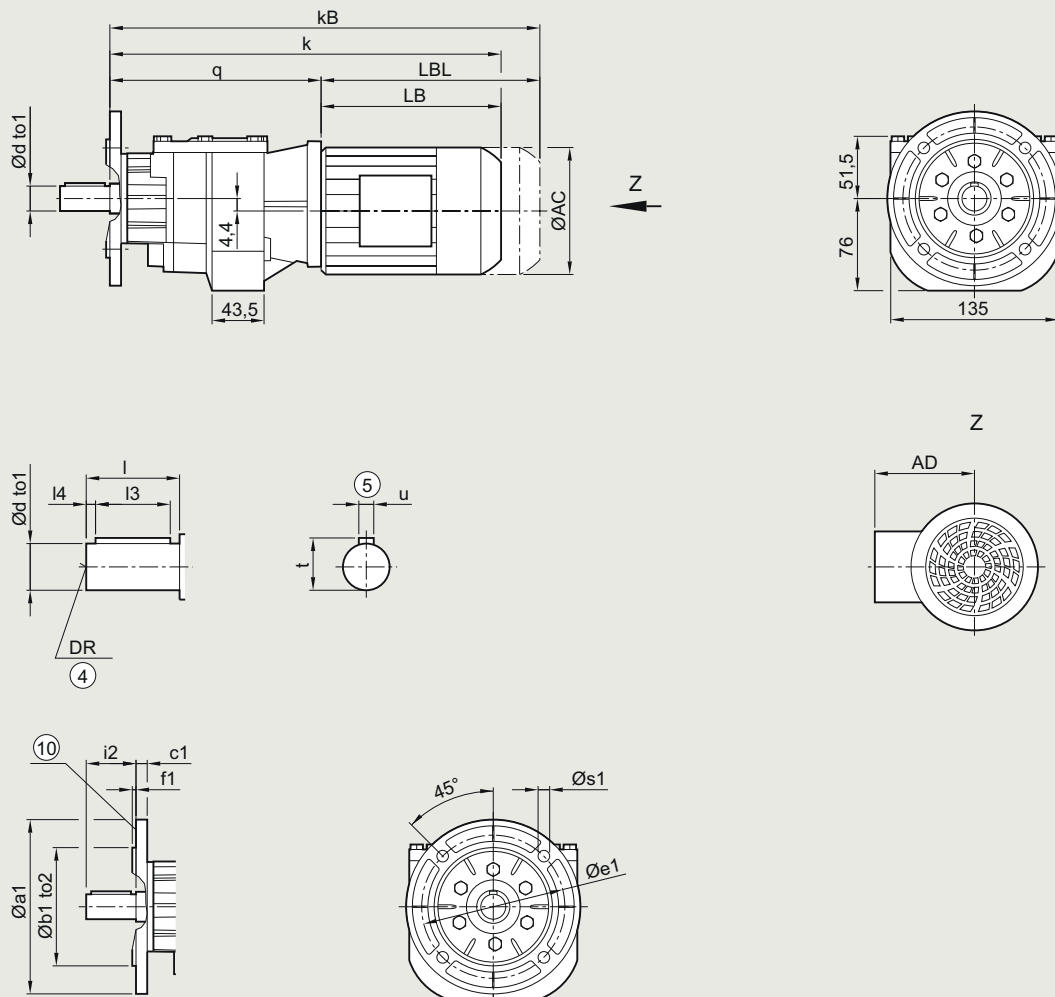
⑤ Feather key/keyway DIN 6885-1

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF19 in a flange-mounted design

**DZF030**
**ZF/DF19**


Flange	a1	b1	to2	c1	e1	f1	s1	Shaft	d	to1	l	l3	l4	t	u	i2	DR
	120	80	j6	8	100	3.0	6.6		16	k6	28	22	3	18.0	5	28	M5
	140	95	j6	9	115	3.0	9.0		16	k6	40	32	4	18.0	5	40	M8
	160	110	j6	9	130	3.5	9.0		20	k6	40	32	4	22.5	6	40	M6x16
Motor	LE 63	63Z		71		71Z		71Y		80		80Z					
q	168.5	168.5		176.5		176.5		176.5		177.0		177.0					
AC	117.8	117.8		138.8		138.8		138.8		156.3		156.3					
AD <sup>1)</sup>	124.0	124.0		134.0		134.0		134.0		149.2		149.2					
k	329.0	355.0		361.0		380.0		420.0		417.0		452.0					
kB	373.5	399.5		416.0		435.0		475.0		477.0		512.0					
LB	160.5	186.5		184.5		203.5		243.5		240.0		275.0					
LBL	205.0	231.0		239.5		258.5		298.5		300.0		335.0					

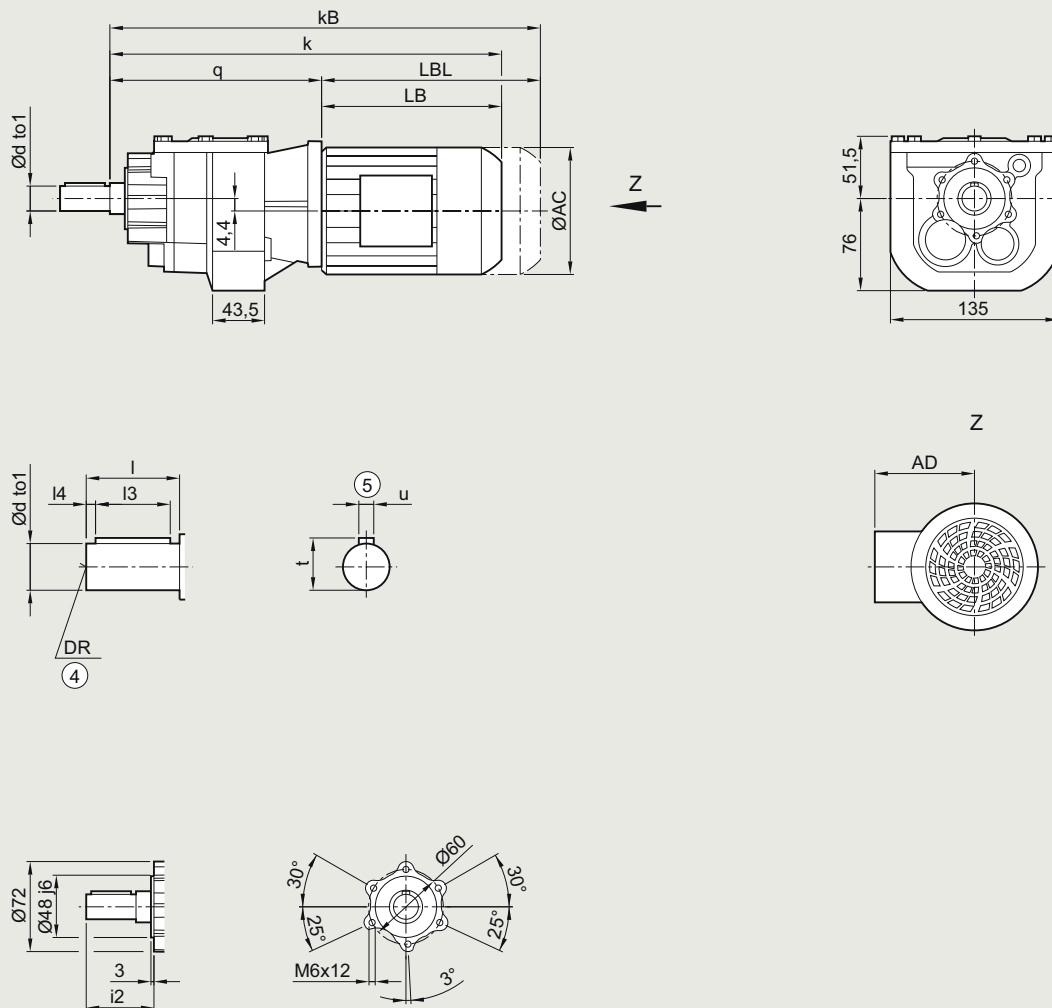
④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180



**Gearbox ZZ/DZ19 in a housing flange design**
**DZZ030**
**ZZ/DZ19**


Shaft	d	to1	l	l3	l4	t	u	i2	DR
	16	k6	28	22	3	18.0	5	42	M5
	16	k6	40	32	4	18.0	5	54	M8
	20	k6	40	32	4	22.5	6	54	M6x16
Motor	LE 63	63Z	71	71Z	71Y	80	80Z		
q	168.5	168.5	176.5	176.5	176.5	177.0	177.0		
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3		
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2		
k	329.0	355.0	361.0	380.0	420.0	417.0	452.0		
kB	373.5	399.5	416.0	435.0	475.0	477.0	512.0		
LB	160.5	186.5	184.5	203.5	243.5	240.0	275.0		
LBL	205.0	231.0	239.5	258.5	298.5	300.0	335.0		

<sup>④</sup> DIN 332

<sup>⑤</sup> Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

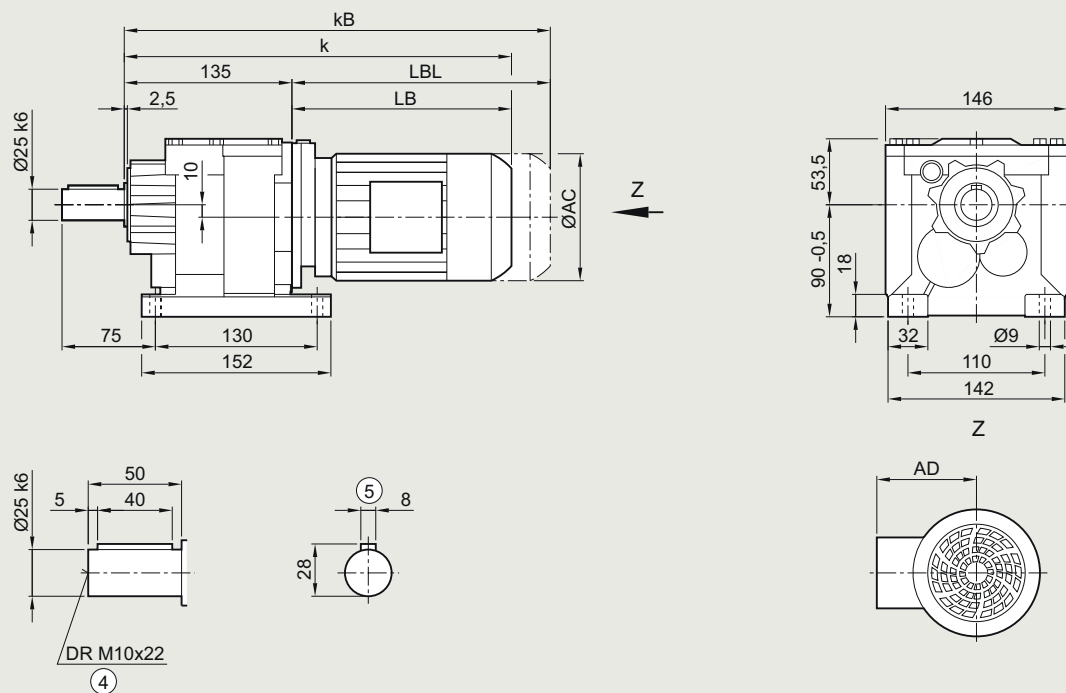
Helical geared motors

## Dimensional drawings

### Gearbox Z/D29 in a foot-mounted design

DZ030

Z/D29



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	329.0	355.0	361.0	380.0	420.0	425.0	460.0	486.5	526.5	543.0	578.0
kB	373.5	399.5	416.0	435.0	475.0	485.0	520.0	556.5	596.5	621.5	656.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

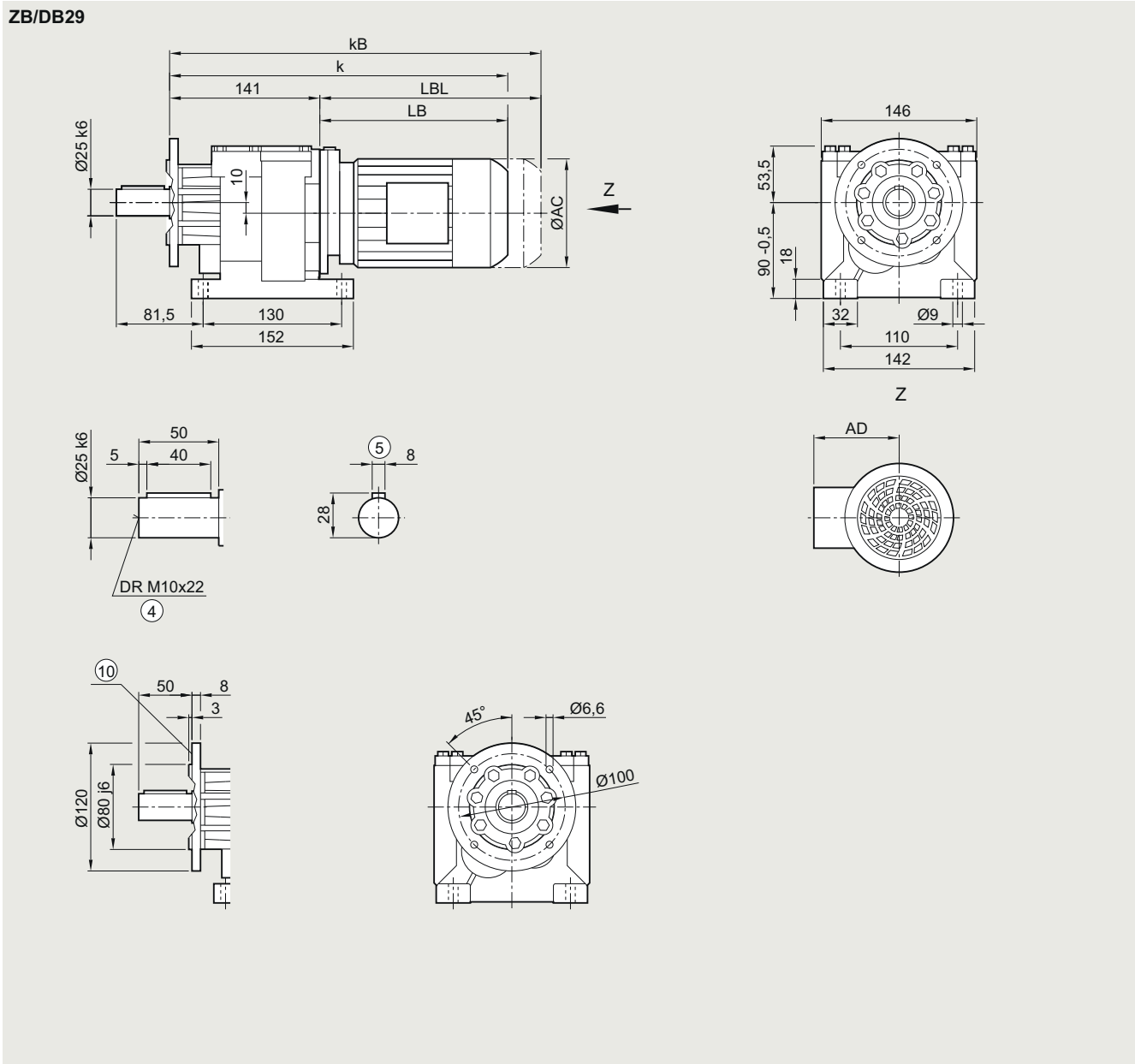
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox ZB/DB29 in a foot/flange-mounted design**

**DZB030**



Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
	63										
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	335.0	361.0	367.0	386.0	426.0	431.0	466.0	492.5	532.5	549.0	584.0
kB	379.5	405.5	422.0	441.0	481.0	491.0	526.0	562.5	602.5	627.5	662.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

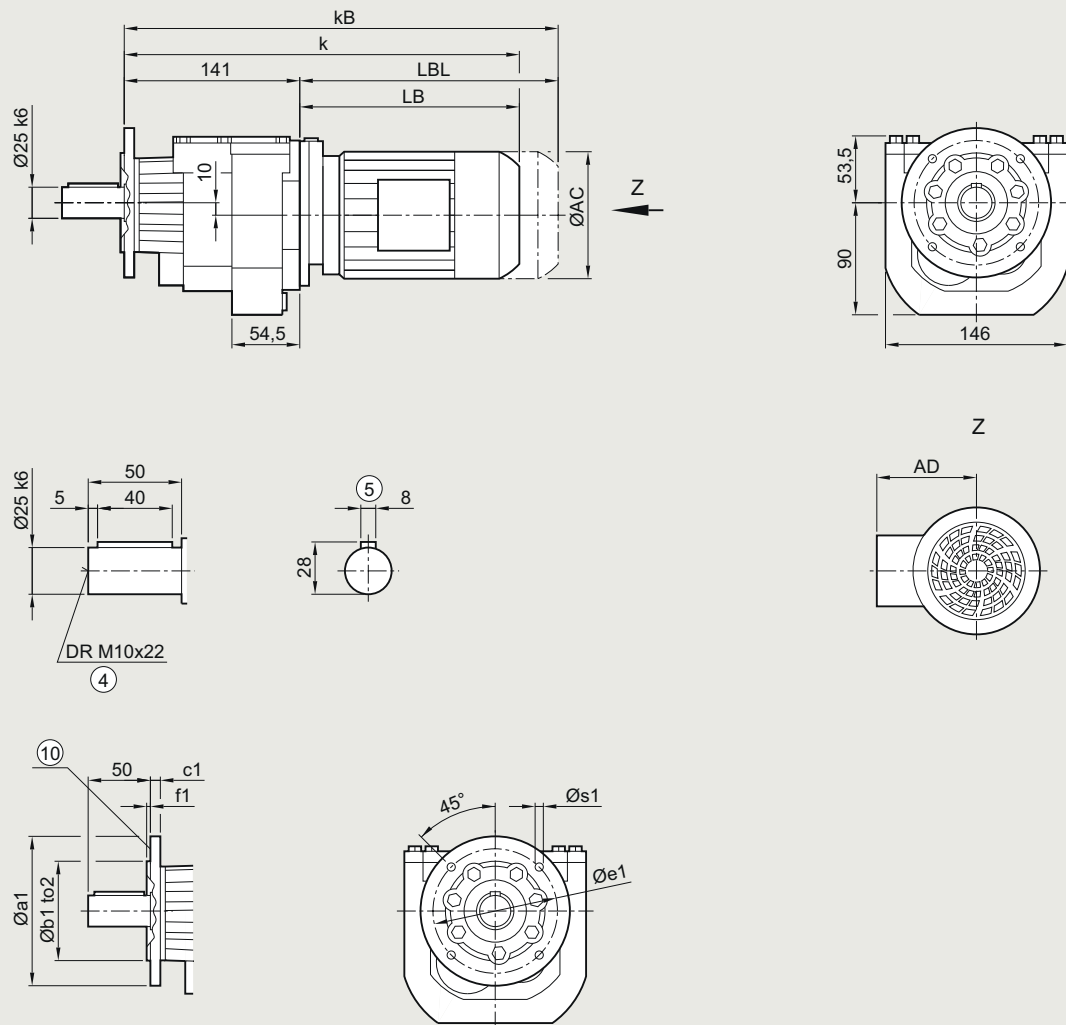
⑩ For inner contour, see page 3/180

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF29 in a flange-mounted design

**DZF030**
**ZF/DF29**


Flange	a1	b1	to2	c1	e1	f1	s1
	120	80	j6	8	100	3.0	6.6
	140	95	j6	9	115	3.0	9.0
	160	110	j6	9	130	3.5	9.0

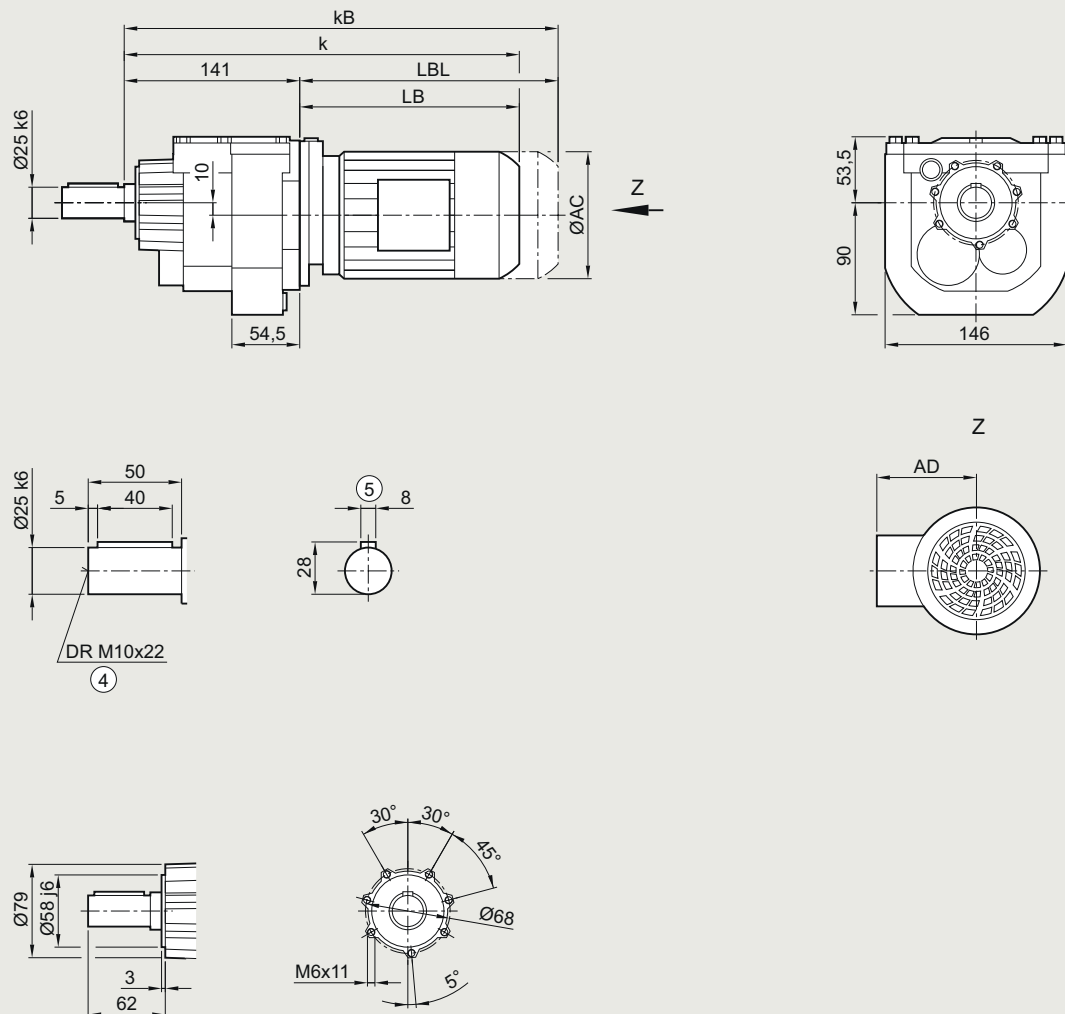
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	335.0	361.0	367.0	386.0	426.0	431.0	466.0	492.5	532.5	549.0	584.0
kB	379.5	405.5	422.0	441.0	481.0	491.0	526.0	562.5	602.5	627.5	662.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox ZZ/DZ29 in a housing flange design**
**DZZ030**
**ZZ/DZ29**


Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
	63										
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	335.0	361.0	367.0	386.0	426.0	431.0	466.0	492.5	532.5	549.0	584.0
kB	379.5	405.5	422.0	441.0	481.0	491.0	526.0	562.5	602.5	627.5	662.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

# SIMOGEAR geared motors

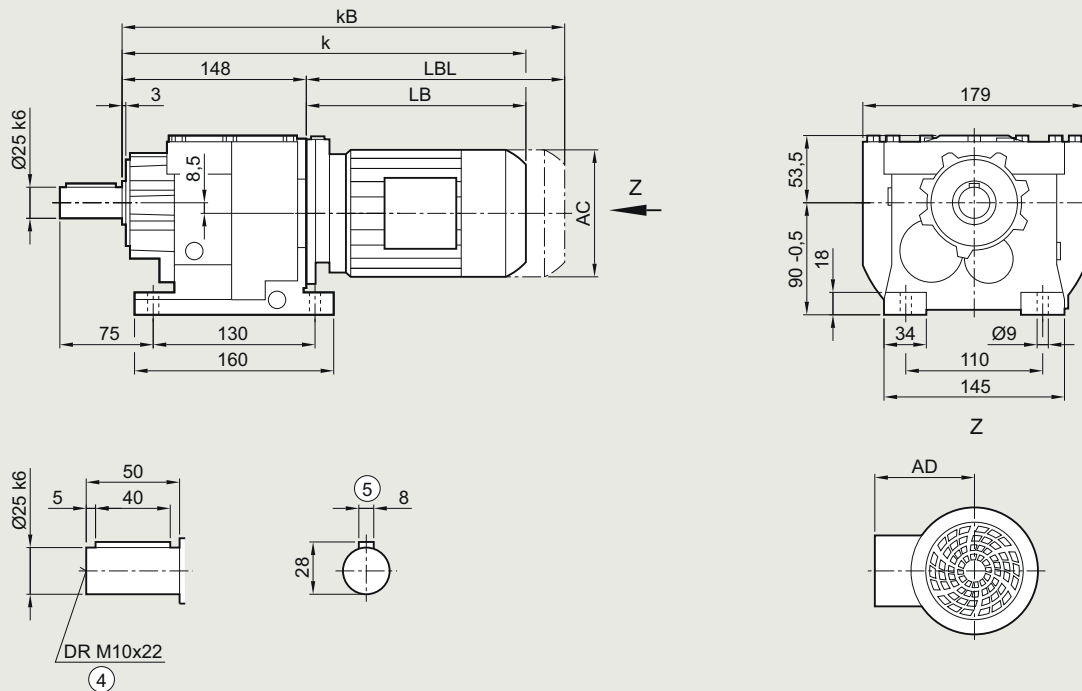
Helical geared motors

## Dimensional drawings

### Gearbox Z/D39 in a foot-mounted design

DZ030

Z/D39



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	342.0	368.0	374.0	393.0	433.0	438.0	473.0	499.5	539.5	556.0	591.0	566.0	591.0
kB	386.5	412.5	429.0	448.0	488.0	498.0	533.0	569.5	609.5	634.5	669.5	639.0	664.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

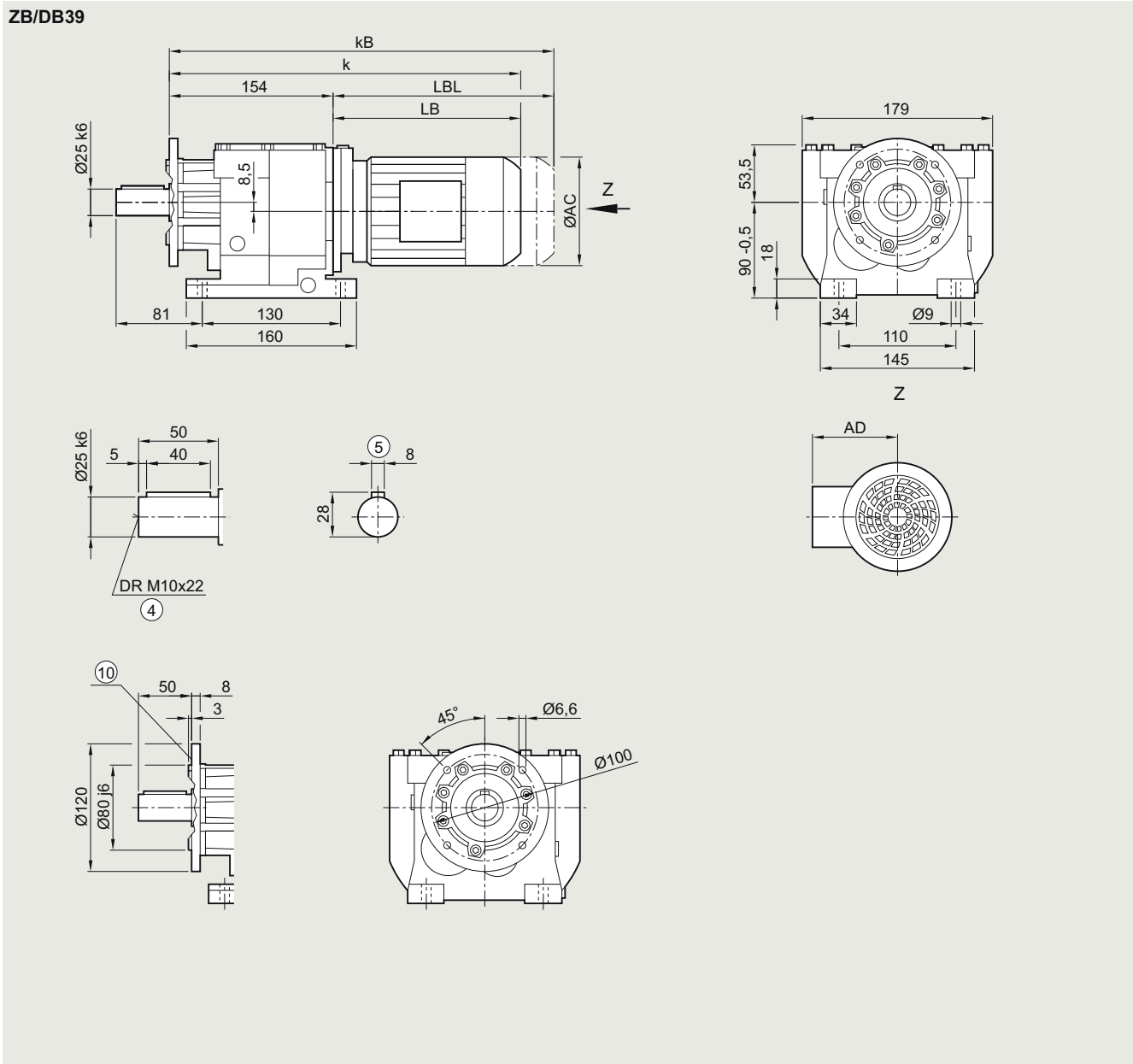
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox ZB/DB39 in a foot/flange-mounted design**

**DZB030**



Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
	63												
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	348.0	374.0	380.0	399.0	439.0	444.0	479.0	505.5	545.5	562.0	597.0	572.0	597.0
kB	392.5	418.5	435.0	454.0	494.0	504.0	539.0	575.5	615.5	640.5	675.5	645.0	670.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

# SIMOGEAR geared motors

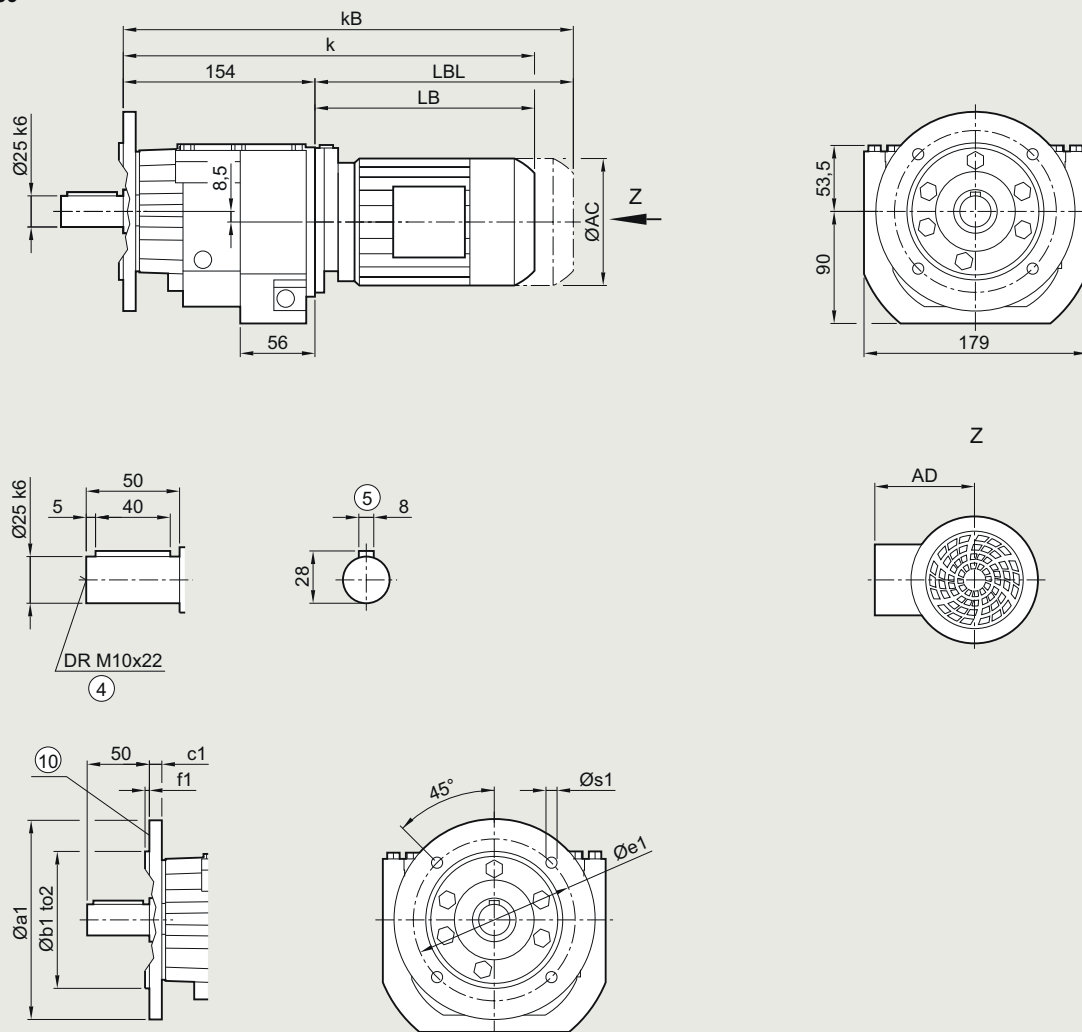
## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF39 in a flange-mounted design

##### DZF030

##### ZF/DF39



Flange	a1	b1	to2	c1	e1	f1	s1
	120	80	j6	8	100	3.0	6.6
	160	110	j6	10	130	3.5	9.0
	200	130	j6	12	165	3.5	11.0

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	348.0	374.0	380.0	399.0	439.0	444.0	479.0	505.5	545.5	562.0	597.0	572.0	597.0
kB	392.5	418.5	435.0	454.0	494.0	504.0	539.0	575.5	615.5	640.5	675.5	645.0	670.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

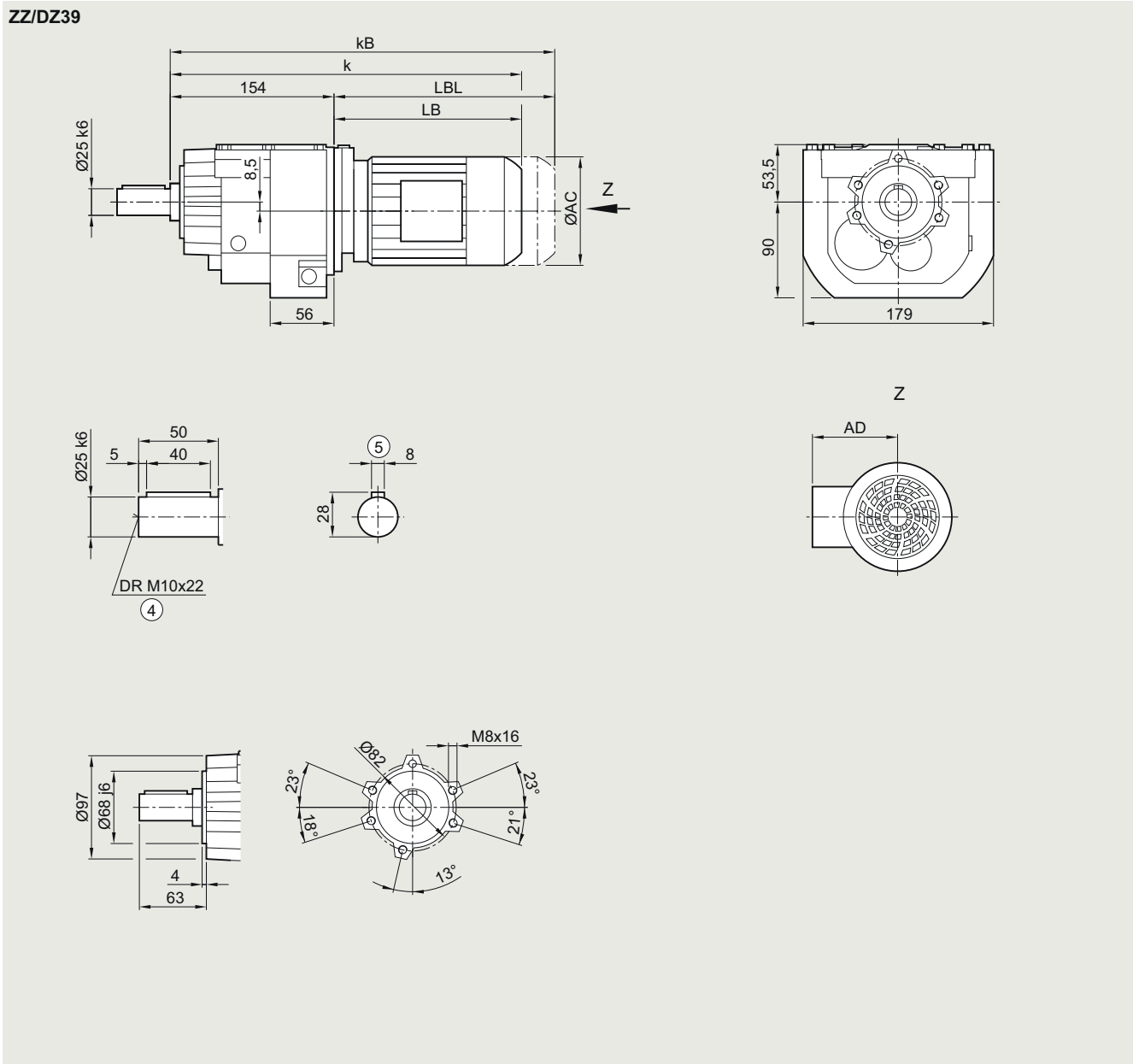
⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180



**Gearbox ZZ/DZ39 in a housing flange design**

**DZZ030**



Motor	LE	63Z		71Z		80Z		90Z		100Z		112Z	
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	348.0	374.0	380.0	399.0	439.0	444.0	479.0	505.5	545.5	562.0	597.0	572.0	597.0
kB	392.5	418.5	435.0	454.0	494.0	504.0	539.0	575.5	615.5	640.5	675.5	645.0	670.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

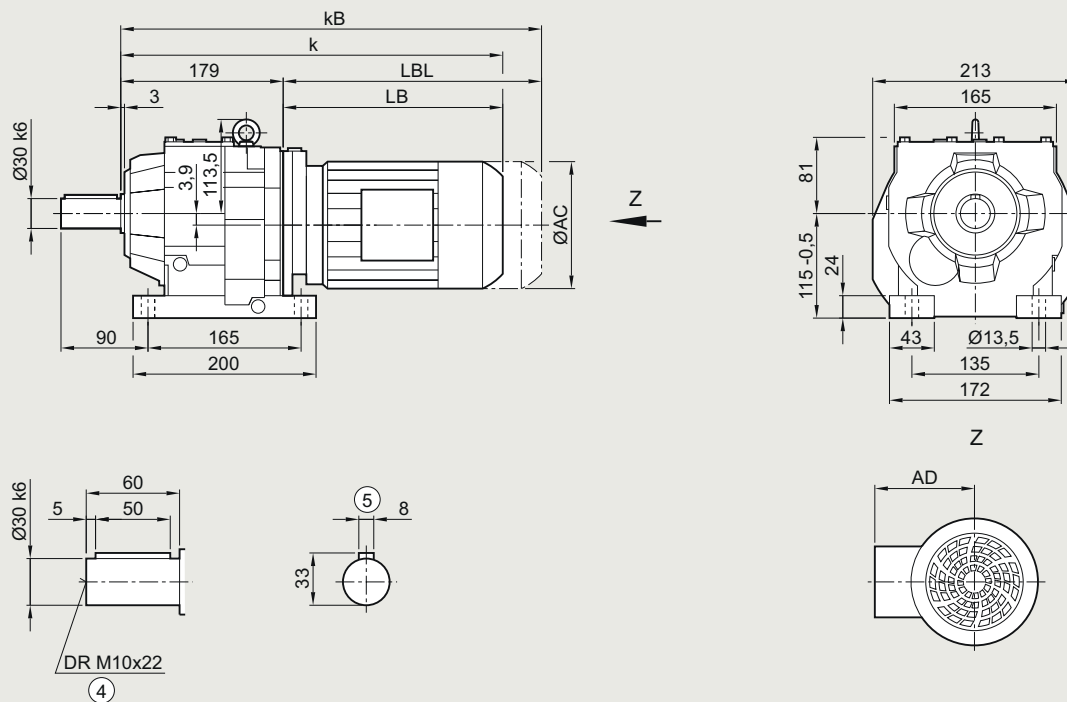
## Helical geared motors

### Dimensional drawings

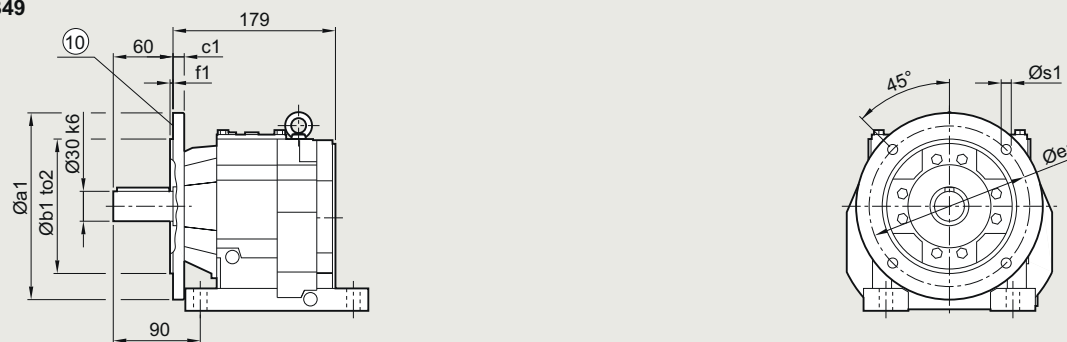
Gearbox Z/D49 in a foot-mounted design and ZB/DB49 in a foot/flange-mounted design

DZ030, DZB030

Z/D49



ZB/DB49



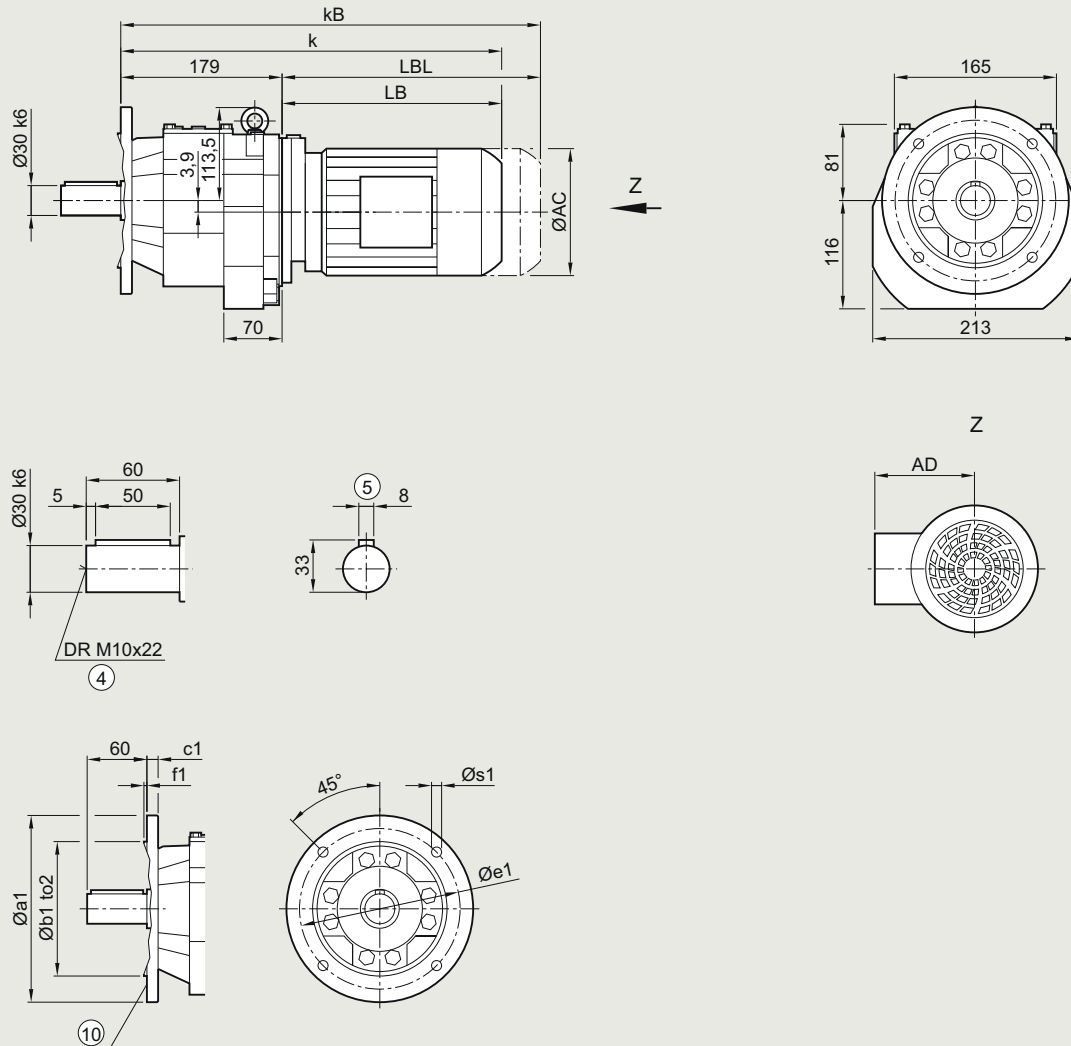
Flange	a1	b1	to2	c1	e1	f1	s1								
	140	95	j6	10	115	3.0	9.0								
	160	110	j6	10	130	3.5	9.0								
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	363.5	389.5	395.5	414.5	454.5	459.5	494.5	521.0	561.0	577.5	612.5	587.5	622.0	640.5	690.5
kB	408.0	434.0	450.5	469.5	509.5	519.5	554.5	591.0	631.0	656.0	691.0	660.5	695.0	745.0	795.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox ZF/DF49 in a flange-mounted design**
**DZF030**
**ZF/DF49**


Flange	a1	b1	to2	c1	e1	f1	s1
	140	95	j6	10	115	3.0	9.0
	160	110	j6	10	130	3.5	9.0
	200	130	j6	12	165	3.5	11.0

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	363.5	389.5	395.5	414.5	454.5	459.5	494.5	521.0	561.0	577.5	612.5	587.5	622.0	640.5	690.5
kB	408.0	434.0	450.5	469.5	509.5	519.5	554.5	591.0	631.0	656.0	691.0	660.5	695.0	745.0	795.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

# SIMOGEAR geared motors

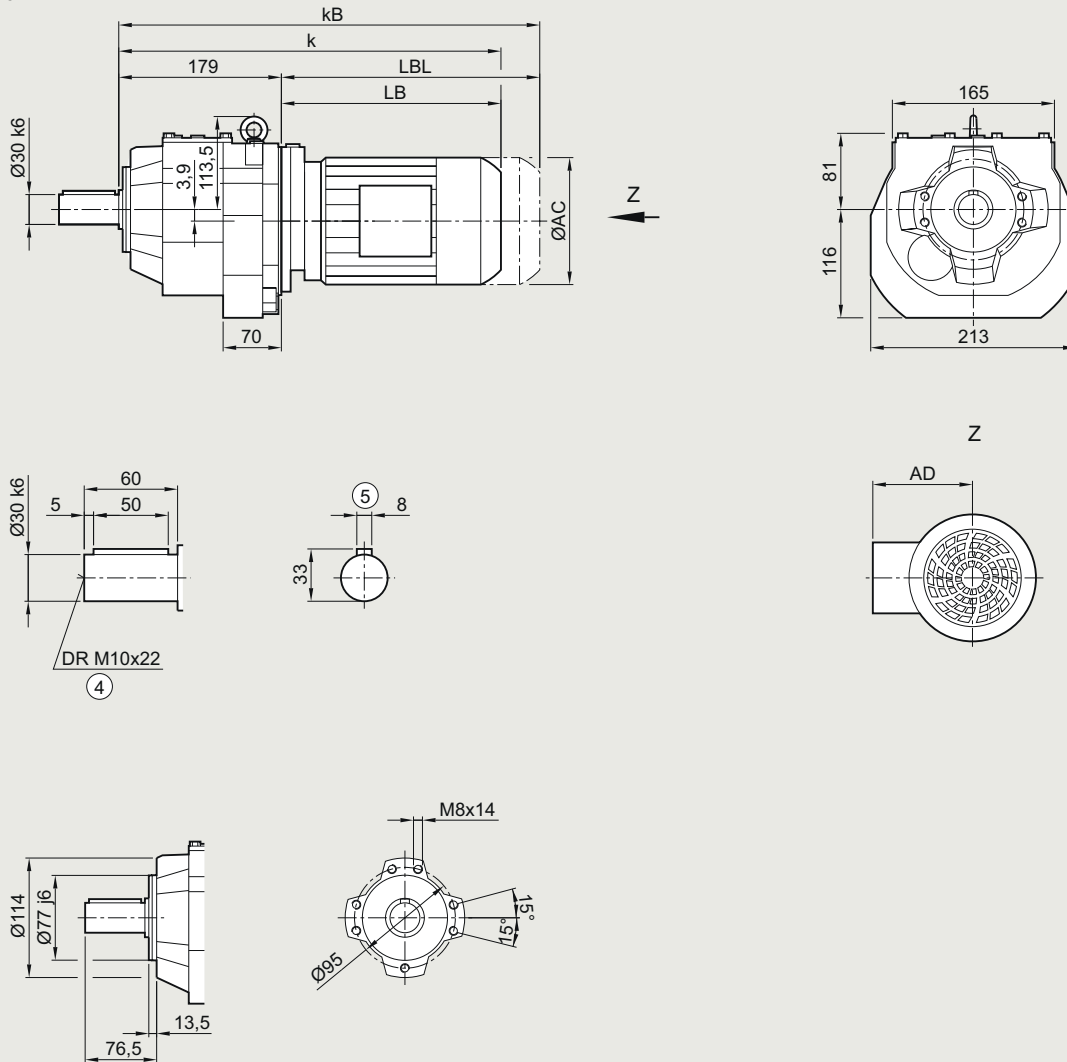
Helical geared motors

## Dimensional drawings

### Gearbox ZZ/DZ49 in a housing flange design

DZZ030

ZZ/DZ49

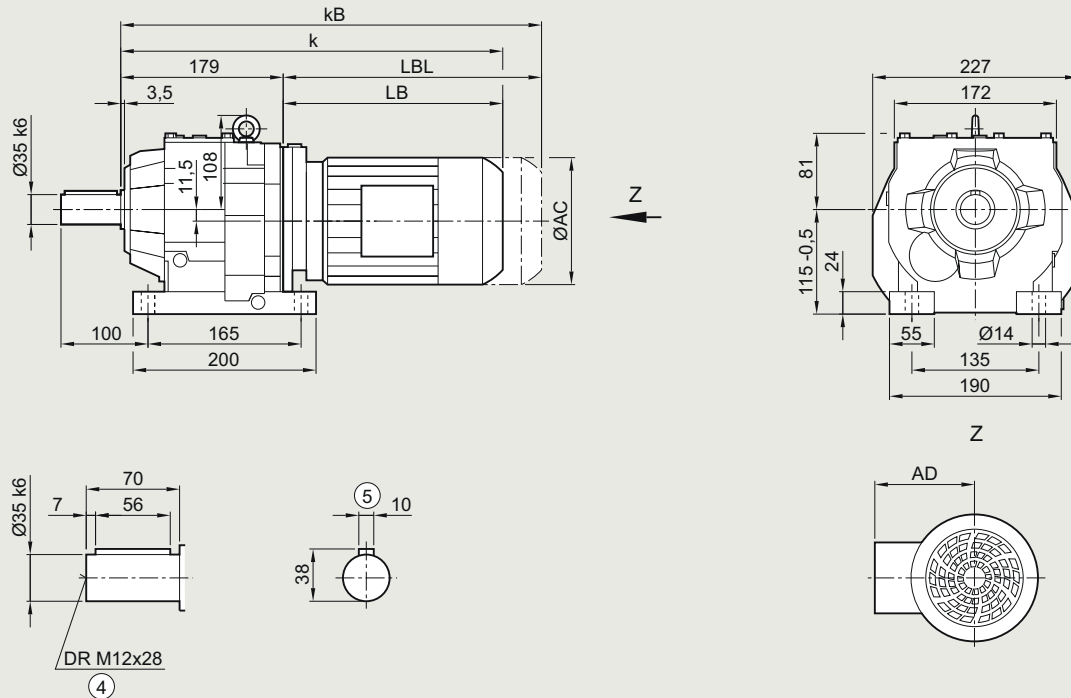
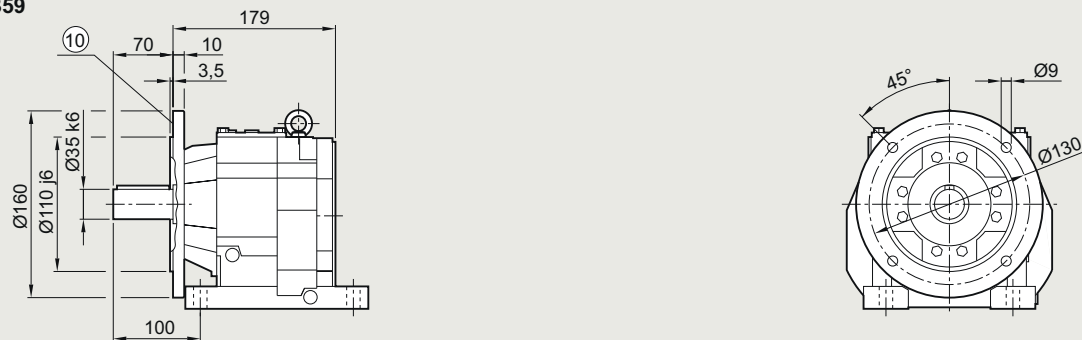


Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	63														
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	363.5	389.5	395.5	414.5	454.5	459.5	494.5	521.0	561.0	577.5	612.5	587.5	622.0	640.5	690.5
kB	408.0	434.0	450.5	469.5	509.5	519.5	554.5	591.0	631.0	656.0	691.0	660.5	695.0	745.0	795.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox Z/D59 in a foot-mounted design and ZB/DB59 in a foot/flange-mounted design**
**DZ030, DZB030**
**Z/D59**

**ZB/DB59**


Motor	LE														
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	363.5	389.5	395.5	414.5	454.5	459.5	494.5	521.0	561.0	577.5	612.5	587.5	622.0	640.5	690.5
kB	408.0	434.0	450.5	469.5	509.5	519.5	554.5	591.0	631.0	656.0	691.0	660.5	695.0	745.0	795.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

<sup>4)</sup> DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>5)</sup> Feather key/keyway DIN 6885-1

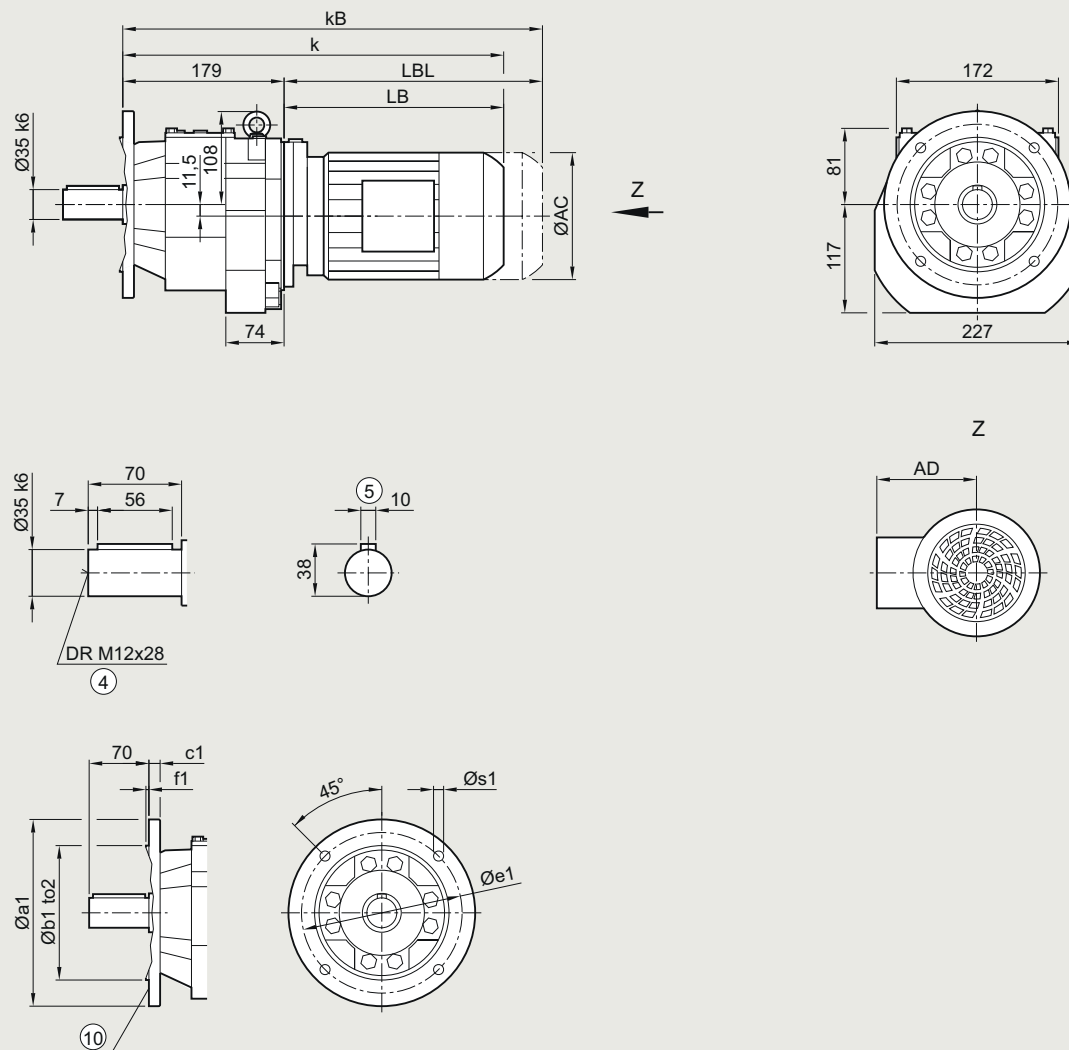
<sup>10)</sup> For inner contour, see page 3/180

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF59 in a flange-mounted design

**DZF030**
**ZF/DF59**


Flange	a1	b1	to2	c1	e1	f1	s1
160	160	110	j6	10	130	3.5	9.0
200	200	130	j6	12	165	3.5	11.0
250	250	180	j6	15	215	4.0	13.5

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	363.5	389.5	395.5	414.5	454.5	459.5	494.5	521.0	561.0	577.5	612.5	587.5	622.0	640.5	690.5
kB	408.0	434.0	450.5	469.5	509.5	519.5	554.5	591.0	631.0	656.0	691.0	660.5	695.0	745.0	795.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

<sup>4)</sup> DIN 332

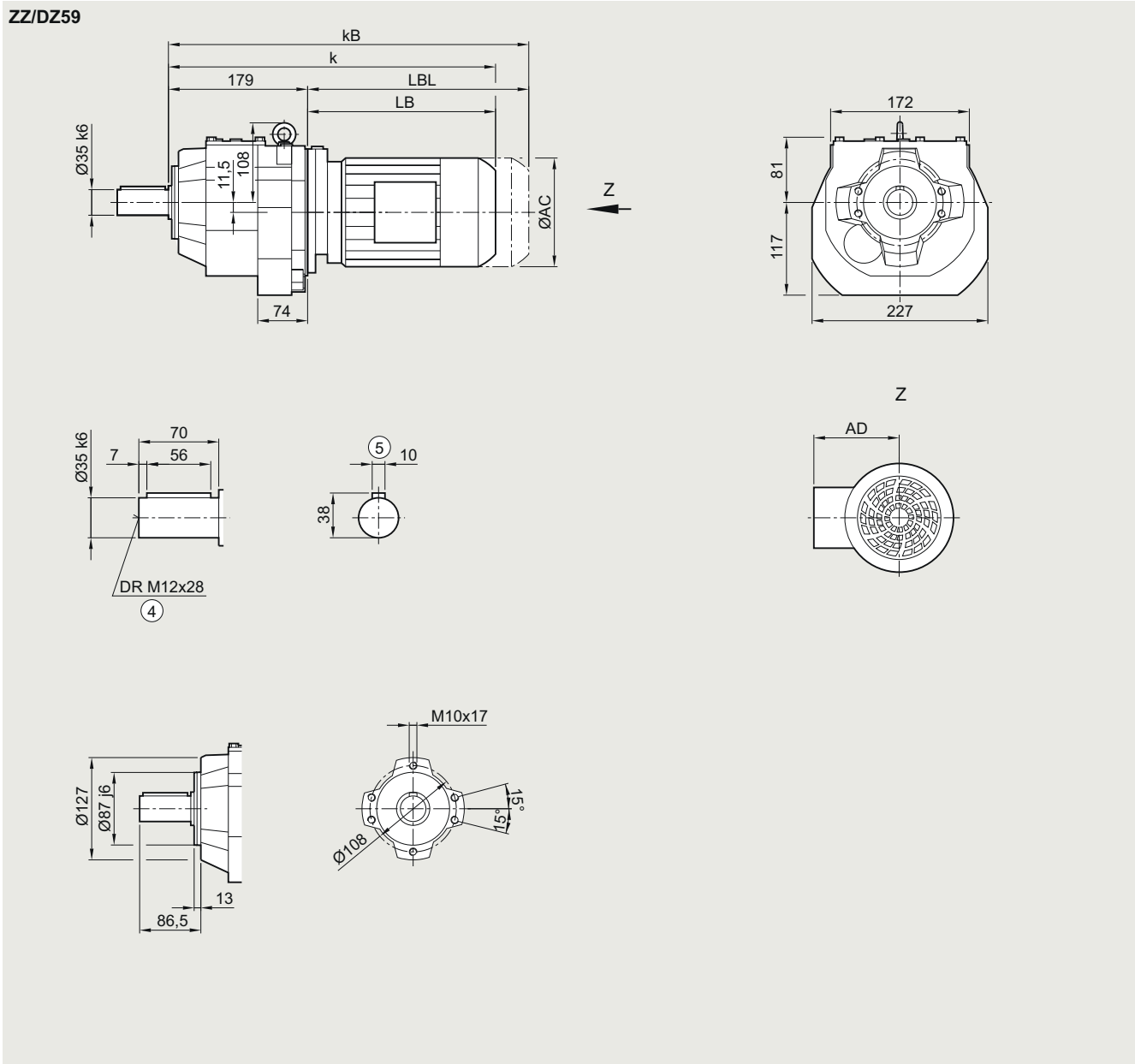
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>5)</sup> Feather key/keyway DIN 6885-1

<sup>10)</sup> For inner contour, see page 3/180

**Gearbox ZZ/DZ59 in a housing flange design**

**DZZ030**



Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	63														
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	363.5	389.5	395.5	414.5	454.5	459.5	494.5	521.0	561.0	577.5	612.5	587.5	622.0	640.5	690.5
kB	408.0	434.0	450.5	469.5	509.5	519.5	554.5	591.0	631.0	656.0	691.0	660.5	695.0	745.0	795.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

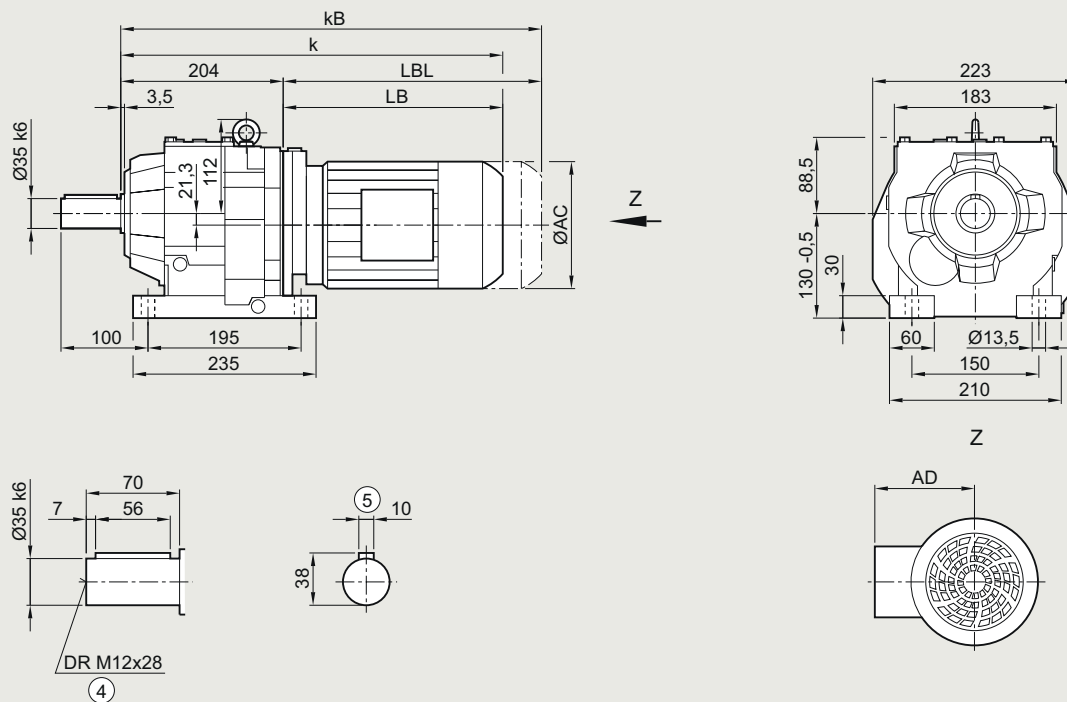
Helical geared motors

## Dimensional drawings

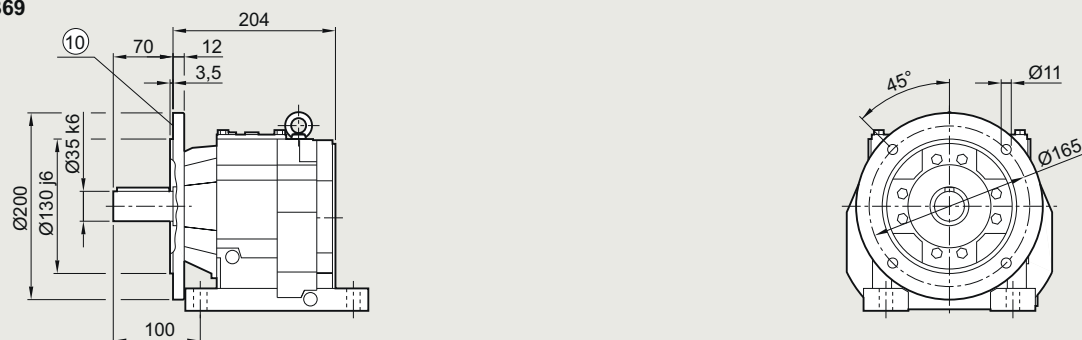
Gearbox Z/D69 in a foot-mounted design and ZB/DB69 in a foot/flange-mounted design

DZ030, DZB030

Z/D69



ZB/DB69



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	388.5	414.5	420.5	439.5	479.5	484.5	519.5	546.0	586.0	602.5	637.5	612.5	647.0	665.5	715.5
kB	433.0	459.0	475.5	494.5	534.5	544.5	579.5	616.0	656.0	681.0	716.0	685.5	720.0	770.0	820.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	340.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

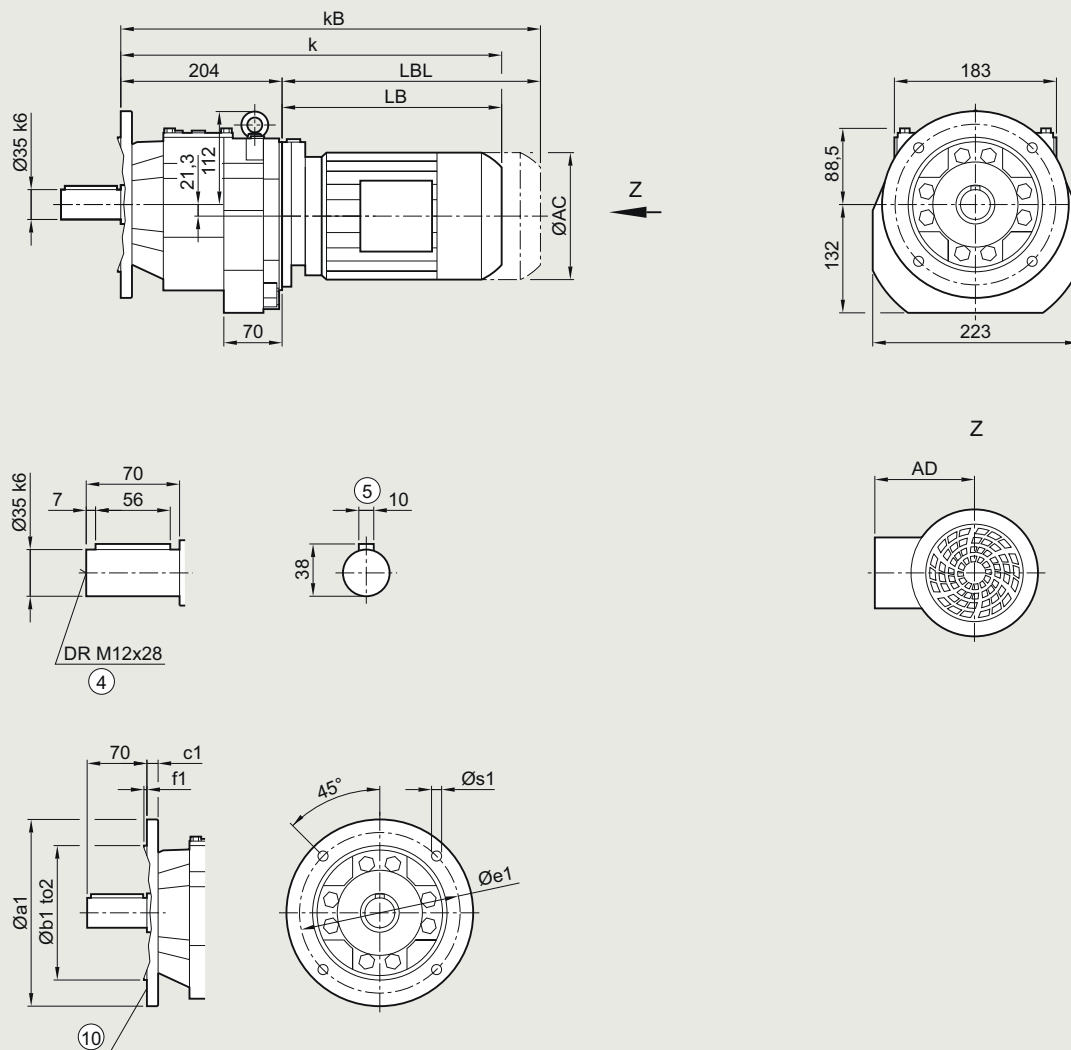
④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180



**Gearbox ZF/DF69 in a flange-mounted design**
**DZF030**
**ZF/DF69**


Flange	a1	b1	to2	c1	e1	f1	s1								
	200	130	j6	12	165	3.5	11.0								
	250	180	j6	15	215	4.0	13.5								
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	388.5	414.5	420.5	439.5	479.5	484.5	519.5	546.0	586.0	602.5	637.5	612.5	647.0	665.5	715.5
kB	433.0	459.0	475.5	494.5	534.5	544.5	579.5	616.0	656.0	681.0	716.0	685.5	720.0	770.0	820.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	340.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

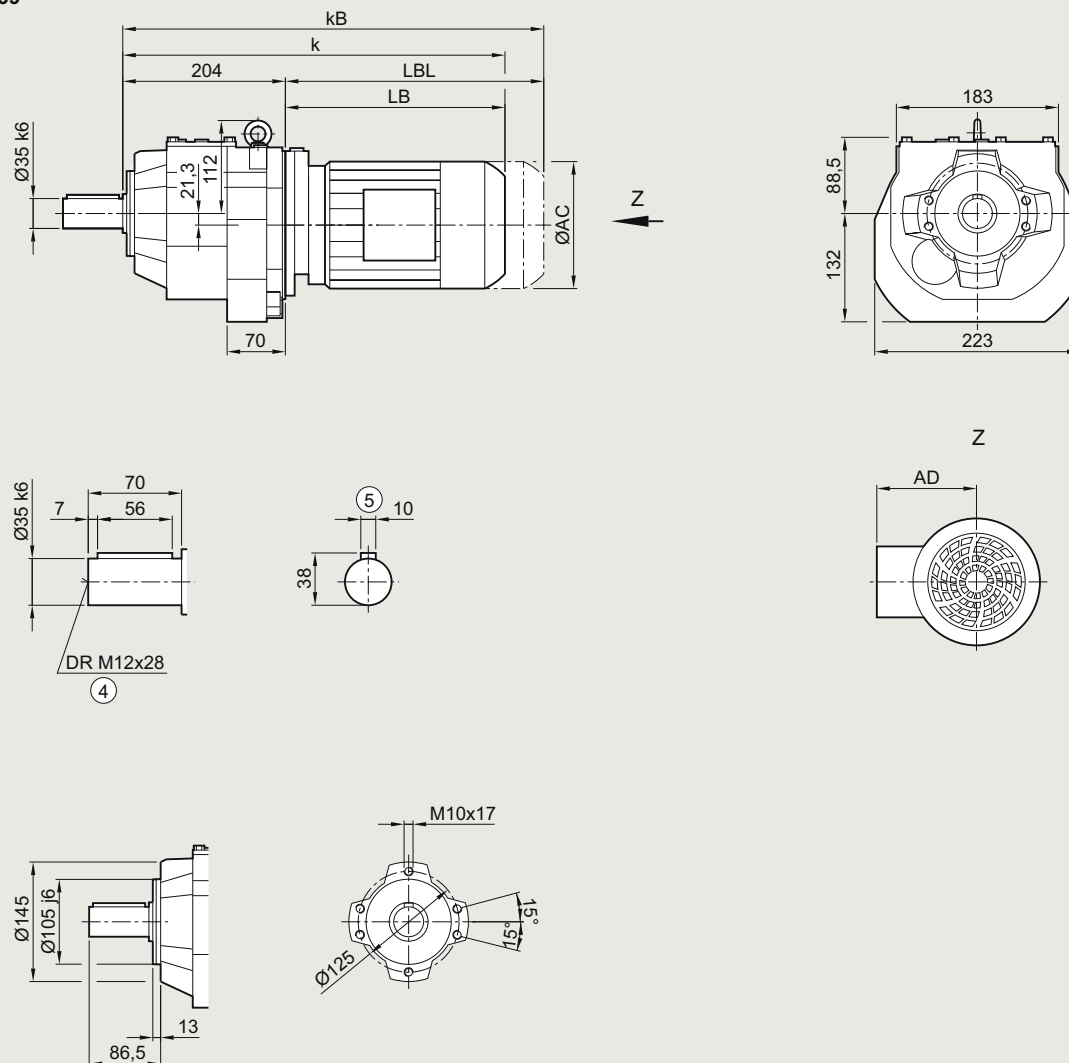
⑩ For inner contour, see page 3/180

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZZ/DZ69 in a housing flange design

**DZZ030**
**ZZ/DZ69**


Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	63														
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	388.5	414.5	420.5	439.5	479.5	484.5	519.5	546.0	586.0	602.5	637.5	612.5	647.0	665.5	715.5
kB	433.0	459.0	475.5	494.5	534.5	544.5	579.5	616.0	656.0	681.0	716.0	685.5	720.0	770.0	820.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	340.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

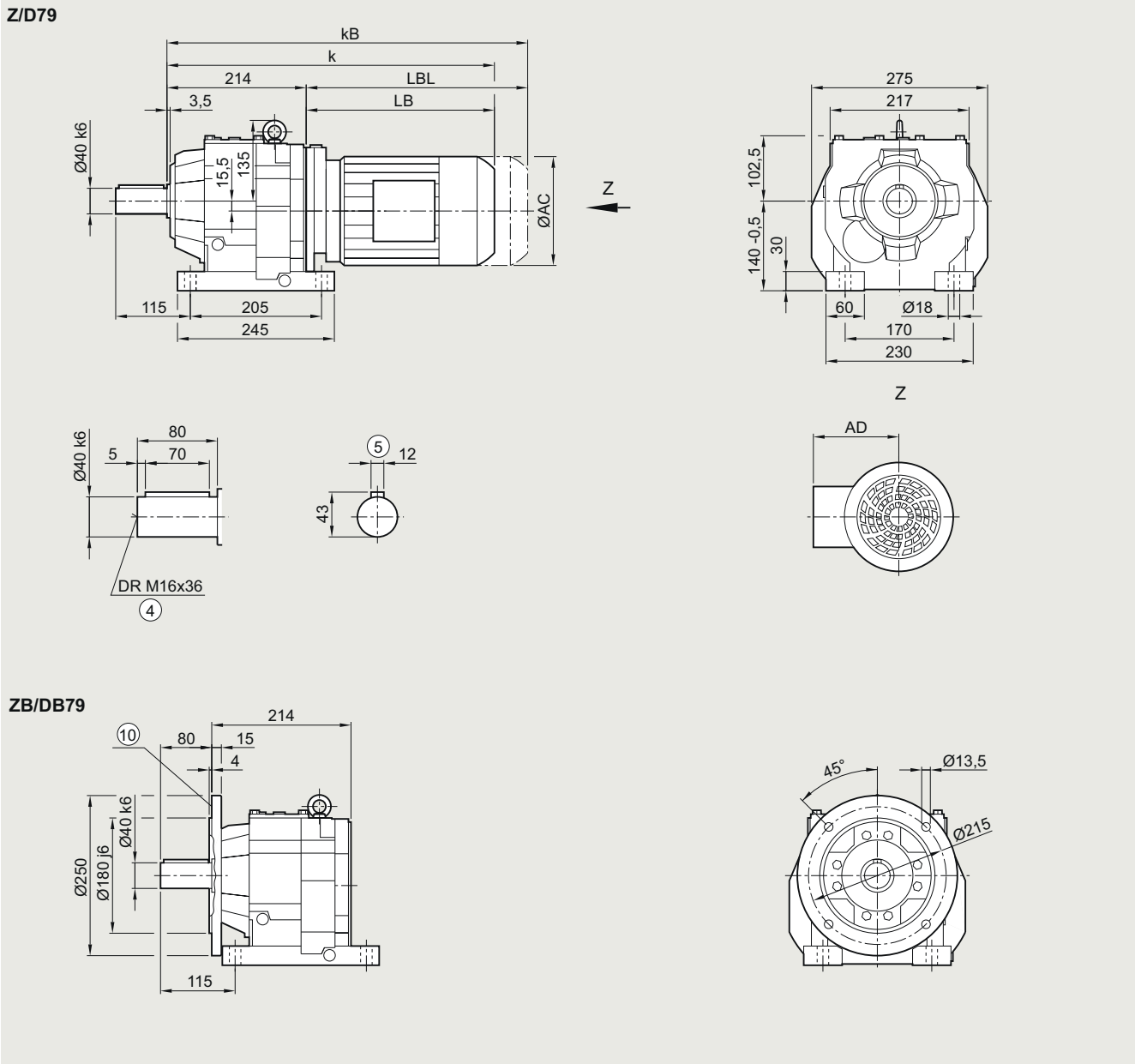
<sup>④</sup> DIN 332

<sup>⑤</sup> Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox Z/D79 in a foot-mounted design and ZB/DB79 in a foot/flange-mounted design**

**DZ030, DZB030**



Motor	LE														
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0
k	428.5	447.5	487.5	488.5	523.5	550.0	590.0	606.5	641.5	616.5	641.5	669.5	719.5	751.5	811.5
kB	483.5	502.5	542.5	548.5	583.5	620.0	660.0	685.0	720.0	689.5	714.5	774.0	824.0	867.5	927.5
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

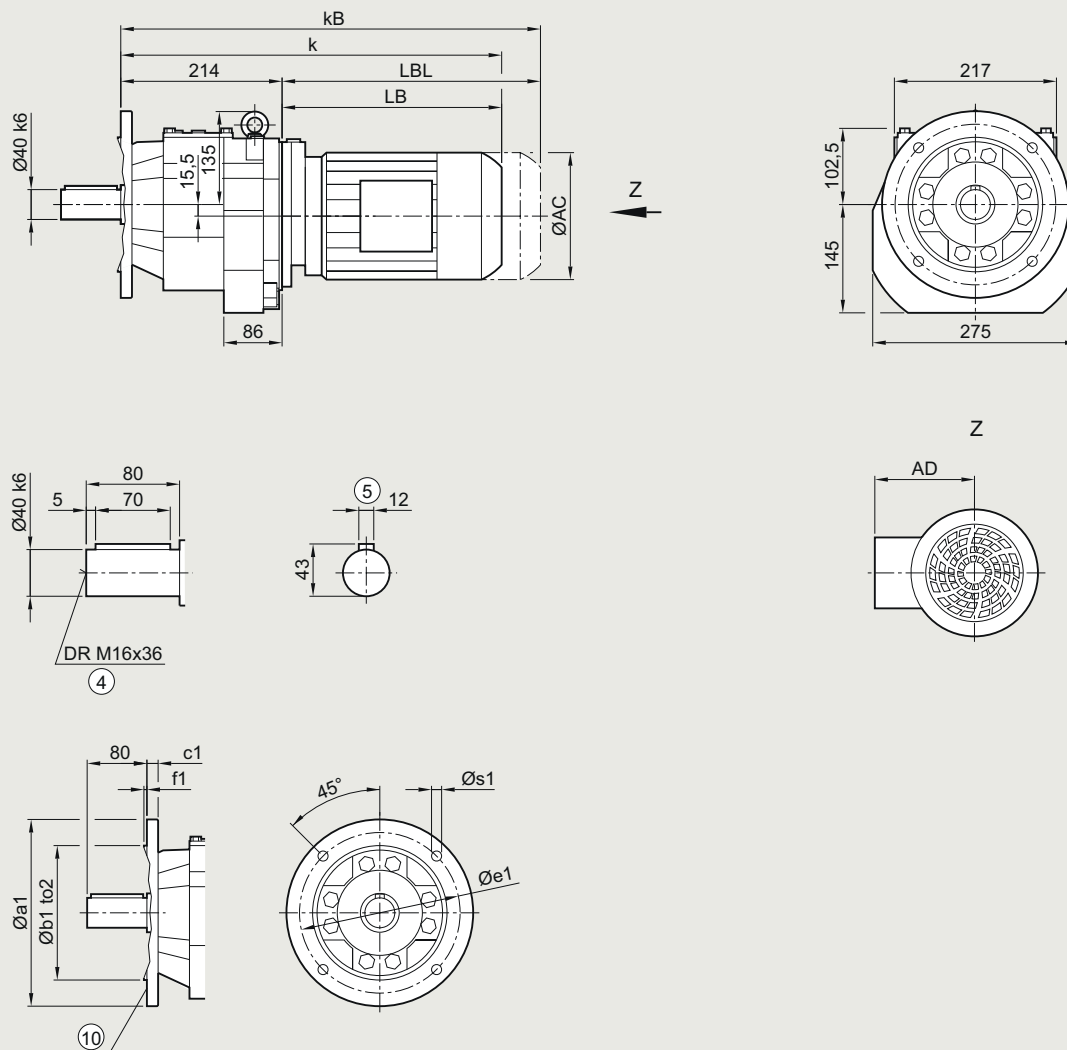
⑩ For inner contour, see page 3/180

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF79 in a flange-mounted design

**DZF030**
**ZF/DF79**


Flange	a1	b1	to2	c1	e1	f1	s1
	250	180	j6	15	215	4.0	13.5
	300	230	j6	16	265	4.0	13.5
	350	250	j6	16	300	5.0	17.5

Motor	LE 71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0
k	428.5	447.5	487.5	488.5	523.5	550.0	590.0	606.5	641.5	616.5	641.5	669.5	719.5	751.5	811.5
kB	483.5	502.5	542.5	548.5	583.5	620.0	660.0	685.0	720.0	689.5	714.5	774.0	824.0	867.5	927.5
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5

④ DIN 332

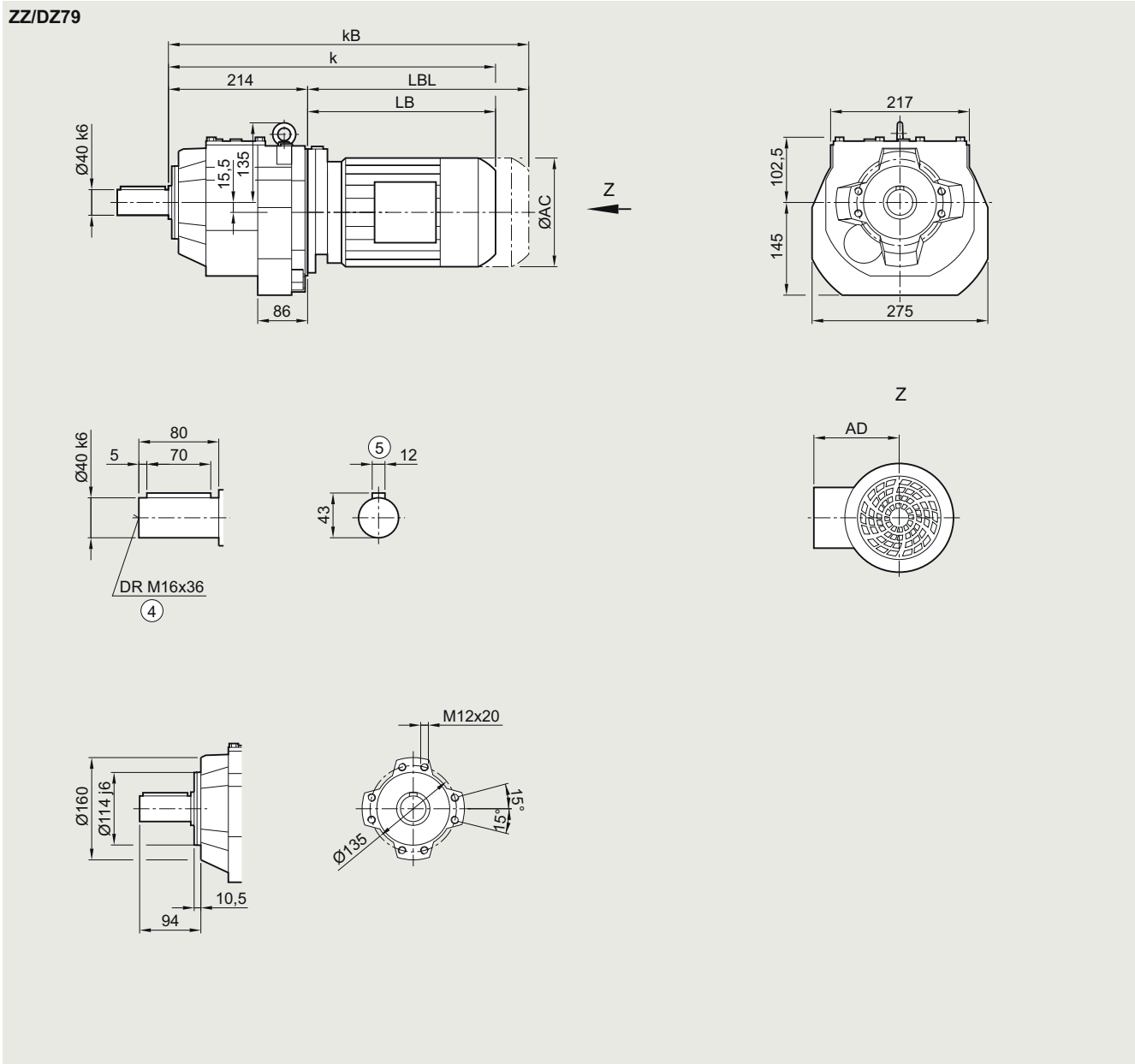
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox ZZ/DZ79 in a housing flange design**

**DZZ030**



Motor	LE															
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	
k	428.5	447.5	487.5	488.5	523.5	550.0	590.0	606.5	641.5	616.5	641.5	669.5	719.5	751.5	811.5	
kB	483.5	502.5	542.5	548.5	583.5	620.0	660.0	685.0	720.0	689.5	714.5	774.0	824.0	867.5	927.5	
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5	
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5	

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

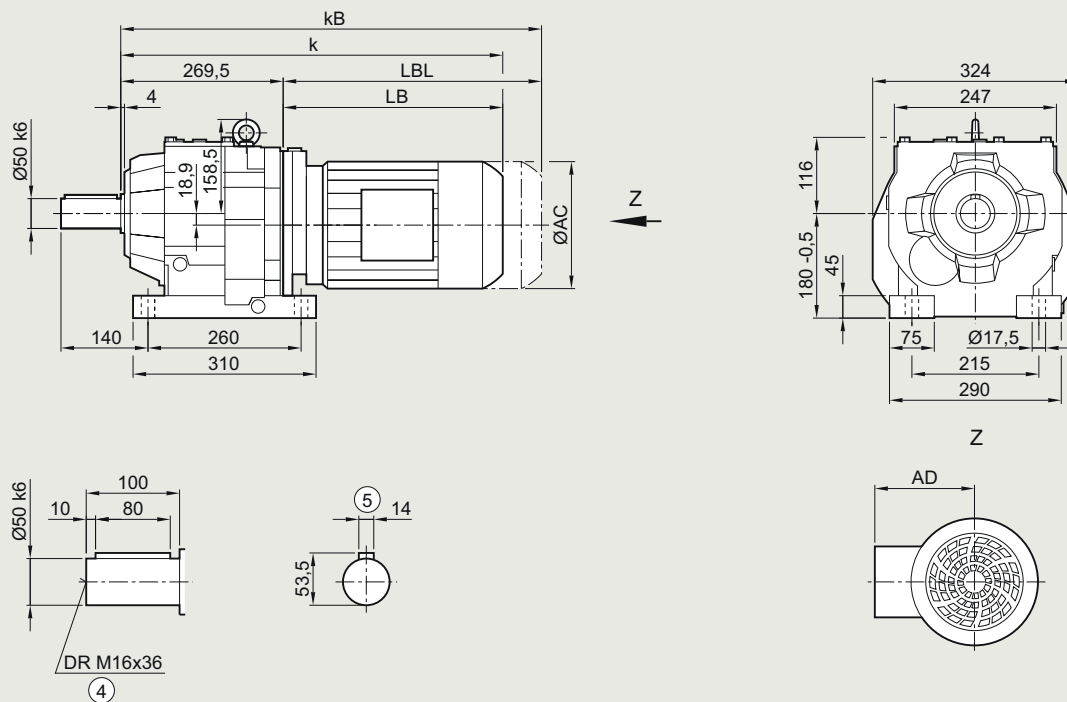
## Helical geared motors

### Dimensional drawings

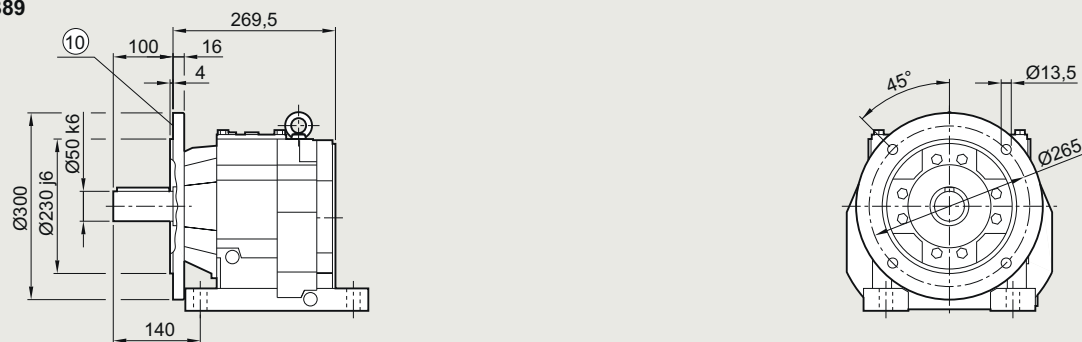
Gearbox Z/D89 in a foot-mounted design and ZB/DB89 in a foot/flange-mounted design

DZ030, DZB030

Z/D89



ZB/DB89



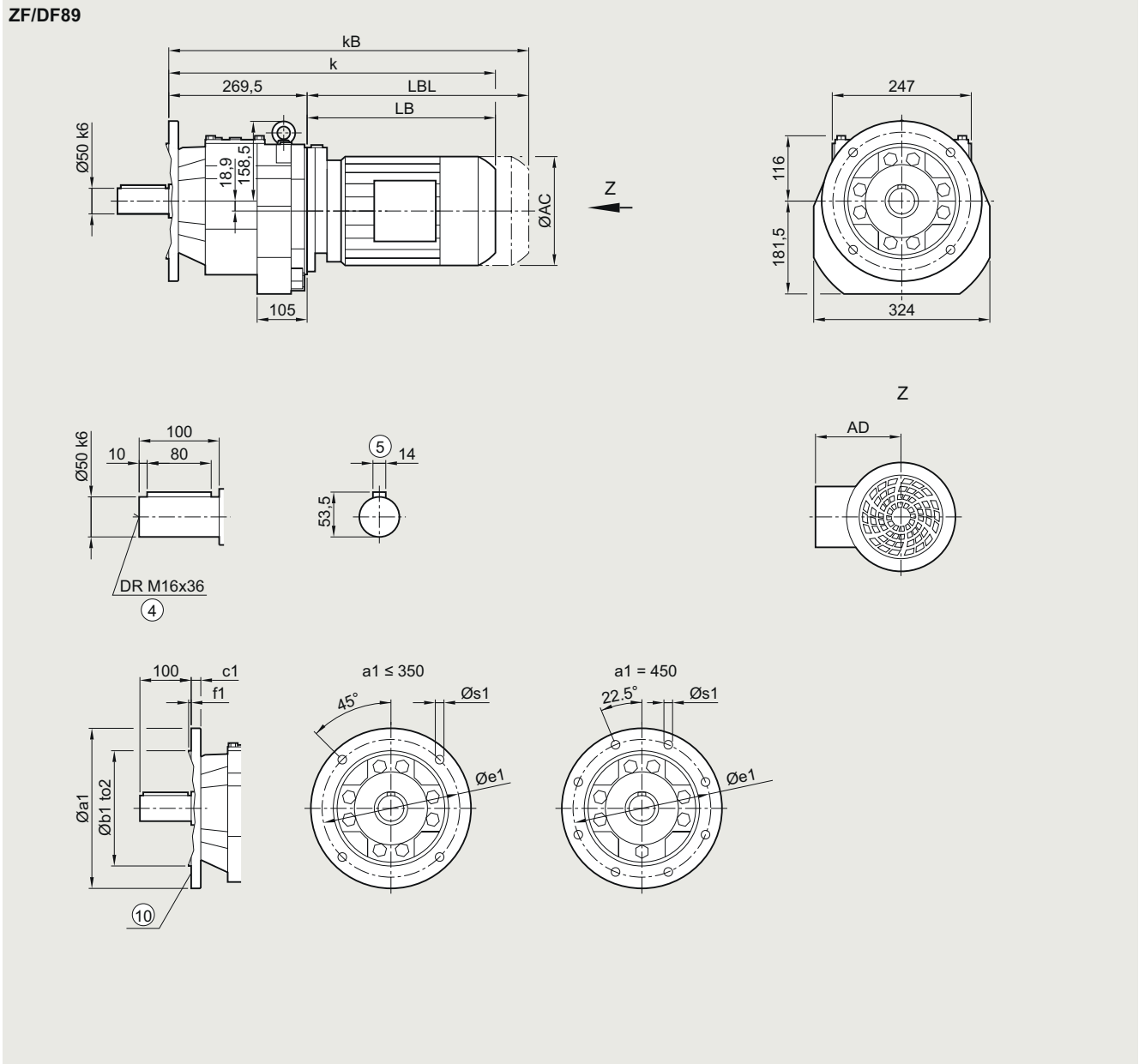
Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	531.0	566.0	592.5	632.5	645.0	680.0	655.0	680.0	708.0	758.0	790.0	850.0	863.0	893.0
kB	591.0	626.0	662.5	702.5	723.5	758.5	728.0	753.0	812.5	862.5	906.0	966.0	992.0	1022.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox ZF/DF89 in a flange-mounted design**
**DZF030**


Flange	a1	b1	to2	c1	e1	f1	s1
	300	230	j6	16	265	4.0	13.5
	350	250	j6	18	300	5.0	17.5
	450	350	h6	18	400	5.0	17.5

Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	531.0	566.0	592.5	632.5	645.0	680.0	655.0	680.0	708.0	758.0	790.0	850.0	863.0	893.0
kB	591.0	626.0	662.5	702.5	723.5	758.5	728.0	753.0	812.5	862.5	906.0	966.0	992.0	1022.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

# SIMOGEAR geared motors

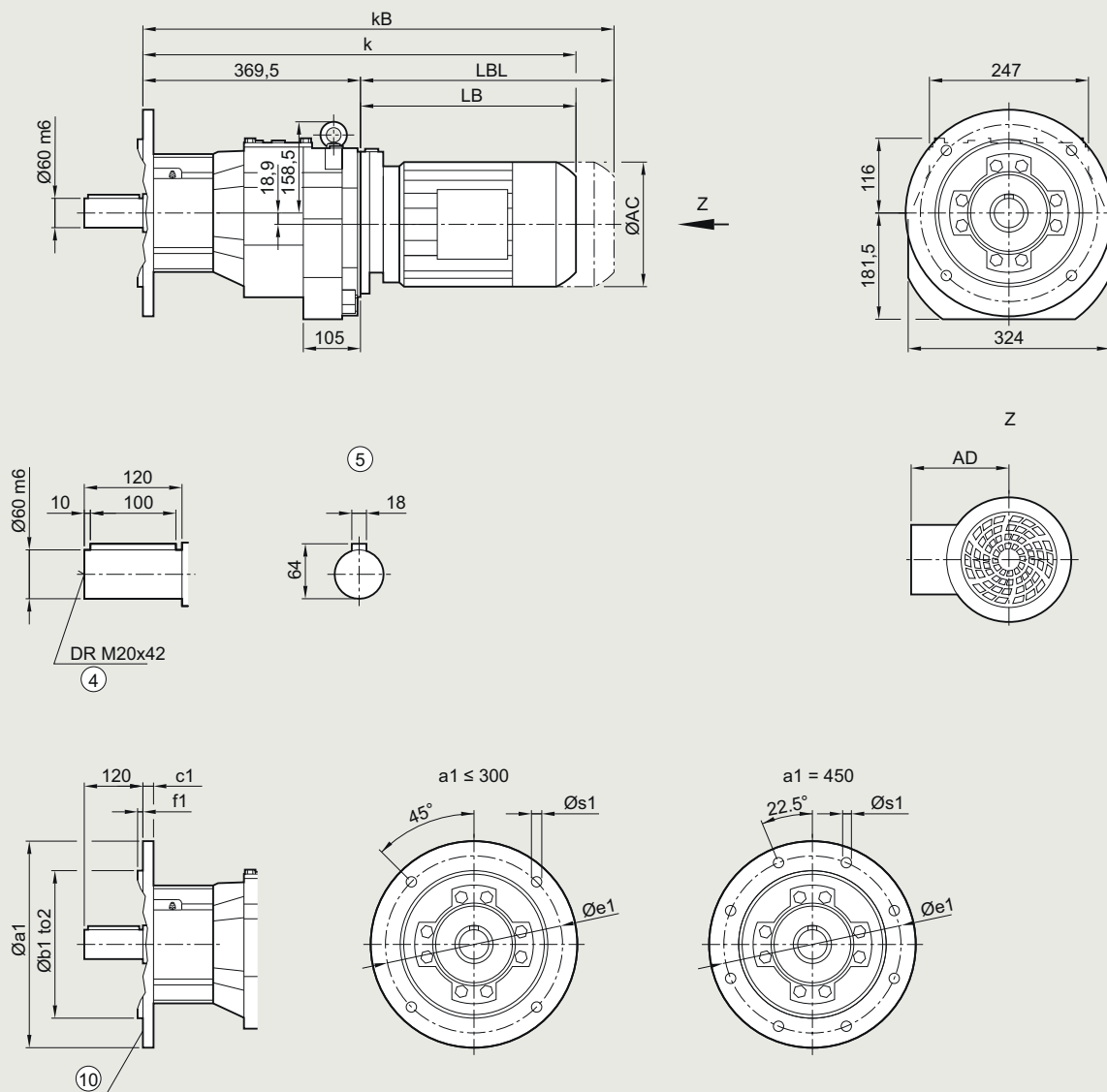
Helical geared motors

## Dimensional drawings

### Gearbox ZF/DF89 in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040

ZF/DF89



Flange	a1	b1	to2	c1	e1	f1	s1							
	300	230	j6	16	265	4.0	13.5							
	350	250	j6	18	300	5.0	17.5							
	450	350	h6	18	400	5.0	17.5							
Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	631.0	666.0	692.5	732.5	745.0	780.0	755.0	780.0	808.0	858.0	890.0	950.0	963.0	993.0
kB	691.0	726.0	762.5	802.5	823.5	858.5	828.0	853.0	912.5	962.5	1006.0	1066.0	1092.0	1122.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

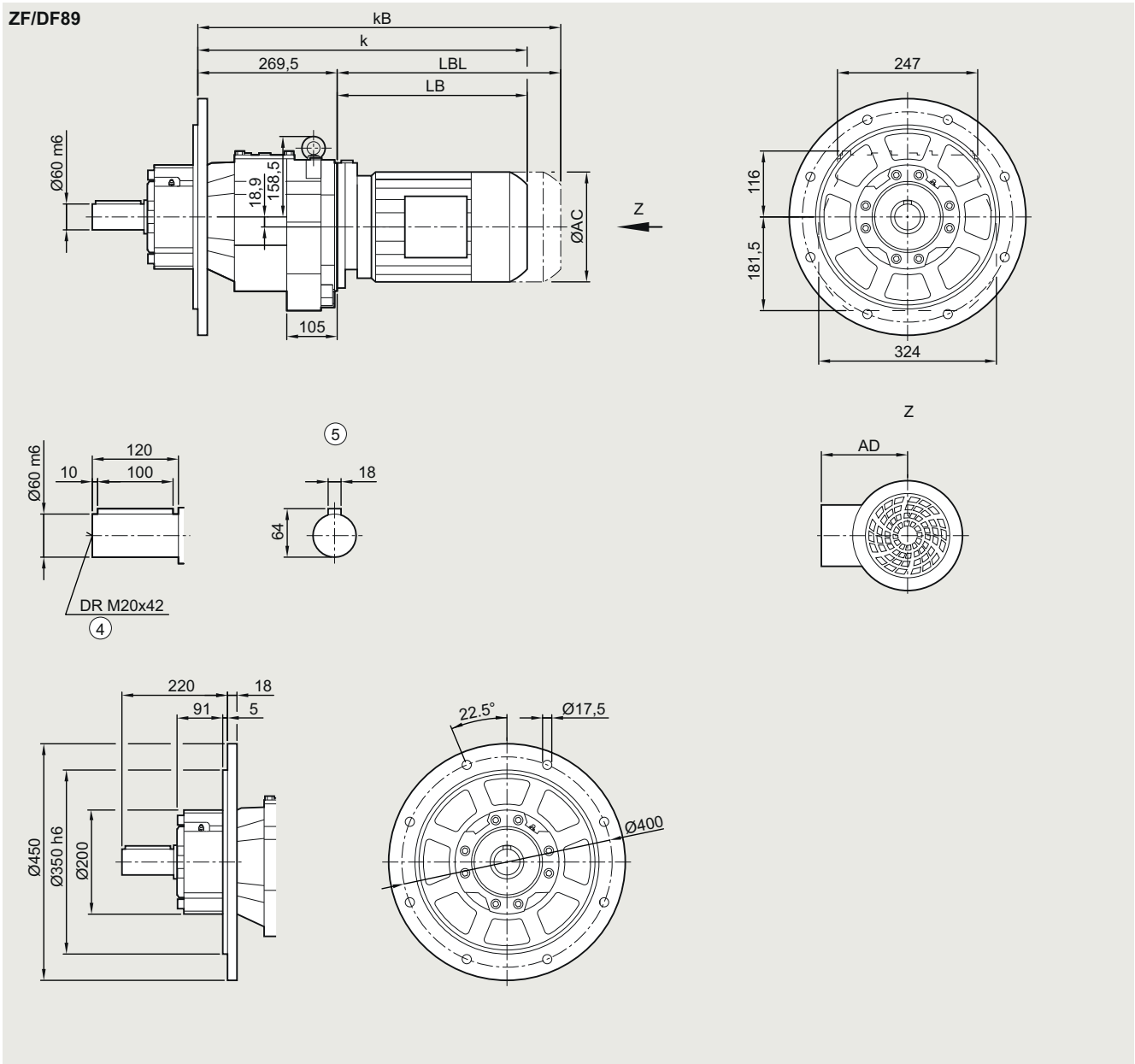
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180



**Gearbox ZF/DF89 in a flange-mounted design with XLplus reinforced bearing system (G31)**

**DZF040**



3

Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	531.0	566.0	592.5	632.5	645.0	680.0	655.0	680.0	708.0	758.0	790.0	850.0	863.0	893.0
kB	591.0	626.0	662.5	702.5	723.5	758.5	728.0	753.0	812.5	862.5	906.0	966.0	992.0	1022.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

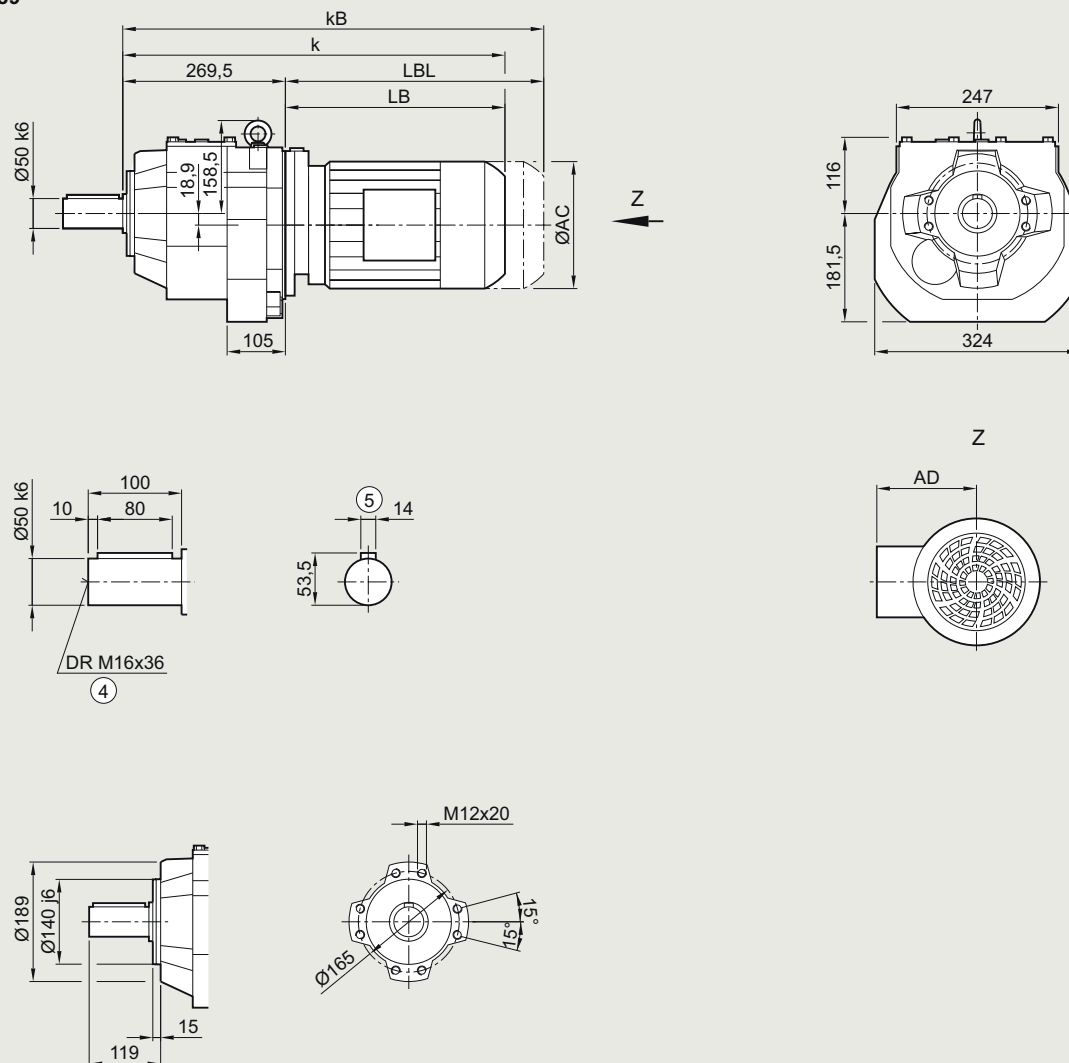
Helical geared motors

## Dimensional drawings

### Gearbox ZZ/DZ89 in a housing flange design

DZZ030

ZZ/DZ89



Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	531.0	566.0	592.5	632.5	645.0	680.0	655.0	680.0	708.0	758.0	790.0	850.0	863.0	893.0
kB	591.0	626.0	662.5	702.5	723.5	758.5	728.0	753.0	812.5	862.5	906.0	966.0	992.0	1022.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

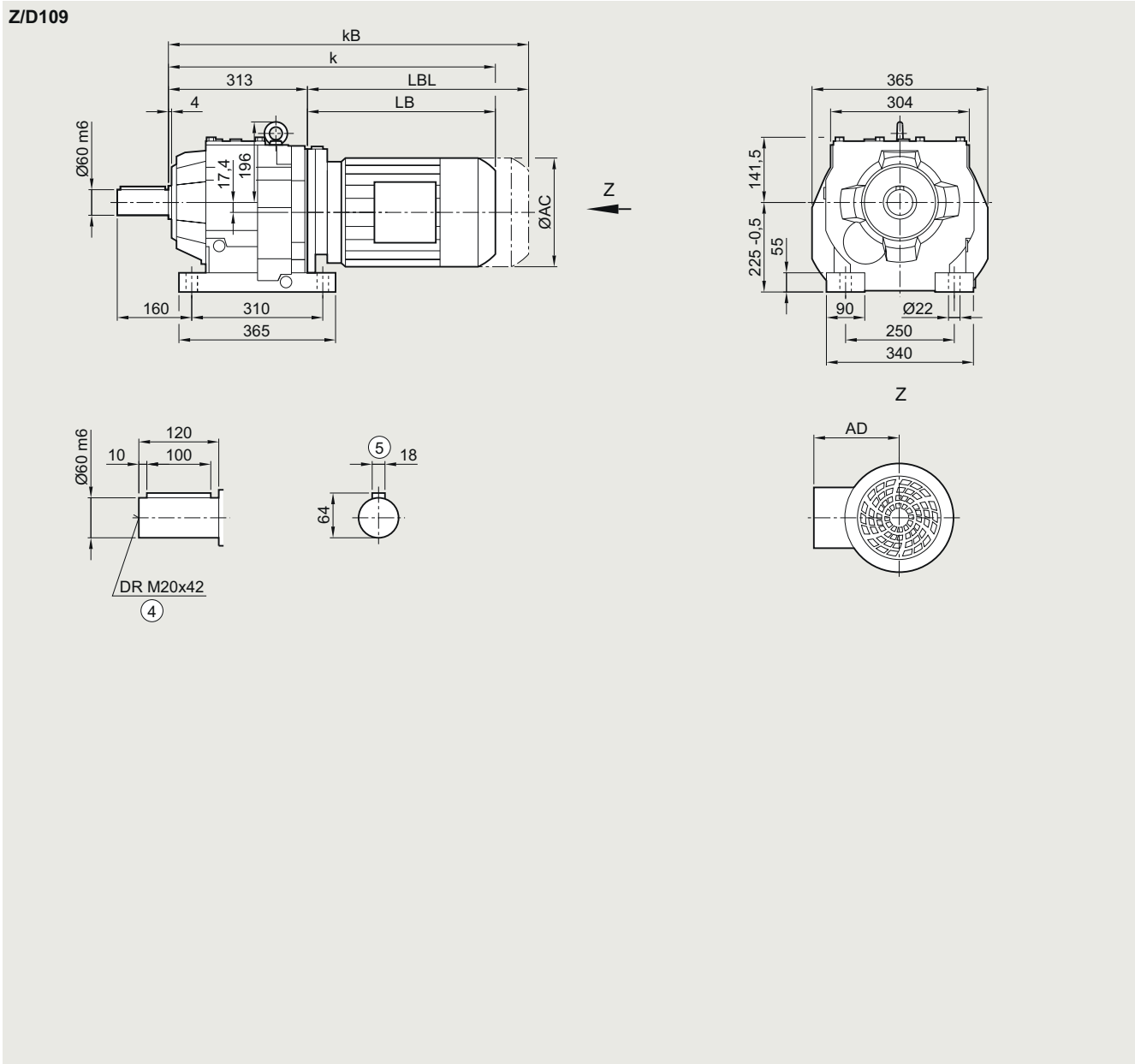
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox Z/D109 in a foot-mounted design**

**DZ030**



Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0
k	629.0	669.0	679.5	714.5	689.5	714.5	742.5	792.5	824.5	884.5	897.5	927.5	965.5	990.5	1011.0	1071.0
kB	699.0	739.0	758.0	793.0	762.5	787.5	847.0	897.0	940.5	1000.5	1026.5	1056.5	1112.5	1137.5	1239.0	1299.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

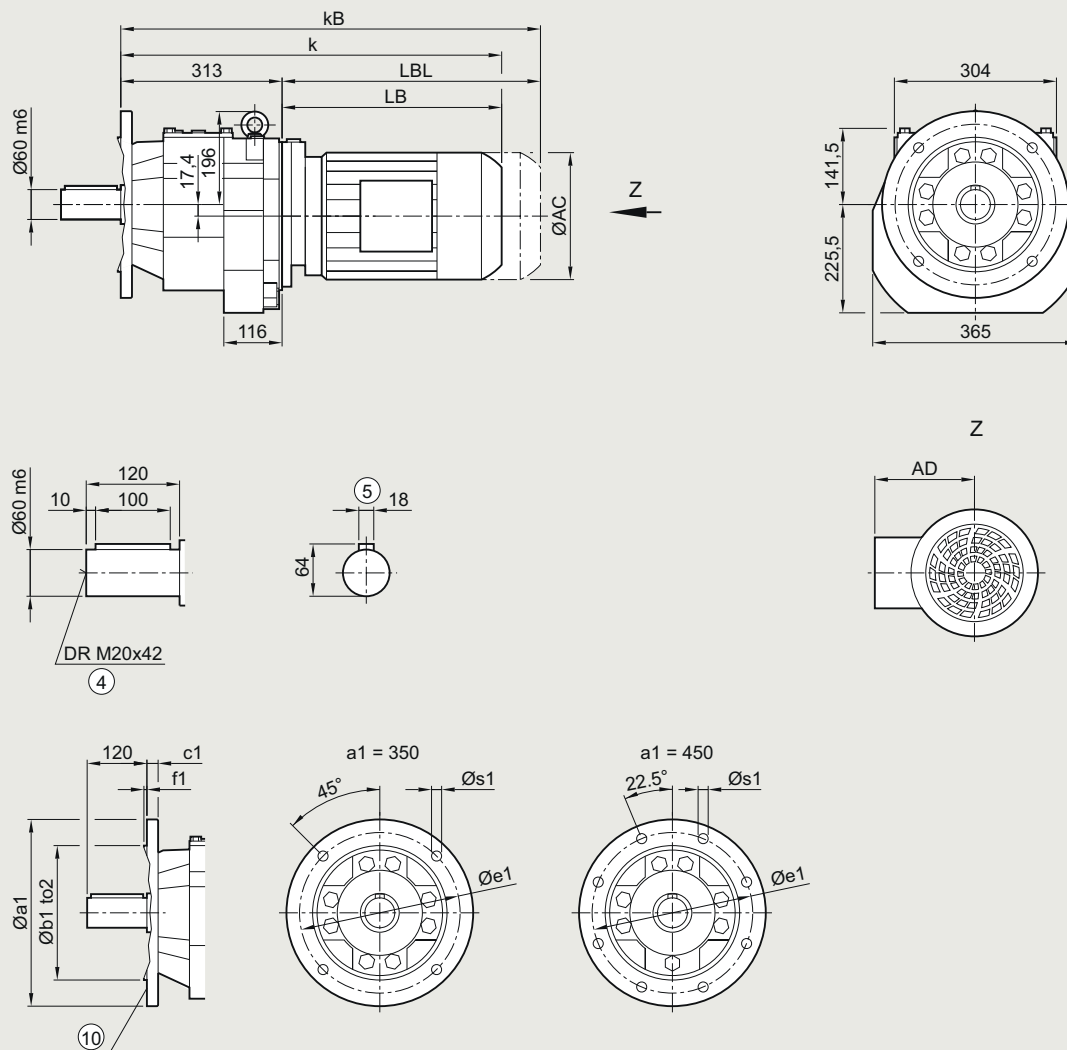
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF109 in a flange-mounted design

**DZF030**
**ZF/DF109**


Flange	a1	b1	to2	c1	e1	f1	s1									
	350	250	h6	18	300	5	17.5									
	450	350	h6	22	400	5	17.5									
Motor	LE										LES					
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0
k	629.0	669.0	679.5	714.5	689.5	714.5	742.5	792.5	824.5	884.5	897.5	927.5	965.5	990.5	1011.0	1071.0
kB	699.0	739.0	758.0	793.0	762.5	787.5	847.0	897.0	940.5	1000.5	1026.5	1056.5	1112.5	1137.5	1239.0	1299.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

<sup>④</sup> DIN 332

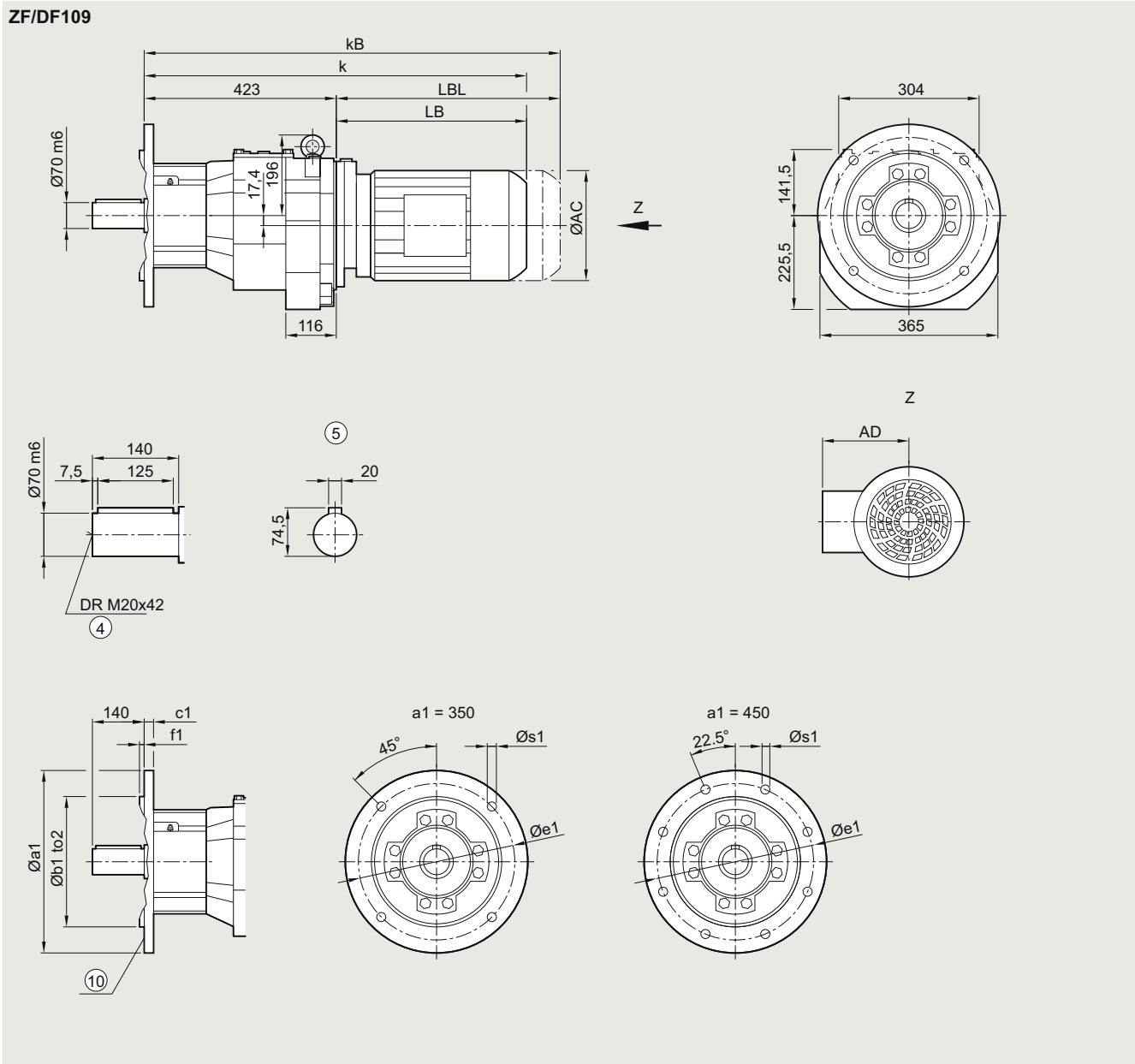
<sup>⑤</sup> Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>⑩</sup> For inner contour, see page 3/180

**Gearbox ZF/DF109 in a flange-mounted design with VLplus reinforced bearing system (G30)**

**DZF040**



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

Motor	LE										LES					
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0
k	739.0	779.0	789.5	824.5	799.5	824.5	852.5	902.5	934.5	994.5	1007.5	1037.5	1075.5	1100.5	1121.0	1181.0
kB	809.0	849.0	868.0	903.0	872.5	897.5	957.0	1007.0	1050.5	1110.5	1136.5	1166.5	1222.5	1247.5	1349.0	1409.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

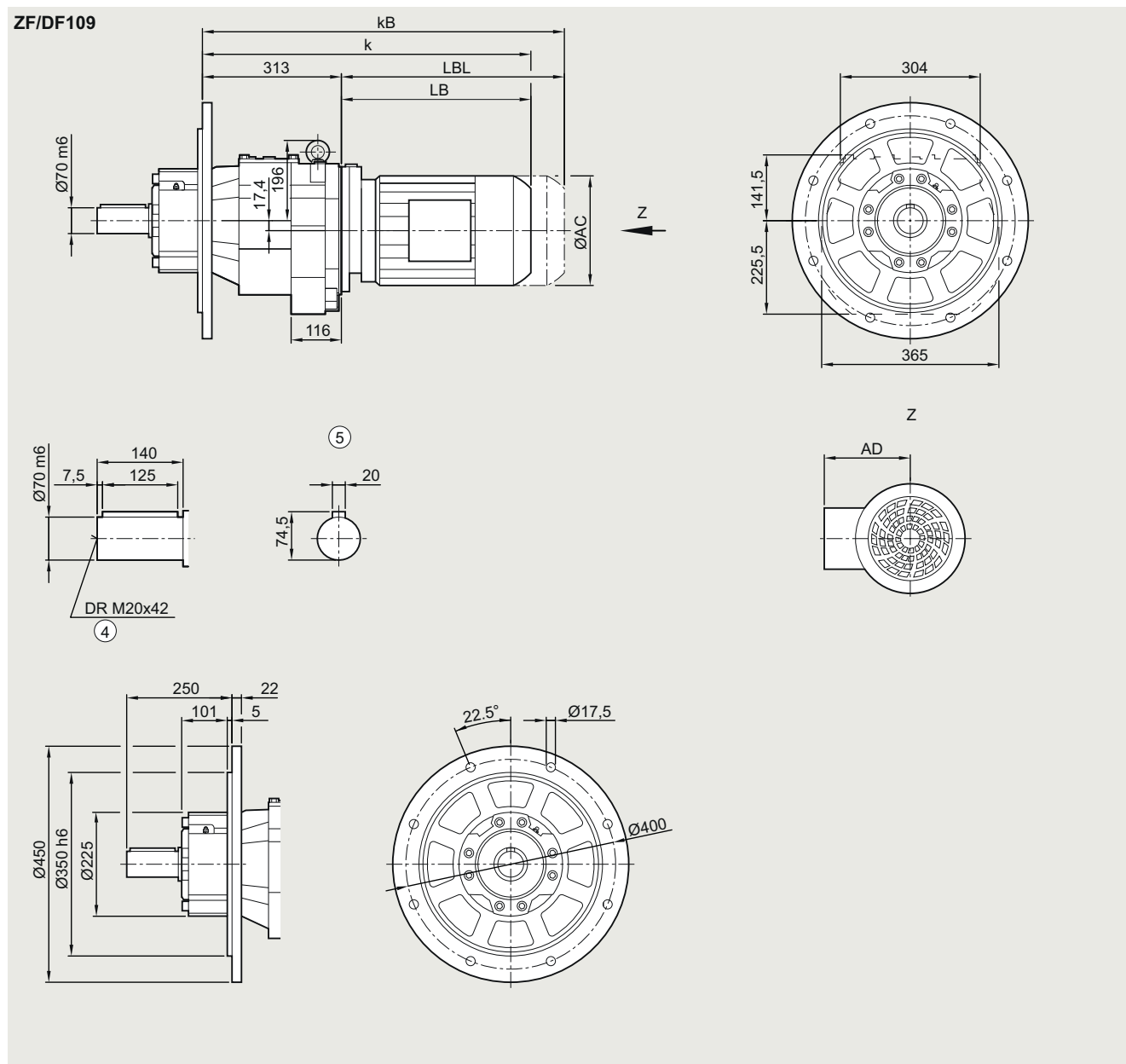
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox ZF/DF109 in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040



Motor	LE										LES					
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0
k	629.0	669.0	679.5	714.5	689.5	714.5	742.5	792.5	824.5	884.5	897.5	927.5	965.5	990.5	1011.0	1071.0
k <sub>B</sub>	699.0	739.0	758.0	793.0	762.5	787.5	847.0	897.0	940.5	1000.5	1026.5	1056.5	1112.5	1137.5	1239.0	1299.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

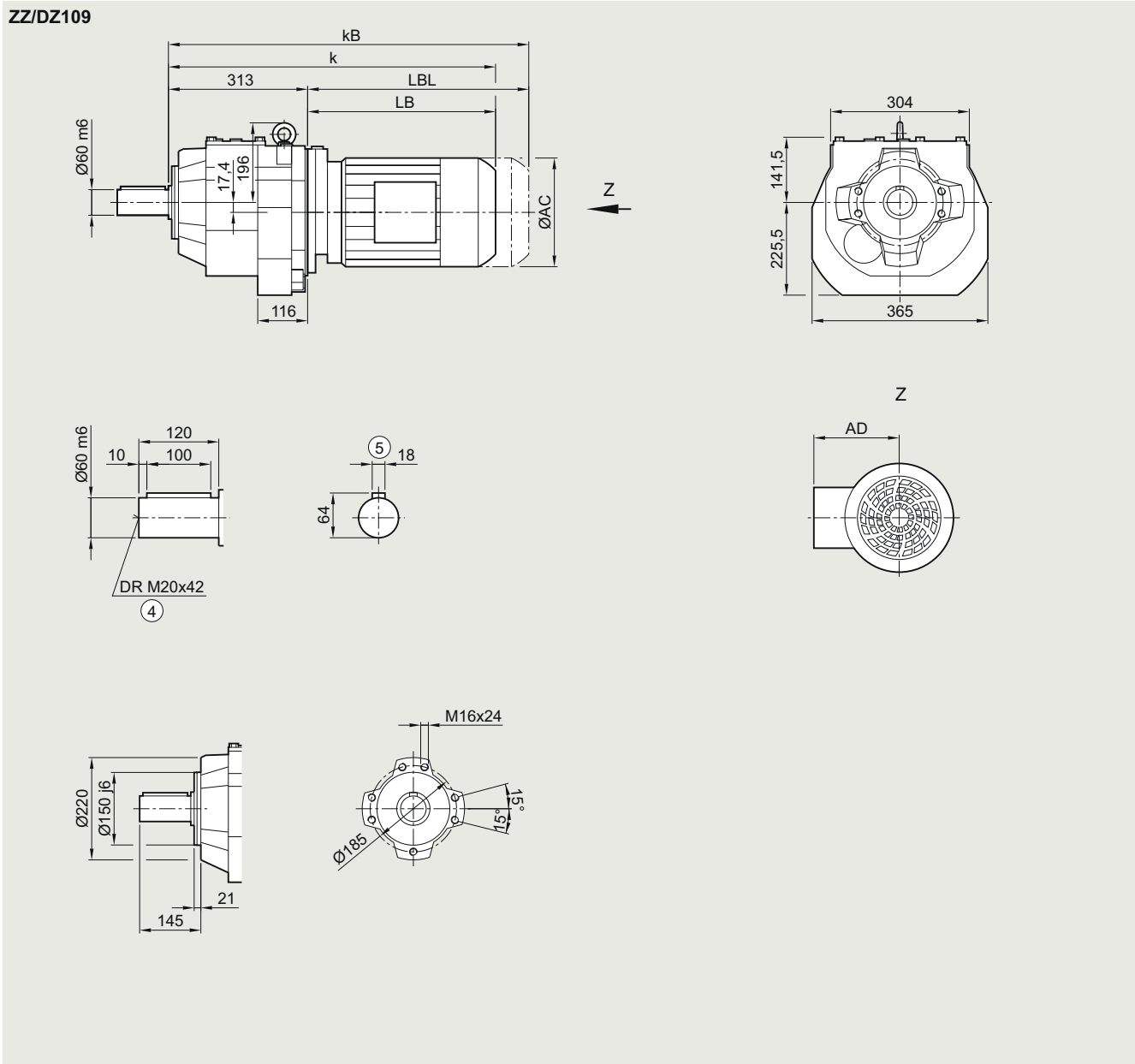
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox ZZ/DZ109 in a housing flange design**

**DZZ030**



Motor	LE										LES					
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0
k	629.0	669.0	679.5	714.5	689.5	714.5	742.5	792.5	824.5	884.5	897.5	927.5	965.5	990.5	1011.0	1071.0
kB	699.0	739.0	758.0	793.0	762.5	787.5	847.0	897.0	940.5	1000.5	1026.5	1056.5	1112.5	1137.5	1239.0	1299.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

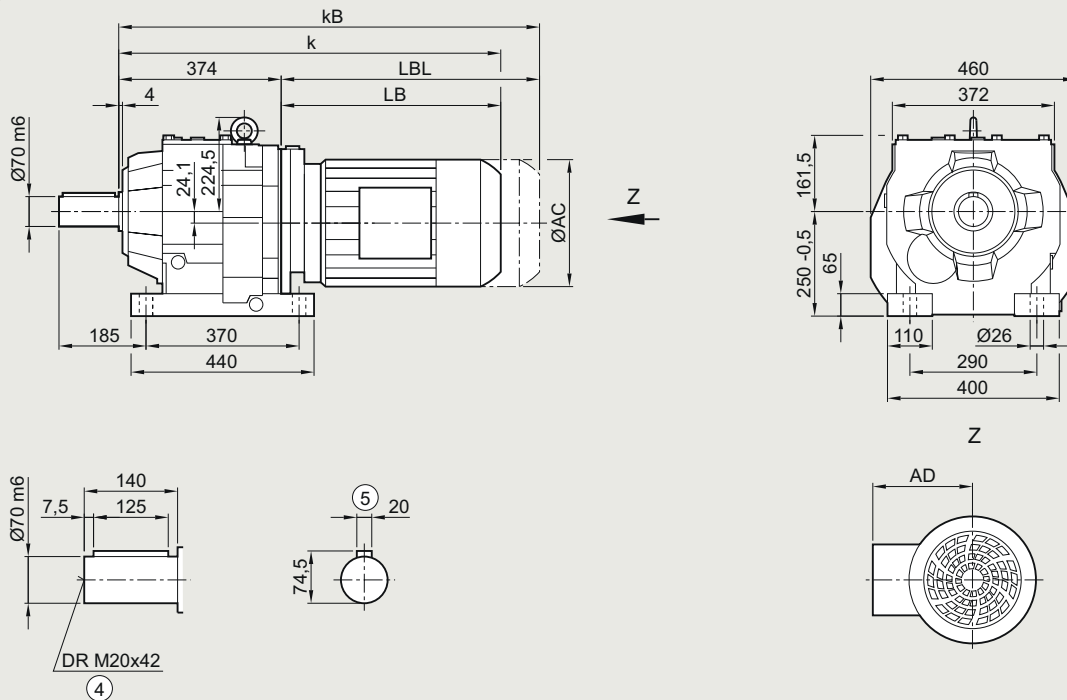
Helical geared motors

## Dimensional drawings

### Gearbox Z/D129 in a foot-mounted design

DZ030

Z/D129



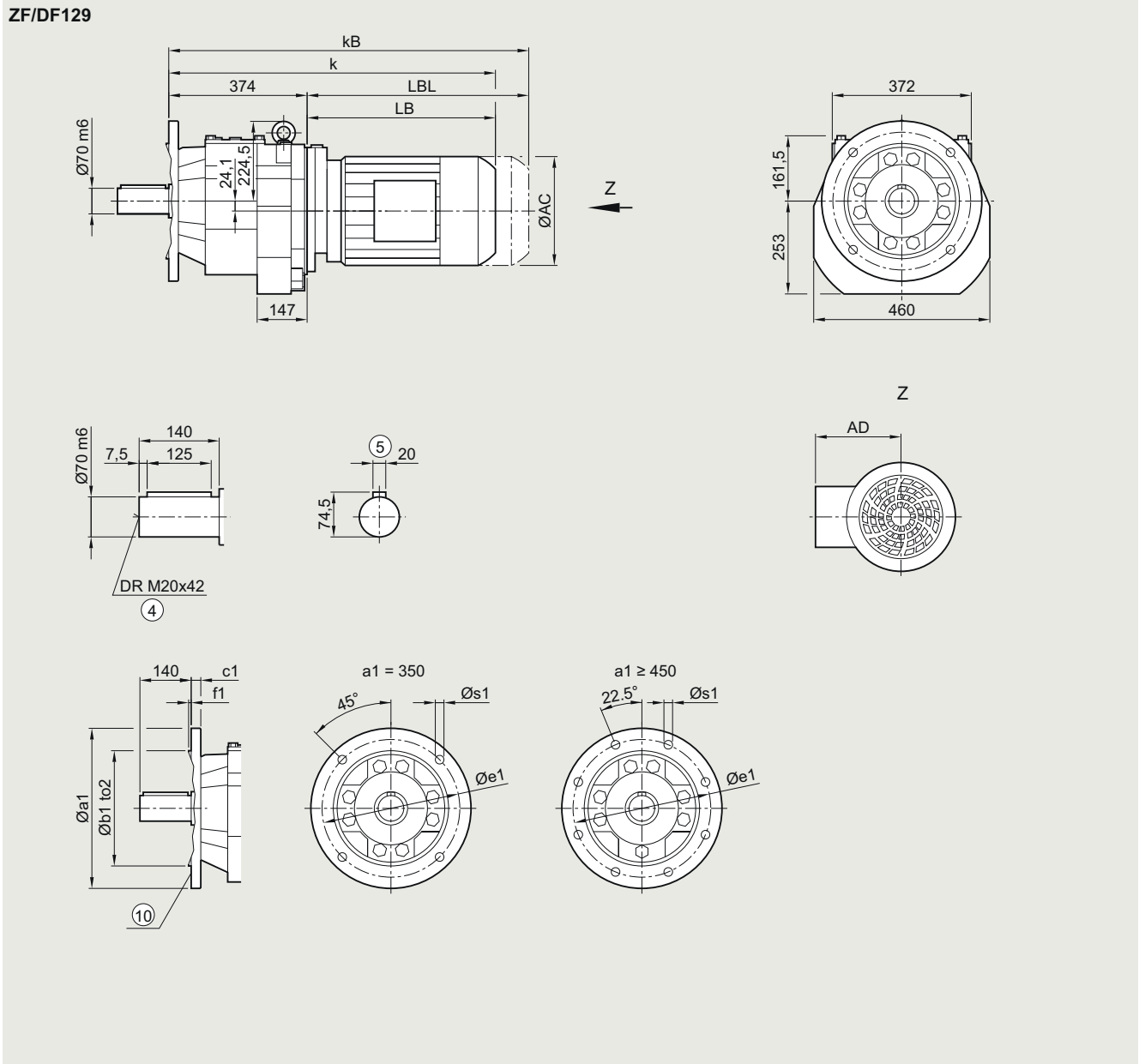
Motor	LE										LES						
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	683.0	723.0	731.5	766.5	741.5	766.5	792.5	842.5	874.5	934.5	947.5	977.5	1015.5	1040.5	1061.0	1121.0	1172.5
kB	753.0	793.0	810.0	845.0	814.5	839.5	897.0	947.0	990.5	1050.5	1076.5	1106.5	1162.5	1187.5	1289.0	1349.0	1397.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox ZF/DF129 in a flange-mounted design**
**DZF030**


Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	20	300	5	17.5
	450	350	h6	22	400	5	17.5
	550	450	h6	22	500	5	17.5

Motor	LE										LES						
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	683.0	723.0	731.5	766.5	741.5	766.5	792.5	842.5	874.5	934.5	947.5	977.5	1015.5	1040.5	1061.0	1121.0	1172.5
kB	753.0	793.0	810.0	845.0	814.5	839.5	897.0	947.0	990.5	1050.5	1076.5	1106.5	1162.5	1187.5	1289.0	1349.0	1397.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

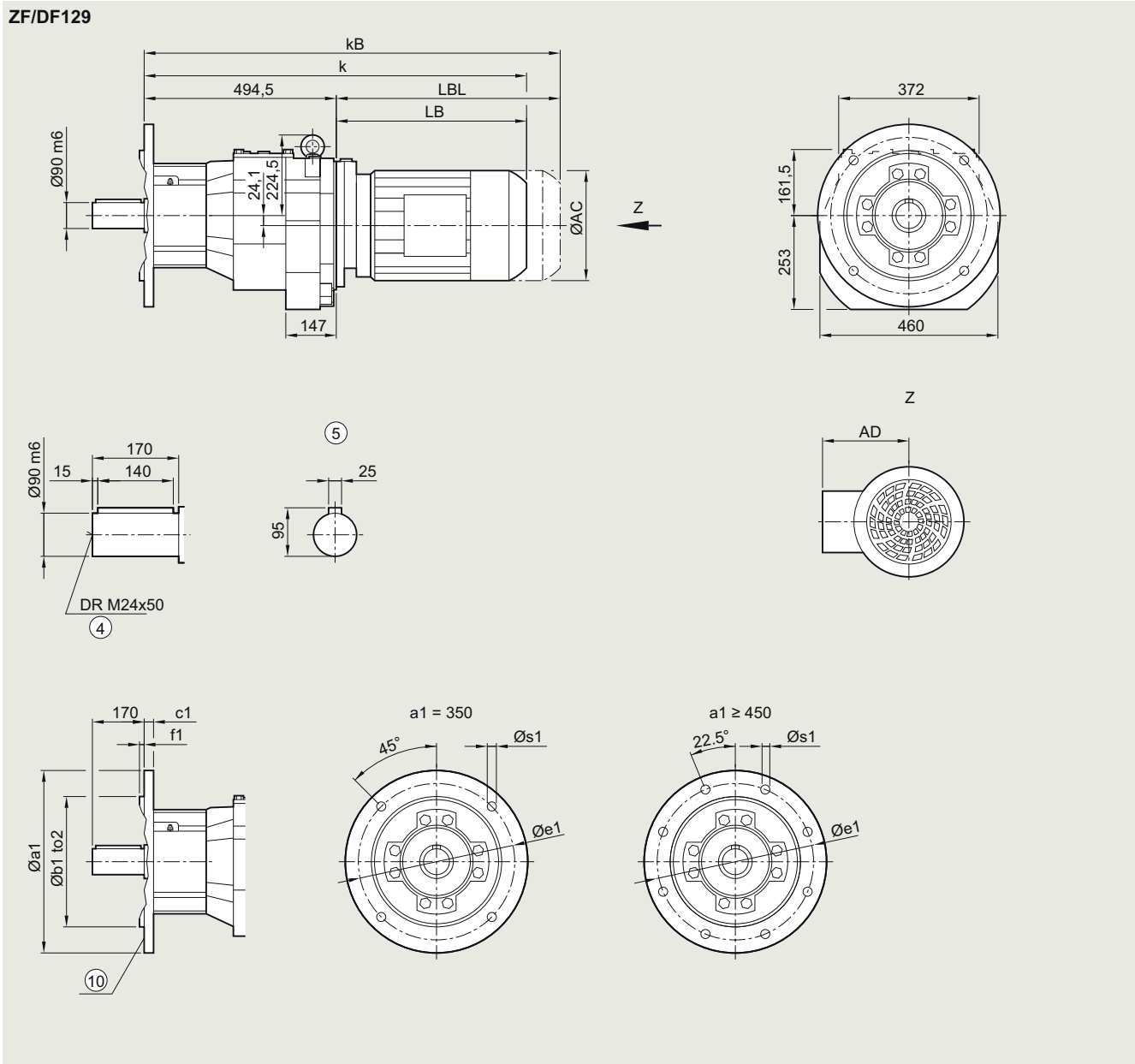
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox ZF/DF129 in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	20	300	5	17.5
	450	350	h6	22	400	5	17.5
	550	450	h6	22	500	5	17.5

Motor	LE										LES						
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	803.0	843.0	851.5	886.5	861.5	886.5	912.5	962.5	994.5	1054.5	1067.5	1097.5	1135.5	1160.5	1181.0	1241.0	1292.5
kB	873.0	913.0	930.0	965.0	934.5	959.5	1017.0	1067.0	1110.5	1170.5	1196.5	1226.5	1282.5	1307.5	1409.0	1469.0	1517.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

④ DIN 332

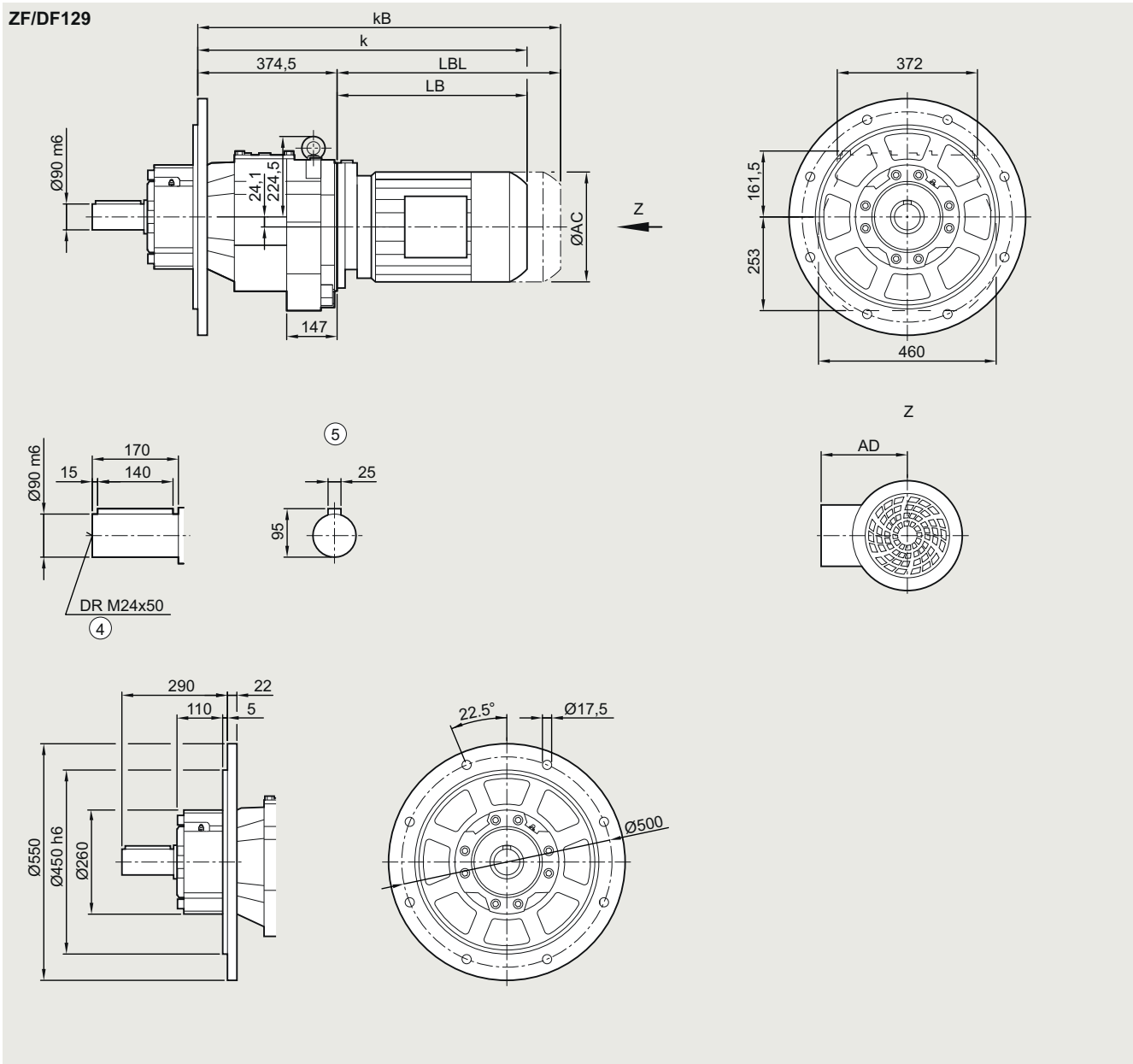
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

**Gearbox ZF/DF129 in a flange-mounted design with XLplus reinforced bearing system (G31)**

**DZF040**



Motor	LE										LES						
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	683.0	723.0	731.5	766.5	741.5	766.5	792.5	842.5	874.5	934.5	947.5	977.5	1015.5	1040.5	1061.0	1121.0	1172.5
kB	753.0	793.0	810.0	845.0	814.5	839.5	897.0	947.0	990.5	1050.5	1076.5	1106.5	1162.5	1187.5	1289.0	1349.0	1397.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

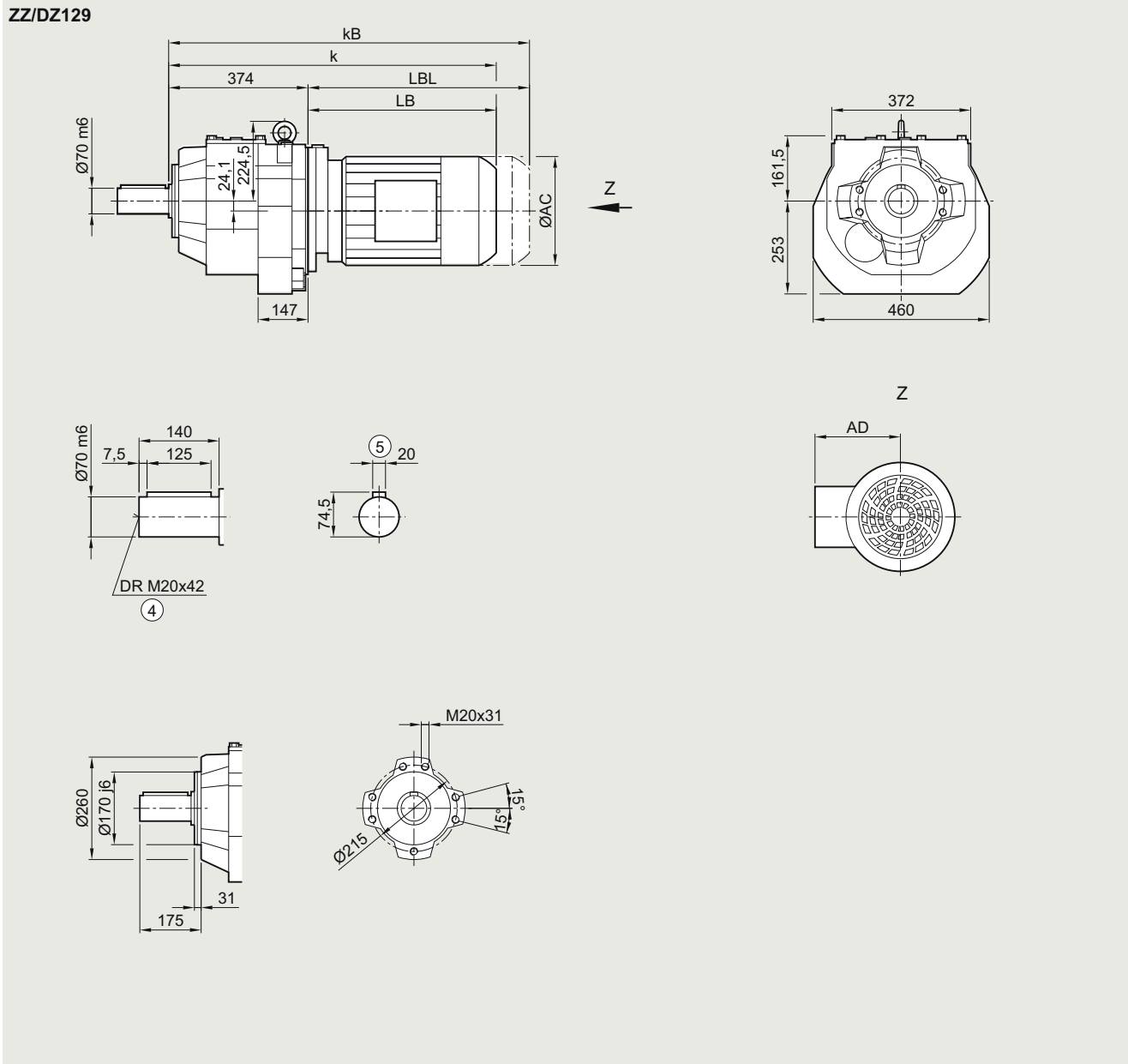
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox ZZ/DZ129 in a housing flange design

DZZ030



Motor	LE										LES						
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	683.0	723.0	731.5	766.5	741.5	766.5	792.5	842.5	874.5	934.5	947.5	977.5	1015.5	1040.5	1061.0	1121.0	1172.5
kB	753.0	793.0	810.0	845.0	814.5	839.5	897.0	947.0	990.5	1050.5	1076.5	1106.5	1162.5	1187.5	1289.0	1349.0	1397.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

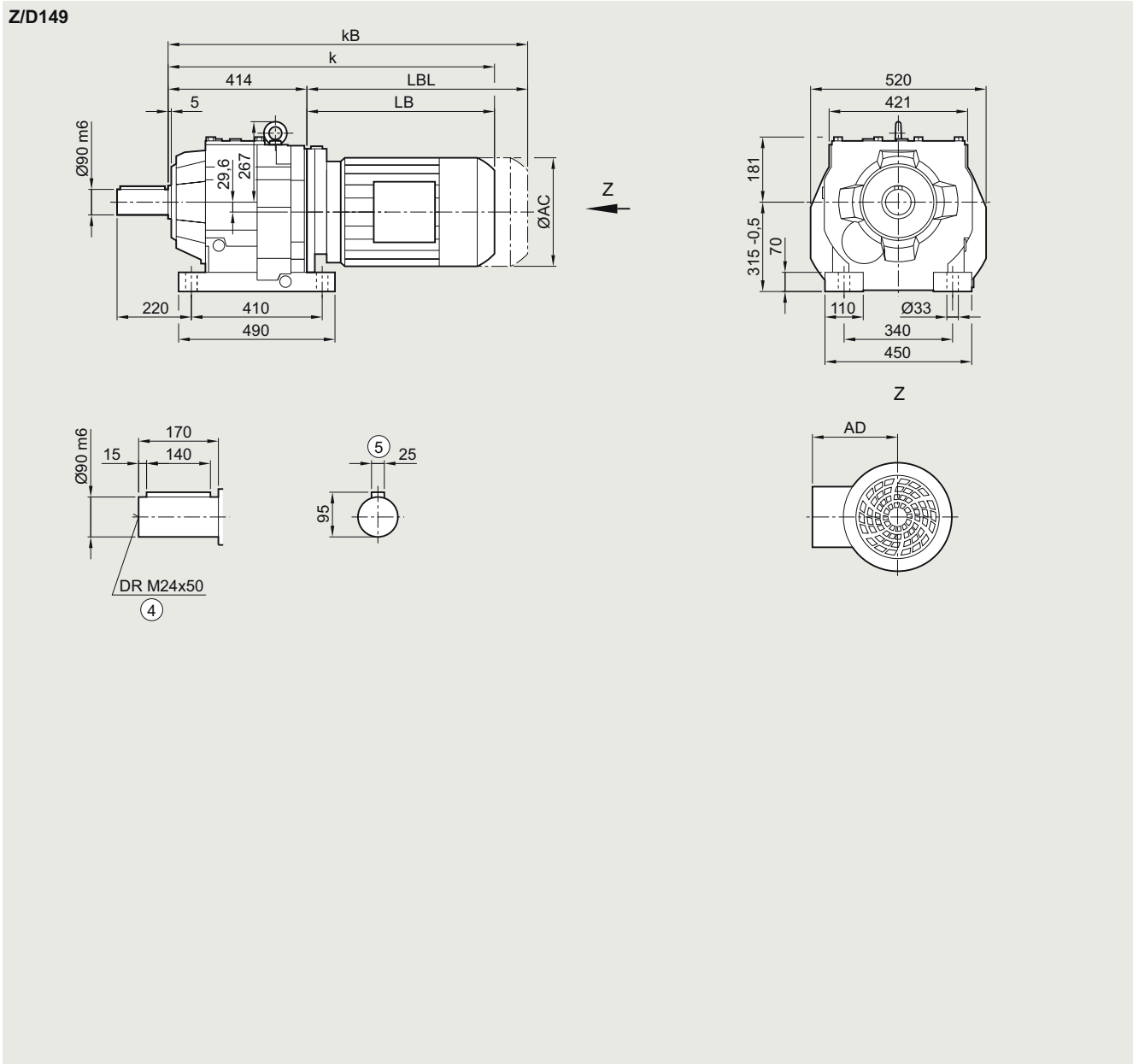
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox Z/D149 in a foot-mounted design**

**DZ030**



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	770.0	805.0	780.0	805.0	826.0	876.0	908.0	968.0	981.0	1011.0	1049.0	1074.0	1094.5	1154.5	1206.0
kB	848.5	883.5	853.0	878.0	930.5	980.5	1024.0	1084.0	1110.0	1140.0	1196.0	1221.0	1322.5	1382.5	1431.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

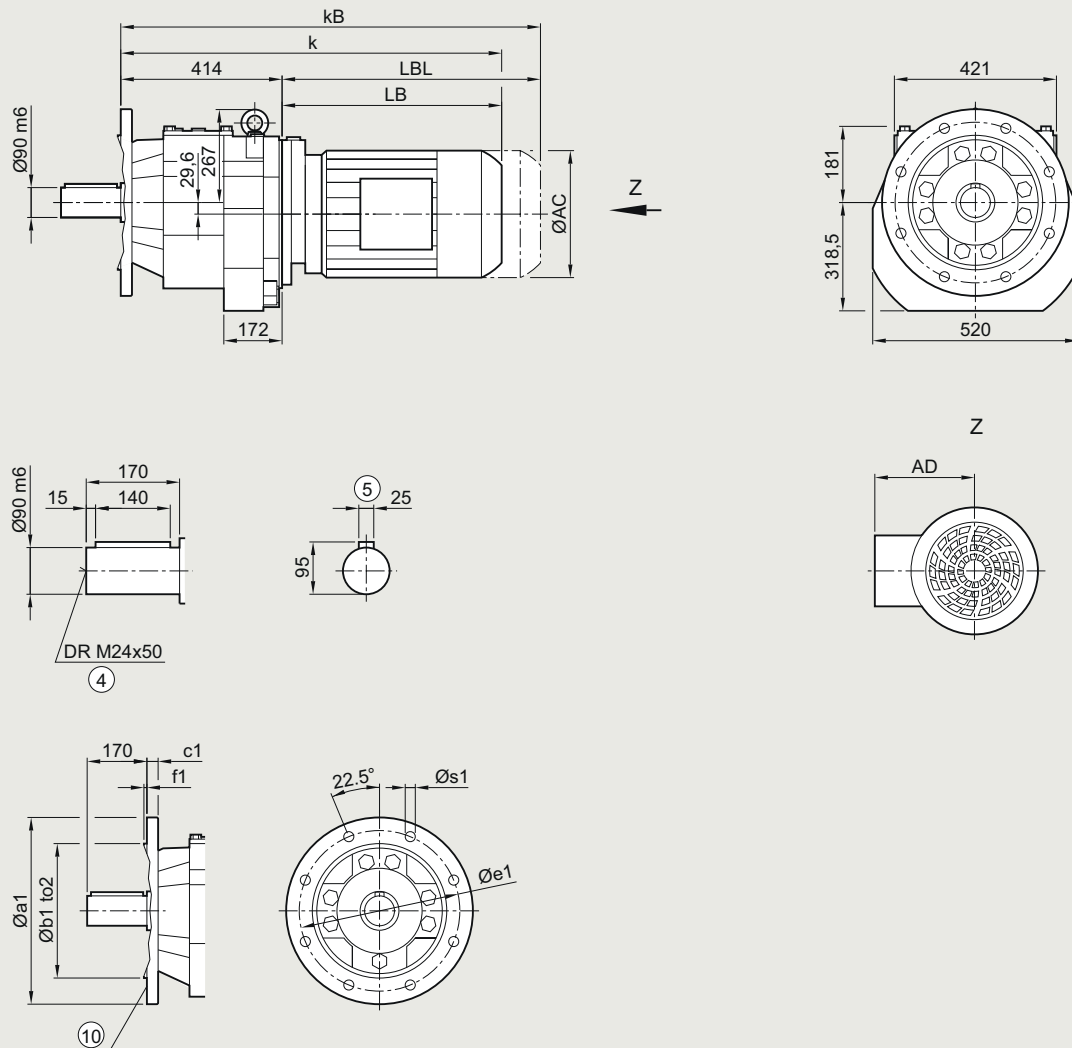
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF149 in a flange-mounted design

**DZF030**
**ZF/DF149**


Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5

Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	770.0	805.0	780.0	805.0	826.0	876.0	908.0	968.0	981.0	1011.0	1049.0	1074.0	1094.5	1154.5	1206.0
kB	848.5	883.5	853.0	878.0	930.5	980.5	1024.0	1084.0	1110.0	1140.0	1196.0	1221.0	1322.5	1382.5	1431.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

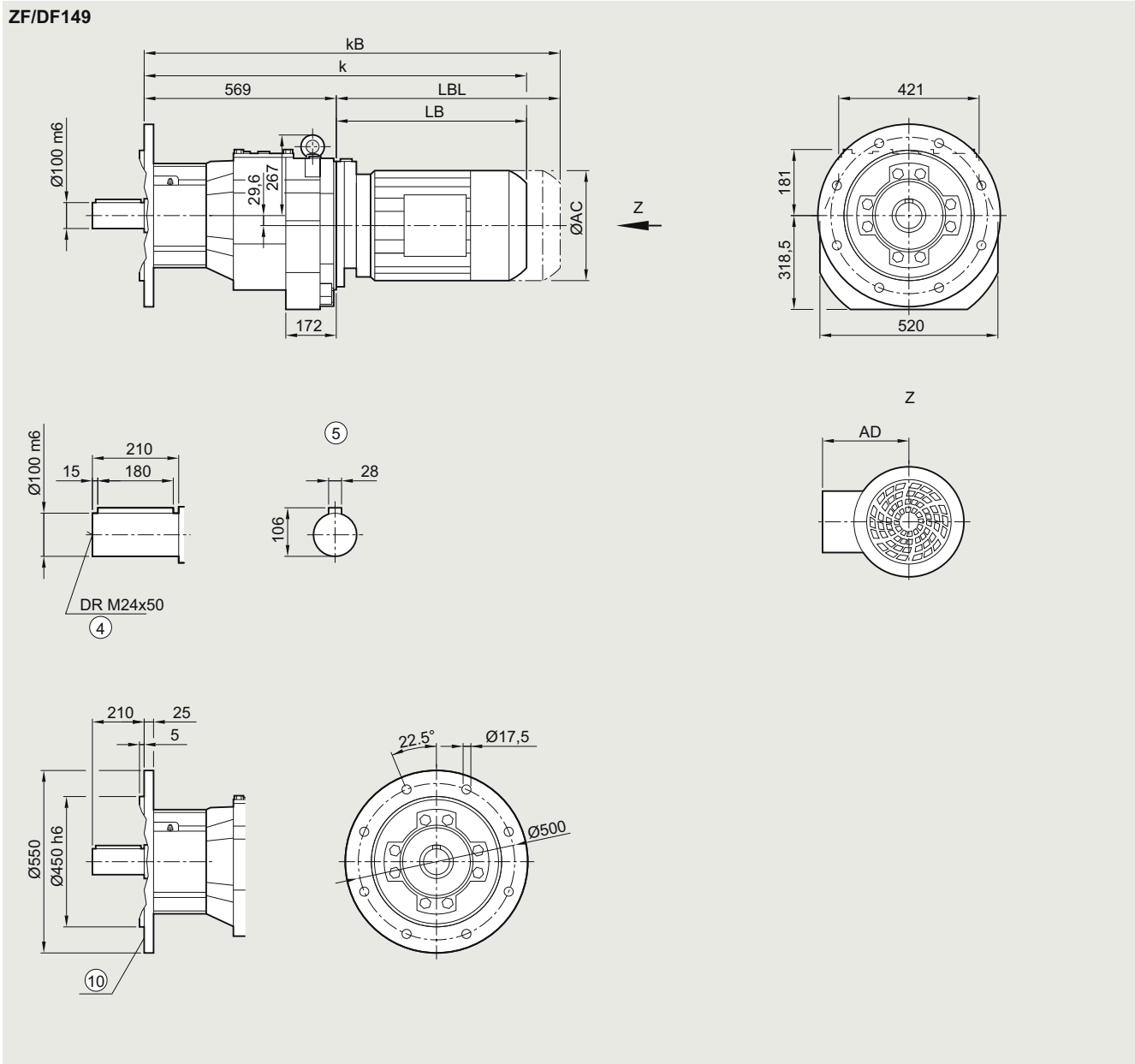
1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox ZF/DF149 in a flange-mounted design with VLplus reinforced bearing system (G30)**

**DZF040**



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	925.0	960.0	935.0	960.0	981.0	1031.0	1063.0	1123.0	1136.0	1166.0	1204.0	1229.0	1249.5	1309.5	1361.0
kB	1003.5	1038.5	1008.0	1033.0	1085.5	1135.5	1179.0	1239.0	1265.0	1295.0	1351.0	1376.0	1477.5	1537.5	1586.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

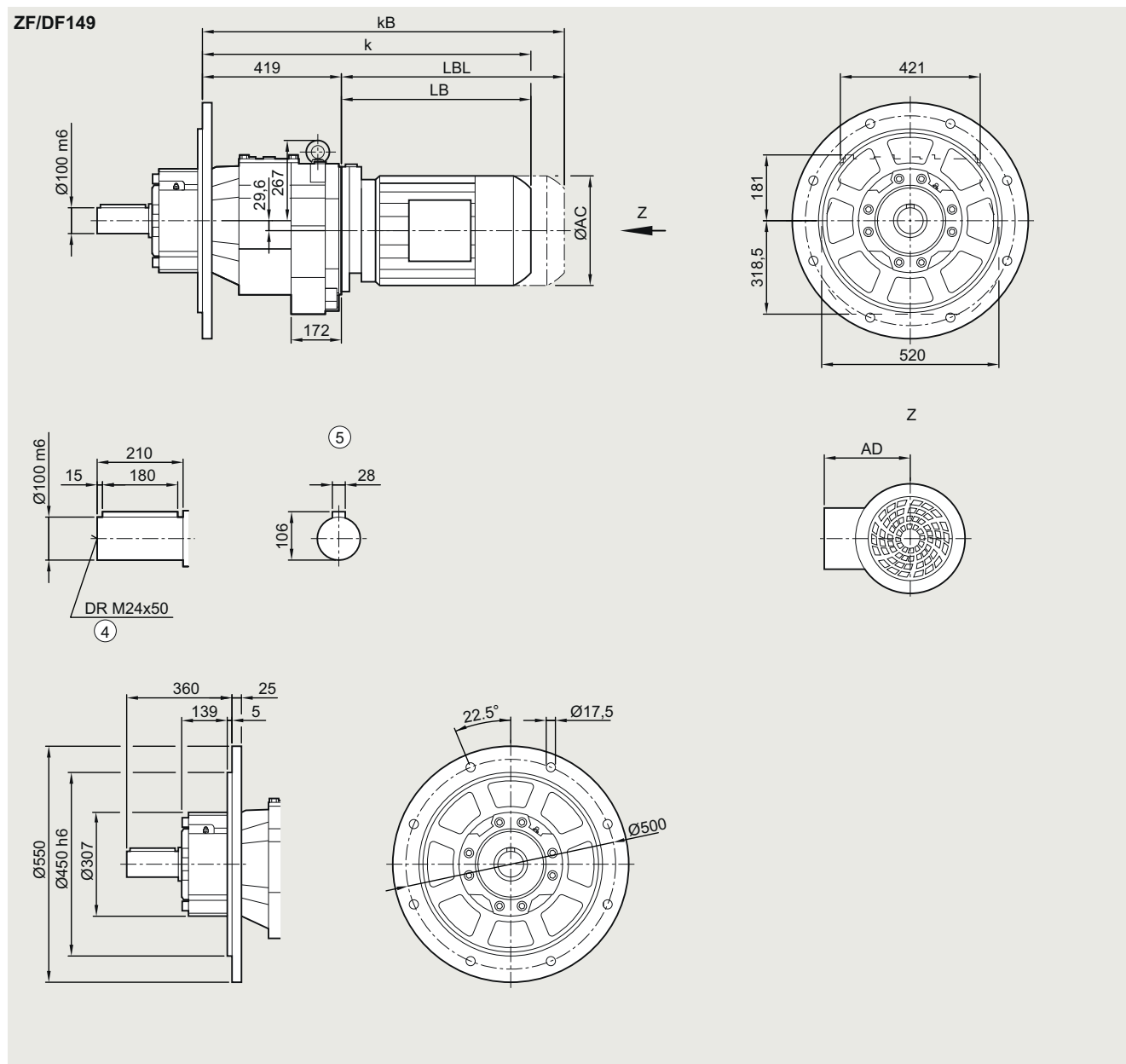
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox ZF/DF149 in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	775.0	810.0	785.0	810.0	831.0	881.0	913.0	973.0	986.0	1016.0	1054.0	1079.0	1099.5	1159.5	1211.0
kB	853.5	888.5	858.0	883.0	935.5	985.5	1029.0	1089.0	1115.0	1145.0	1201.0	1226.0	1327.5	1387.5	1436.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

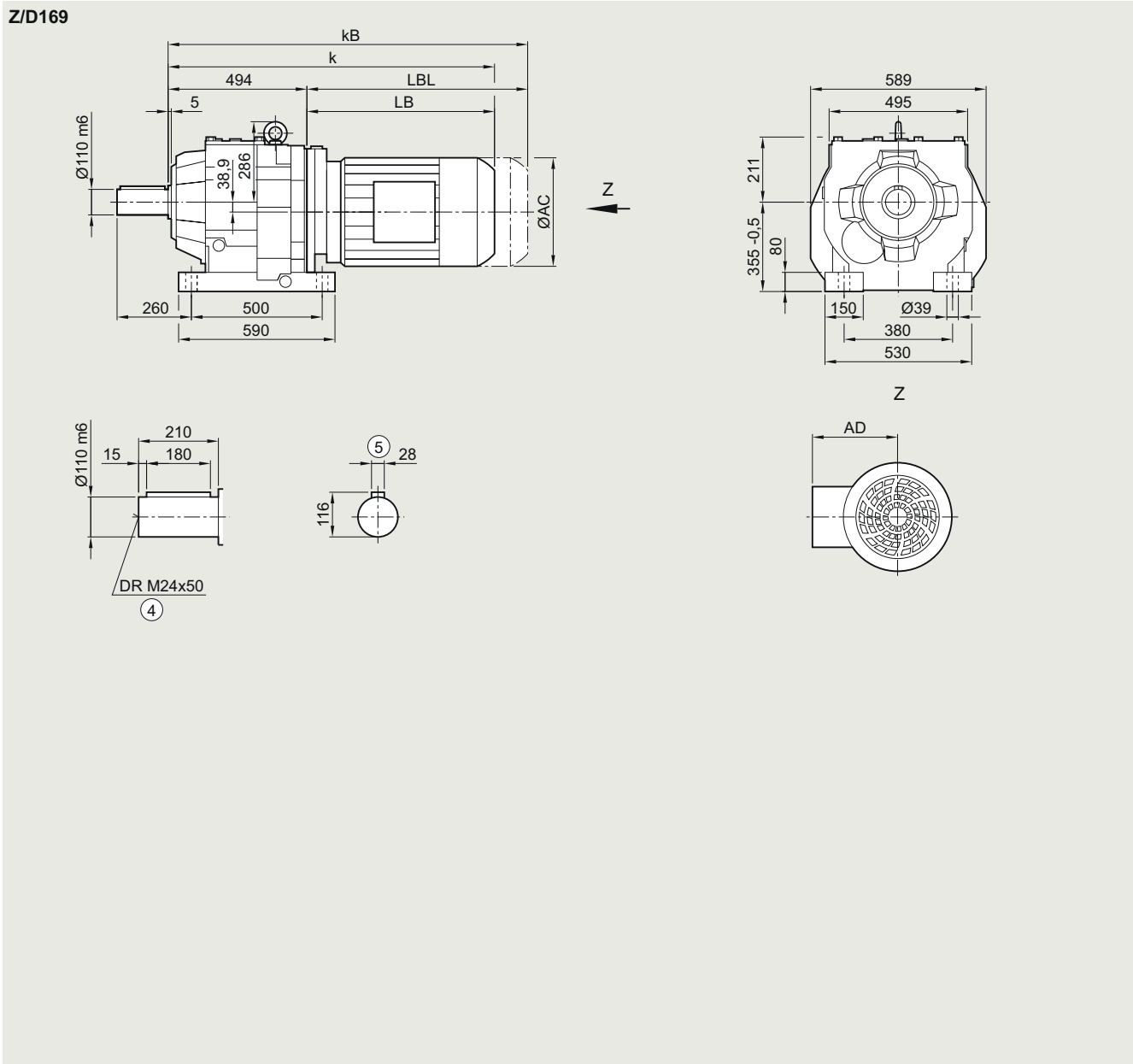
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox Z/D169 in a foot-mounted design**

**DZ030**



Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5	
k	847.5	872.5	893.0	943.0	975.0	1035.0	1047.5	1077.5	1115.5	1140.5	1160.0	1220.0	1267.5	
kB	920.5	945.5	997.5	1047.5	1091.0	1151.0	1176.5	1206.5	1262.5	1287.5	1388.0	1448.0	1492.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

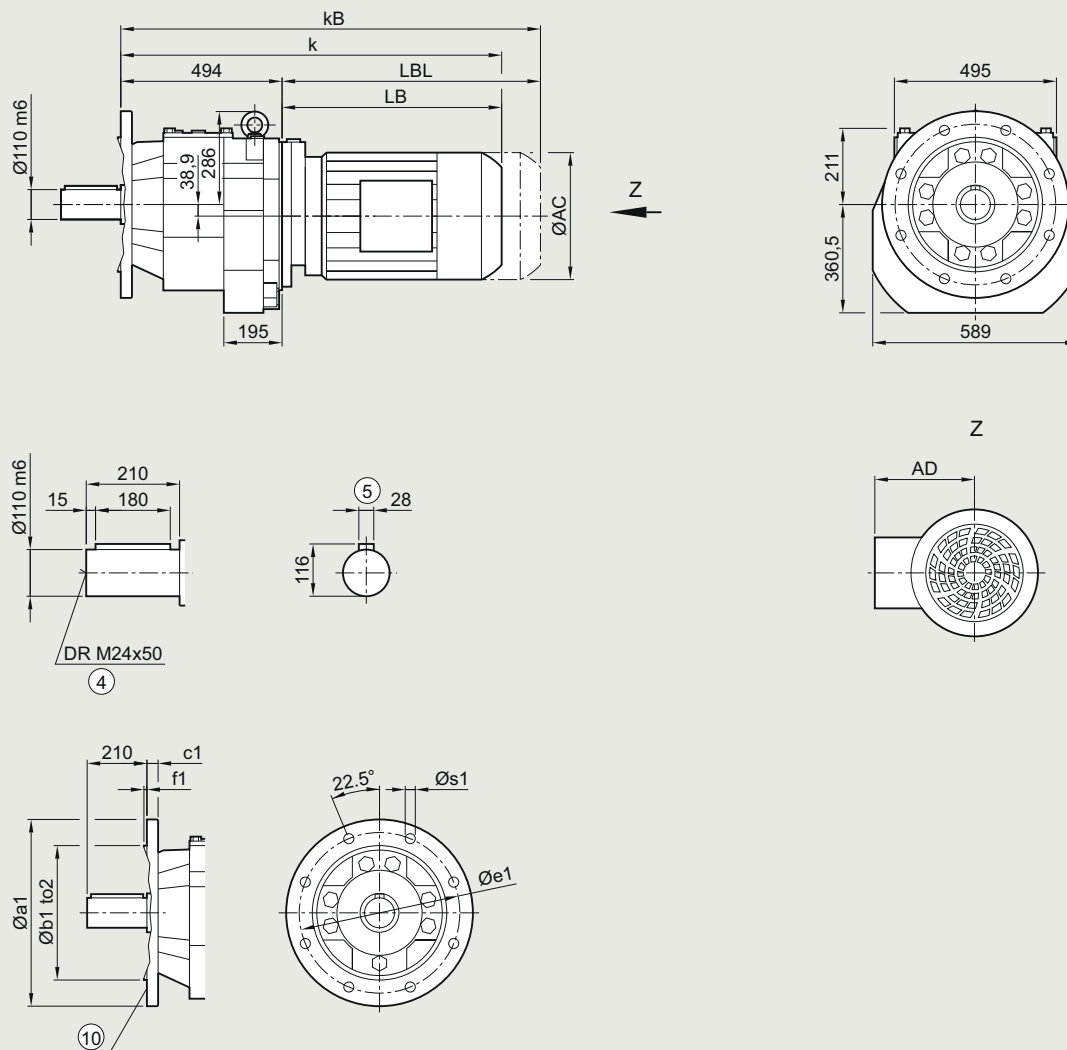
⑤ Feather key/keyway DIN 6885-1

# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox ZF/DF169 in a flange-mounted design

**DZF030**
**ZF/DF169**


Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5
	660	550	h6	25	600	6	22.0

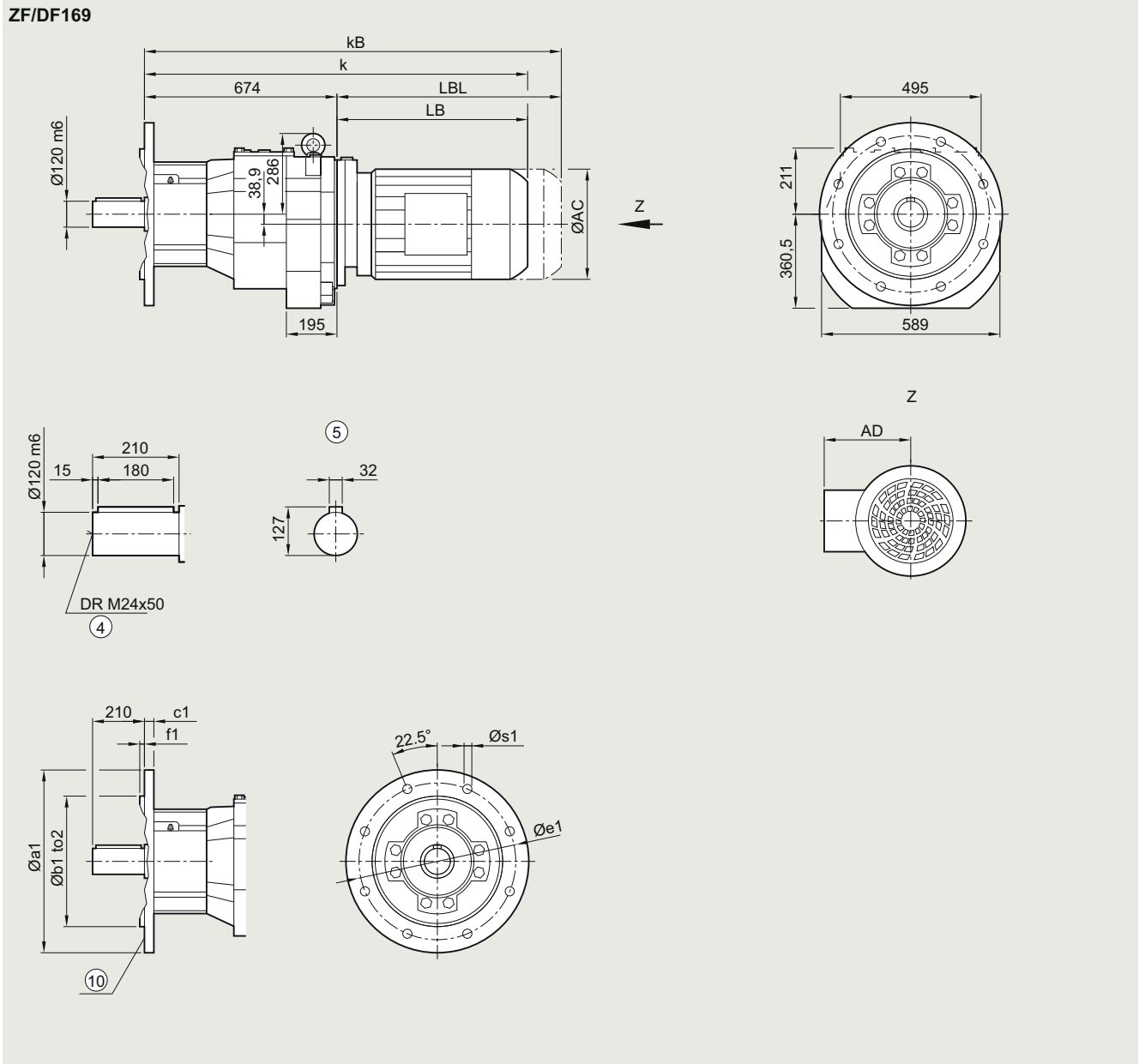
Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	847.5	872.5	893.0	943.0	975.0	1035.0	1047.5	1077.5	1115.5	1140.5	1160.0	1220.0	1267.5
kB	920.5	945.5	997.5	1047.5	1091.0	1151.0	1176.5	1206.5	1262.5	1287.5	1388.0	1448.0	1492.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox ZF/DF169 in a flange-mounted design with VLplus reinforced bearing system (G30)**
**DZF040**


Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5
	660	550	h6	25	600	6	22.0

Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	1027.5	1052.5	1073.0	1123.0	1155.0	1215.0	1227.5	1257.5	1295.5	1320.5	1340.0	1400.0	1447.5
kB	1100.5	1125.5	1177.5	1227.5	1271.0	1331.0	1356.5	1386.5	1442.5	1467.5	1568.0	1628.0	1672.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

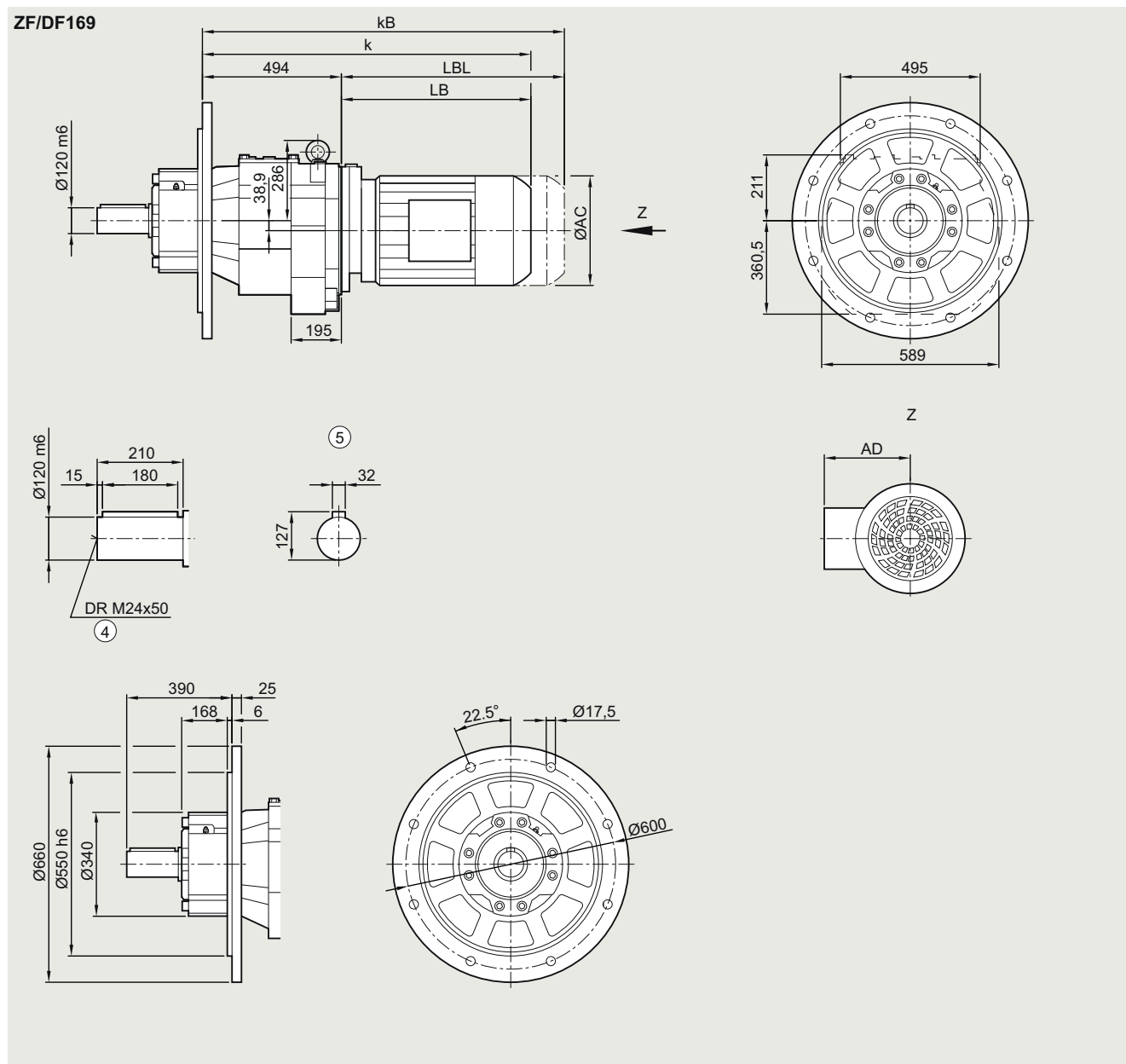
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox ZF/DF169 in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040



Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	847.5	872.5	893.0	943.0	975.0	1035.0	1047.5	1077.5	1115.5	1140.5	1160.0	1220.0	1267.5
kB	920.5	945.5	997.5	1047.5	1091.0	1151.0	1176.5	1206.5	1262.5	1287.5	1388.0	1448.0	1492.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

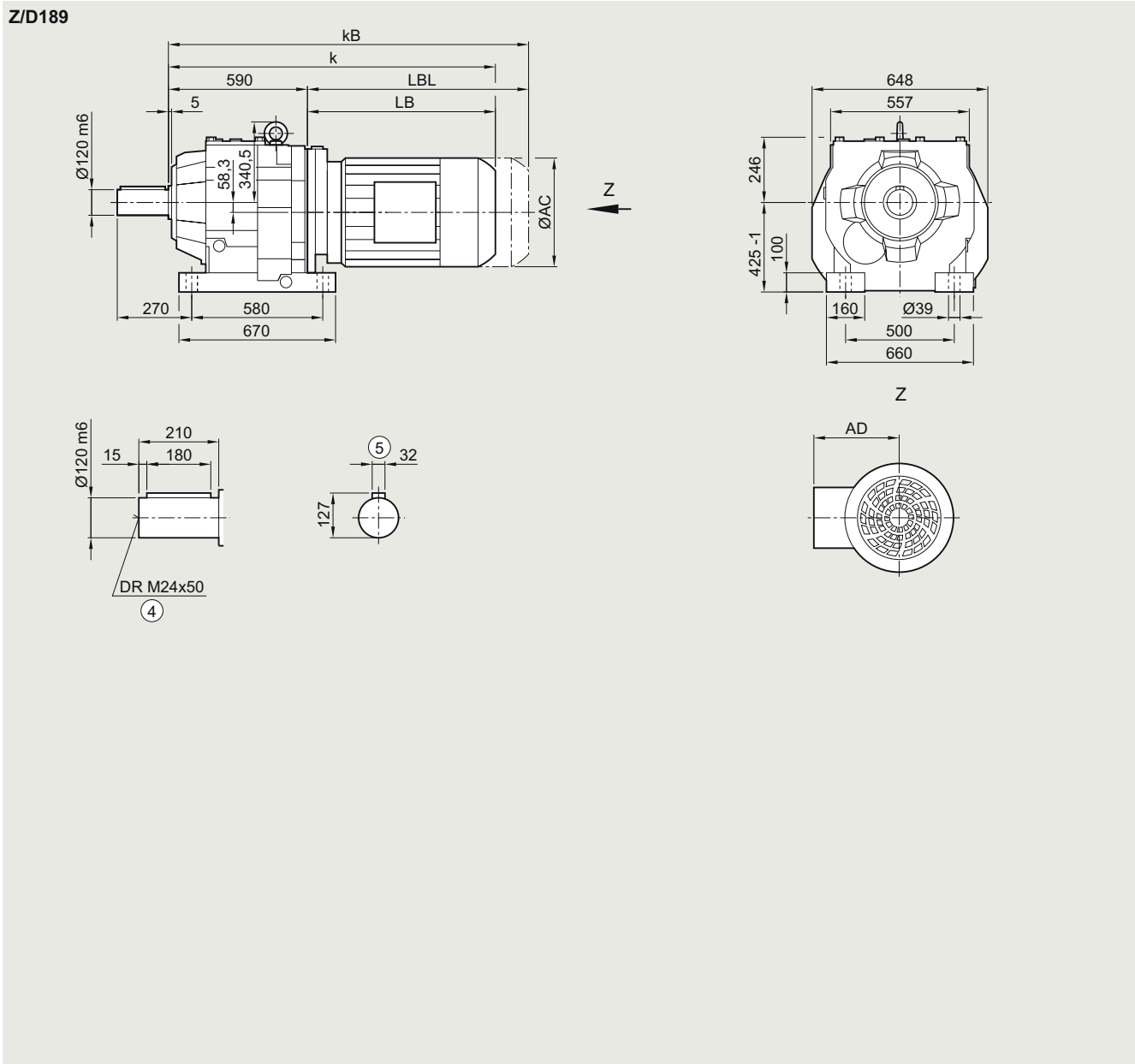
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox Z/D189 in a foot-mounted design**

**DZ030**



Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5	
k	943.5	968.5	989.0	1039.0	1071.0	1131.0	1143.5	1173.5	1211.5	1236.5	1256.0	1316.0	1363.5	
kB	1016.5	1041.5	1093.5	1143.5	1187.0	1247.0	1272.5	1302.5	1358.5	1383.5	1484.0	1544.0	1588.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

# SIMOGEAR geared motors

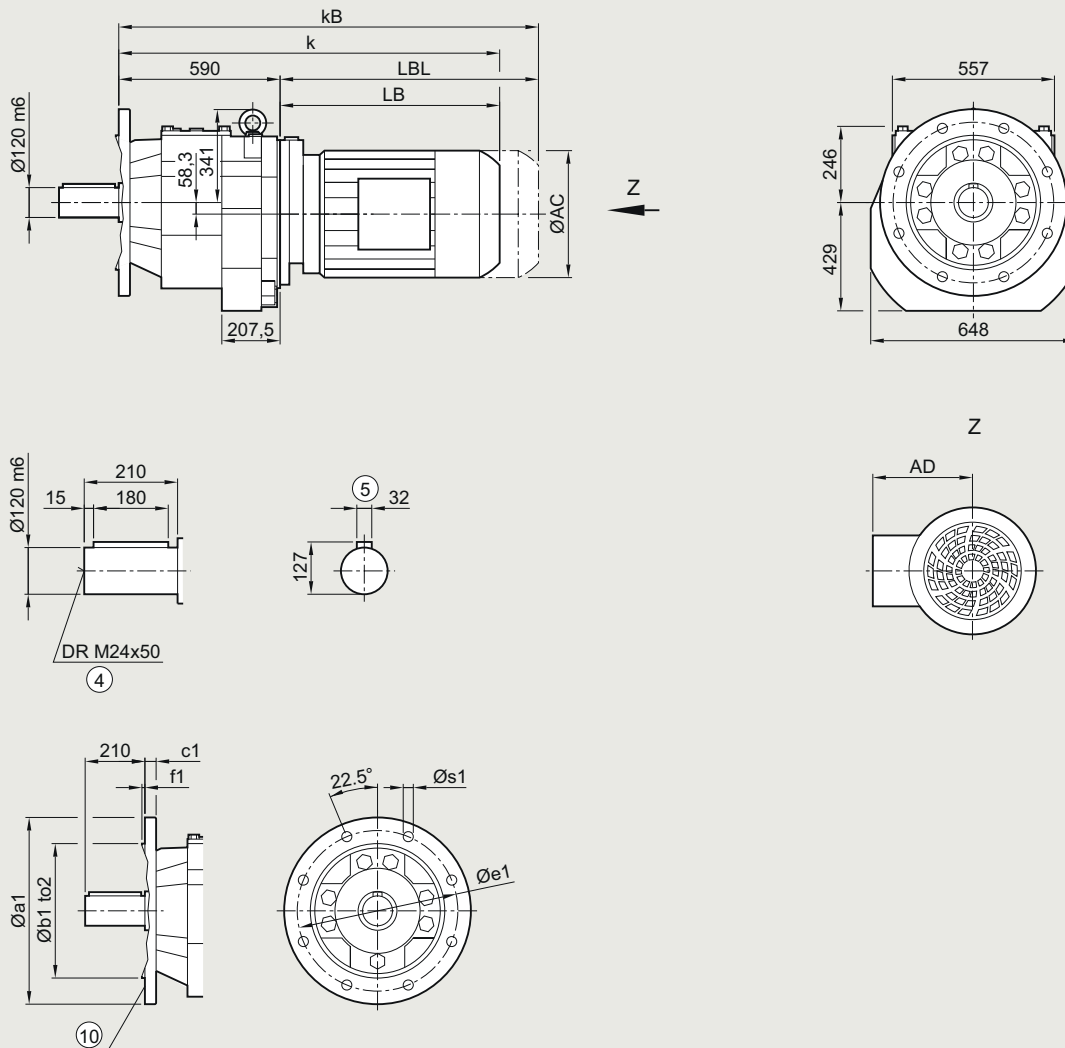
Helical geared motors

## Dimensional drawings

### Gearbox ZF/DF189 in a flange-mounted design

DZF030

ZF/DF189



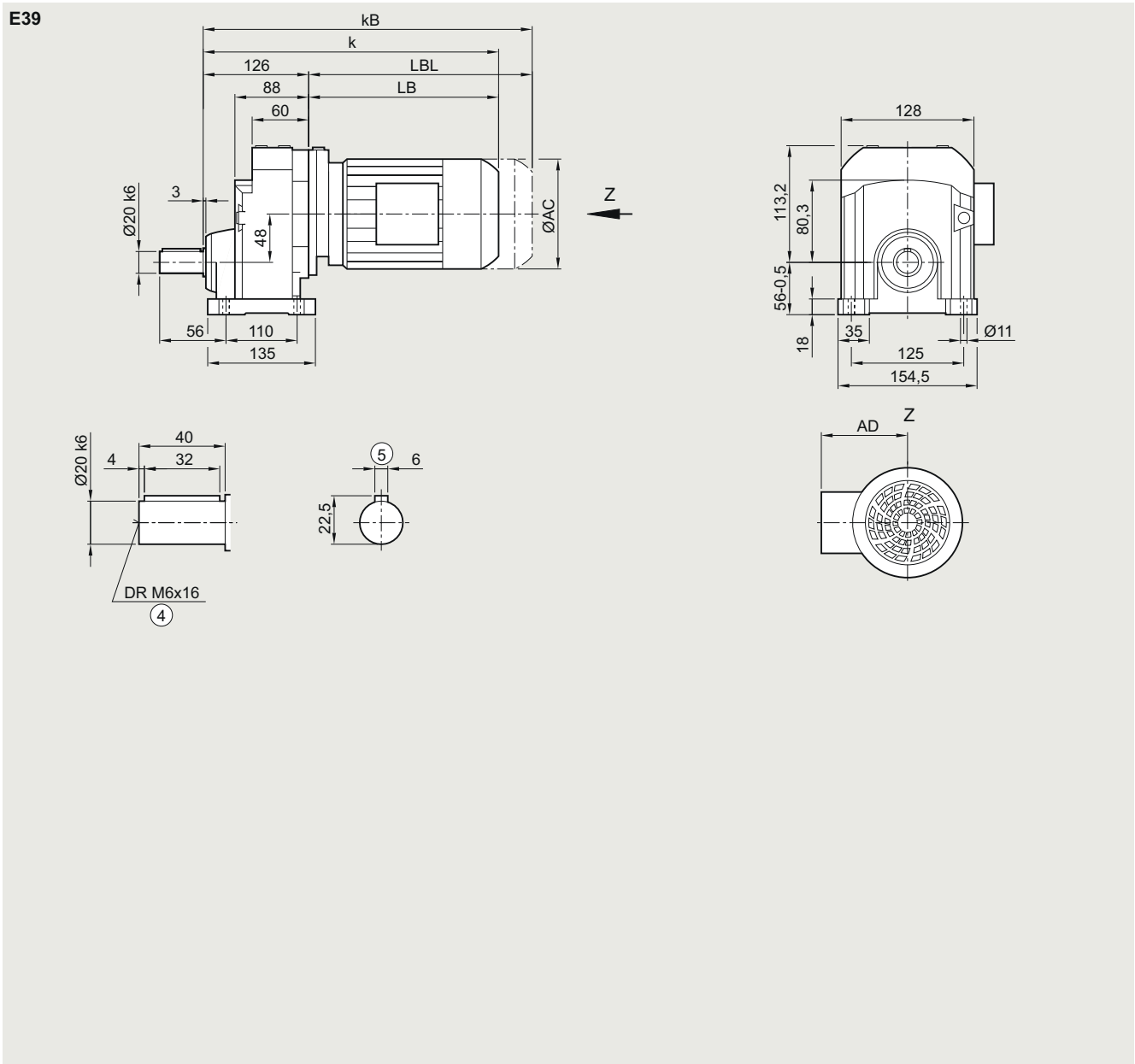
Flange	a1	b1	to2	c1	e1	f1	s1						
	550	450	h6	25	500	5	17.5						
	660	550	h6	28	600	6	22.0						
Motor	LE 112	112Z	132	132Z	160	160Z	LES 180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	943.5	968.5	989.0	1039.0	1071.0	1131.0	1143.5	1173.5	1211.5	1236.5	1256.0	1316.0	1363.5
k <sub>B</sub>	1016.5	1041.5	1093.5	1143.5	1187.0	1247.0	1272.5	1302.5	1358.5	1383.5	1484.0	1544.0	1588.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox E39 in a foot-mounted design**
**E030**

**3**

Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
	63												
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	320.0	346.0	352.0	371.0	411.0	416.0	451.0	477.5	517.5	534.0	569.0	544.0	569.0
kB	364.5	390.5	407.0	426.0	466.0	476.0	511.0	547.5	587.5	612.5	647.5	617.0	642.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

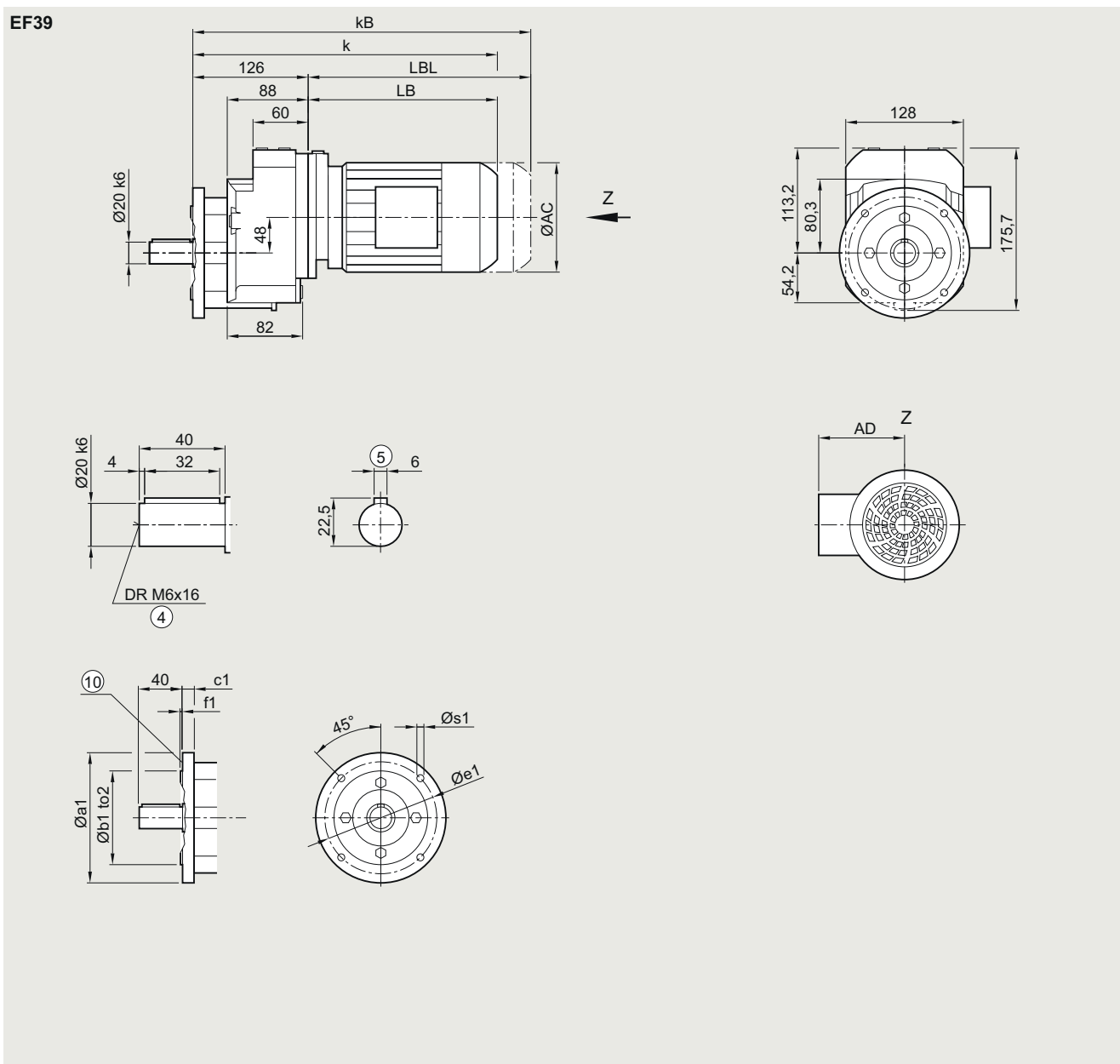
# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox EF39 in a flange-mounted design

##### EF030



Flange	a1	b1	to2	c1	e1	f1	s1
	120	80	j6	8	100	3.0	6.8
	140	95	j6	7	115	3.0	9.0
	160	110	j6	10	130	3.5	9.0
	200	130	j6	12	165	3.5	11.0

Motor	LE	63Z		71Z		80Z		90Z		100Z		112Z	
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	320.0	346.0	352.0	371.0	411.0	416.0	451.0	477.5	517.5	534.0	569.0	544.0	569.0
kB	364.5	390.5	407.0	426.0	466.0	476.0	511.0	547.5	587.5	612.5	647.5	617.0	642.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

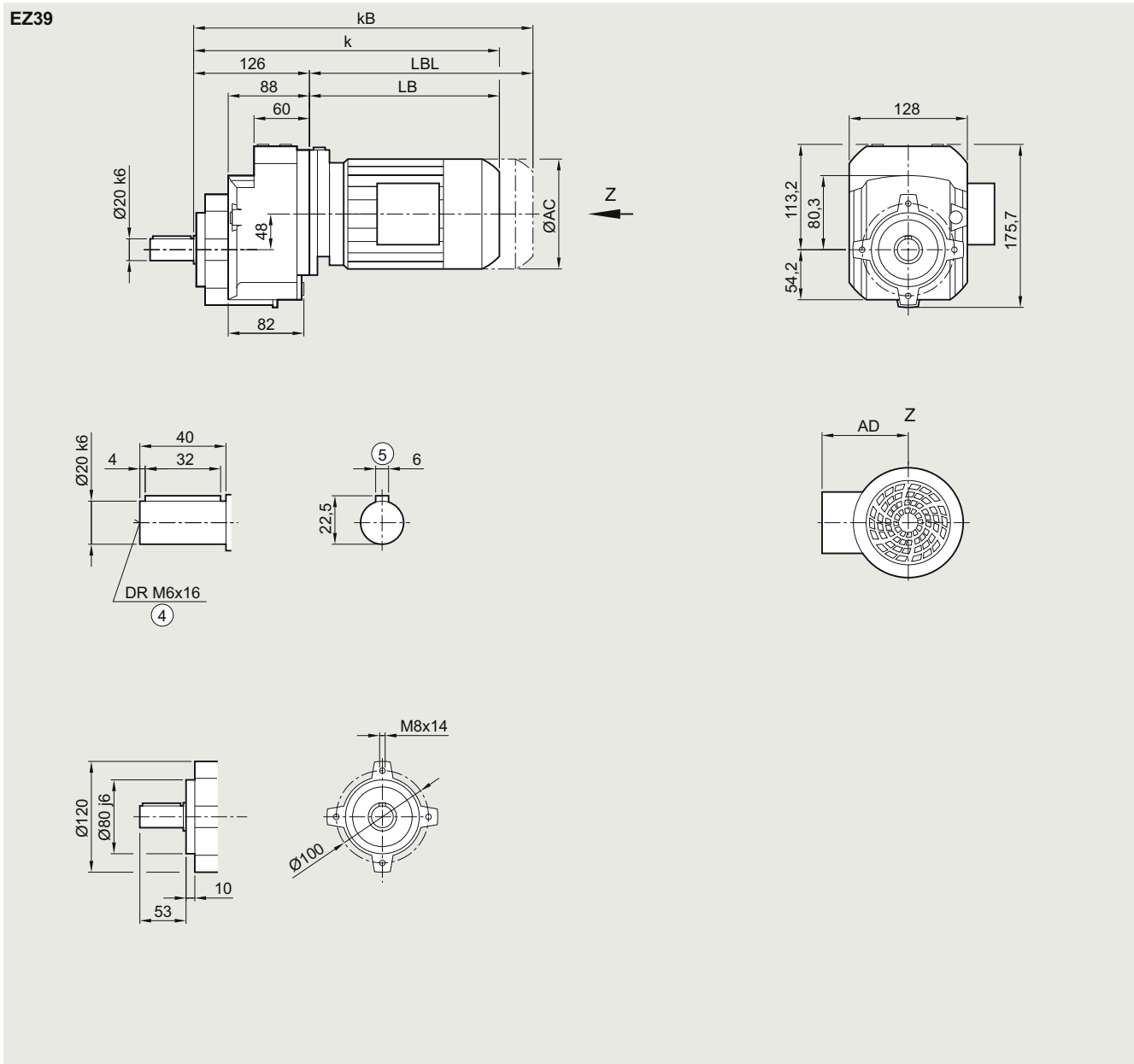
⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180



**Gearbox EZ39 in a housing flange design**

**EZ030**



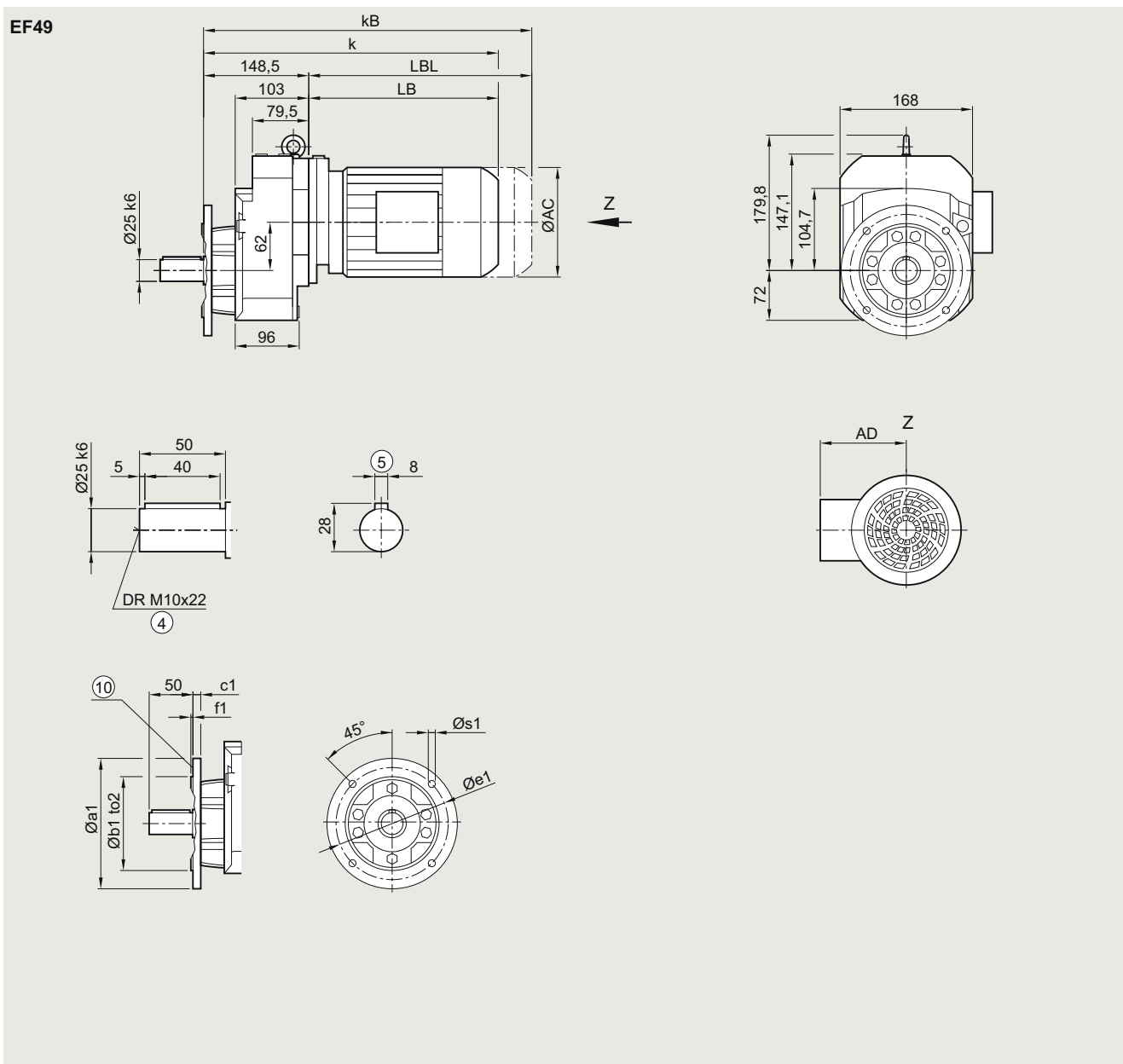
Motor	LE												
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	320.0	346.0	352.0	371.0	411.0	416.0	451.0	477.5	517.5	534.0	569.0	544.0	569.0
k <sub>B</sub>	364.5	390.5	407.0	426.0	466.0	476.0	511.0	547.5	587.5	612.5	647.5	617.0	642.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox EF49 in a flange-mounted design**
**EF030**


Flange	a1	b1	to2	c1	e1	f1	s1
160	110	j6	10	130	3.5	9.0	
200	130	j6	12	165	3.5	11.0	
250	180	j6	15	215	4.0	13.5	

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	333.0	359.0	365.0	384.0	424.0	429.0	464.0	490.5	530.5	547.0	582.0	557.0	591.5	610.0	660.0
kB	377.5	403.5	420.0	439.0	479.0	489.0	524.0	560.5	600.5	625.5	660.5	630.0	664.5	714.5	764.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

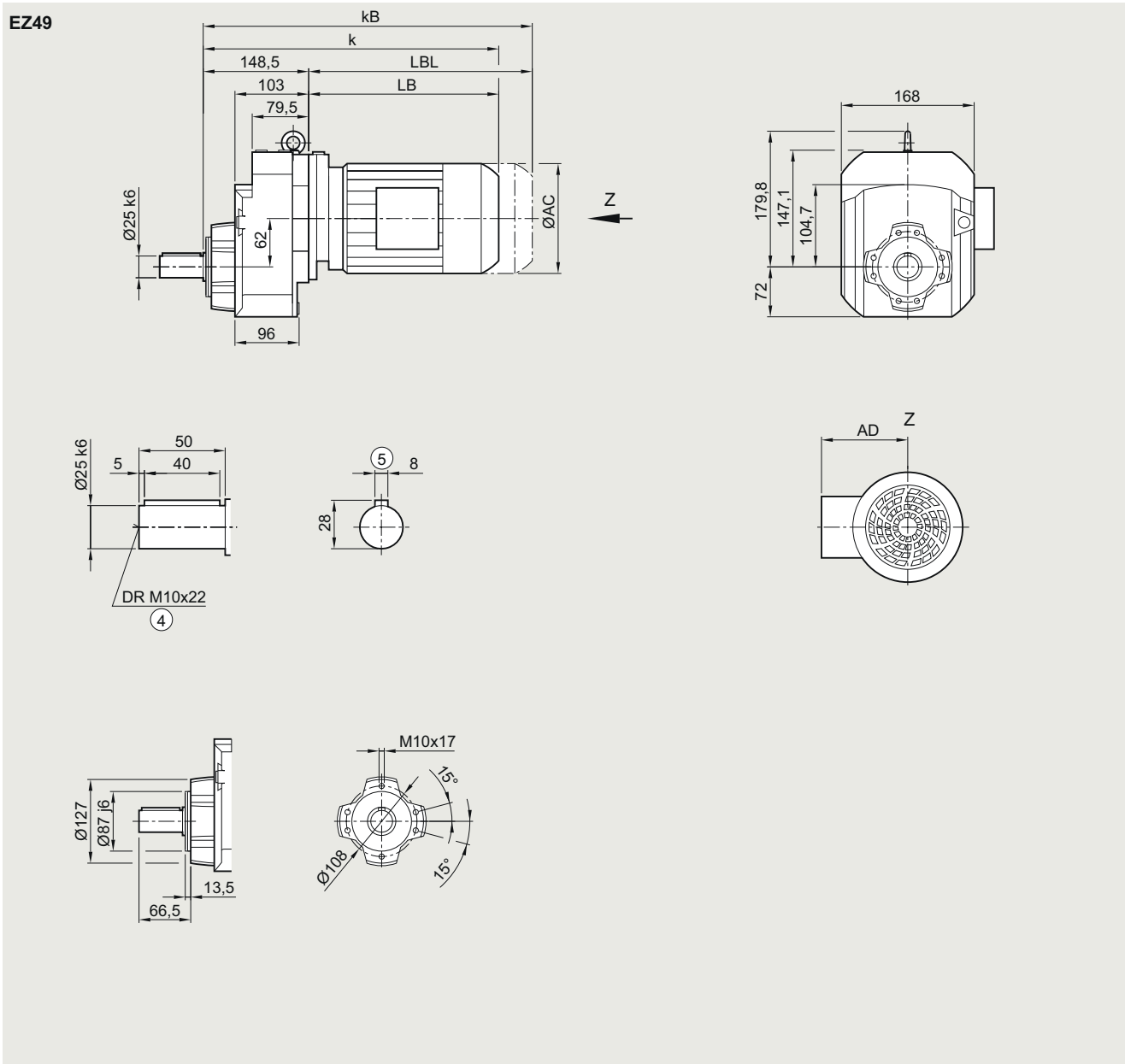
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox EZ49 in a housing flange design

EZ030

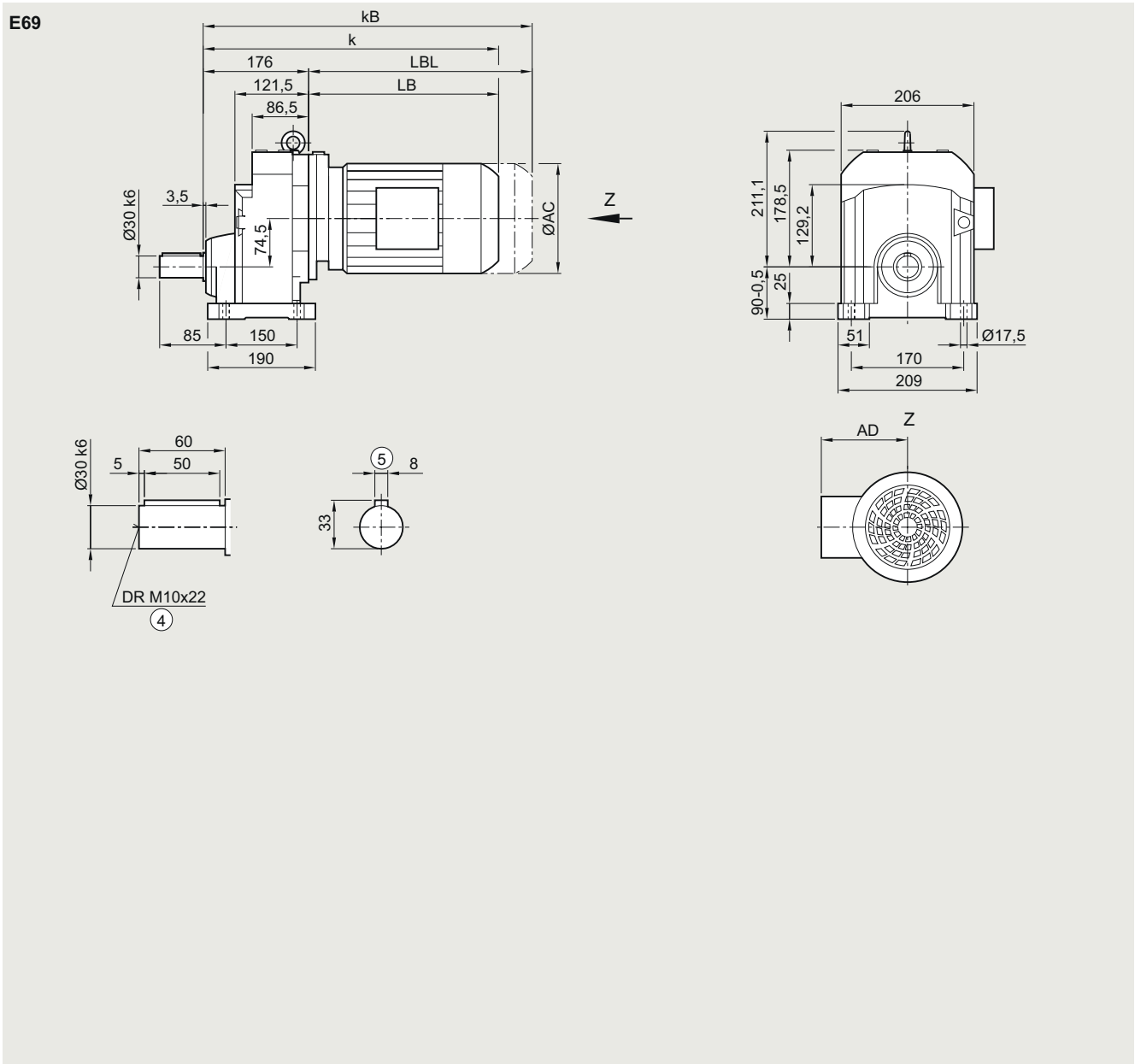


Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	63														
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	333.0	359.0	365.0	384.0	424.0	429.0	464.0	490.5	530.5	547.0	582.0	557.0	591.5	610.0	660.0
kB	377.5	403.5	420.0	439.0	479.0	489.0	524.0	560.5	600.5	625.5	660.5	630.0	664.5	714.5	764.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox E69 in a foot-mounted design**
**E030**

**3**

Motor	LE															
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198	198	222	222	264	264	318	318	
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207	207	241	241	
k	390.5	409.5	449.5	450.5	485.5	512	552	568.5	603.5	578.5	603.5	631.5	681.5	713.5	773.5	
kB	445.5	464.5	504.5	510.5	545.5	582	622	647	682	651.5	676.5	736	786	829.5	889.5	
LB	214.5	233.5	273.5	274.5	309.5	336	376	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5	
LBL	269.5	288.5	328.5	334.5	369.5	406	446	471	506	475.5	500.5	560	610	653.5	713.5	

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

1) AD depends on the motor options, for other dimensions, see page 9/46.

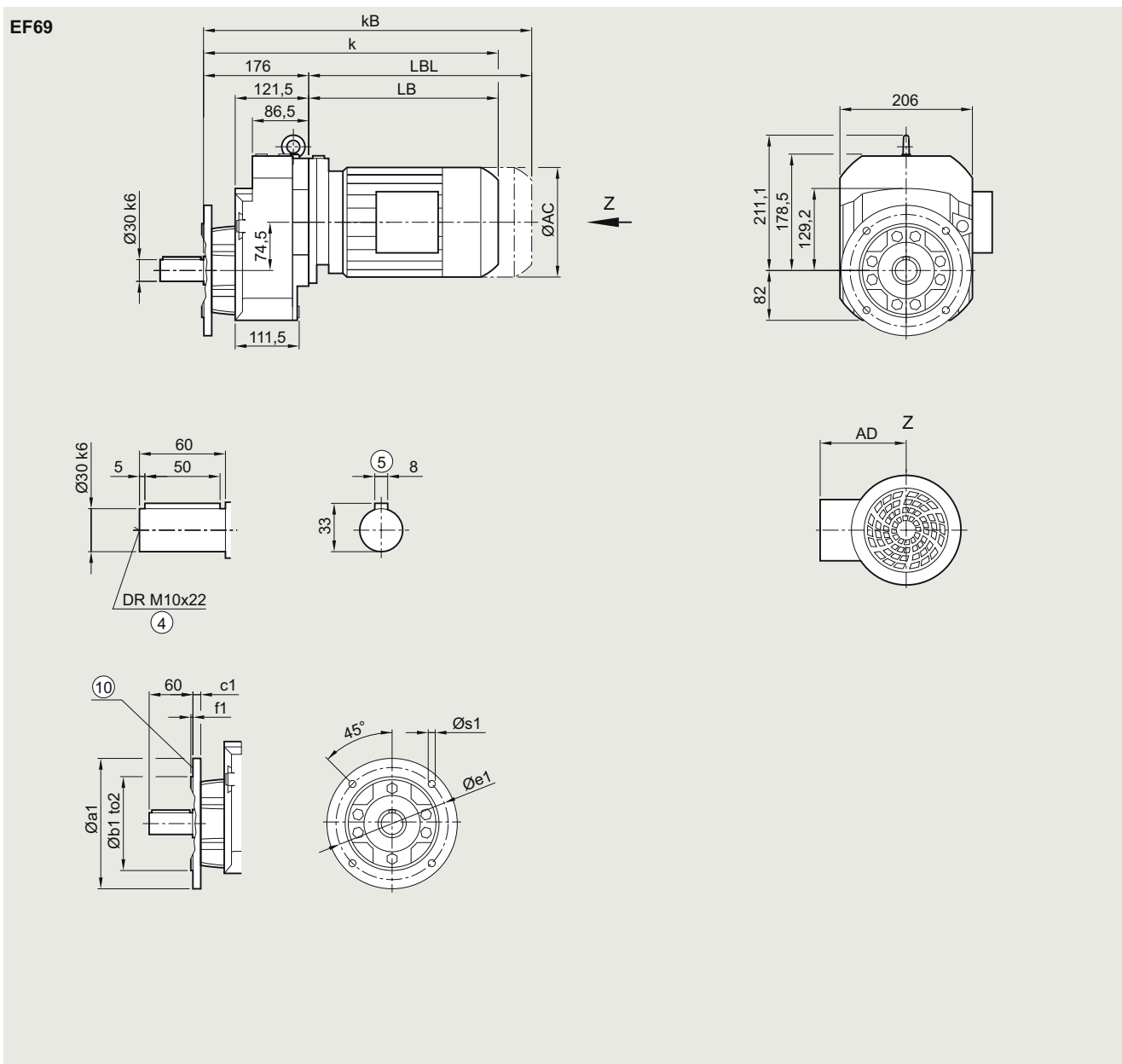
# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox EF69 in a flange-mounted design

##### EF030



Flange	a1	b1	to2	c1	e1	f1	s1
	200	130	j6	12	165	3.5	11.0
	250	180	j6	15	215	4.0	13.5

Motor	LE															
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198	198	222	222	264	264	318	318	
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207	207	241	241	
k	390.5	409.5	449.5	450.5	485.5	512	552	568.5	603.5	578.5	603.5	631.5	681.5	713.5	773.5	
kB	445.5	464.5	504.5	510.5	545.5	582	622	647	682	651.5	676.5	736	786	829.5	889.5	
LB	214.5	233.5	273.5	274.5	309.5	336	376	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5	
LBL	269.5	288.5	328.5	334.5	369.5	406	446	471	506	475.5	500.5	560	610	653.5	713.5	

④ DIN 332

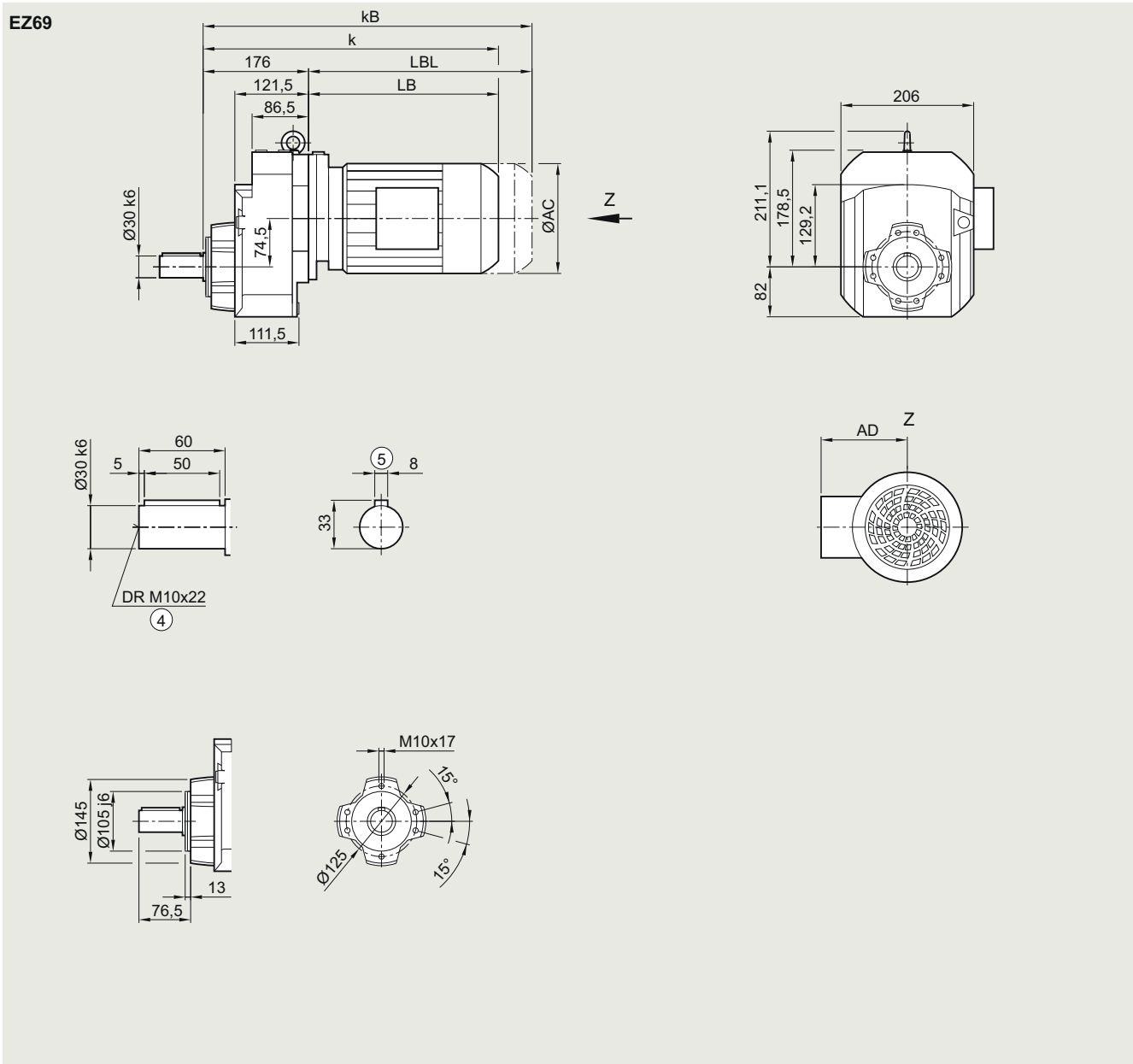
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox EZ69 in a housing flange design**

**EZ030**



Motor	LE														
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198	198	222	222	264	264	318	318
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207	207	241	241
k	390.5	409.5	449.5	450.5	485.5	512	552	568.5	603.5	578.5	603.5	631.5	681.5	713.5	773.5
kB	445.5	464.5	504.5	510.5	545.5	582	622	647	682	651.5	676.5	736	786	829.5	889.5
LB	214.5	233.5	273.5	274.5	309.5	336	376	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406	446	471	506	475.5	500.5	560	610	653.5	713.5

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

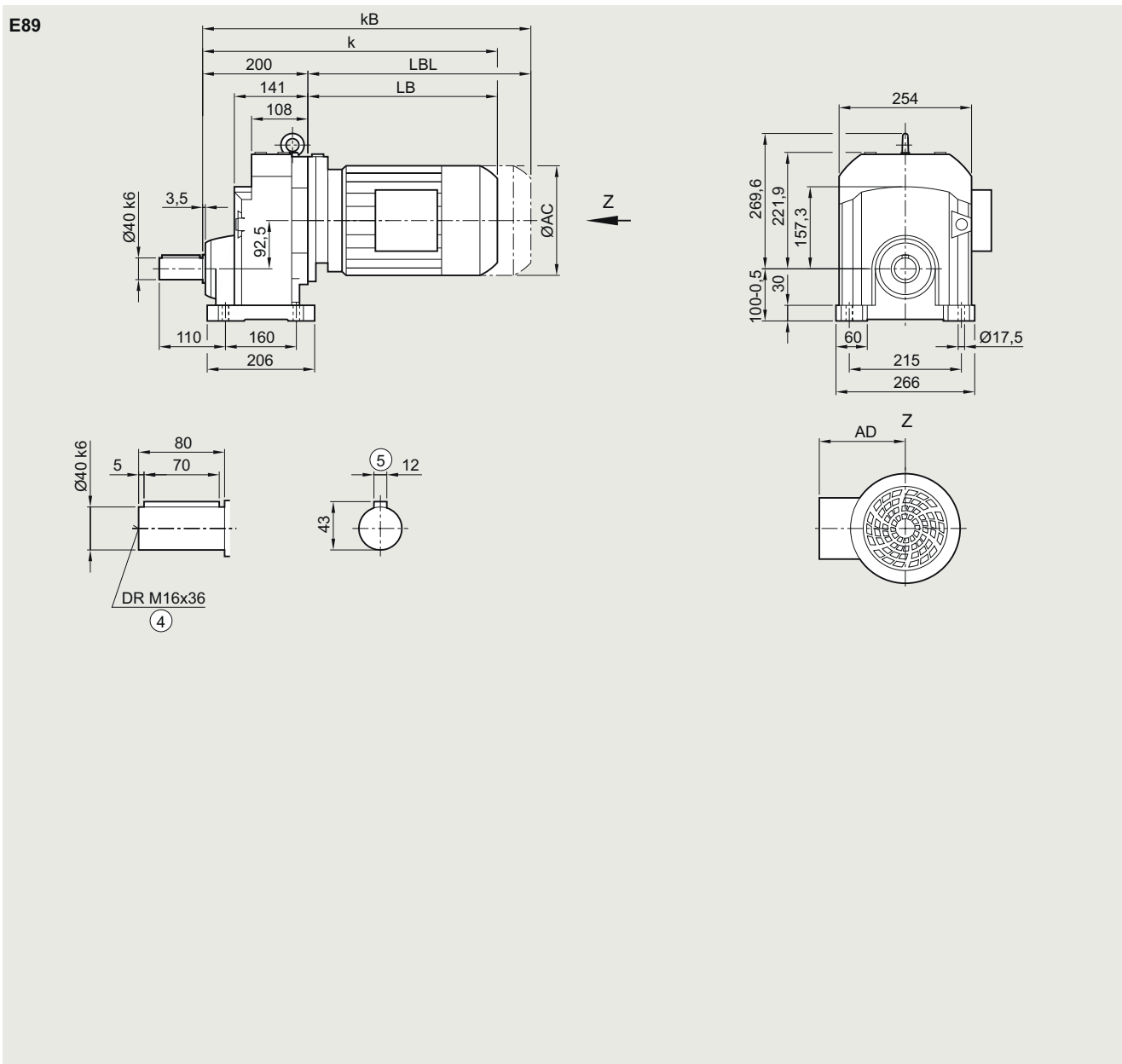
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox E89 in a foot-mounted design

E030



3

Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	461.5	496.5	523.0	563.0	575.5	610.5	585.5	610.5	638.5	688.5	720.5	780.5	793.5	823.5
k <sub>B</sub>	521.5	556.5	593.0	633.0	654.0	689.0	658.5	683.5	743.0	793.0	836.5	896.5	922.5	952.5
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

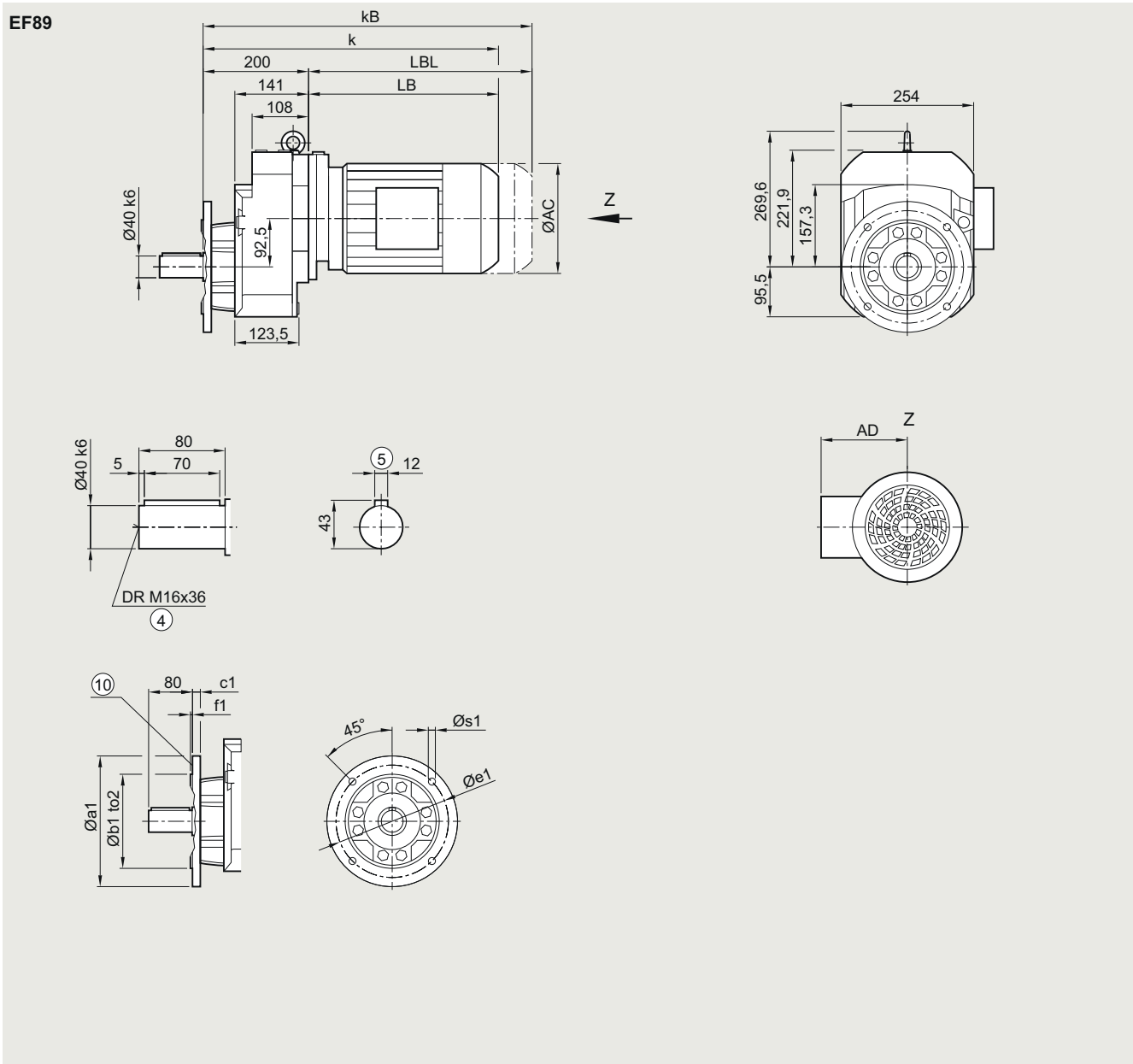
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox EF89 in a flange-mounted design**

**EF030**



Flange	a1	b1	to2	c1	e1	f1	s1							
	250	180	j6	15	215	4.0	13.5							
	300	230	j6	16	265	4.0	13.5							
	350	250	j6	16	300	5.0	17.5							
Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	461.5	496.5	523.0	563.0	575.5	610.5	585.5	610.5	638.5	688.5	720.5	780.5	793.5	823.5
kB	521.5	556.5	593.0	633.0	654.0	689.0	658.5	683.5	743.0	793.0	836.5	896.5	922.5	952.5
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

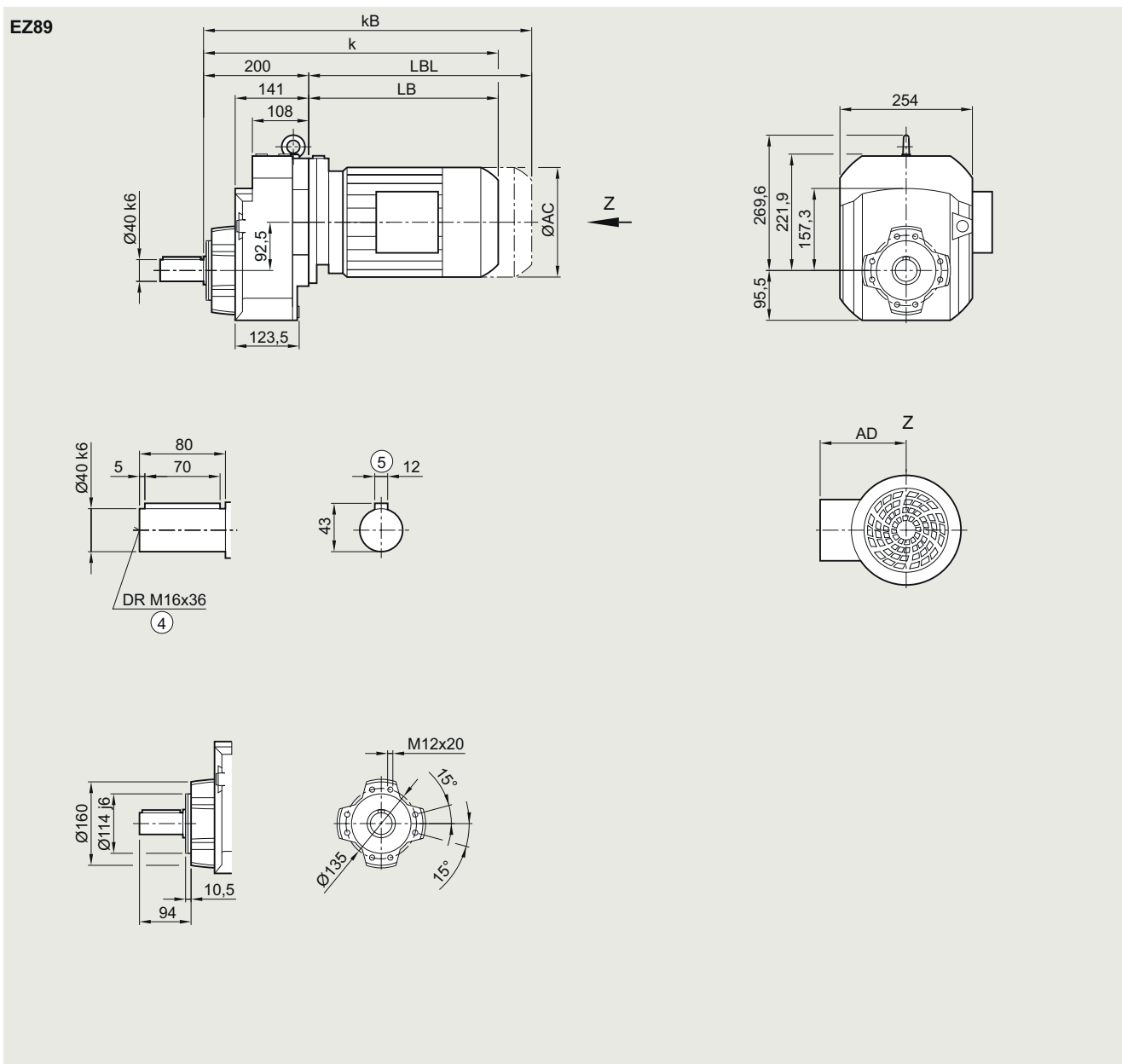
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox EZ89 in a housing flange design

#### EZ030



Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	461.5	496.5	523.0	563.0	575.5	610.5	585.5	610.5	638.5	688.5	720.5	780.5	793.5	823.5
kB	521.5	556.5	593.0	633.0	654.0	689.0	658.5	683.5	743.0	793.0	836.5	896.5	922.5	952.5
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

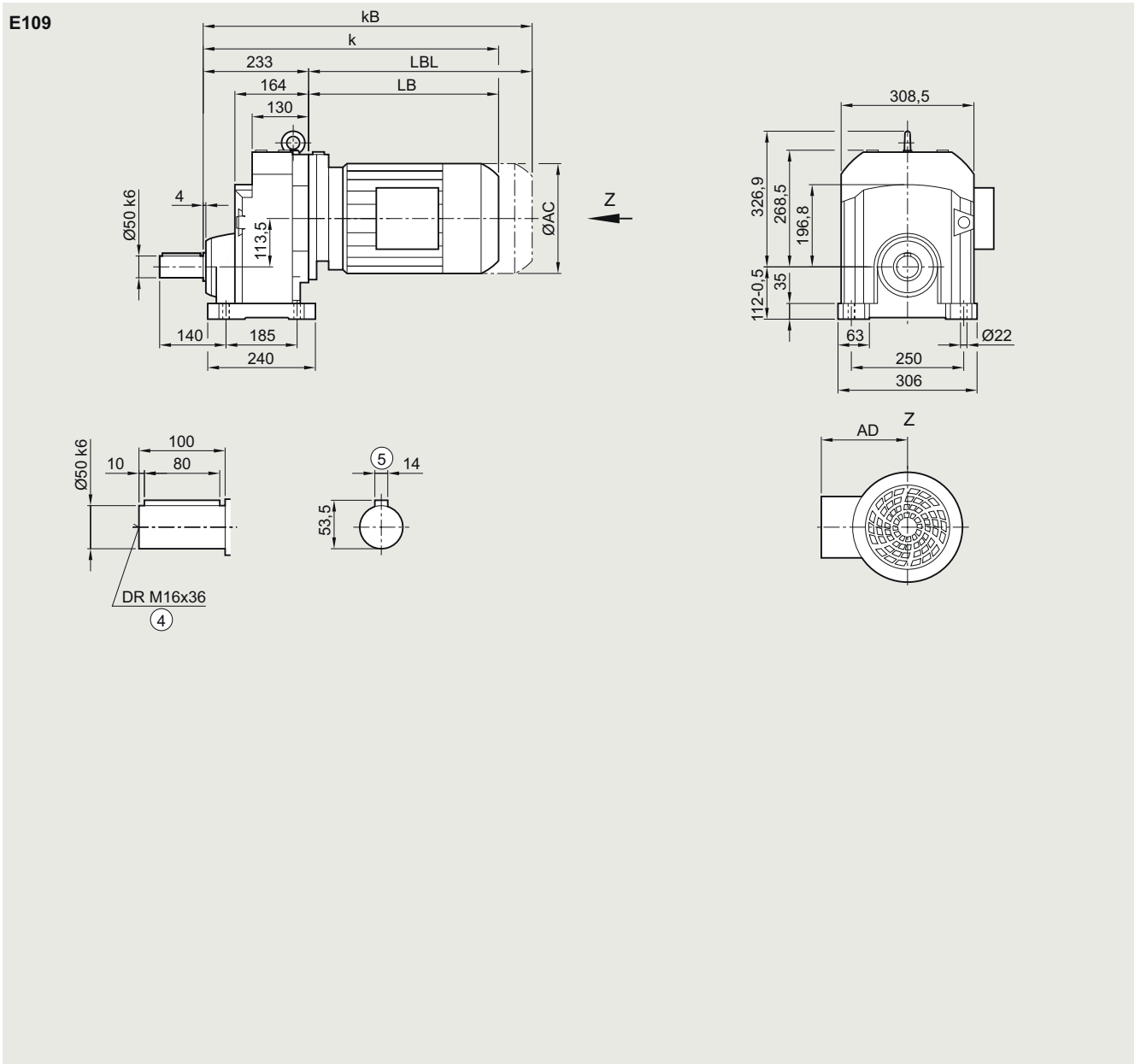
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox E109 in a foot-mounted design**

**E030**



**3**

Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	549.0	589.0	599.5	634.5	609.5	634.5	662.5	712.5	744.5	804.5	817.5	847.5	885.5	910.5	931.0	991.0
kB	619.0	659.0	678.0	713.0	682.5	707.5	767.0	817.0	860.5	920.5	946.5	976.5	1032.5	1057.5	1159.0	1219.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

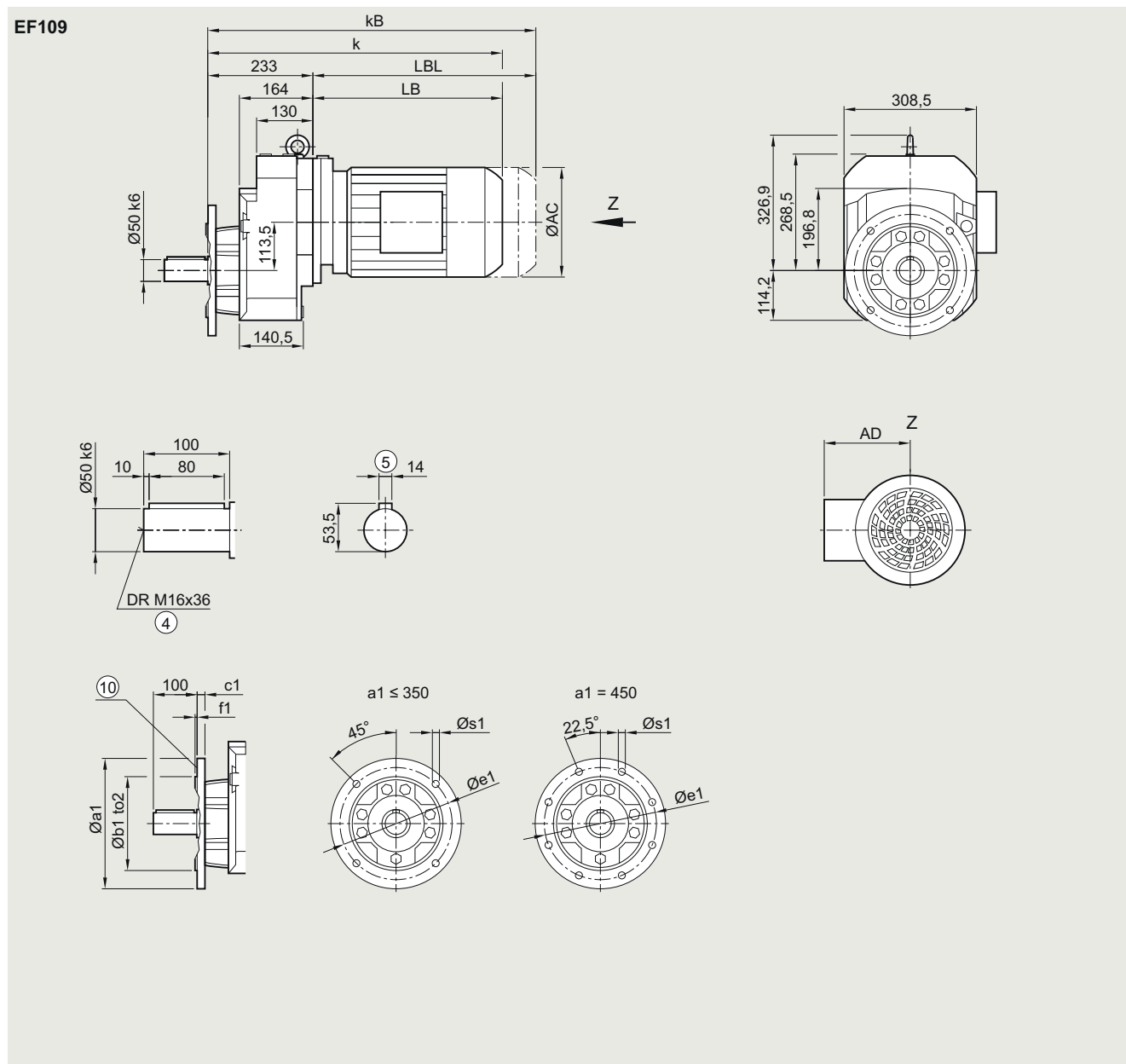
# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox EF109 in a flange-mounted design

##### EF030



Flange	a1	b1	to2	c1	e1	f1	s1
	300	230	j6	16	265	4.0	13.5
	350	250	j6	18	300	5.0	17.5
	450	350	h6	18	400	5.0	17.5

Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	549.0	589.0	599.5	634.5	609.5	634.5	662.5	712.5	744.5	804.5	817.5	847.5	885.5	910.5	931.0	991.0
kB	619.0	659.0	678.0	713.0	682.5	707.5	767.0	817.0	860.5	920.5	946.5	976.5	1032.5	1057.5	1159.0	1219.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

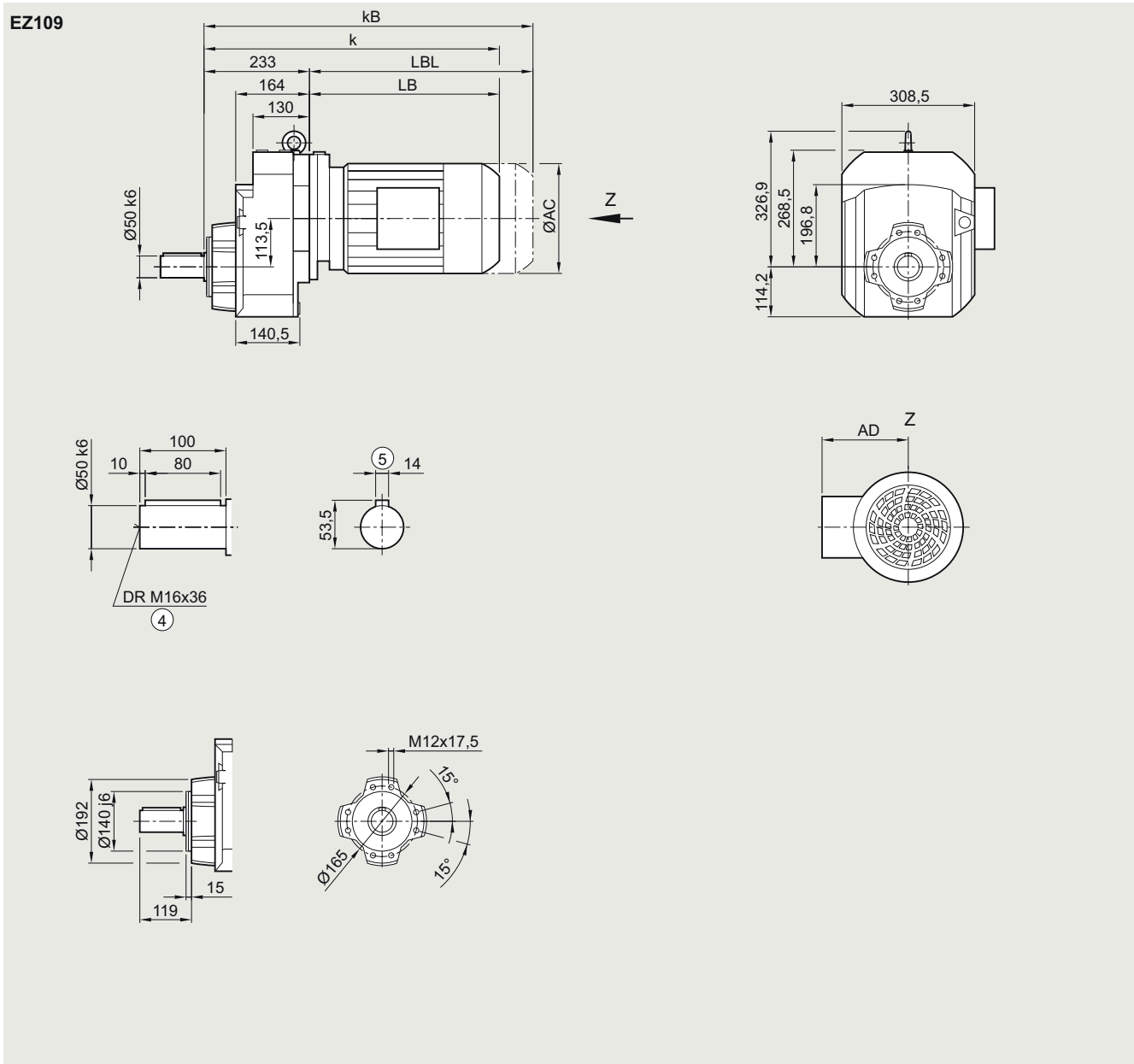
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

**Gearbox EZ109 in a housing flange design**

**EZ030**



Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	549.0	589.0	599.5	634.5	609.5	634.5	662.5	712.5	744.5	804.5	817.5	847.5	885.5	910.5	931.0	991.0
kB	619.0	659.0	678.0	713.0	682.5	707.5	767.0	817.0	860.5	920.5	946.5	976.5	1032.5	1057.5	1159.0	1219.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

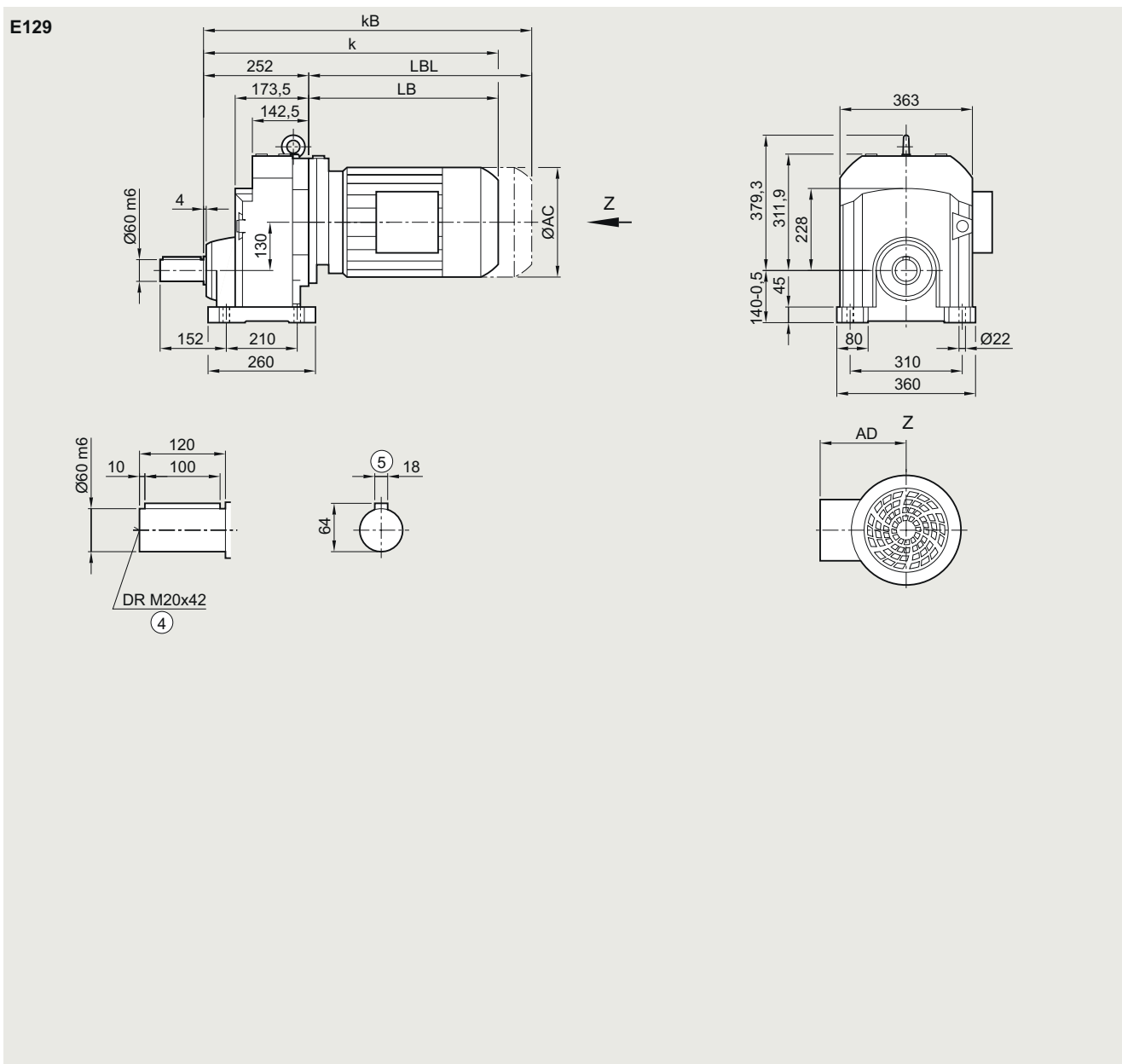
# SIMOGEAR geared motors

Helical geared motors

## Dimensional drawings

### Gearbox E129 in a foot-mounted design

E030



Motor	LE									LES							
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	561.0	601.0	609.5	644.5	619.5	644.5	670.5	720.5	752.5	812.5	825.5	855.5	893.5	918.5	945.0	1005.0	1050.5
k <sub>B</sub>	631.0	671.0	688.0	723.0	692.5	717.5	775.0	825.0	868.5	928.5	954.5	984.5	1040.5	1065.5	1173.0	1233.0	1275.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	693.0	753.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	921.0	981.0	1023.5

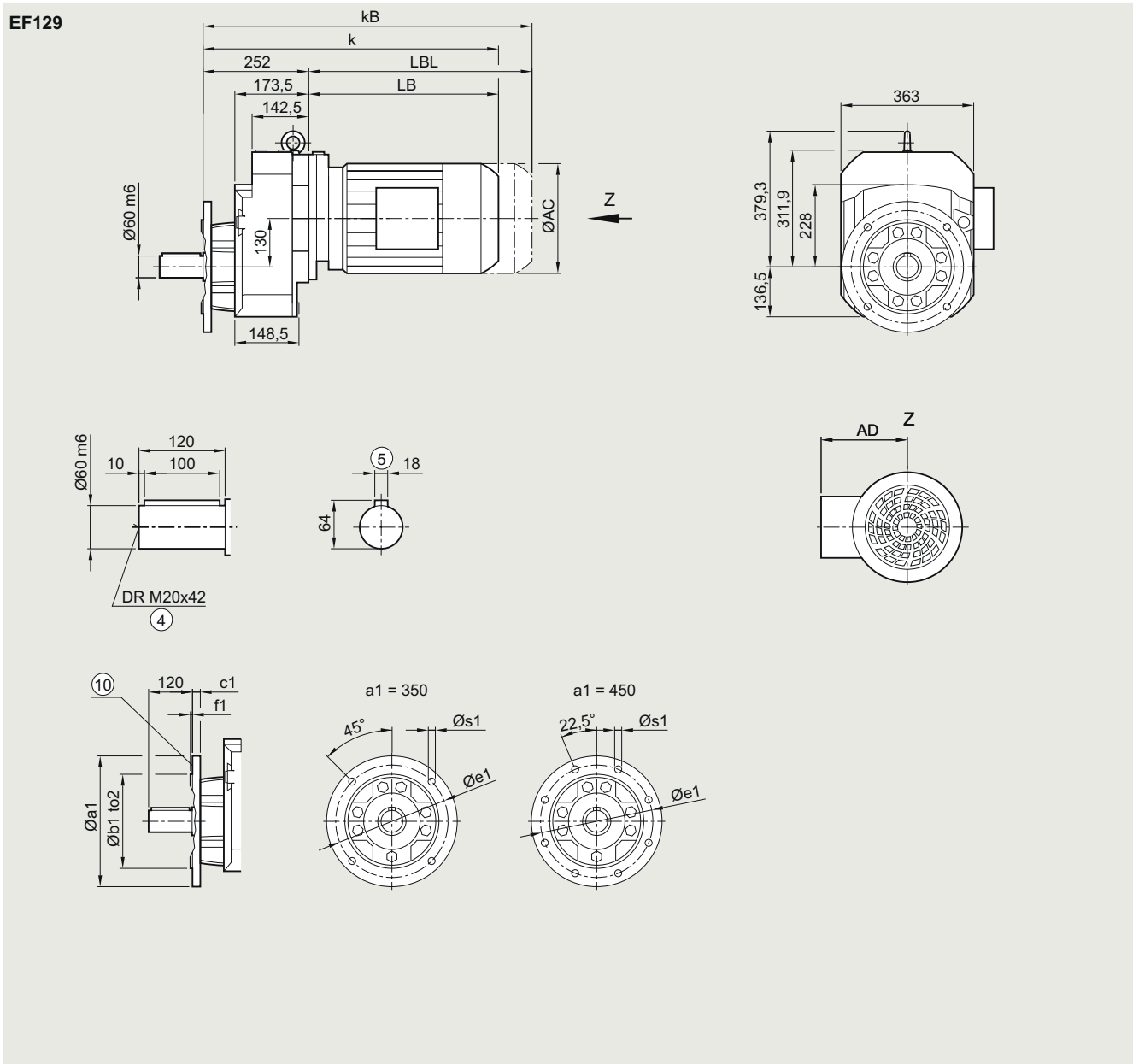
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox EF129 in a flange-mounted design**

**EF030**



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

Motor	LE								LES								
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	561.0	601.0	609.5	644.5	619.5	644.5	670.5	720.5	752.5	812.5	825.5	855.5	893.5	918.5	945.0	1005.0	1050.5
kB	631.0	671.0	688.0	723.0	692.5	717.5	775.0	825.0	868.5	928.5	954.5	984.5	1040.5	1065.5	1173.0	1233.0	1275.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	693.0	753.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	921.0	981.0	1023.5

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

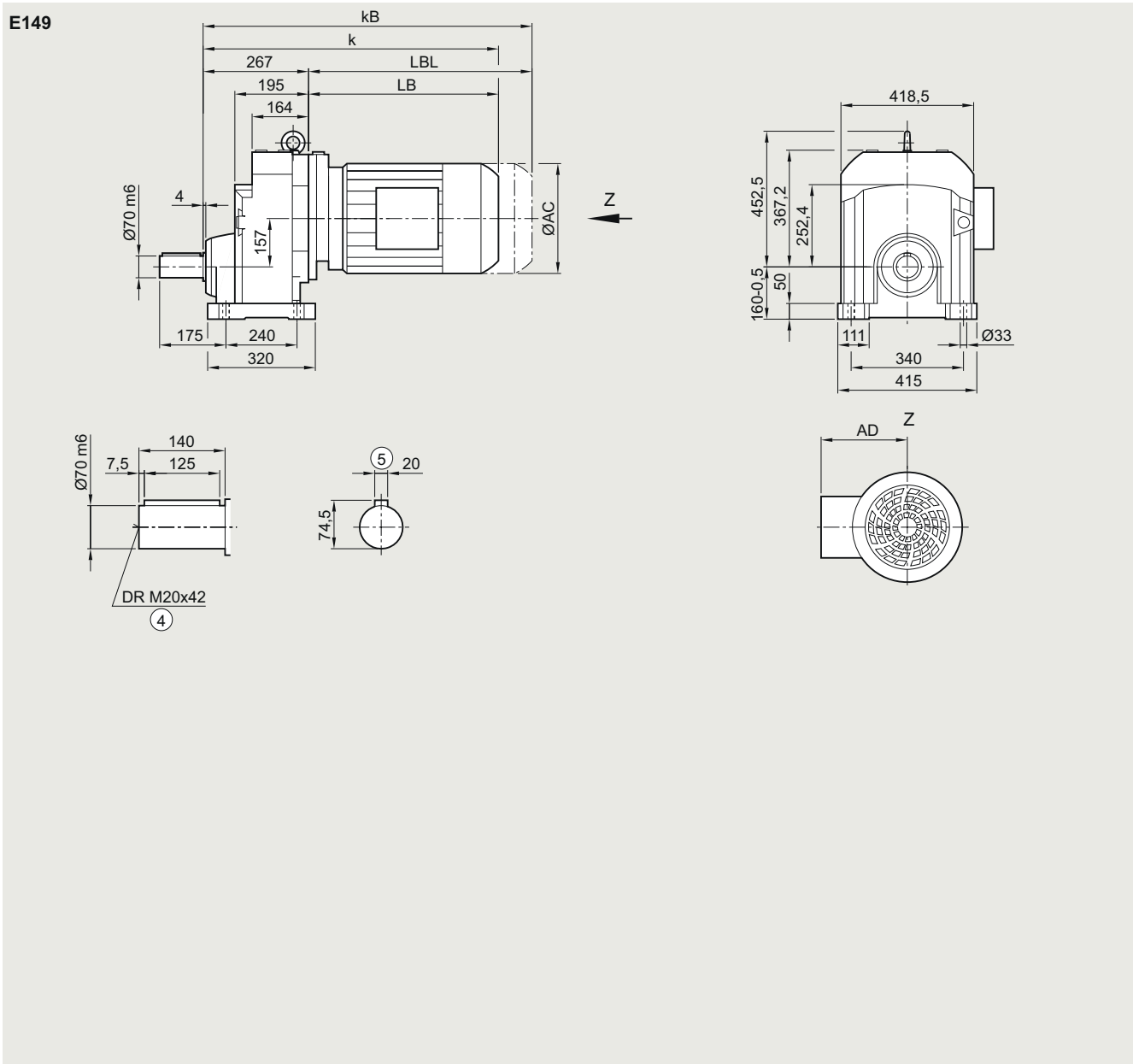
⑩ For inner contour, see page 3/180





**Gearbox E149 in a foot-mounted design**

**E030**



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	623.0	658.0	633.0	658.0	679.0	729.0	761.0	821.0	834.0	864.0	902.0	927.0	947.5	1007.5	1059.0
kB	701.5	736.5	706.0	731.0	783.5	833.5	877.0	937.0	963.0	993.0	1049.0	1074.0	1175.5	1235.5	1284.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

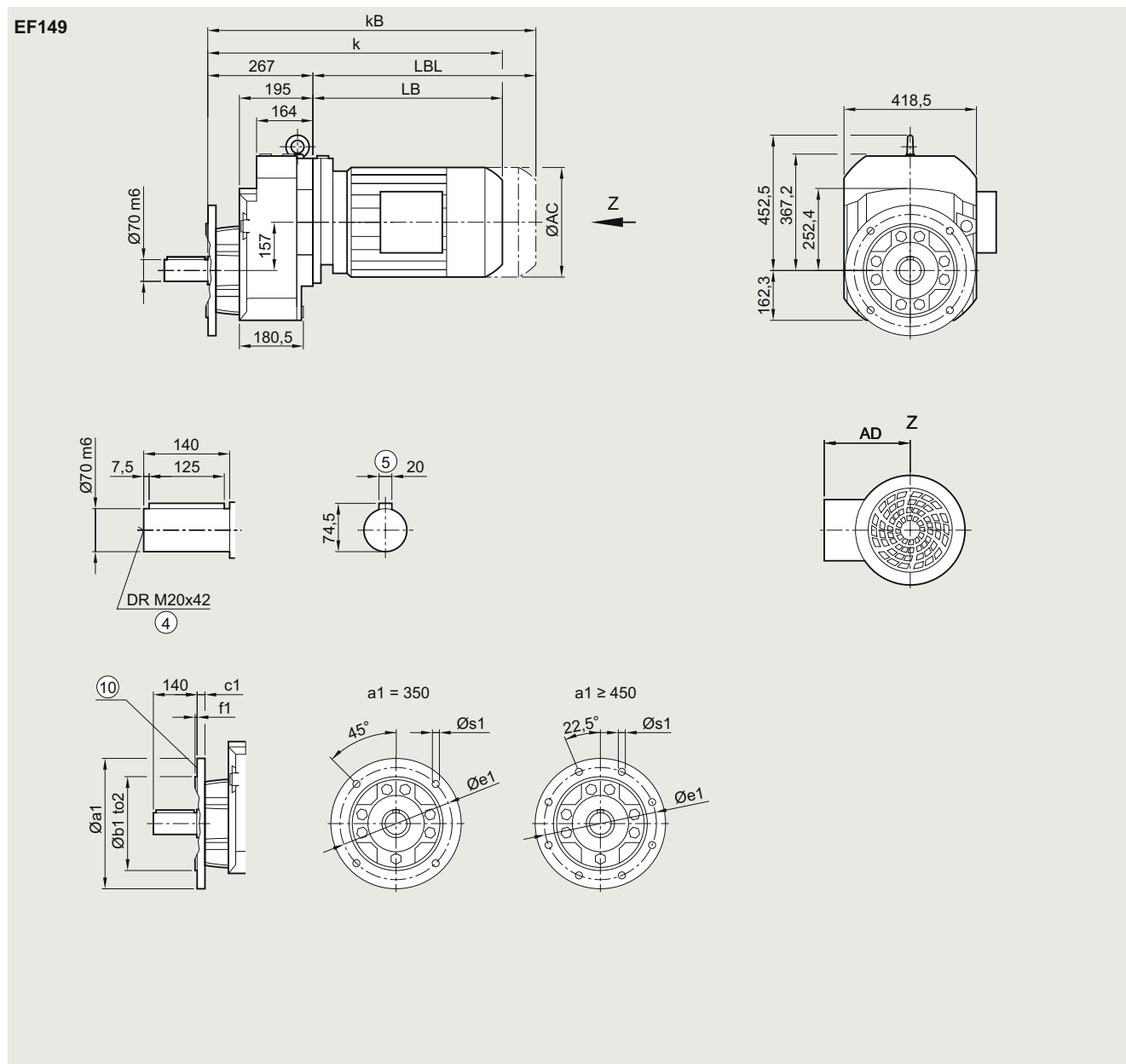
# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Gearbox EF149 in a flange-mounted design

##### EF030



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	20	300	5	17.5
	450	350	h6	22	400	5	17.5
	550	450	h6	22	500	5	17.5

Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	623.0	658.0	633.0	658.0	679.0	729.0	761.0	821.0	834.0	864.0	902.0	927.0	947.5	1007.5	1059.0
kB	701.5	736.5	706.0	731.0	783.5	833.5	877.0	937.0	963.0	993.0	1049.0	1074.0	1175.5	1235.5	1284.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

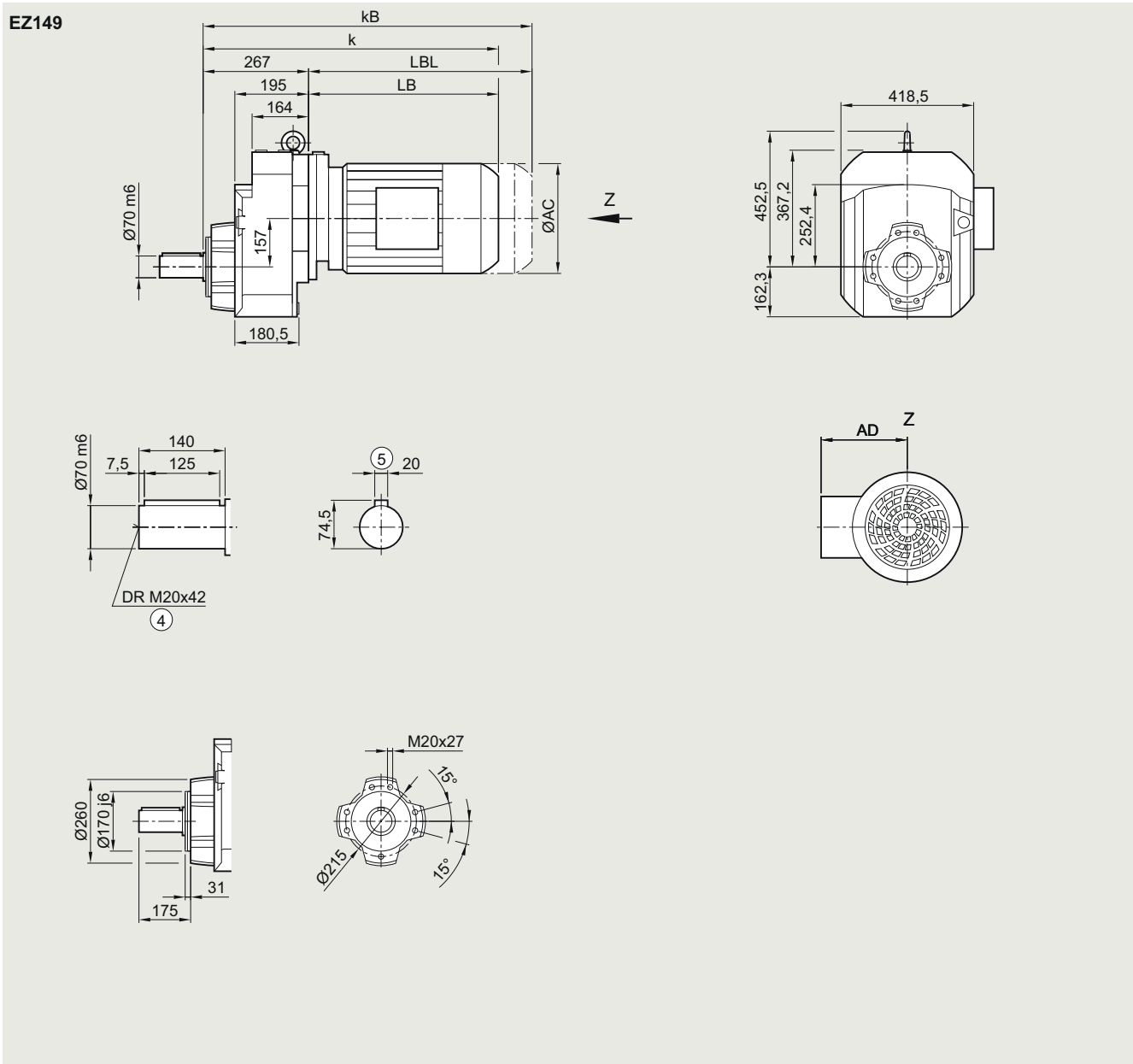
⑤ Feather key/keyway DIN 6885-1

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

**Gearbox EZ149 in a housing flange design**

**EZ030**



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	623.0	658.0	633.0	658.0	679.0	729.0	761.0	821.0	834.0	864.0	902.0	927.0	947.5	1007.5	1059.0
kB	701.5	736.5	706.0	731.0	783.5	833.5	877.0	937.0	963.0	993.0	1049.0	1074.0	1175.5	1235.5	1284.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

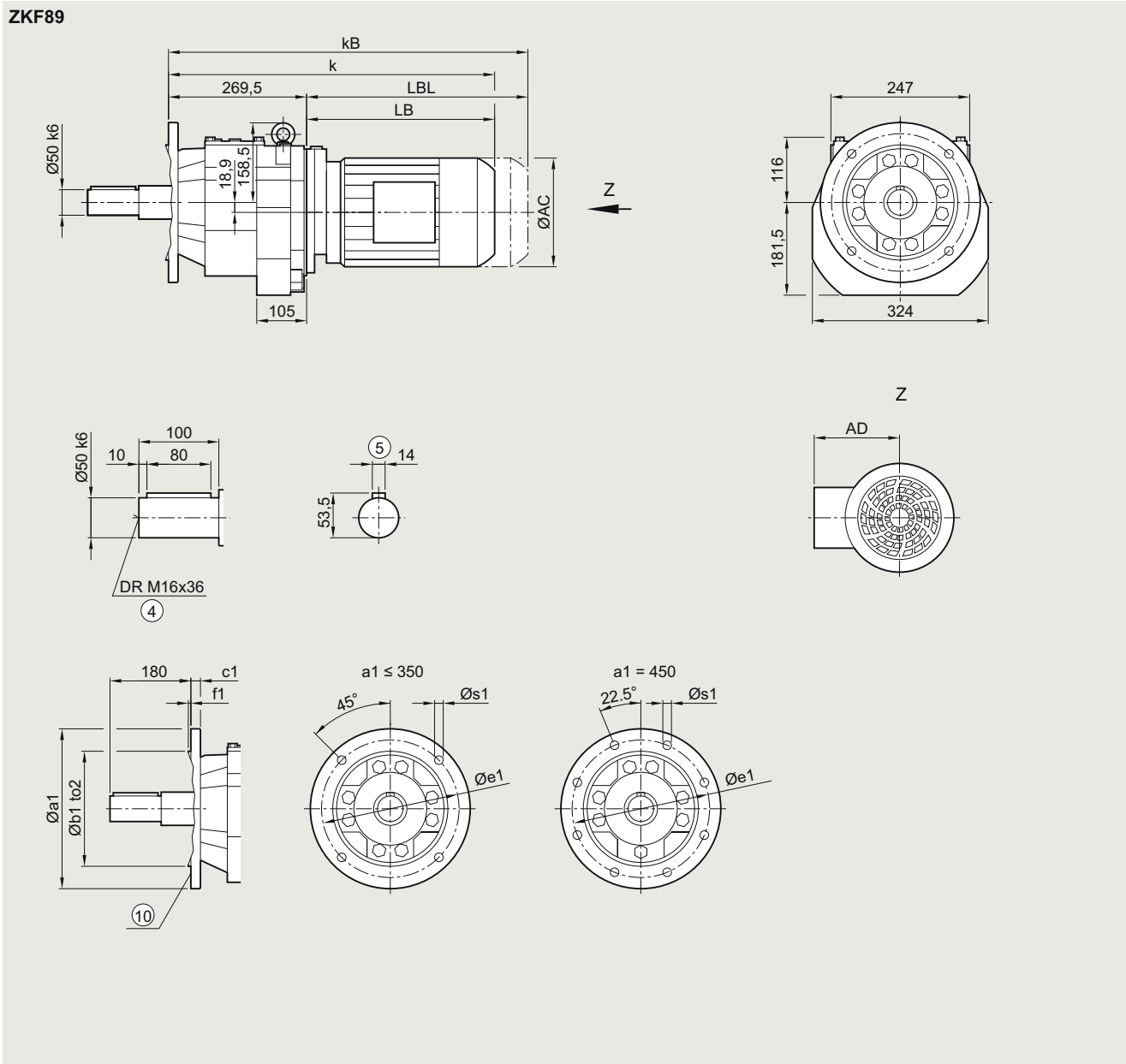
# SIMOGEAR geared motors

## Cooling tower geared motors

### Dimensional drawings

#### Gearbox ZKF89 in a flange-mounted design

##### ZKF030



Flange	a1	b1	to2	c1	e1	f1	s1							
	300	230	j6	16	265	4.0	13.5							
	350	250	j6	18	300	5.0	17.5							
	450	350	h6	18	400	5.0	17.5							
Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	531.0	566.0	592.5	632.5	645.0	680.0	655.0	680.0	708.0	758.0	790.0	850.0	863.0	893.0
kB	591.0	626.0	662.5	702.5	723.5	758.5	728.0	753.0	812.5	862.5	906.0	966.0	992.0	1022.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

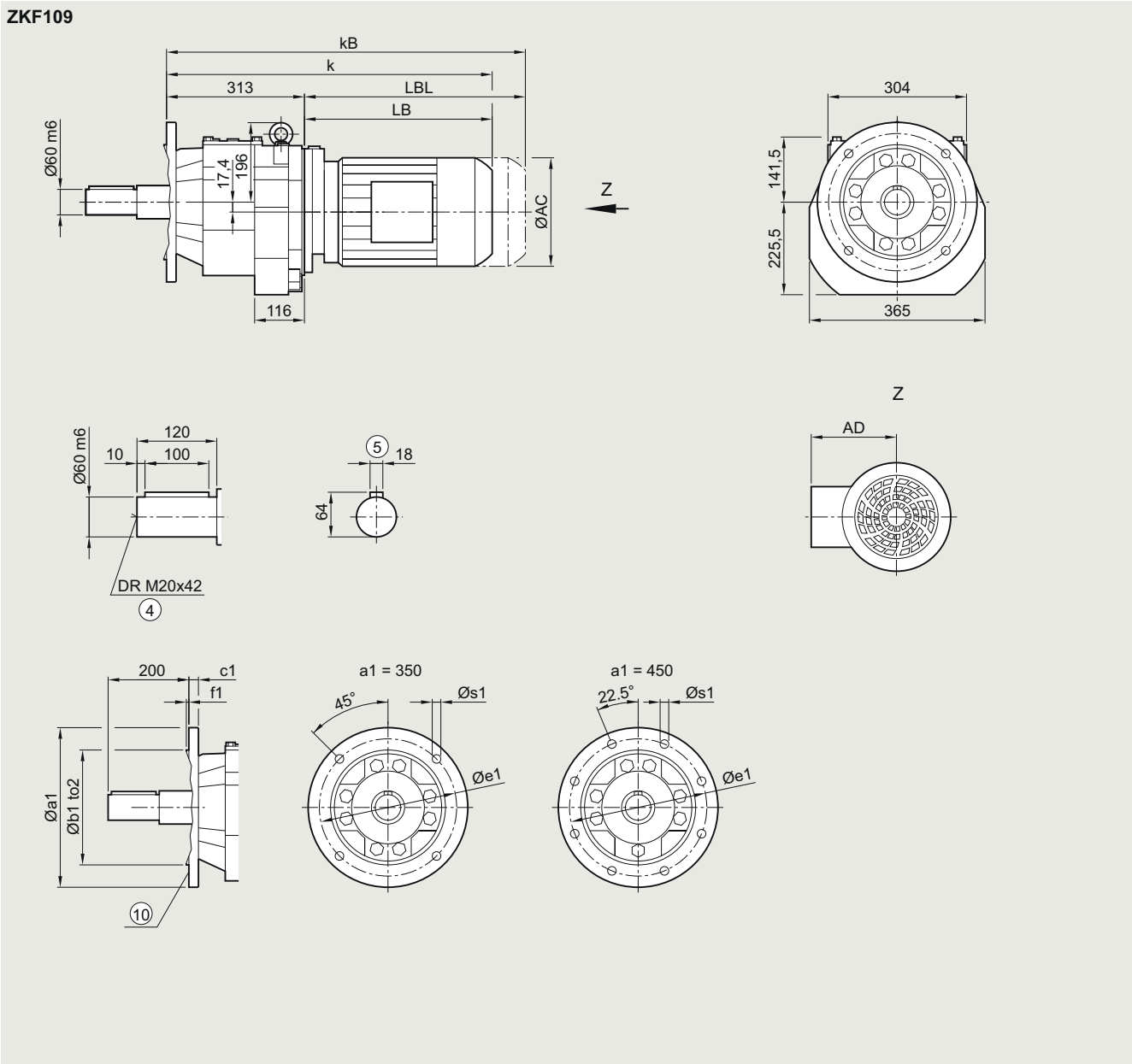
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

**Gearbox ZKF109 in a flange-mounted design**

**ZKF030**



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

Motor	LE										LES					
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0
k	629.0	669.0	679.5	714.5	689.5	714.5	742.5	792.5	824.5	884.5	897.5	927.5	965.5	990.5	1011.0	1071.0
kB	699.0	739.0	758.0	793.0	762.5	787.5	847.0	897.0	940.5	1000.5	1026.5	1056.5	1112.5	1137.5	1239.0	1299.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

# SIMOGEAR geared motors

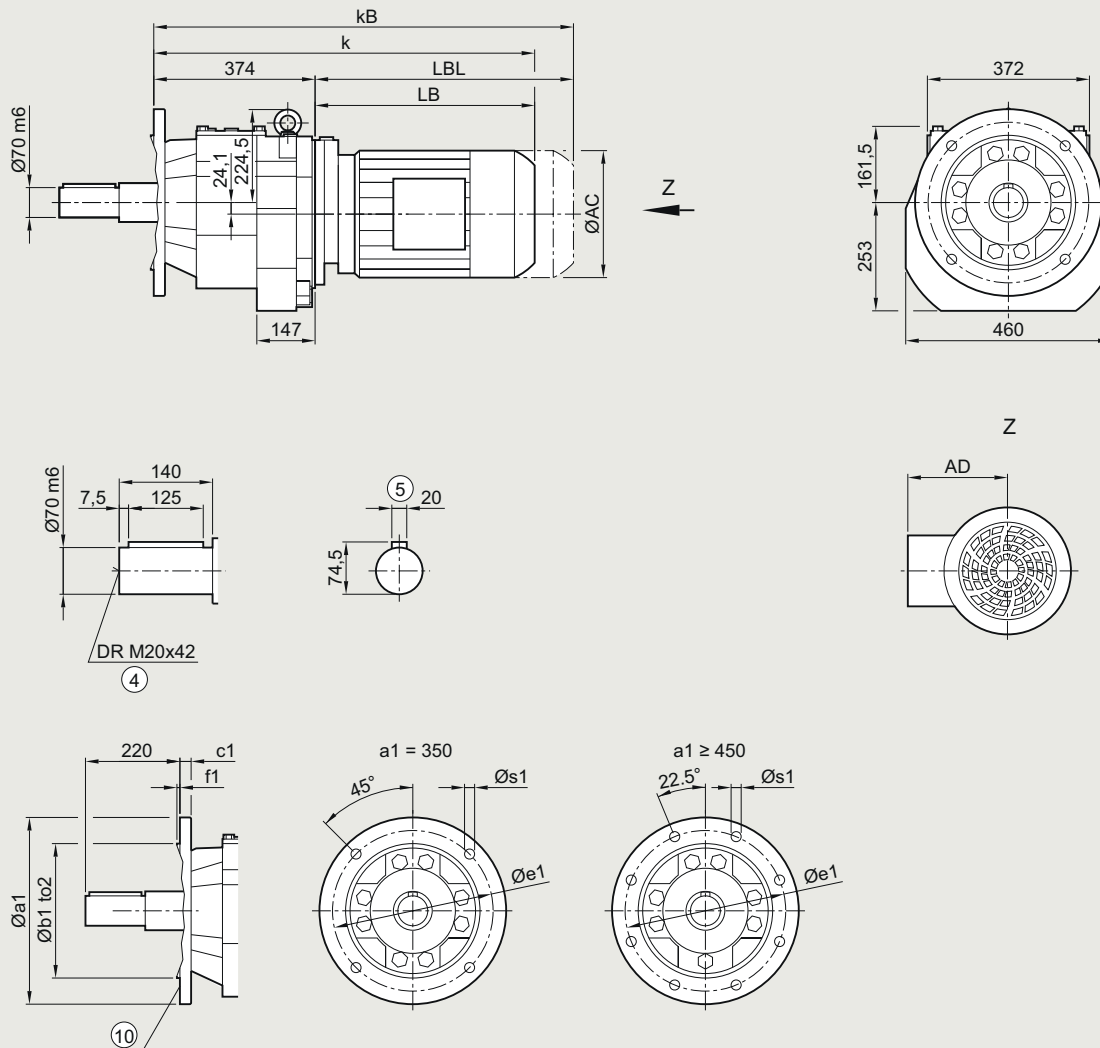
## Cooling tower geared motors

### Dimensional drawings

#### Gearbox ZKF129 in a flange-mounted design

##### ZKF030

##### ZKF129



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	20	300	5	17.5
	450	350	h6	22	400	5	17.5
	550	450	h6	22	500	5	17.5

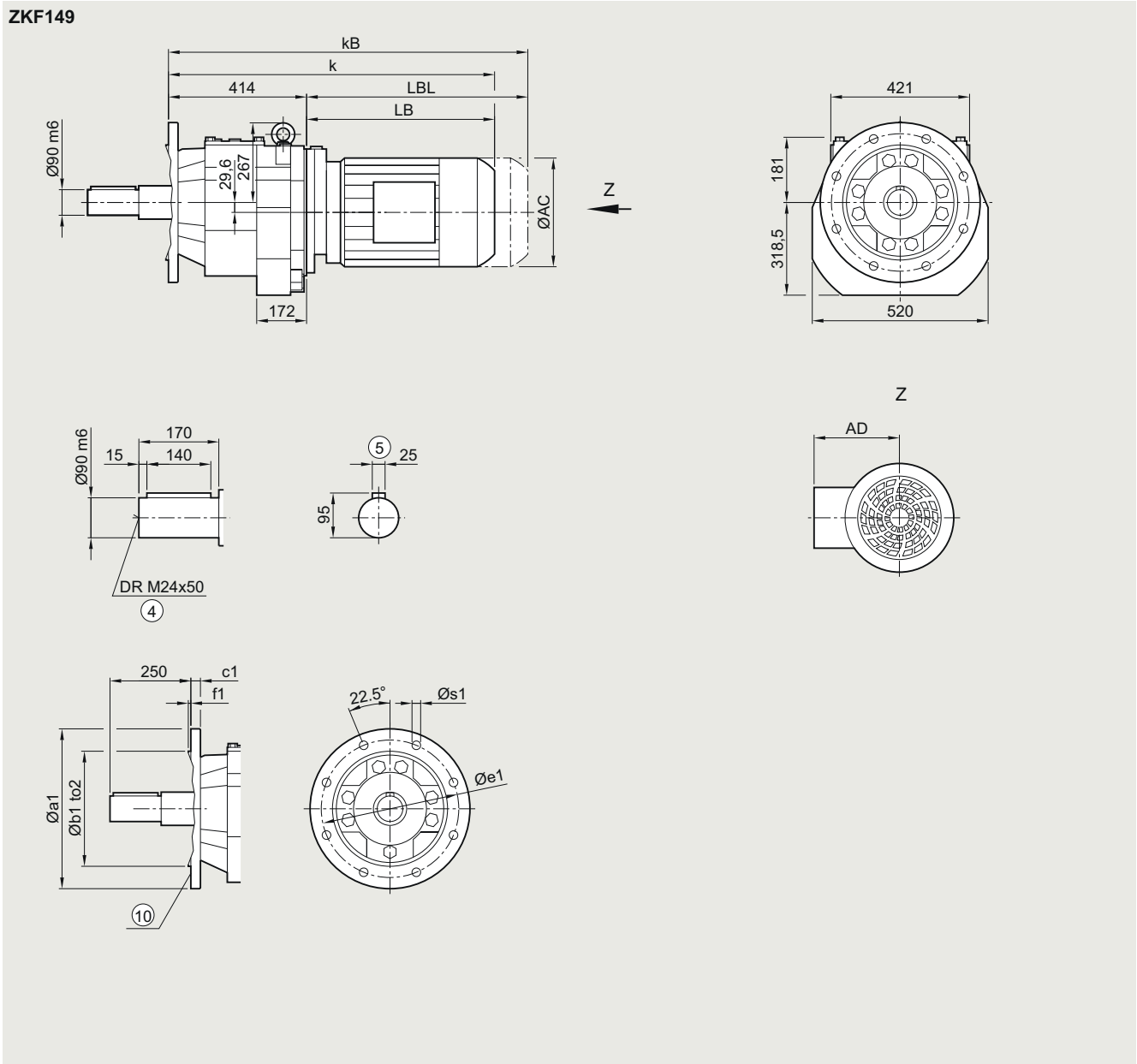
Motor	LE										LES						
	90S	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	683.0	723.0	731.5	766.5	741.5	766.5	792.5	842.5	874.5	934.5	947.5	977.5	1015.5	1040.5	1067.0	1127.0	1172.5
kB	753.0	793.0	810.0	845.0	814.5	839.5	897.0	947.0	990.5	1050.5	1076.5	1106.5	1162.5	1187.5	1295.0	1355.0	1397.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	693.0	753.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	921.0	981.0	1023.5

④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox ZKF149 in a flange-mounted design**
**ZKF030**


Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5

Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	770.0	805.0	780.0	805.0	826.0	876.0	908.0	968.0	981.0	1011.0	1049.0	1074.0	1094.5	1154.5	1206.0
kB	848.5	883.5	853.0	878.0	930.5	980.5	1024.0	1084.0	1110.0	1140.0	1196.0	1221.0	1322.5	1382.5	1431.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

④ DIN 332

1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

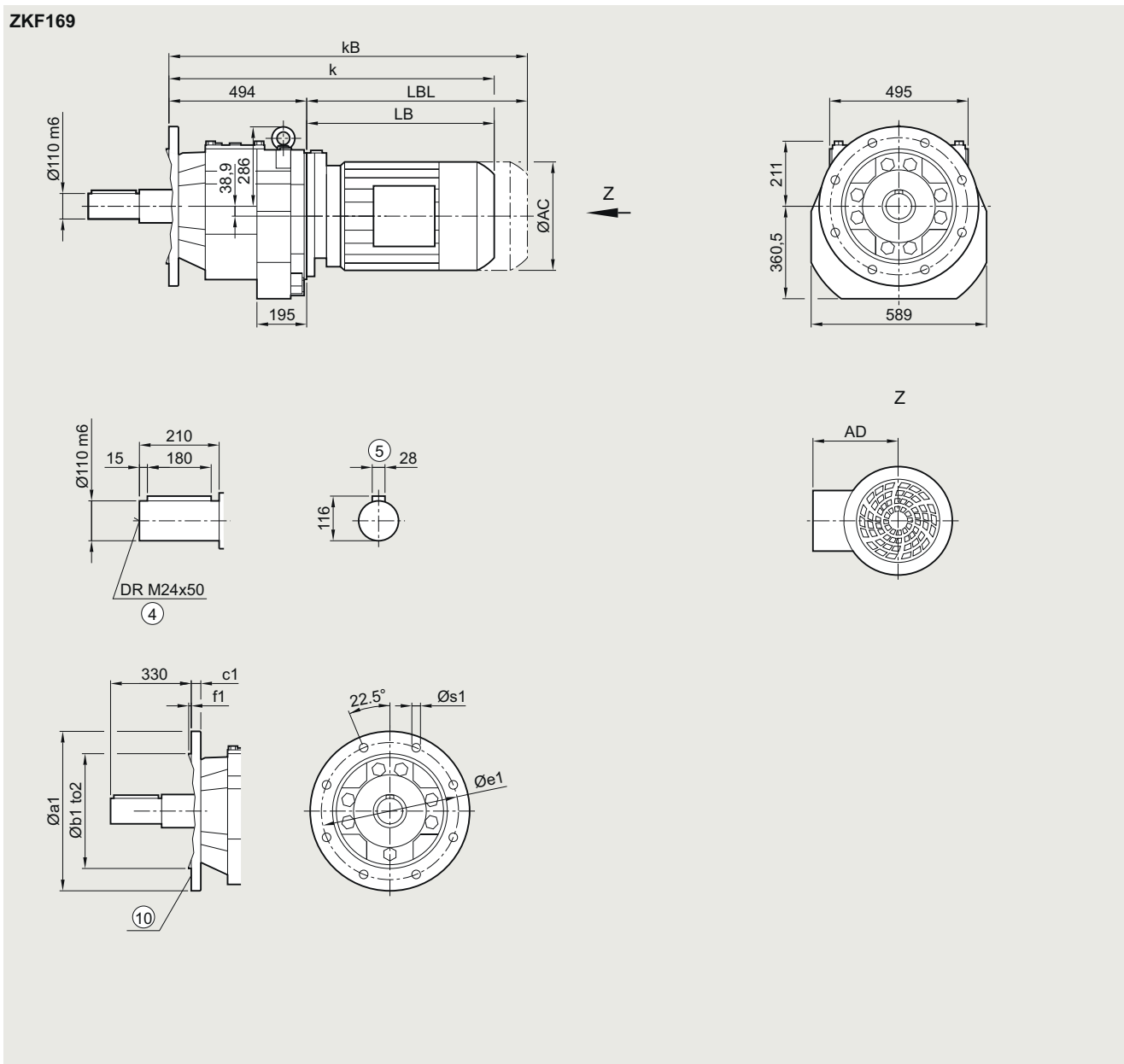
## SIMOGEAR geared motors

### Cooling tower geared motors

#### Dimensional drawings

#### Gearbox ZKF169 in a flange-mounted design

#### ZKF030



Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5
	660	550	h6	25	600	6	22.0

Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	847.5	872.5	893.0	943.0	975.0	1035.0	1047.5	1077.5	1115.5	1140.5	1160.0	1220.0	1267.5
kB	920.5	945.5	997.5	1047.5	1091.0	1151.0	1176.5	1206.5	1262.5	1287.5	1388.0	1448.0	1492.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

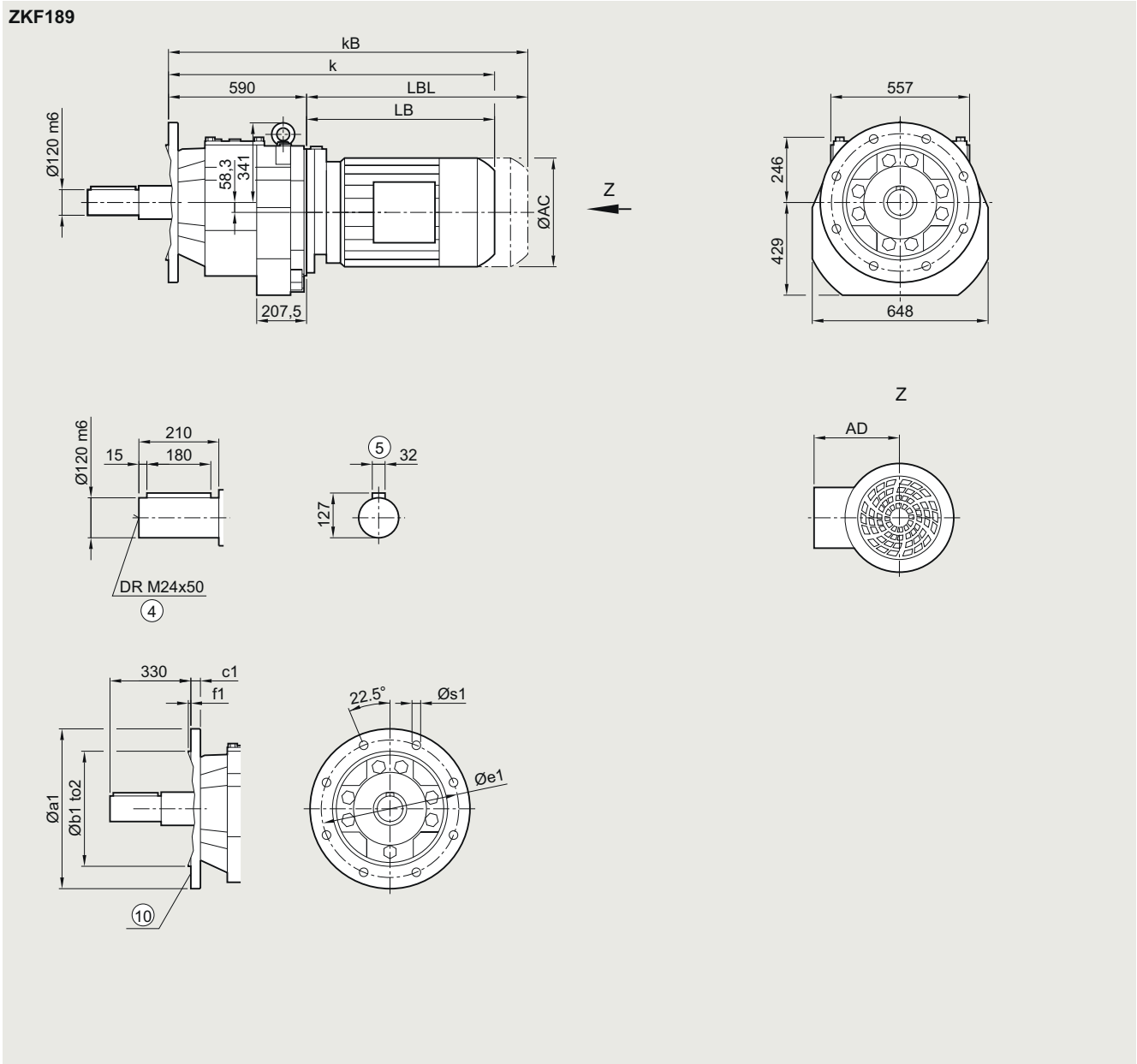
④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180



**Gearbox ZKF189 in a flange-mounted design**
**ZKF030**


Flange	a1	b1	to2	c1	e1	f1	s1
	550	450	h6	25	500	5	17.5
	660	550	h6	28	600	6	22.0

Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	337.0	337.0	407.5
k	943.5	968.5	989.0	1039.0	1071.0	1131.0	1143.5	1173.5	1211.5	1236.5	1256.0	1316.0	1363.5
kB	1016.5	1041.5	1093.5	1143.5	1187.0	1247.0	1272.5	1302.5	1358.5	1383.5	1484.0	1544.0	1588.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

<sup>④</sup> DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>⑤</sup> Feather key/keyway DIN 6885-1

<sup>⑩</sup> For inner contour, see page 3/180

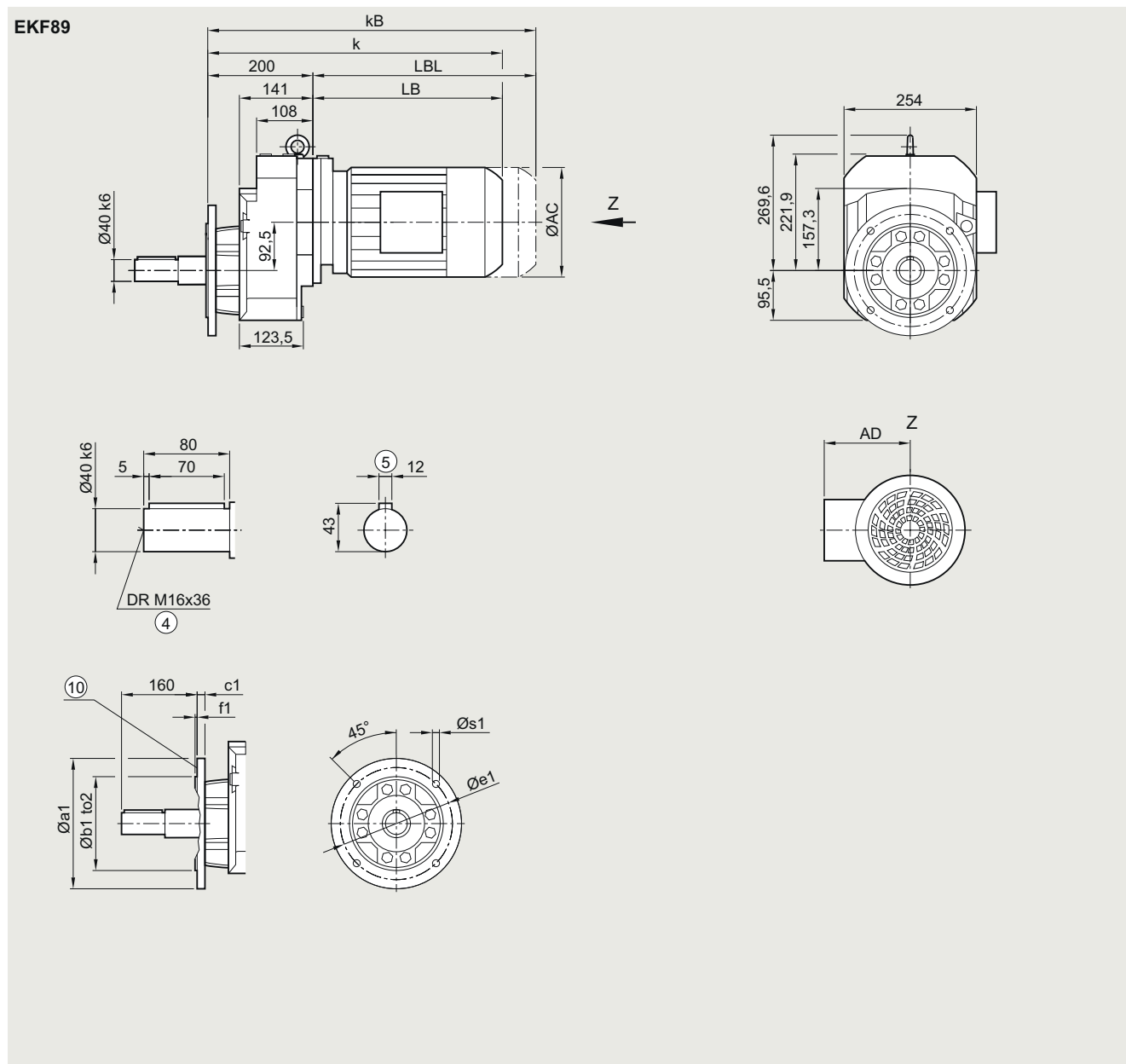
# SIMOGEAR geared motors

## Cooling tower geared motors

### Dimensional drawings

#### Gearbox EKF89 in a flange-mounted design

##### EKF030



Flange	a1	b1	to2	c1	e1	f1	s1							
	250	180	j6	15	215	4.0	13.5							
	300	230	j6	16	265	4.0	13.5							
	350	250	j6	16	300	5.0	17.5							
Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	461.5	496.5	523.0	563.0	575.5	610.5	585.5	610.5	638.5	688.5	720.5	780.5	793.5	823.5
kB	521.5	556.5	593.0	633.0	654.0	689.0	658.5	683.5	743.0	793.0	836.5	896.5	922.5	952.5
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

④ DIN 332

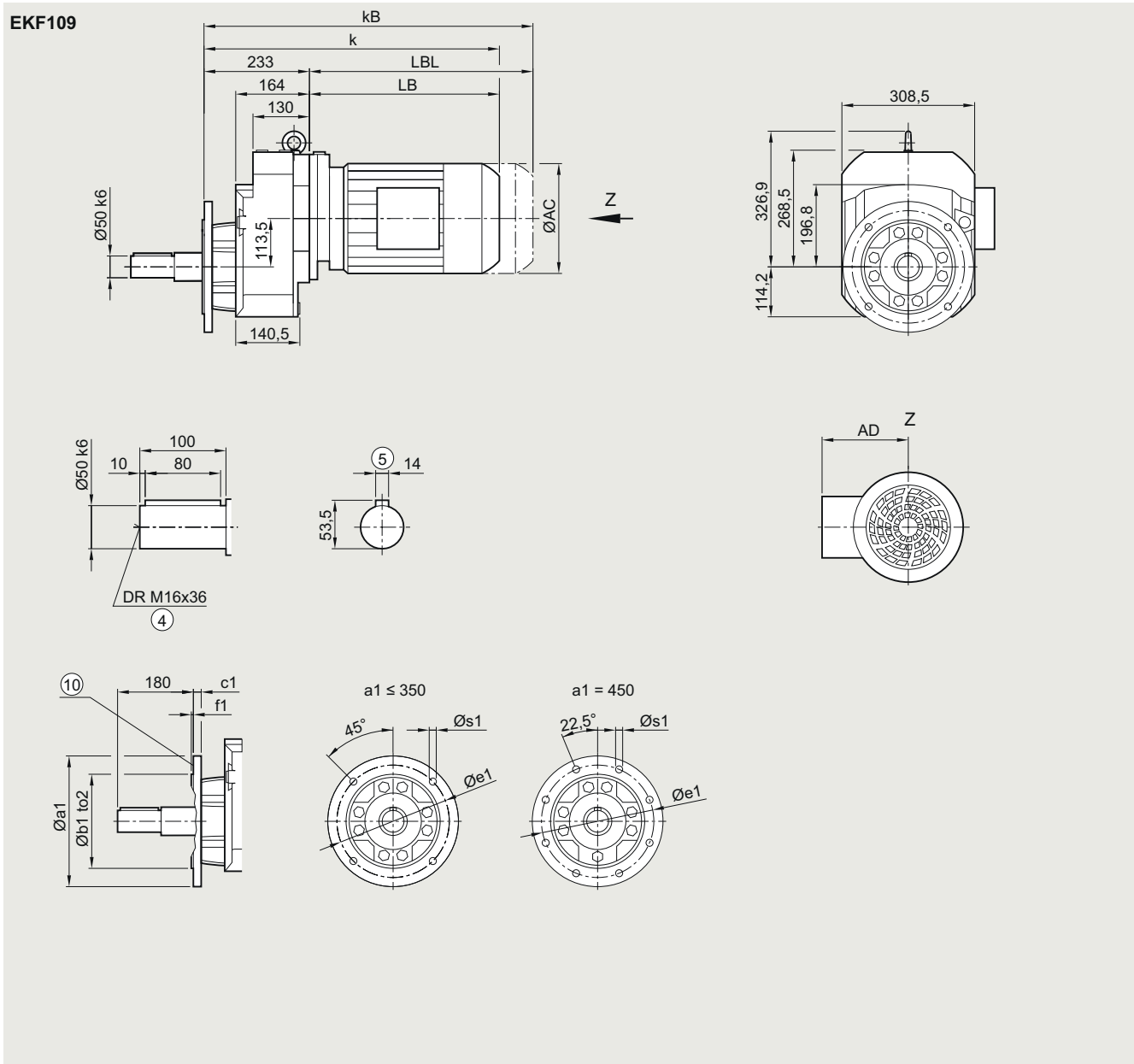
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox EKF109 in a flange-mounted design**

**EKF030**



Flange	a1	b1	to2	c1	e1	f1	s1
	300	230	j6	16	265	4.0	13.5
	350	250	j6	18	300	5.0	17.5
	450	350	h6	18	400	5.0	17.5

Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	549.0	589.0	599.5	634.5	609.5	634.5	662.5	712.5	744.5	804.5	817.5	847.5	885.5	910.5	931.0	991.0
kB	619.0	659.0	678.0	713.0	682.5	707.5	767.0	817.0	860.5	920.5	946.5	976.5	1032.5	1057.5	1159.0	1219.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 3/180

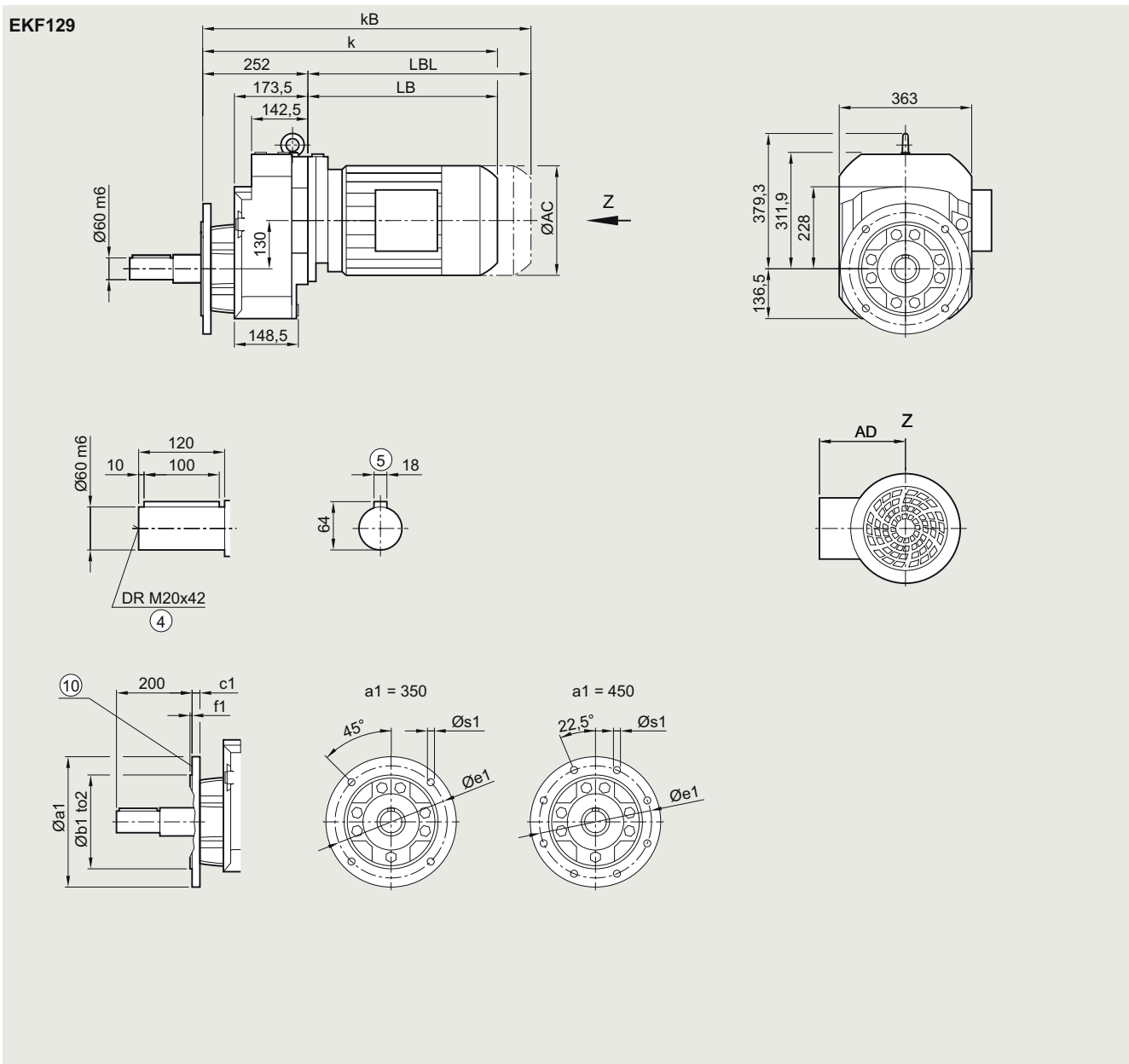
# SIMOGEAR geared motors

## Cooling tower geared motors

### Dimensional drawings

#### Gearbox EKF129 in a flange-mounted design

##### EKF030



Flange	a1	b1	to2	c1	e1	f1	s1										
	350	250	h6	18	300	5	17.5										
	450	350	h6	22	400	5	17.5										
Motor	LE								LES								
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	561.0	601.0	609.5	644.5	619.5	644.5	670.5	720.5	752.5	812.5	825.5	855.5	893.5	918.5	945.0	1005.0	1050.5
kB	631.0	671.0	688.0	723.0	692.5	717.5	775.0	825.0	868.5	928.5	954.5	984.5	1040.5	1065.5	1173.0	1233.0	1275.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	693.0	753.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	921.0	981.0	1023.5

④ DIN 332

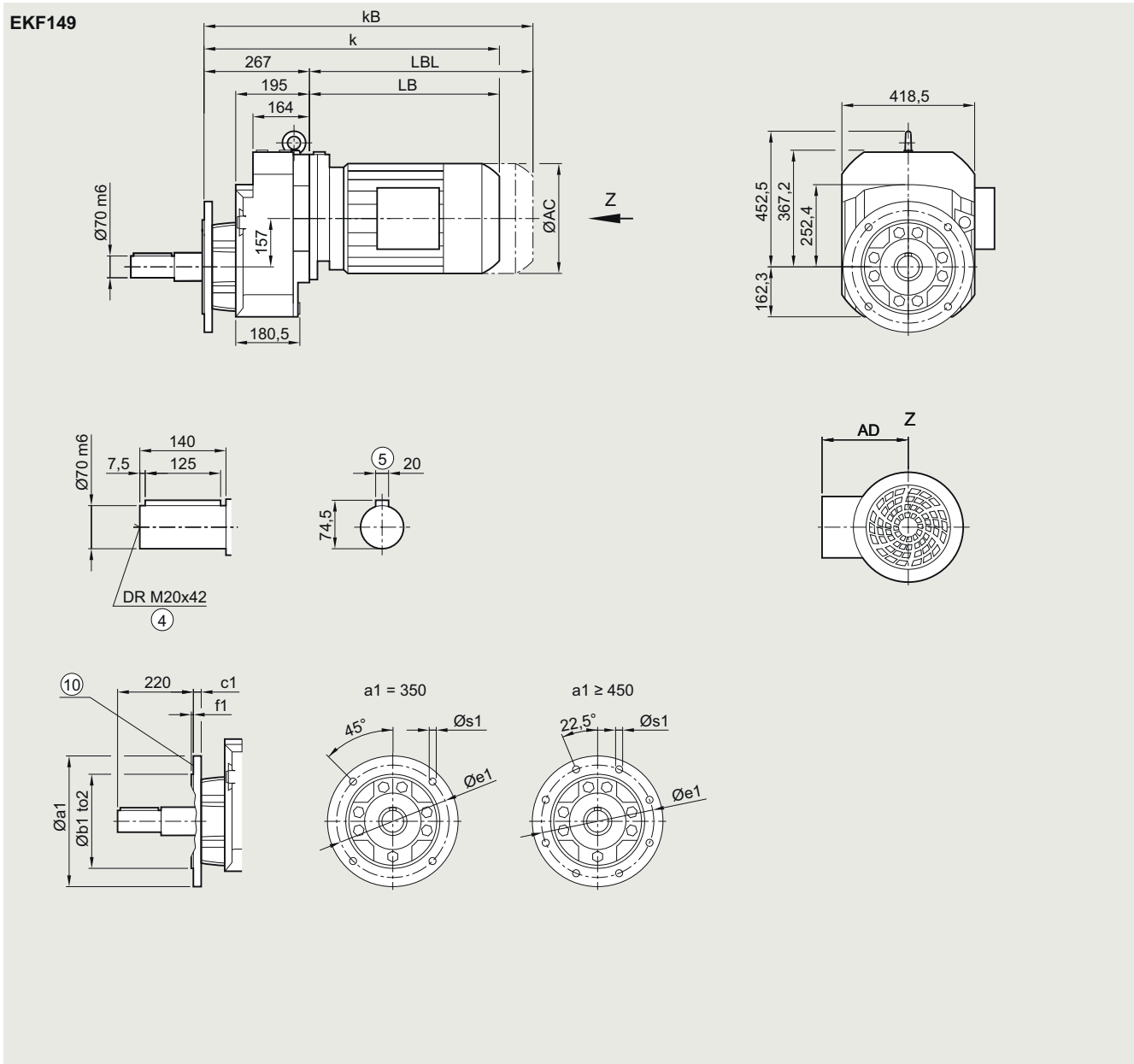
1) AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180

**Gearbox EKF149 in a flange-mounted design**

**EKF030**



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	20	300	5	17.5
	450	350	h6	22	400	5	17.5
	550	450	h6	22	500	5	17.5

Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	623.0	658.0	633.0	658.0	679.0	729.0	761.0	821.0	834.0	864.0	902.0	927.0	947.5	1007.5	1059.0
kB	701.5	736.5	706.0	731.0	783.5	833.5	877.0	937.0	963.0	993.0	1049.0	1074.0	1175.5	1235.5	1284.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

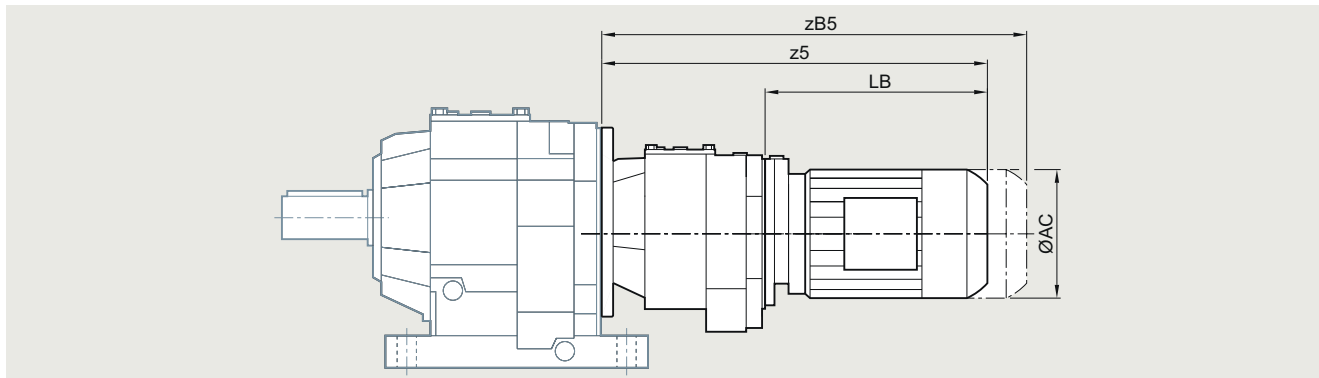
④ DIN 332

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 3/180



**Helical tandem geared motors**


Gearbox	Motor	AC	z5	zB5	LB
D.169-Z/D69	LE63	117.8	391.5	436.0	184.5
	LE63Z	117.8	417.5	462.0	210.5
	LE71	138.8	423.5	478.5	216.5
	LE71Z	138.8	442.5	497.5	235.5
	LE71Y	138.8	482.5	539.5	275.5
	LE80	156.3	487.5	547.5	280.5
	LE80Z	156.3	522.5	582.5	315.5
	LE90	173.8	549.0	619.0	342.0
	LE90Z	173.8	589.0	659.0	382.0
	LE100	198.0	605.5	684.0	398.5
	LE100Z	198.0	640.5	719.0	433.5
	LE112	222.0	615.5	688.5	408.5
	LE112Z	222.0	650.0	723.0	443.0
	LE132	264.0	668.5	773.0	461.5
LE132Z	264.0	718.5	823.0	511.5	
D.189-Z/D69	LE63	117.8	391.5	436.0	184.5
	LE63Z	117.8	417.5	462.0	210.5
	LE71	138.8	423.5	478.5	216.5
	LE71Z	138.8	442.5	497.5	235.5
	LE71Y	138.8	482.5	537.5	275.5
	LE80	156.3	487.5	547.5	280.5
	LE80Z	156.3	522.5	582.5	315.5
	LE90	173.8	549.0	619.0	342.0
	LE90Z	173.8	589.0	659.0	382.0
	LE100	198.0	605.5	684.0	398.5
	LE100Z	198.0	640.5	719.0	433.5
	LE112	222.0	615.5	688.5	408.5
	LE112Z	222.0	650.0	723.0	443.0
	LE132	264.0	668.5	773.0	461.5
LE132Z	264.0	718.5	823.0	511.5	

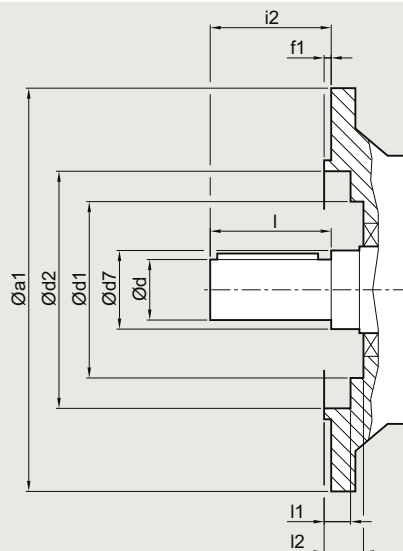
# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Inner contour of the flange-mounted design

Notes regarding the design of the customer's interface.

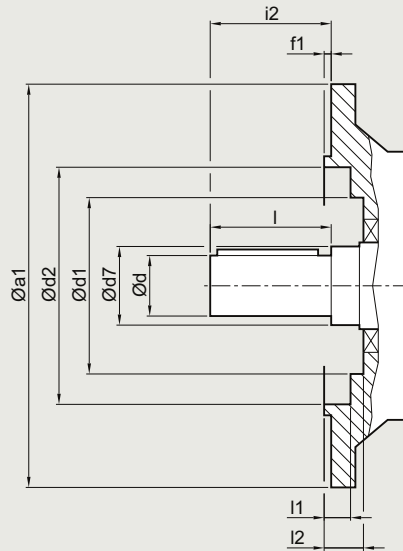


Gearbox	a1	d	d7	d1 ZF/DF	d1 ZB/DB	d2	f1	i2	l	l1 ZF/DF	l1 ZB/DB	l2
<b>Helical gearbox ZF/DF or ZB/DB</b>												
ZF/DF19	120	16	25	48.0	-	72.0	3.0	28	28	1.0	-	6
		16							40			
		20							40			
	140	16	25	48.0	-	87.0	3.0	28	28	1.0	-	6
		16							40			
		20							40			
160	16	25	48.0	-	102.0	3.5	28	28	1.0	-	6.5	
	16							40				
	20							40				
ZF/DF29, ZB/DB29	120	25	30	56.0	56.0	72.0	3.0	50	50	2.0	2.0	8
ZF/DF29	140	25	30	56.0	-	87.0	3.5	50	50	2.0	-	7
						102.0		50	50			7.5
ZF/DF39, ZB/DB39	120	25	35	69.0	66.0	72.0	3.0	50	50	4.0	4.0	9
		30						60	60			
ZF/DF39	160	25	35	66.5	-	102.0	3.5	50	50	1.5	-	6.5
		30						60	60			
		200						25	35			
ZF/DF49, ZB/DB49	140	30	35	79.0	79.0	84.5	3.0	60	60	4.0	4.0	9.5
ZF/DF49	160	30	35	79.0	-	94.5	3.5	60	60	5.5	-	11
						121.0		60	60			4.5
ZF/DF59, ZB/DB59	160	30	40	88.0	88.0	94.5	3.5	60	60	4.5	4.5	11
		35	40					70	70			
		40	45					80	80			
ZF/DF59	200	30	40	88.0	-	115.0	3.5	60	60	4.5	-	9
		35	40					70	70			
		40	45					80	80			
		250	30					40	88.0			
ZF/DF69, ZB/DB69	200	35	47	105.0	105.0	115.0	3.5	70	70	4.5	4.5	11
ZF/DF69	250	35	47	105.0	-	168.0	4.0	70	70	4.0	-	10.5



**Inner contour of the flange-mounted design**

Notes regarding the design of the customer's interface.



Gearbox	a1	d	d7	d1 ZF/DF	d1 ZB/DB	d2	f1	i2	l	l1 ZF/DF	l1 ZB/DB	l2
<b>Helical gearbox ZF/DF or ZB/DB</b>												
ZF/DF79, ZB/DB79	250	35 40 50	52	113.0	114.5	168.0	4.0	70 80 100	70 80 100	0.5	2.5	7.5
ZF/DF79	300	35 40 50	52	113.0	-	217.0	4.0	70 80 100	70 80 100	0.5	-	7.5
	350	35 40 50	52	113.0	-	238.0	5.0	70 80 100	70 80 100	0.5	-	8.5
ZF/DF89, ZB/DB89	300	50 60	62	143.0	143.0	218.0	4.0	100 120	100 120	1.5	1.5	8
ZF/DF89	350	50 60	62	143.0	-	238.0	5.0	100 120	100 120	2.5	-	9
	450	50 60	62	143.0	-	334.0	5.0	100 120	100 120	0.5	-	9
ZF/DF109	350 450	60	65	157.0 168.0	-	236.0 335.0	5.0	120 120	120 120	2.0 0	-	9
ZF/DF129	350 450 550	70	75	180.0	-	236.0 330.0 428.0	5.0	140 140 140	140 140 140	7.5 5.0	-	9
ZF/DF149	450 550	90	100	225.0	-	330.0 430.0	5.0	170 170	170 170	2.5	-	10
ZF/DF169	450	100 110	120	235.0	-	330.0	5.0	210 210	210 210	0.5	-	10
	550	100 110	120	235.0	-	430.0	5.0	210 210	210 210	0.5	-	10
	660	100 110	120	235.0	-	530.0	6.0	210 210	210 210	0	-	11
ZF/DF189	550 660	120	140	274.0	-	430.0 530.0	5.0 6.0	210 210	210 210	0 1.0	-	10 11

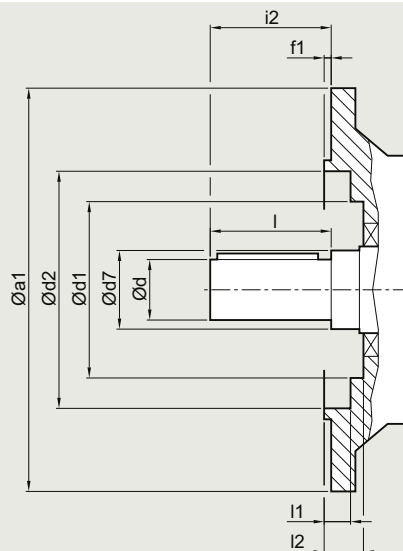
# SIMOGEAR geared motors

## Helical geared motors

### Dimensional drawings

#### Inner contour of the flange-mounted design

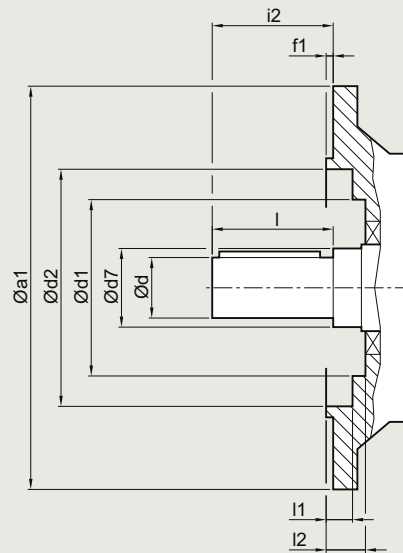
Notes regarding the design of the customer's interface.



Gearbox	a1	d	d7	d1	d2	f1	i2	l	l1	l2		
<b>Helical gearbox ZF/DF with VLplus reinforced bearing system (G30)</b>												
ZF/DF89	300	60	70	143	218.0	4.0	120	120	1.5	8.0		
	350				238.0	5.0			2.5	9.0		
	450				334.0				0.5			
ZF/DF109	350	70	75	157	236.0	5.0	140	140	2.0	9.0		
	450			168	335.0				0			
ZF/DF129	350	90	95	180	236.0	5.0	170	170	7.5	10.0		
	450				330.0				7.5			
	550				428.0				5.0			
ZF/DF149	550	100	120	225	430.0	5.0	210	210	5.5	11.0		
ZF/DF169	450	120	140	235	330.0	5.0	210	210	0.5	10.0		
	550				430.0							
	660				530.0	6.0				0	11.0	
<b>Helical gearbox EF</b>												
EF39	120	20	35	-	72.0	3.0	40	40	6.0	-		
	140			80.0								
	160			100.0	3.5	40				40	5.5	6.5
	200			121.0								
EF49	160	25	40	88	94.5	3.5	50	50	4.5	11.0		
	200				115.0						9.0	
	250				168.0	4.0			50	50	4.0	10.5
EF69	200	30	40	105	115.0	3.5	60	60	4.5	11.0		
	250				168.0	4.0					4.0	10.5
EF89	250	40	45	113	168.0	4.0	80	80	0.5	7.5		
	300				217.0							
	350				238.0	5.0						
EF109	300	50	55	143	218.0	4.0	100	100	1.5	8.0		
	350				238.0	5.0					2.5	9.0
	450				334.0						0.5	
EF129	350	60	65	157	236.0	5.0	120	120	2.0	9.0		
	450			168	335.0				0			
EF149	350	70	75	180	236.0	5.0	140	140	7.5	9.0		
	450			180	330.0							
	550			180	428.0				5.0			

**Inner contour of the flange-mounted design**

Notes regarding the design of the customer's interface.



