

Catalog  
D 50.11

Edition  
2023

MOTION CONTROL

## SIMOGEAR

### Gearboxes with adapter

Mounting of IEC, NEMA and servo motors

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

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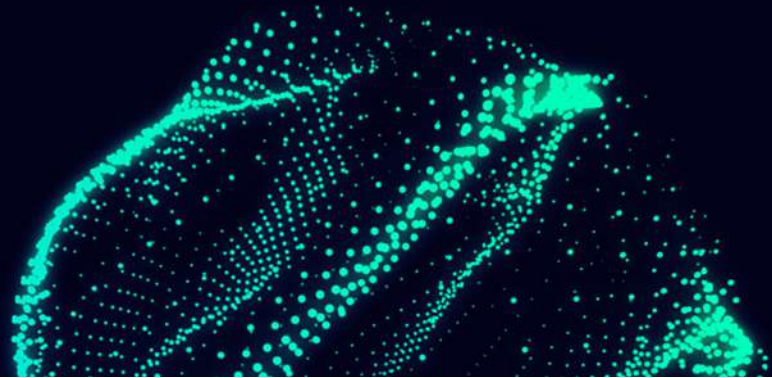


## Related catalogs

<p><b>SIMOGEAR</b> D 50.1  <b>Geared Motors</b>            Helical, parallel shaft, bevel, helical worm, worm geared motors and electric-monorail geared motors            PDF (E86060-K5250-A111-A9-7600)</p>		<p><b>SIMOTICS NEMA Motors</b> D 81.2            Low Voltage AC Motors            Selection and Pricing Guide            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-B6-7600)</p>		<p><b>Industrial Communication</b> IK PI            SIMATIC NET            E86060-K6710-A101-B8-7600</p>	
<p><b>Motion Control Drives</b> D 31.1            SINAMICS Inverters for Single-Axis Drives            Built-In Units            PDF (E86060-K5531-A111-A4-7600)</p>		<p><b>SiePortal</b>            Information and Ordering Platform            on the Internet  <a href="http://sieportal.siemens.com">sieportal.siemens.com</a></p>	
<p><b>Motion Control Drives</b> D 31.2            SINAMICS Converters for Single-Axis Drives            Distributed Converters            PDF (E86060-K5531-A121-A3-7600)</p>		<p><b>Additional documentation</b>            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>            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            PDF (E86060-K5531-A151-A4-7600)</p>			
<p><b>Motion Control Drives</b> D 32            SINAMICS S210 Servo Drive System            PDF (E86060-K5532-A101-A8-7600)</p>			
<p><b>SIMOTICS S-1FG1</b> D 41  <b>Servo geared motors</b>            Helical, Parallel shaft, Bevel and Helical worm geared motors            PDF (E86060-K5541-A101-A6-7600)</p>			

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## MOTION CONTROL

# SIMOGEAR

## Gearboxes with adapter

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

Dear Customer,

We are happy to present the edition of Catalog D 50.11 · 2023 PDF Update December 2023. The catalog provides a comprehensive overview of the 2KJ3 SIMOGEAR gearboxes series with adapters.

The new edition of the catalog mainly contains updates and technical adjustments.

The products listed in this catalog are also included in SiePortal.

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)

The products will be labelled either by Siemens or Innomotics as manufacturer.

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 50.11 · 2023 as a selection and ordering reference document, and wish you every success with our products and solutions.

With kind regards,

Martin Prescher  
Head of Product Portfolio Management  
Innomotics GmbH, Low Voltage Motors, Geared Motors



# SIMOGEAR

## Gearboxes with adapter

### Motion Control



### Catalog D 50.11 · 2023

Supersedes:  
Catalog MD 50.11 · 2018

Refer to SiePortal for current updates of this catalog:  
<https://sieportal.siemens.com>

Please contact your local Siemens branch.

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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?

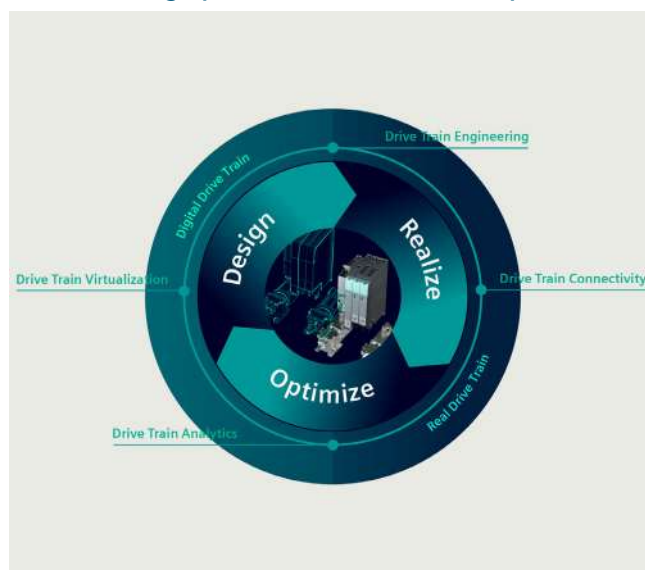
Drive technology offers the ideal entry point into the world of digitalization – for plant and machine builders as well as for users.

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

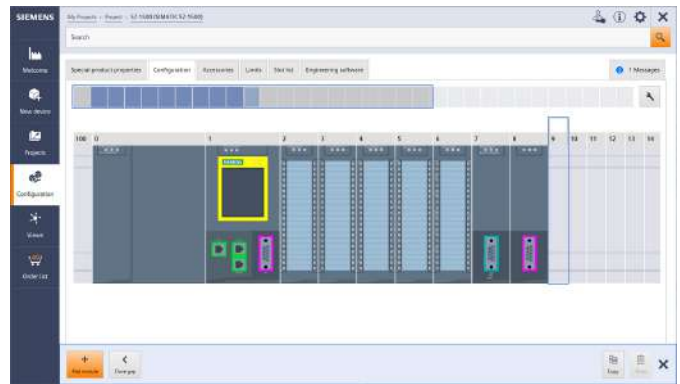
For you to get the most out of our portfolio quickly and easily.

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 SiePortal

### 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.

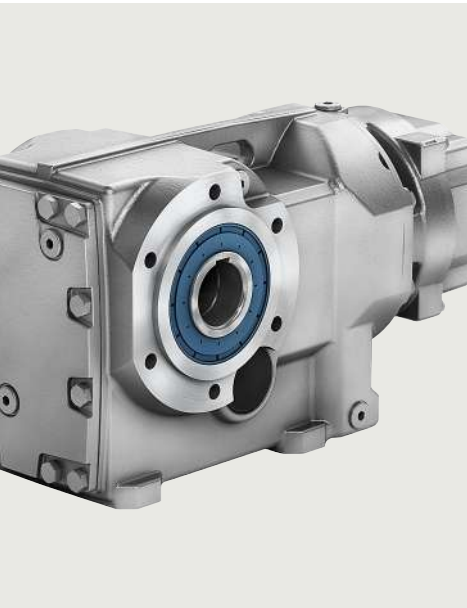
Download it now:

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

For more  
information,  
scan the  
QR code



## Introduction



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## Introduction

### Orientation







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## SIMOGEAR gearboxes with adapter


### Overview

With directly mounted, highly efficient SIMOTICS motors, SIMOGEAR gearboxes with adapter offer a broad spectrum of geared motors for the most common drive applications.

Gearboxes of size 19 and larger can be supplied with a variety of adapters which allow the attachment of motors from virtually all Siemens motor ranges in order to meet the requirements of special applications.

SIMOGEAR adapters	SIMOGEAR gearboxes	SIMOTICS motors	Fields of application
<b>Adapters for mounting an IEC motor</b>			
<b>K4 Short adapter with plug-in connection</b>			
	<ul style="list-style-type: none"> <li>• Helical gearboxes Z, D and E</li> <li>• Parallel shaft gearboxes FZ and FD</li> <li>• Bevel gearboxes B and K</li> <li>• Helical worm gearbox C</li> <li>• Worm gearbox S</li> </ul>	<ul style="list-style-type: none"> <li>• SIMOTICS GP/SD low-voltage motors</li> <li>• SIMOTICS XP explosion-protected motors</li> </ul>	<ul style="list-style-type: none"> <li>• Universal solution</li> <li>• Short design</li> </ul>
<b>K2 Coupling adapter with flexible coupling</b>			
	<ul style="list-style-type: none"> <li>• Helical gearboxes</li> <li>• Parallel shaft gearboxes</li> <li>• Bevel gearboxes</li> <li>• Helical worm gearboxes</li> </ul>	<ul style="list-style-type: none"> <li>• SIMOTICS GP/SD low-voltage motors</li> <li>• SIMOTICS XP explosion-protected motors</li> </ul>	<ul style="list-style-type: none"> <li>• Rugged solution</li> <li>• Harsher environmental conditions</li> <li>• Torsionally flexible cam coupling</li> </ul>
<b>Adapters for mounting a servo motor</b>			
<b>K5 Coupling adapter with flexible coupling exclusively for mounting defined Siemens servo motors</b>			
	<ul style="list-style-type: none"> <li>• Helical gearboxes</li> <li>• Parallel shaft gearboxes</li> <li>• Bevel gearboxes</li> <li>• Helical worm gearboxes</li> </ul>	<ul style="list-style-type: none"> <li>• SIMOTICS S-1FK2</li> <li>• SIMOTICS S-1FK7</li> <li>• SIMOTICS S-1FT7</li> <li>• SIMOTICS M-1PH8 (1PH808 and 1PH810)</li> <li>• SIMOTICS S-1FL6</li> </ul>	<ul style="list-style-type: none"> <li>• Square shape</li> <li>• Version for motor shafts without feather key</li> <li>• Compact design</li> <li>• Zero-backlash coupling</li> </ul>
<b>K8 Coupling adapter with flexible coupling for mounting a servo motor from the SIMOTICS M-1PH8 range</b>			
	<ul style="list-style-type: none"> <li>• Helical gearboxes</li> <li>• Parallel shaft gearboxes</li> <li>• Bevel gearboxes</li> <li>• Helical worm gearboxes</li> </ul>	<ul style="list-style-type: none"> <li>• SIMOTICS M-1PH8 (from 1PH813)</li> </ul>	<ul style="list-style-type: none"> <li>• Square or round shape</li> <li>• Version for motor shafts with feather key</li> <li>• Zero-backlash coupling</li> </ul>
<b>Adapters for mounting a NEMA motor</b>			
<b>K5 Short adapter with plug-in connection</b>			
	<ul style="list-style-type: none"> <li>• Helical gearboxes</li> <li>• Parallel shaft gearboxes</li> <li>• Bevel gearboxes</li> <li>• Helical worm gearboxes</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA motors</li> </ul>	<ul style="list-style-type: none"> <li>• Universal solution</li> <li>• Short design</li> </ul>
<b>K3 Coupling adapter with flexible coupling</b>			
	<ul style="list-style-type: none"> <li>• Helical gearboxes</li> <li>• Parallel shaft gearboxes</li> <li>• Bevel gearboxes</li> <li>• Helical worm gearboxes</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA motors</li> </ul>	<ul style="list-style-type: none"> <li>• Rugged solution</li> <li>• Harsher environmental conditions</li> <li>• Torsionally flexible cam coupling</li> </ul>

## Overview

SIMOGEAR adapters	SIMOGEAR gearboxes	SIMOTICS motors	Fields of application
<b>Adapters with free input shaft</b>			
<b>A/AZ</b>			
	<ul style="list-style-type: none"> <li>• Helical gearboxes</li> <li>• Parallel shaft gearboxes</li> <li>• Bevel gearboxes</li> <li>• Helical worm gearboxes</li> </ul>	-	<ul style="list-style-type: none"> <li>• Flexible solutions for mounting on motors via <ul style="list-style-type: none"> <li>- Belt pulleys,</li> <li>- chain wheels, or</li> <li>- couplings</li> </ul> </li> <li>• Adapter AZ with centering and threaded hole</li> <li>• Adapter A without centering and without threaded hole</li> </ul>

**Torque classes**

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

<b>Helical gearboxes Z and D (2-stage and 3-stage)</b>															
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
<b>Helical gearbox E (1-stage)</b>															
Size		-	-	-	39	49	-	69	-	89	109	129	149	-	-
Maximum output torque	Nm	-	-	-	65	108	-	205	-	365	565	800	1490	-	-
<b>Parallel shaft gearboxes FZ and FD (2-stage and 3-stage)</b>															
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
<b>Bevel gearbox B (2-stage)</b>															
Size		-	19	29	39	-	49	-	-	-	-	-	-	-	-
Maximum output torque	Nm	-	50	110	250	-	450	-	-	-	-	-	-	-	-
<b>Bevel gearbox K (3-stage)</b>															
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
<b>Helical worm gearbox C (2-stage)</b>															
Size		-	-	29	39	-	49	69	-	89	-	-	-	-	-
Maximum output torque	Nm	-	-	110	235	-	400	675	-	1450	-	-	-	-	-
<b>Worm gearbox S (1-stage)</b>															
Size		09	19	29	-	-	-	-	-	-	-	-	-	-	-
Maximum output torque	Nm	28	44	79	-	-	-	-	-	-	-	-	-	-	-

## Introduction

### Orientation

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## SIMOGEAR gearboxes with adapter

### Benefits

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

When developing SIMOGEAR gearboxes, 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.

2-stage SIMOGEAR bevel gearboxes 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.

#### **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), bevel gearboxes B19 to B49 (450 Nm), and helical worm gearboxes C29 and C39A (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 gearboxes, significant emphasis was placed on achieving well-balanced gearbox properties.

With SIMOGEAR gearboxes 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)

#### **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 gearboxes 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 gearboxes with venting have as standard a pressure breather valve.

#### **Modular adapters for connection to many different Siemens motor models**

The modular adapters available for SIMOGEAR gearboxes allow the attachment of numerous different motor models from the Siemens motor spectrum.

The following types of motor can be mounted:

- Standard IEC motors
- Synchronous servo motors
- Asynchronous servo motors
- Explosion-protected motors

#### **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 SiePortal.

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

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

**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 frequency 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.

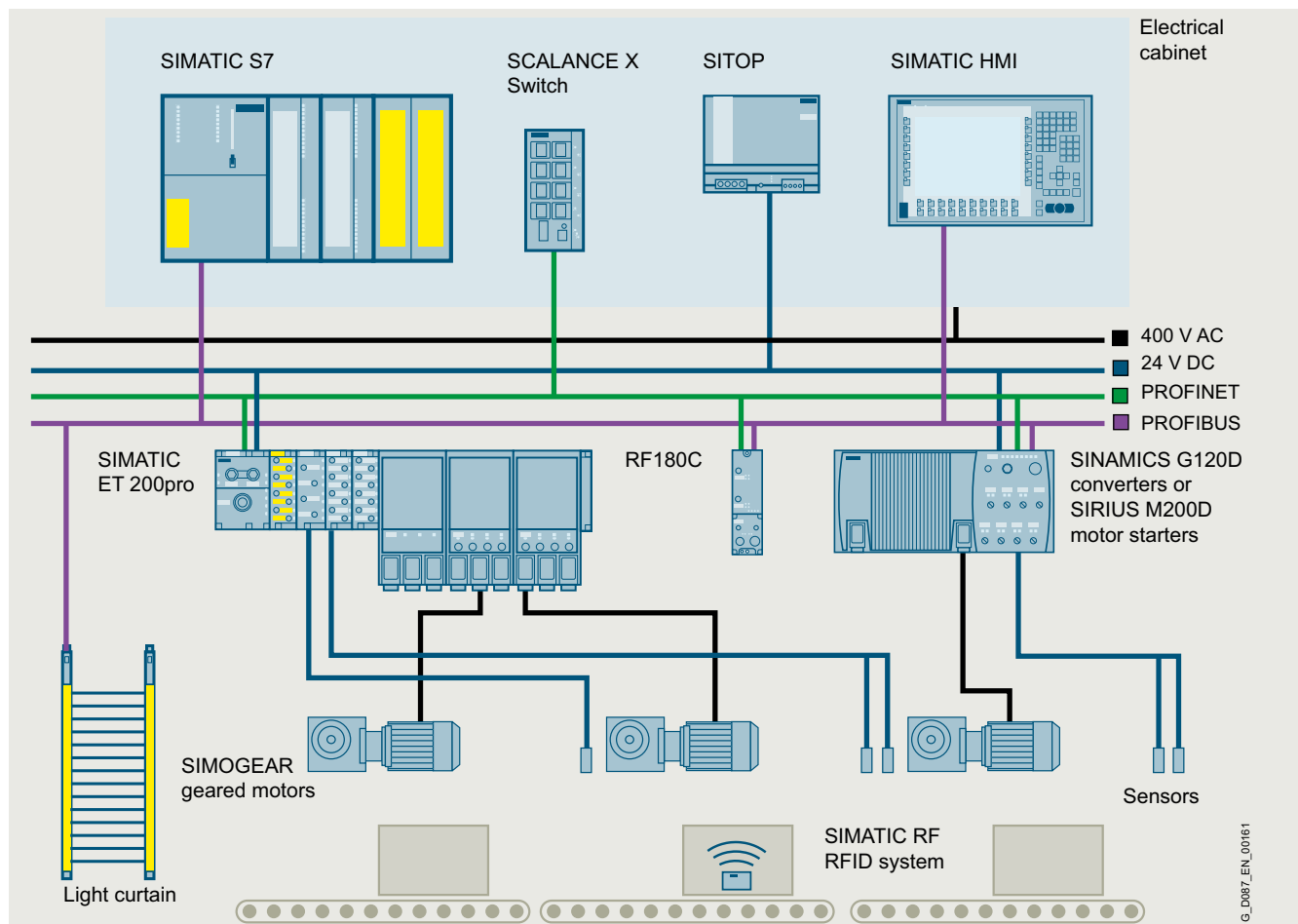


Fig. 1/1 Example of the Siemens Integrated Drive System (IDS) for sophisticated conveyor applications

## Introduction

### Orientation

## SIMOGEAR gearboxes with adapter

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 SiePortal 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 number comprises a combination of digits and letters. To obtain a better overview, the article number is split up into three, hyphenated blocks.

Example:

2KJ3105-1EA04-0AS1+D01

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 adapter type and size; and additional design characteristics are coded in the third block (data positions 13 to 16).

**Structure of the Article No.**

Data position of 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	2	K	J	3	0																
Digit, letter,	Helical gearbox Z, 2-stage	2	K	J	3	1																
letter, digit, digit	Helical gearbox D, 3-stage	2	K	J	3	2																
	Parallel shaft gearbox FZ, 2-stage	2	K	J	3	3																
	Parallel shaft gearbox FD, 3-stage	2	K	J	3	4																
	Bevel gearbox B, 2-stage	2	K	J	3	5																
	Bevel gearbox K, 3-stage	2	K	J	3	5																
	Helical worm gearbox C, 2-stage	2	K	J	3	6																
	Worm gearbox S, 1-stage	2	K	J	3	7																
<b>6th to 7th position:</b>	Gearbox size																					
Digit, digit																						
<b>8th position:</b>	Output shaft								-													
Digit																						
<b>9th position:</b>	Motor size																					
Letter, letter																						
<b>10th position:</b>	Performance indicator (customs tariff number) for gearbox without motor												A									
Letter																						
<b>11th position:</b>	Delivery without motor													0								
Letter																						
<b>12th position:</b>	Short adapter K4 with plug-in connection for mounting an IEC motor													4								
Digit, digit	Coupling adapter K2 with flexible coupling for mounting an IEC motor													2								
	Coupling adapter KS exclusively for mounting defined Siemens servo motors													1								
	Coupling adapter K8 for mounting a servo motor from the SIMOTICS M-1PH8 range													8								
	Short adapter K5 with plug-in connection for mounting a NEMA motor													5								
	Coupling adapter K3 with flexible coupling for mounting a NEMA motor													3								
	Adapter A / AZ * with free input shaft													9								
<b>13th position:</b>	Frequency, voltage														-	0						
Digit																						
<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 helical worm gearbox C worm gearbox S																				D	
	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																					

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## Introduction

Guidelines for selection and ordering

### Article number code

#### Overview

Additional order codes

Information	Input speed in continuous operation	Input power Rated motor power
when ordering	rpm	kW
Order code	<b>Y00</b>	<b>Y00</b>
Plain text specification	Y00:*AND@input speed*	Y00:*ANL@input power*
Example of plain text specification	Y00:*AND@1450* (input speed 1 450 rpm)	Y00:*ANL@1.5* (input power 1.5 kW)
Information required	ATEX version	ATEX version

#### Ordering example

A helical geared motor is required:

- Gearbox type, size Z59
- Adapter type and size K4-90
- Input power 1.5 kW
- Input speed 1500
- Output speed 49, transmission ratio  $i = 28.89$
- Solid shaft V35 x 70
- Mounting position M1

This results in the following Article No. with order codes

Data position of Article No.		1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16	-	Z	+	Order codes	Plain text specification		
Selection criteria	Requirements																									
Gearbox type, gearbox size	Helical gearbox Z, size 59	2	K	J	3	1	0	5	-	■	.	.	■	■	-	■	■	■	■	-	■	+	.	+	.	
Output shaft	Solid shaft V35 x 70	2	K	J	3	1	0	5	-	1																
Adapter size	Size 90	2	K	J	3	1	0	5	-	1	E	A														
Gearbox without motor		2	K	J	3	1	0	5	-	1	E	A	0													
Adapter type	K4 for mounting a standard IEC motor	2	K	J	3	1	0	5	-	1	E	A	0	4												
Voltage	Not relevant	2	K	J	3	1	0	5	-	1	E	A	0	4	-	0										
Mounting type	Foot-mounted design	2	K	J	3	1	0	5	-	1	E	A	0	4	-	0	A									
Transmission ratio	$i = 28.89$	2	K	J	3	1	0	5	-	1	E	A	0	4	-	0	A	S	1							
Mounting position	M1	2	K	J	3	1	0	5	-	1	E	A	0	4	-	0	A	S	1	-	Z	+	D01			
Input power, input speed	1.5 kW, 1 500 rpm	2	K	J	3	1	0	5	-	1	E	A	0	4	-	0	A	S	1	-	Z	+	D01	+	Y00	Y00:*ANL@1.5* *AND@1500*

## 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 about its main technical features.

Example of type designation of the gearbox:		F	D	A	F	S	W	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									
<b>Gearbox stages</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	
<b>Gearbox type - intermediate gearbox</b>											
<b>Gearbox type</b>	Helical gearbox									-	
<b>Gearbox stages intermediate gearbox</b>	2-stage									Z	
	3-stage									D	
<b>Gearbox size</b>	Helical gearbox, 2-stage/3-stage										19 ... 69

## Type designation of the adapters

Example of type designation for gearbox with adapter:		F	D	A	F	S	W	89	-	K4	X	(132)	-	1
<b>Gearboxes</b>														
<b>Adapters</b>														
<b>Adapter type</b>	Short adapter with plug-in connection for mounting an IEC motor									K4				
	Coupling adapter with flexible coupling for mounting an IEC motor									K2				
	Coupling adapter exclusively for mounting defined Siemens servo motors									KS				
	Coupling adapter for mounting a servo motor from the SIMOTICS M-1PH8 range									K8				
	Short adapter with plug-in connection for mounting a NEMA motor									K5				
	Coupling adapter with flexible coupling for mounting a NEMA motor									K3				
	Adapter A with free output shaft									A				
	Adapter A with free output shaft and centering									AZ				
<b>Special features</b>	Backstop										X			
<b>Motor size</b>	Mountable motor size												63 ... 315	
<b>Explosion protection</b>	ATEX version													1



## Introduction

Guidelines for selection and ordering

### Designs

#### Overview

#### Helical gearbox

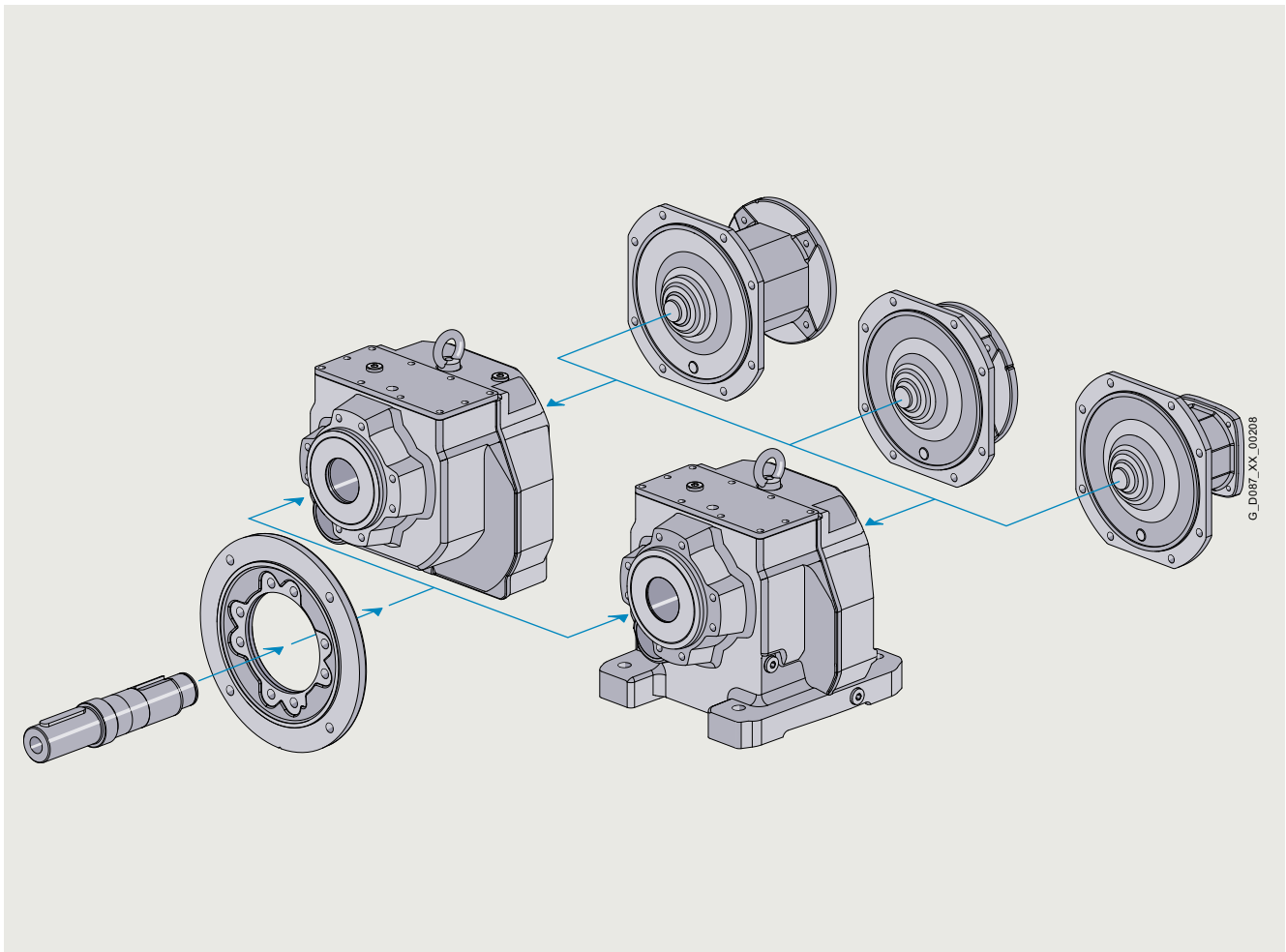


Fig. 1/2 Modular system, helical gearbox

SIMOGEAR helical gearboxes 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 (sizes 29 to 89)
- 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

## Overview

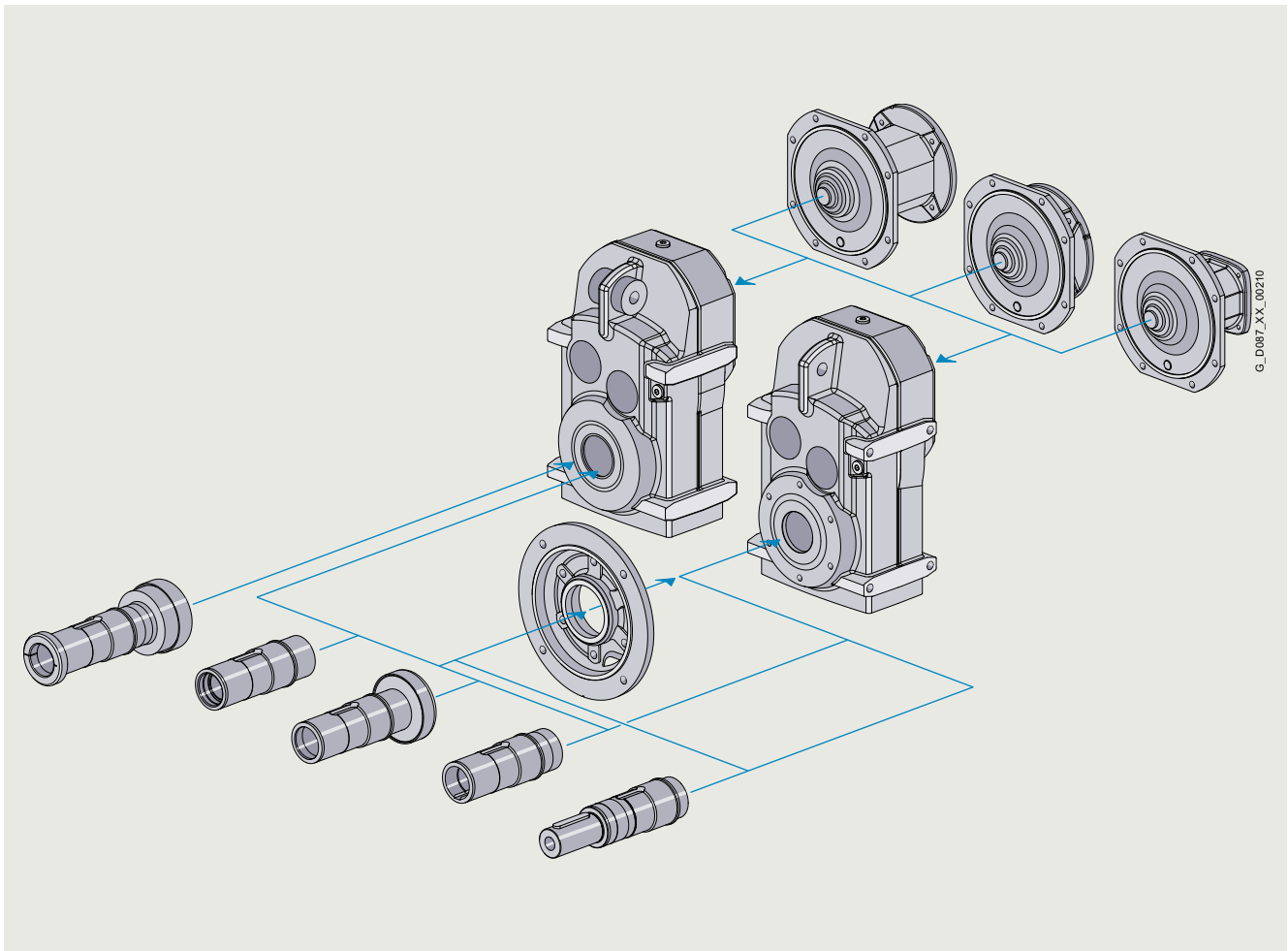
**Parallel shaft gearbox**

Fig. 1/3 Modular system, parallel shaft gearbox

SIMOGEAR parallel shaft gearboxes 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

## Introduction

Guidelines for selection and ordering

### Designs

#### Overview

#### Bevel gearbox B

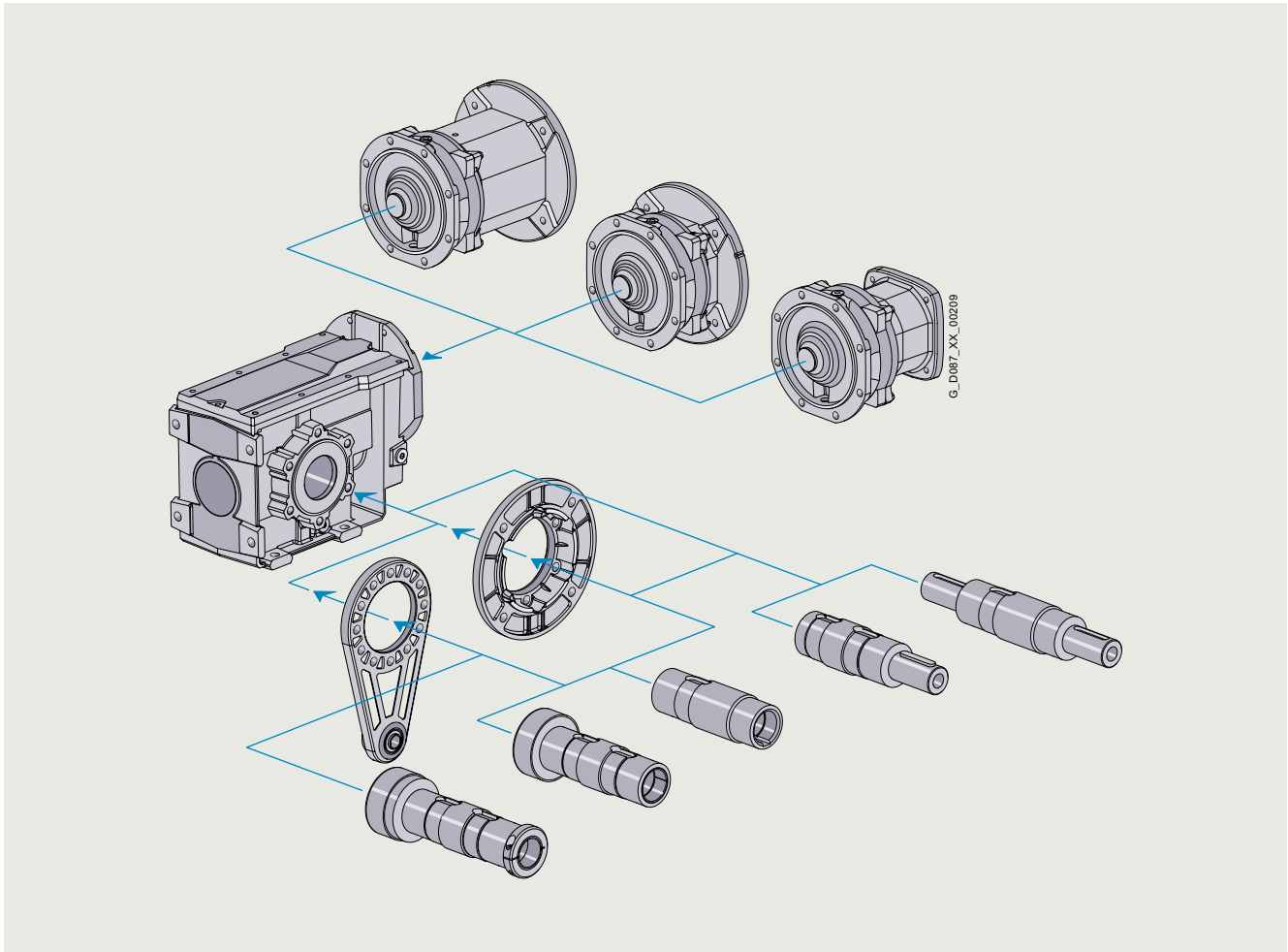


Fig. 1/4 Modular system, bevel gearbox B

SIMOGear bevel gearboxes 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

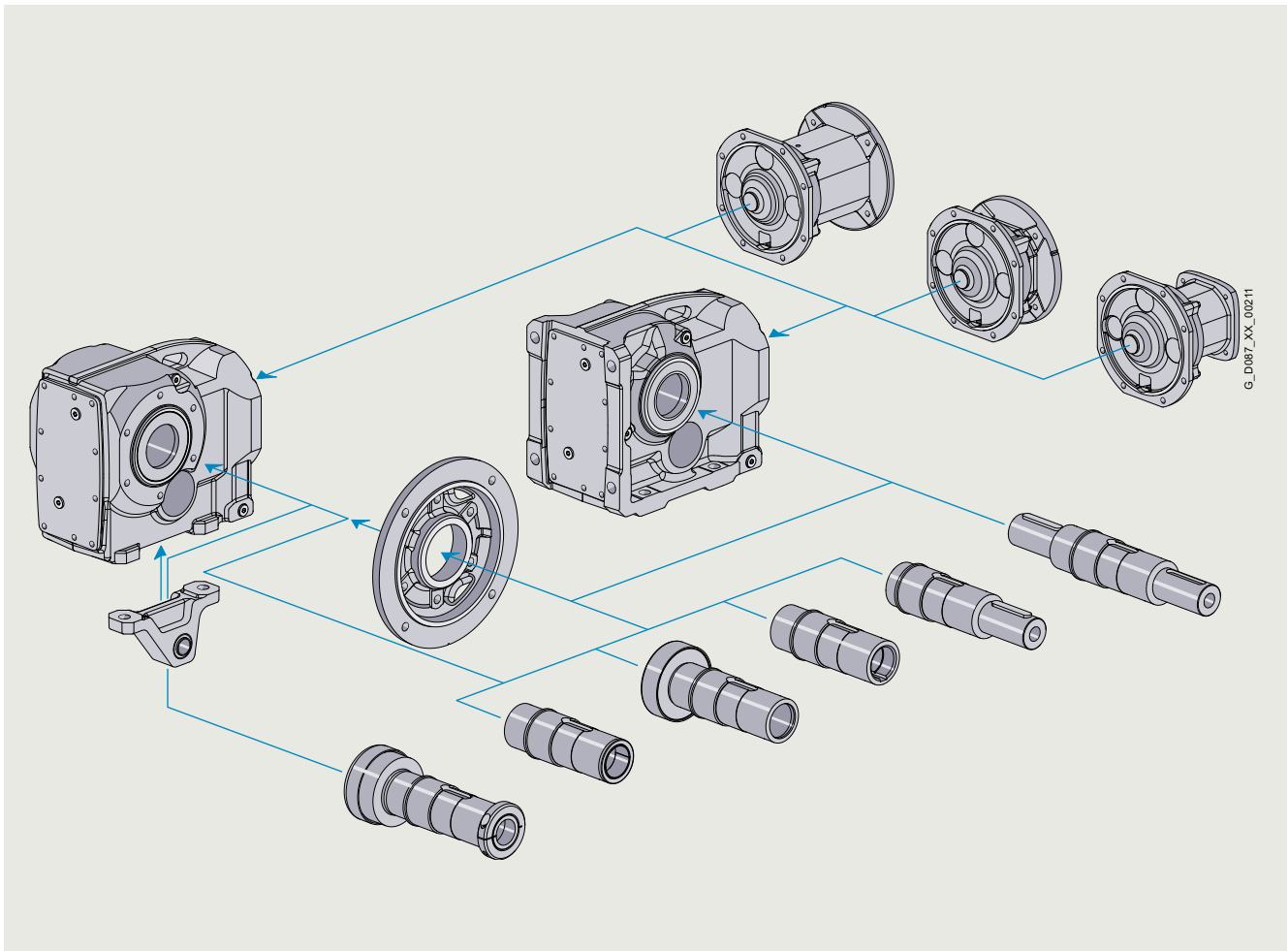
**Overview**
**Bevel gearbox K**


Fig. 1/5 Modular system, bevel gearbox K

SIMOGEAR bevel gearboxes 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

## Introduction

Guidelines for selection and ordering

### Designs

#### Overview

#### Helical worm gearbox

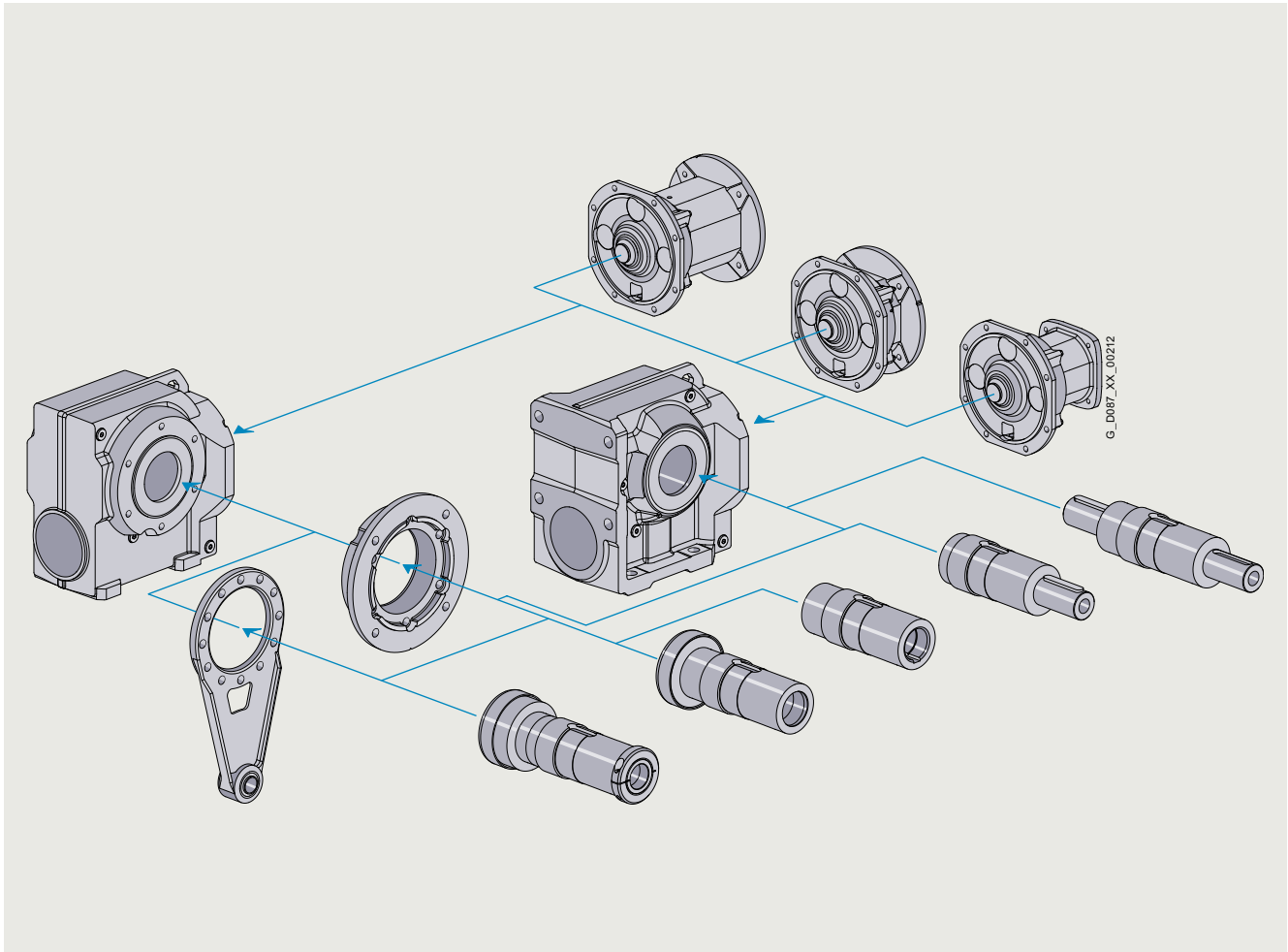


Fig. 1/6 Modular system, helical worm gearbox

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

- 2 stages
- 4 or 5 stages for especially 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

## Overview

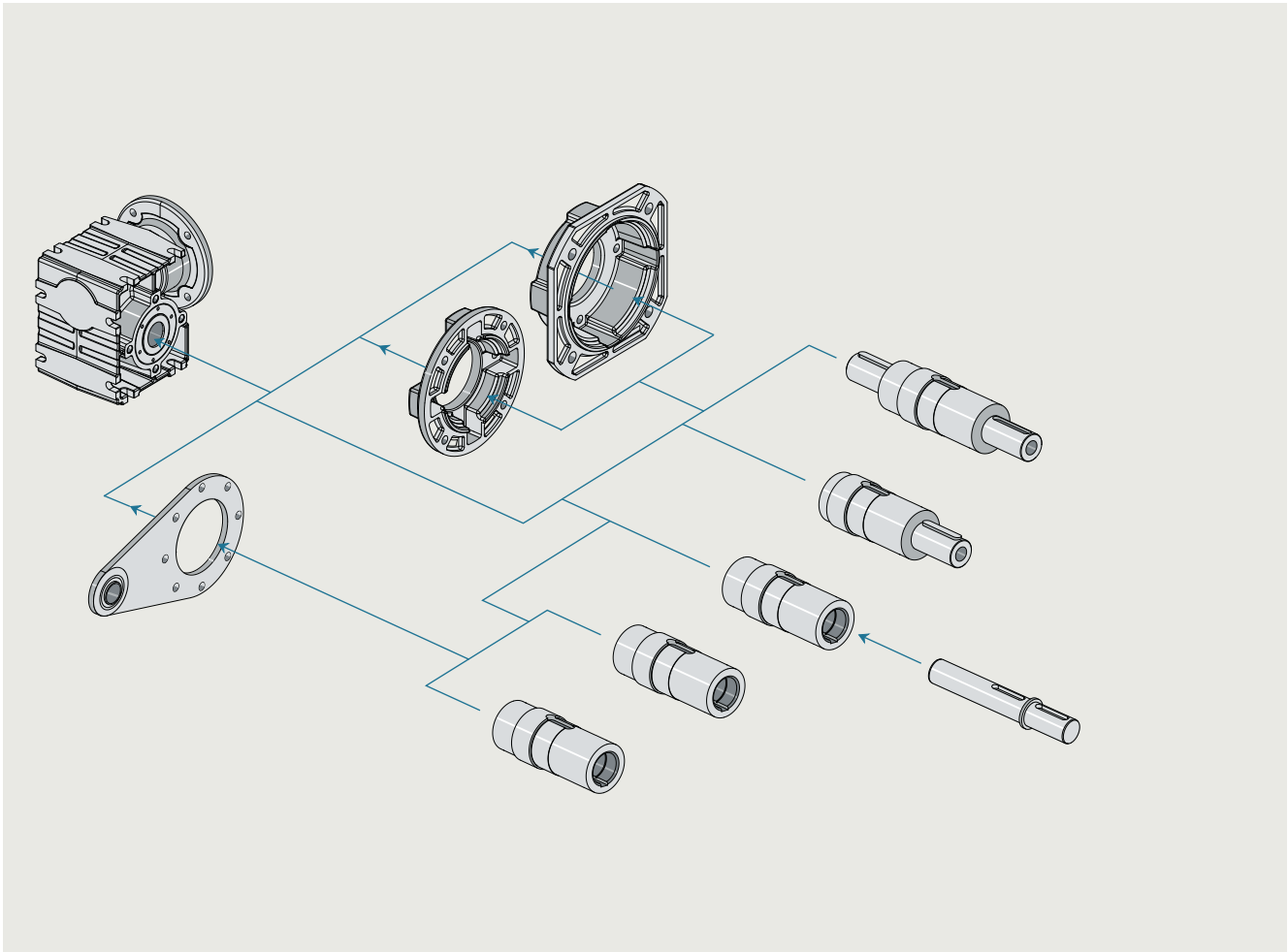
**Worm gearbox**

Fig. 1/7 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

# Introduction

## Guidelines for selection and ordering

### Notes on selection tables

1

#### 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.

The check marks indicate the permissible combinations of adapters and gearboxes.

Gearbox							Adapter										Article No.					
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2															
							KS		3.1		5.1	6.1	8.1	10.1								
									3.2		5.2	6.2		10.2								
									4.1													
									4.2													
							K8								813		816		818			
							K5	56		140	180		210	250	280		320	360				
							K3	56		140	180		210	250	280							
							A/AZ		80	90	100	112	132	160	180	200	225	250				
<b>D.29</b>																						
217.89	6.7	140	3710	10.7	0.02	7626/35		✓	✓													2KJ3202 - ■ ■ A 0 ■ - 0 ■ Q1
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓													↓
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)														(10)

Article No. supplement																
Shaft design		→ page 9/46													1 or 9	
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N		4	
	K2			D	E	F	G	H	J	K	L	M	N	P	Q	2
	KS	A	E	H	K	M										1
		B	F	J	N											
		C														
		D														
	K8								C		D		E		8	
K5	A	B	C		D	E	F		G	H				5		
K3	A	B	C		D	E	F							3		
A/AZ*			D	E	F	G	H	J	K	L	M	N		9		
Adapter type																
Gearbox mounting type		→ page 9/40													A, B, F or H	

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

- (1) Transmission ratio
- (2) Geared motor output speed at a motor speed of 1 450 rpm
- (3) Maximum gearbox output torque for service factor of  $f_B = 1$
- (4) Permissible radial force at the center of shaft extension (foot-mounted design with solid shaft)
- (5) Torsional backlash in minutes of arc for reduced-backlash version (order code G99)  
If torsional backlash is not specified, the option "reduced-backlash version" is not possible with this ratio.
- (6) Moment of inertia of the gearbox reduced to the input shaft
- (7) Ratio, number of teeth
- (8) Adapter
- (9) Possible adapter sizes
- (10) Article No.

#### Structure of the tables for efficiencies for helical worm gearboxes

##### Left-hand side

$i$	$n_{mot} = 700$ rpm				$n_{mot} = 500$ rpm				$n_{mot} = 100$ rpm				Article No.
	$n_2$	$T_{2N}$	$P_{mot}$	$\eta$	$n_2$	$T_{2N}$	$P_{mot}$	$\eta$	$n_2$	$T_{2N}$	$P_{mot}$	$\eta$	
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	(Article No. supplement, see below)
<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 - ■ ■ A 0 ■ - 0 ■ M2
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
(1)	(2)	(3)	(4)	(5)	(2)	(3)	(4)	(5)	(2)	(3)	(4)	(5)	(6)

- (1) Transmission ratio
- (2) Geared motor output speed at specified motor speed  $n_{mot}$
- (3) Maximum gearbox output torque for service factor of  $f_B = 1$
- (4) Input power
- (5) Efficiency
- (6) Article No.

## Overview

### Shaft heights

DIN 747 shaft heights for machines

Shaft height mm	Tolerance mm
≤ 250	-0.5
> 250	-1

Note:

For foot-mounted gearboxes, the mounted motor can extend below the mounting surface of the gearbox.

### Shaft extensions

DIN 748-1 cylindrical shaft extensions

Diameter tolerance:

Diameter mm	Tolerance mm
≤ 50	ISO k6
> 50	ISO m6

Centering holes according to DIN 332, form DR:

Diameter mm	Thread size
> 16 ... 21	M6
> 21 ... 24	M8
> 24 ... 30	M10
> 30 ... 38	M12
> 38 ... 50	M16
> 50 ... 85	M20
> 85 ... 130	M24
> 130	M30

Undercut acc. to DIN 509:

Diameter mm	Undercut acc. to DIN 509	Suggested construction, minimum hollow on mating piece mm
> 16 ... 18	E1.0x0.2	0.9 x 45 °
> 18 ... 50	E1.2x0.2	1.1 x 45 °
> 50 ... 80	E1.6x0.3	1.4 x 45 °
> 80 ... 125	E2.5x0.4	2.2 x 45 °

### Hollow shafts

Hollow shaft with feather key

Diameter tolerance Ø: ISO H7 measured using a mandrel gauge

Feather keys: acc. to DIN 6885-1 (high form)

Hollow shafts with shrink disk

Diameter tolerance Ø: ISO H7 with mandrel gauge, measured in the area of the shrink disk seat. Hub seat, output side equipped with journal bearing sleeve.

Minimum requirement for the design of the customer shaft:

- Elastic limit  $Re \geq 360 \text{ N/mm}^2$
- Module of elasticity, approx.  $206 \text{ kN/mm}^2$
- Without tapped hole on the face
- Customer shaft must not be in contact with shaft shoulder

Hollow shafts with splines

Splines according to DIN 5480

Hollow shafts for the SIMOLOC assembly system

The diameters of the taper bushing and the bronze bushing are designed to hold a customer shaft with tolerance h11.

Minimum requirement for the design of the customer shaft:

- Bright steel drawn EN 10278 (tolerance Ø: ISO h11)
- Elastic limit  $Re \geq 360 \text{ N/mm}^2$
- Module of elasticity, approx.  $206 \text{ kN/mm}^2$
- Straightness less than  $0.5 \text{ mm/m}$

Note:

Deviation from the specified straightness will cause radial runout of the customer's shaft. Customer shafts with minor radial runout ensure optimum operating conditions for geared motors. This has a positive impact on the service life of the drive train.

### Flanges

Centering edge tolerance:

Outer flange diameter mm	Tolerance mm
≤ 300	ISO j6
> 350	ISO h6

### Vent valves

The gearboxes are shown in the dimensional drawings with screw plugs.

If venting is required, then depending on the type of construction, an activated vent valve is installed.

The contour dimension can slightly change as a result.

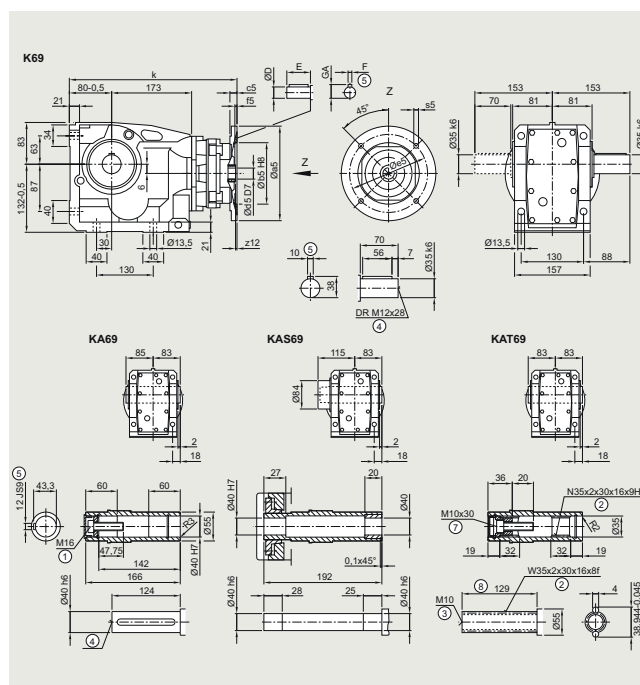


Fig. 1/8 Example, dimensional drawing



## Introduction

### General technical specifications

#### Geared motors for use worldwide

#### Explosion protection as per ATEX

SIMOGEAR gearboxes are available for operation in hazardous environments. The explosion-proof versions of the helical, parallel shaft, bevel, helical worm and worm gearboxes comply with Directive 2014/34/EU (ATEX) which came into force on April 20, 2016.

The gearboxes are approved for use in zones 1 and 2 (gases) and zones 21 and 22 (dust).

Ex atmosphere/Zone		Category	Frequency	SIMOGEAR gearbox available
G (gas and steam)	D (dust)			
0	20	1	Continuously or long-term	no
1	21	2	Infrequently	yes
2	22	3	Rarely or briefly	yes

Use in explosive atmosphere G (gases) is permissible for temperature classes T1 to T4. With use in explosive atmosphere D (dust), it must be noted that the maximum permissible temperature for the gearbox is 120 °C.

An oil level sensor can be integrated for monitoring in inaccessible areas.

#### Versions of SIMOGEAR gearboxes

Explosion protection designation	Zone				Order code
	1	2	21	22	
Ex II 2G Ex h IIC T4 Gb Ex II 2D Ex h IIIC T120 °C Db	✓	✓	✓	✓	K70
Ex II 2G Ex h IIB T4 Gb Ex II 2D Ex h IIIB T120 °C Db	✓	✓	✓	✓	K80
Ex II 3G Ex h IIB T4 Gc Ex II 3D Ex h IIIB T120 °C Dc		✓		✓	K81
Ex II 3G Ex h IIC T4 Gc Ex II 3D Ex h IIIC T120 °C Dc		✓		✓	K82

Adapter types K2, K3, K4, K5 and KS are available for mounting Siemens motors on ATEX-compliant gearboxes.

The following ATEX variants of Siemens motors can therefore be selected:

- Flameproof motors (Ex db)
- Increased safety (Ex eb)
- Non-sparking design (Ex ec)
- Motors with dust explosion protection (Ex tb/tc)

You can select the motors using the Siemens Product Configurator:

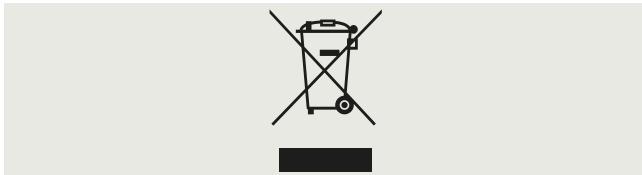
[www.siemens.com/spc](http://www.siemens.com/spc)

## 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.

### 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  $L_{pA}$  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
$L_{pA}$	AA-weighted measuring-surface sound-pressure level	dB (A)
$L_{WA}$	Sound power level	dB (A)

### Direction of rotation

#### Overview

##### 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 output side A or B.

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>

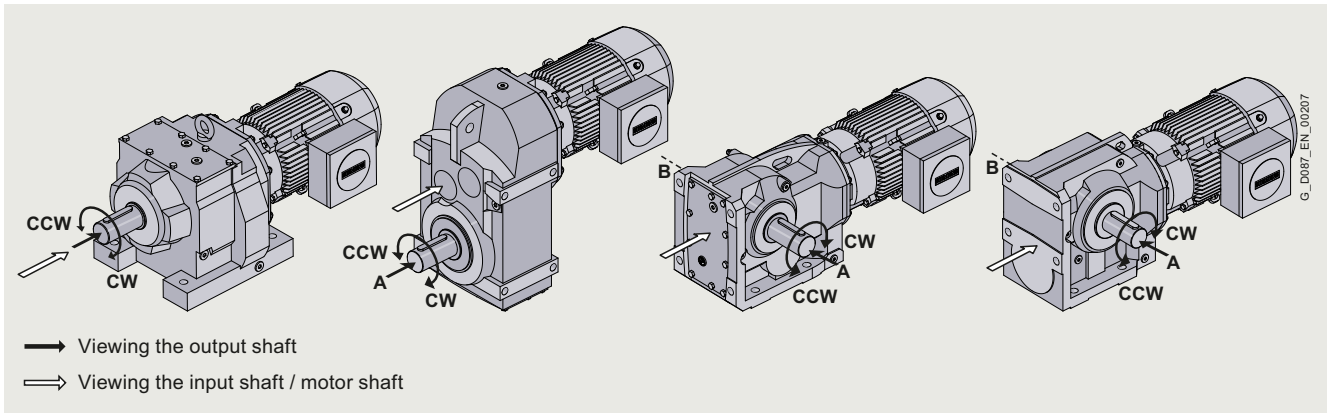


Fig. 1/9 Definition of the direction of rotation

#### Direction of rotation, input to output

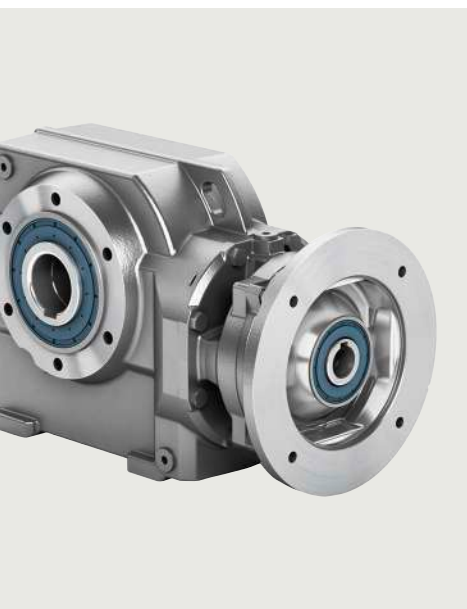
Gearbox type	Size	Gearbox stages	Output side	Direction of rotation	
				Input shaft	Output shaft
<b>Z</b>	19 ... 189	2	-	CW	CW
<b>D</b>	19 ... 189	3	-	CW	CCW
<b>E</b>	39 ... 189	1	-	CW	CCW
<b>FZ</b>	29 ... 189	2	-	CW	CW
<b>FD</b>	29 ... 189	3	-	CW	CCW
<b>B</b>	19 ... 49	2	A	CW	CW
			B	CW	CCW
<b>K</b>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

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## Configuring guide



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## Configuring guide

### Determining the drive data

#### Configuring sequence

#### Overview

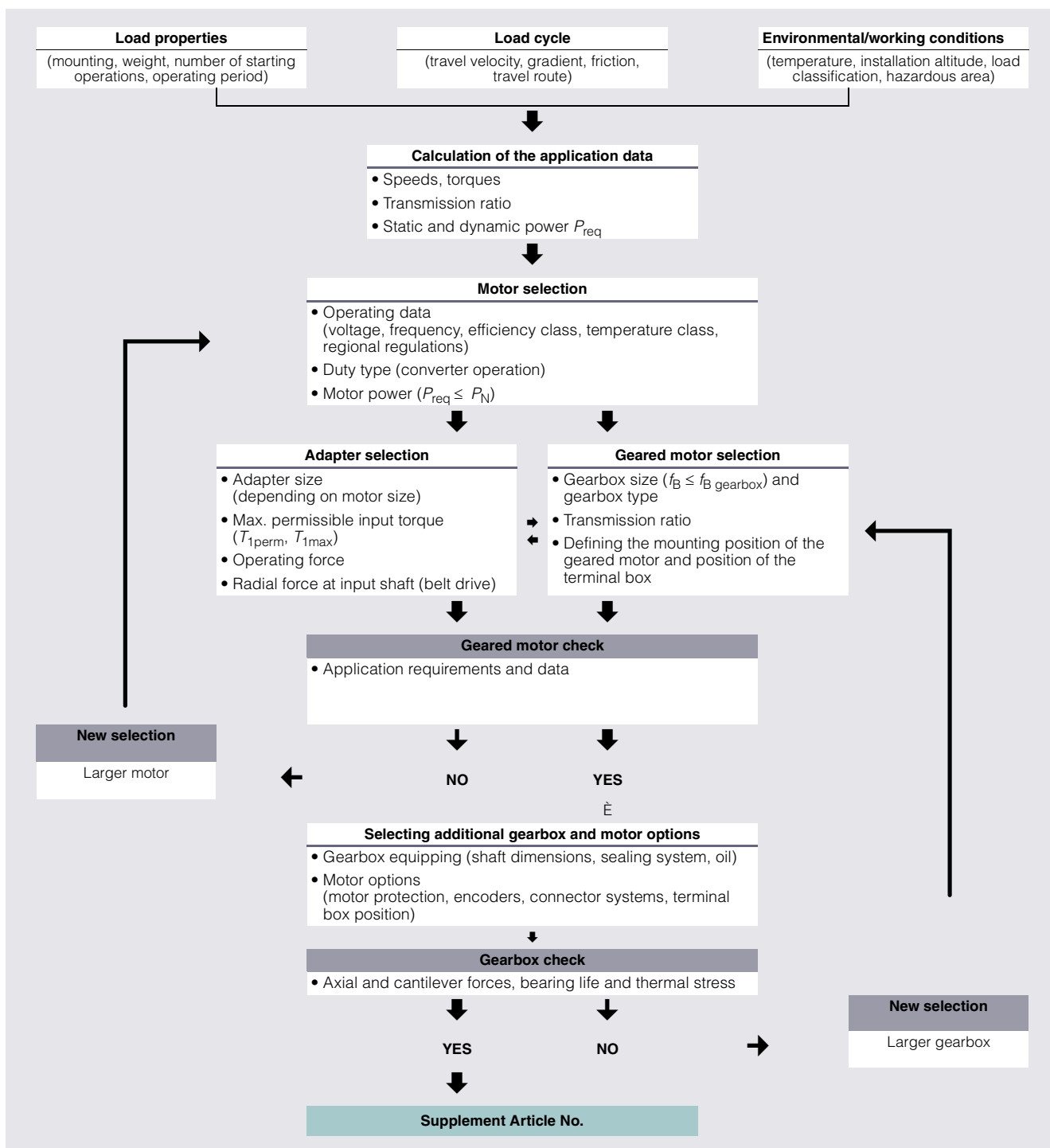
General configuring notes are provided for the standard versions in this catalog.

SIMOGEAR gearboxes permit individual solutions to be created for a wide range of drive applications. In order to select the correct drive, initially specific data for the application must 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 schematically shows how to select and dimension a geared motor using a traction drive as example. However, the specific requirements and boundary conditions associated with the application in question must always be taken into account.



General		Basic version and load data		
General	<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>Output speed:</b>	_____	rpm	
	<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		
	<b>Environmental conditions</b>			
	<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	<input type="checkbox"/> Outdoor operation <input type="checkbox"/> Increased environmental stress	
<b>Air humidity:</b>	_____	%	<input type="checkbox"/> Normal environm. stress <input type="checkbox"/> Aggressive environmental stress	
<b>Temperature:</b>	from _____	to _____	°C	
<b>Brief description of the system:</b> (e.g. sector, conveyor system, etc.)	_____			

Gearbox		Mounting and mounting position		
Gearbox	<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 <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		
	<b>Shafts</b>			
	<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	_____
	<b>Other options:</b> (e.g. axial/radial force)	_____		

Adapter		Basic version (motor connection)		
Adapter	<b>Adapter type:</b>	<input type="checkbox"/> K4 (IEC) <input type="checkbox"/> K2* (IEC) <input type="checkbox"/> KS (for servo motors) <input type="checkbox"/> K8 (for 1PH8) <input type="checkbox"/> K5 (NEMA) <input type="checkbox"/> K3* (NEMA) * selectable with backstop <input type="checkbox"/> A/AZ (free input shaft)		
	<b>Motor mounting</b>			
	<b>Article No. motor:</b>	_____		
	<b>Other options:</b> (e.g. backstop)	_____		

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

## Configuring guide

### Configuring a gearbox

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#### 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 bearing friction, and the shaft seal friction.

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

SIMOGEAR helical, parallel shaft, and bevel geared motors are extremely efficient. 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.

##### Running-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 running-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 them [Siemens Product Configurator](#).

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

In standard 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 by 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 for a 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 ( $m_{BF}$ )	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 ( $m_{BF}$ )

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

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

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 calculation 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  $m_{BF}$  is calculated as follows with reference to the gearbox and the adapter:

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

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>
$m_{BF}$	Mass acceleration factor	-
$n_1$	Input speed of the gearbox	rpm
$n_2$	Output speed of the gearbox	rpm

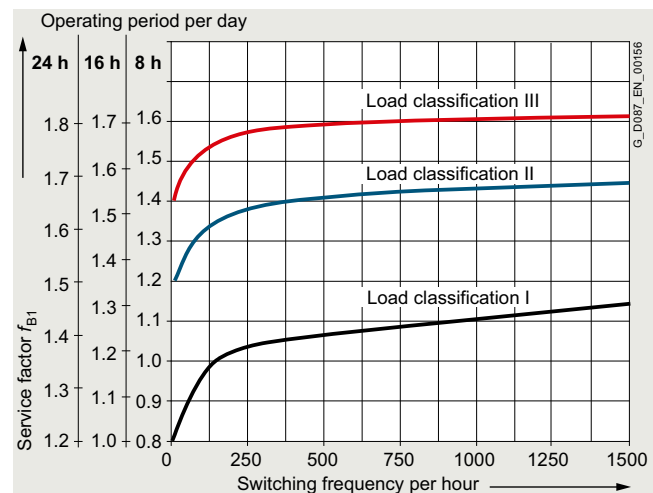


Fig. 2/1 Service factor  $f_{B1}$



## Configuring guide

### Configuring a gearbox

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#### Service factor

##### Determining the service factor for the 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

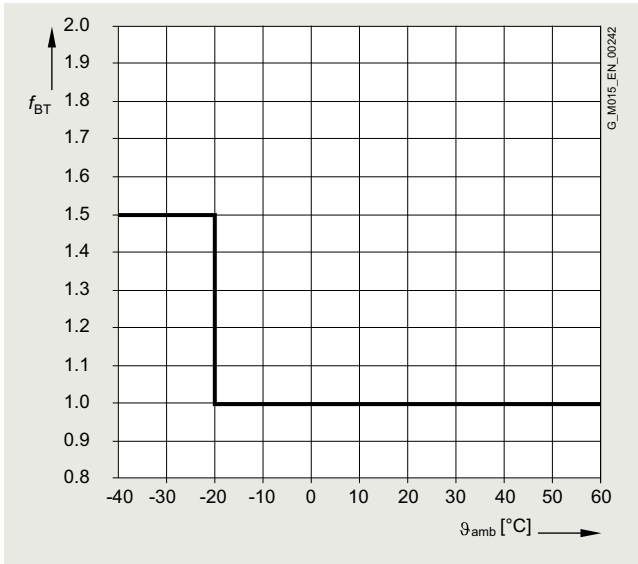


Fig. 2/2 Service factor "ambient temperature"

For helical worm and worm gearboxes

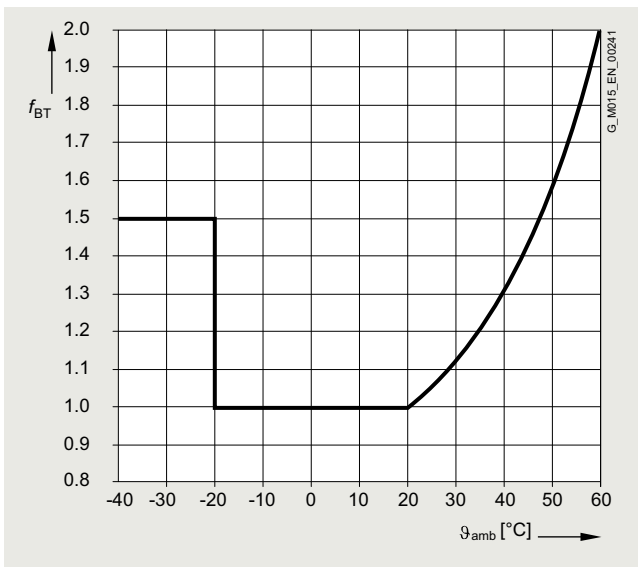


Fig. 2/3 Service factor "ambient temperature" for worm gearboxes

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

For helical worm and worm gearboxes

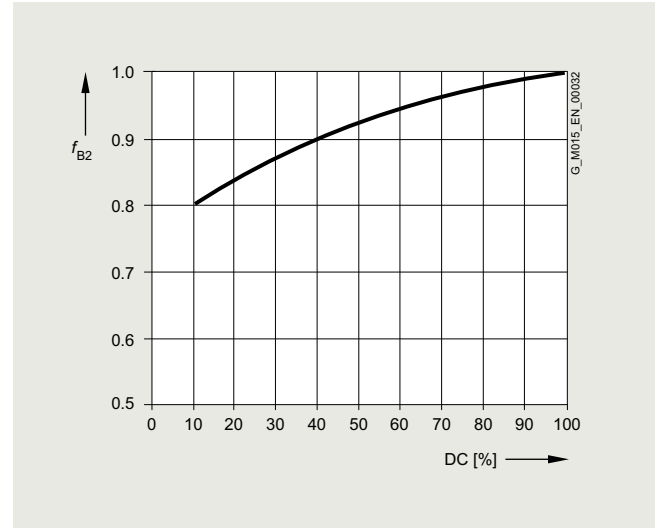


Fig. 2/4 Service factor "short-time duty"

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

### Required torque

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

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

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 a 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 the 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 than average noise levels and a lower than average 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 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  $T_{br}$  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.