Gearbox	a1	d	d7	d1	d2	f1	i2	l	l1	l2	
<b>Cooling tower gearbox ZKF</b>											
ZKF89	300	50	62	143	218.0	4.0	180	100	1.5	8.0	
	350				238.0	5.0			2.5	9.0	
	450				334.0				0.5		
ZKF109	350	60	65	157	236.0	5.0	200	120	2.0	9.0	
	450			168	335.0				0		
ZKF129	350	70	75	180	236.0	5.0	220	140	7.5	9.0	
	450				330.0						
	550				428.0				5.0		
ZKF149	450	90	100	225	330.0	5.0	250	170	2.5	10.0	
	550			430.0							
ZKF169	450	110	120	235	330.0	5.0	330	210	0.5	10.0	
	550				430.0						
	660				530.0	6.0				0	11.0
ZKF189	550	120	140	274	430.0	5.0	330	210	0	10.0	
	660				530.0	6.0				1.0	11.0
<b>Cooling tower gearbox EKF</b>											
EKF89	250	40	45	113	168	4.0	160	80	0.5	7.5	
	300				217						
	350				238	5.0				8.5	
EKF109	300	50	55	143	218	4.0	180	100	1.5	8.0	
	350				238	5.0				2.5	9.0
	450				334					0.5	
EKF129	350	60	65	157	236	5.0	200	120	2.0	9.0	
	450			168	335				0		
EKF149	350	70	75	180	236	5.0	220	140	7.5	9.0	
	450				330						
	550				428				5.0		

## SIMOGEAR geared motors

### Notes

3

## Parallel shaft geared motors



<b>4/2</b>	<b>Orientation</b>
<b>4/3</b>	<b>Geared motors up to 55 kW</b>
4/3	Selection and ordering data
<b>4/46</b>	<b>Transmission ratios and torques</b>
4/46	Selection and ordering data
<b>4/57</b>	<b>Transmission ratios and torques for very low speeds</b>
4/57	Selection and ordering data
<b>4/68</b>	<b>Dimensional drawings</b>
4/68	Overview
4/70	Parallel shaft geared motors FZ./FD.29
4/74	Parallel shaft geared motors FZ./FD.39
4/78	Parallel shaft geared motors FZ./FD.49
4/82	Parallel shaft geared motors FZ./FD.69
4/86	Parallel shaft geared motors FZ./FD.79
4/90	Parallel shaft geared motors FZ./FD.89
4/95	Parallel shaft geared motors FZ./FD.109
4/100	Parallel shaft geared motors FZ./FD.129
4/105	Parallel shaft geared motors FZ./FD.149
4/110	Parallel shaft geared motors FZ./FD.169
4/115	Parallel shaft geared motors FZ./FD.189
4/119	Parallel shaft tandem geared motors
4/121	SIMOLOC assembly system
	<u>Protective covers</u>
4/122	Protective covers for hollow shaft
4/122	Protective covers for hollow shaft with shrink disk
4/123	Protective covers for hollow shaft with SIMOLOC assembly system
4/124	Inner contour of the flange-mounted design

## SIMOGEAR geared motors

### Parallel shaft geared motors

#### Orientation

#### SIMOGEAR parallel shaft geared motor F

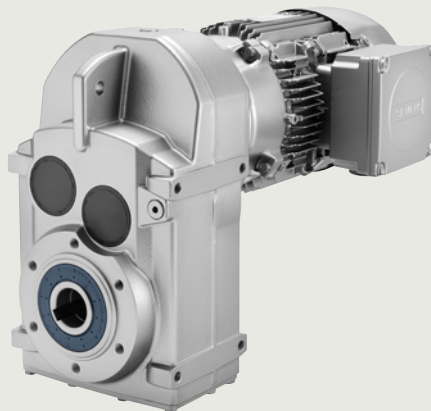


Fig. 4/1 Parallel shaft geared motor F

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		$T_{2N}$ Nm	$i$ -	$P_1$ kW
FZ29 ... FZ189 (2-stage)	11	150 ... 19000	3.5 ... 70.74	55
FD29 ... FD189 (3-stage)	11	150 ... 19000	32 ... 413	55
FZ.29-Z19 ... FD.189-D69 (4-stage to 6-stage)	11	150 ... 19000	274 ... 29900	7.5

SIMOGEAR parallel shaft geared motors are available in the following versions:

#### Transmission stages

- 2-stage or 3-stage parallel shaft geared motors
- 4-stage to 6-stage parallel shaft geared motors for very low output speeds

#### Designs

- Shaft-mounted design
- Flange-mounted design with or without VLplus reinforced bearing systems
- Design with integrated housing flange
- Foot-mounted design

#### Mounting

- Hollow shaft design with feather key
- Hollow shaft design with splined shaft
- Hollow shaft design with shrink disk
- Hollow shaft design with SIMOLOC assembly system
- Solid shaft design with and without feather key

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	-	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.09</b>	<b>FD.69-LE63MEB6</b>							
	2.6	335	348.40	11400	1.8	30	2KJ3404- ■ BD21- ■ ■ S1 -Z	P01
	2.9	295	309.78	11500	2	30	2KJ3404- ■ BD21- ■ ■ R1 -Z	P01
	<b>FD.49-LE63MEB6</b>							
	2.7	315	330.98	8510	1.5	25	2KJ3403- ■ BD21- ■ ■ S1 -Z	P01
	3	280	294.29	8610	1.7	25	2KJ3403- ■ BD21- ■ ■ R1 -Z	P01
	3.5	245	258.40	8720	1.9	25	2KJ3403- ■ BD21- ■ ■ Q1 -Z	P01
	<b>FD.39-LE63MEB6</b>							
	3.3	260	274.26	5930	1.1	16	2KJ3402- ■ BD21- ■ ■ R1 -Z	P01
	3.7	230	243.26	6040	1.2	16	2KJ3402- ■ BD21- ■ ■ Q1 -Z	P01
	4.2	200	211.06	6150	1.4	16	2KJ3402- ■ BD21- ■ ■ P1 -Z	P01
	4.7	184	191.87	6210	1.6	16	2KJ3402- ■ BD21- ■ ■ N1 -Z	P01
	<b>FD.39-LE63MCA4</b>							
	5.1	167	274.26	6270	1.7	15	2KJ3402- ■ BB21- ■ ■ R1 -Z	-
	5.8	148	243.26	6340	2	15	2KJ3402- ■ BB21- ■ ■ Q1 -Z	-
	<b>FD.29-LE63MCA4</b>							
	4.7	182	298.58	5220	0.82	9	2KJ3401- ■ BB21- ■ ■ Q1 -Z	-
	5.3	161	264.39	5220	0.93	9	2KJ3401- ■ BB21- ■ ■ P1 -Z	-
	6.1	140	229.72	5220	1.1	9	2KJ3401- ■ BB21- ■ ■ N1 -Z	-
	6.8	127	208.83	5220	1.2	9	2KJ3401- ■ BB21- ■ ■ M1 -Z	-
	7.9	108	177.71	5220	1.4	9	2KJ3401- ■ BB21- ■ ■ L1 -Z	-
	8.7	98	161.55	5220	1.5	9	2KJ3401- ■ BB21- ■ ■ K1 -Z	-
	10	86	140.86	5220	1.7	9	2KJ3401- ■ BB21- ■ ■ J1 -Z	-
	11	77	126.09	5220	2	9	2KJ3401- ■ BB21- ■ ■ H1 -Z	-
	13	68	111.97	5220	2.2	9	2KJ3401- ■ BB21- ■ ■ G1 -Z	-
	14	63	103.36	5220	2.4	9	2KJ3401- ■ BB21- ■ ■ F1 -Z	-
	16	55	89.78	5220	2.7	9	2KJ3401- ■ BB21- ■ ■ E1 -Z	-
	18	48	78.02	5220	3.2	9	2KJ3401- ■ BB21- ■ ■ D1 -Z	-
	20	43	70.43	5220	3.5	9	2KJ3401- ■ BB21- ■ ■ C1 -Z	-
	21	40	66.29	5220	3.7	9	2KJ3401- ■ BB21- ■ ■ B1 -Z	-
	24	35	57.79	5220	4.3	9	2KJ3401- ■ BB21- ■ ■ A1 -Z	-
	<b>FZ.29-LE63MCA4</b>							
	25	35	56.73	5220	4.3	9	2KJ3301- ■ BB21- ■ ■ C2 -Z	-
28	31	50.32	5220	4.9	9	2KJ3301- ■ BB21- ■ ■ B2 -Z	-	
32	27	43.66	5220	5.6	9	2KJ3301- ■ BB21- ■ ■ A2 -Z	-	
36	24	39.69	5220	6.2	9	2KJ3301- ■ BB21- ■ ■ X1 -Z	-	
41	21	34.04	5220	7.2	9	2KJ3301- ■ BB21- ■ ■ W1 -Z	-	
46	19	30.95	5220	8	9	2KJ3301- ■ BB21- ■ ■ V1 -Z	-	
52	16	27.13	5220	9.1	9	2KJ3301- ■ BB21- ■ ■ U1 -Z	-	
58	15	24.22	5220	10	9	2KJ3301- ■ BB21- ■ ■ T1 -Z	-	
65	13	21.58	5220	11	9	2KJ3301- ■ BB21- ■ ■ S1 -Z	-	
71	12	19.92	5110	12	9	2KJ3301- ■ BB21- ■ ■ R1 -Z	-	
81	11	17.44	4890	14	9	2KJ3301- ■ BB21- ■ ■ Q1 -Z	-	
92	9.3	15.29	4690	16	9	2KJ3301- ■ BB21- ■ ■ P1 -Z	-	
102	8.5	13.88	4540	18	9	2KJ3301- ■ BB21- ■ ■ N1 -Z	-	
108	8	13.06	4460	19	9	2KJ3301- ■ BB21- ■ ■ M1 -Z	-	
123	7	11.51	4280	20	9	2KJ3301- ■ BB21- ■ ■ L1 -Z	-	
141	6.1	9.99	4080	22	9	2KJ3301- ■ BB21- ■ ■ K1 -Z	-	
146	5.9	9.69	4040	24	9	2KJ3301- ■ BB21- ■ ■ J1 -Z	-	
163	5.3	8.63	3890	25	9	2KJ3301- ■ BB21- ■ ■ H1 -Z	-	
177	4.9	7.97	3790	25	9	2KJ3301- ■ BB21- ■ ■ G1 -Z	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/49
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.12</b>	<b>FD.49-LE63ZMH4P</b>							
	4.2	270	330.98	8640	1.8	26	2KJ3403- ■ BD23- ■ ■ S1 -Z -	
	4.7	240	294.29	8730	2	26	2KJ3403- ■ BD23- ■ ■ R1 -Z -	
	<b>FD.39-LE63ZMH4P</b>							
	5.1	225	274.26	6060	1.3	17	2KJ3402- ■ BD23- ■ ■ R1 -Z -	
	5.7	200	243.26	6150	1.4	17	2KJ3402- ■ BD23- ■ ■ Q1 -Z -	
	6.6	174	211.06	6250	1.7	17	2KJ3402- ■ BD23- ■ ■ P1 -Z -	
	7.2	158	191.87	6310	1.8	17	2KJ3402- ■ BD23- ■ ■ N1 -Z -	
	8.4	136	164.56	6390	2.1	17	2KJ3402- ■ BD23- ■ ■ M1 -Z -	
	<b>FD.29-LE63ZMH4P</b>							
	6.7	172	208.83	5220	0.87	11	2KJ3401- ■ BD23- ■ ■ M1 -Z -	
	7.8	147	177.71	5220	1	11	2KJ3401- ■ BD23- ■ ■ L1 -Z -	
	8.6	133	161.55	5220	1.1	11	2KJ3401- ■ BD23- ■ ■ K1 -Z -	
	9.9	116	140.86	5220	1.3	11	2KJ3401- ■ BD23- ■ ■ J1 -Z -	
	11	104	126.09	5220	1.4	11	2KJ3401- ■ BD23- ■ ■ H1 -Z -	
	12	92	111.97	5220	1.6	11	2KJ3401- ■ BD23- ■ ■ G1 -Z -	
	13	85	103.36	5220	1.8	11	2KJ3401- ■ BD23- ■ ■ F1 -Z -	
	15	74	89.78	5220	2	11	2KJ3401- ■ BD23- ■ ■ E1 -Z -	
	18	64	78.02	5220	2.3	11	2KJ3401- ■ BD23- ■ ■ D1 -Z -	
	20	58	70.43	5220	2.6	11	2KJ3401- ■ BD23- ■ ■ C1 -Z -	
	21	55	66.29	5220	2.7	11	2KJ3401- ■ BD23- ■ ■ B1 -Z -	
	24	48	57.79	5220	3.1	11	2KJ3401- ■ BD23- ■ ■ A1 -Z -	
	<b>FZ.29-LE63ZMH4P</b>							
	25	47	56.73	5220	3.2	11	2KJ3301- ■ BD23- ■ ■ C2 -Z -	
28	42	50.32	5220	3.6	11	2KJ3301- ■ BD23- ■ ■ B2 -Z -		
32	36	43.66	5220	4.2	11	2KJ3301- ■ BD23- ■ ■ A2 -Z -		
35	33	39.69	5220	4.6	11	2KJ3301- ■ BD23- ■ ■ X1 -Z -		
41	28	34.04	5220	5.3	11	2KJ3301- ■ BD23- ■ ■ W1 -Z -		
45	26	30.95	5220	5.9	11	2KJ3301- ■ BD23- ■ ■ V1 -Z -		
51	22	27.13	5220	6.7	11	2KJ3301- ■ BD23- ■ ■ U1 -Z -		
57	20	24.22	5220	7.5	11	2KJ3301- ■ BD23- ■ ■ T1 -Z -		
64	18	21.58	5220	8.4	11	2KJ3301- ■ BD23- ■ ■ S1 -Z -		
70	16	19.92	5100	9.1	11	2KJ3301- ■ BD23- ■ ■ R1 -Z -		
80	14	17.44	4890	10	11	2KJ3301- ■ BD23- ■ ■ Q1 -Z -		
91	13	15.29	4680	12	11	2KJ3301- ■ BD23- ■ ■ P1 -Z -		
100	11	13.88	4550	13	11	2KJ3301- ■ BD23- ■ ■ N1 -Z -		
106	11	13.06	4450	14	11	2KJ3301- ■ BD23- ■ ■ M1 -Z -		
121	9.5	11.51	4280	15	11	2KJ3301- ■ BD23- ■ ■ L1 -Z -		
139	8.2	9.99	4090	16	11	2KJ3301- ■ BD23- ■ ■ K1 -Z -		
143	8	9.69	4040	18	11	2KJ3301- ■ BD23- ■ ■ J1 -Z -		
161	7.1	8.63	3890	18	11	2KJ3301- ■ BD23- ■ ■ H1 -Z -		
174	6.6	7.97	3790	18	11	2KJ3301- ■ BD23- ■ ■ G1 -Z -		
199	5.8	6.98	3630	21	11	2KJ3301- ■ BD23- ■ ■ F1 -Z -		
227	5	6.12	3480	23	11	2KJ3301- ■ BD23- ■ ■ E1 -Z -		
250	4.6	5.55	3370	24	11	2KJ3301- ■ BD23- ■ ■ D1 -Z -		
266	4.3	5.22	3300	25	11	2KJ3301- ■ BD23- ■ ■ C1 -Z -		
<b>0.18</b>	<b>FD.79-LE71ZMK6P</b>							
	2.5	700	357.00	14200	1.4	39	2KJ3405- ■ CC23- ■ ■ S1 -Z P01	
	2.7	635	324.62	14300	1.6	39	2KJ3405- ■ CC23- ■ ■ R1 -Z P01	
	3.2	540	276.09	14500	1.8	39	2KJ3405- ■ CC23- ■ ■ Q1 -Z P01	
3.5	490	250.99	14500	2	39	2KJ3405- ■ CC23- ■ ■ P1 -Z P01		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.18</b>	<b>FD.69-LE71ZMK6P</b>							
	2.5	680	348.40	10600	0.88	32	2KJ3404- ■ CC23- ■ ■ S1 -Z	P01
	2.8	605	309.78	10800	0.99	32	2KJ3404- ■ CC23- ■ ■ R1 -Z	P01
	3.2	530	272.00	11000	1.1	32	2KJ3404- ■ CC23- ■ ■ Q1 -Z	P01
	3.5	485	247.27	11100	1.2	32	2KJ3404- ■ CC23- ■ ■ P1 -Z	P01
	<b>FD.69-LE63ZMK4P</b>							
	4	430	348.40	11200	1.4	31	2KJ3404- ■ BE23- ■ ■ S1 -Z	-
	4.5	380	309.78	11300	1.6	31	2KJ3404- ■ BE23- ■ ■ R1 -Z	-
	5.1	335	272.00	11400	1.8	31	2KJ3404- ■ BE23- ■ ■ Q1 -Z	-
	5.6	305	247.27	11500	2	31	2KJ3404- ■ BE23- ■ ■ P1 -Z	-
<b>FD.49-LE71MG6E</b>								
3	575	294.29	7340	0.83	27	2KJ3403- ■ CC23- ■ ■ R1 -Z	P01	
3.4	505	258.40	7790	0.95	27	2KJ3403- ■ CC23- ■ ■ Q1 -Z	P01	
3.7	460	234.91	8090	1	27	2KJ3403- ■ CC23- ■ ■ P1 -Z	P01	
<b>FD.49-LE63ZMK4P</b>								
4.2	410	330.98	8240	1.2	26	2KJ3403- ■ BE23- ■ ■ S1 -Z	-	
4.7	365	294.29	8370	1.3	26	2KJ3403- ■ BE23- ■ ■ R1 -Z	-	
5.4	320	258.40	8500	1.5	26	2KJ3403- ■ BE23- ■ ■ Q1 -Z	-	
5.9	290	234.91	8590	1.6	26	2KJ3403- ■ BE23- ■ ■ P1 -Z	-	
6.9	245	200.98	8720	1.9	26	2KJ3403- ■ BE23- ■ ■ N1 -Z	-	
7.6	225	182.71	8770	2.1	26	2KJ3403- ■ BE23- ■ ■ M1 -Z	-	
<b>FD.39-LE63ZMK4P</b>								
5	340	274.26	5630	0.85	17	2KJ3402- ■ BE23- ■ ■ R1 -Z	-	
5.7	300	243.26	5780	0.96	17	2KJ3402- ■ BE23- ■ ■ Q1 -Z	-	
6.6	260	211.06	5930	1.1	17	2KJ3402- ■ BE23- ■ ■ P1 -Z	-	
7.2	235	191.87	6020	1.2	17	2KJ3402- ■ BE23- ■ ■ N1 -Z	-	
8.4	200	164.56	6150	1.4	17	2KJ3402- ■ BE23- ■ ■ M1 -Z	-	
9.3	186	149.60	6200	1.6	17	2KJ3402- ■ BE23- ■ ■ L1 -Z	-	
11	163	131.17	6290	1.8	17	2KJ3402- ■ BE23- ■ ■ K1 -Z	-	
12	145	117.08	6360	2	17	2KJ3402- ■ BE23- ■ ■ J1 -Z	-	
13	130	104.34	6410	2.2	17	2KJ3402- ■ BE23- ■ ■ H1 -Z	-	
<b>FD.29-LE63ZMK4P</b>								
9.8	175	140.86	5220	0.86	11	2KJ3401- ■ BE23- ■ ■ J1 -Z	-	
11	156	126.09	5220	0.96	11	2KJ3401- ■ BE23- ■ ■ H1 -Z	-	
12	139	111.97	5220	1.1	11	2KJ3401- ■ BE23- ■ ■ G1 -Z	-	
13	128	103.36	5220	1.2	11	2KJ3401- ■ BE23- ■ ■ F1 -Z	-	
15	111	89.78	5220	1.3	11	2KJ3401- ■ BE23- ■ ■ E1 -Z	-	
18	97	78.02	5220	1.5	11	2KJ3401- ■ BE23- ■ ■ D1 -Z	-	
20	87	70.43	5220	1.7	11	2KJ3401- ■ BE23- ■ ■ C1 -Z	-	
21	82	66.29	5220	1.8	11	2KJ3401- ■ BE23- ■ ■ B1 -Z	-	
24	72	57.79	5220	2.1	11	2KJ3401- ■ BE23- ■ ■ A1 -Z	-	
<b>FZ.29-LE63ZMK4P</b>								
24	70	56.73	5220	2.1	11	2KJ3301- ■ BE23- ■ ■ C2 -Z	-	
28	62	50.32	5220	2.4	11	2KJ3301- ■ BE23- ■ ■ B2 -Z	-	
32	54	43.66	5220	2.8	11	2KJ3301- ■ BE23- ■ ■ A2 -Z	-	
35	49	39.69	5220	3	11	2KJ3301- ■ BE23- ■ ■ X1 -Z	-	
41	42	34.04	5220	3.6	11	2KJ3301- ■ BE23- ■ ■ W1 -Z	-	
45	38	30.95	5220	3.9	11	2KJ3301- ■ BE23- ■ ■ V1 -Z	-	
51	34	27.13	5220	4.5	11	2KJ3301- ■ BE23- ■ ■ U1 -Z	-	
57	30	24.22	5220	5	11	2KJ3301- ■ BE23- ■ ■ T1 -Z	-	
64	27	21.58	5160	5.6	11	2KJ3301- ■ BE23- ■ ■ S1 -Z	-	
70	25	19.92	5030	6.1	11	2KJ3301- ■ BE23- ■ ■ R1 -Z	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>0.18</b>	<b>FZ.29-LE63ZMH4E</b>								
	79	22	17.44	4830	6.9	11	2KJ3301- ■ BE23- ■ ■ Q1 -Z -	-	
	91	19	15.29	4640	7.9	11	2KJ3301- ■ BE23- ■ ■ P1 -Z -	-	
	100	17	13.88	4500	8.7	11	2KJ3301- ■ BE23- ■ ■ M1 -Z -	-	
	106	16	13.06	4420	9.3	11	2KJ3301- ■ BE23- ■ ■ N1 -Z -	-	
	120	14	11.51	4250	10	11	2KJ3301- ■ BE23- ■ ■ L1 -Z -	-	
	139	12	9.99	4060	11	11	2KJ3301- ■ BE23- ■ ■ K1 -Z -	-	
	143	12	9.69	4000	12	11	2KJ3301- ■ BE23- ■ ■ J1 -Z -	-	
	160	11	8.63	3860	12	11	2KJ3301- ■ BE23- ■ ■ H1 -Z -	-	
	174	9.9	7.97	3760	12	11	2KJ3301- ■ BE23- ■ ■ G1 -Z -	-	
	198	8.7	6.98	3610	14	11	2KJ3301- ■ BE23- ■ ■ F1 -Z -	-	
	226	7.6	6.12	3460	15	11	2KJ3301- ■ BE23- ■ ■ E1 -Z -	-	
	250	6.9	5.55	3350	16	11	2KJ3301- ■ BE23- ■ ■ D1 -Z -	-	
	265	6.5	5.22	3290	16	11	2KJ3301- ■ BE23- ■ ■ C1 -Z -	-	
	301	5.7	4.60	3160	17	11	2KJ3301- ■ BE23- ■ ■ B1 -Z -	-	
	346	5	4.00	3020	18	11	2KJ3301- ■ BE23- ■ ■ A1 -Z -	-	
	<b>FZ.29-LE63MEB2P</b>								
	163	10	17.44	3860	14	9	2KJ3301- ■ BC23- ■ ■ Q1 -Z	P00	
	186	9.2	15.29	3690	16	9	2KJ3301- ■ BC23- ■ ■ P1 -Z	P00	
	205	8.4	13.88	3580	18	9	2KJ3301- ■ BC23- ■ ■ N1 -Z	P00	
	218	7.9	13.06	3510	19	9	2KJ3301- ■ BC23- ■ ■ M1 -Z	P00	
	248	6.9	11.51	3370	21	9	2KJ3301- ■ BC23- ■ ■ L1 -Z	P00	
	285	6	9.99	3220	23	9	2KJ3301- ■ BC23- ■ ■ K1 -Z	P00	
	294	5.8	9.69	3180	24	9	2KJ3301- ■ BC23- ■ ■ J1 -Z	P00	
	330	5.2	8.63	3060	25	9	2KJ3301- ■ BC23- ■ ■ H1 -Z	P00	
	358	4.8	7.97	2990	25	9	2KJ3301- ■ BC23- ■ ■ G1 -Z	P00	
	<b>0.25</b>	<b>FD.79-LE71YMS6P</b>							
		2.4	980	357.00	13600	1	40	2KJ3405- ■ CE23- ■ ■ S1 -Z	P01
		2.7	890	324.62	13800	1.1	40	2KJ3405- ■ CE23- ■ ■ R1 -Z	P01
		3.2	755	276.09	14100	1.3	40	2KJ3405- ■ CE23- ■ ■ Q1 -Z	P01
		3.5	685	250.99	14200	1.5	40	2KJ3405- ■ CE23- ■ ■ P1 -Z	P01
		<b>FD.79-LE71ZMK4P</b>							
		3.9	610	357.00	14300	1.6	39	2KJ3405- ■ CC23- ■ ■ S1 -Z	-
		4.3	555	324.62	14500	1.8	39	2KJ3405- ■ CC23- ■ ■ R1 -Z	-
		5.1	470	276.09	14500	2.1	39	2KJ3405- ■ CC23- ■ ■ Q1 -Z	-
<b>FD.69-LE71YMS6P</b>									
3.2		745	272.00	10500	0.8	33	2KJ3404- ■ CE23- ■ ■ Q1 -Z	P01	
3.5		675	247.27	10600	0.88	33	2KJ3404- ■ CE23- ■ ■ P1 -Z	P01	
<b>FD.69-LE71ZMK4P</b>									
4		595	348.40	10800	1	32	2KJ3404- ■ CC23- ■ ■ S1 -Z	-	
4.5		530	309.78	11000	1.1	32	2KJ3404- ■ CC23- ■ ■ R1 -Z	-	
5.1		465	272.00	11100	1.3	32	2KJ3404- ■ CC23- ■ ■ Q1 -Z	-	
5.6		420	247.27	11200	1.4	32	2KJ3404- ■ CC23- ■ ■ P1 -Z	-	
6.6		360	211.56	11400	1.7	32	2KJ3404- ■ CC23- ■ ■ N1 -Z	-	
7.3		325	192.32	11500	1.8	32	2KJ3404- ■ CC23- ■ ■ M1 -Z	-	
8.2		290	170.00	11500	2.1	32	2KJ3404- ■ CC23- ■ ■ L1 -Z	-	
<b>FD.49-LE71ZMK4P</b>									
4.2		565	330.98	7400	0.85	27	2KJ3403- ■ CC23- ■ ■ S1 -Z	-	
4.7		500	294.29	7820	0.95	27	2KJ3403- ■ CC23- ■ ■ R1 -Z	-	
5.4		440	258.40	8150	1.1	27	2KJ3403- ■ CC23- ■ ■ Q1 -Z	-	
5.9		400	234.91	8270	1.2	27	2KJ3403- ■ CC23- ■ ■ P1 -Z	-	
6.9	340	200.98	8440	1.4	27	2KJ3403- ■ CC23- ■ ■ N1 -Z	-		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.25</b>	<b>FD.49-LE71ZMK4P</b>							
	7.6	310	182.71	8530	1.5	27	2KJ3403- ■ CC23- ■ ■ M1 -Z -	-
	8.6	275	161.50	8630	1.7	27	2KJ3403- ■ CC23- ■ ■ L1 -Z -	-
	9.5	250	146.82	8700	1.9	27	2KJ3403- ■ CC23- ■ ■ K1 -Z -	-
	11	220	128.60	8790	2.2	27	2KJ3403- ■ CC23- ■ ■ J1 -Z -	-
	<b>FD.39-LE71ZMK4P</b>							
	6.6	360	211.06	5560	0.8	18	2KJ3402- ■ CC23- ■ ■ P1 -Z -	-
	7.3	325	191.87	5690	0.88	18	2KJ3402- ■ CC23- ■ ■ N1 -Z -	-
	8.5	280	164.56	5850	1	18	2KJ3402- ■ CC23- ■ ■ M1 -Z -	-
	9.3	255	149.60	5950	1.1	18	2KJ3402- ■ CC23- ■ ■ L1 -Z -	-
	11	220	131.17	6080	1.3	18	2KJ3402- ■ CC23- ■ ■ K1 -Z -	-
	12	200	117.08	6150	1.4	18	2KJ3402- ■ CC23- ■ ■ J1 -Z -	-
	13	179	104.34	6230	1.6	18	2KJ3402- ■ CC23- ■ ■ H1 -Z -	-
	14	165	96.31	6280	1.8	18	2KJ3402- ■ CC23- ■ ■ G1 -Z -	-
	17	144	84.32	6360	2	18	2KJ3402- ■ CC23- ■ ■ F1 -Z -	-
	19	127	73.93	6420	2.3	18	2KJ3402- ■ CC23- ■ ■ E1 -Z -	-
	<b>FZ.39-LE71ZMK4P</b>							
	24	99	57.99	6530	2.3	17	2KJ3302- ■ CC23- ■ ■ A2 -Z -	-
	<b>FD.29-LE71ZMK4P</b>							
	13	177	103.36	5220	0.85	11	2KJ3401- ■ CC23- ■ ■ F1 -Z -	-
	16	154	89.78	5220	0.98	11	2KJ3401- ■ CC23- ■ ■ E1 -Z -	-
	18	134	78.02	5220	1.1	11	2KJ3401- ■ CC23- ■ ■ D1 -Z -	-
	20	121	70.43	5220	1.2	11	2KJ3401- ■ CC23- ■ ■ C1 -Z -	-
	21	113	66.29	5220	1.3	11	2KJ3401- ■ CC23- ■ ■ B1 -Z -	-
	24	99	57.79	5220	1.5	11	2KJ3401- ■ CC23- ■ ■ A1 -Z -	-
	<b>FZ.29-LE71ZMK4P</b>							
	25	97	56.73	5220	1.5	11	2KJ3301- ■ CC23- ■ ■ C2 -Z -	-
	28	86	50.32	5220	1.7	11	2KJ3301- ■ CC23- ■ ■ B2 -Z -	-
	32	75	43.66	5220	2	11	2KJ3301- ■ CC23- ■ ■ A2 -Z -	-
	35	68	39.69	5220	2.2	11	2KJ3301- ■ CC23- ■ ■ X1 -Z -	-
	41	58	34.04	5220	2.6	11	2KJ3301- ■ CC23- ■ ■ W1 -Z -	-
	45	53	30.95	5220	2.8	11	2KJ3301- ■ CC23- ■ ■ V1 -Z -	-
	51	46	27.13	5220	3.2	11	2KJ3301- ■ CC23- ■ ■ U1 -Z -	-
	58	42	24.22	5220	3.6	11	2KJ3301- ■ CC23- ■ ■ T1 -Z -	-
	65	37	21.58	5060	4.1	11	2KJ3301- ■ CC23- ■ ■ S1 -Z -	-
	70	34	19.92	4940	4.4	11	2KJ3301- ■ CC23- ■ ■ R1 -Z -	-
	80	30	17.44	4750	5	11	2KJ3301- ■ CC23- ■ ■ Q1 -Z -	-
	91	26	15.29	4570	5.7	11	2KJ3301- ■ CC23- ■ ■ P1 -Z -	-
	101	24	13.88	4430	6.3	11	2KJ3301- ■ CC23- ■ ■ N1 -Z -	-
107	22	13.06	4360	6.7	11	2KJ3301- ■ CC23- ■ ■ M1 -Z -	-	
121	20	11.51	4180	7.3	11	2KJ3301- ■ CC23- ■ ■ L1 -Z -	-	
140	17	9.99	4010	8	11	2KJ3301- ■ CC23- ■ ■ K1 -Z -	-	
144	17	9.69	3940	8.6	11	2KJ3301- ■ CC23- ■ ■ J1 -Z -	-	
162	15	8.63	3810	8.8	11	2KJ3301- ■ CC23- ■ ■ H1 -Z -	-	
175	14	7.97	3710	8.8	11	2KJ3301- ■ CC23- ■ ■ G1 -Z -	-	
200	12	6.98	3560	10	11	2KJ3301- ■ CC23- ■ ■ F1 -Z -	-	
228	10	6.12	3430	11	11	2KJ3301- ■ CC23- ■ ■ E1 -Z -	-	
251	9.5	5.55	3320	11	11	2KJ3301- ■ CC23- ■ ■ D1 -Z -	-	
267	8.9	5.22	3260	12	11	2KJ3301- ■ CC23- ■ ■ C1 -Z -	-	
303	7.9	4.60	3130	12	11	2KJ3301- ■ CC23- ■ ■ B1 -Z -	-	
349	6.8	4.00	2990	13	11	2KJ3301- ■ CC23- ■ ■ A1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.25</b>	<b>FZ.29-LE63ZMH2P</b>							
	163	15	17.44	3820	10	11	2KJ3301- ■ BD23- ■ ■ Q1 -Z P00	
	185	13	15.29	3670	12	11	2KJ3301- ■ BD23- ■ ■ P1 -Z P00	
	204	12	13.88	3560	13	11	2KJ3301- ■ BD23- ■ ■ N1 -Z P00	
	217	11	13.06	3490	14	11	2KJ3301- ■ BD23- ■ ■ M1 -Z P00	
	246	9.7	11.51	3350	15	11	2KJ3301- ■ BD23- ■ ■ L1 -Z P00	
<b>0.37</b>	<b>FD.89-LE80MK6P</b>							
	2.8	1280	335.30	17400	1.4	75	2KJ3406- ■ DE23- ■ ■ S1 -Z P01	
	3	1160	304.82	17400	1.6	75	2KJ3406- ■ DE23- ■ ■ R1 -Z P01	
	3.4	1040	273.41	17400	1.8	75	2KJ3406- ■ DE23- ■ ■ Q1 -Z P01	
	3.8	935	245.82	17400	2	75	2KJ3406- ■ DE23- ■ ■ P1 -Z P01	
	<b>FD.79-LE80MK6P</b>							
	2.8	1240	324.62	13100	0.81	44	2KJ3405- ■ DE23- ■ ■ R1 -Z P01	
	3.4	1050	276.09	13500	0.95	44	2KJ3405- ■ DE23- ■ ■ Q1 -Z P01	
	3.7	955	250.99	13700	1	44	2KJ3405- ■ DE23- ■ ■ P1 -Z P01	
	<b>FD.79-LE71YMS4P</b>							
	3.9	910	357.00	13700	1.1	40	2KJ3405- ■ CE23- ■ ■ S1 -Z -	
	4.3	830	324.62	13900	1.2	40	2KJ3405- ■ CE23- ■ ■ R1 -Z -	
	5	705	276.09	14200	1.4	40	2KJ3405- ■ CE23- ■ ■ Q1 -Z -	
	5.5	640	250.99	14300	1.6	40	2KJ3405- ■ CE23- ■ ■ P1 -Z -	
	6.2	570	223.94	14400	1.7	40	2KJ3405- ■ CE23- ■ ■ N1 -Z -	
	6.9	510	200.80	14500	1.9	40	2KJ3405- ■ CE23- ■ ■ M1 -Z -	
	<b>FD.69-LE71YMS4P</b>							
	5.1	695	272.00	10600	0.86	33	2KJ3404- ■ CE23- ■ ■ Q1 -Z -	
	5.6	630	247.27	10700	0.95	33	2KJ3404- ■ CE23- ■ ■ P1 -Z -	
	6.5	540	211.56	11000	1.1	33	2KJ3404- ■ CE23- ■ ■ N1 -Z -	
	7.2	490	192.32	11100	1.2	33	2KJ3404- ■ CE23- ■ ■ M1 -Z -	
	8.1	435	170.00	11200	1.4	33	2KJ3404- ■ CE23- ■ ■ L1 -Z -	
	8.9	395	154.55	11300	1.5	33	2KJ3404- ■ CE23- ■ ■ K1 -Z -	
	10	345	135.37	11400	1.7	33	2KJ3404- ■ CE23- ■ ■ J1 -Z -	
11	320	124.96	11500	1.9	33	2KJ3404- ■ CE23- ■ ■ H1 -Z -		
12	280	110.63	11600	2.1	33	2KJ3404- ■ CE23- ■ ■ G1 -Z -		
<b>FD.49-LE71YMS4P</b>								
5.9	600	234.91	7170	0.8	28	2KJ3403- ■ CE23- ■ ■ P1 -Z -		
6.9	515	200.98	7720	0.93	28	2KJ3403- ■ CE23- ■ ■ N1 -Z -		
7.6	465	182.71	8060	1	28	2KJ3403- ■ CE23- ■ ■ M1 -Z -		
8.5	410	161.50	8240	1.2	28	2KJ3403- ■ CE23- ■ ■ L1 -Z -		
9.4	375	146.82	8340	1.3	28	2KJ3403- ■ CE23- ■ ■ K1 -Z -		
11	325	128.60	8480	1.5	28	2KJ3403- ■ CE23- ■ ■ J1 -Z -		
12	300	118.71	8560	1.6	28	2KJ3403- ■ CE23- ■ ■ H1 -Z -		
13	265	105.10	8660	1.8	28	2KJ3403- ■ CE23- ■ ■ G1 -Z -		
16	220	87.48	8790	2.1	28	2KJ3403- ■ CE23- ■ ■ F1 -Z -		
17	210	82.33	8820	2.3	28	2KJ3403- ■ CE23- ■ ■ E1 -Z -		
<b>FD.39-LE71YMS4P</b>								
11	335	131.17	5650	0.86	19	2KJ3402- ■ CE23- ■ ■ K1 -Z -		
12	300	117.08	5780	0.97	19	2KJ3402- ■ CE23- ■ ■ J1 -Z -		
13	265	104.34	5910	1.1	19	2KJ3402- ■ CE23- ■ ■ H1 -Z -		
14	245	96.31	5980	1.2	19	2KJ3402- ■ CE23- ■ ■ G1 -Z -		
16	215	84.32	6100	1.3	19	2KJ3402- ■ CE23- ■ ■ F1 -Z -		
19	189	73.93	6190	1.5	19	2KJ3402- ■ CE23- ■ ■ E1 -Z -		
21	172	67.07	6260	1.7	19	2KJ3402- ■ CE23- ■ ■ D1 -Z -		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.37</b>	<b>FD.39-LE71YMS4P</b>							
	22	162	63.13	6290	1.8	19	2KJ3402- ■ CE23- ■ ■ C1 -Z -	-
	25	142	55.65	6370	2	19	2KJ3402- ■ CE23- ■ ■ B1 -Z -	-
	29	124	48.29	6430	2.3	19	2KJ3402- ■ CE23- ■ ■ A1 -Z -	-
	<b>FZ.39-LE71YMS4P</b>							
	21	167	65.21	6270	1.7	19	2KJ3302- ■ CE23- ■ ■ B2 -Z -	-
	24	148	57.99	6340	1.5	19	2KJ3302- ■ CE23- ■ ■ A2 -Z -	-
	27	130	50.91	6410	1.8	19	2KJ3302- ■ CE23- ■ ■ X1 -Z -	-
	30	119	46.29	6450	2.2	19	2KJ3302- ■ CE23- ■ ■ W1 -Z -	-
	<b>FD.29-LE71YMS4P</b>							
	20	180	70.43	5220	0.83	13	2KJ3401- ■ CE23- ■ ■ C1 -Z -	-
	21	170	66.29	5220	0.88	13	2KJ3401- ■ CE23- ■ ■ B1 -Z -	-
	24	148	57.79	5220	1	13	2KJ3401- ■ CE23- ■ ■ A1 -Z -	-
	<b>FZ.29-LE71YMS4P</b>							
	24	145	56.73	5220	1	12	2KJ3301- ■ CE23- ■ ■ C2 -Z -	-
	27	129	50.32	5220	1.2	12	2KJ3301- ■ CE23- ■ ■ B2 -Z -	-
	32	112	43.66	5220	1.3	12	2KJ3301- ■ CE23- ■ ■ A2 -Z -	-
	35	102	39.69	5220	1.5	12	2KJ3301- ■ CE23- ■ ■ X1 -Z -	-
	41	87	34.04	5220	1.7	12	2KJ3301- ■ CE23- ■ ■ W1 -Z -	-
	45	79	30.95	5220	1.9	12	2KJ3301- ■ CE23- ■ ■ V1 -Z -	-
	51	70	27.13	5220	2.2	12	2KJ3301- ■ CE23- ■ ■ U1 -Z -	-
	57	62	24.22	5080	2.4	12	2KJ3301- ■ CE23- ■ ■ T1 -Z -	-
	64	55	21.58	4930	2.7	12	2KJ3301- ■ CE23- ■ ■ S1 -Z -	-
	69	51	19.92	4820	2.9	12	2KJ3301- ■ CE23- ■ ■ R1 -Z -	-
	79	45	17.44	4640	3.4	12	2KJ3301- ■ CE23- ■ ■ Q1 -Z -	-
	90	39	15.29	4480	3.8	12	2KJ3301- ■ CE23- ■ ■ P1 -Z -	-
	99	36	13.88	4350	4.2	12	2KJ3301- ■ CE23- ■ ■ N1 -Z -	-
	106	33	13.06	4280	4.5	12	2KJ3301- ■ CE23- ■ ■ M1 -Z -	-
	120	30	11.51	4120	4.9	12	2KJ3301- ■ CE23- ■ ■ L1 -Z -	-
	138	26	9.99	3950	5.3	12	2KJ3301- ■ CE23- ■ ■ K1 -Z -	-
	142	25	9.69	3880	5.8	12	2KJ3301- ■ CE23- ■ ■ J1 -Z -	-
	160	22	8.63	3750	5.9	12	2KJ3301- ■ CE23- ■ ■ H1 -Z -	-
	173	20	7.97	3670	5.9	12	2KJ3301- ■ CE23- ■ ■ G1 -Z -	-
	198	18	6.98	3520	6.9	12	2KJ3301- ■ CE23- ■ ■ F1 -Z -	-
	225	16	6.12	3380	7.3	12	2KJ3301- ■ CE23- ■ ■ E1 -Z -	-
	249	14	5.55	3290	7.6	12	2KJ3301- ■ CE23- ■ ■ D1 -Z -	-
	264	13	5.22	3230	7.9	12	2KJ3301- ■ CE23- ■ ■ C1 -Z -	-
	300	12	4.60	3100	8.2	12	2KJ3301- ■ CE23- ■ ■ B1 -Z -	-
	345	10	4.00	2970	8.9	12	2KJ3301- ■ CE23- ■ ■ A1 -Z -	-
	<b>FZ.29-LE71ZMH2P</b>							
	159	22	17.44	3790	6.7	10	2KJ3301- ■ CB23- ■ ■ Q1 -Z	P00
	181	20	15.29	3640	7.7	10	2KJ3301- ■ CB23- ■ ■ P1 -Z	P00
	200	18	13.88	3530	8.5	10	2KJ3301- ■ CB23- ■ ■ N1 -Z	P00
	212	17	13.06	3470	9	10	2KJ3301- ■ CB23- ■ ■ M1 -Z	P00
	241	15	11.51	3340	9.7	10	2KJ3301- ■ CB23- ■ ■ L1 -Z	P00
	277	13	9.99	3190	11	10	2KJ3301- ■ CB23- ■ ■ K1 -Z	P00
286	12	9.69	3150	12	10	2KJ3301- ■ CB23- ■ ■ J1 -Z	P00	
321	11	8.63	3040	12	10	2KJ3301- ■ CB23- ■ ■ H1 -Z	P00	
348	10	7.97	2960	12	10	2KJ3301- ■ CB23- ■ ■ G1 -Z	P00	
397	8.9	6.98	2840	14	10	2KJ3301- ■ CB23- ■ ■ F1 -Z	P00	
453	7.8	6.12	2730	15	10	2KJ3301- ■ CB23- ■ ■ E1 -Z	P00	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Parallel shaft geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.37	<b>FZ.29-LE71ZMH2P</b>							
	499	7.1	5.55	2640	15	10	2KJ3301- ■ CB23- ■ ■ D1 -Z	P00
0.55	<b>FD.89-LE80ZMQ6P</b>							
	2.8	1880	335.30	17400	0.98	75	2KJ3406- ■ DF23- ■ ■ S1 -Z	P01
	3.1	1710	304.82	17400	1.1	75	2KJ3406- ■ DF23- ■ ■ R1 -Z	P01
	3.4	1530	273.41	17400	1.2	75	2KJ3406- ■ DF23- ■ ■ Q1 -Z	P01
	3.8	1380	245.82	17400	1.3	75	2KJ3406- ■ DF23- ■ ■ P1 -Z	P01
	<b>FD.89-LE80MH4P</b>							
	4.3	1220	335.30	17400	1.5	76	2KJ3406- ■ DC23- ■ ■ S1 -Z	-
	4.7	1110	304.82	17400	1.7	76	2KJ3406- ■ DC23- ■ ■ R1 -Z	-
	5.3	995	273.41	17400	1.9	76	2KJ3406- ■ DC23- ■ ■ Q1 -Z	-
	5.9	895	245.82	17400	2.1	76	2KJ3406- ■ DC23- ■ ■ P1 -Z	-
	<b>FD.79-LE80MH4P</b>							
	4.4	1180	324.62	13200	0.84	45	2KJ3405- ■ DC23- ■ ■ R1 -Z	-
	5.2	1000	276.09	13600	0.99	45	2KJ3405- ■ DC23- ■ ■ Q1 -Z	-
	5.7	915	250.99	13700	1.1	45	2KJ3405- ■ DC23- ■ ■ P1 -Z	-
	6.4	815	223.94	13900	1.2	45	2KJ3405- ■ DC23- ■ ■ N1 -Z	-
	7.2	730	200.80	14100	1.4	45	2KJ3405- ■ DC23- ■ ■ M1 -Z	-
	8	660	180.99	14200	1.5	45	2KJ3405- ■ DC23- ■ ■ L1 -Z	-
	8.6	605	167.07	14400	1.6	45	2KJ3405- ■ DC23- ■ ■ K1 -Z	-
	9.4	555	152.51	14500	1.8	45	2KJ3405- ■ DC23- ■ ■ J1 -Z	-
	11	460	126.54	14500	2.2	45	2KJ3405- ■ DC23- ■ ■ H1 -Z	-
	<b>FD.69-LE80MH4P</b>							
	7.5	700	192.32	10600	0.86	38	2KJ3404- ■ DC23- ■ ■ M1 -Z	-
	8.5	620	170.00	10800	0.97	38	2KJ3404- ■ DC23- ■ ■ L1 -Z	-
	9.3	560	154.55	10900	1.1	38	2KJ3404- ■ DC23- ■ ■ K1 -Z	-
	11	490	135.37	11100	1.2	38	2KJ3404- ■ DC23- ■ ■ J1 -Z	-
	12	455	124.96	11200	1.3	38	2KJ3404- ■ DC23- ■ ■ H1 -Z	-
	13	400	110.63	11300	1.5	38	2KJ3404- ■ DC23- ■ ■ G1 -Z	-
16	335	92.08	11400	1.8	38	2KJ3404- ■ DC23- ■ ■ F1 -Z	-	
17	315	86.67	11500	1.9	38	2KJ3404- ■ DC23- ■ ■ E1 -Z	-	
19	280	77.65	11600	2.1	38	2KJ3404- ■ DC23- ■ ■ D1 -Z	-	
<b>FD.49-LE80MH4P</b>								
8.9	585	161.50	7270	0.81	33	2KJ3403- ■ DC23- ■ ■ L1 -Z	-	
9.8	535	146.82	7600	0.9	33	2KJ3403- ■ DC23- ■ ■ K1 -Z	-	
11	465	128.60	8060	1	33	2KJ3403- ■ DC23- ■ ■ J1 -Z	-	
12	430	118.71	8180	1.1	33	2KJ3403- ■ DC23- ■ ■ H1 -Z	-	
14	380	105.10	8330	1.3	33	2KJ3403- ■ DC23- ■ ■ G1 -Z	-	
16	315	87.48	8510	1.5	33	2KJ3403- ■ DC23- ■ ■ F1 -Z	-	
17	300	82.33	8560	1.6	33	2KJ3403- ■ DC23- ■ ■ E1 -Z	-	
20	265	73.77	8660	1.8	33	2KJ3403- ■ DC23- ■ ■ D1 -Z	-	
23	225	62.81	8770	2.1	33	2KJ3403- ■ DC23- ■ ■ C1 -Z	-	
27	196	53.83	8450	2.4	33	2KJ3403- ■ DC23- ■ ■ B1 -Z	-	
<b>FZ.49-LE80MH4P</b>								
23	220	61.43	8730	2.1	32	2KJ3303- ■ DC23- ■ ■ X1 -Z	-	
26	200	55.85	8540	2.4	32	2KJ3303- ■ DC23- ■ ■ W1 -Z	-	
<b>FD.39-LE80MH4P</b>								
15	350	96.31	5590	0.83	23	2KJ3402- ■ DC23- ■ ■ G1 -Z	-	
17	305	84.32	5760	0.94	23	2KJ3402- ■ DC23- ■ ■ F1 -Z	-	
19	270	73.93	5890	1.1	23	2KJ3402- ■ DC23- ■ ■ E1 -Z	-	
21	245	67.07	5980	1.2	23	2KJ3402- ■ DC23- ■ ■ D1 -Z	-	
23	230	63.13	6040	1.3	23	2KJ3402- ■ DC23- ■ ■ C1 -Z	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/49</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H or D	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.55</b>	<b>FD.39-LE80MH4P</b>							
	26	200	55.65	6150	1.4	23	2KJ3402- ■ DC22- ■ ■ B1 -Z -	-
	30	176	48.29	6240	1.6	23	2KJ3402- ■ DC22- ■ ■ A1 -Z -	-
	<b>FZ.39-LE80MH4P</b>							
	25	210	57.99	6110	1.1	23	2KJ3302- ■ DC22- ■ ■ A2 -Z -	-
	28	186	50.91	6200	1.3	23	2KJ3302- ■ DC22- ■ ■ X1 -Z -	-
	31	169	46.29	6270	1.5	23	2KJ3302- ■ DC22- ■ ■ W1 -Z -	-
	36	144	39.60	6360	2	23	2KJ3302- ■ DC22- ■ ■ V1 -Z -	-
	40	131	36.00	6410	1.9	23	2KJ3302- ■ DC22- ■ ■ U1 -Z -	-
	45	116	31.82	6460	2.5	23	2KJ3302- ■ DC22- ■ ■ T1 -Z -	-
	50	106	28.93	6500	2.6	23	2KJ3302- ■ DC22- ■ ■ S1 -Z -	-
	57	92	25.34	6390	2.9	23	2KJ3302- ■ DC22- ■ ■ R1 -Z -	-
	62	85	23.39	6260	3	23	2KJ3302- ■ DC22- ■ ■ Q1 -Z -	-
	<b>FZ.29-LE80MH4P</b>							
	29	184	50.32	5220	0.82	17	2KJ3301- ■ DC23- ■ ■ B2 -Z -	-
	33	159	43.66	5220	0.94	17	2KJ3301- ■ DC23- ■ ■ A2 -Z -	-
	36	145	39.69	5220	1	17	2KJ3301- ■ DC23- ■ ■ X1 -Z -	-
	42	124	34.04	5150	1.2	17	2KJ3301- ■ DC23- ■ ■ W1 -Z -	-
	47	113	30.95	5050	1.3	17	2KJ3301- ■ DC23- ■ ■ V1 -Z -	-
	53	99	27.13	4910	1.5	17	2KJ3301- ■ DC23- ■ ■ U1 -Z -	-
	59	88	24.22	4790	1.7	17	2KJ3301- ■ DC23- ■ ■ T1 -Z -	-
	67	79	21.58	4650	1.9	17	2KJ3301- ■ DC23- ■ ■ S1 -Z -	-
	72	73	19.92	4560	2.1	17	2KJ3301- ■ DC23- ■ ■ R1 -Z -	-
	83	64	17.44	4410	2.4	17	2KJ3301- ■ DC23- ■ ■ Q1 -Z -	-
	94	56	15.29	4270	2.7	17	2KJ3301- ■ DC23- ■ ■ P1 -Z -	-
	104	51	13.88	4160	3	17	2KJ3301- ■ DC23- ■ ■ N1 -Z -	-
	110	48	13.06	4090	3.1	17	2KJ3301- ■ DC23- ■ ■ M1 -Z -	-
	125	42	11.51	3960	3.4	17	2KJ3301- ■ DC23- ■ ■ L1 -Z -	-
	144	36	9.99	3810	3.7	17	2KJ3301- ■ DC23- ■ ■ K1 -Z -	-
	149	35	9.69	3720	4	17	2KJ3301- ■ DC23- ■ ■ J1 -Z -	-
167	32	8.63	3600	4.1	17	2KJ3301- ■ DC23- ■ ■ H1 -Z -	-	
181	29	7.97	3530	4.1	17	2KJ3301- ■ DC23- ■ ■ G1 -Z -	-	
<b>0.75</b>	<b>FD.129-LE90SQ6P</b>							
	2.3	3130	413.00	37500	1.5	171	2KJ3408- ■ EC23- ■ ■ T1 -Z P01	
	2.5	2880	381.00	37500	1.7	171	2KJ3408- ■ EC23- ■ ■ S1 -Z P01	
	2.7	2660	351.00	37500	1.8	171	2KJ3408- ■ EC23- ■ ■ R1 -Z P01	
	<b>FD.109-LE90SQ6P</b>							
	2.3	3100	410.00	25000	1	118	2KJ3407- ■ EC23- ■ ■ T1 -Z P01	
	2.6	2800	370.00	25000	1.1	118	2KJ3407- ■ EC23- ■ ■ S1 -Z P01	
	2.8	2540	335.70	25000	1.2	118	2KJ3407- ■ EC23- ■ ■ R1 -Z P01	
	3	2340	309.87	25000	1.3	118	2KJ3407- ■ EC23- ■ ■ Q1 -Z P01	
	<b>FD.89-LE90SQ6P</b>							
	3.1	2310	304.82	17400	0.8	78	2KJ3406- ■ EC23- ■ ■ R1 -Z P01	
	3.5	2070	273.41	17400	0.89	78	2KJ3406- ■ EC23- ■ ■ Q1 -Z P01	
	3.8	1860	245.82	17400	0.99	78	2KJ3406- ■ EC23- ■ ■ P1 -Z P01	
	<b>FD.89-LE80ZMQ4P</b>							
	4.3	1650	335.30	17400	1.1	75	2KJ3406- ■ DF23- ■ ■ S1 -Z -	-
	4.8	1500	304.82	17400	1.2	75	2KJ3406- ■ DF23- ■ ■ R1 -Z -	-
	5.3	1350	273.41	17400	1.4	75	2KJ3406- ■ DF23- ■ ■ Q1 -Z -	-
	5.9	1210	245.82	17400	1.5	75	2KJ3406- ■ DF23- ■ ■ P1 -Z -	-
	6.5	1090	222.33	17400	1.7	75	2KJ3406- ■ DF23- ■ ■ N1 -Z -	-
	7.1	1010	205.23	17400	1.8	75	2KJ3406- ■ DF23- ■ ■ M1 -Z -	-

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Parallel shaft geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	-	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.75</b>	<b>FD.89-LE80ZMQ4P</b>							
	7.7	925	188.00	17400	2	75	2KJ3406- ■ DF23- ■ ■ L1 -Z -	-
	<b>FD.79-LE80ZMQ4P</b>							
	5.8	1240	250.99	13100	0.81	44	2KJ3405- ■ DF23- ■ ■ P1 -Z -	-
	6.5	1100	223.94	13400	0.9	44	2KJ3405- ■ DF23- ■ ■ N1 -Z -	-
	7.2	990	200.80	13600	1	44	2KJ3405- ■ DF23- ■ ■ M1 -Z -	-
	8	890	180.99	13800	1.1	44	2KJ3405- ■ DF23- ■ ■ L1 -Z -	-
	8.7	825	167.07	13900	1.2	44	2KJ3405- ■ DF23- ■ ■ K1 -Z -	-
	9.5	750	152.51	14100	1.3	44	2KJ3405- ■ DF23- ■ ■ J1 -Z -	-
	11	625	126.54	14300	1.6	44	2KJ3405- ■ DF23- ■ ■ H1 -Z -	-
	12	585	119.10	14400	1.7	44	2KJ3405- ■ DF23- ■ ■ G1 -Z -	-
	13	555	112.48	14500	1.8	44	2KJ3405- ■ DF23- ■ ■ F1 -Z -	-
	15	470	95.71	14500	2.1	44	2KJ3405- ■ DF23- ■ ■ E1 -Z -	-
	<b>FD.69-LE80ZMQ4P</b>							
	11	665	135.37	10700	0.9	37	2KJ3404- ■ DF23- ■ ■ J1 -Z -	-
12	615	124.96	10800	0.97	37	2KJ3404- ■ DF23- ■ ■ H1 -Z -	-	
13	545	110.63	10900	1.1	37	2KJ3404- ■ DF23- ■ ■ G1 -Z -	-	
16	455	92.08	11200	1.3	37	2KJ3404- ■ DF23- ■ ■ F1 -Z -	-	
17	425	86.67	11200	1.4	37	2KJ3404- ■ DF23- ■ ■ E1 -Z -	-	
19	380	77.65	11300	1.6	37	2KJ3404- ■ DF23- ■ ■ D1 -Z -	-	
22	325	66.11	11400	1.8	37	2KJ3404- ■ DF23- ■ ■ C1 -Z -	-	
26	280	56.67	11000	2.1	37	2KJ3404- ■ DF23- ■ ■ B1 -Z -	-	
30	240	48.80	10600	2.5	37	2KJ3404- ■ DF23- ■ ■ A1 -Z -	-	
<b>FZ.69-LE80ZMQ4P</b>								
22	315	64.67	11400	1.9	36	2KJ3304- ■ DF23- ■ ■ X1 -Z -	-	
25	290	58.79	11100	2.1	36	2KJ3304- ■ DF23- ■ ■ W1 -Z -	-	
29	245	50.00	10700	2.4	36	2KJ3304- ■ DF23- ■ ■ V1 -Z -	-	
<b>FD.49-LE80ZMQ4P</b>								
12	585	118.71	7270	0.82	32	2KJ3403- ■ DF23- ■ ■ H1 -Z -	-	
14	515	105.10	7720	0.92	32	2KJ3403- ■ DF23- ■ ■ G1 -Z -	-	
17	430	87.48	8180	1.1	32	2KJ3403- ■ DF23- ■ ■ F1 -Z -	-	
18	405	82.33	8250	1.2	32	2KJ3403- ■ DF23- ■ ■ E1 -Z -	-	
20	360	73.77	8380	1.3	32	2KJ3403- ■ DF23- ■ ■ D1 -Z -	-	
23	310	62.81	8190	1.5	32	2KJ3403- ■ DF23- ■ ■ C1 -Z -	-	
27	265	53.83	7970	1.8	32	2KJ3403- ■ DF23- ■ ■ B1 -Z -	-	
31	225	46.36	7760	2.1	32	2KJ3403- ■ DF23- ■ ■ A1 -Z -	-	
<b>FZ.49-LE80ZMQ4P</b>								
24	300	61.43	8180	1.6	31	2KJ3303- ■ DF23- ■ ■ X1 -Z -	-	
26	275	55.85	8030	1.7	31	2KJ3303- ■ DF23- ■ ■ W1 -Z -	-	
31	235	47.50	7770	2	31	2KJ3303- ■ DF23- ■ ■ V1 -Z -	-	
34	210	43.18	7640	2.3	31	2KJ3303- ■ DF23- ■ ■ U1 -Z -	-	
38	190	38.53	7440	2.5	31	2KJ3303- ■ DF23- ■ ■ T1 -Z -	-	
<b>FD.39-LE80ZMQ4P</b>								
22	330	67.07	5670	0.88	22	2KJ3402- ■ DF23- ■ ■ D1 -Z -	-	
23	310	63.13	5740	0.93	22	2KJ3402- ■ DF23- ■ ■ C1 -Z -	-	
26	275	55.65	5870	1.1	22	2KJ3402- ■ DF23- ■ ■ B1 -Z -	-	
30	235	48.29	6020	1.2	22	2KJ3402- ■ DF23- ■ ■ A1 -Z -	-	
<b>FZ.39-LE80ZMQ4P</b>								
25	285	57.99	5830	0.8	22	2KJ3302- ■ DF23- ■ ■ A2 -Z -	-	
28	250	50.91	5970	0.95	22	2KJ3302- ■ DF23- ■ ■ X1 -Z -	-	
31	225	46.29	6060	1.1	22	2KJ3302- ■ DF23- ■ ■ W1 -Z -	-	
37	196	39.60	6170	1.5	22	2KJ3302- ■ DF23- ■ ■ V1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>0.75</b>	<b>FZ.39-LE80ZMQ4P</b>								
	40	178	36.00	6230	1.4	22	2KJ3302- ■ DF23- ■ ■ U1 -Z -		
	46	157	31.82	6310	1.8	22	2KJ3302- ■ DF23- ■ ■ T1 -Z -		
	50	143	28.93	6310	1.9	22	2KJ3302- ■ DF23- ■ ■ S1 -Z -		
	57	125	25.34	6130	2.1	22	2KJ3302- ■ DF23- ■ ■ R1 -Z -		
	62	116	23.39	6010	2.3	22	2KJ3302- ■ DF23- ■ ■ Q1 -Z -		
	70	102	20.71	5840	2.4	22	2KJ3302- ■ DF23- ■ ■ P1 -Z -		
	84	85	17.24	5580	2.8	22	2KJ3302- ■ DF23- ■ ■ N1 -Z -		
	89	80	16.22	5490	2.9	22	2KJ3302- ■ DF23- ■ ■ M1 -Z -		
	100	72	14.54	5330	3.1	22	2KJ3302- ■ DF23- ■ ■ L1 -Z -		
	117	61	12.38	5100	3.4	22	2KJ3302- ■ DF23- ■ ■ K1 -Z -		
	137	52	10.61	4890	3.8	22	2KJ3302- ■ DF23- ■ ■ J1 -Z -		
	179	40	8.10	4490	4.2	22	2KJ3302- ■ DF23- ■ ■ G1 -Z -		
	<b>1.1</b>	<b>FZ.29-LE80ZMQ4P</b>							
		43	168	34.04	4770	0.89	16	2KJ3301- ■ DF23- ■ ■ W1 -Z -	
		47	153	30.95	4700	0.98	16	2KJ3301- ■ DF23- ■ ■ V1 -Z -	
		53	134	27.13	4600	1.1	16	2KJ3301- ■ DF23- ■ ■ U1 -Z -	
		60	120	24.22	4510	1.3	16	2KJ3301- ■ DF23- ■ ■ T1 -Z -	
		67	107	21.58	4410	1.4	16	2KJ3301- ■ DF23- ■ ■ S1 -Z -	
73		98	19.92	4340	1.5	16	2KJ3301- ■ DF23- ■ ■ R1 -Z -		
83		86	17.44	4220	1.7	16	2KJ3301- ■ DF23- ■ ■ Q1 -Z -		
95		76	15.29	4090	2	16	2KJ3301- ■ DF23- ■ ■ P1 -Z -		
104		69	13.88	4000	2.2	16	2KJ3301- ■ DF23- ■ ■ N1 -Z -		
111		64	13.06	3950	2.3	16	2KJ3301- ■ DF23- ■ ■ M1 -Z -		
126		57	11.51	3820	2.5	16	2KJ3301- ■ DF23- ■ ■ L1 -Z -		
145		49	9.99	3690	2.8	16	2KJ3301- ■ DF23- ■ ■ K1 -Z -		
150		48	9.69	3590	3	16	2KJ3301- ■ DF23- ■ ■ J1 -Z -		
168		43	8.63	3490	3	16	2KJ3301- ■ DF23- ■ ■ H1 -Z -		
182		39	7.97	3420	3	16	2KJ3301- ■ DF23- ■ ■ G1 -Z -		
208		34	6.98	3300	3.6	16	2KJ3301- ■ DF23- ■ ■ F1 -Z -		
237		30	6.12	3190	3.8	16	2KJ3301- ■ DF23- ■ ■ E1 -Z -		
261		27	5.55	3110	3.9	16	2KJ3301- ■ DF23- ■ ■ D1 -Z -		
278		26	5.22	3050	4.1	16	2KJ3301- ■ DF23- ■ ■ C1 -Z -		
315	23	4.60	2940	4.3	16	2KJ3301- ■ DF23- ■ ■ B1 -Z -			
362	20	4.00	2820	4.6	16	2KJ3301- ■ DF23- ■ ■ A1 -Z -			
<b>1.1</b>	<b>FZ.29-LE80ME2P</b>								
	163	44	17.44	3570	3.4	15	2KJ3301- ■ DB23- ■ ■ Q1 -Z P00		
	186	38	15.29	3450	3.9	15	2KJ3301- ■ DB23- ■ ■ P1 -Z P00		
	205	35	13.88	3360	4.3	15	2KJ3301- ■ DB23- ■ ■ N1 -Z P00		
<b>1.1</b>	<b>FD.149-LE100ZLSA6P</b>								
	2.5	4160	377.00	65000	1.9	278	2KJ3410- ■ FN23- ■ ■ W1 -Z P01		
	<b>FD.129-LE100ZLSA6P</b>								
	2.3	4560	413.00	37400	1.1	191	2KJ3408- ■ FN23- ■ ■ T1 -Z P01		
	2.5	4210	381.00	37500	1.2	191	2KJ3408- ■ FN23- ■ ■ S1 -Z P01		
	2.7	3880	351.00	37500	1.2	191	2KJ3408- ■ FN23- ■ ■ R1 -Z P01		
	3.2	3310	299.31	37500	1.5	191	2KJ3408- ■ FN23- ■ ■ Q1 -Z P01		
	<b>FD.129-LE90SM4P</b>								
	3.5	3010	413.00	37500	1.6	171	2KJ3408- ■ EK23- ■ ■ T1 -Z -		
	3.8	2770	381.00	37500	1.7	171	2KJ3408- ■ EK23- ■ ■ S1 -Z -		
4.1	2560	351.00	37500	1.9	171	2KJ3408- ■ EK23- ■ ■ R1 -Z -			
<b>1.1</b>	<b>FD.109-LE100ZLSA6P</b>								
	2.8	3710	335.70	25000	0.84	137	2KJ3407- ■ FN23- ■ ■ R1 -Z P01		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Parallel shaft geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.1	<b>FD.109-LE100ZLSA6P</b>							
	3.1	3420	309.87	25000	0.9	137	2KJ3407- ■ FN23- ■ ■ Q1 -Z P01	
	<b>FD.109-LE90SM4P</b>							
	3.5	2990	410.00	25000	1	118	2KJ3407- ■ EK23- ■ ■ T1 -Z -	
	3.9	2690	370.00	25000	1.1	118	2KJ3407- ■ EK23- ■ ■ S1 -Z -	
	4.3	2440	335.70	25000	1.3	118	2KJ3407- ■ EK23- ■ ■ R1 -Z -	
	4.6	2260	309.87	25000	1.4	118	2KJ3407- ■ EK23- ■ ■ Q1 -Z -	
	5.1	2050	281.68	25000	1.5	118	2KJ3407- ■ EK23- ■ ■ P1 -Z -	
	6	1740	238.52	25000	1.8	118	2KJ3407- ■ EK23- ■ ■ N1 -Z -	
	6.4	1630	224.49	25000	1.9	118	2KJ3407- ■ EK23- ■ ■ M1 -Z -	
6.9	1510	207.31	25000	2	118	2KJ3407- ■ EK23- ■ ■ L1 -Z -		
<b>FD.89-LE90SM4P</b>								
4.7	2220	304.82	17400	0.83	78	2KJ3406- ■ EK23- ■ ■ R1 -Z -		
5.3	1990	273.41	17400	0.93	78	2KJ3406- ■ EK23- ■ ■ Q1 -Z -		
5.9	1790	245.82	17400	1	78	2KJ3406- ■ EK23- ■ ■ P1 -Z -		
6.5	1620	222.33	17400	1.1	78	2KJ3406- ■ EK23- ■ ■ N1 -Z -		
7	1490	205.23	17400	1.2	78	2KJ3406- ■ EK23- ■ ■ M1 -Z -		
7.7	1370	188.00	17400	1.3	78	2KJ3406- ■ EK23- ■ ■ L1 -Z -		
9.1	1150	157.74	17400	1.6	78	2KJ3406- ■ EK23- ■ ■ K1 -Z -		
9.7	1080	148.46	17400	1.7	78	2KJ3406- ■ EK23- ■ ■ J1 -Z -		
11	990	136.21	17400	1.9	78	2KJ3406- ■ EK23- ■ ■ H1 -Z -		
12	865	118.98	17400	2.1	78	2KJ3406- ■ EK23- ■ ■ G1 -Z -		
<b>FD.79-LE90SM4P</b>								
8.6	1210	167.07	13200	0.82	46	2KJ3405- ■ EK23- ■ ■ K1 -Z -		
9.4	1110	152.51	13400	0.9	46	2KJ3405- ■ EK23- ■ ■ J1 -Z -		
11	920	126.54	13700	1.1	46	2KJ3405- ■ EK23- ■ ■ H1 -Z -		
12	865	119.10	13800	1.2	46	2KJ3405- ■ EK23- ■ ■ G1 -Z -		
13	820	112.48	13900	1.2	46	2KJ3405- ■ EK23- ■ ■ F1 -Z -		
15	695	95.71	14200	1.4	46	2KJ3405- ■ EK23- ■ ■ E1 -Z -		
18	595	81.99	14400	1.7	46	2KJ3405- ■ EK23- ■ ■ D1 -Z -		
20	525	72.09	14500	1.9	46	2KJ3405- ■ EK23- ■ ■ C1 -Z -		
24	440	60.82	14500	2.3	46	2KJ3405- ■ EK23- ■ ■ B1 -Z -		
<b>FD.69-LE90SM4P</b>								
16	670	92.08	10600	0.89	37	2KJ3404- ■ EK23- ■ ■ F1 -Z -		
17	630	86.67	10700	0.95	37	2KJ3404- ■ EK23- ■ ■ E1 -Z -		
19	565	77.65	10700	1.1	37	2KJ3404- ■ EK23- ■ ■ D1 -Z -		
22	480	66.11	10500	1.2	37	2KJ3404- ■ EK23- ■ ■ C1 -Z -		
25	410	56.67	10200	1.5	37	2KJ3404- ■ EK23- ■ ■ B1 -Z -		
30	355	48.80	9980	1.7	37	2KJ3404- ■ EK23- ■ ■ A1 -Z -		
<b>FZ.69-LE90SM4P</b>								
22	470	64.67	10400	1.3	37	2KJ3304- ■ EK23- ■ ■ X1 -Z -		
24	425	58.79	10300	1.4	37	2KJ3304- ■ EK23- ■ ■ W1 -Z -		
29	365	50.00	10000	1.6	37	2KJ3304- ■ EK23- ■ ■ V1 -Z -		
32	330	45.45	9850	1.8	37	2KJ3304- ■ EK23- ■ ■ U1 -Z -		
36	295	40.56	9620	2	37	2KJ3304- ■ EK23- ■ ■ T1 -Z -		
40	265	36.36	9400	2.3	37	2KJ3304- ■ EK23- ■ ■ S1 -Z -		
44	235	32.78	9210	2.5	37	2KJ3304- ■ EK23- ■ ■ R1 -Z -		
48	220	30.26	9020	2.7	37	2KJ3304- ■ EK23- ■ ■ Q1 -Z -		
<b>FD.49-LE90SM4P</b>								
17	600	82.33	7170	0.8	32	2KJ3403- ■ EK23- ■ ■ E1 -Z -		
20	535	73.77	7310	0.89	32	2KJ3403- ■ EK23- ■ ■ D1 -Z -		
23	455	62.81	7270	1	32	2KJ3403- ■ EK23- ■ ■ C1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/49</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H or D	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.1</b>	<b>FD.49-LE90SM4P</b>							
	27	390	53.83	7180	1.2	32	2KJ3403- ■ EK23- ■ ■ B1 -Z -	
	31	335	46.36	7060	1.4	32	2KJ3403- ■ EK23- ■ ■ A1 -Z -	
	<b>FZ.49-LE90SM4P</b>							
	23	445	61.43	7260	1.1	32	2KJ3303- ■ EK23- ■ ■ X1 -Z -	
	26	405	55.85	7200	1.2	32	2KJ3303- ■ EK23- ■ ■ W1 -Z -	
	30	345	47.50	7070	1.4	32	2KJ3303- ■ EK23- ■ ■ V1 -Z -	
	33	315	43.18	6980	1.5	32	2KJ3303- ■ EK23- ■ ■ U1 -Z -	
	37	280	38.53	6870	1.7	32	2KJ3303- ■ EK23- ■ ■ T1 -Z -	
	42	250	34.55	6760	1.9	32	2KJ3303- ■ EK23- ■ ■ S1 -Z -	
46	225	31.14	6630	2.1	32	2KJ3303- ■ EK23- ■ ■ R1 -Z -		
50	210	28.74	6520	2.3	32	2KJ3303- ■ EK23- ■ ■ Q1 -Z -		
55	191	26.24	6410	2.5	32	2KJ3303- ■ EK23- ■ ■ P1 -Z -		
66	159	21.77	6150	3	32	2KJ3303- ■ EK23- ■ ■ N1 -Z -		
<b>FD.39-LE90SM4P</b>								
30	350	48.29	5590	0.82	25	2KJ3402- ■ EK23- ■ ■ A1 -Z -		
<b>FZ.39-LE90SM4P</b>								
36	285	39.60	5830	1	24	2KJ3302- ■ EK23- ■ ■ V1 -Z -		
40	260	36.00	5930	0.97	24	2KJ3302- ■ EK23- ■ ■ U1 -Z -		
45	230	31.82	5920	1.2	24	2KJ3302- ■ EK23- ■ ■ T1 -Z -		
50	210	28.93	5830	1.3	24	2KJ3302- ■ EK23- ■ ■ S1 -Z -		
57	185	25.34	5700	1.4	24	2KJ3302- ■ EK23- ■ ■ R1 -Z -		
62	171	23.39	5610	1.5	24	2KJ3302- ■ EK23- ■ ■ Q1 -Z -		
70	151	20.71	5490	1.7	24	2KJ3302- ■ EK23- ■ ■ P1 -Z -		
84	126	17.24	5280	1.9	24	2KJ3302- ■ EK23- ■ ■ N1 -Z -		
89	118	16.22	5220	1.9	24	2KJ3302- ■ EK23- ■ ■ M1 -Z -		
99	106	14.54	5090	2.1	24	2KJ3302- ■ EK23- ■ ■ L1 -Z -		
116	90	12.38	4900	2.3	24	2KJ3302- ■ EK23- ■ ■ K1 -Z -		
136	77	10.61	4720	2.6	24	2KJ3302- ■ EK23- ■ ■ J1 -Z -		
158	67	9.13	4540	2.8	24	2KJ3302- ■ EK23- ■ ■ H1 -Z -		
178	59	8.10	4350	2.8	24	2KJ3302- ■ EK23- ■ ■ G1 -Z -		
214	49	6.74	4140	3.1	24	2KJ3302- ■ EK23- ■ ■ F1 -Z -		
227	46	6.35	4080	3.2	24	2KJ3302- ■ EK23- ■ ■ E1 -Z -		
253	42	5.69	3950	3.4	24	2KJ3302- ■ EK23- ■ ■ D1 -Z -		
298	35	4.84	3780	3.6	24	2KJ3302- ■ EK23- ■ ■ C1 -Z -		
347	30	4.15	3620	3.9	24	2KJ3302- ■ EK23- ■ ■ B1 -Z -		
403	26	3.57	3460	4.1	24	2KJ3302- ■ EK23- ■ ■ A1 -Z -		
<b>FZ.39-LE80ZMJ2P</b>								
167	63	17.24	4470	3.7	22	2KJ3302- ■ DM23- ■ ■ N1 -Z P00		
178	59	16.22	4400	3.9	22	2KJ3302- ■ DM23- ■ ■ M1 -Z P00		
198	53	14.54	4270	4.2	22	2KJ3302- ■ DM23- ■ ■ L1 -Z P00		
<b>FZ.29-LE90SM4P</b>								
59	177	24.22	4050	0.85	18	2KJ3301- ■ EK23- ■ ■ T1 -Z -		
67	157	21.58	4000	0.95	18	2KJ3301- ■ EK23- ■ ■ S1 -Z -		
72	145	19.92	3960	1	18	2KJ3301- ■ EK23- ■ ■ R1 -Z -		
83	127	17.44	3890	1.2	18	2KJ3301- ■ EK23- ■ ■ Q1 -Z -		
94	112	15.29	3800	1.3	18	2KJ3301- ■ EK23- ■ ■ P1 -Z -		
104	101	13.88	3740	1.5	18	2KJ3301- ■ EK23- ■ ■ N1 -Z -		
110	95	13.06	3700	1.6	18	2KJ3301- ■ EK23- ■ ■ M1 -Z -		
125	84	11.51	3610	1.7	18	2KJ3301- ■ EK23- ■ ■ L1 -Z -		
144	73	9.99	3500	1.9	18	2KJ3301- ■ EK23- ■ ■ K1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.1	<b>FZ.29-LE90SM4P</b>							
	149	71	9.69	3380	2	18	2KJ3301- ■ EK23- ■ ■ J1 -Z -	-
	167	63	8.63	3300	2.1	18	2KJ3301- ■ EK23- ■ ■ H1 -Z -	-
	181	58	7.97	3250	2.1	18	2KJ3301- ■ EK23- ■ ■ G1 -Z -	-
	206	51	6.98	3150	2.4	18	2KJ3301- ■ EK23- ■ ■ F1 -Z -	-
	235	45	6.12	3050	2.6	18	2KJ3301- ■ EK23- ■ ■ E1 -Z -	-
	259	40	5.55	2990	2.7	18	2KJ3301- ■ EK23- ■ ■ D1 -Z -	-
	276	38	5.22	2940	2.8	18	2KJ3301- ■ EK23- ■ ■ C1 -Z -	-
	313	34	4.60	2840	2.9	18	2KJ3301- ■ EK23- ■ ■ B1 -Z -	-
	360	29	4.00	2740	3.1	18	2KJ3301- ■ EK23- ■ ■ A1 -Z -	-
	<b>FZ.29-LE80ZMJ2P</b>							
	165	64	17.44	3390	2.4	16	2KJ3301- ■ DM23- ■ ■ Q1 -Z	P00
	189	56	15.29	3290	2.7	16	2KJ3301- ■ DM23- ■ ■ P1 -Z	P00
	208	50	13.88	3220	3	16	2KJ3301- ■ DM23- ■ ■ N1 -Z	P00
	221	48	13.06	3160	3.2	16	2KJ3301- ■ DM23- ■ ■ M1 -Z	P00
	251	42	11.51	3060	3.4	16	2KJ3301- ■ DM23- ■ ■ L1 -Z	P00
	289	36	9.99	2960	3.7	16	2KJ3301- ■ DM23- ■ ■ K1 -Z	P00
	298	35	9.69	2880	4.1	16	2KJ3301- ■ DM23- ■ ■ J1 -Z	P00
	334	31	8.63	2800	4.1	16	2KJ3301- ■ DM23- ■ ■ H1 -Z	P00
	362	29	7.97	2740	4.1	16	2KJ3301- ■ DM23- ■ ■ G1 -Z	P00
	413	25	6.98	2650	4.8	16	2KJ3301- ■ DM23- ■ ■ F1 -Z	P00
471	22	6.12	2550	5.1	16	2KJ3301- ■ DM23- ■ ■ E1 -Z	P00	
520	20	5.55	2480	5.3	16	2KJ3301- ■ DM23- ■ ■ D1 -Z	P00	
553	19	5.22	2440	5.6	16	2KJ3301- ■ DM23- ■ ■ C1 -Z	P00	
627	17	4.60	2350	5.8	16	2KJ3301- ■ DM23- ■ ■ B1 -Z	P00	
721	15	4.00	2250	6.2	16	2KJ3301- ■ DM23- ■ ■ A1 -Z	P00	
1.5	<b>FD.149-LE112ZMKA6P</b>							
	2.6	5530	377.00	65000	1.4	280	2KJ3410- ■ GH23- ■ ■ W1 -Z	P01
	3	4740	323.04	65000	1.7	280	2KJ3410- ■ GH23- ■ ■ V1 -Z	P01
	3.2	4460	304.03	65000	1.8	280	2KJ3410- ■ GH23- ■ ■ U1 -Z	P01
	3.4	4180	285.00	65000	1.9	280	2KJ3410- ■ GH23- ■ ■ T1 -Z	P01
	<b>FD.129-LE112ZMKA6P</b>							
	2.4	6060	413.00	36000	0.8	192	2KJ3408- ■ GH23- ■ ■ T1 -Z	P01
	2.6	5590	381.00	36400	0.87	192	2KJ3408- ■ GH23- ■ ■ S1 -Z	P01
	2.8	5150	351.00	36900	0.94	192	2KJ3408- ■ GH23- ■ ■ R1 -Z	P01
	3.3	4390	299.31	37500	1.1	192	2KJ3408- ■ GH23- ■ ■ Q1 -Z	P01
	<b>FD.129-LE90ZLR4P</b>							
	3.5	4090	413.00	37500	1.2	174	2KJ3408- ■ EM23- ■ ■ T1 -Z	-
	3.8	3770	381.00	37500	1.3	174	2KJ3408- ■ EM23- ■ ■ S1 -Z	-
	4.1	3480	351.00	37500	1.4	174	2KJ3408- ■ EM23- ■ ■ R1 -Z	-
	4.8	2960	299.31	37500	1.6	174	2KJ3408- ■ EM23- ■ ■ Q1 -Z	-
	5.1	2790	281.70	37500	1.7	174	2KJ3408- ■ EM23- ■ ■ P1 -Z	-
	5.5	2590	261.42	37500	1.9	174	2KJ3408- ■ EM23- ■ ■ N1 -Z	-
	6.3	2290	231.12	37500	2.1	174	2KJ3408- ■ EM23- ■ ■ M1 -Z	-
	<b>FD.109-LE90ZLR4P</b>							
	3.9	3660	370.00	25000	0.85	121	2KJ3407- ■ EM23- ■ ■ S1 -Z	-
	4.3	3320	335.70	25000	0.93	121	2KJ3407- ■ EM23- ■ ■ R1 -Z	-
4.7	3070	309.87	25000	1	121	2KJ3407- ■ EM23- ■ ■ Q1 -Z	-	
5.1	2790	281.68	25000	1.1	121	2KJ3407- ■ EM23- ■ ■ P1 -Z	-	
6.1	2360	238.52	25000	1.3	121	2KJ3407- ■ EM23- ■ ■ N1 -Z	-	
6.4	2220	224.49	25000	1.4	121	2KJ3407- ■ EM23- ■ ■ M1 -Z	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.5</b>	<b>FD.109-LE90ZLR4P</b>							
	7	2050	207.31	25000	1.5	121	2KJ3407- ■ EM23- ■ ■ L1 -Z -	-
	7.8	1820	184.46	25000	1.7	121	2KJ3407- ■ EM23- ■ ■ K1 -Z -	-
	8.8	1620	163.83	25000	1.9	121	2KJ3407- ■ EM23- ■ ■ J1 -Z -	-
	9.9	1450	146.65	25000	2.1	121	2KJ3407- ■ EM23- ■ ■ H1 -Z -	-
	<b>FD.89-LE90ZLR4P</b>							
	6.5	2200	222.33	17400	0.84	81	2KJ3406- ■ EM23- ■ ■ N1 -Z -	-
	7	2030	205.23	17400	0.91	81	2KJ3406- ■ EM23- ■ ■ M1 -Z -	-
	7.7	1860	188.00	17400	0.99	81	2KJ3406- ■ EM23- ■ ■ L1 -Z -	-
	9.2	1560	157.74	17400	1.2	81	2KJ3406- ■ EM23- ■ ■ K1 -Z -	-
9.7	1470	148.46	17400	1.3	81	2KJ3406- ■ EM23- ■ ■ J1 -Z -	-	
11	1350	136.21	17400	1.4	81	2KJ3406- ■ EM23- ■ ■ H1 -Z -	-	
12	1180	118.98	17400	1.6	81	2KJ3406- ■ EM23- ■ ■ G1 -Z -	-	
14	1050	106.52	17400	1.8	81	2KJ3406- ■ EM23- ■ ■ F1 -Z -	-	
16	920	93.14	17400	2	81	2KJ3406- ■ EM23- ■ ■ E1 -Z -	-	
18	790	79.95	17400	2.3	81	2KJ3406- ■ EM23- ■ ■ D1 -Z -	-	
<b>FD.79-LE90ZLR4P</b>								
11	1250	126.54	13100	0.8	49	2KJ3405- ■ EM23- ■ ■ H1 -Z -	-	
12	1180	119.10	13200	0.85	49	2KJ3405- ■ EM23- ■ ■ G1 -Z -	-	
13	1110	112.48	13400	0.9	49	2KJ3405- ■ EM23- ■ ■ F1 -Z -	-	
15	945	95.71	13700	1.1	49	2KJ3405- ■ EM23- ■ ■ E1 -Z -	-	
18	810	81.99	13900	1.2	49	2KJ3405- ■ EM23- ■ ■ D1 -Z -	-	
20	715	72.09	14100	1.4	49	2KJ3405- ■ EM23- ■ ■ C1 -Z -	-	
24	600	60.82	14400	1.7	49	2KJ3405- ■ EM23- ■ ■ B1 -Z -	-	
27	525	53.01	14500	1.9	49	2KJ3405- ■ EM23- ■ ■ A1 -Z -	-	
<b>FZ.79-LE90ZLR4P</b>								
27	530	53.55	14500	1.9	48	2KJ3305- ■ EM23- ■ ■ X1 -Z -	-	
30	475	48.03	14500	2.1	48	2KJ3305- ■ EM23- ■ ■ W1 -Z -	-	
33	425	43.18	14500	2.3	48	2KJ3305- ■ EM23- ■ ■ V1 -Z -	-	
37	385	39.06	14500	2.6	48	2KJ3305- ■ EM23- ■ ■ U1 -Z -	-	
<b>FD.69-LE90ZLR4P</b>								
22	655	66.11	9410	0.92	40	2KJ3404- ■ EM23- ■ ■ C1 -Z -	-	
25	560	56.67	9320	1.1	40	2KJ3404- ■ EM23- ■ ■ B1 -Z -	-	
30	480	48.80	9200	1.2	40	2KJ3404- ■ EM23- ■ ■ A1 -Z -	-	
<b>FZ.69-LE90ZLR4P</b>								
22	640	64.67	9410	0.94	40	2KJ3304- ■ EM23- ■ ■ X1 -Z -	-	
25	580	58.79	9360	1	40	2KJ3304- ■ EM23- ■ ■ W1 -Z -	-	
29	495	50.00	9200	1.2	40	2KJ3304- ■ EM23- ■ ■ V1 -Z -	-	
32	450	45.45	9100	1.3	40	2KJ3304- ■ EM23- ■ ■ U1 -Z -	-	
36	400	40.56	8960	1.5	40	2KJ3304- ■ EM23- ■ ■ T1 -Z -	-	
40	360	36.36	8800	1.7	40	2KJ3304- ■ EM23- ■ ■ S1 -Z -	-	
44	325	32.78	8640	1.8	40	2KJ3304- ■ EM23- ■ ■ R1 -Z -	-	
48	300	30.26	8520	2	40	2KJ3304- ■ EM23- ■ ■ Q1 -Z -	-	
52	270	27.62	8390	2.2	40	2KJ3304- ■ EM23- ■ ■ P1 -Z -	-	
63	225	22.92	8060	2.6	40	2KJ3304- ■ EM23- ■ ■ N1 -Z -	-	
67	210	21.57	7970	2.8	40	2KJ3304- ■ EM23- ■ ■ M1 -Z -	-	
71	200	20.37	7850	3	40	2KJ3304- ■ EM23- ■ ■ L1 -Z -	-	
<b>FD.49-LE90ZLR4P</b>								
27	530	53.83	6250	0.9	35	2KJ3403- ■ EM23- ■ ■ B1 -Z -	-	
31	460	46.36	6240	1	35	2KJ3403- ■ EM23- ■ ■ A1 -Z -	-	
<b>FZ.49-LE90ZLR4P</b>								
26	550	55.85	6240	0.87	35	2KJ3303- ■ EM23- ■ ■ W1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.5</b>	<b>FZ.49-LE90ZLR4P</b>							
	30	470	47.50	6250	1	35	2KJ3303- ■ EM23- ■ ■ V1 -Z -	-
	33	425	43.18	6250	1.1	35	2KJ3303- ■ EM23- ■ ■ U1 -Z -	-
	38	380	38.53	6210	1.3	35	2KJ3303- ■ EM23- ■ ■ T1 -Z -	-
	42	340	34.55	6160	1.4	35	2KJ3303- ■ EM23- ■ ■ S1 -Z -	-
	46	305	31.14	6100	1.6	35	2KJ3303- ■ EM23- ■ ■ R1 -Z -	-
	50	285	28.74	6020	1.7	35	2KJ3303- ■ EM23- ■ ■ Q1 -Z -	-
	55	260	26.24	5950	1.8	35	2KJ3303- ■ EM23- ■ ■ P1 -Z -	-
	66	215	21.77	5780	2.2	35	2KJ3303- ■ EM23- ■ ■ N1 -Z -	-
	71	200	20.49	5730	2.4	35	2KJ3303- ■ EM23- ■ ■ M1 -Z -	-
	75	192	19.35	5650	2.5	35	2KJ3303- ■ EM23- ■ ■ L1 -Z -	-
	88	163	16.47	5480	2.9	35	2KJ3303- ■ EM23- ■ ■ K1 -Z -	-
102	140	14.11	5300	3.4	35	2KJ3303- ■ EM23- ■ ■ J1 -Z -	-	
	<b>FZ.39-LE90ZLR4P</b>							
	45	315	31.82	5280	0.9	27	2KJ3302- ■ EM23- ■ ■ T1 -Z -	-
	50	285	28.93	5260	0.96	27	2KJ3302- ■ EM23- ■ ■ S1 -Z -	-
	57	250	25.34	5200	1.1	27	2KJ3302- ■ EM23- ■ ■ R1 -Z -	-
	62	230	23.39	5170	1.1	27	2KJ3302- ■ EM23- ■ ■ Q1 -Z -	-
	70	205	20.71	5080	1.2	27	2KJ3302- ■ EM23- ■ ■ P1 -Z -	-
	84	171	17.24	4940	1.4	27	2KJ3302- ■ EM23- ■ ■ N1 -Z -	-
	89	161	16.22	4890	1.4	27	2KJ3302- ■ EM23- ■ ■ M1 -Z -	-
	99	144	14.54	4800	1.5	27	2KJ3302- ■ EM23- ■ ■ L1 -Z -	-
	117	123	12.38	4650	1.7	27	2KJ3302- ■ EM23- ■ ■ K1 -Z -	-
	136	105	10.61	4500	1.9	27	2KJ3302- ■ EM23- ■ ■ J1 -Z -	-
	158	90	9.13	4360	2.1	27	2KJ3302- ■ EM23- ■ ■ H1 -Z -	-
	178	80	8.10	4160	2.1	27	2KJ3302- ■ EM23- ■ ■ G1 -Z -	-
	214	67	6.74	3990	2.3	27	2KJ3302- ■ EM23- ■ ■ F1 -Z -	-
	228	63	6.35	3930	2.4	27	2KJ3302- ■ EM23- ■ ■ E1 -Z -	-
	254	56	5.69	3830	2.5	27	2KJ3302- ■ EM23- ■ ■ D1 -Z -	-
	299	48	4.84	3670	2.7	27	2KJ3302- ■ EM23- ■ ■ C1 -Z -	-
	348	41	4.15	3520	2.9	27	2KJ3302- ■ EM23- ■ ■ B1 -Z -	-
405	35	3.57	3390	3.1	27	2KJ3302- ■ EM23- ■ ■ A1 -Z -	-	
	<b>FZ.39-LE90SM2P</b>							
	169	85	17.24	4290	2.8	24	2KJ3302- ■ EK23- ■ ■ N1 -Z	P00
	179	80	16.22	4230	2.9	24	2KJ3302- ■ EK23- ■ ■ M1 -Z	P00
	200	72	14.54	4110	3.1	24	2KJ3302- ■ EK23- ■ ■ L1 -Z	P00
	235	61	12.38	3950	3.4	24	2KJ3302- ■ EK23- ■ ■ K1 -Z	P00
	274	52	10.61	3800	3.8	24	2KJ3302- ■ EK23- ■ ■ J1 -Z	P00
	319	45	9.13	3650	4.2	24	2KJ3302- ■ EK23- ■ ■ H1 -Z	P00
	359	40	8.10	3490	4.2	24	2KJ3302- ■ EK23- ■ ■ G1 -Z	P00
	432	33	6.74	3320	4.6	24	2KJ3302- ■ EK23- ■ ■ F1 -Z	P00
	458	31	6.35	3270	4.8	24	2KJ3302- ■ EK23- ■ ■ E1 -Z	P00
	511	28	5.69	3170	5	24	2KJ3302- ■ EK23- ■ ■ D1 -Z	P00
	601	24	4.84	3020	5.4	24	2KJ3302- ■ EK23- ■ ■ C1 -Z	P00
701	20	4.15	2890	5.8	24	2KJ3302- ■ EK23- ■ ■ B1 -Z	P00	
815	18	3.57	2760	6.1	24	2KJ3302- ■ EK23- ■ ■ A1 -Z	P00	
	<b>FZ.29-LE90ZLR4P</b>							
	83	173	17.44	3500	0.87	21	2KJ3301- ■ EM23- ■ ■ Q1 -Z -	-
	95	152	15.29	3460	0.99	21	2KJ3301- ■ EM23- ■ ■ P1 -Z -	-
	104	138	13.88	3430	1.1	21	2KJ3301- ■ EM23- ■ ■ N1 -Z -	-
111	129	13.06	3410	1.2	21	2KJ3301- ■ EM23- ■ ■ M1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>1.5</b>	<b>FZ.29-LE90ZLR4P</b>								
	126	114	11.51	3350	1.3	21	2KJ3301- ■ EM23- ■ ■ L1 -Z -		
	145	99	9.99	3280	1.4	21	2KJ3301- ■ EM23- ■ ■ K1 -Z -		
	149	96	9.69	3130	1.5	21	2KJ3301- ■ EM23- ■ ■ H1 -Z -		
	167	86	8.63	3070	1.5	21	2KJ3301- ■ EM23- ■ ■ J1 -Z -		
	181	79	7.97	3040	1.5	21	2KJ3301- ■ EM23- ■ ■ G1 -Z -		
	207	69	6.98	2970	1.8	21	2KJ3301- ■ EM23- ■ ■ F1 -Z -		
	236	61	6.12	2890	1.9	21	2KJ3301- ■ EM23- ■ ■ E1 -Z -		
	260	55	5.55	2840	2	21	2KJ3301- ■ EM23- ■ ■ D1 -Z -		
	277	52	5.22	2800	2	21	2KJ3301- ■ EM23- ■ ■ C1 -Z -		
	314	46	4.60	2720	2.1	21	2KJ3301- ■ EM23- ■ ■ B1 -Z -		
	361	40	4.00	2630	2.3	21	2KJ3301- ■ EM23- ■ ■ A1 -Z -		
	<b>FZ.29-LE90SM2P</b>								
	167	86	17.44	3200	1.7	18	2KJ3301- ■ EK23- ■ ■ Q1 -Z P00		
	190	75	15.29	3120	2	18	2KJ3301- ■ EK23- ■ ■ P1 -Z P00		
	210	68	13.88	3060	2.2	18	2KJ3301- ■ EK23- ■ ■ N1 -Z P00		
	223	64	13.06	3020	2.3	18	2KJ3301- ■ EK23- ■ ■ M1 -Z P00		
	253	57	11.51	2930	2.5	18	2KJ3301- ■ EK23- ■ ■ L1 -Z P00		
	291	49	9.99	2840	2.8	18	2KJ3301- ■ EK23- ■ ■ K1 -Z P00		
	300	48	9.69	2750	3	18	2KJ3301- ■ EK23- ■ ■ J1 -Z P00		
	337	42	8.63	2690	3.1	18	2KJ3301- ■ EK23- ■ ■ H1 -Z P00		
	365	39	7.97	2630	3.1	18	2KJ3301- ■ EK23- ■ ■ G1 -Z P00		
	417	34	6.98	2550	3.6	18	2KJ3301- ■ EK23- ■ ■ F1 -Z P00		
	475	30	6.12	2470	3.8	18	2KJ3301- ■ EK23- ■ ■ E1 -Z P00		
	524	27	5.55	2410	4	18	2KJ3301- ■ EK23- ■ ■ D1 -Z P00		
	557	26	5.22	2360	4.1	18	2KJ3301- ■ EK23- ■ ■ C1 -Z P00		
	633	23	4.60	2280	4.3	18	2KJ3301- ■ EK23- ■ ■ B1 -Z P00		
	728	20	4.00	2200	4.6	18	2KJ3301- ■ EK23- ■ ■ A1 -Z P00		
	<b>2.2</b>	<b>FD.169-LE132SQA6P</b>							
		2.6	7930	368.00	73500	1.7	455	2KJ3411- ■ HG23- ■ ■ V1 -Z P01	
		2.8	7390	343.01	73500	1.8	455	2KJ3411- ■ HG23- ■ ■ U1 -Z P01	
		<b>FD.149-LE132SQA6P</b>							
		2.6	8120	377.00	65000	0.98	308	2KJ3410- ■ HG23- ■ ■ W1 -Z P01	
		3	6960	323.04	65000	1.1	308	2KJ3410- ■ HG23- ■ ■ V1 -Z P01	
3.2		6550	304.03	65000	1.2	308	2KJ3410- ■ HG23- ■ ■ U1 -Z P01		
3.4		6140	285.00	65000	1.3	308	2KJ3410- ■ HG23- ■ ■ T1 -Z P01		
<b>FD.149-LE100ZLSA4P</b>									
3.9		5400	377.00	65000	1.5	278	2KJ3410- ■ FN23- ■ ■ W1 -Z -		
4.5		4630	323.04	65000	1.7	278	2KJ3410- ■ FN23- ■ ■ V1 -Z -		
4.8		4360	304.03	65000	1.8	278	2KJ3410- ■ FN23- ■ ■ U1 -Z -		
5.1		4080	285.00	65000	2	278	2KJ3410- ■ FN23- ■ ■ T1 -Z -		
<b>FD.129-LE100ZLSA4P</b>									
3.5		5920	413.00	36100	0.82	191	2KJ3408- ■ FN23- ■ ■ T1 -Z -		
3.8		5460	381.00	36600	0.89	191	2KJ3408- ■ FN23- ■ ■ S1 -Z -		
4.2		5030	351.00	37000	0.96	191	2KJ3408- ■ FN23- ■ ■ R1 -Z -		
4.9		4290	299.31	37500	1.1	191	2KJ3408- ■ FN23- ■ ■ Q1 -Z -		
5.2		4040	281.70	37500	1.2	191	2KJ3408- ■ FN23- ■ ■ P1 -Z -		
5.6		3740	261.42	37500	1.3	191	2KJ3408- ■ FN23- ■ ■ N1 -Z -		
6.3		3310	231.12	37500	1.5	191	2KJ3408- ■ FN23- ■ ■ M1 -Z -		
7.1		2950	206.32	37500	1.6	191	2KJ3408- ■ FN23- ■ ■ L1 -Z -		
7.9		2660	185.66	37500	1.8	191	2KJ3408- ■ FN23- ■ ■ K1 -Z -		
9.1		2310	161.14	37500	2.1	191	2KJ3408- ■ FN23- ■ ■ J1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>2.2</b>	<b>FD.109-LE100ZLSA4P</b>							
	6.1	3420	238.52	25000	0.91	137	2KJ3407- ■ FN23- ■ ■ N1 -Z -	-
	6.5	3210	224.49	25000	0.96	137	2KJ3407- ■ FN23- ■ ■ M1 -Z -	-
	7.1	2970	207.31	25000	1	137	2KJ3407- ■ FN23- ■ ■ L1 -Z -	-
	7.9	2640	184.46	25000	1.2	137	2KJ3407- ■ FN23- ■ ■ K1 -Z -	-
	8.9	2350	163.83	25000	1.3	137	2KJ3407- ■ FN23- ■ ■ J1 -Z -	-
	10	2100	146.65	25000	1.5	137	2KJ3407- ■ FN23- ■ ■ H1 -Z -	-
	12	1790	125.37	25000	1.7	137	2KJ3407- ■ FN23- ■ ■ G1 -Z -	-
	13	1600	111.95	25000	1.9	137	2KJ3407- ■ FN23- ■ ■ F1 -Z -	-
	15	1410	98.94	25000	2.2	137	2KJ3407- ■ FN23- ■ ■ E1 -Z -	-
	<b>FD.89-LE100ZLSA4P</b>							
	9.3	2260	157.74	17400	0.82	96	2KJ3406- ■ FN23- ■ ■ K1 -Z -	-
	9.9	2120	148.46	17400	0.87	96	2KJ3406- ■ FN23- ■ ■ J1 -Z -	-
	11	1950	136.21	17400	0.95	96	2KJ3406- ■ FN23- ■ ■ H1 -Z -	-
	12	1700	118.98	17400	1.1	96	2KJ3406- ■ FN23- ■ ■ G1 -Z -	-
14	1520	106.52	17400	1.2	96	2KJ3406- ■ FN23- ■ ■ F1 -Z -	-	
16	1330	93.14	17400	1.4	96	2KJ3406- ■ FN23- ■ ■ E1 -Z -	-	
18	1140	79.95	17400	1.6	96	2KJ3406- ■ FN23- ■ ■ D1 -Z -	-	
21	1010	70.67	17400	1.8	96	2KJ3406- ■ FN23- ■ ■ C1 -Z -	-	
24	860	60.09	17400	2.1	96	2KJ3406- ■ FN23- ■ ■ B1 -Z -	-	
28	735	51.51	17400	2.5	96	2KJ3406- ■ FN23- ■ ■ A1 -Z -	-	
<b>FZ.89-LE100ZLSA4P</b>								
24	885	61.72	17400	2.1	95	2KJ3306- ■ FN23- ■ ■ B2 -Z -	-	
26	795	55.72	17400	2.3	95	2KJ3306- ■ FN23- ■ ■ A2 -Z -	-	
<b>FD.79-LE100ZLSA4P</b>								
18	1170	81.99	13200	0.85	65	2KJ3405- ■ FN23- ■ ■ D1 -Z -	-	
20	1030	72.09	13500	0.97	65	2KJ3405- ■ FN23- ■ ■ C1 -Z -	-	
24	870	60.82	13800	1.1	65	2KJ3405- ■ FN23- ■ ■ B1 -Z -	-	
28	760	53.01	14000	1.3	65	2KJ3405- ■ FN23- ■ ■ A1 -Z -	-	
<b>FZ.79-LE100ZLSA4P</b>								
31	685	48.03	14200	1.5	64	2KJ3305- ■ FN23- ■ ■ W1 -Z -	-	
34	615	43.18	14300	1.6	64	2KJ3305- ■ FN23- ■ ■ V1 -Z -	-	
38	560	39.06	14400	1.8	64	2KJ3305- ■ FN23- ■ ■ U1 -Z -	-	
41	515	36.05	14500	1.9	64	2KJ3305- ■ FN23- ■ ■ T1 -Z -	-	
44	470	33.02	14500	2.1	64	2KJ3305- ■ FN23- ■ ■ S1 -Z -	-	
53	395	27.71	14500	2.5	64	2KJ3305- ■ FN23- ■ ■ R1 -Z -	-	
56	370	26.08	14500	2.7	64	2KJ3305- ■ FN23- ■ ■ Q1 -Z -	-	
61	340	23.93	14500	2.9	64	2KJ3305- ■ FN23- ■ ■ P1 -Z -	-	
<b>FD.69-LE100ZLSA4P</b>								
30	700	48.80	7780	0.86	58	2KJ3404- ■ FN23- ■ ■ A1 -Z -	-	
<b>FZ.69-LE100ZLSA4P</b>								
36	580	40.56	7800	1	57	2KJ3304- ■ FN23- ■ ■ T1 -Z -	-	
40	520	36.36	7760	1.2	57	2KJ3304- ■ FN23- ■ ■ S1 -Z -	-	
45	470	32.78	7700	1.3	57	2KJ3304- ■ FN23- ■ ■ R1 -Z -	-	
48	430	30.26	7670	1.4	57	2KJ3304- ■ FN23- ■ ■ Q1 -Z -	-	
53	395	27.62	7570	1.5	57	2KJ3304- ■ FN23- ■ ■ P1 -Z -	-	
64	325	22.92	7400	1.8	57	2KJ3304- ■ FN23- ■ ■ N1 -Z -	-	
68	305	21.57	7340	1.9	57	2KJ3304- ■ FN23- ■ ■ M1 -Z -	-	
72	290	20.37	7260	2.1	57	2KJ3304- ■ FN23- ■ ■ L1 -Z -	-	
85	245	17.33	7060	2.4	57	2KJ3304- ■ FN23- ■ ■ K1 -Z -	-	
99	210	14.85	6840	2.8	57	2KJ3304- ■ FN23- ■ ■ J1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>2.2</b>	<b>FZ.69-LE100ZLSA4P</b>							
	112	187	13.06	6640	3.2	57	2KJ3304- ■ FN23- ■ ■ H1 -Z -	-
	133	158	11.01	6390	3.8	57	2KJ3304- ■ FN23- ■ ■ G1 -Z -	-
	165	128	8.90	6030	3.7	57	2KJ3304- ■ FN23- ■ ■ E1 -Z -	-
	192	109	7.62	5810	4.3	57	2KJ3304- ■ FN23- ■ ■ D1 -Z -	-
	<b>FZ.49-LE100ZLSA4P</b>							
	38	550	38.53	5050	0.87	53	2KJ3303- ■ FN23- ■ ■ T1 -Z -	-
	42	495	34.55	5110	0.97	53	2KJ3303- ■ FN23- ■ ■ S1 -Z -	-
	47	445	31.14	5150	1.1	53	2KJ3303- ■ FN23- ■ ■ R1 -Z -	-
	51	410	28.74	5160	1.2	53	2KJ3303- ■ FN23- ■ ■ Q1 -Z -	-
	56	375	26.24	5160	1.3	53	2KJ3303- ■ FN23- ■ ■ P1 -Z -	-
	67	310	21.77	5120	1.5	53	2KJ3303- ■ FN23- ■ ■ N1 -Z -	-
	71	290	20.49	5110	1.6	53	2KJ3303- ■ FN23- ■ ■ M1 -Z -	-
	76	275	19.35	5080	1.7	53	2KJ3303- ■ FN23- ■ ■ L1 -Z -	-
	89	235	16.47	4980	2	53	2KJ3303- ■ FN23- ■ ■ K1 -Z -	-
	104	200	14.11	4880	2.4	53	2KJ3303- ■ FN23- ■ ■ J1 -Z -	-
	118	178	12.40	4760	2.7	53	2KJ3303- ■ FN23- ■ ■ H1 -Z -	-
	140	150	10.46	4620	3.2	53	2KJ3303- ■ FN23- ■ ■ G1 -Z -	-
	161	131	9.12	4490	3.7	53	2KJ3303- ■ FN23- ■ ■ F1 -Z -	-
174	120	8.40	4330	3.7	53	2KJ3303- ■ FN23- ■ ■ E1 -Z -	-	
203	103	7.20	4190	4.4	53	2KJ3303- ■ FN23- ■ ■ D1 -Z -	-	
<b>FZ.49-LE90ZLR2P</b>								
150	140	19.35	4550	3.4	35	2KJ3303- ■ EM23- ■ ■ L1 -Z	P00	
177	119	16.47	4400	4	35	2KJ3303- ■ EM23- ■ ■ K1 -Z	P00	
<b>FZ.39-LE100ZLSA4P</b>								
71	295	20.71	4380	0.84	42	2KJ3302- ■ FN23- ■ ■ P1 -Z -	-	
85	245	17.24	4360	0.95	42	2KJ3302- ■ FN23- ■ ■ N1 -Z -	-	
90	230	16.22	4350	0.99	42	2KJ3302- ■ FN23- ■ ■ M1 -Z -	-	
101	205	14.54	4320	1.1	42	2KJ3302- ■ FN23- ■ ■ L1 -Z -	-	
118	178	12.38	4210	1.2	42	2KJ3302- ■ FN23- ■ ■ K1 -Z -	-	
138	152	10.61	4130	1.3	42	2KJ3302- ■ FN23- ■ ■ J1 -Z -	-	
160	131	9.13	4030	1.4	42	2KJ3302- ■ FN23- ■ ■ H1 -Z -	-	
181	116	8.10	3840	1.4	42	2KJ3302- ■ FN23- ■ ■ G1 -Z -	-	
217	97	6.74	3720	1.6	42	2KJ3302- ■ FN23- ■ ■ F1 -Z -	-	
231	91	6.35	3670	1.6	42	2KJ3302- ■ FN23- ■ ■ E1 -Z -	-	
257	82	5.69	3590	1.7	42	2KJ3302- ■ FN23- ■ ■ D1 -Z -	-	
303	69	4.84	3480	1.8	42	2KJ3302- ■ FN23- ■ ■ C1 -Z -	-	
353	60	4.15	3350	2	42	2KJ3302- ■ FN23- ■ ■ B1 -Z -	-	
410	51	3.57	3240	2.1	42	2KJ3302- ■ FN23- ■ ■ A1 -Z -	-	
<b>FZ.39-LE90ZLR2P</b>								
169	124	17.24	4000	1.9	27	2KJ3302- ■ EM23- ■ ■ N1 -Z	P00	
179	117	16.22	3950	2	27	2KJ3302- ■ EM23- ■ ■ M1 -Z	P00	
200	105	14.54	3870	2.1	27	2KJ3302- ■ EM23- ■ ■ L1 -Z	P00	
235	89	12.38	3740	2.3	27	2KJ3302- ■ EM23- ■ ■ K1 -Z	P00	
274	77	10.61	3610	2.6	27	2KJ3302- ■ EM23- ■ ■ J1 -Z	P00	
319	66	9.13	3490	2.9	27	2KJ3302- ■ EM23- ■ ■ H1 -Z	P00	
359	58	8.10	3340	2.9	27	2KJ3302- ■ EM23- ■ ■ G1 -Z	P00	
432	49	6.74	3190	3.1	27	2KJ3302- ■ EM23- ■ ■ F1 -Z	P00	
458	46	6.35	3140	3.2	27	2KJ3302- ■ EM23- ■ ■ E1 -Z	P00	
511	41	5.69	3060	3.4	27	2KJ3302- ■ EM23- ■ ■ D1 -Z	P00	
601	35	4.84	2930	3.7	27	2KJ3302- ■ EM23- ■ ■ C1 -Z	P00	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>2.2</b>	<b>FZ.39-LE90ZLR2P</b>							
	701	30	4.15	2810	3.9	27	2KJ3302- ■ EM23- ■ ■ B1 -Z	P00
	815	26	3.57	2690	4.2	27	2KJ3302- ■ EM23- ■ ■ A1 -Z	P00
	<b>FZ.29-LE100ZLSA4P</b>							
	112	187	13.06	2910	0.8	35	2KJ3301- ■ FN23- ■ ■ M1 -Z	-
	127	165	11.51	2910	0.87	35	2KJ3301- ■ FN23- ■ ■ L1 -Z	-
	147	143	9.99	2890	0.95	35	2KJ3301- ■ FN23- ■ ■ K1 -Z	-
	151	139	9.69	2690	1	35	2KJ3301- ■ FN23- ■ ■ J1 -Z	-
	170	124	8.63	2690	1.1	35	2KJ3301- ■ FN23- ■ ■ H1 -Z	-
	184	114	7.97	2680	1	35	2KJ3301- ■ FN23- ■ ■ G1 -Z	-
	210	100	6.98	2650	1.2	35	2KJ3301- ■ FN23- ■ ■ F1 -Z	-
	239	88	6.12	2610	1.3	35	2KJ3301- ■ FN23- ■ ■ E1 -Z	-
	264	80	5.55	2580	1.4	35	2KJ3301- ■ FN23- ■ ■ D1 -Z	-
	281	75	5.22	2560	1.4	35	2KJ3301- ■ FN23- ■ ■ C1 -Z	-
	318	66	4.60	2510	1.5	35	2KJ3301- ■ FN23- ■ ■ B1 -Z	-
	366	57	4.00	2450	1.6	35	2KJ3301- ■ FN23- ■ ■ A1 -Z	-
	<b>FZ.29-LE90ZLR2P</b>							
	167	126	17.44	2860	1.2	21	2KJ3301- ■ EM23- ■ ■ Q1 -Z	P00
	190	110	15.29	2830	1.4	21	2KJ3301- ■ EM23- ■ ■ P1 -Z	P00
	210	100	13.88	2790	1.5	21	2KJ3301- ■ EM23- ■ ■ N1 -Z	P00
223	94	13.06	2770	1.6	21	2KJ3301- ■ EM23- ■ ■ M1 -Z	P00	
253	83	11.51	2710	1.7	21	2KJ3301- ■ EM23- ■ ■ L1 -Z	P00	
291	72	9.99	2650	1.9	21	2KJ3301- ■ EM23- ■ ■ K1 -Z	P00	
300	70	9.69	2530	2	21	2KJ3301- ■ EM23- ■ ■ J1 -Z	P00	
337	62	8.63	2490	2.1	21	2KJ3301- ■ EM23- ■ ■ H1 -Z	P00	
365	58	7.97	2450	2.1	21	2KJ3301- ■ EM23- ■ ■ G1 -Z	P00	
417	50	6.98	2390	2.4	21	2KJ3301- ■ EM23- ■ ■ F1 -Z	P00	
475	44	6.12	2330	2.6	21	2KJ3301- ■ EM23- ■ ■ E1 -Z	P00	
524	40	5.55	2280	2.7	21	2KJ3301- ■ EM23- ■ ■ D1 -Z	P00	
557	38	5.22	2250	2.8	21	2KJ3301- ■ EM23- ■ ■ C1 -Z	P00	
633	33	4.60	2190	2.9	21	2KJ3301- ■ EM23- ■ ■ B1 -Z	P00	
728	29	4.00	2110	3.2	21	2KJ3301- ■ EM23- ■ ■ A1 -Z	P00	
<b>3</b>	<b>FD.189-LE132SQB6P</b>							
	2.8	10200	347.35	110900	1.9	665	2KJ3412- ■ HH23- ■ ■ T1 -Z	P01
	<b>FD.169-LE132SQB6P</b>							
	2.6	10800	368.00	73500	1.3	453	2KJ3411- ■ HH23- ■ ■ V1 -Z	P01
	2.8	10000	343.01	73500	1.3	453	2KJ3411- ■ HH23- ■ ■ U1 -Z	P01
	3.2	8960	304.94	73500	1.5	453	2KJ3411- ■ HH23- ■ ■ T1 -Z	P01
	3.6	8040	273.80	73500	1.7	453	2KJ3411- ■ HH23- ■ ■ S1 -Z	P01
	<b>FD.149-LE132SQB6P</b>							
	3	9490	323.04	65000	0.84	306	2KJ3410- ■ HH23- ■ ■ V1 -Z	P01
	3.2	8930	304.03	65000	0.9	306	2KJ3410- ■ HH23- ■ ■ U1 -Z	P01
	3.4	8370	285.00	65000	0.96	306	2KJ3410- ■ HH23- ■ ■ T1 -Z	P01
	<b>FD.149-LE100ZLSB4P</b>							
	3.9	7390	377.00	65000	1.1	278	2KJ3410- ■ FP23- ■ ■ W1 -Z	-
	4.5	6330	323.04	65000	1.3	278	2KJ3410- ■ FP23- ■ ■ V1 -Z	-
	4.8	5960	304.03	65000	1.3	278	2KJ3410- ■ FP23- ■ ■ U1 -Z	-
	5.1	5590	285.00	65000	1.4	278	2KJ3410- ■ FP23- ■ ■ T1 -Z	-
	5.8	4950	252.64	65000	1.6	278	2KJ3410- ■ FP23- ■ ■ S1 -Z	-
	6.5	4400	224.42	65000	1.8	278	2KJ3410- ■ FP23- ■ ■ R1 -Z	-
	7.2	3970	202.50	65000	2	278	2KJ3410- ■ FP23- ■ ■ Q1 -Z	-

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>FD.129-LE100ZLSB4P</b>							
	4.9	5870	299.31	36200	0.83	191	2KJ3408- ■ FP23- ■ ■ Q1 -Z -	-
	5.2	5520	281.70	36500	0.88	191	2KJ3408- ■ FP23- ■ ■ P1 -Z -	-
	5.6	5130	261.42	36900	0.95	191	2KJ3408- ■ FP23- ■ ■ M1 -Z -	-
	6.3	4530	231.12	37500	1.1	191	2KJ3408- ■ FP23- ■ ■ N1 -Z -	-
	7.1	4040	206.32	37500	1.2	191	2KJ3408- ■ FP23- ■ ■ L1 -Z -	-
	7.9	3640	185.66	37500	1.3	191	2KJ3408- ■ FP23- ■ ■ K1 -Z -	-
	9.1	3160	161.14	37500	1.5	191	2KJ3408- ■ FP23- ■ ■ J1 -Z -	-
	10	2840	144.92	37500	1.7	191	2KJ3408- ■ FP23- ■ ■ H1 -Z -	-
	12	2480	126.66	37500	2	191	2KJ3408- ■ FP23- ■ ■ G1 -Z -	-
	13	2210	113.03	37500	2.2	191	2KJ3408- ■ FP23- ■ ■ F1 -Z -	-
	<b>FD.109-LE100ZLSB4P</b>							
	7.9	3620	184.46	25000	0.86	137	2KJ3407- ■ FP23- ■ ■ K1 -Z -	-
8.9	3210	163.83	25000	0.96	137	2KJ3407- ■ FP23- ■ ■ J1 -Z -	-	
10	2870	146.65	25000	1.1	137	2KJ3407- ■ FP23- ■ ■ H1 -Z -	-	
12	2460	125.37	25000	1.3	137	2KJ3407- ■ FP23- ■ ■ G1 -Z -	-	
13	2190	111.95	25000	1.4	137	2KJ3407- ■ FP23- ■ ■ F1 -Z -	-	
15	1940	98.94	25000	1.6	137	2KJ3407- ■ FP23- ■ ■ E1 -Z -	-	
17	1700	86.83	25000	1.8	137	2KJ3407- ■ FP23- ■ ■ D1 -Z -	-	
19	1480	75.59	25000	2.1	137	2KJ3407- ■ FP23- ■ ■ C1 -Z -	-	
23	1260	64.62	25000	2.4	137	2KJ3407- ■ FP23- ■ ■ B1 -Z -	-	
21	1380	70.74	25000	2.2	134	2KJ3307- ■ FP23- ■ ■ B2 -Z -	-	
22	1280	65.30	25000	2.4	134	2KJ3307- ■ FP23- ■ ■ A2 -Z -	-	
<b>FD.89-LE100ZLSB4P</b>								
14	2090	106.52	17400	0.89	96	2KJ3406- ■ FP23- ■ ■ F1 -Z -	-	
16	1820	93.14	17400	1	96	2KJ3406- ■ FP23- ■ ■ E1 -Z -	-	
18	1560	79.95	17400	1.2	96	2KJ3406- ■ FP23- ■ ■ D1 -Z -	-	
21	1380	70.67	17400	1.3	96	2KJ3406- ■ FP23- ■ ■ C1 -Z -	-	
24	1170	60.09	17400	1.6	96	2KJ3406- ■ FP23- ■ ■ B1 -Z -	-	
28	1010	51.51	17400	1.8	96	2KJ3406- ■ FP23- ■ ■ A1 -Z -	-	
<b>FZ.89-LE100ZLSB4P</b>								
24	1210	61.72	17400	1.5	95	2KJ3306- ■ FP23- ■ ■ B2 -Z -	-	
26	1090	55.72	17400	1.7	95	2KJ3306- ■ FP23- ■ ■ A2 -Z -	-	
29	990	50.54	17400	1.9	95	2KJ3306- ■ FP23- ■ ■ X1 -Z -	-	
31	915	46.66	17400	2	95	2KJ3306- ■ FP23- ■ ■ W1 -Z -	-	
34	830	42.41	17400	2.2	95	2KJ3306- ■ FP23- ■ ■ V1 -Z -	-	
41	705	35.91	17400	2.6	95	2KJ3306- ■ FP23- ■ ■ U1 -Z -	-	
<b>FD.79-LE100ZLSB4P</b>								
24	1190	60.82	13200	0.84	65	2KJ3405- ■ FP23- ■ ■ B1 -Z -	-	
28	1040	53.01	13500	0.96	65	2KJ3405- ■ FP23- ■ ■ A1 -Z -	-	
<b>FZ.79-LE100ZLSB4P</b>								
30	940	48.03	13700	1.1	64	2KJ3305- ■ FP23- ■ ■ W1 -Z -	-	
34	845	43.18	13900	1.2	64	2KJ3305- ■ FP23- ■ ■ V1 -Z -	-	
37	765	39.06	14000	1.3	64	2KJ3305- ■ FP23- ■ ■ U1 -Z -	-	
40	705	36.05	14200	1.4	64	2KJ3305- ■ FP23- ■ ■ T1 -Z -	-	
44	645	33.02	14300	1.5	64	2KJ3305- ■ FP23- ■ ■ S1 -Z -	-	
53	540	27.71	14500	1.8	64	2KJ3305- ■ FP23- ■ ■ R1 -Z -	-	
56	510	26.08	14500	2	64	2KJ3305- ■ FP23- ■ ■ Q1 -Z -	-	
61	470	23.93	14500	2.1	64	2KJ3305- ■ FP23- ■ ■ P1 -Z -	-	
70	410	20.90	14500	2.4	64	2KJ3305- ■ FP23- ■ ■ N1 -Z -	-	
78	365	18.71	14500	2.7	64	2KJ3305- ■ FP23- ■ ■ M1 -Z -	-	
89	320	16.36	14500	3.1	64	2KJ3305- ■ FP23- ■ ■ L1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

### Parallel shaft geared motors

#### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>3</b>	<b>FZ.69-LE100ZLSB4P</b>								
	40	710	36.36	6600	0.84	57	2KJ3304- ■ FP23- ■ ■ S1 -Z -	-	
	45	640	32.78	6660	0.93	57	2KJ3304- ■ FP23- ■ ■ R1 -Z -	-	
	48	590	30.26	6690	1	57	2KJ3304- ■ FP23- ■ ■ Q1 -Z -	-	
	53	540	27.62	6690	1.1	57	2KJ3304- ■ FP23- ■ ■ P1 -Z -	-	
	64	450	22.92	6640	1.3	57	2KJ3304- ■ FP23- ■ ■ N1 -Z -	-	
	68	420	21.57	6640	1.4	57	2KJ3304- ■ FP23- ■ ■ M1 -Z -	-	
	72	400	20.37	6590	1.5	57	2KJ3304- ■ FP23- ■ ■ L1 -Z -	-	
	84	340	17.33	6480	1.8	57	2KJ3304- ■ FP23- ■ ■ K1 -Z -	-	
	98	290	14.85	6360	2.1	57	2KJ3304- ■ FP23- ■ ■ J1 -Z -	-	
	112	255	13.06	6230	2.3	57	2KJ3304- ■ FP23- ■ ■ H1 -Z -	-	
	133	215	11.01	6050	2.8	57	2KJ3304- ■ FP23- ■ ■ G1 -Z -	-	
	152	188	9.60	5890	3.2	57	2KJ3304- ■ FP23- ■ ■ F1 -Z -	-	
	164	175	8.90	5730	2.7	57	2KJ3304- ■ FP23- ■ ■ E1 -Z -	-	
	192	150	7.62	5550	3.1	57	2KJ3304- ■ FP23- ■ ■ D1 -Z -	-	
	218	131	6.70	5400	3.3	57	2KJ3304- ■ FP23- ■ ■ C1 -Z -	-	
	258	111	5.66	5190	3.7	57	2KJ3304- ■ FP23- ■ ■ B1 -Z -	-	
	296	97	4.93	5010	4	57	2KJ3304- ■ FP23- ■ ■ A1 -Z -	-	
		<b>FZ.49-LE100ZLSB4P</b>							
		51	560	28.74	4190	0.85	53	2KJ3303- ■ FP23- ■ ■ Q1 -Z -	-
56		515	26.24	4250	0.93	53	2KJ3303- ■ FP23- ■ ■ P1 -Z -	-	
67		425	21.77	4380	1.1	53	2KJ3303- ■ FP23- ■ ■ N1 -Z -	-	
71		400	20.49	4400	1.2	53	2KJ3303- ■ FP23- ■ ■ M1 -Z -	-	
75		380	19.35	4400	1.3	53	2KJ3303- ■ FP23- ■ ■ L1 -Z -	-	
89		320	16.47	4430	1.5	53	2KJ3303- ■ FP23- ■ ■ K1 -Z -	-	
103		275	14.11	4400	1.7	53	2KJ3303- ■ FP23- ■ ■ J1 -Z -	-	
118		240	12.40	4370	2	53	2KJ3303- ■ FP23- ■ ■ H1 -Z -	-	
140		205	10.46	4270	2.3	53	2KJ3303- ■ FP23- ■ ■ G1 -Z -	-	
160		179	9.12	4190	2.7	53	2KJ3303- ■ FP23- ■ ■ F1 -Z -	-	
174		165	8.40	4010	2.7	53	2KJ3303- ■ FP23- ■ ■ E1 -Z -	-	
203		141	7.20	3920	3.2	53	2KJ3303- ■ FP23- ■ ■ D1 -Z -	-	
231		124	6.33	3840	3.5	53	2KJ3303- ■ FP23- ■ ■ C1 -Z -	-	
273		105	5.34	3720	3.8	53	2KJ3303- ■ FP23- ■ ■ B1 -Z -	-	
314		91	4.65	3620	4.1	53	2KJ3303- ■ FP23- ■ ■ A1 -Z -	-	
	<b>FZ.39-LE100ZLSB4P</b>								
	118	240	12.38	3760	0.86	42	2KJ3302- ■ FP23- ■ ■ K1 -Z -	-	
	138	205	10.61	3740	0.96	42	2KJ3302- ■ FP23- ■ ■ J1 -Z -	-	
	160	179	9.13	3680	1.1	42	2KJ3302- ■ FP23- ■ ■ H1 -Z -	-	
	180	159	8.10	3490	1.1	42	2KJ3302- ■ FP23- ■ ■ G1 -Z -	-	
	217	132	6.74	3430	1.1	42	2KJ3302- ■ FP23- ■ ■ F1 -Z -	-	
	230	125	6.35	3400	1.2	42	2KJ3302- ■ FP23- ■ ■ E1 -Z -	-	
	257	112	5.69	3340	1.3	42	2KJ3302- ■ FP23- ■ ■ D1 -Z -	-	
	302	95	4.84	3260	1.3	42	2KJ3302- ■ FP23- ■ ■ C1 -Z -	-	
	352	81	4.15	3180	1.4	42	2KJ3302- ■ FP23- ■ ■ B1 -Z -	-	
409	70	3.57	3080	1.5	42	2KJ3302- ■ FP23- ■ ■ A1 -Z -	-		
	<b>FZ.29-LE100ZLSB4P</b>								
	209	137	6.98	2300	0.9	35	2KJ3301- ■ FP23- ■ ■ F1 -Z -	-	
	239	120	6.12	2310	0.95	35	2KJ3301- ■ FP23- ■ ■ E1 -Z -	-	
	263	109	5.55	2300	0.99	35	2KJ3301- ■ FP23- ■ ■ D1 -Z -	-	
	280	102	5.22	2300	1	35	2KJ3301- ■ FP23- ■ ■ C1 -Z -	-	
	317	90	4.60	2280	1.1	35	2KJ3301- ■ FP23- ■ ■ B1 -Z -	-	
365	78	4.00	2250	1.2	35	2KJ3301- ■ FP23- ■ ■ A1 -Z -	-		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>4</b>	<b>FD.189-LE132MJ6P</b>							
	2.8	13600	347.35	110900	1.4	665	2KJ3412- ■ HK23- ■ ■ T1 -Z	P01
	3.1	12100	310.76	110900	1.6	665	2KJ3412- ■ HK23- ■ ■ S1 -Z	P01
	3.5	10900	280.27	110900	1.7	665	2KJ3412- ■ HK23- ■ ■ R1 -Z	P01
	3.9	9700	247.71	110900	2	665	2KJ3412- ■ HK23- ■ ■ Q1 -Z	P01
	<b>FD.169-LE132MJ6P</b>							
	2.6	14400	368.00	73500	0.94	453	2KJ3411- ■ HK23- ■ ■ V1 -Z	P01
	2.8	13400	343.01	73500	1	453	2KJ3411- ■ HK23- ■ ■ U1 -Z	P01
	3.2	11900	304.94	73500	1.1	453	2KJ3411- ■ HK23- ■ ■ T1 -Z	P01
	3.6	10700	273.80	73500	1.3	453	2KJ3411- ■ HK23- ■ ■ S1 -Z	P01
<b>FD.169-LE112ZMKB4P</b>								
4	9620	368.00	73500	1.4	426	2KJ3411- ■ GJ23- ■ ■ V1 -Z	-	
4.3	8970	343.01	73500	1.5	426	2KJ3411- ■ GJ23- ■ ■ U1 -Z	-	
4.8	7970	304.94	73500	1.7	426	2KJ3411- ■ GJ23- ■ ■ T1 -Z	-	
5.3	7160	273.80	73500	1.9	426	2KJ3411- ■ GJ23- ■ ■ S1 -Z	-	
5.9	6480	247.84	73500	2.1	426	2KJ3411- ■ GJ23- ■ ■ R1 -Z	-	
<b>FD.149-LE112ZMKB4P</b>								
3.9	9860	377.00	65000	0.81	280	2KJ3410- ■ GJ23- ■ ■ W1 -Z	-	
4.5	8450	323.04	65000	0.95	280	2KJ3410- ■ GJ23- ■ ■ V1 -Z	-	
4.8	7950	304.03	65000	1	280	2KJ3410- ■ GJ23- ■ ■ U1 -Z	-	
5.1	7450	285.00	65000	1.1	280	2KJ3410- ■ GJ23- ■ ■ T1 -Z	-	
5.8	6610	252.64	65000	1.2	280	2KJ3410- ■ GJ23- ■ ■ S1 -Z	-	
6.5	5870	224.42	65000	1.4	280	2KJ3410- ■ GJ23- ■ ■ R1 -Z	-	
7.2	5290	202.50	65000	1.5	280	2KJ3410- ■ GJ23- ■ ■ Q1 -Z	-	
8.1	4690	179.44	65000	1.7	280	2KJ3410- ■ GJ23- ■ ■ P1 -Z	-	
9.2	4150	158.91	65000	1.9	280	2KJ3410- ■ GJ23- ■ ■ N1 -Z	-	
10	3700	141.43	65000	2.2	280	2KJ3410- ■ GJ23- ■ ■ M1 -Z	-	
<b>FD.129-LE112ZMKB4P</b>								
6.3	6040	231.12	36000	0.8	192	2KJ3408- ■ GJ23- ■ ■ M1 -Z	-	
7.1	5390	206.32	36600	0.9	192	2KJ3408- ■ GJ23- ■ ■ L1 -Z	-	
7.9	4850	185.66	37200	1	192	2KJ3408- ■ GJ23- ■ ■ K1 -Z	-	
9.1	4210	161.14	37500	1.2	192	2KJ3408- ■ GJ23- ■ ■ J1 -Z	-	
10	3790	144.92	37500	1.3	192	2KJ3408- ■ GJ23- ■ ■ H1 -Z	-	
12	3310	126.66	37500	1.5	192	2KJ3408- ■ GJ23- ■ ■ G1 -Z	-	
13	2950	113.03	37500	1.6	192	2KJ3408- ■ GJ23- ■ ■ F1 -Z	-	
15	2600	99.58	37500	1.9	192	2KJ3408- ■ GJ23- ■ ■ E1 -Z	-	
17	2280	87.25	37500	2.1	192	2KJ3408- ■ GJ23- ■ ■ D1 -Z	-	
<b>FD.109-LE112ZMKB4P</b>								
10	3830	146.65	25000	0.81	137	2KJ3407- ■ GJ23- ■ ■ H1 -Z	-	
12	3280	125.37	25000	0.95	137	2KJ3407- ■ GJ23- ■ ■ G1 -Z	-	
13	2920	111.95	25000	1.1	137	2KJ3407- ■ GJ23- ■ ■ F1 -Z	-	
15	2580	98.94	25000	1.2	137	2KJ3407- ■ GJ23- ■ ■ E1 -Z	-	
17	2270	86.83	25000	1.4	137	2KJ3407- ■ GJ23- ■ ■ D1 -Z	-	
19	1970	75.59	25000	1.6	137	2KJ3407- ■ GJ23- ■ ■ C1 -Z	-	
23	1690	64.62	25000	1.8	137	2KJ3407- ■ GJ23- ■ ■ B1 -Z	-	
26	1440	55.31	25000	2.1	137	2KJ3407- ■ GJ23- ■ ■ A1 -Z	-	
<b>FZ.109-LE112ZMKB4P</b>								
21	1850	70.74	25000	1.7	134	2KJ3307- ■ GJ23- ■ ■ B2 -Z	-	
22	1700	65.30	25000	1.8	134	2KJ3307- ■ GJ23- ■ ■ A2 -Z	-	
24	1570	60.12	25000	2	134	2KJ3307- ■ GJ23- ■ ■ X1 -Z	-	
28	1340	51.27	25000	2.3	134	2KJ3307- ■ GJ23- ■ ■ W1 -Z	-	
30	1260	48.25	25000	2.5	134	2KJ3307- ■ GJ23- ■ ■ V1 -Z	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

## Parallel shaft geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
4	<b>FZ.109-LE112ZMKB4P</b>							
	33	1170	44.78	25000	2.6	134	2KJ3307- ■ GJ23- ■ ■ U1 -Z -	-
	<b>FD.89-LE112ZMKB4P</b>							
	18	2090	79.95	17400	0.88	96	2KJ3406- ■ GJ23- ■ ■ D1 -Z -	-
	21	1840	70.67	17400	1	96	2KJ3406- ■ GJ23- ■ ■ C1 -Z -	-
	24	1570	60.09	17400	1.2	96	2KJ3406- ■ GJ23- ■ ■ B1 -Z -	-
	28	1340	51.51	17400	1.4	96	2KJ3406- ■ GJ23- ■ ■ A1 -Z -	-
	<b>FZ.89-LE112ZMKB4P</b>							
	24	1610	61.72	17400	1.1	95	2KJ3306- ■ GJ23- ■ ■ B2 -Z -	-
	26	1450	55.72	17400	1.3	95	2KJ3306- ■ GJ23- ■ ■ A2 -Z -	-
	29	1320	50.54	17400	1.4	95	2KJ3306- ■ GJ23- ■ ■ X1 -Z -	-
	31	1220	46.66	17400	1.5	95	2KJ3306- ■ GJ23- ■ ■ W1 -Z -	-
	34	1110	42.41	17400	1.7	95	2KJ3306- ■ GJ23- ■ ■ V1 -Z -	-
	41	940	35.91	17400	2	95	2KJ3306- ■ GJ23- ■ ■ U1 -Z -	-
	43	880	33.80	17400	2.1	95	2KJ3306- ■ GJ23- ■ ■ T1 -Z -	-
	47	815	31.21	17400	2.3	95	2KJ3306- ■ GJ23- ■ ■ S1 -Z -	-
	53	725	27.77	17400	2.5	95	2KJ3306- ■ GJ23- ■ ■ R1 -Z -	-
	59	645	24.67	17400	2.9	95	2KJ3306- ■ GJ23- ■ ■ Q1 -Z -	-
	<b>FZ.79-LE112ZMKB4P</b>							
	30	1250	48.03	13100	0.8	65	2KJ3305- ■ GJ23- ■ ■ W1 -Z -	-
	34	1130	43.18	13300	0.89	65	2KJ3305- ■ GJ23- ■ ■ V1 -Z -	-
	37	1020	39.06	13500	0.98	65	2KJ3305- ■ GJ23- ■ ■ U1 -Z -	-
	40	940	36.05	13700	1.1	65	2KJ3305- ■ GJ23- ■ ■ T1 -Z -	-
	44	860	33.02	13800	1.2	65	2KJ3305- ■ GJ23- ■ ■ S1 -Z -	-
	53	725	27.71	14100	1.4	65	2KJ3305- ■ GJ23- ■ ■ R1 -Z -	-
	56	680	26.08	14200	1.5	65	2KJ3305- ■ GJ23- ■ ■ Q1 -Z -	-
	61	625	23.93	14300	1.6	65	2KJ3305- ■ GJ23- ■ ■ P1 -Z -	-
	70	545	20.90	14500	1.8	65	2KJ3305- ■ GJ23- ■ ■ N1 -Z -	-
	78	490	18.71	14500	2	65	2KJ3305- ■ GJ23- ■ ■ M1 -Z -	-
	89	425	16.36	14500	2.3	65	2KJ3305- ■ GJ23- ■ ■ L1 -Z -	-
	104	365	14.04	14500	2.7	65	2KJ3305- ■ GJ23- ■ ■ K1 -Z -	-
	118	325	12.41	14400	3.1	65	2KJ3305- ■ GJ23- ■ ■ J1 -Z -	-
	138	275	10.56	13900	3.6	65	2KJ3305- ■ GJ23- ■ ■ H1 -Z -	-
	172	220	8.51	13100	3.2	65	2KJ3305- ■ GJ23- ■ ■ F1 -Z -	-
	196	195	7.44	12700	3.7	65	2KJ3305- ■ GJ23- ■ ■ E1 -Z -	-
	228	167	6.39	12200	4.3	65	2KJ3305- ■ GJ23- ■ ■ D1 -Z -	-
	259	148	5.64	11800	4.7	65	2KJ3305- ■ GJ23- ■ ■ C1 -Z -	-
	<b>FZ.69-LE112ZMKB4P</b>							
	53	720	27.62	5580	0.83	58	2KJ3304- ■ GJ23- ■ ■ P1 -Z -	-
	64	600	22.92	5710	1	58	2KJ3304- ■ GJ23- ■ ■ N1 -Z -	-
	68	560	21.57	5770	1.1	58	2KJ3304- ■ GJ23- ■ ■ M1 -Z -	-
	72	530	20.37	5780	1.1	58	2KJ3304- ■ GJ23- ■ ■ L1 -Z -	-
84	450	17.33	5800	1.3	58	2KJ3304- ■ GJ23- ■ ■ K1 -Z -	-	
98	385	14.85	5770	1.5	58	2KJ3304- ■ GJ23- ■ ■ J1 -Z -	-	
112	340	13.06	5710	1.8	58	2KJ3304- ■ GJ23- ■ ■ H1 -Z -	-	
133	285	11.01	5620	2.1	58	2KJ3304- ■ GJ23- ■ ■ G1 -Z -	-	
152	250	9.60	5500	2.4	58	2KJ3304- ■ GJ23- ■ ■ F1 -Z -	-	
164	230	8.90	5380	2	58	2KJ3304- ■ GJ23- ■ ■ E1 -Z -	-	
192	199	7.62	5230	2.3	58	2KJ3304- ■ GJ23- ■ ■ D1 -Z -	-	
218	175	6.70	5110	2.5	58	2KJ3304- ■ GJ23- ■ ■ C1 -Z -	-	
258	148	5.66	4950	2.8	58	2KJ3304- ■ GJ23- ■ ■ B1 -Z -	-	
296	129	4.93	4800	3	58	2KJ3304- ■ GJ23- ■ ■ A1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/49</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H or D	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>4</b>	<b>FZ.49-LE112ZMKB4P</b>							
	67	570	21.77	3430	0.84	53	2KJ3303- ■ GJ23- ■ ■ N1 -Z -	-
	71	535	20.49	3520	0.9	53	2KJ3303- ■ GJ23- ■ ■ M1 -Z -	-
	75	505	19.35	3580	0.95	53	2KJ3303- ■ GJ23- ■ ■ L1 -Z -	-
	89	430	16.47	3710	1.1	53	2KJ3303- ■ GJ23- ■ ■ K1 -Z -	-
	103	365	14.11	3810	1.3	53	2KJ3303- ■ GJ23- ■ ■ J1 -Z -	-
	118	320	12.40	3840	1.5	53	2KJ3303- ■ GJ23- ■ ■ H1 -Z -	-
	140	270	10.46	3840	1.8	53	2KJ3303- ■ GJ23- ■ ■ G1 -Z -	-
	160	235	9.12	3820	2	53	2KJ3303- ■ GJ23- ■ ■ F1 -Z -	-
	174	220	8.40	3610	2	53	2KJ3303- ■ GJ23- ■ ■ E1 -Z -	-
	203	188	7.20	3580	2.4	53	2KJ3303- ■ GJ23- ■ ■ D1 -Z -	-
	231	166	6.33	3530	2.6	53	2KJ3303- ■ GJ23- ■ ■ C1 -Z -	-
	273	140	5.34	3460	2.9	53	2KJ3303- ■ GJ23- ■ ■ B1 -Z -	-
	314	122	4.65	3390	3.1	53	2KJ3303- ■ GJ23- ■ ■ A1 -Z -	-
	<b>FZ.39-LE112ZMKB4P</b>							
	217	176	6.74	3060	0.86	45	2KJ3302- ■ GJ23- ■ ■ F1 -Z -	-
	230	166	6.35	3050	0.9	45	2KJ3302- ■ GJ23- ■ ■ E1 -Z -	-
	257	149	5.69	3040	0.94	45	2KJ3302- ■ GJ23- ■ ■ D1 -Z -	-
	302	127	4.84	3000	1	45	2KJ3302- ■ GJ23- ■ ■ C1 -Z -	-
352	109	4.15	2940	1.1	45	2KJ3302- ■ GJ23- ■ ■ B1 -Z -	-	
409	93	3.57	2890	1.2	45	2KJ3302- ■ GJ23- ■ ■ A1 -Z -	-	
<b>5.5</b>	<b>FD.189-LE132ZMS6P</b>							
	2.8	18700	347.35	110900	1	667	2KJ3412- ■ HL23- ■ ■ T1 -Z P01	
	3.1	16700	310.76	110900	1.1	667	2KJ3412- ■ HL23- ■ ■ S1 -Z P01	
	3.5	15000	280.27	110900	1.3	667	2KJ3412- ■ HL23- ■ ■ R1 -Z P01	
	3.9	13300	247.71	110900	1.4	667	2KJ3412- ■ HL23- ■ ■ Q1 -Z P01	
	<b>FD.189-LE132ZST4P</b>							
	4.2	12400	347.35	110900	1.5	667	2KJ3412- ■ HJ23- ■ ■ T1 -Z -	-
	4.7	11100	310.76	110900	1.7	667	2KJ3412- ■ HJ23- ■ ■ S1 -Z -	-
	5.2	10000	280.27	110900	1.9	667	2KJ3412- ■ HJ23- ■ ■ R1 -Z -	-
	5.9	8850	247.71	110900	2.1	667	2KJ3412- ■ HJ23- ■ ■ Q1 -Z -	-
	<b>FD.169-LE132ZMS6P</b>							
	3.2	16400	304.94	73500	0.83	455	2KJ3411- ■ HL23- ■ ■ T1 -Z P01	
	3.6	14700	273.80	73500	0.92	455	2KJ3411- ■ HL23- ■ ■ S1 -Z P01	
	<b>FD.169-LE132ZST4P</b>							
	4	13100	368.00	73500	1	455	2KJ3411- ■ HJ23- ■ ■ V1 -Z -	-
	4.3	12200	343.01	73500	1.1	455	2KJ3411- ■ HJ23- ■ ■ U1 -Z -	-
	4.8	10800	304.94	73500	1.2	455	2KJ3411- ■ HJ23- ■ ■ T1 -Z -	-
	5.4	9780	273.80	73500	1.4	455	2KJ3411- ■ HJ23- ■ ■ S1 -Z -	-
	5.9	8850	247.84	73500	1.5	455	2KJ3411- ■ HJ23- ■ ■ R1 -Z -	-
	6.8	7770	217.70	73500	1.7	455	2KJ3411- ■ HJ23- ■ ■ Q1 -Z -	-
	7.5	7040	197.27	73500	1.9	455	2KJ3411- ■ HJ23- ■ ■ P1 -Z -	-
	<b>FD.149-LE132ZST4P</b>							
	5.8	9020	252.64	65000	0.89	308	2KJ3410- ■ HJ23- ■ ■ S1 -Z -	-
	6.6	8010	224.42	65000	1	308	2KJ3410- ■ HJ23- ■ ■ R1 -Z -	-
	7.3	7230	202.50	65000	1.1	308	2KJ3410- ■ HJ23- ■ ■ Q1 -Z -	-
	8.2	6410	179.44	65000	1.2	308	2KJ3410- ■ HJ23- ■ ■ P1 -Z -	-
	9.3	5670	158.91	65000	1.4	308	2KJ3410- ■ HJ23- ■ ■ N1 -Z -	-
10	5050	141.43	65000	1.6	308	2KJ3410- ■ HJ23- ■ ■ M1 -Z -	-	
12	4520	126.73	65000	1.8	308	2KJ3410- ■ HJ23- ■ ■ L1 -Z -	-	
13	4010	112.36	65000	2	308	2KJ3410- ■ HJ23- ■ ■ K1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>5.5</b>	<b>FD.129-LE132ZST4P</b>							
	9.1	5750	161.14	36300	0.84	222	2KJ3408- ■ HJ23- ■ ■ J1 -Z -	-
	10	5170	144.92	36800	0.94	222	2KJ3408- ■ HJ23- ■ ■ H1 -Z -	-
	12	4520	126.66	37500	1.1	222	2KJ3408- ■ HJ23- ■ ■ G1 -Z -	-
	13	4030	113.03	37500	1.2	222	2KJ3408- ■ HJ23- ■ ■ F1 -Z -	-
	15	3550	99.58	37500	1.4	222	2KJ3408- ■ HJ23- ■ ■ E1 -Z -	-
	17	3110	87.25	37500	1.6	222	2KJ3408- ■ HJ23- ■ ■ D1 -Z -	-
	19	2710	76.04	37500	1.8	222	2KJ3408- ■ HJ23- ■ ■ C1 -Z -	-
	21	2480	69.40	37500	2	222	2KJ3408- ■ HJ23- ■ ■ B1 -Z -	-
	25	2130	59.75	37500	2.3	222	2KJ3408- ■ HJ23- ■ ■ A1 -Z -	-
	<b>FZ.129-LE132ZST4P</b>							
	21	2470	69.20	37500	2	217	2KJ3308- ■ HJ23- ■ ■ A2 -Z -	-
	25	2110	59.22	37500	2.3	217	2KJ3308- ■ HJ23- ■ ■ X1 -Z -	-
	26	1990	55.74	37500	2.4	217	2KJ3308- ■ HJ23- ■ ■ W1 -Z -	-
	<b>FD.109-LE132ZST4P</b>							
	15	3530	98.94	25000	0.88	168	2KJ3407- ■ HJ23- ■ ■ E1 -Z -	-
	17	3100	86.83	25000	1	168	2KJ3407- ■ HJ23- ■ ■ D1 -Z -	-
	19	2700	75.59	25000	1.1	168	2KJ3407- ■ HJ23- ■ ■ C1 -Z -	-
	23	2300	64.62	25000	1.3	168	2KJ3407- ■ HJ23- ■ ■ B1 -Z -	-
	27	1970	55.31	25000	1.6	168	2KJ3407- ■ HJ23- ■ ■ A1 -Z -	-
	<b>FZ.109-LE132ZST4P</b>							
	24	2140	60.12	25000	1.4	164	2KJ3307- ■ HJ23- ■ ■ X1 -Z -	-
	29	1830	51.27	25000	1.7	164	2KJ3307- ■ HJ23- ■ ■ W1 -Z -	-
	30	1720	48.25	25000	1.8	164	2KJ3307- ■ HJ23- ■ ■ V1 -Z -	-
	33	1600	44.78	25000	1.9	164	2KJ3307- ■ HJ23- ■ ■ U1 -Z -	-
	37	1410	39.59	25000	2.2	164	2KJ3307- ■ HJ23- ■ ■ T1 -Z -	-
	42	1260	35.34	25000	2.5	164	2KJ3307- ■ HJ23- ■ ■ S1 -Z -	-
	46	1130	31.80	25000	2.7	164	2KJ3307- ■ HJ23- ■ ■ R1 -Z -	-
	<b>FD.89-LE132ZST4P</b>							
	24	2140	60.09	17400	0.86	127	2KJ3406- ■ HJ23- ■ ■ B1 -Z -	-
	29	1840	51.51	17400	1	127	2KJ3406- ■ HJ23- ■ ■ A1 -Z -	-
	<b>FZ.89-LE132ZST4P</b>							
	35	1510	42.41	17400	1.2	126	2KJ3306- ■ HJ23- ■ ■ V1 -Z -	-
	41	1280	35.91	17400	1.4	126	2KJ3306- ■ HJ23- ■ ■ U1 -Z -	-
	43	1200	33.80	17400	1.5	126	2KJ3306- ■ HJ23- ■ ■ T1 -Z -	-
	47	1110	31.21	17400	1.7	126	2KJ3306- ■ HJ23- ■ ■ S1 -Z -	-
	53	990	27.77	17400	1.9	126	2KJ3306- ■ HJ23- ■ ■ R1 -Z -	-
	60	880	24.67	17400	2.1	126	2KJ3306- ■ HJ23- ■ ■ Q1 -Z -	-
	67	785	22.08	17400	2.3	126	2KJ3306- ■ HJ23- ■ ■ P1 -Z -	-
	78	675	18.88	17400	2.7	126	2KJ3306- ■ HJ23- ■ ■ N1 -Z -	-
	87	600	16.86	17400	3.1	126	2KJ3306- ■ HJ23- ■ ■ M1 -Z -	-
	99	530	14.90	17400	3.5	126	2KJ3306- ■ HJ23- ■ ■ L1 -Z -	-
	193	270	7.60	17400	4.1	126	2KJ3306- ■ HJ23- ■ ■ F1 -Z -	-
	<b>FZ.79-LE132ZST4P</b>							
	45	1180	33.02	13200	0.85	96	2KJ3305- ■ HJ23- ■ ■ S1 -Z -	-
	53	990	27.71	13600	1	96	2KJ3305- ■ HJ23- ■ ■ R1 -Z -	-
	56	930	26.08	13700	1.1	96	2KJ3305- ■ HJ23- ■ ■ Q1 -Z -	-
	61	855	23.93	13900	1.2	96	2KJ3305- ■ HJ23- ■ ■ P1 -Z -	-
	70	745	20.90	14100	1.3	96	2KJ3305- ■ HJ23- ■ ■ N1 -Z -	-
	79	665	18.71	14200	1.5	96	2KJ3305- ■ HJ23- ■ ■ M1 -Z -	-
	90	585	16.36	14300	1.7	96	2KJ3305- ■ HJ23- ■ ■ L1 -Z -	-
	105	500	14.04	14000	2	96	2KJ3305- ■ HJ23- ■ ■ K1 -Z -	-

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
5.5	<b>FZ.79-LE132ZST4P</b>							
	118	440	12.41	13700	2.3	96	2KJ3305- ■ HJ23- ■ ■ J1 -Z -	-
	139	375	10.56	13300	2.7	96	2KJ3305- ■ HJ23- ■ ■ H1 -Z -	-
	162	320	9.05	12900	3.1	96	2KJ3305- ■ HJ23- ■ ■ G1 -Z -	-
	173	300	8.51	12600	2.4	96	2KJ3305- ■ HJ23- ■ ■ F1 -Z -	-
	198	265	7.44	12300	2.7	96	2KJ3305- ■ HJ23- ■ ■ E1 -Z -	-
	230	225	6.39	11900	3.2	96	2KJ3305- ■ HJ23- ■ ■ D1 -Z -	-
	261	200	5.64	11500	3.5	96	2KJ3305- ■ HJ23- ■ ■ C1 -Z -	-
	306	172	4.80	11100	3.8	96	2KJ3305- ■ HJ23- ■ ■ B1 -Z -	-
	358	147	4.11	10700	4.1	96	2KJ3305- ■ HJ23- ■ ■ A1 -Z -	-
	<b>FZ.69-LE132ZST4P</b>							
	72	725	20.37	4560	0.82	88	2KJ3304- ■ HJ23- ■ ■ L1 -Z -	-
	85	615	17.33	4760	0.97	88	2KJ3304- ■ HJ23- ■ ■ K1 -Z -	-
	99	530	14.85	4860	1.1	88	2KJ3304- ■ HJ23- ■ ■ J1 -Z -	-
	113	465	13.06	4920	1.3	88	2KJ3304- ■ HJ23- ■ ■ H1 -Z -	-
	134	390	11.01	4950	1.5	88	2KJ3304- ■ HJ23- ■ ■ G1 -Z -	-
	153	340	9.60	4930	1.7	88	2KJ3304- ■ HJ23- ■ ■ F1 -Z -	-
	165	315	8.90	4810	1.5	88	2KJ3304- ■ HJ23- ■ ■ E1 -Z -	-
	193	270	7.62	4760	1.7	88	2KJ3304- ■ HJ23- ■ ■ D1 -Z -	-
	219	235	6.70	4710	1.8	88	2KJ3304- ■ HJ23- ■ ■ C1 -Z -	-
	260	200	5.66	4590	2	88	2KJ3304- ■ HJ23- ■ ■ B1 -Z -	-
	298	176	4.93	4490	2.2	88	2KJ3304- ■ HJ23- ■ ■ A1 -Z -	-
	<b>FZ.49-LE132ZST4P</b>							
	89	585	16.47	2680	0.82	81	2KJ3303- ■ HJ23- ■ ■ K1 -Z -	-
	104	500	14.11	2910	0.95	81	2KJ3303- ■ HJ23- ■ ■ J1 -Z -	-
	119	440	12.40	3040	1.1	81	2KJ3303- ■ HJ23- ■ ■ H1 -Z -	-
	141	370	10.46	3180	1.3	81	2KJ3303- ■ HJ23- ■ ■ G1 -Z -	-
	161	325	9.12	3220	1.5	81	2KJ3303- ■ HJ23- ■ ■ F1 -Z -	-
	175	300	8.40	3020	1.5	81	2KJ3303- ■ HJ23- ■ ■ E1 -Z -	-
	204	255	7.20	3080	1.7	81	2KJ3303- ■ HJ23- ■ ■ D1 -Z -	-
	232	225	6.33	3090	1.9	81	2KJ3303- ■ HJ23- ■ ■ C1 -Z -	-
	275	191	5.34	3080	2.1	81	2KJ3303- ■ HJ23- ■ ■ B1 -Z -	-
	316	166	4.65	3060	2.3	81	2KJ3303- ■ HJ23- ■ ■ A1 -Z -	-
7.5	<b>FD.189-LE132ZMS4P</b>							
	4.2	16900	347.35	110900	1.1	667	2KJ3412- ■ HL23- ■ ■ T1 -Z -	-
	4.2	16900	347.35	110900	1.1	667	2KJ3412- ■ HL23- ■ ■ T1 -Z -	-
	4.7	15100	310.76	110900	1.3	667	2KJ3412- ■ HL23- ■ ■ S1 -Z -	-
	4.7	15100	310.76	110900	1.3	667	2KJ3412- ■ HL23- ■ ■ S1 -Z -	-
	5.2	13600	280.27	110900	1.4	667	2KJ3412- ■ HL23- ■ ■ R1 -Z -	-
	5.2	13700	280.27	110900	1.4	667	2KJ3412- ■ HL23- ■ ■ R1 -Z -	-
	5.9	12000	247.71	110900	1.6	667	2KJ3412- ■ HL23- ■ ■ Q1 -Z -	-
	5.9	12100	247.71	110900	1.6	667	2KJ3412- ■ HL23- ■ ■ Q1 -Z -	-
	6.5	11000	226.42	110900	1.7	667	2KJ3412- ■ HL23- ■ ■ P1 -Z -	-
	6.5	11000	226.42	110900	1.7	667	2KJ3412- ■ HL23- ■ ■ P1 -Z -	-
	7.2	9920	203.69	110900	1.9	667	2KJ3412- ■ HL23- ■ ■ N1 -Z -	-
	7.2	9950	203.69	110900	1.9	667	2KJ3412- ■ HL23- ■ ■ N1 -Z -	-
	8	8900	182.03	110900	2.1	667	2KJ3412- ■ HL23- ■ ■ M1 -Z -	-
	8.1	8860	182.03	110900	2.1	667	2KJ3412- ■ HL23- ■ ■ M1 -Z -	-
	<b>FD.169-LE132ZMS4P</b>							
	4.3	16700	343.01	73500	0.81	455	2KJ3411- ■ HL23- ■ ■ U1 -Z -	-
	4.8	14900	304.94	73500	0.91	455	2KJ3411- ■ HL23- ■ ■ T1 -Z -	-

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>7.5</b>	<b>FD.169-LE132ZMS4P</b>							
	5.4	13300	273.80	73500	1	455	2KJ3411- ■ HL23- ■ ■ S1 -Z -	-
	5.9	12100	247.84	73500	1.1	455	2KJ3411- ■ HL23- ■ ■ R1 -Z -	-
	6.7	10600	217.70	73500	1.3	455	2KJ3411- ■ HL23- ■ ■ Q1 -Z -	-
	7.4	9640	197.27	73500	1.4	455	2KJ3411- ■ HL23- ■ ■ P1 -Z -	-
	8.3	8590	175.69	73500	1.6	455	2KJ3411- ■ HL23- ■ ■ N1 -Z -	-
	9.3	7710	157.76	73500	1.8	455	2KJ3411- ■ HL23- ■ ■ M1 -Z -	-
	10	6880	140.77	73500	2	455	2KJ3411- ■ HL23- ■ ■ L1 -Z -	-
	12	6130	125.49	73500	2.2	455	2KJ3411- ■ HL23- ■ ■ K1 -Z -	-
	<b>FD.149-LE132ZMS4P</b>							
7.2	9900	202.50	65000	0.81	308	2KJ3410- ■ HL23- ■ ■ Q1 -Z -	-	
8.2	8770	179.44	65000	0.91	308	2KJ3410- ■ HL23- ■ ■ P1 -Z -	-	
9.2	7760	158.91	65000	1	308	2KJ3410- ■ HL23- ■ ■ N1 -Z -	-	
10	6910	141.43	65000	1.2	308	2KJ3410- ■ HL23- ■ ■ M1 -Z -	-	
12	6190	126.73	65000	1.3	308	2KJ3410- ■ HL23- ■ ■ L1 -Z -	-	
13	5490	112.36	65000	1.5	308	2KJ3410- ■ HL23- ■ ■ K1 -Z -	-	
15	4840	99.18	65000	1.6	308	2KJ3410- ■ HL23- ■ ■ J1 -Z -	-	
17	4260	87.20	64000	1.9	308	2KJ3410- ■ HL23- ■ ■ H1 -Z -	-	
19	3860	78.98	62800	2.1	308	2KJ3410- ■ HL23- ■ ■ G1 -Z -	-	
21	3360	68.76	61100	2.4	308	2KJ3410- ■ HL23- ■ ■ F1 -Z -	-	
<b>FD.129-LE132ZMS4P</b>								
13	5520	113.03	36500	0.88	222	2KJ3408- ■ HL23- ■ ■ F1 -Z -	-	
15	4860	99.58	37100	1	222	2KJ3408- ■ HL23- ■ ■ E1 -Z -	-	
17	4260	87.25	37500	1.1	222	2KJ3408- ■ HL23- ■ ■ D1 -Z -	-	
19	3710	76.04	37500	1.3	222	2KJ3408- ■ HL23- ■ ■ C1 -Z -	-	
21	3390	69.40	37500	1.4	222	2KJ3408- ■ HL23- ■ ■ B1 -Z -	-	
25	2920	59.75	37500	1.7	222	2KJ3408- ■ HL23- ■ ■ A1 -Z -	-	
<b>FZ.129-LE132ZMS4P</b>								
21	3380	69.20	37500	1.4	217	2KJ3308- ■ HL23- ■ ■ A2 -Z -	-	
25	2890	59.22	37500	1.7	217	2KJ3308- ■ HL23- ■ ■ X1 -Z -	-	
26	2720	55.74	37500	1.8	217	2KJ3308- ■ HL23- ■ ■ W1 -Z -	-	
28	2550	52.25	37500	1.9	217	2KJ3308- ■ HL23- ■ ■ V1 -Z -	-	
32	2260	46.32	37500	2.1	217	2KJ3308- ■ HL23- ■ ■ U1 -Z -	-	
36	2010	41.14	37500	2.4	217	2KJ3308- ■ HL23- ■ ■ T1 -Z -	-	
39	1810	37.12	37500	2.7	217	2KJ3308- ■ HL23- ■ ■ S1 -Z -	-	
<b>FD.109-LE132ZMS4P</b>								
19	3690	75.59	25000	0.84	168	2KJ3407- ■ HL23- ■ ■ C1 -Z -	-	
23	3150	64.62	25000	0.98	168	2KJ3407- ■ HL23- ■ ■ B1 -Z -	-	
26	2700	55.31	25000	1.1	168	2KJ3407- ■ HL23- ■ ■ A1 -Z -	-	
<b>FZ.109-LE132ZMS4P</b>								
24	2930	60.12	25000	1.1	164	2KJ3307- ■ HL23- ■ ■ X1 -Z -	-	
29	2500	51.27	25000	1.2	164	2KJ3307- ■ HL23- ■ ■ W1 -Z -	-	
30	2350	48.25	25000	1.3	164	2KJ3307- ■ HL23- ■ ■ V1 -Z -	-	
33	2180	44.78	25000	1.4	164	2KJ3307- ■ HL23- ■ ■ U1 -Z -	-	
37	1930	39.59	25000	1.6	164	2KJ3307- ■ HL23- ■ ■ T1 -Z -	-	
41	1720	35.34	25000	1.8	164	2KJ3307- ■ HL23- ■ ■ S1 -Z -	-	
46	1550	31.80	25000	2	164	2KJ3307- ■ HL23- ■ ■ R1 -Z -	-	
53	1340	27.60	25000	2.3	164	2KJ3307- ■ HL23- ■ ■ Q1 -Z -	-	
59	1210	24.82	25000	2.6	164	2KJ3307- ■ HL23- ■ ■ P1 -Z -	-	
68	1060	21.70	25000	2.9	164	2KJ3307- ■ HL23- ■ ■ N1 -Z -	-	
<b>FZ.89-LE132ZMS4P</b>								
35	2070	42.41	17400	0.89	126	2KJ3306- ■ HL23- ■ ■ V1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	N	-	-	kg	(Article No. supplement, see below)	No. of poles
<b>7.5</b>	<b>FZ.89-LE132ZMS4P</b>							
	41	1750	35.91	17400	1.1	126	2KJ3306- ■ HL23- ■ ■ U1 -Z -	-
	43	1650	33.80	17400	1.1	126	2KJ3306- ■ HL23- ■ ■ T1 -Z -	-
	47	1520	31.21	17400	1.2	126	2KJ3306- ■ HL23- ■ ■ S1 -Z -	-
	53	1350	27.77	17400	1.4	126	2KJ3306- ■ HL23- ■ ■ R1 -Z -	-
	59	1200	24.67	17400	1.5	126	2KJ3306- ■ HL23- ■ ■ Q1 -Z -	-
	66	1080	22.08	17400	1.7	126	2KJ3306- ■ HL23- ■ ■ P1 -Z -	-
	78	920	18.88	17400	2	126	2KJ3306- ■ HL23- ■ ■ N1 -Z -	-
	87	820	16.86	17400	2.2	126	2KJ3306- ■ HL23- ■ ■ M1 -Z -	-
	98	725	14.90	17400	2.5	126	2KJ3306- ■ HL23- ■ ■ L1 -Z -	-
	112	635	13.07	17400	2.9	126	2KJ3306- ■ HL23- ■ ■ K1 -Z -	-
	129	555	11.38	17400	3.3	126	2KJ3306- ■ HL23- ■ ■ J1 -Z -	-
	151	475	9.73	17400	3.9	126	2KJ3306- ■ HL23- ■ ■ H1 -Z -	-
	193	370	7.60	17300	3	126	2KJ3306- ■ HL23- ■ ■ F1 -Z -	-
	218	325	6.72	16800	3.4	126	2KJ3306- ■ HL23- ■ ■ E1 -Z -	-
	248	285	5.90	16200	3.8	126	2KJ3306- ■ HL23- ■ ■ D1 -Z -	-
	286	250	5.13	15700	4.4	126	2KJ3306- ■ HL23- ■ ■ C1 -Z -	-
	334	215	4.39	15100	4.9	126	2KJ3306- ■ HL23- ■ ■ B1 -Z -	-
	390	184	3.76	14500	5.4	126	2KJ3306- ■ HL23- ■ ■ A1 -Z -	-
		<b>FZ.79-LE132ZMS4P</b>						
	61	1170	23.93	13200	0.85	96	2KJ3305- ■ HL23- ■ ■ P1 -Z -	-
	70	1020	20.90	13400	0.98	96	2KJ3305- ■ HL23- ■ ■ N1 -Z -	-
	78	915	18.71	13300	1.1	96	2KJ3305- ■ HL23- ■ ■ M1 -Z -	-
	90	800	16.36	13200	1.3	96	2KJ3305- ■ HL23- ■ ■ L1 -Z -	-
	104	685	14.04	13100	1.5	96	2KJ3305- ■ HL23- ■ ■ K1 -Z -	-
	118	605	12.41	12900	1.6	96	2KJ3305- ■ HL23- ■ ■ J1 -Z -	-
	139	515	10.56	12600	1.9	96	2KJ3305- ■ HL23- ■ ■ H1 -Z -	-
	162	440	9.05	12300	2.3	96	2KJ3305- ■ HL23- ■ ■ G1 -Z -	-
	172	415	8.51	12000	1.7	96	2KJ3305- ■ HL23- ■ ■ F1 -Z -	-
	197	360	7.44	11700	2	96	2KJ3305- ■ HL23- ■ ■ E1 -Z -	-
	229	310	6.39	11400	2.3	96	2KJ3305- ■ HL23- ■ ■ D1 -Z -	-
	260	275	5.64	11100	2.5	96	2KJ3305- ■ HL23- ■ ■ C1 -Z -	-
	305	235	4.80	10700	2.8	96	2KJ3305- ■ HL23- ■ ■ B1 -Z -	-
	356	200	4.11	10400	3	96	2KJ3305- ■ HL23- ■ ■ A1 -Z -	-
	<b>FZ.69-LE132ZMS4P</b>							
	99	725	14.85	3660	0.83	88	2KJ3304- ■ HL23- ■ ■ J1 -Z -	-
	112	635	13.06	3880	0.94	88	2KJ3304- ■ HL23- ■ ■ H1 -Z -	-
	133	535	11.01	4060	1.1	88	2KJ3304- ■ HL23- ■ ■ G1 -Z -	-
	153	465	9.60	4170	1.3	88	2KJ3304- ■ HL23- ■ ■ F1 -Z -	-
	165	435	8.90	4040	1.1	88	2KJ3304- ■ HL23- ■ ■ E1 -Z -	-
	192	370	7.62	4120	1.2	88	2KJ3304- ■ HL23- ■ ■ D1 -Z -	-
	219	325	6.70	4130	1.3	88	2KJ3304- ■ HL23- ■ ■ C1 -Z -	-
	259	275	5.66	4110	1.5	88	2KJ3304- ■ HL23- ■ ■ B1 -Z -	-
	297	240	4.93	4080	1.6	88	2KJ3304- ■ HL23- ■ ■ A1 -Z -	-
	<b>FZ.49-LE132ZMS4P</b>							
	140	510	10.46	2270	0.94	84	2KJ3303- ■ HL23- ■ ■ G1 -Z -	-
	161	445	9.12	2440	1.1	84	2KJ3303- ■ HL23- ■ ■ F1 -Z -	-
	174	410	8.40	2230	1.1	84	2KJ3303- ■ HL23- ■ ■ E1 -Z -	-
	203	350	7.20	2400	1.3	84	2KJ3303- ■ HL23- ■ ■ D1 -Z -	-
	231	305	6.33	2520	1.4	84	2KJ3303- ■ HL23- ■ ■ C1 -Z -	-
	274	260	5.34	2580	1.5	84	2KJ3303- ■ HL23- ■ ■ B1 -Z -	-
	315	225	4.65	2640	1.6	84	2KJ3303- ■ HL23- ■ ■ A1 -Z -	-

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>9.2</b>	<b>FD.189-LE160MPA4P</b>							
	4.3	20600	347.35	110900	0.92	684	2KJ3412- ■ JQ23- ■ ■ T1 -Z -	-
	4.8	18400	310.76	110900	1	684	2KJ3412- ■ JQ23- ■ ■ S1 -Z -	-
	5.3	16600	280.27	110900	1.1	684	2KJ3412- ■ JQ23- ■ ■ R1 -Z -	-
	6	14700	247.71	110900	1.3	684	2KJ3412- ■ JQ23- ■ ■ Q1 -Z -	-
	6.5	13400	226.42	110900	1.4	684	2KJ3412- ■ JQ23- ■ ■ P1 -Z -	-
	7.3	12000	203.69	110900	1.6	684	2KJ3412- ■ JQ23- ■ ■ N1 -Z -	-
	8.1	10800	182.03	110900	1.8	684	2KJ3412- ■ JQ23- ■ ■ M1 -Z -	-
	9	9770	164.61	110900	1.9	684	2KJ3412- ■ JQ23- ■ ■ L1 -Z -	-
	10	8620	145.28	110900	2.2	684	2KJ3412- ■ JQ23- ■ ■ K1 -Z -	-
	<b>FD.169-LE160MPA4P</b>							
	5.4	16200	273.80	73500	0.84	472	2KJ3411- ■ JQ23- ■ ■ S1 -Z -	-
	6	14700	247.84	73500	0.92	472	2KJ3411- ■ JQ23- ■ ■ R1 -Z -	-
	6.8	12900	217.70	73500	1.1	472	2KJ3411- ■ JQ23- ■ ■ Q1 -Z -	-
	7.5	11700	197.27	73500	1.2	472	2KJ3411- ■ JQ23- ■ ■ P1 -Z -	-
	8.4	10400	175.69	73500	1.3	472	2KJ3411- ■ JQ23- ■ ■ N1 -Z -	-
	9.4	9360	157.76	73500	1.5	472	2KJ3411- ■ JQ23- ■ ■ M1 -Z -	-
	11	8350	140.77	73500	1.6	472	2KJ3411- ■ JQ23- ■ ■ L1 -Z -	-
	12	7450	125.49	73500	1.8	472	2KJ3411- ■ JQ23- ■ ■ K1 -Z -	-
	13	6600	111.30	73500	2.1	472	2KJ3411- ■ JQ23- ■ ■ J1 -Z -	-
14	6060	102.18	73500	2.2	472	2KJ3411- ■ JQ23- ■ ■ H1 -Z -	-	
	<b>FD.149-LE160MPA4P</b>							
	9.3	9430	158.91	65000	0.85	325	2KJ3410- ■ JQ23- ■ ■ N1 -Z -	-
	10	8390	141.43	65000	0.95	325	2KJ3410- ■ JQ23- ■ ■ M1 -Z -	-
	12	7520	126.73	64400	1.1	325	2KJ3410- ■ JQ23- ■ ■ L1 -Z -	-
	13	6670	112.36	63600	1.2	325	2KJ3410- ■ JQ23- ■ ■ K1 -Z -	-
	15	5880	99.18	62600	1.4	325	2KJ3410- ■ JQ23- ■ ■ J1 -Z -	-
	17	5170	87.20	61500	1.5	325	2KJ3410- ■ JQ23- ■ ■ H1 -Z -	-
	19	4680	78.98	60500	1.7	325	2KJ3410- ■ JQ23- ■ ■ G1 -Z -	-
	22	4080	68.76	59100	2	325	2KJ3410- ■ JQ23- ■ ■ F1 -Z -	-
	26	3340	56.37	56900	2.4	325	2KJ3410- ■ JQ23- ■ ■ E1 -Z -	-
	<b>FD.129-LE160MPA4P</b>							
	15	5910	99.58	36100	0.82	239	2KJ3408- ■ JQ23- ■ ■ E1 -Z -	-
	17	5180	87.25	36800	0.94	239	2KJ3408- ■ JQ23- ■ ■ D1 -Z -	-
	19	4510	76.04	37500	1.1	239	2KJ3408- ■ JQ23- ■ ■ C1 -Z -	-
	21	4120	69.40	37500	1.2	239	2KJ3408- ■ JQ23- ■ ■ B1 -Z -	-
25	3540	59.75	37500	1.4	239	2KJ3408- ■ JQ23- ■ ■ A1 -Z -	-	
	<b>FZ.129-LE160MPA4P</b>							
	21	4100	69.20	37500	1.2	234	2KJ3308- ■ JQ23- ■ ■ A2 -Z -	-
	25	3510	59.22	37500	1.4	234	2KJ3308- ■ JQ23- ■ ■ X1 -Z -	-
	27	3300	55.74	37500	1.5	234	2KJ3308- ■ JQ23- ■ ■ W1 -Z -	-
	28	3100	52.25	37500	1.6	234	2KJ3308- ■ JQ23- ■ ■ V1 -Z -	-
	32	2750	46.32	37500	1.8	234	2KJ3308- ■ JQ23- ■ ■ U1 -Z -	-
	36	2440	41.14	37500	2	234	2KJ3308- ■ JQ23- ■ ■ T1 -Z -	-
	40	2200	37.12	37500	2.2	234	2KJ3308- ■ JQ23- ■ ■ S1 -Z -	-
	45	1950	32.90	37500	2.5	234	2KJ3308- ■ JQ23- ■ ■ R1 -Z -	-
	51	1720	29.13	37000	2.8	234	2KJ3308- ■ JQ23- ■ ■ Q1 -Z -	-
	<b>FD.109-LE160MPA4P</b>							
	23	3830	64.62	25000	0.81	185	2KJ3407- ■ JQ23- ■ ■ B1 -Z -	-
27	3280	55.31	25000	0.94	185	2KJ3407- ■ JQ23- ■ ■ A1 -Z -	-	
	<b>FZ.109-LE160MPA4P</b>							
25	3560	60.12	25000	0.87	182	2KJ3307- ■ JQ23- ■ ■ X1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
9.2	<b>FZ.109-LE160MPA4P</b>								
	29	3040	51.27	25000	1	182	2KJ3307- ■ JQ23- ■ ■ W1 -Z -		
	31	2860	48.25	25000	1.1	182	2KJ3307- ■ JQ23- ■ ■ V1 -Z -		
	33	2650	44.78	25000	1.2	182	2KJ3307- ■ JQ23- ■ ■ U1 -Z -		
	37	2350	39.59	25000	1.3	182	2KJ3307- ■ JQ23- ■ ■ T1 -Z -		
	42	2090	35.34	25000	1.5	182	2KJ3307- ■ JQ23- ■ ■ S1 -Z -		
	47	1880	31.80	25000	1.6	182	2KJ3307- ■ JQ23- ■ ■ R1 -Z -		
	54	1630	27.60	25000	1.9	182	2KJ3307- ■ JQ23- ■ ■ Q1 -Z -		
	60	1470	24.82	25000	2.1	182	2KJ3307- ■ JQ23- ■ ■ P1 -Z -		
	68	1280	21.70	25000	2.4	182	2KJ3307- ■ JQ23- ■ ■ N1 -Z -		
	76	1140	19.36	25000	2.7	182	2KJ3307- ■ JQ23- ■ ■ M1 -Z -		
	87	1010	17.06	24500	3.1	182	2KJ3307- ■ JQ23- ■ ■ L1 -Z -		
	99	885	14.95	23900	3.5	182	2KJ3307- ■ JQ23- ■ ■ K1 -Z -		
	164	535	9.02	21200	3.9	182	2KJ3307- ■ JQ23- ■ ■ F1 -Z -		
	186	470	7.94	20600	4.2	182	2KJ3307- ■ JQ23- ■ ■ E1 -Z -		
	9.2	<b>FZ.89-LE160MPA4P</b>							
		41	2130	35.91	17400	0.87	145	2KJ3306- ■ JQ23- ■ ■ U1 -Z -	
		44	2000	33.80	17400	0.92	145	2KJ3306- ■ JQ23- ■ ■ T1 -Z -	
		47	1850	31.21	17400	1	145	2KJ3306- ■ JQ23- ■ ■ S1 -Z -	
		53	1640	27.77	17400	1.1	145	2KJ3306- ■ JQ23- ■ ■ R1 -Z -	
		60	1460	24.67	17400	1.3	145	2KJ3306- ■ JQ23- ■ ■ Q1 -Z -	
		67	1310	22.08	17400	1.4	145	2KJ3306- ■ JQ23- ■ ■ P1 -Z -	
		78	1120	18.88	17400	1.7	145	2KJ3306- ■ JQ23- ■ ■ N1 -Z -	
		88	1000	16.86	17400	1.8	145	2KJ3306- ■ JQ23- ■ ■ M1 -Z -	
		99	885	14.90	17400	2.1	145	2KJ3306- ■ JQ23- ■ ■ L1 -Z -	
		113	775	13.07	17400	2.4	145	2KJ3306- ■ JQ23- ■ ■ K1 -Z -	
		130	675	11.38	17400	2.7	145	2KJ3306- ■ JQ23- ■ ■ J1 -Z -	
		152	575	9.73	17400	3.2	145	2KJ3306- ■ JQ23- ■ ■ H1 -Z -	
		178	495	8.33	17300	3.5	145	2KJ3306- ■ JQ23- ■ ■ G1 -Z -	
		195	450	7.60	16900	2.4	145	2KJ3306- ■ JQ23- ■ ■ F1 -Z -	
		220	395	6.72	16400	2.8	145	2KJ3306- ■ JQ23- ■ ■ E1 -Z -	
		251	350	5.90	15900	3.2	145	2KJ3306- ■ JQ23- ■ ■ D1 -Z -	
		288	305	5.13	15400	3.6	145	2KJ3306- ■ JQ23- ■ ■ C1 -Z -	
		337	260	4.39	14800	4.1	145	2KJ3306- ■ JQ23- ■ ■ B1 -Z -	
		394	220	3.76	14300	4.4	145	2KJ3306- ■ JQ23- ■ ■ A1 -Z -	
	9.2	<b>FZ.79-LE160MPA4P</b>							
71		1240	20.90	12200	0.81	114	2KJ3305- ■ JQ23- ■ ■ N1 -Z -		
79		1110	18.71	12300	0.9	114	2KJ3305- ■ JQ23- ■ ■ M1 -Z -		
90		970	16.36	12300	1	114	2KJ3305- ■ JQ23- ■ ■ L1 -Z -		
105		830	14.04	12200	1.2	114	2KJ3305- ■ JQ23- ■ ■ K1 -Z -		
119		735	12.41	12100	1.4	114	2KJ3305- ■ JQ23- ■ ■ J1 -Z -		
140		625	10.56	12000	1.6	114	2KJ3305- ■ JQ23- ■ ■ H1 -Z -		
164		535	9.05	11700	1.9	114	2KJ3305- ■ JQ23- ■ ■ G1 -Z -		
174		505	8.51	11500	1.4	114	2KJ3305- ■ JQ23- ■ ■ F1 -Z -		
199		440	7.44	11300	1.6	114	2KJ3305- ■ JQ23- ■ ■ E1 -Z -		
232		375	6.39	11000	1.9	114	2KJ3305- ■ JQ23- ■ ■ D1 -Z -		
262		335	5.64	10700	2.1	114	2KJ3305- ■ JQ23- ■ ■ C1 -Z -		
308		285	4.80	10400	2.3	114	2KJ3305- ■ JQ23- ■ ■ B1 -Z -		
360		240	4.11	10100	2.5	114	2KJ3305- ■ JQ23- ■ ■ A1 -Z -		
11	<b>FD.189-LE160MPB4P</b>								
	4.7	22100	310.76	110800	0.86	676	2KJ3412- ■ JR23- ■ ■ S1 -Z -		
	5.3	19900	280.27	110900	0.95	676	2KJ3412- ■ JR23- ■ ■ R1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/49</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H or D	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
11	<b>FD.189-LE160MPB4P</b>							
	6	17600	247.71	110900	1.1	676	2KJ3412- ■ JR23- ■ ■ Q1 -Z -	-
	6.5	16100	226.42	110900	1.2	676	2KJ3412- ■ JR23- ■ ■ P1 -Z -	-
	7.2	14500	203.69	110900	1.3	676	2KJ3412- ■ JR23- ■ ■ M1 -Z -	-
	8.1	12900	182.03	110900	1.5	676	2KJ3412- ■ JR23- ■ ■ N1 -Z -	-
	9	11700	164.61	110900	1.6	676	2KJ3412- ■ JR23- ■ ■ L1 -Z -	-
	10	10300	145.28	110900	1.8	676	2KJ3412- ■ JR23- ■ ■ K1 -Z -	-
	11	9210	129.45	110900	2.1	676	2KJ3412- ■ JR23- ■ ■ J1 -Z -	-
	<b>FD.169-LE160MPB4P</b>							
	6.8	15500	217.70	73500	0.88	464	2KJ3411- ■ JR23- ■ ■ Q1 -Z -	-
	7.5	14000	197.27	73500	0.97	464	2KJ3411- ■ JR23- ■ ■ P1 -Z -	-
8.4	12500	175.69	73500	1.1	464	2KJ3411- ■ JR23- ■ ■ N1 -Z -	-	
9.3	11200	157.76	73500	1.2	464	2KJ3411- ■ JR23- ■ ■ M1 -Z -	-	
10	10000	140.77	73500	1.4	464	2KJ3411- ■ JR23- ■ ■ L1 -Z -	-	
12	8930	125.49	73500	1.5	464	2KJ3411- ■ JR23- ■ ■ K1 -Z -	-	
13	7920	111.30	73500	1.7	464	2KJ3411- ■ JR23- ■ ■ J1 -Z -	-	
14	7270	102.18	73500	1.9	464	2KJ3411- ■ JR23- ■ ■ H1 -Z -	-	
16	6410	90.03	73500	2.1	464	2KJ3411- ■ JR23- ■ ■ G1 -Z -	-	
<b>FD.149-LE160MPB4P</b>								
12	9020	126.73	60700	0.89	317	2KJ3410- ■ JR23- ■ ■ L1 -Z -	-	
13	8000	112.36	60300	1	317	2KJ3410- ■ JR23- ■ ■ K1 -Z -	-	
15	7060	99.18	59700	1.1	317	2KJ3410- ■ JR23- ■ ■ J1 -Z -	-	
17	6210	87.20	58900	1.3	317	2KJ3410- ■ JR23- ■ ■ H1 -Z -	-	
19	5620	78.98	58200	1.4	317	2KJ3410- ■ JR23- ■ ■ G1 -Z -	-	
21	4890	68.76	57100	1.6	317	2KJ3410- ■ JR23- ■ ■ F1 -Z -	-	
26	4010	56.37	55300	2	317	2KJ3410- ■ JR23- ■ ■ E1 -Z -	-	
29	3560	50.01	54100	2.2	317	2KJ3410- ■ JR23- ■ ■ D1 -Z -	-	
33	3220	45.30	53100	2.5	317	2KJ3410- ■ JR23- ■ ■ C1 -Z -	-	
<b>FZ.149-LE160MPB4P</b>								
30	3450	48.48	53800	2.3	311	2KJ3310- ■ JR23- ■ ■ T1 -Z -	-	
34	3120	43.89	52800	2.6	311	2KJ3310- ■ JR23- ■ ■ S1 -Z -	-	
<b>FD.129-LE160MPB4P</b>								
19	5410	76.04	36600	0.9	231	2KJ3408- ■ JR23- ■ ■ C1 -Z -	-	
21	4940	69.40	37100	0.98	231	2KJ3408- ■ JR23- ■ ■ B1 -Z -	-	
25	4250	59.75	37500	1.1	231	2KJ3408- ■ JR23- ■ ■ A1 -Z -	-	
<b>FZ.129-LE160MPB4P</b>								
21	4920	69.20	37100	0.98	226	2KJ3308- ■ JR23- ■ ■ A2 -Z -	-	
25	4210	59.22	37500	1.1	226	2KJ3308- ■ JR23- ■ ■ X1 -Z -	-	
26	3970	55.74	37500	1.2	226	2KJ3308- ■ JR23- ■ ■ W1 -Z -	-	
28	3720	52.25	37500	1.3	226	2KJ3308- ■ JR23- ■ ■ V1 -Z -	-	
32	3290	46.32	37500	1.5	226	2KJ3308- ■ JR23- ■ ■ U1 -Z -	-	
36	2930	41.14	37500	1.7	226	2KJ3308- ■ JR23- ■ ■ T1 -Z -	-	
40	2640	37.12	37500	1.8	226	2KJ3308- ■ JR23- ■ ■ S1 -Z -	-	
45	2340	32.90	36900	2.1	226	2KJ3308- ■ JR23- ■ ■ R1 -Z -	-	
51	2070	29.13	36100	2.3	226	2KJ3308- ■ JR23- ■ ■ Q1 -Z -	-	
57	1840	25.93	35300	2.6	226	2KJ3308- ■ JR23- ■ ■ P1 -Z -	-	
63	1650	23.23	34500	2.9	226	2KJ3308- ■ JR23- ■ ■ N1 -Z -	-	
<b>FZ.109-LE160MPB4P</b>								
29	3650	51.27	25000	0.85	174	2KJ3307- ■ JR23- ■ ■ W1 -Z -	-	
31	3430	48.25	25000	0.9	174	2KJ3307- ■ JR23- ■ ■ V1 -Z -	-	
33	3180	44.78	25000	0.97	174	2KJ3307- ■ JR23- ■ ■ U1 -Z -	-	
37	2820	39.59	25000	1.1	174	2KJ3307- ■ JR23- ■ ■ T1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
11	<b>FZ.109-LE160MPB4P</b>								
	42	2510	35.34	25000	1.2	174	2KJ3307- ■ JR23- ■ ■ S1 -Z -	-	
	46	2260	31.80	25000	1.4	174	2KJ3307- ■ JR23- ■ ■ R1 -Z -	-	
	53	1960	27.60	25000	1.6	174	2KJ3307- ■ JR23- ■ ■ Q1 -Z -	-	
	59	1760	24.82	25000	1.8	174	2KJ3307- ■ JR23- ■ ■ P1 -Z -	-	
	68	1540	21.70	24900	2	174	2KJ3307- ■ JR23- ■ ■ N1 -Z -	-	
	76	1370	19.36	24500	2.2	174	2KJ3307- ■ JR23- ■ ■ M1 -Z -	-	
	86	1210	17.06	23900	2.6	174	2KJ3307- ■ JR23- ■ ■ L1 -Z -	-	
	99	1060	14.95	23300	2.9	174	2KJ3307- ■ JR23- ■ ■ K1 -Z -	-	
	113	925	13.03	22700	3.3	174	2KJ3307- ■ JR23- ■ ■ J1 -Z -	-	
	124	845	11.89	22200	3.6	174	2KJ3307- ■ JR23- ■ ■ H1 -Z -	-	
	164	640	9.02	20900	3.3	174	2KJ3307- ■ JR23- ■ ■ F1 -Z -	-	
	186	565	7.94	20300	3.5	174	2KJ3307- ■ JR23- ■ ■ E1 -Z -	-	
	212	495	6.96	19600	3.8	174	2KJ3307- ■ JR23- ■ ■ D1 -Z -	-	
	243	430	6.07	19000	4.2	174	2KJ3307- ■ JR23- ■ ■ C1 -Z -	-	
	266	395	5.54	18500	4.4	174	2KJ3307- ■ JR23- ■ ■ B1 -Z -	-	
	309	340	4.77	17900	4.8	174	2KJ3307- ■ JR23- ■ ■ A1 -Z -	-	
		<b>FZ.89-LE160MPB4P</b>							
		47	2220	31.21	17400	0.83	137	2KJ3306- ■ JR23- ■ ■ S1 -Z -	-
		53	1970	27.77	17400	0.94	137	2KJ3306- ■ JR23- ■ ■ R1 -Z -	-
60		1750	24.67	17400	1.1	137	2KJ3306- ■ JR23- ■ ■ Q1 -Z -	-	
67		1570	22.08	17400	1.2	137	2KJ3306- ■ JR23- ■ ■ P1 -Z -	-	
78		1340	18.88	17400	1.4	137	2KJ3306- ■ JR23- ■ ■ N1 -Z -	-	
87		1200	16.86	17400	1.5	137	2KJ3306- ■ JR23- ■ ■ M1 -Z -	-	
99		1060	14.90	17400	1.7	137	2KJ3306- ■ JR23- ■ ■ L1 -Z -	-	
113		930	13.07	17400	2	137	2KJ3306- ■ JR23- ■ ■ K1 -Z -	-	
130		810	11.38	17400	2.3	137	2KJ3306- ■ JR23- ■ ■ J1 -Z -	-	
152		690	9.73	17400	2.7	137	2KJ3306- ■ JR23- ■ ■ H1 -Z -	-	
177		590	8.33	16900	2.9	137	2KJ3306- ■ JR23- ■ ■ G1 -Z -	-	
194		540	7.60	16500	2	137	2KJ3306- ■ JR23- ■ ■ F1 -Z -	-	
219		475	6.72	16100	2.3	137	2KJ3306- ■ JR23- ■ ■ E1 -Z -	-	
250		420	5.90	15600	2.6	137	2KJ3306- ■ JR23- ■ ■ D1 -Z -	-	
288		365	5.13	15100	3	137	2KJ3306- ■ JR23- ■ ■ C1 -Z -	-	
336		310	4.39	14600	3.4	137	2KJ3306- ■ JR23- ■ ■ B1 -Z -	-	
392		265	3.76	14100	3.7	137	2KJ3306- ■ JR23- ■ ■ A1 -Z -	-	
		<b>FZ.79-LE160MPB4P</b>							
		90	1160	16.36	11300	0.86	106	2KJ3305- ■ JR23- ■ ■ L1 -Z -	-
	105	1000	14.04	11400	1	106	2KJ3305- ■ JR23- ■ ■ K1 -Z -	-	
	119	880	12.41	11400	1.1	106	2KJ3305- ■ JR23- ■ ■ J1 -Z -	-	
	140	750	10.56	11300	1.3	106	2KJ3305- ■ JR23- ■ ■ H1 -Z -	-	
	163	645	9.05	11200	1.6	106	2KJ3305- ■ JR23- ■ ■ G1 -Z -	-	
	173	605	8.51	10900	1.2	106	2KJ3305- ■ JR23- ■ ■ F1 -Z -	-	
	198	530	7.44	10800	1.4	106	2KJ3305- ■ JR23- ■ ■ E1 -Z -	-	
	231	455	6.39	10600	1.6	106	2KJ3305- ■ JR23- ■ ■ D1 -Z -	-	
	262	400	5.64	10400	1.7	106	2KJ3305- ■ JR23- ■ ■ C1 -Z -	-	
	307	340	4.80	10100	1.9	106	2KJ3305- ■ JR23- ■ ■ B1 -Z -	-	
	359	290	4.11	9910	2.1	106	2KJ3305- ■ JR23- ■ ■ A1 -Z -	-	
	15	<b>FD.189-LE160ZLL4P</b>							
6.5		21900	226.42	110900	0.86	701	2KJ3412- ■ JU23- ■ ■ P1 -Z -	-	
7.2		19700	203.69	110900	0.96	701	2KJ3412- ■ JU23- ■ ■ N1 -Z -	-	
	8.1	17600	182.03	110900	1.1	701	2KJ3412- ■ JU23- ■ ■ M1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	see page 10/49
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H or D	see page 10/42

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
15	<b>FD.189-LE160ZLL4P</b>							
	9	15900	164.61	110900	1.2	701	2KJ3412- ■ JU23- ■ ■ L1 -Z -	-
	10	14100	145.28	110900	1.3	701	2KJ3412- ■ JU23- ■ ■ K1 -Z -	-
	11	12500	129.45	110900	1.5	701	2KJ3412- ■ JU23- ■ ■ J1 -Z -	-
	13	11300	117.27	110900	1.7	701	2KJ3412- ■ JU23- ■ ■ H1 -Z -	-
	14	10200	105.48	110900	1.9	701	2KJ3412- ■ JU23- ■ ■ G1 -Z -	-
	17	8510	87.65	110900	2.2	701	2KJ3412- ■ JU23- ■ ■ F1 -Z -	-
	<b>FD.169-LE160ZLL4P</b>							
	8.4	17000	175.69	73500	0.8	489	2KJ3411- ■ JU23- ■ ■ N1 -Z -	-
	9.3	15300	157.76	73500	0.89	489	2KJ3411- ■ JU23- ■ ■ M1 -Z -	-
	10	13600	140.77	73500	0.99	489	2KJ3411- ■ JU23- ■ ■ L1 -Z -	-
	12	12100	125.49	73500	1.1	489	2KJ3411- ■ JU23- ■ ■ K1 -Z -	-
	13	10800	111.30	73500	1.3	489	2KJ3411- ■ JU23- ■ ■ J1 -Z -	-
	14	9920	102.18	73500	1.4	489	2KJ3411- ■ JU23- ■ ■ H1 -Z -	-
	16	8740	90.03	73500	1.6	489	2KJ3411- ■ JU23- ■ ■ G1 -Z -	-
	20	7170	73.85	73500	1.9	489	2KJ3411- ■ JU23- ■ ■ F1 -Z -	-
	23	6280	64.75	73500	2.2	489	2KJ3411- ■ JU23- ■ ■ E1 -Z -	-
	<b>FD.149-LE160ZLL4P</b>							
15	9630	99.18	53300	0.83	342	2KJ3410- ■ JU23- ■ ■ J1 -Z -	-	
17	8460	87.20	53300	0.94	342	2KJ3410- ■ JU23- ■ ■ H1 -Z -	-	
19	7670	78.98	53100	1	342	2KJ3410- ■ JU23- ■ ■ G1 -Z -	-	
21	6670	68.76	52700	1.2	342	2KJ3410- ■ JU23- ■ ■ F1 -Z -	-	
26	5470	56.37	51600	1.5	342	2KJ3410- ■ JU23- ■ ■ E1 -Z -	-	
29	4850	50.01	50900	1.6	342	2KJ3410- ■ JU23- ■ ■ D1 -Z -	-	
33	4390	45.30	50200	1.8	342	2KJ3410- ■ JU23- ■ ■ C1 -Z -	-	
37	3820	39.43	49100	2.1	342	2KJ3410- ■ JU23- ■ ■ B1 -Z -	-	
46	3140	32.33	47400	2.4	342	2KJ3410- ■ JU23- ■ ■ A1 -Z -	-	
<b>FZ.149-LE160ZLL4P</b>								
30	4700	48.48	50700	1.7	336	2KJ3310- ■ JU23- ■ ■ T1 -Z -	-	
34	4260	43.89	49900	1.9	336	2KJ3310- ■ JU23- ■ ■ S1 -Z -	-	
38	3740	38.55	48900	2.1	336	2KJ3310- ■ JU23- ■ ■ R1 -Z -	-	
42	3390	34.93	48100	2.4	336	2KJ3310- ■ JU23- ■ ■ Q1 -Z -	-	
47	3020	31.11	47100	2.6	336	2KJ3310- ■ JU23- ■ ■ P1 -Z -	-	
53	2710	27.94	46100	2.9	336	2KJ3310- ■ JU23- ■ ■ N1 -Z -	-	
<b>FD.129-LE160ZLL4P</b>								
25	5800	59.75	35800	0.84	256	2KJ3408- ■ JU23- ■ ■ A1 -Z -	-	
<b>FZ.129-LE160ZLL4P</b>								
25	5750	59.22	35800	0.84	251	2KJ3308- ■ JU23- ■ ■ X1 -Z -	-	
26	5410	55.74	35800	0.9	251	2KJ3308- ■ JU23- ■ ■ W1 -Z -	-	
28	5070	52.25	35800	0.96	251	2KJ3308- ■ JU23- ■ ■ V1 -Z -	-	
32	4490	46.32	35600	1.1	251	2KJ3308- ■ JU23- ■ ■ U1 -Z -	-	
36	3990	41.14	35300	1.2	251	2KJ3308- ■ JU23- ■ ■ T1 -Z -	-	
40	3600	37.12	35000	1.3	251	2KJ3308- ■ JU23- ■ ■ S1 -Z -	-	
45	3190	32.90	34600	1.5	251	2KJ3308- ■ JU23- ■ ■ R1 -Z -	-	
51	2820	29.13	34000	1.7	251	2KJ3308- ■ JU23- ■ ■ Q1 -Z -	-	
57	2510	25.93	33400	1.9	251	2KJ3308- ■ JU23- ■ ■ P1 -Z -	-	
63	2250	23.23	32900	2.1	251	2KJ3308- ■ JU23- ■ ■ N1 -Z -	-	
72	2000	20.60	32200	2.4	251	2KJ3308- ■ JU23- ■ ■ M1 -Z -	-	
81	1760	18.18	31500	2.7	251	2KJ3308- ■ JU23- ■ ■ L1 -Z -	-	
92	1550	15.99	30700	3.1	251	2KJ3308- ■ JU23- ■ ■ K1 -Z -	-	
102	1400	14.48	30000	3.3	251	2KJ3308- ■ JU23- ■ ■ J1 -Z -	-	
117	1220	12.61	29200	3.7	251	2KJ3308- ■ JU23- ■ ■ H1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
15	<b>FZ.129-LE160ZLL4P</b>							
	151	950	9.80	27300	3.8	251	2KJ3308- ■ JU23- ■ ■ F1 -Z -	
	<b>FZ.109-LE160ZLL4P</b>							
	37	3840	39.59	23300	0.81	199	2KJ3307- ■ JU23- ■ ■ T1 -Z -	
	42	3430	35.34	23400	0.9	199	2KJ3307- ■ JU23- ■ ■ S1 -Z -	
	46	3080	31.80	23500	1	199	2KJ3307- ■ JU23- ■ ■ R1 -Z -	
	53	2680	27.60	23400	1.2	199	2KJ3307- ■ JU23- ■ ■ Q1 -Z -	
	59	2410	24.82	23300	1.3	199	2KJ3307- ■ JU23- ■ ■ P1 -Z -	
	68	2100	21.70	23100	1.5	199	2KJ3307- ■ JU23- ■ ■ N1 -Z -	
	76	1880	19.36	22800	1.6	199	2KJ3307- ■ JU23- ■ ■ M1 -Z -	
	86	1650	17.06	22500	1.9	199	2KJ3307- ■ JU23- ■ ■ L1 -Z -	
	99	1450	14.95	22000	2.1	199	2KJ3307- ■ JU23- ■ ■ K1 -Z -	
	113	1260	13.03	21600	2.4	199	2KJ3307- ■ JU23- ■ ■ J1 -Z -	
	124	1150	11.89	21200	2.6	199	2KJ3307- ■ JU23- ■ ■ H1 -Z -	
	144	990	10.23	20700	2.9	199	2KJ3307- ■ JU23- ■ ■ G1 -Z -	
	164	875	9.02	20100	2.4	199	2KJ3307- ■ JU23- ■ ■ F1 -Z -	
	186	770	7.94	19600	2.6	199	2KJ3307- ■ JU23- ■ ■ E1 -Z -	
	212	675	6.96	19000	2.8	199	2KJ3307- ■ JU23- ■ ■ D1 -Z -	
	243	590	6.07	18400	3.1	199	2KJ3307- ■ JU23- ■ ■ C1 -Z -	
	266	535	5.54	18100	3.2	199	2KJ3307- ■ JU23- ■ ■ B1 -Z -	
	309	460	4.77	17500	3.5	199	2KJ3307- ■ JU23- ■ ■ A1 -Z -	
	<b>FZ.89-LE160ZLL4P</b>							
	67	2140	22.08	17100	0.86	162	2KJ3306- ■ JU23- ■ ■ P1 -Z -	
	78	1830	18.88	17200	1	162	2KJ3306- ■ JU23- ■ ■ N1 -Z -	
	87	1630	16.86	17200	1.1	162	2KJ3306- ■ JU23- ■ ■ M1 -Z -	
	99	1440	14.90	17100	1.3	162	2KJ3306- ■ JU23- ■ ■ L1 -Z -	
	113	1260	13.07	17000	1.5	162	2KJ3306- ■ JU23- ■ ■ K1 -Z -	
	130	1100	11.38	16700	1.7	162	2KJ3306- ■ JU23- ■ ■ J1 -Z -	
	152	945	9.73	16400	2	162	2KJ3306- ■ JU23- ■ ■ H1 -Z -	
	177	805	8.33	16000	2.2	162	2KJ3306- ■ JU23- ■ ■ G1 -Z -	
	194	735	7.60	15600	1.5	162	2KJ3306- ■ JU23- ■ ■ F1 -Z -	
	219	650	6.72	15300	1.7	162	2KJ3306- ■ JU23- ■ ■ E1 -Z -	
	250	570	5.90	15000	1.9	162	2KJ3306- ■ JU23- ■ ■ D1 -Z -	
	288	495	5.13	14600	2.2	162	2KJ3306- ■ JU23- ■ ■ C1 -Z -	
	336	425	4.39	14100	2.5	162	2KJ3306- ■ JU23- ■ ■ B1 -Z -	
	392	365	3.76	13600	2.7	162	2KJ3306- ■ JU23- ■ ■ A1 -Z -	
	<b>FZ.79-LE160ZLL4P</b>							
	119	1200	12.41	9750	0.83	131	2KJ3305- ■ JU23- ■ ■ J1 -Z -	
	140	1020	10.56	9930	0.98	131	2KJ3305- ■ JU23- ■ ■ H1 -Z -	
	163	875	9.05	10000	1.1	131	2KJ3305- ■ JU23- ■ ■ G1 -Z -	
	173	825	8.51	9720	0.87	131	2KJ3305- ■ JU23- ■ ■ F1 -Z -	
	198	720	7.44	9740	1	131	2KJ3305- ■ JU23- ■ ■ E1 -Z -	
	231	620	6.39	9680	1.2	131	2KJ3305- ■ JU23- ■ ■ D1 -Z -	
	262	545	5.64	9630	1.3	131	2KJ3305- ■ JU23- ■ ■ C1 -Z -	
	307	465	4.80	9470	1.4	131	2KJ3305- ■ JU23- ■ ■ B1 -Z -	
	359	395	4.11	9320	1.5	131	2KJ3305- ■ JU23- ■ ■ A1 -Z -	
	18.5	<b>FD.189-LES180MQ4P</b>						
8.1		21800	182.03	110900	0.87	776	2KJ3412- ■ KL33- ■ ■ M1 -Z -	
8.9		19700	164.61	110900	0.96	776	2KJ3412- ■ KL33- ■ ■ L1 -Z -	
10		17400	145.28	110900	1.1	776	2KJ3412- ■ KL33- ■ ■ K1 -Z -	
11		15500	129.45	110900	1.2	776	2KJ3412- ■ KL33- ■ ■ J1 -Z -	

## Article No. supplement

Shaft design	1 or 9	see page 10/49
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H or D	see page 10/42

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>18.5</b>	<b>FD.189-LES180MQ4P</b>							
	13	14000	117.27	110900	1.3	776	2KJ3412- ■ KL33- ■ ■ H1 -Z -	-
	14	12600	105.48	110900	1.5	776	2KJ3412- ■ KL33- ■ ■ G1 -Z -	-
	17	10500	87.65	110900	1.8	776	2KJ3412- ■ KL33- ■ ■ F1 -Z -	-
	19	9360	77.92	110900	2	776	2KJ3412- ■ KL33- ■ ■ E1 -Z -	-
	<b>FD.169-LES180MQ4P</b>							
	10	16900	140.77	73500	0.8	558	2KJ3411- ■ KL33- ■ ■ L1 -Z -	-
	12	15000	125.49	73500	0.9	558	2KJ3411- ■ KL33- ■ ■ K1 -Z -	-
	13	13300	111.30	73500	1	558	2KJ3411- ■ KL33- ■ ■ J1 -Z -	-
	14	12200	102.18	73500	1.1	558	2KJ3411- ■ KL33- ■ ■ H1 -Z -	-
	16	10800	90.03	73500	1.3	558	2KJ3411- ■ KL33- ■ ■ G1 -Z -	-
	20	8870	73.85	73500	1.5	558	2KJ3411- ■ KL33- ■ ■ F1 -Z -	-
	23	7780	64.75	73500	1.7	558	2KJ3411- ■ KL33- ■ ■ E1 -Z -	-
	29	6080	50.63	73500	2.2	558	2KJ3411- ■ KL33- ■ ■ D1 -Z -	-
	32	5590	46.55	73500	2.4	558	2KJ3411- ■ KL33- ■ ■ C1 -Z -	-
	<b>FD.149-LES180MQ4P</b>							
	19	9490	78.98	48600	0.84	417	2KJ3410- ■ KL33- ■ ■ G1 -Z -	-
	21	8260	68.76	48700	0.97	417	2KJ3410- ■ KL33- ■ ■ F1 -Z -	-
26	6770	56.37	48500	1.2	417	2KJ3410- ■ KL33- ■ ■ E1 -Z -	-	
29	6010	50.01	48100	1.3	417	2KJ3410- ■ KL33- ■ ■ D1 -Z -	-	
32	5440	45.30	47600	1.5	417	2KJ3410- ■ KL33- ■ ■ C1 -Z -	-	
37	4730	39.43	46900	1.7	417	2KJ3410- ■ KL33- ■ ■ B1 -Z -	-	
45	3880	32.33	45600	1.9	417	2KJ3410- ■ KL33- ■ ■ A1 -Z -	-	
<b>FZ.149-LES180MQ4P</b>								
42	4190	34.93	46200	1.9	416	2KJ3310- ■ KL33- ■ ■ Q1 -Z -	-	
47	3730	31.11	45400	2.1	416	2KJ3310- ■ KL33- ■ ■ P1 -Z -	-	
53	3350	27.94	44600	2.4	416	2KJ3310- ■ KL33- ■ ■ N1 -Z -	-	
59	2990	24.93	43700	2.7	416	2KJ3310- ■ KL33- ■ ■ M1 -Z -	-	
66	2670	22.22	42800	3	416	2KJ3310- ■ KL33- ■ ■ L1 -Z -	-	
<b>FZ.129-LES180MQ4P</b>								
50	3500	29.13	32200	1.4	328	2KJ3308- ■ KL33- ■ ■ Q1 -Z -	-	
57	3110	25.93	31800	1.6	328	2KJ3308- ■ KL33- ■ ■ P1 -Z -	-	
63	2790	23.23	31400	1.7	328	2KJ3308- ■ KL33- ■ ■ N1 -Z -	-	
71	2470	20.60	30900	2	328	2KJ3308- ■ KL33- ■ ■ M1 -Z -	-	
81	2180	18.18	30300	2.2	328	2KJ3308- ■ KL33- ■ ■ L1 -Z -	-	
92	1920	15.99	29700	2.5	328	2KJ3308- ■ KL33- ■ ■ K1 -Z -	-	
102	1740	14.48	29100	2.7	328	2KJ3308- ■ KL33- ■ ■ J1 -Z -	-	
117	1510	12.61	28400	3	328	2KJ3308- ■ KL33- ■ ■ H1 -Z -	-	
142	1240	10.34	27300	3.5	328	2KJ3308- ■ KL33- ■ ■ G1 -Z -	-	
150	1170	9.80	26700	3.1	328	2KJ3308- ■ KL33- ■ ■ F1 -Z -	-	
170	1040	8.65	26000	3.5	328	2KJ3308- ■ KL33- ■ ■ E1 -Z -	-	
193	910	7.60	25200	4	328	2KJ3308- ■ KL33- ■ ■ D1 -Z -	-	
213	825	6.89	24700	4.4	328	2KJ3308- ■ KL33- ■ ■ C1 -Z -	-	
<b>FZ.109-LES180MQ4P</b>								
59	2980	24.82	21500	1	277	2KJ3307- ■ KL33- ■ ■ P1 -Z -	-	
68	2600	21.70	21500	1.2	277	2KJ3307- ■ KL33- ■ ■ N1 -Z -	-	
76	2320	19.36	21400	1.3	277	2KJ3307- ■ KL33- ■ ■ M1 -Z -	-	
86	2050	17.06	21200	1.5	277	2KJ3307- ■ KL33- ■ ■ L1 -Z -	-	
98	1790	14.95	20900	1.7	277	2KJ3307- ■ KL33- ■ ■ K1 -Z -	-	
113	1560	13.03	20600	2	277	2KJ3307- ■ KL33- ■ ■ J1 -Z -	-	
124	1420	11.89	20400	2.1	277	2KJ3307- ■ KL33- ■ ■ H1 -Z -	-	
144	1230	10.23	19900	2.3	277	2KJ3307- ■ KL33- ■ ■ G1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>18.5</b>	<b>FZ.109-LES180MQ4P</b>							
	163	1080	9.02	19400	1.9	277	2KJ3307- ■ KL33- ■ ■ F1 -Z -	-
	185	950	7.94	19000	2.1	277	2KJ3307- ■ KL33- ■ ■ E1 -Z -	-
	211	835	6.96	18500	2.3	277	2KJ3307- ■ KL33- ■ ■ D1 -Z -	-
	242	730	6.07	18000	2.5	277	2KJ3307- ■ KL33- ■ ■ C1 -Z -	-
	265	665	5.54	17700	2.6	277	2KJ3307- ■ KL33- ■ ■ B1 -Z -	-
	308	570	4.77	17100	2.8	277	2KJ3307- ■ KL33- ■ ■ A1 -Z -	-
	<b>FZ.89-LES180MQ4P</b>							
	87	2020	16.86	15600	0.91	238	2KJ3306- ■ KL33- ■ ■ M1 -Z -	-
	99	1790	14.90	15700	1	238	2KJ3306- ■ KL33- ■ ■ L1 -Z -	-
	112	1570	13.07	15700	1.2	238	2KJ3306- ■ KL33- ■ ■ K1 -Z -	-
	129	1360	11.38	15700	1.4	238	2KJ3306- ■ KL33- ■ ■ J1 -Z -	-
	151	1160	9.73	15500	1.6	238	2KJ3306- ■ KL33- ■ ■ H1 -Z -	-
	176	1000	8.33	15200	1.7	238	2KJ3306- ■ KL33- ■ ■ G1 -Z -	-
	193	910	7.60	14900	1.2	238	2KJ3306- ■ KL33- ■ ■ F1 -Z -	-
	219	805	6.72	14600	1.4	238	2KJ3306- ■ KL33- ■ ■ E1 -Z -	-
	249	705	5.90	14400	1.6	238	2KJ3306- ■ KL33- ■ ■ D1 -Z -	-
	287	615	5.13	14100	1.8	238	2KJ3306- ■ KL33- ■ ■ C1 -Z -	-
	335	525	4.39	13700	2	238	2KJ3306- ■ KL33- ■ ■ B1 -Z -	-
	391	450	3.76	13300	2.2	238	2KJ3306- ■ KL33- ■ ■ A1 -Z -	-
<b>22</b>	<b>FD.189-LES180ZLN4P</b>							
	8.9	23500	164.61	110000	0.81	781	2KJ3412- ■ KN33- ■ ■ L1 -Z -	-
	10	20700	145.28	110900	0.92	781	2KJ3412- ■ KN33- ■ ■ K1 -Z -	-
	11	18500	129.45	110900	1	781	2KJ3412- ■ KN33- ■ ■ J1 -Z -	-
	13	16700	117.27	110900	1.1	781	2KJ3412- ■ KN33- ■ ■ H1 -Z -	-
	14	15000	105.48	110900	1.3	781	2KJ3412- ■ KN33- ■ ■ G1 -Z -	-
	17	12500	87.65	110900	1.5	781	2KJ3412- ■ KN33- ■ ■ F1 -Z -	-
	19	11100	77.92	110900	1.7	781	2KJ3412- ■ KN33- ■ ■ E1 -Z -	-
	24	8870	62.11	110900	2.1	781	2KJ3412- ■ KN33- ■ ■ D1 -Z -	-
	<b>FD.169-LES180ZLN4P</b>							
	13	15900	111.30	73500	0.85	563	2KJ3411- ■ KN33- ■ ■ J1 -Z -	-
	14	14600	102.18	73500	0.93	563	2KJ3411- ■ KN33- ■ ■ H1 -Z -	-
	16	12800	90.03	73500	1.1	563	2KJ3411- ■ KN33- ■ ■ G1 -Z -	-
	20	10500	73.85	73500	1.3	563	2KJ3411- ■ KN33- ■ ■ F1 -Z -	-
	23	9250	64.75	73500	1.5	563	2KJ3411- ■ KN33- ■ ■ E1 -Z -	-
	29	7230	50.63	73500	1.9	563	2KJ3411- ■ KN33- ■ ■ D1 -Z -	-
	32	6650	46.55	72600	2	563	2KJ3411- ■ KN33- ■ ■ C1 -Z -	-
	36	5830	40.82	71000	2.3	563	2KJ3411- ■ KN33- ■ ■ B1 -Z -	-
	<b>FZ.169-LES180ZLN4P</b>							
	36	5870	41.07	71100	2.3	555	2KJ3311- ■ KN33- ■ ■ R1 -Z -	-
40	5280	36.94	69700	2.6	555	2KJ3311- ■ KN33- ■ ■ Q1 -Z -	-	
<b>FD.149-LES180ZLN4P</b>								
21	9820	68.76	44800	0.81	422	2KJ3410- ■ KN33- ■ ■ F1 -Z -	-	
26	8050	56.37	45300	0.99	422	2KJ3410- ■ KN33- ■ ■ E1 -Z -	-	
29	7140	50.01	45200	1.1	422	2KJ3410- ■ KN33- ■ ■ D1 -Z -	-	
32	6470	45.30	45100	1.2	422	2KJ3410- ■ KN33- ■ ■ C1 -Z -	-	
37	5630	39.43	44700	1.4	422	2KJ3410- ■ KN33- ■ ■ B1 -Z -	-	
45	4620	32.33	43800	1.6	422	2KJ3410- ■ KN33- ■ ■ A1 -Z -	-	
<b>FZ.149-LES180ZLN4P</b>								
42	4990	34.93	44200	1.6	421	2KJ3310- ■ KN33- ■ ■ Q1 -Z -	-	
47	4440	31.11	43600	1.8	421	2KJ3310- ■ KN33- ■ ■ P1 -Z -	-	
53	3990	27.94	43000	2	421	2KJ3310- ■ KN33- ■ ■ N1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>22</b>	<b>FZ.149-LES180ZLN4P</b>							
	59	3560	24.93	42300	2.2	421	2KJ3310- ■ KN33- ■ ■ M1 -Z -	-
	66	3170	22.22	41500	2.5	421	2KJ3310- ■ KN33- ■ ■ L1 -Z -	-
	75	2810	19.71	40700	2.8	421	2KJ3310- ■ KN33- ■ ■ K1 -Z -	-
	81	2580	18.10	40000	3.1	421	2KJ3310- ■ KN33- ■ ■ J1 -Z -	-
	<b>FZ.129-LES180ZLN4P</b>							
	50	4160	29.13	30300	1.2	333	2KJ3308- ■ KN33- ■ ■ Q1 -Z -	-
	57	3700	25.93	30200	1.3	333	2KJ3308- ■ KN33- ■ ■ P1 -Z -	-
	63	3320	23.23	29900	1.5	333	2KJ3308- ■ KN33- ■ ■ N1 -Z -	-
	71	2940	20.60	29600	1.6	333	2KJ3308- ■ KN33- ■ ■ M1 -Z -	-
	81	2590	18.18	29200	1.9	333	2KJ3308- ■ KN33- ■ ■ L1 -Z -	-
	92	2280	15.99	28700	2.1	333	2KJ3308- ■ KN33- ■ ■ K1 -Z -	-
	102	2070	14.48	28200	2.3	333	2KJ3308- ■ KN33- ■ ■ J1 -Z -	-
	117	1800	12.61	27600	2.5	333	2KJ3308- ■ KN33- ■ ■ H1 -Z -	-
	142	1470	10.34	26600	2.9	333	2KJ3308- ■ KN33- ■ ■ G1 -Z -	-
	150	1400	9.80	26000	2.6	333	2KJ3308- ■ KN33- ■ ■ F1 -Z -	-
	170	1230	8.65	25400	2.9	333	2KJ3308- ■ KN33- ■ ■ E1 -Z -	-
	193	1080	7.60	24700	3.3	333	2KJ3308- ■ KN33- ■ ■ D1 -Z -	-
	213	985	6.89	24200	3.7	333	2KJ3308- ■ KN33- ■ ■ C1 -Z -	-
	245	855	6.00	23500	4.2	333	2KJ3308- ■ KN33- ■ ■ B1 -Z -	-
	299	700	4.92	22400	4.3	333	2KJ3308- ■ KN33- ■ ■ A1 -Z -	-
	<b>FZ.109-LES180ZLN4P</b>							
	59	3540	24.82	19600	0.87	282	2KJ3307- ■ KN33- ■ ■ P1 -Z -	-
	68	3100	21.70	19800	1	282	2KJ3307- ■ KN33- ■ ■ N1 -Z -	-
	76	2760	19.36	19900	1.1	282	2KJ3307- ■ KN33- ■ ■ M1 -Z -	-
	86	2430	17.06	19900	1.3	282	2KJ3307- ■ KN33- ■ ■ L1 -Z -	-
	98	2130	14.95	19800	1.5	282	2KJ3307- ■ KN33- ■ ■ K1 -Z -	-
	113	1860	13.03	19600	1.7	282	2KJ3307- ■ KN33- ■ ■ J1 -Z -	-
	124	1690	11.89	19500	1.8	282	2KJ3307- ■ KN33- ■ ■ H1 -Z -	-
	144	1460	10.23	19100	2	282	2KJ3307- ■ KN33- ■ ■ G1 -Z -	-
	163	1280	9.02	18700	1.6	282	2KJ3307- ■ KN33- ■ ■ F1 -Z -	-
	185	1130	7.94	18400	1.8	282	2KJ3307- ■ KN33- ■ ■ E1 -Z -	-
	211	995	6.96	18000	1.9	282	2KJ3307- ■ KN33- ■ ■ D1 -Z -	-
	242	865	6.07	17500	2.1	282	2KJ3307- ■ KN33- ■ ■ C1 -Z -	-
	265	790	5.54	17200	2.2	282	2KJ3307- ■ KN33- ■ ■ B1 -Z -	-
	308	680	4.77	16700	2.4	282	2KJ3307- ■ KN33- ■ ■ A1 -Z -	-
		<b>FZ.89-LES180ZLN4P</b>						
99		2130	14.90	14300	0.87	243	2KJ3306- ■ KN33- ■ ■ L1 -Z -	-
112		1860	13.07	14500	0.99	243	2KJ3306- ■ KN33- ■ ■ K1 -Z -	-
129		1620	11.38	14600	1.1	243	2KJ3306- ■ KN33- ■ ■ J1 -Z -	-
151		1390	9.73	14600	1.3	243	2KJ3306- ■ KN33- ■ ■ H1 -Z -	-
176		1190	8.33	14500	1.5	243	2KJ3306- ■ KN33- ■ ■ G1 -Z -	-
193		1080	7.60	14100	1	243	2KJ3306- ■ KN33- ■ ■ F1 -Z -	-
219		960	6.72	14000	1.2	243	2KJ3306- ■ KN33- ■ ■ E1 -Z -	-
249		840	5.90	13800	1.3	243	2KJ3306- ■ KN33- ■ ■ D1 -Z -	-
287		730	5.13	13600	1.5	243	2KJ3306- ■ KN33- ■ ■ C1 -Z -	-
335		625	4.39	13200	1.7	243	2KJ3306- ■ KN33- ■ ■ B1 -Z -	-
391		535	3.76	12900	1.8	243	2KJ3306- ■ KN33- ■ ■ A1 -Z -	-
<b>30</b>		<b>FD.189-LES200ZLU4P</b>						
	13	22800	117.27	110400	0.83	851	2KJ3412- ■ LN33- ■ ■ H1 -Z -	-
	14	20500	105.48	110900	0.92	851	2KJ3412- ■ LN33- ■ ■ G1 -Z -	-

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>30</b>	<b>FD.189-LES200ZLU4P</b>							
	17	17000	87.65	110900	1.1	851	2KJ3412- ■ LN33- ■ ■ F1 -Z -	-
	19	15100	77.92	110200	1.3	851	2KJ3412- ■ LN33- ■ ■ E1 -Z -	-
	24	12100	62.11	106800	1.6	851	2KJ3412- ■ LN33- ■ ■ D1 -Z -	-
	30	9630	49.43	102900	2	851	2KJ3412- ■ LN33- ■ ■ C1 -Z -	-
	36	7910	40.61	99200	2.4	851	2KJ3412- ■ LN33- ■ ■ B1 -Z -	-
	<b>FZ.189-LES200ZLU4P</b>							
	39	7390	37.93	97900	2.6	830	2KJ3312- ■ LN33- ■ ■ L1 -Z -	-
	<b>FD.169-LES200ZLU4P</b>							
	20	14300	73.85	69500	0.94	633	2KJ3411- ■ LN33- ■ ■ F1 -Z -	-
23	12600	64.75	69200	1.1	633	2KJ3411- ■ LN33- ■ ■ E1 -Z -	-	
29	9860	50.63	68100	1.4	633	2KJ3411- ■ LN33- ■ ■ D1 -Z -	-	
32	9070	46.55	67600	1.5	633	2KJ3411- ■ LN33- ■ ■ C1 -Z -	-	
36	7950	40.82	66600	1.7	633	2KJ3411- ■ LN33- ■ ■ B1 -Z -	-	
46	6220	31.92	64300	2.2	633	2KJ3411- ■ LN33- ■ ■ A1 -Z -	-	
<b>FZ.169-LES200ZLU4P</b>								
40	7200	36.94	65700	1.9	631	2KJ3311- ■ LN33- ■ ■ Q1 -Z -	-	
45	6430	33.02	64600	2.1	631	2KJ3311- ■ LN33- ■ ■ P1 -Z -	-	
49	5820	29.86	63600	2.3	631	2KJ3311- ■ LN33- ■ ■ N1 -Z -	-	
56	5130	26.35	62200	2.6	631	2KJ3311- ■ LN33- ■ ■ M1 -Z -	-	
63	4570	23.48	60900	3	631	2KJ3311- ■ LN33- ■ ■ L1 -Z -	-	
<b>FD.149-LES200ZLU4P</b>								
29	9740	50.01	38700	0.82	492	2KJ3410- ■ LN33- ■ ■ D1 -Z -	-	
32	8820	45.30	39200	0.91	492	2KJ3410- ■ LN33- ■ ■ C1 -Z -	-	
37	7680	39.43	39500	1	492	2KJ3410- ■ LN33- ■ ■ B1 -Z -	-	
45	6300	32.33	39600	1.2	492	2KJ3410- ■ LN33- ■ ■ A1 -Z -	-	
<b>FZ.149-LES200ZLU4P</b>								
47	6060	31.11	39500	1.3	495	2KJ3310- ■ LN33- ■ ■ P1 -Z -	-	
53	5440	27.94	39400	1.5	495	2KJ3310- ■ LN33- ■ ■ N1 -Z -	-	
59	4850	24.93	39000	1.6	495	2KJ3310- ■ LN33- ■ ■ M1 -Z -	-	
66	4330	22.22	38600	1.8	495	2KJ3310- ■ LN33- ■ ■ L1 -Z -	-	
75	3840	19.71	38100	2.1	495	2KJ3310- ■ LN33- ■ ■ K1 -Z -	-	
81	3520	18.10	37700	2.3	495	2KJ3310- ■ LN33- ■ ■ J1 -Z -	-	
92	3100	15.94	37000	2.6	495	2KJ3310- ■ LN33- ■ ■ H1 -Z -	-	
112	2540	13.08	35800	3	495	2KJ3310- ■ LN33- ■ ■ G1 -Z -	-	
128	2230	11.47	35000	3.3	495	2KJ3310- ■ LN33- ■ ■ F1 -Z -	-	
164	1740	8.97	33300	3.9	495	2KJ3310- ■ LN33- ■ ■ E1 -Z -	-	
182	1570	8.09	32300	3.6	495	2KJ3310- ■ LN33- ■ ■ D1 -Z -	-	
221	1290	6.64	31000	4.4	495	2KJ3310- ■ LN33- ■ ■ C1 -Z -	-	
<b>FZ.129-LES200ZLU4P</b>								
57	5050	25.93	26400	0.96	408	2KJ3308- ■ LN33- ■ ■ P1 -Z -	-	
63	4520	23.23	26600	1.1	408	2KJ3308- ■ LN33- ■ ■ N1 -Z -	-	
71	4010	20.60	26600	1.2	408	2KJ3308- ■ LN33- ■ ■ M1 -Z -	-	
81	3540	18.18	26500	1.4	408	2KJ3308- ■ LN33- ■ ■ L1 -Z -	-	
92	3110	15.99	26300	1.5	408	2KJ3308- ■ LN33- ■ ■ K1 -Z -	-	
102	2820	14.48	26100	1.7	408	2KJ3308- ■ LN33- ■ ■ J1 -Z -	-	
117	2450	12.61	25800	1.8	408	2KJ3308- ■ LN33- ■ ■ H1 -Z -	-	
142	2010	10.34	25100	2.1	408	2KJ3308- ■ LN33- ■ ■ G1 -Z -	-	
150	1910	9.80	24400	1.9	408	2KJ3308- ■ LN33- ■ ■ F1 -Z -	-	
170	1680	8.65	24000	2.2	408	2KJ3308- ■ LN33- ■ ■ E1 -Z -	-	
193	1480	7.60	23500	2.4	408	2KJ3308- ■ LN33- ■ ■ D1 -Z -	-	
213	1340	6.89	23100	2.7	408	2KJ3308- ■ LN33- ■ ■ C1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>30</b>	<b>FZ.129-LES200ZLU4P</b>								
	245	1160	6.00	22600	3.1	408	2KJ3308- ■ LN33- ■ ■ B1 -Z -	-	
	299	955	4.92	21700	3.2	408	2KJ3308- ■ LN33- ■ ■ A1 -Z -	-	
	<b>FZ.109-LES200ZLU4P</b>								
	76	3770	19.36	16600	0.82	357	2KJ3307- ■ LN33- ■ ■ M1 -Z -	-	
	86	3320	17.06	17000	0.93	357	2KJ3307- ■ LN33- ■ ■ L1 -Z -	-	
	98	2910	14.95	17300	1.1	357	2KJ3307- ■ LN33- ■ ■ K1 -Z -	-	
	113	2540	13.03	17400	1.2	357	2KJ3307- ■ LN33- ■ ■ J1 -Z -	-	
	124	2310	11.89	17500	1.3	357	2KJ3307- ■ LN33- ■ ■ H1 -Z -	-	
	144	1990	10.23	17400	1.4	357	2KJ3307- ■ LN33- ■ ■ G1 -Z -	-	
	163	1750	9.02	17200	1.2	357	2KJ3307- ■ LN33- ■ ■ F1 -Z -	-	
	185	1540	7.94	17000	1.3	357	2KJ3307- ■ LN33- ■ ■ E1 -Z -	-	
	211	1350	6.96	16800	1.4	357	2KJ3307- ■ LN33- ■ ■ D1 -Z -	-	
	242	1180	6.07	16500	1.5	357	2KJ3307- ■ LN33- ■ ■ C1 -Z -	-	
	265	1080	5.54	16300	1.6	357	2KJ3307- ■ LN33- ■ ■ B1 -Z -	-	
	308	930	4.77	15900	1.7	357	2KJ3307- ■ LN33- ■ ■ A1 -Z -	-	
	<b>37</b>	<b>FD.189-LES225SD4P</b>							
		17	20900	87.65	103900	0.91	901	2KJ3412- ■ MF33- ■ ■ F1 -Z -	-
		19	18600	77.92	103300	1	901	2KJ3412- ■ MF33- ■ ■ E1 -Z -	-
24		14800	62.11	101400	1.3	901	2KJ3412- ■ MF33- ■ ■ D1 -Z -	-	
30		11800	49.43	98600	1.6	901	2KJ3412- ■ MF33- ■ ■ C1 -Z -	-	
36		9700	40.61	95600	2	901	2KJ3412- ■ MF33- ■ ■ B1 -Z -	-	
46		7720	32.32	91800	2.5	901	2KJ3412- ■ MF33- ■ ■ A1 -Z -	-	
<b>FZ.189-LES225SD4P</b>									
39		9060	37.93	94500	2.1	873	2KJ3312- ■ MF33- ■ ■ L1 -Z -	-	
43		8130	34.03	92700	2.3	873	2KJ3312- ■ MF33- ■ ■ K1 -Z -	-	
49		7270	30.41	90800	2.6	873	2KJ3312- ■ MF33- ■ ■ J1 -Z -	-	
54		6490	27.17	88800	2.9	873	2KJ3312- ■ MF33- ■ ■ H1 -Z -	-	
<b>FD.169-LES225SD4P</b>									
23		15400	64.75	63200	0.88	689	2KJ3411- ■ MF33- ■ ■ E1 -Z -	-	
29		12100	50.63	63300	1.1	689	2KJ3411- ■ MF33- ■ ■ D1 -Z -	-	
32		11100	46.55	63200	1.2	689	2KJ3411- ■ MF33- ■ ■ C1 -Z -	-	
36		9750	40.82	62700	1.4	689	2KJ3411- ■ MF33- ■ ■ B1 -Z -	-	
46		7630	31.92	61200	1.8	689	2KJ3411- ■ MF33- ■ ■ A1 -Z -	-	
<b>FZ.169-LES225SD4P</b>									
45		7890	33.02	61400	1.7	674	2KJ3311- ■ MF33- ■ ■ P1 -Z -	-	
49		7130	29.86	60700	1.9	674	2KJ3311- ■ MF33- ■ ■ N1 -Z -	-	
56		6300	26.35	59700	2.2	674	2KJ3311- ■ MF33- ■ ■ M1 -Z -	-	
63		5610	23.48	58600	2.4	674	2KJ3311- ■ MF33- ■ ■ L1 -Z -	-	
69		5080	21.27	57700	2.7	674	2KJ3311- ■ MF33- ■ ■ K1 -Z -	-	
77		4570	19.13	56600	3	674	2KJ3311- ■ MF33- ■ ■ J1 -Z -	-	
183		1920	8.07	46200	4.3	674	2KJ3311- ■ MF33- ■ ■ D1 -Z -	-	
<b>FD.149-LES225SD4P</b>									
37		9420	39.43	35100	0.85	545	2KJ3410- ■ MF33- ■ ■ B1 -Z -	-	
46		7720	32.33	35900	0.97	545	2KJ3410- ■ MF33- ■ ■ A1 -Z -	-	
<b>FZ.149-LES225SD4P</b>									
53		6680	27.94	36200	1.2	540	2KJ3310- ■ MF33- ■ ■ N1 -Z -	-	
59		5960	24.93	36200	1.3	540	2KJ3310- ■ MF33- ■ ■ M1 -Z -	-	
67		5310	22.22	36100	1.5	540	2KJ3310- ■ MF33- ■ ■ L1 -Z -	-	
75	4710	19.71	35800	1.7	540	2KJ3310- ■ MF33- ■ ■ K1 -Z -	-		
82	4320	18.10	35600	1.8	540	2KJ3310- ■ MF33- ■ ■ J1 -Z -	-		
93	3810	15.94	35100	2.1	540	2KJ3310- ■ MF33- ■ ■ H1 -Z -	-		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
37	<b>FZ.149-LES225SD4P</b>							
	113	3120	13.08	34300	2.4	540	2KJ3310- ■ MF33- ■ ■ G1 -Z -	-
	129	2740	11.47	33600	2.7	540	2KJ3310- ■ MF33- ■ ■ F1 -Z -	-
	165	2140	8.97	32200	3.2	540	2KJ3310- ■ MF33- ■ ■ E1 -Z -	-
	183	1930	8.09	31300	2.9	540	2KJ3310- ■ MF33- ■ ■ D1 -Z -	-
	223	1580	6.64	30100	3.6	540	2KJ3310- ■ MF33- ■ ■ C1 -Z -	-
	254	1390	5.82	29300	4.1	540	2KJ3310- ■ MF33- ■ ■ B1 -Z -	-
	<b>FZ.129-LES225SD4P</b>							
	64	5550	23.23	23600	0.87	451	2KJ3308- ■ MF33- ■ ■ N1 -Z -	-
	72	4920	20.60	24000	0.98	451	2KJ3308- ■ MF33- ■ ■ M1 -Z -	-
	81	4340	18.18	24200	1.1	451	2KJ3308- ■ MF33- ■ ■ L1 -Z -	-
	92	3820	15.99	24300	1.3	451	2KJ3308- ■ MF33- ■ ■ K1 -Z -	-
	102	3460	14.48	24300	1.4	451	2KJ3308- ■ MF33- ■ ■ J1 -Z -	-
	117	3010	12.61	24200	1.5	451	2KJ3308- ■ MF33- ■ ■ H1 -Z -	-
	143	2470	10.34	23800	1.7	451	2KJ3308- ■ MF33- ■ ■ G1 -Z -	-
	151	2340	9.80	23100	1.5	451	2KJ3308- ■ MF33- ■ ■ F1 -Z -	-
	171	2060	8.65	22800	1.8	451	2KJ3308- ■ MF33- ■ ■ E1 -Z -	-
	194	1810	7.60	22500	2	451	2KJ3308- ■ MF33- ■ ■ D1 -Z -	-
	215	1640	6.89	22200	2.2	451	2KJ3308- ■ MF33- ■ ■ C1 -Z -	-
	246	1430	6.00	21700	2.5	451	2KJ3308- ■ MF33- ■ ■ B1 -Z -	-
	300	1170	4.92	21000	2.6	451	2KJ3308- ■ MF33- ■ ■ A1 -Z -	-
	<b>FZ.109-LES225SD4P</b>							
	99	3570	14.95	15100	0.87	399	2KJ3307- ■ MF33- ■ ■ K1 -Z -	-
	113	3110	13.03	15500	1	399	2KJ3307- ■ MF33- ■ ■ J1 -Z -	-
	124	2840	11.89	15700	1.1	399	2KJ3307- ■ MF33- ■ ■ H1 -Z -	-
	144	2440	10.23	15900	1.2	399	2KJ3307- ■ MF33- ■ ■ G1 -Z -	-
	164	2150	9.02	15800	0.97	399	2KJ3307- ■ MF33- ■ ■ F1 -Z -	-
	186	1890	7.94	15800	1.1	399	2KJ3307- ■ MF33- ■ ■ E1 -Z -	-
	212	1660	6.96	15700	1.1	399	2KJ3307- ■ MF33- ■ ■ D1 -Z -	-
	243	1450	6.07	15500	1.2	399	2KJ3307- ■ MF33- ■ ■ C1 -Z -	-
	267	1320	5.54	15400	1.3	399	2KJ3307- ■ MF33- ■ ■ B1 -Z -	-
	310	1140	4.77	15200	1.4	399	2KJ3307- ■ MF33- ■ ■ A1 -Z -	-
45	<b>FD.189-LES225YMF4P</b>							
	19	22600	77.92	95700	0.84	946	2KJ3412- ■ MT33- ■ ■ E1 -Z -	-
	24	18000	62.11	95300	1.1	946	2KJ3412- ■ MT33- ■ ■ D1 -Z -	-
	30	14300	49.43	93800	1.3	946	2KJ3412- ■ MT33- ■ ■ C1 -Z -	-
	36	11800	40.61	91600	1.6	946	2KJ3412- ■ MT33- ■ ■ B1 -Z -	-
	46	9390	32.32	88700	2	946	2KJ3412- ■ MT33- ■ ■ A1 -Z -	-
	<b>FZ.189-LES225YMF4P</b>							
	39	11000	37.93	90800	1.7	918	2KJ3312- ■ MT33- ■ ■ L1 -Z -	-
	43	9890	34.03	89400	1.9	918	2KJ3312- ■ MT33- ■ ■ K1 -Z -	-
	49	8840	30.41	87800	2.1	918	2KJ3312- ■ MT33- ■ ■ J1 -Z -	-
	54	7900	27.17	86100	2.4	918	2KJ3312- ■ MT33- ■ ■ H1 -Z -	-
	59	7220	24.85	84700	2.6	918	2KJ3312- ■ MT33- ■ ■ G1 -Z -	-
	67	6420	22.09	82800	3	918	2KJ3312- ■ MT33- ■ ■ F1 -Z -	-
	<b>FD.169-LES225YMF4P</b>							
	29	14700	50.63	57800	0.92	734	2KJ3411- ■ MT33- ■ ■ D1 -Z -	-
	32	13500	46.55	58100	1	734	2KJ3411- ■ MT33- ■ ■ C1 -Z -	-
	36	11800	40.82	58400	1.1	734	2KJ3411- ■ MT33- ■ ■ B1 -Z -	-
	46	9280	31.92	57700	1.5	734	2KJ3411- ■ MT33- ■ ■ A1 -Z -	-

## Article No. supplement

Shaft design	1 or 9	see page 10/49
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H or D	see page 10/42

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Geared motors up to 55 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>45</b>	<b>FZ.169-LES225YMF4P</b>							
	45	9600	33.02	57800	1.4	719	2KJ3311- ■ MT33- ■ ■ P1 -Z -	-
	49	8680	29.86	57500	1.6	719	2KJ3311- ■ MT33- ■ ■ N1 -Z -	-
	56	7660	26.35	56800	1.8	719	2KJ3311- ■ MT33- ■ ■ M1 -Z -	-
	63	6820	23.48	56100	2	719	2KJ3311- ■ MT33- ■ ■ L1 -Z -	-
	69	6180	21.27	55400	2.2	719	2KJ3311- ■ MT33- ■ ■ K1 -Z -	-
	77	5560	19.13	54500	2.4	719	2KJ3311- ■ MT33- ■ ■ J1 -Z -	-
	93	4620	15.90	52900	2.9	719	2KJ3311- ■ MT33- ■ ■ H1 -Z -	-
	105	4100	14.13	51800	3.1	719	2KJ3311- ■ MT33- ■ ■ G1 -Z -	-
	131	3270	11.26	49600	3.6	719	2KJ3311- ■ MT33- ■ ■ F1 -Z -	-
	165	2600	8.97	47300	4	719	2KJ3311- ■ MT33- ■ ■ E1 -Z -	-
	183	2340	8.07	45200	3.6	719	2KJ3311- ■ MT33- ■ ■ D1 -Z -	-
	206	2080	7.18	44100	4	719	2KJ3311- ■ MT33- ■ ■ C1 -Z -	-
	<b>FD.149-LES225YMF4P</b>							
	46	9400	32.33	31700	0.8	590	2KJ3410- ■ MT33- ■ ■ A1 -Z -	-
	<b>FZ.149-LES225YMF4P</b>							
	53	8120	27.94	32600	0.98	585	2KJ3310- ■ MT33- ■ ■ N1 -Z -	-
	59	7240	24.93	33000	1.1	585	2KJ3310- ■ MT33- ■ ■ M1 -Z -	-
	67	6460	22.22	33200	1.2	585	2KJ3310- ■ MT33- ■ ■ L1 -Z -	-
	75	5730	19.71	33300	1.4	585	2KJ3310- ■ MT33- ■ ■ K1 -Z -	-
82	5260	18.10	33300	1.5	585	2KJ3310- ■ MT33- ■ ■ J1 -Z -	-	
93	4630	15.94	33100	1.7	585	2KJ3310- ■ MT33- ■ ■ H1 -Z -	-	
113	3800	13.08	32600	2	585	2KJ3310- ■ MT33- ■ ■ G1 -Z -	-	
129	3330	11.47	32100	2.2	585	2KJ3310- ■ MT33- ■ ■ F1 -Z -	-	
165	2600	8.97	31100	2.6	585	2KJ3310- ■ MT33- ■ ■ E1 -Z -	-	
183	2350	8.09	30200	2.4	585	2KJ3310- ■ MT33- ■ ■ D1 -Z -	-	
223	1930	6.64	29200	2.9	585	2KJ3310- ■ MT33- ■ ■ C1 -Z -	-	
254	1690	5.82	28500	3.4	585	2KJ3310- ■ MT33- ■ ■ B1 -Z -	-	
325	1320	4.55	27100	4.3	585	2KJ3310- ■ MT33- ■ ■ A1 -Z -	-	
<b>FZ.129-LES225YMF4P</b>								
72	5990	20.60	21000	0.81	496	2KJ3308- ■ MT33- ■ ■ M1 -Z -	-	
81	5280	18.18	21600	0.92	496	2KJ3308- ■ MT33- ■ ■ L1 -Z -	-	
92	4640	15.99	22000	1	496	2KJ3308- ■ MT33- ■ ■ K1 -Z -	-	
102	4210	14.48	22200	1.1	496	2KJ3308- ■ MT33- ■ ■ J1 -Z -	-	
117	3660	12.61	22300	1.2	496	2KJ3308- ■ MT33- ■ ■ H1 -Z -	-	
143	3000	10.34	22300	1.4	496	2KJ3308- ■ MT33- ■ ■ G1 -Z -	-	
151	2840	9.80	21600	1.3	496	2KJ3308- ■ MT33- ■ ■ F1 -Z -	-	
171	2510	8.65	21400	1.4	496	2KJ3308- ■ MT33- ■ ■ E1 -Z -	-	
194	2210	7.60	21300	1.6	496	2KJ3308- ■ MT33- ■ ■ D1 -Z -	-	
215	2000	6.89	21100	1.8	496	2KJ3308- ■ MT33- ■ ■ C1 -Z -	-	
246	1740	6.00	20800	2.1	496	2KJ3308- ■ MT33- ■ ■ B1 -Z -	-	
300	1430	4.92	20200	2.1	496	2KJ3308- ■ MT33- ■ ■ A1 -Z -	-	
<b>FZ.109-LES225YMF4P</b>								
113	3780	13.03	13300	0.82	444	2KJ3307- ■ MT33- ■ ■ J1 -Z -	-	
124	3450	11.89	13700	0.89	444	2KJ3307- ■ MT33- ■ ■ H1 -Z -	-	
144	2970	10.23	14200	0.97	444	2KJ3307- ■ MT33- ■ ■ G1 -Z -	-	
164	2620	9.02	14200	0.8	444	2KJ3307- ■ MT33- ■ ■ F1 -Z -	-	
186	2300	7.94	14400	0.87	444	2KJ3307- ■ MT33- ■ ■ E1 -Z -	-	
212	2020	6.96	14500	0.94	444	2KJ3307- ■ MT33- ■ ■ D1 -Z -	-	
243	1760	6.07	14500	1	444	2KJ3307- ■ MT33- ■ ■ C1 -Z -	-	
267	1610	5.54	14500	1.1	444	2KJ3307- ■ MT33- ■ ■ B1 -Z -	-	
310	1380	4.77	14300	1.2	444	2KJ3307- ■ MT33- ■ ■ A1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ N	$F_{R2}$ -	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>55</b>	<b>FD.189-LES250MD4P</b>							
	24	22000	62.11	87600	0.86	1049	2KJ3412- ■ NM33- ■ ■ D1 -Z -	-
	30	17500	49.43	87600	1.1	1049	2KJ3412- ■ NM33- ■ ■ C1 -Z -	-
	36	14300	40.61	86800	1.3	1049	2KJ3412- ■ NM33- ■ ■ B1 -Z -	-
	46	11400	32.32	84700	1.7	1049	2KJ3412- ■ NM33- ■ ■ A1 -Z -	-
	<b>FZ.189-LES250MD4P</b>							
	49	10700	30.41	84100	1.8	1021	2KJ3312- ■ NM33- ■ ■ J1 -Z -	-
	55	9630	27.17	82700	2	1021	2KJ3312- ■ NM33- ■ ■ H1 -Z -	-
	60	8800	24.85	81600	2.2	1021	2KJ3312- ■ NM33- ■ ■ G1 -Z -	-
	67	7820	22.09	80100	2.4	1021	2KJ3312- ■ NM33- ■ ■ F1 -Z -	-
79	6640	18.75	77800	2.9	1021	2KJ3312- ■ NM33- ■ ■ E1 -Z -	-	
91	5740	16.21	75600	3.3	1021	2KJ3312- ■ NM33- ■ ■ D1 -Z -	-	
<b>FD.169-LES250MD4P</b>								
32	16400	46.55	52000	0.82	838	2KJ3411- ■ NM33- ■ ■ C1 -Z -	-	
36	14400	40.82	52900	0.94	838	2KJ3411- ■ NM33- ■ ■ B1 -Z -	-	
46	11300	31.92	53400	1.2	838	2KJ3411- ■ NM33- ■ ■ A1 -Z -	-	
<b>FZ.169-LES250MD4P</b>								
56	9330	26.35	53300	1.5	822	2KJ3311- ■ NM33- ■ ■ M1 -Z -	-	
63	8320	23.48	52900	1.6	822	2KJ3311- ■ NM33- ■ ■ L1 -Z -	-	
70	7530	21.27	52500	1.8	822	2KJ3311- ■ NM33- ■ ■ K1 -Z -	-	
77	6780	19.13	51900	2	822	2KJ3311- ■ NM33- ■ ■ J1 -Z -	-	
93	5630	15.90	50800	2.4	822	2KJ3311- ■ NM33- ■ ■ H1 -Z -	-	
105	5000	14.13	49900	2.6	822	2KJ3311- ■ NM33- ■ ■ G1 -Z -	-	
132	3990	11.26	48000	2.9	822	2KJ3311- ■ NM33- ■ ■ F1 -Z -	-	
165	3170	8.97	46000	3.3	822	2KJ3311- ■ NM33- ■ ■ E1 -Z -	-	
184	2860	8.07	43800	2.9	822	2KJ3311- ■ NM33- ■ ■ D1 -Z -	-	
206	2540	7.18	42900	3.3	822	2KJ3311- ■ NM33- ■ ■ C1 -Z -	-	
259	2020	5.72	40900	4	822	2KJ3311- ■ NM33- ■ ■ B1 -Z -	-	
326	1610	4.55	38900	4.5	822	2KJ3311- ■ NM33- ■ ■ A1 -Z -	-	
<b>FZ.149-LES250MD4P</b>								
67	7870	22.22	29600	1	687	2KJ3310- ■ NM33- ■ ■ L1 -Z -	-	
75	6980	19.71	30100	1.1	687	2KJ3310- ■ NM33- ■ ■ K1 -Z -	-	
82	6410	18.10	30300	1.2	687	2KJ3310- ■ NM33- ■ ■ J1 -Z -	-	
93	5640	15.94	30500	1.4	687	2KJ3310- ■ NM33- ■ ■ H1 -Z -	-	
113	4630	13.08	30500	1.6	687	2KJ3310- ■ NM33- ■ ■ G1 -Z -	-	
129	4060	11.47	30300	1.8	687	2KJ3310- ■ NM33- ■ ■ F1 -Z -	-	
165	3170	8.97	29600	2.1	687	2KJ3310- ■ NM33- ■ ■ E1 -Z -	-	
183	2860	8.09	28800	2	687	2KJ3310- ■ NM33- ■ ■ D1 -Z -	-	
223	2350	6.64	28000	2.4	687	2KJ3310- ■ NM33- ■ ■ C1 -Z -	-	
255	2060	5.82	27500	2.8	687	2KJ3310- ■ NM33- ■ ■ B1 -Z -	-	
326	1610	4.55	26300	3.5	687	2KJ3310- ■ NM33- ■ ■ A1 -Z -	-	
<b>FZ.129-LES250MD4P</b>								
93	5660	15.99	19200	0.85	598	2KJ3308- ■ NM33- ■ ■ K1 -Z -	-	
102	5130	14.48	19600	0.91	598	2KJ3308- ■ NM33- ■ ■ J1 -Z -	-	
118	4460	12.61	20100	1	598	2KJ3308- ■ NM33- ■ ■ H1 -Z -	-	
143	3660	10.34	20400	1.2	598	2KJ3308- ■ NM33- ■ ■ G1 -Z -	-	
171	3060	8.65	19800	1.2	598	2KJ3308- ■ NM33- ■ ■ E1 -Z -	-	
195	2690	7.60	19800	1.3	598	2KJ3308- ■ NM33- ■ ■ D1 -Z -	-	
215	2440	6.89	19700	1.5	598	2KJ3308- ■ NM33- ■ ■ C1 -Z -	-	
247	2120	6.00	19600	1.7	598	2KJ3308- ■ NM33- ■ ■ B1 -Z -	-	
301	1740	4.92	19200	1.7	598	2KJ3308- ■ NM33- ■ ■ A1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>FZ.29</b>																	
56.73	26	150	5220	7.6	0.04	851/15	✓	✓								2KJ3301 - ■■■■■■ - ■■ C2	
50.32	29	150	5220	8.0	0.05	1258/25	✓	✓	✓	✓						2KJ3301 - ■■■■■■ - ■■ B2	
43.66	33	150	5220	8.0	0.06	2183/50	✓	✓	✓	✓						2KJ3301 - ■■■■■■ - ■■ A2	
39.69	37	150	5220	8.0	0.08	2183/55	✓	✓	✓	✓						2KJ3301 - ■■■■■■ - ■■ X1	
34.04	43	150	4910	8.1	0.10	851/25	✓	✓	✓	✓						2KJ3301 - ■■■■■■ - ■■ W1	
30.95	47	150	4720	8.1	0.12	1702/55	✓	✓	✓	✓						2KJ3301 - ■■■■■■ - ■■ V1	
27.13	53	150	4460	8.2	0.14	407/15	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ U1	
24.22	60	150	4250	8.3	0.17	1332/55	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ T1	
21.58	67	150	4040	8.4	0.20	259/12	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ S1	
19.92	73	150	3910	8.4	0.24	259/13	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ R1	
17.44	83	150	3680	8.6	0.28	1221/70	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ Q1	
15.29	95	150	3470	8.8	0.30	1147/75	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ P1	
13.88	104	150	3320	8.9	0.38	111/8	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ N1	
13.06	111	150	3230	8.9	0.44	222/17	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ M1	
11.51	126	143	3100	8.6	0.50	518/45	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ L1	
9.99	145	136	2960	8.8	0.67	999/100	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ K1	
9.69	150	143	2660	13.8	0.26	2664/275	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ J1	
8.63	168	130	2640	14.0	0.32	259/30	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ H1	
7.97	182	120	2630	14.0	0.38	518/65	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ G1	
6.98	208	123	2440	14.5	0.46	1221/175	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ F1	
6.12	237	114	2370	15.0	0.53	2294/375	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ E1	
5.55	261	108	2320	15.3	0.66	111/20	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ D1	
5.22	278	106	2300	15.3	0.76	444/85	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ C1	
4.60	315	97	2280	15.3	0.92	1036/225	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ B1	
4.00	362	91	2250	15.0	1.21	999/250	✓	✓	✓	✓	✓					2KJ3301 - ■■■■■■ - ■■ A1	
<b>FD.29</b>																	
298.58	4.9	150	5220	7.9	0.02	94054/315	✓	✓								2KJ3401 - ■■■■■■ - ■■ Q1	
264.39	5.5	150	5220	8.0	0.03	92537/350	✓	✓	✓	✓						2KJ3401 - ■■■■■■ - ■■ P1	
229.72	6.3	150	5220	8.0	0.04	80401/350	✓	✓	✓	✓						2KJ3401 - ■■■■■■ - ■■ N1	
208.83	6.9	150	5220	8.0	0.05	80401/385	✓	✓	✓	✓						2KJ3401 - ■■■■■■ - ■■ M1	
177.71	8.2	150	5220	8.0	0.06	62197/350	✓	✓	✓	✓						2KJ3401 - ■■■■■■ - ■■ L1	
161.55	9	150	5220	8.0	0.08	62197/385	✓	✓	✓	✓						2KJ3401 - ■■■■■■ - ■■ K1	
140.86	10	150	5220	8.0	0.09	19721/140	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ J1	
126.09	11	150	5220	8.0	0.12	48544/385	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ H1	
111.97	13	150	5220	8.0	0.14	47027/420	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ G1	
103.36	14	150	5220	8.0	0.17	47027/455	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ F1	
89.78	16	150	5220	8.1	0.19	43993/490	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ E1	
78.02	19	150	5220	8.0	0.19	13653/175	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ D1	
70.43	21	150	5220	8.1	0.25	19721/280	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ C1	
66.29	22	150	5220	8.1	0.29	39442/595	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ B1	
57.79	25	150	5220	8.1	0.33	6068/105	✓	✓	✓	✓	✓					2KJ3401 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design **1 or 9** [see page 10/49](#)Motor frame size, motor type, efficiency class [see chapter 9](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F, H or D** [see page 10/42](#)<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>FZ.39</b>																	
<b>65.21</b>	22	290	6040	6.3	0.06	913/14	✓	✓									2KJ3302 - ■■■■■■ - ■■ B2
<b>57.99</b>	25	230	6000	6.6	0.08	4059/70	✓	✓	✓	✓							2KJ3302 - ■■■■■■ - ■■ A2
<b>50.91</b>	28	240	5950	6.6	0.09	1782/35	✓	✓	✓	✓							2KJ3302 - ■■■■■■ - ■■ X1
<b>46.29</b>	31	255	5820	6.6	0.11	324/7	✓	✓	✓	✓							2KJ3302 - ■■■■■■ - ■■ W1
<b>39.60</b>	37	290	5950	6.7	0.13	198/5	✓	✓	✓	✓							2KJ3302 - ■■■■■■ - ■■ V1
<b>36.00</b>	40	255	5480	6.7	0.16	36/1	✓	✓	✓	✓							2KJ3302 - ■■■■■■ - ■■ U1
<b>31.82</b>	46	285	5320	6.8	0.19	891/28	✓	✓	✓	✓	✓	✓					2KJ3302 - ■■■■■■ - ■■ T1
<b>28.93</b>	50	275	5080	6.8	0.26	405/14	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ S1
<b>25.34</b>	57	265	4930	6.9	0.30	1419/56	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ R1
<b>23.39</b>	62	260	4730	6.9	0.36	4257/182	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ Q1
<b>20.71</b>	70	250	4730	7.0	0.42	4059/196	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ P1
<b>17.24</b>	84	235	4450	7.2	0.57	3861/224	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ N1
<b>16.22</b>	89	230	4360	7.2	0.66	3861/238	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ M1
<b>14.54</b>	100	220	4220	7.3	0.74	407/28	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ L1
<b>12.38</b>	117	210	3990	7.5	0.97	99/8	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ K1
<b>10.61</b>	137	199	3790	7.7	1.28	297/28			✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ J1
<b>9.13</b>	159	189	3610	7.9	1.65	1023/112			✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ H1
<b>8.10</b>	179	167	3430	12.1	0.70	3403/420	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ G1
<b>6.74</b>	215	152	3270	12.5	0.96	1079/160	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ F1
<b>6.35</b>	228	149	3200	12.5	1.11	1079/170	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ E1
<b>5.69</b>	255	140	3120	12.9	1.29	3071/540	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ D1
<b>4.84</b>	300	128	3000	13.4	1.73	581/120	✓	✓	✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ C1
<b>4.15</b>	349	118	2950	13.9	2.30	83/20			✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ B1
<b>3.57</b>	406	108	2890	14.5	3.00	2573/720			✓	✓	✓	✓	✓				2KJ3302 - ■■■■■■ - ■■ A1
<b>FD.39</b>																	
<b>274.26</b>	5.3	290	5820	6.9	0.04	32637/119	✓	✓									2KJ3402 - ■■■■■■ - ■■ R1
<b>243.26</b>	6	290	5820	7.0	0.05	8514/35	✓	✓	✓	✓							2KJ3402 - ■■■■■■ - ■■ Q1
<b>211.06</b>	6.9	290	5820	7.0	0.06	251163/1190	✓	✓	✓	✓							2KJ3402 - ■■■■■■ - ■■ P1
<b>191.87</b>	7.6	290	5820	7.0	0.07	22833/119	✓	✓	✓	✓							2KJ3402 - ■■■■■■ - ■■ N1
<b>164.56</b>	8.8	290	5820	7.0	0.09	97911/595	✓	✓	✓	✓							2KJ3402 - ■■■■■■ - ■■ M1
<b>149.60</b>	9.7	290	5820	7.0	0.11	17802/119	✓	✓	✓	✓							2KJ3402 - ■■■■■■ - ■■ L1
<b>131.17</b>	11	290	5820	7.0	0.12	15609/119	✓	✓	✓	✓	✓	✓					2KJ3402 - ■■■■■■ - ■■ K1
<b>117.08</b>	12	290	5820	7.0	0.15	13932/119	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ J1
<b>104.34</b>	14	290	5820	7.0	0.18	7095/68	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ H1
<b>96.31</b>	15	290	5820	7.0	0.21	21285/221	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ G1
<b>84.32</b>	17	290	5820	7.1	0.25	140481/1666	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ F1
<b>73.93</b>	20	290	5820	7.1	0.24	43989/595	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ E1
<b>67.07</b>	22	290	5820	7.2	0.34	63855/952	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ D1
<b>63.13</b>	23	290	5820	7.2	0.40	127710/2023	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ C1
<b>55.65</b>	26	290	5820	7.2	0.44	946/17	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ B1
<b>48.29</b>	30	290	5820	7.2	0.59	114939/2380	✓	✓	✓	✓	✓	✓	✓				2KJ3402 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>FZ.49</b>																		
<b>61.43</b>	24	480	6990	6.0	0.18	1843/30	✓	✓	✓	✓						2KJ3303 - ■■■■■■ - ■■ X1		
<b>55.85</b>	26	480	6680	6.0	0.22	1843/33	✓	✓	✓	✓						2KJ3303 - ■■■■■■ - ■■ W1		
<b>47.50</b>	31	480	6160	6.0	0.27	95/2	✓	✓	✓	✓						2KJ3303 - ■■■■■■ - ■■ V1		
<b>43.18</b>	34	480	5870	6.0	0.33	475/11	✓	✓	✓	✓						2KJ3303 - ■■■■■■ - ■■ U1		
<b>38.53</b>	38	480	5530	6.1	0.39	1387/36	✓	✓	✓	✓	✓					2KJ3303 - ■■■■■■ - ■■ T1		
<b>34.55</b>	42	480	5220	6.1	0.47	380/11	✓	✓	✓	✓	✓					2KJ3303 - ■■■■■■ - ■■ S1		
<b>31.14</b>	47	480	4940	6.2	0.55	1121/36	✓	✓	✓	✓	✓					2KJ3303 - ■■■■■■ - ■■ R1		
<b>28.74</b>	50	480	4730	6.1	0.65	1121/39	✓	✓	✓	✓	✓					2KJ3303 - ■■■■■■ - ■■ Q1		
<b>26.24</b>	55	480	4490	6.2	0.77	551/21	✓	✓	✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ P1		
<b>21.77</b>	67	480	4030	6.3	0.99	1045/48	✓	✓	✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ N1		
<b>20.49</b>	71	480	3890	6.3	1.15	1045/51	✓	✓	✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ M1		
<b>19.35</b>	75	480	3750	6.3	1.30	1045/54	✓	✓	✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ L1		
<b>16.47</b>	88	480	3390	6.4	1.61	247/15	✓	✓	✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ K1		
<b>14.11</b>	103	480	3060	6.6	1.99	931/66			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ J1		
<b>12.40</b>	117	480	3010	6.7	2.50	893/72			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ H1		
<b>10.46</b>	139	480	3140	6.8	3.10	722/69			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ G1		
<b>9.12</b>	159	480	3210	7.4	4.20	228/25			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ F1		
<b>8.40</b>	173	450	3010	9.3	2.20	42/5	✓	✓	✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ E1		
<b>7.20</b>	201	450	3070	9.6	2.80	1029/143			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ D1		
<b>6.33</b>	229	430	3090	9.9	3.50	329/52			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ C1		
<b>5.34</b>	272	400	3080	10.2	4.60	1596/299			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ B1		
<b>4.65</b>	312	375	3060	11.3	6.10	1512/325			✓	✓	✓	✓				2KJ3303 - ■■■■■■ - ■■ A1		
<b>FD.49</b>																		
<b>330.98</b>	4.4	480	7960	6.2	0.06	26809/81	✓	✓								2KJ3403 - ■■■■■■ - ■■ S1		
<b>294.29</b>	4.9	480	7960	6.3	0.07	13243/45	✓	✓	✓	✓						2KJ3403 - ■■■■■■ - ■■ R1		
<b>258.40</b>	5.6	480	7960	6.3	0.08	1292/5	✓	✓	✓	✓						2KJ3403 - ■■■■■■ - ■■ Q1		
<b>234.91</b>	6.2	480	7960	6.3	0.10	2584/11	✓	✓	✓	✓						2KJ3403 - ■■■■■■ - ■■ P1		
<b>200.98</b>	7.2	480	7960	6.3	0.12	9044/45	✓	✓	✓	✓						2KJ3403 - ■■■■■■ - ■■ N1		
<b>182.71</b>	7.9	480	7960	6.3	0.14	18088/99	✓	✓	✓	✓						2KJ3403 - ■■■■■■ - ■■ M1		
<b>161.50</b>	9	480	7960	6.3	0.17	323/2	✓	✓	✓	✓	✓					2KJ3403 - ■■■■■■ - ■■ L1		
<b>146.82</b>	9.9	480	7960	6.3	0.22	1615/11	✓	✓	✓	✓	✓					2KJ3403 - ■■■■■■ - ■■ K1		
<b>128.60</b>	11	480	7960	6.3	0.26	13889/108	✓	✓	✓	✓	✓					2KJ3403 - ■■■■■■ - ■■ J1		
<b>118.71</b>	12	480	7960	6.3	0.31	13889/117	✓	✓	✓	✓	✓					2KJ3403 - ■■■■■■ - ■■ H1		
<b>105.10</b>	14	480	7960	6.4	0.37	13243/126	✓	✓	✓	✓	✓	✓				2KJ3403 - ■■■■■■ - ■■ G1		
<b>87.48</b>	17	480	7960	6.4	0.50	4199/48	✓	✓	✓	✓	✓	✓				2KJ3403 - ■■■■■■ - ■■ F1		
<b>82.33</b>	18	480	7960	6.4	0.59	247/3	✓	✓	✓	✓	✓	✓				2KJ3403 - ■■■■■■ - ■■ E1		
<b>73.77</b>	20	480	7630	6.4	0.66	11951/162	✓	✓	✓	✓	✓	✓				2KJ3403 - ■■■■■■ - ■■ D1		
<b>62.81</b>	23	480	7070	6.4	0.86	2261/36	✓	✓	✓	✓	✓	✓				2KJ3403 - ■■■■■■ - ■■ C1		
<b>53.83</b>	27	480	6560	6.5	1.13	323/6			✓	✓	✓	✓				2KJ3403 - ■■■■■■ - ■■ B1		
<b>46.36</b>	31	480	6080	6.5	1.46	10013/216			✓	✓	✓	✓				2KJ3403 - ■■■■■■ - ■■ A1		

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>FZ.69</b>																		
64.67	22	600	9620	5.7	0.19	194/3	✓	✓	✓	✓						2KJ3304 - ■■■■■■ - ■■ X1		
58.79	25	600	9210	5.7	0.23	1940/33	✓	✓	✓	✓						2KJ3304 - ■■■■■■ - ■■ W1		
50.00	29	600	8530	5.8	0.29	50/1	✓	✓	✓	✓						2KJ3304 - ■■■■■■ - ■■ V1		
45.45	32	600	8140	5.8	0.35	500/11	✓	✓	✓	✓						2KJ3304 - ■■■■■■ - ■■ U1		
40.56	36	600	7700	5.8	0.41	365/9	✓	✓	✓	✓	✓					2KJ3304 - ■■■■■■ - ■■ T1		
36.36	40	600	7290	5.9	0.49	400/11	✓	✓	✓	✓	✓					2KJ3304 - ■■■■■■ - ■■ S1		
32.78	44	600	6920	5.9	0.58	295/9	✓	✓	✓	✓	✓					2KJ3304 - ■■■■■■ - ■■ R1		
30.26	48	600	6640	5.9	0.69	1180/39	✓	✓	✓	✓	✓					2KJ3304 - ■■■■■■ - ■■ Q1		
27.62	52	600	6330	5.9	0.83	580/21	✓	✓	✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ P1		
22.92	63	600	5720	6.0	1.07	275/12	✓	✓	✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ N1		
21.57	67	600	5540	6.0	1.23	1100/51	✓	✓	✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ M1		
20.37	71	600	5360	6.0	1.39	550/27	✓	✓	✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ L1		
17.33	84	600	4890	6.2	1.74	52/3	✓	✓	✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ K1		
14.85	98	600	4450	6.2	2.20	490/33			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ J1		
13.06	111	600	4110	6.2	2.70	235/18			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ H1		
11.01	132	600	4040	6.2	3.50	760/69			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ G1		
9.60	151	600	4140	6.2	4.60	48/5			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ F1		
8.90	163	475	4040	8.9	2.40	89/10	✓	✓	✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ E1		
7.62	190	465	4100	8.9	3.10	4361/572			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ D1		
6.70	216	440	4120	8.9	3.90	4183/624			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ C1		
5.66	256	410	4110	8.9	5.10	1691/299			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ B1		
4.93	294	385	4070	8.9	6.80	1602/325			✓	✓	✓	✓				2KJ3304 - ■■■■■■ - ■■ A1		
<b>FD.69</b>																		
348.40	4.2	600	10800	6.0	0.06	28220/81	✓	✓								2KJ3404 - ■■■■■■ - ■■ S1		
309.78	4.7	600	10800	6.0	0.07	2788/9	✓	✓	✓	✓						2KJ3404 - ■■■■■■ - ■■ R1		
272.00	5.3	600	10800	6.0	0.08	272/1	✓	✓	✓	✓						2KJ3404 - ■■■■■■ - ■■ Q1		
247.27	5.9	600	10800	6.0	0.10	2720/11	✓	✓	✓	✓						2KJ3404 - ■■■■■■ - ■■ P1		
211.56	6.9	600	10800	6.0	0.12	1904/9	✓	✓	✓	✓						2KJ3404 - ■■■■■■ - ■■ N1		
192.32	7.5	600	10800	6.0	0.14	19040/99	✓	✓	✓	✓						2KJ3404 - ■■■■■■ - ■■ M1		
170.00	8.5	600	10800	6.1	0.17	170/1	✓	✓	✓	✓	✓					2KJ3404 - ■■■■■■ - ■■ L1		
154.55	9.4	600	10800	6.1	0.22	1700/11	✓	✓	✓	✓	✓					2KJ3404 - ■■■■■■ - ■■ K1		
135.37	11	600	10800	6.1	0.26	3655/27	✓	✓	✓	✓	✓					2KJ3404 - ■■■■■■ - ■■ J1		
124.96	12	600	10800	6.1	0.31	14620/117	✓	✓	✓	✓	✓					2KJ3404 - ■■■■■■ - ■■ H1		
110.63	13	600	10800	6.1	0.38	6970/63	✓	✓	✓	✓	✓	✓				2KJ3404 - ■■■■■■ - ■■ G1		
92.08	16	600	10800	6.1	0.51	1105/12	✓	✓	✓	✓	✓	✓				2KJ3404 - ■■■■■■ - ■■ F1		
86.67	17	600	10800	6.1	0.60	260/3	✓	✓	✓	✓	✓	✓				2KJ3404 - ■■■■■■ - ■■ E1		
77.65	19	600	10400	6.2	0.66	6290/81	✓	✓	✓	✓	✓	✓				2KJ3404 - ■■■■■■ - ■■ D1		
66.11	22	600	9720	6.2	0.87	595/9	✓	✓	✓	✓	✓	✓				2KJ3404 - ■■■■■■ - ■■ C1		
56.67	26	600	9050	6.2	1.15	170/3			✓	✓	✓	✓				2KJ3404 - ■■■■■■ - ■■ B1		
48.80	30	600	8430	6.2	1.47	2635/54			✓	✓	✓	✓				2KJ3404 - ■■■■■■ - ■■ A1		

## Article No. supplement

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Motor frame size, motor type, efficiency class		see chapter 9
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<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>FZ.79</b>																		
53.55	27	1000	13600	5.6	0.56	589/11		✓	✓	✓							2KJ3305 - ■■■■■■ - ■■ X1	
48.03	30	1000	13600	5.6	0.77	1729/36		✓	✓	✓	✓	✓					2KJ3305 - ■■■■■■ - ■■ W1	
43.18	34	1000	13600	5.7	0.87	475/11		✓	✓	✓	✓	✓					2KJ3305 - ■■■■■■ - ■■ V1	
39.06	37	1000	13600	5.7	0.97	703/18		✓	✓	✓	✓	✓					2KJ3305 - ■■■■■■ - ■■ U1	
36.05	40	1000	13600	5.7	1.15	1406/39		✓	✓	✓	✓	✓					2KJ3305 - ■■■■■■ - ■■ T1	
33.02	44	1000	13600	5.7	1.49	1387/42		✓	✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ S1	
27.71	52	1000	13600	5.7	1.62	665/24		✓	✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ R1	
26.08	56	1000	13600	5.7	1.85	1330/51		✓	✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ Q1	
23.93	61	1000	13600	5.7	2.0	646/27		✓	✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ P1	
20.90	69	1000	13600	5.7	2.9	209/10		✓	✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ N1	
18.71	77	1000	12900	5.7	3.6	1235/66			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ M1	
16.36	89	1000	12200	5.7	4.2	589/36			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ L1	
14.04	103	1000	11400	5.8	4.7	323/23			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ K1	
12.41	117	1000	10800	6.2	6.0	931/75			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ J1	
10.56	137	1000	10100	6.3	7.8	95/9				✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ H1	
9.05	160	1000	9980	6.5	10	190/21					✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ G1	
8.51	170	720	10300	8.9	4.6	468/55			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ F1	
7.44	195	725	9770	9.2	5.5	186/25			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ E1	
6.39	227	720	9690	9.3	6.5	3672/575			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ D1	
5.64	257	700	9620	10.2	8.3	3528/625			✓	✓	✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ C1	
4.80	302	650	9480	10.6	11	24/5					✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ B1	
4.11	353	605	9310	11.0	15	144/35					✓	✓	✓	✓			2KJ3305 - ■■■■■■ - ■■ A1	
<b>FD.79</b>																		
357.00	4.1	1000	13600	5.6	0.17	57133/160		✓	✓	✓							2KJ3405 - ■■■■■■ - ■■ S1	
324.62	4.5	1000	13600	5.6	0.20	57133/176		✓	✓	✓							2KJ3405 - ■■■■■■ - ■■ R1	
276.09	5.3	1000	13600	5.6	0.25	8835/32		✓	✓	✓							2KJ3405 - ■■■■■■ - ■■ Q1	
250.99	5.8	1000	13600	5.6	0.30	44175/176		✓	✓	✓							2KJ3405 - ■■■■■■ - ■■ P1	
223.94	6.5	1000	13600	5.6	0.35	42997/192		✓	✓	✓	✓	✓					2KJ3405 - ■■■■■■ - ■■ N1	
200.80	7.2	1000	13600	5.6	0.42	8835/44		✓	✓	✓	✓	✓					2KJ3405 - ■■■■■■ - ■■ M1	
180.99	8	1000	13600	5.6	0.49	34751/192		✓	✓	✓	✓	✓					2KJ3405 - ■■■■■■ - ■■ L1	
167.07	8.7	1000	13600	5.6	0.58	34751/208		✓	✓	✓	✓	✓					2KJ3405 - ■■■■■■ - ■■ K1	
152.51	9.5	1000	13600	5.6	0.69	17081/112		✓	✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ J1	
126.54	11	1000	13600	5.7	0.87	32395/256		✓	✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ H1	
119.10	12	1000	13600	5.7	1.01	32395/272		✓	✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ G1	
112.48	13	1000	13600	5.7	1.15	32395/288		✓	✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ F1	
95.71	15	1000	13600	5.7	1.39	7657/80		✓	✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ E1	
81.99	18	1000	13600	5.7	1.70	28861/352			✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ D1	
72.09	20	1000	13600	5.7	2.10	27683/384			✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ C1	
60.82	24	1000	13600	5.7	2.60	11191/184			✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ B1	
53.01	27	1000	13600	5.8	3.50	5301/100			✓	✓	✓	✓	✓	✓			2KJ3405 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>FZ.89</b>																	
61.72	23	1850	17400	4.8	1.38	2407/39			✓	✓	✓	✓					2KJ3306 - ■■■■■■ - ■■ B2
55.72	26	1850	17400	4.8	1.51	7968/143			✓	✓	✓	✓					2KJ3306 - ■■■■■■ - ■■ A2
50.54	29	1850	17400	4.8	1.77	7885/156			✓	✓	✓	✓					2KJ3306 - ■■■■■■ - ■■ X1
46.66	31	1850	17400	4.8	2.1	7885/169			✓	✓	✓	✓					2KJ3306 - ■■■■■■ - ■■ W1
42.41	34	1850	17400	4.9	2.4	7719/182			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ V1
35.91	40	1850	17400	4.9	2.9	3735/104			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ U1
33.80	43	1850	17400	4.9	3.0	7470/221			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ T1
31.21	46	1850	17400	5.0	4.5	3652/117			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ S1
27.77	52	1850	17400	5.0	5.5	7221/260			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ R1
24.67	59	1850	17400	5.0	6.7	7055/286			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ Q1
22.08	66	1850	17400	5.1	6.7	6889/312			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ P1
18.88	77	1850	17200	5.1	7.9	5644/299			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ N1
16.86	86	1850	16400	5.4	10	5478/325			✓	✓	✓	✓	✓	✓	✓		2KJ3306 - ■■■■■■ - ■■ M1
14.90	97	1850	15500	5.5	12	581/39				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ L1
13.07	111	1850	14600	5.3	16	3569/273				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ K1
11.38	127	1850	14600	5.3	20	3403/299				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ J1
9.73	149	1850	14600	5.5	26	2656/273				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ H1
8.33	174	1740	14500	5.6	33	2490/299				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ G1
7.60	191	1100	14100	9.0	14	4752/625			✓	✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ F1
6.72	216	1110	14000	9.2	17	168/25				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ E1
5.90	246	1110	13800	9.2	23	1032/175				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ D1
5.13	283	1110	13600	9.2	28	2952/575				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ C1
4.39	330	1060	13300	9.2	39	768/175				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ B1
3.76	386	985	12900	9.5	50	432/115				✓	✓	✓	✓	✓			2KJ3306 - ■■■■■■ - ■■ A1
<b>FD.89</b>																	
335.30	4.3	1850	17400	5.1	0.42	370512/1105			✓	✓							2KJ3406 - ■■■■■■ - ■■ S1
304.82	4.8	1850	17400	5.1	0.51	741024/2431			✓	✓							2KJ3406 - ■■■■■■ - ■■ R1
273.41	5.3	1850	17400	5.1	0.71	4648/17			✓	✓	✓	✓					2KJ3406 - ■■■■■■ - ■■ Q1
245.82	5.9	1850	17400	5.1	0.79	597600/2431			✓	✓	✓	✓					2KJ3406 - ■■■■■■ - ■■ P1
222.33	6.5	1850	17400	5.1	0.88	49136/221			✓	✓	✓	✓					2KJ3406 - ■■■■■■ - ■■ N1
205.23	7.1	1850	17400	5.1	1.03	589632/2873			✓	✓	✓	✓					2KJ3406 - ■■■■■■ - ■■ M1
188.00	7.7	1850	17400	5.1	1.35	290832/1547			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ L1
157.74	9.2	1850	17400	5.1	1.43	34860/221			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ K1
148.46	9.8	1850	17400	5.1	1.64	557760/3757			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ J1
136.21	11	1850	17400	5.1	1.79	5312/39			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ H1
118.98	12	1850	17400	5.1	2.6	131472/1105			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ G1
106.52	14	1850	17400	5.1	3.1	19920/187			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ F1
93.14	16	1850	17400	5.1	3.7	20584/221			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ E1
79.95	18	1850	17400	5.2	4.0	23904/299			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ D1
70.67	21	1850	17400	5.2	5.1	390432/5525			✓	✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ C1
60.09	24	1850	17400	5.3	6.5	13280/221				✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ B1
51.51	28	1850	17400	5.3	8.5	79680/1547				✓	✓	✓	✓	✓			2KJ3406 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

1) Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size												Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	250	
<b>FZ.109</b>																			
70.74	20	3100	25000	4.6	3.6	12733/180				✓	✓	✓						2KJ3307 - ■■■■■■ - ■■ B2	
65.30	22	3100	25000	4.6	4.3	12733/195				✓	✓	✓						2KJ3307 - ■■■■■■ - ■■ A2	
60.12	24	3100	25000	4.6	4.9	6313/105				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ X1	
51.27	28	3100	25000	4.6	6.3	2461/48				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ W1	
48.25	30	3100	25000	4.6	7.1	2461/51				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ V1	
44.78	32	3100	25000	4.6	7.8	12091/270				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ U1	
39.59	37	3100	25000	4.6	9.5	3959/100				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ T1	
35.34	41	3100	24700	4.7	11	11663/330				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ S1	
31.80	46	3100	23600	4.7	13	11449/360				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ R1	
27.60	53	3100	22200	4.7	16	9523/345				✓	✓	✓	✓	✓				2KJ3307 - ■■■■■■ - ■■ Q1	
24.82	58	3100	21200	4.9	19	3103/125				✓	✓	✓	✓	✓	✓			2KJ3307 - ■■■■■■ - ■■ P1	
21.70	67	3100	19900	5.0	23	7811/360				✓	✓	✓	✓	✓	✓			2KJ3307 - ■■■■■■ - ■■ N1	
19.36	75	3100	18900	5.0	27	2033/105				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ M1	
17.06	85	3100	17800	5.0	33	1177/69				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ L1	
14.95	97	3100	16700	5.1	40	4708/315				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ K1	
13.03	111	3100	15600	5.2	48	1498/115				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ J1	
11.89	122	3060	15600	5.2	56	107/9				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ H1	
10.23	142	2880	15900	5.3	70	1177/115						✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ G1	
9.02	161	2090	16100	7.6	36	1767/196				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ F1	
7.94	183	2000	15800	7.8	44	5115/644				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ E1	
6.96	208	1900	15700	7.9	54	341/49				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ D1	
6.07	239	1800	15600	8.1	68	279/46				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ C1	
5.54	262	1730	15400	8.2	79	155/28				✓	✓	✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ B1	
4.77	304	1620	15200	8.4	102	3069/644						✓	✓	✓	✓	✓		2KJ3307 - ■■■■■■ - ■■ A1	
<b>FD.109</b>																			
410.00	3.5	3100	25000	6.5	1.27	332021/810				✓	✓	✓						2KJ3407 - ■■■■■■ - ■■ T1	
370.00	3.9	3100	25000	6.5	1.37	183184/495				✓	✓	✓						2KJ3407 - ■■■■■■ - ■■ S1	
335.70	4.3	3100	25000	6.5	1.61	217531/648				✓	✓	✓						2KJ3407 - ■■■■■■ - ■■ R1	
309.87	4.7	3100	25000	6.5	1.89	217531/702				✓	✓	✓						2KJ3407 - ■■■■■■ - ■■ Q1	
281.68	5.1	3100	25000	6.5	2.2	354919/1260				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ P1	
238.52	6.1	3100	25000	6.5	2.6	11449/48				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ N1	
224.49	6.5	3100	25000	6.5	2.6	11449/51				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ M1	
207.31	7	3100	25000	6.5	4.0	251878/1215				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ L1	
184.46	7.9	3100	25000	6.5	5.0	332021/1800				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ K1	
163.83	8.9	3100	25000	6.5	5.9	194633/1188				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ J1	
146.65	9.9	3100	25000	6.5	5.9	950267/6480				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ H1	
125.37	12	3100	25000	6.5	6.7	389266/3105				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ G1	
111.95	13	3100	25000	6.5	8.6	125939/1125				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ F1	
98.94	15	3100	25000	6.5	9.6	80143/810				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ E1	
86.83	17	3100	25000	6.5	14	492307/5670				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ D1	
75.59	19	3100	25000	6.5	16	469409/6210				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ C1	
64.62	22	3100	25000	6.5	21	183184/2835				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ B1	
55.31	26	3100	25000	6.5	25	11449/207				✓	✓	✓	✓	✓				2KJ3407 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design **1 or 9** [see page 10/49](#)Motor frame size, motor type, efficiency class [see chapter 9](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F, H or D** [see page 10/42](#)

1) Only in conjunction with reduced-backlash version



## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size													Article No. (Article No. supplement, see below)					
							63	71	80	90	100	112	132	160	180	200	225	250							
<b>FZ.129</b>																									
69.20	21	4850	37200	5.1	7.7	13563/196				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ A2
59.22	24	4850	37200	5.1	9.7	6633/112				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ X1
55.74	26	4850	37200	5.1	11	6633/119				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ W1
52.25	28	4850	36600	5.1	12	209/4				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ V1
46.32	31	4850	34800	5.1	15	12969/280				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ U1
41.14	35	4850	33100	5.1	18	288/7				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ T1
37.12	39	4850	31700	5.1	21	297/8				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ S1
32.90	44	4850	30100	5.2	26	10593/322				✓	✓	✓	✓	✓											2KJ3308 - ■■■■■■ - ■■ R1
29.13	50	4850	28500	5.3	29	10197/350				✓	✓	✓	✓	✓	✓										2KJ3308 - ■■■■■■ - ■■ Q1
25.93	56	4850	27100	5.3	35	363/14					✓	✓	✓	✓	✓	✓									2KJ3308 - ■■■■■■ - ■■ P1
23.23	62	4850	25800	5.3	41	2277/98					✓	✓	✓	✓	✓	✓	✓								2KJ3308 - ■■■■■■ - ■■ N1
20.60	70	4850	24400	5.3	49	6633/322					✓	✓	✓	✓	✓	✓	✓								2KJ3308 - ■■■■■■ - ■■ M1
18.18	80	4850	23000	5.4	60	891/49					✓	✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ L1
15.99	91	4800	21700	5.4	73	2574/161					✓	✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ K1
14.48	100	4690	21000	5.5	83	1419/98					✓	✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ J1
12.61	115	4530	20100	5.5	101	4059/322						✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ H1
10.34	140	4320	20400	5.5	135	1881/182							✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ G1
9.80	148	3630	19600	8.1	64	2479/253					✓	✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ F1
8.65	168	3640	19700	8.1	79	666/77					✓	✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ E1
7.60	191	3620	19800	8.1	97	1924/253					✓	✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ D1
6.89	210	3630	19700	8.2	112	1591/231					✓	✓	✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ C1
6.00	242	3640	19600	8.3	140	1517/253							✓	✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ B1
4.92	295	3030	19300	8.5	192	703/143								✓	✓	✓	✓	✓							2KJ3308 - ■■■■■■ - ■■ A1
<b>FD.129</b>																									
413.00	3.5	4850	37200	5.5	3.3	9911/24				✓	✓	✓													2KJ3408 - ■■■■■■ - ■■ T1
381.00	3.8	4850	37200	5.5	3.9	9911/26				✓	✓	✓													2KJ3408 - ■■■■■■ - ■■ S1
351.00	4.1	4850	37200	5.5	4.5	34397/98				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ R1
299.31	4.8	4850	37200	5.5	5.6	67045/224				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ Q1
281.70	5.1	4850	37200	5.5	6.4	67045/238				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ P1
261.42	5.5	4850	37200	5.5	6.9	65879/252				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ N1
231.12	6.3	4850	37200	5.5	8.4	64713/280				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ M1
206.32	7	4850	37200	5.5	10	5777/28				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ L1
185.66	7.8	4850	37200	5.5	12	62381/336				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ K1
161.14	9	4850	37200	5.5	14	51887/322				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ J1
144.92	10	4850	37200	5.5	16	50721/350				✓	✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ H1
126.66	11	4850	37200	5.5	19	42559/336					✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ G1
113.03	13	4850	37200	5.5	23	11077/98					✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ F1
99.58	15	4850	37200	5.5	27	32065/322					✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ E1
87.25	17	4850	37200	5.5	32	12826/147					✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ D1
76.04	19	4850	37200	5.5	37	1749/23					✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ C1
69.40	21	4850	37200	5.5	44	2915/42					✓	✓	✓	✓											2KJ3408 - ■■■■■■ - ■■ B1
59.75	24	4850	37200	5.5	53	19239/322								✓	✓										2KJ3408 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design **1 or 9** [see page 10/49](#)Motor frame size, motor type, efficiency class [see chapter 9](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F, H or D** [see page 10/42](#)

1) Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Transmission ratios and torques

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>FZ.149</b>																		
48.48	30	8000	42700	4.6	31	1600/33					✓	✓	✓	✓				2KJ3310 - ■■■■■■ - ■■ T1
43.89	33	8000	40800	4.6	36	395/9					✓	✓	✓	✓				2KJ3310 - ■■■■■■ - ■■ S1
38.55	38	8000	38500	4.6	44	2660/69					✓	✓	✓	✓				2KJ3310 - ■■■■■■ - ■■ R1
34.93	42	8000	36800	4.6	51	524/15					✓	✓	✓	✓	✓			2KJ3310 - ■■■■■■ - ■■ Q1
31.11	47	8000	34900	4.7	60	280/9					✓	✓	✓	✓	✓	✓		2KJ3310 - ■■■■■■ - ■■ P1
27.94	52	8000	33100	4.7	72	1760/63					✓	✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ N1
24.93	58	8000	31300	4.7	84	1720/69					✓	✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ M1
22.22	65	8000	29600	4.7	98	200/9					✓	✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ L1
19.71	74	8000	27800	4.7	117	1360/69					✓	✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ K1
18.10	80	8000	26600	4.8	132	380/21					✓	✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ J1
15.94	91	8000	24900	4.8	156	1100/69						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ H1
13.08	111	7620	23200	4.9	212	170/13						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ G1
11.47	126	7320	23700	4.9	241	172/15						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ F1
8.97	162	6770	24500	6.2	379	260/29						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ E1
8.09	179	5690	23900	6.2	200	2420/299						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ D1
6.64	218	5690	24000	6.3	277	1122/169						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ C1
5.82	249	5680	24000	6.6	325	1892/325						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ B1
4.55	319	5650	23600	7.3	517	132/29						✓	✓	✓	✓	✓	✓	2KJ3310 - ■■■■■■ - ■■ A1
<b>FD.149</b>																		
377.00	3.8	8000	65000	4.8	7.1	18495/49					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ W1
323.04	4.5	8000	65000	4.8	9	9045/28					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ V1
304.03	4.8	8000	65000	4.8	10	36180/119					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ U1
285.00	5.1	8000	65000	4.8	11	285/1					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ T1
252.64	5.7	8000	65000	4.8	14	3537/14					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ S1
224.42	6.5	8000	65000	4.8	16	17280/77					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ R1
202.50	7.2	8000	65000	4.8	19	405/2					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ Q1
179.44	8.1	8000	65000	4.8	23	28890/161					✓	✓	✓	✓				2KJ3410 - ■■■■■■ - ■■ P1
158.91	9.1	8000	65000	4.8	26	5562/35					✓	✓	✓	✓	✓			2KJ3410 - ■■■■■■ - ■■ N1
141.43	10	8000	65000	4.8	31	990/7					✓	✓	✓	✓	✓	✓		2KJ3410 - ■■■■■■ - ■■ M1
126.73	11	8000	65000	4.8	37	6210/49					✓	✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ L1
112.36	13	8000	63600	4.8	43	18090/161					✓	✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ K1
99.18	15	8000	60700	4.8	53	4860/49					✓	✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ J1
87.20	17	8000	57700	4.8	63	14040/161					✓	✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ H1
78.98	18	8000	54800	4.8	71	3870/49					✓	✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ G1
68.76	21	8000	52600	4.9	85	11070/161						✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ F1
56.37	26	8000	49600	4.9	111	5130/91						✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ E1
50.01	29	8000	45600	5.2	73	37960/759					✓	✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ D1
45.30	32	8000	43300	5.2	83	31390/693					✓	✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ C1
39.43	37	7970	41400	5.2	102	29930/759						✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ B1
32.33	45	7510	39000	5.2	135	13870/429						✓	✓	✓	✓	✓	✓	2KJ3410 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi^{1)}$	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$	Motor frame size										Article No. (Article No. supplement, see below)			
							63	71	80	90	100	112	132	160	180	200		225	250	
<b>FZ.169</b>																				
<b>44.93</b>	32	12400	59900	4.2	68	3100/69						✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ S1			
<b>41.07</b>	35	13600	55100	4.3	80	616/15						✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ R1		
<b>36.94</b>	39	13600	52500	4.3	95	665/18						✓	✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ Q1	
<b>33.02</b>	44	13600	49800	4.4	111	2080/63						✓	✓	✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ P1
<b>29.86</b>	49	13600	47500	4.4	133	2060/69						✓	✓	✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ N1
<b>26.35</b>	55	13600	44700	4.4	157	1660/63						✓	✓	✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ M1
<b>23.48</b>	62	13600	42200	4.4	186	540/23						✓	✓	✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ L1
<b>21.27</b>	68	13600	42300	4.3	206	1340/63						✓	✓	✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ K1
<b>19.13</b>	76	13600	42800	4.3	249	440/23							✓	✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ J1
<b>15.90</b>	91	13500	43200	4.4	314	620/39								✓	✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ H1
<b>14.13</b>	103	12900	43200	4.4	386	212/15									✓	✓	✓			2KJ3311 - ■■■■■■ - ■■ G1
<b>11.26</b>	129	11700	42800	4.6	534	980/87										✓	✓			2KJ3311 - ■■■■■■ - ■■ F1
<b>8.97</b>	162	10400	41900	4.8	710	260/29											✓			2KJ3311 - ■■■■■■ - ■■ E1
<b>8.07</b>	180	8350	39300	5.9	396	1364/169														2KJ3311 - ■■■■■■ - ■■ D1
<b>7.18</b>	202	8310	38900	5.9	489	2332/325														2KJ3311 - ■■■■■■ - ■■ C1
<b>5.72</b>	253	8210	37800	6.4	697	2156/377														2KJ3311 - ■■■■■■ - ■■ B1
<b>4.55</b>	319	7300	36400	6.8	967	132/29														2KJ3311 - ■■■■■■ - ■■ A1
<b>FD.169</b>																				
<b>368.00</b>	3.9	13600	73500	4.4	18	106240/289							✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ V1	
<b>343.01</b>	4.2	13600	73500	4.4	19	52480/153							✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ U1	
<b>304.94</b>	4.8	13600	73500	4.4	24	5184/17							✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ T1	
<b>273.80</b>	5.3	13600	73500	4.4	28	51200/187							✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ S1	
<b>247.84</b>	5.9	13600	73500	4.4	33	12640/51							✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ R1	
<b>217.70</b>	6.7	13600	73500	4.4	40	85120/391							✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ Q1	
<b>197.27</b>	7.4	13600	73500	4.4	46	16768/85							✓	✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ P1
<b>175.69</b>	8.3	13600	73500	4.4	54	8960/51							✓	✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ N1
<b>157.76</b>	9.2	13600	73500	4.4	64	56320/357							✓	✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ M1
<b>140.77</b>	10	13600	73500	4.4	74	55040/391							✓	✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ L1
<b>125.49</b>	12	13600	73500	4.4	86	6400/51							✓	✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ K1
<b>111.30</b>	13	13600	73500	4.4	101	2560/23							✓	✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ J1
<b>102.18</b>	14	13600	73500	4.4	113	12160/119							✓	✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ H1
<b>90.03</b>	16	13600	73500	4.4	132	35200/391								✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ G1
<b>73.85</b>	20	13600	71200	4.5	176	960/13								✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ F1
<b>64.75</b>	22	13600	67400	4.5	194	5504/85								✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ E1
<b>50.63</b>	29	13600	60600	4.5	302	24960/493								✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ D1
<b>46.55</b>	31	13600	58300	4.7	201	3026/65								✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ C1
<b>40.82</b>	36	13600	55000	4.7	226	15308/375								✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ B1
<b>31.92</b>	45	13600	53400	4.8	355	4628/145								✓	✓	✓				2KJ3411 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>FZ.189</b>																	
<b>37.93</b>	38	19000	76100	4.0	143	11948/315					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ L1
<b>34.03</b>	43	19000	72500	4.1	169	3914/115					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ K1
<b>30.41</b>	48	19000	68900	4.1	202	3193/105					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ J1
<b>27.17</b>	53	19000	65400	4.1	241	9373/345					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ H1
<b>24.85</b>	58	19000	62700	4.1	269	7828/315					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ G1
<b>22.09</b>	66	19000	59300	4.1	321	7622/345					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ F1
<b>18.75</b>	77	19000	54700	4.2	410	7313/390					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ E1
<b>16.21</b>	89	19000	50800	4.2	495	6077/375					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ D1
<b>13.26</b>	109	17600	48700	4.3	687	5768/435					✓	✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ C1
<b>10.89</b>	133	16300	50000	4.4	906	4738/435						✓	✓	✓	✓	✓	2KJ3312 - ■■■■■■ - ■■ B1
<b>8.47</b>	171	14700	50400	4.8	1333	3811/450									✓	✓	2KJ3312 - ■■■■■■ - ■■ A1
<b>FD.189</b>																	
<b>347.35</b>	4.2	19000	110900	4.1	36	590499/1700					✓	✓	✓				2KJ3412 - ■■■■■■ - ■■ T1
<b>310.76</b>	4.7	19000	110900	4.1	43	290563/935					✓	✓	✓				2KJ3412 - ■■■■■■ - ■■ S1
<b>280.27</b>	5.2	19000	110900	4.1	49	571753/2040					✓	✓	✓				2KJ3412 - ■■■■■■ - ■■ R1
<b>247.71</b>	5.9	19000	110900	4.1	61	290563/1173					✓	✓	✓				2KJ3412 - ■■■■■■ - ■■ Q1
<b>226.42</b>	6.4	19000	110900	4.1	71	1443442/6375					✓	✓	✓	✓			2KJ3412 - ■■■■■■ - ■■ P1
<b>203.69</b>	7.1	19000	110900	4.1	84	1246609/6120					✓	✓	✓	✓	✓		2KJ3412 - ■■■■■■ - ■■ N1
<b>182.03</b>	8	19000	110900	4.1	98	139256/765					✓	✓	✓	✓	✓		2KJ3412 - ■■■■■■ - ■■ M1
<b>164.61</b>	8.8	19000	110900	4.1	117	965419/5865					✓	✓	✓	✓	✓		2KJ3412 - ■■■■■■ - ■■ L1
<b>145.28</b>	10	19000	110900	4.1	136	111137/765					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ K1
<b>129.45</b>	11	19000	110900	4.1	160	253071/1955					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ J1
<b>117.27</b>	12	19000	110900	4.1	175	89713/765					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ H1
<b>105.48</b>	14	19000	110900	4.1	210	206206/1955					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ G1
<b>87.65</b>	17	19000	108200	4.1	258	22351/255					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ F1
<b>77.92</b>	19	19000	103200	4.1	314	496769/6375					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ E1
<b>62.11</b>	23	19000	94000	4.2	422	459277/7395					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ D1
<b>49.43</b>	29	19000	85400	4.2	533	121849/2465						✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ C1
<b>40.61</b>	36	19000	78400	4.4	478	35329/870					✓	✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ B1
<b>32.32</b>	45	19000	70800	4.4	621	9373/290						✓	✓	✓	✓	✓	2KJ3412 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design **1 or 9** [see page 10/49](#)Motor frame size, motor type, efficiency class [see chapter 9](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F, H or D** [see page 10/42](#)<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	φ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FZ.29-Z19</b>															
1760	0.82	150	5220	-	0.02	1715912/975	✓	✓							2KJ3320 - ■■■■■■ - ■■ R1
1558	0.93	150	5220	-	0.03	2532354/1625	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ Q1
1354	1.1	150	5220	-	0.04	2200242/1625	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ P1
1231	1.2	150	5220	-	0.05	400044/325	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ N1
1047	1.4	150	5220	-	0.07	1702074/1625	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ M1
952	1.5	150	5220	-	0.08	309468/325	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ L1
830	1.7	150	5220	-	0.09	20757/25	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ K1
743	2	150	5220	-	0.12	241536/325	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ J1
660	2.2	150	5220	-	0.15	214489/325	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ H1
609	2.4	150	5220	-	0.18	2573868/4225	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ G1
529	2.7	150	5220	-	0.2	1203906/2275	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ F1
460	3.2	150	5220	-	0.21	747252/1625	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ E1
415	3.5	150	5220	-	0.27	20757/50	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ D1
391	3.7	150	5220	-	0.32	9768/25	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ C1
340.63	4.3	150	5220	-	0.36	110704/325	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ B1
314.27	4.6	150	5220	-	0.19	428978/1365	✓	✓	✓						2KJ3320 - ■■■■■■ - ■■ A1
<b>FZ.29-D19</b>															
8237	0.18	150	5220	-	0.03	93697098/11375	✓	✓							2KJ3321 - ■■■■■■ - ■■ P1
7157	0.20	150	5220	-	0.04	81408954/11375	✓	✓							2KJ3321 - ■■■■■■ - ■■ N1
6506	0.22	150	5220	-	0.04	14801628/2275	✓	✓							2KJ3321 - ■■■■■■ - ■■ M1
5536	0.26	150	5220	-	0.06	62976738/11375	✓	✓							2KJ3321 - ■■■■■■ - ■■ L1
5033	0.29	150	5220	-	0.07	11450316/2275	✓	✓							2KJ3321 - ■■■■■■ - ■■ K1
4389	0.33	150	5220	-	0.08	768009/175	✓	✓							2KJ3321 - ■■■■■■ - ■■ J1
3928	0.37	150	5220	-	0.11	8936832/2275	✓	✓							2KJ3321 - ■■■■■■ - ■■ H1
3488	0.42	150	5220	-	0.13	7936093/2275	✓	✓							2KJ3321 - ■■■■■■ - ■■ G1
3220	0.45	150	5220	-	0.16	95233116/29575	✓	✓							2KJ3321 - ■■■■■■ - ■■ F1
2797	0.52	150	5220	-	0.17	44544522/15925	✓	✓							2KJ3321 - ■■■■■■ - ■■ E1
2431	0.60	150	5220	-	0.18	27648324/11375	✓	✓							2KJ3321 - ■■■■■■ - ■■ D1
2194	0.66	150	5220	-	0.22	768009/350	✓	✓							2KJ3321 - ■■■■■■ - ■■ C1
2065	0.70	150	5220	-	0.26	361416/175	✓	✓							2KJ3321 - ■■■■■■ - ■■ B1
1800	0.81	150	5220	-	0.29	4096048/2275	✓	✓							2KJ3321 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub> -	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FZ.39-Z19</b>															
2028	0.71	230	6040	-	0.02	922746/455	✓	✓						2KJ3322 - ■■■■■■ - ■■ T1	
1796	0.81	230	6040	-	0.03	8170767/4550	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ S1	
1560	0.93	230	6040	-	0.04	7099191/4550	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ R1	
1418	1.0	230	6040	-	0.05	645381/455	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ Q1	
1207	1.2	230	6040	-	0.07	5491827/4550	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ P1	
1097	1.3	230	6040	-	0.08	499257/455	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ N1	
957	1.5	230	6040	-	0.09	133947/140	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ M1	
856	1.7	230	6040	-	0.12	389664/455	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ L1	
761	1.9	230	6040	-	0.15	1384119/1820	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ K1	
702	2.1	230	6040	-	0.18	4152357/5915	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ J1	
610	2.4	230	6040	-	0.2	3884463/6370	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ H1	
530	2.7	230	6040	-	0.21	1205523/2275	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ G1	
478	3.0	230	6040	-	0.27	133947/280	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ F1	
450	3.2	230	6040	-	0.32	267894/595	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ E1	
393	3.7	230	6040	-	0.36	178596/455	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ D1	
362	4.0	230	6040	-	0.19	461373/1274	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ C1	
314.58	4.6	230	6040	-	0.22	431607/1372	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ B1	
273.36	5.3	230	6040	-	0.23	133947/490	✓	✓	✓					2KJ3322 - ■■■■■■ - ■■ A1	
<b>FZ.39-D19</b>															
8247	0.18	230	6040	-	0.04	262670067/31850	✓	✓						2KJ3323 - ■■■■■■ - ■■ N1	
7497	0.19	230	6040	-	0.04	23879097/3185	✓	✓						2KJ3323 - ■■■■■■ - ■■ M1	
6380	0.23	230	6040	-	0.06	203197599/31850	✓	✓						2KJ3323 - ■■■■■■ - ■■ L1	
5800	0.25	230	6040	-	0.07	18472509/3185	✓	✓						2KJ3323 - ■■■■■■ - ■■ K1	
5057	0.29	230	6040	-	0.08	4956039/980	✓	✓						2KJ3323 - ■■■■■■ - ■■ J1	
4527	0.32	230	6040	-	0.11	14417568/3185	✓	✓						2KJ3323 - ■■■■■■ - ■■ H1	
4020	0.36	230	6040	-	0.13	51212403/12740	✓	✓						2KJ3323 - ■■■■■■ - ■■ G1	
3711	0.39	230	6040	-	0.16	153637209/41405	✓	✓						2KJ3323 - ■■■■■■ - ■■ F1	
3223	0.45	230	6040	-	0.17	143725131/44590	✓	✓						2KJ3323 - ■■■■■■ - ■■ E1	
2801	0.52	230	6040	-	0.18	44604351/15925	✓	✓						2KJ3323 - ■■■■■■ - ■■ D1	
2529	0.57	230	6040	-	0.22	4956039/1960	✓	✓						2KJ3323 - ■■■■■■ - ■■ C1	
2380	0.61	230	6040	-	0.26	9912078/4165	✓	✓						2KJ3323 - ■■■■■■ - ■■ B1	
2075	0.7	230	6040	-	0.29	6608052/3185	✓	✓						2KJ3323 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FZ.49-Z19</b>															
<b>2149</b>	0.67	480	7960	-	0.02	1256926/585	✓	✓						2KJ3324 - ■■■■■■ - ■■ J1	
<b>1903</b>	0.76	480	7960	-	0.03	1236653/650	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ H1	
<b>1653</b>	0.88	480	7960	-	0.04	1074469/650	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ G1	
<b>1503</b>	0.96	480	7960	-	0.05	97679/65	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ F1	
<b>1279</b>	1.1	480	7960	-	0.07	831193/650	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ E1	
<b>1163</b>	1.2	480	7960	-	0.08	75563/65	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ D1	
<b>1014</b>	1.4	480	7960	-	0.09	20273/20	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ C1	
<b>907</b>	1.6	480	7960	-	0.13	58976/65	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ B1	
<b>806</b>	1.8	480	7960	-	0.15	628463/780	✓	✓	✓					2KJ3324 - ■■■■■■ - ■■ A1	
<b>FZ.49-D19</b>															
<b>11357</b>	0.13	480	7960	-	0.02	46506262/4095	✓	✓						2KJ3325 - ■■■■■■ - ■■ Q1	
<b>10056</b>	0.14	480	7960	-	0.03	45756161/4550	✓	✓						2KJ3325 - ■■■■■■ - ■■ P1	
<b>8737</b>	0.17	480	7960	-	0.04	39755353/4550	✓	✓						2KJ3325 - ■■■■■■ - ■■ N1	
<b>7943</b>	0.18	480	7960	-	0.04	3614123/455	✓	✓						2KJ3325 - ■■■■■■ - ■■ M1	
<b>6759</b>	0.21	480	7960	-	0.06	30754141/4550	✓	✓						2KJ3325 - ■■■■■■ - ■■ L1	
<b>6145</b>	0.24	480	7960	-	0.07	2795831/455	✓	✓						2KJ3325 - ■■■■■■ - ■■ K1	
<b>5358</b>	0.27	480	7960	-	0.08	750101/140	✓	✓						2KJ3325 - ■■■■■■ - ■■ J1	
<b>4796</b>	0.3	480	7960	-	0.11	2182112/455	✓	✓						2KJ3325 - ■■■■■■ - ■■ H1	
<b>4259</b>	0.34	480	7960	-	0.13	23253131/5460	✓	✓						2KJ3325 - ■■■■■■ - ■■ G1	
<b>3931</b>	0.37	480	7960	-	0.16	23253131/5915	✓	✓						2KJ3325 - ■■■■■■ - ■■ F1	
<b>3415</b>	0.42	480	7960	-	0.17	21752929/6370	✓	✓						2KJ3325 - ■■■■■■ - ■■ E1	
<b>2967</b>	0.49	480	7960	-	0.18	6750909/2275	✓	✓						2KJ3325 - ■■■■■■ - ■■ D1	
<b>2679</b>	0.54	480	7960	-	0.22	750101/280	✓	✓						2KJ3325 - ■■■■■■ - ■■ C1	
<b>2521</b>	0.58	480	7960	-	0.26	1500202/595	✓	✓						2KJ3325 - ■■■■■■ - ■■ B1	
<b>2198</b>	0.66	480	7960	-	0.29	3000404/1365	✓	✓						2KJ3325 - ■■■■■■ - ■■ A1	
<b>FD.49-Z19</b>															
<b>752</b>	1.9	480	7960	-	0.21	3762/5	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ J1	
<b>679</b>	2.1	480	7960	-	0.28	2717/4	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ H1	
<b>639</b>	2.3	480	7960	-	0.32	10868/17	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ G1	
<b>557</b>	2.6	480	7960	-	0.37	1672/3	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ F1	
<b>514</b>	2.8	480	7960	-	0.20	32395/63	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ E1	
<b>447</b>	3.2	480	7960	-	0.23	393965/882	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ D1	
<b>388</b>	3.7	480	7960	-	0.25	2717/7	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ C1	
<b>350</b>	4.1	480	7960	-	0.32	176605/504	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ B1	
<b>329.79</b>	4.4	480	7960	-	0.37	353210/1071	✓	✓	✓					2KJ3424 - ■■■■■■ - ■■ A1	
<b>FD.49-D19</b>															
<b>14685</b>	0.10	480	7960	-	0.07	14699730/1001	✓	✓						2KJ3425 - ■■■■■■ - ■■ C1	
<b>12805</b>	0.11	480	7960	-	0.08	179265/14	✓	✓						2KJ3425 - ■■■■■■ - ■■ B1	
<b>11461</b>	0.13	480	7960	-	0.11	11472960/1001	✓	✓						2KJ3425 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FZ.69-Z19</b>															
2262	0.64	600	10800	-	0.02	264616/117	✓	✓							2KJ3326 - ■■■■■■ - ■■ F1
2003	0.72	600	10800	-	0.03	130174/65	✓	✓	✓						2KJ3326 - ■■■■■■ - ■■ E1
1740	0.83	600	10800	-	0.04	113102/65	✓	✓	✓						2KJ3326 - ■■■■■■ - ■■ D1
1582	0.92	600	10800	-	0.05	20564/13	✓	✓	✓						2KJ3326 - ■■■■■■ - ■■ C1
1346	1.1	600	10800	-	0.07	87494/65	✓	✓	✓						2KJ3326 - ■■■■■■ - ■■ B1
1224	1.2	600	10800	-	0.08	15908/13	✓	✓	✓						2KJ3326 - ■■■■■■ - ■■ A1
<b>FZ.69-D19</b>															
11955	0.12	600	10800	-	0.02	9790792/819	✓	✓							2KJ3327 - ■■■■■■ - ■■ Q1
10586	0.14	600	10800	-	0.03	4816438/455	✓	✓							2KJ3327 - ■■■■■■ - ■■ P1
9197	0.16	600	10800	-	0.04	4184774/455	✓	✓							2KJ3327 - ■■■■■■ - ■■ N1
8361	0.17	600	10800	-	0.04	760868/91	✓	✓							2KJ3327 - ■■■■■■ - ■■ M1
7115	0.20	600	10800	-	0.06	3237278/455	✓	✓							2KJ3327 - ■■■■■■ - ■■ L1
6468	0.22	600	10800	-	0.07	588596/91	✓	✓							2KJ3327 - ■■■■■■ - ■■ K1
5640	0.26	600	10800	-	0.08	39479/7	✓	✓							2KJ3327 - ■■■■■■ - ■■ J1
5048	0.29	600	10800	-	0.11	459392/91	✓	✓							2KJ3327 - ■■■■■■ - ■■ H1
4483	0.32	600	10800	-	0.13	1223849/273	✓	✓							2KJ3327 - ■■■■■■ - ■■ G1
4138	0.35	600	10800	-	0.16	4895396/1183	✓	✓							2KJ3327 - ■■■■■■ - ■■ F1
3595	0.4	600	10800	-	0.17	2289782/637	✓	✓							2KJ3327 - ■■■■■■ - ■■ E1
3124	0.46	600	10800	-	0.18	1421244/455	✓	✓							2KJ3327 - ■■■■■■ - ■■ D1
2820	0.51	600	10800	-	0.22	39479/14	✓	✓							2KJ3327 - ■■■■■■ - ■■ C1
2654	0.55	600	10800	-	0.26	315832/119	✓	✓							2KJ3327 - ■■■■■■ - ■■ B1
2314	0.63	600	10800	-	0.29	631664/273	✓	✓							2KJ3327 - ■■■■■■ - ■■ A1
<b>FD.69-Z19</b>															
1200	1.2	600	10800	-	0.32	1200/1	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ M1
1046	1.4	600	10800	-	0.37	13600/13	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ L1
965	1.5	600	10800	-	0.19	263500/273	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ K1
838	1.7	600	10800	-	0.22	123250/147	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ J1
729	2.0	600	10800	-	0.23	5100/7	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ H1
658	2.2	600	10800	-	0.30	27625/42	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ G1
619	2.3	600	10800	-	0.35	13000/21	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ F1
587	2.5	600	10800	-	0.37	1760/3	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ E1
541	2.7	600	10800	-	0.20	34100/63	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ D1
470	3.1	600	10800	-	0.23	207350/441	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ C1
409	3.5	600	10800	-	0.25	2860/7	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ B1
369	3.9	600	10800	-	0.32	46475/126	✓	✓	✓						2KJ3426 - ■■■■■■ - ■■ A1
<b>FD.69-D19</b>															
13479	0.11	600	10800	-	0.08	94350/7	✓	✓							2KJ3427 - ■■■■■■ - ■■ B1
12065	0.12	600	10800	-	0.11	12076800/1001	✓	✓							2KJ3427 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version



**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FZ.79-Z39</b>															
2687	0.54	1000	13600	-	0.06	13059137/4860	✓	✓							2KJ3328 - ■■■■■■ - ■■ S2
2389	0.61	1000	13600	-	0.07	6450899/2700	✓	✓	✓	✓					2KJ3328 - ■■■■■■ - ■■ R1
2098	0.69	1000	13600	-	0.08	157339/75	✓	✓	✓	✓					2KJ3328 - ■■■■■■ - ■■ Q1
1907	0.76	1000	13600	-	0.10	314678/165	✓	✓	✓	✓					2KJ3328 - ■■■■■■ - ■■ P1
1632	0.89	1000	13600	-	0.12	1101373/675	✓	✓	✓	✓					2KJ3328 - ■■■■■■ - ■■ N1
1483	0.98	1000	13600	-	0.14	2202746/1485	✓	✓	✓	✓					2KJ3328 - ■■■■■■ - ■■ M1
1311	1.1	1000	13600	-	0.17	157339/120	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ L1
1192	1.2	1000	13600	-	0.22	157339/132	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ K1
1044	1.4	1000	13600	-	0.26	6765577/6480	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ J1
964	1.5	1000	13600	-	0.31	520429/540	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ H1
853	1.7	1000	13600	-	0.36	921557/1080	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ G1
710	2.0	1000	13600	-	0.48	2045407/2880	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ F1
668	2.2	1000	13600	-	0.56	2045407/3060	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ E1
599	2.4	1000	13600	-	0.61	5821543/9720	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ D1
510	2.8	1000	13600	-	0.79	1101373/2160	✓	✓	✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ C1
437	3.3	1000	13600	-	1.03	157339/360			✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ B1
376	3.9	1000	13600	-	1.31	4877509/12960			✓	✓	✓	✓			2KJ3328 - ■■■■■■ - ■■ A1
<b>FZ.79-D39</b>															
11301	0.13	1000	13600	-	0.03	155608271/13770	✓	✓							2KJ3330 - ■■■■■■ - ■■ N1
10023	0.14	1000	13600	-	0.05	6765577/675	✓	✓	✓	✓					2KJ3330 - ■■■■■■ - ■■ M1
8696	0.17	1000	13600	-	0.05	399169043/45900	✓	✓	✓	✓					2KJ3330 - ■■■■■■ - ■■ L1
7906	0.18	1000	13600	-	0.07	399169043/50490	✓	✓	✓	✓					2KJ3330 - ■■■■■■ - ■■ K1
6780	0.21	1000	13600	-	0.08	155608271/22950	✓	✓	✓	✓					2KJ3330 - ■■■■■■ - ■■ J1
6164	0.24	1000	13600	-	0.10	155608271/25245	✓	✓	✓	✓					2KJ3330 - ■■■■■■ - ■■ H1
5405	0.27	1000	13600	-	0.12	74421347/13770	✓	✓	✓	✓	✓	✓			2KJ3330 - ■■■■■■ - ■■ G1
4824	0.30	1000	13600	-	0.15	13531154/2805	✓	✓	✓	✓	✓	✓			2KJ3330 - ■■■■■■ - ■■ F1
4299	0.34	1000	13600	-	0.17	47359039/11016	✓	✓	✓	✓	✓	✓			2KJ3330 - ■■■■■■ - ■■ E1
3968	0.37	1000	13600	-	0.21	3643003/918	✓	✓	✓	✓	✓	✓			2KJ3330 - ■■■■■■ - ■■ D1
3474	0.42	1000	13600	-	0.25	10631621/3060	✓	✓	✓	✓	✓	✓			2KJ3330 - ■■■■■■ - ■■ C1
3046	0.48	1000	13600	-	0.23	209732887/68850	✓	✓	✓	✓	✓	✓			2KJ3330 - ■■■■■■ - ■■ B1
2764	0.52	1000	13600	-	0.33	6765577/2448	✓	✓	✓	✓	✓	✓			2KJ3330 - ■■■■■■ - ■■ A1
<b>FD.79-D39</b>															
17865	0.08	1000	13600	-	0.08	583103521/32640	✓	✓	✓	✓					2KJ3430 - ■■■■■■ - ■■ E1
16241	0.09	1000	13600	-	0.10	53009411/3264	✓	✓	✓	✓					2KJ3430 - ■■■■■■ - ■■ D1
14240	0.10	1000	13600	-	0.12	278875597/19584	✓	✓	✓	✓	✓	✓			2KJ3430 - ■■■■■■ - ■■ C1
12710	0.11	1000	13600	-	0.15	6914271/544	✓	✓	✓	✓	✓	✓			2KJ3430 - ■■■■■■ - ■■ B1
11327	0.13	1000	13600	-	0.17	887331445/78336	✓	✓	✓	✓	✓	✓			2KJ3430 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FZ.89-Z39</b>															
3453	0.42	1850	17400	-	0.06	1398467/405	✓	✓						2KJ3331 - ■■■■■■ - ■■ P1	
3070	0.47	1850	17400	-	0.07	690809/225	✓	✓	✓	✓				2KJ3331 - ■■■■■■ - ■■ N1	
2696	0.54	1850	17400	-	0.08	67396/25	✓	✓	✓	✓				2KJ3331 - ■■■■■■ - ■■ M1	
2451	0.59	1850	17400	-	0.10	134792/55	✓	✓	✓	✓				2KJ3331 - ■■■■■■ - ■■ L1	
2097	0.69	1850	17400	-	0.12	471772/225	✓	✓	✓	✓				2KJ3331 - ■■■■■■ - ■■ K1	
1906	0.76	1850	17400	-	0.14	943544/495	✓	✓	✓	✓				2KJ3331 - ■■■■■■ - ■■ J1	
1685	0.86	1850	17400	-	0.17	16849/10	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ H1	
1532	0.95	1850	17400	-	0.22	16849/11	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ G1	
1342	1.1	1850	17400	-	0.26	724507/540	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ F1	
1238	1.2	1850	17400	-	0.31	724507/585	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ E1	
1097	1.3	1850	17400	-	0.36	98687/90	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ D1	
913	1.6	1850	17400	-	0.48	219037/240	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ C1	
859	1.7	1850	17400	-	0.56	219037/255	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ B1	
770	1.9	1850	17400	-	0.61	623413/810	✓	✓	✓	✓	✓	✓		2KJ3331 - ■■■■■■ - ■■ A1	
<b>FZ.89-D39</b>															
14522	0.1	1850	17400	-	0.03	33327322/2295	✓	✓						2KJ3332 - ■■■■■■ - ■■ N1	
12880	0.11	1850	17400	-	0.05	2898028/225	✓	✓	✓	✓				2KJ3332 - ■■■■■■ - ■■ M1	
11175	0.13	1850	17400	-	0.05	42745913/3825	✓	✓	✓	✓				2KJ3332 - ■■■■■■ - ■■ L1	
10159	0.14	1850	17400	-	0.07	85491826/8415	✓	✓	✓	✓				2KJ3332 - ■■■■■■ - ■■ K1	
8713	0.17	1850	17400	-	0.08	33327322/3825	✓	✓	✓	✓				2KJ3332 - ■■■■■■ - ■■ J1	
7921	0.18	1850	17400	-	0.10	66654644/8415	✓	✓	✓	✓				2KJ3332 - ■■■■■■ - ■■ H1	
6945	0.21	1850	17400	-	0.12	15939154/2295	✓	✓	✓	✓	✓	✓		2KJ3332 - ■■■■■■ - ■■ G1	
6299	0.23	1850	17400	-	0.15	5796056/935	✓	✓	✓	✓	✓	✓		2KJ3332 - ■■■■■■ - ■■ F1	
5525	0.26	1850	17400	-	0.17	5071549/918	✓	✓	✓	✓	✓	✓		2KJ3332 - ■■■■■■ - ■■ E1	
5100	0.28	1850	17400	-	0.21	10143098/1989	✓	✓	✓	✓	✓	✓		2KJ3332 - ■■■■■■ - ■■ D1	
4465	0.32	1850	17400	-	0.25	1138511/255	✓	✓	✓	✓	✓	✓		2KJ3332 - ■■■■■■ - ■■ C1	
3915	0.37	1850	17400	-	0.23	44919434/11475	✓	✓	✓	✓	✓	✓		2KJ3332 - ■■■■■■ - ■■ B1	
3552	0.41	1850	17400	-	0.33	724507/204	✓	✓	✓	✓	✓	✓		2KJ3332 - ■■■■■■ - ■■ A1	
<b>FD.89-Z39</b>															
648	2.2	1850	17400	-	0.75	47389680/73117	✓	✓	✓	✓	✓	✓		2KJ3431 - ■■■■■■ - ■■ E1	
581	2.5	1850	17400	-	0.85	7493240/12903	✓	✓	✓	✓	✓	✓		2KJ3431 - ■■■■■■ - ■■ D1	
494	2.9	1850	17400	-	1.12	2126460/4301	✓	✓	✓	✓	✓	✓		2KJ3431 - ■■■■■■ - ■■ C1	
424	3.4	1850	17400	-	1.48	1822680/4301			✓	✓	✓	✓		2KJ3431 - ■■■■■■ - ■■ B1	
365	4	1850	17400	-	1.91	1569530/4301			✓	✓	✓	✓		2KJ3431 - ■■■■■■ - ■■ A1	
<b>FD.89-D39</b>															
17750	0.08	1850	17400	-	0.12	15389528/867	✓	✓	✓	✓	✓	✓		2KJ3432 - ■■■■■■ - ■■ B1	
15843	0.09	1850	17400	-	0.15	50365728/3179	✓	✓	✓	✓	✓	✓		2KJ3432 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	1 or 9	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H or D	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>P</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FD.109-Z39</b>															
7014	0.21	3100	25000	-	0.06	2940126098/419175	✓	✓							2KJ3433 - ■■■■■■ - ■■ A2
6237	0.23	3100	25000	-	0.07	1452351446/232875	✓	✓	✓	✓					2KJ3433 - ■■■■■■ - ■■ X1
5476	0.26	3100	25000	-	0.09	141692824/25875	✓	✓	✓	✓					2KJ3433 - ■■■■■■ - ■■ W1
4978	0.29	3100	25000	-	0.10	283385648/56925	✓	✓	✓	✓					2KJ3433 - ■■■■■■ - ■■ V1
4259	0.34	3100	25000	-	0.12	991849768/232875	✓	✓	✓	✓					2KJ3433 - ■■■■■■ - ■■ U1
3872	0.37	3100	25000	-	0.15	1983699536/512325	✓	✓	✓	✓					2KJ3433 - ■■■■■■ - ■■ T1
3423	0.42	3100	25000	-	0.17	17711603/5175	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ S1
3111	0.47	3100	25000	-	0.23	35423206/11385	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ R1
2725	0.53	3100	25000	-	0.27	761598929/279450	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ Q1
2516	0.58	3100	25000	-	0.32	117169066/46575	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ P1
2227	0.65	3100	25000	-	0.38	103739389/46575	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ N1
1854	0.78	3100	25000	-	0.50	230250839/124200	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ M1
1745	0.83	3100	25000	-	0.59	27088334/15525	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ L1
1563	0.93	3100	25000	-	0.64	655329311/419175	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ K1
1331	1.1	3100	25000	-	0.84	123981221/93150	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ J1
1141	1.3	3100	25000	-	1.10	17711603/15525			✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ H1
982	1.5	3100	25000	-	1.40	549059693/558900			✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ G1
810	1.8	3100	25000	-	0.73	154343969/190440	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ F1
763	1.9	3100	25000	-	0.84	18158114/23805	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ E1
683	2.1	3100	25000	-	0.96	439286681/642735	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ D1
582	2.5	3100	25000	-	1.28	83108291/142830	✓	✓	✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ C1
499	2.9	3100	25000	-	1.70	11872613/23805			✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ B1
429	3.4	3100	25000	-	2.20	368051003/856980			✓	✓	✓	✓			2KJ3433 - ■■■■■■ - ■■ A1
<b>FD.109-D39</b>															
22701	0.06	3100	25000	-	0.05	5286392566/232875	✓	✓	✓	✓					2KJ3434 - ■■■■■■ - ■■ L1
20637	0.07	3100	25000	-	0.07	10572785132/512325	✓	✓	✓	✓					2KJ3434 - ■■■■■■ - ■■ K1
17699	0.08	3100	25000	-	0.08	179199748/10125	✓	✓	✓	✓					2KJ3434 - ■■■■■■ - ■■ J1
16090	0.09	3100	25000	-	0.10	358399496/22275	✓	✓	✓	✓					2KJ3434 - ■■■■■■ - ■■ H1
14108	0.10	3100	25000	-	0.12	1971197228/139725	✓	✓	✓	✓	✓	✓			2KJ3434 - ■■■■■■ - ■■ G1
12592	0.12	3100	25000	-	0.15	716798992/56925	✓	✓	✓	✓	✓	✓			2KJ3434 - ■■■■■■ - ■■ F1
11222	0.13	3100	25000	-	0.18	313599559/27945	✓	✓	✓	✓	✓	✓			2KJ3434 - ■■■■■■ - ■■ E1
10359	0.14	3100	25000	-	0.21	96492172/9315	✓	✓	✓	✓	✓	✓			2KJ3434 - ■■■■■■ - ■■ D1
9069	0.16	3100	25000	-	0.25	140799802/15525	✓	✓	✓	✓	✓	✓			2KJ3434 - ■■■■■■ - ■■ C1
7952	0.18	3100	25000	-	0.23	5555192188/698625	✓	✓	✓	✓	✓	✓			2KJ3434 - ■■■■■■ - ■■ B1
7214	0.2	3100	25000	-	0.33	44799937/6210	✓	✓	✓	✓	✓	✓			2KJ3434 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FD.129-Z49</b>															
6604	0.22	4850	37200	-	0.18	177513589/26880	✓	✓	✓	✓					2KJ3435 - ■■■■■■ - ■■ B2
6004	0.24	4850	37200	-	0.21	16137599/2688	✓	✓	✓	✓					2KJ3435 - ■■■■■■ - ■■ A2
5106	0.28	4850	37200	-	0.27	9150185/1792	✓	✓	✓	✓					2KJ3435 - ■■■■■■ - ■■ X1
4642	0.31	4850	37200	-	0.32	4159175/896	✓	✓	✓	✓					2KJ3435 - ■■■■■■ - ■■ W1
4142	0.35	4850	37200	-	0.38	133592701/32256	✓	✓	✓	✓	✓	✓			2KJ3435 - ■■■■■■ - ■■ V1
3714	0.39	4850	37200	-	0.45	831835/224	✓	✓	✓	✓	✓	✓			2KJ3435 - ■■■■■■ - ■■ U1
3347	0.43	4850	37200	-	0.53	107972183/32256	✓	✓	✓	✓	✓	✓			2KJ3435 - ■■■■■■ - ■■ T1
3090	0.47	4850	37200	-	0.63	107972183/34944	✓	✓	✓	✓	✓	✓			2KJ3435 - ■■■■■■ - ■■ S1
2821	0.51	4850	37200	-	0.75	53071073/18816	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ R1
2340	0.62	4850	37200	-	0.95	100652035/43008	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ Q1
2203	0.66	4850	37200	-	1.10	100652035/45696	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ P1
2080	0.70	4850	37200	-	1.25	100652035/48384	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ N1
1770	0.82	4850	37200	-	1.53	23790481/13440	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ M1
1516	0.96	4850	37200	-	1.89	1164569/768			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ L1
1333	1.1	4850	37200	-	2.3	86011739/64512			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ K1
1125	1.3	4850	37200	-	2.9	34770703/30912			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ J1
980	1.5	4850	37200	-	3.9	5490111/5600			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ H1
967	1.5	4850	37200	-	1.51	27620791/28560	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ G1
913	1.6	4850	37200	-	1.71	27620791/30240	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ F1
777	1.9	4850	37200	-	2.2	32642753/42000	✓	✓	✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ E1
666	2.2	4850	37200	-	2.8	1597897/2400			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ D1
585	2.5	4850	37200	-	3.5	118016107/201600			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ C1
494	2.9	4850	37200	-	4.5	47708639/96600			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ B1
430	3.4	4850	37200	-	6.0	7532943/17500			✓	✓	✓	✓	✓		2KJ3435 - ■■■■■■ - ■■ A1
<b>FD.129-D49</b>															
27777	0.05	4850	37200	-	0.08	31110629/1120	✓	✓	✓	✓					2KJ3436 - ■■■■■■ - ■■ N1
25252	0.06	4850	37200	-	0.10	2828239/112	✓	✓	✓	✓					2KJ3436 - ■■■■■■ - ■■ M1
21605	0.07	4850	37200	-	0.12	31110629/1440	✓	✓	✓	✓					2KJ3436 - ■■■■■■ - ■■ L1
19641	0.07	4850	37200	-	0.14	2828239/144	✓	✓	✓	✓					2KJ3436 - ■■■■■■ - ■■ K1
17361	0.08	4850	37200	-	0.17	31110629/1792	✓	✓	✓	✓	✓	✓			2KJ3436 - ■■■■■■ - ■■ J1
15783	0.09	4850	37200	-	0.22	14141195/896	✓	✓	✓	✓	✓	✓			2KJ3436 - ■■■■■■ - ■■ H1
13824	0.10	4850	37200	-	0.26	1337757047/96768	✓	✓	✓	✓	✓	✓			2KJ3436 - ■■■■■■ - ■■ G1
12761	0.11	4850	37200	-	0.31	1337757047/104832	✓	✓	✓	✓	✓	✓			2KJ3436 - ■■■■■■ - ■■ F1
11298	0.13	4850	37200	-	0.37	1275535789/112896	✓	✓	✓	✓	✓	✓	✓		2KJ3436 - ■■■■■■ - ■■ E1
9404	0.15	4850	37200	-	0.50	404438177/43008	✓	✓	✓	✓	✓	✓	✓		2KJ3436 - ■■■■■■ - ■■ D1
8851	0.16	4850	37200	-	0.59	23790481/2688	✓	✓	✓	✓	✓	✓	✓		2KJ3436 - ■■■■■■ - ■■ C1
7930	0.18	4850	37200	-	0.65	1151093273/145152	✓	✓	✓	✓	✓	✓	✓		2KJ3436 - ■■■■■■ - ■■ B1
6751	0.21	4850	37200	-	0.85	31110629/4608	✓	✓	✓	✓	✓	✓	✓		2KJ3436 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>P</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FD.149-Z49</b>															
6608	0.22	8000	65000	-	0.18	2590191/392	✓	✓	✓	✓				2KJ3437 - ■■■■■■ - ■■ B2	
6007	0.24	8000	65000	-	0.22	12950955/2156	✓	✓	✓	✓				2KJ3437 - ■■■■■■ - ■■ A2	
5109	0.28	8000	65000	-	0.28	2002725/392	✓	✓	✓	✓				2KJ3437 - ■■■■■■ - ■■ X1	
4545	0.32	8000	65000	-	0.34	10013625/2156	✓	✓	✓	✓				2KJ3437 - ■■■■■■ - ■■ W1	
4144	0.35	8000	65000	-	0.39	3248865/784	✓	✓	✓	✓	✓			2KJ3437 - ■■■■■■ - ■■ V1	
3716	0.39	8000	65000	-	0.47	2002725/539	✓	✓	✓	✓	✓			2KJ3437 - ■■■■■■ - ■■ U1	
3349	0.43	8000	65000	-	0.55	2625795/784	✓	✓	✓	✓	✓			2KJ3437 - ■■■■■■ - ■■ T1	
3092	0.47	8000	65000	-	0.66	7877385/2548	✓	✓	✓	✓	✓			2KJ3437 - ■■■■■■ - ■■ S1	
2822	0.51	8000	65000	-	0.78	3871935/1372	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ R1	
2342	0.62	8000	65000	-	1.0	7343325/3136	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ Q1	
2204	0.66	8000	65000	-	1.16	7343325/3332	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ P1	
2081	0.70	8000	65000	-	1.31	815925/392	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ N1	
1771	0.82	8000	65000	-	1.62	347139/196	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ M1	
1517	0.96	8000	65000	-	2.0	133515/88			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ L1	
1334	1.1	8000	65000	-	2.5	2091735/1568			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ K1	
1125	1.3	8000	65000	-	3.2	110295/98			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ J1	
981	1.5	8000	65000	-	4.2	240327/245			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ H1	
968	1.5	8000	65000	-	1.81	806058/833	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ G1	
914	1.6	8000	65000	-	2.0	44781/49	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ F1	
778	1.9	8000	65000	-	2.6	952614/1225	✓	✓	✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ E1	
666	2.2	8000	65000	-	3.4	36639/55			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ D1	
586	2.5	8000	65000	-	4.3	574011/980			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ C1	
494	2.9	8000	65000	-	5.7	121068/245			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ B1	
431	3.4	8000	65000	-	7.5	2638008/6125			✓	✓	✓	✓		2KJ3437 - ■■■■■■ - ■■ A1	
<b>FD.149-D49</b>															
27793	0.05	8000	65000	-	0.08	1361853/49	✓	✓	✓	✓				2KJ3438 - ■■■■■■ - ■■ N1	
25266	0.06	8000	65000	-	0.10	13618530/539	✓	✓	✓	✓				2KJ3438 - ■■■■■■ - ■■ M1	
21617	0.07	8000	65000	-	0.12	151317/7	✓	✓	✓	✓				2KJ3438 - ■■■■■■ - ■■ L1	
19652	0.07	8000	65000	-	0.14	1513170/77	✓	✓	✓	✓				2KJ3438 - ■■■■■■ - ■■ K1	
17371	0.08	8000	65000	-	0.17	6809265/392	✓	✓	✓	✓	✓			2KJ3438 - ■■■■■■ - ■■ J1	
15791	0.09	8000	65000	-	0.22	34046325/2156	✓	✓	✓	✓	✓			2KJ3438 - ■■■■■■ - ■■ H1	
13832	0.10	8000	65000	-	0.26	10844385/784	✓	✓	✓	✓	✓			2KJ3438 - ■■■■■■ - ■■ G1	
12768	0.11	8000	65000	-	0.31	32533155/2548	✓	✓	✓	✓	✓			2KJ3438 - ■■■■■■ - ■■ F1	
11305	0.13	8000	65000	-	0.37	31019985/2744	✓	✓	✓	✓	✓	✓		2KJ3438 - ■■■■■■ - ■■ E1	
9409	0.15	8000	65000	-	0.50	29506815/3136	✓	✓	✓	✓	✓	✓		2KJ3438 - ■■■■■■ - ■■ D1	
8856	0.16	8000	65000	-	0.59	1735695/196	✓	✓	✓	✓	✓	✓		2KJ3438 - ■■■■■■ - ■■ C1	
7935	0.18	8000	65000	-	0.66	3110405/392	✓	✓	✓	✓	✓	✓		2KJ3438 - ■■■■■■ - ■■ B1	
6755	0.21	8000	65000	-	0.86	756585/112	✓	✓	✓	✓	✓	✓		2KJ3438 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

1) Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

Parallel shaft geared motors

## Transmission ratios and torques for very low speeds

### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FD.169-Z69</b>															
6230	0.23	13600	73500	-	0.21	5189888/833	✓	✓	✓	✓					2KJ3440 - ■■■■■■ - ■■ A2
5664	0.26	13600	73500	-	0.26	4718080/833	✓	✓	✓	✓					2KJ3440 - ■■■■■■ - ■■ X1
4817	0.30	13600	73500	-	0.33	4012800/833	✓	✓	✓	✓					2KJ3440 - ■■■■■■ - ■■ W1
4379	0.33	13600	73500	-	0.40	3648000/833	✓	✓	✓	✓					2KJ3440 - ■■■■■■ - ■■ V1
3907	0.37	13600	73500	-	0.47	9764480/2499	✓	✓	✓	✓	✓	✓			2KJ3440 - ■■■■■■ - ■■ U1
3503	0.41	13600	73500	-	0.57	2918400/833	✓	✓	✓	✓	✓	✓			2KJ3440 - ■■■■■■ - ■■ T1
3158	0.46	13600	73500	-	0.67	7891840/2499	✓	✓	✓	✓	✓	✓			2KJ3440 - ■■■■■■ - ■■ S1
2915	0.50	13600	73500	-	0.80	31567360/10829	✓	✓	✓	✓	✓	✓			2KJ3440 - ■■■■■■ - ■■ R1
2661	0.54	13600	73500	-	0.95	15516160/5831	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ Q1
2208	0.66	13600	73500	-	1.25	1839200/833	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ P1
2078	0.70	13600	73500	-	1.44	29427200/14161	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ N1
1963	0.74	13600	73500	-	1.63	14713600/7497	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ M1
1670	0.87	13600	73500	-	2.1	1391104/833	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ L1
1431	1.0	13600	73500	-	2.6	24320/17			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ K1
1258	1.2	13600	73500	-	3.2	3143360/2499			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ J1
1061	1.4	13600	73500	-	4.2	20331520/19159			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ H1
925	1.6	13600	73500	-	5.7	3852288/4165			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ G1
869	1.7	13600	73500	-	3.2	21401600/24633	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ F1
739	2.0	13600	73500	-	4.3	2023424/2737	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ E1
633	2.3	13600	73500	-	5.6	2723840/4301			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ D1
557	2.6	13600	73500	-	7.1	4572160/8211			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ C1
470	3.1	13600	73500	-	9.7	29573120/62951			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ B1
409	3.5	13600	73500	-	13	5603328/13685			✓	✓	✓	✓	✓		2KJ3440 - ■■■■■■ - ■■ A1
<b>FD.169-D69</b>															
29846	0.05	13600	73500	-	0.07	4387328/147	✓	✓	✓	✓					2KJ3441 - ■■■■■■ - ■■ P1
26206	0.06	13600	73500	-	0.08	1284096/49	✓	✓	✓	✓					2KJ3441 - ■■■■■■ - ■■ N1
23824	0.06	13600	73500	-	0.10	1167360/49	✓	✓	✓	✓					2KJ3441 - ■■■■■■ - ■■ M1
20382	0.07	13600	73500	-	0.12	428032/21	✓	✓	✓	✓					2KJ3441 - ■■■■■■ - ■■ L1
18530	0.08	13600	73500	-	0.15	389120/21	✓	✓	✓	✓					2KJ3441 - ■■■■■■ - ■■ K1
16379	0.09	13600	73500	-	0.17	802560/49	✓	✓	✓	✓	✓	✓			2KJ3441 - ■■■■■■ - ■■ J1
14890	0.10	13600	73500	-	0.23	729600/49	✓	✓	✓	✓	✓	✓			2KJ3441 - ■■■■■■ - ■■ H1
13042	0.11	13600	73500	-	0.26	5751680/441	✓	✓	✓	✓	✓	✓			2KJ3441 - ■■■■■■ - ■■ G1
12039	0.12	13600	73500	-	0.32	23006720/1911	✓	✓	✓	✓	✓	✓			2KJ3441 - ■■■■■■ - ■■ F1
10659	0.14	13600	73500	-	0.39	10968320/1029	✓	✓	✓	✓	✓	✓	✓		2KJ3441 - ■■■■■■ - ■■ E1
8872	0.16	13600	73500	-	0.52	434720/49	✓	✓	✓	✓	✓	✓	✓		2KJ3441 - ■■■■■■ - ■■ D1
8350	0.17	13600	73500	-	0.61	6955520/833	✓	✓	✓	✓	✓	✓	✓		2KJ3441 - ■■■■■■ - ■■ C1
7482	0.19	13600	73500	-	0.68	9898240/1323	✓	✓	✓	✓	✓	✓	✓		2KJ3441 - ■■■■■■ - ■■ B1
6370	0.23	13600	73500	-	0.89	133760/21	✓	✓	✓	✓	✓	✓	✓		2KJ3441 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>P</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>FD.189-Z69</b>															
7150	0.20	19000	110900	-	0.23	191447542/26775	✓	✓	✓	✓				2KJ3442 - ■■■■■■ - ■■ C2	
6500	0.22	19000	110900	-	0.28	34808644/5355	✓	✓	✓	✓				2KJ3442 - ■■■■■■ - ■■ B2	
5529	0.26	19000	110900	-	0.35	1973686/357	✓	✓	✓	✓				2KJ3442 - ■■■■■■ - ■■ A2	
5026	0.29	19000	110900	-	0.43	1794260/357	✓	✓	✓	✓				2KJ3442 - ■■■■■■ - ■■ X1	
4484	0.32	19000	110900	-	0.51	72039539/16065	✓	✓	✓	✓	✓	✓		2KJ3442 - ■■■■■■ - ■■ W1	
4021	0.36	19000	110900	-	0.62	1435408/357	✓	✓	✓	✓	✓	✓		2KJ3442 - ■■■■■■ - ■■ V1	
3624	0.40	19000	110900	-	0.73	58223737/16065	✓	✓	✓	✓	✓	✓		2KJ3442 - ■■■■■■ - ■■ U1	
3345	0.43	19000	110900	-	0.87	17914996/5355	✓	✓	✓	✓	✓	✓		2KJ3442 - ■■■■■■ - ■■ T1	
3054	0.47	19000	110900	-	1.04	114473788/37485	✓	✓	✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ S1	
2534	0.57	19000	110900	-	1.38	10855273/4284	✓	✓	✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ R1	
2385	0.61	19000	110900	-	1.57	43421092/18207	✓	✓	✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ Q1	
2252	0.64	19000	110900	-	1.78	21710546/9639	✓	✓	✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ P1	
1917	0.76	19000	110900	-	2.3	51315836/26775	✓	✓	✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ N1	
1642	0.88	19000	110900	-	2.9	1255982/765			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ M1	
1444	1.0	19000	110900	-	3.6	46381621/32130			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ L1	
1218	1.2	19000	110900	-	4.8	150000136/123165			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ K1	
1061	1.4	19000	110900	-	6.4	15789488/14875			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ J1	
997	1.5	19000	110900	-	4.0	31578976/31671	✓	✓	✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ H1	
848	1.7	19000	110900	-	5.4	74641216/87975	✓	✓	✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ G1	
727	2.0	19000	110900	-	7.1	140669984/193545			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ F1	
639	2.3	19000	110900	-	9.1	33732088/52785			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ E1	
539	2.7	19000	110900	-	12	218182016/404685			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ D1	
478	3.0	19000	110900	-	12	8403976/17595			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ C1	
403	3.6	19000	110900	-	16	54357632/134895			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ B1	
351	4.1	19000	110900	-	21	17165568/48875			✓	✓	✓	✓	✓	2KJ3442 - ■■■■■■ - ■■ A1	
<b>FD.189-D69</b>															
27341	0.05	19000	110900	-	0.10	2870816/105	✓	✓	✓	✓				2KJ3443 - ■■■■■■ - ■■ M1	
23392	0.06	19000	110900	-	0.12	15789488/675	✓	✓	✓	✓				2KJ3443 - ■■■■■■ - ■■ L1	
21265	0.07	19000	110900	-	0.15	2870816/135	✓	✓	✓	✓				2KJ3443 - ■■■■■■ - ■■ K1	
18797	0.08	19000	110900	-	0.17	1973686/105	✓	✓	✓	✓	✓	✓		2KJ3443 - ■■■■■■ - ■■ J1	
17088	0.08	19000	110900	-	0.23	358852/21	✓	✓	✓	✓	✓	✓		2KJ3443 - ■■■■■■ - ■■ H1	
14968	0.10	19000	110900	-	0.27	42434249/2835	✓	✓	✓	✓	✓	✓		2KJ3443 - ■■■■■■ - ■■ G1	
13817	0.10	19000	110900	-	0.32	13056692/945	✓	✓	✓	✓	✓	✓		2KJ3443 - ■■■■■■ - ■■ F1	
12233	0.12	19000	110900	-	0.39	80921126/6615	✓	✓	✓	✓	✓	✓	✓	2KJ3443 - ■■■■■■ - ■■ E1	
10182	0.14	19000	110900	-	0.53	12828959/1260	✓	✓	✓	✓	✓	✓	✓	2KJ3443 - ■■■■■■ - ■■ D1	
9583	0.15	19000	110900	-	0.62	51315836/5355	✓	✓	✓	✓	✓	✓	✓	2KJ3443 - ■■■■■■ - ■■ C1	
8586	0.17	19000	110900	-	0.69	73026382/8505	✓	✓	✓	✓	✓	✓	✓	2KJ3443 - ■■■■■■ - ■■ B1	
7310	0.20	19000	110900	-	0.90	986843/135	✓	✓	✓	✓	✓	✓	✓	2KJ3443 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

1) Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

## Parallel shaft geared motors

### Dimensional drawings

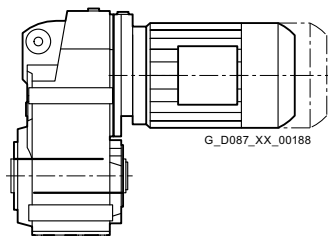
#### Overview

Information about dimensional drawings can be found in chapter [Introduction on page 1/24](#).

Design	Frame size	Dimensional drawing on page
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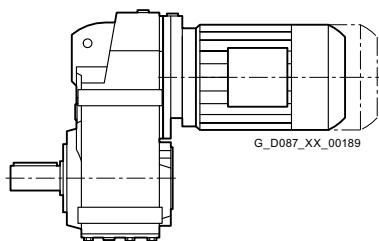
#### Parallel shaft geared motor FZ and FD

##### Shaft-mounted design



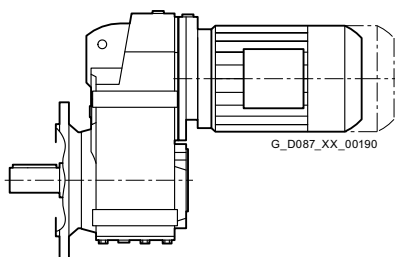
FZAD./FDAD.29	4/70
FZAD./FDAD.39	4/74
FZAD./FDAD.49	4/78
FZAD./FDAD.69	4/82
FZAD./FDAD.79	4/86
FZAD./FDAD.89	4/90
FZAD./FDAD.109	4/95
FZAD./FDAD.129	4/100
FZAD./FDAD.149	4/105
FZAD./FDAD.169	4/110
FZAD./FDAD.189	4/115

##### Housing flange design



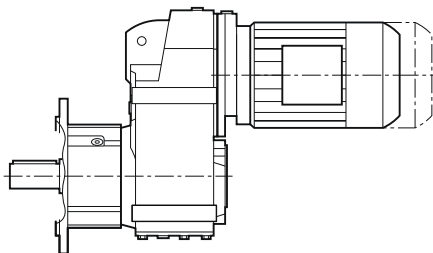
FZ.Z./FD.Z.29	4/71
FZ.Z./FD.Z.39	4/75
FZ.Z./FD.Z.49	4/79
FZ.Z./FD.Z.69	4/83
FZ.Z./FD.Z.79	4/87
FZ.Z./FD.Z.89	4/91
FZ.Z./FD.Z.109	4/96
FZ.Z./FD.Z.129	4/101
FZ.Z./FD.Z.149	4/106
FZ.Z./FD.Z.169	4/111
FZ.Z./FD.Z.189	4/116

##### Flange-mounted design



FZ.F./FD.F.29	4/72
FZ.F./FD.F.39	4/76
FZ.F./FD.F.49	4/80
FZ.F./FD.F.69	4/84
FZ.F./FD.F.79	4/88
FZ.F./FD.F.89	4/92
FZ.F./FD.F.109	4/97
FZ.F./FD.F.129	4/102
FZ.F./FD.F.149	4/107
FZ.F./FD.F.169	4/112
FZ.F./FD.F.189	4/117

##### Flange-mounted design with VLplus reinforced bearing system



FZ.F./FD.F.89	4/93
FZ.F./FD.F.109	4/98
FZ.F./FD.F.129	4/103
FZ.F./FD.F.149	4/108
FZ.F./FD.F.169	4/113

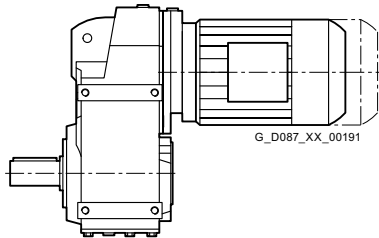


**Overview**

Design	Frame size	Dimensional drawing on page
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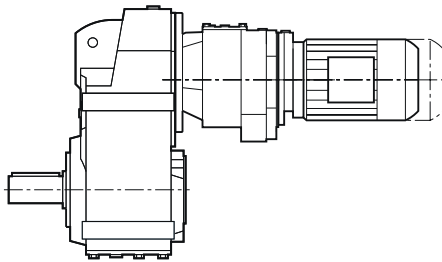
**Parallel shaft geared motor FZ and FD**

*Foot-mounted design*



FZ../FD..29	4/73
FZ../FD..39	4/77
FZ../FD..49	4/81
FZ../FD..69	4/85
FZ../FD..79	4/89
FZ../FD..89	4/94
FZ../FD..109	4/99
FZ../FD..129	4/104
FZ../FD..149	4/109
FZ../FD..169	4/114
FZ../FD..189	4/118

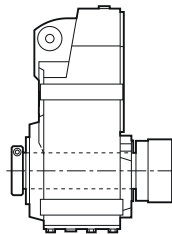
**Parallel shaft tandem geared motor**



FZ../FD..29-Z/D19 ... FD..189-Z/D69	4/119 ... 4/120
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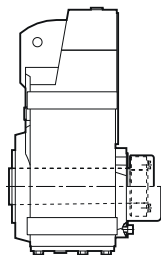
**Additional versions and options**

*SIMOLOC assembly system*



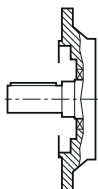
FZADR/FDADR29 ... FZADR/FDADR89	4/121
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**Protective covers**



FZ../FD..29 ... FZ../FD..189	4/122 ... 4/123
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**Inner contour of the flange-mounted design**



FZF/FDF.29 ... FZF/FDF.189	4/124
FZAF/FDAF.29 ... FZAF/FDAF.189	

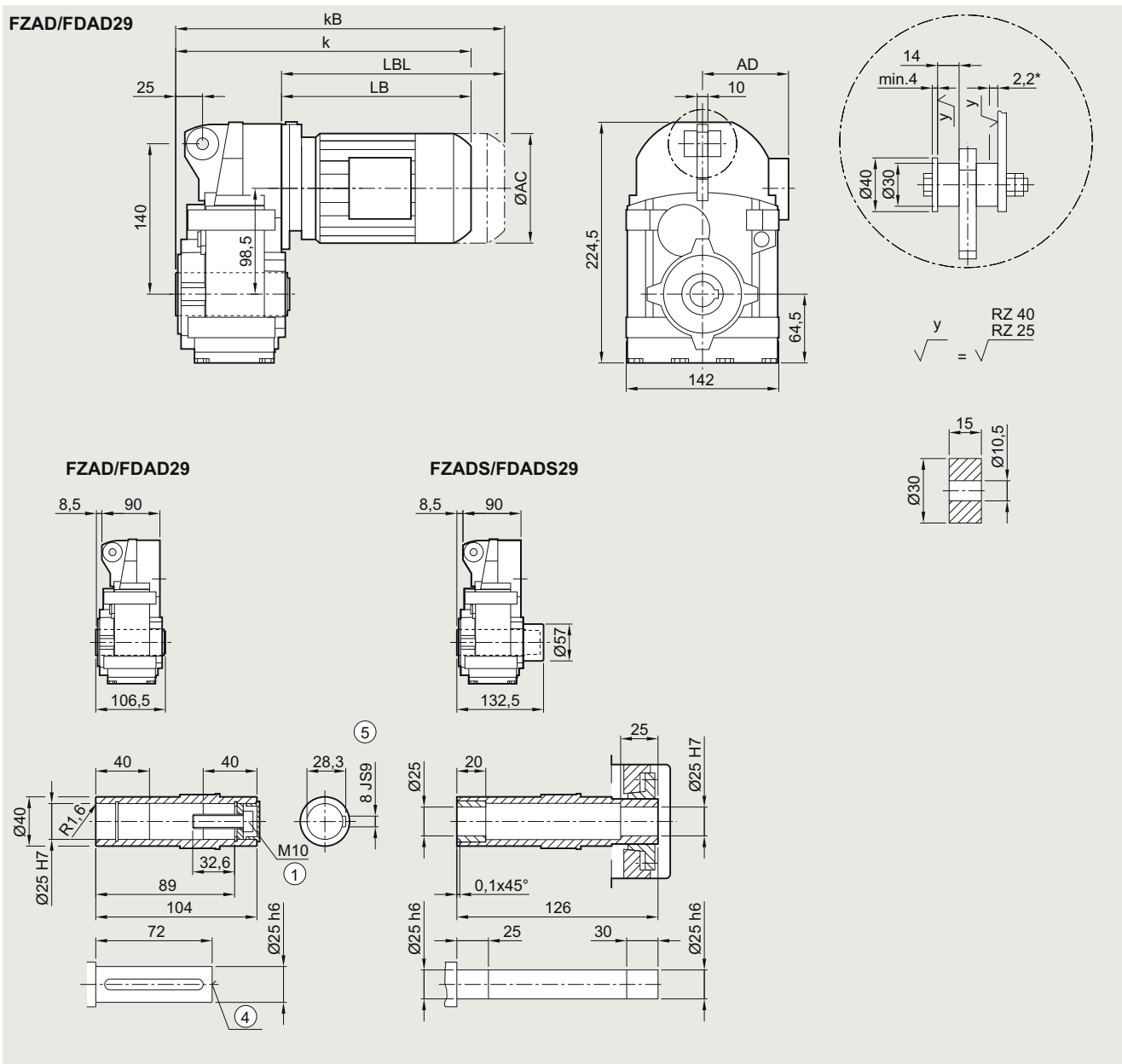
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.29 in a shaft-mounted design

FAD030, FADS030



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90 <sup>2)</sup>	90Z <sup>2)</sup>	100 <sup>2)</sup>	100Z <sup>2)</sup>
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	292.5	318.5	324.5	343.5	383.5	388.5	423.5	450.0	490.0	506.5	541.5
kB	337.0	363.0	379.5	398.5	438.5	448.5	483.5	520.0	560.0	585.0	620.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4017

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

\* Spring compression at max. torque

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>2)</sup> FDADS/FZADS not possible



# SIMOGEAR geared motors

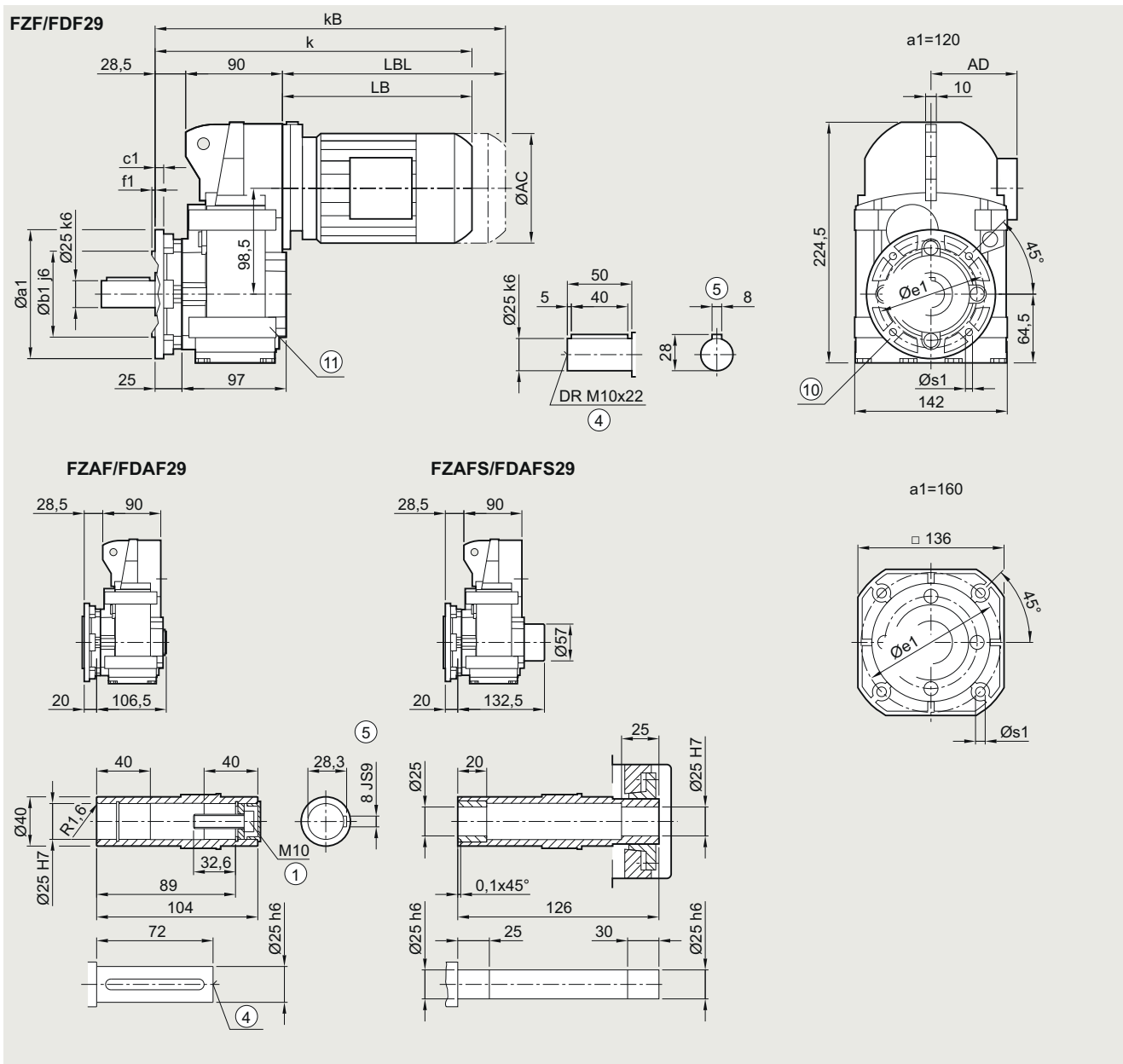
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.F/FD.F.29 in a flange-mounted design

FF030, FAF030, FAFS030

4



Flange	a1	b1	c1	f1	e1	s1
	120	80	8	3.0	100	6.6
	160	110	9	3.5	130	9.0

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90 <sup>2)</sup>	90Z <sup>2)</sup>	100 <sup>2)</sup>	100Z <sup>2)</sup>
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	312.5	338.5	344.5	363.5	400.5	408.5	443.5	470.0	510.0	526.5	561.5
kB	357.0	383.0	399.5	418.5	458.5	468.5	503.5	540.0	580.0	605.0	640.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4017

④ DIN 332

⑤ Feather key/keyway DIN 6885-1 ⑥ For inner contour, see page 4/124

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46. <sup>2)</sup> FDADS/FZADS not possible ⑦ Use bores only for foot-mounted design



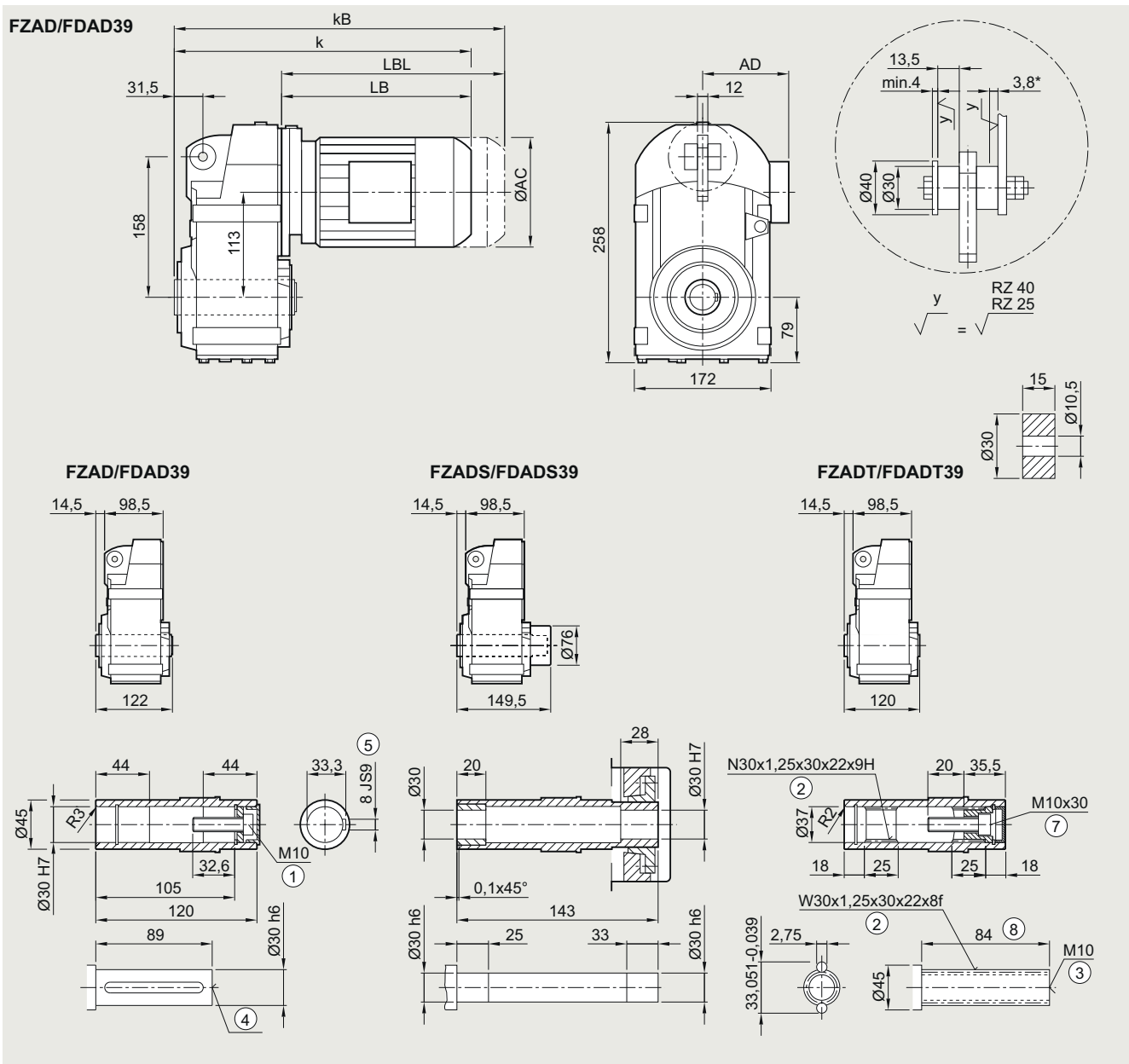
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.39 in a shaft-mounted design

FAD030, FADS030, FADT030

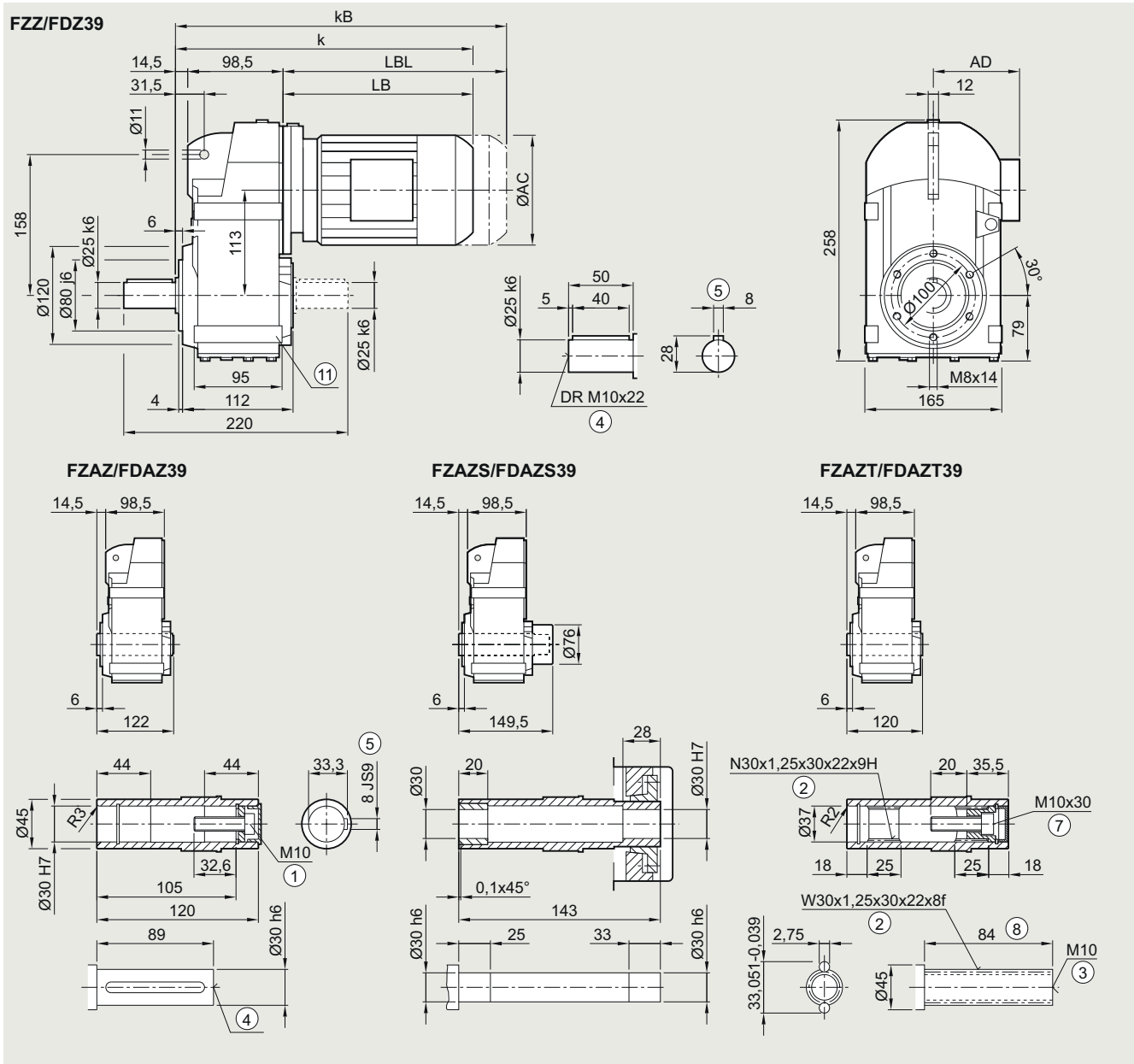


Motor	LE													
	63	63Z	71	71Z	71Y	80	80Z	90S	90Z	100 <sup>2)</sup>	100Z <sup>2)</sup>	112 <sup>2)</sup>	112Z <sup>2)</sup>	
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	
k	307.0	333.0	339.0	358.0	398.0	403.0	438.0	464.5	504.5	521.0	556.0	531.0	556.0	
kB	351.5	377.5	394.0	413.0	453.0	463.0	498.0	534.5	574.5	599.5	634.5	604.0	629.0	
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0	
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder + 1 mm  
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.    <sup>2)</sup> FDADS/FZADS not possible    \* Spring compression at max. torque

**Gearbox FZ.Z./FD.Z.39 in a housing flange design**

**FZ030, FAZ030, FAZS030, FAZT030**



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100 <sup>2)</sup>	100Z <sup>2)</sup>	112 <sup>2)</sup>	112Z <sup>2)</sup>
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	307.0	333.0	339.0	358.0	398.0	403.0	438.0	464.5	504.5	521.0	556.0	531.0	556.0
kB	351.5	377.5	394.0	413.0	453.0	463.0	498.0	534.5	574.5	599.5	634.5	604.0	629.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑨ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>2)</sup> FDADS/FZADS not possible

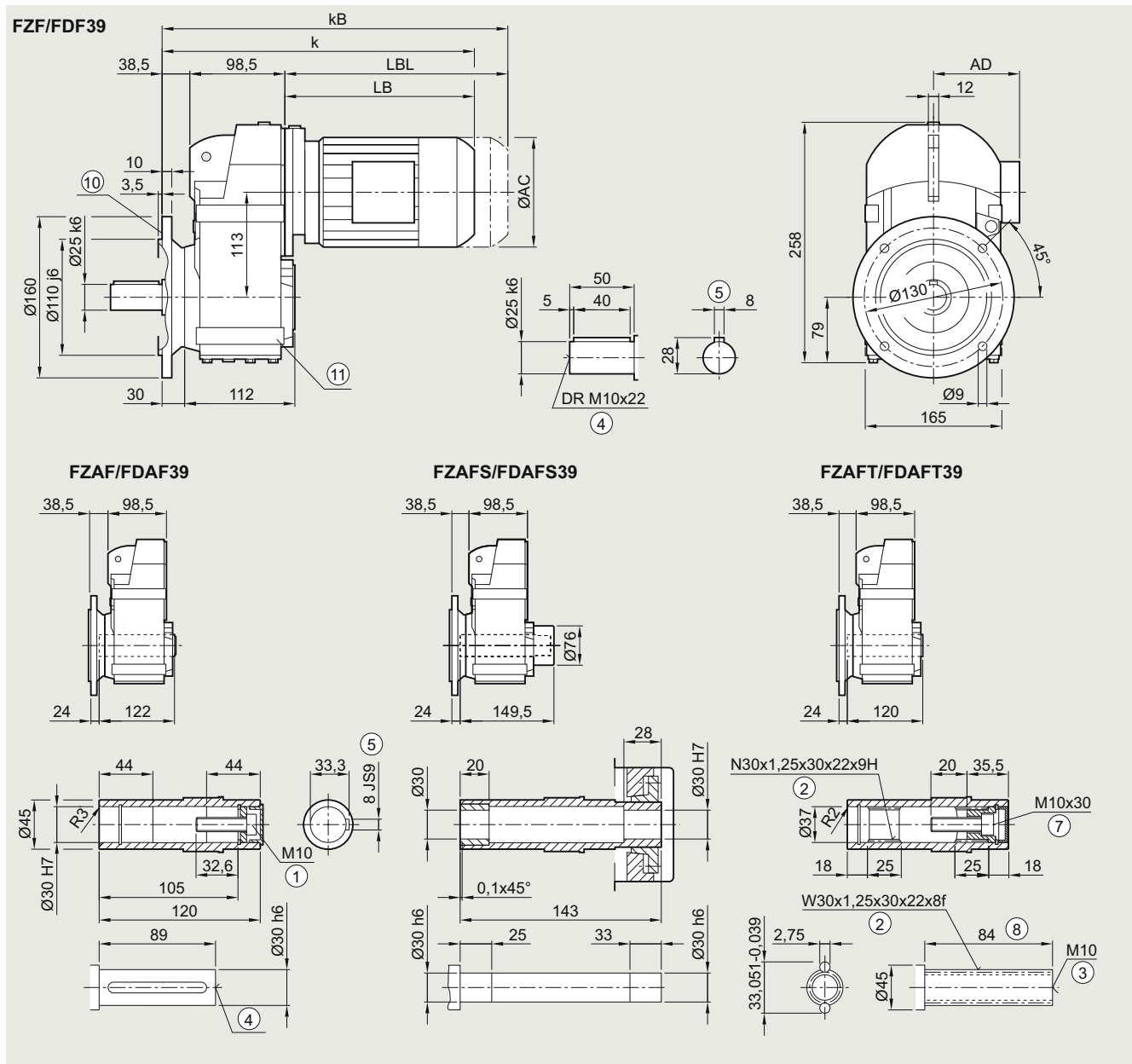
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.F/FD.F.39 in a flange-mounted design

FF030, FAF030, FAFS030, FAFT030



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100 <sup>(2)</sup>	100Z <sup>(2)</sup>	112 <sup>(2)</sup>	112Z <sup>(2)</sup>
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	331.0	357.0	363.0	382.0	422.0	427.0	462.0	488.5	528.5	545.0	580.0	555.0	580.0
kB	375.5	401.5	418.0	437.0	477.0	487.0	522.0	558.5	598.5	623.5	658.5	628.0	653.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

Ⓣ For inner contour, see page 4/124 Ⓢ Use bores only for foot-mounted design

1) AD depends on the motor options, for other dimensions, see page 9/46. 2) FADAFS/FZAFS not possible





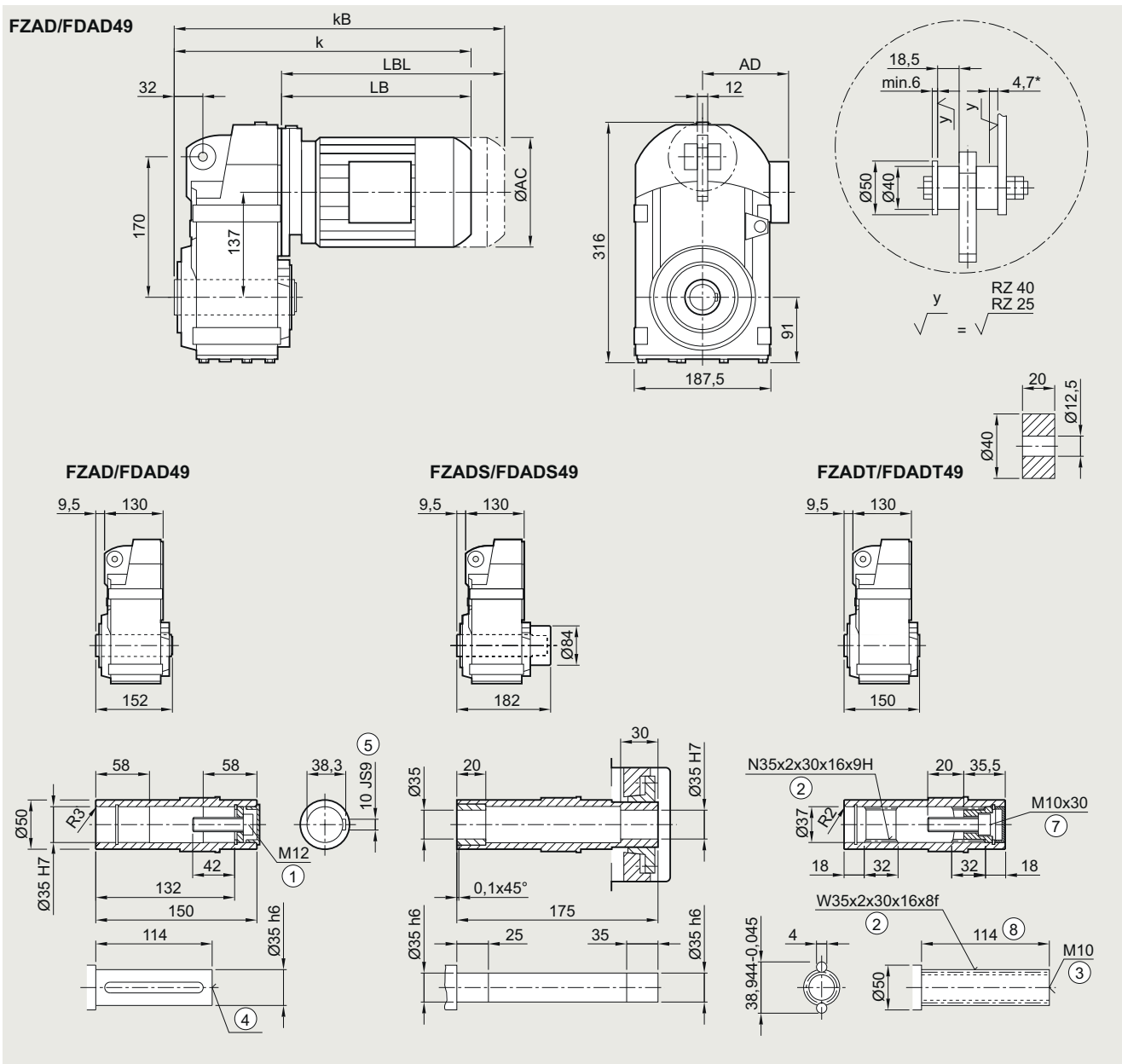
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.49 in a shaft-mounted design

FAD030, FADS030, FADT030



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112 <sup>2)</sup>	112Z <sup>2)</sup>	132 <sup>2)</sup>	132Z <sup>2)</sup>
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	324.0	350.0	356.0	375.0	415.0	420.0	455.0	481.5	521.5	538.0	573.0	548.0	582.5	601.0	651.0
kB	368.5	394.5	411.0	430.0	470.0	480.0	515.0	551.5	591.5	616.5	651.5	621.0	655.5	705.5	755.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	430.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder + 1 mm  
 1) AD depends on the motor options, for other dimensions, see page 9/46.    2) FDADS/FZADS not possible    \* Spring compression at max. torque



# SIMOGEAR geared motors

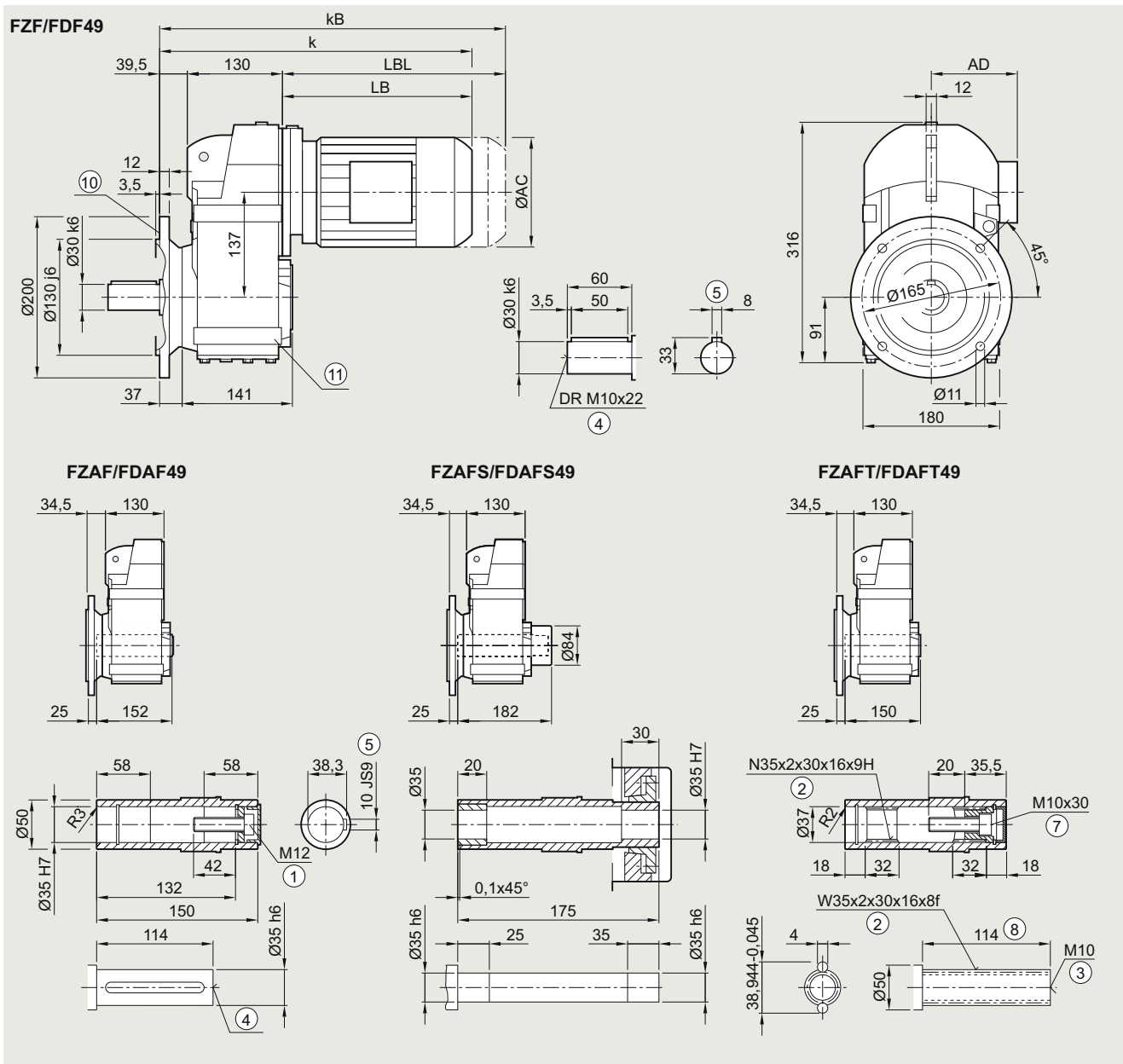
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.F/FD.F.49 in a flange-mounted design

FF030, FAF030, FAFS030, FAFT030

4



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112 <sup>2)</sup>	112Z <sup>2)</sup>	132 <sup>2)</sup>	132Z <sup>2)</sup>
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	354.0	380.0	386.0	394.0	434.0	450.0	485.0	511.5	551.5	568.0	603.0	578.0	612.5	631.0	681.0
kB	398.5	424.5	441.0	460.0	500.0	510.0	545.0	581.5	621.5	646.5	681.5	651.0	685.5	735.5	785.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	430.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑩ For inner contour, see page 4/124    ⑪ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.    2) FADAFS/FZAFS not possible



# SIMOGEAR geared motors

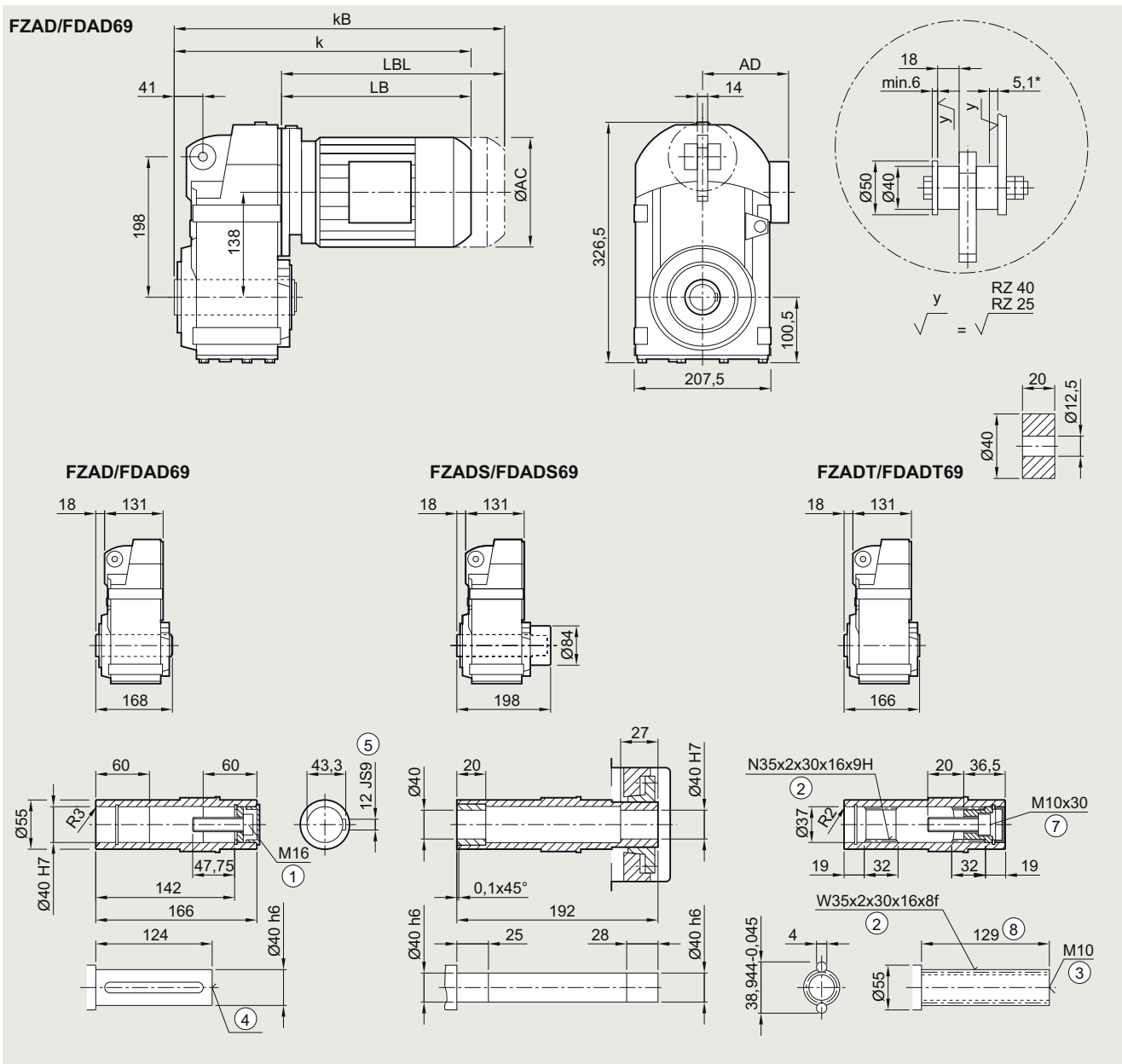
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.69 in a shaft-mounted design

FAD030, FADS030, FADT030

4



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112 <sup>2)</sup>	112Z <sup>2)</sup>	132 <sup>2)</sup>	132Z <sup>2)</sup>
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	333.5	359.5	365.5	384.5	424.5	429.5	464.5	491.0	531.0	547.5	582.5	557.5	592.0	610.5	660.5
kB	378.0	404.0	420.5	439.5	479.5	489.5	524.5	561.0	601.0	626.0	661.0	630.5	665.0	715.0	765.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	340.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder + 1 mm  
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.    <sup>2)</sup> FDADS/FZADS not possible    \* Spring compression at max. torque









# SIMOGEAR geared motors

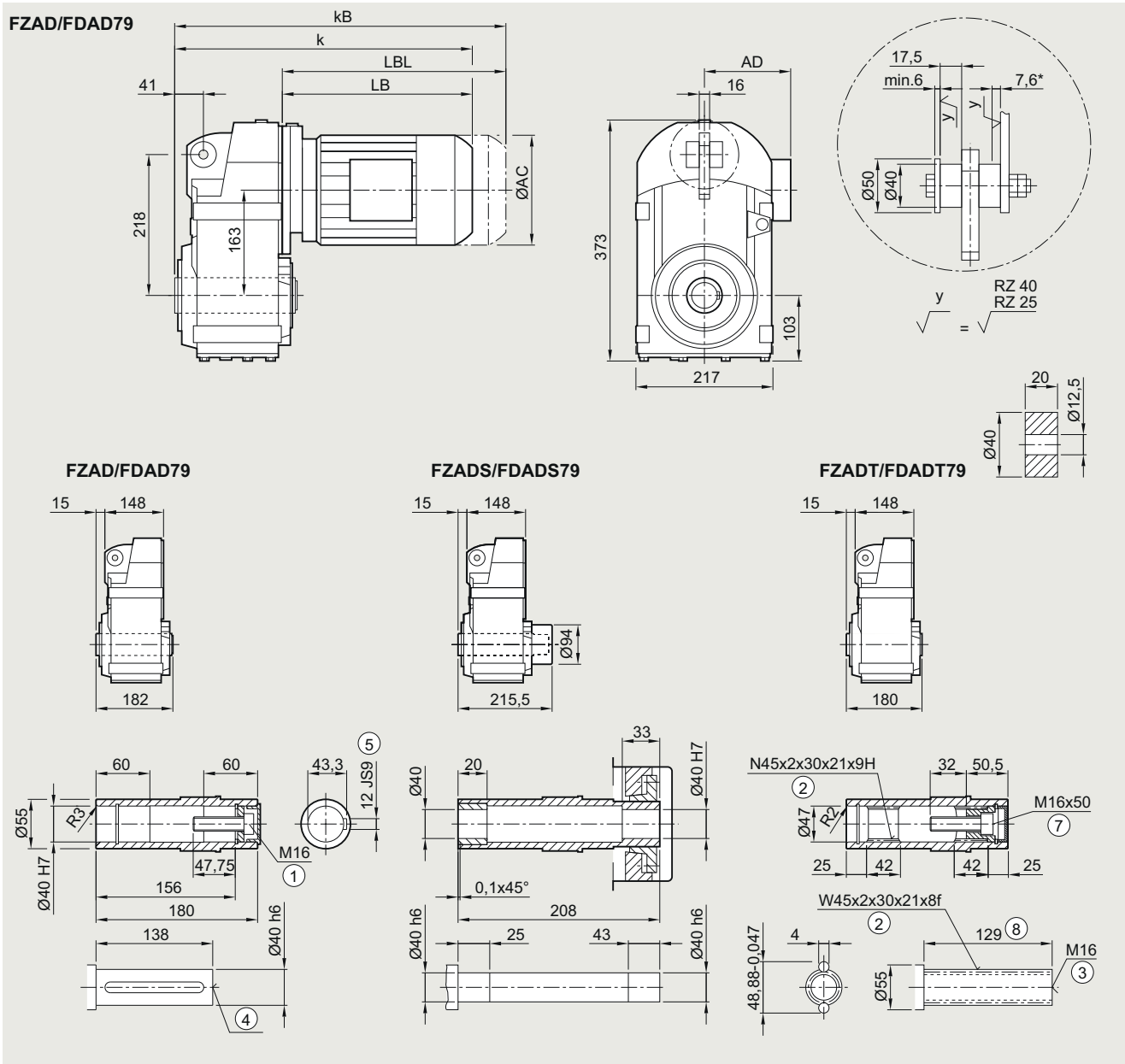
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.79 in a shaft-mounted design

FAD030, FADS030, FADT030

4



Motor	LE														
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160 <sup>2)</sup>	160Z <sup>2)</sup>
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0
k	377.5	396.5	436.5	437.5	472.5	499.0	539.0	555.5	590.5	565.5	590.5	618.5	668.5	700.5	760.5
kB	432.5	451.5	491.5	497.5	532.5	569.0	609.0	634.0	669.0	638.5	663.5	723.0	773.0	816.5	876.5
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm  
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.    <sup>2)</sup> FDAS/FZAS not possible    \* Spring compression at max. torque



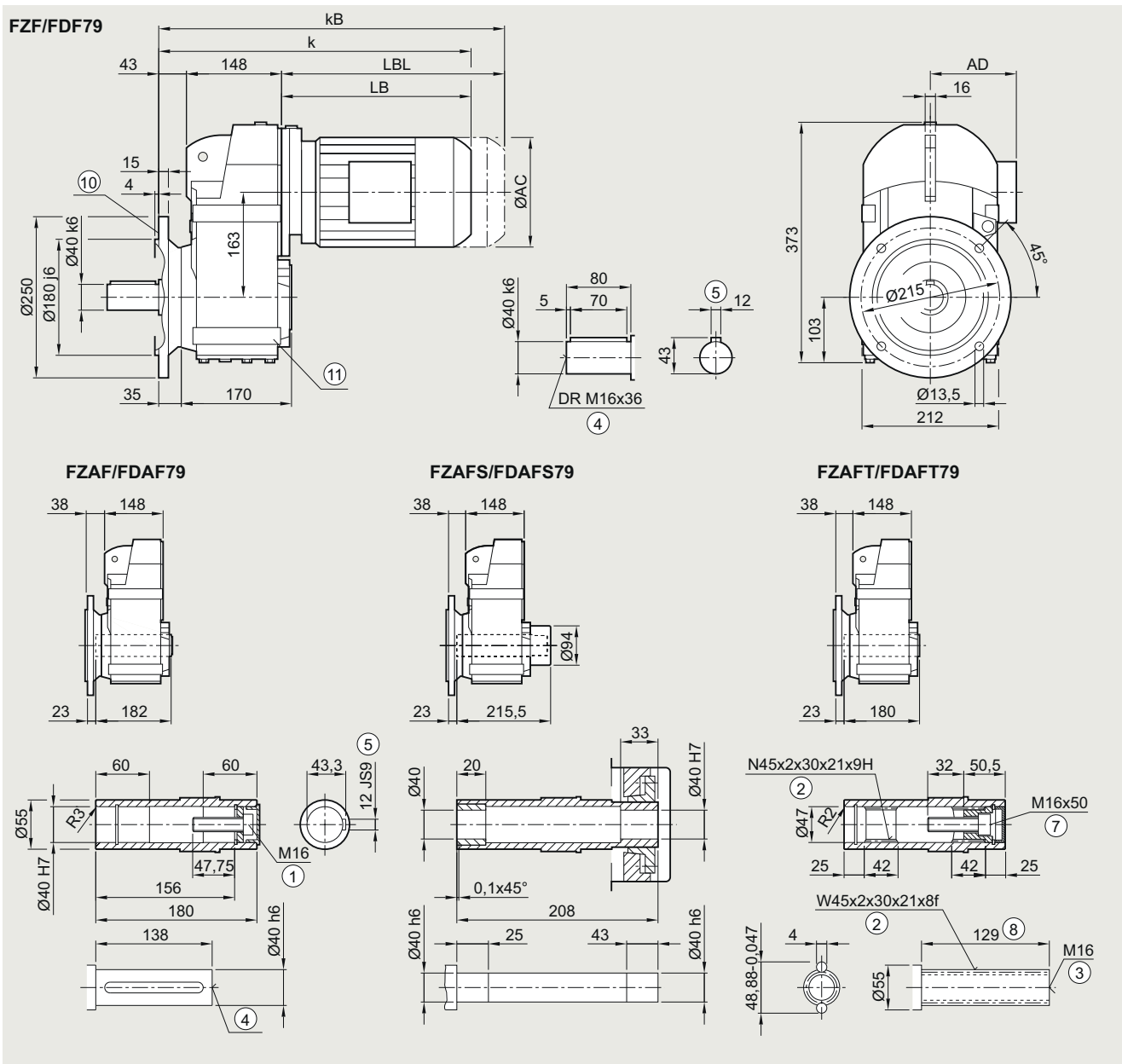
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.F/FD.F.79 in a flange-mounted design

FF030, FAF030, FAFS030, FAFT030



Motor	LE 71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160 <sup>(2)</sup>	160Z <sup>(2)</sup>
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0
k	405.5	424.5	464.5	465.5	500.5	527.0	567.0	583.5	618.5	593.5	618.5	646.5	696.5	728.5	788.5
kB	460.5	479.5	519.5	525.5	560.5	597.0	637.0	662.0	697.0	666.5	691.5	751.0	801.0	844.5	904.5
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5

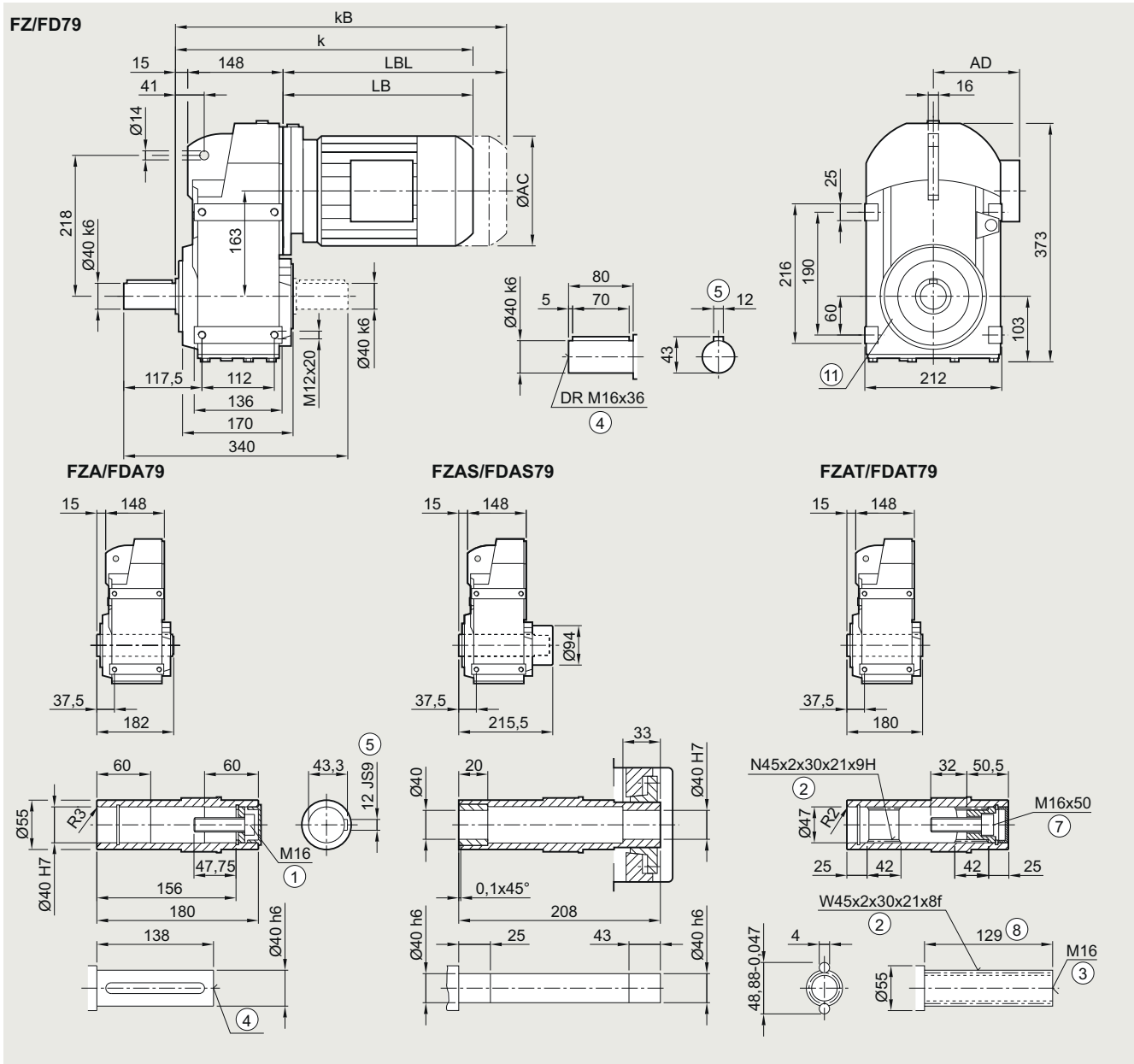
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

Ⓜ For inner contour, see page 4/124 Ⓜ Use bores only for foot-mounted design

1) AD depends on the motor options, for other dimensions, see page 9/46. 2) FADAFS/FZAFS not possible

**Gearbox FZ./FD..79 in a foot-mounted design**

**F030, FA030, FAS030, FAT030**



Motor	LE 71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160 <sup>2)</sup>	160Z <sup>2)</sup>
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0
k	377.5	396.5	436.5	437.5	472.5	499.0	539.0	555.5	590.5	565.5	590.5	618.5	668.5	700.5	760.5
kB	432.5	451.5	491.5	497.5	532.5	569.0	609.0	634.0	669.0	638.5	663.5	723.0	773.0	816.5	876.5
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑩ Use bores only for housing flange design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>2)</sup> FDAS/FZAS not possible

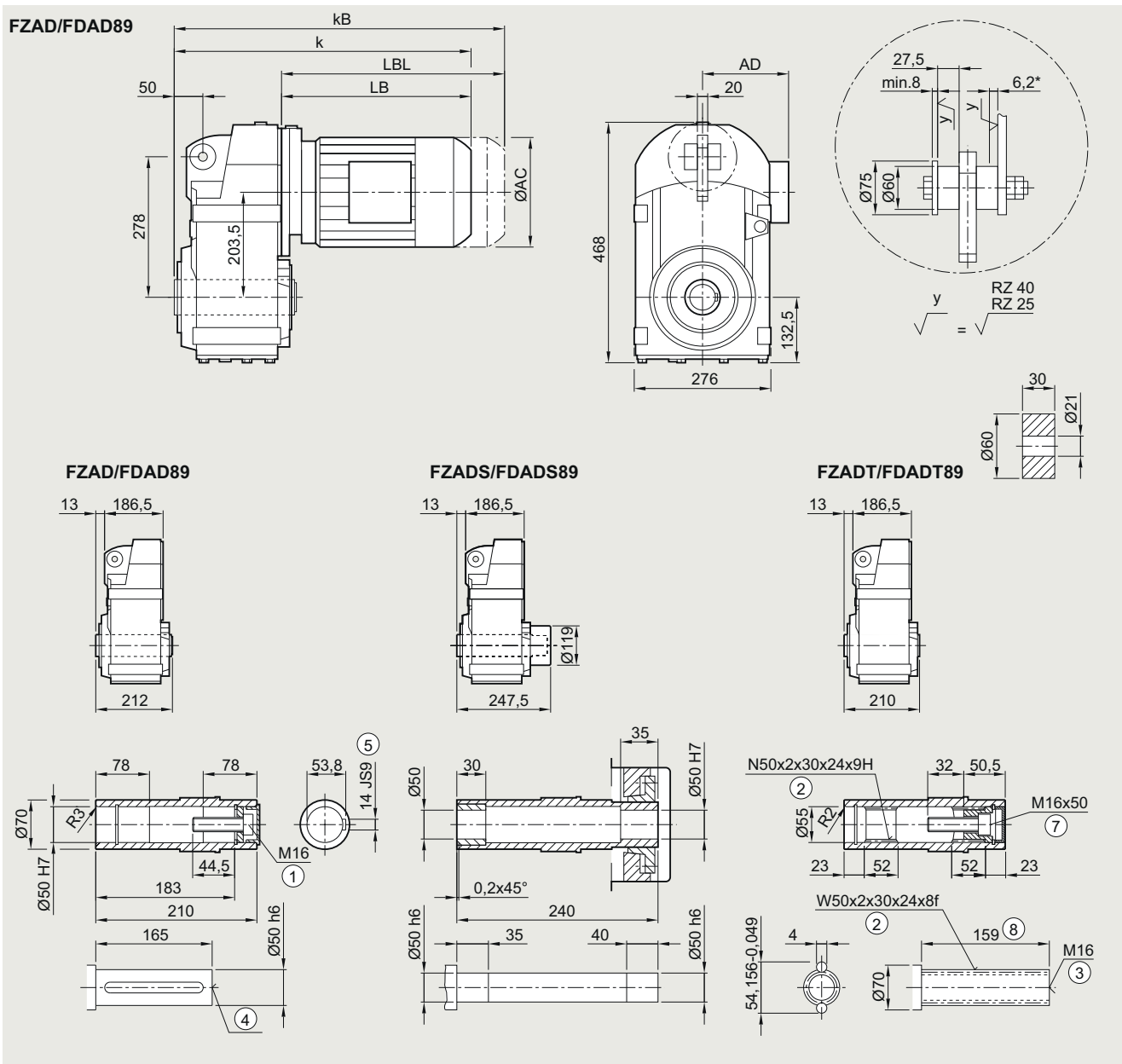
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.89 in a shaft-mounted design

FAD030, FADS030, FADT030



Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180 <sup>2)</sup>	180Z <sup>2)</sup>
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	461.0	496.0	522.5	562.5	575.0	610.0	585.0	610.0	638.0	688.0	720.0	780.0	793.0	823.0
kB	521.0	556.0	592.5	632.5	653.5	688.5	658.0	683.0	742.5	792.5	836.0	896.0	922.0	952.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder + 1 mm  
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.    <sup>2)</sup> FDAS/FZAS not possible    \* Spring compression at max. torque

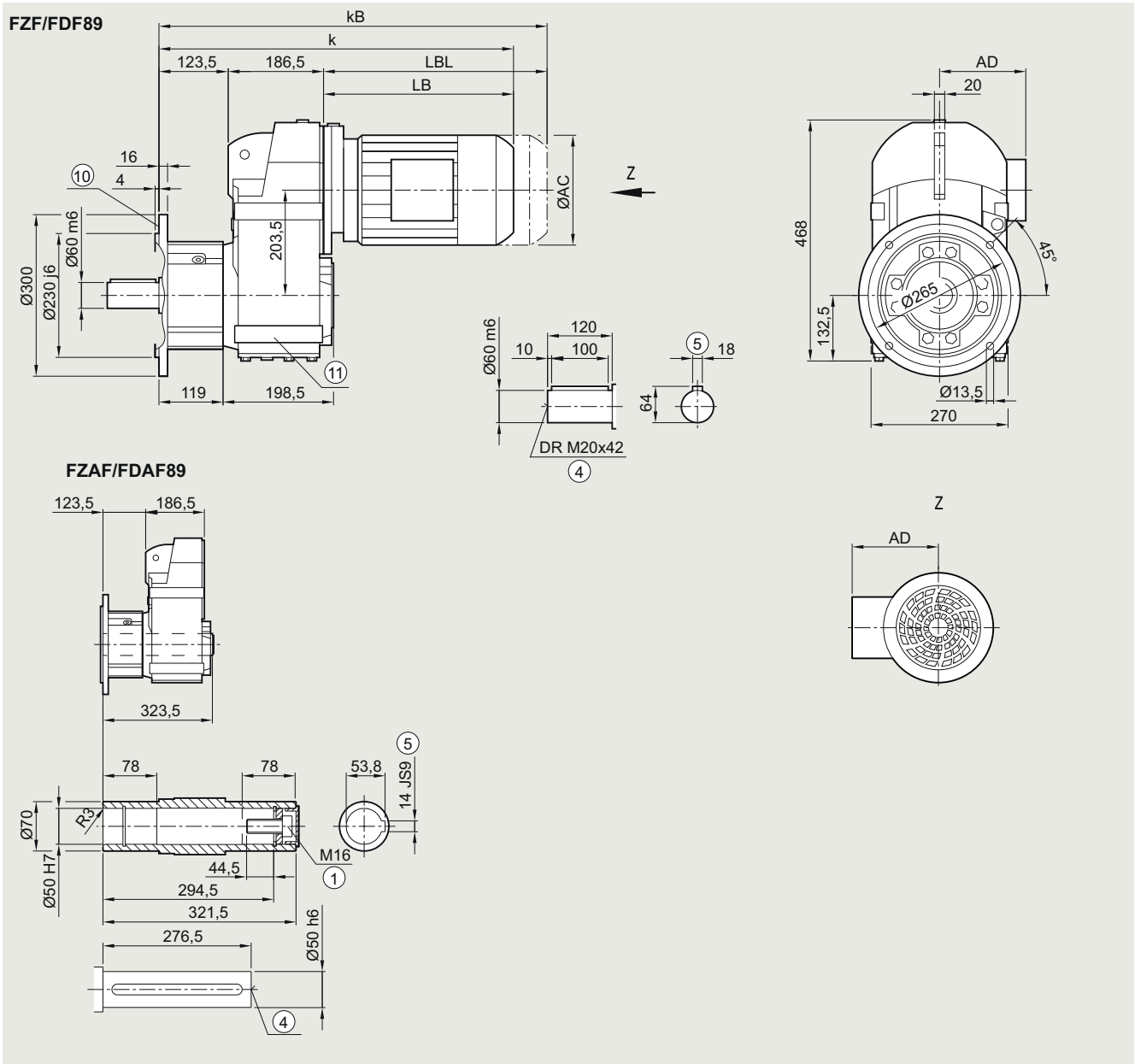






**Gearbox FZ.F/FD.F.89 in a flange-mounted design with VLplus reinforced bearing system (G30)**

**FF040, FAF040**



4

Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	571.5	606.5	633.0	673.0	685.5	720.5	695.5	720.5	748.5	798.5	830.5	890.5	903.5	933.5
kB	631.5	666.5	703.0	743.0	764.0	799.0	768.5	793.5	853.0	903.0	946.5	1006.5	1033.0	1062.5
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

① ISO 4014    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑩ Use bores only for foot-mounted design

⑨ For inner contour, see page 4/124

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

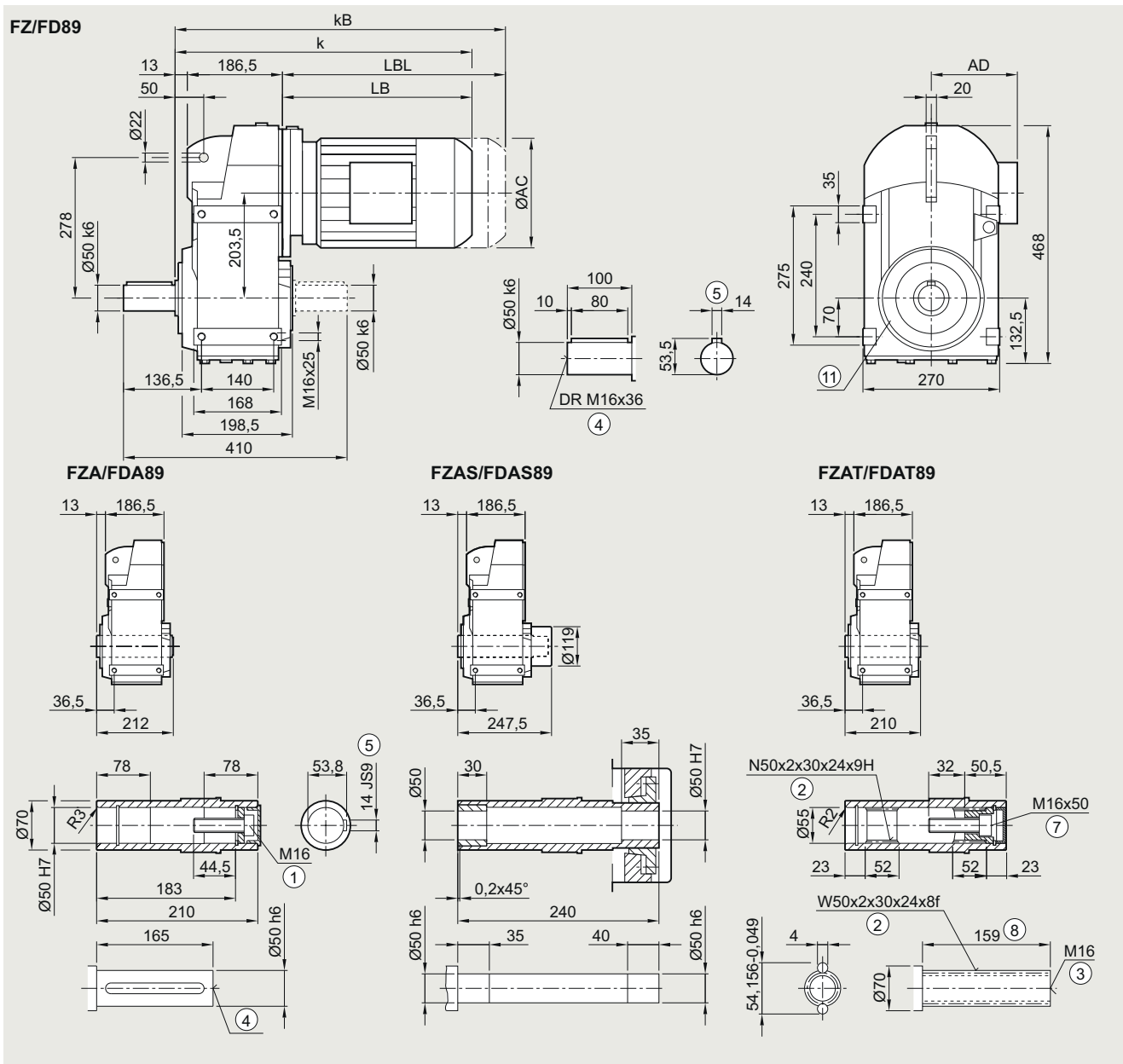
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ./FD..89 in a foot-mounted design

F030, FA030, FAS030, FAT030

4



Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180 <sup>2)</sup>	180Z <sup>2)</sup>
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	461.0	496.0	522.5	562.5	575.0	610.0	585.0	610.0	638.0	688.0	720.0	780.0	793.0	823.0
kB	521.0	556.0	592.5	632.5	653.5	688.5	658.0	683.0	742.5	792.5	836.0	896.0	922.0	952.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

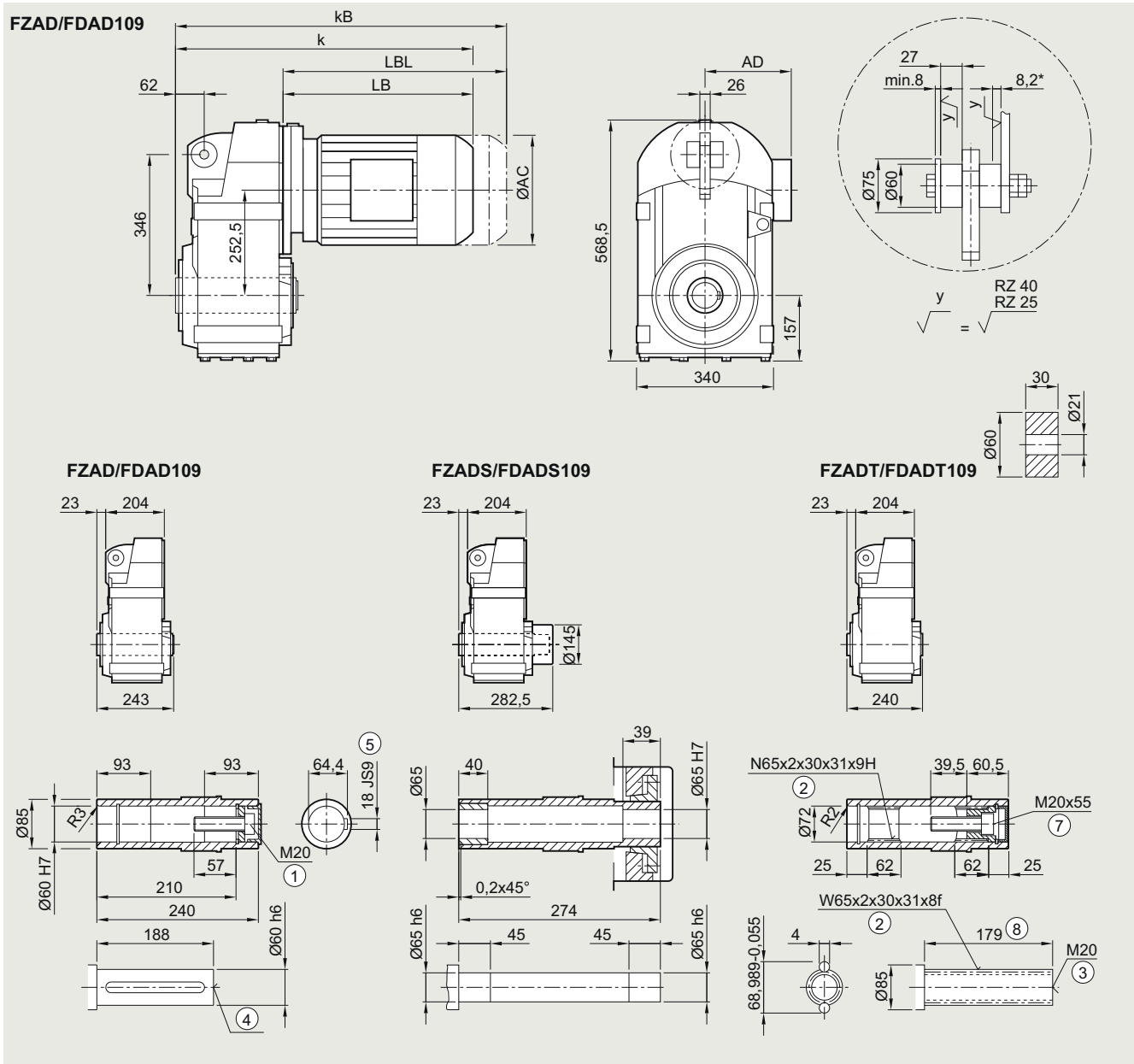
⑩ Use bores only for housing flange design

1) AD depends on the motor options, for other dimensions, see page 9/46.