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

#### 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
$T_{br\text{max}}$	Maximum braking torque	Nm

## Configuring guide

### Configuring a gearbox

#### Gearbox fastening

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

When the largest possible motor 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 quality 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	Strength 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

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 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	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	8.8	10.9

We recommend that you consider the following possibilities:

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

### 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 element  $d_0$
- Transmission element type, e.g. chain wheel
- Ambient temperature

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
Chain 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 9/46). 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 force

The permissible radial force load can be increased, taking the force application angles  $\alpha$  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 service life	h
$L_{na}$	Modified 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

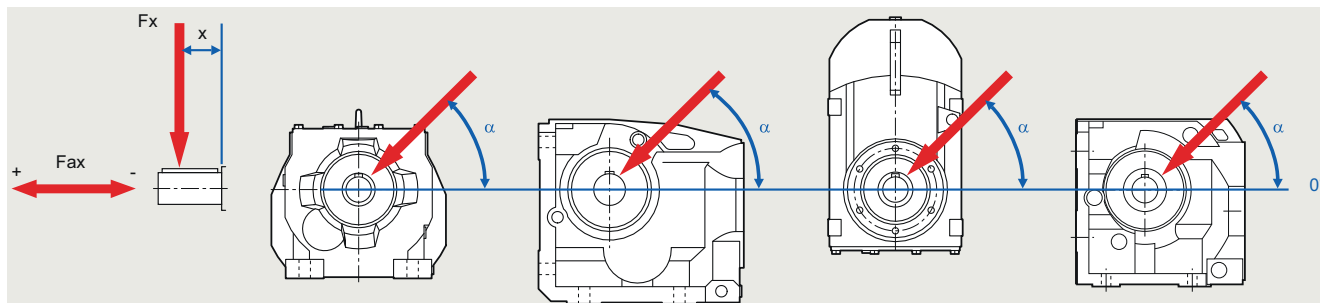


Fig. 2/5 Diagram showing force application point

##### 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>						
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>Parallel shaft gearbox 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	459.5	354.4	7728	0	110	210
189	538	433	11655	0	120	210
<b>Bevel gearbox B</b>						
29	117	97	83	0	20	40
39	143.5	113.5	209	0	30	60
49	175	140	392	0	35	70

### 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 gearbox 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 gearbox 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 gearbox 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

### Permissible torque for SIMOLOC assembly system

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

Diameter of customer shaft	Max. permissible torque $T_2$					
	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



### Permissible radial force for adapter A/AZ

The permissible radial forces on the input shaft of the adapter A/AZ depend on various factors.

The ALVIS Web Gear Calculation tool can be used for a more detailed check.

Adapter size	d1 mm	l1 mm	Permissible radial force $F_{RAperm}$ l 1/2 with 0.5x1 N
<b>Adapter A/AZ</b>			
80	19	40	Use the calculation tool ALVIS Web Gear Calculation
90	24	50	
100	28	60	
112	28	60	
132	38	80	
160	42	110	
180	48	110	
200	55	110	
225	55	110	
250	55	110	

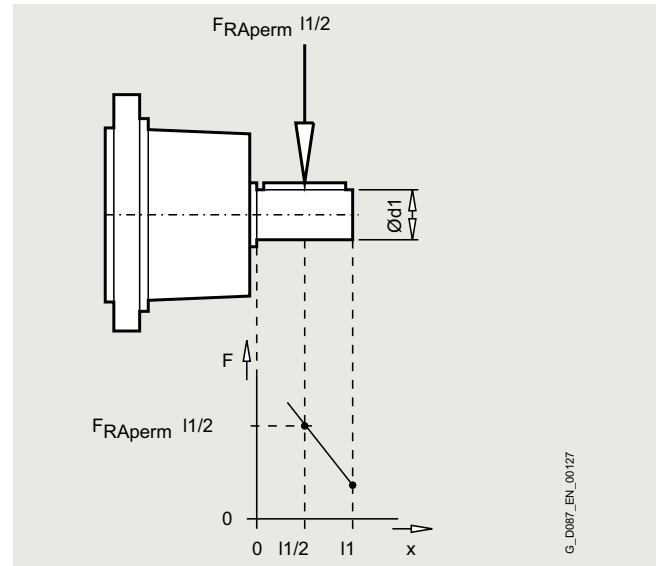


Fig. 2/7 Permissible radial force for adapter A/AZ



## Configuring guide

### Notes

2

## Helical gearboxes



<b>3/2</b>	<b>Orientation</b>	
<b>3/4</b>	<b>Transmission ratios and torques</b>	
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<b>3/53</b>	<b>Dimensions</b>	
3/53	Overview	
	<u>Helical gearbox with adapter K4</u>	
3/58	Helical gearbox Z./D.29	
3/62	Helical gearbox Z./D.39	
3/66	Helical gearbox Z./D.49	
3/69	Helical gearbox Z./D.59	
3/72	Helical gearbox Z./D.69	
3/75	Helical gearbox Z./D.79	
3/78	Helical gearbox Z./D.89	
3/83	Helical gearbox Z./D.109	
3/88	Helical gearbox Z./D.129	
3/93	Helical gearbox Z./D.149	
3/97	Helical gearbox Z./D.169	
3/101	Helical gearbox Z./D.189	
3/103	Helical gearbox E.39	
3/106	Helical gearbox E.49	
3/109	Helical gearbox E.69	
3/112	Helical gearbox E.89	
3/115	Helical gearbox E.109	
3/118	Helical gearbox E.129	
3/121	Helical gearbox E.149	
	<u>Helical gearbox with adapter K2</u>	
3/124	Helical gearbox Z./D.29 to Z./D.189	
3/126	Helical gearbox E.39 to E.149	
	<u>Helical gearbox with KS adapter</u>	
3/128	Helical gearbox Z./D.19	
3/131	Helical gearbox Z./D.29	
3/135	Helical gearbox Z./D.39	
3/139	Helical gearbox Z./D.49	
3/142	Helical gearbox Z./D.59	
3/145	Helical gearbox Z./D.69	
3/148	Helical gearbox Z./D.79	
3/151	Helical gearbox Z./D.89	
3/156	Helical gearbox Z./D.109	
3/161	Helical gearbox Z./D.129	
3/166	Helical gearbox Z./D.149	
3/170	Helical gearbox Z./D.169	
3/174	Helical gearbox Z./D.189	
3/176	Helical gearbox E.39	
3/179	Helical gearbox E.49	
3/182	Helical gearbox E.69	
3/185	Helical gearbox E.89	
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3/194	Helical gearbox E.149	
	<b>Dimensions</b>	
	<u>Helical gearbox with adapter K8</u>	
3/197	Helical gearbox Z./D.89 to Z./D.189	
3/197	Helical gearbox E.89 to E.149	
	<u>Helical gearbox with adapter K5</u>	
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3/199	Helical gearbox E.39 to E.149	
	<u>Helical gearbox with adapter K3</u>	
3/201	Helical gearbox Z./D.29 to Z./D.189	
3/202	Helical gearbox E.39 to E.149	
	<u>Helical gearbox with adapter A</u>	
3/204	Helical gearbox Z./D.29 to Z./D.189	
3/205	Helical gearbox E.39 to E.149	
	<u>Helical gearbox with adapter AZ</u>	
3/207	Helical gearbox Z./D.29 to Z./D.189	
3/208	Helical gearbox E.39 to E.149	
3/210	Helical tandem gearbox with adapter K4	
3/211	Helical tandem gearbox with adapter K2	
3/212	Helical tandem gearbox with KS adapter	
3/214	Helical tandem gearbox with adapter K5	
3/215	Helical tandem gearbox with adapter K3	
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3/217	Helical tandem gearbox with adapter AZ	
3/218	Inner contour of the flange design	

## SIMOGEAR gearboxes

Helical geared motors

### Orientation

#### SIMOGEAR helical gearboxes Z and D

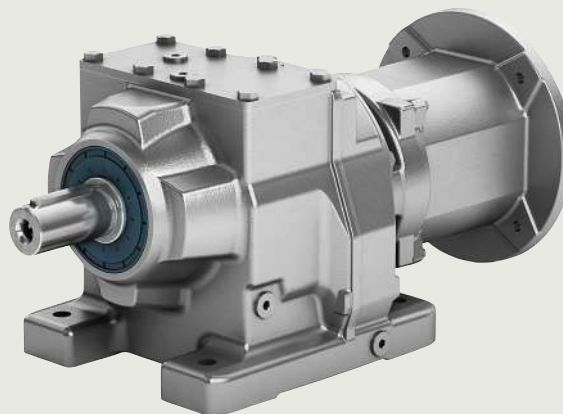


Fig. 3/1 Helical geared motor Z and D

#### SIMOGEAR helical gearbox 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 ... 57	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-stage to 6-stage)	12	140 ... 19000	325 ... 27816	7.5

SIMOGEAR helical gearboxes are available in the following versions:

#### Gearbox stages

- 2-stage or 3-stage helical gearboxes
- 1-stage helical gearboxes for high output speeds
- 4-stage to 6-stage helical gearboxes for very 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**

Gearbox							Adapter					Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-		3.2	5.2	6.2		10.2	
					$\text{kgm}^2$			4.1					
								4.2					
<b>D.19</b>													
184.86	7.8	100	1650	13.1	0.02	50468/273	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ Q1
163.69	8.9	100	1650	13.2	0.03	74481/455	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ P1
142.23	10	100	1650	13.2	0.04	64713/455	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ N1
129.30	11	100	1650	13.2	0.04	11766/91	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ M1
110.02	13	100	1650	13.2	0.06	50061/455	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ L1
100.02	14	100	1650	13.2	0.07	9102/91	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ K1
87.21	17	100	1650	13.3	0.08	1221/14	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ J1
78.07	19	100	1650	13.3	0.11	7104/91	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ H1
69.32	21	100	1650	13.3	0.13	12617/182	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ G1
63.99	23	100	1650	13.3	0.16	75702/1183	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ F1
55.59	26	100	1650	13.4	0.17	35409/637	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ E1
48.30	30	100	1650	13.3	0.18	21978/455	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ D1
43.61	33	100	1650	13.3	0.22	1221/28	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ C1
41.04	35	100	1650	13.3	0.26	4884/119	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ B1
35.78	41	100	1650	13.4	0.29	3256/91	✓						2KJ3201 - ■ ■ A0 ■ - 0 ■ A1
<b>Z.19</b>													
34.97	41	100	1650	12.6	0.02	1364/39	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ W1
30.97	47	100	1650	13.2	0.03	2013/65	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ V1
26.91	54	100	1650	13.3	0.04	1749/65	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ U1
24.46	59	100	1650	13.3	0.05	318/13	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ T1
20.82	70	100	1650	13.5	0.06	1353/65	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ S1
18.92	77	100	1790	13.5	0.08	246/13	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ R1
16.50	88	99	1900	13.7	0.09	33/2	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ Q1
14.77	98	95	1870	13.8	0.12	192/13	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ P1
13.12	111	91	1830	13.9	0.15	341/26	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ N1
12.11	120	88	1810	13.9	0.18	2046/169	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ M1
10.52	138	82	1760	14.3	0.20	957/91	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ L1
9.14	159	78	1710	13.9	0.21	594/65	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ K1
8.25	176	74	1670	14.1	0.27	33/4	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ J1
7.76	187	73	1650	14.1	0.32	132/17	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ H1
6.77	214	68	1600	14.5	0.36	88/13	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ G1
6.25	232	56	1460	20.3	0.19	1705/273	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ F1
5.43	267	53	1420	21.0	0.22	1595/294	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ E1
4.71	308	49	1380	20.3	0.22	33/7	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ D1
4.26	340	47	1350	20.7	0.29	715/168	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ C1
4.01	362	46	1330	20.7	0.32	1430/357	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ B1
3.49	415	43	1290	21.5	0.39	220/63	✓						2KJ3101 - ■ ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

Article No. supplement													
Shaft design	1 or 9		see page 9/46										
Adapter size	KS	A	B	C	D	E	F	H	J	K	M	N	1
Adapter type													
Gearbox mounting type	A, B, F or H		see page 9/40										







































































**Selection and ordering data**

Gearbox							Adapter					Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-		3.2	5.2	6.2		10.2	
					$\text{kgm}^2$			4.1					
								4.2					
<b>D.29-Z19</b>													
<b>8025</b>	0.18	140	3710	-	0.08	1966032/245	✓						<b>2KJ3221 - A0 - 0 C1</b>
<b>7183</b>	0.20	140	3710	-	0.11	251652096/35035	✓						<b>2KJ3221 - A0 - 0 B1</b>
<b>6379</b>	0.23	140	3710	-	0.13	20315664/3185	✓						<b>2KJ3221 - A0 - 0 A1</b>
<b>Z.29-D19</b>													
<b>5890</b>	0.25	140	3710	-	0.02	13399254/2275	✓						<b>2KJ3121 - A0 - 0 P1</b>
<b>5215</b>	0.28	140	3710	-	0.03	118648233/22750	✓						<b>2KJ3121 - A0 - 0 N1</b>
<b>4531</b>	0.32	140	3710	-	0.04	103087809/22750	✓						<b>2KJ3121 - A0 - 0 M1</b>
<b>4119</b>	0.35	140	3710	-	0.04	9371619/2275	✓						<b>2KJ3121 - A0 - 0 L1</b>
<b>3505</b>	0.41	140	3710	-	0.06	79747173/22750	✓						<b>2KJ3121 - A0 - 0 K1</b>
<b>3187</b>	0.45	140	3710	-	0.07	7249743/2275	✓						<b>2KJ3121 - A0 - 0 J1</b>
<b>2779</b>	0.52	140	3710	-	0.08	1945053/700	✓						<b>2KJ3121 - A0 - 0 H1</b>
<b>2487</b>	0.58	140	3710	-	0.11	5658336/2275	✓						<b>2KJ3121 - A0 - 0 G1</b>
<b>2209</b>	0.66	140	3710	-	0.13	20098881/9100	✓						<b>2KJ3121 - A0 - 0 F1</b>
<b>2039</b>	0.71	140	3710	-	0.16	60296643/29575	✓						<b>2KJ3121 - A0 - 0 E1</b>
<b>1771</b>	0.82	140	3710	-	0.17	56406537/31850	✓						<b>2KJ3121 - A0 - 0 D1</b>
<b>1539</b>	0.94	140	3710	-	0.18	17505477/11375	✓						<b>2KJ3121 - A0 - 0 C1</b>
<b>1389</b>	1.0	140	3710	-	0.22	1945053/1400	✓						<b>2KJ3121 - A0 - 0 B1</b>
<b>1308</b>	1.1	140	3710	-	0.26	3890106/2975	✓						<b>2KJ3121 - A0 - 0 A1</b>
<b>Z.29-Z19</b>													
<b>1114</b>	1.3	140	3710	-	0.02	362142/325	✓						<b>2KJ3120 - A0 - 0 P1</b>
<b>987</b>	1.5	140	3710	-	0.03	3206709/3250	✓						<b>2KJ3120 - A0 - 0 N1</b>
<b>857</b>	1.7	140	3710	-	0.04	2786157/3250	✓						<b>2KJ3120 - A0 - 0 M1</b>
<b>779</b>	1.9	140	3710	-	0.05	253287/325	✓						<b>2KJ3120 - A0 - 0 L1</b>
<b>663</b>	2.2	140	3710	-	0.07	2155329/3250	✓						<b>2KJ3120 - A0 - 0 K1</b>
<b>603</b>	2.4	140	3710	-	0.08	195939/325	✓						<b>2KJ3120 - A0 - 0 J1</b>
<b>526</b>	2.8	140	3710	-	0.09	52569/100	✓						<b>2KJ3120 - A0 - 0 H1</b>
<b>471</b>	3.1	140	3710	-	0.12	152928/325	✓						<b>2KJ3120 - A0 - 0 G1</b>
<b>418</b>	3.5	140	3710	-	0.15	543213/1300	✓						<b>2KJ3120 - A0 - 0 F1</b>
<b>386</b>	3.8	140	3710	-	0.18	1629639/4225	✓						<b>2KJ3120 - A0 - 0 E1</b>
<b>335.06</b>	4.3	140	3710	-	0.20	1524501/4550	✓						<b>2KJ3120 - A0 - 0 D1</b>
<b>291.15</b>	5.0	140	3710	-	0.21	473121/1625	✓						<b>2KJ3120 - A0 - 0 C1</b>
<b>262.85</b>	5.5	140	3710	-	0.27	52569/200	✓						<b>2KJ3120 - A0 - 0 B1</b>
<b>247.38</b>	5.9	140	3710	-	0.32	105138/425	✓						<b>2KJ3120 - A0 - 0 A1</b>

1) Only in conjunction with reduced-backlash version

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 9/46
Adapter size	<b>KS</b>	A B C D E F H J K M N
Adapter type		
Gearbox mounting type	<b>A, B, F or H</b>	see page 9/40

## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter					Article No.	
<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi$ <sup>1)</sup>	$J_G$ 10 <sup>-4</sup> kgm <sup>2</sup>	$R_{ex}$	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	10.1 10.2	(Article No. supplement, see below)
<b>D.39-D19</b>													
<b>8760</b>	0.17	200	4370	-	0.08	744588/85	✓						2KJ3223 - ■ A0 ■ - 0 ■ A1
<b>Z.39-D19</b>													
<b>8075</b>	0.18	200	4370	-	0.02	201872/25	✓						2KJ3123 - ■ A0 ■ - 0 ■ P1
<b>7150</b>	0.2	200	4370	-	0.03	893772/125	✓						2KJ3123 - ■ A0 ■ - 0 ■ N1
<b>6212</b>	0.23	200	4370	-	0.04	776556/125	✓						2KJ3123 - ■ A0 ■ - 0 ■ M1
<b>5648</b>	0.26	200	4370	-	0.04	141192/25	✓						2KJ3123 - ■ A0 ■ - 0 ■ L1
<b>4806</b>	0.3	200	4370	-	0.06	600732/125	✓						2KJ3123 - ■ A0 ■ - 0 ■ K1
<b>4369</b>	0.33	200	4370	-	0.07	109224/25	✓						2KJ3123 - ■ A0 ■ - 0 ■ J1
<b>3810</b>	0.38	200	4370	-	0.08	95238/25	✓						2KJ3123 - ■ A0 ■ - 0 ■ H1
<b>3410</b>	0.43	200	4370	-	0.11	85248/25	✓						2KJ3123 - ■ A0 ■ - 0 ■ G1
<b>3028</b>	0.48	200	4370	-	0.13	75702/25	✓						2KJ3123 - ■ A0 ■ - 0 ■ F1
<b>2795</b>	0.52	200	4370	-	0.16	908424/325	✓						2KJ3123 - ■ A0 ■ - 0 ■ E1
<b>2428</b>	0.6	200	4370	-	0.17	424908/175	✓						2KJ3123 - ■ A0 ■ - 0 ■ D1
<b>2110</b>	0.69	200	4370	-	0.18	263736/125	✓						2KJ3123 - ■ A0 ■ - 0 ■ C1
<b>1905</b>	0.76	200	4370	-	0.22	47619/25	✓						2KJ3123 - ■ A0 ■ - 0 ■ B1
<b>1793</b>	0.81	200	4370	-	0.26	761904/425	✓						2KJ3123 - ■ A0 ■ - 0 ■ A1
<b>Z.39-Z19</b>													
<b>1528</b>	0.95	200	4370	-	0.02	38192/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ S1
<b>1353</b>	1.1	200	4370	-	0.03	169092/125	✓						2KJ3122 - ■ A0 ■ - 0 ■ R1
<b>1175</b>	1.2	200	4370	-	0.04	146916/125	✓						2KJ3122 - ■ A0 ■ - 0 ■ Q1
<b>1068</b>	1.4	200	4370	-	0.05	26712/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ P1
<b>909</b>	1.6	200	4370	-	0.07	113652/125	✓						2KJ3122 - ■ A0 ■ - 0 ■ N1
<b>827</b>	1.8	200	4370	-	0.08	20664/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ M1
<b>721</b>	2.0	200	4370	-	0.09	18018/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ L1
<b>645</b>	2.2	200	4370	-	0.12	16128/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ K1
<b>573</b>	2.5	200	4370	-	0.15	14322/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ J1
<b>529</b>	2.7	200	4370	-	0.18	171864/325	✓						2KJ3122 - ■ A0 ■ - 0 ■ H1
<b>459</b>	3.2	200	4370	-	0.20	11484/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ G1
<b>399</b>	3.6	200	4370	-	0.21	49896/125	✓						2KJ3122 - ■ A0 ■ - 0 ■ F1
<b>360</b>	4.0	200	4370	-	0.27	9009/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ E1
<b>339.16</b>	4.3	200	4370	-	0.32	144144/425	✓						2KJ3122 - ■ A0 ■ - 0 ■ D1
<b>295.68</b>	4.9	200	4370	-	0.36	7392/25	✓						2KJ3122 - ■ A0 ■ - 0 ■ C1
<b>272.80</b>	5.3	200	4370	-	0.19	1364/5	✓						2KJ3122 - ■ A0 ■ - 0 ■ B1
<b>236.97</b>	6.1	200	4370	-	0.22	8294/35	✓						2KJ3122 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

Article No. supplement													
Shaft design	1 or 9			see page 9/46									
Adapter size	KS	A	B	C	D	E	F	H	J	K	M	N	1
Adapter type													
Gearbox mounting type	A, B, F or H			see page 9/40									

**Selection and ordering data**

Gearbox							Adapter					Article No.	
<i>i</i>	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-		3.2	5.2	6.2		10.2	
					$kgm^2$			4.1					
								4.2					
<b>D.49-D19</b>													
<b>13709</b>	0.11	320	5780	-	0.06	9980343/728	✓						2KJ3225 - ■ A0 ■ - 0 ■ D1
<b>12463</b>	0.12	320	5780	-	0.07	49901715/4004	✓						2KJ3225 - ■ A0 ■ - 0 ■ C1
<b>10867</b>	0.13	320	5780	-	0.08	1217115/112	✓						2KJ3225 - ■ A0 ■ - 0 ■ B1
<b>9727</b>	0.15	320	5780	-	0.11	9736920/1001	✓						2KJ3225 - ■ A0 ■ - 0 ■ A1
<b>Z.49-D19</b>													
<b>9638</b>	0.15	320	5900	-	0.02	52625507/5460	✓						2KJ3125 - ■ A0 ■ - 0 ■ P1
<b>8535</b>	0.17	320	5900	-	0.03	310660251/36400	✓						2KJ3125 - ■ A0 ■ - 0 ■ N1
<b>7415</b>	0.20	320	5900	-	0.04	269917923/36400	✓						2KJ3125 - ■ A0 ■ - 0 ■ M1
<b>6741</b>	0.22	320	5900	-	0.04	24537993/3640	✓						2KJ3125 - ■ A0 ■ - 0 ■ L1
<b>5736</b>	0.25	320	5900	-	0.06	208804431/36400	✓						2KJ3125 - ■ A0 ■ - 0 ■ K1
<b>5215</b>	0.28	320	5900	-	0.07	18982221/3640	✓						2KJ3125 - ■ A0 ■ - 0 ■ J1
<b>4547</b>	0.32	320	5900	-	0.08	5092791/1120	✓						2KJ3125 - ■ A0 ■ - 0 ■ H1
<b>4070</b>	0.36	320	5900	-	0.11	1851924/455	✓						2KJ3125 - ■ A0 ■ - 0 ■ G1
<b>3614</b>	0.40	320	5900	-	0.13	52625507/14560	✓						2KJ3125 - ■ A0 ■ - 0 ■ F1
<b>3336</b>	0.43	320	5900	-	0.16	157876521/47320	✓						2KJ3125 - ■ A0 ■ - 0 ■ E1
<b>2898</b>	0.50	320	5900	-	0.17	147690939/50960	✓						2KJ3125 - ■ A0 ■ - 0 ■ D1
<b>2518</b>	0.58	320	5900	-	0.18	45835119/18200	✓						2KJ3125 - ■ A0 ■ - 0 ■ C1
<b>2274</b>	0.64	320	5900	-	0.22	5092791/2240	✓						2KJ3125 - ■ A0 ■ - 0 ■ B1
<b>2140</b>	0.68	320	5900	-	0.26	5092791/2380	✓						2KJ3125 - ■ A0 ■ - 0 ■ A1
<b>Z.49-Z19</b>													
<b>1823</b>	0.80	320	5900	-	0.02	1422311/780	✓						2KJ3124 - ■ A0 ■ - 0 ■ S1
<b>1615</b>	0.90	320	5900	-	0.03	8396223/5200	✓						2KJ3124 - ■ A0 ■ - 0 ■ R1
<b>1403</b>	1.0	320	5900	-	0.04	7295079/5200	✓						2KJ3124 - ■ A0 ■ - 0 ■ Q1
<b>1275</b>	1.1	320	5900	-	0.05	663189/520	✓						2KJ3124 - ■ A0 ■ - 0 ■ P1
<b>1085</b>	1.3	320	5900	-	0.07	5643363/5200	✓						2KJ3124 - ■ A0 ■ - 0 ■ N1
<b>987</b>	1.5	320	5900	-	0.08	513033/520	✓						2KJ3124 - ■ A0 ■ - 0 ■ M1
<b>860</b>	1.7	320	5900	-	0.09	137643/160	✓						2KJ3124 - ■ A0 ■ - 0 ■ L1
<b>770</b>	1.9	320	5900	-	0.12	50052/65	✓						2KJ3124 - ■ A0 ■ - 0 ■ K1
<b>684</b>	2.1	320	5900	-	0.15	1422311/2080	✓						2KJ3124 - ■ A0 ■ - 0 ■ J1
<b>631</b>	2.3	320	5900	-	0.18	4266933/6760	✓						2KJ3124 - ■ A0 ■ - 0 ■ H1
<b>548</b>	2.6	320	5900	-	0.20	3991647/7280	✓						2KJ3124 - ■ A0 ■ - 0 ■ G1
<b>476</b>	3.0	320	5900	-	0.21	1238787/2600	✓						2KJ3124 - ■ A0 ■ - 0 ■ F1
<b>430</b>	3.4	320	5900	-	0.27	137643/320	✓						2KJ3124 - ■ A0 ■ - 0 ■ E1
<b>405</b>	3.6	320	5900	-	0.32	137643/340	✓						2KJ3124 - ■ A0 ■ - 0 ■ D1
<b>353</b>	4.1	320	5900	-	0.36	45881/130	✓						2KJ3124 - ■ A0 ■ - 0 ■ C1
<b>325.62</b>	4.5	320	5900	-	0.19	1422311/4368	✓						2KJ3124 - ■ A0 ■ - 0 ■ B1
<b>282.85</b>	5.1	320	5900	-	0.22	1330549/4704	✓						2KJ3124 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 9/46											
Adapter size	<b>KS</b>	<b>A</b>	<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>							<b>1</b>
		<b>B</b>	<b>F</b>	<b>J</b>		<b>N</b>							
		<b>C</b>											
		<b>D</b>											
Adapter type													
Gearbox mounting type	<b>A, B, F or H</b>	see page 9/40											

## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter					Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-		3.2	5.2	6.2		10.2	
<b>D.59-D19</b>													
14985	0.10	450	7660	-	0.06	10908747/728	✓						2KJ3227 - ■ A0 ■ - 0 ■ D1
13622	0.11	450	7660	-	0.07	54543735/4004	✓						2KJ3227 - ■ A0 ■ - 0 ■ C1
11878	0.12	450	7660	-	0.08	1330335/112	✓						2KJ3227 - ■ A0 ■ - 0 ■ B1
10632	0.14	450	7660	-	0.11	10642680/1001	✓						2KJ3227 - ■ A0 ■ - 0 ■ A1
<b>D.59-D19</b>													
739	2.0	450	7660	-	0.22	579275/784	✓						2KJ3226 - ■ A0 ■ - 0 ■ J1
642	2.3	450	7660	-	0.23	35955/56	✓						2KJ3226 - ■ A0 ■ - 0 ■ H1
580	2.5	450	7660	-	0.30	259675/448	✓						2KJ3226 - ■ A0 ■ - 0 ■ G1
546	2.7	450	7660	-	0.35	15275/28	✓						2KJ3226 - ■ A0 ■ - 0 ■ F1
507	2.9	450	7660	-	0.20	1362295/2688	✓						2KJ3226 - ■ A0 ■ - 0 ■ E1
440	3.3	450	7660	-	0.23	16567265/37632	✓						2KJ3226 - ■ A0 ■ - 0 ■ D1
383	3.8	450	7660	-	0.24	342771/896	✓						2KJ3226 - ■ A0 ■ - 0 ■ C1
345.36	4.2	450	7660	-	0.31	7426705/21504	✓						2KJ3226 - ■ A0 ■ - 0 ■ B1
325.05	4.5	450	7660	-	0.37	436865/1344	✓						2KJ3226 - ■ A0 ■ - 0 ■ A1
<b>Z.59-D19</b>													
9577	0.15	450	7660	-	0.02	5229173/546	✓						2KJ3127 - ■ A0 ■ - 0 ■ P1
8480	0.17	450	7660	-	0.03	30868989/3640	✓						2KJ3127 - ■ A0 ■ - 0 ■ N1
7368	0.20	450	7660	-	0.04	26820597/3640	✓						2KJ3127 - ■ A0 ■ - 0 ■ M1
6698	0.22	450	7660	-	0.04	26820597/4004	✓						2KJ3127 - ■ A0 ■ - 0 ■ L1
5700	0.25	450	7660	-	0.06	20748009/3640	✓						2KJ3127 - ■ A0 ■ - 0 ■ K1
5182	0.28	450	7660	-	0.07	20748009/4004	✓						2KJ3127 - ■ A0 ■ - 0 ■ J1
4518	0.32	450	7660	-	0.08	506049/112	✓						2KJ3127 - ■ A0 ■ - 0 ■ H1
4044	0.36	450	7660	-	0.11	4048392/1001	✓						2KJ3127 - ■ A0 ■ - 0 ■ G1
3591	0.40	450	7660	-	0.13	5229173/1456	✓						2KJ3127 - ■ A0 ■ - 0 ■ F1
3315	0.44	450	7660	-	0.16	15687519/4732	✓						2KJ3127 - ■ A0 ■ - 0 ■ E1
2880	0.50	450	7660	-	0.17	14675421/5096	✓						2KJ3127 - ■ A0 ■ - 0 ■ D1
2502	0.58	450	7660	-	0.18	4554441/1820	✓						2KJ3127 - ■ A0 ■ - 0 ■ C1
2259	0.64	450	7660	-	0.22	506049/224	✓						2KJ3127 - ■ A0 ■ - 0 ■ B1
2126	0.68	450	7660	-	0.26	506049/238	✓						2KJ3127 - ■ A0 ■ - 0 ■ A1
<b>Z.59-Z19</b>													
1812	0.80	450	7660	-	0.02	141329/78	✓						2KJ3126 - ■ A0 ■ - 0 ■ G1
1604	0.90	450	7660	-	0.03	834297/520	✓						2KJ3126 - ■ A0 ■ - 0 ■ F1
1394	1.0	450	7660	-	0.04	724881/520	✓						2KJ3126 - ■ A0 ■ - 0 ■ E1
1267	1.1	450	7660	-	0.05	724881/572	✓						2KJ3126 - ■ A0 ■ - 0 ■ D1
1078	1.3	450	7660	-	0.07	560757/520	✓						2KJ3126 - ■ A0 ■ - 0 ■ C1
980	1.5	450	7660	-	0.08	560757/572	✓						2KJ3126 - ■ A0 ■ - 0 ■ B1
855	1.7	450	7660	-	0.09	13677/16	✓						2KJ3126 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

Article No. supplement													
Shaft design	1 or 9			see page 9/46									
Adapter size	KS			A	E	H	K	M	1				
				B	F	J		N					
				C									
				D									
Adapter type													
Gearbox mounting type	A, B, F or H			see page 9/40									

## Selection and ordering data

Gearbox							Adapter					Article No.	
<i>i</i>	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-		3.2	5.2	6.2		10.2	
								4.1					
								4.2					
<b>D.69-D19</b>													
14575	0.10	600	11000	-	0.07	9284040/637	✓						2KJ3230 - ■ A0 ■ - 0 ■ C1
12708	0.11	600	11000	-	0.08	622710/49	✓						2KJ3230 - ■ A0 ■ - 0 ■ B1
11375	0.13	600	11000	-	0.11	7246080/637	✓						2KJ3230 - ■ A0 ■ - 0 ■ A1
<b>D.69-Z19</b>													
1532	0.95	600	11000	-	0.20	976140/637	✓						2KJ3228 - ■ A0 ■ - 0 ■ Q1
1332	1.1	600	11000	-	0.21	121176/91	✓						2KJ3228 - ■ A0 ■ - 0 ■ P1
1202	1.2	600	11000	-	0.27	8415/7	✓						2KJ3228 - ■ A0 ■ - 0 ■ N1
1131	1.3	600	11000	-	0.32	7920/7	✓						2KJ3228 - ■ A0 ■ - 0 ■ M1
986	1.5	600	11000	-	0.37	89760/91	✓						2KJ3228 - ■ A0 ■ - 0 ■ L1
910	1.6	600	11000	-	0.19	579700/637	✓						2KJ3228 - ■ A0 ■ - 0 ■ K1
791	1.8	600	11000	-	0.22	271150/343	✓						2KJ3228 - ■ A0 ■ - 0 ■ J1
687	2.1	600	11000	-	0.23	33660/49	✓						2KJ3228 - ■ A0 ■ - 0 ■ H1
620	2.3	600	11000	-	0.30	60775/98	✓						2KJ3228 - ■ A0 ■ - 0 ■ G1
584	2.5	600	11000	-	0.35	28600/49	✓						2KJ3228 - ■ A0 ■ - 0 ■ F1
542	2.7	600	11000	-	0.20	318835/588	✓						2KJ3228 - ■ A0 ■ - 0 ■ E1
471	3.1	600	11000	-	0.23	3877445/8232	✓						2KJ3228 - ■ A0 ■ - 0 ■ D1
409	3.5	600	11000	-	0.24	80223/196	✓						2KJ3228 - ■ A0 ■ - 0 ■ C1
370	3.9	600	11000	-	0.31	1738165/4704	✓						2KJ3228 - ■ A0 ■ - 0 ■ B1
347.77	4.2	600	11000	-	0.37	102245/294	✓						2KJ3228 - ■ A0 ■ - 0 ■ A1
<b>Z.69-D19</b>													
10247	0.14	600	11000	-	0.02	19581584/1911	✓						2KJ3130 - ■ A0 ■ - 0 ■ Q1
9073	0.16	600	11000	-	0.03	28898628/3185	✓						2KJ3130 - ■ A0 ■ - 0 ■ P1
7883	0.18	600	11000	-	0.04	25108644/3185	✓						2KJ3130 - ■ A0 ■ - 0 ■ N1
7167	0.2	600	11000	-	0.04	4565208/637	✓						2KJ3130 - ■ A0 ■ - 0 ■ M1
6098	0.24	600	11000	-	0.06	19423668/3185	✓						2KJ3130 - ■ A0 ■ - 0 ■ L1
5544	0.26	600	11000	-	0.07	3531576/637	✓						2KJ3130 - ■ A0 ■ - 0 ■ K1
4834	0.3	600	11000	-	0.08	236874/49	✓						2KJ3130 - ■ A0 ■ - 0 ■ J1
4327	0.34	600	11000	-	0.11	2756352/637	✓						2KJ3130 - ■ A0 ■ - 0 ■ H1
3843	0.38	600	11000	-	0.13	2447698/637	✓						2KJ3130 - ■ A0 ■ - 0 ■ G1
3547	0.41	600	11000	-	0.16	29372376/8281	✓						2KJ3130 - ■ A0 ■ - 0 ■ F1
3081	0.47	600	11000	-	0.17	13738692/4459	✓						2KJ3130 - ■ A0 ■ - 0 ■ E1
2677	0.54	600	11000	-	0.18	8527464/3185	✓						2KJ3130 - ■ A0 ■ - 0 ■ D1
2417	0.6	600	11000	-	0.22	118437/49	✓						2KJ3130 - ■ A0 ■ - 0 ■ C1
2275	0.64	600	11000	-	0.26	1894992/833	✓						2KJ3130 - ■ A0 ■ - 0 ■ B1
1983	0.73	600	11000	-	0.29	1263328/637	✓						2KJ3130 - ■ A0 ■ - 0 ■ A1
<b>Z.69-Z19</b>													
1939	0.75	600	11000	-	0.02	529232/273	✓						2KJ3128 - ■ A0 ■ - 0 ■ B1
1717	0.84	600	11000	-	0.03	781044/455	✓						2KJ3128 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

## Article No. supplement

Shaft design	1 or 9	see page 9/46
Adapter size	KS	A B C D E F H J K M N
Adapter type		
Gearbox mounting type	A, B, F or H	see page 9/40



## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1	5.1	6.1	8.1	10.1			
									3.2	5.2	6.2		10.2			
									4.1							
									4.2							
							K5		56	140	180		210	250		
							K3		56	140	180		210	250		
							A/AZ			80	90	100	112	132	160	
<b>D.79-D39</b>																
15344	0.09	840	13400	-	0.21	5738565/374	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3232 - ■ ■ A0 ■ - 0 ■ D1
13434	0.11	840	13400	-	0.25	6394401/476	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3232 - ■ ■ A0 ■ - 0 ■ C1
11778	0.12	840	13400	-	0.23	22025159/1870	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3232 - ■ ■ A0 ■ - 0 ■ B1
10686	0.14	840	13400	-	0.33	31972005/2992	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3232 - ■ ■ A0 ■ - 0 ■ A1
<b>Z.79-D39</b>																
10451	0.14	840	13400	-	0.03	47969467/4590	✓	✓								2KJ3132 - ■ ■ A0 ■ - 0 ■ R1
9269	0.16	840	13400	-	0.05	2085629/225	✓	✓								2KJ3132 - ■ ■ A0 ■ - 0 ■ Q1
8043	0.18	840	13400	-	0.05	123052111/15300	✓	✓								2KJ3132 - ■ ■ A0 ■ - 0 ■ P1
7311	0.20	840	13400	-	0.07	123052111/16830	✓	✓	✓	✓						2KJ3132 - ■ ■ A0 ■ - 0 ■ N1
6271	0.23	840	13400	-	0.08	47969467/7650	✓	✓	✓	✓						2KJ3132 - ■ ■ A0 ■ - 0 ■ M1
5700	0.25	840	13400	-	0.10	47969467/8415	✓	✓	✓	✓						2KJ3132 - ■ ■ A0 ■ - 0 ■ L1
4998	0.29	840	13400	-	0.12	22941919/4590	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ K1
4461	0.33	840	13400	-	0.15	4171258/935	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ J1
3976	0.36	840	13400	-	0.17	14599403/3672	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ H1
3670	0.40	840	13400	-	0.21	1123031/306	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ G1
3213	0.45	840	13400	-	0.25	3277417/1020	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ F1
2817	0.51	840	13400	-	0.23	64654499/22950	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ E1
2556	0.57	840	13400	-	0.33	2085629/816	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ D1
2406	0.60	840	13400	-	0.39	2085629/867	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ C1
2120	0.68	840	13400	-	0.43	14599403/6885	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ B1
1840	0.79	840	13400	-	0.58	6256887/3400	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3132 - ■ ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

Article No. supplement											
Shaft design	1 or 9									see page 9/46	
Adapter size	K4	B	C	D	E	F	G	H	J	4	
	K2			D	E	F	G	H	J	2	
	KS		A		E	H	K	M			1
			B		F	J	N				
			C								
		D									
	K5		A		B	C		D	E	5	
	K3		A		B	C		D	E	3	
	A/AZ*			D	E	F	G	H	J	9	
Adapter type											
Gearbox mounting type	A, B, F or H									see page 9/40	

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Selection and ordering data**

Gearbox							Adapter								Article No.	
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi$ <sup>1)</sup>	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-							K2			80	90	100	112	132	160	
							KS		3.1	5.1	6.1	8.1	10.1			
									3.2	5.2	6.2		10.2			
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>Z.79-Z39</b>																
2485	0.58	840	13400	-	0.06	4025749/1620	✓	✓								2KJ3131 - ■ ■ A0 ■ - 0 ■ T1
2210	0.66	840	13400	-	0.07	1988623/900	✓	✓	✓	✓						2KJ3131 - ■ ■ A0 ■ - 0 ■ S1
1940	0.75	840	13400	-	0.08	48503/25	✓	✓	✓	✓						2KJ3131 - ■ ■ A0 ■ - 0 ■ R1
1764	0.82	840	13400	-	0.10	97006/55	✓	✓	✓	✓						2KJ3131 - ■ ■ A0 ■ - 0 ■ Q1
1509	0.96	840	13400	-	0.12	339521/225	✓	✓	✓	✓						2KJ3131 - ■ ■ A0 ■ - 0 ■ P1
1372	1.1	840	13400	-	0.14	679042/495	✓	✓	✓	✓						2KJ3131 - ■ ■ A0 ■ - 0 ■ N1
1213	1.2	840	13400	-	0.17	48503/40	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ M1
1102	1.3	840	13400	-	0.22	48503/44	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ L1
966	1.5	840	13400	-	0.26	2085629/2160	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ K1
891	1.6	840	13400	-	0.31	160433/180	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ J1
789	1.8	840	13400	-	0.36	284089/360	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ H1
657	2.2	840	13400	-	0.48	630539/960	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ G1
618	2.3	840	13400	-	0.56	630539/1020	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ F1
554	2.6	840	13400	-	0.61	1794611/3240	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ E1
472	3.1	840	13400	-	0.79	339521/720	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ D1
455	3.2	840	13400	-	0.36	21853/48	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ C1
379	3.8	840	13400	-	0.48	48503/128	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ B1
357	4.1	840	13400	-	0.56	48503/136	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>	2KJ3131 - ■ ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

Article No. supplement											
Shaft design	1 or 9									see page 9/46	
Adapter size	K4	B	C	D	E	F	G	H	J	4	
	K2			D	E	F	G	H	J	2	
	KS		A		E	H	K	M			1
			B		F	J		N			
			C								
		D									
K5		A		B	C		D	E		5	
K3			A		B	C		D	E	3	
A/AZ*				D	E	F	G	H	J	9	
Adapter type											
Gearbox mounting type	A, B, F or H									see page 9/40	

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1	5.1	6.1	8.1	10.1			
									3.2	5.2	6.2		10.2			
									4.1							
									4.2							
							K5		56	140	180		210	250		
							K3		56	140	180		210	250		
							A/AZ			80	90	100	112	132	160	
<b>D.89-D39</b>																
16496	0.09	1680	18500	-	0.12	214526312/13005	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3234 - ■ ■ A0 ■ - 0 ■ B1
14723	0.1	1680	18500	-	0.15	234028704/15895	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3234 - ■ ■ A0 ■ - 0 ■ A1
<b>D.89-Z39</b>																
715	2.0	1680	18500	-	0.63	6987123/9775	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ H1
673	2.2	1680	18500	-	0.73	111793968/166175	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ G1
603	2.4	1680	18500	-	0.83	17676824/29325	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ F1
513	2.8	1680	18500	-	1.09	5016396/9775	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ E1
480	3.0	1680	18500	-	0.66	1270386/2645	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ D1
452	3.2	1680	18500	-	0.77	20326176/44965	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ C1
405	3.6	1680	18500	-	0.87	3213968/7935	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ B1
345	4.2	1680	18500	-	1.15	912072/2645	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3233 - ■ ■ A0 ■ - 0 ■ A1
<b>Z.89-D39</b>																
13495	0.11	1680	18500	-	0.03	464574838/34425	✓	✓								2KJ3134 - ■ ■ A0 ■ - 0 ■ N1
11970	0.12	1680	18500	-	0.05	40397812/3375	✓	✓								2KJ3134 - ■ ■ A0 ■ - 0 ■ M1
10385	0.14	1680	18500	-	0.05	595867727/57375	✓	✓								2KJ3134 - ■ ■ A0 ■ - 0 ■ L1
9441	0.15	1680	18500	-	0.07	1191735454/126225	✓	✓	✓	✓						2KJ3134 - ■ ■ A0 ■ - 0 ■ K1
8097	0.18	1680	18500	-	0.08	464574838/57375	✓	✓	✓	✓						2KJ3134 - ■ ■ A0 ■ - 0 ■ J1
7361	0.20	1680	18500	-	0.1	929149676/126225	✓	✓	✓	✓						2KJ3134 - ■ ■ A0 ■ - 0 ■ H1
6454	0.22	1680	18500	-	0.12	222187966/34425	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3134 - ■ ■ A0 ■ - 0 ■ G1
5761	0.25	1680	18500	-	0.15	80795624/14025	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3134 - ■ ■ A0 ■ - 0 ■ F1
5134	0.28	1680	18500	-	0.17	70696171/13770	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3134 - ■ ■ A0 ■ - 0 ■ E1
4739	0.31	1680	18500	-	0.21	10876334/2295	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3134 - ■ ■ A0 ■ - 0 ■ D1
4149	0.35	1680	18500	-	0.25	15870569/3825	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3134 - ■ ■ A0 ■ - 0 ■ C1
3638	0.40	1680	18500	-	0.23	626166086/172125	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3134 - ■ ■ A0 ■ - 0 ■ B1
3300	0.44	1680	18500	-	0.33	10099453/3060	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3134 - ■ ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

## Article No. supplement

Shaft design	1 or 9	see page 9/46														
Adapter size	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS		A		E	H	K	M								1
			B		F	J		N								
			C													
		D														
	K5		A		B	C		D	E						5	
	K3		A		B	C		D	E						3	
	A/AZ*			D	E	F	G	H	J						9	
Adapter type																
Gearbox mounting type	A, B, F or H		see page 9/40													

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Transmission ratios and torques for very low speeds**

**Selection and ordering data**

Gearbox							Adapter								Article No.	
<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>P</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-							K2			80	90	100	112	132	160	
							KS		3.1	5.1	6.1	8.1	10.1			
									3.2	5.2	6.2		10.2			
									4.1							
									4.2							
							K5		56	140	180			210	250	
							K3		56	140	180			210	250	
							A/AZ			80	90	100	112	132	160	
<b>Z.89-Z39</b>																
3209	0.45	1680	18500	-	0.06	19494293/6075	✓	✓								2KJ3133 - ■ ■ A0 ■ - 0 ■ N1
2853	0.51	1680	18500	-	0.07	9629711/3375	✓	✓	✓	✓						2KJ3133 - ■ ■ A0 ■ - 0 ■ M1
2505	0.58	1680	18500	-	0.08	939484/375	✓	✓	✓	✓						2KJ3133 - ■ ■ A0 ■ - 0 ■ L1
2278	0.64	1680	18500	-	0.10	1878968/825	✓	✓	✓	✓						2KJ3133 - ■ ■ A0 ■ - 0 ■ K1
1949	0.74	1680	18500	-	0.12	6576388/3375	✓	✓	✓	✓						2KJ3133 - ■ ■ A0 ■ - 0 ■ J1
1771	0.82	1680	18500	-	0.14	13152776/7425	✓	✓	✓	✓						2KJ3133 - ■ ■ A0 ■ - 0 ■ H1
1566	0.93	1680	18500	-	0.17	234871/150	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3133 - ■ ■ A0 ■ - 0 ■ G1
1423	1.0	1680	18500	-	0.22	234871/165	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3133 - ■ ■ A0 ■ - 0 ■ F1
1247	1.2	1680	18500	-	0.26	10099453/8100	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3133 - ■ ■ A0 ■ - 0 ■ E1
1151	1.3	1680	18500	-	0.31	776881/675	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3133 - ■ ■ A0 ■ - 0 ■ D1
1019	1.4	1680	18500	-	0.36	1375673/1350	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3133 - ■ ■ A0 ■ - 0 ■ C1
848	1.7	1680	18500	-	0.48	3053323/3600	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3133 - ■ ■ A0 ■ - 0 ■ B1
798	1.8	1680	18500	-	0.56	3053323/3825	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3133 - ■ ■ A0 ■ - 0 ■ A1
<b>D.109-D39</b>																
19321	0.08	3100	20200	-	0.05	59992439/3105	✓	✓								2KJ3236 - ■ ■ A0 ■ - 0 ■ T1
17565	0.08	3100	20200	-	0.07	119984878/6831	✓	✓	✓	✓						2KJ3236 - ■ ■ A0 ■ - 0 ■ S1
15064	0.1	3100	20200	-	0.08	2033642/135	✓	✓	✓	✓						2KJ3236 - ■ ■ A0 ■ - 0 ■ R1
13695	0.11	3100	20200	-	0.10	4067284/297	✓	✓	✓	✓						2KJ3236 - ■ ■ A0 ■ - 0 ■ Q1
12008	0.12	3100	20200	-	0.12	22370062/1863	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3236 - ■ ■ A0 ■ - 0 ■ P1
10717	0.14	3100	20200	-	0.15	8134568/759	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3236 - ■ ■ A0 ■ - 0 ■ N1
9551	0.15	3100	20200	-	0.18	35588735/3726	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3236 - ■ ■ A0 ■ - 0 ■ M1
8817	0.16	3100	20200	-	0.21	5475190/621	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3236 - ■ ■ A0 ■ - 0 ■ L1
7719	0.19	3100	20200	-	0.25	11185031/1449	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3236 - ■ ■ A0 ■ - 0 ■ K1
6768	0.21	3100	20200	-	0.23	63042902/9315	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3236 - ■ ■ A0 ■ - 0 ■ J1
6140	0.24	3100	20200	-	0.33	5084105/828	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>2)</sup>			2KJ3236 - ■ ■ A0 ■ - 0 ■ H1

- 1) Only in conjunction with reduced-backlash version
- 2) Not available for adapter A/AZ
- 3) Only available for KS adapter

Article No. supplement																		
Shaft design	1 or 9 <span style="float: right;">see page 9/46</span>																	
Adapter size	K4	B	C	D	E	F	G	H	J								4	
	K2				D	E	F	G	H	J							2	
	KS			A			E	H	K	M							1	
				B			F	J			N							
				C														
K5			A	B	C			D	E							5		
K3			A	B	C			D	E							3		
A/AZ*					D	E	F	G	H	J							9	
Adapter type																		
Gearbox mounting type	A, B, F or H <span style="float: right;">see page 9/40</span>																	

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter								Article No.	
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi$ <sup>1)</sup>	$J_G$ 10 <sup>-4</sup> kgm <sup>2</sup>	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-							K2			80	90	100	112	132	160	
							KS		3.1	5.1	6.1	8.1	10.1			
									3.2	5.2	6.2		10.2			
									4.1							
									4.2							
							K5		56	140	180		210	250		
							K3		56	140	180		210	250		
							A/AZ			80	90	100	112	132	160	
<b>D.109-Z39</b>																
5970	0.24	3100	20200	-	0.06	33365917/5589	✓	✓								2KJ3235 - ■ ■ A0 ■ - 0 ■ A2
5308	0.27	3100	20200	-	0.07	16481959/3105	✓	✓	✓	✓						2KJ3235 - ■ ■ A0 ■ - 0 ■ X1
4661	0.31	3100	20200	-	0.09	1607996/345	✓	✓	✓	✓						2KJ3235 - ■ ■ A0 ■ - 0 ■ W1
4237	0.34	3100	20200	-	0.10	3215992/759	✓	✓	✓	✓						2KJ3235 - ■ ■ A0 ■ - 0 ■ V1
3625	0.4	3100	20200	-	0.12	11255972/3105	✓	✓	✓	✓						2KJ3235 - ■ ■ A0 ■ - 0 ■ U1
3296	0.44	3100	20200	-	0.15	22511944/6831	✓	✓	✓	✓						2KJ3235 - ■ ■ A0 ■ - 0 ■ T1
2913	0.5	3100	20200	-	0.17	401999/138	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ S1
2648	0.55	3100	20200	-	0.23	2009995/759	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ R1
2320	0.62	3100	20200	-	0.27	17285957/7452	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ Q1
2141	0.68	3100	20200	-	0.32	1329689/621	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ P1
1896	0.76	3100	20200	-	0.38	16481959/8694	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ N1
1578	0.92	3100	20200	-	0.50	5225987/3312	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ M1
1485	0.98	3100	20200	-	0.59	307411/207	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ L1
1331	1.1	3100	20200	-	0.64	14873963/11178	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ K1
1133	1.3	3100	20200	-	0.84	2813993/2484	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ J1
971	1.5	3100	20200	-	1.10	401999/414			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ H1
836	1.7	3100	20200	-	1.40	12461969/14904			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ G1
690	2.1	3100	20200	-	0.73	122609695/177744	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ F1
649	2.2	3100	20200	-	0.84	7212335/11109	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ E1
582	2.5	3100	20200	-	0.96	348966055/599886	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ D1
495	2.9	3100	20200	-	1.28	9431515/19044	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ C1
424	3.4	3100	20200	-	1.69	9431515/22218			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ B1
366	4	3100	20200	-	2.20	292376965/799848			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3235 - ■ ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

## Article No. supplement

Shaft design	1 or 9	see page 9/46															
Adapter size	K4	B	C	D	E	F	G	H	J							4	
	K2			D	E	F	G	H	J							2	
	KS		A		E	H	K	M									1
			B		F	J		N									
			C														
	D																
	K5	A		B	C		D	E								5	
	K3	A		B	C		D	E								3	
	A/AZ*			D	E	F	G	H	J							9	
Adapter type																	
Gearbox mounting type	A, B, F or H	see page 9/40															

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Transmission ratios and torques for very low speeds**
**Selection and ordering data**

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>D.129-D49</b>																
19506	0.07	5000	27000	-	0.12	1643206859/84240	✓	✓	✓	✓						2KJ3238 - ■ A0 ■ - 0 ■ L1
17733	0.08	5000	27000	-	0.14	1643206859/92664	✓	✓	✓	✓						2KJ3238 - ■ A0 ■ - 0 ■ K1
15675	0.09	5000	27000	-	0.17	234743837/14976	✓	✓	✓	✓	✓	✓				2KJ3238 - ■ A0 ■ - 0 ■ J1
14250	0.1	5000	27000	-	0.22	1173719185/82368	✓	✓	✓	✓	✓	✓				2KJ3238 - ■ A0 ■ - 0 ■ H1
12482	0.12	5000	27000	-	0.26	10093984991/808704	✓	✓	✓	✓	✓	✓				2KJ3238 - ■ A0 ■ - 0 ■ G1
11522	0.13	5000	27000	-	0.31	10093984991/876096	✓	✓	✓	✓	✓	✓				2KJ3238 - ■ A0 ■ - 0 ■ F1
10201	0.14	5000	27000	-	0.37	9624497317/943488	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3238 - ■ A0 ■ - 0 ■ E1
8490	0.17	5000	27000	-	0.50	234743837/27648	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3238 - ■ A0 ■ - 0 ■ D1
7991	0.18	5000	27000	-	0.59	13808461/1728	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3238 - ■ A0 ■ - 0 ■ C1
7160	0.2	5000	27000	-	0.65	8685521969/1213056	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3238 - ■ A0 ■ - 0 ■ B1
6096	0.24	5000	27000	-	0.85	1643206859/269568	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3238 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

<b>Article No. supplement</b>																		
Shaft design	<b>1 or 9</b>							see page 9/46										
Adapter size	K4	B	C	D	E	F	G	H	J							4		
	K2			D	E	F	G	H	J							2		
	KS		A		E	H	K	M								1		
			B		F	J		N										
			C															
		D																
	K5		A		B	C		D	E						5			
	K3		A		B	C		D	E						3			
	A/AZ*			D	E	F	G	H	J						9			
Adapter type																		
Gearbox mounting type	<b>A, B, F or H</b>							see page 9/40										

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter										Article No.
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)	
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160		
							KS		3.1		5.1	6.1	8.1	10.1			
									3.2		5.2	6.2		10.2			
									4.1								
									4.2								
							K5		56		140	180		210	250		
							K3		56		140	180		210	250		
							A/AZ			80	90	100	112	132	160		
<b>D.129-Z49</b>																	
5963	0.24	5000	27000	-	0.18	1339420717/224640	✓	✓	✓	✓						2KJ3237 - ■ ■ A0 ■ - 0 ■ B2	
5420	0.27	5000	27000	-	0.21	1339420717/247104	✓	✓	✓	✓						2KJ3237 - ■ ■ A0 ■ - 0 ■ A2	
4610	0.31	5000	27000	-	0.27	69042305/14976	✓	✓	✓	✓						2KJ3237 - ■ ■ A0 ■ - 0 ■ X1	
4191	0.35	5000	27000	-	0.32	345211525/82368	✓	✓	✓	✓						2KJ3237 - ■ ■ A0 ■ - 0 ■ W1	
3739	0.39	5000	27000	-	0.37	1008017653/269568	✓	✓	✓	✓	✓	✓				2KJ3237 - ■ ■ A0 ■ - 0 ■ V1	
3353	0.43	5000	27000	-	0.45	69042305/20592	✓	✓	✓	✓	✓	✓				2KJ3237 - ■ ■ A0 ■ - 0 ■ U1	
3022	0.48	5000	27000	-	0.53	814699199/269568	✓	✓	✓	✓	✓	✓				2KJ3237 - ■ ■ A0 ■ - 0 ■ T1	
2790	0.52	5000	27000	-	0.63	814699199/292032	✓	✓	✓	✓	✓	✓				2KJ3237 - ■ ■ A0 ■ - 0 ■ S1	
2547	0.57	5000	27000	-	0.74	400445369/157248	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ R1	
2113	0.69	5000	27000	-	0.95	759465355/359424	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ Q1	
1989	0.73	5000	27000	-	1.09	759465355/381888	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ P1	
1878	0.77	5000	27000	-	1.24	759465355/404352	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ N1	
1598	0.91	5000	27000	-	1.53	13808461/8640	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ M1	
1369	1.1	5000	27000	-	1.89	676614589/494208			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ L1	
1204	1.2	5000	27000	-	2.3	648997667/539136			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ K1	
1016	1.4	5000	27000	-	2.9	262360759/258336			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ J1	
885	1.6	5000	27000	-	3.9	13808461/15600			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ H1	
873	1.7	5000	27000	-	1.51	208411423/238680	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ G1	
825	1.8	5000	27000	-	1.71	208411423/252720	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ F1	
702	2.1	5000	27000	-	2.2	18946493/27000	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ E1	
601	2.4	5000	27000	-	2.8	928378157/1544400			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ D1	
529	2.7	5000	27000	-	3.4	890485171/1684800			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ C1	
446	3.3	5000	27000	-	4.5	359983367/807300			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ B1	
389	3.7	5000	27000	-	6	18946493/48750			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3237 - ■ ■ A0 ■ - 0 ■ A1	

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

Article No. supplement																
Shaft design	1 or 9 see page 9/46															
Adapter size	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS		A		E	H	K	M								1
			B		F	J		N								
			C													
		D														
	K5		A		B	C		D	E						5	
	K3		A		B	C		D	E						3	
	A/AZ*			D	E	F	G	H	J						9	
Adapter type																
Gearbox mounting type	A, B, F or H see page 9/40															

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>D.149-D49</b>																
<b>24180</b>	0.06	8000	51200	-	0.08	118481211/4900	✓	✓								2KJ3241 - ■ ■ A0 ■ - 0 ■ N1
<b>21982</b>	0.07	8000	51200	-	0.10	118481211/5390	✓	✓	✓	✓						2KJ3241 - ■ ■ A0 ■ - 0 ■ M1
<b>18807</b>	0.08	8000	51200	-	0.12	13164579/700	✓	✓	✓	✓						2KJ3241 - ■ ■ A0 ■ - 0 ■ L1
<b>17097</b>	0.08	8000	51200	-	0.14	13164579/770	✓	✓	✓	✓						2KJ3241 - ■ ■ A0 ■ - 0 ■ K1
<b>15112</b>	0.10	8000	51200	-	0.17	118481211/7840	✓	✓	✓	✓	✓	✓				2KJ3241 - ■ ■ A0 ■ - 0 ■ J1
<b>13739</b>	0.11	8000	51200	-	0.22	118481211/8624	✓	✓	✓	✓	✓	✓				2KJ3241 - ■ ■ A0 ■ - 0 ■ H1
<b>12034</b>	0.12	8000	51200	-	0.26	188692299/15680	✓	✓	✓	✓	✓	✓				2KJ3241 - ■ ■ A0 ■ - 0 ■ G1
<b>11108</b>	0.13	8000	51200	-	0.31	566076897/50960	✓	✓	✓	✓	✓	✓				2KJ3241 - ■ ■ A0 ■ - 0 ■ F1
<b>9835</b>	0.15	8000	51200	-	0.37	539747739/54880	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3241 - ■ ■ A0 ■ - 0 ■ E1
<b>8186</b>	0.18	8000	51200	-	0.50	513418581/62720	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3241 - ■ ■ A0 ■ - 0 ■ D1
<b>7704</b>	0.19	8000	51200	-	0.59	30201093/3920	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3241 - ■ ■ A0 ■ - 0 ■ C1
<b>6903</b>	0.21	8000	51200	-	0.66	54121047/7840	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3241 - ■ ■ A0 ■ - 0 ■ B1
<b>5877</b>	0.25	8000	51200	-	0.86	13164579/2240	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3241 - ■ ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 9/46		
Adapter size	<b>K4</b>	B C D E F G H J	4	
	<b>K2</b>	D E F G H J	2	
	<b>KS</b>	A	E H K M	1
		B	F J N	
		C		
	<b>K5</b>	A B C D E	5	
	<b>K3</b>	A B C D E	3	
<b>A/AZ*</b>	D E F G H J	9		
Adapter type				
Gearbox mounting type	<b>A, B, F or H</b>	see page 9/40		

 \* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>D.149-Z49</b>																
5749	0.25	8000	51200	-	0.18	225346617/39200	✓	✓	✓	✓						2KJ3240 - ■ ■ A0 ■ - 0 ■ B2
5226	0.28	8000	51200	-	0.22	225346617/43120	✓	✓	✓	✓						2KJ3240 - ■ ■ A0 ■ - 0 ■ A2
4445	0.33	8000	51200	-	0.28	6969483/1568	✓	✓	✓	✓						2KJ3240 - ■ ■ A0 ■ - 0 ■ X1
4041	0.36	8000	51200	-	0.34	34847415/8624	✓	✓	✓	✓						2KJ3240 - ■ ■ A0 ■ - 0 ■ W1
3605	0.4	8000	51200	-	0.39	56530251/15680	✓	✓	✓	✓	✓	✓				2KJ3240 - ■ ■ A0 ■ - 0 ■ V1
3233	0.45	8000	51200	-	0.47	6969483/2156	✓	✓	✓	✓	✓	✓				2KJ3240 - ■ ■ A0 ■ - 0 ■ U1
2914	0.5	8000	51200	-	0.55	45688833/15680	✓	✓	✓	✓	✓	✓				2KJ3240 - ■ ■ A0 ■ - 0 ■ T1
2690	0.54	8000	51200	-	0.66	137066499/50960	✓	✓	✓	✓	✓	✓				2KJ3240 - ■ ■ A0 ■ - 0 ■ S1
2455	0.59	8000	51200	-	0.78	67371669/27440	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ R1
2037	0.71	8000	51200	-	1.0	25554771/12544	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ Q1
1917	0.76	8000	51200	-	1.16	25554771/13328	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ P1
1811	0.80	8000	51200	-	1.31	2839419/1568	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ N1
1541	0.94	8000	51200	-	1.62	30201093/19600	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ M1
1320	1.1	8000	51200	-	2.0	2323161/1760			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ L1
1161	1.2	8000	51200	-	2.5	36396189/31360			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ K1
979	1.5	8000	51200	-	3.2	1919133/1960			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ J1
853	1.7	8000	51200	-	4.2	20908449/24500			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ H1
842	1.7	8000	51200	-	1.81	35063523/41650	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ G1
795	1.8	8000	51200	-	2.0	3895947/4900	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ F1
677	2.1	8000	51200	-	2.6	41438709/61250	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ E1
580	2.5	8000	51200	-	3.4	3187593/5500			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ D1
510	2.8	8000	51200	-	4.3	49938957/98000			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ C1
430	3.4	8000	51200	-	5.7	2633229/6125			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ B1
375	3.9	8000	51200	-	7.5	57376674/153125			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3240 - ■ ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement																
Shaft design	1 or 9															
Adapter size	see page 9/46															
	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS		A		E	H	K	M								1
			B		F	J		N								
			C													
			D													
	K5		A		B	C		D	E							5
	K3		A		B	C		D	E							3
	A/AZ*			D	E	F	G	H	J							9
Adapter type																
Gearbox mounting type	A, B, F or H															
	see page 9/40															

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1	5.1	6.1	8.1	10.1			
									3.2	5.2	6.2		10.2			
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>D.169-D69</b>																
<b>23323</b>	0.06	14000	70100	-	0.08	28571136/1225	✓	✓	✓	✓						2KJ3243 - ■ ■ A0 ■ - 0 ■ N1
<b>21203</b>	0.07	14000	70100	-	0.10	5194752/245	✓	✓	✓	✓						2KJ3243 - ■ ■ A0 ■ - 0 ■ M1
<b>18140</b>	0.08	14000	70100	-	0.12	9523712/525	✓	✓	✓	✓						2KJ3243 - ■ ■ A0 ■ - 0 ■ L1
<b>16491</b>	0.09	14000	70100	-	0.15	1731584/105	✓	✓	✓	✓						2KJ3243 - ■ ■ A0 ■ - 0 ■ K1
<b>14577</b>	0.10	14000	70100	-	0.17	3571392/245	✓	✓	✓	✓	✓	✓				2KJ3243 - ■ ■ A0 ■ - 0 ■ J1
<b>13252</b>	0.11	14000	70100	-	0.23	649344/49	✓	✓	✓	✓	✓	✓				2KJ3243 - ■ ■ A0 ■ - 0 ■ H1
<b>11608</b>	0.12	14000	70100	-	0.26	25594976/2205	✓	✓	✓	✓	✓	✓				2KJ3243 - ■ ■ A0 ■ - 0 ■ G1
<b>10715</b>	0.14	14000	70100	-	0.32	102379904/9555	✓	✓	✓	✓	✓	✓				2KJ3243 - ■ ■ A0 ■ - 0 ■ F1
<b>9487</b>	0.15	14000	70100	-	0.39	48809024/5145	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3243 - ■ ■ A0 ■ - 0 ■ E1
<b>7896</b>	0.18	14000	70100	-	0.52	1934504/245	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3243 - ■ ■ A0 ■ - 0 ■ D1
<b>7431</b>	0.2	14000	70100	-	0.61	30952064/4165	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3243 - ■ ■ A0 ■ - 0 ■ C1
<b>6659</b>	0.22	14000	70100	-	0.68	44047168/6615	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3243 - ■ ■ A0 ■ - 0 ■ B1
<b>5669</b>	0.26	14000	70100	-	0.89	595232/105	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3243 - ■ ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