2) FDAS/FZAS not possible

**Gearbox FZAD./FDAD.109 in a shaft-mounted design**

**FAD030, FADS030, FADT030**



Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225 <sup>2)</sup>	225Y <sup>2)</sup>
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	543.0	583.0	593.5	628.5	603.5	628.5	656.5	706.5	738.5	798.5	811.5	841.5	879.5	904.5	925.0	985.0
kB	613.0	653.0	672.0	707.0	676.5	701.5	761.0	811.0	854.5	914.5	940.5	970.5	1026.5	1051.5	1153.0	1213.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

\* Spring compression at max. torque

<sup>2)</sup> FDAS/FZAS not possible

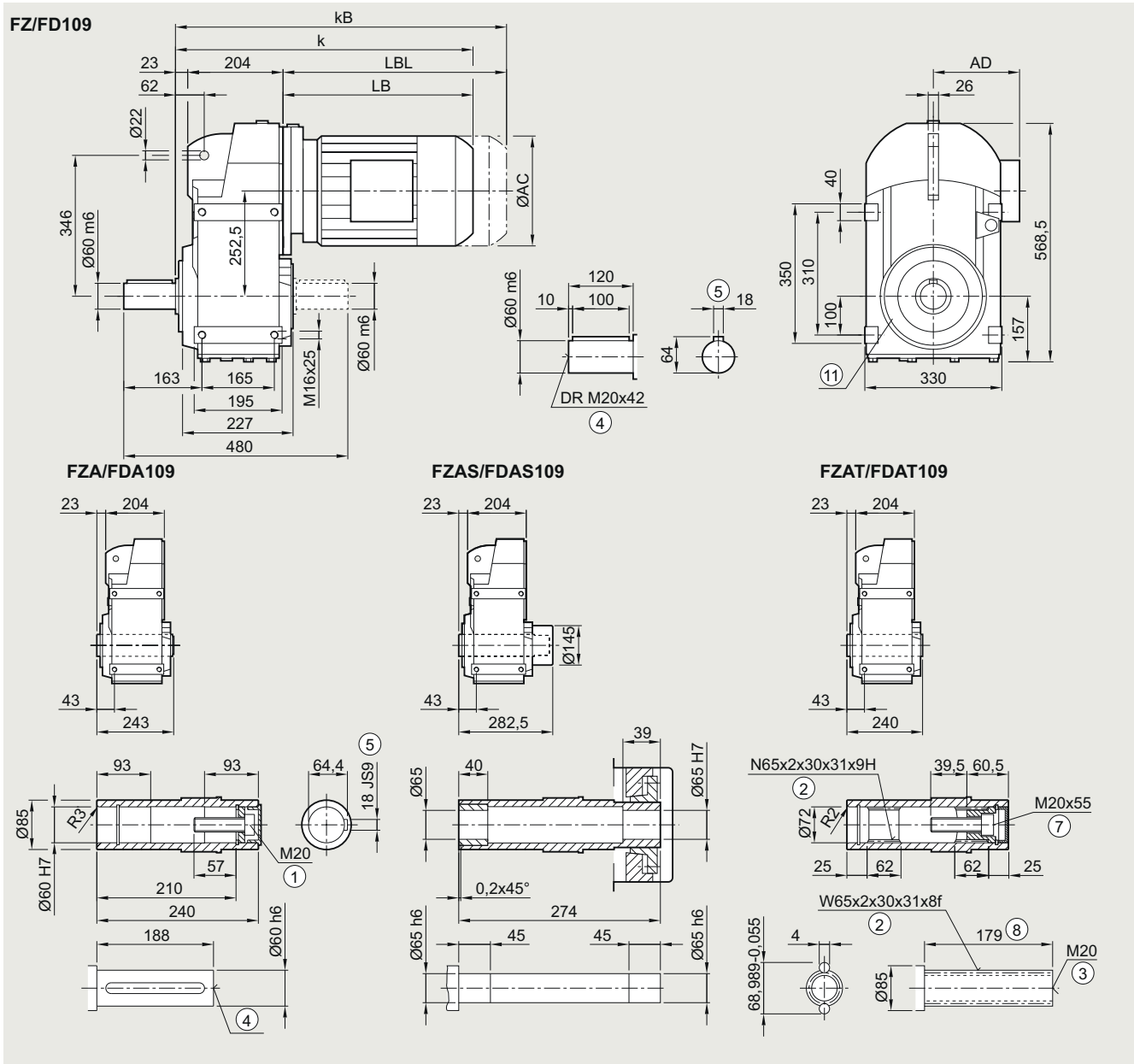






**Gearbox FD./FZ.109 in a foot-mounted design**

**F030, FA030, FAS030, FAT030**



Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225 <sup>2)</sup>	225Y <sup>2)</sup>
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	543.0	583.0	593.5	628.5	603.5	628.5	656.5	706.5	738.5	798.5	811.5	841.5	879.5	904.5	925.0	985.0
kB	613.0	653.0	672.0	707.0	676.5	701.5	761.0	811.0	854.5	914.5	940.5	970.5	1026.5	1051.5	1153.0	1213.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder + 1 mm

⑩ Use bores only for housing flange design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>2)</sup> FDAS/FZAS not possible

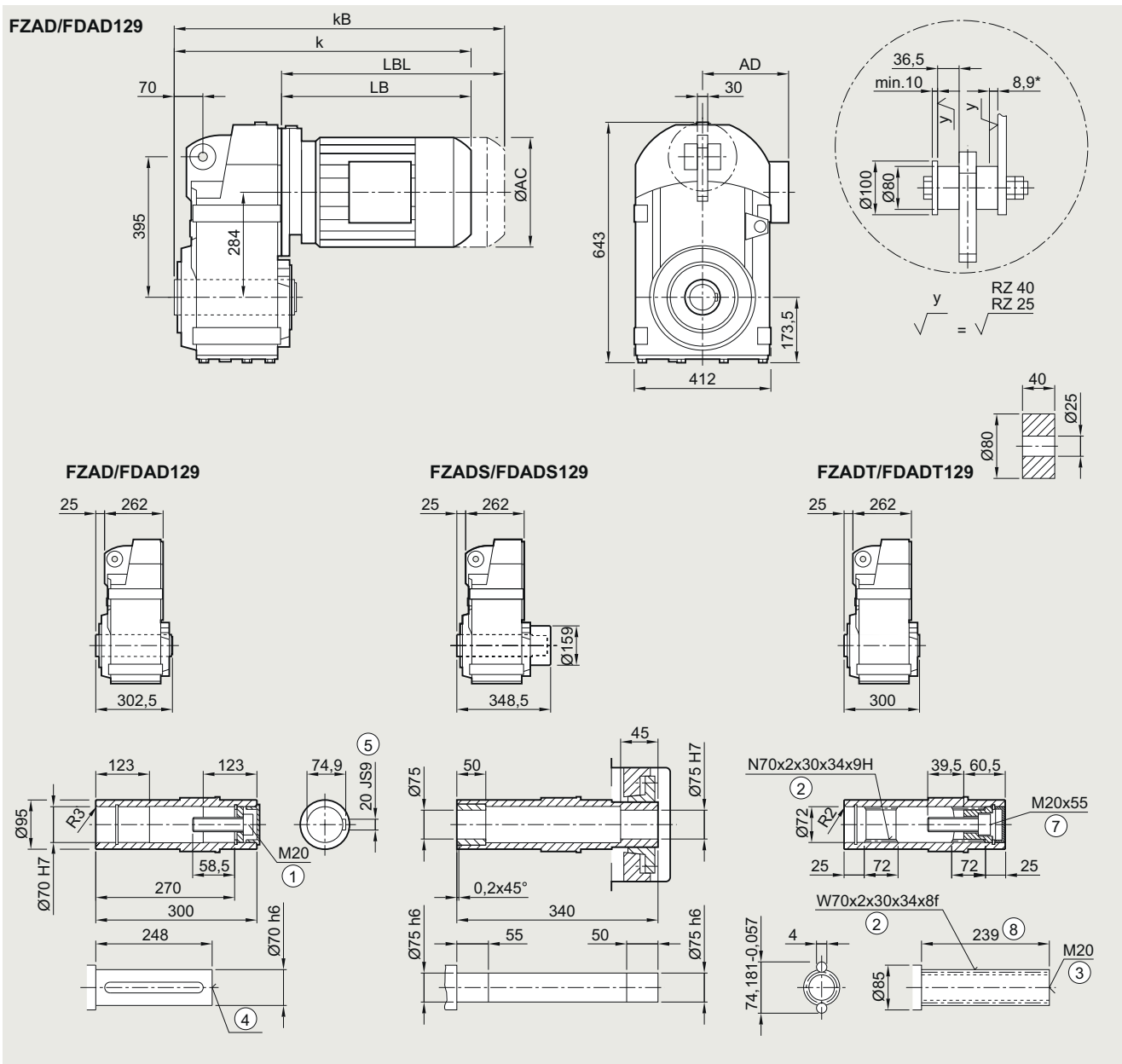
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.129 in a shaft-mounted design

FAD030, FADS030, FADT030



Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250 <sup>2)</sup>
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	596.0	636.0	644.5	679.5	654.5	679.5	705.5	755.5	787.5	847.5	860.5	890.5	928.5	953.5	974.0	1034.0	1085.5
kB	666.0	706.0	723.0	758.0	727.5	752.5	810.0	860.0	903.5	963.5	989.5	1019.5	1075.5	1100.5	1202.0	1262.0	1310.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

1) AD depends on the motor options, for other dimensions, see page 9/46.

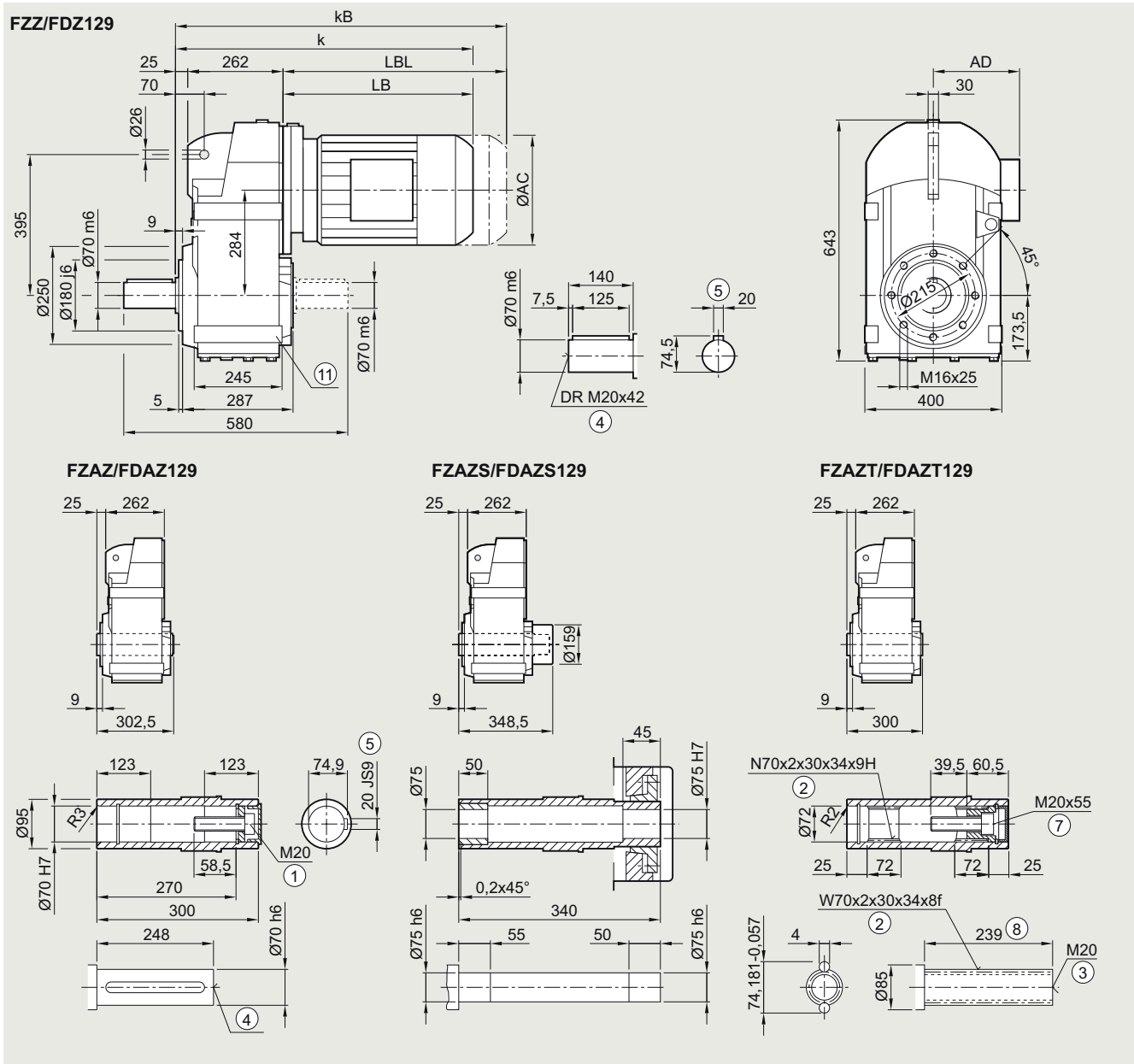
\* Spring compression at max. torque

2) FDAS/FZAS not possible



**Gearbox FZ.Z./FD.Z.129 in a housing flange design**

FZ030, FAZ030, FAZS030, FAZT030



Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250 <sup>2)</sup>
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	596.0	636.0	644.5	679.5	654.5	679.5	705.5	755.5	787.5	847.5	860.5	890.5	928.5	953.5	974.0	1034.0	1085.5
kB	666.0	706.0	723.0	758.0	727.5	752.5	810.0	860.0	903.5	963.5	989.5	1019.5	1075.5	1100.5	1202.0	1262.0	1310.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑩ Use bores only for foot-mounted design

1) AD depends on the motor options, for other dimensions, see page 9/46.

2) FDAS/FZAS not possible

# SIMOGEAR geared motors

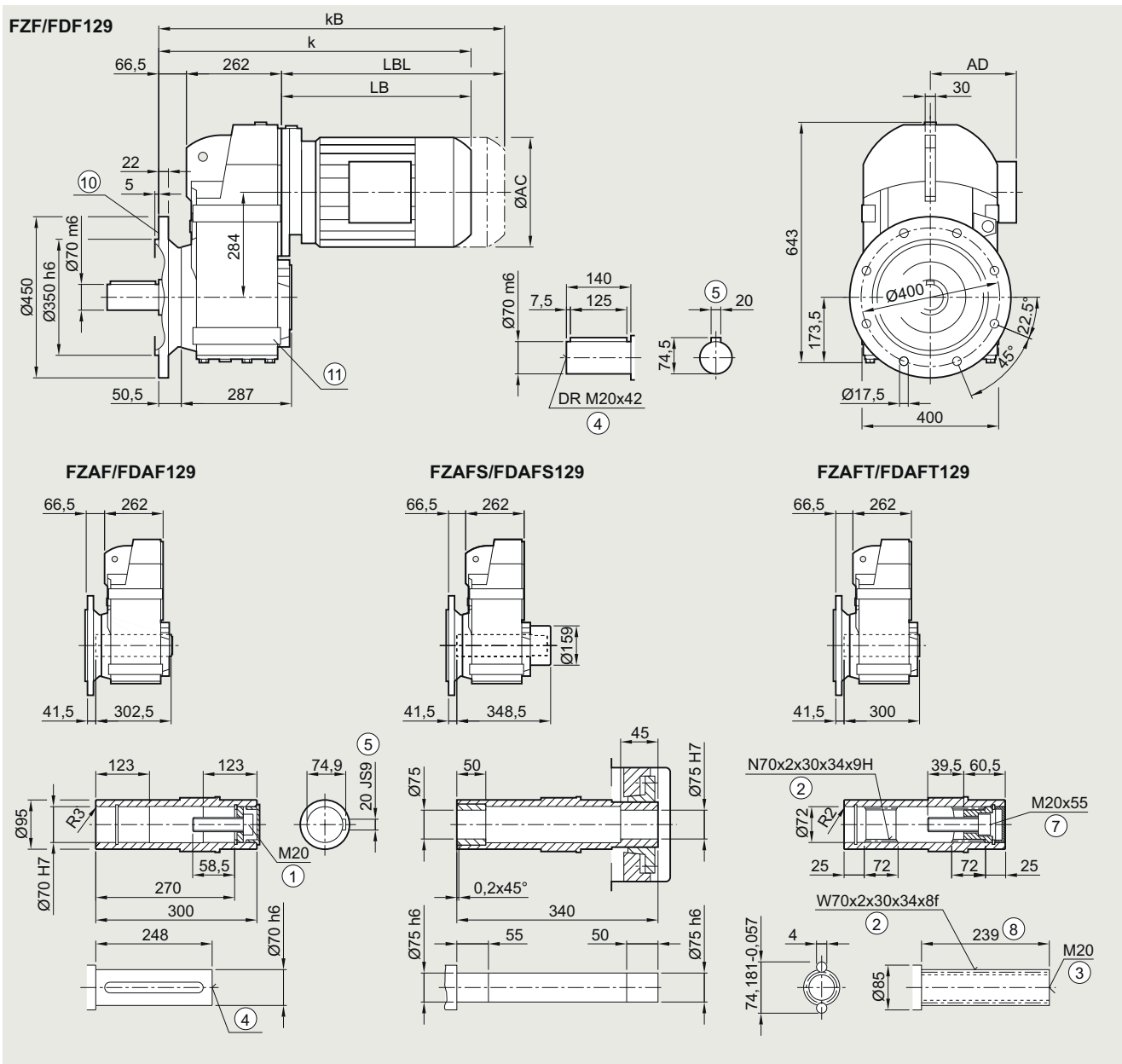
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.F/FD.F.129 in a flange-mounted design

FF030, FAF030, FAFS030, FAFT030

4



Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250 <sup>2)</sup>
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	637.5	677.5	686.0	721.0	696.0	721.0	747.0	797.0	829.0	889.0	902.0	932.0	970.0	995.0	1015.0	1075.0	1127.0
kB	707.5	747.5	764.5	799.5	769.0	794.0	851.5	901.5	945.0	1005.0	1031.0	1061.0	1117.0	1142.0	1243.5	1303.5	1352.0
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm

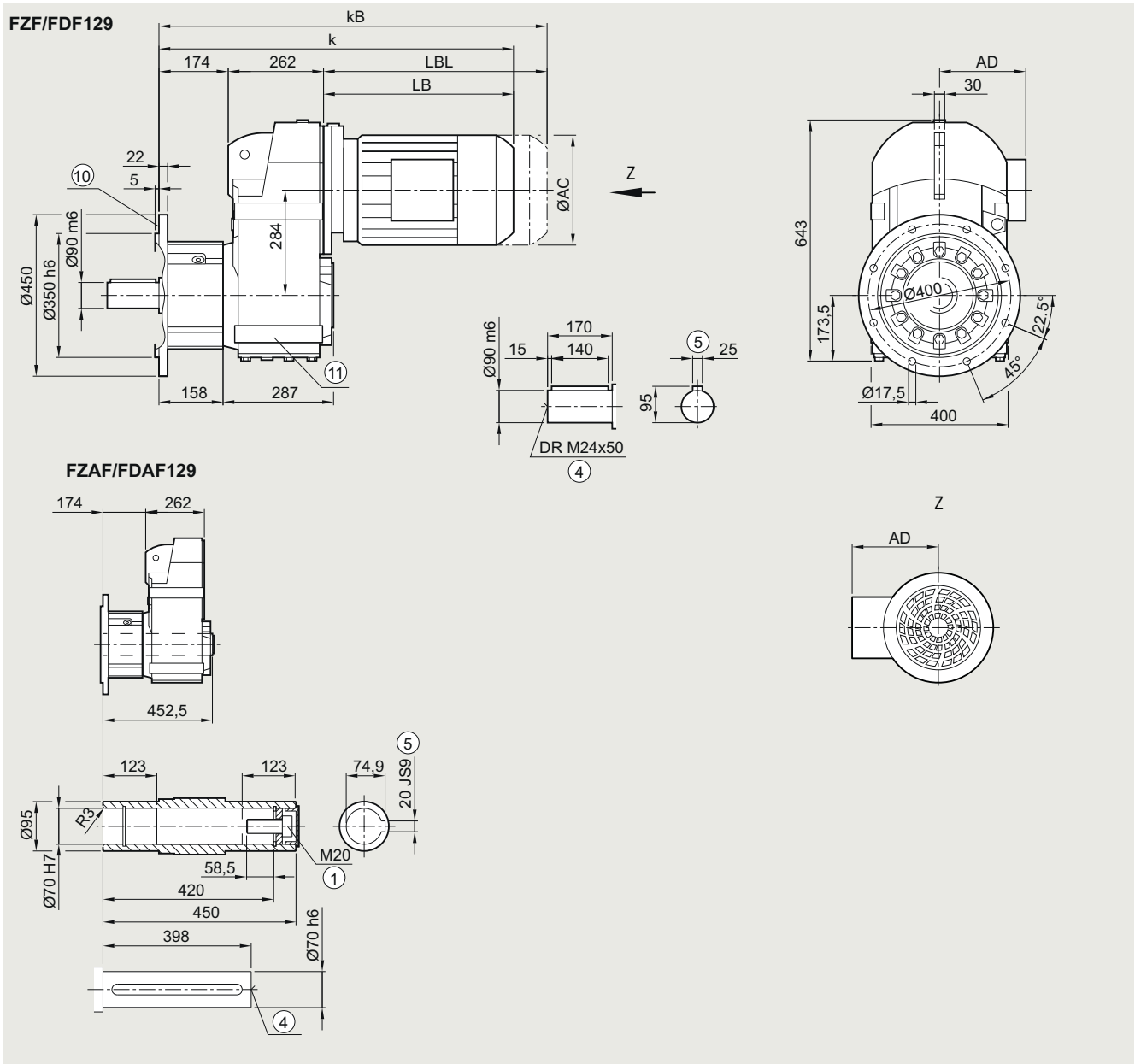
⑧ For inner contour, see page 4/124    ⑨ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>2)</sup> FDAS/FZAS not possible

**Gearbox FZ.F/FD.F.129 in a flange-mounted design with VLplus reinforced bearing system (G30)**

**FF040, FAF040**



4

Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	745.0	751.0	793.5	828.5	803.5	828.5	854.5	904.5	936.5	996.5	1009.5	1039.5	1077.5	1102.5	1123.0	1183.0	1234.5
kB	815.0	855.0	872.0	907.0	876.5	901.5	959.0	1009.0	1052.5	1112.5	1138.5	1168.5	1224.5	1249.5	1351.0	1411.0	1459.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ Use bores only for foot-mounted design

⑦ For inner contour, see page 4/124

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

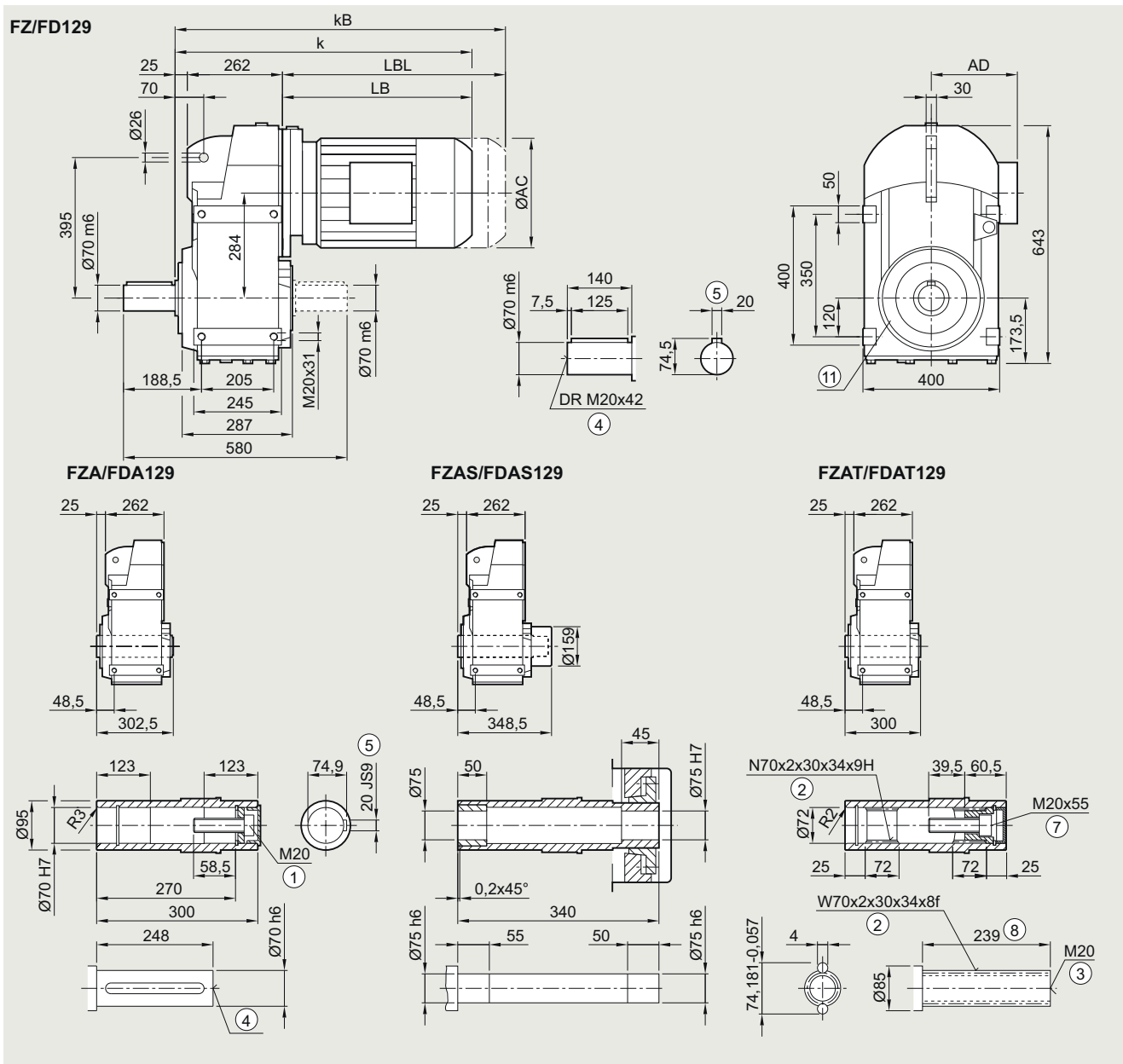
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ./FD..129 in a foot-mounted design

F030, FA030, FAS030, FAT030

4



Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250 <sup>2)</sup>
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	596.0	636.0	644.5	679.5	654.5	679.5	705.5	755.5	787.5	847.5	860.5	890.5	928.5	953.5	974.0	1034.0	1085.5
kB	666.0	706.0	723.0	758.0	727.5	752.5	810.0	860.0	903.5	963.5	989.5	1019.5	1075.5	1100.5	1202.0	1262.0	1310.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder + 1 mm

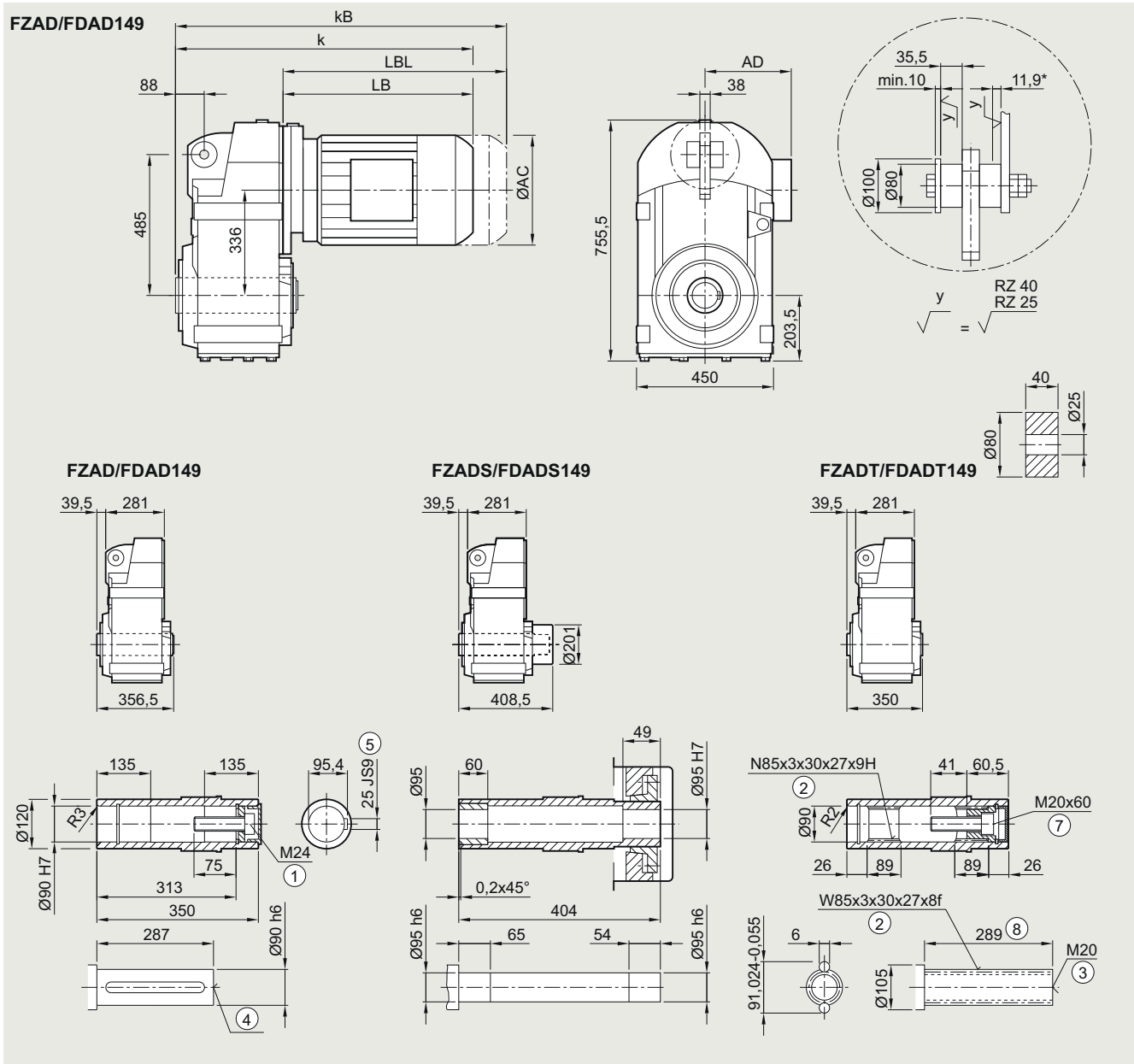
⑩ Use bores only for housing flange design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

<sup>2)</sup> FDAS/FZAS not possible

**Gearbox FZAD./FDAD.149 in a shaft-mounted design**

**FAD030, FADS030, FADT030**



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	676.5	711.5	686.5	711.5	732.5	782.5	814.5	874.5	887.5	917.5	955.5	980.5	1000.5	1060.5	1112.0
kB	755.0	790.0	759.5	784.5	837.0	887.0	930.5	990.5	1016.5	1046.5	1102.5	1127.5	1229.0	1289.0	1337.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ Without locating shoulder +1 mm  
 1) AD depends on the motor options, for other dimensions, see page 9/46.    \* Spring compression at max. torque

# SIMOGEAR geared motors

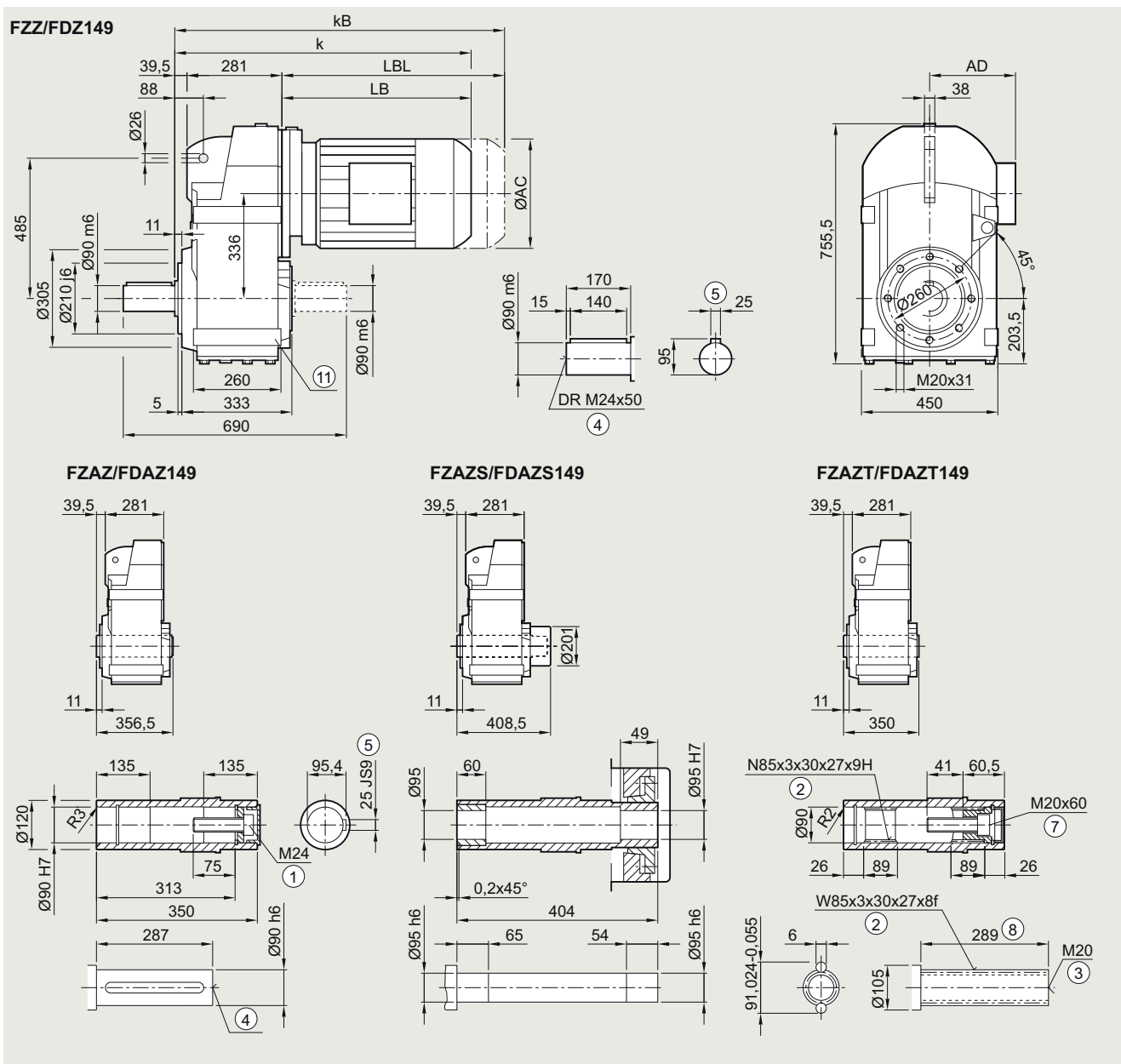
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.Z./FD.Z.149 in a housing flange design

FZ030, FAZ030, FAZS030, FAZT030

4

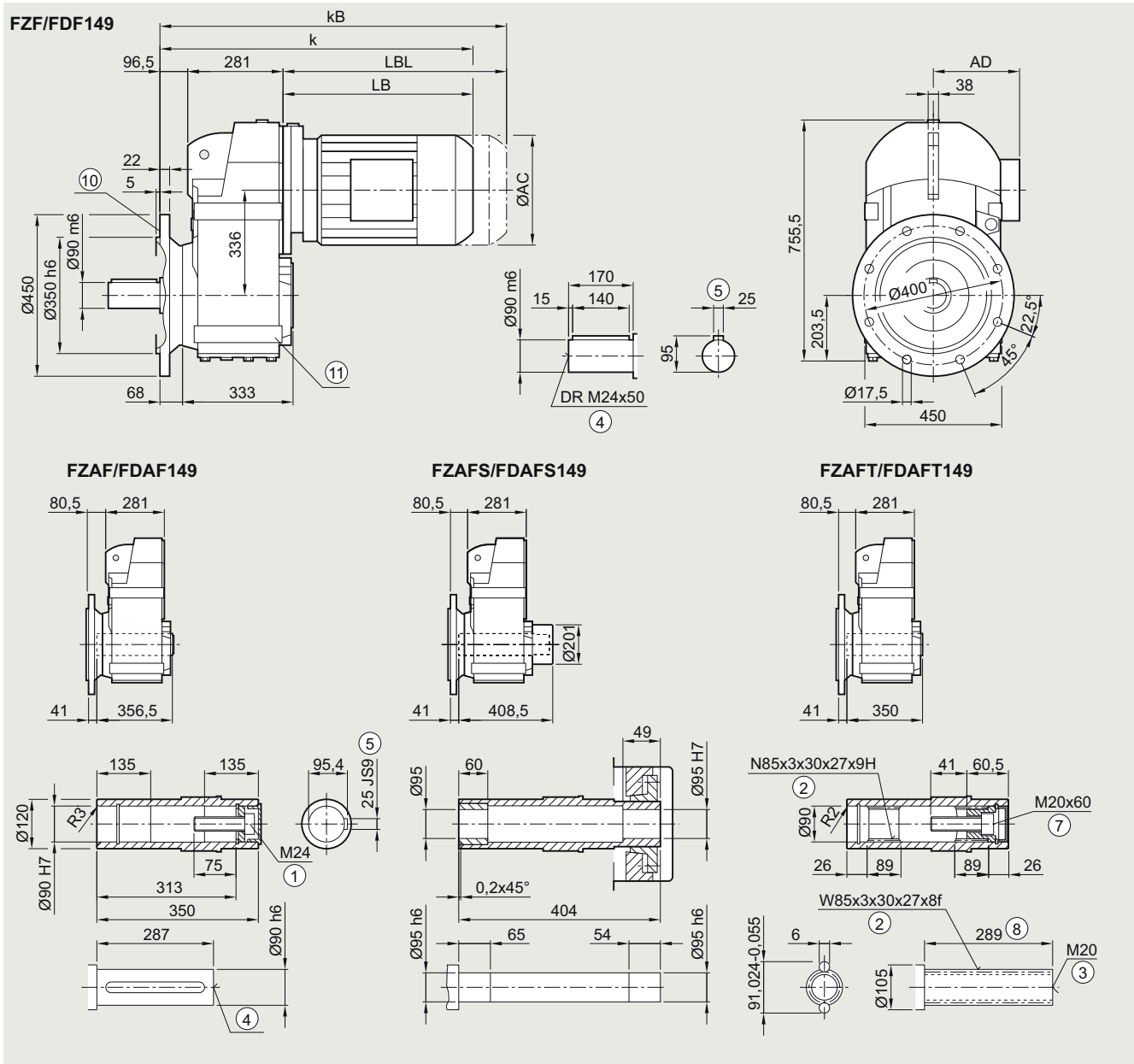


Motor	LE 100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	676.5	711.5	686.5	711.5	732.5	782.5	814.5	874.5	887.5	917.5	955.5	980.5	1000.5	1060.5	1112.0
kB	755.0	790.0	759.5	784.5	837.0	887.0	930.5	990.5	1016.5	1046.5	1102.5	1127.5	1229.0	1289.0	1337.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm  
 ⑧ Use bores only for foot-mounted design    ⑨ AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox FZ.F/FD.F.149 in a flange-mounted design**

**FF030, FAF030, FAFS030, FAFT030**



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	734.0	769.0	744.0	769.0	790.0	840.0	872.0	932.0	945.0	975.0	1013.0	1038.0	1058.5	1118.5	1170.0
kB	812.5	847.5	817.0	842.0	894.5	944.5	988.0	1048.0	1074.0	1104.0	1160.0	1185.0	1286.5	1346.5	1395.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑩ For inner contour, see page 4/124    ⑪ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.







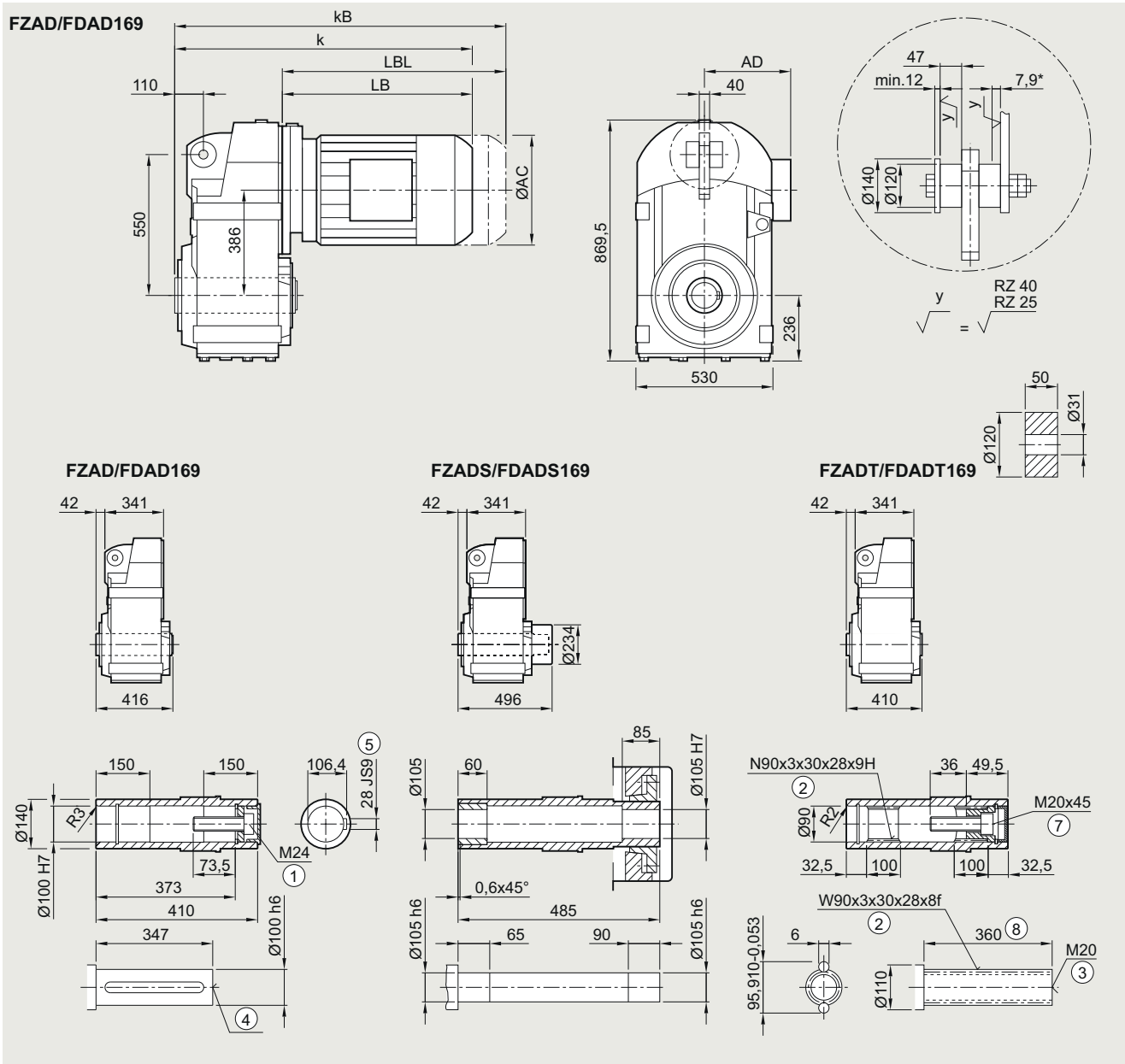
# SIMOGEAR geared motors

Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZAD./FDAD.169 in a shaft-mounted design

FAD030, FADS030, FADT030

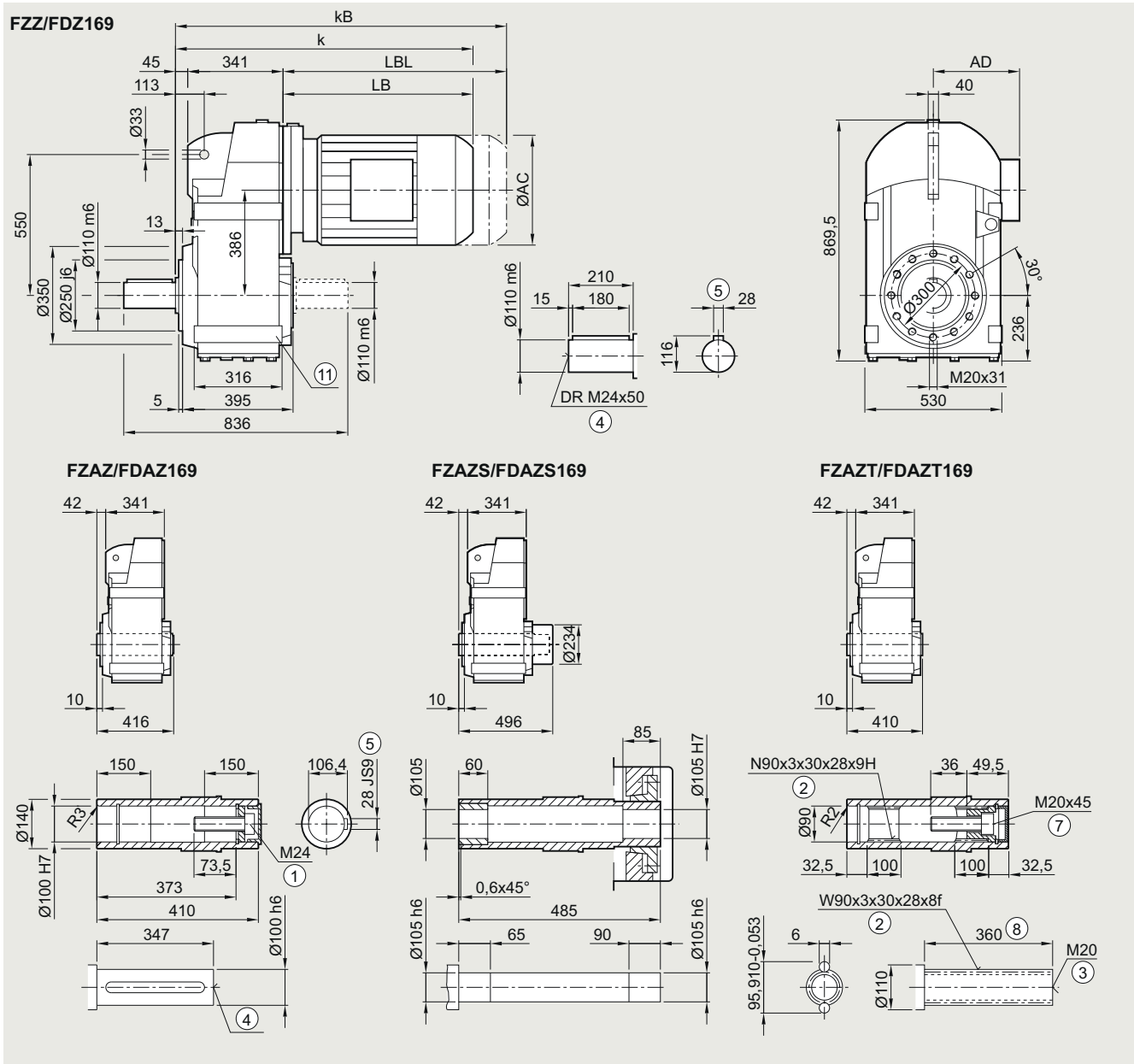


Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	739.5	764.5	785.0	835.0	867.0	927.0	939.5	969.5	1007.5	1032.5	1052.5	1112.0	1159.5
kB	812.5	837.5	889.5	939.5	983.0	1043.0	1068.5	1098.5	1154.5	1179.5	1280.0	1340.0	1384.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.0	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ Without locating shoulder +1 mm  
 1) AD depends on the motor options, for other dimensions, see page 9/46.    \* Spring compression at max. torque

**Gearbox FZ.Z./FD.Z.169 in a housing flange design**

**FZ030, FAZ030, FAZS030, FAZT030**



Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	739.5	764.5	785.0	835.0	867.0	927.0	939.5	969.5	1007.5	1032.5	1052.5	1112.0	1159.5
kB	812.5	837.5	889.5	939.5	983.0	1043.0	1068.5	1098.5	1154.5	1179.5	1280.0	1340.0	1384.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.0	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm  
 ⑧ Use bores only for foot-mounted design    ⑨ AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

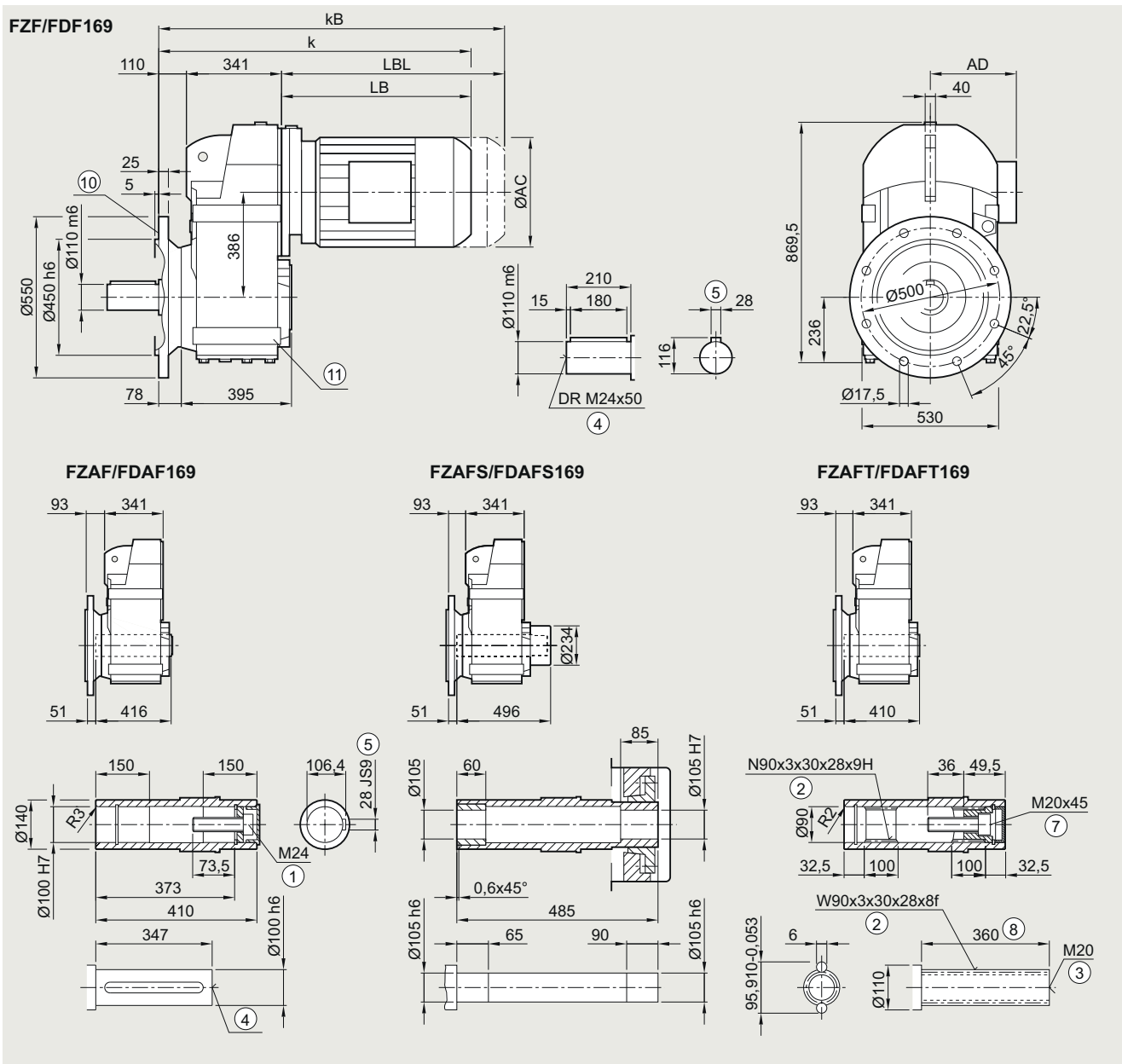
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.F/FD.F.169 in a flange-mounted design

FF030, FAF030, FAFS030, FAFT030

4

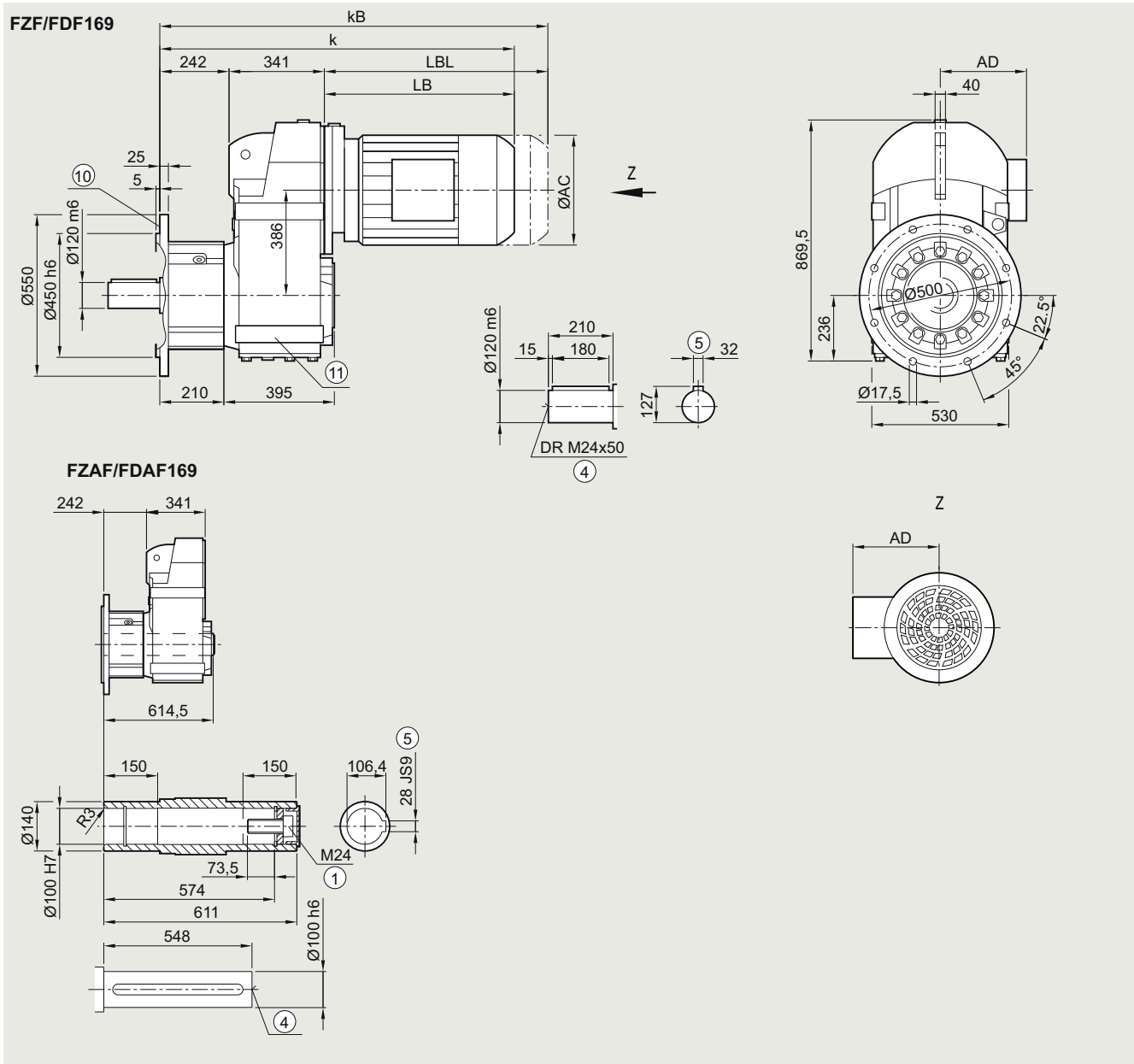


Motor	LE				LES				200					
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	804.5	829.5	850.0	900.0	932.0	992.0	1004.5	1034.5	1072.5	1097.5	1117.0	1177.0	1224.5	
kB	877.5	902.5	954.5	1004.5	1048.0	1108.0	1133.5	1163.5	1219.5	1244.5	1345.0	1405.0	1449.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑩ For inner contour, see page 4/124    ⑪ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox FZ.F/FD.F.169 in a flange-mounted design with VLplus reinforced bearing system (G30)**

**FF040, FAF040**



4

Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	936.5	961.5	982.0	1032.0	1064.0	1124.0	1136.5	1166.5	1204.5	1129.5	1249.0	1309.0	1356.5	
kB	1009.5	1034.5	1086.5	1136.5	1180.0	1240.0	1265.5	1295.5	1351.5	1376.5	1477.0	1537.0	1581.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ Use bores only for foot-mounted design

⑦ For inner contour, see page 4/124

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

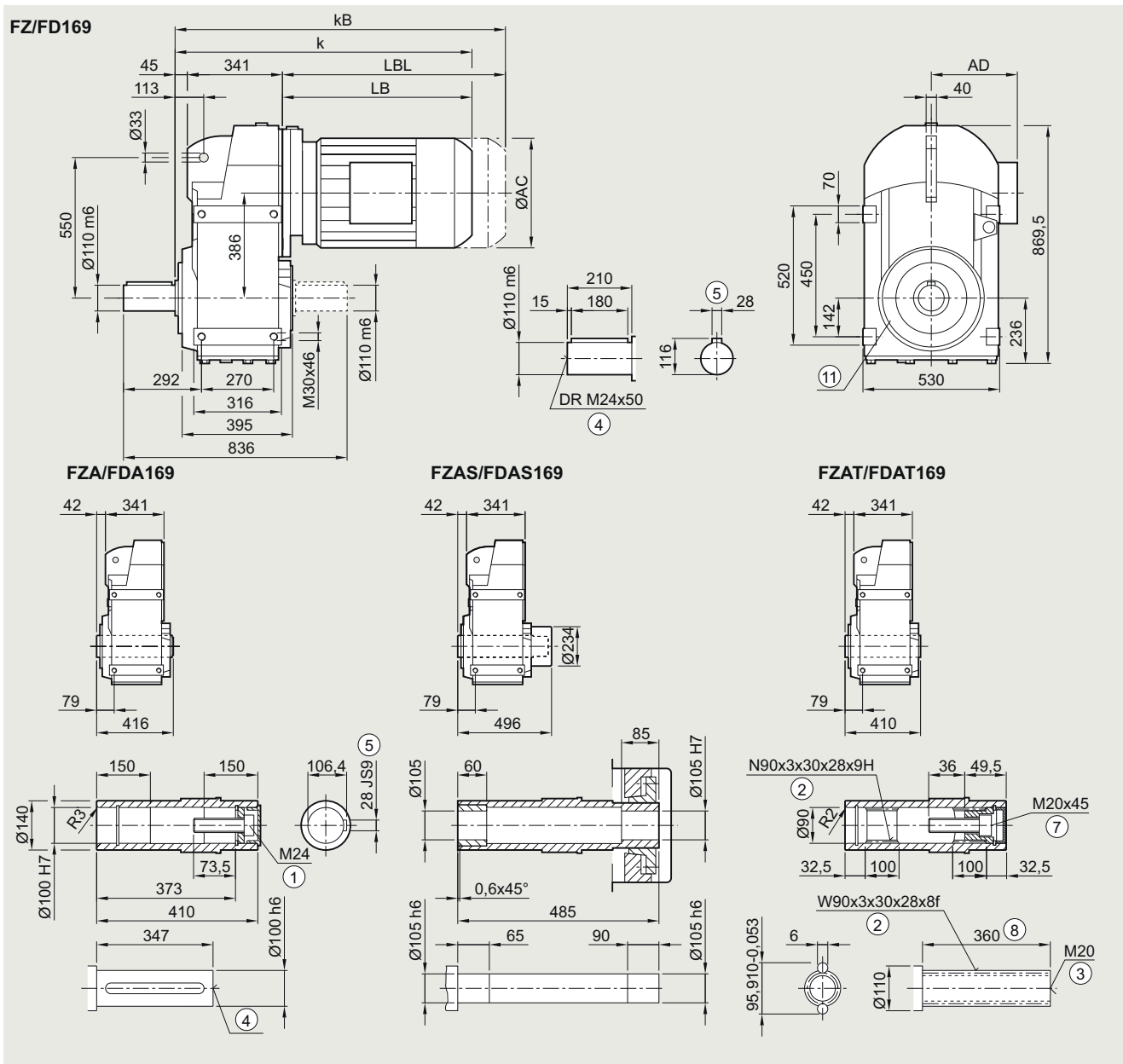
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ./FD..169 in a foot-mounted design

F030, FA030, FAS030, FAT030

4

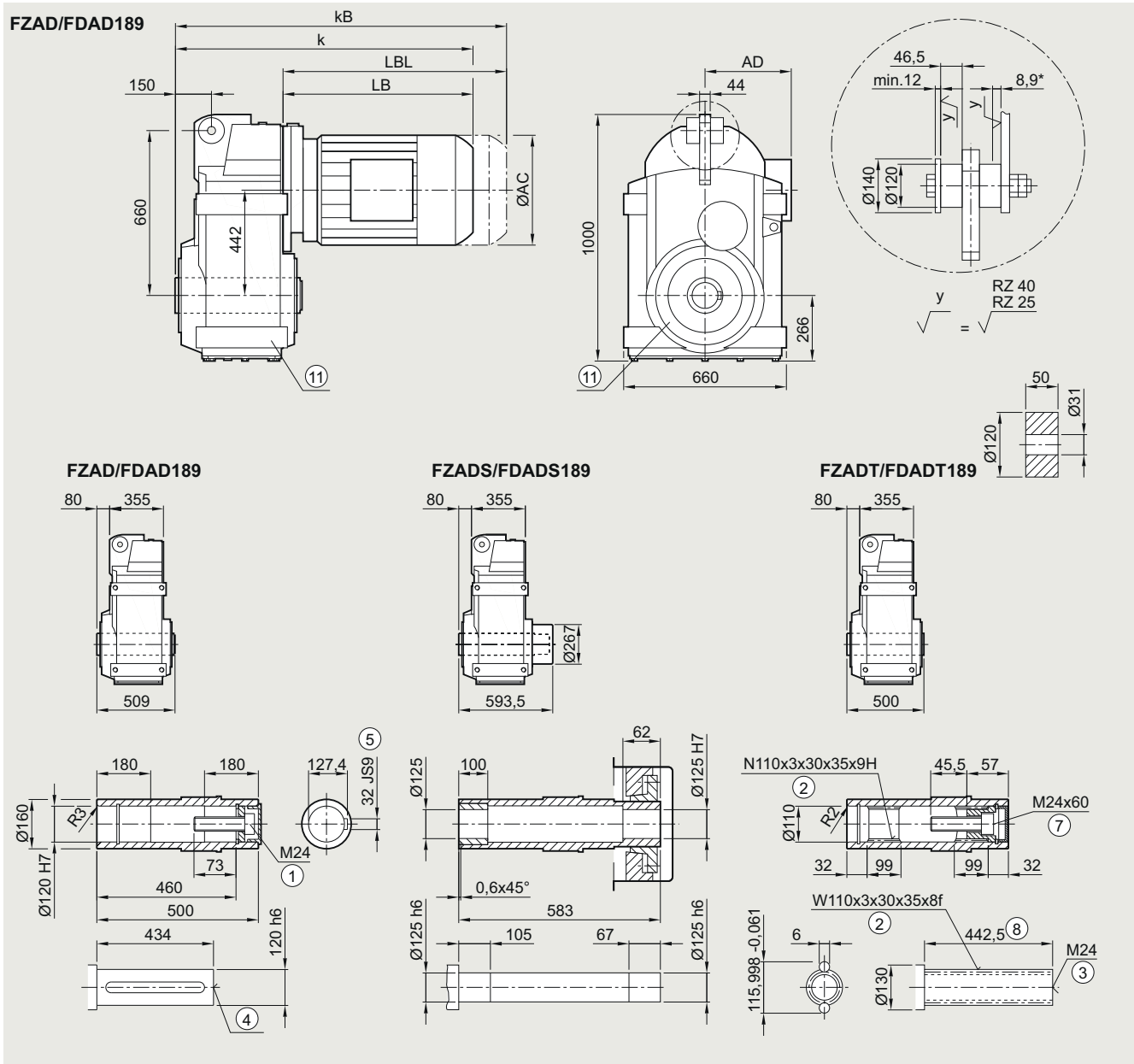


Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.0
k	739.5	764.5	785.0	835.0	867.0	927.0	939.5	969.5	1007.5	1032.5	1052.5	1112.0	1159.5
kB	812.5	837.5	889.5	939.5	983.0	1043.0	1068.5	1098.5	1154.5	1179.5	1280.0	1340.0	1384.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.0	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder + 1 mm  
 ⑨ Use bores only for housing flange design    1) AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox FZAD./FDAD.189 in a shaft-mounted design**

*FAD030, FADS030, FADT030*



Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	788.5	813.5	834.0	884.0	916.0	976.0	988.5	1018.5	1056.5	1081.5	1101.0	1161.0	1208.5	
kB	861.5	886.5	938.5	988.5	1032.0	1092.0	1117.5	1147.5	1203.5	1228.5	1329.0	1389.0	1433.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

\* Spring compression at max. torque

# SIMOGEAR geared motors

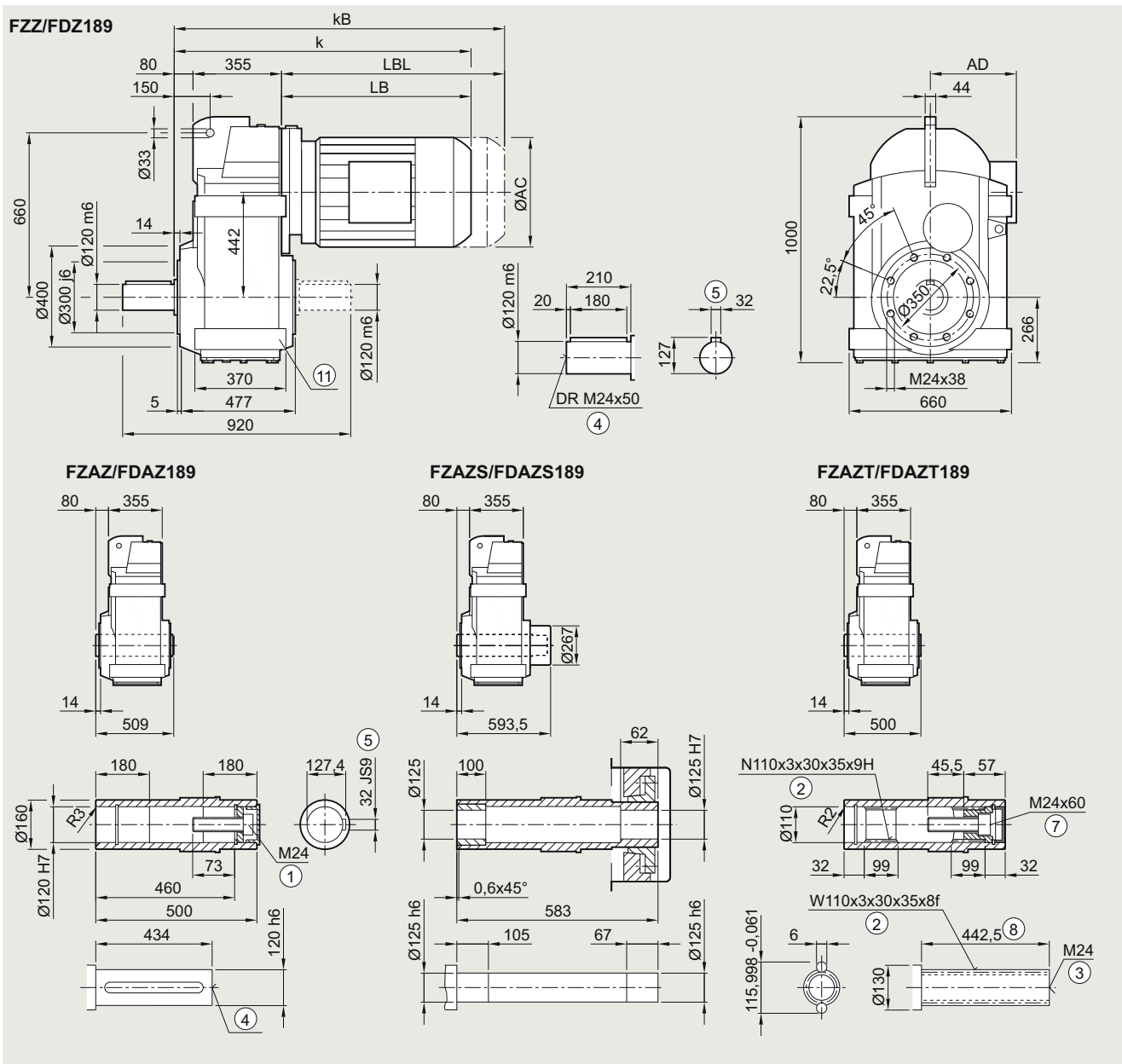
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ.Z./FD.Z.189 in a housing flange design

FZ030, FAZ030, FAZS030, FAZT030

4



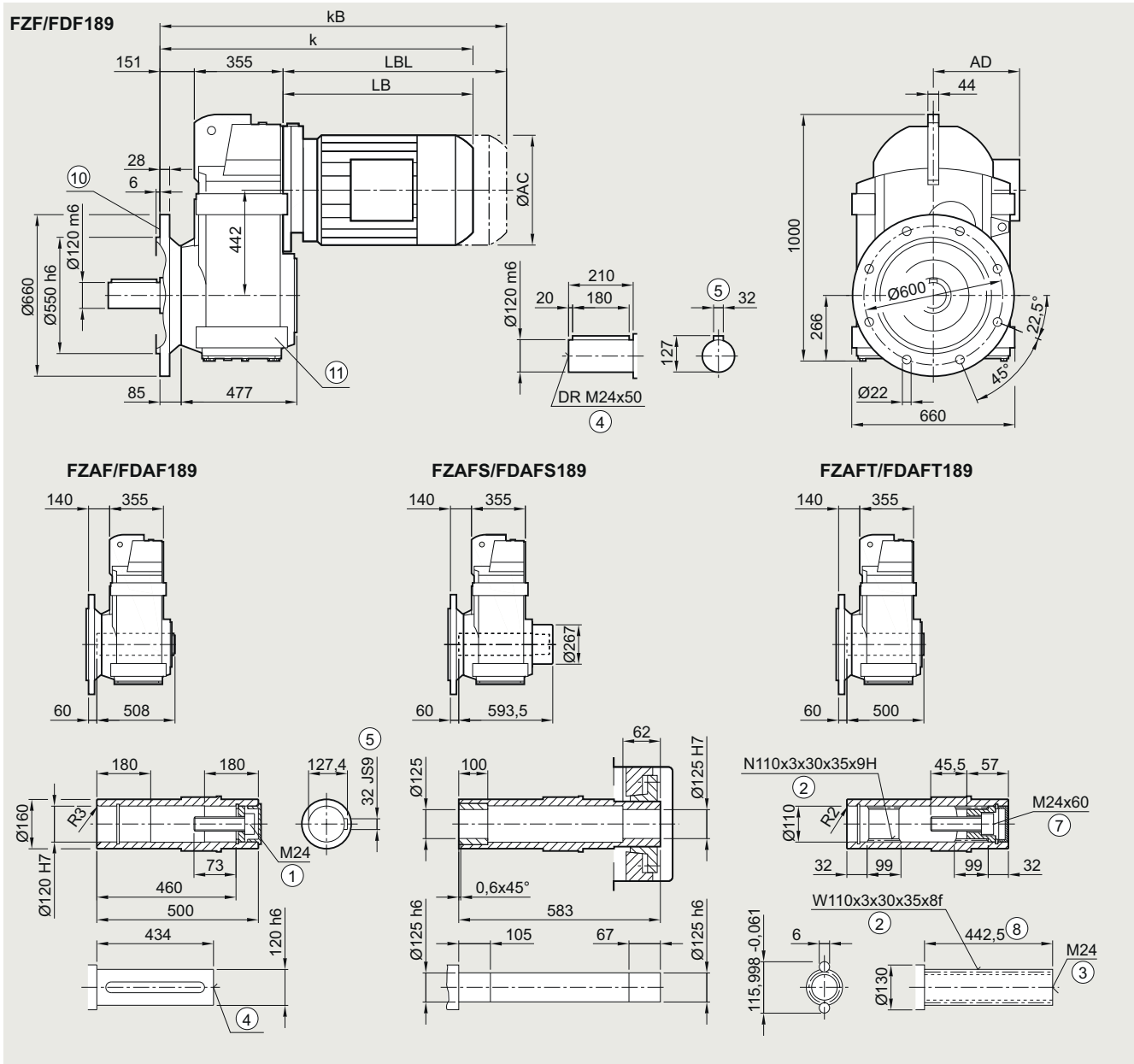
Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	788.5	813.5	834.0	884.0	916.0	976.0	988.5	1018.5	1056.5	1081.5	1101.0	1161.0	1208.5	
kB	861.5	886.5	938.5	988.5	1032.0	1092.0	1117.5	1147.5	1203.5	1228.5	1329.0	1389.0	1433.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ Without locating shoulder +1 mm  
 ⑦ ISO 4762    ⑧ Use bores only for foot-mounted design  
 ⑨ AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox FZ.F/FD.F.189 in a flange-mounted design**

FF030, FAF030, FAFS030, FAFT030



Motor	LE				LES				200					
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	859.5	884.5	905.0	955.0	987.0	1047.0	1059.5	1089.5	1127.5	1152.5	1172.0	1232.0	1279.5	
kB	932.5	957.5	1009.5	1059.5	1103.0	1163.0	1188.5	1218.5	1274.5	1299.5	1400.0	1460.0	1504.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑩ For inner contour, see page 4/124    ⑪ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.

# SIMOGEAR geared motors

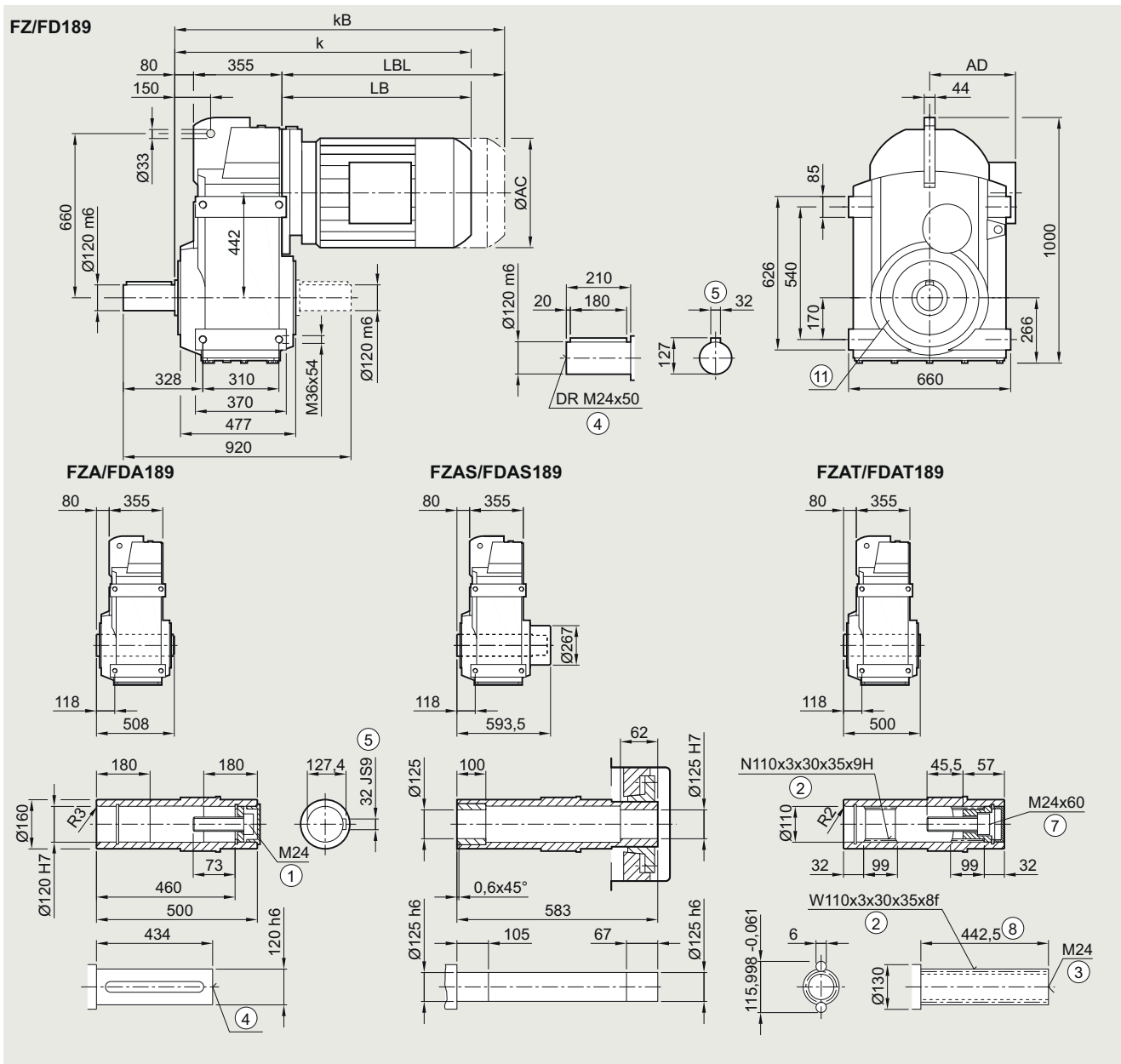
Parallel shaft geared motors

## Dimensional drawings

### Gearbox FZ./FD..189 in a foot-mounted design

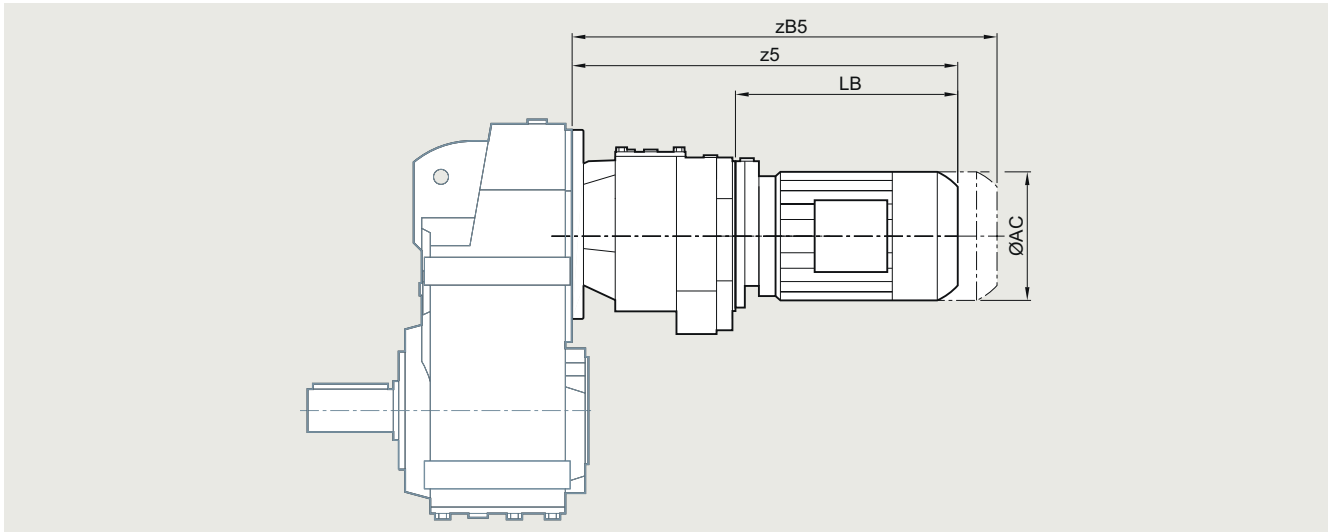
F030, FA030, FAS030, FAT030

4



Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	788.5	813.5	834.0	884.0	916.0	976.0	988.5	1018.5	1056.5	1081.5	1101.0	1161.0	1208.5
kB	861.5	886.5	938.5	988.5	1032.0	1092.0	1117.5	1147.5	1203.5	1228.5	1329.0	1389.0	1433.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder + 1 mm  
 ⑨ Use bores only for housing flange design    1) AD depends on the motor options, for other dimensions, see page 9/46.

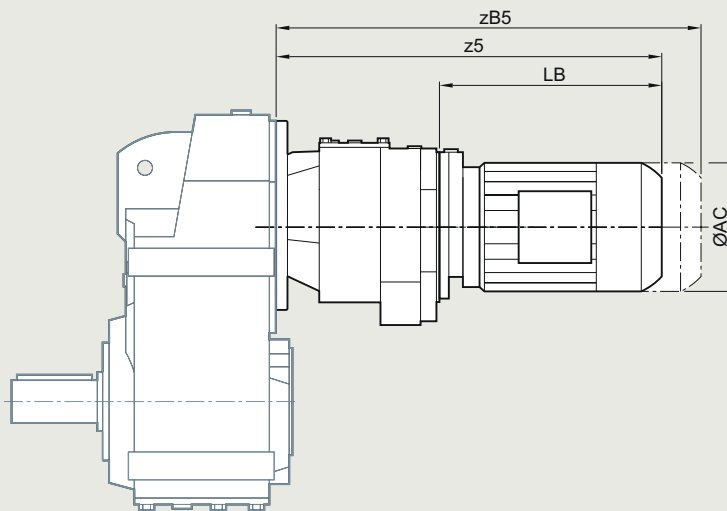
**Parallel shaft tandem geared motors**


Gearbox	Motor	AC	z5	zB5	LB
FZ../FD../29-Z/D19	LE63	117.8	331.0	375.5	160.5
	LE63Z	117.8	357.0	401.5	186.5
FZ../FD../39-Z/D19	LE63	117.8	331.0	375.5	160.5
	LE63Z	117.8	357.0	401.5	186.5
	LES71	138.8	363.0	418.0	184.5
	LE71Z	138.8	382.0	437.0	203.5
	LE71Y	138.8	422.0	477.0	243.5
FZ../FD../49-Z/D19	LE63	117.8	322.0	366.5	160.5
	LE63Z	117.8	348.0	392.5	186.5
	LE71	138.8	354.0	409.0	184.5
	LE71Z	138.8	373.0	428.0	203.5
	LE71Y	138.8	413.0	468.0	243.5
	LE80	156.3	410.0	470.0	240.0
FZ../FD../69-Z/D19	LE63	117.8	322.0	366.5	160.5
	LE63Z	117.8	348.0	392.5	186.5
	LE71	138.8	354.0	409.0	184.5
	LE71Z	138.8	373.0	428.0	203.5
	LE71Y	138.8	413.0	468.0	243.5
	LE80	156.3	410.0	470.0	240.0
	LE80Z	156.3	445.0	505.0	275.0
FZ../FD../79-Z/D39	LE63	117.8	373.5	418.0	194.0
	LE63Z	117.8	399.5	444.0	220.0
	LE71	138.8	405.5	460.5	226.0
	LE71Z	138.8	424.5	479.5	245.0
	LE71Y	138.8	464.5	519.5	285.0
	LE80	156.3	469.5	529.5	290.0
	LE80Z	156.3	504.5	564.5	325.0
FZ../FD../89-Z/D39	LE63	117.8	356.5	401.0	194.0
	LE63Z	117.8	382.5	427.0	220.0
	LE71	138.8	388.5	443.5	226.0
	LE71Z	138.8	407.5	462.5	245.0
	LE71Y	138.8	447.5	502.5	285.0
	LE80	156.3	452.5	512.5	290.0
	LE80Z	156.3	487.5	547.5	325.0
	LE90	173.8	514.0	584.0	351.5
	LE90Z	173.8	554.0	624.0	391.5

Gearbox	Motor	AC	z5	zB5	LB
FD../109-Z/D39	LE63	117.8	347.5	392.0	194.0
	LE63Z	117.8	373.5	418.0	220.0
	LE71	138.8	379.5	434.5	226.0
	LE71Z	138.8	398.5	453.5	245.0
	LE71Y	138.8	438.5	493.5	285.0
	LE80	156.3	443.5	503.5	290.0
	LE80Z	156.3	478.5	538.5	325.0
	LE90	173.8	505.0	575.0	351.5
	LE90Z	173.8	545.0	615.0	391.5
	LE100	198.0	561.5	640.0	408.0
FD../129-Z/D49	LE63	117.8	376.5	421.0	184.5
	LE63Z	117.8	402.5	447.0	210.5
	LE71	138.8	408.5	463.5	216.5
	LE71Z	138.8	427.5	482.5	235.5
	LE71Y	138.8	467.5	522.5	275.5
	LE80	156.3	472.5	532.5	280.5
	LE80Z	156.3	507.5	567.5	315.5
	LE90	173.8	534.0	604.0	342.0
	LE90Z	173.8	574.0	644.0	382.0
	LE100	198.0	590.5	669.0	398.5
	LE100Z	198.0	625.5	704.0	433.5
LE112	222.0	600.5	673.5	408.5	
	LE112Z	222.0	635.0	708.0	443.0

**SIMOGEAR geared motors**

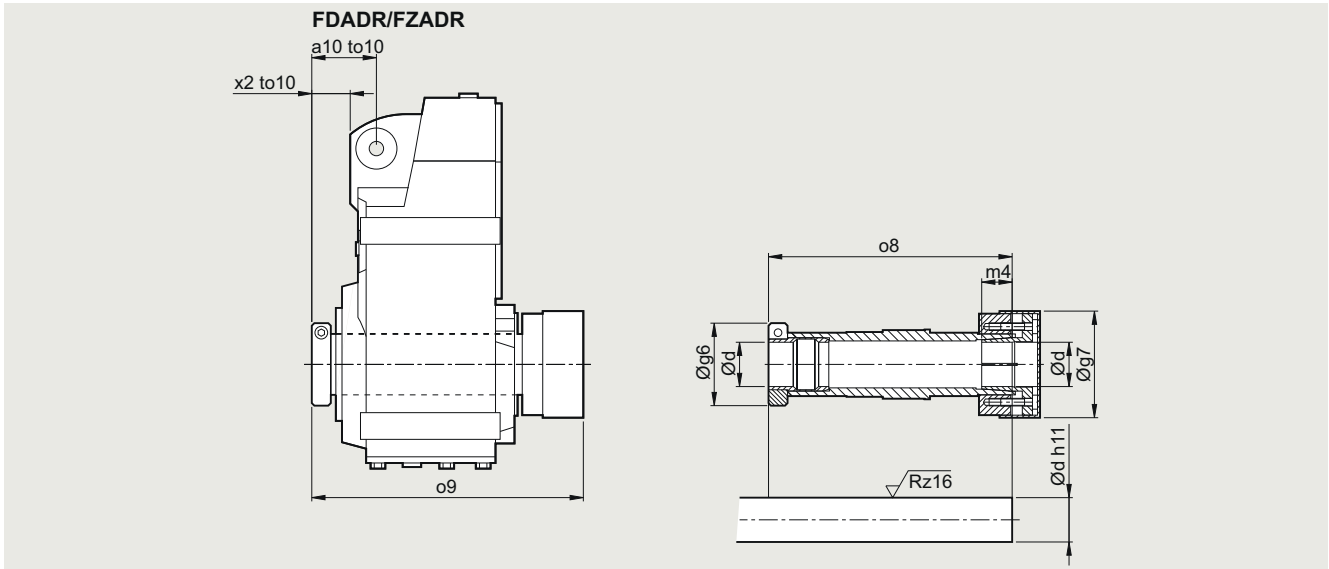
Parallel shaft geared motors

**Dimensional drawings****Parallel shaft tandem geared motors**

Gearbox	Motor	AC	z5	zB5	LB
FD..149-Z/D49	LE63	117.8	366.0	410.5	184.5
	LE63Z	117.8	392.0	436.5	210.5
	LE71	138.8	398.0	453.0	216.5
	LE71Z	138.8	417.0	472.0	235.5
	LE71Y	138.8	457.0	512.0	275.5
	LE80	156.3	462.0	522.0	280.5
	LE80Z	156.3	497.0	557.0	315.5
	LE90	173.8	523.5	593.5	342.0
	LE90Z	173.8	563.5	633.5	382.0
	LE100	198.0	580.0	658.5	398.5
	LE100Z	198.0	615.0	693.5	433.5
	LE112	222.0	590.0	663.0	408.5
	LE112Z	222.0	624.5	697.5	443.0
	LE132	264.0	643.0	747.5	461.5
LE132Z	264.0	693.0	797.5	511.5	
FD..169-Z/D69	LE63	117.8	391.5	436.0	184.5
	LE63Z	117.8	417.5	462.0	210.5
	LE71	138.8	423.5	478.5	216.5
	LE71Z	138.8	442.5	497.5	235.5
	LE71Y	138.8	482.5	537.5	275.5
	LE80	156.3	487.5	547.5	280.5
	LE80Z	156.3	522.5	582.5	315.5
	LE90	173.8	549.0	619.0	342.0
	LE90Z	173.8	589.0	659.0	382.0
	LE100	198.0	605.5	684.0	398.5
	LE100Z	198.0	640.5	719.0	433.5
	LE112	222.0	615.5	688.5	408.5
	LE112Z	222.0	650.0	723.0	443.0
	LE132	264.0	668.5	773.0	461.5
LE132Z	264.0	718.5	823.0	511.5	

Gearbox	Motor	AC	z5	zB5	LB
FD..189-Z/D69	LE63	117.8	391.5	436.0	184.5
	LE63Z	117.8	417.5	462.0	210.5
	LE71	138.8	423.5	478.5	216.5
	LE71Z	138.8	442.5	497.5	235.5
	LE71Y	138.8	482.5	537.5	275.5
	LE80	156.3	487.5	547.5	280.5
	LE80Z	156.3	522.5	582.5	315.5
	LE90	173.8	549.0	619.0	342.0
	LE90Z	173.8	589.0	659.0	382.0
	LE100	198.0	605.5	684.0	398.5
	LE100Z	198.0	640.5	719.0	433.5
	LE112	222.0	615.5	688.5	408.5
	LE112Z	222.0	650.0	723.0	443.0
	LE132	264.0	668.5	773.0	461.5
LE132Z	264.0	718.5	823.0	511.5	

## SIMOLOC assembly system



Note mounting tolerance to10 when positioning the torque arm.

d	g6	g7	m4	o8	o9	a10	to10	x2
<b>FZADR/FDADR29</b>								
25	58.5	56	18.5	140.5	161	40.0	+2.1	23.5
20							+0.6	
1"								
0.75"								
<b>FZADR/FDADR39</b>								
30	62.0	76	22	160.5	181	46.5	+2.2	29.5
25							+0.7	
1.25"								
1.1875"								
1"								
<b>FZADR/FDADR49</b>								
35	65.0	84	24	192.0	214	47.0	+2.6	24.5
30							+0.8	
1.375"								
1.4375"								
1.25"								
1.1875"								
<b>FZADR/FDADR69</b>								
40	79.5	94	30	217.5	240	59.5	+2.5	37.0
35							+0.7	
1.5"								
1.625"								
1.4375"								
1.375"								
<b>FZADR/FDADR79</b>								
40	79.5	94	30	232.0	259	60.0	+3.2	34.0
35							+1.4	
1.5"								
1.625"								
1.4375"								
1.375"								
<b>FZADR/FDADR89</b>								
50	89.0	114	32	264.0	295	69.0	+3.4	32.0
40							+1.5	
2"								
1.9375"								
1.75"								
1.625"								

## SIMOGEAR geared motors

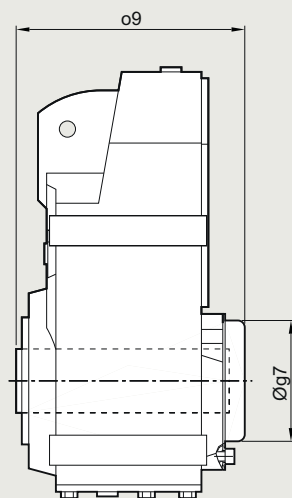
Parallel shaft geared motors

### Dimensional drawings

#### Protective covers

##### Protective cover for hollow shaft

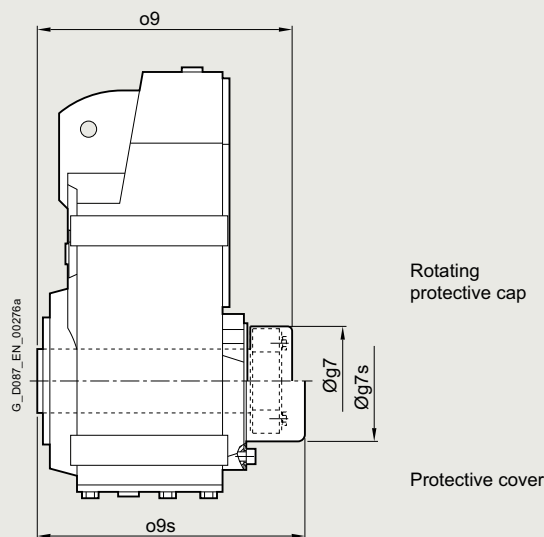
F.A, F.AF, F.AZ, F.AD



Gearbox type	F.A..29	F.A..39	F.A..49	F.A..69	F.A..79	F.A..89	F.A..109	F.A..129	F.A..149	F.A..169	F.A..189
<b>Protective cover</b>											
g7	67.0	82.5	80.0	99.0	99.0	137.0	187.0	187.0	218.0	257.5	309.5
o9	120.5	134.0	177.0	179.0	192.5	232.5	281.5	348.0	425.0	520.0	623.5

##### Protective cover for hollow shaft with shrink disk

F.A.S, F.AFS, F.AZS, F.ADS

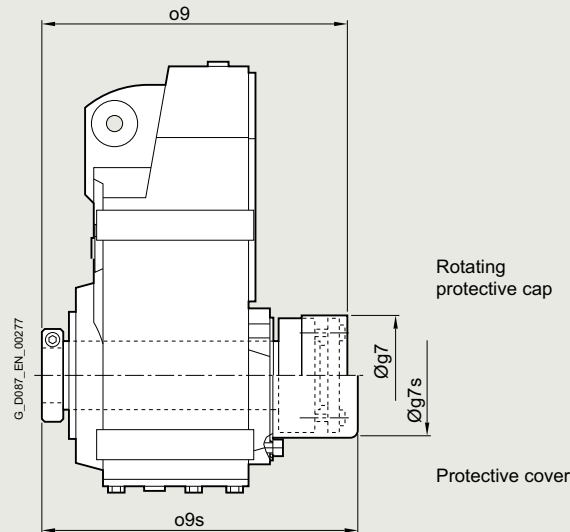


Gearbox type	F.A..29	F.A..39	F.A..49	F.A..69	F.A..79	F.A..89	F.A..109	F.A..129	F.A..149	F.A..169	F.A..189
<b>Rotating protective cap with shrink disk version</b>											
Max. motor frame size that can be mounted	80	90	100	100	132	160	200	225	250	250	250
g7	57.0	76.0	84.0	84.0	94.0	119.0	145.0	159.0	201.0	234.0	267.0
o9	132.5	149.5	182.0	198.0	215.5	247.5	282.5	348.5	408.5	496.0	593.5
<b>Protective cover</b>											
Max. motor frame size that can be mounted	80	80	100	100	112	132	200	225	250	250	250
g7s	58.0	82.5	86.0	99.0	99.0	137.0	187.0	187.0	218.0	257.5	309.5
o9s	135.5	170.0	198.0	210.0	223.5	284.5	308.5	375.0	425.0	520.0	623.5

**Protective covers**

**Protective cover for hollow shaft with SIMOLOC assembly system**

F.ADR



Gearbox type	F.ADR29	F.ADR39	F.ADR49	F.ADR69	F.ADR79	F.ADR89
<b>Rotating protective cap</b>						
Max. motor frame size that can be mounted	80	90	100	100	132	160
g7	56.0	76.0	84.0	94.0	94.0	114.0
o9	161.0	181.0	214.0	240.0	259.0	295.0
<b>Protective cover</b>						
Max. motor frame size that can be mounted	80	80	100	100	112	132
g7s	58.0	82.5	86.0	99.0	99.0	137.0
o9s	164.0	184.0	219.0	249.5	263.5	303.5

## SIMOGEAR geared motors

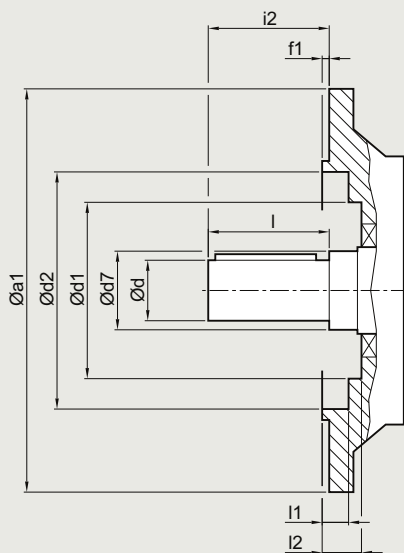
Parallel shaft geared motors

### Dimensional drawings

#### Inner contour of the flange-mounted design

Notes regarding the design of the customer's interface for the solid shaft design

FZF/FDF



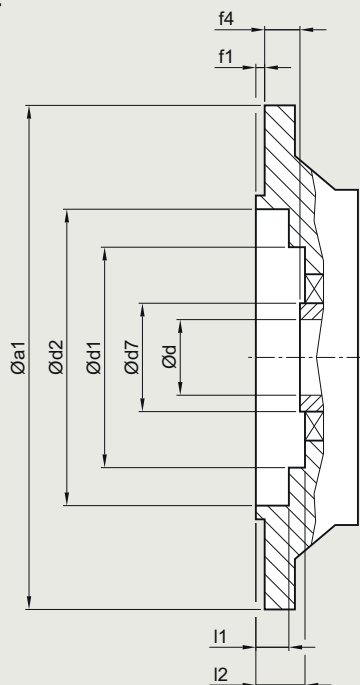
Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
FZF/FDF29	120	25	40	-	70	3.0	40	40	24.0	-
	160	25	40	70	101	3.5	40	40	8.5	24.5
FZF/FDF39	160	25	30	-	100	3.5	50	50	5.0	-
		35	45	80	102	3.5	46	70	2.0	29.5
FZF/FDF49	200	30	35	-	118	3.5	60	60	5.5	-
		40	50	90	120	3.5	55	80	4.0	30.5
FZF/FDF69	250	35	45	-	165	4.0	70	70	6.5	-
FZF/FDF79	250	40	55	-	165	4.0	80	80	6.5	-
		50	55	104	165	4.0	77	100	2.0	29.5
FZF/FDF89	300	50	55	-	165	4.0	100	100	8.0	-
FZF/FDF109	350	60	65	-	235	5.0	120	120	9.0	-
		80	85	184	210	5.0	134	170	13.0	45.0
FZF/FDF129	450	70	75	-	336	5.0	140	140	9.0	-
		90	95	184	336	5.0	128.5	170	16.5	48.5
FZF/FDF149	450	90	100	-	336	5.0	170	170	10.0	-
		100	120	214	330	5.0	169	210	10.5	50.0
FZF/FDF169	550	110	120	-	427	5.0	210	210	10.0	-
		120	140	254	426	5.0	162	210	14.5	56.0
FZF/FDF189	660	120	160	-	517	6.0	210	210	11.0	-
		140	160	306	518	6.0	190	250	6.0	62.0

With VLplus reinforced bearing system (G30)

FZF/FDF89	300	60	70	143	218	4.0	120	120	1.5	8
FZF/FDF109	350	70	85	190	234	5.0	140	140	2.0	4
FZF/FDF129	450	90	95	-	336	5.0	170	170	16.5	-
FZF/FDF149	450	100	120	225	336	5.0	210	210	10.5	11
FZF/FDF169	550	120	140	-	426	5.0	210	210	19.5	-

Notes regarding the design of the customer's interface for the hollow shaft design

FDAF /FZAF



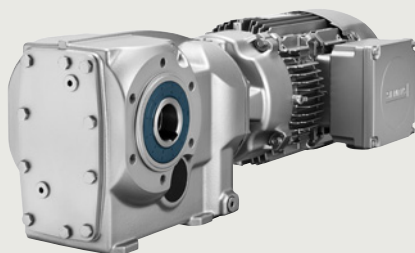
Gearbox type	a1	d	d7	d1	d2	f1	f4	l1	l2
FDAF /FZAF 29	120	25	40	-	70	3.0	20.0	24.0	-
	160	25	40	70	101	3.5	20.0	8.5	24.5
FDAF /FZAF 39	160	25	45	80	102	3.5	24.0	2.0	29.5
		30							
FDAF /FZAF 49	200	30	50	90	120	3.5	25.0	4.0	30.5
		35							
FDAF /FZAF 69	250	40	55	104	165	4.0	23.5	2.0	29.5
FDAF /FZAF 79	250	40	55	104	165	4.0	23.0	2.0	29.5
FDAF /FZAF 89	300	50	70	135	215	4.0	37.0	2.0	44.5
FDAF /FZAF 109	350	60	85	184	210	5.0	36.0	13.0	45.0
		70	90						
FDAF /FZAF 129	450	70	95	184	336	5.0	41.5	16.5	48.5
FDAF /FZAF 149	450	80	120	214	330	5.0	41.0	10.5	50.0
		90							
FDAF /FZAF 169	550	100	140	254	426	5.0	56.0	14.5	56.0
		110							
FDAF /FZAF 189	660	120	160	306	518	6.0	66.0	6.0	62.0

With VLplus reinforced bearing system (G30)

FDAF /FZAF 89	300	50	70	143	218	4.0	0	1.5	8
FDAF /FZAF 109	350	60	85	190	234	5.0	0	2.0	4
FDAF /FZAF 129	450	70	95	-	336	5.0	0	16.5	-
FDAF /FZAF 149	450	90	120	225	330	5.0	0	10.5	11
FDAF /FZAF 169	550	100	140	-	426	5.0	0	14.5	-



## Bevel geared motors



<b>5/2</b>	<b>Orientation</b>
<b>5/3</b> 5/3	<b>Geared motors up to 55 kW</b> Selection and ordering data
<b>5/44</b> 5/44	<b>Transmission ratios and torques</b> Selection and ordering data
<b>5/58</b> 5/58	<b>Transmission ratios and torques for very low speeds</b> Selection and ordering data
<b>5/68</b> 5/68	<b>Dimensional drawings</b> Overview
5/70	Bevel geared motors B..19
5/74	Bevel geared motors B..29
5/78	Bevel geared motors B..39
5/82	Bevel geared motors B..49
5/86	Bevel geared motors K..39
5/90	Bevel geared motors K..49
5/94	Bevel geared motors K..69
5/98	Bevel geared motors K..79
5/102	Bevel geared motors K..89
5/107	Bevel geared motors K..109
5/112	Bevel geared motors K..129
5/117	Bevel geared motors K..149
5/122	Bevel geared motors K..169
5/127	Bevel geared motors K..189
5/131	Bevel tandem geared motors
5/133	SIMOLOC assembly system
	<u>Protective covers</u>
5/134	Protective covers for hollow shaft
5/135	Protective covers for hollow shaft with shrink disk
5/135	Protective covers for hollow shaft with SIMOLOC assembly system
5/136	Inner contour of the flange-mounted design

## SIMOGEAR geared motors

### Bevel geared motors

#### Orientation

##### SIMOGEAR bevel geared motor B



Fig. 5/1 Bevel geared motor B

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		$T_{2N}$ Nm	$i$	$P_1$ kW
B19 ... B49 (2-stage)	4	50... 450	3.5 ... 59	7.5

##### SIMOGEAR bevel geared motor K

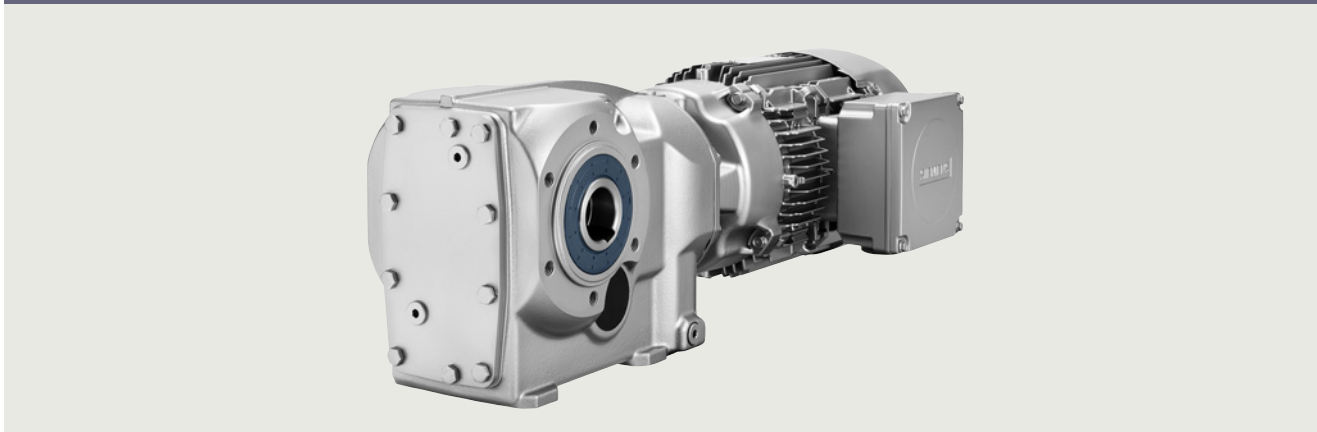


Fig. 5/2 Bevel geared motor K

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		$T_{2N}$ Nm	$i$	$P_1$ kW
K39 ... K189 (3-stage)	10	150 ... 19500	5.17 ... 244	55
K.39-Z/D19 ... K189-Z/D69 (5-stage and 6-stage)	10	220 ... 19500	170 ... 14900	7.5

SIMOGEAR bevel geared motors are available in the following versions:

#### Transmission stages

- 2-stage or 3-stage bevel geared motors
- 5-stage or 6-stage bevel geared motors for very low output speeds

#### Versions

- Shaft-mounted design
- Flange-mounted design with or without VLplus reinforced bearing systems
- Design with integrated housing flange
- Foot-mounted design

#### Mounting

- Hollow shaft design with feather key
- Hollow shaft design with splined shaft
- Hollow shaft design with shrink disk
- Hollow shaft design with SIMOLOC assembly system
- Solid shaft design with and without feather key

For 2-stage bevel gearboxes B, the torque arm is supplied loose to enable it to be mounted as required on site. The position of the torque arm can be freely selected.

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.09</b>	<b>K.39-LE63MEB6</b>							
	5.7	151	157.32	6330	1.5	15	2KJ3504- ■ BD21- ■ ■ J2 -Z	P01
	6.4	134	139.54	6400	1.6	15	2KJ3504- ■ BD21- ■ ■ H2 -Z	P01
	7.4	116	121.07	6460	1.9	15	2KJ3504- ■ BD21- ■ ■ G2 -Z	P01
	8.1	106	110.06	6500	2.1	15	2KJ3504- ■ BD21- ■ ■ F2 -Z	P01
	<b>B.29-LE63MEB6</b>							
	19	45	46.85	4200	2.4	9	2KJ3501- ■ BD21- ■ ■ B2 -Z	P01
	22	40	41.56	4200	2.8	9	2KJ3501- ■ BD21- ■ ■ A2 -Z	P01
	25	35	36.06	4200	3.2	9	2KJ3501- ■ BD21- ■ ■ X1 -Z	P01
	27	32	32.78	4200	3.5	9	2KJ3501- ■ BD21- ■ ■ W1 -Z	P01
	<b>B.29-LE63MCA4</b>							
	30	29	46.85	4200	3.9	9	2KJ3501- ■ BB21- ■ ■ B2 -Z	-
	34	25	41.56	4200	4.3	9	2KJ3501- ■ BB21- ■ ■ A2 -Z	-
	39	22	36.06	4200	5	9	2KJ3501- ■ BB21- ■ ■ X1 -Z	-
	43	20	32.78	4200	5.5	9	2KJ3501- ■ BB21- ■ ■ W1 -Z	-
	50	17	28.11	4200	6.4	9	2KJ3501- ■ BB21- ■ ■ V1 -Z	-
	55	16	25.56	4200	7.1	9	2KJ3501- ■ BB21- ■ ■ U1 -Z	-
	63	14	22.41	4200	8.1	9	2KJ3501- ■ BB21- ■ ■ T1 -Z	-
	70	12	20.00	4200	9	9	2KJ3501- ■ BB21- ■ ■ S1 -Z	-
	79	11	17.82	4200	10	9	2KJ3501- ■ BB21- ■ ■ R1 -Z	-
	86	10	16.45	4200	11	9	2KJ3501- ■ BB21- ■ ■ Q1 -Z	-
	98	8.8	14.40	4200	12	9	2KJ3501- ■ BB21- ■ ■ P1 -Z	-
	112	7.7	12.63	4200	14	9	2KJ3501- ■ BB21- ■ ■ N1 -Z	-
	<b>B.19-LE63MEB6</b>							
	21	40	42.10	1910	1.2	8	2KJ3500- ■ BD21- ■ ■ A2 -Z	P01
	24	36	37.28	1910	1.4	8	2KJ3500- ■ BD21- ■ ■ X1 -Z	P01
	28	31	32.39	1910	1.6	8	2KJ3500- ■ BD21- ■ ■ W1 -Z	P01
	30	28	29.44	1910	1.8	8	2KJ3500- ■ BD21- ■ ■ V1 -Z	P01
	<b>B.19-LE63MCA4</b>							
	33	26	42.10	1910	1.9	8	2KJ3500- ■ BB21- ■ ■ A2 -Z	-
	38	23	37.28	1910	2.2	8	2KJ3500- ■ BB21- ■ ■ X1 -Z	-
	44	20	32.39	1910	2.5	8	2KJ3500- ■ BB21- ■ ■ W1 -Z	-
	48	18	29.44	1910	2.8	8	2KJ3500- ■ BB21- ■ ■ V1 -Z	-
	56	15	25.06	1910	3.3	8	2KJ3500- ■ BB21- ■ ■ U1 -Z	-
	62	14	22.78	1910	3.6	8	2KJ3500- ■ BB21- ■ ■ T1 -Z	-
	71	12	19.86	1910	4.1	8	2KJ3500- ■ BB21- ■ ■ S1 -Z	-
	79	11	17.78	1910	4.6	8	2KJ3500- ■ BB21- ■ ■ R1 -Z	-
	89	9.6	15.79	1910	5.2	8	2KJ3500- ■ BB21- ■ ■ Q1 -Z	-
	97	8.9	14.57	1910	5.6	8	2KJ3500- ■ BB21- ■ ■ P1 -Z	-
111	7.7	12.66	1910	6.5	8	2KJ3500- ■ BB21- ■ ■ N1 -Z	-	
128	6.7	11.00	1910	7.5	8	2KJ3500- ■ BB21- ■ ■ M1 -Z	-	
142	6.1	9.93	1910	8.3	8	2KJ3500- ■ BB21- ■ ■ L1 -Z	-	
151	5.7	9.35	1910	8.8	8	2KJ3500- ■ BB21- ■ ■ K1 -Z	-	
173	5	8.15	1910	9.5	8	2KJ3500- ■ BB21- ■ ■ J1 -Z	-	
179	4.8	7.87	1910	7.9	8	2KJ3500- ■ BB21- ■ ■ H1 -Z	-	
202	4.3	6.99	1910	8.9	8	2KJ3500- ■ BB21- ■ ■ G1 -Z	-	
219	3.9	6.45	1910	9.9	8	2KJ3500- ■ BB21- ■ ■ F1 -Z	-	
251	3.4	5.61	1910	11	8	2KJ3500- ■ BB21- ■ ■ E1 -Z	-	
290	3	4.87	1910	12	8	2KJ3500- ■ BB21- ■ ■ D1 -Z	-	
320	2.7	4.40	1910	13	8	2KJ3500- ■ BB21- ■ ■ C1 -Z	-	
341	2.5	4.14	1910	13	8	2KJ3500- ■ BB21- ■ ■ B1 -Z	-	
391	2.2	3.61	1910	14	8	2KJ3500- ■ BB21- ■ ■ A1 -Z	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.12	<b>K.39-LE63ZMH4P</b>							
	8.8	130	157.32	6410	1.7	17	2KJ3504- ■ BD23- ■ ■ J2 -Z -	
	10	115	139.54	6470	1.9	17	2KJ3504- ■ BD23- ■ ■ H2 -Z -	
	11	100	121.07	6520	2.2	17	2KJ3504- ■ BD23- ■ ■ G2 -Z -	
	<b>B.29-LE63ZMH4P</b>							
	30	39	46.85	4200	2.8	11	2KJ3501- ■ BD23- ■ ■ B2 -Z -	
	33	34	41.56	4200	3.2	11	2KJ3501- ■ BD23- ■ ■ A2 -Z -	
	39	30	36.06	4200	3.7	11	2KJ3501- ■ BD23- ■ ■ X1 -Z -	
	42	27	32.78	4200	4.1	11	2KJ3501- ■ BD23- ■ ■ W1 -Z -	
	49	23	28.11	4200	4.7	11	2KJ3501- ■ BD23- ■ ■ V1 -Z -	
	54	21	25.56	4200	5.2	11	2KJ3501- ■ BD23- ■ ■ U1 -Z -	
	62	18	22.41	4200	6	11	2KJ3501- ■ BD23- ■ ■ T1 -Z -	
	70	16	20.00	4200	6.7	11	2KJ3501- ■ BD23- ■ ■ S1 -Z -	
	78	15	17.82	4200	7.5	11	2KJ3501- ■ BD23- ■ ■ R1 -Z -	
	84	14	16.45	4200	8.1	11	2KJ3501- ■ BD23- ■ ■ Q1 -Z -	
	97	12	14.40	4200	9.3	11	2KJ3501- ■ BD23- ■ ■ P1 -Z -	
	110	10	12.63	4200	11	11	2KJ3501- ■ BD23- ■ ■ N1 -Z -	
	121	9.4	11.46	4200	12	11	2KJ3501- ■ BD23- ■ ■ M1 -Z -	
	129	8.9	10.78	4200	12	11	2KJ3501- ■ BD23- ■ ■ L1 -Z -	
146	7.8	9.51	4200	14	11	2KJ3501- ■ BD23- ■ ■ K1 -Z -		
177	6.5	7.84	4110	12	11	2KJ3501- ■ BD23- ■ ■ H1 -Z -		
188	6.1	7.38	4030	12	11	2KJ3501- ■ BD23- ■ ■ G1 -Z -		
214	5.4	6.51	3870	14	11	2KJ3501- ■ BD23- ■ ■ F1 -Z -		
<b>B.19-LE63ZMH4P</b>								
33	35	42.10	1910	1.4	10	2KJ3500- ■ BD23- ■ ■ A2 -Z -		
37	31	37.28	1910	1.6	10	2KJ3500- ■ BD23- ■ ■ X1 -Z -		
43	27	32.39	1910	1.9	10	2KJ3500- ■ BD23- ■ ■ W1 -Z -		
47	24	29.44	1910	2.1	10	2KJ3500- ■ BD23- ■ ■ V1 -Z -		
55	21	25.06	1910	2.4	10	2KJ3500- ■ BD23- ■ ■ U1 -Z -		
61	19	22.78	1910	2.7	10	2KJ3500- ■ BD23- ■ ■ T1 -Z -		
70	16	19.86	1910	3.1	10	2KJ3500- ■ BD23- ■ ■ S1 -Z -		
78	15	17.78	1910	3.4	10	2KJ3500- ■ BD23- ■ ■ R1 -Z -		
88	13	15.79	1910	3.8	10	2KJ3500- ■ BD23- ■ ■ Q1 -Z -		
95	12	14.57	1910	4.2	10	2KJ3500- ■ BD23- ■ ■ P1 -Z -		
110	10	12.66	1910	4.8	10	2KJ3500- ■ BD23- ■ ■ N1 -Z -		
126	9.1	11.00	1910	5.5	10	2KJ3500- ■ BD23- ■ ■ M1 -Z -		
140	8.2	9.93	1910	6.1	10	2KJ3500- ■ BD23- ■ ■ L1 -Z -		
149	7.7	9.35	1910	6.5	10	2KJ3500- ■ BD23- ■ ■ K1 -Z -		
171	6.7	8.15	1910	7	10	2KJ3500- ■ BD23- ■ ■ J1 -Z -		
177	6.5	7.87	1910	5.9	10	2KJ3500- ■ BD23- ■ ■ H1 -Z -		
199	5.8	6.99	1910	6.6	10	2KJ3500- ■ BD23- ■ ■ G1 -Z -		
216	5.3	6.45	1910	7.3	10	2KJ3500- ■ BD23- ■ ■ F1 -Z -		
248	4.6	5.61	1910	8	10	2KJ3500- ■ BD23- ■ ■ E1 -Z -		
285	4	4.87	1910	8.7	10	2KJ3500- ■ BD23- ■ ■ D1 -Z -		
316	3.6	4.40	1910	9.4	10	2KJ3500- ■ BD23- ■ ■ C1 -Z -		
336	3.4	4.14	1910	9.7	10	2KJ3500- ■ BD23- ■ ■ B1 -Z -		
385	3	3.61	1910	10	10	2KJ3500- ■ BD23- ■ ■ A1 -Z -		
0.18	<b>K.79-LE71ZMK6P</b>							
	3.6	480	244.25	14400	1.7	36	2KJ3508- ■ CC23- ■ ■ J2 -Z P01	
	3.9	435	222.05	14400	1.9	36	2KJ3508- ■ CC23- ■ ■ H2 -Z P01	
<b>K.69-LE71ZMK6P</b>								
4.5	385	196.59	11300	1.6	31	2KJ3507- ■ CC23- ■ ■ H2 -Z P01		

## Article No. supplement

Shaft design **1 or 9** [see page 10/51](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F, H, C or D** [see page 10/42](#)

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.18	<b>K.69-LE71ZMK6P</b>							
	4.9	350	178.72	11400	1.7	31	2KJ3507- ■ CC23- ■ ■ G2 -Z	P01
	5.8	295	152.00	11500	2	31	2KJ3507- ■ CC23- ■ ■ F2 -Z	P01
	<b>K.49-LE71ZMK6P</b>							
	4.4	390	200.25	8060	1.1	24	2KJ3505- ■ CC23- ■ ■ J2 -Z	P01
	4.9	350	178.06	8370	1.2	24	2KJ3505- ■ CC23- ■ ■ H2 -Z	P01
	5.6	305	156.34	8540	1.4	24	2KJ3505- ■ CC23- ■ ■ G2 -Z	P01
	6.2	275	142.13	8630	1.5	24	2KJ3505- ■ CC23- ■ ■ F2 -Z	P01
	<b>K.49-LE63ZMK4P</b>							
	6.9	245	200.25	8720	1.7	24	2KJ3505- ■ BE23- ■ ■ J2 -Z	-
	7.8	220	178.06	8790	1.9	24	2KJ3505- ■ BE23- ■ ■ H2 -Z	-
	<b>K.39-LE71ZMK6P</b>							
	6.3	270	139.54	5890	0.8	17	2KJ3504- ■ CC23- ■ ■ H2 -Z	P01
	7.2	235	121.07	6020	0.92	17	2KJ3504- ■ CC23- ■ ■ G2 -Z	P01
	8	215	110.06	6100	1	17	2KJ3504- ■ CC23- ■ ■ F2 -Z	P01
	<b>K.39-LE63ZMK4P</b>							
	8.8	195	157.32	6170	1.1	17	2KJ3504- ■ BE23- ■ ■ J2 -Z	-
	9.9	173	139.54	6250	1.3	17	2KJ3504- ■ BE23- ■ ■ H2 -Z	-
	11	150	121.07	6340	1.5	17	2KJ3504- ■ BE23- ■ ■ G2 -Z	-
	13	137	110.06	6390	1.6	17	2KJ3504- ■ BE23- ■ ■ F2 -Z	-
	15	117	94.39	6460	1.9	17	2KJ3504- ■ BE23- ■ ■ E2 -Z	-
	16	107	85.81	6500	2.1	17	2KJ3504- ■ BE23- ■ ■ D2 -Z	-
	<b>B.39-LE71ZMK6P</b>							
	16	111	56.36	6980	2.3	16	2KJ3502- ■ CC23- ■ ■ A2 -Z	P01
	17	98	50.11	6980	2.1	16	2KJ3502- ■ CC23- ■ ■ X1 -Z	P01
	<b>B.29-LE71ZMK6P</b>							
	19	91	46.85	4200	1.2	11	2KJ3501- ■ CC23- ■ ■ B2 -Z	P01
	21	81	41.56	4200	1.3	11	2KJ3501- ■ CC23- ■ ■ A2 -Z	P01
	24	70	36.06	4200	1.6	11	2KJ3501- ■ CC23- ■ ■ X1 -Z	P01
	27	64	32.78	4200	1.7	11	2KJ3501- ■ CC23- ■ ■ W1 -Z	P01
	<b>B.29-LE63ZMK4P</b>							
	30	58	46.85	4200	1.9	11	2KJ3501- ■ BE23- ■ ■ B2 -Z	-
	33	52	41.56	4200	2.1	11	2KJ3501- ■ BE23- ■ ■ A2 -Z	-
	38	45	36.06	4200	2.5	11	2KJ3501- ■ BE23- ■ ■ X1 -Z	-
	42	41	32.78	4200	2.7	11	2KJ3501- ■ BE23- ■ ■ W1 -Z	-
	49	35	28.11	4200	3.2	11	2KJ3501- ■ BE23- ■ ■ V1 -Z	-
	54	32	25.56	4200	3.5	11	2KJ3501- ■ BE23- ■ ■ U1 -Z	-
	62	28	22.41	4200	4	11	2KJ3501- ■ BE23- ■ ■ T1 -Z	-
	69	25	20.00	4200	4.4	11	2KJ3501- ■ BE23- ■ ■ S1 -Z	-
	78	22	17.82	4200	5	11	2KJ3501- ■ BE23- ■ ■ R1 -Z	-
	84	20	16.45	4200	5.4	11	2KJ3501- ■ BE23- ■ ■ Q1 -Z	-
	96	18	14.40	4200	6.2	11	2KJ3501- ■ BE23- ■ ■ P1 -Z	-
	110	16	12.63	4200	7	11	2KJ3501- ■ BE23- ■ ■ N1 -Z	-
	121	14	11.46	4200	7.7	11	2KJ3501- ■ BE23- ■ ■ M1 -Z	-
	128	13	10.78	4200	8.2	11	2KJ3501- ■ BE23- ■ ■ L1 -Z	-
	146	12	9.51	4200	9.3	11	2KJ3501- ■ BE23- ■ ■ K1 -Z	-
	168	10	8.25	4160	11	11	2KJ3501- ■ BE23- ■ ■ J1 -Z	-
177	9.7	7.84	4080	7.7	11	2KJ3501- ■ BE23- ■ ■ H1 -Z	-	
188	9.2	7.38	4000	8.2	11	2KJ3501- ■ BE23- ■ ■ G1 -Z	-	
213	8.1	6.51	3840	9.3	11	2KJ3501- ■ BE23- ■ ■ F1 -Z	-	
245	7	5.65	3670	11	11	2KJ3501- ■ BE23- ■ ■ E1 -Z	-	
273	6.3	5.07	3560	12	11	2KJ3501- ■ BE23- ■ ■ D1 -Z	-	

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/51</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H, C or D	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.18	<b>B.29-LE63ZMK4P</b>							
	290	5.9	4.78	3490	12	11	2KJ3501- ■ BE23- ■ ■ C1 -Z -	-
	329	5.2	4.21	3350	14	11	2KJ3501- ■ BE23- ■ ■ B1 -Z -	-
	<b>B.19-LE71ZMK6P</b>							
	30	58	29.44	1910	0.86	10	2KJ3500- ■ CC23- ■ ■ V1 -Z P01	
	<b>B.19-LE63ZMK4P</b>							
	33	52	42.10	1910	0.96	10	2KJ3500- ■ BE23- ■ ■ A2 -Z -	-
	37	46	37.28	1910	1.1	10	2KJ3500- ■ BE23- ■ ■ X1 -Z -	-
	43	40	32.39	1910	1.2	10	2KJ3500- ■ BE23- ■ ■ W1 -Z -	-
	47	36	29.44	1910	1.4	10	2KJ3500- ■ BE23- ■ ■ V1 -Z -	-
	55	31	25.06	1910	1.6	10	2KJ3500- ■ BE23- ■ ■ U1 -Z -	-
	61	28	22.78	1910	1.8	10	2KJ3500- ■ BE23- ■ ■ T1 -Z -	-
	70	25	19.86	1910	2	10	2KJ3500- ■ BE23- ■ ■ S1 -Z -	-
	78	22	17.78	1910	2.3	10	2KJ3500- ■ BE23- ■ ■ R1 -Z -	-
	88	20	15.79	1910	2.6	10	2KJ3500- ■ BE23- ■ ■ Q1 -Z -	-
	95	18	14.57	1910	2.8	10	2KJ3500- ■ BE23- ■ ■ P1 -Z -	-
	109	16	12.66	1910	3.2	10	2KJ3500- ■ BE23- ■ ■ N1 -Z -	-
	126	14	11.00	1910	3.7	10	2KJ3500- ■ BE23- ■ ■ M1 -Z -	-
	139	12	9.93	1910	4.1	10	2KJ3500- ■ BE23- ■ ■ L1 -Z -	-
	148	12	9.35	1910	4.3	10	2KJ3500- ■ BE23- ■ ■ K1 -Z -	-
	170	10	8.15	1910	4.6	10	2KJ3500- ■ BE23- ■ ■ J1 -Z -	-
	176	9.8	7.87	1910	3.9	10	2KJ3500- ■ BE23- ■ ■ H1 -Z -	-
	198	8.7	6.99	1910	4.4	10	2KJ3500- ■ BE23- ■ ■ G1 -Z -	-
	215	8	6.45	1910	4.9	10	2KJ3500- ■ BE23- ■ ■ F1 -Z -	-
	247	7	5.61	1910	5.3	10	2KJ3500- ■ BE23- ■ ■ E1 -Z -	-
	284	6	4.87	1910	5.8	10	2KJ3500- ■ BE23- ■ ■ D1 -Z -	-
	315	5.5	4.40	1910	6.2	10	2KJ3500- ■ BE23- ■ ■ C1 -Z -	-
335	5.1	4.14	1910	6.4	10	2KJ3500- ■ BE23- ■ ■ B1 -Z -	-	
384	4.5	3.61	1910	6.9	10	2KJ3500- ■ BE23- ■ ■ A1 -Z -	-	
0.25	<b>K.79-LE71YMS6P</b>							
	3.6	670	244.25	14200	1.2	38	2KJ3508- ■ CE23- ■ ■ J2 -Z P01	
	3.9	605	222.05	14400	1.3	38	2KJ3508- ■ CE23- ■ ■ H2 -Z P01	
	4.6	515	188.85	14400	1.6	38	2KJ3508- ■ CE23- ■ ■ G2 -Z P01	
	5.1	470	171.69	14400	1.7	38	2KJ3508- ■ CE23- ■ ■ F2 -Z P01	
	<b>K.79-LE71ZMK4P</b>							
	5.7	415	244.25	14400	2	36	2KJ3508- ■ CC23- ■ ■ J2 -Z -	-
	<b>K.69-LE71YMS6P</b>							
	4.4	535	196.59	11000	1.1	33	2KJ3507- ■ CE23- ■ ■ H2 -Z P01	
	4.9	490	178.72	11100	1.2	33	2KJ3507- ■ CE23- ■ ■ G2 -Z P01	
	5.7	415	152.00	11200	1.4	33	2KJ3507- ■ CE23- ■ ■ F2 -Z P01	
	6.3	375	138.18	11300	1.6	33	2KJ3507- ■ CE23- ■ ■ E2 -Z P01	
	<b>K.69-LE71ZMK4P</b>							
	7.1	335	196.59	11400	1.8	31	2KJ3507- ■ CC23- ■ ■ H2 -Z -	-
	7.8	305	178.72	11500	2	31	2KJ3507- ■ CC23- ■ ■ G2 -Z -	-
	<b>K.49-LE71YMS6P</b>							
	4.9	485	178.06	7310	0.86	26	2KJ3505- ■ CE23- ■ ■ H2 -Z P01	
	5.6	425	156.34	7780	0.98	26	2KJ3505- ■ CE23- ■ ■ G2 -Z P01	
	6.1	390	142.13	8060	1.1	26	2KJ3505- ■ CE23- ■ ■ F2 -Z P01	
	<b>K.49-LE71ZMK4P</b>							
	7	340	200.25	8440	1.2	24	2KJ3505- ■ CC23- ■ ■ J2 -Z -	-
	7.8	305	178.06	8540	1.4	24	2KJ3505- ■ CC23- ■ ■ H2 -Z -	-
	8.9	265	156.34	8660	1.6	24	2KJ3505- ■ CC23- ■ ■ G2 -Z -	-

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/51</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H, C or D	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.25</b>	<b>K.49-LE71ZMK4P</b>							
	9.8	240	142.13	8730	1.7	24	2KJ3505- ■ CC23- ■ ■ F2 -Z -	
	11	205	121.60	8830	2	24	2KJ3505- ■ CC23- ■ ■ E2 -Z -	
	13	189	110.55	8880	2.2	24	2KJ3505- ■ CC23- ■ ■ D2 -Z -	
	<b>K.39-LE71ZMK4P</b>							
	8.9	265	157.32	5910	0.82	17	2KJ3504- ■ CC23- ■ ■ J2 -Z -	
	10	235	139.54	6020	0.92	17	2KJ3504- ■ CC23- ■ ■ H2 -Z -	
	12	205	121.07	6130	1.1	17	2KJ3504- ■ CC23- ■ ■ G2 -Z -	
	13	188	110.06	6200	1.2	17	2KJ3504- ■ CC23- ■ ■ F2 -Z -	
	15	162	94.39	6290	1.4	17	2KJ3504- ■ CC23- ■ ■ E2 -Z -	
	16	147	85.81	6350	1.5	17	2KJ3504- ■ CC23- ■ ■ D2 -Z -	
	19	129	75.24	6420	1.7	17	2KJ3504- ■ CC23- ■ ■ C2 -Z -	
	21	115	67.16	6470	1.9	17	2KJ3504- ■ CC23- ■ ■ B2 -Z -	
	23	102	59.85	6520	2.1	17	2KJ3504- ■ CC23- ■ ■ A2 -Z -	
	25	95	55.25	6530	2.3	17	2KJ3504- ■ CC23- ■ ■ X1 -Z -	
	<b>B.39-LE71YMS6P</b>							
	15	155	56.36	6980	1.6	18	2KJ3502- ■ CE23- ■ ■ A2 -Z P01	
	17	138	50.11	6980	1.5	18	2KJ3502- ■ CE23- ■ ■ X1 -Z P01	
	20	121	44.00	6980	2.1	18	2KJ3502- ■ CE23- ■ ■ W1 -Z P01	
	22	110	40.00	6980	2.1	18	2KJ3502- ■ CE23- ■ ■ V1 -Z P01	
	<b>B.39-LE71ZMK4P</b>							
	28	86	50.11	6980	2.4	16	2KJ3502- ■ CC23- ■ ■ X1 -Z -	
	<b>B.29-LE71YMS6P</b>							
	19	129	46.85	4040	0.86	13	2KJ3501- ■ CE23- ■ ■ B2 -Z P01	
	21	114	41.56	4110	0.96	13	2KJ3501- ■ CE23- ■ ■ A2 -Z P01	
	24	99	36.06	4190	1.1	13	2KJ3501- ■ CE23- ■ ■ X1 -Z P01	
	27	90	32.78	4200	1.2	13	2KJ3501- ■ CE23- ■ ■ W1 -Z P01	
	<b>B.29-LE71ZMK4P</b>							
	30	80	46.85	4200	1.4	11	2KJ3501- ■ CC23- ■ ■ B2 -Z -	
	34	71	41.56	4200	1.5	11	2KJ3501- ■ CC23- ■ ■ A2 -Z -	
	39	62	36.06	4200	1.8	11	2KJ3501- ■ CC23- ■ ■ X1 -Z -	
	43	56	32.78	4200	2	11	2KJ3501- ■ CC23- ■ ■ W1 -Z -	
	50	48	28.11	4200	2.3	11	2KJ3501- ■ CC23- ■ ■ V1 -Z -	
	55	44	25.56	4200	2.5	11	2KJ3501- ■ CC23- ■ ■ U1 -Z -	
	62	38	22.41	4200	2.9	11	2KJ3501- ■ CC23- ■ ■ T1 -Z -	
	70	34	20.00	4200	3.2	11	2KJ3501- ■ CC23- ■ ■ S1 -Z -	
78	30	17.82	4200	3.6	11	2KJ3501- ■ CC23- ■ ■ R1 -Z -		
85	28	16.45	4200	3.9	11	2KJ3501- ■ CC23- ■ ■ Q1 -Z -		
97	25	14.40	4200	4.5	11	2KJ3501- ■ CC23- ■ ■ P1 -Z -		
110	22	12.63	4200	5.1	11	2KJ3501- ■ CC23- ■ ■ N1 -Z -		
122	20	11.46	4200	5.6	11	2KJ3501- ■ CC23- ■ ■ M1 -Z -		
129	18	10.78	4200	6	11	2KJ3501- ■ CC23- ■ ■ L1 -Z -		
147	16	9.51	4200	6.8	11	2KJ3501- ■ CC23- ■ ■ K1 -Z -		
169	14	8.25	4110	7.8	11	2KJ3501- ■ CC23- ■ ■ J1 -Z -		
178	13	7.84	4040	5.6	11	2KJ3501- ■ CC23- ■ ■ H1 -Z -		
189	13	7.38	3950	5.9	11	2KJ3501- ■ CC23- ■ ■ G1 -Z -		
214	11	6.51	3810	6.7	11	2KJ3501- ■ CC23- ■ ■ F1 -Z -		
247	9.7	5.65	3640	7.8	11	2KJ3501- ■ CC23- ■ ■ E1 -Z -		
275	8.7	5.07	3530	8.5	11	2KJ3501- ■ CC23- ■ ■ D1 -Z -		
292	8.2	4.78	3460	9	11	2KJ3501- ■ CC23- ■ ■ C1 -Z -		
331	7.2	4.21	3320	10	11	2KJ3501- ■ CC23- ■ ■ B1 -Z -		
382	6.2	3.65	3180	12	11	2KJ3501- ■ CC23- ■ ■ A1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.25</b>	<b>B.19-LE71ZMK4P</b>							
	43	55	32.39	1910	0.9	10	2KJ3500- ■ CC23- ■ ■ W1 -Z -	
	47	50	29.44	1910	0.99	10	2KJ3500- ■ CC23- ■ ■ V1 -Z -	
	56	43	25.06	1910	1.2	10	2KJ3500- ■ CC23- ■ ■ U1 -Z -	
	61	39	22.78	1910	1.3	10	2KJ3500- ■ CC23- ■ ■ T1 -Z -	
	70	34	19.86	1910	1.5	10	2KJ3500- ■ CC23- ■ ■ S1 -Z -	
	78	30	17.78	1910	1.6	10	2KJ3500- ■ CC23- ■ ■ R1 -Z -	
	88	27	15.79	1910	1.9	10	2KJ3500- ■ CC23- ■ ■ Q1 -Z -	
	96	25	14.57	1910	2	10	2KJ3500- ■ CC23- ■ ■ P1 -Z -	
	110	22	12.66	1910	2.3	10	2KJ3500- ■ CC23- ■ ■ N1 -Z -	
	127	19	11.00	1910	2.7	10	2KJ3500- ■ CC23- ■ ■ M1 -Z -	
	140	17	9.93	1910	2.9	10	2KJ3500- ■ CC23- ■ ■ L1 -Z -	
	149	16	9.35	1910	3.1	10	2KJ3500- ■ CC23- ■ ■ K1 -Z -	
	171	14	8.15	1910	3.4	10	2KJ3500- ■ CC23- ■ ■ J1 -Z -	
	177	14	7.87	1910	2.8	10	2KJ3500- ■ CC23- ■ ■ H1 -Z -	
	200	12	6.99	1910	3.2	10	2KJ3500- ■ CC23- ■ ■ G1 -Z -	
	216	11	6.45	1910	3.5	10	2KJ3500- ■ CC23- ■ ■ F1 -Z -	
	249	9.6	5.61	1910	3.9	10	2KJ3500- ■ CC23- ■ ■ E1 -Z -	
286	8.3	4.87	1910	4.2	10	2KJ3500- ■ CC23- ■ ■ D1 -Z -		
317	7.5	4.40	1910	4.5	10	2KJ3500- ■ CC23- ■ ■ C1 -Z -		
337	7.1	4.14	1910	4.7	10	2KJ3500- ■ CC23- ■ ■ B1 -Z -		
386	6.2	3.61	1910	5	10	2KJ3500- ■ CC23- ■ ■ A1 -Z -		
<b>0.37</b>	<b>K.89-LE80MK6P</b>							
	4	885	231.80	18100	1.8	62	2KJ3510- ■ DE23- ■ ■ K2 -Z P01	
	4.4	805	210.72	18100	2	62	2KJ3510- ■ DE23- ■ ■ J2 -Z P01	
	<b>K.79-LE80MK6P</b>							
	3.8	930	244.25	13700	0.88	41	2KJ3508- ■ DE23- ■ ■ J2 -Z P01	
	4.2	845	222.05	13900	0.97	41	2KJ3508- ■ DE23- ■ ■ H2 -Z P01	
	4.9	720	188.85	14100	1.1	41	2KJ3508- ■ DE23- ■ ■ G2 -Z P01	
	5.4	655	171.69	14300	1.3	41	2KJ3508- ■ DE23- ■ ■ F2 -Z P01	
	<b>K.79-LE71YMS4P</b>							
	5.6	625	244.25	14300	1.3	38	2KJ3508- ■ CE23- ■ ■ J2 -Z -	
	6.2	565	222.05	14400	1.4	38	2KJ3508- ■ CE23- ■ ■ H2 -Z -	
	7.3	480	188.85	14400	1.7	38	2KJ3508- ■ CE23- ■ ■ G2 -Z -	
	8	440	171.69	14400	1.9	38	2KJ3508- ■ CE23- ■ ■ F2 -Z -	
	9	390	153.18	14400	2.1	38	2KJ3508- ■ CE23- ■ ■ E2 -Z -	
	<b>K.69-LE80MK6P</b>							
	4.7	750	196.59	9880	0.8	36	2KJ3507- ■ DE23- ■ ■ H2 -Z P01	
	5.2	680	178.72	10300	0.88	36	2KJ3507- ■ DE23- ■ ■ G2 -Z P01	
	6.1	580	152.00	10900	1	36	2KJ3507- ■ DE23- ■ ■ F2 -Z P01	
	6.7	525	138.18	11000	1.1	36	2KJ3507- ■ DE23- ■ ■ E2 -Z P01	
	<b>K.69-LE71YMS4P</b>							
	7	500	196.59	11000	1.2	33	2KJ3507- ■ CE23- ■ ■ H2 -Z -	
	7.7	455	178.72	11200	1.3	33	2KJ3507- ■ CE23- ■ ■ G2 -Z -	
	9.1	385	152.00	11300	1.5	33	2KJ3507- ■ CE23- ■ ■ F2 -Z -	
	10	350	138.18	11400	1.7	33	2KJ3507- ■ CE23- ■ ■ E2 -Z -	
	11	315	123.29	11500	1.9	33	2KJ3507- ■ CE23- ■ ■ D2 -Z -	
	12	280	110.55	11600	2.1	33	2KJ3507- ■ CE23- ■ ■ C2 -Z -	
	<b>K.49-LE71YMS4P</b>							
	6.9	510	200.25	7120	0.82	26	2KJ3505- ■ CE23- ■ ■ J2 -Z -	
	7.8	455	178.06	7550	0.92	26	2KJ3505- ■ CE23- ■ ■ H2 -Z -	
	8.8	400	156.34	7980	1	26	2KJ3505- ■ CE23- ■ ■ G2 -Z -	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.37</b>	<b>K.49-LE71YMS4P</b>							
	9.7	360	142.13	8290	1.2	26	2KJ3505- ■ CE23- ■ ■ F2 -Z -	
	11	310	121.60	8530	1.3	26	2KJ3505- ■ CE23- ■ ■ E2 -Z -	
	12	280	110.55	8610	1.5	26	2KJ3505- ■ CE23- ■ ■ D2 -Z -	
	14	250	97.71	8700	1.7	26	2KJ3505- ■ CE23- ■ ■ C2 -Z -	
	16	225	88.83	8770	1.8	26	2KJ3505- ■ CE23- ■ ■ B2 -Z -	
	18	199	77.81	8810	2.1	26	2KJ3505- ■ CE23- ■ ■ A2 -Z -	
	19	184	71.82	8650	2.3	26	2KJ3505- ■ CE23- ■ ■ X1 -Z -	
	<b>K.39-LE71YMS4P</b>							
	15	240	94.39	6000	0.91	18	2KJ3504- ■ CE23- ■ ■ E2 -Z -	
16	220	85.81	6080	1	18	2KJ3504- ■ CE23- ■ ■ D2 -Z -		
18	193	75.24	6180	1.1	18	2KJ3504- ■ CE23- ■ ■ C2 -Z -		
21	172	67.16	6260	1.3	18	2KJ3504- ■ CE23- ■ ■ B2 -Z -		
23	153	59.85	6330	1.4	18	2KJ3504- ■ CE23- ■ ■ A2 -Z -		
25	141	55.25	6370	1.6	18	2KJ3504- ■ CE23- ■ ■ X1 -Z -		
29	124	48.37	6430	1.8	18	2KJ3504- ■ CE23- ■ ■ W1 -Z -		
33	109	42.41	6490	2	18	2KJ3504- ■ CE23- ■ ■ V1 -Z -		
36	98	38.48	6530	2.2	18	2KJ3504- ■ CE23- ■ ■ U1 -Z -		
38	93	36.21	6530	2.4	18	2KJ3504- ■ CE23- ■ ■ T1 -Z -		
43	82	31.92	6450	2.7	18	2KJ3504- ■ CE23- ■ ■ S1 -Z -		
<b>B.49-LE80MK6P</b>								
16	225	59.28	11500	2	27	2KJ3503- ■ DE23- ■ ■ C2 -Z P01		
17	205	53.89	11500	2.2	27	2KJ3503- ■ DE23- ■ ■ B2 -Z P01		
<b>B.39-LE80MK6P</b>								
18	191	50.11	6980	1.1	21	2KJ3502- ■ DE23- ■ ■ X1 -Z P01		
21	168	44.00	6980	1.5	21	2KJ3502- ■ DE23- ■ ■ W1 -Z P01		
23	153	40.00	6980	1.5	21	2KJ3502- ■ DE23- ■ ■ V1 -Z P01		
<b>B.39-LE71YMS4P</b>								
24	144	56.36	6980	1.7	18	2KJ3502- ■ CE23- ■ ■ A2 -Z -		
28	128	50.11	6980	1.6	18	2KJ3502- ■ CE23- ■ ■ X1 -Z -		
31	113	44.00	6980	2.2	18	2KJ3502- ■ CE23- ■ ■ W1 -Z -		
34	102	40.00	6980	2.2	18	2KJ3502- ■ CE23- ■ ■ V1 -Z -		
<b>B.29-LE80MK6P</b>								
26	138	36.06	3990	0.8	16	2KJ3501- ■ DE23- ■ ■ X1 -Z P01		
28	125	32.78	4060	0.88	16	2KJ3501- ■ DE23- ■ ■ W1 -Z P01		
<b>B.29-LE71YMS4P</b>								
29	120	46.85	4080	0.92	13	2KJ3501- ■ CE23- ■ ■ B2 -Z -		
33	106	41.56	4160	1	13	2KJ3501- ■ CE23- ■ ■ A2 -Z -		
38	92	36.06	4200	1.2	13	2KJ3501- ■ CE23- ■ ■ X1 -Z -		
42	84	32.78	4200	1.3	13	2KJ3501- ■ CE23- ■ ■ W1 -Z -		
49	72	28.11	4200	1.5	13	2KJ3501- ■ CE23- ■ ■ V1 -Z -		
54	65	25.56	4200	1.7	13	2KJ3501- ■ CE23- ■ ■ U1 -Z -		
62	57	22.41	4200	1.9	13	2KJ3501- ■ CE23- ■ ■ T1 -Z -		
69	51	20.00	4200	2.1	13	2KJ3501- ■ CE23- ■ ■ S1 -Z -		
77	46	17.82	4200	2.4	13	2KJ3501- ■ CE23- ■ ■ R1 -Z -		
84	42	16.45	4200	2.6	13	2KJ3501- ■ CE23- ■ ■ Q1 -Z -		
96	37	14.40	4200	3	13	2KJ3501- ■ CE23- ■ ■ P1 -Z -		
109	32	12.63	4200	3.4	13	2KJ3501- ■ CE23- ■ ■ N1 -Z -		
120	29	11.46	4200	3.7	13	2KJ3501- ■ CE23- ■ ■ M1 -Z -		
128	28	10.78	4200	4	13	2KJ3501- ■ CE23- ■ ■ L1 -Z -		
145	24	9.51	4200	4.5	13	2KJ3501- ■ CE23- ■ ■ K1 -Z -		
167	21	8.25	4060	5.2	13	2KJ3501- ■ CE23- ■ ■ J1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.37	<b>B.29-LE71YMS4P</b>							
	176	20	7.84	3980	3.7	13	2KJ3501- ■ CE23- ■ ■ H1 -Z -	
	187	19	7.38	3910	4	13	2KJ3501- ■ CE23- ■ ■ G1 -Z -	
	212	17	6.51	3760	4.5	13	2KJ3501- ■ CE23- ■ ■ F1 -Z -	
	244	14	5.65	3610	5.2	13	2KJ3501- ■ CE23- ■ ■ E1 -Z -	
	272	13	5.07	3500	5.7	13	2KJ3501- ■ CE23- ■ ■ D1 -Z -	
	289	12	4.78	3440	6	13	2KJ3501- ■ CE23- ■ ■ C1 -Z -	
	328	11	4.21	3300	6.9	13	2KJ3501- ■ CE23- ■ ■ B1 -Z -	
	378	9.3	3.65	3160	7.8	13	2KJ3501- ■ CE23- ■ ■ A1 -Z -	
	<b>B.19-LE71YMS4P</b>							
	61	58	22.78	1910	0.86	11	2KJ3500- ■ CE23- ■ ■ T1 -Z -	
	69	51	19.86	1910	0.98	11	2KJ3500- ■ CE23- ■ ■ S1 -Z -	
	78	46	17.78	1910	1.1	11	2KJ3500- ■ CE23- ■ ■ R1 -Z -	
	87	40	15.79	1910	1.2	11	2KJ3500- ■ CE23- ■ ■ Q1 -Z -	
	95	37	14.57	1910	1.3	11	2KJ3500- ■ CE23- ■ ■ P1 -Z -	
	109	32	12.66	1910	1.5	11	2KJ3500- ■ CE23- ■ ■ N1 -Z -	
	125	28	11.00	1910	1.8	11	2KJ3500- ■ CE23- ■ ■ M1 -Z -	
	139	25	9.93	1910	2	11	2KJ3500- ■ CE23- ■ ■ L1 -Z -	
	148	24	9.35	1910	2.1	11	2KJ3500- ■ CE23- ■ ■ K1 -Z -	
169	21	8.15	1910	2.3	11	2KJ3500- ■ CE23- ■ ■ J1 -Z -		
175	20	7.87	1910	1.9	11	2KJ3500- ■ CE23- ■ ■ H1 -Z -		
197	18	6.99	1910	2.1	11	2KJ3500- ■ CE23- ■ ■ G1 -Z -		
214	16	6.45	1910	2.4	11	2KJ3500- ■ CE23- ■ ■ F1 -Z -		
246	14	5.61	1910	2.6	11	2KJ3500- ■ CE23- ■ ■ E1 -Z -		
283	12	4.87	1910	2.8	11	2KJ3500- ■ CE23- ■ ■ D1 -Z -		
314	11	4.40	1910	3	11	2KJ3500- ■ CE23- ■ ■ C1 -Z -		
333	11	4.14	1910	3.1	11	2KJ3500- ■ CE23- ■ ■ B1 -Z -		
382	9.2	3.61	1910	3.4	11	2KJ3500- ■ CE23- ■ ■ A1 -Z -		
0.55	<b>K.89-LE80ZMQ6P</b>							
	4	1300	231.80	18100	1.2	62	2KJ3510- ■ DF23- ■ ■ K2 -Z P01	
	4.4	1180	210.72	18100	1.4	62	2KJ3510- ■ DF23- ■ ■ J2 -Z P01	
	4.9	1060	189.01	18100	1.5	62	2KJ3510- ■ DF23- ■ ■ H2 -Z P01	
	5.5	955	169.94	18100	1.7	62	2KJ3510- ■ DF23- ■ ■ G2 -Z P01	
	<b>K.89-LE80MH4P</b>							
	6.2	845	231.80	18100	1.9	63	2KJ3510- ■ DC23- ■ ■ K2 -Z -	
	6.8	765	210.72	18100	2.1	63	2KJ3510- ■ DC23- ■ ■ J2 -Z -	
	<b>K.79-LE80ZMQ6P</b>							
	5.4	960	171.69	13700	0.85	41	2KJ3508- ■ DF23- ■ ■ F2 -Z P01	
	<b>K.79-LE80MH4P</b>							
	5.9	890	244.25	13800	0.92	42	2KJ3508- ■ DC23- ■ ■ J2 -Z -	
	6.5	810	222.05	13900	1	42	2KJ3508- ■ DC23- ■ ■ H2 -Z -	
	7.6	685	188.85	14200	1.2	42	2KJ3508- ■ DC23- ■ ■ G2 -Z -	
	8.4	625	171.69	14300	1.3	42	2KJ3508- ■ DC23- ■ ■ F2 -Z -	
	9.4	555	153.18	14400	1.5	42	2KJ3508- ■ DC23- ■ ■ E2 -Z -	
	10	500	137.35	14400	1.6	42	2KJ3508- ■ DC23- ■ ■ D2 -Z -	
	12	450	123.80	14400	1.8	42	2KJ3508- ■ DC23- ■ ■ C2 -Z -	
	13	415	114.28	14400	2	42	2KJ3508- ■ DC23- ■ ■ B2 -Z -	
	14	380	104.32	14400	2.2	42	2KJ3508- ■ DC23- ■ ■ A2 -Z -	
	<b>K.69-LE80MH4P</b>							
7.3	715	196.59	10100	0.84	37	2KJ3507- ■ DC23- ■ ■ H2 -Z -		
8.1	650	178.72	10500	0.92	37	2KJ3507- ■ DC23- ■ ■ G2 -Z -		
9.5	550	152.00	10900	1.1	37	2KJ3507- ■ DC23- ■ ■ F2 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.55</b>	<b>K.69-LE80MH4P</b>							
	10	500	138.18	11000	1.2	37	2KJ3507- ■ DC23- ■ ■ E2 -Z -	
	12	450	123.29	11200	1.3	37	2KJ3507- ■ DC23- ■ ■ D2 -Z -	
	13	400	110.55	11300	1.5	37	2KJ3507- ■ DC23- ■ ■ C2 -Z -	
	14	360	99.64	11400	1.7	37	2KJ3507- ■ DC23- ■ ■ B2 -Z -	
	16	335	91.98	11400	1.8	37	2KJ3507- ■ DC23- ■ ■ A2 -Z -	
	17	305	83.96	11500	2	37	2KJ3507- ■ DC23- ■ ■ X1 -Z -	
	21	250	69.67	11600	2.4	37	2KJ3507- ■ DC23- ■ ■ W1 -Z -	
	<b>K.49-LE80MH4P</b>							
	10	515	142.13	7080	0.81	30	2KJ3505- ■ DC23- ■ ■ F2 -Z -	
12	440	121.60	7670	0.95	30	2KJ3505- ■ DC23- ■ ■ E2 -Z -		
13	400	110.55	7980	1	30	2KJ3505- ■ DC23- ■ ■ D2 -Z -		
15	355	97.71	8250	1.2	30	2KJ3505- ■ DC23- ■ ■ C2 -Z -		
16	320	88.83	8180	1.3	30	2KJ3505- ■ DC23- ■ ■ B2 -Z -		
19	280	77.81	8030	1.5	30	2KJ3505- ■ DC23- ■ ■ A2 -Z -		
20	260	71.82	7910	1.6	30	2KJ3505- ■ DC23- ■ ■ X1 -Z -		
23	230	63.59	7750	1.8	30	2KJ3505- ■ DC23- ■ ■ W1 -Z -		
27	193	52.93	7470	2.2	30	2KJ3505- ■ DC23- ■ ■ V1 -Z -		
29	182	49.82	7380	2.3	30	2KJ3505- ■ DC23- ■ ■ U1 -Z -		
<b>K.39-LE80MH4P</b>								
19	270	75.24	5890	0.8	23	2KJ3504- ■ DC23- ■ ■ C2 -Z -		
21	245	67.16	5980	0.9	23	2KJ3504- ■ DC23- ■ ■ B2 -Z -		
24	215	59.85	6100	1	23	2KJ3504- ■ DC23- ■ ■ A2 -Z -		
26	200	55.25	6150	1.1	23	2KJ3504- ■ DC23- ■ ■ X1 -Z -		
30	176	48.37	6240	1.2	23	2KJ3504- ■ DC23- ■ ■ W1 -Z -		
34	155	42.41	6320	1.4	23	2KJ3504- ■ DC23- ■ ■ V1 -Z -		
37	140	38.48	6280	1.6	23	2KJ3504- ■ DC23- ■ ■ U1 -Z -		
40	132	36.21	6210	1.7	23	2KJ3504- ■ DC23- ■ ■ T1 -Z -		
45	116	31.92	6050	1.9	23	2KJ3504- ■ DC23- ■ ■ S1 -Z -		
52	101	27.70	5850	2.2	23	2KJ3504- ■ DC23- ■ ■ R1 -Z -		
54	98	26.89	5810	2.2	23	2KJ3504- ■ DC23- ■ ■ Q1 -Z -		
60	87	23.97	5660	2.5	23	2KJ3504- ■ DC23- ■ ■ P1 -Z -		
65	81	22.12	5550	2.7	23	2KJ3504- ■ DC23- ■ ■ N1 -Z -		
74	71	19.37	5360	3.1	23	2KJ3504- ■ DC23- ■ ■ M1 -Z -		
<b>B.49-LE80ZMQ6P</b>								
16	330	59.28	11400	1.4	27	2KJ3503- ■ DF23- ■ ■ C2 -Z -	P01	
17	300	53.89	11500	1.5	27	2KJ3503- ■ DF23- ■ ■ B2 -Z -	P01	
20	255	45.83	11500	1.7	27	2KJ3503- ■ DF23- ■ ■ A2 -Z -	P01	
22	230	41.67	11300	1.9	27	2KJ3503- ■ DF23- ■ ■ X1 -Z -	P01	
<b>B.49-LE80MH4P</b>								
24	215	59.28	11100	2.1	28	2KJ3503- ■ DC23- ■ ■ C2 -Z -		
27	197	53.89	10800	2.3	28	2KJ3503- ■ DC23- ■ ■ B2 -Z -		
<b>B.39-LE80ZMQ6P</b>								
21	245	44.00	6980	1	21	2KJ3502- ■ DF23- ■ ■ W1 -Z -	P01	
23	225	40.00	6980	1	21	2KJ3502- ■ DF23- ■ ■ V1 -Z -	P01	
<b>B.39-LE80MH4P</b>								
29	183	50.11	6980	1.1	22	2KJ3502- ■ DC23- ■ ■ X1 -Z -		
33	160	44.00	6980	1.6	22	2KJ3502- ■ DC23- ■ ■ W1 -Z -		
36	146	40.00	6980	1.6	22	2KJ3502- ■ DC23- ■ ■ V1 -Z -		
42	125	34.22	6980	2	22	2KJ3502- ■ DC23- ■ ■ U1 -Z -		
46	113	31.11	6980	2.2	22	2KJ3502- ■ DC23- ■ ■ T1 -Z -		
52	100	27.50	6980	2.5	22	2KJ3502- ■ DC23- ■ ■ S1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	No. of poles
0.55	<b>B.39-LE80MH4P</b>							
	58	91	25.00	6980	2.7	22	2KJ3502- DC23- R1 -Z	-
	66	80	21.90	6980	3.1	22	2KJ3502- DC23- Q1 -Z	-
	<b>B.29-LE80MH4P</b>							
	40	132	36.06	4020	0.84	17	2KJ3501- DC23- X1 -Z	-
	44	120	32.78	4080	0.92	17	2KJ3501- DC23- W1 -Z	-
	51	103	28.11	4170	1.1	17	2KJ3501- DC23- V1 -Z	-
	56	93	25.56	4200	1.2	17	2KJ3501- DC23- U1 -Z	-
	64	82	22.41	4200	1.3	17	2KJ3501- DC23- T1 -Z	-
	72	73	20.00	4200	1.5	17	2KJ3501- DC23- S1 -Z	-
	81	65	17.82	4200	1.7	17	2KJ3501- DC23- R1 -Z	-
	88	60	16.45	4200	1.8	17	2KJ3501- DC23- Q1 -Z	-
	100	52	14.40	4200	2.1	17	2KJ3501- DC23- P1 -Z	-
	114	46	12.63	4200	2.4	17	2KJ3501- DC23- N1 -Z	-
	126	42	11.46	4200	2.6	17	2KJ3501- DC23- M1 -Z	-
	134	39	10.78	4200	2.8	17	2KJ3501- DC23- L1 -Z	-
	151	35	9.51	4070	3.2	17	2KJ3501- DC23- K1 -Z	-
	175	30	8.25	3920	3.7	17	2KJ3501- DC23- J1 -Z	-
	184	29	7.84	3830	2.6	17	2KJ3501- DC23- H1 -Z	-
	195	27	7.38	3770	2.8	17	2KJ3501- DC23- G1 -Z	-
	221	24	6.51	3630	3.2	17	2KJ3501- DC23- F1 -Z	-
	255	21	5.65	3480	3.6	17	2KJ3501- DC23- E1 -Z	-
	284	18	5.07	3410	4	17	2KJ3501- DC23- D1 -Z	-
	301	17	4.78	3340	4.2	17	2KJ3501- DC23- C1 -Z	-
	342	15	4.21	3220	4.8	17	2KJ3501- DC23- B1 -Z	-
	<b>B.19-LE80MH4P</b>							
	91	58	15.79	1910	0.87	15	2KJ3500- DC23- Q1 -Z	-
	99	53	14.57	1910	0.94	15	2KJ3500- DC23- P1 -Z	-
	114	46	12.66	1910	1.1	15	2KJ3500- DC23- N1 -Z	-
	131	40	11.00	1910	1.2	15	2KJ3500- DC23- M1 -Z	-
	145	36	9.93	1910	1.4	15	2KJ3500- DC23- L1 -Z	-
	154	34	9.35	1910	1.5	15	2KJ3500- DC23- K1 -Z	-
177	30	8.15	1910	1.6	15	2KJ3500- DC23- J1 -Z	-	
183	29	7.87	1910	1.3	15	2KJ3500- DC23- H1 -Z	-	
206	26	6.99	1910	1.5	15	2KJ3500- DC23- G1 -Z	-	
223	24	6.45	1910	1.7	15	2KJ3500- DC23- F1 -Z	-	
257	20	5.61	1910	1.8	15	2KJ3500- DC23- E1 -Z	-	
296	18	4.87	1910	2	15	2KJ3500- DC23- D1 -Z	-	
327	16	4.40	1910	2.1	15	2KJ3500- DC23- C1 -Z	-	
348	15	4.14	1910	2.2	15	2KJ3500- DC23- B1 -Z	-	
399	13	3.61	1910	2.4	15	2KJ3500- DC23- A1 -Z	-	
0.75	<b>K.109-LE90SQ6P</b>							
	4.4	1640	216.65	24500	1.8	101	2KJ3511- EC23- H2 -Z	P01
	4.8	1480	195.60	24500	2	101	2KJ3511- EC23- G2 -Z	P01
	<b>K.89-LE90SQ6P</b>							
	4.1	1750	231.80	18100	0.91	64	2KJ3510- EC23- K2 -Z	P01
	4.5	1590	210.72	18100	1	64	2KJ3510- EC23- J2 -Z	P01
	5	1430	189.01	18100	1.1	64	2KJ3510- EC23- H2 -Z	P01
	5.6	1280	169.94	18100	1.2	64	2KJ3510- EC23- G2 -Z	P01
	<b>K.89-LE80ZMQ4P</b>							
	6.3	1140	231.80	18100	1.4	62	2KJ3510- DF23- K2 -Z	-
	6.9	1040	210.72	18100	1.5	62	2KJ3510- DF23- J2 -Z	-

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.75</b>	<b>K.89-LE80ZMQ4P</b>							
	7.7	930	189.01	18100	1.7	62	2KJ3510- DF23- H2 -Z -	
	8.5	835	169.94	18100	1.9	62	2KJ3510- DF23- G2 -Z -	
	9.4	755	153.70	18100	2.1	62	2KJ3510- DF23- F2 -Z -	
	<b>K.79-LE80ZMQ4P</b>							
	7.7	930	188.85	13700	0.88	41	2KJ3508- DF23- G2 -Z -	
	8.4	845	171.69	13900	0.97	41	2KJ3508- DF23- F2 -Z -	
	9.5	755	153.18	14100	1.1	41	2KJ3508- DF23- E2 -Z -	
	11	675	137.35	14200	1.2	41	2KJ3508- DF23- D2 -Z -	
	12	610	123.80	14300	1.3	41	2KJ3508- DF23- C2 -Z -	
13	565	114.28	14400	1.5	41	2KJ3508- DF23- B2 -Z -		
14	515	104.32	14400	1.6	41	2KJ3508- DF23- A2 -Z -		
17	425	86.56	14400	1.9	41	2KJ3508- DF23- X1 -Z -		
18	400	81.47	14400	2	41	2KJ3508- DF23- W1 -Z -		
19	380	76.94	14400	2.2	41	2KJ3508- DF23- V1 -Z -		
<b>K.69-LE80ZMQ4P</b>								
9.5	750	152.00	9880	0.8	36	2KJ3507- DF23- F2 -Z -		
10	680	138.18	10300	0.88	36	2KJ3507- DF23- E2 -Z -		
12	605	123.29	10800	0.99	36	2KJ3507- DF23- D2 -Z -		
13	545	110.55	10900	1.1	36	2KJ3507- DF23- C2 -Z -		
15	490	99.64	11100	1.2	36	2KJ3507- DF23- B2 -Z -		
16	450	91.98	11200	1.3	36	2KJ3507- DF23- A2 -Z -		
17	415	83.96	11200	1.4	36	2KJ3507- DF23- X1 -Z -		
21	340	69.67	11100	1.7	36	2KJ3507- DF23- W1 -Z -		
22	320	65.57	11000	1.9	36	2KJ3507- DF23- V1 -Z -		
23	305	61.93	10800	2	36	2KJ3507- DF23- U1 -Z -		
28	260	52.69	10500	2.3	36	2KJ3507- DF23- T1 -Z -		
<b>K.49-LE80ZMQ4P</b>								
15	480	97.71	7250	0.87	29	2KJ3505- DF23- C2 -Z -		
16	435	88.83	7260	0.96	29	2KJ3505- DF23- B2 -Z -		
19	380	77.81	7230	1.1	29	2KJ3505- DF23- A2 -Z -		
20	355	71.82	7150	1.2	29	2KJ3505- DF23- X1 -Z -		
23	310	63.59	7110	1.3	29	2KJ3505- DF23- W1 -Z -		
27	260	52.93	6930	1.6	29	2KJ3505- DF23- V1 -Z -		
29	245	49.82	6870	1.7	29	2KJ3505- DF23- U1 -Z -		
32	220	44.63	6750	1.9	29	2KJ3505- DF23- T1 -Z -		
38	188	38.00	6560	2.2	29	2KJ3505- DF23- S1 -Z -		
45	161	32.57	6360	2.6	29	2KJ3505- DF23- R1 -Z -		
<b>K.39-LE80ZMQ4P</b>								
26	270	55.25	5890	0.81	22	2KJ3504- DF23- X1 -Z -		
30	235	48.37	6000	0.92	22	2KJ3504- DF23- W1 -Z -		
34	205	42.41	5930	1.1	22	2KJ3504- DF23- V1 -Z -		
38	190	38.48	5810	1.2	22	2KJ3504- DF23- U1 -Z -		
40	179	36.21	5760	1.2	22	2KJ3504- DF23- T1 -Z -		
45	158	31.92	5650	1.4	22	2KJ3504- DF23- S1 -Z -		
52	137	27.70	5510	1.6	22	2KJ3504- DF23- R1 -Z -		
54	133	26.89	5480	1.7	22	2KJ3504- DF23- Q1 -Z -		
60	118	23.97	5370	1.9	22	2KJ3504- DF23- P1 -Z -		
66	109	22.12	5280	2	22	2KJ3504- DF23- N1 -Z -		
75	96	19.37	5120	2.3	22	2KJ3504- DF23- M1 -Z -		
85	84	16.98	4970	2.6	22	2KJ3504- DF23- L1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.75	<b>K.39-LE80ZMQ4P</b>							
	94	76	15.41	4860	2.9	22	2KJ3504- ■ DF23- ■ ■ K1 -Z -	-
	100	72	14.50	4790	3.1	22	2KJ3504- ■ DF23- ■ ■ J1 -Z -	-
	113	63	12.78	4650	3.5	22	2KJ3504- ■ DF23- ■ ■ H1 -Z -	-
	144	50	10.04	4290	3.7	22	2KJ3504- ■ DF23- ■ ■ F1 -Z -	-
	<b>B.49-LE90SQ6P</b>							
	16	445	59.28	11200	1	28	2KJ3503- ■ EC23- ■ ■ C2 -Z P01	
	18	405	53.89	11200	1.1	28	2KJ3503- ■ EC23- ■ ■ B2 -Z P01	
	21	345	45.83	10900	1.3	28	2KJ3503- ■ EC23- ■ ■ A2 -Z P01	
	23	315	41.67	10700	1.4	28	2KJ3503- ■ EC23- ■ ■ X1 -Z P01	
<b>B.49-LE80ZMQ4P</b>								
24	290	59.28	10500	1.5	27	2KJ3503- ■ DF23- ■ ■ C2 -Z -	-	
27	265	53.89	10300	1.7	27	2KJ3503- ■ DF23- ■ ■ B2 -Z -	-	
32	225	45.83	9980	2	27	2KJ3503- ■ DF23- ■ ■ A2 -Z -	-	
35	205	41.67	9760	2.2	27	2KJ3503- ■ DF23- ■ ■ X1 -Z -	-	
39	184	37.18	9480	2.5	27	2KJ3503- ■ DF23- ■ ■ W1 -Z -	-	
44	165	33.33	9220	2.7	27	2KJ3503- ■ DF23- ■ ■ V1 -Z -	-	
<b>B.39-LE80ZMQ4P</b>								
29	245	50.11	6980	0.85	21	2KJ3502- ■ DF23- ■ ■ X1 -Z -	-	
33	215	44.00	6980	1.2	21	2KJ3502- ■ DF23- ■ ■ W1 -Z -	-	
36	198	40.00	6980	1.2	21	2KJ3502- ■ DF23- ■ ■ V1 -Z -	-	
42	169	34.22	6980	1.5	21	2KJ3502- ■ DF23- ■ ■ U1 -Z -	-	
47	154	31.11	6980	1.6	21	2KJ3502- ■ DF23- ■ ■ T1 -Z -	-	
53	136	27.50	6980	1.8	21	2KJ3502- ■ DF23- ■ ■ S1 -Z -	-	
58	123	25.00	6980	2	21	2KJ3502- ■ DF23- ■ ■ R1 -Z -	-	
66	108	21.90	6980	2.3	21	2KJ3502- ■ DF23- ■ ■ Q1 -Z -	-	
72	100	20.21	6980	2.5	21	2KJ3502- ■ DF23- ■ ■ P1 -Z -	-	
81	88	17.90	6980	2.8	21	2KJ3502- ■ DF23- ■ ■ N1 -Z -	-	
97	74	14.90	6980	3.4	21	2KJ3502- ■ DF23- ■ ■ M1 -Z -	-	
<b>B.29-LE80ZMQ4P</b>								
57	126	25.56	4050	0.87	16	2KJ3501- ■ DF23- ■ ■ U1 -Z -	-	
65	111	22.41	4130	0.99	16	2KJ3501- ■ DF23- ■ ■ T1 -Z -	-	
72	99	20.00	4190	1.1	16	2KJ3501- ■ DF23- ■ ■ S1 -Z -	-	
81	88	17.82	4200	1.2	16	2KJ3501- ■ DF23- ■ ■ R1 -Z -	-	
88	81	16.45	4200	1.4	16	2KJ3501- ■ DF23- ■ ■ Q1 -Z -	-	
101	71	14.40	4200	1.5	16	2KJ3501- ■ DF23- ■ ■ P1 -Z -	-	
115	62	12.63	4200	1.8	16	2KJ3501- ■ DF23- ■ ■ N1 -Z -	-	
127	57	11.46	4140	1.9	16	2KJ3501- ■ DF23- ■ ■ M1 -Z -	-	
135	53	10.78	4090	2.1	16	2KJ3501- ■ DF23- ■ ■ L1 -Z -	-	
152	47	9.51	3950	2.3	16	2KJ3501- ■ DF23- ■ ■ K1 -Z -	-	
176	41	8.25	3810	2.7	16	2KJ3501- ■ DF23- ■ ■ J1 -Z -	-	
185	39	7.84	3720	1.9	16	2KJ3501- ■ DF23- ■ ■ H1 -Z -	-	
196	36	7.38	3660	2.1	16	2KJ3501- ■ DF23- ■ ■ G1 -Z -	-	
223	32	6.51	3540	2.3	16	2KJ3501- ■ DF23- ■ ■ F1 -Z -	-	
257	28	5.65	3400	2.7	16	2KJ3501- ■ DF23- ■ ■ E1 -Z -	-	
286	25	5.07	3340	3	16	2KJ3501- ■ DF23- ■ ■ D1 -Z -	-	
303	24	4.78	3270	3.1	16	2KJ3501- ■ DF23- ■ ■ C1 -Z -	-	
344	21	4.21	3160	3.6	16	2KJ3501- ■ DF23- ■ ■ B1 -Z -	-	
397	18	3.65	3030	4	16	2KJ3501- ■ DF23- ■ ■ A1 -Z -	-	
<b>B.19-LE80ZMQ4P</b>								
115	62	12.66	1910	0.8	14	2KJ3500- ■ DF23- ■ ■ N1 -Z -	-	
132	54	11.00	1910	0.92	14	2KJ3500- ■ DF23- ■ ■ M1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.75	<b>B.19-LE80ZMQ4P</b>							
	146	49	9.93	1910	1	14	2KJ3500- DF23- L1 -Z -	
	155	46	9.35	1910	1.1	14	2KJ3500- DF23- K1 -Z -	
	178	40	8.15	1910	1.2	14	2KJ3500- DF23- J1 -Z -	
	184	39	7.87	1910	0.98	14	2KJ3500- DF23- H1 -Z -	
	207	34	6.99	1910	1.1	14	2KJ3500- DF23- G1 -Z -	
	225	32	6.45	1910	1.2	14	2KJ3500- DF23- F1 -Z -	
	258	28	5.61	1910	1.3	14	2KJ3500- DF23- E1 -Z -	
	298	24	4.87	1910	1.5	14	2KJ3500- DF23- D1 -Z -	
	330	22	4.40	1910	1.6	14	2KJ3500- DF23- C1 -Z -	
	350	20	4.14	1910	1.6	14	2KJ3500- DF23- B1 -Z -	
402	18	3.61	1910	1.7	14	2KJ3500- DF23- A1 -Z -		
1.1	<b>K.129-LE100ZLSA6P</b>							
	4.2	2520	228.30	39400	1.7	170	2KJ3512- FN23- J2 -Z P01	
	4.5	2330	210.74	39600	1.9	170	2KJ3512- FN23- H2 -Z P01	
	<b>K.109-LE100ZLSA6P</b>							
	4.4	2390	216.65	24500	1.2	119	2KJ3511- FN23- H2 -Z P01	
	4.9	2160	195.60	24500	1.3	119	2KJ3511- FN23- G2 -Z P01	
	5.4	1960	177.43	24500	1.5	119	2KJ3511- FN23- F2 -Z P01	
	5.8	1810	163.78	24500	1.6	119	2KJ3511- FN23- E2 -Z P01	
	6.4	1640	148.88	24500	1.8	119	2KJ3511- FN23- D2 -Z P01	
	<b>K.109-LE90SM4P</b>							
	6.6	1580	216.65	24500	1.8	101	2KJ3511- EK23- H2 -Z -	
	7.4	1420	195.60	24500	2	101	2KJ3511- EK23- G2 -Z -	
	<b>K.89-LE100ZLSA6P</b>							
	5.6	1870	169.94	18100	0.85	84	2KJ3510- FN23- G2 -Z P01	
	<b>K.89-LE90SM4P</b>							
	6.2	1690	231.80	18100	0.95	64	2KJ3510- EK23- K2 -Z -	
	6.8	1530	210.72	18100	1	64	2KJ3510- EK23- J2 -Z -	
	7.6	1370	189.01	18100	1.2	64	2KJ3510- EK23- H2 -Z -	
	8.5	1240	169.94	18100	1.3	64	2KJ3510- EK23- G2 -Z -	
	9.4	1120	153.70	18100	1.4	64	2KJ3510- EK23- F2 -Z -	
	10	1030	141.88	18100	1.5	64	2KJ3510- EK23- E2 -Z -	
	11	945	129.96	18100	1.7	64	2KJ3510- EK23- D2 -Z -	
	13	795	109.04	18100	2	64	2KJ3510- EK23- C2 -Z -	
	14	745	102.63	18100	2.1	64	2KJ3510- EK23- B2 -Z -	
	<b>K.79-LE90SM4P</b>							
	10	1000	137.35	13600	0.82	42	2KJ3508- EK23- D2 -Z -	
	12	900	123.80	13800	0.91	42	2KJ3508- EK23- C2 -Z -	
	13	830	114.28	13900	0.98	42	2KJ3508- EK23- B2 -Z -	
	14	760	104.32	14000	1.1	42	2KJ3508- EK23- A2 -Z -	
	17	630	86.56	14300	1.3	42	2KJ3508- EK23- X1 -Z -	
18	590	81.47	14400	1.4	42	2KJ3508- EK23- W1 -Z -		
19	560	76.94	14400	1.5	42	2KJ3508- EK23- V1 -Z -		
22	475	65.47	14400	1.7	42	2KJ3508- EK23- U1 -Z -		
26	405	56.08	14400	2	42	2KJ3508- EK23- T1 -Z -		
29	360	49.31	14400	2.3	42	2KJ3508- EK23- S1 -Z -		
35	300	41.60	14400	2.6	42	2KJ3508- EK23- R1 -Z -		
<b>K.69-LE90SM4P</b>								
14	725	99.64	10000	0.83	37	2KJ3507- EK23- B2 -Z -		
16	670	91.98	10100	0.89	37	2KJ3507- EK23- A2 -Z -		
17	610	83.96	10100	0.98	37	2KJ3507- EK23- X1 -Z -		

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/51</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H, C or D	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.1	<b>K.69-LE90SM4P</b>							
	21	505	69.67	10000	1.2	37	2KJ3507- ■ EK23- ■ ■ W1 -Z -	
	22	475	65.57	9950	1.3	37	2KJ3507- ■ EK23- ■ ■ V1 -Z -	
	23	450	61.93	9880	1.3	37	2KJ3507- ■ EK23- ■ ■ U1 -Z -	
	27	380	52.69	9690	1.6	37	2KJ3507- ■ EK23- ■ ■ T1 -Z -	
	32	325	45.14	9460	1.8	37	2KJ3507- ■ EK23- ■ ■ S1 -Z -	
	36	290	39.69	9220	2.1	37	2KJ3507- ■ EK23- ■ ■ R1 -Z -	
	43	240	33.48	8950	2.4	37	2KJ3507- ■ EK23- ■ ■ Q1 -Z -	
49	210	29.18	8690	2.6	37	2KJ3507- ■ EK23- ■ ■ P1 -Z -		
	<b>K.49-LE90SM4P</b>							
	20	520	71.82	5890	0.8	30	2KJ3505- ■ EK23- ■ ■ X1 -Z -	
	23	460	63.59	5960	0.91	30	2KJ3505- ■ EK23- ■ ■ W1 -Z -	
	27	385	52.93	5980	1.1	30	2KJ3505- ■ EK23- ■ ■ V1 -Z -	
	29	360	49.82	5990	1.2	30	2KJ3505- ■ EK23- ■ ■ U1 -Z -	
	32	325	44.63	5950	1.3	30	2KJ3505- ■ EK23- ■ ■ T1 -Z -	
	38	275	38.00	5900	1.5	30	2KJ3505- ■ EK23- ■ ■ S1 -Z -	
	44	235	32.57	5800	1.8	30	2KJ3505- ■ EK23- ■ ■ R1 -Z -	
	51	205	28.05	5670	2.1	30	2KJ3505- ■ EK23- ■ ■ Q1 -Z -	
	55	192	26.30	5610	2.2	30	2KJ3505- ■ EK23- ■ ■ P1 -Z -	
	62	170	23.28	5500	2.5	30	2KJ3505- ■ EK23- ■ ■ N1 -Z -	
	74	141	19.38	5320	3	30	2KJ3505- ■ EK23- ■ ■ M1 -Z -	
	79	133	18.24	5260	3.2	30	2KJ3505- ■ EK23- ■ ■ L1 -Z -	
	148	71	9.75	4520	3.9	30	2KJ3505- ■ EK23- ■ ■ F1 -Z -	
	157	67	9.18	4450	4	30	2KJ3505- ■ EK23- ■ ■ E1 -Z -	
	<b>K.39-LE90SM4P</b>							
	40	260	36.21	5050	0.83	24	2KJ3504- ■ EK23- ■ ■ T1 -Z -	
	45	230	31.92	5010	0.94	24	2KJ3504- ■ EK23- ■ ■ S1 -Z -	
	52	200	27.70	4960	1.1	24	2KJ3504- ■ EK23- ■ ■ R1 -Z -	
	54	196	26.89	4930	1.1	24	2KJ3504- ■ EK23- ■ ■ Q1 -Z -	
	60	175	23.97	4860	1.3	24	2KJ3504- ■ EK23- ■ ■ P1 -Z -	
	65	161	22.12	4820	1.4	24	2KJ3504- ■ EK23- ■ ■ N1 -Z -	
	74	141	19.37	4730	1.6	24	2KJ3504- ■ EK23- ■ ■ M1 -Z -	
	85	124	16.98	4630	1.8	24	2KJ3504- ■ EK23- ■ ■ L1 -Z -	
	93	112	15.41	4550	2	24	2KJ3504- ■ EK23- ■ ■ K1 -Z -	
	99	106	14.50	4490	2.1	24	2KJ3504- ■ EK23- ■ ■ J1 -Z -	
	113	93	12.78	4390	2.4	24	2KJ3504- ■ EK23- ■ ■ H1 -Z -	
	130	81	11.09	4250	2.7	24	2KJ3504- ■ EK23- ■ ■ G1 -Z -	
	143	73	10.04	4060	2.5	24	2KJ3504- ■ EK23- ■ ■ F1 -Z -	
	163	64	8.81	3950	2.8	24	2KJ3504- ■ EK23- ■ ■ E1 -Z -	
	180	58	7.99	3860	3	24	2KJ3504- ■ EK23- ■ ■ D1 -Z -	
	191	55	7.52	3800	3.1	24	2KJ3504- ■ EK23- ■ ■ C1 -Z -	
	217	48	6.63	3700	3.3	24	2KJ3504- ■ EK23- ■ ■ B1 -Z -	
250	42	5.75	3570	3.6	24	2KJ3504- ■ EK23- ■ ■ A1 -Z -		
	<b>B.49-LE90SM4P</b>							
	24	430	59.28	9670	1	28	2KJ3503- ■ EK23- ■ ■ C2 -Z -	
	27	390	53.89	9550	1.1	28	2KJ3503- ■ EK23- ■ ■ B2 -Z -	
	31	330	45.83	9310	1.3	28	2KJ3503- ■ EK23- ■ ■ A2 -Z -	
	35	300	41.67	9150	1.5	28	2KJ3503- ■ EK23- ■ ■ X1 -Z -	
	39	270	37.18	8930	1.7	28	2KJ3503- ■ EK23- ■ ■ W1 -Z -	
	43	240	33.33	8750	1.9	28	2KJ3503- ■ EK23- ■ ■ V1 -Z -	
48	215	30.05	8560	2.1	28	2KJ3503- ■ EK23- ■ ■ U1 -Z -		

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.1	<b>B.49-LE90SM4P</b>							
	52	200	27.74	8400	2.2	28	2KJ3503- ■ EK23- ■ ■ T1 -Z -	
	57	185	25.32	8210	2.4	28	2KJ3503- ■ EK23- ■ ■ S1 -Z -	
	69	153	21.01	7850	2.9	28	2KJ3503- ■ EK23- ■ ■ R1 -Z -	
	73	144	19.77	7730	3.1	28	2KJ3503- ■ EK23- ■ ■ Q1 -Z -	
	<b>B.39-LE90SM4P</b>							
	42	250	34.22	6980	1	23	2KJ3502- ■ EK23- ■ ■ U1 -Z -	
	46	225	31.11	6980	1.1	23	2KJ3502- ■ EK23- ■ ■ T1 -Z -	
	52	200	27.50	6980	1.2	23	2KJ3502- ■ EK23- ■ ■ S1 -Z -	
	58	182	25.00	6980	1.4	23	2KJ3502- ■ EK23- ■ ■ R1 -Z -	
	66	160	21.90	6980	1.6	23	2KJ3502- ■ EK23- ■ ■ Q1 -Z -	
	71	147	20.21	6980	1.7	23	2KJ3502- ■ EK23- ■ ■ P1 -Z -	
	80	131	17.90	6980	1.9	23	2KJ3502- ■ EK23- ■ ■ N1 -Z -	
	97	109	14.90	6790	2.3	23	2KJ3502- ■ EK23- ■ ■ M1 -Z -	
	103	102	14.02	6690	2.4	23	2KJ3502- ■ EK23- ■ ■ L1 -Z -	
115	92	12.56	6500	2.7	23	2KJ3502- ■ EK23- ■ ■ K1 -Z -		
135	78	10.69	6230	3.1	23	2KJ3502- ■ EK23- ■ ■ J1 -Z -		
157	67	9.17	5970	3.4	23	2KJ3502- ■ EK23- ■ ■ H1 -Z -		
183	58	7.89	5720	3.8	23	2KJ3502- ■ EK23- ■ ■ G1 -Z -		
218	48	6.60	5480	4.2	23	2KJ3502- ■ EK23- ■ ■ F1 -Z -		
232	45	6.21	5380	4.4	23	2KJ3502- ■ EK23- ■ ■ E1 -Z -		
<b>B.29-LE90SM4P</b>								
81	130	17.82	4030	0.85	18	2KJ3501- ■ EK23- ■ ■ R1 -Z -		
88	120	16.45	4080	0.92	18	2KJ3501- ■ EK23- ■ ■ Q1 -Z -		
100	105	14.40	4080	1	18	2KJ3501- ■ EK23- ■ ■ P1 -Z -		
114	92	12.63	3980	1.2	18	2KJ3501- ■ EK23- ■ ■ N1 -Z -		
126	84	11.46	3900	1.3	18	2KJ3501- ■ EK23- ■ ■ M1 -Z -		
134	79	10.78	3860	1.4	18	2KJ3501- ■ EK23- ■ ■ L1 -Z -		
151	69	9.51	3760	1.6	18	2KJ3501- ■ EK23- ■ ■ K1 -Z -		
175	60	8.25	3640	1.8	18	2KJ3501- ■ EK23- ■ ■ J1 -Z -		
184	57	7.84	3540	1.3	18	2KJ3501- ■ EK23- ■ ■ H1 -Z -		
195	54	7.38	3490	1.4	18	2KJ3501- ■ EK23- ■ ■ G1 -Z -		
221	48	6.51	3380	1.6	18	2KJ3501- ■ EK23- ■ ■ F1 -Z -		
255	41	5.65	3280	1.8	18	2KJ3501- ■ EK23- ■ ■ E1 -Z -		
284	37	5.07	3240	2	18	2KJ3501- ■ EK23- ■ ■ D1 -Z -		
301	35	4.78	3180	2.1	18	2KJ3501- ■ EK23- ■ ■ C1 -Z -		
342	31	4.21	3080	2.4	18	2KJ3501- ■ EK23- ■ ■ B1 -Z -		
395	27	3.65	2960	2.7	18	2KJ3501- ■ EK23- ■ ■ A1 -Z -		
1.5	<b>K.129-LE112ZMKA6P</b>							
	4.3	3350	228.30	38600	1.3	170	2KJ3512- ■ GH23- ■ ■ J2 -Z P01	
	4.6	3090	210.74	38900	1.4	170	2KJ3512- ■ GH23- ■ ■ H2 -Z P01	
	5	2850	194.04	39100	1.5	170	2KJ3512- ■ GH23- ■ ■ G2 -Z P01	
	5.9	2430	165.47	39500	1.8	170	2KJ3512- ■ GH23- ■ ■ F2 -Z P01	
	<b>K.129-LE90ZLR4P</b>							
	6.3	2260	228.30	39700	1.9	154	2KJ3512- ■ EM23- ■ ■ J2 -Z -	
	6.9	2080	210.74	39900	2.1	154	2KJ3512- ■ EM23- ■ ■ H2 -Z -	
	<b>K.109-LE112ZMKA6P</b>							
	4.5	3180	216.65	24500	0.91	120	2KJ3511- ■ GH23- ■ ■ H2 -Z P01	
	5	2870	195.60	24500	1	120	2KJ3511- ■ GH23- ■ ■ G2 -Z P01	
	5.5	2600	177.43	24500	1.1	120	2KJ3511- ■ GH23- ■ ■ F2 -Z P01	
	6	2400	163.78	24500	1.2	120	2KJ3511- ■ GH23- ■ ■ E2 -Z P01	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

## Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
1.5	<b>K.109-LE90ZLR4P</b>							
	6.7	2140	216.65	24500	1.4	104	2KJ3511- ■ EM23- ■ ■ H2 -Z -	-
	7.4	1930	195.60	24500	1.5	104	2KJ3511- ■ EM23- ■ ■ G2 -Z -	-
	8.1	1750	177.43	24500	1.6	104	2KJ3511- ■ EM23- ■ ■ F2 -Z -	-
	8.8	1620	163.78	24500	1.8	104	2KJ3511- ■ EM23- ■ ■ E2 -Z -	-
	9.7	1470	148.88	24500	2	104	2KJ3511- ■ EM23- ■ ■ D2 -Z -	-
	<b>K.89-LE90ZLR4P</b>							
	7.6	1870	189.01	18100	0.85	67	2KJ3510- ■ EM23- ■ ■ H2 -Z -	-
	8.5	1680	169.94	18100	0.95	67	2KJ3510- ■ EM23- ■ ■ G2 -Z -	-
	9.4	1520	153.70	18100	1.1	67	2KJ3510- ■ EM23- ■ ■ F2 -Z -	-
	10	1400	141.88	18100	1.1	67	2KJ3510- ■ EM23- ■ ■ E2 -Z -	-
	11	1280	129.96	18100	1.2	67	2KJ3510- ■ EM23- ■ ■ D2 -Z -	-
	13	1080	109.04	18100	1.5	67	2KJ3510- ■ EM23- ■ ■ C2 -Z -	-
	14	1010	102.63	18100	1.6	67	2KJ3510- ■ EM23- ■ ■ B2 -Z -	-
	15	930	94.16	18100	1.7	67	2KJ3510- ■ EM23- ■ ■ A2 -Z -	-
	18	815	82.25	18100	2	67	2KJ3510- ■ EM23- ■ ■ X1 -Z -	-
	20	730	73.64	18100	2.2	67	2KJ3510- ■ EM23- ■ ■ W1 -Z -	-
	<b>K.79-LE90ZLR4P</b>							
	17	855	86.56	13900	0.96	45	2KJ3508- ■ EM23- ■ ■ X1 -Z -	-
	18	805	81.47	14000	1	45	2KJ3508- ■ EM23- ■ ■ W1 -Z -	-
19	760	76.94	14000	1.1	45	2KJ3508- ■ EM23- ■ ■ V1 -Z -	-	
22	645	65.47	14300	1.3	45	2KJ3508- ■ EM23- ■ ■ U1 -Z -	-	
26	555	56.08	14400	1.5	45	2KJ3508- ■ EM23- ■ ■ T1 -Z -	-	
29	485	49.31	14400	1.7	45	2KJ3508- ■ EM23- ■ ■ S1 -Z -	-	
35	410	41.60	14400	1.9	45	2KJ3508- ■ EM23- ■ ■ R1 -Z -	-	
40	355	36.26	14400	2.1	45	2KJ3508- ■ EM23- ■ ■ Q1 -Z -	-	
44	325	32.78	14400	2.5	45	2KJ3508- ■ EM23- ■ ■ P1 -Z -	-	
<b>K.69-LE90ZLR4P</b>								
21	690	69.67	8680	0.87	40	2KJ3507- ■ EM23- ■ ■ W1 -Z -	-	
22	650	65.57	8690	0.92	40	2KJ3507- ■ EM23- ■ ■ V1 -Z -	-	
23	610	61.93	8720	0.98	40	2KJ3507- ■ EM23- ■ ■ U1 -Z -	-	
27	520	52.69	8680	1.1	40	2KJ3507- ■ EM23- ■ ■ T1 -Z -	-	
32	445	45.14	8590	1.3	40	2KJ3507- ■ EM23- ■ ■ S1 -Z -	-	
36	390	39.69	8490	1.5	40	2KJ3507- ■ EM23- ■ ■ R1 -Z -	-	
43	330	33.48	8300	1.7	40	2KJ3507- ■ EM23- ■ ■ Q1 -Z -	-	
50	285	29.18	8140	1.9	40	2KJ3507- ■ EM23- ■ ■ P1 -Z -	-	
55	255	26.05	7980	2.3	40	2KJ3507- ■ EM23- ■ ■ N1 -Z -	-	
59	240	24.52	7890	2.4	40	2KJ3507- ■ EM23- ■ ■ M1 -Z -	-	
62	225	23.15	7810	2.5	40	2KJ3507- ■ EM23- ■ ■ L1 -Z -	-	
73	195	19.70	7530	2.8	40	2KJ3507- ■ EM23- ■ ■ K1 -Z -	-	
86	167	16.88	7280	3.2	40	2KJ3507- ■ EM23- ■ ■ J1 -Z -	-	
97	147	14.84	7070	3.5	40	2KJ3507- ■ EM23- ■ ■ H1 -Z -	-	
155	93	9.34	6130	4	40	2KJ3507- ■ EM23- ■ ■ E1 -Z -	-	
<b>K.49-LE90ZLR4P</b>								
27	525	52.93	4880	0.8	33	2KJ3505- ■ EM23- ■ ■ V1 -Z -	-	
29	490	49.82	4970	0.85	33	2KJ3505- ■ EM23- ■ ■ U1 -Z -	-	
32	440	44.63	5040	0.95	33	2KJ3505- ■ EM23- ■ ■ T1 -Z -	-	
38	375	38.00	5110	1.1	33	2KJ3505- ■ EM23- ■ ■ S1 -Z -	-	
44	320	32.57	5130	1.3	33	2KJ3505- ■ EM23- ■ ■ R1 -Z -	-	
52	275	28.05	5110	1.5	33	2KJ3505- ■ EM23- ■ ■ Q1 -Z -	-	
55	260	26.30	5080	1.6	33	2KJ3505- ■ EM23- ■ ■ P1 -Z -	-	
62	230	23.28	5030	1.8	33	2KJ3505- ■ EM23- ■ ■ N1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.5</b>	<b>K.49-LE90ZLR4P</b>							
	75	192	19.38	4920	2.2	33	2KJ3505- ■ EM23- ■ ■ M1 -Z -	
	79	181	18.24	4880	2.3	33	2KJ3505- ■ EM23- ■ ■ L1 -Z -	
	88	162	16.34	4800	2.6	33	2KJ3505- ■ EM23- ■ ■ K1 -Z -	
	104	138	13.91	4670	3	33	2KJ3505- ■ EM23- ■ ■ J1 -Z -	
	121	118	11.93	4540	3.6	33	2KJ3505- ■ EM23- ■ ■ H1 -Z -	
	148	97	9.75	4290	2.8	33	2KJ3505- ■ EM23- ■ ■ F1 -Z -	
	157	91	9.18	4240	3	33	2KJ3505- ■ EM23- ■ ■ E1 -Z -	
	176	82	8.22	4140	3.1	33	2KJ3505- ■ EM23- ■ ■ D1 -Z -	
	206	69	7.00	3990	3.5	33	2KJ3505- ■ EM23- ■ ■ C1 -Z -	
	241	60	6.00	3840	3.8	33	2KJ3505- ■ EM23- ■ ■ B1 -Z -	
	279	51	5.17	3700	4.1	33	2KJ3505- ■ EM23- ■ ■ A1 -Z -	
	<b>K.39-LE90ZLR4P</b>							
	52	275	27.70	4270	0.8	27	2KJ3504- ■ EM23- ■ ■ R1 -Z -	
	54	265	26.89	4290	0.83	27	2KJ3504- ■ EM23- ■ ■ Q1 -Z -	
	60	235	23.97	4310	0.93	27	2KJ3504- ■ EM23- ■ ■ P1 -Z -	
	65	215	22.12	4320	1	27	2KJ3504- ■ EM23- ■ ■ N1 -Z -	
	75	192	19.37	4260	1.1	27	2KJ3504- ■ EM23- ■ ■ M1 -Z -	
	85	168	16.98	4220	1.3	27	2KJ3504- ■ EM23- ■ ■ L1 -Z -	
	94	153	15.41	4170	1.4	27	2KJ3504- ■ EM23- ■ ■ K1 -Z -	
	100	144	14.50	4140	1.5	27	2KJ3504- ■ EM23- ■ ■ J1 -Z -	
	113	127	12.78	4070	1.7	27	2KJ3504- ■ EM23- ■ ■ H1 -Z -	
	130	110	11.09	3980	2	27	2KJ3504- ■ EM23- ■ ■ G1 -Z -	
	144	100	10.04	3770	1.8	27	2KJ3504- ■ EM23- ■ ■ F1 -Z -	
	164	87	8.81	3700	2.1	27	2KJ3504- ■ EM23- ■ ■ E1 -Z -	
	181	79	7.99	3640	2.2	27	2KJ3504- ■ EM23- ■ ■ D1 -Z -	
	192	74	7.52	3600	2.3	27	2KJ3504- ■ EM23- ■ ■ C1 -Z -	
	218	66	6.63	3500	2.4	27	2KJ3504- ■ EM23- ■ ■ B1 -Z -	
	251	57	5.75	3400	2.6	27	2KJ3504- ■ EM23- ■ ■ A1 -Z -	
	<b>B.49-LE90ZLR4P</b>							
	27	530	53.89	8600	0.84	31	2KJ3503- ■ EM23- ■ ■ B2 -Z -	
	32	450	45.83	8500	0.99	31	2KJ3503- ■ EM23- ■ ■ A2 -Z -	
	35	410	41.67	8400	1.1	31	2KJ3503- ■ EM23- ■ ■ X1 -Z -	
39	365	37.18	8290	1.2	31	2KJ3503- ■ EM23- ■ ■ W1 -Z -		
43	330	33.33	8140	1.4	31	2KJ3503- ■ EM23- ■ ■ V1 -Z -		
48	295	30.05	8020	1.5	31	2KJ3503- ■ EM23- ■ ■ U1 -Z -		
52	275	27.74	7890	1.6	31	2KJ3503- ■ EM23- ■ ■ T1 -Z -		
57	250	25.32	7760	1.8	31	2KJ3503- ■ EM23- ■ ■ S1 -Z -		
69	205	21.01	7490	2.2	31	2KJ3503- ■ EM23- ■ ■ R1 -Z -		
73	196	19.77	7380	2.3	31	2KJ3503- ■ EM23- ■ ■ Q1 -Z -		
77	185	18.67	7290	2.4	31	2KJ3503- ■ EM23- ■ ■ P1 -Z -		
91	158	15.89	7020	2.9	31	2KJ3503- ■ EM23- ■ ■ N1 -Z -		
106	135	13.61	6770	3.3	31	2KJ3503- ■ EM23- ■ ■ M1 -Z -		
174	82	8.29	6000	4	31	2KJ3503- ■ EM23- ■ ■ H1 -Z -		
185	77	7.80	5900	4.3	31	2KJ3503- ■ EM23- ■ ■ G1 -Z -		
<b>B.39-LE90ZLR4P</b>								
46	305	31.11	6980	0.81	26	2KJ3502- ■ EM23- ■ ■ T1 -Z -		
53	270	27.50	6980	0.92	26	2KJ3502- ■ EM23- ■ ■ S1 -Z -		
58	245	25.00	6980	1	26	2KJ3502- ■ EM23- ■ ■ R1 -Z -		
66	215	21.90	6980	1.2	26	2KJ3502- ■ EM23- ■ ■ Q1 -Z -		
71	200	20.21	6890	1.2	26	2KJ3502- ■ EM23- ■ ■ P1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
1.5	<b>B.39-LE90ZLR4P</b>								
	81	177	17.90	6730	1.4	26	2KJ3502- ■ EM23- ■ ■ N1 -Z -		
	97	148	14.90	6480	1.7	26	2KJ3502- ■ EM23- ■ ■ M1 -Z -		
	103	139	14.02	6390	1.8	26	2KJ3502- ■ EM23- ■ ■ L1 -Z -		
	115	125	12.56	6230	2	26	2KJ3502- ■ EM23- ■ ■ K1 -Z -		
	135	106	10.69	6000	2.3	26	2KJ3502- ■ EM23- ■ ■ J1 -Z -		
	158	91	9.17	5780	2.5	26	2KJ3502- ■ EM23- ■ ■ H1 -Z -		
	183	78	7.89	5560	2.8	26	2KJ3502- ■ EM23- ■ ■ G1 -Z -		
	219	65	6.60	5350	3.1	26	2KJ3502- ■ EM23- ■ ■ F1 -Z -		
	233	62	6.21	5260	3.2	26	2KJ3502- ■ EM23- ■ ■ E1 -Z -		
	260	55	5.56	5100	3.6	26	2KJ3502- ■ EM23- ■ ■ D1 -Z -		
	305	47	4.74	4870	4.3	26	2KJ3502- ■ EM23- ■ ■ C1 -Z -		
	356	40	4.06	4660	5	26	2KJ3502- ■ EM23- ■ ■ B1 -Z -		
	413	35	3.50	4450	5.5	26	2KJ3502- ■ EM23- ■ ■ A1 -Z -		
	1.5	<b>B.29-LE90ZLR4P</b>							
		114	125	12.63	3670	0.88	21	2KJ3501- ■ EM23- ■ ■ N1 -Z -	
		126	114	11.46	3620	0.97	21	2KJ3501- ■ EM23- ■ ■ M1 -Z -	
		134	107	10.78	3590	1	21	2KJ3501- ■ EM23- ■ ■ L1 -Z -	
		152	94	9.51	3520	1.2	21	2KJ3501- ■ EM23- ■ ■ K1 -Z -	
		175	82	8.25	3430	1.3	21	2KJ3501- ■ EM23- ■ ■ J1 -Z -	
184		78	7.84	3320	0.96	21	2KJ3501- ■ EM23- ■ ■ H1 -Z -		
196		73	7.38	3290	1	21	2KJ3501- ■ EM23- ■ ■ G1 -Z -		
222		64	6.51	3220	1.2	21	2KJ3501- ■ EM23- ■ ■ F1 -Z -		
256		56	5.65	3120	1.3	21	2KJ3501- ■ EM23- ■ ■ E1 -Z -		
285		50	5.07	3120	1.5	21	2KJ3501- ■ EM23- ■ ■ D1 -Z -		
302		47	4.78	3070	1.6	21	2KJ3501- ■ EM23- ■ ■ C1 -Z -		
343		42	4.21	2970	1.8	21	2KJ3501- ■ EM23- ■ ■ B1 -Z -		
396		36	3.65	2870	2	21	2KJ3501- ■ EM23- ■ ■ A1 -Z -		
2.2		<b>K.149-LE132SQA6P</b>							
		4.1	5100	237.03	65000	1.6	283	2KJ3513- ■ HG23- ■ ■ J2 -Z P01	
	4.8	4370	202.86	65000	1.8	283	2KJ3513- ■ HG23- ■ ■ H2 -Z P01		
	5.1	4110	190.92	65000	1.9	283	2KJ3513- ■ HG23- ■ ■ G2 -Z P01		
	5.4	3850	178.97	65000	2.1	283	2KJ3513- ■ HG23- ■ ■ F2 -Z P01		
	<b>K.129-LE132SQA6P</b>								
	5	4180	194.04	37800	1.1	200	2KJ3512- ■ HG23- ■ ■ G2 -Z P01		
	5.9	3560	165.47	38400	1.2	200	2KJ3512- ■ HG23- ■ ■ F2 -Z P01		
	<b>K.129-LE100ZLSA4P</b>								
	6.4	3270	228.30	38700	1.3	170	2KJ3512- ■ FN23- ■ ■ J2 -Z -		
	7	3020	210.74	38900	1.5	170	2KJ3512- ■ FN23- ■ ■ H2 -Z -		
	7.5	2780	194.04	39200	1.6	170	2KJ3512- ■ FN23- ■ ■ G2 -Z -		
	8.9	2370	165.47	39600	1.9	170	2KJ3512- ■ FN23- ■ ■ F2 -Z -		
	9.4	2230	155.74	39700	2	170	2KJ3512- ■ FN23- ■ ■ E2 -Z -		
	10	2070	144.53	39900	2.1	170	2KJ3512- ■ FN23- ■ ■ D2 -Z -		
	<b>K.109-LE100ZLSA4P</b>								
6.8	3100	216.65	24500	0.93	119	2KJ3511- ■ FN23- ■ ■ H2 -Z -			
7.5	2800	195.60	24500	1	119	2KJ3511- ■ FN23- ■ ■ G2 -Z -			
8.3	2540	177.43	24500	1.1	119	2KJ3511- ■ FN23- ■ ■ F2 -Z -			
8.9	2340	163.78	24500	1.2	119	2KJ3511- ■ FN23- ■ ■ E2 -Z -			
9.8	2130	148.88	24500	1.4	119	2KJ3511- ■ FN23- ■ ■ D2 -Z -			
12	1700	118.65	24500	1.7	119	2KJ3511- ■ FN23- ■ ■ B2 -Z -			
12	1800	126.07	24500	1.6	119	2KJ3511- ■ FN23- ■ ■ C2 -Z -			

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>2.2</b>	<b>K.109-LE100ZLSA4P</b>							
	13	1570	109.57	24500	1.8	119	2KJ3511- ■ FN23- ■ ■ A2 -Z -	
	15	1390	97.49	24500	2.1	119	2KJ3511- ■ FN23- ■ ■ X1 -Z -	
	17	1240	86.59	24500	2.3	119	2KJ3511- ■ FN23- ■ ■ W1 -Z -	
	<b>K.89-LE100ZLSA4P</b>							
	11	1860	129.96	18100	0.86	84	2KJ3510- ■ FN23- ■ ■ D2 -Z -	
	13	1560	109.04	18100	1	84	2KJ3510- ■ FN23- ■ ■ C2 -Z -	
	14	1470	102.63	18100	1.1	84	2KJ3510- ■ FN23- ■ ■ B2 -Z -	
	16	1350	94.16	18100	1.2	84	2KJ3510- ■ FN23- ■ ■ A2 -Z -	
	18	1180	82.25	18100	1.4	84	2KJ3510- ■ FN23- ■ ■ X1 -Z -	
	20	1050	73.64	18100	1.5	84	2KJ3510- ■ FN23- ■ ■ W1 -Z -	
	23	920	64.39	18100	1.7	84	2KJ3510- ■ FN23- ■ ■ V1 -Z -	
	27	790	55.27	18100	2	84	2KJ3510- ■ FN23- ■ ■ U1 -Z -	
	30	700	48.85	18100	2.3	84	2KJ3510- ■ FN23- ■ ■ T1 -Z -	
	35	595	41.54	18100	2.6	84	2KJ3510- ■ FN23- ■ ■ S1 -Z -	
	<b>K.79-LE100ZLSA4P</b>							
	22	935	65.47	13700	0.87	63	2KJ3508- ■ FN23- ■ ■ U1 -Z -	
	26	800	56.08	14000	1	63	2KJ3508- ■ FN23- ■ ■ T1 -Z -	
	30	705	49.31	14200	1.2	63	2KJ3508- ■ FN23- ■ ■ S1 -Z -	
	35	595	41.60	14400	1.3	63	2KJ3508- ■ FN23- ■ ■ R1 -Z -	
	40	520	36.26	14400	1.5	63	2KJ3508- ■ FN23- ■ ■ Q1 -Z -	
	45	470	32.78	14400	1.7	63	2KJ3508- ■ FN23- ■ ■ P1 -Z -	
	54	390	27.20	14400	2.1	63	2KJ3508- ■ FN23- ■ ■ N1 -Z -	
	57	365	25.60	14400	2.1	63	2KJ3508- ■ FN23- ■ ■ M1 -Z -	
	61	345	24.17	14400	2.2	63	2KJ3508- ■ FN23- ■ ■ L1 -Z -	
	71	295	20.57	14400	2.5	63	2KJ3508- ■ FN23- ■ ■ K1 -Z -	
	83	250	17.62	14400	2.8	63	2KJ3508- ■ FN23- ■ ■ J1 -Z -	
	95	220	15.49	14400	3.1	63	2KJ3508- ■ FN23- ■ ■ H1 -Z -	
112	187	13.07	14400	3.5	63	2KJ3508- ■ FN23- ■ ■ G1 -Z -		
139	151	10.51	14400	3	63	2KJ3508- ■ FN23- ■ ■ E1 -Z -		
163	129	9.01	13800	3.5	63	2KJ3508- ■ FN23- ■ ■ D1 -Z -		
185	114	7.92	13300	4	63	2KJ3508- ■ FN23- ■ ■ C1 -Z -		
<b>K.69-LE100ZLSA4P</b>								
32	645	45.14	7110	0.93	57	2KJ3507- ■ FN23- ■ ■ S1 -Z -		
37	565	39.69	7190	1.1	57	2KJ3507- ■ FN23- ■ ■ R1 -Z -		
44	480	33.48	7180	1.2	57	2KJ3507- ■ FN23- ■ ■ Q1 -Z -		
50	415	29.18	7170	1.3	57	2KJ3507- ■ FN23- ■ ■ P1 -Z -		
56	370	26.05	7110	1.6	57	2KJ3507- ■ FN23- ■ ■ N1 -Z -		
60	350	24.52	7060	1.7	57	2KJ3507- ■ FN23- ■ ■ M1 -Z -		
63	330	23.15	7020	1.8	57	2KJ3507- ■ FN23- ■ ■ L1 -Z -		
74	280	19.70	6890	2	57	2KJ3507- ■ FN23- ■ ■ K1 -Z -		
87	240	16.88	6720	2.2	57	2KJ3507- ■ FN23- ■ ■ J1 -Z -		
99	210	14.84	6580	2.4	57	2KJ3507- ■ FN23- ■ ■ H1 -Z -		
117	180	12.52	6350	2.7	57	2KJ3507- ■ FN23- ■ ■ G1 -Z -		
134	156	10.91	6180	3	57	2KJ3507- ■ FN23- ■ ■ F1 -Z -		
157	134	9.34	5730	2.8	57	2KJ3507- ■ FN23- ■ ■ E1 -Z -		
183	115	8.01	5550	3.2	57	2KJ3507- ■ FN23- ■ ■ D1 -Z -		
208	101	7.04	5400	3.6	57	2KJ3507- ■ FN23- ■ ■ C1 -Z -		
247	85	5.94	5190	4	57	2KJ3507- ■ FN23- ■ ■ B1 -Z -		
283	74	5.18	5020	4.4	57	2KJ3507- ■ FN23- ■ ■ A1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>2.2</b>	<b>K.49-LE100ZLSA4P</b>								
	45	465	32.57	3970	0.9	51	2KJ3505- ■ FN23- ■ ■ R1 -Z -		
	52	400	28.05	4110	1	51	2KJ3505- ■ FN23- ■ ■ Q1 -Z -		
	56	375	26.30	4150	1.1	51	2KJ3505- ■ FN23- ■ ■ P1 -Z -		
	63	330	23.28	4220	1.3	51	2KJ3505- ■ FN23- ■ ■ N1 -Z -		
	76	275	19.38	4240	1.5	51	2KJ3505- ■ FN23- ■ ■ M1 -Z -		
	80	260	18.24	4230	1.6	51	2KJ3505- ■ FN23- ■ ■ L1 -Z -		
	90	230	16.34	4240	1.8	51	2KJ3505- ■ FN23- ■ ■ K1 -Z -		
	105	199	13.91	4170	2.1	51	2KJ3505- ■ FN23- ■ ■ J1 -Z -		
	123	171	11.93	4100	2.5	51	2KJ3505- ■ FN23- ■ ■ H1 -Z -		
	143	147	10.27	4020	2.8	51	2KJ3505- ■ FN23- ■ ■ G1 -Z -		
	150	140	9.75	3910	2	51	2KJ3505- ■ FN23- ■ ■ F1 -Z -		
	160	132	9.18	3880	2.1	51	2KJ3505- ■ FN23- ■ ■ E1 -Z -		
	178	118	8.22	3810	2.2	51	2KJ3505- ■ FN23- ■ ■ D1 -Z -		
	209	100	7.00	3710	2.4	51	2KJ3505- ■ FN23- ■ ■ C1 -Z -		
	244	86	6.00	3600	2.6	51	2KJ3505- ■ FN23- ■ ■ B1 -Z -		
	283	74	5.17	3490	2.8	51	2KJ3505- ■ FN23- ■ ■ A1 -Z -		
		<b>K.39-LE100ZLSA4P</b>							
		86	240	16.98	3540	0.9	41	2KJ3504- ■ FN23- ■ ■ L1 -Z -	
		95	220	15.41	3540	1	41	2KJ3504- ■ FN23- ■ ■ K1 -Z -	
101		205	14.50	3570	1.1	41	2KJ3504- ■ FN23- ■ ■ J1 -Z -		
115		183	12.78	3540	1.2	41	2KJ3504- ■ FN23- ■ ■ H1 -Z -		
132		159	11.09	3520	1.4	41	2KJ3504- ■ FN23- ■ ■ G1 -Z -		
146		144	10.04	3290	1.3	41	2KJ3504- ■ FN23- ■ ■ F1 -Z -		
166		126	8.81	3270	1.4	41	2KJ3504- ■ FN23- ■ ■ E1 -Z -		
183		115	7.99	3240	1.5	41	2KJ3504- ■ FN23- ■ ■ D1 -Z -		
195		108	7.52	3220	1.6	41	2KJ3504- ■ FN23- ■ ■ C1 -Z -		
221		95	6.63	3180	1.7	41	2KJ3504- ■ FN23- ■ ■ B1 -Z -		
255		82	5.75	3120	1.8	41	2KJ3504- ■ FN23- ■ ■ A1 -Z -		
		<b>B.49-LE100ZLSA4P</b>							
		39	530	37.18	7140	0.84	48	2KJ3503- ■ FN23- ■ ■ W1 -Z -	
	44	475	33.33	7130	0.94	48	2KJ3503- ■ FN23- ■ ■ V1 -Z -		
	49	430	30.05	7080	1	48	2KJ3503- ■ FN23- ■ ■ U1 -Z -		
	53	395	27.74	7050	1.1	48	2KJ3503- ■ FN23- ■ ■ T1 -Z -		
	58	360	25.32	6990	1.2	48	2KJ3503- ■ FN23- ■ ■ S1 -Z -		
	70	300	21.01	6820	1.5	48	2KJ3503- ■ FN23- ■ ■ R1 -Z -		
	74	280	19.77	6780	1.6	48	2KJ3503- ■ FN23- ■ ■ Q1 -Z -		
	78	265	18.67	6720	1.7	48	2KJ3503- ■ FN23- ■ ■ P1 -Z -		
	92	225	15.89	6540	2	48	2KJ3503- ■ FN23- ■ ■ N1 -Z -		
	108	195	13.61	6330	2.3	48	2KJ3503- ■ FN23- ■ ■ M1 -Z -		
	122	172	11.97	6170	2.6	48	2KJ3503- ■ FN23- ■ ■ L1 -Z -		
	145	145	10.10	5940	3.1	48	2KJ3503- ■ FN23- ■ ■ K1 -Z -		
	166	126	8.80	5760	3.6	48	2KJ3503- ■ FN23- ■ ■ J1 -Z -		
	177	119	8.29	5750	2.8	48	2KJ3503- ■ FN23- ■ ■ H1 -Z -		
	188	112	7.80	5660	3	48	2KJ3503- ■ FN23- ■ ■ G1 -Z -		
	199	106	7.37	5580	3.1	48	2KJ3503- ■ FN23- ■ ■ F1 -Z -		
	234	90	6.27	5350	3.7	48	2KJ3503- ■ FN23- ■ ■ E1 -Z -		
273	77	5.37	5130	4.3	48	2KJ3503- ■ FN23- ■ ■ D1 -Z -			
310	68	4.72	4950	4.9	48	2KJ3503- ■ FN23- ■ ■ C1 -Z -			
	<b>B.39-LE100ZLSA4P</b>								
	67	310	21.90	6230	0.8	41	2KJ3502- ■ FN23- ■ ■ Q1 -Z -		
	72	290	20.21	6160	0.86	41	2KJ3502- ■ FN23- ■ ■ P1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
2.2	<b>B.39-LE100ZLSA4P</b>								
	82	255	17.90	6090	0.97	41	2KJ3502- ■ FN23- ■ ■ N1 -Z -		
	98	210	14.90	5960	1.2	41	2KJ3502- ■ FN23- ■ ■ M1 -Z -		
	104	200	14.02	5890	1.2	41	2KJ3502- ■ FN23- ■ ■ L1 -Z -		
	117	180	12.56	5780	1.4	41	2KJ3502- ■ FN23- ■ ■ K1 -Z -		
	137	153	10.69	5610	1.6	41	2KJ3502- ■ FN23- ■ ■ J1 -Z -		
	160	132	9.17	5430	1.7	41	2KJ3502- ■ FN23- ■ ■ H1 -Z -		
	186	113	7.89	5260	1.9	41	2KJ3502- ■ FN23- ■ ■ G1 -Z -		
	222	95	6.60	5120	2.1	41	2KJ3502- ■ FN23- ■ ■ F1 -Z -		
	236	89	6.21	5050	2.2	41	2KJ3502- ■ FN23- ■ ■ E1 -Z -		
	263	80	5.56	4900	2.5	41	2KJ3502- ■ FN23- ■ ■ D1 -Z -		
	309	68	4.74	4700	2.9	41	2KJ3502- ■ FN23- ■ ■ C1 -Z -		
	361	58	4.06	4510	3.4	41	2KJ3502- ■ FN23- ■ ■ B1 -Z -		
	419	50	3.50	4330	3.8	41	2KJ3502- ■ FN23- ■ ■ A1 -Z -		
		<b>B.29-LE100ZLSA4P</b>							
		154	136	9.51	3110	0.81	36	2KJ3501- ■ FN23- ■ ■ K1 -Z -	
		178	118	8.25	3080	0.93	36	2KJ3501- ■ FN23- ■ ■ J1 -Z -	
		225	93	6.51	2900	0.8	36	2KJ3501- ■ FN23- ■ ■ F1 -Z -	
		259	81	5.65	2850	0.93	36	2KJ3501- ■ FN23- ■ ■ E1 -Z -	
289		73	5.07	2900	1	36	2KJ3501- ■ FN23- ■ ■ D1 -Z -		
306		69	4.78	2860	1.1	36	2KJ3501- ■ FN23- ■ ■ C1 -Z -		
348		60	4.21	2800	1.2	36	2KJ3501- ■ FN23- ■ ■ B1 -Z -		
401		52	3.65	2720	1.4	36	2KJ3501- ■ FN23- ■ ■ A1 -Z -		
3		<b>K.169-LE132SQB6P</b>							
		4.4	6560	223.30	70000	2	451	2KJ3514- ■ HH23- ■ ■ F2 -Z P01	
		<b>K.149-LE132SQB6P</b>							
		4.1	6960	237.03	65000	1.1	281	2KJ3513- ■ HH23- ■ ■ J2 -Z P01	
	4.8	5960	202.86	65000	1.3	281	2KJ3513- ■ HH23- ■ ■ H2 -Z P01		
	5.1	5610	190.92	65000	1.4	281	2KJ3513- ■ HH23- ■ ■ G2 -Z P01		
	5.4	5250	178.97	65000	1.5	281	2KJ3513- ■ HH23- ■ ■ F2 -Z P01		
	<b>K.149-LE100ZLSB4P</b>								
	6.2	4650	237.03	65000	1.7	253	2KJ3513- ■ FP23- ■ ■ J2 -Z -		
	7.2	3980	202.86	65000	2	253	2KJ3513- ■ FP23- ■ ■ H2 -Z -		
	7.6	3740	190.92	65000	2.1	253	2KJ3513- ■ FP23- ■ ■ G2 -Z -		
	<b>K.129-LE132SQB6P</b>								
	5.9	4860	165.47	37100	0.9	198	2KJ3512- ■ HH23- ■ ■ F2 -Z P01		
	<b>K.129-LE100ZLSB4P</b>								
	6.4	4480	228.30	37500	0.98	170	2KJ3512- ■ FP23- ■ ■ J2 -Z -		
	6.9	4130	210.74	37900	1.1	170	2KJ3512- ■ FP23- ■ ■ H2 -Z -		
	7.5	3800	194.04	38200	1.2	170	2KJ3512- ■ FP23- ■ ■ G2 -Z -		
	8.8	3240	165.47	38700	1.4	170	2KJ3512- ■ FP23- ■ ■ F2 -Z -		
	9.4	3050	155.74	38900	1.4	170	2KJ3512- ■ FP23- ■ ■ E2 -Z -		
10	2830	144.53	39100	1.6	170	2KJ3512- ■ FP23- ■ ■ D2 -Z -			
11	2500	127.77	39400	1.8	170	2KJ3512- ■ FP23- ■ ■ C2 -Z -			
13	2230	114.06	39700	2	170	2KJ3512- ■ FP23- ■ ■ B2 -Z -			
14	2010	102.64	39900	2.2	170	2KJ3512- ■ FP23- ■ ■ A2 -Z -			
<b>K.109-LE100ZLSB4P</b>									
8.2	3480	177.43	24500	0.83	119	2KJ3511- ■ FP23- ■ ■ F2 -Z -			
8.9	3210	163.78	24500	0.9	119	2KJ3511- ■ FP23- ■ ■ E2 -Z -			
9.8	2920	148.88	24500	0.99	119	2KJ3511- ■ FP23- ■ ■ D2 -Z -			
12	2320	118.65	24500	1.2	119	2KJ3511- ■ FP23- ■ ■ B2 -Z -			
12	2470	126.07	24500	1.2	119	2KJ3511- ■ FP23- ■ ■ C2 -Z -			

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/51</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H, C or D	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>K.109-LE100ZLSB4P</b>							
	13	2150	109.57	24500	1.3	119	2KJ3511- ■ FP23- ■ ■ A2 -Z -	
	15	1910	97.49	24500	1.5	119	2KJ3511- ■ FP23- ■ ■ X1 -Z -	
	17	1690	86.59	24500	1.7	119	2KJ3511- ■ FP23- ■ ■ W1 -Z -	
	19	1520	77.51	24500	1.9	119	2KJ3511- ■ FP23- ■ ■ V1 -Z -	
	22	1300	66.26	24500	2.2	119	2KJ3511- ■ FP23- ■ ■ U1 -Z -	
	<b>K.89-LE100ZLSB4P</b>							
	16	1840	94.16	18100	0.87	84	2KJ3510- ■ FP23- ■ ■ A2 -Z -	
	18	1610	82.25	18100	0.99	84	2KJ3510- ■ FP23- ■ ■ X1 -Z -	
	20	1440	73.64	18100	1.1	84	2KJ3510- ■ FP23- ■ ■ W1 -Z -	
	23	1260	64.39	18100	1.3	84	2KJ3510- ■ FP23- ■ ■ V1 -Z -	
	26	1080	55.27	18100	1.5	84	2KJ3510- ■ FP23- ■ ■ U1 -Z -	
	30	955	48.85	18100	1.7	84	2KJ3510- ■ FP23- ■ ■ T1 -Z -	
	35	815	41.54	18100	1.9	84	2KJ3510- ■ FP23- ■ ■ S1 -Z -	
	37	770	39.29	18100	2.1	84	2KJ3510- ■ FP23- ■ ■ R1 -Z -	
44	645	32.96	18100	2.5	84	2KJ3510- ■ FP23- ■ ■ Q1 -Z -		
47	605	31.03	18100	2.6	84	2KJ3510- ■ FP23- ■ ■ P1 -Z -		
<b>K.79-LE100ZLSB4P</b>								
30	965	49.31	13600	0.85	63	2KJ3508- ■ FP23- ■ ■ S1 -Z -		
35	815	41.60	13900	0.98	63	2KJ3508- ■ FP23- ■ ■ R1 -Z -		
40	710	36.26	14100	1.1	63	2KJ3508- ■ FP23- ■ ■ Q1 -Z -		
45	640	32.78	14300	1.3	63	2KJ3508- ■ FP23- ■ ■ P1 -Z -		
54	530	27.20	14400	1.5	63	2KJ3508- ■ FP23- ■ ■ N1 -Z -		
57	500	25.60	14400	1.6	63	2KJ3508- ■ FP23- ■ ■ M1 -Z -		
60	470	24.17	14400	1.6	63	2KJ3508- ■ FP23- ■ ■ L1 -Z -		
71	400	20.57	14400	1.8	63	2KJ3508- ■ FP23- ■ ■ K1 -Z -		
83	345	17.62	14400	2.1	63	2KJ3508- ■ FP23- ■ ■ J1 -Z -		
94	300	15.49	14400	2.3	63	2KJ3508- ■ FP23- ■ ■ H1 -Z -		
112	255	13.07	14400	2.6	63	2KJ3508- ■ FP23- ■ ■ G1 -Z -		
128	220	11.39	14400	2.9	63	2KJ3508- ■ FP23- ■ ■ F1 -Z -		
139	205	10.51	14000	2.2	63	2KJ3508- ■ FP23- ■ ■ E1 -Z -		
162	177	9.01	13500	2.5	63	2KJ3508- ■ FP23- ■ ■ D1 -Z -		
184	155	7.92	13100	2.9	63	2KJ3508- ■ FP23- ■ ■ C1 -Z -		
219	131	6.68	12500	3.5	63	2KJ3508- ■ FP23- ■ ■ B1 -Z -		
251	114	5.82	12100	3.8	63	2KJ3508- ■ FP23- ■ ■ A1 -Z -		
<b>K.69-LE100ZLSB4P</b>								
44	655	33.48	5940	0.88	57	2KJ3507- ■ FP23- ■ ■ Q1 -Z -		
50	570	29.18	6070	0.97	57	2KJ3507- ■ FP23- ■ ■ P1 -Z -		
56	510	26.05	6120	1.2	57	2KJ3507- ■ FP23- ■ ■ N1 -Z -		
60	480	24.52	6140	1.2	57	2KJ3507- ■ FP23- ■ ■ M1 -Z -		
63	450	23.15	6180	1.3	57	2KJ3507- ■ FP23- ■ ■ L1 -Z -		
74	385	19.70	6150	1.4	57	2KJ3507- ■ FP23- ■ ■ K1 -Z -		
86	330	16.88	6090	1.6	57	2KJ3507- ■ FP23- ■ ■ J1 -Z -		
98	290	14.84	6020	1.8	57	2KJ3507- ■ FP23- ■ ■ H1 -Z -		
117	245	12.52	5900	2	57	2KJ3507- ■ FP23- ■ ■ G1 -Z -		
134	210	10.91	5800	2.2	57	2KJ3507- ■ FP23- ■ ■ F1 -Z -		
156	183	9.34	5300	2	57	2KJ3507- ■ FP23- ■ ■ E1 -Z -		
182	157	8.01	5180	2.3	57	2KJ3507- ■ FP23- ■ ■ D1 -Z -		
207	138	7.04	5070	2.6	57	2KJ3507- ■ FP23- ■ ■ C1 -Z -		
246	117	5.94	4910	3	57	2KJ3507- ■ FP23- ■ ■ B1 -Z -		
282	102	5.18	4780	3.2	57	2KJ3507- ■ FP23- ■ ■ A1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>K.49-LE100ZLSB4P</b>							
	56	515	26.30	3060	0.81	51	2KJ3505- ■ FP23- ■ ■ P1 -Z -	
	63	455	23.28	3250	0.92	51	2KJ3505- ■ FP23- ■ ■ N1 -Z -	
	75	380	19.38	3430	1.1	51	2KJ3505- ■ FP23- ■ ■ M1 -Z -	
	80	355	18.24	3500	1.2	51	2KJ3505- ■ FP23- ■ ■ L1 -Z -	
	89	320	16.34	3550	1.3	51	2KJ3505- ■ FP23- ■ ■ K1 -Z -	
	105	270	13.91	3620	1.5	51	2KJ3505- ■ FP23- ■ ■ J1 -Z -	
	122	230	11.93	3640	1.8	51	2KJ3505- ■ FP23- ■ ■ H1 -Z -	
	142	200	10.27	3610	2.1	51	2KJ3505- ■ FP23- ■ ■ G1 -Z -	
	150	191	9.75	3490	1.4	51	2KJ3505- ■ FP23- ■ ■ F1 -Z -	
	159	180	9.18	3480	1.5	51	2KJ3505- ■ FP23- ■ ■ E1 -Z -	
	178	161	8.22	3460	1.6	51	2KJ3505- ■ FP23- ■ ■ D1 -Z -	
	209	137	7.00	3410	1.7	51	2KJ3505- ■ FP23- ■ ■ C1 -Z -	
	243	118	6.00	3340	1.9	51	2KJ3505- ■ FP23- ■ ■ B1 -Z -	
	282	101	5.17	3270	2.1	51	2KJ3505- ■ FP23- ■ ■ A1 -Z -	
	<b>K.39-LE100ZLSB4P</b>							
	114	250	12.78	2940	0.88	41	2KJ3504- ■ FP23- ■ ■ H1 -Z -	
	132	215	11.09	3020	1	41	2KJ3504- ■ FP23- ■ ■ G1 -Z -	
145	197	10.04	2740	0.93	41	2KJ3504- ■ FP23- ■ ■ F1 -Z -		
166	173	8.81	2780	1.1	41	2KJ3504- ■ FP23- ■ ■ E1 -Z -		
183	157	7.99	2810	1.1	41	2KJ3504- ■ FP23- ■ ■ D1 -Z -		
194	148	7.52	2810	1.2	41	2KJ3504- ■ FP23- ■ ■ C1 -Z -		
220	130	6.63	2820	1.2	41	2KJ3504- ■ FP23- ■ ■ B1 -Z -		
254	113	5.75	2800	1.3	41	2KJ3504- ■ FP23- ■ ■ A1 -Z -		
<b>B.49-LE100ZLSB4P</b>								
53	540	27.74	6090	0.83	48	2KJ3503- ■ FP23- ■ ■ T1 -Z -		
58	495	25.32	6100	0.91	48	2KJ3503- ■ FP23- ■ ■ S1 -Z -		
69	410	21.01	6100	1.1	48	2KJ3503- ■ FP23- ■ ■ R1 -Z -		
74	385	19.77	6090	1.2	48	2KJ3503- ■ FP23- ■ ■ Q1 -Z -		
78	365	18.67	6060	1.2	48	2KJ3503- ■ FP23- ■ ■ P1 -Z -		
92	310	15.89	5980	1.4	48	2KJ3503- ■ FP23- ■ ■ N1 -Z -		
107	265	13.61	5880	1.7	48	2KJ3503- ■ FP23- ■ ■ M1 -Z -		
122	235	11.97	5750	1.9	48	2KJ3503- ■ FP23- ■ ■ L1 -Z -		
145	198	10.10	5600	2.3	48	2KJ3503- ■ FP23- ■ ■ K1 -Z -		
166	173	8.80	5450	2.6	48	2KJ3503- ■ FP23- ■ ■ J1 -Z -		
176	163	8.29	5490	2	48	2KJ3503- ■ FP23- ■ ■ H1 -Z -		
187	153	7.80	5420	2.2	48	2KJ3503- ■ FP23- ■ ■ G1 -Z -		
198	145	7.37	5350	2.3	48	2KJ3503- ■ FP23- ■ ■ F1 -Z -		
233	123	6.27	5150	2.7	48	2KJ3503- ■ FP23- ■ ■ E1 -Z -		
272	105	5.37	4970	3.1	48	2KJ3503- ■ FP23- ■ ■ D1 -Z -		
309	93	4.72	4800	3.6	48	2KJ3503- ■ FP23- ■ ■ C1 -Z -		
367	78	3.98	4600	4.2	48	2KJ3503- ■ FP23- ■ ■ B1 -Z -		
421	68	3.47	4430	4.8	48	2KJ3503- ■ FP23- ■ ■ A1 -Z -		
<b>B.39-LE100ZLSB4P</b>								
98	290	14.90	5350	0.86	41	2KJ3502- ■ FP23- ■ ■ M1 -Z -		
104	275	14.02	5320	0.91	41	2KJ3502- ■ FP23- ■ ■ L1 -Z -		
116	245	12.56	5280	1	41	2KJ3502- ■ FP23- ■ ■ K1 -Z -		
137	210	10.69	5180	1.1	41	2KJ3502- ■ FP23- ■ ■ J1 -Z -		
159	180	9.17	5070	1.3	41	2KJ3502- ■ FP23- ■ ■ H1 -Z -		
185	155	7.89	4950	1.4	41	2KJ3502- ■ FP23- ■ ■ G1 -Z -		
221	130	6.60	4880	1.5	41	2KJ3502- ■ FP23- ■ ■ F1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

## Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
3	<b>B.39-LE100ZLSB4P</b>							
	235	122	6.21	4820	1.6	41	2KJ3502- ■ FP23- ■ ■ E1 -Z -	-
	263	109	5.56	4710	1.8	41	2KJ3502- ■ FP23- ■ ■ D1 -Z -	-
	308	93	4.74	4530	2.2	41	2KJ3502- ■ FP23- ■ ■ C1 -Z -	-
	360	80	4.06	4370	2.5	41	2KJ3502- ■ FP23- ■ ■ B1 -Z -	-
	417	69	3.50	4200	2.8	41	2KJ3502- ■ FP23- ■ ■ A1 -Z -	-
	<b>B.29-LE100ZLSB4P</b>							
	347	83	4.21	2600	0.9	36	2KJ3501- ■ FP23- ■ ■ B1 -Z -	-
	400	72	3.65	2540	1	36	2KJ3501- ■ FP23- ■ ■ A1 -Z -	-
	4	<b>K.169-LE132MJ6P</b>						
4.4		8740	223.30	70000	1.5	451	2KJ3514- ■ HK23- ■ ■ F2 -Z P01	
4.7		8160	208.35	70000	1.6	451	2KJ3514- ■ HK23- ■ ■ E2 -Z P01	
5.3		7250	185.23	70000	1.8	451	2KJ3514- ■ HK23- ■ ■ D2 -Z P01	
5.9		6510	166.31	70000	2	451	2KJ3514- ■ HK23- ■ ■ C2 -Z P01	
<b>K.149-LE132MJ6P</b>								
4.1		9280	237.03	65000	0.86	281	2KJ3513- ■ HK23- ■ ■ J2 -Z P01	
4.8		7940	202.86	65000	1	281	2KJ3513- ■ HK23- ■ ■ H2 -Z P01	
5.1		7480	190.92	65000	1.1	281	2KJ3513- ■ HK23- ■ ■ G2 -Z P01	
5.4		7010	178.97	65000	1.1	281	2KJ3513- ■ HK23- ■ ■ F2 -Z P01	
<b>K.149-LE112ZMKB4P</b>								
6.2		6200	237.03	65000	1.3	254	2KJ3513- ■ GJ23- ■ ■ J2 -Z -	-
7.2		5300	202.86	65000	1.5	254	2KJ3513- ■ GJ23- ■ ■ H2 -Z -	-
7.6		4990	190.92	65000	1.6	254	2KJ3513- ■ GJ23- ■ ■ G2 -Z -	-
8.2		4680	178.97	65000	1.7	254	2KJ3513- ■ GJ23- ■ ■ F2 -Z -	-
9.2		4150	158.65	65000	1.9	254	2KJ3513- ■ GJ23- ■ ■ E2 -Z -	-
10		3680	140.93	65000	2.2	254	2KJ3513- ■ GJ23- ■ ■ D2 -Z -	-
<b>K.129-LE112ZMKB4P</b>								
6.9		5510	210.74	36500	0.8	170	2KJ3512- ■ GJ23- ■ ■ H2 -Z -	-
7.5		5070	194.04	36900	0.87	170	2KJ3512- ■ GJ23- ■ ■ G2 -Z -	-
8.8		4320	165.47	37700	1	170	2KJ3512- ■ GJ23- ■ ■ F2 -Z -	-
9.4		4070	155.74	37900	1.1	170	2KJ3512- ■ GJ23- ■ ■ E2 -Z -	-
10		3780	144.53	38200	1.2	170	2KJ3512- ■ GJ23- ■ ■ D2 -Z -	-
11		3340	127.77	38600	1.3	170	2KJ3512- ■ GJ23- ■ ■ C2 -Z -	-
13		2980	114.06	39000	1.5	170	2KJ3512- ■ GJ23- ■ ■ B2 -Z -	-
14		2680	102.64	39300	1.6	170	2KJ3512- ■ GJ23- ■ ■ A2 -Z -	-
16		2330	89.09	39600	1.9	170	2KJ3512- ■ GJ23- ■ ■ X1 -Z -	-
18		2090	80.12	39900	2.1	170	2KJ3512- ■ GJ23- ■ ■ W1 -Z -	-
21		1830	70.03	40000	2.4	170	2KJ3512- ■ GJ23- ■ ■ V1 -Z -	-
<b>K.109-LE112ZMKB4P</b>								
12		3100	118.65	24500	0.93	120	2KJ3511- ■ GJ23- ■ ■ B2 -Z -	-
12		3290	126.07	24500	0.88	120	2KJ3511- ■ GJ23- ■ ■ C2 -Z -	-
13		2860	109.57	24500	1	120	2KJ3511- ■ GJ23- ■ ■ A2 -Z -	-
15		2550	97.49	24500	1.1	120	2KJ3511- ■ GJ23- ■ ■ X1 -Z -	-
17		2260	86.59	24500	1.3	120	2KJ3511- ■ GJ23- ■ ■ W1 -Z -	-
19		2020	77.51	24500	1.4	120	2KJ3511- ■ GJ23- ■ ■ V1 -Z -	-
22		1730	66.26	24500	1.7	120	2KJ3511- ■ GJ23- ■ ■ U1 -Z -	-
25		1540	59.17	24500	1.9	120	2KJ3511- ■ GJ23- ■ ■ T1 -Z -	-
28		1360	52.29	24500	2.1	120	2KJ3511- ■ GJ23- ■ ■ S1 -Z -	-
32		1200	45.89	24500	2.4	120	2KJ3511- ■ GJ23- ■ ■ R1 -Z -	-
<b>K.89-LE112ZMKB4P</b>								
20		1920	73.64	18100	0.83	84	2KJ3510- ■ GJ23- ■ ■ W1 -Z -	-
23		1680	64.39	18100	0.95	84	2KJ3510- ■ GJ23- ■ ■ V1 -Z -	-

## Article No. supplement

Shaft design	1 or 9	<a href="#">see page 10/51</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F, H, C or D	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
4	<b>K.89-LE112ZMKB4P</b>							
	26	1440	55.27	18100	1.1	84	2KJ3510- ■ GJ23- ■ ■ U1 -Z -	
	30	1270	48.85	18100	1.3	84	2KJ3510- ■ GJ23- ■ ■ T1 -Z -	
	35	1080	41.54	18100	1.4	84	2KJ3510- ■ GJ23- ■ ■ S1 -Z -	
	37	1020	39.29	18100	1.6	84	2KJ3510- ■ GJ23- ■ ■ R1 -Z -	
	44	860	32.96	18100	1.9	84	2KJ3510- ■ GJ23- ■ ■ Q1 -Z -	
	47	810	31.03	18100	2	84	2KJ3510- ■ GJ23- ■ ■ P1 -Z -	
	51	745	28.46	18100	2.1	84	2KJ3510- ■ GJ23- ■ ■ N1 -Z -	
	59	650	24.86	18100	2.5	84	2KJ3510- ■ GJ23- ■ ■ M1 -Z -	
	66	580	22.26	18100	2.7	84	2KJ3510- ■ GJ23- ■ ■ L1 -Z -	
	75	505	19.46	18100	3.1	84	2KJ3510- ■ GJ23- ■ ■ K1 -Z -	
	139	275	10.51	18100	3.1	84	2KJ3510- ■ GJ23- ■ ■ E1 -Z -	
	162	235	9.02	18100	3.4	84	2KJ3510- ■ GJ23- ■ ■ D1 -Z -	
	183	205	7.97	18000	3.7	84	2KJ3510- ■ GJ23- ■ ■ C1 -Z -	
	215	177	6.78	17300	4.1	84	2KJ3510- ■ GJ23- ■ ■ B1 -Z -	
	251	152	5.81	16600	4.4	84	2KJ3510- ■ GJ23- ■ ■ A1 -Z -	
	<b>K.79-LE112ZMKB4P</b>							
	40	945	36.26	13700	0.81	64	2KJ3508- ■ GJ23- ■ ■ Q1 -Z -	
	45	855	32.78	13900	0.96	64	2KJ3508- ■ GJ23- ■ ■ P1 -Z -	
	54	710	27.20	14100	1.1	64	2KJ3508- ■ GJ23- ■ ■ N1 -Z -	
	57	670	25.60	14200	1.2	64	2KJ3508- ■ GJ23- ■ ■ M1 -Z -	
	60	630	24.17	14300	1.2	64	2KJ3508- ■ GJ23- ■ ■ L1 -Z -	
	71	535	20.57	14400	1.4	64	2KJ3508- ■ GJ23- ■ ■ K1 -Z -	
	83	460	17.62	14400	1.6	64	2KJ3508- ■ GJ23- ■ ■ J1 -Z -	
	94	405	15.49	14400	1.7	64	2KJ3508- ■ GJ23- ■ ■ H1 -Z -	
	112	340	13.07	14400	1.9	64	2KJ3508- ■ GJ23- ■ ■ G1 -Z -	
	128	295	11.39	14000	2.2	64	2KJ3508- ■ GJ23- ■ ■ F1 -Z -	
	139	275	10.51	13600	1.6	64	2KJ3508- ■ GJ23- ■ ■ E1 -Z -	
	162	235	9.01	13200	1.9	64	2KJ3508- ■ GJ23- ■ ■ D1 -Z -	
	184	205	7.92	12800	2.2	64	2KJ3508- ■ GJ23- ■ ■ C1 -Z -	
	219	175	6.68	12300	2.6	64	2KJ3508- ■ GJ23- ■ ■ B1 -Z -	
	251	152	5.82	11900	2.8	64	2KJ3508- ■ GJ23- ■ ■ A1 -Z -	
	<b>K.69-LE112ZMKB4P</b>							
	56	680	26.05	4910	0.88	58	2KJ3507- ■ GJ23- ■ ■ N1 -Z -	
	60	640	24.52	5000	0.93	58	2KJ3507- ■ GJ23- ■ ■ M1 -Z -	
	63	605	23.15	5070	0.97	58	2KJ3507- ■ GJ23- ■ ■ L1 -Z -	
	74	515	19.70	5220	1.1	58	2KJ3507- ■ GJ23- ■ ■ K1 -Z -	
	86	440	16.88	5310	1.2	58	2KJ3507- ■ GJ23- ■ ■ J1 -Z -	
	98	385	14.84	5350	1.3	58	2KJ3507- ■ GJ23- ■ ■ H1 -Z -	
	117	325	12.52	5330	1.5	58	2KJ3507- ■ GJ23- ■ ■ G1 -Z -	
134	285	10.91	5270	1.6	58	2KJ3507- ■ GJ23- ■ ■ F1 -Z -		
156	240	9.34	4790	1.5	58	2KJ3507- ■ GJ23- ■ ■ E1 -Z -		
182	210	8.01	4710	1.7	58	2KJ3507- ■ GJ23- ■ ■ D1 -Z -		
207	184	7.04	4660	2	58	2KJ3507- ■ GJ23- ■ ■ C1 -Z -		
246	155	5.94	4570	2.2	58	2KJ3507- ■ GJ23- ■ ■ B1 -Z -		
282	136	5.18	4480	2.4	58	2KJ3507- ■ GJ23- ■ ■ A1 -Z -		
<b>K.49-LE112ZMKB4P</b>								
75	505	19.38	2460	0.83	52	2KJ3505- ■ GJ23- ■ ■ M1 -Z -		
80	475	18.24	2560	0.88	52	2KJ3505- ■ GJ23- ■ ■ L1 -Z -		
89	425	16.34	2730	0.98	52	2KJ3505- ■ GJ23- ■ ■ K1 -Z -		
105	360	13.91	2920	1.2	52	2KJ3505- ■ GJ23- ■ ■ J1 -Z -		
122	310	11.93	3020	1.3	52	2KJ3505- ■ GJ23- ■ ■ H1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

## Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
4	<b>K.49-LE112ZMKB4P</b>							
	142	265	10.27	3110	1.5	52	2KJ3505- ■ GJ23- ■ ■ G1 -Z -	
	150	255	9.75	2960	1.1	52	2KJ3505- ■ GJ23- ■ ■ F1 -Z -	
	159	240	9.18	2980	1.1	52	2KJ3505- ■ GJ23- ■ ■ E1 -Z -	
	178	215	8.22	3010	1.2	52	2KJ3505- ■ GJ23- ■ ■ D1 -Z -	
	209	183	7.00	3030	1.3	52	2KJ3505- ■ GJ23- ■ ■ C1 -Z -	
	243	157	6.00	3020	1.4	52	2KJ3505- ■ GJ23- ■ ■ B1 -Z -	
	282	135	5.17	2990	1.6	52	2KJ3505- ■ GJ23- ■ ■ A1 -Z -	
	<b>K.39-LE112ZMKB4P</b>							
	183	205	7.99	2300	0.84	45	2KJ3504- ■ GJ23- ■ ■ D1 -Z -	
	194	197	7.52	2300	0.87	45	2KJ3504- ■ GJ23- ■ ■ C1 -Z -	
	220	173	6.63	2370	0.93	45	2KJ3504- ■ GJ23- ■ ■ B1 -Z -	
	254	150	5.75	2420	1	45	2KJ3504- ■ GJ23- ■ ■ A1 -Z -	
	<b>B.49-LE112ZMKB4P</b>							
	69	550	21.01	5170	0.82	49	2KJ3503- ■ GJ23- ■ ■ R1 -Z -	
	74	515	19.77	5230	0.87	49	2KJ3503- ■ GJ23- ■ ■ Q1 -Z -	
	78	485	18.67	5260	0.92	49	2KJ3503- ■ GJ23- ■ ■ P1 -Z -	
	92	415	15.89	5280	1.1	49	2KJ3503- ■ GJ23- ■ ■ N1 -Z -	
	107	355	13.61	5280	1.3	49	2KJ3503- ■ GJ23- ■ ■ M1 -Z -	
	122	310	11.97	5250	1.4	49	2KJ3503- ■ GJ23- ■ ■ L1 -Z -	
	145	260	10.10	5180	1.7	49	2KJ3503- ■ GJ23- ■ ■ K1 -Z -	
	166	230	8.80	5070	2	49	2KJ3503- ■ GJ23- ■ ■ J1 -Z -	
	176	215	8.29	5170	1.5	49	2KJ3503- ■ GJ23- ■ ■ H1 -Z -	
	187	200	7.80	5130	1.6	49	2KJ3503- ■ GJ23- ■ ■ G1 -Z -	
	198	193	7.37	5050	1.7	49	2KJ3503- ■ GJ23- ■ ■ F1 -Z -	
	233	164	6.27	4900	2	49	2KJ3503- ■ GJ23- ■ ■ E1 -Z -	
	272	141	5.37	4750	2.3	49	2KJ3503- ■ GJ23- ■ ■ D1 -Z -	
	309	123	4.72	4620	2.7	49	2KJ3503- ■ GJ23- ■ ■ C1 -Z -	
367	104	3.98	4440	3.2	49	2KJ3503- ■ GJ23- ■ ■ B1 -Z -		
421	91	3.47	4290	3.6	49	2KJ3503- ■ GJ23- ■ ■ A1 -Z -		
<b>B.39-LE112ZMKB4P</b>								
137	280	10.69	4640	0.86	44	2KJ3502- ■ GJ23- ■ ■ J1 -Z -		
159	240	9.17	4600	0.96	44	2KJ3502- ■ GJ23- ■ ■ H1 -Z -		
185	205	7.89	4560	1.1	44	2KJ3502- ■ GJ23- ■ ■ G1 -Z -		
221	173	6.60	4580	1.2	44	2KJ3502- ■ GJ23- ■ ■ F1 -Z -		
235	162	6.21	4550	1.2	44	2KJ3502- ■ GJ23- ■ ■ E1 -Z -		
263	145	5.56	4460	1.4	44	2KJ3502- ■ GJ23- ■ ■ D1 -Z -		
308	124	4.74	4320	1.6	44	2KJ3502- ■ GJ23- ■ ■ C1 -Z -		
360	106	4.06	4180	1.9	44	2KJ3502- ■ GJ23- ■ ■ B1 -Z -		
417	92	3.50	4040	2.1	44	2KJ3502- ■ GJ23- ■ ■ A1 -Z -		
5.5	<b>K.189-LE132ZMS6P</b>							
	4.9	10700	199.51	104000	1.8	683	2KJ3515- ■ HL23- ■ ■ W1 -Z P01	
	5.5	9610	178.49	104000	2	683	2KJ3515- ■ HL23- ■ ■ V1 -Z P01	
	<b>K.169-LE132ZMS6P</b>							
	4.4	12000	223.30	70000	1.1	453	2KJ3514- ■ HL23- ■ ■ F2 -Z P01	
	4.7	11200	208.35	70000	1.2	453	2KJ3514- ■ HL23- ■ ■ E2 -Z P01	
	5.3	9970	185.23	70000	1.3	453	2KJ3514- ■ HL23- ■ ■ D2 -Z P01	
	5.9	8950	166.31	70000	1.5	453	2KJ3514- ■ HL23- ■ ■ C2 -Z P01	
	<b>K.169-LE132ZST4P</b>							
	6.6	7970	223.30	70000	1.6	453	2KJ3514- ■ HJ23- ■ ■ F2 -Z -	
	7.1	7440	208.35	70000	1.7	453	2KJ3514- ■ HJ23- ■ ■ E2 -Z -	
	7.9	6610	185.23	70000	2	453	2KJ3514- ■ HJ23- ■ ■ D2 -Z -	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>5.5</b>	<b>K.149-LE132ZMS6P</b>							
	5.4	9640	178.97	65000	0.83	283	2KJ3513- ■ HL23- ■ ■ F2 -Z	P01
	<b>K.149-LE132ZST4P</b>							
	6.2	8460	237.03	65000	0.94	283	2KJ3513- ■ HJ23- ■ ■ J2 -Z	-
	7.2	7240	202.86	65000	1.1	283	2KJ3513- ■ HJ23- ■ ■ H2 -Z	-
	7.7	6820	190.92	65000	1.2	283	2KJ3513- ■ HJ23- ■ ■ G2 -Z	-
	8.2	6390	178.97	65000	1.3	283	2KJ3513- ■ HJ23- ■ ■ F2 -Z	-
	9.3	5660	158.65	65000	1.4	283	2KJ3513- ■ HJ23- ■ ■ E2 -Z	-
	10	5030	140.93	65000	1.6	283	2KJ3513- ■ HJ23- ■ ■ D2 -Z	-
	12	4540	127.16	65000	1.8	283	2KJ3513- ■ HJ23- ■ ■ C2 -Z	-
13	4020	112.68	65000	2	283	2KJ3513- ■ HJ23- ■ ■ B2 -Z	-	
15	3560	99.79	65000	2.2	283	2KJ3513- ■ HJ23- ■ ■ A2 -Z	-	
<b>K.129-LE132ZST4P</b>								
10	5160	144.53	36900	0.85	200	2KJ3512- ■ HJ23- ■ ■ D2 -Z	-	
12	4560	127.77	37400	0.96	200	2KJ3512- ■ HJ23- ■ ■ C2 -Z	-	
13	4070	114.06	37900	1.1	200	2KJ3512- ■ HJ23- ■ ■ B2 -Z	-	
14	3660	102.64	38300	1.2	200	2KJ3512- ■ HJ23- ■ ■ A2 -Z	-	
17	3180	89.09	38800	1.4	200	2KJ3512- ■ HJ23- ■ ■ X1 -Z	-	
18	2860	80.12	39100	1.5	200	2KJ3512- ■ HJ23- ■ ■ W1 -Z	-	
21	2500	70.03	39400	1.8	200	2KJ3512- ■ HJ23- ■ ■ V1 -Z	-	
24	2230	62.49	39700	2	200	2KJ3512- ■ HJ23- ■ ■ U1 -Z	-	
27	1960	55.05	40000	2.2	200	2KJ3512- ■ HJ23- ■ ■ T1 -Z	-	
<b>K.109-LE132ZST4P</b>								
15	3480	97.49	24500	0.83	151	2KJ3511- ■ HJ23- ■ ■ X1 -Z	-	
17	3090	86.59	24500	0.94	151	2KJ3511- ■ HJ23- ■ ■ W1 -Z	-	
19	2770	77.51	24500	1	151	2KJ3511- ■ HJ23- ■ ■ V1 -Z	-	
22	2360	66.26	24500	1.2	151	2KJ3511- ■ HJ23- ■ ■ U1 -Z	-	
25	2110	59.17	24500	1.4	151	2KJ3511- ■ HJ23- ■ ■ T1 -Z	-	
28	1860	52.29	24500	1.6	151	2KJ3511- ■ HJ23- ■ ■ S1 -Z	-	
32	1640	45.89	24500	1.8	151	2KJ3511- ■ HJ23- ■ ■ R1 -Z	-	
37	1420	39.95	24500	2	151	2KJ3511- ■ HJ23- ■ ■ Q1 -Z	-	
43	1220	34.15	24500	2.2	151	2KJ3511- ■ HJ23- ■ ■ P1 -Z	-	
50	1040	29.23	24500	2.5	151	2KJ3511- ■ HJ23- ■ ■ N1 -Z	-	
59	890	24.98	24500	2.7	151	2KJ3511- ■ HJ23- ■ ■ M1 -Z	-	
66	795	22.31	24500	3	151	2KJ3511- ■ HJ23- ■ ■ L1 -Z	-	
141	370	10.45	21400	3.4	151	2KJ3511- ■ HJ23- ■ ■ E1 -Z	-	
160	325	9.17	20700	3.9	151	2KJ3511- ■ HJ23- ■ ■ D1 -Z	-	
<b>K.89-LE132ZST4P</b>								
27	1970	55.27	18100	0.81	115	2KJ3510- ■ HJ23- ■ ■ U1 -Z	-	
30	1740	48.85	18100	0.92	115	2KJ3510- ■ HJ23- ■ ■ T1 -Z	-	
35	1480	41.54	18100	1.1	115	2KJ3510- ■ HJ23- ■ ■ S1 -Z	-	
37	1400	39.29	18100	1.1	115	2KJ3510- ■ HJ23- ■ ■ R1 -Z	-	
45	1170	32.96	18100	1.4	115	2KJ3510- ■ HJ23- ■ ■ Q1 -Z	-	
47	1100	31.03	18100	1.4	115	2KJ3510- ■ HJ23- ■ ■ P1 -Z	-	
52	1010	28.46	18100	1.6	115	2KJ3510- ■ HJ23- ■ ■ N1 -Z	-	
59	885	24.86	18100	1.8	115	2KJ3510- ■ HJ23- ■ ■ M1 -Z	-	
66	795	22.26	18100	2	115	2KJ3510- ■ HJ23- ■ ■ L1 -Z	-	
76	695	19.46	18100	2.2	115	2KJ3510- ■ HJ23- ■ ■ K1 -Z	-	
88	595	16.71	18100	2.5	115	2KJ3510- ■ HJ23- ■ ■ J1 -Z	-	
100	525	14.77	18100	2.7	115	2KJ3510- ■ HJ23- ■ ■ H1 -Z	-	
117	445	12.56	18100	3	115	2KJ3510- ■ HJ23- ■ ■ G1 -Z	-	
137	380	10.76	18100	3.3	115	2KJ3510- ■ HJ23- ■ ■ F1 -Z	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
5.5	<b>K.89-LE132ZST4P</b>							
	140	375	10.51	18100	2.3	115	2KJ3510- ■ HJ23- ■ ■ E1 -Z -	
	163	320	9.02	18000	2.5	115	2KJ3510- ■ HJ23- ■ ■ D1 -Z -	
	184	285	7.97	17500	2.7	115	2KJ3510- ■ HJ23- ■ ■ C1 -Z -	
	217	240	6.78	16900	3	115	2KJ3510- ■ HJ23- ■ ■ B1 -Z -	
	253	205	5.81	16200	3.3	115	2KJ3510- ■ HJ23- ■ ■ A1 -Z -	
	<b>K.79-LE132ZST4P</b>							
	54	970	27.20	13600	0.82	94	2KJ3508- ■ HJ23- ■ ■ N1 -Z -	
	57	915	25.60	13700	0.86	94	2KJ3508- ■ HJ23- ■ ■ M1 -Z -	
	61	860	24.17	13800	0.89	94	2KJ3508- ■ HJ23- ■ ■ L1 -Z -	
	71	735	20.57	14100	1	94	2KJ3508- ■ HJ23- ■ ■ K1 -Z -	
	83	630	17.62	14200	1.1	94	2KJ3508- ■ HJ23- ■ ■ J1 -Z -	
	95	550	15.49	14000	1.3	94	2KJ3508- ■ HJ23- ■ ■ H1 -Z -	
	112	465	13.07	13600	1.4	94	2KJ3508- ■ HJ23- ■ ■ G1 -Z -	
	129	405	11.39	13300	1.6	94	2KJ3508- ■ HJ23- ■ ■ F1 -Z -	
140	375	10.51	13000	1.2	94	2KJ3508- ■ HJ23- ■ ■ E1 -Z -		
163	320	9.01	12600	1.4	94	2KJ3508- ■ HJ23- ■ ■ D1 -Z -		
186	280	7.92	12300	1.6	94	2KJ3508- ■ HJ23- ■ ■ C1 -Z -		
220	235	6.68	11900	1.9	94	2KJ3508- ■ HJ23- ■ ■ B1 -Z -		
253	205	5.82	11500	2.1	94	2KJ3508- ■ HJ23- ■ ■ A1 -Z -		
<b>K.69-LE132ZST4P</b>								
87	600	16.88	4150	0.88	88	2KJ3507- ■ HJ23- ■ ■ J1 -Z -		
99	530	14.84	4290	0.97	88	2KJ3507- ■ HJ23- ■ ■ H1 -Z -		
117	445	12.52	4450	1.1	88	2KJ3507- ■ HJ23- ■ ■ G1 -Z -		
135	390	10.91	4500	1.2	88	2KJ3507- ■ HJ23- ■ ■ F1 -Z -		
157	330	9.34	3970	1.1	88	2KJ3507- ■ HJ23- ■ ■ E1 -Z -		
184	285	8.01	4020	1.3	88	2KJ3507- ■ HJ23- ■ ■ D1 -Z -		
209	250	7.04	4060	1.5	88	2KJ3507- ■ HJ23- ■ ■ C1 -Z -		
247	210	5.94	4070	1.6	88	2KJ3507- ■ HJ23- ■ ■ B1 -Z -		
284	185	5.18	4030	1.8	88	2KJ3507- ■ HJ23- ■ ■ A1 -Z -		
<b>K.49-LE132ZST4P</b>								
106	495	13.91	1850	0.85	82	2KJ3505- ■ HJ23- ■ ■ J1 -Z -		
123	425	11.93	2110	0.99	82	2KJ3505- ■ HJ23- ■ ■ H1 -Z -		
143	365	10.27	2320	1.1	82	2KJ3505- ■ HJ23- ■ ■ G1 -Z -		
160	325	9.18	2260	0.82	82	2KJ3505- ■ HJ23- ■ ■ E1 -Z -		
179	290	8.22	2380	0.87	82	2KJ3505- ■ HJ23- ■ ■ D1 -Z -		
210	250	7.00	2460	0.96	82	2KJ3505- ■ HJ23- ■ ■ C1 -Z -		
245	210	6.00	2560	1	82	2KJ3505- ■ HJ23- ■ ■ B1 -Z -		
284	185	5.17	2560	1.1	82	2KJ3505- ■ HJ23- ■ ■ A1 -Z -		
<b>B.49-LE132ZST4P</b>								
108	485	13.61	4390	0.93	79	2KJ3503- ■ HJ23- ■ ■ M1 -Z -		
123	425	11.97	4470	1.1	79	2KJ3503- ■ HJ23- ■ ■ L1 -Z -		
146	360	10.10	4500	1.2	79	2KJ3503- ■ HJ23- ■ ■ K1 -Z -		
167	310	8.80	4530	1.4	79	2KJ3503- ■ HJ23- ■ ■ J1 -Z -		
177	295	8.29	4670	1.1	79	2KJ3503- ■ HJ23- ■ ■ H1 -Z -		
188	275	7.80	4660	1.2	79	2KJ3503- ■ HJ23- ■ ■ G1 -Z -		
199	260	7.37	4640	1.3	79	2KJ3503- ■ HJ23- ■ ■ F1 -Z -		
234	220	6.27	4550	1.5	79	2KJ3503- ■ HJ23- ■ ■ E1 -Z -		
274	192	5.37	4430	1.7	79	2KJ3503- ■ HJ23- ■ ■ D1 -Z -		
311	169	4.72	4330	2	79	2KJ3503- ■ HJ23- ■ ■ C1 -Z -		
369	142	3.98	4200	2.3	79	2KJ3503- ■ HJ23- ■ ■ B1 -Z -		
424	124	3.47	4080	2.6	79	2KJ3503- ■ HJ23- ■ ■ A1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>7.5</b>	<b>K.189-LE132ZMS4P</b>							
	7.3	9750	199.51	104000	2	683	2KJ3515- ■ HL23- ■ ■ W1 -Z -	
	<b>K.169-LE132ZMS4P</b>							
	6.6	10900	223.30	70000	1.2	453	2KJ3514- ■ HL23- ■ ■ F2 -Z -	
	7	10100	208.35	70000	1.3	453	2KJ3514- ■ HL23- ■ ■ E2 -Z -	
	7.9	9050	185.23	70000	1.4	453	2KJ3514- ■ HL23- ■ ■ D2 -Z -	
	8.8	8130	166.31	70000	1.6	453	2KJ3514- ■ HL23- ■ ■ C2 -Z -	
	9.7	7360	150.55	70000	1.8	453	2KJ3514- ■ HL23- ■ ■ B2 -Z -	
	11	6460	132.24	70000	2	453	2KJ3514- ■ HL23- ■ ■ A2 -Z -	
	12	5850	119.83	70000	2.2	453	2KJ3514- ■ HL23- ■ ■ X1 -Z -	
<b>K.149-LE132ZMS4P</b>								
7.2	9910	202.86	65000	0.81	283	2KJ3513- ■ HL23- ■ ■ H2 -Z -		
7.7	9330	190.92	65000	0.86	283	2KJ3513- ■ HL23- ■ ■ G2 -Z -		
8.2	8750	178.97	65000	0.91	283	2KJ3513- ■ HL23- ■ ■ F2 -Z -		
9.2	7750	158.65	65000	1	283	2KJ3513- ■ HL23- ■ ■ E2 -Z -		
10	6890	140.93	65000	1.2	283	2KJ3513- ■ HL23- ■ ■ D2 -Z -		
12	6210	127.16	65000	1.3	283	2KJ3513- ■ HL23- ■ ■ C2 -Z -		
13	5500	112.68	65000	1.5	283	2KJ3513- ■ HL23- ■ ■ B2 -Z -		
15	4870	99.79	64100	1.6	283	2KJ3513- ■ HL23- ■ ■ A2 -Z -		
16	4340	88.81	62900	1.8	283	2KJ3513- ■ HL23- ■ ■ X1 -Z -		
18	3890	79.59	61700	2.1	283	2KJ3513- ■ HL23- ■ ■ W1 -Z -		
21	3450	70.56	60400	2.3	283	2KJ3513- ■ HL23- ■ ■ V1 -Z -		
<b>K.129-LE132ZMS4P</b>								
14	5010	102.64	37000	0.88	200	2KJ3512- ■ HL23- ■ ■ A2 -Z -		
16	4350	89.09	37600	1	200	2KJ3512- ■ HL23- ■ ■ X1 -Z -		
18	3910	80.12	38100	1.1	200	2KJ3512- ■ HL23- ■ ■ W1 -Z -		
21	3420	70.03	38600	1.3	200	2KJ3512- ■ HL23- ■ ■ V1 -Z -		
23	3050	62.49	38900	1.4	200	2KJ3512- ■ HL23- ■ ■ U1 -Z -		
27	2690	55.05	39300	1.6	200	2KJ3512- ■ HL23- ■ ■ T1 -Z -		
30	2350	48.24	39300	1.9	200	2KJ3512- ■ HL23- ■ ■ S1 -Z -		
35	2050	42.04	38400	2.1	200	2KJ3512- ■ HL23- ■ ■ R1 -Z -		
38	1870	38.37	37700	2.3	200	2KJ3512- ■ HL23- ■ ■ Q1 -Z -		
44	1610	33.03	36700	2.7	200	2KJ3512- ■ HL23- ■ ■ P1 -Z -		
<b>K.109-LE132ZMS4P</b>								
22	3240	66.26	24500	0.9	151	2KJ3511- ■ HL23- ■ ■ U1 -Z -		
25	2890	59.17	24500	1	151	2KJ3511- ■ HL23- ■ ■ T1 -Z -		
28	2550	52.29	24500	1.1	151	2KJ3511- ■ HL23- ■ ■ S1 -Z -		
32	2240	45.89	24500	1.3	151	2KJ3511- ■ HL23- ■ ■ R1 -Z -		
37	1950	39.95	24500	1.4	151	2KJ3511- ■ HL23- ■ ■ Q1 -Z -		
43	1670	34.15	24500	1.6	151	2KJ3511- ■ HL23- ■ ■ P1 -Z -		
50	1420	29.23	24500	1.8	151	2KJ3511- ■ HL23- ■ ■ N1 -Z -		
59	1220	24.98	24500	1.9	151	2KJ3511- ■ HL23- ■ ■ M1 -Z -		
66	1090	22.31	24500	2.2	151	2KJ3511- ■ HL23- ■ ■ L1 -Z -		
74	960	19.71	24200	2.5	151	2KJ3511- ■ HL23- ■ ■ K1 -Z -		
85	845	17.30	23600	2.8	151	2KJ3511- ■ HL23- ■ ■ J1 -Z -		
97	735	15.06	22900	3.1	151	2KJ3511- ■ HL23- ■ ■ H1 -Z -		
114	625	12.87	22100	3.5	151	2KJ3511- ■ HL23- ■ ■ G1 -Z -		
140	510	10.45	20800	2.5	151	2KJ3511- ■ HL23- ■ ■ E1 -Z -		
160	445	9.17	20200	2.8	151	2KJ3511- ■ HL23- ■ ■ D1 -Z -		
183	390	7.99	19500	3.3	151	2KJ3511- ■ HL23- ■ ■ C1 -Z -		
214	330	6.83	18800	3.9	151	2KJ3511- ■ HL23- ■ ■ B1 -Z -		
251	285	5.84	18100	4.6	151	2KJ3511- ■ HL23- ■ ■ A1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	No. of poles	
7.5	<b>K.89-LE132ZMS4P</b>								
	37	1920	39.29	18100	0.83	115	2KJ3510- HL23- R1 -Z -	-	
	44	1610	32.96	18100	0.99	115	2KJ3510- HL23- Q1 -Z -	-	
	47	1510	31.03	18100	1.1	115	2KJ3510- HL23- P1 -Z -	-	
	51	1390	28.46	18100	1.1	115	2KJ3510- HL23- N1 -Z -	-	
	59	1210	24.86	18100	1.3	115	2KJ3510- HL23- M1 -Z -	-	
	66	1080	22.26	18100	1.5	115	2KJ3510- HL23- L1 -Z -	-	
	75	950	19.46	18100	1.6	115	2KJ3510- HL23- K1 -Z -	-	
	88	815	16.71	18100	1.8	115	2KJ3510- HL23- J1 -Z -	-	
	99	720	14.77	18100	2	115	2KJ3510- HL23- H1 -Z -	-	
	117	610	12.56	18100	2.2	115	2KJ3510- HL23- G1 -Z -	-	
	136	525	10.76	18100	2.4	115	2KJ3510- HL23- F1 -Z -	-	
	139	510	10.51	17900	1.6	115	2KJ3510- HL23- E1 -Z -	-	
	162	440	9.02	17400	1.8	115	2KJ3510- HL23- D1 -Z -	-	
	184	390	7.97	16900	2	115	2KJ3510- HL23- C1 -Z -	-	
	216	330	6.78	16400	2.2	115	2KJ3510- HL23- B1 -Z -	-	
	252	280	5.81	15800	2.4	115	2KJ3510- HL23- A1 -Z -	-	
	7.5	<b>K.79-LE132ZMS4P</b>							
		83	860	17.62	12900	0.83	94	2KJ3508- HL23- J1 -Z -	-
		95	755	15.49	12900	0.92	94	2KJ3508- HL23- H1 -Z -	-
112		635	13.07	12700	1	94	2KJ3508- HL23- G1 -Z -	-	
129		555	11.39	12500	1.2	94	2KJ3508- HL23- F1 -Z -	-	
139		510	10.51	12100	0.87	94	2KJ3508- HL23- E1 -Z -	-	
163		440	9.01	11900	1	94	2KJ3508- HL23- D1 -Z -	-	
185		385	7.92	11700	1.2	94	2KJ3508- HL23- C1 -Z -	-	
219		325	6.68	11300	1.4	94	2KJ3508- HL23- B1 -Z -	-	
252		285	5.82	11000	1.5	94	2KJ3508- HL23- A1 -Z -	-	
7.5		<b>K.69-LE132ZMS4P</b>							
	117	610	12.52	3290	0.8	88	2KJ3507- HL23- G1 -Z -	-	
	134	530	10.91	3520	0.88	88	2KJ3507- HL23- F1 -Z -	-	
	157	455	9.34	2860	0.81	88	2KJ3507- HL23- E1 -Z -	-	
	183	390	8.01	3090	0.93	88	2KJ3507- HL23- D1 -Z -	-	
	208	340	7.04	3260	1.1	88	2KJ3507- HL23- C1 -Z -	-	
	247	290	5.94	3360	1.2	88	2KJ3507- HL23- B1 -Z -	-	
	283	250	5.18	3450	1.3	88	2KJ3507- HL23- A1 -Z -	-	
7.5	<b>K.49-LE132ZMS4P</b>								
	143	500	10.27	1270	0.83	82	2KJ3505- HL23- G1 -Z -	-	
	283	250	5.17	2030	0.83	82	2KJ3505- HL23- A1 -Z -	-	
7.5	<b>B.49-LE132ZMS4P</b>								
	145	490	10.10	3650	0.91	79	2KJ3503- HL23- K1 -Z -	-	
	166	430	8.80	3740	1	79	2KJ3503- HL23- J1 -Z -	-	
	177	405	8.29	4010	0.81	79	2KJ3503- HL23- H1 -Z -	-	
	188	380	7.80	4030	0.87	79	2KJ3503- HL23- G1 -Z -	-	
	199	360	7.37	4040	0.92	79	2KJ3503- HL23- F1 -Z -	-	
	234	305	6.27	4040	1.1	79	2KJ3503- HL23- E1 -Z -	-	
	273	260	5.37	4020	1.3	79	2KJ3503- HL23- D1 -Z -	-	
	310	230	4.72	3970	1.4	79	2KJ3503- HL23- C1 -Z -	-	
	368	195	3.98	3880	1.7	79	2KJ3503- HL23- B1 -Z -	-	
	422	170	3.47	3810	1.9	79	2KJ3503- HL23- A1 -Z -	-	
	9.2	<b>K.189-LE160MPA4P</b>							
7.4		11800	199.51	104000	1.6	700	2KJ3515- JQ23- W1 -Z -	-	
	8.3	10500	178.49	104000	1.8	700	2KJ3515- JQ23- V1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42



## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>9.2</b>	<b>K.189-LE160MPA4P</b>							
	9.2	9550	160.98	104000	2	700	2KJ3515- ■ JQ23- ■ ■ U1 -Z -	
	<b>K.169-LE160MPA4P</b>							
	6.6	13200	223.30	70000	0.98	469	2KJ3514- ■ JQ23- ■ ■ F2 -Z -	
	7.1	12300	208.35	70000	1.1	469	2KJ3514- ■ JQ23- ■ ■ E2 -Z -	
	8	10900	185.23	70000	1.2	469	2KJ3514- ■ JQ23- ■ ■ D2 -Z -	
	8.9	9870	166.31	70000	1.3	469	2KJ3514- ■ JQ23- ■ ■ C2 -Z -	
	9.8	8930	150.55	70000	1.5	469	2KJ3514- ■ JQ23- ■ ■ B2 -Z -	
	11	7850	132.24	70000	1.7	469	2KJ3514- ■ JQ23- ■ ■ A2 -Z -	
	12	7110	119.83	70000	1.8	469	2KJ3514- ■ JQ23- ■ ■ X1 -Z -	
14	6330	106.72	70000	2.1	469	2KJ3514- ■ JQ23- ■ ■ W1 -Z -		
<b>K.149-LE160MPA4P</b>								
9.3	9410	158.65	62700	0.85	301	2KJ3513- ■ JQ23- ■ ■ E2 -Z -		
11	8360	140.93	62600	0.96	301	2KJ3513- ■ JQ23- ■ ■ D2 -Z -		
12	7540	127.16	62200	1.1	301	2KJ3513- ■ JQ23- ■ ■ C2 -Z -		
13	6680	112.68	61700	1.2	301	2KJ3513- ■ JQ23- ■ ■ B2 -Z -		
15	5920	99.79	60900	1.4	301	2KJ3513- ■ JQ23- ■ ■ A2 -Z -		
17	5270	88.81	60100	1.5	301	2KJ3513- ■ JQ23- ■ ■ X1 -Z -		
19	4720	79.59	59200	1.7	301	2KJ3513- ■ JQ23- ■ ■ W1 -Z -		
21	4180	70.56	58100	1.9	301	2KJ3513- ■ JQ23- ■ ■ V1 -Z -		
24	3690	62.28	56900	2.2	301	2KJ3513- ■ JQ23- ■ ■ U1 -Z -		
27	3250	54.76	55600	2.5	301	2KJ3513- ■ JQ23- ■ ■ T1 -Z -		
<b>K.129-LE160MPA4P</b>								
17	5280	89.09	36700	0.83	218	2KJ3512- ■ JQ23- ■ ■ X1 -Z -		
18	4750	80.12	37300	0.93	218	2KJ3512- ■ JQ23- ■ ■ W1 -Z -		
21	4150	70.03	37800	1.1	218	2KJ3512- ■ JQ23- ■ ■ V1 -Z -		
24	3710	62.49	38300	1.2	218	2KJ3512- ■ JQ23- ■ ■ U1 -Z -		
27	3260	55.05	37900	1.3	218	2KJ3512- ■ JQ23- ■ ■ T1 -Z -		
31	2860	48.24	37400	1.5	218	2KJ3512- ■ JQ23- ■ ■ S1 -Z -		
35	2490	42.04	36700	1.8	218	2KJ3512- ■ JQ23- ■ ■ R1 -Z -		
39	2270	38.37	36200	1.9	218	2KJ3512- ■ JQ23- ■ ■ Q1 -Z -		
45	1960	33.03	35400	2.2	218	2KJ3512- ■ JQ23- ■ ■ P1 -Z -		
47	1870	31.55	35100	2.3	218	2KJ3512- ■ JQ23- ■ ■ N1 -Z -		
54	1630	27.58	34300	2.7	218	2KJ3512- ■ JQ23- ■ ■ M1 -Z -		
60	1460	24.61	33500	3	218	2KJ3512- ■ JQ23- ■ ■ L1 -Z -		
<b>K.109-LE160MPA4P</b>								
25	3510	59.17	24500	0.83	170	2KJ3511- ■ JQ23- ■ ■ T1 -Z -		
28	3100	52.29	24500	0.93	170	2KJ3511- ■ JQ23- ■ ■ S1 -Z -		
32	2720	45.89	24500	1.1	170	2KJ3511- ■ JQ23- ■ ■ R1 -Z -		
37	2370	39.95	24500	1.2	170	2KJ3511- ■ JQ23- ■ ■ Q1 -Z -		
43	2020	34.15	24500	1.3	170	2KJ3511- ■ JQ23- ■ ■ P1 -Z -		
51	1730	29.23	24500	1.5	170	2KJ3511- ■ JQ23- ■ ■ N1 -Z -		
59	1480	24.98	24200	1.6	170	2KJ3511- ■ JQ23- ■ ■ M1 -Z -		
66	1320	22.31	23800	1.8	170	2KJ3511- ■ JQ23- ■ ■ L1 -Z -		
75	1170	19.71	23300	2	170	2KJ3511- ■ JQ23- ■ ■ K1 -Z -		
86	1020	17.30	22800	2.3	170	2KJ3511- ■ JQ23- ■ ■ J1 -Z -		
98	890	15.06	22200	2.6	170	2KJ3511- ■ JQ23- ■ ■ H1 -Z -		
115	760	12.87	21600	2.9	170	2KJ3511- ■ JQ23- ■ ■ G1 -Z -		
134	650	11.02	20900	3.2	170	2KJ3511- ■ JQ23- ■ ■ F1 -Z -		
142	620	10.45	20300	2	170	2KJ3511- ■ JQ23- ■ ■ E1 -Z -		
161	540	9.17	19700	2.3	170	2KJ3511- ■ JQ23- ■ ■ D1 -Z -		

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

## Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
9.2	<b>K.109-LE160MPA4P</b>							
	185	470	7.99	19100	2.7	170	2KJ3511- JQ23- C1 -Z -	-
	217	405	6.83	18400	3.2	170	2KJ3511- JQ23- B1 -Z -	-
	253	345	5.84	17800	3.7	170	2KJ3511- JQ23- A1 -Z -	-
	<b>K.89-LE160MPA4P</b>							
	45	1950	32.96	18100	0.82	133	2KJ3510- JQ23- Q1 -Z -	-
	48	1840	31.03	18100	0.87	133	2KJ3510- JQ23- P1 -Z -	-
	52	1690	28.46	18100	0.95	133	2KJ3510- JQ23- N1 -Z -	-
	60	1470	24.86	18100	1.1	133	2KJ3510- JQ23- M1 -Z -	-
	66	1320	22.26	18100	1.2	133	2KJ3510- JQ23- L1 -Z -	-
	76	1150	19.46	18100	1.4	133	2KJ3510- JQ23- K1 -Z -	-
	89	990	16.71	18100	1.5	133	2KJ3510- JQ23- J1 -Z -	-
	100	875	14.77	18100	1.6	133	2KJ3510- JQ23- H1 -Z -	-
	118	745	12.56	18100	1.8	133	2KJ3510- JQ23- G1 -Z -	-
	138	635	10.76	18000	2	133	2KJ3510- JQ23- F1 -Z -	-
141	620	10.51	17200	1.4	133	2KJ3510- JQ23- E1 -Z -	-	
164	535	9.02	16800	1.5	133	2KJ3510- JQ23- D1 -Z -	-	
186	470	7.97	16400	1.6	133	2KJ3510- JQ23- C1 -Z -	-	
218	400	6.78	15900	1.8	133	2KJ3510- JQ23- B1 -Z -	-	
255	345	5.81	15400	2	133	2KJ3510- JQ23- A1 -Z -	-	
11	<b>K.189-LE160MPB4P</b>							
	7.4	14200	199.51	104000	1.3	692	2KJ3515- JR23- W1 -Z -	-
	8.3	12700	178.49	104000	1.5	692	2KJ3515- JR23- V1 -Z -	-
	9.2	11400	160.98	104000	1.7	692	2KJ3515- JR23- U1 -Z -	-
	10	10100	142.28	104000	1.9	692	2KJ3515- JR23- T1 -Z -	-
	11	9260	130.05	104000	2.1	692	2KJ3515- JR23- S1 -Z -	-
	<b>K.169-LE160MPB4P</b>							
	6.6	15900	223.30	70000	0.82	461	2KJ3514- JR23- F2 -Z -	-
	7.1	14800	208.35	70000	0.88	461	2KJ3514- JR23- E2 -Z -	-
	8	13100	185.23	70000	0.99	461	2KJ3514- JR23- D2 -Z -	-
	8.9	11800	166.31	70000	1.1	461	2KJ3514- JR23- C2 -Z -	-
	9.8	10700	150.55	70000	1.2	461	2KJ3514- JR23- B2 -Z -	-
	11	9410	132.24	70000	1.4	461	2KJ3514- JR23- A2 -Z -	-
	12	8530	119.83	70000	1.5	461	2KJ3514- JR23- X1 -Z -	-
	14	7600	106.72	70000	1.7	461	2KJ3514- JR23- W1 -Z -	-
15	6820	95.83	70000	1.9	461	2KJ3514- JR23- V1 -Z -	-	
17	6090	85.51	70000	2.1	461	2KJ3514- JR23- U1 -Z -	-	
<b>K.149-LE160MPB4P</b>								
10	10000	140.93	58100	0.8	293	2KJ3513- JR23- D2 -Z -	-	
12	9050	127.16	58100	0.88	293	2KJ3513- JR23- C2 -Z -	-	
13	8020	112.68	58000	1	293	2KJ3513- JR23- B2 -Z -	-	
15	7100	99.79	57700	1.1	293	2KJ3513- JR23- A2 -Z -	-	
17	6320	88.81	57200	1.3	293	2KJ3513- JR23- X1 -Z -	-	
19	5660	79.59	56600	1.4	293	2KJ3513- JR23- W1 -Z -	-	
21	5020	70.56	55900	1.6	293	2KJ3513- JR23- V1 -Z -	-	
24	4430	62.28	54900	1.8	293	2KJ3513- JR23- U1 -Z -	-	
27	3900	54.76	53900	2.1	293	2KJ3513- JR23- T1 -Z -	-	
30	3530	49.60	53000	2.3	293	2KJ3513- JR23- S1 -Z -	-	
34	3070	43.18	51700	2.6	293	2KJ3513- JR23- R1 -Z -	-	
<b>K.129-LE160MPB4P</b>								
21	4980	70.03	35800	0.88	210	2KJ3512- JR23- V1 -Z -	-	
24	4450	62.49	35800	0.99	210	2KJ3512- JR23- U1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
11	<b>K.129-LE160MPB4P</b>							
	27	3920	55.05	35700	1.1	210	2KJ3512- ■ JR23- ■ ■ T1 -Z -	
	31	3430	48.24	35500	1.3	210	2KJ3512- ■ JR23- ■ ■ S1 -Z -	
	35	2990	42.04	35100	1.5	210	2KJ3512- ■ JR23- ■ ■ R1 -Z -	
	38	2730	38.37	34700	1.6	210	2KJ3512- ■ JR23- ■ ■ Q1 -Z -	
	45	2350	33.03	34100	1.9	210	2KJ3512- ■ JR23- ■ ■ P1 -Z -	
	47	2240	31.55	33900	2	210	2KJ3512- ■ JR23- ■ ■ N1 -Z -	
	53	1960	27.58	33200	2.2	210	2KJ3512- ■ JR23- ■ ■ M1 -Z -	
	60	1750	24.61	32600	2.5	210	2KJ3512- ■ JR23- ■ ■ L1 -Z -	
	68	1540	21.68	31800	2.8	210	2KJ3512- ■ JR23- ■ ■ K1 -Z -	
	78	1350	19.00	31100	3.1	210	2KJ3512- ■ JR23- ■ ■ J1 -Z -	
	89	1170	16.56	30200	3.4	210	2KJ3512- ■ JR23- ■ ■ H1 -Z -	
	125	840	11.80	28000	3.4	210	2KJ3512- ■ JR23- ■ ■ E1 -Z -	
	143	735	10.34	27200	3.9	210	2KJ3512- ■ JR23- ■ ■ D1 -Z -	
11	<b>K.109-LE160MPB4P</b>							
	32	3260	45.89	23500	0.89	162	2KJ3511- ■ JR23- ■ ■ R1 -Z -	
	37	2840	39.95	23600	0.99	162	2KJ3511- ■ JR23- ■ ■ Q1 -Z -	
	43	2430	34.15	23600	1.1	162	2KJ3511- ■ JR23- ■ ■ P1 -Z -	
	50	2080	29.23	23400	1.3	162	2KJ3511- ■ JR23- ■ ■ N1 -Z -	
	59	1770	24.98	23200	1.3	162	2KJ3511- ■ JR23- ■ ■ M1 -Z -	
	66	1580	22.31	22900	1.5	162	2KJ3511- ■ JR23- ■ ■ L1 -Z -	
	75	1400	19.71	22500	1.7	162	2KJ3511- ■ JR23- ■ ■ K1 -Z -	
	85	1230	17.30	22100	1.9	162	2KJ3511- ■ JR23- ■ ■ J1 -Z -	
	98	1070	15.06	21600	2.2	162	2KJ3511- ■ JR23- ■ ■ H1 -Z -	
	115	915	12.87	21000	2.4	162	2KJ3511- ■ JR23- ■ ■ G1 -Z -	
	134	785	11.02	20400	2.7	162	2KJ3511- ■ JR23- ■ ■ F1 -Z -	
	141	740	10.45	19800	1.7	162	2KJ3511- ■ JR23- ■ ■ E1 -Z -	
	161	650	9.17	19300	1.9	162	2KJ3511- ■ JR23- ■ ■ D1 -Z -	
	185	565	7.99	18800	2.2	162	2KJ3511- ■ JR23- ■ ■ C1 -Z -	
	216	485	6.83	18100	2.7	162	2KJ3511- ■ JR23- ■ ■ B1 -Z -	
253	415	5.84	17500	3.1	162	2KJ3511- ■ JR23- ■ ■ A1 -Z -		
11	<b>K.89-LE160MPB4P</b>							
	59	1770	24.86	18100	0.9	125	2KJ3510- ■ JR23- ■ ■ M1 -Z -	
	66	1580	22.26	18100	1	125	2KJ3510- ■ JR23- ■ ■ L1 -Z -	
	76	1380	19.46	18100	1.1	125	2KJ3510- ■ JR23- ■ ■ K1 -Z -	
	88	1190	16.71	18100	1.2	125	2KJ3510- ■ JR23- ■ ■ J1 -Z -	
	100	1050	14.77	18100	1.3	125	2KJ3510- ■ JR23- ■ ■ H1 -Z -	
	117	895	12.56	17800	1.5	125	2KJ3510- ■ JR23- ■ ■ G1 -Z -	
	137	765	10.76	17400	1.6	125	2KJ3510- ■ JR23- ■ ■ F1 -Z -	
	140	745	10.51	16500	1.1	125	2KJ3510- ■ JR23- ■ ■ E1 -Z -	
	164	640	9.02	16200	1.2	125	2KJ3510- ■ JR23- ■ ■ D1 -Z -	
	185	565	7.97	15900	1.4	125	2KJ3510- ■ JR23- ■ ■ C1 -Z -	
	218	480	6.78	15500	1.5	125	2KJ3510- ■ JR23- ■ ■ B1 -Z -	
	254	410	5.81	15100	1.6	125	2KJ3510- ■ JR23- ■ ■ A1 -Z -	
15	<b>K.189-LE160ZLL4P</b>							
	7.4	19300	199.51	104000	0.99	717	2KJ3515- ■ JU23- ■ ■ W1 -Z -	
	8.3	17300	178.49	104000	1.1	717	2KJ3515- ■ JU23- ■ ■ V1 -Z -	
	9.2	15600	160.98	104000	1.2	717	2KJ3515- ■ JU23- ■ ■ U1 -Z -	
	10	13800	142.28	104000	1.4	717	2KJ3515- ■ JU23- ■ ■ T1 -Z -	
	11	12600	130.05	104000	1.5	717	2KJ3515- ■ JU23- ■ ■ S1 -Z -	
	13	11300	117.00	104000	1.7	717	2KJ3515- ■ JU23- ■ ■ R1 -Z -	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
15	<b>K.189-LE160ZLL4P</b>							
	14	10100	104.56	104000	1.9	717	2KJ3515- ■ JU23- ■ ■ Q1 -Z -	-
	16	9180	94.55	104000	2.1	717	2KJ3515- ■ JU23- ■ ■ P1 -Z -	-
	<b>K.169-LE160ZLL4P</b>							
	8.9	16100	166.31	70000	0.8	486	2KJ3514- ■ JU23- ■ ■ C2 -Z -	-
	9.8	14600	150.55	70000	0.89	486	2KJ3514- ■ JU23- ■ ■ B2 -Z -	-
	11	12800	132.24	70000	1	486	2KJ3514- ■ JU23- ■ ■ A2 -Z -	-
	12	11600	119.83	70000	1.1	486	2KJ3514- ■ JU23- ■ ■ X1 -Z -	-
	14	10300	106.72	70000	1.3	486	2KJ3514- ■ JU23- ■ ■ W1 -Z -	-
	15	9300	95.83	70000	1.4	486	2KJ3514- ■ JU23- ■ ■ V1 -Z -	-
	17	8300	85.51	70000	1.6	486	2KJ3514- ■ JU23- ■ ■ U1 -Z -	-
	19	7400	76.23	70000	1.8	486	2KJ3514- ■ JU23- ■ ■ T1 -Z -	-
	22	6560	67.61	70000	2	486	2KJ3514- ■ JU23- ■ ■ S1 -Z -	-
	24	6020	62.07	70000	2.2	486	2KJ3514- ■ JU23- ■ ■ R1 -Z -	-
	27	5310	54.68	70000	2.4	486	2KJ3514- ■ JU23- ■ ■ Q1 -Z -	-
<b>K.149-LE160ZLL4P</b>								
15	9690	99.79	50500	0.83	318	2KJ3513- ■ JU23- ■ ■ A2 -Z -	-	
17	8620	88.81	50800	0.93	318	2KJ3513- ■ JU23- ■ ■ X1 -Z -	-	
19	7730	79.59	50800	1	318	2KJ3513- ■ JU23- ■ ■ W1 -Z -	-	
21	6850	70.56	50700	1.2	318	2KJ3513- ■ JU23- ■ ■ V1 -Z -	-	
24	6040	62.28	50400	1.3	318	2KJ3513- ■ JU23- ■ ■ U1 -Z -	-	
27	5310	54.76	49900	1.5	318	2KJ3513- ■ JU23- ■ ■ T1 -Z -	-	
30	4810	49.60	49400	1.7	318	2KJ3513- ■ JU23- ■ ■ S1 -Z -	-	
34	4190	43.18	48600	1.9	318	2KJ3513- ■ JU23- ■ ■ R1 -Z -	-	
42	3430	35.40	47200	2.3	318	2KJ3513- ■ JU23- ■ ■ Q1 -Z -	-	
46	3140	32.33	46500	2.5	318	2KJ3513- ■ JU23- ■ ■ P1 -Z -	-	
51	2780	28.66	45500	2.7	318	2KJ3513- ■ JU23- ■ ■ N1 -Z -	-	
58	2450	25.30	44500	3	318	2KJ3513- ■ JU23- ■ ■ M1 -Z -	-	
104	1370	14.15	39100	3	318	2KJ3513- ■ JU23- ■ ■ G1 -Z -	-	
119	1200	12.44	38000	3.3	318	2KJ3513- ■ JU23- ■ ■ F1 -Z -	-	
131	1090	11.26	37100	3.6	318	2KJ3513- ■ JU23- ■ ■ E1 -Z -	-	
150	950	9.81	35800	4	318	2KJ3513- ■ JU23- ■ ■ D1 -Z -	-	
<b>K.129-LE160ZLL4P</b>								
27	5340	55.05	30800	0.82	235	2KJ3512- ■ JU23- ■ ■ T1 -Z -	-	
31	4680	48.24	31200	0.94	235	2KJ3512- ■ JU23- ■ ■ S1 -Z -	-	
35	4080	42.04	31300	1.1	235	2KJ3512- ■ JU23- ■ ■ R1 -Z -	-	
38	3720	38.37	31300	1.2	235	2KJ3512- ■ JU23- ■ ■ Q1 -Z -	-	
45	3200	33.03	31200	1.4	235	2KJ3512- ■ JU23- ■ ■ P1 -Z -	-	
47	3060	31.55	31100	1.4	235	2KJ3512- ■ JU23- ■ ■ N1 -Z -	-	
53	2670	27.58	30800	1.6	235	2KJ3512- ■ JU23- ■ ■ M1 -Z -	-	
60	2390	24.61	30400	1.8	235	2KJ3512- ■ JU23- ■ ■ L1 -Z -	-	
68	2100	21.68	29900	2	235	2KJ3512- ■ JU23- ■ ■ K1 -Z -	-	
78	1840	19.00	29400	2.2	235	2KJ3512- ■ JU23- ■ ■ J1 -Z -	-	
89	1600	16.56	28800	2.5	235	2KJ3512- ■ JU23- ■ ■ H1 -Z -	-	
98	1460	15.11	28300	2.7	235	2KJ3512- ■ JU23- ■ ■ G1 -Z -	-	
113	1260	13.01	27500	3	235	2KJ3512- ■ JU23- ■ ■ F1 -Z -	-	
125	1140	11.80	27000	2.5	235	2KJ3512- ■ JU23- ■ ■ E1 -Z -	-	
143	1000	10.34	26300	2.8	235	2KJ3512- ■ JU23- ■ ■ D1 -Z -	-	
164	875	9.01	25500	3.2	235	2KJ3512- ■ JU23- ■ ■ C1 -Z -	-	
179	795	8.22	25000	3.4	235	2KJ3512- ■ JU23- ■ ■ B1 -Z -	-	
208	685	7.08	24200	3.7	235	2KJ3512- ■ JU23- ■ ■ A1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>15</b>	<b>K.109-LE160ZLL4P</b>							
	43	3310	34.15	20300	0.82	187	2KJ3511- JU23- P1 -Z -	
	50	2830	29.23	20600	0.92	187	2KJ3511- JU23- N1 -Z -	
	59	2420	24.98	20700	0.98	187	2KJ3511- JU23- M1 -Z -	
	66	2160	22.31	20700	1.1	187	2KJ3511- JU23- L1 -Z -	
	75	1910	19.71	20600	1.2	187	2KJ3511- JU23- K1 -Z -	
	85	1680	17.30	20400	1.4	187	2KJ3511- JU23- J1 -Z -	
	98	1460	15.06	20100	1.6	187	2KJ3511- JU23- H1 -Z -	
	115	1250	12.87	19700	1.8	187	2KJ3511- JU23- G1 -Z -	
	134	1070	11.02	19300	2	187	2KJ3511- JU23- F1 -Z -	
	141	1010	10.45	18600	1.2	187	2KJ3511- JU23- E1 -Z -	
	161	890	9.17	18300	1.4	187	2KJ3511- JU23- D1 -Z -	
	185	775	7.99	17800	1.6	187	2KJ3511- JU23- C1 -Z -	
	216	660	6.83	17400	2	187	2KJ3511- JU23- B1 -Z -	
	253	565	5.84	16900	2.3	187	2KJ3511- JU23- A1 -Z -	
	<b>K.89-LE160ZLL4P</b>							
	76	1890	19.46	16300	0.83	150	2KJ3510- JU23- K1 -Z -	
	88	1620	16.71	16400	0.91	150	2KJ3510- JU23- J1 -Z -	
	100	1430	14.77	16400	0.99	150	2KJ3510- JU23- H1 -Z -	
	117	1220	12.56	16300	1.1	150	2KJ3510- JU23- G1 -Z -	
	137	1040	10.76	16100	1.2	150	2KJ3510- JU23- F1 -Z -	
	140	1020	10.51	15000	0.83	150	2KJ3510- JU23- E1 -Z -	
	164	875	9.02	14900	0.91	150	2KJ3510- JU23- D1 -Z -	
	185	770	7.97	14700	0.99	150	2KJ3510- JU23- C1 -Z -	
	218	655	6.78	14500	1.1	150	2KJ3510- JU23- B1 -Z -	
254	560	5.81	14200	1.2	150	2KJ3510- JU23- A1 -Z -		
<b>18.5</b>	<b>K.189-LES180MQ4P</b>							
	11	15600	130.05	104000	1.2	794	2KJ3515- KL33- S1 -Z -	
	13	14000	117.00	104000	1.4	794	2KJ3515- KL33- R1 -Z -	
	14	12500	104.56	104000	1.6	794	2KJ3515- KL33- Q1 -Z -	
	16	11300	94.55	104000	1.7	794	2KJ3515- KL33- P1 -Z -	
	18	10000	83.44	104000	1.9	794	2KJ3515- KL33- N1 -Z -	
	20	8930	74.35	104000	2.2	794	2KJ3515- KL33- M1 -Z -	
	22	8090	67.36	104000	2.4	794	2KJ3515- KL33- L1 -Z -	
	<b>K.169-LES180MQ4P</b>							
	12	14400	119.83	70000	0.9	565	2KJ3514- KL33- X1 -Z -	
	14	12800	106.72	70000	1	565	2KJ3514- KL33- W1 -Z -	
	15	11500	95.83	70000	1.1	565	2KJ3514- KL33- V1 -Z -	
	17	10200	85.51	70000	1.3	565	2KJ3514- KL33- U1 -Z -	
	19	9160	76.23	70000	1.4	565	2KJ3514- KL33- T1 -Z -	
	22	8120	67.61	70000	1.6	565	2KJ3514- KL33- S1 -Z -	
	24	7460	62.07	70000	1.7	565	2KJ3514- KL33- R1 -Z -	
	27	6570	54.68	70000	2	565	2KJ3514- KL33- Q1 -Z -	
	33	5390	44.86	70000	2.4	565	2KJ3514- KL33- P1 -Z -	
	<b>K.149-LES180MQ4P</b>							
	18	9560	79.59	45800	0.84	394	2KJ3513- KL33- W1 -Z -	
	21	8480	70.56	46300	0.94	394	2KJ3513- KL33- V1 -Z -	
	24	7480	62.28	46500	1.1	394	2KJ3513- KL33- U1 -Z -	
	27	6580	54.76	46400	1.2	394	2KJ3513- KL33- T1 -Z -	
	30	5960	49.60	46300	1.3	394	2KJ3513- KL33- S1 -Z -	
	34	5190	43.18	45900	1.5	394	2KJ3513- KL33- R1 -Z -	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
18.5	<b>K.149-LES180MQ4P</b>								
	42	4250	35.40	45000	1.8	394	2KJ3513- ■ KL33- ■ ■ Q1 -Z -		
	45	3880	32.33	44500	2	394	2KJ3513- ■ KL33- ■ ■ P1 -Z -		
	51	3440	28.66	43800	2.2	394	2KJ3513- ■ KL33- ■ ■ N1 -Z -		
	58	3040	25.30	42900	2.4	394	2KJ3513- ■ KL33- ■ ■ M1 -Z -		
	66	2670	22.25	42000	2.7	394	2KJ3513- ■ KL33- ■ ■ L1 -Z -		
	73	2420	20.15	41200	2.9	394	2KJ3513- ■ KL33- ■ ■ K1 -Z -		
	84	2100	17.54	40200	3.3	394	2KJ3513- ■ KL33- ■ ■ J1 -Z -		
	104	1700	14.15	38200	2.4	394	2KJ3513- ■ KL33- ■ ■ G1 -Z -		
	118	1490	12.44	37200	2.7	394	2KJ3513- ■ KL33- ■ ■ F1 -Z -		
	131	1350	11.26	36300	2.9	394	2KJ3513- ■ KL33- ■ ■ E1 -Z -		
	150	1170	9.81	35200	3.3	394	2KJ3513- ■ KL33- ■ ■ D1 -Z -		
	183	965	8.04	33600	3.8	394	2KJ3513- ■ KL33- ■ ■ C1 -Z -		
	216	820	6.82	32300	4.4	394	2KJ3513- ■ KL33- ■ ■ B1 -Z -		
	18.5	<b>K.129-LES180MQ4P</b>							
		35	5050	42.04	28100	0.87	312	2KJ3512- ■ KL33- ■ ■ R1 -Z -	
		38	4610	38.37	28300	0.95	312	2KJ3512- ■ KL33- ■ ■ Q1 -Z -	
		45	3970	33.03	28600	1.1	312	2KJ3512- ■ KL33- ■ ■ P1 -Z -	
		47	3790	31.55	28600	1.2	312	2KJ3512- ■ KL33- ■ ■ N1 -Z -	
		53	3310	27.58	28600	1.3	312	2KJ3512- ■ KL33- ■ ■ M1 -Z -	
		60	2950	24.61	28500	1.5	312	2KJ3512- ■ KL33- ■ ■ L1 -Z -	
		68	2600	21.68	28300	1.6	312	2KJ3512- ■ KL33- ■ ■ K1 -Z -	
		77	2280	19.00	27900	1.8	312	2KJ3512- ■ KL33- ■ ■ J1 -Z -	
		89	1990	16.56	27500	2	312	2KJ3512- ■ KL33- ■ ■ H1 -Z -	
		97	1810	15.11	27100	2.2	312	2KJ3512- ■ KL33- ■ ■ G1 -Z -	
		113	1560	13.01	26500	2.4	312	2KJ3512- ■ KL33- ■ ■ F1 -Z -	
125		1410	11.80	26100	2	312	2KJ3512- ■ KL33- ■ ■ E1 -Z -		
142		1240	10.34	25500	2.3	312	2KJ3512- ■ KL33- ■ ■ D1 -Z -		
163		1080	9.01	24800	2.5	312	2KJ3512- ■ KL33- ■ ■ C1 -Z -		
179		985	8.22	24400	2.7	312	2KJ3512- ■ KL33- ■ ■ B1 -Z -		
208		850	7.08	23600	3	312	2KJ3512- ■ KL33- ■ ■ A1 -Z -		
18.5		<b>K.109-LES180MQ4P</b>							
	66	2680	22.31	18800	0.89	263	2KJ3511- ■ KL33- ■ ■ L1 -Z -		
	75	2360	19.71	18900	1	263	2KJ3511- ■ KL33- ■ ■ K1 -Z -		
	85	2070	17.30	18900	1.2	263	2KJ3511- ■ KL33- ■ ■ J1 -Z -		
	98	1810	15.06	18800	1.3	263	2KJ3511- ■ KL33- ■ ■ H1 -Z -		
	114	1540	12.87	18700	1.4	263	2KJ3511- ■ KL33- ■ ■ G1 -Z -		
	133	1320	11.02	18400	1.6	263	2KJ3511- ■ KL33- ■ ■ F1 -Z -		
	141	1250	10.45	17600	1	263	2KJ3511- ■ KL33- ■ ■ E1 -Z -		
	160	1100	9.17	17400	1.2	263	2KJ3511- ■ KL33- ■ ■ D1 -Z -		
	184	960	7.99	17100	1.3	263	2KJ3511- ■ KL33- ■ ■ C1 -Z -		
	215	820	6.83	16700	1.6	263	2KJ3511- ■ KL33- ■ ■ B1 -Z -		
	252	700	5.84	16300	1.9	263	2KJ3511- ■ KL33- ■ ■ A1 -Z -		
	22	<b>K.189-LES180ZLN4P</b>							
		11	18500	130.05	104000	1	799	2KJ3515- ■ KN33- ■ ■ S1 -Z -	
13		16700	117.00	104000	1.2	799	2KJ3515- ■ KN33- ■ ■ R1 -Z -		
14		14900	104.56	104000	1.3	799	2KJ3515- ■ KN33- ■ ■ Q1 -Z -		
16		13500	94.55	104000	1.4	799	2KJ3515- ■ KN33- ■ ■ P1 -Z -		
18		11900	83.44	104000	1.6	799	2KJ3515- ■ KN33- ■ ■ N1 -Z -		
20		10600	74.35	104000	1.8	799	2KJ3515- ■ KN33- ■ ■ M1 -Z -		
22		9620	67.36	104000	2	799	2KJ3515- ■ KN33- ■ ■ L1 -Z -		

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>22</b>	<b>K.189-LES180ZLN4P</b>							
	24	8650	60.58	104000	2.3	799	2KJ3515- ■ KN33- ■ ■ K1 -Z -	
	<b>K.169-LES180ZLN4P</b>							
	14	15200	106.72	70000	0.85	570	2KJ3514- ■ KN33- ■ ■ W1 -Z -	
	15	13600	95.83	70000	0.95	570	2KJ3514- ■ KN33- ■ ■ V1 -Z -	
	17	12200	85.51	70000	1.1	570	2KJ3514- ■ KN33- ■ ■ U1 -Z -	
	19	10800	76.23	70000	1.2	570	2KJ3514- ■ KN33- ■ ■ T1 -Z -	
	22	9660	67.61	70000	1.3	570	2KJ3514- ■ KN33- ■ ■ S1 -Z -	
	24	8870	62.07	70000	1.5	570	2KJ3514- ■ KN33- ■ ■ R1 -Z -	
	27	7810	54.68	70000	1.7	570	2KJ3514- ■ KN33- ■ ■ Q1 -Z -	
	33	6410	44.86	70000	2	570	2KJ3514- ■ KN33- ■ ■ P1 -Z -	
	37	5620	39.33	69200	2.3	570	2KJ3514- ■ KN33- ■ ■ N1 -Z -	
	<b>K.149-LES180ZLN4P</b>							
	24	8900	62.28	42500	0.9	399	2KJ3513- ■ KN33- ■ ■ U1 -Z -	
	27	7820	54.76	43000	1	399	2KJ3513- ■ KN33- ■ ■ T1 -Z -	
	30	7080	49.60	43100	1.1	399	2KJ3513- ■ KN33- ■ ■ S1 -Z -	
	34	6170	43.18	43100	1.3	399	2KJ3513- ■ KN33- ■ ■ R1 -Z -	
	42	5060	35.40	42700	1.6	399	2KJ3513- ■ KN33- ■ ■ Q1 -Z -	
	45	4620	32.33	42400	1.7	399	2KJ3513- ■ KN33- ■ ■ P1 -Z -	
	51	4090	28.66	41900	1.9	399	2KJ3513- ■ KN33- ■ ■ N1 -Z -	
58	3610	25.30	41300	2.1	399	2KJ3513- ■ KN33- ■ ■ M1 -Z -		
66	3180	22.25	40600	2.3	399	2KJ3513- ■ KN33- ■ ■ L1 -Z -		
73	2880	20.15	40000	2.5	399	2KJ3513- ■ KN33- ■ ■ K1 -Z -		
84	2500	17.54	39100	2.7	399	2KJ3513- ■ KN33- ■ ■ J1 -Z -		
102	2050	14.38	37700	3.2	399	2KJ3513- ■ KN33- ■ ■ H1 -Z -		
104	2020	14.15	37200	2	399	2KJ3513- ■ KN33- ■ ■ G1 -Z -		
118	1770	12.44	36300	2.3	399	2KJ3513- ■ KN33- ■ ■ F1 -Z -		
131	1600	11.26	35600	2.5	399	2KJ3513- ■ KN33- ■ ■ E1 -Z -		
150	1400	9.81	34600	2.7	399	2KJ3513- ■ KN33- ■ ■ D1 -Z -		
183	1140	8.04	33100	3.2	399	2KJ3513- ■ KN33- ■ ■ C1 -Z -		
216	975	6.82	31800	3.7	399	2KJ3513- ■ KN33- ■ ■ B1 -Z -		
<b>K.129-LES180ZLN4P</b>								
38	5480	38.37	25400	0.8	317	2KJ3512- ■ KN33- ■ ■ Q1 -Z -		
45	4720	33.03	26000	0.93	317	2KJ3512- ■ KN33- ■ ■ P1 -Z -		
47	4500	31.55	26200	0.98	317	2KJ3512- ■ KN33- ■ ■ N1 -Z -		
53	3940	27.58	26500	1.1	317	2KJ3512- ■ KN33- ■ ■ M1 -Z -		
60	3510	24.61	26600	1.3	317	2KJ3512- ■ KN33- ■ ■ L1 -Z -		
68	3090	21.68	26600	1.4	317	2KJ3512- ■ KN33- ■ ■ K1 -Z -		
77	2710	19.00	26400	1.5	317	2KJ3512- ■ KN33- ■ ■ J1 -Z -		
89	2360	16.56	26200	1.7	317	2KJ3512- ■ KN33- ■ ■ H1 -Z -		
97	2160	15.11	25900	1.8	317	2KJ3512- ■ KN33- ■ ■ G1 -Z -		
113	1850	13.01	25500	2	317	2KJ3512- ■ KN33- ■ ■ F1 -Z -		
125	1680	11.80	25200	1.7	317	2KJ3512- ■ KN33- ■ ■ E1 -Z -		
142	1470	10.34	24700	1.9	317	2KJ3512- ■ KN33- ■ ■ D1 -Z -		
163	1280	9.01	24100	2.1	317	2KJ3512- ■ KN33- ■ ■ C1 -Z -		
179	1170	8.22	23800	2.3	317	2KJ3512- ■ KN33- ■ ■ B1 -Z -		
208	1010	7.08	23100	2.5	317	2KJ3512- ■ KN33- ■ ■ A1 -Z -		
<b>K.109-LES180ZLN4P</b>								
75	2810	19.71	17200	0.84	268	2KJ3511- ■ KN33- ■ ■ K1 -Z -		
85	2470	17.30	17400	0.97	268	2KJ3511- ■ KN33- ■ ■ J1 -Z -		
98	2150	15.06	17500	1.1	268	2KJ3511- ■ KN33- ■ ■ H1 -Z -		
114	1830	12.87	17600	1.2	268	2KJ3511- ■ KN33- ■ ■ G1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

Bevel geared motors

## Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
22	<b>K.109-LES180ZLN4P</b>							
	133	1570	11.02	17400	1.3	268	2KJ3511- ■ KN33- ■ ■ F1 -Z -	
	141	1490	10.45	16600	0.84	268	2KJ3511- ■ KN33- ■ ■ E1 -Z -	
	160	1310	9.17	16500	0.97	268	2KJ3511- ■ KN33- ■ ■ D1 -Z -	
	184	1140	7.99	16300	1.1	268	2KJ3511- ■ KN33- ■ ■ C1 -Z -	
	215	975	6.83	16000	1.3	268	2KJ3511- ■ KN33- ■ ■ B1 -Z -	
	252	835	5.84	15700	1.6	268	2KJ3511- ■ KN33- ■ ■ A1 -Z -	
30	<b>K.189-LES200ZLU4P</b>							
	13	22800	117.00	104000	0.86	875	2KJ3515- ■ LN33- ■ ■ R1 -Z -	
	14	20300	104.56	104000	0.96	875	2KJ3515- ■ LN33- ■ ■ Q1 -Z -	
	16	18400	94.55	104000	1.1	875	2KJ3515- ■ LN33- ■ ■ P1 -Z -	
	18	16200	83.44	104000	1.2	875	2KJ3515- ■ LN33- ■ ■ N1 -Z -	
	20	14400	74.35	104000	1.3	875	2KJ3515- ■ LN33- ■ ■ M1 -Z -	
	22	13100	67.36	104000	1.5	875	2KJ3515- ■ LN33- ■ ■ L1 -Z -	
	24	11800	60.58	104000	1.7	875	2KJ3515- ■ LN33- ■ ■ K1 -Z -	
	29	9810	50.34	104000	2	875	2KJ3515- ■ LN33- ■ ■ J1 -Z -	
	33	8720	44.76	104000	2.2	875	2KJ3515- ■ LN33- ■ ■ H1 -Z -	
	<b>K.169-LES200ZLU4P</b>							
	19	14800	76.23	65900	0.88	645	2KJ3514- ■ LN33- ■ ■ T1 -Z -	
	22	13100	67.61	66300	0.99	645	2KJ3514- ■ LN33- ■ ■ S1 -Z -	
	24	12000	62.07	66400	1.1	645	2KJ3514- ■ LN33- ■ ■ R1 -Z -	
	27	10600	54.68	66200	1.2	645	2KJ3514- ■ LN33- ■ ■ Q1 -Z -	
	33	8740	44.86	65300	1.5	645	2KJ3514- ■ LN33- ■ ■ P1 -Z -	
	37	7660	39.33	64500	1.7	645	2KJ3514- ■ LN33- ■ ■ N1 -Z -	
	48	5990	30.75	62500	2.2	645	2KJ3514- ■ LN33- ■ ■ M1 -Z -	
	50	5730	29.43	62100	2.3	645	2KJ3514- ■ LN33- ■ ■ L1 -Z -	
	54	5260	27.02	61300	2.5	645	2KJ3514- ■ LN33- ■ ■ K1 -Z -	
	62	4630	23.80	60000	2.8	645	2KJ3514- ■ LN33- ■ ■ J1 -Z -	
	120	2370	12.20	51100	2.8	645	2KJ3514- ■ LN33- ■ ■ E1 -Z -	
	147	1950	10.01	49000	3.3	645	2KJ3514- ■ LN33- ■ ■ D1 -Z -	
	167	1710	8.78	47600	3.7	645	2KJ3514- ■ LN33- ■ ■ C1 -Z -	
	<b>K.149-LES200ZLU4P</b>							
	30	9660	49.60	35900	0.83	474	2KJ3513- ■ LN33- ■ ■ S1 -Z -	
	34	8410	43.18	36900	0.95	474	2KJ3513- ■ LN33- ■ ■ R1 -Z -	
	42	6890	35.40	37600	1.1	474	2KJ3513- ■ LN33- ■ ■ Q1 -Z -	
	45	6300	32.33	37700	1.2	474	2KJ3513- ■ LN33- ■ ■ P1 -Z -	
	51	5580	28.66	37800	1.4	474	2KJ3513- ■ LN33- ■ ■ N1 -Z -	
	58	4930	25.30	37600	1.5	474	2KJ3513- ■ LN33- ■ ■ M1 -Z -	
	66	4330	22.25	37400	1.7	474	2KJ3513- ■ LN33- ■ ■ L1 -Z -	
	73	3920	20.15	37100	1.8	474	2KJ3513- ■ LN33- ■ ■ K1 -Z -	
84	3410	17.54	36500	2	474	2KJ3513- ■ LN33- ■ ■ J1 -Z -		
102	2800	14.38	35600	2.4	474	2KJ3513- ■ LN33- ■ ■ H1 -Z -		
104	2750	14.15	35100	1.5	474	2KJ3513- ■ LN33- ■ ■ G1 -Z -		
118	2420	12.44	34400	1.7	474	2KJ3513- ■ LN33- ■ ■ F1 -Z -		
131	2190	11.26	33900	1.8	474	2KJ3513- ■ LN33- ■ ■ E1 -Z -		
150	1910	9.81	33100	2	474	2KJ3513- ■ LN33- ■ ■ D1 -Z -		
183	1560	8.04	31800	2.4	474	2KJ3513- ■ LN33- ■ ■ C1 -Z -		
216	1320	6.82	30800	2.7	474	2KJ3513- ■ LN33- ■ ■ B1 -Z -		
<b>K.129-LES200ZLU4P</b>								
53	5370	27.58	21600	0.82	393	2KJ3512- ■ LN33- ■ ■ M1 -Z -		
60	4790	24.61	22200	0.92	393	2KJ3512- ■ LN33- ■ ■ L1 -Z -		

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>30</b>	<b>K.129-LES200ZLU4P</b>							
	68	4220	21.68	22700	1	393	2KJ3512- ■ LN33- ■ ■ K1 -Z -	
	77	3700	19.00	23100	1.1	393	2KJ3512- ■ LN33- ■ ■ J1 -Z -	
	89	3220	16.56	23300	1.2	393	2KJ3512- ■ LN33- ■ ■ H1 -Z -	
	97	2940	15.11	23300	1.3	393	2KJ3512- ■ LN33- ■ ■ G1 -Z -	
	113	2530	13.01	23200	1.5	393	2KJ3512- ■ LN33- ■ ■ F1 -Z -	
	125	2300	11.80	23100	1.2	393	2KJ3512- ■ LN33- ■ ■ E1 -Z -	
	142	2010	10.34	22800	1.4	393	2KJ3512- ■ LN33- ■ ■ D1 -Z -	
	163	1750	9.01	22500	1.6	393	2KJ3512- ■ LN33- ■ ■ C1 -Z -	
	179	1600	8.22	22300	1.7	393	2KJ3512- ■ LN33- ■ ■ B1 -Z -	
208	1380	7.08	21800	1.8	393	2KJ3512- ■ LN33- ■ ■ A1 -Z -		
<b>37</b>	<b>K.189-LES225SD4P</b>							
	16	22600	94.55	104000	0.86	917	2KJ3515- ■ MF33- ■ ■ P1 -Z -	
	18	19900	83.44	104000	0.98	917	2KJ3515- ■ MF33- ■ ■ N1 -Z -	
	20	17700	74.35	104000	1.1	917	2KJ3515- ■ MF33- ■ ■ M1 -Z -	
	22	16100	67.36	104000	1.2	917	2KJ3515- ■ MF33- ■ ■ L1 -Z -	
	24	14400	60.58	104000	1.3	917	2KJ3515- ■ MF33- ■ ■ K1 -Z -	
	29	12000	50.34	104000	1.6	917	2KJ3515- ■ MF33- ■ ■ J1 -Z -	
	33	10700	44.76	104000	1.8	917	2KJ3515- ■ MF33- ■ ■ H1 -Z -	
	41	8520	35.67	104000	2.3	917	2KJ3515- ■ MF33- ■ ■ G1 -Z -	
	52	6780	28.39	104000	2.9	917	2KJ3515- ■ MF33- ■ ■ F1 -Z -	
	<b>K.169-LES225SD4P</b>							
	22	16100	67.61	59200	0.8	690	2KJ3514- ■ MF33- ■ ■ S1 -Z -	
	24	14800	62.07	59800	0.88	690	2KJ3514- ■ MF33- ■ ■ R1 -Z -	
	27	13000	54.68	60400	0.99	690	2KJ3514- ■ MF33- ■ ■ Q1 -Z -	
	33	10700	44.86	60600	1.2	690	2KJ3514- ■ MF33- ■ ■ P1 -Z -	
	38	9400	39.33	60300	1.4	690	2KJ3514- ■ MF33- ■ ■ N1 -Z -	
	48	7350	30.75	59200	1.8	690	2KJ3514- ■ MF33- ■ ■ M1 -Z -	
	50	7030	29.43	58900	1.8	690	2KJ3514- ■ MF33- ■ ■ L1 -Z -	
	55	6460	27.02	58400	2	690	2KJ3514- ■ MF33- ■ ■ K1 -Z -	
	62	5690	23.80	57400	2.3	690	2KJ3514- ■ MF33- ■ ■ J1 -Z -	
	76	4660	19.53	55700	2.7	690	2KJ3514- ■ MF33- ■ ■ H1 -Z -	
	86	4090	17.12	54500	3	690	2KJ3514- ■ MF33- ■ ■ G1 -Z -	
	121	2910	12.20	49500	2.3	690	2KJ3514- ■ MF33- ■ ■ E1 -Z -	
	148	2390	10.01	47600	2.7	690	2KJ3514- ■ MF33- ■ ■ D1 -Z -	
	168	2090	8.78	46400	3	690	2KJ3514- ■ MF33- ■ ■ C1 -Z -	
	215	1640	6.86	43900	3.7	690	2KJ3514- ■ MF33- ■ ■ B1 -Z -	
	<b>K.149-LES225SD4P</b>							
	42	8460	35.40	33100	0.93	518	2KJ3513- ■ MF33- ■ ■ Q1 -Z -	
	46	7720	32.33	33700	1	518	2KJ3513- ■ MF33- ■ ■ P1 -Z -	
	52	6850	28.66	34100	1.1	518	2KJ3513- ■ MF33- ■ ■ N1 -Z -	
	58	6040	25.30	34400	1.2	518	2KJ3513- ■ MF33- ■ ■ M1 -Z -	
	66	5310	22.25	34500	1.4	518	2KJ3513- ■ MF33- ■ ■ L1 -Z -	
	73	4810	20.15	34500	1.5	518	2KJ3513- ■ MF33- ■ ■ K1 -Z -	
84	4190	17.54	34300	1.6	518	2KJ3513- ■ MF33- ■ ■ J1 -Z -		
103	3430	14.38	33700	1.9	518	2KJ3513- ■ MF33- ■ ■ H1 -Z -		
104	3380	14.15	33200	1.2	518	2KJ3513- ■ MF33- ■ ■ G1 -Z -		
119	2970	12.44	32700	1.4	518	2KJ3513- ■ MF33- ■ ■ F1 -Z -		
131	2690	11.26	32300	1.5	518	2KJ3513- ■ MF33- ■ ■ E1 -Z -		
151	2340	9.81	31700	1.6	518	2KJ3513- ■ MF33- ■ ■ D1 -Z -		
184	1920	8.04	30700	1.9	518	2KJ3513- ■ MF33- ■ ■ C1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Bevel geared motors

Geared motors up to 55 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
37	<b>K.149-LES225SD4P</b>							
	217	1630	6.82	29800	2.2	518	2KJ3513- MF33- B1 -Z -	
	<b>K.129-LES225SD4P</b>							
	68	5180	21.68	19400	0.82	435	2KJ3512- MF33- K1 -Z -	
	78	4540	19.00	20100	0.91	435	2KJ3512- MF33- J1 -Z -	
	89	3950	16.56	20700	1	435	2KJ3512- MF33- H1 -Z -	
	98	3610	15.11	20900	1.1	435	2KJ3512- MF33- G1 -Z -	
	114	3110	13.01	21200	1.2	435	2KJ3512- MF33- F1 -Z -	
	125	2820	11.80	21200	1	435	2KJ3512- MF33- E1 -Z -	
	143	2470	10.34	21200	1.2	435	2KJ3512- MF33- D1 -Z -	
	164	2150	9.01	21100	1.3	435	2KJ3512- MF33- C1 -Z -	
	180	1960	8.22	21000	1.4	435	2KJ3512- MF33- B1 -Z -	
	209	1690	7.08	20700	1.5	435	2KJ3512- MF33- A1 -Z -	
45	<b>K.189-LES225YMF4P</b>							
	18	24200	83.44	104000	0.8	962	2KJ3515- MT33- N1 -Z -	
	20	21600	74.35	104000	0.9	962	2KJ3515- MT33- M1 -Z -	
	22	19500	67.36	104000	1	962	2KJ3515- MT33- L1 -Z -	
	24	17600	60.58	104000	1.1	962	2KJ3515- MT33- K1 -Z -	
	29	14600	50.34	104000	1.3	962	2KJ3515- MT33- J1 -Z -	
	33	13000	44.76	104000	1.5	962	2KJ3515- MT33- H1 -Z -	
	41	10300	35.67	104000	1.9	962	2KJ3515- MT33- G1 -Z -	
	52	8250	28.39	103900	2.4	962	2KJ3515- MT33- F1 -Z -	
	58	7370	25.37	101700	2.6	962	2KJ3515- MT33- E1 -Z -	
	<b>K.169-LES225YMF4P</b>							
	27	15800	54.68	53900	0.82	735	2KJ3514- MT33- Q1 -Z -	
	33	13000	44.86	55200	1	735	2KJ3514- MT33- P1 -Z -	
	38	11400	39.33	55600	1.1	735	2KJ3514- MT33- N1 -Z -	
	48	8940	30.75	55500	1.5	735	2KJ3514- MT33- M1 -Z -	
	50	8550	29.43	55400	1.5	735	2KJ3514- MT33- L1 -Z -	
	55	7850	27.02	55100	1.7	735	2KJ3514- MT33- K1 -Z -	
	62	6920	23.80	54600	1.9	735	2KJ3514- MT33- J1 -Z -	
	76	5670	19.53	53400	2.2	735	2KJ3514- MT33- H1 -Z -	
	86	4970	17.12	52400	2.5	735	2KJ3514- MT33- G1 -Z -	
	110	3890	13.39	50400	3.1	735	2KJ3514- MT33- F1 -Z -	
	121	3540	12.20	47700	1.9	735	2KJ3514- MT33- E1 -Z -	
	148	2910	10.01	46100	2.2	735	2KJ3514- MT33- D1 -Z -	
	168	2550	8.78	45100	2.5	735	2KJ3514- MT33- C1 -Z -	
	215	1990	6.86	42900	3.1	735	2KJ3514- MT33- B1 -Z -	
	<b>K.149-LES225YMF4P</b>							
	46	9400	32.33	29000	0.83	563	2KJ3513- MT33- P1 -Z -	
	52	8330	28.66	30000	0.92	563	2KJ3513- MT33- N1 -Z -	
	58	7350	25.30	30800	1	563	2KJ3513- MT33- M1 -Z -	
	66	6470	22.25	31300	1.1	563	2KJ3513- MT33- L1 -Z -	
	73	5850	20.15	31600	1.2	563	2KJ3513- MT33- K1 -Z -	
	84	5100	17.54	31700	1.4	563	2KJ3513- MT33- J1 -Z -	
	103	4180	14.38	31600	1.6	563	2KJ3513- MT33- H1 -Z -	
104	4110	14.15	31000	1	563	2KJ3513- MT33- G1 -Z -		
119	3610	12.44	30800	1.1	563	2KJ3513- MT33- F1 -Z -		
131	3270	11.26	30600	1.2	563	2KJ3513- MT33- E1 -Z -		
151	2850	9.81	30200	1.3	563	2KJ3513- MT33- D1 -Z -		
184	2330	8.04	29500	1.6	563	2KJ3513- MT33- C1 -Z -		
217	1980	6.82	28800	1.8	563	2KJ3513- MT33- B1 -Z -		

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H, C or D	see page 10/42

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>45</b>	<b>K.129-LES225YMF4P</b>							
	89	4810	16.56	17800	0.83	480	2KJ3512- ■ MT33- ■ ■ H1 -Z -	
	98	4390	15.11	18300	0.9	480	2KJ3512- ■ MT33- ■ ■ G1 -Z -	
	114	3780	13.01	18900	1	480	2KJ3512- ■ MT33- ■ ■ F1 -Z -	
	125	3430	11.80	19100	0.82	480	2KJ3512- ■ MT33- ■ ■ E1 -Z -	
	143	3000	10.34	19400	0.95	480	2KJ3512- ■ MT33- ■ ■ D1 -Z -	
	164	2620	9.01	19500	1.1	480	2KJ3512- ■ MT33- ■ ■ C1 -Z -	
	180	2390	8.22	19500	1.1	480	2KJ3512- ■ MT33- ■ ■ B1 -Z -	
209	2050	7.08	19500	1.2	480	2KJ3512- ■ MT33- ■ ■ A1 -Z -		
<b>55</b>	<b>K.189-LES250MD4P</b>							
	22	23800	67.36	104000	0.82	1066	2KJ3515- ■ NM33- ■ ■ L1 -Z -	
	24	21400	60.58	104000	0.91	1066	2KJ3515- ■ NM33- ■ ■ K1 -Z -	
	29	17800	50.34	104000	1.1	1066	2KJ3515- ■ NM33- ■ ■ J1 -Z -	
	33	15800	44.76	104000	1.2	1066	2KJ3515- ■ NM33- ■ ■ H1 -Z -	
	42	12600	35.67	103400	1.5	1066	2KJ3515- ■ NM33- ■ ■ G1 -Z -	
	52	10000	28.39	100200	1.9	1066	2KJ3515- ■ NM33- ■ ■ F1 -Z -	
	58	8990	25.37	98300	2.2	1066	2KJ3515- ■ NM33- ■ ■ E1 -Z -	
	70	7470	21.09	95100	2.6	1066	2KJ3515- ■ NM33- ■ ■ D1 -Z -	
	79	6640	18.75	93000	2.9	1066	2KJ3515- ■ NM33- ■ ■ C1 -Z -	
	<b>K.169-LES250MD4P</b>							
	33	15800	44.86	48600	0.82	837	2KJ3514- ■ NM33- ■ ■ P1 -Z -	
	38	13900	39.33	49700	0.93	837	2KJ3514- ■ NM33- ■ ■ N1 -Z -	
	48	10800	30.75	51100	1.2	837	2KJ3514- ■ NM33- ■ ■ M1 -Z -	
	50	10400	29.43	51000	1.2	837	2KJ3514- ■ NM33- ■ ■ L1 -Z -	
	55	9570	27.02	51100	1.4	837	2KJ3514- ■ NM33- ■ ■ K1 -Z -	
	62	8430	23.80	51000	1.5	837	2KJ3514- ■ NM33- ■ ■ J1 -Z -	
	76	6920	19.53	50400	1.8	837	2KJ3514- ■ NM33- ■ ■ H1 -Z -	
	87	6060	17.12	49800	2	837	2KJ3514- ■ NM33- ■ ■ G1 -Z -	
	111	4740	13.39	48400	2.5	837	2KJ3514- ■ NM33- ■ ■ F1 -Z -	
	121	4320	12.20	45400	1.6	837	2KJ3514- ■ NM33- ■ ■ E1 -Z -	
	148	3540	10.01	44300	1.8	837	2KJ3514- ■ NM33- ■ ■ D1 -Z -	
	169	3110	8.78	43400	2	837	2KJ3514- ■ NM33- ■ ■ C1 -Z -	
	216	2430	6.86	41600	2.5	837	2KJ3514- ■ NM33- ■ ■ B1 -Z -	
	<b>K.149-LES250MD4P</b>							
	59	8960	25.30	26200	0.83	664	2KJ3513- ■ NM33- ■ ■ M1 -Z -	
	67	7880	22.25	27300	0.91	664	2KJ3513- ■ NM33- ■ ■ L1 -Z -	
	74	7140	20.15	27900	0.99	664	2KJ3513- ■ NM33- ■ ■ K1 -Z -	
	84	6210	17.54	28600	1.1	664	2KJ3513- ■ NM33- ■ ■ J1 -Z -	
103	5090	14.38	29100	1.3	664	2KJ3513- ■ NM33- ■ ■ H1 -Z -		
105	5010	14.15	28300	0.83	664	2KJ3513- ■ NM33- ■ ■ G1 -Z -		
119	4400	12.44	28500	0.91	664	2KJ3513- ■ NM33- ■ ■ F1 -Z -		
132	3990	11.26	28500	0.99	664	2KJ3513- ■ NM33- ■ ■ E1 -Z -		
151	3470	9.81	28400	1.1	664	2KJ3513- ■ NM33- ■ ■ D1 -Z -		
184	2850	8.04	28000	1.3	664	2KJ3513- ■ NM33- ■ ■ C1 -Z -		
217	2410	6.82	27500	1.5	664	2KJ3513- ■ NM33- ■ ■ B1 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

## SIMOGEAR geared motors

### Bevel geared motors

#### Transmission ratios and torques

##### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>B.19</b>																		
<b>42.10</b>	34	50	3880	13.0	0.02	3410/81	✓	✓								2KJ3500 - ■■■■■■ - ■■ A2		
<b>37.28</b>	39	50	3700	13.5	0.03	671/18	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ X1		
<b>32.39</b>	45	50	3510	13.6	0.04	583/18	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ W1		
<b>29.44</b>	49	50	3380	13.6	0.04	265/9	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ V1		
<b>25.06</b>	58	50	3170	13.7	0.06	451/18	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ U1		
<b>22.78</b>	64	50	3050	13.7	0.08	205/9	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ T1		
<b>19.86</b>	73	50	2890	13.9	0.09	715/36	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ S1		
<b>17.78</b>	82	50	2770	14.0	0.12	160/9	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ R1		
<b>15.79</b>	92	50	2640	14.1	0.14	1705/108	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ Q1		
<b>14.57</b>	100	50	2550	14.1	0.17	1705/117	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ P1		
<b>12.66</b>	115	50	2410	14.4	0.19	1595/126	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ N1		
<b>11.00</b>	132	50	2270	14.1	0.19	11/1	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ M1		
<b>9.93</b>	146	50	2190	14.2	0.25	715/72	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ L1		
<b>9.35</b>	155	50	2160	14.2	0.29	1430/153	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ K1		
<b>8.15</b>	178	47	2110	14.6	0.33	220/27	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ J1		
<b>7.87</b>	184	38	2160	21.4	0.14	1472/187	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ H1		
<b>6.99</b>	207	38	2100	21.7	0.17	713/102	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ G1		
<b>6.45</b>	225	39	2060	21.6	0.20	1426/221	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ F1		
<b>5.61</b>	258	37	1990	22.3	0.22	667/119	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ E1		
<b>4.87</b>	298	35	1930	21.6	0.24	414/85	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ D1		
<b>4.40</b>	330	34	1880	22.0	0.32	299/68	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ C1		
<b>4.14</b>	350	33	1850	22.0	0.37	1196/289	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ B1		
<b>3.61</b>	402	31	1780	22.8	0.43	184/51	✓	✓	✓							2KJ3500 - ■■■■■■ - ■■ A1		

##### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi^{1)}$	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>B.29</b>																		
<b>46.85</b>	31	110	4130	10.6	0.04	1265/27	✓	✓								2KJ3501 - ■■■■■■ - ■■ B2		
<b>41.56</b>	35	110	4130	11.0	0.05	374/9	✓	✓	✓	✓						2KJ3501 - ■■■■■■ - ■■ A2		
<b>36.06</b>	40	110	4130	11.1	0.06	649/18	✓	✓	✓	✓						2KJ3501 - ■■■■■■ - ■■ X1		
<b>32.78</b>	44	110	4130	11.1	0.07	295/9	✓	✓	✓	✓						2KJ3501 - ■■■■■■ - ■■ W1		
<b>28.11</b>	52	110	4130	11.2	0.09	253/9	✓	✓	✓	✓						2KJ3501 - ■■■■■■ - ■■ V1		
<b>25.56</b>	57	110	4130	11.2	0.11	230/9	✓	✓	✓	✓						2KJ3501 - ■■■■■■ - ■■ U1		
<b>22.41</b>	65	110	4130	11.4	0.13	605/27	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ T1		
<b>20.00</b>	72	110	4130	11.4	0.16	20/1	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ S1		
<b>17.82</b>	81	110	4130	11.5	0.19	1925/108	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ R1		
<b>16.45</b>	88	110	4130	11.5	0.23	1925/117	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ Q1		
<b>14.40</b>	101	110	4020	11.7	0.28	605/42	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ P1		
<b>12.63</b>	115	110	3800	12.0	0.27	341/27	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ N1		
<b>11.46</b>	127	110	3650	12.1	0.38	275/24	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ M1		
<b>10.78</b>	135	110	3560	12.1	0.44	550/51	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ L1		
<b>9.51</b>	152	110	3370	11.8	0.50	770/81	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ K1		
<b>8.25</b>	176	110	3160	12.0	0.67	33/4	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ J1		
<b>7.84</b>	185	75	3350	16.5	0.41	345/44	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ H1		
<b>7.38</b>	196	75	3260	16.5	0.48	1380/187	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ G1		
<b>6.51</b>	223	75	3100	16.1	0.54	644/99	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ F1		
<b>5.65</b>	257	75	2920	16.3	0.73	621/110	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ E1		
<b>5.07</b>	286	74	2900	18.9	0.60	345/68	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ D1		
<b>4.78</b>	303	74	2830	18.9	0.70	1380/289	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ C1		
<b>4.21</b>	344	74	2680	18.2	0.82	644/153	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ B1		
<b>3.65</b>	397	73	2550	18.6	1.10	621/170	✓	✓	✓	✓	✓					2KJ3501 - ■■■■■■ - ■■ A1		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Bevel geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub> -	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>B.39</b>																	
<b>56.36</b>	26	250	6980	8.5	0.06	4565/81	✓	✓									2KJ3502 - ■■■■■■ - ■■ A2
<b>50.11</b>	29	210	6980	8.8	0.08	451/9	✓	✓	✓	✓							2KJ3502 - ■■■■■■ - ■■ X1
<b>44.00</b>	33	250	6980	8.9	0.09	44/1	✓	✓	✓	✓							2KJ3502 - ■■■■■■ - ■■ W1
<b>40.00</b>	36	230	6980	8.9	0.11	40/1	✓	✓	✓	✓							2KJ3502 - ■■■■■■ - ■■ V1
<b>34.22</b>	42	250	6980	8.9	0.13	308/9	✓	✓	✓	✓							2KJ3502 - ■■■■■■ - ■■ U1
<b>31.11</b>	47	250	6980	8.9	0.16	280/9	✓	✓	✓	✓							2KJ3502 - ■■■■■■ - ■■ T1
<b>27.50</b>	53	250	6980	9.0	0.20	55/2	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ S1
<b>25.00</b>	58	250	6980	9.0	0.26	25/1	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ R1
<b>21.90</b>	66	250	6720	9.2	0.30	2365/108	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ Q1
<b>20.21</b>	72	250	6490	9.2	0.36	2365/117	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ P1
<b>17.90</b>	81	250	6160	9.3	0.43	2255/126	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ N1
<b>14.90</b>	97	250	5680	9.5	0.58	715/48	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ M1
<b>14.02</b>	103	250	5520	9.5	0.67	715/51	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ L1
<b>12.56</b>	115	250	5260	9.6	0.75	2035/162	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ K1
<b>10.69</b>	136	240	4960	9.8	0.98	385/36	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ J1
<b>9.17</b>	158	230	4690	10.1	1.29	55/6			✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ H1
<b>7.89</b>	184	220	4550	10.3	1.66	1705/216			✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ G1
<b>6.60</b>	220	200	4590	15.1	0.94	897/136	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ F1
<b>6.21</b>	233	200	4550	15.1	1.08	1794/289	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ E1
<b>5.56</b>	261	200	4460	15.5	1.26	851/153	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ D1
<b>4.74</b>	306	200	4330	16.0	1.69	161/34	✓	✓	✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ C1
<b>4.06</b>	357	200	4190	16.5	2.30	69/17			✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ B1
<b>3.50</b>	414	192	4050	17.1	3.00	713/204			✓	✓	✓	✓					2KJ3502 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi^{1)}$	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>B.49</b>																		
<b>59.28</b>	24	450	9510	8.3	0.19	1067/18	✓	✓	✓	✓						2KJ3503 - ■■■■■■ - ■■ C2		
<b>53.89</b>	27	450	9120	8.3	0.23	485/9	✓	✓	✓	✓						2KJ3503 - ■■■■■■ - ■■ B2		
<b>45.83</b>	32	450	8480	8.3	0.28	275/6	✓	✓	✓	✓						2KJ3503 - ■■■■■■ - ■■ A2		
<b>41.67</b>	35	450	8120	8.3	0.34	125/3	✓	✓	✓	✓						2KJ3503 - ■■■■■■ - ■■ X1		
<b>37.18</b>	39	450	7710	8.4	0.40	4015/108	✓	✓	✓	✓	✓	✓				2KJ3503 - ■■■■■■ - ■■ W1		
<b>33.33</b>	44	450	7320	8.4	0.48	100/3	✓	✓	✓	✓	✓	✓				2KJ3503 - ■■■■■■ - ■■ V1		
<b>30.05</b>	48	450	6970	8.4	0.56	3245/108	✓	✓	✓	✓	✓	✓				2KJ3503 - ■■■■■■ - ■■ U1		
<b>27.74</b>	52	450	6710	8.4	0.67	3245/117	✓	✓	✓	✓	✓	✓				2KJ3503 - ■■■■■■ - ■■ T1		
<b>25.32</b>	57	450	6420	8.5	0.80	1595/63	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ S1		
<b>21.01</b>	69	450	5850	8.6	1.03	3025/144	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ R1		
<b>19.77</b>	73	450	5670	8.6	1.18	3025/153	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ Q1		
<b>18.67</b>	78	450	5510	8.6	1.34	3025/162	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ P1		
<b>15.89</b>	91	450	5060	8.7	1.66	143/9	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ N1		
<b>13.61</b>	107	450	4660	8.9	2.10	245/18			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ M1		
<b>11.97</b>	121	450	4340	9.0	2.50	2585/216			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ L1		
<b>10.10</b>	144	450	3930	9.2	3.30	2090/207			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ K1		
<b>8.80</b>	165	450	3620	9.7	4.40	44/5			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ J1		
<b>8.29</b>	175	330	4540	14.1	1.52	2255/272	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ H1		
<b>7.80</b>	186	330	4410	14.1	1.74	2255/289	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ G1		
<b>7.37</b>	197	330	4290	14.1	1.97	2255/306	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ F1		
<b>6.27</b>	231	330	3970	14.4	2.50	533/85	✓	✓	✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ E1		
<b>5.37</b>	270	330	3700	14.8	3.30	2009/374			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ D1		
<b>4.72</b>	307	330	3690	15.1	4.10	1927/408			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ C1		
<b>3.98</b>	364	330	3660	15.6	5.40	1558/391			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ B1		
<b>3.47</b>	418	325	3610	17.0	7.20	1476/425			✓	✓	✓	✓	✓			2KJ3503 - ■■■■■■ - ■■ A1		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Bevel geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>K.39</b>																		
157.32	9.2	220	6080	7.3	0.04	3933/25	✓	✓									2KJ3504 - ■■■■■■ - ■■ J2	
139.54	10	220	6080	7.4	0.05	17442/125	✓	✓	✓	✓							2KJ3504 - ■■■■■■ - ■■ H2	
121.07	12	220	6080	7.4	0.06	30267/250	✓	✓	✓	✓							2KJ3504 - ■■■■■■ - ■■ G2	
110.06	13	220	6080	7.4	0.07	30267/275	✓	✓	✓	✓							2KJ3504 - ■■■■■■ - ■■ F2	
94.39	15	220	6080	7.4	0.09	11799/125	✓	✓	✓	✓							2KJ3504 - ■■■■■■ - ■■ E2	
85.81	17	220	6080	7.4	0.11	23598/275	✓	✓	✓	✓							2KJ3504 - ■■■■■■ - ■■ D2	
75.24	19	220	6080	7.5	0.12	1881/25	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ C2	
67.16	22	220	6080	7.5	0.15	18468/275	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ B2	
59.85	24	220	6080	7.5	0.18	1197/20	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ A2	
55.25	26	220	6080	7.5	0.22	3591/65	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ X1	
48.37	30	220	6080	7.6	0.26	16929/350	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ W1	
42.41	34	220	5790	7.7	0.24	5301/125	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ V1	
38.47	38	220	5540	7.7	0.34	1539/40	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ U1	
36.21	40	220	5390	7.7	0.40	3078/85	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ T1	
31.92	45	220	5080	7.6	0.44	798/25	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ S1	
27.70	52	220	4760	7.7	0.60	13851/500	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ R1	
26.89	54	220	4690	9.2	0.26	6804/253	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ Q1	
23.97	60	220	4440	9.3	0.32	2205/92	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ P1	
22.12	66	220	4270	9.3	0.38	6615/299	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ N1	
19.37	75	220	4000	9.4	0.47	891/46	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ M1	
16.98	85	220	3740	9.6	0.51	1953/115	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ L1	
15.41	94	220	3560	9.7	0.67	2835/184	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ K1	
14.50	100	220	3450	9.7	0.78	5670/391	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ J1	
12.78	113	220	3220	9.7	0.92	294/23	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ H1	
11.09	131	220	2990	9.8	1.24	5103/460	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ G1	
10.04	144	184	2880	14.7	0.55	231/23	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ F1	
8.81	165	183	2790	15.1	0.62	3038/345	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ E1	
7.99	181	175	2810	15.3	0.80	735/92	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ D1	
7.52	193	171	2810	15.3	0.92	2940/391	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ C1	
6.63	219	161	2820	15.3	1.11	1372/207	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ B1	
5.75	252	150	2810	15.4	1.49	1323/230	✓	✓	✓	✓	✓	✓					2KJ3504 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version



**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>K.49</b>																		
<b>200.25</b>	7.2	420	7820	6.7	0.06	12616/63	✓	✓								2KJ3505 - ■■■■■■ - ■■ J2		
<b>178.06</b>	8.1	420	7820	6.8	0.07	6232/35	✓	✓	✓	✓						2KJ3505 - ■■■■■■ - ■■ H2		
<b>156.34</b>	9.3	420	7820	6.8	0.08	5472/35	✓	✓	✓	✓						2KJ3505 - ■■■■■■ - ■■ G2		
<b>142.13</b>	10	420	7820	6.8	0.10	10944/77	✓	✓	✓	✓						2KJ3505 - ■■■■■■ - ■■ F2		
<b>121.60</b>	12	420	7820	6.8	0.12	608/5	✓	✓	✓	✓						2KJ3505 - ■■■■■■ - ■■ E2		
<b>110.55</b>	13	420	7820	6.8	0.14	1216/11	✓	✓	✓	✓						2KJ3505 - ■■■■■■ - ■■ D2		
<b>97.71</b>	15	420	7710	6.8	0.17	684/7	✓	✓	✓	✓	✓	✓				2KJ3505 - ■■■■■■ - ■■ C2		
<b>88.83</b>	16	420	7370	6.8	0.22	6840/77	✓	✓	✓	✓	✓	✓				2KJ3505 - ■■■■■■ - ■■ B2		
<b>77.81</b>	19	420	6910	6.9	0.25	1634/21	✓	✓	✓	✓	✓	✓				2KJ3505 - ■■■■■■ - ■■ A2		
<b>71.82</b>	20	420	6640	6.9	0.30	6536/91	✓	✓	✓	✓	✓	✓				2KJ3505 - ■■■■■■ - ■■ X1		
<b>63.59</b>	23	420	6250	6.9	0.37	3116/49	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ W1		
<b>52.93</b>	27	420	5680	7.0	0.50	741/14	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ V1		
<b>49.82</b>	29	420	5500	7.0	0.58	5928/119	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ U1		
<b>44.63</b>	32	420	5190	7.0	0.65	2812/63	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ T1		
<b>38.00</b>	38	420	4740	7.1	0.84	38/1	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ S1		
<b>32.57</b>	45	420	4340	7.1	1.11	228/7			✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ R1		
<b>28.05</b>	52	420	3970	7.2	1.43	589/21			✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ Q1		
<b>26.30</b>	55	420	3820	8.6	0.52	55040/2093	✓	✓	✓	✓	✓	✓				2KJ3505 - ■■■■■■ - ■■ P1		
<b>23.28</b>	62	420	3540	8.7	0.65	26240/1127	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ N1		
<b>19.38</b>	75	420	3130	8.8	0.90	3120/161	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ M1		
<b>18.24</b>	79	420	3000	8.8	1.03	49920/2737	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ L1		
<b>16.34</b>	89	420	2780	9.0	1.21	23680/1449	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ K1		
<b>13.91</b>	104	420	2880	9.1	1.62	320/23	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ J1		
<b>11.93</b>	122	420	3000	9.3	2.20	1920/161			✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ H1		
<b>10.27</b>	141	415	3080	9.5	2.90	4960/483			✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ G1		
<b>9.75</b>	149	275	2960	14.2	1.03	39/4	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ F1		
<b>9.18</b>	158	270	2980	14.2	1.19	156/17	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ E1		
<b>8.22</b>	176	255	3010	14.5	1.40	74/9	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ D1		
<b>7.00</b>	207	240	3030	14.8	1.88	7/1	✓	✓	✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ C1		
<b>6.00</b>	242	225	3020	15.2	2.50	6/1			✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ B1		
<b>5.17</b>	280	210	2990	15.4	3.30	31/6			✓	✓	✓	✓	✓			2KJ3505 - ■■■■■■ - ■■ A1		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Bevel geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub> -	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>K.69</b>																		
196.59	7.4	600	10800	6.4	0.17	14744/75	✓	✓	✓	✓							2KJ3507 - ■■■■■■ - ■■ H2	
178.72	8.1	600	10800	6.4	0.20	29488/165	✓	✓	✓	✓							2KJ3507 - ■■■■■■ - ■■ G2	
152.00	9.5	600	10800	6.4	0.25	152/1	✓	✓	✓	✓							2KJ3507 - ■■■■■■ - ■■ F2	
138.18	10	600	10800	6.4	0.30	1520/11	✓	✓	✓	✓							2KJ3507 - ■■■■■■ - ■■ E2	
123.29	12	600	10800	6.4	0.35	5548/45	✓	✓	✓	✓	✓	✓					2KJ3507 - ■■■■■■ - ■■ D2	
110.55	13	600	10800	6.4	0.42	1216/11	✓	✓	✓	✓	✓	✓					2KJ3507 - ■■■■■■ - ■■ C2	
99.64	15	600	10800	6.4	0.49	4484/45	✓	✓	✓	✓	✓	✓					2KJ3507 - ■■■■■■ - ■■ B2	
91.98	16	600	10600	6.4	0.58	17936/195	✓	✓	✓	✓	✓	✓					2KJ3507 - ■■■■■■ - ■■ A2	
83.96	17	600	10100	6.4	0.69	8816/105	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ X1	
69.67	21	600	9300	6.5	0.87	209/3	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ W1	
65.57	22	600	9030	6.5	1.01	3344/51	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ V1	
61.93	23	600	8770	6.5	1.15	1672/27	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ U1	
52.69	28	600	8090	6.5	1.40	3952/75	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ T1	
45.14	32	600	7470	6.5	1.70	7448/165			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ S1	
39.69	37	600	6980	6.5	2.10	1786/45			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ R1	
33.48	43	580	6500	6.5	2.60	11552/345			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ Q1	
29.18	50	555	6200	6.5	3.50	3648/125			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ P1	
26.05	56	600	5500	7.8	1.25	3751/144	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ N1	
24.52	59	595	5340	7.8	1.44	3751/153	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ M1	
23.15	63	585	5230	7.8	1.63	3751/162	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ L1	
19.70	74	555	4950	8.0	2.10	4433/225	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ K1	
16.88	86	530	4680	8.0	2.60	1519/90			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ J1	
14.84	98	515	4430	8.0	3.30	16027/1080			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ H1	
12.52	116	490	4170	8.0	4.30	12958/1035			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ G1	
10.91	133	470	3960	8.0	5.70	1364/125			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ F1	
9.34	155	370	3640	13.0	2.40	3224/345	✓	✓	✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ E1	
8.01	181	365	3330	13.0	3.10	6076/759			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ D1	
7.04	206	365	3210	13.0	3.90	1457/207			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ C1	
5.94	244	345	3350	13.0	5.10	9424/1587			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ B1	
5.18	280	330	3420	13.0	6.80	2976/575			✓	✓	✓	✓	✓				2KJ3507 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>P</i> <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>K.79</b>																	
<b>244.25</b>	5.9	820	13900	5.7	0.17	175861/720	✓	✓	✓	✓							2KJ3508 - ■■■■■■ - ■■ J2
<b>222.05</b>	6.5	820	13900	5.7	0.20	175861/792	✓	✓	✓	✓							2KJ3508 - ■■■■■■ - ■■ H2
<b>188.85</b>	7.7	820	13900	5.7	0.25	9065/48	✓	✓	✓	✓							2KJ3508 - ■■■■■■ - ■■ G2
<b>171.69</b>	8.4	820	13900	5.7	0.31	45325/264	✓	✓	✓	✓							2KJ3508 - ■■■■■■ - ■■ F2
<b>153.18</b>	9.5	820	13900	5.8	0.35	132349/864	✓	✓	✓	✓	✓	✓					2KJ3508 - ■■■■■■ - ■■ E2
<b>137.35</b>	11	820	13900	5.8	0.42	9065/66	✓	✓	✓	✓	✓	✓					2KJ3508 - ■■■■■■ - ■■ D2
<b>123.80</b>	12	820	13900	5.8	0.50	106967/864	✓	✓	✓	✓	✓	✓					2KJ3508 - ■■■■■■ - ■■ C2
<b>114.28</b>	13	820	13900	5.8	0.59	106967/936	✓	✓	✓	✓	✓	✓					2KJ3508 - ■■■■■■ - ■■ B2
<b>104.32</b>	14	820	13900	5.8	0.70	7511/72	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ A2
<b>86.56</b>	17	820	13900	5.8	0.89	99715/1152	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ X1
<b>81.47</b>	18	820	13900	5.8	1.02	99715/1224	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ W1
<b>76.94</b>	19	820	13900	5.8	1.16	99715/1296	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ V1
<b>65.47</b>	22	820	13900	5.9	1.42	23569/360	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ U1
<b>56.08</b>	26	820	13900	5.9	1.73	88837/1584			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ T1
<b>49.31</b>	29	820	13900	5.9	2.10	85211/1728			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ S1
<b>41.60</b>	35	800	14000	6.0	2.70	34447/828			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ R1
<b>36.26</b>	40	770	14000	6.1	3.60	1813/50			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ Q1
<b>32.78</b>	44	820	13900	7.2	0.94	6293/192	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ P1
<b>27.20</b>	53	800	14000	7.3	1.23	83545/3072	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ N1
<b>25.60</b>	57	785	14000	7.3	1.41	83545/3264	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ M1
<b>24.17</b>	60	770	14000	7.3	1.60	83545/3456	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ L1
<b>20.57</b>	70	740	14100	7.4	2.00	19747/960	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ K1
<b>17.62</b>	82	715	13800	7.5	2.60	74431/4224			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ J1
<b>15.49</b>	94	695	13300	7.6	3.20	71393/4608			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ H1
<b>13.07</b>	111	665	12600	7.8	4.20	28861/2208			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ G1
<b>11.39</b>	127	645	12000	8.3	5.50	4557/400			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ F1
<b>10.51</b>	138	445	12600	10.4	2.30	1209/115	✓	✓	✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ E1
<b>9.01</b>	161	450	11900	10.6	3.00	4557/506			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ D1
<b>7.92</b>	183	450	11300	10.8	3.70	1457/184			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ C1
<b>6.68</b>	217	455	10900	11.1	4.90	3534/529			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ B1
<b>5.82</b>	249	430	10700	12.1	6.60	3348/575			✓	✓	✓	✓	✓				2KJ3508 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Bevel geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>K.89</b>																	
<b>231.80</b>	6.3	1600	18100	5.6	0.42	10199/44	✓	✓	✓								2KJ3510 - ■■■■■■ - ■■ K2
<b>210.72</b>	6.9	1600	18100	5.6	0.51	50995/242	✓	✓	✓								2KJ3510 - ■■■■■■ - ■■ J2
<b>189.01</b>	7.7	1600	18100	5.6	0.71	149695/792	✓	✓	✓	✓	✓						2KJ3510 - ■■■■■■ - ■■ H2
<b>169.94</b>	8.5	1600	18100	5.6	0.80	41125/242	✓	✓	✓	✓	✓						2KJ3510 - ■■■■■■ - ■■ G2
<b>153.70</b>	9.4	1600	18100	5.6	0.88	60865/396	✓	✓	✓	✓	✓						2KJ3510 - ■■■■■■ - ■■ F2
<b>141.88</b>	10	1600	18100	5.6	1.05	60865/429	✓	✓	✓	✓	✓						2KJ3510 - ■■■■■■ - ■■ E2
<b>129.96</b>	11	1600	18100	5.6	1.37	17155/132	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ D2
<b>109.04</b>	13	1600	18100	5.6	1.45	57575/528	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ C2
<b>102.63</b>	14	1600	18100	5.6	1.66	57575/561	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ B2
<b>94.16</b>	15	1600	18100	5.6	1.81	27965/297	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ A2
<b>82.25</b>	18	1600	18100	5.6	2.60	329/4	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ X1
<b>73.64</b>	20	1600	18100	5.6	3.20	106925/1452		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ W1
<b>64.39</b>	23	1600	18100	5.6	3.70	50995/792		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ V1
<b>55.27</b>	26	1600	18100	5.6	4.10	27965/506		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ U1
<b>48.85</b>	30	1600	18100	5.6	5.20	16121/330		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ T1
<b>41.54</b>	35	1570	18100	5.6	6.60	8225/198			✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ S1
<b>39.29</b>	37	1600	18100	7.0	1.86	11315/288	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ R1
<b>32.96</b>	44	1600	18100	7.0	2.10	37975/1152	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ Q1
<b>31.03</b>	47	1600	18100	7.0	2.40	37975/1224	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ P1
<b>28.46</b>	51	1600	18100	7.0	2.70	18445/648	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ N1
<b>24.86</b>	58	1600	18100	7.1	3.80	2387/96	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ M1
<b>22.26</b>	65	1600	18100	7.1	4.70	70525/3168		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ L1
<b>19.46</b>	75	1560	17900	7.1	5.70	33635/1728		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ K1
<b>16.71</b>	87	1480	17200	7.1	6.80	18445/1104		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ J1
<b>14.77</b>	98	1420	16600	7.1	8.60	10633/720		✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ H1
<b>12.56</b>	115	1330	16300	7.1	11.00	5425/432			✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ G1
<b>10.76</b>	135	1250	16100	7.1	15.00	775/72			✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ F1
<b>10.51</b>	138	845	16100	10.8	6.40	6727/640	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ E1
<b>9.02</b>	161	800	15400	10.8	7.70	33201/3680	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ D1
<b>7.97</b>	182	770	14800	10.8	9.80	31899/4000	✓	✓	✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ C1
<b>6.78</b>	214	720	14500	10.8	13.00	217/32			✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ B1
<b>5.81</b>	250	675	14200	10.8	17.00	93/16			✓	✓	✓	✓	✓				2KJ3510 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\varphi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>K.109</b>																	
<b>216.65</b>	6.7	2900	24500	5.6	1.27	107242/495			✓	✓	✓	✓					2KJ3511 - ■■■■■■ - ■■ H2
<b>195.60</b>	7.4	2900	24500	5.6	1.37	118336/605			✓	✓	✓	✓					2KJ3511 - ■■■■■■ - ■■ G2
<b>177.43</b>	8.2	2900	24500	5.6	1.61	35131/198			✓	✓	✓	✓					2KJ3511 - ■■■■■■ - ■■ F2
<b>163.78</b>	8.9	2900	24500	5.6	1.9	70262/429			✓	✓	✓	✓					2KJ3511 - ■■■■■■ - ■■ E2
<b>148.88</b>	9.7	2900	24500	5.6	2.2	57319/385			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ D2
<b>126.07</b>	12	2900	24500	5.6	2.6	5547/44			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ C2
<b>118.65</b>	12	2900	24500	5.6	2.6	22188/187			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ B2
<b>109.57</b>	13	2900	24500	5.6	4.1	14792/135			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ A2
<b>97.49</b>	15	2900	24500	5.6	5.0	53621/550			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ X1
<b>86.59</b>	17	2900	24500	5.7	6.0	31433/363			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ W1
<b>77.51</b>	19	2900	24500	5.7	5.9	153467/1980			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ V1
<b>66.26</b>	22	2900	24500	5.7	6.8	251464/3795			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ U1
<b>59.17</b>	25	2900	24500	5.8	8.6	7396/125			✓	✓	✓	✓	✓	✓	✓		2KJ3511 - ■■■■■■ - ■■ T1
<b>52.29</b>	28	2900	24500	5.8	9.7	25886/495				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ S1
<b>45.89</b>	32	2900	24500	5.8	14	159014/3465				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ R1
<b>39.95</b>	36	2820	23900	5.8	17	151618/3795				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ Q1
<b>34.15</b>	42	2710	22700	5.8	21	118336/3465				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ P1
<b>29.23</b>	50	2620	21500	5.8	27	7396/253				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ N1
<b>24.98</b>	58	2380	21000	6.9	9.9	163744/6555			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ M1
<b>22.31</b>	65	2380	20000	7.1	13	52976/2375			✓	✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ L1
<b>19.71</b>	74	2380	18900	7.1	15	16856/855				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ K1
<b>17.30</b>	84	2400	17800	7.1	20	14792/855				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ J1
<b>15.06</b>	96	2310	17500	7.1	25	98728/6555				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ H1
<b>12.87</b>	113	2200	17500	7.1	33	11008/855				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ G1
<b>11.02</b>	132	2100	17400	7.2	43	4816/437				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ F1
<b>10.45</b>	139	1260	17600	10.8	17	784/75				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ E1
<b>9.17</b>	158	1270	16700	10.8	23	688/75				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ D1
<b>7.99</b>	181	1280	16300	10.8	29	4592/575				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ C1
<b>6.83</b>	212	1300	16000	10.8	38	512/75				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ B1
<b>5.84</b>	248	1300	15700	11.0	49	672/115				✓	✓	✓	✓	✓			2KJ3511 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

## Bevel geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub>	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>K.129</b>																	
<b>228.30</b>	6.4	4400	37600	6.3	3.3	30821/135			✓	✓	✓						2KJ3512 - ■■■■■■ - ■■ J2
<b>210.74</b>	6.9	4400	37600	6.3	3.9	123284/585			✓	✓	✓						2KJ3512 - ■■■■■■ - ■■ H2
<b>194.04</b>	7.5	4400	37600	6.3	4.5	8732/45			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ G2
<b>165.47</b>	8.8	4400	37600	6.3	5.6	5957/36			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ F2
<b>155.74</b>	9.3	4400	37600	6.3	6.4	23828/153			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ E2
<b>144.53</b>	10	4400	37600	6.3	7.0	58534/405			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ D2
<b>127.77</b>	11	4400	37600	6.3	8.4	9583/75			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ C2
<b>114.06</b>	13	4400	37600	6.3	10	56462/495			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ B2
<b>102.64</b>	14	4400	37600	6.3	12	27713/270			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ A2
<b>89.09</b>	16	4400	37600	6.3	14	92204/1035			✓	✓	✓	✓	✓				2KJ3512 - ■■■■■■ - ■■ X1
<b>80.12</b>	18	4400	37600	6.3	17	30044/375			✓	✓	✓	✓	✓	✓			2KJ3512 - ■■■■■■ - ■■ W1
<b>70.03</b>	21	4400	37600	6.3	19	18907/270			✓	✓	✓	✓	✓	✓			2KJ3512 - ■■■■■■ - ■■ V1
<b>62.49</b>	23	4400	36200	6.4	23	2812/45			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ U1
<b>55.05</b>	26	4400	34300	6.4	27	11396/207			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ T1
<b>48.24</b>	30	4400	32400	6.4	33	6512/135			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ S1
<b>42.04</b>	34	4400	30500	6.4	39	14504/345			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ R1
<b>38.37</b>	38	4400	29200	6.9	45	1036/27			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ Q1
<b>33.03</b>	44	4400	27300	7.0	55	11396/345					✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ P1
<b>31.55</b>	46	4400	26700	7.0	23	3944/125			✓	✓	✓	✓	✓	✓			2KJ3512 - ■■■■■■ - ■■ N1
<b>27.58</b>	53	4400	25000	7.0	27	1241/45			✓	✓	✓	✓	✓	✓			2KJ3512 - ■■■■■■ - ■■ M1
<b>24.61</b>	59	4400	23700	7.1	33	2584/105			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ L1
<b>21.68</b>	67	4270	22700	7.1	40	1496/69			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ K1
<b>19.00</b>	76	4140	21700	7.1	50	5984/315			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ J1
<b>16.56</b>	88	4020	20600	7.2	62	1904/115			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ H1
<b>15.11</b>	96	3940	20000	7.2	72	136/9			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ G1
<b>13.01</b>	111	3810	19000	7.2	91	1496/115					✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ F1
<b>11.80</b>	123	2830	21400	9.5	46	119680/10143			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ E1
<b>10.34</b>	140	2850	20100	9.6	57	95744/9261			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ D1
<b>9.01</b>	161	2760	19500	9.7	71	4352/483			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ C1
<b>8.22</b>	176	2680	19500	9.8	83	10880/1323			✓	✓	✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ B1
<b>7.08</b>	205	2530	19500	9.9	107	23936/3381					✓	✓	✓	✓	✓		2KJ3512 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	φ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	225	
<b>K.149</b>																		
<b>237.03</b>	6.1	8000	65000	5.3	7.1	83433/352				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ J2
<b>202.86</b>	7.1	8000	65000	5.3	9.0	285621/1408				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ H2
<b>190.92</b>	7.6	8000	65000	5.3	10	285621/1496				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ G2
<b>178.97</b>	8.1	8000	65000	5.3	11	188993/1056				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ F2
<b>158.65</b>	9.1	8000	65000	5.3	14	558453/3520				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ E2
<b>140.93</b>	10	8000	64100	5.3	16	17052/121				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ D2
<b>127.16</b>	11	8000	61400	5.3	19	89523/704				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ C2
<b>112.68</b>	13	8000	58400	5.3	23	456141/4048				✓	✓	✓	✓	✓				2KJ3513 - ■■■■■■ - ■■ B2
<b>99.79</b>	15	8000	55600	5.4	26	439089/4400				✓	✓	✓	✓	✓	✓			2KJ3513 - ■■■■■■ - ■■ A2
<b>88.81</b>	16	8000	52900	5.4	31	1421/16				✓	✓	✓	✓	✓	✓			2KJ3513 - ■■■■■■ - ■■ X1
<b>79.59</b>	18	8000	50400	5.4	37	14007/176				✓	✓	✓	✓	✓	✓	✓		2KJ3513 - ■■■■■■ - ■■ W1
<b>70.56</b>	21	8000	47900	5.4	43	285621/4048				✓	✓	✓	✓	✓	✓	✓		2KJ3513 - ■■■■■■ - ■■ V1
<b>62.28</b>	23	8000	45300	5.4	52	5481/88				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ U1
<b>54.76</b>	26	8000	42700	5.4	63	55419/1012				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ T1
<b>49.60</b>	29	8000	40800	5.4	70	8729/176				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ S1
<b>43.18</b>	34	8000	38200	5.4	85	174783/4048					✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ R1
<b>35.40</b>	41	7850	35100	5.5	110	80997/2288					✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ Q1
<b>32.33</b>	45	7760	33900	6.1	49	12673/392				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ P1
<b>28.66</b>	51	7630	32200	6.1	59	36917/1288				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ N1
<b>25.30</b>	57	7420	30900	6.1	73	4959/196				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ M1
<b>22.25</b>	65	7210	29500	6.2	89	7163/322				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ L1
<b>20.15</b>	72	7070	28400	6.2	103	23693/1176				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ K1
<b>17.54</b>	83	6890	28500	6.3	128	22591/1288					✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ J1
<b>14.38</b>	101	6660	29000	6.3	174	10469/728					✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ H1
<b>14.15</b>	102	4140	31100	8.0	79	17328/1225				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ G1
<b>12.44</b>	117	4030	29800	8.0	97	150176/12075				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ F1
<b>11.26</b>	129	3950	28800	8.1	113	124184/11025				✓	✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ E1
<b>9.81</b>	148	3850	28400	8.2	141	118408/12075					✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ D1
<b>8.04</b>	180	3720	28000	8.3	194	54872/6825					✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ C1
<b>6.82</b>	213	3630	27500	8.4	266	89528/13125					✓	✓	✓	✓	✓	✓	✓	2KJ3513 - ■■■■■■ - ■■ B1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Bevel geared motors

## Transmission ratios and torques

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size											Article No. (Article No. supplement, see below)					
							63	71	80	90	100	112	132	160	180	200	225		250				
<b>K.169</b>																							
<b>223.30</b>	6.5	13000	70000	5.2	18	273319/1224					✓	✓	✓	✓									2KJ3514 - ■■■■■■ - ■■ F2
<b>208.35</b>	7.0	13000	70000	5.2	20	135013/648					✓	✓	✓	✓									2KJ3514 - ■■■■■■ - ■■ E2
<b>185.23</b>	7.8	13000	70000	5.2	24	29637/160					✓	✓	✓	✓									2KJ3514 - ■■■■■■ - ■■ D2
<b>166.31</b>	8.7	13000	70000	5.2	28	16465/99					✓	✓	✓	✓									2KJ3514 - ■■■■■■ - ■■ C2
<b>150.55</b>	9.6	13000	70000	5.2	33	260147/1728					✓	✓	✓	✓									2KJ3514 - ■■■■■■ - ■■ B2
<b>132.24</b>	11	13000	70000	5.2	40	437969/3312					✓	✓	✓	✓									2KJ3514 - ■■■■■■ - ■■ A2
<b>119.83</b>	12	13000	70000	5.2	47	431383/3600					✓	✓	✓	✓	✓								2KJ3514 - ■■■■■■ - ■■ X1
<b>106.72</b>	14	13000	70000	5.2	54	23051/216					✓	✓	✓	✓	✓	✓							2KJ3514 - ■■■■■■ - ■■ W1
<b>95.83</b>	15	13000	70000	5.2	65	36223/378					✓	✓	✓	✓	✓	✓	✓						2KJ3514 - ■■■■■■ - ■■ V1
<b>85.51</b>	17	13000	70000	5.2	75	141599/1656					✓	✓	✓	✓	✓	✓	✓	✓					2KJ3514 - ■■■■■■ - ■■ U1
<b>76.23</b>	19	13000	70000	5.2	88	16465/216					✓	✓	✓	✓	✓	✓	✓	✓	✓				2KJ3514 - ■■■■■■ - ■■ T1
<b>67.61</b>	21	13000	66900	5.3	103	55981/828					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ S1
<b>62.07</b>	23	13000	64500	5.3	114	62567/1008					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ R1
<b>54.68</b>	27	13000	60900	5.3	134	181115/3312						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ Q1
<b>44.86</b>	32	13000	55700	5.3	180	55981/1248						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ P1
<b>39.33</b>	37	13000	52300	5.3	198	141599/3600						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ N1
<b>30.75</b>	47	13000	46500	5.4	309	42809/1392						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ M1
<b>29.43</b>	49	13000	45500	5.8	133	25721/874					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ L1
<b>27.02</b>	54	13000	43500	5.9	151	1513/56					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ K1
<b>23.80</b>	61	13000	40800	5.9	181	83215/3496						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ J1
<b>19.53</b>	74	12700	40000	6.0	249	77163/3952						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ H1
<b>17.12</b>	85	12400	40800	6.0	288	65059/3800						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ G1
<b>13.39</b>	108	11900	41300	6.2	457	59007/4408						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ F1
<b>12.20</b>	119	6760	38700	8.1	202	143990/11799						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ E1
<b>10.01</b>	145	6530	37800	8.3	280	22253/2223						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ D1
<b>8.78</b>	165	6360	37800	8.3	328	112574/12825						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ C1
<b>6.86</b>	211	6130	37300	8.8	523	34034/4959						✓	✓	✓	✓	✓	✓	✓	✓	✓			2KJ3514 - ■■■■■■ - ■■ B1

## Article No. supplement

Shaft design **1 or 9** [see page 10/51](#)Motor frame size, motor type, efficiency class [see chapter 9](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F, H, C or D** [see page 10/42](#)<sup>1)</sup> Only in conjunction with reduced-backlash version



## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub> -	Motor frame size										Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	180	200	
<b>K.189</b>																	
<b>199.51</b>	7.3	19100	104000	4.8	37	186543/935					✓	✓	✓				2KJ3515 - ■■■■■■ - ■■ W1
<b>178.49</b>	8.1	19500	104000	4.8	43	367164/2057					✓	✓	✓				2KJ3515 - ■■■■■■ - ■■ V1
<b>160.98</b>	9	19500	104000	4.8	50	60207/374					✓	✓	✓				2KJ3515 - ■■■■■■ - ■■ U1
<b>142.28</b>	10	19500	104000	4.8	62	611940/4301					✓	✓	✓				2KJ3515 - ■■■■■■ - ■■ T1
<b>130.05</b>	11	19500	104000	4.8	73	55272/425					✓	✓	✓	✓			2KJ3515 - ■■■■■■ - ■■ S1
<b>117.00</b>	12	19500	104000	4.8	86	43757/374					✓	✓	✓	✓	✓		2KJ3515 - ■■■■■■ - ■■ R1
<b>104.56</b>	14	19500	104000	4.8	100	19552/187					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ Q1
<b>94.55</b>	15	19500	104000	4.8	119	406644/4301					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ P1
<b>83.44</b>	17	19500	104000	4.8	140	15604/187					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ N1
<b>74.35</b>	20	19500	104000	4.8	164	319788/4301					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ M1
<b>67.36</b>	22	19500	104000	4.8	182	12596/187					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ L1
<b>60.58</b>	24	19500	104000	4.8	220	23688/391					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ K1
<b>50.34</b>	29	19500	104000	4.8	273	122388/2431					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ J1
<b>44.76</b>	32	19500	99100	4.8	334	209244/4675					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ H1
<b>35.67</b>	41	19500	89900	4.9	455	193452/5423					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ G1
<b>28.39</b>	51	19500	81300	5.0	586	153972/5423						✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ F1
<b>25.37</b>	57	19500	77300	5.3	335	11088/437					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ E1
<b>21.09</b>	69	19500	70900	5.4	439	5208/247					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ D1
<b>18.75</b>	77	19500	67000	5.4	545	8904/475					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ C1
<b>14.94</b>	97	19500	60000	5.6	786	8232/551					✓	✓	✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ B1
<b>11.89</b>	122	19500	61300	5.7	1109	6552/551							✓	✓	✓	✓	2KJ3515 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Bevel geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.39-Z19</b>															
3001	0.48	220	6080	-	0.02	975384/325	✓	✓						2KJ3520 - ■■■■■■ - ■■ E2	
2657	0.55	220	6080	-	0.03	4318434/1625	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ D2	
2309	0.63	220	6080	-	0.04	3752082/1625	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ C2	
2099	0.69	220	6080	-	0.05	7504164/3575	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ B2	
1786	0.81	220	6080	-	0.07	2902554/162	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ A2	
1624	0.89	220	6080	-	0.08	5805108/3575	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ X1	
1416	1.0	220	6080	-	0.09	35397/25	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ W1	
1267	1.1	220	6080	-	0.12	4530816/3575	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ V1	
1125	1.3	220	6080	-	0.15	365769/325	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ U1	
1039	1.4	220	6080	-	0.18	4389228/4225	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ T1	
902	1.6	220	6080	-	0.20	2053026/2275	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ S1	
784	1.8	220	6080	-	0.21	1274292/1625	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ R1	
708	2.0	220	6080	-	0.27	35397/50	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ Q1	
666	2.2	220	6080	-	0.32	283176/425	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ P1	
581	2.5	220	6080	-	0.36	188784/325	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ N1	
536	2.7	220	6080	-	0.19	243846/455	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ M1	
466	3.1	220	6080	-	0.22	114057/245	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ L1	
405	3.6	220	6080	-	0.23	70794/175	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ K1	
365	4.0	220	6080	-	0.29	51129/140	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ J1	
343.72	4.2	220	6080	-	0.35	204516/595	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ H1	
329.29	4.4	220	6080	-	0.32	699732/2125	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ G1	
287.07	5.1	220	6080	-	0.37	466488/1625	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ F1	
264.86	5.5	220	6080	-	0.19	602547/2275	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ E1	
230.07	6.3	220	6080	-	0.22	563673/2450	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ D1	
199.92	7.3	220	6080	-	0.23	174933/875	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ C1	
180.49	8.0	220	6080	-	0.30	252681/1400	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ B1	
169.87	8.5	220	6080	-	0.35	505362/2975	✓	✓	✓					2KJ3520 - ■■■■■■ - ■■ A1	
<b>K.39-D19</b>															
6699	0.22	220	6080	-	0.11	167640192/25025	✓	✓						2KJ3521 - ■■■■■■ - ■■ H1	
5949	0.24	220	6080	-	0.13	13533453/2275	✓	✓						2KJ3521 - ■■■■■■ - ■■ G1	
5491	0.26	220	6080	-	0.16	162401436/29575	✓	✓						2KJ3521 - ■■■■■■ - ■■ F1	
4770	0.30	220	6080	-	0.17	75961962/15925	✓	✓						2KJ3521 - ■■■■■■ - ■■ E1	
4145	0.35	220	6080	-	0.18	47148804/11375	✓	✓						2KJ3521 - ■■■■■■ - ■■ D1	
3742	0.39	220	6080	-	0.22	1309689/350	✓	✓						2KJ3521 - ■■■■■■ - ■■ C1	
3522	0.41	220	6080	-	0.26	10477512/2975	✓	✓						2KJ3521 - ■■■■■■ - ■■ B1	
3070	0.47	220	6080	-	0.29	6985008/2275	✓	✓						2KJ3521 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi$ <sup>1)</sup>	$J_G$ 10 <sup>-4</sup> kgm <sup>2</sup>	$R_{ex}$	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.49-Z19</b>															
<b>3866</b>	0.38	420	7820	-	0.02	150784/39	✓	✓							2KJ3522 - ■■■■■■ - ■■ <b>G2</b>
<b>3424</b>	0.42	420	7820	-	0.03	222528/65	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>F2</b>
<b>2975</b>	0.49	420	7820	-	0.04	193344/65	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>E2</b>
<b>2704</b>	0.54	420	7820	-	0.05	386688/143	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>D2</b>
<b>2301</b>	0.63	420	7820	-	0.07	149568/65	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>C2</b>
<b>2092</b>	0.69	420	7820	-	0.08	299136/143	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>B2</b>
<b>1824</b>	0.79	420	7820	-	0.09	1824/1	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>A2</b>
<b>1633</b>	0.89	420	7820	-	0.12	233472/143	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>W1</b>
<b>1450</b>	1.0	420	7820	-	0.15	18848/13	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>V1</b>
<b>1338</b>	1.1	420	7820	-	0.18	226176/169	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>U1</b>
<b>1163</b>	1.2	420	7820	-	0.20	105792/91	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>T1</b>
<b>1010</b>	1.4	420	7820	-	0.21	65664/65	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>S1</b>
<b>912</b>	1.6	420	7820	-	0.27	912/1	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>R1</b>
<b>858</b>	1.7	420	7820	-	0.32	14592/17	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>Q1</b>
<b>748</b>	1.9	420	7820	-	0.36	9728/13	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>P1</b>
<b>690</b>	2.1	420	7820	-	0.19	188480/273	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>N1</b>
<b>600</b>	2.4	420	7820	-	0.22	88160/147	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>M1</b>
<b>521</b>	2.8	420	7820	-	0.23	3648/7	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>L1</b>
<b>470</b>	3.1	420	7820	-	0.30	9880/21	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>K1</b>
<b>443</b>	3.3	420	7820	-	0.35	158080/357	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>J1</b>
<b>437</b>	3.3	420	7820	-	0.27	24453/56	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>H1</b>
<b>411</b>	3.5	420	7820	-	0.32	48906/119	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>G1</b>
<b>358</b>	4.1	420	7820	-	0.37	2508/7	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>F1</b>
<b>330.56</b>	4.4	420	7820	-	0.20	32395/98	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>E1</b>
<b>287.15</b>	5.0	420	7820	-	0.23	393965/1372	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>D1</b>
<b>249.52</b>	5.8	420	7820	-	0.24	24453/98	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>C1</b>
<b>225.26</b>	6.4	420	7820	-	0.31	176605/784	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>B1</b>
<b>212.01</b>	6.8	420	7820	-	0.37	176605/833	✓	✓	✓						2KJ3522 - ■■■■■■ - ■■ <b>A1</b>
<b>K.49-D19</b>															
<b>9641</b>	0.15	420	7820	-	0.08	67488/7	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>J1</b>
<b>8630</b>	0.17	420	7820	-	0.11	8638464/1001	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>H1</b>
<b>7663</b>	0.19	420	7820	-	0.13	697376/91	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>G1</b>
<b>7074</b>	0.20	420	7820	-	0.16	8368512/1183	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>F1</b>
<b>6145</b>	0.24	420	7820	-	0.17	3914304/637	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>E1</b>
<b>5340</b>	0.27	420	7820	-	0.18	2429568/455	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>D1</b>
<b>4821</b>	0.30	420	7820	-	0.22	33744/7	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>C1</b>
<b>4537</b>	0.32	420	7820	-	0.26	539904/119	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>B1</b>
<b>3955</b>	0.37	420	7820	-	0.29	359936/91	✓	✓							2KJ3523 - ■■■■■■ - ■■ <b>A1</b>

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

1) Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Bevel geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.69-Z19</b>															
3866	0.38	600	10800	-	0.02	150784/39	✓	✓						2KJ3524 - ■■■■■■ - ■■ F2	
3424	0.42	600	10800	-	0.03	222528/65	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ E2	
2975	0.49	600	10800	-	0.04	193344/65	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ D2	
2704	0.54	600	10800	-	0.05	386688/143	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ C2	
2301	0.63	600	10800	-	0.07	149568/65	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ B2	
2092	0.69	600	10800	-	0.08	299136/143	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ A2	
1824	0.79	600	10800	-	0.10	1824/1	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ W1	
1633	0.89	600	10800	-	0.13	233472/143	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ V1	
1450	1.0	600	10800	-	0.15	18848/13	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ U1	
1338	1.1	600	10800	-	0.18	226176/169	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ T1	
1163	1.2	600	10800	-	0.21	105792/91	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ S1	
1010	1.4	600	10800	-	0.21	65664/65	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ R1	
912	1.6	600	10800	-	0.27	912/1	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ Q1	
858	1.7	600	10800	-	0.32	14592/17	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ P1	
748	1.9	600	10800	-	0.37	9728/13	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ N1	
690	2.1	600	10800	-	0.20	188480/273	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ M1	
600	2.4	600	10800	-	0.23	88160/147	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ L1	
521	2.8	600	10800	-	0.24	3648/7	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ K1	
470	3.1	600	10800	-	0.31	9880/21	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ J1	
443	3.3	600	10800	-	0.37	158080/357	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ H1	
419	3.5	600	10800	-	0.38	147136/351	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ G1	
387	3.7	600	10800	-	0.22	2850760/7371	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ F1	
335.96	4.3	600	10800	-	0.25	1333420/3969	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ E1	
291.94	5.0	600	10800	-	0.27	18392/63	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ D1	
263.55	5.5	600	10800	-	0.35	149435/567	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ C1	
248.05	5.8	600	10800	-	0.41	2390960/9639	✓	✓	✓					2KJ3524 - ■■■■■■ - ■■ B1	
216.25	6.7	600	10800	-	0.48	367840/1701			✓					2KJ3524 - ■■■■■■ - ■■ A1	
<b>K.69-D19</b>															
9641	0.15	600	10800	-	0.08	67488/7	✓	✓						2KJ3525 - ■■■■■■ - ■■ J1	
8630	0.17	600	10800	-	0.11	8638464/1001	✓	✓						2KJ3525 - ■■■■■■ - ■■ H1	
7663	0.19	600	10800	-	0.13	697376/91	✓	✓						2KJ3525 - ■■■■■■ - ■■ G1	
7074	0.20	600	10800	-	0.16	8368512/1183	✓	✓						2KJ3525 - ■■■■■■ - ■■ F1	
6145	0.24	600	10800	-	0.17	3914304/637	✓	✓						2KJ3525 - ■■■■■■ - ■■ E1	
5340	0.27	600	10800	-	0.18	2429568/455	✓	✓						2KJ3525 - ■■■■■■ - ■■ D1	
4821	0.30	600	10800	-	0.22	33744/7	✓	✓						2KJ3525 - ■■■■■■ - ■■ C1	
4537	0.32	600	10800	-	0.26	539904/119	✓	✓						2KJ3525 - ■■■■■■ - ■■ B1	
3955	0.37	600	10800	-	0.29	359936/91	✓	✓						2KJ3525 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi$ <sup>1)</sup>	$J_G$ 10 <sup>-4</sup> kgm <sup>2</sup>	$R_{ex}$	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.79-Z19</b>															
<b>4804</b>	0.30	820	13900	-	0.02	562030/117	✓	✓						2KJ3526 - ■■■■■■ - ■■ F2	
<b>4254</b>	0.34	820	13900	-	0.03	110593/26	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ E2	
<b>3696</b>	0.39	820	13900	-	0.04	96089/26	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ D2	
<b>3360</b>	0.43	820	13900	-	0.05	480445/143	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ C2	
<b>2859</b>	0.51	820	13900	-	0.07	74333/26	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ B2	
<b>2599</b>	0.56	820	13900	-	0.08	371665/143	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ A2	
<b>2266</b>	0.64	820	13900	-	0.10	9065/4	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ W1	
<b>2029</b>	0.71	820	13900	-	0.13	290080/143	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ V1	
<b>1801</b>	0.81	820	13900	-	0.15	281015/156	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ U1	
<b>1663</b>	0.87	820	13900	-	0.18	281015/169	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ T1	
<b>1444</b>	1.0	820	13900	-	0.21	37555/26	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ S1	
<b>1255</b>	1.2	820	13900	-	0.21	16317/13	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ R1	
<b>1133</b>	1.3	820	13900	-	0.27	9065/8	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ Q1	
<b>1066</b>	1.4	820	13900	-	0.32	18130/17	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ P1	
<b>930</b>	1.6	820	13900	-	0.37	36260/39	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ N1	
<b>858</b>	1.7	820	13900	-	0.20	200725/234	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ M1	
<b>745</b>	1.9	820	13900	-	0.23	26825/36	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ L1	
<b>648</b>	2.2	820	13900	-	0.24	1295/2	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ K1	
<b>585</b>	2.5	820	13900	-	0.31	84175/144	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ J1	
<b>550</b>	2.6	820	13900	-	0.37	84175/153	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ H1	
<b>521</b>	2.8	820	13900	-	0.38	1096865/2106	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ G1	
<b>481</b>	3.0	820	13900	-	0.22	24287725/50544	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ F1	
<b>417</b>	3.5	820	13900	-	0.25	3245825/7776	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ E1	
<b>363</b>	4.0	820	13900	-	0.27	156695/432	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ D1	
<b>327.46</b>	4.4	820	13900	-	0.35	10185175/31104	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ C1	
<b>308.19</b>	4.7	820	13900	-	0.41	10185175/33048	✓	✓	✓					2KJ3526 - ■■■■■■ - ■■ B1	
<b>268.68</b>	5.4	820	13900	-	0.48	783475/2916			✓					2KJ3526 - ■■■■■■ - ■■ A1	
<b>K.79-D19</b>															
<b>9522</b>	0.15	820	13900	-	0.13	1485365/156	✓	✓						2KJ3527 - ■■■■■■ - ■■ G1	
<b>8789</b>	0.16	820	13900	-	0.16	1485365/169	✓	✓						2KJ3527 - ■■■■■■ - ■■ F1	
<b>7635</b>	0.19	820	13900	-	0.17	198505/26	✓	✓						2KJ3527 - ■■■■■■ - ■■ E1	
<b>6634</b>	0.22	820	13900	-	0.18	86247/13	✓	✓						2KJ3527 - ■■■■■■ - ■■ D1	
<b>5989</b>	0.24	820	13900	-	0.22	47915/8	✓	✓						2KJ3527 - ■■■■■■ - ■■ C1	
<b>5637</b>	0.26	820	13900	-	0.26	95830/17	✓	✓						2KJ3527 - ■■■■■■ - ■■ B1	
<b>4914</b>	0.30	820	13900	-	0.29	191660/39	✓	✓						2KJ3527 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 10/49
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H, C or D</b>	see page 10/42

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Bevel geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.89-Z39</b>															
6101	0.24	1600	18100	-	0.06	86972795/14256	✓	✓						2KJ3528 - ■■■■■■ - ■■ F2	
5425	0.27	1600	18100	-	0.07	8592493/1584	✓	✓	✓	✓				2KJ3528 - ■■■■■■ - ■■ E2	
4763	0.30	1600	18100	-	0.08	209573/44	✓	✓	✓	✓				2KJ3528 - ■■■■■■ - ■■ D2	
4330	0.33	1600	18100	-	0.10	1047865/242	✓	✓	✓	✓				2KJ3528 - ■■■■■■ - ■■ C2	
3705	0.39	1600	18100	-	0.12	1467011/396	✓	✓	✓	✓				2KJ3528 - ■■■■■■ - ■■ B2	
3368	0.43	1600	18100	-	0.14	7335055/2178	✓	✓	✓	✓				2KJ3528 - ■■■■■■ - ■■ A2	
2977	0.49	1600	18100	-	0.17	1047865/352	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ W1	
2706	0.54	1600	18100	-	0.22	5239325/1936	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ V1	
2370	0.61	1600	18100	-	0.26	45058195/19008	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ U1	
2188	0.66	1600	18100	-	0.31	3466015/1584	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ T1	
1937	0.75	1600	18100	-	0.36	6137495/3168	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ S1	
1612	0.90	1600	18100	-	0.48	13622245/8448	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ R1	
1518	0.96	1600	18100	-	0.56	13622245/8976	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ Q1	
1360	1.1	1600	18100	-	0.61	38771005/28512	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ P1	
1158	1.3	1600	18100	-	0.79	7335055/6336	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ N1	
992	1.5	1600	18100	-	1.04	1047865/1056			✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ M1	
854	1.7	1600	18100	-	1.32	32483815/38016			✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ L1	
705	2.1	1600	18100	-	0.61	45656975/64768	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ K1	
663	2.2	1600	18100	-	0.70	45656975/68816	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ J1	
594	2.4	1600	18100	-	0.79	129946775/218592	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ H1	
506	2.9	1600	18100	-	1.04	24584525/48576	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ G1	
476	3.0	1600	18100	-	0.65	84791525/178112	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ F1	
448	3.2	1600	18100	-	0.75	84791525/189244	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ E1	
401	3.6	1600	18100	-	0.85	241329725/601128	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ D1	
341.78	4.2	1600	18100	-	1.12	45656975/133584	✓	✓	✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ C1	
292.96	4.9	1600	18100	-	1.48	6522425/22264			✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ B1	
252.27	5.7	1600	18100	-	1.92	202195175/801504			✓	✓	✓	✓		2KJ3528 - ■■■■■■ - ■■ A1	
<b>K.89-D39</b>															
9761	0.15	1600	18100	-	0.17	1577036825/161568	✓	✓	✓	✓	✓	✓		2KJ3530 - ■■■■■■ - ■■ E1	
9010	0.16	1600	18100	-	0.21	121310525/13464	✓	✓	✓	✓	✓	✓		2KJ3530 - ■■■■■■ - ■■ D1	
7888	0.18	1600	18100	-	0.25	6436885/816	✓	✓	✓	✓	✓	✓		2KJ3530 - ■■■■■■ - ■■ C1	
6916	0.21	1600	18100	-	0.23	279360809/40392	✓	✓	✓	✓	✓	✓		2KJ3530 - ■■■■■■ - ■■ B1	
6275	0.23	1600	18100	-	0.33	225290975/35904	✓	✓	✓	✓	✓	✓		2KJ3530 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	φ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.109-Z39</b>															
<b>6638</b>	0.22	2900	24500	-	0.06	55861988/8415	✓	✓							2KJ3531 - ■■■■■■ - ■■ F2
<b>5903</b>	0.25	2900	24500	-	0.07	27594476/4675	✓	✓	✓	✓					2KJ3531 - ■■■■■■ - ■■ F2
<b>5183</b>	0.28	2900	24500	-	0.08	24229296/4675	✓	✓	✓	✓					2KJ3531 - ■■■■■■ - ■■ E2
<b>4712</b>	0.31	2900	24500	-	0.10	48458592/10285	✓	✓	✓	✓					2KJ3531 - ■■■■■■ - ■■ D2
<b>4031</b>	0.36	2900	24500	-	0.12	18845008/4675	✓	✓	✓	✓					2KJ3531 - ■■■■■■ - ■■ C2
<b>3665</b>	0.40	2900	24500	-	0.14	37690016/10285	✓	✓	✓	✓					2KJ3531 - ■■■■■■ - ■■ B2
<b>3239</b>	0.45	2900	24500	-	0.17	3028662/935	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ A2
<b>2945</b>	0.49	2900	24500	-	0.23	6057324/2057	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ W1
<b>2579</b>	0.56	2900	24500	-	0.26	7235137/2805	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ V1
<b>2381</b>	0.61	2900	24500	-	0.31	2226196/935	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ U1
<b>2108</b>	0.69	2900	24500	-	0.36	1971034/935	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ T1
<b>1755</b>	0.83	2900	24500	-	0.48	6562101/3740	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ S1
<b>1651</b>	0.88	2900	24500	-	0.57	26248404/15895	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ R1
<b>1480</b>	0.98	2900	24500	-	0.62	12451166/8415	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ Q1
<b>1260</b>	1.2	2900	24500	-	0.80	1177813/935	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ P1
<b>1080</b>	1.3	2900	24500	-	1.05	1009554/935			✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ N1
<b>930</b>	1.6	2900	24500	-	1.34	5216029/5610			✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ M1
<b>767</b>	1.9	2900	24500	-	0.63	13196313/17204	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ L1
<b>722</b>	2.0	2900	24500	-	0.73	52785252/73117	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ K1
<b>647</b>	2.2	2900	24500	-	0.83	8346386/12903	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ J1
<b>551</b>	2.6	2900	24500	-	1.09	2368569/4301	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ H1
<b>519</b>	2.8	2900	24500	-	1.40	88672493/170775			✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ G1
<b>428</b>	3.4	2900	24500	-	0.73	24926369/58190	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ F1
<b>403</b>	3.6	2900	24500	-	0.84	11730056/29095	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ E1
<b>361</b>	4.0	2900	24500	-	0.97	283777124/785565	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ D1
<b>307.54</b>	4.7	2900	24500	-	1.28	26843782/87285	✓	✓	✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ C1
<b>263.61</b>	5.5	2900	24500	-	1.70	7669652/29095			✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ B1
<b>227</b>	6.4	2900	24500	-	2.20	59439803/261855			✓	✓	✓	✓			2KJ3531 - ■■■■■■ - ■■ A1
<b>K.109-D39</b>															
<b>13352</b>	0.11	2900	24500	-	0.12	57881096/4335	✓	✓	✓	✓	✓	✓			2KJ3532 - ■■■■■■ - ■■ G1
<b>11918</b>	0.12	2900	24500	-	0.15	2083719456/174845	✓	✓	✓	✓	✓	✓			2KJ3532 - ■■■■■■ - ■■ F1
<b>10621</b>	0.14	2900	24500	-	0.17	101291918/9537	✓	✓	✓	✓	✓	✓			2KJ3532 - ■■■■■■ - ■■ E1
<b>9804</b>	0.15	2900	24500	-	0.21	31166744/3179	✓	✓	✓	✓	✓	✓			2KJ3532 - ■■■■■■ - ■■ D1
<b>8583</b>	0.17	2900	24500	-	0.25	12403092/1445	✓	✓	✓	✓	✓	✓			2KJ3532 - ■■■■■■ - ■■ C1
<b>7526</b>	0.19	2900	24500	-	0.23	1794313976/238425	✓	✓	✓	✓	✓	✓			2KJ3532 - ■■■■■■ - ■■ B1
<b>6828</b>	0.21	2900	24500	-	0.33	21705411/3179	✓	✓	✓	✓	✓	✓			2KJ3532 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Bevel geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.129-Z39</b>															
5743	0.25	4400	37600	-	0.06	209316289/36450	✓	✓						2KJ3533 - ■■■■■■ - ■■ A2	
5106	0.28	4400	37600	-	0.07	103397203/20250	✓	✓	✓	✓				2KJ3533 - ■■■■■■ - ■■ X1	
4483	0.32	4400	37600	-	0.09	5043766/1125	✓	✓	✓	✓				2KJ3533 - ■■■■■■ - ■■ W1	
4076	0.36	4400	37600	-	0.11	10087532/2475	✓	✓	✓	✓				2KJ3533 - ■■■■■■ - ■■ V1	
3487	0.42	4400	37600	-	0.13	35306362/10125	✓	✓	✓	✓				2KJ3533 - ■■■■■■ - ■■ U1	
3170	0.46	4400	37600	-	0.15	70612724/22275	✓	✓	✓	✓				2KJ3533 - ■■■■■■ - ■■ T1	
2802	0.52	4400	37600	-	0.18	2521883/900	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ S1	
2547	0.57	4400	37600	-	0.24	2521883/990	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ R1	
2231	0.65	4400	37600	-	0.28	108440969/48600	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ Q1	
2060	0.70	4400	37600	-	0.33	8341613/4050	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ P1	
1824	0.79	4400	37600	-	0.39	14771029/8100	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ N1	
1518	0.96	4400	37600	-	0.53	32784479/21600	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ M1	
1429	1.0	4400	37600	-	0.61	32784479/22950	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ L1	
1280	1.1	4400	37600	-	0.68	93309671/72900	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ K1	
1090	1.3	4400	37600	-	0.88	17653181/16200	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ J1	
934	1.6	4400	37600	-	1.16	2521883/2700			✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ H1	
804	1.8	4400	37600	-	1.48	78178373/97200			✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ G1	
664	2.2	4400	37600	-	0.85	21976409/33120	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ F1	
625	2.3	4400	37600	-	0.98	21976409/35190	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ E1	
560	2.6	4400	37600	-	1.13	62548241/111780	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ D1	
476	3.0	4400	37600	-	1.51	11833451/24840	✓	✓	✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ C1	
408	3.6	4400	37600	-	2.00	1690493/4140			✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ B1	
352	4.1	4400	37600	-	2.60	52405283/149040			✓	✓	✓	✓		2KJ3533 - ■■■■■■ - ■■ A1	
<b>K.129-D39</b>															
14490	0.10	4400	40000	-	0.09	2494142287/172125	✓	✓	✓	✓				2KJ3534 - ■■■■■■ - ■■ H1	
13173	0.11	4400	40000	-	0.10	4988284574/378675	✓	✓	✓	✓				2KJ3534 - ■■■■■■ - ■■ G1	
11550	0.13	4400	40000	-	0.12	1192850659/103275	✓	✓	✓	✓	✓	✓		2KJ3534 - ■■■■■■ - ■■ F1	
10309	0.14	4400	40000	-	0.15	433763876/42075	✓	✓	✓	✓	✓	✓		2KJ3534 - ■■■■■■ - ■■ E1	
9188	0.16	4400	40000	-	0.18	759086783/82620	✓	✓	✓	✓	✓	✓		2KJ3534 - ■■■■■■ - ■■ D1	
8481	0.17	4400	40000	-	0.21	58391291/6885	✓	✓	✓	✓	✓	✓		2KJ3534 - ■■■■■■ - ■■ C1	
7425	0.20	4400	40000	-	0.25	170407237/22950	✓	✓	✓	✓	✓	✓		2KJ3534 - ■■■■■■ - ■■ B1	
6510	0.22	4400	40000	-	0.23	3361670039/516375	✓	✓	✓	✓	✓	✓		2KJ3534 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design **1 or 9** [see page 10/49](#)Motor frame size, motor type, efficiency class [see chapter 9](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F, H, C or D** [see page 10/42](#)<sup>1)</sup> Only in conjunction with reduced-backlash version



**Selection and ordering data**

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\varphi$ <sup>1)</sup>	$J_G$ 10 <sup>-4</sup> kgm <sup>2</sup>	$R_{ex}$	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.149-Z49</b>															
<b>4149</b>	0.35	8000	65000	-	0.18	58423197/14080	✓	✓	✓	✓					<b>2KJ3535</b> - ■■■■■■ - ■■ <b>B2</b>
<b>3772</b>	0.38	8000	65000	-	0.22	58423197/15488	✓	✓	✓	✓					<b>2KJ3535</b> - ■■■■■■ - ■■ <b>A2</b>
<b>3208</b>	0.45	8000	65000	-	0.28	9034515/2816	✓	✓	✓	✓					<b>2KJ3535</b> - ■■■■■■ - ■■ <b>X1</b>
<b>2917</b>	0.5	8000	65000	-	0.34	45172575/15488	✓	✓	✓	✓					<b>2KJ3535</b> - ■■■■■■ - ■■ <b>W1</b>
<b>2602</b>	0.56	8000	65000	-	0.39	14655991/5632	✓	✓	✓	✓	✓	✓			<b>2KJ3535</b> - ■■■■■■ - ■■ <b>V1</b>
<b>2333</b>	0.62	8000	65000	-	0.47	9034515/3872	✓	✓	✓	✓	✓	✓			<b>2KJ3535</b> - ■■■■■■ - ■■ <b>U1</b>
<b>2103</b>	0.69	8000	65000	-	0.55	11845253/5632	✓	✓	✓	✓	✓	✓			<b>2KJ3535</b> - ■■■■■■ - ■■ <b>T1</b>
<b>1941</b>	0.75	8000	65000	-	0.66	35535759/18304	✓	✓	✓	✓	✓	✓			<b>2KJ3535</b> - ■■■■■■ - ■■ <b>S1</b>
<b>1772</b>	0.82	8000	65000	-	0.78	2495247/1408	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>R1</b>
<b>1470</b>	0.99	8000	65000	-	1.00	3011505/2048	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>Q1</b>
<b>1384</b>	1.0	8000	65000	-	1.16	3011505/2176	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>P1</b>
<b>1307</b>	1.1	8000	65000	-	1.31	1003835/768	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>N1</b>
<b>1112</b>	1.3	8000	65000	-	1.62	7829913/7040	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>M1</b>
<b>953</b>	1.5	8000	65000	-	2.00	29512749/30976			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>L1</b>
<b>838</b>	1.7	8000	65000	-	2.50	9436049/11264			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>K1</b>
<b>707</b>	2.1	8000	65000	-	3.20	497553/704			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>J1</b>
<b>616</b>	2.4	8000	65000	-	4.20	5420709/8800			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>H1</b>
<b>608</b>	2.4	8000	65000	-	1.81	826413/1360	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>G1</b>
<b>574</b>	2.5	8000	65000	-	2.00	275471/480	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>F1</b>
<b>488</b>	3.0	8000	65000	-	2.60	10743369/22000	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>E1</b>
<b>418</b>	3.5	8000	65000	-	3.40	40494237/96800			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>D1</b>
<b>368</b>	3.9	8000	65000	-	4.30	12947137/35200			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>C1</b>
<b>310.31</b>	4.7	8000	65000	-	5.70	682689/2200			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>B1</b>
<b>270.46</b>	5.4	8000	65000	-	7.50	7437717/27500			✓	✓	✓	✓	✓		<b>2KJ3535</b> - ■■■■■■ - ■■ <b>A1</b>
<b>K.149-D49</b>															
<b>13575</b>	0.11	8000	65000	-	0.12	23891273/1760	✓	✓	✓	✓					<b>2KJ3536</b> - ■■■■■■ - ■■ <b>L1</b>
<b>12341</b>	0.12	8000	65000	-	0.14	23891273/1936	✓	✓	✓	✓					<b>2KJ3536</b> - ■■■■■■ - ■■ <b>K1</b>
<b>10908</b>	0.13	8000	65000	-	0.17	30717351/2816	✓	✓	✓	✓	✓	✓			<b>2KJ3536</b> - ■■■■■■ - ■■ <b>J1</b>
<b>9917</b>	0.15	8000	65000	-	0.22	153586755/15488	✓	✓	✓	✓	✓	✓			<b>2KJ3536</b> - ■■■■■■ - ■■ <b>H1</b>
<b>8686</b>	0.17	8000	65000	-	0.26	146760677/16896	✓	✓	✓	✓	✓	✓			<b>2KJ3536</b> - ■■■■■■ - ■■ <b>G1</b>
<b>8018</b>	0.18	8000	65000	-	0.31	146760677/18304	✓	✓	✓	✓	✓	✓			<b>2KJ3536</b> - ■■■■■■ - ■■ <b>F1</b>
<b>7099</b>	0.20	8000	65000	-	0.37	19990657/2816	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3536</b> - ■■■■■■ - ■■ <b>E1</b>
<b>5909</b>	0.25	8000	65000	-	0.50	133108521/22528	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3536</b> - ■■■■■■ - ■■ <b>D1</b>
<b>5561</b>	0.26	8000	65000	-	0.59	7829913/1408	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3536</b> - ■■■■■■ - ■■ <b>C1</b>
<b>4983</b>	0.29	8000	65000	-	0.66	126282443/25344	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3536</b> - ■■■■■■ - ■■ <b>B1</b>
<b>4242</b>	0.34	8000	65000	-	0.86	23891273/5632	✓	✓	✓	✓	✓	✓	✓		<b>2KJ3536</b> - ■■■■■■ - ■■ <b>A1</b>

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

## SIMOGEAR geared motors

Bevel geared motors

## Transmission ratios and torques for very low speeds

## Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	φ <sup>1)</sup>	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.169-Z49</b>															
6248	0.23	13000	70000	-	0.19	1799298493/288000	✓	✓	✓	✓				2KJ3537 - ■■■■■■ - ■■ C2	
5680	0.26	13000	70000	-	0.23	1799298493/316800	✓	✓	✓	✓				2KJ3537 - ■■■■■■ - ■■ B2	
4831	0.30	13000	70000	-	0.28	18549469/3840	✓	✓	✓	✓				2KJ3537 - ■■■■■■ - ■■ A2	
4391	0.33	13000	70000	-	0.34	18549469/4224	✓	✓	✓	✓				2KJ3537 - ■■■■■■ - ■■ X1	
3918	0.37	13000	70000	-	0.40	1354111237/345600	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ W1	
3513	0.41	13000	70000	-	0.48	18549469/5280	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ V1	
3167	0.46	13000	70000	-	0.57	1094418671/345600	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ U1	
2923	0.50	13000	70000	-	0.67	1094418671/374400	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ T1	
2668	0.54	13000	70000	-	0.80	537934601/201600	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ S1	
2214	0.65	13000	70000	-	1.03	204044159/92160	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ R1	
2084	0.70	13000	70000	-	1.19	204044159/97920	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ Q1	
1968	0.74	13000	70000	-	1.35	204044159/103680	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ P1	
1675	0.87	13000	70000	-	1.67	241143097/144000	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ N1	
1435	1.0	13000	70000	-	2.10	908923981/633600			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ M1	
1261	1.1	13000	70000	-	2.60	871825043/691200			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ L1	
1064	1.4	13000	70000	-	3.30	352439911/331200			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ K1	
927	1.6	13000	70000	-	4.40	18549469/20000			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ J1	
915	1.6	13000	70000	-	1.98	279967567/306000	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ H1	
864	1.7	13000	70000	-	2.20	279967567/324000	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ G1	
735	2.0	13000	70000	-	2.90	330870761/450000	✓	✓	✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ F1	
630	2.3	13000	70000	-	3.80	1247128253/1980000			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ E1	
554	2.6	13000	70000	-	4.70	1196225059/2160000			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ D1	
467	3.1	13000	70000	-	6.30	483580343/1035000			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ C1	
416	3.5	13000	70000	-	6.90	25840171/62100			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ B1	
363	4.0	13000	70000	-	9.10	1360009/3750			✓	✓	✓	✓		2KJ3537 - ■■■■■■ - ■■ A1	
<b>K.169-D49</b>															
14931	0.10	13000	70000	-	0.22	315340973/21120	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ H1	
13078	0.11	13000	70000	-	0.26	13559661839/1036800	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ G1	
12072	0.12	13000	70000	-	0.31	13559661839/1123200	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ F1	
10689	0.14	13000	70000	-	0.38	12928979893/1209600	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ E1	
8896	0.16	13000	70000	-	0.51	4099432649/460800	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ D1	
8373	0.17	13000	70000	-	0.59	241143097/28800	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ C1	
7502	0.19	13000	70000	-	0.66	11667616001/1555200	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ B1	
6387	0.23	13000	70000	-	0.86	2207386811/345600	✓	✓	✓	✓	✓	✓		2KJ3538 - ■■■■■■ - ■■ A1	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	φ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	Motor frame size								Article No. (Article No. supplement, see below)
							63	71	80	90	100	112	132	160	
<b>K.189-Z69</b>															
6375	0.23	19500	104000	-	0.21	3793088/595	✓	✓	✓	✓				2KJ3540 - ■■■■■■ - ■■ C2	
5795	0.25	19500	104000	-	0.26	7586176/1309	✓	✓	✓	✓				2KJ3540 - ■■■■■■ - ■■ B2	
4929	0.29	19500	104000	-	0.32	586560/119	✓	✓	✓	✓				2KJ3540 - ■■■■■■ - ■■ A2	
4481	0.32	19500	104000	-	0.39	5865600/1309	✓	✓	✓	✓				2KJ3540 - ■■■■■■ - ■■ X1	
3998	0.36	19500	104000	-	0.46	1427296/357	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ W1	
3585	0.40	19500	104000	-	0.56	4692480/1309	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ V1	
3231	0.45	19500	104000	-	0.66	1153568/357	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ U1	
2983	0.49	19500	104000	-	0.78	354944/119	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ T1	
2723	0.53	19500	104000	-	0.93	2268032/833	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ S1	
2259	0.64	19500	104000	-	1.23	268840/119	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ R1	
2126	0.68	19500	104000	-	1.41	4301440/2023	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ Q1	
2008	0.72	19500	104000	-	1.59	2150720/1071	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ P1	
1709	0.85	19500	104000	-	2.0	1016704/595	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ N1	
1464	0.99	19500	104000	-	2.5	273728/187			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ M1	
1287	1.1	19500	104000	-	3.2	459472/357			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ L1	
1086	1.3	19500	104000	-	4.1	2971904/2737			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ K1	
946	1.5	19500	104000	-	5.5	2815488/2975			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ J1	
889	1.6	19500	104000	-	3.1	3128320/3519	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ H1	
756	1.9	19500	104000	-	4.0	16267264/21505	✓	✓	✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ G1	
648	2.2	19500	104000	-	5.3	30657536/47311			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ F1	
570	2.5	19500	104000	-	6.7	7351552/12903			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ E1	
481	3.0	19500	104000	-	9.1	47550464/98923			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ D1	
419	3.5	19500	104000	-	12	45047808/107525			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ C1	
384	3.8	19500	104000	-	11	37948928/98923			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ B1	
334.36	4.3	19500	104000	-	14	35951616/107525			✓	✓	✓	✓		2KJ3540 - ■■■■■■ - ■■ A1	
<b>K.189-D69</b>															
13345	0.11	19500	104000	-	0.26	840736/63	✓	✓	✓	✓	✓	✓		2KJ3541 - ■■■■■■ - ■■ G1	
12318	0.12	19500	104000	-	0.32	258688/21	✓	✓	✓	✓	✓	✓		2KJ3541 - ■■■■■■ - ■■ F1	
10907	0.13	19500	104000	-	0.38	1603264/147	✓	✓	✓	✓	✓	✓		2KJ3541 - ■■■■■■ - ■■ E1	
9078	0.16	19500	104000	-	0.52	63544/7	✓	✓	✓	✓	✓	✓		2KJ3541 - ■■■■■■ - ■■ D1	
8544	0.17	19500	104000	-	0.61	1016704/119	✓	✓	✓	✓	✓	✓		2KJ3541 - ■■■■■■ - ■■ C1	
7655	0.19	19500	104000	-	0.67	1446848/189	✓	✓	✓	✓	✓	✓		2KJ3541 - ■■■■■■ - ■■ B1	
6517	0.22	19500	104000	-	0.89	19552/3	✓	✓	✓	✓	✓	✓		2KJ3541 - ■■■■■■ - ■■ A1	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/49</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H, C or D</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Only in conjunction with reduced-backlash version

# SIMOGEAR geared motors

## Bevel geared motors

### Dimensional drawings

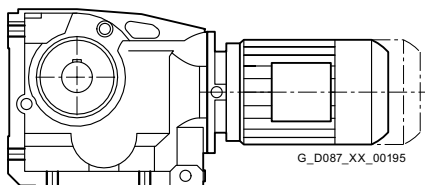
#### Overview

Information about dimensional drawings can be found in chapter [Introduction on page 1/24](#).

Design	Frame size	Dimensional drawing on page
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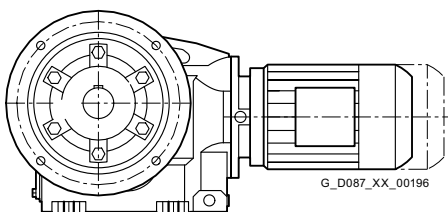
#### Bevel geared motors B and K

##### Foot-mounted design



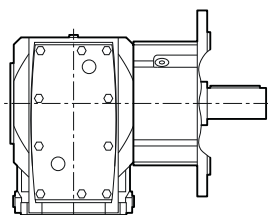
B..19	5/70
B..29	5/74
B..39	5/78
B..49	5/82
K..39	5/86
K..49	5/90
K..69	5/94
K..79	5/98
K..89	5/102
K..109	5/107
K..129	5/112
K..149	5/117
K..169	5/122
K..189	5/127

##### Flange-mounted design



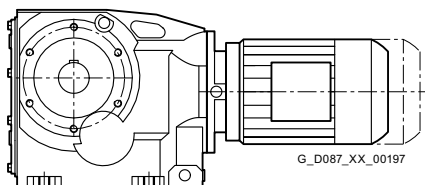
B.F.19	5/71
B.F.29	5/75
B.F.39	5/79
B.F.49	5/83
K.F.39	5/87
K.F.49	5/91
K.F.69	5/95
K.F.79	5/99
K.F.89	5/103
K.F.109	5/108
K.F.129	5/113
K.F.149	5/118
K.F.169	5/123
K.F.189	5/128

##### Flange-mounted design with VLplus reinforced bearing system



K.F.89	5/104
K.F.109	5/109
K.F.129	5/114
K.F.149	5/119
K.F.169	5/124

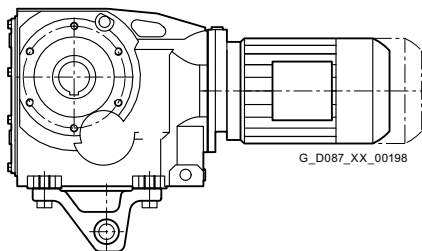
##### Housing flange design



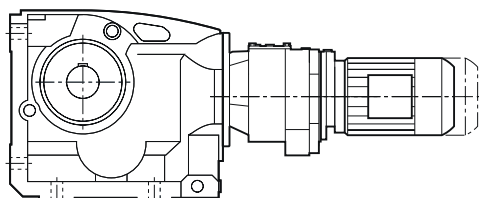
B.Z.19	5/72
B.Z.29	5/76
B.Z.39	5/80
B.Z.49	5/84
K.Z.39	5/88
K.Z.49	5/92
K.Z.69	5/96
K.Z.79	5/100
K.Z.89	5/105
K.Z.109	5/110
K.Z.129	5/115
K.Z.149	5/120
K.Z.169	5/125
K.Z.189	5/129

**Overview**

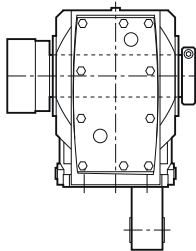
Design	Frame size	Dimensional drawing on page
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**Bevel geared motors B and K**
*Shaft-mounted design*


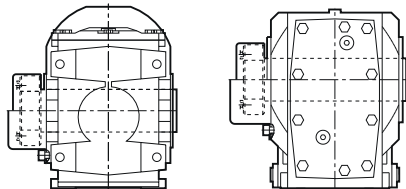
BAD.19	5/73
BAD.29	5/77
BAD.39	5/81
BAD.49	5/85
KAD.39	5/89
KAD.49	5/93
KAD.69	5/97
KAD.79	5/101
KAD.89	5/106
KAD.109	5/111
KAD.129	5/116
KAD.149	5/121
KAD.169	5/126
KAD.189	5/130

**Bevel tandem geared motors**


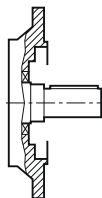
K.39-D/Z19 ... K.189-D/Z69	5/131 ... 5/132
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**Additional versions and options**
*SIMOLOC assembly system*


BADR29 ... BADR49	5/133 ... 5/134
KADR39 ... K...R89	

**Protective covers**


BA.19 ... KA.189	5/134 ... 5/135
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**Inner contour of the flange-mounted design**


BF19 ... KF189	5/136
BAF19 ... KAF189	

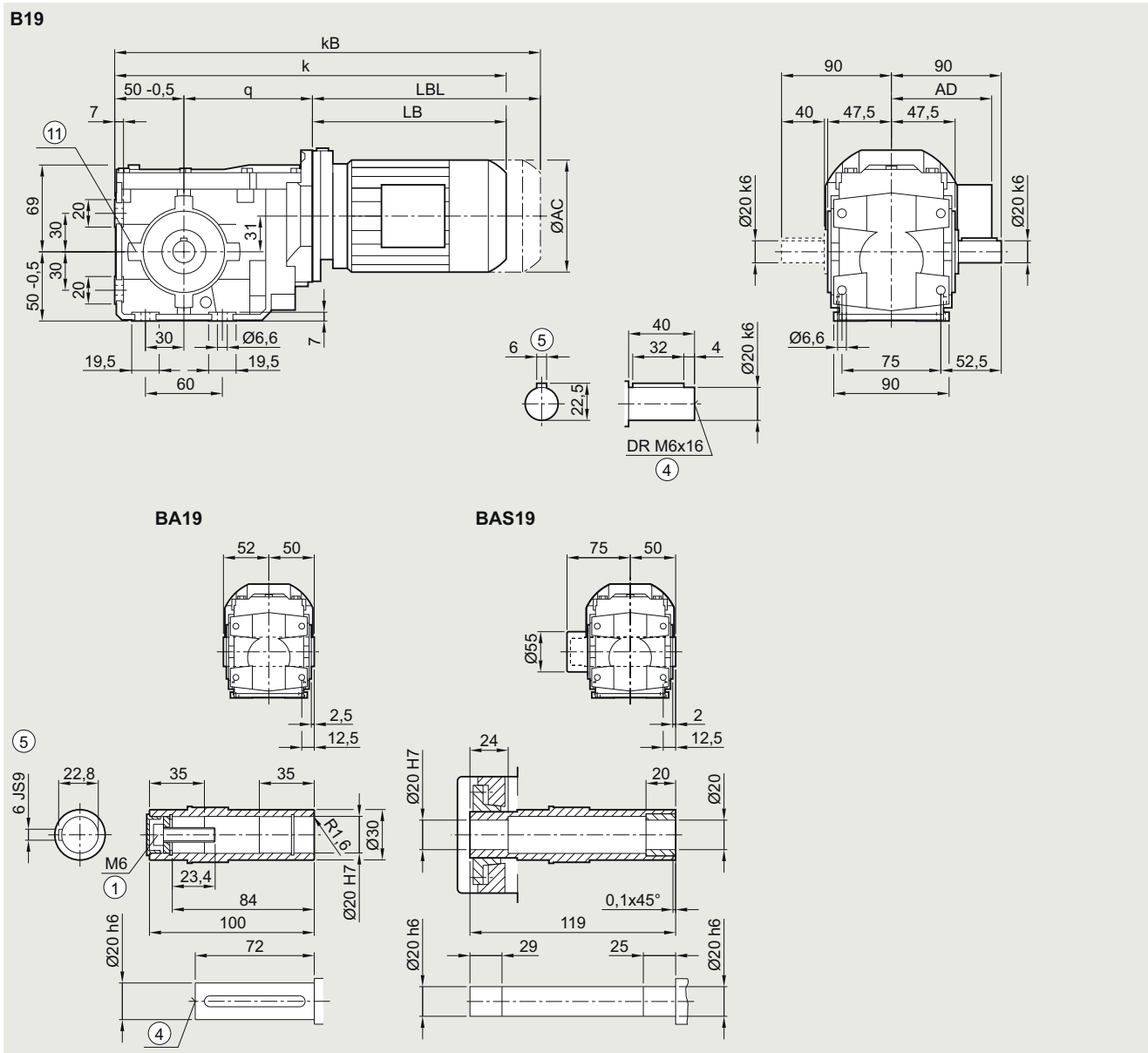
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B..19 in a foot-mounted design

**B030, BA030**



Motor	LE 63	63Z	71	71Z	71Y	80	80Z
q	133.0	133.0	141.0	141.0	141.0	149.5	149.5
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2
k	343.5	369.5	375.5	394.5	434.5	439.5	474.5
kB	388.0	414.0	430.5	449.5	489.5	499.5	534.5
LB	160.5	186.5	184.5	203.5	243.5	240.0	275.0
LBL	205.0	231.0	239.5	258.5	298.5	300.0	335.0

① ISO 4014

④ DIN 332

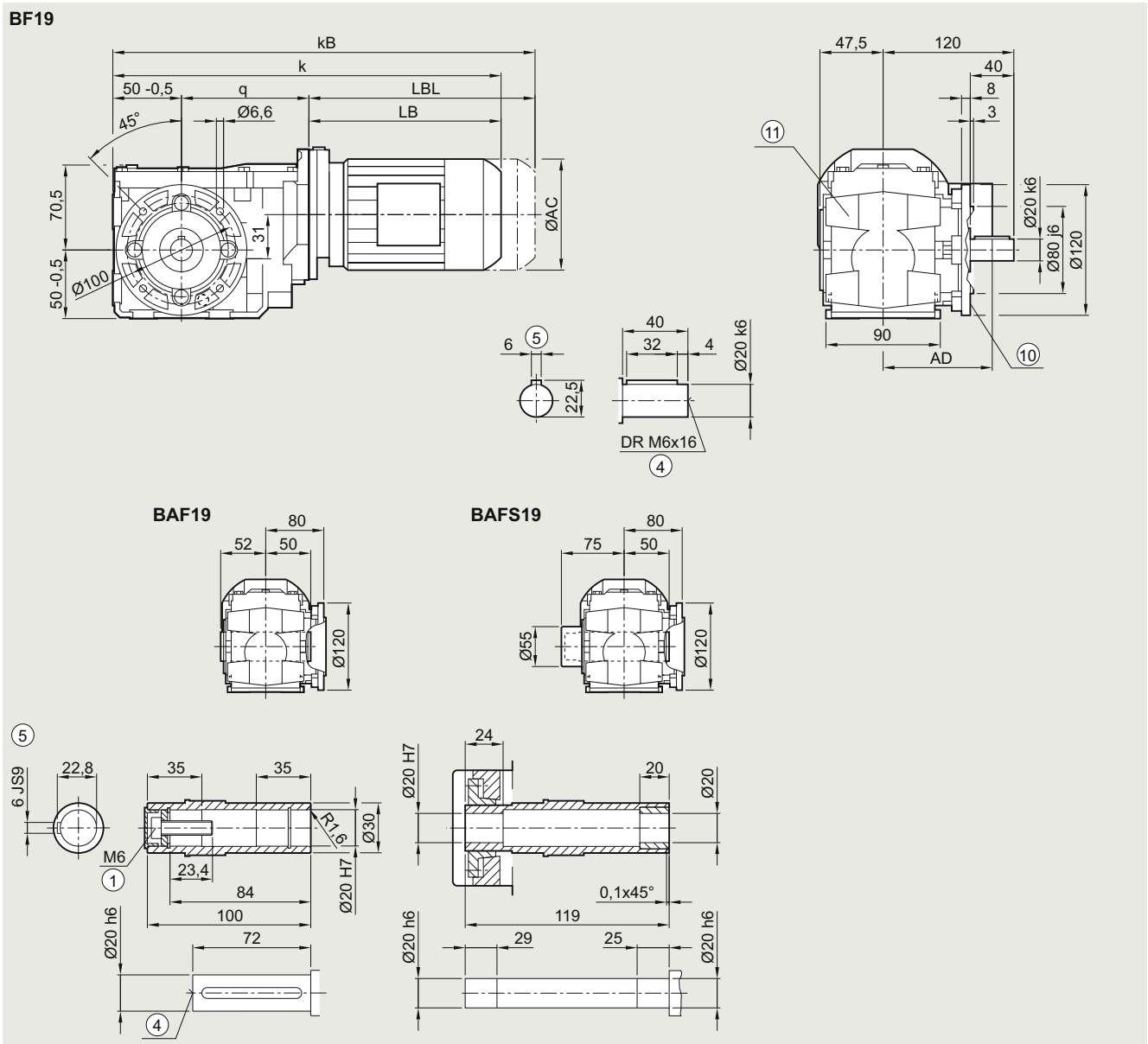
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for housing flange design

**Gearbox B.F.19 in a flange-mounted design**

**BF030, BAF030**



5

Motor	LE 63	63Z	71	71Z	71Y	80	80Z
q	133.0	133.0	141.0	141.0	141.0	149.5	149.5
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2
k	343.5	369.5	375.5	394.5	434.5	439.5	474.5
kB	388.0	414.0	430.5	449.5	489.5	499.5	534.5
LB	160.5	186.5	184.5	203.5	243.5	240.0	275.0
LBL	205.0	231.0	239.5	258.5	298.5	300.0	335.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 5/136

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑪ Use bores only for foot-mounted design

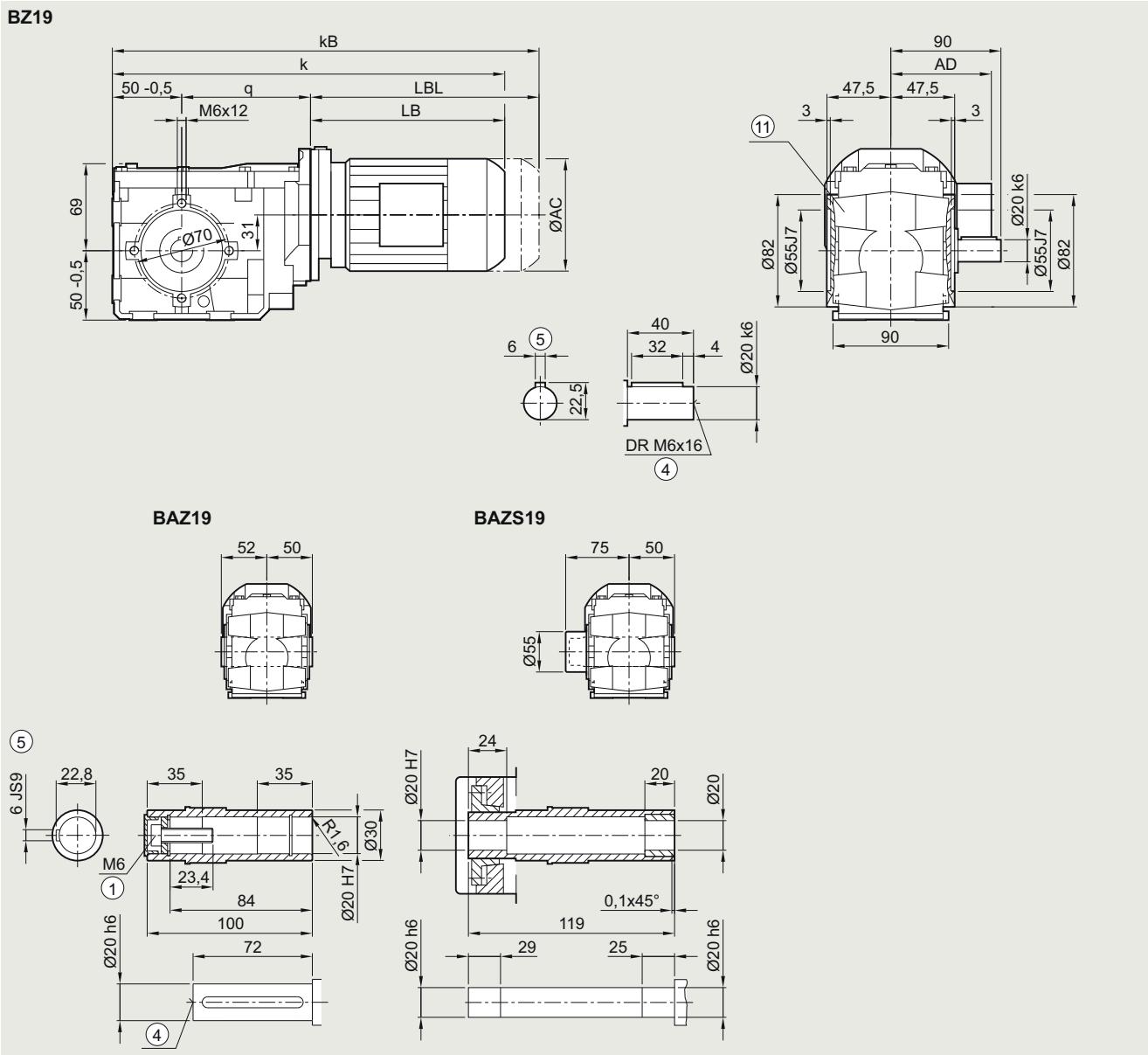
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B.Z.19 in a housing flange design

BZ030, BAZ030



Motor	LE 63	63Z	71	71Z	71Y	80	80Z
q	133.0	133.0	141.0	141.0	141.0	149.5	149.5
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2
k	343.5	369.5	375.5	394.5	434.5	439.5	474.5
kB	388.0	414.0	430.5	449.5	489.5	499.5	534.5
LB	160.5	186.5	184.5	203.5	243.5	240.0	275.0
LBL	205.0	231.0	239.5	258.5	298.5	300.0	335.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

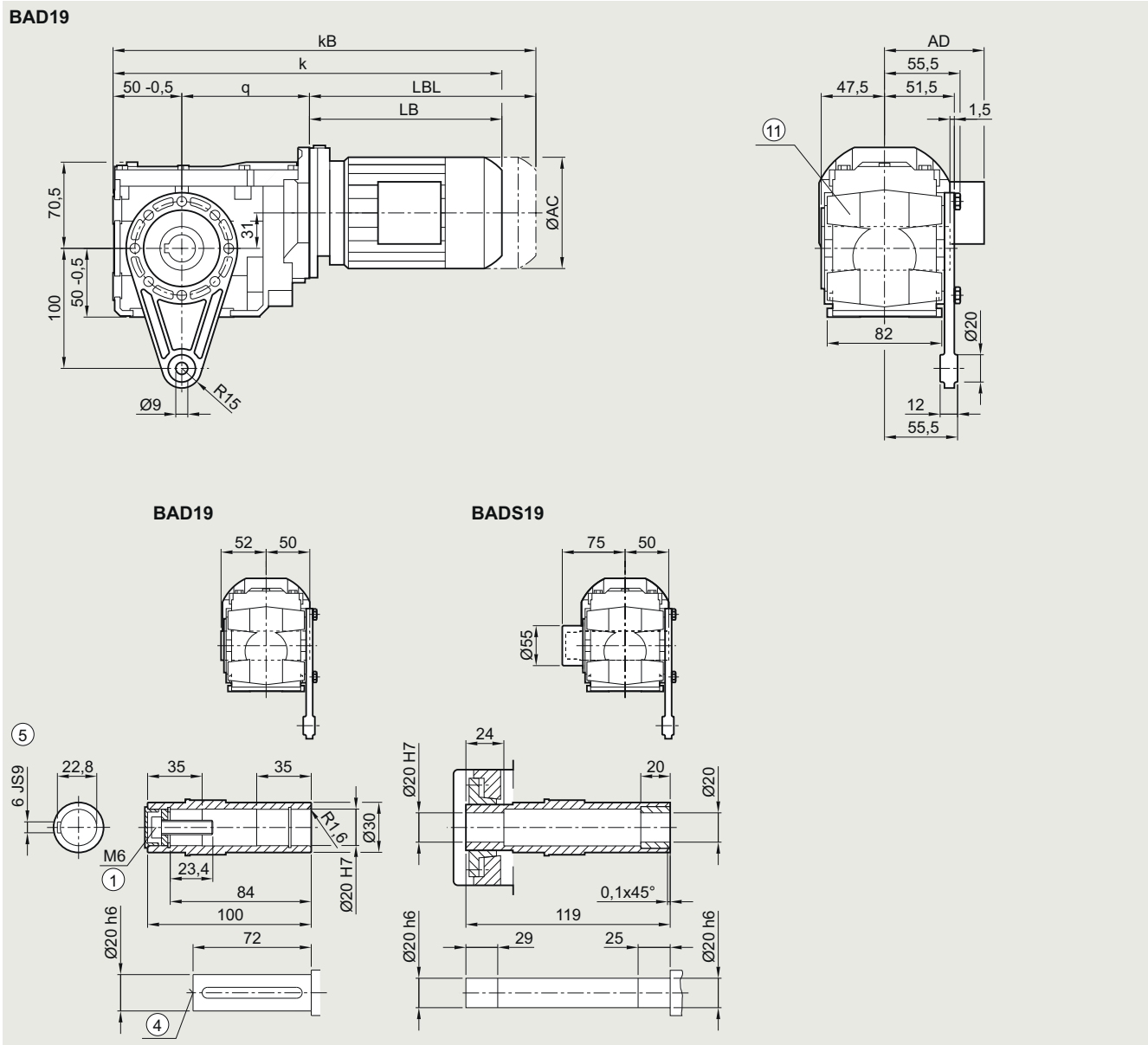
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design



**Gearbox BAD.19 in a shaft-mounted design**

**BAD030**



5

Motor	LE 63	63Z	71	71Z	71Y	80	80Z
q	133.0	133.0	141.0	141.0	141.0	149.5	149.5
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2
k	343.5	369.5	375.5	394.5	434.5	439.5	474.5
kB	388.0	414.0	430.5	449.5	489.5	499.5	534.5
LB	160.5	186.5	184.5	203.5	243.5	240.0	275.0
LBL	205.0	231.0	239.5	258.5	298.5	300.0	335.0

⑤ ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design

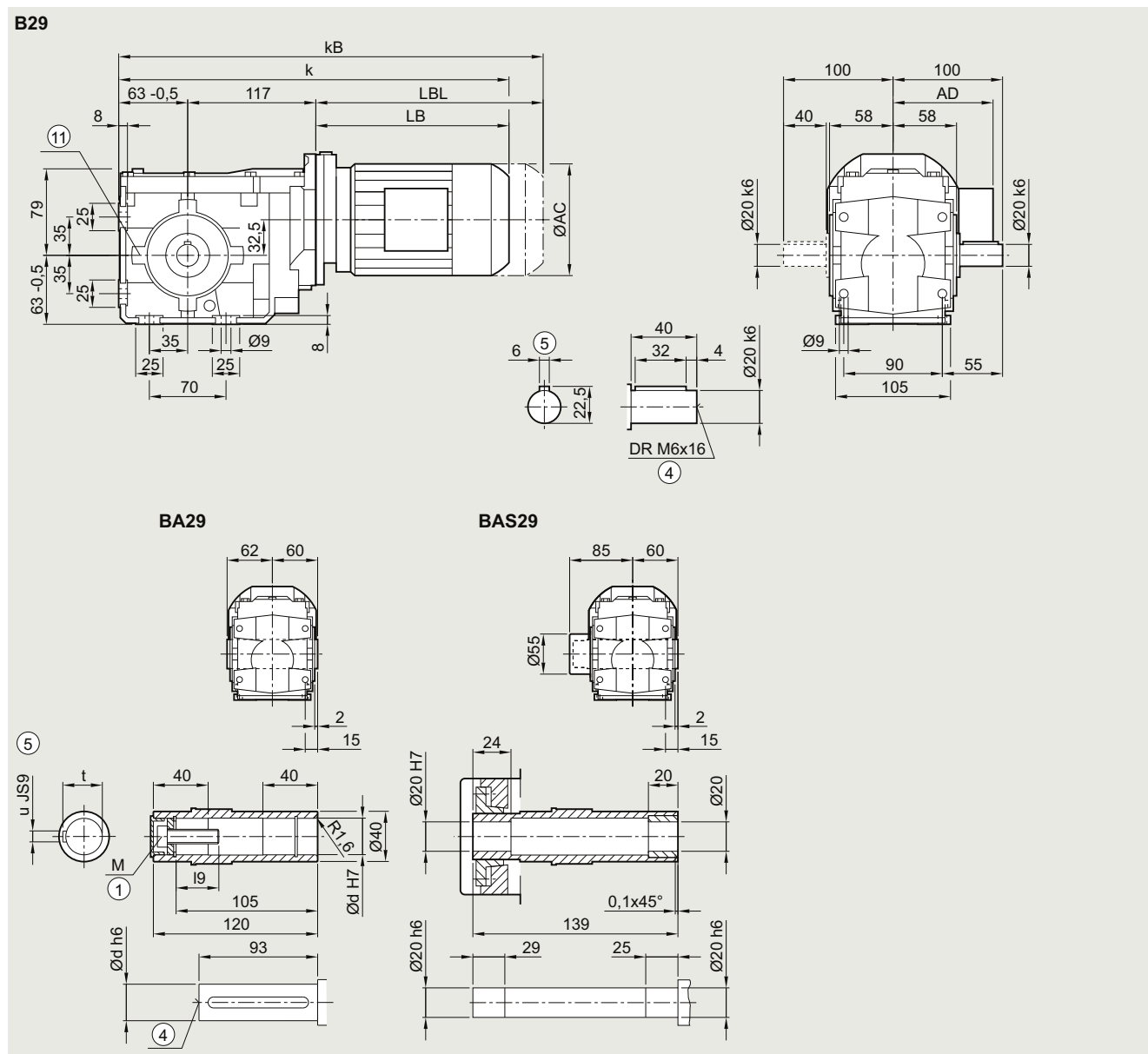
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B..29 in a foot-mounted design

**B030, BA030, BAS030**



Shaft	d	I9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
	63										
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	374.0	400.0	406.0	425.0	465.0	470.0	505.0	531.5	571.5	588.0	623.0
kB	418.5	444.5	461.0	480.0	520.0	530.0	565.0	601.5	641.5	666.5	701.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

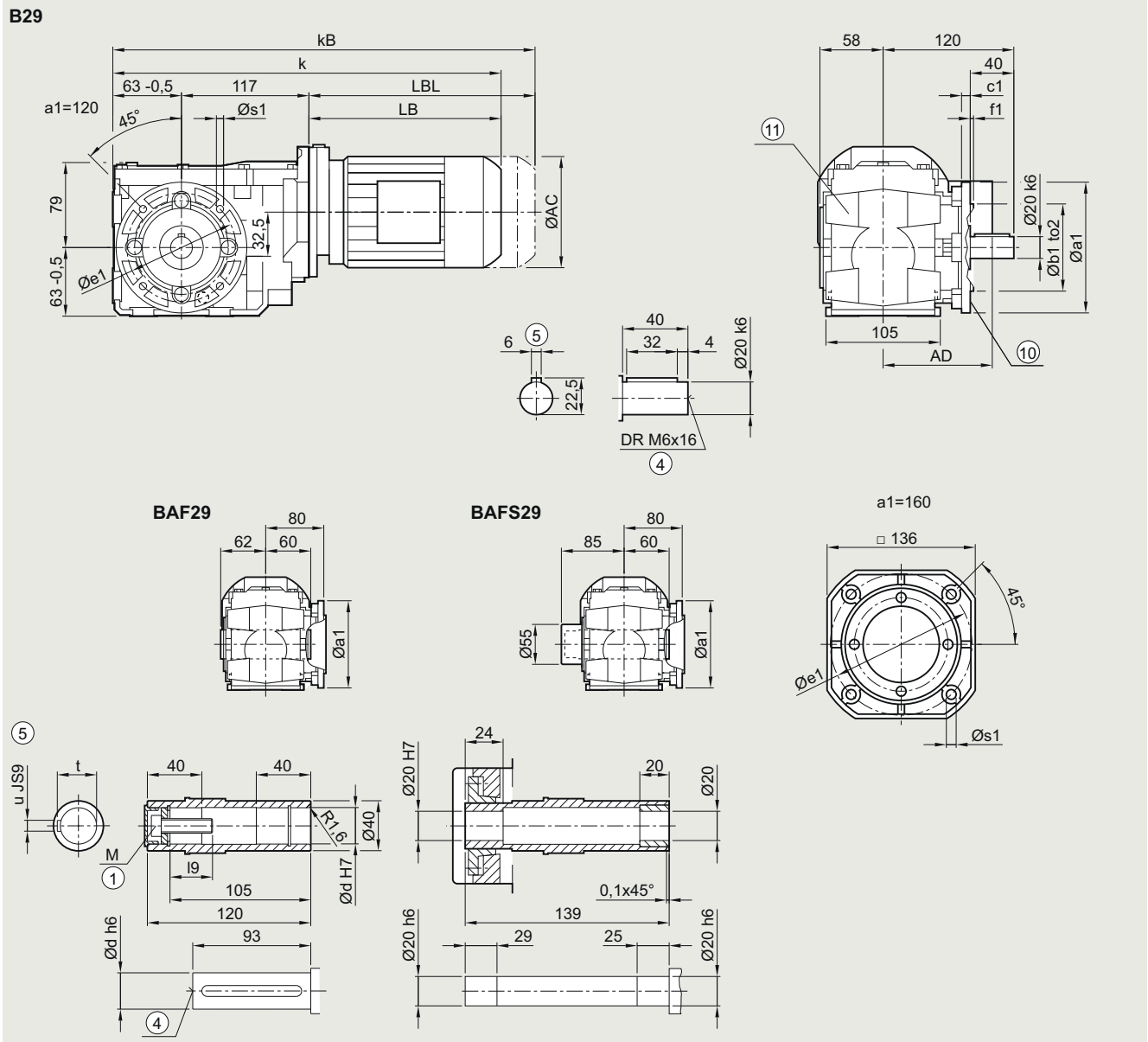
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑥ Use bores only for housing flange design

**Gearbox B.F.29 in a flange-mounted design**

**BF030, BAF030, BAFS030**



Flange	a1	b1	c1	f1	e1	s1	to2				
	120	80	8	3.0	100	6.6	j6				
	160	110	9	3.5	130	9.0	j6				
Shaft	d	l9	M	t	u						
	20	23.4	M6	22.8	6						
	25	27.6	M10	28.3	8						
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	374.0	400.0	406.0	425.0	465.0	470.0	505.0	531.5	571.5	588.0	623.0
kB	418.5	444.5	461.0	480.0	520.0	530.0	565.0	601.5	641.5	666.5	701.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 5/136

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑪ Use bores only for foot-mounted design

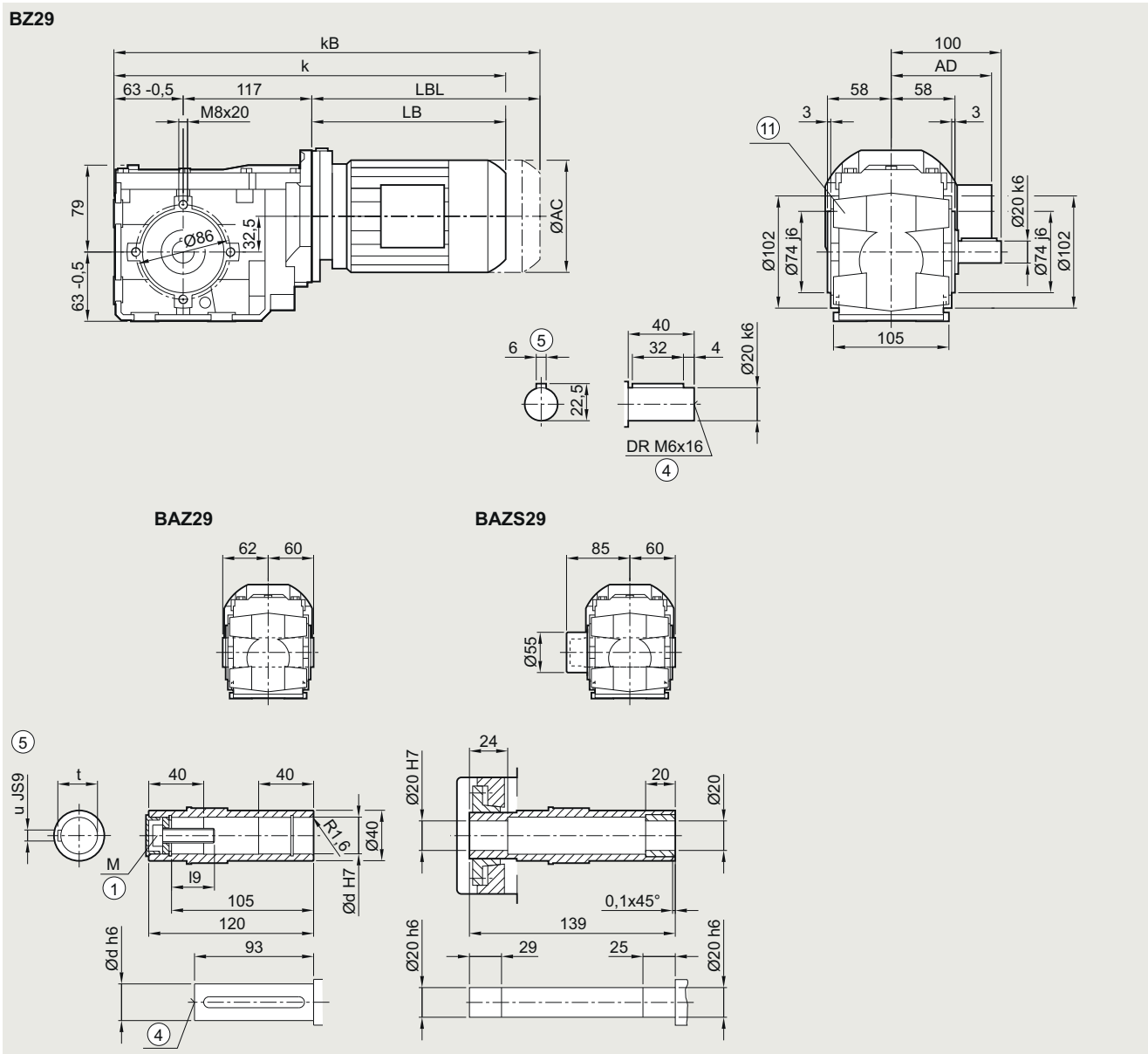
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B.Z.29 in a housing flange design

BZ030, BAZ030, BAZS030



Shaft	d	I9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
	63										
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	374.0	400.0	406.0	425.0	465.0	470.0	505.0	531.5	571.5	588.0	623.0
kB	418.5	444.5	461.0	480.0	520.0	530.0	565.0	601.5	641.5	666.5	701.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

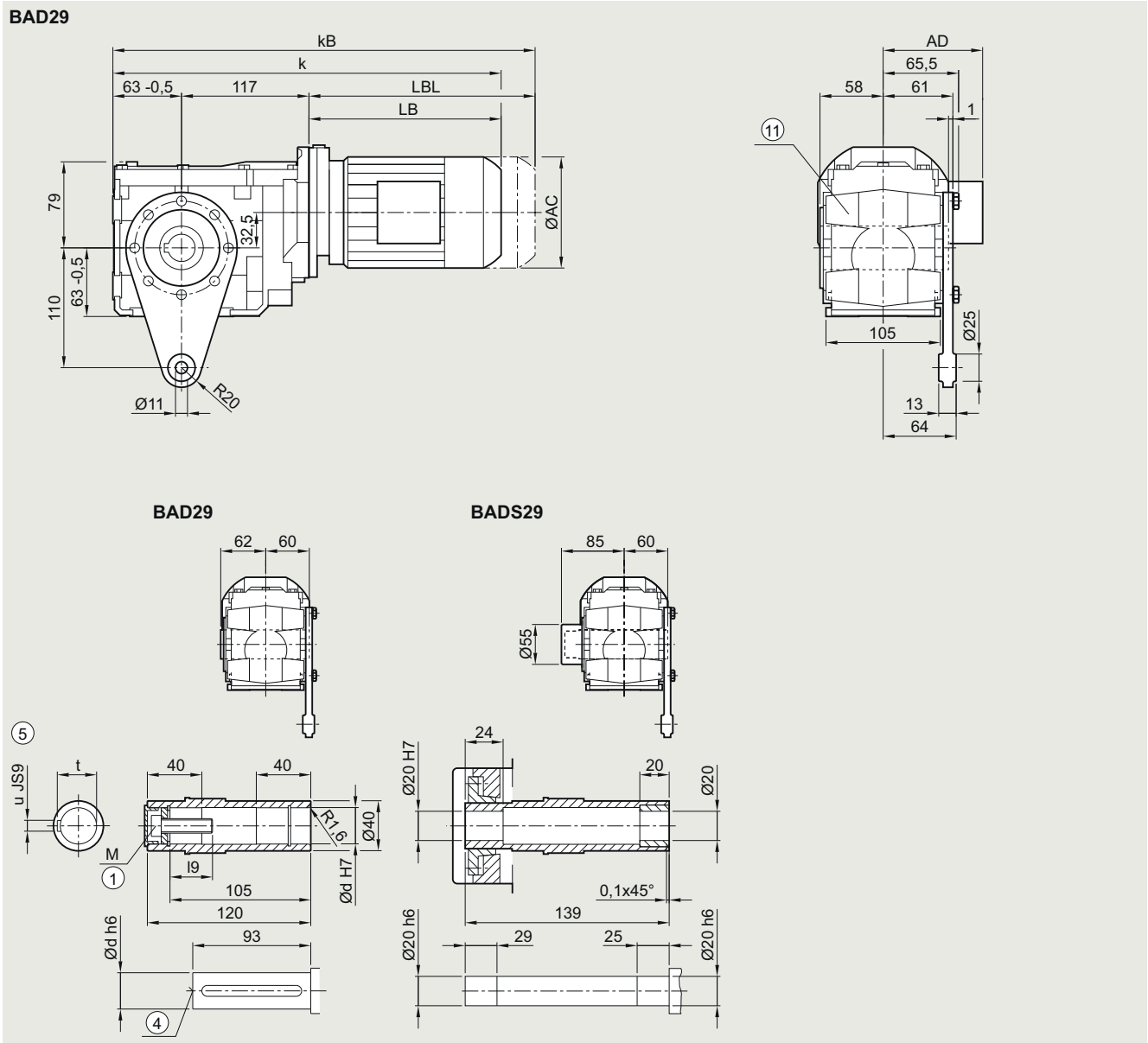
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design

**Gearbox BAD.29 in a shaft-mounted design**

**BAD030, BADS030**



5

Shaft	d	I9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
	AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	374.0	400.0	406.0	425.0	465.0	470.0	505.0	531.5	571.5	588.0	623.0
kB	418.5	444.5	461.0	480.0	520.0	530.0	565.0	601.5	641.5	666.5	701.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design

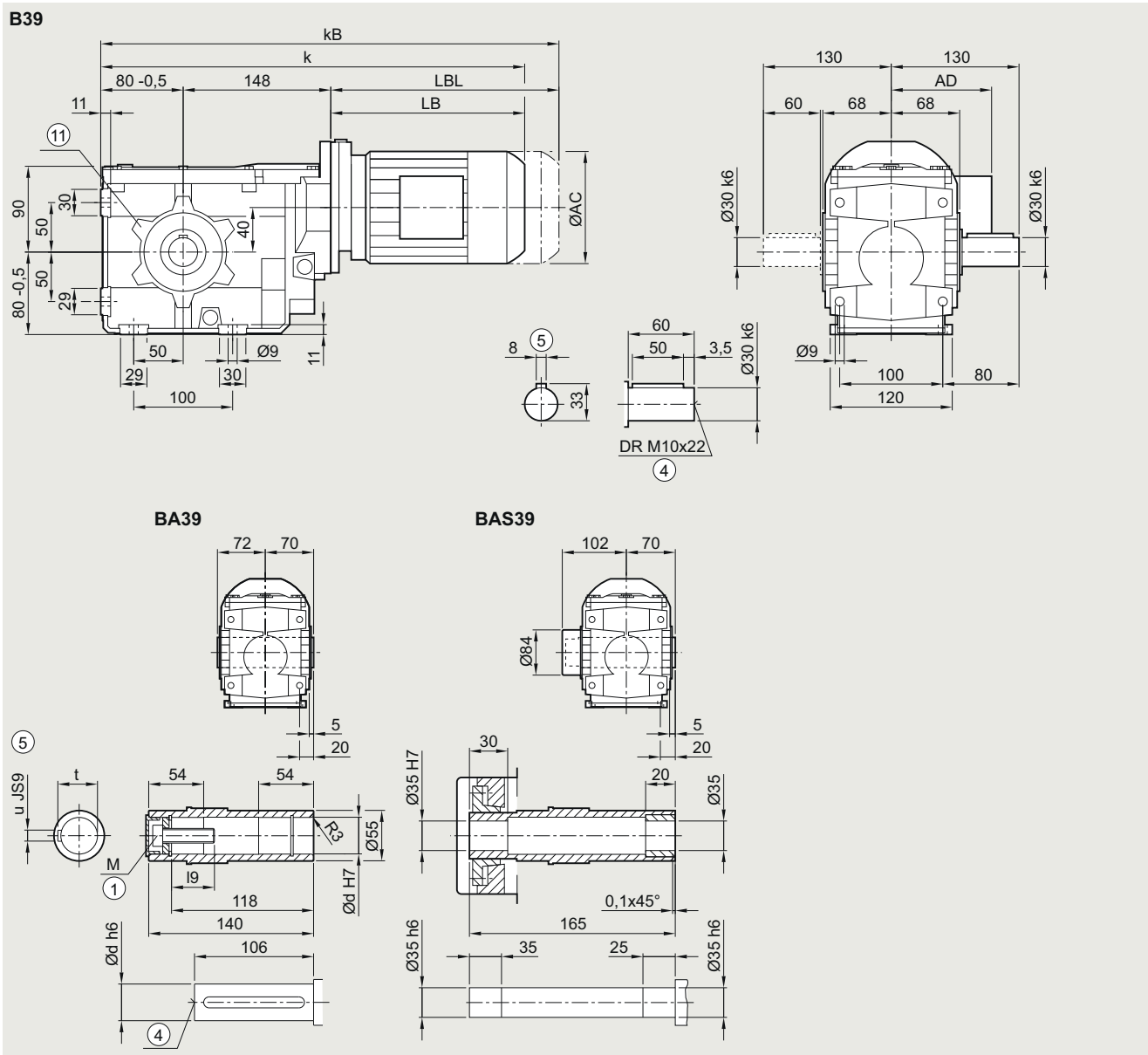
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B..39 in a foot-mounted design

**B030, BA030, BAS030**



Shaft	d	I9	M	t	u
	30	32.6	M10	33.3	8
	35	37	M12	38.3	10
	40	47.75	M16	43.3	12

Motor														
	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	
k	422.0	448.0	454.0	473.0	513.0	518.0	553.0	579.5	619.5	636.0	671.0	646.0	671.0	
kB	466.5	492.5	509.0	528.0	568.0	578.0	613.0	649.5	689.5	714.5	749.5	719.0	744.0	
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0	
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0	

① ISO 4014

④ DIN 332

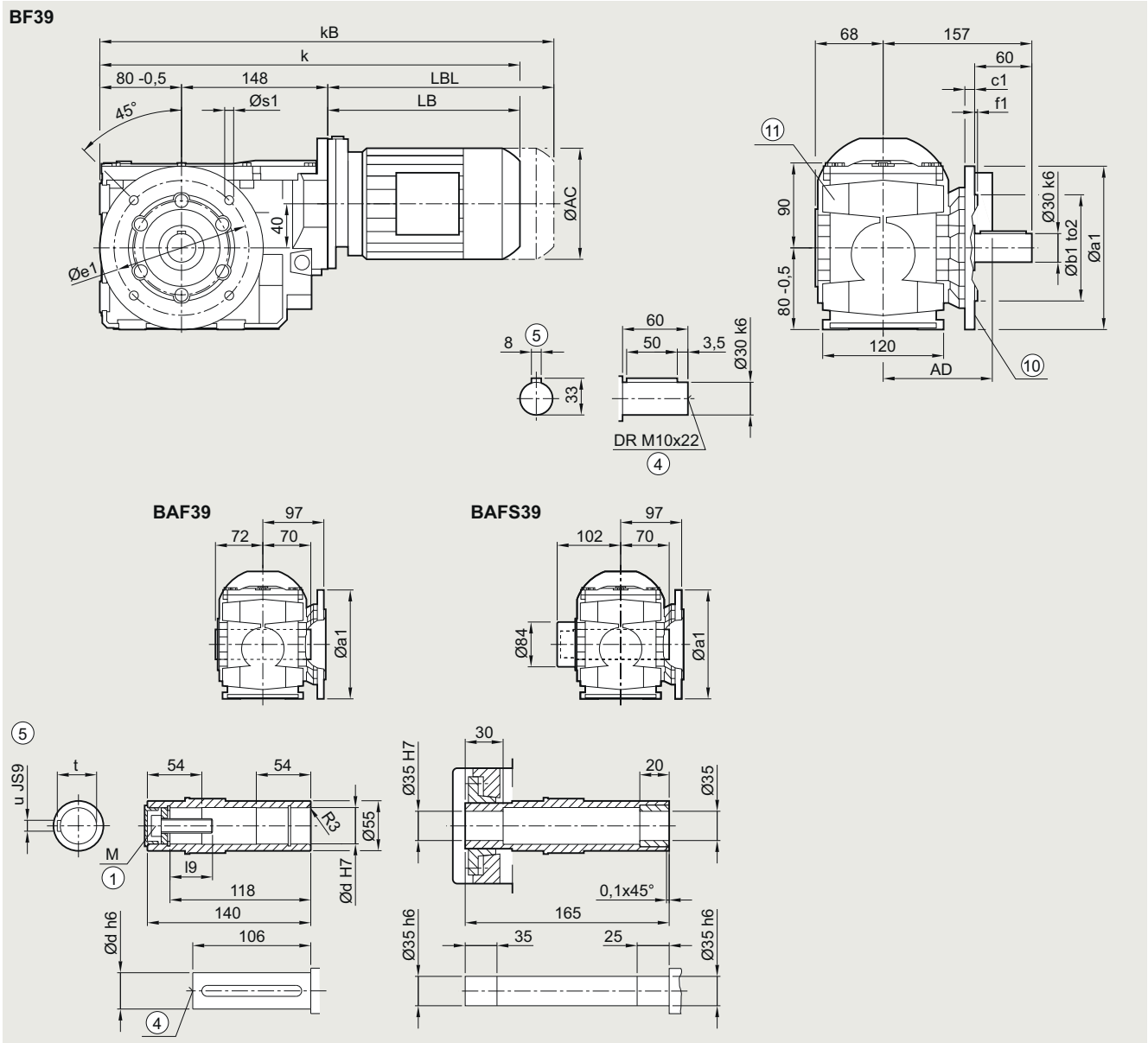
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑥ Use bores only for housing flange design

**Gearbox B.F.39 in a flange-mounted design**

**BF030, BAF030, BAFS030**



Flange	a1	b1	c1	f1	e1	s	to2						
	160	110	10	3.5	130	9	j6						
	200	130	12	3.5	165	11	j6						
Shaft	d	l9	M	t	u								
	30	32.6	M10	33.3	8								
	35	37	M12	38.3	10								
	40	47.75	M16	43.3	12								
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	422.0	448.0	454.0	473.0	513.0	518.0	553.0	579.5	619.5	636.0	671.0	646.0	671.0
kB	466.5	492.5	509.0	528.0	568.0	578.0	613.0	649.5	689.5	714.5	749.5	719.0	744.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014      ④ DIN 332      ⑤ Feather key/keyway DIN 6885-1      ⑩ For inner contour, see page 5/136  
 1) AD depends on the motor options, for other dimensions, see page 9/46.      ⑪ Use bores only for foot-mounted design

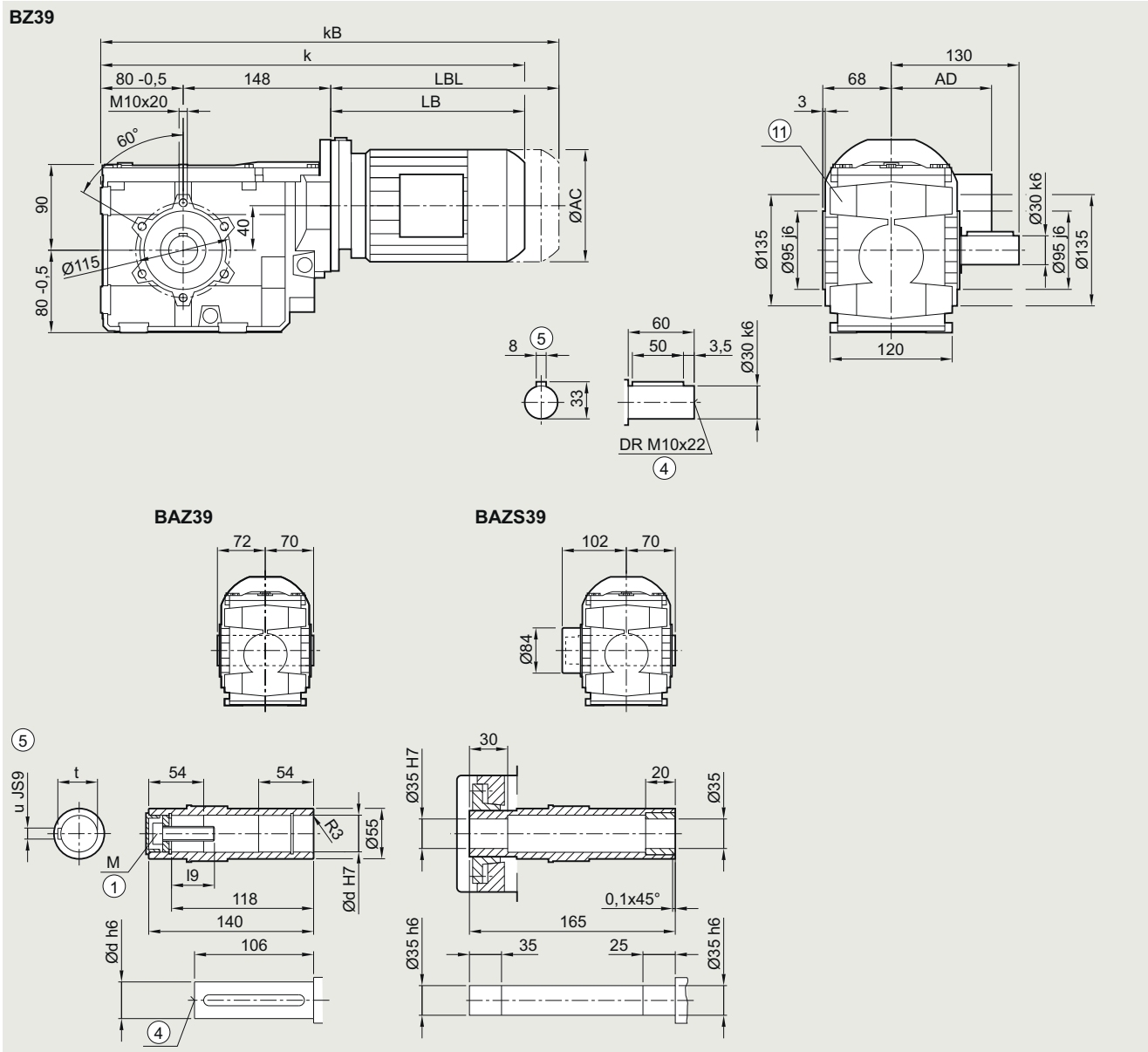
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B.Z.39 in a housing flange design

BZ030, BAZ030, BAZS030



Shaft	d	I9	M	t	u
	30	32.6	M10	33.3	8
	35	37	M12	38.3	10
	40	47.75	M16	43.3	12

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	422.0	448.0	454.0	473.0	513.0	518.0	553.0	579.5	619.5	636.0	671.0	646.0	671.0
kB	466.5	492.5	509.0	528.0	568.0	578.0	613.0	649.5	689.5	714.5	749.5	719.0	744.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

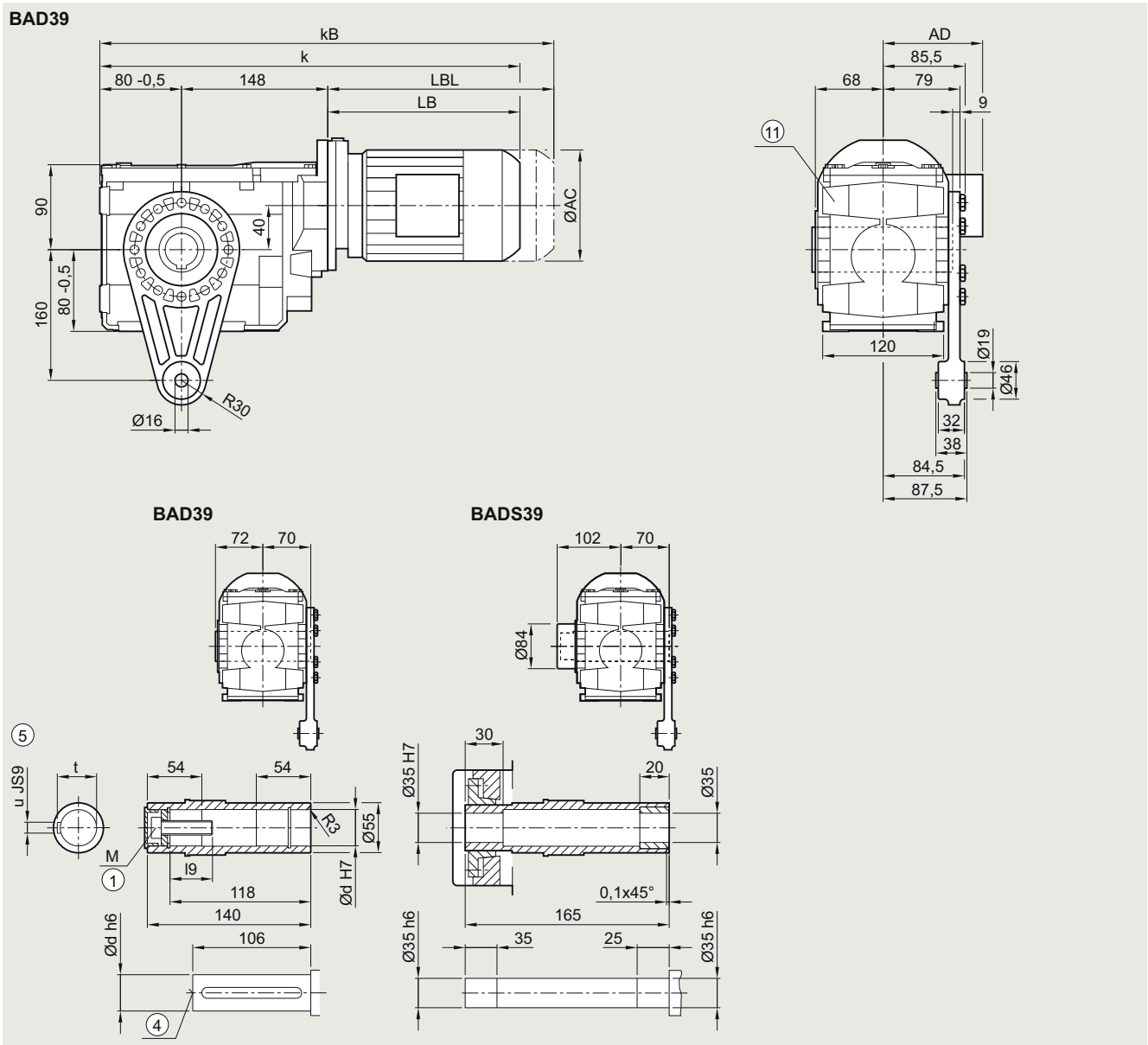
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design



**Gearbox BAD.39 in a shaft-mounted design**

**BAD030, BADS030**



5

Shaft	d	I9	M	t	u
	30	32.6	M10	33.3	8
	35	37	M12	38.3	10
	40	47.75	M16	43.3	12

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	422.0	448.0	454.0	473.0	513.0	518.0	553.0	579.5	619.5	636.0	671.0	646.0	671.0
kB	466.5	492.5	509.0	528.0	568.0	578.0	613.0	649.5	689.5	714.5	749.5	719.0	744.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design

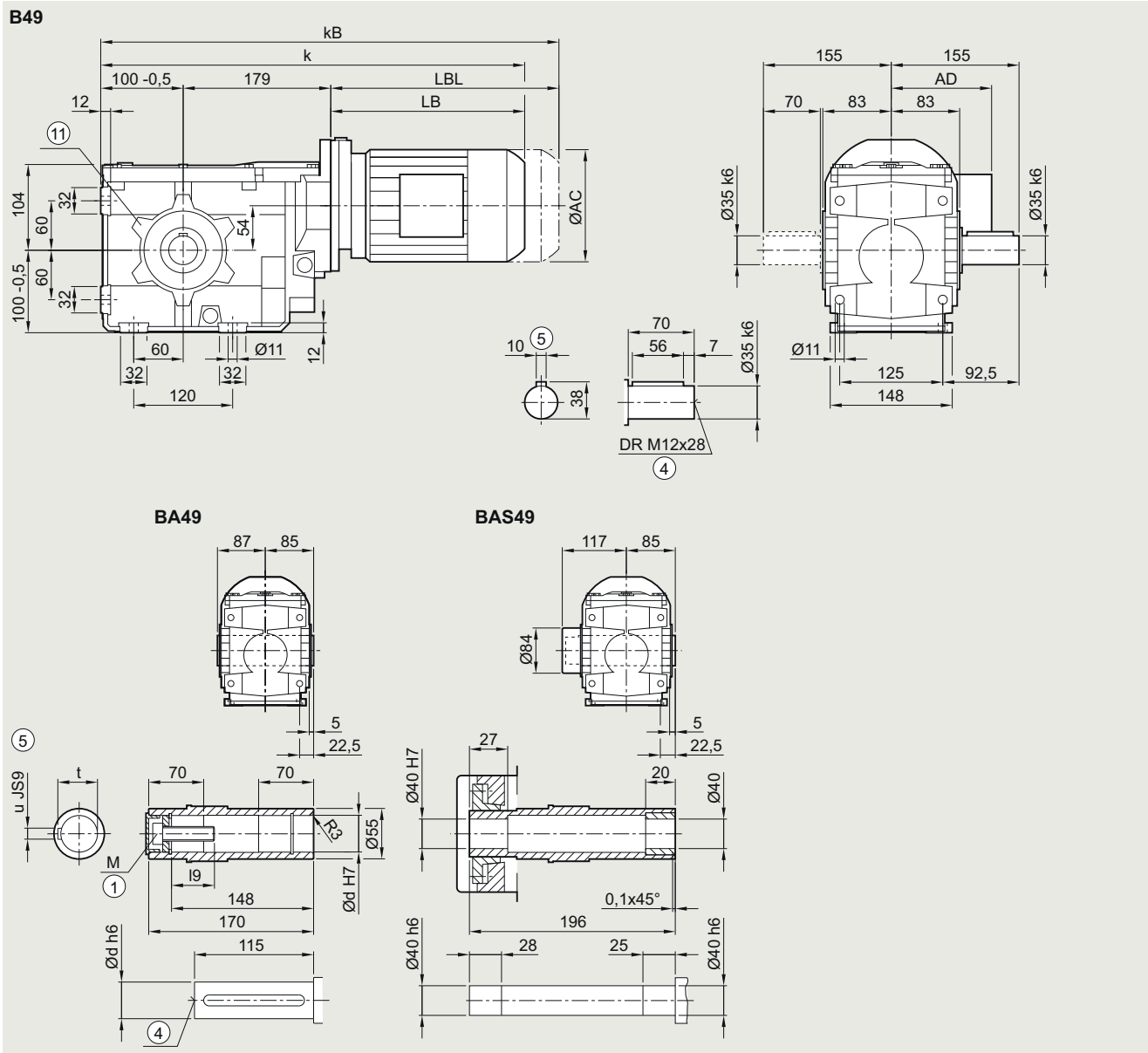
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B..49 in a foot-mounted design

**B030, BA030, BAS030**



Shaft	d	i9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

Motor	LE														
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	463.5	489.5	495.5	514.5	554.5	559.5	594.5	621.0	661.0	677.5	712.5	687.5	722.0	740.5	790.5
kB	508.0	534.0	550.5	569.5	609.5	619.5	654.5	691.0	731.0	756.0	791.0	760.5	795.0	845.0	895.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014

④ DIN 332

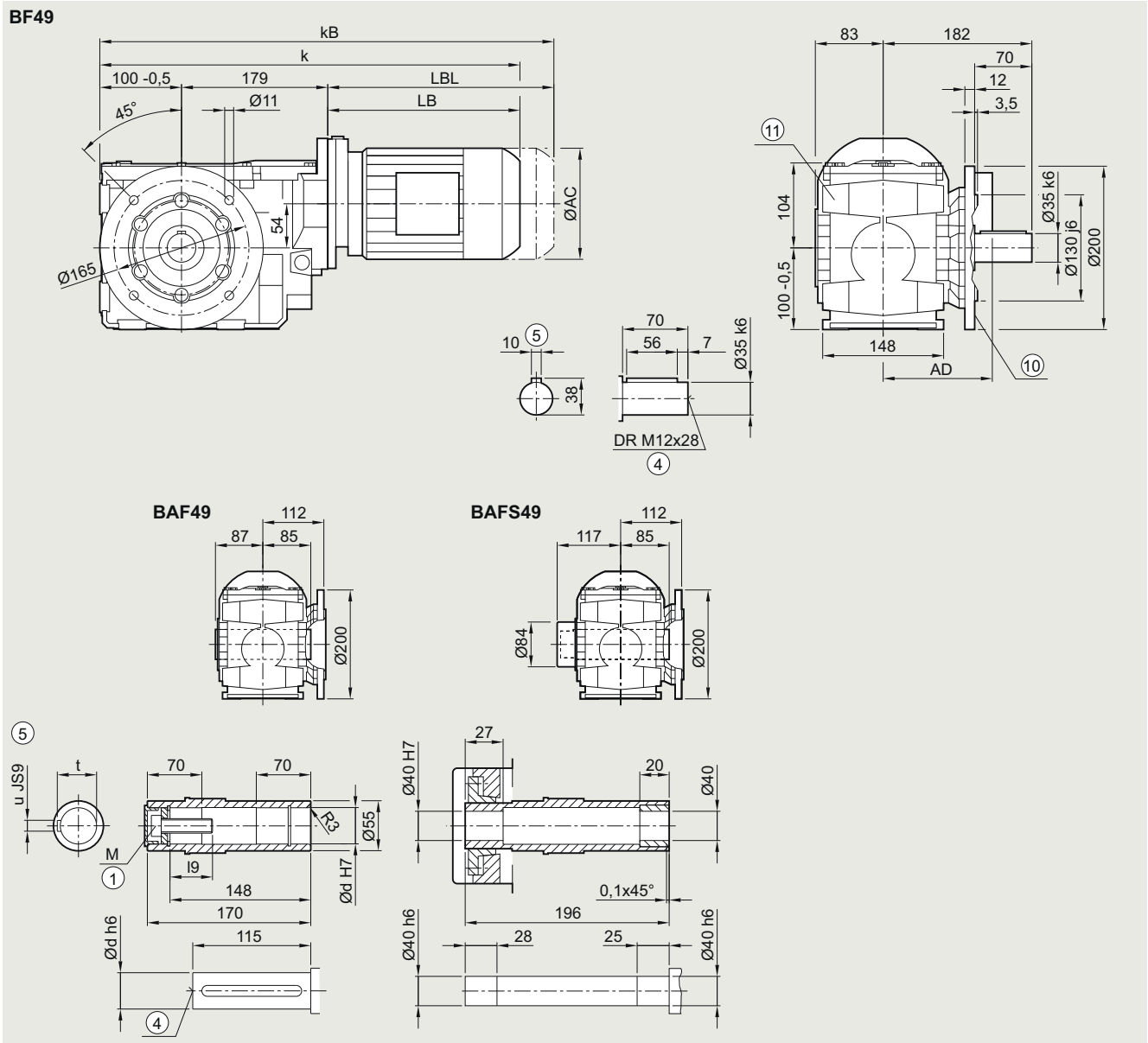
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑥ Use bores only for housing flange design

**Gearbox B.F.49 in a flange-mounted design**

**BF030, BAF030, BAFS030**



5

Shaft	d	i9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

Motor	LE														
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	463.5	489.5	495.5	514.5	554.5	559.5	594.5	621.0	661.0	677.5	712.5	687.5	722.0	740.5	790.5
kB	508.0	534.0	550.5	569.5	609.5	619.5	654.5	691.0	731.0	756.0	791.0	760.5	795.0	845.0	895.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 5/136

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑪ Use bores only for foot-mounted design

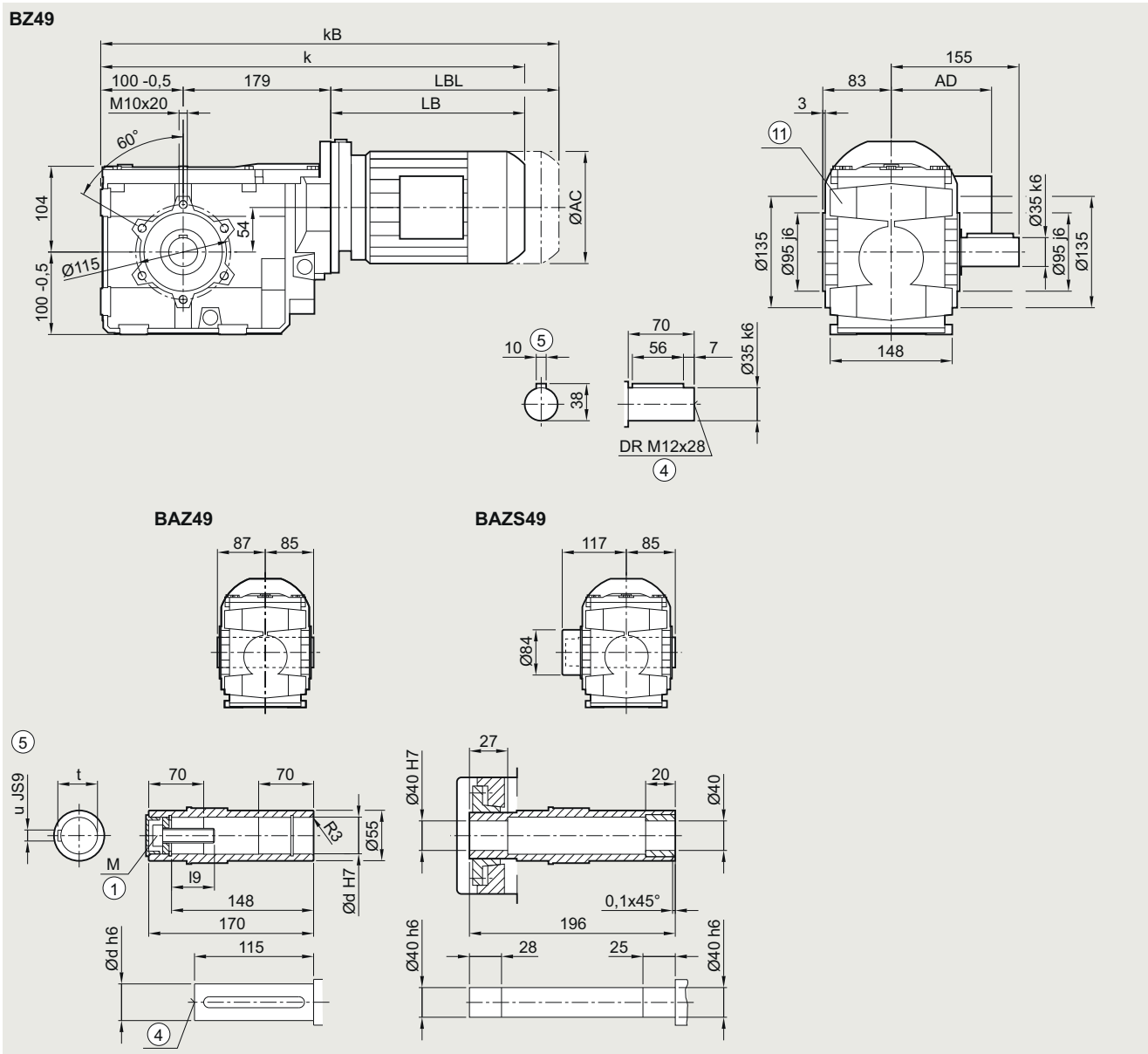
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox B.Z.49 in a housing flange design

BZ030, BAZ030, BAZS030



Shaft	d	I9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	463.5	489.5	495.5	514.5	554.5	559.5	594.5	621.0	661.0	677.5	712.5	687.5	722.0	740.5	790.5
kB	508.0	534.0	550.5	569.5	609.5	619.5	654.5	691.0	731.0	756.0	791.0	760.5	795.0	845.0	895.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014

④ DIN 332

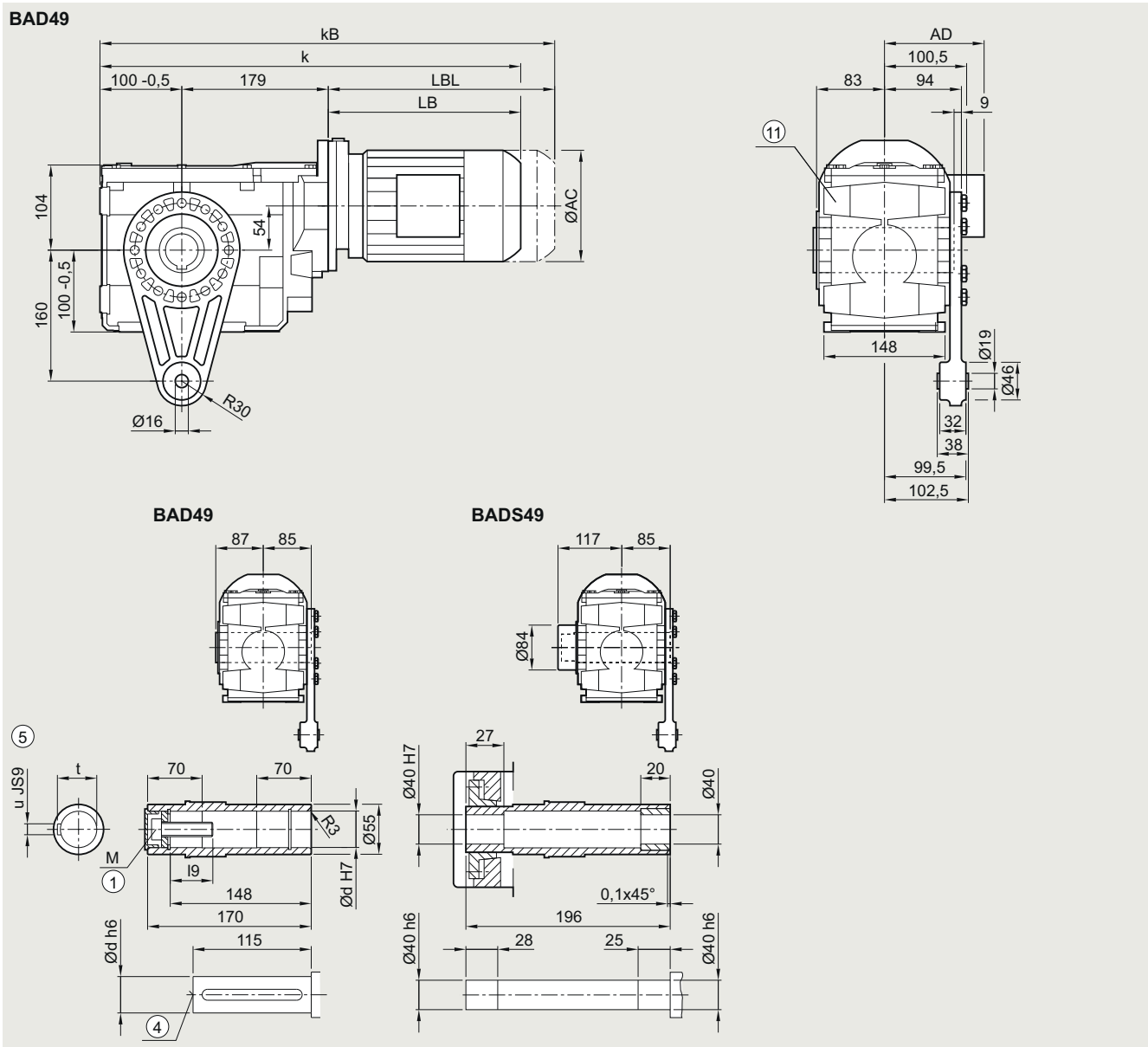
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design

**Gearbox BAD.49 in a shaft-mounted design**

**BAD030, BADS030**



5

Shaft	d	I9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	463.5	489.5	495.5	514.5	554.5	559.5	594.5	621.0	661.0	677.5	712.5	687.5	722.0	740.5	790.5
kB	508.0	534.0	550.5	569.5	609.5	619.5	654.5	691.0	731.0	756.0	791.0	760.5	795.0	845.0	895.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ Use bores only for foot-mounted design

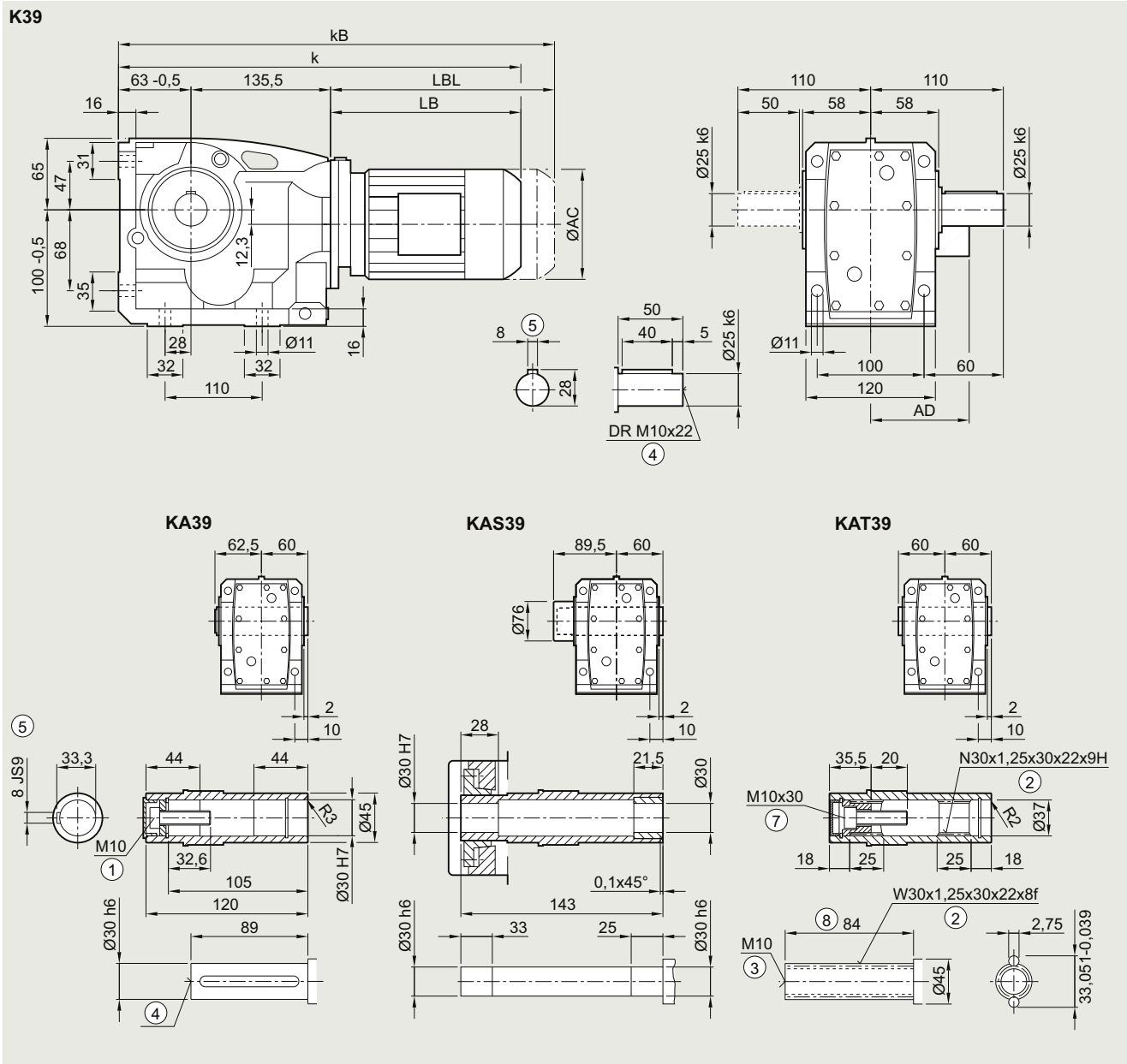
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K..39 in a foot-mounted design

**K030, KA030, KAS030, KAT030**



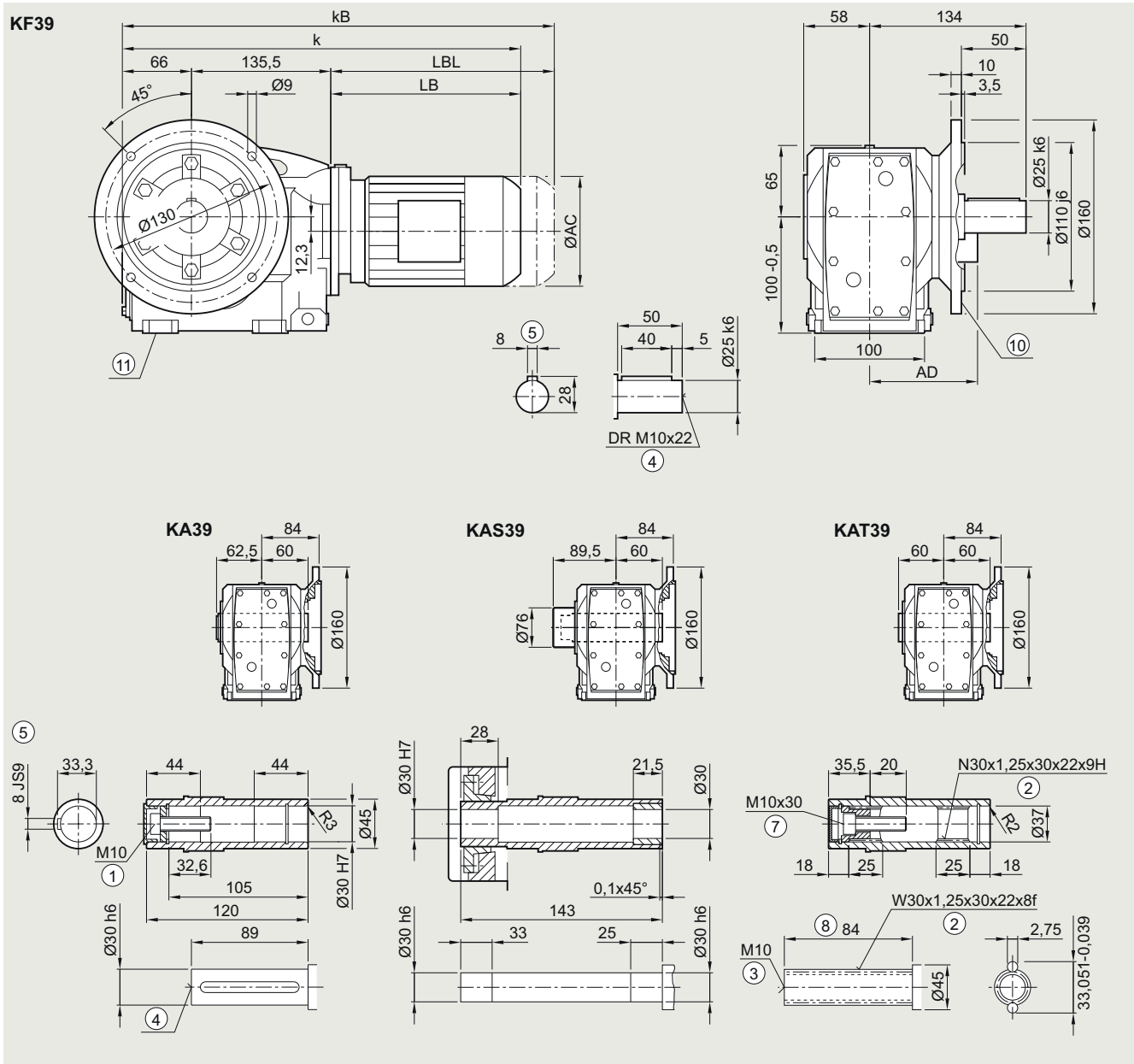
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	392.0	418.0	424.0	443.0	483.0	488.0	523.0	549.5	589.5	606.0	641.0	616.0	641.0
kB	436.5	462.5	479.0	498.0	538.0	548.0	583.0	619.5	659.5	684.5	719.5	689.0	714.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.F.39 in a flange-mounted design**

**KF030, KAF030, KAFS030, KAFT030**



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	395.0	421.0	427.0	446.0	486.0	491.0	526.0	552.5	592.5	609.0	644.0	619.0	644.0
kB	439.5	465.5	482.0	501.0	541.0	551.0	586.0	622.5	662.5	687.5	722.5	692.0	717.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 5/136    ⑪ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

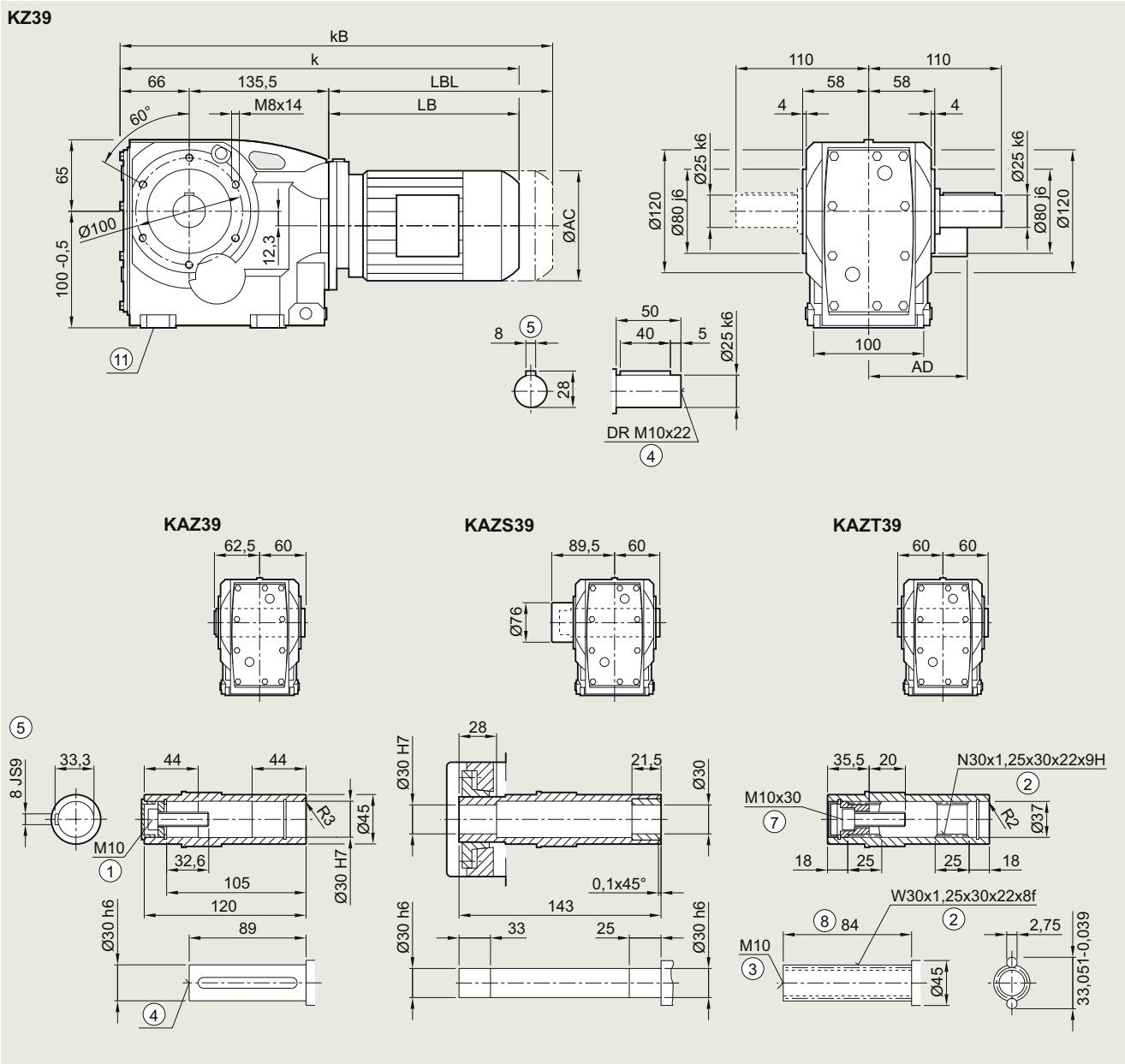
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.Z.39 in a housing flange design

KZ030, KAZ030, KAZS030, KAZT030



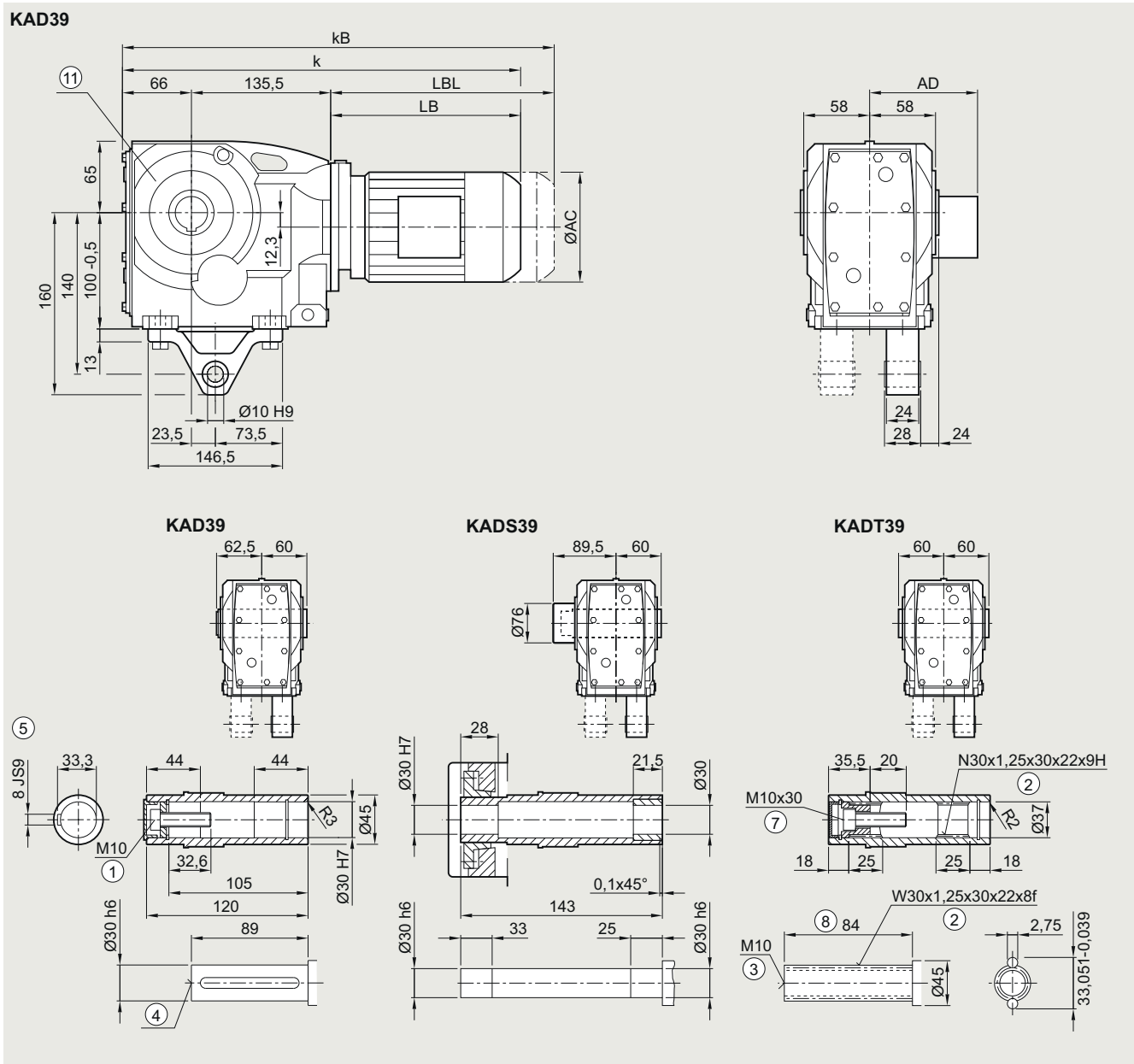
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	395.0	421.0	427.0	446.0	486.0	491.0	526.0	552.5	592.5	609.0	644.0	619.0	644.0
kB	439.5	465.5	482.0	501.0	541.0	551.0	586.0	622.5	662.5	687.5	722.5	692.0	717.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox KAD.39 in a shaft-mounted design**

**KAD031, KADS031, KADT031**



Motor	LE													
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	
k	395.0	421.0	427.0	446.0	486.0	491.0	526.0	552.5	592.5	609.0	644.0	619.0	644.0	
kB	439.5	465.5	482.0	501.0	541.0	551.0	586.0	622.5	662.5	687.5	722.5	692.0	717.0	
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0	418.0	443.0	
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5	491.0	516.0	

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for housing flange design 1) AD depends on the motor options, for other dimensions, see page 9/46.

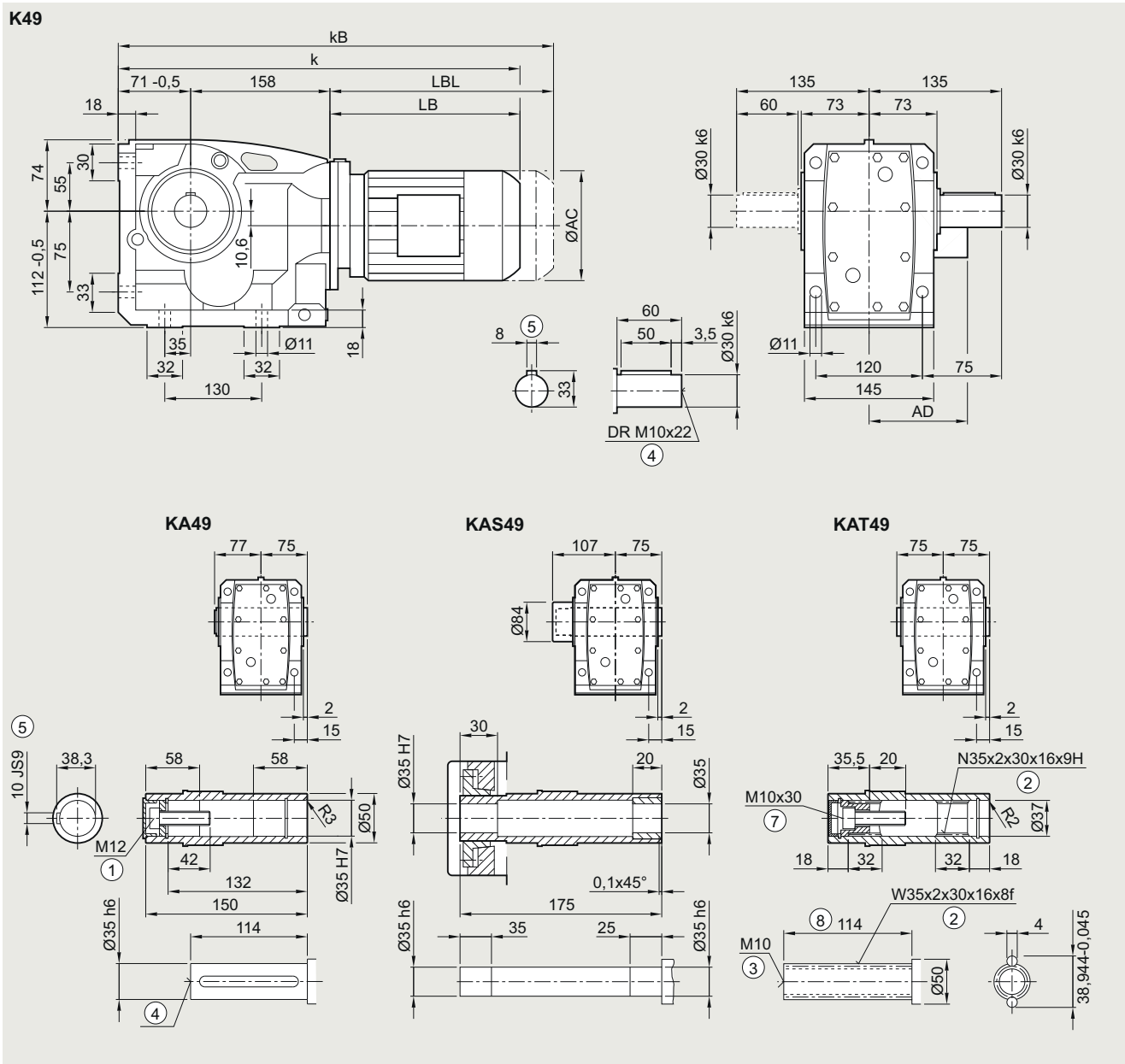
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K..49 in a foot-mounted design

K030, KA030, KAS030, KAT030



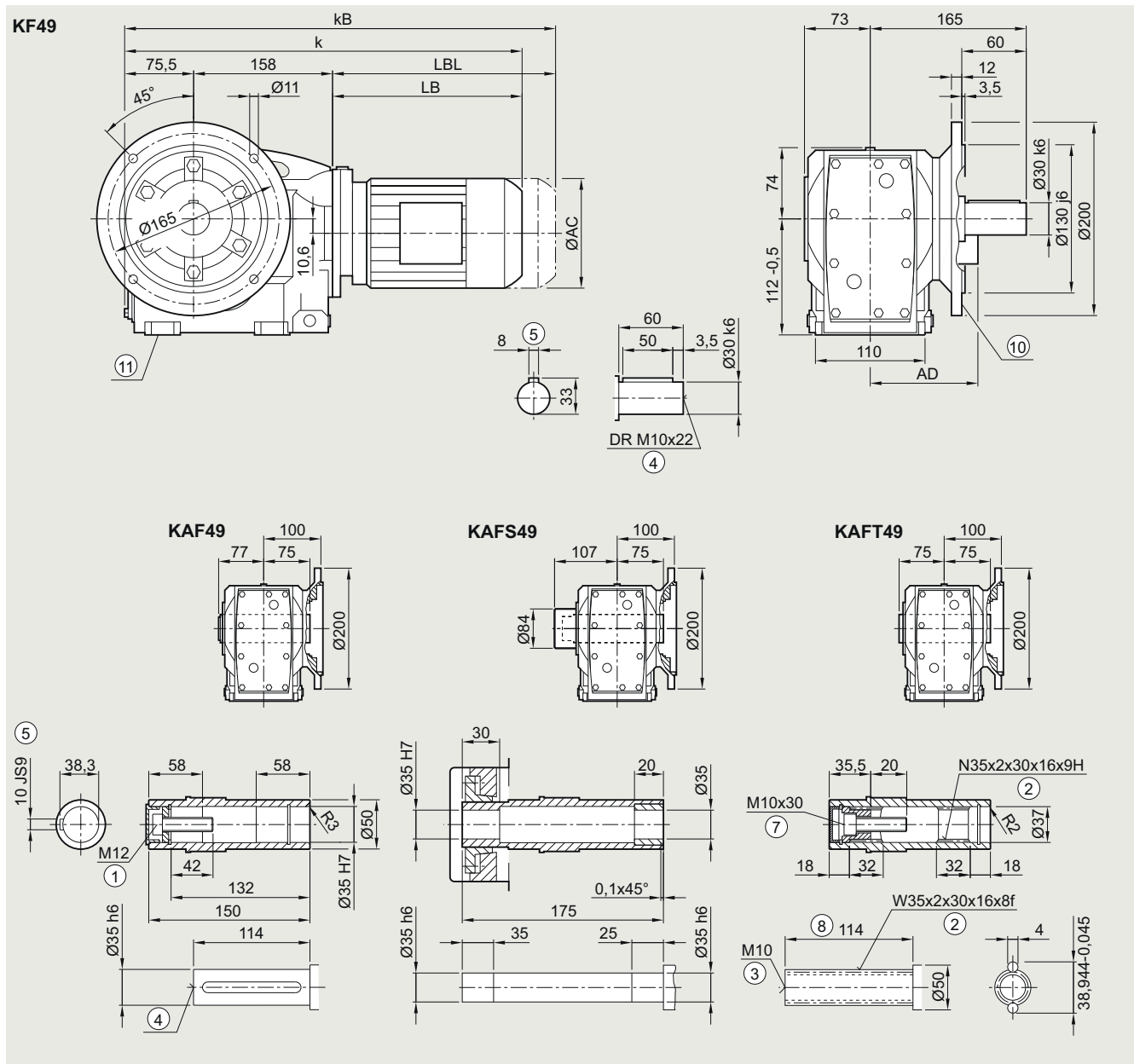
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	413.5	439.5	445.5	464.5	504.5	509.5	544.5	571.0	611.0	627.5	662.5	637.5	672.0	690.5	740.5
kB	458.0	484.0	500.5	519.5	559.5	569.5	604.5	641.0	681.0	706.0	741.0	710.5	745.0	795.0	845.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.F.49 in a flange-mounted design**

**KF030, KAF030, KAFS030, KAFT030**



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	418.0	444.0	450.0	469.0	509.0	514.0	549.0	575.5	615.5	632.0	667.0	642.0	676.5	695.0	745.0
kB	462.5	488.5	505.0	524.0	564.0	574.0	609.0	645.5	685.5	710.5	745.5	715.0	749.5	799.5	849.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/136    ⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

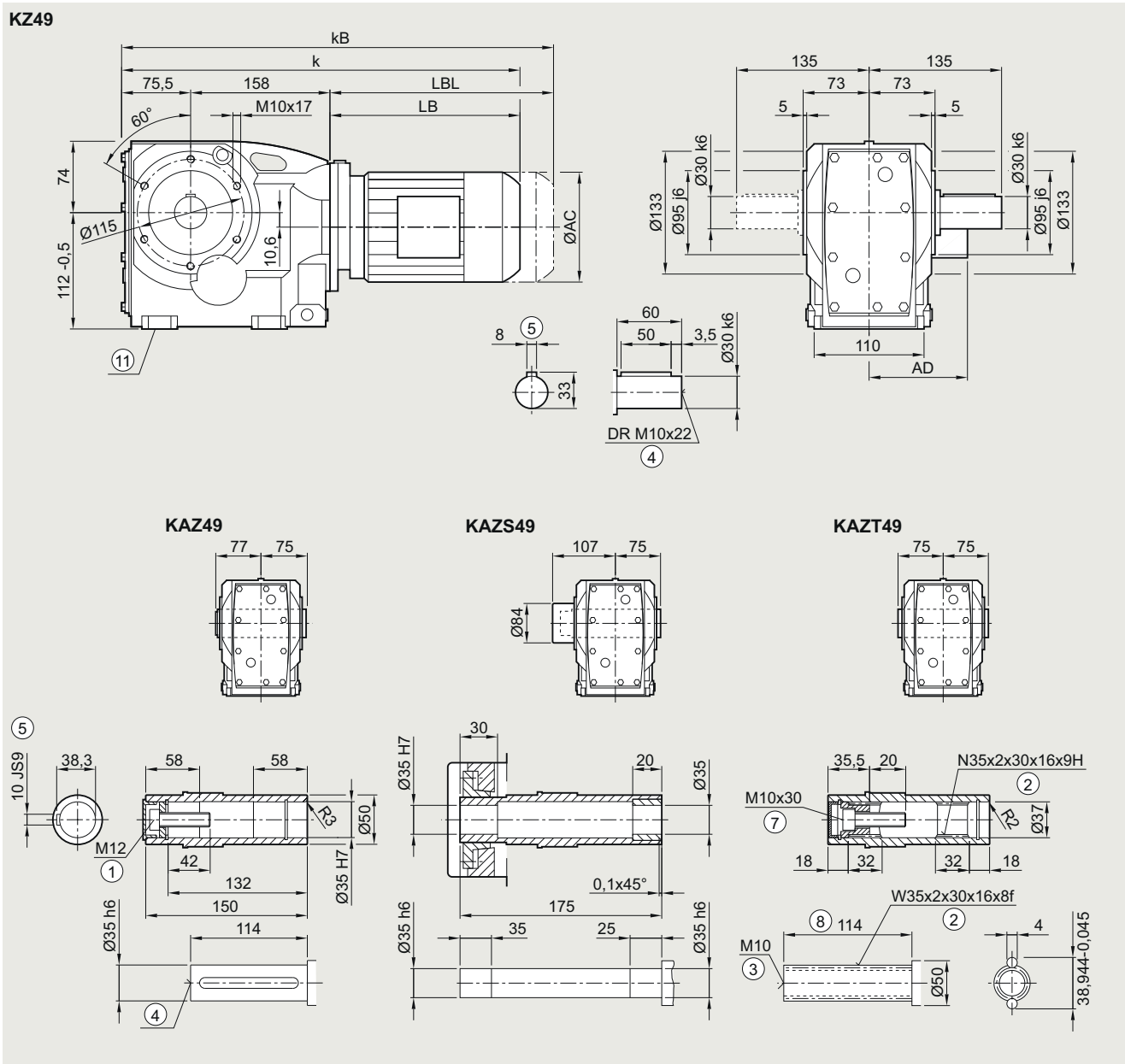
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.Z.49 in a housing flange design

KZ030, KAZ030, KAZS030, KAZT030

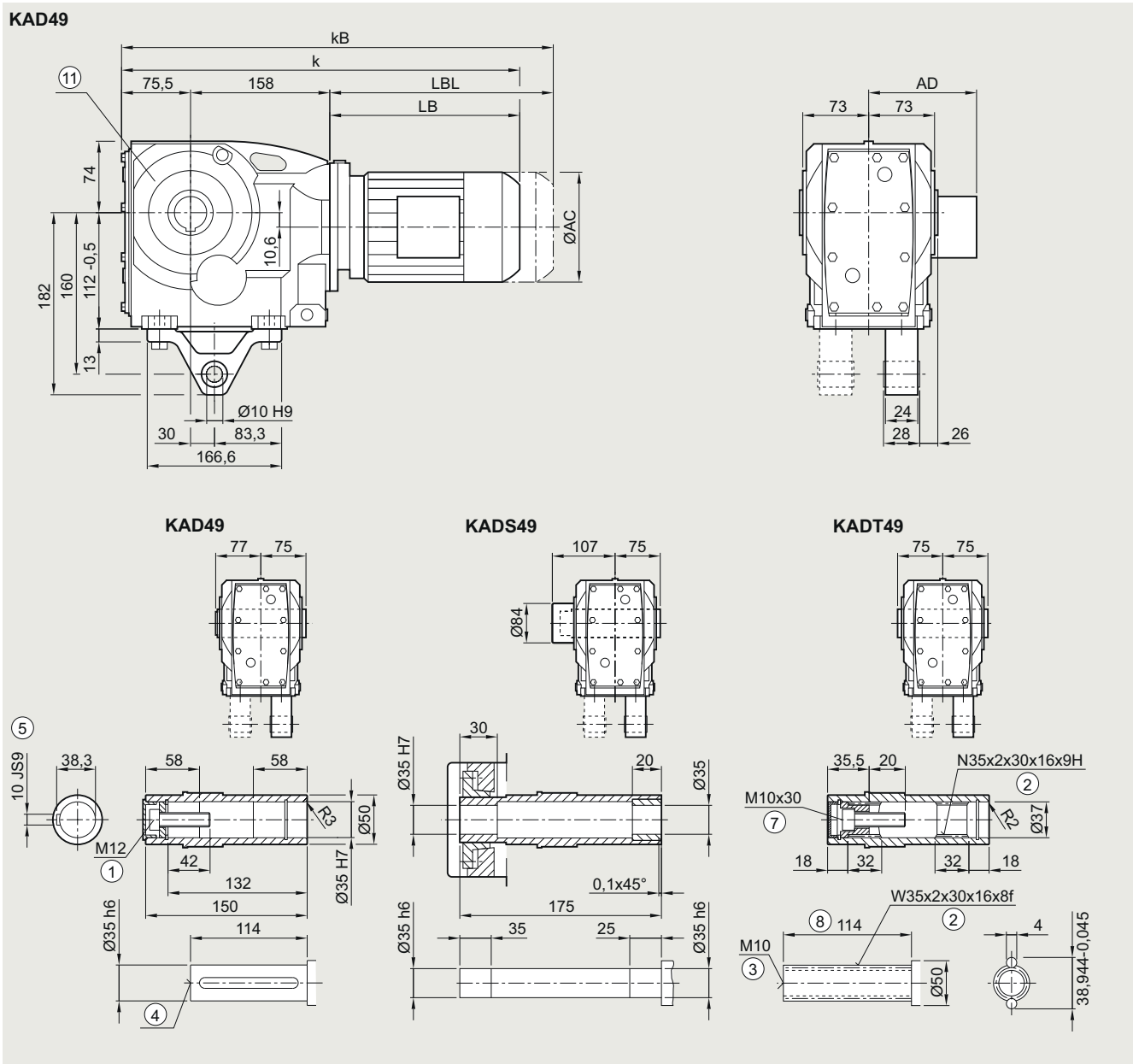


Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	418.0	444.0	450.0	469.0	509.0	514.0	549.0	575.5	615.5	632.0	667.0	642.0	676.5	695.0	745.0
kB	462.5	488.5	505.0	524.0	564.0	574.0	609.0	645.5	685.5	710.5	745.5	715.0	749.5	799.5	849.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design    1) AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox KAD.49 in a shaft-mounted design**

**KAD031, KADS031, KADT031**



Motor	LE															
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	
k	418.0	444.0	450.0	469.0	509.0	514.0	549.0	575.5	615.5	632.0	667.0	642.0	676.5	695.0	745.0	
kB	462.5	488.5	505.0	524.0	564.0	574.0	609.0	645.5	685.5	710.5	745.5	715.0	749.5	799.5	849.5	
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5	
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for housing flange design    ⑩ AD depends on the motor options, for other dimensions, see page 9/46.

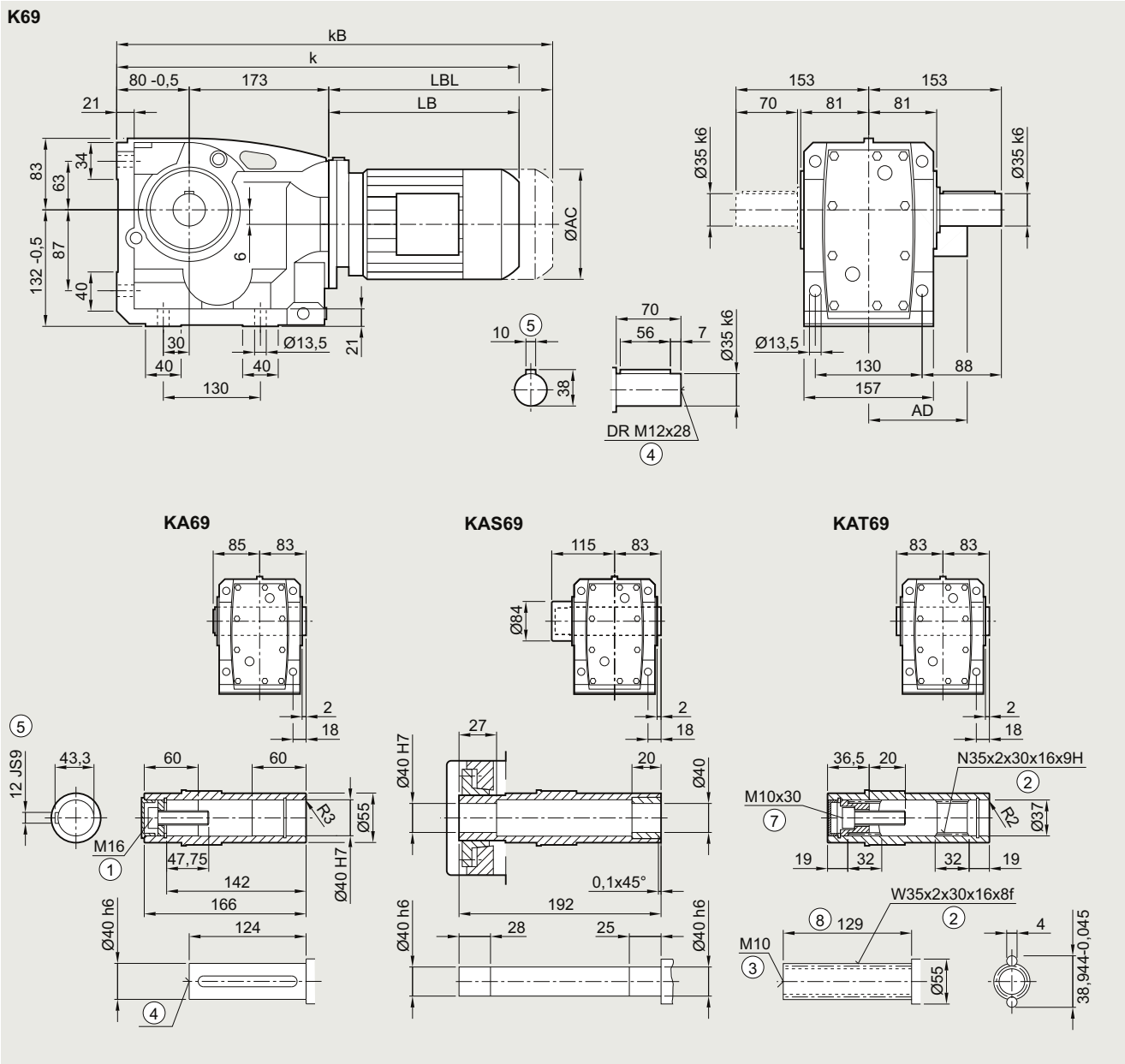
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K..69 in a foot-mounted design

K030, KA030, KAS030, KAT030



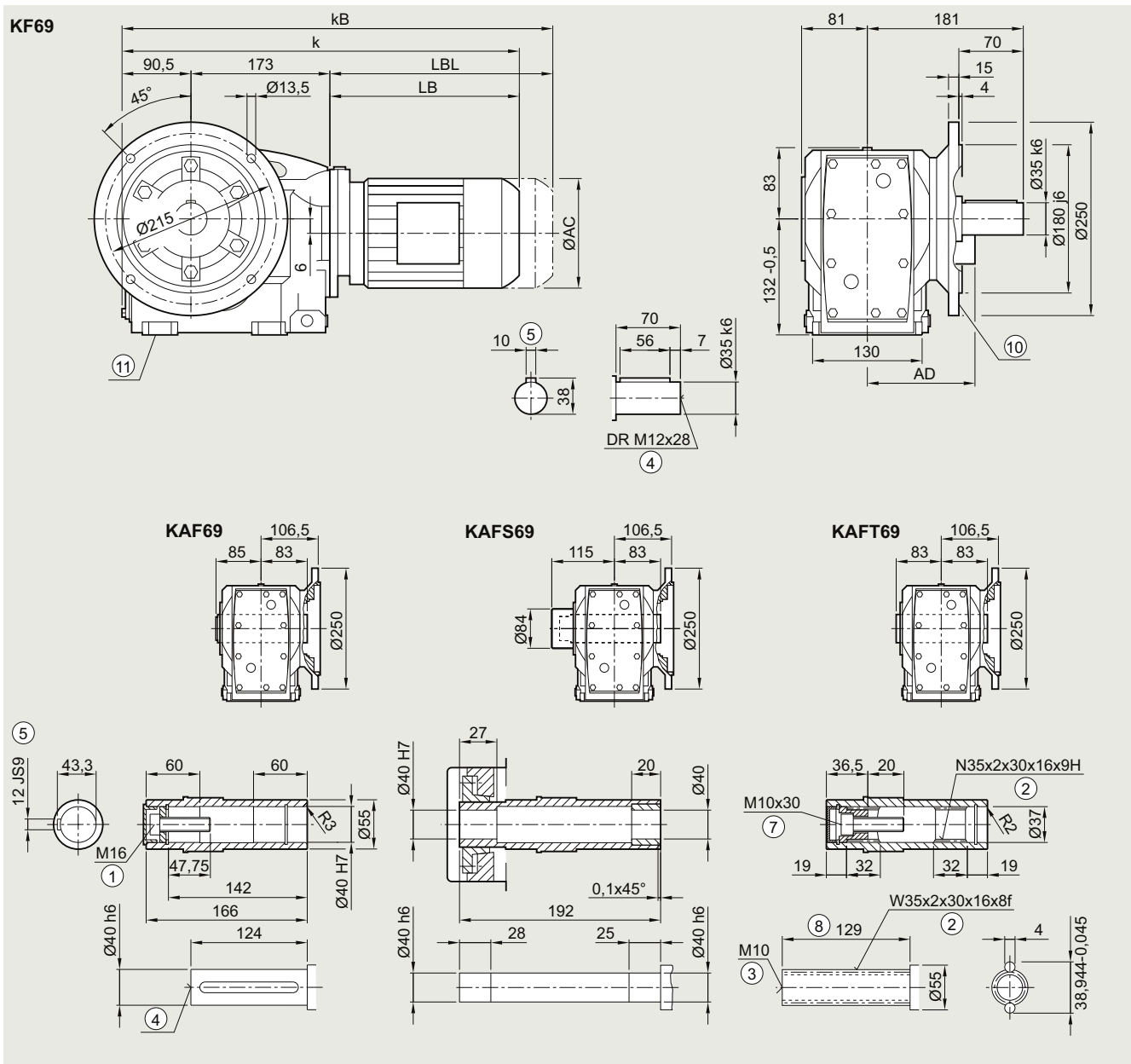
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	437.5	463.5	469.5	488.5	528.5	533.5	568.5	595.0	635.0	651.5	686.5	661.5	696.0	714.5	764.5
kB	482.0	508.0	524.5	543.5	583.5	593.5	628.5	665.0	705.0	730.0	765.0	734.5	769.0	819.0	869.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.F.69 in a flange-mounted design**

**KF030, KAF030, KAFS030, KAFT030**



Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	448.0	474.0	480.0	499.0	539.0	544.0	579.0	605.5	645.5	662.0	697.0	672.0	706.5	725.0	775.0
kB	492.5	518.5	535.0	554.0	594.0	604.0	639.0	675.5	715.5	740.5	775.5	745.0	779.5	829.5	879.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 5/136

⑪ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

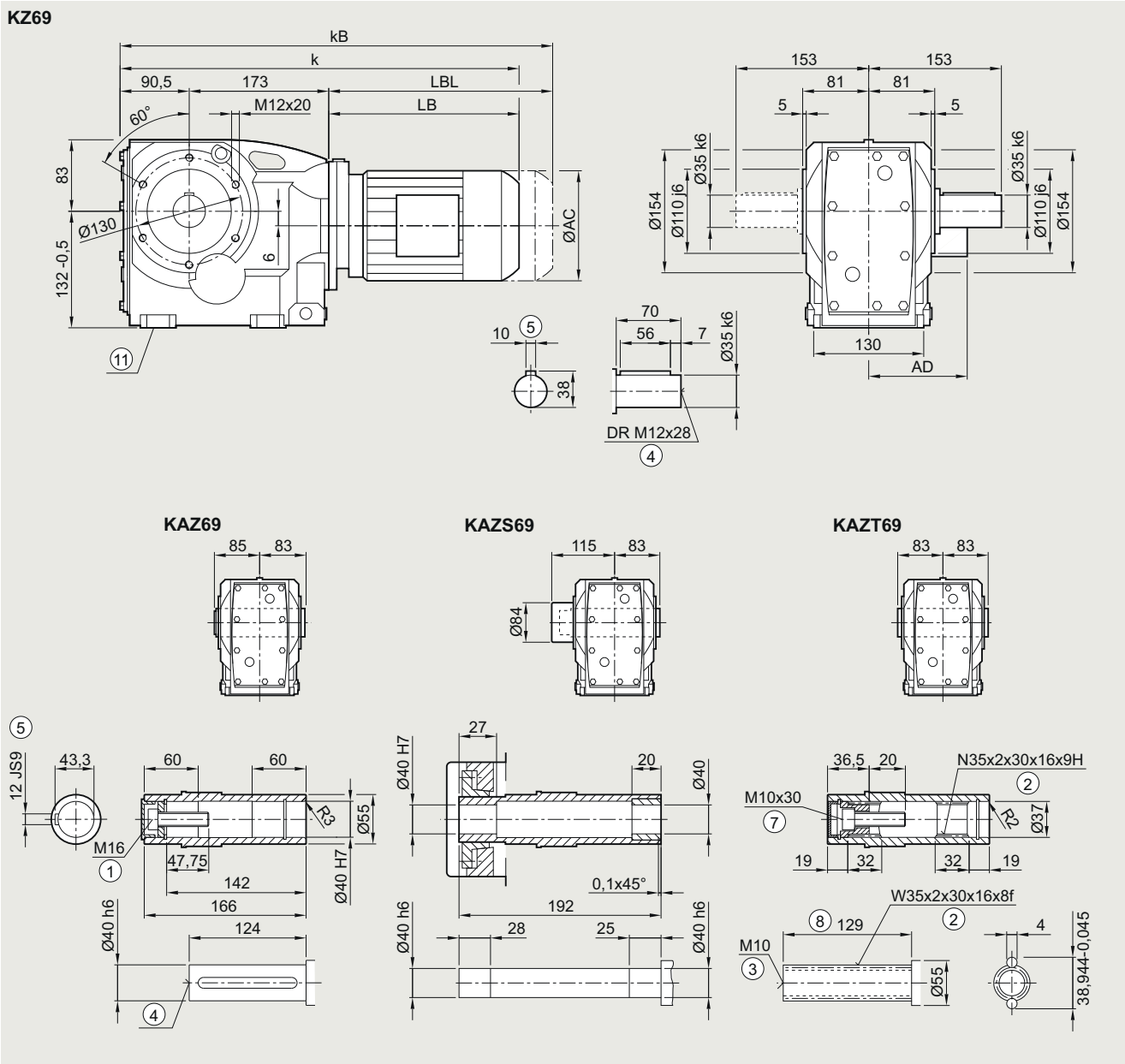
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.Z.69 in a housing flange design

KZ030, KAZ030, KAZS030, KAZT030



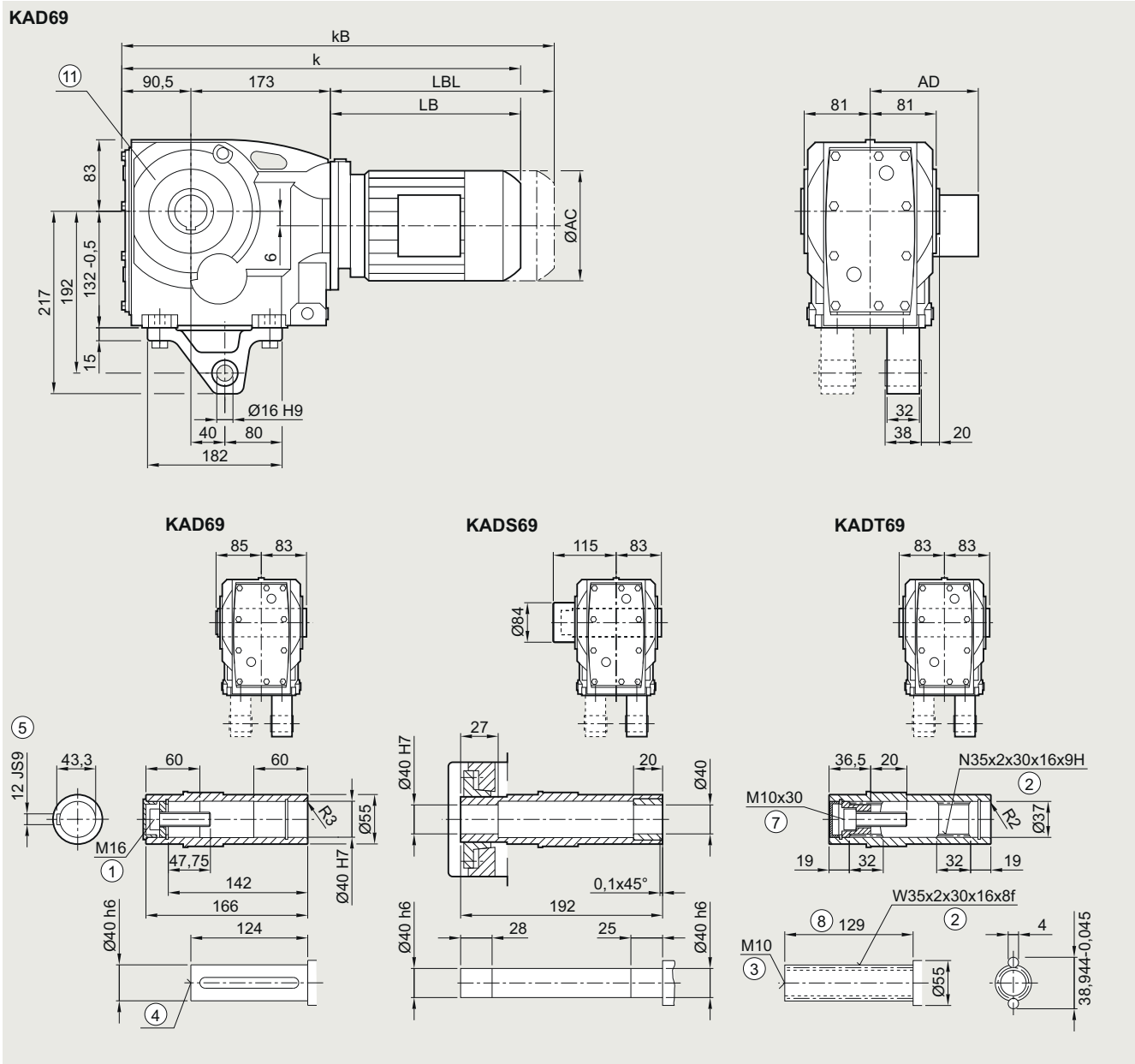
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	448.0	474.0	480.0	499.0	539.0	544.0	579.0	605.5	645.5	662.0	697.0	672.0	706.5	725.0	775.0
kB	492.5	518.5	535.0	554.0	594.0	604.0	639.0	675.5	715.5	740.5	775.5	745.0	779.5	829.5	879.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox KAD.69 in a shaft-mounted design**

**KAD030, KADS030, KADT030**



5

Motor	LE	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC		117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>		124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k		448.0	474.0	480.0	499.0	539.0	544.0	579.0	605.5	645.5	662.0	697.0	672.0	706.5	725.0	775.0
kB		492.5	518.5	535.0	554.0	594.0	604.0	639.0	675.5	715.5	740.5	775.5	745.0	779.5	829.5	879.5
LB		184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL		229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm  
 ⑧ Use bores only for housing flange design    ⑨ AD depends on the motor options, for other dimensions, see page 9/46.

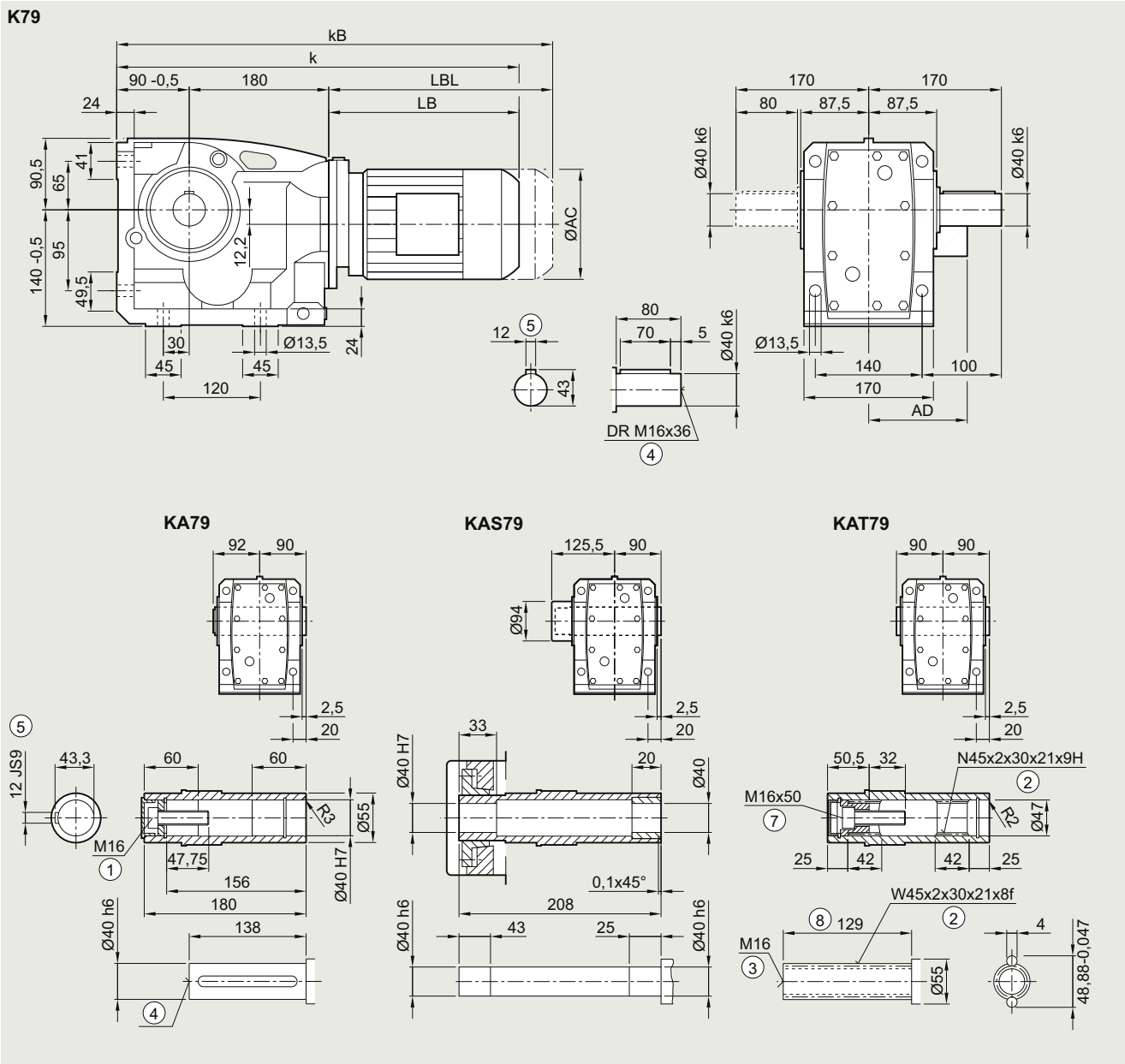
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K..79 in a foot-mounted design

K030, KA030, KAS030, KAT030



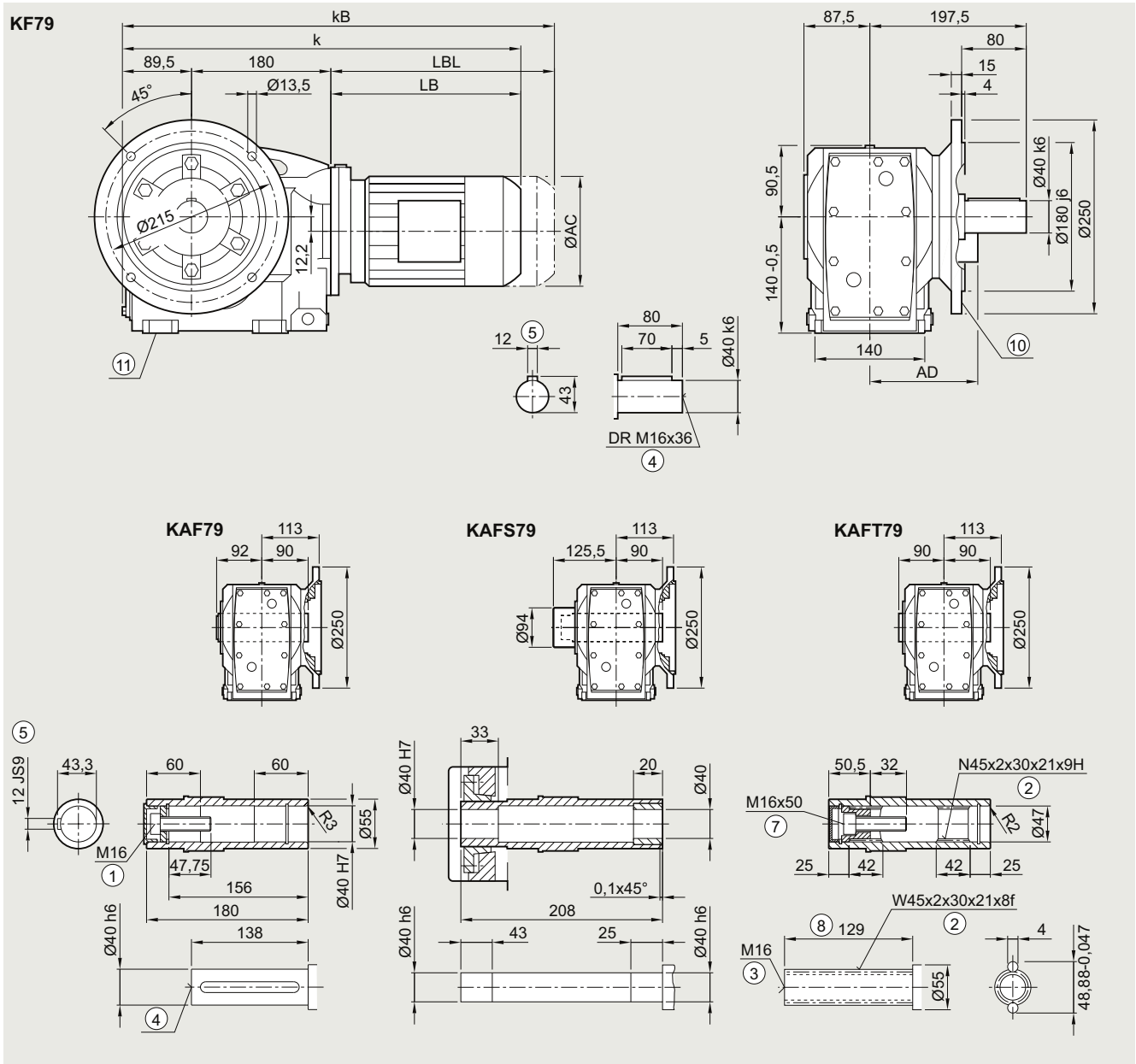
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	454.5	480.5	486.5	505.5	545.5	550.5	585.5	612.0	652.0	668.5	703.5	678.5	713.0	731.5	781.5
kB	499.0	525.0	541.5	560.5	600.5	610.5	645.5	682.0	722.0	747.0	782.0	751.5	786.0	836.0	886.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑥ ISO 4762 ⑦ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.F.79 in a flange-mounted design**

**KF030, KAF030, KAFS030, KAFT030**



**5**

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	454.0	480.0	486.0	505.0	545.0	550.0	585.0	611.5	651.5	668.0	703.0	678.5	712.5	731.0	781.0
kB	498.5	524.5	541.0	560.0	600.0	610.0	645.0	681.5	721.5	746.5	781.5	751.0	785.5	835.5	885.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/136

⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

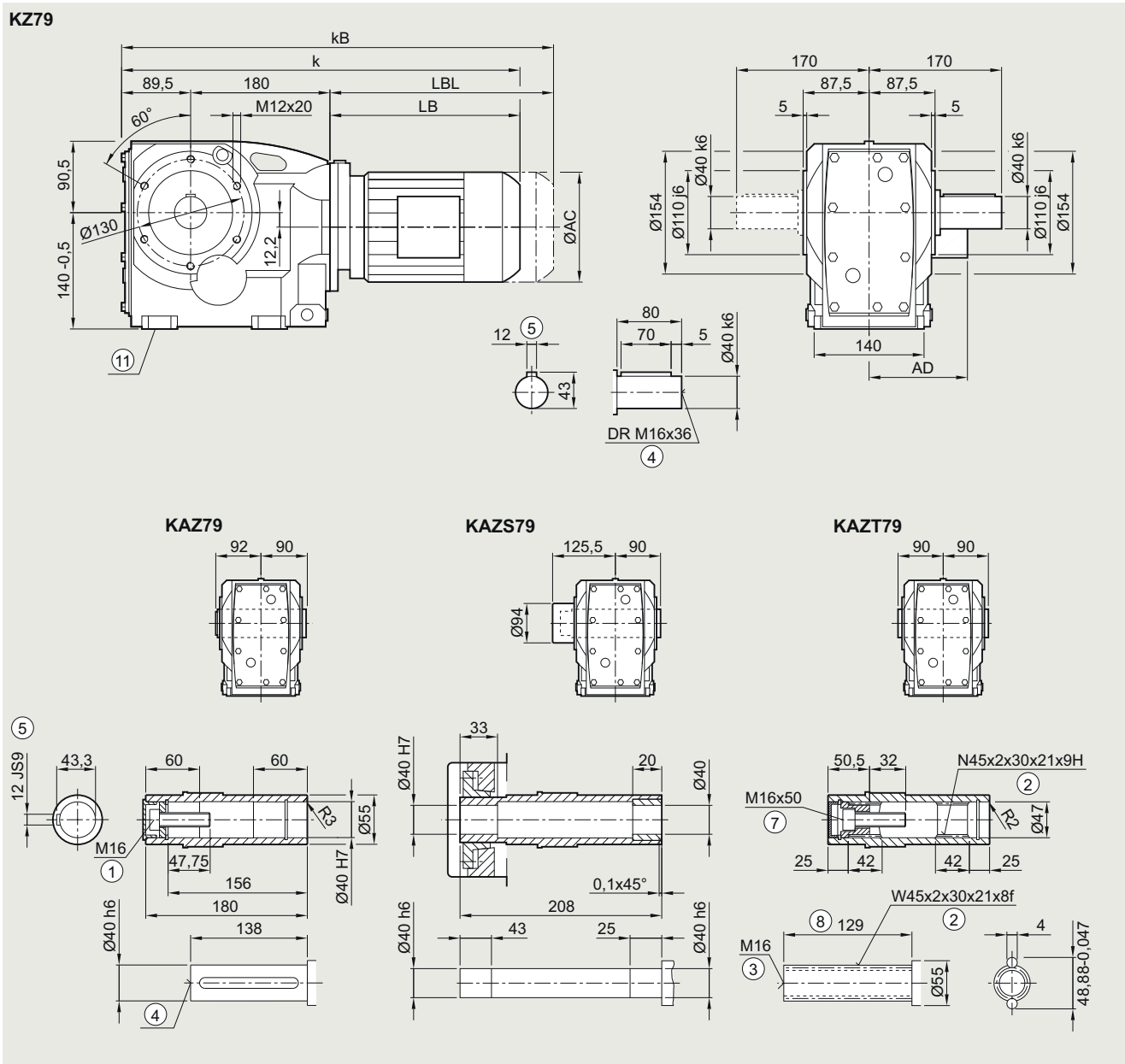
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.Z.79 in a housing flange design

KZ030, KAZ030, KAZS030, KAZT030

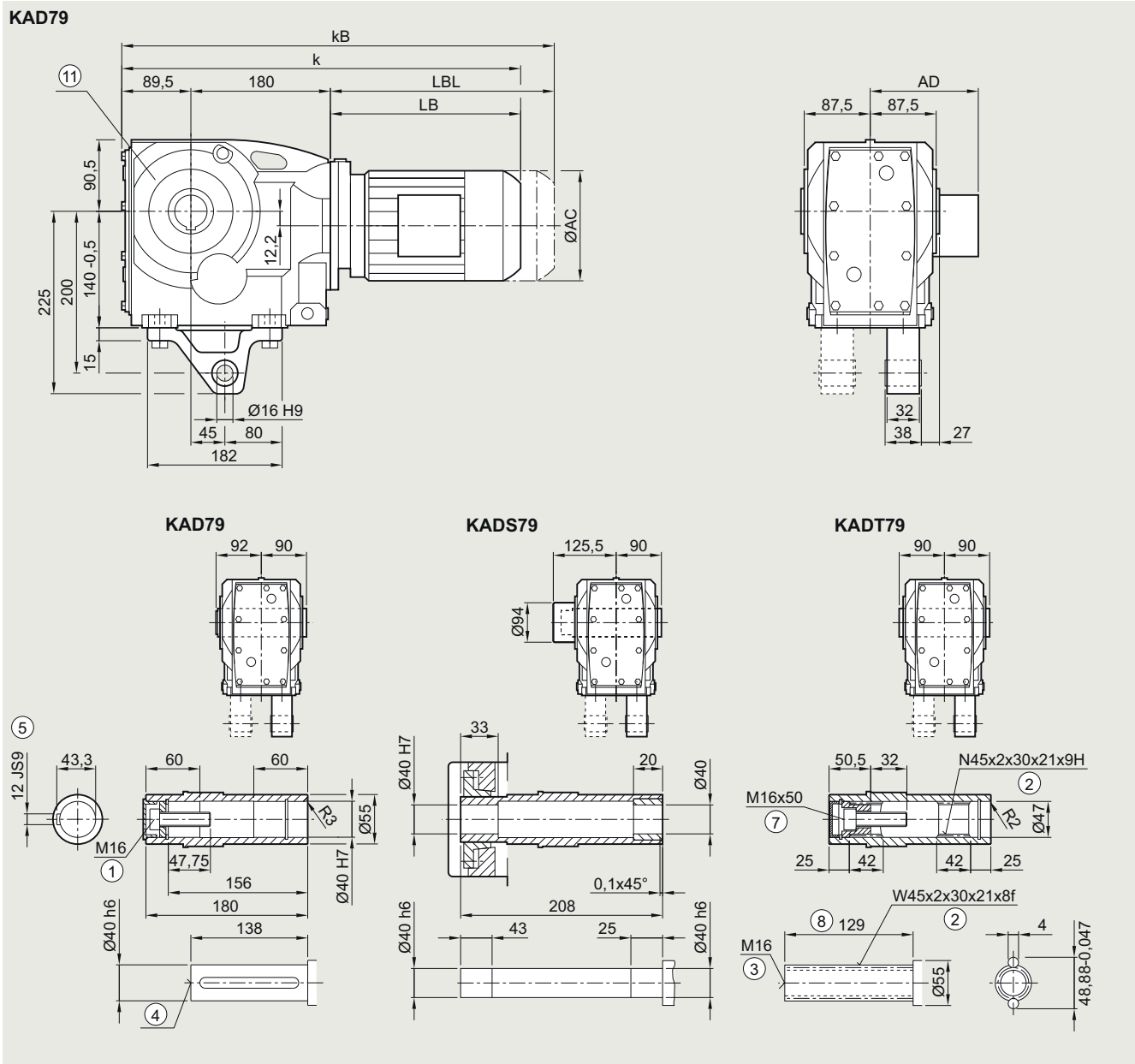


Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	454.0	480.0	486.0	505.0	545.0	550.0	585.0	611.5	651.5	668.0	703.0	678.5	712.5	731.0	781.0
kB	498.5	524.5	541.0	560.0	600.0	610.0	645.0	681.5	721.5	746.5	781.5	751.0	785.5	835.5	885.5
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm  
 ⑧ Use bores only for foot-mounted design    ⑨ AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox KAD.79 in a shaft-mounted design**

**KAD030, KADS030, KADT030**



5

Motor	LE															
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	
k	454.0	480.0	486.0	505.0	545.0	550.0	585.0	611.5	651.5	668.0	703.0	678.5	712.5	731.0	781.0	
kB	498.5	524.5	541.0	560.0	600.0	610.0	645.0	681.5	721.5	746.5	781.5	751.0	785.5	835.5	885.5	
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5	
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for housing flange design    1) AD depends on the motor options, for other dimensions, see page 9/46.

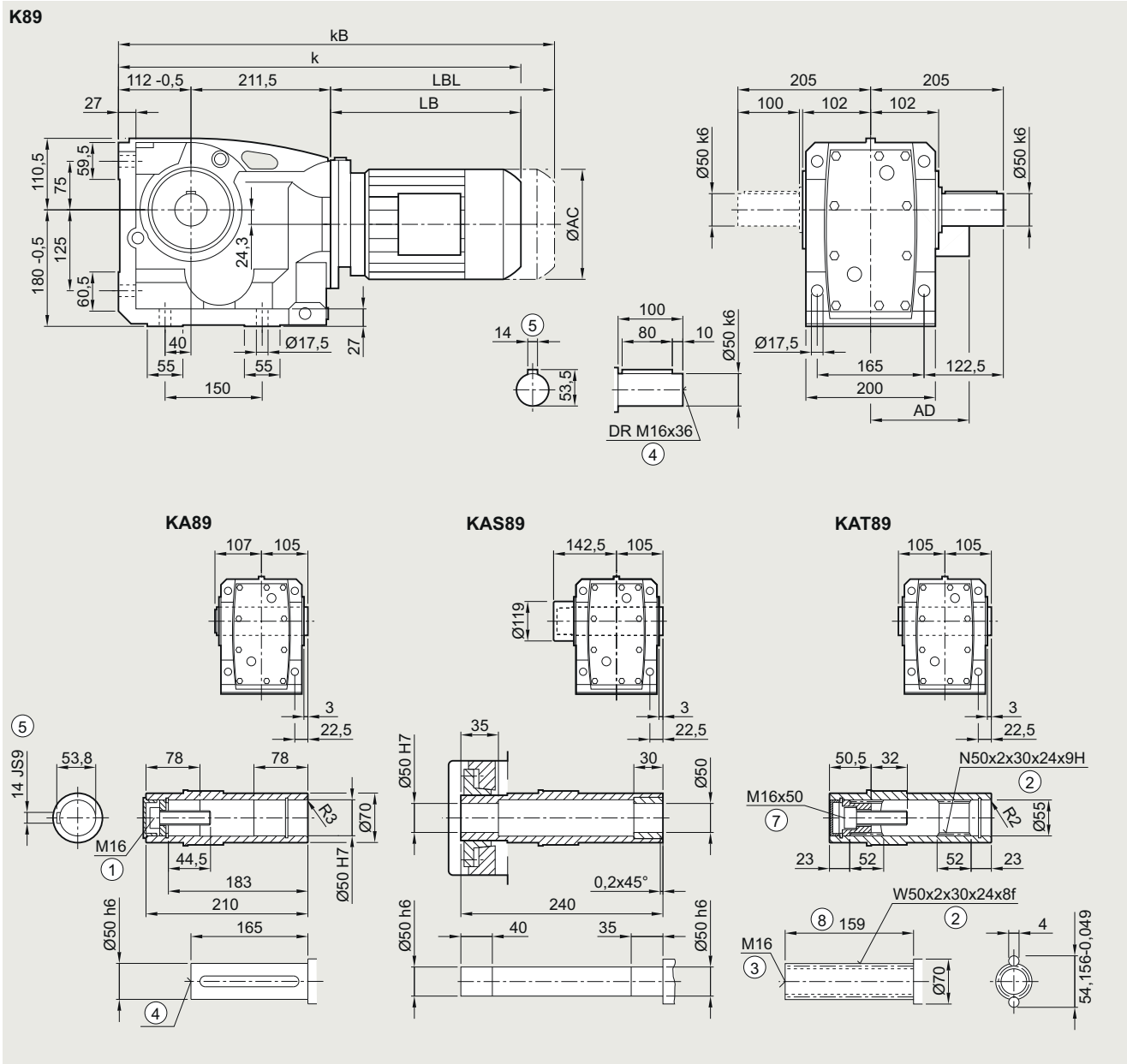
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K..89 in a foot-mounted design

K030, KA030, KAS030, KAT030



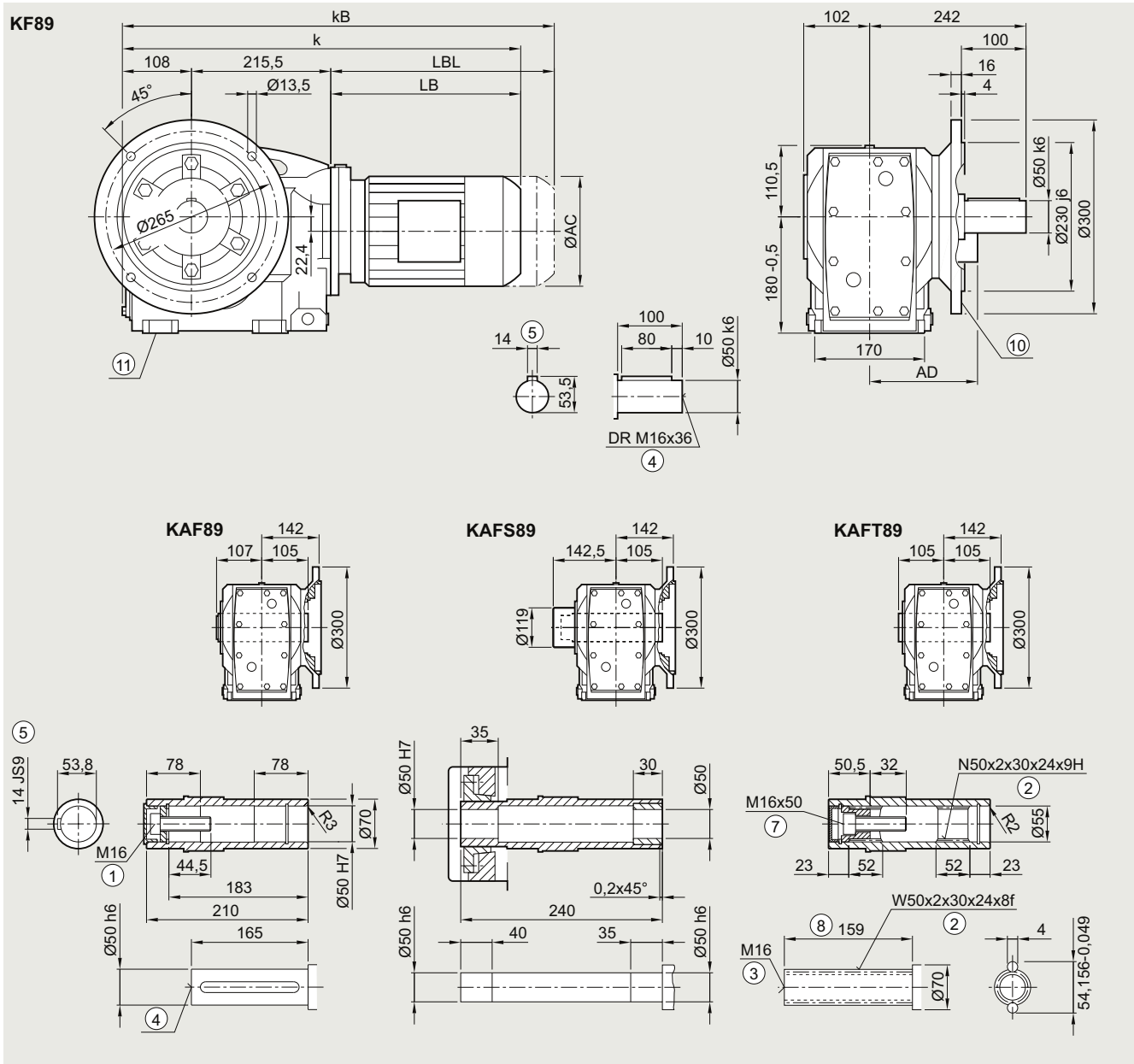
Motor	LE															
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	
k	538.0	557.0	597.0	598.0	633.0	659.5	699.5	716.0	751.0	726.0	751.0	779.0	829.0	861.0	921.0	
kB	593.0	612.0	652.0	658.0	693.0	729.5	769.5	794.5	829.5	799.0	824.0	883.5	933.5	977.0	1037.0	
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5	
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5	

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.F.89 in a flange-mounted design**

**KF030, KAF030, KAFS030, KAFT030**



Motor	LE 71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0
k	538.0	557.0	597.0	598.0	633.0	659.5	699.5	716.0	751.0	726.0	751.0	779.0	829.0	861.0	921.0
kB	593.0	612.0	652.0	658.0	693.0	729.5	769.5	794.5	829.5	799.0	824.0	883.5	933.5	977.0	1037.0
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/136    ⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

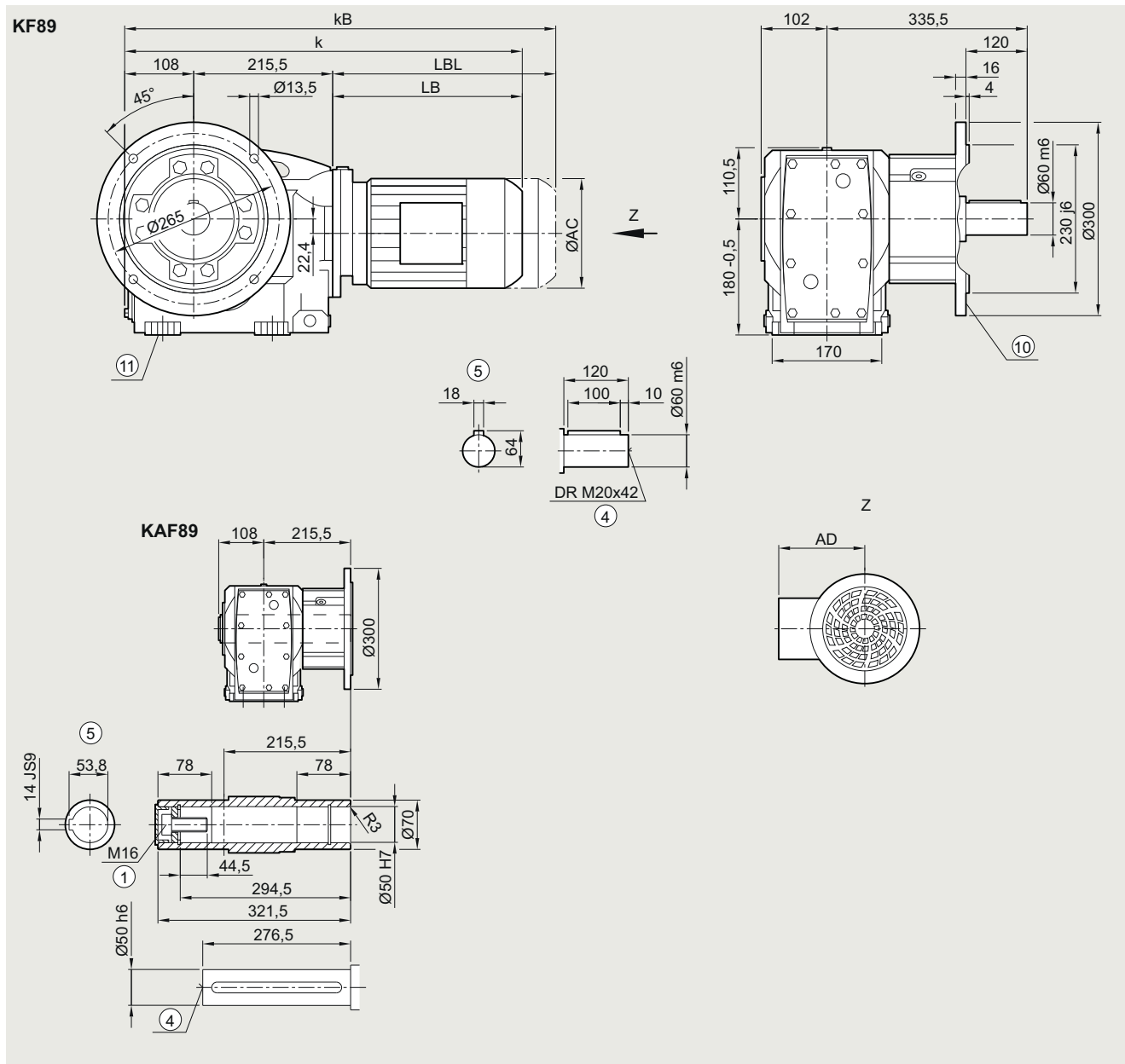
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.F.89 in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040, KAF040



Motor	LE															
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	
k	538.0	557.0	597.0	598.0	633.0	659.5	699.5	716.0	751.0	726.0	751.0	779.0	829.0	861.0	921.0	
kB	593.0	612.0	652.0	658.0	693.0	729.5	769.5	794.5	829.5	799.0	824.0	883.5	933.5	977.0	1037.0	
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5	
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5	

① ISO 4014    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑩ Use bores only for foot-mounted design

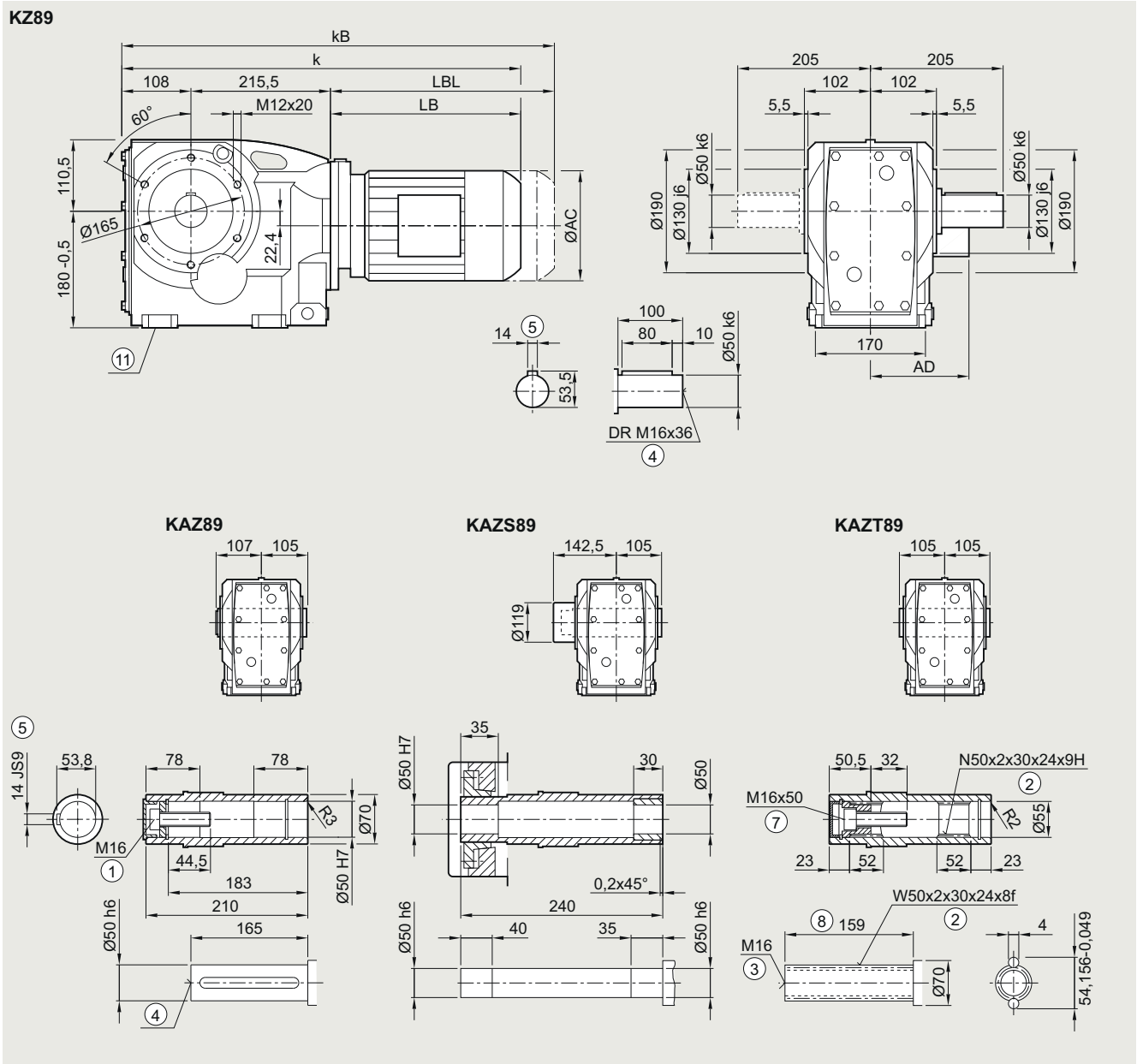
⑨ For inner contour, see page 5/136

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox K.Z.89 in a housing flange design**

**KZ030, KAZ030, KAZS030, KAZT030**



**5**

Motor	LE														
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0
k	538.0	557.0	597.0	598.0	633.0	659.5	699.5	716.0	751.0	726.0	751.0	779.0	829.0	861.0	921.0
kB	593.0	612.0	652.0	658.0	693.0	729.5	769.5	794.5	829.5	799.0	824.0	883.5	933.5	977.0	1037.0
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design    1) AD depends on the motor options, for other dimensions, see page 9/46.

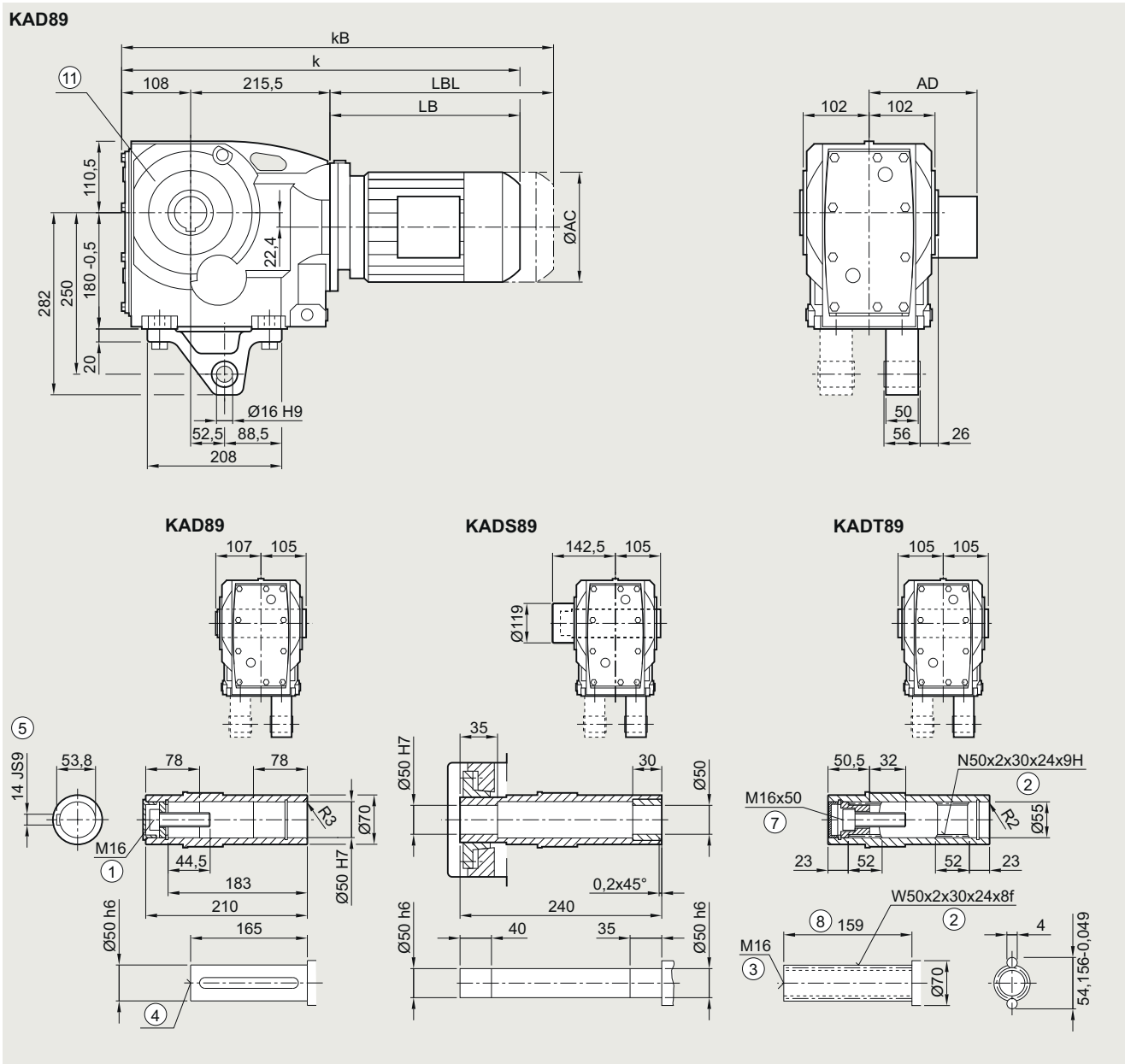
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox KAD.89 in a shaft-mounted design

KAD031, KADS031, KADT031

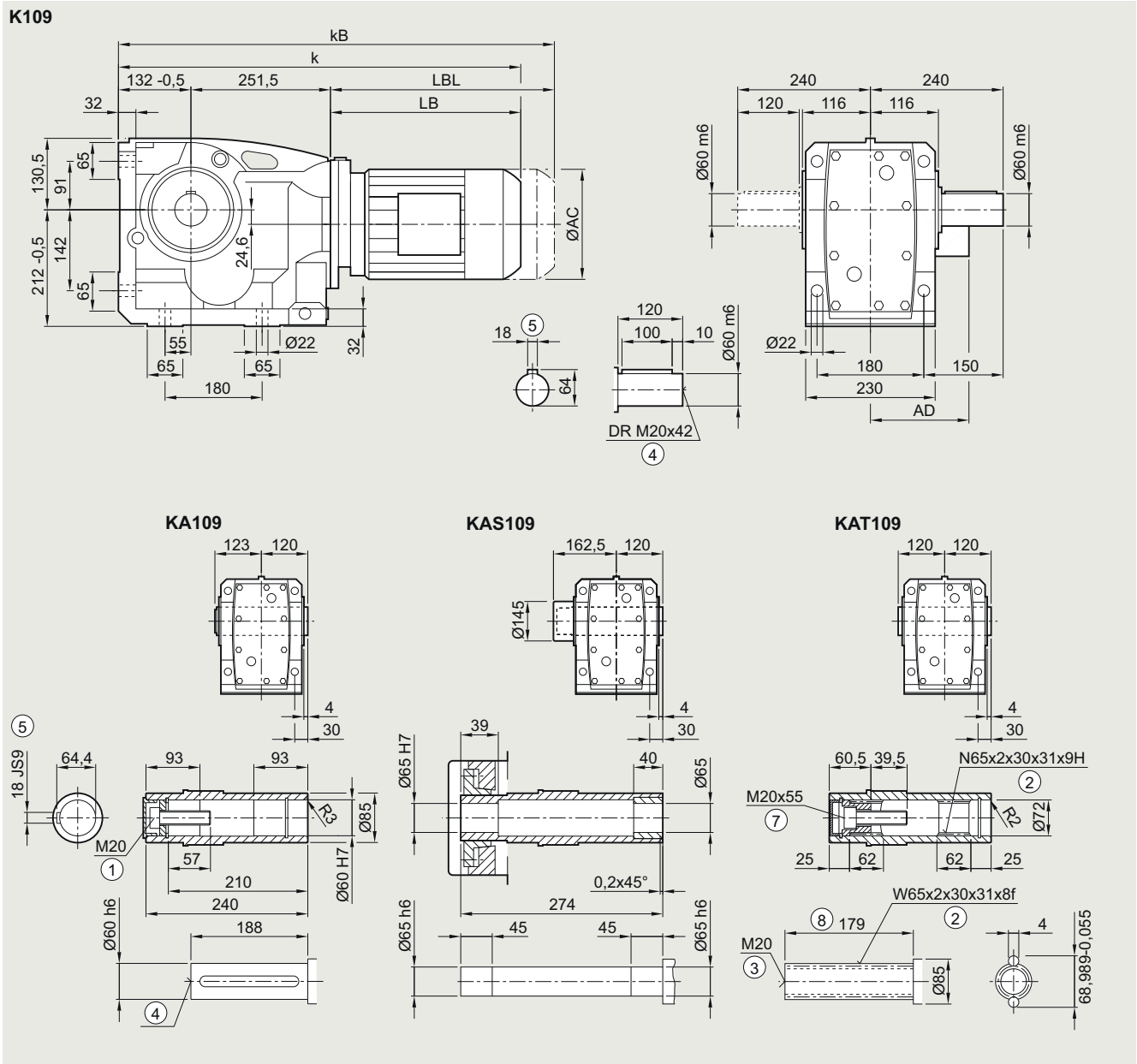


Motor	LE															
	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	
k	538.0	557.0	597.0	598.0	633.0	659.5	699.5	716.0	751.0	726.0	751.0	779.0	829.0	861.0	921.0	
kB	593.0	612.0	652.0	658.0	693.0	729.5	769.5	794.5	829.5	799.0	824.0	883.5	933.5	977.0	1037.0	
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5	537.5	597.5	
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0	653.5	713.5	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm  
 ⑧ Use bores only for housing flange design    ⑨ AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K..109 in a foot-mounted design**

**K030, KA030, KAS030, KAT030**



Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	645.0	680.0	706.5	746.5	759.0	794.0	769.0	794.0	822.0	872.0	904.0	964.0	977.0	1007.0
kB	705.0	740.0	776.5	816.5	837.5	872.5	842.0	867.0	926.5	976.5	1020.0	1080.0	1106.0	1136.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

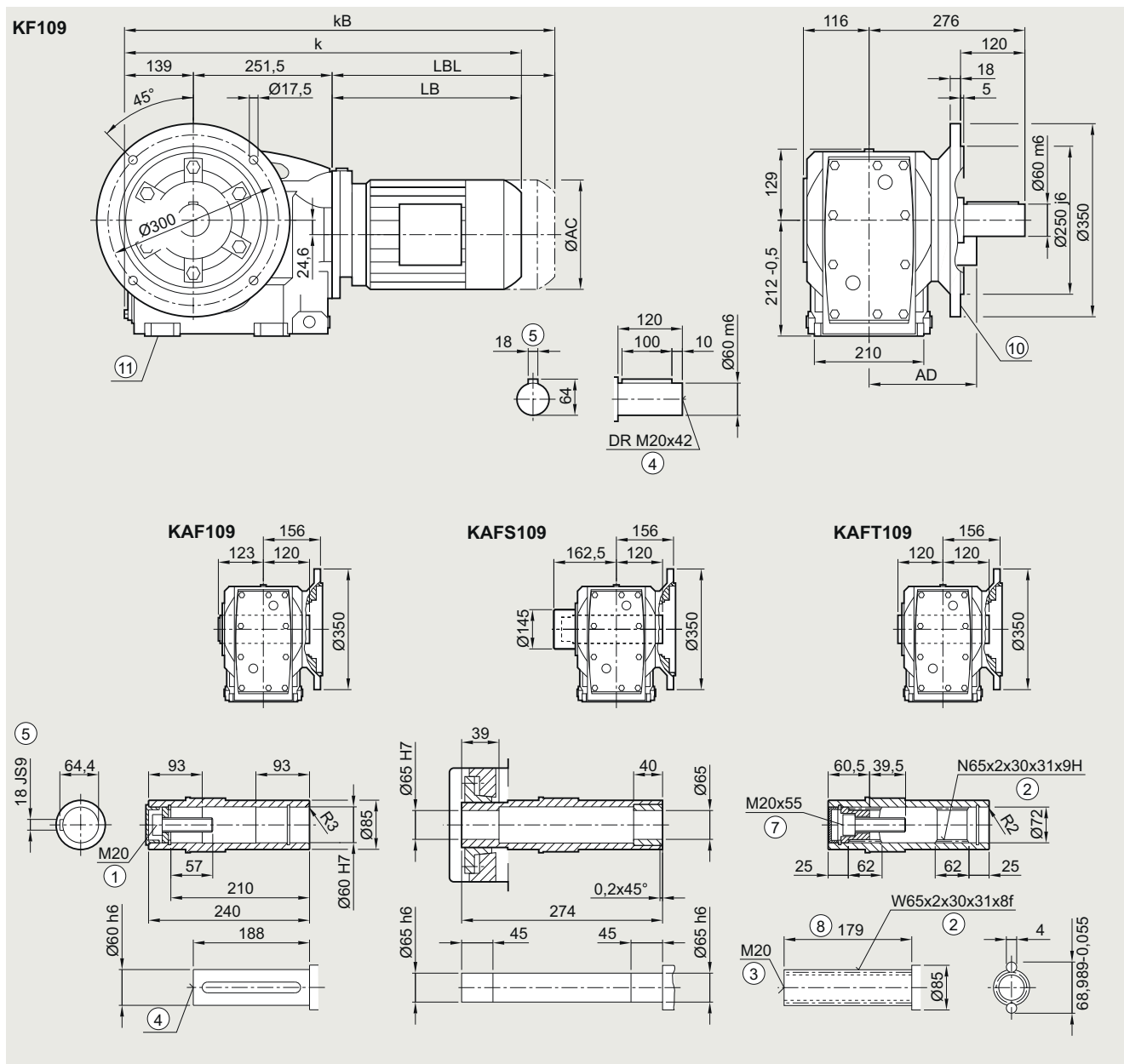
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.F.109 in a flange-mounted design

KF030, KAF030, KAFS030, KAFT030



Motor	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	LES 180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	652.0	687.0	713.5	753.5	766.0	801.0	776.0	801.0	829.0	879.0	911.0	971.0	984.0	1014.0
kB	712.0	747.0	783.5	823.5	844.5	879.5	849.0	874.0	933.5	983.5	1027.0	1087.0	1113.0	1143.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/136    ⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



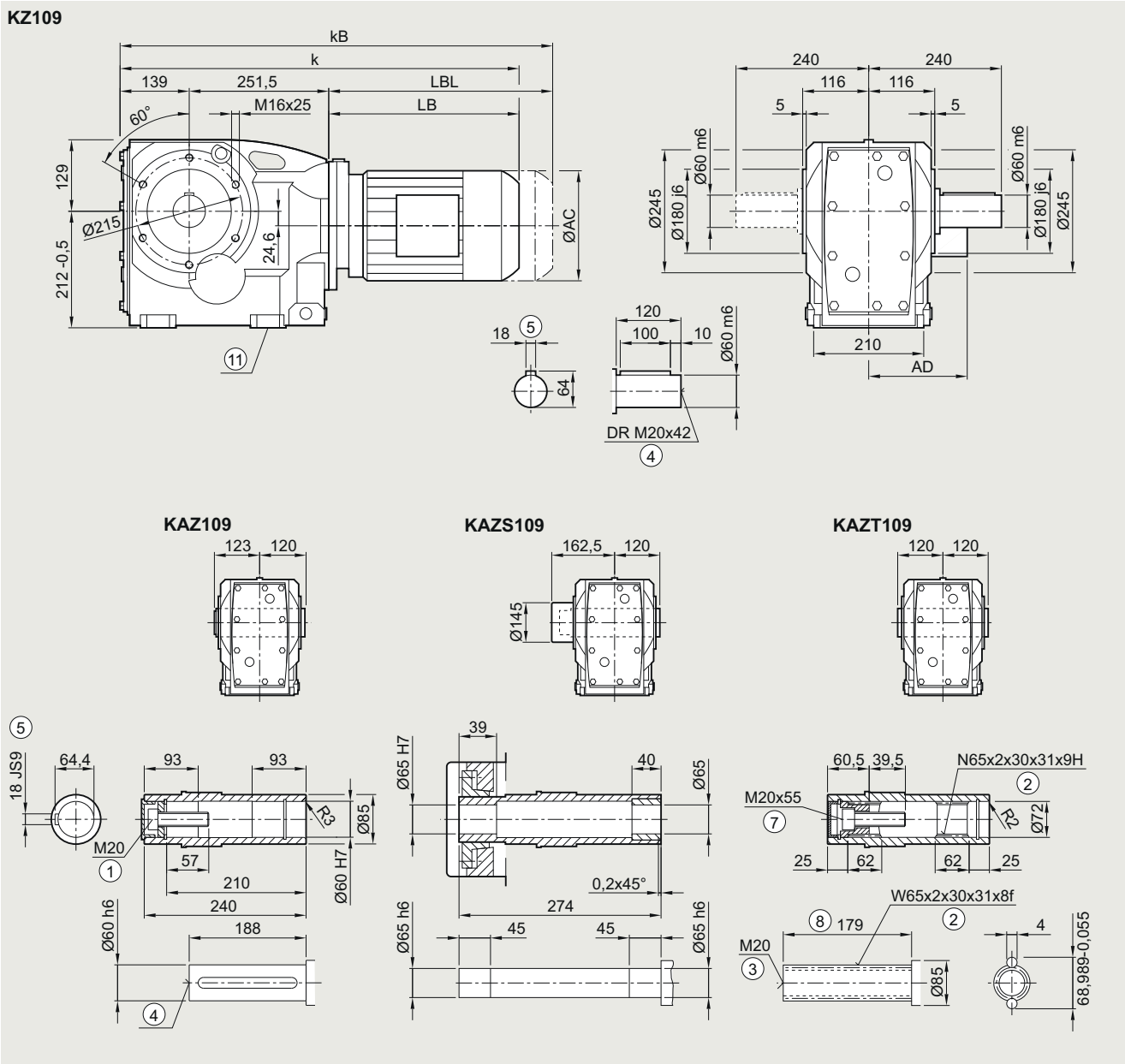
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.Z.109 in a housing flange design

KZ030, KAZ030, KAZS030, KAZT030

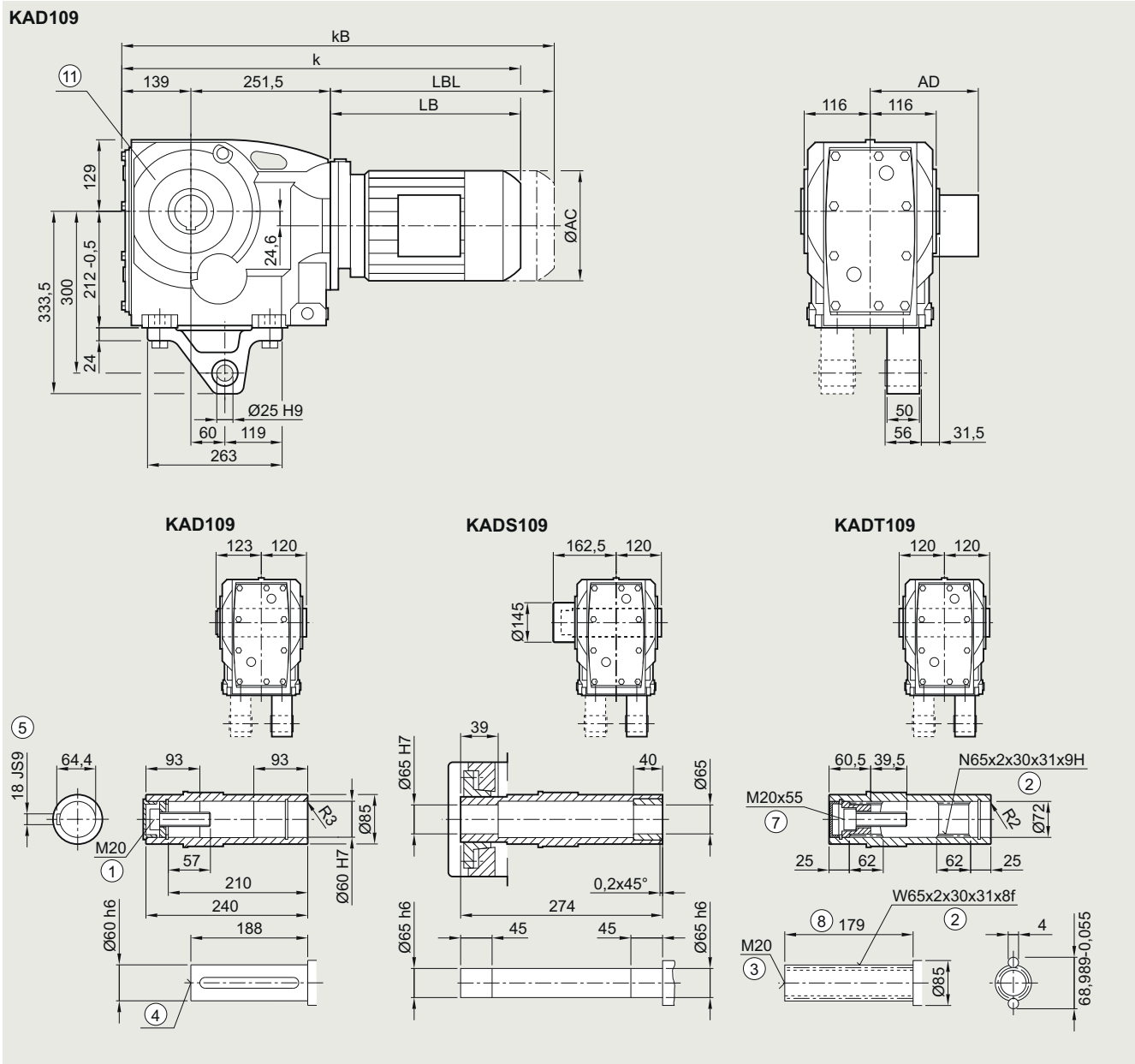


Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	652.0	687.0	713.5	753.5	766.0	801.0	776.0	801.0	829.0	879.0	911.0	971.0	984.0	1014.0
kB	712.0	747.0	783.5	823.5	844.5	879.5	849.0	874.0	933.5	983.5	1027.0	1087.0	1113.0	1143.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox KAD.109 in a shaft-mounted design**

**KAD030, KADS030, KADT030**



5

Motor	LE												LES	
	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z
AC	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5
AD <sup>1)</sup>	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0
k	652.0	687.0	713.5	753.5	766.0	801.0	776.0	801.0	829.0	879.0	911.0	971.0	984.0	1014.0
kB	712.0	747.0	783.5	823.5	844.5	879.5	849.0	874.0	933.5	983.5	1027.0	1087.0	1113.0	1143.0
LB	261.5	296.5	323.0	363.0	375.5	410.5	385.5	410.5	438.5	488.5	520.5	580.5	593.5	623.5
LBL	321.5	356.5	393.0	433.0	454.0	489.0	458.5	483.5	543.0	593.0	636.5	696.5	722.5	752.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for housing flange design    1) AD depends on the motor options, for other dimensions, see page 9/46.

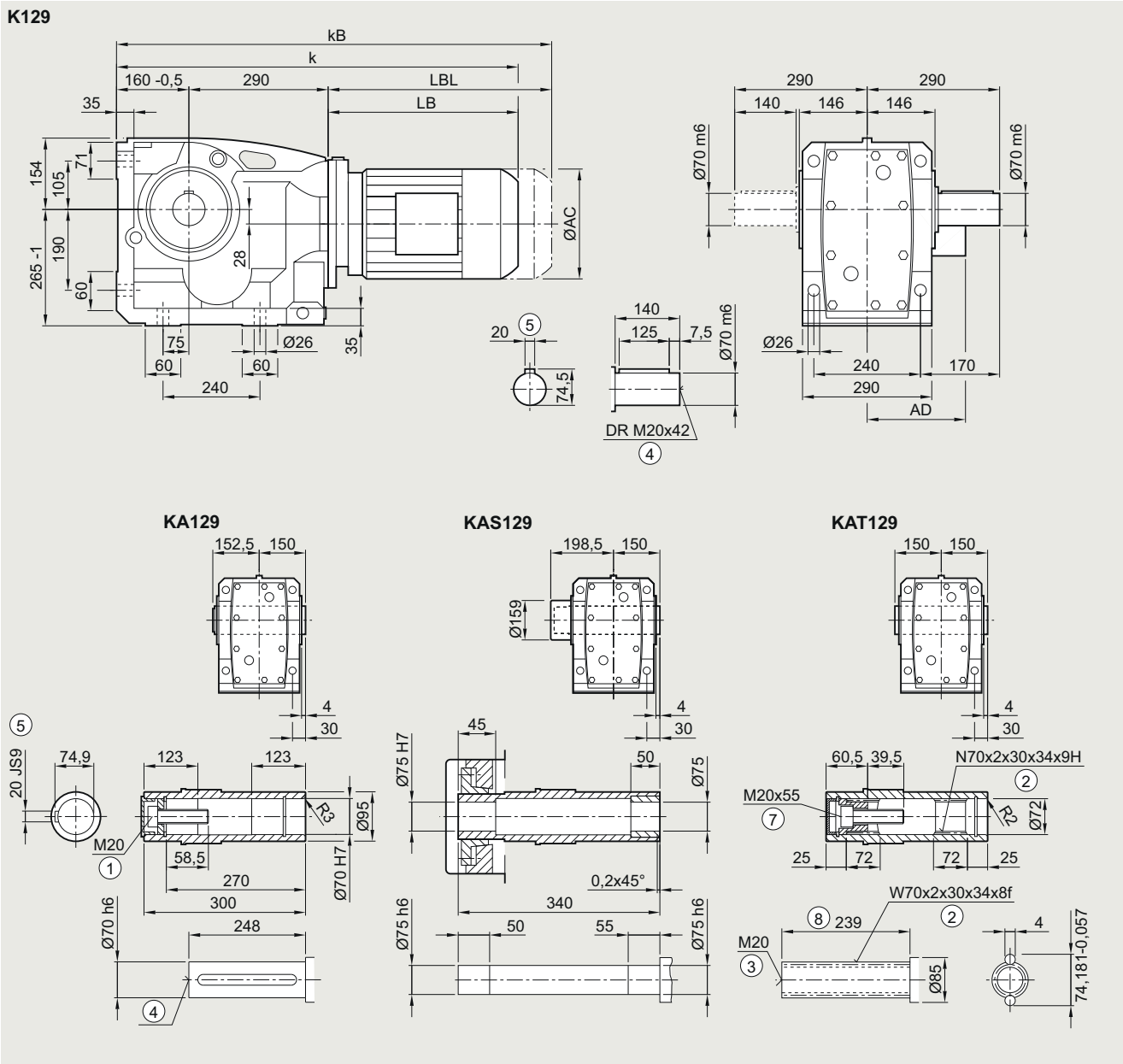
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K..129 in a foot-mounted design

K030, KA030, KAS030, KAT030



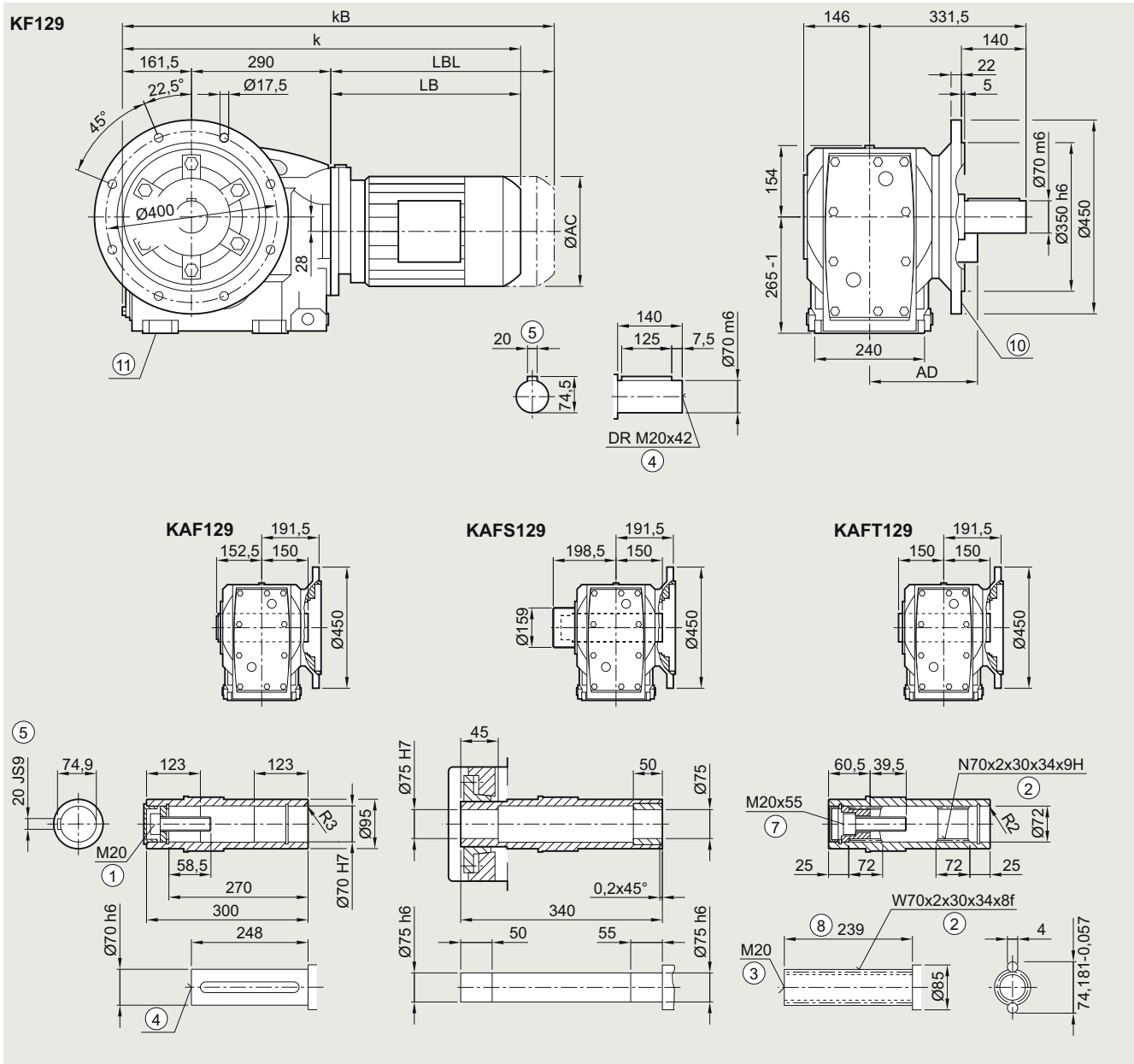
Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	766.0	806.0	816.5	851.5	826.5	851.5	879.5	929.5	961.5	1021.5	1034.5	1064.5	1102.5	1127.5	1148.0	1208.0
kB	836.0	876.0	895.0	930.0	899.5	924.5	984.0	1034.0	1077.5	1137.5	1163.5	1193.5	1249.5	1274.5	1376.0	1436.0
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm  
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox K.F.129 in a flange-mounted design**

**KF030, KAF030, KAFS030, KAFT030**



Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	767.5	807.5	818.0	853.0	828.0	853.0	881.0	931.0	963.0	1023.0	1036.0	1066.0	1104.0	1129.0	1149.5	1209.5
kB	837.5	877.5	896.5	931.5	901.0	926.0	985.5	1035.5	1079.0	1139.0	1165.0	1195.0	1251.0	1276.0	1377.5	1437.5
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/136    ⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

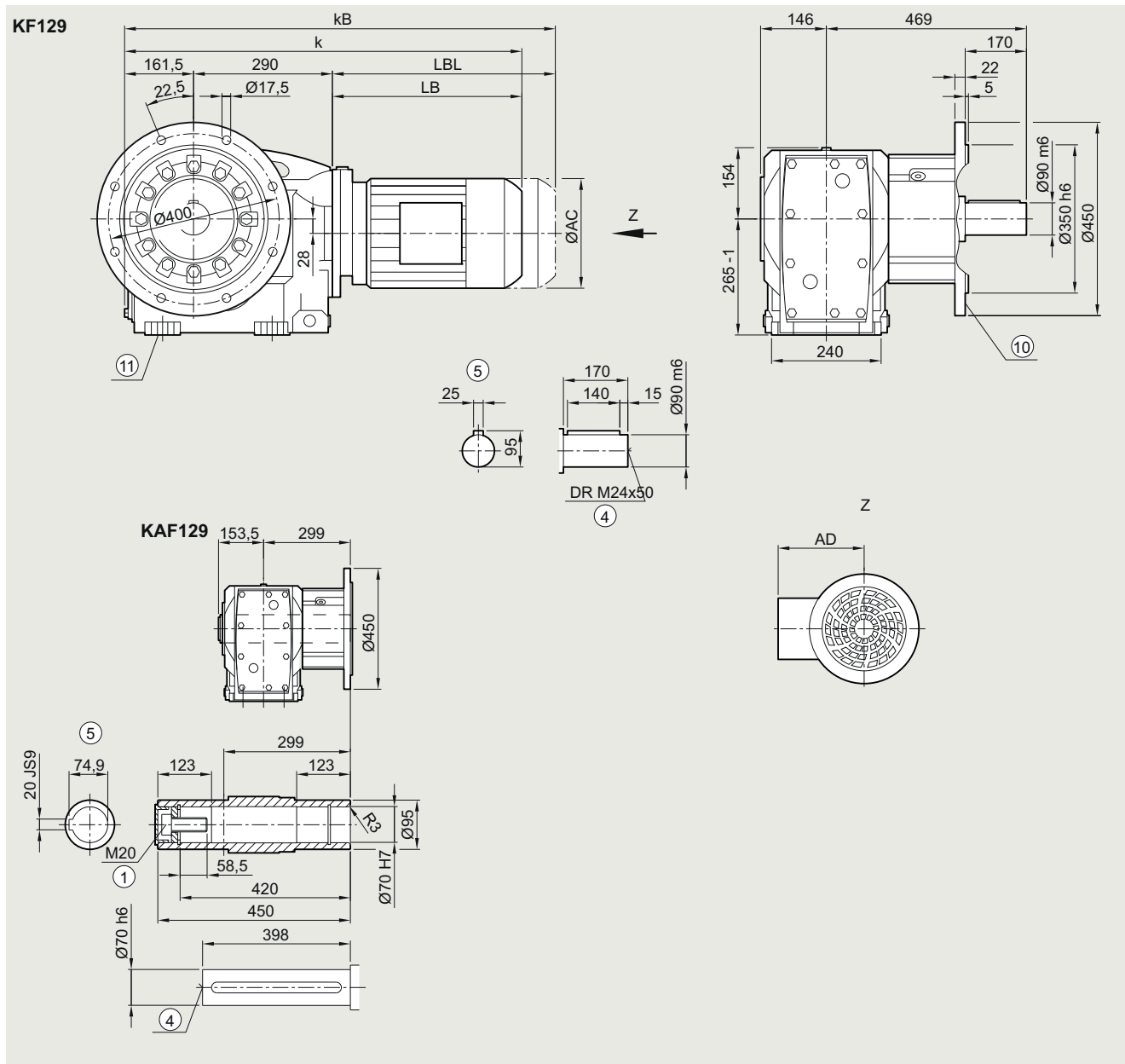
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.F.129 in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040, KAF040



Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	767.5	807.5	818.0	853.0	828.0	853.0	881.0	931.0	963.0	1023.0	1036.0	1066.0	1104.0	1129.0	1149.5	1209.5
kB	837.5	877.5	896.5	931.5	901.0	926.0	985.5	1035.5	1079.0	1139.0	1165.0	1195.0	1251.0	1276.0	1377.5	1437.5
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

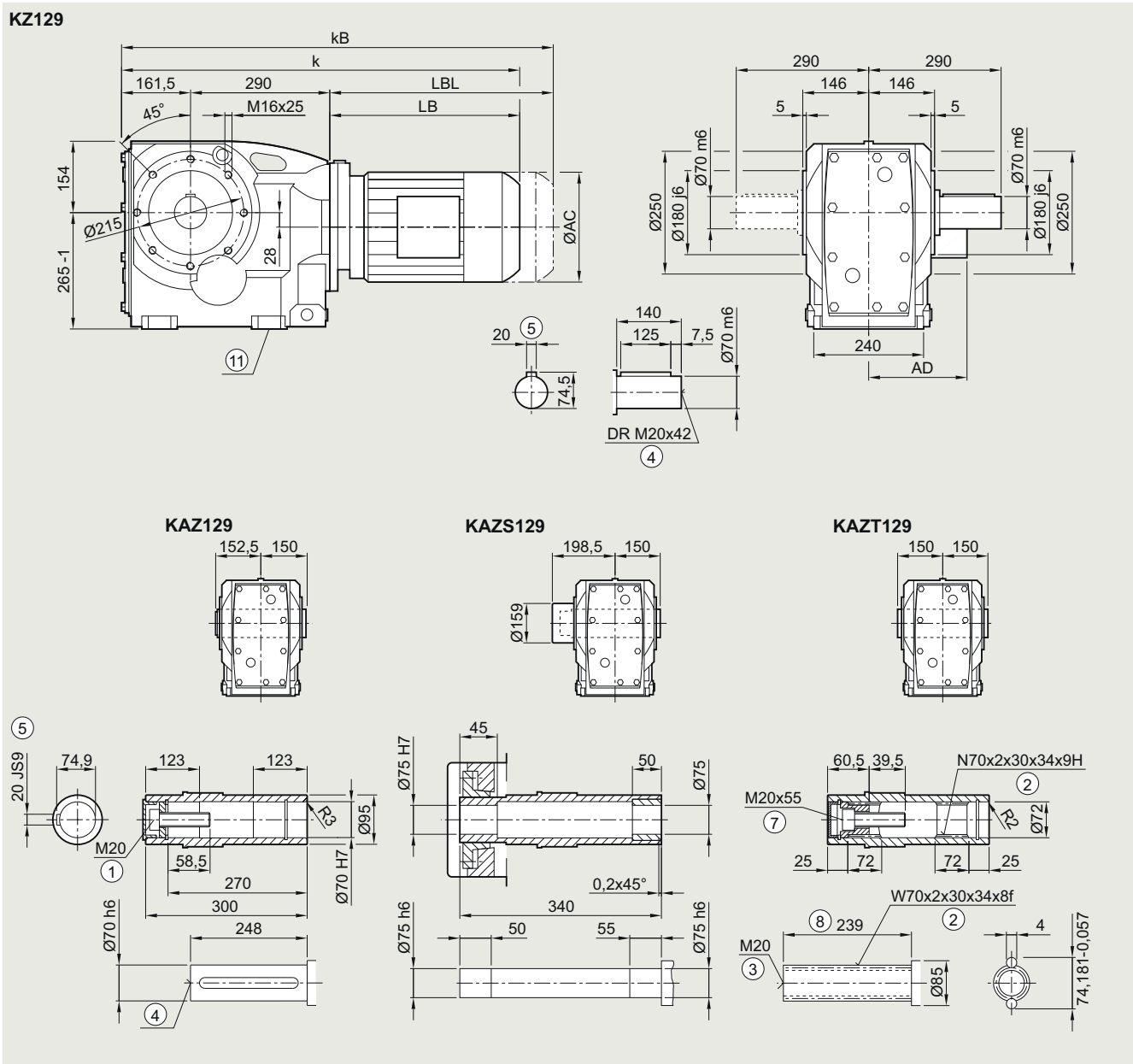
① ISO 4014    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑩ Use bores only for foot-mounted design

⑪ For inner contour, see page 5/136

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.Z.129 in a housing flange design**

**KZ030, KAZ030, KAZS030, KAZT030**



Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	767.5	807.5	818.0	853.0	828.0	853.0	881.0	931.0	963.0	1023.0	1036.0	1066.0	1104.0	1129.0	1149.5	1209.5
kB	837.5	877.5	896.5	931.5	901.0	926.0	985.5	1035.5	1079.0	1139.0	1165.0	1195.0	1251.0	1276.0	1377.5	1437.5
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.

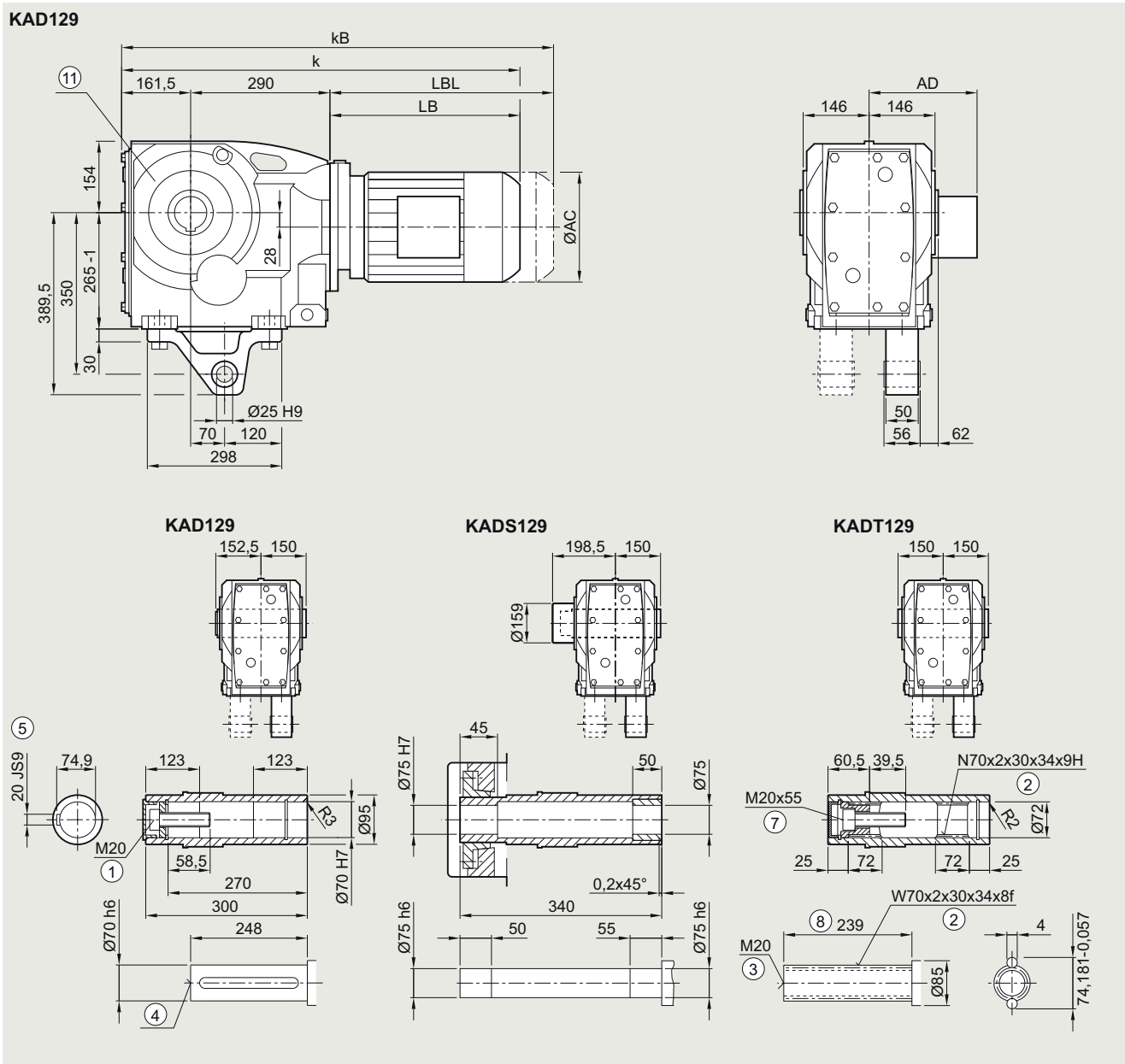
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox KAD.129 in a shaft-mounted design

KAD030, KADS030, KADT030

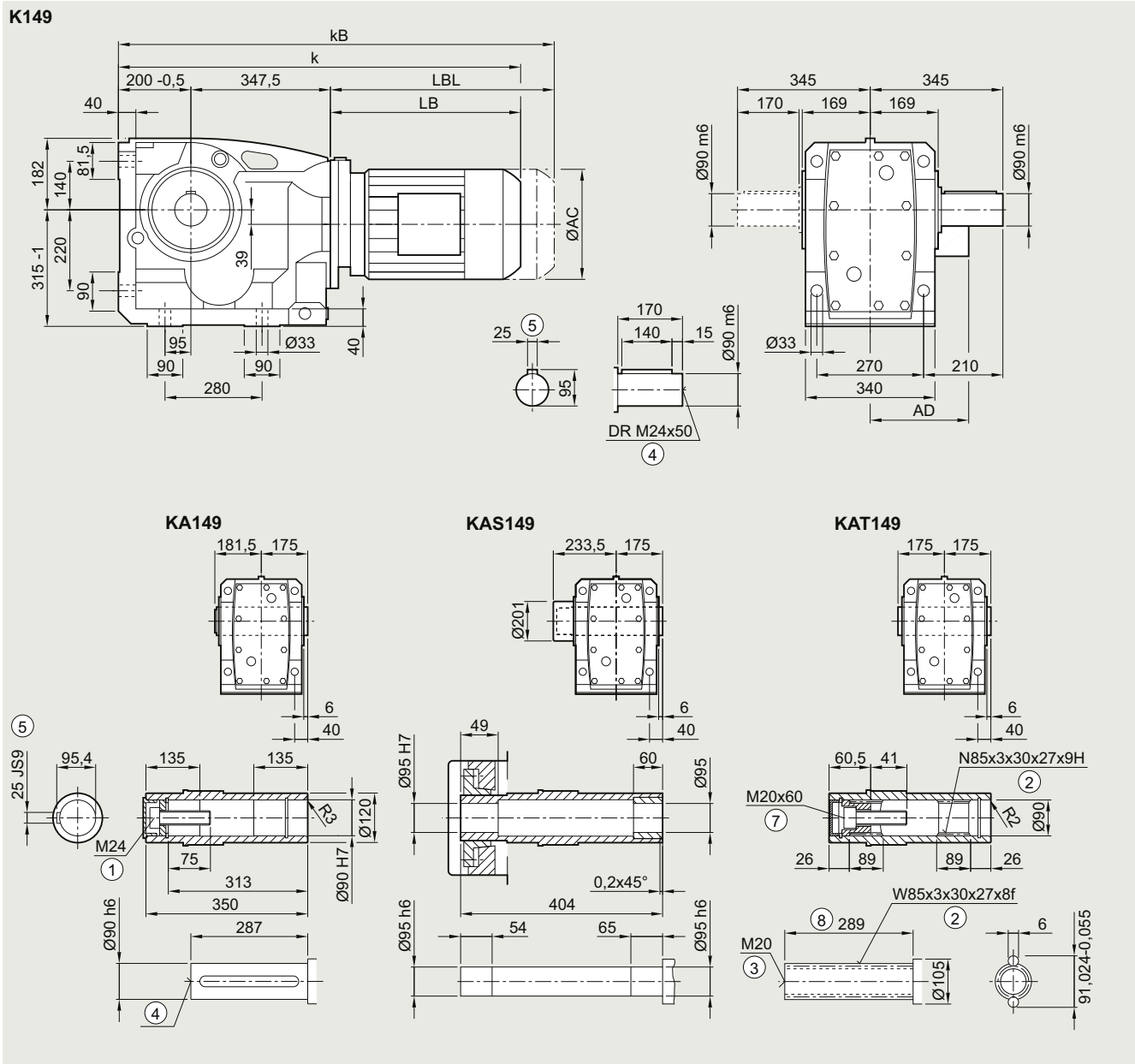


Motor	LE										LES					
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0
k	767.5	807.5	818.0	853.0	828.0	853.0	881.0	931.0	963.0	1023.0	1036.0	1066.0	1104.0	1129.0	1149.5	1209.5
kB	837.5	877.5	896.5	931.5	901.0	926.0	985.5	1035.5	1079.0	1139.0	1165.0	1195.0	1251.0	1276.0	1377.5	1437.5
LB	316.0	356.0	366.5	401.5	376.5	401.5	429.5	479.5	511.5	571.5	584.5	614.5	652.5	677.5	698.0	758.0
LBL	386.0	426.0	445.0	480.0	449.5	474.5	534.0	584.0	627.5	687.5	713.5	743.5	799.5	824.5	926.0	986.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑥ ISO 4762    ⑦ Without locating shoulder +1 mm  
 ⑧ Use bores only for housing flange design    ⑨ AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K..149 in a foot-mounted design**

**K030, KA030, KAS030, KAT030**



Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	856.5	896.5	905.0	940.0	915.0	940.0	966.0	1016.0	1048.0	1108.0	1121.0	1151.0	1189.0	1214.0	1234.5	1294.5	1346.0
kB	926.5	966.5	983.5	1018.5	988.0	1013.0	1070.5	1120.5	1164.0	1224.0	1250.0	1280.0	1336.0	1361.0	1462.5	1522.5	1571.0
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

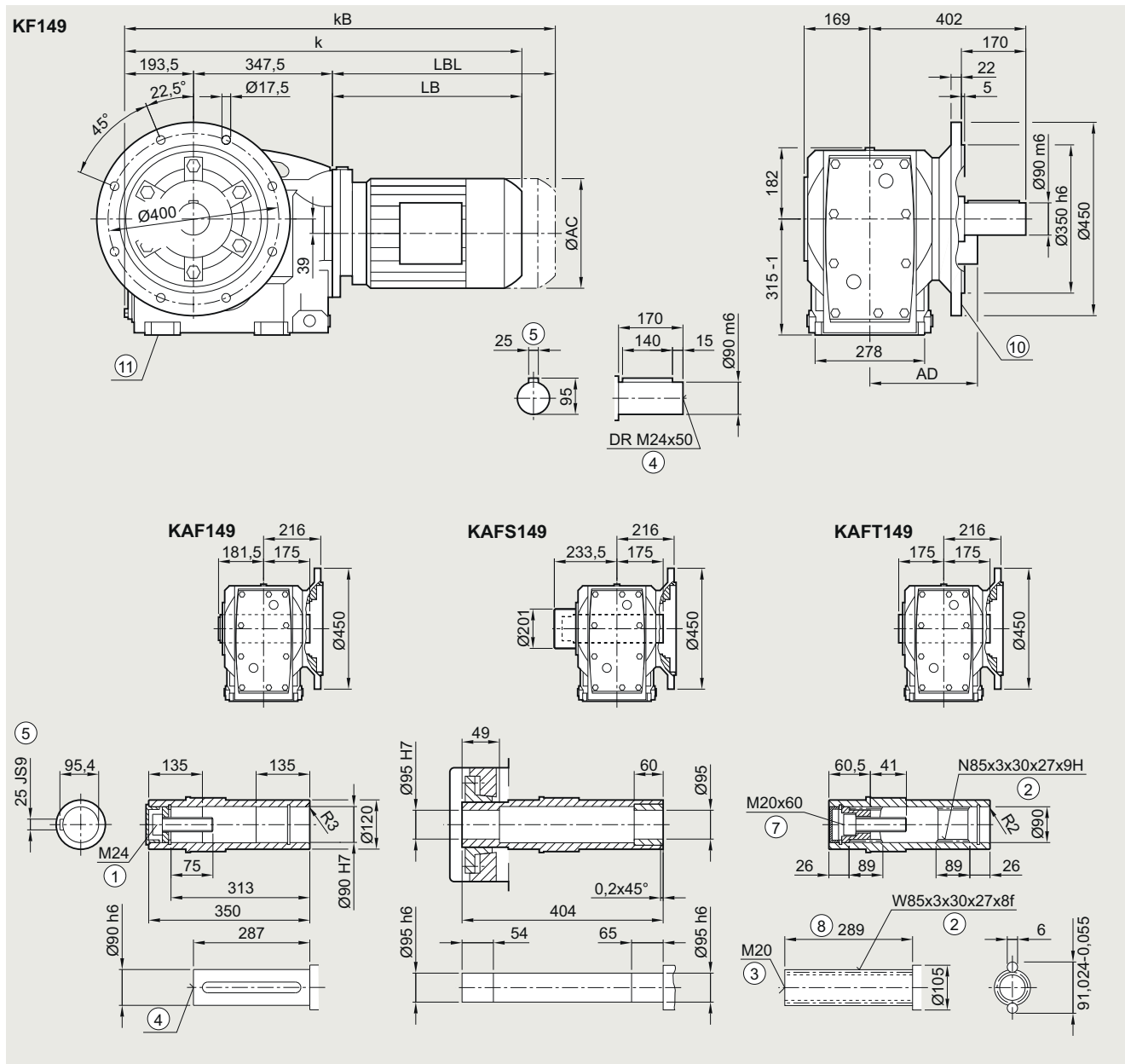
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.F.149 in a flange-mounted design

KF030, KAF030, KAFS030, KAFT030



Motor	LE									LES							
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	850.0	890.0	898.5	933.5	908.5	933.5	959.5	1009.5	1041.5	1101.5	1114.5	1144.5	1182.5	1207.5	1228.0	1288.0	1339.5
KB	920.0	960.0	977.0	1012.0	981.5	1006.5	1064.0	1114.0	1157.5	1217.5	1243.5	1273.5	1329.5	1354.5	1456.0	1516.0	1564.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑥ ISO 4762 ⑦ Without locating shoulder +1 mm

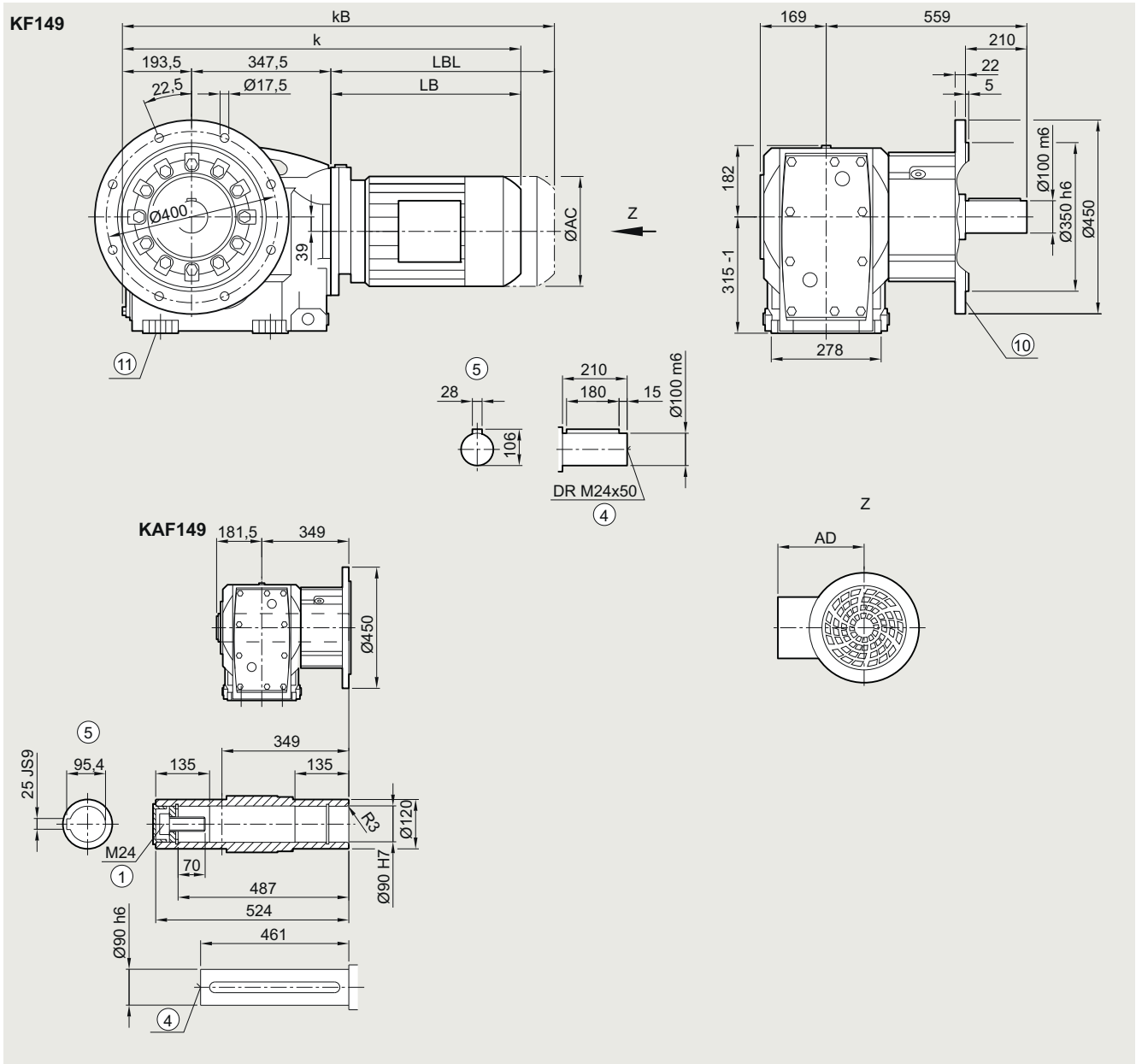
⑧ For inner contour, see page 5/136

⑨ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.F.149 in a flange-mounted design with VLplus reinforced bearing system (G30)**

**KF040, KAF040**



5

Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	850.0	890.0	898.5	933.5	908.5	933.5	959.5	1009.5	1041.5	1101.5	1114.5	1144.5	1182.5	1207.5	1228.0	1288.0	1339.5
kB	920.0	960.0	977.0	1012.0	981.5	1006.5	1064.0	1114.0	1157.5	1217.5	1243.5	1273.5	1329.5	1354.5	1456.0	1516.0	1564.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑩ Use bores only for foot-mounted design

⑪ For inner contour, see page 5/136

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

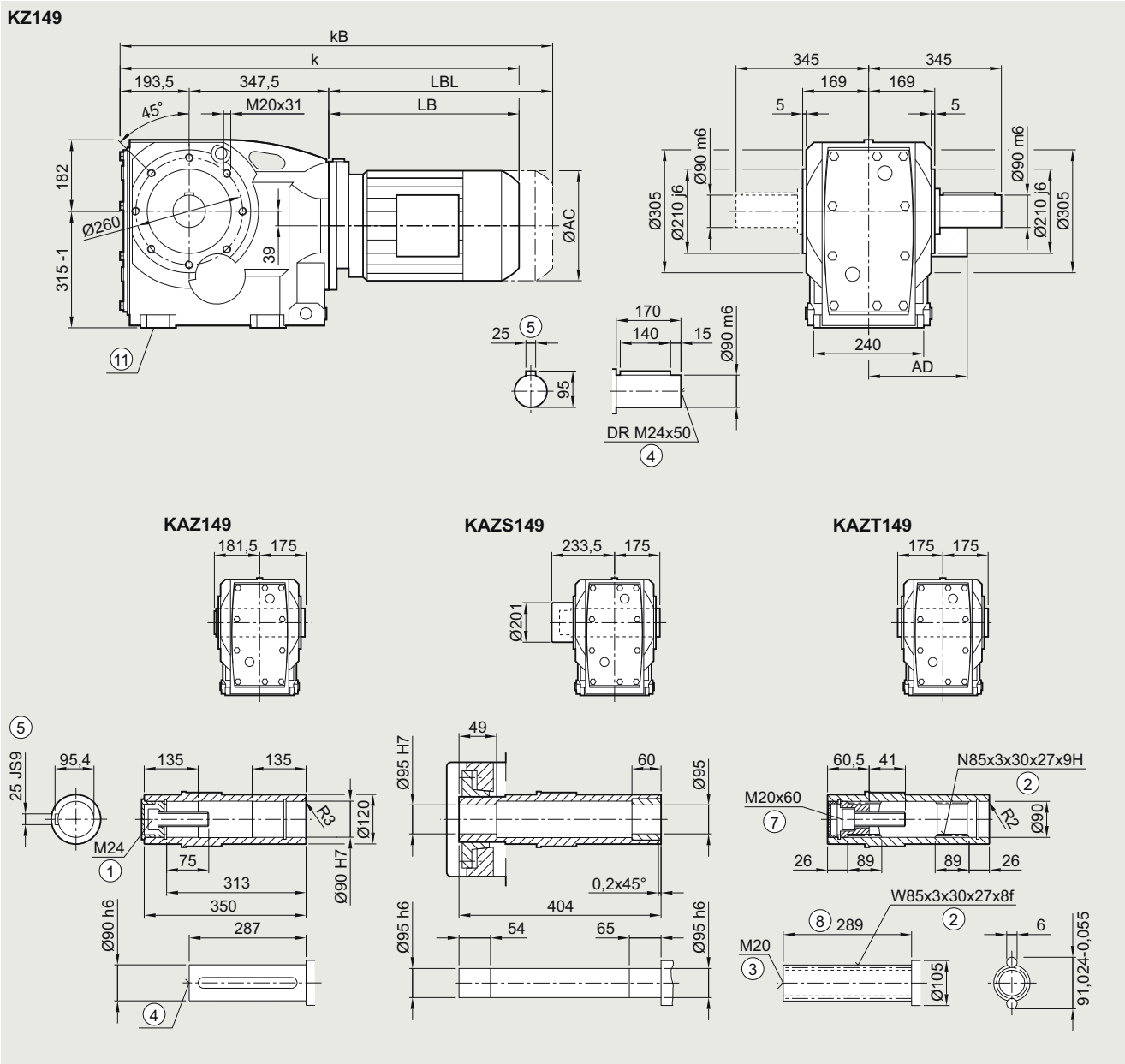
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.Z.149 in a housing flange design

KZ030, KAZ030, KAZS030, KAZT030



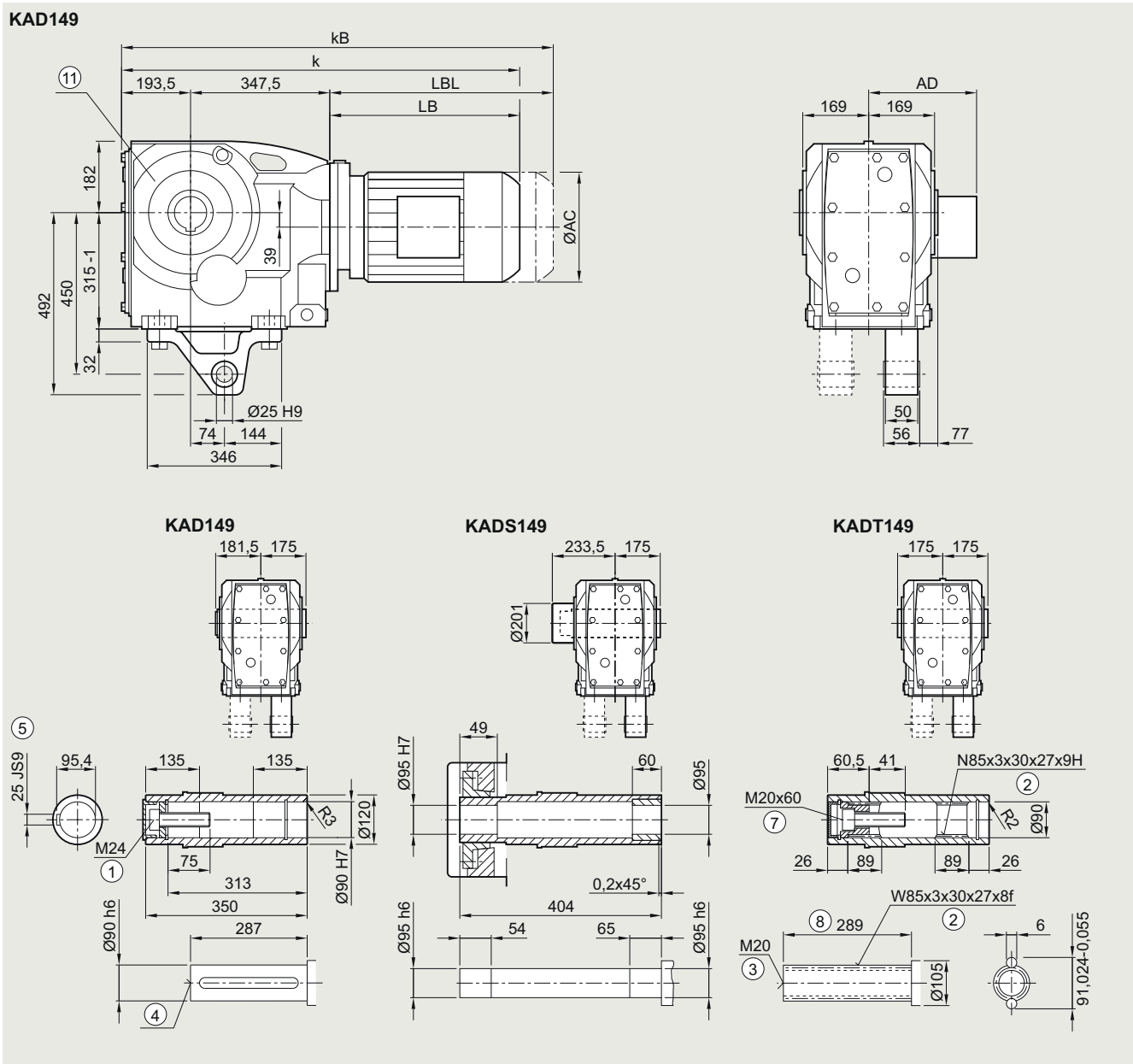
Motor	LE										LES						
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	850.0	890.0	898.5	933.5	908.5	933.5	959.5	1009.5	1041.5	1101.5	1114.5	1144.5	1182.5	1207.5	1228.0	1288.0	1339.5
kB	920.0	960.0	977.0	1012.0	981.5	1006.5	1064.0	1114.0	1157.5	1217.5	1243.5	1273.5	1329.5	1354.5	1456.0	1516.0	1564.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox KAD.149 in a shaft-mounted design**

**KAD031, KADS031, KADT031**



Motor	LE									LES							
	90	90Z	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	850.0	890.0	898.5	933.5	908.5	933.5	959.5	1009.5	1041.5	1101.5	1114.5	1144.5	1182.5	1207.5	1228.0	1288.0	1339.5
kB	920.0	960.0	977.0	1012.0	981.5	1006.5	1064.0	1114.0	1157.5	1217.5	1243.5	1273.5	1329.5	1354.5	1456.0	1516.0	1564.5
LB	309.0	349.0	357.5	392.5	367.5	392.5	418.5	468.5	500.5	560.5	573.5	603.5	641.5	666.5	687.0	747.0	798.5
LBL	379.0	419.0	436.0	471.0	440.5	465.5	523.0	573.0	616.5	676.5	702.5	732.5	788.5	813.5	915.0	975.0	1023.5

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

⑩ Use bores only for housing flange design

1) AD depends on the motor options, for other dimensions, see page 9/46.

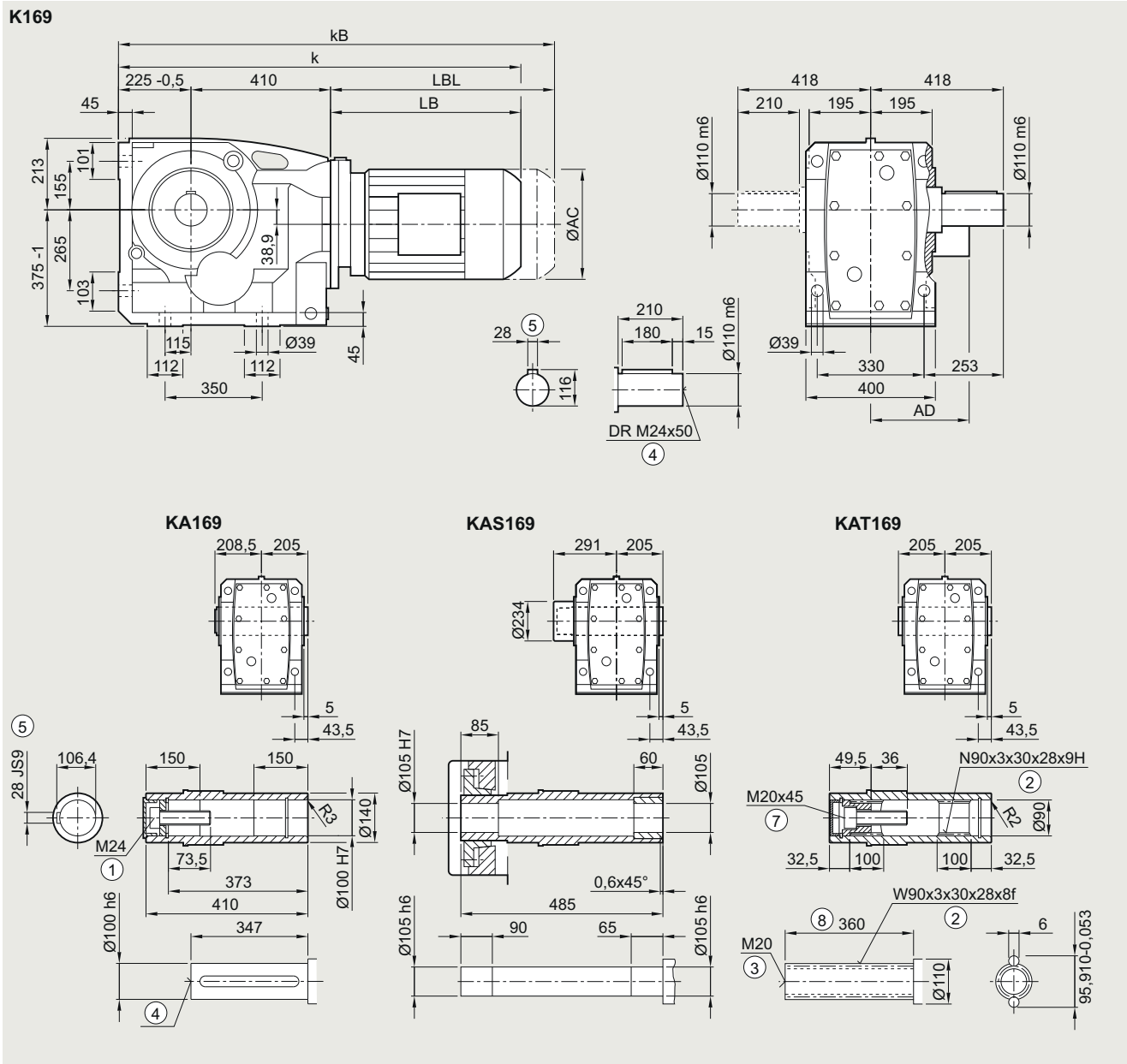
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K..169 in a foot-mounted design

K030, KA030, KAS030, KAT030



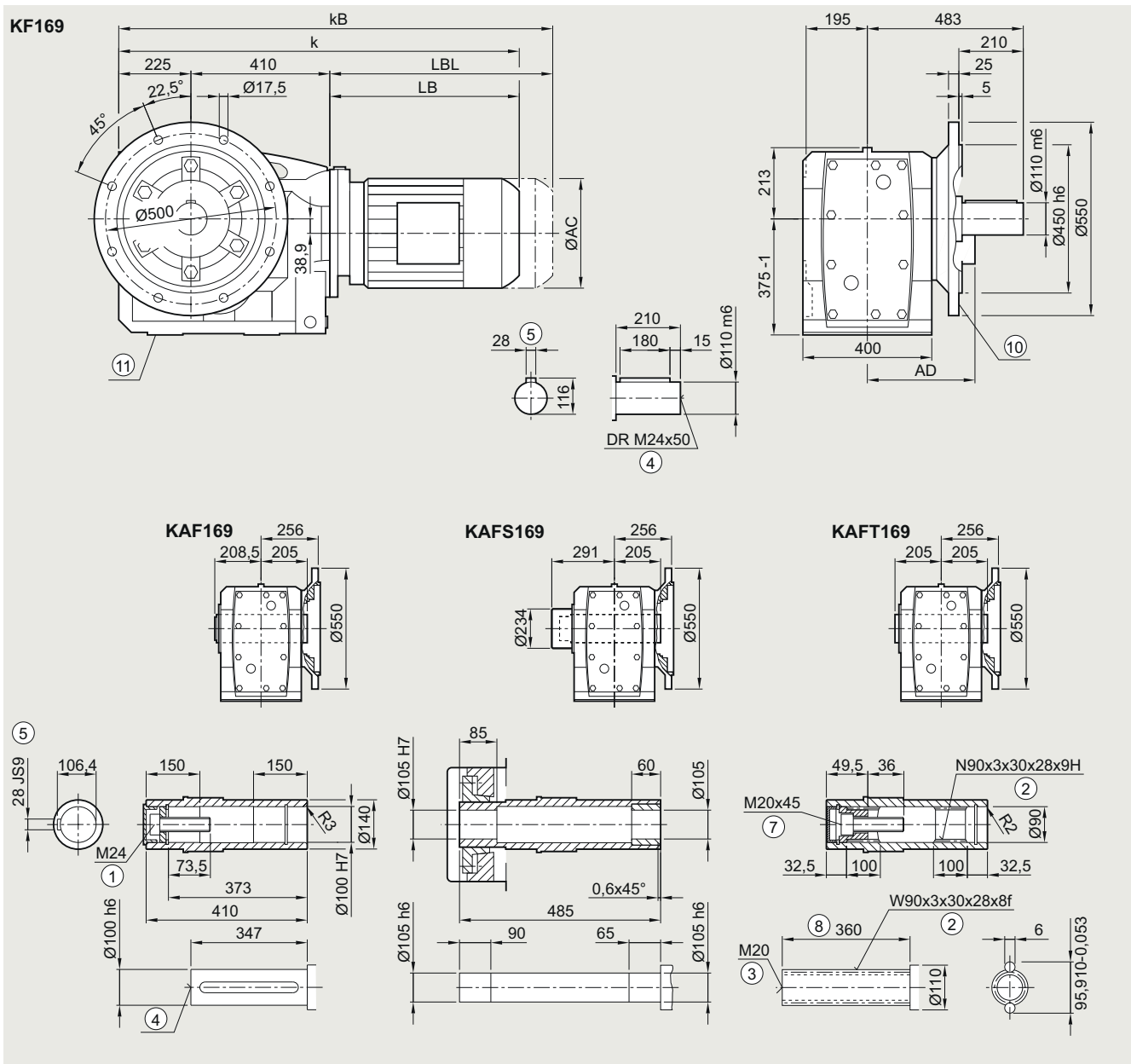
Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	991.0	1026.0	1001.0	1026.0	1047.0	1097.0	1129.0	1189.0	1202.0	1232.0	1270.0	1295.0	1315.5	1375.5	1427.0
kB	1069.5	1104.5	1074.0	1099.0	1151.5	1201.5	1245.0	1305.0	1331.0	1361.0	1417.0	1442.0	1543.5	1603.5	1652.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K.F.169 in a flange-mounted design**

**KF030, KAF030, KAFS030, KAFT030**



Motor	LE								LES							
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	991.0	1026.0	1001.0	1026.0	1047.0	1097.0	1129.0	1189.0	1202.0	1232.0	1270.0	1295.0	1315.5	1375.5	1427.0	
kB	1069.5	1104.5	1074.0	1099.0	1151.5	1201.5	1245.0	1305.0	1331.0	1361.0	1417.0	1442.0	1543.5	1603.5	1652.0	
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0	
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/136    ⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

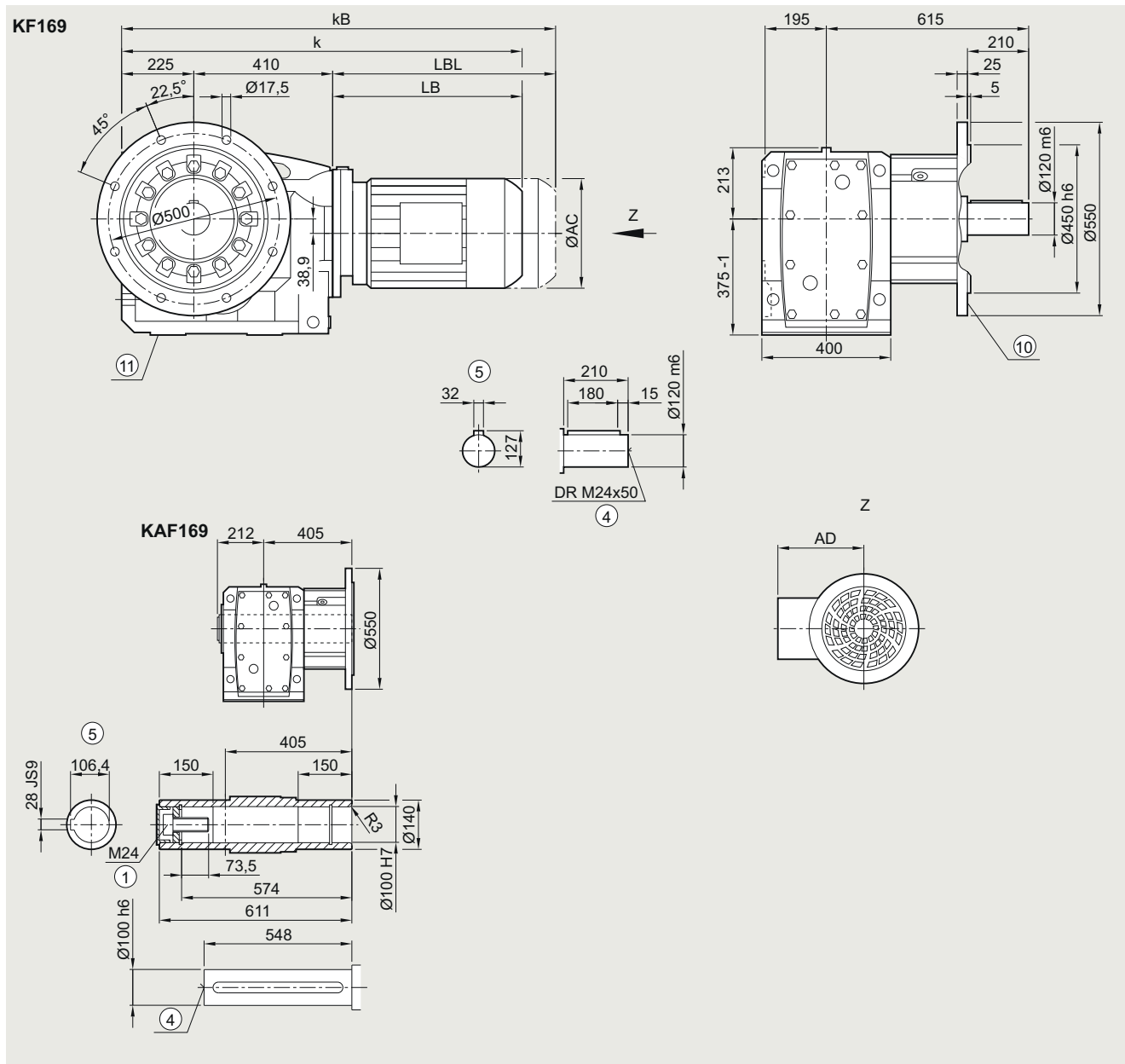
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.F.169 in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040, KAF040



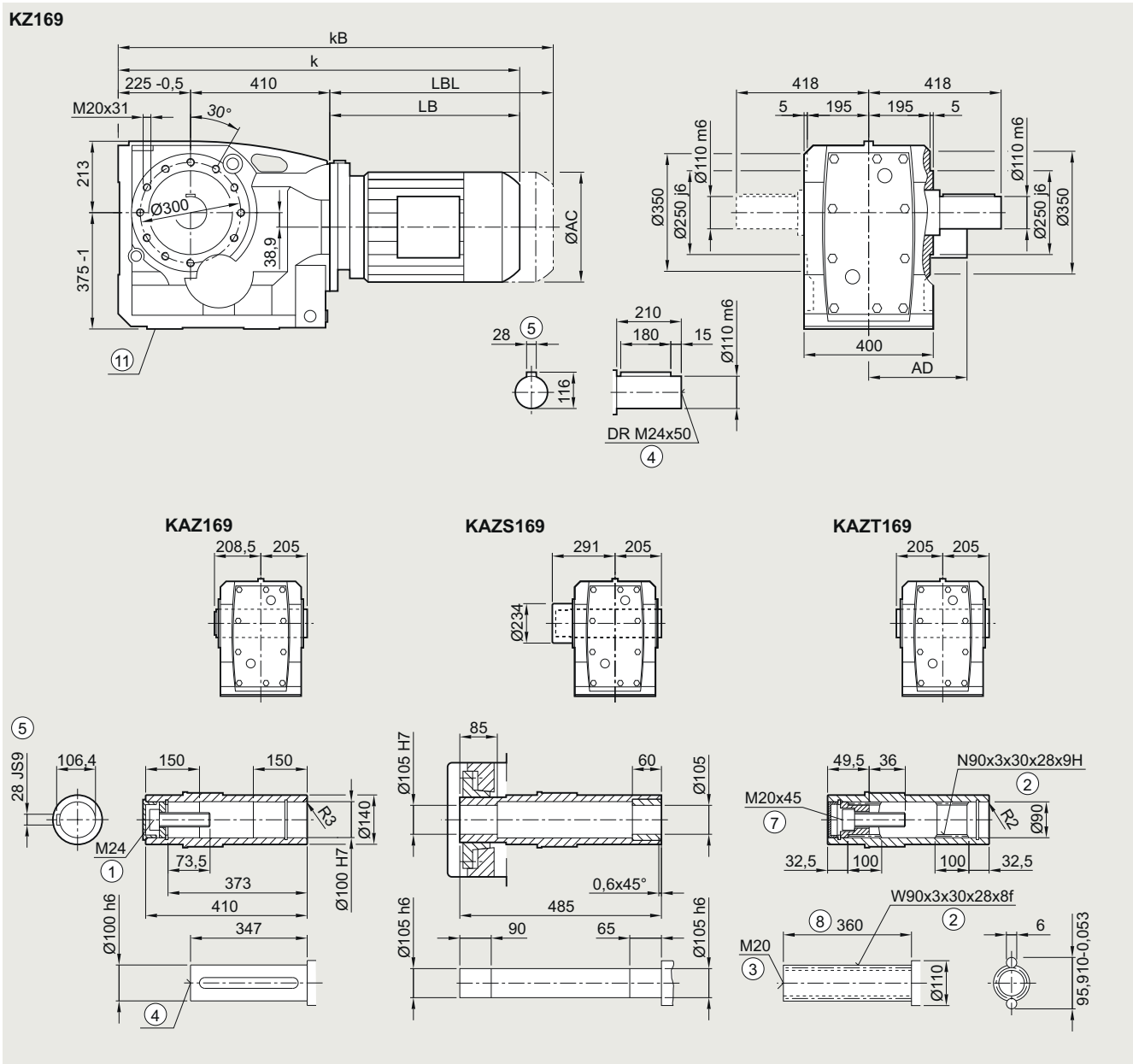
Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	991.0	1026.0	1001.0	1026.0	1047.0	1097.0	1129.0	1189.0	1202.0	1232.0	1270.0	1295.0	1315.5	1375.5	1427.0
kB	1069.5	1104.5	1074.0	1099.0	1151.5	1201.5	1245.0	1305.0	1331.0	1361.0	1417.0	1442.0	1543.5	1603.5	1652.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

① ISO 4014    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑩ Use bores only for foot-mounted design  
 ⑧ For inner contour, see page 5/136    1) AD depends on the motor options, for other dimensions, see page 9/46.

5

**Gearbox K.Z.169 in a housing flange design**

**KZ030, KAZ030, KAZS030, KAZT030**



Motor	LE								LES							
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	991.0	1026.0	1001.0	1026.0	1047.0	1097.0	1129.0	1189.0	1202.0	1232.0	1270.0	1295.0	1315.5	1375.5	1427.0	
kB	1069.5	1104.5	1074.0	1099.0	1151.5	1201.5	1245.0	1305.0	1331.0	1361.0	1417.0	1442.0	1543.5	1603.5	1652.0	
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0	
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.

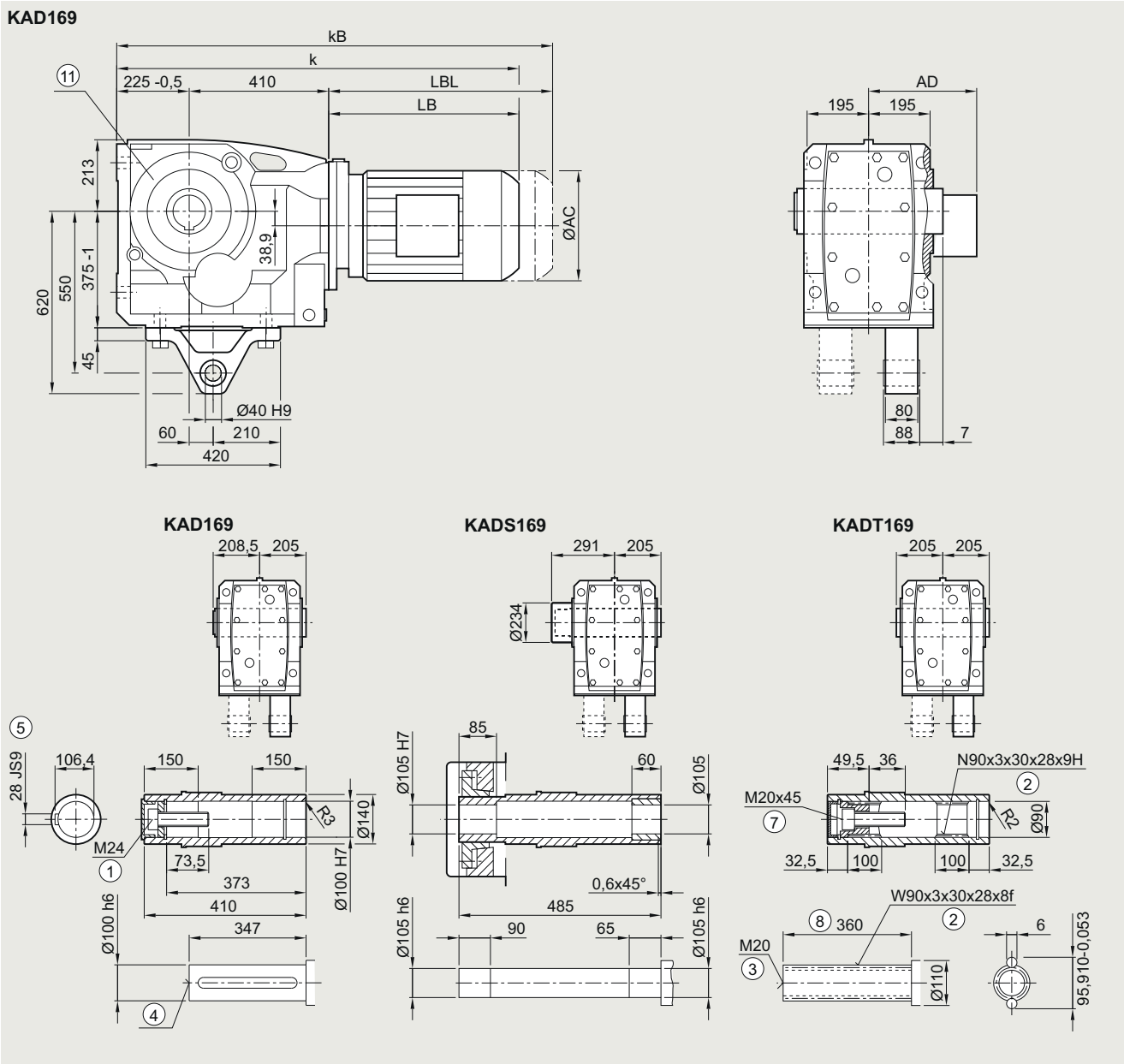
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox KAD.169 in a shaft-mounted design

KAD031, KADS031, KADT031



Motor	LE								LES						
	100	100Z	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	198.0	198.0	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	170.5	170.5	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	991.0	1026.0	1001.0	1026.0	1047.0	1097.0	1129.0	1189.0	1202.0	1232.0	1270.0	1295.0	1315.5	1375.5	1427.0
kB	1069.5	1104.5	1074.0	1099.0	1151.5	1201.5	1245.0	1305.0	1331.0	1361.0	1417.0	1442.0	1543.5	1603.5	1652.0
LB	356.0	391.0	366.0	391.0	412.0	462.0	494.0	554.0	567.0	597.0	635.0	660.0	680.5	740.5	792.0
LBL	434.5	469.5	439.0	464.0	516.5	566.5	610.0	670.0	696.0	726.0	782.0	807.0	908.5	968.5	1017.0

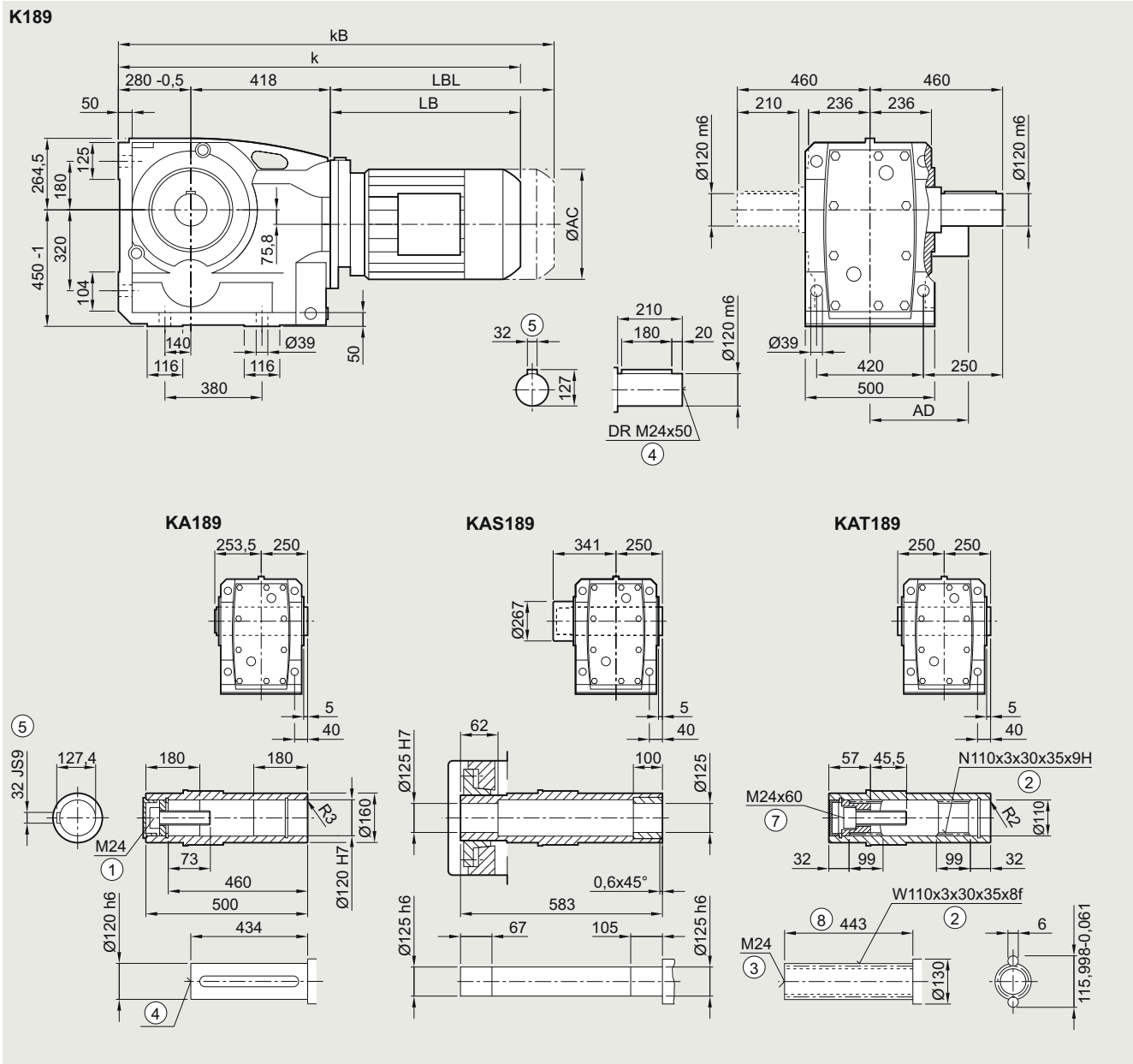
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

⑩ Use bores only for housing flange design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox K..189 in a foot-mounted design**

**K030, KA030, KAS030, KAT030**



Motor	LE						LES						
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5
k	1051.5	1076.5	1097.0	1147.0	1179.0	1239.0	1251.5	1281.5	1319.5	1344.5	1364.0	1424.0	1471.5
kB	1124.5	1149.5	1201.5	1251.5	1295.0	1355.0	1380.5	1410.5	1466.5	1491.5	1592.0	1652.0	1696.5
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

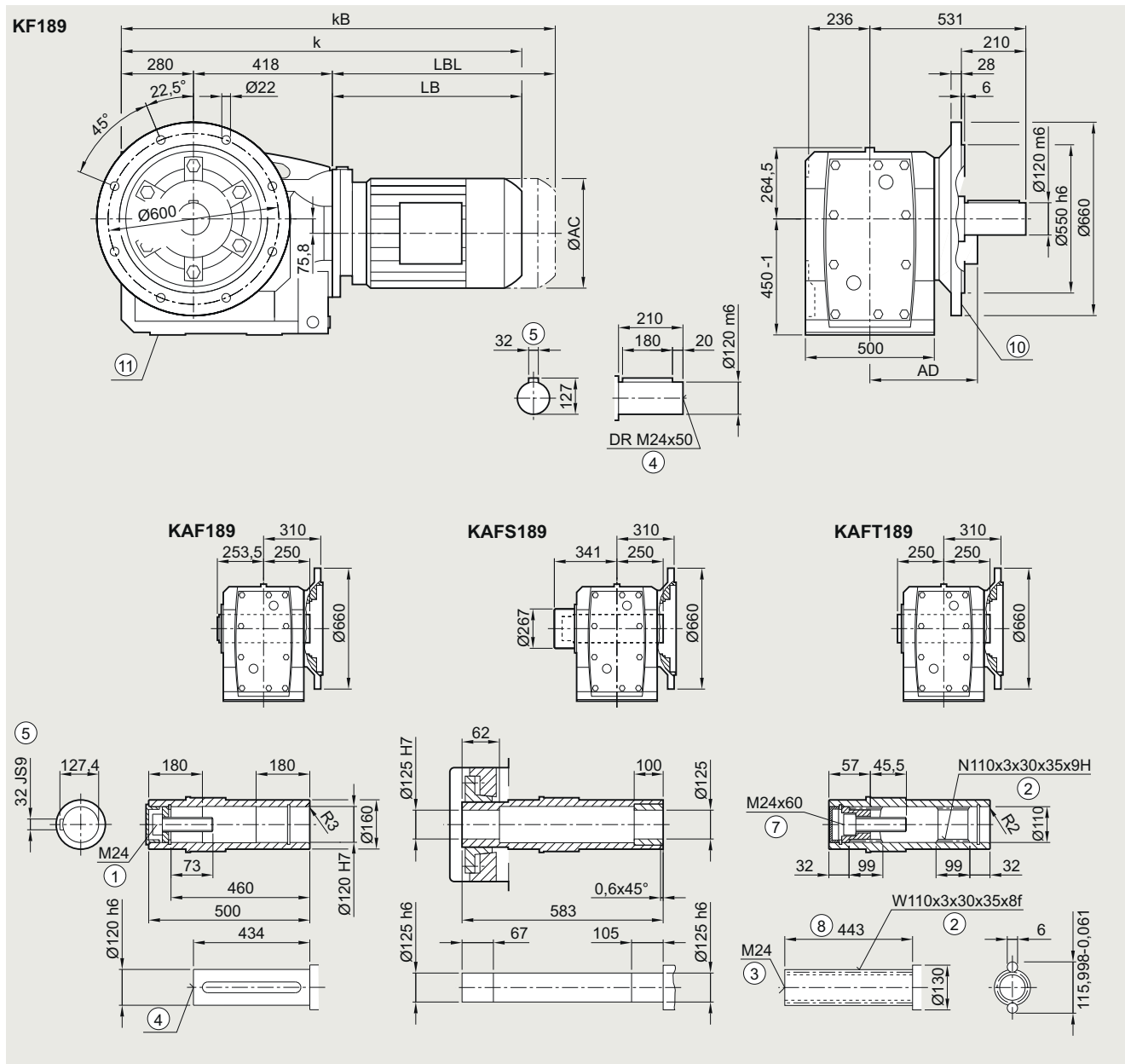
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox K.F.189 in a flange-mounted design

KF030, KAF030, KAFS030, KAFT030



Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	1051.5	1076.5	1097.0	1147.0	1179.0	1239.0	1251.5	1281.5	1319.5	1344.5	1364.0	1424.0	1471.5	
kB	1124.5	1149.5	1201.5	1251.5	1295.0	1355.0	1380.5	1410.5	1466.5	1491.5	1592.0	1652.0	1696.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/136

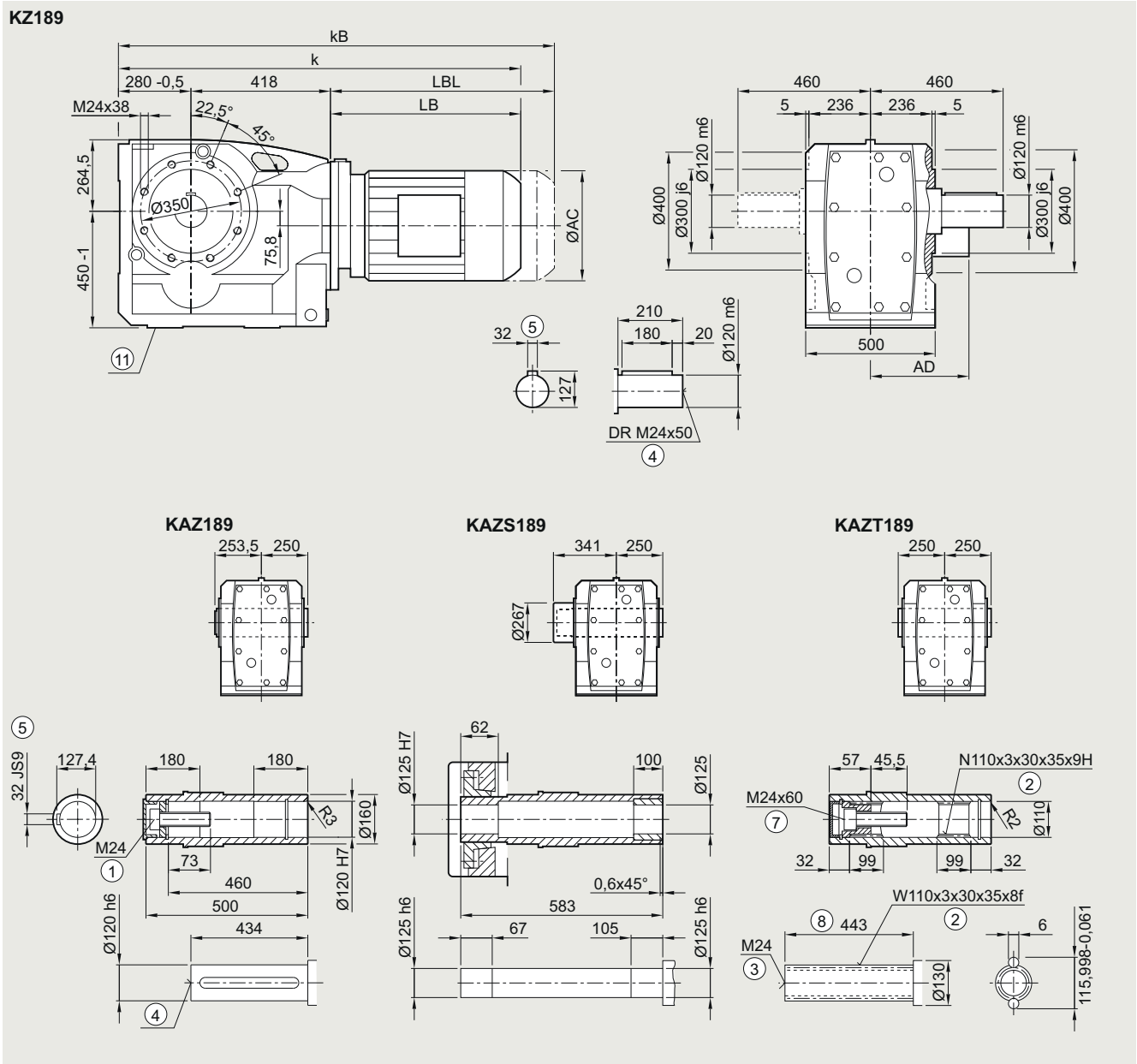
⑩ Use bores only for foot-mounted design

1) AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox K.Z.189 in a housing flange design**

**KZ030, KAZ030, KAZS030, KAZT030**



5

Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	1051.5	1076.5	1097.0	1147.0	1179.0	1239.0	1251.5	1281.5	1319.5	1344.5	1364.0	1424.0	1471.5	
kB	1124.5	1149.5	1201.5	1251.5	1295.0	1355.0	1380.5	1410.5	1466.5	1491.5	1592.0	1652.0	1696.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885-1    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 ⑨ Use bores only for foot-mounted design  
 1) AD depends on the motor options, for other dimensions, see page 9/46.

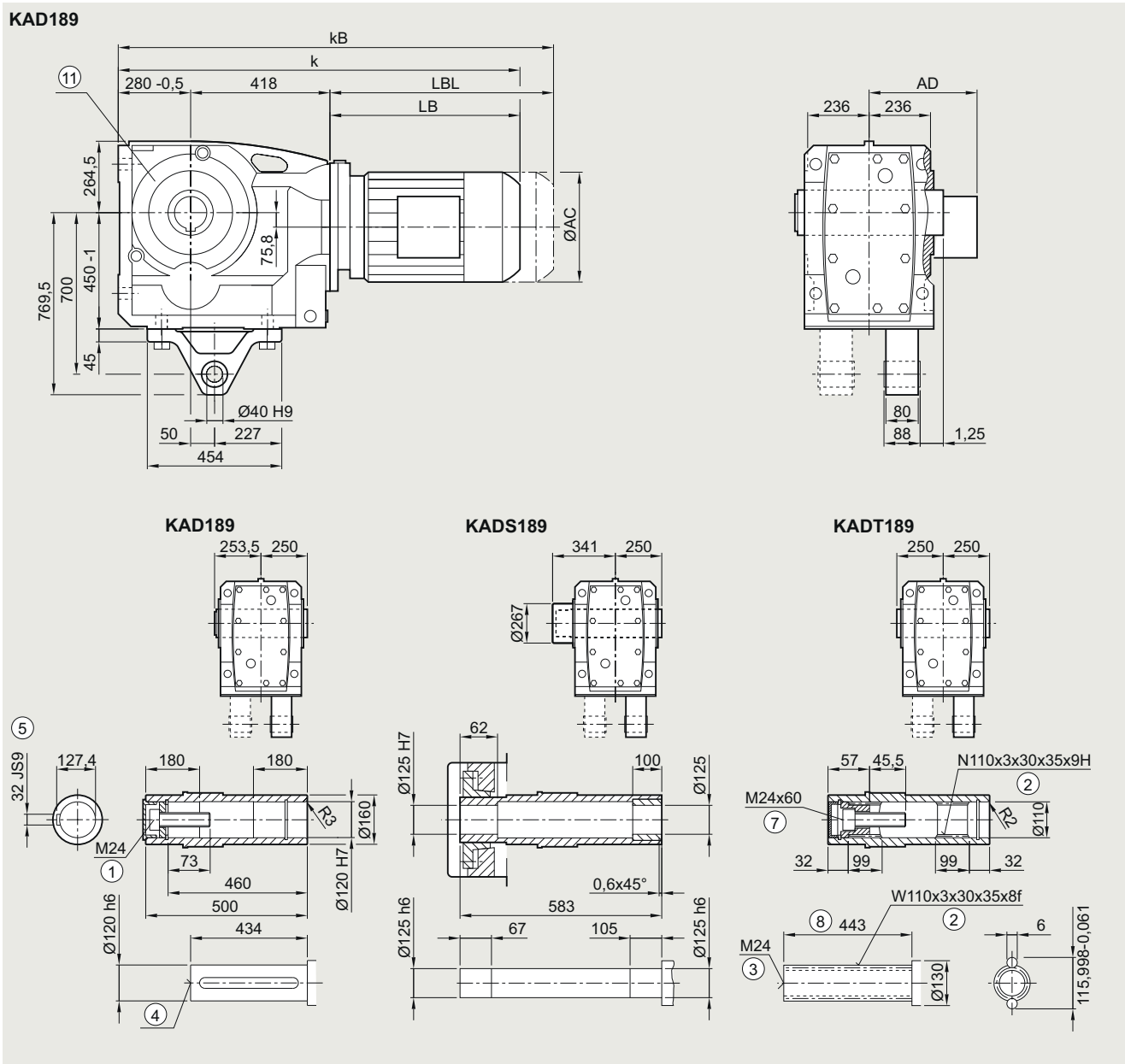
# SIMOGEAR geared motors

Bevel geared motors

## Dimensional drawings

### Gearbox KAD.189 in a shaft-mounted design

KAD031, KADS031, KADT031

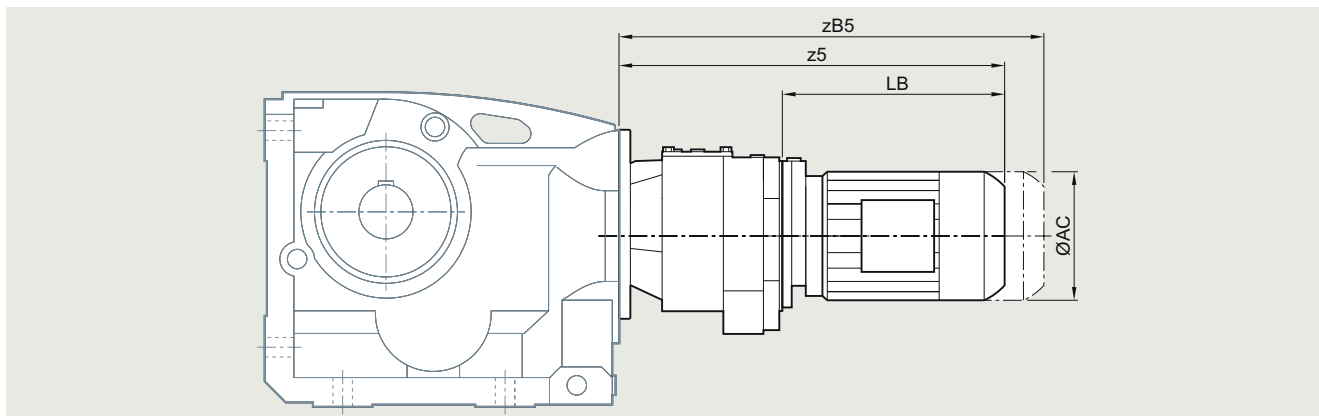


Motor	LE						LES							
	112	112Z	132	132Z	160	160Z	180	180Z	200	200Z	225	225Y	250	
AC	222.0	222.0	264.0	264.0	318.0	318.0	352.5	352.5	392.5	392.5	439.0	439.0	487.0	
AD <sup>1)</sup>	181.5	181.5	207.0	207.0	241.0	241.0	292.0	292.0	315.0	315.0	382.0	382.0	457.5	
k	1051.5	1076.5	1097.0	1147.0	1179.0	1239.0	1251.5	1281.5	1319.5	1344.5	1364.0	1424.0	1471.5	
kB	1124.5	1149.5	1201.5	1251.5	1295.0	1355.0	1380.5	1410.5	1466.5	1491.5	1592.0	1652.0	1696.5	
LB	353.5	378.5	399.0	449.0	481.0	541.0	553.5	583.5	621.5	646.5	666.0	726.0	773.5	
LBL	426.5	451.5	503.5	553.5	597.0	657.0	682.5	712.5	768.5	793.5	894.0	954.0	998.5	

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

⑩ Use bores only for housing flange design

1) AD depends on the motor options, for other dimensions, see page 9/46.