**Article No. supplement**

Shaft design	<b>1 or 9</b>	see page 9/46														
Adapter size	<b>K4</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>							<b>4</b>
	<b>K2</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>							<b>2</b>
	<b>KS</b>		<b>A</b>			<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>							<b>1</b>
			<b>B</b>			<b>F</b>	<b>J</b>		<b>N</b>							
			<b>C</b>													
		<b>D</b>														
	<b>K5</b>		<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>							<b>5</b>
<b>K3</b>		<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>							<b>3</b>	
<b>A/AZ*</b>				<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>						<b>9</b>	
Adapter type																
Gearbox mounting type	<b>A, B, F or H</b>	see page 9/40														

 \* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>D.169-Z.69</b>																
5545	0.26	14000	70100	-	0.21	115475008/20825	✓	✓	✓	✓						2KJ3242 - ■ ■ A0 ■ - 0 ■ A2
5041	0.29	14000	70100	-	0.26	20995456/4165	✓	✓	✓	✓						2KJ3242 - ■ ■ A0 ■ - 0 ■ X1
4287	0.34	14000	70100	-	0.33	3571392/833	✓	✓	✓	✓						2KJ3242 - ■ ■ A0 ■ - 0 ■ W1
3898	0.37	14000	70100	-	0.40	3246720/833	✓	✓	✓	✓						2KJ3242 - ■ ■ A0 ■ - 0 ■ V1
3478	0.42	14000	70100	-	0.47	43451936/12495	✓	✓	✓	✓	✓	✓				2KJ3242 - ■ ■ A0 ■ - 0 ■ U1
3118	0.47	14000	70100	-	0.57	2597376/833	✓	✓	✓	✓	✓	✓				2KJ3242 - ■ ■ A0 ■ - 0 ■ T1
2811	0.52	14000	70100	-	0.67	35118688/12495	✓	✓	✓	✓	✓	✓				2KJ3242 - ■ ■ A0 ■ - 0 ■ S1
2594	0.56	14000	70100	-	0.8	140474752/54145	✓	✓	✓	✓	✓	✓				2KJ3242 - ■ ■ A0 ■ - 0 ■ R1
2368	0.61	14000	70100	-	0.95	69046912/29155	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ Q1
1965	0.74	14000	70100	-	1.25	1636888/833	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ P1
1849	0.78	14000	70100	-	1.44	26190208/14161	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ N1
1747	0.83	14000	70100	-	1.62	13095104/7497	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ M1
1486	0.98	14000	70100	-	2.1	30952064/20825	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ L1
1273	1.1	14000	70100	-	2.6	108224/85	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ K1
1119	1.3	14000	70100	-	3.2	13987952/12495	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ J1
944	1.5	14000	70100	-	4.2	90475264/95795			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ H1
823	1.8	14000	70100	-	5.7	85713408/104125			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ G1
773	1.9	14000	70100	-	3.2	19047424/24633			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ F1
658	2.2	14000	70100	-	4.3	45021184/68425			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ E1
564	2.6	14000	70100	-	5.6	12121088/21505	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ D1
496	2.9	14000	70100	-	7.1	20346112/41055	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ C1
418	3.5	14000	70100	-	9.7	131600384/314755			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ B1
364	4.0	14000	70100	-	13	124674048/342125			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3242 - ■ ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement												
Shaft design	1 or 9											
Adapter size	see page 9/46											
	K4	B	C	D	E	F	G	H	J	4		
	K2	D E F G H J									2	
	KS	A	E H		K M						1	
		B	F J		N							
		C										
		D										
	K5	A	B	C	D E						5	
	K3	A	B	C	D E						3	
	A/AZ*	D E F G H J									9	
Adapter type												
Gearbox mounting type	A, B, F or H											
	see page 9/40											

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1	5.1	6.1	8.1	10.1			
									3.2	5.2	6.2		10.2			
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>D.189-D69</b>																
27816	0.05	19000	107000	-	0.07	15994264/575	✓	✓	✓	✓						2KJ3245 - ■ ■ A0 ■ - 0 ■ P1
24424	0.06	19000	107000	-	0.09	14043744/575	✓	✓	✓	✓						2KJ3245 - ■ ■ A0 ■ - 0 ■ N1
22204	0.07	19000	107000	-	0.11	2553408/115	✓	✓	✓	✓						2KJ3245 - ■ ■ A0 ■ - 0 ■ M1
18996	0.08	19000	107000	-	0.12	10922912/575	✓	✓	✓	✓						2KJ3245 - ■ ■ A0 ■ - 0 ■ L1
17269	0.08	19000	107000	-	0.15	1985984/115	✓	✓	✓	✓						2KJ3245 - ■ ■ A0 ■ - 0 ■ K1
15265	0.09	19000	107000	-	0.18	1755468/115	✓	✓	✓	✓	✓	✓				2KJ3245 - ■ ■ A0 ■ - 0 ■ J1
13877	0.1	19000	107000	-	0.23	319176/23	✓	✓	✓	✓	✓	✓				2KJ3245 - ■ ■ A0 ■ - 0 ■ H1
12155	0.12	19000	107000	-	0.27	4193618/345	✓	✓	✓	✓	✓	✓				2KJ3245 - ■ ■ A0 ■ - 0 ■ G1
11220	0.13	19000	107000	-	0.32	1290344/115	✓	✓	✓	✓	✓	✓				2KJ3245 - ■ ■ A0 ■ - 0 ■ F1
9934	0.15	19000	107000	-	0.39	7997132/805	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3245 - ■ ■ A0 ■ - 0 ■ E1
8269	0.18	19000	107000	-	0.53	1901757/230	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3245 - ■ ■ A0 ■ - 0 ■ D1
7782	0.19	19000	107000	-	0.62	15214056/1955	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3245 - ■ ■ A0 ■ - 0 ■ C1
6973	0.21	19000	107000	-	0.69	7216924/1035	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3245 - ■ ■ A0 ■ - 0 ■ B1
5936	0.24	19000	107000	-	0.91	682682/115	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3245 - ■ ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

**Article No. supplement**

Shaft design	1 or 9	see page 9/46														
Adapter size	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS		A		E	H	K	M								1
			B		F	J		N								
			C													
		D														
	K5		A		B	C		D	E						5	
	K3		A		B	C		D	E						3	
	A/AZ*			D	E	F	G	H	J						9	
Adapter type																
Gearbox mounting type	A, B, F or H	see page 9/40														

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Helical gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$P_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>D.189-Z69</b>																
5807	0.25	19000	107000	-	0.24	56760132/9775	✓	✓	✓	✓						2KJ3244 - ■ ■ A0 ■ - 0 ■ A2
5279	0.27	19000	107000	-	0.29	10320024/1955	✓	✓	✓	✓						2KJ3244 - ■ ■ A0 ■ - 0 ■ X1
4490	0.32	19000	107000	-	0.37	1755468/391	✓	✓	✓	✓						2KJ3244 - ■ ■ A0 ■ - 0 ■ W1
4082	0.36	19000	107000	-	0.45	1595880/391	✓	✓	✓	✓						2KJ3244 - ■ ■ A0 ■ - 0 ■ V1
3642	0.4	19000	107000	-	0.53	7119398/1955	✓	✓	✓	✓	✓	✓				2KJ3244 - ■ ■ A0 ■ - 0 ■ U1
3265	0.44	19000	107000	-	0.64	1276704/391	✓	✓	✓	✓	✓	✓				2KJ3244 - ■ ■ A0 ■ - 0 ■ T1
2943	0.49	19000	107000	-	0.77	5754034/1955	✓	✓	✓	✓	✓	✓				2KJ3244 - ■ ■ A0 ■ - 0 ■ S1
2717	0.53	19000	107000	-	0.91	5311416/1955	✓	✓	✓	✓	✓	✓				2KJ3244 - ■ ■ A0 ■ - 0 ■ R1
2480	0.58	19000	107000	-	1.08	33939048/13685	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ Q1
2058	0.7	19000	107000	-	1.45	1609179/782	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ P1
1937	0.75	19000	107000	-	1.65	12873432/6647	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ N1
1829	0.79	19000	107000	-	1.87	2145572/1173	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ M1
1556	0.93	19000	107000	-	2.4	15214056/9775	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ L1
1333	1.1	19000	107000	-	3.1	2606604/1955			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ K1
1172	1.2	19000	107000	-	3.8	2291861/1955			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ J1
989	1.5	19000	107000	-	5.1	44471856/44965			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ H1
862	1.7	19000	107000	-	6.8	42131232/48875			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ G1
810	1.8	19000	107000	-	4.5	21845824/26979	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ F1
689	2.1	19000	107000	-	6	154906752/224825	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ E1
590	2.5	19000	107000	-	8	26539968/44965			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ D1
519	2.8	19000	107000	-	10	23335312/44965			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ C1
438	3.3	19000	107000	-	14	452804352/1034195			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ B1
382	3.8	19000	107000	-	18	428972544/1124125			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3244 - ■ ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

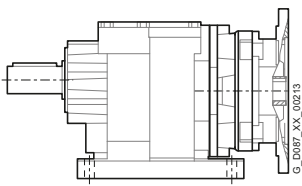
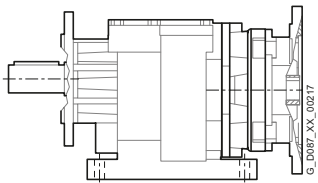
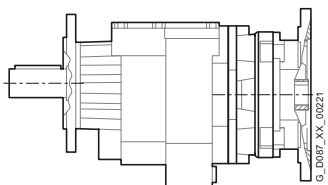
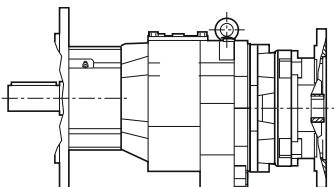
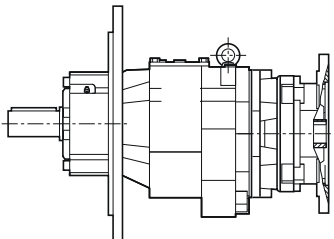
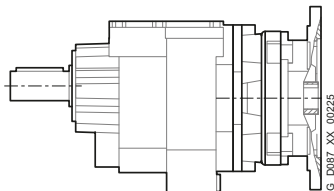
<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement																	
Shaft design	1 or 9																
Adapter size	see page 9/46																
	K4	B	C	D	E	F	G	H	J								4
	K2	D			E	F	G	H	J								2
	KS	A		E	H	K	M									1	
		B		F	J	N											
		C															
		D															
	K5	A		B	C		D	E									5
	K3	A		B	C		D	E									3
	A/AZ*	D			E	F	G	H	J								9
Adapter type																	
Gearbox mounting type	A, B, F or H																
	see page 9/40																

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Overview**

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing, see page
<b>Helical gearboxes Z and D with adapter K4</b>		
<b>Foot-mounted design</b>		
	Z/D29	3/58
	Z/D39	3/62
	Z/D49	3/66
	Z/D59	3/69
	Z/D69	3/72
	Z/D79	3/75
	Z/D89	3/78
	Z/D109	3/83
	Z/D129	3/88
	Z/D149	3/93
	Z/D169	3/97
Z/D189	3/101	
<b>Foot/flange-mounted design</b>		
	ZB/DB29	3/59
	ZB/DB39	3/63
	ZB/DB49	3/66
	ZB/DB59	3/69
	ZB/DB69	3/72
	ZB/DB79	3/75
ZB/DB89	3/78	
<b>Flange-mounted design</b>		
	ZF/DF29	3/60
	ZF/DF39	3/64
	ZF/DF49	3/67
	ZF/DF59	3/70
	ZF/DF69	3/73
	ZF/DF79	3/76
	ZF/DF89	3/79
	ZF/DF109	3/84
	ZF/DF129	3/89
	ZF/DF149	3/94
	ZF/DF169	3/98
ZF/DF189	3/102	
<b>Flange-mounted design with VLplus reinforced bearing system</b>		
	ZF/DF89	3/80
	ZF/DF109	3/85
	ZF/DF129	3/90
	ZF/DF149	3/95
	ZF/DF169	3/99
<b>Flange-mounted design with XLplus reinforced bearing system</b>		
	ZF/DF89	3/81
	ZF/DF109	3/86
	ZF/DF129	3/91
	ZF/DF149	3/96
	ZF/DF169	3/100
<b>Housing flange design</b>		
	ZZ/DZ29	3/61
	ZZ/DZ39	3/65
	ZZ/DZ49	3/68
	ZZ/DZ59	3/71
	ZZ/DZ69	3/74
	ZZ/DZ79	3/77
	ZZ/DZ89	3/79
	ZZ/DZ109	3/84
ZZ/DZ129	3/89	

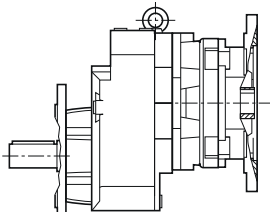
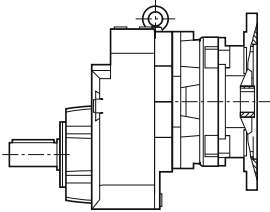
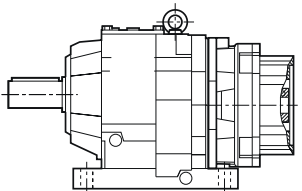
# SIMOGEAR gearboxes

## Helical gearboxes

### Dimensional drawings

#### Overview

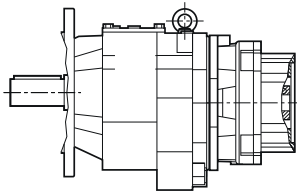
Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing, see page
<b>Helical gearbox E with adapter K4</b>		
<i>Foot-mounted design</i>		
	E39	3/103
	E49	3/106
	E69	3/109
	E89	3/112
	E109	3/115
	E129	3/118
	E149	3/121
<i>Flange-mounted design</i>		
	EF39	3/104
	EF49	3/107
	EF69	3/110
	EF89	3/113
	EF109	3/116
	EF129	3/119
	EF149	3/122
<i>Housing flange design</i>		
	EZ39	3/105
	EZ49	3/108
	EZ69	3/111
	EZ89	3/114
	EZ109	3/117
	EZ129	3/120
	EZ149	3/123
<b>Helical gearbox with adapter K2</b>		
	Z./D.29 ... Z./D.189	3/124 ... 3/126
	E.39 ... E.149	3/126 ... 3/127
<b>Helical gearboxes Z and D with KS adapter</b>		
<i>Foot-mounted design</i>		
	Z/D19	3/128
	Z/D29	3/131
	Z/D39	3/135
	Z/D49	3/139
	Z/D59	3/142
	Z/D69	3/145
	Z/D79	3/148
	Z/D89	3/151
	Z/D109	3/156
	Z/D129	3/161
	Z/D149	3/166
	Z/D169	3/170
	Z/D189	3/174
<i>Foot/flange-mounted design</i>		
	ZB/DB29	3/132
	ZB/DB39	3/136
	ZB/DB49	3/139
	ZB/DB59	3/142
	ZB/DB69	3/145
	ZB/DB79	3/148
	ZB/DB89	3/151

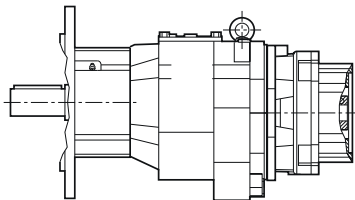
**Overview**

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

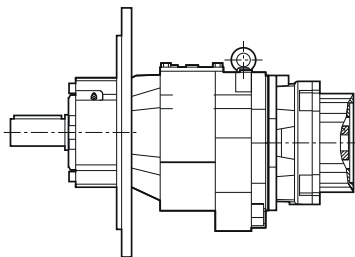
Design	Size	Dimensional drawing, see page
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**Helical gearboxes Z and D with KS adapter**
**Flange-mounted design**


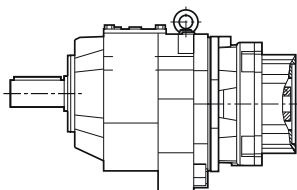
ZF/DF19	3/129
ZF/DF29	3/133
ZF/DF39	3/137
ZF/DF49	3/140
ZF/DF59	3/143
ZF/DF69	3/146
ZF/DF79	3/149
ZF/DF89	3/152
ZF/DF109	3/157
ZF/DF129	3/162
ZF/DF149	3/167
ZF/DF169	3/171
ZF/DF189	3/175

**Flange-mounted design with VLplus reinforced bearing system**


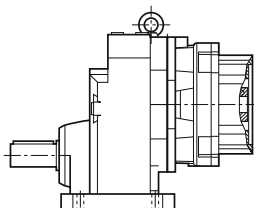
ZF/DF89	3/153
ZF/DF109	3/158
ZF/DF129	3/163
ZF/DF149	3/168
ZF/DF169	3/172

**Flange-mounted design with XLplus reinforced bearing system**


ZF/DF89	3/154
ZF/DF109	3/159
ZF/DF129	3/164
ZF/DF149	3/169
ZF/DF169	3/173

**Housing flange design**


ZZ/DZ19	3/130
ZZ/DZ29	3/134
ZZ/DZ39	3/138
ZZ/DZ49	3/141
ZZ/DZ59	3/144
ZZ/DZ69	3/147
ZZ/DZ79	3/150
ZZ/DZ89	3/155
ZZ/DZ109	3/160
ZZ/DZ129	3/165

**Helical gearbox E with KS adapter**
**Foot-mounted design**


E39	3/176
E49	3/179
E69	3/182
E89	3/185
E109	3/188
E129	3/191
E149	3/194



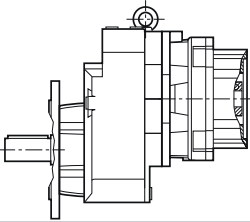
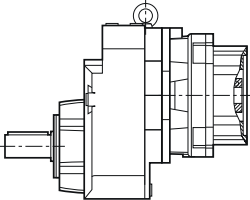
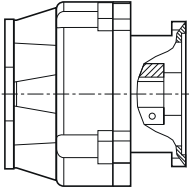
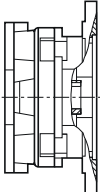
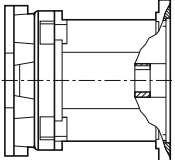
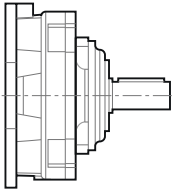
## SIMOGEAR gearboxes

### Helical gearboxes

#### Dimensional drawings

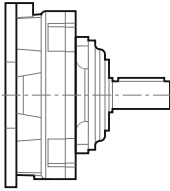
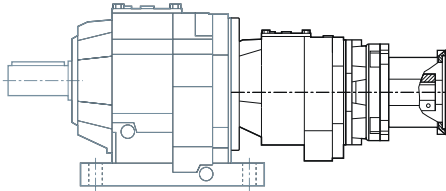
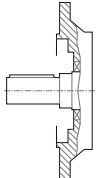
#### Overview

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing, see page
<b>Helical gearbox E with KS adapter</b>		
<i>Flange-mounted design</i>		
	EF39	3/177
	EF49	3/180
	EF69	3/183
	EF89	3/186
	EF109	3/189
	EF129	3/192
	EF149	3/195
<i>Housing flange design</i>		
	EZ39	3/178
	EZ49	3/181
	EZ69	3/184
	EZ89	3/187
	EZ109	3/190
	EZ129	3/193
	EZ149	3/196
<b>Helical gearbox with adapter K8</b>		
	Z./D.89 ... Z./D.189	3/197
	E.89 ... E.149	
<b>Helical gearbox with adapter K5</b>		
	Z./D.29 ... Z./D.189	3/198 ... 3/199
	E.39 ... E.149	3/199 ... 3/200
<b>Helical gearbox with adapter K3</b>		
	Z./D.29 ... Z./D.189	3/201 ... 3/202
	E.39 ... E.149	3/202 ... 3/203
<b>Helical gearbox with adapter A</b>		
	Z./D.29 ... Z./D.189	3/204 ... 3/205
	E.39 ... E.149	3/205 ... 3/206

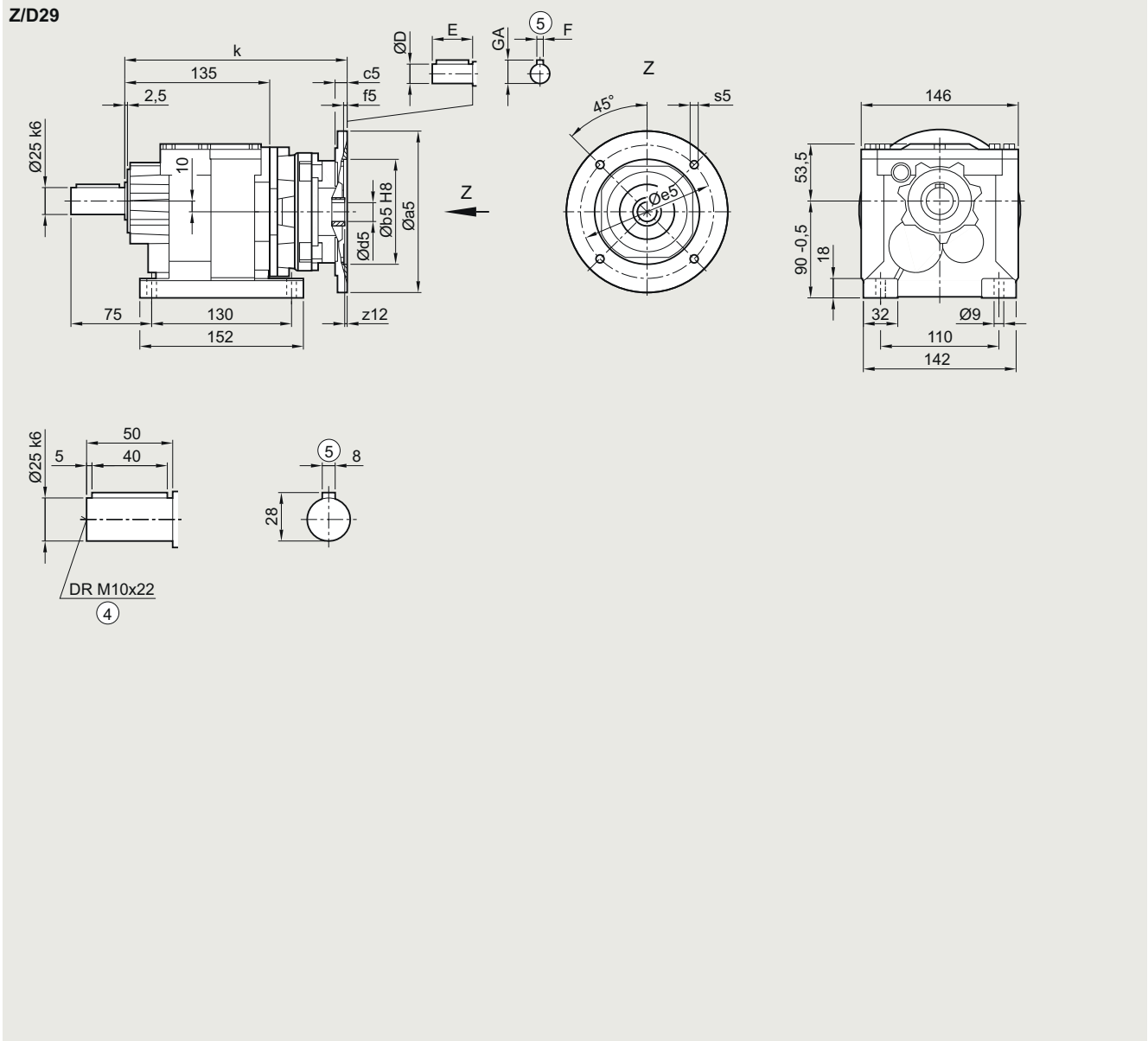
**Overview**

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing, see page	
<b>Helical gearbox with adapter AZ</b>			
	Z./D.29 ... Z./D.189	3/207 ... 3/208	
	E.39 ... E.149	3/208 ... 3/209	
<b>Helical tandem gearbox with adapter</b>			
	- K4	Z./D.79-Z/D39 ... D.189-Z/D69	3/210
	- K2	Z./D.79-Z/D39 ... D.189-Z/D69	3/211
	- KS	Z./D.29-Z/D19 ... D.189-Z/D69	3/212 ... 3/213
	- K5	Z./D.79-Z/D39 ... D.189-Z/D69	3/214
	- K3	Z./D.79-Z/D39 ... D.189-Z/D69	3/215
	- A	Z./D.79-Z/D39 ... D.189-Z/D69	3/216
	- AZ	Z./D.79-Z/D39 ... D.189-Z/D69	3/217
<b>Additional versions and options</b>			
	Inner contour of the flange design	3/218	

**SIMOGEAR gearboxes**

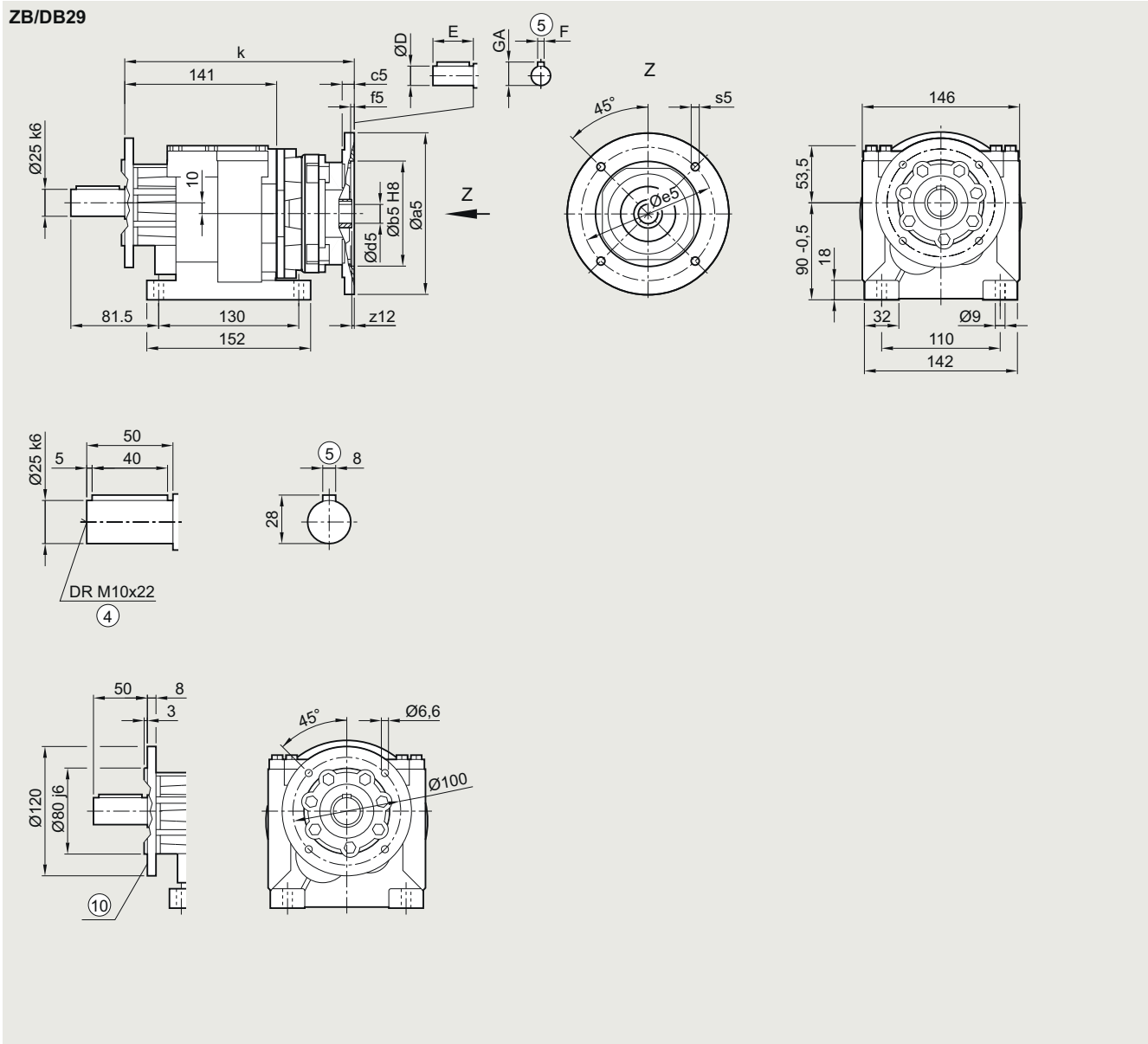
Helical gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****Z/D29 gearbox in a foot-mounted design****DZ030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	212.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	212.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	240.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	240.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

**ZB/DB29 gearbox in a foot/flange-mounted design****DZB030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	218.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	218.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	246.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	246.5

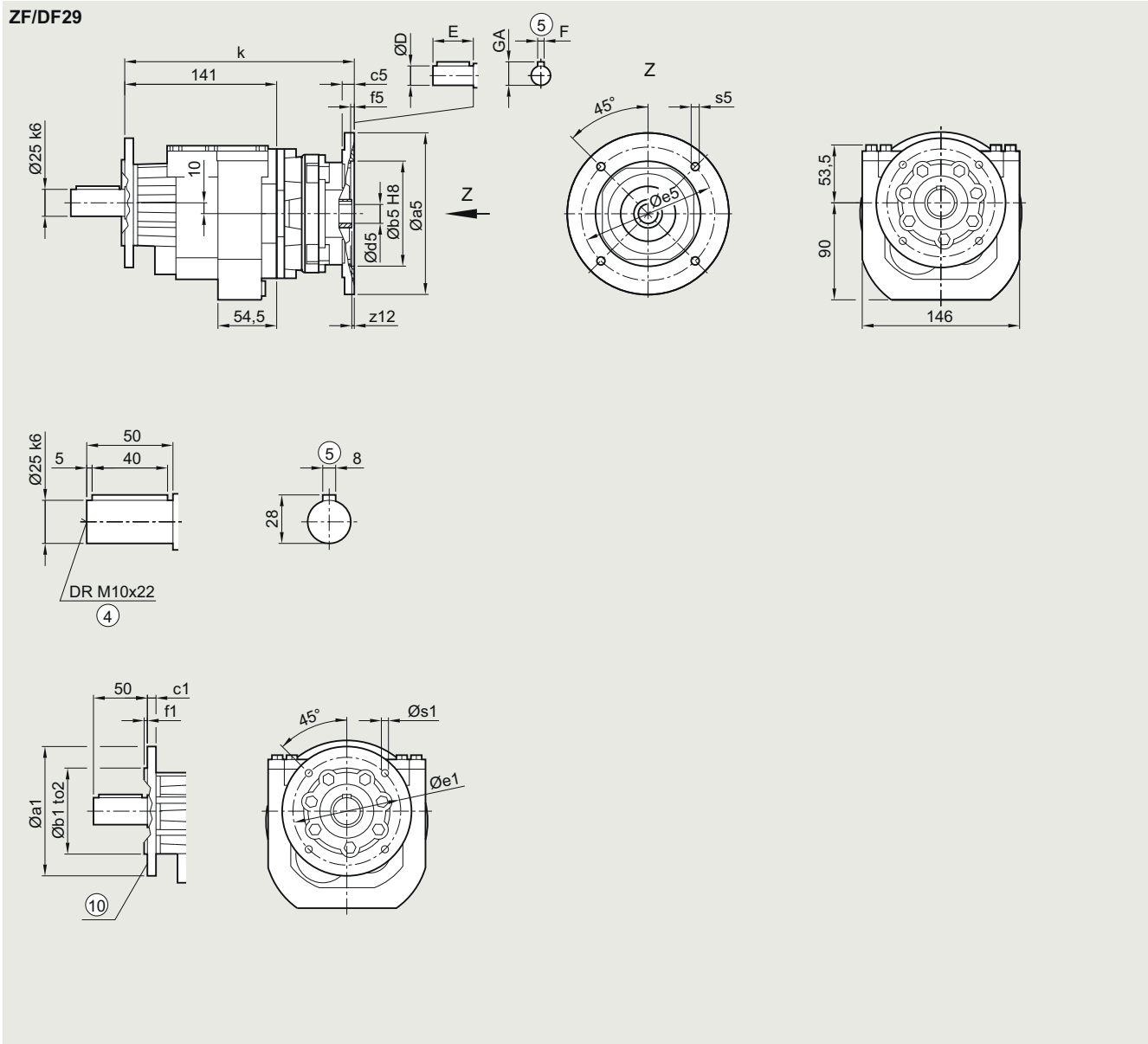
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**SIMOGEAR gearboxes**

Helical gearbox with adapter K4 for mounting an IEC motor

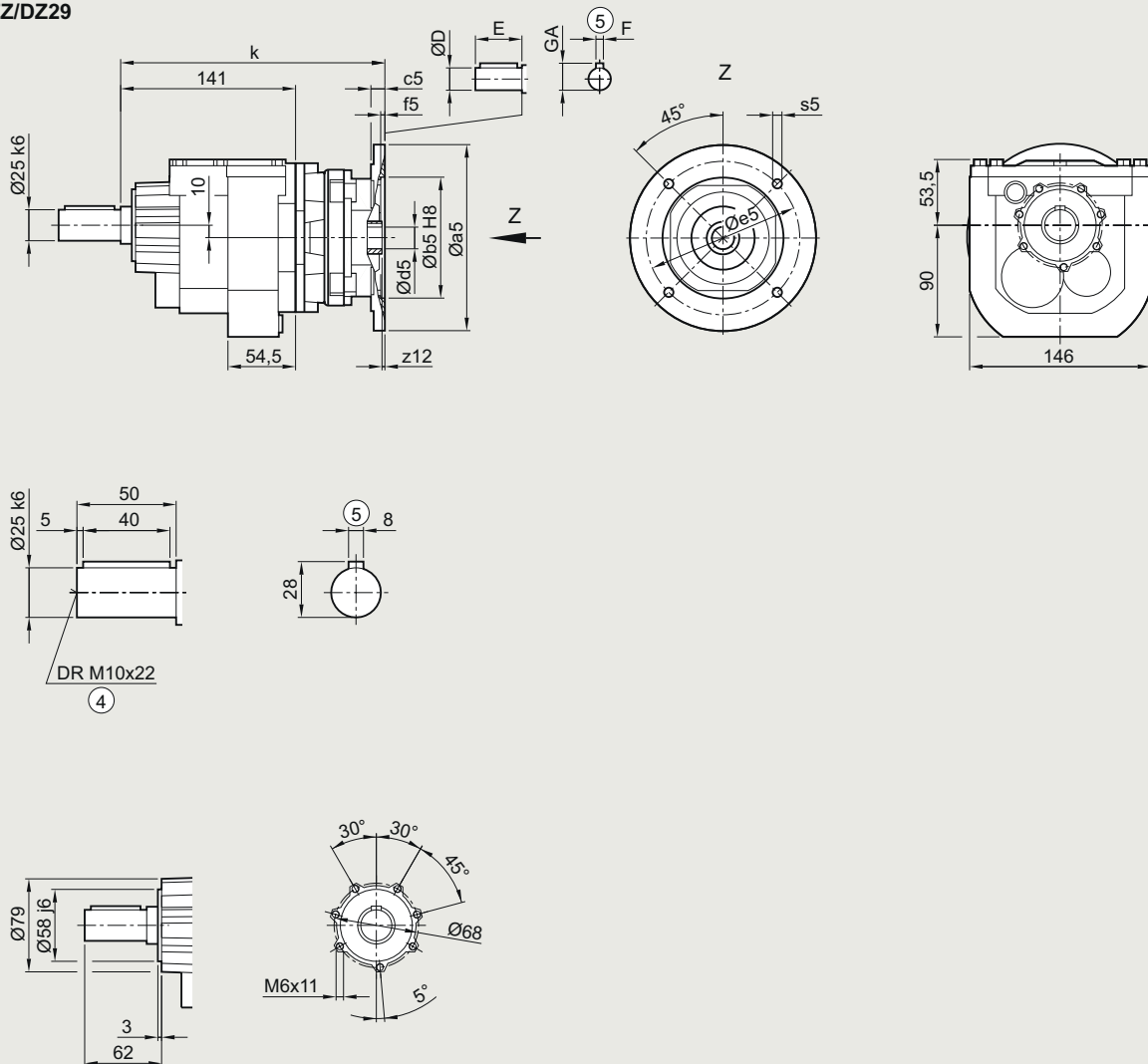
**Dimensional drawings****ZF/DF29 gearbox in a flange-mounted design****DZF030K4**

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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	218.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	218.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	246.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	246.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZZ/DZ29 gearbox in a housing flange design****DZZ030K4****ZZ/DZ29**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	218.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	218.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	246.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	246.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

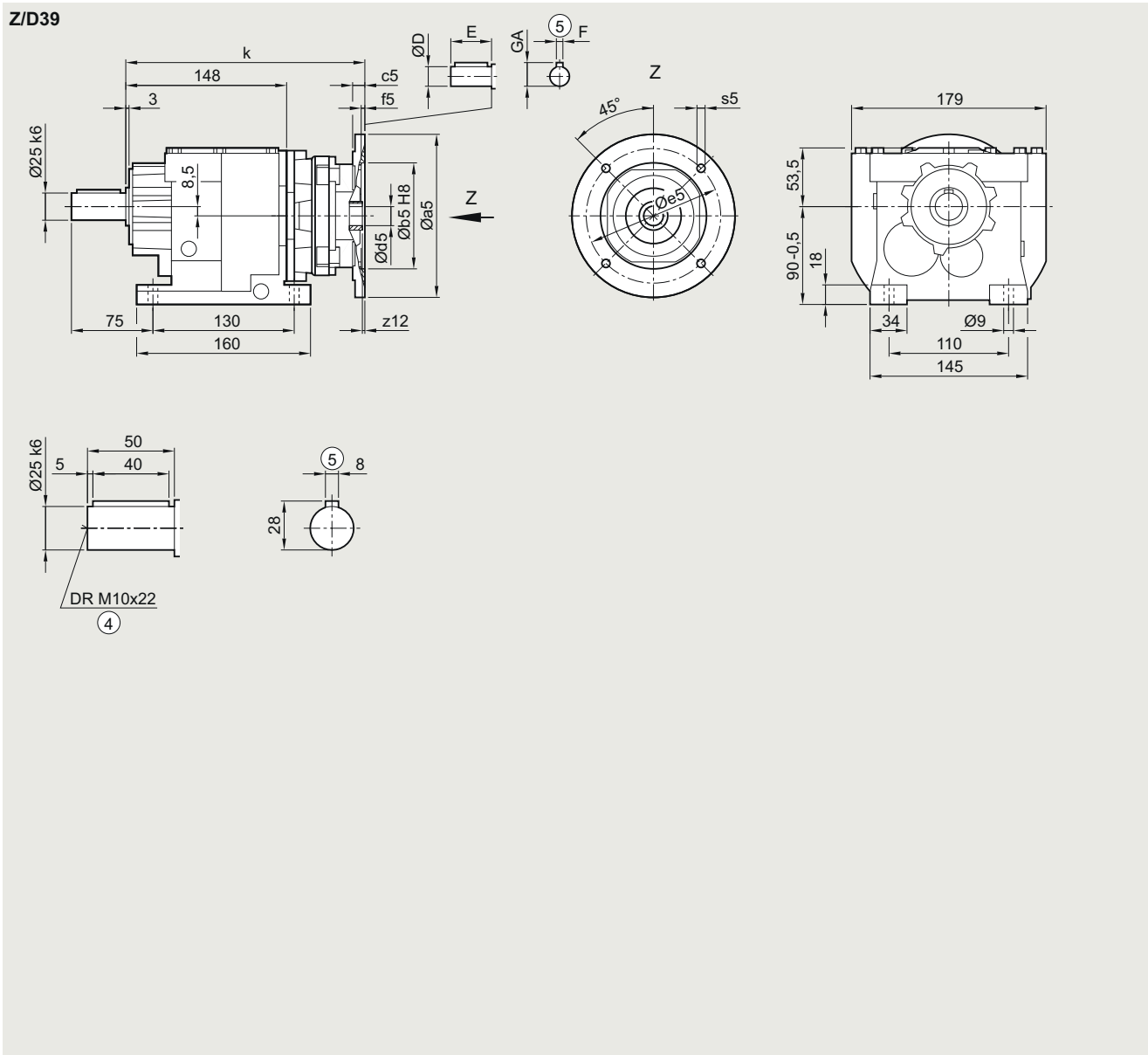
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### Z/D39 gearbox in a foot-mounted design

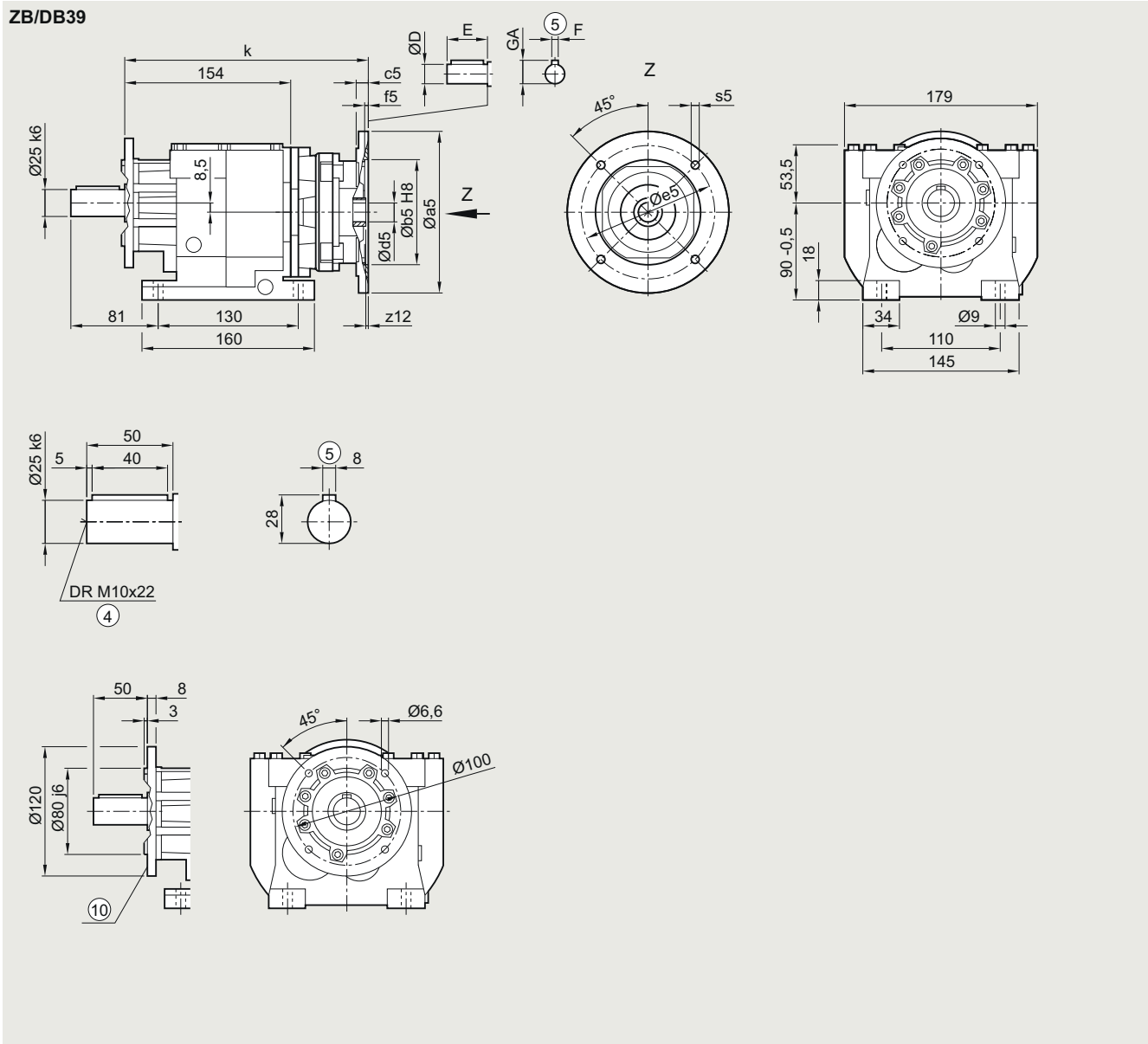
##### DZ030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	225.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	225.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	253.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	308.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

**ZB/DB39 gearbox in a foot/flange-mounted design****DZB030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	231.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	231.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	259.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	259.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	314.0

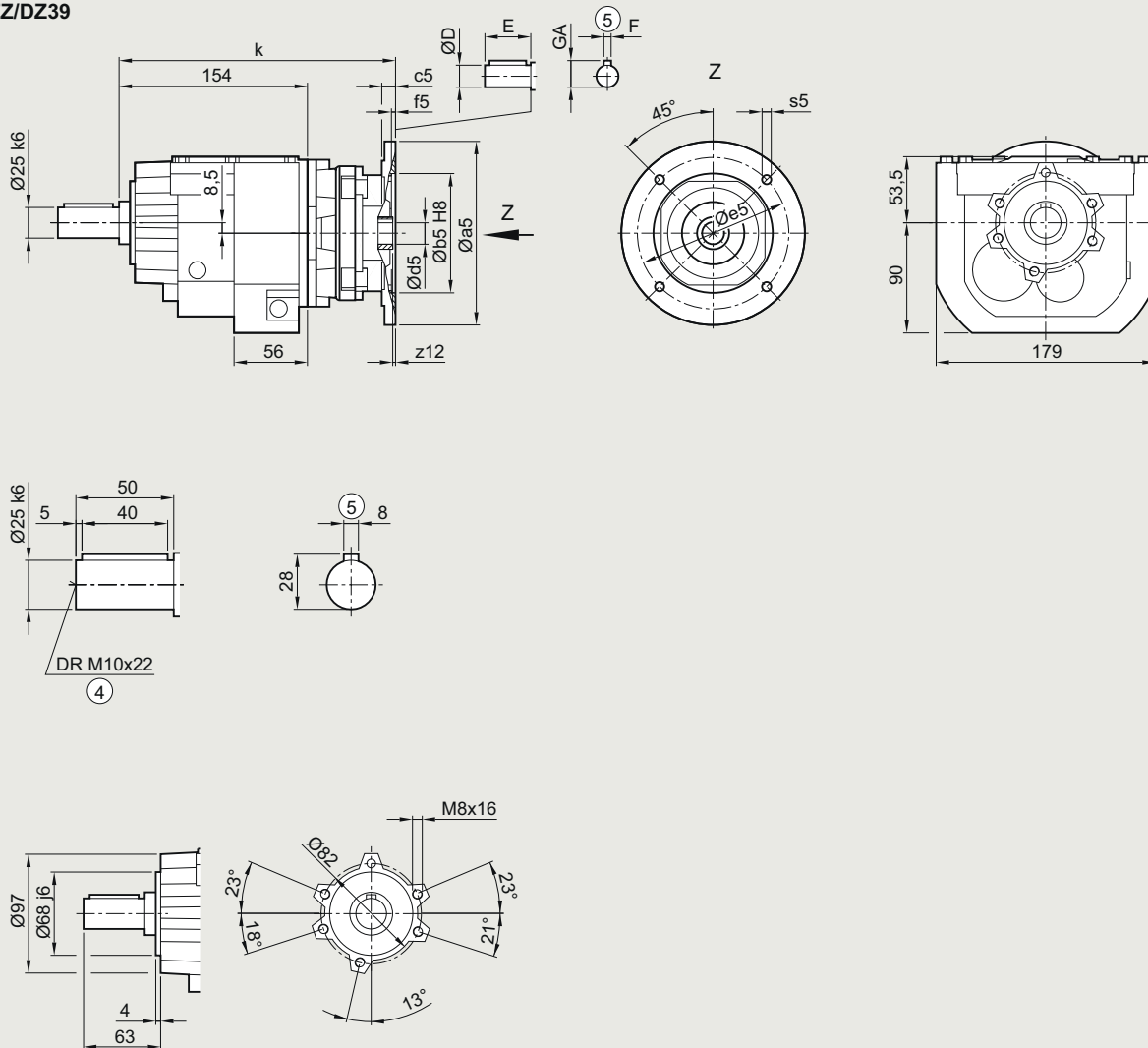
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218





**ZZ/DZ39 gearbox in a housing flange design****DZZ030K4****ZZ/DZ39**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	231.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	231.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	259.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	259.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	314.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

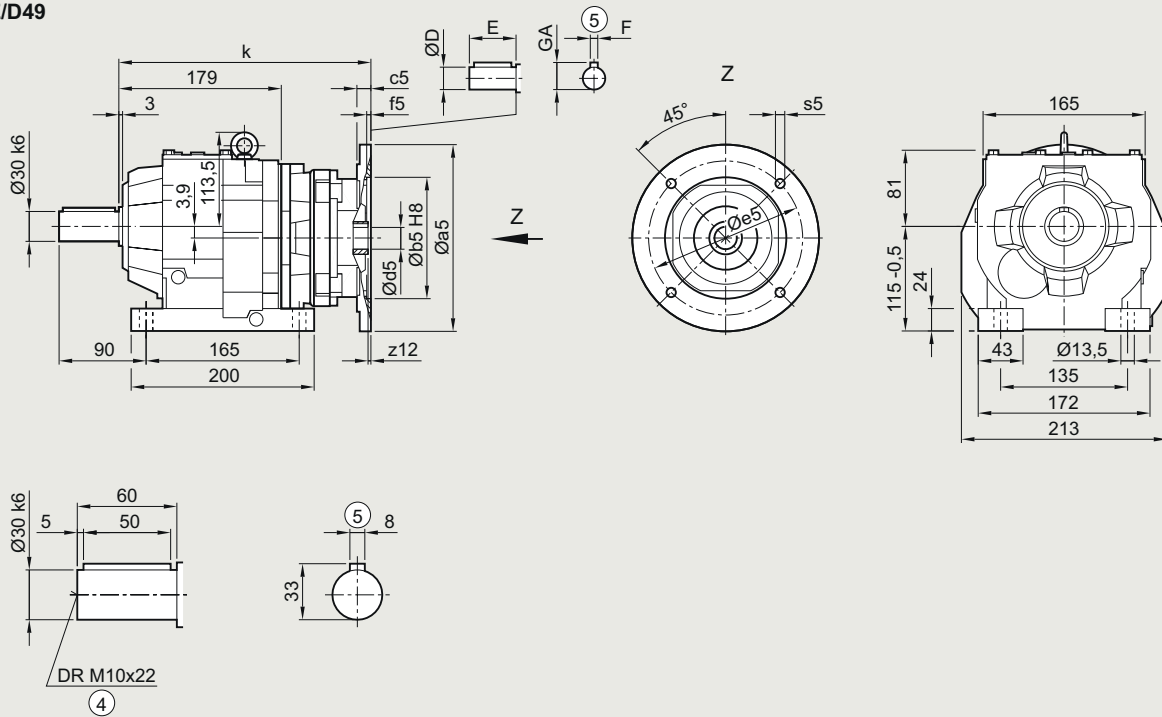
Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

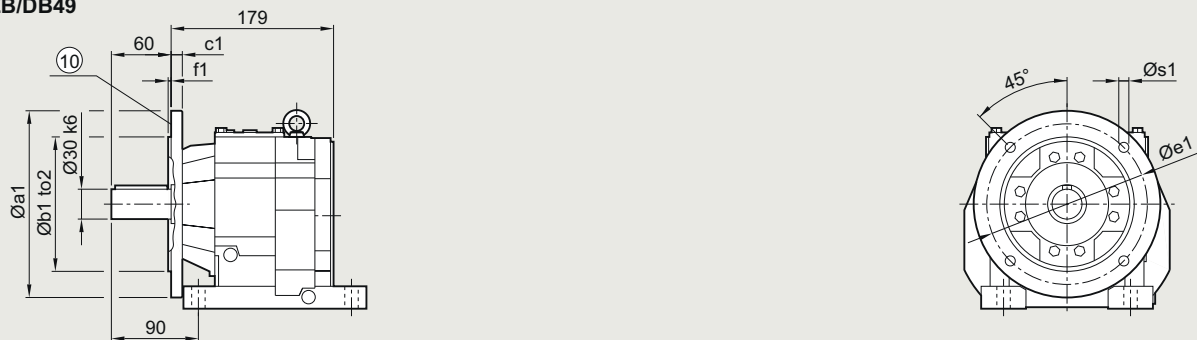
#### Z/D49 and ZB/DB49 gearboxes in a foot and foot/flange-mounted design

##### DZ030K4, DZB030K4

###### Z/D49



###### ZB/DB49

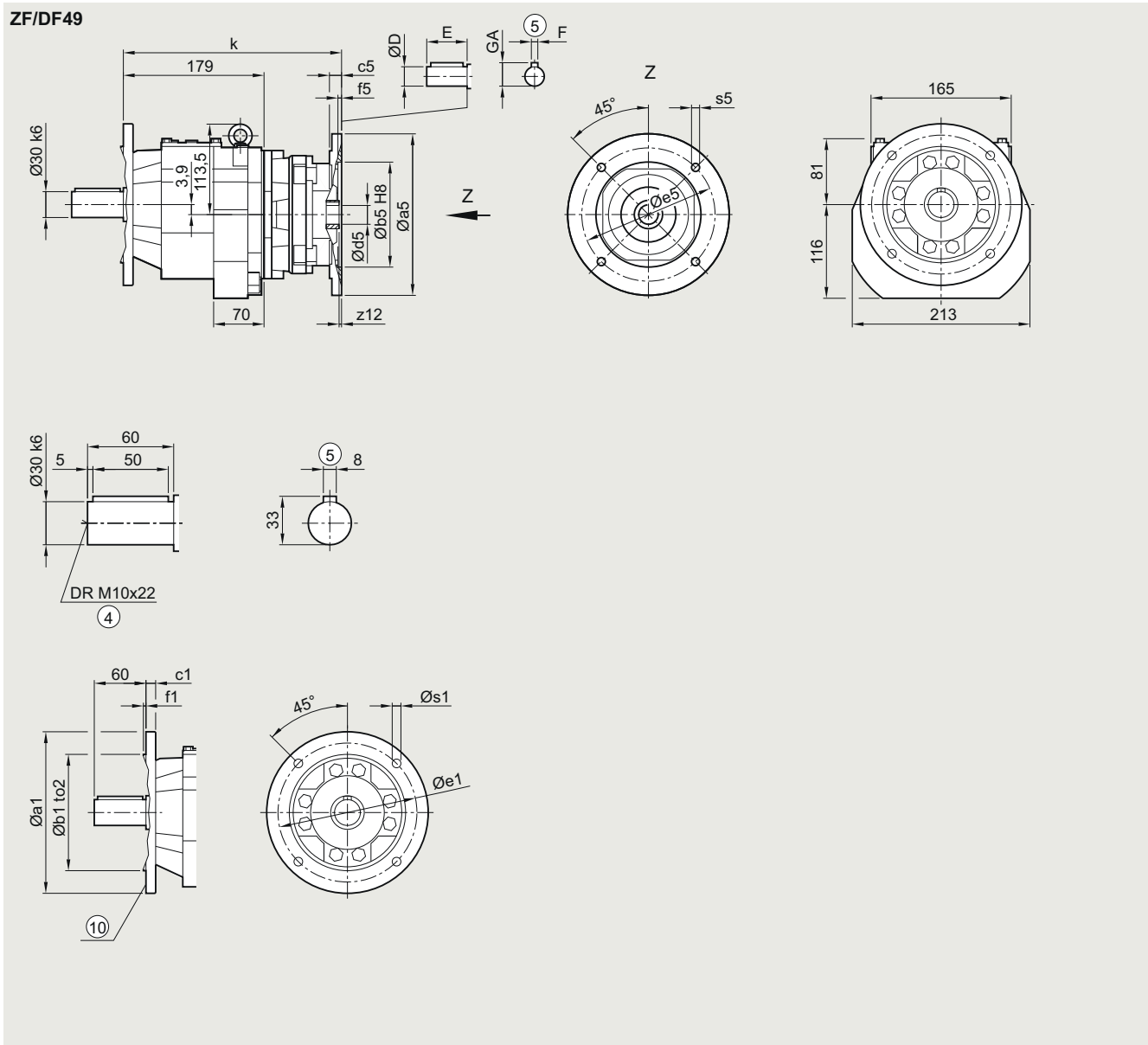


Flange	a1	b1	to2	c1	e1	f1	s1						
	140	95	j6	10	115	3.0	9.0						
	160	110	j6	10	130	3.5	9.0						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k	
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0	
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0	
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0	
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0	
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5	
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5	
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	347.0	

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF49 gearbox in a flange-mounted design****DZF030K4**

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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	347.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

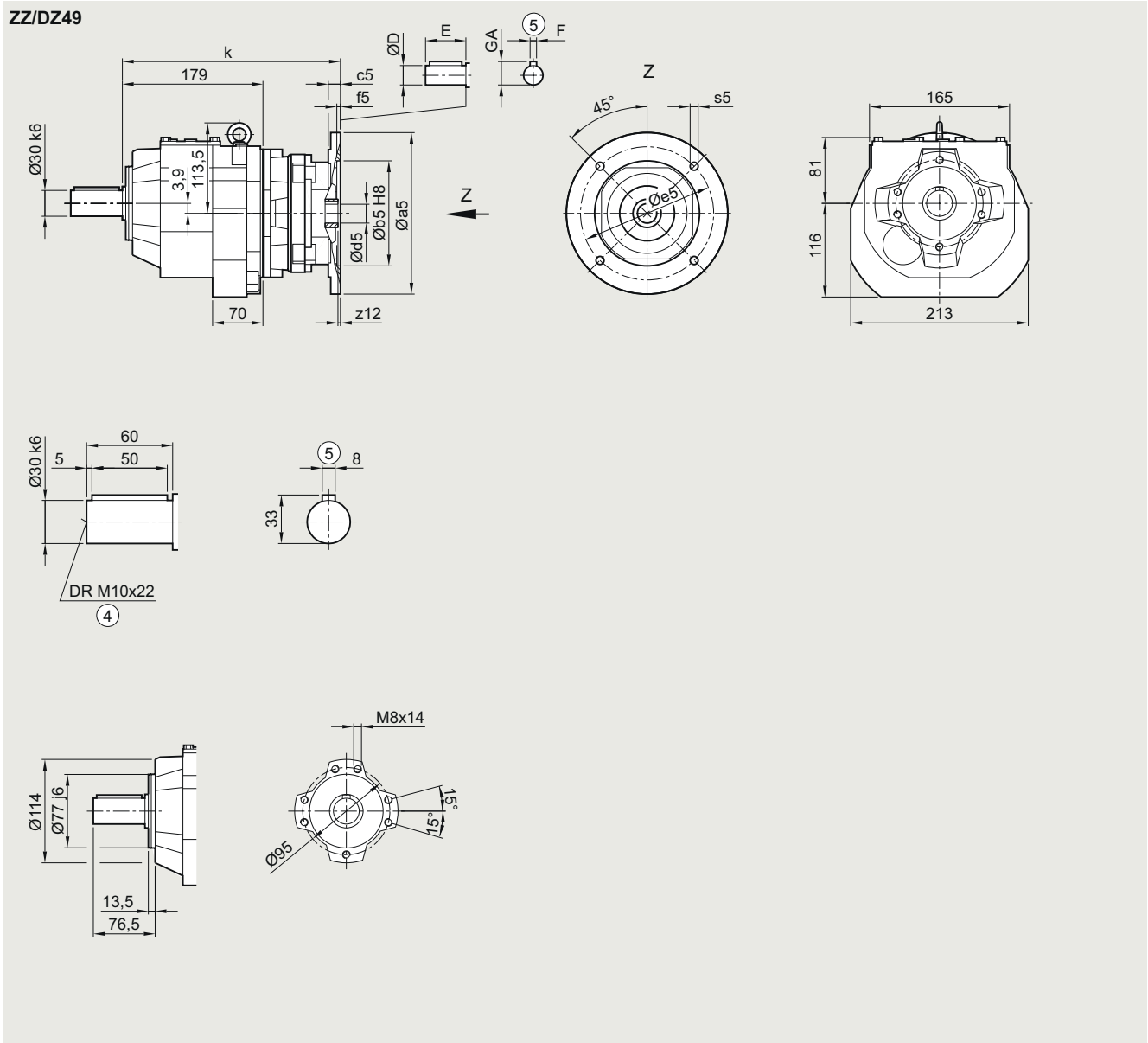
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZZ/DZ49 gearbox in a housing flange design

##### DZZ030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	347.0

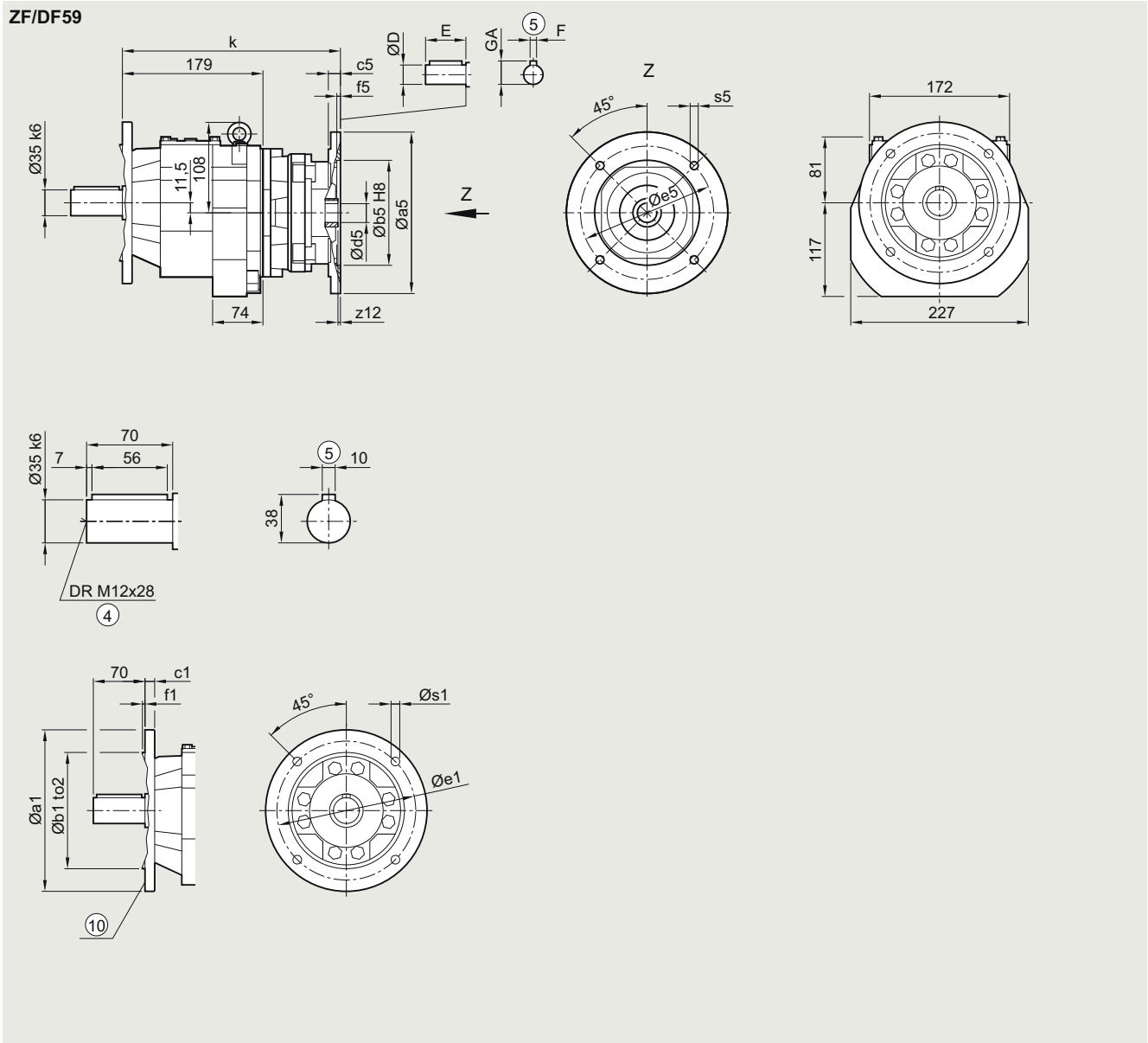
④ DIN 332

⑤ Feather key/keyway DIN 6885



**SIMOGEAR gearboxes**

Helical gearbox with adapter K4 for mounting an IEC motor

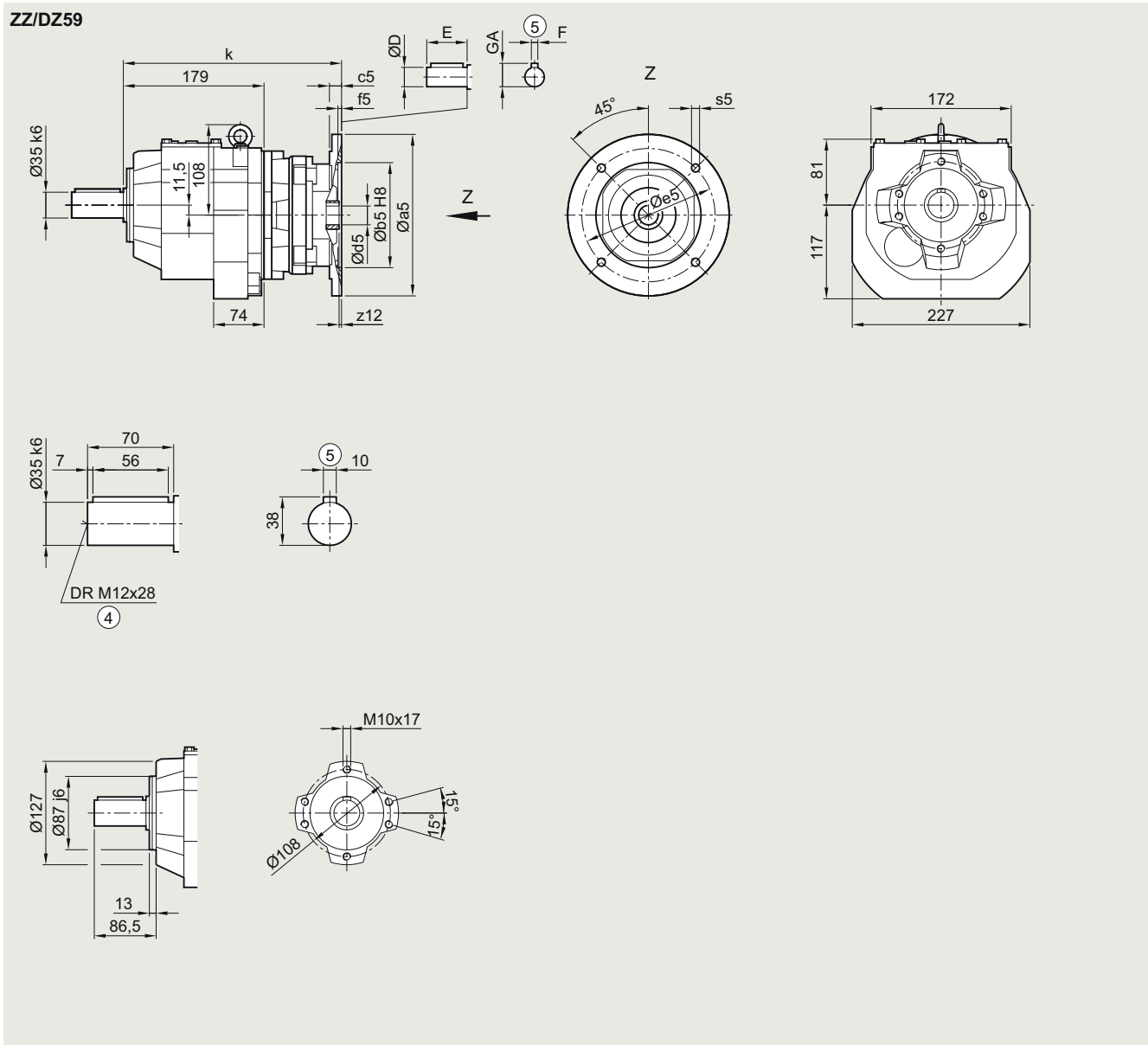
**Dimensional drawings****ZF/DF59 gearbox in a flange-mounted design****DZF030K4**