**Bevel tandem geared motors**


Gearbox	Motor	AC	z5	zB5	LB
K.39-Z/D19	LE63	117.8	331.0	375.5	160.5
	LE63Z	117.8	357.0	401.5	186.5
	LE71	138.8	363.0	418.0	184.5
	LE71Z	138.8	382.0	437.0	203.5
	LE71Y	138.8	422.0	477.0	243.5
K.49-Z/D19	LE63	117.8	322.0	366.5	160.5
	LE63Z	117.8	348.0	392.5	186.5
	LE71	138.8	354.0	409.0	184.5
	LE71Z	138.8	373.0	428.0	203.5
	LE71Y	138.8	413.0	468.0	243.5
	LE80	156.3	410.0	470.0	240.0
K.69-Z/D19	LE63	117.8	322.0	366.5	160.5
	LE63Z	117.8	348.0	392.5	186.5
	LE71	138.8	354.0	409.0	184.5
	LE71Z	138.8	373.0	428.0	203.5
	LE71Y	138.8	413.0	468.0	243.5
	LE80	156.3	410.0	470.0	240.0
K.79-Z/D19	LE63	117.8	322.0	366.5	160.5
	LE63Z	117.8	348.0	392.5	186.5
	LE71	138.8	354.0	409.0	184.5
	LE71Z	138.8	373.0	428.0	203.5
	LE71Y	138.8	413.0	468.0	243.5
	LE80	156.3	410.0	470.0	240.0
K.89-Z/D39	LE63	117.8	373.5	418.0	194.0
	LE63Z	117.8	399.5	444.0	220.0
	LE71	138.8	405.5	460.5	226.0
	LE71Z	138.8	424.5	479.5	245.0
	LE71Y	138.8	464.5	519.5	285.0
	LE80	156.3	469.5	529.5	290.0
	LE80Z	156.3	504.5	564.5	325.0
	LE90	173.8	531.0	601.0	351.5
	LE90Z	173.8	571.0	641.0	391.5
	LE100	198.0	587.5	666.0	408.0
	LE100Z	198.0	622.5	701.0	443.0

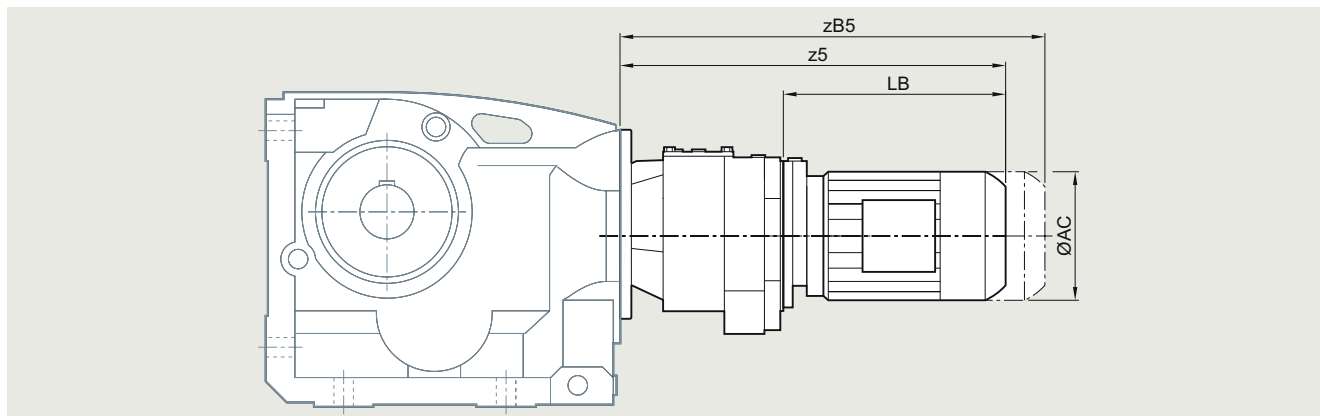
Gearbox	Motor	AC	z5	zB5	LB	
K.109-Z/D39	LE63	117.8	356.5	401.0	194.0	
	LE63Z	117.8	382.5	427.0	220.0	
	LE71	138.8	388.5	443.5	226.0	
	LE71Z	138.8	407.5	462.5	245.0	
	LE71Y	138.8	447.5	502.5	285.0	
	LE80	156.3	452.5	512.5	290.0	
K.129-Z/D39	LE80Z	156.3	487.5	547.5	325.0	
	LE90	173.8	514.0	584.0	351.5	
	LE90Z	173.8	554.0	624.0	391.5	
	LE100	198.0	570.5	649.0	408.0	
	LE100Z	198.0	605.5	684.0	443.0	
	LE112	222.0	580.5	653.5	418.0	
	LE112Z	222.0	605.5	678.5	443.0	
	K.149-Z/D49	LE63	117.8	347.5	392.0	194.0
		LE63Z	117.8	373.5	418.0	220.0
		LE71	138.8	379.5	434.5	226.0
		LE71Z	138.8	398.5	453.5	245.0
LE71Y		138.8	438.5	493.5	285.0	
LE80		156.3	443.5	503.5	290.0	
LE80Z		156.3	478.5	538.5	325.0	
LE90		173.8	505.0	575.0	351.5	
LE90Z		173.8	545.0	615.0	391.5	
LE100		198.0	561.5	640.0	408.0	
LE100Z		198.0	596.5	675.0	443.0	
K.149-Z/D49	LE112	222.0	571.5	644.5	418.0	
	LE112Z	222.0	596.5	669.5	443.0	
	LE63	117.8	376.5	421.0	184.5	
	LE63Z	117.8	402.5	447.0	210.5	
	LE71	138.8	408.5	463.5	216.5	
	LE71Z	138.8	427.5	482.5	235.5	
	LE71Y	138.8	467.5	522.5	275.5	
	LE80	156.3	472.5	532.5	280.5	
	LE80Z	156.3	507.5	567.5	315.5	
	LE90	173.8	534.0	604.0	342.0	
	LE90Z	173.8	574.0	644.0	382.0	
LE100	198.0	590.5	669.0	398.5		
LE100Z	198.0	625.5	704.0	433.5		
LE112	222.0	600.5	673.5	408.5		
LE112Z	222.0	635.0	708.0	443.0		
LE132	264.0	653.5	758.0	461.5		
LE132Z	264.0	703.5	808.0	511.5		

## SIMOGEAR geared motors

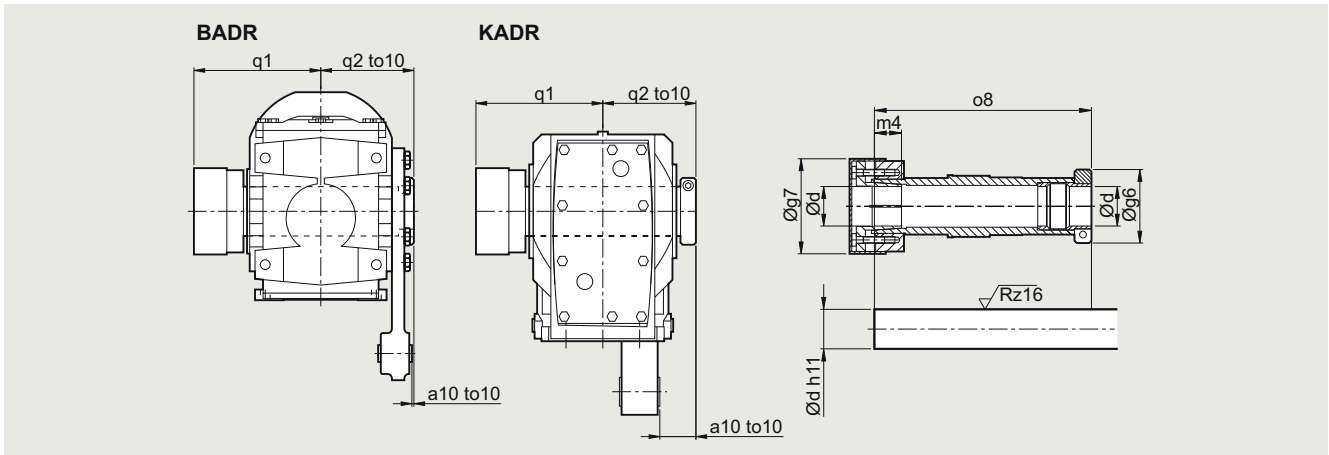
Bevel geared motors

### Dimensional drawings

#### Bevel tandem geared motors



Gearbox	Motor	AC	z5	zB5	LB
K.169-Z/D49	LE63	117.8	366.0	410.5	184.5
	LE63Z	117.8	392.0	436.5	210.5
	LE71	138.8	398.0	453.0	216.5
	LE71Z	138.8	417.5	472.5	235.5
	LE71Y	138.8	457.5	512.5	275.5
	LE80	156.3	462.0	522.0	280.5
	LE80Z	156.3	497.0	557.0	315.5
	LE90	173.8	523.5	593.5	342.0
	LE90Z	173.8	563.5	633.5	382.0
	LE100	198.0	580.0	658.5	398.5
	LE100Z	198.0	615.0	693.5	433.5
	LE112	222.0	590.0	663.0	408.5
	LE112Z	222.0	624.5	697.5	443.0
	LE132	264.0	643.0	747.5	461.5
LE132Z	264.0	693.0	797.5	511.5	
K.189-Z/D69	LE63	117.8	391.5	436.0	184.5
	LE63Z	117.8	417.5	462.0	210.5
	LE71	138.8	423.5	478.5	216.5
	LE71Z	138.8	442.5	497.5	235.5
	LE71Y	138.8	482.5	537.5	275.5
	LE80	156.3	487.5	547.5	280.5
	LE80Z	156.3	522.5	582.5	315.5
	LE90	173.8	549.0	619.0	342.0
	LE90Z	173.8	589.0	659.0	382.0
	LE100	198.0	605.5	684.0	398.5
	LE100Z	198.0	640.5	719.0	433.5
	LE112	222.0	615.5	688.5	408.5
	LE112Z	222.0	650.0	723.0	443.0
	LE132	264.0	668.5	773.0	461.5
LE132Z	264.0	718.5	823.0	511.5	

**SIMOLOC assembly system**


Note mounting tolerance to10 when positioning the torque arm.

d	g6	g7	m4	o8	q1	q2	a10	to10
<b>BADR29</b>								
25	58.5	56	18.5	151	102	75	11	+2.1
20								+0.6
1"								
0.75"								
<b>BADR39</b>								
30	62.0	76	22	180.5	116	85	2.5	+2.2
25								+0.7
1.25"								
1.1875"								
1"								
<b>BADR49</b>								
35	65.0	84	24	210.0	134	100	-2.5	+2.6
30								+0.8
1.375"								
1.4375"								
1.25"								
1.1875"								
40	79.5	94	30	220	140	104	1.5	
1.625"								
<b>KADR39</b>								
30	62.0	76	22	160.5	106	75	39	+2.2
25								+0.7
1.25"								
1.1875"								
1"								
<b>KADR49</b>								
35	65.0	84	24	192.0	124	90	41	+2.6
30								+0.8
1.375"								
1.4375"								
1.25"								
1.1875"								

## SIMOGEAR geared motors

Bevel geared motors

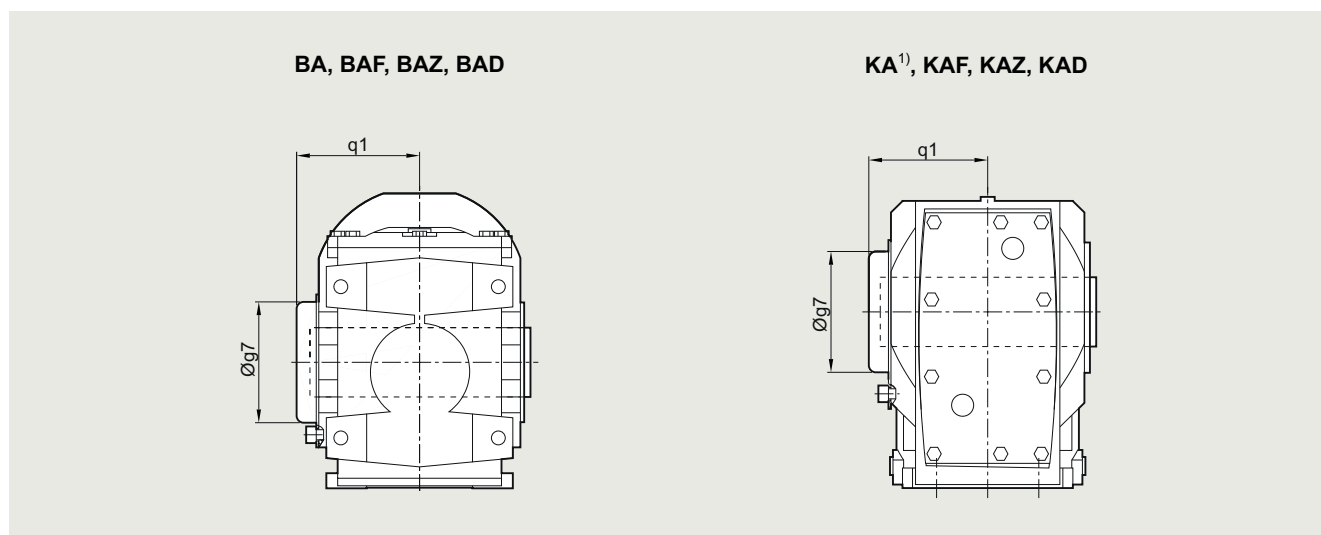
### Dimensional drawings

#### SIMOLOC assembly system

d	g6	g7	m4	o8	q1	q2	a10	to10
<b>KADR69</b>								
40	79.5	94	30	217.5	138	102	39	+2.5
35								+0.7
1.5"								
1.625"								
1.4375"								
1.375"								
<b>KADR79</b>								
40	79.5	94	30	232.0	150	109	46	+3.2
35								+1.4
1.5"								
1.625"								
1.4375"								
1.375"								
<b>KADR89</b>								
50	89.0	114	32	264.0	171	124	45	+3.4
40								+1.5
2"								
1.9375"								
1.75"								
1.625"								

#### Protective covers

##### Protective cover for hollow shaft

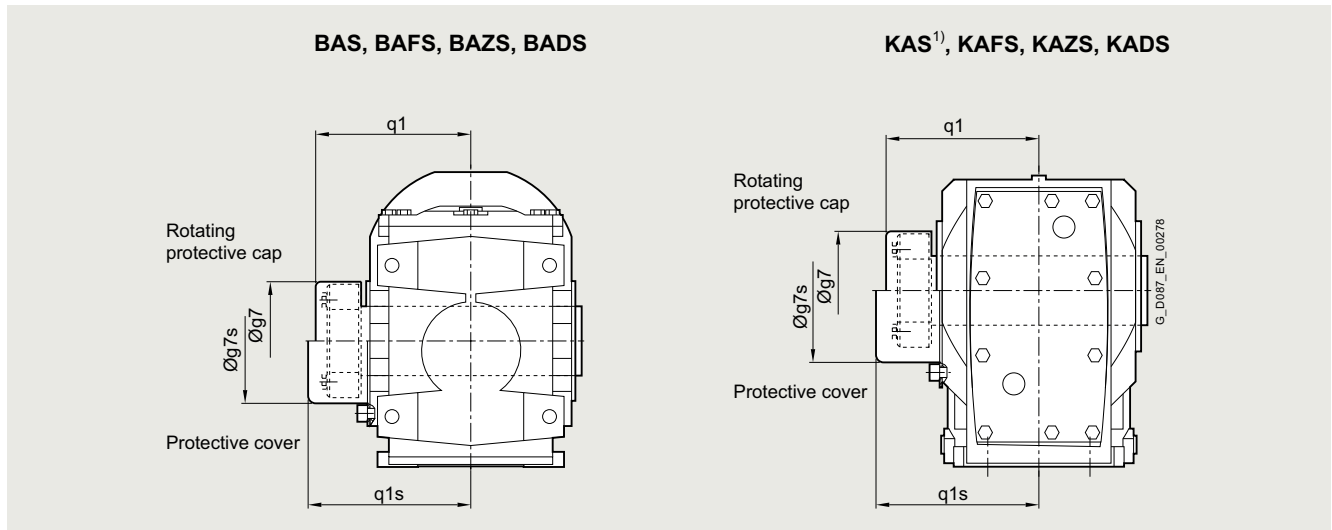


<sup>1)</sup> KA/KAS version valid only for gearbox sizes 169 and 189

Gearbox type	BA.19	BA.29	BA.39	BA.49	KA.39	KA.49	KA.69	KA.79	KA.89	KA.109	KA.129	KA.149	KA.169	KA.189
<b>Protective cover</b>														
g7	82.0	67.0	80.0	80.0	82.5	80.0	99.0	99.0	137.0	187.0	187.0	218.0	257.5	309.5
q1	57.5	76.0	96.0	111.0	73.0	105.0	95.0	101.5	124.5	168.0	198.0	250.0	313.0	373.5

**Protective covers**

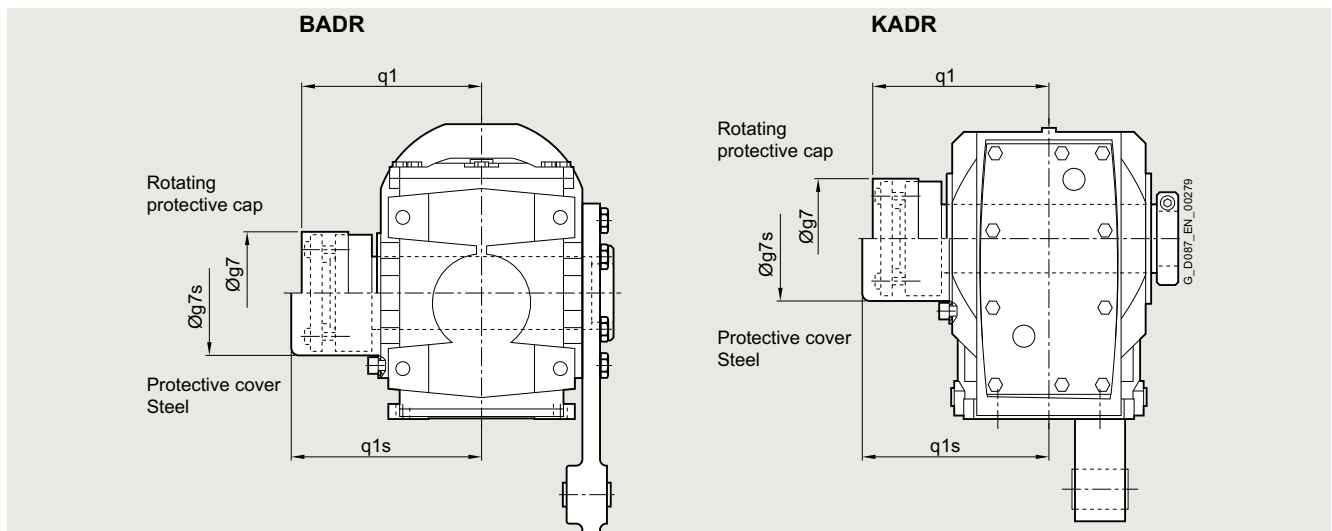
**Protective cover for hollow shaft with shrink disk**



¹) KA/KAS version valid only for gearbox sizes 169 and 189

Gearbox type	BA..29	BA..39	BA..49	KA..39	KA..49	KA..69	KA..79	KA..89	KA..109	KA..129	KA..149	KA..169	KA..189
<b>Rotating protective cap with shrink disk version</b>													
g7	55	84	84	76.0	84	84	94.0	119.0	142.0	159.0	201.0	234.0	267.0
q1	85	102	117	89.5	107	115	125.5	142.5	162.5	198.5	233.5	291.0	343.5
<b>Protective cover</b>													
g7s	58	86	86	82.5	86	99	99.0	137.0	187.0	187.0	218.0	257.5	309.5
q1s	91	119	134	109.0	122	126	132.5	176.5	195.0	225.0	250.0	313.0	373.5

**Protective cover for hollow shaft with SIMOLOC assembly system**



Gearbox type	BADR29	BADR39	BADR49	KADR39	KADR49	KADR69	KADR79	KADR89
<b>Rotating protective cap</b>								
g7	56	76	84 (94)	76	84	94	94	114
q1	102	116	134 (140)	106	124	138	150	171
<b>Protective cover</b>								
g7s	58	86.0	86 (99)	82.5	86	99	99	137
q1s	102	119.0	138 (143)	109	126	145	151.5	176.5

( ) Dimension in brackets for hollow shaft d=40 and d=1.625"

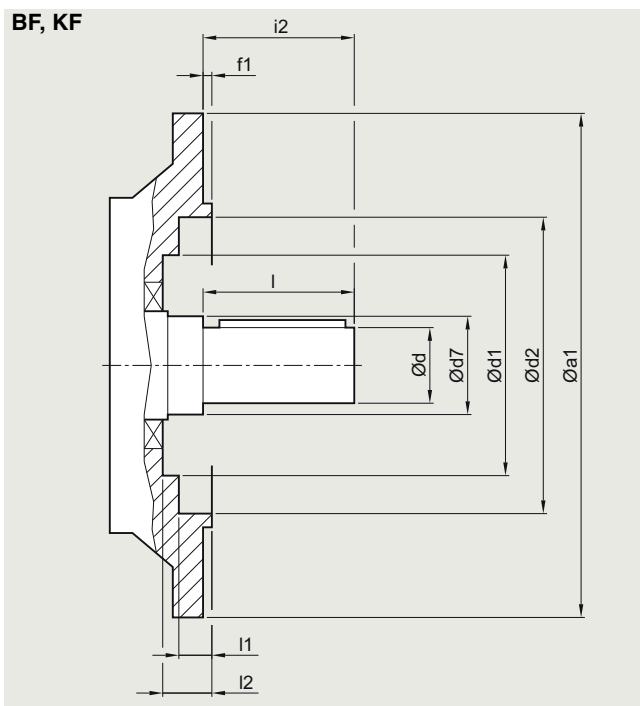
## SIMOGEAR geared motors

Bevel geared motors

### Dimensional drawings

#### Inner contour of the flange-mounted design

Notes regarding the design of the customer's interface for the solid shaft design

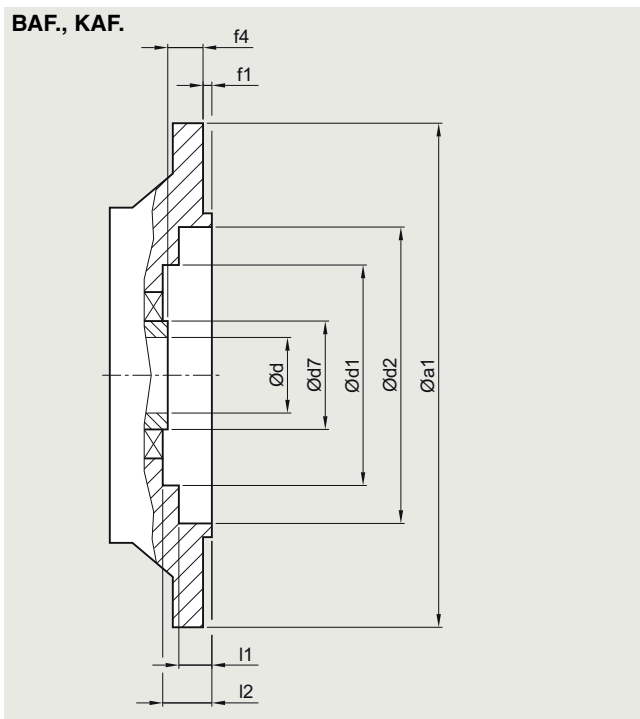


Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
BF19	120	20	30	60	68	3.0	40	40	23.5	29.5
BF29	120	20	40	-	70	3.0	40	40	24.0	-
	160	20	40	70	101	3.5	40	40	8.5	24.5
BF39	160	30	55	93	100	3.5	60	60	11.0	31.5
	200	30	55	93	119	3.5	60	60	16.0	31.5
BF49	200	35	55	93	119	3.5	70	70	16.0	31.5
KF39	160	25	30	-	100	3.5	50	50	5.0	-
	35	45	80	102	3.5	46	70	2.0	29.5	-
KF49	200	30	35	-	118	3.5	60	60	5.5	-
	40	50	90	120	3.5	55	80	4.0	30.5	-
KF69	250	35	45	-	165	4.0	70	70	6.5	-
KF79	250	40	55	-	165	4.0	80	80	6.5	-
	50	55	104	165	4.0	77	100	2.0	29.5	-
KF89	300	50	55	-	165	4.0	100	100	8.0	-
KF109	350	60	65	-	235	5.0	120	120	9.0	-
	80	85	184	210	5.0	134	170	13.0	45.0	-
KF129	450	70	75	-	336	5.0	140	140	9.0	-
	90	95	184	336	5.0	128.5	170	16.5	48.5	-
KF149	450	90	100	-	336	5.0	170	170	10.0	-
	100	120	214	330	5.0	169	210	10.5	50.0	-
KF169	550	110	120	-	427	5.0	210	210	10.0	-
	120	140	254	426	5.0	162	210	14.5	56.0	-
KF189	660	120	160	-	517	6.0	210	210	11.0	-
	140	160	306	518	6.0	190	250	6.0	62.0	-

#### With VLplus reinforced bearing system (G30)

KF89	300	60	70	143	218	4.0	120	120	1.5	8
KF109	350	70	85	190	234	5.0	140	140	2.0	4
KF129	450	90	95	-	336	5.0	170	170	16.5	-
KF149	450	100	120	225	336	5.0	210	210	10.5	11
KF169	550	120	140	-	426	5.0	210	210	19.5	-



**Inner contour of the flange-mounted design**
*Notes regarding the design of the customer's interface for the hollow shaft design*


Gearbox type	a1	d	d7	d1	d2	f1	f4	l1	l2
BAF.19	120	20	30	60	68	3.0	30.0	23.5	29.5
BAF.29	120	20	40	-	70	3.0	20.0	24.0	-
		25							
BAF.39	160	20	40	70	101	3.5	20.0	8.5	24.5
		25							
		30	55	93	100	3.5	27.0	11.0	31.5
BAF.39	200	30	55	93	119	3.5	27.0	16.0	31.5
		35							
		40							
BAF.49	200	35	55	93	119	3.5	27.0	16.0	31.5
		40							
KAF.39	160	25	45	80	102	3.5	24.0	2.0	29.5
		30							
KAF.49	200	30	50	90	120	3.5	25.0	4.0	30.5
		35							
KAF.69	250	40	55	104	165	4.0	23.5	2.0	29.5
KAF.79	250	40	55	104	165	4.0	23.0	2.0	29.5
KAF.89	300	50	70	135	215	4.0	37.0	2.0	44.5
KAF.109	350	60	85	184	210	5.0	36.0	13.0	45.0
		70	90						
KAF.129	450	70	95	184	336	5.0	41.5	16.5	48.5
KAF.149	450	80	120	214	330	5.0	41.0	40.0	50.0
		90							
KAF.169	550	100	140	254	426	5.0	56.0	14.5	56.0
		110							
KAF.189	660	120	160	306	518	6.0	66.0	6.0	62.0
<b>With VLplus reinforced bearing system (G30)</b>									
KAF.89	300	50	70	143	218	4.0	0	1.5	8
KAF.109	350	60	85	190	234	5.0	0	2.0	4
KAF.129	450	70	95	-	336	5.0	0	16.5	-
KAF.149	450	90	120	225	330	5.0	0	10.5	11
KAF.169	550	100	140	-	426	5.0	0	14.5	-

## SIMOGEAR geared motors

### Notes

5

## Helical worm geared motors



<b>6/2</b>	<b>Orientation</b>
<b>6/3</b>	<b>Geared motors up to 7.5 kW</b>
6/3	Selection and ordering data
<b>6/18</b>	<b>Transmission ratios and torques</b>
6/18	Selection and ordering data
<b>6/23</b>	<b>Transmission ratios and torques for very low speeds</b>
6/23	Selection and ordering data
<b>6/28</b>	<b>Efficiencies</b>
6/28	Selection and ordering data
<b>6/38</b>	<b>Dimensional drawings</b>
6/38	Overview
6/40	Helical worm geared motors C..29
6/44	Helical worm geared motors C..39A
6/48	Helical worm geared motors C..49
6/52	Helical worm geared motors C..69
6/56	Helical worm geared motors C..89
6/60	Helical worm tandem geared motors
6/61	SIMOLOC assembly system
	<u>Protective covers</u>
6/62	Protective covers for hollow shaft
6/62	Protective covers for hollow shaft with shrink disk
6/62	Protective covers for hollow shaft with SIMOLOC assembly system
6/63	Inner contour of the flange-mounted design

## SIMOGEAR geared motors

Helical worm geared motors

### Orientation

#### SIMOGEAR helical worm geared motors C

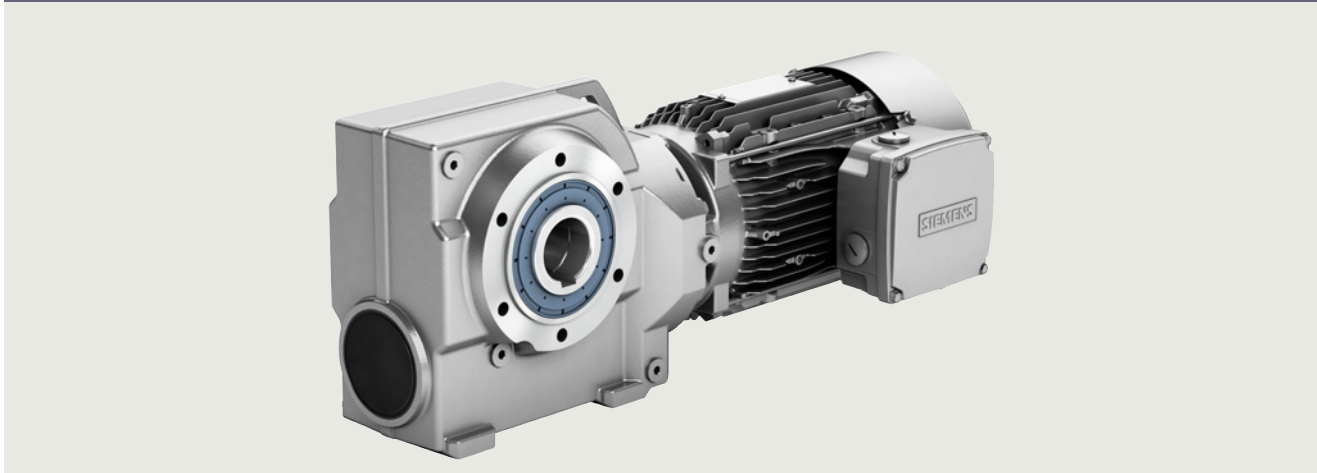


Fig. 6/1 Helical worm gearboxes C

6

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		$T_{2N}$ Nm	$i$ -	$P_1$ kW
C29 ... C89 (2-stage)	5	82 ... 1450	6.48 ... 363	7.5
C.29-Z/D19 ... C.89-Z/D39 (4 or 5-stage)	5	80 ... 1310	270 ... 19000	7.5

SIMOGEAR helical worm geared motors are available in the following versions:

#### Transmission stages

- 2-stage helical worm geared motors
- 4 or 5-stage helical worm geared motors for very low output speeds

#### Designs

- Shaft-mounted design
- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design

#### Mounting

- Hollow shaft design with feather key
- Hollow shaft with shrink disk
- Hollow shaft with SIMOLOC assembly system
- Solid shaft with and without feather key (at one end or both ends)

For helical worm gearboxes, the torque arm is supplied loose to enable it to be mounted as required on site. The position of the torque arm can be freely selected.

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	No. of poles
<b>0.09</b>	<b>C.49-LE63MEB6</b>							
	3	176	299	8730	2	20	2KJ3603- ■ BD21- ■ ■ N2 -Z	P01
	<b>C.39A-LE63MEB6</b>							
	3	167	299	6270	1.1	14	2KJ3642- ■ BD21- ■ ■ N2 -Z	P01
	3.4	152	265.2	6330	1.2	14	2KJ3642- ■ BD21- ■ ■ M2 -Z	P01
	3.9	136	230.1	6390	1.4	14	2KJ3642- ■ BD21- ■ ■ L2 -Z	P01
	4.3	126	209.18	6430	1.5	14	2KJ3642- ■ BD21- ■ ■ K2 -Z	P01
	<b>C.39A-LE63MCA4</b>							
	4.7	117	299	6460	1.6	14	2KJ3642- ■ BB21- ■ ■ N2 -Z	-
	5.3	106	265.2	6500	1.8	14	2KJ3642- ■ BB21- ■ ■ M2 -Z	-
	6.1	95	230.1	6540	2	14	2KJ3642- ■ BB21- ■ ■ L2 -Z	-
	<b>C.29-LE63MEB6</b>							
	4.3	125	209.18	4050	0.86	9	2KJ3601- ■ BD21- ■ ■ K2 -Z	P01
	5	110	179.4	4130	0.97	9	2KJ3601- ■ BD21- ■ ■ J2 -Z	P01
	<b>C.29-LE63MCA4</b>							
	5.3	105	265.2	4150	1	8	2KJ3601- ■ BB21- ■ ■ M2 -Z	-
	6.1	94	230.1	4210	1.2	8	2KJ3601- ■ BB21- ■ ■ L2 -Z	-
	6.7	87	209.18	4240	1.3	8	2KJ3601- ■ BB21- ■ ■ K2 -Z	-
	7.9	76	179.4	4300	1.4	8	2KJ3601- ■ BB21- ■ ■ J2 -Z	-
	8.6	71	163.09	4330	1.6	8	2KJ3601- ■ BB21- ■ ■ H2 -Z	-
	9.9	63	143	4370	1.7	8	2KJ3601- ■ BB21- ■ ■ G2 -Z	-
	11	57	127.64	4400	1.9	8	2KJ3601- ■ BB21- ■ ■ F2 -Z	-
	12	51	113.75	4430	2.1	8	2KJ3601- ■ BB21- ■ ■ E2 -Z	-
	13	48	105	4440	2.3	8	2KJ3601- ■ BB21- ■ ■ D2 -Z	-
	15	42	91.93	4470	2.6	8	2KJ3601- ■ BB21- ■ ■ C2 -Z	-
	17	37	80.6	4500	3	8	2KJ3601- ■ BB21- ■ ■ B2 -Z	-
	19	34	73.12	4500	3.3	8	2KJ3601- ■ BB21- ■ ■ A2 -Z	-
20	32	68.82	4500	3.5	8	2KJ3601- ■ BB21- ■ ■ X1 -Z	-	
23	28	60.67	4500	3.9	8	2KJ3601- ■ BB21- ■ ■ W1 -Z	-	
27	24	52.65	4500	4.5	8	2KJ3601- ■ BB21- ■ ■ U1 -Z	-	
28	27	49.87	4500	3.8	8	2KJ3601- ■ BB21- ■ ■ V1 -Z	-	
33	23	43.27	4500	4.4	8	2KJ3601- ■ BB21- ■ ■ T1 -Z	-	
36	21	39.33	4500	4.8	8	2KJ3601- ■ BB21- ■ ■ S1 -Z	-	
43	18	32.64	4500	5	8	2KJ3601- ■ BB21- ■ ■ Q1 -Z	-	
<b>0.12</b>	<b>C.39A-LE63ZMH4P</b>							
	4.6	158	299	6310	1.2	16	2KJ3642- ■ BD23- ■ ■ N2 -Z	-
	5.2	144	265.2	6360	1.3	16	2KJ3642- ■ BD23- ■ ■ M2 -Z	-
	6	128	230.1	6420	1.5	16	2KJ3642- ■ BD23- ■ ■ L2 -Z	-
	6.6	118	209.18	6460	1.6	16	2KJ3642- ■ BD23- ■ ■ K2 -Z	-
	7.7	103	179.4	6510	1.9	16	2KJ3642- ■ BD23- ■ ■ J2 -Z	-
	8.5	95	163.09	6450	2	16	2KJ3642- ■ BD23- ■ ■ H2 -Z	-
	<b>C.29-LE63ZMH4P</b>							
	6	126	230.1	4050	0.85	10	2KJ3601- ■ BD23- ■ ■ L2 -Z	-
	6.6	117	209.18	4090	0.93	10	2KJ3601- ■ BD23- ■ ■ K2 -Z	-
	7.7	103	179.4	4160	1.1	10	2KJ3601- ■ BD23- ■ ■ J2 -Z	-
	8.5	95	163.09	4200	1.2	10	2KJ3601- ■ BD23- ■ ■ H2 -Z	-
	9.7	85	143	4250	1.3	10	2KJ3601- ■ BD23- ■ ■ G2 -Z	-
	11	77	127.64	4290	1.4	10	2KJ3601- ■ BD23- ■ ■ F2 -Z	-
	12	69	113.75	4340	1.6	10	2KJ3601- ■ BD23- ■ ■ E2 -Z	-
	13	64	105	4360	1.7	10	2KJ3601- ■ BD23- ■ ■ D2 -Z	-
	15	57	91.93	4400	1.9	10	2KJ3601- ■ BD23- ■ ■ C2 -Z	-

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

# SIMOGEAR geared motors

## Helical worm geared motors

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.12	<b>C.29-LE63MEB4E</b>							
	17	50	80.6	4430	2.2	10	2KJ3601- ■ BD23- ■ ■ B2 -Z -	-
	19	46	73.12	4450	2.4	10	2KJ3601- ■ BD23- ■ ■ A2 -Z -	-
	20	43	68.82	4470	2.6	10	2KJ3601- ■ BD23- ■ ■ X1 -Z -	-
	23	38	60.67	4490	2.9	10	2KJ3601- ■ BD23- ■ ■ W1 -Z -	-
	26	33	52.65	4500	3.4	10	2KJ3601- ■ BD23- ■ ■ V1 -Z -	-
	28	36	49.87	4500	2.8	10	2KJ3601- ■ BD23- ■ ■ U1 -Z -	-
	32	32	43.27	4500	3.3	10	2KJ3601- ■ BD23- ■ ■ T1 -Z -	-
	35	29	39.33	4500	3.6	10	2KJ3601- ■ BD23- ■ ■ S1 -Z -	-
	41	25	33.73	4500	4.2	10	2KJ3601- ■ BD23- ■ ■ R1 -Z -	-
	43	24	32.64	4500	3.7	10	2KJ3601- ■ BD23- ■ ■ Q1 -Z -	-
	49	21	28.32	4500	4.3	10	2KJ3601- ■ BD23- ■ ■ P1 -Z -	-
	54	19	25.75	4500	4.7	10	2KJ3601- ■ BD23- ■ ■ N1 -Z -	-
0.18	<b>C.69-LE71ZMK6P</b>							
	2.4	440	360	11200	1.5	30	2KJ3604- ■ CC23- ■ ■ M2 -Z P01	
	2.7	400	319.8	11300	1.7	30	2KJ3604- ■ CC23- ■ ■ L2 -Z P01	
	3.1	360	280.8	11400	1.9	30	2KJ3604- ■ CC23- ■ ■ K2 -Z P01	
	3.4	335	255.27	11400	2	30	2KJ3604- ■ CC23- ■ ■ J2 -Z P01	
	<b>C.49-LE71ZMK6P</b>							
	2.9	355	299	8400	0.96	22	2KJ3603- ■ CC23- ■ ■ N2 -Z P01	
	3.3	325	265.2	8480	1.1	22	2KJ3603- ■ CC23- ■ ■ M2 -Z P01	
	3.8	290	230.1	8590	1.2	22	2KJ3603- ■ CC23- ■ ■ L2 -Z P01	
	4.2	270	209.18	8640	1.3	22	2KJ3603- ■ CC23- ■ ■ K2 -Z P01	
	<b>C.49-LE63ZMK4P</b>							
	4.6	245	299	8720	1.4	21	2KJ3603- ■ BE23- ■ ■ N2 -Z -	-
	5.2	225	265.2	8730	1.5	21	2KJ3603- ■ BE23- ■ ■ M2 -Z -	-
	6	200	230.1	8730	1.8	21	2KJ3603- ■ BE23- ■ ■ L2 -Z -	-
	6.6	184	209.18	8730	1.9	21	2KJ3603- ■ BE23- ■ ■ K2 -Z -	-
	<b>C.39A-LE63ZMK4P</b>							
	4.6	235	299	6020	0.81	16	2KJ3642- ■ BE23- ■ ■ N2 -Z -	-
	5.2	215	265.2	6100	0.89	16	2KJ3642- ■ BE23- ■ ■ M2 -Z -	-
	6	193	230.1	6180	1	16	2KJ3642- ■ BE23- ■ ■ L2 -Z -	-
	6.6	177	209.18	6240	1.1	16	2KJ3642- ■ BE23- ■ ■ K2 -Z -	-
	7.7	155	179.4	6210	1.2	16	2KJ3642- ■ BE23- ■ ■ J2 -Z -	-
	8.5	143	163.09	6070	1.4	16	2KJ3642- ■ BE23- ■ ■ H2 -Z -	-
	9.7	126	143	5900	1.5	16	2KJ3642- ■ BE23- ■ ■ G2 -Z -	-
	11	114	127.64	5740	1.7	16	2KJ3642- ■ BE23- ■ ■ F2 -Z -	-
	12	102	113.75	5590	1.9	16	2KJ3642- ■ BE23- ■ ■ E2 -Z -	-
	13	94	105	5480	2.1	16	2KJ3642- ■ BE23- ■ ■ D2 -Z -	-
	<b>C.29-LE63ZMK4P</b>							
	9.7	128	143	4040	0.86	10	2KJ3601- ■ BE23- ■ ■ G2 -Z -	-
	11	116	127.64	4100	0.95	10	2KJ3601- ■ BE23- ■ ■ F2 -Z -	-
	12	104	113.75	4160	1.1	10	2KJ3601- ■ BE23- ■ ■ E2 -Z -	-
	13	97	105	4190	1.1	10	2KJ3601- ■ BE23- ■ ■ D2 -Z -	-
	15	86	91.93	4250	1.3	10	2KJ3601- ■ BE23- ■ ■ C2 -Z -	-
	17	75	80.6	4300	1.5	10	2KJ3601- ■ BE23- ■ ■ B2 -Z -	-
19	68	73.12	4340	1.6	10	2KJ3601- ■ BE23- ■ ■ A2 -Z -	-	
20	64	68.82	4360	1.7	10	2KJ3601- ■ BE23- ■ ■ X1 -Z -	-	
23	57	60.67	4400	1.9	10	2KJ3601- ■ BE23- ■ ■ W1 -Z -	-	
26	49	52.65	4440	2.2	10	2KJ3601- ■ BE23- ■ ■ V1 -Z -	-	
28	54	49.87	4410	1.9	10	2KJ3601- ■ BE23- ■ ■ U1 -Z -	-	
32	47	43.27	4450	2.2	10	2KJ3601- ■ BE23- ■ ■ T1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.18</b>	<b>C.29-LE63ZMK4P</b>							
	35	43	39.33	4470	2.4	10	2KJ3601- ■ BE23- ■ ■ S1 -Z -	-
	41	37	33.73	4500	2.8	10	2KJ3601- ■ BE23- ■ ■ R1 -Z -	-
	42	36	32.64	4500	2.5	10	2KJ3601- ■ BE23- ■ ■ Q1 -Z -	-
	49	32	28.32	4500	2.8	10	2KJ3601- ■ BE23- ■ ■ P1 -Z -	-
	54	29	25.75	4500	3.1	10	2KJ3601- ■ BE23- ■ ■ N1 -Z -	-
	63	25	22.08	4500	3.6	10	2KJ3601- ■ BE23- ■ ■ M1 -Z -	-
	69	23	20.07	4500	4	10	2KJ3601- ■ BE23- ■ ■ L1 -Z -	-
79	20	17.6	4500	4.6	10	2KJ3601- ■ BE23- ■ ■ K1 -Z -	-	
<b>0.25</b>	<b>C.69-LE71YMS6P</b>							
	2.4	620	360	10700	1.1	32	2KJ3604- ■ CE23- ■ ■ M2 -Z P01	
	2.7	560	319.8	10900	1.2	32	2KJ3604- ■ CE23- ■ ■ L2 -Z P01	
	3.1	505	280.8	11000	1.3	32	2KJ3604- ■ CE23- ■ ■ K2 -Z P01	
	3.4	470	255.27	11100	1.4	32	2KJ3604- ■ CE23- ■ ■ J2 -Z P01	
	<b>C.69-LE71ZMK4P</b>							
	3.9	420	360	11200	1.6	30	2KJ3604- ■ CC23- ■ ■ M2 -Z -	-
	4.4	380	319.8	11300	1.8	30	2KJ3604- ■ CC23- ■ ■ L2 -Z -	-
	5	340	280.8	11400	2	30	2KJ3604- ■ CC23- ■ ■ K2 -Z -	-
	<b>C.49-LE71YMS6P</b>							
	3.8	405	230.1	8250	0.86	23	2KJ3603- ■ CE23- ■ ■ L2 -Z P01	
	4.2	375	209.18	8340	0.93	23	2KJ3603- ■ CE23- ■ ■ K2 -Z P01	
	<b>C.49-LE71ZMK4P</b>							
	4.7	340	299	8440	1	22	2KJ3603- ■ CC23- ■ ■ N2 -Z -	-
	5.3	310	265.2	8530	1.1	22	2KJ3603- ■ CC23- ■ ■ M2 -Z -	-
	6.1	275	230.1	8630	1.3	22	2KJ3603- ■ CC23- ■ ■ L2 -Z -	-
	6.7	250	209.18	8700	1.4	22	2KJ3603- ■ CC23- ■ ■ K2 -Z -	-
	7.8	220	179.4	8730	1.6	22	2KJ3603- ■ CC23- ■ ■ J2 -Z -	-
	8.6	200	163.09	8730	1.8	22	2KJ3603- ■ CC23- ■ ■ H2 -Z -	-
	9.8	179	143	8730	2	22	2KJ3603- ■ CC23- ■ ■ G2 -Z -	-
	11	160	127.64	8580	2.2	22	2KJ3603- ■ CC23- ■ ■ F2 -Z -	-
	<b>C.39A-LE71ZMK4P</b>							
	7.8	210	179.4	5740	0.9	16	2KJ3642- ■ CC23- ■ ■ J2 -Z -	-
	8.6	197	163.09	5610	0.98	16	2KJ3642- ■ CC23- ■ ■ H2 -Z -	-
	9.8	174	143	5490	1.1	16	2KJ3642- ■ CC23- ■ ■ G2 -Z -	-
	11	157	127.64	5370	1.2	16	2KJ3642- ■ CC23- ■ ■ F2 -Z -	-
	12	140	113.75	5260	1.4	16	2KJ3642- ■ CC23- ■ ■ E2 -Z -	-
	13	130	105	5170	1.5	16	2KJ3642- ■ CC23- ■ ■ D2 -Z -	-
	15	114	91.93	5030	1.7	16	2KJ3642- ■ CC23- ■ ■ C2 -Z -	-
	17	100	80.6	4890	1.9	16	2KJ3642- ■ CC23- ■ ■ B2 -Z -	-
	19	91	73.12	4780	2.1	16	2KJ3642- ■ CC23- ■ ■ A2 -Z -	-
	20	86	68.82	4710	2.3	16	2KJ3642- ■ CC23- ■ ■ X1 -Z -	-
23	76	60.67	4570	2.4	16	2KJ3642- ■ CC23- ■ ■ W1 -Z -	-	
<b>C.29-LE71ZMK4P</b>								
13	134	105	4010	0.82	10	2KJ3601- ■ CC23- ■ ■ D2 -Z -	-	
15	118	91.93	4090	0.93	10	2KJ3601- ■ CC23- ■ ■ C2 -Z -	-	
17	104	80.6	4160	1.1	10	2KJ3601- ■ CC23- ■ ■ B2 -Z -	-	
19	94	73.12	4210	1.2	10	2KJ3601- ■ CC23- ■ ■ A2 -Z -	-	
20	89	68.82	4230	1.2	10	2KJ3601- ■ CC23- ■ ■ X1 -Z -	-	
23	78	60.67	4290	1.4	10	2KJ3601- ■ CC23- ■ ■ W1 -Z -	-	
26	68	52.65	4340	1.6	10	2KJ3601- ■ CC23- ■ ■ V1 -Z -	-	
28	75	49.87	4300	1.4	10	2KJ3601- ■ CC23- ■ ■ U1 -Z -	-	
32	65	43.27	4360	1.6	10	2KJ3601- ■ CC23- ■ ■ T1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.25</b>	<b>C.29-LE71ZMK4P</b>							
	35	60	39.33	4380	1.7	10	2KJ3601- ■ CC23- ■ ■ S1 -Z -	-
	41	52	33.73	4420	2	10	2KJ3601- ■ CC23- ■ ■ R1 -Z -	-
	43	50	32.64	4430	1.8	10	2KJ3601- ■ CC23- ■ ■ Q1 -Z -	-
	49	44	28.32	4460	2.1	10	2KJ3601- ■ CC23- ■ ■ P1 -Z -	-
	54	40	25.75	4480	2.3	10	2KJ3601- ■ CC23- ■ ■ N1 -Z -	-
	63	34	22.08	4500	2.6	10	2KJ3601- ■ CC23- ■ ■ M1 -Z -	-
	70	31	20.07	4500	2.9	10	2KJ3601- ■ CC23- ■ ■ L1 -Z -	-
	79	28	17.6	4500	3.3	10	2KJ3601- ■ CC23- ■ ■ K1 -Z -	-
	89	25	15.71	4500	3.7	10	2KJ3601- ■ CC23- ■ ■ J1 -Z -	-
	100	22	14	4500	4.2	10	2KJ3601- ■ CC23- ■ ■ H1 -Z -	-
108	20	12.92	4500	4.6	10	2KJ3601- ■ CC23- ■ ■ G1 -Z -	-	
<b>0.37</b>	<b>C.89-LE80MK6P</b>							
	2.5	945	363	16300	1.5	55	2KJ3605- ■ DE23- ■ ■ N2 -Z P01	
	2.8	870	329.73	16300	1.7	55	2KJ3605- ■ DE23- ■ ■ M2 -Z P01	
	3.1	790	295.75	16300	1.8	55	2KJ3605- ■ DE23- ■ ■ L2 -Z P01	
	3.5	720	265.91	16300	2	55	2KJ3605- ■ DE23- ■ ■ K2 -Z P01	
	<b>C.69-LE80MK6P</b>							
	2.9	790	319.8	10300	0.85	36	2KJ3604- ■ DE23- ■ ■ L2 -Z P01	
	3.3	710	280.8	10500	0.94	36	2KJ3604- ■ DE23- ■ ■ K2 -Z P01	
	3.6	660	255.27	10600	1	36	2KJ3604- ■ DE23- ■ ■ J2 -Z P01	
	<b>C.69-LE71YMS4P</b>							
	3.8	630	360	10700	1.1	32	2KJ3604- ■ CE23- ■ ■ M2 -Z -	-
4.3	570	319.8	10900	1.2	32	2KJ3604- ■ CE23- ■ ■ L2 -Z -	-	
4.9	510	280.8	11000	1.3	32	2KJ3604- ■ CE23- ■ ■ K2 -Z -	-	
5.4	465	255.27	11100	1.4	32	2KJ3604- ■ CE23- ■ ■ J2 -Z -	-	
6.3	405	218.4	11200	1.7	32	2KJ3604- ■ CE23- ■ ■ H2 -Z -	-	
7	370	198.55	11300	1.8	32	2KJ3604- ■ CE23- ■ ■ G2 -Z -	-	
7.9	330	175.5	11400	2	32	2KJ3604- ■ CE23- ■ ■ F2 -Z -	-	
<b>C.49-LE71YMS4P</b>								
6	410	230.1	8240	0.85	23	2KJ3603- ■ CE23- ■ ■ L2 -Z -	-	
6.6	380	209.18	8330	0.94	23	2KJ3603- ■ CE23- ■ ■ K2 -Z -	-	
7.7	330	179.4	8470	1.1	23	2KJ3603- ■ CE23- ■ ■ J2 -Z -	-	
8.5	300	163.09	8490	1.2	23	2KJ3603- ■ CE23- ■ ■ H2 -Z -	-	
9.7	265	143	8280	1.3	23	2KJ3603- ■ CE23- ■ ■ G2 -Z -	-	
11	235	127.64	8100	1.5	23	2KJ3603- ■ CE23- ■ ■ F2 -Z -	-	
12	210	113.75	7910	1.7	23	2KJ3603- ■ CE23- ■ ■ E2 -Z -	-	
13	198	105	7740	1.8	23	2KJ3603- ■ CE23- ■ ■ D2 -Z -	-	
15	174	91.93	7510	2	23	2KJ3603- ■ CE23- ■ ■ C2 -Z -	-	
17	153	80.6	7280	2.2	23	2KJ3603- ■ CE23- ■ ■ B2 -Z -	-	
19	138	73.12	7120	2.3	23	2KJ3603- ■ CE23- ■ ■ A2 -Z -	-	
<b>C.39A-LE71YMS4P</b>								
11	235	127.64	4760	0.83	17	2KJ3642- ■ CE23- ■ ■ F2 -Z -	-	
12	210	113.75	4710	0.92	17	2KJ3642- ■ CE23- ■ ■ E2 -Z -	-	
13	194	105	4670	1	17	2KJ3642- ■ CE23- ■ ■ D2 -Z -	-	
15	171	91.93	4590	1.1	17	2KJ3642- ■ CE23- ■ ■ C2 -Z -	-	
17	150	80.6	4500	1.3	17	2KJ3642- ■ CE23- ■ ■ B2 -Z -	-	
19	136	73.12	4430	1.4	17	2KJ3642- ■ CE23- ■ ■ A2 -Z -	-	
20	128	68.82	4390	1.5	17	2KJ3642- ■ CE23- ■ ■ X1 -Z -	-	
23	113	60.67	4290	1.6	17	2KJ3642- ■ CE23- ■ ■ W1 -Z -	-	
26	98	52.65	4170	1.8	17	2KJ3642- ■ CE23- ■ ■ V1 -Z -	-	
28	113	49.87	3740	1.7	17	2KJ3642- ■ CE23- ■ ■ U1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.37</b>	<b>C.39A-LE71YMS4P</b>							
	32	98	43.27	3670	2	17	2KJ3642- ■ CE23- ■ ■ T1 -Z -	
	35	89	39.33	3610	2.2	17	2KJ3642- ■ CE23- ■ ■ S1 -Z -	
	41	77	33.73	3510	2.6	17	2KJ3642- ■ CE23- ■ ■ R1 -Z -	
	<b>C.29-LE71YMS4P</b>							
	20	133	68.82	4010	0.83	12	2KJ3601- ■ CE23- ■ ■ X1 -Z -	
	23	117	60.67	4090	0.94	12	2KJ3601- ■ CE23- ■ ■ W1 -Z -	
	26	102	52.65	4170	1.1	12	2KJ3601- ■ CE23- ■ ■ V1 -Z -	
	28	112	49.87	4120	0.91	12	2KJ3601- ■ CE23- ■ ■ U1 -Z -	
	32	98	43.27	4190	1.1	12	2KJ3601- ■ CE23- ■ ■ T1 -Z -	
	35	89	39.33	4230	1.2	12	2KJ3601- ■ CE23- ■ ■ S1 -Z -	
	41	77	33.73	4290	1.4	12	2KJ3601- ■ CE23- ■ ■ R1 -Z -	
	42	75	32.64	4300	1.2	12	2KJ3601- ■ CE23- ■ ■ Q1 -Z -	
	49	66	28.32	4350	1.4	12	2KJ3601- ■ CE23- ■ ■ P1 -Z -	
	54	60	25.75	4380	1.5	12	2KJ3601- ■ CE23- ■ ■ N1 -Z -	
	63	51	22.08	4430	1.8	12	2KJ3601- ■ CE23- ■ ■ M1 -Z -	
	69	47	20.07	4450	1.9	12	2KJ3601- ■ CE23- ■ ■ L1 -Z -	
	78	41	17.6	4480	2.2	12	2KJ3601- ■ CE23- ■ ■ K1 -Z -	
	88	37	15.71	4500	2.5	12	2KJ3601- ■ CE23- ■ ■ J1 -Z -	
	99	33	14	4500	2.8	12	2KJ3601- ■ CE23- ■ ■ H1 -Z -	
107	30	12.92	4440	3.1	12	2KJ3601- ■ CE23- ■ ■ G1 -Z -		
122	27	11.31	4270	3.5	12	2KJ3601- ■ CE23- ■ ■ F1 -Z -		
139	23	9.92	4130	4	12	2KJ3601- ■ CE23- ■ ■ E1 -Z -		
153	21	9	4010	4.4	12	2KJ3601- ■ CE23- ■ ■ D1 -Z -		
163	20	8.47	3940	4.6	12	2KJ3601- ■ CE23- ■ ■ C1 -Z -		
185	18	7.47	3800	5	12	2KJ3601- ■ CE23- ■ ■ B1 -Z -		
<b>0.55</b>	<b>C.89-LE80ZMQ6P</b>							
	2.6	1390	363	16300	1	55	2KJ3605- ■ DF23- ■ ■ N2 -Z P01	
	2.8	1280	329.73	16300	1.1	55	2KJ3605- ■ DF23- ■ ■ M2 -Z P01	
	3.2	1160	295.75	16300	1.2	55	2KJ3605- ■ DF23- ■ ■ L2 -Z P01	
	3.5	1060	265.91	16300	1.4	55	2KJ3605- ■ DF23- ■ ■ K2 -Z P01	
	<b>C.89-LE80MH4P</b>							
	4	950	363	16300	1.5	56	2KJ3605- ■ DC23- ■ ■ N2 -Z -	
	4.4	870	329.73	16300	1.7	56	2KJ3605- ■ DC23- ■ ■ M2 -Z -	
	4.9	780	295.75	16300	1.8	56	2KJ3605- ■ DC23- ■ ■ L2 -Z -	
	5.4	705	265.91	16300	2	56	2KJ3605- ■ DC23- ■ ■ K2 -Z -	
	<b>C.69-LE80MH4P</b>							
	4.5	815	319.8	10300	0.82	37	2KJ3604- ■ DC23- ■ ■ L2 -Z -	
	5.1	725	280.8	10500	0.93	37	2KJ3604- ■ DC23- ■ ■ K2 -Z -	
	5.6	665	255.27	10600	1	37	2KJ3604- ■ DC23- ■ ■ J2 -Z -	
	6.6	580	218.4	10800	1.2	37	2KJ3604- ■ DC23- ■ ■ H2 -Z -	
	7.3	530	198.55	11000	1.3	37	2KJ3604- ■ DC23- ■ ■ G2 -Z -	
	8.2	470	175.5	11100	1.4	37	2KJ3604- ■ DC23- ■ ■ F2 -Z -	
	9	430	159.55	11200	1.5	37	2KJ3604- ■ DC23- ■ ■ E2 -Z -	
	10	375	139.75	11300	1.6	37	2KJ3604- ■ DC23- ■ ■ D2 -Z -	
	11	345	129	11400	1.6	37	2KJ3604- ■ DC23- ■ ■ C2 -Z -	
13	305	114.21	11200	1.7	37	2KJ3604- ■ DC23- ■ ■ B2 -Z -		
14	320	102.5	10500	2.1	37	2KJ3604- ■ DC23- ■ ■ A2 -Z -		
<b>C.49-LE80MH4P</b>								
8.8	430	163.09	7460	0.82	28	2KJ3603- ■ DC23- ■ ■ H2 -Z -		
10	380	143	7360	0.93	28	2KJ3603- ■ DC23- ■ ■ G2 -Z -		
11	340	127.64	7260	1	28	2KJ3603- ■ DC23- ■ ■ F2 -Z -		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>0.55</b>	<b>C.49-LE80MH4P</b>							
	13	305	113.75	7130	1.2	28	2KJ3603- ■ DC23- ■ ■ E2 -Z -	-
	14	280	105	7060	1.3	28	2KJ3603- ■ DC23- ■ ■ D2 -Z -	-
	16	245	91.93	6910	1.4	28	2KJ3603- ■ DC23- ■ ■ C2 -Z -	-
	18	215	80.6	6740	1.5	28	2KJ3603- ■ DC23- ■ ■ B2 -Z -	-
	20	197	73.12	6600	1.6	28	2KJ3603- ■ DC23- ■ ■ A2 -Z -	-
	21	185	68.82	6530	1.6	28	2KJ3603- ■ DC23- ■ ■ X1 -Z -	-
	24	163	60.67	6350	1.7	28	2KJ3603- ■ DC23- ■ ■ W1 -Z -	-
	27	142	52.65	6150	1.9	28	2KJ3603- ■ DC23- ■ ■ V1 -Z -	-
	29	162	49.87	5620	2	28	2KJ3603- ■ DC23- ■ ■ U1 -Z -	-
33	141	43.27	5470	2.5	28	2KJ3603- ■ DC23- ■ ■ T1 -Z -	-	
<b>0.75</b>	<b>C.39A-LE80MH4P</b>							
	16	240	91.93	3940	0.8	22	2KJ3642- ■ DC23- ■ ■ C2 -Z -	-
	18	210	80.6	3930	0.91	22	2KJ3642- ■ DC23- ■ ■ B2 -Z -	-
	20	194	73.12	3880	1	22	2KJ3642- ■ DC23- ■ ■ A2 -Z -	-
	21	183	68.82	3860	1.1	22	2KJ3642- ■ DC23- ■ ■ X1 -Z -	-
	24	161	60.67	3820	1.1	22	2KJ3642- ■ DC23- ■ ■ W1 -Z -	-
	27	140	52.65	3750	1.2	22	2KJ3642- ■ DC23- ■ ■ V1 -Z -	-
	29	162	49.87	3180	1.2	22	2KJ3642- ■ DC23- ■ ■ U1 -Z -	-
	33	140	43.27	3170	1.4	22	2KJ3642- ■ DC23- ■ ■ T1 -Z -	-
	37	127	39.33	3160	1.6	22	2KJ3642- ■ DC23- ■ ■ S1 -Z -	-
	43	109	33.73	3120	1.8	22	2KJ3642- ■ DC23- ■ ■ R1 -Z -	-
	44	108	32.64	2970	2	22	2KJ3642- ■ DC23- ■ ■ Q1 -Z -	-
	51	94	28.32	2930	2.5	22	2KJ3642- ■ DC23- ■ ■ P1 -Z -	-
56	86	25.75	2900	2.7	22	2KJ3642- ■ DC23- ■ ■ N1 -Z -	-	
<b>0.75</b>	<b>C.29-LE80MH4P</b>							
	37	127	39.33	4040	0.81	16	2KJ3601- ■ DC23- ■ ■ S1 -Z -	-
	43	110	33.73	4130	0.95	16	2KJ3601- ■ DC23- ■ ■ R1 -Z -	-
	44	107	32.64	4140	0.84	16	2KJ3601- ■ DC23- ■ ■ Q1 -Z -	-
	51	93	28.32	4210	0.96	16	2KJ3601- ■ DC23- ■ ■ P1 -Z -	-
	56	85	25.75	4250	1.1	16	2KJ3601- ■ DC23- ■ ■ N1 -Z -	-
	65	73	22.08	4310	1.2	16	2KJ3601- ■ DC23- ■ ■ M1 -Z -	-
	72	67	20.07	4350	1.4	16	2KJ3601- ■ DC23- ■ ■ L1 -Z -	-
	82	59	17.6	4390	1.6	16	2KJ3601- ■ DC23- ■ ■ K1 -Z -	-
	92	52	15.71	4370	1.8	16	2KJ3601- ■ DC23- ■ ■ J1 -Z -	-
	103	47	14	4250	2	16	2KJ3601- ■ DC23- ■ ■ H1 -Z -	-
	111	43	12.92	4180	2.2	16	2KJ3601- ■ DC23- ■ ■ G1 -Z -	-
	127	38	11.31	4040	2.5	16	2KJ3601- ■ DC23- ■ ■ F1 -Z -	-
	145	33	9.92	3920	2.8	16	2KJ3601- ■ DC23- ■ ■ E1 -Z -	-
	160	30	9	3820	3	16	2KJ3601- ■ DC23- ■ ■ D1 -Z -	-
	170	28	8.47	3770	3.2	16	2KJ3601- ■ DC23- ■ ■ C1 -Z -	-
	193	25	7.47	3640	3.4	16	2KJ3601- ■ DC23- ■ ■ B1 -Z -	-
222	22	6.48	3490	3.8	16	2KJ3601- ■ DC23- ■ ■ A1 -Z -	-	
<b>0.75</b>	<b>C.89-LE90SQ6P</b>							
	2.9	1730	329.73	15800	0.84	58	2KJ3605- ■ EC23- ■ ■ M2 -Z	P01
	3.2	1570	295.75	16000	0.92	58	2KJ3605- ■ EC23- ■ ■ L2 -Z	P01
3.6	1430	265.91	16300	1	58	2KJ3605- ■ EC23- ■ ■ K2 -Z	P01	
<b>0.75</b>	<b>C.89-LE80ZMQ4P</b>							
	4	1290	363	16300	1.1	55	2KJ3605- ■ DF23- ■ ■ N2 -Z	-
	4.4	1170	329.73	16300	1.2	55	2KJ3605- ■ DF23- ■ ■ M2 -Z	-
4.9	1060	295.75	16300	1.4	55	2KJ3605- ■ DF23- ■ ■ L2 -Z	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

Geared motors up to 7.5 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.75	<b>C.89-LE80ZMQ4P</b>							
	5.5	960	265.91	16300	1.5	55	2KJ3605- ■ DF23- ■ ■ K2 -Z -	-
	6	870	240.5	16300	1.7	55	2KJ3605- ■ DF23- ■ ■ J2 -Z -	-
	6.5	805	222	16300	1.8	55	2KJ3605- ■ DF23- ■ ■ H2 -Z -	-
	7.1	735	203.36	16300	2	55	2KJ3605- ■ DF23- ■ ■ G2 -Z -	-
	<b>C.69-LE80ZMQ4P</b>							
	6.6	785	218.4	10400	0.86	36	2KJ3604- ■ DF23- ■ ■ H2 -Z -	-
	7.3	720	198.55	10500	0.94	36	2KJ3604- ■ DF23- ■ ■ G2 -Z -	-
	8.3	640	175.5	10700	1	36	2KJ3604- ■ DF23- ■ ■ F2 -Z -	-
	9.1	580	159.55	10800	1.1	36	2KJ3604- ■ DF23- ■ ■ E2 -Z -	-
	10	510	139.75	11000	1.2	36	2KJ3604- ■ DF23- ■ ■ D2 -Z -	-
	11	470	129	10800	1.2	36	2KJ3604- ■ DF23- ■ ■ C2 -Z -	-
	13	415	114.21	10600	1.3	36	2KJ3604- ■ DF23- ■ ■ B2 -Z -	-
	14	435	102.5	9790	1.5	36	2KJ3604- ■ DF23- ■ ■ A2 -Z -	-
	16	385	90	9560	1.8	36	2KJ3604- ■ DF23- ■ ■ X1 -Z -	-
	18	350	81.82	9400	1.9	36	2KJ3604- ■ DF23- ■ ■ W1 -Z -	-
	21	300	70	9120	2.2	36	2KJ3604- ■ DF23- ■ ■ V1 -Z -	-
	23	270	63.64	8960	2.3	36	2KJ3604- ■ DF23- ■ ■ U1 -Z -	-
	<b>C.49-LE80ZMQ4P</b>							
	13	410	113.75	6400	0.86	27	2KJ3603- ■ DF23- ■ ■ E2 -Z -	-
	14	380	105	6360	0.93	27	2KJ3603- ■ DF23- ■ ■ D2 -Z -	-
	16	335	91.93	6280	1	27	2KJ3603- ■ DF23- ■ ■ C2 -Z -	-
	18	290	80.6	6220	1.1	27	2KJ3603- ■ DF23- ■ ■ B2 -Z -	-
	20	265	73.12	6130	1.2	27	2KJ3603- ■ DF23- ■ ■ A2 -Z -	-
	21	250	68.82	6070	1.2	27	2KJ3603- ■ DF23- ■ ■ X1 -Z -	-
	24	220	60.67	5950	1.3	27	2KJ3603- ■ DF23- ■ ■ W1 -Z -	-
	28	192	52.65	5800	1.4	27	2KJ3603- ■ DF23- ■ ■ V1 -Z -	-
	29	220	49.87	5110	1.5	27	2KJ3603- ■ DF23- ■ ■ U1 -Z -	-
	34	191	43.27	5040	1.8	27	2KJ3603- ■ DF23- ■ ■ T1 -Z -	-
	37	174	39.33	4970	2.3	27	2KJ3603- ■ DF23- ■ ■ S1 -Z -	-
	43	149	33.73	4860	2.5	27	2KJ3603- ■ DF23- ■ ■ R1 -Z -	-
	47	136	30.67	4780	2.8	27	2KJ3603- ■ DF23- ■ ■ Q1 -Z -	-
	<b>C.39A-LE80ZMQ4P</b>							
	24	215	60.67	3370	0.84	21	2KJ3642- ■ DF23- ■ ■ W1 -Z -	-
	28	189	52.65	3340	0.9	21	2KJ3642- ■ DF23- ■ ■ V1 -Z -	-
	29	215	49.87	2630	0.91	21	2KJ3642- ■ DF23- ■ ■ U1 -Z -	-
	34	190	43.27	2660	1	21	2KJ3642- ■ DF23- ■ ■ T1 -Z -	-
	37	172	39.33	2700	1.2	21	2KJ3642- ■ DF23- ■ ■ S1 -Z -	-
	43	148	33.73	2720	1.4	21	2KJ3642- ■ DF23- ■ ■ R1 -Z -	-
	44	147	32.64	2520	1.5	21	2KJ3642- ■ DF23- ■ ■ Q1 -Z -	-
	51	128	28.32	2540	1.8	21	2KJ3642- ■ DF23- ■ ■ P1 -Z -	-
	56	116	25.75	2550	2	21	2KJ3642- ■ DF23- ■ ■ N1 -Z -	-
66	100	22.08	2540	2.4	21	2KJ3642- ■ DF23- ■ ■ M1 -Z -	-	
72	91	20.07	2530	2.6	21	2KJ3642- ■ DF23- ■ ■ L1 -Z -	-	
82	80	17.6	2500	2.8	21	2KJ3642- ■ DF23- ■ ■ K1 -Z -	-	
92	71	15.71	2470	3	21	2KJ3642- ■ DF23- ■ ■ J1 -Z -	-	
104	63	14	2440	3.2	21	2KJ3642- ■ DF23- ■ ■ H1 -Z -	-	
112	58	12.92	2410	3.4	21	2KJ3642- ■ DF23- ■ ■ G1 -Z -	-	
128	51	11.31	2360	3.7	21	2KJ3642- ■ DF23- ■ ■ F1 -Z -	-	
146	45	9.92	2300	4	21	2KJ3642- ■ DF23- ■ ■ E1 -Z -	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

## SIMOGEAR geared motors

Helical worm geared motors

Geared motors up to 7.5 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.75	<b>C.29-LE80ZMQ4P</b>							
	66	99	22.08	4180	0.92	15	2KJ3601- ■ DF23- ■ ■ M1 -Z -	-
	72	91	20.07	4220	1	15	2KJ3601- ■ DF23- ■ ■ L1 -Z -	-
	82	80	17.6	4150	1.2	15	2KJ3601- ■ DF23- ■ ■ K1 -Z -	-
	92	71	15.71	4080	1.3	15	2KJ3601- ■ DF23- ■ ■ J1 -Z -	-
	104	63	14	4010	1.5	15	2KJ3601- ■ DF23- ■ ■ H1 -Z -	-
	112	58	12.92	3950	1.6	15	2KJ3601- ■ DF23- ■ ■ G1 -Z -	-
	128	51	11.31	3840	1.8	15	2KJ3601- ■ DF23- ■ ■ F1 -Z -	-
	146	45	9.92	3730	2.1	15	2KJ3601- ■ DF23- ■ ■ E1 -Z -	-
	161	41	9	3650	2.2	15	2KJ3601- ■ DF23- ■ ■ D1 -Z -	-
	171	38	8.47	3610	2.3	15	2KJ3601- ■ DF23- ■ ■ C1 -Z -	-
	194	34	7.47	3500	2.5	15	2KJ3601- ■ DF23- ■ ■ B1 -Z -	-
	224	29	6.48	3380	2.8	15	2KJ3601- ■ DF23- ■ ■ A1 -Z -	-
1.1	<b>C.89-LE90SM4P</b>							
	4.4	1740	329.73	15800	0.83	58	2KJ3605- ■ EK23- ■ ■ M2 -Z -	-
	4.9	1560	295.75	16100	0.92	58	2KJ3605- ■ EK23- ■ ■ L2 -Z -	-
	5.4	1410	265.91	16300	1	58	2KJ3605- ■ EK23- ■ ■ K2 -Z -	-
	6	1280	240.5	16300	1.1	58	2KJ3605- ■ EK23- ■ ■ J2 -Z -	-
	6.5	1180	222	16300	1.2	58	2KJ3605- ■ EK23- ■ ■ H2 -Z -	-
	7.1	1090	203.36	16300	1.3	58	2KJ3605- ■ EK23- ■ ■ G2 -Z -	-
	8.4	915	170.62	16300	1.5	58	2KJ3605- ■ EK23- ■ ■ F2 -Z -	-
	9	860	160.59	16300	1.5	58	2KJ3605- ■ EK23- ■ ■ E2 -Z -	-
	9.8	790	147.33	16300	1.6	58	2KJ3605- ■ EK23- ■ ■ D2 -Z -	-
	11	690	128.7	16300	1.7	58	2KJ3605- ■ EK23- ■ ■ C2 -Z -	-
	12	615	115.23	16300	1.8	58	2KJ3605- ■ EK23- ■ ■ B2 -Z -	-
	14	540	100.75	16300	2	58	2KJ3605- ■ EK23- ■ ■ A2 -Z -	-
	17	460	86.48	16300	2.1	58	2KJ3605- ■ EK23- ■ ■ X1 -Z -	-
	19	410	76.44	16300	2.3	58	2KJ3605- ■ EK23- ■ ■ W1 -Z -	-
	<b>C.69-LE90SM4P</b>							
	11	695	129	9720	0.82	36	2KJ3604- ■ EK23- ■ ■ C2 -Z -	-
	13	615	114.21	9620	0.87	36	2KJ3604- ■ EK23- ■ ■ B2 -Z -	-
	14	645	102.5	8550	1	36	2KJ3604- ■ EK23- ■ ■ A2 -Z -	-
16	565	90	8500	1.2	36	2KJ3604- ■ EK23- ■ ■ X1 -Z -	-	
18	515	81.82	8430	1.3	36	2KJ3604- ■ EK23- ■ ■ W1 -Z -	-	
21	440	70	8300	1.5	36	2KJ3604- ■ EK23- ■ ■ V1 -Z -	-	
23	405	63.64	8170	1.6	36	2KJ3604- ■ EK23- ■ ■ U1 -Z -	-	
26	355	56.25	8040	1.7	36	2KJ3604- ■ EK23- ■ ■ T1 -Z -	-	
28	325	51.14	7910	1.8	36	2KJ3604- ■ EK23- ■ ■ S1 -Z -	-	
32	285	44.79	7720	1.9	36	2KJ3604- ■ EK23- ■ ■ R1 -Z -	-	
35	260	41.35	7620	2	36	2KJ3604- ■ EK23- ■ ■ Q1 -Z -	-	
39	230	36.61	7440	2.1	36	2KJ3604- ■ EK23- ■ ■ P1 -Z -	-	
48	198	30	6930	2.8	36	2KJ3604- ■ EK23- ■ ■ N1 -Z -	-	
91	106	15.88	5890	3.4	36	2KJ3604- ■ EK23- ■ ■ H1 -Z -	-	
<b>C.49-LE90SM4P</b>								
20	390	73.12	5300	0.8	27	2KJ3603- ■ EK23- ■ ■ A2 -Z -	-	
21	370	68.82	5280	0.82	27	2KJ3603- ■ EK23- ■ ■ X1 -Z -	-	
24	325	60.67	5260	0.87	27	2KJ3603- ■ EK23- ■ ■ W1 -Z -	-	
27	280	52.65	5220	0.95	27	2KJ3603- ■ EK23- ■ ■ V1 -Z -	-	
29	320	49.87	4280	0.99	27	2KJ3603- ■ EK23- ■ ■ U1 -Z -	-	
33	280	43.27	4300	1.2	27	2KJ3603- ■ EK23- ■ ■ T1 -Z -	-	
37	255	39.33	4300	1.6	27	2KJ3603- ■ EK23- ■ ■ S1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H or D	see page 10/42

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles	
<b>1.1</b>	<b>C.49-LE90SM4P</b>								
	43	220	33.73	4270	1.7	27	2KJ3603- ■ EK23- ■ ■ R1 -Z -	-	
	47	200	30.67	4250	1.9	27	2KJ3603- ■ EK23- ■ ■ Q1 -Z -	-	
	54	176	26.89	4200	2.1	27	2KJ3603- ■ EK23- ■ ■ P1 -Z -	-	
	60	157	24	4150	2.2	27	2KJ3603- ■ EK23- ■ ■ N1 -Z -	-	
	67	140	21.39	4090	2.4	27	2KJ3603- ■ EK23- ■ ■ M1 -Z -	-	
	73	129	19.74	4040	2.5	27	2KJ3603- ■ EK23- ■ ■ L1 -Z -	-	
	83	113	17.29	3950	2.7	27	2KJ3603- ■ EK23- ■ ■ K1 -Z -	-	
	95	99	15.16	3860	2.9	27	2KJ3603- ■ EK23- ■ ■ J1 -Z -	-	
	105	90	13.75	3790	3.1	27	2KJ3603- ■ EK23- ■ ■ H1 -Z -	-	
	111	84	12.94	3750	3.2	27	2KJ3603- ■ EK23- ■ ■ G1 -Z -	-	
	126	74	11.41	3650	3.4	27	2KJ3603- ■ EK23- ■ ■ F1 -Z -	-	
	145	65	9.9	3520	3.8	27	2KJ3603- ■ EK23- ■ ■ E1 -Z -	-	
		<b>C.39A-LE90SM4P</b>							
		43	215	33.73	2050	0.92	23	2KJ3642- ■ EK23- ■ ■ R1 -Z -	-
44		215	32.64	1260	0.99	23	2KJ3642- ■ EK23- ■ ■ Q1 -Z -	-	
51		189	28.32	1560	1.2	23	2KJ3642- ■ EK23- ■ ■ P1 -Z -	-	
56		171	25.75	1800	1.4	23	2KJ3642- ■ EK23- ■ ■ N1 -Z -	-	
65		147	22.08	2020	1.6	23	2KJ3642- ■ EK23- ■ ■ M1 -Z -	-	
72		134	20.07	2050	1.8	23	2KJ3642- ■ EK23- ■ ■ L1 -Z -	-	
82		118	17.6	2080	1.9	23	2KJ3642- ■ EK23- ■ ■ K1 -Z -	-	
92		105	15.71	2100	2.1	23	2KJ3642- ■ EK23- ■ ■ J1 -Z -	-	
103		93	14	2110	2.2	23	2KJ3642- ■ EK23- ■ ■ H1 -Z -	-	
111		86	12.92	2100	2.3	23	2KJ3642- ■ EK23- ■ ■ G1 -Z -	-	
127		76	11.31	2080	2.5	23	2KJ3642- ■ EK23- ■ ■ F1 -Z -	-	
145		66	9.92	2070	2.7	23	2KJ3642- ■ EK23- ■ ■ E1 -Z -	-	
160		60	9	2050	2.9	23	2KJ3642- ■ EK23- ■ ■ D1 -Z -	-	
170		56	8.47	2040	3	23	2KJ3642- ■ EK23- ■ ■ C1 -Z -	-	
193	50	7.47	1990	3.3	23	2KJ3642- ■ EK23- ■ ■ B1 -Z -	-		
222	43	6.48	1950	3.6	23	2KJ3642- ■ EK23- ■ ■ A1 -Z -	-		
	<b>C.29-LE90SM4P</b>								
	92	105	15.71	3600	0.88	17	2KJ3601- ■ EK23- ■ ■ J1 -Z -	-	
	103	94	14	3570	0.99	17	2KJ3601- ■ EK23- ■ ■ H1 -Z -	-	
	111	86	12.92	3560	1.1	17	2KJ3601- ■ EK23- ■ ■ G1 -Z -	-	
	127	76	11.31	3490	1.2	17	2KJ3601- ■ EK23- ■ ■ F1 -Z -	-	
	145	66	9.92	3440	1.4	17	2KJ3601- ■ EK23- ■ ■ E1 -Z -	-	
	160	60	9	3390	1.5	17	2KJ3601- ■ EK23- ■ ■ D1 -Z -	-	
	170	57	8.47	3340	1.6	17	2KJ3601- ■ EK23- ■ ■ C1 -Z -	-	
	193	50	7.47	3270	1.7	17	2KJ3601- ■ EK23- ■ ■ B1 -Z -	-	
222	43	6.48	3190	1.9	17	2KJ3601- ■ EK23- ■ ■ A1 -Z -	-		
<b>1.5</b>	<b>C.89-LE90ZLR4P</b>								
	6	1740	240.5	15800	0.83	61	2KJ3605- ■ EM23- ■ ■ J2 -Z -	-	
	6.5	1610	222	16000	0.9	61	2KJ3605- ■ EM23- ■ ■ H2 -Z -	-	
	7.1	1480	203.36	16200	0.98	61	2KJ3605- ■ EM23- ■ ■ G2 -Z -	-	
	8.5	1240	170.62	16300	1.1	61	2KJ3605- ■ EM23- ■ ■ F2 -Z -	-	
	9	1170	160.59	16300	1.1	61	2KJ3605- ■ EM23- ■ ■ E2 -Z -	-	
	9.8	1070	147.33	16300	1.2	61	2KJ3605- ■ EM23- ■ ■ D2 -Z -	-	
	11	935	128.7	16300	1.3	61	2KJ3605- ■ EM23- ■ ■ C2 -Z -	-	
	13	840	115.23	16300	1.3	61	2KJ3605- ■ EM23- ■ ■ B2 -Z -	-	
	14	735	100.75	16300	1.4	61	2KJ3605- ■ EM23- ■ ■ A2 -Z -	-	
	17	630	86.48	16200	1.6	61	2KJ3605- ■ EM23- ■ ■ X1 -Z -	-	
19	555	76.44	15800	1.7	61	2KJ3605- ■ EM23- ■ ■ W1 -Z -	-		

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.5</b>	<b>C.69-LE90ZLR4P</b>							
	16	770	90	7250	0.87	39	2KJ3604- ■ EM23- ■ ■ X1 -Z -	-
	18	700	81.82	7300	0.96	39	2KJ3604- ■ EM23- ■ ■ W1 -Z -	-
	21	600	70	7320	1.1	39	2KJ3604- ■ EM23- ■ ■ V1 -Z -	-
	23	550	63.64	7280	1.2	39	2KJ3604- ■ EM23- ■ ■ U1 -Z -	-
	26	485	56.25	7250	1.3	39	2KJ3604- ■ EM23- ■ ■ T1 -Z -	-
	28	440	51.14	7200	1.3	39	2KJ3604- ■ EM23- ■ ■ S1 -Z -	-
	32	385	44.79	7110	1.4	39	2KJ3604- ■ EM23- ■ ■ R1 -Z -	-
	35	355	41.35	7040	1.5	39	2KJ3604- ■ EM23- ■ ■ Q1 -Z -	-
	39	315	36.61	6920	1.6	39	2KJ3604- ■ EM23- ■ ■ P1 -Z -	-
	48	265	30	6470	2	39	2KJ3604- ■ EM23- ■ ■ N1 -Z -	-
	55	235	26.28	6320	2.2	39	2KJ3604- ■ EM23- ■ ■ M1 -Z -	-
	60	215	24.26	6240	2.3	39	2KJ3604- ■ EM23- ■ ■ L1 -Z -	-
	67	193	21.48	6080	2.5	39	2KJ3604- ■ EM23- ■ ■ K1 -Z -	-
	81	160	17.88	5870	2.7	39	2KJ3604- ■ EM23- ■ ■ J1 -Z -	-
	91	144	15.88	5600	2.5	39	2KJ3604- ■ EM23- ■ ■ H1 -Z -	-
103	128	14.06	5450	2.8	39	2KJ3604- ■ EM23- ■ ■ G1 -Z -	-	
124	106	11.7	5230	3.4	39	2KJ3604- ■ EM23- ■ ■ F1 -Z -	-	
131	100	11.01	5160	3.6	39	2KJ3604- ■ EM23- ■ ■ E1 -Z -	-	
146	90	9.87	5020	4	39	2KJ3604- ■ EM23- ■ ■ D1 -Z -	-	
	<b>C.49-LE90ZLR4P</b>							
	33	380	43.27	3450	0.91	30	2KJ3603- ■ EM23- ■ ■ T1 -Z -	-
	37	345	39.33	3530	1.1	30	2KJ3603- ■ EM23- ■ ■ S1 -Z -	-
	43	295	33.73	3640	1.3	30	2KJ3603- ■ EM23- ■ ■ R1 -Z -	-
	47	270	30.67	3650	1.4	30	2KJ3603- ■ EM23- ■ ■ Q1 -Z -	-
	54	235	26.89	3700	1.5	30	2KJ3603- ■ EM23- ■ ■ P1 -Z -	-
	60	210	24	3690	1.6	30	2KJ3603- ■ EM23- ■ ■ N1 -Z -	-
	68	190	21.39	3660	1.7	30	2KJ3603- ■ EM23- ■ ■ M1 -Z -	-
	73	175	19.74	3650	1.8	30	2KJ3603- ■ EM23- ■ ■ L1 -Z -	-
	84	153	17.29	3610	2	30	2KJ3603- ■ EM23- ■ ■ K1 -Z -	-
	95	135	15.16	3550	2.1	30	2KJ3603- ■ EM23- ■ ■ J1 -Z -	-
	105	122	13.75	3510	2.3	30	2KJ3603- ■ EM23- ■ ■ H1 -Z -	-
	112	115	12.94	3480	2.4	30	2KJ3603- ■ EM23- ■ ■ G1 -Z -	-
	127	101	11.41	3410	2.5	30	2KJ3603- ■ EM23- ■ ■ F1 -Z -	-
	146	88	9.9	3330	2.8	30	2KJ3603- ■ EM23- ■ ■ E1 -Z -	-
	161	82	9	3180	3.1	30	2KJ3603- ■ EM23- ■ ■ D1 -Z -	-
171	77	8.47	3150	3.3	30	2KJ3603- ■ EM23- ■ ■ C1 -Z -	-	
193	68	7.47	3070	3.6	30	2KJ3603- ■ EM23- ■ ■ B1 -Z -	-	
223	59	6.48	2980	3.9	30	2KJ3603- ■ EM23- ■ ■ A1 -Z -	-	
	<b>C.39A-LE90ZLR4P</b>							
	51	255	28.32	0	0.92	26	2KJ3642- ■ EM23- ■ ■ P1 -Z -	-
	56	230	25.75	315	1	26	2KJ3642- ■ EM23- ■ ■ N1 -Z -	-
	65	200	22.08	715	1.2	26	2KJ3642- ■ EM23- ■ ■ M1 -Z -	-
	72	182	20.07	960	1.3	26	2KJ3642- ■ EM23- ■ ■ L1 -Z -	-
	82	160	17.6	1250	1.4	26	2KJ3642- ■ EM23- ■ ■ K1 -Z -	-
	92	142	15.71	1490	1.5	26	2KJ3642- ■ EM23- ■ ■ J1 -Z -	-
	103	127	14	1670	1.6	26	2KJ3642- ■ EM23- ■ ■ H1 -Z -	-
	112	117	12.92	1750	1.7	26	2KJ3642- ■ EM23- ■ ■ G1 -Z -	-
	128	103	11.31	1780	1.9	26	2KJ3642- ■ EM23- ■ ■ F1 -Z -	-
	146	90	9.92	1800	2	26	2KJ3642- ■ EM23- ■ ■ E1 -Z -	-
161	82	9	1800	2.1	26	2KJ3642- ■ EM23- ■ ■ D1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>1.5</b>	<b>C.39A-LE90ZLR4P</b>							
	171	77	8.47	1800	2.2	26	2KJ3642- ■ EM23- ■ ■ C1 -Z -	-
	193	68	7.47	1790	2.4	26	2KJ3642- ■ EM23- ■ ■ B1 -Z -	-
	223	59	6.48	1770	2.6	26	2KJ3642- ■ EM23- ■ ■ A1 -Z -	-
	<b>C.29-LE90ZLR4P</b>							
	128	103	11.31	3100	0.91	20	2KJ3601- ■ EM23- ■ ■ F1 -Z -	-
	146	90	9.92	3090	1	20	2KJ3601- ■ EM23- ■ ■ E1 -Z -	-
	161	82	9	3060	1.1	20	2KJ3601- ■ EM23- ■ ■ D1 -Z -	-
	171	77	8.47	3050	1.2	20	2KJ3601- ■ EM23- ■ ■ C1 -Z -	-
	193	68	7.47	3010	1.3	20	2KJ3601- ■ EM23- ■ ■ B1 -Z -	-
	223	59	6.48	2950	1.4	20	2KJ3601- ■ EM23- ■ ■ A1 -Z -	-
	<b>2.2</b>	<b>C.89-LE100ZLSA4P</b>						
9.9		1550	147.33	15800	0.82	77	2KJ3605- ■ FN23- ■ ■ D2 -Z -	-
11		1350	128.7	15700	0.87	77	2KJ3605- ■ FN23- ■ ■ C2 -Z -	-
13		1210	115.23	15500	0.92	77	2KJ3605- ■ FN23- ■ ■ B2 -Z -	-
15		1060	100.75	15200	0.99	77	2KJ3605- ■ FN23- ■ ■ A2 -Z -	-
17		910	86.48	14900	1.1	77	2KJ3605- ■ FN23- ■ ■ X1 -Z -	-
19		805	76.44	14600	1.1	77	2KJ3605- ■ FN23- ■ ■ W1 -Z -	-
23		680	65	14200	1.3	77	2KJ3605- ■ FN23- ■ ■ V1 -Z -	-
26		720	55.61	12500	2	77	2KJ3605- ■ FN23- ■ ■ U1 -Z -	-
29		645	50	12300	2.2	77	2KJ3605- ■ FN23- ■ ■ T1 -Z -	-
32		585	45.22	12100	2.4	77	2KJ3605- ■ FN23- ■ ■ S1 -Z -	-
35		540	41.74	11900	2.5	77	2KJ3605- ■ FN23- ■ ■ R1 -Z -	-
38		495	38.24	11700	2.6	77	2KJ3605- ■ FN23- ■ ■ Q1 -Z -	-
<b>C.69-LE100ZLSA4P</b>								
26		700	56.25	5900	0.87	57	2KJ3604- ■ FN23- ■ ■ T1 -Z -	-
29		640	51.14	5940	0.9	57	2KJ3604- ■ FN23- ■ ■ S1 -Z -	-
33		560	44.79	6000	0.97	57	2KJ3604- ■ FN23- ■ ■ R1 -Z -	-
35		515	41.35	6030	1	57	2KJ3604- ■ FN23- ■ ■ Q1 -Z -	-
40		455	36.61	6030	1.1	57	2KJ3604- ■ FN23- ■ ■ P1 -Z -	-
49		385	30	5630	1.4	57	2KJ3604- ■ FN23- ■ ■ N1 -Z -	-
56		340	26.28	5570	1.5	57	2KJ3604- ■ FN23- ■ ■ M1 -Z -	-
60		315	24.26	5540	1.6	57	2KJ3604- ■ FN23- ■ ■ L1 -Z -	-
68		275	21.48	5500	1.7	57	2KJ3604- ■ FN23- ■ ■ K1 -Z -	-
82		230	17.88	5370	1.9	57	2KJ3604- ■ FN23- ■ ■ J1 -Z -	-
92		205	15.88	5110	1.7	57	2KJ3604- ■ FN23- ■ ■ H1 -Z -	-
104		185	14.06	4990	1.9	57	2KJ3604- ■ FN23- ■ ■ G1 -Z -	-
125		154	11.7	4850	2.3	57	2KJ3604- ■ FN23- ■ ■ F1 -Z -	-
133		145	11.01	4790	2.5	57	2KJ3604- ■ FN23- ■ ■ E1 -Z -	-
148		130	9.87	4700	2.8	57	2KJ3604- ■ FN23- ■ ■ D1 -Z -	-
174		110	8.4	4550	3.3	57	2KJ3604- ■ FN23- ■ ■ C1 -Z -	-
203		95	7.2	4390	3.8	57	2KJ3604- ■ FN23- ■ ■ B1 -Z -	-
236		82	6.2	4240	4.3	57	2KJ3604- ■ FN23- ■ ■ A1 -Z -	-
<b>C.49-LE100ZLSA4P</b>								
54		345	26.89	2740	1	48	2KJ3603- ■ FN23- ■ ■ P1 -Z -	-
61		305	24	2870	1.1	48	2KJ3603- ■ FN23- ■ ■ N1 -Z -	-
68		275	21.39	2920	1.2	48	2KJ3603- ■ FN23- ■ ■ M1 -Z -	-
74	250	19.74	2990	1.2	48	2KJ3603- ■ FN23- ■ ■ L1 -Z -	-	
85	220	17.29	3020	1.4	48	2KJ3603- ■ FN23- ■ ■ K1 -Z -	-	
97	195	15.16	3020	1.5	48	2KJ3603- ■ FN23- ■ ■ J1 -Z -	-	
107	177	13.75	3030	1.6	48	2KJ3603- ■ FN23- ■ ■ H1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
2.2	<b>C.49-LE100ZLSA4P</b>							
	113	166	12.94	3030	1.6	48	2KJ3603- ■ FN23- ■ ■ G1 -Z -	-
	128	146	11.41	3010	1.7	48	2KJ3603- ■ FN23- ■ ■ F1 -Z -	-
	148	127	9.9	2980	1.9	48	2KJ3603- ■ FN23- ■ ■ E1 -Z -	-
	163	118	9	2830	2.2	48	2KJ3603- ■ FN23- ■ ■ D1 -Z -	-
	173	111	8.47	2810	2.3	48	2KJ3603- ■ FN23- ■ ■ C1 -Z -	-
	196	98	7.47	2770	2.4	48	2KJ3603- ■ FN23- ■ ■ B1 -Z -	-
	226	85	6.48	2730	2.7	48	2KJ3603- ■ FN23- ■ ■ A1 -Z -	-
	<b>C.39A-LE100ZLSA4P</b>							
	83	230	17.6	0	0.97	40	2KJ3642- ■ FN23- ■ ■ K1 -Z -	-
	93	205	15.71	0	1	40	2KJ3642- ■ FN23- ■ ■ J1 -Z -	-
	105	184	14	170	1.1	40	2KJ3642- ■ FN23- ■ ■ H1 -Z -	-
	113	170	12.92	375	1.2	40	2KJ3642- ■ FN23- ■ ■ G1 -Z -	-
	130	148	11.31	705	1.3	40	2KJ3642- ■ FN23- ■ ■ F1 -Z -	-
148	130	9.92	955	1.4	40	2KJ3642- ■ FN23- ■ ■ E1 -Z -	-	
163	118	9	1110	1.5	40	2KJ3642- ■ FN23- ■ ■ D1 -Z -	-	
173	111	8.47	1210	1.5	40	2KJ3642- ■ FN23- ■ ■ C1 -Z -	-	
196	98	7.47	1370	1.7	40	2KJ3642- ■ FN23- ■ ■ B1 -Z -	-	
226	85	6.48	1470	1.8	40	2KJ3642- ■ FN23- ■ ■ A1 -Z -	-	
3	<b>C.89-LE100ZLSB4P</b>							
	19	1100	76.44	13300	0.84	77	2KJ3605- ■ FP23- ■ ■ W1 -Z -	-
	22	935	65	13100	0.92	77	2KJ3605- ■ FP23- ■ ■ V1 -Z -	-
	26	985	55.61	11100	1.5	77	2KJ3605- ■ FP23- ■ ■ U1 -Z -	-
	29	885	50	11000	1.6	77	2KJ3605- ■ FP23- ■ ■ T1 -Z -	-
	32	800	45.22	11000	1.7	77	2KJ3605- ■ FP23- ■ ■ S1 -Z -	-
	35	740	41.74	10900	1.8	77	2KJ3605- ■ FP23- ■ ■ R1 -Z -	-
	38	675	38.24	10800	1.9	77	2KJ3605- ■ FP23- ■ ■ Q1 -Z -	-
	46	570	32.08	10500	2.1	77	2KJ3605- ■ FP23- ■ ■ P1 -Z -	-
	48	535	30.2	10400	2.2	77	2KJ3605- ■ FP23- ■ ■ N1 -Z -	-
	53	490	27.7	10300	2.3	77	2KJ3605- ■ FP23- ■ ■ M1 -Z -	-
	58	455	25.03	9830	2.4	77	2KJ3605- ■ FP23- ■ ■ L1 -Z -	-
	70	380	21	9560	2.8	77	2KJ3605- ■ FP23- ■ ■ K1 -Z -	-
	74	360	19.76	9450	3.1	77	2KJ3605- ■ FP23- ■ ■ J1 -Z -	-
	<b>C.69-LE100ZLSB4P</b>							
	40	625	36.61	5010	0.8	57	2KJ3604- ■ FP23- ■ ■ P1 -Z -	-
	49	530	30	4660	1	57	2KJ3604- ■ FP23- ■ ■ N1 -Z -	-
	56	465	26.28	4740	1.1	57	2KJ3604- ■ FP23- ■ ■ M1 -Z -	-
	60	430	24.26	4770	1.1	57	2KJ3604- ■ FP23- ■ ■ L1 -Z -	-
	68	380	21.48	4800	1.2	57	2KJ3604- ■ FP23- ■ ■ K1 -Z -	-
	82	315	17.88	4800	1.4	57	2KJ3604- ■ FP23- ■ ■ J1 -Z -	-
	92	285	15.88	4520	1.3	57	2KJ3604- ■ FP23- ■ ■ H1 -Z -	-
104	250	14.06	4510	1.4	57	2KJ3604- ■ FP23- ■ ■ G1 -Z -	-	
125	210	11.7	4430	1.7	57	2KJ3604- ■ FP23- ■ ■ F1 -Z -	-	
133	198	11.01	4400	1.8	57	2KJ3604- ■ FP23- ■ ■ E1 -Z -	-	
148	178	9.87	4340	2	57	2KJ3604- ■ FP23- ■ ■ D1 -Z -	-	
174	151	8.4	4250	2.4	57	2KJ3604- ■ FP23- ■ ■ C1 -Z -	-	
203	130	7.2	4140	2.8	57	2KJ3604- ■ FP23- ■ ■ B1 -Z -	-	
235	112	6.2	4020	3.1	57	2KJ3604- ■ FP23- ■ ■ A1 -Z -	-	
<b>C.49-LE100ZLSB4P</b>								
61	420	24	1920	0.82	48	2KJ3603- ■ FP23- ■ ■ N1 -Z -	-	
68	375	21.39	2080	0.88	48	2KJ3603- ■ FP23- ■ ■ M1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Selection and ordering data**

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
<b>3</b>	<b>C.49-LE100ZLSB4P</b>							
	74	345	19.74	2190	0.91	48	2KJ3603- ■ FP23- ■ ■ L1 -Z -	-
	84	300	17.29	2350	0.99	48	2KJ3603- ■ FP23- ■ ■ K1 -Z -	-
	96	265	15.16	2440	1.1	48	2KJ3603- ■ FP23- ■ ■ H1 -Z -	-
	106	240	13.75	2500	1.1	48	2KJ3603- ■ FP23- ■ ■ J1 -Z -	-
	113	225	12.94	2530	1.2	48	2KJ3603- ■ FP23- ■ ■ G1 -Z -	-
	128	200	11.41	2560	1.3	48	2KJ3603- ■ FP23- ■ ■ F1 -Z -	-
	147	174	9.9	2590	1.4	48	2KJ3603- ■ FP23- ■ ■ E1 -Z -	-
	162	162	9	2420	1.6	48	2KJ3603- ■ FP23- ■ ■ D1 -Z -	-
	172	152	8.47	2440	1.7	48	2KJ3603- ■ FP23- ■ ■ C1 -Z -	-
	195	134	7.47	2440	1.8	48	2KJ3603- ■ FP23- ■ ■ B1 -Z -	-
	225	116	6.48	2440	2	48	2KJ3603- ■ FP23- ■ ■ A1 -Z -	-
	<b>C.39A-LE100ZLSB4P</b>							
	104	250	14	0	0.82	40	2KJ3642- ■ FP23- ■ ■ H1 -Z -	-
	113	230	12.92	0	0.86	40	2KJ3642- ■ FP23- ■ ■ G1 -Z -	-
	129	200	11.31	0	0.93	40	2KJ3642- ■ FP23- ■ ■ F1 -Z -	-
	147	178	9.92	0	1	40	2KJ3642- ■ FP23- ■ ■ E1 -Z -	-
	162	162	9	1	1.1	40	2KJ3642- ■ FP23- ■ ■ D1 -Z -	-
	172	152	8.47	131	1.1	40	2KJ3642- ■ FP23- ■ ■ C1 -Z -	-
	195	134	7.47	405	1.2	40	2KJ3642- ■ FP23- ■ ■ B1 -Z -	-
	225	116	6.48	675	1.3	40	2KJ3642- ■ FP23- ■ ■ A1 -Z -	-
	<b>4</b>	<b>C.89-LE112ZMKB4P</b>						
26		1310	55.61	9370	1.1	77	2KJ3605- ■ GJ23- ■ ■ U1 -Z -	-
29		1180	50	9500	1.2	77	2KJ3605- ■ GJ23- ■ ■ T1 -Z -	-
32		1070	45.22	9560	1.3	77	2KJ3605- ■ GJ23- ■ ■ S1 -Z -	-
35		990	41.74	9590	1.4	77	2KJ3605- ■ GJ23- ■ ■ R1 -Z -	-
38		905	38.24	9610	1.4	77	2KJ3605- ■ GJ23- ■ ■ Q1 -Z -	-
46		760	32.08	9560	1.6	77	2KJ3605- ■ GJ23- ■ ■ P1 -Z -	-
48		715	30.2	9530	1.7	77	2KJ3605- ■ GJ23- ■ ■ N1 -Z -	-
53		655	27.7	9470	1.7	77	2KJ3605- ■ GJ23- ■ ■ M1 -Z -	-
58		605	25.03	8940	1.8	77	2KJ3605- ■ GJ23- ■ ■ L1 -Z -	-
70		510	21	8790	2.1	77	2KJ3605- ■ GJ23- ■ ■ K1 -Z -	-
74		480	19.76	8730	2.3	77	2KJ3605- ■ GJ23- ■ ■ J1 -Z -	-
81		440	18.13	8640	2.5	77	2KJ3605- ■ GJ23- ■ ■ H1 -Z -	-
92		385	15.84	8470	2.9	77	2KJ3605- ■ GJ23- ■ ■ G1 -Z -	-
103		340	14.18	8350	3.1	77	2KJ3605- ■ GJ23- ■ ■ F1 -Z -	-
118		300	12.4	8130	3.4	77	2KJ3605- ■ GJ23- ■ ■ E1 -Z -	-
137		255	10.64	7910	3.7	77	2KJ3605- ■ GJ23- ■ ■ D1 -Z -	-
155		225	9.41	7710	4	77	2KJ3605- ■ GJ23- ■ ■ C1 -Z -	-
182		194	8	7420	4.3	77	2KJ3605- ■ GJ23- ■ ■ B1 -Z -	-
213		167	6.86	7150	4.3	77	2KJ3605- ■ GJ23- ■ ■ A1 -Z -	-
<b>C.69-LE112ZMKB4P</b>								
56		620	26.28	3700	0.83	58	2KJ3604- ■ GJ23- ■ ■ M1 -Z -	-
60		570	24.26	3830	0.86	58	2KJ3604- ■ GJ23- ■ ■ L1 -Z -	-
68		505	21.48	3960	0.93	58	2KJ3604- ■ GJ23- ■ ■ K1 -Z -	-
82		420	17.88	4100	1	58	2KJ3604- ■ GJ23- ■ ■ J1 -Z -	-
92		380	15.88	3800	0.94	58	2KJ3604- ■ GJ23- ■ ■ H1 -Z -	-
104		335	14.06	3880	1.1	58	2KJ3604- ■ GJ23- ■ ■ G1 -Z -	-
125	280	11.7	3910	1.3	58	2KJ3604- ■ GJ23- ■ ■ F1 -Z -	-	
133	260	11.01	3940	1.4	58	2KJ3604- ■ GJ23- ■ ■ E1 -Z -	-	
148	235	9.87	3910	1.5	58	2KJ3604- ■ GJ23- ■ ■ D1 -Z -	-	

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
4	<b>C.69-LE112ZMKB4P</b>							
	174	200	8.4	3880	1.8	58	2KJ3604- ■ GJ23- ■ ■ C1 -Z -	-
	203	173	7.2	3810	2.1	58	2KJ3604- ■ GJ23- ■ ■ B1 -Z -	-
	235	149	6.2	3740	2.3	58	2KJ3604- ■ GJ23- ■ ■ A1 -Z -	-
	<b>C.49-LE112ZMKB4P</b>							
	96	355	15.16	1600	0.8	49	2KJ3603- ■ GJ23- ■ ■ J1 -Z -	-
	106	320	13.75	1820	0.85	49	2KJ3603- ■ GJ23- ■ ■ H1 -Z -	-
	113	300	12.94	1900	0.89	49	2KJ3603- ■ GJ23- ■ ■ G1 -Z -	-
	128	265	11.41	2010	0.95	49	2KJ3603- ■ GJ23- ■ ■ F1 -Z -	-
	147	230	9.9	2110	1	49	2KJ3603- ■ GJ23- ■ ■ E1 -Z -	-
	162	215	9	1580	1.2	49	2KJ3603- ■ GJ23- ■ ■ D1 -Z -	-
	172	200	8.47	1760	1.3	49	2KJ3603- ■ GJ23- ■ ■ C1 -Z -	-
	195	179	7.47	1940	1.3	49	2KJ3603- ■ GJ23- ■ ■ B1 -Z -	-
	225	155	6.48	2080	1.5	49	2KJ3603- ■ GJ23- ■ ■ A1 -Z -	-
5.5	<b>C.89-LE132ZST4P</b>							
	38	1230	38.24	7840	1	108	2KJ3605- ■ HJ23- ■ ■ Q1 -Z -	-
	46	1030	32.08	8090	1.2	108	2KJ3605- ■ HJ23- ■ ■ P1 -Z -	-
	49	975	30.2	8110	1.2	108	2KJ3605- ■ HJ23- ■ ■ N1 -Z -	-
	53	895	27.7	8160	1.3	108	2KJ3605- ■ HJ23- ■ ■ M1 -Z -	-
	59	830	25.03	7570	1.3	108	2KJ3605- ■ HJ23- ■ ■ L1 -Z -	-
	70	695	21	7660	1.5	108	2KJ3605- ■ HJ23- ■ ■ K1 -Z -	-
	74	655	19.76	7670	1.7	108	2KJ3605- ■ HJ23- ■ ■ J1 -Z -	-
	81	600	18.13	7670	1.8	108	2KJ3605- ■ HJ23- ■ ■ H1 -Z -	-
	93	525	15.84	7620	2.1	108	2KJ3605- ■ HJ23- ■ ■ G1 -Z -	-
	104	470	14.18	7560	2.3	108	2KJ3605- ■ HJ23- ■ ■ F1 -Z -	-
	119	410	12.4	7460	2.5	108	2KJ3605- ■ HJ23- ■ ■ E1 -Z -	-
	138	350	10.64	7320	2.7	108	2KJ3605- ■ HJ23- ■ ■ D1 -Z -	-
	156	310	9.41	7180	2.9	108	2KJ3605- ■ HJ23- ■ ■ C1 -Z -	-
	184	265	8	6970	3.1	108	2KJ3605- ■ HJ23- ■ ■ B1 -Z -	-
	214	225	6.86	6780	3.1	108	2KJ3605- ■ HJ23- ■ ■ A1 -Z -	-
	<b>C.69-LE132ZST4P</b>							
	126	380	11.7	3020	0.94	88	2KJ3604- ■ HJ23- ■ ■ F1 -Z -	-
	134	360	11.01	3160	1	88	2KJ3604- ■ HJ23- ■ ■ E1 -Z -	-
	149	320	9.87	3260	1.1	88	2KJ3604- ■ HJ23- ■ ■ D1 -Z -	-
175	275	8.4	3310	1.3	88	2KJ3604- ■ HJ23- ■ ■ C1 -Z -	-	
204	235	7.2	3340	1.5	88	2KJ3604- ■ HJ23- ■ ■ B1 -Z -	-	
237	200	6.2	3350	1.7	88	2KJ3604- ■ HJ23- ■ ■ A1 -Z -	-	
7.5	<b>C.89-LE132ZMS4P</b>							
	46	1420	32.08	6030	0.86	108	2KJ3605- ■ HL23- ■ ■ P1 -Z -	-
	49	1330	30.2	6240	0.89	108	2KJ3605- ■ HL23- ■ ■ N1 -Z -	-
	53	1220	27.7	6440	0.93	108	2KJ3605- ■ HL23- ■ ■ M1 -Z -	-
	59	1130	25.03	4930	0.96	108	2KJ3605- ■ HL23- ■ ■ L1 -Z -	-
	70	950	21	6070	1.1	108	2KJ3605- ■ HL23- ■ ■ K1 -Z -	-
	74	895	19.76	6250	1.2	108	2KJ3605- ■ HL23- ■ ■ J1 -Z -	-
	81	820	18.13	6370	1.3	108	2KJ3605- ■ HL23- ■ ■ H1 -Z -	-
	92	715	15.84	6500	1.5	108	2KJ3605- ■ HL23- ■ ■ G1 -Z -	-
	103	640	14.18	6560	1.6	108	2KJ3605- ■ HL23- ■ ■ F1 -Z -	-
	118	560	12.4	6580	1.8	108	2KJ3605- ■ HL23- ■ ■ E1 -Z -	-
	138	480	10.64	6560	2	108	2KJ3605- ■ HL23- ■ ■ D1 -Z -	-
	156	425	9.41	6510	2.1	108	2KJ3605- ■ HL23- ■ ■ C1 -Z -	-
	183	360	8	6420	2.3	108	2KJ3605- ■ HL23- ■ ■ B1 -Z -	-

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical worm geared motors

Geared motors up to 7.5 kW

### Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	No. of poles
7.5	<b>C.69-LE132ZMS4P</b>							
	214	310	6.86	6290	2.3	108	<b>2KJ3605-</b> ■ <b>HL23-</b> ■ ■ <b>A1</b> <b>-Z</b> -	
	<b>C.69-LE132ZMS4P</b>							
	148	440	9.87	1410	0.81	88	<b>2KJ3604-</b> ■ <b>HL23-</b> ■ ■ <b>D1</b> <b>-Z</b> -	
	174	375	8.4	2000	0.96	88	<b>2KJ3604-</b> ■ <b>HL23-</b> ■ ■ <b>C1</b> <b>-Z</b> -	
	203	320	7.2	2480	1.1	88	<b>2KJ3604-</b> ■ <b>HL23-</b> ■ ■ <b>B1</b> <b>-Z</b> -	
236	275	6.2	2790	1.3	88	<b>2KJ3604-</b> ■ <b>HL23-</b> ■ ■ <b>A1</b> <b>-Z</b> -		

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

### Helical worm geared motors

#### Transmission ratios and torques

##### Selection and ordering data

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.29</b>													
<b>265.20</b>	5.5	108	4140	0.05	1326/5	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ M2
<b>230.10</b>	6.3	108	4140	0.05	2301/10	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ L2
<b>209.18</b>	6.9	109	4130	0.07	2301/11	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ K2
<b>179.40</b>	8.1	110	4130	0.08	897/5	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ J2
<b>163.09</b>	8.9	110	4130	0.10	1794/11	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ H2
<b>143.00</b>	10	110	4130	0.11	143/1	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ G2
<b>127.64</b>	11	110	4130	0.14	1404/11	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ F2
<b>113.75</b>	13	110	4130	0.16	455/4	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ E2
<b>105.00</b>	14	110	4130	0.20	105/1	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ D2
<b>91.93</b>	16	110	4130	0.22	1287/14	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ C2
<b>80.60</b>	18	110	4130	0.22	403/5	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ B2
<b>73.12</b>	20	110	4130	0.28	585/8	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ A2
<b>68.82</b>	21	110	4130	0.33	1170/17	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ X1
<b>60.67</b>	24	110	4130	0.36	182/3	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ W1
<b>52.65</b>	28	110	4130	0.48	1053/20	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ V1
<b>49.87</b>	29	102	4170	0.05	748/15	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ U1
<b>43.27</b>	34	103	4160	0.06	649/15	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ T1
<b>39.33</b>	37	103	4160	0.07	118/3	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ S1
<b>33.73</b>	43	104	4160	0.09	506/15	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ R1
<b>32.64</b>	44	90	4230	0.05	816/25	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ Q1
<b>28.32</b>	51	90	4230	0.06	708/25	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ P1
<b>25.75</b>	56	91	4220	0.07	1416/55	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ N1
<b>22.08</b>	66	91	4220	0.09	552/25	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ M1
<b>20.07</b>	72	92	4200	0.11	1104/55	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ L1
<b>17.60</b>	82	92	3970	0.13	88/5	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ K1
<b>15.71</b>	92	92	3770	0.15	864/55	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ J1
<b>14.00</b>	104	93	3560	0.18	14/1	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ H1
<b>12.92</b>	112	93	3430	0.22	168/13	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ G1
<b>11.31</b>	128	94	3210	0.25	396/35	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ F1
<b>9.92</b>	146	94	3020	0.26	248/25	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ E1
<b>9.00</b>	161	91	2960	0.33	9/1	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ D1
<b>8.47</b>	171	90	2950	0.38	144/17	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ C1
<b>7.47</b>	194	86	2920	0.43	112/15	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ B1
<b>6.48</b>	224	82	2880	0.57	162/25	✓	✓	✓	✓				2KJ3601 - ■■■■■■ - ■■ A1

##### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.39A</b>													
<b>299.00</b>	4.8	192	6180	0.04	299/1	✓	✓						2KJ3642 - ■■■■■■ - ■■ N2
<b>265.20</b>	5.5	192	6180	0.05	1326/5	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ M2
<b>230.10</b>	6.3	193	6180	0.06	2301/10	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ L2
<b>209.18</b>	6.9	193	6180	0.07	2301/11	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ K2
<b>179.40</b>	8.1	193	6180	0.09	897/5	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ J2
<b>163.09</b>	8.9	193	6180	0.11	1794/11	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ H2
<b>143.00</b>	10	194	6170	0.13	143/1	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ G2
<b>127.64</b>	11	194	6170	0.16	1404/11	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ F2
<b>113.75</b>	13	194	6170	0.19	455/4	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ E2
<b>105.00</b>	14	194	6170	0.23	105/1	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ D2
<b>91.93</b>	16	194	6170	0.27	1287/14	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ C2
<b>80.60</b>	18	194	6170	0.26	403/5	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ B2
<b>73.12</b>	20	194	6170	0.36	585/8	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ A2
<b>68.82</b>	21	194	6170	0.43	1170/17	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ X1
<b>60.67</b>	24	183	6210	0.47	182/3	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ W1
<b>52.65</b>	28	170	6260	0.64	1053/20	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ V1
<b>49.87</b>	29	198	6160	0.06	748/15	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ U1
<b>43.27</b>	34	199	6150	0.07	649/15	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ T1
<b>39.33</b>	37	200	6140	0.08	118/3	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ S1
<b>33.73</b>	43	200	5730	0.11	506/15	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ R1
<b>32.64</b>	44	215	5260	0.07	816/25	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ Q1
<b>28.32</b>	51	235	4680	0.08	708/25	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ P1
<b>25.75</b>	56	235	4450	0.10	1416/55	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ N1
<b>22.08</b>	66	235	4100	0.13	552/25	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ M1
<b>20.07</b>	72	235	3890	0.16	1104/55	✓	✓	✓	✓				2KJ3642 - ■■■■■■ - ■■ L1
<b>17.60</b>	82	225	3720	0.19	88/5	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ K1
<b>15.71</b>	92	215	3600	0.23	864/55	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ J1
<b>14.00</b>	104	205	3490	0.28	14/1	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ H1
<b>12.92</b>	112	199	3400	0.34	168/13	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ G1
<b>11.31</b>	128	189	3270	0.41	396/35	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ F1
<b>9.92</b>	146	181	3130	0.44	248/25	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ E1
<b>9.00</b>	161	174	3040	0.59	9/1	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ D1
<b>8.47</b>	171	170	3030	0.68	144/17	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ C1
<b>7.47</b>	194	163	3050	0.81	112/15	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ B1
<b>6.48</b>	224	154	3050	1.08	162/25	✓	✓	✓	✓	✓			2KJ3642 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical worm geared motors

### Transmission ratios and torques

#### Selection and ordering data

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.49</b>													
<b>299.00</b>	4.8	350	8410	0.04	299/1	✓	✓						2KJ3603 - ■■■■■■ - ■■ N2
<b>265.20</b>	5.5	350	8410	0.05	1326/5	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ M2
<b>230.10</b>	6.3	355	8400	0.07	2301/10	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ L2
<b>209.18</b>	6.9	355	8400	0.08	2301/11	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ K2
<b>179.40</b>	8.1	355	8260	0.10	897/5	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ J2
<b>163.09</b>	8.9	355	7920	0.13	1794/11	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ H2
<b>143.00</b>	10	355	7480	0.15	143/1	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ G2
<b>127.64</b>	11	355	7110	0.18	1404/11	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ F2
<b>113.75</b>	13	355	6760	0.22	455/4	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ E2
<b>105.00</b>	14	355	6510	0.26	105/1	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ D2
<b>91.93</b>	16	350	6160	0.32	1287/14	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ C2
<b>80.60</b>	18	330	5930	0.32	403/5	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ B2
<b>73.12</b>	20	315	5770	0.44	585/8	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ A2
<b>68.82</b>	21	305	5680	0.51	1170/17	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ X1
<b>60.67</b>	24	285	5500	0.58	182/3	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ W1
<b>52.65</b>	28	265	5290	0.78	1053/20	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ V1
<b>49.87</b>	29	320	4250	0.08	748/15	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ U1
<b>43.27</b>	34	350	3680	0.10	649/15	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ T1
<b>39.33</b>	37	400	3050	0.12	118/3	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ S1
<b>33.73</b>	43	375	2940	0.15	506/15	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ R1
<b>30.67</b>	47	385	2660	0.19	92/3	✓	✓	✓	✓				2KJ3603 - ■■■■■■ - ■■ Q1
<b>26.89</b>	54	360	2620	0.23	242/9	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ P1
<b>24.00</b>	60	345	2540	0.28	24/1	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ N1
<b>21.39</b>	68	330	2460	0.34	385/18	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ M1
<b>19.74</b>	73	315	2450	0.41	770/39	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ L1
<b>17.29</b>	84	300	2350	0.51	121/7	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ K1
<b>15.16</b>	96	285	2270	0.56	682/45	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ J1
<b>13.75</b>	105	275	2200	0.73	55/4	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ H1
<b>12.94</b>	112	270	2160	0.85	220/17	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ G1
<b>11.41</b>	127	255	2100	1.02	308/27	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ F1
<b>9.90</b>	146	245	1990	1.36	99/10	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ E1
<b>9.00</b>	161	255	1140	1.03	9/1	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ D1
<b>8.47</b>	171	255	1290	1.18	144/17	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ C1
<b>7.47</b>	194	240	1580	1.45	112/15	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ B1
<b>6.48</b>	224	230	1850	1.93	162/25	✓	✓	✓	✓	✓	✓		2KJ3603 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

**Selection and ordering data**

<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.69</b>													
<b>360.00</b>	4.0	675	10600	0.07	1079/3	✓	✓						2KJ3604 - ■■■■■■ - ■■ M2
<b>319.80</b>	4.5	675	10600	0.09	1599/5	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ L2
<b>280.80</b>	5.2	675	10600	0.11	1404/5	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ K2
<b>255.27</b>	5.7	675	10600	0.13	2808/11	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ J2
<b>218.40</b>	6.6	675	10600	0.16	1092/5	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ H2
<b>198.55</b>	7.3	675	10600	0.19	2184/11	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ G2
<b>175.50</b>	8.3	665	10600	0.23	351/2	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ F2
<b>159.55</b>	9.1	640	10700	0.30	1755/11	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ E2
<b>139.75</b>	10	590	10500	0.35	559/4	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ D2
<b>129.00</b>	11	565	10300	0.42	129/1	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ C2
<b>114.21</b>	13	535	9990	0.52	1599/14	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ B2
<b>102.50</b>	14	675	8310	0.10	205/2	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ A2
<b>90.00</b>	16	675	7790	0.12	90/1	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ X1
<b>81.82</b>	18	675	7410	0.15	900/11	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ W1
<b>70.00</b>	21	660	6920	0.18	70/1	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ V1
<b>63.64</b>	23	640	6700	0.22	700/11	✓	✓	✓	✓				2KJ3604 - ■■■■■■ - ■■ U1
<b>56.25</b>	26	610	6460	0.27	225/4	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ T1
<b>51.14</b>	28	580	6320	0.34	1125/22	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ S1
<b>44.79</b>	32	545	6110	0.41	1075/24	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ R1
<b>41.35</b>	35	525	5980	0.49	1075/26	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ Q1
<b>36.61</b>	40	500	5770	0.61	1025/28	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ P1
<b>30.00</b>	48	545	4560	0.46	30/1	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ N1
<b>26.28</b>	55	515	4410	0.56	473/18	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ M1
<b>24.26</b>	60	500	4300	0.67	946/39	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ L1
<b>21.48</b>	68	475	4160	0.83	451/21	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ K1
<b>17.88</b>	81	440	3960	1.17	143/8	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ J1
<b>15.88</b>	91	360	3950	0.88	1032/65	✓	✓	✓	✓	✓	✓		2KJ3604 - ■■■■■■ - ■■ H1
<b>14.06</b>	103	355	3730	1.11	492/35	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ G1
<b>11.70</b>	124	360	3310	1.56	117/10	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ F1
<b>11.01</b>	132	360	3180	1.79	936/85	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ E1
<b>9.87</b>	147	360	2890	2.10	148/15	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ D1
<b>8.40</b>	173	360	3110	2.90	42/5	✓	✓	✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ C1
<b>7.20</b>	201	360	3170	3.90	36/5			✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ B1
<b>6.20</b>	234	355	3190	5.20	31/5			✓	✓	✓	✓	✓	2KJ3604 - ■■■■■■ - ■■ A1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

Helical worm geared motors

## Transmission ratios and torques

### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.89</b>													
363.00	4	1450	16200	0.47	3627/10	✓	✓	✓					2KJ3605 - ■■■■■■ - ■■ N2
329.73	4.4	1450	16200	0.57	3627/11	✓	✓	✓					2KJ3605 - ■■■■■■ - ■■ M2
295.75	4.9	1450	16200	0.78	1183/4	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ L2
265.91	5.5	1450	16200	0.89	2925/11	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ K2
240.50	6	1450	16200	1.00	481/2	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ J2
222.00	6.5	1450	16200	1.18	222/1	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ H2
203.36	7.1	1450	16200	1.52	2847/14	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ G2
170.62	8.5	1360	16300	1.67	1365/8	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ F2
160.59	9	1330	16300	1.91	2730/17	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ E2
147.33	9.8	1280	16300	2.10	442/3	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ D2
128.70	11	1190	16300	3.00	1287/10	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ C2
115.23	13	1120	15900	3.70	2535/22		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ B2
100.75	14	1050	15300	4.40	403/4		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ A2
86.48	17	985	14600	4.90	1989/23		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ X1
76.44	19	930	14100	6.30	1911/25		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ W1
65.00	22	865	13400	8.10	65/1				✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ V1
55.61	26	1450	8630	0.89	1001/18	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ U1
50.00	29	1430	8160	1.02	50/1	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ T1
45.22	32	1380	7910	1.15	407/9	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ S1
41.74	35	1340	7720	1.35	1628/39	✓	✓	✓	✓	✓			2KJ3605 - ■■■■■■ - ■■ R1
38.24	38	1300	7510	1.73	803/21	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ Q1
32.08	45	1220	7110	1.97	385/12	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ P1
30.20	48	1200	6950	2.20	1540/51	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ N1
27.70	52	1140	6890	2.50	748/27	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ M1
25.03	58	1090	5490	2.10	876/35	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ L1
21.00	69	1070	4480	2.50	21/1	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ K1
19.76	73	1120	3400	2.80	336/17	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ J1
18.13	80	1110	3180	3.20	272/15	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ H1
15.84	92	1110	4150	4.40	396/25	✓	✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ G1
14.18	102	1070	4810	5.40	156/11		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ F1
12.40	117	1010	5490	6.60	62/5		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ E1
10.64	136	960	5620	8.00	1224/115		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ D1
9.41	154	915	5680	10.00	1176/125		✓	✓	✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ C1
8.00	181	840	5710	14.00	8/1				✓	✓	✓		2KJ3605 - ■■■■■■ - ■■ B1
6.86	211	720	5690	18.00	48/7					✓	✓	✓	2KJ3605 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



# SIMOGEAR geared motors

## Helical worm geared motors

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.29-Z19</b>													
1744	0.83	87	4240	0.02	1020272/585	✓	✓						2KJ3620 - ■■■■■■ - ■■ S1
1544	0.94	87	4240	0.03	501908/325	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ R1
1342	1.1	88	4240	0.04	436084/325	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ Q1
1220	1.2	88	4240	0.05	79288/65	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ P1
1038	1.4	89	4230	0.07	337348/325	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ N1
944	1.5	90	4230	0.08	61336/65	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ M1
823	1.8	90	4230	0.09	4114/5	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ L1
736	2.0	91	4220	0.12	47872/65	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ K1
654	2.2	91	4220	0.15	127534/195	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ J1
604	2.4	91	4220	0.18	510136/845	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ H1
524	2.8	92	4220	0.20	238612/455	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ G1
456	3.2	93	4210	0.21	148104/325	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ F1
411	3.5	93	4210	0.27	2057/5	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ E1
387	3.7	93	4210	0.32	1936/5	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ D1
337.56	4.3	94	4210	0.36	65824/195	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ C1
311.44	4.7	94	4210	0.19	255068/819	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ B1
270.54	5.4	95	4200	0.22	119306/441	✓	✓	✓					2KJ3620 - ■■■■■■ - ■■ A1
<b>C.29-D19</b>													
9219	0.16	80	4280	0.02	37750064/4095	✓	✓						2KJ3621 - ■■■■■■ - ■■ Q1
8163	0.18	80	4280	0.03	18570596/2275	✓	✓						2KJ3621 - ■■■■■■ - ■■ P1
7092	0.20	81	4270	0.04	16135108/2275	✓	✓						2KJ3621 - ■■■■■■ - ■■ N1
6448	0.22	81	4270	0.04	2933656/455	✓	✓						2KJ3621 - ■■■■■■ - ■■ M1
5487	0.26	82	4270	0.06	12481876/2275	✓	✓						2KJ3621 - ■■■■■■ - ■■ L1
4988	0.29	82	4270	0.07	2269432/455	✓	✓						2KJ3621 - ■■■■■■ - ■■ K1
4349	0.33	83	4260	0.08	152218/35	✓	✓						2KJ3621 - ■■■■■■ - ■■ J1
3893	0.37	84	4260	0.11	1771264/455	✓	✓						2KJ3621 - ■■■■■■ - ■■ H1
3457	0.42	84	4260	0.13	4718758/1365	✓	✓						2KJ3621 - ■■■■■■ - ■■ G1
3191	0.45	84	4260	0.16	18875032/5915	✓	✓						2KJ3621 - ■■■■■■ - ■■ F1
2772	0.52	85	4250	0.17	8828644/3185	✓	✓						2KJ3621 - ■■■■■■ - ■■ E1
2409	0.60	86	4250	0.18	5479848/2275	✓	✓						2KJ3621 - ■■■■■■ - ■■ D1
2175	0.67	86	4250	0.22	76109/35	✓	✓						2KJ3621 - ■■■■■■ - ■■ C1
2047	0.71	86	4250	0.26	71632/35	✓	✓						2KJ3621 - ■■■■■■ - ■■ B1
1784	0.81	87	4240	0.29	2435488/1365	✓	✓						2KJ3621 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

## SIMOGEAR geared motors

Helical worm geared motors

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	P <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.39A-Z19</b>													
1744	0.83	169	6270	0.02	1020272/585	✓	✓						2KJ3652 - ■■■■■■ - ■■ S1
1544	0.94	171	6260	0.03	501908/325	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ R1
1342	1.1	173	6250	0.04	436084/325	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ Q1
1220	1.2	173	6250	0.05	79288/65	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ P1
1038	1.4	175	6240	0.07	337348/325	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ N1
944	1.5	175	6240	0.08	61336/65	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ M1
823	1.8	176	6240	0.09	4114/5	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ L1
736	2.0	177	6240	0.12	47872/65	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ K1
654	2.2	178	6230	0.15	127534/195	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ J1
604	2.4	179	6230	0.18	510136/845	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ H1
524	2.8	180	6230	0.20	238612/455	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ G1
456	3.2	181	6220	0.21	148104/325	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ F1
411	3.5	182	6220	0.27	2057/5	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ E1
387	3.7	182	6220	0.32	1936/5	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ D1
337.56	4.3	183	6210	0.36	65824/195	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ C1
311.44	4.7	184	6210	0.19	255068/819	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ B1
270.54	5.4	185	6210	0.22	119306/441	✓	✓	✓					2KJ3652 - ■■■■■■ - ■■ A1
<b>C.39A-D19</b>													
11553	0.13	160	6300	0.06	150183/13	✓	✓						2KJ3653 - ■■■■■■ - ■■ S1
10502	0.14	160	6300	0.07	136530/13	✓	✓						2KJ3653 - ■■■■■■ - ■■ R1
9219	0.16	156	6320	0.02	37750064/4095	✓	✓						2KJ3653 - ■■■■■■ - ■■ Q1
8163	0.18	157	6310	0.03	18570596/2275	✓	✓						2KJ3653 - ■■■■■■ - ■■ P1
7092	0.20	157	6310	0.04	16135108/2275	✓	✓						2KJ3653 - ■■■■■■ - ■■ N1
6448	0.22	158	6310	0.04	2933656/455	✓	✓						2KJ3653 - ■■■■■■ - ■■ M1
5487	0.26	159	6300	0.06	12481876/2275	✓	✓						2KJ3653 - ■■■■■■ - ■■ L1
4988	0.29	159	6300	0.07	2269432/455	✓	✓						2KJ3653 - ■■■■■■ - ■■ K1
4349	0.33	160	6300	0.08	152218/35	✓	✓						2KJ3653 - ■■■■■■ - ■■ J1
3893	0.37	161	6300	0.11	1771264/455	✓	✓						2KJ3653 - ■■■■■■ - ■■ H1
3457	0.42	161	6300	0.13	4718758/1365	✓	✓						2KJ3653 - ■■■■■■ - ■■ G1
3191	0.45	162	6290	0.16	18875032/5915	✓	✓						2KJ3653 - ■■■■■■ - ■■ F1
2772	0.52	163	6290	0.17	8828644/3185	✓	✓						2KJ3653 - ■■■■■■ - ■■ E1
2409	0.60	165	6280	0.18	5479848/2275	✓	✓						2KJ3653 - ■■■■■■ - ■■ D1
2175	0.67	166	6280	0.22	76109/35	✓	✓						2KJ3653 - ■■■■■■ - ■■ C1
2047	0.71	167	6270	0.26	71632/35	✓	✓						2KJ3653 - ■■■■■■ - ■■ B1
1784	0.81	169	6270	0.29	2435488/1365	✓	✓						2KJ3653 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

### Helical worm geared motors

#### Transmission ratios and torques for very low speeds

#### Selection and ordering data

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.49-Z19</b>													
<b>2819</b>	0.51	285	8600	0.02	42284/15	✓	✓						2KJ3624 - ■■■■■■ - ■■ V1
<b>2496</b>	0.58	290	8590	0.03	62403/25	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ U1
<b>2169</b>	0.67	295	8570	0.04	54219/25	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ T1
<b>1972</b>	0.74	295	8570	0.05	9858/5	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ S1
<b>1678</b>	0.86	305	8540	0.07	41943/25	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ R1
<b>1525</b>	0.95	305	8540	0.08	7626/5	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ Q1
<b>1330</b>	1.1	315	8510	0.10	13299/10	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ P1
<b>1190</b>	1.2	320	8500	0.13	5952/5	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ N1
<b>1057</b>	1.4	325	8480	0.15	10571/10	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ M1
<b>976</b>	1.5	330	8470	0.18	63426/65	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ L1
<b>848</b>	1.7	340	8440	0.21	29667/35	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ K1
<b>737</b>	2.0	340	8440	0.21	18414/25	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ J1
<b>665</b>	2.2	340	8440	0.27	13299/20	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ H1
<b>626</b>	2.3	345	8430	0.32	53196/85	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ G1
<b>546</b>	2.7	345	8430	0.37	2728/5	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ F1
<b>503</b>	2.9	345	8430	0.20	10571/21	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ E1
<b>437</b>	3.3	345	8430	0.23	128557/294	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ D1
<b>380</b>	3.8	350	8410	0.24	13299/35	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ C1
<b>343.03</b>	4.2	350	8410	0.31	57629/168	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ B1
<b>322.85</b>	4.5	350	8410	0.36	115258/357	✓	✓	✓					2KJ3624 - ■■■■■■ - ■■ A1
<b>C.49-D19</b>													
<b>11463</b>	0.13	270	8640	0.04	2006103/175	✓	✓						2KJ3625 - ■■■■■■ - ■■ N1
<b>10421</b>	0.14	270	8640	0.04	364746/35	✓	✓						2KJ3625 - ■■■■■■ - ■■ M1
<b>8868</b>	0.16	270	8640	0.06	1551891/175	✓	✓						2KJ3625 - ■■■■■■ - ■■ L1
<b>8062</b>	0.18	270	8640	0.07	282162/35	✓	✓						2KJ3625 - ■■■■■■ - ■■ K1
<b>7029</b>	0.21	275	8630	0.08	492063/70	✓	✓						2KJ3625 - ■■■■■■ - ■■ J1
<b>6292</b>	0.23	275	8630	0.11	220224/35	✓	✓						2KJ3625 - ■■■■■■ - ■■ H1
<b>5588</b>	0.26	275	8630	0.13	391127/70	✓	✓						2KJ3625 - ■■■■■■ - ■■ G1
<b>5158</b>	0.28	275	8630	0.16	2346762/455	✓	✓						2KJ3625 - ■■■■■■ - ■■ F1
<b>4480</b>	0.32	280	8610	0.17	1097679/245	✓	✓						2KJ3625 - ■■■■■■ - ■■ E1
<b>3893</b>	0.37	280	8730	0.18	681318/175	✓	✓						2KJ3625 - ■■■■■■ - ■■ D1
<b>3515</b>	0.41	280	8610	0.22	492063/140	✓	✓						2KJ3625 - ■■■■■■ - ■■ C1
<b>3308</b>	0.44	285	8600	0.26	1968252/595	✓	✓						2KJ3625 - ■■■■■■ - ■■ B1
<b>2884</b>	0.50	285	8600	0.29	100936/35	✓	✓						2KJ3625 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Helical worm geared motors

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	F <sub>ex</sub> -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.69-Z19</b>													
3585	0.40	505	11000	0.02	139810/39	✓	✓						2KJ3626 - ■■■■■■ - ■■ V1
3174	0.46	510	11000	0.03	82533/26	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ U1
2758	0.53	510	11000	0.04	71709/26	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ T1
2507	0.58	515	11000	0.05	32595/13	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ S1
2134	0.68	515	11000	0.07	55473/26	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ R1
1940	0.75	520	11000	0.08	25215/13	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ Q1
1691	0.86	520	11000	0.09	6765/4	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ P1
1514	0.96	525	11000	0.12	19680/13	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ N1
1344	1.1	530	11000	0.15	69905/52	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ M1
1241	1.2	530	11000	0.18	209715/169	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ L1
1078	1.3	535	10900	0.20	196185/182	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ K1
937	1.5	540	10900	0.21	12177/13	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ J1
846	1.7	545	10900	0.27	6765/8	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ H1
796	1.8	550	10900	0.32	13530/17	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ G1
694	2.1	555	10900	0.36	9020/13	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ F1
640	2.3	560	10900	0.19	349525/546	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ E1
556	2.6	570	10900	0.22	326975/588	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ D1
483	3.0	580	10800	0.23	6765/14	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ C1
436	3.3	585	10800	0.29	146575/336	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ B1
411	3.5	590	10800	0.35	146575/357	✓	✓	✓					2KJ3626 - ■■■■■■ - ■■ A1
<b>C.69-D19</b>													
18949	0.08	495	11000	0.02	5172970/273	✓	✓						2KJ3627 - ■■■■■■ - ■■ Q1
16779	0.09	495	11000	0.03	3053721/182	✓	✓						2KJ3627 - ■■■■■■ - ■■ P1
14578	0.10	495	11000	0.04	2653233/182	✓	✓						2KJ3627 - ■■■■■■ - ■■ N1
13253	0.11	495	11000	0.04	1206015/91	✓	✓						2KJ3627 - ■■■■■■ - ■■ M1
11277	0.13	500	11000	0.06	2052501/182	✓	✓						2KJ3627 - ■■■■■■ - ■■ L1
10252	0.14	500	11000	0.07	932955/91	✓	✓						2KJ3627 - ■■■■■■ - ■■ K1
8939	0.16	500	11000	0.08	250305/28	✓	✓						2KJ3627 - ■■■■■■ - ■■ J1
8002	0.18	500	12200	0.11	728160/91	✓	✓						2KJ3627 - ■■■■■■ - ■■ H1
7106	0.20	500	11000	0.13	2586485/364	✓	✓						2KJ3627 - ■■■■■■ - ■■ G1
6559	0.22	500	11000	0.16	7759455/1183	✓	✓						2KJ3627 - ■■■■■■ - ■■ F1
5698	0.25	500	11000	0.17	7258845/1274	✓	✓						2KJ3627 - ■■■■■■ - ■■ E1
4951	0.29	505	11000	0.18	450549/91	✓	✓						2KJ3627 - ■■■■■■ - ■■ D1
4470	0.32	505	11000	0.22	250305/56	✓	✓						2KJ3627 - ■■■■■■ - ■■ C1
4207	0.34	505	11000	0.26	500610/119	✓	✓						2KJ3627 - ■■■■■■ - ■■ B1
3667	0.40	505	11000	0.29	333740/91	✓	✓						2KJ3627 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	Motor frame size							Article No. (Article No. supplement, see below)
						63	71	80	90	100	112	132	
<b>C.89-Z39</b>													
3111	0.47	1120	16300	0.06	7560553/2430	✓	✓						2KJ3628 - ■■■■■■ - ■■ T1
2766	0.52	1120	16300	0.07	3734731/1350	✓	✓	✓	✓				2KJ3628 - ■■■■■■ - ■■ S1
2429	0.60	1130	16300	0.08	182182/75	✓	✓	✓	✓				2KJ3628 - ■■■■■■ - ■■ R1
2208	0.66	1130	16300	0.10	33124/15	✓	✓	✓	✓				2KJ3628 - ■■■■■■ - ■■ Q1
1889	0.77	1140	16300	0.12	1275274/675	✓	✓	✓	✓				2KJ3628 - ■■■■■■ - ■■ P1
1718	0.84	1150	16300	0.14	231868/135	✓	✓	✓	✓				2KJ3628 - ■■■■■■ - ■■ N1
1518	0.96	1150	16300	0.17	91091/60	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ M1
1380	1.1	1160	16300	0.22	8281/6	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ L1
1209	1.2	1170	16300	0.26	3916913/3240	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ K1
1116	1.3	1170	16300	0.31	303301/270	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ J1
988	1.5	1180	16300	0.36	533533/540	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ H1
822	1.8	1200	16300	0.48	1184183/1440	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ G1
774	1.9	1210	16300	0.56	1184183/1530	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ F1
693	2.1	1220	16300	0.61	3370367/4860	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ E1
590	2.5	1230	16300	0.79	637637/1080	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ D1
506	2.9	1260	16300	1.03	91091/180			✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ C1
436	3.3	1280	16300	1.31	2823821/6480			✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ B1
360	4.0	1310	16300	0.59	793793/2208	✓	✓	✓	✓	✓	✓		2KJ3628 - ■■■■■■ - ■■ A1
<b>C.89-D39</b>													
18243	0.08	850	16300	0.05	93039401/5100	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ R1
16585	0.09	855	16300	0.07	93039401/5610	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ Q1
14223	0.10	860	16300	0.08	36269597/2550	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ P1
13085	0.11	1100	16300	0.03	90088999/6885	✓	✓						2KJ3630 - ■■■■■■ - ■■ N1
11606	0.12	1100	16300	0.05	7833826/675	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ M1
10070	0.14	1100	16300	0.05	231097867/22950	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ L1
9154	0.16	1100	16300	0.07	21008897/2295	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ K1
7851	0.18	1100	16300	0.08	90088999/11475	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ J1
7137	0.20	1100	16300	0.10	16379818/2295	✓	✓	✓	✓				2KJ3630 - ■■■■■■ - ■■ H1
6258	0.23	1110	16300	0.12	43086043/6885	✓	✓	✓	✓	✓	✓		2KJ3630 - ■■■■■■ - ■■ G1
5586	0.26	1110	16300	0.15	1424332/255	✓	✓	✓	✓	✓	✓		2KJ3630 - ■■■■■■ - ■■ F1
4978	0.29	1110	16300	0.17	27418391/5508	✓	✓	✓	✓	✓	✓		2KJ3630 - ■■■■■■ - ■■ E1
4595	0.32	1110	16300	0.21	2109107/459	✓	✓	✓	✓	✓	✓		2KJ3630 - ■■■■■■ - ■■ D1
4023	0.36	1110	16300	0.25	6155149/1530	✓	✓	✓	✓	✓	✓		2KJ3630 - ■■■■■■ - ■■ C1
3527	0.41	1120	16300	0.23	121424303/34425	✓	✓	✓	✓	✓	✓		2KJ3630 - ■■■■■■ - ■■ B1
3200	0.45	1120	16300	0.33	3916913/1224	✓	✓	✓	✓	✓	✓		2KJ3630 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	see page 10/51
Motor frame size, motor type, efficiency class		see chapter 9
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F, H or D</b>	see page 10/42

# SIMOGEAR geared motors

## Helical worm geared motors

### Efficiencies

#### Selection and ordering data

i	$n_{\text{mot}} = 2800 \text{ rpm}$				$n_{\text{mot}} = 1400 \text{ rpm}$				$n_{\text{mot}} = 900 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.29</b>													
<b>265.20</b>	10.6	110	0.17	73	5.3	108	0.09	65	3.4	106	0.06	59	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>M2</b>
<b>230.10</b>	12.2	110	0.19	74	6.1	108	0.10	67	3.9	106	0.07	61	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>L2</b>
<b>209.18</b>	13.4	110	0.21	75	6.7	109	0.11	68	4.3	107	0.08	62	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>K2</b>
<b>179.40</b>	15.6	110	0.24	76	7.8	109	0.13	70	5.0	107	0.09	64	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>J2</b>
<b>163.09</b>	17.2	110	0.26	76	8.6	110	0.14	71	5.5	108	0.10	65	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>H2</b>
<b>143.00</b>	19.6	110	0.30	76	9.8	110	0.16	72	6.3	108	0.11	67	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>G2</b>
<b>127.64</b>	22	110	0.33	76	11.0	110	0.17	73	7.1	109	0.12	68	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>F2</b>
<b>113.75</b>	25	110	0.38	76	12.3	110	0.19	74	7.9	109	0.13	70	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>E2</b>
<b>105.00</b>	27	110	0.41	76	13.3	110	0.21	74	8.6	110	0.14	70	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>D2</b>
<b>91.93</b>	30	110	0.46	76	15.2	110	0.23	75	9.8	110	0.16	72	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>C2</b>
<b>80.60</b>	35	105	0.51	76	17.4	110	0.27	75	11.2	110	0.18	73	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>B2</b>
<b>73.12</b>	38	101	0.53	76	19.1	110	0.29	75	12.3	110	0.19	74	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>A2</b>
<b>68.82</b>	41	99	0.56	76	20	110	0.31	75	13.1	110	0.21	74	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>X1</b>
<b>60.67</b>	46	95	0.61	75	23	110	0.35	76	14.8	110	0.23	74	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>W1</b>
<b>52.65</b>	53	90	0.67	75	27	110	0.41	76	17.1	110	0.26	75	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>V1</b>
<b>49.87</b>	56	105	0.69	90	28	102	0.34	87	18	100	0.22	84	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>U1</b>
<b>43.27</b>	65	106	0.80	90	32	103	0.39	88	21	101	0.26	86	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>T1</b>
<b>39.33</b>	71	106	0.88	90	36	103	0.44	89	23	101	0.28	86	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>S1</b>
<b>33.73</b>	83	107	1.00	90	42	104	0.51	89	27	102	0.33	87	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>R1</b>
<b>32.64</b>	86	92	0.91	92	43	90	0.45	90	28	88	0.30	87	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>Q1</b>
<b>28.32</b>	99	93	1.10	92	49	90	0.51	90	32	89	0.34	88	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>P1</b>
<b>25.75</b>	109	93	1.20	92	54	90	0.57	91	35	89	0.37	89	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>N1</b>
<b>22.08</b>	127	94	1.40	92	63	91	0.66	91	41	89	0.43	89	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>M1</b>
<b>20.07</b>	140	94	1.50	92	70	91	0.74	91	45	90	0.47	90	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>L1</b>
<b>17.60</b>	159	93	1.7*	92	80	92	0.85	92	51	90	0.54	90	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>K1</b>
<b>15.71</b>	178	89	1.8*	92	89	92	0.95	92	57	91	0.60	91	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>J1</b>
<b>14.00</b>	200	86	2.0*	92	100	93	1.10	92	64	91	0.67	91	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>H1</b>
<b>12.92</b>	217	83	2.1*	92	108	93	1.20	92	70	91	0.74	91	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>G1</b>
<b>11.31</b>	248	79	2.3*	92	124	94	1.30	92	80	92	0.85	91	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>F1</b>
<b>9.92</b>	282	74	2.4*	91	141	94	1.50	92	91	92	0.97	91	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>E1</b>
<b>9.00</b>	311	71	2.6*	92	156	90	1.6*	92	100	93	1.10	92	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>D1</b>
<b>8.47</b>	331	70	2.7*	91	165	88	1.7*	92	106	93	1.10	92	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>C1</b>
<b>7.47</b>	375	66	2.8*	91	187	83	1.8*	92	120	93	1.30	92	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>B1</b>
<b>6.48</b>	432	62	3.1*	91	216	78	1.9*	92	139	91	1.40	92	<b>2KJ3601</b> - ■■■■■■ - ■■ <b>A1</b>

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 1.5 \text{ kW}$

## Selection and ordering data

i	$n_{\text{mot}} = 700 \text{ rpm}$				$n_{\text{mot}} = 500 \text{ rpm}$				$n_{\text{mot}} = 100 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.29</b>													
265.20	2.6	104	<0.06	57	1.9	103	<0.06	54	0.38	95	<0.06	47	2KJ3601 - ■■■■■■ - ■■ M2
230.10	3	105	0.06	58	2.2	104	<0.06	55	0.43	96	<0.06	48	2KJ3601 - ■■■■■■ - ■■ L2
209.18	3.3	105	0.06	59	2.4	104	<0.06	56	0.48	97	<0.06	48	2KJ3601 - ■■■■■■ - ■■ K2
179.40	3.9	106	0.07	61	2.8	105	<0.06	57	0.56	97	<0.06	48	2KJ3601 - ■■■■■■ - ■■ J2
163.09	4.3	107	0.08	62	3.1	105	0.06	58	0.61	98	<0.06	48	2KJ3601 - ■■■■■■ - ■■ H2
143.00	4.9	107	0.09	64	3.5	106	0.07	59	0.70	98	<0.06	48	2KJ3601 - ■■■■■■ - ■■ G2
127.64	5.5	108	0.10	65	3.9	106	0.07	61	0.78	99	<0.06	49	2KJ3601 - ■■■■■■ - ■■ F2
113.75	6.2	108	0.11	66	4.4	107	0.08	62	0.88	99	<0.06	49	2KJ3601 - ■■■■■■ - ■■ E2
105.00	6.7	109	0.11	67	4.8	107	0.09	63	0.95	100	<0.06	49	2KJ3601 - ■■■■■■ - ■■ D2
91.93	7.6	109	0.13	69	5.4	108	0.09	65	1.1	100	<0.06	50	2KJ3601 - ■■■■■■ - ■■ C2
80.60	8.7	110	0.14	70	6.2	108	0.11	66	1.2	101	<0.06	50	2KJ3601 - ■■■■■■ - ■■ B2
73.12	9.6	110	0.16	71	6.8	109	0.12	67	1.4	101	<0.06	51	2KJ3601 - ■■■■■■ - ■■ A2
68.82	10.2	110	0.16	72	7.3	109	0.12	68	1.5	102	<0.06	51	2KJ3601 - ■■■■■■ - ■■ X1
60.67	11.5	110	0.18	73	8.2	110	0.14	70	1.6	102	<0.06	52	2KJ3601 - ■■■■■■ - ■■ W1
52.65	13.3	110	0.21	74	9.5	110	0.15	71	1.9	103	<0.06	53	2KJ3601 - ■■■■■■ - ■■ V1
49.87	14.0	99	0.18	83	10.0	98	0.13	80	2.0	91	<0.06	73	2KJ3601 - ■■■■■■ - ■■ U1
43.27	16.2	100	0.20	84	11.6	98	0.15	81	2.3	91	<0.06	74	2KJ3601 - ■■■■■■ - ■■ T1
39.33	17.8	100	0.22	84	12.7	99	0.16	82	2.5	92	<0.06	74	2KJ3601 - ■■■■■■ - ■■ S1
33.73	21	101	0.26	85	14.8	99	0.19	83	3.0	92	<0.06	74	2KJ3601 - ■■■■■■ - ■■ R1
32.64	21	87	0.22	86	15.3	86	0.17	84	3.1	80	<0.06	77	2KJ3601 - ■■■■■■ - ■■ Q1
28.32	25	88	0.27	87	17.7	86	0.19	84	3.5	80	<0.06	78	2KJ3601 - ■■■■■■ - ■■ P1
25.75	27	88	0.29	87	19.4	87	0.21	85	3.9	81	<0.06	78	2KJ3601 - ■■■■■■ - ■■ N1
22.08	32	89	0.34	88	23	87	0.25	86	4.5	81	<0.06	78	2KJ3601 - ■■■■■■ - ■■ M1
20.07	35	89	0.37	89	25	88	0.27	87	5.0	82	<0.06	79	2KJ3601 - ■■■■■■ - ■■ L1
17.60	40	89	0.42	89	28	88	0.30	87	5.7	82	0.06	79	2KJ3601 - ■■■■■■ - ■■ K1
15.71	45	90	0.47	90	32	89	0.34	88	6.4	83	0.07	79	2KJ3601 - ■■■■■■ - ■■ J1
14.00	50	90	0.53	90	36	89	0.38	89	7.1	83	0.08	80	2KJ3601 - ■■■■■■ - ■■ H1
12.92	54	90	0.57	90	39	89	0.41	89	7.7	83	0.08	80	2KJ3601 - ■■■■■■ - ■■ G1
11.31	62	91	0.65	91	44	90	0.46	90	8.8	84	0.10	81	2KJ3601 - ■■■■■■ - ■■ F1
9.92	71	91	0.75	91	50	90	0.53	90	10.1	84	0.11	81	2KJ3601 - ■■■■■■ - ■■ E1
9.00	78	92	0.82	91	56	91	0.59	91	11.1	85	0.12	82	2KJ3601 - ■■■■■■ - ■■ D1
8.47	83	92	0.88	91	59	91	0.62	91	11.8	85	0.13	82	2KJ3601 - ■■■■■■ - ■■ C1
7.47	94	93	1.00	92	67	91	0.71	91	13.4	85	0.15	83	2KJ3601 - ■■■■■■ - ■■ B1
6.48	108	93	1.20	92	77	92	0.81	91	15.4	86	0.17	84	2KJ3601 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 1.5 \text{ kW}$

## SIMOGEAR geared motors

### Helical worm geared motors

#### Efficiencies

#### Selection and ordering data

i	$n_{\text{mot}} = 2800 \text{ rpm}$				$n_{\text{mot}} = 1400 \text{ rpm}$				$n_{\text{mot}} = 900 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.39A</b>													
<b>299.00</b>	9.4	194	0.27	71	4.7	192	0.15	64	3.0	189	0.10	58	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>N2</b>
<b>265.20</b>	10.6	194	0.30	72	5.3	192	0.16	66	3.4	190	0.11	60	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>M2</b>
<b>230.10</b>	12.2	194	0.34	73	6.1	193	0.18	68	3.9	191	0.13	62	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>L2</b>
<b>209.18</b>	13.4	194	0.38	73	6.7	193	0.20	68	4.3	191	0.14	63	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>K2</b>
<b>179.40</b>	15.6	194	0.44	73	7.8	193	0.23	70	5.0	192	0.16	65	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>J2</b>
<b>163.09</b>	17.2	194	0.48	73	8.6	193	0.25	71	5.5	192	0.17	66	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>H2</b>
<b>143.00</b>	19.6	194	0.55	73	9.8	194	0.28	71	6.3	193	0.19	68	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>G2</b>
<b>127.64</b>	22	194	0.61	73	11	194	0.31	72	7.1	193	0.21	69	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>F2</b>
<b>113.75</b>	25	181	0.66	73	12.3	194	0.35	72	7.9	193	0.23	70	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>E2</b>
<b>105.00</b>	27	175	0.68	73	13.3	194	0.37	72	8.6	193	0.25	70	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>D2</b>
<b>91.93</b>	30	165	0.72	72	15.2	194	0.43	72	9.8	194	0.28	71	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>C2</b>
<b>80.60</b>	35	157	0.80	72	17.4	194	0.49	73	11.2	194	0.32	72	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>B2</b>
<b>73.12</b>	38	150	0.84	72	19.1	189	0.52	73	12.3	194	0.35	72	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>A2</b>
<b>68.82</b>	41	147	0.88	72	20	185	0.53	73	13.1	194	0.37	72	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>X1</b>
<b>60.67</b>	46	139	0.94	72	23	175	0.58	73	14.8	194	0.41	73	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>W1</b>
<b>52.65</b>	53	131	1.00	72	27	166	0.65	73	17.1	192	0.47	73	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>V1</b>
<b>49.87</b>	56	195	1.30	89	28	198	0.66	89	18	194	0.41	89	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>U1</b>
<b>43.27</b>	65	196	1.50	89	32	199	0.75	89	21	196	0.49	89	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>T1</b>
<b>39.33</b>	71	196	1.60	89	36	200	0.85	89	23	196	0.53	89	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>S1</b>
<b>33.73</b>	83	196	1.90	89	42	200	1.00	89	27	197	0.63	89	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>R1</b>
<b>32.64</b>	86	200	2.00	91	43	210	1.00	91	28	205	0.68	90	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>Q1</b>
<b>28.32</b>	99	200	2.30	91	49	225	1.30	91	32	225	0.84	90	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>P1</b>
<b>25.75</b>	109	200	2.50	91	54	235	1.50	91	35	230	0.95	90	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>N1</b>
<b>22.08</b>	127	198	2.90	91	63	235	1.70	91	41	230	1.10	91	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>M1</b>
<b>20.07</b>	140	188	3.00	91	70	235	1.90	91	45	235	1.20	91	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>L1</b>
<b>17.60</b>	159	180	3.3*	91	80	225	2.10	92	51	235	1.40	91	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>K1</b>
<b>15.71</b>	178	172	3.5*	91	89	215	2.20	91	57	235	1.60	91	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>J1</b>
<b>14.00</b>	200	164	3.8*	91	100	205	2.40	91	64	235	1.70	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>H1</b>
<b>12.92</b>	217	159	4.0*	91	108	200	2.50	92	70	230	1.90	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>G1</b>
<b>11.31</b>	248	152	4.3*	91	124	192	2.70	91	80	220	2.00	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>F1</b>
<b>9.92</b>	282	145	4.7*	91	141	183	3.00	91	91	210	2.20	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>E1</b>
<b>9.00</b>	311	137	4.9*	91	156	177	3.2*	91	100	205	2.30	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>D1</b>
<b>8.47</b>	331	129	4.9*	91	165	173	3.3*	91	106	200	2.40	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>C1</b>
<b>7.47</b>	375	114	4.9*	91	187	166	3.6*	91	120	192	2.60	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>B1</b>
<b>6.48</b>	432	99	4.9*	91	216	157	3.9*	91	139	182	2.90	92	<b>2KJ3642</b> - ■■■■■■ - ■■ <b>A1</b>

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 1.5 \text{ kW}$



## Selection and ordering data

i	$n_{\text{mot}} = 700 \text{ rpm}$				$n_{\text{mot}} = 500 \text{ rpm}$				$n_{\text{mot}} = 100 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.39A</b>													
<b>299.00</b>	2.3	187	0.08	55	1.7	184	0.06	52	0.33	170	<0.06	44	<b>2KJ3642</b> - ■■■■■■ - ■■ N2
<b>265.20</b>	2.6	188	0.09	57	1.9	185	0.07	53	0.38	167	<0.06	44	<b>2KJ3642</b> - ■■■■■■ - ■■ M2
<b>230.10</b>	3.0	189	0.10	58	2.2	186	0.08	54	0.43	164	<0.06	44	<b>2KJ3642</b> - ■■■■■■ - ■■ L2
<b>209.18</b>	3.3	190	0.11	59	2.4	187	0.09	55	0.48	162	<0.06	44	<b>2KJ3642</b> - ■■■■■■ - ■■ K2
<b>179.40</b>	3.9	191	0.13	62	2.8	188	0.10	57	0.56	160	<0.06	45	<b>2KJ3642</b> - ■■■■■■ - ■■ J2
<b>163.09</b>	4.3	191	0.14	63	3.1	189	0.11	58	0.61	160	<0.06	45	<b>2KJ3642</b> - ■■■■■■ - ■■ H2
<b>143.00</b>	4.9	192	0.15	64	3.5	190	0.12	60	0.70	160	<0.06	46	<b>2KJ3642</b> - ■■■■■■ - ■■ G2
<b>127.64</b>	5.5	192	0.17	66	3.9	191	0.13	61	0.78	161	<0.06	46	<b>2KJ3642</b> - ■■■■■■ - ■■ F2
<b>113.75</b>	6.2	193	0.19	67	4.4	191	0.14	63	0.88	162	<0.06	47	<b>2KJ3642</b> - ■■■■■■ - ■■ E2
<b>105.00</b>	6.7	193	0.20	68	4.8	192	0.15	64	0.95	163	<0.06	47	<b>2KJ3642</b> - ■■■■■■ - ■■ D2
<b>91.93</b>	7.6	193	0.22	69	5.4	192	0.17	66	1.1	166	<0.06	48	<b>2KJ3642</b> - ■■■■■■ - ■■ C2
<b>80.60</b>	8.7	193	0.25	70	6.2	193	0.19	67	1.2	168	<0.06	49	<b>2KJ3642</b> - ■■■■■■ - ■■ B2
<b>73.12</b>	9.6	194	0.28	71	6.8	193	0.20	68	1.4	170	<0.06	49	<b>2KJ3642</b> - ■■■■■■ - ■■ A2
<b>68.82</b>	10.2	194	0.29	71	7.3	193	0.21	69	1.5	172	<0.06	50	<b>2KJ3642</b> - ■■■■■■ - ■■ X1
<b>60.67</b>	11.5	194	0.32	72	8.2	193	0.24	70	1.6	176	0.06	51	<b>2KJ3642</b> - ■■■■■■ - ■■ W1
<b>52.65</b>	13.3	194	0.37	73	9.5	194	0.27	71	1.9	180	0.07	53	<b>2KJ3642</b> - ■■■■■■ - ■■ V1
<b>49.87</b>	14.0	192	0.32	88	10.0	190	0.23	86	2.0	177	0.06	66	<b>2KJ3642</b> - ■■■■■■ - ■■ U1
<b>43.27</b>	16.2	194	0.37	88	11.6	191	0.27	87	2.3	178	0.06	67	<b>2KJ3642</b> - ■■■■■■ - ■■ T1
<b>39.33</b>	17.8	194	0.41	88	12.7	192	0.29	88	2.5	179	0.07	68	<b>2KJ3642</b> - ■■■■■■ - ■■ S1
<b>33.73</b>	21	196	0.49	89	14.8	193	0.34	88	3.0	180	0.08	71	<b>2KJ3642</b> - ■■■■■■ - ■■ R1
<b>32.64</b>	21	200	0.51	88	15.3	197	0.37	86	3.1	174	0.08	76	<b>2KJ3642</b> - ■■■■■■ - ■■ Q1
<b>28.32</b>	25	220	0.66	89	17.7	215	0.47	87	3.5	192	0.09	76	<b>2KJ3642</b> - ■■■■■■ - ■■ P1
<b>25.75</b>	27	230	0.73	89	19.4	225	0.53	87	3.9	210	0.11	77	<b>2KJ3642</b> - ■■■■■■ - ■■ N1
<b>22.08</b>	32	230	0.86	90	23	225	0.62	88	4.5	210	0.13	77	<b>2KJ3642</b> - ■■■■■■ - ■■ M1
<b>20.07</b>	35	230	0.94	90	25	230	0.68	89	5.0	215	0.15	78	<b>2KJ3642</b> - ■■■■■■ - ■■ L1
<b>17.60</b>	40	230	1.10	91	28	230	0.76	90	5.7	215	0.16	79	<b>2KJ3642</b> - ■■■■■■ - ■■ K1
<b>15.71</b>	45	235	1.20	91	32	230	0.86	90	6.4	215	0.18	79	<b>2KJ3642</b> - ■■■■■■ - ■■ J1
<b>14.00</b>	50	235	1.40	91	36	230	0.97	91	7.1	215	0.20	80	<b>2KJ3642</b> - ■■■■■■ - ■■ H1
<b>12.92</b>	54	235	1.50	92	39	230	1.10	91	7.7	215	0.22	81	<b>2KJ3642</b> - ■■■■■■ - ■■ G1
<b>11.31</b>	62	235	1.70	92	44	235	1.20	91	8.8	220	0.25	82	<b>2KJ3642</b> - ■■■■■■ - ■■ F1
<b>9.92</b>	71	230	1.90	92	50	235	1.40	91	10.1	220	0.28	83	<b>2KJ3642</b> - ■■■■■■ - ■■ E1
<b>9.00</b>	78	220	2.00	92	56	235	1.50	92	11.1	220	0.31	83	<b>2KJ3642</b> - ■■■■■■ - ■■ D1
<b>8.47</b>	83	215	2.10	92	59	235	1.60	92	11.8	220	0.33	84	<b>2KJ3642</b> - ■■■■■■ - ■■ C1
<b>7.47</b>	94	205	2.30	92	67	230	1.80	92	13.4	220	0.37	85	<b>2KJ3642</b> - ■■■■■■ - ■■ B1
<b>6.48</b>	108	198	2.50	92	77	220	2.00	92	15.4	225	0.42	86	<b>2KJ3642</b> - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 1.5 \text{ kW}$

## SIMOGEAR geared motors

### Helical worm geared motors

#### Efficiencies

#### Selection and ordering data

i	$n_{\text{mot}} = 2800 \text{ rpm}$				$n_{\text{mot}} = 1400 \text{ rpm}$				$n_{\text{mot}} = 900 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.49</b>													
<b>299.00</b>	9.4	355	0.48	73	4.7	350	0.26	67	3.0	345	0.18	61	<b>2KJ3603 - ■■■■■■ - ■■ N2</b>
<b>265.20</b>	10.6	355	0.54	74	5.3	350	0.29	69	3.4	350	0.20	63	<b>2KJ3603 - ■■■■■■ - ■■ M2</b>
<b>230.10</b>	12.2	355	0.62	74	6.1	350	0.32	70	3.9	350	0.22	65	<b>2KJ3603 - ■■■■■■ - ■■ L2</b>
<b>209.18</b>	13.4	355	0.68	74	6.7	355	0.35	71	4.3	350	0.24	66	<b>2KJ3603 - ■■■■■■ - ■■ K2</b>
<b>179.40</b>	15.6	355	0.79	74	7.8	355	0.40	72	5.0	350	0.27	68	<b>2KJ3603 - ■■■■■■ - ■■ J2</b>
<b>163.09</b>	17.2	340	0.84	74	8.6	355	0.44	73	5.5	350	0.30	69	<b>2KJ3603 - ■■■■■■ - ■■ H2</b>
<b>143.00</b>	19.6	315	0.89	74	9.8	355	0.50	73	6.3	355	0.33	70	<b>2KJ3603 - ■■■■■■ - ■■ G2</b>
<b>127.64</b>	22	300	0.95	73	11.0	355	0.56	73	7.1	355	0.37	71	<b>2KJ3603 - ■■■■■■ - ■■ F2</b>
<b>113.75</b>	25	285	1.00	73	12.3	355	0.62	74	7.9	355	0.41	72	<b>2KJ3603 - ■■■■■■ - ■■ E2</b>
<b>105.00</b>	27	275	1.10	73	13.3	350	0.66	74	8.6	355	0.44	72	<b>2KJ3603 - ■■■■■■ - ■■ D2</b>
<b>91.93</b>	30	260	1.10	73	15.2	330	0.72	74	9.8	355	0.50	73	<b>2KJ3603 - ■■■■■■ - ■■ C2</b>
<b>80.60</b>	35	250	1.30	73	17.4	315	0.78	74	11.2	355	0.57	74	<b>2KJ3603 - ■■■■■■ - ■■ B2</b>
<b>73.12</b>	38	240	1.30	73	19.1	300	0.82	74	12.3	345	0.61	74	<b>2KJ3603 - ■■■■■■ - ■■ A2</b>
<b>68.82</b>	41	230	1.40	73	20	295	0.84	74	13.1	340	0.63	74	<b>2KJ3603 - ■■■■■■ - ■■ X1</b>
<b>60.67</b>	46	220	1.50	73	23	280	0.92	74	14.8	320	0.68	74	<b>2KJ3603 - ■■■■■■ - ■■ W1</b>
<b>52.65</b>	53	210	1.60	73	27	265	1.00	74	17.1	305	0.74	74	<b>2KJ3603 - ■■■■■■ - ■■ V1</b>
<b>49.87</b>	56	310	2.10	90	28	310	1.00	89	18	305	0.66	87	<b>2KJ3603 - ■■■■■■ - ■■ U1</b>
<b>43.27</b>	65	340	2.60	90	32	340	1.30	89	21	335	0.85	88	<b>2KJ3603 - ■■■■■■ - ■■ T1</b>
<b>39.33</b>	71	335	2.80	89	36	395	1.70	89	23	395	1.10	88	<b>2KJ3603 - ■■■■■■ - ■■ S1</b>
<b>33.73</b>	83	315	3.10	89	42	365	1.80	90	27	365	1.20	89	<b>2KJ3603 - ■■■■■■ - ■■ R1</b>
<b>30.67</b>	91	300	3.20	89	46	380	2.10	89	29	400	1.40	89	<b>2KJ3603 - ■■■■■■ - ■■ Q1</b>
<b>26.89</b>	104	285	3.50	89	52	360	2.20	90	33	400	1.50	89	<b>2KJ3603 - ■■■■■■ - ■■ P1</b>
<b>24.00</b>	117	275	3.80	89	58	345	2.40	90	38	400	1.80	90	<b>2KJ3603 - ■■■■■■ - ■■ N1</b>
<b>21.39</b>	131	260	4.1*	89	65	330	2.50	90	42	385	1.90	90	<b>2KJ3603 - ■■■■■■ - ■■ M1</b>
<b>19.74</b>	142	255	4.3*	89	71	320	2.70	90	46	370	2.00	90	<b>2KJ3603 - ■■■■■■ - ■■ L1</b>
<b>17.29</b>	162	240	4.6*	89	81	305	2.90	90	52	355	2.20	90	<b>2KJ3603 - ■■■■■■ - ■■ K1</b>
<b>15.16</b>	185	230	5.1*	89	92	290	3.20	90	59	335	2.30	90	<b>2KJ3603 - ■■■■■■ - ■■ J1</b>
<b>13.75</b>	204	220	5.4*	89	102	280	3.40	90	65	325	2.50	90	<b>2KJ3603 - ■■■■■■ - ■■ H1</b>
<b>12.94</b>	216	210	5.3*	89	108	275	3.50	90	70	315	2.60	90	<b>2KJ3603 - ■■■■■■ - ■■ G1</b>
<b>11.41</b>	245	185	5.4*	89	123	260	3.80	90	79	305	2.80	90	<b>2KJ3603 - ■■■■■■ - ■■ F1</b>
<b>9.90</b>	283	161	5.4*	89	141	250	4.1*	89	91	290	3.10	90	<b>2KJ3603 - ■■■■■■ - ■■ E1</b>
<b>9.00</b>	311	185	6.6*	91	156	260	4.6*	92	100	260	3.00	92	<b>2KJ3603 - ■■■■■■ - ■■ D1</b>
<b>8.47</b>	331	174	6.6*	91	165	260	4.9*	92	106	260	3.20	92	<b>2KJ3603 - ■■■■■■ - ■■ C1</b>
<b>7.47</b>	375	153	6.6*	91	187	250	5.3*	92	120	260	3.60	92	<b>2KJ3603 - ■■■■■■ - ■■ B1</b>
<b>6.48</b>	432	133	6.6*	91	216	235	5.8*	92	139	260	4.1*	92	<b>2KJ3603 - ■■■■■■ - ■■ A1</b>

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 1.5 \text{ kW}$

## Selection and ordering data

i	$n_{\text{mot}} = 700 \text{ rpm}$				$n_{\text{mot}} = 500 \text{ rpm}$				$n_{\text{mot}} = 100 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.49</b>													
299.00	2.3	340	0.14	58	1.7	315	0.10	54	0.33	260	<0.06	45	2KJ3603 - ■■■■■■ - ■■ N2
265.20	2.6	340	0.16	60	1.9	315	0.11	55	0.38	255	<0.06	45	2KJ3603 - ■■■■■■ - ■■ M2
230.10	3.0	345	0.18	61	2.2	320	0.13	57	0.43	255	<0.06	45	2KJ3603 - ■■■■■■ - ■■ L2
209.18	3.3	345	0.19	63	2.4	320	0.14	58	0.48	255	<0.06	45	2KJ3603 - ■■■■■■ - ■■ K2
179.40	3.9	350	0.22	65	2.8	330	0.16	60	0.56	255	<0.06	46	2KJ3603 - ■■■■■■ - ■■ J2
163.09	4.3	350	0.24	66	3.1	330	0.18	61	0.61	255	<0.06	46	2KJ3603 - ■■■■■■ - ■■ H2
143.00	4.9	350	0.27	68	3.5	340	0.20	63	0.70	255	<0.06	47	2KJ3603 - ■■■■■■ - ■■ G2
127.64	5.5	350	0.30	69	3.9	350	0.22	65	0.78	260	<0.06	47	2KJ3603 - ■■■■■■ - ■■ F2
113.75	6.2	355	0.33	70	4.4	350	0.25	66	0.88	260	<0.06	48	2KJ3603 - ■■■■■■ - ■■ E2
105.00	6.7	355	0.35	71	4.8	350	0.26	67	0.95	265	<0.06	49	2KJ3603 - ■■■■■■ - ■■ D2
91.93	7.6	355	0.39	72	5.4	350	0.29	69	1.1	270	0.06	50	2KJ3603 - ■■■■■■ - ■■ C2
80.60	8.7	355	0.45	73	6.2	355	0.33	70	1.2	275	0.07	51	2KJ3603 - ■■■■■■ - ■■ B2
73.12	9.6	355	0.49	73	6.8	355	0.36	71	1.4	280	0.08	52	2KJ3603 - ■■■■■■ - ■■ A2
68.82	10.2	355	0.52	73	7.3	355	0.38	72	1.5	280	0.08	52	2KJ3603 - ■■■■■■ - ■■ X1
60.67	11.5	350	0.57	74	8.2	355	0.42	73	1.6	285	0.09	54	2KJ3603 - ■■■■■■ - ■■ W1
52.65	13.3	330	0.63	74	9.5	355	0.48	73	1.9	295	0.11	55	2KJ3603 - ■■■■■■ - ■■ V1
49.87	14.0	295	0.51	86	10.0	285	0.37	83	2.0	245	0.07	71	2KJ3603 - ■■■■■■ - ■■ U1
43.27	16.2	330	0.65	87	11.6	320	0.47	84	2.3	275	0.09	71	2KJ3603 - ■■■■■■ - ■■ T1
39.33	17.8	390	0.83	87	12.7	375	0.60	85	2.5	320	0.12	72	2KJ3603 - ■■■■■■ - ■■ S1
33.73	21	360	0.91	88	14.8	355	0.64	86	3.0	300	0.13	73	2KJ3603 - ■■■■■■ - ■■ R1
30.67	23	395	1.10	88	16.3	385	0.77	87	3.3	330	0.16	73	2KJ3603 - ■■■■■■ - ■■ Q1
26.89	26	395	1.20	89	18.6	390	0.87	88	3.7	330	0.17	74	2KJ3603 - ■■■■■■ - ■■ P1
24.00	29	395	1.40	89	21	390	0.99	88	4.2	335	0.20	75	2KJ3603 - ■■■■■■ - ■■ N1
21.39	33	395	1.50	89	23	395	1.10	89	4.7	340	0.22	76	2KJ3603 - ■■■■■■ - ■■ M1
19.74	35	400	1.60	90	25	395	1.20	89	5.1	340	0.24	77	2KJ3603 - ■■■■■■ - ■■ L1
17.29	40	385	1.80	90	29	395	1.30	89	5.8	345	0.27	78	2KJ3603 - ■■■■■■ - ■■ K1
15.16	46	365	2.00	90	33	390	1.50	90	6.6	345	0.30	79	2KJ3603 - ■■■■■■ - ■■ J1
13.75	51	355	2.10	90	36	390	1.60	90	7.3	345	0.33	80	2KJ3603 - ■■■■■■ - ■■ H1
12.94	54	345	2.20	90	39	385	1.80	90	7.7	350	0.35	80	2KJ3603 - ■■■■■■ - ■■ G1
11.41	61	330	2.40	90	44	370	1.90	90	8.8	355	0.40	82	2KJ3603 - ■■■■■■ - ■■ F1
9.90	71	315	2.60	90	51	350	2.10	90	10.1	360	0.46	83	2KJ3603 - ■■■■■■ - ■■ E1
9.00	78	260	2.30	92	56	255	1.70	91	11.1	235	0.33	84	2KJ3603 - ■■■■■■ - ■■ D1
8.47	83	260	2.50	92	59	260	1.80	91	11.8	240	0.35	84	2KJ3603 - ■■■■■■ - ■■ C1
7.47	94	260	2.80	92	67	260	2.00	92	13.4	240	0.40	85	2KJ3603 - ■■■■■■ - ■■ B1
6.48	108	260	3.20	92	77	260	2.30	92	15.4	245	0.46	87	2KJ3603 - ■■■■■■ - ■■ A1

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 1.5 \text{ kW}$

# SIMOGEAR geared motors

## Helical worm geared motors

### Efficiencies

#### Selection and ordering data

i	$n_{\text{mot}} = 2800 \text{ rpm}$				$n_{\text{mot}} = 1400 \text{ rpm}$				$n_{\text{mot}} = 900 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.69</b>													
<b>360.00</b>	7.8	575	0.65	73	3.9	680	0.40	69	2.5	645	0.27	63	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>M2</b>
<b>319.80</b>	8.8	570	0.72	73	4.4	680	0.45	70	2.8	655	0.30	65	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>L2</b>
<b>280.80</b>	10.0	560	0.81	73	5.0	680	0.50	71	3.2	660	0.33	66	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>K2</b>
<b>255.27</b>	11.0	555	0.88	73	5.5	680	0.55	72	3.5	665	0.36	67	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>J2</b>
<b>218.40</b>	12.8	530	0.97	74	6.4	655	0.60	73	4.1	675	0.42	70	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>H2</b>
<b>198.55</b>	14.1	510	1.00	73	7.1	635	0.65	73	4.5	680	0.46	70	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>G2</b>
<b>175.50</b>	16.0	485	1.10	73	8.0	610	0.70	74	5.1	685	0.51	72	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>F2</b>
<b>159.55</b>	17.5	470	1.20	73	8.8	590	0.74	74	5.6	670	0.54	72	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>E2</b>
<b>139.75</b>	20	440	1.30	73	10.0	550	0.79	74	6.4	630	0.58	73	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>D2</b>
<b>129.00</b>	22	425	1.30	74	10.9	535	0.83	74	7.0	610	0.61	73	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>C2</b>
<b>114.21</b>	25	405	1.40	73	12.3	510	0.89	74	7.9	585	0.66	74	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>B2</b>
<b>102.50</b>	27	555	1.80	87	13.7	645	1.10	86	8.8	625	0.69	84	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>A2</b>
<b>90.00</b>	31	555	2.10	87	15.6	665	1.30	86	10.0	650	0.81	84	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>X1</b>
<b>81.82</b>	34	545	2.20	87	17.1	680	1.40	87	11.0	775	1.10	85	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>W1</b>
<b>70.00</b>	40	515	2.50	87	20	650	1.60	87	12.9	680	1.10	86	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>V1</b>
<b>63.64</b>	44	500	2.70	87	22	630	1.70	87	14.1	720	1.20	86	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>U1</b>
<b>56.25</b>	50	480	2.90	87	25	605	1.80	87	16.0	695	1.30	87	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>T1</b>
<b>51.14</b>	55	455	3.00	87	27	575	1.90	87	17.6	660	1.40	87	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>S1</b>
<b>44.79</b>	63	430	3.30	87	31	545	2.00	87	20	630	1.50	87	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>R1</b>
<b>41.35</b>	68	420	3.40	87	34	525	2.20	87	22	610	1.60	87	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>Q1</b>
<b>36.61</b>	76	400	3.70	87	38	505	2.30	87	25	580	1.80	87	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>P1</b>
<b>30.00</b>	93	435	4.70	90	47	545	3.00	90	30	560	2.00	90	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>N1</b>
<b>26.28</b>	107	410	5.10	90	53	520	3.20	90	34	550	2.20	90	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>M1</b>
<b>24.26</b>	115	400	5.30	90	58	500	3.40	90	37	545	2.30	91	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>L1</b>
<b>21.48</b>	130	380	5.8*	90	65	480	3.60	90	42	540	2.60	91	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>K1</b>
<b>17.88</b>	157	355	6.5*	90	78	450	4.10	90	50	520	3.00	91	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>J1</b>
<b>15.88</b>	176	365	7.3*	92	88	365	3.70	92	57	365	2.40	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>H1</b>
<b>14.06</b>	199	360	8.2*	92	100	360	4.10	92	64	360	2.60	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>G1</b>
<b>11.70</b>	239	345	9.5*	92	120	365	5.00	92	77	365	3.20	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>F1</b>
<b>11.01</b>	254	325	9.5*	92	127	365	5.40	92	82	365	3.50	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>E1</b>
<b>9.87</b>	284	290	9.5*	92	142	365	6.0*	92	91	365	3.80	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>D1</b>
<b>8.40</b>	333	250	9.6*	91	167	370	7.1*	92	107	370	4.50	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>C1</b>
<b>7.20</b>	389	210	9.6*	91	194	365	8.2*	92	125	365	5.30	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>B1</b>
<b>6.20</b>	452	184	9.6*	91	226	365	9.4*	92	145	365	6.1*	92	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>A1</b>

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 1.5 \text{ kW}$

**Selection and ordering data**

i	$n_{\text{mot}} = 700 \text{ rpm}$				$n_{\text{mot}} = 500 \text{ rpm}$				$n_{\text{mot}} = 100 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.69</b>													
<b>360.00</b>	1.9	610	0.20	60	1.4	570	0.15	55	0.28	460	<0.06	45	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>M2</b>
<b>319.80</b>	2.2	620	0.23	61	1.6	575	0.17	57	0.31	460	<0.06	45	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>L2</b>
<b>280.80</b>	2.5	625	0.26	63	1.8	580	0.19	58	0.36	455	<0.06	45	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>K2</b>
<b>255.27</b>	2.7	635	0.28	64	2.0	590	0.21	59	0.39	455	<0.06	45	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>J2</b>
<b>218.40</b>	3.2	645	0.33	66	2.3	605	0.24	62	0.46	460	<0.06	46	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>H2</b>
<b>198.55</b>	3.5	650	0.35	68	2.5	610	0.25	63	0.50	455	<0.06	47	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>G2</b>
<b>175.50</b>	4.0	665	0.40	69	2.8	625	0.28	65	0.57	460	0.06	48	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>F2</b>
<b>159.55</b>	4.4	670	0.44	70	3.1	635	0.31	66	0.63	465	0.06	48	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>E2</b>
<b>139.75</b>	5.0	670	0.49	72	3.6	650	0.36	68	0.72	475	0.07	49	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>D2</b>
<b>129.00</b>	5.4	655	0.51	72	3.9	660	0.39	69	0.78	480	0.08	50	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>C2</b>
<b>114.21</b>	6.1	630	0.55	73	4.4	670	0.44	71	0.88	490	0.09	51	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>B2</b>
<b>102.50</b>	6.8	610	0.54	81	4.9	585	0.39	78	0.98	500	0.08	67	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>A2</b>
<b>90.00</b>	7.8	635	0.63	82	5.6	610	0.45	79	1.1	515	0.09	67	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>X1</b>
<b>81.82</b>	8.6	800	0.87	84	6.1	775	0.62	80	1.2	650	0.12	68	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>W1</b>
<b>70.00</b>	10.0	665	0.83	84	7.1	645	0.59	82	1.4	540	0.12	68	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>V1</b>
<b>63.64</b>	11.0	775	1.00	85	7.9	830	0.83	83	1.6	695	0.17	69	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>U1</b>
<b>56.25</b>	12.4	750	1.10	86	8.9	810	0.90	84	1.8	675	0.18	70	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>T1</b>
<b>51.14</b>	13.7	715	1.20	86	9.8	785	0.95	85	2.0	750	0.22	71	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>S1</b>
<b>44.79</b>	15.6	680	1.30	87	11.2	750	1.00	86	2.2	760	0.24	72	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>R1</b>
<b>41.35</b>	16.9	660	1.30	87	12.1	730	1.10	86	2.4	765	0.27	72	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>Q1</b>
<b>36.61</b>	19.1	630	1.50	87	13.7	700	1.20	87	2.7	770	0.30	73	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>P1</b>
<b>30.00</b>	23	560	1.50	90	16.7	555	1.10	89	3.3	480	0.22	77	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>N1</b>
<b>26.28</b>	27	550	1.70	90	19	545	1.20	90	3.8	480	0.24	78	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>M1</b>
<b>24.26</b>	29	545	1.80	90	21	540	1.30	90	4.1	475	0.26	79	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>L1</b>
<b>21.48</b>	33	540	2.10	91	23	540	1.40	90	4.7	475	0.30	80	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>K1</b>
<b>17.88</b>	39	545	2.50	91	28	545	1.80	91	5.6	490	0.35	82	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>J1</b>
<b>15.88</b>	44	365	1.80	92	31	360	1.30	91	6.3	330	0.26	83	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>H1</b>
<b>14.06</b>	50	360	2.10	92	36	355	1.50	92	7.1	330	0.29	84	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>G1</b>
<b>11.70</b>	60	365	2.50	92	43	365	1.80	92	8.5	340	0.36	85	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>F1</b>
<b>11.01</b>	64	365	2.70	92	45	365	1.90	92	9.1	340	0.38	86	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>E1</b>
<b>9.87</b>	71	365	3.00	92	51	365	2.10	92	10.1	345	0.43	86	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>D1</b>
<b>8.40</b>	83	370	3.50	92	60	370	2.50	92	11.9	350	0.50	87	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>C1</b>
<b>7.20</b>	97	365	4.10	92	69	365	2.90	92	13.9	350	0.59	88	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>B1</b>
<b>6.20</b>	113	365	4.70	92	81	365	3.40	92	16.1	355	0.67	89	<b>2KJ3604</b> - ■■■■■■ - ■■ <b>A1</b>

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Helical worm geared motors

### Efficiencies

#### Selection and ordering data

i	$n_{\text{mot}} = 2800 \text{ rpm}$				$n_{\text{mot}} = 1400 \text{ rpm}$				$n_{\text{mot}} = 900 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.89</b>													
<b>363.00</b>	7.7	1180	1.30	73	3.9	1460	0.83	72	2.5	1430	0.55	68	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>N2</b>
<b>329.73</b>	8.5	1180	1.40	73	4.2	1460	0.89	72	2.7	1440	0.59	69	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>M2</b>
<b>295.75</b>	9.5	1170	1.60	73	4.7	1460	0.99	73	3.0	1460	0.66	70	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>L2</b>
<b>265.91</b>	10.5	1170	1.80	73	5.3	1460	1.10	73	3.4	1470	0.74	71	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>K2</b>
<b>240.50</b>	11.6	1160	1.90	73	5.8	1450	1.20	73	3.7	1480	0.80	72	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>J2</b>
<b>222.00</b>	12.6	1120	2.00	73	6.3	1410	1.30	73	4.1	1490	0.89	72	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>H2</b>
<b>203.36</b>	13.8	1090	2.20	73	6.9	1370	1.40	73	4.4	1500	0.95	73	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>G2</b>
<b>170.62</b>	16.4	1030	2.40	73	8.2	1300	1.50	73	5.3	1490	1.10	73	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>F2</b>
<b>160.59</b>	17.4	1010	2.50	73	8.7	1270	1.60	73	5.6	1460	1.20	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>E2</b>
<b>147.33</b>	19	980	2.70	73	9.5	1230	1.70	74	6.1	1430	1.20	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>D2</b>
<b>128.70</b>	22	915	2.90	73	10.9	1150	1.80	73	7.0	1340	1.30	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>C2</b>
<b>115.23</b>	24	875	3.00	73	12.1	1100	1.90	74	7.8	1280	1.40	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>B2</b>
<b>100.75</b>	28	830	3.30	73	13.9	1040	2.10	74	8.9	1210	1.50	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>A2</b>
<b>86.48</b>	32	780	3.60	73	16.2	980	2.30	73	10.4	1140	1.70	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>X1</b>
<b>76.44</b>	37	740	4.00	73	18.3	935	2.40	73	11.8	1080	1.80	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>W1</b>
<b>65.00</b>	43	695	4.30	73	22	875	2.80	73	13.8	1010	2.00	74	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>V1</b>
<b>55.61</b>	50	1150	6.70	90	25	1450	4.20	91	16.2	1550	2.90	90	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>U1</b>
<b>50.00</b>	56	1130	7.40	90	28	1430	4.60	90	18.0	1560	3.30	90	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>T1</b>
<b>45.22</b>	62	1100	7.90	90	31	1380	5.00	91	19.9	1560	3.60	90	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>S1</b>
<b>41.74</b>	67	1070	8.30	90	34	1350	5.30	91	22	1560	4.00	91	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>R1</b>
<b>38.24</b>	73	1040	8.80	90	37	1310	5.60	91	24	1520	4.20	91	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>Q1</b>
<b>32.08</b>	87	985	10*	90	44	1240	6.30	91	28	1440	4.70	91	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>P1</b>
<b>30.20</b>	93	950	10.3*	90	46	1200	6.40	91	30	1390	4.80	91	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>N1</b>
<b>27.70</b>	101	920	10.8*	90	51	1160	6.90	91	32	1340	5.00	91	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>M1</b>
<b>25.03</b>	112	1080	13.7*	93	56	1090	6.90	93	36	1090	4.50	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>L1</b>
<b>21.00</b>	133	1000	15.1*	93	67	1080	8.20	93	43	1070	5.20	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>K1</b>
<b>19.76</b>	142	980	15.8*	93	71	1120	9.00	93	46	1120	5.80	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>J1</b>
<b>18.13</b>	154	950	16.6*	93	77	1120	9.7*	93	50	1120	6.30	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>H1</b>
<b>15.84</b>	177	865	17.3*	93	88	1140	11.3*	93	57	1140	7.30	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>G1</b>
<b>14.18</b>	197	770	17.3*	92	99	1090	12.2*	93	63	1150	8.20	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>F1</b>
<b>12.40</b>	226	675	17.3*	93	113	1040	13.3*	93	73	1140	9.5*	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>E1</b>
<b>10.64</b>	263	580	17.3*	92	132	985	14.7*	93	85	1140	10.9*	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>D1</b>
<b>9.41</b>	298	510	17.4*	92	149	940	15.9*	93	96	1090	11.8*	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>C1</b>
<b>8.00</b>	350	435	17.4*	92	175	870	17.3*	93	112	1030	13.1*	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>B1</b>
<b>6.86</b>	408	370	17.4*	92	204	745	17.3*	93	131	980	14.5*	93	<b>2KJ3605</b> - ■■■■■■ - ■■ <b>A1</b>

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 9.2 \text{ kW}$

## Selection and ordering data

i	$n_{\text{mot}} = 700 \text{ rpm}$				$n_{\text{mot}} = 500 \text{ rpm}$				$n_{\text{mot}} = 100 \text{ rpm}$				Article No. (Article No. supplement, see below)
	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{\text{mot}}$ kW	$\eta$ %	
<b>C.89</b>													
<b>363.00</b>	1.9	1360	0.42	64	1.4	1260	0.31	60	0.28	955	0.06	45	<b>2KJ3605 - ■■■■■■ - ■■ N2</b>
<b>329.73</b>	2.1	1380	0.46	66	1.5	1280	0.33	61	0.30	960	0.07	45	<b>2KJ3605 - ■■■■■■ - ■■ M2</b>
<b>295.75</b>	2.4	1400	0.53	67	1.7	1310	0.37	62	0.34	965	0.08	45	<b>2KJ3605 - ■■■■■■ - ■■ L2</b>
<b>265.91</b>	2.6	1420	0.57	68	1.9	1330	0.42	64	0.38	975	0.08	46	<b>2KJ3605 - ■■■■■■ - ■■ K2</b>
<b>240.50</b>	2.9	1440	0.63	70	2.1	1360	0.46	66	0.42	985	0.09	47	<b>2KJ3605 - ■■■■■■ - ■■ J2</b>
<b>222.00</b>	3.2	1450	0.69	70	2.3	1380	0.50	67	0.45	995	0.10	47	<b>2KJ3605 - ■■■■■■ - ■■ H2</b>
<b>203.36</b>	3.4	1470	0.74	71	2.5	1400	0.54	68	0.49	1000	0.11	48	<b>2KJ3605 - ■■■■■■ - ■■ G2</b>
<b>170.62</b>	4.1	1490	0.89	72	2.9	1440	0.63	70	0.59	1030	0.13	50	<b>2KJ3605 - ■■■■■■ - ■■ F2</b>
<b>160.59</b>	4.4	1490	0.95	73	3.1	1450	0.67	71	0.62	1040	0.14	50	<b>2KJ3605 - ■■■■■■ - ■■ E2</b>
<b>147.33</b>	4.8	1500	1.00	73	3.4	1460	0.73	71	0.68	1060	0.15	51	<b>2KJ3605 - ■■■■■■ - ■■ D2</b>
<b>128.70</b>	5.4	1450	1.10	74	3.9	1480	0.84	72	0.78	1090	0.17	53	<b>2KJ3605 - ■■■■■■ - ■■ C2</b>
<b>115.23</b>	6.1	1390	1.20	74	4.3	1490	0.92	73	0.87	1110	0.19	54	<b>2KJ3605 - ■■■■■■ - ■■ B2</b>
<b>100.75</b>	6.9	1310	1.30	74	5.0	1460	1.00	74	0.99	1150	0.21	56	<b>2KJ3605 - ■■■■■■ - ■■ A2</b>
<b>86.48</b>	8.1	1230	1.40	74	5.8	1380	1.10	74	1.2	1190	0.26	58	<b>2KJ3605 - ■■■■■■ - ■■ X1</b>
<b>76.44</b>	9.2	1170	1.50	74	6.5	1310	1.20	74	1.3	1220	0.28	60	<b>2KJ3605 - ■■■■■■ - ■■ W1</b>
<b>65.00</b>	10.8	1100	1.70	74	7.7	1230	1.30	74	1.5	1270	0.32	62	<b>2KJ3605 - ■■■■■■ - ■■ V1</b>
<b>55.61</b>	12.6	1540	2.30	90	9.0	1510	1.60	88	1.8	1290	0.33	75	<b>2KJ3605 - ■■■■■■ - ■■ U1</b>
<b>50.00</b>	14.0	1540	2.50	90	10.0	1530	1.80	88	2.0	1430	0.40	75	<b>2KJ3605 - ■■■■■■ - ■■ T1</b>
<b>45.22</b>	15.5	1550	2.80	90	11.1	1530	2.00	89	2.2	1430	0.43	76	<b>2KJ3605 - ■■■■■■ - ■■ S1</b>
<b>41.74</b>	16.8	1550	3.00	90	12.0	1540	2.20	89	2.4	1450	0.48	77	<b>2KJ3605 - ■■■■■■ - ■■ R1</b>
<b>38.24</b>	18.3	1560	3.30	90	13.1	1540	2.40	90	2.6	1450	0.51	77	<b>2KJ3605 - ■■■■■■ - ■■ Q1</b>
<b>32.08</b>	22	1560	4.00	91	15.6	1550	2.80	90	3.1	1390	0.57	79	<b>2KJ3605 - ■■■■■■ - ■■ P1</b>
<b>30.20</b>	23	1510	4.00	91	16.6	1550	3.00	90	3.3	1460	0.64	79	<b>2KJ3605 - ■■■■■■ - ■■ N1</b>
<b>27.70</b>	25	1460	4.20	91	18.1	1560	3.30	91	3.6	1470	0.69	80	<b>2KJ3605 - ■■■■■■ - ■■ M1</b>
<b>25.03</b>	28	1090	3.50	93	20	1080	2.50	92	4.0	990	0.50	84	<b>2KJ3605 - ■■■■■■ - ■■ L1</b>
<b>21.00</b>	33	1070	4.00	93	24	1070	2.90	92	4.8	985	0.59	85	<b>2KJ3605 - ■■■■■■ - ■■ K1</b>
<b>19.76</b>	35	1120	4.50	93	25	1120	3.20	92	5.1	1030	0.65	85	<b>2KJ3605 - ■■■■■■ - ■■ J1</b>
<b>18.13</b>	39	1110	4.90	93	28	1110	3.50	92	5.5	1030	0.70	85	<b>2KJ3605 - ■■■■■■ - ■■ H1</b>
<b>15.84</b>	44	1140	5.70	93	32	1130	4.10	93	6.3	1050	0.81	86	<b>2KJ3605 - ■■■■■■ - ■■ G1</b>
<b>14.18</b>	49	1150	6.40	93	35	1140	4.50	93	7.1	1070	0.92	87	<b>2KJ3605 - ■■■■■■ - ■■ F1</b>
<b>12.40</b>	56	1140	7.30	93	40	1140	5.20	93	8.1	1080	1.00	88	<b>2KJ3605 - ■■■■■■ - ■■ E1</b>
<b>10.64</b>	66	1150	8.50	93	47	1140	6.10	93	9.4	1090	1.20	88	<b>2KJ3605 - ■■■■■■ - ■■ D1</b>
<b>9.41</b>	74	1120	9.4*	93	53	1120	6.70	93	10.6	1070	1.30	89	<b>2KJ3605 - ■■■■■■ - ■■ C1</b>
<b>8.00</b>	88	1120	11.2*	93	62	1130	7.90	93	12.5	1090	1.60	90	<b>2KJ3605 - ■■■■■■ - ■■ B1</b>
<b>6.86</b>	102	1060	12.3*	93	73	1110	9.20	93	14.6	1090	1.80	91	<b>2KJ3605 - ■■■■■■ - ■■ A1</b>

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

\*  $P_{\text{mot max}} = 9.2 \text{ kW}$

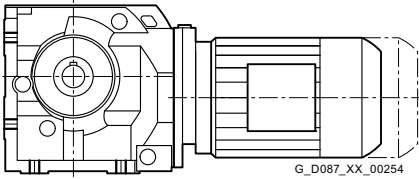
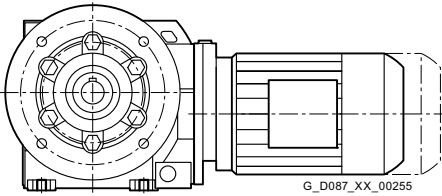
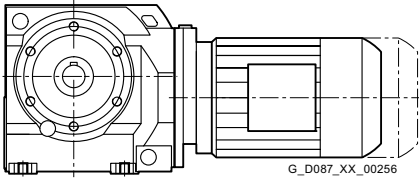
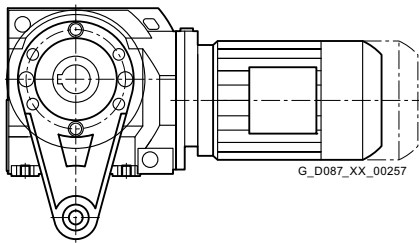
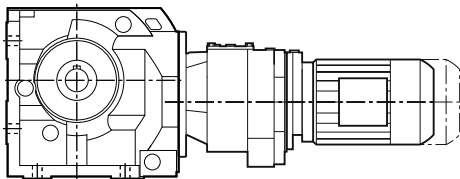
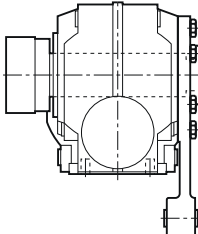
## SIMOGEAR geared motors

### Helical worm geared motors

#### Dimensional drawings

##### Overview

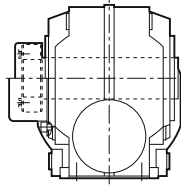
Notes on the dimensional drawings are provided in chapter [Introduction on page 1/24](#).

Design	Frame size	Dimensional drawing, see page
<b>Helical worm geared motor C</b>		
<i>Foot-mounted design</i>		
	C..29	6/40
	C..39A	6/44
	C..49	6/48
	C..69	6/52
	C..89	6/56
<i>Flange-mounted design</i>		
	C.F.29	6/41
	C.F.39A	6/45
	C.F.49	6/49
	C.F.69	6/53
	C.F.89	6/57
<i>Housing flange design</i>		
	C.Z.29	6/42
	C.Z.39A	6/46
	C.Z.49	6/50
	C.Z.69	6/54
	C.Z.89	6/58
<i>Shaft-mounted design</i>		
	CAD.29	6/43
	CAD.39A	6/47
	CAD.49	6/51
	CAD.69	6/55
	CAD.89	6/59
<b>Helical worm tandem geared motors</b>		
	C.29-Z/D19 ... C.89-Z/D39	6/60
<b>Additional versions and options</b>		
<i>SIMOLOC assembly system</i>		
	CADR.29 ... CADR.89	6/61



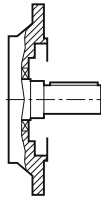
**Overview**

Design	Frame size	Dimensional drawing, see page
<b>Additional versions and options</b>		
<i>Protective covers</i>		



CA.29 ... CA.89  
 CA.S29 ... CA.S89  
 CADR29 ... CADR89

6/62

**Inner contour of the flange-mounted design**


CF29 ... CF89  
 CAF.29 ... CAF.89

6/63

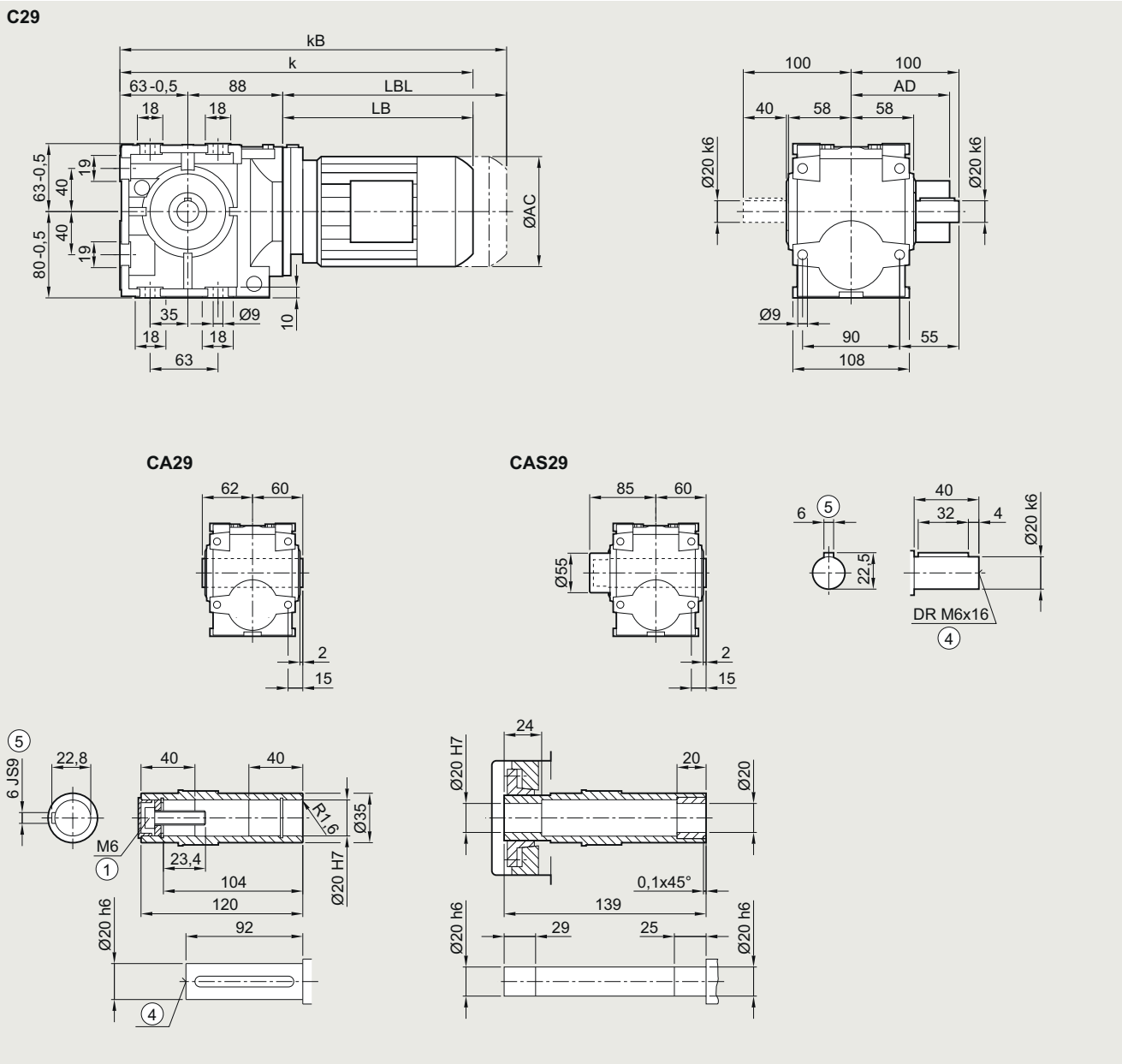
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C..29 in a foot-mounted design

C030, CA030, CAS030



6

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	371.0	377.0	396.0	436.0	441.0	476.0	502.5	542.5
kB	389.5	415.5	432.0	451.0	491.0	501.0	536.0	572.5	612.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5

① ISO 4014

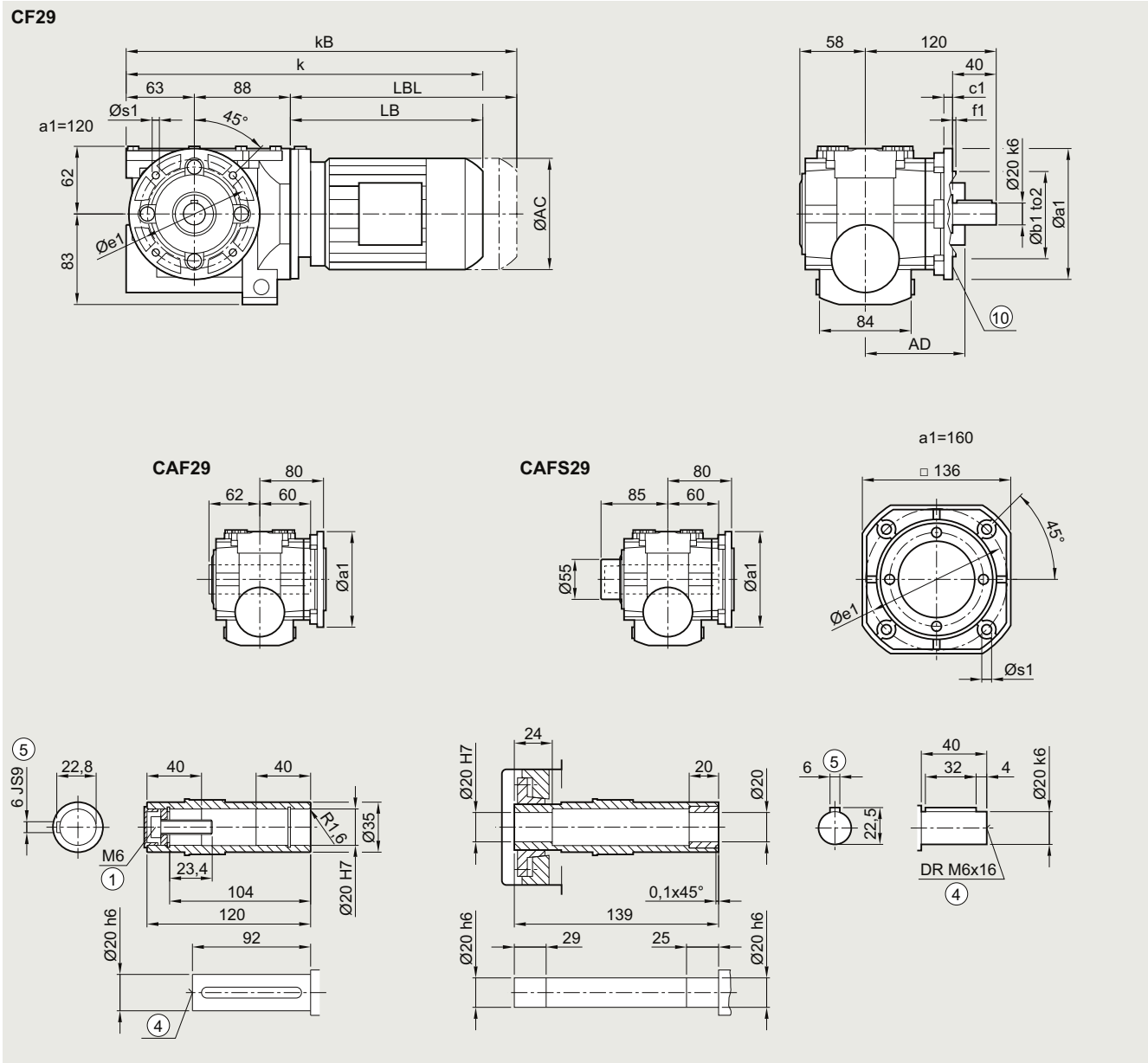
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox C.F.29 in a flange-mounted design**

**CF030, CAF030, CAFS030**



Flange	a1	b1	c1	f1	e1	s1	to2
	120	80	8	3.0	100	6.6	j6
	160	110	9	3.5	130	9.0	j6

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	371.0	377.0	396.0	436.0	441.0	476.0	502.5	542.5
kB	389.5	415.5	432.0	451.0	491.0	501.0	536.0	572.5	612.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

⑩ For inner contour, see page 6/63.

# SIMOGEAR geared motors

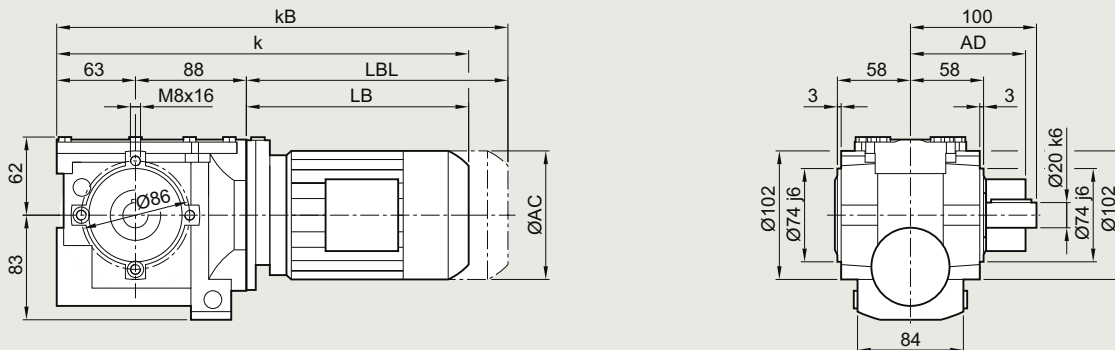
Helical worm geared motors

## Dimensional drawings

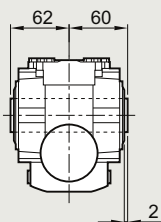
### Gearbox C.Z.29 in a housing flange design

CZ030, CAZ030, CAZS030

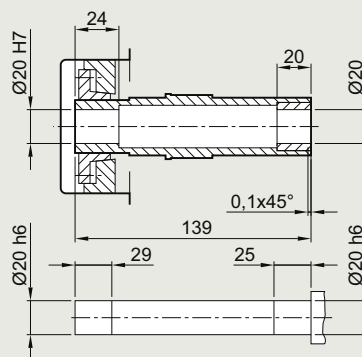
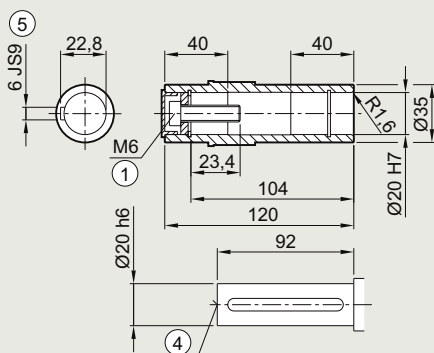
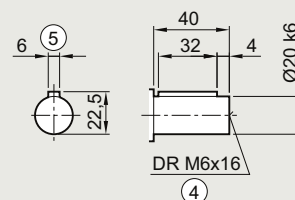
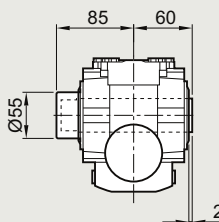
CZ29



CAZ29



CAZS29



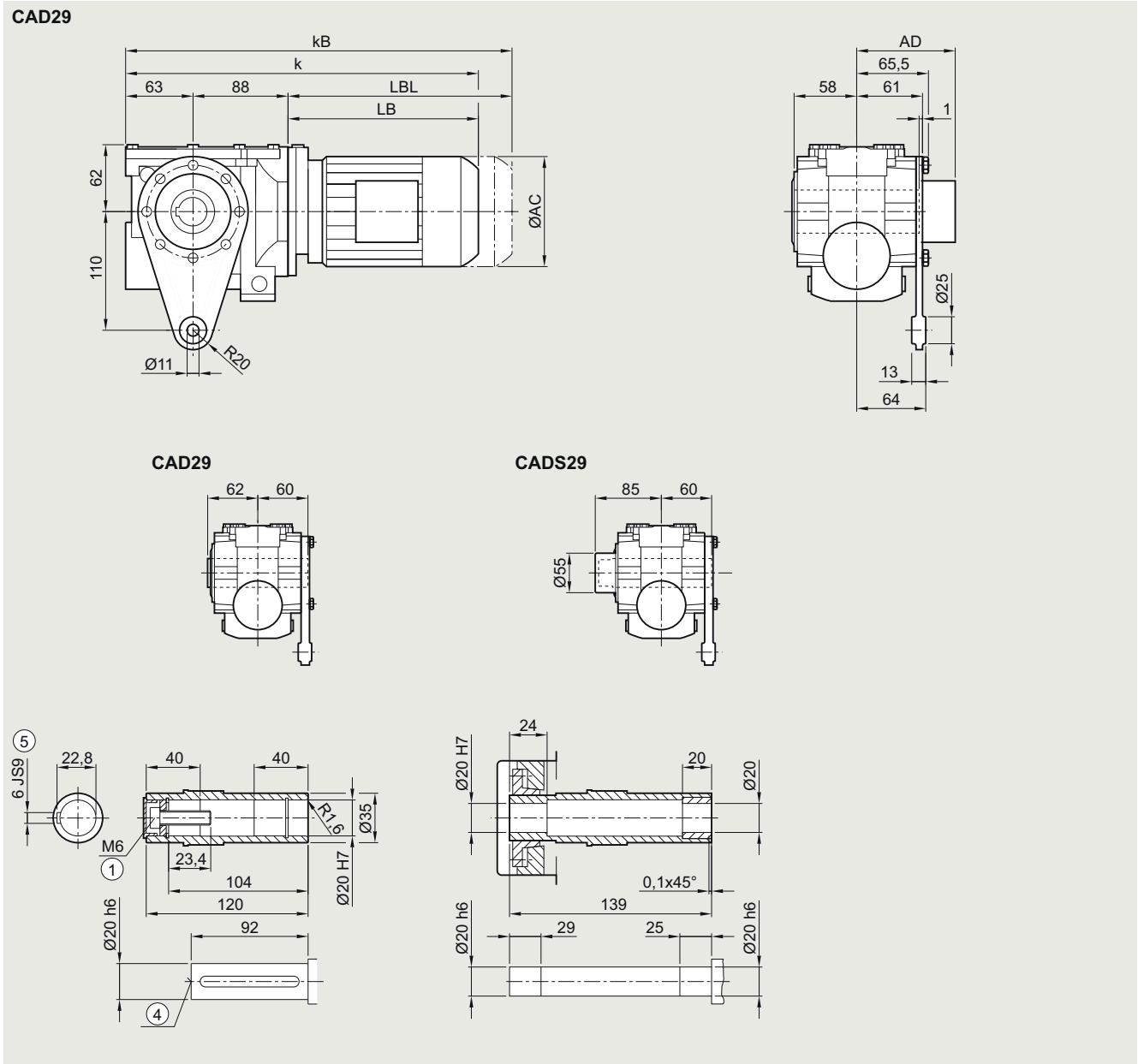
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	371.0	377.0	396.0	436.0	441.0	476.0	502.5	542.5
kB	389.5	415.5	432.0	451.0	491.0	501.0	536.0	572.5	612.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox CAD.29 in a shaft-mounted design**
**CAD030, CADS030**


Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	371.0	377.0	396.0	436.0	441.0	476.0	502.5	542.5
kB	389.5	415.5	432.0	451.0	491.0	501.0	536.0	572.5	612.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

1) AD depends on the motor options, for other dimensions, see page 9/46.

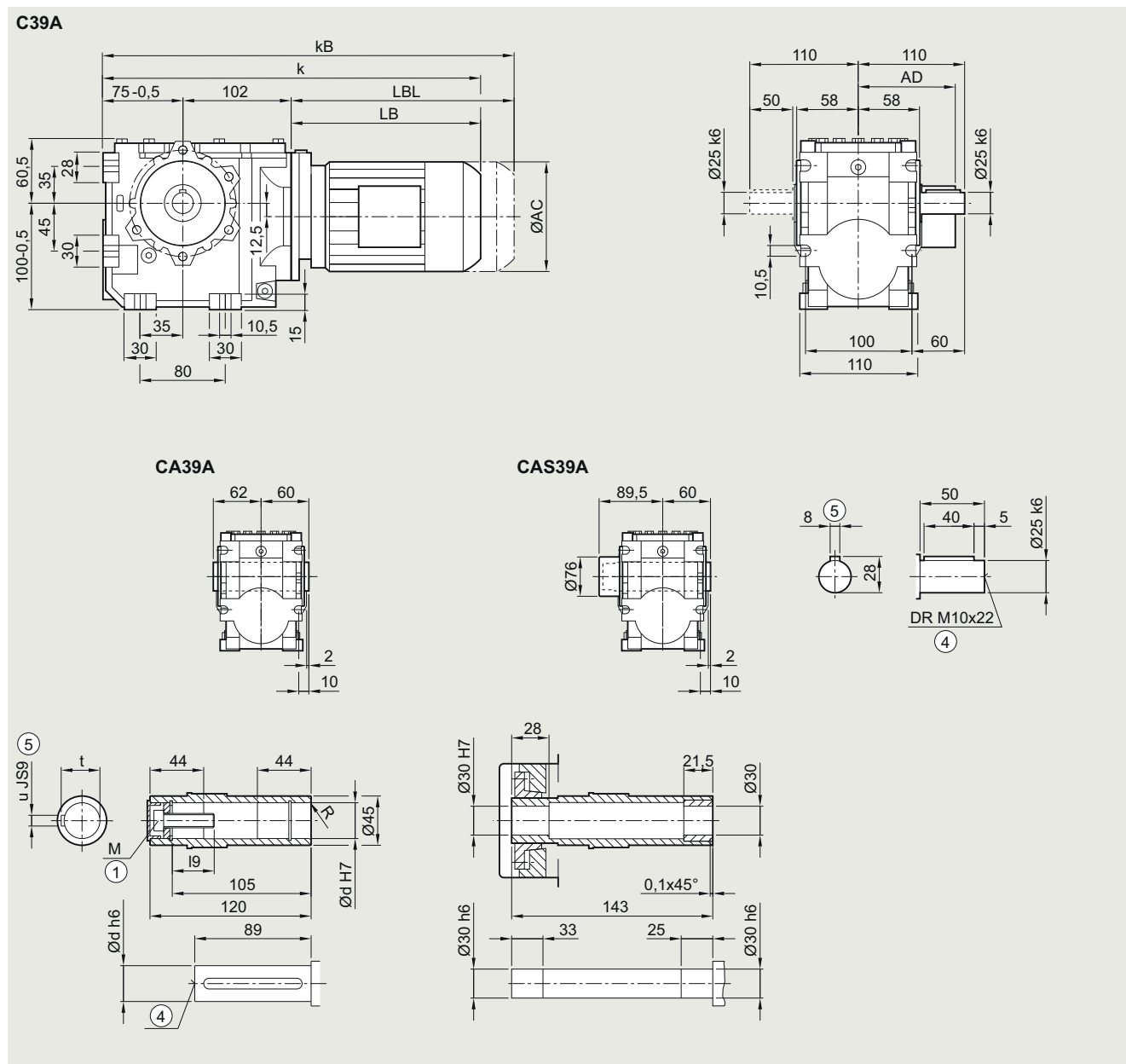
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C..39A in a foot-mounted design

C031, CA031, CAS031



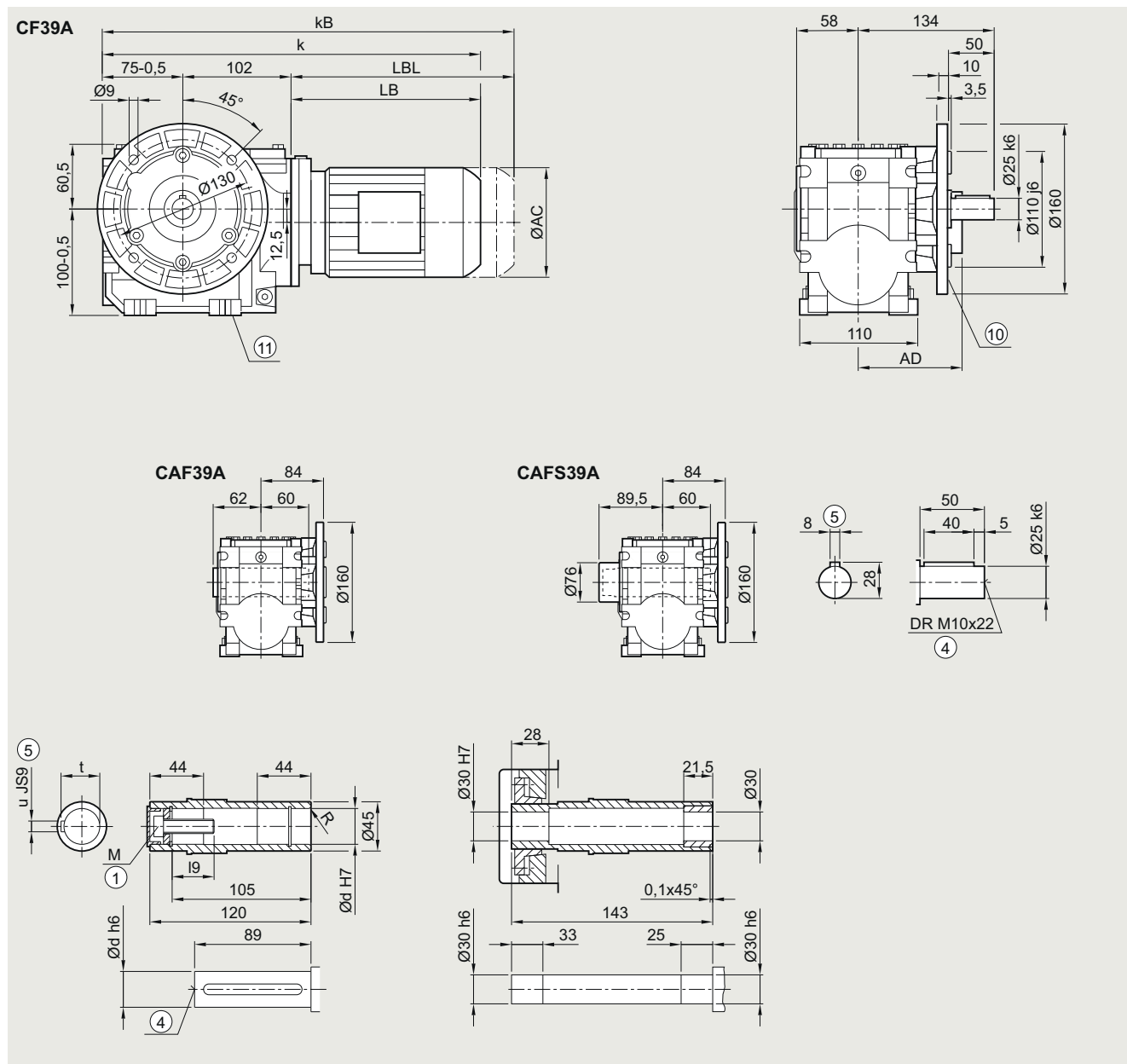
Shaft	d	I9	M	R	t	u					
	25	32.6	M10	1.6	28.3	8					
	30	32.6	M10	3.0	33.3	8					
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	371.0	397.0	403.0	422.0	462.0	467.0	502.0	528.5	568.5	585.0	620.0
kB	415.5	441.5	458.0	477.0	517.0	527.0	562.0	598.5	638.5	663.5	698.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox C.F.39A in a flange-mounted design**
**CF031, CAF031, CAFS031**


Shaft	d	l9	M	R	t	u					
	25	32.6	M10	1.6	28.3	8					
	30	32.6	M10	3.0	33.3	8					
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	371.0	397.0	403.0	422.0	462.0	467.0	502.0	528.5	568.5	585.0	620.0
kB	415.5	441.5	458.0	477.0	517.0	527.0	562.0	598.5	638.5	663.5	698.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

⑧ Use bores only for foot-mounted design

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 6/63

1) AD depends on the motor options, for other dimensions, see page 9/46.

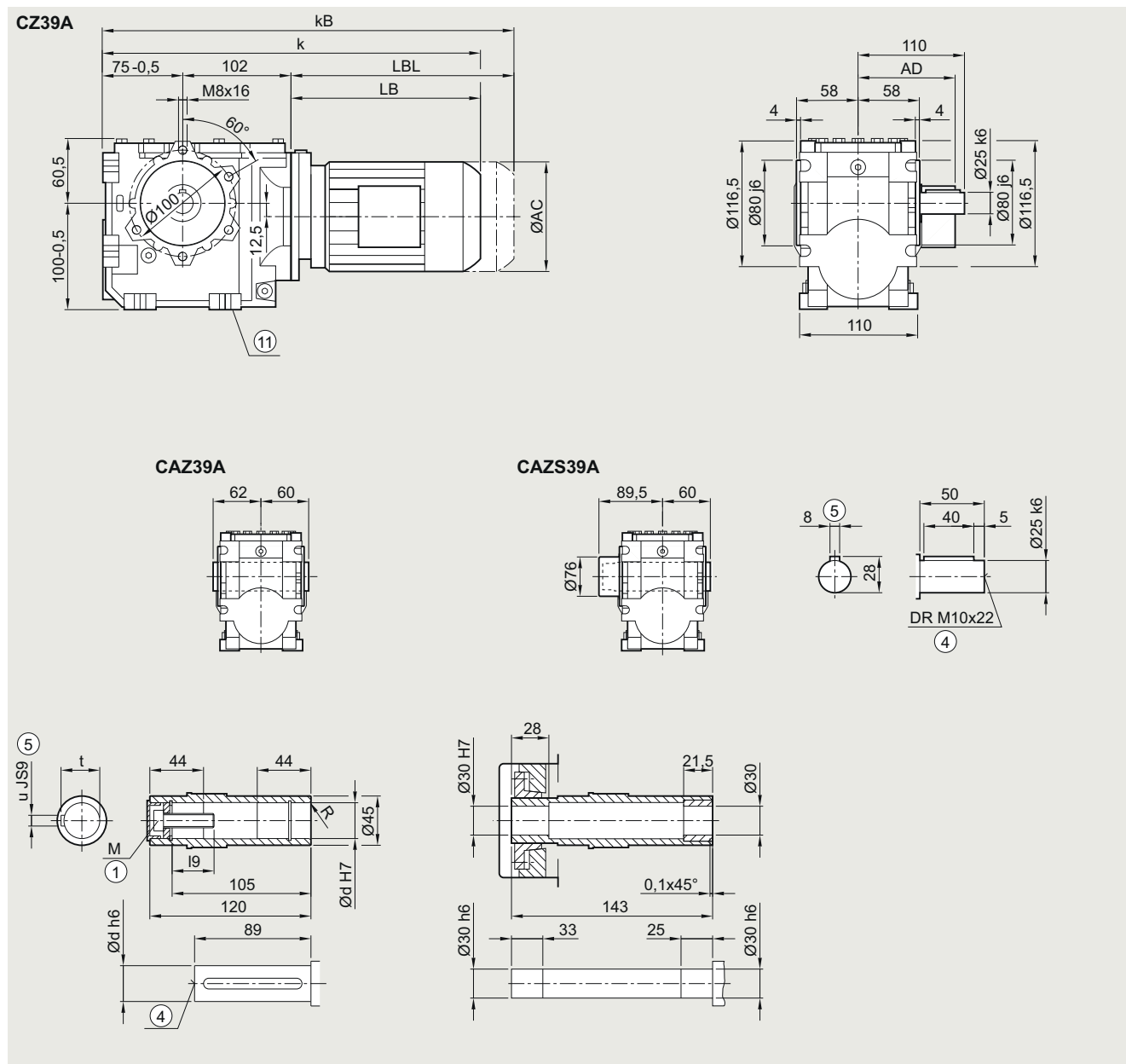
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C.Z.39A in a housing flange design

CZ031, CAZ031, CAZS031



Shaft	d	I9	M	R	t	u					
	25	32.6	M10	1.6	28.3	8					
	30	32.6	M10	3.0	33.3	8					
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	371.0	397.0	403.0	422.0	462.0	467.0	502.0	528.5	568.5	585.0	620.0
kB	415.5	441.5	458.0	477.0	517.0	527.0	562.0	598.5	638.5	663.5	698.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

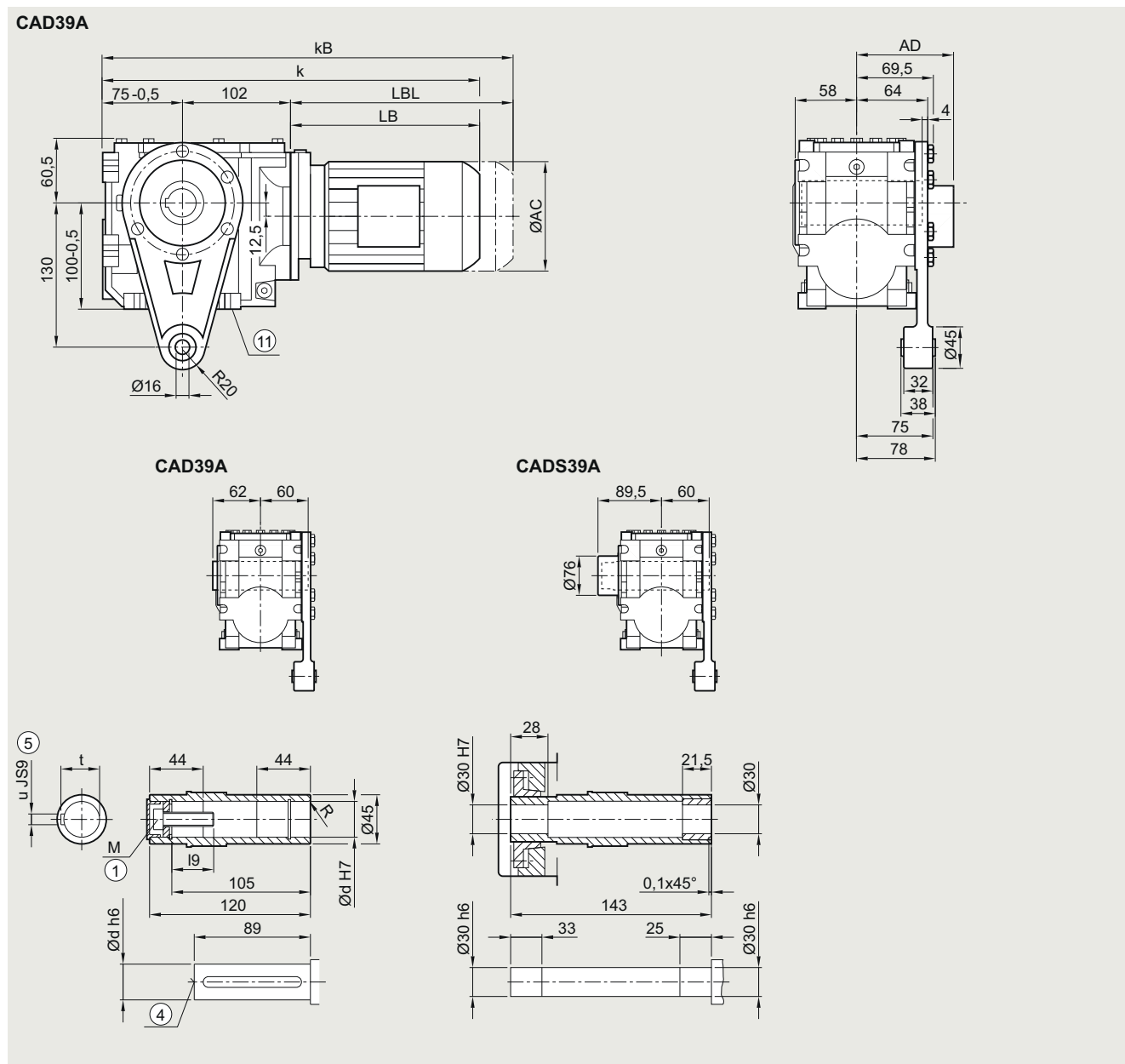
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1 ⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox CAD.39A in a shaft-mounted design**
**CAD031, CADS031**


Shaft	d	l9	M	R	t	u					
	25	32.6	M10	1.6	28.3	8					
	30	32.6	M10	3.0	33.3	8					
Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	371.0	397.0	403.0	422.0	462.0	467.0	502.0	528.5	568.5	585.0	620.0
kB	415.5	441.5	458.0	477.0	517.0	527.0	562.0	598.5	638.5	663.5	698.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1 ⑥ Use bores only for foot-mounted design

1) AD depends on the motor options, for other dimensions, see page 9/46.

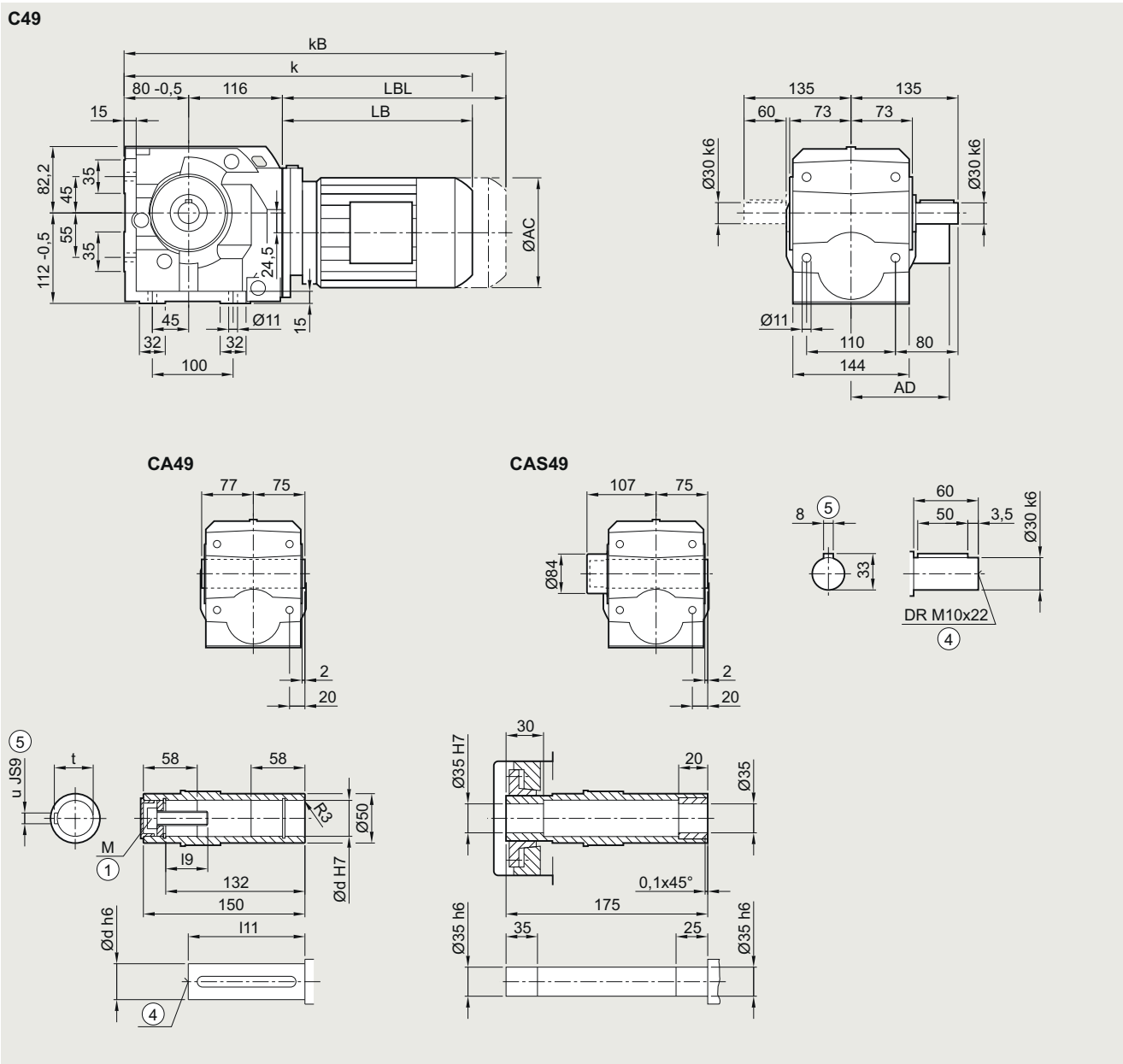
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C..49 in a foot-mounted design

C030, CA030, CAS030



Shaft	d	l9	l11	M	t	u							
	30	32.6	114	M10	33.3	8							
	35	42	116	M12	38.3	10							
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	406.5	412.5	431.5	471.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
kB	425.0	451.0	467.5	486.5	526.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014

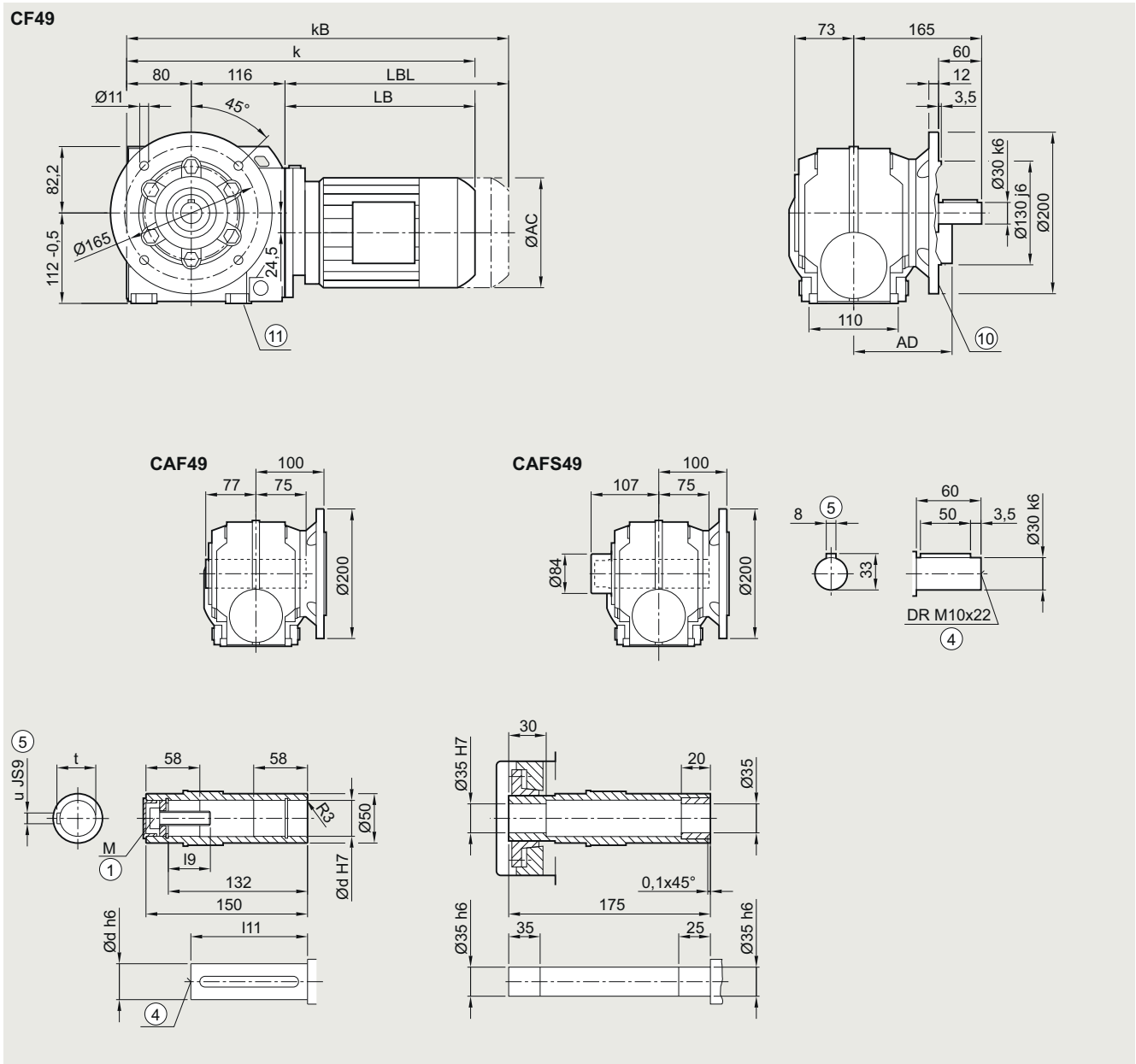
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox C.F.49 in a flange-mounted design**

**CF030, CAF030, CAFS030**



**6**

Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	406.5	412.5	431.5	471.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
kB	425.0	451.0	467.5	486.5	526.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 6/63

⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

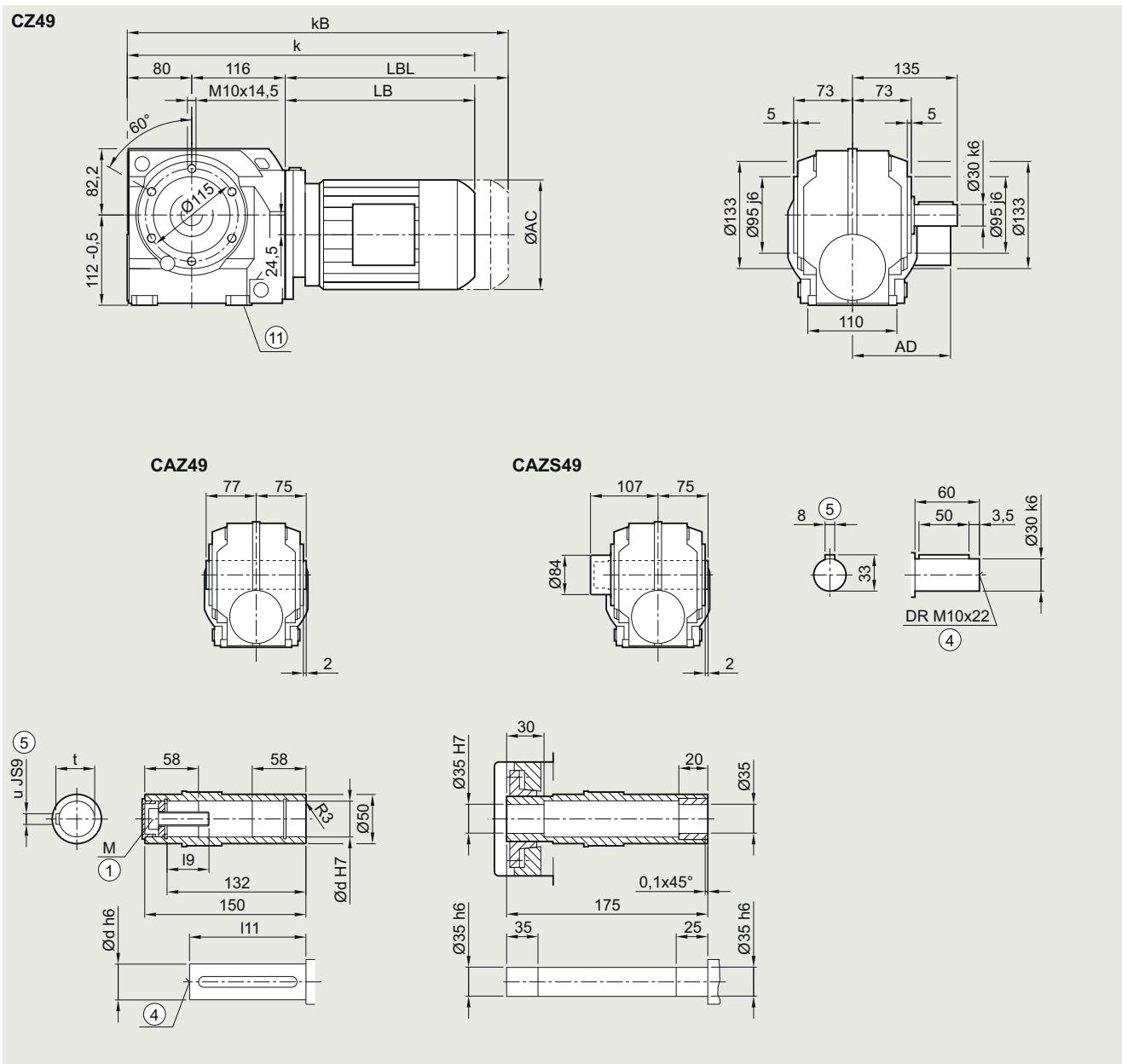
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C.Z.49 in a housing flange design

CZ030, CAZ030, CAZS030



Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

Motor	LE 63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	406.5	412.5	431.5	471.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
kB	425.0	451.0	467.5	486.5	526.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014

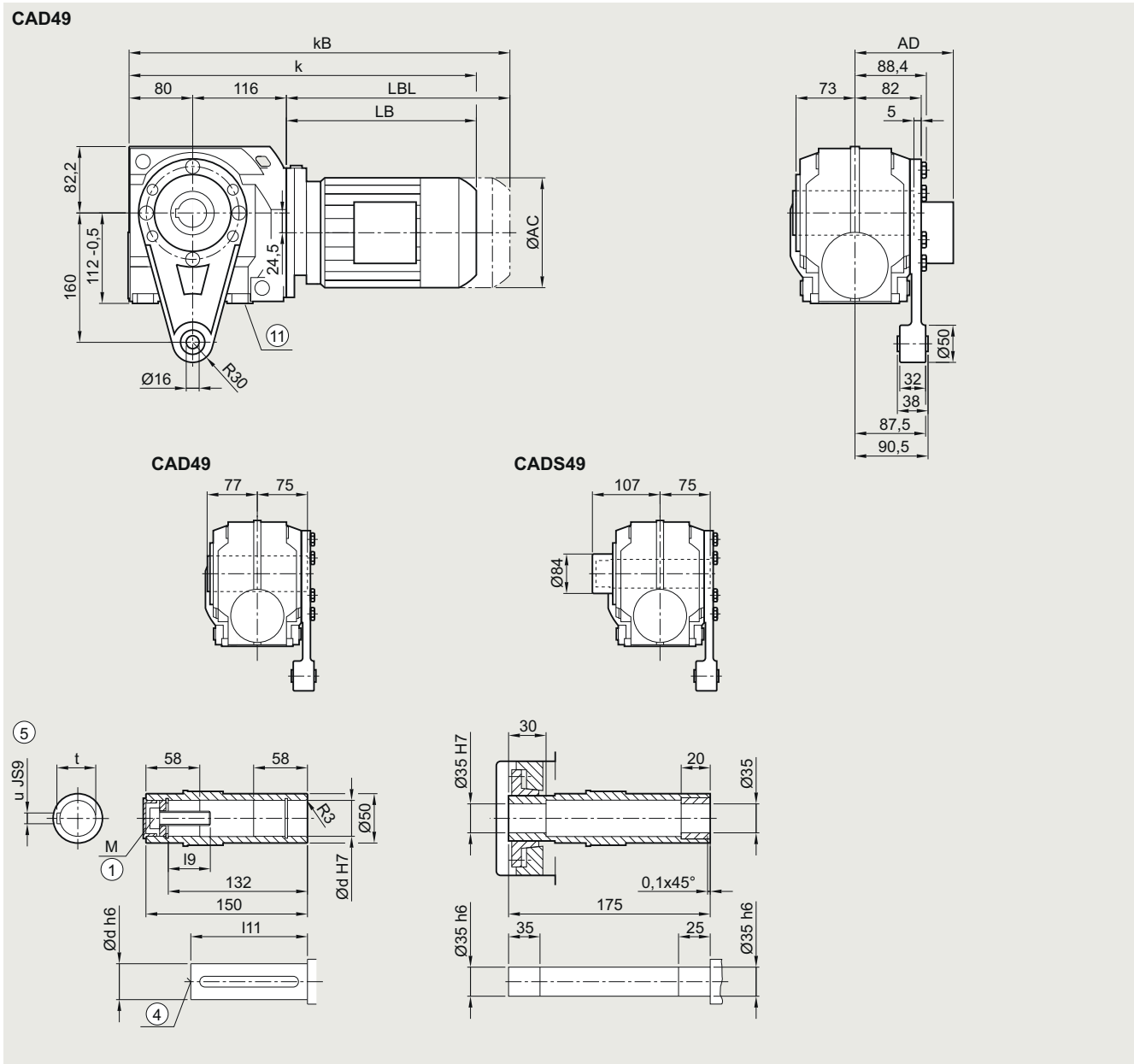
④ DIN 332

⑤ Feather key/keyway DIN 6885-1 ⑥ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox CAD.49 in a shaft-mounted design**

**CAD030, CADS030**



Shaft	d	I9	I11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z
	63												
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	406.5	412.5	431.5	471.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
kB	425.0	451.0	467.5	486.5	526.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

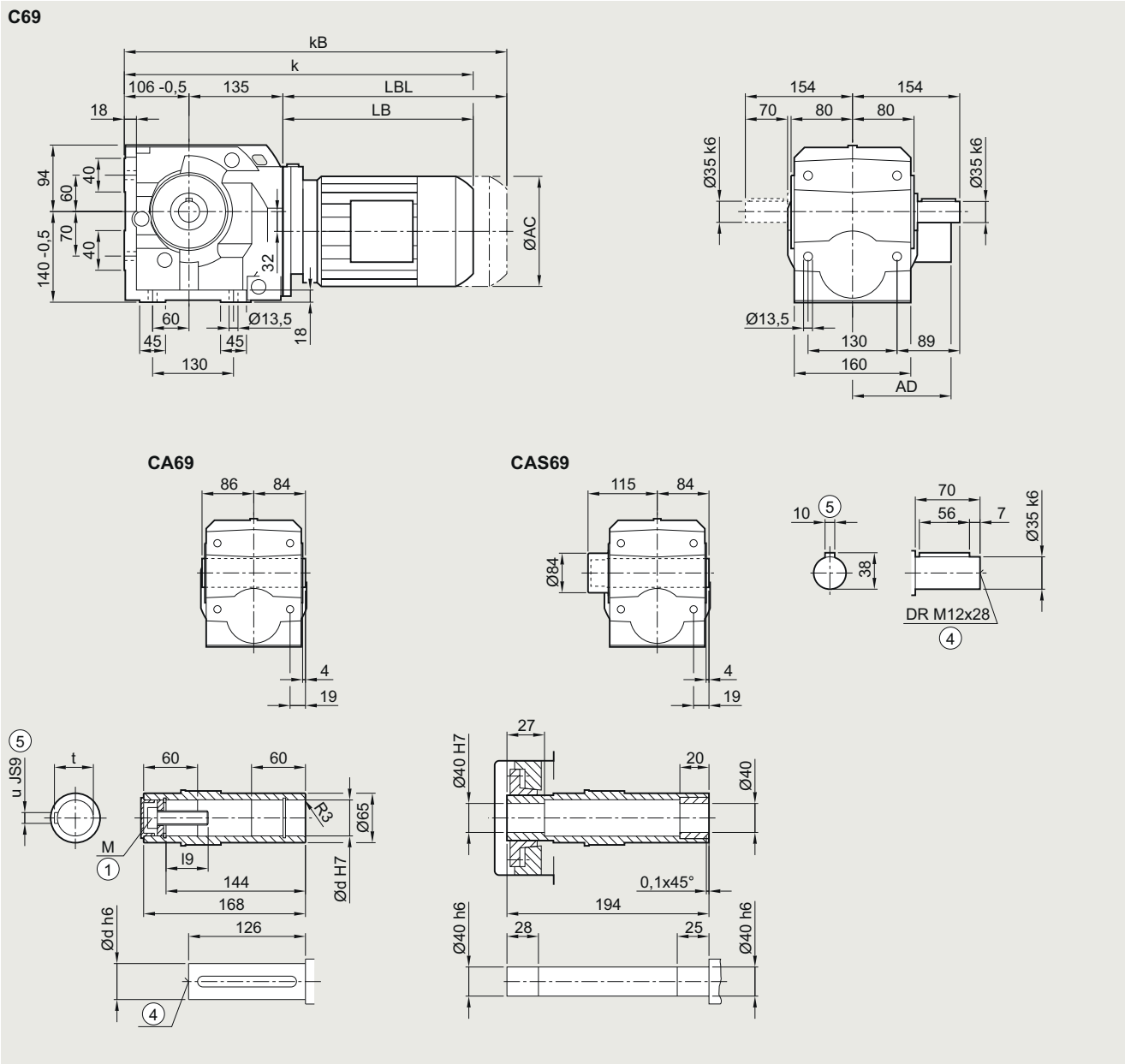
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C..69 in a foot-mounted design

C030, CA030, CAS030



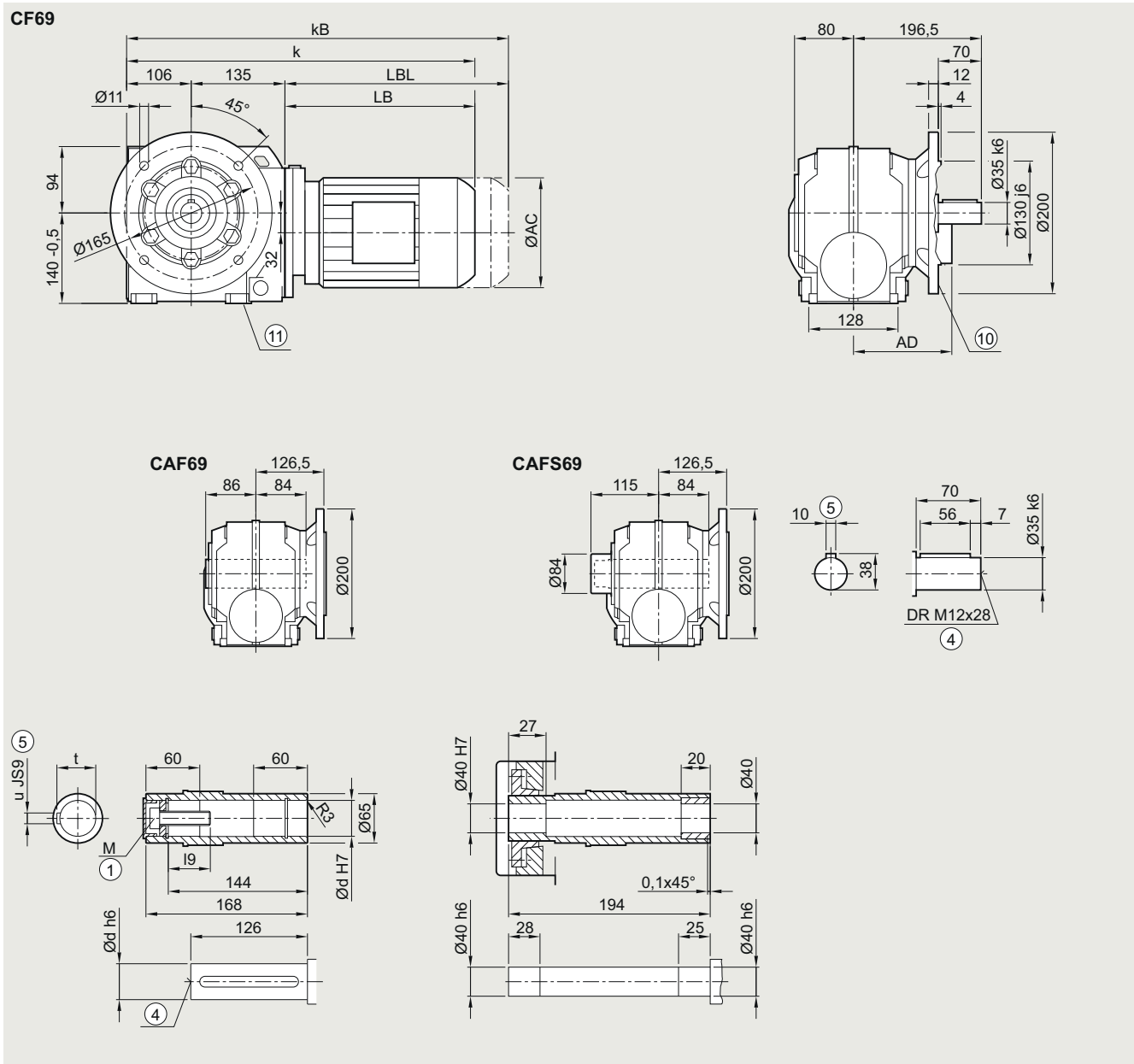
Shaft	d	i9	M	t	u										
	40	47.75	M16	43.3	12										
	45	48.75	M16	48.8	14										
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	425.5	451.5	457.5	476.5	516.5	521.5	556.5	583.0	623.0	639.5	674.5	649.5	684.0	702.5	752.5
kB	470.0	496.0	512.5	531.5	571.5	581.5	616.5	653.0	693.0	718.0	753.0	722.5	757.0	807.0	857.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox C.F.69 in a flange-mounted design**
**CF030, CAF030, CAFS030**


Shaft	d	i9	M	t	u										
	40	47.75	M16	43.3	12										
	45	48.75	M16	48.8	14										
Motor	LE	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	425.5	451.5	457.5	476.5	516.5	521.5	556.5	583.0	623.0	639.5	674.5	649.5	684.0	702.5	752.5
k <sub>B</sub>	470.0	496.0	512.5	531.5	571.5	581.5	616.5	653.0	693.0	718.0	753.0	722.5	757.0	807.0	857.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 6/63

⑩ Use bores only for foot-mounted design

1) AD depends on the motor options, for other dimensions, see page 9/46.

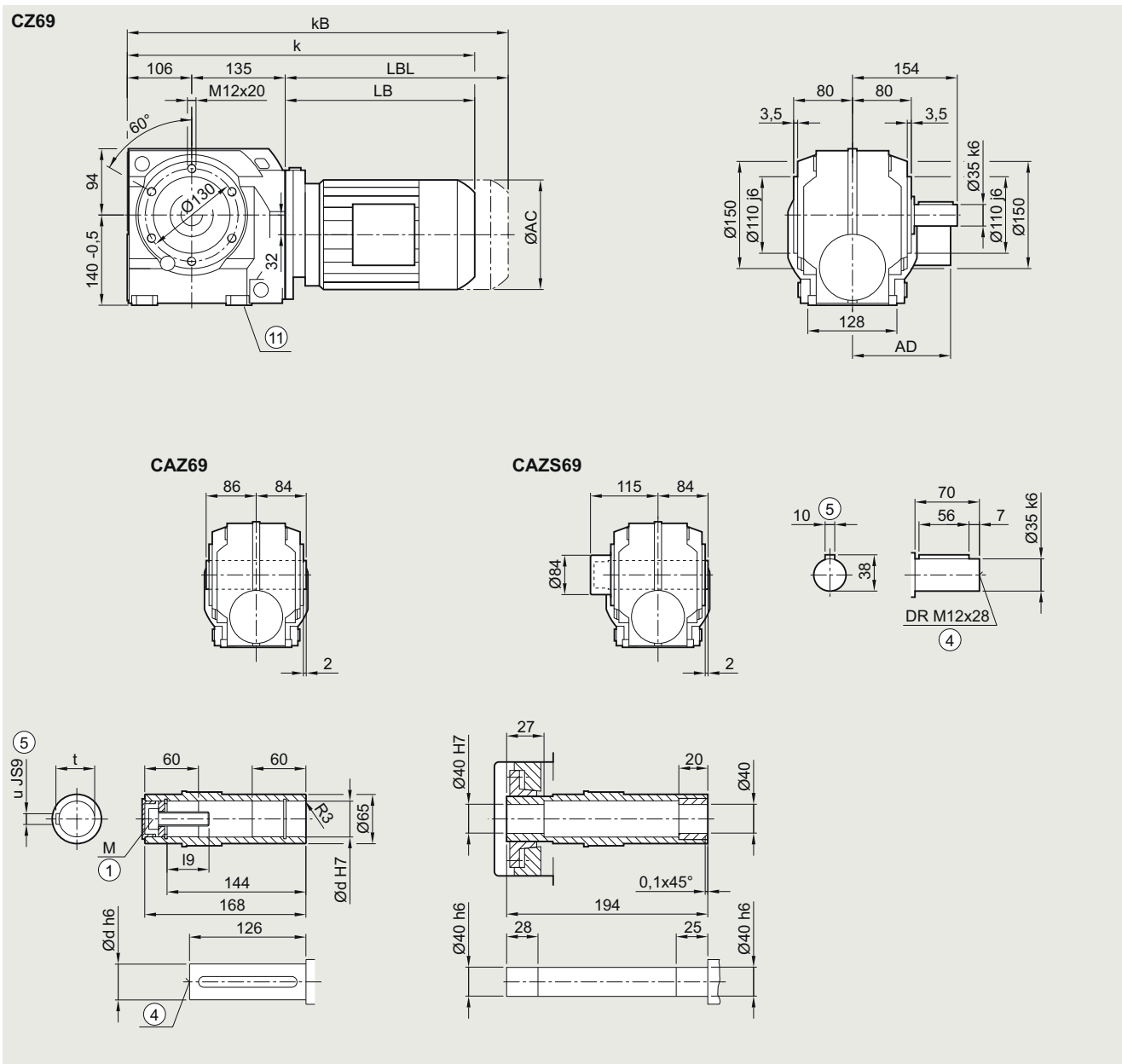
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C.Z.69 in a housing flange design

CZ030, CAZ030, CAZS030



Shaft	d	i9	M	t	u
	40	47.75	M16	43.3	12
	45	48.75	M16	48.8	14

Motor	LE														
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	425.5	451.5	457.5	476.5	516.5	521.5	556.5	583.0	623.0	639.5	674.5	649.5	684.0	702.5	752.5
kB	470.0	496.0	512.5	531.5	571.5	581.5	616.5	653.0	693.0	718.0	753.0	722.5	757.0	807.0	857.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

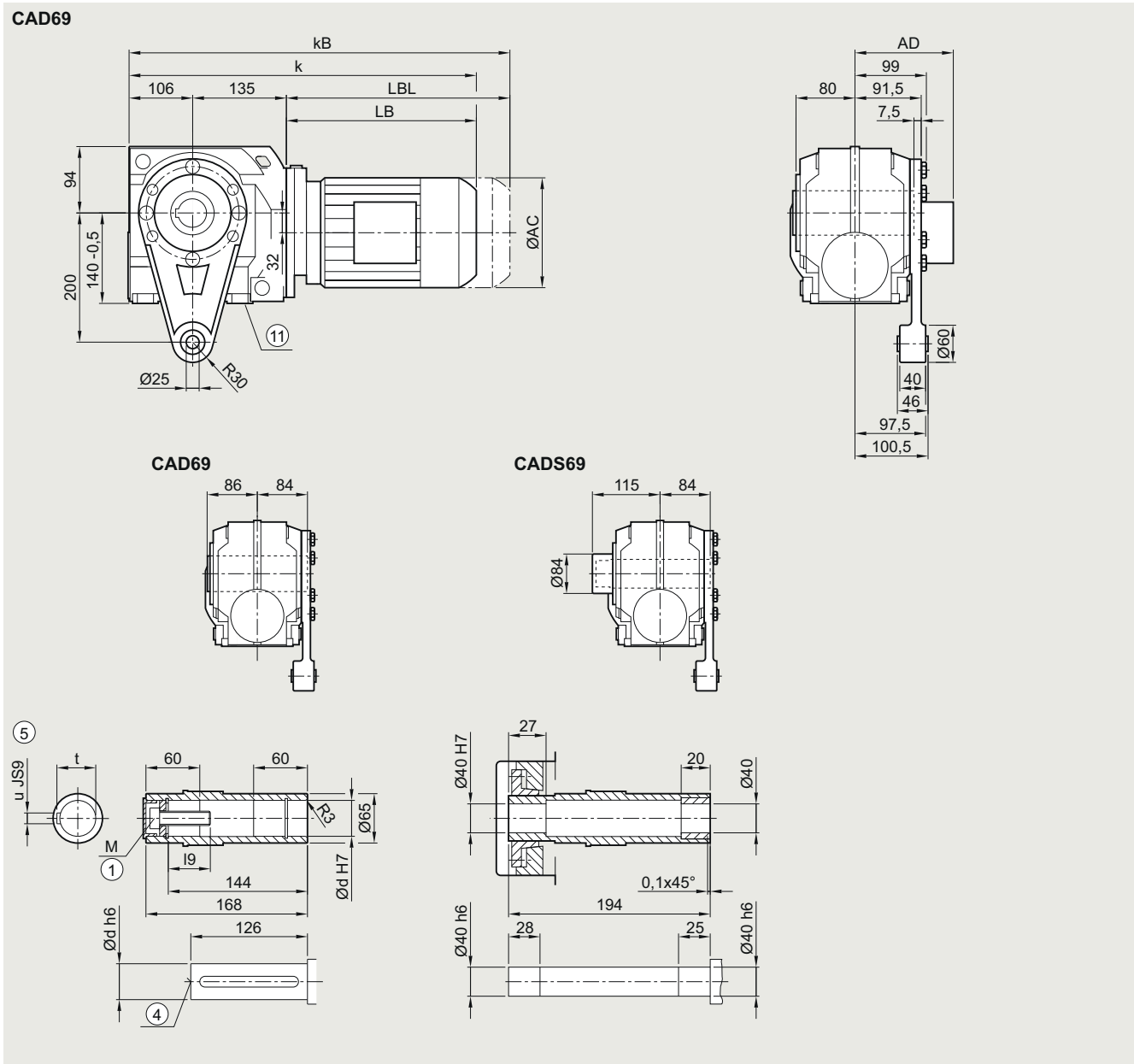
⑥ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.



**Gearbox CAD.69 in a shaft-mounted design**

**CAD030, CADS030**



Shaft	d	i9	M	t	u
	40	47.75	M16	43.3	12
	45	48.75	M16	48.8	14

Motor	LE														
	63	63Z	71	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	425.5	451.5	457.5	476.5	516.5	521.5	556.5	583.0	623.0	639.5	674.5	649.5	684	702.5	752.5
kB	470.0	496.0	512.5	531.5	571.5	581.5	616.5	653.0	693.0	718.0	753.0	722.5	757	807.0	857.0
LB	184.5	210.5	216.5	235.5	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443	461.5	511.5
LBL	229.0	255.0	271.5	290.5	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516	566.0	616.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

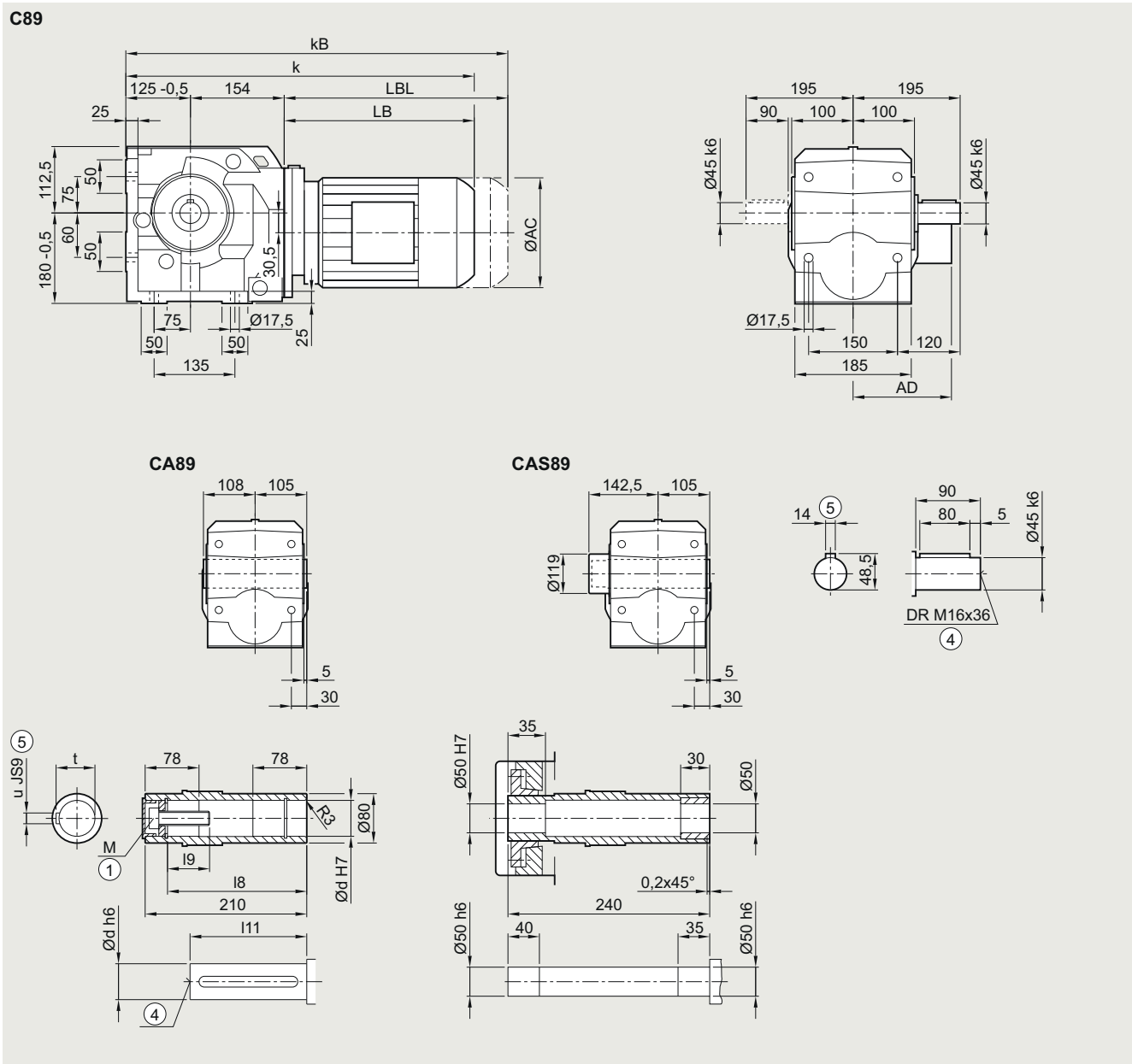
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C..89 in a foot-mounted design

C030, CA030, CAS030



Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

Motor	LE	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	71												
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	552.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
kB	548.5	567.5	607.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

① ISO 4014

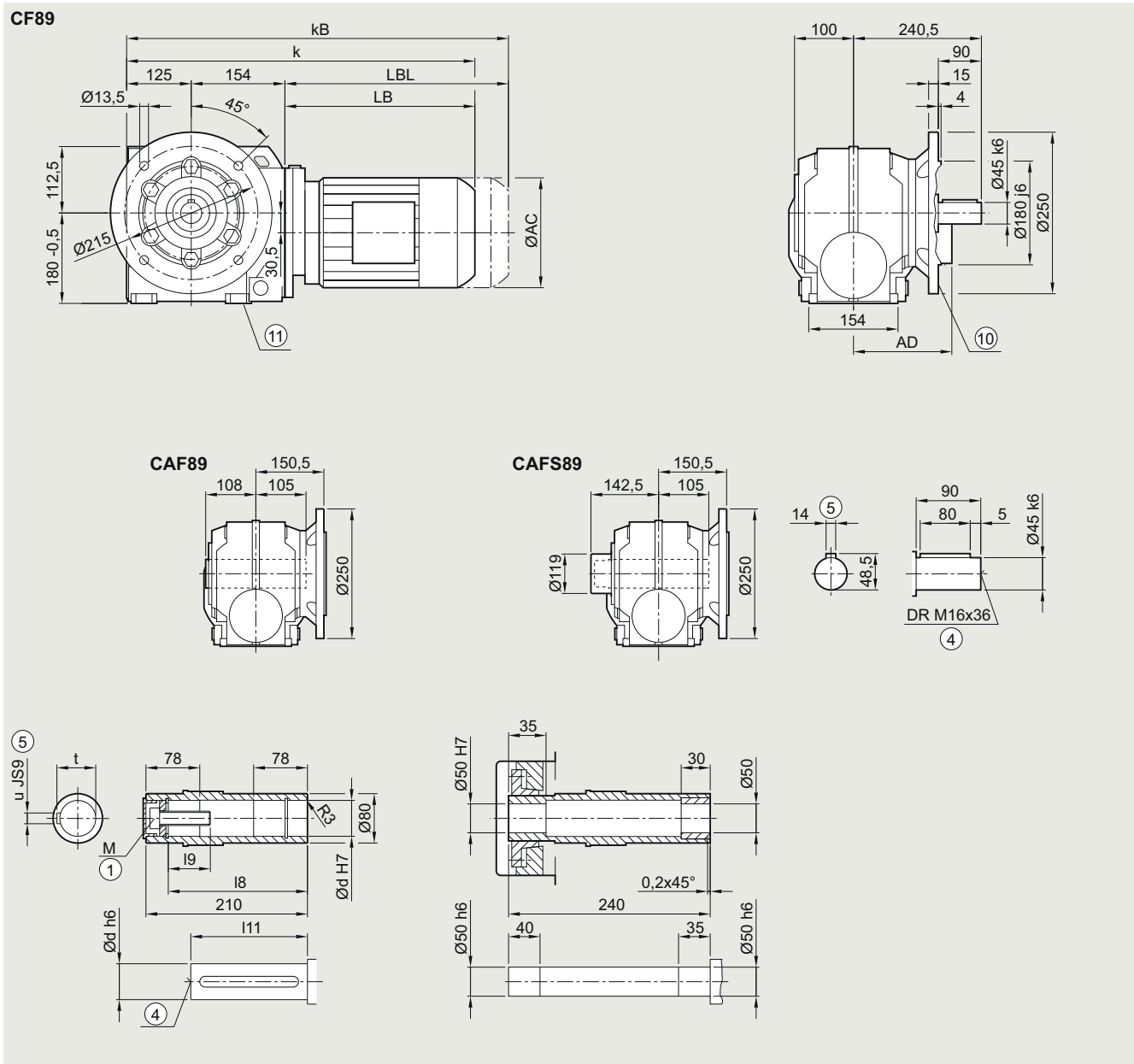
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox C.F.89 in a flange-mounted design**

**CF030, CAF030, CAFS030**



Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

Motor	LE	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
	71												
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	552.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
kB	548.5	567.5	607.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour, see page 6/63

⑩ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

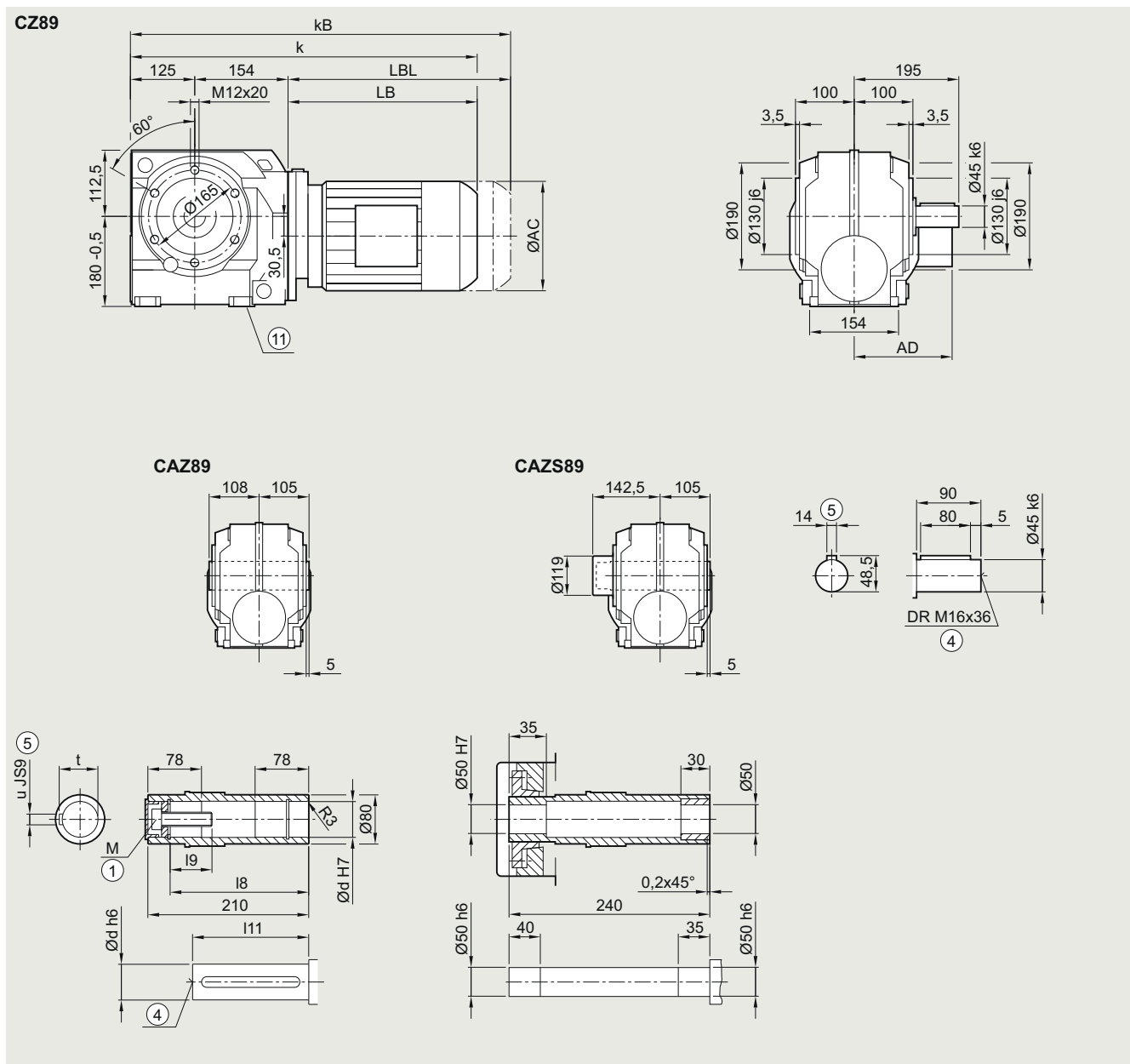
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Gearbox C.Z.89 in a housing flange design

CZ030, CAZ030, CAZS030



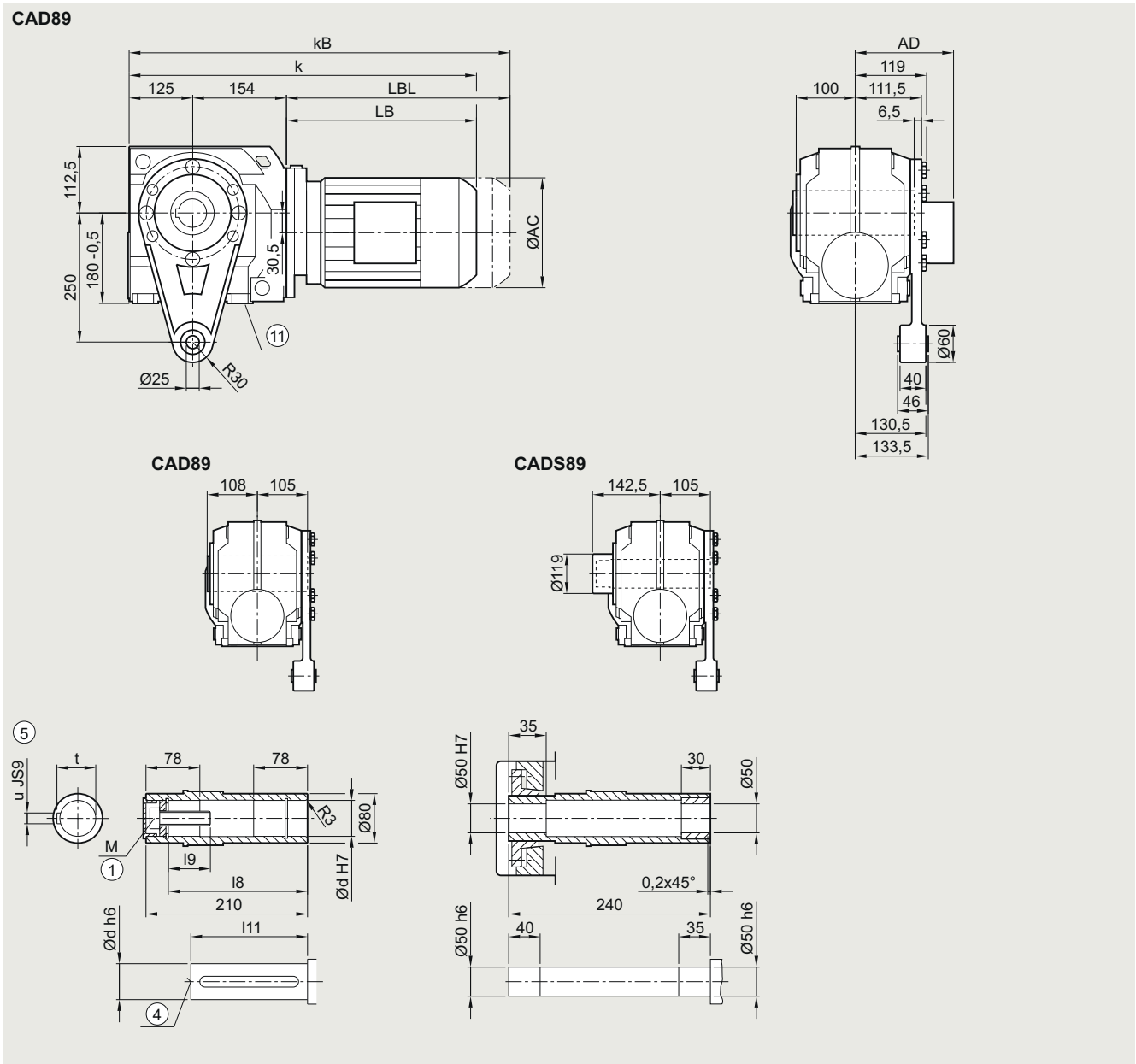
Shaft	d	l8	l9	l11	M	t	u						
	50	183	44.5	165	M16	53.8	14						
	60	180	57	158	M20	64.4	18						
Motor	LE	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	552.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
kB	548.5	567.5	607.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1 ⑥ Use bores only for foot-mounted design

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

**Gearbox CAD.89 in a shaft-mounted design**
**CAD030, CADS030**


Shaft	d	l8	l9	l11	M	t	u						
	50	183	44.5	165	M16	53.8	14						
	60	180	57	158	M20	64.4	18						
Motor	LE	71Z	71Y	80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	552.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
kB	548.5	567.5	607.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	273.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	328.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

⑤ ISO 4014

④ DIN 332

⑥ Feather key/keyway DIN 6885-1 ⑩ Use bores only for foot-mounted design

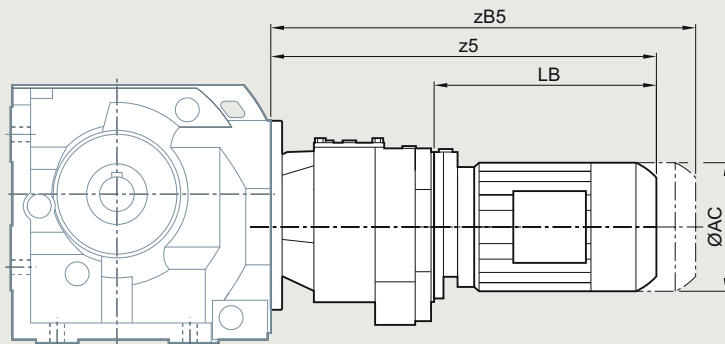
1) AD depends on the motor options, for other dimensions, see page 9/46.

## SIMOGEAR geared motors

Helical worm geared motors

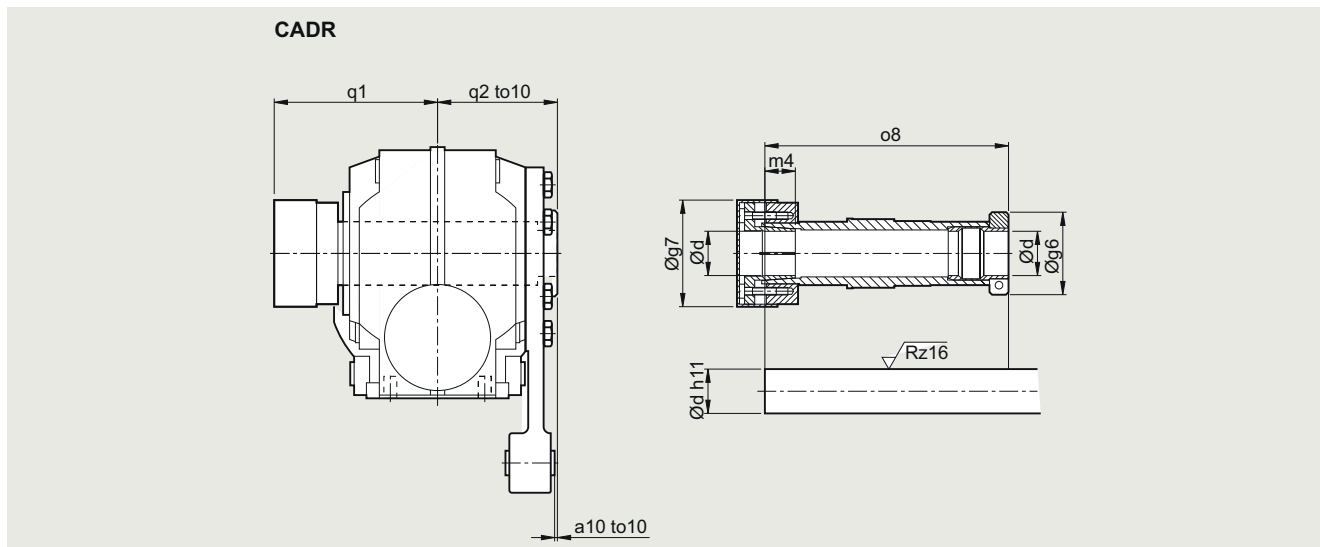
### Dimensional drawings

#### Helical worm tandem geared motors



Gearbox	Motor	AC	z5	zB5	LB
C.29-Z/D19	LE63	117.8	331.0	375.5	160.5
	LE63Z	117.8	357.0	401.5	186.5
C.39A-Z/D19	LE63	117.8	331.0	375.5	160.5
	LE63Z	117.8	357.0	401.5	186.5
	LE71	138.8	363.0	418.0	184.5
	LE71Z	138.8	382.0	437.0	203.5
C.49-Z/D19	LE71Y	138.8	422.0	477.0	243.5
	LE63	117.8	322.0	366.5	160.5
	LE63Z	117.8	348.0	392.5	186.5
	LE71	138.8	354.0	409.0	184.5
	LE71Z	138.8	373.0	428.0	203.5
	LE71Y	138.8	413.0	468.0	243.5
C.69-Z/D19	LE80	156.3	410.0	470.0	240.0
	LE80Z	156.3	445.0	505.0	275.0
	LE63	117.8	322.0	366.5	160.5
	LE63Z	117.8	348.0	392.5	186.5
	LE71	138.8	354.0	409.0	184.5
	LE71Z	138.8	373.0	428.0	203.5
C.89-Z/D39	LE71Y	138.8	413.5	468.0	243.5
	LE80	156.3	410.0	470.0	240.0
	LE80Z	156.3	445.0	505.0	275.0
	LE63	117.8	373.5	418.0	194.0
	LE63Z	117.8	399.5	444.0	220.0
	LE71	138.8	405.5	460.5	226.0
C.89-Z/D39	LE71Z	138.8	424.5	479.5	245.0
	LE71Y	138.8	464.5	519.5	285.0
	LE80	156.3	469.5	529.5	290.0
	LE80Z	156.3	504.5	564.5	325.0
	LE90	173.8	531.0	601.0	351.5
	LE90Z	173.8	571.0	641.0	391.5

## SIMOLOC assembly system



Note mounting tolerance to10 when positioning the torque arm.

d	g6	g7	m4	o8	q1	q2	a10	to10
<b>CADR.29</b>								
20	58.5	56	18.5	151.0	102	75	11	+2.1
1"								+0.6
0.75"								
<b>CADR39A</b>								
30	62.0	76	22	160.5	106	75	39	+2.2
25								+0.7
1.25"								
1.1875"								
1"								
<b>CADR49</b>								
35	65.0	84	24	192.0	124	90	35	+2.6
30								+0.8
1.4375"								
1.375"								
1.25"								
1.1875"								
<b>CADR69</b>								
40	79.5	94	30	217.5	138	102	39	+2.5
35								+0.7
1.5"								
1.4375"								
1.375"								
1.625"								
<b>CADR89</b>								
50	89.0	114	32	264.0	171	124	45	+3.4
40								+1.5
2"								
1.9375"								
1.75"								
1.625"								

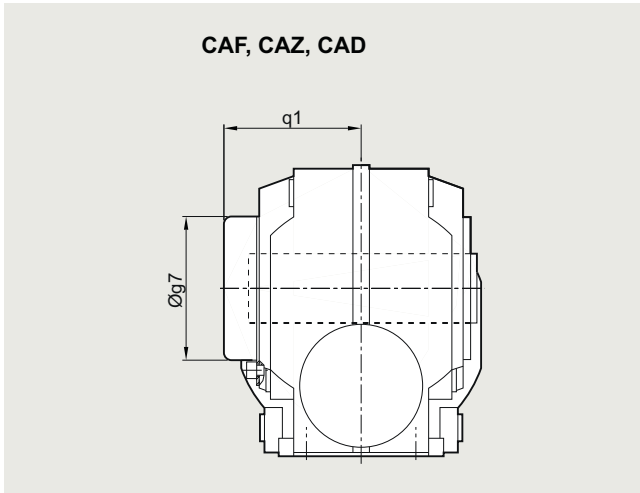
# SIMOGEAR geared motors

Helical worm geared motors

## Dimensional drawings

### Protective covers

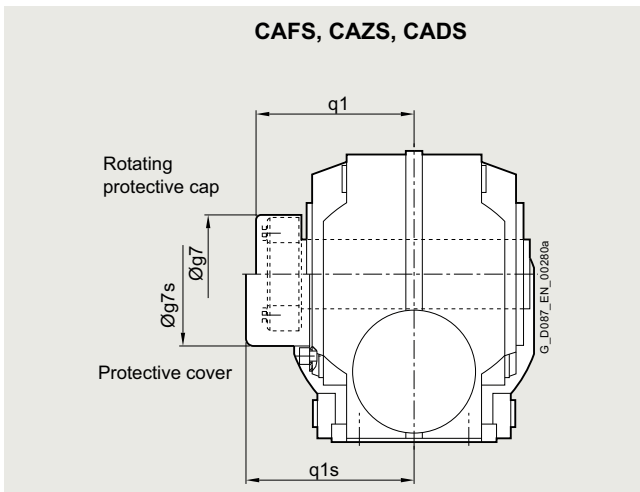
#### Protective covers for hollow shaft



Gearbox type	CA.29	CA.39A	CA.49	CA.69	CA.89
<b>Protective cover</b>					
g7	67.0	82.5	80.0	99.0	137.0
q1	76.0	73.0	99.0	95.5	124.5

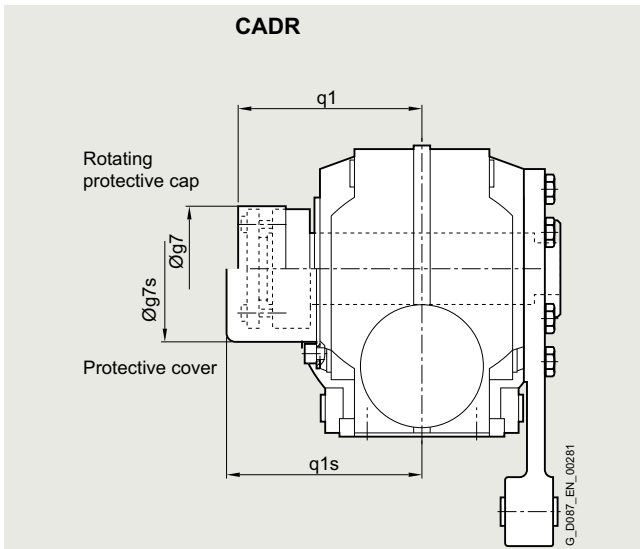
6

#### Protective covers for hollow shaft with shrink disk



Gearbox type	CA.S29	CA.S39A	CA.S49	CA.S69	CA.S89
<b>Rotating protective cap for the shrink disk version</b>					
g7	55.0	76.0	84.0	84.0	94.0
q1	85.0	89.5	107.0	115.0	125.5
<b>Protective cover</b>					
g7s	58.0	82.5	86.0	99.0	137.0
q1s	91.0	109.0	122.0	126.5	176.5

#### Protective covers for hollow shaft with SIMOLOC assembly system

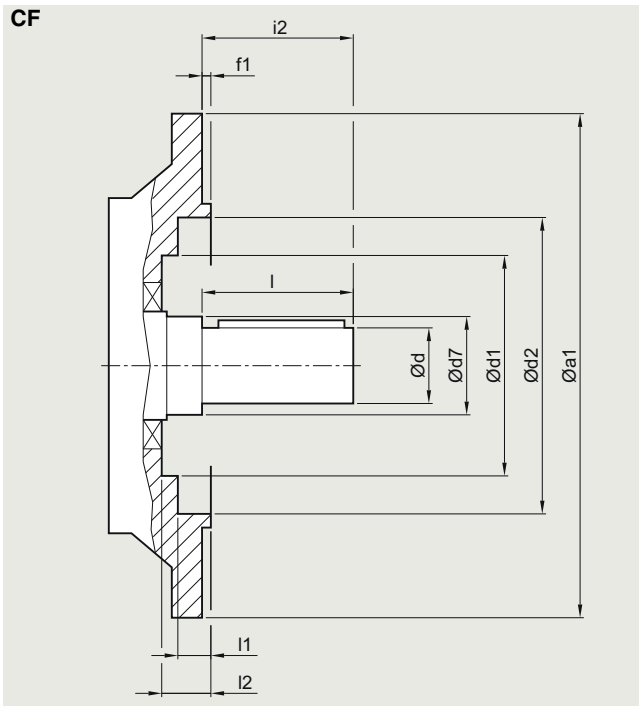


Gearbox type	CADR29	CADR39A	CADR49	CADR69	CADR89
<b>Rotating protective cap</b>					
g7	56.0	76.0	84.0	94.0	114.0
q1	101.5	106.0	124.0	144.0	171.0
<b>Protective cover</b>					
g7s	58.0	82.5	86.0	99	137.0
q1s	102.0	109.0	126.0	145.5	176.5



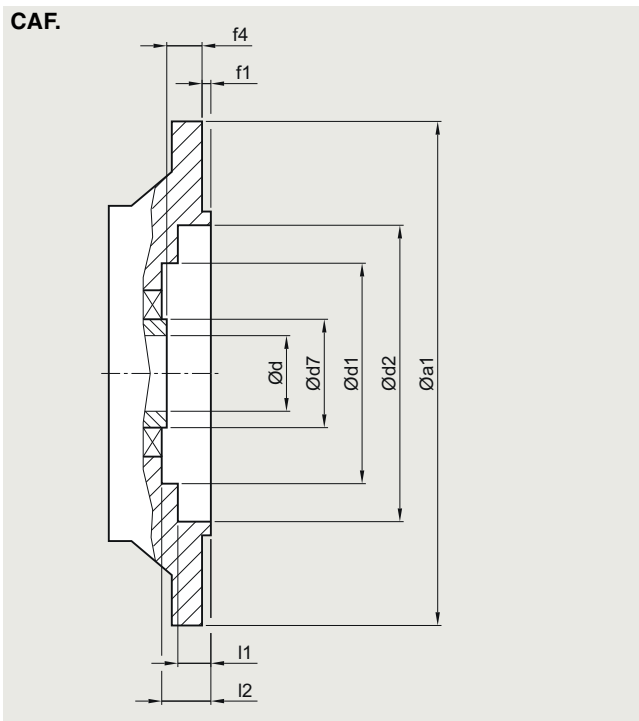
**Inner contour of the flange-mounted design**

*Notes regarding the design of the customer's interface for the solid shaft design*



Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
CF29	120	20	40	-	70	3.0	40	40	24.0	-
	160			70	101	3.5			8.5	24.5
CF39A	160	25	30	-	100	3.5	50	50	4.0	-
CF49	200	30	35	-	118	3.5	60	60	5.5	-
CF69	200	35	45	105	120	4.0	70	70	4.5	48.0
CF89	250	45	70	134	165	4.0	90	90	6.5	53.0

*Notes regarding the design of the customer's interface for the hollow shaft design*



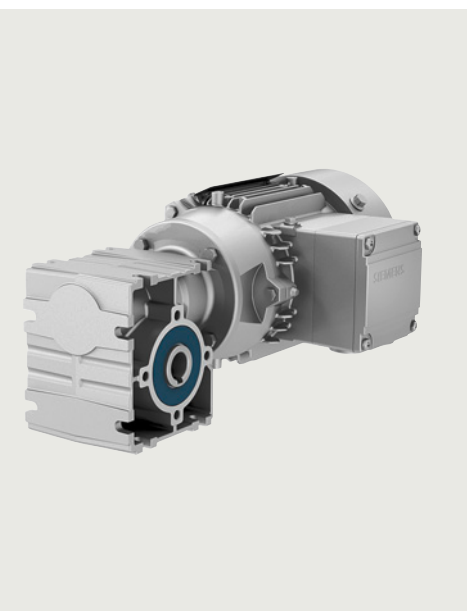
Gearbox type	a1	d	d7	d1	d2	f1	f4	l1	l2
CAF.29	120	20	35	-	70	3.0	23.0	24.0	-
	160			70	101	3.5		8.5	24.5
CAF.39A	160	25	45	75	100	3.5	24.0	5.0	29.5
		30							
CAF.49	200	30	50	90	120	3.5	25.0	4.0	30.5
		35							
CAF.69	200	40	65	105	120	4.0	42.0	4.5	48.0
		45							
CAF.89	250	50	80	134	147	4.0	45.5	14.0	53.0
		60							

## SIMOGEAR geared motors

### Notes

6

## Worm geared motors



<b>7/2</b>	<b>Orientation</b>
<b>7/3</b> 7/3	<b>Geared motors up to 0.37 kW</b> Selection and ordering data
<b>7/5</b> 7/5	<b>Transmission ratios and torques</b> Selection and ordering data
<b>7/7</b> 7/7	<b>General technical specifications</b> Permissible radial force
<b>7/7</b> 7/7	<b>Dimensional drawings</b> Overview
7/8	Worm geared motors S..09
7/12	Worm geared motors S..19
7/16	Worm geared motors S..29
7/20	Protective cover for hollow shaft

## SIMOGEAR geared motors

### Worm geared motors

#### Orientation

#### SIMOGEAR worm geared motors S

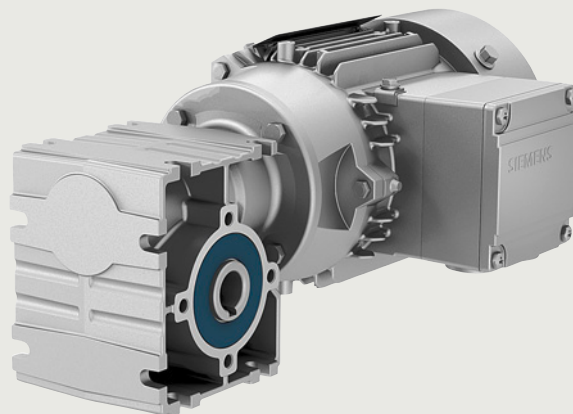


Fig. 7/1 Worm gearbox S

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		$T_{2N}$ Nm	$i$ -	$P_1$ kW
S09 ... S29 (1-stage)	3	33 ... 116	5.0 ... 100	0.55

SIMOGEAR worm geared motors are available in the following versions for mounting in any position:

#### Transmission stages

- 1-stage worm geared motors

#### Designs

- Shaft-mounted design
- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design

#### Mounting

- Hollow shaft design with feather key
- Hollow shaft design with plug-in shaft SE
- Solid shaft design with feather key (at one end or both ends)

For worm gearboxes, the torque arm is supplied loose to enable it to be mounted as required on site. The position of the torque arm can be freely selected.

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	-	kg	(Article No. supplement, see below)	No. of poles	
0.09	<b>S.29-LEI63MEB6</b>								
	8.9	44	100	3530	1.6	9	2KJ3732- ■ BD21- ■ ■ A1 -Z	P01	
	11	39	80	3550	2.2	9	2KJ3732- ■ BD21- ■ ■ B1 -Z	P01	
	<b>S.19-LEI63MEB6</b>								
	11	38	80	3550	0.94	6	2KJ3731- ■ BD21- ■ ■ B1 -Z	P01	
	15	32	60	3580	1.5	6	2KJ3731- ■ BD21- ■ ■ C1 -Z	P01	
	<b>S.09-LEI63MEB6</b>								
	15	29	60	1700	0.84	6	2KJ3730- ■ BD21- ■ ■ C1 -Z	P01	
	18	26	50	1720	1.1	6	2KJ3730- ■ BD21- ■ ■ D1 -Z	P01	
	22	22	40	1730	1.3	6	2KJ3730- ■ BD21- ■ ■ E1 -Z	P01	
0.12	<b>S.29-LEI63ZMH4P</b>								
	14	39	100	3550	1.8	10	2KJ3732- ■ BD23- ■ ■ A1 -Z	-	
	17	35	80	3560	2.3	10	2KJ3732- ■ BD23- ■ ■ B1 -Z	-	
	23	29	60	3590	2.8	10	2KJ3732- ■ BD23- ■ ■ C1 -Z	-	
	28	26	50	3600	3	10	2KJ3732- ■ BD23- ■ ■ D1 -Z	-	
	35	22	40	3620	3.5	10	2KJ3732- ■ BD23- ■ ■ E1 -Z	-	
	46	18	30	3640	4.2	10	2KJ3732- ■ BD23- ■ ■ F1 -Z	-	
	56	16	25	3640	4.8	10	2KJ3732- ■ BD23- ■ ■ G1 -Z	-	
	<b>S.19-LEI63ZMH4P</b>								
	17	34	80	3570	1	8	2KJ3731- ■ BD23- ■ ■ B1 -Z	-	
	23	29	60	3590	1.5	8	2KJ3731- ■ BD23- ■ ■ C1 -Z	-	
	28	26	50	3600	1.7	8	2KJ3731- ■ BD23- ■ ■ D1 -Z	-	
	35	22	40	3620	2	8	2KJ3731- ■ BD23- ■ ■ E1 -Z	-	
	46	18	30	3630	2.4	8	2KJ3731- ■ BD23- ■ ■ F1 -Z	-	
	56	16	25	3640	2.5	8	2KJ3731- ■ BD23- ■ ■ G1 -Z	-	
	70	13	20	3650	3.3	8	2KJ3731- ■ BD23- ■ ■ H1 -Z	-	
	93	10	15	3670	4.2	8	2KJ3731- ■ BD23- ■ ■ J1 -Z	-	
	<b>S.09-LEI63ZMH4P</b>								
	23	26	60	1720	0.91	7	2KJ3730- ■ BD23- ■ ■ C1 -Z	-	
	28	23	50	1730	1.1	7	2KJ3730- ■ BD23- ■ ■ D1 -Z	-	
	35	20	40	1740	1.4	7	2KJ3730- ■ BD23- ■ ■ E1 -Z	-	
	46	16	30	1760	1.7	7	2KJ3730- ■ BD23- ■ ■ F1 -Z	-	
	56	14	25	1760	1.9	7	2KJ3730- ■ BD23- ■ ■ G1 -Z	-	
	70	12	20	1770	2.2	7	2KJ3730- ■ BD23- ■ ■ H1 -Z	-	
	93	9.8	15	1780	2.7	7	2KJ3730- ■ BD23- ■ ■ J1 -Z	-	
	139	7	10	1790	3.9	7	2KJ3730- ■ BD23- ■ ■ K1 -Z	-	
	0.18	<b>S.29-LEI71ZMK6P</b>							
		11	80	80	3380	1.1	10	2KJ3732- ■ CC23- ■ ■ B1 -Z	P01
		<b>S.29-LEI63ZMK4P</b>							
		14	59	100	3460	1.2	10	2KJ3732- ■ BE23- ■ ■ A1 -Z	-
17		52	80	3490	1.5	10	2KJ3732- ■ BE23- ■ ■ B1 -Z	-	
23		44	60	3530	1.8	10	2KJ3732- ■ BE23- ■ ■ C1 -Z	-	
28		39	50	3550	2	10	2KJ3732- ■ BE23- ■ ■ D1 -Z	-	
35		33	40	3570	2.3	10	2KJ3732- ■ BE23- ■ ■ E1 -Z	-	
46		27	30	3600	2.8	10	2KJ3732- ■ BE23- ■ ■ F1 -Z	-	
55		23	25	3610	3.2	10	2KJ3732- ■ BE23- ■ ■ G1 -Z	-	
69		20	20	3630	3.8	10	2KJ3732- ■ BE23- ■ ■ H1 -Z	-	
92		16	15	3640	4.8	10	2KJ3732- ■ BE23- ■ ■ J1 -Z	-	
<b>S.19-LEI63ZMK4P</b>									
23		43	60	3530	1	8	2KJ3731- ■ BE23- ■ ■ C1 -Z	-	
28		38	50	3550	1.2	8	2KJ3731- ■ BE23- ■ ■ D1 -Z	-	
35		33	40	3570	1.3	8	2KJ3731- ■ BE23- ■ ■ E1 -Z	-	

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Worm geared motors

## Geared motors up to 0.37 kW

## Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement, see below)	Additional identification code -Z with order code No. of poles
0.18	<b>S.19-LEI63ZMK4P</b>							
	46	27	30	3600	1.6	8	2KJ3731- ■ BE23- ■ ■ F1 -Z -	-
	55	23	25	3610	1.7	8	2KJ3731- ■ BE23- ■ ■ G1 -Z -	-
	69	20	20	3630	2.2	8	2KJ3731- ■ BE23- ■ ■ H1 -Z -	-
	92	16	15	3640	2.8	8	2KJ3731- ■ BE23- ■ ■ J1 -Z -	-
	138	11	10	3660	3.9	8	2KJ3731- ■ BE23- ■ ■ K1 -Z -	-
	<b>S.09-LEI63ZMK4P</b>							
	35	30	40	1700	0.93	7	2KJ3730- ■ BE23- ■ ■ E1 -Z -	-
	46	25	30	1720	1.1	7	2KJ3730- ■ BE23- ■ ■ F1 -Z -	-
	55	22	25	1730	1.3	7	2KJ3730- ■ BE23- ■ ■ G1 -Z -	-
	69	19	20	1740	1.5	7	2KJ3730- ■ BE23- ■ ■ H1 -Z -	-
	92	15	15	1760	1.8	7	2KJ3730- ■ BE23- ■ ■ J1 -Z -	-
	138	10	10	1780	2.6	7	2KJ3730- ■ BE23- ■ ■ K1 -Z -	-
	198	7.7	7	1790	3.6	7	2KJ3730- ■ BE23- ■ ■ L1 -Z -	-
277	5.6	5	1800	4.6	7	2KJ3730- ■ BE23- ■ ■ M1 -Z -	-	
0.25	<b>S.29-LEI71ZMK4P</b>							
	17	72	80	3410	1.1	10	2KJ3732- ■ CC23- ■ ■ B1 -Z -	-
	23	60	60	3460	1.3	10	2KJ3732- ■ CC23- ■ ■ C1 -Z -	-
	28	54	50	3480	1.5	10	2KJ3732- ■ CC23- ■ ■ D1 -Z -	-
	35	46	40	3520	1.7	10	2KJ3732- ■ CC23- ■ ■ E1 -Z -	-
	46	37	30	3560	2	10	2KJ3732- ■ CC23- ■ ■ F1 -Z -	-
	56	32	25	3580	2.3	10	2KJ3732- ■ CC23- ■ ■ G1 -Z -	-
	70	27	20	3600	2.7	10	2KJ3732- ■ CC23- ■ ■ H1 -Z -	-
	93	22	15	3620	3.5	10	2KJ3732- ■ CC23- ■ ■ J1 -Z -	-
	140	15	10	3650	5	10	2KJ3732- ■ CC23- ■ ■ K1 -Z -	-
	<b>S.19-LEI71ZMK4P</b>							
	28	53	50	3490	0.84	8	2KJ3731- ■ CC23- ■ ■ D1 -Z -	-
	35	46	40	3520	0.96	8	2KJ3731- ■ CC23- ■ ■ E1 -Z -	-
	46	37	30	3550	1.2	8	2KJ3731- ■ CC23- ■ ■ F1 -Z -	-
56	32	25	3580	1.2	8	2KJ3731- ■ CC23- ■ ■ G1 -Z -	-	
70	27	20	3600	1.6	8	2KJ3731- ■ CC23- ■ ■ H1 -Z -	-	
93	21	15	3620	2	8	2KJ3731- ■ CC23- ■ ■ J1 -Z -	-	
140	15	10	3650	2.8	8	2KJ3731- ■ CC23- ■ ■ K1 -Z -	-	
199	11	7	3660	3.7	8	2KJ3731- ■ CC23- ■ ■ L1 -Z -	-	
279	7.9	5	3680	4.9	8	2KJ3731- ■ CC23- ■ ■ M1 -Z -	-	
0.37	<b>S.29-LEI71YMS4P</b>							
	23	90	60	3330	0.89	12	2KJ3732- ■ CE23- ■ ■ C1 -Z -	-
	28	80	50	3380	0.98	12	2KJ3732- ■ CE23- ■ ■ D1 -Z -	-
	34	69	40	3420	1.1	12	2KJ3732- ■ CE23- ■ ■ E1 -Z -	-
	46	56	30	3480	1.4	12	2KJ3732- ■ CE23- ■ ■ F1 -Z -	-
	55	48	25	3510	1.5	12	2KJ3732- ■ CE23- ■ ■ G1 -Z -	-
	69	41	20	3540	1.8	12	2KJ3732- ■ CE23- ■ ■ H1 -Z -	-
	92	32	15	3580	2.3	12	2KJ3732- ■ CE23- ■ ■ J1 -Z -	-
	138	22	10	3620	3.3	12	2KJ3732- ■ CE23- ■ ■ K1 -Z -	-
	197	16	7	3640	4.5	12	2KJ3732- ■ CE23- ■ ■ L1 -Z -	-
	<b>S.19-LEI71YMS4P</b>							
	55	48	25	3510	0.81	10	2KJ3731- ■ CE23- ■ ■ G1 -Z -	-
	69	41	20	3540	1.1	10	2KJ3731- ■ CE23- ■ ■ H1 -Z -	-
	92	32	15	3580	1.3	10	2KJ3731- ■ CE23- ■ ■ J1 -Z -	-
138	22	10	3620	1.9	10	2KJ3731- ■ CE23- ■ ■ K1 -Z -	-	
197	16	7	3640	2.5	10	2KJ3731- ■ CE23- ■ ■ L1 -Z -	-	
276	12	5	3660	3.3	10	2KJ3731- ■ CE23- ■ ■ M1 -Z -	-	

## Article No. supplement

Shaft design	1 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F, H or D	see page 10/42

**Selection and ordering data**

i	Lead angle of the worm $\gamma_m$	$n_{mot} = 2\,800$ rpm				$n_{mot} = 1\,400$ rpm				Motor frame size		Article No. (Article No. supplement, see below)
		$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	63	71	
<b>S.09</b>												
80	2.1	35.0	18	0.14	48	17.5	19	0.07	47	✓		2KJ3730 - ■■■■■■ - ■■ B1
60	2.7	46.7	22	0.20	55	23.3	24	0.11	52	✓		2KJ3730 - ■■■■■■ - ■■ C1
50	3.2	56.0	21	0.21	58	28.0	27	0.14	56	✓		2KJ3730 - ■■■■■■ - ■■ D1
40	3.8	70.0	21	0.24	63	35.0	28	0.17	61	✓		2KJ3730 - ■■■■■■ - ■■ E1
30	4.6	93.3	20	0.29	68	46.7	28	0.20	67	✓		2KJ3730 - ■■■■■■ - ■■ F1
25	5.2	112.0	20	0.33	72	56.0	27	0.23	70	✓		2KJ3730 - ■■■■■■ - ■■ G1
20	7.4	140.0	21	0.40	77	70.0	27	0.26	75	✓		2KJ3730 - ■■■■■■ - ■■ H1
15	9.2	186.7	20	0.48	81	93.3	27	0.33	80	✓		2KJ3730 - ■■■■■■ - ■■ J1
10	14.0	280.0	20	0.68	86	140.0	27	0.47	85	✓		2KJ3730 - ■■■■■■ - ■■ K1
7	19.0	400.0	19	0.89	89	200.0	26	0.62	88	✓		2KJ3730 - ■■■■■■ - ■■ L1
5	25.0	560.0	19	1.22	91	280.0	25	0.81	91	✓		2KJ3730 - ■■■■■■ - ■■ M1
<b>S.19</b>												
80	3.5	35.0	33	0.22	55	17.5	35	0.12	54	✓		2KJ3731 - ■■■■■■ - ■■ B1
60	3.5	46.7	33	0.26	61	23.3	44	0.18	59	✓		2KJ3731 - ■■■■■■ - ■■ C1
50	4.0	56.0	33	0.30	64	28.0	44	0.20	63	✓	✓	2KJ3731 - ■■■■■■ - ■■ D1
40	4.5	70.0	31	0.33	68	35.0	43	0.24	67	✓	✓	2KJ3731 - ■■■■■■ - ■■ E1
30	5.5	93.3	31	0.42	73	46.7	41	0.28	72	✓	✓	2KJ3731 - ■■■■■■ - ■■ F1
25	6.5	112.0	31	0.48	76	56.0	41	0.32	75	✓	✓	2KJ3731 - ■■■■■■ - ■■ G1
20	9.5	140.0	31	0.56	81	70.0	41	0.38	80	✓	✓	2KJ3731 - ■■■■■■ - ■■ H1
15	11.0	186.7	30	0.70	84	93.3	41	0.48	84	✓	✓	2KJ3731 - ■■■■■■ - ■■ J1
10	17.0	280.0	30	1.00	88	140.0	40	0.67	88	✓	✓	2KJ3731 - ■■■■■■ - ■■ K1
7	17.0	400.0	29	1.33	91	200.0	39	0.91	90	✓	✓	2KJ3731 - ■■■■■■ - ■■ L1
5	23.0	560.0	28	1.78	92	280.0	37	1.18	92	✓	✓	2KJ3731 - ■■■■■■ - ■■ M1
<b>S.29</b>												
100	2.0	28.0	57	0.33	50	14.0	72	0.22	49	✓		2KJ3732 - ■■■■■■ - ■■ A1
80	2.5	35.0	57	0.39	54	17.5	80	0.27	54	✓	✓	2KJ3732 - ■■■■■■ - ■■ B1
60	3.0	46.7	57	0.46	60	23.3	78	0.32	59	✓	✓	2KJ3732 - ■■■■■■ - ■■ C1
50	3.5	56.0	55	0.50	64	28.0	75	0.35	63	✓	✓	2KJ3732 - ■■■■■■ - ■■ D1
40	4.5	70.0	55	0.59	68	35.0	74	0.40	68	✓	✓	2KJ3732 - ■■■■■■ - ■■ E1
30	5.0	93.3	53	0.71	73	46.7	73	0.49	73	✓	✓	2KJ3732 - ■■■■■■ - ■■ F1
25	6.0	112.0	53	0.82	76	56.0	73	0.56	76	✓	✓	2KJ3732 - ■■■■■■ - ■■ G1
20	8.5	140.0	53	0.96	81	70.0	73	0.67	80	✓	✓	2KJ3732 - ■■■■■■ - ■■ H1
15	10.0	186.7	53	1.23	84	93.3	72	0.84	84	✓	✓	2KJ3732 - ■■■■■■ - ■■ J1
10	15.0	280.0	53	1.77	88	140.0	72	1.20	88	✓	✓	2KJ3732 - ■■■■■■ - ■■ K1
7	15.0	400.0	53	2.44	91	200.0	71	1.63	91	✓	✓	2KJ3732 - ■■■■■■ - ■■ L1
5	21.0	560.0	51	3.22	93	280.0	69	2.18	93	✓	✓	2KJ3732 - ■■■■■■ - ■■ M1

**Article No. supplement**

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Worm geared motors

### Transmission ratios and torques

#### Selection and ordering data

i	Lead angle of the worm $\gamma_m$	$n_{mot} = 900$ rpm				$n_{mot} = 500$ rpm				Motor frame size		Article No. (Article No. supplement, see below)
		$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	63	71	
<b>S.09</b>												
80	2.1	11.3	19	0.05	44	6.3	20	0.03	40	✓		2KJ3730 - ■■■■■■ - ■■ B1
60	2.7	15.0	24	0.08	50	8.3	24	0.05	45	✓		2KJ3730 - ■■■■■■ - ■■ C1
50	3.2	18.0	27	0.10	53	10.0	28	0.06	49	✓		2KJ3730 - ■■■■■■ - ■■ D1
40	3.8	22.5	31	0.13	58	12.5	31	0.08	54	✓		2KJ3730 - ■■■■■■ - ■■ E1
30	4.6	30.0	32	0.16	64	16.7	33	0.10	60	✓		2KJ3730 - ■■■■■■ - ■■ F1
25	5.2	36.0	32	0.18	68	20.0	32	0.10	64	✓		2KJ3730 - ■■■■■■ - ■■ G1
20	7.4	45.0	31	0.20	73	25.0	31	0.12	70	✓		2KJ3730 - ■■■■■■ - ■■ H1
15	9.2	60.0	33	0.27	78	33.3	33	0.15	75	✓		2KJ3730 - ■■■■■■ - ■■ J1
10	14.0	90.0	32	0.36	84	50.0	33	0.21	81	✓		2KJ3730 - ■■■■■■ - ■■ K1
7	19.0	128.6	31	0.48	87	71.4	33	0.29	85	✓		2KJ3730 - ■■■■■■ - ■■ L1
5	25.0	180.0	30	0.63	90	100.0	33	0.39	88	✓		2KJ3730 - ■■■■■■ - ■■ M1
<b>S.19</b>												
80	3.5	11.3	35	0.08	51	6.3	36	0.05	47	✓		2KJ3731 - ■■■■■■ - ■■ B1
60	3.5	15.0	49	0.14	57	8.3	51	0.09	52	✓		2KJ3731 - ■■■■■■ - ■■ C1
50	4.0	18.0	51	0.16	61	10.0	59	0.11	56	✓	✓	2KJ3731 - ■■■■■■ - ■■ D1
40	4.5	22.5	51	0.18	65	12.5	64	0.14	61	✓	✓	2KJ3731 - ■■■■■■ - ■■ E1
30	5.5	30.0	50	0.22	70	16.7	63	0.17	66	✓	✓	2KJ3731 - ■■■■■■ - ■■ F1
25	6.5	36.0	49	0.25	74	20.0	62	0.19	70	✓	✓	2KJ3731 - ■■■■■■ - ■■ G1
20	9.5	45.0	50	0.30	78	25.0	62	0.22	75	✓	✓	2KJ3731 - ■■■■■■ - ■■ H1
15	11.0	60.0	50	0.38	82	33.3	62	0.27	79	✓	✓	2KJ3731 - ■■■■■■ - ■■ J1
10	17.0	90.0	49	0.53	87	50.0	61	0.38	85	✓	✓	2KJ3731 - ■■■■■■ - ■■ K1
7	17.0	128.6	47	0.70	90	71.4	58	0.49	88	✓	✓	2KJ3731 - ■■■■■■ - ■■ L1
5	23.0	180.0	44	0.91	91	100.0	56	0.65	90	✓	✓	2KJ3731 - ■■■■■■ - ■■ M1
<b>S.29</b>												
100	2.0	9.0	72	0.14	47	5.0	72	0.09	43	✓		2KJ3732 - ■■■■■■ - ■■ A1
80	2.5	11.3	92	0.21	52	6.3	93	0.13	48	✓	✓	2KJ3732 - ■■■■■■ - ■■ B1
60	3.0	15.0	93	0.26	57	8.3	116	0.19	53	✓	✓	2KJ3732 - ■■■■■■ - ■■ C1
50	3.5	18.0	90	0.28	61	10.0	115	0.21	57	✓	✓	2KJ3732 - ■■■■■■ - ■■ D1
40	4.5	22.5	90	0.32	66	12.5	113	0.24	62	✓	✓	2KJ3732 - ■■■■■■ - ■■ E1
30	5.0	30.0	86	0.38	72	16.7	110	0.28	68	✓	✓	2KJ3732 - ■■■■■■ - ■■ F1
25	6.0	36.0	85	0.43	75	20.0	109	0.32	71	✓	✓	2KJ3732 - ■■■■■■ - ■■ G1
20	8.5	45.0	85	0.51	79	25.0	109	0.38	76	✓	✓	2KJ3732 - ■■■■■■ - ■■ H1
15	10.0	60.0	85	0.64	83	33.3	109	0.47	81	✓	✓	2KJ3732 - ■■■■■■ - ■■ J1
10	15.0	90.0	85	0.92	87	50.0	109	0.66	86	✓	✓	2KJ3732 - ■■■■■■ - ■■ K1
7	15.0	128.6	84	1.26	90	71.4	107	0.90	89	✓	✓	2KJ3732 - ■■■■■■ - ■■ L1
5	21.0	180.0	82	1.68	92	100.0	105	1.21	91	✓	✓	2KJ3732 - ■■■■■■ - ■■ M1

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 10/42</a>



**Permissible radial force  $F_{Rperm}$** 
**Radial force conversion for out-of-center force application point**

If the force is not applied at the center of the shaft extension, the permissible radial force must be calculated using the following formula.

The lower value of  $F_{xperm1}$  (bearing service life) and  $F_{xperm2}$  (strength) is the permissible radial force. The calculation is applicable without axial force.

Permissible radial force according to the bearing service life

$$F_{xperm1} = F_{R2} \cdot \frac{y}{(z + x)}$$

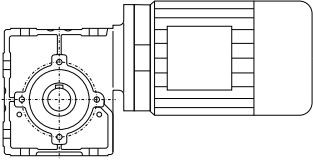
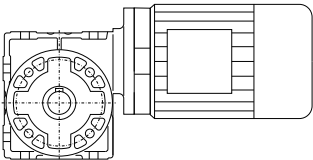
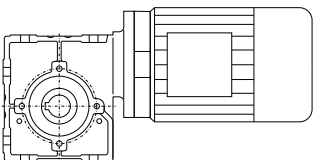
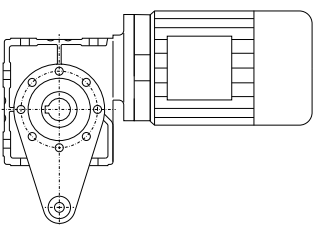
Permissible radial force according to the shaft strength

$$F_{xperm2} = \frac{a}{(b + x)}$$

Gearbox type	d mm	l mm	y mm	z mm	a kNmm	$F_{Rperm}$ in N with $x = l/2$ for output speeds $n_2$ in rpm							
						≤ 16	≤ 25	≤ 40	≤ 63	≤ 100	≤ 160	≤ 250	≤ 400
S09	16	40	83.5	63.5	36	1 800	1 800	1 800	1 800	1 800	1 690	1 400	1 120
SF09			106.0	86.0		1 800	1 800	1 800	1 800	1 620	1 330	1 100	880
S19	20	40	98.0	78.0	76	3 800	3 800	3 800	3 200	2 650	2 180	1 780	1 420
SF19			128.0	108.0		3 200	3 120	2 920	2 450	2 030	1 670	1 360	1 090
S29	20	40	120.5	100.5	72	3 600	3 600	3 600	3 600	3 600	3 290	2 680	2 120
SF29			153.5	133.5		3 600	3 600	3 600	3 600	3 150	2 580	2 110	1 660

**Dimensional drawings**
**Overview**

Notes on the dimensional drawings are provided in chapter [Introduction on page 1/24](#).

Design	Frame size	Dimensional drawing, see page
<b>Worm geared motor S</b>		
<b>Foot-mounted design</b>		
	S.09	7/8
	S.19	7/12
	S.29	7/16
<b>Flange-mounted design</b>		
	S.F09	7/9
	S.F19	7/13
	S.F29	7/17
<b>Housing flange design</b>		
	S.Z09	7/10
	S.Z19	7/14
	S.Z29	7/18
<b>Shaft-mounted design</b>		
	SAD09	7/11
	SAD19	7/15
	SAD29	7/19
<b>Additional versions and options</b>		
	Protective cover for hollow shafts	7/20

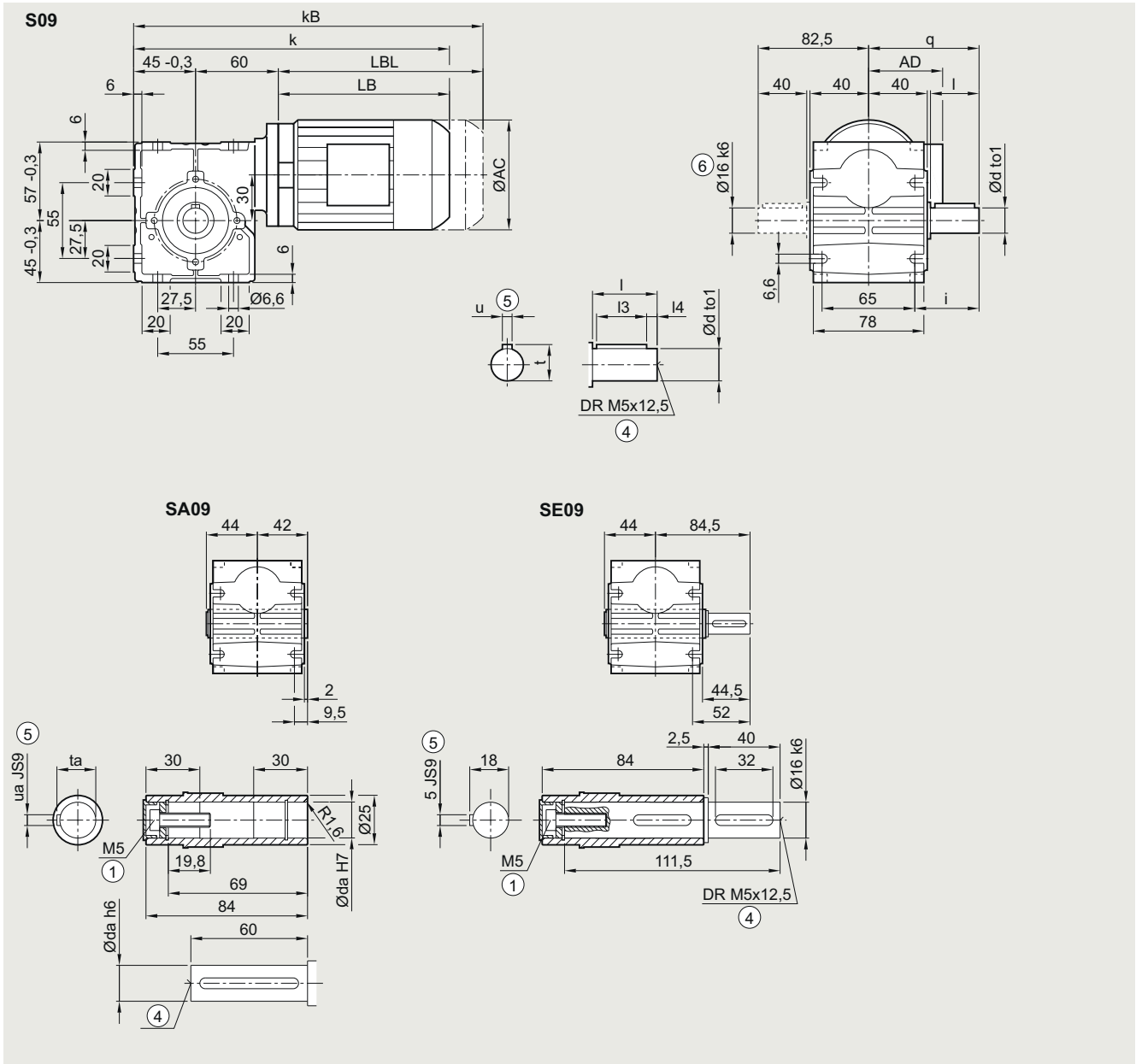
# SIMOGEAR geared motors

## Worm geared motors

### Dimensional drawings

#### Gearbox S.09 in a foot-mounted design

##### S031, SA031, SE031



Solid shaft	d	to1	l	l3	l4	u	t	q	i	Hollow shaft	da	ua	ta
	14	k6	30	22	4	5	16	72.5	40		14	5	16.3
16	k6	40	32	4	5	18	82.5	50	16	5	18.3		

Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL
LEI63	117.8	101	284.5	335.5	179.5	230.5
LEI63Z	117.8	101	310.5	361.5	205.5	256.5

① ISO 4014

④ DIN 332

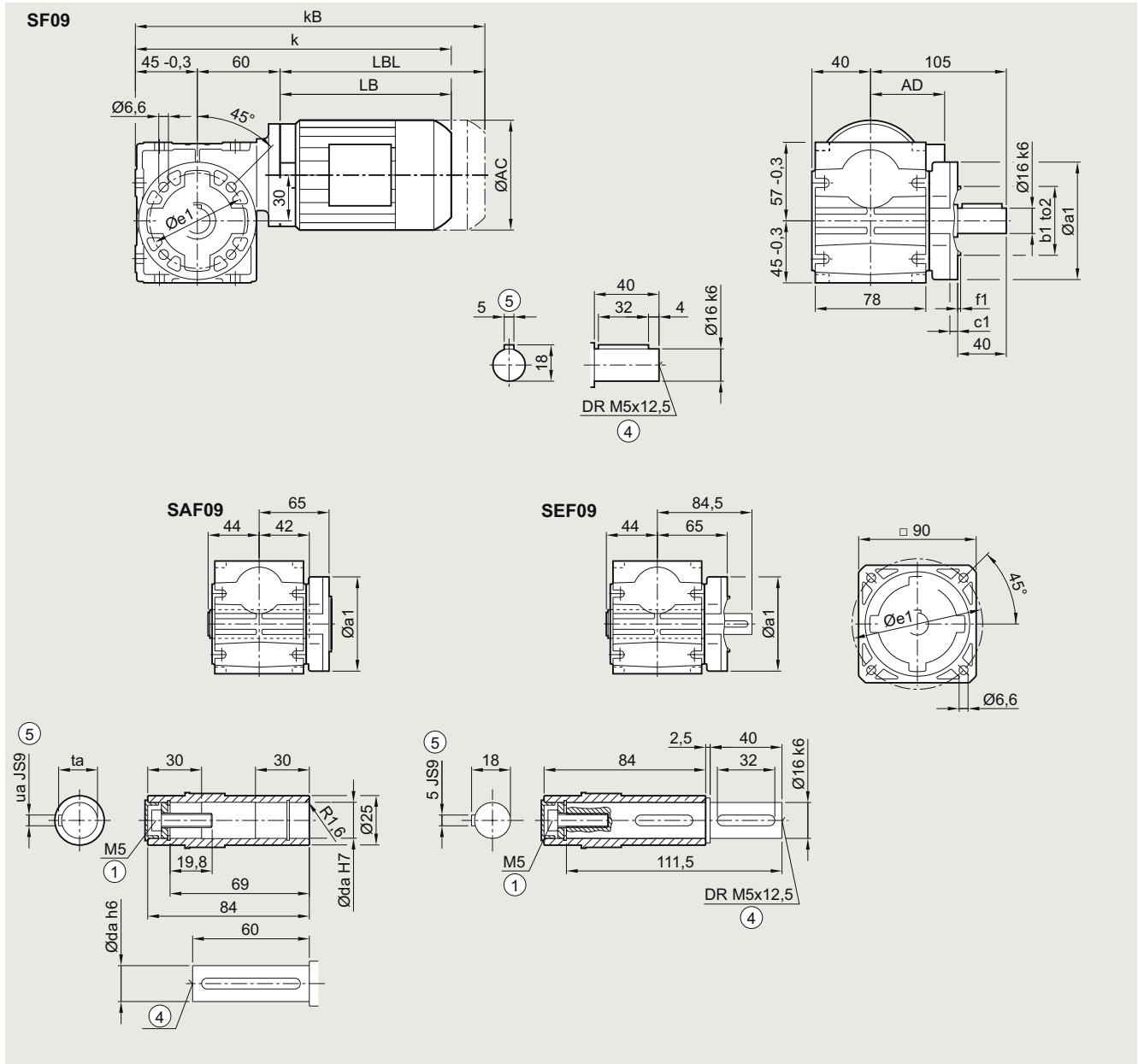
⑤ Feather key/keyway DIN 6885-1

1) AD depends on the motor options, for other dimensions, see page 9/53.

⑥ Solid shaft with 2nd shaft extension only d16

**Gearbox S.F09 in a flange-mounted design**

**SF031, SAF031, SEF031**



Hollow shaft	da		ua		ta		
		14	16	5	5	16.3	18.3
Flange	a1	e1	b1	to2	c1	f1	
	80	65	50	j6	7	2.5	
	120	100	80	j6	7	3.0	
Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL	
	LEI63	117.8	101	284.5	335.5	179.5	230.5
	LEI63Z	117.8	101	310.5	361.5	205.5	256.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

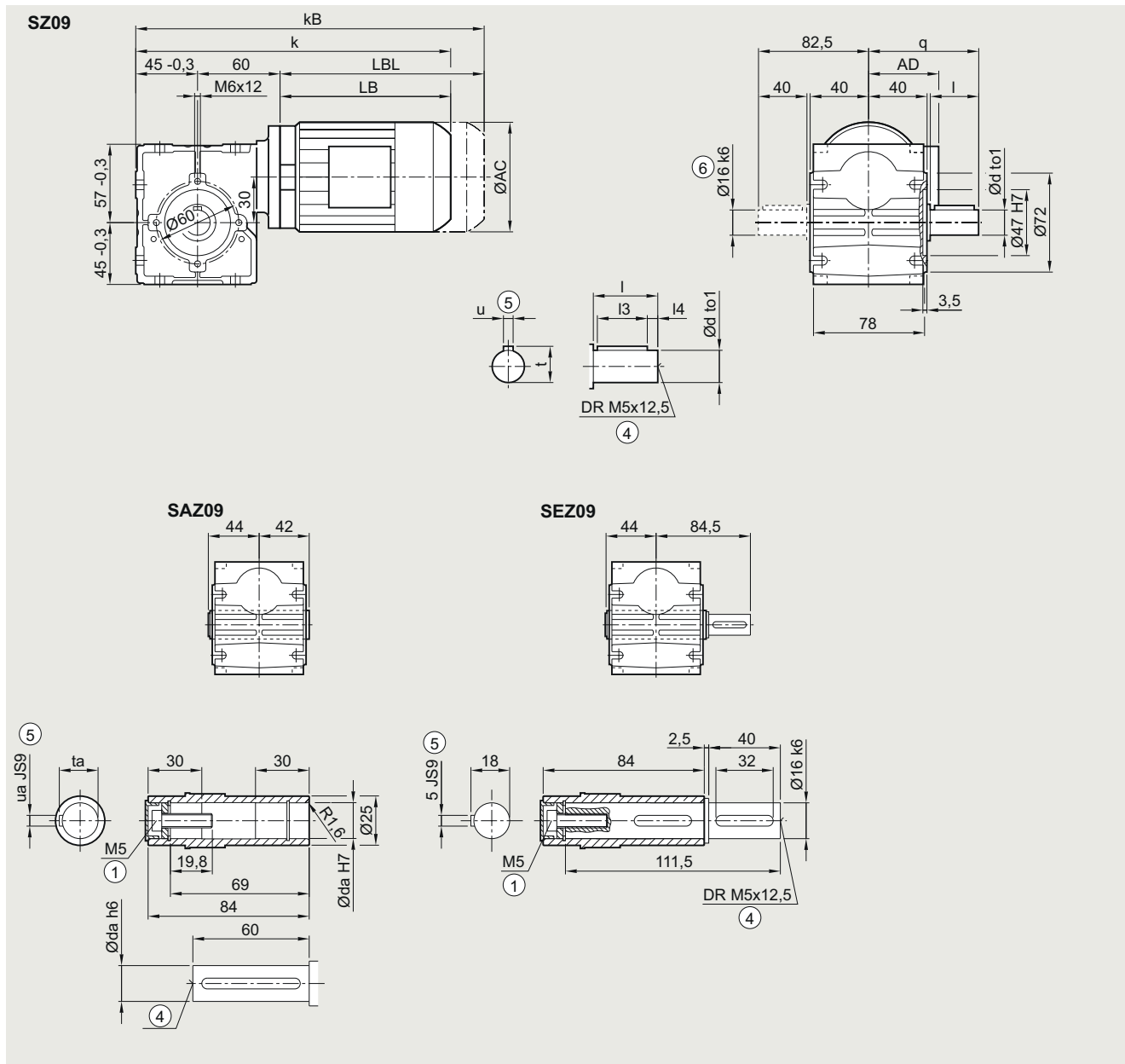
# SIMOGEAR geared motors

Worm geared motors

## Dimensional drawings

### Gearbox S.Z09 in a housing flange design

SZ031, SAZ031, SEZ031



Solid shaft	d	to1	l	l3	l4	u	t	q	Hollow shaft	da	ua	ta
	14	k6	30	22	4	5	16	72.5		14	5	16.3
16	k6	40	32	4	5	18	82.5	16	5	18.3		

Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL
LEI63	117.8	101	284.5	335.5	179.5	230.5
LEI63Z	117.8	101	310.5	361.5	205.5	256.5

① ISO 4014

④ DIN 332

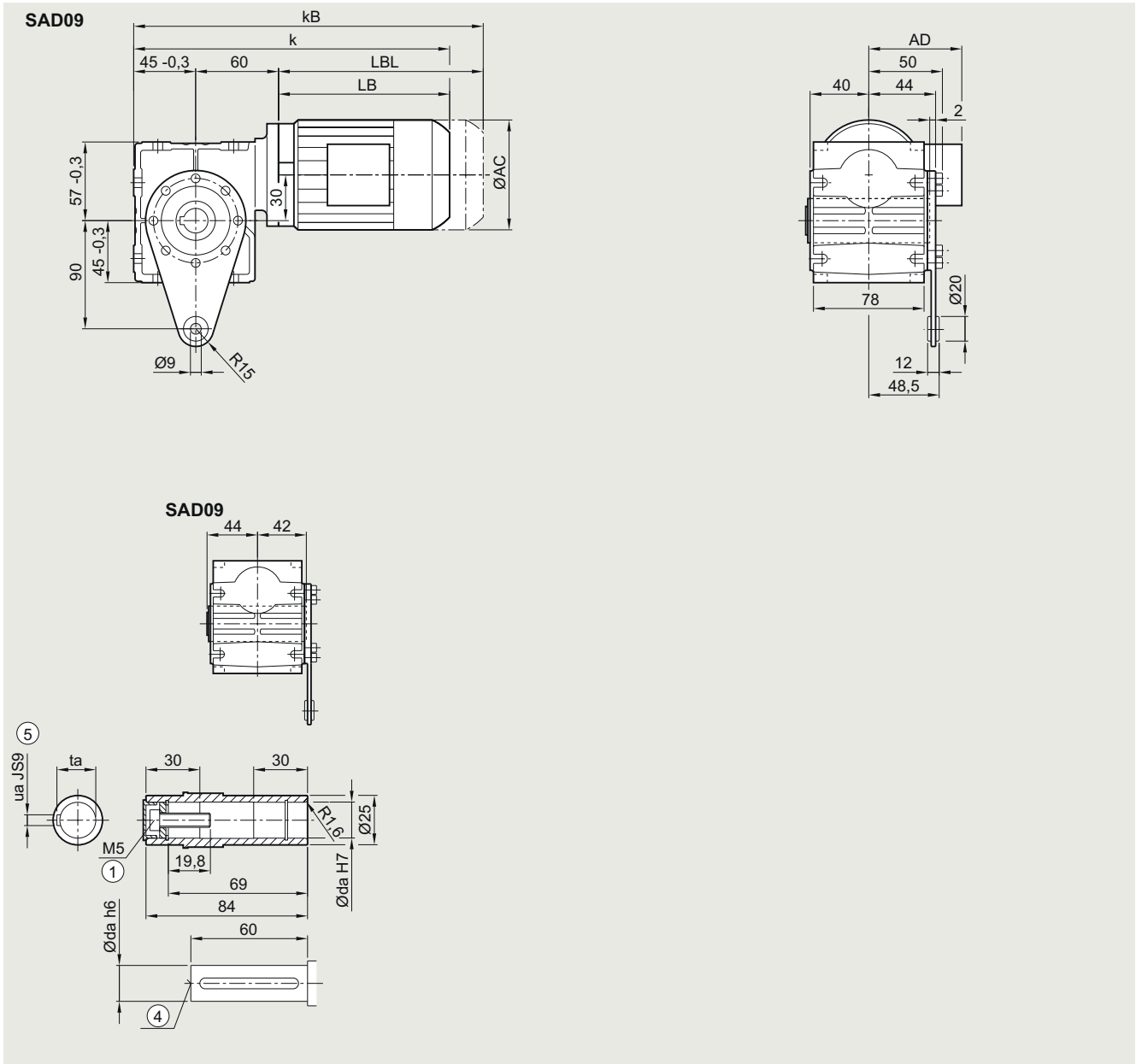
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

⑥ Solid shaft with 2nd shaft extension only d16

**Gearbox SAD09 in a shaft-mounted design**

**SAD031**



Hollow shaft	da	ua	ta			
	14	5	16.3			
	16	5	18.3			
Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL
LEI63	117.8	101	284.5	335.5	179.5	230.5
LEI63Z	117.8	101	310.5	361.5	205.5	256.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

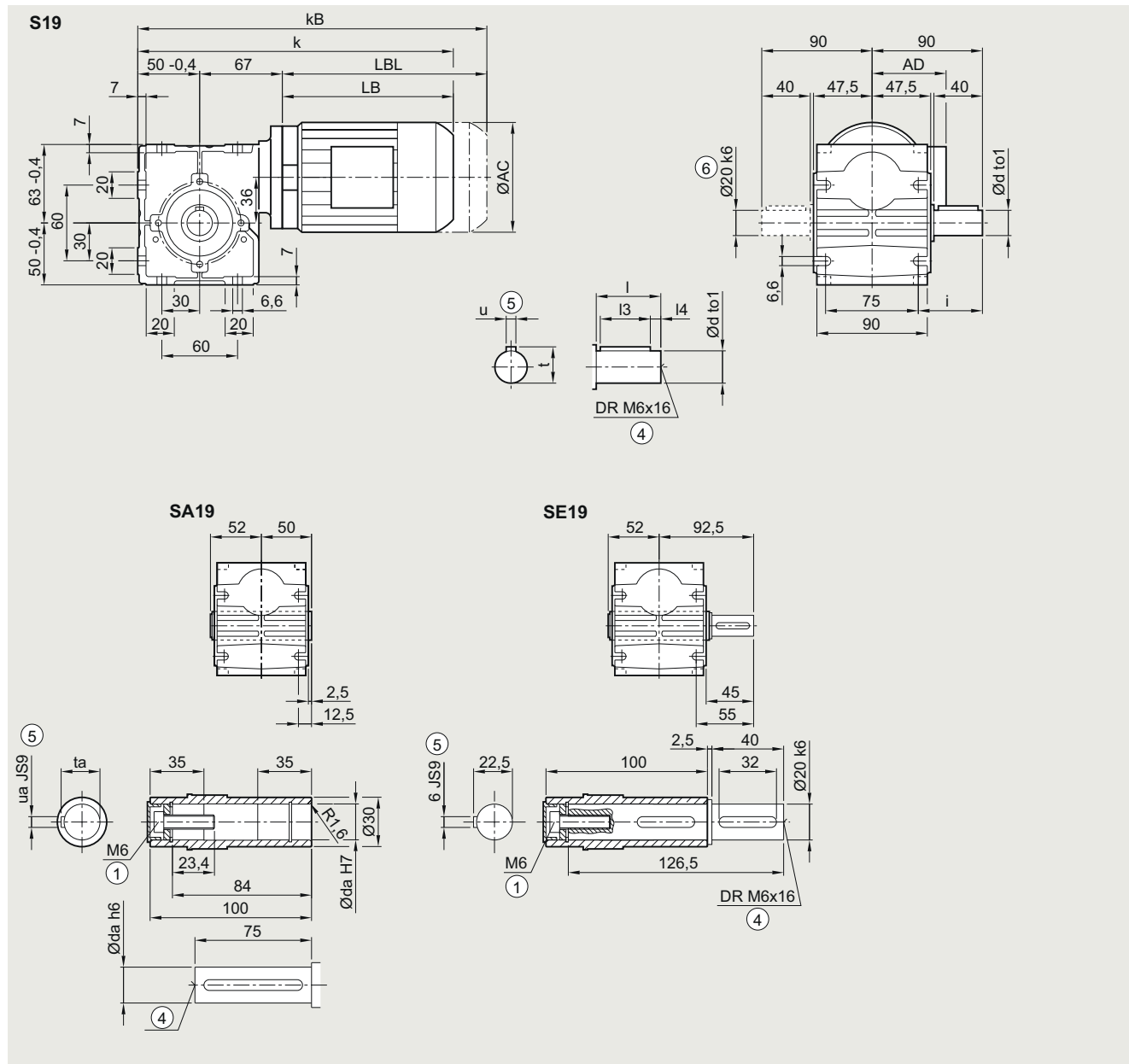
# SIMOGEAR geared motors

Worm geared motors

## Dimensional drawings

### Gearbox S.19 in a foot-mounted design

S031, SA031, SE031



Solid shaft	d	to1	l	l3	l4	i	u	t	Hollow shaft	da	ua	ta
	18	k6	40	32	4	52.5	6	20.5		18	6	20.8
20	k6	40	32	4	52.5	6	22.5	20	6	22.8		
Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL						
LEI63	117.8	101	296.5	347.5	179.5	230.5						
LEI63Z	117.8	101	322.5	373.5	205.5	256.5						
LEI71	138.8	111	327.0	378.5	210.0	261.5						
LEI71Z	138.8	111	343.5	398.5	226.5	281.5						
LEI71Y	138.8	111	383.5	438.5	266.5	321.5						

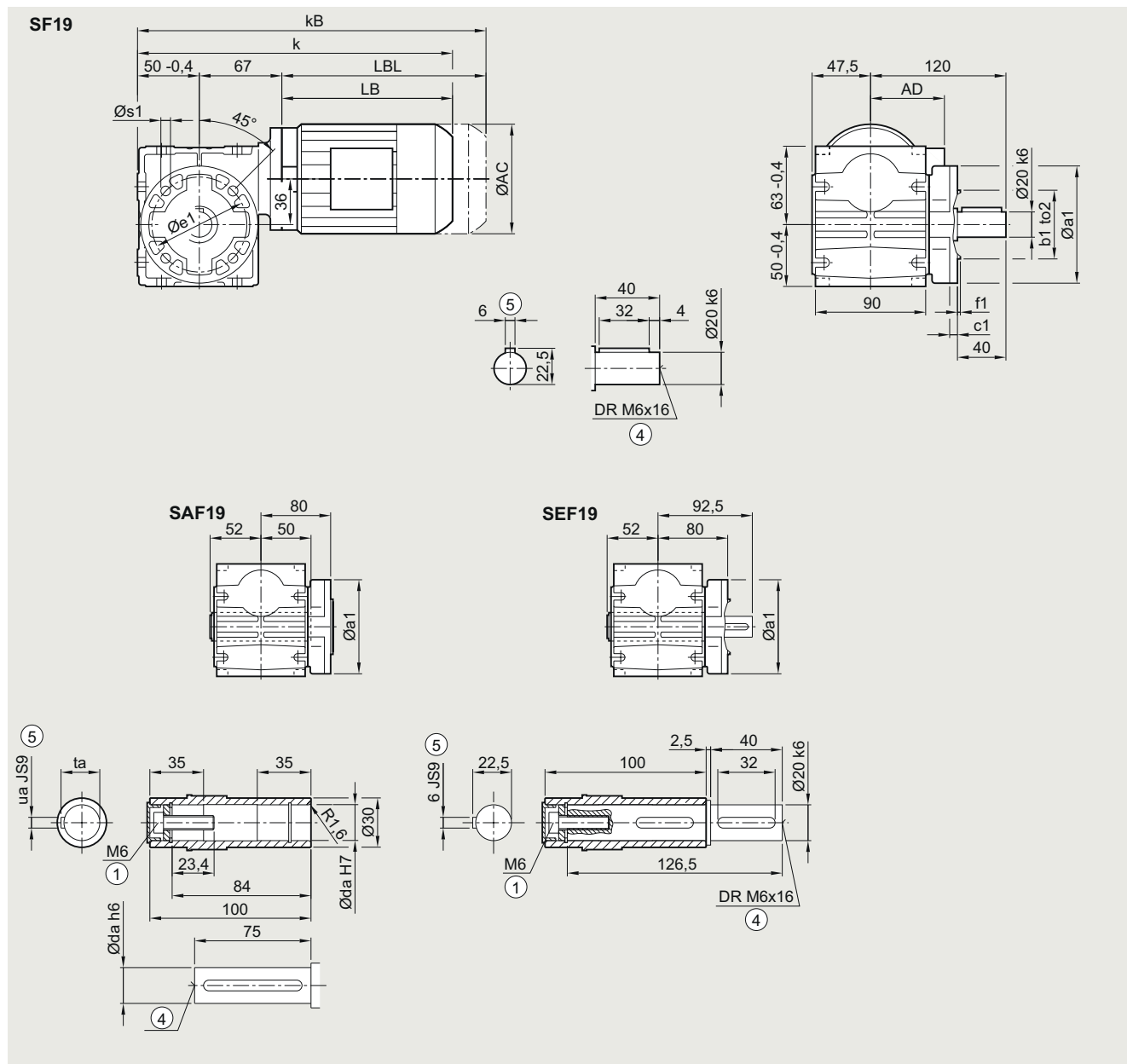
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

⑥ Solid shaft with 2nd shaft extension only d20

**Gearbox S.F19 in a flange-mounted design**
**SF031, SAF031, SEF031**


Hollow shaft	da	ua	ta				
	18	6	20.8				
	20	6	22.8				
Flange	a1	e1	b1	to2	c1	f1	s1
	110	87	60	H8	8	4.0	9
	120	100	80	j6	8	3.0	6.6
Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL	
LEI63	117.8	101	296.5	347.5	179.5	230.5	
LEI63Z	117.8	101	322.5	373.5	205.5	256.5	
LEI71	138.8	111	327.0	378.5	210	261.5	
LEI71Z	138.8	111	343.5	398.5	226.5	281.5	
LEI71Y	138.8	111	383.5	438.5	266.5	321.5	

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

1) AD depends on the motor options, for other dimensions, see page 9/53.

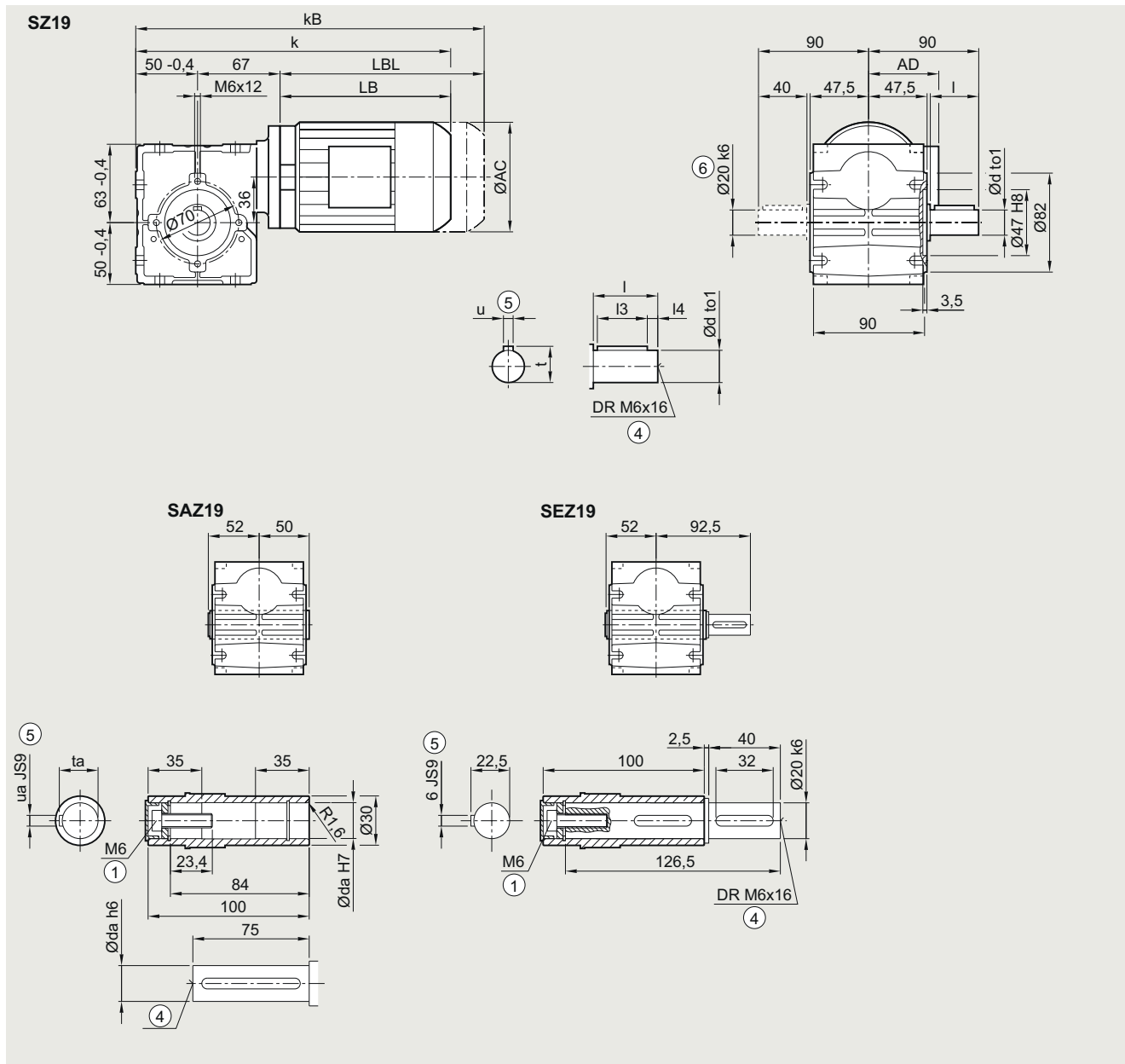
# SIMOGEAR geared motors

Worm geared motors

## Dimensional drawings

### Gearbox S.Z19 in a housing flange design

SZ031, SAZ031, SEZ031



Solid shaft	d	to1	l	l3	l4	u	t	Hollow shaft	da	ua	ta
	18	k6	40	31	4	6	20.5		18	6	20.8
20	k6	40	32	4	6	22.5	20	6	22.8		

Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL
LEI63	117.8	101	296.5	347.5	179.5	230.5
LEI63Z	117.8	101	322.5	373.5	205.5	256.5
LEI71	138.8	111	327.0	378.5	210	261.5
LEI71Z	138.8	111	343.5	398.5	226.5	281.5
LEI71Y	138.8	111	383.5	438.5	266.5	321.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

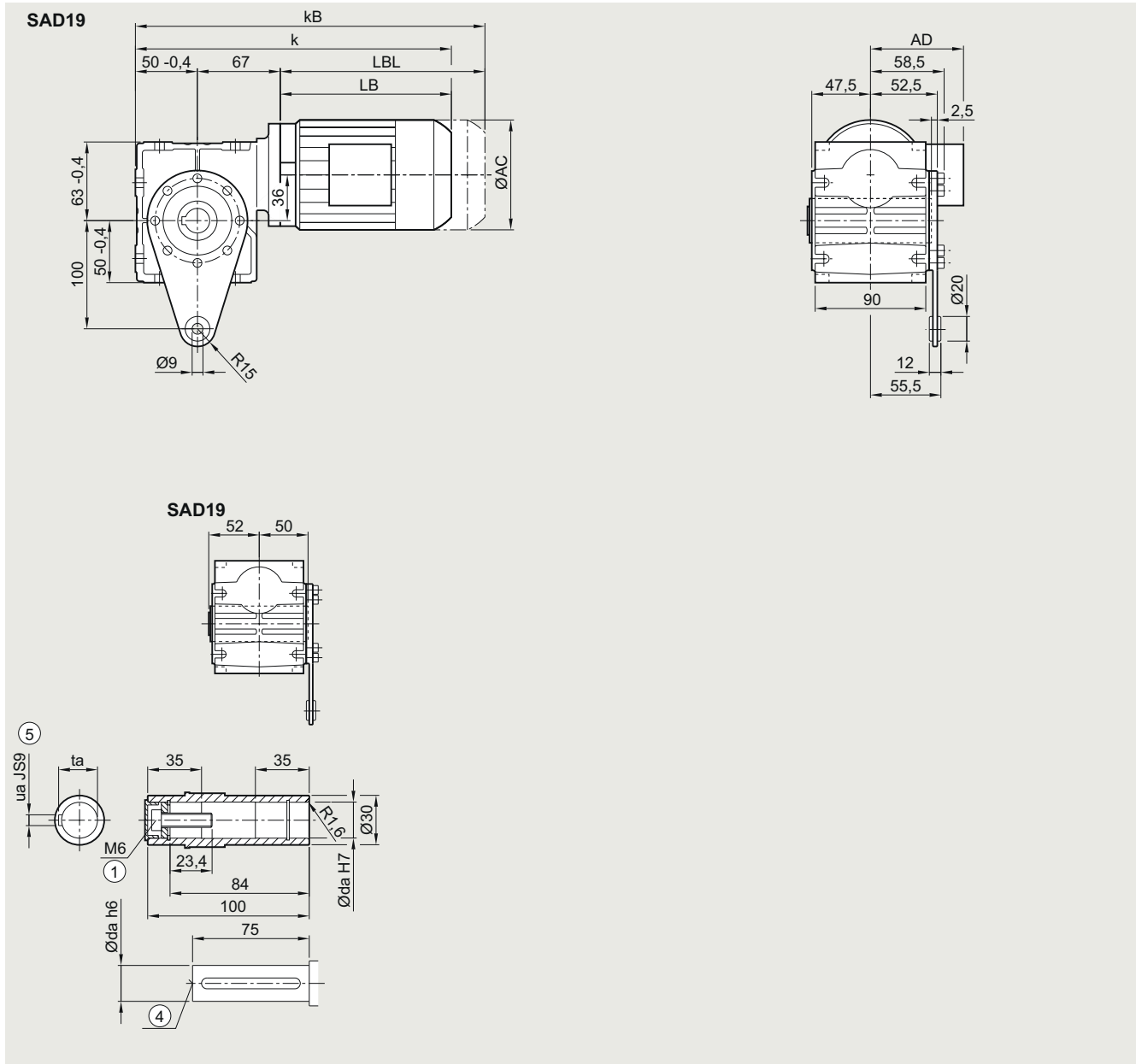
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

⑥ Solid shaft with 2nd shaft extension only d20



**Gearbox SAD19 in a shaft-mounted design**

**SAD031**



Hollow shaft	da	ua	ta
	18	6	20.8
	20	6	22.8

Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL
LEI63	117.8	101	296.5	347.5	179.5	230.5
LEI63Z	117.8	101	322.5	373.5	205.5	256.5
LEI71	138.8	111	327.0	378.5	210.0	261.5
LEI71Z	138.8	111	343.5	398.5	226.5	281.5
LEI71Y	138.8	111	383.5	438.5	266.5	321.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

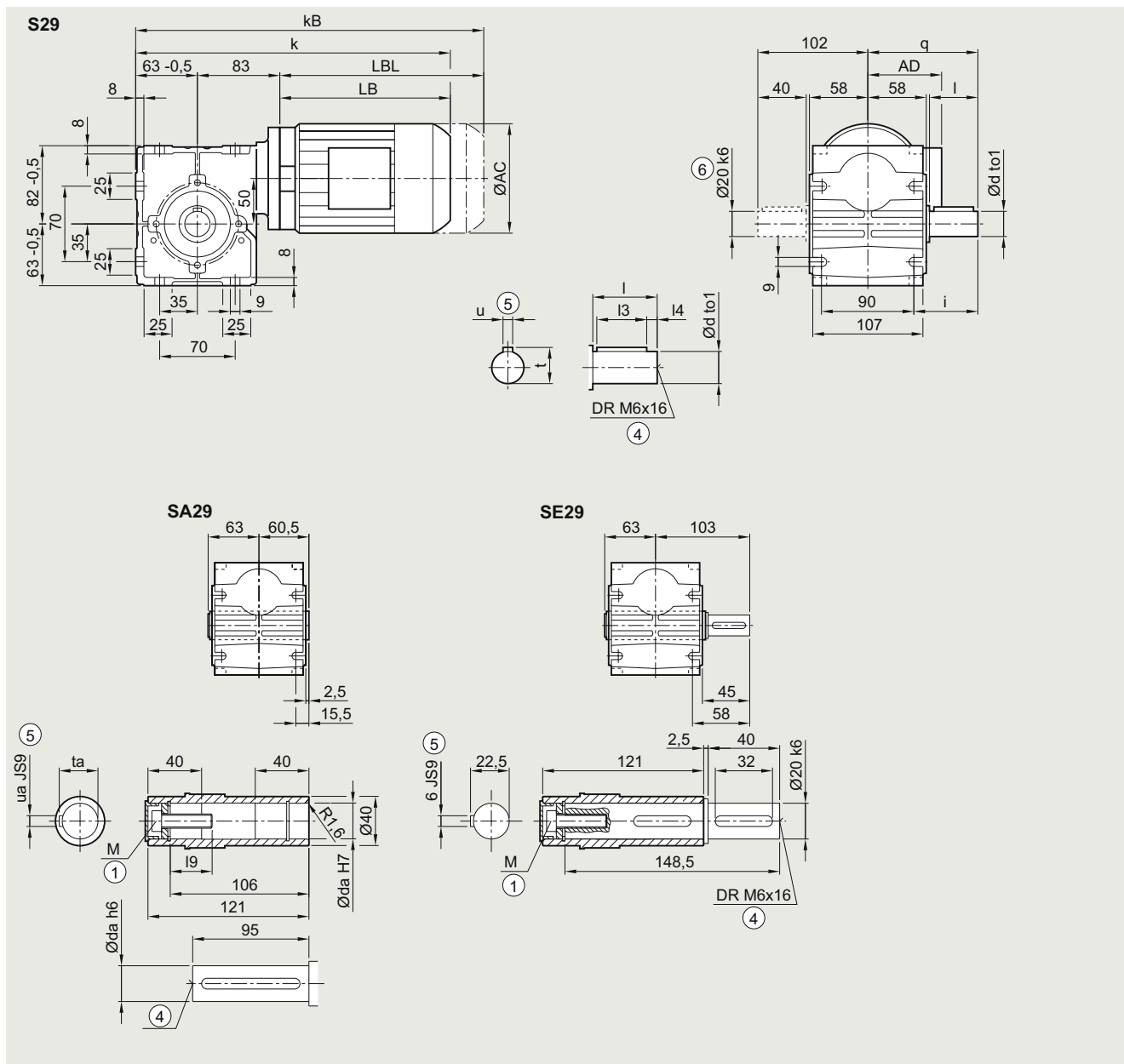
# SIMOGEAR geared motors

## Worm geared motors

### Dimensional drawings

#### Gearbox S.29 in a foot-mounted design

S031, SA031, SE031



Solid shaft	d	to1	l	l3	l4	u	t	q	i	Hollow shaft	da	ua	ta	l9	M
	20	k6	40	32	4	6	22.5	102	57		20	6	22.8	23.4	M6
	25	k6	50	40	5	8	28.0	112	67		25	8	28.3	32.6	M10
Motor	AC	AD	k	kB	LB	LBL									
LEI63	117.8	101	325.5	376.5	179.5	230.5									
LEI63Z	117.8	101	351.5	402.5	205.5	256.5									
LEI71	138.8	111	356.5	407.5	210.5	261.5									
LEI71Z	138.8	111	372.5	427.5	226.5	281.5									
LEI71Y	138.8	111	412.5	467.5	266.5	321.5									

① ISO 4014

④ DIN 332

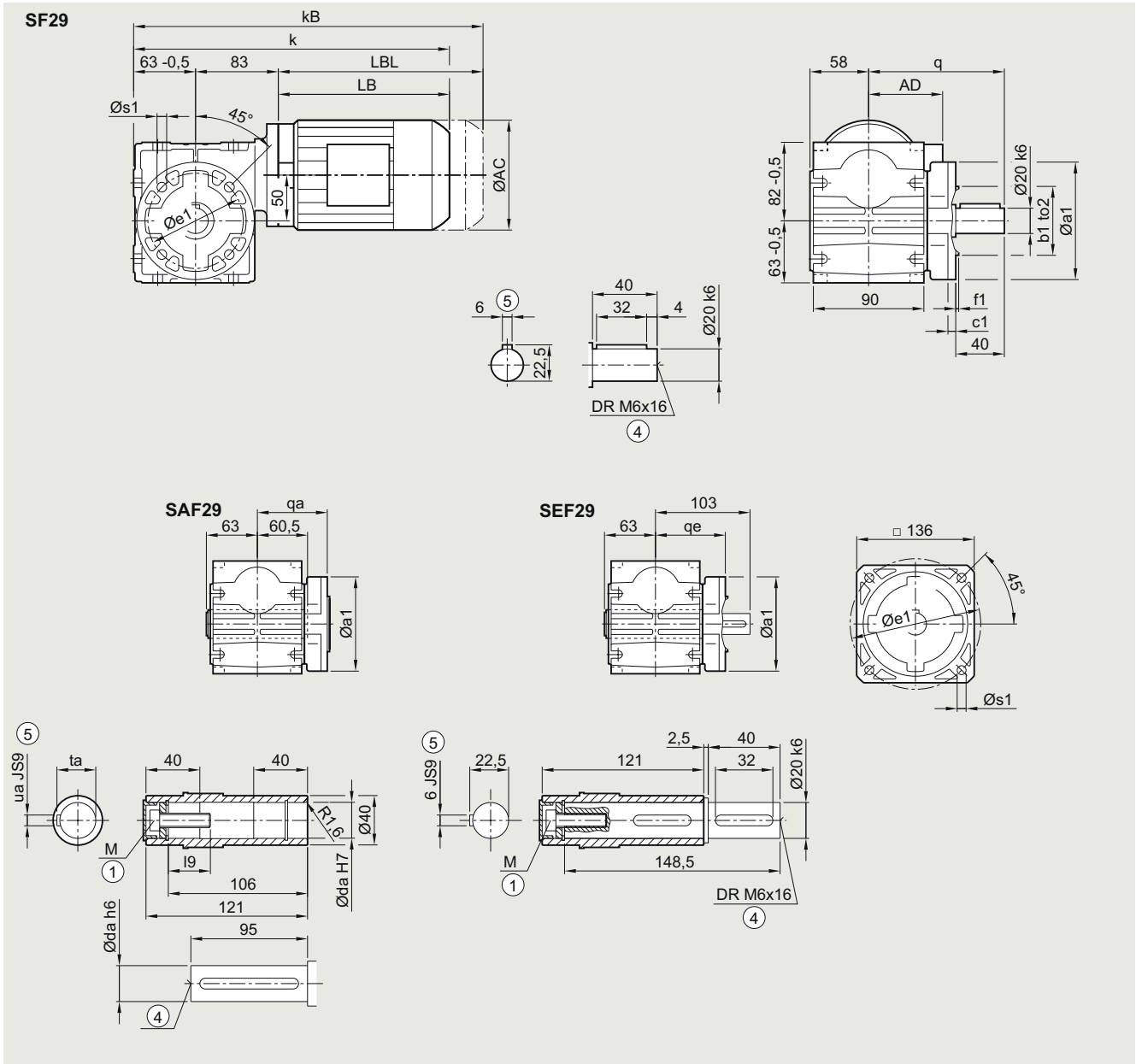
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

⑥ Solid shaft with 2nd shaft extension only d20

**Gearbox S.F29 in a flange-mounted design**

**SF031, SAF031, SEF031**



Hollow shaft	da	ua	ta	I9	M				
	20	6	22.8	23.4	M6				
	25	8	28.3	32.6	M10				
Flange	a1	e1	b1	to2	c1	f1	s1	q	qa / qe
	120	100	80	j6	8	3.0	6.6	120	80
	160	130	110	j6	8	3.5	9.0	135	85
Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL			
LEI63	117.8	101	325.5	376.5	179.5	230.5			
LEI63Z	117.8	101	351.5	402.5	205.5	256.5			
LEI71	138.8	111	356.5	407.5	210.5	261.5			
LEI71Z	138.8	111	372.5	427.5	226.5	281.5			
LEI71Y	138.8	111	412.5	467.5	266.5	321.5			

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

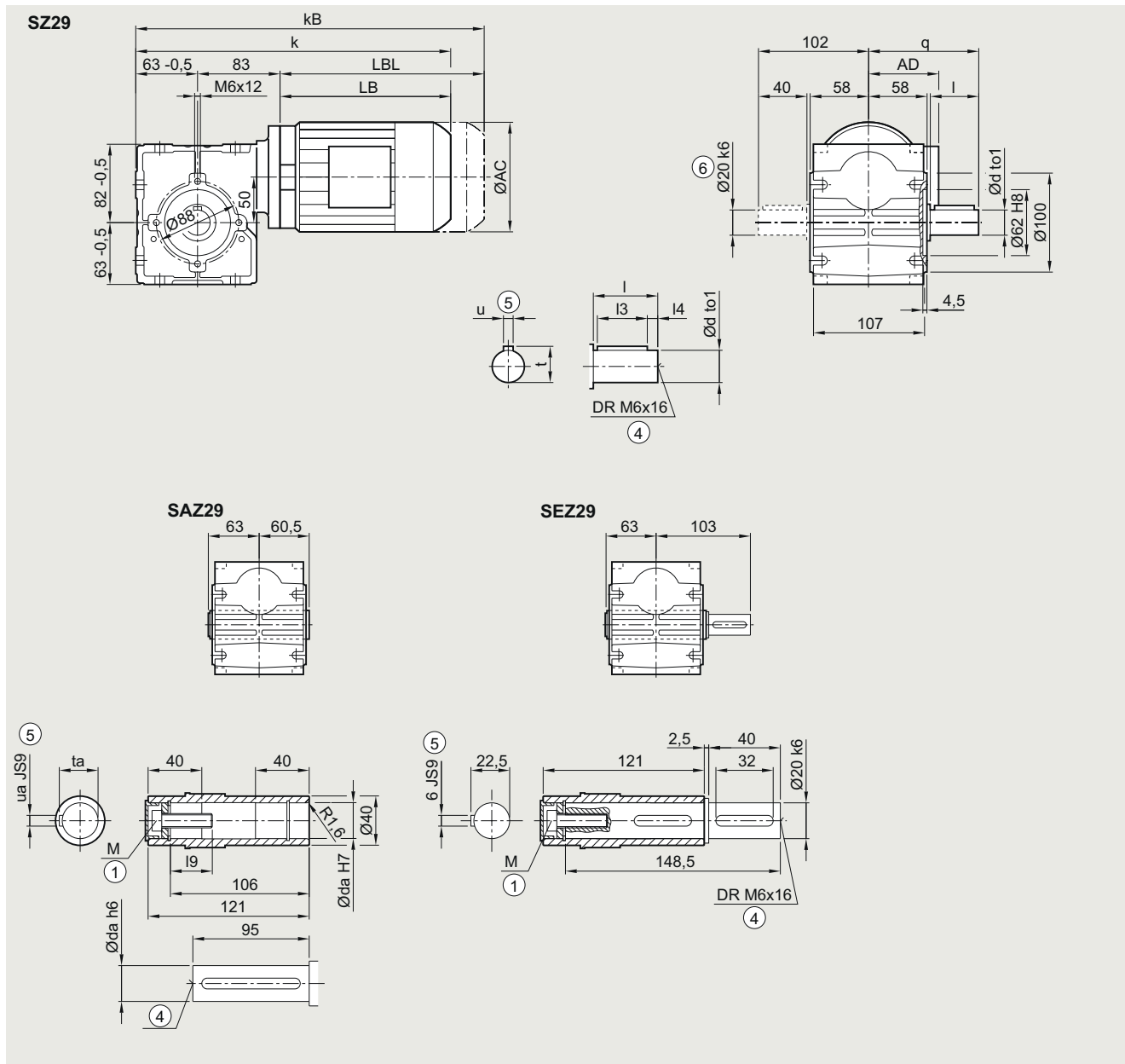
# SIMOGEAR geared motors

Worm geared motors

## Dimensional drawings

### Gearbox S.Z29 in a housing flange design

SZ031, SAZ031, SEZ031



Solid shaft	d	to1	l	l3	l4	u	t	q	Hollow shaft	da	ua	ta	l9	M
		20	k6	40	32	4	6	22.5		102		20	6	22.8
	25	k6	50	40	5	8	28.0	112		25	8	28.3	32.6	M10
Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL								
LEI63	117.8	101	325.5	376.5	179.5	230.5								
LEI63Z	117.8	101	351.5	402.5	205.5	256.5								
LEI71	138.8	111	356.5	407.5	210.5	261.5								
LEI71Z	138.8	111	372.5	427.5	226.5	281.5								
LEI71Y	138.8	111	412.5	467.5	266.5	321.5								

① ISO 4014

④ DIN 332

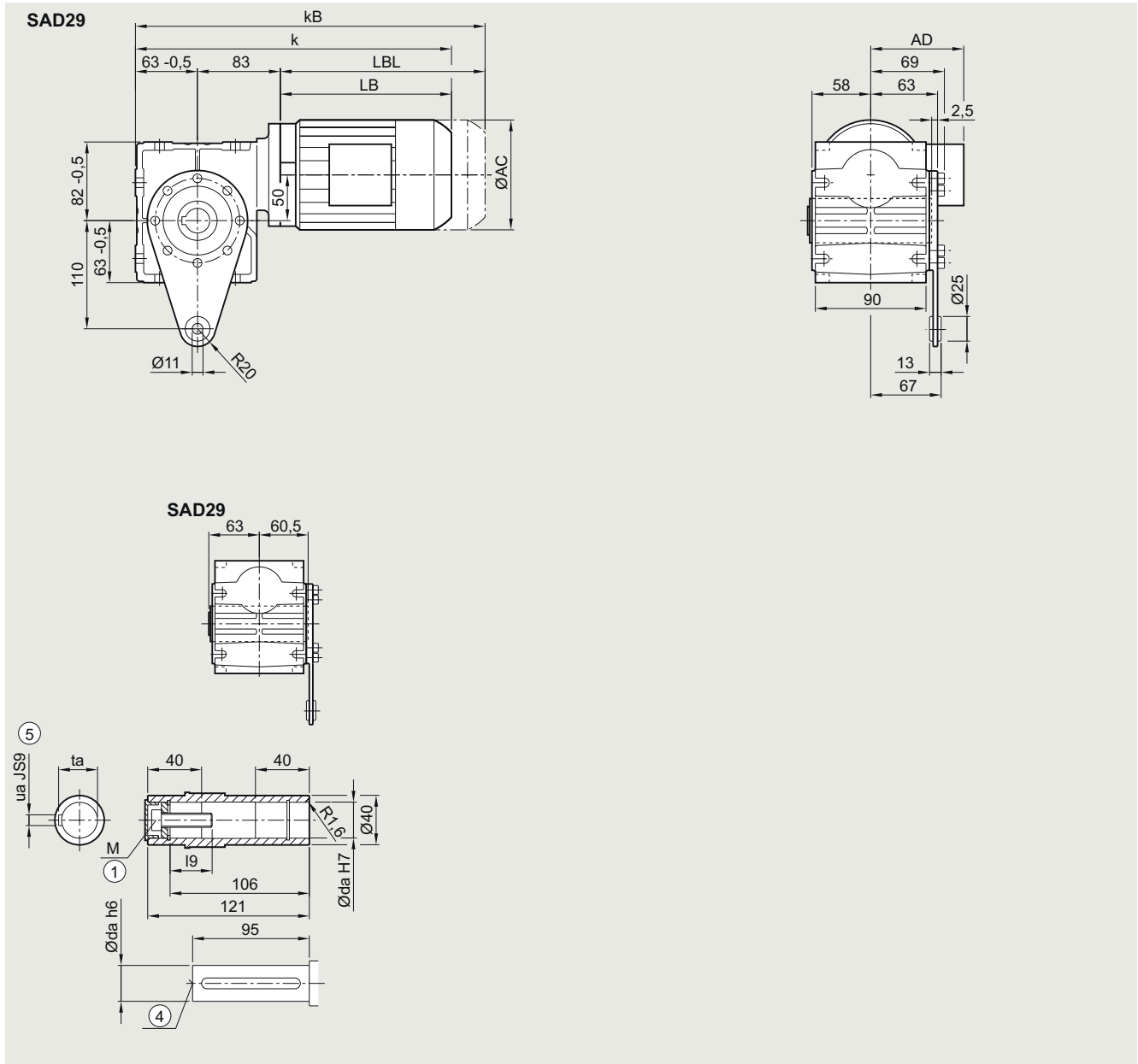
⑤ Feather key/keyway DIN 6885-1

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

⑥ Solid shaft with 2nd shaft extension only d20

**Gearbox SAD29 in a shaft-mounted design**

**SAD031**



Hollow shaft	da	ua	ta	I9	M
	20	6	22.8	23.4	M6
	25	8	28.3	32.6	M10

Motor	AC	AD <sup>1)</sup>	k	kB	LB	LBL
LEI63	117.8	101	325.5	376.5	179.5	230.5
LEI63Z	117.8	101	351.5	402.5	205.5	256.5
LEI71	138.8	111	356.5	407.5	210.5	261.5
LEI71Z	138.8	111	372.5	427.5	226.5	281.5
LEI71Y	138.8	111	412.5	467.5	266.5	321.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

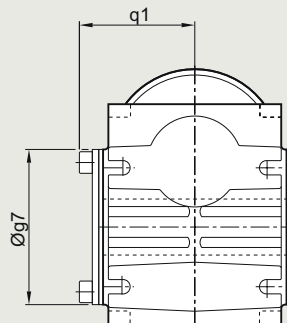
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/53.

**SIMOGEAR geared motors**

Worm geared motors

**Dimensional drawings****Protective cover for hollow shaft**

SA, SAZ, SAF, SE, SEZ



Gearbox type	S.09	S.19	S.29
<b>Protective cover</b>			
g7	72	82	100
q1	51	59.5	70

## Electric-monorail geared motors



<b>8/2</b>	<b>Orientation</b>
<b>8/3</b>	<b>Geared motors up to 3 kW for light-load applications</b>
8/3	Selection and ordering data
<b>8/8</b>	<b>Geared motors up to 7.5 kW for heavy-load applications</b>
8/8	Selection and ordering data
<b>8/16</b>	<b>Transmission ratios and torques for light-load applications</b>
8/16	Selection and ordering data
<b>8/17</b>	<b>Transmission ratios and torques for heavy-load applications</b>
8/17	Selection and ordering data
<b>8/19</b>	<b>Dimensional drawings</b>
8/19	Overview
	<u>Light-load applications</u>
8/20	Bevel gearbox BHZ29
8/21	Bevel gearbox BHZ39
8/22	Bevel gearbox BH39
	<u>Heavy-load applications</u>
8/23	Bevel gearbox KHF49
8/24	Bevel gearbox KHF69
8/25	Bevel gearbox KHF79
8/26	Clutch lever, position B

## SIMOGEAR geared motors

Electric-monorail geared motors

### Orientation

#### SIMOGEAR bevel geared motor BH for light-load applications

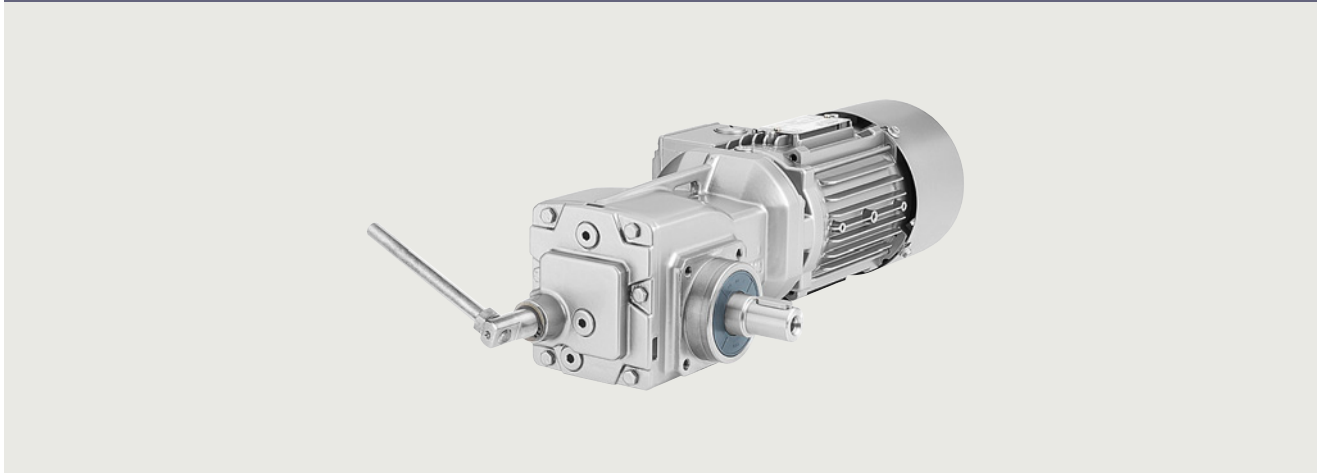


Fig. 8/1 Bevel geared motor BH

#### SIMOGEAR bevel geared motor KH for heavy-load applications

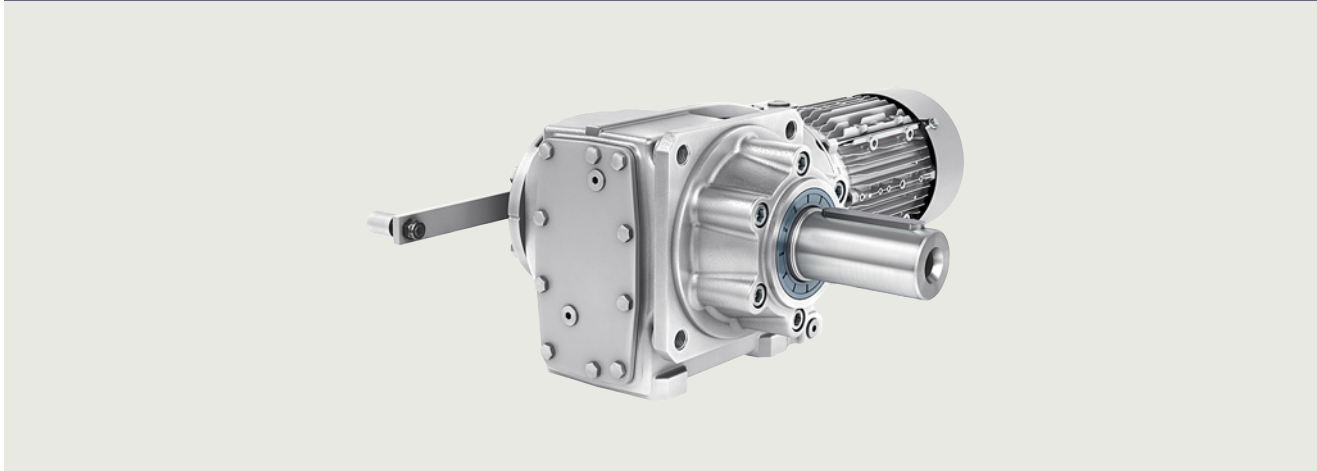


Fig. 8/2 Bevel geared motor KH

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		$T_{2N}$ Nm	$i$ -	$P_1$ kW
BH29 ... BH39 (2-stage)	2	33 ... 116	5.0 ... 100	3
KH49 ... KH79 (3-stage)	3	33 ... 116	5.0 ... 100	7.5

SIMOGEAR electric-monorail geared motors are available in the following versions for mounting in any position:

#### Transmission stages

- 2-stage bevel geared motors for light-load applications
- 3-stage bevel geared motors for heavy-load applications

#### Designs

- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design

#### Mounting

- Solid shaft design with and without feather key



## SIMOGEAR geared motors

### Electric-monorail geared motors for light-load applications

Geared motors up to 3 kW

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}^{1)}$	$F_{R290}^{1)}$	$F_{R2270}^{1)}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles
<b>0.12</b>	<b>BH.29-LE63ZMH4P</b>									
	28	41	50.26	7500	7500	7500	2.2	11	2KJ3803- ■ BD23- ■ ■ R1 -Z -	
	31	37	44.58	7500	7500	7500	2.4	11	2KJ3803- ■ BD23- ■ ■ Q1 -Z -	
	36	32	38.68	7240	7330	7350	2.8	11	2KJ3803- ■ BD23- ■ ■ P1 -Z -	
	40	29	35.16	7030	7110	7130	3.1	11	2KJ3803- ■ BD23- ■ ■ N1 -Z -	
	46	25	30.16	6700	6760	6780	3.6	11	2KJ3803- ■ BD23- ■ ■ M1 -Z -	
	51	23	27.41	6500	6560	6580	4	11	2KJ3803- ■ BD23- ■ ■ L1 -Z -	
	58	20	24.04	6240	6290	6300	4.5	11	2KJ3803- ■ BD23- ■ ■ K1 -Z -	
	65	18	21.45	6020	6060	6070	5.1	11	2KJ3803- ■ BD23- ■ ■ J1 -Z -	
	73	16	19.12	5800	5840	5850	5.7	11	2KJ3803- ■ BD23- ■ ■ H1 -Z -	
	79	15	17.65	5650	5690	5700	6.2	11	2KJ3803- ■ BD23- ■ ■ G1 -Z -	
	90	13	15.45	5410	5450	5460	6.9	11	2KJ3803- ■ BD23- ■ ■ F1 -Z -	
	103	11	13.55	5180	5210	5220	7.5	11	2KJ3803- ■ BD23- ■ ■ E1 -Z -	
	113	10	12.29	5030	5050	5060	8	11	2KJ3803- ■ BD23- ■ ■ D1 -Z -	
	120	9.5	11.57	4930	4950	4960	8.3	11	2KJ3803- ■ BD23- ■ ■ C1 -Z -	
	136	8.4	10.2	4730	4750	4760	9	11	2KJ3803- ■ BD23- ■ ■ B1 -Z -	
	157	7.3	8.85	4520	4540	4540	9.9	11	2KJ3803- ■ BD23- ■ ■ A1 -Z -	
<b>0.18</b>	<b>BH.39-LE71ZMK6P</b>									
	15	117	60.21	15000	15000	15000	1.7	16	2KJ3804- ■ CC23- ■ ■ T1 -Z P01	
	17	101	52.26	15000	15000	15000	2	16	2KJ3804- ■ CC23- ■ ■ S1 -Z P01	
	19	90	46.47	15000	15000	15000	2.2	16	2KJ3804- ■ CC23- ■ ■ R1 -Z P01	
	<b>BH.29-LE71ZMK6P</b>									
	18	98	50.26	7500	7500	7500	0.92	11	2KJ3803- ■ CC23- ■ ■ R1 -Z P01	
	20	87	44.58	7500	7500	7500	1	11	2KJ3803- ■ CC23- ■ ■ Q1 -Z P01	
	23	75	38.68	7500	7500	7500	1.2	11	2KJ3803- ■ CC23- ■ ■ P1 -Z P01	
	25	68	35.16	7500	7500	7500	1.3	11	2KJ3803- ■ CC23- ■ ■ N1 -Z P01	
	<b>BH.29-LE63ZMK4P</b>									
	28	62	50.26	7500	7500	7500	1.5	11	2KJ3803- ■ BE23- ■ ■ R1 -Z -	
	31	55	44.58	7440	7500	7500	1.6	11	2KJ3803- ■ BE23- ■ ■ Q1 -Z -	
	36	48	38.68	7130	7250	7290	1.9	11	2KJ3803- ■ BE23- ■ ■ P1 -Z -	
	40	43	35.16	6930	7040	7070	2.1	11	2KJ3803- ■ BE23- ■ ■ N1 -Z -	
	46	37	30.16	6610	6710	6730	2.4	11	2KJ3803- ■ BE23- ■ ■ M1 -Z -	
	51	34	27.41	6420	6510	6530	2.7	11	2KJ3803- ■ BE23- ■ ■ L1 -Z -	
	58	30	24.04	6160	6240	6260	3	11	2KJ3803- ■ BE23- ■ ■ K1 -Z -	
	65	26	21.45	5950	6020	6040	3.4	11	2KJ3803- ■ BE23- ■ ■ J1 -Z -	
	73	24	19.12	5740	5800	5820	3.8	11	2KJ3803- ■ BE23- ■ ■ H1 -Z -	
	79	22	17.65	5600	5650	5670	4.2	11	2KJ3803- ■ BE23- ■ ■ G1 -Z -	
	91	19	15.45	5360	5410	5430	4.6	11	2KJ3803- ■ BE23- ■ ■ F1 -Z -	
	103	17	13.55	5150	5190	5200	5	11	2KJ3803- ■ BE23- ■ ■ E1 -Z -	
	114	15	12.29	4990	5030	5040	5.4	11	2KJ3803- ■ BE23- ■ ■ D1 -Z -	
	121	14	11.57	4890	4930	4940	5.6	11	2KJ3803- ■ BE23- ■ ■ C1 -Z -	
	137	12	10.2	4700	4730	4740	6.1	11	2KJ3803- ■ BE23- ■ ■ B1 -Z -	
	158	11	8.85	4490	4520	4530	6.6	11	2KJ3803- ■ BE23- ■ ■ A1 -Z -	
<b>0.25</b>	<b>BH.39-LE71YMS6P</b>									
	15	162	60.21	15000	15000	15000	1.2	18	2KJ3804- ■ CE23- ■ ■ T1 -Z P01	
	17	141	52.26	15000	15000	15000	1.4	18	2KJ3804- ■ CE23- ■ ■ S1 -Z P01	

**Article No. supplement**

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Values apply to BH.39 for 30 x 50 solid shaft. For conversion for 25 x 35 solid shaft, [see page 2/15](#).

## SIMOGEAR geared motors

Electric-monorail geared motors for light-load applications

### Geared motors up to 3 kW

#### Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}^{1)}$	$F_{R290}^{1)}$	$F_{R2270}^{1)}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles	
<b>0.25</b>	<b>BH.39-LE71YMS6P</b>										
	19	125	46.47	15000	15000	15000	1.6	18	2KJ3804- ■ CE23- ■ R1 -Z	P01	
	22	110	40.8	15000	15000	15000	1.8	18	2KJ3804- ■ CE23- ■ Q1 -Z	P01	
	<b>BH.39-LE71ZMK4P</b>										
	23	103	60.21	15000	15000	15000	1.9	16	2KJ3804- ■ CC23- ■ T1 -Z	-	
	27	89	52.26	15000	15000	15000	2.2	16	2KJ3804- ■ CC23- ■ S1 -Z	-	
	30	80	46.47	15000	15000	15000	2.5	16	2KJ3804- ■ CC23- ■ R1 -Z	-	
	<b>BH.29-LE71YMS6P</b>										
	23	104	38.68	7500	7500	7500	0.86	13	2KJ3803- ■ CE23- ■ P1 -Z	P01	
	25	95	35.16	7500	7500	7500	0.95	13	2KJ3803- ■ CE23- ■ N1 -Z	P01	
	<b>BH.29-LE71ZMK4P</b>										
	28	86	50.26	7500	7500	7500	1	11	2KJ3803- ■ CC23- ■ R1 -Z	-	
	31	76	44.58	7280	7480	7500	1.2	11	2KJ3803- ■ CC23- ■ Q1 -Z	-	
	36	66	38.68	7000	7170	7210	1.4	11	2KJ3803- ■ CC23- ■ P1 -Z	-	
	40	60	35.16	6810	6960	7000	1.5	11	2KJ3803- ■ CC23- ■ N1 -Z	-	
	46	52	30.16	6510	6640	6680	1.7	11	2KJ3803- ■ CC23- ■ M1 -Z	-	
	51	47	27.41	6330	6450	6480	1.9	11	2KJ3803- ■ CC23- ■ L1 -Z	-	
	58	41	24.04	6080	6190	6220	2.2	11	2KJ3803- ■ CC23- ■ K1 -Z	-	
65	37	21.45	5880	5970	6000	2.5	11	2KJ3803- ■ CC23- ■ J1 -Z	-		
73	33	19.12	5670	5760	5780	2.8	11	2KJ3803- ■ CC23- ■ H1 -Z	-		
79	30	17.65	5540	5610	5640	3	11	2KJ3803- ■ CC23- ■ G1 -Z	-		
90	26	15.45	5320	5380	5400	3.3	11	2KJ3803- ■ CC23- ■ F1 -Z	-		
103	23	13.55	5100	5160	5180	3.6	11	2KJ3803- ■ CC23- ■ E1 -Z	-		
114	21	12.29	4950	5000	5020	3.9	11	2KJ3803- ■ CC23- ■ D1 -Z	-		
121	20	11.57	4860	4910	4920	4	11	2KJ3803- ■ CC23- ■ C1 -Z	-		
137	18	10.2	4670	4710	4720	4.4	11	2KJ3803- ■ CC23- ■ B1 -Z	-		
158	15	8.85	4460	4500	4510	4.8	11	2KJ3803- ■ CC23- ■ A1 -Z	-		
<b>0.37</b>	<b>BH.39-LE80MK6P</b>										
	20	175	46.47	on request			1.1	21	2KJ3804- ■ DE23- ■ R1 -Z	-	
	<b>BH.39-LE71YMS4P</b>										
	23	151	60.21	15000	15000	15000	1.3	18	2KJ3804- ■ CE23- ■ T1 -Z	-	
	27	131	52.26	15000	15000	15000	1.5	18	2KJ3804- ■ CE23- ■ S1 -Z	-	
	30	116	46.47	15000	15000	15000	1.7	18	2KJ3804- ■ CE23- ■ R1 -Z	-	
	35	102	40.8	15000	15000	15000	2	18	2KJ3804- ■ CE23- ■ Q1 -Z	-	
	38	93	37.09	15000	15000	15000	2.2	18	2KJ3804- ■ CE23- ■ P1 -Z	-	
	44	80	31.73	15000	15000	15000	2.5	18	2KJ3804- ■ CE23- ■ N1 -Z	-	
	49	72	28.85	15000	15000	15000	2.8	18	2KJ3804- ■ CE23- ■ M1 -Z	-	
	<b>BH.29-LE71YMS4P</b>										
	32	112	44.58	on request			0.81	13	2KJ3803- ■ CE23- ■ PQ -Z	-	
	36	97	38.68	6740	6980	7040	0.93	13	2KJ3803- ■ CE23- ■ P1 -Z	-	
	40	88	35.16	6570	6790	6850	1	13	2KJ3803- ■ CE23- ■ N1 -Z	-	
	47	76	30.16	6300	6490	6540	1.2	13	2KJ3803- ■ CE23- ■ M1 -Z	-	
	51	69	27.41	6130	6310	6350	1.3	13	2KJ3803- ■ CE23- ■ L1 -Z	-	
	59	60	24.04	5910	6070	6110	1.5	13	2KJ3803- ■ CE23- ■ K1 -Z	-	
	66	54	21.45	5730	5860	5900	1.7	13	2KJ3803- ■ CE23- ■ J1 -Z	-	
74	48	19.12	5540	5660	5690	1.9	13	2KJ3803- ■ CE23- ■ H1 -Z	-		

#### Article No. supplement

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Values apply to BH.39 for 30 x 50 solid shaft. For conversion for 25 x 35 solid shaft, [see page 2/15](#).

# SIMOGEAR geared motors

## Electric-monorail geared motors for light-load applications

Geared motors up to 3 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}^{1)}$	$F_{R290}^{1)}$	$F_{R2270}^{1)}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles	
<b>0.37</b>	<b>BH.29-LE71YMS4P</b>										
	80	44	17.65	5400	5520	5550	2	13	2KJ3803- ■ CE23- ■ ■ G1 -Z -	-	
	91	39	15.45	5200	5300	5320	2.3	13	2KJ3803- ■ CE23- ■ ■ F1 -Z -	-	
	104	34	13.55	5000	5080	5110	2.5	13	2KJ3803- ■ CE23- ■ ■ E1 -Z -	-	
	115	31	12.29	4850	4930	4950	2.6	13	2KJ3803- ■ CE23- ■ ■ D1 -Z -	-	
	122	29	11.57	4760	4840	4860	2.7	13	2KJ3803- ■ CE23- ■ ■ C1 -Z -	-	
	138	26	10.2	4590	4650	4670	3	13	2KJ3803- ■ CE23- ■ ■ B1 -Z -	-	
	159	22	8.85	4390	4440	4460	3.2	13	2KJ3803- ■ CE23- ■ ■ A1 -Z -	-	
<b>0.55</b>	<b>BH.39-LE80MH4P</b>										
	31	169	46.47	15000	15000	15000	1.2	22	2KJ3804- ■ DC23- ■ ■ R1 -Z -	-	
	35	149	40.8	15000	15000	15000	1.3	22	2KJ3804- ■ DC23- ■ ■ Q1 -Z -	-	
	39	135	37.09	15000	15000	15000	1.5	22	2KJ3804- ■ DC23- ■ ■ P1 -Z -	-	
	45	116	31.73	15000	15000	15000	1.7	22	2KJ3804- ■ DC23- ■ ■ N1 -Z -	-	
	50	105	28.85	15000	15000	15000	1.9	22	2KJ3804- ■ DC23- ■ ■ M1 -Z -	-	
	56	93	25.5	15000	15000	15000	2.2	22	2KJ3804- ■ DC23- ■ ■ L1 -Z -	-	
	62	84	23.18	15000	15000	15000	2.4	22	2KJ3804- ■ DC23- ■ ■ K1 -Z -	-	
	71	74	20.31	14600	14800	14900	2.7	22	2KJ3804- ■ DC23- ■ ■ J1 -Z -	-	
	77	68	18.74	14300	14500	14500	2.9	22	2KJ3804- ■ DC23- ■ ■ H1 -Z -	-	
	87	60	16.6	13800	14000	14000	3.3	22	2KJ3804- ■ DC23- ■ ■ G1 -Z -	-	
	<b>BH.29-LE80MB4</b>										
	48	110	30.16	5960	6230	6290	0.82	17	2KJ3803- ■ DC23- ■ ■ M1 -Z -	-	
	53	100	27.41	5820	6070	6120	0.9	17	2KJ3803- ■ DC23- ■ ■ L1 -Z -	-	
	60	88	24.04	5630	5840	5890	1	17	2KJ3803- ■ DC23- ■ ■ K1 -Z -	-	
	67	78	21.45	5460	5660	5700	1.2	17	2KJ3803- ■ DC23- ■ ■ J1 -Z -	-	
	75	70	19.12	5290	5470	5510	1.3	17	2KJ3803- ■ DC23- ■ ■ H1 -Z -	-	
	82	64	17.65	5180	5340	5380	1.4	17	2KJ3803- ■ DC23- ■ ■ G1 -Z -	-	
93	56	15.45	4990	5130	5170	1.6	17	2KJ3803- ■ DC23- ■ ■ F1 -Z -	-		
106	49	13.55	4810	4930	4970	1.7	17	2KJ3803- ■ DC23- ■ ■ E1 -Z -	-		
117	45	12.29	4680	4790	4820	1.8	17	2KJ3803- ■ DC23- ■ ■ D1 -Z -	-		
124	42	11.57	4600	4700	4730	1.9	17	2KJ3803- ■ DC23- ■ ■ C1 -Z -	-		
141	37	10.2	4430	4520	4550	2	17	2KJ3803- ■ DC23- ■ ■ B1 -Z -	-		
163	32	8.85	4250	4330	4350	2.2	17	2KJ3803- ■ DC23- ■ ■ A1 -Z -	-		
<b>0.75</b>	<b>BH.39-LE80ZMQ4P</b>										
	31	230	46.47	14800	15000	15000	0.87	21	2KJ3804- ■ DF23- ■ ■ R1 -Z -	-	
	36	200	40.8	15000	15000	15000	0.99	21	2KJ3804- ■ DF23- ■ ■ Q1 -Z -	-	
	39	183	37.09	15000	15000	15000	1.1	21	2KJ3804- ■ DF23- ■ ■ P1 -Z -	-	
	46	157	31.73	15000	15000	15000	1.3	21	2KJ3804- ■ DF23- ■ ■ N1 -Z -	-	
	50	142	28.85	15000	15000	15000	1.4	21	2KJ3804- ■ DF23- ■ ■ M1 -Z -	-	
	57	126	25.5	15000	15000	15000	1.6	21	2KJ3804- ■ DF23- ■ ■ L1 -Z -	-	
	63	114	23.18	15000	15000	15000	1.7	21	2KJ3804- ■ DF23- ■ ■ K1 -Z -	-	
	71	100	20.31	14500	14700	14800	2	21	2KJ3804- ■ DF23- ■ ■ J1 -Z -	-	
	77	93	18.74	14100	14400	14400	2.2	21	2KJ3804- ■ DF23- ■ ■ H1 -Z -	-	
	87	82	16.6	13700	13900	13900	2.4	21	2KJ3804- ■ DF23- ■ ■ G1 -Z -	-	
	105	68	13.81	13000	13200	13200	2.9	21	2KJ3804- ■ DF23- ■ ■ F1 -Z -	-	
	112	64	13	12800	13000	13000	3.1	21	2KJ3804- ■ DF23- ■ ■ E1 -Z -	-	
	124	58	11.65	12400	12600	12600	3.5	21	2KJ3804- ■ DF23- ■ ■ D1 -Z -	-	

## Article No. supplement

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

<sup>1)</sup> Values apply to BH.39 for 30 x 50 solid shaft. For conversion for 25 x 35 solid shaft, [see page 2/15](#).

## SIMOGEAR geared motors

Electric-monorail geared motors for light-load applications

### Geared motors up to 3 kW

#### Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}^{1)}$	$F_{R290}^{1)}$	$F_{R2270}^{1)}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code		
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles		
<b>0.75</b>	<b>BH.29-LE80ZMQ4P</b>											
	68	106	21.45	5260	5520	5580	0.85	16	2KJ3803- DF23- J1 -Z -	-		
	76	94	19.12	5120	5350	5400	0.95	16	2KJ3803- DF23- H1 -Z -	-		
	82	87	17.65	5020	5230	5280	1	16	2KJ3803- DF23- G1 -Z -	-		
	94	76	15.45	4850	5040	5080	1.2	16	2KJ3803- DF23- F1 -Z -	-		
	107	67	13.55	4690	4850	4890	1.3	16	2KJ3803- DF23- E1 -Z -	-		
	118	61	12.29	4560	4710	4750	1.3	16	2KJ3803- DF23- D1 -Z -	-		
	125	57	11.57	4490	4630	4660	1.4	16	2KJ3803- DF23- C1 -Z -	-		
	142	50	10.2	4330	4460	4490	1.5	16	2KJ3803- DF23- B1 -Z -	-		
164	44	8.85	4160	4270	4300	1.6	16	2KJ3803- DF23- A1 -Z -	-			
<b>1.1</b>	<b>BH.39-LE90SM4P</b>											
	45	230	31.73	14800	15000	15000	0.86	23	2KJ3804- EK23- N1 -Z -	-		
	50	210	28.85	14900	15000	15000	0.95	23	2KJ3804- EK23- M1 -Z -	-		
	56	186	25.5	15000	15000	15000	1.1	23	2KJ3804- EK23- L1 -Z -	-		
	62	169	23.18	14600	15000	15000	1.2	23	2KJ3804- EK23- K1 -Z -	-		
	71	148	20.31	14200	14500	14600	1.3	23	2KJ3804- EK23- J1 -Z -	-		
	77	137	18.74	13900	14200	14300	1.5	23	2KJ3804- EK23- H1 -Z -	-		
	87	121	16.6	13500	13700	13800	1.7	23	2KJ3804- EK23- G1 -Z -	-		
	104	101	13.81	12800	13100	13100	2	23	2KJ3804- EK23- F1 -Z -	-		
	111	95	13	12600	12800	12900	2.1	23	2KJ3804- EK23- E1 -Z -	-		
	124	85	11.65	12300	12500	12500	2.4	23	2KJ3804- EK23- D1 -Z -	-		
	145	72	9.92	11700	11900	12000	2.8	23	2KJ3804- EK23- C1 -Z -	-		
	169	62	8.5	11300	11400	11400	3.2	23	2KJ3804- EK23- B1 -Z -	-		
	197	53	7.32	10800	10900	11000	3.7	23	2KJ3804- EK23- A1 -Z -	-		
	<b>1.5</b>	<b>BH.29-LE90SM4P</b>										
		106	99	13.55	4470	4720	4770	0.85	18	2KJ3803- EK23- E1 -Z -	-	
		117	90	12.29	4370	4590	4640	0.9	18	2KJ3803- EK23- D1 -Z -	-	
		124	84	11.57	4310	4520	4570	0.94	18	2KJ3803- EK23- C1 -Z -	-	
141		74	10.2	4180	4360	4410	1	18	2KJ3803- EK23- B1 -Z -	-		
163		65	8.85	4030	4190	4230	1.1	18	2KJ3803- EK23- A1 -Z -	-		
<b>1.5</b>		<b>BH.39-LE90ZLR4P</b>										
	62	230	23.18	14200	14700	14800	0.87	26	2KJ3804- EM23- K1 -Z -	-		
	71	200	20.31	13800	14200	14400	0.99	26	2KJ3804- EM23- J1 -Z -	-		
	77	186	18.74	13500	13900	14000	1.1	26	2KJ3804- EM23- H1 -Z -	-		
	87	165	16.6	13100	13500	13600	1.2	26	2KJ3804- EM23- G1 -Z -	-		
	105	137	13.81	12600	12900	13000	1.5	26	2KJ3804- EM23- F1 -Z -	-		
	111	129	13	12400	12700	12700	1.6	26	2KJ3804- EM23- E1 -Z -	-		
	124	115	11.65	12000	12300	12400	1.7	26	2KJ3804- EM23- D1 -Z -	-		
	146	98	9.92	11500	11800	11800	2	26	2KJ3804- EM23- C1 -Z -	-		
	170	84	8.5	11100	11300	11300	2.4	26	2KJ3804- EM23- B1 -Z -	-		
	197	73	7.32	10600	10800	10900	2.8	26	2KJ3804- EM23- A1 -Z -	-		
	<b>2.2</b>	<b>BH.29-LE90ZLR4P</b>										
		163	88	8.85	3860	4080	4120	0.82	21	2KJ3803- EM23- A1 -Z -	-	
<b>2.2</b>	<b>BH.39-LE100ZLSA4P</b>											
	88	235	16.6	12600	13100	13200	0.84	41	2KJ3804- FN23- G1 -Z -	-		
	106	198	13.81	12100	12500	12600	1	41	2KJ3804- FN23- F1 -Z -	-		

#### Article No. supplement

Shaft design **1, 2 or 9** [see page 10/51](#)

Frequency and voltage **2 or 9** [see page 11/2](#)

Gearbox mounting type **A, F or H** [see page 10/42](#)

<sup>1)</sup> Values apply to BH.39 for 30 x 50 solid shaft. For conversion for 25 x 35 solid shaft, [see page 2/15](#).

## SIMOGEAR geared motors

Electric-monorail geared motors for light-load applications

Geared motors up to 3 kW

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}^{1)}$	$F_{R290}^{1)}$	$F_{R2270}^{1)}$	$f_B$	m	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles	
<b>2.2</b>	<b>BH.39-LE100ZLSA4P</b>										
	113	186	13	11900	12300	12400	1.1	41	<b>2KJ3804-</b> ■ <b>FN23-</b> ■ ■ <b>E1</b> <b>-Z</b> -		
	126	167	11.65	11600	12000	12100	1.2	41	<b>2KJ3804-</b> ■ <b>FN23-</b> ■ ■ <b>D1</b> <b>-Z</b> -		
	148	142	9.92	11200	11500	11600	1.4	41	<b>2KJ3804-</b> ■ <b>FN23-</b> ■ ■ <b>C1</b> <b>-Z</b> -		
	172	122	8.5	10800	11100	11100	1.6	41	<b>2KJ3804-</b> ■ <b>FN23-</b> ■ ■ <b>B1</b> <b>-Z</b> -		
200	105	7.32	10400	10600	10700	1.9	41	<b>2KJ3804-</b> ■ <b>FN23-</b> ■ ■ <b>A1</b> <b>-Z</b> -			
<b>3</b>	<b>BH.39-LE100ZLSB4P</b>										
	125	225	11.65	11200	11700	11800	0.87	41	<b>2KJ3804-</b> ■ <b>FP23-</b> ■ ■ <b>D1</b> <b>-Z</b> -		
	147	195	9.92	10800	11300	11400	1	41	<b>2KJ3804-</b> ■ <b>FP23-</b> ■ ■ <b>C1</b> <b>-Z</b> -		
	172	167	8.5	10500	10900	10900	1.2	41	<b>2KJ3804-</b> ■ <b>FP23-</b> ■ ■ <b>B1</b> <b>-Z</b> -		
199	144	7.32	10100	10400	10500	1.4	41	<b>2KJ3804-</b> ■ <b>FP23-</b> ■ ■ <b>A1</b> <b>-Z</b> -			

**Article No. supplement**Shaft design **1, 2 or 9** [see page 10/51](#)Frequency and voltage **2 or 9** [see page 11/2](#)Gearbox mounting type **A, F or H** [see page 10/42](#)<sup>1)</sup> Values apply to BH.39 for 30 x 50 solid shaft. For conversion for 25 x 35 solid shaft, [see page 2/15](#).

## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$ kW	$n_2$ rpm	$T_2$ Nm	$i$ -	$F_{R2}$ N	$F_{R290}$ N	$F_{R2270}$ N	$f_B$ -	$m$ kg	Article No. (Article No. supplement → below)	Additional identification code -Z with order code No. of poles		
<b>0.18</b>	<b>KH.79-LE71ZMK6P</b>											
	3.6	470	244.25	on request			1.7	52	2KJ3808- ■ CC23- ■■ D2 -Z	P01		
	4	430	222.05	on request			1.9	52	2KJ3808- ■ CC23- ■■ C2 -Z	P01		
	<b>KH.69-LE71ZMK6P</b>											
	4.5	380	196.59	on request			1.6	45	2KJ3807- ■ CC23- ■■ C2 -Z	P01		
	5	345	178.72	on request			1.7	45	2KJ3807- ■ CC23- ■■ B2 -Z	P01		
	5.8	295	152	on request			2	45	2KJ3807- ■ CC23- ■■ A2 -Z	P01		
	<b>KH.49-LE71ZMK6P</b>											
	4.4	385	200.25	on request			1.1	22	2KJ3806- ■ CC23- ■■ C2 -Z	P01		
	5	345	178.06	on request			1.2	22	2KJ3806- ■ CC23- ■■ B2 -Z	P01		
	5.7	300	156.34	on request			1.4	22	2KJ3806- ■ CC23- ■■ A2 -Z	P01		
	6.2	275	142.13	on request			1.5	22	2KJ3806- ■ CC23- ■■ X1 -Z	P01		
	<b>KH.49-LE63ZMK4P</b>											
	7	245	200.25	on request			1.7	22	2KJ3806- ■ BE23- ■■ C2 -Z	-		
	7.9	215	178.06	on request			1.9	22	2KJ3806- ■ BE23- ■■ B2 -Z	-		
	<b>0.25</b>	<b>KH.79-LE71YMS6P</b>										
		3.6	655	244.25	on request			1.2	54	2KJ3808- ■ CE23- ■■ D2 -Z	P01	
		4	595	222.05	on request			1.4	54	2KJ3808- ■ CE23- ■■ C2 -Z	P01	
		4.7	505	188.85	on request			1.6	54	2KJ3808- ■ CE23- ■■ B2 -Z	P01	
5.2		460	171.69	on request			1.8	54	2KJ3808- ■ CE23- ■■ A2 -Z	P01		
<b>KH.79-LE71ZMK4P</b>												
5.7		415	244.25	on request			2	52	2KJ3808- ■ CC23- ■■ D2 -Z	-		
<b>KH.69-LE71YMS6P</b>												
4.5		530	196.59	on request			1.1	47	2KJ3807- ■ CE23- ■■ C2 -Z	P01		
5		480	178.72	on request			1.2	47	2KJ3807- ■ CE23- ■■ B2 -Z	P01		
5.8		410	152	on request			1.5	47	2KJ3807- ■ CE23- ■■ A2 -Z	P01		
6.4		370	138.18	on request			1.6	47	2KJ3807- ■ CE23- ■■ X1 -Z	P01		
<b>KH.69-LE71ZMK4P</b>												
7.1		335	196.59	on request			1.8	45	2KJ3807- ■ CC23- ■■ C2 -Z	-		
7.8		305	178.72	on request			2	45	2KJ3807- ■ CC23- ■■ B2 -Z	-		
<b>KH.49-LE71YMS6P</b>												
5		480	178.06	on request			0.87	24	2KJ3806- ■ CE23- ■■ B2 -Z	P01		
5.7		420	156.34	on request			1	24	2KJ3806- ■ CE23- ■■ A2 -Z	P01		
6.2		380	142.13	on request			1.1	24	2KJ3806- ■ CE23- ■■ X1 -Z	P01		
<b>KH.49-LE71ZMK4P</b>												
7		340	200.25	on request			1.2	22	2KJ3806- ■ CC23- ■■ C2 -Z	-		
7.8		305	178.06	on request			1.4	22	2KJ3806- ■ CC23- ■■ B2 -Z	-		
8.9		265	156.34	on request			1.6	22	2KJ3806- ■ CC23- ■■ A2 -Z	-		
9.8		240	142.13	on request			1.7	22	2KJ3806- ■ CC23- ■■ X1 -Z	-		
11		205	121.6	on request			2	22	2KJ3806- ■ CC23- ■■ W1 -Z	-		
13		189	110.55	on request			2.2	22	2KJ3806- ■ CC23- ■■ V1 -Z	-		
<b>0.37</b>		<b>KH.79-LE80MK6P</b>										
		3.8	915	244.25	on request			0.89	57	2KJ3808- ■ DE23- ■■ D2 -Z	P01	
		4.2	835	222.05	on request			0.98	57	2KJ3808- ■ DE23- ■■ C2 -Z	P01	
		5	710	188.85	on request			1.2	57	2KJ3808- ■ DE23- ■■ B2 -Z	P01	
		5.5	645	171.69	on request			1.3	57	2KJ3808- ■ DE23- ■■ A2 -Z	P01	

#### Article No. supplement

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$F_{R290}$	$F_{R2270}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles	
<b>0.37</b>	<b>KH.79-LE71YMS4P</b>										
	5.8	610	244.25	on request			1.3	54	2KJ3808- ■ CE23- ■ ■ D2 -Z -		
	6.3	555	222.05	on request			1.5	54	2KJ3808- ■ CE23- ■ ■ C2 -Z -		
	7.5	470	188.85	on request			1.7	54	2KJ3808- ■ CE23- ■ ■ B2 -Z -		
	8.2	430	171.69	on request			1.9	54	2KJ3808- ■ CE23- ■ ■ A2 -Z -		
	9.2	380	153.18	on request			2.1	54	2KJ3808- ■ CE23- ■ ■ X1 -Z -		
	<b>KH.69-LE80MK6P</b>										
	4.8	735	196.59	on request			0.81	50	2KJ3807- ■ DE23- ■ ■ C2 -Z P01		
	5.3	670	178.72	on request			0.89	50	2KJ3807- ■ DE23- ■ ■ B2 -Z P01		
	6.2	570	152	on request			1.1	50	2KJ3807- ■ DE23- ■ ■ A2 -Z P01		
	6.8	515	138.18	on request			1.2	50	2KJ3807- ■ DE23- ■ ■ X1 -Z P01		
	<b>KH.69-LE71YMS4P</b>										
	7.2	490	196.59	on request			1.2	47	2KJ3807- ■ CE23- ■ ■ C2 -Z -		
	7.9	445	178.72	on request			1.3	47	2KJ3807- ■ CE23- ■ ■ B2 -Z -		
	9.3	380	152	on request			1.6	47	2KJ3807- ■ CE23- ■ ■ A2 -Z -		
	10	345	138.18	on request			1.7	47	2KJ3807- ■ CE23- ■ ■ X1 -Z -		
	11	305	123.29	on request			1.9	47	2KJ3807- ■ CE23- ■ ■ W1 -Z -		
	13	275	110.55	on request			2.2	47	2KJ3807- ■ CE23- ■ ■ V1 -Z -		
	<b>KH.49-LE71YMS4P</b>										
	7	500	200.25	on request			0.84	24	2KJ3806- ■ CE23- ■ ■ C2 -Z -		
	7.9	445	178.06	on request			0.94	24	2KJ3806- ■ CE23- ■ ■ B2 -Z -		
	9	390	156.34	on request			1.1	24	2KJ3806- ■ CE23- ■ ■ A2 -Z -		
	9.9	355	142.13	on request			1.2	24	2KJ3806- ■ CE23- ■ ■ X1 -Z -		
	12	305	121.6	18500	18500	18500	1.4	24	2KJ3806- ■ CE23- ■ ■ W1 -Z -		
	13	275	110.55	18500	18500	18500	1.5	24	2KJ3806- ■ CE23- ■ ■ V1 -Z -		
14	245	97.71	18500	18500	18500	1.7	24	2KJ3806- ■ CE23- ■ ■ U1 -Z -			
16	220	88.83	18500	18500	18500	1.9	24	2KJ3806- ■ CE23- ■ ■ T1 -Z -			
18	195	77.81	18500	18500	18500	2.2	24	2KJ3806- ■ CE23- ■ ■ S1 -Z -			
20	180	71.82	18500	18500	18500	2.3	24	2KJ3806- ■ CE23- ■ ■ R1 -Z -			
<b>0.55</b>	<b>KH.79-LE80ZMQ6P</b>										
	5.4	960	171.69	on request			0.85	57	2KJ3808- ■ DF23- ■ ■ A2 -Z P01		
	<b>KH.79-LE80MH4P</b>										
	5.9	890	244.25	on request			0.92	58	2KJ3808- ■ DC23- ■ ■ D2 -Z -		
	6.5	810	222.05	on request			1	58	2KJ3808- ■ DC23- ■ ■ C2 -Z -		
	7.6	685	188.85	on request			1.2	58	2KJ3808- ■ DC23- ■ ■ B2 -Z -		
	8.4	625	171.69	on request			1.3	58	2KJ3808- ■ DC23- ■ ■ A2 -Z -		
	9.4	555	153.18	on request			1.5	58	2KJ3808- ■ DC23- ■ ■ X1 -Z -		
	10	500	137.35	40000	40000	40000	1.6	58	2KJ3808- ■ DC23- ■ ■ W1 -Z -		
	12	450	123.8	40000	40000	40000	1.8	58	2KJ3808- ■ DC23- ■ ■ V1 -Z -		
	13	415	114.28	40000	40000	40000	2	58	2KJ3808- ■ DC23- ■ ■ U1 -Z -		
	14	380	104.32	40000	40000	40000	2.2	58	2KJ3808- ■ DC23- ■ ■ T1 -Z -		
	<b>KH.69-LE80MH4P</b>										
	7.3	715	196.59	on request			0.84	51	2KJ3807- ■ DC23- ■ ■ C2 -Z -		
	8.1	650	178.72	on request			0.92	51	2KJ3807- ■ DC23- ■ ■ B2 -Z -		
	9.5	550	152	on request			1.1	51	2KJ3807- ■ DC23- ■ ■ A2 -Z -		
	10	500	138.18	25000	25000	25000	1.2	51	2KJ3807- ■ DC23- ■ ■ X1 -Z -		
	12	450	123.29	25000	25000	25000	1.3	51	2KJ3807- ■ DC23- ■ ■ W1 -Z -		

## Article No. supplement

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$F_{R290}$	$F_{R2270}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code		
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles		
0.55	<b>KH.69-LE80MH4P</b>											
	13	400	110.55	25000	25000	25000	1.5	51	2KJ3807- DC23- V1 -Z	-		
	14	360	99.64	25000	25000	25000	1.7	51	2KJ3807- DC23- U1 -Z	-		
	16	335	91.98	25000	25000	25000	1.8	51	2KJ3807- DC23- T1 -Z	-		
	17	305	83.96	25000	25000	25000	2	51	2KJ3807- DC23- S1 -Z	-		
	21	250	69.67	25000	25000	25000	2.4	51	2KJ3807- DC23- R1 -Z	-		
	<b>KH.49-LE80MH4P</b>											
	10	515	142.13	17900	18300	18500	0.81	29	2KJ3806- DC23- X1 -Z	-		
	12	440	121.6	18500	18500	18500	0.95	29	2KJ3806- DC23- W1 -Z	-		
	13	400	110.55	18500	18500	18500	1	29	2KJ3806- DC23- V1 -Z	-		
	15	355	97.71	18500	18500	18500	1.2	29	2KJ3806- DC23- U1 -Z	-		
	16	320	88.83	18500	18500	18500	1.3	29	2KJ3806- DC23- T1 -Z	-		
	19	280	77.81	18500	18500	18500	1.5	29	2KJ3806- DC23- S1 -Z	-		
	20	260	71.82	18500	18500	18500	1.6	29	2KJ3806- DC23- R1 -Z	-		
	23	230	63.59	18500	18500	18500	1.8	29	2KJ3806- DC23- Q1 -Z	-		
	27	193	52.93	18500	18500	18500	2.2	29	2KJ3806- DC23- P1 -Z	-		
	29	182	49.82	18500	18500	18500	2.3	29	2KJ3806- DC23- N1 -Z	-		
	0.75	<b>KH.79-LE80ZMQ4P</b>										
		7.7	930	188.85	on request			0.88	57	2KJ3808- DF23- B2 -Z	-	
8.4		845	171.69	on request			0.97	57	2KJ3808- DF23- A2 -Z	-		
9.5		755	153.18	on request			1.1	57	2KJ3808- DF23- X1 -Z	-		
11		675	137.35	39400	40000	40000	1.2	57	2KJ3808- DF23- W1 -Z	-		
12		610	123.8	40000	40000	40000	1.3	57	2KJ3808- DF23- V1 -Z	-		
13		560	114.28	40000	40000	40000	1.5	57	2KJ3808- DF23- U1 -Z	-		
14		515	104.32	40000	40000	40000	1.6	57	2KJ3808- DF23- T1 -Z	-		
17		425	86.56	40000	40000	40000	1.9	57	2KJ3808- DF23- S1 -Z	-		
18		400	81.47	40000	40000	40000	2	57	2KJ3808- DF23- R1 -Z	-		
19		380	76.94	40000	40000	40000	2.2	57	2KJ3808- DF23- Q1 -Z	-		
<b>KH.69-LE80ZMQ4P</b>												
9.5		750	152	on request			0.8	50	2KJ3807- DF23- A2 -Z	-		
10		680	138.18	25000	25000	25000	0.88	50	2KJ3807- DF23- X1 -Z	-		
12		605	123.29	25000	25000	25000	0.99	50	2KJ3807- DF23- W1 -Z	-		
13		545	110.55	25000	25000	25000	1.1	50	2KJ3807- DF23- V1 -Z	-		
15		490	99.64	25000	25000	25000	1.2	50	2KJ3807- DF23- U1 -Z	-		
16		450	91.98	25000	25000	25000	1.3	50	2KJ3807- DF23- T1 -Z	-		
17		415	83.96	25000	25000	25000	1.4	50	2KJ3807- DF23- S1 -Z	-		
21		340	69.67	25000	25000	25000	1.7	50	2KJ3807- DF23- R1 -Z	-		
22	320	65.57	25000	25000	25000	1.9	50	2KJ3807- DF23- Q1 -Z	-			
23	305	61.93	25000	25000	25000	2	50	2KJ3807- DF23- P1 -Z	-			
28	260	52.69	25000	25000	25000	2.3	50	2KJ3807- DF23- N1 -Z	-			
<b>KH.49-LE80ZMQ4P</b>												
15	480	97.71	18300	18500	18500	0.87	28	2KJ3806- DF23- U1 -Z	-			
16	435	88.83	18500	18500	18500	0.96	28	2KJ3806- DF23- T1 -Z	-			
19	380	77.81	18500	18500	18500	1.1	28	2KJ3806- DF23- S1 -Z	-			
20	355	71.82	18500	18500	18500	1.2	28	2KJ3806- DF23- R1 -Z	-			
23	310	63.59	18500	18500	18500	1.3	28	2KJ3806- DF23- Q1 -Z	-			

#### Article No. supplement

Shaft design	1, 2 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F or H	see page 10/42



# SIMOGEAR geared motors

## Electric-monorail geared motors for heavy-load applications

Geared motors up to 7.5 kW

## Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$F_{R290}$	$F_{R2270}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles	
0.75	<b>KH.49-LE80ZMQ4P</b>										
	27	260	52.93	18500	18500	18500	1.6	28	2KJ3806- ■ DF23- ■ P1 -Z -	-	
	29	245	49.82	18500	18500	18500	1.7	28	2KJ3806- ■ DF23- ■ N1 -Z -	-	
	32	220	44.63	18500	18500	18500	1.9	28	2KJ3806- ■ DF23- ■ M1 -Z -	-	
	38	188	38	18500	18500	18500	2.2	28	2KJ3806- ■ DF23- ■ L1 -Z -	-	
45	161	32.57	18500	18500	18500	2.6	28	2KJ3806- ■ DF23- ■ K1 -Z -	-		
1.1	<b>KH.79-LE90SM4P</b>										
	10	1000	137.35	31600	38000	40000	0.81	58	2KJ3808- ■ EK23- ■ W1 -Z -	-	
	12	900	114.28	35600	40000	40000	0.97	58	2KJ3808- ■ EK23- ■ V1 -Z -	-	
	13	830	123.8	34000	40000	40000	0.9	58	2KJ3808- ■ EK23- ■ U1 -Z -	-	
	14	760	104.32	37400	40000	40000	1.1	58	2KJ3808- ■ EK23- ■ T1 -Z -	-	
	17	630	86.56	40000	40000	40000	1.3	58	2KJ3808- ■ EK23- ■ S1 -Z -	-	
	18	590	81.47	40000	40000	40000	1.4	58	2KJ3808- ■ EK23- ■ R1 -Z -	-	
	19	560	76.94	40000	40000	40000	1.4	58	2KJ3808- ■ EK23- ■ Q1 -Z -	-	
	22	475	65.47	40000	40000	40000	1.7	58	2KJ3808- ■ EK23- ■ P1 -Z -	-	
	26	405	56.08	40000	40000	40000	2	58	2KJ3808- ■ EK23- ■ N1 -Z -	-	
	29	360	49.31	40000	40000	40000	2.3	58	2KJ3808- ■ EK23- ■ M1 -Z -	-	
	35	300	41.6	40000	40000	40000	2.6	58	2KJ3808- ■ EK23- ■ L1 -Z -	-	
	<b>KH.69-LE90SM4P</b>										
14	725	99.64	24400	25000	25000	0.83	51	2KJ3807- ■ EK23- ■ U1 -Z -	-		
16	670	91.98	25000	25000	25000	0.89	51	2KJ3807- ■ EK23- ■ T1 -Z -	-		
17	610	83.96	25000	25000	25000	0.98	51	2KJ3807- ■ EK23- ■ S1 -Z -	-		
21	505	69.67	25000	25000	25000	1.2	51	2KJ3807- ■ EK23- ■ R1 -Z -	-		
22	475	65.57	25000	25000	25000	1.3	51	2KJ3807- ■ EK23- ■ Q1 -Z -	-		
23	450	61.93	25000	25000	25000	1.3	51	2KJ3807- ■ EK23- ■ P1 -Z -	-		
27	380	52.69	25000	25000	25000	1.6	51	2KJ3807- ■ EK23- ■ N1 -Z -	-		
32	325	45.14	25000	25000	25000	1.8	51	2KJ3807- ■ EK23- ■ M1 -Z -	-		
36	290	39.69	25000	25000	25000	2.1	51	2KJ3807- ■ EK23- ■ L1 -Z -	-		
43	240	33.48	25000	25000	25000	2.4	51	2KJ3807- ■ EK23- ■ K1 -Z -	-		
49	210	29.18	25000	25000	25000	2.6	51	2KJ3807- ■ EK23- ■ J1 -Z -	-		
<b>KH.49-LE90SM4P</b>											
23	460	63.59	18500	18500	18500	0.91	28	2KJ3806- ■ EK23- ■ Q1 -Z -	-		
27	385	52.93	18500	18500	18500	1.1	28	2KJ3806- ■ EK23- ■ P1 -Z -	-		
29	360	49.82	18500	18500	18500	1.2	28	2KJ3806- ■ EK23- ■ N1 -Z -	-		
32	325	44.63	18500	18500	18500	1.3	28	2KJ3806- ■ EK23- ■ M1 -Z -	-		
38	275	38	18500	18500	18500	1.5	28	2KJ3806- ■ EK23- ■ L1 -Z -	-		
44	235	32.57	18500	18500	18500	1.8	28	2KJ3806- ■ EK23- ■ K1 -Z -	-		
51	205	28.05	18500	18500	18500	2.1	28	2KJ3806- ■ EK23- ■ J1 -Z -	-		
55	192	26.3	18500	18500	18500	2.2	28	2KJ3806- ■ EK23- ■ H1 -Z -	-		
62	170	23.28	18500	18500	18500	2.5	28	2KJ3806- ■ EK23- ■ G1 -Z -	-		
74	141	19.38	18500	18500	18500	3	28	2KJ3806- ■ EK23- ■ F1 -Z -	-		
79	133	18.24	18500	18500	18500	3.2	28	2KJ3806- ■ EK23- ■ E1 -Z -	-		
1.5	<b>KH.79-LE90LH4E</b>										
	17	855	86.56	35200	40000	40000	0.96	61	2KJ3808- ■ EM23- ■ S1 -Z -	-	
	18	805	81.47	36400	40000	40000	1	61	2KJ3808- ■ EM23- ■ R1 -Z -	-	
	19	760	76.94	37400	40000	40000	1.1	61	2KJ3808- ■ EM23- ■ Q1 -Z -	-	
22	645	65.47	40000	40000	40000	1.3	61	2KJ3808- ■ EM23- ■ P1 -Z -	-		

## Article No. supplement

Shaft design	1, 2 or 9	<a href="#">see page 10/51</a>
Frequency and voltage	2 or 9	<a href="#">see page 11/2</a>
Gearbox mounting type	A, F or H	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$F_{R290}$	$F_{R2270}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles	
1.5	<b>KH.79-LE90LH4E</b>										
	26	555	56.08	40000	40000	40000	1.5	61	2KJ3808- ■ EM23- ■ ■ N1 -Z -	-	
	29	485	49.31	40000	40000	40000	1.7	61	2KJ3808- ■ EM23- ■ ■ M1 -Z -	-	
	35	410	41.6	40000	40000	40000	1.9	61	2KJ3808- ■ EM23- ■ ■ L1 -Z -	-	
	40	355	36.26	40000	40000	40000	2.1	61	2KJ3808- ■ EM23- ■ ■ K1 -Z -	-	
	44	325	32.78	39400	40000	39600	2.5	61	2KJ3808- ■ EM23- ■ ■ J1 -Z -	-	
	<b>KH.69-LE90LH4E</b>										
	21	690	69.67	24900	25000	25000	0.87	54	2KJ3807- ■ EM23- ■ ■ R1 -Z -	-	
	22	650	65.57	25000	25000	25000	0.92	54	2KJ3807- ■ EM23- ■ ■ Q1 -Z -	-	
	23	610	61.93	25000	25000	25000	0.98	54	2KJ3807- ■ EM23- ■ ■ P1 -Z -	-	
	27	520	52.69	25000	25000	25000	1.1	54	2KJ3807- ■ EM23- ■ ■ N1 -Z -	-	
	32	445	45.14	25000	25000	25000	1.3	54	2KJ3807- ■ EM23- ■ ■ M1 -Z -	-	
	36	390	39.69	25000	25000	25000	1.5	54	2KJ3807- ■ EM23- ■ ■ L1 -Z -	-	
	43	330	33.48	25000	25000	25000	1.7	54	2KJ3807- ■ EM23- ■ ■ K1 -Z -	-	
	50	285	29.18	25000	25000	25000	1.9	54	2KJ3807- ■ EM23- ■ ■ J1 -Z -	-	
	55	255	26.05	25000	25000	25000	2.3	54	2KJ3807- ■ EM23- ■ ■ H1 -Z -	-	
	59	240	24.52	25000	25000	25000	2.4	54	2KJ3807- ■ EM23- ■ ■ G1 -Z -	-	
	62	225	23.15	25000	25000	25000	2.5	54	2KJ3807- ■ EM23- ■ ■ F1 -Z -	-	
	73	195	19.7	25000	25000	25000	2.8	54	2KJ3807- ■ EM23- ■ ■ E1 -Z -	-	
86	167	16.88	25000	25000	25000	3.2	54	2KJ3807- ■ EM23- ■ ■ D1 -Z -	-		
97	147	14.84	24800	25000	24900	3.5	54	2KJ3807- ■ EM23- ■ ■ C1 -Z -	-		
2.2	<b>KH.49-LE90LH4E</b>										
	27	525	52.93	on request			0.8	31	2KJ3806- ■ EM23- ■ ■ P1 -Z -	-	
	29	490	49.82	18300	18500	18500	0.85	31	2KJ3806- ■ EM23- ■ ■ N1 -Z -	-	
	32	440	44.63	18500	18500	18500	0.95	31	2KJ3806- ■ EM23- ■ ■ M1 -Z -	-	
	38	375	38	18500	18500	18500	1.1	31	2KJ3806- ■ EM23- ■ ■ L1 -Z -	-	
	44	320	32.57	18500	18500	18500	1.3	31	2KJ3806- ■ EM23- ■ ■ K1 -Z -	-	
	52	275	28.05	18500	18500	18500	1.5	31	2KJ3806- ■ EM23- ■ ■ J1 -Z -	-	
	55	260	26.3	18500	18500	18500	1.6	31	2KJ3806- ■ EM23- ■ ■ H1 -Z -	-	
	62	230	23.28	18500	18500	18500	1.8	31	2KJ3806- ■ EM23- ■ ■ G1 -Z -	-	
	75	192	19.38	18500	18500	18500	2.2	31	2KJ3806- ■ EM23- ■ ■ F1 -Z -	-	
	79	181	18.24	18500	18500	18500	2.3	31	2KJ3806- ■ EM23- ■ ■ E1 -Z -	-	
	88	162	16.34	18500	18500	18500	2.6	31	2KJ3806- ■ EM23- ■ ■ D1 -Z -	-	
	104	138	13.91	17900	18300	18000	3	31	2KJ3806- ■ EM23- ■ ■ C1 -Z -	-	
121	118	11.93	17200	17500	17200	3.6	31	2KJ3806- ■ EM23- ■ ■ B1 -Z -	-		
2.2	<b>KH.79-LE100ZLSA4P</b>										
	22	935	65.47	33200	39300	40000	0.87	78	2KJ3808- ■ FN23- ■ ■ P1 -Z -	-	
	26	800	56.08	36400	40000	40000	1	78	2KJ3808- ■ FN23- ■ ■ N1 -Z -	-	
	30	705	49.31	38700	40000	40000	1.2	78	2KJ3808- ■ FN23- ■ ■ M1 -Z -	-	
	35	595	41.6	40000	40000	40000	1.3	78	2KJ3808- ■ FN23- ■ ■ L1 -Z -	-	
	40	520	36.26	39700	40000	39900	1.5	78	2KJ3808- ■ FN23- ■ ■ K1 -Z -	-	
	45	470	32.78	38700	39900	38900	1.7	78	2KJ3808- ■ FN23- ■ ■ J1 -Z -	-	
	53	390	27.2	36800	37800	37000	2.1	78	2KJ3808- ■ FN23- ■ ■ H1 -Z -	-	
	57	365	25.6	36200	37100	36300	2.1	78	2KJ3808- ■ FN23- ■ ■ G1 -Z -	-	
	61	345	24.17	35600	36500	35800	2.2	78	2KJ3808- ■ FN23- ■ ■ F1 -Z -	-	
	71	295	20.57	34100	34900	34200	2.5	78	2KJ3808- ■ FN23- ■ ■ E1 -Z -	-	

#### Article No. supplement

Shaft design	1, 2 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F or H	see page 10/42

## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

Geared motors up to 7.5 kW

### Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$F_{R290}$	$F_{R2270}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles
2.2	<b>KH.79-LE100ZLSA4P</b>									
	83	250	17.62	32700	33300	32800	2.8	78	2KJ3808- ■ FN23- ■ D1 -Z -	-
	95	220	15.49	31500	32100	31600	3.1	78	2KJ3808- ■ FN23- ■ C1 -Z -	-
	112	187	13.07	30000	30500	30100	3.5	78	2KJ3808- ■ FN23- ■ B1 -Z -	-
	<b>KH.69-LE100ZLSA4P</b>									
	32	645	45.14	25000	25000	25000	0.93	71	2KJ3807- ■ FN23- ■ M1 -Z -	-
	37	565	39.69	25000	25000	25000	1.1	71	2KJ3807- ■ FN23- ■ L1 -Z -	-
	44	480	33.48	25000	25000	25000	1.2	71	2KJ3807- ■ FN23- ■ K1 -Z -	-
	50	415	29.18	25000	25000	25000	1.3	71	2KJ3807- ■ FN23- ■ J1 -Z -	-
	56	370	26.05	25000	25000	25000	1.6	71	2KJ3807- ■ FN23- ■ H1 -Z -	-
	60	350	24.52	25000	25000	25000	1.7	71	2KJ3807- ■ FN23- ■ G1 -Z -	-
	63	330	23.15	25000	25000	25000	1.8	71	2KJ3807- ■ FN23- ■ F1 -Z -	-
	74	280	19.7	25000	25000	25000	2	71	2KJ3807- ■ FN23- ■ E1 -Z -	-
	87	240	16.88	25000	25000	25000	2.2	71	2KJ3807- ■ FN23- ■ D1 -Z -	-
	99	210	14.84	24400	25000	24500	2.4	71	2KJ3807- ■ FN23- ■ C1 -Z -	-
117	180	12.52	23300	23800	23400	2.7	71	2KJ3807- ■ FN23- ■ B1 -Z -	-	
134	156	10.91	22400	22900	22500	3	71	2KJ3807- ■ FN23- ■ A1 -Z -	-	
<b>KH.49-LE100ZLSA4P</b>										
45	465	32.57	18500	18500	18500	0.9	49	2KJ3806- ■ FN23- ■ K1 -Z -	-	
52	400	28.05	18500	18500	18500	1	49	2KJ3806- ■ FN23- ■ J1 -Z -	-	
55	375	26.3	18500	18500	18500	1.1	49	2KJ3806- ■ FN23- ■ H1 -Z -	-	
62	330	23.28	18500	18500	18500	1.3	49	2KJ3806- ■ FN23- ■ G1 -Z -	-	
75	275	19.38	18500	18500	18500	1.5	49	2KJ3806- ■ FN23- ■ F1 -Z -	-	
80	260	18.24	18500	18500	18500	1.6	49	2KJ3806- ■ FN23- ■ E1 -Z -	-	
89	230	16.34	18200	18500	18300	1.8	49	2KJ3806- ■ FN23- ■ D1 -Z -	-	
105	199	13.91	17500	18100	17600	2.1	49	2KJ3806- ■ FN23- ■ C1 -Z -	-	
122	171	11.93	16800	17300	16900	2.5	49	2KJ3806- ■ FN23- ■ B1 -Z -	-	
142	147	10.27	16200	16600	16200	2.8	49	2KJ3806- ■ FN23- ■ A1 -Z -	-	
3	<b>KH.79-LE100ZLSB4P</b>									
	30	965	49.31	32600	38800	40000	0.85	78	2KJ3808- ■ FP23- ■ M1 -Z -	-
	35	815	41.6	36200	40000	40000	0.98	78	2KJ3808- ■ FP23- ■ L1 -Z -	-
	40	710	36.26	38700	40000	39300	1.1	78	2KJ3808- ■ FP23- ■ K1 -Z -	-
	44	640	32.78	38000	39600	38200	1.3	78	2KJ3808- ■ FP23- ■ J1 -Z -	-
	53	530	27.2	36200	37600	36400	1.5	78	2KJ3808- ■ FP23- ■ H1 -Z -	-
	57	500	25.6	35600	36900	35900	1.6	78	2KJ3808- ■ FP23- ■ G1 -Z -	-
	60	470	24.17	35100	36300	35300	1.6	78	2KJ3808- ■ FP23- ■ F1 -Z -	-
	71	400	20.57	33600	34700	33800	1.8	78	2KJ3808- ■ FP23- ■ E1 -Z -	-
	83	345	17.62	32300	33200	32400	2.1	78	2KJ3808- ■ FP23- ■ D1 -Z -	-
	94	300	15.49	31200	32000	31300	2.3	78	2KJ3808- ■ FP23- ■ C1 -Z -	-
	111	255	13.07	29700	30400	29900	2.6	78	2KJ3808- ■ FP23- ■ B1 -Z -	-
	128	220	11.39	28600	29200	28700	2.9	78	2KJ3808- ■ FP23- ■ A1 -Z -	-
	<b>KH.69-LE100ZLSB4P</b>									
	44	655	33.48	25000	25000	25000	0.88	71	2KJ3807- ■ FP23- ■ K1 -Z -	-
50	570	29.18	25000	25000	25000	0.97	71	2KJ3807- ■ FP23- ■ J1 -Z -	-	
56	510	26.05	25000	25000	25000	1.2	71	2KJ3807- ■ FP23- ■ H1 -Z -	-	
59	480	24.52	25000	25000	25000	1.2	71	2KJ3807- ■ FP23- ■ G1 -Z -	-	

#### Article No. supplement

Shaft design	<b>1, 2 or 9</b>	see page 10/51
Frequency and voltage	<b>2 or 9</b>	see page 11/2
Gearbox mounting type	<b>A, F or H</b>	see page 10/42

## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

### Geared motors up to 7.5 kW

#### Selection and ordering data

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$F_{R290}$	$F_{R2270}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code	
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles	
3	<b>KH.69-LE100ZLSB4P</b>										
	63	450	23.15	25000	25000	25000	1.3	71	2KJ3807- ■ FP23- ■ ■ F1 -Z -	-	
	74	385	19.7	25000	25000	25000	1.4	71	2KJ3807- ■ FP23- ■ ■ E1 -Z -	-	
	86	330	16.88	24900	25000	25000	1.6	71	2KJ3807- ■ FP23- ■ ■ D1 -Z -	-	
	98	290	14.84	24100	24900	24200	1.8	71	2KJ3807- ■ FP23- ■ ■ C1 -Z -	-	
	117	245	12.52	23000	23700	23100	2	71	2KJ3807- ■ FP23- ■ ■ B1 -Z -	-	
	134	210	10.91	22200	22800	22300	2.2	71	2KJ3807- ■ FP23- ■ ■ A1 -Z -	-	
	<b>KH.49-LE100ZLSB4P</b>										
	56	515	26.3	17900	18300	18500	0.81	49	2KJ3806- ■ FP23- ■ ■ H1 -Z -	-	
	63	455	23.28	18500	18500	18500	0.92	49	2KJ3806- ■ FP23- ■ ■ G1 -Z -	-	
	75	380	19.38	18500	18500	18500	1.1	49	2KJ3806- ■ FP23- ■ ■ F1 -Z -	-	
	80	355	18.24	18300	18500	18400	1.2	49	2KJ3806- ■ FP23- ■ ■ E1 -Z -	-	
	89	320	16.34	17800	18500	17900	1.3	49	2KJ3806- ■ FP23- ■ ■ D1 -Z -	-	
	105	270	13.91	17100	18000	17200	1.5	49	2KJ3806- ■ FP23- ■ ■ C1 -Z -	-	
122	230	11.93	16500	17200	16600	1.8	49	2KJ3806- ■ FP23- ■ ■ B1 -Z -	-		
142	200	10.27	15900	16500	16000	2.1	49	2KJ3806- ■ FP23- ■ ■ A1 -Z -	-		
4	<b>KH.79-LE112ZMKB4P</b>										
	40	945	36.26	33200	39300	38400	0.81	79	2KJ3808- ■ GJ23- ■ ■ K1 -Z -	-	
	45	855	32.78	35300	39300	37400	0.96	79	2KJ3808- ■ GJ23- ■ ■ J1 -Z -	-	
	54	710	27.2	35400	37300	35800	1.1	79	2KJ3808- ■ GJ23- ■ ■ H1 -Z -	-	
	57	670	25.6	34900	36700	35200	1.2	79	2KJ3808- ■ GJ23- ■ ■ G1 -Z -	-	
	60	630	24.17	34400	36100	34700	1.2	79	2KJ3808- ■ GJ23- ■ ■ F1 -Z -	-	
	71	535	20.57	33100	34500	33300	1.4	79	2KJ3808- ■ GJ23- ■ ■ E1 -Z -	-	
	83	460	17.62	31800	33000	32000	1.6	79	2KJ3808- ■ GJ23- ■ ■ D1 -Z -	-	
	94	405	15.49	30700	31800	30900	1.7	79	2KJ3808- ■ GJ23- ■ ■ C1 -Z -	-	
	112	340	13.07	29400	30300	29500	1.9	79	2KJ3808- ■ GJ23- ■ ■ B1 -Z -	-	
	128	295	11.39	28300	29100	28400	2.2	79	2KJ3808- ■ GJ23- ■ ■ A1 -Z -	-	
	<b>KH.69-LE112ZMKB4P</b>										
	56	680	26.05	25000	25000	25000	0.88	72	2KJ3807- ■ GJ23- ■ ■ H1 -Z -	-	
	60	640	24.52	25000	25000	25000	0.93	72	2KJ3807- ■ GJ23- ■ ■ G1 -Z -	-	
63	605	23.15	25000	25000	25000	0.97	72	2KJ3807- ■ GJ23- ■ ■ F1 -Z -	-		
74	515	19.7	25000	25000	25000	1.1	72	2KJ3807- ■ GJ23- ■ ■ E1 -Z -	-		
86	440	16.88	24400	25000	24600	1.2	72	2KJ3807- ■ GJ23- ■ ■ D1 -Z -	-		
98	385	14.84	23600	24700	23800	1.3	72	2KJ3807- ■ GJ23- ■ ■ C1 -Z -	-		
117	325	12.52	22600	23600	22800	1.5	72	2KJ3807- ■ GJ23- ■ ■ B1 -Z -	-		
134	285	10.91	21800	22600	22000	1.6	72	2KJ3807- ■ GJ23- ■ ■ A1 -Z -	-		
<b>KH.49-LE112ZMKB4P</b>											
75	505	19.38	17800	18400	18000	0.83	50	2KJ3806- ■ GJ23- ■ ■ F1 -Z -	-		
80	475	18.24	17600	18500	17800	0.88	50	2KJ3806- ■ GJ23- ■ ■ E1 -Z -	-		
89	425	16.34	17200	18500	17400	0.98	50	2KJ3806- ■ GJ23- ■ ■ D1 -Z -	-		
105	360	13.91	16600	17700	16800	1.2	50	2KJ3806- ■ GJ23- ■ ■ C1 -Z -	-		
122	310	11.93	16100	17000	16200	1.3	50	2KJ3806- ■ GJ23- ■ ■ B1 -Z -	-		
142	265	10.27	15500	16300	15600	1.5	50	2KJ3806- ■ GJ23- ■ ■ A1 -Z -	-		
5.5	<b>KH.79-LE132ZST4P</b>										
	54	970	27.2	32500	36600	34700	0.82	109	2KJ3808- ■ HJ23- ■ ■ H1 -Z -	-	
	57	915	25.6	33900	36200	34300	0.86	109	2KJ3808- ■ HJ23- ■ ■ G1 -Z -	-	

#### Article No. supplement

Shaft design	1, 2 or 9	see page 10/51
Frequency and voltage	2 or 9	see page 11/2
Gearbox mounting type	A, F or H	see page 10/42

## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

Geared motors up to 7.5 kW

**Selection and ordering data**

$P_N$	$n_2$	$T_2$	$i$	$F_{R2}$	$F_{R290}$	$F_{R2270}$	$f_B$	$m$	Article No.	Additional identification code -Z with order code		
kW	rpm	Nm	-	N	N	N	-	kg	(Article No. supplement → below)	No. of poles		
<b>5.5</b>	<b>KH.79-LE132ZST4P</b>											
	61	860	24.17	33400	35700	33800	0.89	109	2KJ3808- ■ HJ23- ■ ■ F1 -Z	-		
	71	735	20.57	32200	34100	32500	1	109	2KJ3808- ■ HJ23- ■ ■ E1 -Z	-		
	83	630	17.62	31000	32700	31300	1.1	109	2KJ3808- ■ HJ23- ■ ■ D1 -Z	-		
	95	550	15.49	30100	31500	30300	1.3	109	2KJ3808- ■ HJ23- ■ ■ C1 -Z	-		
	112	465	13.07	28800	30000	29000	1.4	109	2KJ3808- ■ HJ23- ■ ■ B1 -Z	-		
	129	405	11.39	27800	28900	28000	1.6	109	2KJ3808- ■ HJ23- ■ ■ A1 -Z	-		
	<b>KH.69-LE132ZST4P</b>											
	87	600	16.88	23600	25000	23900	0.88	102	2KJ3807- ■ HJ23- ■ ■ D1 -Z	-		
	99	530	14.84	23000	24400	23200	0.97	102	2KJ3807- ■ HJ23- ■ ■ C1 -Z	-		
	117	445	12.52	22100	23300	22300	1.1	102	2KJ3807- ■ HJ23- ■ ■ B1 -Z	-		
	135	390	10.91	21300	22400	21500	1.2	102	2KJ3807- ■ HJ23- ■ ■ A1 -Z	-		
	<b>KH.49-LE132ZST4P</b>											
	106	495	13.91	15900	17400	16100	0.85	80	2KJ3806- ■ HJ23- ■ ■ C1 -Z	-		
	123	425	11.93	15400	16700	15600	0.99	80	2KJ3806- ■ HJ23- ■ ■ B1 -Z	-		
	143	365	10.27	15000	16100	15100	1.1	80	2KJ3806- ■ HJ23- ■ ■ A1 -Z	-		
	<b>7.5</b>	<b>KH.79-LE132ZMS4P</b>										
		83	860	17.62	30100	32100	30500	0.83	109	2KJ3808- ■ HL23- ■ ■ D1 -Z	-	
95		755	15.49	29200	31200	29600	0.92	109	2KJ3808- ■ HL23- ■ ■ C1 -Z	-		
112		635	13.07	28100	29800	28400	1	109	2KJ3808- ■ HL23- ■ ■ B1 -Z	-		
129		555	11.39	27200	28600	27400	1.2	109	2KJ3808- ■ HL23- ■ ■ A1 -Z	-		
<b>KH.69-LE132ZMS4P</b>												
117		610	12.52	21300	23000	21600	0.8	102	2KJ3807- ■ HL23- ■ ■ B1 -Z	-		
135		530	10.91	20700	22200	21000	0.88	102	2KJ3807- ■ HL23- ■ ■ A1 -Z	-		
<b>KH.49-LE132ZMS4P</b>												
143		500	10.27	14300	15700	14400	0.83	80	2KJ3806- ■ HL23- ■ ■ A1 -Z	-		

**Article No. supplement**

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Electric-monorail geared motors for light-load applications

### Transmission ratios and torques

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	F <sub>R2</sub> <sup>90</sup> N	F <sub>R2</sub> <sup>270</sup> N	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size						Article No.
								63	71	80	90	100	112	
<b>BH.29</b>														
50.26	29	90	7340	7500	7500	0.04	4071/81	✓	✓					2KJ3803 - ■■■■■■ - ■■ R1
44.58	33	90	7030	7250	7300	0.05	4012/90	✓	✓	✓				2KJ3803 - ■■■■■■ - ■■ Q1
38.68	37	90	6670	6890	6950	0.06	3481/90	✓	✓	✓				2KJ3803 - ■■■■■■ - ■■ P1
35.16	41	90	6440	6660	6720	0.07	3481/99	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ N1
30.16	48	90	6090	6310	6360	0.09	2714/90	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ M1
27.41	53	90	5880	6100	6150	0.11	2714/99	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ L1
24.04	60	90	5600	5820	5870	0.12	2596/108	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ K1
21.45	68	90	5370	5590	5640	0.15	2124/99	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ J1
19.12	76	90	5140	5360	5410	0.18	2065/108	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ H1
17.65	82	90	4990	5210	5260	0.22	2065/117	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ G1
15.45	94	88	4760	4980	5020	0.24	1947/126	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ F1
13.55	107	84	4560	4760	4810	0.25	1829/135	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ E1
12.29	118	81	4410	4610	4660	0.32	1770/144	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ D1
11.57	125	79	4330	4520	4570	0.37	1770/153	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ C1
10.20	142	76	4150	4330	4380	0.42	1652/162	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ B1
8.85	164	72	3960	4140	4180	0.55	1593/180	✓	✓	✓	✓			2KJ3803 - ■■■■■■ - ■■ A1
<b>BH.39</b>														
60.21	24	200	15000	15000	15000	0.05	4335/72	✓	✓					2KJ3804 - ■■■■■■ - ■■ T1
52.26	28	200	15000	15000	15000	0.06	4233/81	✓	✓					2KJ3804 - ■■■■■■ - ■■ S1
46.47	31	200	15000	15000	15000	0.07	4182/90	✓	✓	✓				2KJ3804 - ■■■■■■ - ■■ R1
40.80	36	200	15000	15000	15000	0.08	3672/90	✓	✓	✓				2KJ3804 - ■■■■■■ - ■■ Q1
37.09	39	200	15000	15000	15000	0.10	3672/99	✓	✓	✓	✓			2KJ3804 - ■■■■■■ - ■■ P1
31.73	46	200	15000	15000	15000	0.12	2856/90	✓	✓	✓	✓			2KJ3804 - ■■■■■■ - ■■ N1
28.85	50	200	15000	15000	15000	0.14	2856/99	✓	✓	✓	✓			2KJ3804 - ■■■■■■ - ■■ M1
25.50	57	200	15000	15000	15000	0.17	2754/108	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ L1
23.18	63	200	15000	15000	15000	0.23	2295/99	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ K1
20.31	71	200	15000	15000	15000	0.26	2193/108	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ J1
18.74	77	200	14800	14800	14800	0.31	2193/117	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ H1
16.60	87	200	14200	14200	14200	0.36	2091/126	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ G1
13.81	105	200	13500	13500	13500	0.49	1989/144	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ F1
13.00	112	200	13200	13200	13200	0.57	1989/153	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ E1
11.65	124	200	12800	12800	12800	0.62	1887/162	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ D1
9.92	146	200	12200	12200	12200	0.80	1785/180	✓	✓	✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ C1
8.50	171	200	11600	11600	11600	1.05	1683/198			✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ B1
7.32	198	200	11100	11100	11100	1.34	1581/216			✓	✓	✓		2KJ3804 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

# SIMOGEAR geared motors

## Electric-monorail geared motors for heavy-load applications

### Transmission ratios and torques

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	F <sub>R290</sub> N	F <sub>R2270</sub> N	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub>	Motor frame size							Article No.
								63	71	80	90	100	112	132	
<b>KH.49</b>															
200.25	7.2	420	18500	18500	18500	0.06	12616/63	✓	✓						2KJ3806 - ■■■■■■ - ■■ C2
178.06	8.1	420	18500	18500	18500	0.07	6232/35	✓	✓	✓					2KJ3806 - ■■■■■■ - ■■ B2
156.34	9.3	420	18500	18500	18500	0.08	5472/35	✓	✓	✓					2KJ3806 - ■■■■■■ - ■■ A2
142.13	10	420	18500	18500	18500	0.10	10944/77	✓	✓	✓	✓				2KJ3806 - ■■■■■■ - ■■ X1
121.60	12	420	18500	18500	18500	0.12	608/5	✓	✓	✓	✓				2KJ3806 - ■■■■■■ - ■■ W1
110.55	13	420	18500	18500	18500	0.14	1216/11	✓	✓	✓	✓				2KJ3806 - ■■■■■■ - ■■ V1
97.71	15	420	18500	18500	18500	0.17	684/7	✓	✓	✓	✓	✓			2KJ3806 - ■■■■■■ - ■■ U1
88.83	16	420	18500	18500	18500	0.22	6840/77	✓	✓	✓	✓	✓			2KJ3806 - ■■■■■■ - ■■ T1
77.81	19	420	18500	18500	18500	0.25	1634/21	✓	✓	✓	✓	✓			2KJ3806 - ■■■■■■ - ■■ S1
71.82	20	420	18500	18500	18500	0.30	6536/91	✓	✓	✓	✓	✓			2KJ3806 - ■■■■■■ - ■■ R1
63.59	23	420	18500	18500	18500	0.37	3116/49	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ Q1
52.93	27	420	18500	18500	18500	0.50	741/14	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ P1
49.82	29	420	18500	18500	18500	0.58	5928/119	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ N1
44.63	32	420	18500	18500	18500	0.64	2812/63	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ M1
38.00	38	420	18500	18500	18500	0.84	38/1	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ L1
32.57	45	420	18500	18500	18500	1.11	228/7			✓	✓	✓	✓	✓	2KJ3806 - ■■■■■■ - ■■ K1
28.05	52	420	18500	18500	18500	1.43	589/21			✓	✓	✓	✓	✓	2KJ3806 - ■■■■■■ - ■■ J1
26.30	55	420	18500	18500	18500	0.52	55040/2093	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ H1
23.28	62	420	18500	18500	18500	0.64	26240/1127	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ G1
19.38	75	420	18300	18500	18500	0.89	3120/161	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ F1
18.24	79	420	17900	18500	18100	1.03	49920/2737	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ E1
16.34	89	420	17300	18500	17500	1.2	23680/1449	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ D1
13.91	104	420	16400	17600	16500	1.61	320/23	✓	✓	✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ C1
11.93	122	420	15500	16800	15700	2.2	1920/161			✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ B1
10.27	141	415	14800	16000	14900	2.8	4960/483			✓	✓	✓	✓		2KJ3806 - ■■■■■■ - ■■ A1
<b>KH.69</b>															
196.59	7.4	600	25000	25000	25000	0.17	14744/75	✓	✓	✓					2KJ3807 - ■■■■■■ - ■■ C2
178.72	8.1	600	25000	25000	25000	0.20	29488/165	✓	✓	✓	✓				2KJ3807 - ■■■■■■ - ■■ B2
152.00	9.5	600	25000	25000	25000	0.25	152/1	✓	✓	✓	✓				2KJ3807 - ■■■■■■ - ■■ A2
138.18	10	600	25000	25000	25000	0.30	1520/11	✓	✓	✓	✓				2KJ3807 - ■■■■■■ - ■■ X1
123.29	12	600	25000	25000	25000	0.35	5548/45	✓	✓	✓	✓	✓			2KJ3807 - ■■■■■■ - ■■ W1
110.55	13	600	25000	25000	25000	0.42	1216/11	✓	✓	✓	✓	✓			2KJ3807 - ■■■■■■ - ■■ V1
99.64	15	600	25000	25000	25000	0.49	4484/45	✓	✓	✓	✓	✓			2KJ3807 - ■■■■■■ - ■■ U1
91.98	16	600	25000	25000	25000	0.58	17936/195	✓	✓	✓	✓	✓			2KJ3807 - ■■■■■■ - ■■ T1
83.96	17	600	25000	25000	25000	0.69	8816/105	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ S1
69.67	21	600	25000	25000	25000	0.87	209/3	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ R1
65.57	22	600	25000	25000	25000	1.01	3344/51	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ Q1
61.93	23	600	25000	25000	25000	1.15	1672/27	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ P1
52.69	28	600	25000	25000	25000	1.4	3952/75	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ N1
45.14	32	600	25000	25000	25000	1.7	7448/165			✓	✓	✓	✓	✓	2KJ3807 - ■■■■■■ - ■■ M1
39.69	37	600	25000	25000	25000	2.1	1786/45			✓	✓	✓	✓	✓	2KJ3807 - ■■■■■■ - ■■ L1
33.48	43	580	25000	25000	25000	2.6	11552/345			✓	✓	✓	✓	✓	2KJ3807 - ■■■■■■ - ■■ K1
29.18	50	555	25000	25000	25000	3.5	3648/125			✓	✓	✓	✓	✓	2KJ3807 - ■■■■■■ - ■■ J1
26.05	56	600	25000	25000	25000	1.26	3751/144	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ H1
24.52	59	595	25000	25000	25000	1.44	3751/153	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ G1
23.15	63	585	25000	25000	25000	1.63	3751/162	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ F1
19.70	74	555	25000	25000	25000	2.1	4433/225	✓	✓	✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ E1
16.88	86	530	24000	25000	24300	2.6	1519/90			✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ D1
14.84	98	515	23100	24600	23400	3.3	16027/1080			✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ C1
12.52	116	490	22000	23300	22200	4.3	12958/1035			✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ B1
10.91	133	470	21100	22400	21300	5.7	1364/125			✓	✓	✓	✓		2KJ3807 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>

## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

### Transmission ratios and torques

#### Selection and ordering data

i	n <sub>2</sub> rpm	T <sub>2N</sub> Nm	F <sub>R2</sub> N	F <sub>R290</sub> N	F <sub>R2270</sub> N	J <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	R <sub>ex</sub> -	Motor frame size							Article No.
								63	71	80	90	100	112	132	
<b>KH.79</b>															
<b>244.25</b>	5.9	820	36100	40000	40000	0.17	175861/720	✓	✓	✓					2KJ3808 - ■■■■■■ - ■■ D2
<b>222.05</b>	6.5	820	36100	40000	40000	0.21	175861/792	✓	✓	✓	✓				2KJ3808 - ■■■■■■ - ■■ C2
<b>188.85</b>	7.7	820	36100	40000	40000	0.25	9065/48	✓	✓	✓	✓				2KJ3808 - ■■■■■■ - ■■ B2
<b>171.69</b>	8.4	820	36100	40000	40000	0.31	45325/264	✓	✓	✓	✓				2KJ3808 - ■■■■■■ - ■■ A2
<b>153.18</b>	9.5	820	36100	40000	40000	0.35	132349/864	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ X1
<b>137.35</b>	11	820	36100	40000	40000	0.42	9065/66	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ W1
<b>123.80</b>	12	820	36100	40000	40000	0.50	106967/864	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ V1
<b>114.28</b>	13	820	36100	40000	40000	0.59	106967/936	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ U1
<b>104.32</b>	14	820	36100	40000	40000	0.70	7511/72	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ T1
<b>86.56</b>	17	820	36100	40000	40000	0.89	99715/1152	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ S1
<b>81.47</b>	18	820	36100	40000	40000	1.02	99715/1224	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ R1
<b>76.94</b>	19	820	36100	40000	40000	1.16	99715/1296	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ Q1
<b>65.47</b>	22	820	36100	40000	40000	1.42	23569/360	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ P1
<b>56.08</b>	26	820	36100	40000	40000	1.74	88837/1584			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ N1
<b>49.31</b>	29	820	36100	40000	40000	2.1	85211/1728			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ M1
<b>41.60</b>	35	800	36600	40000	40000	2.7	34447/828			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ L1
<b>36.26</b>	40	770	37300	40000	39100	3.6	1813/50			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ K1
<b>32.78</b>	44	820	36100	39400	37700	0.95	6293/192	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ J1
<b>27.20</b>	53	800	35200	37200	35500	1.25	83545/3072	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ H1
<b>25.60</b>	57	785	34500	36600	34900	1.43	83545/3264	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ G1
<b>24.17</b>	60	770	34000	35900	34300	1.62	83545/3456	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ F1
<b>20.57</b>	70	740	32300	34200	32600	2.1	19747/960	✓	✓	✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ E1
<b>17.62</b>	82	715	30800	32700	31100	2.6	74431/4224			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ D1
<b>15.49</b>	94	695	29600	31400	29900	3.2	71393/4608			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ C1
<b>13.07</b>	111	665	28200	29900	28500	4.2	28861/2208			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ B1
<b>11.39</b>	127	645	27300	28800	27500	5.6	4557/400			✓	✓	✓	✓		2KJ3808 - ■■■■■■ - ■■ A1

#### Article No. supplement

Shaft design	<b>1, 2 or 9</b>	<a href="#">see page 10/51</a>
Motor frame size, motor type, efficiency class		<a href="#">see chapter 9</a>
Frequency and voltage	<b>2 or 9</b>	<a href="#">see page 11/2</a>
Gearbox mounting type	<b>A, F or H</b>	<a href="#">see page 10/42</a>



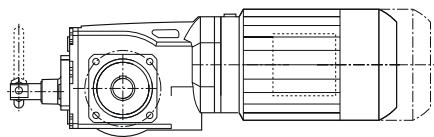
## Overview

Notes on the dimensional drawings are provided in chapter [Introduction on page 1/24](#).

Design	Frame size	Dimensional drawing, see page
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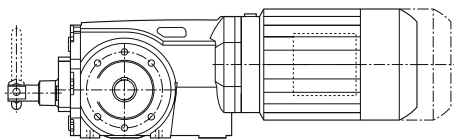
### Light-load applications

#### Housing flange design



BHZ29	8/20
BHZ39	8/21

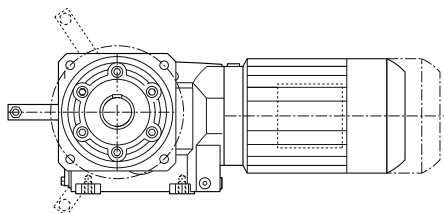
#### Foot-mounted design



BH39	8/22
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### Heavy-load applications

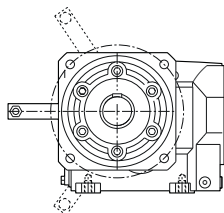
#### Flange-mounted design



KHF49	8/23
KHF69	8/24
KHF79	8/25

#### Additional versions and options

Clutch lever	8/26
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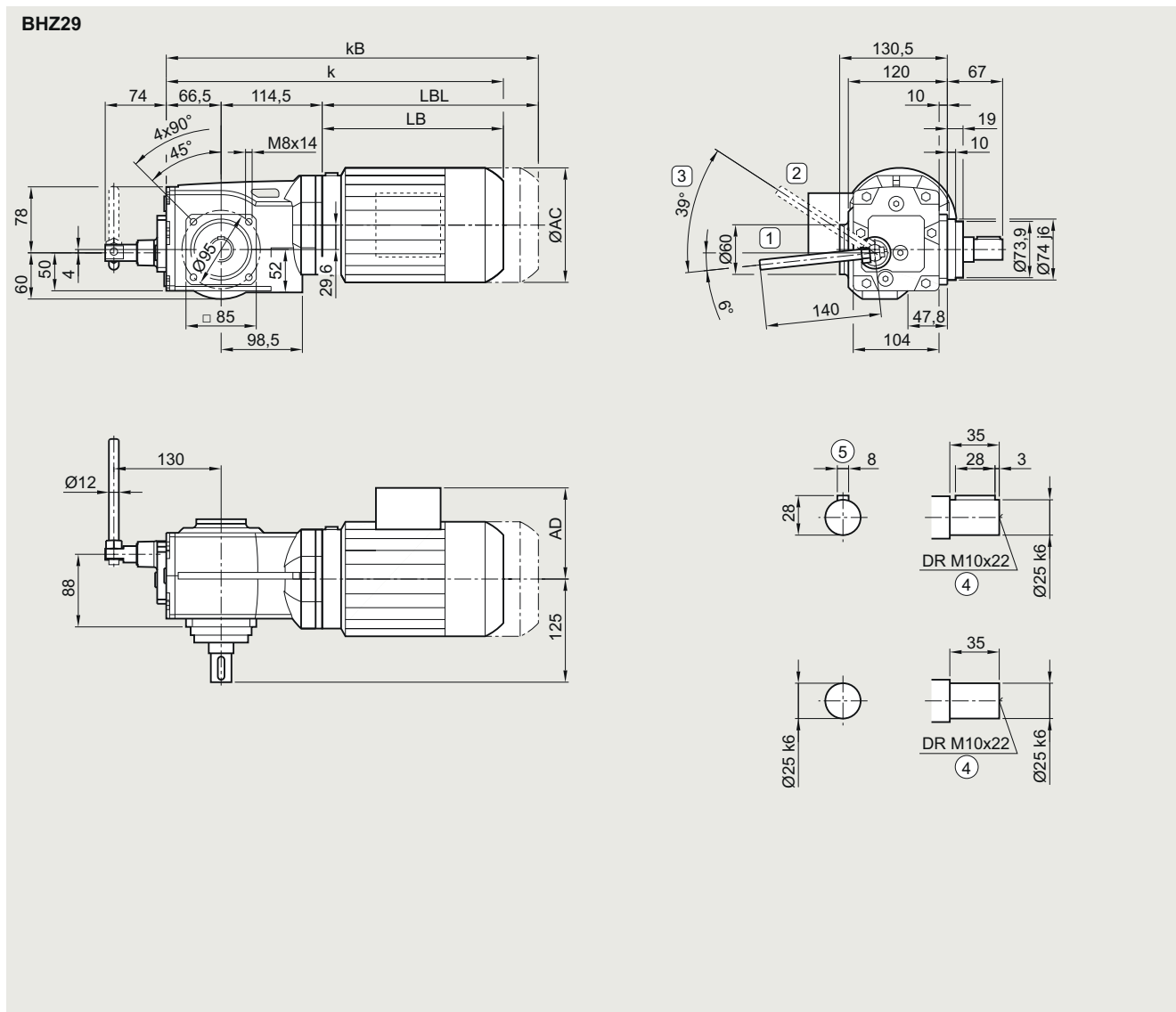
# SIMOGEAR geared motors

Electric-monorail geared motors for light-load applications

## Dimensional drawings

### Gearbox BHZ29 in a housing flange design

BHZ030



8

#### Clutch

①	Engaged
②	Disengaged
③	Operating travel in accordance with VDI 3643

Motor	LE63	LE63Z	LE71	LE71Z	LE71Y	LE80	LE80Z	LE90	LE90Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2
k	375.0	401.0	407.0	426.0	466.0	471.0	506.0	533.0	573.0
kB	419.5	445.5	462.0	481.0	521.0	531.0	566.5	603.0	643.0
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5

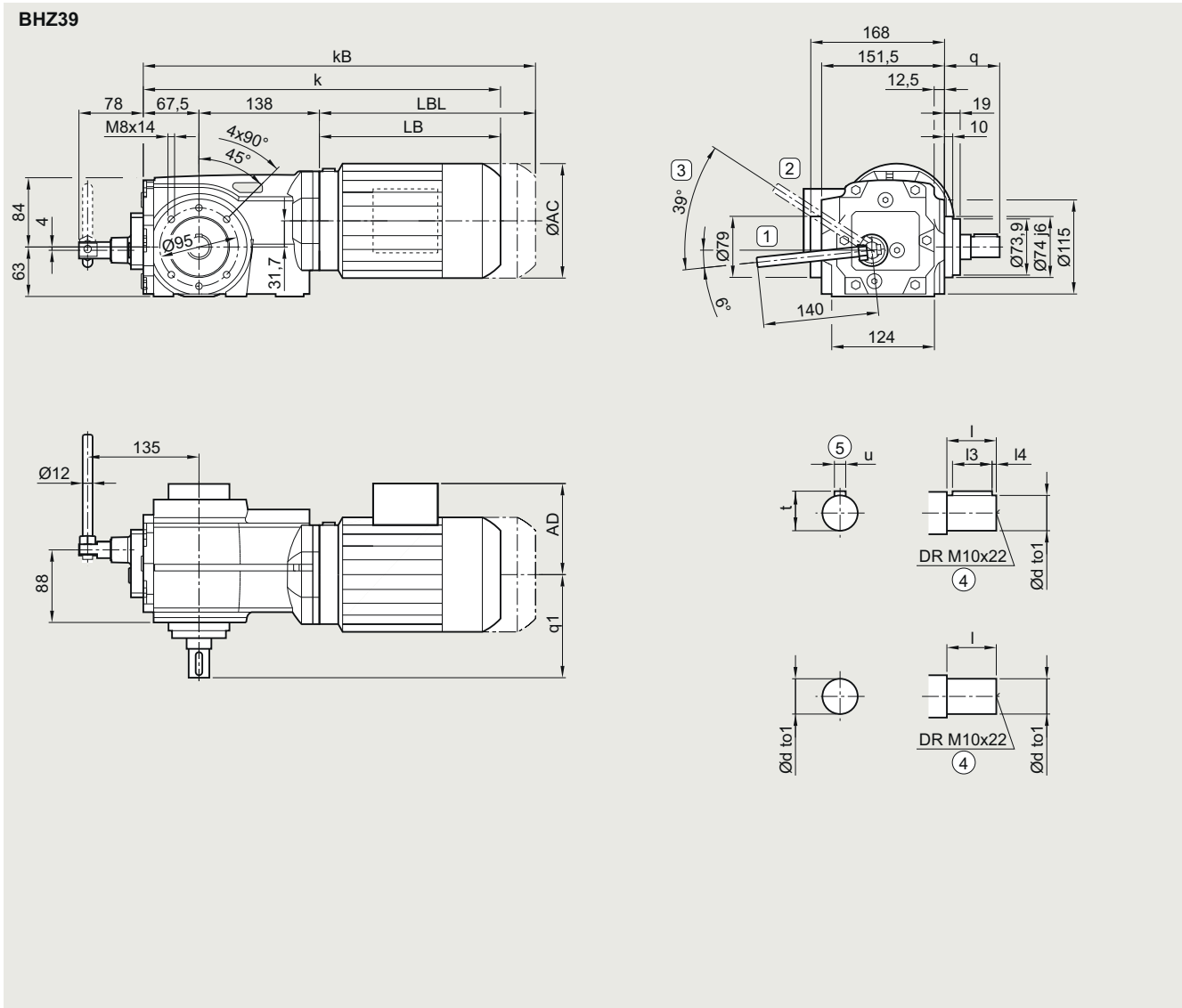
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

**Gearbox BHZ39 in a housing flange design**

**BHZ030**



Clutch	
①	Engaged
②	Disengaged
③	Operating travel in accordance with VDI 3643

Shaft	d	to1	l	l3	l4	t	u	q	q1
	25	k6	35	28	3	28	8	67	125
	30	k6	50	40	5	33	8	72	130

Motor	LE63	LE63Z	LE71	LE71Z	LE71Y	LE80	LE80Z	LE90	LE90Z	LE100	LE100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	399.5	425.5	431.5	450.5	491.0	496.0	531.0	557.5	597.5	614.0	649.0
kB	444.0	470.0	486.5	505.5	546.0	556.0	591.0	627.5	667.5	692.5	727.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

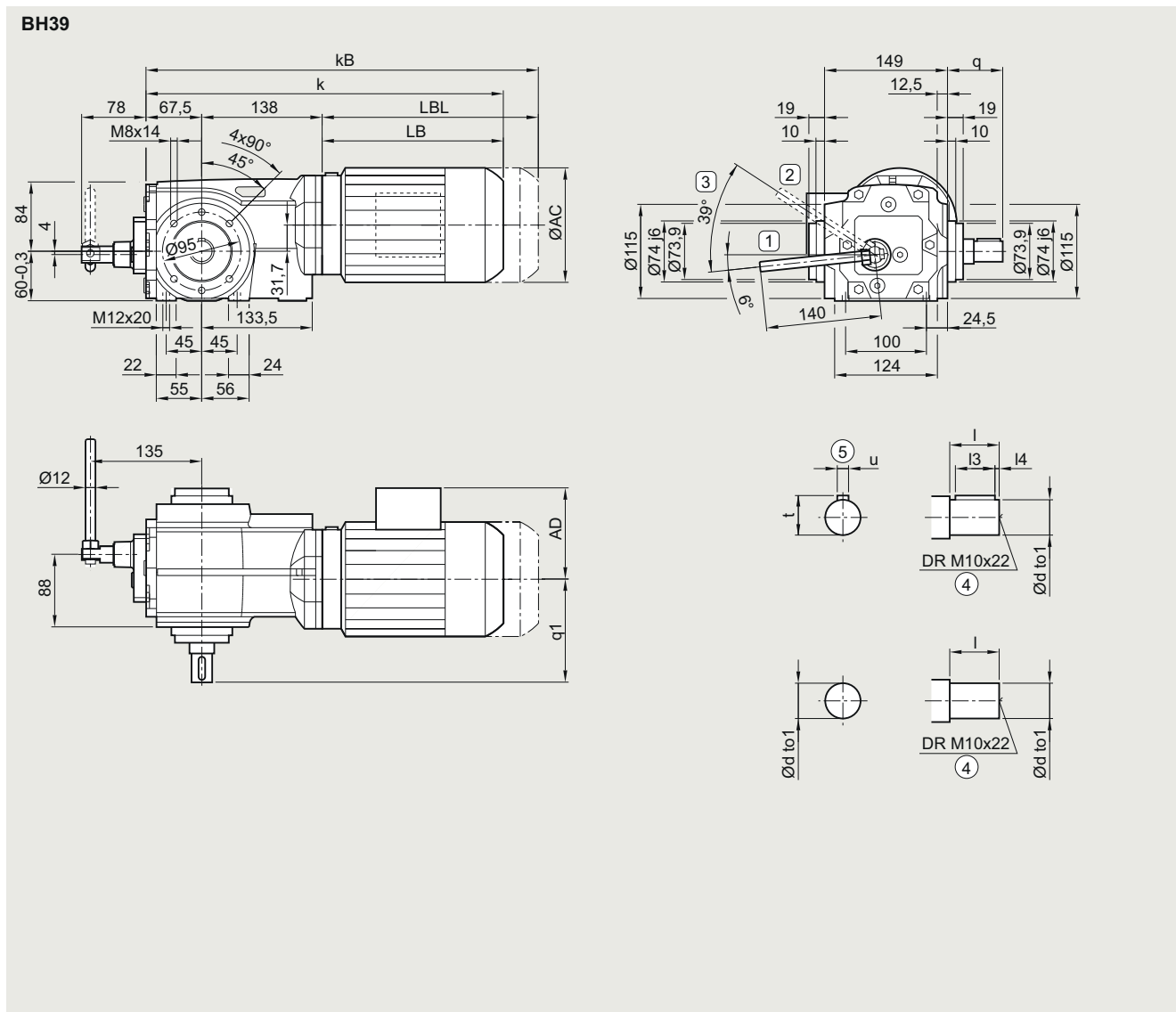
# SIMOGEAR geared motors

Electric-monorail geared motors for light-load applications

## Dimensional drawings

### Gearbox BH39 in a foot-mounted design

#### BH030



#### Clutch

①	Engaged
②	Disengaged
③	Operating travel in accordance with VDI 3643

Shaft	d	to1	l	l3	l4	t	u	q	q1
	25	k6	35	28	3	28	8	67	125
	30	k6	50	40	5	33	8	72	130

Motor	LE63	LE63Z	LE71	LE71Z	LE71Y	LE80	LE80Z	LE90	LE90Z	LE100	LE100Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	399.5	425.5	431.5	450.5	491.0	496.0	531.0	557.5	597.5	614.0	649.0
kB	444.0	470.0	486.5	505.5	546.0	556.0	591.0	627.5	667.5	692.5	727.5
LB	194.0	220.0	226.0	245.0	285.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	264.5	281.0	300.0	340.0	350.0	385.0	421.5	461.5	486.5	521.5

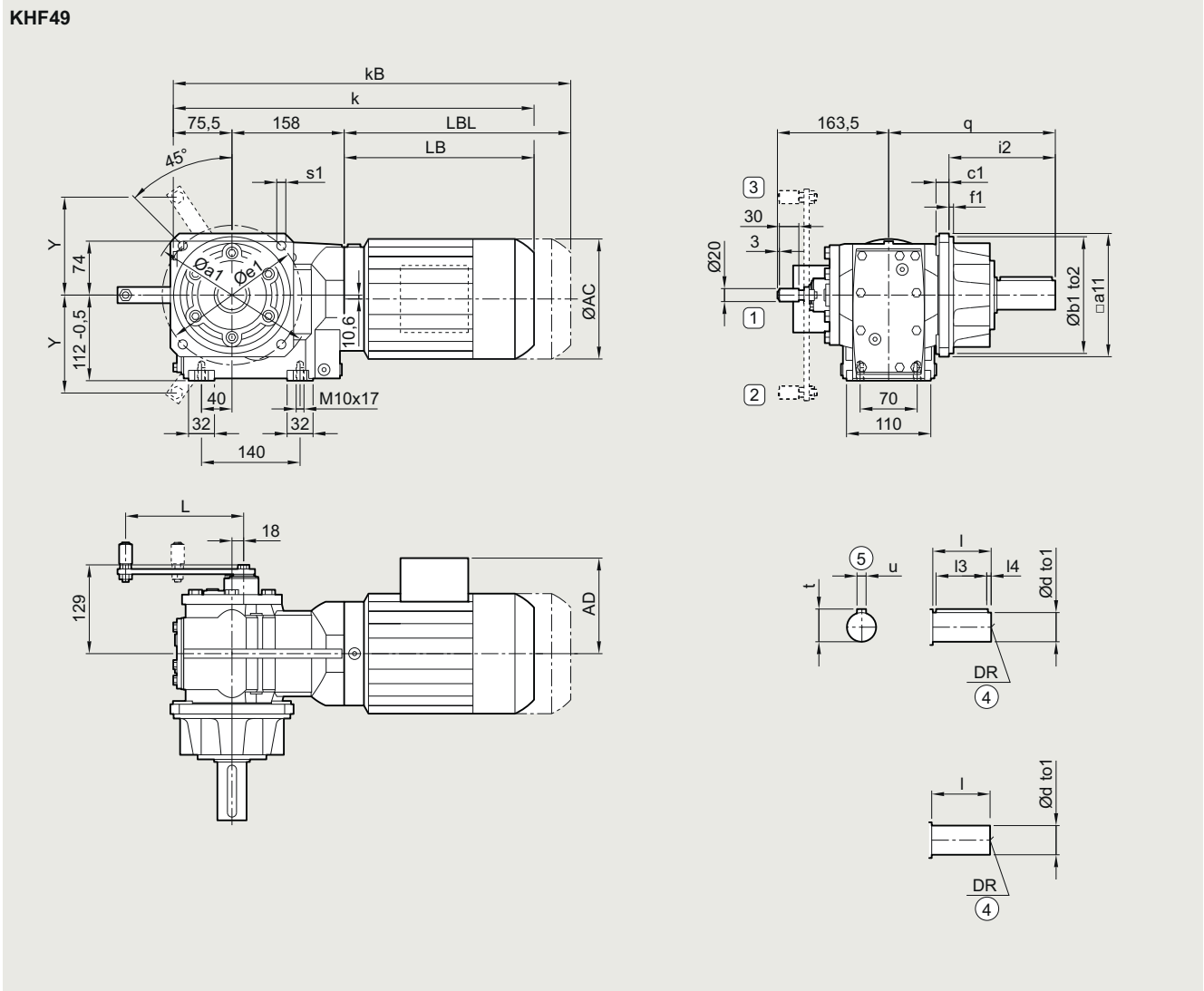
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

## Gearbox KHF49 in a flange-mounted design

## KHF030



Clutch		Clutch lever			L		Y	
①	Engaged	Position A, short	140	117				
② ③	Disengaged	Position A, long	182	151				

Flange	a1	b1	to2	c1	f1	a11	e1	s1	Shaft	d	to1	l	l3	l4	t	u	q	i2	DR
	200	130	j6	13	6	160	165	M10		30	k6	60	50	3.5	33	8	191	100	M10x22
										35	k6	70	56	7	38	10	201	110	M12x28
	250	180	j6	15	6	190	215	M12		30	k6	60	50	3.5	33	8	191	105	M10x22
										35	k6	70	56	7	38	10	201	115	M12x28

Motor	LE63	LE63Z	LE71	LE71Z	LE71Y	LE80	LE80Z	LE90	LE90Z	LE100	LE100Z	LE112	LE112Z	LE132	LE132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	427.5	453.5	459.5	478.5	509.0	514.0	549.0	575.5	615.5	632.0	667.0	642.0	676.5	695.0	745.0
kB	472.0	498.0	514.5	533.5	564.0	574.0	609.0	645.5	685.5	710.5	745.5	715.0	749.5	799.5	849.5
LB	194.0	220.0	226.0	245.0	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	238.5	264.5	281.0	300.0	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

# SIMOGEAR geared motors

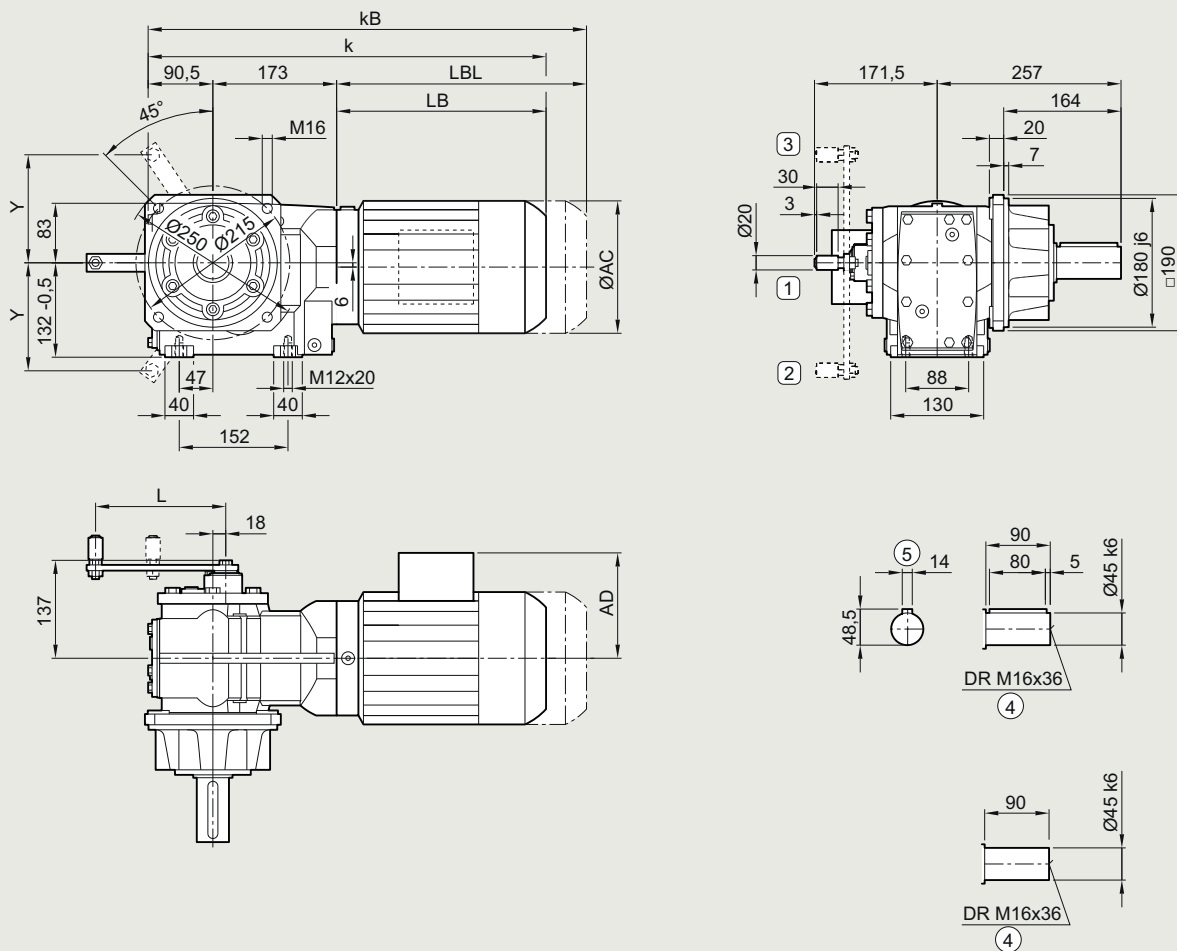
Electric-monorail geared motors for heavy-load applications

## Dimensional drawings

### Gearbox KHF69 in a flange-mounted design

KHF030

KHF69



8

Clutch		Clutch lever		L	Y										
①	Engaged	Position A, short	140	117											
② ③	Disengaged	Position A, long	182	151											
Motor	LE63	LE63Z	LE71	LE71Z	LE71Y	LE80	LE80Z	LE90	LE90Z	LE100	LE100Z	LE112	LE112Z	LE132	LE132Z
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	457.5	483.5	489.5	508.5	539.0	544.0	579.0	605.5	645.5	662.0	697.0	672.0	706.5	725.0	775.0
kB	502.0	528.0	544.5	563.5	594.0	604.0	639.0	675.5	715.5	740.5	775.5	745.0	779.5	829.5	879.5
LB	194.0	220.0	226.0	245.0	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5
LBL	238.5	264.5	281.0	300.0	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0

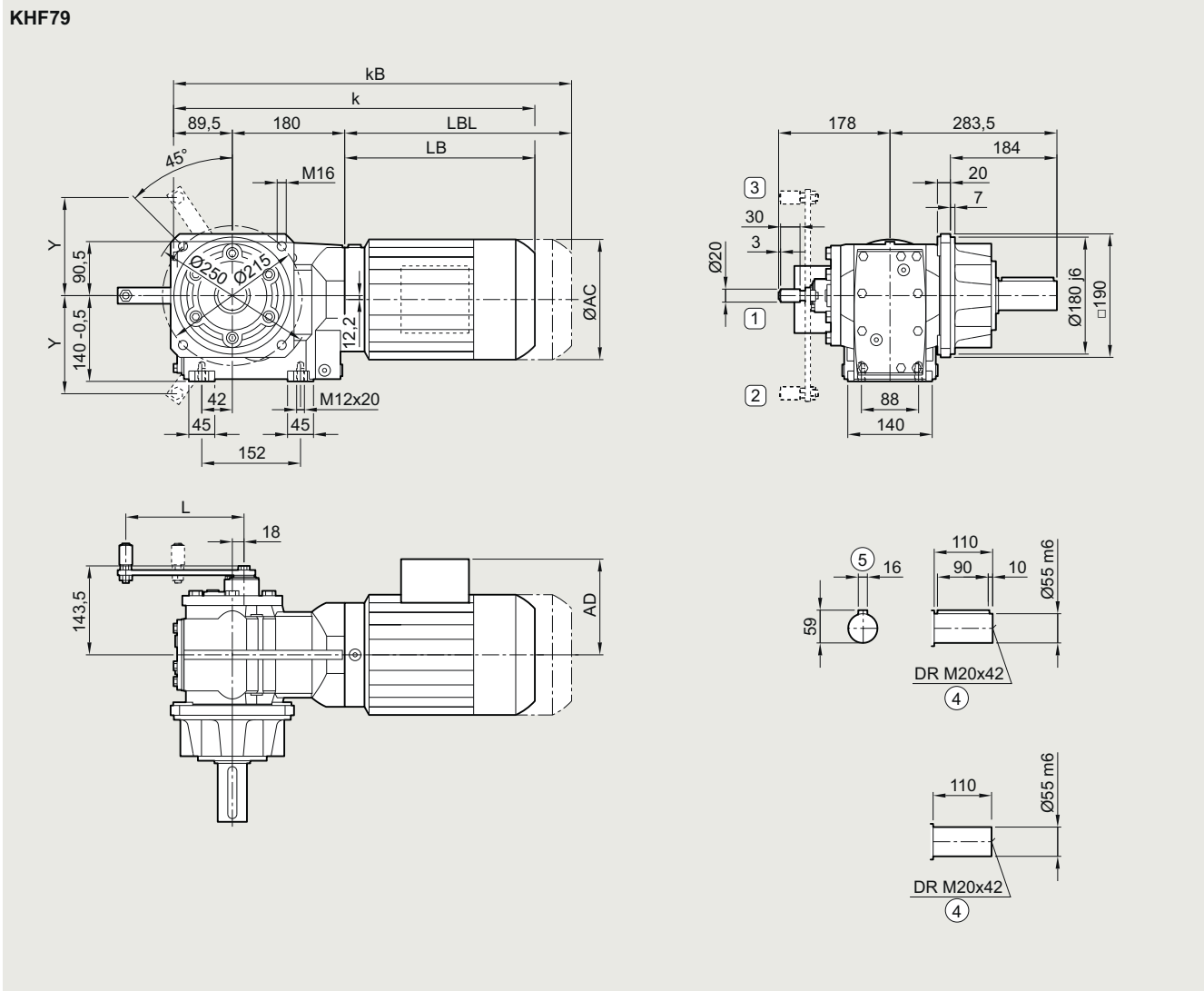
<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

**Gearbox KHF79 in a flange-mounted design**

**KHF030**



Clutch		Clutch lever			L	Y										
①	Engaged	Position A, short	140	117												
② ③	Disengaged	Position A, long	182	151												
Motor	LE63	LE63Z	LE71	LE71Z	LE71Y	LE80	LE80Z	LE90	LE90Z	LE100	LE100Z	LE112	LE112Z	LE132	LE132Z	
AC	117.8	117.8	138.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0	
AD <sup>1)</sup>	124.0	124.0	134.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0	
k	463.5	489.5	495.5	514.5	545.0	550.0	585.0	611.5	651.5	668.0	703.0	678.5	712.5	731.0	781.0	
kB	508.5	534.0	550.5	569.5	600.0	610.0	645.0	681.5	721.5	746.5	781.5	751.0	785.5	835.5	885.5	
LB	194.0	220.0	226.0	245.0	275.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0	461.5	511.5	
LBL	238.5	264.5	281.0	300.0	330.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0	566.0	616.0	

<sup>1)</sup> AD depends on the motor options, for other dimensions, see page 9/46.

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

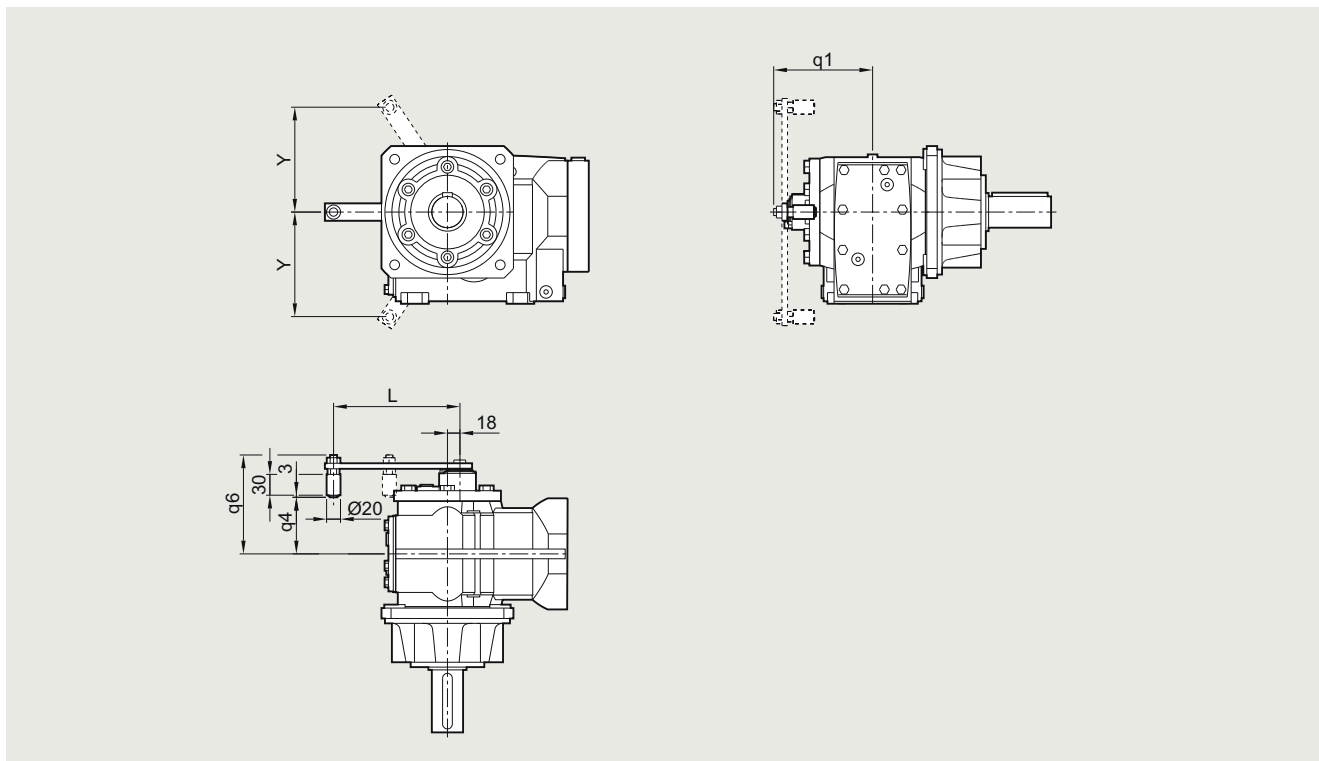
## SIMOGEAR geared motors

Electric-monorail geared motors for heavy-load applications

### Dimensional drawings

#### Clutch lever, position B

Further information about the clutch lever can be found in chapter [Gearbox options on page 10/55](#).



8

Gearbox type	q1	q4	q6
KHF49	129.0	73.5	134.5
KHF69	137.0	81.5	142.5
KHF79	143.5	88.0	149.0

Clutch lever	L	Y
Position B, short	140	117
Position B, long	182	151





<b>9/2</b>	<b>Orientation</b>
9/2	MODULOG modular system
9/3	Overview of technical specifications
9/5	Efficiency and power factor
9/5	EMC measures
<b>9/6</b>	<b>Converter World Motor</b>
	Selection and ordering data
	<u>Line voltage 380 V to 480 V</u>
9/6	• 1500 rpm
9/6	• 1750 rpm
9/8	• 2610 rpm
9/8	• 3000 rpm
<b>9/10</b>	<b>Synchronous reluctance motors for converter operation</b>
	Selection and ordering data
	<u>Line voltage 400 V / 480 V</u>
9/10	• 4-pole at 50 Hz, 60 Hz, 87 Hz, 104 Hz power
<b>9/12</b>	<b>VSD10 line motors for converter operation</b>
	Selection and ordering data
	<u>Line voltage 400 V / 460V</u>
9/14	• 4-pole at 50 Hz, 60 Hz, 87 Hz power
	<u>Line voltage 500 V / 575 V</u>
9/14	• 4-pole at 50 Hz, 60 Hz, 87 Hz power
	<u>Line voltage 690 V</u>
9/16	• 4-pole at 50 Hz, 87 Hz power
<b>9/18</b>	<b>Motors with Premium Efficiency IE3</b>
	Selection and ordering data
9/18	• 4/2/6-pole at 50 Hz power
9/22	• 4/2/6-pole at 60 Hz, 50 Hz power
9/26	• 4/2-pole at 60 Hz, 60 Hz power
9/28	• 4/6-pole at 87 Hz power
<b>9/30</b>	<b>Motors with High Efficiency IE2</b>
	Selection and ordering data
9/30	• 4/2/6-pole at 50 Hz power
9/30	• 4/2/6-pole at 60 Hz, 50 Hz power
9/30	• 4/2/6-pole at 60 Hz, 60 Hz power
9/32	• 4/6-pole at 87 Hz power, duty type S9
<b>9/34</b>	<b>Motors with Standard Efficiency IE1</b>
	Selection and ordering data
9/34	• 4/6/8-pole at 50 Hz power
9/34	• 4/6/8-pole at 60 Hz, 50 Hz power
9/34	• 4/6/8-pole at 60 Hz, 60 Hz power
9/34	• 4/8-pole at 87 Hz power
<b>9/36</b>	<b>Explosion-protected motors</b>
	Selection and ordering data
	<u>Motors for Zone 2 and Zone 22</u>
9/36	• 4-pole at 50 Hz power

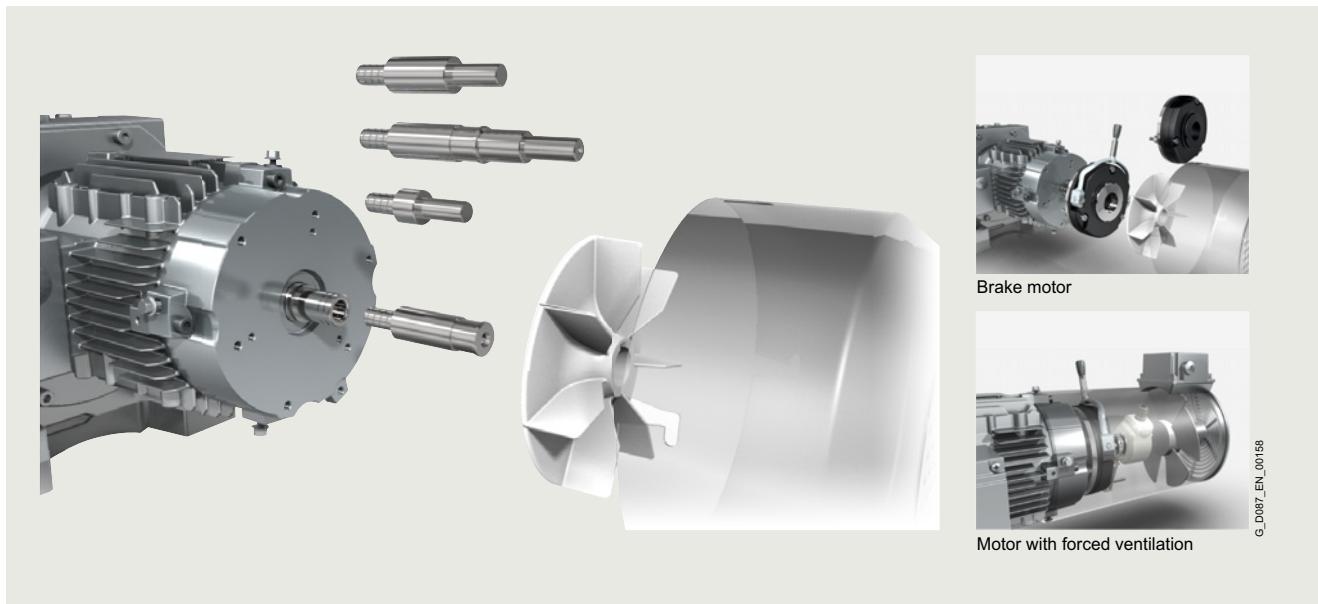
<b>9/38</b>	<b>Motors according to UL and CSA standards</b>
	Selection and ordering data
9/38	• 4/2/6-pole at 60 Hz, 50 Hz power
9/42	• 4/2/6-pole at 60 Hz, 60 Hz power
9/44	• 4/6-pole at 104 Hz power
<b>9/46</b>	<b>Dimensions</b>
9/46	Motors
9/53	Motors for worm gearboxes S
9/54	Explosion-protected motors
	<u>Additional lengths</u>
9/58	Second shaft extension, handwheel, and canopy
9/59	Encoder
9/60	Prepared for encoder mounting
9/61	Separately driven fan, encoder, and canopy
9/62	Application terminal box
9/63	HAN 10E motor plug
9/65	HAN K4/4 motor plug
9/67	HAN Q8 and HAN Q12 motor plugs

## Motors

### Orientation

#### MODULOG modular system

#### Overview



The MODULOG modular system has a range of benefits for machine and plant designers.

The name MODULOG stands for a clear and transparent **modular** motor system with an optimum **logistical** structure. It enables users to assemble powerful, durable, and extremely easy-to-service motors from just a few standard components to create a customized motor system for most applications.

At the heart of the system is a basic motor dimensioned for international line supply conditions with an individually configurable MODULOG modular system at the non-drive end (NDE) of the motor.

Functional expansions, such as brakes, backstops, rotary encoders, separately driven fan, canopy, etc., can be combined almost arbitrarily as "additional functional components".

## Overview

The motors comply with all applicable international (IEC), European (EN, CENELEC) and national (DIN/VDE) standards:

Motor type	Three-phase induction motors with squirrel-cage rotor
Connection types	You can establish the connection type that can be used from the product number suffixes in the selection and ordering data for the required motor.
Number of poles	2, 4, 6, 8
Rated speed (synchronous speed)	750 ... 3 600 rpm
Rated power (50 Hz)	0.09 ... 55 kW (4-pole)
Rated torque	0.85 ... 355 Nm (4-pole)
Stator winding insulation	Temperature class 155 (F) Utilization according to temperature class 130 (B) Optionally, temperature class 180 (H)
Degree of protection according to IEC 60034-5 (EN 60034-5)	IP55 Optional IP65, IP56
Cooling according to IEC 60034-6 (EN 60034-6)	Self-cooled (IC 411) Optionally, force ventilated (IC 416)
Coolant temperature	-40 ... +60 °C
Installation altitude	Up to 1 000 m above sea level
Rated voltage	200 ... 690 V You can establish the voltage that can be used from the selection and ordering data for the required motor.
Rated frequency	50 Hz, 60 Hz, 87 Hz
Vibration severity according to IEC 60034-14 (EN 60034-14)	Vibration severity A
Balancing type	Half-key balancing
Sound pressure level, sound power level according to IEC 60034-9 (EN 60034-9)	You can establish the corresponding sound pressure level and sound power level from the selection and ordering data for the required motor.
Weight	You can establish the corresponding weight from the selection and ordering data for the required motor.
Rating plates	See "Rating plate" in chapter "General options"
Connection and terminal boxes	See "Connection, circuit, and terminal boxes" in chapter "Motor options"

The geared motors comply with all of the applicable IEC/EN standards.

IEC	EN	DIN/VDE	Title
IEC 60027-4	EN 60027-4	EN 60027-4	Formula symbols for electrical engineering Part 4: Rotating electrical machines
IEC 60034-1	EN 60034-1	EN 60034-1 (VDE 0530-1)	Rotating electrical machines: - Rating and performance
IEC 60034-2-1	EN 60034-2-1	EN 60034-2-1 (VDE 0530-2-1)	- Standard technique to determine the losses and efficiency based on testing (with the exception of machines for track and road vehicles) (IEC 60034-2-1:2007); German Edition EN 60034-2-1:2007
IEC 60034-5	EN 60034-5	EN 60034-5 (VDE 0530-5)	- Degrees of protection provided by integral design of rotating electrical machines (IP code) – Classification
IEC 60034-6	EN 60034-6	EN 60034-6 (VDE 0530-6)	- Classification of cooling methods (IC code)
IEC 60034-7	EN 60034-7	EN 60034-7 (VDE 0530-7)	- Classification of types of construction, mounting arrangements and terminal box position (IM code)
IEC 60034-8	EN 60034-8	EN 60034-8 (VDE 0530-8)	- Terminal markings and direction of rotation
IEC 60034-9	EN 60034-9	EN 60034-9 (VDE 0530-9)	- Noise limits
IEC 60034-11	EN 60034-11	EN 60034-11 (VDE 0530-11)	- Built-in thermal protection
IEC 60034-12	EN 60034-12	EN 60034-12 (VDE 0530-12)	- Starting behavior of three-phase squirrel-cage motors, with the exception of pole-changing motors
IEC 60034-14	EN 60034-14	EN 60034-14 (VDE 0530-14)	- Mechanical vibration of certain machines with shaft heights 56 mm and higher

## Motors

### Orientation

## Technical specifications

### Overview

IEC	EN	DIN/VDE	Title
IEC 60034-30-1	EN 60034-30-1	EN 60034-30-1 (VDE 0530-30)	- International efficiency classes for rotating electrical machines (IE code)
IEC/TS 60034-17	-	-	- Converter-fed squirrel-cage induction motors – Application guide
IEC/TS 60034-25	-	DIN VDE 0530-25 (VDE 0530-25)	- Rotating electrical machines - Part 25: AC machines when used in power drive systems – Application guide
-	-	ISO 10816	Vibration limits
IEC 60038	EN 60038	EN 60038 (VDE 0175-1)	IEC standard voltages
-	EN 50347	EN 50347	Three-phase induction motors for general applications with standardized dimensions and power ratings – frame sizes 56 to 315 and flange sizes 65 to 740
IEC 60085	EN 60085	EN 60085 (VDE 0301-1)	Electrical insulation, thermal evaluation + designation
IEC 60445	EN 60445	EN 60445 (VDE 0197)	Identification of equipment terminals, conductor terminations and conductors
IEC 60529	EN 60529	EN 60529 (VDE 0470-1)	Degrees of protection provided by the enclosure (IP code)
IEC 62444	EN 62444	EN 62444 (VDE 0619)	Cable glands for electrical installation
-	-	DIN 42925	Terminal box cable entries for three-phase squirrel-cage motors at rated voltages from 400 to 690 V

#### Further, the following applies to explosion-protected motors:

IEC 60079-0	EN 60079-0	EN 60079-0	General provisions
IEC 60079-15	EN 60079-15	EN 60079-15	Type of protection "n" (non-sparking)
IEC 60079-31	EN 60079-31	EN 60079-31	Areas containing flammable dust

The following applies to explosion-protected motors:

Since the requirements of explosion-protected motors comply with the European standards EN 60079-0, EN 60079-15, EN 60079-31 and Directive 2014/34/EU (ATEX 95), the certificates issued by authorized testing agencies (PTB, FTZU, etc.) are recognized by all member states of the EU. The remaining members of CENELEC, Switzerland in particular, also accept the certificates.

### Tolerances

The following tolerances are permitted according to EN 60034: Motors that comply with EN 60034-1 must have a voltage tolerance of  $\pm 5\%$  /frequency tolerance of  $\pm 2\%$  (Zone A). If utilized, the admissible limit temperature of the temperature class may be exceeded by 10 K.

Description	Tolerance
Efficiency	$P_N \leq 150 \text{ kW}$ : $-0.15 (1 - \eta)$ $P_N > 150 \text{ kW}$ : $-0.1 (1 - \eta)$
Power factor	$-(1 - \cos \varphi)$ 6  (minimum 0.02/maximum 0.07)
Slip at full load and operating temperature	$\pm 20\%$ of the setpoint slip for $P_N \geq 1 \text{ kW}$ $\pm 30\%$ of the setpoint slip for $P_N < 1 \text{ kW}$
Starting torque	$-15\%$ and $+25\%$
Breakdown torque	$-10\%$ without upper limit
Starting current	$+20\%$ without lower limit
Moment of inertia	$\pm 10\%$

**Efficiency and power factor**

The efficiency  $\eta$  and the power factor  $\cos \varphi$  for each rated power are listed in the selection tables in the individual sections of this catalog.

Partial-load power factor  $\cos \varphi$ 

4/4 of full load	1/4	1/2	3/4	5/4
0.92	0.70	0.86	0.90	0.92
0.91	0.65	0.85	0.89	0.91
0.90	0.63	0.83	0.88	0.90
0.89	0.61	0.80	0.86	0.89
0.88	0.57	0.78	0.85	0.88
0.87	0.53	0.76	0.84	0.87
0.86	0.51	0.75	0.83	0.86
0.85	0.49	0.73	0.81	0.86
0.84	0.47	0.71	0.80	0.85
0.83	0.45	0.69	0.79	0.84
0.82	0.43	0.67	0.77	0.83
0.81	0.41	0.66	0.76	0.82
0.80	0.40	0.65	0.75	0.81
0.79	0.38	0.63	0.74	0.80
0.78	0.36	0.61	0.72	0.80
0.77	0.34	0.59	0.71	0.79
0.76	0.32	0.58	0.70	0.78
0.75	0.30	0.56	0.69	0.78
0.74	0.29	0.55	0.68	0.77
0.73	0.28	0.54	0.67	0.77
0.72	0.27	0.52	0.63	0.76
0.71	0.26	0.50	0.62	0.76

For motors with Standard Efficiency (IE1), High Efficiency (IE2) and Premium Efficiency (IE3), the 3/4 load efficiency is also listed in the selection tables. The part-load values stated in the tables below are averages; precise values can be provided on request.

Partial-load efficiency  $\eta$  in %

4/4 of full load	1/4	1/2	3/4	5/4
97	93	96.0	97.0	96.5
96	92	95.0	96.0	95.5
95	90	93.5	95.0	94.5
94	89	92.5	94.0	93.5
93	88	91.5	93.0	92.5
92	87	91.0	92.0	91.5
91	86	90.0	91.0	90.0
90	85	89.0	90.0	89.0
89	84	88.0	89.0	88.0
88	80	87.0	88.0	87.0
87	79	86.0	87.0	86.0
86	78	85.0	86.0	85.0
85	76	84.0	85.0	83.5
84	74	83.0	84.0	82.5
83	72	82.0	83.0	81.5
82	70	81.0	82.0	80.5
81	68	80.0	81.0	79.5
80	66	79.0	80.0	78.5
79	64	77.0	79.5	77.5
78	62	75.5	78.5	76.5
77	60	74.0	77.5	75.0
76	58	73.0	76.0	74.0
75	56	72.0	75.0	73.0
74	55	71.0	74.0	72.0
73	54	70.0	73.0	71.0
72	53	68.0	72.0	70.0
71	52	67.0	71.0	69.0
70	51	66.0	70.0	68.0
69	50	65.0	69.0	67.0
68	49	64.0	67.5	66.0
67	48	62.0	66.5	65.0
66	47	61.0	65.0	64.0
65	46	60.0	64.0	63.0
64	45	59.0	63.0	62.0
63	44	57.0	62.0	61.0
62	43	56.0	60.5	60.5
61	42	55.0	59.5	59.5
60	41	54.0	58.5	58.5

**EMC measures**

SIMOGEAR geared motors are designed as components for installation in systems and machines. The manufacturer of the system or machine is responsible for complying with EMC Directive 2014/30/EU and "Electromagnetic Compatibility Regulations 2016".

The motors, when correctly used in continuous operation connected to the line supply, fulfill basic EMC standards EN 50081 and EN 50082.

**Line voltage 380 V to 480 V**
**Selection and ordering data**

Frame size	Motor	$P_N$ kW	Connection	$f_N$ Hz	$T_N$ Nm	$I_N$ A	$U_N$ V	$\cos \varphi$ -	$\eta$ PDS (90, 100) %	Efficiency class acc. to IEC TS 60034- 30-2 and IEC 60034-2-3
<b>1500 rpm</b>										
71	LE71YMS4PV	0.37	Y	52.7	2.4	1.2	330	0.7	75.36	IE3
80	LE80ZMK4PV	0.55	Y	51.6	3.5	1.5	330	0.77	79.12	IE3
	LE80ZMQ4PV	0.75	Y	51.7	4.8	2.1	330	0.76	80.91	IE3
90	LE90SM4PV	1.1	Y	52.3	7	2.9	330	0.79	82.27	IE3
	LE90ZLR4PV	1.5	Y	52.1	9.6	3.8	330	0.82	83.64	IE3
100	LE100ZLSA4PV	2.2	Y	51.3	14	5.3	330	0.82	86.24	IE3
	LE100ZLSB4PV	3	Y	51.5	19.1	7.3	330	0.83	86.33	IE3
112	LE112ZMKB4PV	4	Y	51.5	26	9.6	330	0.83	87.46	IE3
132	LE132ZST4PV	5.5	Y	50.8	35	13.4	330	0.81	88.82	IE3
	LE132ZMS4PV	7.5	Y	50.7	48	18.4	330	0.79	89.3	IE3
160	LE160MPA4PV	9.2	Y	50.7	59	25	330	0.61	90.74	IE3
	LE160MPB4PV	11	Y	50.9	70	26	330	0.71	91.43	IE3
	LE160ZLL4PV	15	Y	50.9	96	35	330	0.72	91.46	IE3
180	LES180MQ4PV	18.5	Y	50.7	118	37	380	0.81	92.67	IE3
	LES180ZLN4PV	22	Y	51	140	44	380	0.83	92.38	IE3
200	LES200ZLU4PV	30	Y	50.7	191	58	380	0.84	93.37	IE3
225	LES225SD4PV	37	Y	50.5	236	70	380	0.83	93.59	IE3
	LES225YMF4PV	45	Y	50.7	286	86	380	0.85	93.5	IE3
250	LES250MD4PV	55	Y	50.4	350	101	380	0.86	94.42	IE3
<b>1750 rpm</b>										
71	LE71YMS4PV	0.43	Y	61.7	2.4	1.2	380	0.73	77.08	IE3
80	LE80ZMK4PV	0.64	Y	60.2	3.5	1.5	380	0.8	80.38	IE3
	LE80ZMQ4PV	0.88	Y	59.6	4.8	2.1	380	0.69	81.99	IE3
90	LE90SM4PV	1.3	Y	60.7	7	2.9	380	0.73	83.33	IE3
	LE90ZLR4PV	1.8	Y	60.2	9.6	3.8	380	0.72	84.22	IE3
100	LE100ZLSA4PV	2.6	Y	59.5	14	5.3	380	0.75	87.67	IE3
	LE100ZLSB4PV	3.5	Y	59.7	19.1	7.3	380	0.76	87.42	IE3
112	LE112ZMKB4PV	4.7	Y	59.5	26	9.6	380	0.76	88.37	IE3
132	LE132ZST4PV	6.4	Y	59.2	35	13.4	380	0.81	90.47	IE3
	LE132ZMS4PV	8.8	Y	59.2	48	18.4	380	0.79	91.06	IE3
160	LE160MPA4PV	10.7	Y	59.1	59	25	380	0.65	91.48	IE3
	LE160MPB4PV	12.8	Y	59	70	26	380	0.73	91.95	IE3
	LE160ZLL4PV	17.5	Y	59.1	96	35	380	0.75	92.18	IE3
180	LES180MQ4PV	18.5	Y	59.4	101	35	380	0.85	93.5	IE4
	LES180ZLN4PV	22	Y	59.6	120	42	380	0.85	93.26	IE3
200	LES200ZLU4PV	30	Y	59.4	164	56	380	0.77	94.02	IE3
225	LES225SD4PV	37	Y	59.3	202	70	380	0.91	94.22	IE3
	LES225YMF4PV	45	Y	59.2	246	83	380	0.89	94.56	IE3
250	LES250MD4PV	55	Y	59	300	101	380	0.91	94.8	IE3

Frame size	Motor	Mech. limit speed rpm	$J_{mot}$ $10^{-4} \text{ kgm}^2$	$m_{mot}$ kg	9th to 13th position of the Article No.	
					2KJ3... - . ■ ■ ■ ■ ■ - ■ ... - Z	
<b>1500 rpm</b>						
71	LE71YMS4PV	4200	13	11	2KJ3... - .	<b>C E 1 3 - 6</b> ...
80	LE80ZMK4PV	4200	30	13	2KJ3... - .	<b>D E 1 3 - 6</b> ...
	LE80ZMQ4PV	4200	30	15	2KJ3... - .	<b>D F 1 3 - 6</b> ...
90	LE90SM4PV	4200	37	21	2KJ3... - .	<b>E K 1 3 - 6</b> ...
	LE90ZLR4PV	4200	49	22	2KJ3... - .	<b>E M 1 3 - 6</b> ...
100	LE100ZLSA4PV	4200	123	39	2KJ3... - .	<b>F N 1 3 - 6</b> ...
	LE100ZLSB4PV	4200	123	39	2KJ3... - .	<b>F P 1 3 - 6</b> ...
112	LE112ZMKB4PV	4200	145	57	2KJ3... - .	<b>G J 1 3 - 6</b> ...
132	LE132ZST4PV	4200	351	84	2KJ3... - .	<b>H J 1 3 - 6</b> ...
	LE132ZMS4PV	4200	399	87	2KJ3... - .	<b>H L 1 3 - 6</b> ...
160	LE160MPA4PV	4200	710	97	2KJ3... - .	<b>J Q 1 3 - 6</b> ...
	LE160MPB4PV	4200	710	97	2KJ3... - .	<b>J R 1 3 - 6</b> ...
	LE160ZLL4PV	4200	851	112	2KJ3... - .	<b>J U 1 3 - 6</b> ...
180	LES180MQ4PV	4200	1397	190	2KJ3... - .	<b>K L 1 3 - 6</b> ...
	LES180ZLN4PV	4200	1515	200	2KJ3... - .	<b>K N 1 3 - 6</b> ...
200	LES200ZLU4PV	4200	2394	267	2KJ3... - .	<b>L N 1 3 - 6</b> ...
225	LES225SD4PV	4200	4200	312	2KJ3... - .	<b>M F 1 3 - 6</b> ...
	LES225YMF4PV	4200	5200	354	2KJ3... - .	<b>M T 1 3 - 6</b> ...
250	LES250MD4PV	3700	8500	441	2KJ3... - .	<b>N M 1 3 - 6</b> ...
<b>1750 rpm</b>						
71	LE71YMS4PV	4200	13	11	2KJ3... - .	<b>C E 1 3 - 6</b> ...
80	LE80ZMK4PV	4200	30	13	2KJ3... - .	<b>D E 1 3 - 6</b> ...
	LE80ZMQ4PV	4200	30	15	2KJ3... - .	<b>D F 1 3 - 6</b> ...
90	LE90SM4PV	4200	37	21	2KJ3... - .	<b>E K 1 3 - 6</b> ...
	LE90ZLR4PV	4200	49	22	2KJ3... - .	<b>E M 1 3 - 6</b> ...
100	LE100ZLSA4PV	4200	123	39	2KJ3... - .	<b>F N 1 3 - 6</b> ...
	LE100ZLSB4PV	4200	123	39	2KJ3... - .	<b>F P 1 3 - 6</b> ...
112	LE112ZMKB4PV	4200	145	57	2KJ3... - .	<b>G J 1 3 - 6</b> ...
132	LE132ZST4PV	4200	351	84	2KJ3... - .	<b>H J 1 3 - 6</b> ...
	LE132ZMS4PV	4200	399	87	2KJ3... - .	<b>H L 1 3 - 6</b> ...
160	LE160MPA4PV	4200	710	97	2KJ3... - .	<b>J Q 1 3 - 6</b> ...
	LE160MPB4PV	4200	710	97	2KJ3... - .	<b>J R 1 3 - 6</b> ...
	LE160ZLL4PV	4200	851	112	2KJ3... - .	<b>J U 1 3 - 6</b> ...
180	LES180MQ4PV	4200	1397	190	2KJ3... - .	<b>K L 1 3 - 6</b> ...
	LES180ZLN4PV	4200	1515	200	2KJ3... - .	<b>K N 1 3 - 6</b> ...
200	LES200ZLU4PV	4200	2394	267	2KJ3... - .	<b>L N 1 3 - 6</b> ...
225	LES225SD4PV	4200	4200	312	2KJ3... - .	<b>M F 1 3 - 6</b> ...
	LES225YMF4PV	4200	5200	354	2KJ3... - .	<b>M T 1 3 - 6</b> ...
250	LES250MD4PV	3700	8500	441	2KJ3... - .	<b>N M 1 3 - 6</b> ...

**Line voltage 380 V to 480 V**
**Selection and ordering data**

Frame size	Motor	$P_N$ kW	Connection	$f_N$ Hz	$T_N$ Nm	$I_N$ A	$U_N$ V	$\cos \varphi$ -	$\eta$ PDS (90, 100) %	Efficiency class acc. to IEC TS 60034- 30-2 and IEC 60034-2-3
<b>2610 rpm</b>										
71	LE71YMS4PV	0.64	D	89.6	2.4	2	330	0.67	78.81	IE3
80	LE80ZMK4PV	0.96	D	88.6	3.5	2.6	330	0.76	81.92	IE3
	LE80ZMQ4PV	1.3	D	88.8	4.8	3.6	330	0.73	84.24	IE4
90	LE90SM4PV	1.9	D	89.1	7	5	330	0.76	84.92	IE3
	LE90ZLR4PV	2.6	D	89	9.6	6.5	330	0.79	85.64	IE3
100	LE100ZLSA4PV	3.81	D	88.3	14	9.3	330	0.82	88.35	IE3
	LE100ZLSB4PV	5.2	D	88.4	19.1	12.6	330	0.8	87.61	IE3
112	LE112ZMKB4PV	6.93	D	88.3	26	16.6	330	0.81	89.08	IE3
132	LE132ZST4PV	9.6	D	87.8	35	23	330	0.81	90.61	IE3
	LE132ZMS4PV	13.1	D	87.8	48	33	330	0.79	90.76	IE3
160	LE160MPA4PV	16	D	87.7	59	43	330	0.61	91.31	IE3
	LE160MPB4PV	19.1	D	88	70	46	330	0.68	91.97	IE3
	LE160ZLL4PV	26	D	87.9	96	61	330	0.7	92.3	IE3
180	LES180MQ4PV	32	D	87.8	118	64	380	0.81	93.55	IE3
	LES180ZLN4PV	38	D	87.8	140	77	380	0.82	93	IE3
200	LES200ZLU4PV	52	D	87.7	191	101	380	0.83	94.18	IE3
225	LES225SD4PV	64	D	87.6	236	123	380	0.83	94.37	IE3
	LES225YMF4PV	78	D	87.8	286	147	380	0.85	94.58	IE3
250	LES250MD4PV	96	D	87.4	350	177	380	0.86	94.86	IE3
<b>3000 rpm</b>										
71	LE71YMS4PV	0.74	D	103.2	2.5	2	380	0.7	79.83	IE3
80	LE80ZMK4PV	1.1	D	101.8	3.5	2.6	380	0.78	82.37	IE3
	LE80ZMQ4PV	1.5	D	101.5	4.8	3.6	380	0.67	84.04	IE3
90	LE90SM4PV	2.2	D	101.9	7	5	380	0.7	85.76	IE3
	LE90ZLR4PV	3	D	101.9	9.6	6.5	380	0.7	86.04	IE3
100	LE100ZLSA4PV	4.4	D	101.1	14	9.3	380	0.74	88.43	IE3
	LE100ZLSB4PV	6	D	101.1	19.1	12.6	380	0.76	88.86	IE3
112	LE112ZMKB4PV	8	D	100.9	26	16.6	380	0.74	89.08	IE3
132	LE132ZST4PV	11	D	101	35	23	380	0.8	90.87	IE3
	LE132ZMS4PV	15	D	100.9	48	33	380	0.78	90.88	IE3
160	LE160MPA4PV	18.4	D	100.7	59	43	380	0.64	91.36	IE3
	LE160MPB4PV	22	D	101	70	46	380	0.71	91.71	IE3
	LE160ZLL4PV	30	D	100.9	96	61	380	0.73	92.41	IE3
180	LES180MQ4PV	32	D	102.5	102	61	380	0.85	93.78	IE3
	LES180ZLN4PV	38	D	101.3	121	73	380	0.85	93.4	IE3
200	LES200ZLU4PV	52	D	101	166	94	380	0.86	94.26	IE3
225	LES225SD4PV	64	D	101	204	128	380	0.91	93.52	IE2
	LES225YMF4PV	78	D	100.9	248	144	380	0.67	94.92	IE3
250	LES250MD4PV	96	D	100.7	306	175	380	0.88	95.7	IE3



Frame size	Motor	Mech. limit speed rpm	$J_{mot}$ $10^{-4} \text{ kgm}^2$	$m_{mot}$ kg	9th to 13th position of the Article No.	
					2KJ3... - . ■ ■ ■ ■ - ■ ... - Z	
<b>2610 rpm</b>						
71	LE71YMS4PV	4200	13	11	2KJ3... - .	<b>C E 1 3 - 7</b> ...
80	LE80ZMK4PV	4200	30	13	2KJ3... - .	<b>D E 1 3 - 7</b> ...
	LE80ZMQ4PV	4200	30	15	2KJ3... - .	<b>D F 1 3 - 7</b> ...
90	LE90SM4PV	4200	37	21	2KJ3... - .	<b>E K 1 3 - 7</b> ...
	LE90ZLR4PV	4200	49	22	2KJ3... - .	<b>E M 1 3 - 7</b> ...
100	LE100ZLSA4PV	4200	123	39	2KJ3... - .	<b>F N 1 3 - 7</b> ...
	LE100ZLSB4PV	4200	123	39	2KJ3... - .	<b>F P 1 3 - 7</b> ...
112	LE112ZMKB4PV	4200	145	57	2KJ3... - .	<b>G J 1 3 - 7</b> ...
132	LE132ZST4PV	4200	351	84	2KJ3... - .	<b>H J 1 3 - 7</b> ...
	LE132ZMS4PV	4200	399	87	2KJ3... - .	<b>H L 1 3 - 7</b> ...
160	LE160MPA4PV	4200	710	97	2KJ3... - .	<b>J Q 1 3 - 7</b> ...
	LE160MPB4PV	4200	710	97	2KJ3... - .	<b>J R 1 3 - 7</b> ...
	LE160ZLL4PV	4200	851	112	2KJ3... - .	<b>J U 1 3 - 7</b> ...
180	LES180MQ4PV	4200	1397	190	2KJ3... - .	<b>K L 1 3 - 7</b> ...
	LES180ZLN4PV	4200	1515	200	2KJ3... - .	<b>K N 1 3 - 7</b> ...
200	LES200ZLU4PV	4200	2394	267	2KJ3... - .	<b>L N 1 3 - 7</b> ...
225	LES225SD4PV	4200	4200	312	2KJ3... - .	<b>M F 1 3 - 7</b> ...
	LES225YMF4PV	4200	5200	354	2KJ3... - .	<b>M T 1 3 - 7</b> ...
250	LES250MD4PV	3700	8500	441	2KJ3... - .	<b>N M 1 3 - 7</b> ...
<b>3000 rpm</b>						
71	LE71YMS4PV	4200	13	11	2KJ3... - .	<b>C E 1 3 - 7</b> ...
80	LE80ZMK4PV	4200	30	13	2KJ3... - .	<b>D E 1 3 - 7</b> ...
	LE80ZMQ4PV	4200	30	15	2KJ3... - .	<b>D F 1 3 - 7</b> ...
90	LE90SM4PV	4200	37	21	2KJ3... - .	<b>E K 1 3 - 7</b> ...
	LE90ZLR4PV	4200	49	22	2KJ3... - .	<b>E M 1 3 - 7</b> ...
100	LE100ZLSA4PV	4200	123	39	2KJ3... - .	<b>F N 1 3 - 7</b> ...
	LE100ZLSB4PV	4200	123	39	2KJ3... - .	<b>F P 1 3 - 7</b> ...
112	LE112ZMKB4PV	4200	145	57	2KJ3... - .	<b>G J 1 3 - 7</b> ...
132	LE132ZST4PV	4200	351	84	2KJ3... - .	<b>H J 1 3 - 7</b> ...
	LE132ZMS4PV	4200	399	87	2KJ3... - .	<b>H L 1 3 - 7</b> ...
160	LE160MPA4PV	4200	710	97	2KJ3... - .	<b>J Q 1 3 - 7</b> ...
	LE160MPB4PV	4200	710	97	2KJ3... - .	<b>J R 1 3 - 7</b> ...
	LE160ZLL4PV	4200	851	112	2KJ3... - .	<b>J U 1 3 - 7</b> ...
180	LES180MQ4PV	4200	1397	190	2KJ3... - .	<b>K L 1 3 - 7</b> ...
	LES180ZLN4PV	4200	1515	200	2KJ3... - .	<b>K N 1 3 - 7</b> ...
200	LES200ZLU4PV	4200	2394	267	2KJ3... - .	<b>L N 1 3 - 7</b> ...
225	LES225SD4PV	4200	4200	312	2KJ3... - .	<b>M F 1 3 - 7</b> ...
	LES225YMF4PV	4200	5200	354	2KJ3... - .	<b>M T 1 3 - 7</b> ...
250	LES250MD4PV	3700	8500	441	2KJ3... - .	<b>N M 1 3 - 7</b> ...

## Motors

Synchronous reluctance motors for converter operation

IE4

Line voltage 400 V / 480 V

## Selection and ordering data

Frame size	Motor	$P_N$ kW	Conne- ction	$f_N$ Hz	$T_N$ Nm	$I_N$ A 50/87 Hz: 380 V 60/104 Hz: 440 V	$\cos \varphi$ -	$\eta$ 4/4 load %	Efficiency class acc. to IEC 60034-30-2	$L_{pTA}$ dB (A)	$L_{WA}$ dB (A)
<b>50 Hz power</b>											
<b>4-pole, 1500 rpm</b>											
80	LE80MH4SV	0.55	Y	50	3.50	1.49	0.67	83.9	IE4	66.0	78.0
	LE80ZMQ4SV	0.75	Y	50	4.75	1.98	0.67	85.7	IE4	66.0	78.0
90	LE90SQ4SV	1.1	Y	50	7.00	2.80	0.69	87.2	IE4	58.0	70.0
	LE90ZLT4SV	1.5	Y	50	9.50	3.75	0.69	88.2	IE4	58.0	70.0
112	LE112MGA4SV	2.2	Y	50	14.00	5.30	0.71	89.5	IE4	58.0	70.0
	LE112MGB4SV	3	Y	50	19.10	7.10	0.71	90.4	IE4	59.0	71.0
	LE112ZMN4SV	4	Y	50	25.50	9.30	0.72	91.1	IE4	59.0	71.0
<b>60 Hz, 50 Hz power</b>											
<b>4-pole, 1800 rpm</b>											
80	LE80MH4SV	0.55	Y	60	2.90	1.32	0.65	84.0	IE4	67.0	79.0
	LE80ZMQ4SV	0.75	Y	60	4.00	1.80	0.64	85.5	IE4	67.0	79.0
90	LE90SQ4SV	1.1	Y	60	5.80	2.45	0.67	87.5	IE4	59.0	71.0
	LE90ZLT4SV	1.5	Y	60	8.00	3.35	0.66	88.5	IE4	59.0	71.0
112	LE112MGA4SV	2.2	Y	60	11.70	4.70	0.69	91.0	IE4	58.0	70.0
	LE112MGB4SV	3	Y	60	15.90	6.30	0.70	91.0	IE4	59.0	71.0
	LE112ZMN4SV	4	Y	60	21.00	8.30	0.71	91.0	IE4	60.0	72.0
<b>60 Hz, 60 Hz power</b>											
<b>4-pole, 1800 rpm</b>											
80	LE80MH4SV	0.63	Y	60	3.35	1.49	0.66	84.0	IE4	67.0	79.0
	LE80ZMQ4SV	0.86	Y	60	4.55	2.00	0.66	85.5	IE4	67.0	79.0
90	LE90SQ4SV	1.27	Y	60	6.70	2.75	0.69	87.5	IE4	59.0	71.0
	LE90ZLT4SV	1.75	Y	60	9.30	3.80	0.68	88.5	IE4	59.0	71.0
112	LE112MGA4SV	2.55	Y	60	13.50	5.20	0.71	91.0	IE4	58.0	70.0
	LE112MGB4SV	3.45	Y	60	18.30	6.90	0.72	91.0	IE4	59.0	71.0
	LE112ZMN4SV	4.55	Y	60	24.00	9.00	0.73	91.0	IE4	60.0	72.0
<b>87 Hz power</b>											
<b>4-pole, 2610 rpm</b>											
80	LE80MH4SV	0.96	$\Delta$	87	3.50	2.55	0.65	87.5	IE4	69.0	81.0
	LE80ZMQ4SV	1.3	$\Delta$	87	4.75	3.45	0.64	89.0	IE4	69.0	81.0
90	LE90SQ4SV	1.9	$\Delta$	87	7.00	4.80	0.68	89.0	IE4	69.0	81.0
	LE90ZLT4SV	2.6	$\Delta$	87	9.50	6.50	0.67	90.5	IE4	69.0	81.0
112	LE112MGA4SV	3.83	$\Delta$	87	14.10	9.20	0.69	92.0	IE4	65.0	77.0
	LE112MGB4SV	5.2	$\Delta$	87	19.00	12.30	0.70	91.8	IE4	65.0	77.0
	LE112ZMN4SV	6.9	$\Delta$	87	25.00	16.00	0.71	92.3	IE4	69.0	81.0
<b>104 Hz power</b>											
<b>4-pole, 3120 rpm</b>											
80	LE80MH4SV	1.09	$\Delta$	104	3.35	2.50	0.65	88.0	IE4	69.0	81.0
	LE80ZMQ4SV	1.49	$\Delta$	104	4.55	3.45	0.64	89.0	IE4	69.0	81.0
90	LE90SQ4SV	2.2	$\Delta$	104	6.70	4.80	0.68	89.0	IE4	O. R.	O. R.
	LE90ZLT4SV	3.0	$\Delta$	104	9.30	6.50	0.67	90.5	IE4	O. R.	O. R.
112	LE112MGA4SV	4.41	$\Delta$	104	13.50	9.00	0.70	92.0	IE4	64.0	76.0
	LE112MGB4SV	6.0	$\Delta$	104	18.40	12.10	0.71	91.8	IE4	64.0	76.0
	LE112ZMN4SV	7.9	$\Delta$	104	24.00	15.60	0.72	92.3	IE4	64.0	76.0

O. R. On request

Frame size	Motor	Mech. limit speed rpm	$J_{mot}$ $10^{-4}$ kgm <sup>2</sup>	$m_{mot}$ kg	Preferred SINAMCS G120-PM240 other SINAMICS converters also possible Type <sup>1)</sup>	Frame size	IES class acc. to EN 50598-2	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code
<b>50 Hz power</b>									
<b>4-pole, 1500 rpm</b>									
80	LE80MH4SV	3200	19	11	6SL3210-1PE11-8.L1	FSA	IES2	2KJ3... - . <b>D D 2 7</b> - ....	<b>P92</b>
	LE80ZMQ4SV	3200	25	13	6SL3210-1PE12-3.L1	FSA	IES2	2KJ3... - . <b>D E 2 7</b> - ....	<b>P92</b>
90	LE90SQ4SV	3200	34	16	6SL3210-1PE13-2.L1	FSA	IES2	2KJ3... - . <b>E L 2 7</b> - ....	<b>P92</b>
	LE90ZLT4SV	3200	43	18	6SL3210-1PE14-3.L1	FSA	IES2	2KJ3... - . <b>E N 2 7</b> - ....	<b>P92</b>
112	LE112MGA4SV	3200	93	32	6SL3210-1PE16-1.L1	FSA	IES2	2KJ3... - . <b>G J 2 7</b> - ....	<b>P92</b>
	LE112MGB4SV	3200	93	32	6SL3210-1PE18-0.L1	FSA	IES2	2KJ3... - . <b>G K 2 7</b> - ....	<b>P92</b>
	LE112ZMN4SV	3200	114	37	6SL3210-1PE21-1.L0	FSA	IES2	2KJ3... - . <b>G L 2 7</b> - ....	<b>P92</b>
<b>60 Hz, 50 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
80	LE80MH4SV	3200	19	11	6SL3210-1PE11-8.L1	FSA	IES2	2KJ3... - . <b>D D 2 7</b> - ....	<b>P92</b>
	LE80ZMQ4SV	3200	25	13	6SL3210-1PE12-3.L1	FSA	IES2	2KJ3... - . <b>D E 2 7</b> - ....	<b>P92</b>
90	LE90SQ4SV	3200	34	16	6SL3210-1PE13-2.L1	FSA	IES2	2KJ3... - . <b>E L 2 7</b> - ....	<b>P92</b>
	LE90ZLT4SV	3200	43	18	6SL3210-1PE14-3.L1	FSA	IES2	2KJ3... - . <b>E N 2 7</b> - ....	<b>P92</b>
112	LE112MGA4SV	3200	93	32	6SL3210-1PE16-1.L1	FSA	IES2	2KJ3... - . <b>G J 2 7</b> - ....	<b>P92</b>
	LE112MGB4SV	3200	93	32	6SL3210-1PE18-0.L1	FSA	IES2	2KJ3... - . <b>G K 2 7</b> - ....	<b>P92</b>
	LE112ZMN4SV	3200	114	37	6SL3210-1PE21-1.L0	FSA	IES2	2KJ3... - . <b>G L 2 7</b> - ....	<b>P92</b>
<b>60 Hz, 60 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
80	LE80MH4SV	3200	19	11	6SL3210-1PE11-8.L1	FSA	IES2	2KJ3... - . <b>D D 2 7</b> - ....	<b>P92</b>
	LE80ZMQ4SV	3200	25	13	6SL3210-1PE12-3.L1	FSA	IES2	2KJ3... - . <b>D E 2 7</b> - ....	<b>P92</b>
90	LE90SQ4SV	3200	34	16	6SL3210-1PE13-2.L1	FSA	IES2	2KJ3... - . <b>E L 2 7</b> - ....	<b>P92</b>
	LE90ZLT4SV	3200	43	18	6SL3210-1PE14-3.L1	FSA	IES2	2KJ3... - . <b>E N 2 7</b> - ....	<b>P92</b>
112	LE112MGA4SV	3200	93	32	6SL3210-1PE16-1.L1	FSA	IES2	2KJ3... - . <b>G J 2 7</b> - ....	<b>P92</b>
	LE112MGB4SV	3200	93	32	6SL3210-1PE18-0.L1	FSA	IES2	2KJ3... - . <b>G K 2 7</b> - ....	<b>P92</b>
	LE112ZMN4SV	3200	114	37	6SL3210-1PE21-1.L0	FSA	IES2	2KJ3... - . <b>G L 2 7</b> - ....	<b>P92</b>
<b>87 Hz power</b>									
<b>4-pole, 2610 rpm</b>									
80	LE80MH4SV	3200	19	11	6SL3210-1PE13-2.L1	FSA	IES2	2KJ3... - . <b>D D 2 7</b> - ....	<b>P92</b>
	LE80ZMQ4SV	3200	25	13	6SL3210-1PE14-3.L1	FSA	IES2	2KJ3... - . <b>D E 2 7</b> - ....	<b>P92</b>
90	LE90SQ4SV	3200	34	16	6SL3210-1PE16-1.L1	FSA	IES2	2KJ3... - . <b>E L 2 7</b> - ....	<b>P92</b>
	LE90ZLT4SV	3200	43	18	6SL3210-1PE18-0.L1	FSA	IES2	2KJ3... - . <b>E N 2 7</b> - ....	<b>P92</b>
112	LE112MGA4SV	3200	93	32	6SL3210-1PE21-1.L0	FSA	IES2	2KJ3... - . <b>G J 2 7</b> - ....	<b>P92</b>
	LE112MGB4SV	3200	93	32	6SL3210-1PE21-4.L0	FSA	IES2	2KJ3... - . <b>G K 2 7</b> - ....	<b>P92</b>
	LE112ZMN4SV	3200	114	37	6SL3210-1PE21-8.L0	FSB	IES2	2KJ3... - . <b>G L 2 7</b> - ....	<b>P92</b>
<b>104 Hz power</b>									
<b>4-pole, 3120 rpm</b>									
80	LE80MH4SV	3200	19	11	6SL3210-1PE13-2.L1	FSA	IES2	2KJ3... - . <b>D D 2 7</b> - ....	<b>P92</b>
	LE80ZMQ4SV	3200	25	13	6SL3210-1PE14-3.L1	FSA	IES2	2KJ3... - . <b>D E 2 7</b> - ....	<b>P92</b>
90	LE90SQ4SV	3200	34	16	6SL3210-1PE16-1.L1	FSA	IES2	2KJ3... - . <b>E L 2 7</b> - ....	<b>P92</b>
	LE90ZLT4SV	3200	43	18	6SL3210-1PE18-0.L1	FSA	IES2	2KJ3... - . <b>E N 2 7</b> - ....	<b>P92</b>
112	LE112MGA4SV	3200	93	32	6SL3210-1PE21-1.L0	FSA	IES2	2KJ3... - . <b>G J 2 7</b> - ....	<b>P92</b>
	LE112MGB4SV	3200	93	32	6SL3210-1PE21-4.L0	FSA	IES2	2KJ3... - . <b>G K 2 7</b> - ....	<b>P92</b>
	LE112ZMN4SV	3200	114	37	6SL3210-1PE21-8.L0	FSB	IES2	2KJ3... - . <b>G L 2 7</b> - ....	<b>P92</b>

<sup>1)</sup> In addition to the Power Module, a Control Unit and an Operator Panel are required (see Catalog D 31 and/or D 35).

## Motors

VSD10 line motors for converter operation

Line voltage 400 V / 460 V

### Selection and ordering data

Frame size	Motor	$P_N$ kW	Connection	$f_N$ Hz	$T_N$ Nm	$I_N$ 50/87 Hz: 400 V 60 Hz: 460 V A	$\cos \varphi$ -	$\eta$ 4/4 load %	$L_{pFA}$ dB (A)	$L_{WA}$ dB (A)
<b>50 Hz power</b>										
<b>4-pole, 1500 rpm</b>										
<b>100</b>	LE100LB4V	2.2	Y	52.9	14.0	5.2	0.81	79.7	79.0	91.0
	LE100LH4V	3	Y	52.7	19.1	6.6	0.85	81.5	79.0	91.0
<b>112</b>	LE112ME4V	4	Y	52.3	25.5	8.6	0.85	83.1	77.4	89.4
<b>132</b>	LE132SF4V	5.5	Y	52.1	35.0	12.0	0.82	84.7	76.0	88.0
	LE132ME4V	7.5	Y	51.7	47.5	16.2	0.82	86.0	76.0	88.0
<b>160</b>	LE160MD4V	11	Y	51.5	70	23.5	0.82	87.6	83.5	95.5
	LE160LA4V	15	Y	51.4	95	31.5	0.82	88.7	83.5	95.5
<b>180</b>	LES180ZMQ4V	18.5	Y	51.1	118	37	0.85	89.3	71.0	83.0
	LES180ZLJ4V	22	Y	51.1	140	45	0.83	89.9	71.0	83.0
<b>200</b>	LES200LN4V	30	Y	50.9	191	60	0.83	90.7	76.3	88.3
<b>225</b>	LES225MD4V	37	Y	50.9	236	72	0.85	91.4	67.0	83.0
	LES225SD4V	45	Y	50.9	286	84	0.88	92.4	70.0	83.0
<b>250</b>	LES250MD4V	55	Y	50.8	350	105	0.86	92.3	70.0	83.0
<b>60 Hz power</b>										
<b>4-pole, 1800 rpm</b>										
<b>100</b>	LE100LB4V	2.55	Y	62.8	13.5	4.9	0.82	83.0	79.0	91.0
	LE100LH4V	3.45	Y	62.6	18.3	6.2	0.86	85.0	79.0	91.0
<b>112</b>	LE112ME4V	4.55	Y	62.2	24.0	8.3	0.85	85.0	77.2	89.2
<b>132</b>	LE132SF4V	6.3	Y	62.0	33.5	11.3	0.84	87.0	76.0	88.0
	LE132ME4V	8.6	Y	61.7	45.5	15.4	0.84	87.5	76.0	88.0
<b>160</b>	LE160MD4V	12.6	Y	61.4	67	23.0	0.82	88.5	82.3	94.3
	LE160LA4V	17.3	Y	61.4	92	30.5	0.82	90.5	82.3	94.3
<b>180</b>	LES180ZMQ4V	21.3	Y	61.1	113	36.0	0.85	91.0	73.0	85.0
	LES180ZLJ4V	25.3	Y	61.1	134	43.5	0.84	91.0	73.0	85.0
<b>200</b>	LES200LN4V	34.5	Y	60.9	183	58	0.84	92.4	77.7	89.7
<b>225</b>	LES225MD4V	42.5	Y	60.9	225	70	0.86	92.4	70.0	86.0
	LES225SD4V	52	Y	60.9	276	84	0.83	93.0	72.0	86.0
<b>250</b>	LES250MD4V	63	Y	60.8	334	103	0.86	93.0	72.0	86.0
<b>87 Hz power</b>										
<b>4-pole, 2610 rpm</b>										
<b>100</b>	LE100LB4V	3.7	$\Delta$	89.3	13.5	8.6	0.79	83.0	81.0	93.0
	LE100LH4V	5	$\Delta$	89.3	18.3	11.3	0.79	85.0	81.0	93.0
<b>112</b>	LE112ME4V	6.6	$\Delta$	89.0	24.0	14.6	0.81	85.0	78.4	90.4
<b>132</b>	LE132SF4V	9	$\Delta$	88.8	33.0	19.4	0.81	87.0	83.0	95.0
	LE132ME4V	12.5	$\Delta$	88.8	45.5	27.1	0.80	87.5	83.0	95.0
<b>160</b>	LE160MD4V	17	$\Delta$	88.3	62	37.5	0.78	88.5	85.8	97.8
	LE160LA4V	23.5	$\Delta$	88.2	86	51	0.77	90.5	85.8	97.8
<b>180</b>	LES180ZMQ4V	31	$\Delta$	88.1	113	62	0.84	91.0	84.0	96.0
	LES180ZLJ4V	36.5	$\Delta$	88.0	134	74	0.82	91.0	84.0	96.0
<b>200</b>	LES200LN4V	48	$\Delta$	87.8	176	97	0.81	92.4	83.1	95.1

Frame size	Motor	Mech. limit speed rpm	$J_{mot}$ $10^{-4}$ kgm <sup>2</sup>	$m_{mot}$ kg	Preferred SINAMCS G120-PM240 other SINAMICS converters also possible Type <sup>1)</sup>	Frame size	IES class acc. to EN 50598-2	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code Power
<b>50 Hz power</b>									
<b>4-pole, 1500 rpm</b>									
100	LE100LB4V	4200	59	15	6SL3210-1PE16-1.L1	FSA	IES1	2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	21	6SL3210-1PE18-0.L1	FSA	IES1	2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
112	LE112ME4V	4200	100	27	6SL3210-1PE21-1.L0	FSB	IES1	2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
132	LE132SF4V	4200	190	39	6SL3210-1PE21-4.L0	FSB	IES1	2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	43	6SL3210-1PE21-8.L0	FSB	IES1	2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
160	LE160MD4V	4200	440	67	6SL3210-1PE22-7.L0	FSC	IES1	2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	75	6SL3210-1PE23-3.L0	FSC	IES2	2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
180	LES180ZMQ4V	4200	1300	170	6SL3210-1PE23-8.L0	FSD	IES2	2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PE24-5.L0	FSD	IES2	2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
200	LES200LN4V	4200	2000	220	6SL3210-1PE26-0.L0	FSD	IES2	2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>
225	LES225MD4V	4500	3700	260	6SL3210-1PE27-5.L0	FSD	IES2	2KJ3... - . <b>M R 3 8</b> - ....	<b>P92</b>
	LES225SD4V	4500	4500	290	6SL3210-1PE28-8.L0	FSE	IES2	2KJ3... - . <b>M F 3 8</b> - ....	<b>P92</b>
250	LES250MD4V	3700	6900	360	6SL3210-1PE31-1.L0	FSE	IES2	2KJ3... - . <b>N M 3 8</b> - ....	<b>P92</b>
<b>60 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
100	LE100LB4V	4200	59	15	6SL3210-1PE16-1.L1	FSA	IES1	2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	21	6SL3210-1PE18-0.L1	FSA	IES1	2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
112	LE112ME4V	4200	100	27	6SL3210-1PE21-1.L0	FSB	IES1	2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
132	LE132SF4V	4200	190	39	6SL3210-1PE21-4.L0	FSB	IES1	2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	43	6SL3210-1PE21-8.L0	FSB	IES1	2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
160	LE160MD4V	4200	440	67	6SL3210-1PE22-7.L0	FSC	IES1	2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	75	6SL3210-1PE23-3.L0	FSC	IES2	2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
180	LES180ZMQ4V	4200	1300	170	6SL3210-1PE23-8.L0	FSD	IES2	2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PE24-5.L0	FSD	IES2	2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
200	LES200LN4V	4200	2000	220	6SL3210-1PE26-0.L0	FSD	IES2	2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>
225	LES225MD4V	4500	3700	260	6SL3210-1PE27-5.L0	FSD	IES2	2KJ3... - . <b>M R 3 8</b> - ....	<b>P92</b>
	LES225SD4V	4500	4500	290	6SL3210-1PE28-8.L0	FSE	IES2	2KJ3... - . <b>M F 3 8</b> - ....	<b>P92</b>
250	LES250MD4V	3700	6900	360	6SL3210-1PE31-1.L0	FSE	IES2	2KJ3... - . <b>N M 3 8</b> - ....	<b>P92</b>
<b>87 Hz power</b>									
<b>4-pole, 2610 rpm</b>									
100	LE100LB4V	4200	59	15	6SL3210-1PE21-1.L0	FSB	IES1	2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	21	6SL3210-1PE21-4.L0	FSB	IES1	2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
112	LE112ME4V	4200	100	27	6SL3210-1PE21-8.L0	FSB	IES1	2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
132	LE132SF4V	4200	190	39	6SL3210-1PE22-7.L0	FSC	IES1	2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	43	6SL3210-1PE23-3.L0	FSC	IES1	2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
160	LE160MD4V	4200	440	67	6SL3210-1PE24-5.L0	FSD	IES1	2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	75	6SL3210-1PE26-0.L0	FSD	IES2	2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
180	LES180ZMQ4V	4200	1300	170	6SL3210-1PE27-5.L0	FSD	IES2	2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PE28-8.L0	FSE	IES2	2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
200	LES200LN4V	4200	2000	220	6SL3210-1PE31-1.L0	FSE	IES2	2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>

<sup>1)</sup> In addition to the Power Module, a Control Unit and an Operator Panel are required (see Catalog D 31 and/or D 35).

## Motors

VSD10 line motors for converter operation

Line voltage 500 V / 575 V

### Selection and ordering data

Frame size	Motor	$P_N$ kW	Connection	$f_N$ Hz	$T_N$ Nm	$I_N$ 50/87 Hz: 500 V 60 Hz: 575 V A	$\cos \varphi$ -	$\eta$ 4/4 load %	$L_{pFA}$ dB (A)	$L_{WA}$ dB (A)
<b>50 Hz power</b>										
<b>4-pole, 1500 rpm</b>										
100	LE100LB4V	2.2	Y	52.8	14.0	4.1	0.81	79.7	80.0	92.1
	LE100LH4V	3	Y	52.6	19.1	5.2	0.85	81.5	80.0	92.1
112	LE112ME4V	4	Y	52.4	25.5	6.8	0.85	83.1	79.0	91.3
132	LE132SF4V	5.5	Y	52.0	35.0	9.5	0.82	84.7	77.0	89.4
	LE132ME4V	7.5	Y	51.9	47.8	12.8	0.82	86.0	77.0	89.4
160	LE160MD4V	11	Y	51.5	70	18.4	0.82	87.6	85.0	97.8
	LE160LA4V	13.5	Y	51.2	86	23.0	0.79	88.7	85.0	97.8
180	LES180ZMQ4V	16.7	Y	51.0	106	27.0	0.84	89.3	72.0	85.0
	LES180ZLJ4V	21.5	Y	51.1	137	34.5	0.83	89.9	72.0	85.0
200	LES200LN4V	30	Y	51.0	191	48	0.83	90.7	78.0	91.3
225	LES225MD4V	33	Y	50.6	210	51	0.84	92.0	70.0	84.0
	LES225SD4V	41	Y	50.7	261	61	0.87	92.4	71.0	84.0
250	LES250MD4V	52	Y	50.7	331	80	0.85	92.3	71.0	84.0
<b>60 Hz power</b>										
<b>4-pole, 1800 rpm</b>										
100	LE100LB4V	2.55	Y	62.8	13.5	3.95	0.82	83.0	80.0	92.1
	LE100LH4V	3.45	Y	62.6	18.3	4.95	0.86	85.0	80.0	92.1
112	LE112ME4V	4.55	Y	62.3	24.1	6.6	0.85	85.0	79.0	91.3
132	LE132SF4V	6.3	Y	62.0	33.4	9.0	0.84	87.0	77.0	89.4
	LE132ME4V	8.6	Y	61.9	45.6	12.3	0.84	87.5	77.0	89.4
160	LE160MD4V	12.6	Y	61.5	66.9	18.2	0.82	88.5	85.0	97.8
	LE160LA4V	15.6	Y	61.2	82.8	22.5	0.81	90.5	85.0	97.8
180	LES180ZMQ4V	19.2	Y	61.0	102	26.5	0.84	91.0	72.0	85.0
	LES180ZLJ4V	25.3	Y	61.2	134	34.5	0.84	91.0	72.0	85.0
200	LES200LN4V	34.5	Y	61.0	183	46.5	0.84	92.4	78.0	91.3
225	LES225MD4V	38	Y	60.6	202	51	0.84	92.4	70.0	84.0
	LES225SD4V	47	Y	60.7	249	61	0.87	93.0	71.0	84.0
250	LES250MD4V	59	Y	60.7	313	78	0.85	93.0	71.0	84.0
<b>87 Hz power</b>										
<b>4-pole, 2610 rpm</b>										
100	LE100LB4V	3.7	$\Delta$	89.6	13.5	6.8	0.79	83.0	81.0	93.1
	LE100LH4V	5	$\Delta$	89.3	18.3	8.7	0.79	85.0	81.0	93.1
112	LE112ME4V	6.6	$\Delta$	89.1	24.1	12.0	0.81	85.0	80.0	92.3
132	LE132SF4V	9	$\Delta$	88.8	32.9	15.4	0.81	87.0	83.0	95.4
	LE132ME4V	12.5	$\Delta$	88.7	45.7	21.5	0.8	87.5	83.0	95.4
160	LE160MD4V	17	$\Delta$	88.4	62.2	29.5	0.78	88.5	85.0	97.8
	LE160LA4V	23.5	$\Delta$	88.3	86	40.5	0.77	90.5	85.0	97.8
180	LES180ZMQ4V	31	$\Delta$	88	113	49	0.84	91.0	84.0	97.0
	LES180ZLJ4V	37	$\Delta$	88.1	134	59	0.82	91.0	84.0	97.0
200	LES200LN4V	48	$\Delta$	87.9	176	77	0.81	92.4	84.0	97.3

Frame size	Motor	Mech. limit speed rpm	$J_{mot}$ $10^{-4}$ kgm <sup>2</sup>	$m_{mot}$ kg	Preferred SINAMCS G120-PM240 other SINAMICS converters also possible Type <sup>1)</sup>	Frame size	IES class acc. to EN 50598-2	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code Power
<b>50 Hz power</b>									
<b>4-pole, 1500 rpm</b>									
100	LE100LB4V	4200	59	18				2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	22				2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
112	LE112ME4V	4200	100	27				2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
132	LE132SF4V	4200	190	38	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	44	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
160	LE160MD4V	4200	440	62	6SL3210-1PH22-0.L0	FSD		2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	73	6SL3210-1PH22-3.L0	FSD		2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
180	LES180ZMQ4V	4200	1300	170	6SL3210-1PH22-7.L0	FSD		2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PH23-5.L0	FSD		2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
200	LES200LN4V	4200	2000	220	6SL3210-1PH25-2.L0	FSE		2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>
225	LES225MD4V	4500	3700	260	6SL3210-1PH25-2.L0	FSE		2KJ3... - . <b>M R 3 8</b> - ....	<b>P92</b>
	LES225SD4V	4500	4500	290	6SL3210-1PH26-2.L0	FSE		2KJ3... - . <b>M F 3 8</b> - ....	<b>P92</b>
250	LES250MD4V	3700	6900	360	6SL3210-1PH28-0.L0	FSF		2KJ3... - . <b>N M 3 8</b> - ....	<b>P92</b>
<b>60 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
100	LE100LB4V	4200	59	18				2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	22				2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
112	LE112ME4V	4200	100	27	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
132	LE132SF4V	4200	190	38	6SL3210-1PH22-0.L0	FSD		2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	44	6SL3210-1PH22-3.L0	FSD		2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
160	LE160MD4V	4200	440	62	6SL3210-1PH23-5.L0	FSD		2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	73	6SL3210-1PH24-2.L0	FSD		2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
180	LES180ZMQ4V	4200	1300	170	6SL3210-1PH22-7.L0	FSD		2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PH23-5.L0	FSD		2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
200	LES200LN4V	4200	2000	220	6SL3210-1PH25-2.L0	FSE		2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>
225	LES225MD4V	4500	3700	260	6SL3210-1PH25-2.L0	FSE		2KJ3... - . <b>M R 3 8</b> - ....	<b>P92</b>
	LES225SD4V	4500	4500	290	6SL3210-1PH26-2.L0	FSE		2KJ3... - . <b>M F 3 8</b> - ....	<b>P92</b>
250	LES250MD4V	3700	6900	360	6SL3210-1PH28-0.L0	FSF		2KJ3... - . <b>N M 3 8</b> - ....	<b>P92</b>
<b>87 Hz power</b>									
<b>4-pole, 2610 rpm</b>									
100	LE100LB4V	4200	59	18				2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	22				2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
112	LE112ME4V	4200	100	27	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
132	LE132SF4V	4200	190	38	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	44	6SL3210-1PH22-0.L0	FSD		2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
160	LE160MD4V	4200	440	62	6SL3210-1PH22-3.L0	FSD		2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	73				2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
180	LES180ZMQ4V	4200	1300	170	6SL3210-1PH25-2.L0	FSE		2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PH26-2.L0	FSE		2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
200	LES200LN4V	4200	2000	220	6SL3210-1PH31-0.L0	FSF		2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>

<sup>1)</sup> In addition to the Power Module, a Control Unit and an Operator Panel are required (see Catalog D 31 and/or D 35).

## Motors

VSD10 line motors for converter operation

### Line voltage 690 V

#### Selection and ordering data

Frame size	Motor	$P_N$ kW	Connection	$f_N$ Hz	$T_N$ Nm	$I_N$ 50/87 Hz: 690 V A	$\cos \varphi$ -	$\eta$ 4/4 load %	$L_{pftA}$ dB (A)	$L_{WA}$ dB (A)
<b>50 Hz power</b>										
<b>4-pole, 1500 rpm</b>										
<b>100</b>	LE100LB4V	2.2	Y	52.9	14.0	3.0	0.81	79.7	80.0	92.1
	LE100LH4V	3	Y	52.5	19.1	3.8	0.85	81.5	80.0	92.1
<b>112</b>	LE112ME4V	4	Y	52.5	25.5	5.0	0.85	83.1	79.0	91.3
<b>132</b>	LE132SF4V	5.5	Y	52.0	35.0	6.9	0.82	84.7	77.0	89.4
	LE132ME4V	7.5	Y	51.7	47.8	9.3	0.82	86.0	77.0	89.4
<b>160</b>	LE160MD4V	11	Y	51.5	70	13.4	0.82	87.6	85.0	97.8
	LE160LA4V	15	Y	51.4	95.5	18.0	0.82	88.7	85.0	97.8
<b>180</b>	LES180ZMQ4V	18.5	Y	51.1	117.8	21.5	0.85	89.3	72.0	85.0
	LES180ZLJ4V	22	Y	51.2	140	25.0	0.85	89.9	72.0	85.0
<b>200</b>	LES200LN4V	30	Y	51.0	191	35.0	0.83	90.7	78.0	91.3
<b>225</b>	LES225MD4V	37	Y	50.8	236	41.5	0.85	91.4	70.0	84.0
	LES225SD4V	45	Y	50.8	286	48.5	0.88	92.4	71.0	84.0
<b>250</b>	LES250MD4V	55	Y	50.8	350	61.0	0.86	92.3	71.0	84.0
<b>87 Hz power</b>										
<b>4-pole, 2610 rpm</b>										
<b>100</b>	LE100LB4V	3.7	$\Delta$	89.5	13.5	4.95	0.79	83.0	81.0	93.1
	LE100LH4V	5	$\Delta$	89.5	18.3	6.5	0.79	85.0	81.0	93.1
<b>112</b>	LE112ME4V	6.6	$\Delta$	89.2	24.1	8.4	0.81	85.0	80.0	92.3
<b>132</b>	LE132SF4V	9	$\Delta$	88.7	32.9	11.2	0.81	87.0	83.0	95.4
	LE132ME4V	12.5	$\Delta$	88.6	45.7	15.6	0.80	87.5	83.0	95.4
<b>160</b>	LE160MD4V	17	$\Delta$	88.3	62.2	21.5	0.78	88.5	85.0	97.8
	LE160LA4V	23.5	$\Delta$	88.2	86	29.5	0.77	90.5	85.0	97.8
<b>180</b>	LES180ZMQ4V	31	$\Delta$	88.0	112	35	0.84	91.0	84.0	97.0
	LES180ZLJ4V	36.5	$\Delta$	88.2	134	42	0.84	91.0	84.0	97.0
<b>200</b>	LES200LN4V	48	$\Delta$	87.9	176	56	0.81	92.4	84.0	97.3



Frame size	Motor	Mech. limit speed rpm	$J_{mot}$ $10^{-4}$ kgm <sup>2</sup>	$m_{mot}$ kg	Preferred SINAMCS G120-PM240 other SINAMICS converters also possible Type <sup>1)</sup>	Frame size	IES class acc. to EN 50598-2	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code Power
<b>50 Hz power</b>									
<b>4-pole, 1500 rpm</b>									
<b>100</b>	LE100LB4V	4200	59	18				2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	22				2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
<b>112</b>	LE112ME4V	4200	100	27	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
<b>132</b>	LE132SF4V	4200	190	38	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	44	6SL3210-1PH22-0.L0	FSD		2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
<b>160</b>	LE160MD4V	4200	440	62	6SL3210-1PH22-7.L0	FSD		2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	73	6SL3210-1PH23-5.L0	FSD		2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
<b>180</b>	LES180ZMQ4V	4200	1300	170	6SL3210-1PH22-3.L0	FSD		2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PH22-7.L0	FSD		2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
<b>200</b>	LES200LN4V	4200	2000	220	6SL3210-1PH23-5.L0	FSD		2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>
<b>225</b>	LES225MD4V	4500	3700	260	6SL3210-1PH24-2.L0	FSD		2KJ3... - . <b>M R 3 8</b> - ....	<b>P92</b>
	LES225SD4V	4500	4500	290	6SL3210-1PH25-2.L0	FSE		2KJ3... - . <b>M F 3 8</b> - ....	<b>P92</b>
<b>250</b>	LES250MD4V	3700	6900	360	6SL3210-1PH26-2.L0	FSE		2KJ3... - . <b>N M 3 8</b> - ....	<b>P92</b>
<b>87 Hz power</b>									
<b>4-pole, 2610 rpm</b>									
<b>100</b>	LE100LB4V	4200	59	18				2KJ3... - . <b>F L 2 8</b> - ....	<b>P92</b>
	LE100LH4V	4200	78	22				2KJ3... - . <b>F N 2 8</b> - ....	<b>P92</b>
<b>112</b>	LE112ME4V	4200	100	27	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>G H 2 8</b> - ....	<b>P92</b>
<b>132</b>	LE132SF4V	4200	190	38	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>H J 2 8</b> - ....	<b>P92</b>
	LE132ME4V	4200	240	44	6SL3210-1PH21-4.L0	FSD		2KJ3... - . <b>H F 2 8</b> - ....	<b>P92</b>
<b>160</b>	LE160MD4V	4200	440	62	6SL3210-1PH22-0.L0	FSD		2KJ3... - . <b>J P 2 8</b> - ....	<b>P92</b>
	LE160LA4V	4200	560	73				2KJ3... - . <b>J S 2 8</b> - ....	<b>P92</b>
<b>180</b>	LES180ZMQ4V	4200	1300	170	6SL3210-1PH24-2.L0	FSD		2KJ3... - . <b>K N 3 8</b> - ....	<b>P92</b>
	LES180ZLJ4V	4200	1300	170	6SL3210-1PH25-2.L0	FSE		2KJ3... - . <b>K L 3 8</b> - ....	<b>P92</b>
<b>200</b>	LES200LN4V	4200	2000	220	6SL3210-1PH26-2.L0	FSE		2KJ3... - . <b>L M 3 8</b> - ....	<b>P92</b>

<sup>1)</sup> In addition to the Power Module, a Control Unit and an Operator Panel are required (see Catalog D 31 and/or D 35).

## Motors

Motors with Premium Efficiency IE3

IE3

## Selection and ordering data

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 50 Hz: 400 V A	$\cos \varphi$	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{s1}/I_N$	$T_{S1}/T_N$	$T_{Bk}/T_N$
							4/4 load %	3/4 load %	2/4 load %				
<b>50 Hz power</b>													
<b>4-pole, 1500 rpm</b>													
63	LE63ZMH4P	0.12	1390	0.82	0.39	0.68	64.8	63.1	57.3	IE3	3.6	2.4	2.6
	LE63ZMK4P	0.18	1400	1.23	0.57	0.65	69.9	68.1	62.3	IE3	4	2.8	2.9
71	LE71ZMK4P	0.25	1395	1.71	0.68	0.72	73.5	73.7	70.4	IE3	4.2	2.5	2.6
	LE71YMS4P	0.37	1410	2.5	0.99	0.70	77.3	76.8	73.2	IE3	4.8	3.1	3.1
80	LE80MH4P	0.55	1440	3.65	1.26	0.78	80.8	81.5	79.8	IE3	5.9	2.1	3.1
	LE80ZMQ4P	0.75	1450	4.95	1.75	0.75	82.5	82.3	80.1	IE3	7.1	2.7	3.9
90	LE90SM4P	1.1	1440	7.30	2.40	0.78	84.1	84.7	83.4	IE3	6.9	2.9	3.6
	LE90ZLR4P	1.5	1445	9.90	3.15	0.80	85.3	85.7	84.4	IE3	7.3	2.9	3.5
100	LE100ZLSA4P	2.2	1465	14.3	4.4	0.83	86.7	87	85.9	IE3	8.4	3.2	4.4
	LE100ZLSB4P	3	1460	19.6	5.9	0.83	87.7	88.5	87.9	IE3	7.3	2.5	3.9
112	LE112ZMKB4P	4	1460	26.0	7.9	0.82	88.6	89.2	88.6	IE3	7.1	2.4	3.7
132	LE132ZST4P	5.5	1470	35.5	10.8	0.82	89.6	90.0	89.4	IE3	8.5	2.9	3.7
	LE132ZMS4P	7.5	1465	49.0	14.3	0.84	90.4	91.1	90.8	IE3	8.2	2.6	3.7
160	LE160MPA4P	9.2	1480	59.0	18.7	0.78	91.0	90.7	89.3	IE3	7.6	2.3	3.6
	LE160MPB4P <sup>1)</sup>	11	1475	71.0	20.5	0.84	91.4	91.9	91.4	IE3	6.8	2.2	3.2
	LE160ZLL4P	15	1475	97.0	28.5	0.82	92.1	92.3	91.5	IE3	8.5	2.5	3.8
180	LES180MQ4P <sup>1)</sup>	18.5	1470	120.0	35.0	0.82	92.6	93.1	92.9	IE3	7.2	2.5	3.3
	LES180ZLN4P	22	1470	143.0	41.0	0.83	93.0	93.6	93.6	IE3	6.8	2.3	3.3
200	LES200ZLU4P	30	1470	195.0	55.0	0.84	93.6	94.0	93.7	IE3	7.3	2.6	3.1
225	LES225SD4P	37	1478	239.0	66.0	0.86	93.9	94.5	94.4	IE3	6.4	2.5	2.7
	LES225YMF4P	45	1478	290.0	80.0	0.86	94.2	94.9	95	IE3	6.6	2.6	2.6
250	LES250MD4P	55	1482	354.0	96.0	0.87	94.6	95.1	95	IE3	6.8	2.5	2.9
<b>2-pole, 3000 rpm</b>													
63	LE63MEB2P	0.18	2850	0.6	0.51	0.78	65.9	64.8	58.6	IE3	4.5	2.2	2.7
	LE63ZMH2P	0.25	2835	0.84	0.64	0.81	69.7	68.3	61.7	IE3	4.1	1.9	2.5
71	LE71ZMH2P	0.37	2850	1.24	0.95	0.76	73.8	73.3	69.7	IE3	5.8	3.5	3.5
	LE71ZMM2P	0.55	2850	1.84	1.34	0.76	77.8	77.5	74.5	IE3	6.1	3.7	3.7
80	LE80ME2P	0.75	2850	2.50	1.56	0.86	80.7	82.2	81.9	IE3	6.2	2.6	3.0
	LE80ZMJ2P	1.1	2885	3.65	2.25	0.85	82.7	83.9	83.1	IE3	7.1	3.0	3.3
90	LE90SM2P	1.5	2910	4.90	3.0	0.86	84.2	84.6	83.2	IE3	8.1	2.7	4.2
	LE90ZLR2P	2.2	2910	7.20	4.2	0.88	85.9	86.8	86.1	IE3	8.3	2.6	4.0
100	LE100ZLK2P	3	2920	9.8	5.6	0.88	87.1	87.9	87.5	IE3	8.1	3.2	4.6
112	LE112ZMH2P	4	2950	12.9	7.4	0.89	88.1	88.7	88.2	IE3	8.7	2.5	4.0
132	LE132SF2P	5.5	2950	18.0	9.9	0.90	89.2	90.1	89.7	IE3	7.3	1.9	3.7
	LE132ZSQB2P	7.5	2950	24.5	13.1	0.92	90.1	91.0	91.0	IE3	8.3	1.9	3.9
160	LE160MG2P	11	2955	35.5	19.6	0.89	91.2	91.0	89.5	IE3	7.9	2.4	3.8
	LE160MM2P	15	2960	48.0	27.0	0.87	91.9	91.8	90.5	IE3	8.8	2.8	4.3
	LE160ZLJ2P	18.5	2955	60.0	32.0	0.90	92.4	92.8	92.4	IE3	9.0	2.8	4.2

<sup>1)</sup> Operating values at rated power for 60 Hz are stored in the Siemens Product Configurator.

Frame size	Motor	$T_A/T_N$	$L_{pfA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code No. of poles
		kW	dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg		
<b>50 Hz power</b>									
<b>4-pole, 1500 rpm</b>									
63	LE63ZMH4P	2.6	59	67	20000	4.3	4	2KJ3... - . <b>B D 2 3</b> - ....	-
	LE63ZMK4P	3.1	55	62	15000	4.7	5	2KJ3... - . <b>B E 2 3</b> - ....	-
71	LE71ZMK4P	2.8	44	55	10000	9.1	5	2KJ3... - . <b>C C 2 3</b> - ....	-
	LE71YMS4P	3.4	56	67	10000	13	6	2KJ3... - . <b>C E 2 3</b> - ....	-
80	LE80MH4P	2.3	52	60	15000	21	9	2KJ3... - . <b>D C 2 3</b> - ....	-
	LE80ZMQ4P	3.0	58	66	15000	29	10	2KJ3... - . <b>D F 2 3</b> - ....	-
90	LE90SM4P	3.2	56	68	9000	36	12	2KJ3... - . <b>E K 2 3</b> - ....	-
	LE90ZLR4P	3.19	62	70	7500	49	15	2KJ3... - . <b>E M 2 3</b> - ....	-
100	LE100ZLSA4P	3.5	60	72	6000	140	29	2KJ3... - . <b>F N 2 3</b> - ....	-
	LE100ZLSB4P	2.8	60	72	6000	140	29	2KJ3... - . <b>F P 2 3</b> - ....	-
112	LE112ZMKB4P	2.6	58	70	5100	170	29	2KJ3... - . <b>G J 2 3</b> - ....	-
132	LE132ZST4P	3.2	64	76	4500	340	57	2KJ3... - . <b>H J 2 3</b> - ....	-
	LE132ZMS4P	2.9	64	76	4500	460	57	2KJ3... - . <b>H L 2 3</b> - ....	-
160	LE160MPA4P	2.5	O. R.	O. R.	3000	710	73	2KJ3... - . <b>J Q 2 3</b> - ....	-
	LE160MPB4P <sup>1)</sup>	2.4	65	77	3000	710	73	2KJ3... - . <b>J R 2 3</b> - ....	-
	LE160ZLL4P	2.8	65	77	3000	850	90	2KJ3... - . <b>J U 2 3</b> - ....	-
180	LES180MQ4P <sup>1)</sup>	2.8	66	73	600	1300	165	2KJ3... - . <b>K L 3 3</b> - ....	-
	LES180ZLN4P	2.5	67	75	550	1400	170	2KJ3... - . <b>K N 3 3</b> - ....	-
200	LES200ZLU4P	2.9	65	72	400	2400	240	2KJ3... - . <b>L N 3 3</b> - ....	-
225	LES225SD4P	2.8	65	78	400	4200	285	2KJ3... - . <b>M F 3 3</b> - ....	-
	LES225YMF4P	2.86	66	79	435	5200	340	2KJ3... - . <b>M T 3 3</b> - ....	-
250	LES250MD4P	2.8	66	79	170	8500	420	2KJ3... - . <b>N M 3 3</b> - ....	-
<b>2-pole, 3000 rpm</b>									
63	LE63MEB2P	2.4	56	64	7000	2.2	4	2KJ3... - . <b>B C 2 3</b> - ....	<b>P00</b>
	LE63ZMH2P	2.1	56	64	7000	2.6	5	2KJ3... - . <b>B D 2 3</b> - ....	<b>P00</b>
71	LE71ZMH2P	3.9	52	63	7000	4.5	7	2KJ3... - . <b>C B 2 3</b> - ....	<b>P00</b>
	LE71ZMM2P	4.1	57	68	7000	5.4	8	2KJ3... - . <b>C D 2 3</b> - ....	<b>P00</b>
80	LE80ME2P	2.9	60	71	5100	11	9.3	2KJ3... - . <b>D B 2 3</b> - ....	<b>P00</b>
	LE80ZMJ2P	3.3	60	71	8700	13	10	2KJ3... - . <b>D M 2 3</b> - ....	<b>P00</b>
90	LE90SM2P	3.0	65	77	6000	21	12	2KJ3... - . <b>E K 2 3</b> - ....	<b>P00</b>
	LE90ZLR2P	2.9	65	77	6000	31	15	2KJ3... - . <b>E M 2 3</b> - ....	<b>P00</b>
100	LE100ZLK2P	3.5	71	79	2700	54	26	2KJ3... - . <b>F K 2 3</b> - ....	<b>P00</b>
112	LE112ZMH2P	2.8	73	81	1350	120	29	2KJ3... - . <b>G G 2 3</b> - ....	<b>P00</b>
132	LE132SF2P	2.1	68	80	1350	240	36	2KJ3... - . <b>H E 2 3</b> - ....	<b>P00</b>
	LE132ZSQB2P	2.1	72	80	1080	310	50	2KJ3... - . <b>H H 2 3</b> - ....	<b>P00</b>
160	LE160MG2P	2.6	70	82	600	530	65	2KJ3... - . <b>J N 2 3</b> - ....	<b>P00</b>
	LE160MM2P	3.1	74	82	600	610	74	2KJ3... - . <b>J P 2 3</b> - ....	<b>P00</b>
	LE160ZLJ2P	3.1	70	82	840	680	84	2KJ3... - . <b>J T 2 3</b> - ....	<b>P00</b>

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<sup>1)</sup> Operating values at rated power for 60 Hz are stored in the Siemens Product Configurator.

**Motors**

Motors with Premium Efficiency IE3

**IE3****Selection and ordering data**

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 50 Hz: 400 V A	$\cos \varphi$ -	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{S1}/I_N$ -	$T_{S1}/T_N$ -	$T_{Bk}/T_N$ -
							4/4 load %	3/4 load %	2/4 load %				
<b>50 Hz power</b>													
<b>6-pole, 1000 rpm</b>													
<b>71</b>	LE71ZMK6P	0.18	885	1.94	0.59	0.69	63.9	64.8	60.8	IE3	2.8	2.3	2.3
	LE71YMS6P	0.25	885	2.7	0.76	0.69	68.6	69.5	66.2	IE3	3.2	2.6	2.6
<b>80</b>	LE80MK6P	0.37	940	3.75	1.1	0.66	73.5	73.1	69.4	IE3	4.2	2.3	2.7
	LE80ZMQ6P	0.55	935	5.6	1.53	0.67	77.2	77	73.9	IE3	4.5	2.5	2.8
<b>90</b>	LE90SQ6P	0.75	945	7.6	1.96	0.70	78.9	80.0	78.8	IE3	4.6	2.2	2.6
<b>100</b>	LE100ZLSA6P	1.1	975	10.8	2.75	0.71	81.0	81.0	79.0	IE3	5.6	2.2	2.9
<b>112</b>	LE112ZMKA6P	1.5	975	14.7	3.45	0.76	82.5	82.8	81.2	IE3	5.7	2.0	2.8
<b>132</b>	LE132SQA6P	2.2	975	21.5	5.1	0.74	84.3	84.7	83.7	IE3	6.5	2.1	3.1
	LE132SQB6P	3	975	29.5	6.9	0.73	85.6	86.1	84.9	IE3	6.6	2.3	3.2
	LE132MJ6P	4	975	39	9.1	0.73	86.8	87.1	86.2	IE3	6.2	2.2	3.0
	LE132ZMS6P	5.5	975	54	12.5	0.72	88.0	88.3	87.2	IE3	6.8	2.7	3.4
<b>160</b>	LE160MW6P	7.5	985	73	15.0	0.81	89.1	89.5	88.6	IE3	7.9	2.3	3.2
	LE160ZLW6P	11	980	107	22.0	0.80	90.3	90.8	90.2	IE3	6.8	2.9	2.8
<b>180</b>	LES180LJ6P	15	975	147	29.5	0.80	91.2	91.9	91.9	IE3	5.9	2.3	2.8
<b>200</b>	LES200LM6P	18.5	978	181	37.0	0.79	91.7	92.5	92.5	IE3	5.6	2.5	2.6
	LES200ZLS6P	22	978	215	43.5	0.79	92.2	93.1	93.2	IE3	5.6	2.5	2.6
<b>225</b>	LES225YMF6P	30	982	290	56.0	0.83	92.9	93.6	93.5	IE3	6.6	2.6	3.0
<b>250</b>	LES250MD6P	37	985	360	67.0	0.85	93.3	94.0	94.0	IE3	7.0	2.7	2.9

Frame size	Motor	$T_A/T_N$	$L_{pFA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code No. of poles
		kW	dB (A)	dB (A)	1/h	$10^{-4} \text{ kgm}^2$	kg		
<b>50 Hz power</b>									
<b>6-pole, 1000 rpm</b>									
<b>71</b>	LE71ZMK6P	2.5	39	50	15000	10	7	2KJ3... - . C C 2 3 - ....	P01
	LE71YMS6P	2.9	46	57	15000	14	9	2KJ3... - . C E 2 3 - ....	P01
<b>80</b>	LE80MK6P	2.5	42	53	12000	24	11	2KJ3... - . D E 2 3 - ....	P01
	LE80ZMQ6P	2.8	42	53	12000	30	11	2KJ3... - . D F 2 3 - ....	P01
<b>90</b>	LE90SQ6P	2.4	43	55	13700	40	15	2KJ3... - . E C 2 3 - ....	P01
<b>100</b>	LE100ZLSA6P	2.4	59	71	O. R.	48	18	2KJ3... - . F N 2 3 - ....	P01
<b>112</b>	LE112ZMKA6P	2.2	62	74	6900	110	29	2KJ3... - . G H 2 3 - ....	P01
<b>132</b>	LE132SQA6P	2.3	57	65	6900	170	29	2KJ3... - . H G 2 3 - ....	P01
	LE132SQB6P	2.5	58	66	3900	340	42	2KJ3... - . H H 2 3 - ....	P01
	LE132MJ6P	2.4	67	75	3900	390	46	2KJ3... - . H K 2 3 - ....	P01
	LE132ZMS6P	3.0	64	72	3900	500	58	2KJ3... - . H L 2 3 - ....	P01
<b>160</b>	LE160MW6P	2.5	71	79	3300	1320	95	2KJ3... - . J J 2 3 - ....	P01
	LE160ZLW6P	3.2	66	74	2700	1640	106	2KJ3... - . J V 2 3 - ....	P01
<b>180</b>	LES180LJ6P	2.5	61	68	800	1900	180	2KJ3... - . K M 3 3 - ....	P01
<b>200</b>	LES200LM6P	2.8	64	71	680	2800	215	2KJ3... - . L L 3 3 - ....	P01
	LES200ZLS6P	2.8	61	68	680	3200	230	2KJ3... - . L M 3 3 - ....	P01
<b>225</b>	LES225YMF6P	2.9	64	77	270	6700	325	2KJ3... - . M K 3 3 - ....	P01
<b>250</b>	LES250MD6P	3.0	62	75	205	10000	405	2KJ3... - . N D 3 3 - ....	P01

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## Motors

Motors with Premium Efficiency IE3

IE3

## Selection and ordering data

Frame size	Motor	$P_N$	$n_N$	$T_N$	$I_N$	$\cos \varphi$	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{St}/I_N$	$T_{St}/T_N$	$T_{Bk}/T_N$
		kW	rpm	Nm	60 Hz: 460 V A		4/4 load %	3/4 load %	2/4 load %				
<b>60 Hz, 50 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63ZMH4P	0.12	1710	0.67	0.36	0.62	67	64	57.1	IE3	4.3	2.9	3.3
	LE63ZMK4P	0.18	1715	1	0.54	0.6	69.5	66.9	60.6	IE3	4.6	3.6	3.7
71	LE71ZMK4P	0.25	1715	1.39	0.63	0.68	73.4	72.3	68.0	IE3	4.9	2.9	3.1
	LE71YMS4P	0.37	1720	2.05	0.9	0.66	78.2	76.9	72.5	IE3	5.7	3.6	3.8
80	LE80MH4P	0.55	1750	3	1.15	0.74	81.1	80.9	78.6	IE3	6.9	2.7	3.8
	LE80ZMQ4P	0.75	1760	4.05	1.59	0.71	83.5	82.6	79.7	IE3	8.3	3.1	4.7
90	LE90SM4P	1.1	1750	6.0	2.15	0.75	86.5	86.4	84.2	IE3	8.2	3.4	4.4
	LE90ZLR4P	1.5	1755	8.2	2.85	0.77	86.5	86.6	84.7	IE3	8.6	3.4	4.3
100	LE100ZLSA4P	2.2	1770	11.9	3.8	0.81	89.5	89.2	87.2	IE3	9.6	3.5	5.1
	LE100ZLSB4P	3	1760	16.3	5.1	0.82	89.5	89.5	88.3	IE3	8.6	3.1	4.6
112	LE112ZMKB4P	3.7	1770	20.0	6.5	0.80	89.5	89.4	87.7	IE3	8.2	2.9	4.3
132	LE132ZST4P	5.5	1775	29.5	9.3	0.81	91.7	91.6	90.5	IE3	10	3.1	4.2
	LE132ZMS4P	7.5	1770	40.5	12.4	0.83	91.7	91.8	91.0	IE3	9.6	2.7	4.2
160	LE160MPA4P	9.2	1785	49.0	16.4	0.77	91.7	91.1	89.2	IE3	8.8	2.8	4.1
	LE160MPB4P	11	1780	59.0	18.0	0.83	92.4	92.4	91.3	IE3	7.9	2.3	3.7
	LE160ZLL4P	15	1780	80.0	25.0	0.81	93.0	92.8	91.4	IE3	9.5	2.9	4.3
180	LES180MQ4P	18.5	1775	100.0	30.5	0.81	93.6	93.6	92.7	IE3	8.7	2.6	3.8
	LES180ZLN4P	22	1775	118.0	36.5	0.81	93.6	93.8	93.3	IE3	7.7	2.8	3.7
200	LES200ZLU4P	30	1778	161.0	48.0	0.83	94.1	94.2	93.6	IE3	8.8	2.6	3.5
225	LES225SD4P	37	1782	198.0	58.0	0.85	94.5	94.7	94.2	IE3	7.5	2.8	3.0
	LES225YMF4P	45	1782	240.0	70.0	0.85	95.0	95.3	95.1	IE3	7.7	3.0	3.0
250	LES250MD4P	55	1786	294.0	84.0	0.86	95.4	95.6	95.1	IE3	7.6	2.8	3.2
<b>2-pole, 3600 rpm</b>													
63	LE63MEB2P	0.18	3475	0.495	0.48	0.72	65.6	62.3	56.0	IE3	5.3	2.7	3.6
	LE63ZMH2P	0.25	3465	0.69	0.59	0.76	69.5	66.6	59.3	IE3	5.2	2.4	3.1
71	LE71ZMH2P	0.37	3470	1.02	0.87	0.73	73.4	71.7	67.0	IE3	6.8	4.2	4.2
	LE71ZMM2P	0.55	3470	1.51	1.23	0.73	76.8	75.3	71.0	IE3	7.2	4.5	4.5
80	LE80ME2P	0.75	3480	2.05	1.45	0.84	77.0	77.2	75.7	IE3	7.1	3.0	3.6
	LE80ZMJ2P	1.1	3500	3.00	1.98	0.83	84.0	84.0	82	IE3	8.4	3.3	4.0
90	LE90SM2P	1.5	3525	4.05	2.60	0.84	85.5	84.8	82.3	IE3	9.8	3.1	4.9
	LE90ZLR2P	2.2	3530	6.00	3.65	0.87	86.5	86.4	84.5	IE3	9.6	3.0	4.9
100	LE100ZLK2P	3	3525	8.10	4.90	0.87	88.5	88.7	87.2	IE3	9.7	3.8	5.5
112	LE112ZMH2P	3.7	3560	9.90	6.00	0.88	88.5	88.0	86.2	IE3	10.8	3.2	5.1
132	LE132SF2P	5.5	3555	14.8	8.60	0.90	89.5	89.4	88.2	IE3	8.6	2.1	4.4
	LE132ZSQB2P	7.5	3560	20.0	11.5	0.91	90.2	90.4	89.6	IE3	9.4	2.2	4.5
160	LE160MG2P	11	3560	29.5	17.2	0.88	91.0	90.2	88.0	IE3	8.9	3.2	4.3
	LE160MM2P	15	3565	40.0	24.0	0.86	91.0	90.0	87.6	IE3	9.7	3.1	4.8
	LE160ZLJ2P	18.5	3560	49.5	28.5	0.89	91.7	91.5	90.3	IE3	10.2	3.0	4.8

Frame size	Motor	$T_A/T_N$	$L_{pFA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code
		kW	dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg		
<b>60 Hz, 50 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
63	LE63ZMH4P	3.2	O. R.	O. R.	6600	4.3	4	2KJ3... - . <b>B D 2 3</b> - ....	-
	LE63ZMK4P	4	O. R.	O. R.	7200	4.7	5	2KJ3... - . <b>B E 2 3</b> - ....	-
71	LE71ZMK4P	3.2	44	55	20700	9.1	5	2KJ3... - . <b>C C 2 3</b> - ....	-
	LE71YMS4P	4	O. R.	O. R.	18000	13	6	2KJ3... - . <b>C E 2 3</b> - ....	-
80	LE80MH4P	3.0	O. R.	O. R.	12000	21	9	2KJ3... - . <b>D C 2 3</b> - ....	-
	LE80ZMQ4P	3.4	O. R.	O. R.	12000	29	10	2KJ3... - . <b>D F 2 3</b> - ....	-
90	LE90SM4P	3.7	O. R.	O. R.	7000	36	12	2KJ3... - . <b>E K 2 3</b> - ....	-
	LE90ZLR4P	3.74	O. R.	O. R.	6000	49	15	2KJ3... - . <b>E M 2 3</b> - ....	-
100	LE100ZLSA4P	3.9	O. R.	O. R.	4800	140	29	2KJ3... - . <b>F N 2 3</b> - ....	-
	LE100ZLSB4P	3.4	O. R.	O. R.	4800	140	29	2KJ3... - . <b>F P 2 3</b> - ....	-
112	LE112ZMKB4P	3.2	O. R.	O. R.	O. R.	170	29	2KJ3... - . <b>G J 2 3</b> - ....	-
	LE132ZST4P	3.4	O. R.	O. R.	O. R.	340	57	2KJ3... - . <b>H J 2 3</b> - ....	-
132	LE132ZMS4P	3.0	O. R.	O. R.	O. R.	460	57	2KJ3... - . <b>H L 2 3</b> - ....	-
	LE160MPA4P	3.1	O. R.	O. R.	O. R.	710	73	2KJ3... - . <b>J Q 2 3</b> - ....	-
160	LE160MPB4P	2.5	O. R.	O. R.	O. R.	710	73	2KJ3... - . <b>J R 2 3</b> - ....	-
	LE160ZLL4P	3.2	O. R.	O. R.	O. R.	850	90	2KJ3... - . <b>J U 2 3</b> - ....	-
180	LES180MQ4P	2.9	O. R.	O. R.	O. R.	1300	165	2KJ3... - . <b>K L 3 3</b> - ....	-
	LES180ZLN4P	3.1	O. R.	O. R.	O. R.	1400	170	2KJ3... - . <b>K N 3 3</b> - ....	-
200	LES200ZLU4P	2.9	O. R.	O. R.	O. R.	2400	240	2KJ3... - . <b>L N 3 3</b> - ....	-
225	LES225SD4P	3.1	66	80	O. R.	4200	285	2KJ3... - . <b>M F 3 3</b> - ....	-
	LES225YMF4P	3.3	66	80	O. R.	5200	340	2KJ3... - . <b>M T 3 3</b> - ....	-
250	LES250MD4P	3.1	67	81	O. R.	8500	420	2KJ3... - . <b>N M 3 3</b> - ....	-
<b>2-pole, 3600 rpm</b>									
63	LE63MEB2P	3	O. R.	O. R.	2175	2.2	4	2KJ3... - . <b>B C 2 3</b> - ....	P00
	LE63ZMH2P	2.6	O. R.	O. R.	3000	2.6	5	2KJ3... - . <b>B D 2 3</b> - ....	P00
71	LE71ZMH2P	4.6	O. R.	O. R.	12000	4.5	7	2KJ3... - . <b>C B 2 3</b> - ....	P00
	LE71ZMM2P	5	O. R.	O. R.	12000	5.4	8	2KJ3... - . <b>C D 2 3</b> - ....	P00
80	LE80ME2P	3.3	O. R.	O. R.	O. R.	11	9.3	2KJ3... - . <b>D B 2 3</b> - ....	P00
	LE80ZMJ2P	3.6	O. R.	O. R.	O. R.	13	10	2KJ3... - . <b>D M 2 3</b> - ....	P00
90	LE90SM2P	3.4	O. R.	O. R.	O. R.	21	12	2KJ3... - . <b>E K 2 3</b> - ....	P00
	LE90ZLR2P	3.3	O. R.	O. R.	O. R.	31	15	2KJ3... - . <b>E M 2 3</b> - ....	P00
100	LE100ZLK2P	4.2	O. R.	O. R.	O. R.	54	26	2KJ3... - . <b>F K 2 3</b> - ....	P00
112	LE112ZMH2P	3.5	O. R.	O. R.	O. R.	120	29	2KJ3... - . <b>G G 2 3</b> - ....	P00
132	LE132SF2P	2.3	O. R.	O. R.	O. R.	240	36	2KJ3... - . <b>H E 2 3</b> - ....	P00
	LE132ZSQB2P	2.4	O. R.	O. R.	O. R.	310	50	2KJ3... - . <b>H H 2 3</b> - ....	P00
160	LE160MG2P	3.5	O. R.	O. R.	O. R.	530	65	2KJ3... - . <b>J N 2 3</b> - ....	P00
	LE160MM2P	3.4	O. R.	O. R.	O. R.	610	74	2KJ3... - . <b>J P 2 3</b> - ....	P00
	LE160ZLJ2P	3.3	O. R.	O. R.	O. R.	680	84	2KJ3... - . <b>J T 2 3</b> - ....	P00

O. R. On request

**Motors**

Motors with Premium Efficiency IE3

**IE3****Selection and ordering data**

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 60 Hz: 460 V A	$\cos \varphi$ -	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{St}/I_N$ -	$T_{St}/T_N$ -	$T_{Bk}/T_N$ -
							4/4 load %	3/4 load %	2/4 load %				
<b>60 Hz, 50 Hz power</b>													
<b>6-pole, 1200 rpm</b>													
<b>71</b>	LE71ZMK6P	0.18	1110	1.55	0.53	0.63	67.5	66.3	61.0	IE3	3.5	2.8	2.9
	LE71YMS6P	0.25	1110	2.15	0.69	0.64	71.4	70.6	66.4	IE3	3.9	3.2	3.2
<b>80</b>	LE80MK6P	0.37	1150	3.05	1.01	0.61	75.3	74.3	70.0	IE3	5	2.7	3.3
	LE80ZMQ6P	0.55	1145	4.6	1.34	0.63	81.7	80.5	76.4	IE3	5.3	2.8	3.4
<b>90</b>	LE90SQ6P	0.75	1155	6.2	1.76	0.65	82.5	82.4	79.9	IE3	5.3	2.4	3.1
<b>100</b>	LE100ZLSA6P	1.1	1180	8.9	2.3	0.69	87.5	87.2	84.8	IE3	6.7	2.4	3.3
<b>112</b>	LE112ZMKA6P	1.5	1175	12.2	2.9	0.73	88.5	88.3	86.2	IE3	6.9	2.2	3.2
<b>132</b>	LE132SQA6P	2.2	1180	17.8	4.3	0.72	89.5	89.2	87.7	IE3	7.3	2.4	3.5
	LE132SQB6P	3	1180	24.5	6	0.7	89.5	89.5	87.9	IE3	7.6	2.6	3.8
	LE132MJ6P	3.7	1180	30	7.5	0.69	89.5	89.2	87.5	IE3	7.5	2.8	3.8
	LE132ZMS6P	5.5	1180	44.5	11	0.69	91.0	90.8	89.2	IE3	7.8	3	4
<b>160</b>	LE160MW6P	7.5	1185	60	12.9	0.80	91.0	90.8	89.4	IE3	9.3	2.7	3.7
	LE160ZLW6P	11	1185	89	19.3	0.78	91.7	91.7	90.5	IE3	8.0	3.4	3.2
<b>180</b>	LES180LJ6P	15	1178	122	26	0.79	91.7	92.0	91.4	IE3	6.8	2.5	3
<b>200</b>	LES200LM6P	18.5	1180	150	32	0.78	93.0	93.8	93.8	IE3	6.5	2.8	3
	LES200ZLS6P	22	1180	178	37.5	0.79	93.0	93.5	93.4	IE3	6.3	2.6	2.8
<b>225</b>	LES225YMF6P	30	1185	240	49	0.82	94.1	94.4	94.1	IE3	7.6	2.9	3.3
<b>250</b>	LES250MD6P	37	1188	295	59	0.83	94.1	94.4	93.9	IE3	8.0	3.1	3.1



Frame size	Motor	$T_A/T_N$	$L_{pFA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code No. of poles
		kW	dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg		
<b>60 Hz, 50 Hz power</b>									
<b>6-pole, 1200 rpm</b>									
71	LE71ZMK6P	3.1	O. R.	O. R.	O. R.	10	7	2KJ3... - . C C 2 3 - ....	P01
	LE71YMS6P	3.5	O. R.	O. R.	O. R.	14	9	2KJ3... - . C E 2 3 - ....	P01
80	LE80MK6P	3	42	53	12000	24	11	2KJ3... - . D E 2 3 - ....	P01
	LE80ZMQ6P	3.1	42	53	12000	30	11	2KJ3... - . D F 2 3 - ....	P01
90	LE90SQ6P	2.6	O. R.	O. R.	O. R.	40	15	2KJ3... - . E C 2 3 - ....	P01
100	LE100ZLSA6P	2.6	O. R.	O. R.	O. R.	48	18	2KJ3... - . F N 2 3 - ....	P01
112	LE112ZMKA6P	2.4	O. R.	O. R.	O. R.	110	29	2KJ3... - . G H 2 3 - ....	P01
132	LE132SQA6P	2.6	63	71	O. R.	170	29	2KJ3... - . H G 2 3 - ....	P01
	LE132SQB6P	2.9	61	69	O. R.	290	36	2KJ3... - . H H 2 3 - ....	P01
	LE132MJ6P	3.1	62	70	O. R.	370	45	2KJ3... - . H K 2 3 - ....	P01
	LE132ZMS6P	3.3	67	75	O. R.	460	45	2KJ3... - . H L 2 3 - ....	P01
160	LE160MW6P	3.0	73	81	O. R.	980	83	2KJ3... - . J J 2 3 - ....	P01
	LE160ZLW6P	3.7	72	80	O. R.	1200	105	2KJ3... - . J V 2 3 - ....	P01
180	LES180LJ6P	2.8	O. R.	O. R.	O. R.	1900	180	2KJ3... - . K M 3 3 - ....	P01
200	LES200LM6P	3.1	O. R.	O. R.	O. R.	2800	215	2KJ3... - . L L 3 3 - ....	P01
	LES200ZLS6P	2.9	O. R.	O. R.	O. R.	3200	230	2KJ3... - . L M 3 3 - ....	P01
225	LES225YMF6P	3.2	66	79	O. R.	6700	325	2KJ3... - . M K 3 3 - ....	P01
250	LES250MD6P	3.4	63	76	O. R.	10000	405	2KJ3... - . N D 3 3 - ....	P01

O. R. On request

## Motors

Motors with Premium Efficiency IE3

IE3

## Selection and ordering data

Frame size	Motor	$P_N$	$n_N$	$T_N$	$I_N$	$\cos \varphi$	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{St}/I_N$	$T_{St}/T_N$	$T_{Bk}/T_N$
		kW	rpm	Nm	60 Hz: 460 V A		4/4 load %	3/4 load %	2/4 load %				
<b>60 Hz, 60 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63ZMH4P	0.14	1690	0.79	0.39	0.67	67	65.1	59.5	IE3	4	2.5	2.8
	LE63ZMK4P	0.21	1700	1.18	0.58	0.65	69.5	67.9	62.7	IE3	4.4	3.1	3.1
71	LE71ZMK4P	0.29	1695	1.63	0.69	0.72	73.4	73.3	70.0	IE3	4.5	2.5	2.6
	LE71YMS4P	0.43	1710	2.4	0.99	0.7	78.2	77.5	74.1	IE3	5.1	3.0	3.1
80	LE80MH4P	0.63	1740	3.45	1.25	0.78	81.1	81.3	79.6	IE3	6.4	2.4	3.3
	LE80ZMQ4P	0.86	1750	4.7	1.72	0.75	83.5	83.1	80.7	IE3	7.7	2.7	4.1
90	LE90ZLR4P	1.75	1740	9.6	3.15	0.80	86.5	86.7	85.4	IE3	7.7	2.9	3.7
100	LE100ZLSA4P	2.55	1765	13.8	4.25	0.84	89.5	89.7	88.5	IE3	8.5	3	4.4
112	LE112ZMKB4P	4.55	1760	24.5	7.7	0.83	89.5	90.0	89.3	IE3	7.3	2.5	3.8
132	LE132ZST4P	6.3	1770	34.0	10.4	0.83	91.7	92.0	91.3	IE3	8.7	2.7	3.7
	LE132ZMS4P	8.6	1765	46.5	13.8	0.85	91.7	92.0	91.7	IE3	8.4	2.3	3.6
160	LE160MPA4P	10.6	1780	57.0	18.0	0.80	92.4	92.1	90.7	IE3	7.7	2.4	3.5
	LE160MPB4P	12.6	1775	68.0	20.0	0.85	92.4	92.7	92.1	IE3	7.1	2.0	3.2
180	LES180MQ4P	21.3	1770	115.0	34.5	0.83	93.6	94.0	93.6	IE3	7.2	2.4	3.2
	LES180ZLN4P	25.3	1770	136.0	41.0	0.83	93.6	94.1	94.0	IE3	6.9	2.2	3.2
<b>2-pole, 3600 rpm</b>													
63	LE63MEB2P	0.21	3450	0.58	0.52	0.78	65.6	63.5	58.4	IE3	4.9	2.3	3.1
	LE63ZMH2P	0.29	3435	0.81	0.65	0.81	69.5	67.5	62.0	IE3	4.8	2	2.7
71	LE71ZMH2P	0.43	3445	1.19	0.97	0.76	73.4	72.6	68.9	IE3	6	3.6	3.6
	LE71ZMM2P	0.63	3450	1.74	1.35	0.76	76.8	76.1	72.9	IE3	6.6	3.9	3.9
80	LE80ME2P	0.86	3450	2.40	1.63	0.86	77.0	78.0	77.2	IE3	6.4	2.6	3.1
	LE80ZMJ2P	1.27	3480	3.50	2.25	0.85	84.0	84.6	83.4	IE3	7.4	2.8	3.4
90	LE90SM2P	1.75	3510	4.75	2.95	0.87	85.5	85.6	84.0	IE3	8.7	2.6	4.2
100	LE100ZLK2P	3.45	3520	9.40	5.50	0.89	88.5	89.2	88.5	IE3	8.5	3.3	4.7
112	LE112ZMH2P	4.55	3550	12.2	7.20	0.90	88.5	88.7	87.6	IE3	9.0	2.6	4.1
132	LE132SF2P	6.3	3545	17.0	9.70	0.91	89.5	89.9	89.1	IE3	7.5	1.9	3.8
	LE132ZSQB2P	8.6	3550	23.0	13.0	0.92	90.2	90.8	90.5	IE3	8.2	2.0	3.9
160	LE160MM2P	17.3	3560	46.5	27.0	0.88	91.7	91.3	89.7	IE3	8.7	2.7	4.2
	LE160ZLJ2P	21.3	3555	57.0	32.0	0.91	91.7	91.5	90.3	IE3	9.0	2.6	4.2

O. R. On request

Frame size	Motor	$T_A/T_N$	$L_{pFA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code
		kW	dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg		
<b>60 Hz, 60 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
63	LE63ZMH4P	2.8	64	72	6600	4.3	4	2KJ3... - . <b>B D 2 3</b> - ....	-
	LE63ZMK4P	3.4	64	71	7200	4.7	5	2KJ3... - . <b>B E 2 3</b> - ....	-
71	LE71ZMK4P	2.8	44	55	20700	9.1	5	2KJ3... - . <b>C C 2 3</b> - ....	-
	LE71YMS4P	3.3	62	73	18000	13	6	2KJ3... - . <b>C E 2 3</b> - ....	-
80	LE80MH4P	2.6	53	61	12000	21	9	2KJ3... - . <b>D C 2 3</b> - ....	-
	LE80ZMQ4P	3.0	58	66	12000	29	10	2KJ3... - . <b>D F 2 3</b> - ....	-
90	LE90ZLR4P	3.19	59	67	6000	49	15	2KJ3... - . <b>E M 2 3</b> - ....	-
100	LE100ZLSA4P	3.3	62	74	4800	140	29	2KJ3... - . <b>F N 2 3</b> - ....	-
112	LE112ZMKB4P	2.8	62	74	O. R.	170	29	2KJ3... - . <b>G J 2 3</b> - ....	-
132	LE132ZST4P	3	68	80	O. R.	340	57	2KJ3... - . <b>H J 2 3</b> - ....	-
	LE132ZMS4P	2.5	68	80	O. R.	460	57	2KJ3... - . <b>H L 2 3</b> - ....	-
160	LE160MPA4P	2.6	O. R.	O. R.	O. R.	710	73	2KJ3... - . <b>J Q 2 3</b> - ....	-
	LE160MPB4P	2.2	69	81	O. R.	710	73	2KJ3... - . <b>J R 2 3</b> - ....	-
180	LES180MQ4P	2.6	O. R.	O. R.	O. R.	1300	165	2KJ3... - . <b>K L 3 3</b> - ....	-
	LES180ZLN4P	2.4	70	77	O. R.	1400	170	2KJ3... - . <b>K N 3 3</b> - ....	-
<b>2-pole, 3600 rpm</b>									
63	LE63MEB2P	2.5	59	67	2175	2.2	4	2KJ3... - . <b>B C 2 3</b> - ....	<b>P00</b>
	LE63ZMH2P	2.2	56	64	3000	2.6	5	2KJ3... - . <b>B D 2 3</b> - ....	<b>P00</b>
71	LE71ZMH2P	4	57	68	12000	4.5	7	2KJ3... - . <b>C B 2 3</b> - ....	<b>P00</b>
	LE71ZMM2P	4.3	62	73	12000	5.4	8	2KJ3... - . <b>C D 2 3</b> - ....	<b>P00</b>
80	LE80ME2P	2.9	64	75	O. R.	11	9.3	2KJ3... - . <b>D B 2 3</b> - ....	<b>P00</b>
	LE80ZMJ2P	3.1	64	75	O. R.	13	10	2KJ3... - . <b>D M 2 3</b> - ....	<b>P00</b>
90	LE90SM2P	2.9	69	81	O. R.	21	12	2KJ3... - . <b>E K 2 3</b> - ....	<b>P00</b>
100	LE100ZLK2P	3.6	71	83	O. R.	54	26	2KJ3... - . <b>F K 2 3</b> - ....	<b>P00</b>
112	LE112ZMH2P	2.9	O. R.	O. R.	O. R.	120	29	2KJ3... - . <b>G G 2 3</b> - ....	<b>P00</b>
132	LE132SF2P	2.1	72	84	O. R.	240	36	2KJ3... - . <b>H E 2 3</b> - ....	<b>P00</b>
	LE132ZSQB2P	2.2	71	83	O. R.	310	50	2KJ3... - . <b>H H 2 3</b> - ....	<b>P00</b>
160	LE160MM2P	3.0	77	89	O. R.	610	74	2KJ3... - . <b>J P 2 3</b> - ....	<b>P00</b>
	LE160ZLJ2P	2.9	O. R.	O. R.	O. R.	680	84	2KJ3... - . <b>J T 2 3</b> - ....	<b>P00</b>

O. R. On request

**Motors**

Motors with Premium Efficiency IE3

**IE3****Selection and ordering data**

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 87 Hz: 400 V A	$\cos \varphi$ -	$\eta$ 4/4 load %	$T_{Bk}/T_N$ -
<b>87 Hz power</b>								
<b>4-pole, 2610 rpm</b>								
<b>63</b>	LE63ZMH4P	0.21	2510	0.8	0.78	0.6	64.8	2.8
	LE63ZMK4P	0.31	2510	1.18	1.14	0.56	69.9	3.1
<b>71</b>	LE71ZMK4P	0.44	2510	1.67	1.17	0.7	77.7	2.5
	LE71YMS4P	0.64	2520	2.4	1.64	0.68	83	3.1
<b>80</b>	LE80MH4P	0.96	2555	3.6	2.25	0.77	80.8	3.1
	LE80ZMQ4P	1.31	2565	4.9	3.2	0.72	82.5	3.9
<b>90</b>	LE90SM4P	1.91	2550	7.2	4.15	0.76	87.0	3.7
	LE90ZLR4P	2.60	2560	9.7	5.6	0.79	85.3	3.6
<b>100</b>	LE100ZLSA4P	3.85	2575	14.3	7.6	0.82	89.5	4.4
	LE100ZLSB4P	5.2	2570	19.3	10.2	0.82	89.4	3.8
<b>112</b>	LE112ZMKB4P	7.0	2570	26.0	13.8	0.81	90.0	3.7
<b>132</b>	LE132ZST4P	9.6	2580	35.5	18.5	0.82	91.8	3.7
	LE132ZMS4P	13.0	2575	48.0	24.3	0.84	91.6	3.8
<b>160</b>	LE160MPA4P	16.0	2590	59.0	31.9	0.79	91.7	3.6
	LE160MPB4P	19.1	2585	71.0	35.4	0.84	91.9	3.2
	LE160ZLL4P	26.0	2585	96.0	50.0	0.82	92.2	3.9
<b>180</b>	LES180MQ4P	32.0	2580	118.0	60.5	0.82	93.5	3.4
	LES180ZLN4P	38.5	2575	143.0	72.5	0.82	93.9	3.3
<b>200</b>	LES200ZLU4P	52.0	2580	193.0	95.0	0.84	94.0	3.2
<b>225</b>	LES225SD4P	55.5	2592	204.0	100.0	0.85	93.9	3.1
	LES225YMF4P	68.0	2592	250.0	122.0	0.85	94.2	3.0
<b>250</b>	LES250MD4P	82.5	2596	303.0	147.0	0.86	94.6	3.3
<b>6-pole, 1740 rpm</b>								
<b>71</b>	LE71ZMK6P	0.31	1645	1.8	0.98	0.62	73.9	2.4
	LE71YMS6P	0.44	1635	2.55	1.28	0.64	77.8	2.7
<b>80</b>	LE80MK6P	0.64	1685	3.65	1.91	0.6	80.7	2.8
	LE80ZMQ6P	0.96	1685	5.4	2.75	0.61	83	2.9
<b>90</b>	LE90SQ6P	1.31	1690	7.4	3.4	0.66	84.9	2.7
<b>100</b>	LE100ZLSA6P	1.91	1720	10.6	4.5	0.69	88.5	3.0
<b>112</b>	LE112ZMKA6P	2.6	1715	14.5	5.8	0.73	89.5	2.8
<b>132</b>	LE132SQA6P	3.85	1715	21.5	8.97	0.74	84.3	3.1
	LE132SQB6P	5.2	1715	29	12.2	0.72	85.6	3.3
	LE132MJ6P	7	1715	39	16.2	0.72	86.8	3.0
	LE132ZMS6P	9.6	1715	53	22.3	0.71	88.0	3.5
<b>160</b>	LE160MW6P	13	1725	72	26.0	0.81	89.1	3.2
	LE160ZLW6P	19.1	1720	106	38.8	0.79	90.3	2.8
<b>180</b>	LES180LJ6P	26	1715	145	51.8	0.78	92.7	2.8
<b>200</b>	LES200LM6P	32	1720	178	62.1	0.79	93.4	2.6
	LES200ZLS6P	38.5	1715	215	75.9	0.78	93.6	2.6

O. R. On request

Frame size	Motor	$L_{pFA}$	$L_{WA}$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code	
		dB (A)	dB (A)	$10^{-4}$ kgm <sup>2</sup>	kg		No. poles	Power
<b>87 Hz power</b>								
<b>4-pole, 2610 rpm</b>								
63	LE63ZMH4P	O. R.	O. R.	4.3	4	2KJ3... - . <b>B D 2 3</b> - ....	-	<b>P91</b>
	LE63ZMK4P	O. R.	O. R.	4.7	5	2KJ3... - . <b>B E 2 3</b> - ....	-	<b>P91</b>
71	LE71ZMK4P	O. R.	O. R.	9.1	5	2KJ3... - . <b>C C 2 3</b> - ....	-	<b>P91</b>
	LE71YMS4P	O. R.	O. R.	13	6	2KJ3... - . <b>C E 2 3</b> - ....	-	<b>P91</b>
80	LE80MH4P	O. R.	O. R.	21	9	2KJ3... - . <b>D C 2 3</b> - ....	-	<b>P91</b>
	LE80ZMQ4P	O. R.	O. R.	29	10	2KJ3... - . <b>D F 2 3</b> - ....	-	<b>P91</b>
90	LE90SM4P	O. R.	O. R.	36	12	2KJ3... - . <b>E K 2 3</b> - ....	-	<b>P91</b>
	LE90ZLR4P	O. R.	O. R.	49	15	2KJ3... - . <b>E M 2 3</b> - ....	-	<b>P91</b>
100	LE100ZLSA4P	O. R.	O. R.	140	29	2KJ3... - . <b>F N 2 3</b> - ....	-	<b>P91</b>
	LE100ZLSB4P	O. R.	O. R.	140	29	2KJ3... - . <b>F P 2 3</b> - ....	-	<b>P91</b>
112	LE112ZMKB4P	O. R.	O. R.	170	29	2KJ3... - . <b>G J 2 3</b> - ....	-	<b>P91</b>
	LE132ZST4P	O. R.	O. R.	340	57	2KJ3... - . <b>H J 2 3</b> - ....	-	<b>P91</b>
132	LE132ZMS4P	O. R.	O. R.	460	57	2KJ3... - . <b>H L 2 3</b> - ....	-	<b>P91</b>
	LE160MPA4P	O. R.	O. R.	710	73	2KJ3... - . <b>J Q 2 3</b> - ....	-	<b>P91</b>
160	LE160MPB4P	O. R.	O. R.	710	73	2KJ3... - . <b>J R 2 3</b> - ....	-	<b>P91</b>
	LE160ZLL4P	O. R.	O. R.	850	90	2KJ3... - . <b>J U 2 3</b> - ....	-	<b>P91</b>
180	LES180MQ4P	O. R.	O. R.	1300	165	2KJ3... - . <b>K L 3 3</b> - ....	-	<b>P91</b>
	LES180ZLN4P	O. R.	O. R.	1400	170	2KJ3... - . <b>K N 3 3</b> - ....	-	<b>P91</b>
200	LES200ZLU4P	O. R.	O. R.	2400	240	2KJ3... - . <b>L N 3 3</b> - ....	-	<b>P91</b>
225	LES225SD4P	O. R.	O. R.	4200	285	2KJ3... - . <b>M F 3 3</b> - ....	-	<b>P91</b>
	LES225YMF4P	O. R.	O. R.	4700	320	2KJ3... - . <b>M T 3 3</b> - ....	-	<b>P91</b>
250	LES250MD4P	O. R.	O. R.	8500	420	2KJ3... - . <b>N M 3 3</b> - ....	-	<b>P91</b>
<b>6-pole, 1740 rpm</b>								
71	LE71ZMK6P	O. R.	O. R.	10	7	2KJ3... - . <b>C C 2 3</b> - ....	<b>P01</b>	<b>P91</b>
	LE71YMS6P	O. R.	O. R.	14	9	2KJ3... - . <b>C E 2 3</b> - ....	<b>P01</b>	<b>P91</b>
80	LE80MK6P	O. R.	O. R.	24	11	2KJ3... - . <b>D E 2 3</b> - ....	<b>P01</b>	<b>P91</b>
	LE80ZMQ6P	O. R.	O. R.	30	11	2KJ3... - . <b>D F 2 3</b> - ....	<b>P01</b>	<b>P91</b>
90	LE90SQ6P	O. R.	O. R.	40	15	2KJ3... - . <b>E C 2 3</b> - ....	<b>P01</b>	<b>P91</b>
100	LE100ZLSA6P	O. R.	O. R.	48	18	2KJ3... - . <b>F N 2 3</b> - ....	<b>P01</b>	<b>P91</b>
112	LE112ZMKA6P	O. R.	O. R.	110	29	2KJ3... - . <b>G H 2 3</b> - ....	<b>P01</b>	<b>P91</b>
	LE132SQA6P	O. R.	O. R.	170	29	2KJ3... - . <b>H G 2 3</b> - ....	<b>P01</b>	<b>P91</b>
132	LE132SQB6P	O. R.	O. R.	290	36	2KJ3... - . <b>H H 2 3</b> - ....	<b>P01</b>	<b>P91</b>
	LE132MJ6P	O. R.	O. R.	370	45	2KJ3... - . <b>H K 2 3</b> - ....	<b>P01</b>	<b>P91</b>
160	LE132ZMS6P	O. R.	O. R.	460	45	2KJ3... - . <b>H L 2 3</b> - ....	<b>P01</b>	<b>P91</b>
	LE160MW6P	O. R.	O. R.	980	83	2KJ3... - . <b>J J 2 3</b> - ....	<b>P01</b>	<b>P91</b>
180	LE160ZLW6P	O. R.	O. R.	1200	105	2KJ3... - . <b>J V 2 3</b> - ....	<b>P01</b>	<b>P91</b>
	LES180LJ6P	O. R.	O. R.	1900	180	2KJ3... - . <b>K M 3 3</b> - ....	<b>P01</b>	<b>P91</b>
200	LES200LM6P	O. R.	O. R.	2800	215	2KJ3... - . <b>L L 3 3</b> - ....	<b>P01</b>	<b>P91</b>
	LES200ZLS6P	O. R.	O. R.	3200	230	2KJ3... - . <b>L M 3 3</b> - ....	<b>P01</b>	<b>P91</b>

O. R. On request

## Motors

Motors with High Efficiency IE2

IE2

## Selection and ordering data

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 50 Hz: 400 V 60 Hz: 460 V A	$\cos \varphi$	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{St}/I_N$	$T_{St}/T_N$	$T_{Bk}/T_N$
							4/4 load %	3/4 load %	2/4 load %				
<b>50 Hz power</b>													
<b>4-pole, 1500 rpm</b>													
63	LE63MEB4E <sup>1)</sup>	0.12	1390	0.82	0.44	0.66	59.1	56.4	49.0	IE2	3.1	2.4	2.5
	LE63ZMH4E <sup>1)</sup>	0.18	1385	1.24	0.62	0.65	64.7	62.4	55.7	IE2	3.3	2.6	2.6
71	LE71MG4E <sup>1)</sup>	0.25	1395	1.71	0.76	0.69	68.5	68.4	64.2	IE2	3.7	2.4	2.5
	LE71ZMK4E <sup>1)</sup>	0.37	1380	2.55	1.02	0.72	72.7	73.2	69.9	IE2	4.0	2.5	2.5
80	LE80MD4E	0.55	1440	3.65	1.39	0.74	77.1	76.8	73.7	IE2	5.3	2.2	3.1
<b>2-pole, 3000 rpm</b>													
63	LE63MEB2E <sup>1)</sup>	0.18	2850	0.60	0.55	0.78	60.4	59.4	53.7	IE2	4.5	2.2	2.7
	LE63ZMH2E <sup>1)</sup>	0.25	2835	0.84	0.69	0.81	64.8	63.5	57.3	IE2	4.1	1.9	2.5
71	LE71ME2E <sup>1)</sup>	0.37	2770	1.28	0.95	0.81	69.5	70.5	67.9	IE2	4.1	2.5	2.5
	LE71ZMH2E <sup>1)</sup>	0.55	2780	1.89	1.34	0.80	74.1	75.2	72.9	IE2	4.6	2.6	2.6
<b>6-pole, 1000 rpm</b>													
71	LE71MG6E <sup>1)</sup>	0.18	875	1.96	0.68	0.68	56.6	56.9	52.7	IE2	2.5	2.2	2.3
	LE71ZMK6E <sup>1)</sup>	0.25	870	2.75	0.84	0.70	61.6	62.7	59.2	IE2	2.6	2.3	2.3
80	LE80MD6E	0.37	925	3.82	1.08	0.69	71.4	71.5	64.4	IE2	4.0	2.10	2.40
	LE80MK6E	0.55	935	5.62	1.63	0.66	74.0	74.0	70.8	IE2	4.4	2.50	2.90
<b>60 Hz, 50 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63MEB4E <sup>1)</sup>	0.12	1710	0.67	0.39	0.60	64.0	60.3	52.2	IE2	3.7	2.9	3.2
	LE63ZMH4E <sup>1)</sup>	0.18	1710	1.01	0.56	0.59	68.0	64.4	57.3	IE2	3.9	3.3	3.4
71	LE71MG4E <sup>1)</sup>	0.25	1715	1.39	0.70	0.64	70.0	68.5	63.6	IE2	4.4	2.8	3.1
	LE71ZMK4E <sup>1)</sup>	0.37	1705	2.05	0.96	0.67	72.0	71.2	66.9	IE2	5.0	3.0	3.2
80	LE80MD4E	0.55	1750	3.00	1.29	0.71	75.5	74.6	71.1	IE2	6.4	2.7	3.8
<b>2-pole, 3600 rpm</b>													
63	LE63MEB2E <sup>1)</sup>	0.18	3475	0.49	0.49	0.72	64.0	60.8	54.6	IE2	5.3	2.7	3.6
	LE63ZMH2E <sup>1)</sup>	0.25	3465	0.69	0.61	0.76	68.0	65.2	58.0	IE2	5.2	2.4	3.1
71	LE71ME2E <sup>1)</sup>	0.37	3410	1.04	0.84	0.77	72.0	71.4	67.8	IE2	5.1	2.9	3.0
	LE71ZMH2E <sup>1)</sup>	0.55	3420	1.54	1.23	0.76	74.0	73.4	69.6	IE2	5.4	3.4	3.4
<b>6-pole, 1200 rpm</b>													
71	LE71MG6E <sup>1)</sup>	0.18	1105	1.56	0.67	0.61	55.0	53.6	48.8	IE2	2.7	2.9	2.9
	LE71ZMK6E <sup>1)</sup>	0.25	1100	2.40	0.82	0.64	59.5	58.9	54.7	IE2	3.0	2.7	2.7
80	LE80MD6E	0.37	1140	3.10	0.98	0.63	75.3	74.1	61.3	IE2	4.6	2.30	2.90
	LE80MK6E	0.55	1135	4.63	1.47	0.61	77.0	77.5	65.8	IE2	5.2	2.90	3.60
<b>60 Hz, 60 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63MEB4E <sup>1)</sup>	0.14	1685	0.79	0.42	0.66	64.0	61.4	54.8	IE2	3.5	2.4	2.7
	LE63ZMH4E <sup>1)</sup>	0.21	1685	1.19	0.60	0.65	68.0	65.8	59.7	IE2	3.8	2.8	2.9
71	LE71MG4E <sup>1)</sup>	0.29	1695	1.63	0.75	0.69	70.0	69.7	65.9	IE2	4.1	2.4	2.6
	LE71ZMK4E <sup>1)</sup>	0.43	1680	2.45	1.04	0.72	72.0	72.4	69.4	IE2	4.5	2.4	2.4
80	LE80MD4E	0.63	1735	3.45	1.42	0.74	75.5	75.8	73.5	IE2	5.7	2.4	3.3
<b>2-pole, 3600 rpm</b>													
63	LE63MEB2E <sup>1)</sup>	0.21	3450	0.58	0.53	0.78	64.0	62.0	57.0	IE2	4.9	2.3	3.1
	LE63ZMH2E <sup>1)</sup>	0.29	3435	0.81	0.66	0.81	68.0	66.1	60.7	IE2	4.8	2.0	2.7
71	LE71ME2E <sup>1)</sup>	0.43	3370	1.22	0.93	0.81	72.0	72.5	69.9	IE2	4.6	2.5	2.5
	LE71ZMH2E <sup>1)</sup>	0.63	3380	1.78	1.34	0.80	74.0	74.4	71.8	IE2	5.1	2.9	2.9
<b>6-pole, 1200 rpm</b>													
71	LE71MG6E <sup>1)</sup>	0.21	1075	1.87	0.72	0.67	55.0	54.9	51.2	IE2	2.5	2.4	2.4
	LE71ZMK6E <sup>1)</sup>	0.29	1070	2.60	0.87	0.70	59.5	60.1	57.0	IE2	2.8	2.3	2.3
80	LE80MD6E	0.43	1125	3.65	1.04	0.69	75.3	75.3	59.1	IE2	4.2	2.1	2.6
	LE80MK6E	0.63	1135	5.30	1.56	0.66	77.0	77.5	63.7	IE2	4.8	2.6	3.1

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

Frame size	Motor	$T_A/T_N$	$L_{pFA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code
		kW	dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg		
<b>50 Hz power</b>									
<b>4-pole, 1500 rpm</b>									
63	LE63MEB4E <sup>1)</sup>	2.6	50	58	20000	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
	LE63ZMH4E <sup>1)</sup>	2.9	57	64	15000	4.5	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
71	LE71MG4E <sup>1)</sup>	2.6	50	61	10000	7.6	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
	LE71ZMK4E <sup>1)</sup>	2.8	59	67	10000	9.5	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
80	LE80MD4E	2.4	53	64	9000	17	9.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
<b>2-pole, 3000 rpm</b>									
63	LE63MEB2E <sup>1)</sup>	2.4	57	64	7000	2.2	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
	LE63ZMH2E <sup>1)</sup>	2.1	57	64	7000	2.6	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
71	LE71ME2E <sup>1)</sup>	2.8	58	69	7000	3.5	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
	LE71ZMH2E <sup>1)</sup>	2.9	58	69	7000	4.5	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
<b>6-pole, 1000 rpm</b>									
71	LE71MG6E <sup>1)</sup>	2.4	46	57	15000	8	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
	LE71ZMK6E <sup>1)</sup>	2.5	46	57	15000	10	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
80	LE80MD6E	2.17	42	53	12000	17	8.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
	LE80MK6E	2.63	42	53	12000	25	11.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
<b>60 Hz, 50 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
63	LE63MEB4E <sup>1)</sup>	3.2	O. R.	O. R.	6600	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
	LE63ZMH4E <sup>1)</sup>	3.6	O. R.	O. R.	7200	4.5	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
71	LE71MG4E <sup>1)</sup>	3.1	O. R.	O. R.	20700	7.6	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
	LE71ZMK4E <sup>1)</sup>	3.3	O. R.	O. R.	18000	9.5	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
80	LE80MD4E	3.0	O. R.	O. R.	7000	17	9.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
<b>2-pole, 3600 rpm</b>									
63	LE63MEB2E <sup>1)</sup>	3.0	O. R.	O. R.	2175	2.2	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
	LE63ZMH2E <sup>1)</sup>	2.6	O. R.	O. R.	3000	2.6	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
71	LE71ME2E <sup>1)</sup>	3.2	O. R.	O. R.	12000	3.5	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
	LE71ZMH2E <sup>1)</sup>	3.7	O. R.	O. R.	12000	4.5	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
<b>6-pole, 1200 rpm</b>									
71	LE71MG6E <sup>1)</sup>	3.2	O. R.	O. R.	O. R.	8	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
	LE71ZMK6E <sup>1)</sup>	3.0	O. R.	O. R.	O. R.	10	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
80	LE80MD6E	2.5	45	56	8400	17	8.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
	LE80MK6E	3.13	45	56	8400	25	11.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
<b>60 Hz, 60 Hz power</b>									
<b>4-pole, 1800 rpm</b>									
63	LE63MEB4E <sup>1)</sup>	2.6	54	61	6060	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
	LE63ZMH4E <sup>1)</sup>	3.1	62	69	7200	4.5	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
71	LE71MG4E <sup>1)</sup>	2.6	53	64	20700	7.6	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
	LE71ZMK4E <sup>1)</sup>	2.6	53	64	18000	9.5	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
80	LE80MD4E	2.6	55	66	7000	17	9.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	-
<b>2-pole, 3600 rpm</b>									
63	LE63MEB2E <sup>1)</sup>	2.5	60	67	2175	2.2	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
	LE63ZMH2E <sup>1)</sup>	2.2	57	64	3000	2.6	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
71	LE71ME2E <sup>1)</sup>	2.8	63	74	12000	3.5	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
	LE71ZMH2E <sup>1)</sup>	3.2	63	74	12000	4.5	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	P00
<b>6-pole, 1200 rpm</b>									
71	LE71MG6E <sup>1)</sup>	2.6	49	60	O. R.	8	6	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
	LE71ZMK6E <sup>1)</sup>	2.5	49	60	O. R.	10	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
80	LE80MD6E	2.23	45	56	8400	17	8.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01
	LE80MK6E	2.73	45	56	8400	25	11.3	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01

O. R. On request

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

**Motors**

Motors with High Efficiency IE2

**IE2****Selection and ordering data**

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 87 Hz: 400 V A	$\cos \varphi$ -	$\eta$ 4/4 load %	$T_{Br}/T_N$ -
<b>87 Hz power, duty type S9</b>								
<b>4-pole, 1500 rpm</b>								
<b>63</b>	LE63MEB4E <sup>1)</sup>	0.21	2510	0.80	0.73	0.59	70.0	2.5
	LE63ZMH4E <sup>1)</sup>	0.31	2515	1.18	1.02	0.59	74.3	2.7
<b>71</b>	LE71MG4E <sup>1)</sup>	0.44	2515	1.67	1.29	0.60	76.8	2.6
	LE71ZMK4E <sup>1)</sup>	0.64	2495	2.45	1.90	0.67	72.7	2.5
<b>80</b>	LE80MD4E	0.96	2550	3.60	2.40	0.70	82.1	3.1
<b>6-pole, 1000 rpm</b>								
<b>71</b>	LE71MG6E <sup>1)</sup>	0.31	1645	1.80	1.03	0.60	72.7	2.4
	LE71ZMK6E <sup>1)</sup>	0.44	1635	2.55	1.34	0.63	75.3	2.4
<b>80</b>	LE80MD6E	0.65	1675	3.71	1.85	0.63	78.9	2.5
	LE80MK6E	0.95	1675	5.42	2.75	0.61	81.2	3.0

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.



Frame size	Motor	$L_{pfA}$	$L_{WA}$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code	
		dB (A)	dB (A)	$10^{-4}$ kgm <sup>2</sup>	kg		No. poles	Power
<b>87 Hz power, duty type S9</b>								
<b>4-pole, 1500 rpm</b>								
63	LE63MEB4E <sup>1)</sup>	O. R.	O. R.	3.7	4	2KJ3... - . B C 2 2 - ....	-	P91
	LE63ZMH4E <sup>1)</sup>	O. R.	O. R.	4.5	5	2KJ3... - . B D 2 2 - ....	-	P91
71	LE71MG4E <sup>1)</sup>	O. R.	O. R.	7.6	6	2KJ3... - . C C 2 2 - ....	-	P91
	LE71ZMK4E <sup>1)</sup>	O. R.	O. R.	9.5	7	2KJ3... - . C E 2 2 - ....	-	P91
80	LE80MD4E	O. R.	O. R.	17	9.3	2KJ3... - . D C 2 2 - ....	-	P91
<b>6-pole, 1000 rpm</b>								
71	LE71MG6E <sup>1)</sup>	O. R.	O. R.	8	6	2KJ3... - . C C 2 2 - ....	P01	P91
	LE71ZMK6E <sup>1)</sup>	O. R.	O. R.	10	7	2KJ3... - . C E 2 2 - ....	P01	P91
80	LE80MD6E	O. R.	O. R.	17	8.3	2KJ3... - . D C 2 2 - ....	P01	P91
	LE80MK6E	O. R.	O. R.	25	11.3	2KJ3... - . D F 2 2 - ....	P01	P91

O. R. On request

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

**Motors**

Motors with Standard Efficiency IE1

**IE1****Selection and ordering data**

Frame size	Motor	$P_N$ kW	$n_N$ rpm	$T_N$ Nm	$I_N$ 50/87 Hz: 400 V 60 Hz: 460 V A	$\cos \varphi$	$\eta$			Efficiency class acc. to IEC 60034-30	$I_{S1}/I_N$	$T_{S1}/T_N$	$T_{Bk}/T_N$
							4/4 load %	3/4 load %	2/4 load %				
<b>50 Hz power</b>													
<b>4-pole, 1500 rpm</b>													
63	LE63MCA4	0.09	1410	0.61	0.48	0.57	47.0	41.3	31.4	IE1	2.5	2.4	2.9
<b>6-pole, 1000 rpm</b>													
63	LE63MEB6 <sup>1)</sup>	0.09	895	0.96	0.48	0.63	42.7	38.5	30.4	-	2.0	1.8	1.9
<b>8-pole, 750 rpm</b>													
71	LE71MC8	0.09	635	1.40	0.53	0.63	39.0	35.7	28.6	-	1.8	1.8	2.0
<b>60 Hz, 50 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63MCA4	0.09	1720	0.61	0.40	0.53	53.1	47.0	37.1	-	3.0	2.8	3.4
<b>6-pole, 1200 rpm</b>													
63	LE63MEB6 <sup>1)</sup>	0.09	1115	0.77	0.43	0.56	46.4	41.6	33.4	-	2.3	2.0	2.2
<b>8-pole, 900 rpm</b>													
71	LE71MC8	0.09	790	1.10	0.42	0.59	45.0	40.1	31.8	-	2.0	2.2	2.3
<b>60 Hz, 60 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63MCA4	0.11	1705	0.62	0.46	0.57	52.7	47.6	38.7	IE1	2.8	2.5	3.1
<b>6-pole, 1200 rpm</b>													
63	LE63MEB6 <sup>1)</sup>	0.11	1095	0.96	0.49	0.60	46.6	42.6	35.0	-	2.2	1.8	2.0
<b>8-pole, 900 rpm</b>													
71	LE71MC8	0.11	790	1.30	0.52	0.59	45.0	40.9	32.9	-	2.0	1.9	2.0
<b>87 Hz power</b>													
<b>4-pole, 2610 rpm</b>													
63	LE63MCA4	0.16	2530	0.60	0.81	0.51	53.6	-	-	-	-	-	2.9
<b>8-pole, 1305 rpm</b>													
71	LE71MC8	0.15	1115	1.30	0.86	0.47	48.6	-	-	-	-	-	2.1

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

Frame size	Motor	$T_A/T_N$	$L_{ptA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No. 2KJ3... - . ■ ■ ■ ■ - .... -Z	Additional identification code -Z with order code	
		kW	dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg		No. poles	Power
<b>50 Hz power</b>										
<b>4-pole, 1500 rpm</b>										
63	LE63MCA4	2.6	54	61	20000	2.9	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-	-
<b>6-pole, 1000 rpm</b>										
63	LE63MEB6 <sup>1)</sup>	2.0	56	62	15000	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01	-
<b>8-pole, 750 rpm</b>										
71	LE71MC8	2.0	49	56	O. R.	5.5	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	P02	-
<b>60 Hz, 50 Hz power</b>										
<b>4-pole, 1800 rpm</b>										
63	LE63MCA4	3.1	54	61	15000	2.9	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-	-
<b>6-pole, 1200 rpm</b>										
63	LE63MEB6 <sup>1)</sup>	2.2	O. R.	O. R.	10500	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01	-
<b>8-pole, 900 rpm</b>										
71	LE71MC8	2.4	O. R.	O. R.	O. R.	5.5	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	P02	-
<b>60 Hz, 60 Hz power</b>										
<b>4-pole, 1800 rpm</b>										
63	LE63MCA4	2.8	55	62	15000	2.9	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-	-
<b>6-pole, 1200 rpm</b>										
63	LE63MEB6 <sup>1)</sup>	2.0	57	64	10500	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	P01	-
<b>8-pole, 900 rpm</b>										
71	LE71MC8	2.1	54	61	O. R.	5.5	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	P02	-
<b>87 Hz power</b>										
<b>4-pole, 2610 rpm</b>										
63	LE63MCA4	-	O. R.	O. R.	-	O. R.	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	-	P91
<b>8-pole, 1305 rpm</b>										
71	LE71MC8	-	O. R.	O. R.	-	5.5	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	P02	P92

O. R. On request

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

**Motors**

Explosion-protected motors

**Motors for Zone 2 and Zone 22****Selection and ordering data**

Frame size	Motor	$P_N$	$n_N$	$T_N$	$I_N$	$\cos \varphi$	$\eta$			$I_{st}/I_N$
		kW	rpm	Nm	50 Hz 400 V A		4/4 load %	3/4 load %	2/4 load %	
<b>50 Hz power</b>										
<b>4-pole, 1500 rpm</b>										
<b>71</b>	MB71MG4E	0.25	1395	1.71	0.76	0.69	68.5	68.4	64.2	3.7
	MB71ZMK4E	0.37	1380	2.55	1.02	0.72	72.7	73.2	69.9	3.8
<b>80</b>	MB80MH4P	0.55	1440	3.6	1.26	0.78	80.8	81.1	79.3	5.9
	MB80ZMQ4P	0.75	1450	4.9	1.75	0.75	82.5	82.3	79.9	7.1
<b>90</b>	MB90SM4P	1.1	1440	7.3	2.40	0.78	84.1	84.7	83.4	6.9
	MB90ZLR4P	1.5	1445	9.9	3.15	0.80	85.3	86.0	85.2	7.3
<b>100</b>	MB100ZLSA4P	2.2	1465	14.3	4.40	0.83	86.7	87.0	85.9	8.4
	MB100ZLSB4P	3	1460	19.6	5.90	0.83	87.7	88.5	87.9	8.3
<b>112</b>	MB112ZMKB4P	4	1460	26	7.90	0.82	88.6	89.2	88.6	7.1
<b>132</b>	MB132ZST4P	5.5	1470	36	10.8	0.82	89.6	90.0	89.4	8.6
	MB132ZMS4P	7.5	1465	49	14.3	0.84	90.4	91.1	90.8	8.2
<b>160</b>	MB160MPB4P	11	1475	71	20.5	0.84	91.4	91.8	91.2	7.6
	MB160ZLL4P	15	1475	97	28.5	0.82	92.1	92.3	91.5	8.5
<b>180</b>	MBS180MQ4P	18.5	1470	120	35.0	0.82	92.6	93.1	93.0	7.2
	MBS180ZLN4P	22	1470	143	41.0	0.83	93.0	93.6	93.6	6.8



Frame size	Motor	$T_{S1}/T_N$	$T_{BK}/T_N$	$L_{pFA}$	$L_{WA}$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No.	Additional identification code -Z with order code	
		-	-	dB (A)	dB (A)	$10^{-4} \text{ kgm}^2$	kg	2KJ3... - . ■ ■ ■ ■ - .... -Z	Zone 2 <sup>1)</sup>	Zone 22 <sup>1)</sup>
<b>50 Hz power</b>										
<b>4-pole, 1500 rpm</b>										
<b>71</b>	MB71MG4E	2.4	2.5	50	61	7.6	6	2KJ3... - . <b>C C 7 2</b> - ....	<b>K72</b>	<b>K74</b>
	MB71ZMK4E	2.3	2.4	50	61	9.5	7	2KJ3... - . <b>C E 7 2</b> - ....	<b>K72</b>	<b>K74</b>
<b>80</b>	MB80MH4P	2.1	3.1	53	64	21	11	2KJ3... - . <b>D C 7 3</b> - ....	<b>K72</b>	<b>K74</b>
	MB80ZMQ4P	2.7	3.9	53	64	29	14	2KJ3... - . <b>D F 7 3</b> - ....	<b>K72</b>	<b>K74</b>
<b>90</b>	MB90SM4P	2.9	3.6	56	68	36	16	2KJ3... - . <b>E K 7 3</b> - ....	<b>K72</b>	<b>K74</b>
	MB90ZLR4P	2.9	3.5	60	68	49	19	2KJ3... - . <b>E M 7 3</b> - ....	<b>K72</b>	<b>K74</b>
<b>100</b>	MB100ZLSA4P	3.2	4.4	60	72	140	30	2KJ3... - . <b>F N 7 3</b> - ....	<b>K72</b>	<b>K74</b>
	MB100ZLSB4P	2.5	3.9	60	72	140	30	2KJ3... - . <b>F P 7 3</b> - ....	<b>K72</b>	<b>K74</b>
<b>112</b>	MB112ZMKB4P	2.4	3.7	58	70	170	34	2KJ3... - . <b>G J 7 3</b> - ....	<b>K72</b>	<b>K74</b>
<b>132</b>	MB132ZST4P	2.9	3.7	64	76	460	64	2KJ3... - . <b>H J 7 3</b> - ....	<b>K72</b>	<b>K74</b>
	MB132ZMS4P	2.6	3.7	64	76	460	64	2KJ3... - . <b>H L 7 3</b> - ....	<b>K72</b>	<b>K74</b>
<b>160</b>	MB160MPB4P	2.6	3.4	65	77	830	83	2KJ3... - . <b>J R 7 3</b> - ....	<b>K72</b>	<b>K74</b>
	MB160ZLL4P	2.5	3.8	65	77	990	100	2KJ3... - . <b>J U 7 3</b> - ....	<b>K72</b>	<b>K74</b>
<b>180</b>	MBS180MQ4P	2.5	3.3	66	73	1300	165	2KJ3... - . <b>K L 7 3</b> - ....	<b>K72</b>	<b>K74</b>
	MBS180ZLN4P	2.3	3.3	68	75	1400	170	2KJ3... - . <b>K N 7 3</b> - ....	<b>K72</b>	<b>K74</b>

<sup>1)</sup> Additional ordering data and notes relating to explosion-protected geared motors are listed in table "Designs for SIMOGEAR explosion-protected geared motors in Zone 2 and Zone 22" on [page 2/32](#).

## Motors

Motors according to UL and CSA standards



## NEMA Premium Efficient motors MG1, Table 12-12

## Selection and ordering data

Frame size	Motor	$P_N$		$n_N$	$T_N$	EISA	$I_N$	$\cos \varphi$	$\eta$			$I_{st}/I_N$	$T_{st}/T_N$
		kW	hp						rpm	Nm	CC no. CC032A		
<b>60 Hz, 50 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63MCA4	0.09	0.12	1720	0.50	–	0.40	0.53	53.1	47.0	37.1	3.0	2.8
	LE63MEB4E <sup>1)</sup>	0.12	0.17	1710	0.67	–	0.39	0.60	64.0	60.3	52.2	3.7	2.9
	LE63ZMH4E <sup>1)</sup>	0.18	0.25	1710	1.01	–	0.56	0.59	68.0	64.4	57.3	3.9	3.3
71	LE71MG4E <sup>1)</sup>	0.25	0.33	1715	1.39	–	0.70	0.64	70.0	68.5	63.6	4.4	2.8
	LE71ZMK4E <sup>1)</sup>	0.37	0.50	1705	2.05	–	0.96	0.67	72.0	71.2	66.9	4.4	2.8
80	LE80MH4P	0.55	0.75	1750	3.00	–	1.15	0.74	81.1	80.9	78.6	6.9	2.7
	LE80ZMQ4P	0.75	1	1760	4.05	✓	1.59	0.71	83.5	82.6	79.7	8.3	3.1
90	LE90SM4P	1.1	1.5	1750	6.00	✓	2.15	0.75	86.5	86.4	84.2	8.2	3.4
	LE90ZLR4P	1.5	2	1755	8.20	✓	2.85	0.77	86.5	86.2	84.5	8.6	3.4
100	LE100ZLSA4P	2.2	3	1770	11.9	✓	3.80	0.81	89.5	89.2	87.2	9.6	3.5
	LE100ZLSB4P	3	4	1760	16.3	✓	5.10	0.82	89.5	89.5	88.3	9.5	3.1
112	LE112ZMKB4P	3.7	5	1770	20.0	✓	6.50	0.80	89.5	89.4	87.7	8.2	2.9
132	LE132ZST4P	5.5	7.5	1775	29.5	✓	9.30	0.81	91.7	91.6	90.5	10.0	3.1
	LE132ZMS4P	7.5	10	1770	40.5	✓	12.40	0.83	91.7	91.8	91.0	9.6	2.7
160	LE160MPA4P	9.2	12.3	1785	49.0	✓	16.40	0.77	91.7	91.1	89.2	8.8	2.8
	LE160MPB4P	11	15	1775	59.0	✓	18.00	0.83	92.4	92.3	91.1	8.9	3.0
	LE160ZLL4P	15	20	1780	80.0	✓	25.00	0.81	93.0	92.8	91.4	9.5	2.9
180	LES180MQ4P	18.5	25	1775	100.0	✓	30.50	0.81	93.6	93.7	93.1	7.8	2.7
	LES180ZLN4P	22	30	1775	118.0	✓	36.50	0.81	93.6	93.8	93.3	7.7	2.8
200	LES200ZLU4P	30	40	1778	161.0	✓	48.00	0.83	94.1	94.3	93.8	8.1	3.0
225	LES225SD4P	37	50	1782	198.0	✓	58.00	0.85	94.5	94.7	94.2	7.5	2.8
	LES225YMF4P	45	60	1782	240.0	✓	70.00	0.85	95.0	95.3	95.1	7.7	3.0
250	LES250MD4P	55	75	1786	294.0	✓	84.00	0.86	95.4	95.6	95.1	7.6	2.8
<b>2-pole, 3600 rpm</b>													
63	LE63MEB2E <sup>1)</sup>	0.18	0.25	3475	0.49	–	0.49	0.72	64.0	60.8	54.6	5.3	2.7
	LE63ZMH2E <sup>1)</sup>	0.25	0.33	3465	0.69	–	0.61	0.76	68.0	65.2	58	5.2	2.4
71	LE71ME2E <sup>1)</sup>	0.37	0.50	3410	1.04	–	0.84	0.77	72.0	71.4	67.8	5.1	2.9
	LE71ZMH2E <sup>1)</sup>	0.55	0.75	3420	1.54	–	1.23	0.76	74.0	73.4	69.6	5.4	3.4
80	LE80ME2P	0.75	1	3480	2.05	✓	1.45	0.84	77.0	77.2	75.7	7.1	3.0
	LE80ZMJ2P	1.1	1.5	3500	3.0	✓	1.98	0.83	84.0	84.0	82.0	8.4	3.3
90	LE90SM2P	1.5	2	3525	4.05	✓	2.60	0.84	85.5	84.8	82.3	9.8	3.1
	LE90ZLR2P	2.2	3	3530	6.0	✓	3.65	0.87	86.5	86.4	84.5	9.6	3.0
100	LE100ZLK2P	3	4	3525	8.1	✓	4.90	0.87	88.5	88.7	87.2	9.7	3.8
112	LE112ZMH2P	3.7	5	3560	9.9	✓	6.00	0.88	88.5	88.0	86.2	10.8	3.2
132	LE132SF2P	5.5	7.5	3555	14.8	✓	8.60	0.90	89.5	89.4	88.2	8.6	2.1
	LE132ZSQB2P	7.5	10	3555	20.0	✓	11.50	0.91	90.2	90.5	90.0	9.5	2.4
160	LE160MG2P	11	15	3560	29.5	✓	17.20	0.88	91.0	90.4	88.3	8.5	2.8
	LE160MM2P	15	20	3565	40.0	✓	24.00	0.86	91.0	90.5	88.9	9.7	3.1
	LE160ZLJ2P	18.5	25	3560	49.5	✓	28.00	0.90	91.7	91.5	90.3	9.4	3.1

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.



## NEMA Premium Efficient motors MG1, Table 12-12

Frame size	Motor	$T_{BK}/T_N$	$T_A/T_N$	$L_{pFA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No.	Additional identification code -Z with order code		
										No. of poles	Specification	
										2KJ3... - . ■ ■ ■ ■ - .... -Z	UL-R/CSA	
<b>60 Hz, 50 Hz power</b>												
<b>4-pole, 1800 rpm</b>												
63	LE63MCA4	3.4	3.1	O. R.	O. R.	O. R.	2.9	4	2KJ3... - .	<b>B B 2 1</b>	- ... -	<b>N38</b>
	LE63MEB4E <sup>1)</sup>	3.2	3.2	O. R.	O. R.	O. R.	3.7	4	2KJ3... - .	<b>B C 2 2</b>	- ... -	<b>N38</b>
	LE63ZMH4E <sup>1)</sup>	3.4	3.6	O. R.	O. R.	O. R.	4.5	5	2KJ3... - .	<b>B D 2 2</b>	- ... -	<b>N38</b>
71	LE71MG4E <sup>1)</sup>	3.1	3.1	O. R.	O. R.	O. R.	7.6	6	2KJ3... - .	<b>C C 2 2</b>	- ... -	<b>N38</b>
	LE71ZMK4E <sup>1)</sup>	2.8	3.1	O. R.	O. R.	O. R.	9.5	7	2KJ3... - .	<b>C E 2 2</b>	- ... -	<b>N38</b>
80	LE80MH4P	3.8	3.0	O. R.	O. R.	O. R.	21	9	2KJ3... - .	<b>D C 2 3</b>	- ... -	<b>N38</b>
	LE80ZMQ4P	4.7	3.4	O. R.	O. R.	O. R.	39	10	2KJ3... - .	<b>D F 2 3</b>	- ... -	<b>N38</b>
90	LE90SM4P	4.4	3.7	O. R.	O. R.	O. R.	36	12	2KJ3... - .	<b>E K 2 3</b>	- ... -	<b>N38</b>
	LE90ZLR4P	4.3	3.74	O. R.	O. R.	O. R.	49	15	2KJ3... - .	<b>E M 2 3</b>	- ... -	<b>N38</b>
100	LE100ZLSA4P	5.1	3.9	O. R.	O. R.	O. R.	140	29	2KJ3... - .	<b>F N 2 3</b>	- ... -	<b>N38</b>
	LE100ZLSB4P	4.6	3.4	O. R.	O. R.	O. R.	140	29	2KJ3... - .	<b>F P 2 3</b>	- ... -	<b>N38</b>
112	LE112ZMKB4P	4.3	3.2	O. R.	O. R.	O. R.	170	29	2KJ3... - .	<b>G J 2 3</b>	- ... -	<b>N38</b>
132	LE132ZST4P	4.2	3.4	O. R.	O. R.	O. R.	340	57	2KJ3... - .	<b>H J 2 3</b>	- ... -	<b>N38</b>
	LE132ZMS4P	4.2	3.0	O. R.	O. R.	O. R.	460	57	2KJ3... - .	<b>H L 2 3</b>	- ... -	<b>N38</b>
160	LE160MPA4P	4.1	3.1	O. R.	O. R.	O. R.	680	73	2KJ3... - .	<b>J Q 2 3</b>	- ... -	<b>N38</b>
	LE160MPB4P	3.8	3.3	O. R.	O. R.	O. R.	710	73	2KJ3... - .	<b>J R 2 3</b>	- ... -	<b>N38</b>
	LE160ZLL4P	4.3	3.2	O. R.	O. R.	O. R.	850	90	2KJ3... - .	<b>J U 2 3</b>	- ... -	<b>N38</b>
180	LES180MQ4P	3.6	3.0	O. R.	O. R.	O. R.	1300	165	2KJ3... - .	<b>K L 3 3</b>	- ... -	<b>N38</b>
	LES180ZLN4P	3.7	3.1	O. R.	O. R.	O. R.	1400	170	2KJ3... - .	<b>K N 3 3</b>	- ... -	<b>N38</b>
200	LES200ZLU4P	3.5	3.3	O. R.	O. R.	O. R.	2400	240	2KJ3... - .	<b>L N 3 3</b>	- ... -	<b>N38</b>
225	LES225SD4P	3.0	3.1	66	80	O. R.	4200	285	2KJ3... - .	<b>M F 3 3</b>	- ... -	<b>N38</b>
	LES225YMF4P	3.0	3.3	66	80	O. R.	4700	320	2KJ3... - .	<b>M T 3 3</b>	- ... -	<b>N38</b>
250	LES250MD4P	3.2	3.1	67	81	O. R.	8500	420	2KJ3... - .	<b>N M 3 3</b>	- ... -	<b>N38</b>
<b>2-pole, 3600 rpm</b>												
63	LE63MEB2E <sup>1)</sup>	3.6	3.0	O. R.	O. R.	O. R.	2.2	4	2KJ3... - .	<b>B C 2 2</b>	- ... -	<b>P00 N38</b>
	LE63ZMH2E <sup>1)</sup>	3.1	2.6	O. R.	O. R.	O. R.	2.6	5	2KJ3... - .	<b>B D 2 2</b>	- ... -	<b>P00 N38</b>
71	LE71ME2E <sup>1)</sup>	3.0	3.2	O. R.	O. R.	O. R.	3.5	6	2KJ3... - .	<b>C B 2 2</b>	- ... -	<b>P00 N38</b>
	LE71ZMH2E <sup>1)</sup>	3.4	3.7	O. R.	O. R.	O. R.	4.5	7	2KJ3... - .	<b>C D 2 2</b>	- ... -	<b>P00 N38</b>
80	LE80ME2P	3.6	3.3	O. R.	O. R.	O. R.	11.0	9.3	2KJ3... - .	<b>D B 2 3</b>	- ... -	<b>P00 N38</b>
	LE80ZMJ2P	4.0	3.6	O. R.	O. R.	O. R.	13.0	10	2KJ3... - .	<b>D M 2 3</b>	- ... -	<b>P00 N38</b>
90	LE90SM2P	4.9	3.4	O. R.	O. R.	O. R.	21.0	12	2KJ3... - .	<b>E K 2 3</b>	- ... -	<b>P00 N38</b>
	LE90ZLR2P	4.9	3.3	O. R.	O. R.	O. R.	31.0	15	2KJ3... - .	<b>E M 2 3</b>	- ... -	<b>P00 N38</b>
100	LE100ZLK2P	5.5	4.2	O. R.	O. R.	O. R.	54.0	26	2KJ3... - .	<b>F K 2 3</b>	- ... -	<b>P00 N38</b>
112	LE112ZMH2P	5.1	3.5	O. R.	O. R.	O. R.	120.0	29	2KJ3... - .	<b>G G 2 3</b>	- ... -	<b>P00 N38</b>
132	LE132SF2P	4.4	2.3	O. R.	O. R.	O. R.	240.0	36	2KJ3... - .	<b>H E 2 3</b>	- ... -	<b>P00 N38</b>
	LE132ZSQB2P	4.7	2.6	O. R.	O. R.	O. R.	310.0	50	2KJ3... - .	<b>H H 2 3</b>	- ... -	<b>P00 N38</b>
160	LE160MG2P	4.3	3.1	O. R.	O. R.	O. R.	530.0	65	2KJ3... - .	<b>J N 2 3</b>	- ... -	<b>P00 N38</b>
	LE160MM2P	4.8	3.4	O. R.	O. R.	O. R.	610.0	74	2KJ3... - .	<b>J P 2 3</b>	- ... -	<b>P00 N38</b>
	LE160ZLJ2P	4.4	3.4	O. R.	O. R.	O. R.	680.0	84	2KJ3... - .	<b>J T 2 3</b>	- ... -	<b>P00 N38</b>

O. R. On request

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

## Motors

Motors according to UL and CSA standards



Energy Verified

## NEMA Premium Efficient motors MG1, Table 12-12

## Selection and ordering data

Frame size	Motor	$P_N$		$n_N$	$T_N$	EISA	$I_N$	$\cos \varphi$	$\eta$			$I_{st}/I_N$	$T_{st}/T_N$
		kW	hp						rpm	Nm	CC no. CC032A		
<b>60 Hz, 50 Hz power</b>													
<b>6-pole, 1200 rpm</b>													
<b>63</b>	LE63MEB6 <sup>1)</sup>	0.09	0.12	1115	0.77	–	0.43	0.56	46.4	41.6	33.4	2.3	2.0
<b>71</b>	LE71MG6E <sup>1)</sup>	0.18	0.25	1105	1.56	–	0.67	0.61	55.0	53.6	48.8	2.7	2.9
	LE71ZMK6E <sup>1)</sup>	0.25	0.33	1100	2.40	–	0.82	0.64	59.5	58.9	54.7	3.0	2.7
<b>80</b>	LE80MD6E	0.37	0.50	1140	3.10	–	1.15	0.63	64.0	63.0	59.1	4.6	2.3
	LE80MK6E	0.55	0.75	1145	4.60	–	1.66	0.61	68.0	67.4	63.7	5.2	2.9
<b>90</b>	LE90SQ6P	0.75	1.0	1155	6.20	✓	1.76	0.65	82.5	82.4	79.9	5.3	2.4
<b>100</b>	LE100ZLSA6P	1.1	1.5	1180	8.90	✓	2.30	0.69	87.5	87.2	84.8	6.7	2.4
<b>112</b>	LE112ZMKA6P	1.5	2	1175	12.2	✓	2.90	0.73	88.5	88.3	86.2	6.9	2.2
<b>132</b>	LE132SQA6P	2.2	3	1180	17.8	✓	4.30	0.72	89.5	89.2	87.7	7.3	2.4
	LE132SQB6P	3	4	1180	24.5	✓	6.00	0.70	89.5	89.5	87.9	7.6	2.6
	LE132MJ6P	4	5	1180	30.0	✓	7.50	0.69	89.5	89.2	87.5	7.5	2.8
	LE132ZMS6P	5.5	7.5	1180	44.5	✓	11.00	0.69	91.0	90.8	89.2	7.8	3.0
<b>160</b>	LE160MW6P	7.5	10	1185	60.0	✓	12.90	0.80	91.0	90.8	89.4	9.3	2.7
	LE160ZLW6P	11	15	1185	89.0	✓	19.30	0.78	91.7	91.7	90.5	8.0	3.4
<b>180</b>	LES180LJ6P	15	20	1178	122.0	✓	26.00	0.79	91.7	92.0	91.4	6.8	2.5
<b>200</b>	LES200LM6P	18.5	25	1180	150.0	✓	32.00	0.78	93.0	93.8	93.8	6.5	2.8
	LES200ZLS6P	22	30	1180	178.0	✓	37.50	0.79	93.0	93.5	93.4	6.3	2.6
<b>225</b>	LES225YMF6P	30	40	1185	242.0	✓	49.00	0.82	94.1	94.4	94.1	7.6	2.9
<b>250</b>	LES250MD6P	37	50	1188	297.0	✓	59.00	0.83	94.1	94.4	93.9	8.0	3.1

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.





Frame size	Motor	$T_{BK}/T_N$	$T_A/T_N$	$L_{pA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No.	Additional identification code -Z with order code	
										No. of poles	Specification
60 Hz, 50 Hz power										UL-R/CSA	
6-pole, 1200 rpm											
63	LE63MEB6 <sup>1)</sup>	2.2	2.2	O. R.	O. R.	O. R.	3.7	4	2KJ3... - . . . . -Z	<b>B D 2 1</b>	<b>P01 N38</b>
71	LE71MG6E <sup>1)</sup>	2.9	3.20	O. R.	O. R.	O. R.	8.0	6	2KJ3... - . . . . -Z	<b>C C 2 2</b>	<b>P01 N38</b>
	LE71ZMK6E <sup>1)</sup>	2.7	3.00	O. R.	O. R.	O. R.	10	7	2KJ3... - . . . . -Z	<b>C E 2 2</b>	<b>P01 N38</b>
80	LE80MD6E	2.9	2.50	O. R.	O. R.	O. R.	17	8.3	2KJ3... - . . . . -Z	<b>D C 2 2</b>	<b>P01 N38</b>
	LE80MK6E	3.6	3.20	O. R.	O. R.	O. R.	25	11.3	2KJ3... - . . . . -Z	<b>D F 2 2</b>	<b>P01 N38</b>
90	LE90SQ6P	3.1	2.60	O. R.	O. R.	O. R.	40	15	2KJ3... - . . . . -Z	<b>E C 2 3</b>	<b>P01 N38</b>
100	LE100ZLSA6P	3.3	2.60	O. R.	O. R.	O. R.	110	25	2KJ3... - . . . . -Z	<b>F N 2 3</b>	<b>P01 N38</b>
112	LE112ZMKA6P	3.2	2.40	O. R.	O. R.	O. R.	170	29	2KJ3... - . . . . -Z	<b>G H 2 3</b>	<b>P01 N38</b>
132	LE132SQA6P	3.5	2.60	63	71	O. R.	370	45	2KJ3... - . . . . -Z	<b>H G 2 3</b>	<b>P01 N38</b>
	LE132SQB6P	3.8	2.9	56	66	O. R.	340	42	2KJ3... - . . . . -Z	<b>H H 2 3</b>	<b>P01 N38</b>
	LE132MJ6P	3.8	3.1	67	75	O. R.	390	46	2KJ3... - . . . . -Z	<b>H K 2 3</b>	<b>P01 N38</b>
	LE132ZMS6P	4.0	3.30	67	75	O. R.	500	58	2KJ3... - . . . . -Z	<b>H L 2 3</b>	<b>P01 N38</b>
160	LE160MW6P	3.7	2.97	73	81	O. R.	1320	95	2KJ3... - . . . . -Z	<b>J J 2 3</b>	<b>P01 N38</b>
	LE160ZLW6P	3.2	3.74	72	80	O. R.	1640	106	2KJ3... - . . . . -Z	<b>J V 2 3</b>	<b>P01 N38</b>
180	LES180LJ6P	3.0	2.80	O. R.	O. R.	O. R.	1900	180	2KJ3... - . . . . -Z	<b>K M 3 3</b>	<b>P01 N38</b>
200	LES200LM6P	3.0	3.10	O. R.	O. R.	O. R.	2800	215	2KJ3... - . . . . -Z	<b>L L 3 3</b>	<b>P01 N38</b>
	LES200ZLS6P	2.8	2.90	O. R.	O. R.	O. R.	3200	230	2KJ3... - . . . . -Z	<b>L M 3 3</b>	<b>P01 N38</b>
225	LES225YMF6P	3.3	3.20	66	79	O. R.	6700	325	2KJ3... - . . . . -Z	<b>M K 3 3</b>	<b>P01 N38</b>
250	LES250MD6P	3.1	3.40	63	76	O. R.	10000	405	2KJ3... - . . . . -Z	<b>N D 3 3</b>	<b>P01 N38</b>

O. R. On request

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

## Motors

Motors according to UL and CSA standards



Energy Verified

## Selection and ordering data

Frame size	Motor	$P_N$		$n_N$	$T_N$	EISA	$I_N$	$\cos \varphi$	$\eta$			$I_{st}/I_N$	$T_{st}/T_N$
		kW	hp						rpm	Nm	CC no. CC032A		
<b>60 Hz, 60 Hz power</b>													
<b>4-pole, 1800 rpm</b>													
63	LE63MCA4	0.11	0.15	1705	0.62	–	0.46	0.57	52.7	47.6	38.7	2.8	2.5
	LE63MEB4E <sup>1)</sup>	0.14	0.19	1685	0.79	–	0.42	0.66	64.0	61.4	54.8	3.5	2.4
	LE63ZMH4E <sup>1)</sup>	0.21	0.29	1685	1.19	–	0.60	0.65	68.0	65.8	59.7	3.8	2.8
71	LE71MG4E <sup>1)</sup>	0.29	0.39	1695	1.63	–	0.75	0.69	70.0	69.7	65.9	4.1	2.4
	LE71ZMK4E <sup>1)</sup>	0.43	0.58	1680	2.45	–	1.04	0.72	72.0	72.4	69.4	4.0	2.4
80	LE80MH4P	0.63	0.85	1710	3.45	–	1.25	0.78	81.1	81.3	79.6	6.4	2.4
	LE80ZMQ4P	0.86	1.15	1750	4.70	–	1.72	0.75	83.5	83.1	80.7	7.7	2.7
90	LE90ZLR4P	1.75	2.35	1740	9.60	–	3.15	0.80	86.5	86.7	85.4	7.7	2.9
100	LE100ZLSA4P	2.55	3.40	1765	13.8	–	4.25	0.84	89.5	89.7	88.5	8.5	3.0
	LE100ZLSB4P	3.45	4.60	1755	18.8	–	5.80	0.84	89.5	90.1	89.5	8.4	2.7
112	LE112ZMKB4P	4.55	6.10	1760	24.5	–	7.70	0.83	89.5	90.0	89.3	7.3	2.5
132	LE132ZST4P	6.3	8.40	1770	34.0	–	10.40	0.83	91.7	92.0	91.7	8.7	2.7
	LE132ZMS4P	8.6	11.50	1765	46.5	–	13.80	0.85	91.7	92.0	91.3	8.4	2.3
160	LE160MPA4P	10.6	14.20	1780	57.0	–	18.00	0.80	92.4	92.1	90.7	7.7	2.4
	LE160MPB4P	12.6	16.90	1770	68.0	–	20.00	0.85	92.4	92.6	92.0	7.9	2.6
180	LES180MQ4P	21.3	28.60	1770	115.0	–	34.50	0.83	93.6	94.0	93.8	7.2	2.4
	LES180ZLN4P	25.3	33.90	1770	136.0	–	41.00	0.83	93.6	94.1	94.0	6.9	2.2
<b>2-pole, 3600 rpm</b>													
63	LE63MEB2E <sup>1)</sup>	0.21	0.28	3450	0.58	–	0.53	0.78	64.0	62.0	57.0	4.9	2.3
	LE63ZMH2E <sup>1)</sup>	0.29	0.39	3435	0.81	–	0.66	0.81	68.0	66.1	60.7	4.8	2.0
71	LE71ME2E <sup>1)</sup>	0.43	0.58	3370	1.22	–	0.93	0.81	72.0	72.5	69.9	4.6	2.5
	LE71ZMH2E <sup>1)</sup>	0.63	0.85	3380	1.78	–	1.34	0.80	74.0	74.4	71.8	5.1	2.9
80	LE80ME2P	0.86	1.15	3450	2.40	–	1.63	0.86	77.0	78.0	77.2	6.4	2.6
	LE80ZMJ2P	1.27	1.70	3480	3.50	–	2.25	0.85	84.0	84.6	83.4	7.4	2.8
90	LE90SM2P	1.75	2.35	3510	4.75	–	2.95	0.87	85.5	85.6	84.0	8.7	2.6
100	LE100ZLK2P	3.45	4.60	3520	9.40	–	5.50	0.89	88.5	89.2	88.5	8.5	3.3
112	LE112ZMH2P	4.55	6.20	3550	12.2	–	7.20	0.90	88.5	88.7	87.6	9.0	2.6
132	LE132SF2P	6.3	8.40	3545	17.0	–	9.70	0.91	89.5	89.9	89.1	7.5	1.9
	LE132ZSQB2P	8.6	11.50	3550	23.0	–	13.00	0.92	90.2	90.5	90.0	8.4	2.1
160	LE160MG2P	12.6	16.90	3555	34.0	–	19.50	0.89	91.0	90.8	89.3	7.6	2.4
	LE160MM2P	17.3	24.00	3560	46.5	–	27.00	0.88	91.7	91.5	90.3	8.7	2.7
	LE160ZLJ2P	21.3	28.60	3550	57.0	–	32.00	0.91	91.7	91.8	91.1	8.2	2.7
<b>6-pole, 1200 rpm</b>													
63	LE63MEB6 <sup>1)</sup>	0.11	0.13	1095	0.96	–	0.49	0.60	46.6	42.6	35.0	2.2	1.8
71	LE71MG6E <sup>1)</sup>	0.21	0.28	1075	1.87	–	0.72	0.67	55.0	54.9	51.2	2.5	2.4
	LE71ZMK6E <sup>1)</sup>	0.29	0.39	1070	2.60	–	0.87	0.70	59.5	60.1	57.0	2.8	2.3
80	LE80MD6E	0.43	0.58	1125	3.65	–	1.22	0.69	64.0	64.1	61.3	4.2	2.1
	LE80MK6E	0.63	0.85	1135	5.30	–	1.76	0.66	68.0	68.4	65.8	4.8	2.6

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.



Frame size	Motor	$T_{BK}/T_N$	$T_A/T_N$	$L_{pFA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No.	Additional identification code -Z with order code	
										No. of poles	Specification
60 Hz, 60 Hz power											UL-R/CSA
4-pole, 1800 rpm											
63	LE63MCA4	3.1	2.8	55	62	O. R.	2.9	4	2KJ3... - . . . . - . . . . - Z		N38
	LE63MEB4E <sup>1)</sup>	2.7	2.6	54	61	O. R.	3.7	4	2KJ3... - . . . . - . . . . - Z		N38
	LE63ZMH4E <sup>1)</sup>	2.9	3.1	62	69	O. R.	4.5	5	2KJ3... - . . . . - . . . . - Z		N38
71	LE71MG4E <sup>1)</sup>	2.6	2.6	53	64	O. R.	7.6	6	2KJ3... - . . . . - . . . . - Z		N38
	LE71ZMK4E <sup>1)</sup>	2.4	2.6	53	64	O. R.	9.5	7	2KJ3... - . . . . - . . . . - Z		N38
80	LE80MH4P	3.3	2.6	53	61	O. R.	21	9	2KJ3... - . . . . - . . . . - Z		N38
	LE80ZMQ4P	4.1	3.0	58	66	O. R.	29	10	2KJ3... - . . . . - . . . . - Z		N38
90	LE90ZLR4P	3.7	3.19	59	67	O. R.	49	15	2KJ3... - . . . . - . . . . - Z		N38
100	LE100ZLSA4P	4.4	3.3	62	74	O. R.	140	29	2KJ3... - . . . . - . . . . - Z		N38
	LE100ZLSB4P	3.9	3.0	62	74	O. R.	140	29	2KJ3... - . . . . - . . . . - Z		N38
112	LE112ZMKB4P	3.8	2.8	62	74	O. R.	170	29	2KJ3... - . . . . - . . . . - Z		N38
132	LE132ZST4P	3.7	3.0	68	80	O. R.	340	57	2KJ3... - . . . . - . . . . - Z		N38
	LE132ZMS4P	3.6	2.5	68	80	O. R.	460	57	2KJ3... - . . . . - . . . . - Z		N38
160	LE160MPA4P	3.5	2.6	O. R.	O. R.	O. R.	680	73	2KJ3... - . . . . - . . . . - Z		N38
	LE160MPB4P	3.3	2.9	69	81	O. R.	710	73	2KJ3... - . . . . - . . . . - Z		N38
180	LES180MQ4P	3.2	2.6	68	75	O. R.	1300	165	2KJ3... - . . . . - . . . . - Z		N38
	LES180ZLN4P	3.2	2.4	70	77	O. R.	1400	170	2KJ3... - . . . . - . . . . - Z		N38
2-pole, 3600 rpm											
63	LE63MEB2E <sup>1)</sup>	3.1	2.5	60	67	O. R.	2.2	4	2KJ3... - . . . . - . . . . - Z	P00	N38
	LE63ZMH2E <sup>1)</sup>	2.7	2.2	57	64	O. R.	2.6	5	2KJ3... - . . . . - . . . . - Z	P00	N38
71	LE71ME2E <sup>1)</sup>	2.5	2.8	63	74	O. R.	3.5	6	2KJ3... - . . . . - . . . . - Z	P00	N38
	LE71ZMH2E <sup>1)</sup>	2.9	3.2	63	74	O. R.	4.5	7	2KJ3... - . . . . - . . . . - Z	P00	N38
80	LE80ME2P	3.1	2.9	64	75	O. R.	11	9.3	2KJ3... - . . . . - . . . . - Z	P00	N38
	LE80ZMJ2P	3.4	3.1	64	75	O. R.	13	10	2KJ3... - . . . . - . . . . - Z	P00	N38
90	LE90SM2P	4.2	2.9	69	81	O. R.	21	12	2KJ3... - . . . . - . . . . - Z	P00	N38
100	LE100ZLK2P	4.7	3.6	71	83	O. R.	54	26	2KJ3... - . . . . - . . . . - Z	P00	N38
112	LE112ZMH2P	4.1	2.9	O. R.	O. R.	O. R.	120	29	2KJ3... - . . . . - . . . . - Z	P00	N38
132	LE132SF2P	3.8	2.1	72	84	O. R.	240	36	2KJ3... - . . . . - . . . . - Z	P00	N38
	LE132ZSQB2P	4.1	2.3	72	84	O. R.	310	50	2KJ3... - . . . . - . . . . - Z	P00	N38
160	LE160MG2P	3.7	2.6	77	89	O. R.	530	65	2KJ3... - . . . . - . . . . - Z	P00	N38
	LE160MM2P	4.2	3.0	77	89	O. R.	610	74	2KJ3... - . . . . - . . . . - Z	P00	N38
	LE160ZLJ2P	3.8	3.0	O. R.	O. R.	O. R.	680	84	2KJ3... - . . . . - . . . . - Z	P00	N38
6-pole, 1200 rpm											
63	LE63MEB6 <sup>1)</sup>	2.0	2.0	57	64	O. R.	3.7	4	2KJ3... - . . . . - . . . . - Z	P01	N38
71	LE71MG6E <sup>1)</sup>	2.4	2.6	49	60	O. R.	8.0	6	2KJ3... - . . . . - . . . . - Z	P01	N38
	LE71ZMK6E <sup>1)</sup>	2.3	2.5	49	60	O. R.	10.0	7	2KJ3... - . . . . - . . . . - Z	P01	N38
80	LE80MD6E	2.6	2.3	45	56	O. R.	17	8.3	2KJ3... - . . . . - . . . . - Z	P01	N38
	LE80MK6E	3.1	2.9	45	56	O. R.	25	11.3	2KJ3... - . . . . - . . . . - Z	P01	N38

O. R. On request

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

**Motors**

Motors according to UL and CSA standards

**Selection and ordering data**

Frame size	Motor	$P_N$		$n_N$	$T_N$	EISA	$I_N$	$\cos \varphi$	$\eta$	
		kW	hp							rpm
<b>104 Hz power</b>										
<b>4-pole, 3120 rpm</b>										
<b>63</b>	LE63MCA4	0.19	0.25	3025	0.60	–	0.85	0.58	58.2	
	LE63MEB4E	0.24	0.32	3020	0.76	–	0.71	0.59	71.1	
	LE63ZMH4E	0.36	0.48	3020	1.14	–	1.01	0.59	75.2	
<b>71</b>	LE71MG4E	0.50	0.67	3035	1.57	–	1.24	0.65	77.8	
	LE71ZMK4E	0.75	1.0	3020	2.35	–	1.72	0.69	79.1	
<b>80</b>	LE80MH4P	1.09	1.47	3070	3.4	–	2.2	0.77	80.8	
	LE80ZMQ4P	1.49	2.0	3075	4.63	–	3.15	0.72	82.5	
<b>90</b>	LE90ZLR4P	3.05	4.09	3065	9.5	–	5.7	0.79	85.3	
<b>100</b>	LE100ZLSA4P	4.4	5.9	3080	13.6	–	7.5	0.83	89.1	
	LE100ZLSB4P	6.0	8.04	3080	18.6	–	10.2	0.83	89.3	
<b>112</b>	LE112ZMKB4P	7.9	10.59	3080	24.5	–	13.3	0.82	90.2	
<b>6-pole, 2080 rpm</b>										
<b>63</b>	LE63MEB6	0.17	0.23	2000	0.81	–	0.82	0.47	52.4	
<b>71</b>	LE71ZMK6E	0.50	0.67	1975	2.4	–	1.29	0.63	77.3	
<b>112</b>	LE112ZMKA6P	3.05	4.09	2055	14.2	–	5.7	0.74	89.7	

<sup>1)</sup> The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.



Frame size	Motor	$L_{pTA}$	$L_{WA}$	$Z_0$	$J_{mot}$	$m_{mot}$	9th to 12th position of the Article No.	Additional identification code -Z with order code	
								No. of poles	Specification
		dB (A)	dB (A)	1/h	$10^{-4}$ kgm <sup>2</sup>	kg	2KJ3... - . ■ ■ ■ ■ - .... -Z		UL-R/CSA
<b>104 Hz power</b>									
<b>4-pole, 3120 rpm</b>									
<b>63</b>	LE63MCA4	O. R.	O. R.	O. R.	2.9	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>B B 2 1</b>	- ... - <b>N38</b>
	LE63MEB4E	O. R.	O. R.	O. R.	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>B C 2 2</b>	- ... - <b>N38</b>
	LE63ZMH4E	O. R.	O. R.	O. R.	4.5	5	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>B D 2 2</b>	- ... - <b>N38</b>
<b>71</b>	LE71MG4E	O. R.	O. R.	O. R.	7.6	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>C C 2 2</b>	- ... - <b>N38</b>
	LE71ZMK4E	O. R.	O. R.	O. R.	9.5	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>C E 2 2</b>	- ... - <b>N38</b>
<b>80</b>	LE80MH4P	O. R.	O. R.	O. R.	21.0	9	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>D C 2 3</b>	- ... - <b>N38</b>
	LE80ZMQ4P	O. R.	O. R.	O. R.	29.0	10	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>D F 2 3</b>	- ... - <b>N38</b>
<b>90</b>	LE90ZLR4P	O. R.	O. R.	O. R.	49.0	15	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>E M 2 3</b>	- ... - <b>N38</b>
<b>100</b>	LE100ZLSA4P	O. R.	O. R.	O. R.	140.0	29	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>F N 2 3</b>	- ... - <b>N38</b>
	LE100ZLSB4P	O. R.	O. R.	O. R.	140.0	29	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>F P 2 3</b>	- ... - <b>N38</b>
<b>112</b>	LE112ZMKB4P	O. R.	O. R.	O. R.	170.0	29	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>G J 2 3</b>	- ... - <b>N38</b>
<b>6-pole, 2080 rpm</b>									
<b>63</b>	LE63MEB6	O. R.	O. R.	O. R.	3.7	4	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>B D 2 1</b>	<b>P00</b> - ... - <b>N38</b>
<b>71</b>	LE71ZMK6E	O. R.	O. R.	O. R.	10.0	7	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>C E 2 2</b>	<b>P00</b> - ... - <b>N38</b>
<b>112</b>	LE112ZMKA6P	O. R.	O. R.	O. R.	170.0	29	2KJ3... - . ■ ■ ■ ■ - .... -Z	<b>G H 2 3</b>	<b>P00</b> - ... - <b>N38</b>

O. R. On request

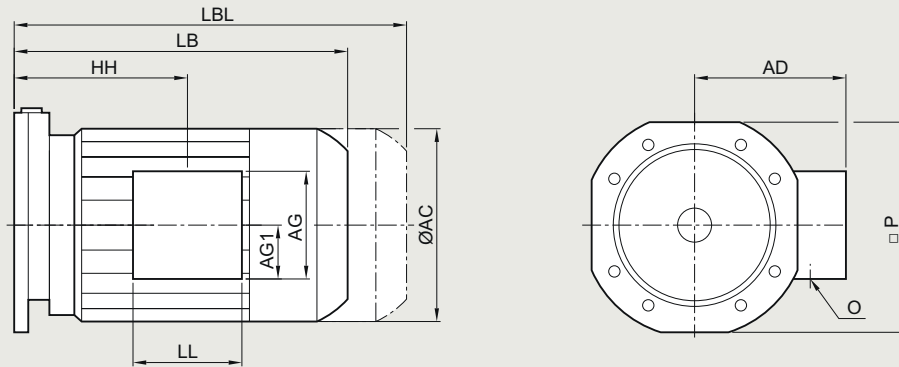
1) The technical specifications also apply to LEI63 and LEI71 motors (with IEC B14 flange) for worm geared motors S.

## Motors

## Dimensions

## Motor frame sizes LE63 to LE71Y

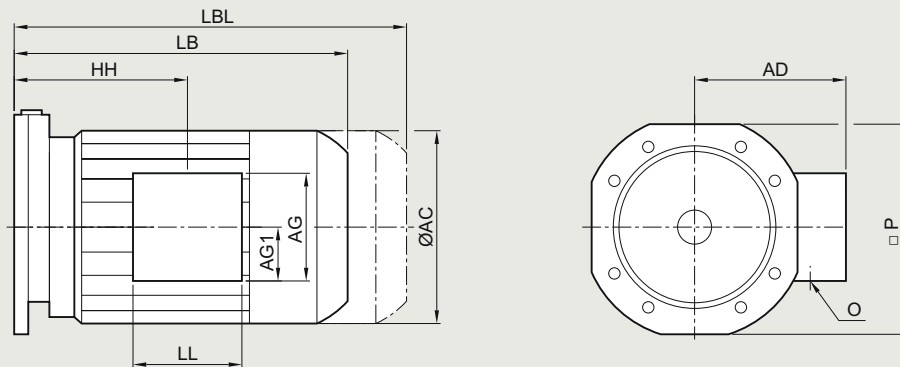
## Overview



Motor	Gearbox type							Dimensions					Terminal box									
	D/Z	E	FD/FZ	B	K	C	EHB	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric	O NPT			
LE63	19	-	-	19	-	-	-	-	61.5	160.5	205.0	117.8	gk127 gk030 TB1E10	124.0	90	90	45.0	M20x1.5/ M25x1.5	2 x 1/2"			
	29	-	29	29	-	29	BH29	120	95.0	194.0	238.5	101.0		75	75	37.5						
	39	39	39	39	39	39	BH39	-	-	-	-	-		132.0	123	119.5	58.0					
	49	49	49	49	49	49	KH49	160	85.5	184.5	229.0	-		-	-	-	-					
	59	59	-	-	-	-	-	-	-	-	-	-		-	-	-	-			-	-	
	69	69	69	-	69	69	KH69	-	-	-	-	-		-	-	-	-			-	-	-
-	-	-	-	79	-	KH79	-	-	-	-	-	-	-	-	-	-	-	-				
LE63Z	19	-	-	19	-	-	-	-	87.5	186.5	231.0	117.8	gk127 gk030 TB1E10	124.0	90	90	45.0	M20x1.5/ M25x1.5	2 x 1/2"			
	29	-	29	29	-	29	BH29	120	121.0	220.0	264.5	101.0		75	75	37.5						
	39	39	39	39	39	39	BH39	-	-	-	-	-		-	-	-	-			-	-	
	49	49	49	49	49	49	KH49	160	111.5	210.5	255.0	-		-	-	-	-			-		
	59	59	-	-	-	-	-	-	-	-	-	-		-	-	-	-			-	-	
	69	69	69	-	69	69	KH69	-	-	-	-	-		-	-	-	-			-	-	-
-	-	-	-	79	-	KH79	-	-	-	-	-	-	-	-	-	-	-	-				
LE71	19	-	-	19	-	-	-	-	93.5	184.5	239.5	138.8	gk127 gk030 TB1E10	134.0	90	90	45.0	M20x1.5/ M25x1.5	2 x 1/2"			
	29	-	29	29	-	29	BH29	120	135.0	226.0	281.0	111.0		75	75	37.5						
	39	39	39	39	39	39	BH39	-	-	-	-	-		-	-	-	-			-	-	
	49	49	49	49	49	49	KH49	160	125.5	216.5	271.5	-		-	-	-	-			-		
	59	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-			-	-	
	69	-	69	-	69	69	KH69	-	-	-	-	-		-	-	-	-			-	-	-
	-	-	-	-	79	-	KH79	-	-	-	-	-		-	-	-	-			-	-	-
	79	69	79	-	-	-	-	198	123.5	214.5	269.5	-		-	-	-	-			-	-	-
-	-	-	-	89	89	-	-	-	-	-	-	-	-	-	-	-	-	-				
LE71Z	19	-	-	19	-	-	-	-	93.5	203.5	258.5	138.8	gk127 gk030 TB1E10	134.0	90	90	45.0	M20x1.5/ M25x1.5	2 x 1/2"			
	29	-	29	29	-	29	BH29	120	135.0	245.0	300.0	111.0		75	75	37.5						
	39	39	39	39	39	39	BH39	-	-	-	-	-		-	-	-	-			-	-	
	49	49	49	49	49	49	KH49	160	125.5	235.5	290.5	-		-	-	-	-			-		
	59	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-			-	-	
	69	-	69	-	69	69	KH69	-	-	-	-	-		-	-	-	-			-	-	-
	-	-	-	-	79	-	KH79	-	-	-	-	-		-	-	-	-			-	-	-
	79	69	79	-	-	-	-	198	123.5	233.5	288.5	-		-	-	-	-			-	-	-
-	-	-	-	89	89	-	-	-	-	-	-	-	-	-	-	-	-	-				
LE71Y	19	-	-	19	-	-	-	-	133.5	243.5	298.5	138.8	gk127 gk030 TB1E10	134.0	90	90	45.0	M20x1.5/ M25x1.5	2 x 1/2"			
	29	-	29	29	-	29	BH29	120	175	285	340	111.0		75	75	37.5						
	39	39	39	39	39	39	BH39	-	-	-	-	-		-	-	-	-			-	-	
	49	49	49	49	49	49	KH49	160	165.5	275.5	330.5	-		-	-	-	-			-	-	
	59	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-			-	-	-
	69	-	69	-	69	69	KH69	-	-	-	-	-		-	-	-	-			-	-	-
	-	-	-	-	79	-	KH79	-	-	-	-	-		-	-	-	-			-	-	-
	79	69	79	-	-	-	-	198	163.5	273.5	328.5	-		-	-	-	-			-	-	-
-	-	-	-	89	89	-	-	-	-	-	-	-	-	-	-	-	-	-				

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

**Overview**



Motor	Gearbox type							Dimensions					AC	Terminal box					
	D/Z	E	FD/FZ	B	K	C	EHB	P	HH	LB	LBL	Type <sup>1)</sup>		AD	LL	AG	AG1	O metric	O NPT
LE80	19	-	-	19	-	-	-	0	120.0	240.0	300.0	156.3	TB1E10	149.2	123	119.5	58.0	M20x1.5/ M25x1.5	2 x 1/2"
	29	-	29	29	-	29	BH29	120	170.0	290.0	350.0	TB1E00	121.0	79	93	50.0	-		
	39	39	39	39	39	39	BH39												
	49	49	49	49	49	49	KH49	160	160.5	280.5	340.5								
	59	-	-	-	-	-	-												
	69	-	69	-	-	69	69	KH69											
	-	-	-	-	79	-	-	KH79											
	79	69	79	-	-	-	-		198	154.5	274.5	334.5							
	-	-	-	-	89	89	-												
89	89	89	-	-	-	-		245	141.5	261.5	321.5								
-	-	-	-	109	-	-													
LE80Z	19	-	-	19	-	-	-	0	155.0	275.0	335.0	156.3	TB1E10	149.2	123	119.5	58.0	M20x1.5/ M25x1.5	2 x 1/2"
	29	-	29	29	-	29	BH29	120	205.0	325.0	385.0	TB1E00	121.0	79	93	50.0	-		
	39	39	39	39	39	39	BH39												
	49	49	49	49	49	49	KH49	160	195.5	315.5	375.5								
	59	-	-	-	-	-	-												
	69	69	69	-	69	69	KH69												
	-	-	-	-	79	-	-	KH79											
	79	-	79	-	-	-	-		198	189.5	309.5	369.5							
	-	-	-	-	89	89	-												
89	89	89	-	-	-	-		245	176.5	296.5	356.5								
-	-	-	-	109	-	-													
LE90	29	-	29	29	-	29	BH29	120	207.5	351.5	421.5	173.8	TB1E10	154.2	123	119.5	58	M20x1.5/ M25x1.5	3/4"+1/2"
	39	39	39	39	39	39	BH39												
	49	49	49	49	49	49	KH49	160	198.0	342.0	412.0								
	59	-	-	-	-	-	-												
	69	-	69	-	69	69	KH69												
	-	-	-	-	79	-	-	KH79											
	79	69	79	-	-	-	-		198	192.0	336.0	406.0							
	-	-	-	-	89	89	-												
	89	89	89	-	-	-	-		245	179.0	323.0	393.0							
	-	-	-	-	109	-	-												
	-	-	-	-	129	-	-		300	172.0	316.0	386.0							
109	109	109	-	-	-	-													
129	129	129	-	-	-	-		350	165.0	309.0	379.0								
-	-	-	-	149	-	-													

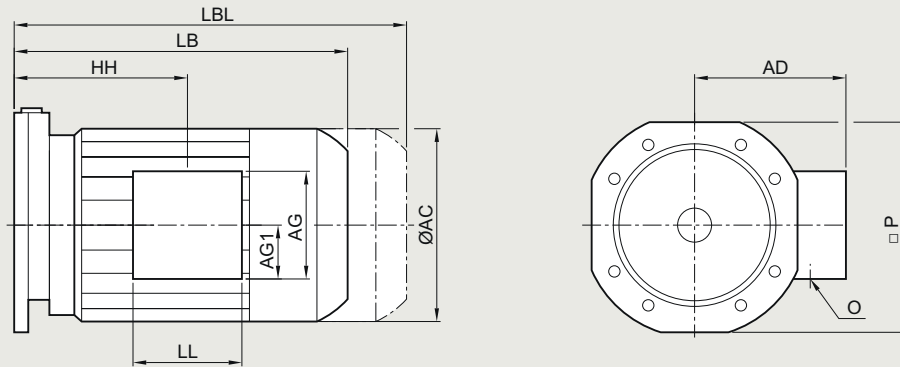
<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

# Motors

## Dimensions

### Motor frame sizes LE90Z to LE100Z

#### Overview

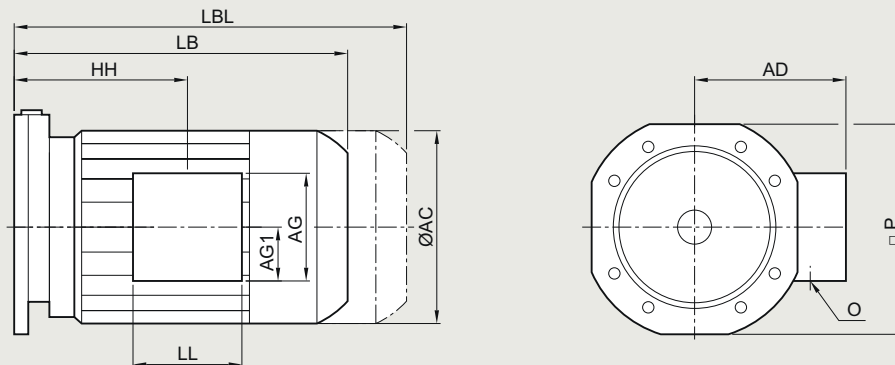


Motor	Gearbox type							Dimensions					Terminal box						
	D/Z	E	FD/FZ	B	K	C	EHB	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric	O NPT
LE90Z	29	-	29	29	-	29	BH29	120	247.5	391.5	461.5	173.8	TB1E10 TB1E00	154.2	123	119.5	58	M20x1.5/ M25x1.5	3/4"+1/2"
	39	39	39	39	39	39	BH39							126.0	79	93	50		-
	49	49	49	49	49	49	KH49	160	238.0	382.0	452.0								
	59	-	-	-	-	-	-												
	69	-	69	-	69	69	KH69												
	-	-	-	-	79	-	KH79												
	79	69	79	-	-	-	-	198	232.0	376.0	446.0								
	-	-	-	-	89	89	-												
	89	89	89	-	-	-	-	245	219.0	363.0	433.0								
	-	-	-	-	109	-	-												
	-	-	-	-	129	-	-	300	212.0	356.0	426.0								
	109	109	109	-	-	-	-												
129	129	129	-	-	-	-	350	205.0	349.0	419.0									
-	-	-	-	149	-	-													
LE100	29	-	29	29	-	29	BH29	120	242.5	408.0	486.5	198.0	TB1F10 TB1F00	170.5	135	135	67.5	2xM32x1.5	3/4"+1/2"
	39	39	39	39	39	39	BH39							166.0	112	135	71.5		-
	49	49	49	49	49	49	KH49	160	233.0	398.5	477.0								
	59	-	-	-	-	-	-												
	69	-	69	-	69	69	KH69												
	-	-	-	-	79	-	KH79												
	79	69	79	-	-	-	-	198	227.0	392.5	471.0								
	-	-	-	-	89	89	-												
	89	89	89	-	-	-	-	245	210.0	375.5	454.0								
	-	-	-	-	109	-	-												
	-	-	-	-	129	-	-	300	201.0	366.5	445.0								
	109	109	109	-	-	-	-												
129	129	129	-	-	-	-	350	192.0	357.5	436.0									
-	-	-	-	149	-	-													
149	149	149	-	169	-	-	405	190.5	356.0	434.5									
LE100Z	29	-	29	29	-	29	BH29	120	277.5	443.0	521.5	198.0	TB1F10 TB1F00	170.5	135	135	67.5	2xM32x1.5	3/4"+1/2"
	39	39	39	39	39	39	BH39							166.0	112	135	71.5		-
	49	49	49	49	49	49	KH49	160	268.0	433.5	512.0								
	59	-	-	-	-	-	-												
	69	-	69	-	69	69	KH69												
	-	-	-	-	79	-	KH79												
	79	69	79	-	-	-	-	198	262.0	427.5	506.0								
	-	-	-	-	89	89	-												
	89	89	89	-	-	-	-	245	245.0	410.5	489.0								
	-	-	-	-	109	-	-												
	-	-	-	-	129	-	-	300	236.0	401.5	480.0								
	109	109	109	-	-	-	-												
129	129	129	-	-	-	-	350	227.0	392.5	471.0									
-	-	-	-	149	-	-													
149	149	149	-	169	-	-	405	225.5	391.0	469.5									

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.



**Overview**



Motor	Gearbox type							Dimensions					AC	Terminal box Type <sup>1)</sup>					
	D/Z	E	FD/FZ	B	K	C	EHB	P	HH	LB	LBL	AD		LL	AG	AG1	O metric	O NPT	
LE112	29	-	29	29	-	29	-	120	244.0	418.0	491.0	222.0	TB1F10	181.5	135	135	67.5	2xM32x1.5	3/4"+1/2"
	39	39	39	39	39	39	-				TB1F00			177.0	112	135	71.5		
	49	49	49	49	49	49	KH49	160	234.5	408.5	481.5								
	59	-	-	-	-	-	-	-											
	69	69	69	-	69	69	KH69												
	-	-	-	-	79	-	KH79												
	79	-	79	-	-	-	-	198	228.5	402.5	475.5								
	-	-	-	-	89	89	-												
	89	89	89	-	-	-	-	245	211.5	385.5	458.5								
	-	-	-	-	109	-	-												
	-	-	-	-	129	-	-	300	202.5	376.5	449.5								
	109	109	109	-	-	-	-												
	129	129	129	-	-	-	-	350	193.5	367.5	440.5								
	-	-	-	-	149	-	-												
149	149	149	-	169	-	-	405	192.0	366.0	439.0									
169	169	169	-	-	-	-	465	179.5	353.5	426.5									
189	189	189	-	189	-	-													
LE112Z	29	-	29	29	-	29	-	120	269.0	443.0	516.0	222.0	TB1F10	181.5	135	135	67.5	2xM32x1.5	3/4"+1/2"
	39	39	39	39	39	39	-				TB1F00			177.0	112	135	71.5		
	49	49	49	49	49	49	KH49	160											
	59	-	-	-	-	-	-												
	69	-	69	-	69	69	KH69												
	-	-	-	-	79	-	KH79												
	79	69	79	-	-	-	-	198	253.5	427.5	500.5								
	-	-	-	-	89	89	-												
	89	89	89	-	-	-	-	245	236.5	410.5	483.5								
	-	-	-	-	109	-	-												
	-	-	-	-	129	-	-	300	227.5	401.5	474.5								
	109	109	109	-	-	-	-												
	129	129	129	-	-	-	-	350	218.5	392.5	465.5								
	-	-	-	-	149	-	-												
149	149	149	-	169	-	-	405	217.0	391.0	464.0									
169	169	169	-	-	-	-	465	204.5	378.5	451.5									
189	189	189	-	189	-	-													
LE132	49	49	49	49	49	49	KH49	160	266.0	461.5	566.0	264.0	TB1H10	207.0	162	162	81.0	2xM32x1.5	3/4"+1/2"
	59	-	-	-	-	-	-				TB1H00			202.0	130	155	84.5		
	69	-	69	-	69	69	KH69												
	-	-	-	-	79	-	KH79												
	79	69	79	-	-	-	-	198	260.0	455.5	560.0								
	-	-	-	-	89	89	-												
	89	89	89	-	-	-	-	245	243.0	438.5	543.0								
	-	-	-	-	109	-	-												
	-	-	-	-	129	-	-	300	234.0	429.5	534.0								
	109	109	109	-	-	-	-												
	129	129	129	-	-	-	-	350	223.0	418.5	523.0								
	-	-	-	-	149	-	-												
	149	149	149	-	169	-	-	405	216.5	412.0	516.5								
	169	169	169	-	-	-	-	465	203.5	399.0	503.5								
189	189	189	-	189	-	-													

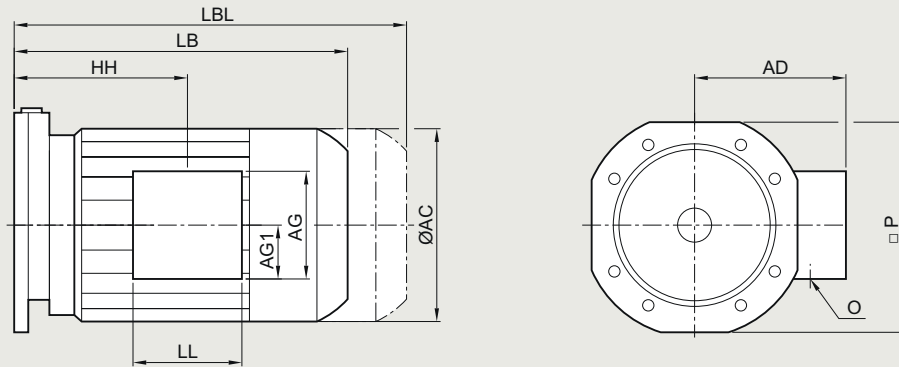
<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

## Motors

## Dimensions

## Motor frame sizes LE132Z to LE160Z

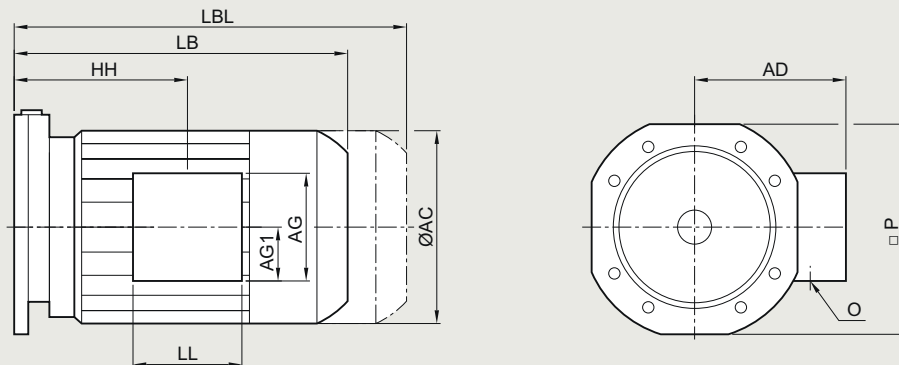
## Overview



Motor	Gearbox type							Dimensions					Terminal box								
	D/Z	E	FD/F Z	B	K	C	EHB	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric	O NPT		
LE132Z	49	49	49	49	49	49	KH49	160	316.0	511.5	616.0	264.0	TB1H10	207.0	162	162	81.0	2xM32x1.5	3/4"+1/2"		
	59	-	-	-	-	-	-						TB1H00	202.0	130	155	84.5	-			
	69	-	69	-	69	69	KH69						-	-	-	-	-	-			
	-	-	-	-	79	-	-	KH79	-	-	-	-	-	-							
	79	69	79	-	-	-	-	198	310.0	505.5	610.0										
	-	-	-	-	89	89	-														
	89	89	89	-	-	-	-	245	293.0	488.5	593.0										
	-	-	-	-	109	-	-														
	-	-	-	-	129	-	-	300	284.0	479.5	584.0										
	109	109	109	-	-	-	-														
	129	129	129	-	-	-	-	350	273.0	468.5	573.0										
	-	-	-	-	149	-	-														
149	149	149	-	169	-	-	405	266.5	462.0	566.5											
169	169	169	-	-	-	-															
189	189	189	-	189	-	-	465	253.5	499.0	553.5											
-	-	-	-	-	-	-															
LE160	49	49	49	49	49	49	-	160	299.5	543.5	659.5	318.0	TB1J10	241.0	180	180	90.0	2xM40x1.5	1 1/4"+1/2"		
	59	-	-	-	-	-	-						TB1J00	236.5	145	175	97.5	-			
	69	-	69	-	69	69	-						-	-	-	-	-	-			
	-	-	-	-	79	-	-	198	293.5	537.5	653.5										
	79	69	79	-	-	-	-														
	-	-	-	-	89	89	-	245	276.5	520.5	636.5										
	89	89	89	-	-	-	-														
	-	-	-	-	109	-	-	300	267.5	511.5	627.5										
	-	-	-	-	129	-	-														
	109	109	109	-	-	-	-	350	256.5	500.5	616.5										
	129	129	129	-	-	-	-														
	-	-	-	-	149	-	-	405	250.0	494.0	610.0										
149	149	149	-	169	-	-															
169	169	169	-	-	-	-	465	237.0	481.0	597.0											
189	189	189	-	189	-	-															
LE160Z	49	49	49	49	49	49	-	160	359.5	603.5	719.5	318.0	TB1J10	241.0	180	180	90.0	2xM40x1.5	1 1/4"+1/2"		
	59	-	-	-	-	-	-						TB1J00	236.5	145	175	97.5	-			
	69	-	69	-	69	69	-						-	-	-	-	-	-			
	-	-	-	-	79	-	-	198	353.5	597.5	713.5										
	79	69	79	-	-	-	-														
	-	-	-	-	89	89	-	245	336.5	580.5	696.5										
	89	89	89	-	-	-	-														
	-	-	-	-	109	-	-	300	327.5	571.5	687.5										
	-	-	-	-	129	-	-														
	109	109	109	-	-	-	-	350	316.5	560.5	676.5										
	129	129	129	-	-	-	-														
	-	-	-	-	149	-	-	405	310.0	554.0	670.0										
149	149	149	-	169	-	-															
169	169	169	-	-	-	-	465	297.0	541.0	657.0											
189	189	189	-	189	-	-															

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

**Overview**



Motor	Gearbox type						Dimensions					Terminal box							
	D/Z	E	FD/FZ	B	K	C	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric	O NPT	
LES180	89	89	89	-	-	-	245	336.0	593.5	722.5	352.5	TB1K01	292.0	197	265	153	2xM40x1.5	1 1/2"+1/2"	
	-	-	-	-	109	-	300	327.0	584.5	713.5									
	109	109	109	-	-	-	350	316.0	573.5	702.5									
	129	129	129	-	-	-	350	316.0	573.5	702.5									
	-	-	-	-	149	-	350	316.0	573.5	702.5									
	149	149	149	-	169	-	405	309.5	567.0	696.0									
	169	169	169	-	-	-	465	296.0	553.5	682.5									
LES180	89	89	89	-	-	-	245	336.0	593.5	722.5	352.5	TB1K01	292.0	197	265	153	2xM40x1.5	1 1/2"+1/2"	
	-	-	-	-	109	-	300	327.0	584.5	713.5									
	109	109	109	-	-	-	350	316.0	573.5	702.5									
	129	129	129	-	-	-	350	316.0	573.5	702.5									
	-	-	-	-	149	-	350	316.0	573.5	702.5									
	149	149	149	-	169	-	405	309.5	567.0	696.0									
	169	169	169	-	-	-	465	296.0	553.5	682.5									
LES180Z	89	89	89	-	-	-	245	366.0	623.5	752.5	352.5	TB1K01	292.0	197	265	153	2xM40x1.5	1 1/2"+1/2"	
	-	-	-	-	109	-	300	357.0	614.5	743.5									
	109	109	109	-	-	-	350	346.0	603.5	732.5									
	129	129	129	-	-	-	350	346.0	603.5	732.5									
	-	-	-	-	149	-	350	346.0	603.5	732.5									
	149	149	149	-	169	-	405	339.5	597.0	726.0									
	169	169	169	-	-	-	465	326.0	583.5	712.5									
LES200	-	-	-	-	129	-	300	391.5	652.5	799.5	392.5	TB1L01	315.0	197	266	154	2xM50x1.5	1 1/2"+1/2"	
	109	109	109	-	-	-	350	380.5	641.5	788.5									
	129	129	129	-	-	-	350	380.5	641.5	788.5									
	-	-	-	-	149	-	350	380.5	641.5	788.5									
	149	149	149	-	169	-	405	374.0	635.0	782.0									
	169	169	169	-	-	-	465	360.5	621.5	768.5									
	189	189	189	-	189	-	465	360.5	621.5	768.5									
LES200Z	-	-	-	-	129	-	300	416.5	677.5	824.5	392.5	TB1L01	315.0	197	266	154	2xM50x1.5	1 1/2"+1/2"	
	109	109	109	-	-	-	350	405.5	666.5	813.5									
	129	129	129	-	-	-	350	405.5	666.5	813.5									
	-	-	-	-	149	-	350	405.5	666.5	813.5									
	149	149	149	-	169	-	405	399.0	660.0	807.0									
	169	169	169	-	-	-	466	385.5	646.5	793.5									
	189	189	189	-	189	-	466	385.5	646.5	793.5									
LES225	-	-	-	-	129	-	300	420.0	698.0	937.0	439.0	TB1L01	337.0	197	266	154	2xM50x1.5	1 1/2"+1/2"	
	109	109	109	-	-	-	350	409.0	687.0	926.0		TB1N01	407.5	233	319	174	2xM63x1.5	-	
	129	129	129	-	-	-	350	409.0	687.0	926.0									
	-	-	-	-	149	-	350	409.0	687.0	926.0									
	149	149	149	-	169	-	405	402.5	680.5	919.5									
	169	169	169	-	-	-	465	388.0	666.0	905.0									
	189	189	189	-	189	-	465	388.0	666.0	905.0									

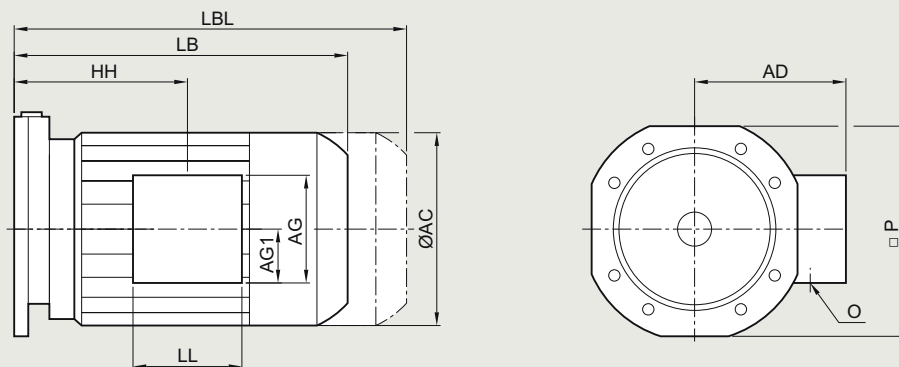
<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

## Motors

### Dimensions

#### Motor frame sizes LES225Y to LES250

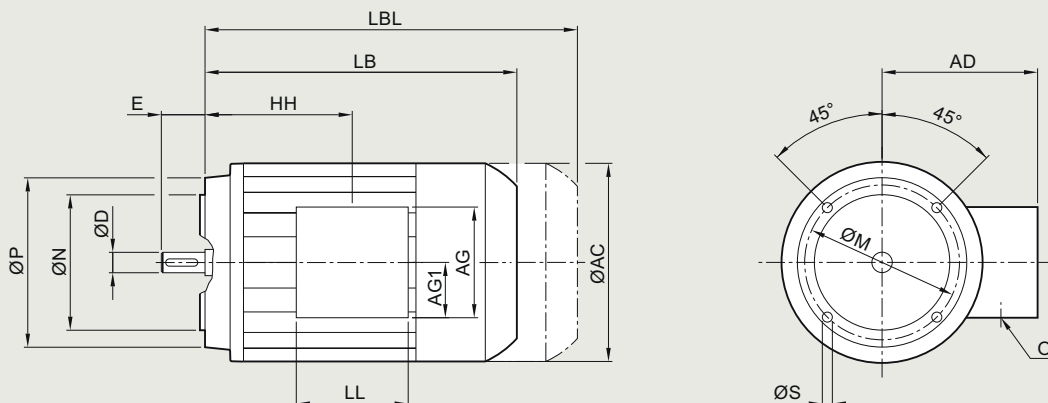
#### Overview



Motor	Gearbox type						Dimensions					Terminal box							
	D/Z	E	FD/FZ	B	K	C	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric	O NPT	
LES225Y	-	-	-	-	129	-	300	480.0	758.0	997.0	439.0	TB1L01	337.0	197	266	154	2xM50x1.5	1 1/2"+1/2"	
	109	109	109	-	-	-						TB1N01	407.5	233	319	174	2xM63x1.5	-	
	129	129	129	-	-	-	350	469.0	747.0	986.0									
	-	-	-	-	149	-													
	149	149	149	-	169	-	405	462.5	740.5	979.5									
	169	169	169	-	-	-	465	448.0	726.0	965.0									
189	189	189	-	189	-														
LES250	129	129	129	-	-	-	350	487.5	798.5	1 023.5	487.0	TB1N01	407.5	233	319	174	2xM63x1.5	2 1/2"+1/2"	
	-	-	-	-	149	-						TB1Q01	457.0	299	374	210	2xM63x1.5	-	
	149	149	149	-	169	-	405	481.0	792.0	1 017.0									
	169	169	169	-	-	-	465	462.5	773.5	998.5									
	189	189	189	-	189	-													

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

**Motors with B14 flange**



Motor	Dimensions											Terminal box				
	P	HH	LB	LBL	AC	N	M	S	D	E	Type <sup>1)</sup>	AD	LL	AG	AG1	O
LEI63	90	69.5	179.5	230.5	118.0	60	75	M5	11	23	<b>gk127</b>	124.0	90	90	45.0	M20x1.5/ M25x1.5
											<b>gk030</b>	101.0	75	75	37.5	
											<b>TB1E10</b>	132.0	123	119.5	58.0	
LEI63Z	90	69.5	205.5	256.5	118.0	60	75	M5	11	23						
LEI71	105	63.5	210.0	261.5	139.0	70	85	M6	14	30	<b>gk127</b>	134.0	90	90	45.0	M20x1.5/ M25x1.5
											<b>gk030</b>	111.0	75	75	37.5	
											<b>TB1E10</b>	142.0	123	119.5	58.0	
LEI71Z	105	63.5	226.5	281.5	139.0	70	85	M6	14	30						
LEI71Y	105	63.5	266.5	321.5	139.0	70	85	M6	14	30						

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

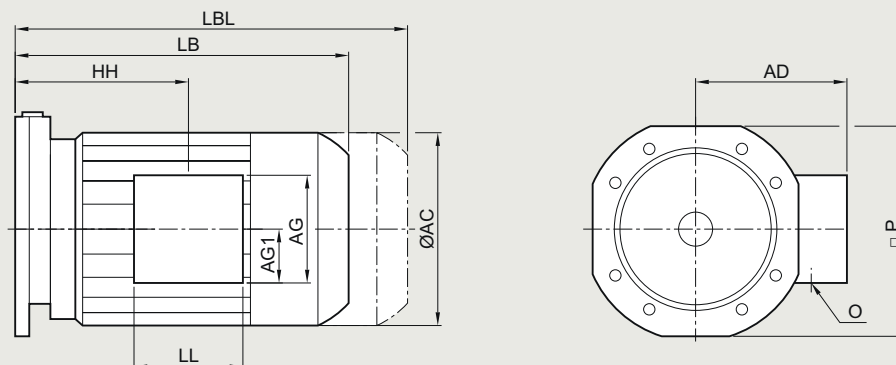
# Motors

## Dimensions



### Explosion-protected motors - motor frame sizes MB71 to MB80Z

#### Overview

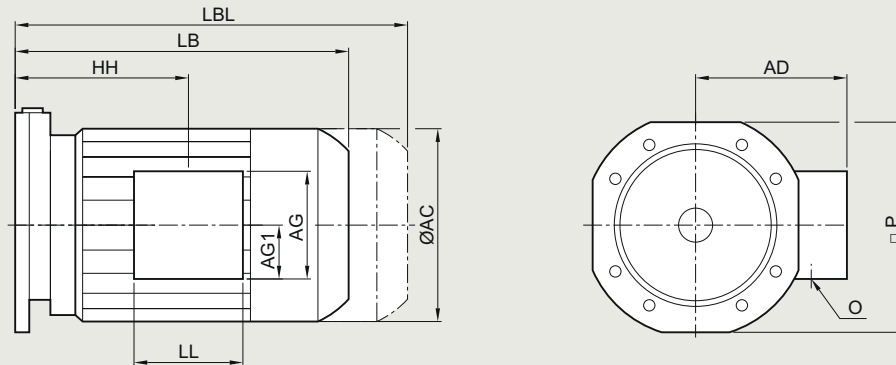


Motor	Gearbox type						Dimensions					AC	Terminal box				
	D/Z	E	FD/FZ	B	K	C	P	HH	LB	LBL	Type <sup>1)</sup>		AD	LL	AG	AG1	O metric
MB71	29	-	29	29	-	29	120	135.0	226.0	281.0	138.8	TB1B00 <sup>2)</sup> TB1B10 <sup>2)</sup> TB1C10 <sup>3)</sup>	111.0	75	75	37.5	M25x1.5/ M16x1.5+ M25x1.5
	39	39	39	39	39	39							134.0	90	90	45.0	
	49	49	49	49	49	49	160	125.5	216.5	271.5			142.0	123	119.5	58.0	
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	79	79	-	-	-	198	123.5	214.5	269.5							
-	-	-	-	89	89												
MB71Z	29	-	29	29	-	29	120	135.0	245.0	300.0	138.8	TB1B00 <sup>2)</sup> TB1B10 <sup>2)</sup> TB1C10 <sup>3)</sup>	111.0	75	75	37.5	M20x1.5/ M25x1.5
	39	39	39	39	39	39							134.0	90	90	45.0	
	49	49	49	49	49	49	160	125.5	235.5	290.5			142.0	123	119.5	58.0	
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	123.5	233.5	288.5							
-	-	-	-	89	89												
MB80	29	-	29	29	-	29	120	170.0	290.0	350.0	156.3	TB1E10 TB1E00	149.2	123	119.5	58.0	M20x1.5/ M25x1.5
	39	39	39	39	39	39							121.0	79	93	50.0	
	49	49	49	49	49	49	160	160.5	280.5	340.5							
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	154.5	274.5	334.5							
-	-	-	-	89	89												
89	89	89	-	-	-	245	141.5	261.5	321.5								
-	-	-	-	109	-												
MB80Z	29	-	29	29	-	29	120	205.0	325.0	385.0	156.3	TB1E10 TB1E00	149.2	123	119.5	58.0	M20x1.5/ M25x1.5
	39	39	39	39	39	39							121.0	79	93	50.0	
	49	49	49	49	49	49	160	195.5	315.5	375.5							
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	189.5	309.5	369.5							
-	-	-	-	89	89												
89	89	89	-	-	-	245	176.5	296.5	356.5								
-	-	-	-	109	-												

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

<sup>2)</sup> Terminal box for Zone 22

<sup>3)</sup> Terminal box for Zone 2


**Explosion-protected motors - motor frame sizes MB90 to MB100Z**
**Overview**


Motor	Gearbox type					Dimensions					Terminal box						
	D/Z	E	FD/FZ	B	K	C	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric
MB90	29	-	29	29	-	29	120	207.5	351.5	421.5	173.8	TB1E10	154.2	123	119.5	58	M20x1.5/ M25x1.5
	39	39	39	39	39	39							TB1E00	126.0	79	93	
	49	49	49	49	49	49	160	198.0	342.0	412.0							
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	192.0	336.0	406.0							
	-	-	-	-	89	89											
	89	89	89	-	-	-	245	179.0	323.0	393.0							
	-	-	-	-	109	-											
-	-	-	-	129	-	300	172.0	316.0	386.0								
109	109	109	-	-	-												
129	129	129	-	-	-	350	165.0	309.0	379.0								
-	-	-	-	149	-												
MB90Z	29	-	29	29	-	29	120	247.5	391.5	461.5	173.8	TB1E10	154.2	123	119.5	58	M20x1.5/ M25x1.5
	39	39	39	39	39	39							TB1E00	126.0	79	93	
	49	49	49	49	49	49	160	238.0	382.0	452.0							
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	232.0	376.0	446.0							
	-	-	-	-	89	89											
	89	89	89	-	-	-	245	219.0	363.0	433.0							
	-	-	-	-	109	-											
-	-	-	-	129	-	300	212.0	356.0	426.0								
109	109	109	-	-	-												
129	129	129	-	-	-	350	205.0	349.0	419.0								
-	-	-	-	149	-												
MB100Z	29	-	29	29	-	29	120	277.5	436.5	515.0		TB1F10	170.5	135	135	67.5	2xM32x1.5
	39	39	39	39	39	39							TB1F00	166.0	112	135	
	49	49	49	49	49	49	160	268.0	427.0	505.5							
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	262.0	421.0	499.5							
	-	-	-	-	89	89											
	89	89	89	-	-	-	245	245.0	404.0	482.5							
	-	-	-	-	109	-											
	-	-	-	-	129	-	300	236.0	395.0	473.5							
	109	109	109	-	-	-											
	129	129	129	-	-	-	350	227.0	386.0	464.5							
-	-	-	-	149	-												
149	149	149	-	169	-	405	225.5	384.5	463.0								

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

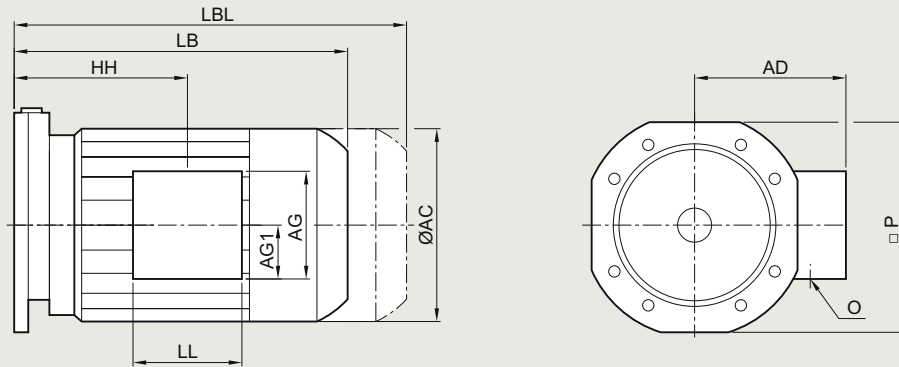
# Motors

## Dimensions



### Explosion-protected motors - motor frame sizes MB112Z to MB160

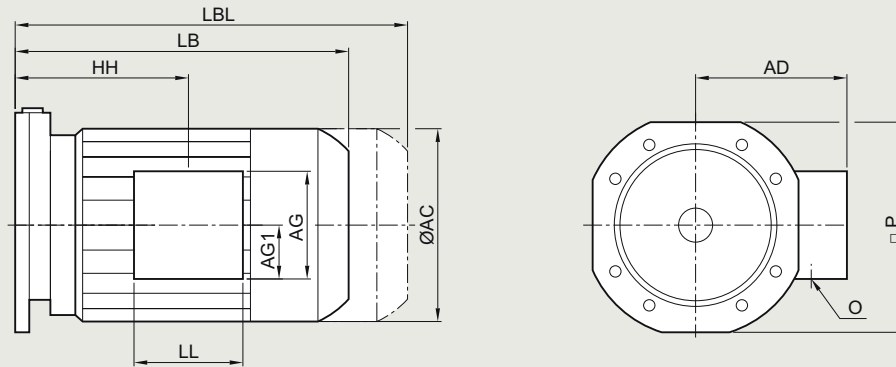
#### Overview



Motor	Gearbox type						Dimensions					Terminal box					
	D/Z	E	FD/FZ	B	K	C	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric
MB112Z	29	-	29	29	-	29	120	269.0	432	505	222.0	TB1F10	181.5	135	135	67.5	2xM32x1.5
	39	39	39	39	39	39							TB1F00	177.0	112	135	
	49	49	49	49	49	49	160										
	59	-	-	-	-	-											
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	253.5	416.5	489.5							
	-	-	-	-	89	89											
	89	89	89	-	-	-	245	236.5	399.5	472.5							
	-	-	-	-	109	-											
	-	-	-	-	129	-	300	227.5	390.5	463.5							
	109	109	109	-	-	-											
	129	129	129	-	-	-	350	218.5	381.5	454.5							
	-	-	-	-	149	-											
	149	149	149	-	169	-	405	217.0	380.0	453.0							
	169	169	169	-	-	-	465	204.5	367.5	440.5							
189	189	189	-	189	-												
MB132Z	49	49	49	49	49	49	160	316.0	502.0	606.5	264.0	TB1H10	207.0	162	162	81.0	2xM32x1.5
	59	-	-	-	-	-							TB1H00	202.0	130	155	
	69	69	69	-	69	69											
	-	-	-	-	79	-											
	79	-	79	-	-	-	198	310.0	496.0	600.5							
	-	-	-	-	89	89											
	89	89	89	-	-	-	245	293.0	479.0	583.5							
	-	-	-	-	109	-											
	-	-	-	-	129	-	300	284.0	470.0	574.5							
	109	109	109	-	-	-											
	129	129	129	-	-	-	350	273.0	459.0	563.5							
	-	-	-	-	149	-											
	149	149	149	-	169	-	405	266.5	452.5	557.0							
	169	169	169	-	-	-	465	253.5	489.5	544.0							
	189	189	189	-	189	-											
	MB160	49	49	49	49	49	49	160	299.5	528.5	644.5	318.0	TB1J10	241.0	180	180	90.0
59		-	-	-	-	-						TB1J00		236.5	145	175	97.5
69		69	69	-	69	69											
-		-	-	-	79	-											
79		-	79	-	-	-	198	293.5	522.5	638.5							
-		-	-	-	89	89											
89		89	89	-	-	-	245	276.5	505.5	621.5							
-		-	-	-	109	-											
-		-	-	-	129	-	300	267.5	496.5	612.5							
109		109	109	-	-	-											
129		129	129	-	-	-	350	256.5	485.5	601.5							
-		-	-	-	149	-											
149		149	149	-	169	-	405	250.0	479.0	595.0							
169		169	169	-	-	-	465	237.0	466.0	582.0							
189		189	189	-	189	-											

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.




**Explosion-protected motors - motor frame sizes MB160Z to MB180Z**
**Overview**


Motor	Gearbox type						Dimensions					Terminal box									
	D/Z	E	FD/FZ	B	K	C	P	HH	LB	LBL	AC	Type <sup>1)</sup>	AD	LL	AG	AG1	O metric				
MB160Z	49	49	49	49	49	49	160	359.5	588.5	704.5	318.0	TB1J10	241.0	180	180	90.0	2xM40x1.5				
	59	-	-	-	-	-						TB1J00						236.5	145	175	97.5
	69	69	69	-	69	69															
	-	-	-	-	79	-	198	353.5	582.5	698.5	318.0	TB1J10	241.0	180	180	90.0	2xM40x1.5				
	79	-	79	-	-	-															
	-	-	-	-	89	89															
	89	89	89	-	-	-	245	336.5	565.5	681.5	318.0	TB1J10	241.0	180	180	90.0	2xM40x1.5				
	-	-	-	-	109	-															
	-	-	-	-	129	-															
	109	109	109	-	-	-	350	316.5	545.5	661.5	318.0	TB1J10	241.0	180	180	90.0	2xM40x1.5				
	129	129	129	-	-	-															
	-	-	-	-	149	-															
149	149	149	-	169	-	405	310.0	539.0	655.0	318.0	TB1J10	241.0	180	180	90.0	2xM40x1.5					
169	169	169	-	-	-																
189	189	189	-	189	-																
MB180	89	89	89	-	-	-	245	336.0	593.5	722.5	352.5	TB1J01	241.0	180	180	90.0	2xM40x1.5				
	-	-	-	-	109	-															
	-	-	-	-	129	-															
	109	109	109	-	-	-	300	327.0	584.5	713.5	352.5	TB1J01	241.0	180	180	90.0	2xM40x1.5				
	129	129	129	-	-	-															
	-	-	-	-	149	-															
	149	149	149	-	169	-	405	309.5	567.0	696.0	352.5	TB1J01	241.0	180	180	90.0	2xM40x1.5				
	169	169	169	-	-	-															
189	189	189	-	189	-																
MB180Z	89	89	89	-	-	-	245	366.0	623.5	752.5	352.5	TB1J01	241.0	180	180	90.0	2xM40x1.5				
	-	-	-	-	109	-															
	-	-	-	-	129	-															
	109	109	109	-	-	-	350	346.0	603.5	732.5	352.5	TB1J01	241.0	180	180	90.0	2xM40x1.5				
	129	129	129	-	-	-															
	-	-	-	-	149	-															
	149	149	149	-	169	-	405	339.5	597.0	726.0	352.5	TB1J01	241.0	180	180	90.0	2xM40x1.5				
	169	169	169	-	-	-															
189	189	189	-	189	-																

<sup>1)</sup> Terminal box type is dependent on the motor options, see page 11/17.

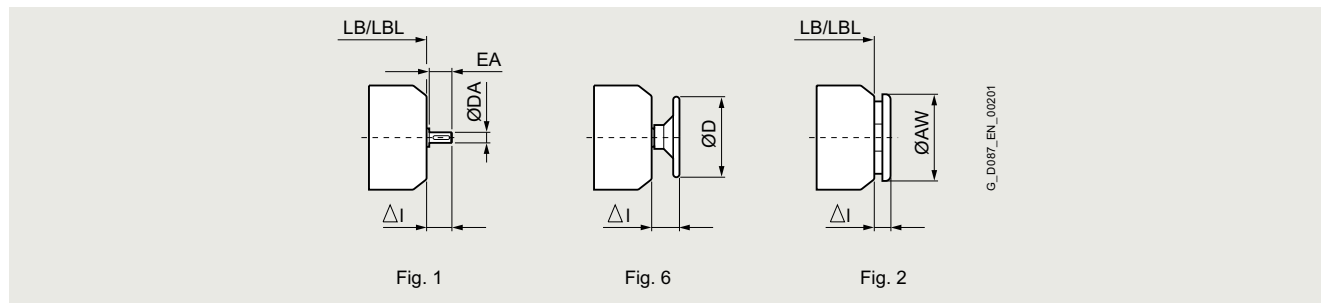
## Motors

### Dimensions

#### Additional lengths

#### Second shaft extension, handwheel, and canopy

More information about the second shaft extension, the handwheel and the canopy can be found in [chapter "Motor options"](#) from page 11/69.

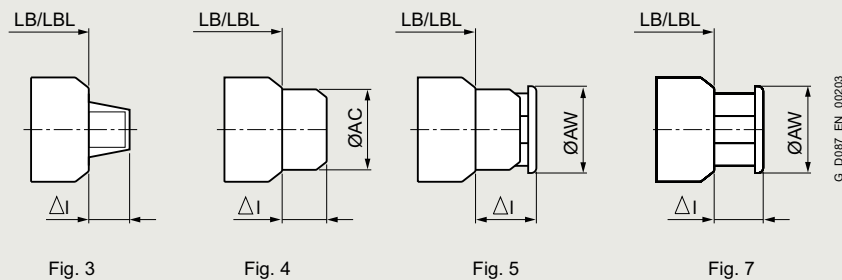


Relevant figure Motor	1 Second shaft extension			6 Handwheel at the second shaft extension		2 Canopy	
	DA	EA	ΔI	D	ΔI	AW	ΔI
LEI63 / LEI63Z <sup>1)</sup>	-	-	-	-	-	124	27
LEI71 <sup>1)</sup>	-	-	-	-	-	124	27
LE63 / LE63Z	-	-	-	-	-	122.8	11.9
LE71 / LE71Z / LE71Y	14	30	34	100	50	137.8	25.9
LE80 / LE80Z	14	30	34	100	50	137.8	25.9
LE90 / LE90Z	19	40	45	160	65	175.8	16
LE100 / LE100Z	19	40	45	160	65	195	40
LE112 / LE112Z	24	50	56	200	77	195	40
LE132 / LE132Z	28	60	68	200	89	260	60
LE160 / LE160Z	38	80	88	315	111	260	60
LES180 / LES180Z	42	110	125	-	-	340	90
LES200 / LES200Z	48	110	130	-	-	340	90
LES225 / LES225Y	55	110	115	-	-	425	96
LES250	60	140	145	-	-	470	96

<sup>1)</sup> Only for worm geared motors S

## Encoder

More information about the encoder can be found in chapter "Motor options" from page 11/46.



G\_D087\_EN\_00203

Relevant figure Motor	3	4			5			7			
	Encoder with protective plate ΔI 1XP	Encoder under cover AC	ΔI 1XP IN 8.5834 IA 8.5883	LL <sub>1</sub> HOG9, HOG10	Encoder under cover with canopy AW	ΔI 1XP	LL <sub>1</sub> HOG9, HOG10	AW	ΔI 1XP	LL <sub>1</sub> HOG9	HOG10
LEI63 / LEI63Z <sup>1)</sup>	70	-	-	-	-	-	-	-	-	-	-
LEI71 <sup>1)</sup>	70	-	-	-	-	-	-	-	-	-	-
LE63 / LE63Z	70	-	-	-	-	-	-	-	-	-	-
LE71 / LE71Z / LE71Y	70	139	92.5	-	138	118.5	-	-	-	-	-
LE80 / LE80Z	70	156.5	92.5	-	138	118.5	-	155	67.5	-	-
LE90 / LE90Z	70	174	92.5	-	176	107	-	155	67.5	-	-
LE100 / LE100Z	-	174	93.5	-	176	108	-	195	83	-	-
LE112 / LE112Z	-	195	95.0	-	194	111	-	195	83	83	-
LE132 / LE132Z	-	195	95.0	-	194	111	-	260	87	87	130
LE160 / LE160Z	-	195	95.0	-	310	111	-	260	87	87	130
LES180 / LES180Z	-	195	95.0	-	310	111	-	340	91	91	131
LES200 / LES200Z	-	195	95.0	-	310	111	-	340	91	91	131
LES225 / LES225Y	-	-	-	-	-	-	-	425	158.2	124.5	158.2
LES250	-	-	-	-	-	-	-	472	158.2	124.5	158.2

<sup>1)</sup> Only for worm geared motors S

# Motors

## Dimensions

### Additional lengths

#### Prepared for encoder mounting

More information about "prepared for encoder mounting" can be found in [chapter "Motor options" on page 11/62](#).