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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	347.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZZ/DZ59 gearbox in a housing flange design****DZZ030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	347.0

④ DIN 332

⑤ Feather key/keyway DIN 6885



## SIMOGEAR gearboxes

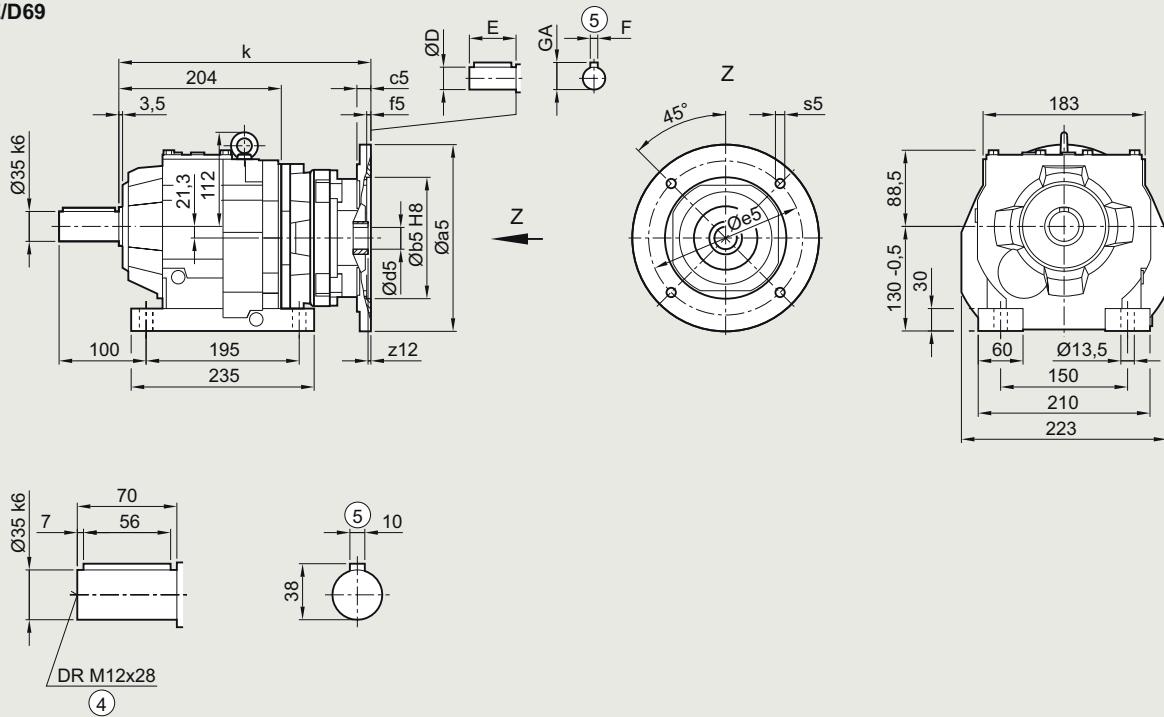
Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

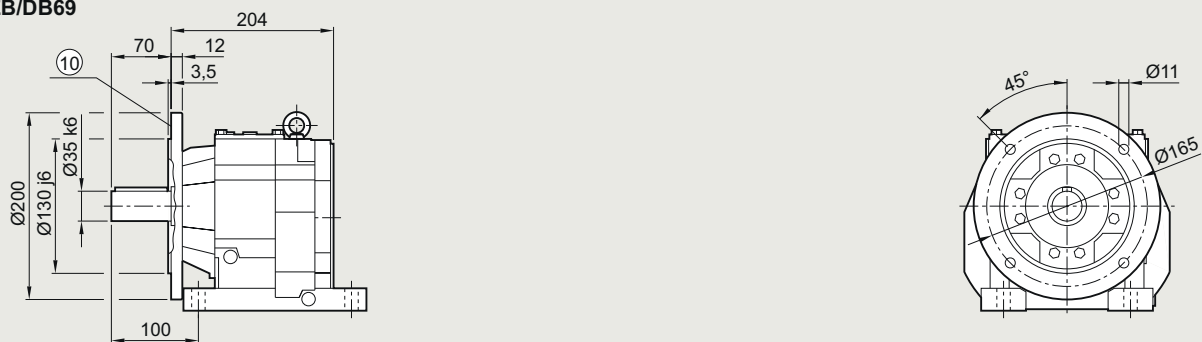
#### Z/D69 and ZB/DB69 gearboxes in a foot and foot/flange-mounted design

##### DZ030K4, DZB030K4

###### Z/D69



###### ZB/DB69

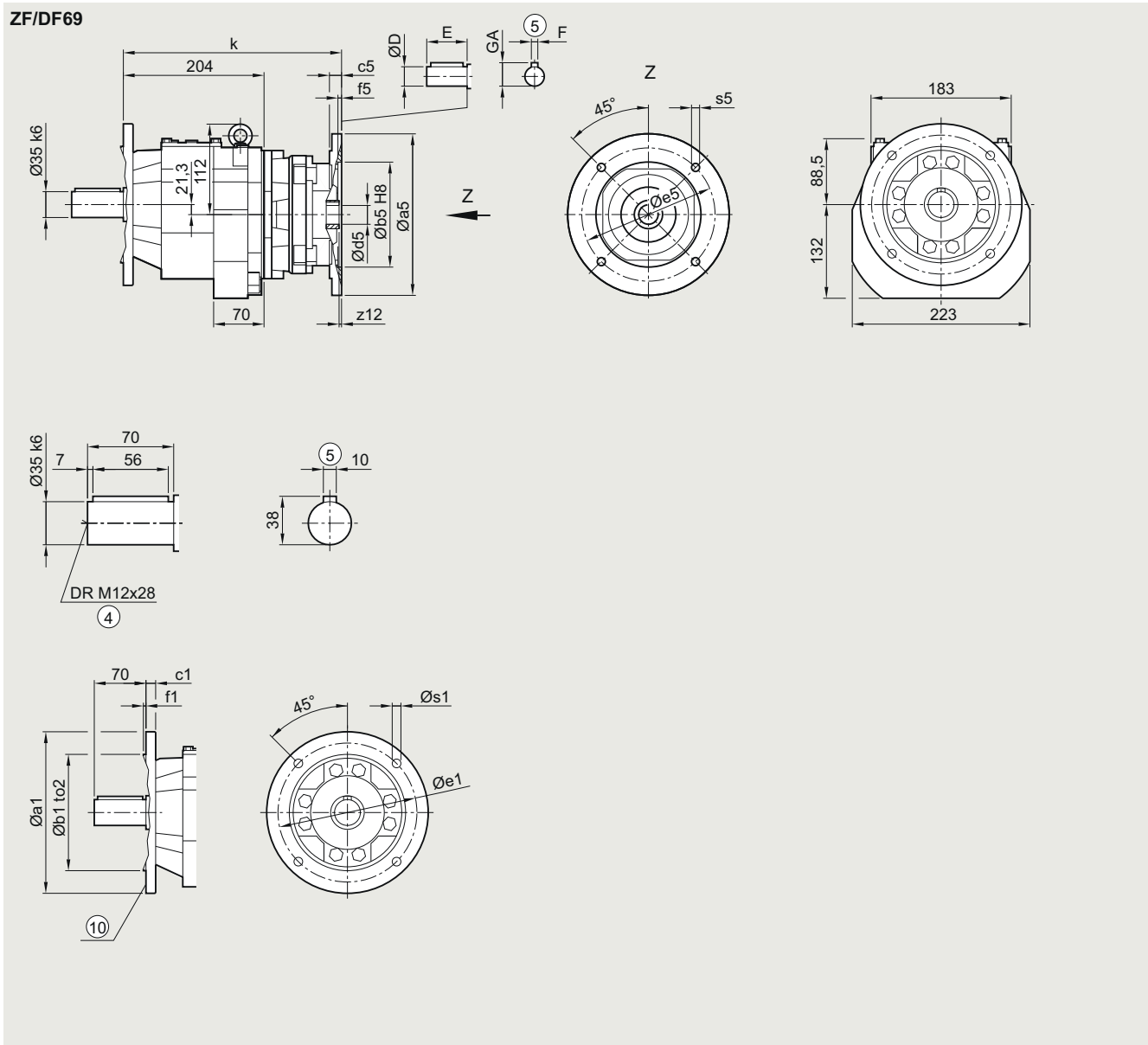


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	272.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	272.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	300.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	300.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	372.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF69 gearbox in a flange-mounted design****DZF030K4**

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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	272.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	272.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	300.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	300.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	372.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

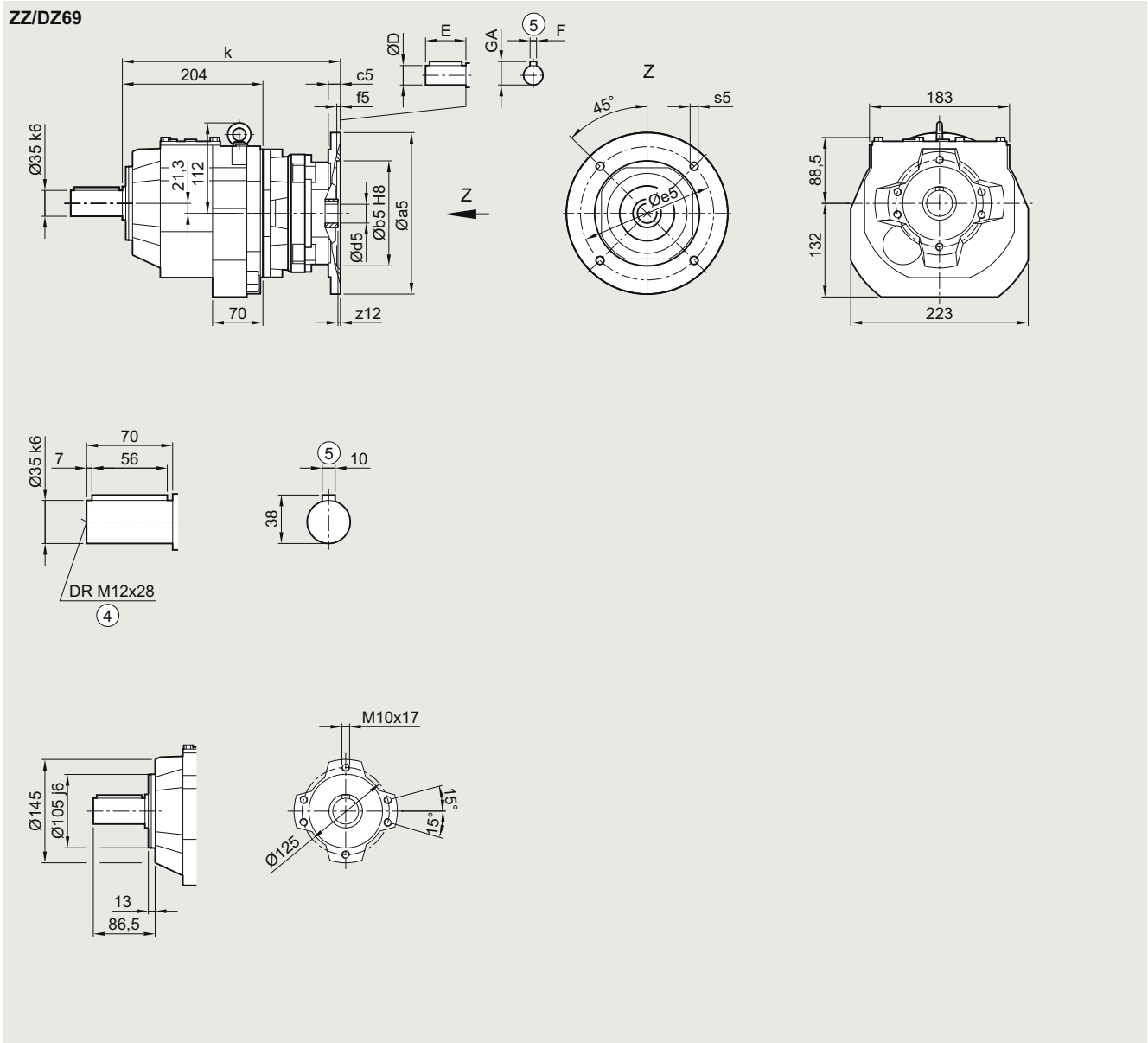
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZZ/DZ69 gearbox in a housing flange design

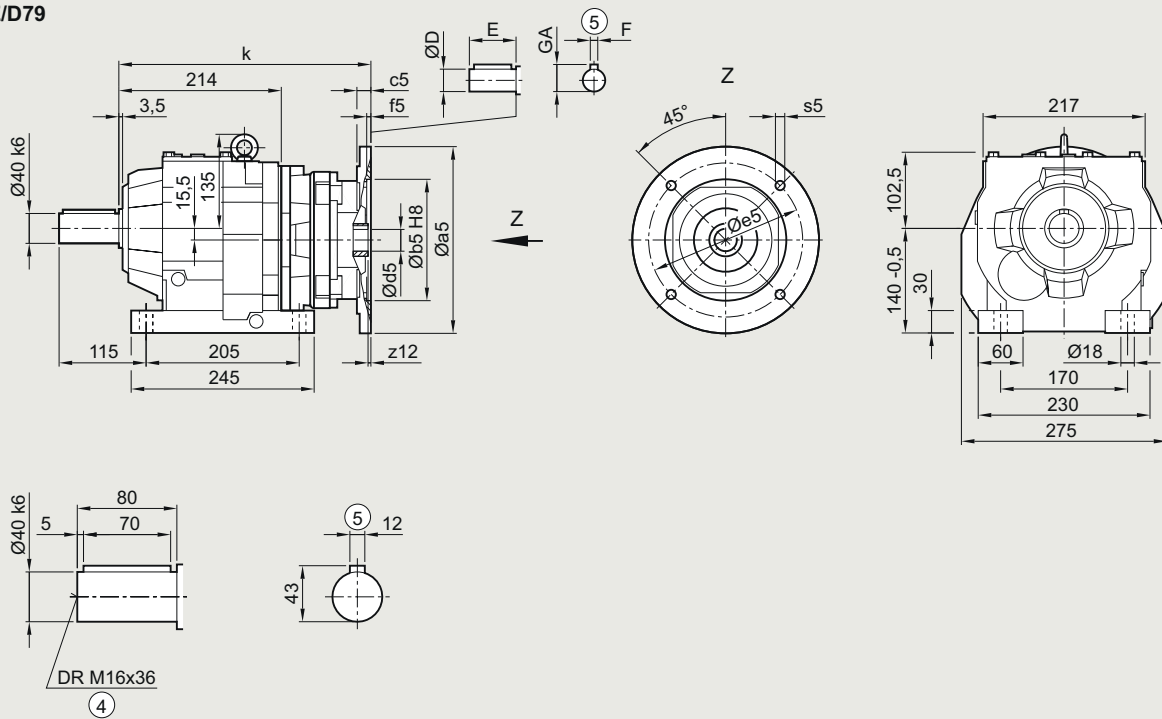
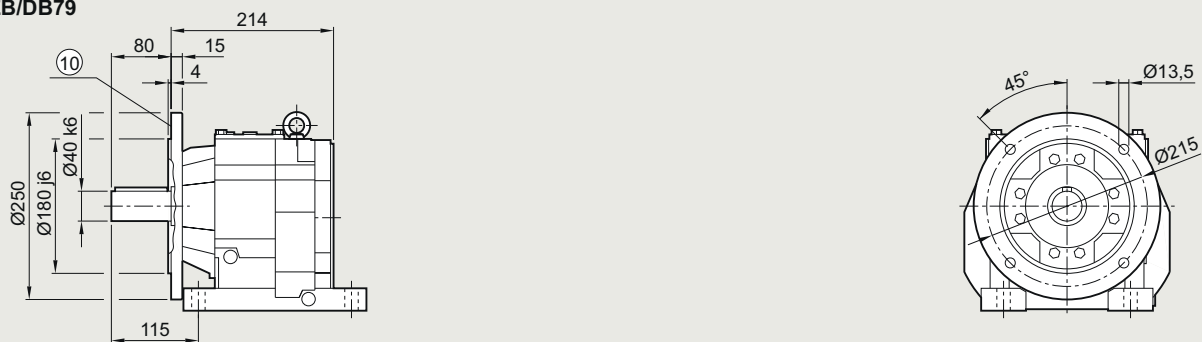
##### DZZ030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	272.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	272.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	300.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	300.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	372.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

**Z/D79 and ZB/DB79 gearboxes in a foot and foot/flange-mounted design****DZ030K4, DZB030K4****Z/D79****ZB/DB79**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	280.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	304.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	304.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	376.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	406.0

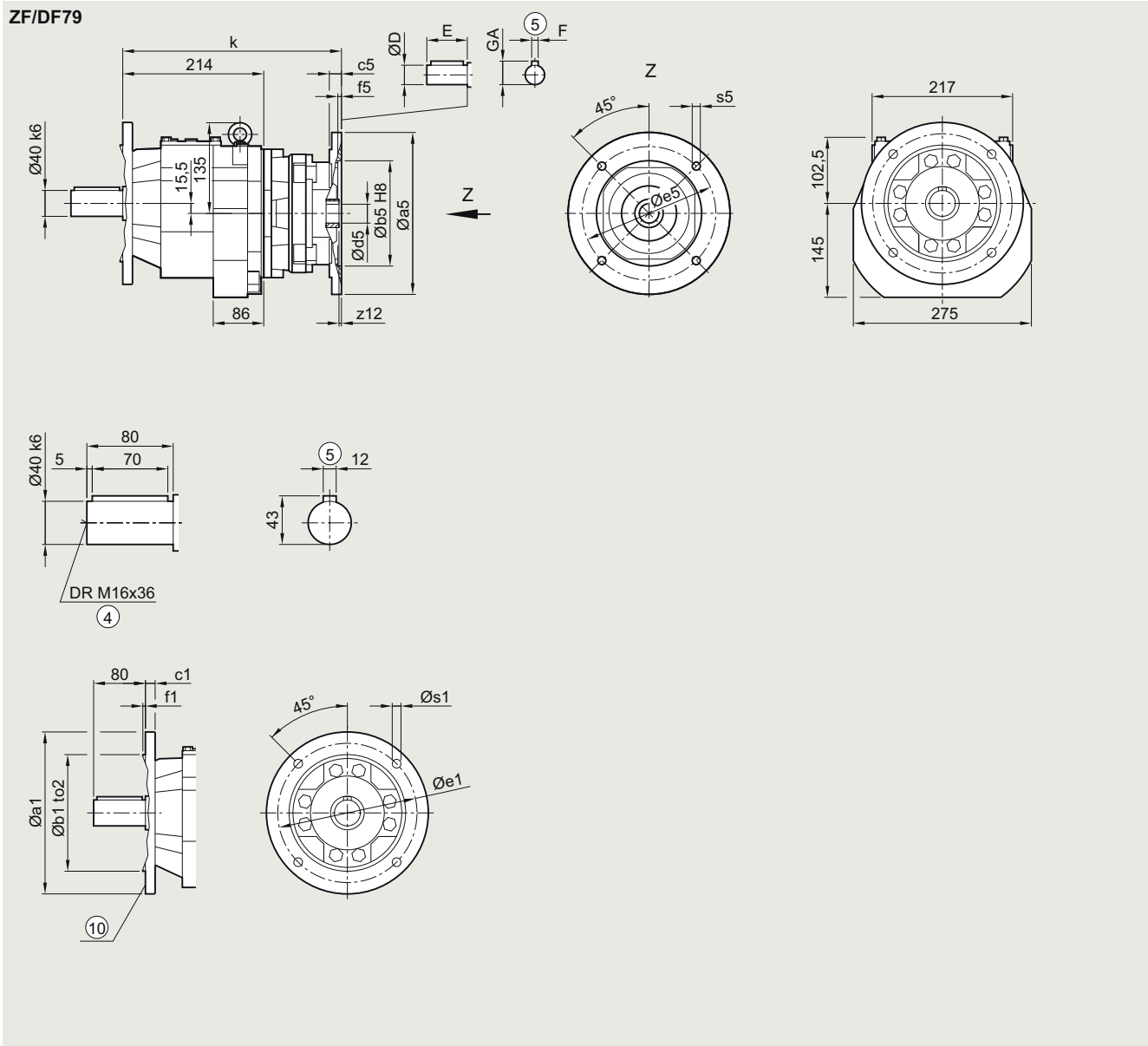
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**SIMOGEAR gearboxes**

Helical gearbox with adapter K4 for mounting an IEC motor

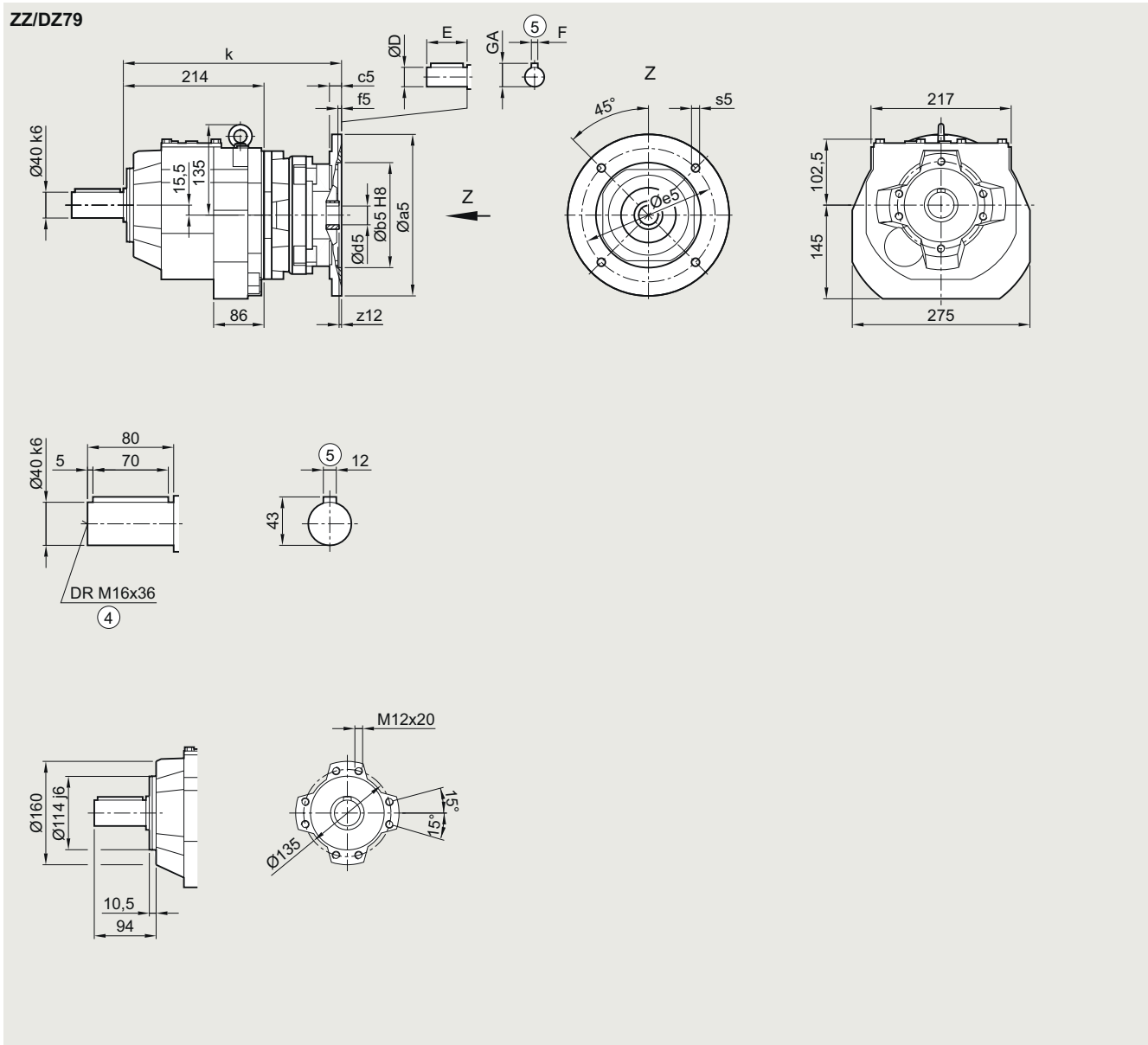
**Dimensional drawings****ZF/DF79 gearbox in a flange-mounted design****DZF030K4**

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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	280.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	304.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	304.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	376.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	406.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZZ/DZ79 gearbox in a housing flange design****DZZ030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	280.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	304.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	304.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	376.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	406.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

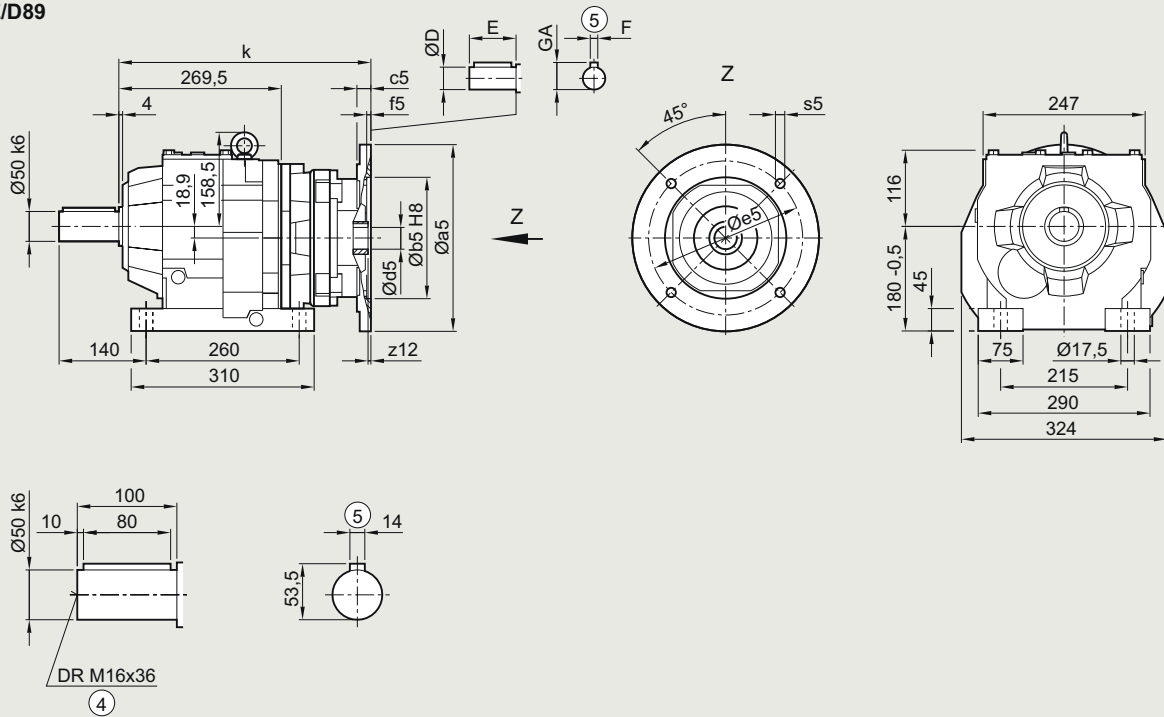
Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

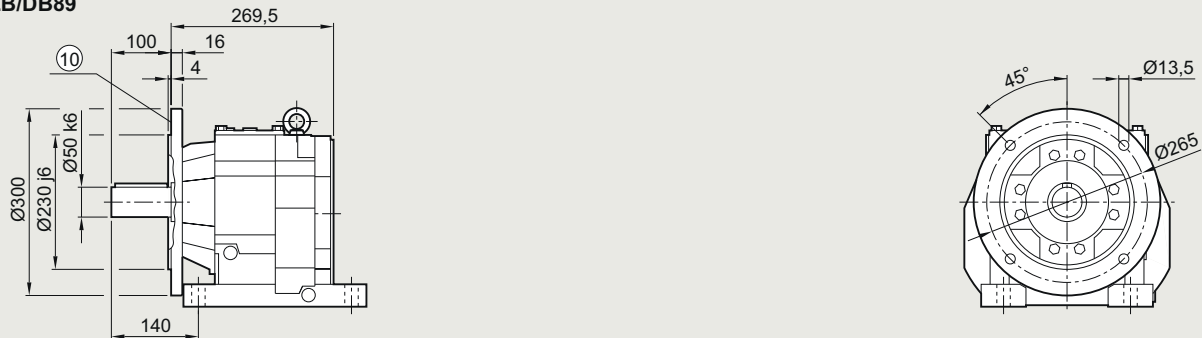
#### Z/D89 and ZB/DB89 gearboxes in a foot and foot/flange-mounted design

##### DZ030K4, DZB030K4

###### Z/D89



###### ZB/DB89



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	444.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	444.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

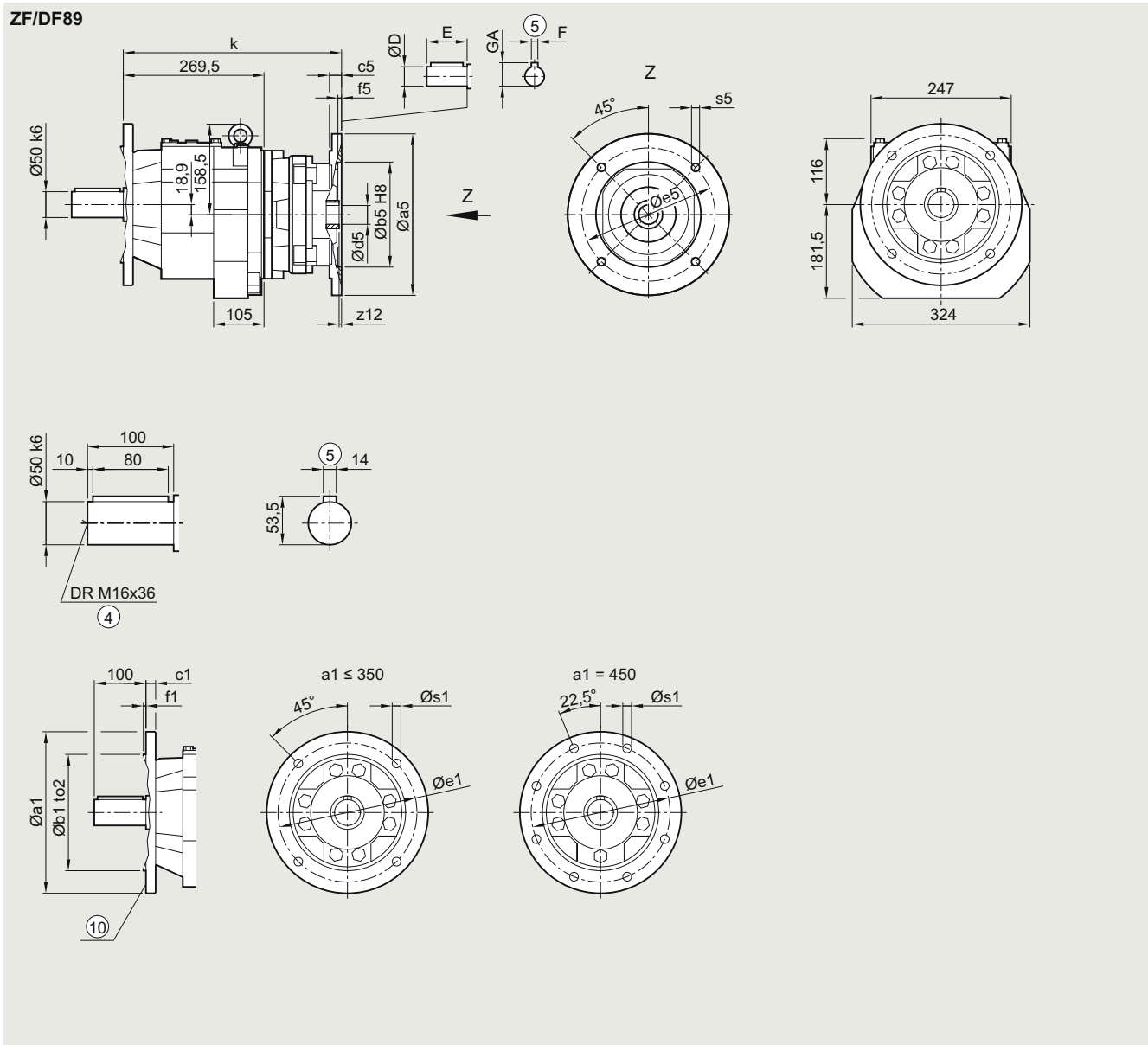
# SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

## Dimensional drawings

### ZF/DF89 gearbox in a flange-mounted design

#### DZF030K4



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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	444.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	444.5

④ DIN 332

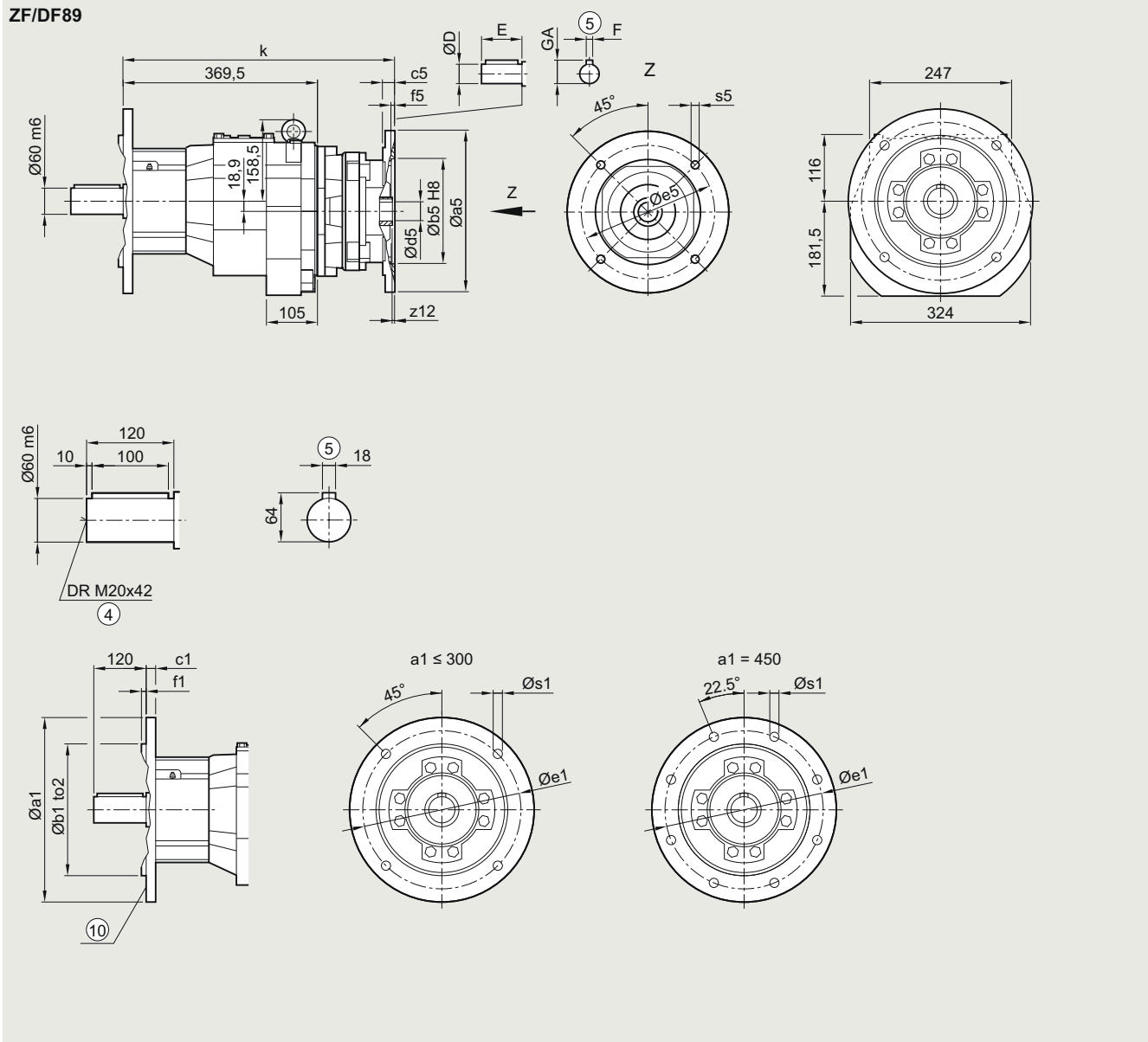
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



**SIMOGEAR gearboxes**

Helical gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****ZF/DF89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****DZF040K4**

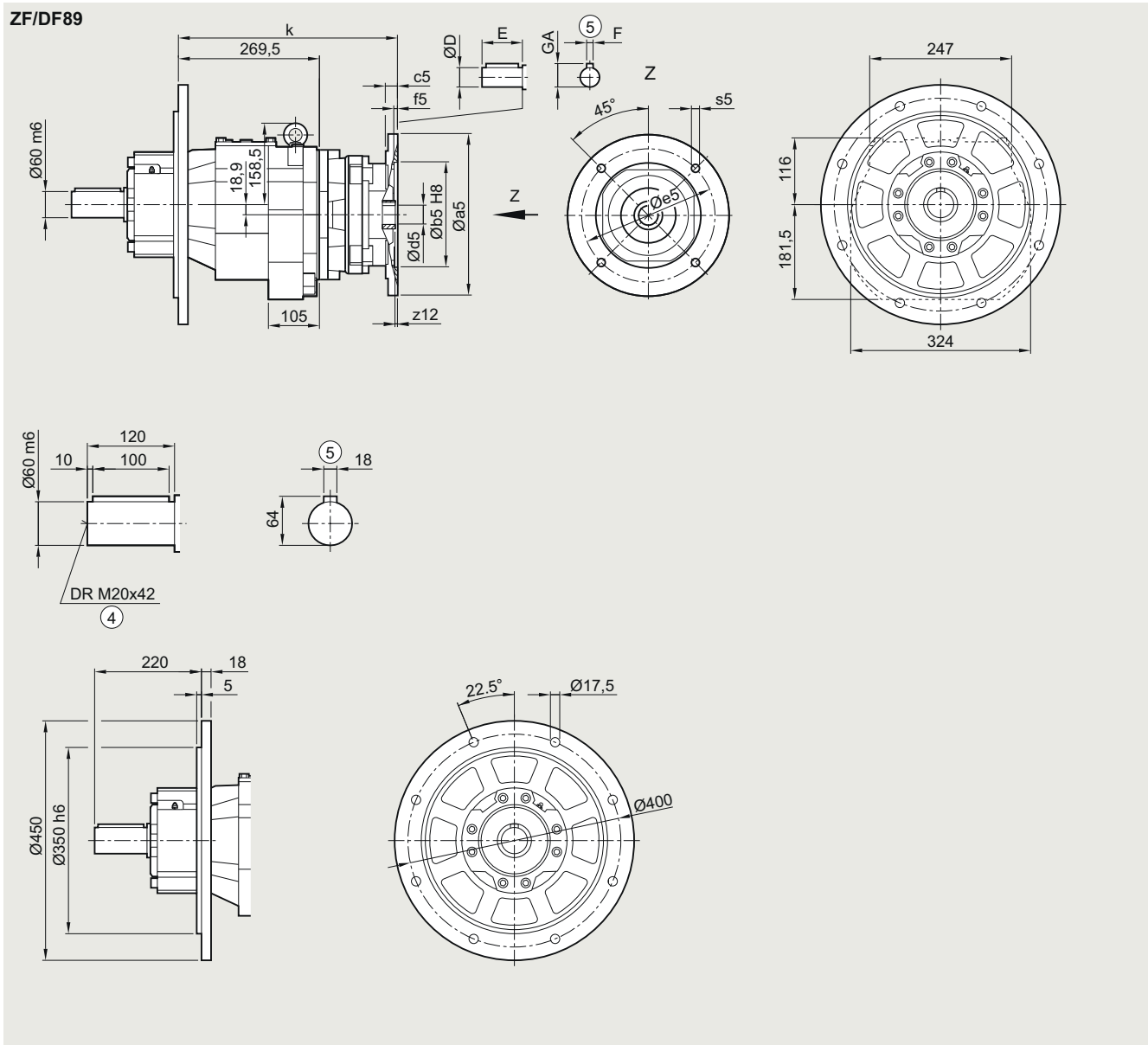
Flange	a1	b1	to2	c1	e1	f1	s1
	300	230	j6	16	265	4.0	13.5
	350	250	j6	18	300	5.0	17.5
	450	350	h6	18	400	5.0	17.5

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	444.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	444.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

**ZF/DF89 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)****DZF040K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	444.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	444.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

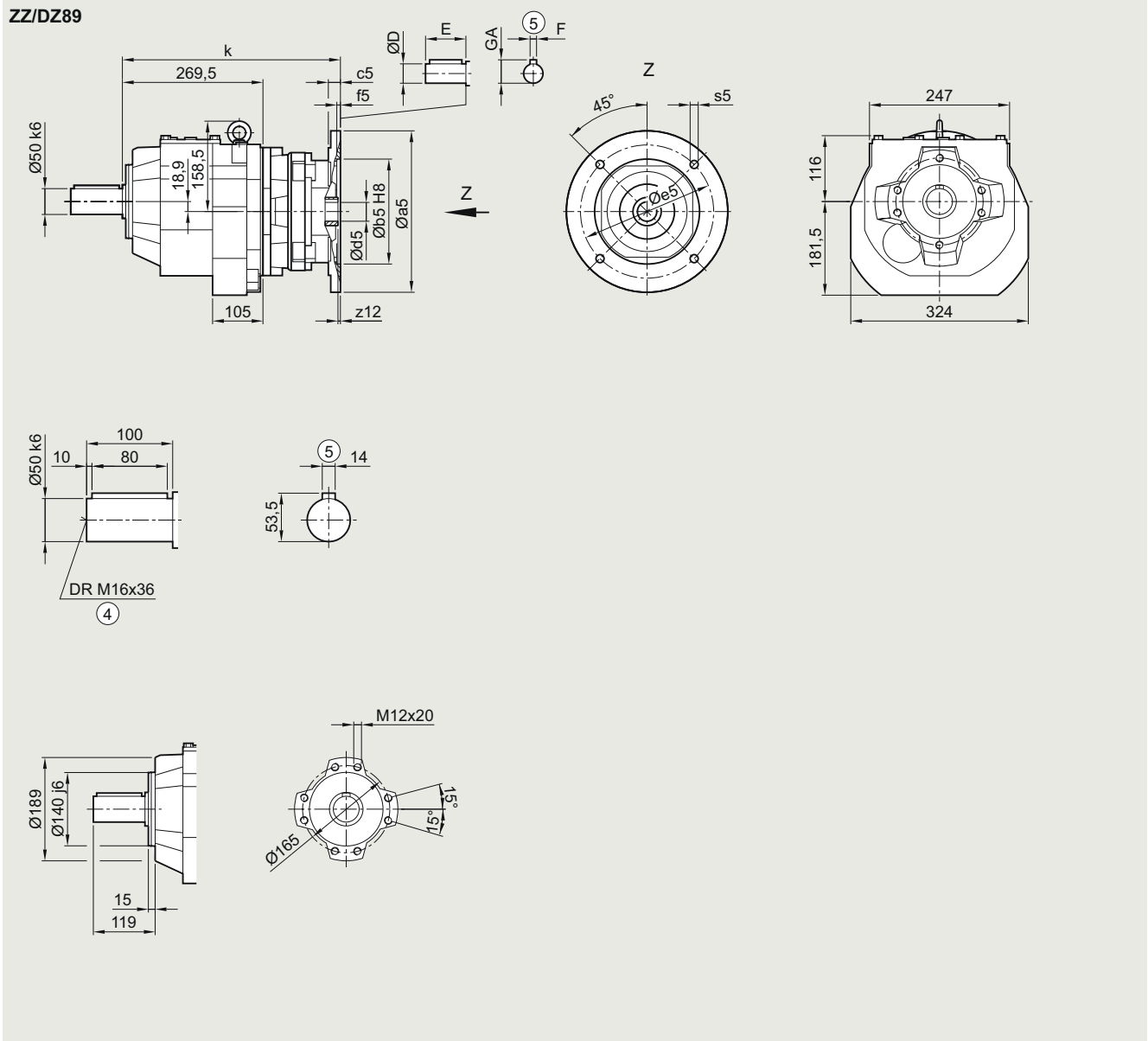
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZZ/DZ89 gearbox in a housing flange design

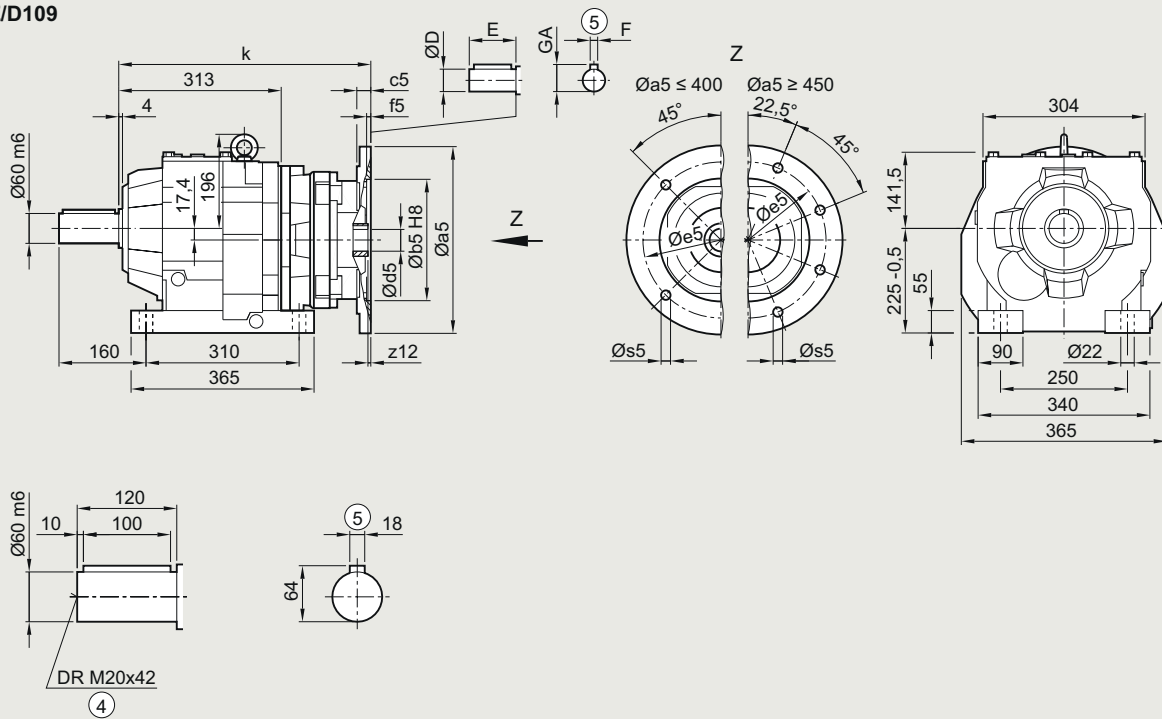
##### DZZ030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	444.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	444.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

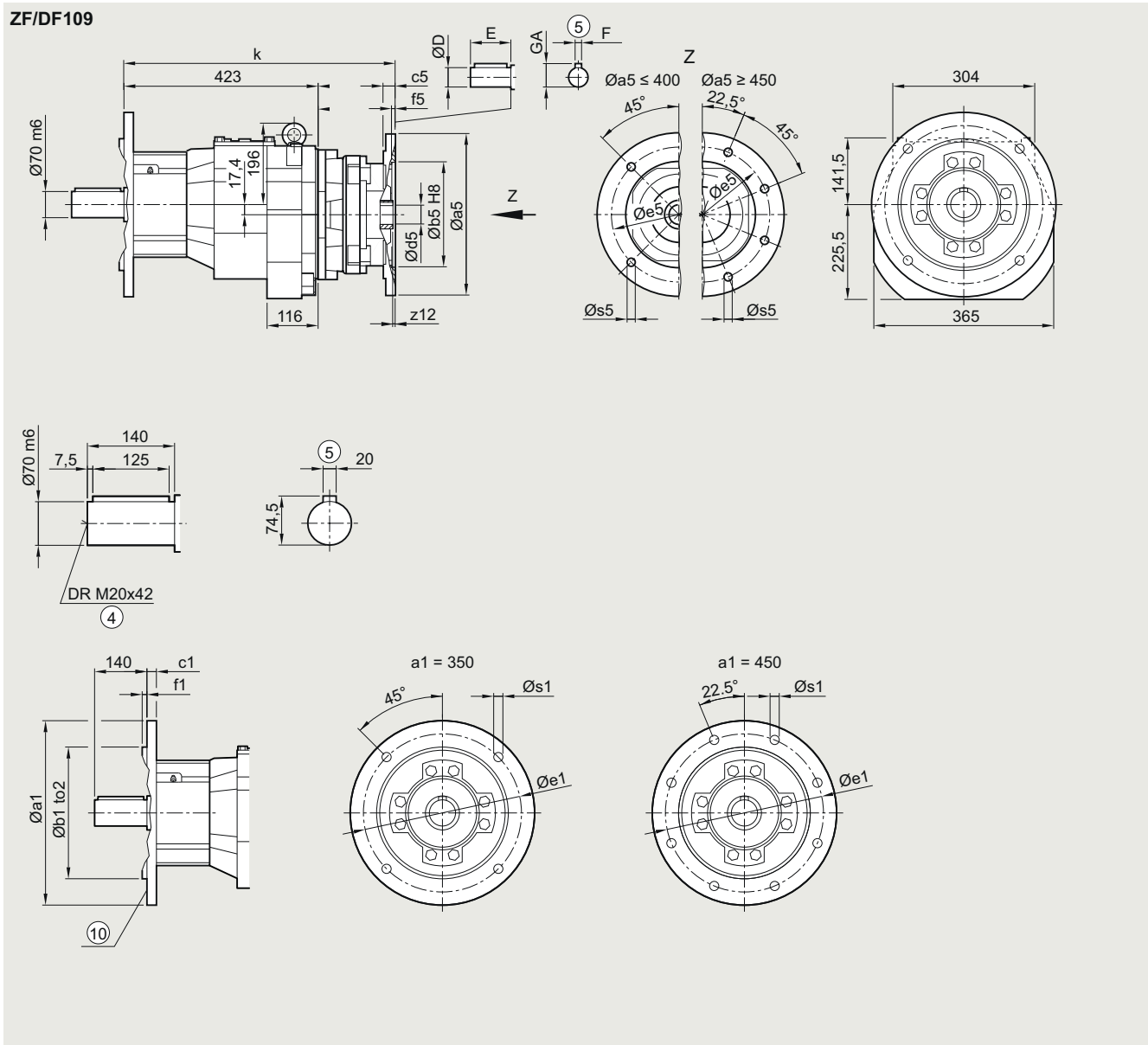
**Z/D109 gearbox in a foot-mounted design****DZ030K4****Z/D109**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	383.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	431.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	431.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	449.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	479.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	479.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	519.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	526.0

④ DIN 332

⑤ Feather key/keyway DIN 6885



**ZF/DF109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****DZF040K4**

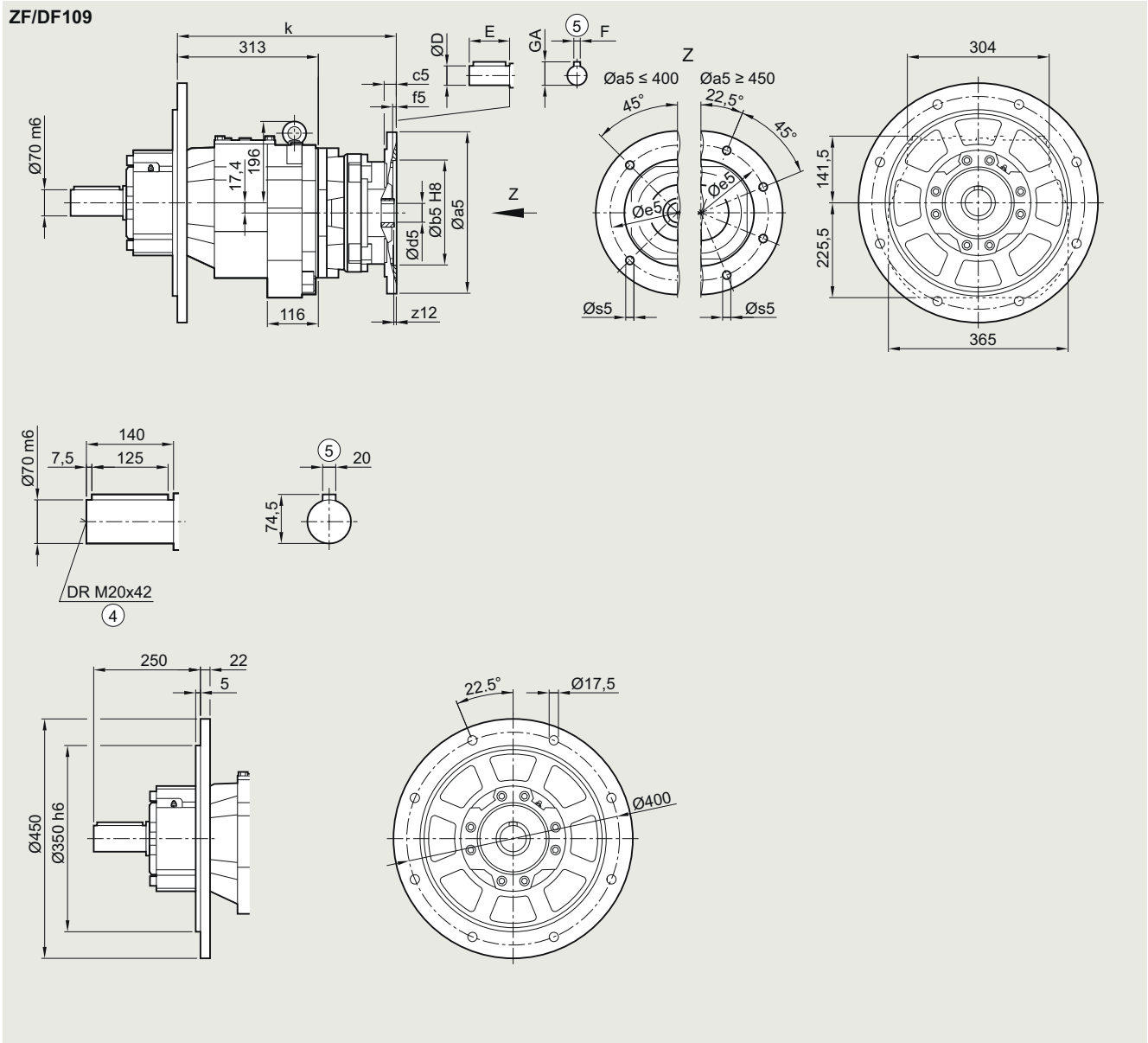
Flange	a1	b1	to2	c1	e1	f1	s1					
	350	250	h6	18	300	5	17.5					
	450	350	h6	22	400	5	17.5					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	383.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	431.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	431.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	449.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	479.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	479.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	519.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	526.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Helical gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****ZF/DF109 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)****DZF040K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	383.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	431.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	431.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	449.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	479.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	479.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	519.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	526.0

④ DIN 332

⑤ Feather key/keyway DIN 6885









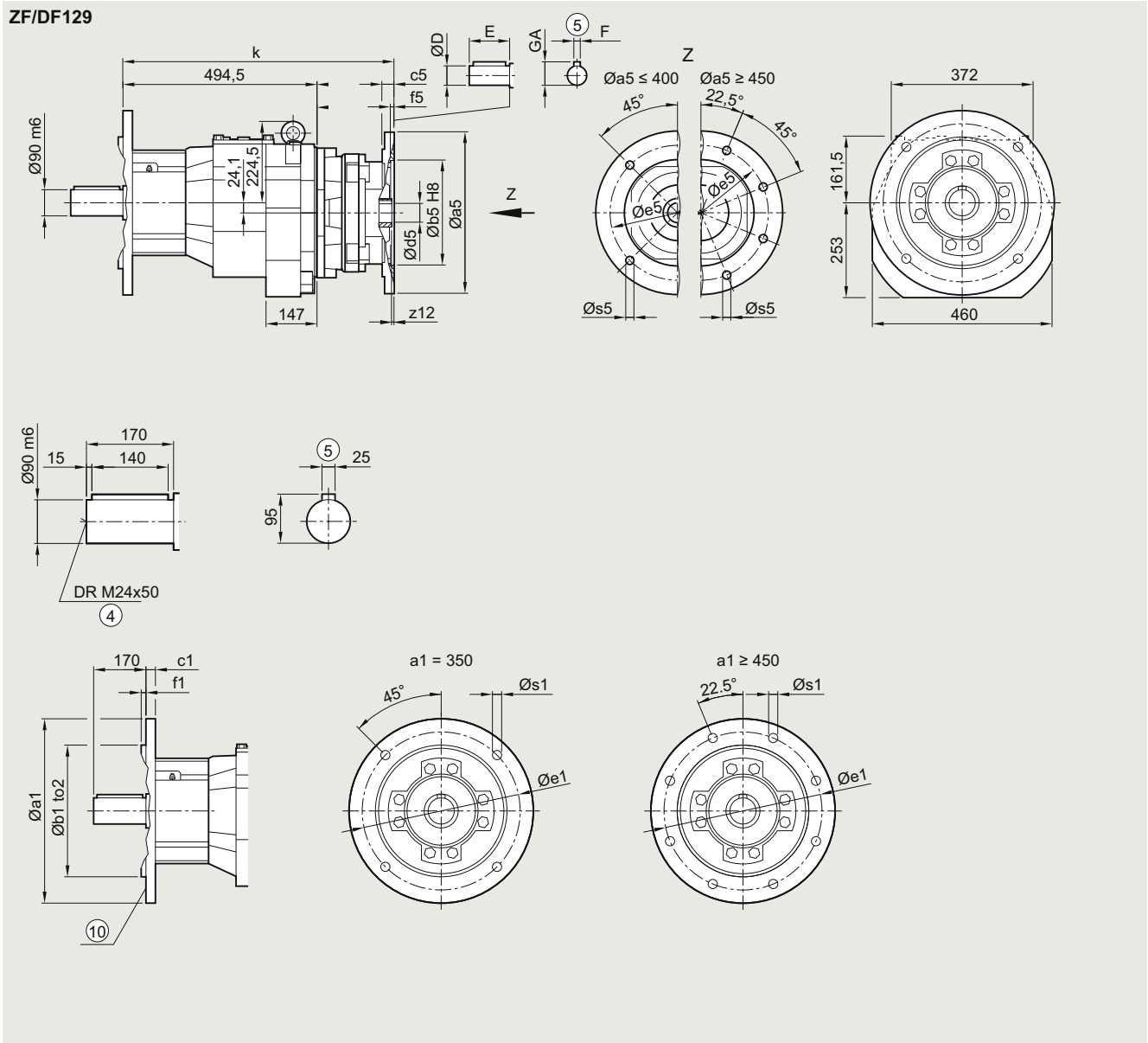
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZF/DF129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

##### DZF040K4

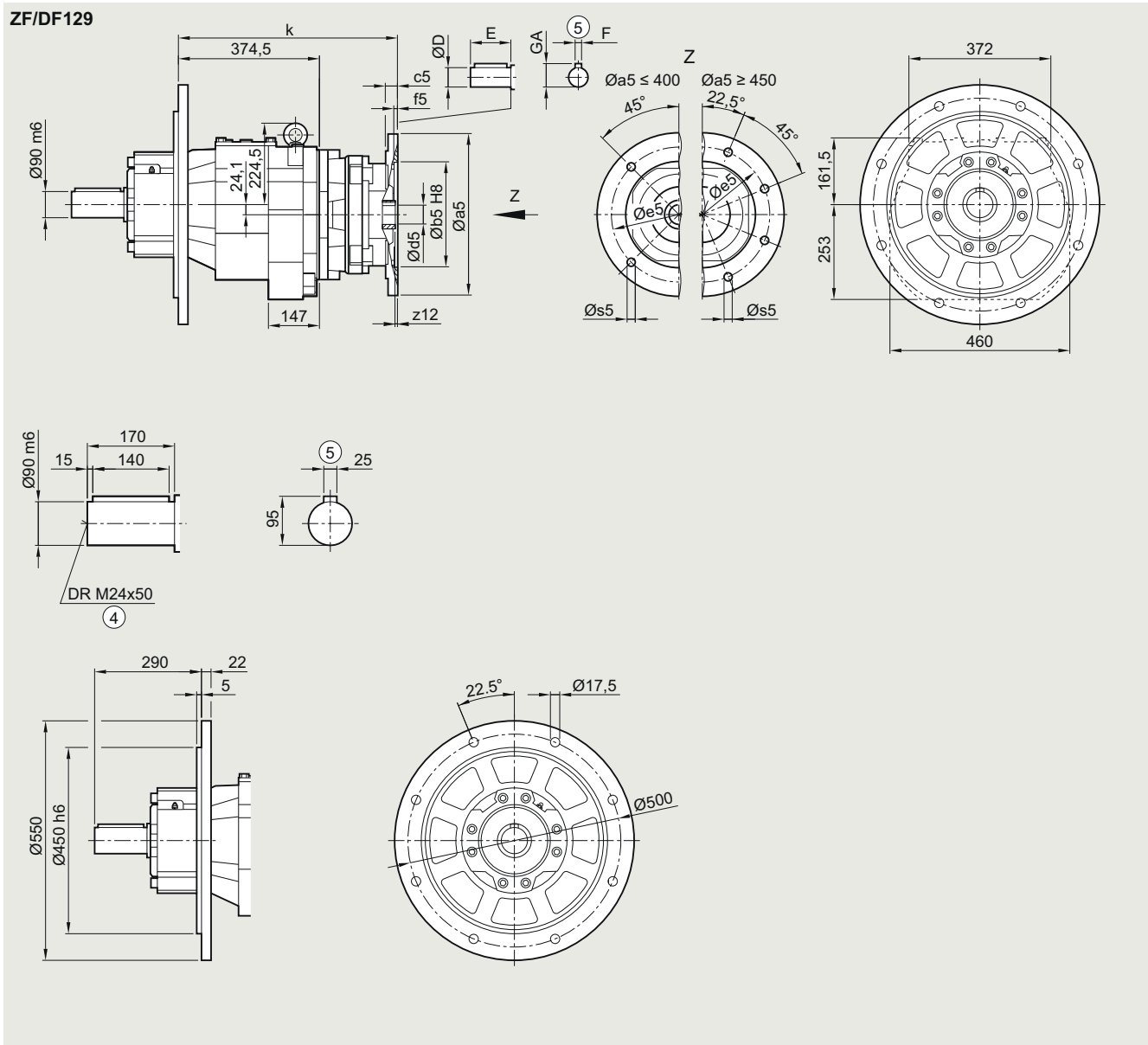


Flange	a1	b1	to2	c1	e1	f1	s1					
	350	250	h6	20	300	5	17.5					
	450	350	h6	22	400	5	17.5					
	550	450	h6	22	500	5	17.5					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	437
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	499
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	529
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	529
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	569.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	582
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	576

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF129 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)****DZF040K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	437
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	499
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	529
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	529
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	569.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	582
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	576

④ DIN 332

⑤ Feather key/keyway DIN 6885

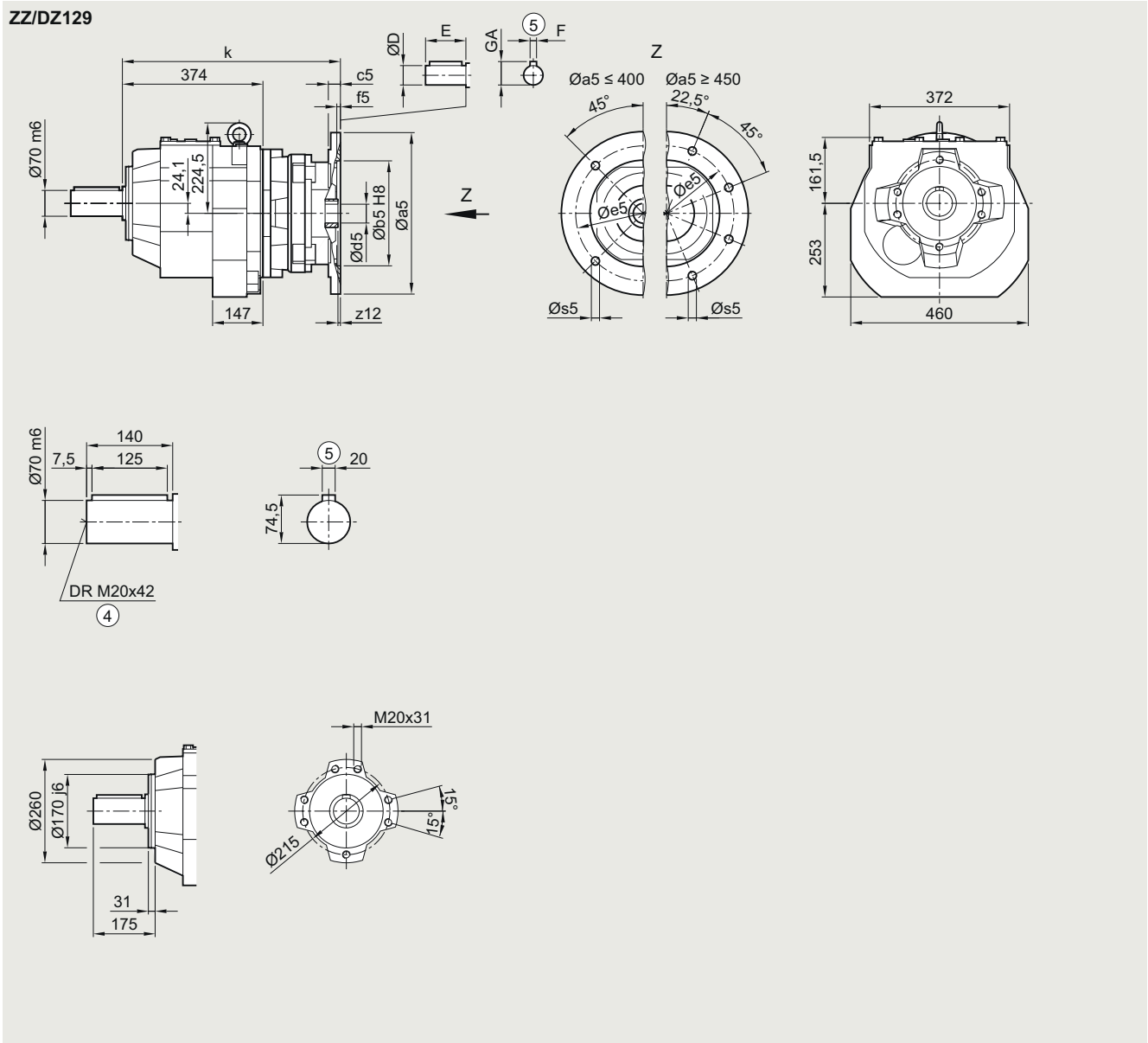
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZZ/DZ129 gearbox in a housing flange design

##### DZZ030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	437
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	499
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	529
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	529
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	569.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	582
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	576