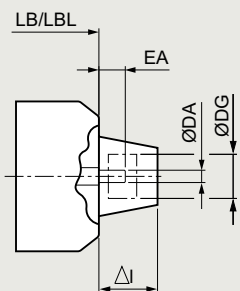


Fig. 1

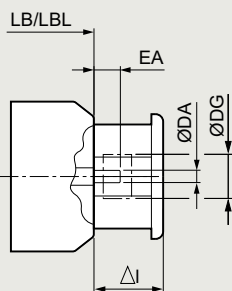


Fig. 2

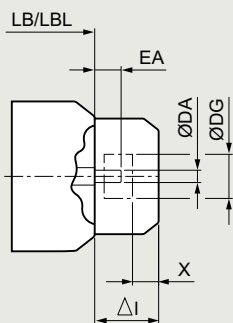


Fig. 3

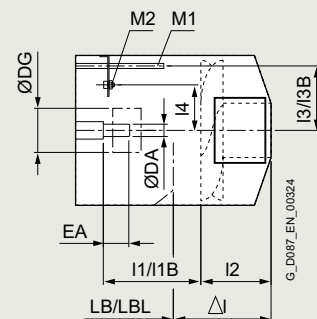


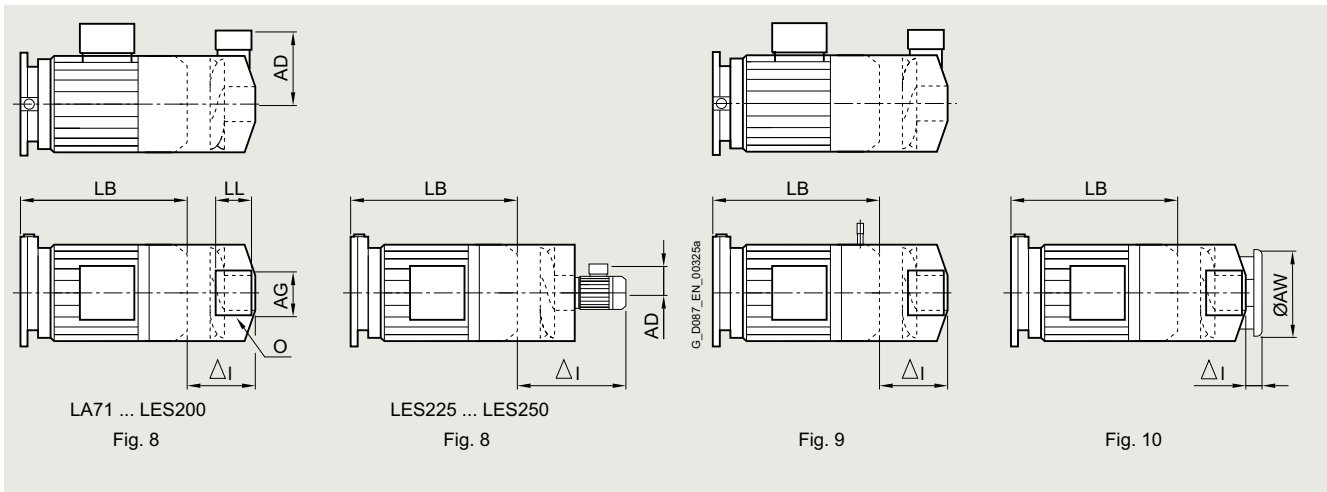
Fig. 4

Relevant figure Motor	1 Encoder prepared with protective plate			2 Encoder prepared under canopy		3 Encoder prepared under cover		4 Encoder prepared + separately driven fan + with / without brake											
	DA	EA	DG max. 60	ΔI	ΔI	ΔI	X	ΔI	I1	I2	I3	Brake	I1B	I3B	I4	M1	M2		
LE63	12	25	max. 60	70	-	-	-	-	-	-	-	-	-	-	-	-	-		
LE63Z																			
LE71		30						92.5	min. 10	229.5	134.5	95	59.0	L4, L8	115.0	59.0	37	M5x120	2xM4
LE71Z																			
LE71Y																			
LE80		30 (25) <sup>1)</sup>			67.5				213.0	121.2	95	56.0	L4, L8	95.5	67.0	M6x130			
LE80Z												L16	95.5	56.0					
												L4, L8	95.5	67.0					
												L16	95.5	56.0					
LE90									213.0	109.4	105	66.0	L8, L16	93.5	75.0	M8x160			
LE90Z												L32	93.5	66.0					
												L8, L16	93.5	75.0					
												L32	93.5	66.0					
LE100		25		-	83		93.5		218.5	115.3	105	66.0	L16, L32	97.0	85.0	M8x160			
LE100Z												L60	97.0	72.5					
												L16, L32	97.0	85.0					
LE112							95.0		206.0	115.5	105	72.5	L32, L60	93.5	95.0	M8x160			
LE112Z																			
LE132					87				258.5	132.0	127	98.0	L80	97.5	116.0				
LE132Z													L150	97.5	98.0				
													L80	97.5	116.0	M8x170			
LE160									285.0	147.0	152	115.0	L150, L260	93.0	141.0				
LE160Z													L150, L260	93.0	141.0				
LES180					91				274.0	162.0	151.5	157.0	L260	95.0	157.0	M10x210			
LES180Z																			
LES200									293.0	136.5	151.5	175.0	L260, L400	96.0	175.0				
LES200Z																			

<sup>1)</sup> Value in parenthesis applies to motor with separately driven fan and brake

**Separately driven fan, encoder, and canopy**

More information about the separately driven fan can be found in [chapter "Motor options" on page 11/12.](#)



Relevant figure	8 Separately driven fan					9 Brake + separately driven fan	9 Encoder + separately driven fan		9 Brake + encoder + separately driven fan			10 Canopy for separately driven fan		
	Motor	ΔI	AD	LL	AG	O	ΔI	ΔI 1XP	LL, HOG9, HOG10	ΔI 1XP	LL, HOG9	HOG10	ΔI	AW
LE63 / LE63Z	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LE71 / LE71Z / LE71Y	110.5	124	107	105	M16x1.5	134.5	229.5	-	229.5	-	-	37	150	
LE80 / LE80Z	89	134	107	105	M16x1.5	118	213	-	213	-	-	40	170	
LE90 / LE90Z	85	143	107	105	M16x1.5	120	213	-	213	-	-	30	188	
LE100 / LE100Z	81.5	152	107	105	M16x1.5	121.5	218.5	-	218.5	-	-	28	210	
LE112 / LE112Z	81	164	107	105	M16x1.5	113	206	-	206	-	-	33	249	
LE132 / LE132Z	114.5	185	107	105	M16x1.5	164.5	258.5	258.5	258.5	258.5	302.5	25	300	
LE160 / LE160Z	131	211	107	105	M16x1.5	191	285	285	285	285	329	32	338	
LES180 / LES180Z	132	211	107	105	M16x1.5	199	274	274	274	274	319	32	338	
LES200 / LES200Z	141	211	107	105	M16x1.5	233	293	293	293	293	337	32	338	
LES225 / LES225Y	227.5	101	-	-	M25x1.5 + M16x1.5	-	-	786.5	-	-	-	258	470	
LES250	232.5	101	-	-	M25x1.5 + M16x1.5	-	-	826.5	-	-	-	256	525	
<b>Explosion-protected motors</b>														
MB100 / MB100Z	81.5	152	107	105				-	-	-	-	28	210	
MB112 / MB112Z	81.0	164	107	105				-	-	-	-	33	249	
MB132 / MB132Z	114.5	185	107	105				-	-	-	-	25	300	
MB160 / MB160Z	131	211	107	105				-	-	-	-	32	338	
MB180 / MB180Z	132	211	107	105				-	-	-	-	32	338	

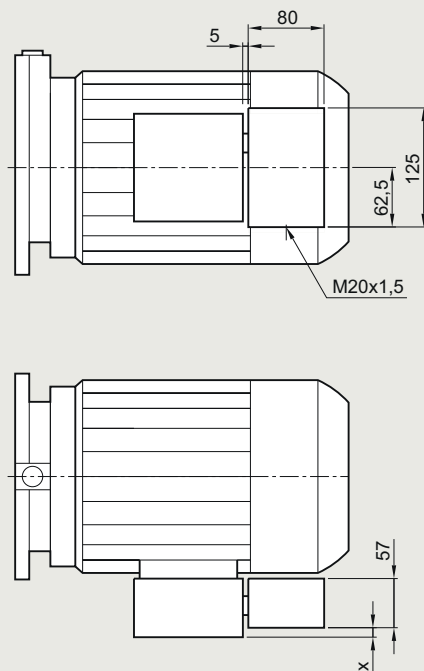
## Motors

### Dimensions

#### Application terminal box

#### Overview

More information about the application terminal box can be found in [chapter "Motor options" on page 11/66](#).



Motor	x	Terminal box type
LE63	2.5 (3.5)	gk127 (TB1E10)
LE71	2.5 (3.5)	
LE80	3.5	TB1E10
LE90	3.5	
LE100	7.0	TB1F10
LE112	7.0	
LE132	11.5	TB1H10
LE160	19.8	TB1J10
LES180	38.0	TB1K01
LES200	39.0	TB1L01

( ) Dimension or terminal box type in parenthesis for terminal box with 9 terminals (YY/Y connection)

Overview

More information about the motor plug can be found in chapter "Motor options" on page 11/19.

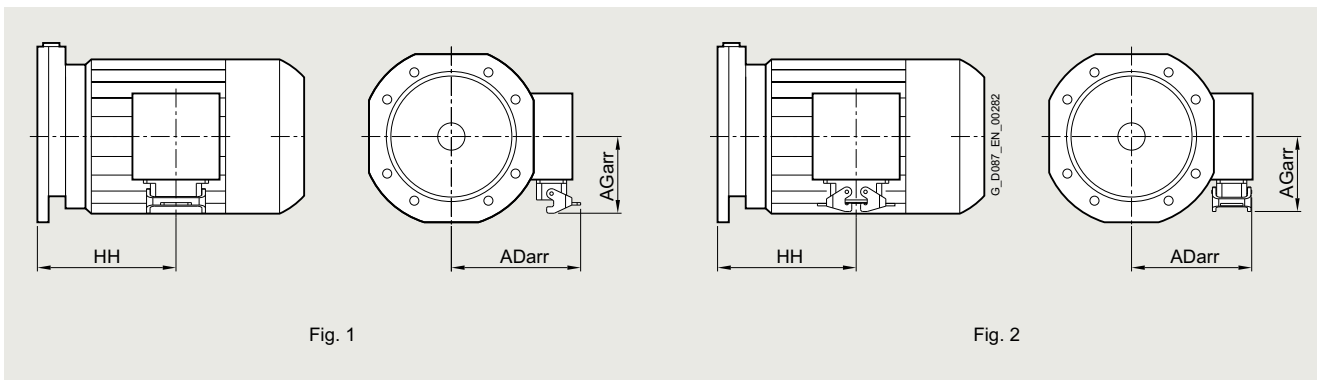


Fig. 1

Fig. 2

Relevant figure							Fig. 1			Fig. 2		
Motor	Gearbox type						HAN 10E motor plug with one bracket			HAN 10E motor plug with two brackets		
	D/Z	FD/FZ	B	K	C	EHB	HH	ADarr	AGarr	HH	ADarr	AGarr
LE63	19	-	19	-	-	-	61.5	132	92.0	61.5	127.0	89.5
	39	29, 39	29, 39	39	29, 39	BH29, BH39	95.0			95.0		
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	85.5			85.5		
LE63Z	19	-	19	-	-	-	87.5	132	92.0	87.5	127.0	89.5
	39	29, 39	29, 39	39	29, 39	BH29, BH39	121.0			121.0		
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	111.5			111.5		
LE71	19	-	19	-	-	-	93.5	142.0	92.0	93.5	127.0	89.5
LE71Z	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	135.0			135.0		
LE71Y	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	125.5			125.5		
	79	79	-	89	89	-	123.5			123.5		
LE80	19	-	19	-	-	-	120.0	155.0	106.0	120.0	139.5	103.5
	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	170.0			170.0		
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	160.5			160.5		
	79	79	-	89	89	-	154.5			154.5		
	89	89	-	109	-	-	141.5			141.5		
LE80Z	19	-	19	-	-	-	155.0	155.0	106.0	155.0	139.5	103.5
	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	205.0			205.0		
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	195.5			195.5		
	79	79	-	89	89	-	189.5			189.5		
	89	89	-	109	-	-	176.5			176.5		
LE90	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	207.5	160.0	106.0	207.5	144.5	103.5
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	198.0			198.0		
	79	79	-	89	89	-	192.0			192.0		
	89	89	-	109	-	-	179.0			179.0		
	109	109	-	129	-	-	172.0			172.0		
	129	129	-	149	-	-	165.0			165.0		
LE90Z	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	247.5	160.0	106.0	247.5	144.5	103.5
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	238.0			238.0		
	79	79	-	89	89	-	232.0			232.0		
	89	89	-	109	-	-	219.0			219.0		
	109	109	-	129	-	-	212.0			212.0		
	129	129	-	149	-	-	205.0			205.0		
LE100	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	242.5	179.5	115.5	242.5	164.0	113.0
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	233.0			233.0		
	79	79	-	89	89	-	227.0			227.0		
	89	89	-	109	-	-	210.0			210.0		
	109	109	-	129	-	-	201.0			201.0		
	129	129	-	149	-	-	192.0			192.0		
	149	149	-	169	-	-	190.5			190.5		

# Motors

## Dimensions

### HAN 10E motor plug

#### Overview

More information about the motor plug can be found in chapter "Motor options" on page 11/19.

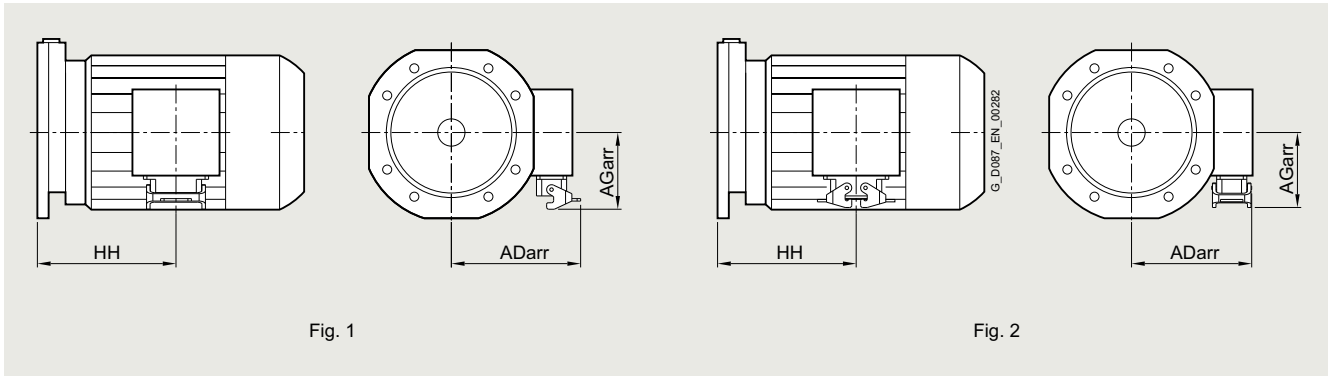


Fig. 1

Fig. 2

Relevant figure							Fig. 1			Fig. 2		
Motor	Gearbox type						HAN 10E motor plug with one bracket			HAN 10E motor plug with two brackets		
	D/Z	FD/FZ	B	K	C	EHB	HH	ADarr	AGarr	HH	ADarr	AGarr
LE100Z	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	277.5	179.5	115.5	277.5	164.0	113.0
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	268.0					
	79	79	-	89	89	-	262.0					
	89	89	-	109	-	-	245.0					
	109	109	-	129	-	-	236.0					
	129	129	-	149	-	-	227.0					
	149	149	-	169	-	-	225.5					
LE112	29, 39	29, 39	29, 39	39	29, 39	-	244.0	190.5	115.5	244.0	175.0	113.0
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	234.5					
	79	79	-	89	89	-	228.5					
	89	89	-	109	-	-	211.5					
	109	109	-	129	-	-	202.5					
	129	129	-	149	-	-	193.5					
	149	149	-	169	-	-	192.0					
169, 189	169, 189	-	189	-	-	179.5						
LE112Z	29, 39	29, 39	29, 39	39	29, 39	-	269.0	190.5	115.5	269.0	1175.0	113.0
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	234.5					
	79	79	-	89	89	-	253.5					
	89	89	-	109	-	-	236.5					
	-	-	-	129	-	-	227.5					
	129	129	-	149	-	-	218.5					
	149	149	-	169	-	-	217.0					
169, 189	169, 189	-	189	-	-	204.5						
LE132	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	266.0	209.5	138.0	266.0	223.0	135.5
	79	79	-	89	89	-	260.0					
	89	89	-	109	-	-	243.0					
	109	109	-	129	-	-	234.0					
	129	129	-	149	-	-	223.0					
	149	149	-	169	-	-	216.5					
	169, 189	169, 189	-	189	-	-	203.5					
LE132Z	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	316.0	209.5	138.0	316.0	223.0	135.5
	79	79	-	89	89	-	310.0					
	89	89	-	109	-	-	293.0					
	109	109	-	129	-	-	284.0					
	129	129	-	149	-	-	273.0					
	149	149	-	169	-	-	266.5					
	169, 189	169, 189	-	189	-	-	253.5					



## Overview

More information about the motor plug can be found in chapter "Motor options" on page 11/20.

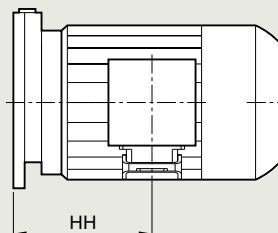


Fig. 1

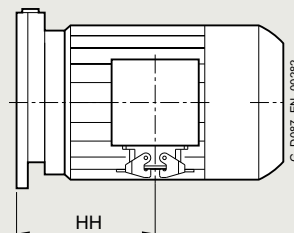
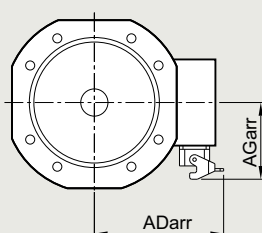
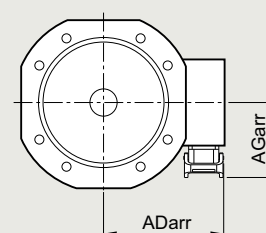


Fig. 2



Relevant figure							Fig. 1			Fig. 2		
Motor	Gearbox type						K4/4 motor plug with one bracket			K4/4 motor plug with two brackets		
	D/Z	FD/FZ	B	K	C	EHB	HH	ADarr	AGarr	HH	ADarr	AGarr
LE112	29, 39	29, 39	29, 39	39	29, 39	-	244.0	190.5	115.5	244.0	175.0	113.0
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	234.5					
	79	79	-	89	89	-	228.5					
	89	89	-	109	-	-	211.5					
	109	109	-	129	-	-	202.5					
	129	129	-	149	-	-	193.5					
	149	149	-	169	-	-	192.0					
169, 189	169, 189	-	189	-	-	179.5						
LE112Z	29, 39	29, 39	29, 39	39	29, 39	-	269.0	190.5	115.5	269.0	1175.0	113.0
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	234.5					
	79	79	-	89	89	-	253.5					
	89	89	-	109	-	-	236.5					
	-	-	-	129	-	-	227.5					
	129	129	-	149	-	-	218.5					
	149	149	-	169	-	-	217.0					
169, 189	169, 189	-	189	-	-	204.5						
LE132	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	266.0	209.5	138.0	266.0	223.0	135.5
	79	79	-	89	89	-	260.0					
	89	89	-	109	-	-	243.0					
	109	109	-	129	-	-	234.0					
	129	129	-	149	-	-	223.0					
	149	149	-	169	-	-	216.5					
	169, 189	169, 189	-	189	-	-	203.5					
LE132Z	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49 ... 79	316.0	209.5	138.0	316.0	223.0	135.5
	79	79	-	89	89	-	310.0					
	89	89	-	109	-	-	293.0					
	109	109	-	129	-	-	284.0					
	129	129	-	149	-	-	273.0					
	149	149	-	169	-	-	266.5					
	169, 189	169, 189	-	189	-	-	253.5					
LE160	49 ... 69	49, 69	49	49 ... 79	49, 69	-	299.5	138.5	138.0	299.5	123.0	135.5
	79	79	-	89	89	-	293.5					
	89	89	-	109	-	-	276.5					
	109	109	-	129	-	-	267.5					
	129	129	-	149	-	-	256.5					
	149	149	-	169	-	-	250.0					
	169, 189	169, 189	-	189	-	-	237.0					
LE160Z	49 ... 69	49, 69	49	49 ... 79	49, 69	-	359.5	138.5	138.0	359.5	123.0	135.5
	79	79	-	89	89	-	353.5					
	89	89	-	109	-	-	336.5					
	109	109	-	129	-	-	327.5					
	129	129	-	149	-	-	316.5					
	149	149	-	169	-	-	310.0					
	169, 189	169, 189	-	189	-	-	297.0					

# Motors

## Dimensions

### HAN K4/4 motor plug

#### Overview

More information about the motor plug can be found in [chapter "Motor options" on page 11/20](#).

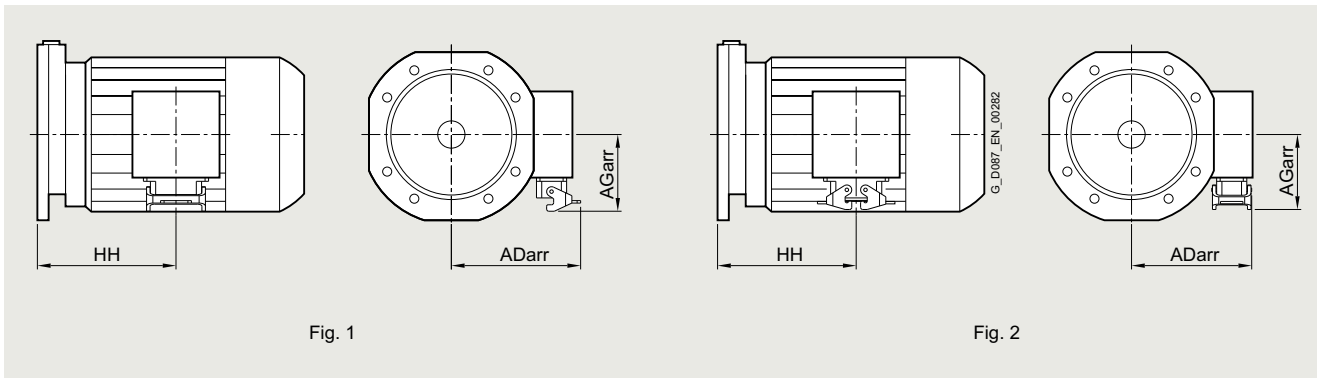


Fig. 1

Fig. 2

Relevant figure						Fig. 1			Fig. 2		
Motor	Gearbox type					K4/4 motor plug with one bracket			K4/4 motor plug with two brackets		
	D/Z	FD/FZ	B	K	C	HH	ADarr	AGarr	HH	ADarr	AGarr
<b>LES180</b>	89	89	-	109	-	336.0	278.5	201.0	336.0	263.0	198.5
	109	109	-	129	-	327.0			327.0		
	129	129	-	149	-	316.0			316.0		
	149	149	-	169	-	309.5			309.5		
	169, 189	169, 189	-	189	-	296.0			296.0		
<b>LES180Z</b>	89	89	-	109	-	366.0	278.5	201.0	366.0	263.0	198.5
	-	-	-	129	-	357.0			357.0		
	129	129	-	149	-	346.0			346.0		
	149	149	-	169	-	339.5			339.5		
	169, 189	169, 189	-	189	-	326.0			326.0		
<b>LES200</b>	109	109	-	129	-	391.5	302.5	201.0	391.5	287.0	198.5
	129	129	-	149	-	380.5			380.5		
	149	149	-	169	-	374.0			374.0		
	169, 189	169, 189	-	189	-	360.5			360.5		
	109	109	-	129	-	300.0			302.5		
129	129	-	149	-	350.0	350.0					
149	149	-	169	-	405.0	405.0					
169, 189	169, 189	-	189	-	466.0	466.0					

## Overview

More information about the motor plug can be found in chapter "Motor options" from page 11/22 to page 11/26.

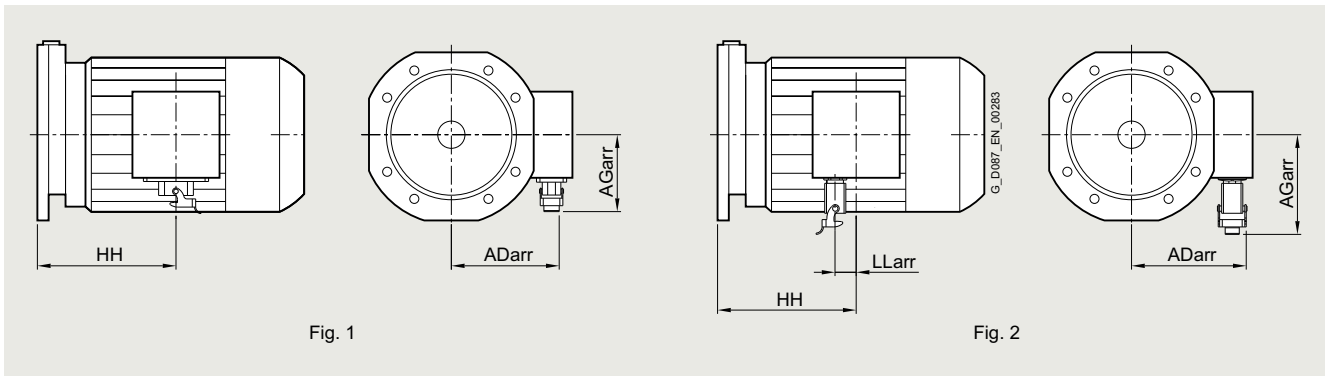


Fig. 1

Fig. 2

Relevant figure							Fig. 1			Fig. 2			
Motor	Gearbox type						HAN Q8 motor plug			HAN Q12 motor plug			
	D/Z	FD/FZ	B	K	C	EHB	HH	ADarr	AGarr	HH	ADarr	AGarr	LLarr
LE63	19	-	19	-	-	-	61.5	110.0	87.5	61.5	104.0	109.0	18
	39	29, 39	29, 39	39	29, 39	BH29, BH39	95.0						
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	85.5						
LE63Z	19	-	19	-	-	-	87.5	110.0	87.5	87.5	104.0	109.0	
	39	29, 39	29, 39	39	29, 39	BH29, BH39	121.0						
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	111.5						
LE71	19	-	19	-	-	-	93.5	120.0	87.5	93.5	114.0	109.0	
LE71Z	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	135.0						
LE71Y	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	125.5						
LE80	79	79	-	89	89	-	123.5			123.5			
	19	-	19	-	-	-	120.0	134.0	107.0	120.0	128.0	122.0	
	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	170.0						
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	160.5						
	79	79	-	89	89	-	154.5						
89	89	-	109	-	-	141.5							
LE80Z	19	-	19	-	-	-	155.0	134.0	107.0	155.0	233.0	122.0	
	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	205.0						
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	195.5						
	79	79	-	89	89	-	189.5						
	89	89	-	109	-	-	176.5						
LE90	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	207.5	139.0	107.0	207.5	133.0	122.0	
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	198.0						
	79	79	-	89	89	-	192.0						
	89	89	-	109	-	-	179.0						
	109	109	-	129	-	-	172.0						
	129	129	-	149	-	-	165.0						
LE90Z	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	247.5	139.0	107.0	247.5	152.5	122.0	
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	238.0						
	79	79	-	89	89	-	232.0						
	89	89	-	109	-	-	219.0						
	109	109	-	129	-	-	212.0						
	129	129	-	149	-	-	205.0						
LE100	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	242.5	158.5	116.5	-	-	-	-
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	233.0						
	79	79	-	89	89	-	227.0						
	89	89	-	109	-	-	210.0						
	109	109	-	129	-	-	201.0						
	129	129	-	149	-	-	192.0						
	149	149	-	169	-	-	190.5						

# Motors

## HAN Q8 and HAN Q12 motor plugs

### Overview

More information about the motor plug can be found in chapter "Motor options" from page 11/22 to page 11/26.

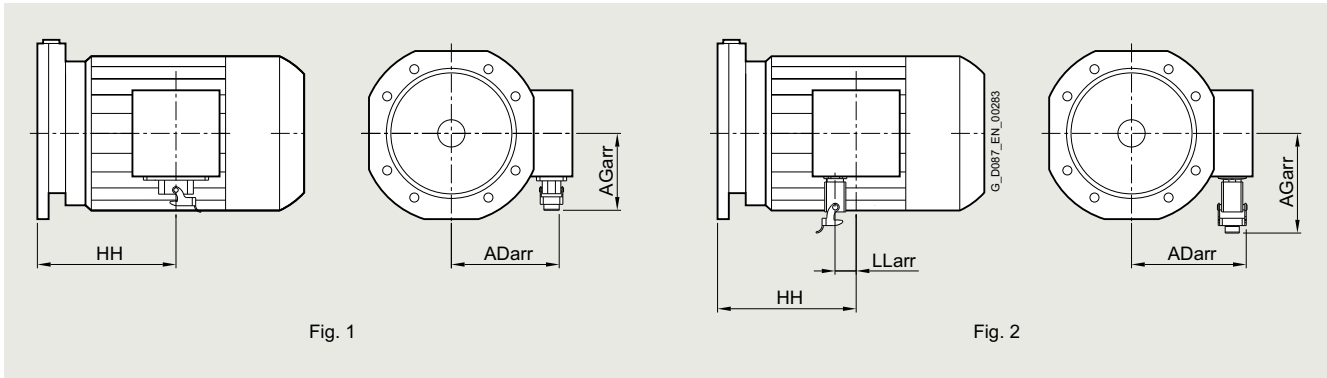
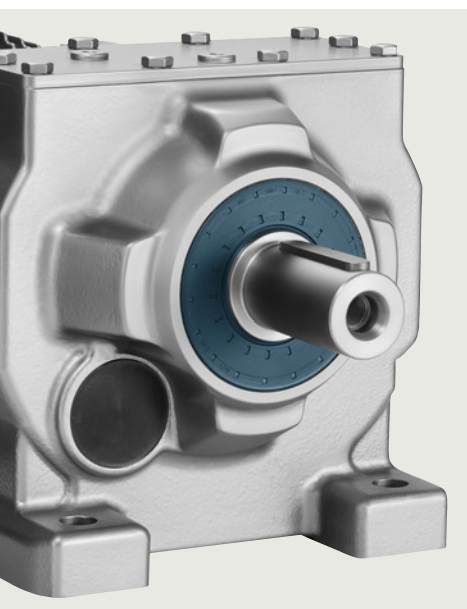


Fig. 1

Fig. 2

Relevant figure							Fig. 1			Fig. 2			
Motor	Gearbox type						HAN Q8 motor plug			HAN Q12 motor plug			
	D/Z	FD/FZ	B	K	C	EHB	HH	ADarr	AGarr	HH	ADarr	AGarr	LLarr
<b>LE100Z</b>	29, 39	29, 39	29, 39	39	29, 39	BH29, BH39	277.5	158.5	116.5	-	-	-	-
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	268.0						
	79	79	-	89	89	-	262.0						
	89	89	-	109	-	-	245.0						
	109	109	-	129	-	-	236.0						
	129	129	-	149	-	-	227.0						
<b>LE112</b>	149	149	-	169	-	-	225.5	169.5	116.5	-	-	-	-
	29, 39	29, 39	29, 39	39	29, 39	-	244.0						
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	234.5						
	79	79	-	89	89	-	228.5						
	89	89	-	109	-	-	211.5						
	109	109	-	129	-	-	202.5						
<b>LE112Z</b>	129	129	-	149	-	-	193.5	169.5	116.5	-	-	-	-
	149	149	-	169	-	-	192.0						
	169, 189	169, 189	-	189	-	-	179.5						
	29, 39	29, 39	29, 39	39	29, 39	-	269.0						
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	234.5						
	79	79	-	89	89	-	253.5						
<b>LE132</b>	89	89	-	109	-	-	236.5	188.5	130.0	-	-	-	-
	-	-	-	129	-	-	227.5						
	129	129	-	149	-	-	218.5						
	149	149	-	169	-	-	217.0						
	169, 189	169, 189	-	189	-	-	204.5						
	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	266.0						
<b>LE132Z</b>	79	79	-	89	89	-	260.0	188.5	130.0	-	-	-	-
	89	89	-	109	-	-	243.0						
	109	109	-	129	-	-	234.0						
	129	129	-	149	-	-	223.0						
	149	149	-	169	-	-	216.5						
	169, 189	169, 189	-	189	-	-	203.5						
<b>LE132Z</b>	49 ... 69	49, 69	49	49 ... 79	49, 69	KH49...79	316.0	188.5	130.0	-	-	-	-
	79	79	-	89	89	-	310.0						
	89	89	-	109	-	-	293.0						
	109	109	-	129	-	-	284.0						
	129	129	-	149	-	-	273.0						
	149	149	-	169	-	-	266.5						
169, 189	169, 189	-	189	-	-	253.5							

## Gearbox options



<b>10/2</b>	<b>Mounting position</b>		<b>Mounting</b>
10/2	Overview		<u>Shaft designs</u>
	<u>Helical gearboxes Z and D</u>	10/48	Selection and ordering data
10/4	Foot-mounted design	10/52	SIMOLOC assembly system
10/6	Foot/flange-mounted design	10/52	Hollow shaft cover
10/8	Flange-mounted design or with housing flange		
	<u>Helical gearboxes E</u>	<b>10/53</b>	<b>Output shaft bearings</b>
10/11	Foot-mounted design	10/53	Reinforced output shaft bearings
10/12	Flange-mounted design or with housing flange		
	<u>Parallel shaft gearboxes</u>	<b>10/54</b>	<b>Output side accessories</b>
10/13	Shaft-mounted design		<u>Accessories for VLplus reinforced bearing systems</u>
10/15	Flange-mounted design or with housing flange	10/54	Drywell
	<u>Bevel gearboxes B</u>	10/54	Grease cartridge
10/19	Foot-mounted design		
10/21	Housing flange design and flange-mounted design	<b>10/55</b>	<b>Electric-monorail gearboxes</b>
10/23	Shaft-mounted design		<u>Clutch</u>
	<u>Bevel gearboxes K</u>	10/55	Clutch for light-load applications
10/25	Foot-mounted design	10/55	Clutch for heavy-load applications
10/26	Housing flange design and flange-mounted design		
10/27	Shaft-mounted design	<b>10/56</b>	<b>Lubrication and sealing</b>
	<u>Helical worm gearboxes</u>		<u>Overview</u>
10/28	Shaft-mounted design	10/56	• Lubrication
10/31	Housing flange design and flange-mounted design	10/56	• Oil quantities
10/34	Foot-mounted design	10/56	• Sealing
	<u>Worm gearboxes</u>	10/56	Selection of lubricant
10/37	Foot-mounted, flange-mounted, shaft-mounted and housing flange designs	10/57	Roller bearing greases for gearboxes and motors
	<u>Electric-monorail geared motors for light-load applications</u>	10/58	Sealing system
10/38	Foot-mounted design and housing flange design		
	<u>Electric-monorail geared motors for heavy-load applications</u>	<b>10/59</b>	<b>Venting and oil level control</b>
10/39	Flange-mounted design		<u>Venting</u>
10/40	<u>Tandem gearboxes</u>	10/59	Overview
10/41	<u>Special mounting positions</u>	10/62	Pressure breather valve
		10/63	Oil expansion unit
			<u>Oil level control</u>
		10/65	Oil level checking screw
		10/65	Oil drain
		10/66	Pt100 electrical oil temperature monitoring
		10/67	Electrical oil level monitoring system
<b>10/42</b>	<b>Mounting</b>		
	<u>Mounting types</u>	<b>10/68</b>	<b>Special version</b>
10/42	Overview		<u>Overview</u>
10/43	Flange-mounted designs	10/68	• Reduced-backlash version
10/45	• Water drain holes at the output flange	10/68	• Shrink-glued output gearwheel
10/46	• Output flange seal		
10/46	Parallel shaft gearboxes F.AD. in a shaft-mounted design		
10/46	Bevel gearboxes KAD. in a shaft-mounted design		
10/46	Bevel gearboxes BAD. in a shaft-mounted design		
10/47	Helical worm gearboxes CAD. in a shaft-mounted design		
10/48	Worm gearboxes SAD in a shaft-mounted design		

# Gearbox options

## Mounting position

### Overview

The mounting position must be specified when you place your order to ensure that the gearbox is supplied with the correct quantity of oil.

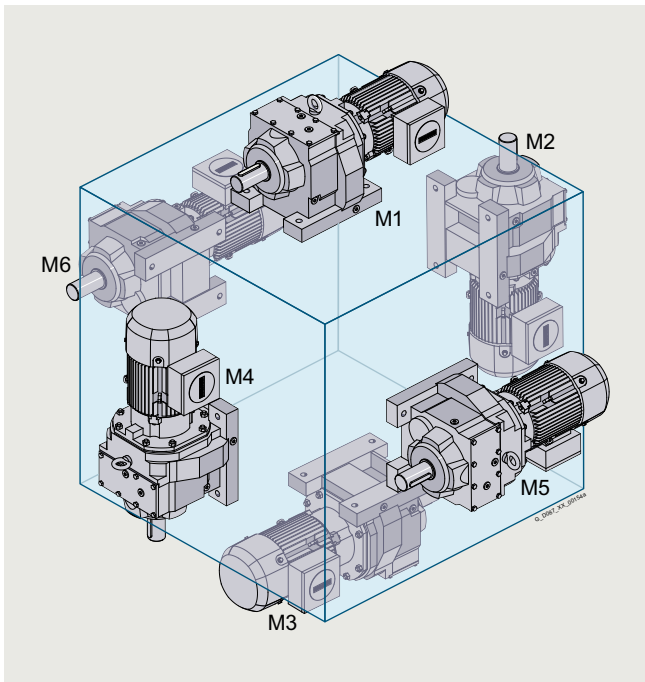


Fig. 10/1 Helical geared motors

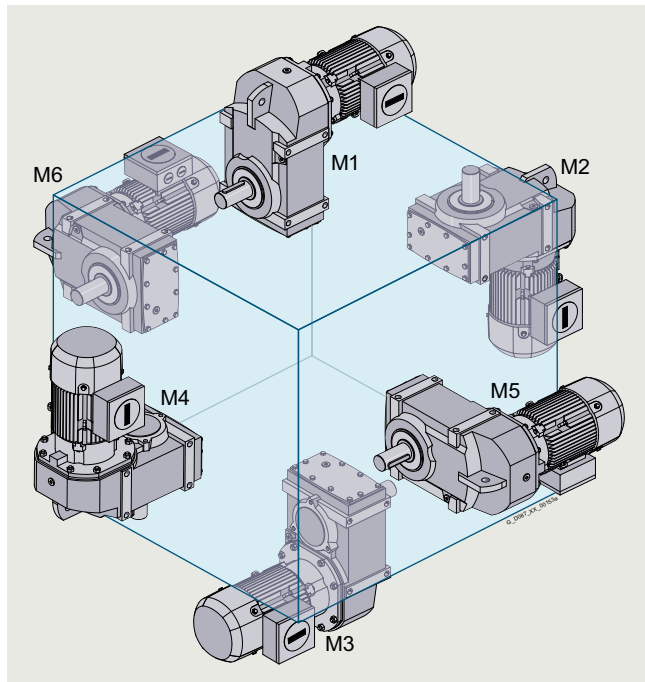


Fig. 10/2 Parallel shaft geared motors

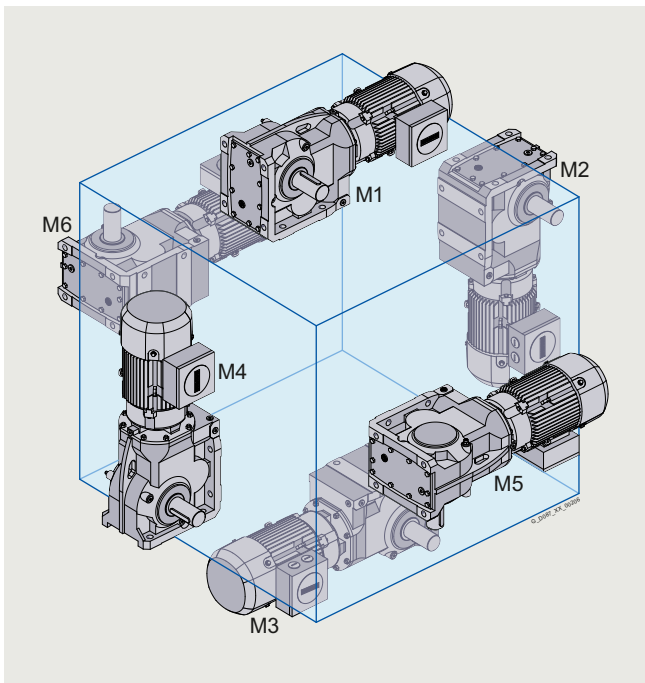


Fig. 10/3 Bevel geared motors

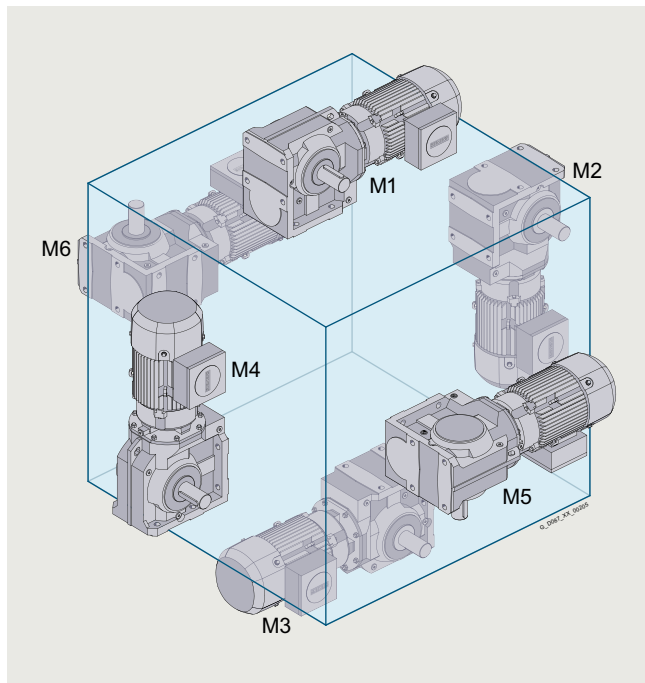


Fig. 10/4 Helical worm geared motors

10

### Overview

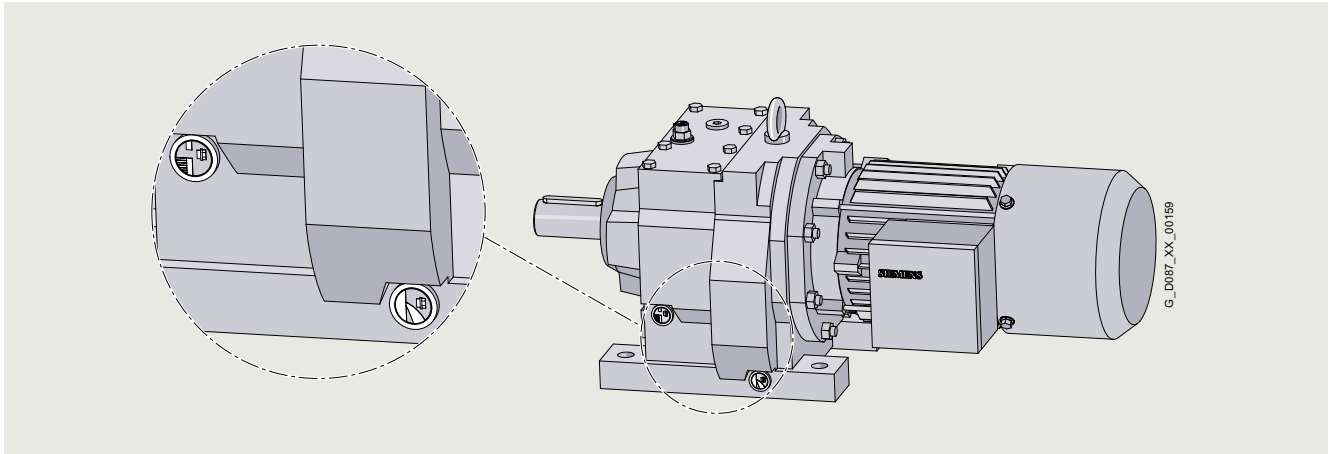








Fig. 10/5 Dimensional drawing from Siemens Product Configurator with details

An explanation of the symbols used to represent mounting positions can be found on the following pages

#### Symbol

##### Oil valves

	Venting
	Oil drain
	Oil level checking screw
	Oil dipstick, optional
	Venting main gearbox (applies only to tandem geared motors)
	Oil drain main gearbox (applies only to tandem geared motors)

#### Supplements

*	On opposite side
A, B	Output side A, output side B
①	Oil level checking screw not possible for tandem geared motors
②	2-stage gearboxes
③	3-stage gearboxes
①	Clutch engaged (only for electric-monorail geared motors)
②	Clutch disengaged (only for electric-monorail geared motors)
③	Clutch disengaged (only for electric-monorail geared motors)
① ... ④	Terminal box position

#### Note:

The [Siemens Product Configurator](#) can be used to configure SIMOGEAR geared motors.

The Siemens Product Configurator can be used on the internet without requiring any installation.

The Siemens Product Configurator can be found in the Industry Mall at the following address:  
[www.siemens.com/spc](http://www.siemens.com/spc)

For the selected mounting position, the 3D images show the exact position of the oil valves.

# Gearbox options

## Mounting position

### Helical gearboxes Z and D

#### Foot-mounted design

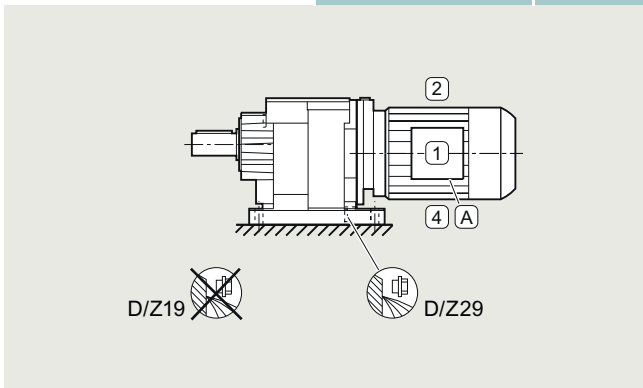
#### Helical gearboxes Z and D, sizes 19 and 29

##### Oil valves

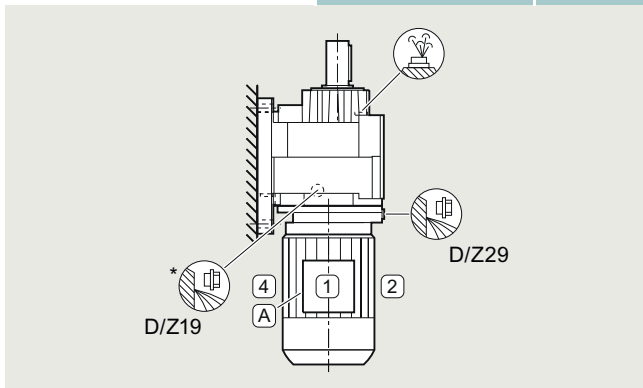
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

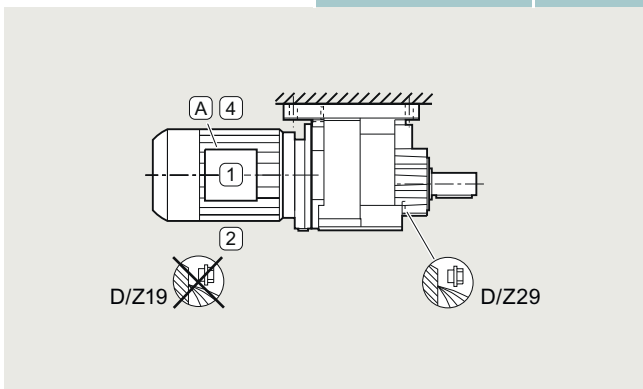
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D01</b>



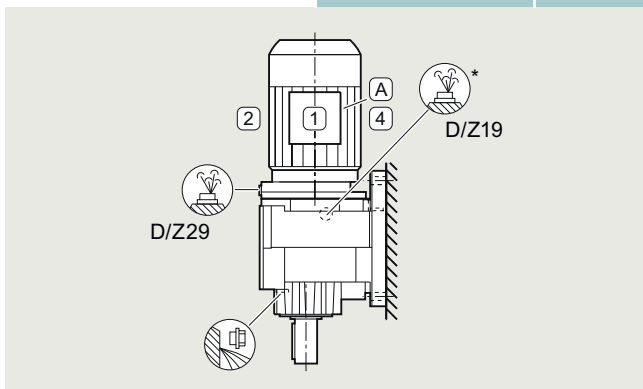
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D02</b>



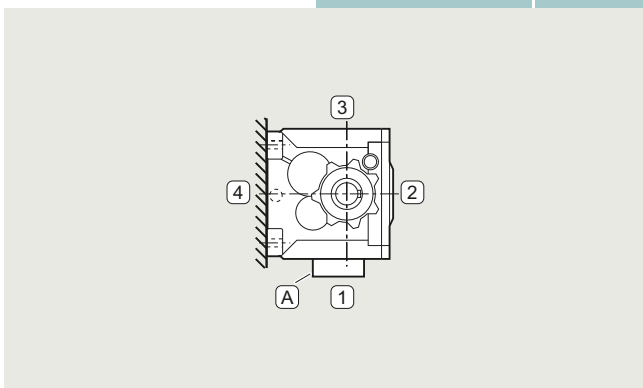
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D03</b>



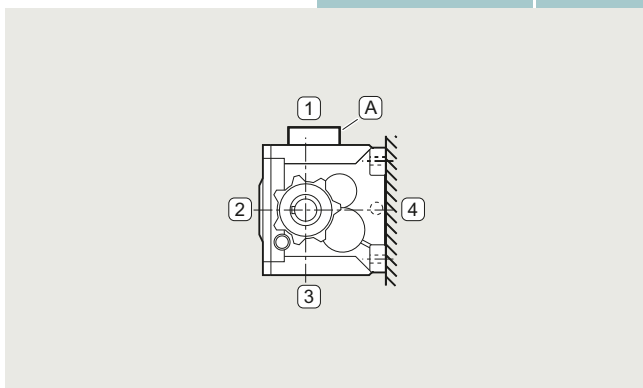
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D06</b>



10



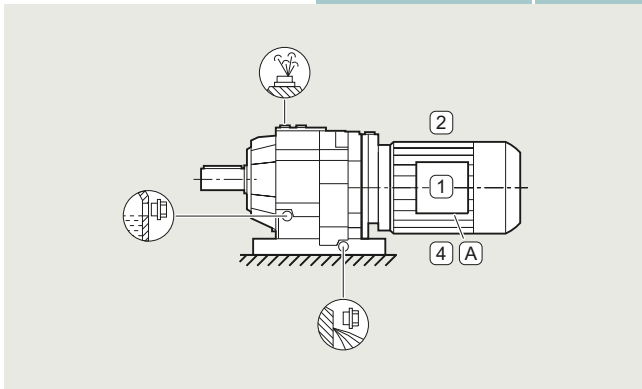
**Foot-mounted design**

**Helical gearboxes Z and D, sizes 39 to 189**

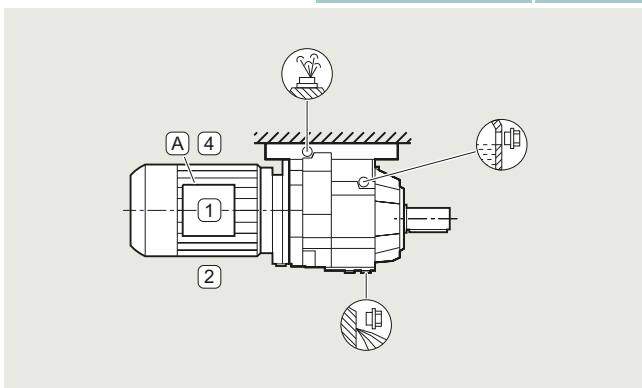
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

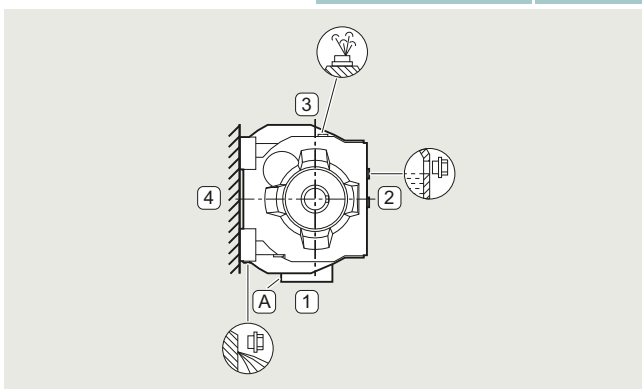
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D01</b>



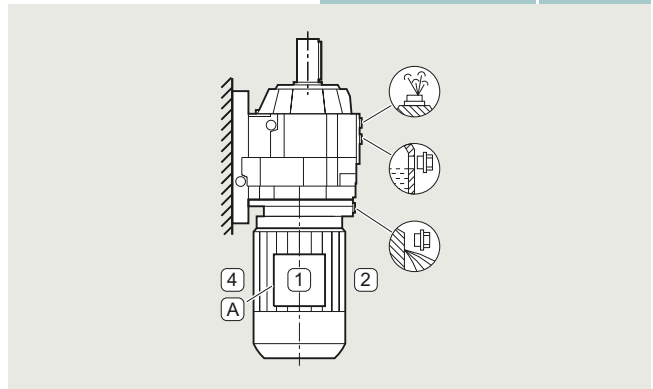
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D03</b>



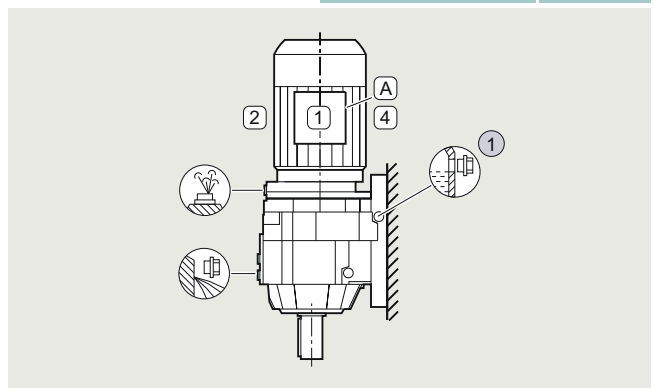
Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D05</b>



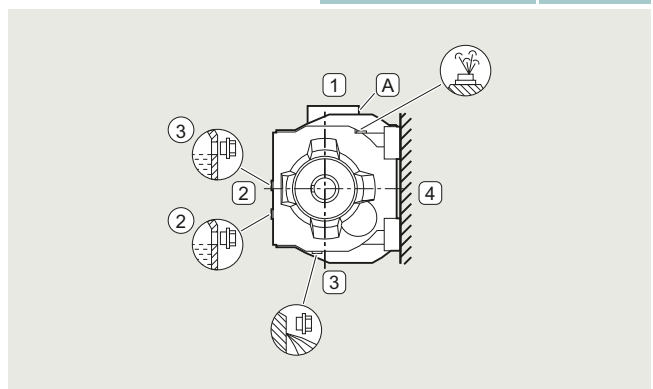
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D02</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ31... - ..... - A...-Z 2KJ32... - ..... - A...-Z	<b>D06</b>



# Gearbox options

## Mounting position

### Helical gearboxes Z and D

#### Foot/flange-mounted design

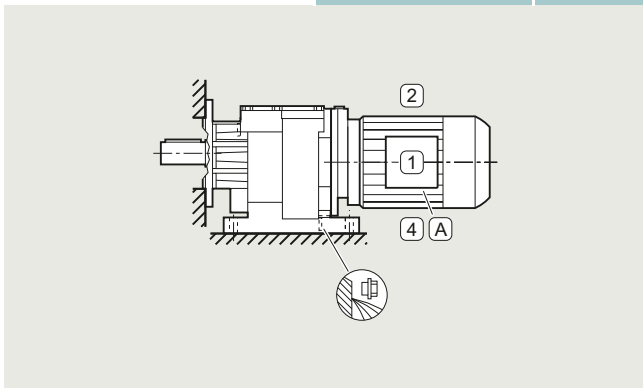
#### Helical gearboxes ZB and DB, size 29

##### Oil valves

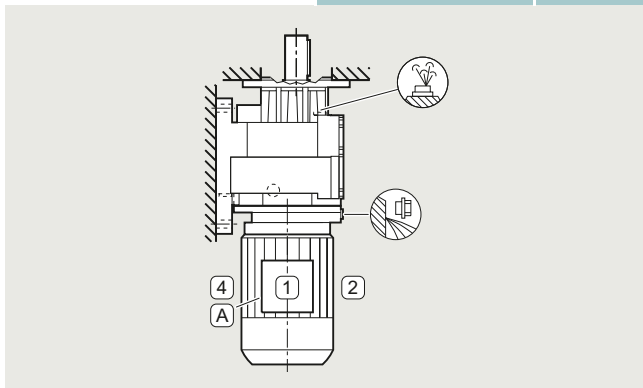
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

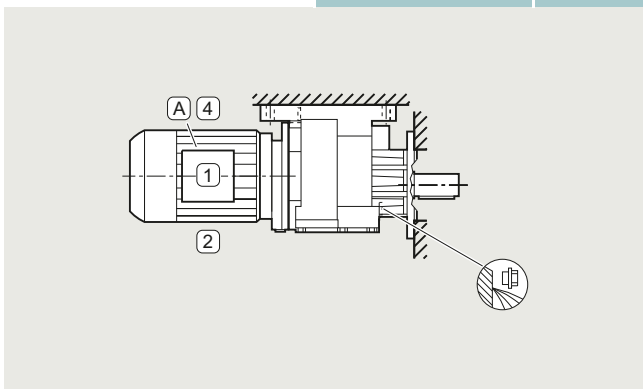
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ3102 - ..... - B.. -Z 2KJ3202 - ..... - B.. -Z	<b>D01</b>



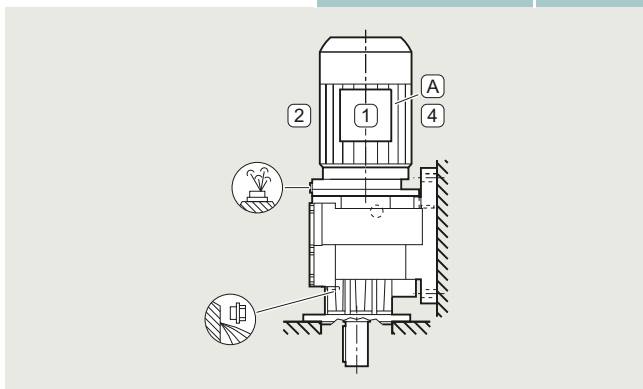
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ3102 - ..... - B.. -Z 2KJ3202 - ..... - B.. -Z	<b>D02</b>



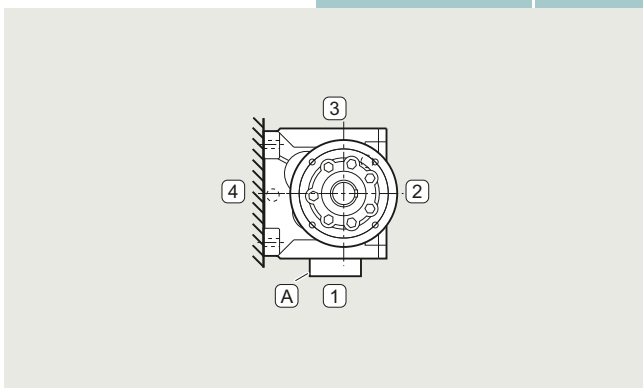
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ3102 - ..... - B.. -Z 2KJ3202 - ..... - B.. -Z	<b>D03</b>



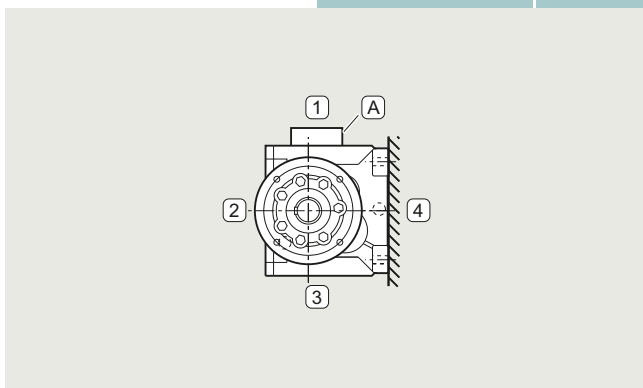
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ3102 - ..... - B.. -Z 2KJ3202 - ..... - B.. -Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ3102 - ..... - B.. -Z 2KJ3202 - ..... - B.. -Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ3102 - ..... - B.. -Z 2KJ3202 - ..... - B.. -Z	<b>D06</b>



10

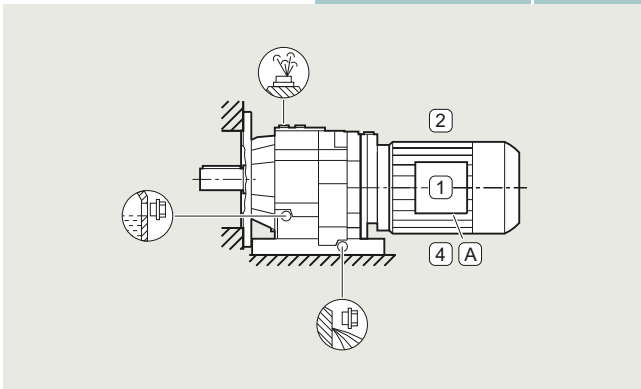
**Foot/flange-mounted design**

**Helical gearboxes ZB and DB, sizes 39 to 89**

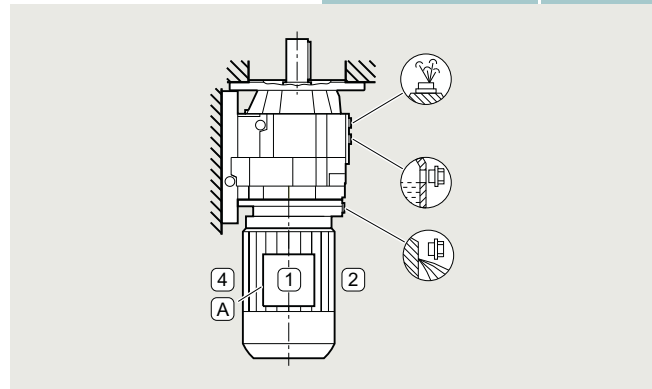
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

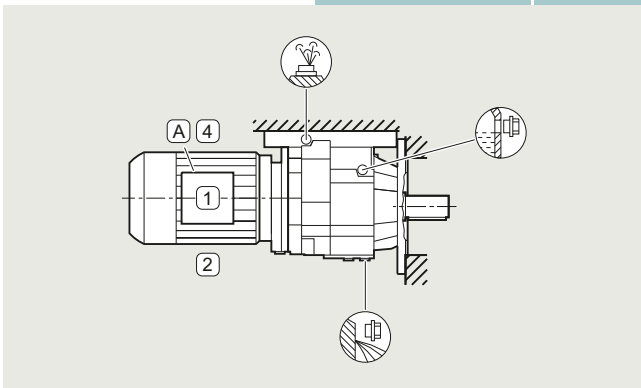
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31... - ..... - B...-Z 2KJ32... - ..... - B...-Z	<b>D01</b>



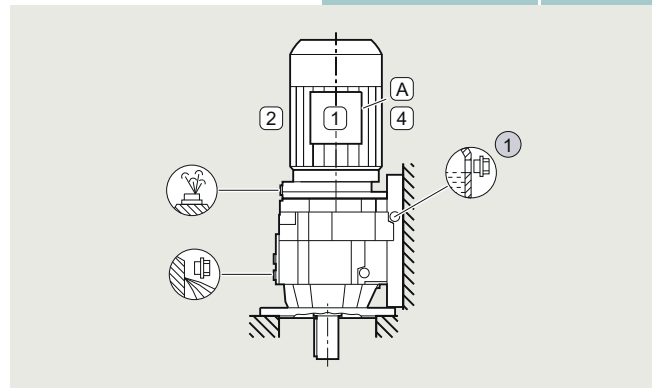
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31... - ..... - B...-Z 2KJ32... - ..... - B...-Z	<b>D02</b>



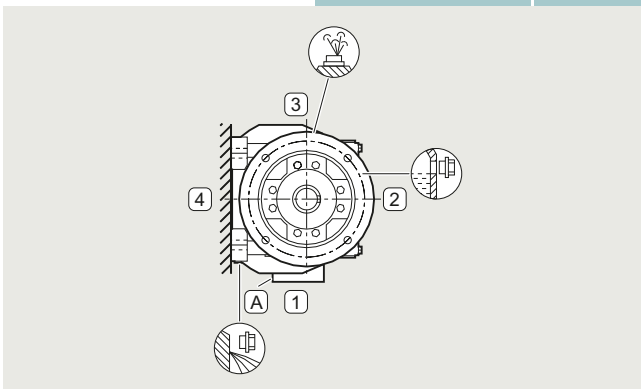
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31... - ..... - B...-Z 2KJ32... - ..... - B...-Z	<b>D03</b>



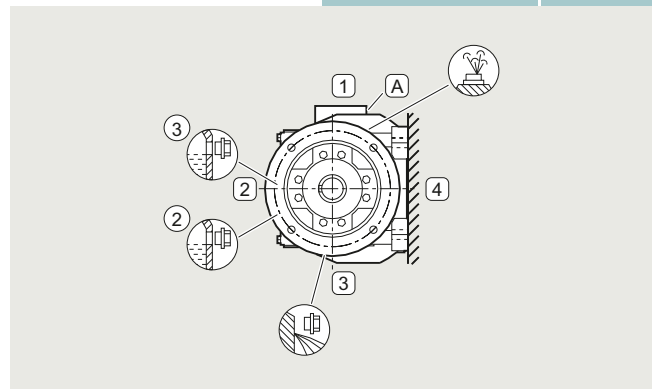
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31... - ..... - B...-Z 2KJ32... - ..... - B...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ31... - ..... - B...-Z 2KJ32... - ..... - B...-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ31... - ..... - B...-Z 2KJ32... - ..... - B...-Z	<b>D06</b>



# Gearbox options

## Mounting position

### Helical gearboxes Z and D

#### Flange-mounted design or with housing flange

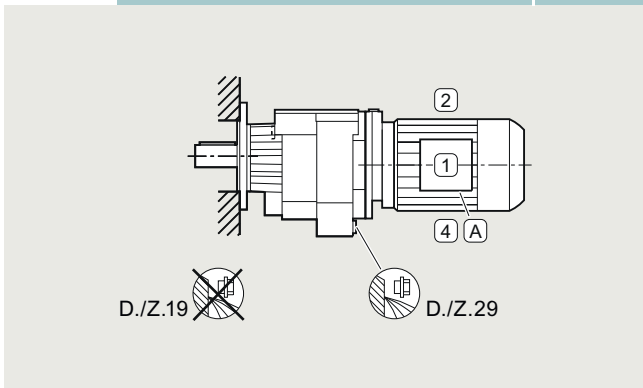
#### Helical gearboxes ZF and DF or ZZ and DZ, sizes 19 and 29

##### Oil valves

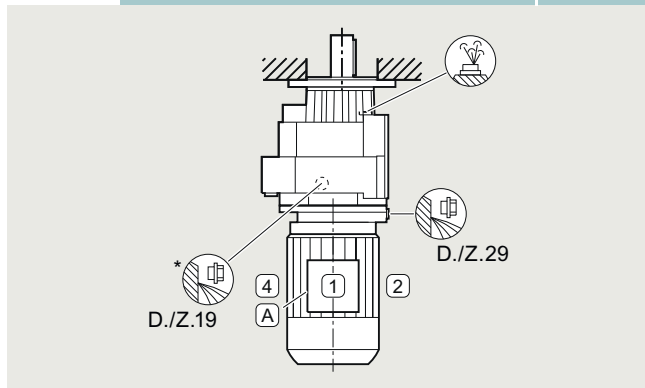
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

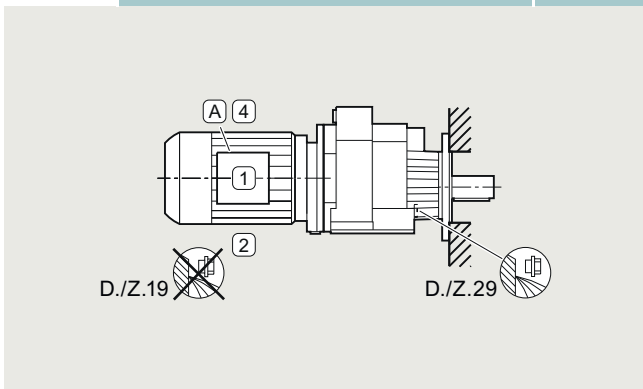
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M1</b>	2KJ31...-.....-F...- <b>Z</b> , 2KJ31...-.....-H...- <b>Z</b> 2KJ32...-.....-F...- <b>Z</b> , 2KJ32...-.....-H...- <b>Z</b>	<b>D01</b>



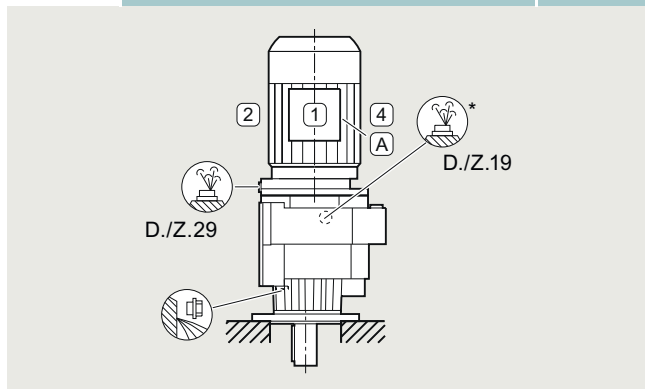
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M2</b>	2KJ31...-.....-F...- <b>Z</b> , 2KJ31...-.....-H...- <b>Z</b> 2KJ32...-.....-F...- <b>Z</b> , 2KJ32...-.....-H...- <b>Z</b>	<b>D02</b>



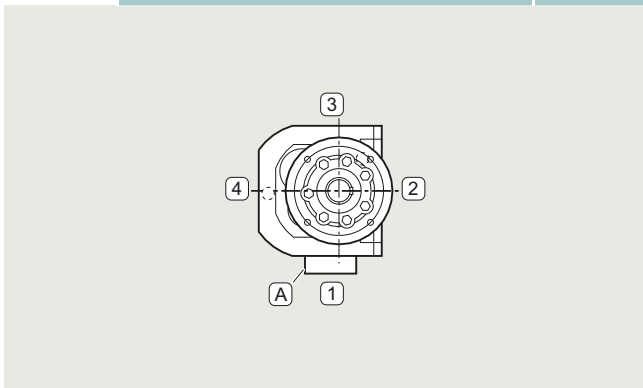
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M3</b>	2KJ31...-.....-F...- <b>Z</b> , 2KJ31...-.....-H...- <b>Z</b> 2KJ32...-.....-F...- <b>Z</b> , 2KJ32...-.....-H...- <b>Z</b>	<b>D03</b>



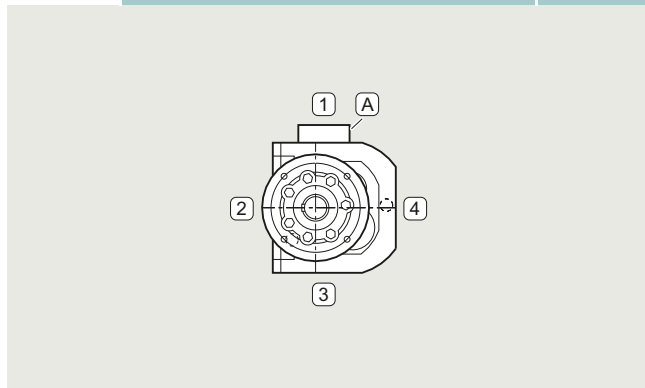
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M4</b>	2KJ31...-.....-F...- <b>Z</b> , 2KJ31...-.....-H...- <b>Z</b> 2KJ32...-.....-F...- <b>Z</b> , 2KJ32...-.....-H...- <b>Z</b>	<b>D04</b>



Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M5</b>	2KJ31...-.....-F...- <b>Z</b> , 2KJ31...-.....-H...- <b>Z</b> 2KJ32...-.....-F...- <b>Z</b> , 2KJ32...-.....-H...- <b>Z</b>	<b>D05</b>



Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M6</b>	2KJ31...-.....-F...- <b>Z</b> , 2KJ31...-.....-H...- <b>Z</b> 2KJ32...-.....-F...- <b>Z</b> , 2KJ32...-.....-H...- <b>Z</b>	<b>D06</b>



10

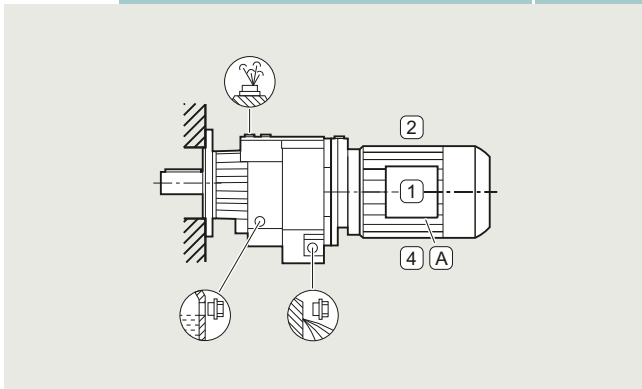
**Flange-mounted design or with housing flange**

**Helical gearboxes ZF and DF or ZZ and DZ, size 39**

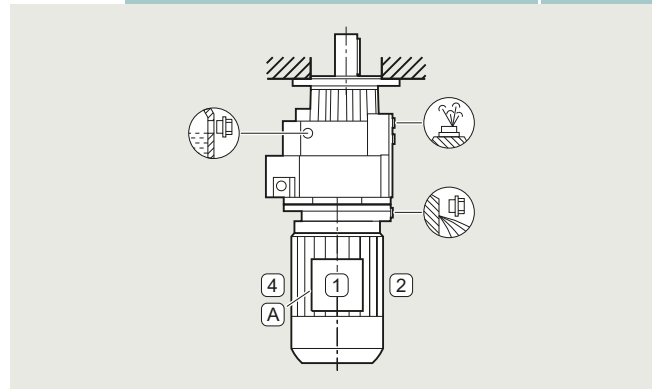
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

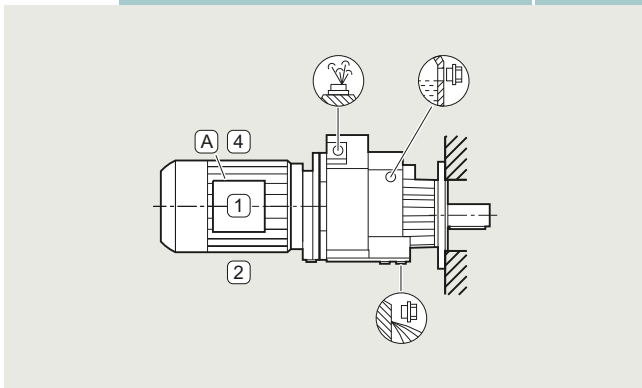
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M1</b>	2KJ3103-.....-F...- <b>Z</b> , 2KJ3103-.....-H...- <b>Z</b> 2KJ3203-.....-F...- <b>Z</b> , 2KJ3203-.....-H...- <b>Z</b>	<b>D01</b>



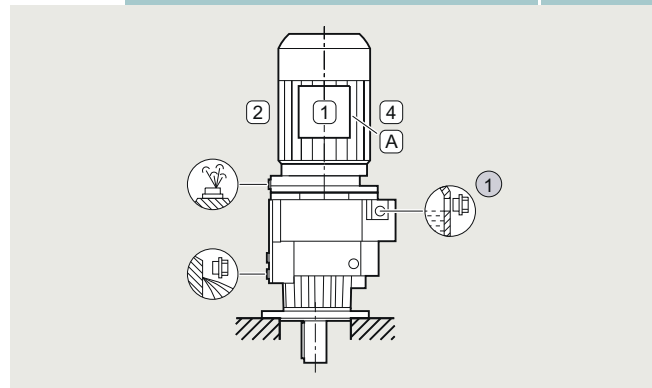
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M2</b>	2KJ3103-.....-F...- <b>Z</b> , 2KJ3103-.....-H...- <b>Z</b> 2KJ3203-.....-F...- <b>Z</b> , 2KJ3203-.....-H...- <b>Z</b>	<b>D02</b>



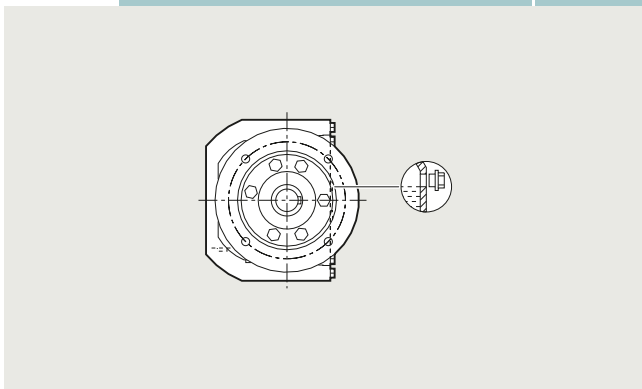
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M3</b>	2KJ3103-.....-F...- <b>Z</b> , 2KJ3103-.....-H...- <b>Z</b> 2KJ3203-.....-F...- <b>Z</b> , 2KJ3203-.....-H...- <b>Z</b>	<b>D03</b>



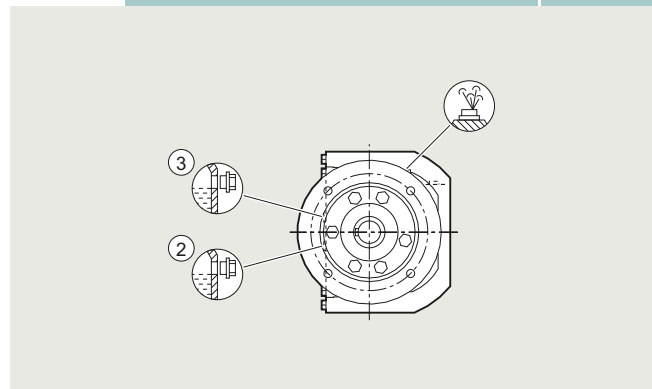
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M4</b>	2KJ3103-.....-F...- <b>Z</b> , 2KJ3103-.....-H...- <b>Z</b> 2KJ3203-.....-F...- <b>Z</b> , 2KJ3203-.....-H...- <b>Z</b>	<b>D04</b>



Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M5</b>	2KJ3103-.....-F...- <b>Z</b> , 2KJ3103-.....-H...- <b>Z</b> 2KJ3203-.....-F...- <b>Z</b> , 2KJ3203-.....-H...- <b>Z</b>	<b>D05</b>



Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M6</b>	2KJ3103-.....-F...- <b>Z</b> , 2KJ3103-.....-H...- <b>Z</b> 2KJ3203-.....-F...- <b>Z</b> , 2KJ3203-.....-H...- <b>Z</b>	<b>D06</b>



# Gearbox options

## Mounting position

### Helical gearboxes Z and D

#### Flange-mounted design or with housing flange

**Helical gearboxes ZF and DF, sizes 49 to 189 or ZZ and DZ, sizes 49 to 129**

**Helical gearboxes ZF and DF with VLplus (G30) / XLplus (G31) reinforced bearing systems, sizes 89 to 169**

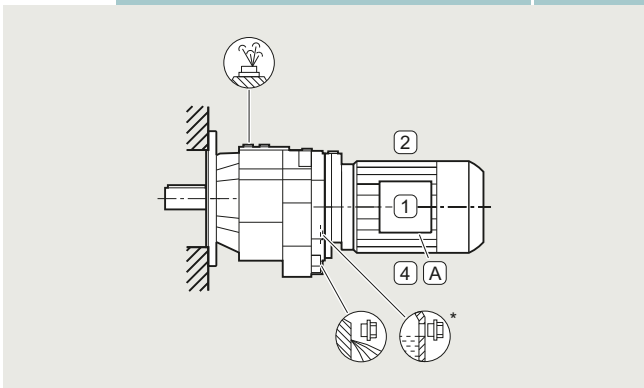
**Cooling tower gearboxes ZKF, sizes 89 to 189 (mounting positions M2 and M4)**

#### Oil valves

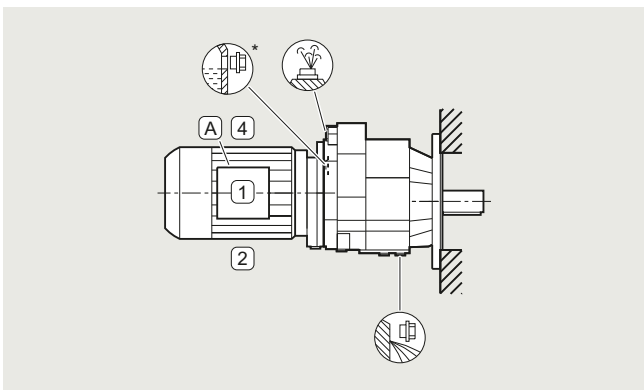
For an explanation of the symbols, see [page 10/3](#).

An oil dipstick is available as an option for 2-stage helical gearboxes ZF89 to ZF189 and ZKF89 to ZKF189 with mounting position M4.

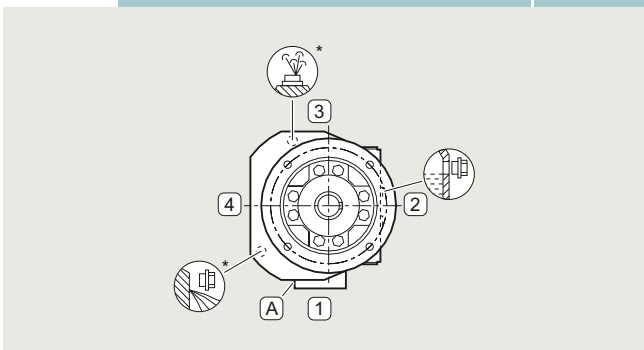
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D01</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	



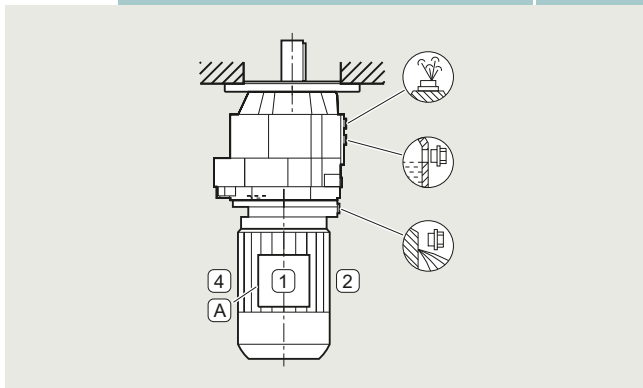
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D03</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D05</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	

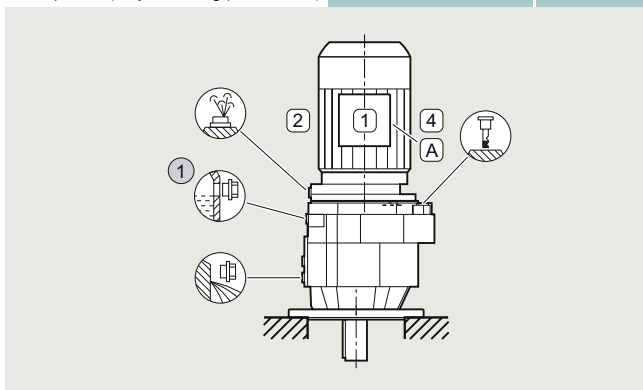


Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D02</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	

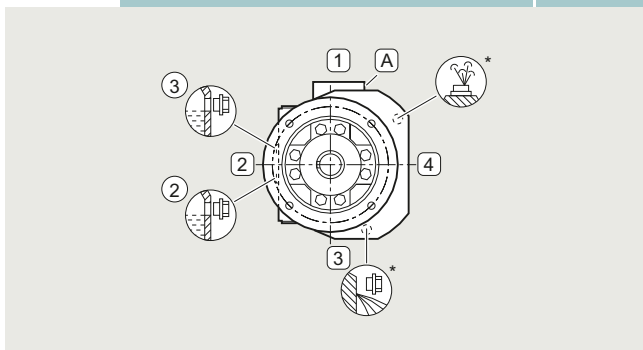


Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D04</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	

Oil dipstick (only mounting position M4) 2KJ31...-Z **G48 + D04**



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D06</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	



10

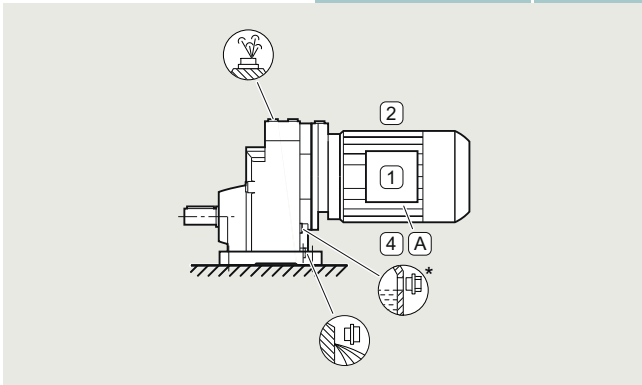
**Foot-mounted design**

**Helical gearboxes E, sizes 39 to 149**

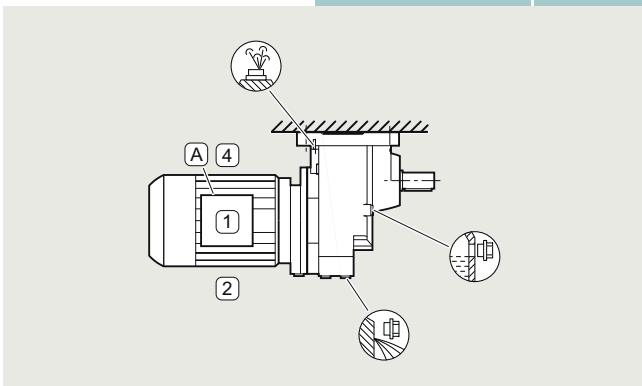
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

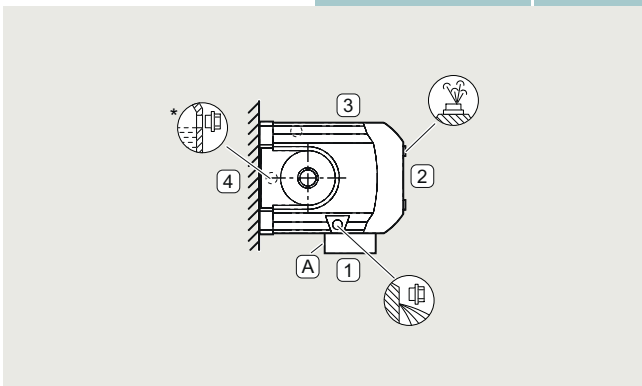
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ30... -.....- A..-Z	<b>D01</b>



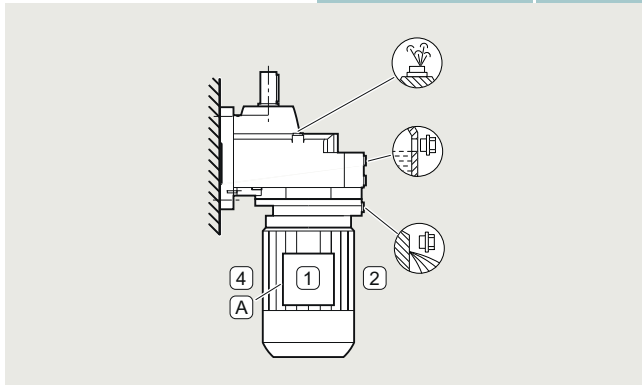
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ30... -.....- A..-Z	<b>D03</b>



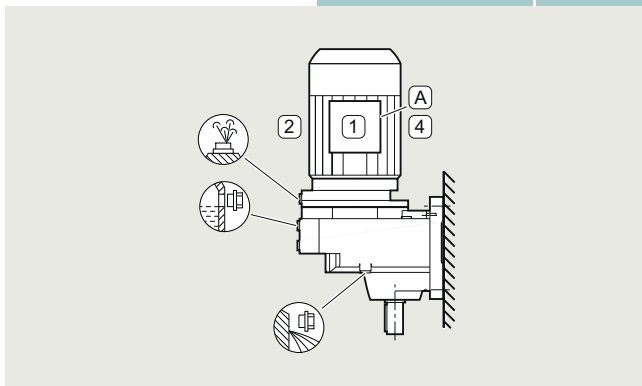
Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ30... -.....- A..-Z	<b>D05</b>



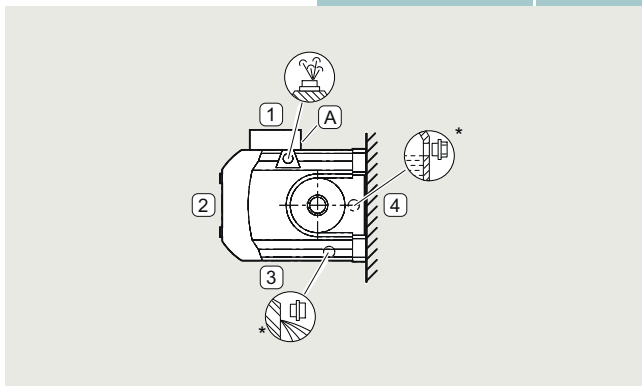
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ30... -.....- A..-Z	<b>D02</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ30... -.....- A..-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ30... -.....- A..-Z	<b>D06</b>



## Gearbox options

### Mounting position

#### Helical gearboxes E

#### Flange-mounted design or with housing flange

Helical gearboxes EF, sizes 39 to 149 or EZ, sizes 39 to 149

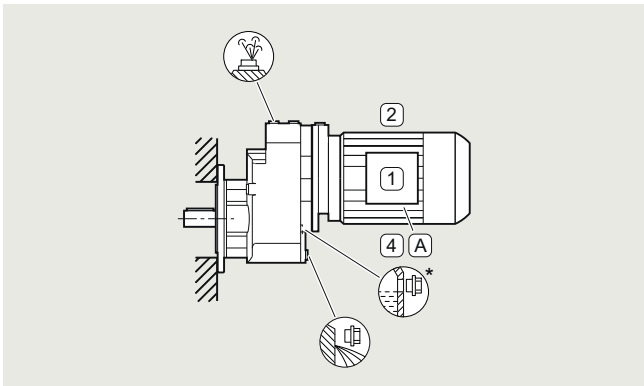
Cooling tower gearboxes EKF, sizes 89 to 149 (mounting positions M2 and M4)

#### Oil valves

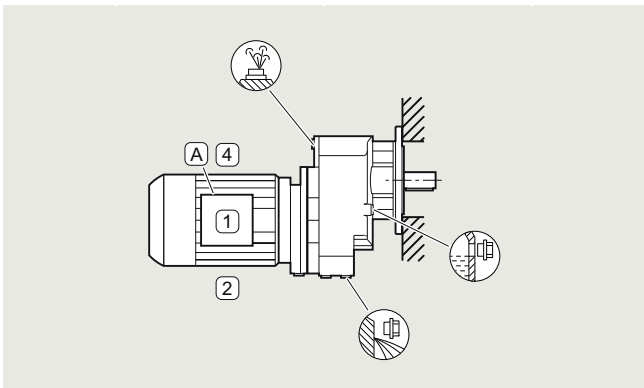
For an explanation of the symbols, see [page 10/3](#).

An oil dipstick is available as an option for 1-stage helical gearboxes EF89 to EF149 and EKF89 to EKF149 with mounting position M4.

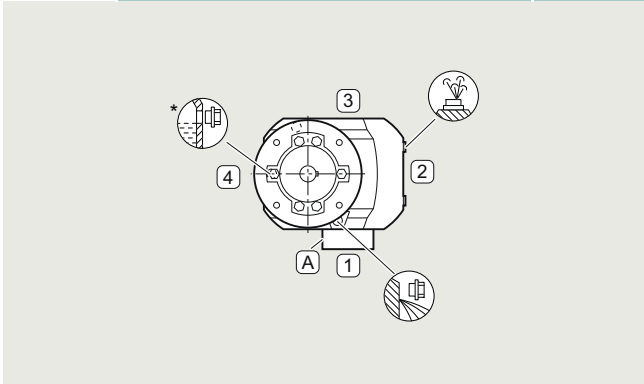
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D01</b>



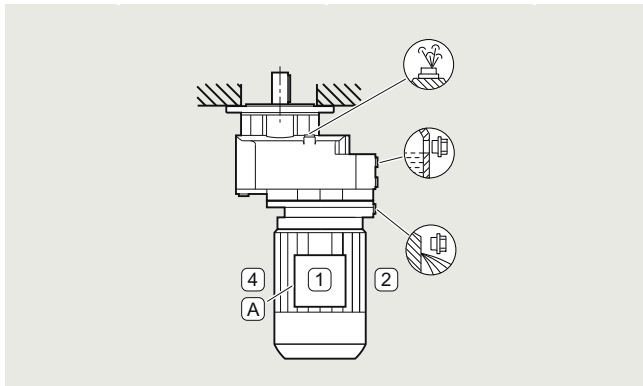
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D03</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D05</b>

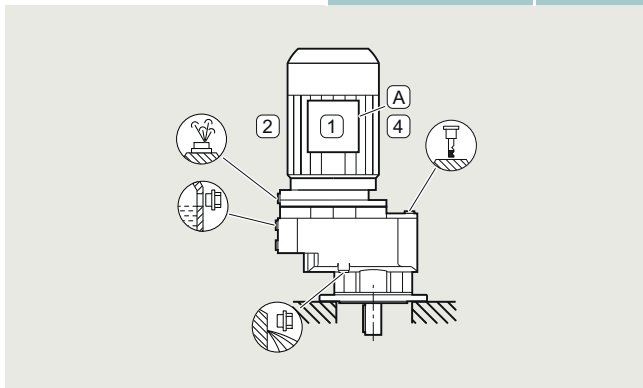


Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D02</b>

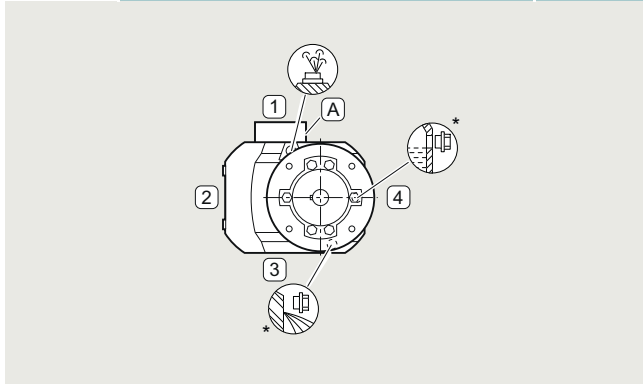


Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D04</b>

Oil dipstick (only mounting position M4) 2KJ30...-.....-F...-Z **G48 + D04**



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D06</b>



10



**Shaft-mounted design**

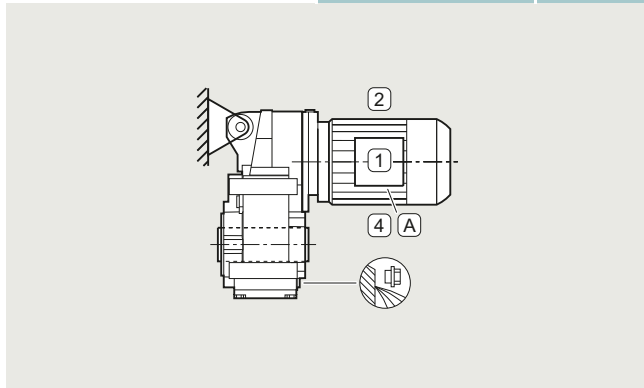
**Parallel shaft gearboxes F.AD, size 29**

**Oil valves**

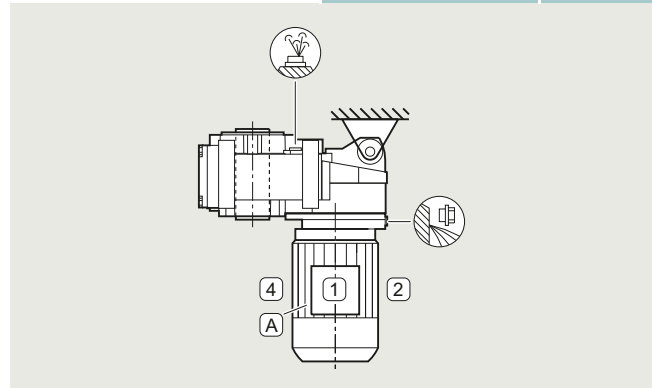
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

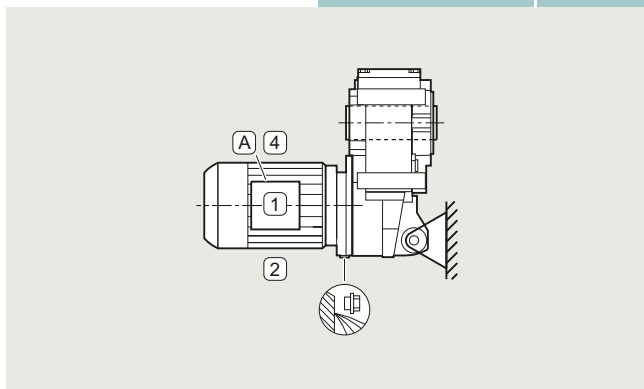
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D01</b>



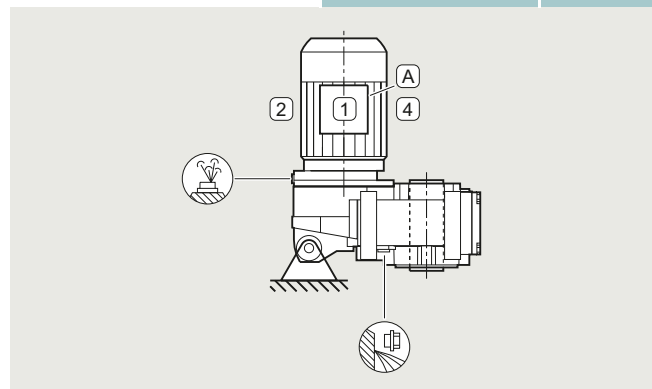
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D02</b>



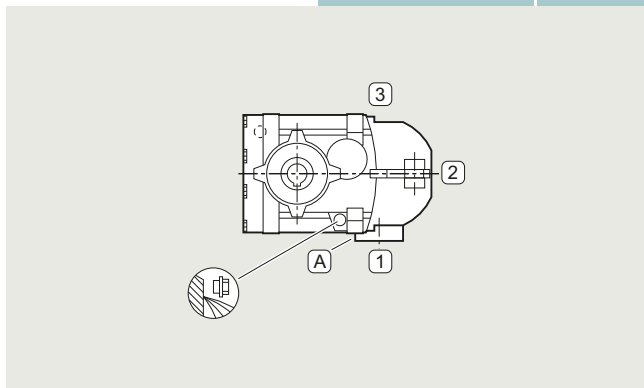
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D03</b>



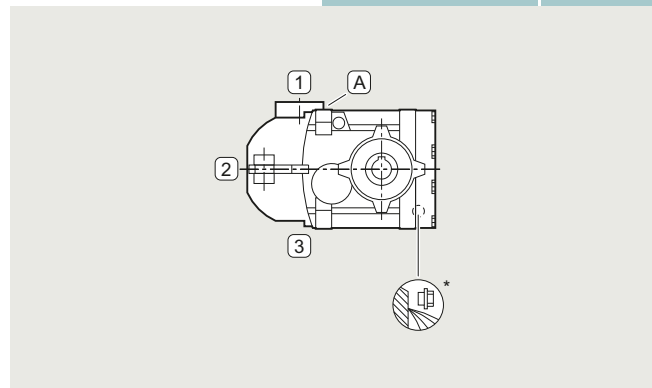
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D06</b>



# Gearbox options

## Mounting position

### Parallel shaft gearboxes

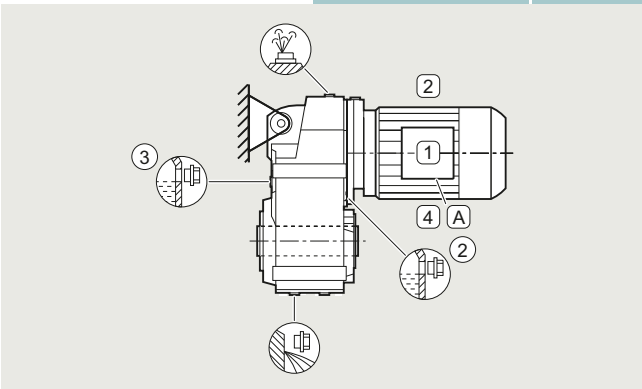
#### Shaft-mounted design

##### Parallel shaft gearboxes F.AD, sizes 39 to 189

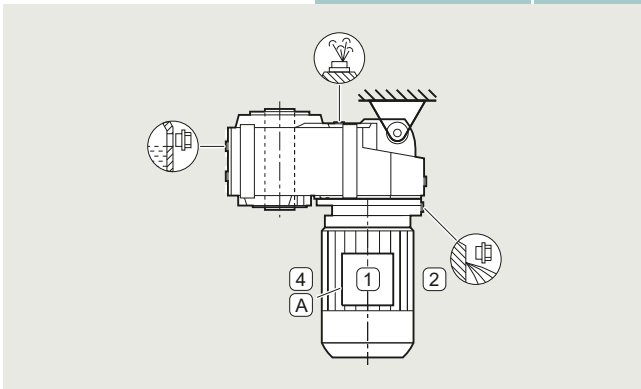
###### Oil valves

For an explanation of the symbols, see [page 10/3](#).

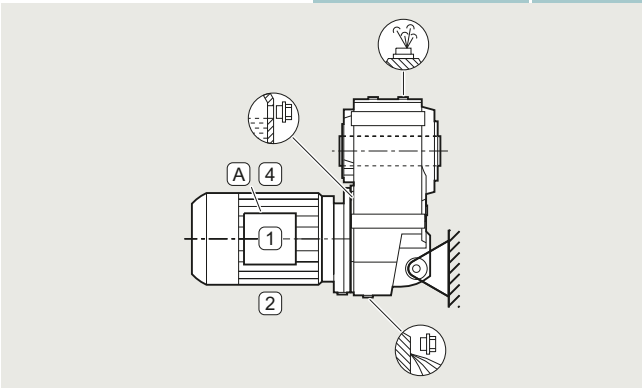
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ33... - ..... - D...-Z 2KJ34... - ..... - D...-Z	<b>D01</b>



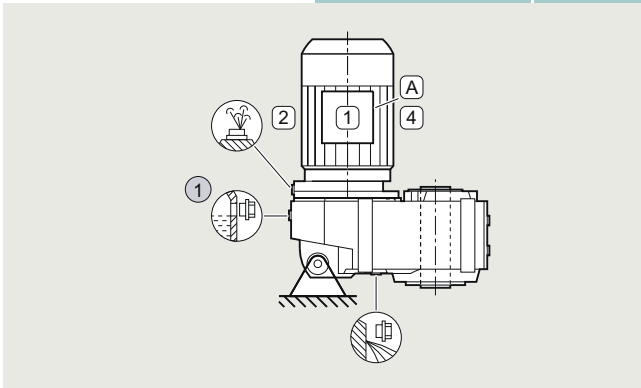
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ33... - ..... - D...-Z 2KJ34... - ..... - D...-Z	<b>D02</b>



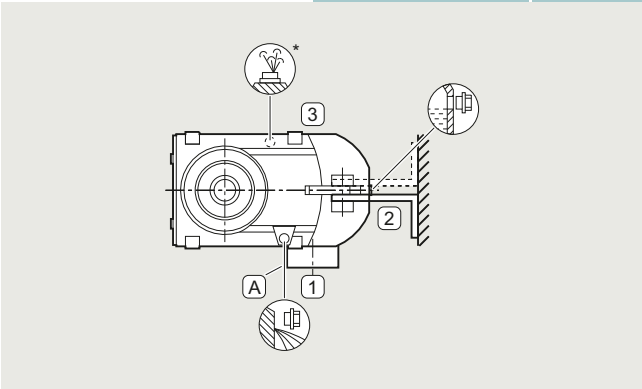
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ33... - ..... - D...-Z 2KJ34... - ..... - D...-Z	<b>D03</b>



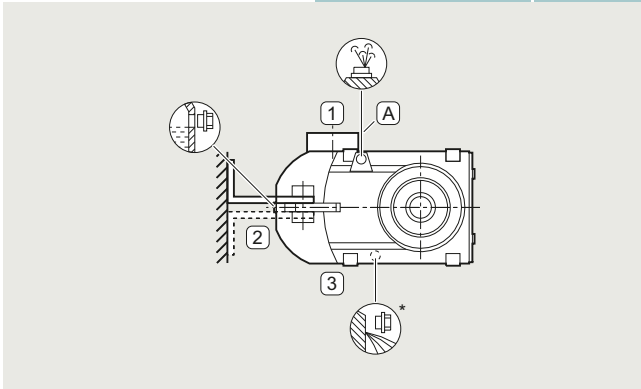
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ33... - ..... - D...-Z 2KJ34... - ..... - D...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ33... - ..... - D...-Z 2KJ34... - ..... - D...-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ33... - ..... - D...-Z 2KJ34... - ..... - D...-Z	<b>D06</b>



10

**Flange-mounted design or with housing flange**

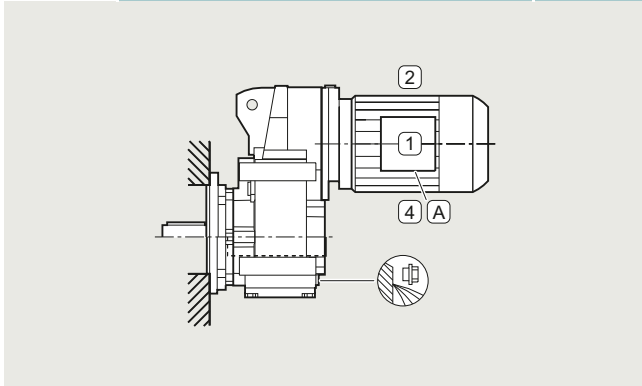
**Parallel shaft gearboxes F..F or F..Z, size 29**

**Oil valves**

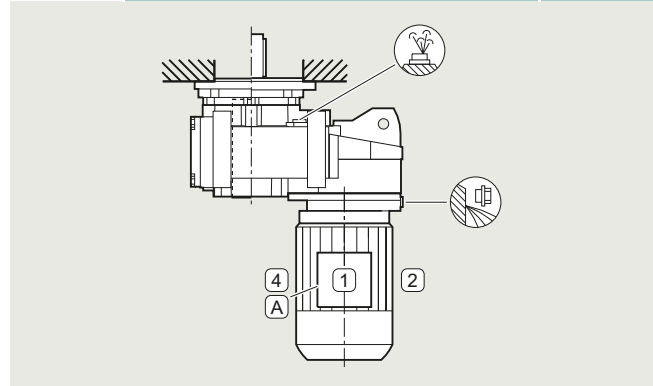
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

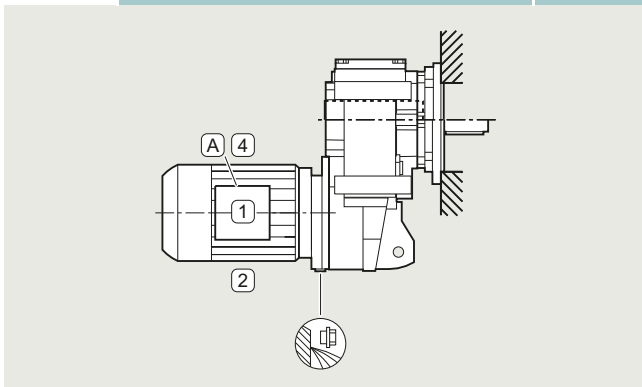
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M1</b>	2KJ3301 -.....-F..-Z, 2KJ3301 -.....-H..-Z 2KJ3401 -.....-F..-Z, 2KJ3401 -.....-H..-Z	<b>D01</b>



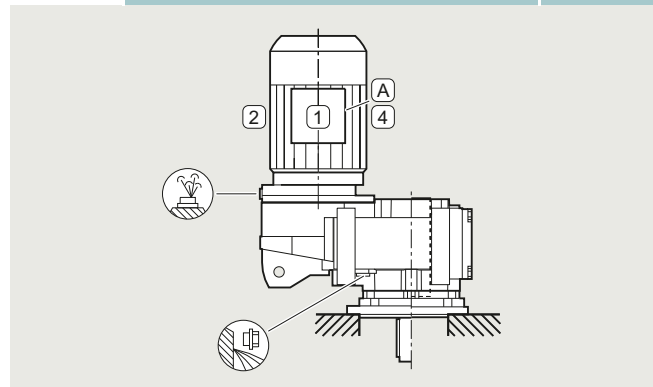
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M2</b>	2KJ3301 -.....-F..-Z, 2KJ3301 -.....-H..-Z 2KJ3401 -.....-F..-Z, 2KJ3401 -.....-H..-Z	<b>D02</b>



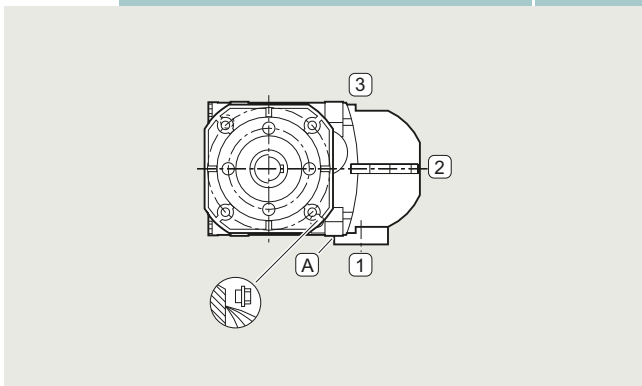
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M3</b>	2KJ3301 -.....-F..-Z, 2KJ3301 -.....-H..-Z 2KJ3401 -.....-F..-Z, 2KJ3401 -.....-H..-Z	<b>D03</b>



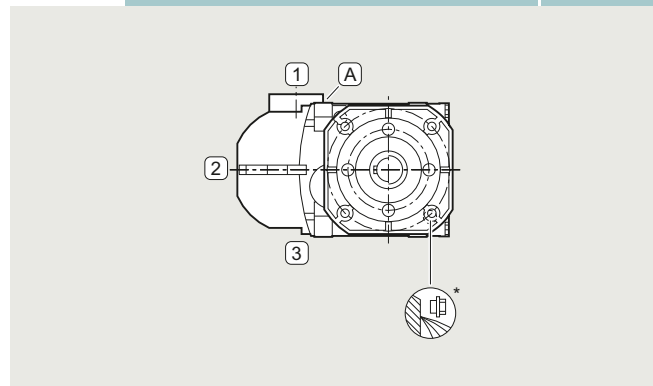
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M4</b>	2KJ3301 -.....-F..-Z, 2KJ3301 -.....-H..-Z 2KJ3401 -.....-F..-Z, 2KJ3401 -.....-H..-Z	<b>D04</b>



Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M5</b>	2KJ3301 -.....-F..-Z, 2KJ3301 -.....-H..-Z 2KJ3401 -.....-F..-Z, 2KJ3401 -.....-H..-Z	<b>D05</b>



Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M6</b>	2KJ3301 -.....-F..-Z, 2KJ3301 -.....-H..-Z 2KJ3401 -.....-F..-Z, 2KJ3401 -.....-H..-Z	<b>D06</b>



## Gearbox options

### Mounting position

#### Parallel shaft gearboxes

##### Flange-mounted design or with housing flange

**Parallel shaft gearboxes F..F or F..Z, sizes 39 to 189**

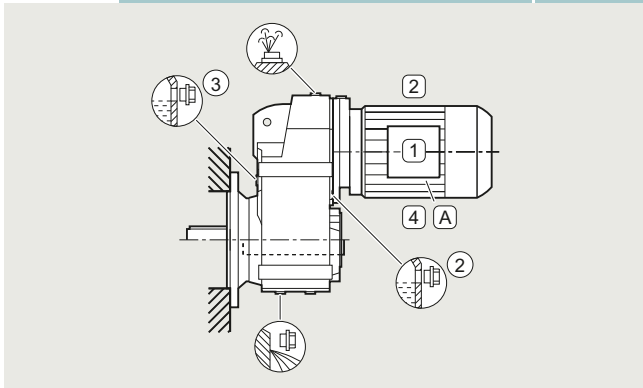
**Parallel shaft gearboxes F..F with VLplus (G30) reinforced bearing system, sizes 89 to 169**

##### Oil valves

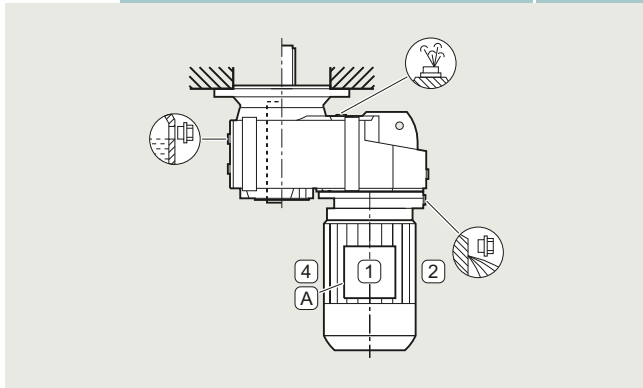
For an explanation of the symbols, see [page 10/3](#).

For parallel shaft gearboxes in flange-mounted or housing flange design, mounting position M1 to M6 is specified without stating the output side A or B. Output side A is always assumed in these cases.

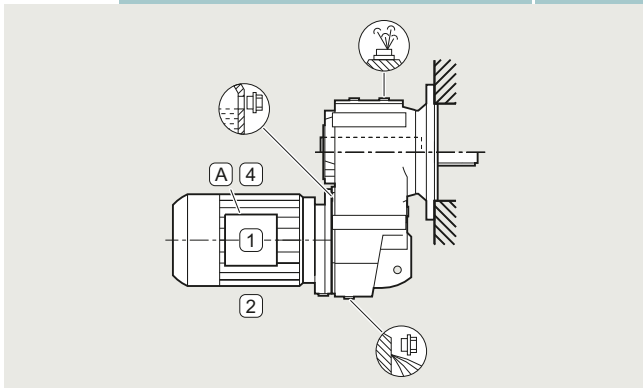
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ33...-.....F...-Z, 2KJ33...-.....H...-Z	<b>D01</b>
	2KJ34...-.....F...-Z, 2KJ34...-.....H...-Z	



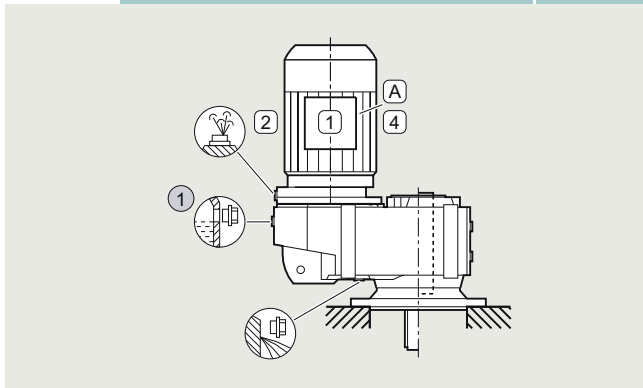
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ33...-.....F...-Z, 2KJ33...-.....H...-Z	<b>D02</b>
	2KJ34...-.....F...-Z, 2KJ34...-.....H...-Z	



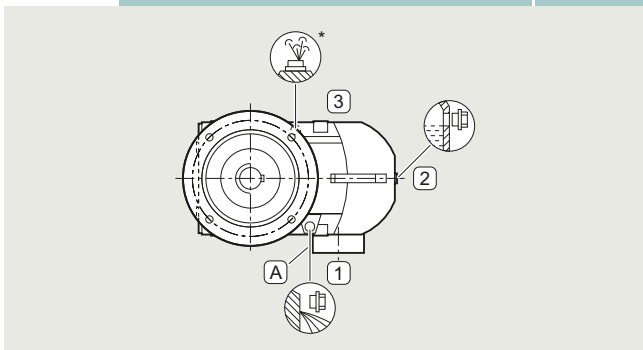
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ33...-.....F...-Z, 2KJ33...-.....H...-Z	<b>D03</b>
	2KJ34...-.....F...-Z, 2KJ34...-.....H...-Z	



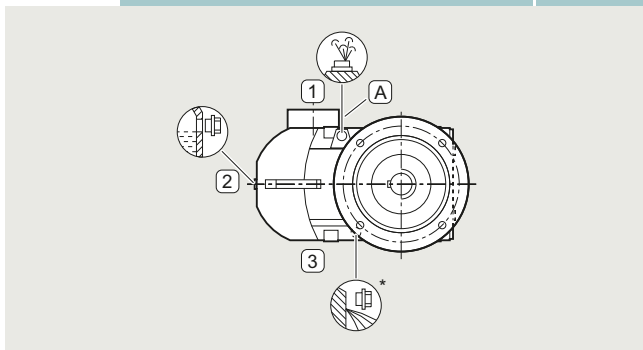
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ33...-.....F...-Z, 2KJ33...-.....H...-Z	<b>D04</b>
	2KJ34...-.....F...-Z, 2KJ34...-.....H...-Z	



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ33...-.....F...-Z, 2KJ33...-.....H...-Z	<b>D05</b>
	2KJ34...-.....F...-Z, 2KJ34...-.....H...-Z	



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ33...-.....F...-Z, 2KJ33...-.....H...-Z	<b>D06</b>
	2KJ34...-.....F...-Z, 2KJ34...-.....H...-Z	



10

**Foot-mounted design**

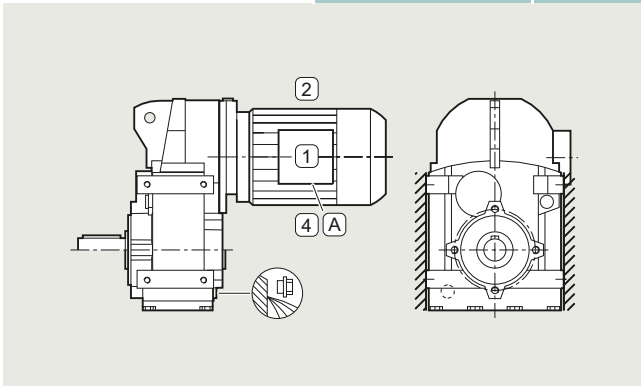
**Parallel shaft gearboxes F, size 29**

**Oil valves**

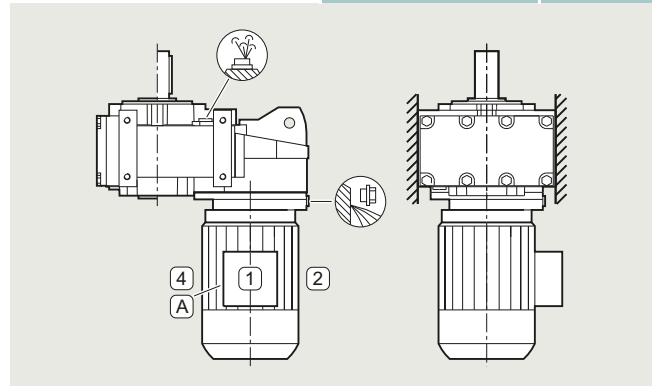
Size 29 is lubricated for life.

For an explanation of the symbols, see page 10/3.

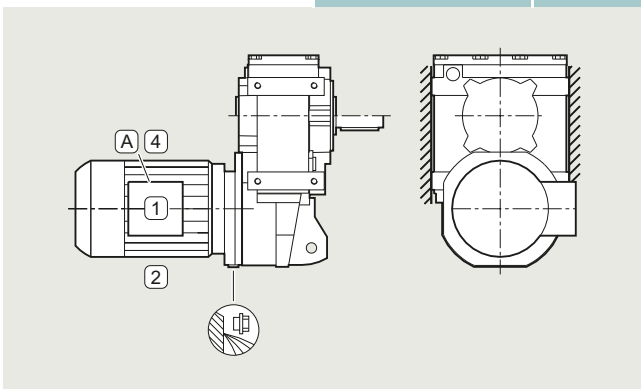
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D01</b>



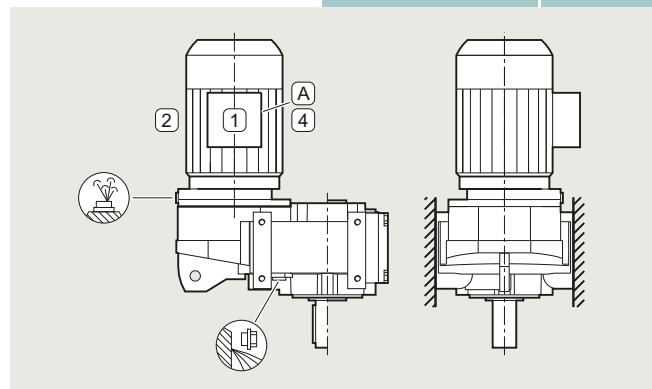
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D02</b>



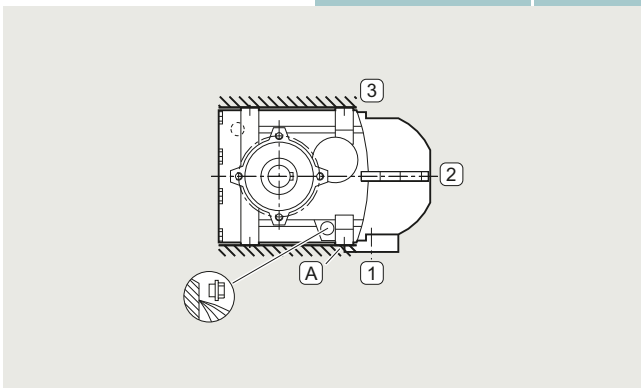
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D03</b>



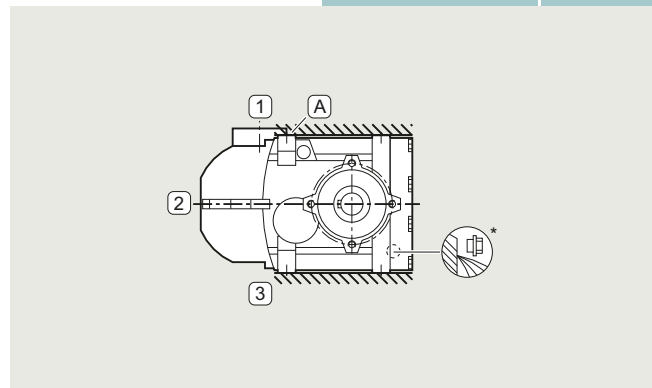
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D06</b>



# Gearbox options

## Mounting position

### Parallel shaft gearboxes

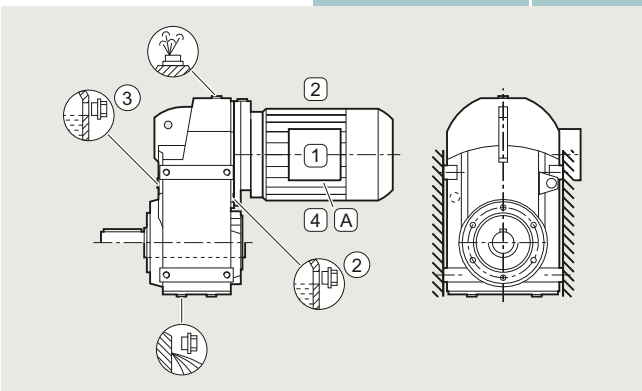
#### Foot-mounted design

#### Parallel shaft gearboxes F, sizes 39 to 189

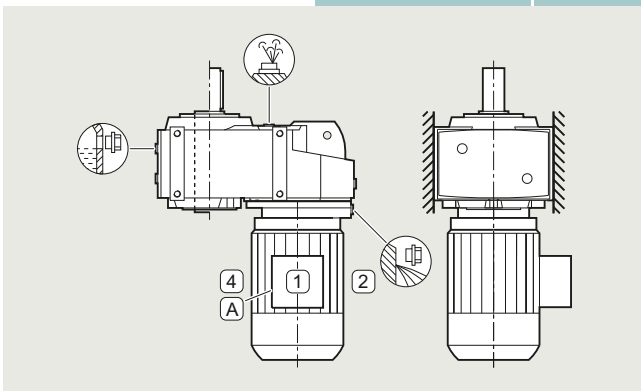
##### Oil valves

For an explanation of the symbols, see [page 10/3](#).

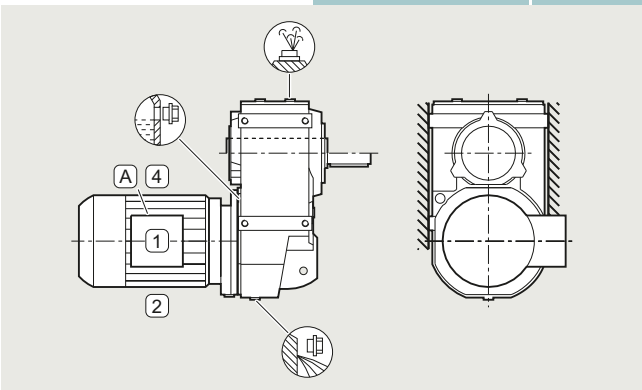
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ33... - ..... - A...-Z 2KJ34... - ..... - A...-Z	<b>D01</b>



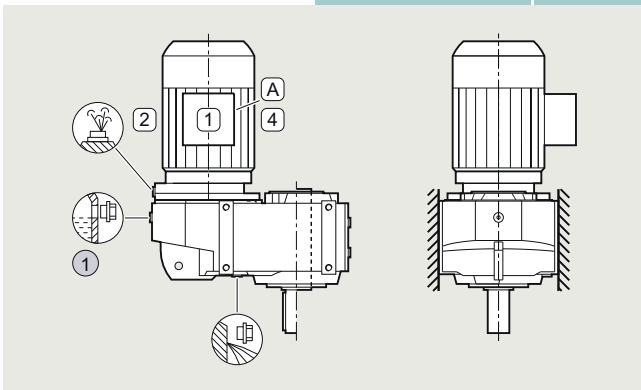
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ33... - ..... - A...-Z 2KJ34... - ..... - A...-Z	<b>D02</b>



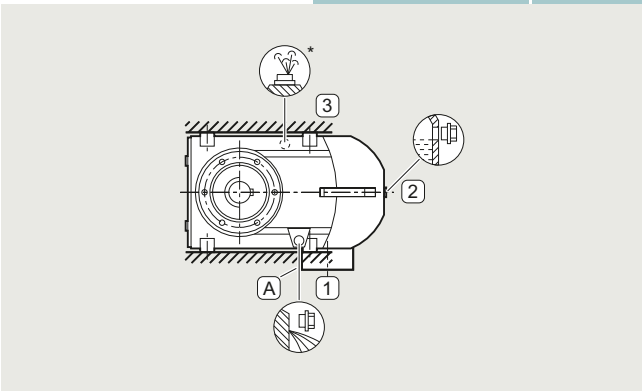
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ33... - ..... - A...-Z 2KJ34... - ..... - A...-Z	<b>D03</b>



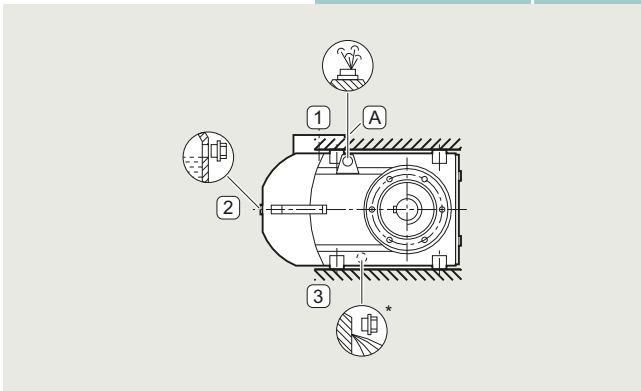
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ33... - ..... - A...-Z 2KJ34... - ..... - A...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ33... - ..... - A...-Z 2KJ34... - ..... - A...-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ33... - ..... - A...-Z 2KJ34... - ..... - A...-Z	<b>D06</b>



10

**Foot-mounted design**

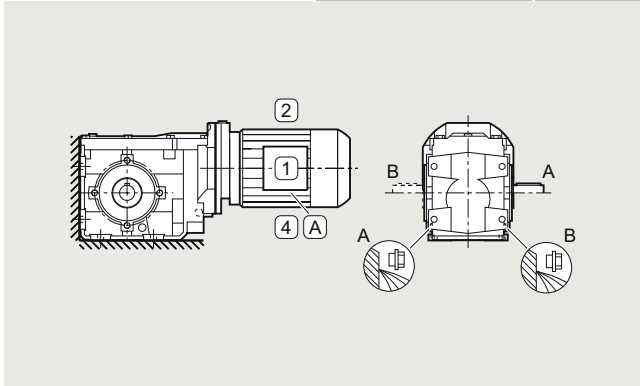
**Bevel gearboxes B, sizes 19 and 29**

**Oil valves**

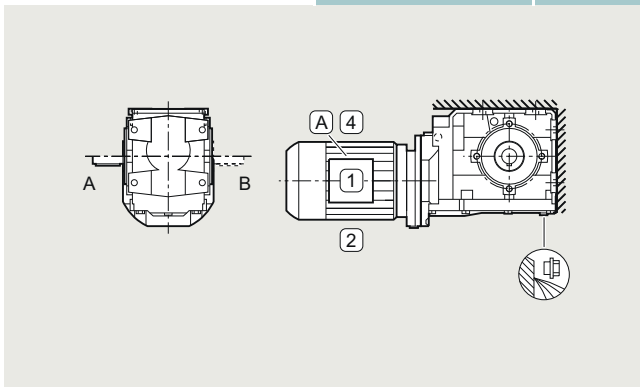
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see page 10/3.

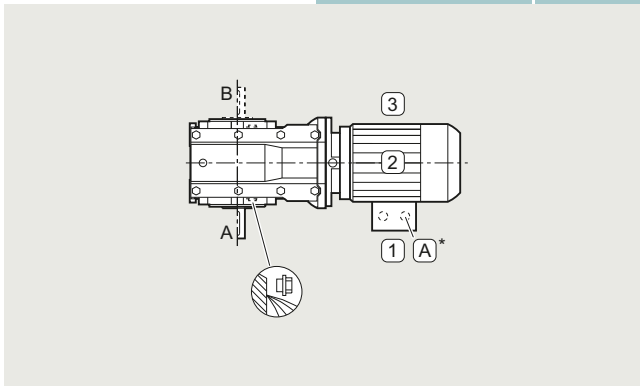
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-...-A...-Z	<b>D21</b>



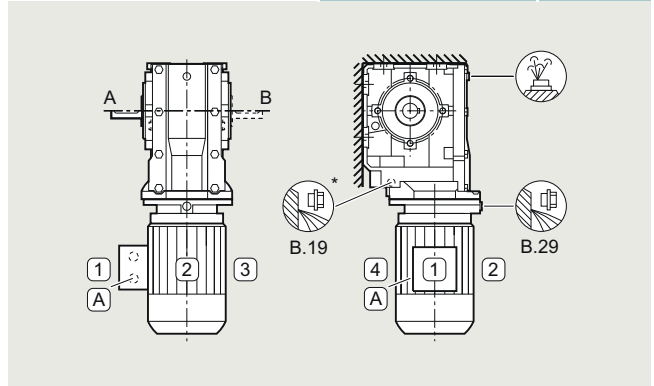
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-...-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-...-A...-Z	<b>D23</b>



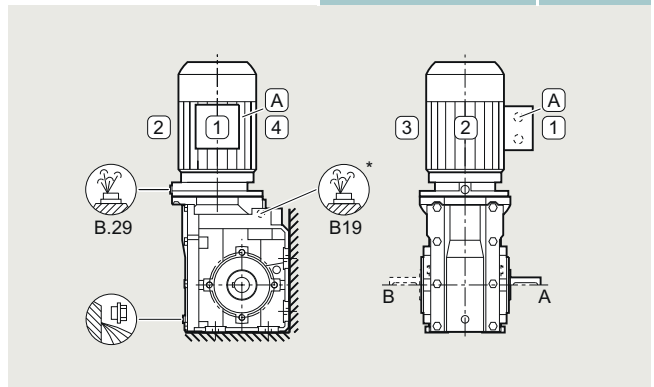
Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-...-A...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-...-A...-Z	<b>D25</b>



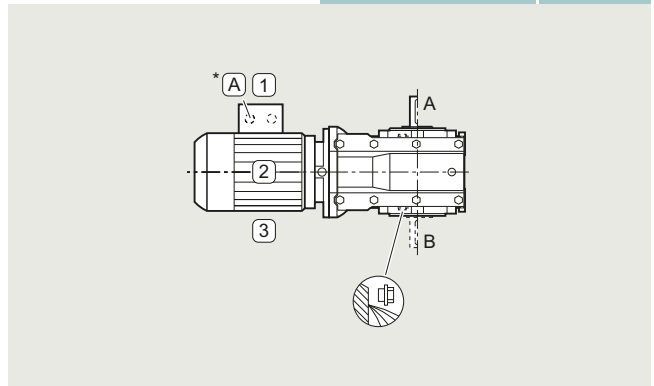
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-...-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-...-A...-Z	<b>D22</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-...-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-...-A...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35...-...-A...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35...-...-A...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Bevel gearboxes B

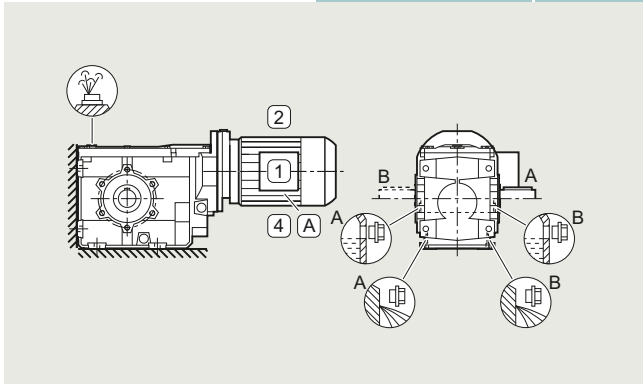
#### Foot-mounted design

#### Bevel gearboxes B, sizes 39 and 49

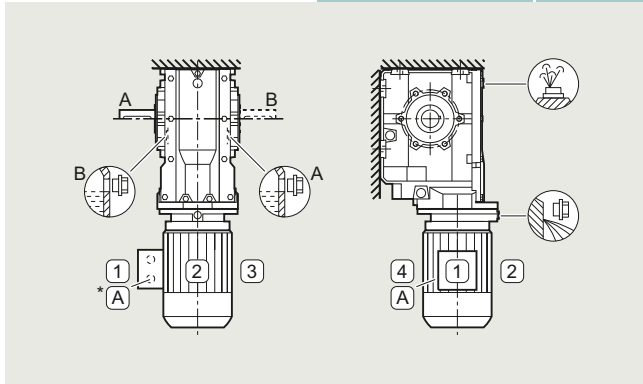
##### Oil valves

For an explanation of the symbols, see [page 10/3](#).

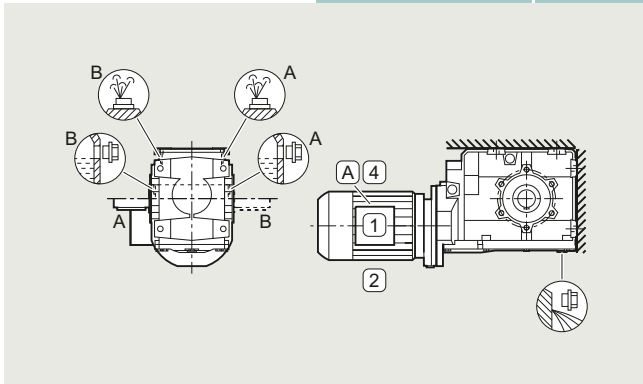
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-A...-Z	<b>D21</b>



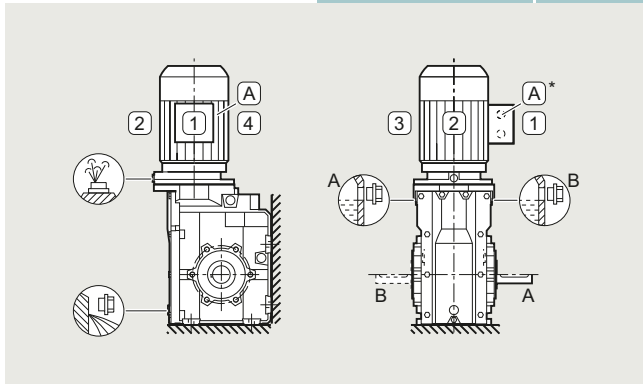
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-A...-Z	<b>D22</b>



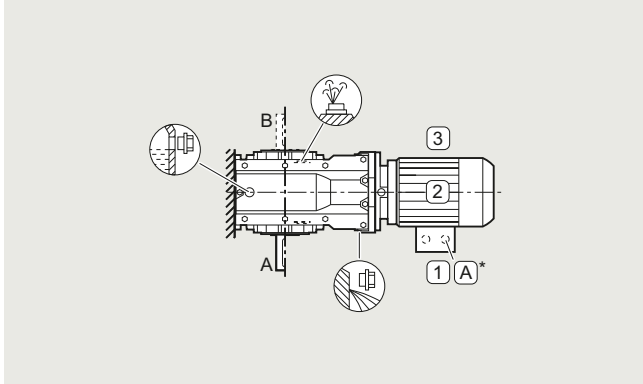
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-A...-Z	<b>D23</b>



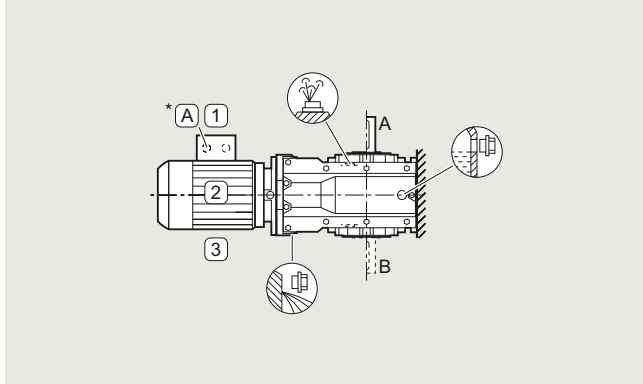
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-A...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-.....-A...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-.....-A...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35...-.....-A...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35...-.....-A...-Z	<b>D26</b>



10



**Housing flange design and flange-mounted design**

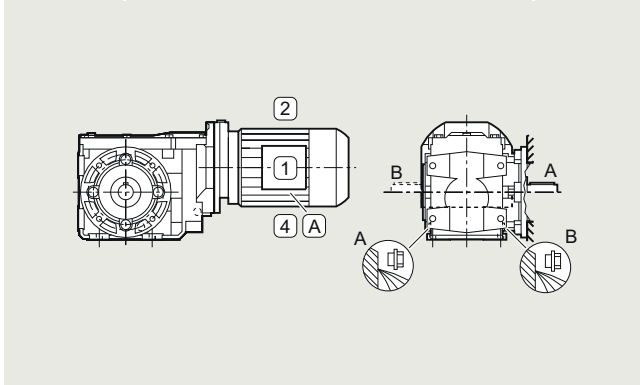
**Bevel gearboxes B.Z and B.F, sizes 19 and 29**

**Oil valves**

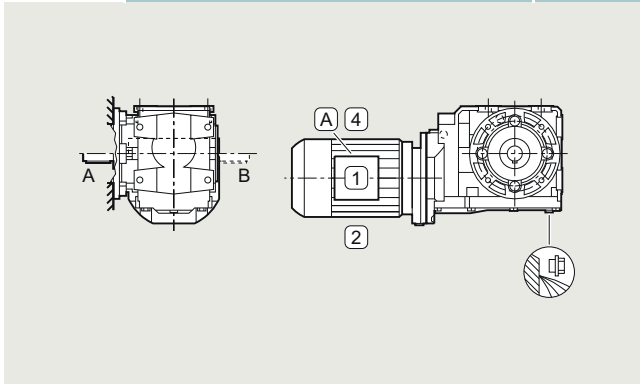
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see page 10/3.

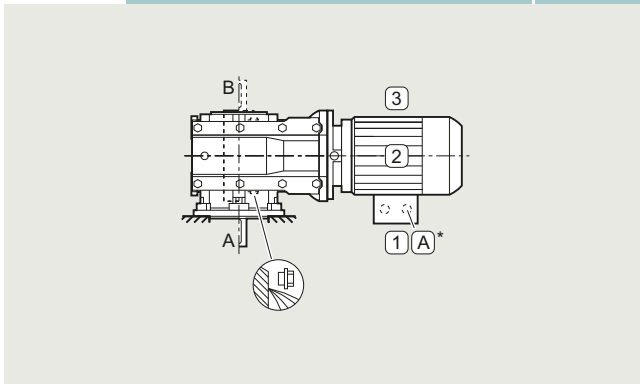
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D21</b>



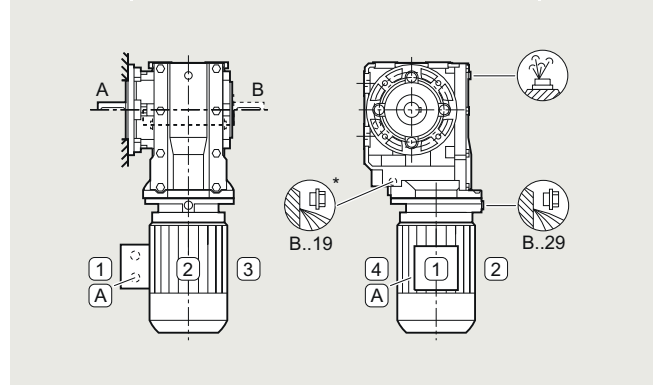
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D13</b>
<b>M1 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D23</b>



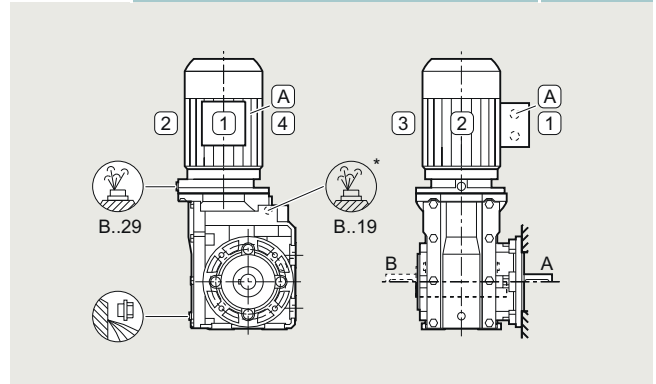
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D15</b>
<b>M1 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D25</b>



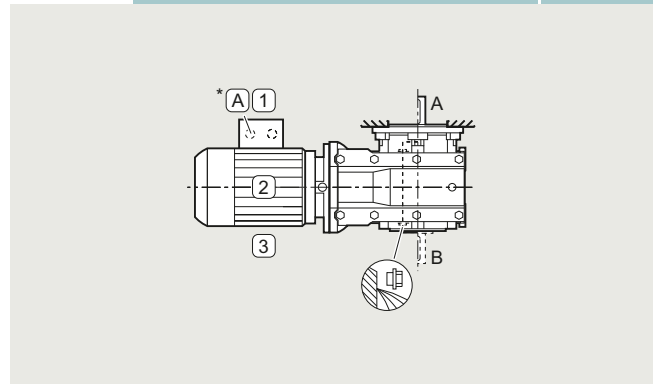
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D12</b>
<b>M1 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D22</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D14</b>
<b>M1 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D24</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D16</b>
<b>M1 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Bevel gearboxes B

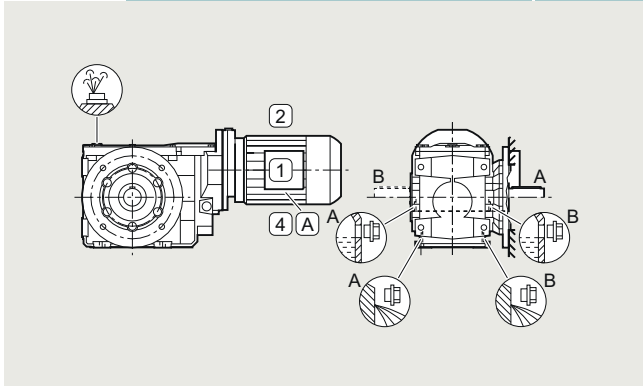
#### Housing flange design and flange-mounted design

##### Bevel gearboxes B.Z and B.F, sizes 39 and 49

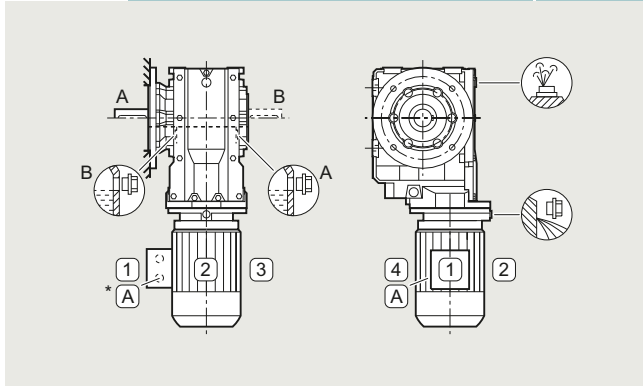
###### Oil valves

For an explanation of the symbols, see page 10/3.

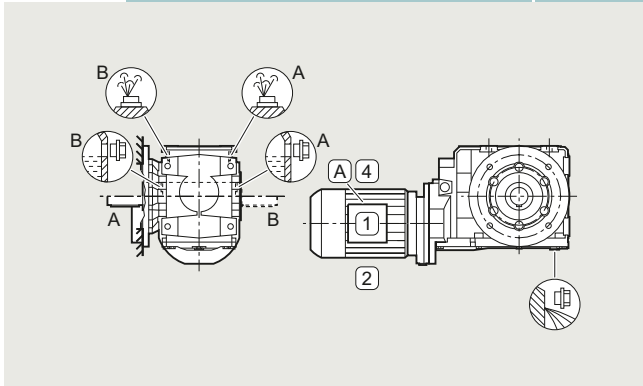
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D21</b>



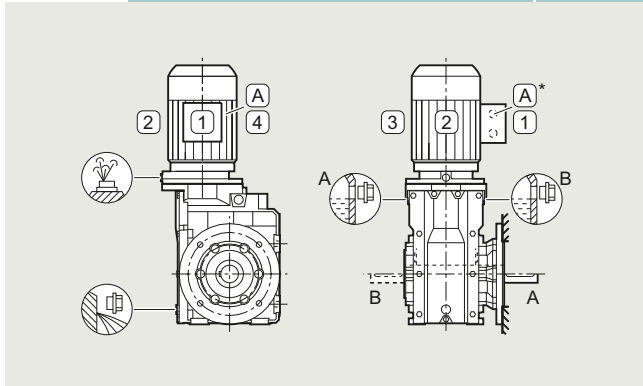
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D22</b>



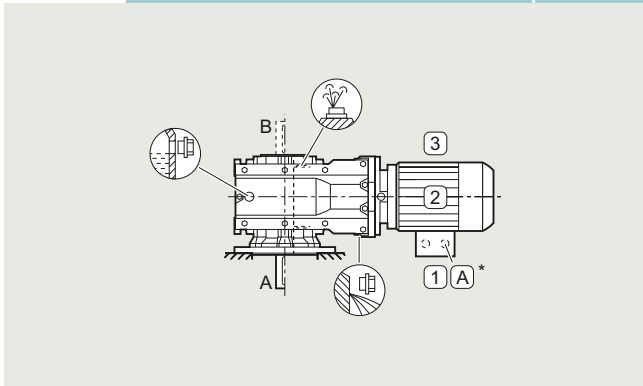
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D23</b>



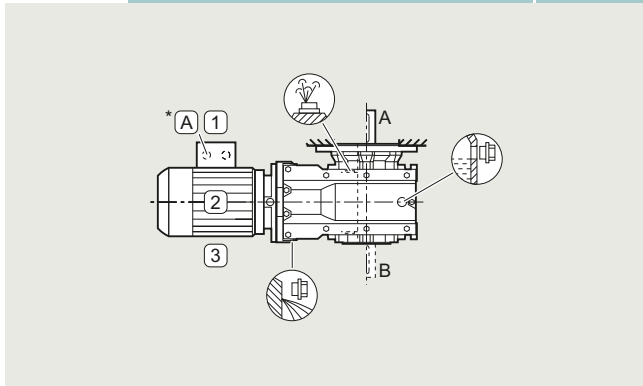
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D26</b>



10

**Shaft-mounted design**

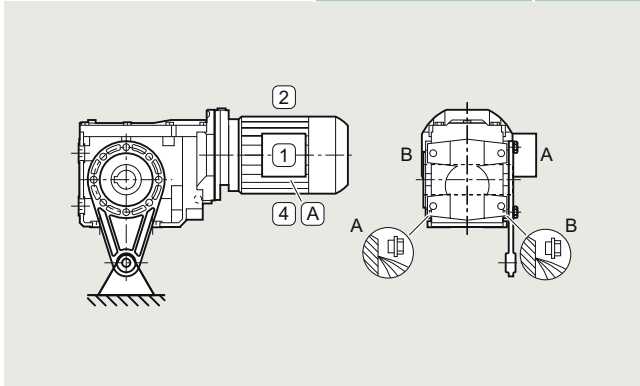
**Bevel gearboxes BAD, sizes 19 and 29**

**Oil valves**

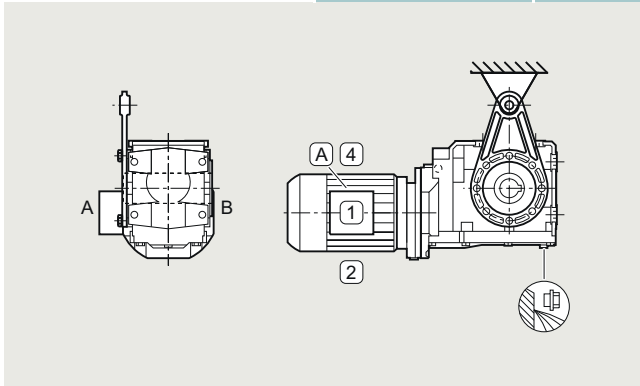
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see page 10/3.

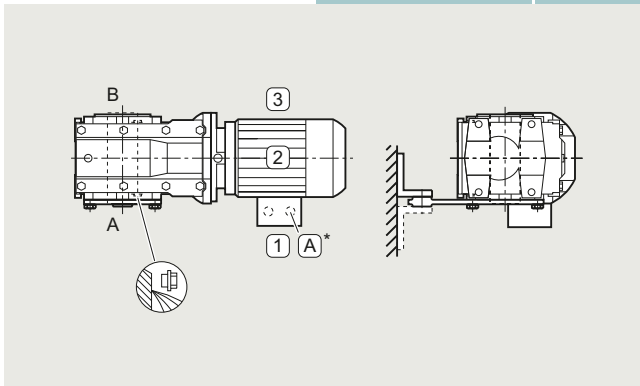
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-D...-Z	<b>D21</b>



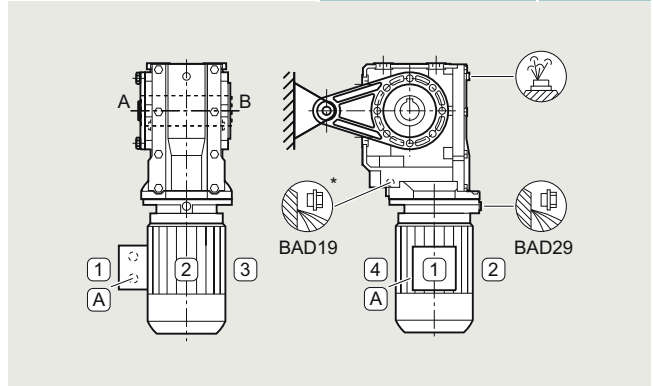
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-D...-Z	<b>D23</b>



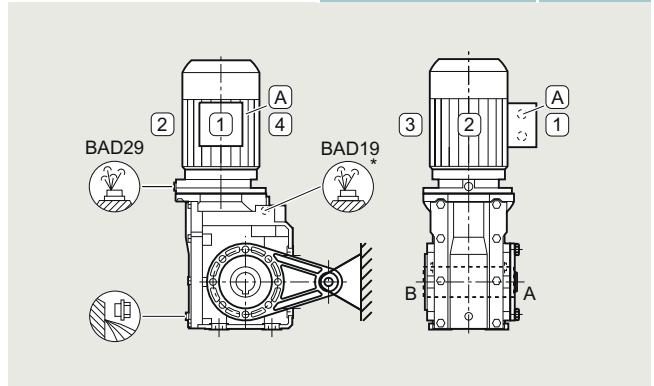
Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-.....-D...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-.....-D...-Z	<b>D25</b>



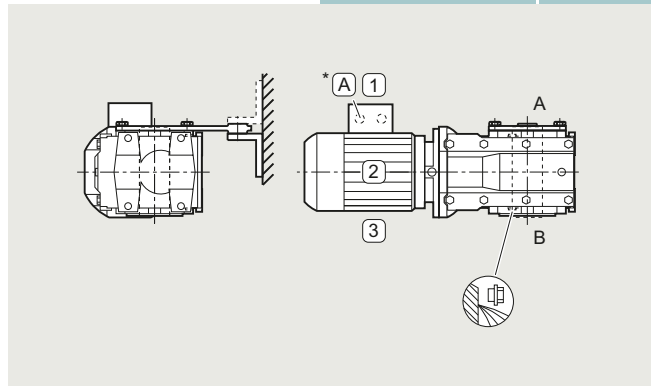
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-D...-Z	<b>D22</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-D...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35...-.....-D...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35...-.....-D...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Bevel gearboxes B

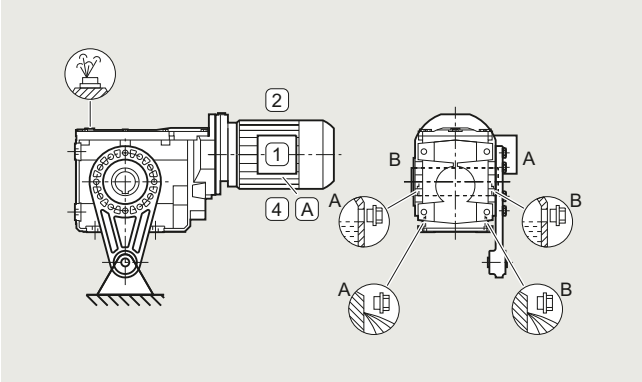
#### Shaft-mounted design

#### Bevel gearboxes BAD, sizes 39 and 49

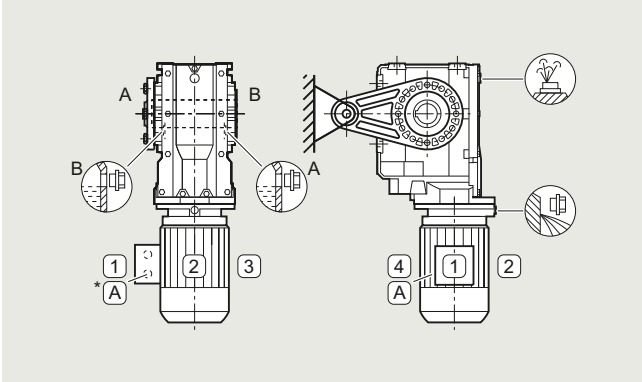
##### Oil valves

For an explanation of the symbols, see [page 10/3](#).

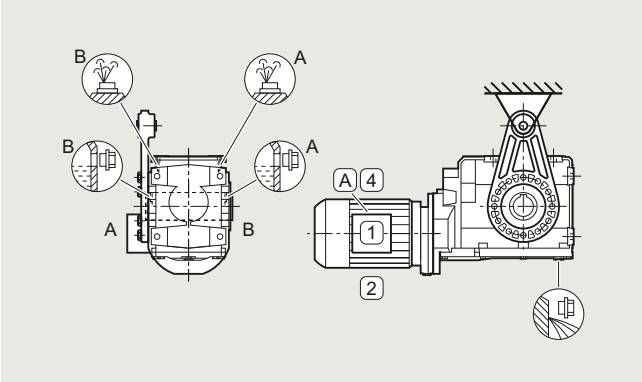
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35... -.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35... -.....-D...-Z	<b>D21</b>



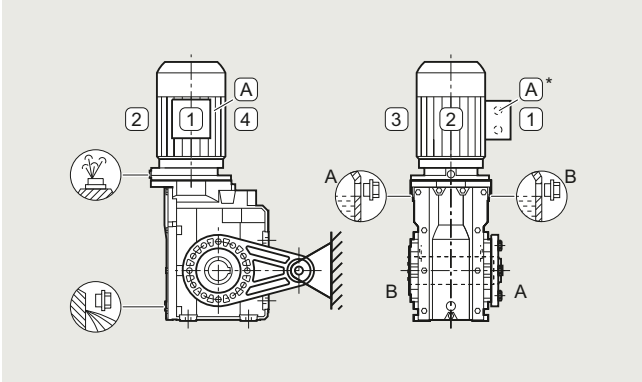
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35... -.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35... -.....-D...-Z	<b>D22</b>



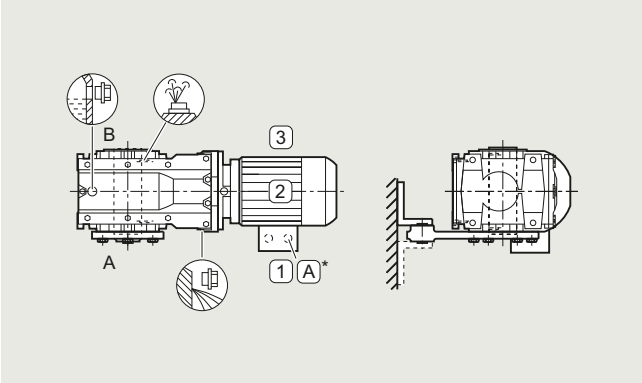
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35... -.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35... -.....-D...-Z	<b>D23</b>



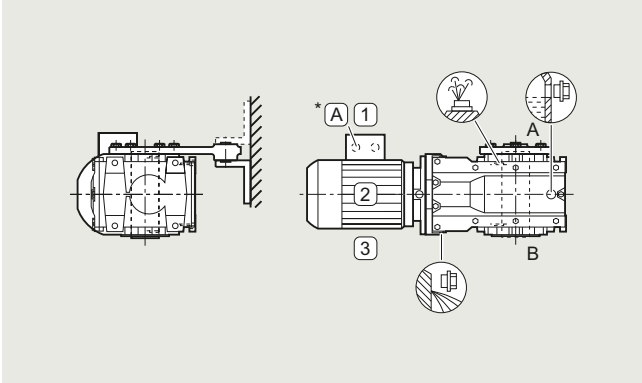
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35... -.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35... -.....-D...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35... -.....-D...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35... -.....-D...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35... -.....-D...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35... -.....-D...-Z	<b>D26</b>



10

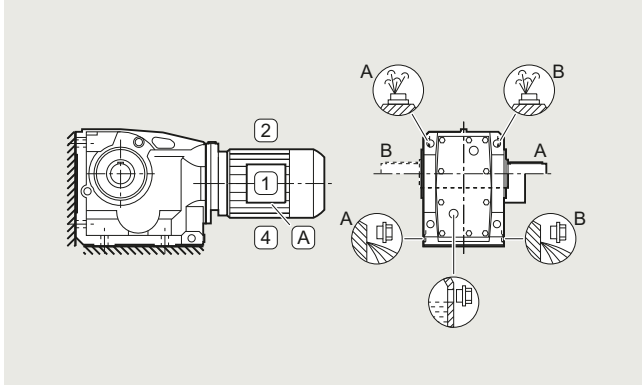
**Foot-mounted design**

**Bevel gearboxes K, sizes 39 to 189**

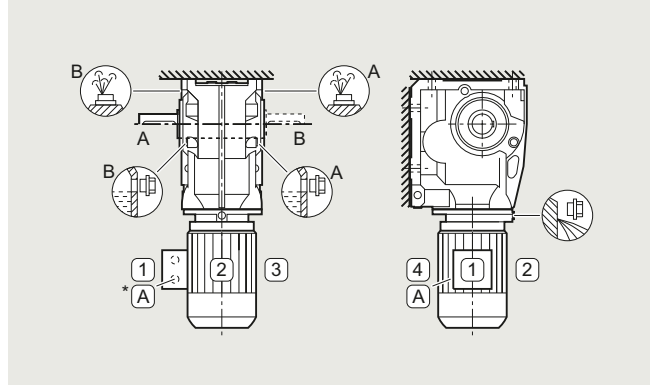
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

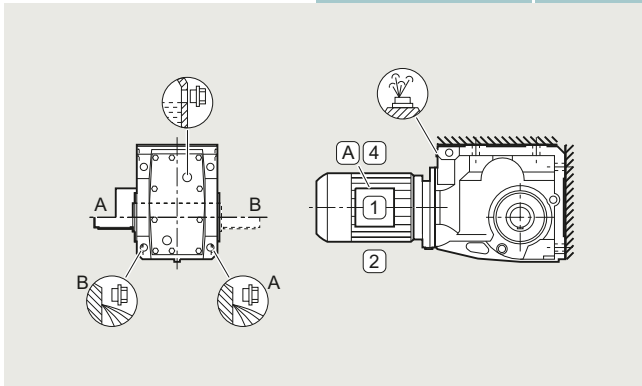
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35... -.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35... -.....-A...-Z	<b>D21</b>



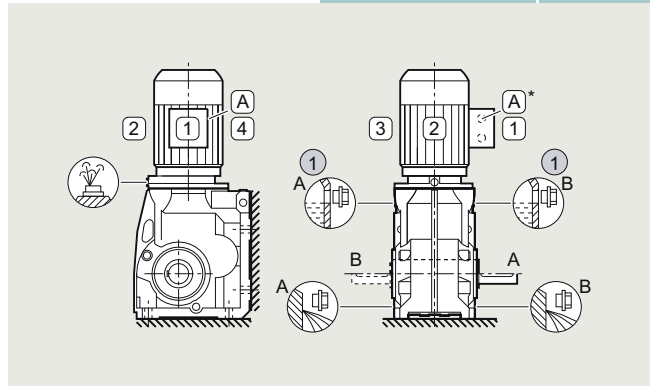
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35... -.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35... -.....-A...-Z	<b>D22</b>



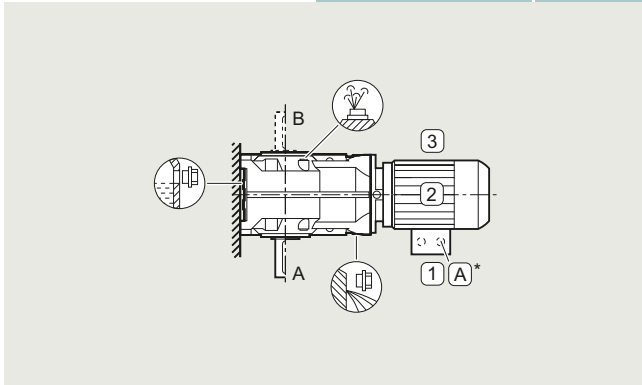
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35... -.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35... -.....-A...-Z	<b>D23</b>



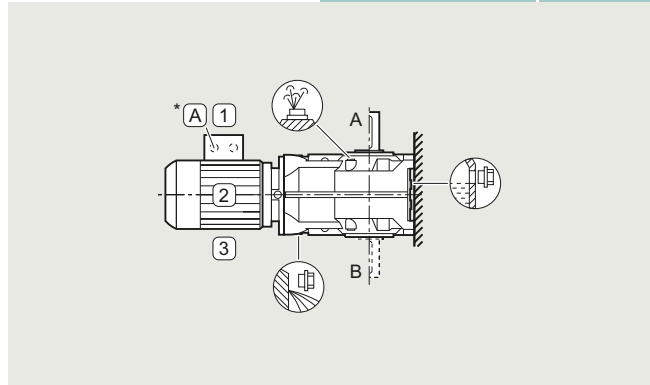
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35... -.....-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35... -.....-A...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35... -.....-A...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35... -.....-A...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35... -.....-A...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35... -.....-A...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Bevel gearboxes K

#### Housing flange design and flange-mounted design

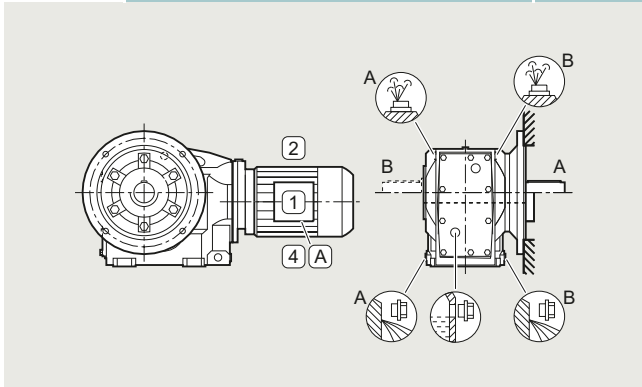
**Bevel gearboxes KAZ and K.F, sizes 39 to 189**

**Bevel gearboxes K.F with VLplus (G30) reinforced bearing systems, sizes 89 to 169**

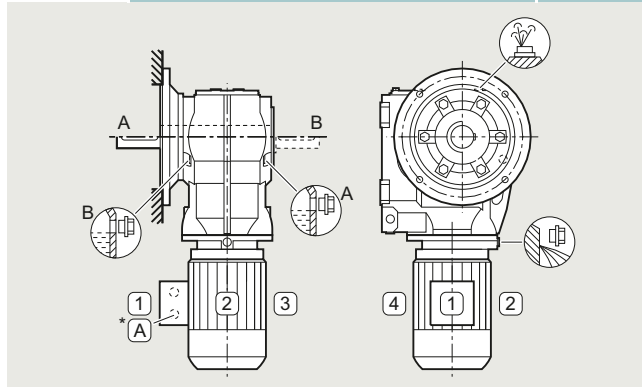
#### Oil valves

For an explanation of the symbols, see [page 10/3](#).

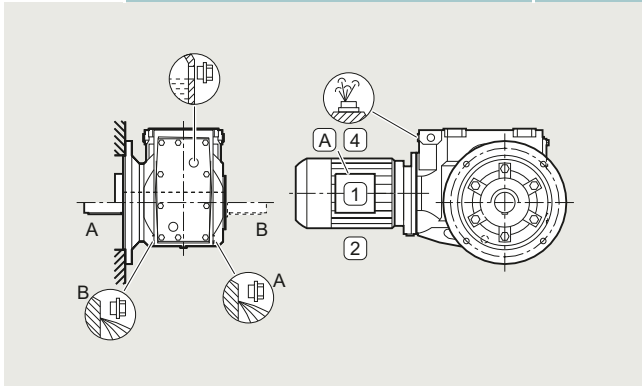
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D21</b>



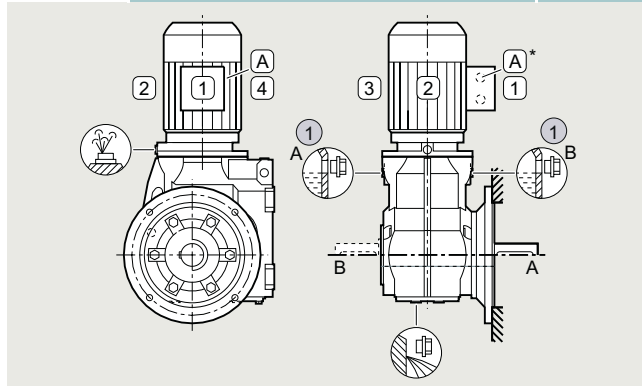
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D22</b>



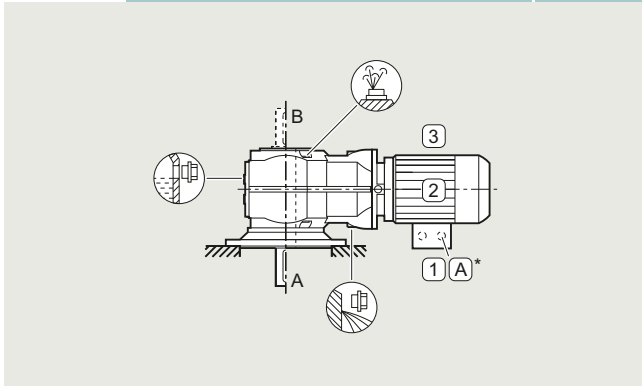
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D23</b>



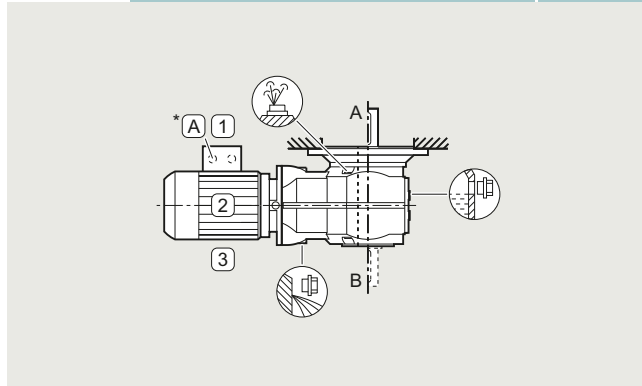
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D24</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D25</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D26</b>



10

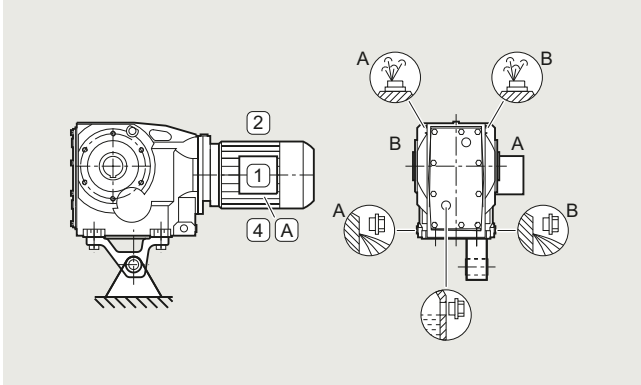
**Shaft-mounted design**

**Bevel gearboxes KAD, sizes 39 to 189**

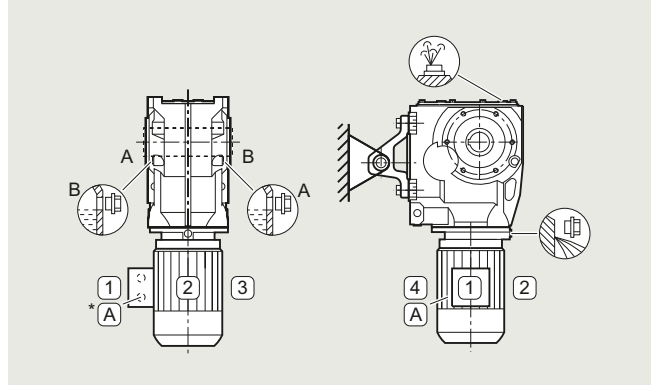
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

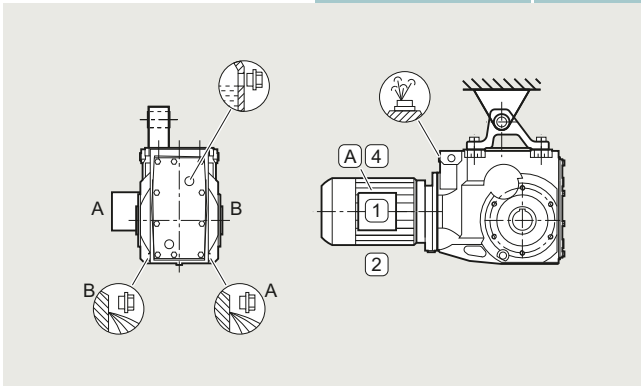
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-D...-Z	<b>D21</b>



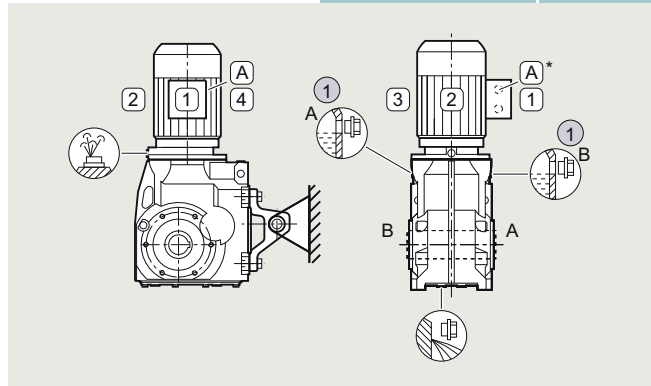
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-D...-Z	<b>D22</b>



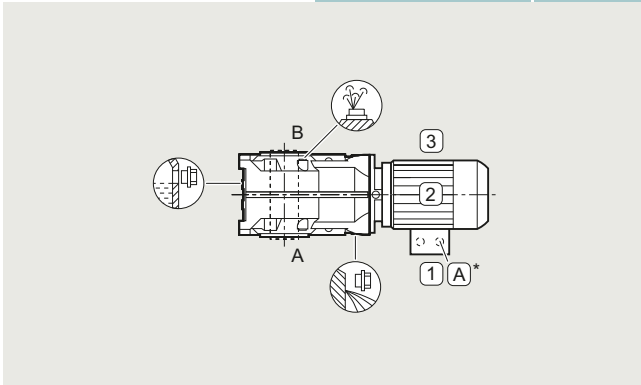
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-D...-Z	<b>D23</b>



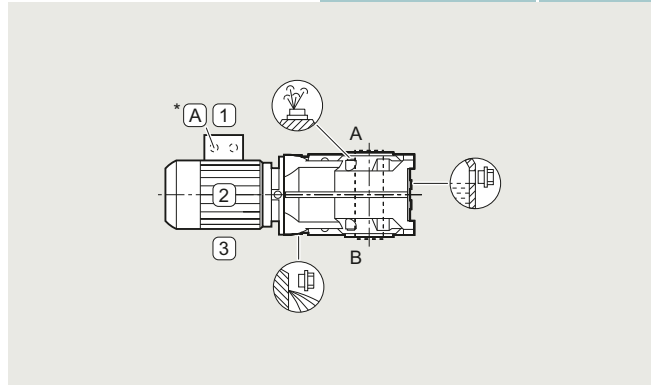
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-D...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-.....-D...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-.....-D...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ35...-.....-D...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ35...-.....-D...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Helical worm gearboxes

#### Shaft-mounted design

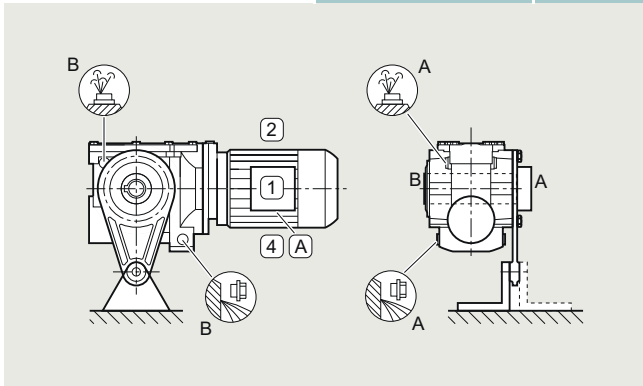
#### Helical worm gearboxes CAD, size 29

##### Oil valves

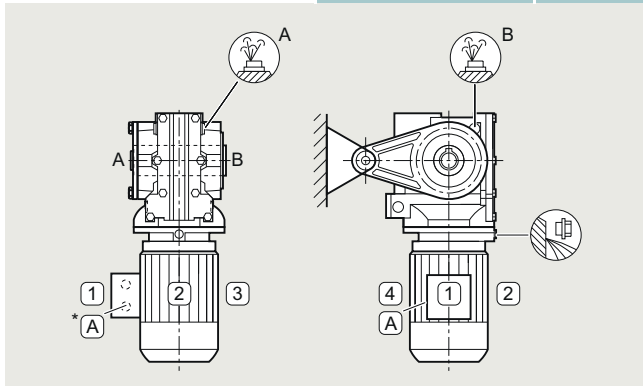
Sizes 29 are lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

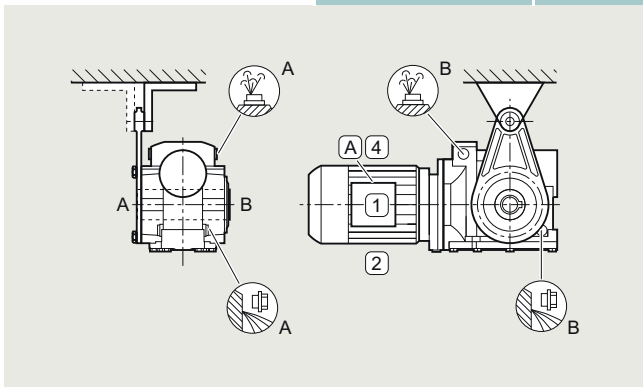
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3601-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3601-.....-D...-Z	<b>D21</b>



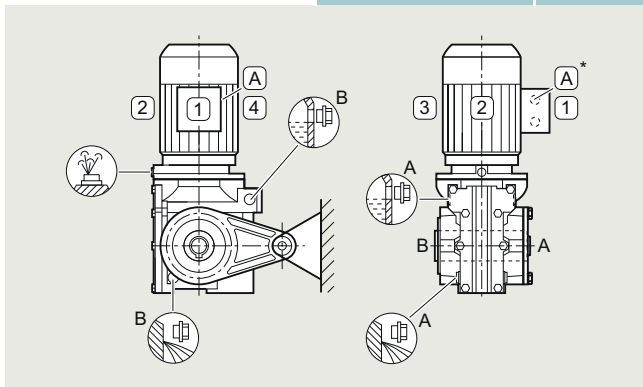
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3601-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3601-.....-D...-Z	<b>D22</b>



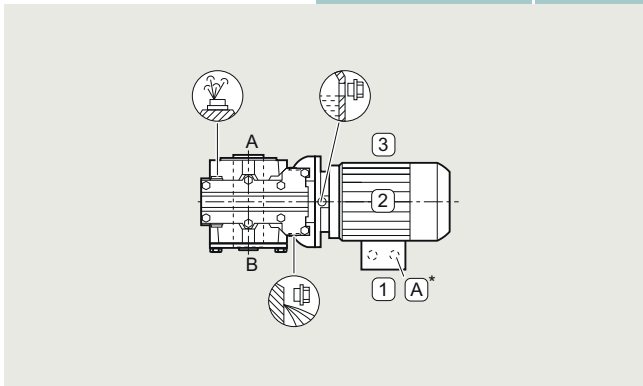
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3601-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3601-.....-D...-Z	<b>D23</b>



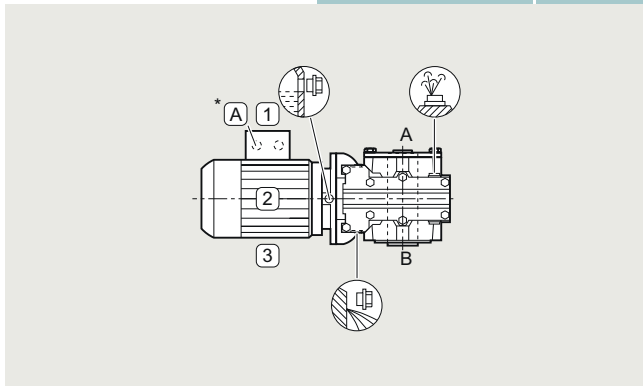
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3601-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3601-.....-D...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3601-.....-D...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3601-.....-D...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ3601-.....-D...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3601-.....-D...-Z	<b>D26</b>



10



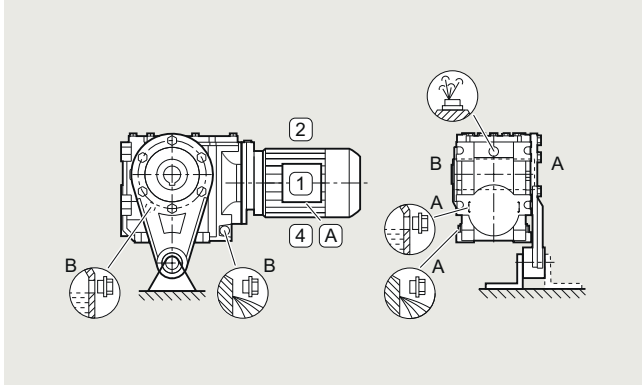
**Shaft-mounted design**

**Helical worm gearboxes CAD, size 39A**

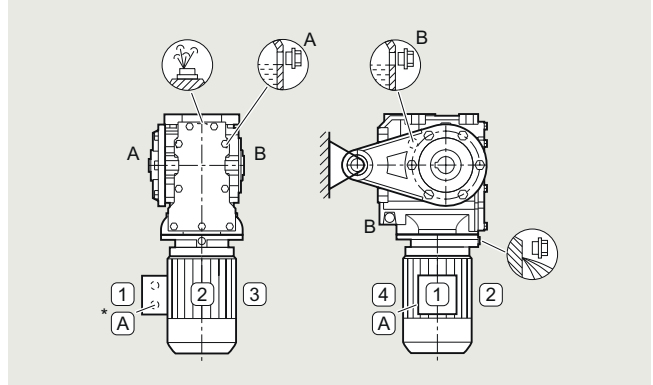
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

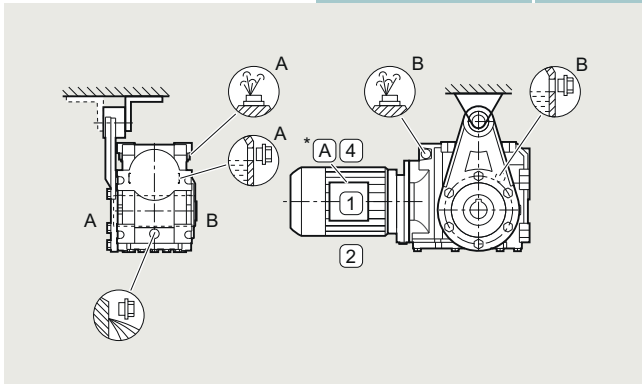
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3642-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3642-.....-D...-Z	<b>D21</b>



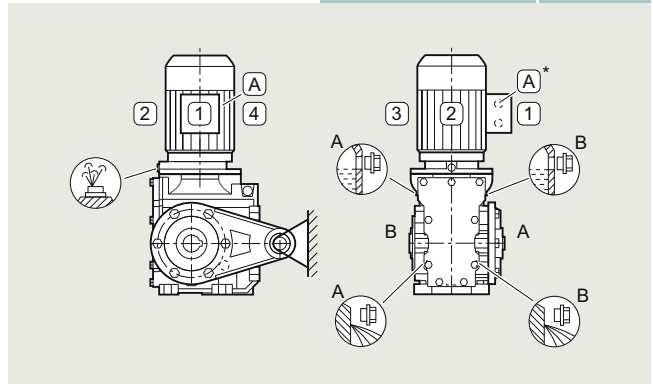
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3642-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3642-.....-D...-Z	<b>D22</b>



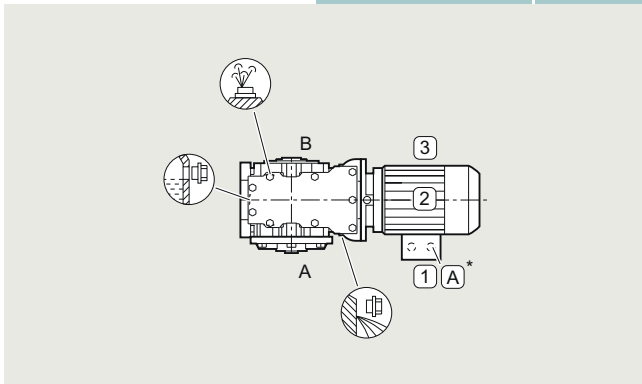
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3642-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3642-.....-D...-Z	<b>D23</b>



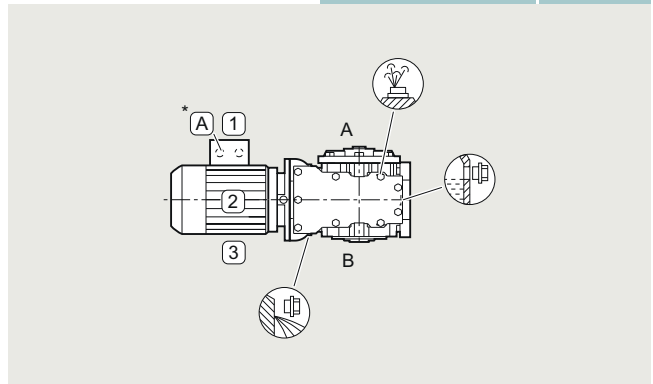
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3642-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3642-.....-D...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3642-.....-D...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3642-.....-D...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ3642-.....-D...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3642-.....-D...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Helical worm gearboxes

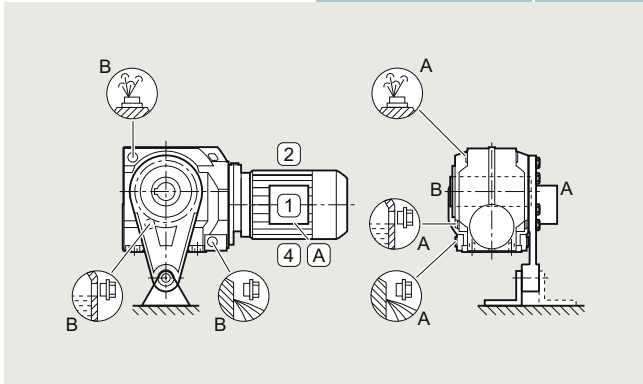
#### Shaft-mounted design

#### Helical worm gearboxes CAD, sizes 49 to 89

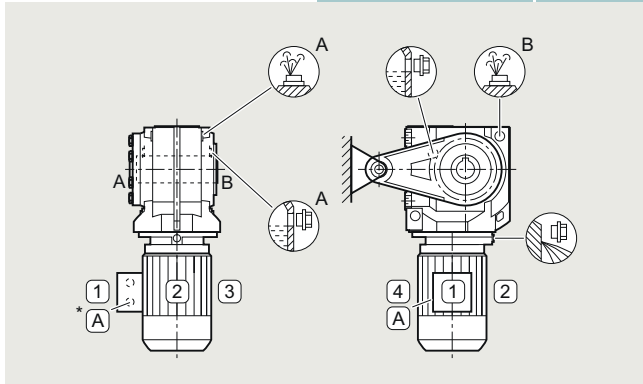
##### Oil valves

For an explanation of the symbols, see [page 10/3](#).

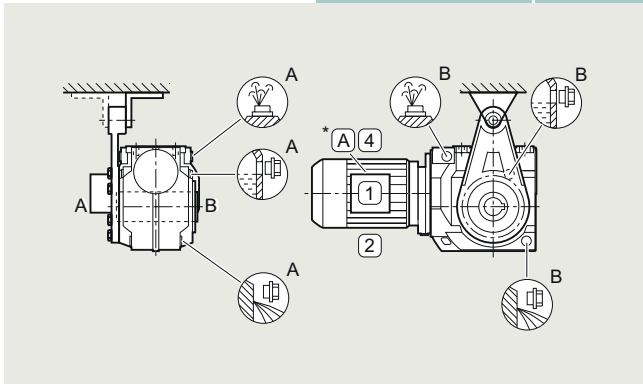
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ360.-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ360.-.....-D...-Z	<b>D21</b>



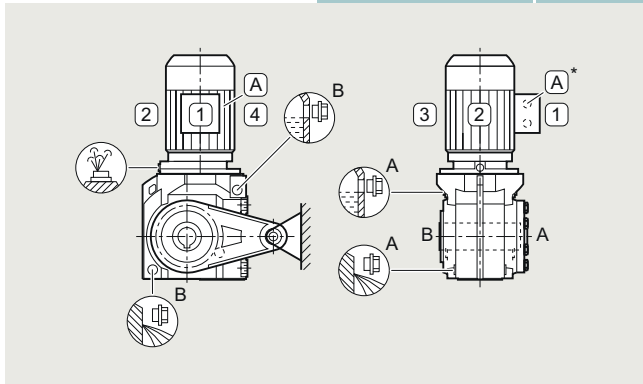
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ360.-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ360.-.....-D...-Z	<b>D22</b>



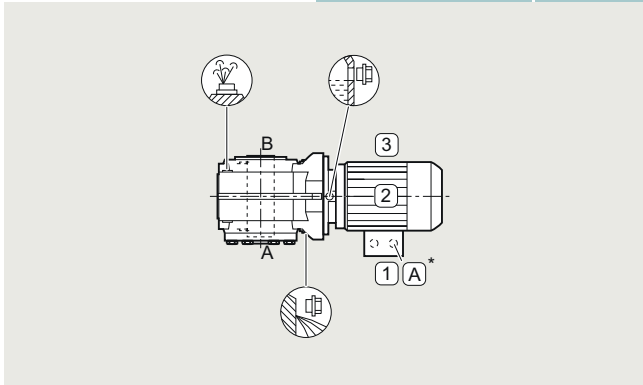
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ360.-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ360.-.....-D...-Z	<b>D23</b>



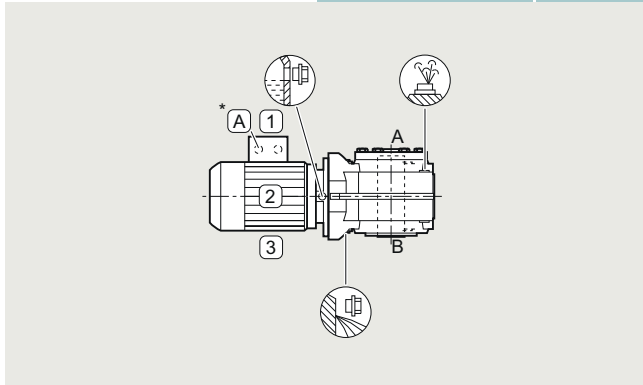
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ360.-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ360.-.....-D...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ360.-.....-D...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ360.-.....-D...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ360.-.....-D...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ360.-.....-D...-Z	<b>D26</b>



10

**Housing flange design and flange-mounted design**

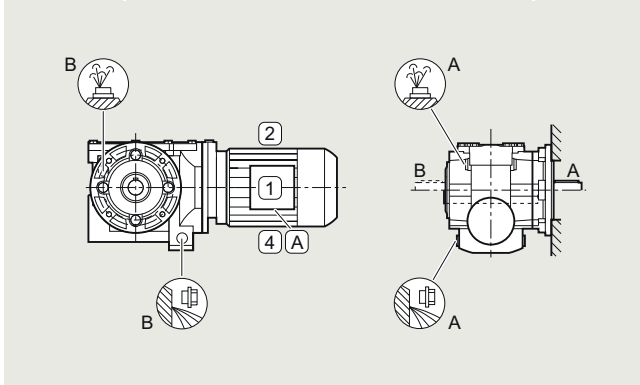
**Helical worm gearboxes C.Z and C.F, size 29**

**Oil valves**

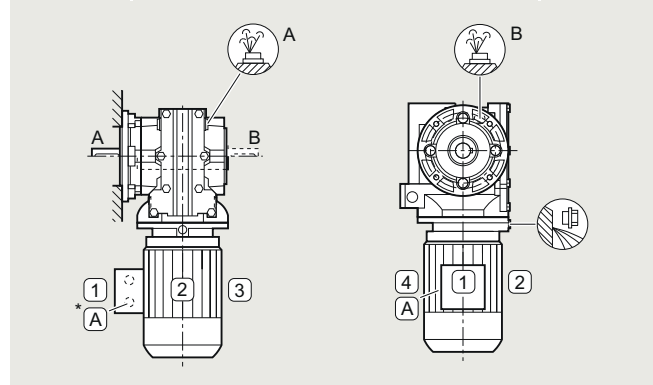
Sizes 29 are lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

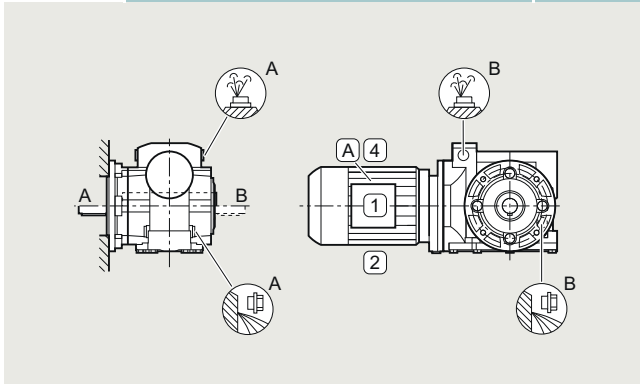
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D21</b>



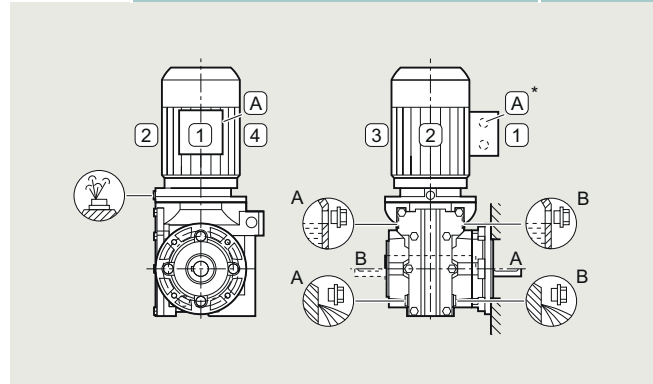
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D22</b>



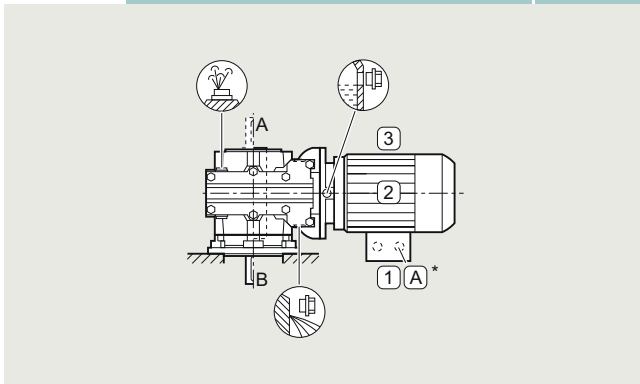
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D23</b>



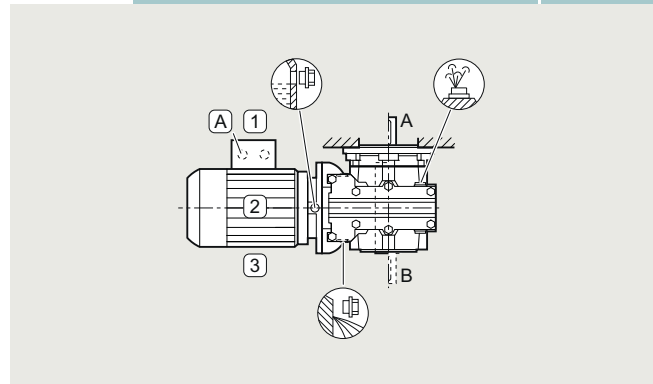
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D24</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D25</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Helical worm gearboxes

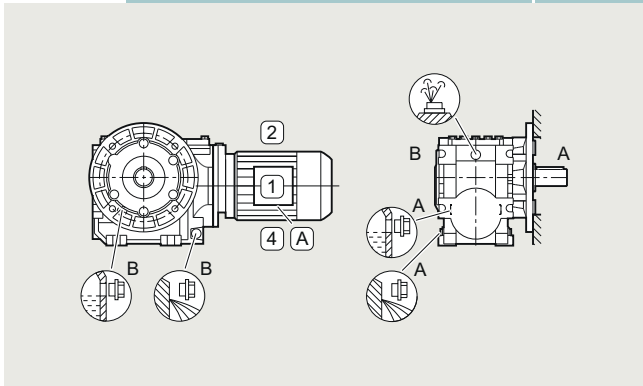
#### Housing flange design and flange-mounted design

##### Helical worm gearboxes C.Z and C.F, size 39A

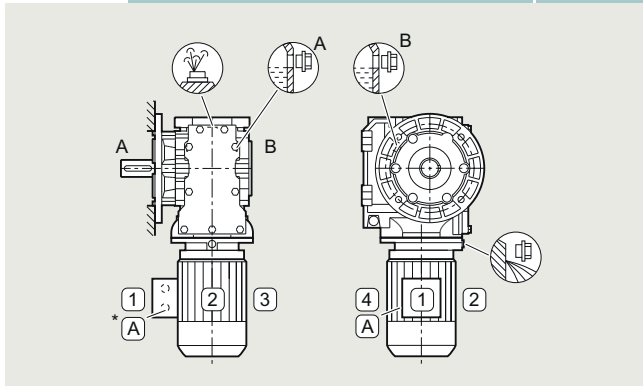
###### Oil valves

For an explanation of the symbols, see [page 10/3](#).

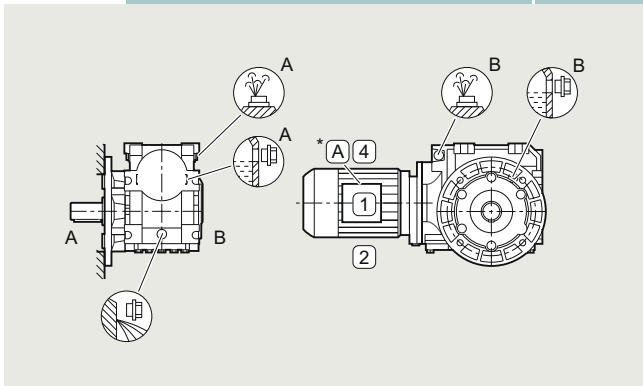
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D21</b>



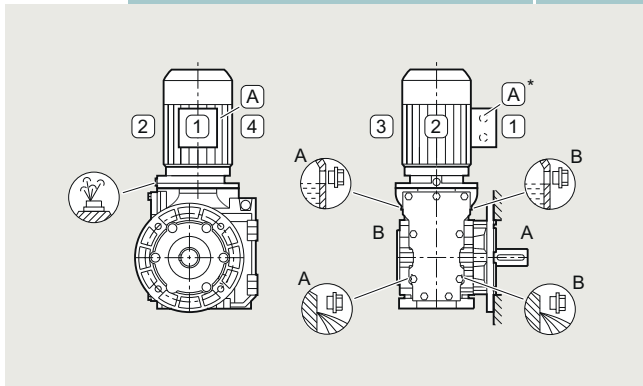
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D22</b>



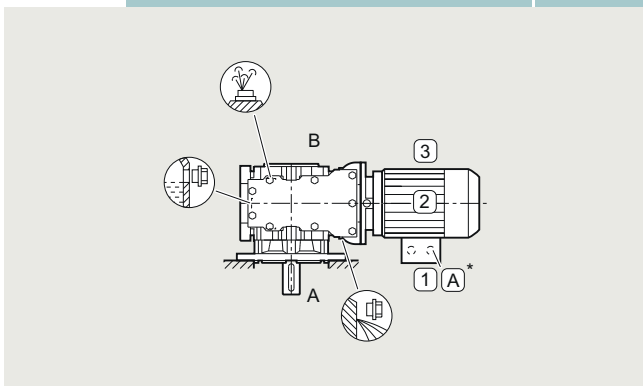
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D23</b>



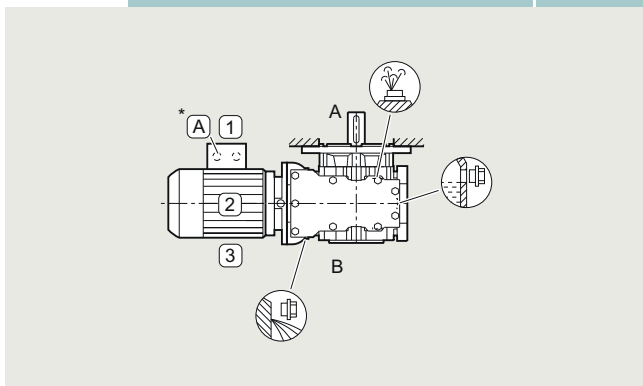
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D24</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D25</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D26</b>



10

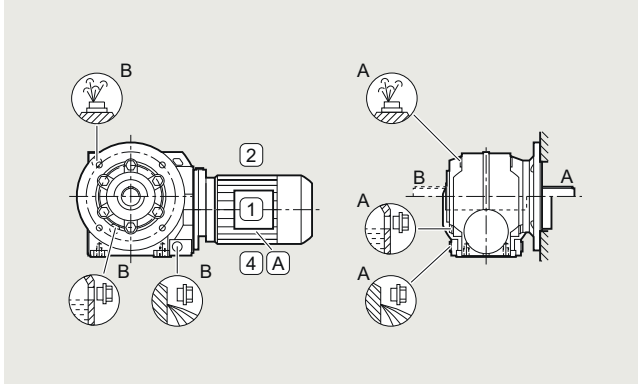
**Housing flange design and flange-mounted design**

**Helical worm gearboxes C.Z and C.F, sizes 49 to 89**

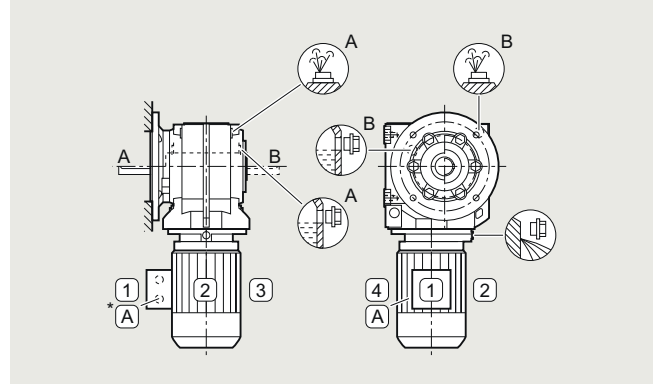
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

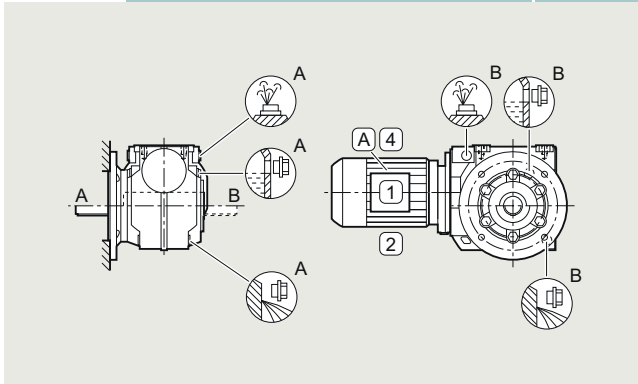
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D21</b>



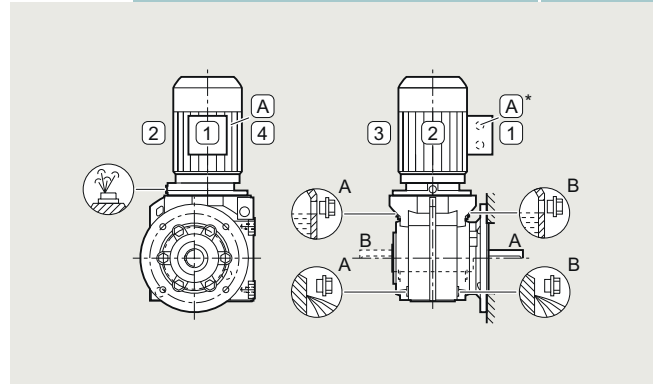
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D22</b>



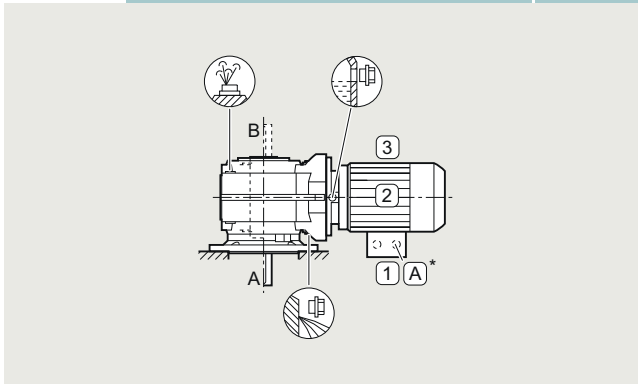
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D23</b>



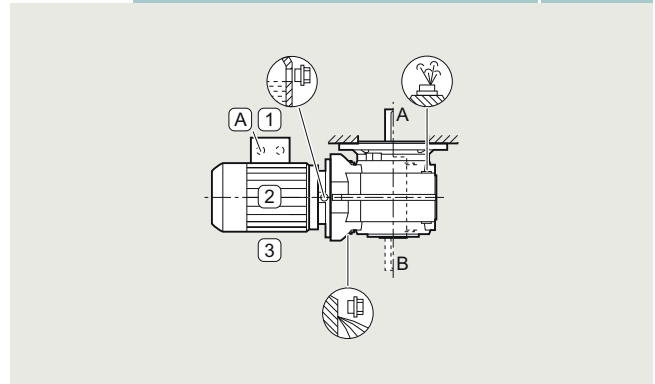
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Helical worm gearboxes

#### Foot-mounted design

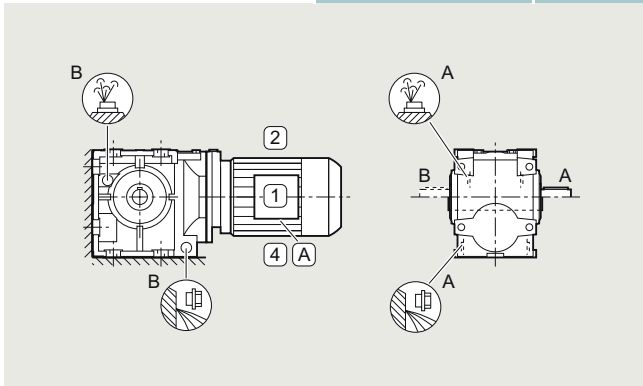
#### Helical worm gearboxes C, size 29

##### Oil valves

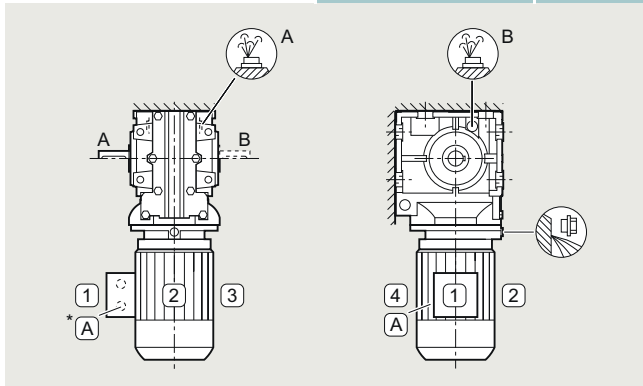
Sizes 29 are lubricated for life.

For an explanation of the symbols, see [page 10/3](#).

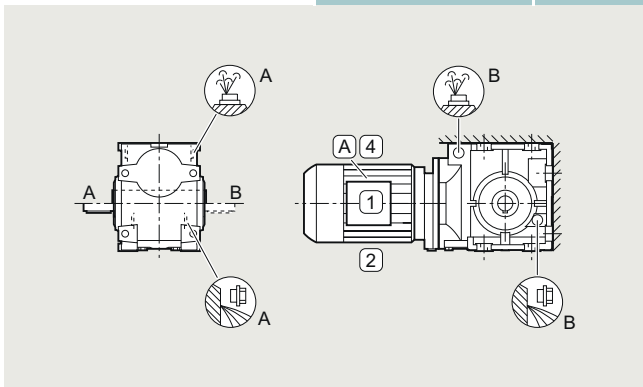
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3601-.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3601-.....-A...-Z	<b>D21</b>



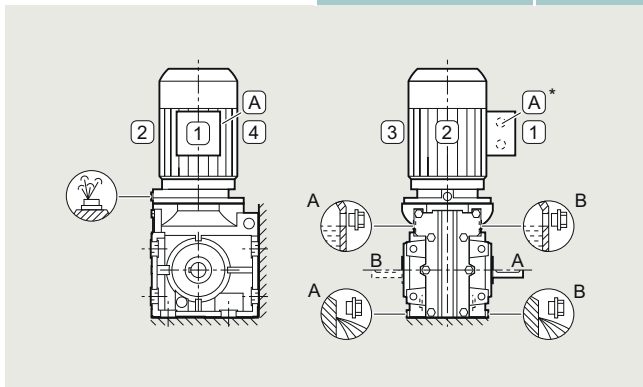
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3601-.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3601-.....-A...-Z	<b>D22</b>



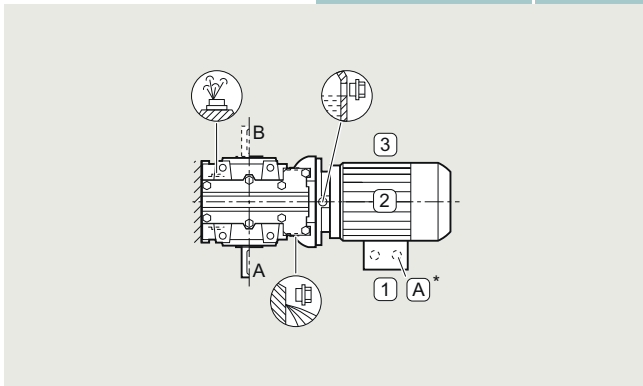
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3601-.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3601-.....-A...-Z	<b>D23</b>



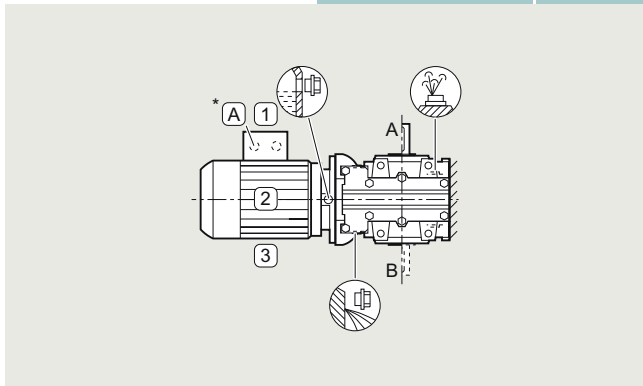
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3601-.....-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3601-.....-A...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3601-.....-A...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3601-.....-A...-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ3601-.....-A...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3601-.....-A...-Z	<b>D26</b>



10

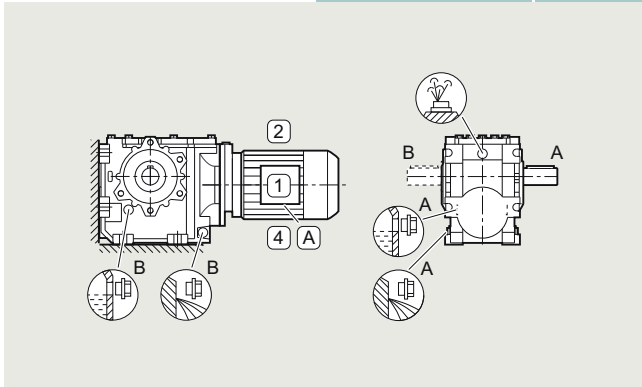
**Foot-mounted design**

**Helical worm gearboxes C, size 39A**

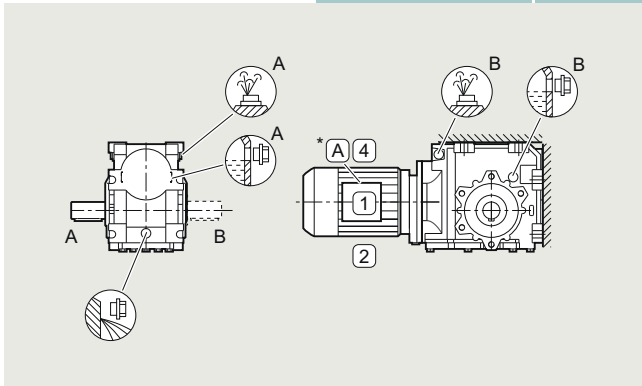
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

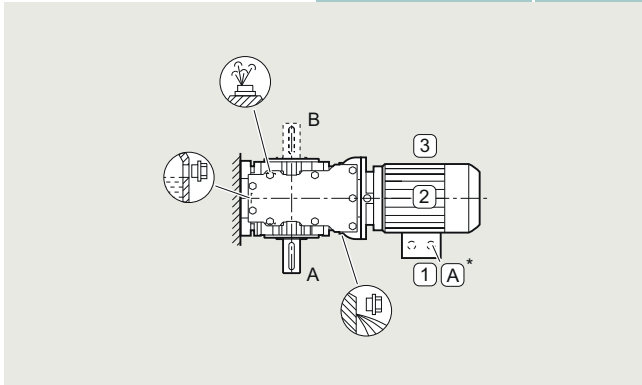
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3642-.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3642-.....-A...-Z	<b>D21</b>



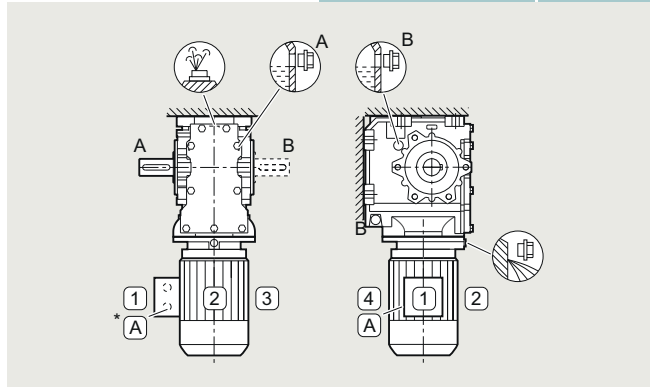
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3642-.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3642-.....-A...-Z	<b>D23</b>



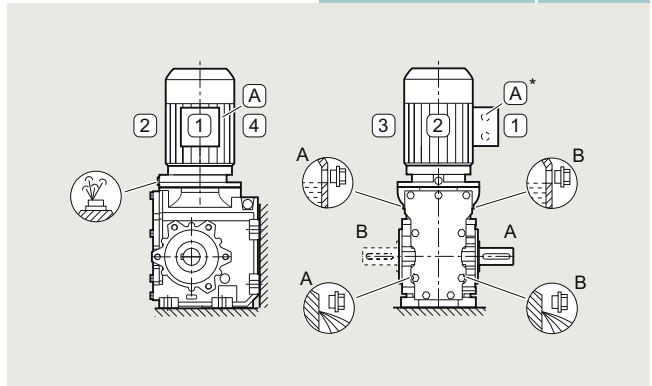
Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3642-.....-A...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3642-.....-A...-Z	<b>D25</b>



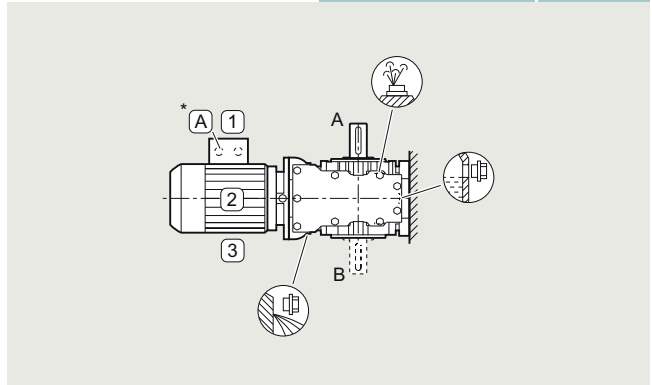
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3642-.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3642-.....-A...-Z	<b>D22</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3642-.....-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3642-.....-A...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ3642-.....-A...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3642-.....-A...-Z	<b>D26</b>



# Gearbox options

## Mounting position

### Helical worm gearboxes

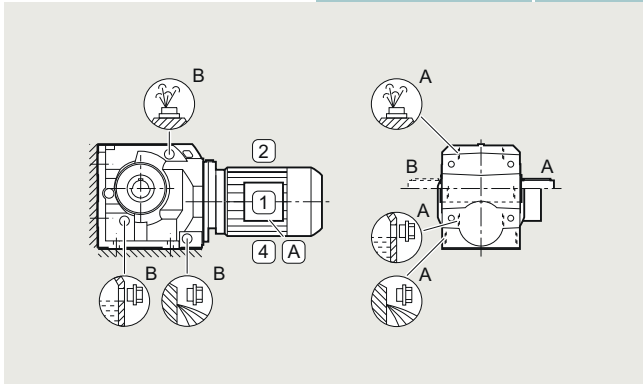
#### Foot-mounted design

#### Helical worm gearboxes C, sizes 49 to 89

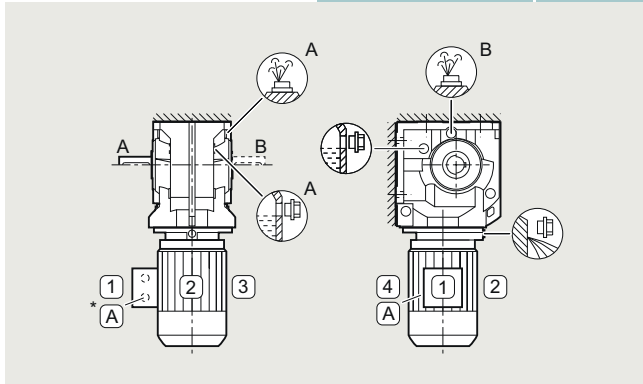
##### Oil valves

For an explanation of the symbols, see [page 10/3](#).

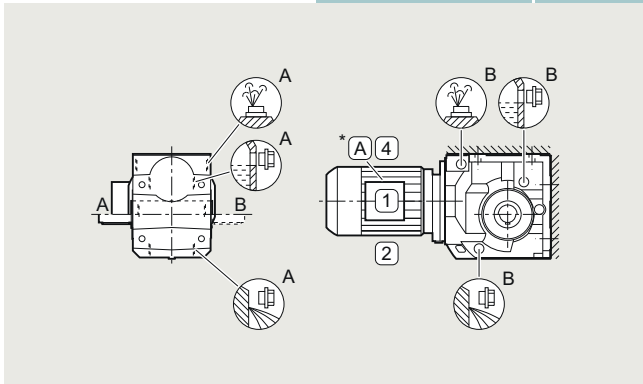
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ360.-...-.A.-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ360.-...-.A.-Z	<b>D21</b>



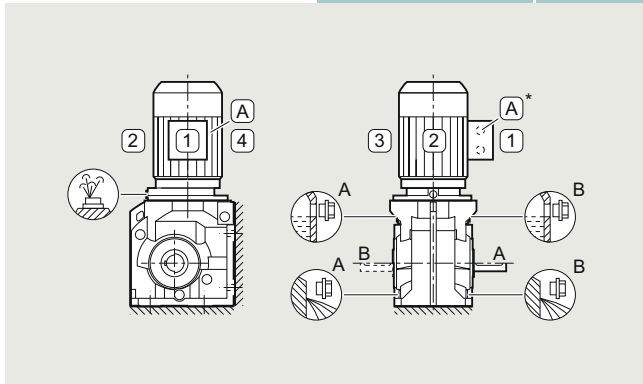
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ360.-...-.A.-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ360.-...-.A.-Z	<b>D22</b>



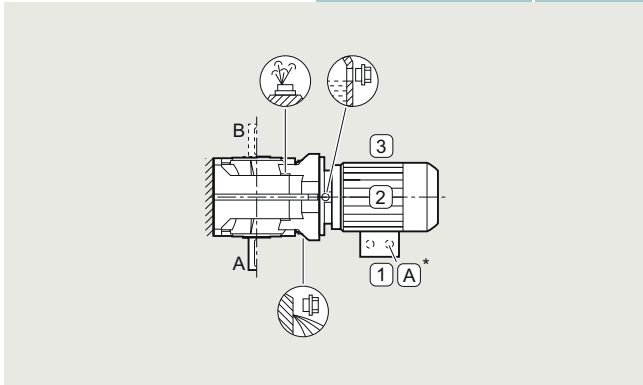
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ360.-...-.A.-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ360.-...-.A.-Z	<b>D23</b>



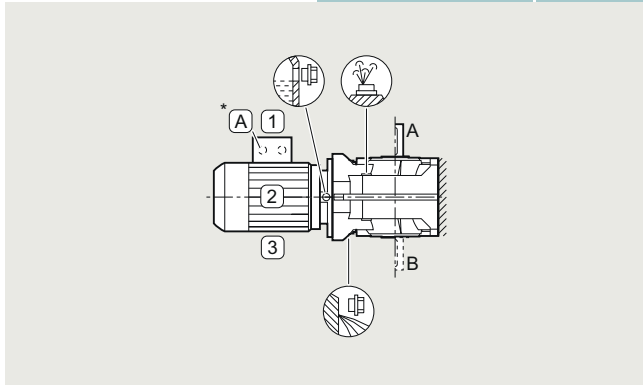
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ360.-...-.A.-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ360.-...-.A.-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ360.-...-.A.-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ360.-...-.A.-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ360.-...-.A.-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ360.-...-.A.-Z	<b>D26</b>



10



**Foot-mounted, flange-mounted, shaft-mounted and housing flange designs**

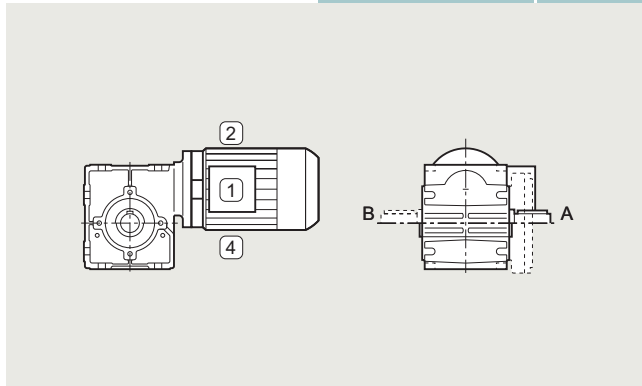
**Worm gearboxes S., sizes 09 to 29**

**Oil valves**

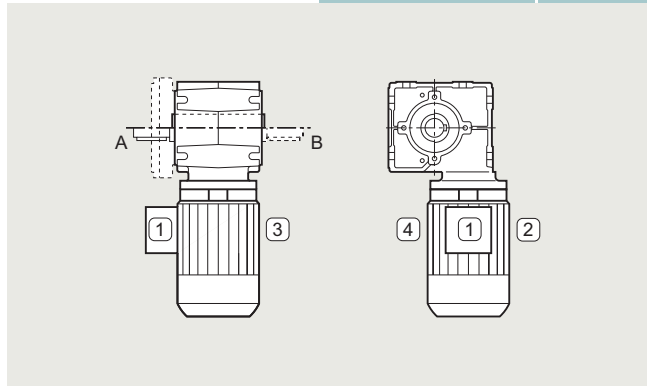
The worm gearboxes S are lubricated for life.  
For an explanation of the symbols, see [page 10/3](#).

**M0** is a universal mounting position in which the geared motor can be installed in any position.

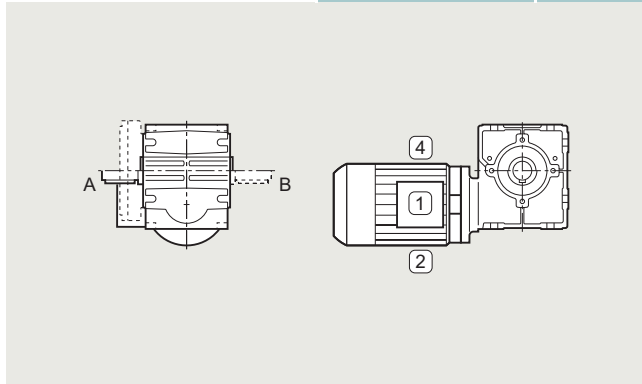
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ373.-.....-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ373.-.....-Z	<b>D21</b>



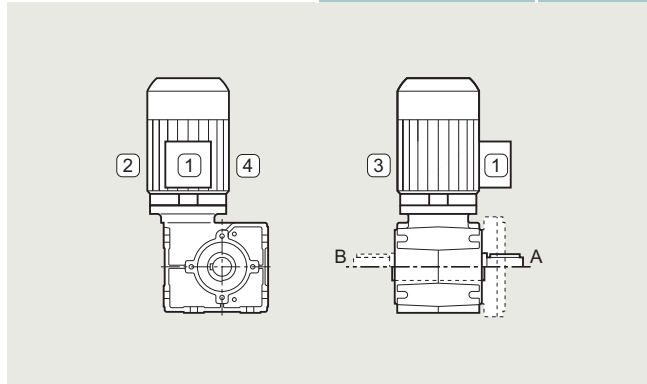
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ373.-.....-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ373.-.....-Z	<b>D22</b>



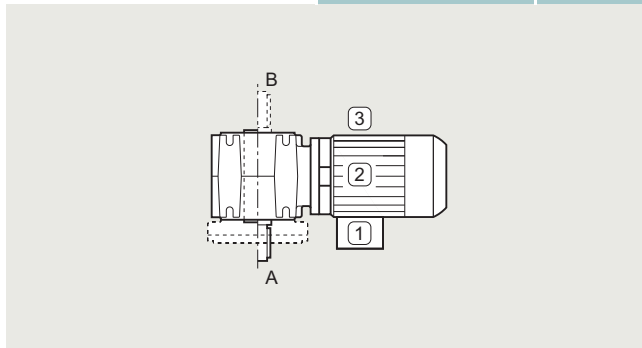
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ373.-.....-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ373.-.....-Z	<b>D23</b>



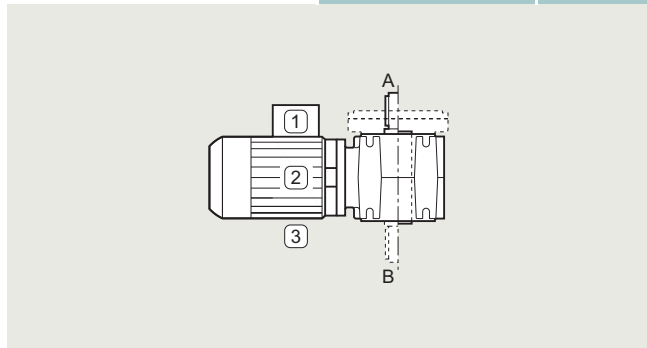
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ373.-.....-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ373.-.....-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ373.-.....-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ373.-.....-Z	<b>D25</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6 output side A</b>	2KJ373.-.....-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ373.-.....-Z	<b>D26</b>



## Gearbox options

### Mounting position

#### Electric-monorail geared motors for light-load applications

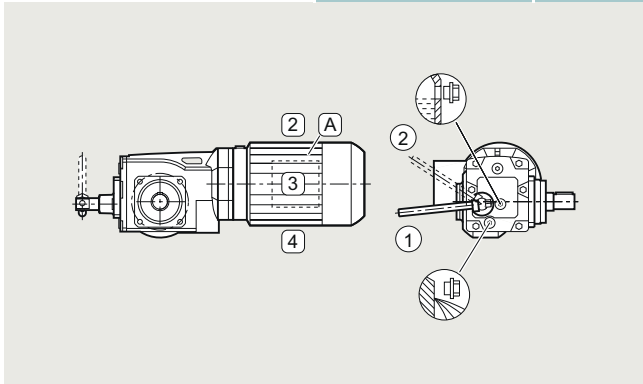
#### Foot-mounted design and housing flange design

#### Electric-monorail geared motor BH., sizes 29 and 39

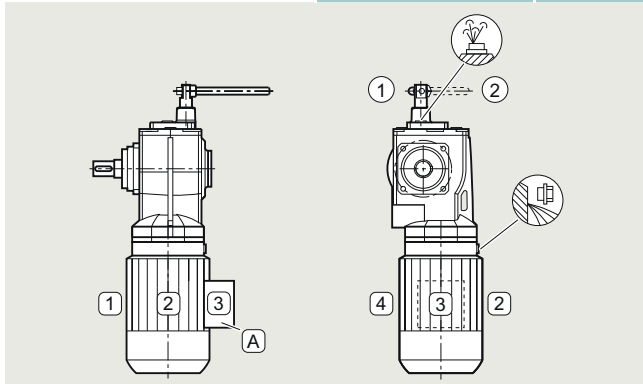
#### Oil valves

For an explanation of the symbols, see [page 10/3](#).

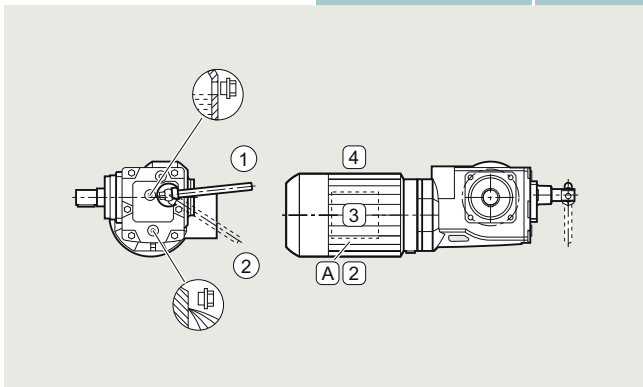
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ380.-.....-Z	<b>D11</b>



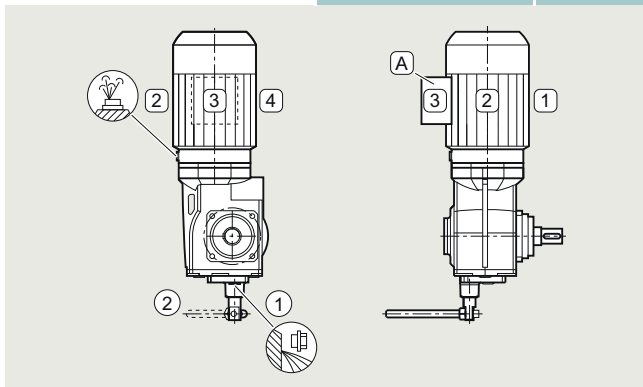
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ380.-.....-Z	<b>D12</b>



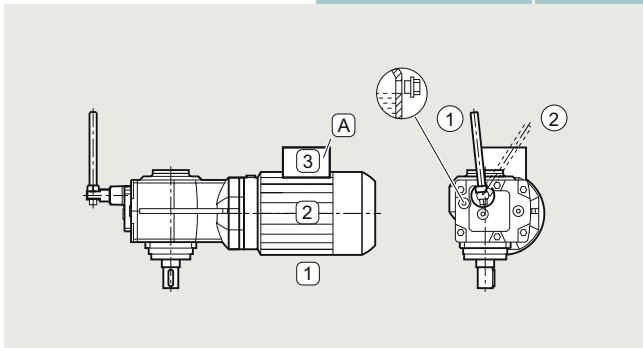
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ380.-.....-Z	<b>D13</b>



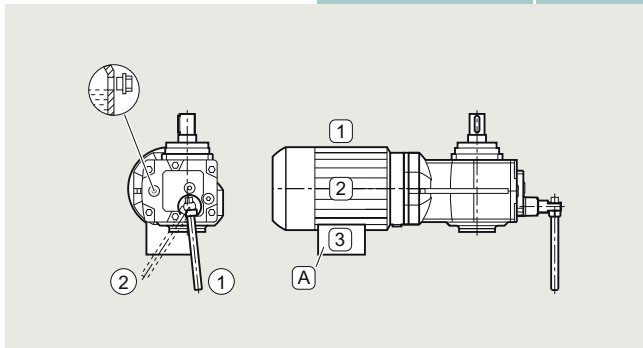
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ380.-.....-Z	<b>D14</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ380.-.....-Z	<b>D15</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ380.-.....-Z	<b>D16</b>



10

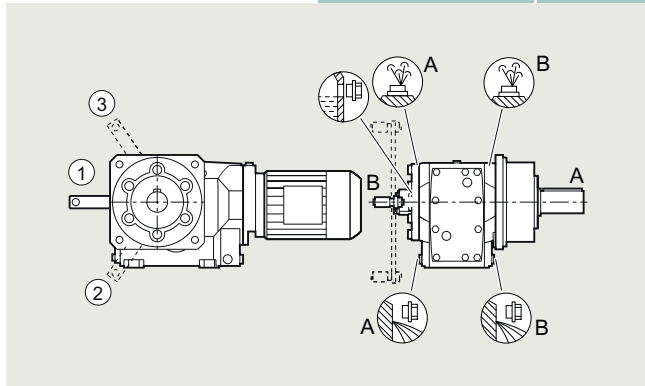
**Flange-mounted design**

**Electric-monorail geared motor KH., sizes 49 to 79**

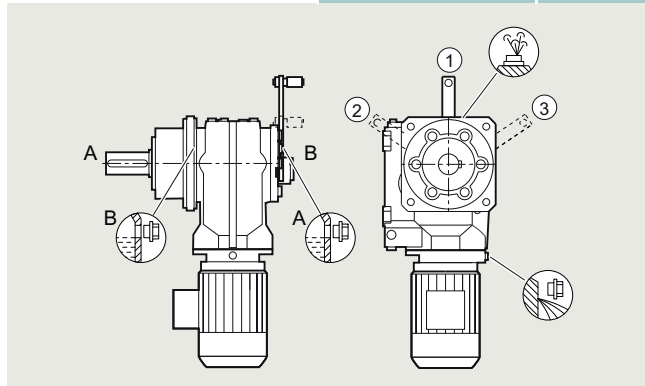
**Oil valves**

For an explanation of the symbols, see [page 10/3](#).

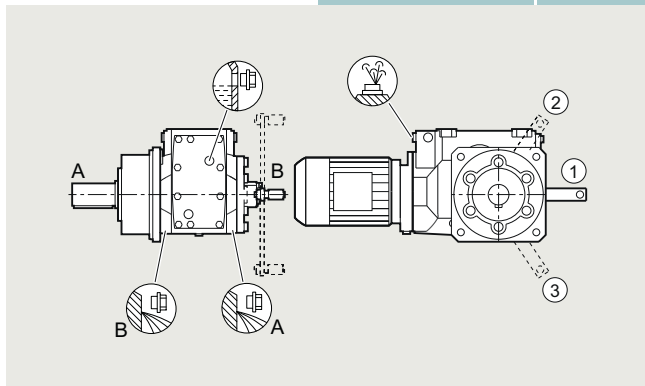
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ380.-.....-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ380.-.....-Z	<b>D21</b>



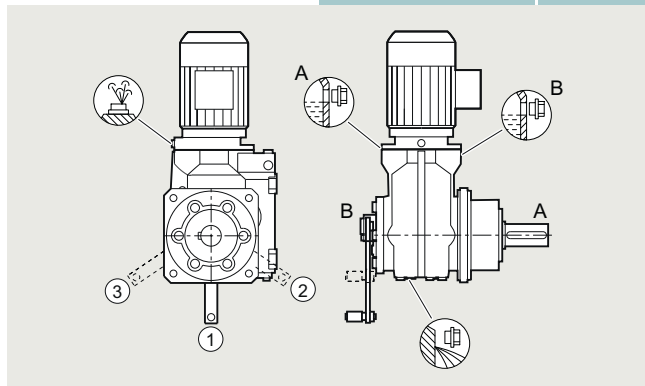
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ380.-.....-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ380.-.....-Z	<b>D22</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ380.-.....-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ380.-.....-Z	<b>D23</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ380.-.....-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ380.-.....-Z	<b>D24</b>



## Gearbox options

### Mounting position

#### Tandem gearboxes

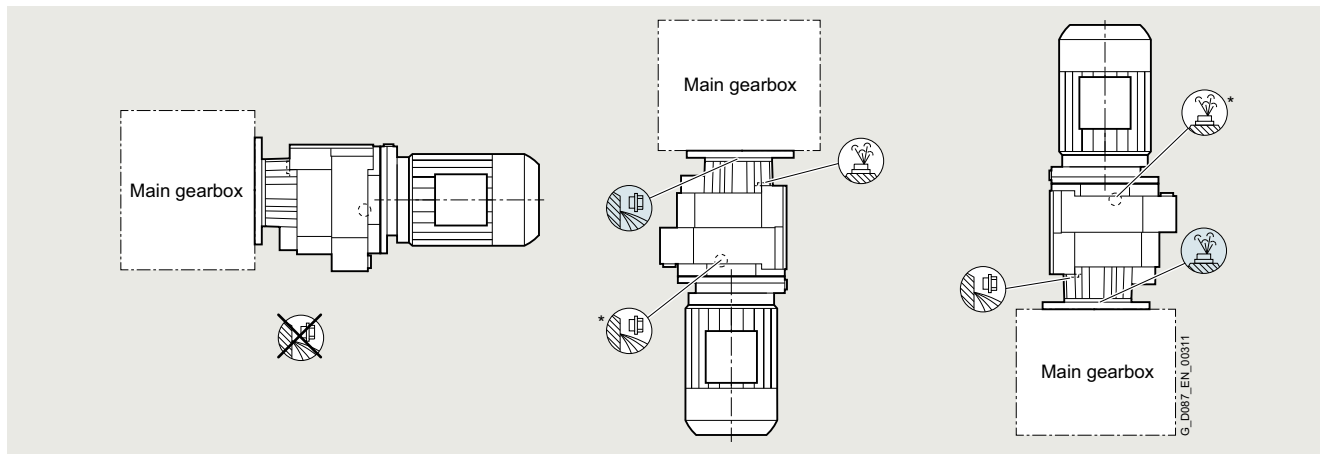
##### Overview

The tandem gearbox is mounted in the same position as the main gearbox. The diagrams below are only designed to show the position of the oil control valves of the 2nd gearbox.

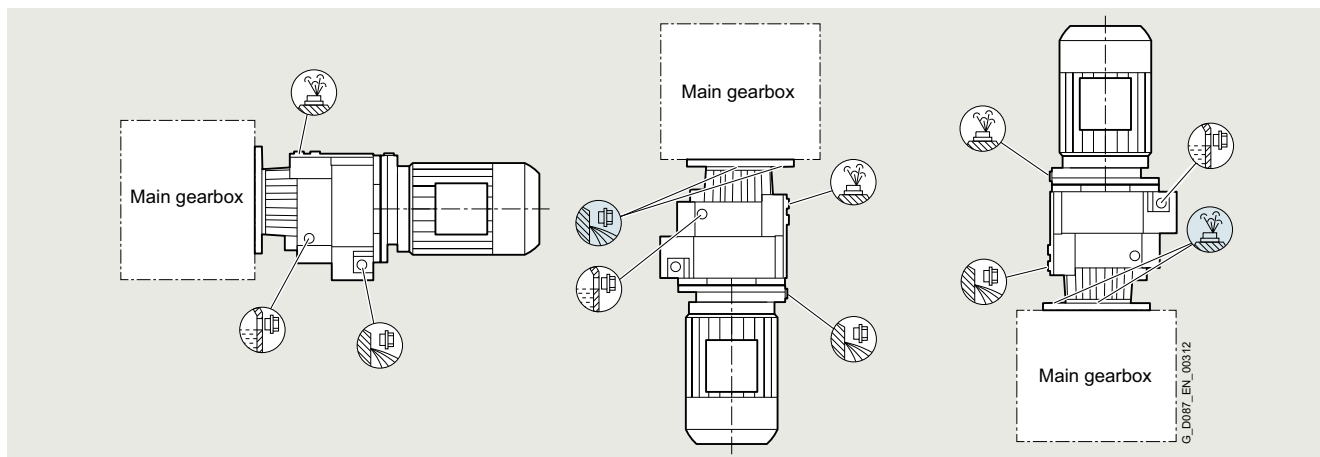
##### Note:

In a horizontal operating position, the convex face of the housing of the 2nd gearbox generally points vertically downwards. For an explanation of the symbols, see [page 10/3](#).

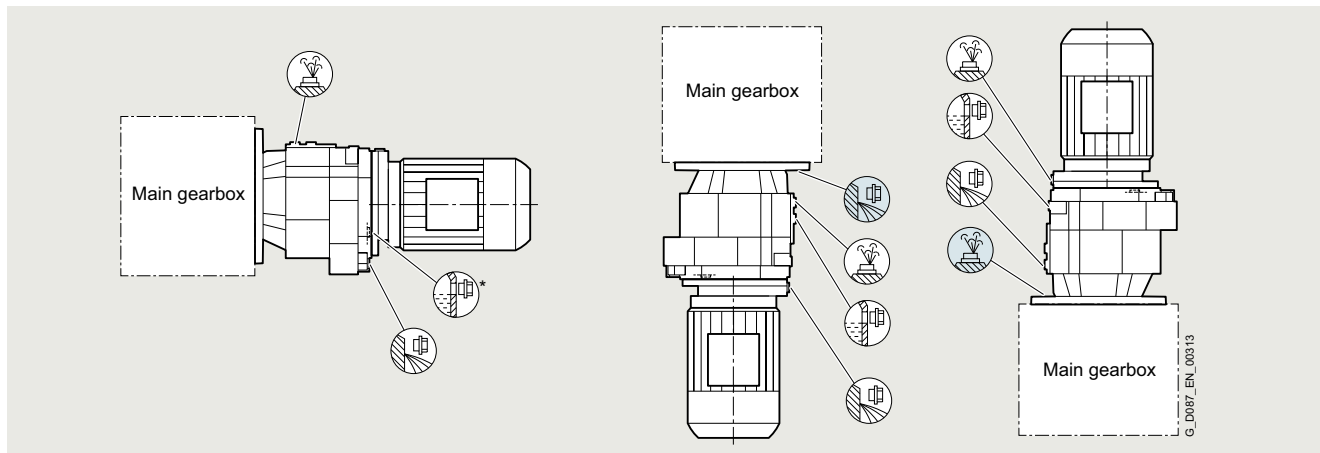
##### Tandem gearboxes: 2nd gearbox size 19



##### Tandem gearboxes: 2nd gearbox size 39



##### Tandem gearboxes: 2nd gearbox sizes 49 to 69



**Overview**

Apart from the standard types of construction, geared motors can also be supplied in different inclined positions.

Note:

The special mounting positions are not available for the electric-monorail geared motors.

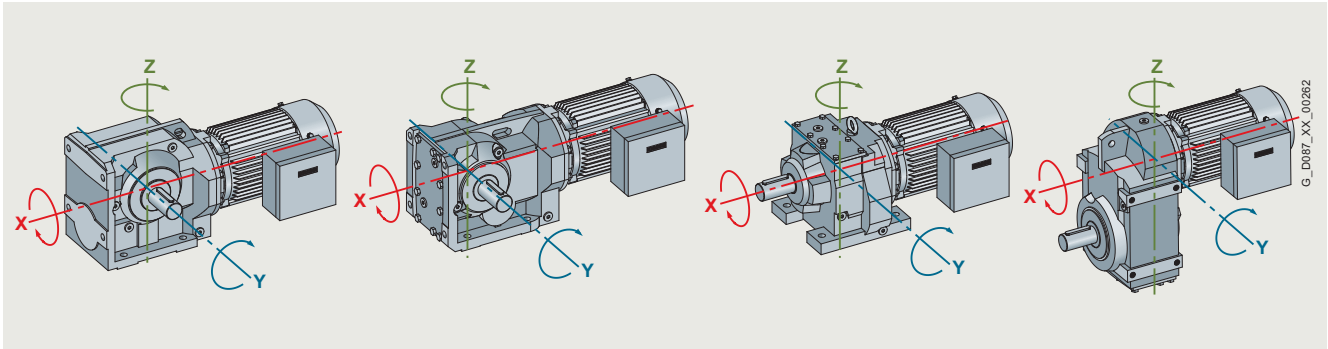


Fig. 10/6 Axes of rotation of the geared motors

Special mounting position	Additional identification code -Z with order code 2KJ3...-.....-Z	Order code	Special mounting position	Additional identification code -Z with order code 2KJ3...-.....-Z	Order code	Special mounting position	Additional identification code -Z with order code 2KJ3...-.....-Z	Order code
<b>Y axis</b>			<b>X axis</b>			<b>Z axis</b>		
Rotation angle 5 °		<b>E01</b>	Rotation angle 5 °		<b>E21</b>	Rotation angle 5 °		<b>E41</b>
Rotation angle 10 °		<b>E02</b>	Rotation angle 10 °		<b>E22</b>	Rotation angle 10 °		<b>E42</b>
Rotation angle 15 °		<b>E03</b>	Rotation angle 15 °		<b>E23</b>	Rotation angle 15 °		<b>E43</b>
Rotation angle 20 °		<b>E04</b>	Rotation angle 20 °		<b>E24</b>	Rotation angle 20 °		<b>E44</b>
Rotation angle 25 °		<b>E05</b>	Rotation angle 25 °		<b>E25</b>	Rotation angle 25 °		<b>E45</b>
Rotation angle 30 °		<b>E06</b>	Rotation angle 30 °		<b>E26</b>	Rotation angle 30 °		<b>E46</b>
Rotation angle 35 °		<b>E07</b>	Rotation angle 35 °		<b>E27</b>	Rotation angle 35 °		<b>E47</b>
Rotation angle 40 °		<b>E08</b>	Rotation angle 40 °		<b>E28</b>	Rotation angle 40 °		<b>E48</b>
Rotation angle 45 °		<b>E09</b>	Rotation angle 45 °		<b>E29</b>	Rotation angle 45 °		<b>E49</b>
Rotation angle 50 °		<b>E10</b>	Rotation angle 50 °		<b>E30</b>	Rotation angle 50 °		<b>E50</b>
Rotation angle 55 °		<b>E11</b>	Rotation angle 55 °		<b>E31</b>	Rotation angle 55 °		<b>E51</b>
Rotation angle 60 °		<b>E12</b>	Rotation angle 60 °		<b>E32</b>	Rotation angle 60 °		<b>E52</b>
Rotation angle 65 °		<b>E13</b>	Rotation angle 65 °		<b>E33</b>	Rotation angle 65 °		<b>E53</b>
Rotation angle 70 °		<b>E14</b>	Rotation angle 70 °		<b>E34</b>	Rotation angle 70 °		<b>E54</b>
Rotation angle 75 °		<b>E15</b>	Rotation angle 75 °		<b>E35</b>	Rotation angle 75 °		<b>E55</b>
Rotation angle 80 °		<b>E16</b>	Rotation angle 80 °		<b>E36</b>	Rotation angle 80 °		<b>E56</b>
Rotation angle 85 °		<b>E17</b>	Rotation angle 85 °		<b>E37</b>	Rotation angle 85 °		<b>E57</b>

# Gearbox options

## Mounting

### Mounting types

#### Overview

Mounting types	Possible for the following geared motors	Gearbox type	14th position of the Article No. 2KJ31... -...-Z	Example
<b>Foot-mounted design</b>	Helical geared motor, 2-stage	<b>Z</b>	2KJ31... -...-Z	
	Helical geared motor, 3-stage	<b>D</b>	2KJ32... -...-Z	
	Helical geared motor, 1-stage	<b>E</b>	2KJ30... -...-Z	
	Parallel shaft geared motor, 2-stage	<b>FZ</b>	2KJ33... -...-Z	
	Parallel shaft geared motor, 3-stage	<b>FD</b>	2KJ34... -...-Z	
	Bevel geared motor, 2-stage	<b>B</b>	2KJ35... -...-Z	
	Bevel geared motor, 3-stage	<b>K</b>	2KJ35... -...-Z	
	Helical worm geared motor, 2-stage	<b>C</b>	2KJ36... -...-Z	
	Worm geared motor, 1-stage	<b>S</b>	2KJ37... -...-Z	
	Electric-monorail geared motor, light-load applications	<b>BH</b>	2KJ38... -...-Z	
<b>Foot/flange-mounted design</b>	Helical geared motor, 2-stage (only for sizes 29 to 89)	<b>ZB</b>	2KJ31... -...-Z	
	Helical geared motor, 3-stage (only for sizes 29 to 89)	<b>DB</b>	2KJ32... -...-Z	
<b>Flange-mounted design (A type)</b>	Helical geared motor, 2-stage	<b>ZF</b>	2KJ31... -...-Z	
	Helical geared motor, 3-stage	<b>DF</b>	2KJ32... -...-Z	
	Helical geared motor, 1-stage	<b>EF</b>	2KJ30... -...-Z	
	Parallel shaft geared motor, 2-stage	<b>FZF</b>	2KJ33... -...-Z	
	Parallel shaft geared motor, 3-stage	<b>DFD</b>	2KJ34... -...-Z	
	Bevel geared motor, 2-stage	<b>BF</b>	2KJ35... -...-Z	
	Bevel geared motor, 3-stage	<b>KF</b>	2KJ35... -...-Z	
	Helical worm geared motor, 2-stage	<b>CF</b>	2KJ36... -...-Z	
	Worm geared motor, 1-stage	<b>SF</b>	2KJ37... -...-Z	
	Electric-monorail geared motor, heavy-load applications	<b>KHF</b>	2KJ38... -...-Z	
<b>Housing flange (C type)</b>	Helical geared motor, 2-stage	<b>ZZ</b>	2KJ31... -...-Z	
	Helical geared motor, 3-stage	<b>DZ</b>	2KJ32... -...-Z	
	Helical geared motor, 1-stage	<b>EZ</b>	2KJ30... -...-Z	
	Parallel shaft geared motor, 2-stage	<b>FZZ</b>	2KJ33... -...-Z	
	Parallel shaft geared motor, 3-stage	<b>FDZ</b>	2KJ34... -...-Z	
	Bevel geared motor, 2-stage	<b>BZ</b>	2KJ35... -...-Z	
	Bevel geared motor, 3-stage	<b>KZ</b>	2KJ35... -...-Z	
	Helical worm geared motor, 2-stage	<b>CZ</b>	2KJ36... -...-Z	
	Worm geared motor, 1-stage	<b>SZ</b>	2KJ37... -...-Z	
	Electric-monorail geared motor, light-load applications	<b>BHZ</b>	2KJ38... -...-Z	
<b>Shaft-mounted design (torque arm)</b>	Parallel shaft geared motor, 2-stage	<b>FZAD</b>	2KJ33... -...-Z	
	Parallel shaft geared motor, 3-stage	<b>FDAD</b>	2KJ34... -...-Z	
	Bevel geared motor, 2-stage	<b>BAD</b>	2KJ35... -...-Z	
	Bevel geared motor, 3-stage	<b>KAD</b>	2KJ35... -...-Z	
	Helical worm geared motor, 2-stage	<b>CAD</b>	2KJ36... -...-Z	
	Worm geared motor, 1-stage	<b>SAD</b>	2KJ37... -...-Z	

## Flange-mounted designs

The flange-mounted designs are available with different diameters.

Gearbox type	Flange diameter mm													Additional identification code -Z with order code		
<b>Helical gearboxes DF and ZF</b>																
Gearbox size	19	29	39	49	59	69	79	89	109	129	149	169	189	2KJ31... -.....-F...-Z 2KJ32... -.....-F...-Z	Order code	
	120	120	120												H02	
	140	140		140											H03	
	160	160	160	160	160										H04	
			200	200	200	200									H05	
				250	250	250									H06	
							300	300							H07	
							350	350	350	350					H08	
								450	450	450	450	450			H09	
										550	550	550	550		H10	
												660	660		H11	
<b>Helical gearboxes VLplus</b>																
							300								H07 + G30	
								350	350	350					H08 + G30	
									450	450		450			H09 + G30	
										550	550	550			H10 + G30	
												660			H11 + G30	
<b>Helical gearboxes XLplus</b>																
								450	450						H09 + G31	
										550	550				H10 + G31	
												660			H11 + G31	
<b>Helical gearboxes DB and ZB</b>																
Gearbox size	29		39		49		59		69		79		89		2KJ31... -.....-B...-Z 2KJ32... -.....-B...-Z	Order code
	120		120													H02
					140											H03
					160		160									H04
									200							H05
											250					H06
													300			H07
<b>Helical gearboxes EF</b>																
Gearbox size	39		49		69		89		109		129		149		2KJ30... -.....-F...-Z	Order code
	120															H02
	140															H03
	160		160													H04
	200		200		200											H05
			250		250		250									H06
							300		300							H07
							350		350		350		350			H08
									450		450		450			H09
													550			H10
<b>Cooling tower gearboxes</b>																
Gearbox size	EKF89	EKF109	EKF129	EKF149	ZKF89	ZKF109	ZKF129	ZKF149	ZKF169	ZKF189	2KJ305... -.....-F...-Z 2KJ315... -.....-F...-Z 2KJ316... -.....-F...-Z			Order code		
	250														H06	
	300	300			300										H07	
	350	350	350	350	350	350	350								H08	
		450	450	450	450	450	450	450	450						H09	
				550			550	550	550	550					H10	
									660	660					H11	
<b>Cooling tower gearboxes XLplus</b>																
					450	450									H09 + G31	
							550	550							H10 + G31	
									660						H11 + G31	

## Gearbox options

### Mounting

#### Mounting types

##### Flange-mounted designs

Gearbox type	Flange diameter mm											Additional identification code -Z with order code		
<b>Parallel shaft gearboxes F..F</b>														
<b>Gearbox size</b>	<b>29</b>	<b>39</b>	<b>49</b>	<b>69</b>	<b>79</b>	<b>89</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>	2KJ33... -.....-F..-Z	Order code	
												2KJ34... -.....-F..-Z		
	120												H02	
	160	160											H04	
			200										H05	
				250	250								H06	
						300							H07	
							350						H08	
								450	450				H09	
										550			H10	
											660		H11	
<i>Parallel shaft gearboxes VLplus</i>						300							H07 + G30	
							350						H08 + G30	
								450	450				H09 + G30	
										550			H10 + G30	
<b>Bevel gearboxes B.F</b>														
<b>Gearbox size</b>	<b>19</b>		<b>29</b>		<b>39</b>		<b>49</b>					2KJ35... -.....-F..-Z	Order code	
	120		120										H02	
			160		160								H04	
					200		200						H05	
<b>Bevel gearboxes K.F</b>														
<b>Gearbox size</b>	<b>39</b>	<b>49</b>	<b>69</b>	<b>79</b>	<b>89</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>		2KJ35... -.....-F..-Z	Order code	
	160												H04	
			200										H05	
				250	250								H06	
						300							H07	
							350						H08	
								450	450				H09	
										550			H10	
											660		H11	
<i>Bevel gearboxes VLplus</i>						300							H07 + G30	
							350						H08 + G30	
								450	450				H09 + G30	
										550			H10 + G30	
<b>Helical worm gearboxes C.F</b>														
<b>Gearbox size</b>	<b>29</b>		<b>39A</b>		<b>49</b>		<b>69</b>		<b>89</b>			2KJ36... -.....-F..-Z	Order code	
	120												H02	
	160		160										H04	
					200		200						H05	
									250				H06	
<b>Worm gearboxes S.F</b>														
<b>Gearbox size</b>	<b>09</b>			<b>19</b>			<b>29</b>					2KJ37... -.....-F..-Z	Order code	
	80			110			120						H01	
	120 / Q90			120			160 / Q136						H02	
<b>Electric-monorail gearboxes KHF for heavy-load applications</b>														
<b>Gearbox size</b>	<b>49</b>			<b>69</b>			<b>79</b>					2KJ38... -.....-F..-Z	Order code	
	200												H05	
	250			250			250						H06	



## Flange-mounted designs

**Water drain holes at the output flange**

For gearboxes in a flange-mounted design, water drain holes can be located at the output flange. This is required for mounting position M2 (output shaft facing upwards), if there is a risk that water will collect in the output flange.

Mounting type	Additional identification code <b>-Z</b> with order code	Order code
Water drain holes at the output flange	2KJ3... -.....-F..-Z	<b>G77</b>

Flange diameter mm	Possible for												
<b>Helical gearboxes Z and D</b>													
Gearbox size	19	29	39	49	59	69	79	89	109	129	149	169	189
120													
140				✓									
160				✓	✓ <sup>1)</sup>								
200				✓	✓	✓ <sup>2)</sup>							
250					✓	✓	✓ <sup>1)</sup>						
300							✓	✓					
350							✓	✓	✓	✓			
450								✓	✓	✓	✓	✓	
550										✓	✓	✓	✓
660												✓	✓

1) Water drain holes are also possible for foot/flange-mounted designs

2) Water drain holes are only possible for foot/flange-mounted designs

<b>Helical gearboxes E</b>													
Gearbox size	39	49	69	89	109	129	149						
120	✓												
140	✓												
160	✓	✓											
200	✓	✓	✓										
250		✓	✓	✓									
300				✓	✓								
350					✓	✓							
450							✓	✓	✓	✓			✓

<b>Cooling tower gearboxes</b>										
Gearbox size	EKF89	EKF109	EKF129	EKF149	ZKF89	ZKF109	ZKF129	ZKF149	ZKF169	ZKF189
250	✓									
300	✓	✓			✓					
350	✓	✓	✓	✓	✓	✓	✓			
450		✓	✓	✓	✓	✓	✓	✓	✓	
550				✓			✓	✓	✓	✓
660									✓	✓

<b>Parallel shaft gearboxes F</b>													
Gearbox size	29	39	49	69	79	89	109	129	149	169	189		
120													
140													
160		✓											
200			✓										
250				✓	✓								
300						✓							
350							✓						
450								✓	✓				
550										✓			
660													✓

<b>Bevel gearboxes K</b>													
Gearbox size	39	49	69	79	89	109	129	149	169	189			
160	✓												
200		✓											
250			✓	✓									
300					✓								
350						✓							
450							✓	✓					
550									✓				
660													✓

## Gearbox options

### Mounting

#### Mounting types

#### Flange-mounted designs

##### Output flange seal

The flange sealing option enables you to create a fluid-tight interface between the housing and the output flange. The seal prevents the escape of fluids (e.g. oil or water).

The gearbox in a flange-mounted design can be used when a fluid-tight space at the output is required. Input gears are a typical application.

The flange sealing option must always be ordered for use in combination with the "water drain holes at the output flange" option.

##### Note:

The "output flange seal" option is not available for the electric-monorail geared motors.

Mounting type	Additional identification code <b>-Z</b> with order code	Order code
Output flange seal	2KJ3... - ..... - F...-Z	<b>G78</b>

#### Parallel shaft gearboxes F.AD. in a shaft-mounted design

The rubber buffers (supplied loose) are used to flexibly support the gearbox on the housing plate provided.

When mounting, the rubber buffers must be pretensioned to the dimension specified in the dimensional drawing.

The elastomer used for support is manufactured out of natural rubber 70° ± 5 Shore A.

The rubber buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +60 °C.

Mounting type	14th position of the Article No.	
Shaft-mounted design	2KJ33... - ..... - ■ ...-Z	<b>D</b>
	2KJ34... - ..... - ■ ...-Z	

The dimensions of the torque arm can be seen in the dimensional drawings.

#### Bevel gearboxes KAD. in a shaft-mounted design

The torque arm of bevel gearboxes K is mounted on the underside of the housing. The rubber buffers are used to flexibly support the gearbox on the torque arm.

The elastomer used for support is manufactured out of natural rubber of grade 60° Shore A.

The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +60 °C.

Mounting type	14th position of the Article No.	
Shaft-mounted design	2KJ35... - ..... - ■ ...-Z	<b>C</b>

The dimensions of the torque arm can be seen in the dimensional drawings.

#### Bevel gearboxes BAD. in a shaft-mounted design

The torque arm can be screwed to the gearbox housing at various positions.

Mounting type	14th position of the Article No.	
Shaft-mounted design	2KJ35... - ..... - ■ ...-Z	<b>D</b>

##### Shaft-mounted design for sizes 19 and 29

The elastomer used for support is manufactured out of natural rubber of grade 90° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -30 and +60 °C.

When ordered, the torque arm is supplied loose.

##### Shaft-mounted design for sizes 39 and 49

The elastomer used for support is manufactured out of natural rubber of grade 60° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +60 °C.

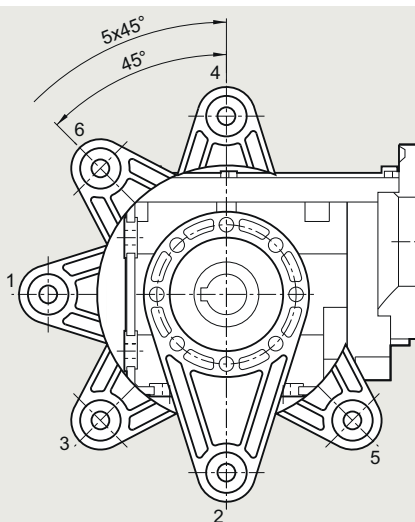


Fig. 10/7 Bevel gearboxes BAD, sizes 19 and 29

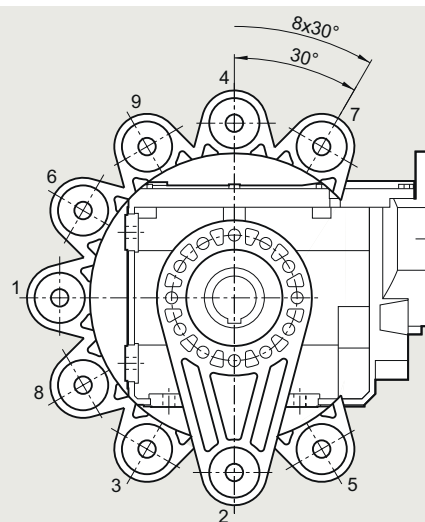


Fig. 10/8 Bevel gearboxes BAD, sizes 39 and 49

**Helical worm gearboxes CAD. in a shaft-mounted design**

The torque arm can be screwed to the gearbox housing at various positions.

Mounting type	14th position of the Article No. 2KJ36... -.....- <b>■</b> ...-Z
Shaft-mounted design	<b>D</b>

When ordered, the torque arm is supplied loose.

**Shaft-mounted design for size 29**

The elastomer used for support is manufactured out of natural rubber of grade 90° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -30 and +60 °C.

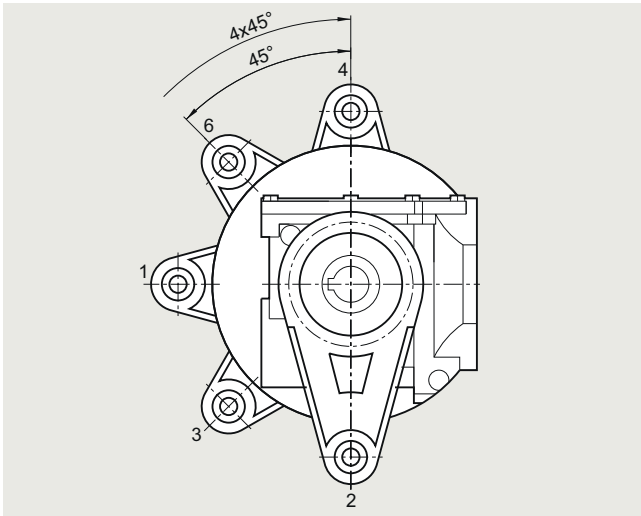


Fig. 10/9 Helical worm gearboxes CAD, size 29

**Shaft-mounted design for sizes 39 to 89**

The elastomer used for support is manufactured out of natural rubber of grade 60° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +60 °C.

Mounting type	Additional identification code -Z with order code 2KJ36... -.....- D...-Z	Order code
Shaft-mounted design, Fig. 1		<b>G09</b>
Shaft-mounted design, Fig. 2		<b>G10</b>

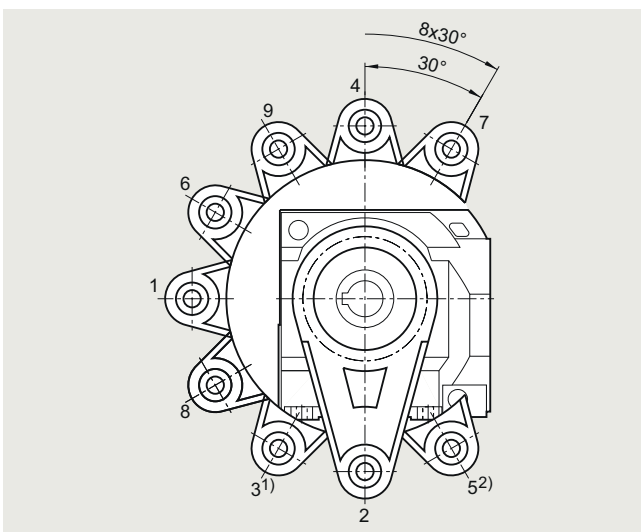


Fig. 10/10 Helical worm gearboxes CAD, Figure 1, sizes 39A to 89

- 1) Position not possible for sizes CAD.39A and CAD.69  
2) Position not possible for size CAD.39A

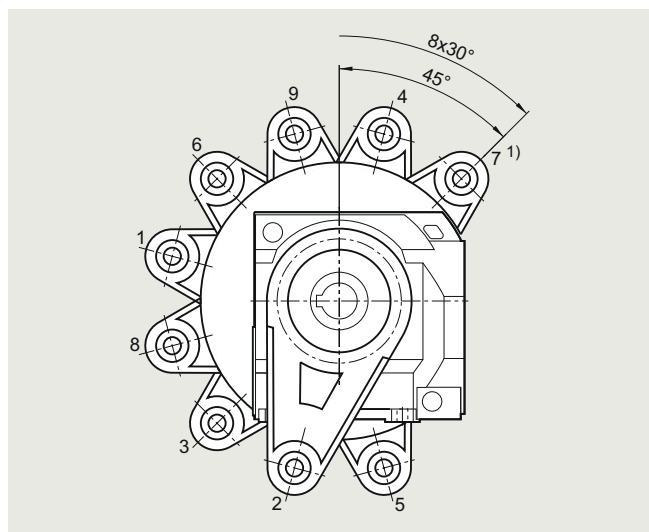


Fig. 10/11 Helical worm gearboxes CAD, Figure 2, sizes 39A to 89

- 1) Position not possible for sizes CAD.39A and CAD.49

## Gearbox options

### Mounting

#### Mounting types

##### Worm gearboxes SAD in a shaft-mounted design

The torque arm can be screwed to the gearbox housing at various positions.

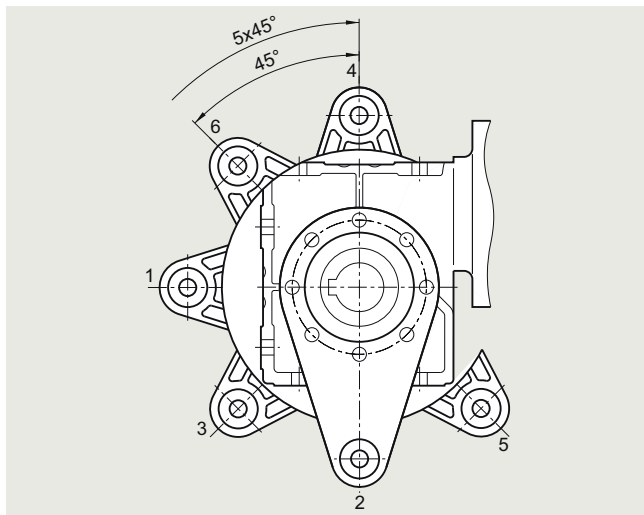


Fig. 10/12 Worm gearboxes S in a shaft-mounted design

The elastomer used for support is manufactured out of natural rubber of grade 90° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -30 and +60 °C.

Mounting type	14th position of the Article No. 2KJ37...-.....- <b>■</b> ...- <b>Z</b>
Shaft-mounted design	<b>D</b>

When ordered, the torque arm is supplied loose.

#### Shaft designs

##### Selection and ordering data

Shaft design	Dimensions mm					Ambient temperature range	8th position of the Article No. An order code is required when <b>9</b> appears in the 8th position of the Article No.	
<b>Helical gearboxes Z and D</b>								
<b>Gearbox size</b>	<b>19</b>	<b>29</b>	<b>39</b>	<b>49</b>	<b>59</b>		2KJ31...- <b>■</b> .....- <b>Z</b>	Order code
Solid shaft	V20 x 40	V25 x 50	V25 x 50	V30 x 60	V35 x 70	-40 ... +60 °C	2KJ32...- <b>■</b> .....- <b>Z</b>	1
	V16 x 28				V30 x 60		2	
	V16 x 40		V30 x 60		V40 x 80		3	
Solid shaft without feather key	VG20 x 40	VG25 x 50	VG25 x 50	VG30 x 60	VG35 x 70		9	<b>H1G</b>
Solid shaft, inches	V0.75" x 1.57"	V1" x 1.97"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"		9	<b>H6A</b>
<b>Gearbox size</b>	<b>69</b>	<b>79</b>	<b>89</b>	<b>109</b>	<b>129</b>		2KJ31...- <b>■</b> .....- <b>Z</b>	Order code
Solid shaft	V35 x 70	V40 x 80	V50 x 100	V60 x 120	V70 x 140	-40 ... +60 °C	2KJ32...- <b>■</b> .....- <b>Z</b>	1
		V35 x 70					2	
		V50 x 100	V60 x 120				3	
Solid shaft without feather key <sup>1)</sup>	VG35 x 70	VG40 x 80	VG50 x 100	VG60 x 120	VG70 x 140		9	<b>H1G</b>
Solid shaft, inches	V1.375" x 2.76"	V1.625" x 3.15"	V2.125" x 3.94"	V2.375" x 4.72"	V2.875" x 5.51"		9	<b>H6A</b>
Solid shaft VLplus			VM60 x120	VM70 x 140	VM90 x 170		9	<b>H1C</b>
Solid shaft XLplus			VM60 x120	VM70 x 140	VM90 x 170		9	<b>H1C</b>
<b>Gearbox size</b>	<b>149</b>	<b>169</b>	<b>189</b>				2KJ31...- <b>■</b> .....- <b>Z</b>	Order code
Solid shaft	V90 x 170	V110 x 210	V120 x 210			-40 ... +60 °C	2KJ32...- <b>■</b> .....- <b>Z</b>	1
		V100 x 210					2	
							3	
Solid shaft without feather key <sup>1)</sup>	VG90 x 170						9	<b>H1G</b>
Solid shaft, inches	V3.625" x 6.69"	V4.375" x 8.27"	V4.75" x 8.27"				9	<b>H6A</b>
Solid shaft VLplus		VM100 x 210	VM120 x 210				9	<b>H1C</b>
Solid shaft XLplus		VM100 x 210	VM120 x 210				9	<b>H1C</b>

<sup>1)</sup> Can only be selected in conjunction with foot-mounted or housing flange design.

## Selection and ordering data

Shaft design	Dimensions mm						Ambient temperature range	8th position of the Article No. An order code is required when <b>9</b> appears in the 8th position of the Article No.	
<b>Helical gearboxes E</b>									
<b>Gearbox size</b>	<b>39</b>	<b>49</b>	<b>69</b>	<b>89</b>	<b>109</b>			2KJ30...-Z	Order code
Solid shaft	V20 x 40	V25 x 50	V30 x 60	V40 x 80	V50 x 100	-40 ... +60 °C	1		-
Solid shaft, inches	V0.75" x 1.57"	V1" x 1.97"	V1.25" x 2.36"	V1.625" x 3.15"	V2.125" x 3.94"		9		H6A
<b>Gearbox size</b>	<b>129</b>	<b>149</b>						2KJ30...-Z	Order code
Solid shaft	V60 x 120	V70 x 140				-40 ... +60 °C	1		-
Solid shaft, inches	V2.375" x 4.72"	V2.875" x 5.51"					9		H6A
<b>Cooling tower gearboxes</b>									
<b>Gearbox size</b>	<b>EKF89</b>	<b>EKF109</b>	<b>EKF129</b>	<b>EKF149</b>				2KJ305...-Z	Order code
Solid shaft	VC40 x 80/160	VC50 x 100/180	VC60 x 120/200	VC70 x 140/220		-40 ... +60 °C	9		H1B
<b>Gearbox size</b>	<b>ZKF89</b>	<b>ZKF109</b>	<b>ZKF129</b>	<b>ZKF149</b>	<b>ZKF169</b>	<b>ZKF189</b>		2KJ315...-Z 2KJ316...-Z	Order code
Solid shaft	VC50 x 100/180	VC60 x 120/200	VC70 x 140/220	VC90 x 170/250	VC110 x 210/330	VC120 x 210/330	-40 ... +60 °C	9	H1B
Solid shaft, inches	VM60 x 120	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210		9		H1C
<b>Parallel shaft gearboxes F</b>									
<b>Gearbox size</b>	<b>29</b>	<b>39</b>	<b>49</b>	<b>69</b>	<b>79</b>	<b>89</b>		2KJ33...-Z 2KJ34...-Z	Order code
Solid shaft	V25 x 50	V25 x 50 V35 x 70	V30 x 60 V40 x 80	V35 x 70	V40 x 80 V50 x 100	V50 x 100	-40 ... +60 °C	1 3	- -
Solid shaft without feather key <sup>1)</sup>	VG25 x 50	VG25 x 50	VG30 x 60	VG35 x 70	VG40 x 80	VG50 x 100		9	H1G
Solid shaft, both ends <sup>1) 2)</sup>		VD25 x 50	VD30 x 60	VD35 x 70	VD40 x 80	VD50 x 100		9	H5A
Solid shaft, both ends without feather key <sup>1) 2)</sup>			VDG30 x 60	VDG35 x 70	VDG40 x 80	VDG50 x 100		9	H5B
Solid shaft, inches	V1" x 1.97"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.625" x 3.15"	V2" x 3.94"		9	H6A
Solid shaft VLplus						VM60 x 120		9	H1C
Hollow shaft	H25	H30 H25	H35 H30	H40	H40	H50		5 6	- -
Hollow shaft, inches	H1"	H1.25"	H1.375"	H1.5"	H1.5"	H2"		9	H7A
Hollow shaft VLplus						HM50		9	H2F
Hollow shaft with shrink disk	HS25	HS30	HS35	HS40	HS40	HS50		9	H3A
SIMOLOC assembly system, metric	HF25 HF20	HF30 HF25	HF35 HF30	HF40 HF35	HF40 HF35	HF50 HF40	-20 ... +60 °C	9 9	H3G H3H
SIMOLOC assembly system, inches	HF1.0" HF0.75"	HF1.25" HF1.1875"	HF1.375" HF1.4375"	HF1.5" HF1.625"	HF1.5" HF1.625"	HF2.0" HF1.9375"		9 9	H3J H3K
		HF1.0" -	HF1.25" HF1.1875"	HF1.4375" HF1.375"	HF1.4375" HF1.375"	HF1.75" HF1.625"		9 9	H3L H3M
Splined hollow shaft		N30	N35	N35	N45	N50	-40 ... +60 °C	9	H4A
<b>Gearbox size</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>			2KJ33...-Z 2KJ34...-Z	Order code
Solid shaft	V60 x 120 V80 x 170	V70 x 140 V90 x 170	V90 x 170 V100 x 210	V110 x 210 V120 x 210	V120 x 210 V140 x 250		-40 ... +60 °C	1 3	- -
Solid shaft without feather key <sup>1)</sup>	VG60 x 120							9	H1G
Solid shaft, both ends <sup>1) 2)</sup>	VD60 x 120	VD70 x 140	VD90 x 170	VD110 x 210	VD120x210			9	H5A
Solid shaft, both ends without feather key <sup>1) 2)</sup>	VDG60 x 120							9	H5B
Solid shaft, inches	V2.375" x 4.72"	V2.875" x 5.51"	V3.625" x 6.69"	V4.375" x 8.27"	V4.75" x 8.27"			9	H6A
Solid shaft VLplus	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210				9	H1C

<sup>1)</sup> Can only be selected in conjunction with foot-mounted or housing flange design.

<sup>2)</sup> Restricted motor frame sizes in conjunction with shaft extensions at both ends; for precise dimensioning, use the functionality of the [Siemens Product Configurator](#).

# Gearbox options

## Mounting

### Shaft designs

#### Selection and ordering data

Shaft design	Dimensions mm					Ambient temperature range	8th position of the Article No. An order code is required when 9 appears in the 8th position of the Article No.	
<b>Parallel shaft gearboxes F</b>								
<b>Gearbox size</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>		2KJ33...-Z	Order code
							2KJ34...-Z	
Hollow shaft	H60	H70	H90	H100	H120	-40 ... +60 °C	5	-
			H80	H110	6		-	
	H70				7		-	
Hollow shaft, inches	H2.375"	H2.75"	H3.625"	H4"	H4.5"		9	H7A
Hollow shaft VLplus	HM60	HM70	HM90	HM100			9	H2F
Hollow shaft with shrink disk	HS65	HS75	HS95	HS105	HS125		9	H3A
			HS90				9	H3B
							9	H3C
Splined hollow shaft	N65	N70	N85	N90	N110		9	H4A
<b>Bevel gearboxes B</b>								
<b>Gearbox size</b>	<b>19</b>	<b>29</b>	<b>39</b>	<b>49</b>			2KJ35...-Z	Order code
Solid shaft	V20 x 40	V20 x 40	V30 x 60	V35 x 70	-40 ... +60 °C	1	-	
Solid shaft without feather key	VG20 x 40	VG20 x 40	VG30 x 60	VG35 x 70		9	H1G	
Solid shaft, both ends <sup>2)</sup>	VD20 x 40	VD20 x 40	VD30 x 60	VD35 x 70		9	H5A	
Solid shaft, inches	V0.75" x 1.57"	V0.75" x 1.57"	V1" x 1.97"	V1.375" x 2.76"		9	H6A	
Hollow shaft	H20	H20	H30	H40		5	-	
		H25	H35	H35		6	-	
			H40			7	-	
Hollow shaft, inches	H0.75"	H0.75"	H1.25"	H1.5"		9	H7A	
Hollow shaft with shrink disk	HS20	HS20	HS35	HS40	-40 ... +60 °C	9	H3A	
SIMOLOC assembly system, metric		HF25	HF30	HF35	-20 ... +60 °C	9	H3G	
		HF20	HF25	HF30		9	H3H	
			HF40			9	H3P	
SIMOLOC assembly system, inches		HF1.0"	HF1.25"	HF1.375"		9	H3J	
		HF0.75"	HF1.1875"	HF1.4375"		9	H3K	
			HF1.0"	HF1.25"		9	H3L	
				HF1.1875"		9	H3M	
				HF1.625"		9	H3N	
<b>Bevel gearboxes K</b>								
<b>Gearbox size</b>	<b>39</b>	<b>49</b>	<b>69</b>	<b>79</b>	<b>89</b>		2KJ35...-Z	Order code
Solid shaft	V25 x 50	V30 x 60	V35 x 70	V40 x 80	V50 x 100	-40 ... +60 °C	1	-
	V35 x 70	V40 x 80		V50 x 100	3		-	
Solid shaft without feather key	VG25 x 50	VG30 x 60	VG35 x 70	VG40 x 80	VG50 x 100		9	H1G
Solid shaft, both ends <sup>1)</sup>	VD25 x 50	VD30 x 60	VD35 x 70	VD40 x 80	VD50 x 100		9	H5A
Solid shaft, both ends without feather key <sup>1)</sup>		VDG30 x 60	VDG35 x 70	VDG40 x 80	VDG50 x 100		9	H5B
Solid shaft, inches	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.625" x 3.15"	V2" x 3.94"		9	H6A
Solid shaft VLplus					VM60 x 120		9	H1C
Hollow shaft	H30	H35	H40	H40	H50		5	-
	H25	H30					6	-
Hollow shaft, inches	H1.25"	H1.375"	H1.5"	H1.5"	H2"		9	H7A
Hollow shaft VLplus					HM50		9	H2F
Hollow shaft with shrink disk	HS30	HS35	HS40	HS40	HS50		9	H3A
SIMOLOC assembly system, metric	HF30	HF35	HF40	HF40	HF50	-20 ... +60 °C	9	H3G
	HF25	HF30	HF35	HF35	HF40		9	H3H
SIMOLOC assembly system, inches	HF1.25"	HF1.375"	HF1.5"	HF1.5"	HF2.0"		9	H3J
	HF1.1875"	HF1.4375"	HF1.625"	HF1.625"	HF1.9375"		9	H3K
	HF1.0"	HF1.25"	HF1.4375"	HF1.4375"	HF1.75"		9	H3L
		HF1.1875"	HF1.375"	HF1.375"	HF1.625"		9	H3M
Splined hollow shaft	N30	N35	N35	N45	N50	-40 ... +60 °C	9	H4A

<sup>1)</sup> Can only be selected in conjunction with foot-mounted or housing flange design.

<sup>2)</sup> Can only be selected in conjunction with foot-mounted design.

## Selection and ordering data

Shaft design	Dimensions mm					Ambient temperature range	8th position of the Article No. An order code is required when <b>9</b> appears in the 8th position of the Article No.			
<b>Bevel gearboxes K</b>										
<b>Gearbox size</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>		2KJ35...- ■ .....-Z	Order code		
Solid shaft	V60 x 120	V70 x 140	V90 x 170	V110 x 210	V120 x 210	-40 ... +60 °C	1	-		
	V80 x 170	V90 x 170	V100 x 210	V120 x 210	V140 x 250				3	-
Solid shaft without feather key	VG60 x 120						9	H1G		
Solid shaft, both ends <sup>1)</sup>	VD60 x 120	VD70 x 140	VD90 x 170	VD110 x 210	VD120 x 210		9	H5A		
Solid shaft, both ends without feather key <sup>1)</sup>	VDG60 x 120						9	H5B		
Solid shaft, inches	V2.375" x 4.72"	V2.875" x 5.51"	V3.625" x 6.69"	V4.375" x 8.27"	V4.75" x 8.27"		9	H6A		
Solid shaft VLplus	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210			9	H1C		
Hollow shaft	H60	H70	H80				5	-		
						6	-			
	H70		H110			7	-			
Hollow shaft, inches	H2.375"	H2.75"	H3.625"	H4"	H4.5"		9	H7A		
Hollow shaft VLplus	HM60	HM70	HM90	HM100			9	H2F		
Hollow shaft with shrink disk	HS65	HS75	HS95	HS105	HS125		9	H3A		
	HS70		HS90				9	H3B		
							9	H3C		
Splined hollow shaft	N65	N70	N85	N90	N110		9	H4A		
<b>Helical worm gearboxes C</b>										
<b>Gearbox size</b>	<b>29</b>	<b>39A</b>	<b>49</b>	<b>69</b>	<b>89</b>		2KJ36...- ■ .....-Z	Order code		
Solid shaft	V20 x 40	V25 x 50	V30 x 60	V35 x 70	V45 x 90	-40 ... +60 °C	1	-		
				V40 x 80 <sup>1)</sup>	V50 x 100 <sup>1)</sup>				2	-
				V50 x 100 <sup>1)</sup>	V70 x 140 <sup>1)</sup>				3	-
Solid shaft without feather key	VG20 x 40	VG25 x 50	VG30 x 60	VG35 x 70	VG45 x 90		9	H1G		
Solid shaft, both ends <sup>1)</sup>	VD20 x 40	VD25 x 50	VD30 x 60	VD35 x 70	VD45 x 90		9	H5A		
Solid shaft, inches	V0.75" x 1.57"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.75" x 3.54"		9	H6A		
Hollow shaft	H20	H25	H30	H35	H40	H45	H50	5		
								6		
								6		
Hollow shaft, inches	H0.75"	H1.25"	H1.375"	H1.5"	H2"		9	H7A		
Hollow shaft with shrink disk	HS20	HS30	HS35	HS40	HS50	HS60	9	H3A		
							9	H3C		
SIMOLOC assembly system, metric	HF25	HF30	HF35	HF40	HF50	-20 ... +60 °C	9	H3G		
	HF20	HF25	HF30	HF35	HF40		9	H3H		
SIMOLOC assembly system, inches	HF1.0"	HF1.25"	HF1.375"	HF1.5"	HF2.0"		9	H3J		
	HF0.75"	HF1.1875"	HF1.4375"	HF1.625"	HF1.9375"		9	H3K		
		HF1.0"	HF1.25"	HF1.4375"	HF1.75"		9	H3L		
			HF1.1875"	HF1.375"	HF1.625"		9	H3M		
<b>Worm gearboxes S</b>										
<b>Gearbox size</b>	<b>09</b>		<b>19</b>	<b>29</b>			2KJ37...- ■ .....-Z	Order code		
Solid shaft	V16 x 40		V20 x 40	V20 x 40		-20 ... +60 °C	1	-		
	V14 x 30		V18 x 40	V25 x 50					3	-
Solid shaft, both ends <sup>2)</sup>	VD16 x 40		VD20 x 40	VD20 x 40			9	H5A		
Hollow shaft	H16		H18	H20			5	-		
	H14		H20	H25			6	-		
Hollow shaft stainless steel	HX16		HX20	HX20			9	H8A		
Plug-in shaft	VE16 x 40		VE20 x 40	VE20 x 40			7	-		
<b>Electric-monorail gearboxes EHB</b>										
<b>Gearbox size</b>	<b>BH29</b>	<b>BH39</b>	<b>KHF49</b>	<b>KHF69</b>	<b>KHF79</b>		2KJ38...- ■ .....-Z	Order code		
Solid shaft	V25 x 35	V25 x 35	V30 x 60	V45 x 90	V55 x 110	-40 ... +60 °C	1	-		
		V30 x 50	V35 x 70						2	-
Solid shaft without feather key	VG25 x 35	VG25 x 35	VG30 x 60	VG45 x 90	VG55 x 110		9	H1G		
		VG30 x 50	VG35 x 70				9	H1H		

<sup>1)</sup> Can only be selected in conjunction with foot-mounted or housing flange design.

<sup>2)</sup> Can only be selected in conjunction with foot-mounted design.

## Gearbox options

### Mounting

#### Shaft designs

##### SIMOLOC assembly system

The new SIMOLOC assembly system has been designed to provide a friction-locked connection between the motor shaft made of drawn shaft material of grade h11 or lower and the hollow shaft in the gearbox.

The SIMOLOC assembly system offers a low-cost, easy-to-fit alternative to conventional shaft connections such as hollow shaft with a feather key, hollow shaft with shrink disk or hollow shaft with splines.

It is compatible with the shaft-mounted designs of the parallel shaft, bevel and helical worm gearboxes.

Several diameters are available for each gearbox size.

##### Components of the SIMOLOC assembly system

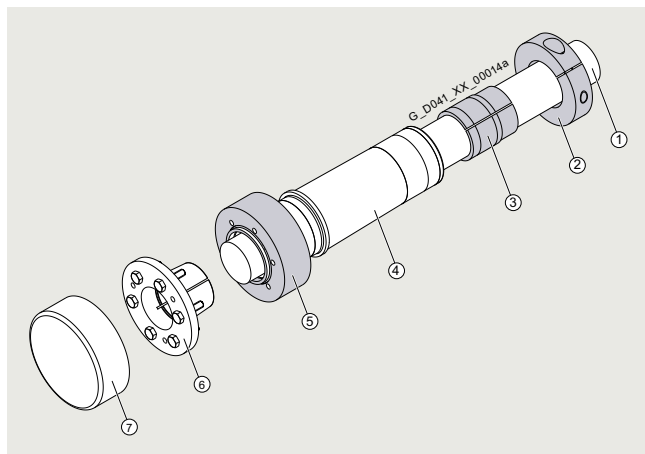


Fig. 10/13 SIMOLOC assembly system

- ① Machine shaft
- ② Clamping ring
- ③ Bronze bushing
- ④ Hollow shaft of gearbox
- ⑤ Thrust collar
- ⑥ Taper bushing
- ⑦ Rotating protective cover

##### Benefits

###### Cost reduction

- The drive shaft of the motor can be made of low-cost, drawn shaft material of grade h11 or lower.
- The shaft is cheaper to machine because there is no need to machine the shaft seat and a keyway is not required.

###### Quick and easy mounting

- Easy to mount and dismantle thanks to adequate clearance between the motor shaft and hollow shaft. The press fit is not made until the taper bushing is inserted.
- The press fit reduces the formation of fretting corrosion. The taper bushing can be removed easily in order to separate the press-fit connection.
- No tight fits need to be overcome when the gearbox is pushed onto the motor shaft.

###### Variability

- Quick adjustment of the gearbox to different motor shaft diameters is possible by replacement of the taper and bronze bushings.
- Easy conversion from metric to inch dimensions and vice versa.

###### Available diameters

The SIMOLOC assembly system can be supplied for shaft-mounted designs. 2 metric versions and 2 to 4 inch versions are available for all sizes.

##### Scope of supply

The gearbox is shipped with a SIMOLOC hollow shaft. The diameter-specific components are supplied as a separate assembly kit. The unit is supplied with pre-assembled rotating protective cover. The non-rotating protective cover can be ordered as an option.

##### Hollow shaft cover

###### Sealing cap

The bore of the hollow shaft is sealed using a plastic sealing cap.

Gearboxes in size 39 and larger with hollow shaft and shrink disk have a rotating protective cap.

The dimensions of the rotating protective cap can be seen in the dimensional drawings provided in the gearbox chapters.

For safety reasons, stationary protective covers may be required.

The sealing cap is not approved for the ATEX version.

###### Protective cover

For sizes 19 to 189, a stationary protective cover for the hollow shaft or hollow shaft with shrink disk versions can be selected.

The dimensions of the protective cover can be seen in the separate dimensional drawing provided in the gearbox chapters.

The protective cover is approved for the ATEX version.

###### Note:

Protective covers made of plastic are generally not painted.

Hollow shaft cover	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-Z	<b>G60</b>
Protective cover <sup>1)</sup>		

<sup>1)</sup> The protective cover can be selected from size 169 for bevel gearboxes with foot-mounted design.



### Reinforced output shaft bearings

The gearboxes can be supplied with the standard design or with a reinforced output shaft bearing design. The reinforced bearings allow higher radial and combined forces (radial and axial) to be absorbed.

Design	Possible for												Additional identification code -Z with order code		
<b>Helical gearboxes Z and D</b>															
<b>Gearbox size</b>	<b>19</b>	<b>29</b>	<b>39</b>	<b>49</b>	<b>59</b>	<b>69</b>	<b>79</b>	<b>89</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>	2KJ31... -Z 2KJ32... -Z	Order code
Radially reinforced output shaft bearings						✓	✓	✓	✓	✓	✓				<b>G20</b>
VLplus reinforced bearing system <sup>2)</sup>								✓	✓	✓	✓	✓			<b>G30</b>
XLplus reinforced bearing system <sup>2)</sup>								✓	✓	✓	✓	✓			<b>G31</b>
<b>Cooling tower gearboxes</b>															
<b>Gearbox size</b>	<b>EKF89 ...</b>	<b>EKF 149</b>	<b>ZKF89</b>	<b>ZKF109</b>	<b>ZKF129</b>	<b>ZKF149</b>	<b>ZKF169</b>	<b>ZKF189</b>						2KJ305... -Z 2KJ315... -Z 2KJ316... -Z	Order code
Radially reinforced output shaft bearings			✓	✓	✓	✓									<b>G20</b>
XLplus reinforced bearing system <sup>2)</sup>			✓	✓	✓	✓	✓								<b>G31</b>
<b>Parallel shaft gearboxes F</b>															
<b>Gearbox size</b>	<b>29</b>	<b>39</b>	<b>49</b>	<b>69</b>	<b>79</b>	<b>89</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>			2KJ33... -Z 2KJ34... -Z	Order code
Radially reinforced output shaft bearings			✓ <sup>1)</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G20</b>
VLplus reinforced bearing system <sup>2)</sup>						✓	✓	✓	✓	✓					<b>G30</b>
<b>Bevel gearboxes K</b>															
<b>Gearbox size</b>	<b>39</b>	<b>49</b>	<b>69</b>	<b>79</b>	<b>89</b>	<b>109</b>	<b>129</b>	<b>149</b>	<b>169</b>	<b>189</b>				2KJ35... -Z	Order code
Radially reinforced output shaft bearings		✓ <sup>1)</sup>	✓	✓	✓	✓	✓	✓	✓	✓					<b>G20</b>
VLplus reinforced bearing system <sup>2)</sup>					✓	✓	✓	✓	✓						<b>G30</b>

<sup>1)</sup> Not possible for flange-mounted design with solid shaft (gearbox type FZF, FDF, KF)

<sup>2)</sup> VLplus and XLplus reinforced bearing systems can only be selected with flange-mounted design.

## Gearbox options

### Output side accessories

#### Accessories for VLplus reinforced bearing systems

##### Drywell

To offer increased protection against escaping gearbox oil in the event of a leak, the VLplus version can be selected with the Drywell option. Any oil that escapes in the event of a leak at the oil chamber is captured and conveyed to an indicator.

The indicator is an oil sight glass. As an option, the version with a capacitive sensor is available, which responds in the event of an oil leak.

A disconnecter approved for use in ATEX applications must be provided for explosion-protected (ATEX) gearboxes. This must be installed outside the hazardous area.

The Drywell system can be used at the following ambient temperatures:

- Drywell with oil sight glass -30 to +60 °C
- Drywell with oil sensor -25 to +45 °C
- Drywell with ATEX oil sensor -20 to +40 °C

For different ambient temperatures, please contact Siemens.

Drywell is available for the following mounting positions:

Gearbox type	Mounting position
Helical gearboxes ZF/DF with VLplus	M4
Parallel shaft gearboxes FZF/FDF with VLplus	M4
Bevel gearboxes KF with VLplus	M5-A / M6-B

Accessories for VLplus reinforced bearing systems	Additional identification code -Z with order code	Order code
	2KJ3... -.....-Z G30	
Drywell with oil sight glass		<b>G89</b>
Drywell with oil sensor		<b>G90</b>
Drywell with ATEX oil sensor		<b>G91</b>
24 V Drywell disconnecter		<b>G88</b>

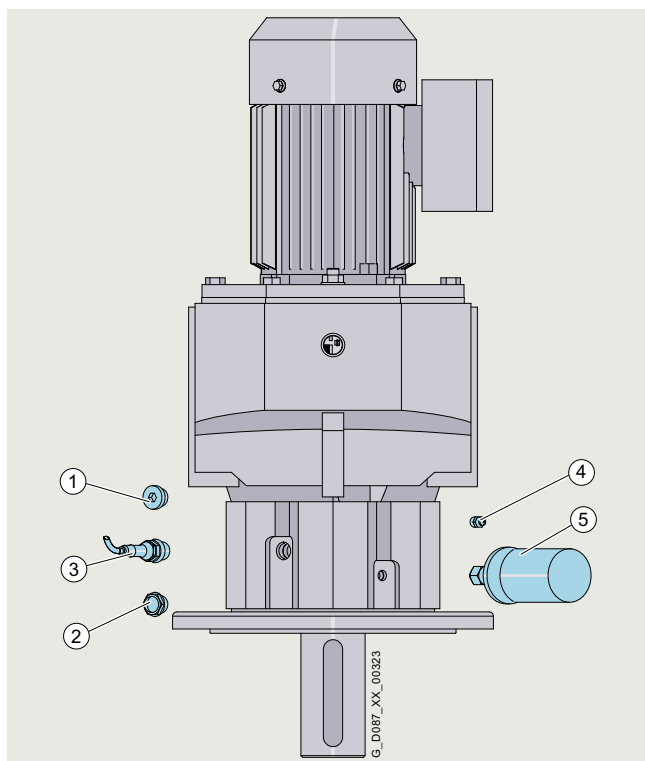


Fig. 10/14 VLplus version with Drywell / grease cartridge

- ① Screw plug (standard)
- ② Drywell with oil sight glass
- ③ Drywell with oil sensor
- ④ Grease nipple / regreasing device (standard)
- ⑤ Grease cartridge / automatic regreasing device

##### Grease cartridge

The output bearing of the flange must be lubricated regularly. A grease cartridge (automatic regreasing device) can be used for this with the VLplus version.

This ensures a continuous supply and prevents the bearing from being provided with too little or too much grease.

The grease cartridge can be used at ambient temperatures between -20 and +55 °C. For different ambient temperatures, please contact Siemens.

Accessories for VLplus reinforced bearing systems	Additional identification code -Z with order code	Order code
	2KJ3... -.....-Z G30	
Grease cartridge		<b>G93</b>

### Overview

The SIMOGEAR electric-monorail gearboxes have a mechanical clutch which safely engages and disengages power transmission by interrupting the force flow between the input and output.

#### Clutch for light-load applications

The position and operating travel of the clutch lever are designed in accordance with VDI guideline 3643 on sizes BH.29 and BH.39.

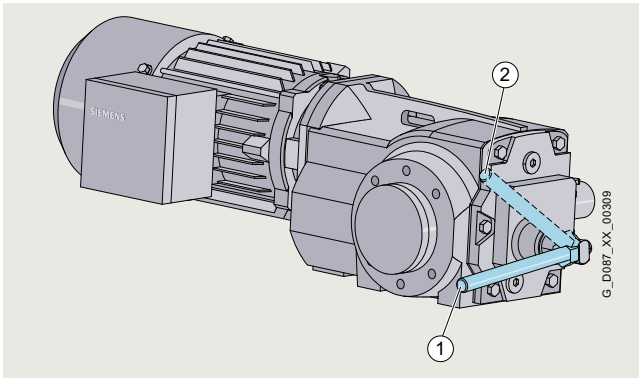


Fig. 10/15 Clutch on BH.29 and BH.39

- ① Clutch engaged
- ② Clutch disengaged

#### Clutch for heavy-load applications

Position 1 is the standard clutch position on sizes KHF49 to KHF79.

The end stop bolt (position 4) limits the operating travel from position 1 to 2, or from position 1 to 3. The operating travel can be altered by changing the thread position. The position of the operating travel is specified with the order.

Furthermore, a short version of the clutch lever is also available. The relevant dimensions can be seen in the dimensional drawings provided in the gearbox chapter.

Clutch for heavy-load applications	Additional identification code -Z with order code	Order code
	2KJ38...-.....-.....-Z	
Clutch operating travel 1-3		<b>H21</b>
Clutch operating travel 1-2		<b>H22</b>
Standard clutch lever		-
Short clutch lever		<b>H23</b>
Clutch lever facing outwards (position A)		-
Clutch lever facing inwards (position B)		<b>H25</b>

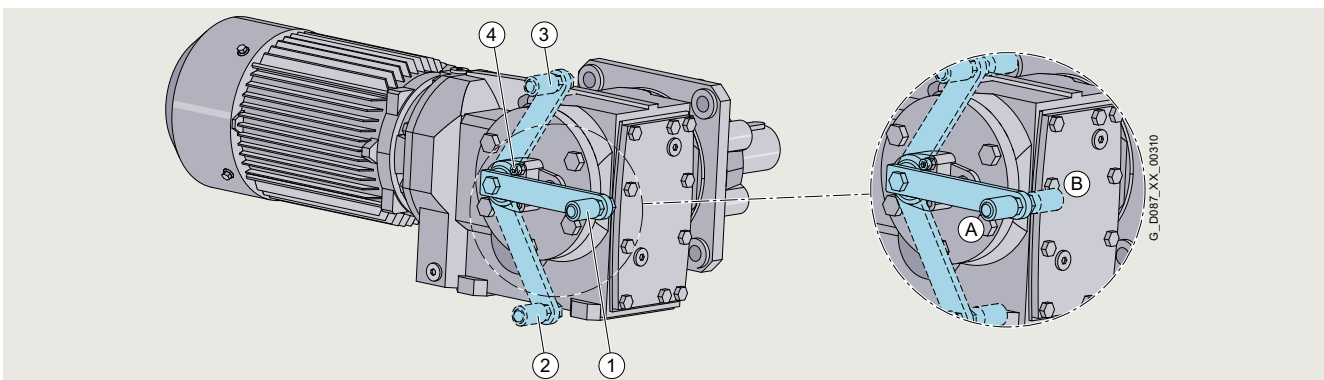


Fig. 10/16 Clutches for KHF49 to KHF79

- ① Clutch engaged
- ② Clutch disengaged
- ③ Clutch disengaged
- ④ End stop bolt
- A Clutch lever facing outwards (position A)
- B Clutch lever facing inwards (position B)

## Gearbox options

### Lubrication and sealing

#### Overview

Gearboxes can be used for different applications. The following lubricants and sealing systems can be selected to ensure an optimum configuration.

The temperature rise of the gearbox during operation increases the oil sump temperature. When selecting the oil, pay attention to the upper limit of the recommended oil sump temperature.

To calculate the oil sump temperature, we recommend a thermal calculation or use of electrical oil temperature monitoring Pt100 (G69).

#### Note:

- For ambient conditions with a high air humidity and salt-laden atmosphere, we recommend that only mineral or PAO oils are used.
- For gearboxes of sizes 169 and 189 with a service factor  $f_B < 1.2$ , we recommend use of CLP ISO PG oils.
- For gearboxes with CLP ISO PG oils for applications in the USA, the approval must be checked. Alternatively, a different type of oil must be used (e.g. CLP ISO PAO oil).

#### Lubrication

The gearboxes are initially filled at the factory with a high-quality lubricant. Lubricants permitted for the various gearbox types and applications are listed in the lubricant table.

Other oils from various lubricant manufacturers that have been approved by Siemens AG can be found on the internet in the Service and Support pages in the List of approved and recommended gear lubricants NT 7300:

<https://support.automation.siemens.com/WW/view/en/44231658>

#### Oil quantities

The lubricant quantity depends on the gearbox type, size and mounting position. The corresponding oil quantities are specified in the operating instructions and on the rating plate of the geared motor.

#### Sealing

The standard models of gearbox are supplied with high-quality radial shaft sealing rings with dust protection lips. This sealing design is reliable for a wide range of applications.

Special application areas and environmental conditions require special radial shaft sealing rings and materials, which are coordinated with the particular gearbox oil and environment. This coordinated sealing system results in a high reliability and availability of the plant.

When compared to standard sealing systems, the maintenance intervals can be extended. This therefore reduces maintenance costs.

#### Selection of lubricant

Applications	Oil type Marking according to DIN 51502	Permissible oil sump temperature range in operation [°C]	Additional identification code -Z with order code 2KJ3... -Z	Order code	Standard ambient temperature range [°C]		Extended ambient temperature range [°C]			
					-	K95	K92	K96	K97	K98
<b>Helical gearboxes Z, D and E, parallel shaft gearboxes F and bevel gearboxes K</b>										
					-15 ... +40	-20 ... +40	-20 ... +45	-25 ... +40	-30 ... +40	-40 ... +40
Standard	CLP ISO VG220	-15 ... +80		K06	✓					
	CLP ISO PAO VG220	-30 ... +100		K12	✓	✓	✓	✓	✓	✓ <sup>1)</sup>
	CLP ISO PAO VG68	-40 ... +60		K13				✓	✓	✓
	CLP ISO PG VG460	-25 ... +110		K08	✓	✓	✓	✓		
	CLP ISO PG VG220	-25 ... +110		K07	✓	✓	✓	✓		
Foodstuff area	CLP ISO H1 VG460	-25 ... +100		K11	✓	✓	✓	✓		
	CLP ISO H1 VG100	-30 ... +90		K14	✓	✓	✓	✓	✓	
Biodegrad- able oil	CLP ISO E VG220	-20 ... +100		K10	✓	✓	✓			

<sup>1)</sup> To ensure optimum lubrication properties, we recommend preheating the drive up to an operating temperature of above -30 °C.

CLP = mineral oil

CLP PG = polyglycol oil

E = ester oil, organic oil (bio oil / risk of water pollution, class WGK1)

PAO = poly-alpha-olefin oil

CLP H1 = physiologically safe oil (USDA-H1 approval)

### Selection of lubricant

Applications	Oil type	Permissible oil sump temperature range in operation [°C]	Additional identification code -Z with order code	Standard ambient temperature range [°C]	Extended ambient temperature range [°C]					
					Order code	K95	K92	K96	K97	K98
<b>Bevel gearboxes B and helical worm gearboxes C</b>					-20 ... +40	-	-20 ... +45	-25 ... +40	-30 ... +40	-40 ... +40
Standard	CLP ISO PG VG220	-25 ... +110		<b>K07</b>	✓		✓	✓		
	CLP ISO PAO VG220	-30 ... +100		<b>K12</b>	✓		✓	✓	✓	✓ <sup>1)</sup>
	CLP ISO PAO VG460	-25 ... +110		<b>K16</b>	✓		✓	✓		
	CLP ISO PAO VG68	-40 ... +60		<b>K13</b>				✓	✓	✓
	CLP ISO PG VG460	-25 ... +110		<b>K08</b>	✓		✓	✓		
Foodstuff area	CLP ISO H1 VG460	-25 ... +100		<b>K11</b>	✓		✓	✓		
	CLP ISO H1 VG100	-30 ... +90		<b>K14</b>	✓		✓	✓		
<b>Worm gearboxes S</b>					-20 ... +40					
Standard	CLP ISO PG VG220	-25 ... +110		<b>K07</b>	✓					
	CLP ISO PG VG460	-25 ... +110		<b>K08</b>	✓					
Foodstuff area	CLP ISO H1 VG460	-25 ... +100		<b>K11</b>	✓					
	CLP ISO H1 VG100	-30 ... +90		<b>K14</b>	✓					
<b>Electric-monorail gearboxes BH. for light-load applications</b>					-20 ... +40	-20 ... +40	-20 ... +45	-25 ... +40		
Standard	CLP ISO PG VG220	-25 ... +110		<b>K07</b>	✓		✓	✓		
	CLP ISO PAO VG220	-30 ... +100		<b>K12</b>	✓		✓	✓		
	CLP ISO PAO VG460	-25 ... +110		<b>K16</b>	✓		✓	✓		
	CLP ISO PAO VG68	-40 ... +60		<b>K13</b>				✓		
	CLP ISO PG VG460	-25 ... +110		<b>K08</b>	✓		✓	✓		
Foodstuff area	CLP ISO H1 VG460	-25 ... +100		<b>K11</b>	✓		✓	✓		
	CLP ISO H1 VG100	-30 ... +90		<b>K14</b>	✓		✓	✓		
<b>Electric-monorail gearboxes KH. for heavy-load applications</b>					-15 ... +40	-20 ... +40	-20 ... +45	-25 ... +40	-30 ... +40	-40 ... +40
Standard	CLP ISO VG220	-15 ... +80		<b>K06</b>	✓					
	CLP ISO PAO VG220	-30 ... +100		<b>K12</b>	✓	✓	✓	✓	✓	✓ <sup>1)</sup>
	CLP ISO PAO VG68	-40 ... +60		<b>K13</b>				✓	✓	✓
	CLP ISO PG VG460	-25 ... +110		<b>K08</b>	✓	✓	✓	✓		
	CLP ISO PG VG220	-25 ... +110		<b>K07</b>	✓	✓	✓	✓		
Foodstuff area	CLP ISO H1 VG460	-25 ... +100		<b>K11</b>	✓	✓	✓	✓		
	CLP ISO H1 VG100	-30 ... +90		<b>K14</b>	✓	✓	✓	✓	✓	
Biodegradable oil	CLP ISO E VG220	-20 ... +100		<b>K10</b>	✓	✓	✓			

<sup>1)</sup> To ensure optimum lubrication properties, we recommend preheating the drive up to an operating temperature of above -30 °C.

CLP = mineral oil

CLP PG = polyglycol oil

E = ester oil, organic oil (bio oil / risk of water pollution, class WGK1)

PAO = poly-alpha-olefin oil

CLP H1 = physiologically safe oil (USDA-H1 approval)

### Roller bearing greases for gearboxes and motors

The roller bearings of gearboxes and motors are lubricated in the factory with a roller bearing grease that is coordinated with the selected application area. The quantity of grease between the rolling elements and the space in front of the bearing depends on the operating conditions and the gearbox mounting position. For operation in the selected application areas, it is not necessary to relubricate the roller bearings.

We recommend that the grease filling of the roller bearings is also changed when the oil or shaft sealing rings are replaced.

Other greases supplied by different lubricant manufacturers that have been approved by Siemens AG are specified in the List of approved and recommended gearbox lubricants NT 7300.

## Gearbox options

### Lubrication and sealing

#### Sealing system

##### Overview

Output shaft sealing	Description	Ambient condition	Additional identification code -Z with order code	Order code
<b>Normal environmental stress</b>				
Standard seal	High-quality NBR radial shaft sealing ring with dust protection lip.	Environment with low dust and pollution levels with low moisture.		-
<b>Longer service life</b>				
Seal with longer service life	The radial shaft sealing ring with protection lip is designed with an additional seal on the internal gearbox side. The sealing system has a high degree of reliability due to its resistance to impurities in the oil.	Environment with low dust and pollution levels with low moisture.		G23
<b>Longer service life and increased environmental stress</b>				
Seal for increased environmental stress	This seal is equipped with an additional fiber disk. In addition to the longer service life, it also provides increased protection against higher environmental stress as a result of dust and dirt deposits. As a consequence, the sealing system has a high degree of reliability. For additional environmental stress, e.g. water jets or significant levels of pollution as a result of production materials, please contact your local Siemens office.	Environments with increased pollution and dust levels as well as low moisture.  Typical applications: Production areas with increased pollution and dust, such as wood chips, dusts or granulate as well as occasional spray water.		G24
<b>High temperature-resistant</b>				
Seal for high temperatures	High-quality FKM radial shaft sealing ring with dust protection lip.	Environment with low dust and pollution levels with low moisture.		G25

##### Selection of seal

Seal	Permissible oil sump temperature range in operation [°C]	Additional identification code -Z with order code		Standard ambient temperature range [°C]	Extended ambient temperature range [°C]				
		2KJ3... -.....-Z	Order code		K95	K92	K96	K97	K98
<b>Helical gearboxes Z, D and E, parallel shaft gearboxes F and bevel gearboxes K</b>									
				-15 ... +40	-20 ... +40	-20 ... +45	-25 ... +40	-30 ... +40	-40 ... +40
Standard seal	-40 ... +80	-		✓	✓	✓	✓	✓	✓
Seal for a longer service life	-40 ... +100	G23		✓	✓	✓	✓	✓	✓
Seal for increased environmental stress	-40 ... +80	G24 <sup>1)</sup>		✓	✓	✓	✓	✓	✓
Seal, high temperature-resistant	-25 ... +110	G25		✓	✓	✓	✓		
<b>Bevel gearboxes B and helical worm gearboxes C</b>									
				-20 ... +40		-20 ... +45	-25 ... +40	-30 ... +40	-40 ... +40
Standard	-40 ... +80	-		✓		✓	✓	✓	✓
Seal for a longer service life	-40 ... +100	G23 <sup>2)</sup>		✓		✓	✓	✓	✓
Seal for increased environmental stress	-40 ... +80	G24 <sup>1) 2)</sup>		✓		✓			
Seal, high temperature-resistant	-25 ... +110	G25		✓		✓	✓		
<b>Worm gearboxes S</b>									
				-20 ... +40					
Standard seal	-40 ... +80	-		✓					
Seal, high temperature-resistant	-25 ... +110	G25		✓					
<b>Electric-monorail gearboxes BH. for light-load applications</b>									
				-20 ... +40		-20 ... +45	-25 ... +40		
Standard seal	-40 ... +80	-		✓					
Seal, high temperature-resistant	-25 ... +110	G25		✓		✓	✓		
<b>Electric-monorail gearboxes KH. for heavy-load applications</b>									
				-15 ... +40	-20 ... +40	-20 ... +45	-25 ... +40	-30 ... +40	-40 ... +40
Standard seal	-40 ... +80	-		✓					
Seal, high temperature-resistant	-25 ... +110	G25		✓	✓	✓	✓		

<sup>1)</sup> Not admissible in conjunction with food oils and biodegradable oils

<sup>2)</sup> Not possible with bevel gearbox B19

### Overview

Gearboxes from size 39 for standard mounting positions are supplied as standard with pressure breather valve, oil level control and drain screw.

Gearbox sizes 19 and 29 are supplied ready for operation, lubricated for life and can be operated in mounting positions M1, M3, M5 and M6 without requiring a pressure breather valve. For mounting positions M2 and M4, they are equipped with a pressure breather valve.

### Possible venting and oil level control options

Design	Possible for													Additional identification code -Z with order code	More information	
<b>Helical gearboxes Z and D</b>																
Gearbox size	19	29	39	49	59	69	79	89	109	129	149	169	189	2KJ31... -Z 2KJ32... -Z	Order code	
Lubricated for life	✓	✓														
Pressure breather valve			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G45</b>	page 10/62
Pressure breather valve, stainless steel			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	page 10/62
Oil expansion unit			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	page 10/63
Oil sight glass with reflector				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	page 10/65
Magnetic oil drain screw			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	page 10/65
Oil drain valve, straight			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	page 10/65
Oil drain valve, angled			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	page 10/65
Oil level sensor								✓	✓	✓	✓	✓	✓		<b>G37</b>	page 10/67
Oil level sensor ATEX								✓	✓	✓	✓	✓	✓		<b>G38</b>	page 10/67
Pt100 electrical temperature monitoring				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G69</b>	page 10/66
24 V disconnecter				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G70</b>	page 10/66
USB / plug adapter cable				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G71</b>	page 10/66
<b>Helical gearboxes E</b>																
Gearbox size	39	49	69	89	109	129	149	2KJ30... -Z	Order code							
Pressure breather valve	✓	✓	✓	✓	✓	✓	✓		<b>G45</b>	page 10/62						
Pressure breather valve, stainless steel	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	page 10/62						
Oil expansion unit	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	page 10/63						
Oil sight glass with reflector	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	page 10/65						
Magnetic oil drain screw	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	page 10/65						
Oil drain valve, straight	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	page 10/65						
Oil drain valve, angled	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	page 10/65						
Oil level sensor				✓	✓	✓	✓		<b>G37</b>	page 10/67						
Oil level sensor ATEX				✓	✓	✓	✓		<b>G38</b>	page 10/67						
Pt100 electrical temperature monitoring		✓	✓	✓	✓	✓	✓		<b>G69</b>	page 10/66						
24 V disconnecter		✓	✓	✓	✓	✓	✓		<b>G70</b>	page 10/66						
USB / plug adapter cable		✓	✓	✓	✓	✓	✓		<b>G71</b>	page 10/66						

## Gearbox options

### Venting and oil level control

#### Venting

#### Overview

Possible venting and oil level control options

Design	Possible for										Additional identification code -Z with order code	More information			
<b>Cooling tower gearboxes</b>															
Gearbox size	EKF				ZKF						2KJ305. ....-Z	Order code			
	89	109	129	149	89	109	129	149	169	189	2KJ315. ....-Z			2KJ316. ....-Z	
Pressure breather valve	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G45</b>	page 10/62	
Pressure breather valve, stainless steel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G49</b>	page 10/62	
Oil dipstick	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G48</b>	page 10/10	
Oil expansion unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G47</b>	page 10/63	
Oil sight glass with reflector	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G34</b>	page 10/65	
Magnetic oil drain screw	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G53</b>	page 10/65	
Oil drain valve, straight	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G54</b>	page 10/65	
Oil drain valve, angled	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G55</b>	page 10/65	
Pt100 electrical temperature monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G69</b>	page 10/66	
24 V disconnecter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G70</b>	page 10/66	
USB / plug adapter cable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			<b>G71</b>	page 10/66	
<b>Parallel shaft gearboxes F</b>															
Gearbox size	29	39	49	69	79	89	109	129	149	169	189	2KJ33. ....-Z	Order code		
												2KJ34. ....-Z			
Lubricated for life	✓														
Pressure breather valve		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G45</b>	page 10/62	
Pressure breather valve, stainless steel		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	page 10/62	
Oil expansion unit		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	page 10/63	
Oil sight glass with reflector			✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	page 10/65	
Magnetic oil drain screw		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	page 10/65	
Oil drain valve, straight		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	page 10/65	
Oil drain valve, angled		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	page 10/65	
Oil level sensor						✓	✓	✓	✓	✓	✓		<b>G37</b>	page 10/67	
Oil level sensor ATEX						✓	✓	✓	✓	✓	✓		<b>G38</b>	page 10/67	
Pt100 electrical temperature monitoring			✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G69</b>	page 10/66	
24 V disconnecter			✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G70</b>	page 10/66	
USB / plug adapter cable			✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G71</b>	page 10/66	
<b>Bevel gearboxes B</b>															
Gearbox size	19		29		39		49				2KJ35. ....-Z	Order code			
Lubricated for life	✓		✓												
Pressure breather valve	✓			✓		✓		✓					<b>G45</b>	page 10/62	
Pressure breather valve, stainless steel	✓			✓		✓		✓					<b>G49</b>	page 10/62	
Oil expansion unit			✓			✓		✓					<b>G47</b>	page 10/63	
Oil sight glass with reflector								✓					<b>G34</b>	page 10/65	
Oil sight glass with reflector on both sides								✓					<b>G35</b>	page 10/65	
Magnetic oil drain screw						✓		✓					<b>G53</b>	page 10/65	
Oil drain valve, straight						✓		✓					<b>G54</b>	page 10/65	
Oil drain valve, angled						✓		✓					<b>G55</b>	page 10/65	
Pt100 electrical temperature monitoring								✓					<b>G69</b>	page 10/66	
24 V disconnecter								✓					<b>G70</b>	page 10/66	
USB / plug adapter cable								✓					<b>G71</b>	page 10/66	



### Overview

Possible venting and oil level control options

Design	Possible for										Additional identification code -Z with order code	More information	
<b>Bevel gearboxes K</b>													
Gearbox size	39	49	69	79	89	109	129	149	169	189	2KJ35... -.....-Z	Order code	
Pressure breather valve	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G45</b>	<a href="#">page 10/62</a>
Pressure breather valve, stainless steel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	<a href="#">page 10/62</a>
Oil expansion unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	<a href="#">page 10/63</a>
Oil sight glass with reflector		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	<a href="#">page 10/65</a>
Oil sight glass with reflector on both sides		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G35</b>	<a href="#">page 10/65</a>
Magnetic oil drain screw	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	<a href="#">page 10/65</a>
Oil drain valve, straight	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	<a href="#">page 10/65</a>
Oil drain valve, angled	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	<a href="#">page 10/65</a>
Oil level sensor					✓	✓	✓	✓	✓	✓		<b>G37</b>	<a href="#">page 10/67</a>
Oil level sensor ATEX					✓	✓	✓	✓	✓	✓		<b>G38</b>	<a href="#">page 10/67</a>
Pt100 electrical temperature monitoring		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G69</b>	<a href="#">page 10/66</a>
24 V disconnecter		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G70</b>	<a href="#">page 10/66</a>
USB / plug adapter cable		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G71</b>	<a href="#">page 10/66</a>
<b>Helical worm gearboxes C</b>													
Gearbox size	29	39A	49	69	89	2KJ36... -.....-Z						Order code	
Lubricated for life	✓ <sup>1)</sup>											-	
Pressure breather valve	✓		✓	✓	✓							<b>G45</b>	<a href="#">page 10/62</a>
Pressure breather valve, stainless steel	✓		✓	✓	✓							<b>G49</b>	<a href="#">page 10/62</a>
Oil expansion unit			✓	✓	✓							<b>G47</b>	<a href="#">page 10/63</a>
Oil sight glass with reflector				✓	✓							<b>G34</b>	<a href="#">page 10/65</a>
Oil sight glass with reflector on both sides				✓	✓							<b>G35</b>	<a href="#">page 10/65</a>
Magnetic oil drain screw			✓	✓	✓							<b>G53</b>	<a href="#">page 10/65</a>
Oil drain valve, straight			✓	✓	✓							<b>G54</b>	<a href="#">page 10/65</a>
Oil drain valve, angled			✓	✓	✓							<b>G55</b>	<a href="#">page 10/65</a>
Pt100 electrical temperature monitoring				✓	✓							<b>G69</b>	<a href="#">page 10/66</a>
24 V disconnecter parameterized				✓	✓							<b>G70</b>	<a href="#">page 10/66</a>
USB / plug adapter cable				✓	✓							<b>G71</b>	<a href="#">page 10/66</a>
<b>Worm gearboxes S</b>													
Size	09	19	29	2KJ37... -.....-Z						Order code			
Lubricated for life	✓	✓	✓									-	
<b>Electric-monorail gearboxes EHB</b>													
Gearbox size	BH29	BH39	KHF49	KHF69	KHF79	2KJ38... -.....-Z						Order code	
Lubricated for life	✓											-	
Pressure breather valve	✓ <sup>2)</sup>		✓	✓	✓							<b>G45</b>	<a href="#">page 10/62</a>
Pressure breather valve, stainless steel	✓ <sup>2)</sup>		✓	✓	✓							<b>G49</b>	<a href="#">page 10/62</a>
Oil sight glass with reflector				✓	✓							<b>G34</b>	<a href="#">page 10/65</a>
Magnetic oil drain screw			✓	✓	✓							<b>G53</b>	<a href="#">page 10/65</a>

1) Helical worm gearboxes for all mounting positions are equipped with a pressure breather valve.

2) Pressure breather valve can be selected only for mounting positions M2 and M4.

## Gearbox options

### Venting and oil level control

#### Venting

##### Pressure breather valve

Gearboxes from size 39 are supplied with an installed pressure breather valve; this is suitable for both indoors and outdoors use.

Gearbox sizes 19 and 29 can be operated in mounting positions M1, M3, M5, and M6 without requiring a pressure breather valve. For mounting positions M2 and M4, they are equipped with a pressure breather valve.

A stainless-steel version of the pressure breather valve is also available for use in special ambient conditions.

Venting	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-...- <b>Z</b>	Order code
Pressure breather valve		<b>G45</b>
Pressure breather valve, stainless steel		<b>G49</b>

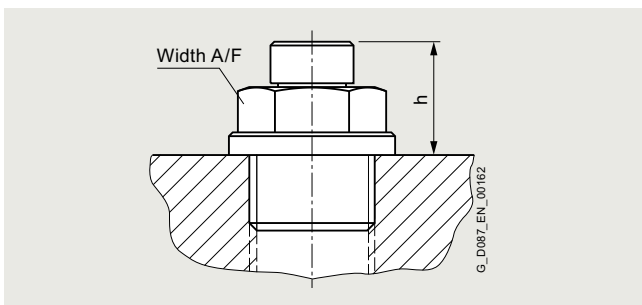


Fig. 10/17 Pressure breather valve

##### Technical specifications

Size	Width across flats Width A/F	Thread	Dimension h mm
<b>Helical gearboxes Z and D</b>			
19, 29	12	G 1/8 A	17
39	12	G 1/8 A	17
49 ... 79	13	G 1/4 A	17
89 ... 129	17	G 3/8 A	17
149 ... 189	24	G 3/4 A	20
<b>Helical gearboxes E</b>			
39	12	G 1/8 A	17
49 ... 69	13	G 1/4 A	17
89 ... 129	17	G 3/8 A	17
149	24	G 3/4 A	20
<b>Cooling tower gearboxes ZKF</b>			
89 ... 129	17	G 3/8 A	17
149 ... 189	24	G 3/4 A	20
<b>Cooling tower gearboxes EKF</b>			
89 ... 129	17	G 3/8 A	17
149	24	G 3/4 A	20
<b>Parallel shaft gearboxes F</b>			
29	12	G 1/8 A	17
39	12	G 1/8 A	17
49 ... 79	13	G 1/4 A	17
89 ... 129	17	G 3/8 A	17
149 ... 189	24	G 3/4 A	20
<b>Bevel gearboxes B</b>			
19, 29	12	G 1/8 A	17
39	12	G 1/8 A	17
49	13	G 1/4 A	17
<b>Bevel gearboxes K</b>			
39	12	G 1/8 A	17
49 ... 89	13	G 1/4 A	17
109 ... 129	17	G 3/8 A	17
149 ... 189	24	G 3/4 A	20
<b>Helical worm gearboxes C</b>			
29	12	G 1/8 A	17
39A	12	G 1/8 A	17
49 ... 89	13	G 1/4 A	17
<b>Electric-monorail gearboxes EHB</b>			
BH29, BH39	13	G 1/4 A	17
KHF49 ... 79	13	G 1/4 A	17

### Oil expansion unit

The oil expansion unit increases the expansion space for the lubricant. For certain types of construction and at high operating temperatures, this avoids that lubricant escapes.

The expansion unit is supplied as a mounting kit, and can be mounted onto the geared motor vertically or at an angle.

The oil expansion unit can be used at the following ambient temperatures:

- Oil expansion unit type 1 -40 to +120 °C
- Oil expansion unit type 2 and type 3 -25 to +100 °C

For different ambient temperatures, please contact Siemens.

Venting	Additional identification code <b>-Z</b> with order code	Order code
Oil expansion unit	2KJ3... -.....-Z	<b>G47</b>

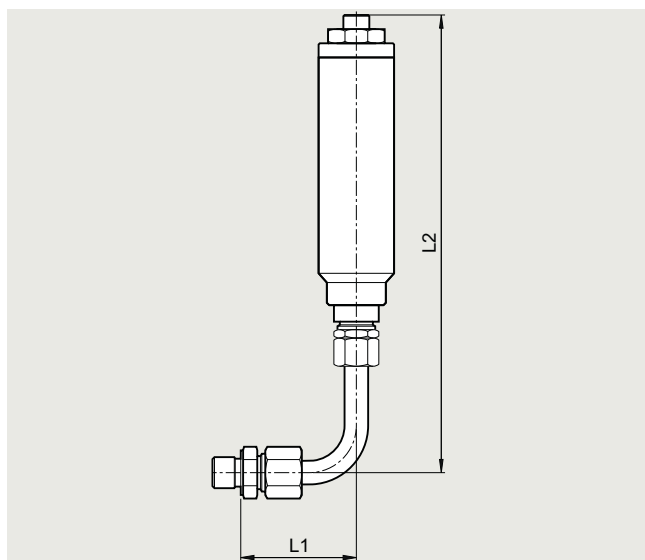


Fig. 10/18 Oil expansion unit type 1

### Technical specifications

Size	Motor frame size	Width across flats Width A/F	Thread	Dimension L1 mm	Dimension L2 mm
<b>Helical gearboxes Z and D</b>					
39	63 ... 90	17/19	G1/8A	49	194
	100 ... 112			71	172
49 ... 69	63 ... 90	19/19	G1/4A	49	194
	100 ... 112			49	194
	132			71	172
79	80 ... 90	19/19	G1/4A	49	194
	100 ... 132			71	172
	160			99	194
89	100 ... 132	22/19	G3/8A	49	194
	160			71	172
	180			71	172
<b>Helical gearboxes E</b>					
39	63 ... 90	17/19	G1/8A	49	194
	100 ... 112			71	172
49	63 ... 90	19/19	G1/4A	49	194
	100 ... 112			49	194
	132			71	172

### Technical specifications

Size	Motor frame size	Width across flats Width A/F	Thread	Dimension L1 mm	Dimension L2 mm
<b>Helical gearboxes E</b>					
69	71 ... 90	19/19	G1/4A	49	194
	100 ... 112			71	172
	132 ... 160			99	194
89	100 ... 132	22/19	G3/8A	49	194
	160			71	172
	180			71	172
<b>Cooling tower gearboxes ZKF</b>					
89	100 ... 132	22/19	G3/8A	49	194
	160			71	172
	180			71	172
<b>Cooling tower gearboxes EKF</b>					
89	100 ... 132	22/19	G3/8A	49	194
	160			71	172
	180			71	172
<b>Parallel shaft gearboxes F</b>					
39	63 ... 90	17/19	G1/8A	49	194
	100 ... 112			71	172
49 ... 69	63 ... 90	19/19	G1/4A	49	194
	100 ... 112			49	194
	132			71	172
79	80 ... 90	19/19	G1/4A	49	194
	100 ... 132			71	172
	160			99	194
89	100 ... 132	22/19	G3/8A	49	194
	160			71	172
	180			71	172
<b>Bevel gearboxes B</b>					
29	63 ... 90	17/19	G1/8A	49	194
	100			71	172
39	63 ... 90	17/19	G1/8A	49	194
	100 ... 112			71	172
	132			49	194
49	63 ... 90	19/19	G1/4A	49	194
	100 ... 112			49	194
	132			71	172
<b>Bevel gearboxes K</b>					
39	63 ... 90	17/19	G1/8A	49	194
	100 ... 112			71	172
	132			49	194
49	63 ... 90	19/19	G1/4A	49	194
	100 ... 112			49	194
	132			71	172
69	71 ... 90	19/19	G1/4A	49	194
	100 ... 112			49	194
	132			71	172
79	71 ... 90	19/19	G1/4A	49	194
	100 ... 132			71	172
	160			99	194
89	80 ... 90	19/19	G1/4A	49	194
	100 ... 132			71	172
	160			99	194
109	100 ... 132	22/19	G3/8A	49	194
	160			71	172
	180			71	172
<b>Helical worm gearboxes C</b>					
39A	63 ... 90	17/19	G1/8A	49	194
	100			71	172
49 ... 69	63 ... 90	19/19	G1/4A	49	194
	100 ... 112			49	194
	132			71	172
89	80 ... 90	19/19	G1/4A	49	194
	100 ... 132			49	194
	132			71	172

## Gearbox options

### Venting and oil level control

#### Venting

#### Oil expansion unit

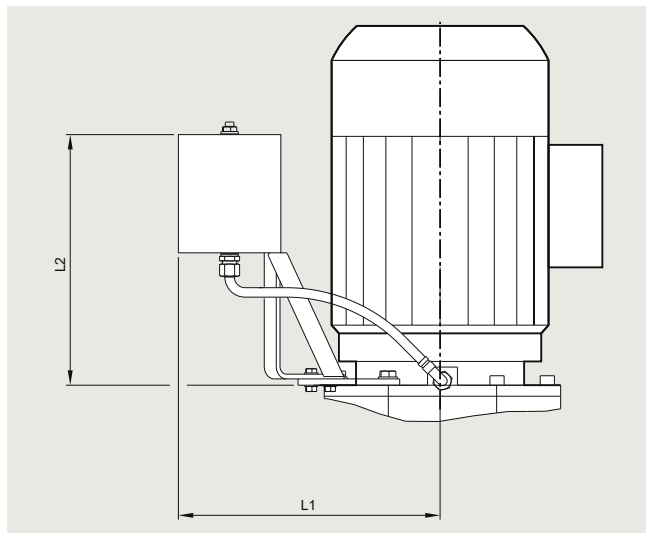


Fig. 10/19 Oil expansion unit type 2

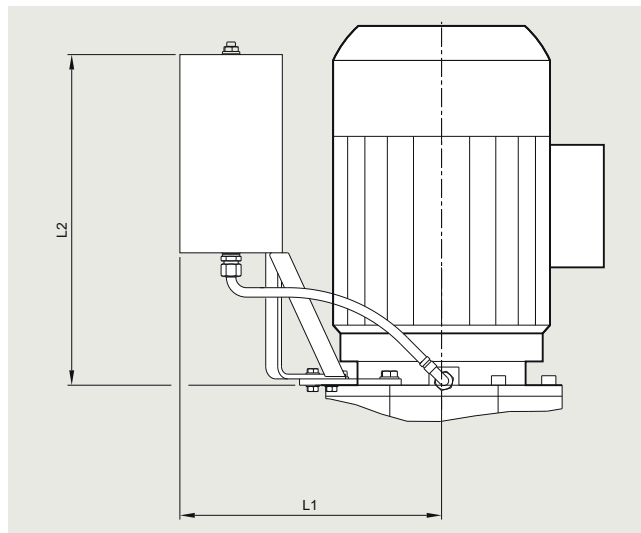


Fig. 10/20 Oil expansion unit type 3

#### Technical specifications

Size	Motor frame size	Type	Thread	Dimension L1 mm	Dimension L2 mm
<b>Helical gearboxes Z and D</b>					
109	90 ... 225	2	G3/8A	406	334
129	90 ... 250	2	G3/8A	442	334
149	100 ... 250	3	G3/4A	465	505
169	112 ... 250	3	G3/4A	493	505
189	112 ... 250	3	G3/4A	493	505
<b>Helical gearboxes E</b>					
109	90 ... 225	2	G3/8A	406	334
129	90 ... 250	2	G3/8A	442	334
149	100 ... 250	3	G3/4A	465	505
<b>Cooling tower gearboxes ZKF</b>					
109	90 ... 225	2	G3/8A	406	334
129	90 ... 250	2	G3/8A	442	334
149	100 ... 250	3	G3/4A	465	505
169	112 ... 250	3	G3/4A	493	505
189	112 ... 250	3	G3/4A	493	505
<b>Cooling tower gearboxes EKF</b>					
109	90 ... 225	2	G3/8A	406	334
129	90 ... 250	2	G3/8A	442	334
149	100 ... 250	3	G3/4A	465	505
<b>Parallel shaft gearboxes F</b>					
109	90 ... 225	2	G3/8A	406	334
129	90 ... 250	2	G3/8A	442	334
149	100 ... 250	3	G3/4A	465	505
169	112 ... 250	3	G3/4A	493	505
189	112 ... 250	3	G3/4A	493	505
<b>Bevel gearboxes K</b>					
129	90 ... 225	2	G3/8A	406	334
149	90 ... 250	2	G3/4A (G3/8A)	442	334
169	100 ... 250	3	G3/4A	465	505
189	112 ... 250	3	G3/4A	493	505

Value in parenthesis applies to mounting position M4.

### Oil level checking screw

For gearbox sizes 49 and higher, the oil level is checked using the oil level checking screw. The oil sight glass is available with a reflector to facilitate visual monitoring.

The oil sight glass on both sides is also available for the following gearboxes in mounting position M2 and M4:

- Bevel geared motor B49
- Bevel geared motor K49 to K189
- Helical worm geared motor C49 to C89

Oil level control	Additional identification code <b>-Z</b> with order code	Order code
Oil sight glass with reflector	2KJ3... -.....-...- <b>Z</b>	<b>G34</b>
Oil sight glass with reflector on both sides (not possible for tandem geared motors)		<b>G35</b>

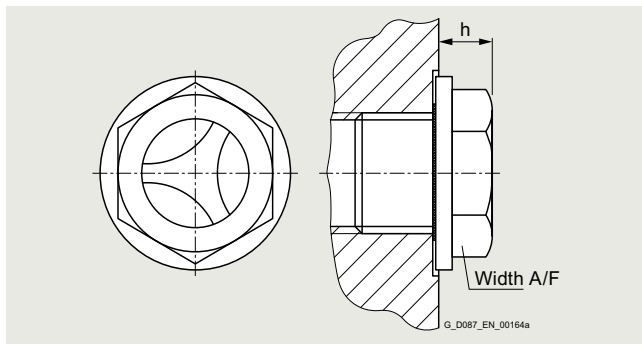


Fig. 10/21 Oil sight glass with reflector

### Technical specifications

Size	Width across flats Width A/F	Thread	Dimension h mm
<b>Helical gearboxes Z and D</b>			
49 ... 79	16	G 1/4 A	10
89 ... 129	19	G 3/8 A	9
149 ... 189	24	G 3/4 A	10
<b>Helical gearboxes E</b>			
49 ... 69	16	G 1/4 A	10
89 ... 129	19	G 3/8 A	9
149	24	G 3/4 A	10
<b>Cooling tower gearboxes ZKF</b>			
89 ... 129	19	G 3/8 A	9
149 ... 189	24	G 3/4 A	10
<b>Cooling tower gearboxes EKF</b>			
89 ... 129	19	G 3/8 A	9
149	24	G 3/4 A	10
<b>Parallel shaft gearboxes F</b>			
49 ... 79	16	G 1/4 A	10
89 ... 129	19	G 3/8 A	9
149 ... 189	24	G 3/4 A	10
<b>Bevel gearboxes B</b>			
49	16	G 1/4 A	10
<b>Bevel gearboxes K</b>			
49 ... 89	16	G 1/4 A	10
109 ... 129	19	G 3/8 A	9
149 ... 189	24	G 3/4 A	10
<b>Helical worm gearboxes C</b>			
49 ... 89	16	G 1/4 A	10
<b>Electric-monorail gearboxes EHB</b>			
BH29, BH39	16	G 1/4 A	10
KHF49 ... 79	16	G 1/4 A	10

### Oil drain

#### Magnetic oil drain screw

For gearboxes from size 39, a magnetic oil drain screw is available that is inserted in the oil drain hole. This serves to collect any metal particles in the gearbox oil.

Oil level control	Additional identification code <b>-Z</b> with order code	Order code
Magnetic oil drain screw	2KJ3... -.....-...- <b>Z</b>	<b>G53</b>

#### Oil drain valve

For gearboxes from size 39, an oil drain valve is available in either a straight or angled design.

The oil drain valve is supplied complete with screw plug as a kit.

Oil level control	Additional identification code <b>-Z</b> with order code	Order code
Oil drain valve, straight	2KJ3... -.....-...- <b>Z</b>	<b>G54</b>
Oil drain valve, angled		<b>G55</b>

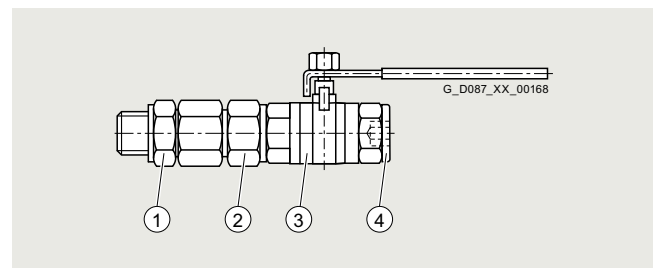


Fig. 10/22 Oil drain valve, straight

- ① Oil drain valve, straight
- ② Screw gland
- ③ Screw gland
- ④ Screw plug

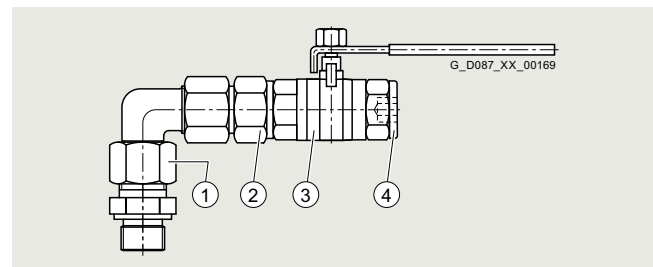


Fig. 10/23 Oil drain valve, angled

- ① Oil drain valve, angled
- ② Screw gland
- ③ Screw gland
- ④ Screw plug

## Gearbox options

### Venting and oil level control

#### Oil level control

#### Pt100 electrical oil temperature monitoring

From size 49, the Pt100 electrical oil temperature monitoring function is available for monitoring the oil temperature in the gearbox.

The Pt100 temperature sensor can be used both in hazardous and non-hazardous areas. In hazardous areas, the sensor may only be operated in conjunction with a disconnecter (temperature transmitter).

#### 24 V disconnecter

The device is parameterized for a temperature measuring range of -40 °C to +120 °C. Application-specific max. permitted limit temperatures must be set on the transmitter either with the PLC controller or the "PACTware" configuration software.

#### USB / plug adapter cable

The adapter cable is required to alter parameters in the disconnecter via the "PACTware" software.

For more information on the disconnecter and the adapter cable, visit [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

Oil level control	Additional identification code <b>-Z</b> with order code	
	2KJ3... -.....-.....- <b>Z</b>	Order code
Pt100 electrical temperature monitoring		<b>G69</b>
24 V disconnecter		<b>G70</b>
USB / plug adapter cable (connection)		<b>G71</b>

#### Technical specifications

Pt100 electrical temperature monitoring	
Measuring circuit	1Pt100 in 3-wire circuit
Tolerance	Class B $\pm 0.3$ °C at 0 °C according to EN 60751
Connecting cable	Hose cable 1x [3 x AWG 22/7-Cu-silver-plated/PTFE/PTFE, 0.36 mm <sup>2</sup> ]
Recommended measuring current	0.3 ... 1.0 mA
Max. operational current	25 mA
Max. operating voltage	10 V DC
Cable length	2 000 mm, open ends
Degree of protection	IP68
Type of protection	II 2G Ex ia IIC Gb II 2D Ex ia IIIC Db

#### 24 V disconnecter

Isolated barrier	1-channel
Supply voltage	24 V DC (Power Rail)
Current output	0/4 mA ... 20 mA
Monitoring	Cable error and sensor break monitoring
Configuration	PACTware

#### USB / plug adapter cable (connection)

On PC	USB type A
On device	Stereo jack 3.5 mm and 3.55 mm
Cable length	3 m

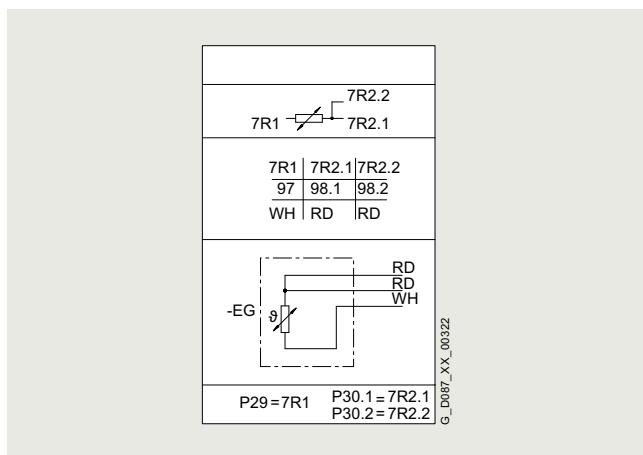


Fig. 10/24 Sensor circuit diagram for Pt100 electrical oil temperature monitoring

### Electrical oil level monitoring system

If the area in which the gearbox is installed is difficult to access, the gearbox oil level will need to be monitored remotely by means of a capacitive sensor.

The capacitive sensor is supplied with a 2 m long cable. The oil level can be monitored only when the gearbox is stationary (i.e. monitoring prior to startup).

A disconnecter approved for use in ATEX applications must be provided for explosion-protected (ATEX) gearboxes. This must be installed outside the hazardous area.

The oil level sensor can be used at the following ambient temperatures:

- Oil level sensor -25 to +45 °C
- Oil level sensor ATEX -20 to +40 °C

For different ambient temperatures, please contact Siemens.

Oil level control	Additional identification code <b>-Z</b> with order code	
	2KJ3... -.....-...- <b>Z</b>	Order code
Oil level sensor		<b>G37</b>
Oil level sensor ATEX version		<b>G38</b>
24 V disconnecter		<b>G40</b>

The electrical oil level monitoring system is available for the following gearboxes

Gearbox size	Mounting position					
	M1	M2	M3	M4	M5	M6
<b>Helical gearboxes Z</b>						
89... 169	✓	✓	✓	✓	✓	✓
189		✓			✓	✓
<b>Helical gearboxes D</b>						
89	✓	✓	✓	✓	✓	
109 ... 169	✓	✓	✓	✓	✓	✓
189		✓			✓	✓
<b>Helical gearboxes E</b>						
89	✓	✓	✓	✓		
109	✓	✓		✓		
129 ... 149	✓	✓	✓	✓	✓	✓
<b>Parallel shaft gearboxes F</b>						
89 ... 189	✓	✓	✓	✓	✓	✓
<b>Bevel gearboxes K</b>						
109 ... 189	✓	✓	✓	✓	✓	✓

The electrical oil level monitoring system in an ATEX version is available for the following gearboxes

Gearbox size	Mounting position					
	M1	M2	M3	M4	M5	M6
<b>Helical gearboxes Z/ZB</b>						
89... 129		✓			✓	✓
149		✓		✓	✓	✓
169	✓	✓	✓	✓	✓	✓
<b>Helical gearboxes ZF</b>						
89		✓			✓	✓
109 ... 129		✓			✓	✓
149		✓		✓	✓	✓
169	✓	✓	✓	✓	✓	✓
<b>Helical gearboxes D/DB</b>						
89		✓			✓	
109 ... 129		✓			✓	✓
149		✓		✓	✓	
169	✓	✓	✓	✓	✓	
<b>Helical gearboxes DF</b>						
89		✓		✓	✓	
109 ... 129		✓		✓	✓	✓
149		✓		✓	✓	
169	✓	✓	✓	✓	✓	
<b>Helical gearboxes E</b>						
89				✓		
109		✓				
129		✓		✓	✓	
149		✓	✓	✓	✓	✓
<b>Parallel shaft gearboxes F</b>						
89 ... 129		✓		✓	✓	✓
149	✓	✓	✓	✓	✓	✓
169 ... 189		✓		✓	✓	✓
<b>Bevel gearboxes K</b>						
109	✓		✓		✓	
129	✓	✓	✓	✓	✓	
149 ... 189	✓	✓	✓	✓	✓	✓

## Gearbox options

### Special version

#### Overview

##### Reduced-backlash version

Gearboxes with reduced backlash are required to perform high-precision positioning tasks and to achieve a high level of control quality. A minimal torsional backlash also has a favorable effect on torque spikes during startup and on load switching in the drive train. With this version, all machine elements in the gearbox that are in the power flow are designed with reduced backlash. As a result, this version also has the option "Shrink-glued output gearwheel".

To ensure that the entire driven machine can be designed with minimum possible backlash, it is advisable to select the solution with integral motor mounting (without adapter), output shafts with shrink disk connection or with smooth shafts (without feather key). In this case, only backlash-free power transmission elements should be used.

The specified torsional backlash in minutes of the angle ['] is based on the maximum rotation angle of the output shaft (no load, max. 1 % of rated output torque) with stationary input shaft.

Refer to the "Torques and transmission ratios" tables for precise values. If no values are specified in the tables, this means that a reduced-backlash version is not available for the specific version.

The dimensions of the reduced-backlash gearboxes are identical to those of the standard versions.

Special version	Additional identification code <b>-Z</b> with order code	Order code
Reduced-backlash version	2KJ3... -.....-.....- <b>Z</b>	<b>G99</b>

##### Shrink-glued output gearwheel

The gearbox output stage is subjected to particular high levels of mechanical stress during rigorous reversing duty or acceleration of high mass moments of inertia. The shrink-glued output gearwheel option ensures the load-bearing capacity of the shaft/hub connection in the event of dynamic load.

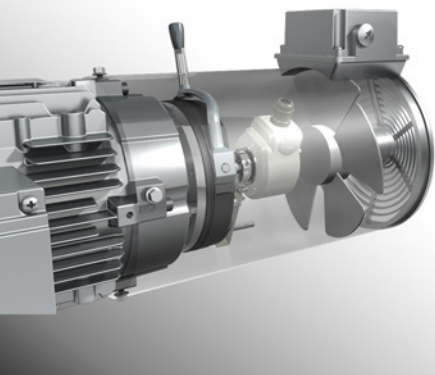
Special version	Additional identification code <b>-Z</b> with order code	Order code
Shrink-glued output gearwheel	2KJ3... -.....-.....- <b>Z</b>	<b>G97</b>

The following gearboxes are available for the reduced-backlash version and the shrink-glued output gearwheel

Gearbox	Gearbox size													
	09	19	29	39	49	59	69	79	89	109	129	149	169	189
Helical gearboxes Z and D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Helical gearboxes E	On request													
Parallel shaft gearboxes F			✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Bevel gearboxes B		✓	✓	✓	✓									
Bevel gearboxes K				✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Helical worm gearboxes C	Not possible													
Worm gearboxes S	Not possible													
Electric-monorail gearboxes BH. and KHF	Not possible													



## Motor options

**11/2 Electrical design** Voltages and frequencies

11/2 Duty types

11/2 Standard voltages

 Motor protection

11/5 Temperature sensor

11/5 Temperature switch

11/6 Pt1000 resistance thermometer

11/6 Selection and ordering data

11/7 Anti-condensation heating

 Windings and insulation

11/8 Converter operation

11/8 Converter World Motor

11/8 Reluctance motor specifically for converter operation

11/9 Impulse Voltage Insulation Class (IVIC) – Category C (strong)

11/9 Example of how to design a drive system

11/10 DURIGNIT IR 2000 insulation

11/10 Temperature class

11/10 Increased air humidity/temperature with 30 to 60 g water per m<sup>3</sup> of air**11/11 Mechanical design** Degrees of protection

11/11 Overview

 Cooling and ventilation

11/11 Overview

11/11 Self ventilation

11/12 Forced ventilation

 Motor connection and terminal boxes

11/14 Connection, circuit and terminal boxes

 Motor plug

11/19 Overview

11/19 HAN 10E motor plug

11/20 HAN K4/4 motor plug

11/22 HAN Q8 motor plug

11/24 HAN Q8 motor plug with cable

11/26 HAN Q12 motor plug

**11/27 Mounted components** Brake

11/27 Overview

11/27 Design and principle of operation

11/28 Selecting the L and FDX brakes

11/29 Selecting the LS brakes with functional safety

11/30 Connecting the brake

11/30 Supply voltages

11/31 Brake control

11/32 Function rectifier

11/34 Brake options

11/39 Technical specifications

 Encoders

11/46 Overview

DRIVE-CLiQ encoders

11/47 • AS 22DQC and AM 22DQC

Incremental encoders

11/48 • TTL1024S/R KD, HTL1024S/R KD, HTL2048S/R KD and HTL2048S/R FD

11/50 • Incremental encoder 1XP8022

## Absolute encoders

11/51 • Absolute encoders 1XP8014 and 1XP8024

11/52 • Absolute encoder 1XP8024-21

## Rugged encoders

11/53 • Rotary pulse encoder LL 861 900 220

11/54 • Rotary pulse encoder HOG9 D 1024 I

11/54 • Rotary pulse encoder HOG10 D 1024 I

## Functionally safe rotary encoders

11/55 • Incremental encoder IN 8.5834

11/57 • Absolute encoder IA 8.5883

## Mechanical protection

11/62 Motors prepared for encoder mounting

11/62 MOTION-CONNECT signal cables

## Encoder accessories

11/63 • Connection system

11/63 • Technical specifications

11/64 • Connector

11/64 • Cable with end sleeves

11/65 • Cable with coupling socket

11/66 • EnDAT gateways for absolute encoders

11/66 • Application terminal box for sensors

11/67 • Modular system in combination with encoder systems

## Backstop

11/69 Second shaft extension and handwheel

11/69 Canopy

**11/70 Designs for special environmental conditions**

11/70 Condensation drain hole

11/70 Internal motor corrosion protection

11/70 Increased corrosion protection for mounted motor components

## Motor options

### Electrical design

#### Voltages and frequencies

#### Duty types

##### Line operation

The three-phase motors are designed for duty type S1 according to IEC 60034 (continuous duty).

##### Converter operation

For converter operation (**P91, P92**), the motors with the applicable voltages are also stamped with duty type Inv. Duty.

Depending on the selected voltage, the technical specifications for the operating points at 50 Hz, 60 Hz, 87 Hz and 104 Hz are stated on the rating plate.

SINAMICS frequency converters are categorized into 3 product groups. Each product group is a data set with motor operating data each assigned to one converter. The converter type is stamped on the additional rating plate.

##### Note:

The selection of the duty types is not necessary or not possible for the Converter World Motors. For more information, see [page 11/8](#).

Duty types	Additional identification code -Z with order code	Order code
	2KJ3...-.....-Z	
<b>Line operation</b>		
Duty type S1		-
Duty type S3 - 75 %		<b>P90</b>
<b>Converter operation</b>		
Duty type S1/Inv. Duty		<b>P91</b>
Duty type Inv. Duty (VSD 10 / synchronous reluctance motors)		<b>P92</b>
<b>Product group 1</b> Version for converter operation in the basic version with operating data SINAMICS G120 with PM240-2		<b>P94</b>
<b>Product group 2</b> Version for converter operation in the basic version with operating data SINAMICS S120 (ALM)		<b>P95</b>
<b>Product group 3</b> Version for converter operation in the basic version with operating data SINAMICS G120D PM250		<b>P96</b>

More information on the product groups is provided in chapter [Configuring guide on page 2/35](#).

#### Standard voltages

Three-phase motors are available for rated voltages ranging from 200 up to 690 V.

Motor frame sizes 63 up to 112 are generally supplied for the voltage range 230/400 V at 50 Hz. For motor frame sizes from 132 and above, the standard version is 400/690 V at 50 Hz.

##### Note:

Further selection of voltages is not possible for the Converter World Motors. For more information, see [page 11/8](#).

At the customer's request, we can stamp a tolerance of  $\pm 10\%$  on the rating plate for our standard voltages. The  $\pm 10\%$  voltage tolerance is not possible in conjunction with the functionally safe rotary encoder.

Voltage tolerance	Additional identification code -Z with order code	Order code
	2KJ3...-.....-Z	
Voltage tolerance $\pm 10\%$ <sup>3)</sup>		<b>P80</b>

#### Standard motor voltages

Fre- quency	Voltages	Power	Possible specifications							Motor frame size	13th position of the Article No. An order code is required when 9 appears in the 13th position of the Article No.	Additional order code required for converter operation				
			CE, UKCA	UL-R/ CSA	China	EAC	Ex- port <sup>1)</sup>	ATEX	63 ... 112			132 ... 250	2KJ3...-.....- .....-Z	Order code	P91	P92

#### Voltages for 50/60 Hz

##### Voltages for 50/60 Hz, 50 Hz power

50 Hz	230 V $\Delta$ /400 V Y	P <sub>50</sub>	✓	✓	✓ <sup>2)</sup>	✓	✓ <sup>4)</sup>	✓	✓	-	4	-	✓	✓	✓	✓
60 Hz	460 V Y	P <sub>50</sub>	✓	✓		✓	✓ <sup>4)</sup>	✓	-	✓	9	N3A				
50 Hz	400 V $\Delta$ /690 V Y	P <sub>50</sub>	✓	✓		✓	✓ <sup>4)</sup>	✓	-	✓	4	-				
60 Hz	460 V $\Delta$	P <sub>50</sub>	✓	✓		✓	✓ <sup>4)</sup>	✓	✓	-	9	N3B				
50 Hz	220 V $\Delta$ /380 V Y <sup>4)</sup>	P <sub>50</sub>	✓	✓	✓	✓	✓	✓	✓	✓	9	N3C	✓			
60 Hz	440 V Y <sup>4)</sup>	P <sub>50</sub>	✓	✓	✓	✓	✓	✓	✓	✓						

##### Voltages for 50/60 Hz, 60 Hz power

50 Hz	230 V $\Delta$ /400 V Y	P <sub>50</sub>	✓	✓	✓	✓	✓	✓	✓	-	2	-	✓	✓	✓	✓
60 Hz	460 V Y	P <sub>60</sub>	✓	✓	✓	✓	✓	✓	-	✓	9	N2A				
50 Hz	400 V $\Delta$ /690 V Y	P <sub>50</sub>	✓	✓		✓	✓ <sup>4)</sup>	✓	-	✓	2	-				
60 Hz	460 V $\Delta$	P <sub>60</sub>	✓	✓		✓	✓ <sup>4)</sup>	✓	✓	-	9	N2B <sup>5)</sup>				
50 Hz	220 V $\Delta$ /380 V Y	P <sub>50</sub>	✓	✓	✓	✓	✓	✓	✓	✓	9	N2C <sup>5)</sup>	✓	✓	✓	✓
60 Hz	440 V Y	P <sub>60</sub>	✓	✓	✓	✓	✓	✓	✓	✓						

- 1) With motor power 0.75 kW or higher.
- 2) Can be selected for motor frame size 80 or higher.
- 3) Motor frame sizes 63 and 80 are not available.
- 4) Cannot be selected for worm gearboxes S.
- 5) Voltages in Standard Efficiency IE1 and High Efficiency IE2 are available.