④ DIN 332

⑤ Feather key/keyway DIN 6885



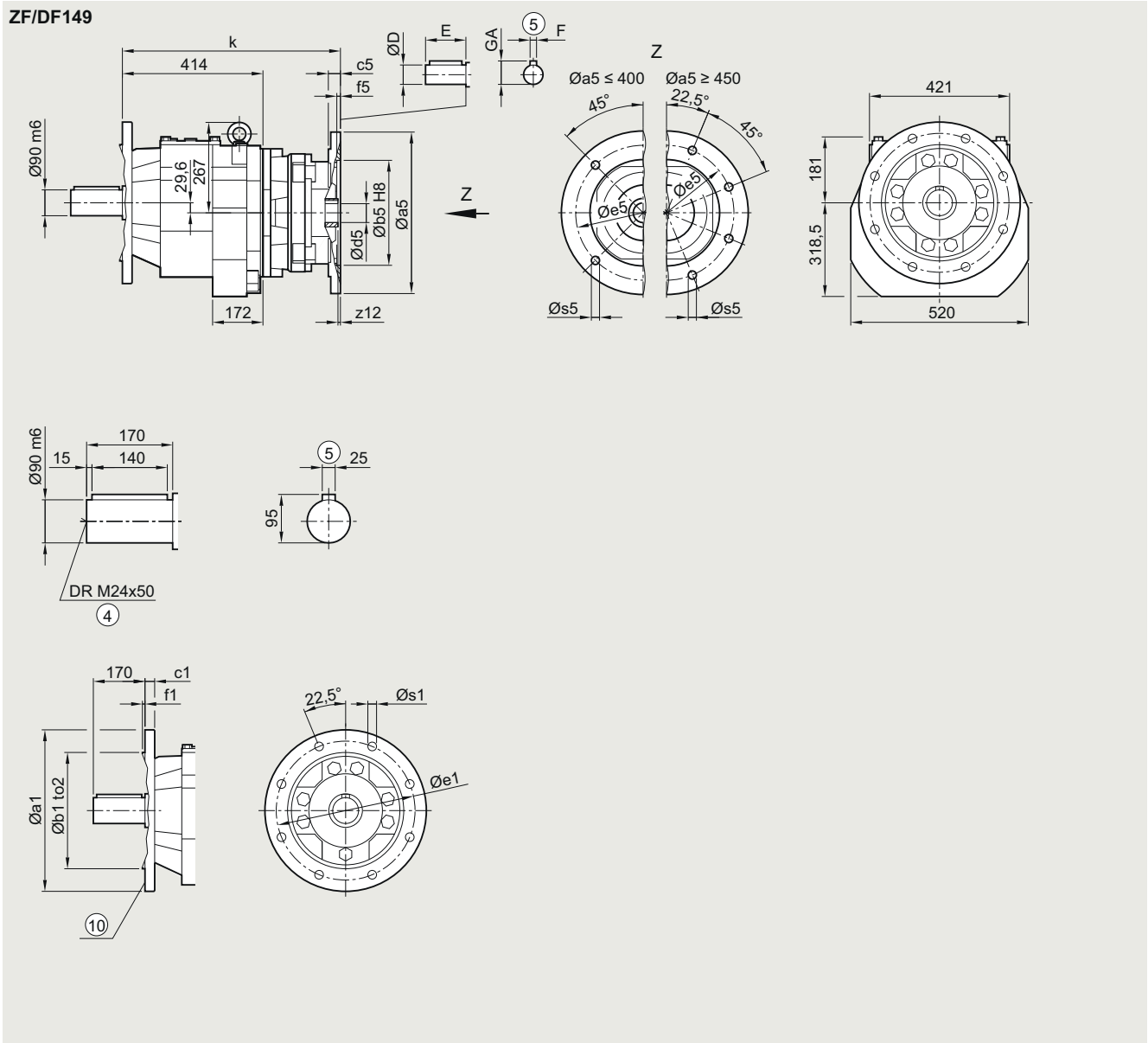
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZF/DF149 gearbox in a flange-mounted design

##### DZF030K4

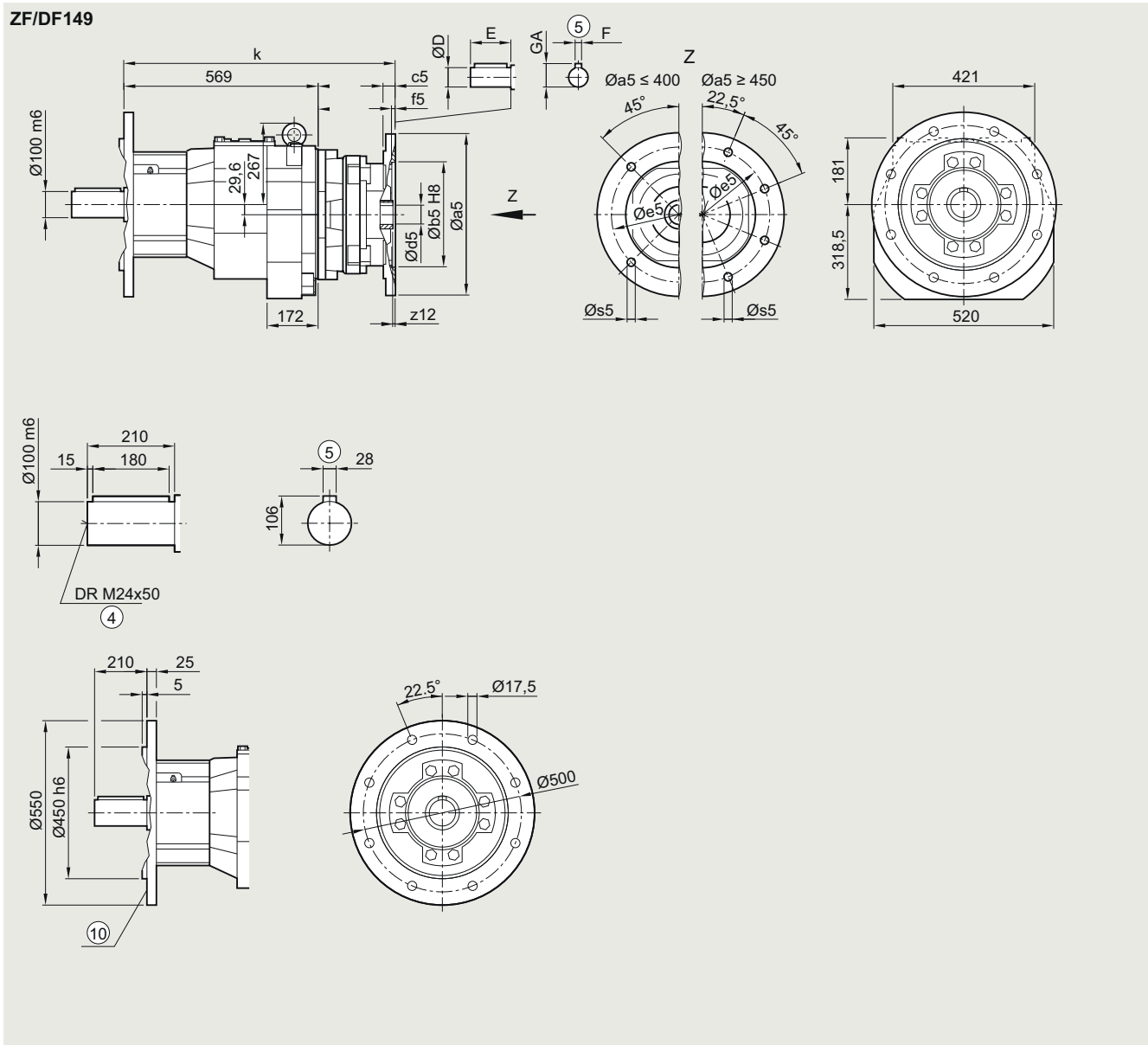


Flange	a1	b1	to2	c1	e1	f1	s1					
	450	350	h6	22	400	5	17.5					
	550	450	h6	25	500	5	17.5					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	522.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	522.0
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	532.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	562.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	562.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	603.0
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	609.5
250	550	450	20	6	500	M16x29	10.0	65	140	18	69.0	644.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****DZF040K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	522.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	522.0
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	532.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	562.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	562.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	603.0
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	609.5
250	550	450	20	6	500	M16x29	10.0	65	140	18	69.0	644.0

④ DIN 332

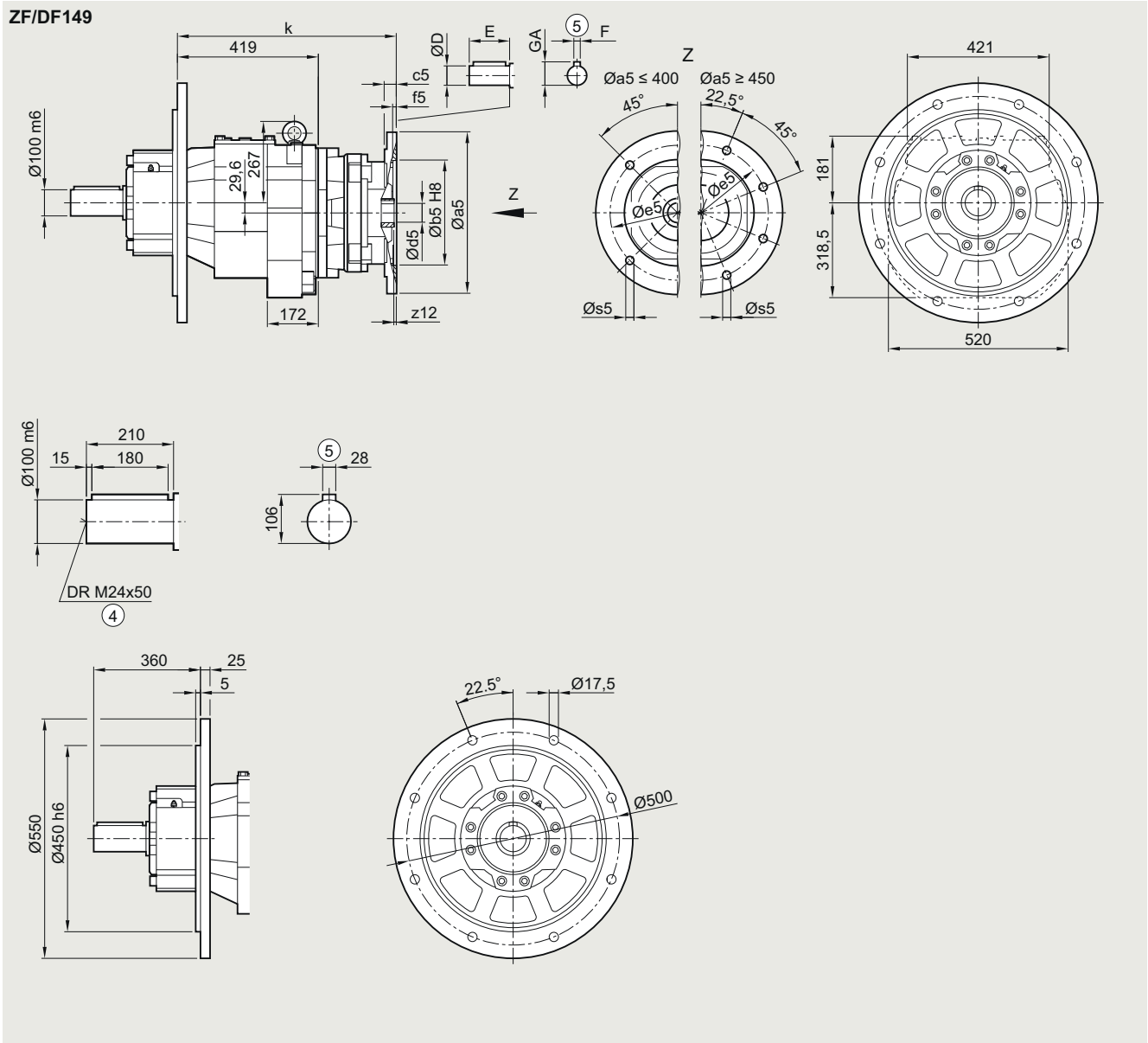
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



**SIMOGEAR gearboxes**

Helical gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****ZF/DF149 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)****DZF040K4**

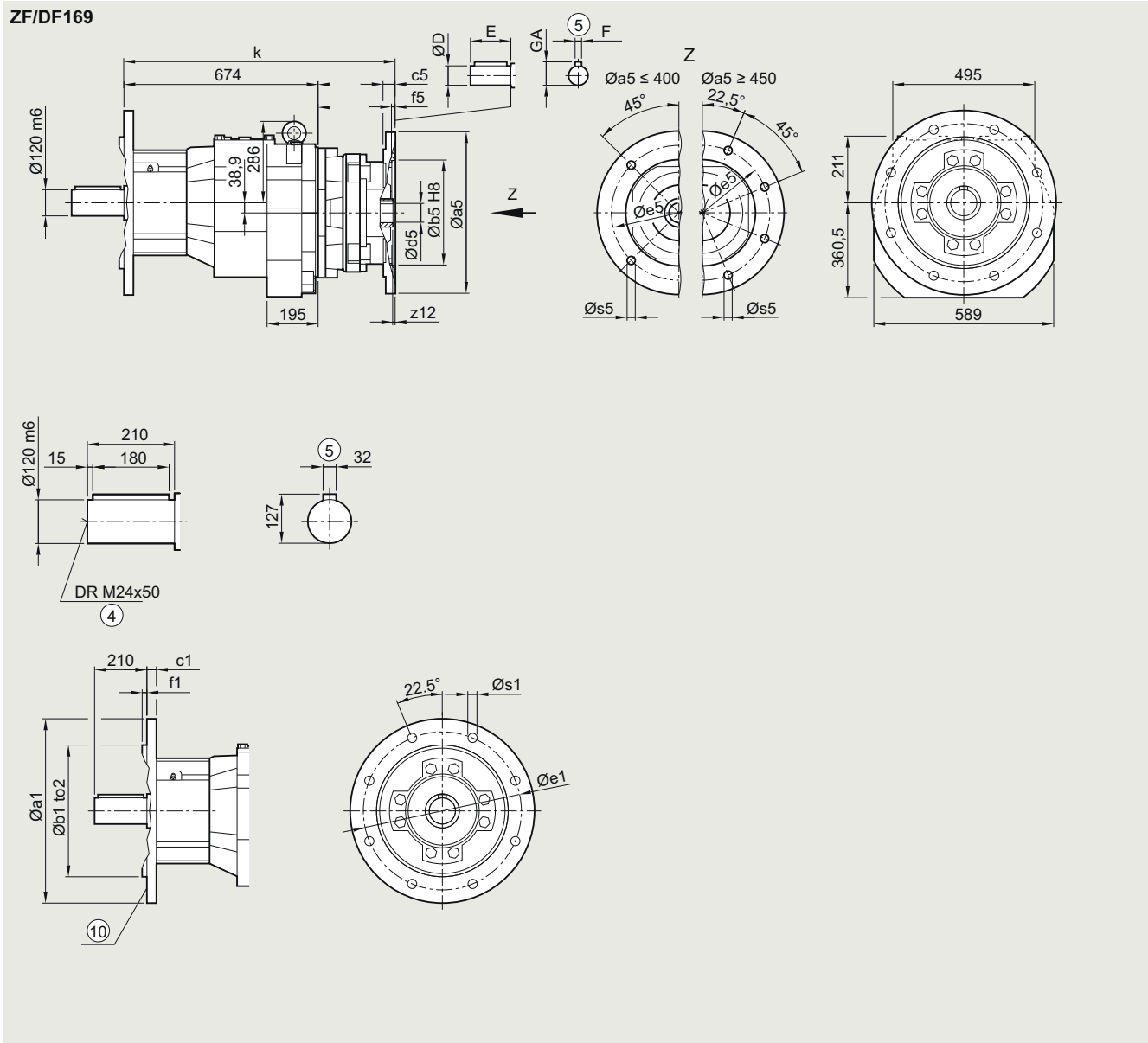
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5	215	M12	7.5	28	60	8	31.0	522.0
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	522.0
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	532.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	562.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	562.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	603.0
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	609.5
250	550	450	20	6	500	M16x29	10.0	65	140	18	69.0	644.0

④ DIN 332

⑤ Feather key/keyway DIN 6885





**ZF/DF169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****DZF040K4**

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	17.5					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	589.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	599.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	629.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	629.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	669.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	675.0
250	550	450	20	6	500	M16x29	10.0	65	140	18	69.0	705.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

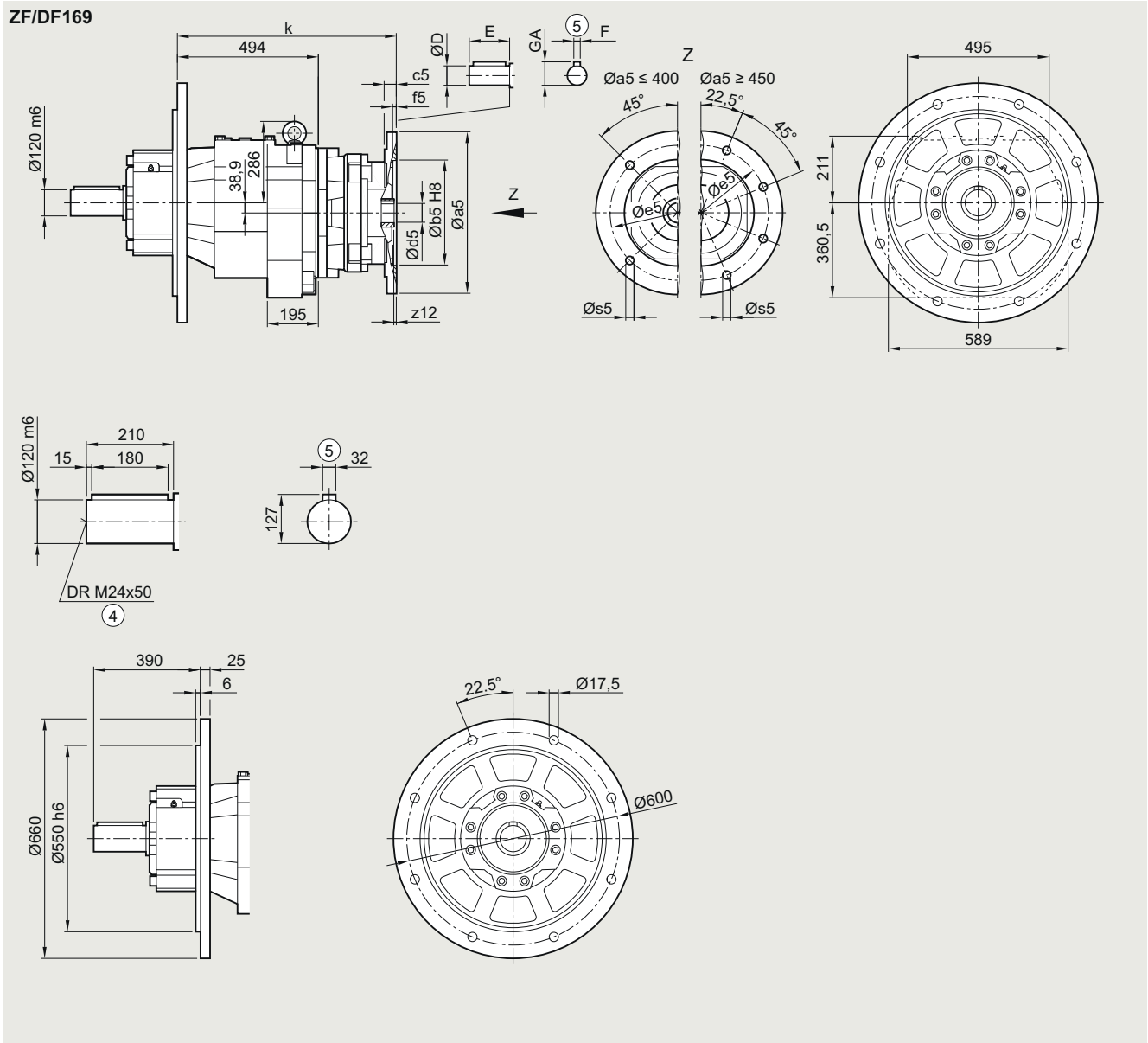
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZF/DF169 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

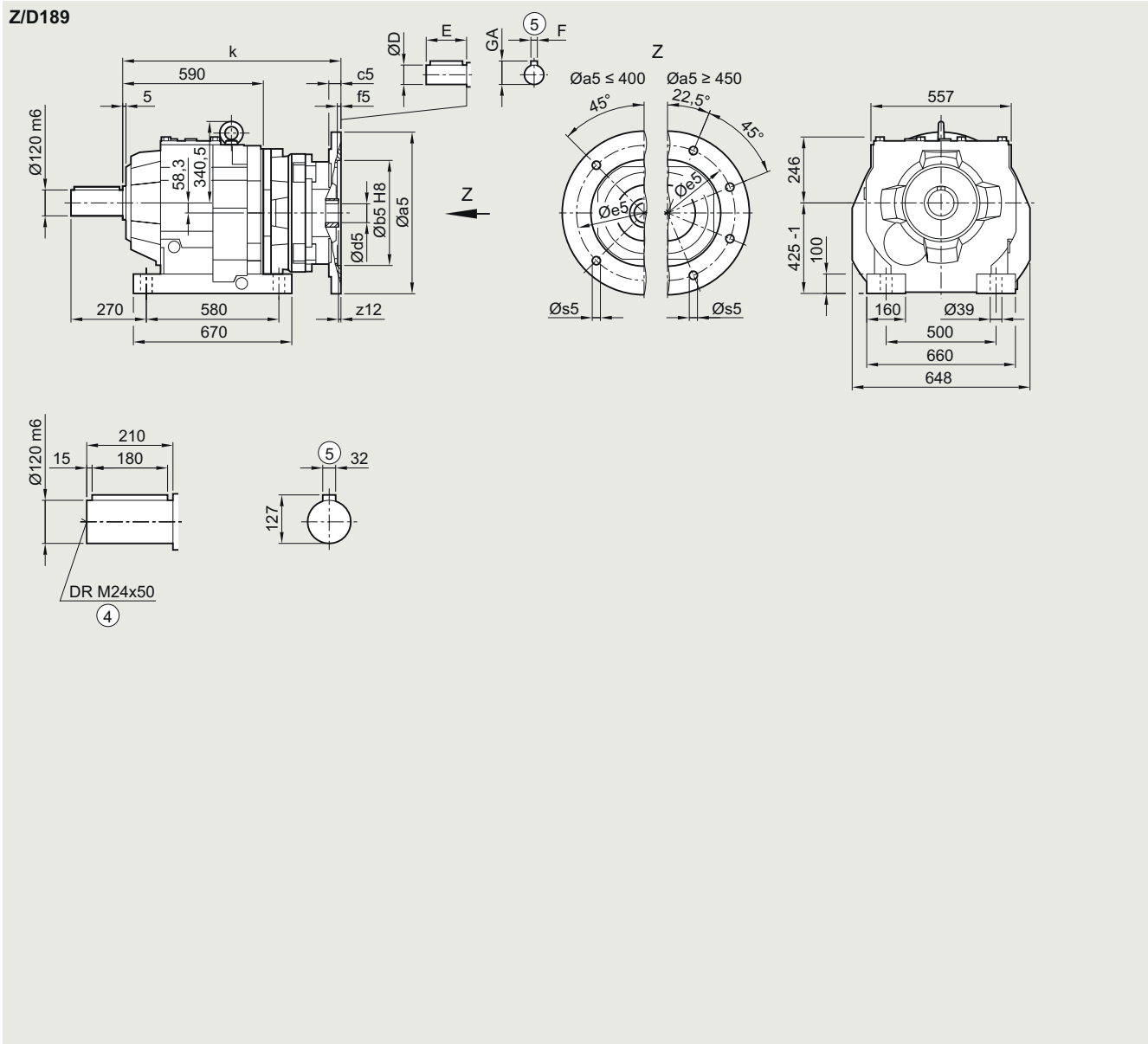
##### DZF040K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	589.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	599.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	629.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	629.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	669.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	675.0
250	550	450	20	6	500	M16x29	10.0	65	140	18	69.0	705.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

**Z/D189 gearbox in a foot-mounted design****DZ030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	685.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	695.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	725.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	725.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	765.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	771.0
250	550	450	20	6	500	M16x29	10.0	65	140	18	69.0	801.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

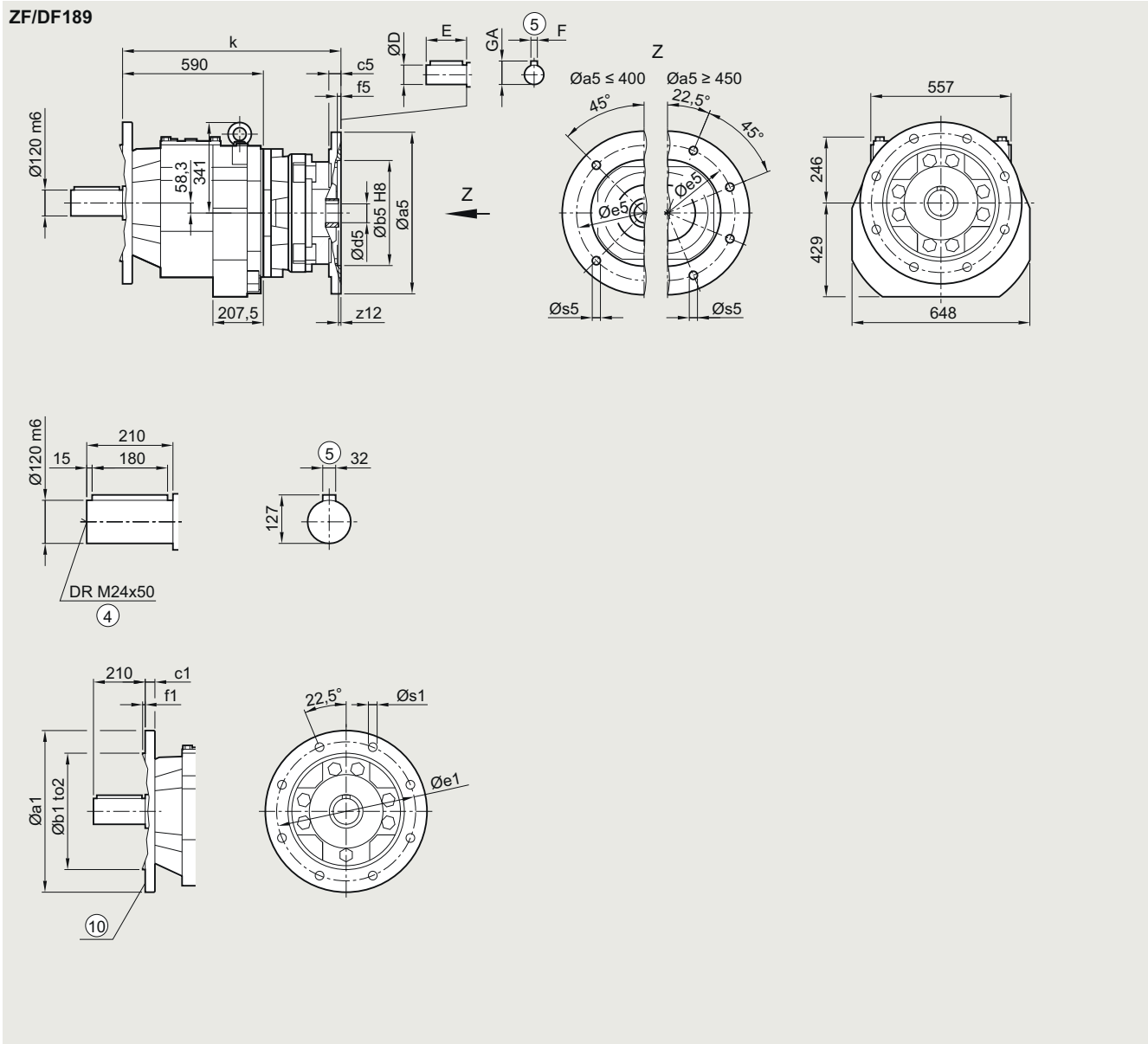
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### ZF/DF189 gearbox in a flange-mounted design

##### DZF030K4



Flange	a1	b1	to2	c1	e1	f1	s1					
	550	450	h6	25	500	5	17.5					
	660	550	h6	28	600	6	22.0					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	685.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	695.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	725.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	725.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	765.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	771.0
250	550	450	20	6	500	M16x29	10.0	65	140	18	69.0	801.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218





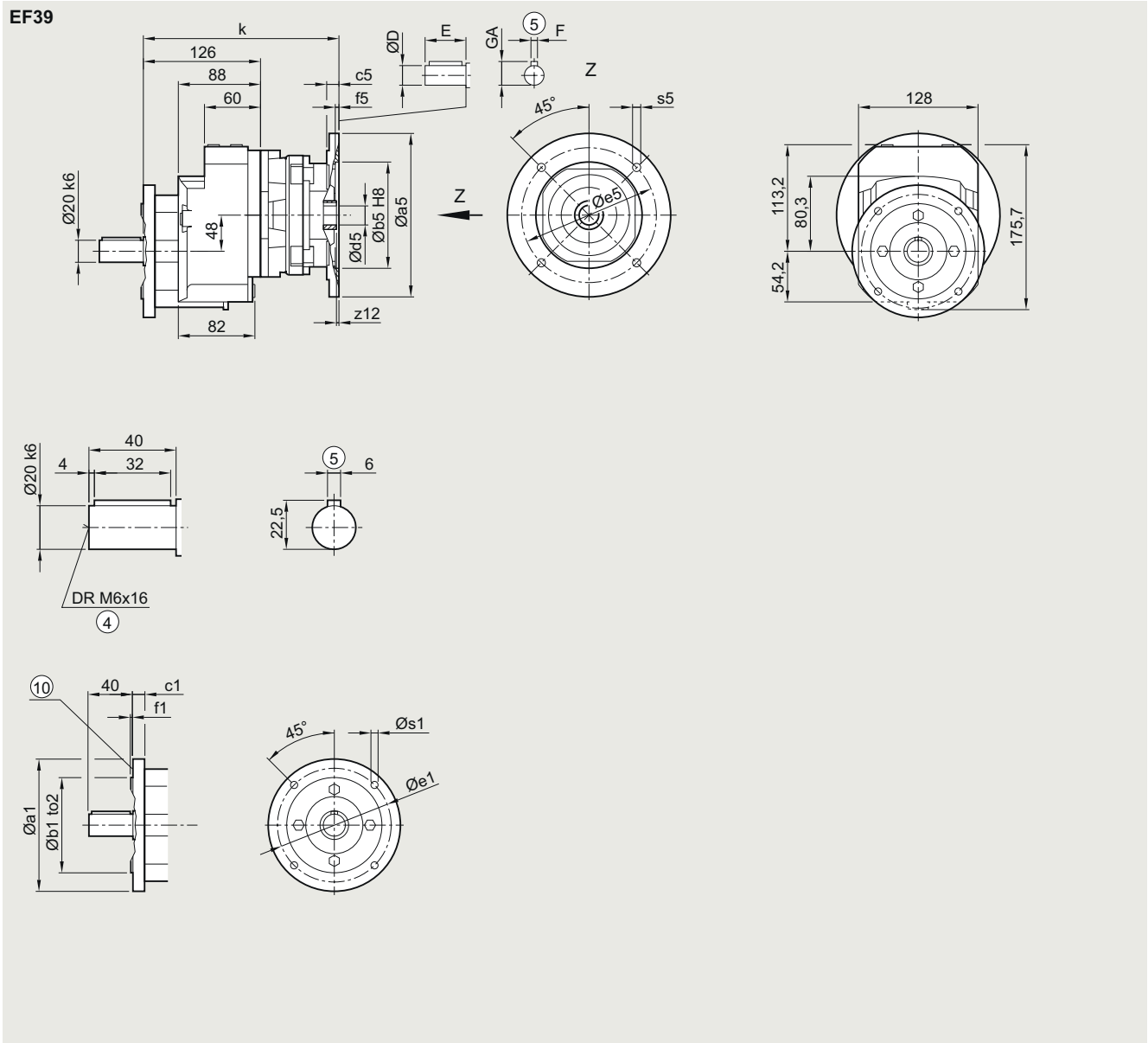
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### EF39 gearbox in a flange-mounted design

##### EF030K4



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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	203.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	203.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	231.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	231.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	286.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	286.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218







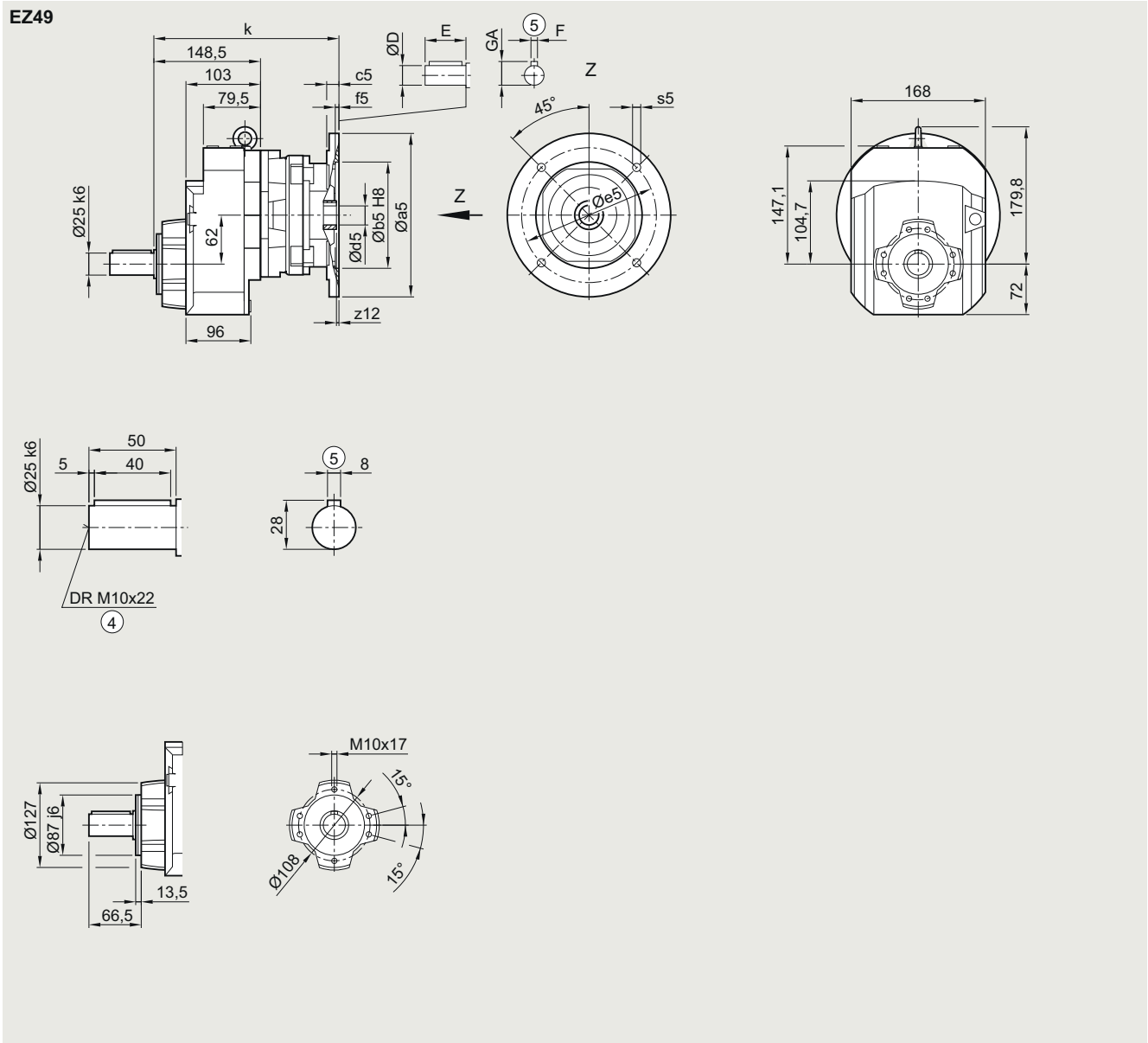
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### EZ49 gearbox in a housing flange design

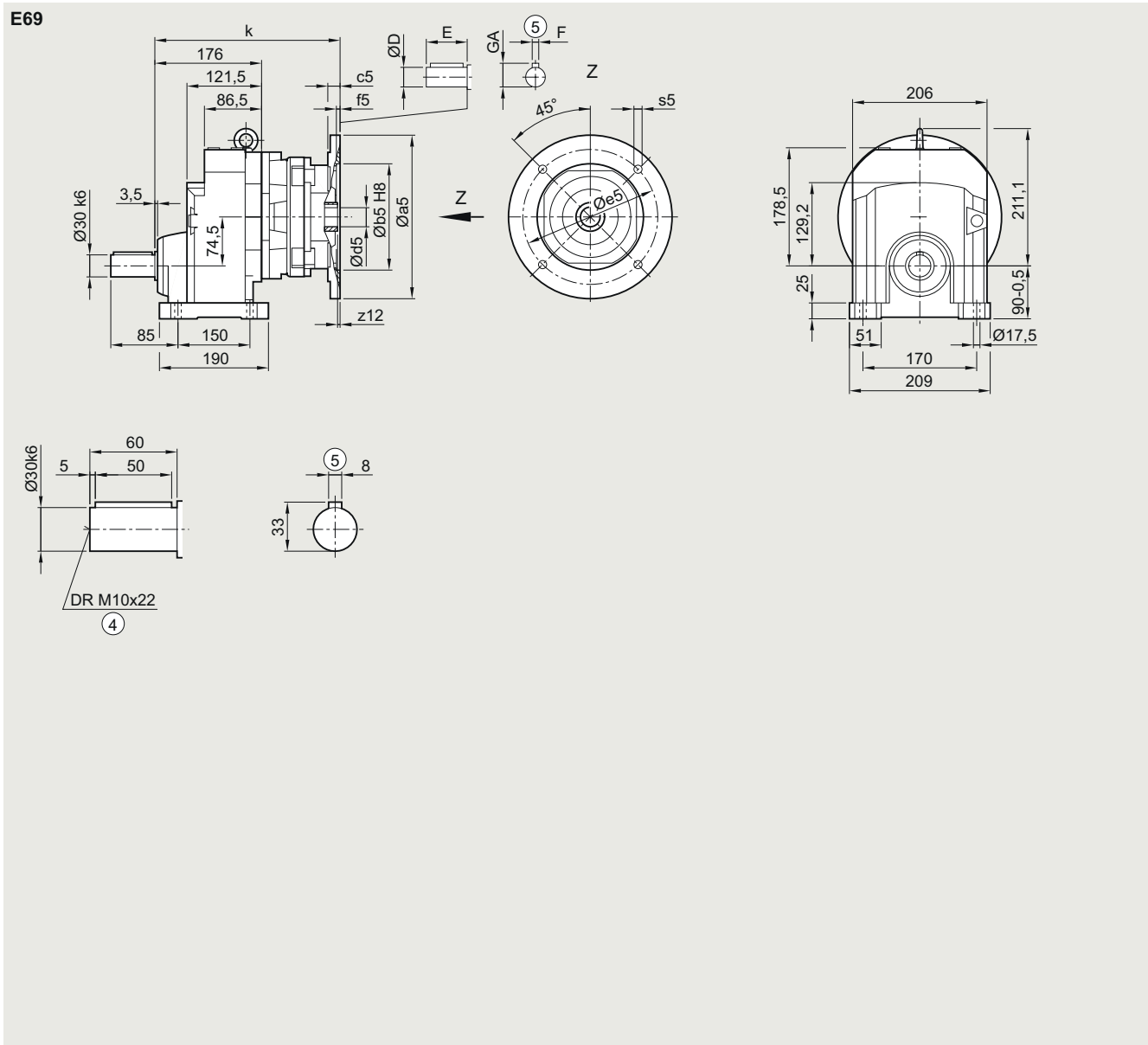
##### EZ030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	216.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	216.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	244.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	244.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.0
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	316.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

**E69 gearbox in a foot-mounted design****E030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	242.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	266.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	266.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	338.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	368.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

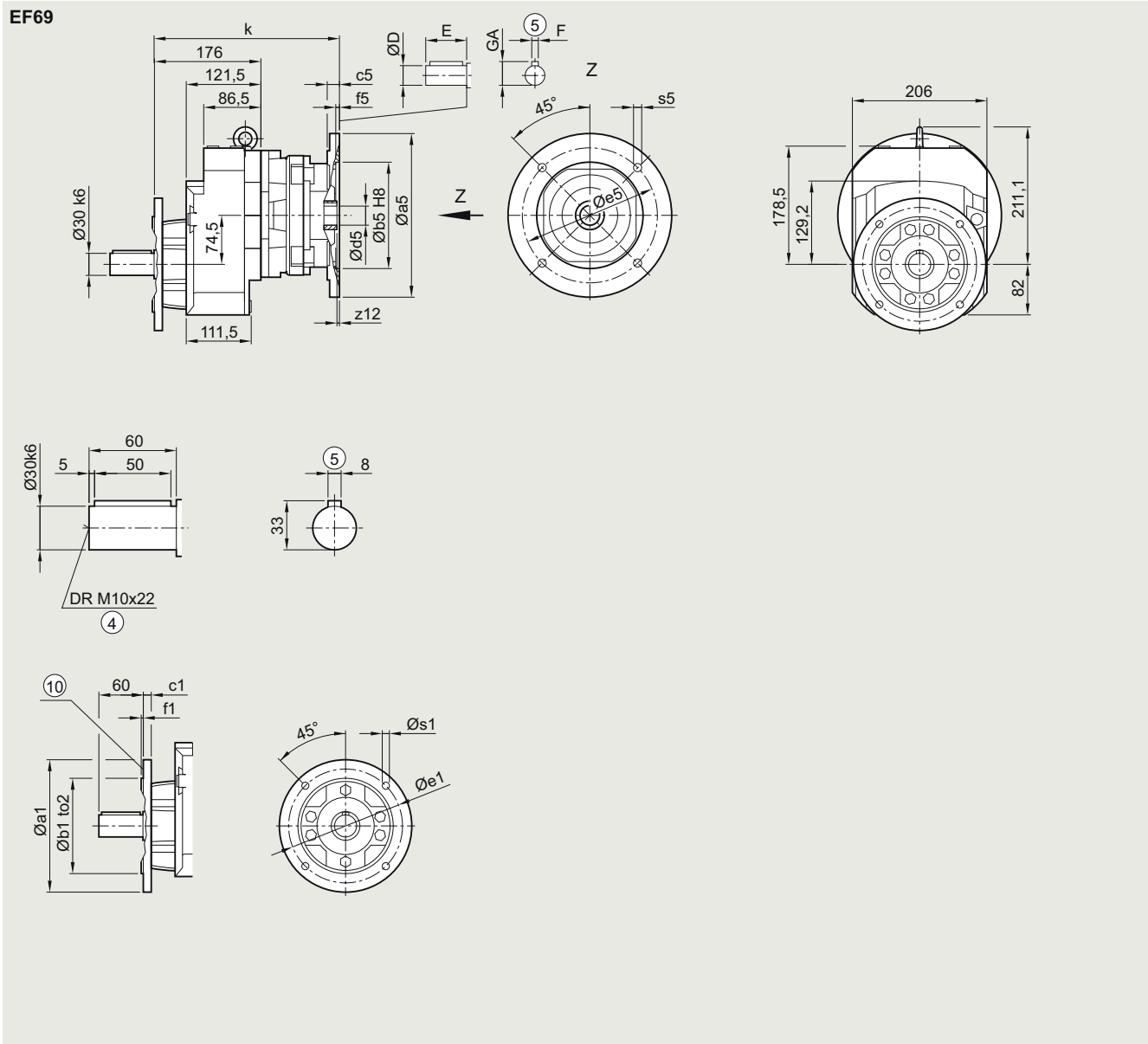
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### EF69 gearbox in a flange-mounted design

##### EF030K4

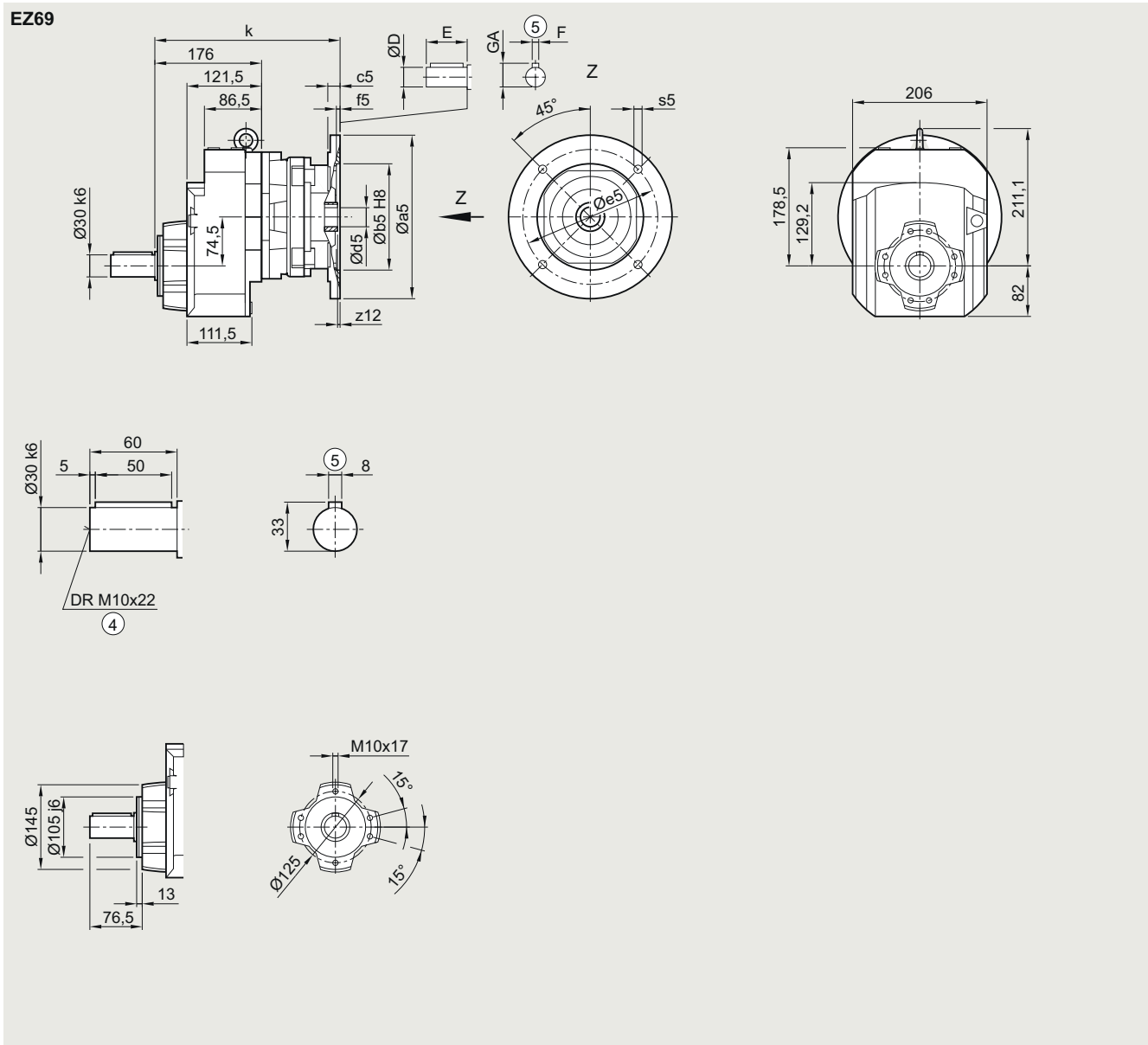


Flange	a1	b1	to2	c1	e1	f1	s1					
	200	130	j6	12	165	3.5	11.0					
	250	180	j6	15	215	4.0	13.5					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	242.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	266.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	266.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	338.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	368.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**EZ69 gearbox in a housing flange design****EZ030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	242.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	266.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	266.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	338.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	368.0

④ DIN 332

⑤ Feather key/keyway DIN 6885











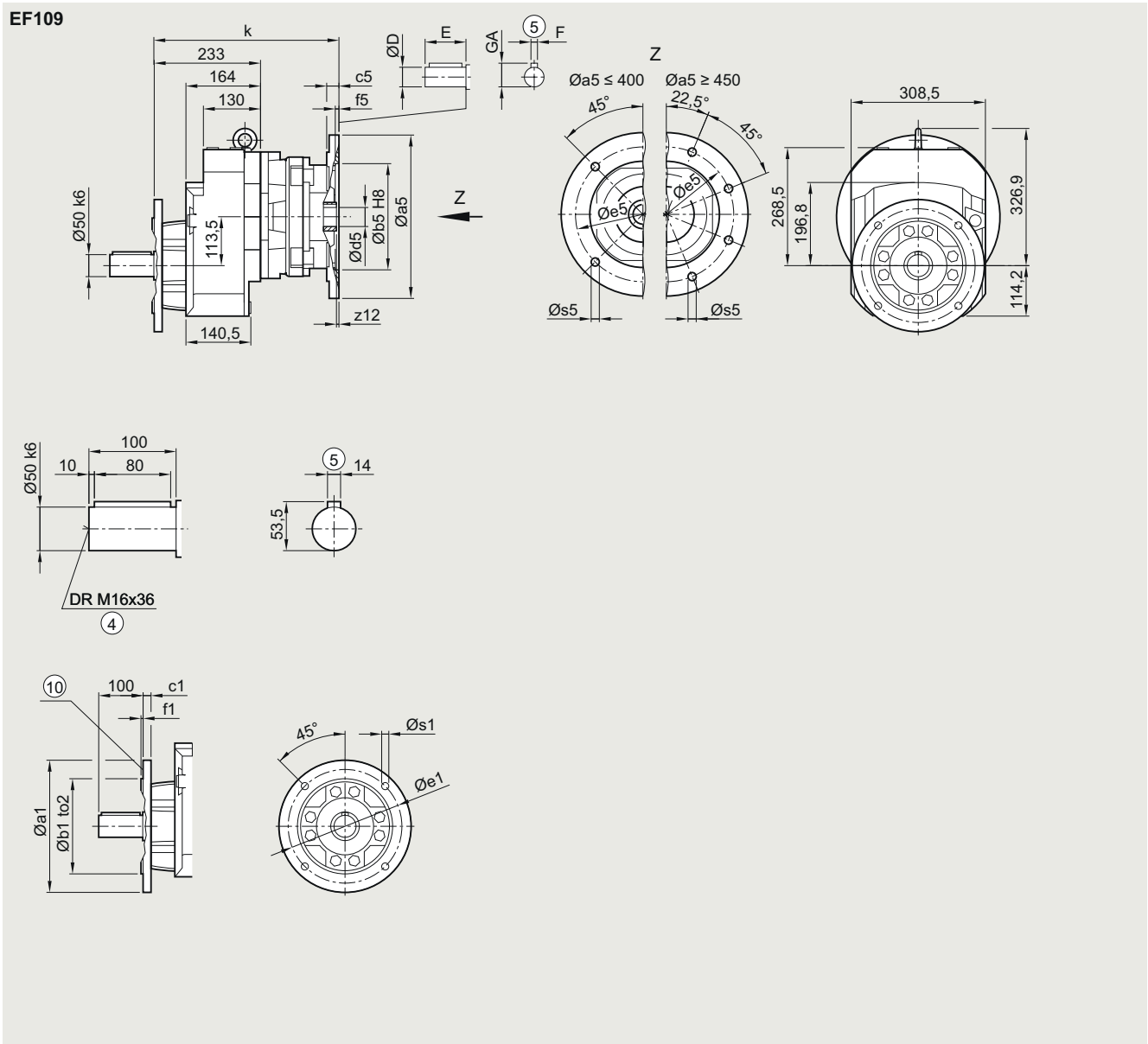
## SIMOGEAR gearboxes

Helical gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### EF109 gearbox in a flange-mounted design

##### EF030K4

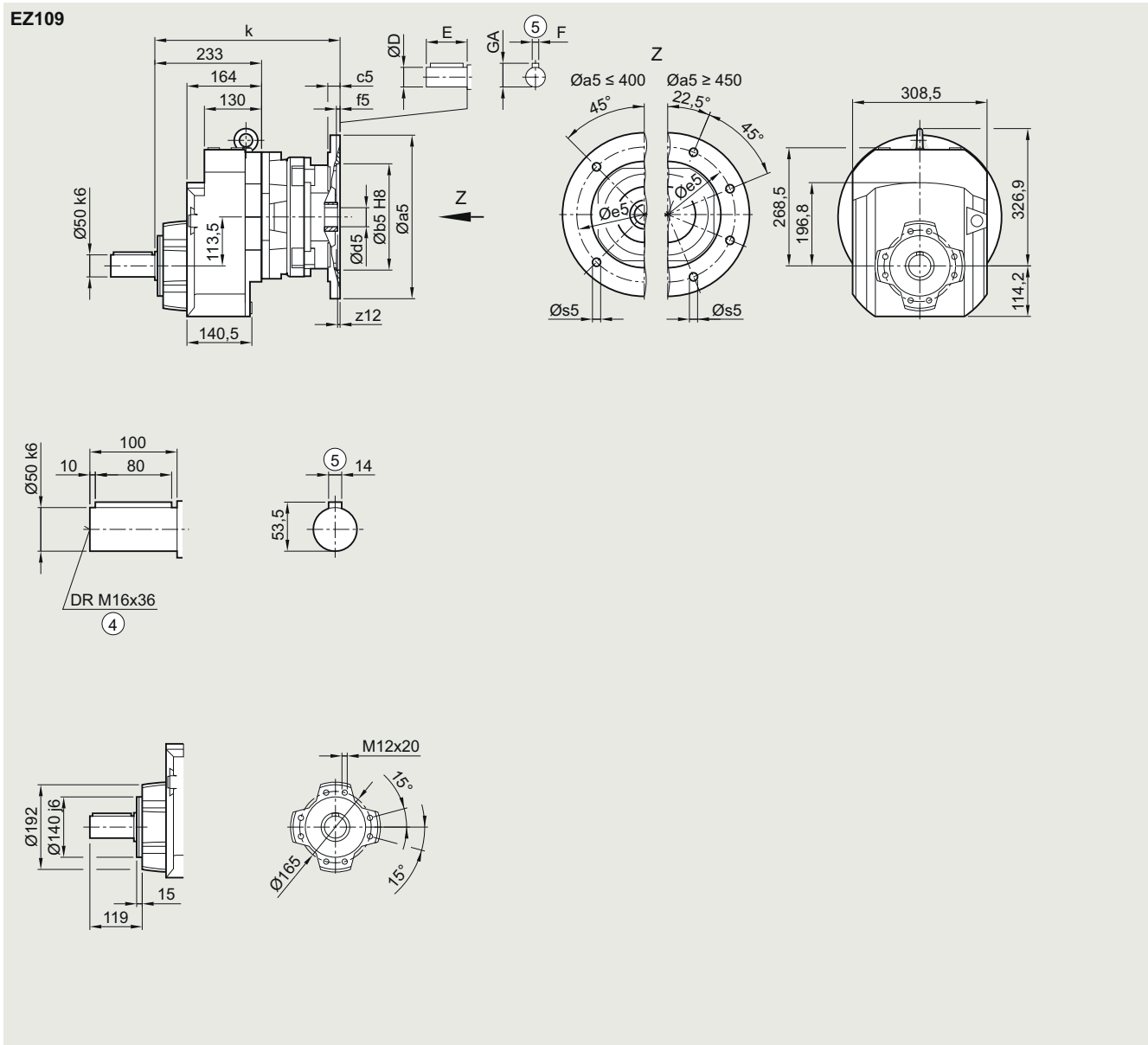


Flange	a1	b1	to2	c1	e1	f1	s1					
	300	230	j6	16	265	4.0	13.5					
	350	250	j6	18	300	5.0	17.5					
	450	350	h6	18	400	5.0	17.5					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	303.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	369.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	399.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	399.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	439.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	446.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**EZ109 gearbox in a housing flange design****EZ030K4**

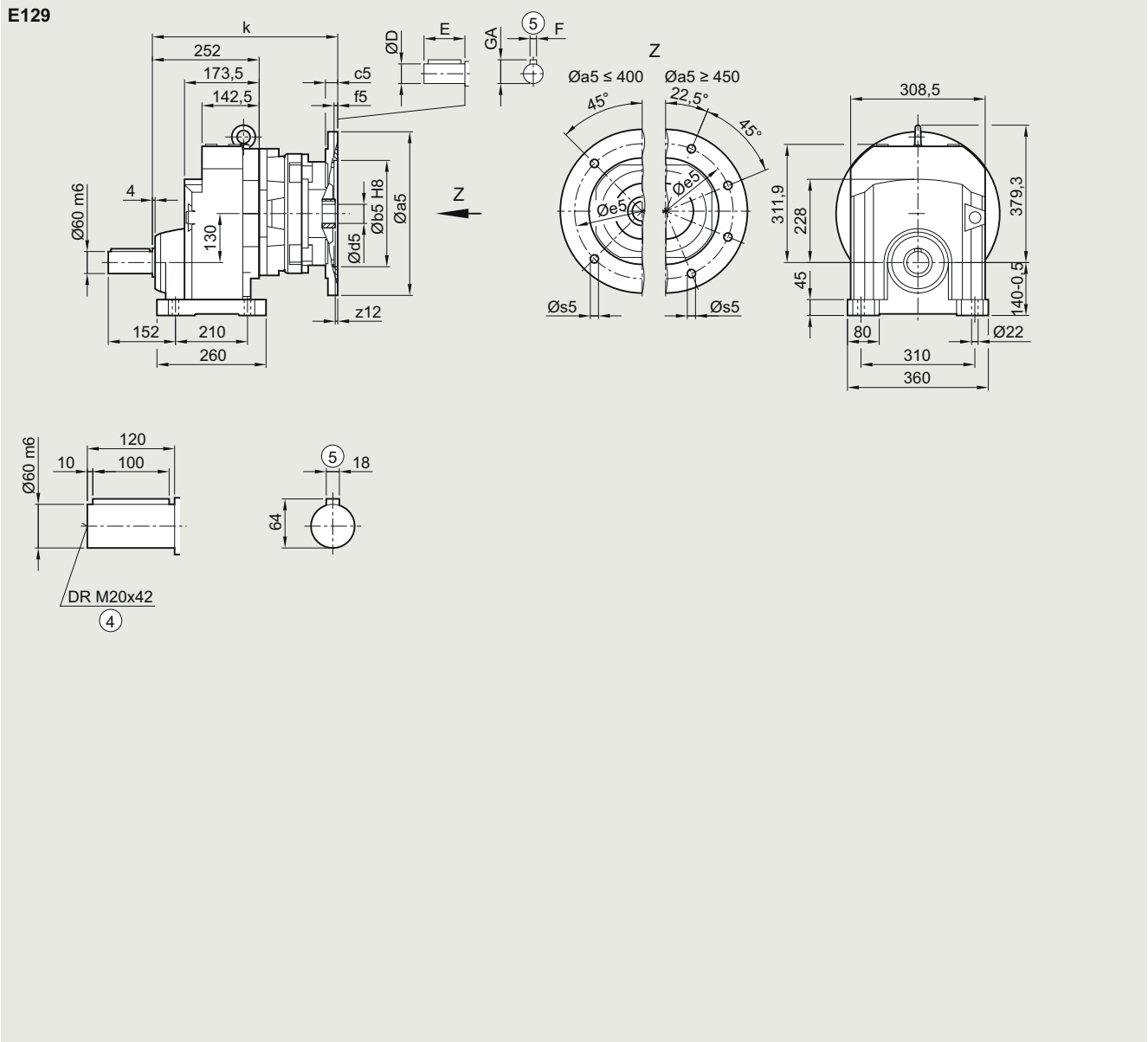
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	303.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	369.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	399.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	399.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	439.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	446.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Helical gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****E129 gearbox in a foot-mounted design****E030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	315.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	377.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	407.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	407.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	447.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	454.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	488.5

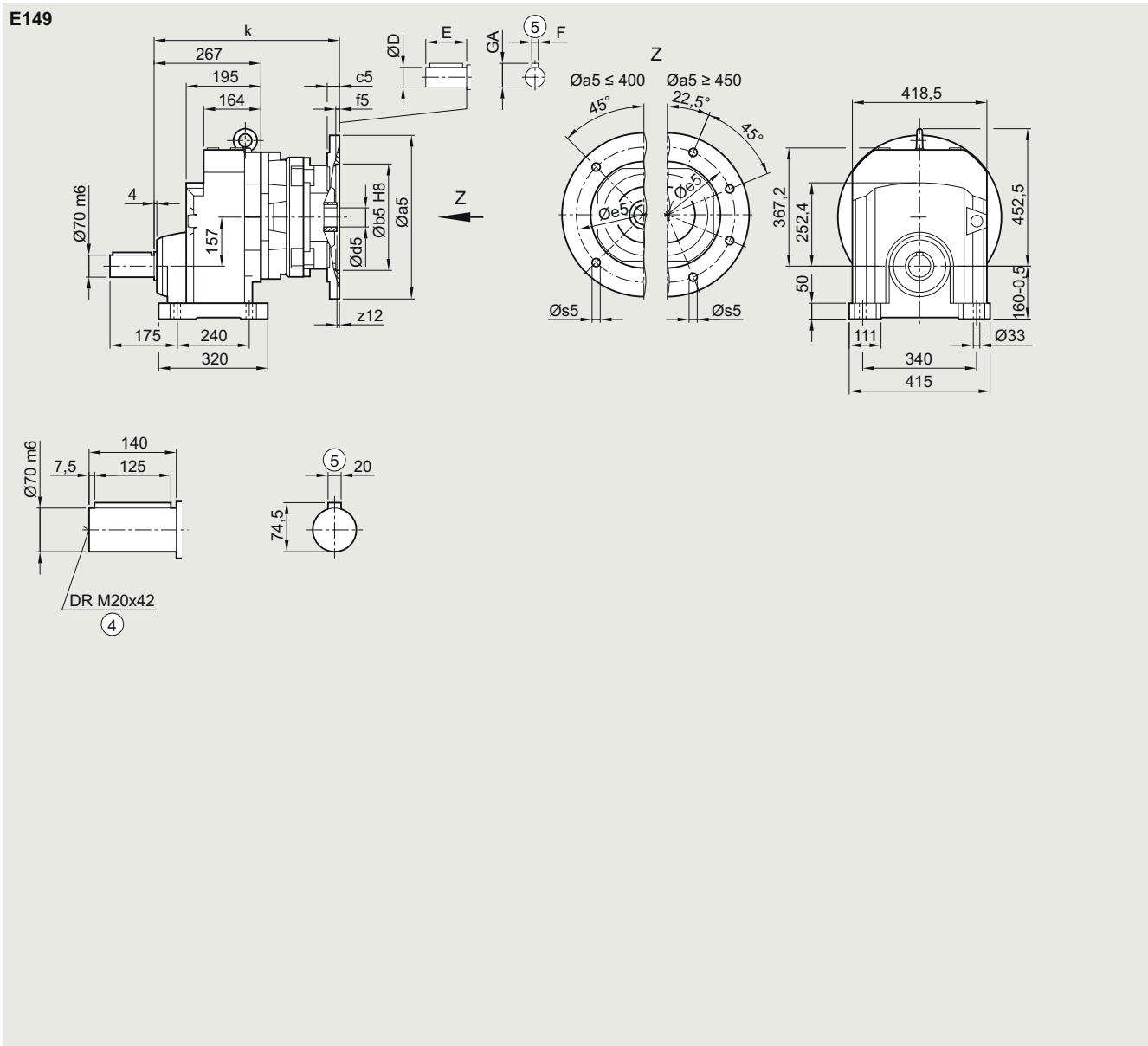
④ DIN 332

⑤ Feather key/keyway DIN 6885







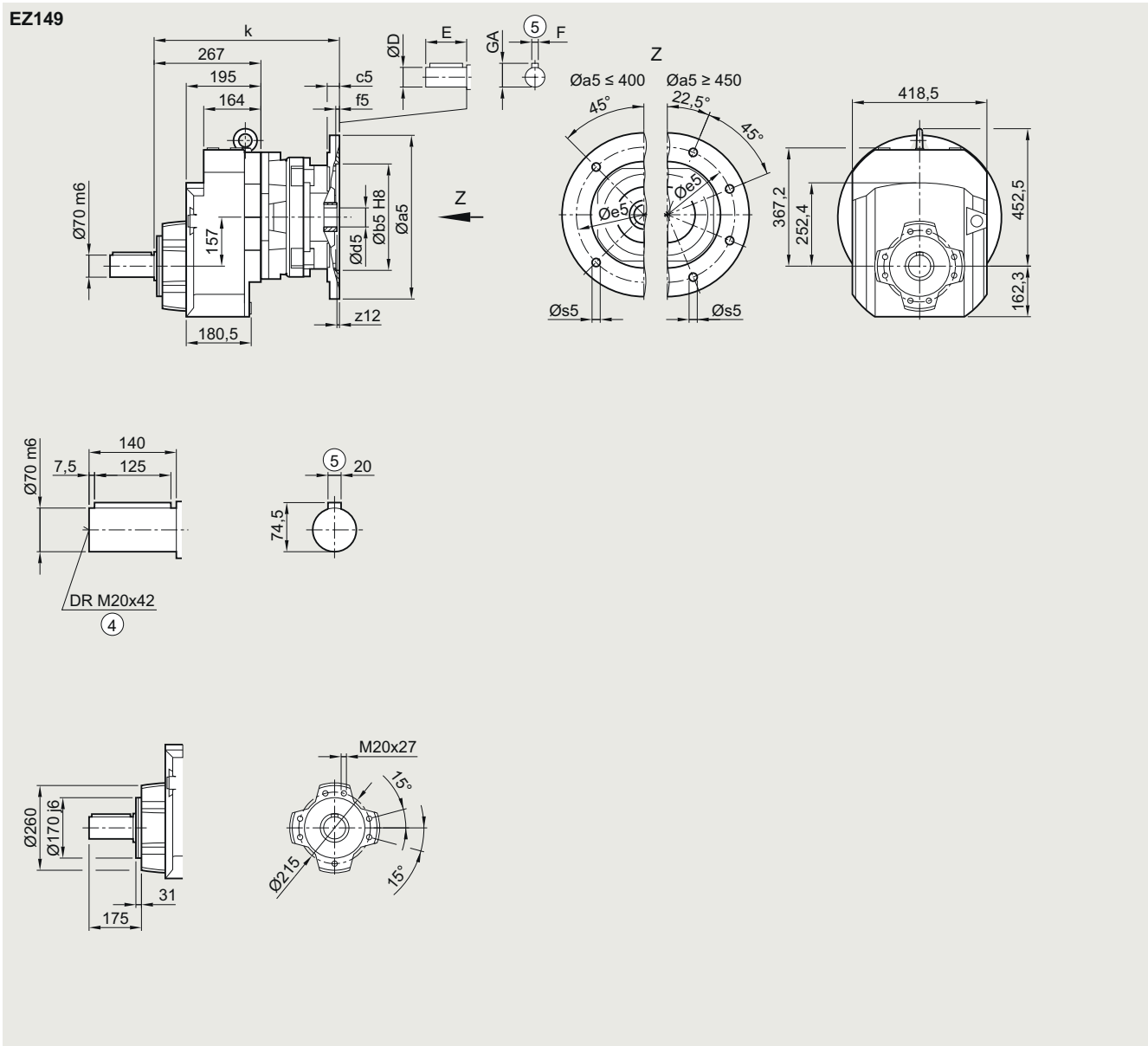
**E149 gearbox in a foot-mounted design****E030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	375.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	375.0
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	385.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	415.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	415.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	456.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	462.5
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	497.0

④ DIN 332

⑤ Feather key/keyway DIN 6885



**EZ149 gearbox in a housing flange design****EZ030K4**

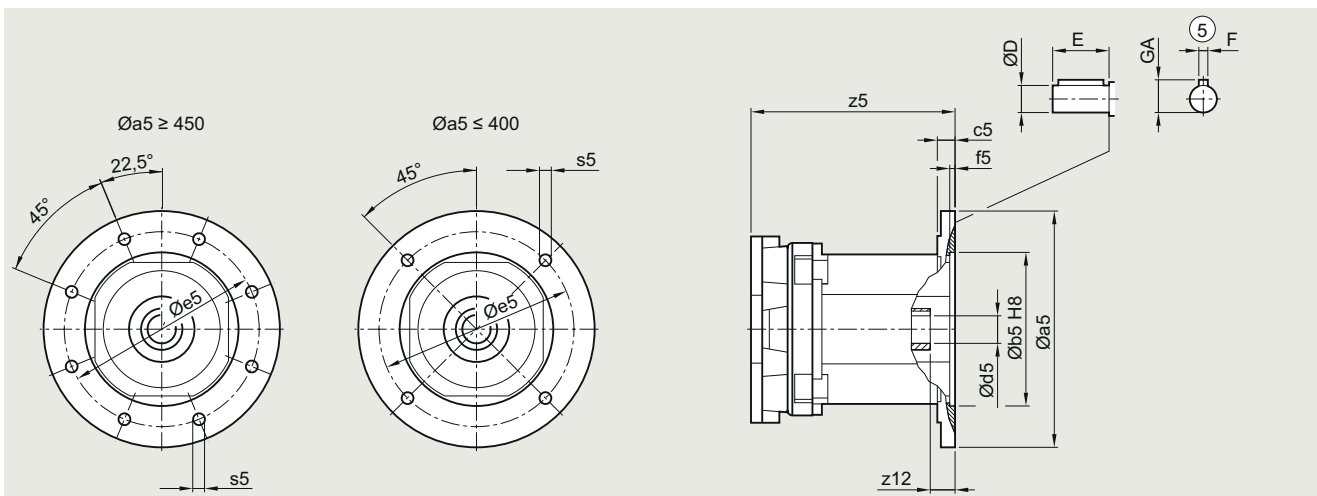
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	375.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	375.0
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	385.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	415.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	415.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	456.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	462.5
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	497.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Helical gearbox with adapter K2 for mounting an IEC motor

**Dimensional drawings****Z./D.29 to Z./D.89 gearboxes****DZ030K2, DZB030K2, DZF030K2, DZZ030K2**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.29</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
<b>Z./D.39</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
<b>Z./D.49</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>Z./D.59</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>Z./D.69</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>Z./D.79</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	182.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	182.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	307.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	352.5
<b>Z./D.89</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	169.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	169.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	290.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	335.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	335.5

© Feather key/keyway DIN 6885

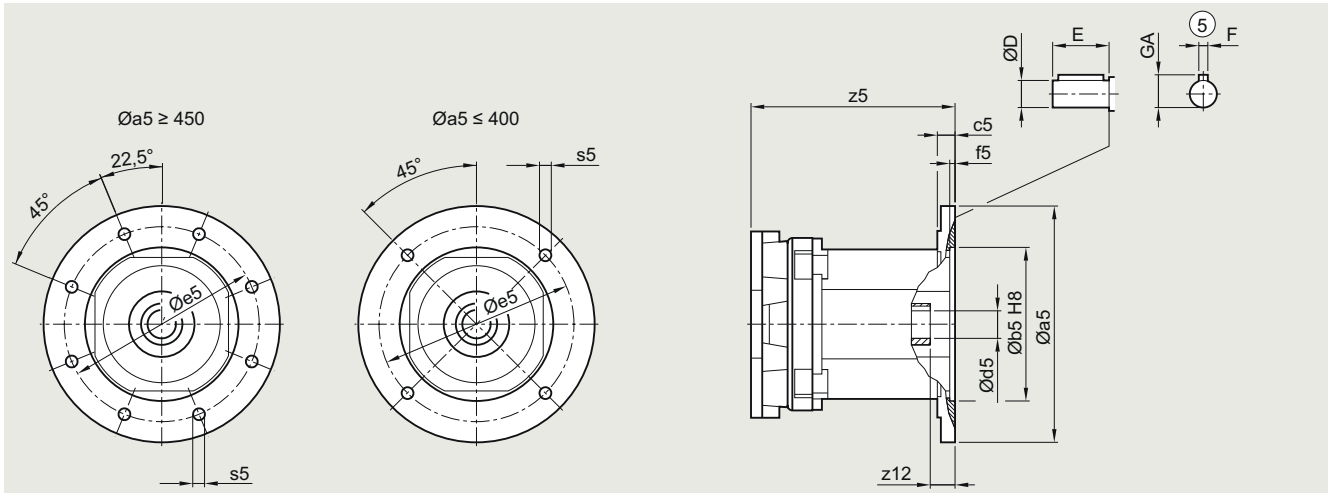
# SIMOGEAR gearboxes

## Helical gearbox with adapter K2 for mounting an IEC motor

### Dimensional drawings

#### Z./D.109 to Z./D.169 gearboxes

DZ030K2, DZB030K2, DZF030K2, DZZ030K2



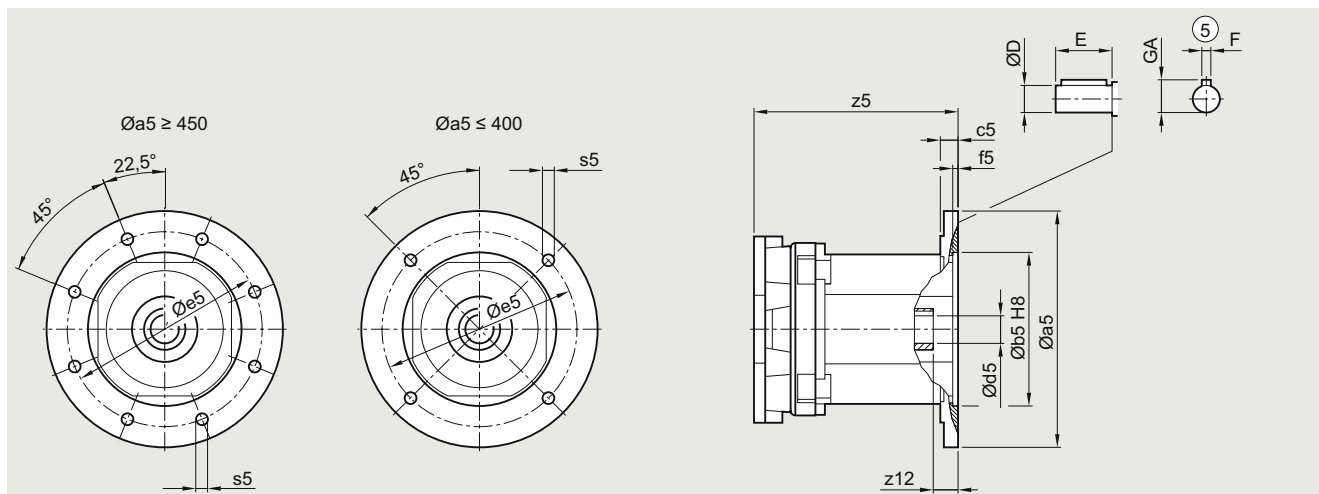
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.109</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	162.5
100	250	180	18	5	215	M12	30	28	60	8	31.0	203.5
112	250	180	18	5	215	M12	30	28	60	8	31.0	203.5
132	300	230	18	5	265	M12	45	38	80	10	41.0	281.5
160	350	250	25	6	300	M16	66	42	110	12	45.0	326.5
180	350	250	25	6	300	M16	59	48	110	14	51.5	326.5
200	400	300	20	6	350	M16x29	60	55	110	16	59.0	371.5
225	450	350	50	6	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	419.0
<b>Z./D.129</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	155.5
100	250	180	18	5	215	M12	30	28	60	8	31.0	194.5
112	250	180	18	5	215	M12	30	28	60	8	31.0	194.5
132	300	230	18	5	265	M12	45	38	80	10	41.0	270.5
160	350	250	25	6	300	M16	66	42	110	12	45.0	315.5
180	350	250	25	6	300	M16	59	48	110	14	51.5	315.5
200	400	300	20	6	350	M16x29	60	55	110	16	59.0	360.5
225	450	350	50	6	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	408.0
250	550	450	27	6	500	M16	75	65 (60)	140	18	69.0 (64.0)	445.5
<b>Z./D.149</b>												
100	250	180	18	5	215	M12	30	28	60	8	31.0	193.0
112	250	180	18	5	215	M12	30	28	60	8	31.0	193.0
132	300	230	18	5	265	M12	45	38	80	10	41.0	264.0
160	350	250	25	6	300	M16	66	42	110	12	45.0	309.0
180	350	250	25	6	300	M16	59	48	110	14	51.5	309.0
200	400	300	20	6	350	M16x29	60	55	110	16	59.0	354.0
225	450	350	50	6	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	401.5
250	550	450	27	6	500	M16	75	65 (60)	140	18	69.0 (64.0)	439.0
280	550	450	27	6	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	314.5
<b>Z./D.169</b>												
112	250	180	18	5	215	M12	30	28	60	8	31.0	180.5
132	300	230	18	5	265	M12	45	38	80	10	41.0	251.0
160	350	250	25	6	300	M16	66	42	110	12	45.0	296.0
180	350	250	25	6	300	M16	59	48	110	14	51.5	296.0
200	400	300	20	6	350	M16x29	60	55	110	16	59.0	340.5
225	450	350	50	6	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	387.0
250	550	450	27	6	500	M16	75	65 (60)	140	18	69.0 (64.0)	420.5
280	550	450	27	6	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	297.5

(j) Feather key/keyway DIN 6885

(i) Dimension in brackets for 2-pole motor

**SIMOGEAR gearboxes**

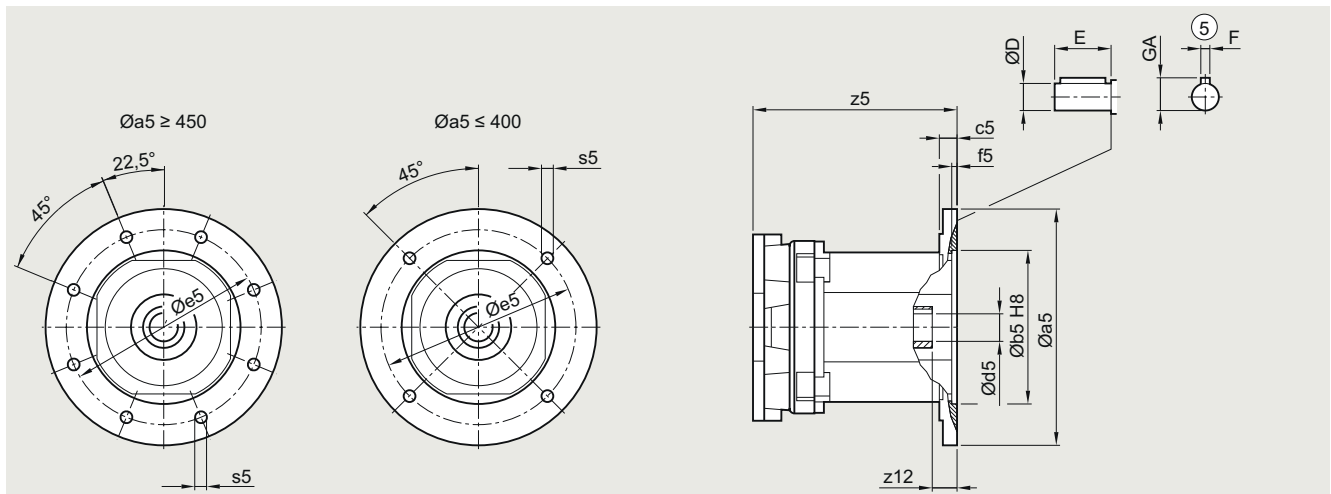
Helical gearbox with adapter K2 for mounting an IEC motor

**Dimensional drawings****Z./D.189 and E.39 to E.89 gearboxes****DZ030K2, DZB030K2, DZF030K2, DZZ030K2, E030K2, EF030K2, EZ030K2**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.189</b>												
112	250	180	18	5	215	M12	30	28	60	8	31.0	180.5
132	300	230	18	5	265	M12	45	38	80	10	41.0	251.0
160	350	250	25	6	300	M16	66	42	110	12	45.0	296.0
180	350	250	25	6	300	M16	59	48	110	14	51.5	296.0
200	400	300	20	6	350	M16x29	60	55	110	16	59.0	340.5
225	450	350	50	6	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	387.0
250	550	450	27	6	500	M16	75	65 (60)	140	18	69.0 (64.0)	420.5
280	550	450	27	6	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	297.5
315	660	550	33	8	600	M20	33.5	80 (65)	170 (140)	22 (18)	85.0 (69.0)	321.5
<b>E.39</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
<b>E.49</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>E.69</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	182.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	182.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	307.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	352.5
<b>E.89</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	169.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	169.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	290.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	335.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	335.5

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( ) Dimension in brackets for 2-pole motor

**E.109 to E.149 gearboxes****E030K2, EF030K2, EZ030K2**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>E.109</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	162.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	203.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	203.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	281.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	326.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	326.5
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	371.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64 (59.0)	419.0
<b>E.129</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	155.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	194.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	194.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	270.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	315.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	315.5
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	360.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64 (59.0)	408.0
250	550	450	27	6.0	500	M16	75	65	140	18	69.0	445.5
<b>E.149</b>												
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	193.0
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	193.0
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	264.0
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	309.0
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	309.0
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	354.0
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64 (59.0)	401.5
250	550	450	27	6.0	500	M16	75	65	140	18	69.0	439.0
280	550	450	27	6.0	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	314.5

Ⓞ Feather key/keyway DIN 6885

( ) Dimension in brackets for 2-pole motor



## SIMOGEAR gearboxes

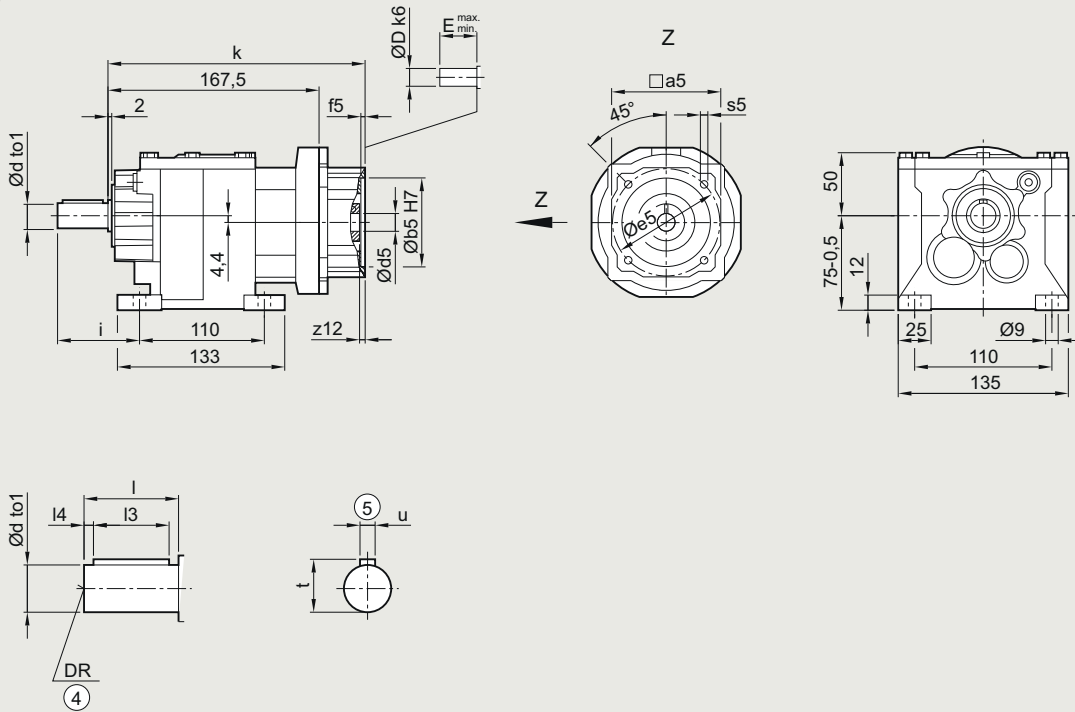
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### Z/D19 gearbox in a foot-mounted design

##### DZ030KS

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	58	M6x16	
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	208.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	208.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	220.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	220.5

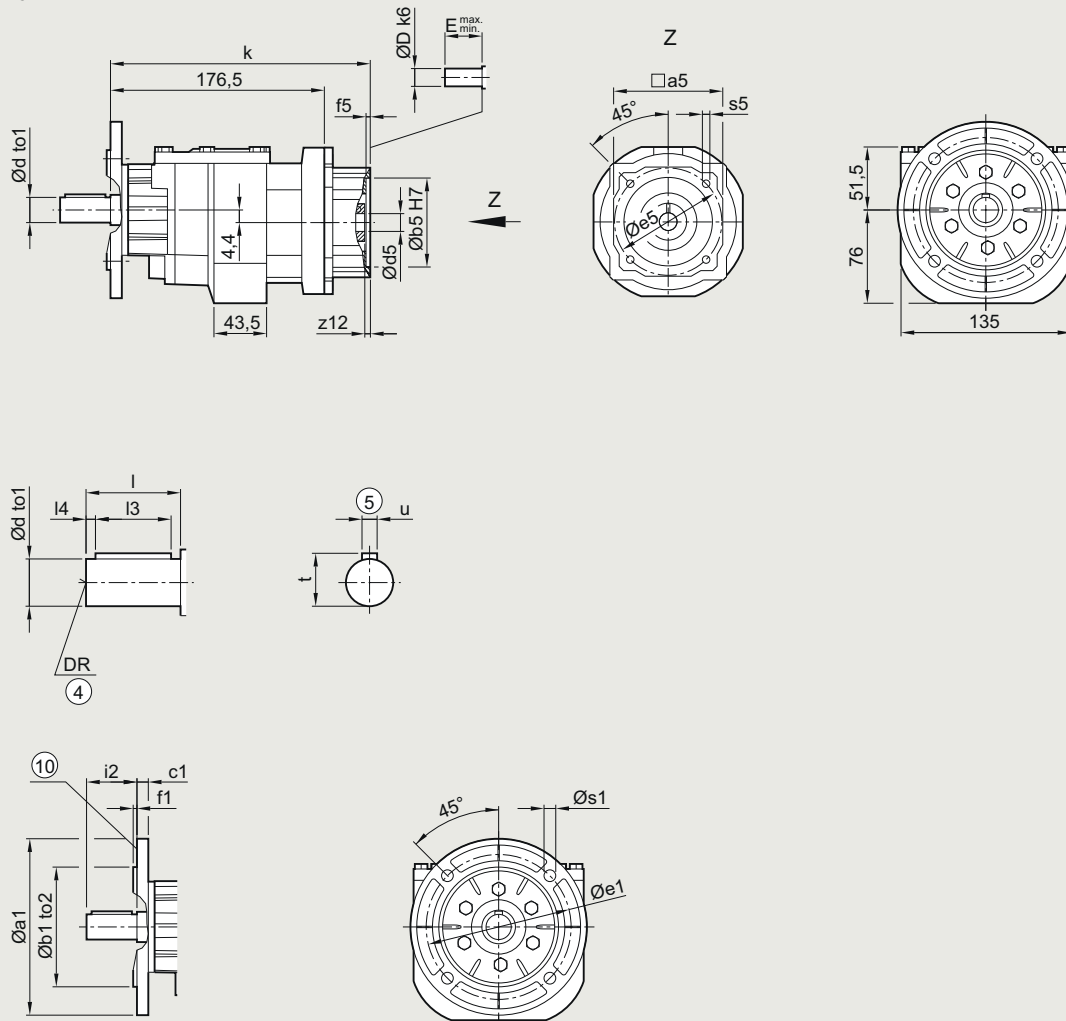
④ DIN 332

⑤ Feather key/keyway DIN 6885

## ZF/DF19 gearbox in a flange-mounted design

## DZF030KS

## ZF/DF19



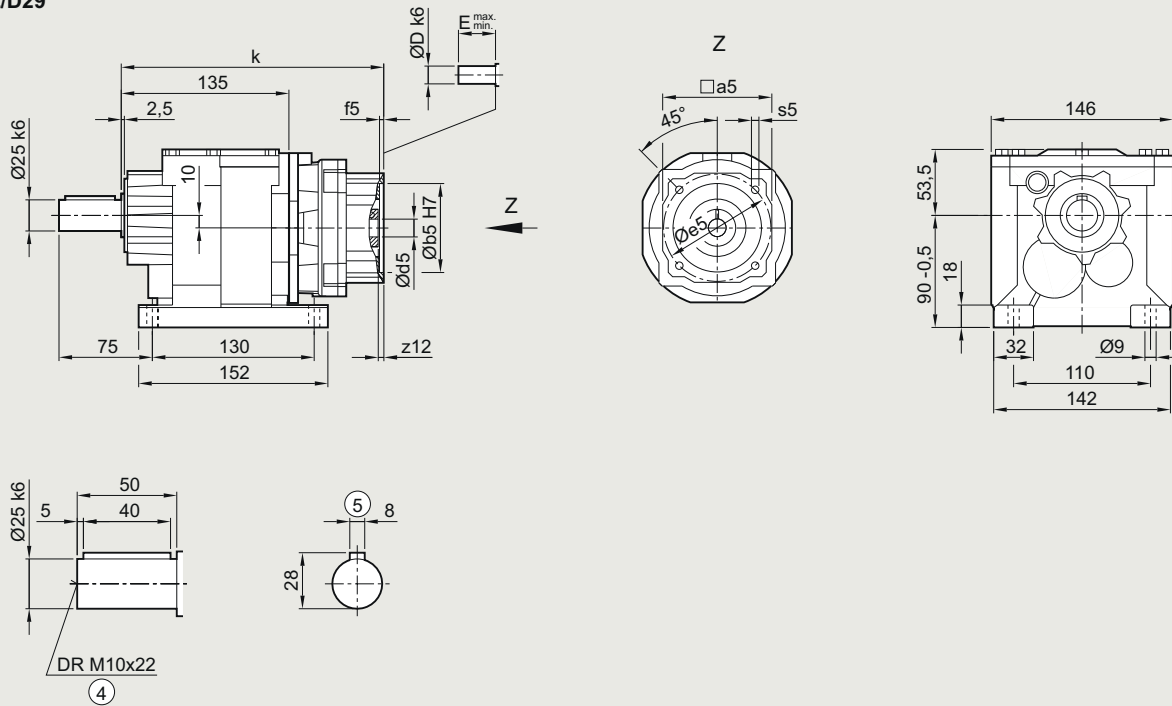
Shaft	d	to1	l	l3	l4	t	u	i2	DR	
	16	k6	28	22	3	18.0	5	28	M5	
	16	k6	40	32	4	18.0	5	40	M8	
	20	k6	40	32	4	22.5	6	40	M6x16	
Flange	a1	b1	to2	c1	e1	f1	s1			
	120	80	j6	8	100	3.0	6.6			
	140	95	j6	9	115	3.0	9.0			
	160	110	j6	9	130	3.5	9.0			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	217
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	217
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	229.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	229.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



**Z/D29 gearbox in a foot-mounted design****DZ030KS****Z/D29**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	217
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	217
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	229.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	229.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	245.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	245.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	270.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	270.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

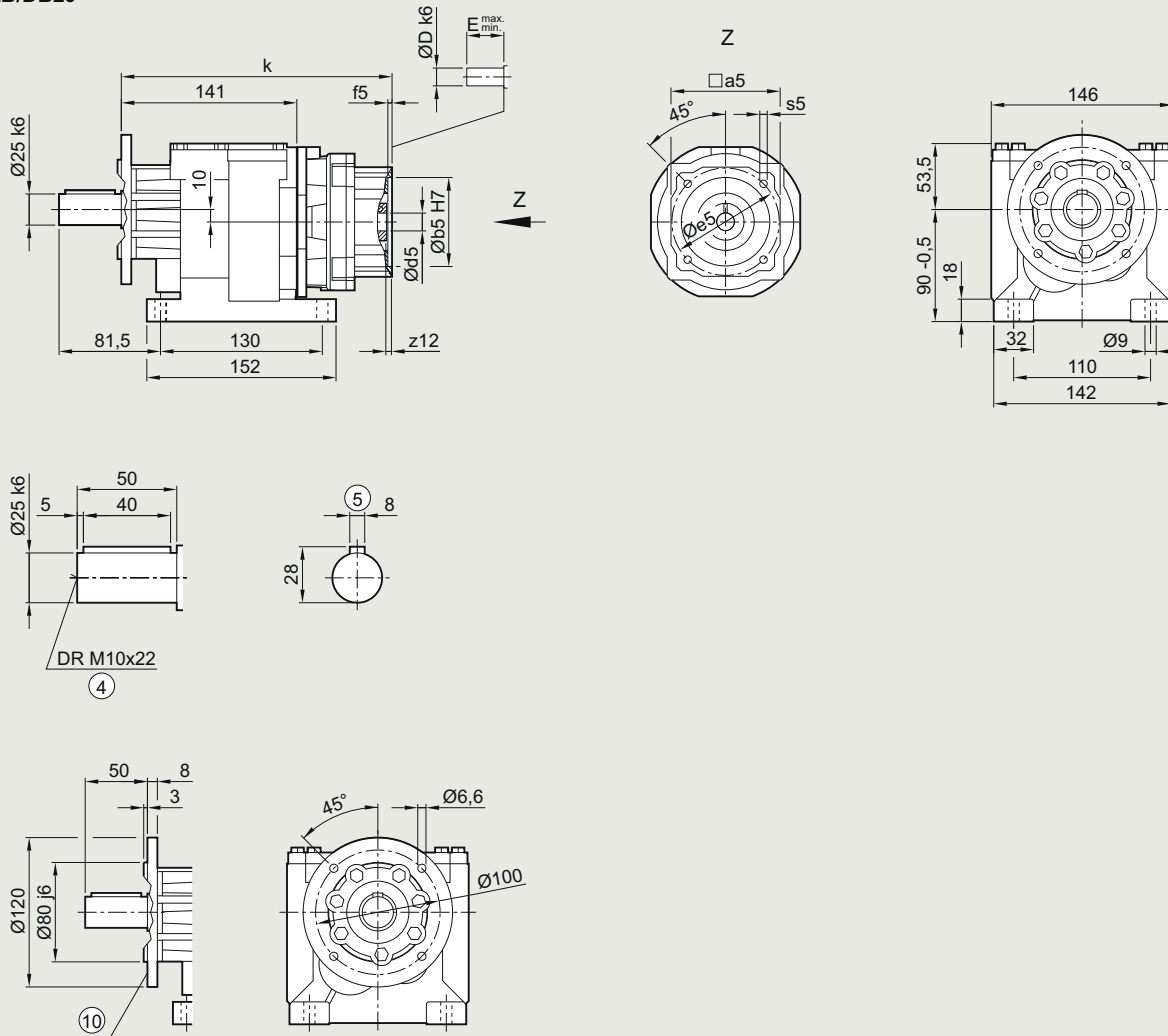
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZB/DB29 gearbox in a foot/flange-mounted design

##### DZB030KS

##### ZB/DB29

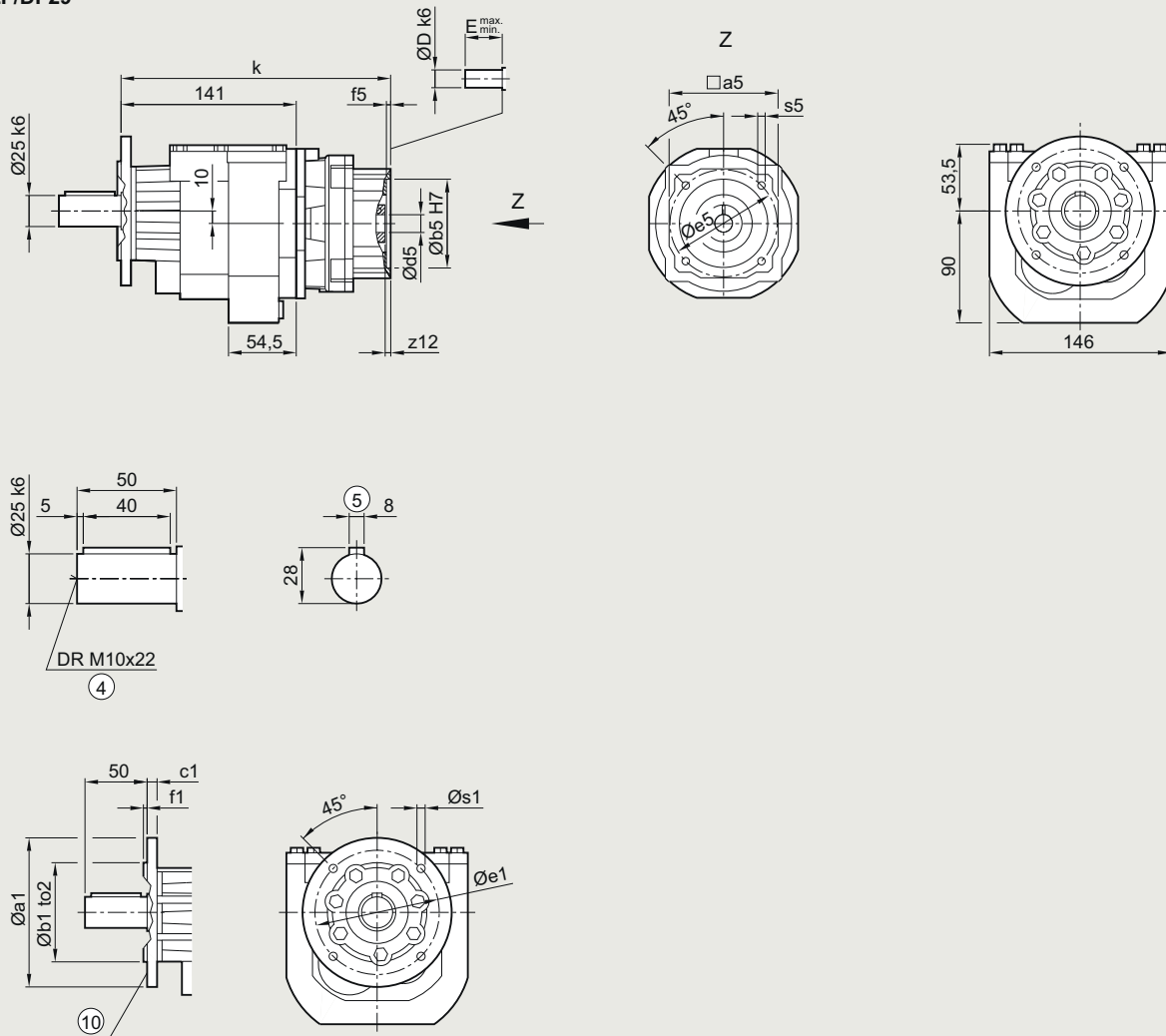


Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	223
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	223
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	235.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	235.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	251.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	251.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	276.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	276.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF29 gearbox in a flange-mounted design****DZF030KS****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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	223
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	223
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	235.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	235.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	251.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	251.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	276.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	276.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## SIMOGEAR gearboxes

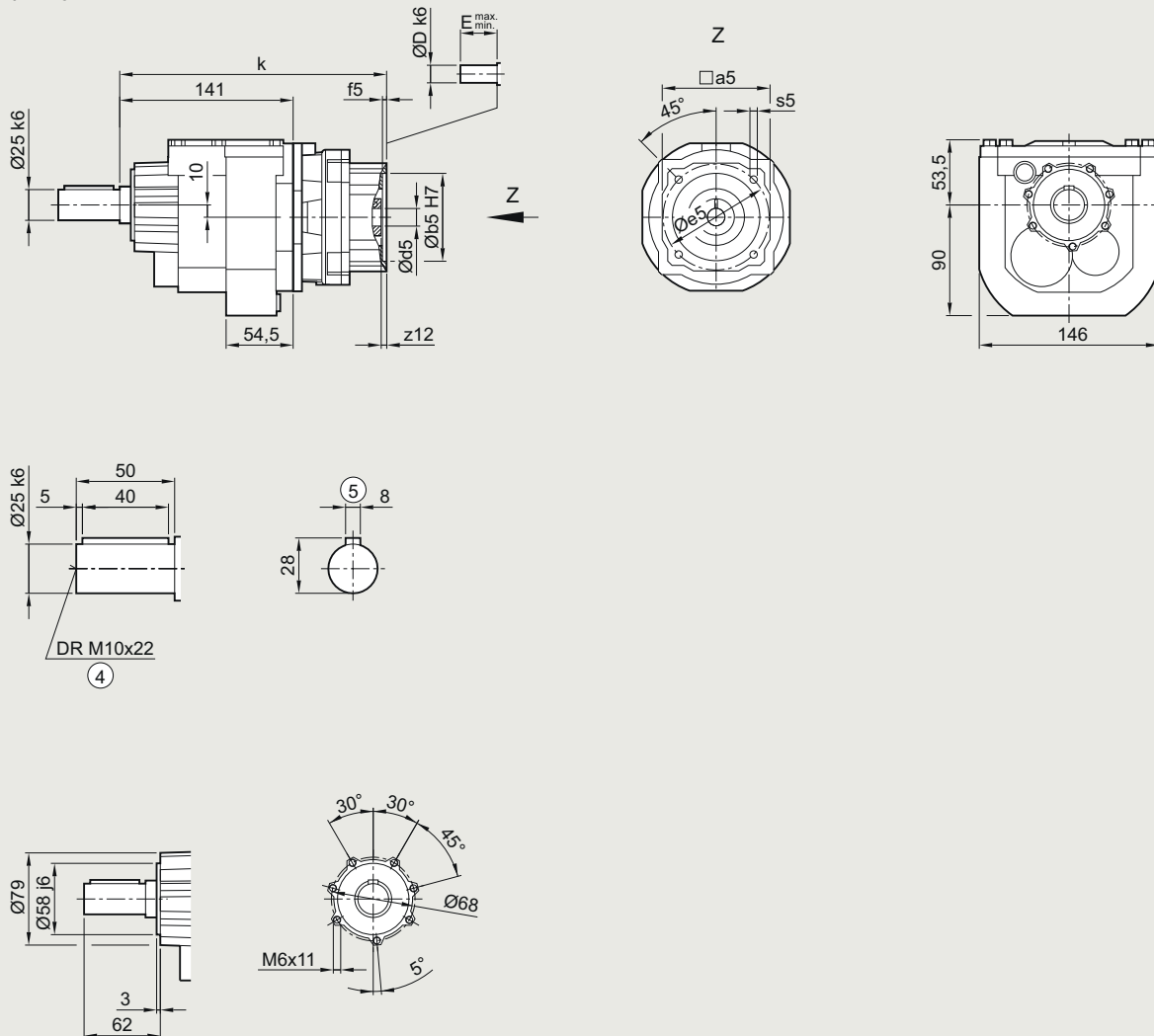
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZZ/DZ29 gearbox in a housing flange design

##### DZZ030KS

##### ZZ/DZ29



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	223
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	223
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	235.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	235.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	251.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	251.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	276.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	276.5

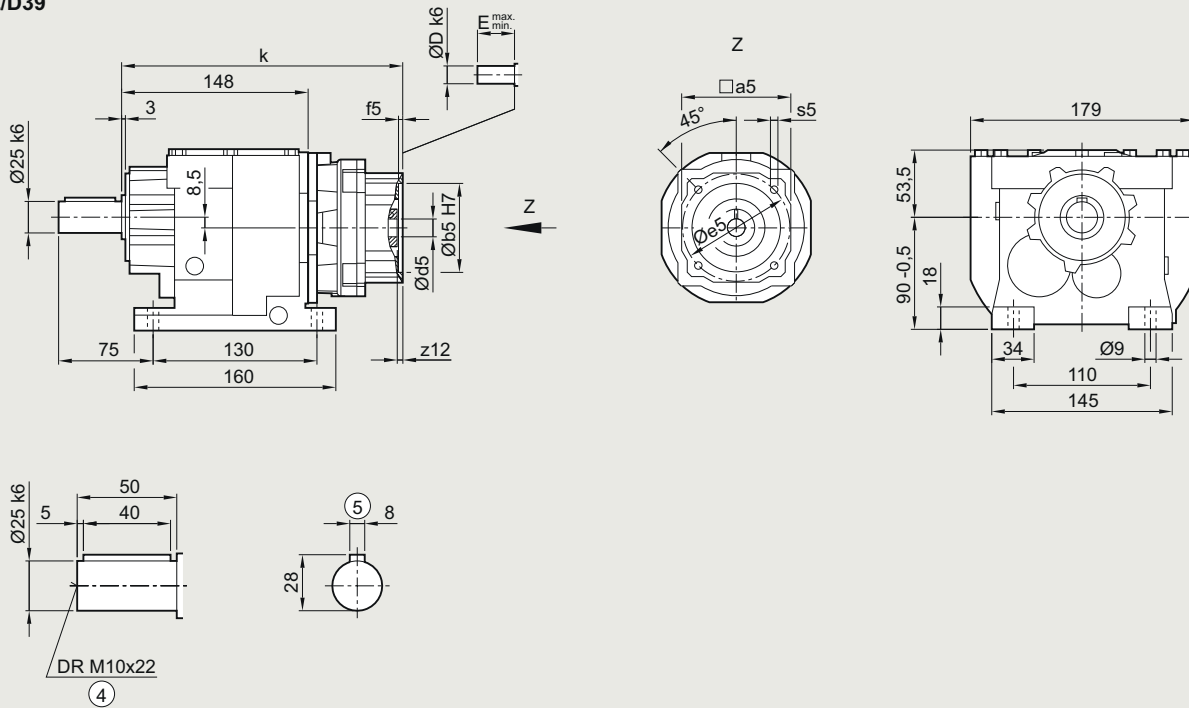
④ DIN 332

⑤ Feather key/keyway DIN 6885

## Z/D39 gearbox in a foot-mounted design

## DZ030KS

Z/D39



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	230
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	230
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	242.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	242.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	258.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	258.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	283.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	283.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	296

④ DIN 332

⑤ Feather key/keyway DIN 6885



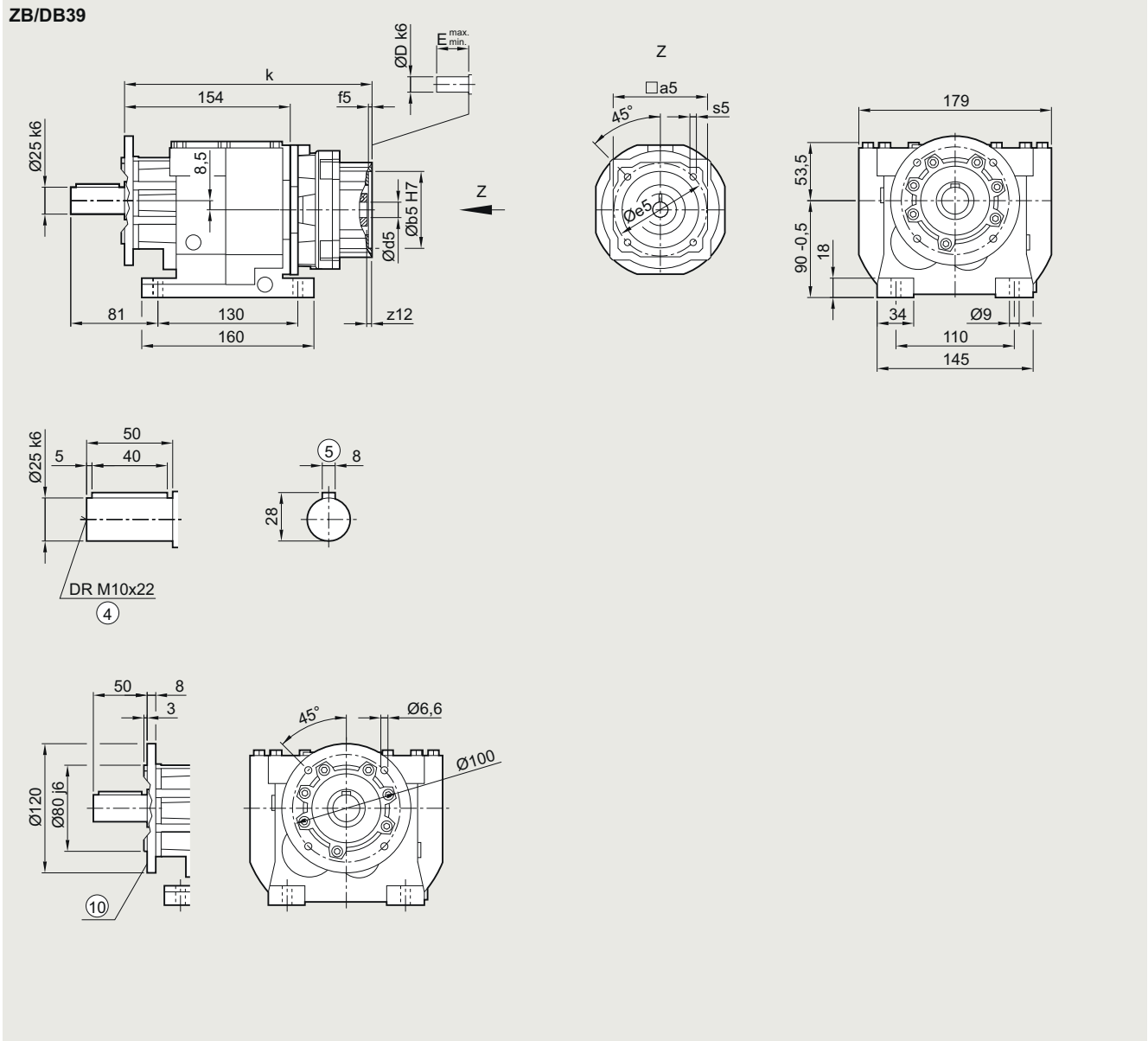
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZB/DB39 gearbox in a foot/flange-mounted design

##### DZB030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	236
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	236
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	248.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	248.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	264.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	264.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	289.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	289.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	302

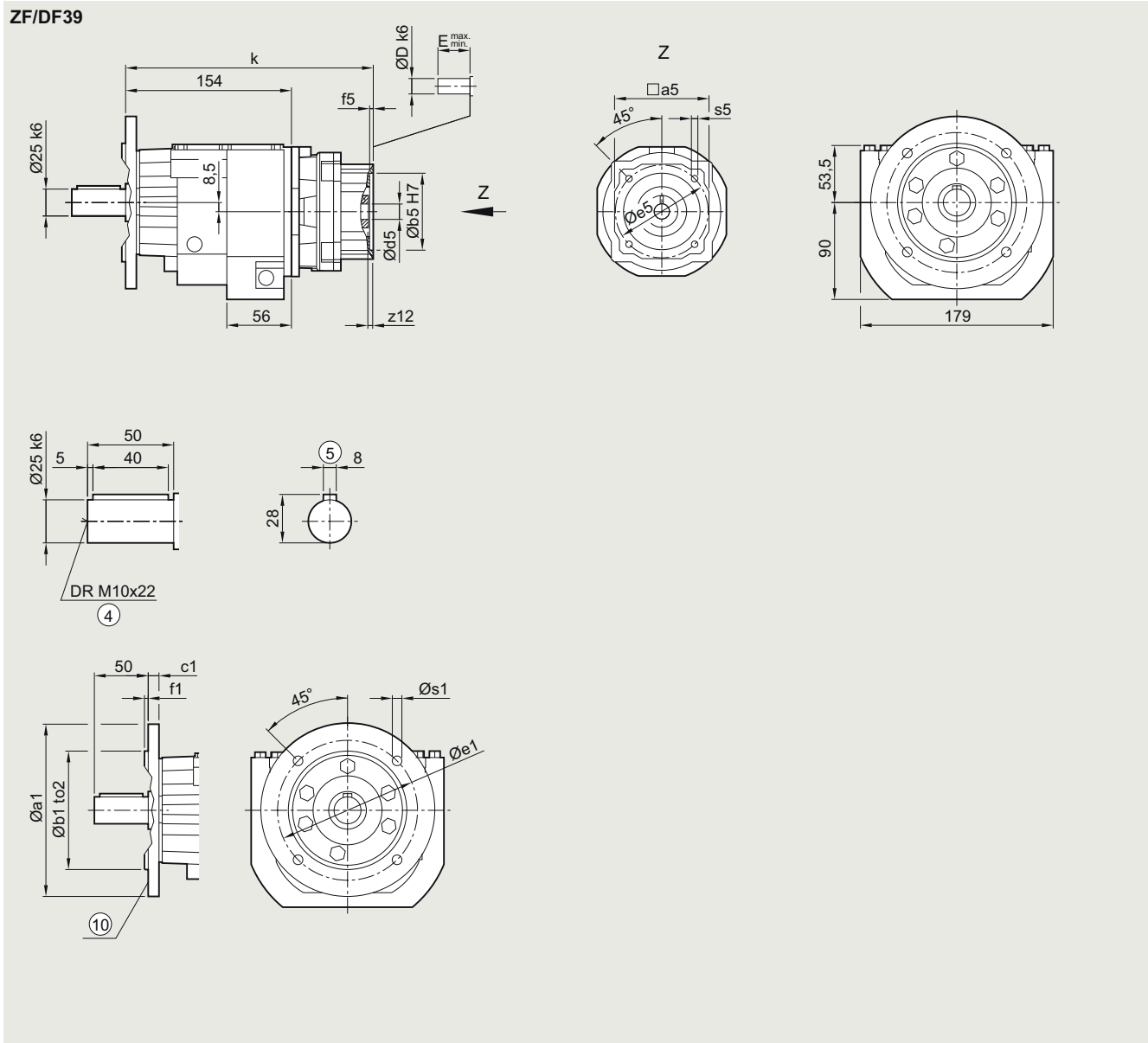
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## ZF/DF39 gearbox in a flange-mounted design

## DZF030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	236
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	236
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	248.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	248.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	264.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	264.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	289.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	289.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	302

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

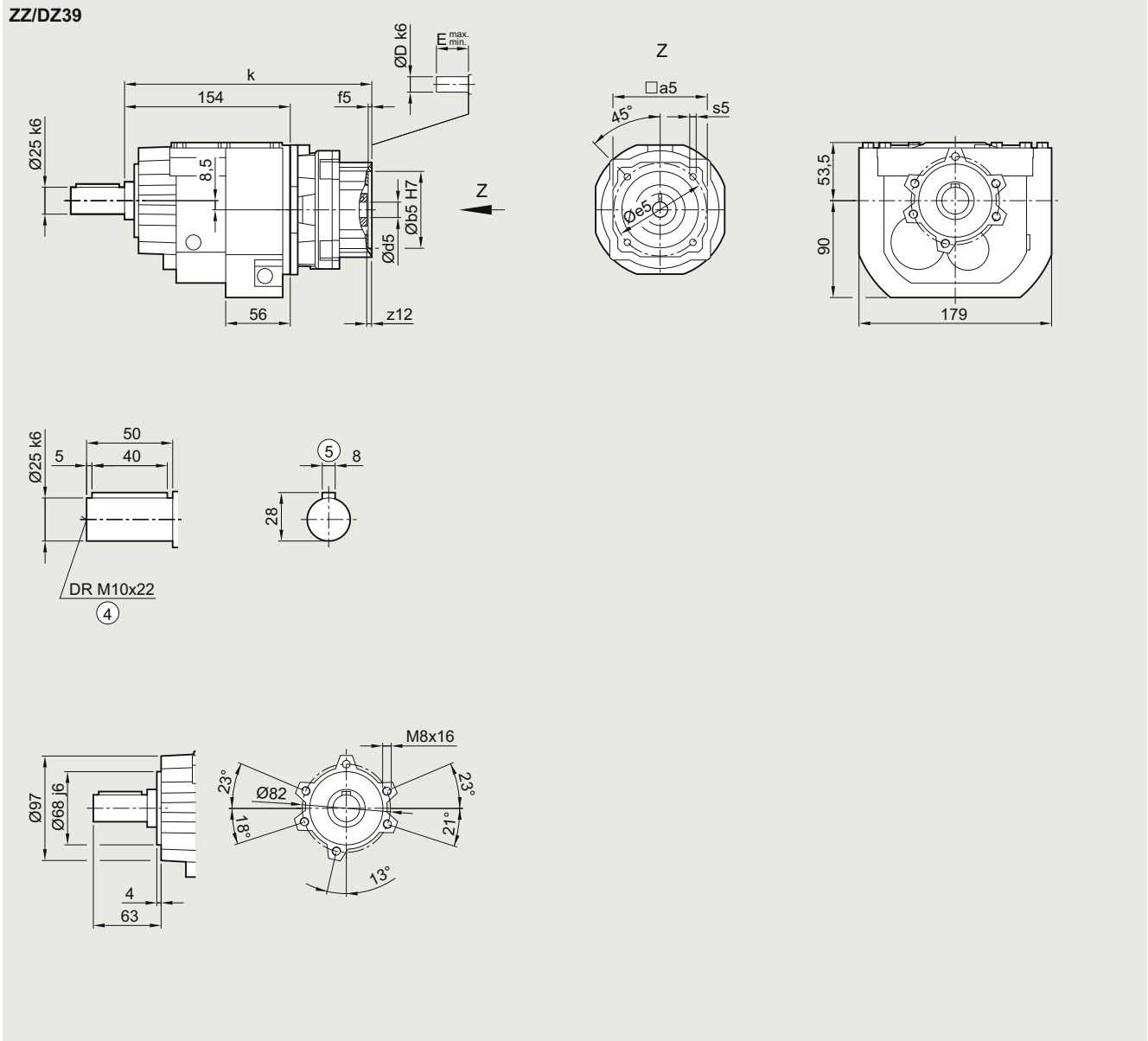
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZZ/DZ39 gearbox in a housing flange design

##### DZZ030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	236
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	236
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	248.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	248.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	264.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	264.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	289.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	289.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	302

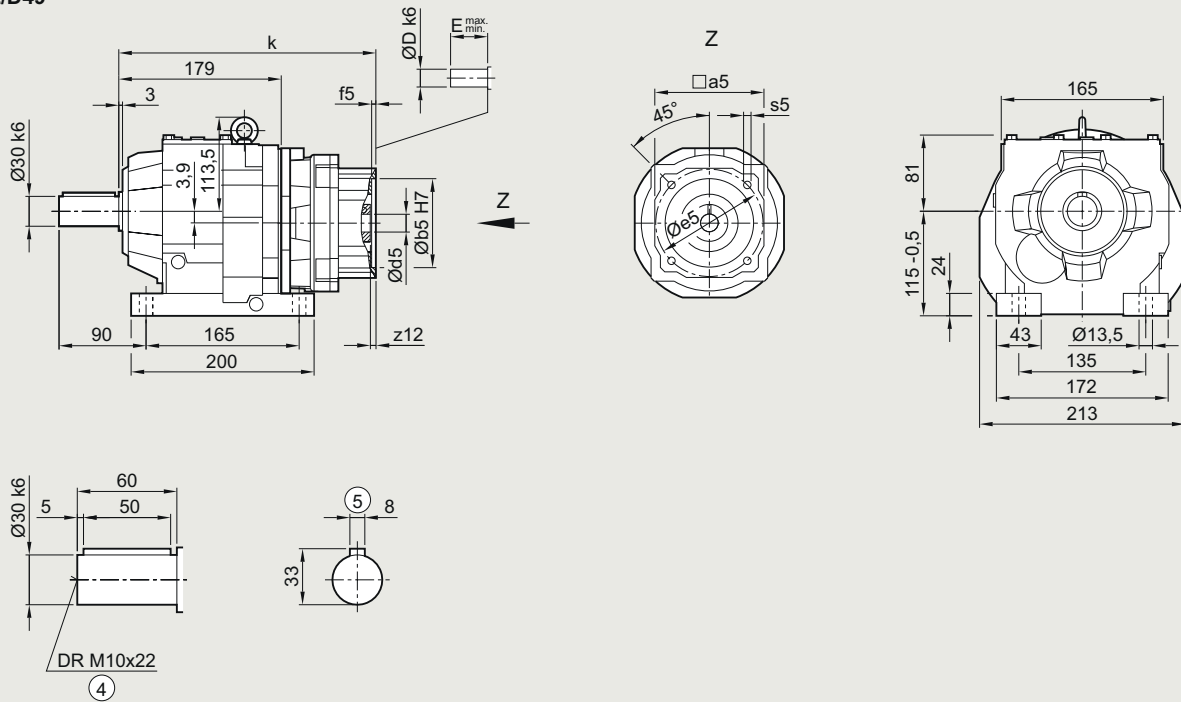
④ DIN 332

⑤ Feather key/keyway DIN 6885

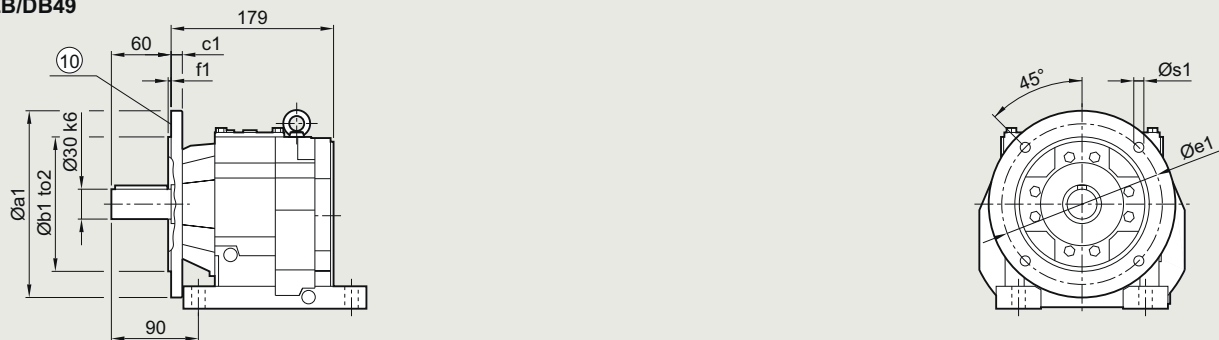
## Z/D49 and ZB/DB49 gearboxes in a foot and foot/flange-mounted design

## DZ030KS, DZB030KS

## 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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	305
KS6.2	130	110	7	145	M8x15	8	22	40	58	305
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	317.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	353.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	353.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## SIMOGEAR gearboxes

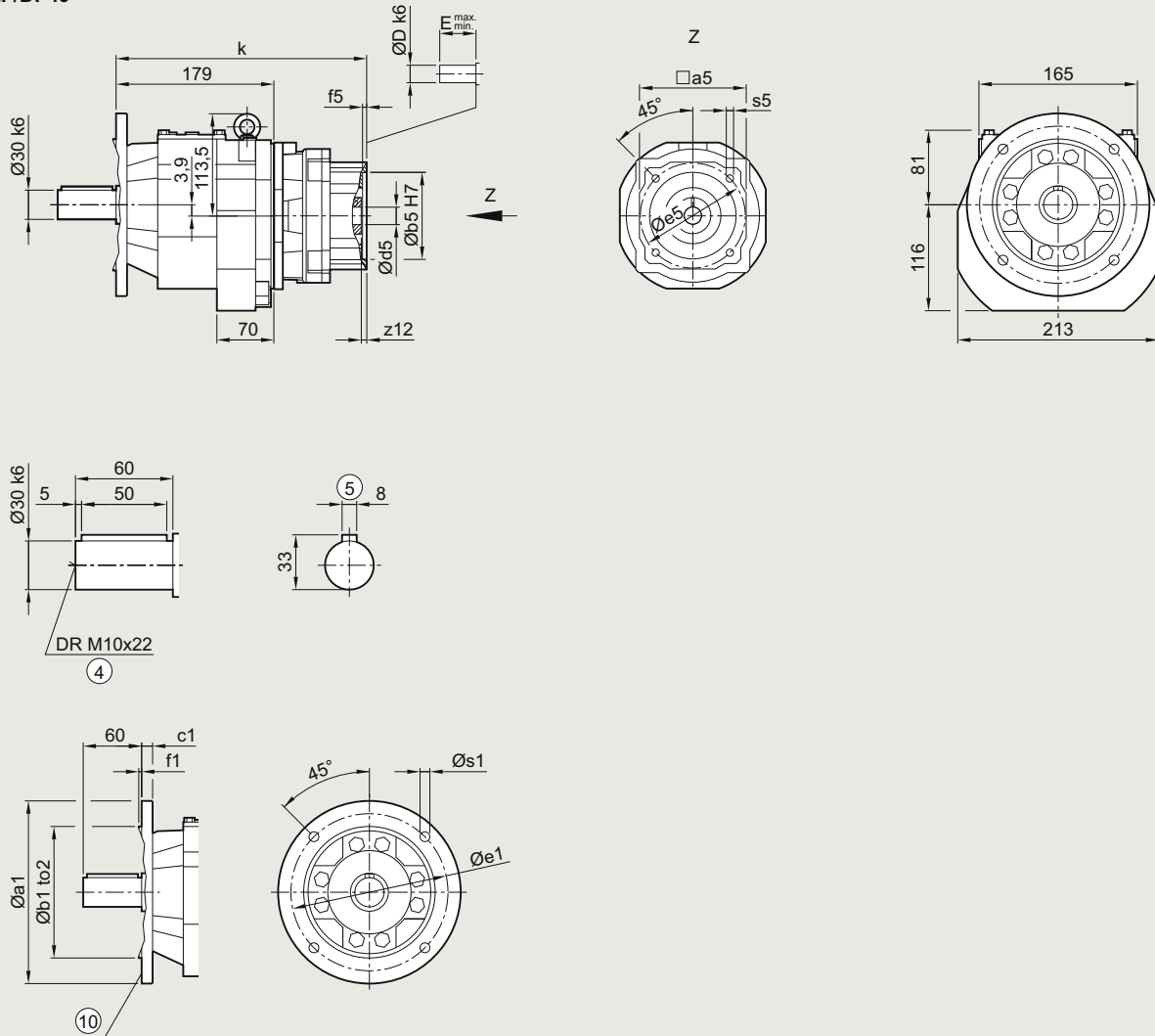
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF49 gearbox in a flange-mounted design

##### DZF030KS

##### 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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	305
KS6.2	130	110	7	145	M8x15	8	22	40	58	305
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	317.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	353.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	353.5

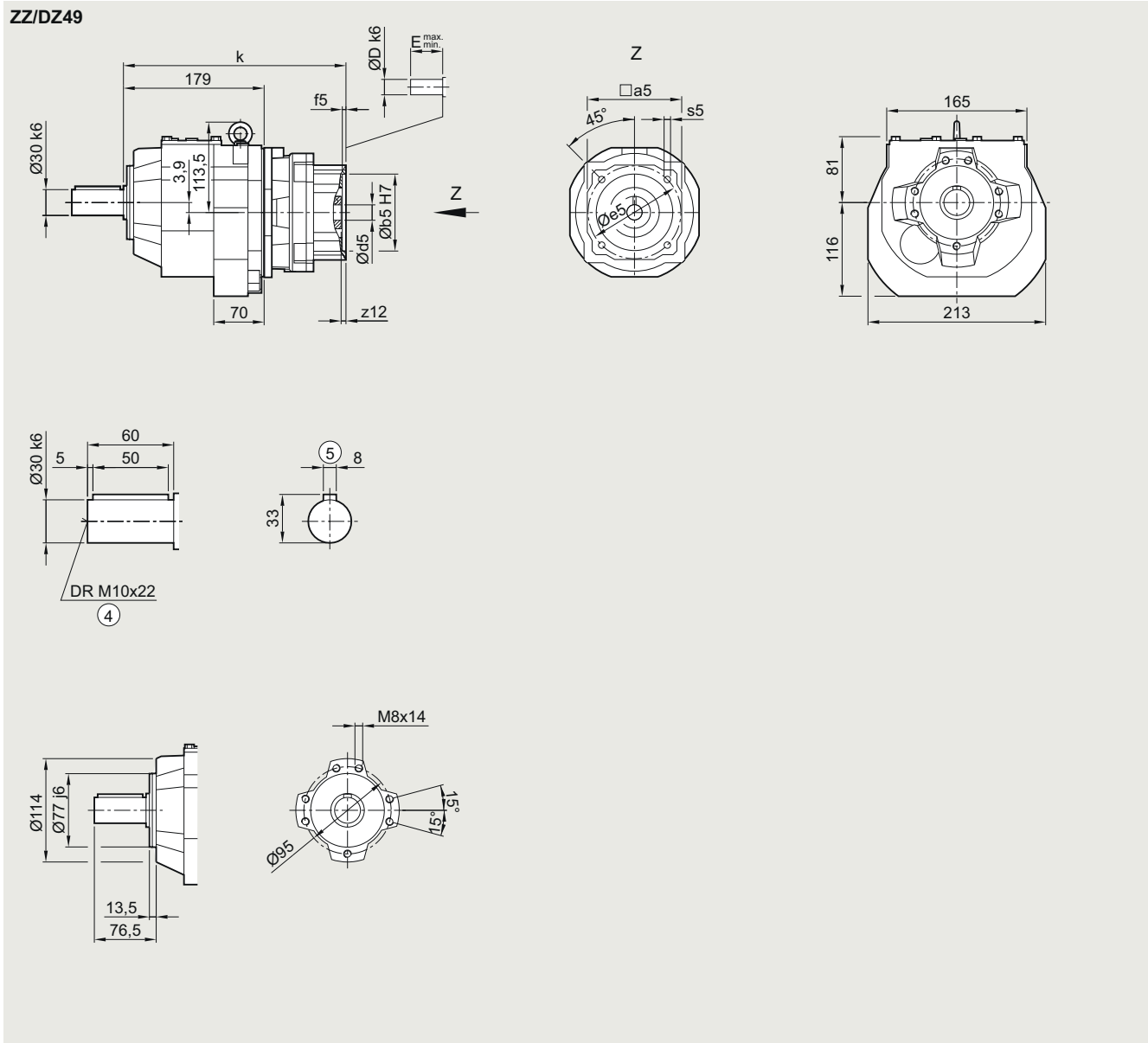
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## ZZ/DZ49 gearbox in a housing flange design

## DZZ030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{\min.}$	$E_{\max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	305
KS6.2	130	110	7	145	M8x15	8	22	40	58	305
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	317.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	353.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	353.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

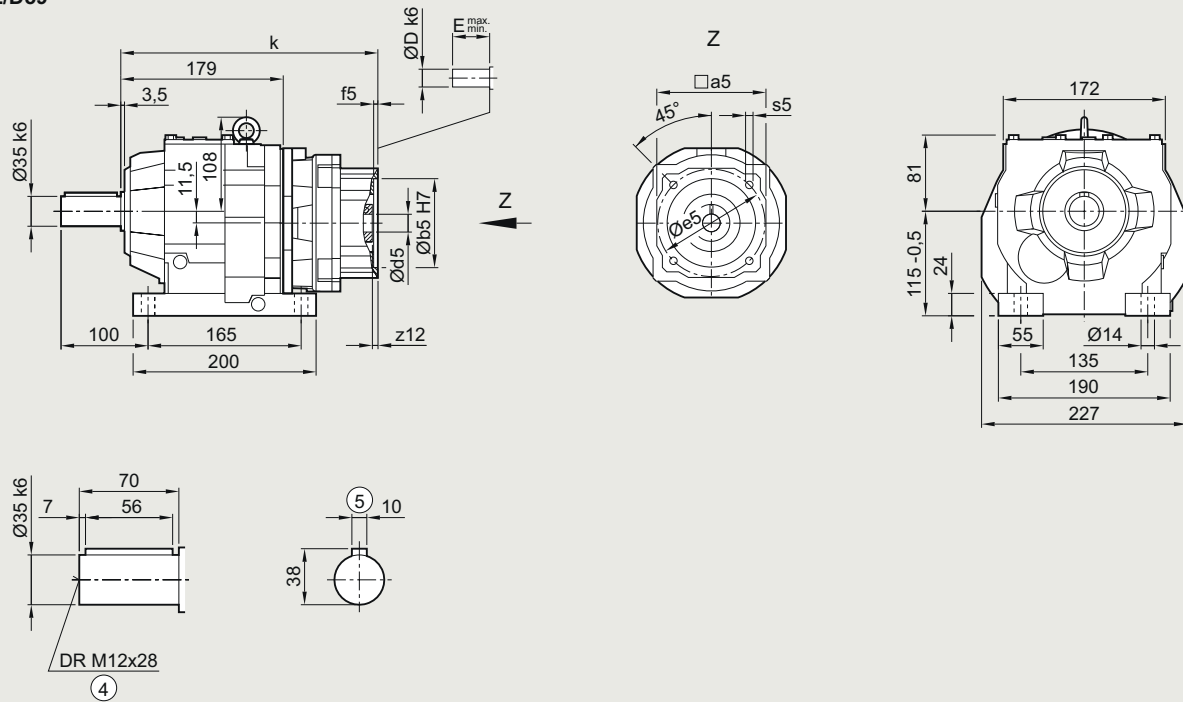
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

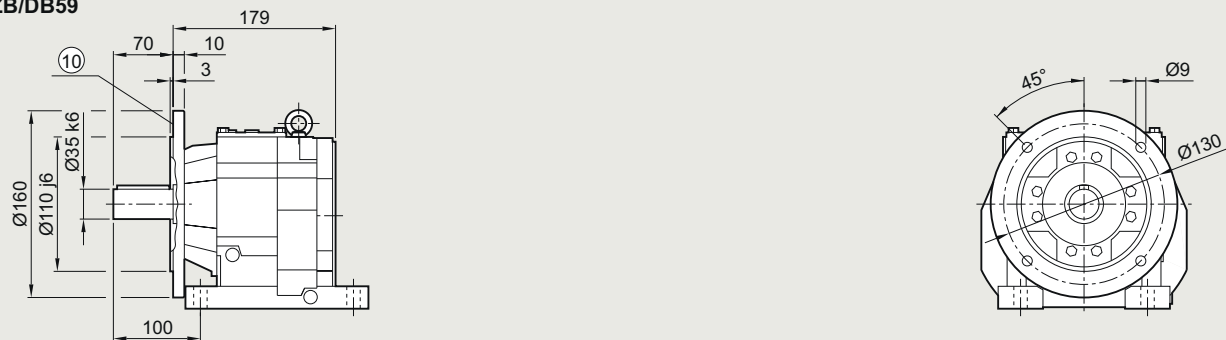
#### Z/D59 and ZB/DB59 gearboxes in a foot and foot/flange-mounted design

##### DZ030KS, DZB030KS

###### Z/D59



###### ZB/DB59

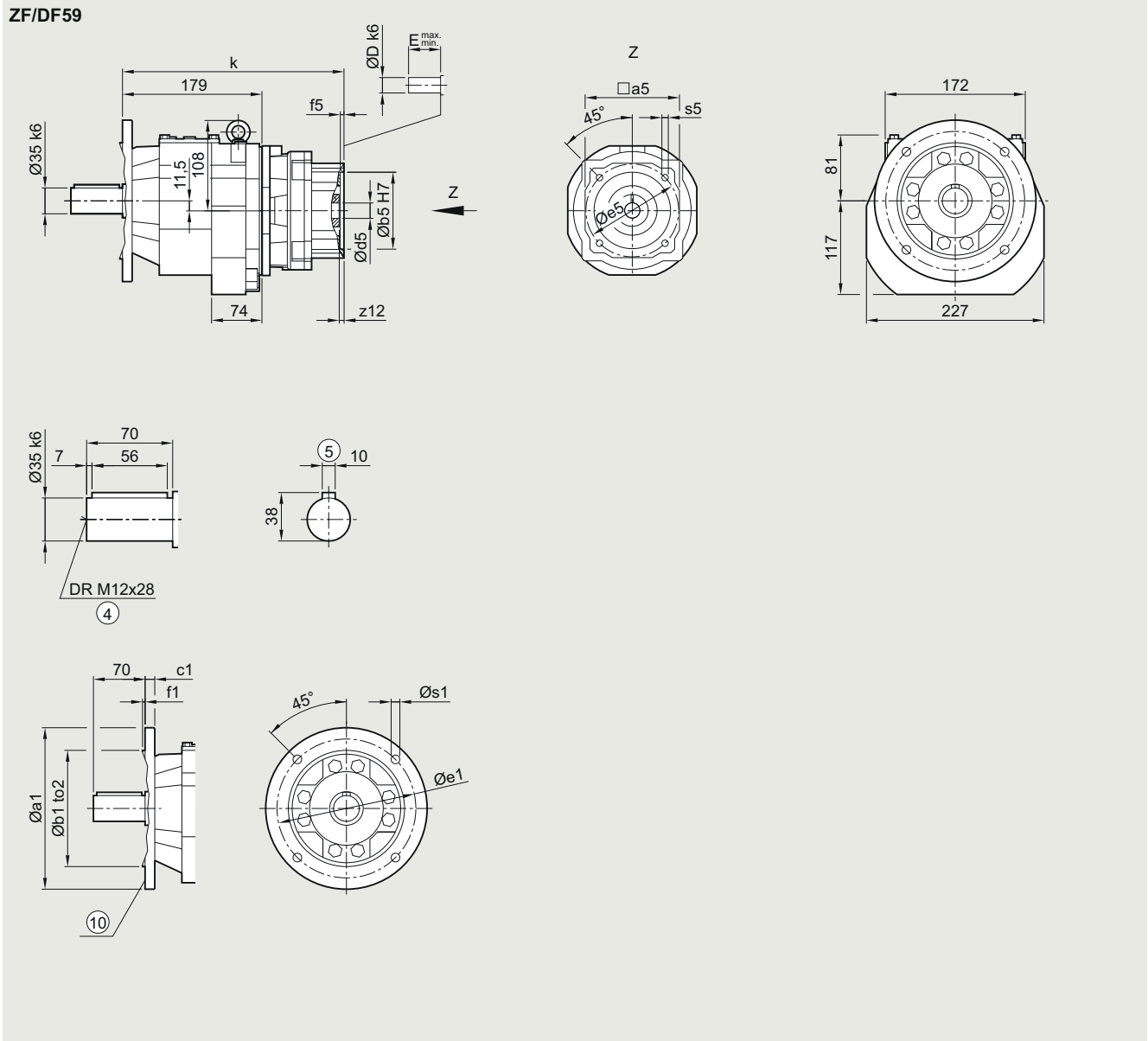


Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	305
KS6.2	130	110	7	145	M8x15	8	22	40	58	305
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	317.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	353.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	353.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF59 gearbox in a flange-mounted design****DZF030KS**

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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	305
KS6.2	130	110	7	145	M8x15	8	22	40	58	305
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	317.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	353.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	353.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