**Standard voltages**

## Standard motor voltages

Fre- quency	Voltages	Power	Possible specifications						Motor frame size			13th position of the Article No. An order code is required when 9 appears in the 13th position of the Article No.	Additional order code required for converter operation					
			CE, UKCA	UL-R/ CSA	China	EAC	Ex- port <sup>1)</sup>	ATEX	63 ... 112	132 ... 250	2KJ3...-...- -...-Z			Order code	P91	P92	P94	P95
<b>Voltages for 50 Hz</b>																		
50/ 87 Hz	230 V Δ/400 V Δ	P <sub>50/ P<sub>87</sub></sub>	✓			✓			✓	✓		9	N6A	✓				
87 Hz	400 V Δ <sup>4) 7)</sup>	P <sub>87</sub>	✓		✓	✓		✓	✓	✓		9	N6L	✓		✓	✓ <sup>2)</sup>	
50 Hz	500 V Y	P <sub>50</sub>	✓			✓	✓	✓	✓ <sup>3)</sup>	✓		9	N1C	✓		✓	✓	
50 Hz	500 V Δ <sup>4)</sup>	P <sub>50</sub>	✓			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓		9	N1D	✓		✓ <sup>2)</sup>	✓ <sup>2)</sup>	
50 Hz	380 V Δ/660 V Y	P <sub>50</sub>	✓			✓	✓		■	■		9	N1S		✓			
50 Hz	240 V Δ/415 V Y +3/-5 %	P <sub>50</sub>	✓			✓	✓		■	■		9	N1T	✓				
50 Hz	415 V Δ +3/-5 %	P <sub>50</sub>	✓			✓	✓		■	■		9	N1U	✓				
50 Hz	200 V Δ	P <sub>50</sub>	✓			✓	✓		■	■		9	N1K	✓				

**Voltages for 60 Hz**
**Voltages for 60 Hz, 50 Hz power**

60 Hz	220 V Δ/380 V Y	P <sub>50</sub>	✓	✓		✓		✓	■	■		9	N4C	✓			
60 Hz	380 V Δ/660 V Y	P <sub>50</sub>	✓			✓		✓	■	■		9	N4D				
60 Hz	440 V Δ	P <sub>50</sub>	✓	✓		✓		✓	■	■		9	N4F	✓		✓	✓
60 Hz	575 V Y <sup>8)</sup>	P <sub>50</sub>	✓	✓		✓		✓	■ <sup>3)</sup>	■		9	N4L	✓			
60 Hz	575 V Δ <sup>8)</sup>	P <sub>50</sub>	✓	✓		✓		✓	■ <sup>2)</sup>	■		9	N4M	✓			
60 Hz	230 V YY/460 V Y	P <sub>50</sub>	✓	✓		✓			■	■		9	N4N	✓			
60 Hz	230 V Δ/400 V Y	P <sub>50</sub>	✓	✓		✓		✓	■	■		9	N4A	✓			
60 Hz	400 V Δ/690 V Y	P <sub>50</sub>	✓			✓		✓	■	■		9	N4B	✓			
60 Hz	200 V Δ	P <sub>50</sub>	✓			✓			■	■		9	N4P	✓			
60 Hz	208 V Δ	P <sub>50</sub>	✓			✓			■	■		9	N4Q	✓			

**Voltages for 60 Hz, 60 Hz power**

60 Hz	220 V Δ/380 V Y	P <sub>60</sub>	✓			✓		✓	■	■		9	N5C <sup>5)</sup>	✓			
60 Hz	380 V Δ/660 V Y	P <sub>60</sub>	✓			✓		✓	■	■		9	N5D <sup>5)</sup>				
60 Hz	440 V Y	P <sub>60</sub>	✓		✓	✓		✓	■	■		9	N5E <sup>5)</sup>	✓		✓	✓
60 Hz	440 V Δ	P <sub>60</sub>	✓			✓		✓	■	■		9	N5F <sup>5)</sup>	✓		✓	✓
60 Hz	460 V Y	P <sub>60</sub>	✓	✓	✓	✓		✓	✓	✓		9	N5H <sup>5)</sup>	✓		✓	✓
60 Hz	460 V Δ	P <sub>60</sub>	✓	✓		✓		✓	✓	✓		9	N5J <sup>5)</sup>	✓		✓	✓
60 Hz	575 V Y <sup>8)</sup>	P <sub>60</sub>	✓	✓		✓		✓	■ <sup>3)</sup>	■		9	N5L	✓			
60 Hz	575 V Δ <sup>8)</sup>	P <sub>60</sub>	✓	✓		✓		✓	■ <sup>2)</sup>	■		9	N5M	✓			
60 Hz	230 V YY/460 V Y	P <sub>60</sub>	✓	✓		✓			■	■		9	N5N <sup>5)</sup>	✓			

**Voltages for brake motors with function rectifier<sup>4)</sup>**
**Voltages for 60 Hz, 50 Hz power**

60 Hz	440 V Δ	P <sub>60</sub>	✓			✓		✓	✓	✓ <sup>6)</sup>		9	N5G				
60 Hz	460 V Δ	P <sub>60</sub>	✓			✓		✓	✓	✓ <sup>6)</sup>		9	N5K				

■ With additional price

1) With motor power 0.75 kW or higher.

2) Can be selected for motor frame size 100 or higher.

3) Motor frame sizes 63 and 80 are not available.

4) Cannot be selected for worm gearboxes S.

5) Voltages in Standard Efficiency IE1 and High Efficiency IE2 are available.

6) Can be selected for motor frame sizes up to 200.

7) Voltage is only available for explosion-protected motors.

8) Voltages can only be selected in conjunction with UL/CSA specification.

## Motor options

### Electrical design

#### Voltages and frequencies

##### Standard voltages

Standard motor voltages

Fre- quency	Voltages	Power	Possible specifications					Motor frame size		13th position of the Article No. An order code is required when 9 appears in the 13th position of the Article No.	Additional order code required for converter operation
			CE, UKCA	UL-R/ CSA	China	EAC	Ex- port <sup>1)</sup>	63 ... 112	132 ... 250		

##### Voltages for VSD10 line motors for converter operation <sup>4)</sup>

###### Voltages for 50/60 Hz, 60 Hz power

50 Hz	220 V Δ/380 V Y	P <sub>50</sub>						✓ <sup>2)</sup>	✓	9	N2C <sup>4)</sup>	✓	✓
60 Hz	440 V Y	P <sub>60</sub>	✓	✓			✓	✓	✓				
50 Hz	277 V Δ/480 V Y	P <sub>50</sub>	✓				✓	■ <sup>2)</sup>	■	9	N2G		✓
60 Hz	550 V Y	P <sub>60</sub>											
50 Hz	380 V Y	P <sub>50</sub>	✓	✓			✓	✓	✓ <sup>2)</sup>	9	N2H <sup>5)</sup>		✓
60 Hz	440 V Y	P <sub>60</sub>											

###### Voltages for 50 Hz

50 Hz	380 V Y	P <sub>50</sub>	✓	✓			✓	✓ <sup>2)</sup>	-	9	N1N		✓
50 Hz	380 V Δ/660 V Y	P <sub>50</sub>	✓				✓	■ <sup>2)</sup>	■	9	N1S		✓
50 Hz	220 V Δ	P <sub>50</sub>	✓	✓			✓	✓ <sup>2)</sup>	✓	9	N1V <sup>5)</sup>		✓

##### Voltages for synchronous reluctance motors for converter operation <sup>3) 6)</sup>

###### Voltages for 50 Hz

50 Hz	380 V Y	P <sub>50</sub>	✓	✓			✓	✓	-	9	N1N		✓
-------	---------	-----------------	---	---	--	--	---	---	---	---	-----	--	---

###### Voltages for 50/60 Hz, 50 Hz power

50 Hz	220 V Δ/380 V Y <sup>3)</sup>	P <sub>50</sub>	✓	✓			✓	✓	-	9	N3C <sup>4)</sup>		✓
60 Hz	440 V Y <sup>3)</sup>	P <sub>50</sub>											

###### Voltages for 50/60 Hz, 60 Hz power

50 Hz	220 V Δ/380 V Y	P <sub>50</sub>	✓	✓			✓	✓	-	9	N2C <sup>4)</sup>		✓
60 Hz	440 V Y	P <sub>60</sub>											

###### Voltages for 87 Hz, 87 Hz power

87 Hz	380 V Δ	P <sub>87</sub>	✓	✓			✓	✓	-	9	N6K		✓
-------	---------	-----------------	---	---	--	--	---	---	---	---	-----	--	---

■ With additional price

<sup>1)</sup> With motor power 0.75 kW or higher.

<sup>2)</sup> Can be selected for motor frame size 100 or higher.

<sup>3)</sup> Cannot be selected for worm gearboxes S.

<sup>4)</sup> Voltages in Standard Efficiency IE1 and High Efficiency IE2 are available.

<sup>5)</sup> Voltage can only be selected in conjunction with HAN K4/4, HAN Q8 and HAN Q8 motor plug with cable.

<sup>6)</sup> Synchronous reluctance motors available in motor frame sizes 80, 90 and 112.

**Temperature sensor**

The temperature sensor is a **positive temperature coefficient (PTC) thermistor** which offers comprehensive protection against thermal motor overload. The temperature of the winding can be accurately monitored thanks to its low thermal capacity and the excellent heat contact with the winding. The PTC thermistor exhibits a sudden change in resistance when a rated response temperature (NAT) is reached.

A tripping unit is used to evaluate the change in resistance and to open auxiliary circuits via auxiliary contacts.

The switching hysteresis of the PTC thermistor is low, which facilitates fast restarting of the drive. Motors with this type of protection are recommended for heavy duty starting, intermittent duty, extreme changes in load, high ambient temperatures, or fluctuating supply systems.

In order to prevent serious damage caused by impulse voltage peaks to the sensor and the downstream evaluation electronic circuitry that can occur in converter operation (as a result of the close contact between PTC thermistor and winding), the connecting cables and the PTC thermistor have reinforced insulation designed to provide "protective separation".

The selected motor protection depends on the motor frame size and motor type. The motor protection available is listed in the "Selection and ordering data" on [page 11/6](#).

Motor protection	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3...-.....-Z	<b>M10</b>
PTC thermistor for disconnection		

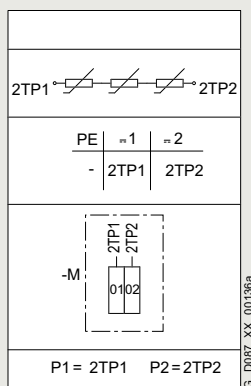


Fig. 11/1 Connection circuit diagram

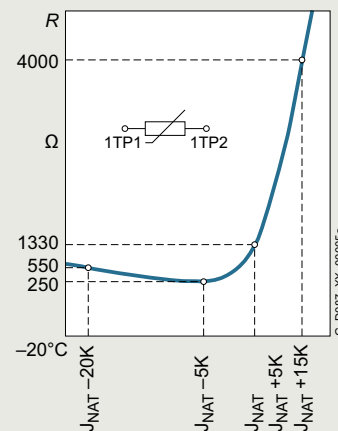


Fig. 11/2 Temperature sensor characteristic

**Temperature switch**

The temperature switch is a **winding thermostat (NC contact)** and is suitable as a protection device for slowly increasing motor temperatures. When the rated response temperature (NAT) is reached, it can open an auxiliary circuit. When the motor temperature decreases, the winding thermostat closes again as soon as the temperature falls significantly below the rated response temperature.

When the motor current rises quickly (e.g. with a locked rotor), these switches are not suitable due to their large thermal time constants.

The temperature switch provides safety isolation in accordance with EN 61800-5-1 up to max. 500 V.

It is not possible to use the temperature switch in combination with a functionally safe rotary encoder.

The selected motor protection depends on the motor frame size and motor type. The motor protection available is listed in the "Selection and ordering data" on [page 11/6](#).

Motor protection	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3...-.....-Z	<b>M12</b>
Winding thermostat for disconnection		

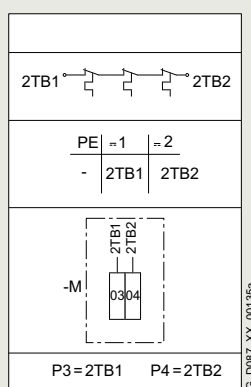


Fig. 11/3 Connection circuit diagram

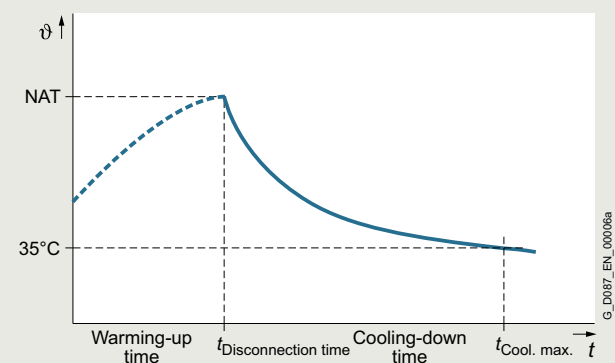


Fig. 11/4 Temperature switch characteristic

# Motor options

## Electrical design

### Motor protection

#### Pt1000 resistance thermometer

The resistance thermometer has a chip for a temperature sensor, the resistance of which changes in relation to temperature according to a series of reproducible basic values. The changes in resistance are transferred as changes in current. At 0 °C, the measurement resistances are adjusted to 1000 Ω for the Pt1000, and correspond to the accuracy class B (i.e. the relationship between resistance and temperature). The limit deviation is ±0.3 °C, and the admissible deviations are defined in EN 60751.

Similar to the method of operation of the Pt100, the relationship between the temperature and the electrical resistance of conductors is utilized in the Pt1000 to measure the temperature, just like with the additional resistance thermometers described above.

Pure metals undergo larger changes in resistance than alloys and have relatively constant temperature coefficients.

Temperatures for alarm and tripping can be set as required when using converters from Siemens that determine the motor temperature in accordance with the measuring principle described above. With these devices, the measured signal is evaluated directly in the converter. For line operation, the 3RS10 temperature monitoring relay, which forms part of the protection equipment, can be ordered separately. For further details, see [Catalog IC 10](#), Article No.: E86060-K1010-A101-B4-7600.

The selected motor protection depends on the motor frame size and motor type. The motor protection available is listed in the "Selection and ordering data" (see table).

Motor protection	Additional identification code -Z with order code	Order code
Pt1000 resistance thermometer	2KJ3... -.....-.....-Z	<b>M17</b>

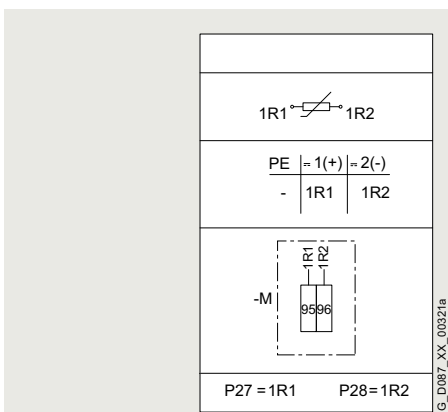


Fig. 11/5 Connection circuit diagram

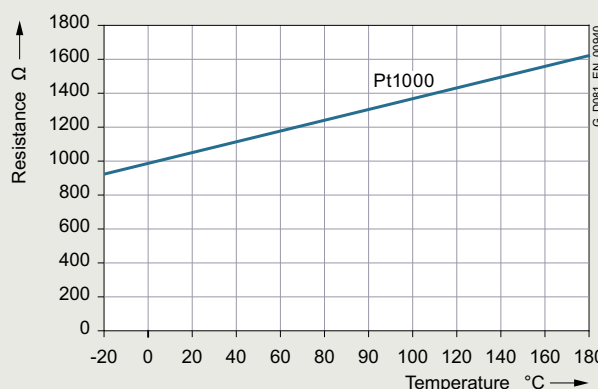


Fig. 11/6 Pt1000 resistance thermometer characteristic

#### Selection and ordering data

For the Converter World Motor, the resistance thermometer (Pt1000) is already integrated and therefore cannot be selected. No other motor protection is available.

Motor protection	Motor frame size												Additional identification code -Z with order code	Order code	
	63	71	80	90	100	112	132	160	180	200	225	250			
PTC thermistor, disconnection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2KJ3... -.....-.....-Z	<b>M10</b>
Winding thermostat, disconnection <sup>1)</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>M12</b>
Pt1000 resistance thermometer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>M17</b>
<b>Motor protection for VSD10 line motors</b>															
PTC thermistor, disconnection						✓	✓	✓	✓	✓	✓	✓	✓		<b>M10</b>
Winding thermostat, disconnection <sup>1)</sup>						✓	✓	✓	✓	✓	✓	✓	✓		<b>M12</b>
Pt1000 resistance thermometer					✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>M17</b>
<b>Motor protection for synchronous reluctance motors</b>															
Pt1000 resistance thermometer		✓	✓			✓									<b>M17</b>
<b>Motor protection for explosion-protected motors (MB motors)</b>															
PTC thermistor, disconnection		✓	✓	✓	✓	✓	✓	✓	✓						<b>M10</b>
Pt1000 resistance thermometer		✓	✓	✓	✓	✓	✓	✓	✓						<b>M17</b>

<sup>1)</sup> Not possible with the functionally safe rotary encoder.

#### Protective devices

Number of windings	Example	Function	Number of temperature-dependent protective devices	Number of terminals
1	Motors with one pole number	Disconnection	3 or 1 (motor frame sizes 80 and 90)	2

#### The following applies to explosion-protected motors (MB motors):

In order to achieve full thermal protection, it is necessary to combine a thermally delayed overcurrent release and a PTC thermistor. For full motor protection implemented only with PTC thermistors, please inquire.

The SIRIUS 3RN2 thermistor motor protection device for protecting motors against overheating by means of direct temperature measurement, also for hazardous zones with ATEX approval, can be ordered separately. For further details, see [Catalog IC 10](#) or [www.siemens.com/product?3RN2](http://www.siemens.com/product?3RN2).

### Anti-condensation heating

Motors whose windings are at risk of condensation due to the climatic conditions, e.g. non-operational motors in humid atmospheres or motors that are subjected to widely fluctuating temperatures, can be equipped with anti-condensation heaters. Anti-condensation heating must not be switched on during operation.

Instead of an anti-condensation heater, another possibility is to connect a voltage that is approximately 4 to 10 % of the rated motor voltage to stator terminals U1 and V1; 20 to 30 % of rated motor current is sufficient to heat the motor.

#### Note:

Anti-condensation heating cannot be selected in conjunction with the following motors and options:

- Converter World Motors
- Explosion-protected motors (MB motors)
- Motor plugs

Motor protection	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-...- <b>Z</b>	
115 V anti-condensation heating		<b>M40</b>
230 V anti-condensation heating		<b>M41</b>

#### Technical specifications

Motor frame size	Heating power W
63 ... 80 <sup>1)</sup>	12.5
90 ... 112	25
132 ... 200	50
225 ... 250	92

<sup>1)</sup> Only possible for worm geared motors S in motor frame size 71

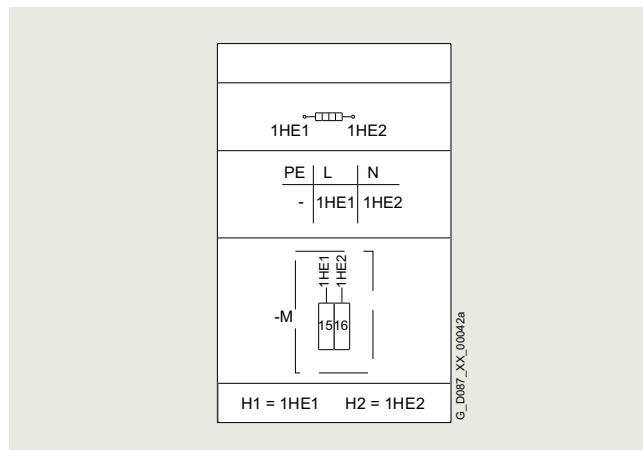


Fig. 11/7 Connection circuit diagram for the anti-condensation heating

## Motor options

### Electrical design

#### Windings and insulation

##### Converter operation

All motors used in SIMOGEAR geared motors are equipped with innovative insulation systems, consisting of high-quality enamel wires and insulating sheet materials in conjunction with highly temperature-resistant impregnations.

The motors can be operated with SINAMICS G and SINAMICS S converters (controlled and uncontrolled infeed) provided that the permissible voltage peaks are not exceeded.

Continuous operation while utilizing the admissible voltage tolerances must be avoided, and is not recommended according to IEC 60034-1 2011 chapter 7.3.

Preferred supply system configurations are TT systems and TN systems with neutral-point grounding. In the case of a fault when connected to an IT system (ground fault), the insulation is excessively stressed. In this case, the process should be terminated as quickly as possible ( $t < 2$  h), and the fault resolved. We do not recommend operation on TN systems with transition-point grounding.

##### Note:

When motors are operated with SINAMICS converters, additional losses occur which, depending on the admissible winding overtemperature, can make it necessary to reduce the torque. The permissible torque values can be obtained from the SIZER engineering tool. The lowest frequency specified there is 5 Hz. For stationary converter operation at lower frequencies, particularly in the case of frame sizes  $< 100$ , it is necessary to contact the Quotation Center.

For converter operation with the outputs specified in the catalog, the motors are utilized according to temperature class 155 (F), i.e. normally, in this case, neither a service factor  $> 1$  nor an increased coolant temperature is possible.

##### Converter World Motor

The Converter World Motors are asynchronous motors and have been developed and optimized for operation with SINAMICS converters. However, operation with other converters is also possible. When operating with most SINAMICS converters, automated commissioning is possible using motor, gearbox and encoder codes via the Startdrive software. This requires at least firmware V5.2 SP3 for SINAMICS S120, for example.

As standard, the Converter World Motors include a winding optimized for the converter, which can be operated between 380 V and 480 V.

Therefore, the extended voltage variants and duty types cannot be selected.

##### Insulation

The motors can be operated with SINAMICS G/S converters up to line voltages of 480 V when the permissible voltage peaks are complied with ( $\hat{U}_{LL} \leq 3200$  V,  $\hat{U}_{LE} \leq 2800$  V).

The following gearbox types are available for the Converter World Motor:

Gearbox type	Gearbox size
Helical gearboxes Z and D	19 ... 189
Helical gearboxes E	39 ... 149
Parallel shaft gearboxes F	29 ... 189
Bevel gearboxes B	19 ... 49
Bevel gearboxes K	39 ... 189
Helical worm gearboxes C	29 ... 89
Electric-monorail gearboxes EHB	29 ... 79
Worm gearboxes S	not possible

##### Reluctance motors specifically for converter operation

The essential difference between synchronous reluctance motors and induction motors is the rotor. In contrast to an induction motor, a reluctance motor has a rotor where no current flows through the squirrel cage. Therefore, it is not capable of starting up directly on the line supply and a SINAMICS converter will always be needed to control it.

Thanks to intelligent control by SINAMICS converters and the low losses in the rotor, the motor has a significantly optimized thermal response and therefore also a higher efficiency. The efficiency exceeds the IE4 efficiency requirements in accordance with IEC 60034-30-2, particularly in partial load operation, but also at the rated operating point.

The thermal reserves (as a result of the cooler rotor) of the reluctance motor allow a continuous overload capability of up to 200 %. A smaller motor can be used if no increased short-term overload capability is required in these cases. The only thing needed is a converter that can provide the required load current.

SINAMICS converters facilitate closed-loop speed control without requiring an encoder (encoderless operation). The closed-loop control is optimized by the standard of a Pt1000 temperature sensor, which increases the accuracy of the temperature model.

The dynamic response of the reluctance motor is also considerably higher than that of a comparable induction motor with IE3 efficiency thanks to the lower intrinsic moment of inertia of the rotor.

##### System connection

The synchronous reluctance geared motor can be operated with the following SINAMICS converters:

Converter compatibility				
	Control Unit	Power Module	Operator panel	
<b>G120</b>				
Modular	$\geq$ FW4.7 SP6	CU240E-2	PM240-2	BOP-2
	$\geq$ FW4.7 SP9	CU230P-2	PM240P-2	IOP & IOP-2
Distributed	$\geq$ FW4.7 SP9	G120D only CU240D-2		
<b>S120</b>				
	$\geq$ FW4.8	CU310-2	PM240-2	BOP20
		CU320-2	Booksize	

- The converter is operated with a rated pulse frequency of at least 4 kHz.
- The converter can provide the rated voltage as listed in the catalog.

For SINAMICS G120 converters (from firmware version 4.7) the SIMOTICS GP/SD synchronous reluctance series can be selected in the SINAMICS converter via the STARTER software or the operator panel at the converter (Basic Operator Panel (BOP), Intelligent Operator Panel (IOP)) as motor category and can be addressed using the motor code number.

##### Rated voltage

The tolerance for the rated voltage is in accordance with EN 60034-1. A rated voltage range is not specified. The rated motor voltages are selected so that when operated with a SINAMICS G120 converter, the available voltage is optimally utilized.



**Reluctance motors specifically for converter operation**
**Insulation**

The motors can be operated with SINAMICS G/S converters up to line voltages of 480 V when the permissible voltage peaks are complied with ( $\hat{U}_{LL} \leq 3200 \text{ V}$ ,  $\hat{U}_{LE} \leq 2800 \text{ V}$ ).

When operated with a converter with the powers specified in the catalog, the motors in accordance with temperature class 155 (F) are utilized in accordance with temperature class 130 (B) (service factor 1.2).

Preferred supply system configurations are TT systems and TN systems with neutral-point grounding.

**Noise**

The max. sound pressure levels can be found in the "Selection and ordering data" in the [Motors chapter on page 9/10](#).

The following gearbox types are available for the synchronous reluctance motor:

Gearbox type	Gearbox size
Helical gearboxes Z and D	19 ... 189
Helical gearboxes E	39 ... 149
Parallel shaft gearboxes F	29 ... 189
Bevel gearboxes B	19 ... 49
Bevel gearboxes K	39 ... 189
Helical worm gearboxes C	29 ... 89
Electric-monorail gearboxes EHB	29 ... 79
Worm gearboxes S	not possible

**Impulse Voltage Insulation Class (IVIC) – Category C (strong)**

The insulation system of the motors meets the requirements of EN 60034-18-41:2014 according to stress category C (strong).

The insulation systems of the motors are optimized for operation with SINAMICS converters. The permissible voltage peaks specified in the table must not be exceeded.

Thanks to the high-quality insulation systems, the requirements of IVIC C are significantly exceeded; see the comparison in the table. This also means that significantly more stringent requirements can be met by the system operator.

The table below shows a comparison between the maximum admissible peak-peak voltage at the motor terminal as stipulated by EN 60034-18-41 and the peak-peak voltage tolerance of SIMOTICS insulation systems.

Line voltage for standard insulation

	Line voltage $U_N$			
	400 V		480 V	
Standard	IVIC C	Siemens	IVIC C	Siemens
$\hat{U}_{\text{phase-ground}}$	1680	2200	2016	2200
$\hat{U}_{\text{phase-phase}}$	2360	3000	2832	3000

Line voltage for reinforced insulation (Advanced)

	Line voltage $U_N$					
	400 V		480 V		500 V	
Advanced	IVIC C	Siemens	IVIC C	Siemens	IVIC C	Siemens
$\hat{U}_{\text{phase-ground}}$	1680	2800	2016	2800	2100	2800
$\hat{U}_{\text{phase-phase}}$	2360	3200	2832	3200	2950	3200

The following applies for the voltage rise time:  $T_a > 0.3 \pm 0.2 \mu\text{s}$ .

The voltages specified are peak-peak values (Vpk/pk).

**Example of how to design a drive system for a line voltage of 400 V in compliance with the specifications for the motor and converter**

When SIMOGEAR geared motors are operated with SINAMICS converters, reflections may cause voltage peaks in excess of the upper tolerance limits. These effects may also be influenced by the design and length of the cables used.

A = standard power cable (NYCWY)

B = power cable with symmetrical shield (e.g. Protolflex)

In the example below, various motor configurations are assessed on the basis of the following general conditions:

- Configuration with a single motor:  
Each motor has its own Motor Module with a separate infeed for each module
- Configuration with multiple motors:  
Each motor has its own Motor Module; these modules are interconnected via a common DC link which is supplied by an Active Line Module combined with an Active Interface Module (AIM).
- TN system  $U_k = 5 \%$
- $U_{\text{DC Link}} = 1.5 \times U_{\text{Line}}$  with a modulation depth  $\text{ALM}_{\text{max}} < 0.97$  and  $U_{\text{DC,max}}$
- Motor Modules in the booksize format
- Active Line Module (ALM) with matching Active Interface Module (AIM)
- No parallel connection of Active Line Modules
- Pulse frequencies set to factory settings

On this basis, the maximum recommended cable lengths  $m$  are:

Rated power kW	Rated voltage $U_{\text{Line}} = 400 \text{ V} \pm 10 \%$ (DC link voltage $U_{\text{DC Link}} = 640 \text{ V}_{\text{DC}}$ )			
	Multi-motor operation		Single-motor operation	
	Cable type A	Cable type B	Cable type A	Cable type B
0.09 ... 4	50 <sup>1)</sup>	50 <sup>1)</sup>	50 <sup>1)</sup>	50 <sup>1)</sup>
5.5 ... 7.5	55	70 <sup>1)</sup>	70 <sup>1)</sup>	70 <sup>1)</sup>
11 ... 18.5	50	75	100 <sup>1)</sup>	100 <sup>1)</sup>
22 ... 45	100 <sup>1)</sup>	100 <sup>1)</sup>		
55 ... 90	85			

<sup>1)</sup> Cable length limitation by SINAMICS Motor Module

Provided that the cables do not exceed the recommended lengths and on the basis of the specified constraints, it can be assumed that the system will operate in compliance with the product specifications.

Other cable lengths may be used, but the potential voltage peaks and front times must be checked separately according to the table for compliance with the product specifications.

## Motor options

### Electrical design

#### Windings and insulation

##### DURIGNIT IR 2000 insulation

The DURIGNIT IR 2000 insulating system consists of high-quality enamel wires and insulating sheet materials in conjunction with temperature-resistant resin impregnation.

This ensures that these motors will have a high mechanical and electrical strength, high service value and a long service life. The insulating system protects the winding to a large degree against aggressive gases, vapors, dust, oil and increased air humidity. It can withstand the usual vibration stress.

The insulation is suitable up to an absolute air humidity of 30 g water per m<sup>3</sup> of air. Condensation should be prevented from forming on the winding.

Please inquire about extreme applications.

##### Temperature class

All motors are designed for temperature class 155 (F). They are utilized to temperature class 130 (B).

The 4-pole motors can be optionally implemented for temperature class 180 (H). The winding is utilized to temperature class 155 (F).

##### Note:

Temperature class 180 (H) cannot be selected in conjunction with the following motors and gearbox types:

- VSD10 line motors
- Converter World Motor
- Explosion-protected motors (MB motors)
- Worm geared motors S

Motor protection	Additional identification code <b>-Z</b> with order code	Order code
Temperature class 180 (H)	2KJ3... -.....-.....- <b>Z</b>	<b>M08</b>

##### Increased air humidity/temperature with 30 to 60 g water per m<sup>3</sup> of air

The motors in the standard range are designed for up to 30 g water per m<sup>3</sup>. A design for increased air humidity in the range between 30 and 60 g water per m<sup>3</sup> of air as a function of the temperature is possible, as shown in the following table.

##### Note:

The increased air humidity/temperature with 30 to 60 g water per m<sup>3</sup> of air cannot be selected in conjunction with explosion-protected motors (MB motors) or worm geared motors S.

Motor protection	Additional identification code <b>-Z</b> with order code	Order code
Increased air humidity/temperature with 30 to 60 g water per m <sup>3</sup> of air	2KJ3... -.....-.....- <b>Z</b>	<b>N54</b>

Relative humidity	Temperature						
	+20 °C	+30 °C	+40 °C	+50 °C	+60 °C	+70 °C	+80 °C
10 %	2	3	5	8	13	20	29
15 %	3	5	8	12	19	30	44
20 %	3	6	10	17	26	39	58
25 %	4	8	13	21	32	49	
30 %	5	9	15	25	39	59	
35 %	6	11	18	29	45		
40 %	7	12	20	33	52		
45 %	8	14	23	38	58		
50 %	9	15	26	41			
55 %	10	17	28	46			
60 %	10	19	31	50			
65 %	11	20	33	54			
70 %	12	21	36	58			
75 %	13	23	38				
80 %	14	24	41				
85 %	15	26	43				
90 %	16	27	46				
95 %	16	29	49				
100 %	17	30	51				

Increased air humidity/temperature  
with 30 to 60 g water per m<sup>3</sup> of air

#### Overview

The degree of protection only applies to the electrical equipment (motor, brake, encoder). Depending on the application area, the applicable measures must be applied to the gearbox.

#### Available degrees of protection

Degree of protection	Motor options that can be mounted	Additional identification code -Z with order code	Order code
IP55	No restrictions	2KJ3... -.....-Z	K01
IP56 <sup>1) 2)</sup>	Possible with separately driven fan, incremental encoder and absolute encoder.		K02
IP65 <sup>1) 3)</sup>	Possible with a brake, backstop, separately driven fan, incremental encoder, absolute encoder and motor plug.		K03

1) Not possible for worm geared motors S

2) Not possible for electric-monorail geared motors

3) For explosion-protected motors in Zone 2

### Cooling and ventilation

#### Overview

The motors have radial-flow fans, which cool regardless of the direction of rotation of the motor (cooling method IC 411, IEC 60034-6). The air flows from the non-drive end (NDE) to the drive end (DE).

#### Self ventilation

The motor fan can either be a standard fan, metal fan or high inertia fan.

#### Note:

Standard fans made of plastic are not suitable for ambient temperatures below -25 °C. For lower temperatures, metal fans **M21** or high inertia fans **M22** must be used.

The explosion-protected motors (MB motors) for Zone 22 are equipped as standard with a metal fan; motors for Zone 2, with a standard plastic fan. For explosion-protected motors in Zone 2, alternatively, a metal fan **M21** can be selected.

#### Standard fan

As standard, the motors are equipped with a plastic fan. This can be used for the entire standard ambient temperature range.

#### Metal fan

As an alternative to the standard plastic fans, aluminum fans are available for the motors. Metal fans are used for specific environmental conditions, e.g.:

- If there are solid or dirt particles, such as wood chips, textile fibers in the cooling air
- Special motor designs for increased ambient temperatures exceeding +60 °C
- At temperatures below -25 °C

#### High inertia fan

When required, 4-pole motors in frame sizes 71 to 132 can be equipped with a high inertia fan.

High inertia fans as an additional inertia are finely balanced according to ISO 1940. Typical applications are drives for traveling gear, conveying equipment, or in general for supporting soft starting and/or soft braking in line operation.

It is not possible to use a high inertia fan in conjunction with converter motors (Converter World Motor, VSD10 line motors or synchronous reluctance motors).

A high inertia fan increases the moment of inertia of the motor according to the table below.

Motor frame size	$J_z$ 10 <sup>-4</sup> kgm <sup>2</sup>	$m_{fan}$ kg
71	17.1	1.38
80	27.9	1.75
90	54.0	2.55
100	116.0	3.30
112	230.0	5.30
132	562.0	9.10

#### Overview, self ventilation

Motor frame size	Fan	Material		Motor type			Additional identification code -Z with order code	
		Fan	Fan cover	LE71 ... LES250	MB71 ... MB180		2KJ3... -.....-Z	Order code
63 ... 90	Standard fan	Plastic	Sheet metal	✓	-	✓		
	Metal fan	Aluminum	Sheet metal	✓	✓	✓	M21	
	High inertia fan	Steel core with plastic fan blades	Sheet metal	✓	-	-	M22 <sup>1)</sup>	
100 ... 132	Standard fan	Plastic	Sheet metal	✓	-	✓		-
	Metal fan	Aluminum	Sheet metal	✓	✓	✓		M21
	High inertia fan	Cast iron	Sheet metal	✓	-	-		M22 <sup>1)</sup>
160	Standard fan	Plastic	Sheet metal	✓	-	✓		-
	Metal fan	Aluminum	Sheet metal	✓	✓	✓		M21
180 ... 200	Standard fan	Plastic	Sheet metal	✓	-	✓		-
	Metal fan	Steel	Sheet metal	✓	✓	✓		M21
225 ... 250	Standard fan	Plastic	Plastic / sheet metal <sup>2)</sup>	✓	-	-		-
	Metal fan	Steel	Plastic / sheet metal <sup>2)</sup>	✓	-	-		M21

1) Cannot be selected for worm geared motors S and converter motors.

2) The fan cover is made of sheet metal for motors with brake.

## Motor options

### Mechanical design

#### Cooling and ventilation

##### Forced ventilation

Forced ventilation (separately driven fan) can be combined with almost all brakes and encoders as required.

##### Note:

Forced ventilation is not suitable for ambient temperatures below -25 °C.

Cooling and ventilation	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3...-...-...- <b>Z</b>	<b>M23</b>
Separately driven fan (Not possible for worm geared motors)		

##### Technical specifications

Motor frame size	Frequency Hz	Rated voltage range			Rated current A	Power consumption W	Volume flow m <sup>3</sup> /h	Weight kg
		Phase	V	Connection				
71	50	1 AC	230 ... 277	⊥(Δ)	0.18	48.0	78	1.45
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.15/0.09	29.0		
	60	1 AC	230 ... 277	⊥(Δ)	0.21	56.0	99	
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.13/0.07	28.0		
80	50	1 AC	230 ... 277	⊥(Δ)	0.19	48.0	128	1.50
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.16/0.09	33.0		
	60	1 AC	230 ... 277	⊥(Δ)	0.22	59.0	151	
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.13/0.07	36.0		
90	50	1 AC	220 ... 277	⊥(Δ)	0.29	59.0	216	1.90
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.39/0.22	78.0		
	60	1 AC	220 ... 277	⊥(Δ)	0.23	61.0	258	
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.32/0.18	71.0		
100	50	1 AC	220 ... 277	⊥(Δ)	0.29	62.0	278	2.05
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.37/0.21	80.0		
	60	1 AC	220 ... 277	⊥(Δ)	0.29	73.0	328	
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.30/0.18	80.0		
112	50	1 AC	220 ... 277	⊥(Δ)	0.27	64.0	355	2.15
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.35/0.20	87.0		
	60	1 AC	220 ... 277	⊥(Δ)	0.35	88.0	418	
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.29/0.17	93.0		
132	50	1 AC	230 ... 277	⊥(Δ)	0.52	125.0	550	3.00
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.64/0.37	160.0		
	60	1 AC	230 ... 277	⊥(Δ)	0.61	163.0	650	
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.55/0.32	180.0		
160	50	1 AC	230 ... 277	⊥(Δ)	0.74	246.0	980	
		3 AC	200 ... 303 / 346... 525	Δ/Y	1.28 / 0.74	314.0		
	60	1 AC	230 ... 277	⊥(Δ)	1.52	390.0	1160	
		3 AC	220 ... 332 / 380... 575	Δ/Y	1.08 / 0.62	391.0		
180	50	1 AC	230 ... 277	⊥(Δ)	0.74	246.0	1200	8.15
		3 AC	200 ... 303 / 346... 525	Δ/Y	1.28 / 0.74	314.0		
	60	1 AC	230 ... 277	⊥(Δ)	1.52	390.0	1379	
		3 AC	220 ... 332 / 380... 575	Δ/Y	1.08 / 0.62	391.0		
200	50	1 AC	230 ... 277	⊥(Δ)	0.74	246.0	1324	9.75
		3 AC	200 ... 303 / 346... 525	Δ/Y	1.28 / 0.74	314.0		
	60	1 AC	230 ... 277	⊥(Δ)	1.52	390.0	1575	
		3 AC	220 ... 332 / 380... 575	Δ/Y	1.08 / 0.62	391.0		
225 ... 250	50	3 AC	220 ... 240 / 380 ... 420	Δ/Y	2.0 / 1.15	450.0	On request	22.0
	60		440 ... 480	Y	1.05	520.0		

**Forced ventilation**
**Forced ventilation for explosion-protected motors**

Forced ventilation is available for frame sizes 100 to 180 for explosion-protected motors (MB motors).

Forced ventilation for explosion-protected motors can only be selected in conjunction with a PTC thermistor (**M10**). When the forced ventilation develops a fault, the PTC thermistor must guarantee that the drive system is safely and reliably shut down.

**Note:**

For explosion-protected motors, forced ventilation is not suitable for ambient temperatures below -20 °C.

Cooling and ventilation	Additional identification code <b>-Z</b> with order code	Order code <b>M23 + M10</b>
	2KJ3... -.....-.....- <b>Z</b>	
Separately driven fan for explosion-protected motors		

**Technical specifications for explosion-protected motors (MB motors)**

Motor frame size	Frequency Hz	Rated voltage range			Rated current A	Power consumption W
		Phase	V	Connection		
100	50	1 AC	220 ... 277	⊥(Δ)	0.28	66.0
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.37/0.22	91.0
	60	1 AC	220 ... 277	⊥(Δ)	0.30	75.0
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.31/0.18	87.0
112	50	1 AC	220 ... 277	⊥(Δ)	0.28	71.0
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.35/0.20	97.0
	60	1 AC	220 ... 277	⊥(Δ)	0.37	94.0
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.31/0.18	103.0
132	50	1 AC	230 ... 277	⊥(Δ)	0.40	98.0
		3 AC	200 ... 303/346 ... 525	Δ/Y	0.58/0.33	124.0
	60	1 AC	230 ... 277	⊥(Δ)	0.57	149.0
		3 AC	220 ... 332/380 ... 575	Δ/Y	0.44/0.25	148.0
160	50	1 AC	230 ... 277	⊥(Δ)	0.97	253.0
		3 AC	200 ... 303 / 346... 525	Δ/Y	0.87 / 0.50	247.0
	60	3 AC	220 ... 332 / 380... 575	Δ/Y	0.93 / 0.56	360.0
180	50	1 AC	230 ... 277	⊥(Δ)	0.97	253.0
		3 AC	200 ... 303 / 346... 525	Δ/Y	0.87 / 0.50	247.0
	60	3 AC	220 ... 332 / 380... 575	Δ/Y	0.93 / 0.56	360.0

**Modular system in combination with self ventilation and forced ventilation for motor frame size 63 to 200**

Cooling method	Motor plug	Encoder					Brake				Back-stop	2nd shaft extension	
		Incremental encoder Functionally safe		Absolute encoder Functionally safe		Encoder under cover <sup>2)</sup>	Encoder accessories	Without manual release	With manual release	Microswitch Brake release monitoring <sup>1)</sup>			Wear monitoring
		No	Yes	No	Yes								
<b>Self ventilation</b>													
Standard fan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	On request	✓	✓
Metal fan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
High inertia fan <sup>2) 3)</sup>	✓	✓	–	✓	–	✓	✓	✓	✓	✓		✓	–
Canopy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	
<b>Forced ventilation <sup>2) 3)</sup></b>													
Canopy	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	On request	✓	–

<sup>1)</sup> Can be selected from brake type L32 or higher.

<sup>2)</sup> Can be selected for motor frame size 71 or higher.

<sup>3)</sup> Not possible for worm geared motors S.

## Motor options

### Mechanical design

#### Motor connection and terminal boxes

##### Connection, circuit and terminal boxes

###### Location and position of the terminal box

The terminal box of the motor can be mounted in four different locations or positions. The position of the terminal box is always when viewing the drive end (DE) of the motor.

The standard position of the terminal box is on the right-hand side, with the cable entry from below (1A).

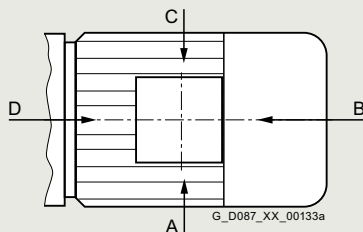
The terminal box is always located at the non-drive end (NDE) of the motor.

###### Selection data, cable entry for motor frame sizes 63 to 250

Terminal box position	Position of the cable entry	Additional identification code -Z with order code 2KJ3...-...-...-Z	Order code
1	A		<b>M55</b>
	B		<b>M56</b>
	C		<b>M57</b>
	D		<b>M58</b>
2	A		<b>M59</b>
	B		<b>M60</b>
	C		<b>M61</b>
	D		<b>M62</b>
3	A		<b>M63</b>
	B		<b>M64</b>
	C		<b>M65</b>
	D		<b>M66</b>
4	A		<b>M67</b>
	B		<b>M68</b>
	C		<b>M69</b>
	D		<b>M70</b> <sup>1)</sup>

1) Not possible for worm geared motors S

Position of the cable entry



Terminal box position  
When viewing DE

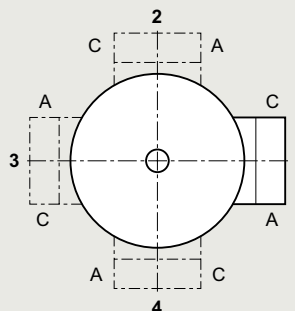


Fig. 11/8 Terminal box position and cable entry

###### Motor connection

The number of winding ends depends on the winding design. Three-phase AC motors are connected to the three phase conductors L1, L2, and L3 of a three-phase line supply. The motor rated voltage in the operating connection must match the phase conductor voltages of the line supply.

When the three phases operate in sequence and are connected to the terminals of the motor in alphabetical order U1, V1 and W1, the motor rotates clockwise when viewing the DE motor shaft.

The direction of rotation of the motor can be reversed if two connecting cables are interchanged. Labeled terminals are provided to connect the protective conductor.

The connections for a brake, anti-condensation heating or thermal motor protection are also located in the terminal box.

###### Note:

Different terminal box sizes are used depending on the connections required.

Additional notes see "Terminal box type" on page 11/17.

Before commissioning the SIMOGEAR geared motors with the Converter World Motor, please observe the notes in the operating instructions BA 2330.

###### Connection when shipped

Motors, frame sizes 63 to 200, can be supplied from the factory with the connection (star or delta) selected. In the factory, the terminal board is connected up in the star or delta connection for shipping.

The connection when shipped can be selected using the following options:

- HAN K4/4 and HAN Q8 motor plugs
- Brakes
- Motor protection
- UL/CSA and CCC certification

Connection when shipped	Additional identification code -Z with order code 2KJ3...-...-...-Z	Order code
Star connection when shipped		<b>M01</b>
Delta connection when shipped		<b>M02</b>

###### Note:

The connection type of the Converter World Motor is already encoded in the Article No. and therefore the connection when shipped M01 and M02 cannot be selected.

Converter World Motor	11th and 13th position of the Article No. 2KJ3...-...-...-Z
Converter World Motor, star connection	1 6
Converter World Motor, delta connection	1 7

**Connection, circuit and terminal boxes**

Motor connection Δ/Y

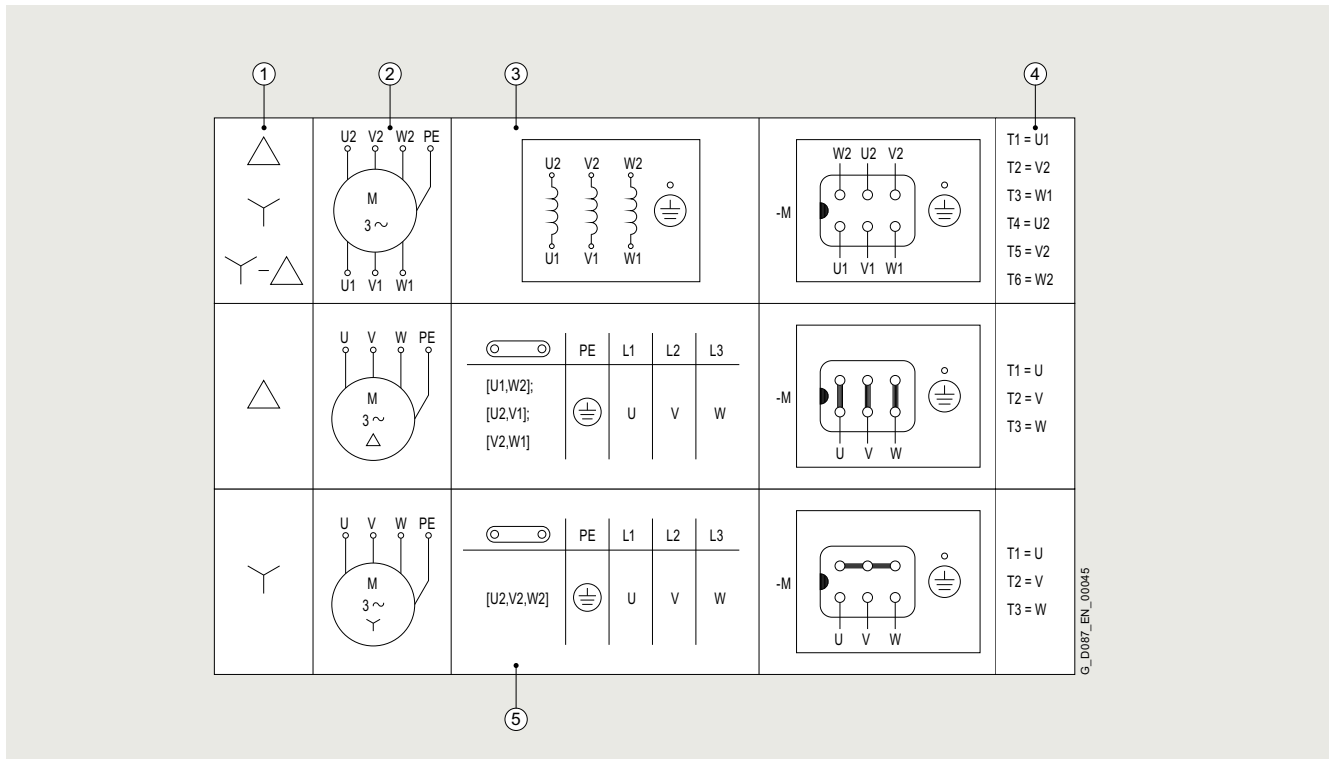


Fig. 11/9 Connection circuit diagram, motor connection Δ/Y

- ① Motor connection
- ② Circuit diagram symbols
- ③ Winding arrangement in the motor
- ④ Comparison:  
Terminal designation acc. to NEMA MG1/acc. to IEC 60034-8
- ⑤ Location of the jumpers on the terminal board and juxtaposition of the line connection with the motor connection

Motor connection Y

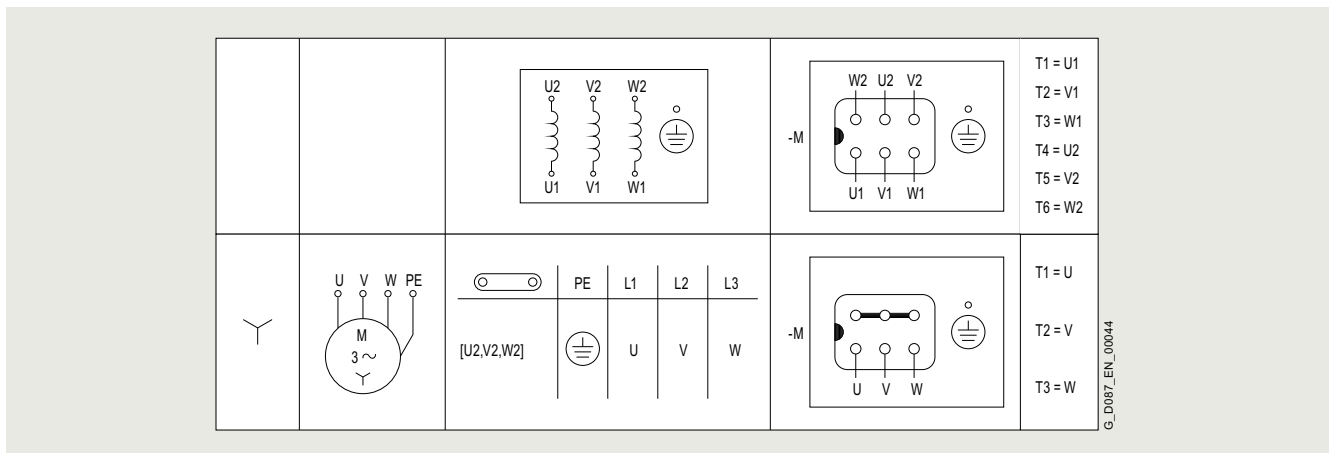


Fig. 11/10 Connection circuit diagram, motor connection Y

## Motor options

### Mechanical design

#### Motor connection and terminal boxes

#### Connection, circuit and terminal boxes

##### Motor connection YY/Y

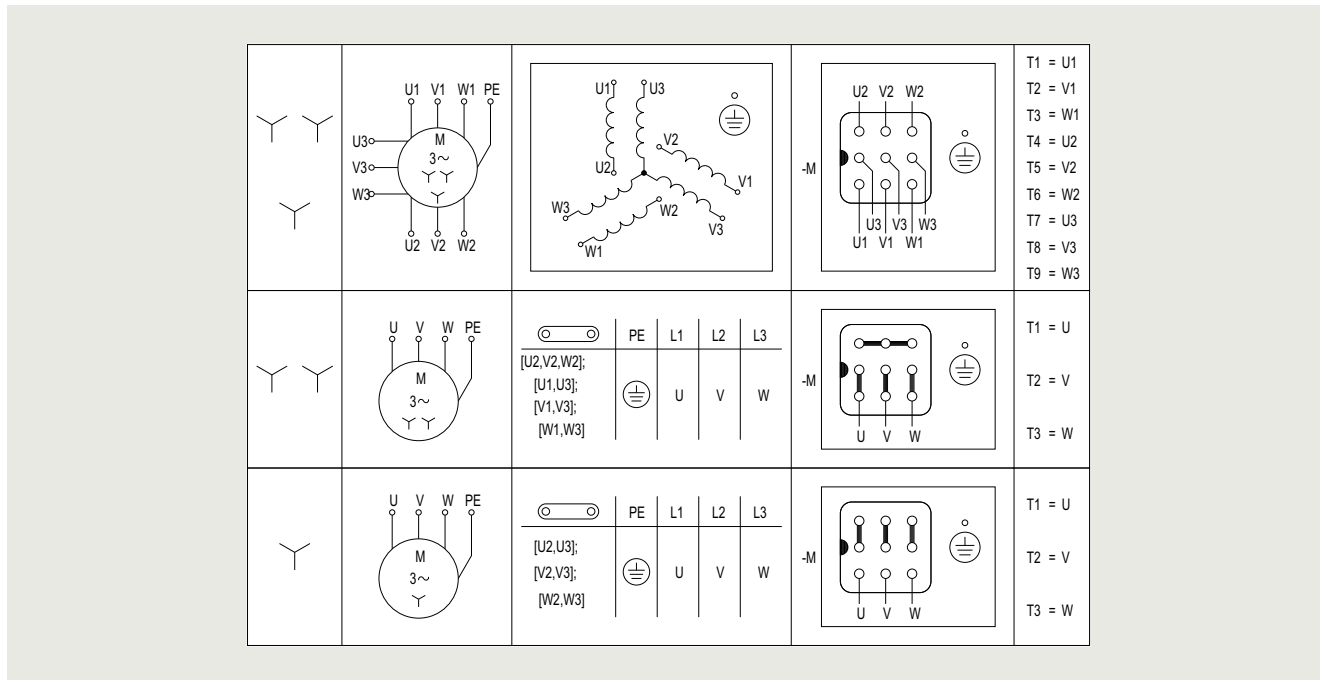


Fig. 11/11 Connection circuit diagram, motor connection YY/Y

#### Terminal connection

The terminal board accommodates the terminals that are connected to the leads to the motor windings.

The terminals are designed so that up to frame size 160, the external (line) connections can be established without requiring cable lugs.

#### Terminal box assignment

Motor frame size	Terminals		Max. connectable conductor mm <sup>2</sup>	Number of cable entries	Terminal box material	Line feeder cable connection	Auxiliary terminals	
	Number	Contact screw thread					Max. number	Max. connectable conductor mm <sup>2</sup>
63	6 (9 for YY/Y motor connection)	M4	1.5 (2.5 with cable lug)	2 cable entries with screw plugs	Aluminum alloy	With or without cable lug	8	2.5
71								
80								
90								
100								
112								
132			M5		16			
160					M6	25		
180						2 cable entries with screw plugs	Cast iron	With cable lug
200								
225	M8	35						
	M10	120						
250		M12	240					



**Connection, circuit and terminal boxes**
**Terminal box type**

The terminal box contains all the electrical connections that are installed in the motor. Different terminal box sizes are used depending on the connections required.

The dimensions of terminal boxes can be found in [chapter "Motors" from page 9/46](#).



Fig. 11/12 Terminal box type gk030, TB1E00, TB1F00, TB1H00, TB1J00

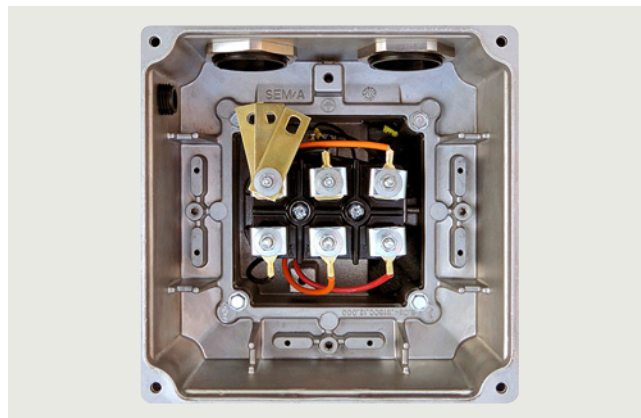


Fig. 11/13 Terminal box type gk127, TB1E10, TB1F10, TB1H10, TB1J10, TB1K01, TB1L01, TB1N01

**Cable entry metric**

Motor frame size	Motor options				Cable entry metric	Terminal box type
	Brake	Winding protection	Heating	Application terminal box		
63 ... 71	Without	PTC thermistor for disconnection	Without	Without	1 x M25 x 1.5 + 1 x M20 x 1.5	gk030 <sup>1)</sup> TB1B00 <sup>2)</sup> TB1C10 <sup>3)</sup>
		Winding thermostat for disconnection				
		Pt1000 resistance thermometer				
	Without	With				
With	No restriction					gk127 <sup>1) 4)</sup> TB1B10 <sup>2)</sup> / TB1C10 <sup>3)</sup>
80 ... 90	Without	PTC thermistor for disconnection	No restriction	Without		TB1E00
		Winding thermostat for disconnection				
		Pt1000 resistance thermometer				
	With	No restriction				
100 ... 112	Without	PTC thermistor for disconnection	No restriction	Without	2 x M32 x 1.5	TB1F00
		Winding thermostat for disconnection				
		Pt1000 resistance thermometer				
	With	No restriction				
132	Without	PTC thermistor for disconnection	No restriction	Without		TB1H00
		Winding thermostat for disconnection				
		Pt1000 resistance thermometer				
	With	No restriction				
160	Without	PTC thermistor for disconnection	No restriction	Without	2 x M40 x 1.5	TB1J00
		Winding thermostat for disconnection				
		Pt1000 resistance thermometer				
	With	No restriction				
180	Without	No restriction				TB1K01
	With					TB1J01 <sup>2)</sup>
	Without	No restriction			2 x M50 x 1.5	TB1L01
	With					
225	Without	No restriction				TB1L01
	With					TB1N01
250	Without	No restriction			2 x M63 x 1.5	TB1N01
	With					

1) Terminal boxes with 9 terminals (circuit YY/Y) terminal box type TB1E10

2) Terminal box type for explosion-protected motors in Zone 22

3) Terminal box type for explosion-protected motors in Zone 2

4) Brake motors in UL-R and CSA version, terminal box type TB1E10

## Motor options

### Mechanical design

#### Motor connection and terminal boxes

##### Connection, circuit and terminal boxes

###### Cable entry NPT

The cable entry with national pipe thread (NPT) can be ordered as an option. The dimensions of terminal boxes can be found in chapter "Motors" from page 9/46.

###### Note:

The cable entry with NPT thread cannot be selected for explosion-protected motors (MB motors).

Terminal box option	Additional identification code <b>-Z</b> with order code	Order code
Cable entry NPT	2KJ3... -.....-.....- <b>Z</b>	<b>M45</b>

Motor frame size	Cable entry NPT	Terminal box type
63 ... 71	2 x 1/2"	gk127 <sup>1) 2)</sup>
80 ... 90		TB1E10
100 ... 112	3/4" + 1/2"	TB1F10
132		TB1H10
160	1 1/4" x 1/2"	TB1J10
180	1 1/2" x 1/2"	TB1K01
200 ... 225		TB1L01
250	2 1/2" x 1/2"	TB1N01

<sup>1)</sup> For terminal boxes with 9 terminals (circuit YY/Y) terminal box type TB1E10

<sup>2)</sup> For brake motors in UL-R and CSA version, terminal box type TB1E10

###### Terminal box cast

Motors can be supplied with the bottom half of the terminal box cast onto the motor housing in order to prevent water ingress into the housing.

In this case, no further changes can be made to the position of the terminal box.

###### Note:

The terminal box cast cannot be selected in conjunction with explosion-protected motors (MB motors) or worm geared motors S.

Terminal box option	Additional identification code <b>-Z</b> with order code	Order code
Terminal box cast	2KJ3... -.....-.....- <b>Z</b>	<b>M53</b>

###### External grounding

Standard IEC 60034 specifies additional external grounding for motors with ratings of 100 kW and higher. For motors, frame sizes 63 up to 160, this is optionally available.

Motors in frame sizes 180 to 250 and explosion-protected motors in frame sizes MB71 to MB180 are supplied as standard with external grounding.

Terminal box option	Additional identification code <b>-Z</b> with order code	Order code
External grounding	2KJ3... -.....-.....- <b>Z</b>	<b>N53</b>

###### Maximum conductor connection for external grounding

Motor frame size	Thread size
63 ... 90	M4
100 ... 112	M5
132 ... 180	M6
200	2 x M6
225 ... 250	2 x M8

##### Modular system in combination with motor connection and terminal box

Modular system	Encoder system	Brake			Microswitch		Self ventilation Forced ventilation	Backstop	Second shaft extension
		Without Manual brake release	With manual release Without locking mechanism	With locking mechanism <sup>1)</sup>	Brake release monitoring <sup>2)</sup>	Wear monitoring			
Terminal box	✓	✓	✓	✓	✓	On request	✓	✓	✓
Motor plug	✓	✓	✓	✓	-	On request	✓	✓	✓

<sup>1)</sup> Only manual brake release with locking mechanism can be selected for motor frame sizes 225 and 250.

<sup>2)</sup> Can be selected from brake type L32 or higher.

#### Overview

The motor plug is supplied ready for use, and replaces the terminal box with terminal board.

Motor plugs are also available in an EMC design. A mating plug can also be provided.

In the basic design, the motor plug is in position B, see page 11/14. The dimensions depend on the motor frame size.

Particularly in cases where a brake with a manual release lever is used in the direction of the non-drive end (NDE), a check must be made to ensure that the motor plug does not collide with the manual release lever in the direction of the drive end (DE).

The main advantages of a motor plug over a terminal box with terminals are as follows:

- Peripheral equipment can be quickly installed
- Reduction of installation and repair times for end users
- No wiring errors as a result of the plug system
- Replacement of a geared motor without having to make any intervention in the electronics

The winding connections and, optionally, the power supply for the brake and the signal cables for the temperature sensors are connected in the plug housing.

#### Note:

It is not possible to use motor plug in conjunction with explosion-protected motors.

#### HAN 10E motor plug

The motor plug is compatible with the products from the ECOFAST field device system. It is available for motor frame sizes 63 to 132 and can be used for line voltages at the motor plug  $\leq 500$  V and rated currents  $\leq 16$  A.

The motor plug can be used in the ambient temperature range from  $-40$  up to  $+60$  °C. A special design is required for higher temperatures.

The motor connection (star or delta connection) is selected by the customer in the form of the mating plug used.

#### Technical specifications

Number of contacts	10 + ⊕
Max. voltage	500 V
Max. current load per PIN	16 A
Degree of protection	IP65

Motor plug	Additional identification code -Z with order code	Order code
	2KJ3...-.....-Z	
HAN 10E motor plug (2 brackets) <sup>1)</sup>		<b>N00</b>
HAN 10E motor plug (2 brackets) EMC <sup>1)</sup>		<b>N01</b>
HAN 10E motor plug (1 bracket) <sup>1)</sup>		<b>N04</b>
HAN 10E motor plug (1 bracket) EMC <sup>1)</sup>		<b>N06</b>
HAN 10E mating plug <sup>1)</sup>		<b>N18</b>

<sup>1)</sup> Not possible for worm geared motors S

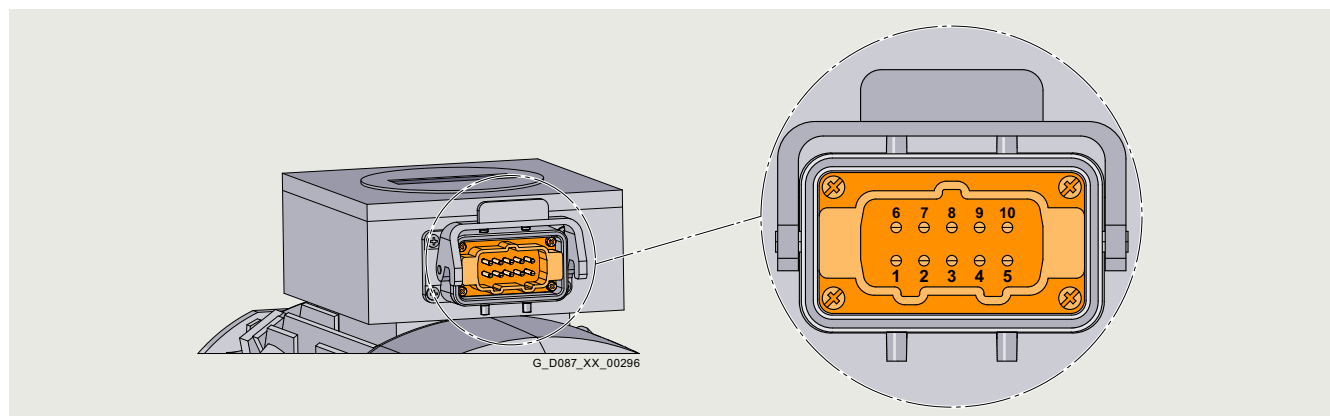


Fig. 11/14 HAN 10E motor plug with pin assignments

#### Connection assignment

PIN	1	2	3	4	5	6	7	8	9	10	PE
Connection	U1	V1	W1	Brake	Brake	W2	U2	V2	Temperature-dependent winding protection		Protective conductor



**HAN K4/4 motor plug**

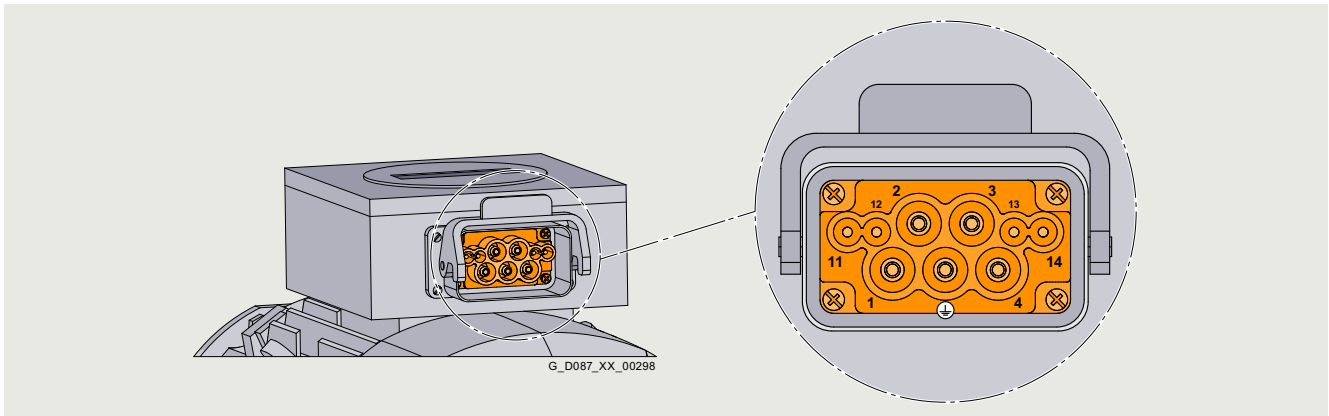


Fig. 11/16 HAN K4/4 motor plug with pin assignments

Connection assignment

PIN	1	2	3	4	11	12	13	14	PE
Connection	U	V	W	-	Brake	Brake	Temperature-dependent winding protection		Protective conductor

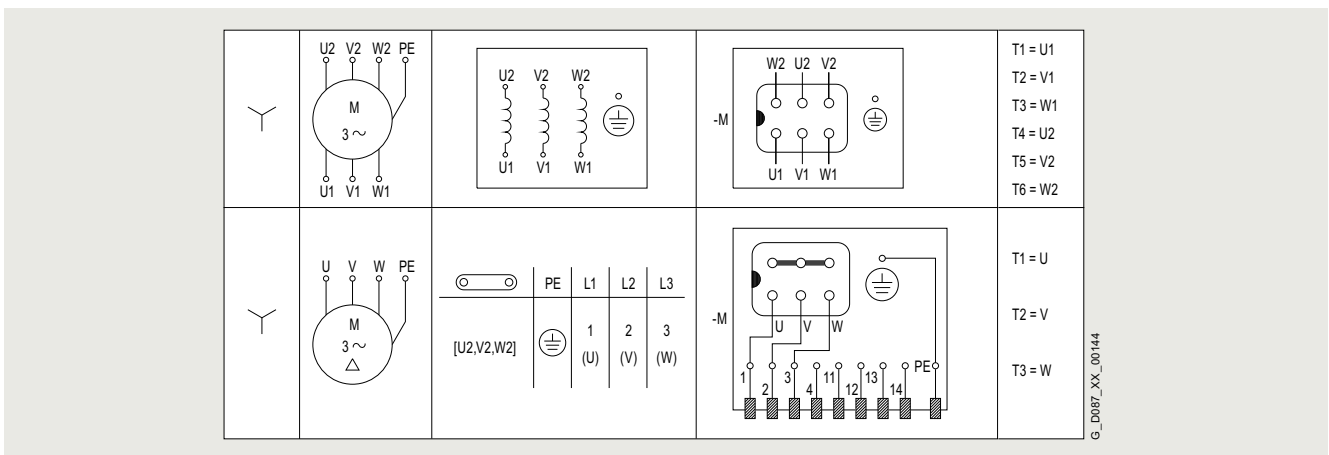


Fig. 11/17 Connection circuit diagram for motor winding Y connection

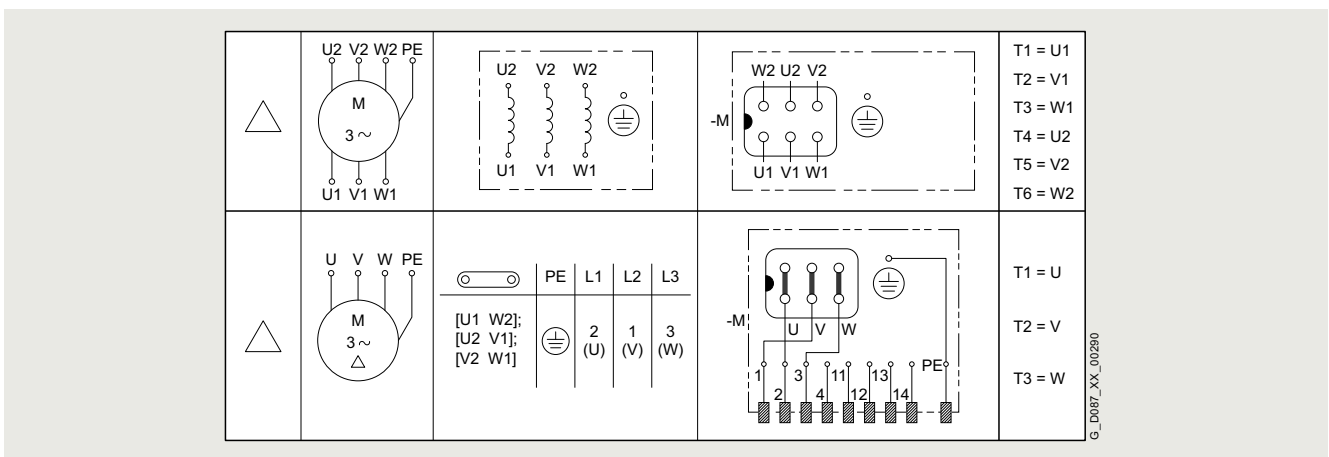


Fig. 11/18 Connection circuit diagram for motor winding Δ connection

## Motor options

### Mechanical design

#### Motor plug

#### HAN Q8 motor plug

The motor plug is available for motor frame sizes 63 to 132 and can be used for line voltages  $\leq 500$  V as well as rated currents  $\leq 16$  A. The jumpers are connected to the terminal board at the factory depending on the selected circuit or voltage.

#### Technical specifications

Number of contacts	8 + ⊕
Max. voltage	500 V (pollution degree 3)
Max. current load per PIN	16 A
Degree of protection (interlocked)	IP65

Motor plug	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-...- <b>Z</b>	
HAN Q8 motor plug (1 bracket) EMC <sup>1)</sup>		<b>N12</b>

1) Not possible for worm geared motors S

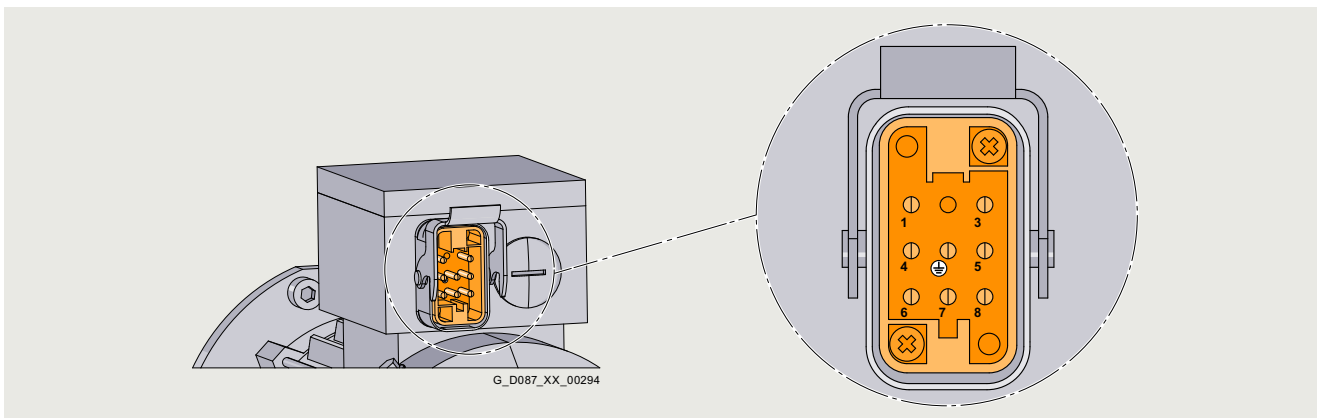


Fig. 11/19 HAN Q8 motor plug with pin assignments for motor frame sizes 63 and 71

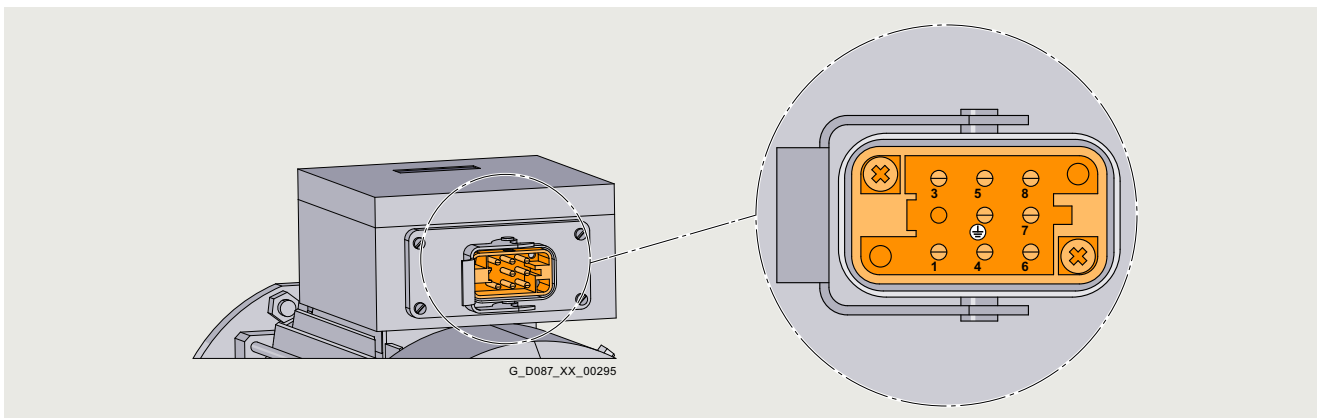


Fig. 11/20 HAN Q8 motor plug with pin assignments for motor frame sizes 80 to 132

#### Connection assignment

PIN	1	2	3	4	5	6	7	8	PE
Connection	U	-	W	Brake	Temperature-dependent motor protection	Brake	V	Temperature-dependent motor protection	Protective conductor

**HAN Q8 motor plug**

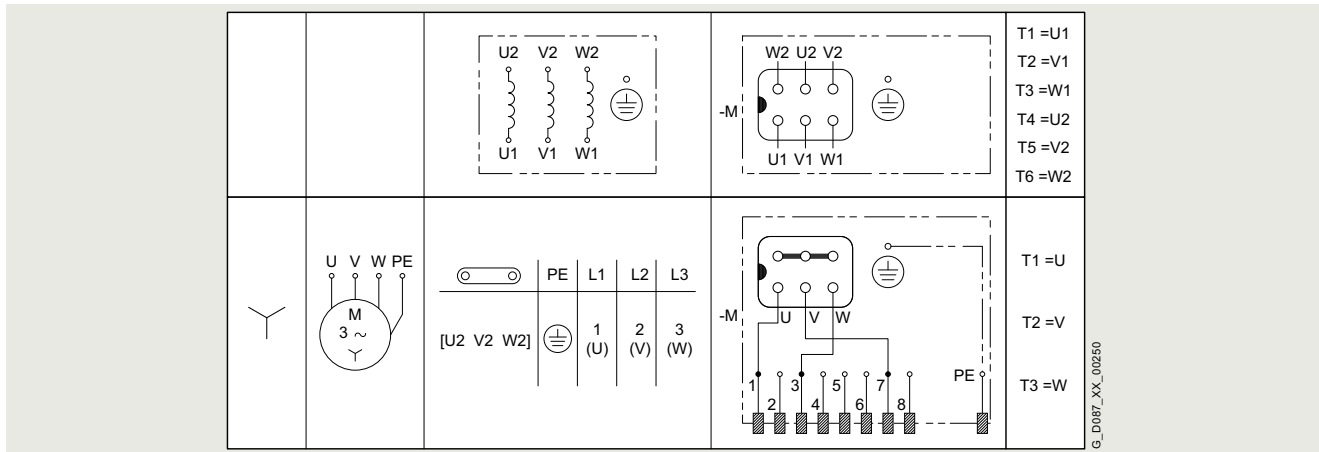


Fig. 11/21 Connection circuit diagram for motor winding Y connection

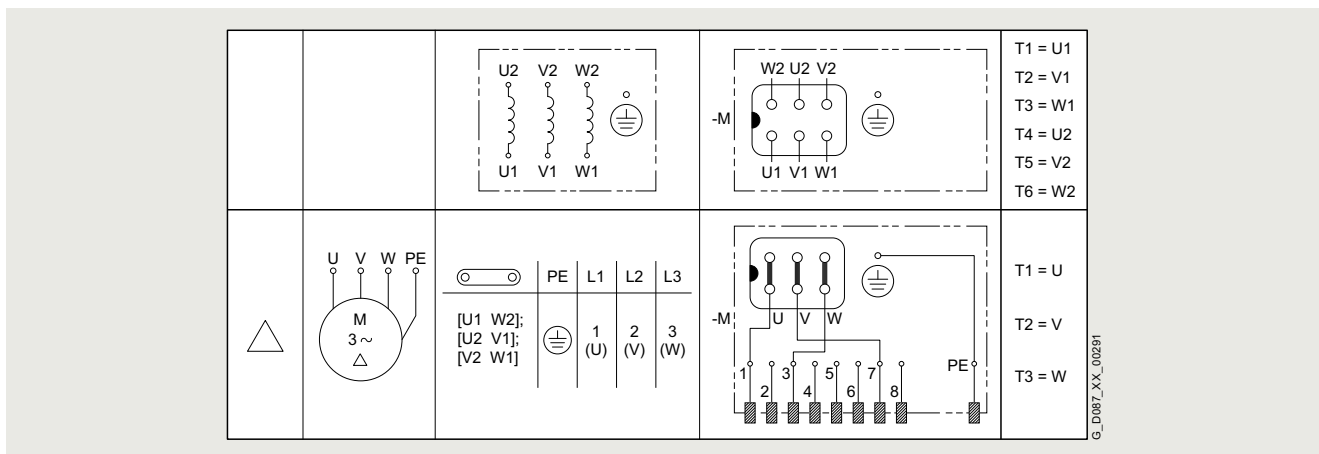


Fig. 11/22 Connection circuit diagram for motor winding Δ connection

## Motor options

### Mechanical design

#### Motor plug

#### HAN Q8 motor plug with cable

The motor plug with cable is available for motor frame sizes 63 to 112 and can be used for line voltages  $\leq 500$  V as well as rated currents  $\leq 16$  A.

One of the intended uses of the motor plug with cable is to provide an optimum connection to SINAMICS G120D.

The jumpers are connected to the terminal board at the factory depending on the selected circuit or voltage.

#### Technical specifications

Motor plug	
Number of contacts	8 + ⊕
Max. voltage	500 V / UL 600 V + 10 % (pollution degree 3)
Max. current load per PIN	16 A
Degree of protection (interlocked)	IP65
Cable suitable for cable carriers	
Rated voltage	
• Power conductors $U_0/U$	600 / 1000 V
• Signal conductors $U_0/U$	300 V
Operating temperature on the surface	
• Permanently installed	-50 °C ... +90 °C
• Moving	-30 °C ... +80 °C
Smallest bending radius	
• Permanently installed	5 x outer diameter
• Moving	12 x outer diameter
Bending operations	Typ. $2 \times 10^6$ cycles
Oil resistance	DIN VDE 0282 Part 10 + HD22.10
Outer jacket	Polyurethane (PUR)
Design	$4 \times 1.5 \text{ mm}^2 + 2 \times (2 \times 0.75 \text{ mm}^2)$ (shielded)
Outer diameter	11.7 ... 12.7 mm

#### Note:

For the HAN Q8 motor plug version with 0.5 m cable (**K50**), the plug insert is rotated through 180° in the plug housing, see Fig. 11/24.

At ambient temperatures below -30 °C, the HAN Q8 motor plugs with cables can only be used with permanently installed cables.

Motor plug	Additional identification code -Z with order code	Order code
	2KJ3... -...-...-Z	
HAN Q8 motor plug with 0.5 m cable (plug insert rotated through 180°)		<b>K50</b>
HAN Q8 motor plug with 1 m cable		<b>K51</b>
HAN Q8 motor plug with 2 m cable		<b>K52</b>
HAN Q8 motor plug with 3 m cable		<b>K53</b>
HAN Q8 motor plug with 4 m cable		<b>K54</b>
HAN Q8 motor plug with 5 m cable		<b>K55</b>

11

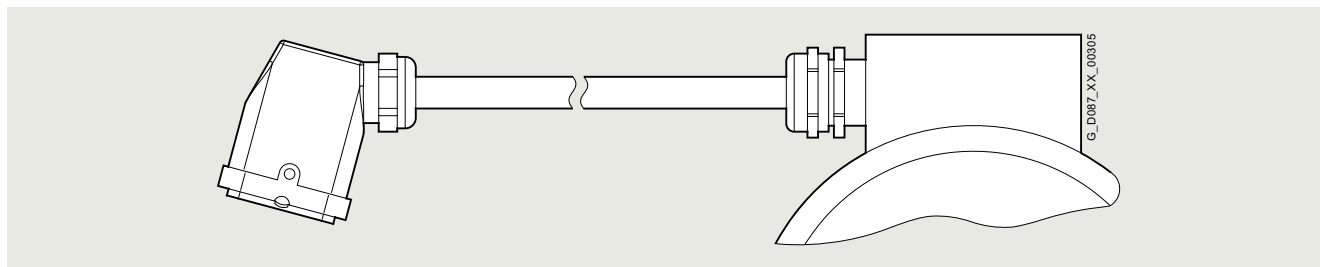


Fig. 11/23 HAN Q8 motor plug with cable

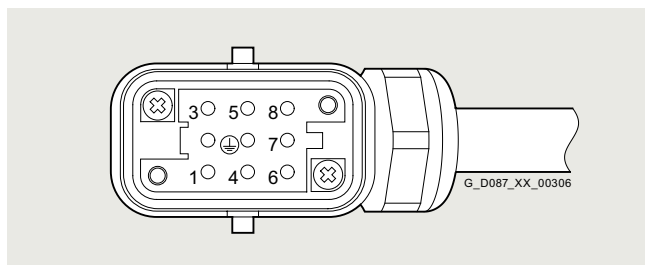


Fig. 11/24 Pin assignments for motor plug with 0.5 m cable, plug insert rotated by 180°

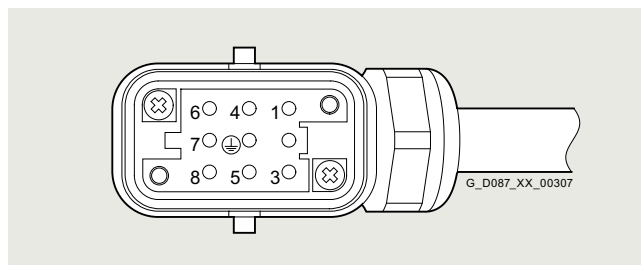


Fig. 11/25 Pin assignments for motor plug with 1 m to 5 m cable, plug insert rotated by 0°





# Motor options

## Mechanical design

### Motor plug

#### HAN Q12 motor plug

The motor plug is available for motor frame sizes 63 to 90 and can be used for line voltages ≤ 400 V as well as rated currents ≤ 10 A. The customer selects the motor connection (star or delta connection).

#### Technical specifications

Number of contacts	12 + ⊕
Max. voltage	400 V (pollution degree 3)
Max. current load per PIN	10 A
Degree of protection (interlocked)	IP65

Motor plug	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	
HAN Q12 motor plug (1 bracket) EMC <sup>1)</sup>		<b>N13</b>

1) Not possible for worm geared motors S

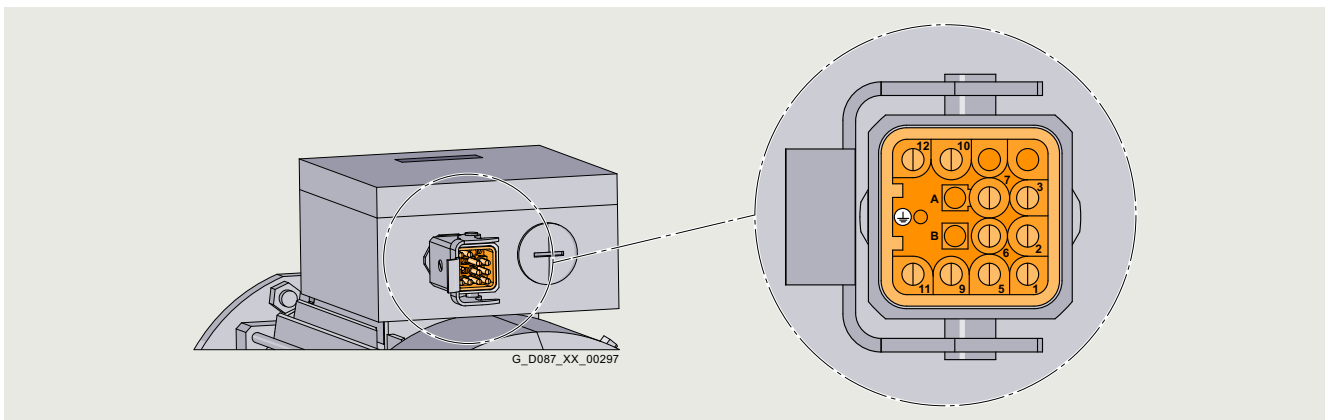


Fig. 11/28 HAN Q12 motor plug with pin assignments

#### Connection assignment

PIN	1	2	3	4	5	6	7	8	9	10	11	12	PE
Connection	U1	V1	W1	-	W2	U2	V2	-	Brake	Temperature-dependent winding protection	Brake	Temperature-dependent winding protection	Protective conductor

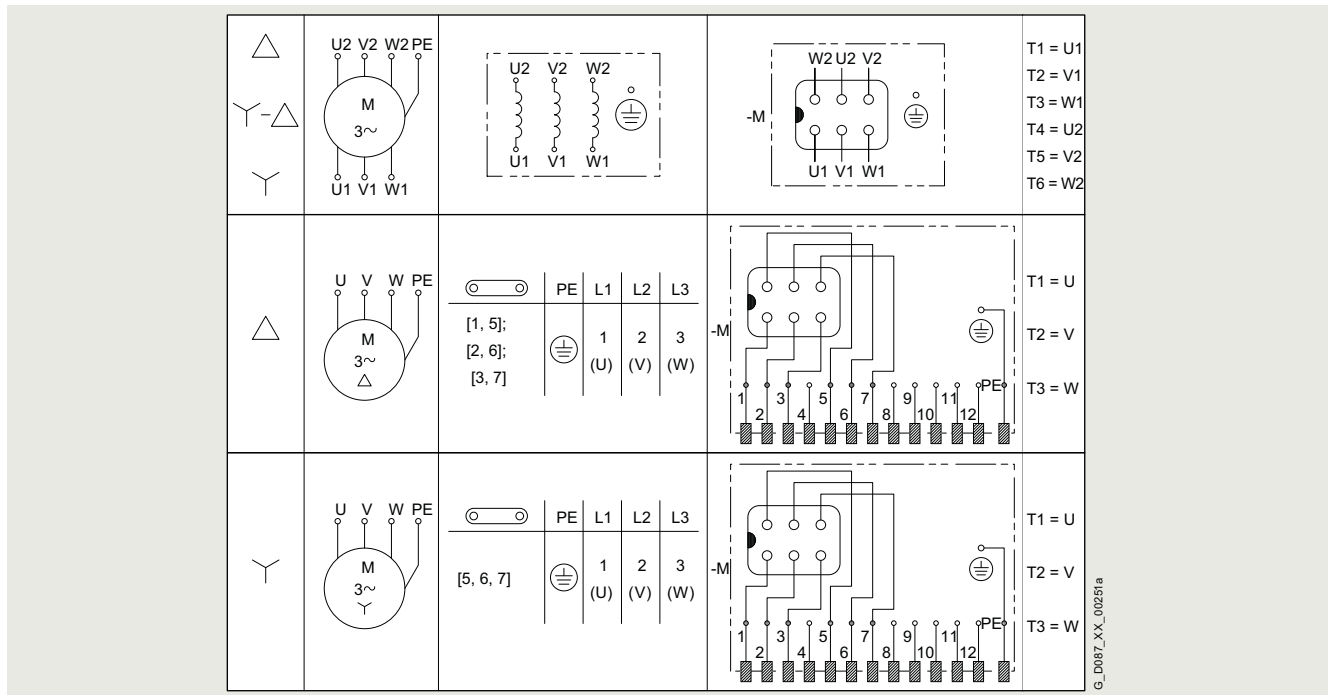


Fig. 11/29 Connection circuit diagram for motor winding

### Overview

SIMOGEAR geared motors can be supplied with spring-operated disk brakes in order to reduce the motor run-on time or to hold loads, for example.

Our MODULOG modular system allows several brake sizes to be used with one motor frame size. This chapter specifies the assignment to the motor frame sizes and possible brake options.

### Design and principle of operation

Single-disk, spring-operated brakes have two friction surfaces. When the brake is in a zero current state, a braking torque is generated using several springs.

The brake is released electromagnetically. When the motor brakes, the rotor, which can be axially shifted on the hub or the shaft, is pressed via the armature disk against the friction surface by means of the springs. In the braked state, there is a gap between the armature disk and the solenoid component.

To release the brake, the solenoid is energized with DC voltage. The resulting magnetic force attracts the armature disk onto the solenoid component against the spring force.

The spring force is then no longer applied to the rotor, which can now rotate freely.

#### Note:

The standard design L brakes are not suitable for ambient temperatures below  $-20\text{ °C}$ . To use them at lower temperatures, the increased corrosion protection option (**C10**) must be selected, see [page 11/37](#).

For ambient temperatures higher than  $45\text{ °C}$ , the brakes must be considered in detail. Please consult Siemens.

L brakes can also be designed as functionally safe LS brakes (**C09**).

The selection of the LS brakes can be found in the table "Brake assignment of the LS brakes" on [page 11/29](#).

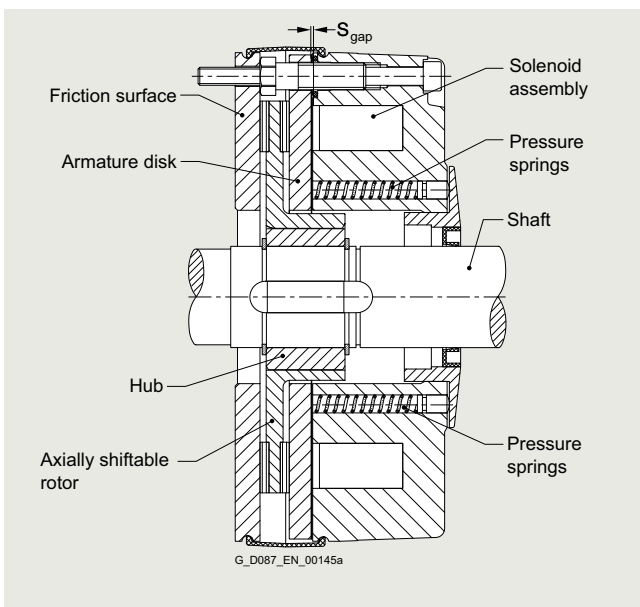


Fig. 11/30 L brake

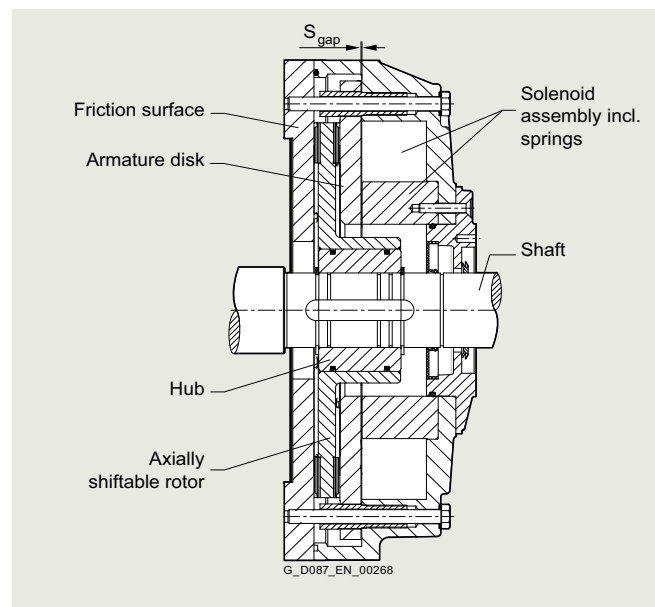


Fig. 11/31 FDX brake

## Motor options

### Mounted components

#### Brake

#### Selecting the L and FDX brakes

Our MODULOG modular system allows several brake sizes to be used with one motor frame size.

Brake assignment of the L and FDX brakes

Brake type	Braking torque $M_2$ Nm	Motor frame size												Additional identification code -Z with order code 2KJ3...-...-...-Z	Order code			
		63	71	80	90	100	112	132	160	180	200	225	250					
L4/1.4	1.4	○	○	○														B01
L4/2	2	○	○	○														B02
L4/3	3	○	○	○														B03
L4	4	□	□	○														B00
L4/5	5	○	○/EX	○														B57
L8/3	3		○ <sup>1)</sup>	○	○													B05
L8/4	4		○ <sup>1)</sup>	○	○													B06
L8/5	5		○ <sup>1)</sup>	○	○													B07
L8/6.3	6.3		○ <sup>1)</sup>	○	○													B08
L8	8		○ <sup>1)</sup>	□	○													B04
L8/10	10		○ <sup>1)</sup>	○/EX	○													B09
L16/8	8			○	○	○												B14
L16/10	10			○	○	○												B11
L16/13	13			○	○	○												B12
L16	16			●	□	○												B10
L16/20	20				○/EX	○												B13
L32/14	14				○	○	○											B66
L32/18	18				○	○	○											B16
L32/23	23				○	○	○											B17
L32	32				○	□	□											B15
L32/40	40					○/EX	○											B18
L60/25	25					○	○											B67
L60/38	38					○	○											B20
L60/50	50					○	○											B21
L60	60						○/EX											B19
L80/25	25							○										B24
L80/35	35								○									B25
L80/50	50								○									B26
L80/63	63								○									B27
L80	80								□									B22
L80/100	100								○/EX									B23
L150/60	60								○	○								B31
L150/80	80								○	○								B32
L150/100	100								○	○								B29
L150/125	125								○	○								B30
L150	150								○	□								B28
L260/100	100									○	○	○						B34
L260/145	145									○	○	○						B35
L260/180	180									○	○	○						B36
L260/200	200									○	○	○						B37
L260/240	240									○	○	○						B38
L260	260									○/EX	□	□						B33
L260/315	315										○/EX <sup>2)</sup>	○						B58
L400/265	265											○	○					B40
L400/300	300											○	○					B41
L400/360	360											○	○					B42
L400	400											○	○					B39
L400/600	600											●	●					B59
FDX30/265	265												○	○				B50
FDX30/300	300												○	○				B51
FDX30/360	360												○	○				B52
FDX30/400	400												□	○				B53
FDX30/500	500												○	○				B54
FDX30/650	650												○	○				B55
FDX30/750	750													○				B56
FDX30/850	850													○				B64
FDX40/650	650													○				B60
FDX40/750	750													○				B61
FDX40/850	850													□				B62
FDX40/1000	1 000													○				B63

□ Standard assignment

○ Working brake and holding brake

● Can only be used as holding brake

<sup>1)</sup> Not possible for worm geared motors S

<sup>2)</sup> Holding brake for explosion-protected motors in Zone 2  
EX Brake available for explosion-protected motors


**Selecting the LS brakes with functional safety**

The following LS brakes with functional safety are available.

Brake	Additional identification code -Z with order code	Order code
	2KJ3...-.....-Z	<b>C09</b>
Functionally safe brake/LS brake (Not possible for worm geared motors S)		

**Brake assignment of the LS brakes**

Brake type	Braking torque $M_4$ Nm	Motor frame size									Additional identification code -Z with order code 2KJ3...-.....-Z	Order code
		71	80	90	100	112	132	160	180	200		
LS4/3	2.4	●	●									<b>B03 + C09</b>
LS4	3.2	□	●									<b>B00 + C09</b>
LS4/5	4.0	●	●									<b>B57 + C09</b>
LS8/6.3	5.0	●	●	●								<b>B08 + C09</b>
LS8	6.4	●	□	●								<b>B04 + C09</b>
LS8/10	8.0	●	●	●								<b>B09 + C09</b>
LS16/10	8.0		●	●	●							<b>B11 + C09</b>
LS16/13	10.4		●	●	●							<b>B12 + C09</b>
LS16	12.8		●	□	●							<b>B10 + C09</b>
LS16/20	16.0			●	●							<b>B13 + C09</b>
LS32/18	14.4			●	●	●						<b>B16 + C09</b>
LS32/23	18.4			●	●	●						<b>B17 + C09</b>
LS32	25.6			●	□	□						<b>B15 + C09</b>
LS32/40	32.0				●	●						<b>B18 + C09</b>
LS60/38	30.4				●	●						<b>B20 + C09</b>
LS60/50	40.0				●	●						<b>B21 + C09</b>
LS60	48.0					●						<b>B19 + C09</b>
LS80/50	40.0						●					<b>B26 + C09</b>
LS80/63	50.4						●					<b>B27 + C09</b>
LS80	64.0						□					<b>B22 + C09</b>
LS80/100	80.0						●					<b>B23 + C09</b>
LS150/100	80						●	●				<b>B29 + C09</b>
LS150/125	100						●	●				<b>B30 + C09</b>
LS150	120						●	□				<b>B28 + C09</b>
LS260/180	144							●	●	●		<b>B36 + C09</b>
LS260/200	160							●	●	●		<b>B37 + C09</b>
LS260/240	192							●	●	●		<b>B38 + C09</b>
LS260	208							●	□	□		<b>B33 + C09</b>
LS260/315	252								●	●		<b>B58 + C09</b>
LS400/265	212.0									●		<b>B40 + C09</b>
LS400/300	240									●		<b>B41 + C09</b>
LS400/360	288									●		<b>B42 + C09</b>
LS400	320									●		<b>B39 + C09</b>
LS400/600	480									●		<b>B59 + C09</b>

- Standard assignment (holding brake)  
 ● Holding brake

## Motor options

### Mounted components

#### Brake

#### Connecting the brake

Labeled terminals are provided in the main terminal box of the motor to connect the brake.

#### Connection circuit diagram with AC or DC control

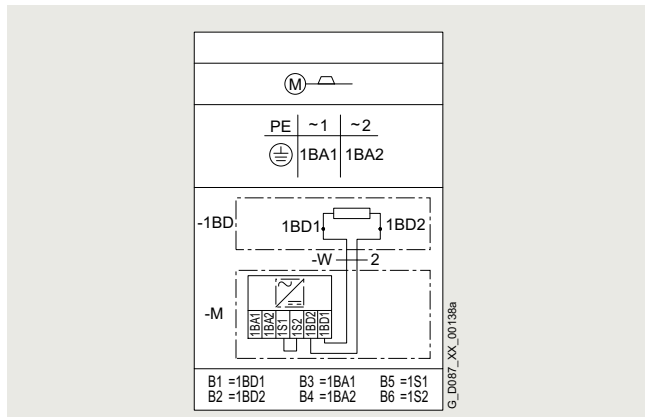


Fig. 11/32 Connection circuit diagram with AC control voltage

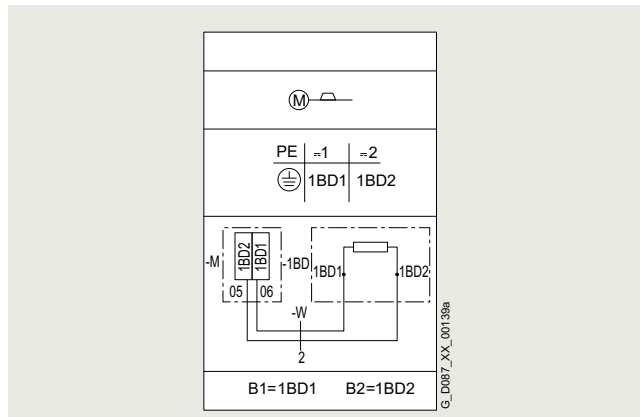


Fig. 11/33 Connection circuit diagram with DC control voltage

#### Function diagram of a brake switched on the AC or DC and AC sides

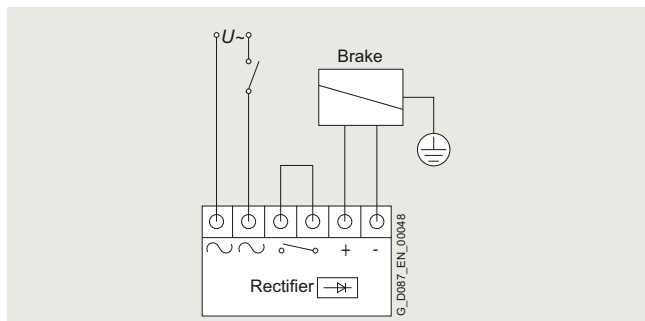


Fig. 11/34 Function diagram of a brake switched on the AC side

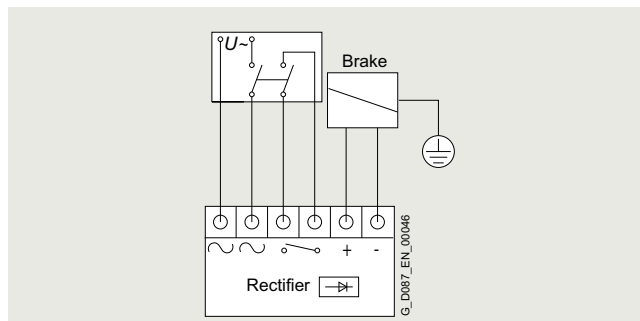


Fig. 11/35 Function diagram of a brake switched on the DC and AC sides

#### Supply voltages

The following supply voltages are available for brakes.

Supply voltage	Possible specifications for geared motors						Motor frame sizes	Brake type		Rectifier		Coil voltage		Additional identification code <b>-Z</b> with order code 2KJ3...-.....- <b>Z</b> Order code		
	CE, UKCA	UL-R/ CSA	China	EAC	Ex-port <sup>1)</sup>	ATEX		L/LS	FDX	L/LS brake	FDX brake	L/LS brake	FDX brake			
<b>DC voltages</b>																
24 V DC ± 10 %	✓	✓	✓	✓	✓	✓	63 ... 200	✓	-	-	-	-	-	-	<b>C66</b>	
103 V DC ± 10 %	✓	✓	✓	✓	✓	✓	63 ... 200	✓	-	-	-	-	-	-	<b>C52</b>	
180 V DC ± 10 %	✓	✓	✓	✓	✓	✓	63 ... 200	✓	-	-	-	-	-	-	<b>C53</b>	
205 V DC ± 10 %	✓	✓	✓	✓	✓	✓	63 ... 200	✓	-	-	-	-	-	-	<b>C64</b>	
<b>AC voltages <sup>2)</sup></b>																
200 V AC ± 10 %	✓	✓ <sup>1)</sup>	✓	✓	✓	✓	63 ... 250	✓	✓	Rectifier bridge	Rectifier PMG	180 V DC	103 V DC	-	<b>C45</b>	
230 V AC ± 10 %	✓	✓ <sup>1)</sup>	✓	✓	✓	✓	63 ... 250	✓	✓	Half-wave rectifier		103 V DC	103 V DC	-	<b>C46</b>	
380 V AC ± 10 %	✓	✓ <sup>1)</sup>	✓	✓	✓	✓	63 ... 250	✓	✓			180 V DC	180 V DC	-	-	<b>C48</b>
400 V AC ± 10 %	✓	✓ <sup>1)</sup>	✓	✓	✓	✓	63 ... 250	✓	✓			180 V DC	180 V DC	-	-	<b>C47</b>
415 V AC ± 10 %	✓	✓ <sup>1)</sup>	✓	✓	✓	✓	63 ... 250	✓	✓			180 V DC	180 V DC	-	-	<b>C50</b>
460 V AC ± 10 %	✓	✓ <sup>1)</sup>	✓	✓	✓	✓	63 ... 250	✓	✓			205 V DC	205 V DC	-	-	<b>C63</b>
<b>AC voltages with function rectifier with disconnection on the DC side using current or voltage sensing <sup>2) 3)</sup></b>																
230 V AC ± 10 %	✓	✓	✓	✓	✓	✓	63 ... 200	✓	-	Function rectifier	-	103 V DC	-	-	<b>C72</b>	
400 V AC ± 10 %	✓	✓	✓	✓	✓	✓	63 ... 200	✓	-	-	-	205 V DC	-	-	<b>C47</b>	
460 V AC ± 10 %	✓	✓	✓	✓	✓	✓	63 ... 200	✓	-	-	-	215 V DC	-	-	<b>C74</b>	

<sup>1)</sup> Not possible for worm geared motors S.

<sup>2)</sup> AC voltages for the functionally safe brake (LS brake) are not available.

<sup>3)</sup> For the AC voltages with function rectifier, for the current sensing, order code **C59** must be specified or for voltage sensing, order code **C60**. More information for the current and voltage sensing is provided on page 11/32.

### Brake control

The brakes are released by DC voltage. The brake is controlled by the DC supply voltage in systems without a rectifier, or by the AC supply voltage in systems with a rectifier. Half-wave rectifiers or rectifier bridges are used as rectifiers.

#### Note:

For deviating ambient temperatures, we recommend the use of a rectifier in the control cabinet. Please consult Siemens as needed.

Explosion-protected motors (MB motors) are supplied without a rectifier. When using a rectifier, it is recommended that this is installed in the control cabinet.

#### Overview

Brake type	DC voltages	AC voltages	Switching frequency	Ambient temperature
L brake	Without rectifier	Rectifier	No restriction	-30 °C ... +45 °C
	Without rectifier	Function rectifier	See section "Function rectifier" on page 11/32	See section "Function rectifier" on page 11/32
LS brake	Without rectifier	-	No restriction	-20 °C ... +40 °C
FDX brake	Without rectifier	PMG rectifier	See table "Switching frequency of PMG rectifiers"	-40 °C ... +45 °C

### Switching frequency of PMG rectifiers

#### Duty cycle/switching frequency for the 205 V DC brake solenoid

Supply voltage $V_{AC}$	Switching frequency s/h														
	1	10	20	30	40	50	60	70	80	90	100	110	120	130	140
<b>410 ... 480 V AC</b>															
410	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
420	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
440	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.40	98.53	97.66	96.80	95.93	95.06
460	98.08	97.21	96.34	95.48	94.61	93.74	92.88	92.01	91.14	90.28	89.41	88.54	87.68	86.81	85.94
480	90.07	89.21	88.34	87.47	86.61	85.74	84.87	84.01	83.14	82.27	81.41	80.54	79.67	78.81	77.94

#### Duty cycle/switching frequency for the 180 V DC brake solenoid

Supply voltage $V_{AC}$	Switching frequency s/h														
	1	10	20	30	40	50	60	70	80	90	100	110	120	130	140
<b>380 ... 440 V AC</b>															
380	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.54	98.67
400	100.00	99.13	98.27	97.40	96.53	95.67	94.80	93.93	93.07	92.20	91.33	90.47	89.60	88.73	87.87
410	95.18	94.31	93.45	92.58	91.71	90.85	89.98	89.11	88.25	87.38	86.51	85.65	84.78	83.91	83.05
420	90.70	89.84	88.97	88.10	87.24	86.37	85.50	84.64	83.77	82.90	82.04	81.17	80.30	79.44	78.57
440	82.64	81.78	80.91	80.04	79.18	78.31	77.44	76.58	75.71	74.84	73.98	73.11	72.24	71.38	70.51

#### Duty cycle/switching frequency for the 103 V DC brake solenoid

Supply voltage $V_{AC}$	Switching frequency s/h														
	1	10	20	30	40	50	60	70	80	90	100	110	120	130	140
<b>190 ... 240 V AC</b>															
190	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
200	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
210	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
220	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.58	98.71	97.84	96.98	96.11
230	99.04	98.17	97.30	96.44	95.57	94.70	93.84	92.97	92.10	91.24	90.37	89.50	88.64	87.77	86.90
240	90.96	90.09	89.22	88.36	87.49	86.62	85.76	84.89	84.02	83.16	82.29	81.42	80.56	79.69	78.82

## Motor options

### Mounted components

#### Brake

#### Function rectifier

The following table provides an overview of brake control with function rectifiers.

Function rectifier Technical specifications	High-speed rectifier + disconnection on the DC side using	
	Current sensing <sup>4)</sup>	Voltage sensing <sup>4)</sup>
Supply voltage	220 ... 460 V <sub>AC</sub> ± 10 %	220 ... 500 V <sub>AC</sub> ± 10 %
Supply frequency	40 ... 60 Hz	40 ... 60 Hz
Max. output current up to an ambient temperature of +40 °C <sup>1)</sup>	1.2 A <sub>DC</sub>	1.2 A <sub>DC</sub>
Ambient temperature range	Specification CE, UKCA: -25 ... +60 °C Specification UL: -25 ... +45 °C	Specification CE, UKCA: -30 ... +60 °C Specification UL: -30 ... +45 °C
Output voltage V <sub>DC</sub>	0.445 x supply voltage (0.89 - max. 8 %) x supply voltage	0.445 x supply voltage (0.89 - max. 8 %) x supply voltage
Permissible continuous current of the current sensor	0.27 ... 34 A <sub>DC</sub>	-
Max. switching frequency <sup>2) 3)</sup>	76 rpm	76 rpm
Supported motors	Max. motor current 34 A	No restrictions
Supported brakes	L4 ... L400	L4 ... L400
Suitable for	Braking operation for fast brake release + application	Braking operation for fast brake release + application
Converter operation	Not suitable	Separate power supply required
Line operation	Direct-on-line starting	Direct-on-line Y/Δ starting
Motor starters	Not suitable	No restrictions
Operation with driving loads and/or high moment of inertia	No restrictions	Separate power supply required
Suppressor circuit	Spark suppressor	Spark suppressor
Additional identification code <b>-Z</b> with order code	Order code	
<b>2KJ3... -... -... -Z</b>	<b>C59</b> <sup>5)</sup>	<b>C60</b>

<sup>1)</sup> At higher ambient temperatures the output current decreases.

<sup>2)</sup> The specified maximum switching frequencies are upper limit values. The switching frequencies are essentially dependent on the braking power and the permissible operating energy of the brakes.

<sup>3)</sup> The maximum switching frequency is obtained from the overexcitation times and recovery times as well as switching-off in holding operation.

<sup>4)</sup> Not possible in conjunction with the functionally safe rotary encoder or the functionally safe brake (LS brake).

<sup>5)</sup> The function rectifier **C59** is connected to the terminal board at the factory depending on the selected circuit or voltage.

#### Duty cycle of brake motors with function rectifier

The high-speed rectifier releases the brake with overexcitation and thus reduces the maximum duty cycle (on-load factor) of the brake.

Depending on the supply voltage and the switching frequency, the maximum duty cycle of the brake solenoid can be taken from the following diagrams and tables.

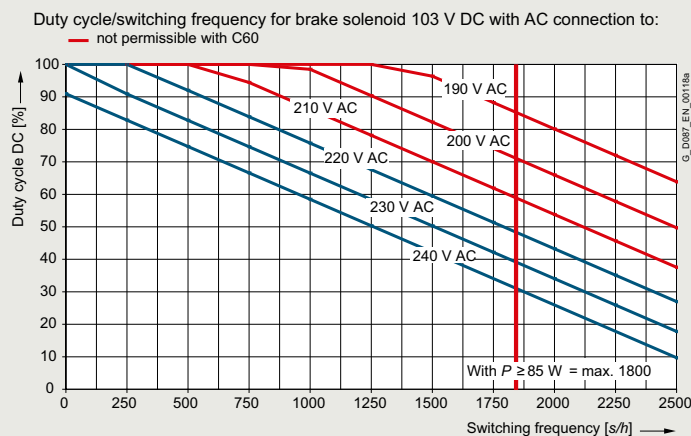


Fig. 11/36 Duty cycle/switching frequency for the 103 V DC brake solenoid

Supply voltage V <sub>AC</sub>	Switching frequency s/h										
	1	250	500	750	1000	1250	1500	1750	up to brake size L80		
220 ... 240 V AC for separate power supply											
220	100	100	91	83	75	67	59	51	43	35	26
230	100	90	82	74	66	58	50	42	34	25	17
240	100	82	74	66	58	50	42	34	25	17	9



**Function rectifier**

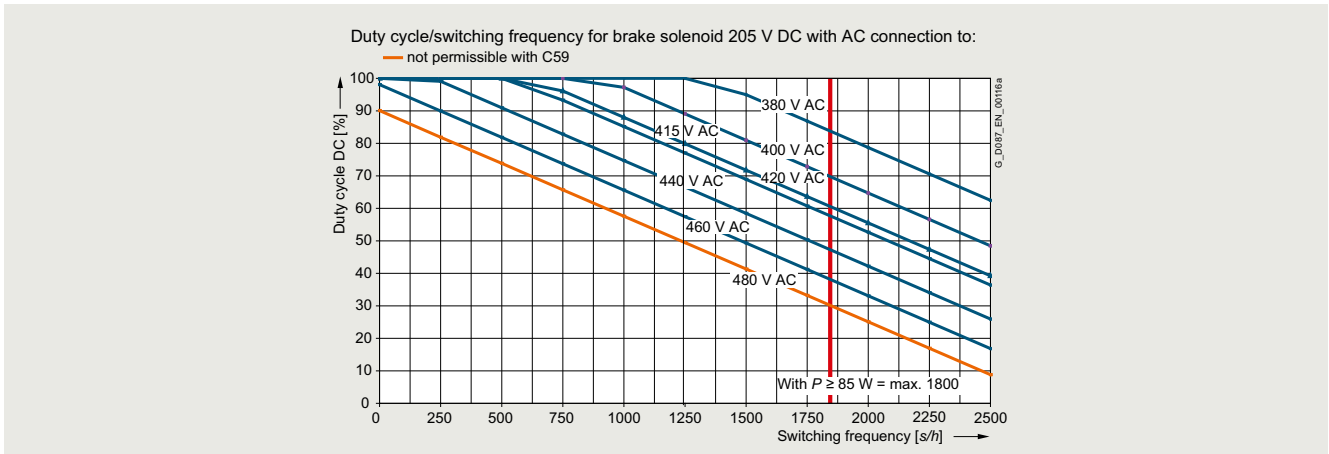


Fig. 11/37 Duty cycle/switching frequency for the 205 V DC brake solenoid

Supply voltage $V_{AC}$	Switching frequency s/h										
	1	250	500	750	1000	1250	1500	1750	up to brake size L80		
400 V AC for connection at the motor terminal board											
380	100	100	100	100	100	100	94	86	78	70	62
400	100	100	100	100	97	89	80	72	64	56	48
420	100	100	100	93	85	77	68	60	52	44	36
380 ... 440 V AC for separate power supply											
380	100	100	100	100	100	100	94	86	78	70	62
400	100	100	100	100	97	89	80	72	64	56	48
440	100	99	90	82	74	66	58	50	42	34	25

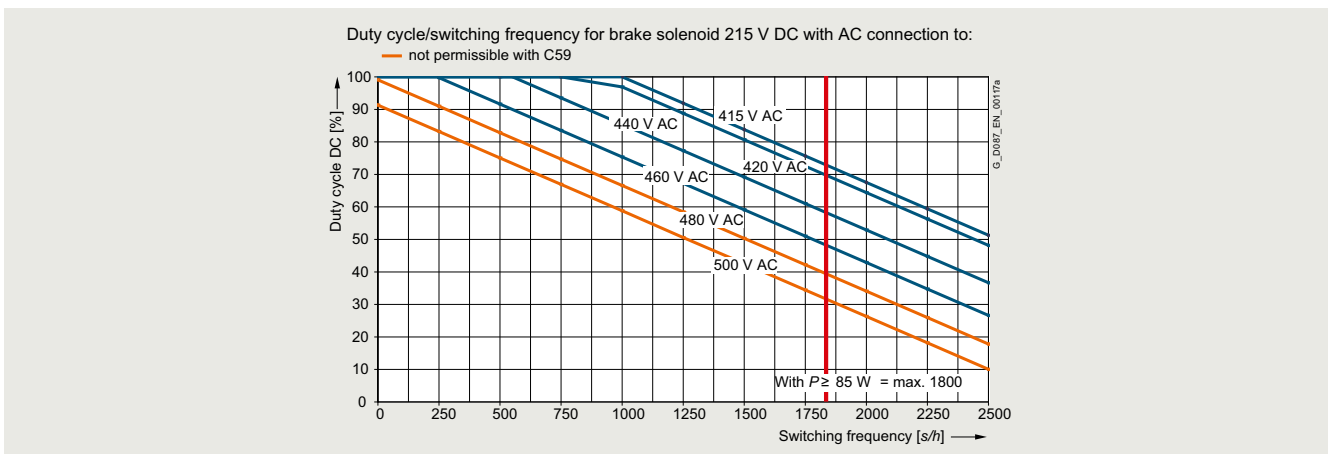


Fig. 11/38 Duty cycle/switching frequency for the 215 V DC brake solenoid

Supply voltage $V_{AC}$	Switching frequency s/h										
	1	250	500	750	1000	1250	1500	1750	up to brake size L80		
410 ... 480 V AC for separate power supply <sup>1)</sup>											
410	100	100	100	100	100	95	87	78	70	62	54
460	100	99	91	83	75	67	59	51	42	34	26
480	100	90	82	74	66	58	50	42	34	25	17

<sup>1)</sup> The brake power supply voltage can be limited by the rectifier.

## Motor options

### Mounted components

#### Brake

#### Brake options

##### Manual brake release

The L/LS brakes can be supplied with a manual brake release lever. The manual brake release lever can be used to release the brake at zero current. When the brake has been released, the motor shaft can rotate freely in order to bring the output shaft to a certain position or for use as an emergency release in the event of a power failure, for example.

The manual brake release lever can be fixed in the released position using an additional locking mechanism mounted on the brake.

Only the manual brake release lever with locking mechanism can be selected for FDX brakes.

The manual brake release lever can be mounted in various positions. The position of the manual brake release lever relates to the standard design of the motor. The standard position is "2".

Brake options	Additional identification code -Z with order code	Order code
Manual brake release lever	2KJ3... -.....-.....-Z	<b>C02</b>
Manual brake release lever with locking mechanism		<b>C03</b>

**Note:**

Manual brake release lever with locking mechanism **C03** cannot be selected in conjunction with the following options:

- Explosion-protected motors (MB motors)
- Functionally safe rotary encoder IN 8.5834
- Functionally safe rotary encoder IA 8.5883
- Worm geared motors S

For explosion-protected motors (MB motors), it is only permissible that the manual brake release lever **C02** is mounted at the side or facing downward.

Use the functionality of the [Siemens Product Configurator](#) for the precise dimensioning.

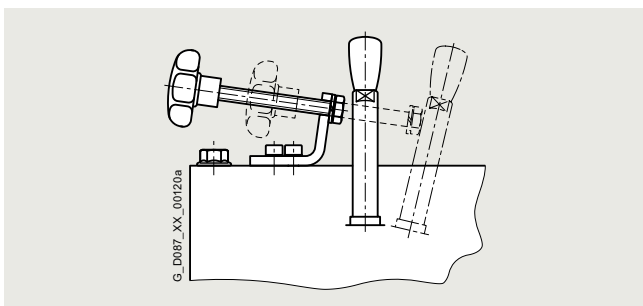


Fig. 11/39 Example of manual brake release lever with locking mechanism for L/LS brake

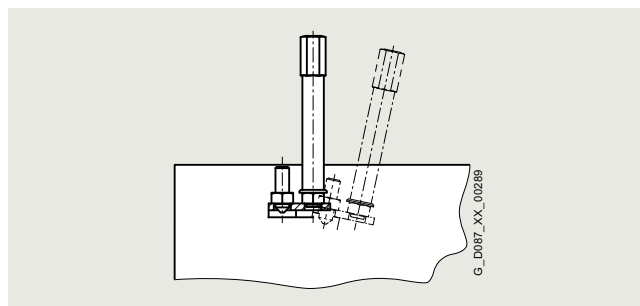


Fig. 11/40 Example of manual brake release lever with locking mechanism for FDX brake

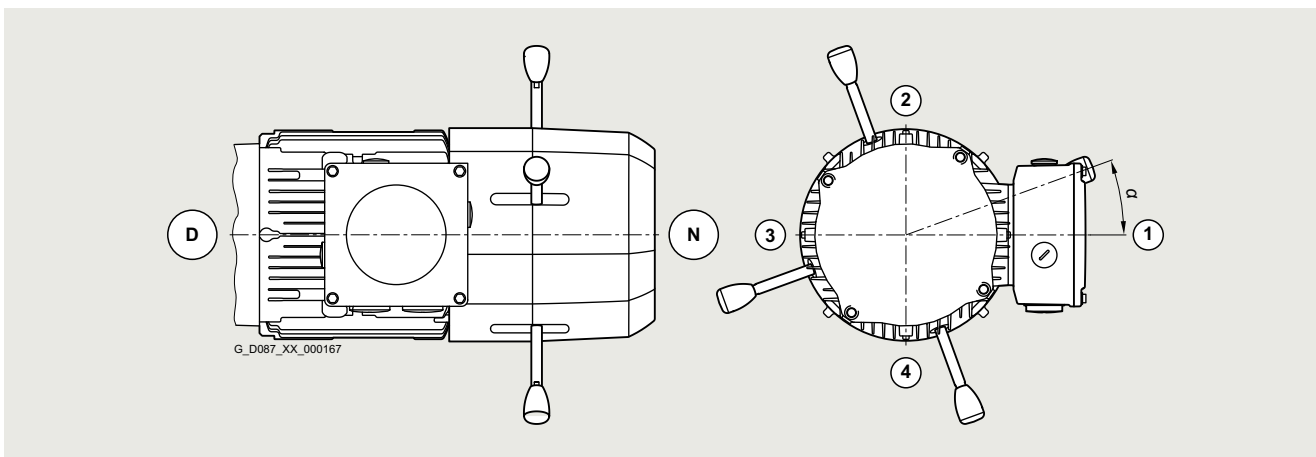


Fig. 11/41 Manual brake release lever position

Manual brake release lever position	Motor frame size														Additional identification code -Z with order code	Order code	
	63 <sup>1)</sup>	71 <sup>1)</sup>	63	71	80	90	100	112	132	160	180	200	225	250			
1	0°	0°	0°	10°	0°	0°	0°	0°	0°	0°	0°	0°	0°	0°	0°		<b>C26</b>
2	90°	90°	90°	100°	90°	90°	90°	90°	90°	90°	90°	90°	90°	90°	90°		<b>C27</b>
3	180°	180°	180°	190°	180°	180°	180°	180°	180°	180°	180°	180°	180°	180°	180°		<b>C28</b>
4	-	-	270°	280°	270°	270°	270°	270°	270°	270°	270°	270°	270°	270°	270°		<b>C29</b>

<sup>1)</sup> Only for worm geared motors S

**Brake options**

The dimensions of the manual brake release lever depend on the frame size.

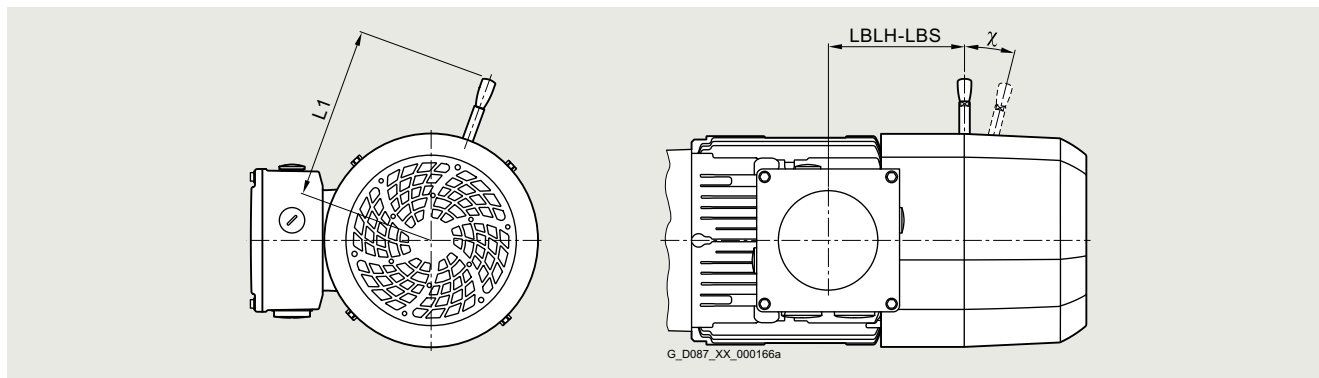


Fig. 11/42 Dimensions, manual brake release lever

Motor frame size	Brake type	Terminal box position	Distance		Distance		Angle, manual brake release lever With the brake released Tolerance +3° $\chi$	Thread, manual brake release lever
			Centerline of the motor up to the outermost position of the manual brake release lever Without locking mechanism mm <b>L1</b>	Centerline of the motor up to the outermost position of the manual brake release lever With locking mechanism mm <b>L1</b>	Center of the terminal box up to the center of the manual brake release lever Standard corrosion protection mm <b>LBLH-LBS</b>	Center of the terminal box up to the center of the manual brake release lever Increased corrosion protection mm <b>LBLH-LBS</b>		
<b>63</b> <sup>1)</sup>	L4 / LS4	1A, 2A, 3A, 4A	107	-	97.4	97.4	12°	M5
<b>71</b> <sup>1)</sup>	L4 / LS4	1A, 2A, 3A, 4A	107	-	130.8	130.8	12°	M5
<b>63</b>	L4 / LS4	1A, 2A, 3A, 4A	107	127	83.3	83.3	12°	M5
<b>71</b>	L4 / LS4	1A, 2A, 3A, 4A	107	127	71.8	71.8	12°	M5
	L8 / LS8	1A, 2A, 3A, 4A	116	136	72.3	72.3	10°	M5
<b>80</b>	L4 / LS4	1A, 2A, 3A, 4A	107	127	97.3	97.3	12°	M5
	L8 / LS8	1A, 2A, 3A, 4A	116	136	97.8	97.8	10°	M5
	L16 / LS16	1A, 2A, 3A, 4A	132	151	108.9	108.9	9°	M6
<b>90</b>	L8 / LS8	1A, 2A, 3A, 4A	116	136	102.8	102.8	10°	M5
	L16 / LS16	1A, 2A, 3A, 4A	132	151	113.9	113.9	9°	M6
	L32 / LS32	1A, 2A, 3A, 4A	161	161	115.9	115.9	10°	M6
<b>100</b>	L16 / LS16	1A, 2A, 3A, 4A	132	151	126.9	126.9	9°	M6
	L32 / LS32	1A, 2A, 3A, 4A	161	161	128.9	128.9	10°	M6
	L60 / LS60	1A, 2A, 3A, 4A	195	195	132.5	132.5	9°	M8
<b>112</b>	L32 / LS32	1A, 2A, 3A, 4A	161	161	128.9	128.9	10°	M6
	L60 / LS60	1A, 2A, 3A, 4A	195	195	132.5	132.5	9°	M8
<b>132</b>	L80 / LS80	1A, 2A, 3A, 4A	240	240	158.0	158.0	10°	M8
	L150 / LS150	1A, 2A, 3A, 4A	279	279	171.1	171.1	9°	M10
<b>132Z</b>	L80 / LS80	1A, 2A, 3A, 4A	240	240	158.0	158.0	10°	M8
	L150 / LS150	1A, 2A, 3A, 4A	279	279	171.1	171.1	9°	M10
<b>160</b>	L150 / LS150	1A, 2A, 3A, 4A	279	279	204.1	204.1	9°	M10
	L260 / LS260	1A, 2A, 3A, 4A	319	319	210.6	210.6	10°	M10
<b>180</b>	L260 / LS260	1A, 2A, 3A, 4A	319	319	198.6	209.6	10°	M10
<b>200</b>	L260 / LS260	1A, 2A, 3A, 4A	319	319	207.6	218.6	10°	M10
	L400 / LS400	1A, 2A, 3A, 4A	445	445	217.7	230.2	10°	M12
<b>225</b>	L400 / LS400	1A, 2A, 3A, 4A	445	445	269.2	269.2	10°	M12
	FDX30	1A, 2A, 3A, 4A	330	330	270.0	270.0	12°	M12
<b>250</b>	FDX30	1A, 2A, 3A, 4A	330	330	273.0	273.0	12°	M12
	FDX40	1A, 2A, 3A, 4A	377	377	273.0	273.0	10°	M12

<sup>1)</sup> Only for worm geared motors S

## Motor options

### Mounted components

#### Brake

#### Brake options

##### Monitoring

###### Brake with microswitch to monitor the release

The air gap  $s_{\text{gap}}$  of the brake is monitored by a microswitch mounted on the base plate of the solenoid assembly.

The motor does not start up until the brake has been fully released ( $s_{\text{gap}} = 0$ ) and the armature disk is in contact with the solenoid assembly. The microswitch is actuated and controls the motor contactor.

When the brake is switched off, the armature disk reaches the maximum air gap  $s_{\text{gapmax}}$  and the microswitch opens. This means that the motor contactor is not controlled and the motor does not start.

This method is used for machines and units which require a precisely defined starting and braking procedure, as well as for fault monitoring of faulty rectifiers, interrupted connecting cables, faulty solenoids, and excessively large air gaps (brake solenoid cannot fully attract the armature disk).

The microswitch for air gap monitoring is available for brakes in sizes L/LS32 to L/LS400 and FDX30 and FDX40.

###### Note:

The mechanical components of the microswitch must be protected against icing at low temperatures.

The microswitch for brake release monitoring **C04** cannot be selected in conjunction with explosion-protected motors (MB motors).

When using the LS brake and the microswitch for brake release monitoring **C04**, it should be noted that the microswitch is not covered by the safety certificate provided.

##### Enclosed brake

The L/LS brakes can be supplied as enclosed brakes. This version is standard for FDX brakes.

Enclosed brakes include a dust protection ring around the circumference and an integrated shaft sealing ring at the shaft outlet. This prevents the release and penetration of dust, moisture, and other pollution. Other advantages are reduced noise when applying the brake as well as, in combination with a motor anti-condensation heater, a reduced risk of the rotor freezing on the friction surfaces.

In addition, a condensation drain hole can be incorporated in the dust protection ring for L/LS brakes.

The enclosed brake can also be shipped in combination with a manual brake release lever and a manual brake release lever with locking mechanism.

The enclosed brake with condensation drain hole **C11** cannot be selected in conjunction with explosion-protected motors (MB motors).

Brake options	Additional identification code -Z with order code	Order code
	2KJ3... -...-...-Z	
Enclosed brake		<b>C01</b>
Enclosed brake with condensation drain hole		<b>C11</b>

Brake options	Additional identification code -Z with order code	Order code
	2KJ3... -...-...-Z	
Microswitch for monitoring brake release		<b>C04</b>

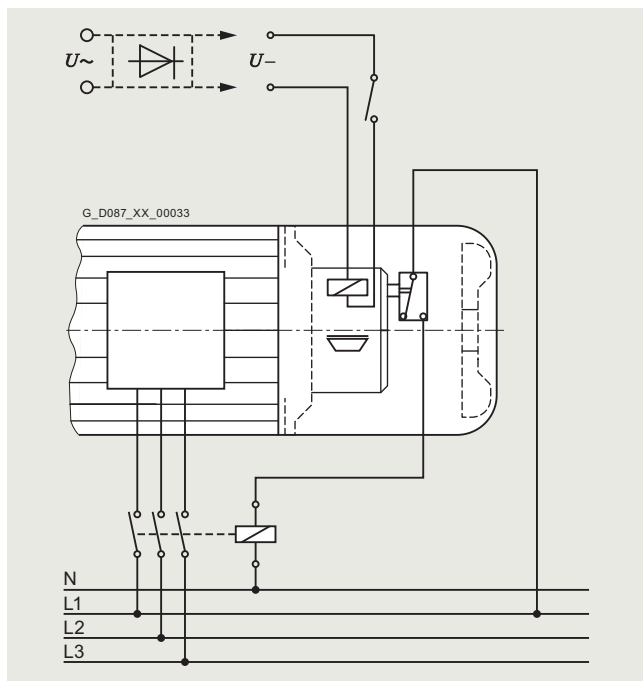


Fig. 11/43 Circuit principle with microswitch

**Brake options**
**Corrosion protection**

The L brakes are supplied as standard with corrosion protection. A friction plate or adapter flange is always mounted between the mating friction surface (end shield on the ventilation side) and the rotor. The rotor is made of a rustproof material.

**Brake with increased corrosion protection**

The adapter flanges and armature disks of the brakes are chromium-plated for increased protection against corrosion. This prevents the friction surfaces from seizing up.

Increased corrosion protection is employed when a motor is used in corrosive environmental conditions (high air humidity, dripping water, crane systems, for example) and/or during prolonged standstill periods or at ambient temperatures below -20 °C.

The FDX brakes are supplied as standard with increased corrosion protection.

The increased corrosion protection **C10** cannot be selected in conjunction with explosion-protected motors (MB motors) or the functionally safe brake (LS brake).

Brake options	Additional identification code <b>-Z</b> with order code	Order code
Increased corrosion protection	2KJ3... -.....-...- <b>Z</b>	<b>C10</b>

Corrosion protection		Brake type										
Design	Material	L4	L8	L16	L32	L60	L80	L150	L260	L400	FDX30	FDX40
<b>Standard corrosion protection</b>												
Friction surface to the motor	Friction plate of stainless steel	✓	✓	✓	✓	✓	✓					
	Adapter flange with thin zinc film							✓	✓	✓		
	End shield								✓	✓		
Armature disk	Gas-nitrided	✓	✓	✓	✓							
	Thin zinc film					✓	✓	✓	✓	✓		
<b>Increased corrosion protection</b>												
Friction surface to the motor	Friction plate of stainless steel	✓	✓	✓	✓	✓	✓					
	Chromium-plated adapter flange							✓	✓	✓	✓	✓
Armature disk	Chromium-plated	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Brake cable protection**

The brake cable of the geared motors is normally routed through the cable gland of the terminal box.

For motor frame sizes 63 to 132, we are offering an optional version of brake cable routing which ensures enhanced protection for the brake cable. In this version, the brake cable is brought into the motor directly under the fan cover through a hole in the base of the terminal box. This arrangement ensures that most of the cable is covered and protected against mechanical damage.

Brake cable protection **C80** cannot be selected in conjunction with explosion-protected motors (MB motors) or worm geared motors S.

Brake options	Additional identification code <b>-Z</b> with order code	Order code
Brake cable protection	2KJ3... -.....-...- <b>Z</b>	<b>C80</b>

## Motor options

### Mounted components

#### Brake

##### Brake options

###### Reduced-noise rotor-hub connection

The brakes are supplied with a reduced-noise rotor-hub connection. This reduces rattling noise of the rotor, particularly at low speeds and in converter operation.

###### Wear-resistant friction lining

The L brakes can also be selected with a wear-resistant friction lining.

The wear-resistant friction lining **C06** cannot be selected in conjunction with explosion-protected motors (MB motors) or the functionally safe brake (LS brake).

Brake options	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	<b>C06</b>
Wear-resistant friction lining		

##### Brake options for motor frame sizes 63 to 250

Option	Brake type											
	L4	L8	L16	L32	L60	L80	L150	L260	L400	FDX30	FDX40	
<b>L and FDX brake</b>												
Without rectifier	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
Rectifier for disconnection on the DC and AC sides	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Function rectifier for quick brake release and application	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
Standard friction lining	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wear-resistant friction lining	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
Microswitch for monitoring brake release	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	
Manual brake release	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
Manual brake release with locking mechanism	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Standard corrosion protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	
Increased corrosion protection	✓	✓	✓	✓	✓	✓	✓	✓	✓	<input type="checkbox"/>	<input type="checkbox"/>	
Enclosed brake	✓	✓	✓	✓	✓	✓	✓	✓	✓	<input type="checkbox"/>	<input type="checkbox"/>	
Enclosed brake with condensation drain hole	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	
Brake cable protection	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	
<b>LS brake</b>	<b>LS4</b>	<b>LS8</b>	<b>LS16</b>	<b>LS32</b>	<b>LS60</b>	<b>LS80</b>	<b>LS150</b>	<b>LS260</b>	<b>LS400</b>			
Without rectifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Standard friction lining	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Microswitch for monitoring brake release	-	-	-	✓	✓	✓	✓	✓	✓			
Manual brake release	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Manual brake release with locking mechanism	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Standard corrosion protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Enclosed brake	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Enclosed brake with condensation drain hole	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Brake cable protection	✓	✓	✓	✓	✓	✓	✓	✓	-			

Standard design

##### Possible modular system in combination with brake for motor frame sizes 63 to 250

Design	Motor plug	Encoder				Ventilation	Backstop	Second shaft extension
		Incremental encoder	Absolute encoder	Encoder under cover without canopy	Encoder accessories			
<b>Brake</b>	✓	✓	✓	✓	✓	✓		✓
Manual brake release								
• Without locking mechanism	✓	✓	✓	✓	✓	✓	-	✓
• With locking mechanism	✓	✓	✓	✓	✓	✓	-	✓
Microswitch								
• Brake release monitoring <sup>1)</sup>	✓	✓	✓	✓	✓	✓	-	✓

<sup>1)</sup> Can be selected for brake type L32 or higher

**Technical specifications**<sup>1)</sup>
**Braking torques as a function of speed and permissible speed limits with operating brake**

Brake type	Maximum permissible operating speed		Braking torque measured at rated braking torque at 100 rpm			
	Friction lining		1500 rpm	2500 rpm	3000 rpm	At max. speed
	Standard rpm	Wear-resistant (C06) rpm	%	%	%	%
L4	4000	3600	87	82	80	77
L8	4000	3600	85	79	78	75
L16	3600	3600	83	77	76	74
L32	3600	3600	81	76	74	72
L60	3600	3000	80	75	73	71
L80	3600	3000	79	73	72	69
L150	3600	1800	77	71	70	67
L260	3600	1800	75	69	68	66
L400	3000	1800	73	67	66	65
FDX30	3000	-	73	67	66	66
FDX40	3000	-	70	64	63	63

**Braking torques as a function of speed and permissible speed limits with holding brake and emergency stop function**

Brake type	Max. permissible no-load speed with emergency stop function		Braking torque measured at rated braking torque at 100 rpm			
	Friction lining		1500 rpm	2500 rpm	3000 rpm	At max. speed
	Standard rpm	Wear-resistant (C06) rpm	%	%	%	%
L4 / LS4	6000	6000	87	82	80	73
L8 / LS8	5000	4500	85	79	78	72
L16 / LS16	4000	3600	83	77	76	73
L32 / LS32	3600	3600	81	76	74	72
L60 / LS60	3600	3000	80	75	73	71
L80 / LS80	3600	3000	79	73	72	69
L150 / LS150	3600	1800	77	71	70	67
L260 / LS260	3600	1800	75	69	68	66
L400 / LS400	3000	1800	73	67	66	65
FDX30	6000	-	73	67	66	59
FDX40	6000	-	70	64	63	56

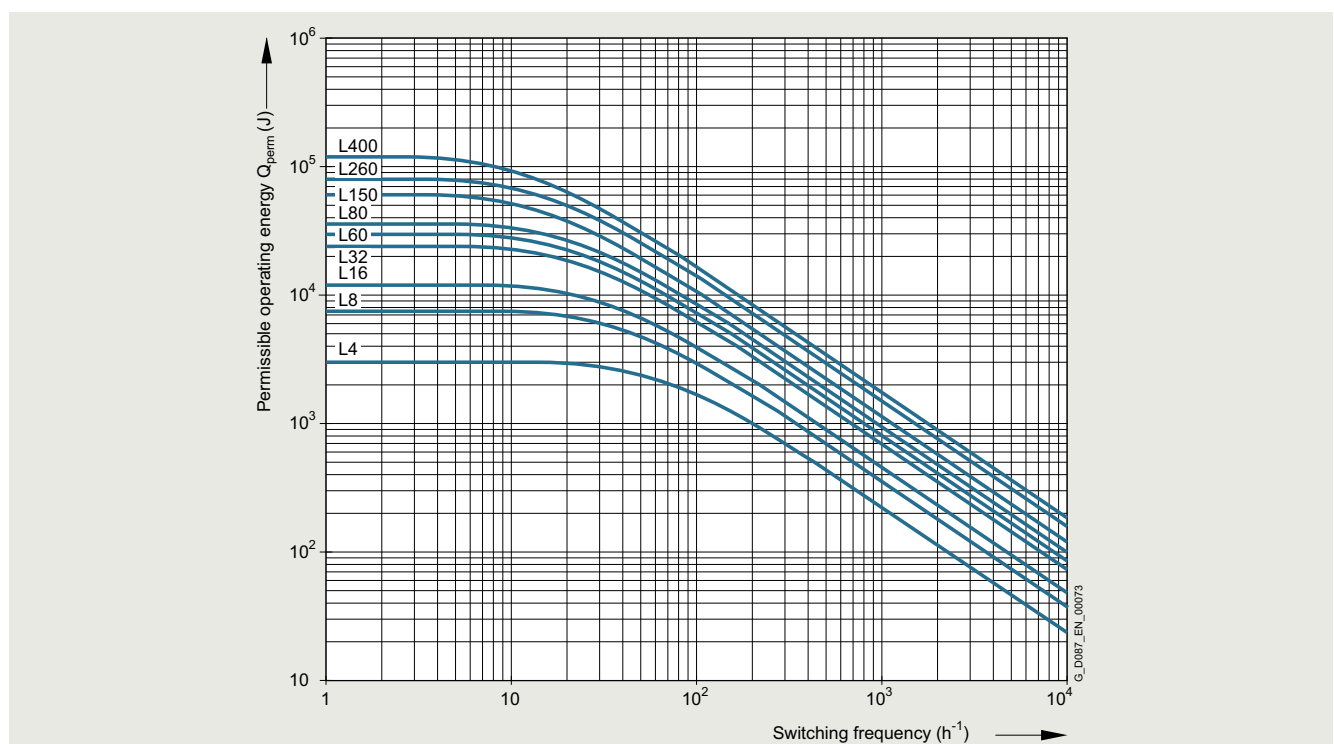


Fig. 11/44 Permissible operating energy

<sup>1)</sup> Values refer to brake in its delivery state

# Motor options

## Mounted components

### Brake

#### Technical specifications <sup>1)</sup>

#### Braking torques as a function of the speed and permissible speed limits for explosion-protected motors

Brake type	Maximum permissible operating speed	Max. permissible no-load speed with emergency stop function	Braking torque measured at rated braking torque at 100 rpm		
	rpm		rpm	1500 rpm	2500 rpm
L4	3000	3000	87	82	80
L8	3000	3000	85	79	78
L16	3000	3000	83	77	76
L32	3000	3000	81	76	74
L60	3000	3000	80	75	73
L80	3000	3000	79	73	72
L150	3000	3000	77	71	70
L260	3000	3000	75	69	68

Permissible operating energy for explosion-protected motors (MB motors) in Zone 2 (gas)

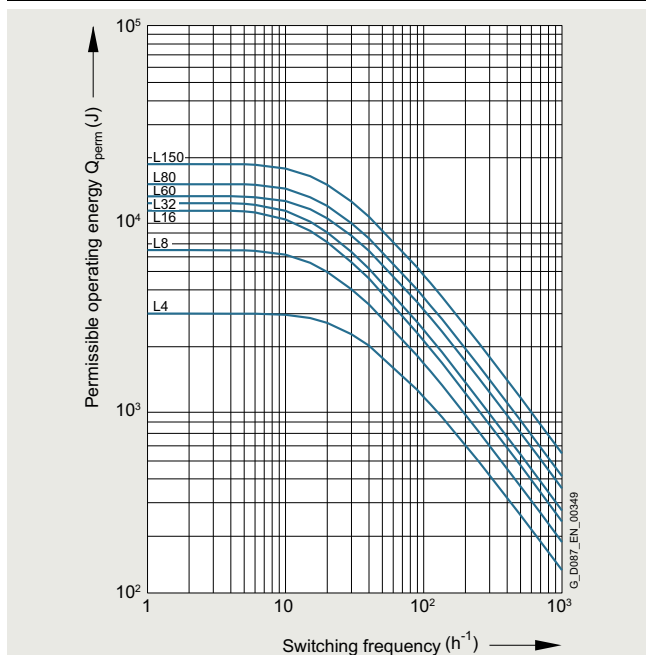


Fig. 11/45 Permissible operating energy in Zone 2 (gas) at 800 rpm

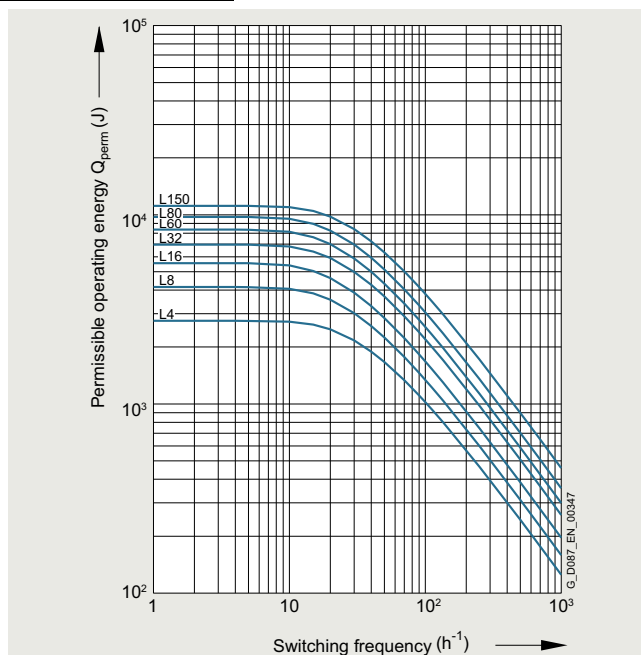


Fig. 11/47 Permissible operating energy in Zone 2 (gas) at 1800 rpm

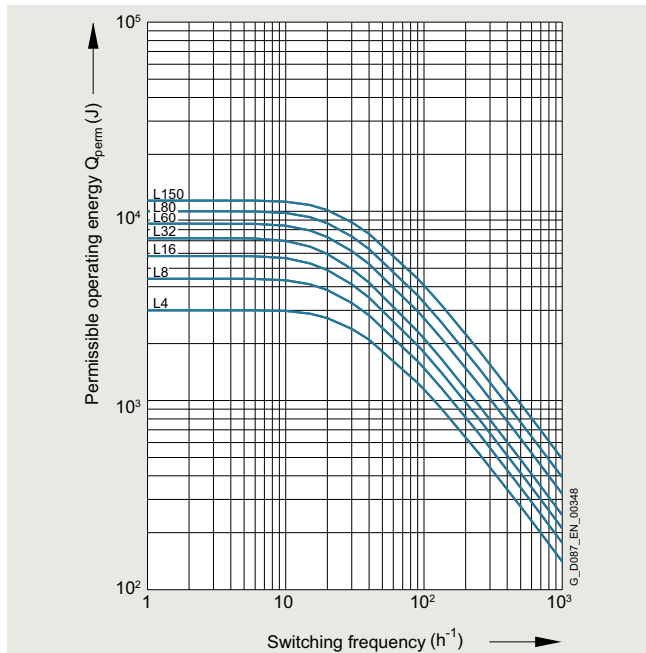


Fig. 11/46 Permissible operating energy in Zone 2 (gas) at 1500 rpm

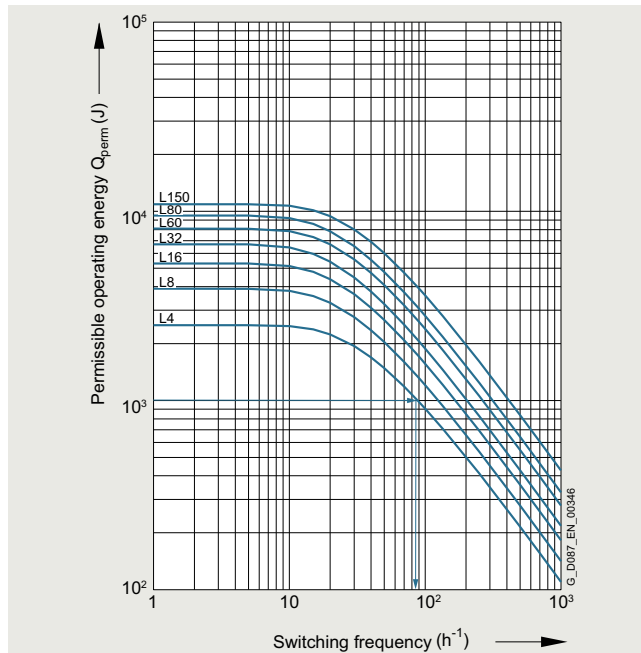


Fig. 11/48 Permissible operating energy in Zone 2 (gas) at 2500 rpm

<sup>1)</sup> Values refer to brake in its delivery state



**Technical specifications <sup>1)</sup>**

Permissible operating energy for explosion-protected motors (MB motors) in Zone 2 (gas)

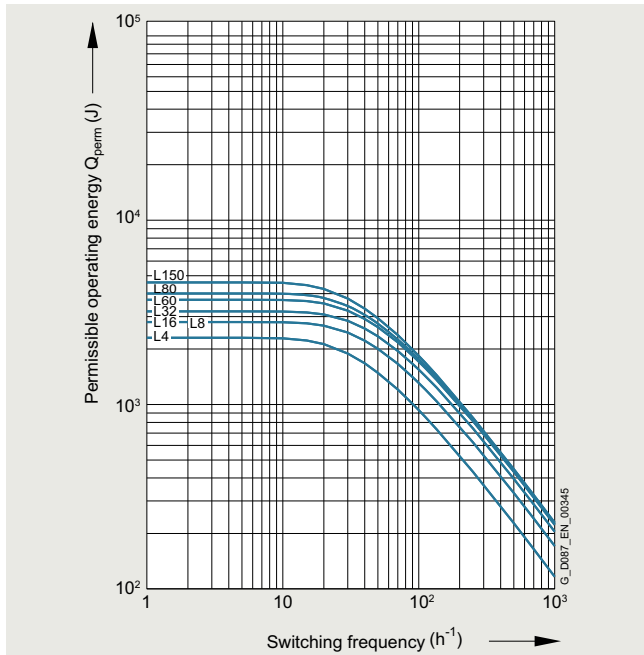


Fig. 11/49 Permissible operating energy in Zone 2 (Gas) at 3000 rpm

Permissible operating energy for explosion-protected motors (MB motors) in Zone 22 (dust)

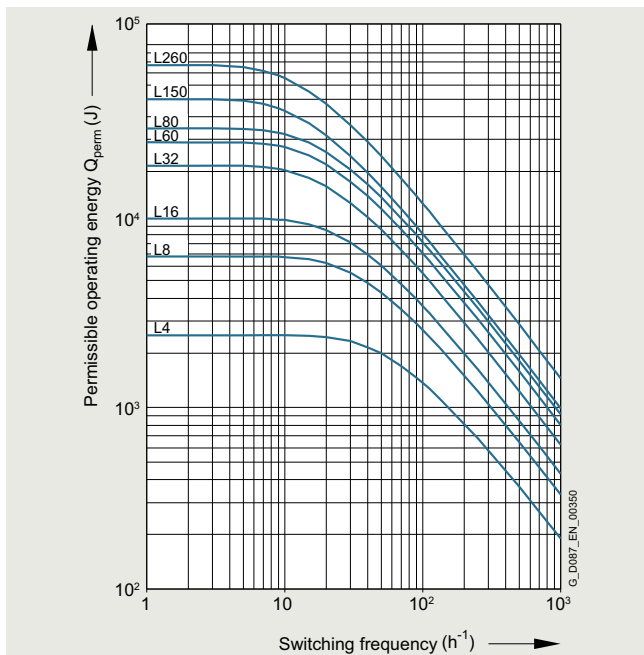


Fig. 11/50 Permissible operating energy for explosion-protected motors in Zone 22 (dust)

<sup>1)</sup> Values refer to brake in its delivery state

## Motor options

### Mounted components

#### Brake

#### Technical specifications <sup>1)</sup>

##### Disconnection times, application times and moments of inertia for L/LS brakes

Brake type		Rated braking torque $T_{br}$		Disconnection time $t_2$		Application time $t_1$ ( $t_1 = t_{11} + t_{12}$ )		Re- response time $t_{11}$	Rise time $t_{12}$	Application time $t_1$ ( $t_1 = t_{11} + t_{12}$ )		Re- response time $t_{11}$	Rise time $t_{12}$	Weight	Moment of inertia $J_B$	
Standard brake	Function- ally safe brake	Rated torque $M_2$ at 100 rpm Nm	Hold- ing torque $M_4$	Standard excitation ms	Over- excitation ms	AC and DC switched or DC switched		ms	ms	AC switched		ms	ms	kg	for wear- resist- ant lining  $10^{-4} \text{ kgm}^2$	
						ms	ms			ms	ms				$10^{-4} \text{ kgm}^2$	$10^{-4} \text{ kgm}^2$
L4/1.4		1.4	1.12	20	13	31		13.0	18.0	250	110	140	0.85	0.15	0.15	
L4/2		2.0	1.6	27	17	22		9.0	13.0	175	77	98				
L4/3	LS4/3	3.0	2.4	29	18	30		12.0	18.0	230	101	129				
L4	LS4	4.0	3.2	45	28	28		15.0	13.0	190	120	70				
L4/5	LS4/5	5.0	4.0	56	35	25		13.0	12.0	158	100	58				
L8/3		3.0	2.4	21	12	65		39.0	26.0	510	326	184	1.5	0.61	0.61	
L8/4		4.0	3.2	30	17	50		30.0	20.0	390	250	140				
L8/5		5.0	4.0	35	20	40		24.0	16.0	310	200	110				
L8/6.3	LS8/6.3	6.3	5.0	45	30	38		18.0	20.0	315	174	141				
L8	LS8	8.0	6.4	57	38	31		15.0	16.0	245	135	110				
L8/10	LS8/10	10.0	8.0	71	47	26		12.5	13.5	205	113	92				
L16/8		8.0	6.4	55	41	36		22.0	14.0	350	183	167	2.6	2	2	
L16/10	LS16/10	10.0	8.0	48	36	58		35.0	23.0	680	355	325				
L16/13	LS16/13	13.0	10.4	60	34	50		30.0	20.0	560	293	267				
L16	LS16	16.0	12.8	76	48	47		28.0	19.0	460	240	220				
L16/20	LS16/20	20.0	16.0	93	59	38		23.0	15.0	390	204	186				
L32/14		14.0	11.2	65	50	46		27.0	19.0	400	210	290	3.9	4.5	4.5	
L32/18	LS32/18	18.0	14.4	65	44	70		45.0	25.0	600	325	275				
L32/23	LS32/23	23.0	18.4	82	56	75		40.0	35.0	680	300	380				
L32	LS32	32.0	25.6	115	78	53		28.0	25.0	490	215	275				
L32/40	LS32/40	40.0	32.0	140	95	45		24.0	21.0	440	194	246				
L60/25		25.0	20.0	130	66	47		25.0	22.0	540	220	320	5.8	6.3	6.3	
L60/38	LS60/38	38.0	30.4	140	60	60		24.0	36.0	800	290	510				
L60/50	LS60/50	50.0	40.0	175	75	50		20.0	30.0	665	240	425				
L60	LS60	60.0	48.0	210	90	42		17.0	25.0	580	210	370				
L80/25		25.0	20.0	95	56	103		48.0	55.0	1 600	690	710	8.4	15	15	
L80/35		35.0	28.0	128	75	73		34.0	39.0	1 200	520	680				
L80/50	LS80/50	50.0	40.0	160	94	90		42.0	48.0	1 920	830	1 090				
L80/63	LS80/63	63.0	50.4	170	100	72		34.0	38.0	1 550	670	880				
L80	LS80	80.0	64.0	220	130	57		27.0	30.0	1 200	520	680				
L80/100	LS80/100	100.0	80.0	280	165	49		24.0	25.0	990	430	560				
L150/60		60.0	48.0	135	81	55		27.5	27.5	920	470	450	12.5	29	29	
L150/80		80.0	64.0	180	108	40		20.0	20.0	690	350	340				
L150/100	LS150/100	100.0	80.0	180	108	93		48.0	45.0	1 300	700	600				
L150/125	LS150/125	125.0	100.0	225	135	85		44.0	41.0	1 200	650	550				
L150	LS150	150.0	120.0	270	160	78		33.0	45.0	1 080	480	600				
L260/100		100.0	80.0	210	95	205		82.0	123.0	1 775	605	1 170	21.0	73	73	
L260/145		145.0	116.0	230	170	180		72.0	108.0	1 200	440	790				
L260/180	LS260/180	180.0	144.0	230	100	185		73.0	112.0	2 500	850	1 650				
L260/200	LS260/200	200.0	160.0	260	120	178		70.0	108.0	2 720	920	1 800				
L260/240	LS260/240	240.0	192.0	312	140	170		67.0	103.0	2 300	570	1 530				
L260	LS260	260.0	208.0	340	150	165		65.0	100.0	2 100	700	1 400				
L260/315	LS260/315	315.0	252.0	410	180	150		60.0	90.0	1 750	590	1 160				
L400/265	LS400/265	265.0	212.0	260	140	275		155.0	120.0	3 100	2 000	1 100	32.0	200	200	
L400/300	LS400/300	300.0	240.0	290	150	260		125.0	135.0	2 800	1 540	1 260				
L400/360	LS400/360	360.0	288.0	350	165	255		125.0	130.0	2 660	1 440	1 220				
L400	LS400	400.0	320.0	390	185	230		110.0	120.0	2 400	1 300	1 100				
L400/600	LS400/600	600.0	480.0	585	265	175		55.0	120.0	1 400	300	1 100				

<sup>1)</sup> Values refer to brake in its delivery state

### Technical specifications <sup>1)</sup>

#### Working capacity for L/LS brakes

Brake type		Power consumption At +20 °C W	Working capacity				Working capacity with wear-resistant friction lining					
Standard brake	Functionally safe brake		Per braking operation $W_{1max}$ kJ	Friction energy until the brake lining is replaced $W_{tot}$ MJ	Friction energy until the air gap is readjusted $W_V$ MJ		Per braking operation $W_{1max}$ kJ	Friction energy until the brake lining is replaced $W_{tot}$ MJ	Friction energy until the air gap is readjusted $W_V$ MJ			
						With over-excitation				With over-excitation		
L4/1.4		20	3	156	46.8	52	3	312	94	104		
L4/2				176		59		117				
L4/3	LS4/3			170	39.6	57		339	80	113		
L4	LS4			180	36.0	60		360	72	120		
L4/5	LS4/5			176	23.4	59		351	46	117		
L8/3		25	7.5	324	86.4	108	7.5	648	173	216		
L8/4											75.6	151
L8/5												
L8/6.3	LS8/6.3								756			
L8	LS8								64.8	648	130	
L8/10	LS8/10				54.0			108				
L16/8		30	12	405	108.0	162	12	810	216	324		
L16/10	LS16/10											
L16/13	LS16/13											
L16	LS16											
L16/20	LS16/20							396	80.0	158	792	160
L32/14		40	24	948	285.0	284	7	1896	570	568		
L32/18	LS32/18											
L32/23	LS32/23								260.0		1885	518
L32	LS32								212.0	284	1888	425
L32/40	LS32/40								165.0		1893	331
L60/25		50	30	1276	306.0	306	18	2560	612	612		
L60/38	LS60/38								280.0		2553	560
L60/50	LS60/50					1320		238.0	317	2640	476	635
L60	LS60					1322						
L80/25		55	36	2310	396.0	396	11	4536	792	792		
L80/35												
L80/50	LS80/50											
L80/63	LS80/63											
L80	LS80											
L80/100	LS80/100				260.0	389		519	778			
L150/60		85	60	2295	612.0	612	36	4590	1224	1224		
L150/80												
L150/100	LS150/100											
L150/125	LS150/125											
L150	LS150											
L260/100		100	80	4680	936.0	1287	10	7020	1872	2574		
L260/145												
L260/180	LS260/180					3510						
L260/200	LS260/200											
L260/240	LS260/240											
L260	LS260											
L260/315	LS260/315	130		3489	756.0	1279		6978	1512	2559		
L400/265	LS400/265	110	120	6480	1440.0	1872	28	12960	2880	3744		
L400/300	LS400/300											
L400/360	LS400/360											
L400	LS400											
L400/600	LS400/600								576.0			1152

<sup>1)</sup> Values refer to brake in its delivery state

## Motor options

### Mounted components

#### Brake

#### Technical specifications <sup>1)</sup>

##### No-load switching frequency for L/LS brakes

Motor type	Power 4-pole At 50 Hz kW	Brake type		Overexcitation							
		Standard brake	Functionally safe brake	Without	With	Without	With	Without	With	Without	With
				No-load switching frequency ( $Z_A$ )							
				1/h	1/h	1/h	1/h	1/h	1/h	1/h	1/h
				4-pole	2-pole		6-pole		8-pole		
LE63..	0.12	L4/5, L4		-	-	-	-	-	-	-	-
	0.18	L4/3, L4/2, L4/1,4		-	-	-	-	-	-	-	-
LE71..	0.25	L4/5, L4	LS4/5, LS4	7300	9500	2500	3200	10500	14000	14500	19000
	0.37	L4/3, L4/2, L4/1,4	LS4/3	12500	13500	4300	4500	18500	20000	25000	27000
		L8/10, L8, L8/6,3	LS8/10, LS8, LS8/6,3	6000	7600	1800	2500	9000	11000	12000	15000
		L8/5, L8/4		8900	11000	2900	3500	13000	16000	17500	22000
		L8/3		11000	12000	3500	4000	16500	18000	22000	24000
LE80..	0.55	L4/5, L4	LS4/5, LS4	9000	9500	2900	3100	13500	14000	-	-
LE80..E	0.75	L4/3, L4/2, L4/1,4	LS4/3	10500	11500	3500	3800	15500	16500	-	-
LE80..P		L8/10, L8, L8/6,3	LS8/10, LS8, LS8/6,3	6300	7500	2100	2500	9400	11000	-	-
		L8/5, L8/4, L8/3		9500	10000	3100	3300	14000	15000	-	-
		L16	LS16	6500	7500	2100	2500	9700	11000	-	-
		L16/13, L16/10, L16/8	LS16/13, LS16/10	7500	8000	2500	2600	11000	12000	-	-
LE90..	1.1	L8/10, L8, L8/6,3		6500	7000	2100	2300	9700	10500	-	-
LE90..E	1.5	L8/5, L8/4, L8/3		8000	8500	2600	2800	12000	12500	-	-
LE90..P		L16/20, L16	LS16/20, LS16	3200	4300	1000	1400	4800	6400	-	-
		L16/13, L16/10, L16/8	LS16/13, LS16/10	6500	7000	2100	2300	9700	10500	-	-
		L32	LS32	2200	3000	700	1000	3300	4500	-	-
		L32/23, L32/18	LS32/23, LS32/18	3300	4200	1100	1400	4900	6300	-	-
		L32/14		5500	6000	1800	2000	8200	12000	-	-
LE100..	2.2	L16/20, L16		6000	6500	2000	2100	9000	9700	12000	13000
LE100..E	3.0	L16/13, L16/10, L16/8		6500	7000	2100	2300	9700	10500	14000	14000
LE100..P		L32/40, L32	LS32/40, LS32	3200	4600	1000	1500	4800	6900	6400	9200
		L32/23, L32/18, L32/14	LS32/23, LS32/18	6000	6500	2000	2100	9000	9700	12000	13000
		L60/50	LS60/50	1100	2100	350	700	1600	3100	2200	4200
		L60/38, L60/25	LS60/38	3200	4600	1000	1500	4800	6900	9200	9200
LE112..	4.0	L32/40, L32	LS32/40, LS32	3300	3500	1100	1100	4900	5200	6600	7000
LE112..E		L32/23, L32/18, L32/14	LS32/23, LS32/18	3600	3800	1200	1200	5400	5700	7600	7600
LE112..P		L60, L60/50	LS60, LS60/50	2600	3200	850	1050	3900	4800	5200	6400
		L60/38, L60/25	LS60/38	3200	3600	1050	1200	4800	5400	7200	7200
LE132..	5.5	L80/100, L80	LS80/100, LS80	1850	2050	600	6500	2700	3000	3700	4100
LE132..E	7.5	L80/63, L80/50	LS80/63, LS80/50	2050	2200	650	700	3000	3300	4100	4400
LE132..P		L80/35, L80/25		2200	2350	700	750	3300	3500	4400	4700
		L150, L150/125	LS150, LS150/125	1200	1500	400	500	1800	2200	2400	3000
		L150/100, L150/80, L150/60	LS150/100	1900	2050	600	650	2800	3000	3800	4100
LE160..	11.0	L150, L150/125	LS150, LS150/125	1400	1550	450	500	2100	2300	2800	3100
LE160..E	15.0	L150/100, L150/80, L150/60	LS150/100	1650	1750	550	550	2400	2600	3300	3500
LE160..P		L260, L260/240	LS260, LS260/240	850	1200	250	400	1200	1800	1700	2400
		L260/200, L260/180	LS260/200, LS260/180	1050	1300	350	400	1500	1900	2100	2600
		L260/145, L260/100		1450	1550	450	500	2100	2300	2900	3100
LES180..E	18.5	L260/315, L260, L260/240	LS260/315, LS260, LS260/240	500	550	320	330	750	800	1000	1100
	22.0	L260/200, L260/180, L260/145, L260/100	LS260/200, LS260/180	550	600	174	200	800	900	1100	1200
LES200..E	30.0	L260/315, L260, L260/240	LS260/315, LS260, LS260/240	450	500	150	150	650	750	900	1000
		L260/200, L260/180, L260/145, L260/100	LS260/200, LS260/180	500	525	150	175	750	750	1000	1050
		L400, L400/360, L400/300, L400/265	LS400, LS400/360, LS400/300, LS400/265	400	425	125	125	600	600	800	850

Conversion factors for no-load switching frequency:

60 Hz operation  $0.75 \times Z_A$

IE3 motors  $0.1 \times Z_A$

No-load switching frequencies for IE1 motors on request.

<sup>1)</sup> Values refer to brake in its delivery state

**Technical specifications** <sup>1)</sup>
**Disconnection times, application times and moments of inertia for FDX brakes**

Brake type	Rated braking torque $T_{br}$  At 100 rpm  Nm	Solenoid voltage  $V_{DC}$	Disconnection time $t_2$		Application time $t_1$ ( $t_1 = t_{11} + t_{12}$ ) AC and DC switched or DC switched	Response time $t_{11}$	Rise time $t_{12}$	Application time $t_1$ ( $t_1 = t_{11} + t_{12}$ ) AC switched	Response time $t_{11}$	Rise time $t_{12}$	Weight  kg	Moment of inertia $J_B$  $10^{-4}$ kgm <sup>2</sup>
			Standard excitation ms	Over-excitation ms								
FDX30/265	265	All	-	173	255	125	130	1710	1360	350	45	195
FDX30/300	300		-	180	250	120	130	1620	1270	350	45	195
FDX30/360	360		-	192	243	113	130	1460	1110	350	45	195
FDX30/400	400		-	200	235	105	130	1350	1000	350	45	195
FDX30/500	500		-	220	220	90	130	800	740	350	45	195
FDX30/650	650		-	250	200	70	130	690	340	350	45	195
FDX30/750	750	103	-	260	190	60	130	670	320	350	45	195
FDX30/750	750	180; 205	-	200	190	60	130	620	270	350	45	195
FDX30/850	850	103	-	270	180	50	130	600	250	350	45	195
FDX30/850	850	180; 205	-	210	180	50	130	550	200	350	45	195
FDX40/650	650	All	-	280	390	230	160	2600	2100	500	80	445
FDX40/750	750		-	315	370	210	160	2230	1730	500	80	445
FDX40/850	850		-	350	350	190	160	1860	1360	500	80	445
FDX40/1000	1000		-	400	320	160	160	1300	800	500	80	445

**Working capacity for FDX brakes**

Brake type	Rated braking torque  At 100 rpm Nm	Solenoid voltage  $V_{DC}$	Power consumption  At +20 °C W	Working capacity		
				per braking operation $W_{1max}$ kJ	Friction energy until the brake lining is replaced $W_{tot}$ MJ	Friction energy until the air gap is readjusted $W_v$ MJ
FDX30/265	265	All	560/140	150	3700	-
FDX30/300	300		560/140	150	3700	-
FDX30/360	360		560/140	150	3700	-
FDX30/400	400		560/140	150	3700	-
FDX30/500	500		560/140	150	3700	-
FDX30/650	650		560/140	150	3700	-
FDX30/750	750	103	560/140	150	3700	-
FDX30/750	750	180; 205	880/220	150	3700	-
FDX30/850	850	103	560/140	150	3700	-
FDX30/850	850	180; 205	880/220	150	3700	-
FDX40/650	650	All	560/140	200	4000	-
FDX40/750	750		560/140	200	4000	-
FDX40/850	850		560/140	200	4000	-
FDX40/1000	1000		560/140	200	4000	-

<sup>1)</sup> Values refer to brake in its delivery state

## Motor options

### Mounted components

#### Encoders

##### Overview

###### Note:

It is not possible to use encoders in conjunction with explosion-protected motors.

Encoder	Motor frame size											Additional identification code -Z with order code 2KJ3... -Z	Order code	Additional information → page	
	63	71	80	90	100	112	132	160	180	200	225				250
<b>DRIVE-CLiQ encoders</b> <sup>1) 2)</sup>															
<i>Without functional safety</i>															
AS 22DQC		✓	✓			✓								<b>Q20</b>	page 11/47
AM 22DQC		✓	✓			✓								<b>Q21</b>	page 11/47
<i>With functional safety</i>															
AS 22DQC			✓	✓		✓								<b>Q22</b>	page 11/47
AM 22DQC			✓	✓		✓								<b>Q23</b>	page 11/47
<b>Incremental encoders</b>															
<i>Incremental encoders</i>															
TTL1024S/R KD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q44</b>	page 11/48
HTL1024S/R KD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q47</b>	page 11/48
HTL2048S/R KD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q48</b>	page 11/48
HTL2048S/R FD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q54</b>	page 11/48
<i>Incremental encoders 1XP8022</i>															
1XP8022-20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q56</b>	page 11/50
1XP8022-10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q59</b>	page 11/50
1XP8022-11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q60</b>	page 11/50
<b>Absolute encoders</b>															
1XP8024-21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q79</b>	page 11/52
1XP8014-10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>3)</sup>	✓ <sup>3)</sup>	<b>Q82</b>	page 11/51
1XP8024-10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>3)</sup>	✓ <sup>3)</sup>	<b>Q83</b>	page 11/51
<b>Rugged encoders</b>															
Leine und Linde LL 861 900 220						✓	✓	✓	✓	✓	✓	✓	✓	<b>Q92</b>	page 11/53
Hübner HOG 9 D 1024						✓	✓	✓	✓	✓	✓	✓	✓	<b>Q93</b>	page 11/53
Hübner HOG 10 D 1024							✓	✓	✓	✓	✓	✓	✓	<b>Q94</b>	page 11/54
<b>Functionally safe rotary encoders</b> <sup>2)</sup>															
<i>Incremental encoders IN 8.5834</i>															
IN 8.5834FS2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q42</b>	page 11/55
IN 8.5834FS3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q43</b>	page 11/55
<i>Absolute encoders IA 8.5883</i>															
IA 8.5883FS2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q77</b>	page 11/57
IA 8.5883FS3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q78</b>	page 11/57
<b>Mechanical protection</b>															
Encoder under cover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<b>Q95</b>	page 11/60

<sup>1)</sup> Can only be selected for synchronous reluctance motors.

<sup>2)</sup> Cannot be selected for electric-monorail geared motors.

<sup>3)</sup> Can only be selected in combination with brake.

### DRIVE-CLiQ encoders

The DRIVE-CLiQ encoders are only available in combination with the synchronous reluctance motors.

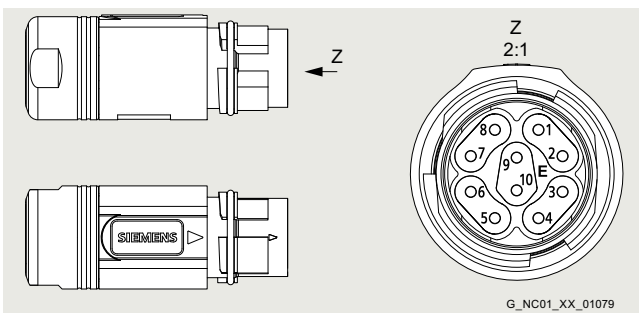
The encoders are suitable for typical industrial environments, but not for harsh industrial conditions such as those typical of offshore or chemical industry applications.



#### Technical specifications

DRIVE-CLiQ encoder	AS 22DQC	AS 22DQC	AM 22DQC	AM 22DQC
Functional safety	No	Yes	No	Yes
Supply voltage $U_B$	20.4 ... 28.8 V <sub>DC</sub>			
Resolution	22 bit (4.194.304)			
Absolute position	Yes, one revolution		Yes, 12 bit (4096 revolutions)	
Angular displacement	± 100°			
Moment of inertia of rotor	8.3 x 10 <sup>-6</sup> kgm <sup>2</sup>			
Maximum mechanical speed	4500 rpm			
Vibration (10 ... 150 Hz)	≤ 200 m/s <sup>2</sup> (EN 60068-2-6)			
Shock resistance (11 ms)	≤ 500 m/s <sup>2</sup> (EN 60068-2-27)			
Degree of protection	IP 66 (EN 60529)			
Ambient temperature range	-30 ... +50 °C			
Connection system	1 m cable length with M17 10-pole Speed-connect-READY			
Weight, approx.	0.4 kg			
<b>Safety values</b>				
Classification	-	System S120, SIL2		System S120, SIL2
Relevant standards (compliance with applicable national and regional laws, standards, and regulations is also essential)		EN ISO 13849-1:2015 EN 61800-5-2:2017		EN ISO 13849-1:2015 EN 61800-5-2:2017
Additional identification code <b>-Z</b> with order code	Order code			
<b>2KJ3... -.....-Z</b>	<b>Q20</b>	<b>Q22</b>	<b>Q21</b>	<b>Q23</b>

#### Connection assignment



#### Signal connector M17 with DRIVE-CLiQ

Signal	TX-P	TX-N	-	-	RX-P	RX-N	-	-	24 V	0 V
PIN	1	2	3	4	5	6	7	8	9	10

## Motor options

### Mounted components

#### Encoders

##### Incremental encoders

Incremental encoders are available up to motor frame size 200.

The encoders are suitable for typical industrial environments, but not for harsh industrial conditions such as those typical of offshore or chemical industry applications.



##### Technical specifications

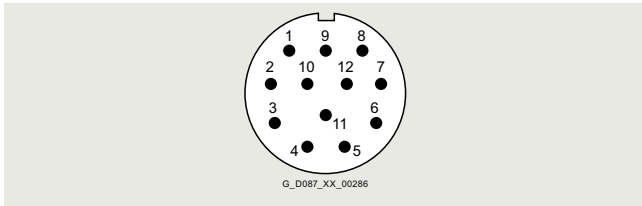
Incremental encoders	HTL2048S/R KD	HTL1024S/R KD	TTL1024S/R KD	HTL2048S/R FD
Pulses per revolution	2048	1024	1024	2048
Incremental signals	HTL	HTL	TTL	HTL
Supply voltage $U_B$	10 ... 30 V <sub>DC</sub>	10 ... 30 V <sub>DC</sub>	5 V <sub>DC</sub> ± 10 %	10 ... 30 V <sub>DC</sub>
Maximum current consumption without load	typ. 50 mA; ≤ 100 mA	typ. 50 mA; ≤ 100 mA	typ. 40 mA; ≤ 90 mA	typ. 50 mA; ≤ 100 mA
Permissible load per output	$I_{Load} \leq \pm 20$ mA	$I_{Load} \leq \pm 20$ mA	$I_{Load} \leq \pm 20$ mA	$I_{Load} \leq \pm 20$ mA
Outputs	2 square-wave pulses A, B 2 square-wave pulses $\bar{A}$ , $\bar{B}$ Zero pulse 0 Zero pulse $\bar{0}$	2 square-wave pulses A, B 2 square-wave pulses $\bar{A}$ , $\bar{B}$ Zero pulse 0 Zero pulse $\bar{0}$	2 square-wave pulses A, B 2 square-wave pulses $\bar{A}$ , $\bar{B}$ Zero pulse 0 Zero pulse $\bar{0}$	2 square-wave pulses A, B 2 square-wave pulses $\bar{A}$ , $\bar{B}$ Zero pulse 0 Zero pulse $\bar{0}$
Signal level	$U_{High} \geq U_{Pmin} - 1.0$ V $U_{Low} \leq 0.5$ V	$U_{High} \geq U_{Pmin} - 1.0$ V $U_{Low} \leq 0.5$ V	$U_{High} \geq U_{Pmin} - 2.5$ V $U_{Low} \leq 0.5$ V	$U_{High} \geq U_{Pmin} - 1.0$ V $U_{Low} \leq 0.5$ V
Switching times (10 ... 90 %)	$t_r, t_f \leq 200$ ns (with 1 m cable 1.2 k $\Omega$ load resistance)	$t_r, t_f \leq 200$ ns (with 1 m cable 1.2 k $\Omega$ load resistance)	$t_r, t_f \leq 30$ ns (with 1 m cable 120 $\Omega$ connection resistance)	$t_r, t_f \leq 200$ ns (with 1 m cable 1.2 k $\Omega$ load resistance)
Max. frequency -3 dB	300 kHz	300 kHz	300 kHz	300 kHz
Short-circuit strength	Yes (with correctly applied supply voltage)	Yes (with correctly applied supply voltage)	Yes (when the supply voltage is correctly connected/ Only a max. of one channel may be short-circuited: For +V = 5 V <sub>DC</sub> a short-circuit to a channel, 0 V, or +V is permitted)	Yes (with correctly applied supply voltage)
Reverse polarity protection of the supply voltage	Yes	Yes	No	Yes
Starting torque	< 0.01 Nm			
Moment of inertia of rotor	6 x 10 <sup>-6</sup> kgm <sup>2</sup>			
Maximum mechanical speed	5000 rpm			
Vibration (10 ... 2000 Hz)	≤ 300 m/s <sup>2</sup> (EN 60068-2-6)			
Shock resistance (6 ms)	≤ 3000 m/s <sup>2</sup> (EN 60068-2-27)			
Degree of protection	IP66/IP67			
Operating temperature range	-40 ... +40 °C (temperature class 180 (H)) / -40 ... +60 °C (temperature class 155 (F))			
Connection system → page 11/63	0.8 m cable (PUR) with 12-pole flange socket M23, 0° coding			12-pole flange socket M23, 0° coding
Weight, approx.	0.34 kg			0.22 kg
Additional identification code -Z with order code	Order code			
2KJ3... -.....-Z	<b>Q48<sup>1)</sup></b>	<b>Q47<sup>1)</sup></b>	<b>Q44<sup>1)</sup></b>	<b>Q54<sup>1)</sup></b>

<sup>1)</sup> For worm geared motors S, the incremental encoder is available only for motor frame size 71.

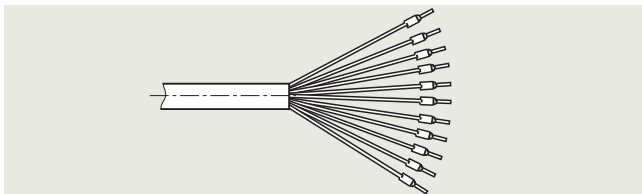


**Incremental encoders**

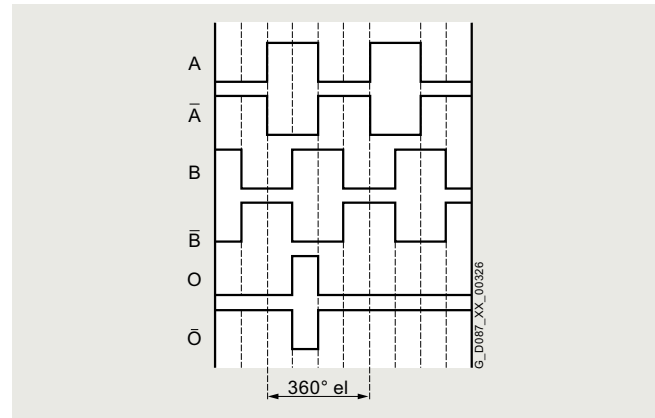
Connection assignment



For cable available as an option, see "Encoder accessories" from page 11/63.



Signal



**M23 connector, 12-pole**

Signal	$\bar{B}$	+Vsens <sup>1)</sup>	0	$\bar{0}$	A	$\bar{A}$		B		0 V	0Vsens <sup>1)</sup>	+V <sup>1)</sup>
PIN	1	2	3	4	5	6	7	8	9	10	11	12
Core color	pink	blue	red	black	brown	green	violet	gray	yellow	white/ green	white	brown/ green

<sup>1)</sup> 0V and 0Vsens or +V and +Vsens are bridged internally in the rotary encoder (PCB).

## Motor options

### Mounted components

#### Encoders

##### Incremental encoders

##### Incremental encoder 1XP8022

The incremental encoder is available up to motor frame size 200.



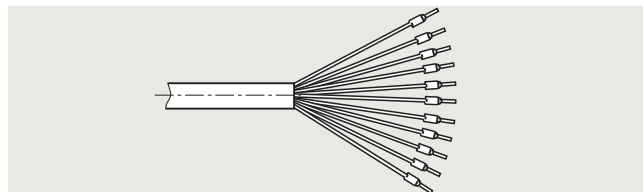
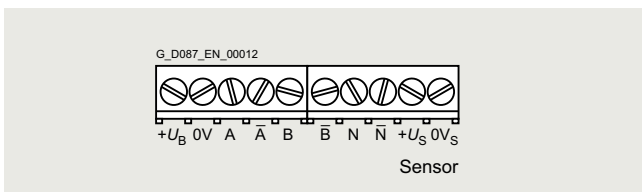
##### Technical specifications

Incremental encoder 1XP8022	-11	-10	-20
Pulses per revolution	2048	1024	1024
Incremental signals	HTL		TTL
Supply voltage $U_B$	8 ... 30 V <sub>DC</sub> (reverse-polarity protected)		5 V <sub>DC</sub> ± 5 % (reverse-polarity protected)
Maximum current consumption without load	≤ 100 mA		
Permissible load per output	$I_L$ ≤ 70 mA		
Outputs	2 square-wave pulses A, B 2 square-wave pulses $\bar{A}$ , $\bar{B}$ Zero pulse N Zero pulse $\bar{N}$		
Signal level	$U_{High} \geq U_B - 3 V$ $U_{Low} \leq 1.5 V$		$U_{High} \geq 2.5 V$ $U_{Low} \leq 0.5 V$
Minimum edge interval	500 ns		≤ 200 ns
Switching times (10 ... 90 %)	≤ 1 μs		
Maximum frequency	120 kHz		
Moment of inertia of rotor	$6 \times 10^{-6} \text{ kgm}^2$		
Maximum mechanical speed	8000 rpm		
Vibration (55 ... 2000 Hz)	≤ 100 m/s <sup>2</sup> (EN 60068-2-6)		
Shock (11 ms)	≤ 1000 m/s <sup>2</sup> (EN 60068-2-27)		
Degree of protection	IP66		
Ambient temperature range	-20 ... +40 °C (temperature class 180 (H)) / -20 ... +45 °C (temperature class 155 (F))		
Connection system → page 11/62	Cable terminal box		
Weight, approx.	0.35 kg		
Additional identification code -Z with order code	Order code		
2KJ3... -.....-Z	Q60 <sup>1)</sup>	Q59 <sup>1)</sup>	Q56 <sup>1)</sup>

<sup>1)</sup> For worm geared motors S, the incremental encoder is available only for motor frame size 71.

##### Connection assignment

For cable available as an option, see "Encoder accessories" from page 11/63.



##### Connections

Connection	+U <sub>B</sub>	0V	A	$\bar{A}$	B	$\bar{B}$	N	$\bar{N}$	+U <sub>S</sub>	0V <sub>S</sub>
Cable terminal box										
Core color	red	blue	green	brown	gray	black	pink	white	yellow	violet

### Absolute encoders 1XP8014 and 1XP8024

Absolute encoders are available up to motor frame size 250.

The multiturn absolute encoder can be shipped with EnDAT protocol or SSI protocol and mounted on the shaft.

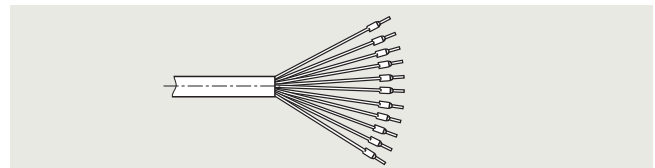
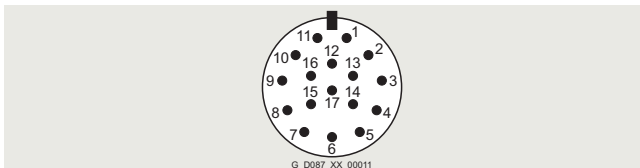
#### Technical specifications

Absolute encoders	1XP8014-10	1XP8024-10
Supply voltage $U_B$	5 V $\pm$ 5 %	
Maximum current consumption without load	$\leq$ 200 mA	
Absolute position values	EnDAT 2 1	
• Code	Dual	
• Positions per revolution	8192 (13 bit)	
• Differentiable revolutions	4 096	
Incremental signals	$\sim$ 1 V <sub>PP</sub>	
• Pulses per revolution	2048	
• Outputs	Sine/cosine pulses A, B	
• Limit frequency -3 dB	$\geq$ 200 kHz	
• Signal size	0.8 ... 1.2 V <sub>PP</sub>	
Moment of inertia of rotor	$4.3 \times 10^{-6}$ kgm <sup>2</sup>	
Maximum permissible mechanical speed	$\leq$ 6 000 rpm	
Permissible electrical speed with system accuracy	$\leq$ 1500 rpm/ $\pm$ 1 LSB $\leq$ 10000 rpm/ $\pm$ 50 LSB	
Vibration (55 ... 2000 Hz)	15 g	30 g
Shock (6 ms)	100 g	
Degree of protection	IP66	
Ambient temperature range	-40 ... +40 °C (temperature class 180 (H)) / -40 ... +60 °C (temperature class 155 (F))	
Connection system → page 11/62	Flange socket, 17-pole with 0° coding	1 m cable with coupling socket
Weight, approx.	0.3 kg	
Additional identification code -Z with order code	Order code	
2KJ3... -.....-Z	<b>Q82</b> <sup>1)</sup>	<b>Q83</b> <sup>1)</sup>

<sup>1)</sup> For worm geared motors S, the absolute encoder is available only for motor frame size 71.

#### Connection assignment

For cable available as an option, see "Encoder accessories" from page 11/63.



Connection	Voltage supply					Incremental signals				Absolute position values				Other signals	
	$U_P$	Sensor $U_P$	0 V	Sensor 0 V	Inner shield	A+	A-	B+	B-	DATA	$\overline{\text{DATA}}$	CLOCK	$\overline{\text{CLOCK}}$	Rot. direction	Zeros
Flange socket (SSI)	7	1	10	4	11	15	16	12	13	14	17	8	9	2	5
Core color	brown/green	blue	white/green	white		green/black	yellow/black	blue/black	red/black	gray	pink	violet	yellow	black	green

Connection	Voltage supply					Incremental signals				Absolute position values				Other signals	
	$U_P$	Sensor $U_P$	0 V	Sensor 0 V	Inner shield	A+	A-	B+	B-	DATA	$\overline{\text{DATA}}$	CLOCK	$\overline{\text{CLOCK}}$	-	-
Flange socket (EnDAT 2 1)	7	1	10	4	11	15	16	12	13	14	17	8	9		
Core color	brown/green	blue	white/green	white		green/black	yellow/black	blue/black	red/black	gray	pink	violet	yellow	black	green

## Motor options

### Mounted components

#### Encoders

#### Absolute encoder 1XP8024-21

The absolute encoder is available with SSI protocol and HTL incremental signals up to motor frame size 200. This is ideally suited to SINAMICS G120D.

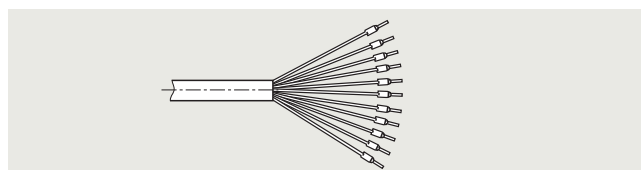
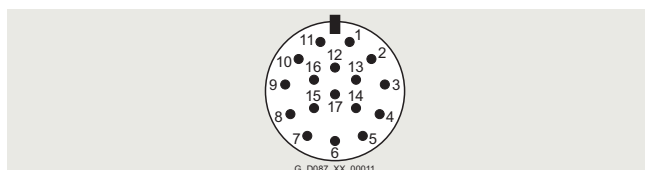
#### Technical specifications

Absolute encoders	1XP8024-21
Supply voltage $U_B$	10 ... 30 V
Maximum current consumption without load	28 mA at 24 V
Absolute position values	SSI
• Code	Gray
• Positions per revolution	8192 (13 bit)
• Differentiable revolutions	4096
• Calculation time $t_{cal}$	$\leq 5 \mu s$
Incremental signals	HTL
• Outputs	2 short-circuit-proof square-wave pulses $U_{a1}, U_{a2}$ (maximum 1 min) 2 short-circuit-proof square-wave pulses $\overline{U}_{a1}, \overline{U}_{a2}$ (maximum 1 min)
• Signal level	$U_{High} \geq U_P - 2.5 V$ $I_{High} = 20 mA$ $U_{Low} \leq 1.6 V$ $I_{Low} = 20 mA$
• Pulses per revolution	2 048
• Sampling rate	$\leq 205 kHz$
• Edge interval	0.43 $\mu s$
Starting torque at 20 °C	$\leq 0.01 Nm$
Moment of inertia of rotor	$4.3 \times 10^{-6} kgm^2$
Maximum permissible mechanical speed	$\leq 6000 rpm$
Vibration (55 ... 2000 Hz)	$\leq 150 m/s^2$ (EN 60068-2-6)
Shock (6 ms)	$\leq 1000 m/s^2$ (EN 60068-2-27)
Degree of protection	IP66
Ambient temperature range	-40 ... +40 °C (temperature class 180 (H)) / -40 ... +60 °C (temperature class 155 (F))
Connection system → page 11/62	1 m cable with 17-pole coupling socket, 0° coding
Weight, approx.	0.3 kg
Additional identification code -Z with order code	Order code
2KJ3... -.....-.....-Z	<b>Q79<sup>1)</sup></b>

1) For worm geared motors S, the absolute encoder can only be selected for motor frame size 71.

#### Connection assignment

For cable available as an option, see "Encoder accessories" from page 11/63.



Connection	Voltage supply					Incremental signals				Absolute position values				Other signals	
	$U_P$	Sen- sor $U_P$	0 V	Sen- sor 0 V	Inner shield	$U_{a1}$	$\overline{U}_{a1}$	$U_{a2}$	$\overline{U}_{a2}$	DATA	$\overline{DATA}$	CLOCK	$\overline{CLOCK}$	Count. direction	Zeros
Flange socket (SSI)	7	1	10	4	11	15	16	12	13	14	17	8	9	2	5
Core color	brown/ green	blue	white/ green	white		green/ black	yellow/ black	blue/ black	red/ black	gray	pink	violet	yellow	black	green

**Rugged encoders**
**Rotary pulse encoder LL 861 900 220**


Fig. 11/51 Leine und Linde LL 861 900 220

With its rugged design, this rotary pulse encoder is also suitable for demanding operating environments. It is resistant to shock and vibration and has insulated bearings.

The rotary pulse encoder LL 861 900 220 is available in combination with self-ventilated motors in frame size 112 or larger, or in combination with forced-ventilated motors in frame size 160 or larger.

The version of the rotary pulse encoder with a diagnostics system (ADS) can be supplied by Leine und Linde.

**Technical specifications**

<b>Supply voltage <math>U_p</math></b>	<b>+9 ... +30 V</b>
Current consumption without load	max. 80 mA
Permissible load current per output	40 mA
Pulses per revolution	1024
Outputs	6 short-circuit-proof square-wave pulses A, A', B, B', 0, 0', high current HTL
Pulse offset between the two outputs	$90^\circ \pm 25^\circ$ electrical
Output amplitude	$U_{\text{High}} \geq U_B - 4 \text{ V}$ $U_{\text{Low}} \leq 2.5 \text{ V}$
Pulse duty factor	1:1 $\pm$ 10 %
Rate of change	50 V/ $\mu$ s (without load)
Maximum frequency	100 kHz for 350 m cable
Maximum speed	4000 rpm
Degree of protection	IP66
Ambient temperature range	-20 ... +40°C
Maximum permissible radial cantilever force	300 N
Maximum permissible axial force	100 N
Connection system → page 11/63	Terminal strips in the encoder Cable connection, M20 x 1.5 radial
Weight, approx.	1.3 kg
Additional identification code -Z with order code	Order code
<b>2KJ3... -.....-Z</b>	<b>Q92</b>

**Manufacturer:**

Leine und Linde (Germany) GmbH  
 Bahnhofstrasse 36  
 73430 Aalen, Germany  
 Phone: +49 (0) 73 61-78093-0  
 Fax: +49 (0) 73 61-78093-11  
[www.leinelinde.com](http://www.leinelinde.com)  
 email: [info@leinelinde.de](mailto:info@leinelinde.de)

**Rotary pulse encoder HOG9 D 1024 I**


Fig. 11/52 Hübner HOG9 D 1024 I

The encoder is equipped with insulated bearings.

The rotary pulse encoder HOG9 D 1024 I is available in combination with self-ventilated motors in frame size 112 or larger, or in combination with forced-ventilated motors in frame size 160 or larger.

**Technical specifications**

<b>Supply voltage <math>U_p</math></b>	<b>+9 ... +30 V</b>
Current consumption without load	50 ... 100 mA
Permissible load current per output	60 mA, 300 mA peak
Pulses per revolution	1024
Outputs	4 short-circuit-proof square-wave pulses A, B and A', B'
Pulse offset between the two outputs	$90^\circ \pm 20^\circ$
Output amplitude	$U_{\text{High}} \geq U_B - 3.5 \text{ V}$ $U_{\text{Low}} \leq 1.5 \text{ V}$
Pulse duty factor	1:1 $\pm$ 20 %
Rate of change	10 V/ $\mu$ s (without load)
Maximum frequency	120 kHz
Maximum speed	7000 rpm
Degree of protection	IP56
Ambient temperature range	-30 ... +40 °C (temperature class 180 (H)) -30 ... +60 °C (temperature class 155 (F))
Maximum permissible radial cantilever force	300 N
Maximum permissible axial force	200 N
Connection system → page 11/63	Radial connector (mating connector is part of the scope of delivery)
Mechanical design acc. to Hübner Ident. No.	73 522 E
Weight	0.7 kg
Additional identification code -Z with order code	Order code
<b>2KJ3... -.....-Z</b>	<b>Q93</b>

**Manufacturer:**

Baumer Hübner GmbH  
 Max-Dohrn-Str. 2+4  
 10589 Berlin, Germany  
 Phone: +49 (0) 30-6 90 03-0  
 Fax: +49 (0) 30-6 90 03-1 04  
[www.baumerhuebner.com](http://www.baumerhuebner.com)  
 email: [info@baumerhuebner.com](mailto:info@baumerhuebner.com)

## Motor options

### Mounted components

#### Encoders

##### Rugged encoders

##### Rotary pulse encoder HOG10 D 1024 I



Fig. 11/53 Hübner HOG10 D 1024 I

This encoder is extremely rugged and is therefore suitable for demanding operating conditions. It is equipped with insulated bearings.

The rotary pulse encoder HOG10 D 1024 I is available for motor frame size 132 and higher.

##### Technical specifications

<b>Supply voltage <math>U_p</math></b>	<b>+9 ... +30 V</b>
Current consumption without load	approx. 100 mA
Permissible load current per output	60 mA, 300 mA peak
Pulses per revolution	1 024
Outputs	4 short-circuit-proof square-wave pulses A, B and A', B'
Pulse offset between the two outputs	$90^\circ \pm 20\%$
Output amplitude	$U_{\text{High}} \geq U_B - 3.5\text{ V}$ $U_{\text{Low}} \leq 1.5\text{ V}$
Pulse duty factor	$1:1 \pm 20\%$
Rate of change	10 V/ $\mu\text{s}$ (without load)
Maximum frequency	120 kHz
Maximum speed	7000 rpm
Degree of protection	IP66
Ambient temperature range	-40 ... +40 °C (temperature class 180 (H)) -40 ... +60 °C (temperature class 155 (F))
Maximum permissible radial cantilever force	400 N
Maximum permissible axial force	250 N
Connection system → page 11/63	Terminals, cable connection M20 x 1.5
Mechanical design acc. to Hübner Ident. No.	74 055 E
Weight, approx.	1.6 kg
Additional identification code <b>-Z</b> with order code	Order code
<b>2KJ3 ... -.....-Z</b>	<b>Q94</b>

##### Manufacturer:

Baumer Hübner GmbH

Max-Dohrn-Str. 2+4

10589 Berlin, Germany

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email: [info@baumerhuebner.com](mailto:info@baumerhuebner.com)



### Functionally safe rotary encoders

Information about configuring and application of the functionally safe rotary encoders can be found in chapter "Configuring guide" on page 2/28.

#### Incremental encoder IN 8.5834

This incremental encoder is available for motor frame sizes 71 to 200.



Fig. 11/54 Incremental encoder IN 8.5834

#### Technical specifications

Incremental encoders	IN 8.5834FS2	IN 8.5834FS3
Pulses per revolution	1024	
Supply voltage $U_B$	$5 V_{DC} \pm 5 \%$	
Maximum current consumption without load	$\leq 70 \text{ mA}$	
Reverse polarity protection for supply voltage	Yes	
Outputs	Sinusoidal/cosinusoidal	
• Max. frequency -3dB	400 kHz	
• Signal level	$1 V_{PP} (\pm 10 \%)$	
• Outputs	Sine signal: B, B_Inv Cosine signal: A, A_Inv	
• Short-circuit strength	Yes (short-circuit proof to 0 V or output, only one channel at a time, when supply voltage is correctly applied)	
Starting torque (at 20 °C)	$< 0.03 \text{ Nm}$	
Moment of inertia of rotor	$7 \times 10^{-6} \text{ kgm}^2$	
Max. permissible mechanical speed	$\leq 3000 \text{ rpm}$	
Maximum permissible angular acceleration	$\leq 4000 \text{ rad/s}^2$	
Vibration (10 ... 150 Hz)	$200 \text{ m/s}^2$ (EN 60068-2-6)	
Shock resistance (11 ms)	$500 \text{ m/s}^2$ (EN 60068-2-27)	
Degree of protection	IP 65	
Ambient temperature range	$-30 \dots +50 \text{ °C}$	
Connection system	Tangential 1 m cable with coupling socket 12-pole, M23 with 0° coding	
Weight, approx.	0.45 kg	
<b>Safety values</b>		
Classification	PLd / SIL2	PLe / SIL3
System structure	2-channel (Cat. 3)	2-channel (Cat. 4)
PFH d value	$2.16 \times 10^{-8} \text{ h}^{-1}$ (The specified value refers to a diagnostic coverage of 90 % that must be achieved with an encoder evaluation unit. The encoder evaluation unit must at least comply with the requirements for SIL2.)	$1.09 \times 10^{-8} \text{ h}^{-1}$ (The specified value refers to a diagnostic coverage of 99 % that must be achieved with an encoder evaluation unit. The encoder evaluation unit must at least comply with the requirements for SIL3.)
Service life	20 years	20 years
Relevant standards (compliance with applicable national and regional laws, standards, and regulations is also essential)	EN ISO 13849-1:2008 EN ISO 13849-2:2012 EN 61800-5-2:2007	EN ISO 13849-1:2008 EN ISO 13849-2:2012 EN 61800-5-2:2007
Additional identification code -Z with order code	Order code	
2KJ3... -.....-.....-Z	Q42 <sup>1)</sup>	Q43 <sup>1)</sup>

<sup>1)</sup> The functionally safe rotary encoder is not compatible with worm geared motors S.

**Motor options**  
Mounted components

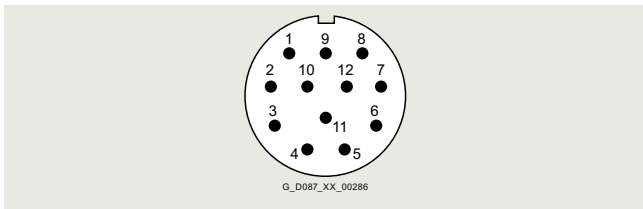


**Encoders**

**Functionally safe rotary encoders**

**Incremental encoder IN 8.5834**

Connection assignment



Signal

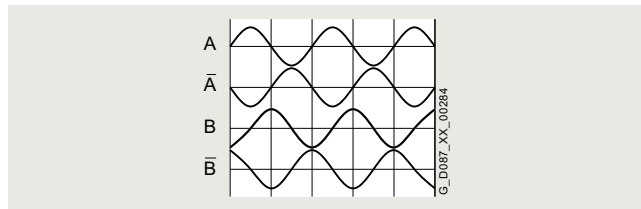


Fig. 11/55 Chart pattern with shaft rotating in clockwise direction (looking in direction of clamping ring)

Connection	Voltage supply				Incremental signals			
	$U_p$	Sensor $U_p$ <sup>1)</sup>	0 V	Sensor 0 V <sup>1)</sup>	A+	A-	B+	B-
Flange socket	12	2	10	11	5	6	8	1

<sup>1)</sup> Jumpers between sensor pins in rotary encoder

Manufacturer:

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Schubertstr. 47  
78054 Villingen-Schwenningen, Germany

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**Functionally safe rotary encoders**
**Absolute encoder IA 8.5883**

This absolute encoder is available for motor frame sizes 71 to 200.



Fig. 11/56 Absolute encoder IA 8.5883

**Technical specifications**

Absolute encoders	IA 8.5883FS2	IA 8.5883FS3
Supply voltage $U_B$	5 V <sub>DC</sub> ± 5 %	
Maximum current consumption without load	≤ 80 mA	
Reverse polarity protection for supply voltage	Yes	
Absolute position values	SSI	
• Output driver	RS485 transceiver type	
• Permitted load / channel	max. ± 20 mA	
• Signal level	HIGH type 3.8 V LOW with I load = 20 mA type 1.3 V	
• Positions per revolution	8192 (13 bit)	
• Differentiable revolutions	4096 (12 bit)	
• Code	Gray	
• SSI clock rate	50 kHz ... 2 MHz	
• Monoflop time	≤ 15 μs	
• Data refresh rate	ST resolution ≤ 1 μs	
SinCos signals	~ 1 V <sub>PP</sub>	
• Max. frequency -3dB	400 kHz	
• Signal level	1 V <sub>PP</sub> (± 10 %)	
• Short-circuit strength	Yes (short-circuit proof to 0 V or output, only one channel at a time, when supply voltage is correctly applied)	
• Pulses per revolution	2 048	
• Outputs	Sine signal: B, B_Inv Cosine signal: A, A_Inv	
Starting torque (at 20 °C)	< 0.03 Nm	
Moment of inertia of rotor	7 x 10 <sup>-6</sup> kgm <sup>2</sup>	
Max. permissible mechanical speed	≤ 3000 rpm	
Maximum permissible angular acceleration	≤ 4000 rad/s <sup>2</sup>	
Vibration (10 ... 150 Hz)	200 m/s <sup>2</sup> (EN 60068-2-6)	
Shock resistance (11 ms)	500 m/s <sup>2</sup> (EN 60068-2-27)	
Degree of protection	IP 65	
Ambient temperature range	-30 ... +50°C	
Connection system	Tangential 1 m cable with coupling socket 17-pole, M23 with 0° coding	
Weight, approx.	0.45 kg	
Additional identification code <b>-Z</b> with order code	Order code	
<b>2KJ3... -.....-.....-Z</b>	<b>Q77<sup>1)</sup></b>	<b>Q78<sup>1)</sup></b>

<sup>1)</sup> The functionally safe rotary encoder is not compatible with worm geared motors S.

# Motor options

## Mounted components



### Encoders

#### Functionally safe rotary encoders

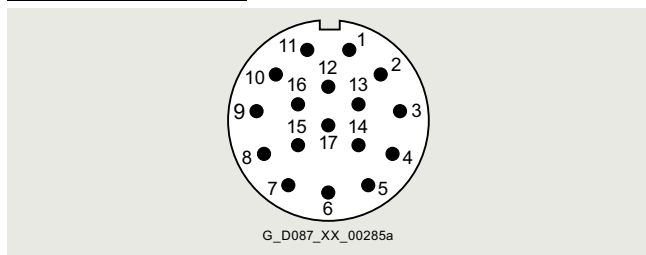
##### Absolute encoder IA 8.5883

###### Technical specifications

Absolute encoders	IA 8.5883FS2	IA 8.5883FS3
<b>Safety values</b>		
Classification	PLd / SIL2	PLe / SIL3
System structure	2-channel (Cat. 3)	2-channel (Cat. 4)
PFH d value	$2.16 \times 10^{-8} \text{ h}^{-1}$ (The specified value refers to a diagnostic coverage of 90 % that must be achieved with an encoder evaluation unit. The encoder evaluation unit must at least comply with the requirements for SIL2.)	$1.09 \times 10^{-8} \text{ h}^{-1}$ (The specified value refers to a diagnostic coverage of 99 % that must be achieved with an encoder evaluation unit. The encoder evaluation unit must at least comply with the requirements for SIL3.)
Service life	20 years	20 years
Relevant standards (compliance with applicable national and regional laws, standards, and regulations is also essential)	EN ISO 13849-1:2008 EN ISO 13849-2:2012 EN 61800-5-2:2007	EN ISO 13849-1:2008 EN ISO 13849-2:2012 EN 61800-5-2:2007
Additional identification code -Z with order code	Order code	
<b>2KJ3... -.....-.....-Z</b>	<b>Q77 <sup>1)</sup></b>	<b>Q78 <sup>1)</sup></b>

<sup>1)</sup> The functionally safe rotary encoder is not compatible with worm geared motors S.

###### Connection assignment



###### Signal

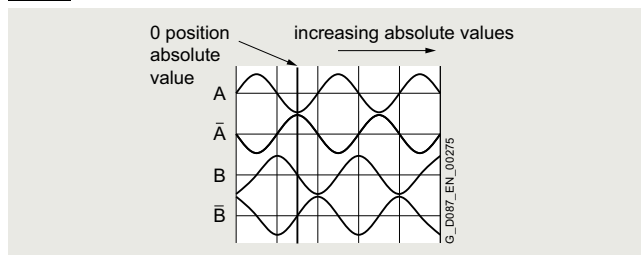


Fig. 11/57 Chart pattern with shaft rotating in clockwise direction (looking in direction of clamping ring)

Connection	Voltage supply				Inner shield <sup>2)</sup>	Incremental signals				Absolute position values				Other signals	
	U <sub>P</sub>	Sensör U <sub>P</sub> <sup>1)</sup>	0 V	Sensör 0 V <sup>1)</sup>		A+	A-	B+	B-	DATA	$\overline{\text{DATA}}$	CLOCK	$\overline{\text{CLOCK}}$	Rot. direction	Zeros
	●	●	●	●						D+	D-	C+	C-	DIR <sup>3)</sup>	SET <sup>4)</sup>
Flange socket (SSI)	7	1	10	4	11	15	16	12	13	14	17	8	9	2	5

- 1) Sensor pins jumpered internally in connector
- 2) No inner shield
- 3) When the input is activated, the absolute values are counted backwards
- 4) When the input is activated, the absolute value is set to zero

###### Manufacturer:

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Schubertstr. 47  
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**Functionally safe rotary encoders**

The maximum permissible air gaps for brake motors with functionally safe rotary encoder are different, see table.

Technical specifications of brake with functionally safe rotary encoder

Brake type	Rated braking torque $T_{br}$ At 100 rpm Nm	Working capacity Friction energy until the air gap is readjusted $W_f$ MJ	Rated air gap $S_{LSN}$ mm	Max. rated air gap $S_{LSM}$ mm
L4/1.4	1.4	46.8	0.2	0.65
L4/2	2	46.8	0.2	0.6
L4/3	3	39.6	0.2	0.55
L4	4	36.0	0.2	0.5
L4/5	5	23.4	0.2	0.4
L8/3	3	86.4	0.2	0.6
L8/4	4	86.4	0.2	0.6
L8/5	5	75.6	0.2	0.6
L8/6.3	6.3	75.6	0.2	0.6
L8	8	64.8	0.2	0.5
L8/10	10	54	0.2	0.5
L16/4	4	108	0.2	0.6
L16/8	8	108	0.2	0.6
L16/10	10	108	0.2	0.6
L16/13	13	108	0.2	0.6
L16	16	108	0.2	0.6
L16/20	20	80	0.2	0.5
L32/8	8	190	0.3	0.7
L32/14	14	190	0.3	0.7
L32/18	18	190	0.3	0.7
L32/23	23	173	0.3	0.7
L32	32	141	0.3	0.6
L32/40	40	110	0.3	0.5
L60/25	25	204	0.3	0.7
L60/35	35	204	0.3	0.7
L60/38	38	187	0.3	0.7
L60/50	50	159	0.3	0.6
L60	60	159	0.3	0.6
L80/25	25	264	0.3	0.7
L80/35	35	264	0.3	0.7
L80/50	50	264	0.3	0.7
L80/63	63	264	0.3	0.7
L80	80	264	0.3	0.7
L80/100	100	173	0.3	0.6
L150/60	60	273	0.4	0.8
L150/80	80	273	0.4	0.8
L150/100	100	273	0.4	0.8
L150/125	125	273	0.4	0.8
L150	150	273	0.4	0.8
L260/100	100	418	0.4	0.8
L260/145	145	418	0.4	0.8
L260/180	180	418	0.4	0.8
L260/200	200	418	0.4	0.8
L260/240	240	418	0.4	0.8
L260	260	418	0.4	0.8
L260/315	315	338	0.4	0.7
L400/265	265	643	0.5	0.9
L400/300	300	643	0.5	0.9
L400/360	360	643	0.5	0.9
L400	400	643	0.5	0.9
L400/600	600	257	0.5	0.7

## Motor options

### Mounted components

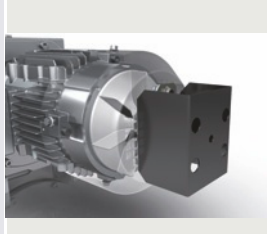
#### Encoders

#### Mechanical protection

##### Versions

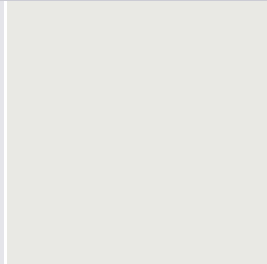
##### Protective plate

For self-ventilated motors up to frame size 90, the encoder is mounted outside the fan cover. In the standard version, the encoder is covered by a protective metal plate (painted red).

The protective plate is used for the following encoder types	Connection system	Image
HTL2048S/R FD (Q54)	Flange socket	
1XP8014-.. (Q82)		
1XP8022-.. (Q56, Q59, Q60)	Cable terminal box	
TTL 1024S/R KD (Q44)	0.8 m cable + coupling socket	
HTL 1024S/R KD (Q47)		
HTL2048S/R KD (Q48)		
1XP8024-.. (Q79, Q83)	1 m cable + coupling socket	

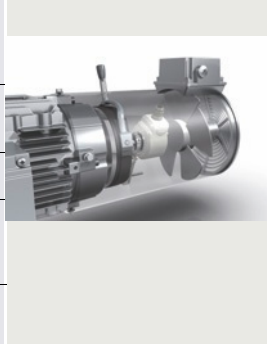
##### Canopy

From motor frame size 100, the encoder is protected by a canopy.

The canopy is used for the following encoder types	Connection system	Image
HTL2048S/R FD (Q54)	Flange socket	
1XP8014-.. (Q82)		
1XP8022-.. (Q56, Q59, Q60)	Cable terminal box	
TTL 1024S/R KD (Q44)	0.8 m cable + coupling socket	
HTL 1024S/R KD (Q47)		
HTL2048S/R KD (Q48)		
1XP8024-.. (Q79, Q83)	1 m cable + coupling socket	
Leine und Linde LL 861 900 220 (Q92)	Cable terminal box	
HOG9 D 1021 I (Q93)	Flange socket	
HOG10 D 1021 I (Q94)	Cable terminal box	

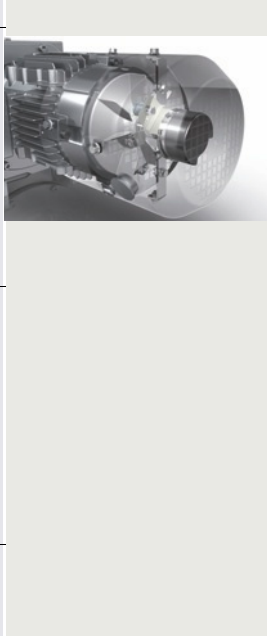
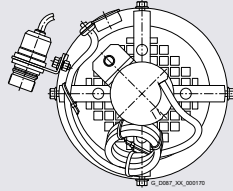
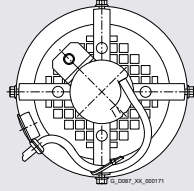
##### Fan cover of the motor (with separately driven fan)

For force-ventilated motors the encoder is mounted inside the fan cover.

The fan cover is used for the following encoder types	Connection system	Mounting the flange/coupling socket	Image
HTL2048S/R FD (Q54)	Flange socket (from motor frame size 132)		
1XP8014-.. (Q82)			
1XP8022-.. (Q56, Q59, Q60)	Cable terminal box		
TTL 1024S/R KD (Q44)	0.8 m cable + coupling socket		
HTL 1024S/R KD (Q47)			
HTL2048S/R KD (Q48)			
1XP8024-.. (Q79, Q83)	1 m cable + coupling socket		
Leine und Linde LL 861 900 220 (Q92)	Cable terminal box		
HOG9 D 1021 I (Q93)	Flange socket		
HOG10 D 1021 I (Q94)	Cable terminal box		
IN 8.5834 (Q42, Q43)	1 m cable + coupling socket	The coupling socket is attached to the motor cooling fins using a cable tie with claw.	
IA 8.5883 (Q77, Q78)	1 m cable + coupling socket		

**Mechanical protection**
**Versions**
**Encoder under cover**

Optionally, for motor frame sizes 71 to 200, instead of the protective metal plate, a protective cover can be ordered. This provides additional mechanical protection for the encoder.

The encoder under the cover can be used for the following encoder types	Connection system	Mounting the flange/coupling socket	Image	Additional identification code <b>-Z</b> with order code	Order code
1XP8022-.. ( <b>Q56, Q59, Q60</b> )	Cable terminal box			2KJ3... -.....-.....- <b>Z</b>	<b>Q95</b>
TTL1024S/R KD ( <b>Q44</b> ) HTL1024S/R KD ( <b>Q47</b> ) HTL2048S/R KD ( <b>Q48</b> )	0.8 m cable + coupling socket	The coupling socket is attached to the cover by a bracket. 			
1XP8024-.. ( <b>Q79, Q83</b> )	1 m cable + coupling socket	The cable is brought out through a cutout with protective envelope. 			
IN 8.5834 ( <b>Q42, Q43</b> )	1 m cable + coupling socket	The coupling socket is attached to the motor cooling fins using a cable tie with claw.			
IA 8.5883 ( <b>Q77, Q78</b> )	1 m cable + coupling socket				

## Motor options

### Mounted components

#### Encoders

##### Motors prepared for encoder mounting

The interface for the modular encoder-mounting shaft is designed for a total maximum weight of  $m = 500$  g. The connections and wiring for the encoder system must be selected such that the rotary encoder is not subjected to any additional forces. The encoder must be mounted in such a way that normal linear expansion does not subject the torque arm to any impermissible forces.

In the delivery state, the encoder-mounting shaft has a maximum radial runout of  $\leq 0.1$  mm. When the encoder is selected, it must be ensured that the minimum immersion depth of the solid shaft into the hollow shaft corresponds to the encoder manufacturer's specifications. The encoder manufacturer's instructions and recommendations must also be observed.

The interface "prepared for encoder mounting" is always shipped with an encoder protective device for protection during transport. The encoder protective device should be used in order to protect the mounted encoder and the mounting system against mechanical damage.

For the dimensions of the available mounting space and other dimensions, please refer to [page 9/60](#).

This option is suitable for applications with medium shock and vibration requirements. At medium cycle frequencies of the application, speeds up to 3600 rpm are possible.

Encoders	Additional identification code -Z with order code	Order code
	2KJ3... -.....-...-Z	N50
Prepared for encoder mounting (12 mm) (Not possible for worm geared motors S)		

##### MOTION-CONNECT signal cables


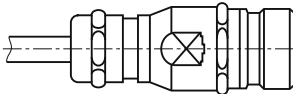
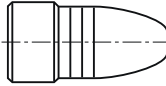
MOTION-CONNECT signal cables are available for connecting Siemens encoders to SINAMICS S110/120 and G120.

These cables can be ordered in precise 10 cm lengths.

Description	Article No.
<b>DRIVE-CLiQ encoders</b>	
Pre-assembled signal cable (Speed Connect, fixed routing)	6FX5002-2DC40-■■■■■
Pre-assembled signal cable (screw thread, fixed routing)	6FX5002-2DD40-■■■■■
Pre-assembled signal cable (Speed Connect, trailing type)	6FX8002-2DC40-■■■■■
Pre-assembled signal cable (screw thread, trailing type)	6FX8002-2DD40-■■■■■
<b>Cable extensions for DRIVE-CLiQ encoders</b>	
Pre-assembled signal cable (Speed Connect, fixed routing)	6FX5002-2DC44-■■■■■
Pre-assembled signal cable (screw thread, fixed routing)	6FX5002-2DD44-■■■■■
Pre-assembled signal cable (Speed Connect, trailing type)	6FX8002-2DC44-■■■■■
Pre-assembled signal cable (screw thread, trailing type)	6FX8002-2DD44-■■■■■
<b>Incremental encoders HTL/TTL</b>	
Pre-assembled signal cable (fixed routing/with Sub-D connector on control side)	6FX5002-2CR00-■■■■■
Pre-assembled signal cable (fixed routing/with bare wire ends on control side)	6FX5002-2CA12-■■■■■
Pre-assembled signal cable (trailing type/with bare wire ends on control side)	6FX8002-2CA12-■■■■■
<b>Absolute encoder (SSI) 1XP8024-21</b>	
Pre-assembled signal cable (fixed routing)	6FX5002-2CC06-■■■■■
Pre-assembled signal cable (trailing type)	6FX8002-2CC06-■■■■■
<b>Absolute encoder (EnDat 2.1) 1XP8014-10; 1XP8024-10</b>	
Pre-assembled signal cable (fixed routing/with Sub-D connector on control side)	6FX5002-2CH00-■■■■■
Pre-assembled signal cable (trailing type/with Sub-D connector on control side)	6FX8002-2CH00-■■■■■
<b>Functionally safe rotary encoder</b>	
Connecting cable for incremental encoder IN 8.5834FS2, IN 8.5834FS3	6FX5002-2CG00-■■■■■
Connecting cable for absolute encoder IA 8.5883FS2, IA 8.5883FS3	6FX5002-2CH00-■■■■■

Further selection options and information about MOTION-CONNECT signal cables are available at:  
<https://support.industry.siemens.com/cs/us/en/view/109747019>

**Encoder accessories**
**Connection system**

Connection system	Description	Design
<b>M23 flange socket</b> 	The flange socket is mounted directly on the encoder.	Pin contacts External thread
<b>M23 coupling socket</b> 	The coupling socket is connected to the encoder via a cable.	Pin contacts External thread
<b>M23 connector</b> 	The connector is connected to the flange/ coupling socket.	Socket contacts Union nut

**Technical specifications**

	Cable suitable for cable carriers	Cable unsuitable for cable carriers
Operating temperature on the surface		
• Permanently installed	-40 °C ... +80 °C	-40 °C ... +100 °C
• Moving	-10 °C ... +80 °C	-30 °C ... +100 °C
Smallest bending radius		
• Permanently installed	≥ 70 mm	≥ 35 mm
• Moving	≥ 100 mm	≥ 70 mm
Bending operations	Typ. $5 \times 10^6$ cycles	-
Oil resistance	EN 50363-10-2	Oil-resistant
Outer jacket	Polyurethane (PUR)	Polyurethane (PUR)
Design	4x2x0.14+4x0.5 (for incremental encoder) 4x2x0.14+4x0.5+4x0.5 (for absolute encoder)	5x2x0.14 mm <sup>2</sup>
Outer diameter	8 mm	7 mm ± 0.2 mm

## Motor options

### Mounted components

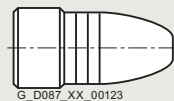
#### Encoders

#### Encoder accessories

##### Connector

A straight connector for shielded cables up to 8 mm in diameter is available for encoders with flange/coupling socket.

##### Selection table

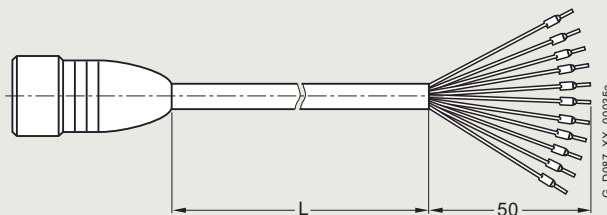


<b>Encoder type</b>	Additional identification code -Z with order code
	2KJ3... -.....-Z Order code
<b>M23 connector</b>	
Incremental encoders TTL1024S/R KD, HTL1024S/R KD, HTL2048S/R KD, HTL2048S/R FD and IN 8.5834	<b>Q62</b> <b>FDU:55190000565002</b>
Absolute encoders 1XP8014, 1XP8024, IA 8.5883	<b>Q62</b> <b>FDU:55190000565003</b>

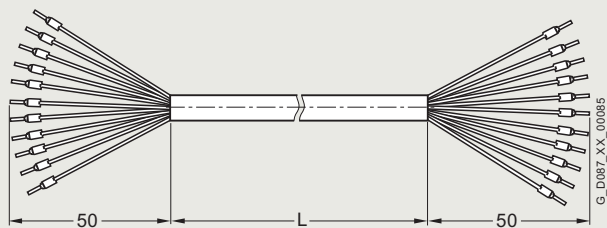
##### Cable with end sleeves

A pre-assembled cable with end sleeves and three different cable lengths can be supplied for the encoders.

##### Selection table



<b>Encoder type</b>	<b>Suitable for cable carrier</b>	Additional identification code -Z with order code
	Yes / No	2KJ3... -.....-Z Order code
<b>Free cable length L</b>		<b>2 m</b>
Incremental encoders TTL1024S/R KD, HTL1024S/R KD, HTL2048S/R KD and HTL2048S/R FD	Yes	<b>Q69</b> <b>FDU:70000004013446</b>
Absolute encoders 1XP8014 and 1XP8024	Yes	<b>Q69</b> <b>FDU:70000004013454</b>



<b>Encoder type</b>	<b>Suitable for cable carrier</b>	Additional identification code -Z with order code
	Yes / No	2KJ3... -.....-Z Order code
<b>Free cable length L</b>		<b>2 m</b> <b>15 m</b>
Incremental encoder 1XP8022	No	<b>Q63</b> <b>Q65</b> <b>FDU:70000004013418</b> <b>FDU:70000004013420</b>

11

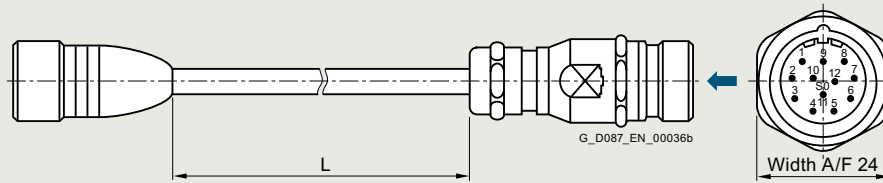


**Encoder accessories**

**Cable with coupling socket**

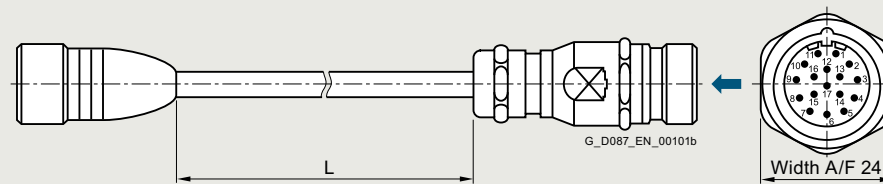
A cable with a straight coupling socket can be supplied for the encoders.

Selection table

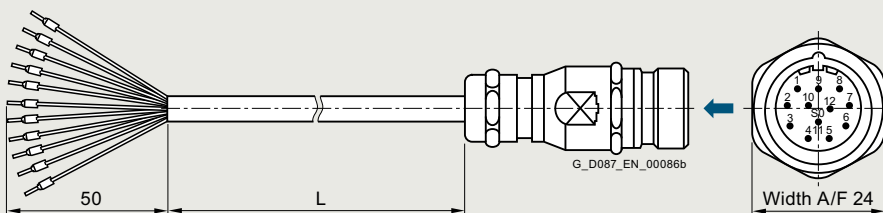


<b>Encoder type</b>	<b>Suitable for cable carrier</b>	Additional identification code <b>-Z</b> with order code
	Yes / No	2KJ3... -...-...-...- <b>Z</b> Order code
<b>Free cable length L</b>		<b>2 m</b>
Incremental encoders TTL1024S/R KD, HTL1024S/R KD, HTL2048S/R KD and HTL2048S/R FD	Yes	<b>Q72</b> <b>FDU:70000004013449</b>

For the connection assignment, see the encoder flange socket.



<b>Encoder type</b>	<b>Suitable for cable carrier</b>	Additional identification code <b>-Z</b> with order code
	Yes / No	2KJ3... -...-...-...- <b>Z</b> Order code
<b>Free cable length L</b>		<b>2 m</b>
Absolute encoders 1XP8014 and 1XP8024	Yes	<b>Q72</b> <b>FDU:70000004013457</b>



<b>Encoder type</b>	<b>Suitable for cable carrier</b>	Additional identification code <b>-Z</b> with order code
	Yes / No	2KJ3... -...-...-...- <b>Z</b> Order code
<b>Free cable length L</b>		<b>2 m</b> <b>15 m</b>
Incremental encoder 1XP8022	No	<b>Q66</b> <b>Q68</b> <b>FDU:70000004013421</b> <b>FDU:70000004013443</b>

## Motor options

### Mounted components

#### Encoders

##### Encoder accessories

###### EnDAT gateways for absolute encoders

Using interface converters (gateways), EnDAT absolute encoders can be integrated in networks with a serial bus system (PROFIBUS DP, CANopen and DeviceNET).

Encoder accessories	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-...- <b>Z</b>	Order code
PROFINET		<b>Q01</b>
PROFIBUS DP		<b>Q02</b>
CANopen		<b>Q03</b>
DeviceNET		<b>Q04</b>



Fig. 11/58 EnDAT gateways

###### Technical specifications

Gateways <sup>1) 2)</sup>	PROFINET	PROFIBUS DP	CANopen	DeviceNET
Supply voltage	9 ... 36 V DC	9 ... 30 V DC	9 ... 30 V DC	9 ... 30 V DC
<b>Encoder data</b>				
Connection	EnDat	EnDat	EnDat	EnDat
Supply voltage	5 V DC ± 5 %	5 V DC ± 5 %	5 V DC ± 5 %	5 V DC ± 5 %
Absolute encoders	1XP8014-10 ( <b>Q82</b> ) and 1XP8024-10 ( <b>Q83</b> )			
Ambient temperature range	-40 ... +60 °C	-40 ... +60 °C	-30 ... +60 °C	-30 ... +60 °C
<b>Accessories</b>				
Cable with coupling socket	<b>Q72</b>			

<sup>1)</sup> Not possible for worm geared motors S.

<sup>2)</sup> Not possible in conjunction with UL-R and CSA designs.

###### Manufacturer:

Leine & Linde AB  
 Am Sandtorkai 50  
 20457 Hamburg, Germany  
 Phone: +49 (0) 40 3176758 60  
 Fax: +49 (0) 40 3176758 65  
[www.leinelinde.com](http://www.leinelinde.com)  
 email: [info@leinelinde.de](mailto:info@leinelinde.de)

###### Application terminal box for sensors

The application terminal box contains the connections for the sensors in the motor (temperature measurement) and on the motor (encoder). This is used to isolate the connections for the power section from those for the sensor section.

The application terminal box is available for motor frame sizes 63 to 200.

The following encoders are possible in combination with the application terminal box:

- Incremental encoder 1XP8022 (**Q56**, **Q59** and **Q60**)
- Incremental encoder LL 861 900 220 (**Q92**)

Encoder accessories	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-...- <b>Z</b>	Order code
Application terminal box (Not possible for worm geared motors S)		<b>Q75</b>

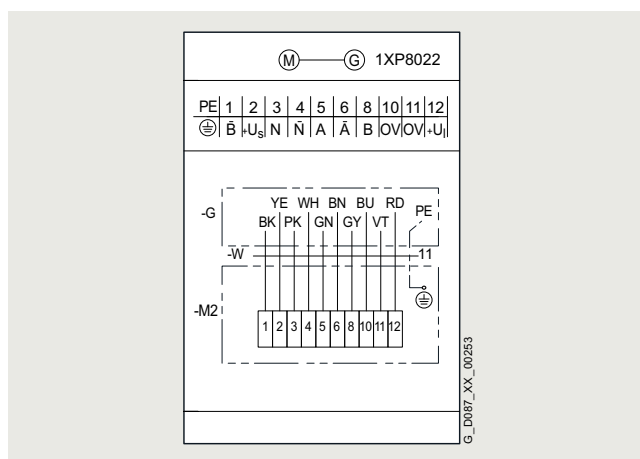


Fig. 11/59 Connection circuit diagram

## Encoder accessories

**Modular system in combination with encoder systems**

Encoder	Motor plug	Brake	Self ventilation			Forced ventilation <sup>1)</sup>	Backstop
			Standard fan	Metal fan	High inertia fan <sup>1)</sup>		
<b>DRIVE-CLiQ encoders</b>							
<i>Without functional safety</i>							
AS 22DQC	✓	✓	✓	✓		✓	
AM 22DQC	✓	✓	✓	✓		✓	
<i>With functional safety</i>							
AS 22DQC	✓	✓	✓	✓		✓	
AM 22DQC	✓	✓	✓	✓		✓	
<b>Incremental encoders</b>							
TTL1024S/R KD HTL1024S/R KD HTL2048S/R KD HTL2048S/R FD	✓	✓	✓	✓	✓	✓	✓
1XP8022-..	✓	✓	✓	✓	✓	✓	✓
<b>Absolute encoders</b>							
1XP8014-..	✓	✓	✓	✓	✓	✓	✓
1XP8024-..	✓	✓	✓	✓	✓	✓	✓
<b>Rugged encoders</b>							
LL 861 900 220	✓	-	✓	✓	✓	✓	✓
HOG9 D 1024 I	✓	-	✓	✓	✓	✓	✓
HOG10 D 1024 I	✓	-	✓	✓	✓	✓	✓
<b>Functionally safe rotary encoders</b>							
IN 8.5834-..	✓	✓	✓	✓	✓	✓	-
IA 8.5883-..	✓	✓	✓	✓	✓	✓	-

<sup>1)</sup> Can be selected for motor frame size 71 or higher

## Motor options

### Mounted components

#### Backstop

Motors in frame sizes 71 to 250 can be supplied with a backstop, which prevents them from rotating in the opposite direction to that used in operation.

Above the disengage speed, in the operational direction of rotation, there is no connection between the inner and outer rings of the backstop.

For starting and stopping below the disengage speed, the operating time may be a maximum of 20 s.

In the direction of rotation opposite to the operational direction of rotation, there is a fixed connection between the inner and outer rings of the backstop. This allows the rated backstop torque to be transmitted.

When selecting the backstop, the direction of rotation of the geared motor output shaft must be specified.

Please note that motor speeds that are lower (e.g. in converter operation) than the disengage speed can damage the backstop.

#### Note:

The backstop is not suitable for ambient temperatures under  $-25\text{ }^{\circ}\text{C}$ . For different ambient temperatures, please contact Siemens.

The backstop cannot be selected in conjunction with the following motors and/or gearbox types:

- Worm geared motors S
- Electric-monorail geared motors
- Explosion-protected motors (MB motors)

The direction of rotation of the output shaft cannot be selected for explosion-protected motors (MB motors) and electric-monorail geared motors.

Mounted components	Additional identification code <b>-Z</b> with order code	Order code
Backstop	2KJ3...-.....-Z	<b>N23</b>
Output shaft direction of rotation, clockwise		<b>K18</b>
Output shaft direction of rotation, counterclockwise		<b>K19</b>

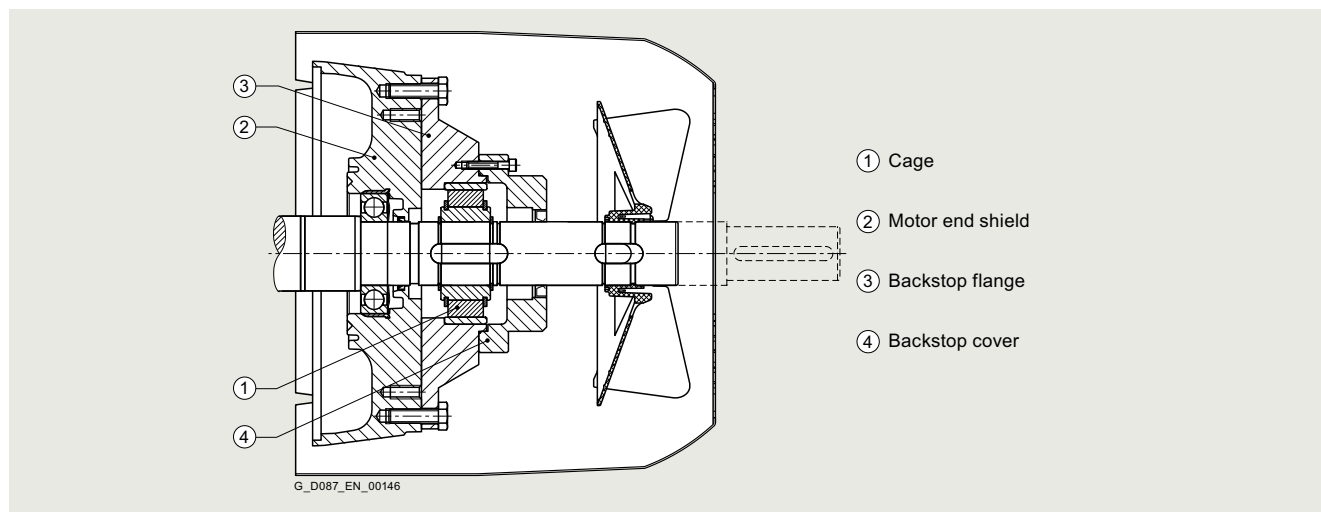


Fig. 11/60 Backstop

#### Technical specifications

Motor frame size	Rated torque	Disengage speed	Maximum speed	Weight	Moment of inertia of cage and inner ring
	$T_{SP}$ Nm	$n_{dis}$ rpm	$n_{max}$ rpm	$m_{Bstp}$ kg	$J_{Bstp}$ $10^{-4}\text{ kgm}^2$
71	100	890	5000	0.26	1.0
80	100	890	5000	0.26	1.0
90	150	860	5000	0.42	2.0
100	150	860	5000	0.42	2.0
112	150	860	5000	0.42	2.0
132	420	750	5000	1.16	8.0
160	800	700	5000	1.16	8.0
180	1050	670	5000	1.60	20.0
200	1050	670	5000	1.60	20.0
225	1350	630	5000	4.20	27.0
250	1350	630	5000	4.20	27.0

#### Modular system in combination with backstop

Modular system	Motor plug	Brake	Encoder	Self ventilation Forced ventilation	Second shaft extension
Backstop	✓	-	✓	✓	✓

**Second shaft extension and handwheel**

**Second shaft extension**

For 4-pole motors a free, second shaft extension can be supplied on the non-drive end (NDE). The second shaft extension has a 60° centering hole to DIN 332, Part 2 with M3 to M24 threaded hole depending on the shaft diameter.

For a coupling output, the second shaft extension can transmit the full rated power. Please also inquire about the power that can be transmitted and permissible cantilever force if belt pulleys, chains or gear pinions are used on the second shaft extension.

The second shaft extension cannot be selected with the following options and/or gearbox types:

- Worm geared motors S
- Converter World Motors
- Explosion-protected motors (MB motors)
- Encoders
- Forced ventilation

Mounted components	Additional identification code <b>-Z</b> with order code	Order code
Second shaft extension	2KJ3... -.....-Z	<b>N39</b>

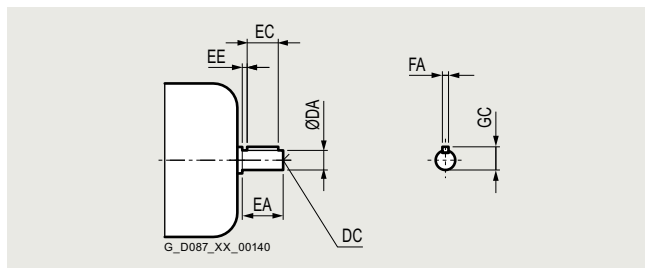


Fig. 11/61 Second motor shaft extension

**Technical specifications**

Motor frame size	DA	EA	Distance between fan cover and shaft shoulder	DC	EC	EE	FA	GC
63	-	-	-	-	-	-	-	-
71	14	30	4	M5	22	4	5	16.0
80	14	30	4	M5	22	4	5	16.0
90	19	40	5	M6	32	4	6	21.5
100	19	40	5	M6	32	4	6	21.5
112	24	50	6	M8	40	5	8	27.0
132	28	60	8	M10	50	5	8	31.0
160	38	80	8	M12	70	5	10	41.0
180	42	110	15	M16	90	10	12	45.0
200	48	110	20	M16	100	5	14	51.5
225	55	110	5	M20	100	5	16	59.0
250	60	140	5	M20	125	10	18	64.0

**Handwheel**

Motors of frame sizes 71 to 160 can be supplied with a second shaft extension and additionally with a handwheel.

The handwheel is a disk-type handwheel in accordance with DIN 3670. By mounting it on the second shaft extension of the motor, the geared motor can be rotated even when the motor winding is in a no-voltage state.

**Note:**

The handwheel in combination with a second shaft extension cannot be selected in conjunction with the following gearbox types and/or motors:

- Worm geared motors S
- Converter World Motors
- Explosion-protected motors (MB motors)

Mounted components	Additional identification code <b>-Z</b> with order code	Order code
Handwheel	2KJ3... -.....-Z	<b>N40</b>

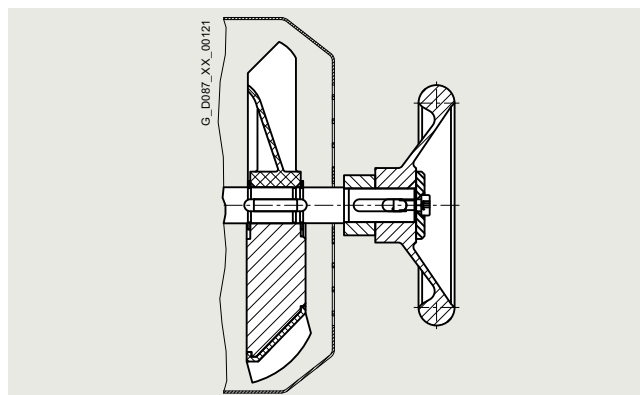


Fig. 11/62 Handwheel

**Modular system in combination with second shaft extension**

Modular system	Motor plug	Brake	Back-stop	Encoder	Self ventilation	Forced ventilation
<b>Second shaft extension</b>						
Without handwheel	✓	✓	✓	-	✓	-
With handwheel	✓	✓	✓	-	✓	-

**Canopy**

Geared motors with a vertical mounting position (motor at the top) can also be fitted with a canopy. The canopy prevents small items from falling into the geared motor; in the case of outdoors installation, its primary function is to serve as a rain canopy.

If the motor is to be used or stored in the open air, we recommend that it is kept under additional cover to protect it from prolonged exposure to direct sunlight, rain, snow, ice, or dust.

Mounted components	Additional identification code <b>-Z</b> with order code	Order code
Canopy	2KJ3... -.....-Z	<b>N22</b>

## Motor options

### Designs for special environmental conditions

#### Condensation drain hole

Condensation can accumulate inside the motor as the result of environmental effects. This can result in corrosion and lower clearances and creepage distances.

The condensation is drained to the outside through the condensation drain hole. Depending on the mounting position, the drain holes are located at the DE and/or NDE of the motor.

#### Note:

The condensation drain hole cannot be selected in conjunction with explosion-protected motors (MB motors) or worm geared motors S.

The option "condensation drain hole" can only be used for the following applications under certain conditions:

Motor	Gearbox type									Mounting position	
	D./Z.	E.	FD./FZ.	B	K	C	BH.	KHF	Possible	Not possible	
LE63, LE71	19			19					M2	M1, M3, M4, M5, M6	
LE71	19 ... 79	39 ... 89	29 ... 79	19 ... 49	39 ... 89	29 ... 89		49 ... 79	M4	M1, M2, M3, M5, M6	
LE80	89	89	89		109				M2	M1, M3, M4, M5, M6	
LE90	89 ... 129	89 ... 129	89 ... 129		109 ... 149				M1, M2, M3, M5, M6	M4	
LE100							29 ... 39		M2	M1, M3, M4, M5, M6	
LE100	89 ... 149	89 ... 149	89 ... 149		109 ... 169				M1, M2, M3, M5, M6	M4	
LE112	89 ... 189	89 ... 149	89 ... 189		109 ... 189				M1, M2, M3, M5, M6	M4	
LE132	129 ... 189	129 ... 149	129 ... 189		149 ... 189				M1, M2, M3, M5, M6	M4	
LE160	149 ... 189	149	149 ... 189		169 ... 189				M1, M2, M3, M5, M6	M4	
LES180	109 ... 189	109 ... 149	109 ... 189		129 ... 189				M1, M2, M3, M5, M6	M4	
LES200	129 ... 189	129 ... 149	129 ... 189		149 ... 189				M1, M2, M3, M5, M6	M4	
LES225	On request										
LES250	On request										

Special ambient conditions	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	
Condensation drain hole		<b>N46</b>

#### Internal motor corrosion protection

The outer surfaces of the geared motors have a high quality paint finish.

For special applications, it may be necessary to apply a protective coating to the inner surfaces of the motor as well.

Special ambient conditions	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	
Internal motor corrosion protection (Not possible for worm geared motors S)		<b>N41</b>

#### Increased corrosion protection for mounted motor components

For motors of frame sizes 63 to 200 with additional mounted components such as an enclosed brake or backstop, the "corrosion protection of mounted motor components" option can be selected for corrosivity category C3 and above. As a result, the internal surfaces of the mounted motor components as well as the fan cover are also coated from the inside.

The increased corrosion protection for mounted motor components cannot be selected in conjunction with the following options and/or gearbox types:

- Worm geared motors S
- Electric-monorail geared motors
- Explosion-protected motors (MB motors)
- Functionally safe rotary encoders
- Encoders under cover

Special ambient conditions	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	
Corrosion protection for mounted motor components		<b>L06</b>

## General options



<b>12/2</b>	<b>Environmental conditions</b>
12/2	Ambient temperatures of the geared motors
12/2	• Extended ambient temperatures
<b>12/3</b>	<b>Surface treatment and preservation</b>
12/3	Surface treatment
12/3	• Surface pretreatment
12/4	• Painting flange surfaces
12/5	• Colors
12/5	Preservation
12/5	• Long-term preservation up to 36 months
<b>12/6</b>	<b>Rating plate</b>
12/6	Overview
12/6	Rating plate for helical, parallel shaft, bevel and helical worm geared motors
12/6	• Geared motors with Converter World Motor
12/7	• Geared motors not in UL/CSA design
12/8	• Geared motors in UL/CSA design
12/9	• Geared motors for converter operation
12/10	• Geared motors with explosion-protected motors
12/11	Rating plate for worm geared motors S
12/11	• Rating plate on the gearbox side
12/12	• Rating plate on the motor side
12/13	• Rating plate on the motor side in CCC design
12/14	Second rating plate
12/14	• Second rating plate, supplied loose
12/14	• Second rating plate, attached
<b>12/14</b>	<b>Documentation</b>
12/14	Safety instruction sheet and operating instructions
12/14	Test certificates
<b>12/15</b>	<b>Packaging options</b>
12/15	Overview
<b>12/16</b>	<b>Fast track</b>
12/16	Overview
<b>12/16</b>	<b>Extension of the liability for defects</b>
12/16	Overview

## General options

### Environmental conditions

#### Ambient temperatures of the geared motors

For the SIMOGEAR geared motors, different ambient temperature ranges are available.

##### Overview

Ambient temperature	Gearbox type								Additional identification code -Z with order code	Order code
	Helical gearboxes Z/D/E	Parallel shaft gearboxes FZ/FD	Bevel gearboxes K	Bevel gearboxes B	Helical worm gearboxes C	Worm gearboxes S S	Electric-monorail gearboxes BH KH			
<b>Standard ambient temperature range</b>										
-15 °C to +40 °C	✓	✓	✓	-	-	-	-	✓		-
-20 °C to +40 °C	✓	✓	✓	-	-	-	-	✓		K95 <sup>1)</sup>
-20 °C to +40 °C	-	-	-	✓	✓	✓	✓	-		-
<b>Extended ambient temperature range</b>										
-20 °C to +45 °C	✓	✓	✓	✓	✓	-	✓	✓		K92
-25 °C to +40 °C	✓	✓	✓	✓	✓	-	✓	✓		K96
-30 °C to +40 °C	✓	✓	✓	✓	✓	-	-	✓		K97
-40 °C to +40 °C	✓ <sup>2)</sup>	✓ <sup>3)</sup>	✓	-	✓ <sup>3)</sup>	-	-	✓		K98

<sup>1)</sup> For the helical, parallel shaft and bevel geared motors, an additional standard temperature range is available after selection of a synthetic oil.

<sup>2)</sup> Can be selected for helical gearboxes Z and D from size 49.

<sup>3)</sup> Can be selected for parallel shaft and helical worm gearboxes from size 39.

#### Extended ambient temperatures

For extended ambient temperatures, the choice of service factor and the shaft load must be considered.

The following restrictions must be considered in conjunction with the extended ambient temperature range:

K92	Further information	K96	Further information	K97	Further information	K98	Further information
-20 °C to +45 °C		-25 °C to +40 °C		-30 °C to +40 °C		-40 °C to +40 °C	
<b>Gearbox options</b>		<b>Gearbox options</b>		<b>Gearbox options</b>		<b>Gearbox options</b>	
<ul style="list-style-type: none"> <li>Lubrication and sealing <a href="#">page 10/56</a></li> <li>Venting and oil level control <a href="#">page 10/59</a></li> <li>Accessories for VLplus reinforced bearing systems <a href="#">page 10/54</a></li> </ul>		<ul style="list-style-type: none"> <li>Shaft design <a href="#">page 10/48</a></li> <li>Lubrication and sealing <a href="#">page 10/56</a></li> <li>Oil level control <a href="#">page 10/59</a></li> <li>Accessories for VLplus reinforced bearing systems <a href="#">page 10/54</a></li> </ul>		<ul style="list-style-type: none"> <li>Shaft design <a href="#">page 10/48</a></li> <li>Lubrication and sealing <a href="#">page 10/56</a></li> <li>Venting and oil level control <a href="#">page 10/59</a></li> <li>Accessories for VLplus reinforced bearing systems <a href="#">page 10/54</a></li> </ul>		<ul style="list-style-type: none"> <li>Mounting type <a href="#">page 10/42</a></li> <li>Shaft design <a href="#">page 10/48</a></li> <li>Lubrication and sealing <a href="#">page 10/56</a></li> <li>Venting and oil level control <a href="#">page 10/59</a></li> <li>Accessories for VLplus reinforced bearing systems <a href="#">page 10/54</a></li> </ul>	
<b>Motor options</b>		<b>Motor options</b>		<b>Motor options</b>		<b>Motor options</b>	
<ul style="list-style-type: none"> <li>Brakes <a href="#">page 11/27</a></li> <li>Encoder <a href="#">page 11/46</a></li> </ul>		<ul style="list-style-type: none"> <li>Brakes <a href="#">page 11/27</a></li> <li>Encoder <a href="#">page 11/46</a></li> </ul>		<ul style="list-style-type: none"> <li>Cooling and ventilation <a href="#">page 11/11</a></li> <li>Brakes <a href="#">page 11/27</a></li> <li>Function rectifier for brakes <a href="#">page 11/32</a></li> <li>Brake supply voltages <a href="#">page 11/30</a></li> <li>Encoder <a href="#">page 11/46</a></li> <li>Backstop <a href="#">page 11/68</a></li> </ul>		<ul style="list-style-type: none"> <li>Cooling and ventilation <a href="#">page 11/11</a></li> <li>Brakes <a href="#">page 11/27</a></li> <li>Function rectifier for brakes <a href="#">page 11/32</a></li> <li>Brake supply voltages <a href="#">page 11/30</a></li> <li>Encoder <a href="#">page 11/46</a></li> <li>Backstop <a href="#">page 11/68</a></li> </ul>	
<b>General options</b>		<b>General options</b>		<b>General options</b>		<b>General options</b>	
-		<ul style="list-style-type: none"> <li>Surface treatment <a href="#">page 12/3</a></li> </ul>		<ul style="list-style-type: none"> <li>Surface treatment <a href="#">page 12/3</a></li> </ul>		<ul style="list-style-type: none"> <li>Surface treatment <a href="#">page 12/3</a></li> </ul>	
<b>ATEX</b>		<b>ATEX</b>		<b>ATEX</b>		<b>ATEX</b>	
-		<ul style="list-style-type: none"> <li>Sales regulation according to ATEX-20</li> </ul>		<ul style="list-style-type: none"> <li>Sales regulation according to ATEX-20</li> </ul>		<ul style="list-style-type: none"> <li>Sales regulation according to ATEX-20</li> </ul>	



## Surface treatment

To protect the drives against corrosion and external influences, five high-quality paint systems are available in various colors.

The corrosion protection system is designed in accordance with the corrosivity categories of Standard EN ISO 12944-2.

Gearmotors, frame size 49 and higher, are painted in RAL 7016 (anthracite gray) to corrosivity category C1 as standard. This ensures that they are protected against corrosion for indoor use.

**Gearmotors, frame sizes 09 to 39 with an aluminum housing, are supplied unpainted as standard.**

The shaft extensions and bare surfaces are treated with corrosion protection for 6 months.

### Note:

Corrosivity category C1 is not suitable for ambient temperatures under -20 °C.

Parts made of plastic are generally not painted.

### Surface pretreatment

For especially demanding applications, the drives can also be pretreated in order to ensure an optimum paint finish even in areas that are hidden or difficult to access.

Surface pretreatment	Additional identification code <b>-Z</b> with order code	
	2KJ3... -.....-.....- <b>Z</b>	Order code
Special pretreatment		<b>L19</b>

Corrosivity category	Paint system			Description	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-.....- <b>Z</b> Order code
	Base coat	Intermediate coat	Top coat		

### Surface protection

#### Aluminum gearbox housing <sup>1)</sup>

<b>Unpainted</b> (standard)	–	–	–	<ul style="list-style-type: none"> <li>Indoor installation</li> <li>Heated buildings with neutral atmospheres</li> </ul>	<b>L00</b>
<b>C1</b> Normal environmental stress - Layer thickness	–	–	1-component hydro paint 60 µm	<ul style="list-style-type: none"> <li>Resistant to greases, conditionally resistant to mineral oils, aliphatic solvents</li> <li>Standard paint</li> </ul>	<b>L02</b>

#### Cast iron gearbox housing <sup>2)</sup>

<b>C1</b> Normal environmental stress - Layer thickness	–	–	1-component hydro paint 60 µm	<ul style="list-style-type: none"> <li>Indoor installation</li> <li>Heated buildings with neutral atmospheres</li> <li>Resistant to greases, conditionally resistant to mineral oils, aliphatic solvents</li> <li>Standard paint</li> </ul>	<b>L02</b>
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#### All geared motors

<b>C2</b> Low environmental stress - Layer thickness	2-component epoxy zinc phosphate	–	2-component polyurethane 100 µm	<ul style="list-style-type: none"> <li>Indoor and outdoor installation</li> <li>Unheated buildings with condensation, production areas with low humidity, e.g. warehouses and sports facilities</li> <li>Atmospheres with little pollution, rural areas</li> <li>Resistant to greases, mineral oils and sulfuric acid (10 %), caustic soda (10 %), and conditionally resistant to aliphatic solvents</li> </ul>	<b>L03</b>
<b>C3</b> Average environmental stress - Layer thickness	2-component epoxy zinc phosphate 90 µm	–	2-component polyurethane 100 µm	<ul style="list-style-type: none"> <li>Indoor and outdoor installation</li> <li>Production areas with high humidity and some air pollution, e.g. food production areas, dairies, laundries, and breweries</li> <li>Urban and industrial atmospheres, moderate contamination from sulfur dioxide, coastal areas with low salt levels</li> <li>Resistant to greases, mineral oils, aliphatic solvents, sulfuric acid (10 %), caustic soda (10 %)</li> </ul>	<b>L04</b>
<b>C4</b> High environmental stress - Layer thickness	2-component epoxy zinc phosphate 90 µm	–	2-component polyurethane 100 µm	<ul style="list-style-type: none"> <li>Indoor and outdoor installation</li> <li>Chemical plants, swimming pools, wastewater treatment plants, electroplating shops, and boathouses above seawater</li> <li>Industrial areas and coastal areas with moderate salt levels</li> <li>Resistant to greases, mineral oils, aliphatic solvents, sulfuric acid (10 %), caustic soda (10 %)</li> </ul>	<b>L20</b>
<b>C5</b> Very high environmental stress - Layer thickness	2-component epoxy zinc phosphate 90 µm	2-component epoxy zinc phosphate 90 µm	2-component polyurethane 100 µm	<ul style="list-style-type: none"> <li>Indoor and outdoor installation</li> <li>Buildings/areas with almost constant condensation and high degrees of pollution, e.g. malt factories and aseptic areas</li> <li>Industrial areas with high humidity and aggressive atmosphere, coastal areas and offshore environments with high salt levels</li> <li>Resistant to greases, mineral oils, aliphatic solvents, sulfuric acid (10 %), caustic soda (20 %)</li> </ul>	<b>L05</b>

<sup>1)</sup> Helical gearboxes D/Z19 to D/Z39, parallel shaft gearboxes F29 and bevel gearboxes B29 and B39

<sup>2)</sup> The bevel gearbox B49 is supplied painted

## General options

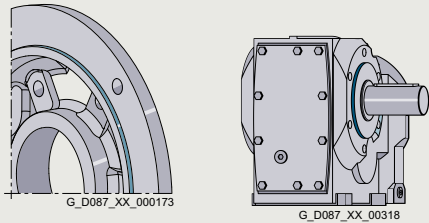
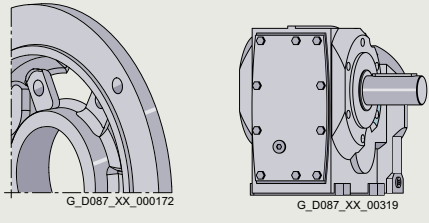
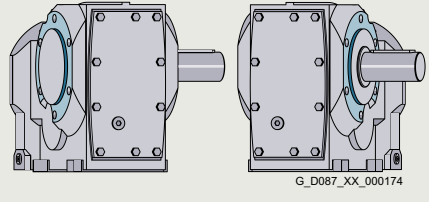
### Surface treatment and preservation

#### Surface treatment

Corrosivity category	Paint system			Description	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-.....- <b>Z</b> Order code
	Base coat	Intermediate coat	Top coat		
<b>Primer</b>				<b>Can be overpainted</b>	
<b>C2 G</b>	2-component polyurethane	–	–	• 2-component polyurethane paint, 2-component epoxy paint and acid-hardening paint, 2-component acrylic paint	<b>L01</b>
<b>C4 G</b>	2-component epoxy zinc phosphate	–	–	• 2-component polyurethane paint, 2-component epoxy paint and acid-hardening paint, 2-component acrylic paint	<b>L09</b>
<b>Unpainted</b>	–	–	–	• Plastic paint, synthetic resin paint, oil paint, 2-component polyurethane paint, 2-component epoxy paint	<b>L00</b>

#### Painting flange surfaces

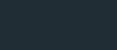




For flange-mounted or housing flange designs, the flange surface and centering are not painted at the selected output end. The versions listed in the table can be optionally selected.

Design	Possible for	Figure	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-.....- <b>Z</b> Order code
Centering not painted	<ul style="list-style-type: none"> <li>• Flange-mounted design</li> <li>• Housing flange design</li> </ul>	<p>Surfaces marked blue are not painted</p> 	<b>L11</b>
Flange completely painted	<ul style="list-style-type: none"> <li>• Flange-mounted design</li> <li>• Housing flange design</li> </ul>		<b>L12</b>
Centering flange not painted on both sides	<ul style="list-style-type: none"> <li>• Housing flange design for bevel gearbox and helical worm gearbox</li> </ul>		<b>L27</b>





## Surface treatment

### Colors

In addition to anthracite gray (RAL 7016), you can select from other standard colors.

RAL color	Designation	Color, example	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-.....- <b>Z</b>	Order code
RAL 7016	Anthracite gray (standard)			<b>L75</b>
RAL 5015	Sky blue			<b>L50</b>
RAL 7030	Stone gray			<b>L55</b>
RAL 7031	Blue gray			<b>L53</b>
RAL 7012	Basalt gray			<b>L83</b>

### Colors for conductive paint finish acc. to ATEX

RAL 7016	Anthracite gray			<b>L75</b>
RAL 5015	Sky blue			<b>L50</b>
RAL 7031	Blue gray			<b>L53</b>
RAL 9011	Graphite black			<b>L80</b>

You can find additional colors in the [Siemens Product Configurator](#).

## Preservation

All gearboxes and geared motors are preserved as standard for 6 months.

### Long-term preservation up to 36 months

If the gearboxes are stored for longer than 6 months, then we recommend the "Long-term preservation" option. A VCI (volatile corrosion inhibitor) is added to the gearbox oil.

Until commissioning, it is not permissible that the gearbox is opened, as otherwise the VCI will vaporize.

The oil level must be checked before commissioning. Corrosion protection is also applied to the flange contact surfaces and shaft extensions. We recommend that the gearbox is stored in the appropriate mounting position.

### Storage conditions

Geared motors, stored in dry, dust-free and evenly tempered rooms do not require any special packaging.

In all other areas, the units must be packaged in foil with desiccant and moisture indicator. If required, protection must be provided against mold and termites. The storage location must be vibration- and shock-free. The storage conditions must be regularly checked.

Preservation	Additional identification code <b>-Z</b> with order code 2KJ3... -.....-.....- <b>Z</b>	Order code
Long-term preservation up to 36 months		<b>K17</b>

For information about storage and commissioning please refer to the operating instructions.

## General options

### Rating plate

#### Overview

The rating plates on the gearboxes and geared motors are normally manufactured out of coated aluminum foil. They are covered with a special masking film which ensures permanent resistance to UV radiation and media of all kinds (oils, greases, salt water, cleaning agents, etc.).

The adhesive and the material ensure firm adhesion and long-term legibility within the operating temperature range from -40 to +155 °C.

For geared motors, the rating plate is attached to a stainless steel plate on the motor.

For specific designs, additional rating plates are attached to the motor.

### Rating plate for helical, parallel shaft, bevel and helical worm geared motors

#### Geared motors with Converter World Motor

SIEMENS											SIEMENS																																																																																																		
S FDU/259232301 1P 2KJ3508-1FP13-6AF1-Z K79-LE100ZLSB4PV-L60-MT-SI04 C-ID: 98765432109873200000 m:73kg Tamb: 15...+40°C M1 3-Mot. Th.Cl.155(F)TP-Pt1000 IP55 IC411 Inverter duty only VPWM											1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52																																																																																																		
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1.00L Oil CLP VG220 i:11.39 n1max:4200 1/min Gear:1508051 Motor:13332 Motor(8):10403332 Encoder:224											<table border="1"> <thead> <tr> <th>48Nm (M4)</th> <th>103V DC ±10%</th> <th>Encoder:224</th> </tr> </thead> <tbody> <tr> <td>40</td> <td>40</td> <td>41</td> </tr> </tbody> </table>											48Nm (M4)	103V DC ±10%	Encoder:224	40	40	41																																																																																		
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Fig. 12/1 Example of a SIMOGEAR rating plate for geared motors with Converter World Motor

#### General data

- Article No.
- Serial No.  
FDU: Siemens AG, Bahnhofstr. 40, 72072 Tübingen, Germany
- Type designation  
(with marking of the brake and/or encoder, if existing)
- Geared motors type
- Customer-specific data <sup>1)</sup> (customer ID/free text),  
max. 20 characters
- Weight  $m$  [kg]
- Ambient temperature
- Mounting position
- Phase number and type of current for the motor
- Temperature class Th.Cl.
- Motor protection
- Degree of protection according to IEC 60034-5
- Ventilation method according to IEC 60034-5
- Operating mode of the motor according to IEC 60034
- Gearbox output speed  $n_2$  [rpm] for the first rated operating point
- Gearbox output speed  $n_2$  [rpm] for the second rated operating point
- Geared motor output torque  $T_2$  [Nm] for the first rated operating point
- Geared motor output torque  $T_2$  [Nm] for the second rated operating point
- Service factor  $f_B$  for the first rated operating point
- Service factor  $f_B$  for the second rated operating point
- Rated speed  $n_1$  [rpm] for the first rated operating point
- Rated speed  $n_1$  [rpm] for the second rated operating point
- Rated frequency  $f$  [Hz] for the first rated operating point
- Rated frequency  $f$  [Hz] for the second rated operating point
- Rated voltage  $U_n$  [V] for the first rated operating point
- Rated voltage  $U_n$  [V] for the second rated operating point

#### General data

- Circuit, graphic symbols according to EN 60617 Part 6/  
IEC 60617-6 for the first rated operating point
- Circuit, graphic symbols according to EN 60617 Part 6/  
IEC 60617-6 for the second rated operating point
- Rated current  $I_N$  [A] for the first rated operating point
- Rated current  $I_N$  [A] for the second rated operating point
- Rated power  $P_N$  [kW] for the first rated operating point
- Rated power  $P_N$  [kW] for the second rated operating point
- Power factor  $\cos \varphi$  for the first rated operating point
- Power factor  $\cos \varphi$  for the second rated operating point
- Efficiency class according to IEC TS 60034-30-2 for the first rated operating point
- Efficiency class according to IEC TS 60034-30-2 for the second rated operating point
- Oil quantity [l], main gearbox/intermediate gearbox, oil type, oil viscosity ISO VG class according to DIN 51519/ISO 3448
- Total transmission ratio  $i$
- Maximum permissible motor speed [rpm]
- M4 rated braking torque  $T_{br}$  [Nm]
- Brake supply voltage  $U$  [V]
- Gearbox code for SINAMICS systems
- Motor code for SINAMICS systems of the 2nd generation
- Motor code for SINAMICS systems of the 3rd generation
- Encoder code for SINAMICS systems
- Data matrix code
- CE marking
- Applicable standard
- EAC marking
- Recognized Component mark for Canada and USA
- Manufacturer's address
- Country of origin

When ordering a replacement/spare part, always specify the serial No.

- <sup>1)</sup> The customer-specific data are used to specify the customer ID/serial number. The following data are not permissible:
- Technical specifications for the geared motor (e.g. ambient temperature, voltage data, etc.)
  - Details of Siemens Article No. (MLFB)
  - Unlawful texts

## Rating plate for helical, parallel shaft, bevel and helical worm geared motors

## Geared motors not in UL/CSA design

<b>SIEMENS</b> S FDUN1/255255701 1P 2KJ3105-1EM22-2AV1-Z ZF59-LE90SG4E-L32/14N-IN S104 2KJ3 1AV/2090B IP55 30kg Tamb -15...+40°C K-ID: 1234567890 INV. DUTY IEC60034 CE (IM)M1 1.5L OIL CLP VG220 i: 28 50Hz n2: 49.3r/min 60Hz n2: 59.7r/min T2: 213Nm fb: 2.1 T2: 203Nm fb: 2.2 3-Mot. THCL.155(F) TP-PTC 14Nm 230V ±10% AC 50Hz 230/400V ±10% D/Y 60Hz 460V ±10% Y 4.33/2.5A cosφ 0.78 2.2 A cosφ 0.78 1.1kW S1 IE2-81.4% 1425r/min 1.27kW S1 IE2-81.4% 1725r/min Mot. 1LE1001-0EB0 230 V SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen / Made in Germany									
<b>SIEMENS</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen /									

Fig. 12/1 Example of a SIMOGEAR rating plate for non-UL/CSA geared motors

General data	Motor and brake data
1 Data matrix code	26 Phase number and type of current for the motor
2 INV. DUTY - suitable for converter operation	27 Temperature class Th.Cl.
3 Applicable standard	28 Motor protection
4 Serial No. FDU: Siemens AG, Bahnhofstr. 40, 72072 Tübingen, Germany	29 Symbols (IEC 60617-2): = brake
5 CE marking or other marking, if required	30 Rated braking torque $T_{br}$ [Nm]
6 Article No.	31 Brake supply voltage $U$ [V]
7 Type designation with marking of the (functionally safe) rotary encoder	Frequency 1
8 Mounting position	32 Rated frequency $f$ [Hz]
9 Geared motors type	33 Rated voltage range $U$ [V]
10 Degree of protection according to IEC 60034-5	34 Circuit, graphic symbols according to EN 60617 Part 6/ IEC 60617-6
11 Weight $m$ [kg]	35 Rated current $I_N$ [A]
12 Ambient temperature	36 Power factor $\cos \varphi$
13 Customer-specific data <sup>1)</sup> (customer ID/free text), max. 20 characters	37 Rated power $P_N$ [kW]
14 Oil quantity [l] main gearbox/intermediate gearbox	38 Operating mode for motor and brake (if $\neq$ S1)
15 Oil type	39 For induction motors: Efficiency class marking according to IEC 60034-30 with efficiency data For synchronous-reluctance motors: Efficiency class marking according to IEC TS 60034-30-2 without efficiency data
16 Oil viscosity ISO VG class according to DIN 51519/ISO 3448	40 Rated speed $n_N$ [rpm]
17 Total transmission ratio $i$	Frequency 2
Frequency 1	41 Rated frequency $f$ [Hz]
18 Rated frequency $f$ [Hz]	42 Rated voltage range $U$ [V]
19 Gearbox output speed $n_2$ [rpm]	43 Circuit, graphic symbols according to EN 60617 Part 6/ IEC 60617-6
20 Geared motor output torque $T_2$ [Nm]	44 Rated current $I_N$ [A]
21 Service factor $f_B$	45 Power factor $\cos \varphi$
Frequency 2	46 Rated power $P_N$ [kW]
22 Rated frequency $f$ [Hz]	47 Operating mode for motor and brake (if $\neq$ S1)
23 Gearbox output speed $n_2$ [rpm]	48 Efficiency class marking according to IEC 60034-30
24 Geared motor output torque $T_2$ [Nm]	49 Rated speed $n_N$ [rpm]
25 Service factor $f_B$	50 Motor designation
When ordering a replacement/spare part, always specify the serial No.	51 Anti-condensation heating
<sup>1)</sup> The customer-specific data are used to specify the customer ID/serial number. The following data are not permissible:	52 Manufacturer's address and country of origin
- Technical specifications for the geared motor (e.g. ambient temperature, voltage data, etc.)	
- Details of Siemens Article No. (MLFB)	
- Unlawful texts	

## General options

### Rating plate

#### Rating plate for helical, parallel shaft, bevel and helical worm geared motors

##### Geared motors in UL/CSA design

<b>SIEMENS</b> S FDUN8/258279601 1P 2KJ3311-3LN33-9AN1-Z FZ169-LES200ZLU4PF-L400/360N-IN 2KJ3 1CV3205B IP55 TEBC 755kg Tamb. -15...+ 40°C K-ID: 1234567890 37.5L OIL CLP VG220 i: 29.86 60Hz n <sub>2</sub> : 59.5r/min T <sub>2</sub> : 4812Nm f <sub>B</sub> : 2.8 3-G-Mot. Th.Cl.155(F) TP-PT1000 360Nm 24V DC ±10% 60Hz 460V Y DES.A CODE K 48.0A PF0.83 NEMA NOM.EFF.94.1% 30kW IE3-94.1% 1778r/min 40HP CONT. SF1.15 Mot. 1LE1523-2AB5 SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen / Made in Germany										<b>SIEMENS</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 36 37 26 31 32 38 33 34 35 39 40 41 42 SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen / 43									
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Fig. 12/2 Example of a SIMOGEAR rating plate for geared motors with a UL/CSA design

#### General data

- 1 Data matrix code
- 2 INV.DUTY - suitable for converter operation
- 3 Applicable standard
- 4 Serial No.  
FDU: Siemens AG, Bahnhofstr. 40, 72072 Tübingen, Germany
- 5 CE marking or other marking, if required
- 6 Article No.
- 7 Type designation with marking of the (functionally safe) rotary encoder
- 8 Geared motors type
- 9 Degree of protection according to IEC 60034-5
- 10 Ventilation method
- 11 Weight  $m$  [kg]
- 12 Ambient temperature
- 13 Customer-specific data <sup>1)</sup> (customer ID/free text), max. 20 characters
- 14 Oil quantity [l] main gearbox/intermediate gearbox
- 15 Oil type
- 16 Oil viscosity ISO VG class according to DIN 51519/ISO 3448
- 17 Total transmission ratio  $i$

#### Frequency 1

- 18 Rated frequency  $f$  [Hz]
- 19 Gearbox output speed  $n_2$  [rpm]
- 20 Geared motor output torque  $T_2$  [Nm]
- 21 Service factor  $f_B$

#### Motor and brake data

- 22 Phase number and type of current for the motor
  - 23 Temperature class Th.Cl.
  - 24 Motor protection
  - 25 Symbols (IEC 60617-2): = brake
  - 26 Rated braking torque  $T_{br}$  [Nm]
  - 27 Brake supply voltage  $U$  [V]
- #### Frequency 1
- 28 Rated frequency  $f$  [Hz]
  - 29 Rated voltage range  $U$  [V]
  - 30 Circuit, graphic symbols according to EN 60617 Part 6/ IEC 60617-6
  - 31 Rated current  $I_N$  [A]
  - 32 Performance factor
  - 33 Rated power  $P_N$  [kW]
  - 34 For induction motors: Efficiency class marking according to IEC 60034-30 with efficiency data  
For synchronous-reluctance motors: Efficiency class marking according to IEC TS 60034-30-2 without efficiency data
  - 35 Rated speed  $n_N$  [rpm]
  - 36 Design letter
  - 37 Code letter
  - 38 NEMA energy efficiency
  - 39 Rated power  $P_N$  [kW]
  - 40 NEMA operating mode
  - 41 Service factor
  - 42 Motor designation
  - 43 Manufacturer's address and country of origin

When ordering a replacement/spare part, always specify the serial No.

- <sup>1)</sup> The customer-specific data are used to specify the customer ID/ serial number. The following data are not permissible:
- Technical specifications for the geared motor (e.g. ambient temperature, voltage data, etc.)
  - Details of Siemens Article No. (MLFB)
  - Unlawful texts

## Rating plate for helical, parallel shaft, bevel and helical worm geared motors

## Geared motors for converter operation

SIEMENS				SIEMENS			
S FDUN1/255255701			CODE: 60021	1			2
87Hz	n2: 40.9r/min	104Hz	n2: 46.6r/min	3	4	7	8
T2: 115Nm	fB: 0.96	T2: 94.7Nm	fB: 1.2	5	6	9	10
87Hz	400V ±10% D	104Hz	460V ±10% D	11	12	13	19
4.8A	cosφ 0.78	4.25A	cosφ 0.69	14	15	22	21
1.90kW	2610r/min	1.90kW	3118r/min	16	17	24	25
EFF 89.0%		EFF 89.0%		18		26	

Fig. 12/3 Example of an additional SIMOGEAR rating plate for geared motors for converter operation at 87 Hz and 104 Hz

General data	Motor and brake data
1 Serial No. FDU: Siemens AG, Bahnhofstr. 40, 72072 Tübingen, Germany	Frequency 1
2 Motor code	11 Rated frequency $f$ [Hz]
Frequency 1	12 Rated voltage range $U$ [V]
3 Rated frequency $f$ [Hz]	13 Circuit, graphic symbols according to EN 60617 Part 6/ IEC 60617-6
4 Gearbox output speed $n_2$ [rpm]	14 Rated current $I_N$ [A]
5 Geared motor output torque $T_2$ [Nm]	15 Power factor $\cos \varphi$
6 Service factor $f_B$	16 Rated power $P_N$ [kW],
Frequency 2	17 Rated speed $n_N$ [rpm]
7 Rated frequency $f$ [Hz]	18 Energy efficiency
8 Gearbox output speed $n_2$ [rpm]	Frequency 2
9 Geared motor output torque $T_2$ [Nm]	19 Rated frequency $f$ [Hz]
10 Service factor $f_B$	20 Rated voltage range $U$ [V]
When ordering a replacement/spare part, always specify the serial No.	21 Circuit, graphic symbols according to EN 60617 Part 6/ IEC 60617-6
	22 Rated current $I_N$ [A]
	23 Power factor $\cos \varphi$
	24 Rated power $P_N$ [kW]
	25 Rated speed $n_N$ [rpm]
	26 Energy efficiency

## General options

### Rating plate

#### Rating plate for helical, parallel shaft, bevel and helical worm geared motors

##### Geared motors with explosion-protected motors




<b>SIEMENS</b> S FDUN1/255255701 1P 2KJ3408-9EA73-0HL1-Z KAZ89-MB100ZLR4P-1 K-ID: 1234567890 16.0L OIL CLPH1 VG460 i: 206.32 n2: 10.0r/min T2: 1341Nm fb: 1.2   T1max: 9.5Nm SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen / Made in Germany			 	<b>SIEMENS</b>		1	2	3	
				4					
				5					
				6				7	
				11	8	9		10.1	
				12	13	14	15	10.2	
							16		
				17			18   20	19	
								21	
				SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen /					

Fig. 12/4 Example of a SIMOGEAR rating plate for geared motors equipped with an explosion-protected motor




<b>SIEMENS</b> S FDUN1/255255701 1P 2KJ3408-9EA07-0HL1-Z KAZ89-MB100ZLR4P-1 K-ID: 1234567890 16.0L OIL CLPH1 VG460 i: 206.32 n2: 10.0r/min T2: 1341Nm fb: 1.2   T1max: 9.5Nm SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen / Made in Germany			 	<b>SIEMENS</b>		1			
				4					
				5					
				6				7	
				11	8	9			
				12	13	14	15		
							16		
				17			18   20	19	
								21	
				SIEMENS AG, Bahnhofstr. 40, DE-72072 Tuebingen /					

Fig. 12/5 Example of a SIMOGEAR rating plate for geared motors equipped with an explosion-protected motor supplied loose

#### General data

- 1 Data matrix code
- 2 CE marking
- 3 Ex marking
- 4 Serial No.  
FDU: Siemens AG, Bahnhofstr. 40, 72072 Tübingen, Germany
- 5 Article No.
- 6 Type designation
- 7 Mounting position
- 8 Weight  $m$  [kg]
- 9 Ambient temperature
- 10.1 Type of protection gas
- 10.2 Type of protection dust
- 11 Customer-specific data <sup>1)</sup> (customer ID/free text),  
max. 20 characters
- 12 Oil quantity [l] main gearbox/intermediate gearbox
- 13 Oil type
- 14 Oil viscosity ISO VG class according to DIN 51519/ISO 3448
- 15 Total transmission ratio  $i$
- 16 Gearbox output speed  $n_2$  [rpm]
- 17 Geared motor output torque  $T_2$  [Nm]
- 18 Service factor  $f_B$
- 19 Maximum permissible tested input speed of the gearbox  
 $n_{1max}$  [rpm]
- 20 Maximum permissible tested gearbox input torque  $T_{1max}$  [Nm]
- 21 Manufacturer's address and country of origin

When ordering a replacement/spare part, always specify the serial No.

- <sup>1)</sup> The customer-specific data are used to specify the customer ID/serial number. The following data are not permissible:
- Technical specifications for the geared motor (e.g. ambient temperature, voltage data, etc.)
  - Details of Siemens Article No. (MLFB)
  - Unlawful texts



### Rating plate for worm geared motor S

The worm geared motors S have separate rating plates for the gearbox side and the motor side.

#### Rating plate on the gearbox side

The rating plate on the gearbox side particularly contains the output data of the worm geared motor S.

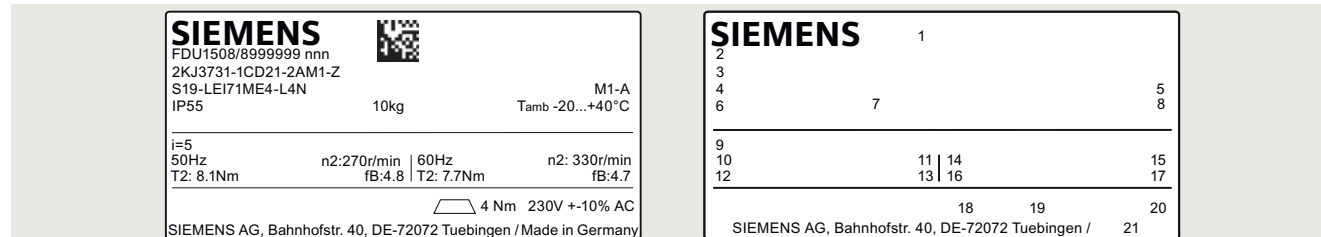


Fig. 12/6 Example of a rating plate on gearbox side on worm geared motor S

#### General data

- 1 Matrix code
- 2 Serial No.
- 3 Article No.
- 4 Type designation
- 5 Mounting position
- 6 Degree of protection according to IEC 60034-5 or IEC 60529
- 7 Weight  $m$  [kg]
- 8 Ambient temperature
- 9 Total transmission ratio

#### Frequency 1

- 10 Rated frequency  $f$  [Hz]
- 11 Gearbox output speed  $n_2$  [rpm]
- 12 Geared motor output torque  $T_2$  [Nm]
- 13 Service factor  $f_B$

When ordering a replacement/spare part, always specify the serial No.

#### General data

- #### Frequency 2
- 14 Rated frequency  $f$  [Hz]
  - 15 Gearbox output speed  $n_2$  [rpm]
  - 16 Geared motor output torque  $T_2$  [Nm]
  - 17 Service factor  $f_B$

#### Brake data

- 18 Symbols (IEC 60617-2): = brake
- 19 Rated braking torque  $T_{br}$  [Nm]
- 20 Brake supply voltage  $U$  [V]
- 21 Country of origin





## General options

### Rating plate

#### Second rating plate

##### Second rating plate, supplied loose

For the gearboxes and geared motors, an additional rating plate can be supplied loose.

For worm geared motors the rating plate on the gearbox side is supplied.

Second rating plate	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	<b>K41</b>
Second rating plate, supplied loose		

##### Second rating plate, attached

When requested, a second rating plate can be attached to the motor.

Second rating plate	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	<b>K68</b>
Second rating plate, attached (Not possible for worm geared motors S)		



Fig. 12/9 Example, rating plate on the motor

### Documentation

#### Safety instruction sheet and operating instructions

The geared motors are shipped with a multi-language safety instruction sheet for each delivery batch.

Every delivery batch of geared motors equipped with explosion-protected motors or functionally safe rotary encoders is delivered with a safety instruction sheet and a set of operating instructions in German and English.

One set of operating instructions in German or English is enclosed for each geared motor using the following ordering option.

The documentation provided Deutsch / English	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	
1 set of operating instructions for each geared motor	German	<b>W21</b>
	English	<b>W22</b>

The operating instructions include the following documents:

- Replacement part drawings and lists
- Mounting instructions
- Declaration of incorporation of partly completed machinery according to the EC Machinery Directive 2006/42/EC (gearboxes)
- EC Declaration of Conformity according to Directive 2014/35/EU (motors)

The latest versions of the operating instructions, the declaration of incorporation, and the Declaration of Conformity are available in the Industry Online Support:

<https://support.industry.siemens.com/cs/ww/en/ps/13424/man>

#### Test certificates

Please contact Siemens regarding test certificates for explosion-protected motors (MB motors).

On request, the following documents are available by email:

Additional documentation	The following is checked:	Additional identification code <b>-Z</b> with order code	Order code
Declaration of compliance with the order EN 10204-2.1 and factory test report EN 10204-2.2, geared motor	-	2KJ3... -.....-.....- <b>Z</b>	<b>On request</b>
Factory test report EN 10204-2.2 for material	-		<b>On request</b>
Acceptance test certificate EN 10204-3.1 for the motor	<ul style="list-style-type: none"> <li>• Winding resistance</li> <li>• No-load current of the 3 phases</li> <li>• Power loss for no-load operation</li> <li>• High-voltage test</li> <li>• No-load speed</li> </ul>		<b>W10</b>
Acceptance test certificate EN 10204-3.1 for gearboxes	<ul style="list-style-type: none"> <li>• Output shaft diameter</li> <li>• Input shaft diameter (for gearboxes with adapter A only)</li> <li>• No-load speed</li> <li>• Noise (subjective assessment)</li> </ul>		<b>W11</b>
Acceptance test certificate EN 10204-3.1 for paint finish	<ul style="list-style-type: none"> <li>• Paint film thickness</li> </ul>		<b>W12</b>

## Overview

The geared motors are sent in a box as standard.

For countries that cannot be supplied by truck, geared motors up to frame size 109 are shipped in a carton suitable for sea and air freight - and from frame size 129, in an MC box.

The following packaging options are available.

Packaging option	Gearbox size	Can be selected for the following countries	Minimum order quantity	Order code
<b>Individual packaging</b>				
Box	19 ... 89	Albania, Austria, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Great Britain, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Kosovo, Malta, the Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Republic of Srpska, Sweden, Switzerland, Slovenia, Spain	-	<b>W40</b>
Overseas	19 ... 89	Worldwide	-	<b>W42</b>
MC box	129 ... 189	Worldwide	-	<b>W44</b>
VCI corrosion inhibiting film	19 ... 189	Albania, Austria, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Great Britain, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Kosovo, Malta, the Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Republic of Srpska, Sweden, Switzerland, Slovenia, Spain	-	<b>W47</b>
<b>Collective packaging</b>				
Wire-mesh box	19 ... 109	Germany	Gearbox size 19: 20 units Gearbox size 29: 20 units Gearbox size 39: 10 units Gearbox size 49: 6 units Gearbox size 59: 5 units Gearbox size 69: 3 units Gearbox size 79: 3 units Gearbox size 89: 2 units Gearbox size 109: 2 units	<b>W45</b>
Overseas	19 ... 109	Worldwide	-	<b>W46</b>
VCI corrosion inhibiting film	19 ... 109	Albania, Austria, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Great Britain, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Kosovo, Malta, the Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Republic of Srpska, Sweden, Switzerland, Slovenia, Spain	-	<b>W52</b>
Neutral packaging surface freight	19 ... 189	Albania, Austria, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Great Britain, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Kosovo, Malta, the Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Republic of Srpska, Sweden, Switzerland, Slovenia, Spain	-	<b>W48</b>
Neutral packaging ocean freight	19 ... 189	Worldwide	-	<b>W49</b>

## General options

### Fast track

#### Overview

For a faster delivery of our SIMOGEAR geared motors outside the standard delivery times we offer a fast track option.

On request, SIMOGEAR geared motors can be delivered with a delivery time of between 2 and 5 work days.

The maximum order quantity is 5 units/order. The order must reach your Siemens sales region by 3:00 p.m. (German local time).

The following product range is available for the fast track option:

- SIMOGEAR gearbox sizes 09 to 189
- SIMOGEAR motor frame sizes 63 to 200
- Paint finish in corrosivity category C1 to C3
- Design not according to ATEX and functionally safe rotary encoder

#### Note:

The fast track cannot be selected for the electric-monorail geared motors.

Fast track	Additional identification code <b>-Z</b> with order code	Order code
Fast track	2KJ3... -.....-.....- <b>Z</b>	<b>W50</b>

### Extension of the liability for defects

#### Overview

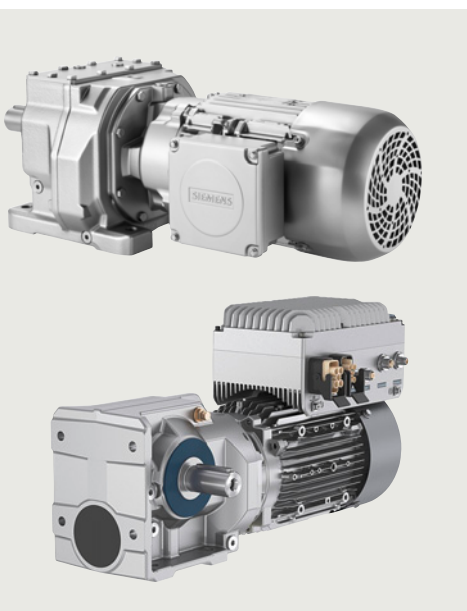
For our SIMOGEAR geared motors, we give you the option of extending existing liabilities for defects beyond the standard period of liability.

The standard liability for defects period, as listed in our standard conditions for the supply of services and products, is 12 months.

It is possible to select the extended period of liability for defects in connection with all of the geared motors and their options listed here in the catalog.

Extension of the liability for defects	Additional identification code <b>-Z</b> with order code	Order code
Extension of the liability for defects by 12 months to a total of 24 months from delivery	2KJ3... -.....-.....- <b>Z</b>	<b>W80</b>
Extension of the liability for defects by 24 months to a total of 36 months from delivery		<b>W82</b>

## SIMOGEAR geared motors and SIMOTICS motors



### 13/2

#### Overview

13/2

SINAMICS G115D - 2KJ8 distributed drive system

13/2

SIMOTICS S-1FG1 servo geared motors

13/4

SIMOTICS M main motors

13/4

SIMOTICS GP and SD low-voltage motors

13/4

SIMOTICS XP explosion-protected motors

13/6

SIMOGEAR motor system

## SIMOGEAR geared motors and SIMOTICS motors

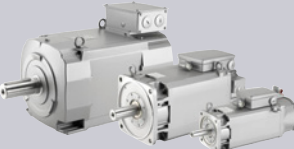
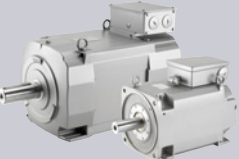
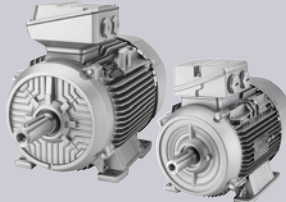

Geared motors		Features	Degree of protection	Gearbox designation (stages)
<b>SINAMICS G115D - 2KJ8 distributed drive system</b>				
	<b>Helical geared motors</b>	1-stage, 2-stage and 3-stage Solid shaft designs	IP65	Z19 ... Z89 (2-stage) D19 ... D89 (3-stage) E39 ... E89 (1-stage)
	<b>Parallel shaft geared motors</b>	2-stage and 3-stage Hollow shaft designs Solid shaft designs	IP65	FZ29 ... FZ89 (2-stage) FD29 ... FD89 (3-stage)
	<b>Bevel geared motors</b>	2-stage and 3-stage Hollow shaft designs Solid shaft designs	IP65	B19 ... B49 (2-stage) K39 ... K109 (3-stage)
	<b>Helical worm geared motors</b>	2-stage Hollow shaft designs Solid shaft designs	IP65	C29 ... C89 (2-stage)
<b>Geared motors</b>		<b>Features</b>	<b>Degree of protection</b>	<b>Gearbox designation (stages)</b>
<b>SIMOTICS S-1FG1 servo geared motors</b>				
	<b>Servo helical geared motors</b>	2-stage and 3-stage Solid shaft designs	IP65	Z19 ... Z129 (2-stage) D19 ... D129 (3-stage)
	<b>Servo parallel shaft geared motors</b>	2-stage and 3-stage Hollow shaft designs Solid shaft designs	IP65	FZ29 ... FZ129 (2-stage) FD29 ... FD129 (3-stage)
	<b>Servo bevel geared motors</b>	2-stage and 3-stage Hollow shaft designs Solid shaft designs	IP65	B19 ... B49 (2-stage) K39 ... K149 (3-stage)
	<b>Servo helical worm geared motors</b>	2-stage Hollow shaft designs Solid shaft design	IP65	C29 ... C89 (2-stage)



## SIMOGEAR geared motors and SIMOTICS motors

Gearbox size	Maximum output torque $T_{2N}$ Nm					Gearbox transmission ratio $i$	Catalog
	10	100	1000	10000	100000		
19, 29, 39, 49, 59, 69, 79, 89	12		2110			1.29 ... 330.23	D 31.2
29, 39, 49, 69, 79, 89	25		2270			3.57 ... 357	
19, 29, 39, 49, 69, 79, 89, 109	7.7		2900			3.47 ... 244.25	
29, 39A, 49, 69, 89	14		1680			6.2 ... 363	
Gearbox size	Maximum output torque $T_{2N}$ Nm					Gearbox transmission ratio $i$	Catalog
	10	100	1000	10000			
19, 29, 39, 49, 59, 69, 79, 89, 109, 129	14		5200			3.4 ... 62.5	D 41
19, 29, 39, 49, 59, 69, 79, 89, 109, 129		146	5000			35.8 ... 373	
29, 39, 49, 69, 79, 89, 109, 129	17		5140			3.6 ... 70.7	
29, 39, 49, 69, 79, 89, 109, 129		163	5010			46.4 ... 413	
19, 29, 39, 49	15		465			3.5 ... 59.3	
39, 49, 69, 79, 89, 109, 129, 149	24		8160			5.2 ... 244.3	
29, 39, 49, 69, 89	46		1480			6.2 ... 102.5	

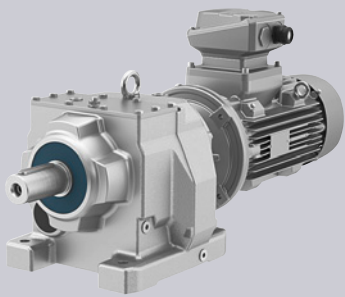
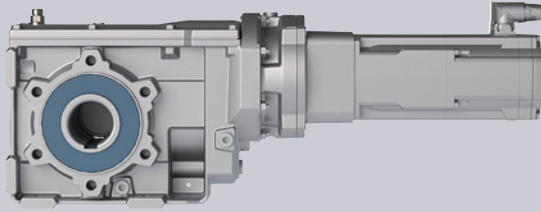
## SIMOGEAR geared motors and SIMOTICS motors

Motor type	Features	Degree of protection	Cooling method
<b>SIMOTICS M main motors</b>			
 <p><b>SIMOTICS M-1PH8 induction motor</b></p>	Three-phase squirrel-cage induction motor without housing Compact unit with high power density	IP55	Forced ventilation
		IP23	Forced ventilation
		IP55/IP65	Water cooling
 <p><b>SIMOTICS M-1PH8 synchronous motor</b></p>	Permanent-magnet synchronous motor Excellent performance features Compact unit with extremely high power density	IP55	Forced ventilation
		IP55/IP65	Water cooling
<b>SIMOTICS GP and SD low-voltage motors</b>			
 <p><b>SIMOTICS GP 1LE10 and VSD10 line 1LE10 standard motors</b>  <b>SIMOTICS GP VSD4000 line 1FP10 reluctance motors</b></p>	For general purpose applications Motors with an aluminum housing	IP55	Natural cooling/ Forced ventilation
<b>SIMOTICS XP explosion-protected motors</b>			
 <p><b>SIMOTICS XP 1MB10 explosion-protected motors</b></p>	Seamless series of explosion-protected motors for gas and dust protection in harsh, hazardous areas Motors with an aluminum housing	Ex tb, Ex tc, Ex ec	Natural cooling

## SIMOGEAR geared motors and SIMOTICS motors

Shaft height (SH)	Rated power $P_N$ for S1 duty type kW							Rated torque $T_N$	Catalog
	0.01	0.1	1	10	100	1000	10000		
80, 100, 132, 160, 180, 225, 280				7.2	270			10 ... 2481 Nm	D 21.4 NC 62
180, 225, 280					24.5	630		317 ... 3710 Nm	
80, 100, 132, 160, 180, 225, 280				4.0	265			14 ... 2598 Nm	
132, 160, 180, 225					18.0	195		95 ... 1086 Nm	
132, 160, 180, 225					20.0	238		108 ... 1647 Nm	
63, 71, 80, 90, 100, 112, 132, 160, 180, 200								0.6 ... 294 Nm	D 81.1
71, 80, 90, 100, 112, 132, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450								1.0 ... 8100 Nm	
Shaft height (SH)	Rated power $P_N$ for S1 duty type kW							Rated torque $T_N$	Catalog
	0.01	0.1	1	10	100	1000	10000		
80, 90, 100, 112, 132, 160				0.37	18.5			2.5 ... 109 Nm	D 81.1
71, 80, 90, 100, 112, 132, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450								1.2 ... 8100 Nm	

## SIMOGEAR geared motors and SIMOTICS motors

SIMOGEAR motor system	Flexible combinations of		
	SIMOTICS motors	SIMOGEAR gearboxes	SIMOGEAR adapters
	<p>SIMOTICS GP/SD low-voltage motors</p> <p>SIMOTICS XP explosion-protected motors</p>	<p>Helical gearbox</p> <p>Parallel shaft gearbox</p> <p>Bevel gearbox</p> <p>Helical worm gearbox</p>	<p>K2 adapter</p> <p>K4 adapter</p>
	<p>SIMOTICS S-1FK2</p> <p>SIMOTICS S-1FK7 servomotors</p>	<p>Helical gearbox</p> <p>Parallel shaft gearbox</p> <p>Bevel gearbox</p> <p>Helical worm gearbox</p>	<p>KS adapter</p>

Configuration is possible in the TIA Selection Tool.

More information on the TIA Selection Tool can be found at [www.siemens.com/tia-selection-tool](http://www.siemens.com/tia-selection-tool)

## Appendix



<b>14/2</b>	<b>Lists</b>
14/2	List of order codes
14/7	List of variables to dimension drives
14/11	Index of abbreviations
<b>14/12</b>	<b>Training</b>
14/12	SITRAIN – Digital Industry Academy
<b>14/14</b>	<b>Partners at Siemens</b>
<b>14/15</b>	<b>Industry Services</b>
14/15	Overview
14/16	Portfolio
14/17	Online Support
<b>14/18</b>	<b>Conversion tables</b>
<b>14/21</b>	<b>Conditions of sale and delivery</b>

## Appendix

### Lists

#### List of order codes

Order code	Special version Designation	Detailed data Chapter/Page
<b>Brake type</b>		
<b>B00 to B67</b>	Brake types according to size and braking torque	11/28
<b>Brake options</b>		
<b>C01</b>	Enclosed brake	11/36
<b>C02</b>	Manual brake release lever	11/34
<b>C03</b>	Manual brake release lever with locking mechanism	11/34
<b>C04</b>	Microswitch for monitoring brake release	11/36
<b>C06</b>	Wear-resistant friction lining	11/38
<b>C09</b>	LS brake with functional safety	11/29
<b>C10</b>	Increased corrosion protection	11/37
<b>C11</b>	Enclosed brake with condensation drain hole	11/36
<b>C80</b>	Brake cable protection	11/37
<b>Manual brake release lever position</b>		
<b>C26</b>	1	11/34
<b>C27</b>	2	11/34
<b>C28</b>	3	11/34
<b>C29</b>	4	11/34
<b>Brake supply voltage</b>		
<b>C45 ... C74</b>	Standard voltages, brake	11/30
<b>Function rectifier</b>		
<b>C59</b>	Function rectifier with disconnection on the DC side by sensing the current	11/32
<b>C60</b>	Function rectifier with disconnection on the DC side by sensing the voltage	11/32
<b>Mounting positions</b>		
<b>D01 ... D06</b>	Mounting positions of the geared motors (helical, cooling tower, and parallel shaft gearboxes)	10/4 ... 10/18
<b>D11 ... D16 and D21 ... D26</b>	Mounting position of the geared motors (bevel, helical worm and worm gearboxes and electric-monorail geared motors)	10/19 ... 10/39
<b>D10 and D20</b>	Output side A or B worm gearbox	10/37
<b>Special mounting positions</b>		
<b>E01 ... E17</b>	Y axis of rotation	10/41
<b>E21 ... E37</b>	X axis of rotation	10/41
<b>E41 ... E57</b>	Z axis of rotation	10/41
<b>Shaft-mounted version helical worm gearbox</b>		
<b>G09</b>	Figure 1	10/47
<b>G10</b>	Figure 2	10/47
<b>Output shaft bearings</b>		
<b>G20</b>	Radially reinforced output shaft bearings	10/53
<b>G30</b>	VLplus reinforced bearing system	10/53
<b>G31</b>	XLplus reinforced bearing system	10/53
<b>Output sealing</b>		
<b>G23</b>	Seal with longer service life	10/58
<b>G24</b>	Seal for increased environmental stress	10/58
<b>G25</b>	Seal for high temperatures	10/58
<b>Oil level control</b>		
<b>G34</b>	Oil sight glass with reflector	10/65
<b>G35</b>	Oil sight glass with reflector on both sides	10/65
<b>G48</b>	Oil dipstick	10/10, 10/12
<b>Electrical oil level monitoring system</b>		
<b>G37</b>	Oil level sensor	10/67
<b>G38</b>	Oil level sensor ATEX version	10/67
<b>G40</b>	24 V disconnecter	10/67
<b>Gearbox venting</b>		
<b>G45</b>	Pressure breather valve	10/62
<b>G49</b>	Pressure breather valve, stainless steel	10/62
<b>G47</b>	Oil expansion unit	10/63 ... 10/64
<b>Oil drain</b>		
<b>G53</b>	Magnetic oil drain screw	10/65
<b>G54</b>	Oil drain valve, straight	10/65
<b>G55</b>	Oil drain valve, angled	10/65

## List of order codes

Order code	Special version Designation	Detailed data Chapter/Page
<b>Hollow shaft cover</b>		
G60	Protective cover	10/52
<b>Electrical oil temperature monitoring</b>		
G69	Pt100 electrical oil temperature monitoring	10/66
G70	24 V disconnecter	10/66
G71	USB / plug adapter cable (connection)	10/66
<b>Water drain holes</b>		
G77	Water drain holes at the output flange	10/45
<b>Output flange sealing</b>		
G78	Output flange sealing	10/46
<b>Accessories for VLplus reinforced bearing systems</b>		
G88	24 V Drywell disconnecter	10/54
G89	Drywell with oil sight glass	10/54
G90	Drywell with oil sensor	10/54
G91	Drywell with ATEX oil sensor	10/54
G93	Grease cartridge	10/54
<b>Shrink-glued output gearwheel</b>		
G97	Shrink-glued output gearwheel	10/68
<b>Reduced-backlash version</b>		
G99	Reduced-backlash version	10/68
<b>Flange diameter</b>		
H01 ... H11	Flange diameter	10/43 ... 10/44
<b>Clutch for electric-monorail geared motors for heavy-load applications</b>		
H21	Clutch operating travel 1-3	10/55
H22	Clutch operating travel 1-2	10/55
H23	Short clutch lever	10/55
H25	Clutch lever facing inwards (position B)	10/55
<b>Degree of protection</b>		
K01	IP55	11/11
K02	IP56	11/11
K03	IP65	11/11
<b>Lubricants</b>		
K06	CLP ISO VG220	10/56 ... 10/57
K07	CLP ISO PG VG220	10/56 ... 10/57
K08	CLP ISO PG VG460	10/56 ... 10/57
K10	CLP ISO E VG220	10/56 ... 10/57
K11	CLP ISO H1 VG460	10/56 ... 10/57
K12	CLP ISO PAO VG220	10/56 ... 10/57
K13	CLP ISO PAO VG68	10/56 ... 10/57
K14	CLP ISO H1 VG100	10/56 ... 10/57
K16	CLP ISO PAO VG460	10/56 ... 10/57
<b>Long-term preservation</b>		
K17	Long-term preservation up to 36 months	12/5
<b>Direction of rotation of the output shaft (required with backstop)</b>		
K18	Clockwise	1/31
K19	Counterclockwise	1/31
<b>Rating plate and additional rating plates</b>		
K41	Second rating plate, supplied loose	12/14
K68	Second rating plate, attached	12/14
<b>Explosion-protected geared motors in Zone 2 and Zone 22</b>		
K72	Explosive gas Zone 2	1/28
K74	Explosive dust Zone 22	1/28
<b>Ambient temperature</b>		
K92	-20 °C to +45 °C	12/2
K95	-20 °C to +40 °C	12/2
K96	-25 °C to +40 °C	12/2
K97	-30 °C to +40 °C	12/2
K98	-40 °C to +40 °C	12/2

# Appendix

## Lists

### List of order codes

Order code	Special version Designation	Detailed data Chapter/Page
<b>Surface treatment</b>		
L00	Unpainted	12/4
L01	Primer according to corrosivity category C2 G	12/4
L02	Surface protection for normal environmental stress C1	12/3
L03	Surface protection for low environmental stress C2	12/3
L04	Surface protection for average environmental stress C3	12/3
L05	Surface protection for very high environmental stress C5	12/3
L09	Primed according to corrosivity category C4 G	12/4
L11	Centering not painted	12/4
L12	Flange completely painted	12/4
L19	Special pretreatment	12/3
L20	Surface protection for high environmental stress C4	12/3
L27	Centering flange not painted on both sides	12/4
<b>RAL colors</b>		
L50	RAL 5015 sky blue	12/5
L53	RAL 7031 blue gray	12/5
L55	RAL 7030 stone gray	12/5
L75	RAL 7016 anthracite gray	12/5
L80	RAL 9011 graphite black	12/5
L83	RAL 7012 basalt gray	12/5
<b>Insulating material class</b>		
M08	Temperature class 180 (H)	11/10
N54	Increased air humidity/temperature with 30 to 60 g water per m <sup>3</sup> of air	11/10
<b>Connection when shipped</b>		
M01	Connected in star for dispatch	11/14
M02	Connected in delta for dispatch	11/14
<b>Thermal motor protection</b>		
M10	PTC thermistor for disconnection	11/5
M12	Winding thermostat for disconnection	11/5
M17	Pt1000 resistance thermometer	11/6
<b>Fan</b>		
M21	Metal fan	11/11
M22	High inertia fan	11/11
M23	Separately driven fan	11/12
<b>Anti-condensation heating</b>		
M40	115 V anti-condensation heating	11/7
M41	230 V anti-condensation heating	11/7
<b>Terminal box position cable entry</b>		
M45	Cable entry NPT	11/18
<b>Terminal box cast</b>		
M53	Terminal box cast	11/18
<b>Terminal box position</b>		
M55 ... M70	Location and position of the terminal box	11/14
<b>Motor plug</b>		
N00	HAN 10E motor plug (2 brackets)	11/19
N01	HAN 10E motor plug (2 brackets) EMC	11/19
N04	HAN 10E motor plug (1 bracket)	11/19
N06	HAN 10E motor plug (1 bracket) EMC	11/19
N08	HAN K4/4 motor plug (1 bracket)	11/20
N09	HAN K4/4 motor plug (1 bracket) EMC	11/20
N10	HAN K4/4 motor plug (2 brackets)	11/20
N11	HAN K4/4 motor plug (2 brackets) EMC	11/20
N12	HAN Q8 motor plug (1 bracket) EMC	11/22
N13	HAN Q12 motor plug (1 bracket) EMC	11/26
N18	HAN 10E counterplug	11/19
N19	HAN K4/4 counterplug	11/20
K50	HAN Q8 motor plug with 0.5 m cable (plug insert rotated by 180°)	11/24
K51 ... K55	HAN Q8 motor plug with 1 m to 5 m cable	11/24



## List of order codes

Order code	Special version Designation	Detailed data Chapter/Page
<b>Canopy</b>		
N22	Canopy	11/69
<b>Backstop on motor</b>		
N23	Backstop	11/68
<b>Second shaft extension on motor</b>		
N39	Second shaft extension	11/69
<b>Handwheel</b>		
N40	Handwheel	11/69
<b>Geared motors for use worldwide</b>		
N27	Design in accordance with BIS	1/27
N30	Design in accordance with EAC	1/27
N38	Design in accordance with UL-R and CSA	1/26
N67	Design for the Chinese market	1/26
N68	Without CE marking	1/27
<b>Designs for special environmental conditions</b>		
L06	Increased corrosion protection for mounted motor components	11/70
N41	Internal motor corrosion protection	11/70
N46	Condensation drain hole	11/70
<b>External grounding</b>		
N53	External grounding	11/18
<b>Motors prepared for encoder mounting</b>		
N50	Prepared for encoder mounting	11/62
<b>Pole number of the motor</b>		
P00	2-pole	Chapter 9
P01	6-pole	Chapter 9
P02	8-pole	Chapter 9
<b>Voltage tolerance</b>		
P80	Voltage tolerance $\pm 10\%$	11/2
<b>Duty types</b>		
P90	Duty type S3 - 75 %	11/2
P91	Duty type S1/Inv. Duty	11/2
P92	Duty type Inv. Duty	11/2
P94	Product group 1 (version for converter operation)	11/2
P95	Product group 2 (version for converter operation)	11/2
P96	Product group 3 (version for converter operation)	11/2
<b>EnDAT gateways for absolute encoders</b>		
Q01	Gateway EnDAT PROFINET	11/66
Q02	Gateway EnDAT PROFIBUS DP	11/66
Q03	Gateway EnDAT CANopen	11/66
Q04	Gateway EnDAT DeviceNET	11/66
<b>Application terminal box for sensors</b>		
Q75	Application terminal box	11/66
<b>DRIVE-CLiQ encoders</b>		
Q20	AS 22DQC without functional safety	11/47
Q21	AM 22DQC without functional safety	11/47
Q22	AS 22DQC with functional safety	11/47
Q23	AM 22DQC with functional safety	11/47
<b>Incremental encoder</b>		
Q42	Functionally safe rotary encoder IN 8.5834FS2	11/55
Q43	Functionally safe rotary encoder IN 8.5834FS3	11/55
Q44	Incremental encoder TTL1024S/R KD	11/48
Q47	Incremental encoder HTL1024S/R KD	11/48
Q48	Incremental encoder HTL2048S/R KD	11/48
Q54	Incremental encoder HTL2048S/R FD	11/48
Q56	Rotary pulse encoder 1XP8022-20 (IN 1024 TTL with cable box)	11/50
Q59	Rotary pulse encoder 1XP8022-10 (IN 1024 HTL with cable box)	11/50
Q60	Rotary pulse encoder 1XP8022-11 (IN 2048 HTL with cable box)	11/50

## Appendix

### Lists

#### List of order codes

Order code	Special version Designation	Detailed data Chapter/Page
<b>Modular set of cables for encoders TTL1024S/R KD, HTL1024S/R KD, HTL2048S/R KD, HTL2048S/R FD, 1XP8014 and 1XP8024</b>		
Q62	Connector	11/64
Q69	Cable with connector and end sleeves, 2 m	11/64
Q72	Cable with coupling socket, 2 m	11/65
<b>Modular set of cables for encoder 1XP8022</b>		
Q63	Cable with end sleeves, 2 m	11/64
Q65	Cable with end sleeves, 15 m	11/64
Q66	Cable with coupling socket, 2 m	11/64
Q68	Cable with coupling socket, 15 m	11/64
<b>Absolute encoder IA</b>		
Q77	Functionally safe rotary encoder IA 8.5883FS2	11/57
Q78	Functionally safe rotary encoder IA 8.5883FS3	11/57
Q79	Absolute encoder 1XP8024-21 (IA SSI protocol with coupling socket)	11/51
Q82	Absolute encoder 1XP8014-10 (IA EnDAT protocol with flange socket)	11/51
Q83	Absolute encoder 1XP8024-10 (IA EnDAT protocol cable with coupling socket)	11/51
<b>Rugged encoders</b>		
Q92	Rotary pulse encoder LL Leine und Linde	11/53
Q93	Rotary pulse encoder HOG 9	11/53
Q94	Rotary pulse encoder HOG 10	11/54
<b>Mechanical protection</b>		
Q95	Encoder under cover	11/61
<b>Documentation</b>		
W10	Acceptance test certificate EN 10204-3.1 for the motor	12/14
W11	Acceptance test certificate EN 10204-3.1 for gearboxes	12/14
W12	Acceptance test certificate EN 10204-3.1 for paint finish	12/14
W21	Operating Instructions (German)	12/14
W22	Operating Instructions (English)	12/14
<b>Fast track</b>		
W50	Fast track	12/16
<b>Packaging options</b>		
W40	Individual packaging box	12/15
W42	Individual packaging overseas	12/15
W44	Individual packaging MC box	12/15
W45	Collective packaging wire-mesh box	12/15
W46	Collective packaging ocean freight	12/15
W47	Individual packaging VCI corrosion inhibiting film	12/15
W48	Collective packaging neutral packaging surface freight	12/15
W49	Collective packaging neutral packaging ocean freight	12/15
W52	Collective packaging VCI corrosion inhibiting film	12/15
<b>Extension of the liability for defects</b>		
W80	Extension of the liability for defects by 12 months to a total of 24 months from delivery	12/16
W82	Extension of the liability for defects by 24 months to a total of 36 months from delivery	12/16

## List of variables to dimension drives

## Overview of data to dimension drives

Code	Description	Unit
a	Gearbox constant for calculating the radial force	kNmm
$\alpha$	Force application angle	°
b, d, l, y, z	Gearbox constants	mm
C	Additional factor to calculate the radial force	-
$\cos \varphi$	Power factor	-
d	Diameter of the input element	mm
$d_0$	Average diameter of the mounted transmission element	mm
DC	Cyclic duration factor	%
$\eta$	Efficiency	%
f	Rated frequency	Hz
$f_B$	Service factor	-
$f_{B1}$	Required service factor	-
$f_{Btot}$	Service factor of the driven machine	-
$f_{br}$	Braking torque correction factor	-
$f_{limit}$	Limit frequency	Hz
$f_N$	Rated motor frequency	Hz
$F_{ax}$	Permissible axial force	N
$F_G$	Force due to weight	N
$F_r$	Radial force at the output shaft	N
$F_{R2}$	Permissible radial force at the center of shaft extension (l/2)	N
$F_{R2max}$	Maximum permissible radial force according to table	N
$F_{Ravail}$	Available radial force from the mounted transmission element	N
$F_x$	Permissible radial force from out of center force application point	N
$F_{xperm1}$	Permissible radial force, limited by the bearing service life, at a distance of x from the shaft shoulder	N
$F_{xperm2}$	Permissible radial force, limited by the shaft strength, at a distance of x from the shaft shoulder	N
H	Vertical distance between running wheel axis and center of gravity	mm
i	Transmission ratio	-
$I_A$	Starting current	A
$I_N$	Rated current	A
$J_2$	Moment of inertia referred to the output speed of the gearbox	kgm <sup>2</sup>
$J_{AD}$	Moment of inertia of the adapter	kgm <sup>2</sup>
$J_{add}$	Additional moment of inertia	kgm <sup>2</sup>
$J_B$	Moment of inertia of the brake	kgm <sup>2</sup>
$J_{Bstp}$	Moment of inertia of cage and inner ring	kgm <sup>2</sup>
$J_G$	Moment of inertia of the gearbox reduced to the input shaft	kgm <sup>2</sup>
$J_{mot}$	Moment of inertia of the motor	kgm <sup>2</sup>
$J_x$	Moment of inertia of the load referred to the motor shaft	kgm <sup>2</sup>
$J_Z$	Additional moment of inertia of a high inertia fan	kgm <sup>2</sup>
k	Factor for taking into account operating conditions	-
$k_{DC}$	Factor for increased power	-
$k_{FI}$	Factor for taking into account the additional moment of inertia	-
$k_{HT}$	Factor for abnormal coolant temperature and installation altitude	-

Code	Description	Unit
$k_M$	Factor for taking into account the load torque while accelerating	-
$k_P$	Factor for taking into account the required power and duty cycle	-
L1	Distance between running wheels	mm
L2	Horizontal distance between running wheel and center of gravity	mm
L3	Distance between swivel joints	mm
$L_{h10}$	Nominal bearing service life	h
$L_N$	Service life of the brake lining until readjustment	h
$L_{na}$	Modified bearing service life	h
$L_{nmax}$	Service life of the brake lining until replacement	h
$L_{pFA}$	Measuring surface sound pressure level	dB (A)
$L_{WA}$	Sound power level	dB (A)
m	Drive weight without any oil	kg
$m_{AF}$	Mass acceleration factor	-
$m_{Bstp}$	Weight of the backstop	kg
$m_{fan}$	Fan weight	kg
$m_{mot}$	Motor weight (without end shield at DE)	kg
$n_1$	Input speed of the gearbox	rpm
$n_2$	Output speed of the gearbox	rpm
$n_{dis}$	Disengage speed	rpm
$n_{br}$	Braking speed	rpm
$n_{max}$	Maximum speed	rpm
$n_N$	Rated speed	rpm
$P_1$	Actual steady-state power of the motor	kW
$P_{DC}$	Power for the new duty cycle	kW
$P_{req}$	Required input power	kW
$P_{mot}$	Motor power	kW
$P_N$	Rated motor power	kW
$P_{perm}$	Permissible motor power	kW
$P_S$	Actual steady-state power of the motor	kW
$Q_{perm}$	Permissible operating energy	J
r	Radius of the output element	m
$R_{ex}$	Exact number of teeth ratio	-
RWC	Running wheel center	-
$s_{br}$	Braking distance	m
$s_{gap}$	Brake air gap	mm
$s_{gapmax}$	Maximum brake air gap	mm
S	Center of gravity	mm
$t_1$	Application time of the brake	ms
$t_2$	Disconnection time	ms
$t_3$	Slipping time	ms
$t_{11}$	Response time	ms
$t_{12}$	Rise time	ms
$t_{br}$	Braking time	s
$t_R$	Duty cycle (decimal)	-
$t_s$	Cycle duration	ms

## Appendix

### Lists

#### List of variables to dimension drives

##### Overview of data to dimension drives

Code	Description	Unit
$T$	Additional factor for ambient temperature	-
$T_{1max}$	Maximum permissible motor torque	Nm
$T_2$	Geared motor output torque	Nm
$T_{2req}$	Required output torque of the driven machine	Nm
$T_{2N}$	Maximum output torque of the gearbox	Nm
$T_A$	Acceleration torque of the motor	Nm
$T_{Bk}$	Breakdown torque	Nm
$T_{br}$	Rated braking torque	Nm
$T_{DC}$	Torque for the new duty cycle	Nm
$T_N$	Rated motor torque	Nm
$T_{req}$	Required torque	Nm
$T_{SP}$	Rated backstop torque	Nm
$T_{St}$	Relative starting torque	Nm
$T_x$	Reduced load torque	Nm
$U$	Rated voltage	V
$v$	Travel velocity	m/s
$W_1$	Friction energy per braking operation	J
$W_{tot}$	Friction energy until the brake lining is replaced	MJ
$W_V$	Friction energy until the brake is readjusted	MJ
$x$	Distance from the shaft shoulder up to the point where force is applied	mm
$x_1$	Distance from the shaft shoulder up to the force application point at running wheel center for $F_x$	mm
$Z$	Switching frequency	1/h
$Z_0$	No-load switching frequency, motor without brake	1/h
$Z_A$	No-load switching frequency, motor with brake	1/h
$Z_{perm}$	Permissible switching frequency	1/h
$\vartheta_{amb}$	Ambient temperature	°C

## Important drive technology variables

SI unit Size	Formula symbol		Unit symbol		Designation or Conversion factor <sup>1)</sup>
	SI	Previously	SI	Previously	
Length (distance)	l	L, s	m	m	1 km = 1 000 m
Surface	A	F	m <sup>2</sup>	m <sup>2</sup>	1 m <sup>2</sup> = 100 dm <sup>2</sup>
Volume	V	V	m <sup>3</sup>	m <sup>3</sup>	1 m <sup>3</sup> = 1 000 dm <sup>3</sup> 1 dm <sup>3</sup> = 1 l
Plane angle	$\alpha, \beta, \gamma$	$\alpha, \beta, \gamma$	rad	Degrees °	1 rad = 1 m/m 1 L = $\pi/2$ rad 1° = $\pi/180$ rad
Rotation angle	$\phi$	$\varphi$		Degrees °	1' = 1°/60; 1" = 1'/60
Time					1 min = 60 s 1 h = 60 min
Time period/duration	t	t	s	s	1 d = 24 h
Frequency	f	f	Hz	1/s	1 Hz = 1/s
Speed	n	n	rpm	rpm	Revolutions per minute
Velocity	v	v	m/s	m/s	1 km/h = $\frac{1}{3.6}$ m/s
Acceleration	a	b	m/s <sup>2</sup>	m/s <sup>2</sup>	g = 9.81 m/s <sup>2</sup>
Acceleration due to gravity	g	g			
Angular velocity	$\omega$	$\Omega$	rad/s	1/s	
Angular acceleration	$\alpha$	$\zeta$	rad/s <sup>2</sup>	1/s <sup>2</sup>	
Mass	m	m	kg	kg	1
Density		d	kg/dm <sup>3</sup>	kg/dm <sup>3</sup>	10 <sup>3</sup>
Force	F	P, K	N	kp	9.81
Force due to weight	G	G			1 N = 1 kg · 1 m/s <sup>2</sup>
Pressure	p	p	Pa N/m <sup>2</sup>	kp/cm <sup>2</sup>	1 Pa = 1 N/m <sup>2</sup> 9.81 · 10 <sup>4</sup>
Mechanical tension	$\sigma$	$\sigma$	N/mm <sup>2</sup>	kp/mm <sup>2</sup>	9.81
Work	W	A		kpm	9.81
Energy	W	E	J	kcal	4187
Quantity of heat	Q	Q			1 J = 1 Nm = 1 Ws
Torque of a force		M <sub>l</sub>			9.81
Torque	T	M <sub>d</sub>	Nm	kpm	1 Nm = 1 J
Bending torque		M <sub>b</sub>			
Power	P	N	W	PS	735.5 1 W = 1 J/s = 1 Nm/s = $\frac{\text{kgm}^2}{\text{s}^3}$
Moment of inertia	J	$\theta$	kgm <sup>2</sup>	kpm <sup>2</sup>	9.81

<sup>1)</sup> The numerical value of a variable in previously used units multiplied by the conversion factor gives the numerical value of the variable in SI units.

Conversion from kW to hp:

$$1 \text{ kW} = 1.34102 \text{ hp}$$

$$1 \text{ hp} = 0.745700 \text{ kW}$$

$$1 \text{ hp} = 1.01387 \text{ PS}$$

hp = horse power (US)

PS = Pferdestärke (horse power in German)

## Appendix

### Lists

#### List of variables to dimension drives

##### Important drive technology variables

SI unit Size	Formula symbol		Unit symbol		Designation or Conversion factor <sup>*)</sup>
	SI	Previously	SI	Previously	
Dynamic viscosity	$\eta$	$\eta$	Pa · s	P	$10^{-1}$
Kinematic viscosity	$\nu$	$\nu$	m <sup>2</sup> /s	St	$10^{-4}$
Electrical current	$I$	$I$	A	A	1 A = 1 W/V = 1 V/Ω
Electrical voltage	$U$	$U$	V	V	1 V = 1 W/A
Electrical resistance	$R$	$R$	Ω	Ω	1 Ω = 1 V/A = 1/S
Electrical conductance	$G$	$G$	S	S	1 S = 1/Ω
Electrical capacitance	$C$	$C$	F	F	1 F = 1 C/V
Electric charge	$Q$	$Q$	C	C	1 C = 1 A · s
Inductance	$L$	$L$	H	H	1 H = 1 Vs/A
Magnetic flux density Induction	$B$	$B$	T	G	$10^4$ 1 T = 1 Wb/m <sup>2</sup>
Magnetic field strength	$H$	$H$	A/m	A/m	
Magnetic flux	$\phi$	$\phi$	Wb	M	$10^8$ 1 Wb = 1 V · s
Temperature	T(θ)	t	K(°C)	°C	0 K = -273.15 °C

<sup>\*)</sup> The numerical value of a variable in previously used units multiplied by the conversion factor gives the numerical value of the variable in SI units.

## List of abbreviations

Abbreviation	Meaning	Abbreviation	Meaning
<b>AC</b>	Alternating Current, three-phase	<b>MODULOG</b>	Modular logistically optimized design (motor)
<b>ATEX</b>	Atmosphères explosibles		
		<b>NAT</b>	Rated response temperature
<b>BIS</b>	Bureau of Indian Standards	<b>NDE</b>	Non-drive end
		<b>NEE</b>	NEMA Energy Efficient
<b>CAD</b>	Computer-Aided Design	<b>NN</b>	Sea level
<b>CCC</b>	China Compulsory Certification	<b>NPT</b>	National Pipe Thread
<b>CEL</b>	China Energy Label		
<b>CEMEP</b>	Comité Européen de Constructeurs de Machines Électriques et d'Électronique de Puissance (European sector committee of manufacturers of electrical machines)	<b>PAO</b>	Polyalphaolefine
		<b>PDS</b>	Power Drive System
<b>CONT</b>	Continuous duty	<b>PE</b>	Protective Earth, grounding
<b>CQC</b>	China Quality Certification Center	<b>PG</b>	Polyglycol
<b>CSA</b>	Canadian Standard Association	<b>PTC</b>	Positive Temperature Coefficient
<b>CT</b>	Coolant temperature		
		<b>RoHS</b>	Restriction of hazardous substances
<b>DC</b>	Direct Current	<b>SA</b>	Installation altitude
<b>DC</b>	Duty cycle	<b>SSI</b>	Simple Sensor Interface
<b>DE</b>	Drive end		
<b>DIN</b>	German Institute for Standardization (Deutsches Institut für Normen e. V.)	<b>TIA</b>	Totally Integrated Automation
		<b>TIP</b>	Totally Integrated Power
<b>EAC</b>	Eurasian conformity	<b>TR CU</b>	Technical Regulation Customs Union
<b>EBPG</b>	Energy-related products directive	<b>TTL</b>	Transistor Transistor Logic
<b>EC</b>	European Community		
<b>ECL</b>	Energy Conservation Law of PRC	<b>UL-R</b>	Underwriters Laboratories Inc. -Recognition Mark
<b>EER</b>	Energy Efficiency Regulations		
<b>EFF</b>	Efficiency	<b>VDE</b>	Association of Electrical Engineering, Electronics and Information Technology (Verband der Elektrotechnik Elektronik Informationstechnik e. V.)
<b>EGE</b>	European Size Unit (Europäische Größeneinheit)		
<b>EISA</b>	Energy Independence and Security Act	<b>VDI</b>	Association of German Engineers (Verein Deutscher Ingenieure)
<b>EMC</b>	Electromagnetic compatibility		
<b>EN</b>	European standard	<b>WEEE</b>	Waste electrical and electronic equipment
<b>EPAct</b>	Energy Policy Act	<b>WGK</b>	Class, signifying risk of water pollution
<b>EU</b>	European Union	<b>Width A/F</b>	Width across flats
<b>EuP</b>	Energy Using Products		
<b>FVA</b>	Research Association for Drive Technology (Forschungsvereinigung Antriebstechnik e. V.)		
<b>HF</b>	High frequency		
<b>HTL</b>	High Transistor Logic		
<b>IDS</b>	Integrated Drive Systems		
<b>IE</b>	International Efficiency		
<b>IEC</b>	International Electrotechnical Commission		
<b>IP</b>	International Protection		
<b>ISO</b>	International Organization of Standardization		

## Appendix

### SITRAIN – Digital Industry Academy

#### Introduction



SITRAIN – DIGITAL INDUSTRY ACADEMY

# The Future of Learning starts **now**

#### **The Future of Learning starts now**

Globalization, digitalization, new work, Internet of Things, new business models – our way of working, living and learning is changing rapidly. With SITRAIN, the future of learning begins today: SITRAIN stands for a modern learning culture that focuses on the needs of learners and the demands of innovative companies.

With SITRAIN – Digital Industry Academy, the future of learning is yours.

Face-to-face training or digital training, location-independent, 24/7, on-demand or learning at fixed dates and course times? With a personal learning consultant, in a team, or on your own responsibility? Everything is possible. SITRAIN offers a wide range of different learning options with the "Learning Journey", "Learning Membership" and "Learning Event".

#### **The three learning formats of SITRAIN – Digital Industry Academy**



##### **Learning Journey**

The combination for sustainable learning success

- The optimal mix of self-study units and guided live modules
- Includes a Learning Membership to work through the self-study modules and access on-demand content
- The SITRAIN learning consultant is available for questions and one-on-one consultations
- Ideal integration into the daily work routine and adaptation to one's own learning pace.



##### **Learning Membership**

Securing knowledge through continuous learning on your own responsibility

- With access to the comprehensive and constantly growing range of self-study units on SITRAIN access, the digital learning platform
- Search and find specific learning content or simply have a look around – anytime and anywhere
- A modern learning culture through continuous learning on your own responsibility and transparency about your learning success in the team or company.



##### **Learning Event**

Acquire theoretical and practical knowledge in a compact and guided format

- You achieve a defined learning goal in the shortest possible time
- The learning consultant guides you through the practical exercises and is also exclusively available to you during the theoretical sessions for the entire duration
- Focused learning, outside of the daily work routine, in a protected learning environment – virtually, in the training center, or at your company.



### Introduction

#### **Expand your knowledge, apply what you have learned, develop future skills**

The SITRAIN Digital Industry Academy combines didactically effective methods and modular options.



Effective



Flexible



Relevant



Continuous

#### **The four building blocks of SITRAIN – Digital Industry Academy**

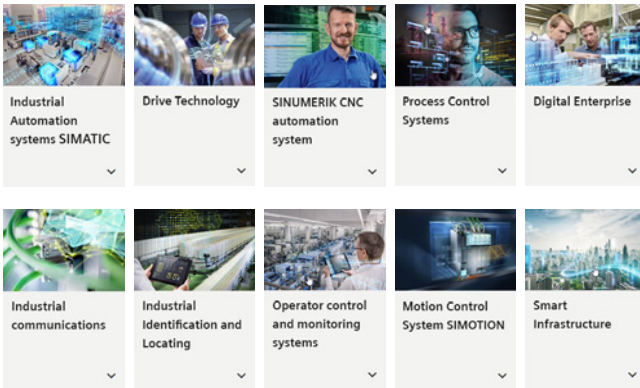
Different methods for maximum learning success:

- Live
- On your own responsibility
- On demand
- Individual

Learn the way you want to learn. For learning success that takes you further.

#### **Education and training directly from the manufacturer**

For individual knowledge building, the following topics concerning the industrial product and solution portfolio of Siemens are available. Experience the new learning culture with SITRAIN.



#### **Training cases catalog**

<https://www.siemens.com/sitrain-catalog-training-cases>



Find  
your local  
offer here



#### **SITRAIN – Digital Industry Academy worldwide**

You will find the regional knowledge offer in the country selection. One click will take you to the corresponding website.

#### **SITRAIN – Digital Industry Academy**

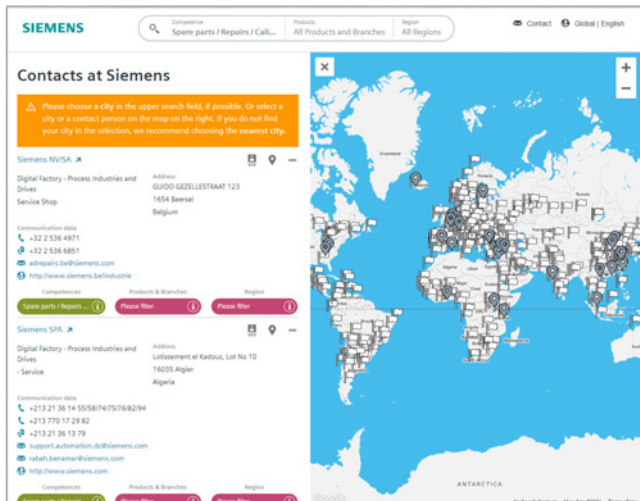
[www.siemens.com/sitrain](http://www.siemens.com/sitrain)

- SITRAIN Learning Journey:  
[www.siemens.com/sitrain-learning-journey](http://www.siemens.com/sitrain-learning-journey)
- SITRAIN Learning Membership:  
[www.siemens.com/sitrain-learning-membership](http://www.siemens.com/sitrain-learning-membership)
- SITRAIN Learning Event:  
[www.siemens.com/sitrain-learning-event](http://www.siemens.com/sitrain-learning-event)

## Appendix

### Partners

#### Partners at Siemens



At your service locally, around the globe for consulting, sales, training, service, support, spare parts on the entire portfolio of Siemens.

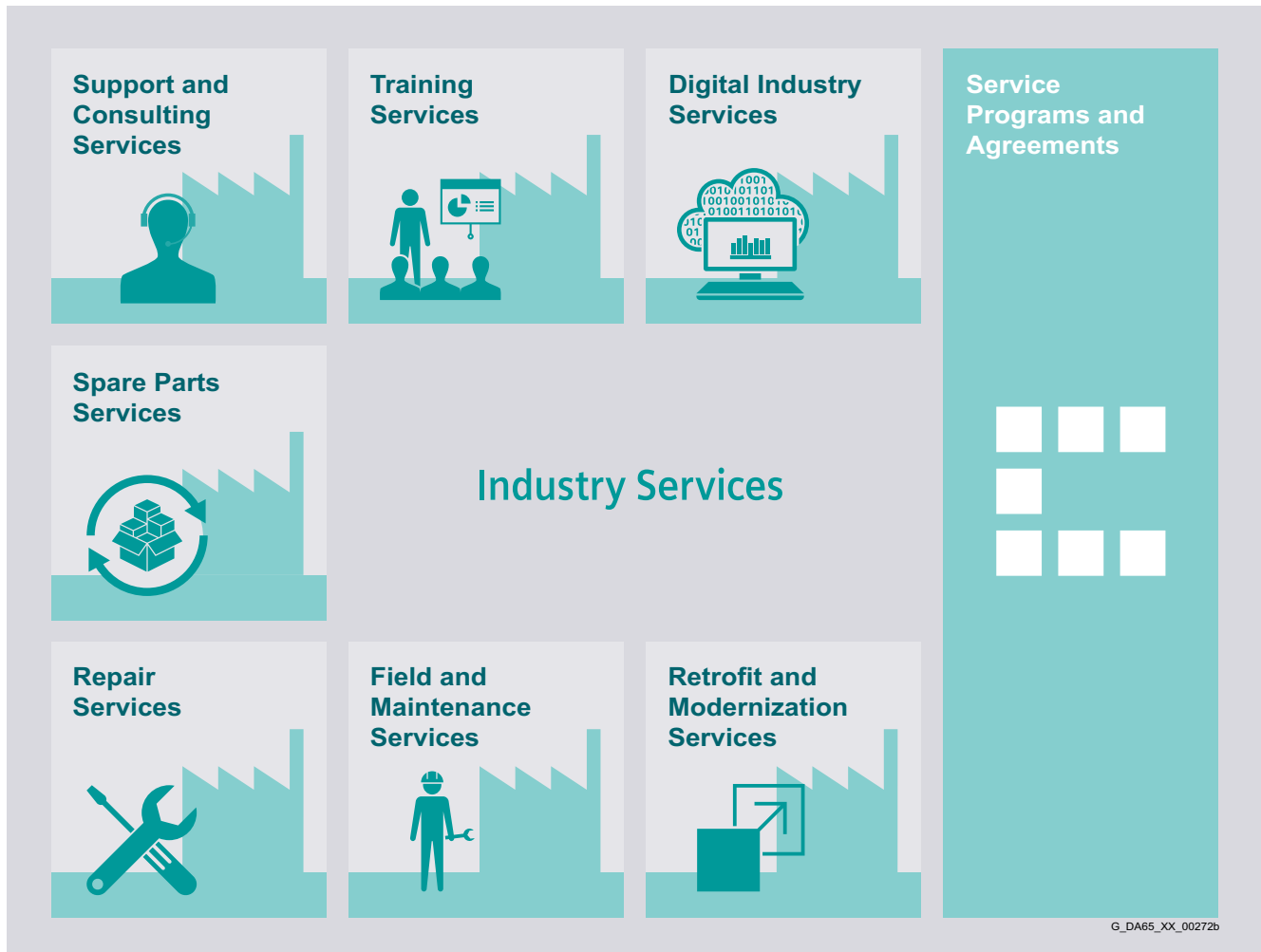
Your partner can be found in our Personal Contacts Database at: [www.siemens.com/automation-contact](http://www.siemens.com/automation-contact)

You start by selecting

- the required competence,
- products and branches,
- a country and a city

or by a

- location search or free text search.

**Overview**

**Keep your business running and shaping your digital future – with Industry Services**

Optimizing the productivity of your equipment and operations can be a challenge, especially with constantly changing market conditions. Working with our service experts makes it easier. We understand your industry's unique processes and provide the services needed so that you can better achieve your business goals.

You can count on us to maximize your uptime and minimize your downtime, increasing your operations' productivity and reliability. When your operations have to be changed quickly to meet a new demand or business opportunity, our services give you the flexibility to adapt. Of course, we take care that your production is protected against cyber threats. We assist in keeping your operations as energy and resource efficient as possible and reducing your total cost of ownership. As a trendsetter, we ensure that you can capitalize on the opportunities of digitalization and by applying data analytics to enhance decision making: You can be sure that your plant reaches its full potential and retains this over the longer lifespan.

You can rely on our highly dedicated team of engineers, technicians and specialists to deliver the services you need – safely, professionally and in compliance with all regulations. We are there for you, where you need us, when you need us.

[www.siemens.com/industryservices](http://www.siemens.com/industryservices)

## Appendix

### Industry Services

#### Industry Services – Portfolio overview

##### Overview



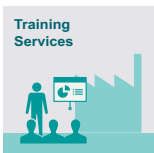
#### Digital Industry Services

Digital Industry Services make your industrial processes transparent to gain improvements in productivity, asset availability, and energy efficiency.

Production data is generated, filtered and translated with intelligent analytics to enhance decision-making.

This is done whilst taking data security into consideration and with continuous protection against cyber-attack threats.

[www.siemens.com/global/en/products/services/industry/digital-industry-services.html](http://www.siemens.com/global/en/products/services/industry/digital-industry-services.html)



#### Training Services

From the basics and advanced to specialist skills, SITRAIN courses provide expertise right from the manufacturer – and encompass the entire spectrum of Siemens products and systems for the industry.

Worldwide, SITRAIN courses are available wherever you need a training course in more than 170 locations in over 60 countries. <https://support.industry.siemens.com/cs/ww/en/sc/2226>



#### Support and Consulting Services

**Industry Online Support** site for comprehensive information, application examples, FAQs and support requests.

**Technical and Engineering Support** for advice and answers for all inquiries about functionality, handling, and fault clearance. The Service Card as prepaid support for value added services such as Priority Call Back or Extended Support offers the clear advantage of quick and easy purchasing.

**Information & Consulting Services**, e.g. SIMATIC System Audit; clarity about the state and service capability of your automation system or Lifecycle Information Services; transparency on the lifecycle of the products in your plants.

<https://support.industry.siemens.com/cs/ww/en/sc/2235>



#### Spare Parts

Spare Parts Services are available worldwide for smooth and fast supply of spare parts – and thus optimal plant availability. Genuine spare parts are available for up to ten years. Logistic experts take care of procurement, transport, custom clearance, storage and order management.

Reliable logistics processes ensure that components reach their destination as needed.

Since not all spare parts can be kept in stock at all times, Siemens offers a preventive measure for spare parts provisioning on the customer's premises with optimized **Spare Parts Packages** for individual products, custom-assembled drive components and entire integrated drive trains – including risk consulting.

**Asset Optimization Services** help you design a strategy for parts supply where your investment and carrying costs are reduced and the risk of obsolescence is avoided.

<https://support.industry.siemens.com/cs/ww/en/sc/2110>



#### Repair Services

Repair Services are offered on-site and in regional repair centers for fast restoration of faulty devices' functionality.

Also available are extended repair services, which include additional diagnostic and repair measures, as well as emergency services.

<https://support.industry.siemens.com/cs/ww/en/sc/2154>



#### Field and Maintenance Services

Siemens specialists are available globally to provide expert field and maintenance services, including commissioning, functional testing, preventive maintenance and fault clearance.

All services can be included in customized service agreements with defined reaction times or fixed maintenance intervals.

<https://support.industry.siemens.com/cs/ww/en/sc/2265>



#### Retrofit and Modernization Services

Provide a cost-effective solution for the expansion of entire plants, optimization of systems or upgrading existing products to the latest technology and software, e.g. migration services for automation systems.

Service experts support projects from planning through commissioning and, if desired over the entire extended lifespan, e.g. Retrofit for Integrated Drive Systems for an extended lifetime of your machines and plants.

<https://support.industry.siemens.com/cs/ww/en/sc/2286>



#### Service Programs and Agreements

A technical Service Program or Agreement enables you to easily bundle a wide range of services into a single annual or multi-year agreement.

You pick the services you need to match your unique requirements or fill gaps in your organization's maintenance capabilities.

Programs and agreements can be customized as KPI-based and/or performance-based contracts.

<https://support.industry.siemens.com/cs/ww/en/sc/2275>

**Overview**

Online Support – fast, intuitive, whenever you want, wherever you need



**Web**  
[www.siemens.com/online-support](http://www.siemens.com/online-support)

**App**

GET IT ON Google Play | Available on the App Store | Microsoft Store

Scan the QR code for information on our Online Support app.



- FAQ / Application examples**  
Information about industrial products, programming and configuration as well as application examples
- Technical information**  
Videos, documentation, manuals, updates, product notes, compatibility tool, certificates, planning data such as dimensional drawings, product data, 3D models
- Forum**  
Exchange information and experience with other users and experts

## Online Support for Siemens Industry Products

Siemens Industry and Online Support with some 1.7 million visitors per month is one of the most popular web services provided by Siemens. It is the central access point for comprehensive technical know-how about products, systems and services for automation and drives applications as well as for process industries.

In connection with the challenges and opportunities related to digitalization you can look forward to continued support with innovative offerings.

## Appendix

### Conversion tables

**Rotary inertia** (to convert from A to B, multiply by entry in table)

A \ B	lb-in <sup>2</sup>	lb-ft <sup>2</sup>	lb-in-s <sup>2</sup>	lb-ft-s <sup>2</sup> slug-ft <sup>2</sup>	kg-cm <sup>2</sup>	kg-cm-s <sup>2</sup>	gm-cm <sup>2</sup>	gm-cm-s <sup>2</sup>	oz-in <sup>2</sup>	oz-in-s <sup>2</sup>
lb-in <sup>2</sup>	1	$6.94 \times 10^{-3}$	$2.59 \times 10^{-3}$	$2.15 \times 10^{-4}$	2.926	$2.98 \times 10^{-3}$	$2.92 \times 10^3$	2.984	16	$4.14 \times 10^{-2}$
lb-ft <sup>2</sup>	144	1	0.3729	$3.10 \times 10^{-2}$	421.40	0.4297	$4.21 \times 10^5$	429.71	2304	5.967
lb-in-s <sup>2</sup>	386.08	2.681	1	$8.33 \times 10^{-2}$	$1.129 \times 10^3$	1.152	$1.129 \times 10^6$	$1.152 \times 10^3$	$6.177 \times 10^3$	16
lb-ft-s <sup>2</sup> slug-ft <sup>2</sup>	$4.63 \times 10^3$	32.17	12	1	$1.35 \times 10^4$	13.825	$1.355 \times 10^7$	$1.38 \times 10^4$	$7.41 \times 10^4$	192
kg-cm <sup>2</sup>	0.3417	$2.37 \times 10^{-3}$	$8.85 \times 10^{-4}$	$7.37 \times 10^{-5}$	1	$1.019 \times 10^{-3}$	1000	1.019	5.46	$1.41 \times 10^{-2}$
kg-cm-s <sup>2</sup>	335.1	2.327	0.8679	$7.23 \times 10^{-2}$	980.66	1	$9.8 \times 10^5$	1000	$5.36 \times 10^3$	13.887
gm-cm <sup>2</sup>	$3.417 \times 10^{-4}$	$2.37 \times 10^{-6}$	$8.85 \times 10^{-7}$	$7.37 \times 10^{-8}$	$1 \times 10^{-3}$	$1.01 \times 10^{-6}$	1	$1.01 \times 10^{-3}$	$5.46 \times 10^{-3}$	$1.41 \times 10^{-5}$
gm-cm-s <sup>2</sup>	0.335	$2.32 \times 10^{-3}$	$8.67 \times 10^{-4}$	$7.23 \times 10^{-5}$	0.9806	$1 \times 10^{-3}$	980.6	1	5.36	$1.38 \times 10^{-2}$
oz-in <sup>2</sup>	0.0625	$4.34 \times 10^{-4}$	$1.61 \times 10^{-4}$	$1.34 \times 10^{-5}$	0.182	$1.86 \times 10^{-4}$	182.9	0.186	1	$2.59 \times 10^{-3}$
oz-in-s <sup>2</sup>	24.13	0.1675	$6.25 \times 10^{-2}$	$5.20 \times 10^{-3}$	70.615	$7.20 \times 10^{-2}$	$7.09 \times 10^4$	72.0	386.08	1

**Torque** (to convert from A to B, multiply by entry in table)

A \ B	lb-in	lb-ft	oz-in	N-m	kg-cm	kg-m	gm-cm	dyne-cm
lb-in	1	$8.333 \times 10^{-2}$	16	0.113	1.152	$1.152 \times 10^{-2}$	$1.152 \times 10^3$	$1.129 \times 10^6$
lb-ft	12	1	192	1.355	13.825	0.138	$1.382 \times 10^4$	$1.355 \times 10^7$
oz-in	$6.25 \times 10^{-2}$	$5.208 \times 10^{-3}$	1	$7.061 \times 10^{-3}$	$7.200 \times 10^{-2}$	$7.200 \times 10^{-4}$	72.007	$7.061 \times 10^4$
N-m	8.850	0.737	141.612	1	10.197	0.102	$1.019 \times 10^4$	$1 \times 10^7$
kg-cm	0.8679	$7.233 \times 10^{-2}$	13.877	$9.806 \times 10^{-2}$	1	$10^{-2}$	1000	$9.806 \times 10^5$
kg-m	86.796	7.233	$1.388 \times 10^3$	9.806	100	1	$1 \times 10^5$	$9.806 \times 10^7$
gm-cm	$8.679 \times 10^{-4}$	$7.233 \times 10^{-5}$	$1.388 \times 10^{-2}$	$9.806 \times 10^{-5}$	$1 \times 10^{-3}$	$1 \times 10^{-5}$	1	980.665
dyne-cm	$8.850 \times 10^{-7}$	$7.375 \times 10^{-8}$	$1.416 \times 10^{-5}$	$10^{-7}$	$1.0197 \times 10^{-6}$	$1.019 \times 10^{-8}$	$1.019 \times 10^{-3}$	1

**Length** (to convert from A to B, multiply by entry in table)

A \ B	inches	feet	cm	yd	mm	m
inches	1	0.0833	2.54	0.028	25.4	0.0254
feet	12	1	30.48	0.333	304.8	0.3048
cm	0.3937	0.03281	1	$1.09 \times 10^{-2}$	10	0.01
yd	36	3	91.44	1	914.4	0.914
mm	0.03937	0.00328	0.1	$1.09 \times 10^{-3}$	1	0.001
m	39.37	3.281	100	1.09	1000	1

**Force** (to convert from A to B, multiply by entry in table)

A \ B	lb	oz	gm	dyne	N
lb	1	16	453.6	$4.448 \times 10^5$	4.4482
oz	0.0625	1	28.35	$2.780 \times 10^4$	0.27801
gm	$2.205 \times 10^{-3}$	0.03527	1	$1.02 \times 10^{-3}$	N.A.
dyne	$2.248 \times 10^{-6}$	$3.59 \times 10^{-5}$	980.7	1	0.00001
N	0.22481	3.5967	N.A.	100000	1

**Mass** (to convert from A to B, multiply by entry in table)

A \ B	lb	oz	gm	kg	slug
lb	1	16	453.6	0.4536	0.0311
oz	$6.25 \times 10^{-2}$	1	28.35	$0.02835 \times 10^{-3}$	$1.93 \times 10^{-3}$
gm	$2.205 \times 10^{-3}$	$3.527 \times 10^{-2}$	1	$10^{-3}$	$6.852 \times 10^{-5}$
kg	2.205	35.27	$10^3$	1	$6.852 \times 10^{-2}$
slug	32.17	514.8	$1.459 \times 10^4$	14.59	1

**Rotation** (to convert from A to B, multiply by entry in table)

A \ B	rpm	rad/s	degrees/s
rpm	1	0.105	6.0
rad/s	9.55	1	57.30
degrees/s	0.167	$1.745 \times 10^{-2}$	1

**Temperature Conversion**

°F	°C	°C	°F
0	-17.8	-10	14
32	0	0	32
50	10	10	50
70	21.1	20	68
90	32.2	30	86
98.4	37	37	98.4
212	100	100	212
subtract 32 and multiply by $\frac{5}{9}$		multiply by $\frac{9}{5}$ and add 32	

**Mechanism Efficiencies**

Acme-screw with brass nut	~0.35–0.65
Acme-screw with plastic nut	~0.50–0.85
Ball-screw	~0.85–0.95
Chain and sprocket	~0.95–0.98
Preloaded ball-screw	~0.75–0.85
Spur or bevel-gears	~0.90
Timing belts	~0.96–0.98
Worm gears	~0.45–0.85
Helical gear (1 reduction)	~0.92

**Friction Coefficients**

Materials	$\mu$
Steel on steel (greased)	~0.15
Plastic on steel	~0.15–0.25
Copper on steel	~0.30
Brass on steel	~0.35
Aluminum on steel	~0.45
Steel on steel	~0.58
Mechanism	$\mu$
Ball bushings	<0.001
Linear bearings	<0.001
Dove-tail slides	~0.2++
Gibb ways	~0.5++

**Material Densities**

Material	lb-in <sup>3</sup>	gm-cm <sup>3</sup>
Aluminum	0.096	2.66
Brass	0.299	8.30
Bronze	0.295	8.17
Copper	0.322	8.91
Hard wood	0.029	0.80
Soft wood	0.018	0.48
Plastic	0.040	1.11
Glass	0.079–0.090	2.2–2.5
Titanium	0.163	4.51
Paper	0.025–0.043	0.7–1.2
Polyvinyl chloride	0.047–0.050	1.3–1.4
Rubber	0.033–0.036	0.92–0.99
Silicone rubber, without filler	0.043	1.2
Cast iron, gray	0.274	7.6
Steel	0.280	7.75

**Wire Gauges<sup>1)</sup>**

Cross-section mm <sup>2</sup>	Standard Wire Gauge (SWG)	American Wire Gauge (AWG)
0.2	25	24
0.3	23	22
0.5	21	20
0.75	20	19
1.0	19	18
1.5	17	16
2.5	15	13
4	13	11
6	12	9
10	9	7
16	7	6
25	5	3
35	3	2
50	0	1/0
70	000	2/0
95	00000	3/0
120	0000000	4/0
150	–	6/0
185	–	7/0

<sup>1)</sup> The table shows approximate SWG/AWG sizes nearest to standard metric sizes; the cross-sections do not match exactly.

## Appendix

### Notes



### 1. General Provisions

By using this catalog you can purchase products (hardware, software and services) described therein from Siemens Aktiengesellschaft subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as "T&C"). Please note that the scope, the quality and the conditions for supplies and services, including software products, by any Siemens entity having a registered office outside Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. The following T&C apply exclusively for orders placed with Siemens Aktiengesellschaft, Germany.

#### 1.1 For customers with a seat or registered office in European Union

For customers with a seat or registered office in European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for stand-alone software products and software products forming a part of a product or project, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany"<sup>1)</sup> and/or
- for consulting services the "Allgemeine Geschäftsbedingungen für Beratungsleistungen der Division DF – Deutschland" (available only in German) and/or
- for other services, the „Supplementary Terms and Conditions for Services ("BL")"<sup>1)</sup> and/or
- for other supplies the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"<sup>1)</sup>.

In case such supplies should contain Open Source Software, the conditions of which shall prevail over the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"<sup>1)</sup>, a notice will be contained in the scope of delivery in which the applicable conditions for Open Source Software are specified. This shall apply mutatis mutandis for notices referring to other third party software components.

#### 1.2 For customers with a seat or registered office outside European Union

For customers with a seat or registered office outside European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for consulting services the "Standard Terms and Conditions for Consulting Services of the Division DF for Customers with a Seat or Registered Office Outside of Germany"<sup>1)</sup> and/or
- for other services the "International Terms & Conditions for Services"<sup>1)</sup> supplemented by "Software Licensing Conditions"<sup>1)</sup> and/or
- for other supplies of hard- and software the "International Terms & Conditions for Products"<sup>1)</sup> supplemented by "Software Licensing Conditions"<sup>1)</sup>

#### 1.3 For customers with master or framework agreement

To the extent our supplies and/or services offered are covered by an existing master or framework agreement, the terms and conditions of that agreement shall apply instead of T&C.

### 2. Prices

The prices are in € (Euro) ex point of delivery, exclusive of packaging.

The sales tax (value added tax) is not included in the prices. It shall be charged separately at the respective rate according to the applicable statutory legal regulations.

Prices are subject to change without prior notice. We will charge the prices valid at the time of delivery.

To compensate for variations in the price of raw materials (e.g. silver, copper, aluminum, lead, gold, dysprosium and neodym), surcharges are calculated on a daily basis using the so-called metal factor for products containing these raw materials. A surcharge for the respective raw material is calculated as a supplement to the price of a product if the basic official price of the raw material in question is exceeded.

The metal factor of a product indicates the basic official price (for those raw materials concerned) as of which the surcharges on the price of the product are applied, and with what method of calculation.

An exact explanation of the metal factor can be downloaded at: [https://mall.industry.siemens.com/legal/ww/en/terms\\_of\\_trade\\_en.pdf](https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf)

To calculate the surcharge (except in the cases of dysprosium and neodym), the official price from the day prior to that on which the order was received or the release order was effected is used.

To calculate the surcharge applicable to dysprosium and neodym ("rare earths"), the corresponding three-month basic average price in the quarter prior to that in which the order was received or the release order was effected is used with a one-month buffer (details on the calculation can be found in the explanation of the metal factor).

### 3. Additional Terms and Conditions

The dimensions are in mm. In Germany, according to the German law on units in measuring technology, data in inches apply only to devices for export.

Illustrations are not binding.

Insofar as there are no remarks on the individual pages of this catalog – especially with regard to data, dimensions and weights given – these are subject to change without prior notice.

<sup>1)</sup> The text of the Terms and Conditions of Siemens AG can be downloaded at [https://mall.industry.siemens.com/legal/ww/en/terms\\_of\\_trade\\_en.pdf](https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf)

## Appendix

### Conditions of sale and delivery

#### 4. Export Regulations

We shall not be obligated to fulfill any agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes and/or other sanctions.

Export may be subject to license. We shall indicate in the delivery details whether licenses are required under German, European and US export lists.

Our products are controlled by the U.S. Government (when labeled with "ECCN" unequal "N") and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations. Products labeled with "AL" unequal "N" are subject to European / national export authorization.

The export indications can be viewed in advance in the description of the respective goods on the Industry Mall, our online catalog system. Only the export labels "AL" and "ECCN" indicated on order confirmations, delivery notes and invoices are authoritative.

Products without label, with label "AL:N" / "ECCN:N", or label "AL:9X9999" / "ECCN: 9X9999" may require authorization from responsible authorities depending on the final end-use, or the destination.

If you transfer goods (hardware and/or software and/or technology as well as corresponding documentation, regardless of the mode of provision) delivered by us or works and services (including all kinds of technical support) performed by us to a third party worldwide, you shall comply with all applicable national and international (re-)export control regulations. In any event of such transfer of goods, works and services you shall comply with the (re-) export control regulations of the Federal Republic of Germany, of the European Union and of the United States of America.

Prior to any transfer of goods, works and services provided by us to a third party you shall in particular check and guarantee by appropriate measures that

- there will be no infringement of an embargo imposed by the European Union, by the United States of America and/ or by the United Nations by such transfer, by brokering of contracts concerning those goods, works and services or by provision of other economic resources in connection with those goods, works and services, also considering the limitations of domestic business and prohibitions of by-passing those embargoes;
- such goods, works and services are not intended for use in connection with armaments, nuclear technology or weapons, if and to the extent such use is subject to prohibition or authorization, unless required authorization is provided;
- the regulations of all applicable Sanctioned Party Lists of the European Union and the United States of America concerning the trading with entities, persons and organizations listed therein are considered.

If required to enable authorities or us to conduct export control checks, you, upon request by us, shall promptly provide us with all information pertaining to the particular end customer, the particular destination and the particular intended use of goods, works and services provided by us, as well as any export control restrictions existing.

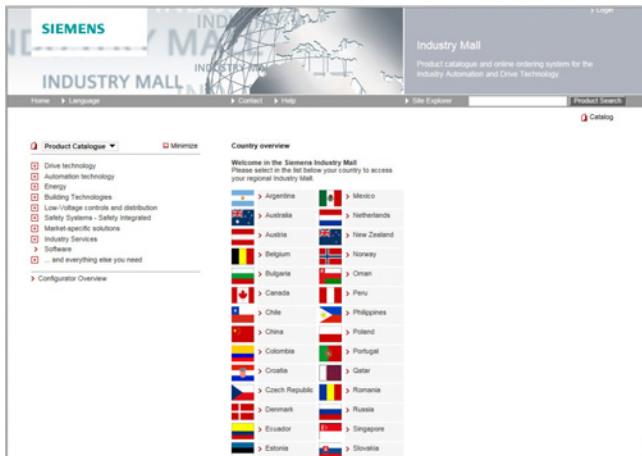
You acknowledge that under the EU embargo regulations against Iran, Syria and Russia respectively the sale of certain listed goods and related services is subject to authorization by the competent export control authorities of the European Union. If (i) the goods or services ordered by you are destined for Iran, Syria or Russia, and (ii) the contract for our supplies and/or services is subject to prior authorization of the competent export control authorities of the European Union, the contract between you and us shall come into force in this respect only upon granting of such authorization.

The products listed in this catalog may be subject to European/German and/or US export regulations. Any export requiring approval is therefore subject to authorization by the relevant authorities.

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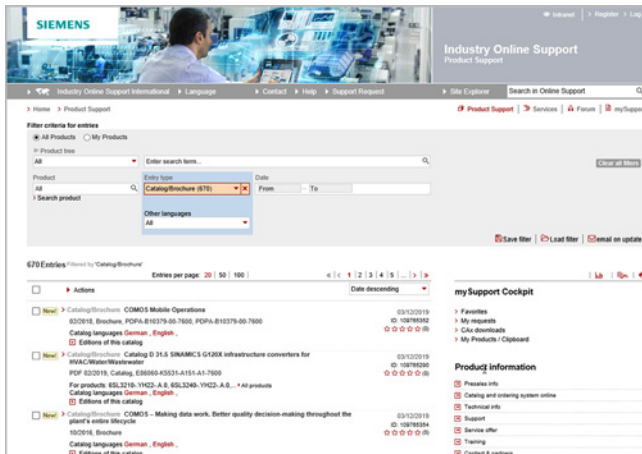
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