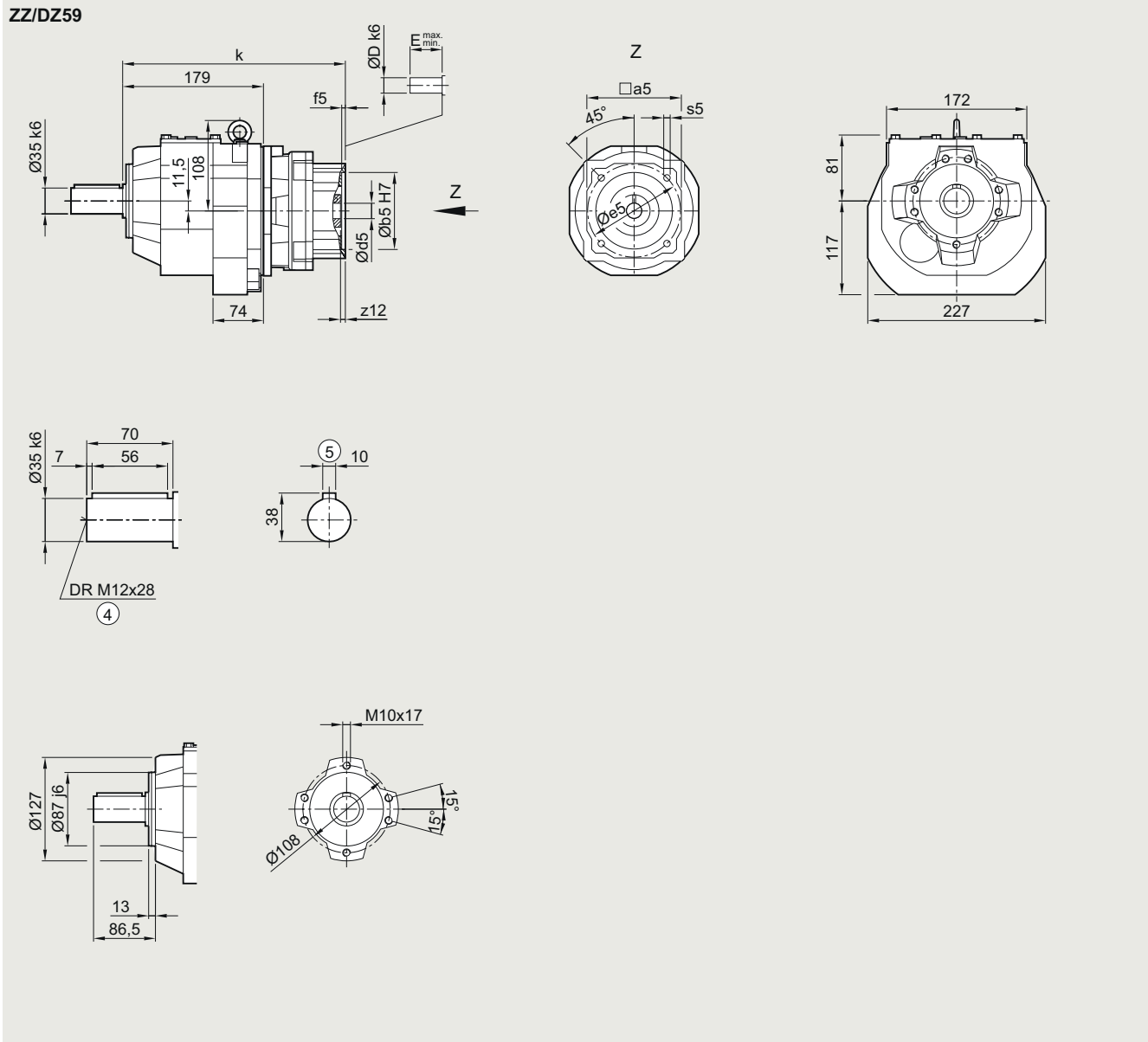
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZZ/DZ59 gearbox in a housing flange design

##### DZZ030KS



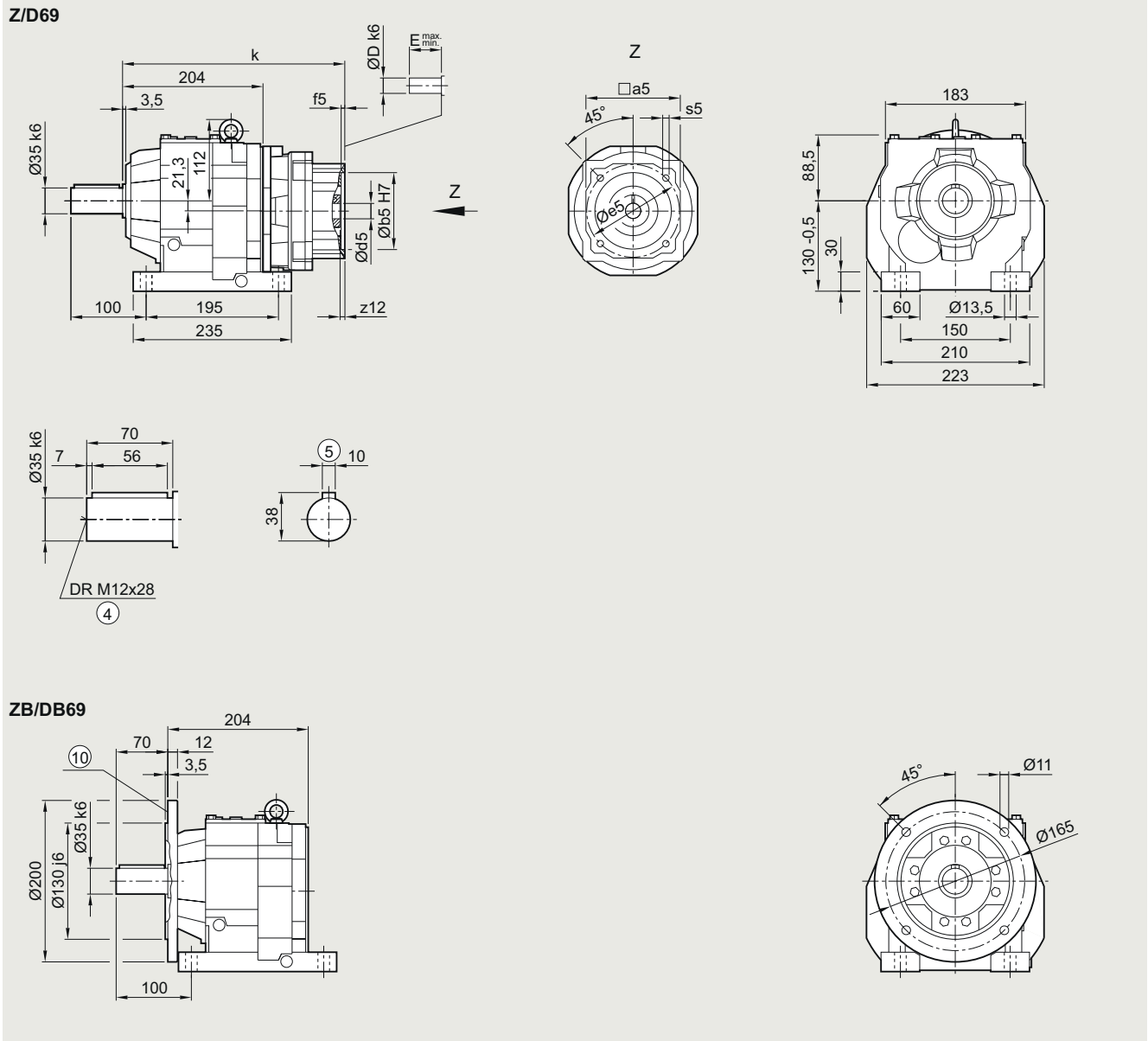
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	305
KS6.2	130	110	7	145	M8x15	8	22	40	58	305
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	317.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	353.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	353.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## Z/D69 and ZB/DB69 gearboxes in a foot and foot/flange-mounted design

## DZ030KS, DZB030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	276.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	276.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	289
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	289
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	305
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	305
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	330
KS6.2	130	110	7	145	M8x15	8	22	40	58	330
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	342.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	378.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	378.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

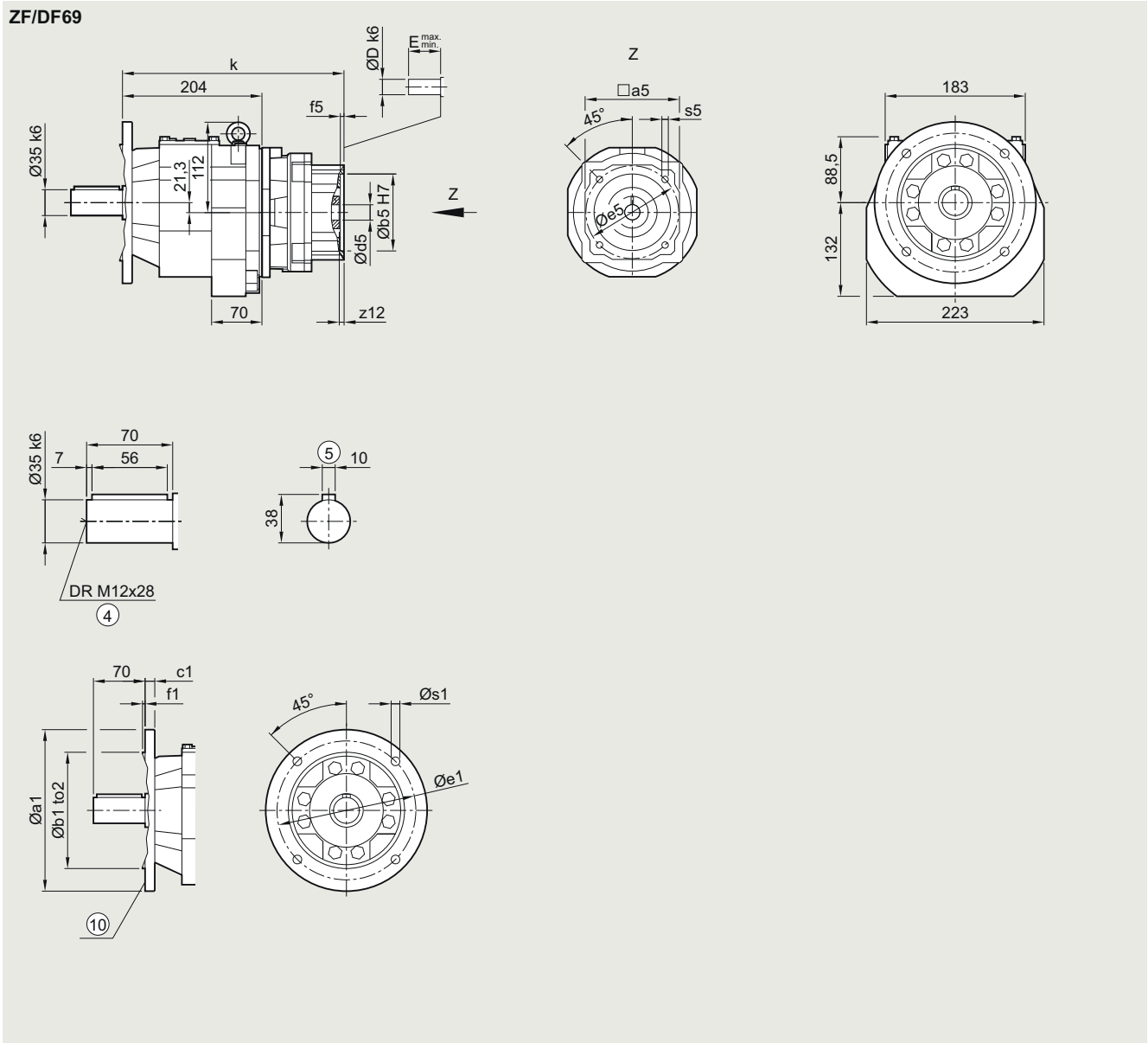
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF69 gearbox in a flange-mounted design

##### DZF030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	276.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	276.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	289
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	289
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	305
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	305
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	330
KS6.2	130	110	7	145	M8x15	8	22	40	58	330
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	342.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	378.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	378.5

④ DIN 332

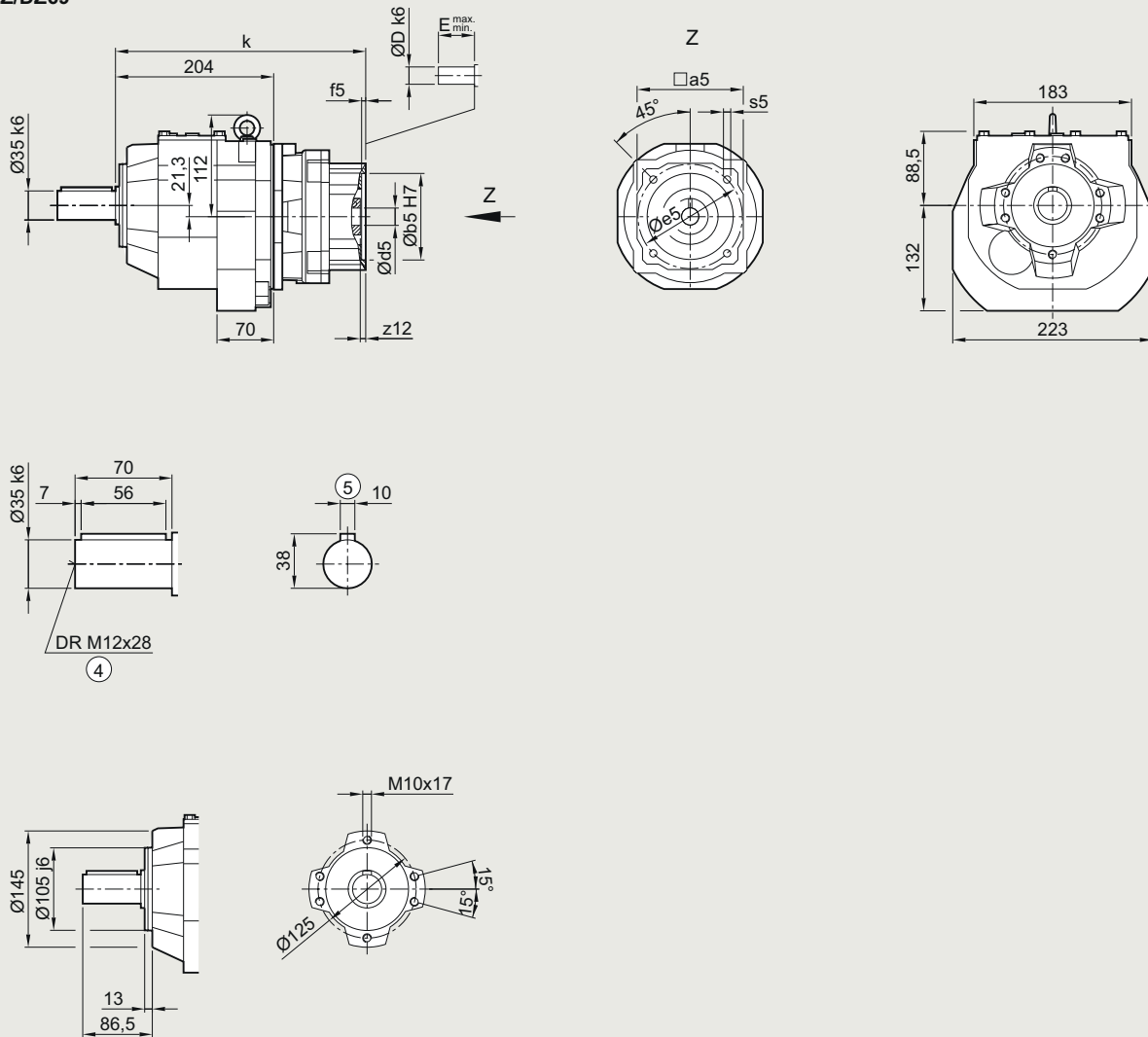
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## ZZ/DZ69 gearbox in a housing flange design

## DZZ030KS

## ZZ/DZ69



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	276.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	276.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	289
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	289
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	305
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	305
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	330
KS6.2	130	110	7	145	M8x15	8	22	40	58	330
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	342.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	378.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	378.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

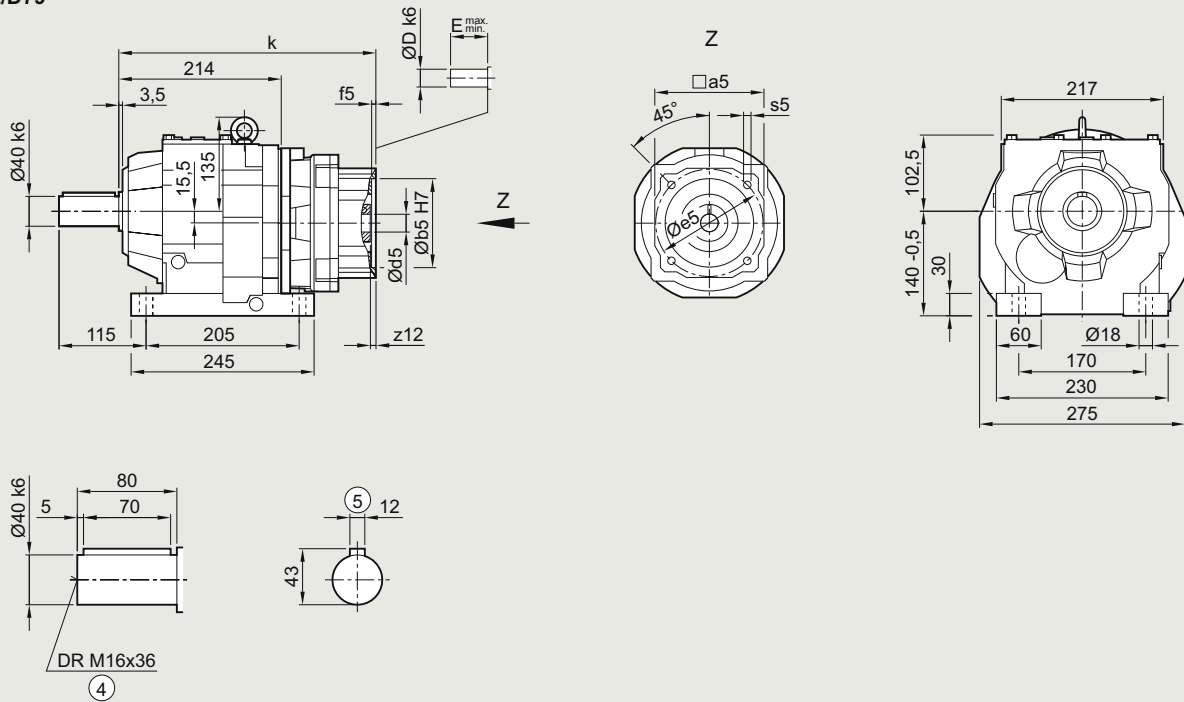
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

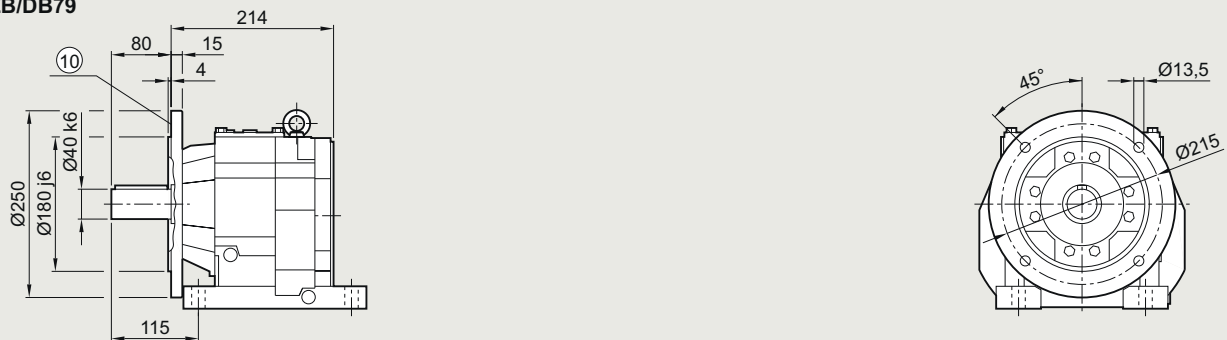
#### Z/D79 and ZB/DB79 gearboxes in a foot and foot/flange-mounted design

##### DZ030KS, DZB030KS

###### Z/D79



###### ZB/DB79



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	284.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	284.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	297
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	297
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	309
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	309
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	334
KS6.2	130	110	7	145	M8x15	8	22	40	58	334
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	346.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	382.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	382.5

④ DIN 332

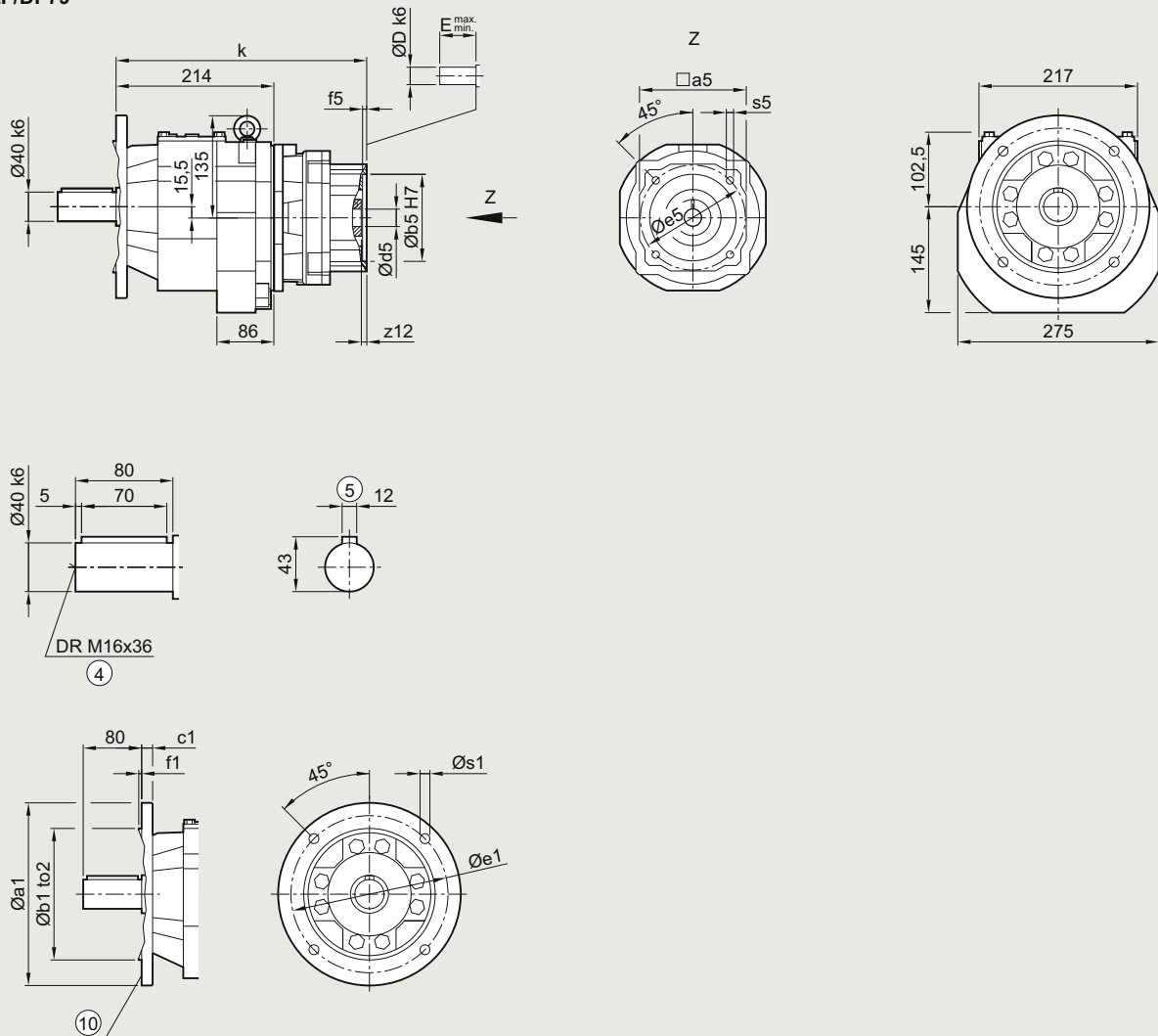
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## ZF/DF79 gearbox in a flange-mounted design

## DZF030KS

## 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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	284.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	284.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	297
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	297
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	309
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	309
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	334
KS6.2	130	110	7	145	M8x15	8	22	40	58	334
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	346.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	382.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	382.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## SIMOGEAR gearboxes

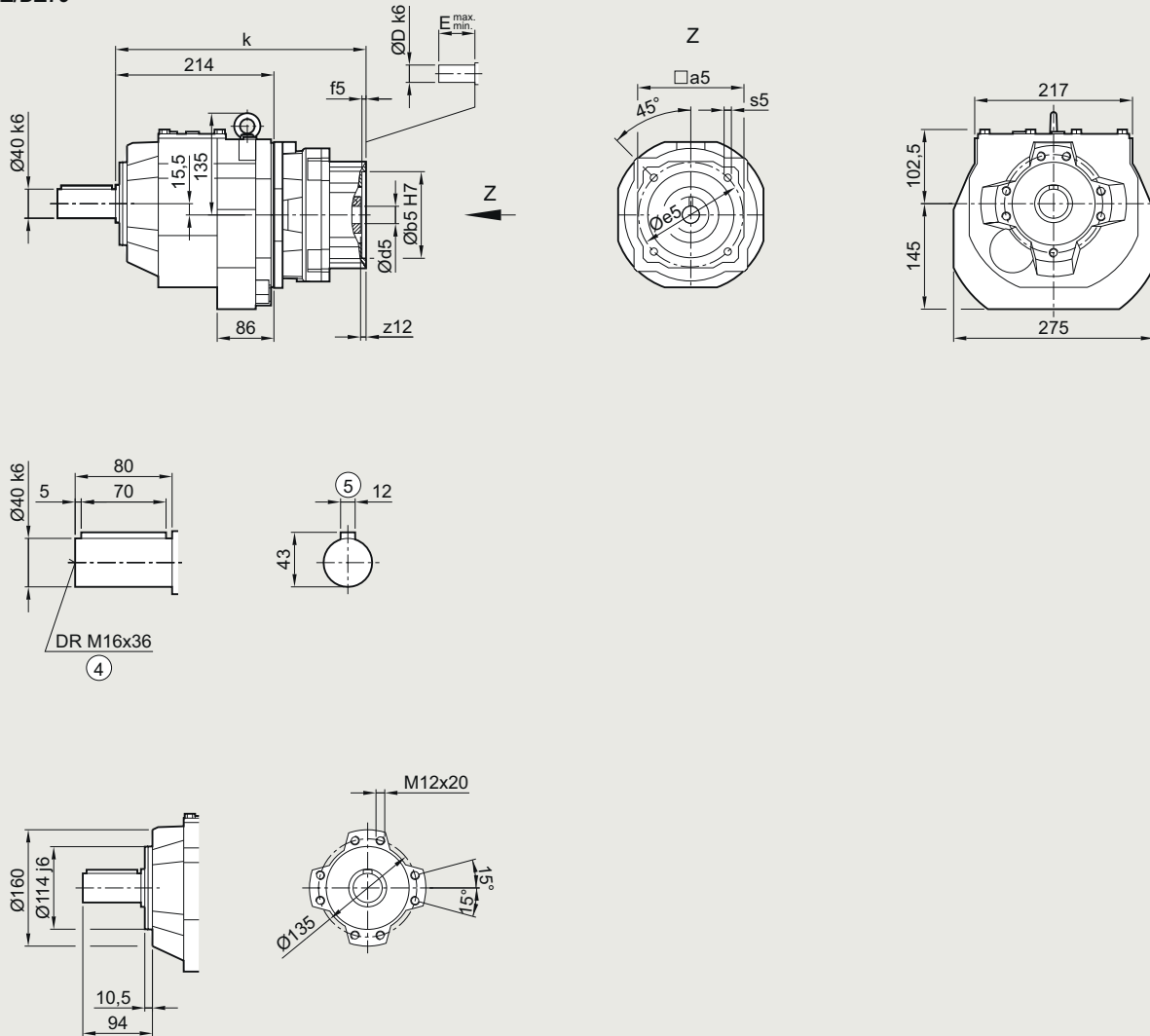
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZZ/DZ79 gearbox in a housing flange design

##### DZZ030KS

##### ZZ/DZ79



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	284.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	284.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	297
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	297
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	309
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	309
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	334
KS6.2	130	110	7	145	M8x15	8	22	40	58	334
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	346.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	382.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	382.5

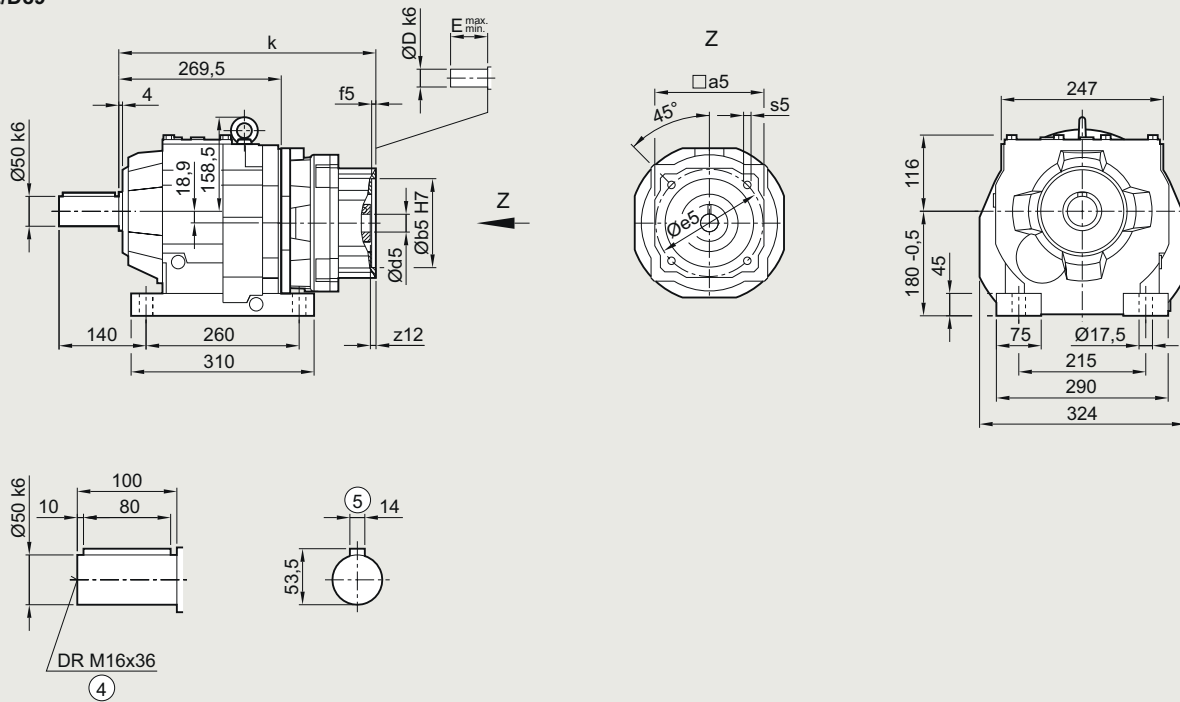
④ DIN 332

⑤ Feather key/keyway DIN 6885

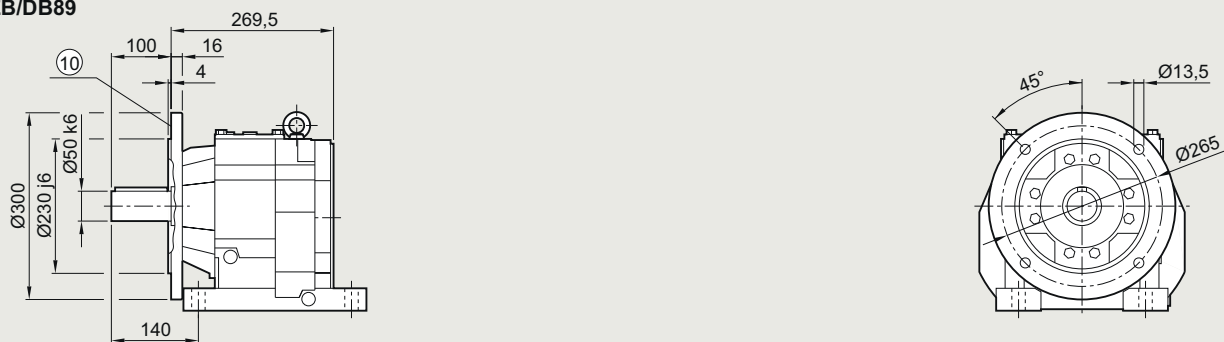
## Z/D89 and ZB/DB89 gearboxes in a foot and foot/flange-mounted design

## DZ030KS, DZB030KS

## Z/D89



## ZB/DB89



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{\text{min}}$	$E_{\text{max}}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	351.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	351.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	372.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	385
KS10.1	196	180	5	215	M12x22	5	38	50	80	421
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	421

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



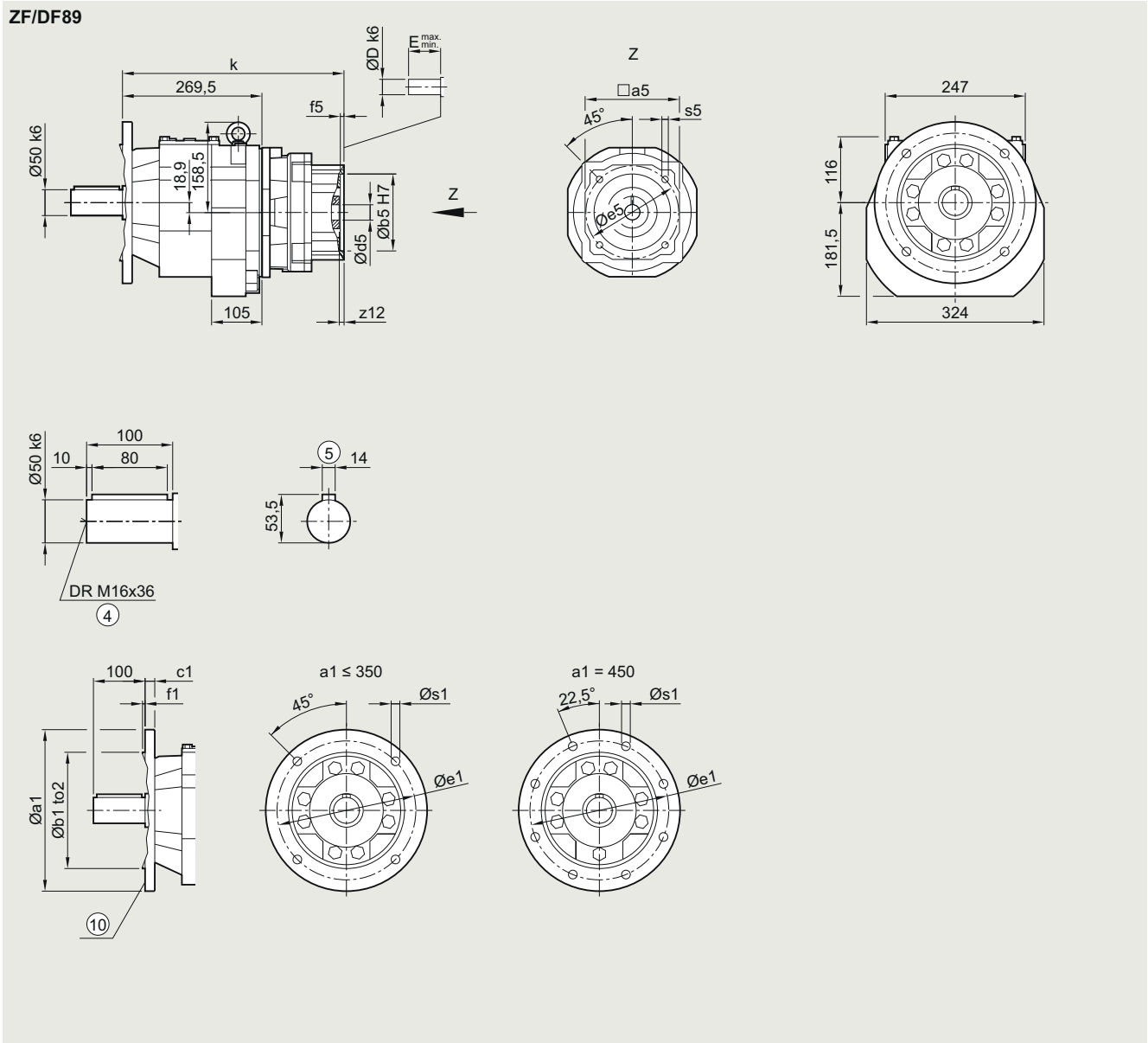
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF89 gearbox in a flange-mounted design

##### DZF030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	351.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	351.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	372.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	385
KS10.1	196	180	5	215	M12x22	5	38	50	80	421
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	421

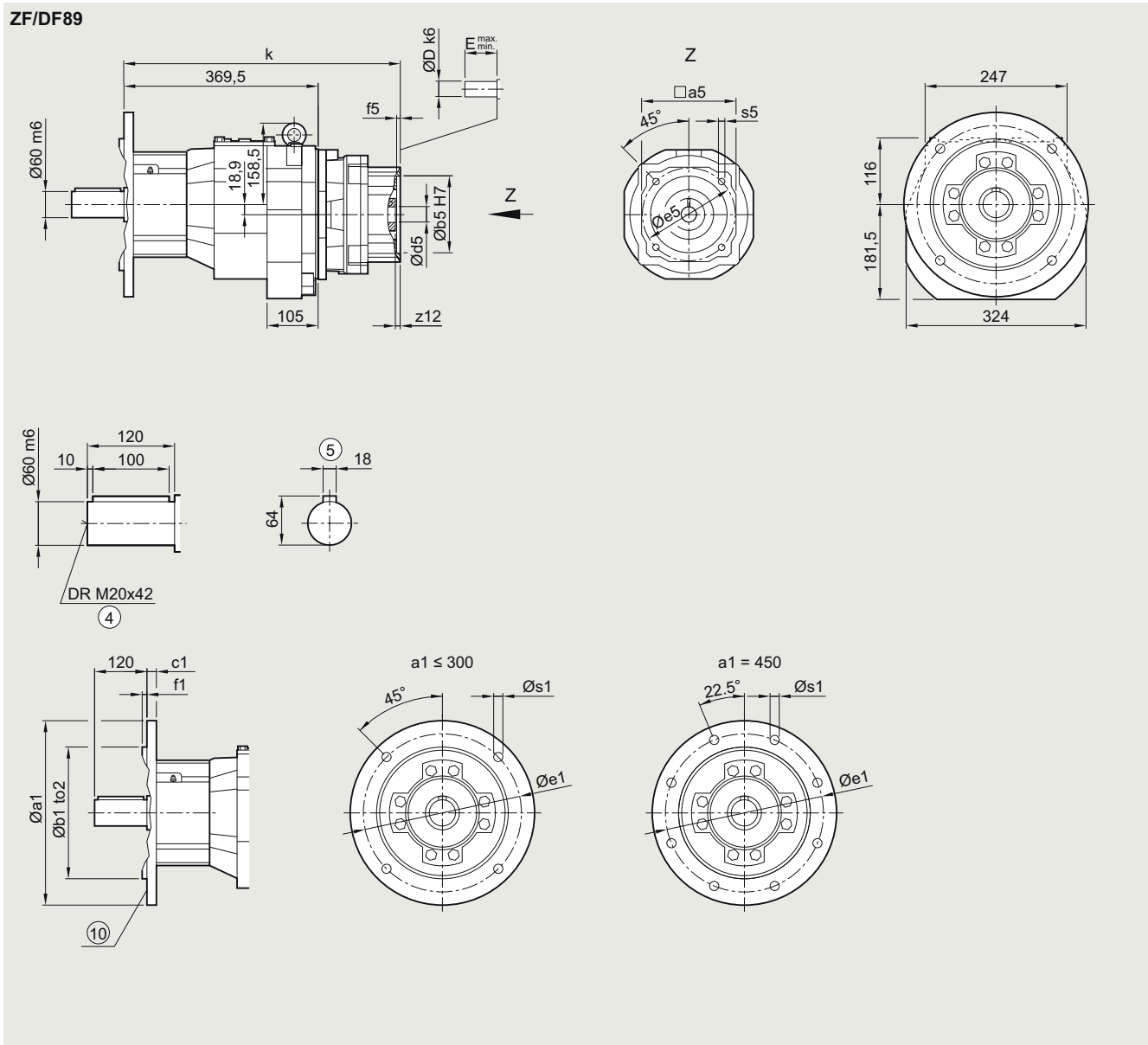
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## ZF/DF89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

## DZF040KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	451.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	451.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	472.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	472.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	485
KS10.1	196	180	5	215	M12x22	5	38	50	80	521
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	521

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

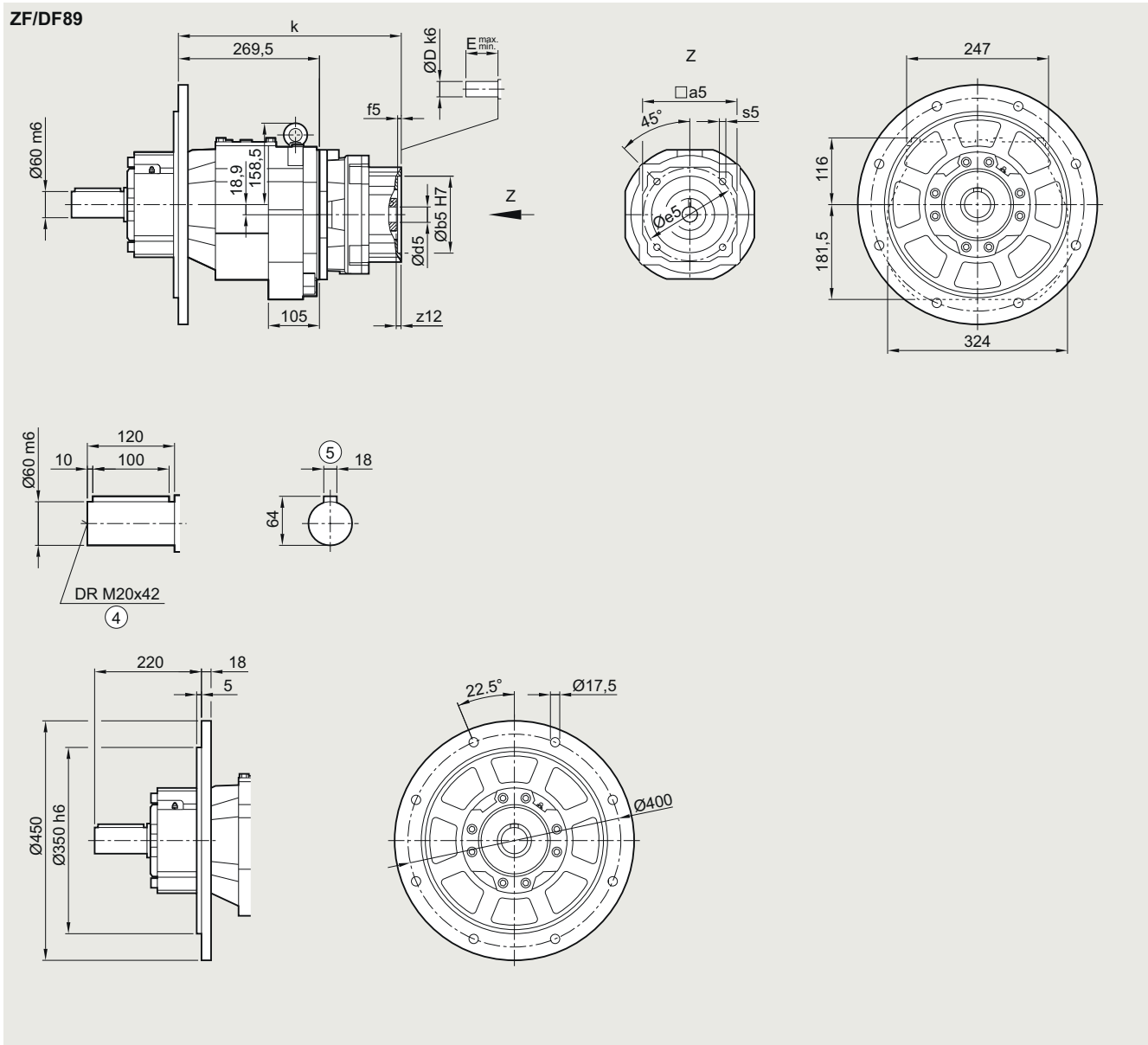
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF89 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

##### DZF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	351.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	351.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	372.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	385
KS10.1	196	180	5	215	M12x22	5	38	50	80	421
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	421

④ DIN 332

⑤ Feather key/keyway DIN 6885



## SIMOGEAR gearboxes

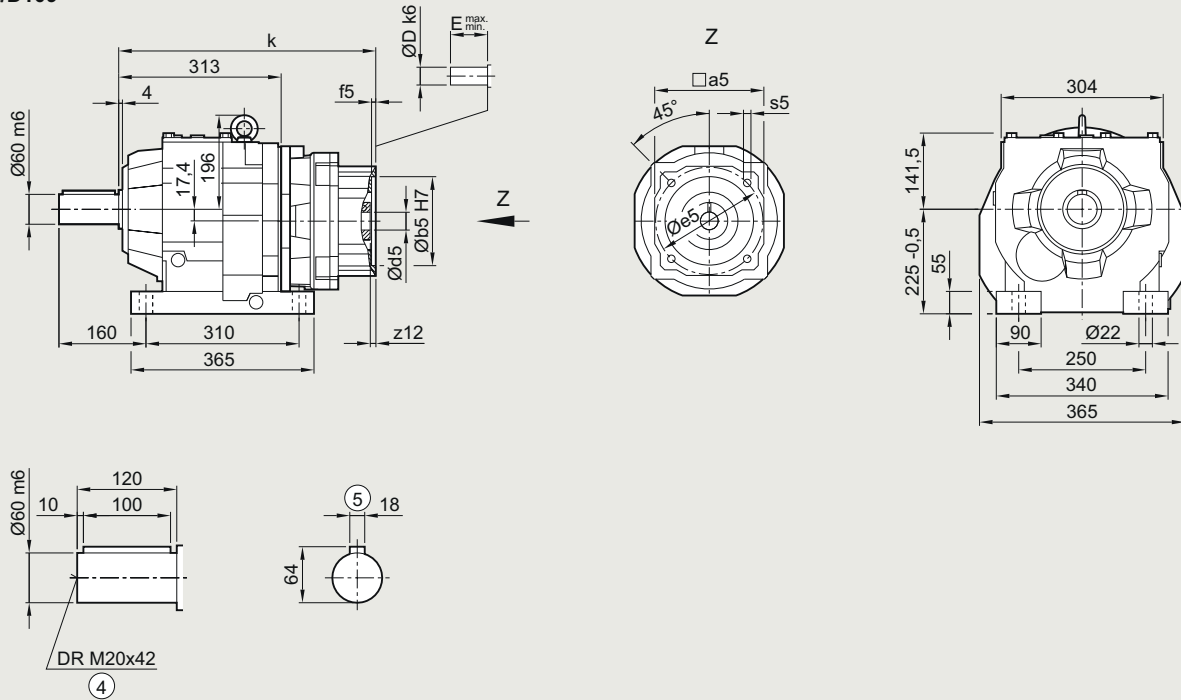
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### Z/D109 gearbox in a foot-mounted design

##### DZ030KS

#### Z/D109



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{\text{min}}$	$E_{\text{max}}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	388
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	388
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	407
KS6.2	130	110	7	145	M8x15	8	22	40	58	407
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	419.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	455.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	455.5

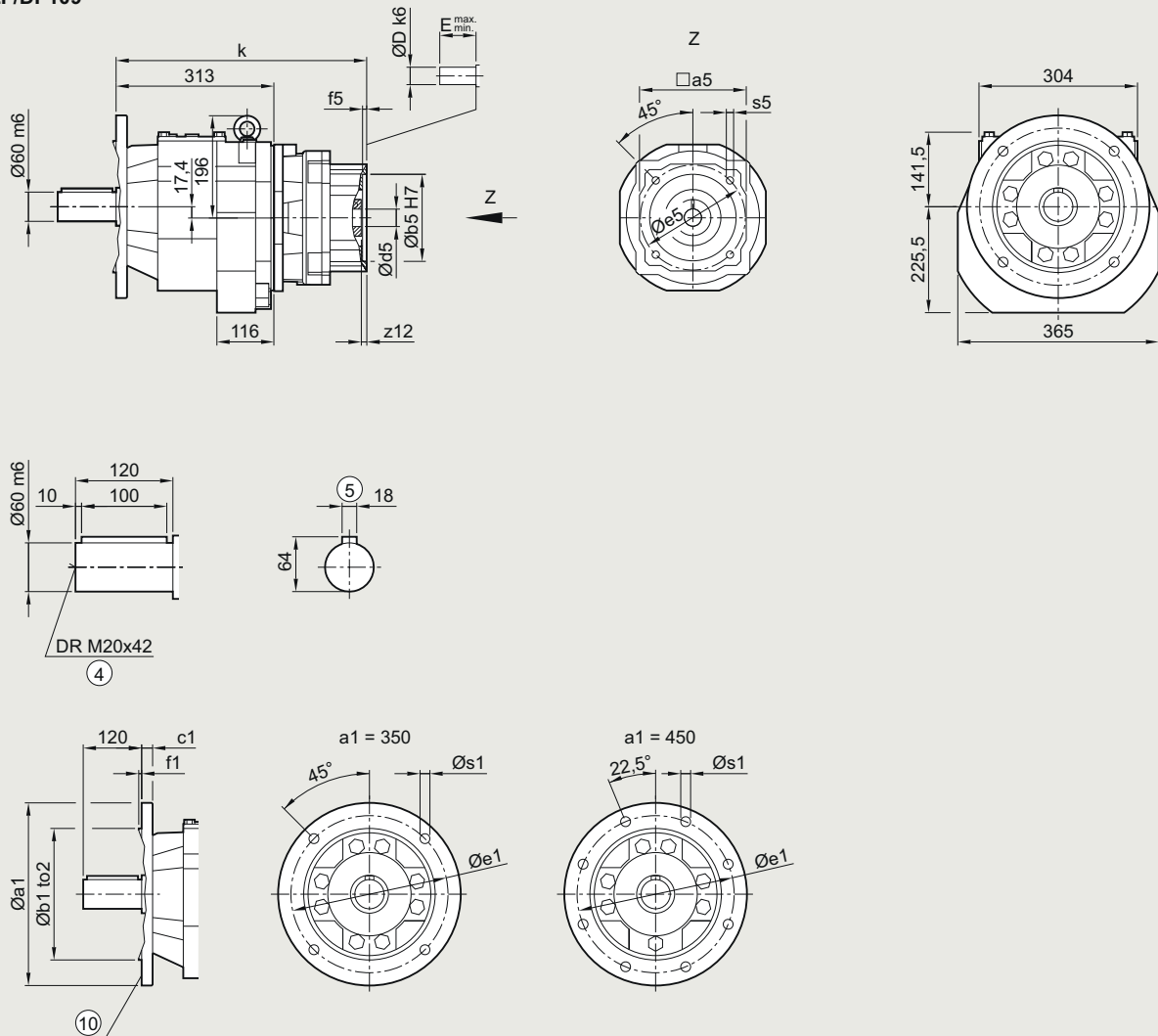
④ DIN 332

⑤ Feather key/keyway DIN 6885

## ZF/DF109 gearbox in a flange-mounted design

## DZF030KS

## 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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	388
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	388
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	407
KS6.2	130	110	7	145	M8x15	8	22	40	58	407
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	419.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	455.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	455.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

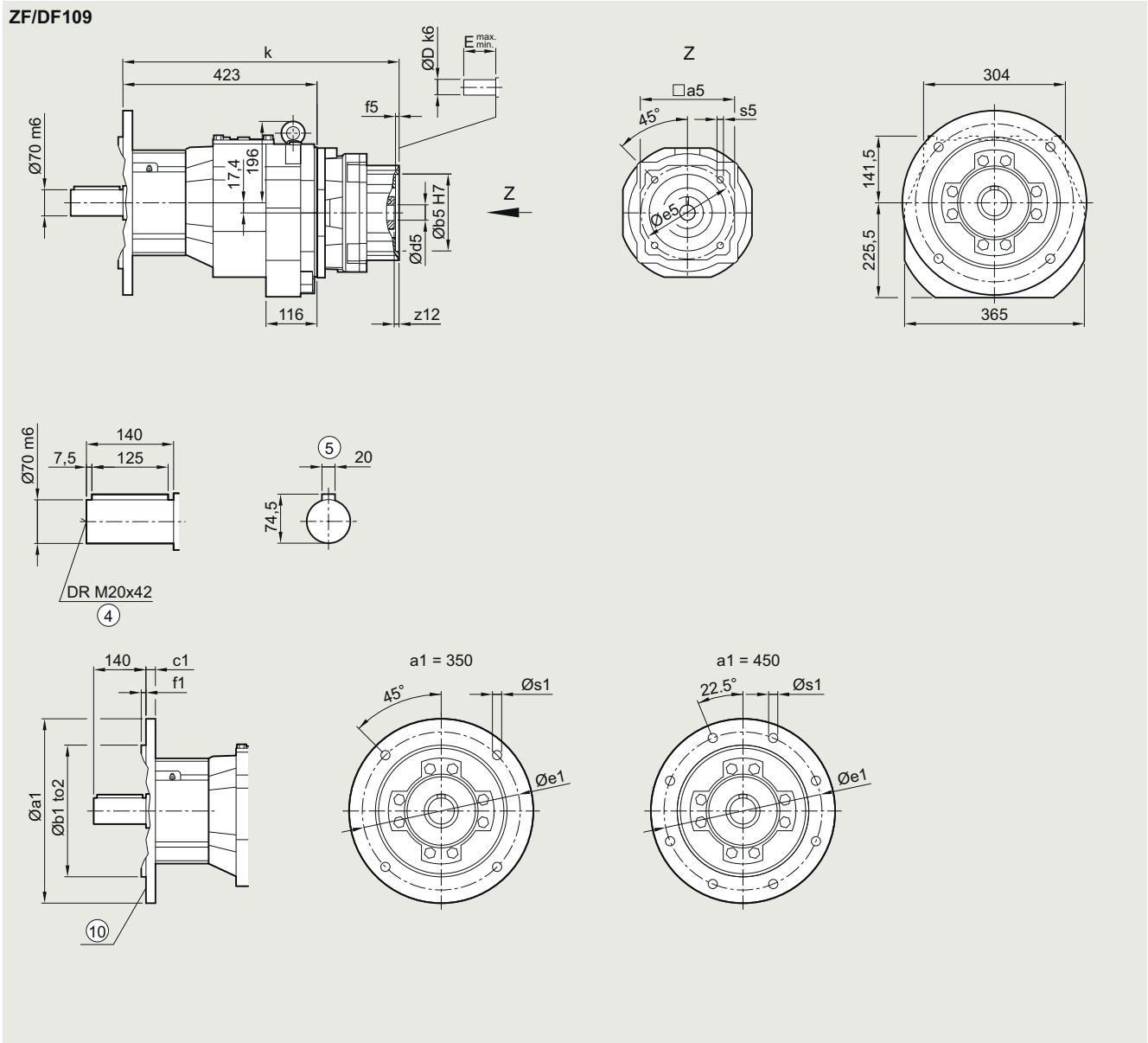
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

##### DZF040KS



Flange	a1	b1	to2	c1	e1	f1	s1			
	350	250	h6	18	300	5	17.5			
	450	350	h6	22	400	5	17.5			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	498
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	498
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	517
KS6.2	130	110	7	145	M8x15	8	22	40	58	517
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	529.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	565.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	565.5

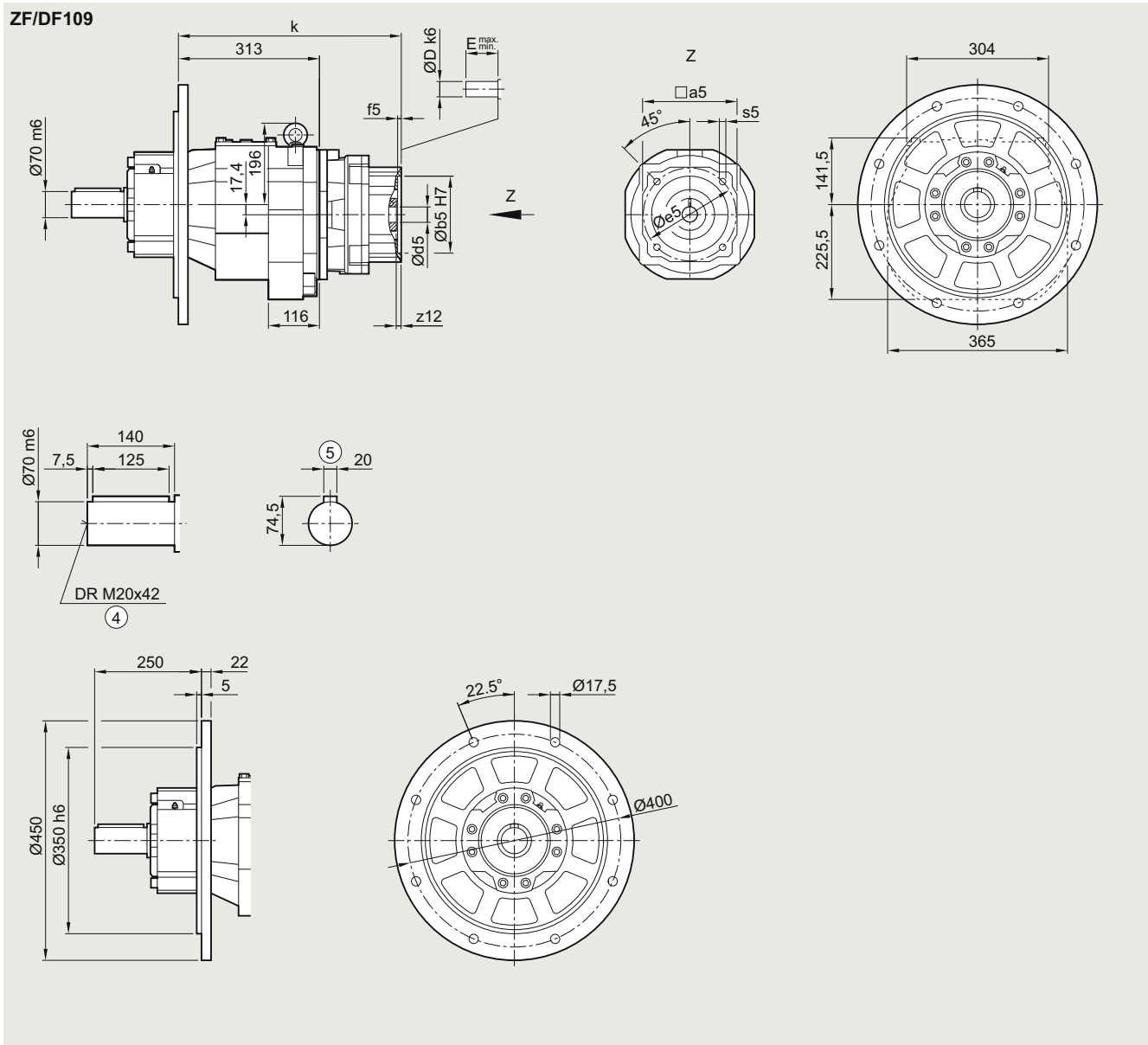
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## ZF/DF109 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

## DZF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	388
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	388
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	407
KS6.2	130	110	7	145	M8x15	8	22	40	58	407
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	419.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	455.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	455.5

④ DIN 332

⑤ Feather key/keyway DIN 6885



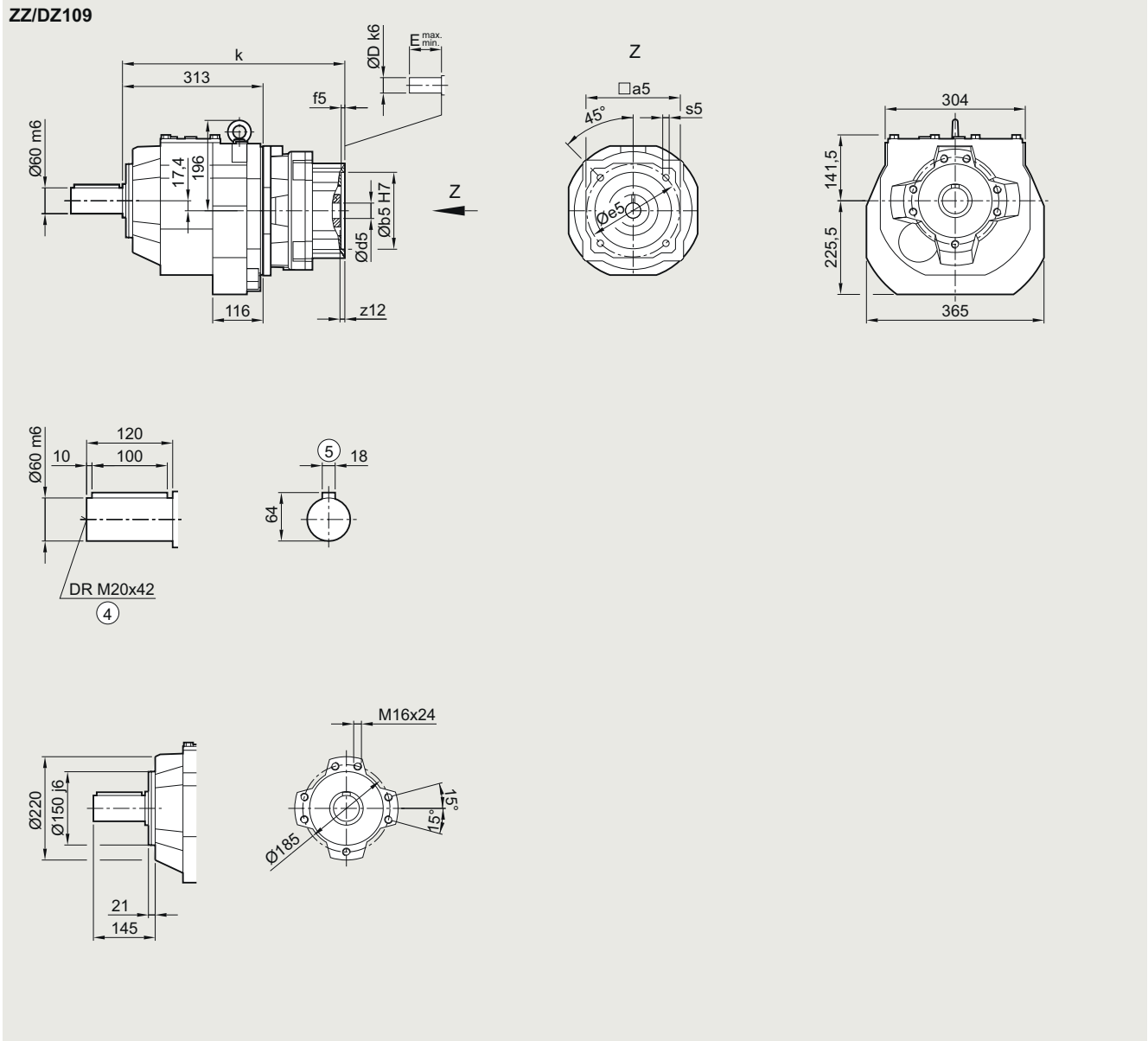
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZZ/DZ109 gearbox in a housing flange design

##### DZZ030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	388
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	388
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	407
KS6.2	130	110	7	145	M8x15	8	22	40	58	407
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	419.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	455.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	455.5

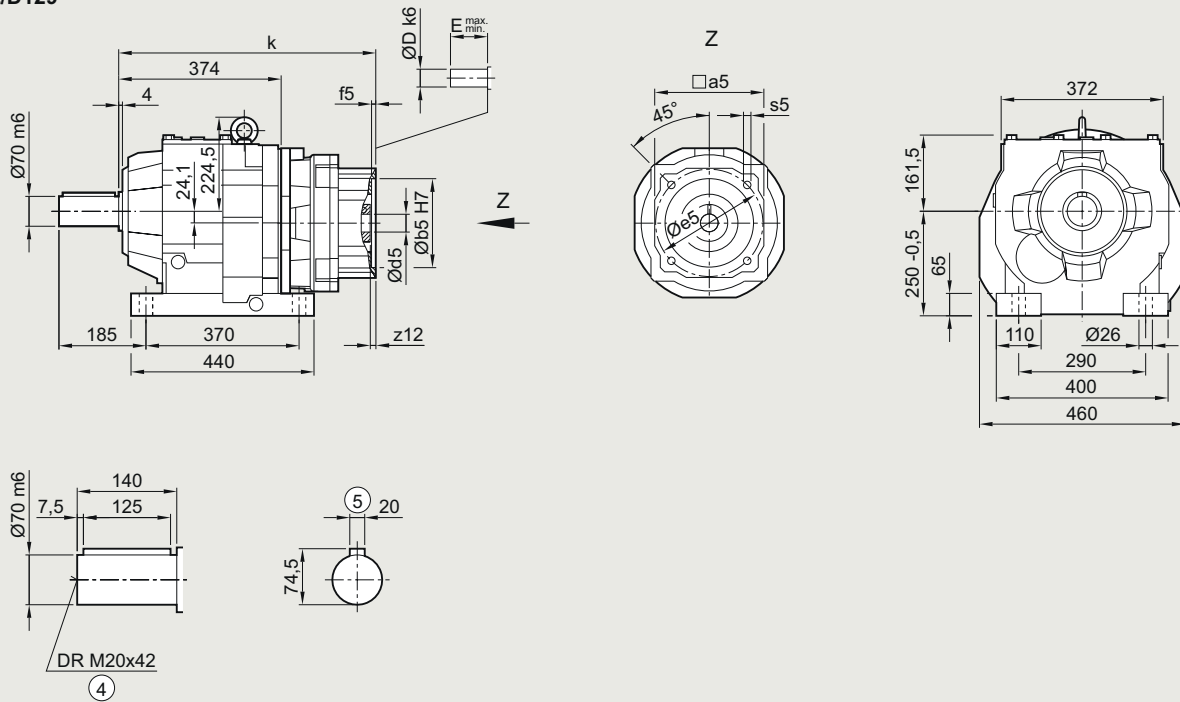
④ DIN 332

⑤ Feather key/keyway DIN 6885

## Z/D129 gearbox in a foot-mounted design

## DZ030KS

## Z/D129



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	442
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	442
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	459
KS6.2	130	110	7	145	M8x15	8	22	40	58	459
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	471.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	505.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	505.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

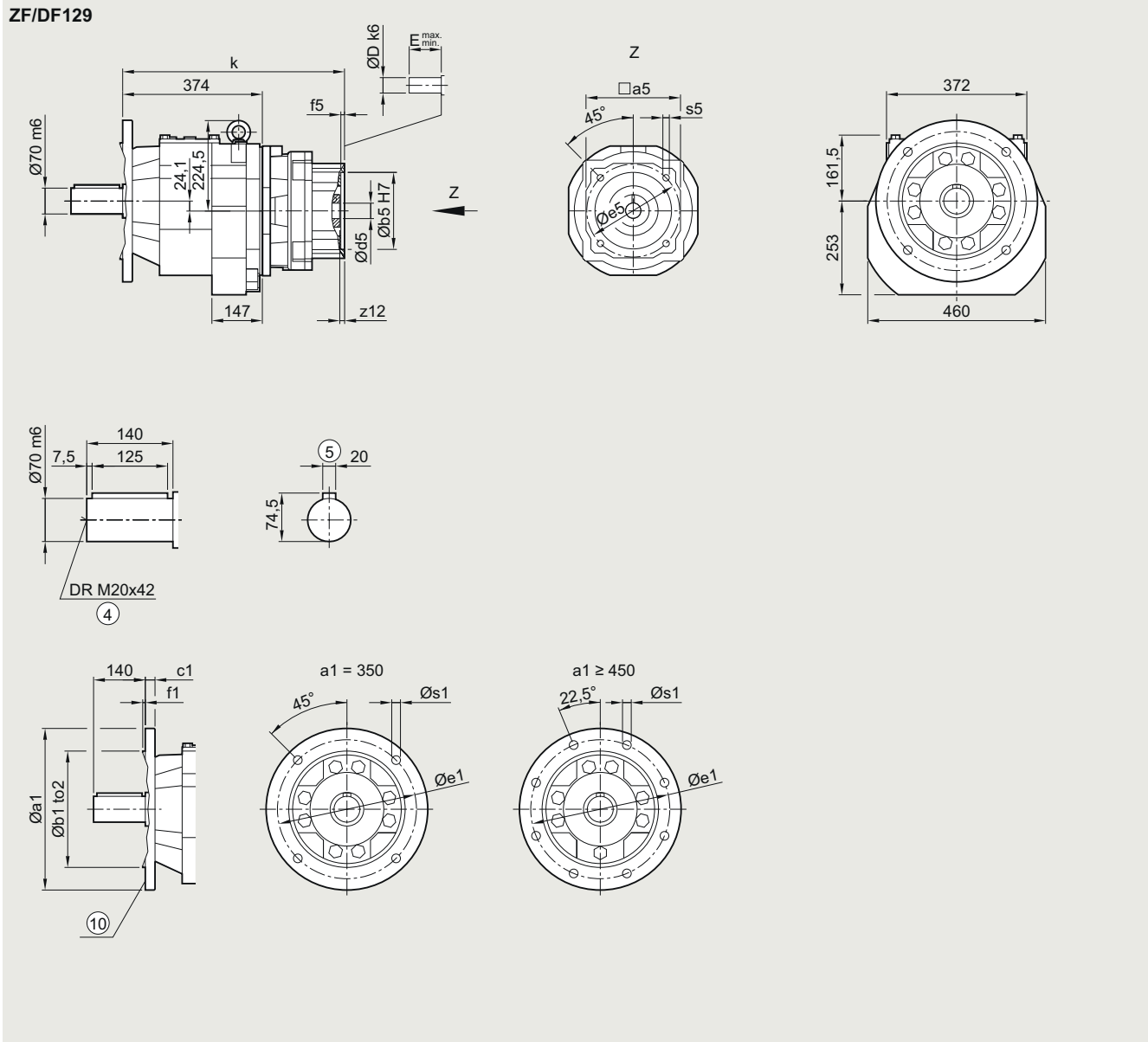
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF129 gearbox in a flange-mounted design

##### DZF030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	442
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	442
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	459
KS6.2	130	110	7	145	M8x15	8	22	40	58	459
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	471.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	505.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	505.5

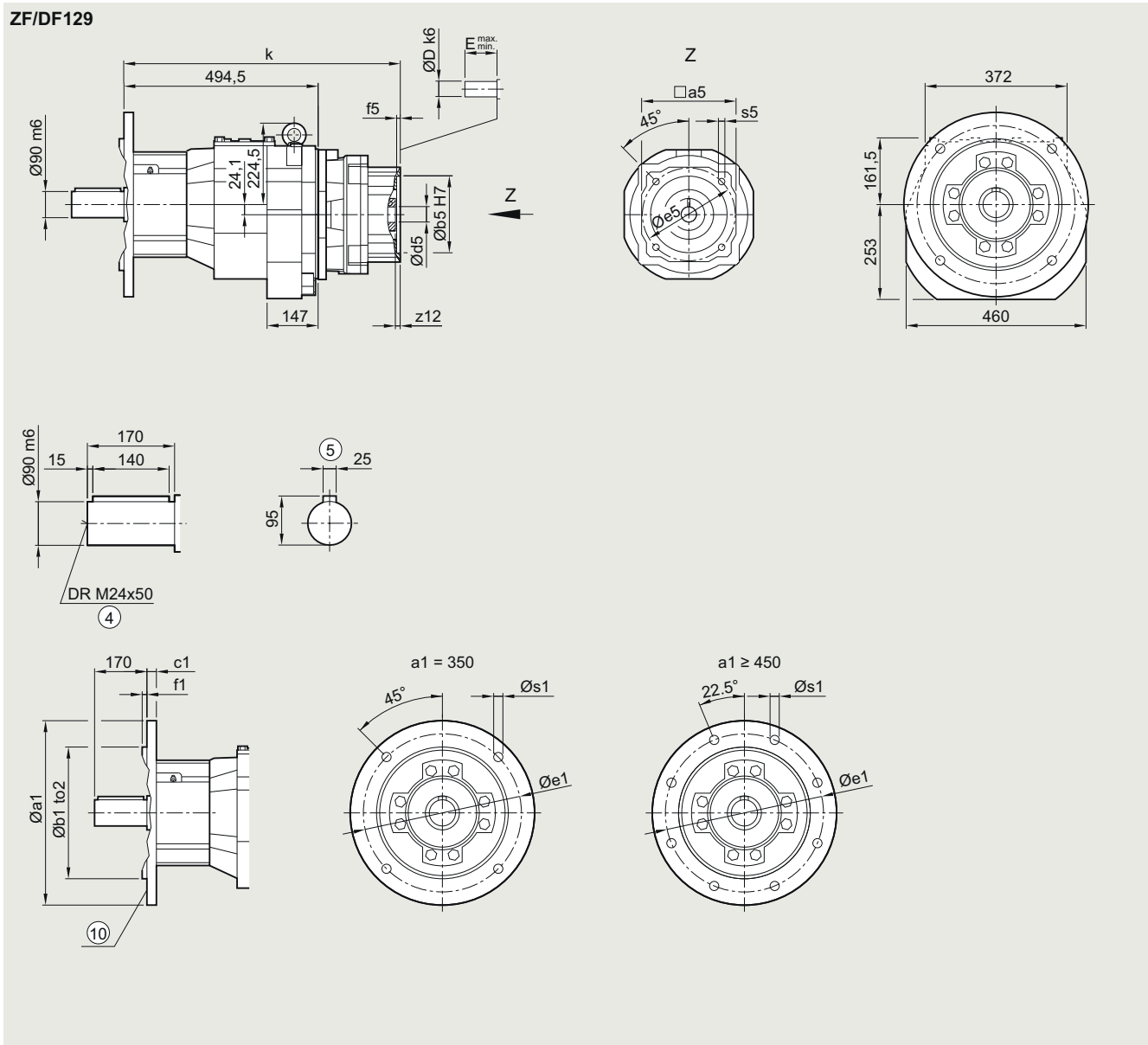
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

## ZF/DF129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

## DZF040KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	562.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	562.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	579.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	579.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	592
KS10.1	196	180	5	215	M12x22	5	38	50	80	626
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	626

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

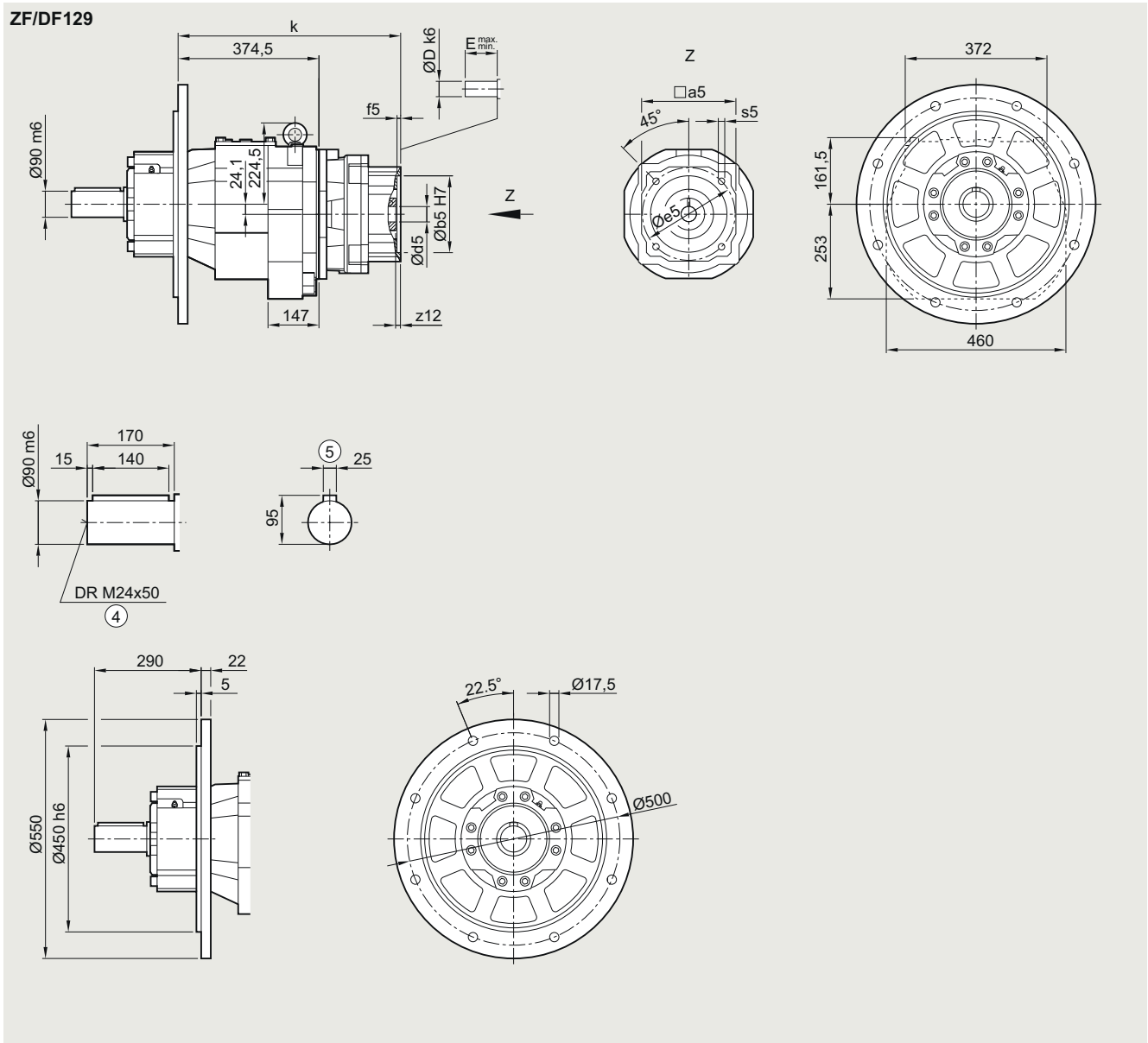
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF129 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

##### DZF040KS



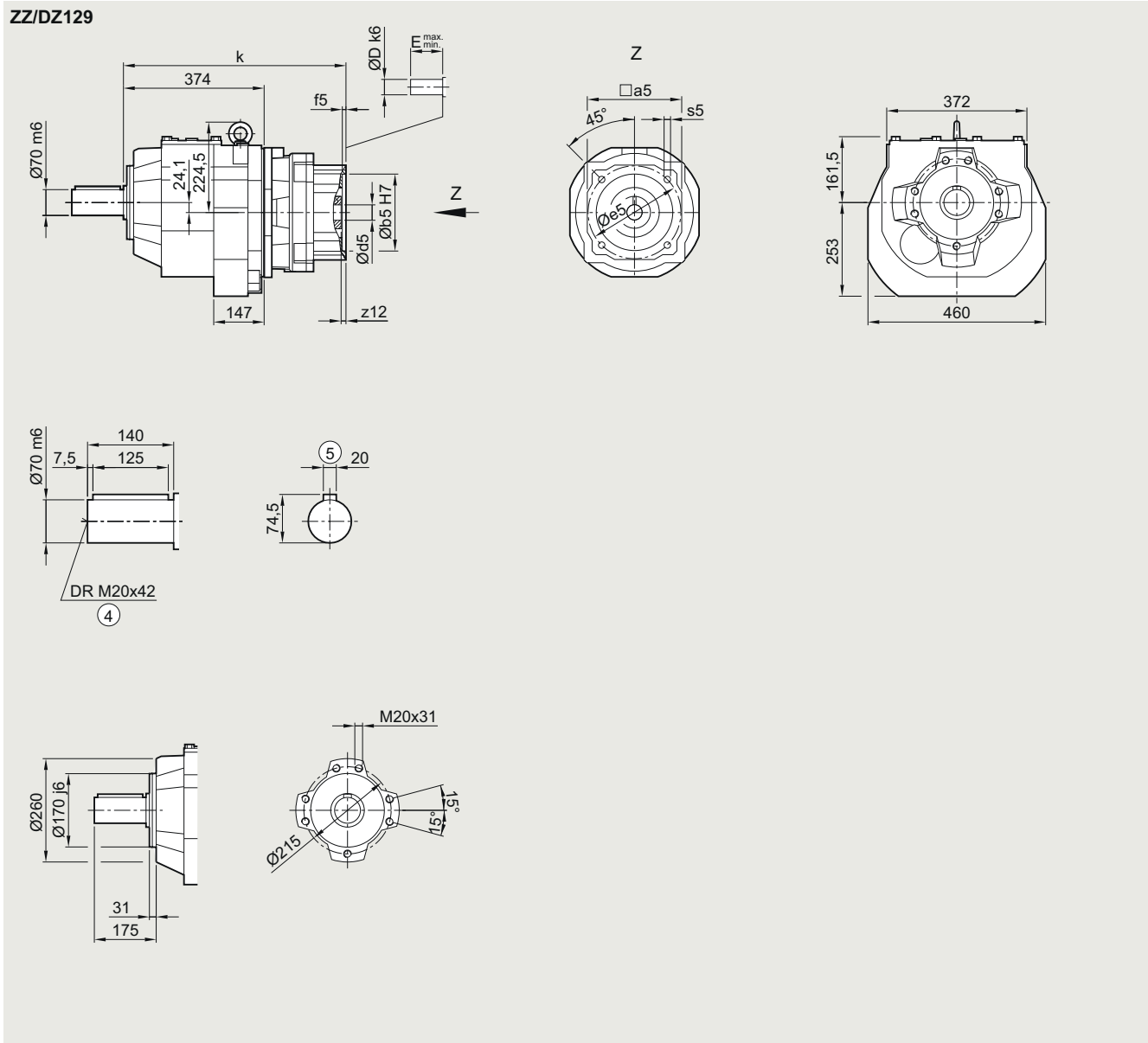
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	442
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	442
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	459
KS6.2	130	110	7	145	M8x15	8	22	40	58	459
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	471.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	505.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	505.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## ZZ/DZ129 gearbox in a housing flange design

## DZZ030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	442
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	442
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	459
KS6.2	130	110	7	145	M8x15	8	22	40	58	459
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	471.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	505.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	505.5

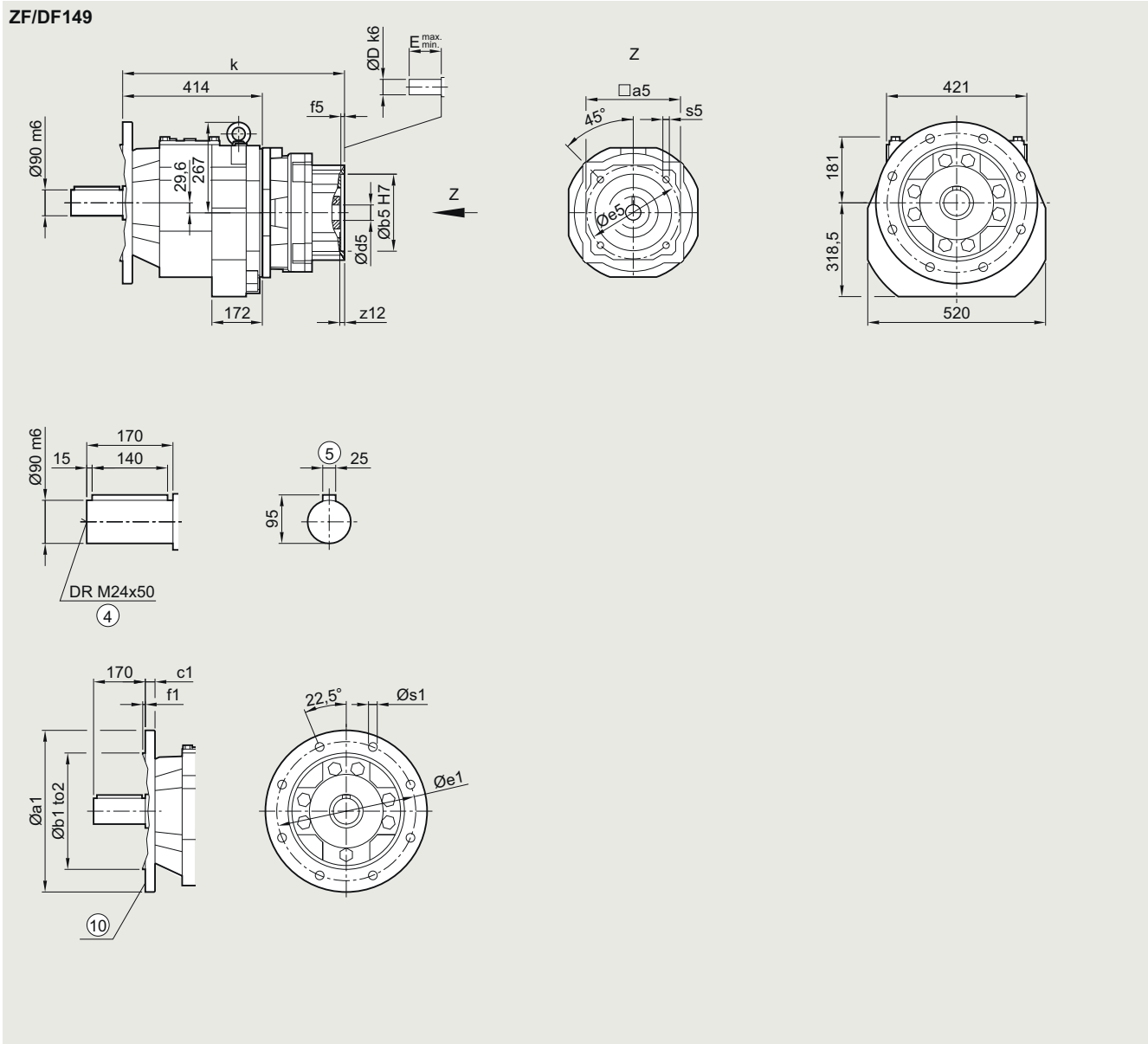
④ DIN 332

⑤ Feather key/keyway DIN 6885



## ZF/DF149 gearbox in a flange-mounted design

## DZF030KS



Flange	a1	b1	to2	c1	e1	f1	s1			
	450	350	h6	22	400	5	17.5			
	550	450	h6	25	500	5	17.5			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	497.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	497.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	510
KS10.1	196	180	5	215	M12x22	5	38	50	80	539
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	539

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



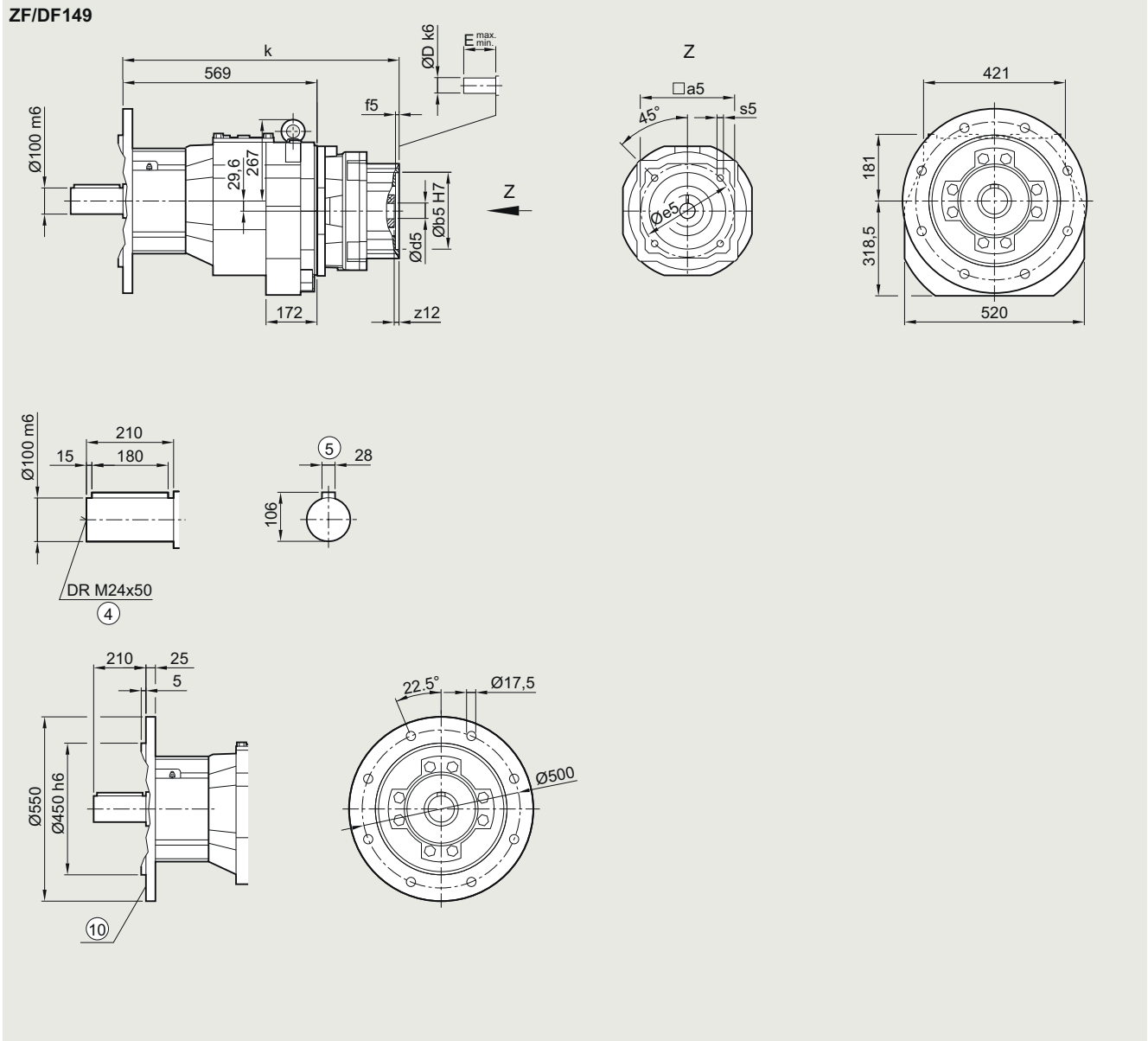
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

##### DZF040KS

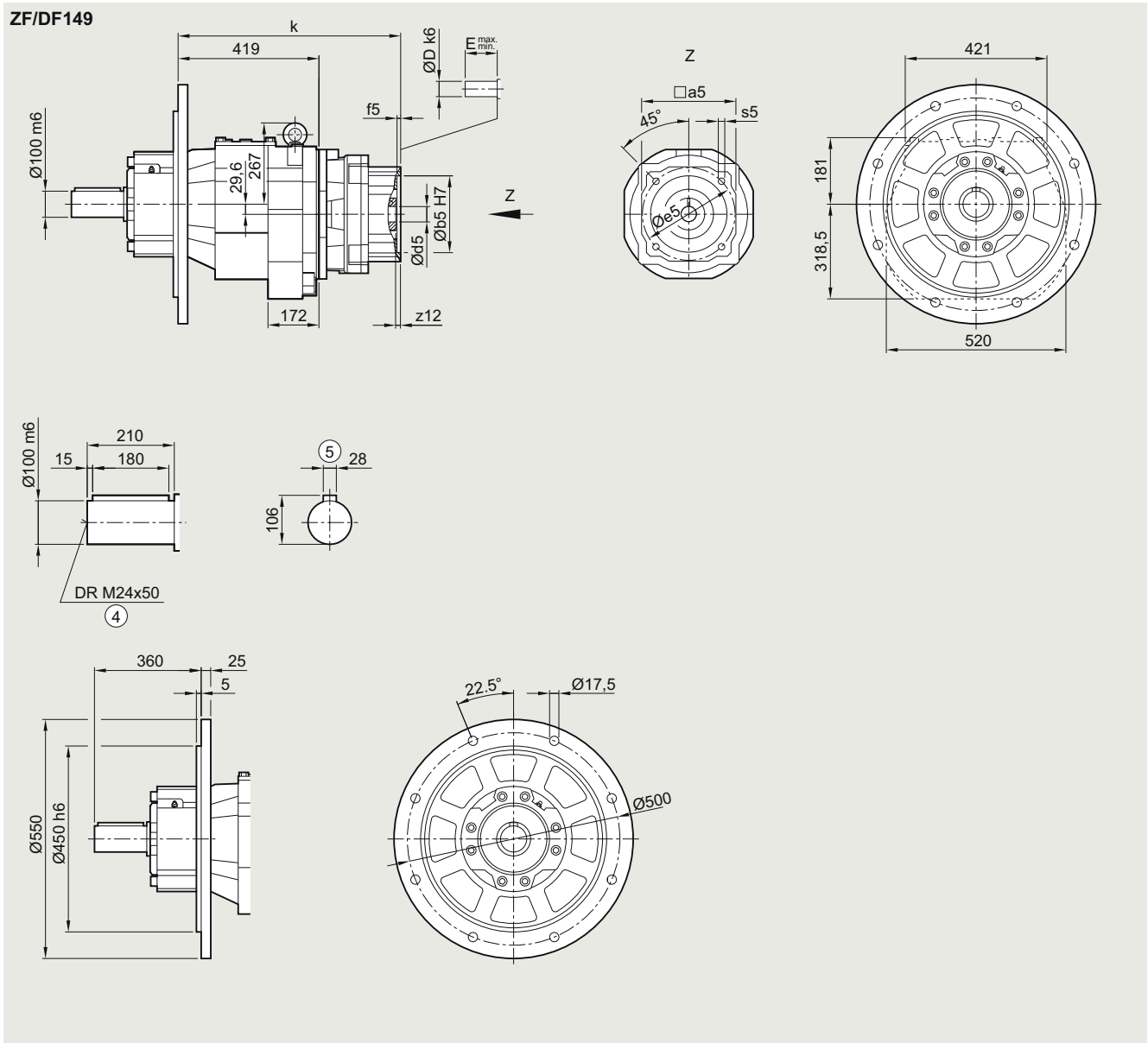


Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	652.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	652.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	665
KS10.1	196	180	5	215	M12x22	5	38	50	80	694
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	694

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF149 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)****DZF040KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	497.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	497.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	510
KS10.1	196	180	5	215	M12x22	5	38	50	80	539
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	539

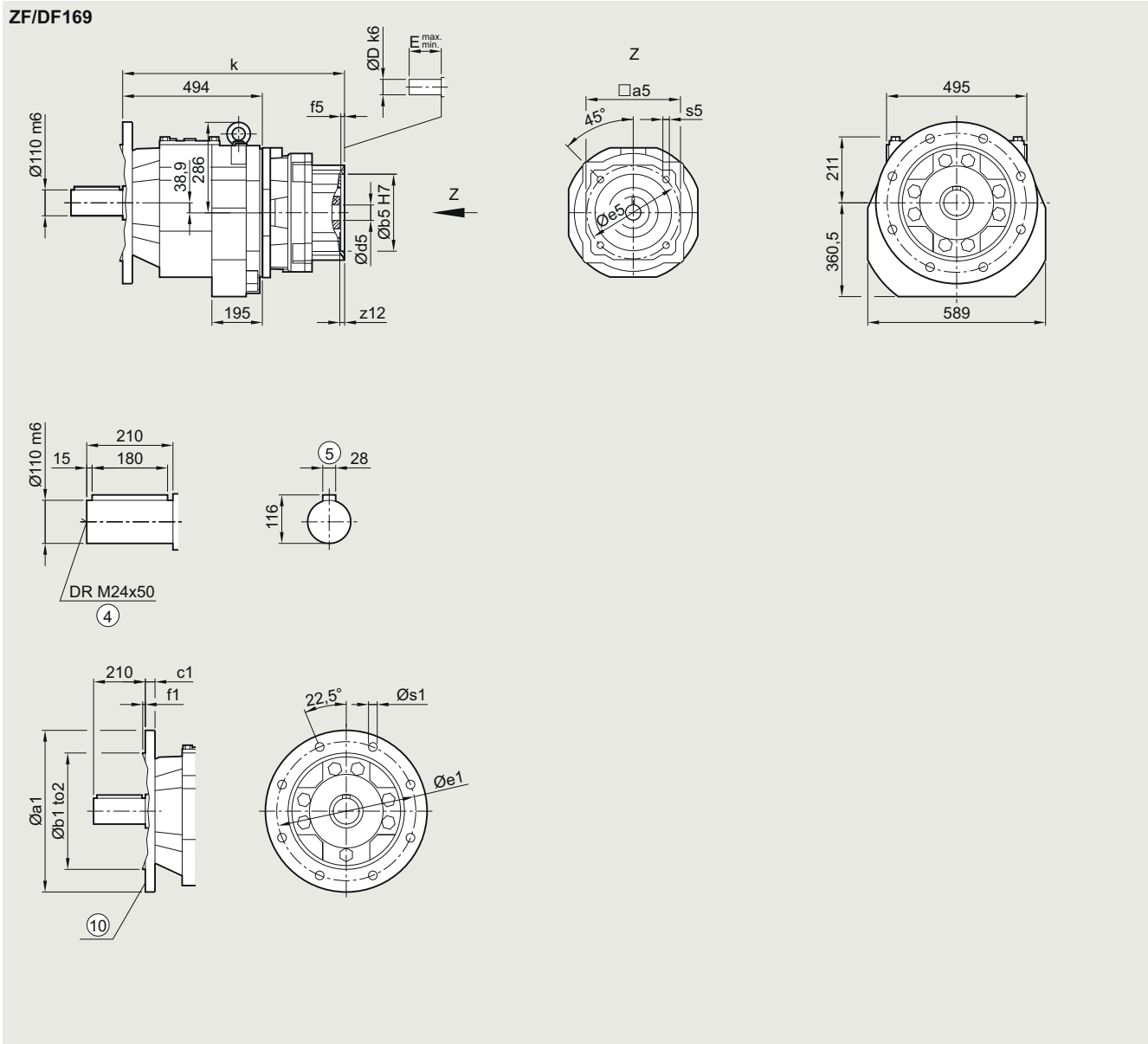
④ DIN 332

⑤ Feather key/keyway DIN 6885



## ZF/DF169 gearbox in a flange-mounted design

## DZF030KS



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	17.5			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	577.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	606
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	606

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

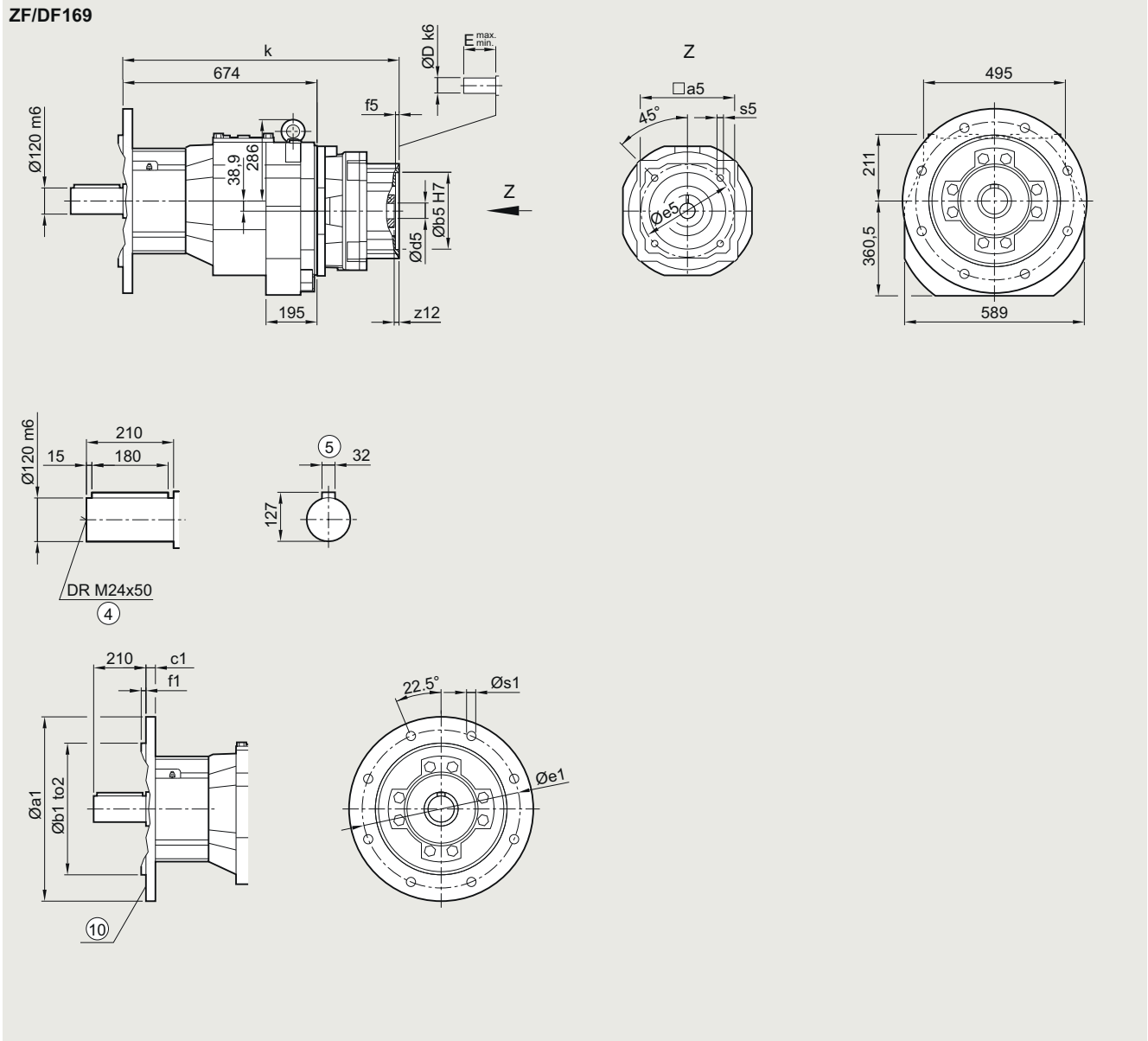
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### ZF/DF169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

##### DZF040KS

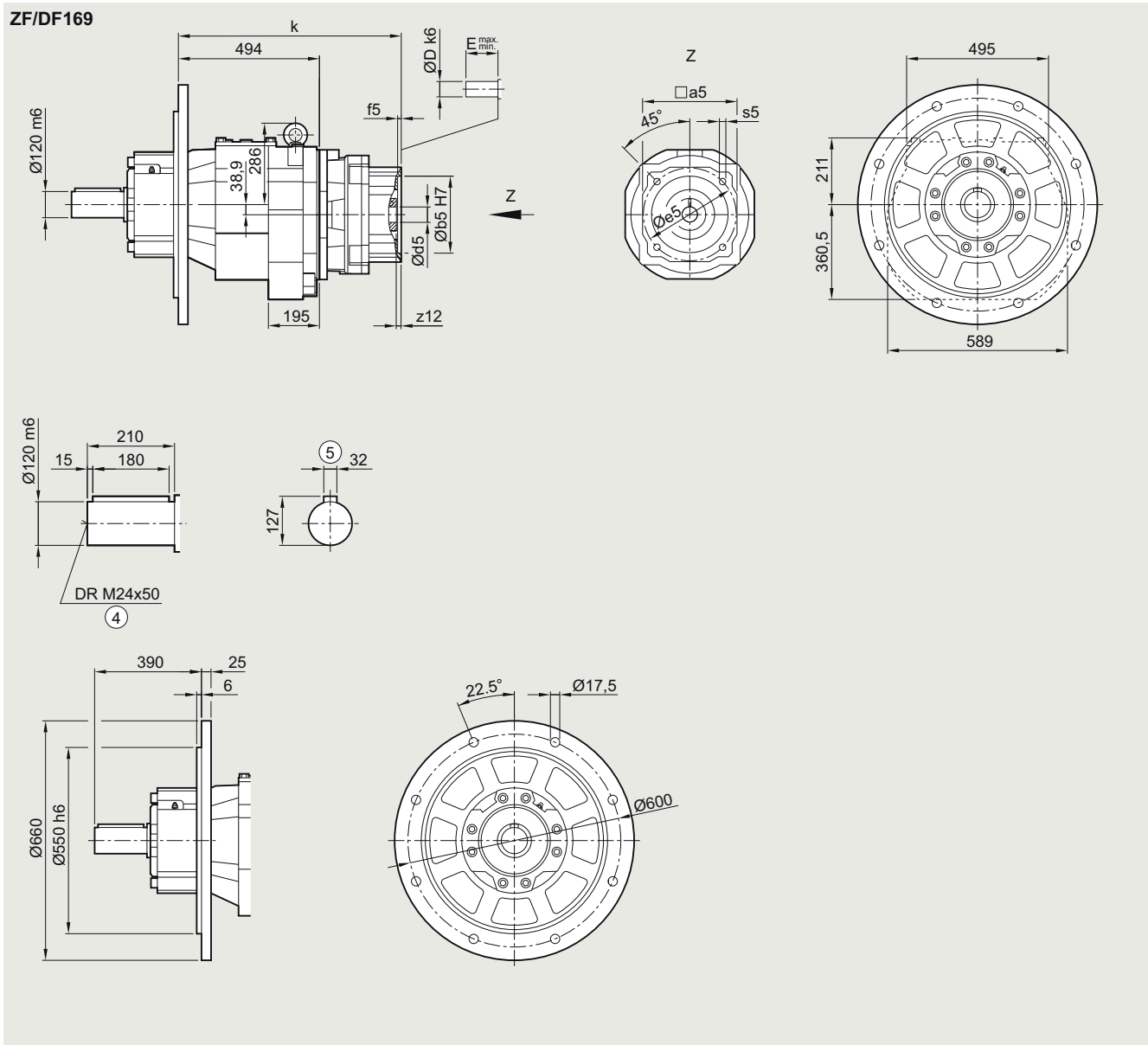


Flange	a1	b1	to2	c1	e1	f1	s1			
	450	350	h6	22	400	5	17.5			
	550	450	h6	25	500	5	17.5			
	660	550	h6	25	600	6	17.5			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	757.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	786
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	786

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**ZF/DF169 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)****DZF040KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	577.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	606
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	606

④ DIN 332

⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

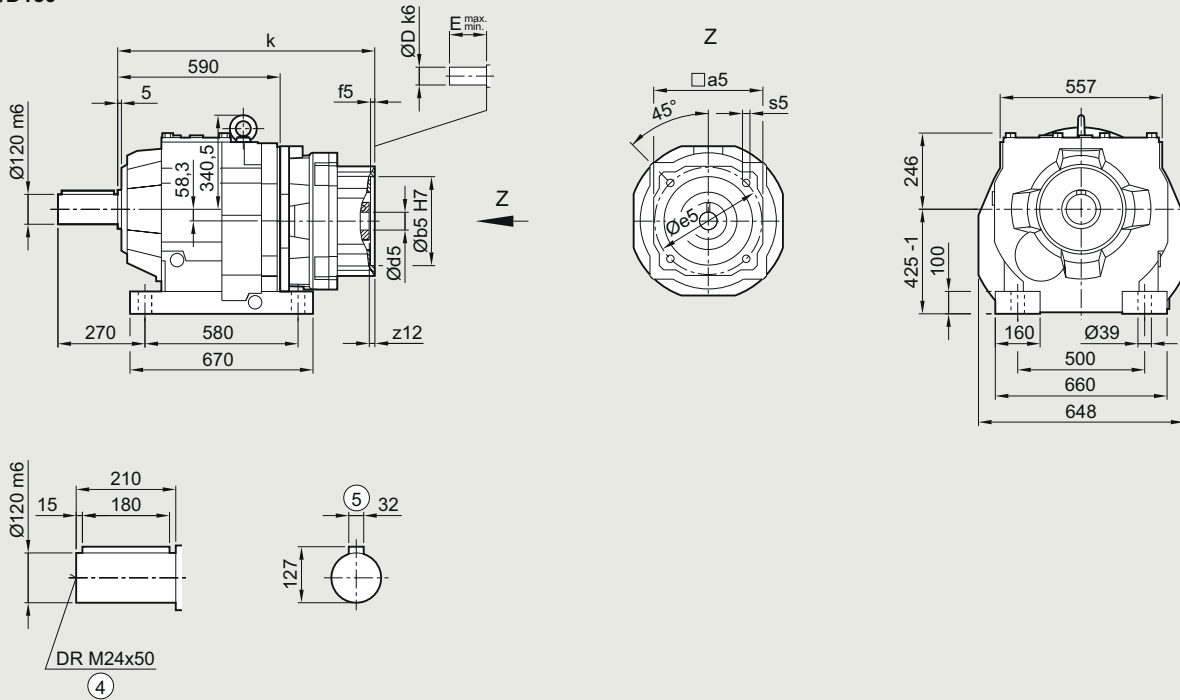
Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### Z/D189 gearbox in a foot-mounted design

##### DZ030KS

##### Z/D189



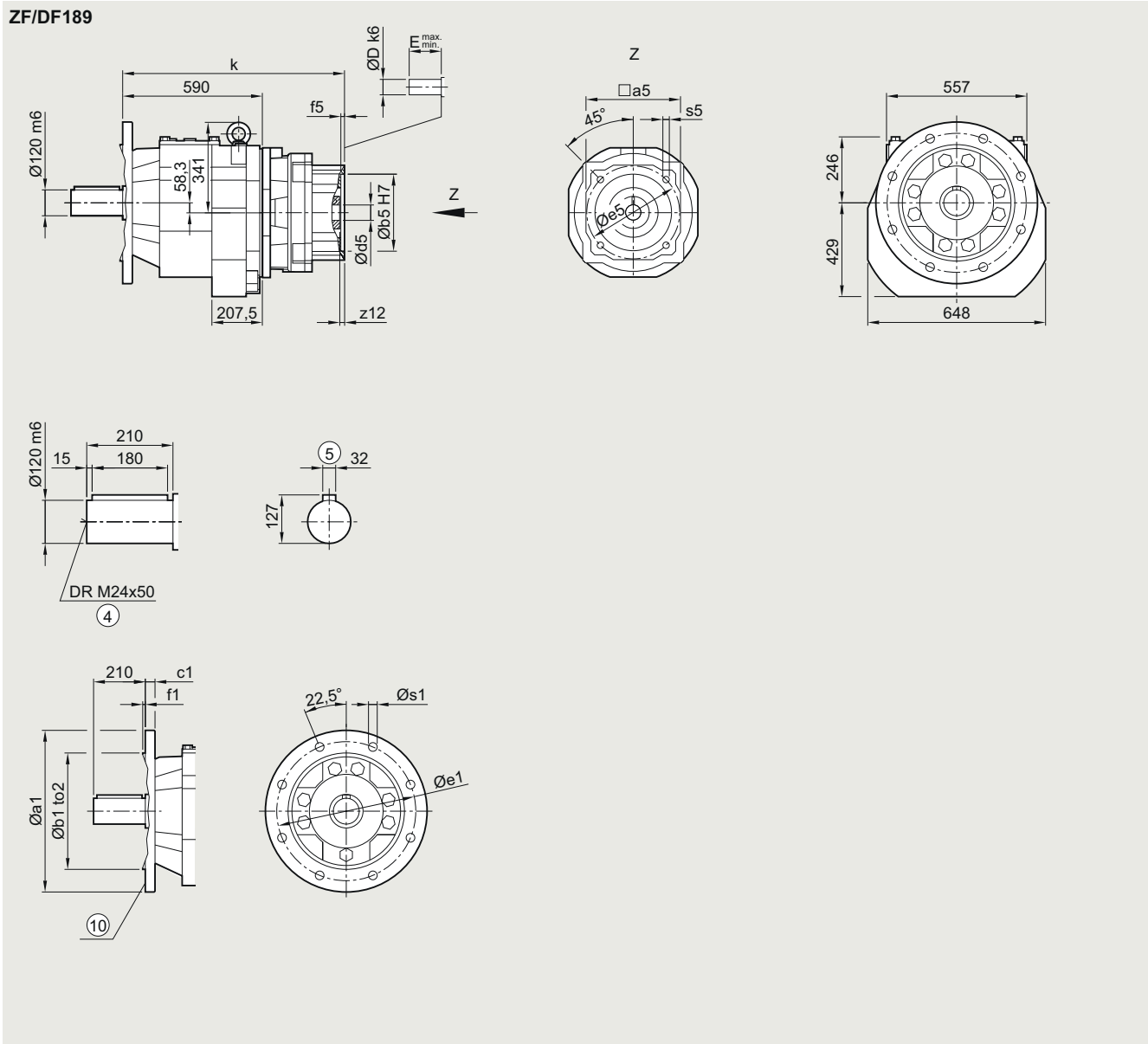
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	673.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	702
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	702

④ DIN 332

⑤ Feather key/keyway DIN 6885

## ZF/DF189 gearbox in a flange-mounted design

## DZF030KS



Flange	a1	b1	to2	c1	e1	f1	s1			k
	550	450	h6	25	500	5	17.5			
	660	550	h6	28	600	6	22.0			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	673.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	702
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	702

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



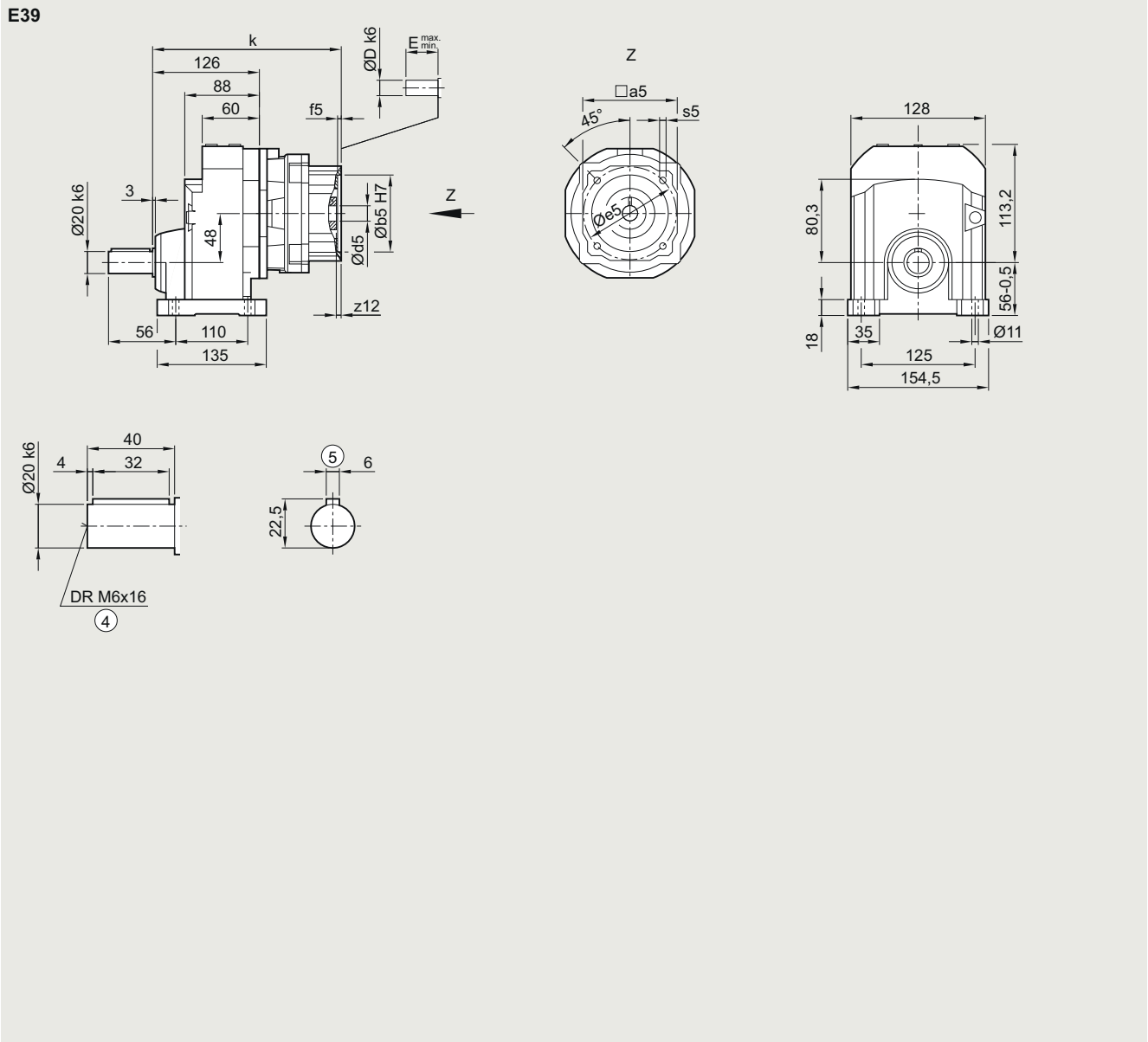
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### E39 gearbox in a foot-mounted design

##### E030KS



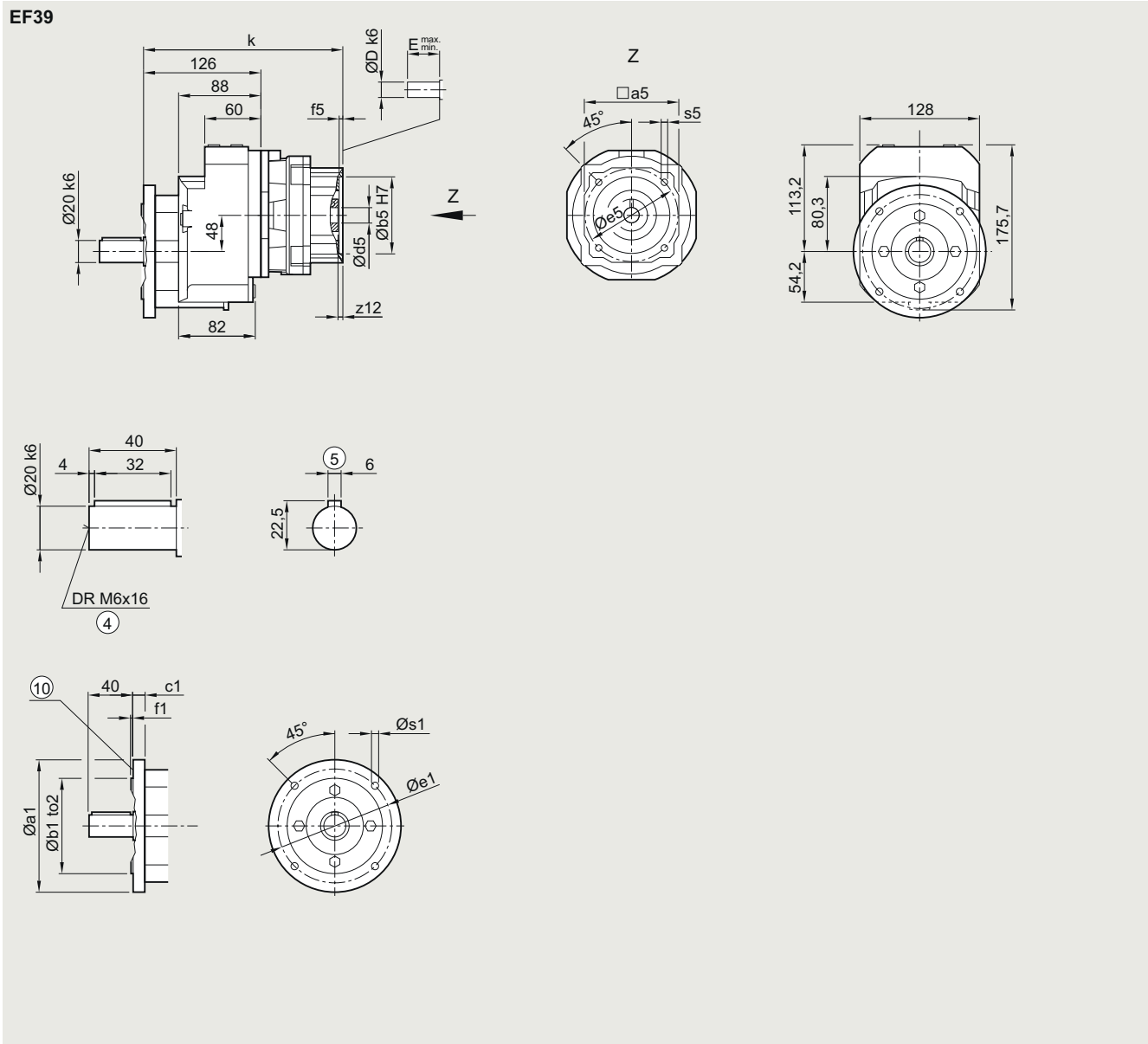
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	208
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	208
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	220.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	220.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	236.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	236.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	261.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	261.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	274

④ DIN 332

⑤ Feather key/keyway DIN 6885

## EF39 gearbox in a flange-mounted design

## EF030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	208
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	208
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	220.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	220.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	236.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	236.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	261.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	261.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	274

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

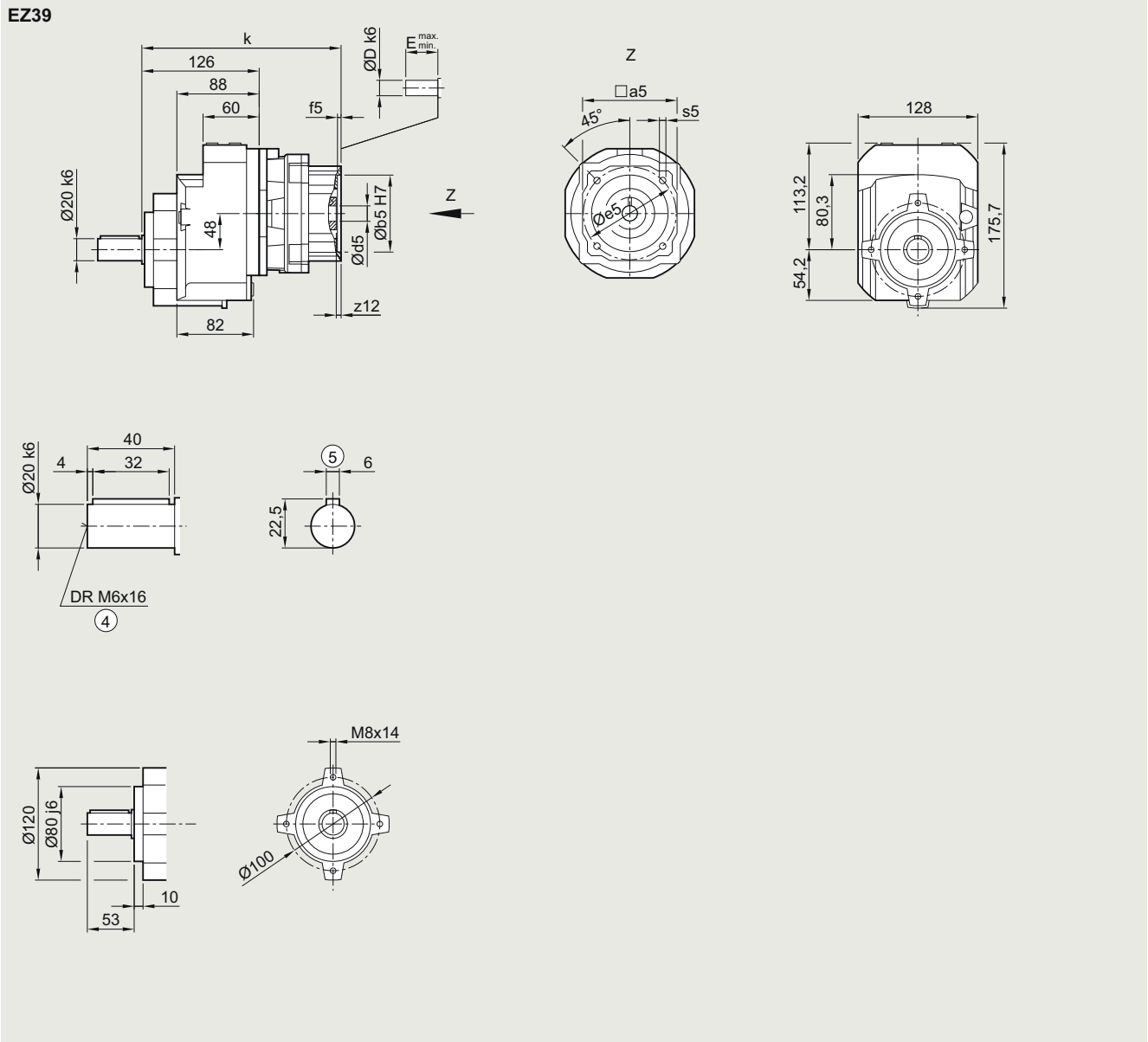
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### EZ39 gearbox in a housing flange design

##### EZ030KS



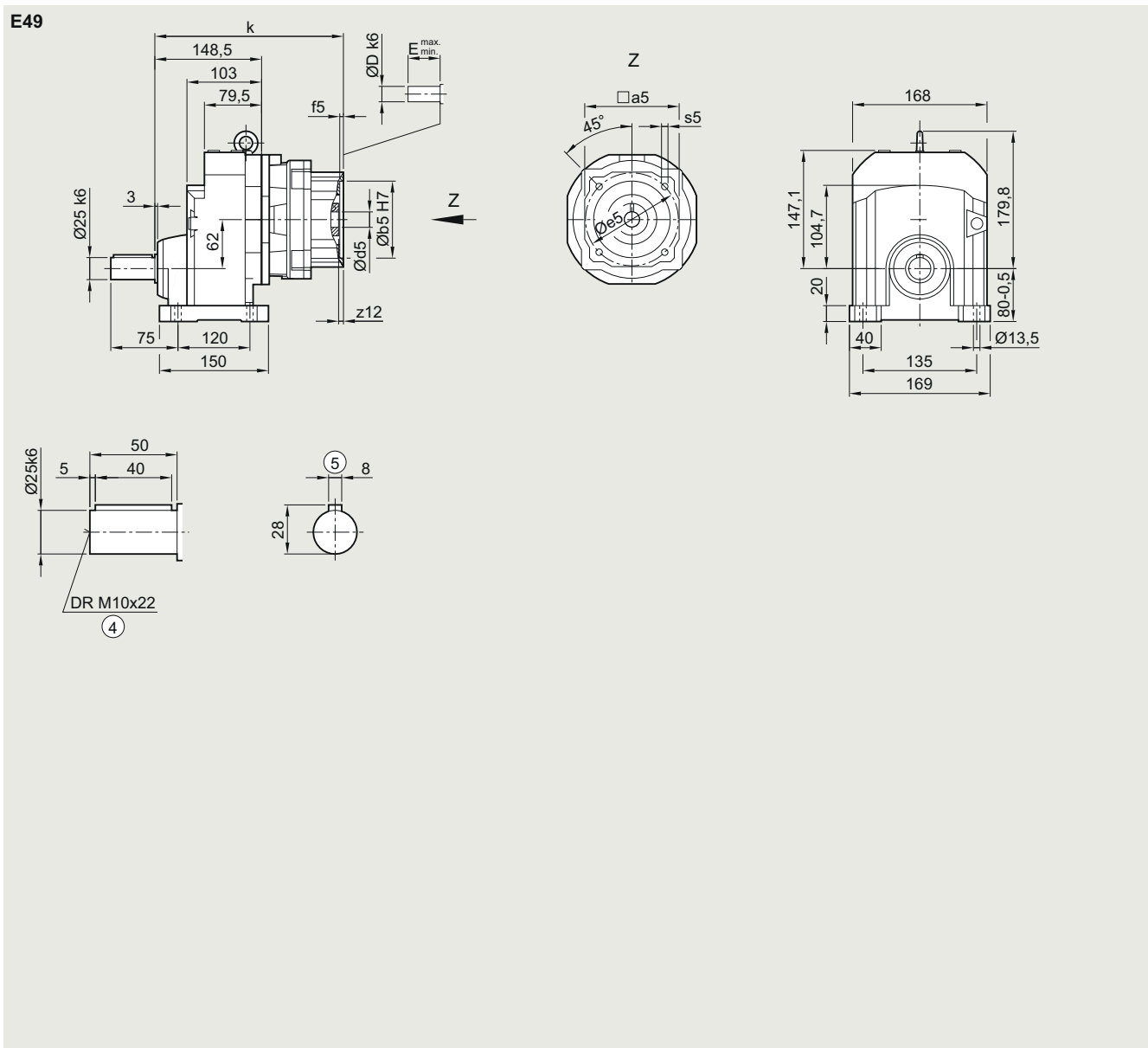
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	208
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	208
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	220.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	220.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	236.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	236.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	261.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	261.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	274

④ DIN 332

⑤ Feather key/keyway DIN 6885

## E49 gearbox in a foot-mounted design

## E030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	233.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	233.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	249.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	249.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	274.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	274.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	287
KS10.1	196	180	5	215	M12x22	5	38	50	80	323
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	323

④ DIN 332

⑤ Feather key/keyway DIN 6885

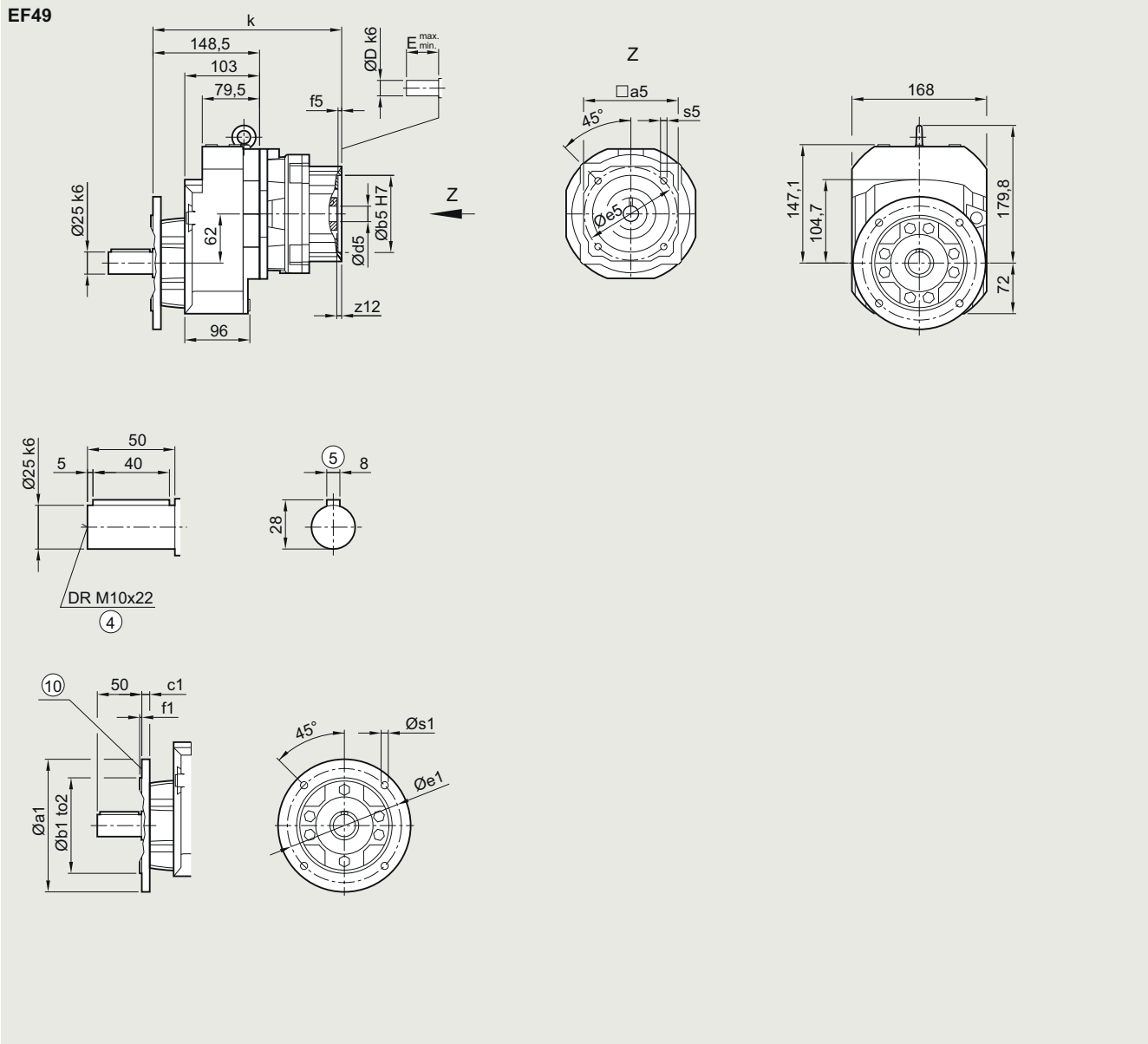
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### EF49 gearbox in a flange-mounted design

##### EF030KS

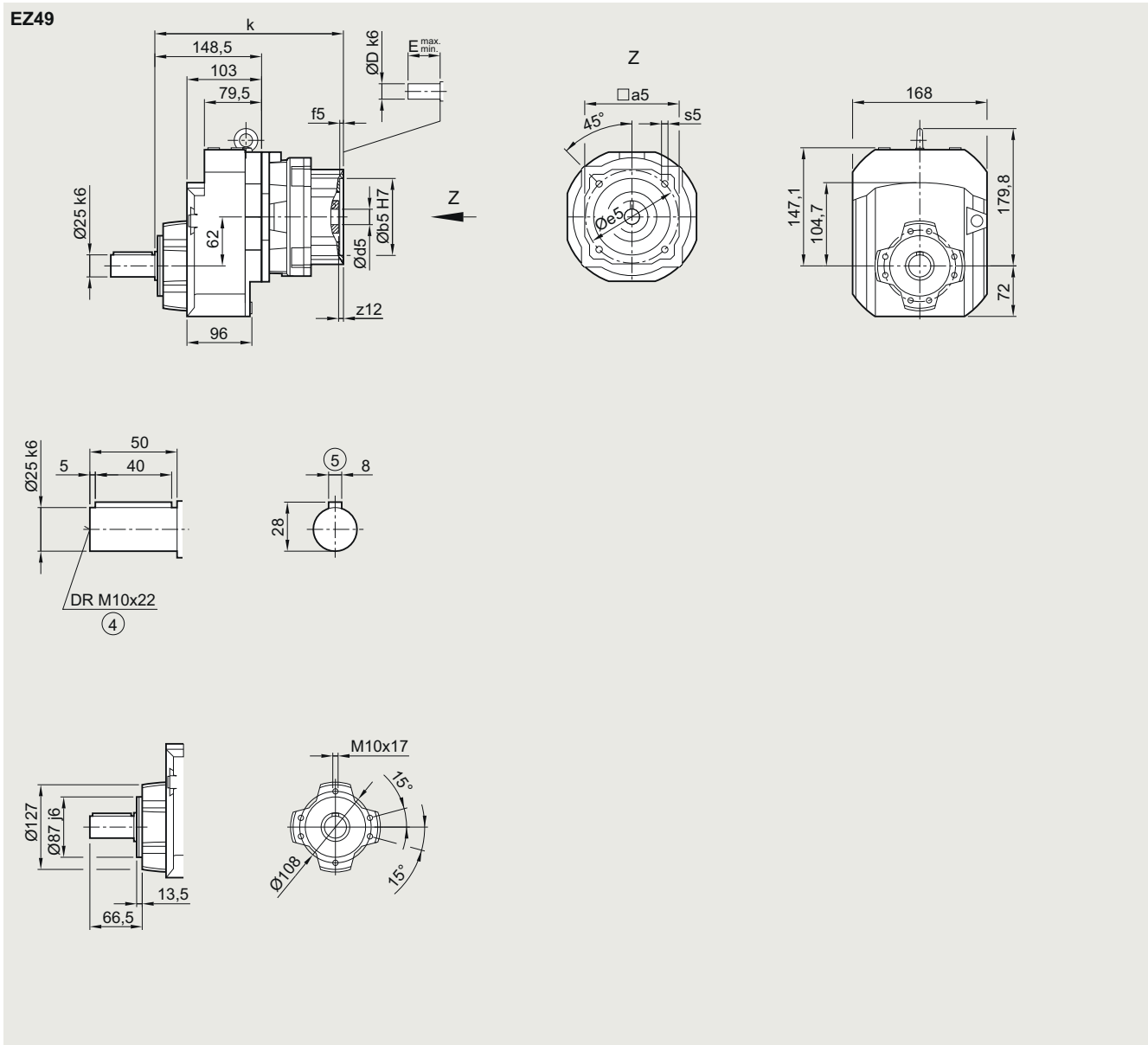


Flange	a1	b1	to2	c1	e1	f1	s1			
	160	110	j6	10	130	3.5	9.0			
	200	130	j6	12	165	3.5	11.0			
	250	180	j6	15	215	4.0	13.5			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	233.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	233.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	249.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	249.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	274.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	274.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	287
KS10.1	196	180	5	215	M12x22	5	38	50	80	323
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	323

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**EZ49 gearbox in a housing flange design****EZ030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	233.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	233.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	249.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	249.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	274.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	274.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	287
KS10.1	196	180	5	215	M12x22	5	38	50	80	323
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	323

④ DIN 332

⑤ Feather key/keyway DIN 6885







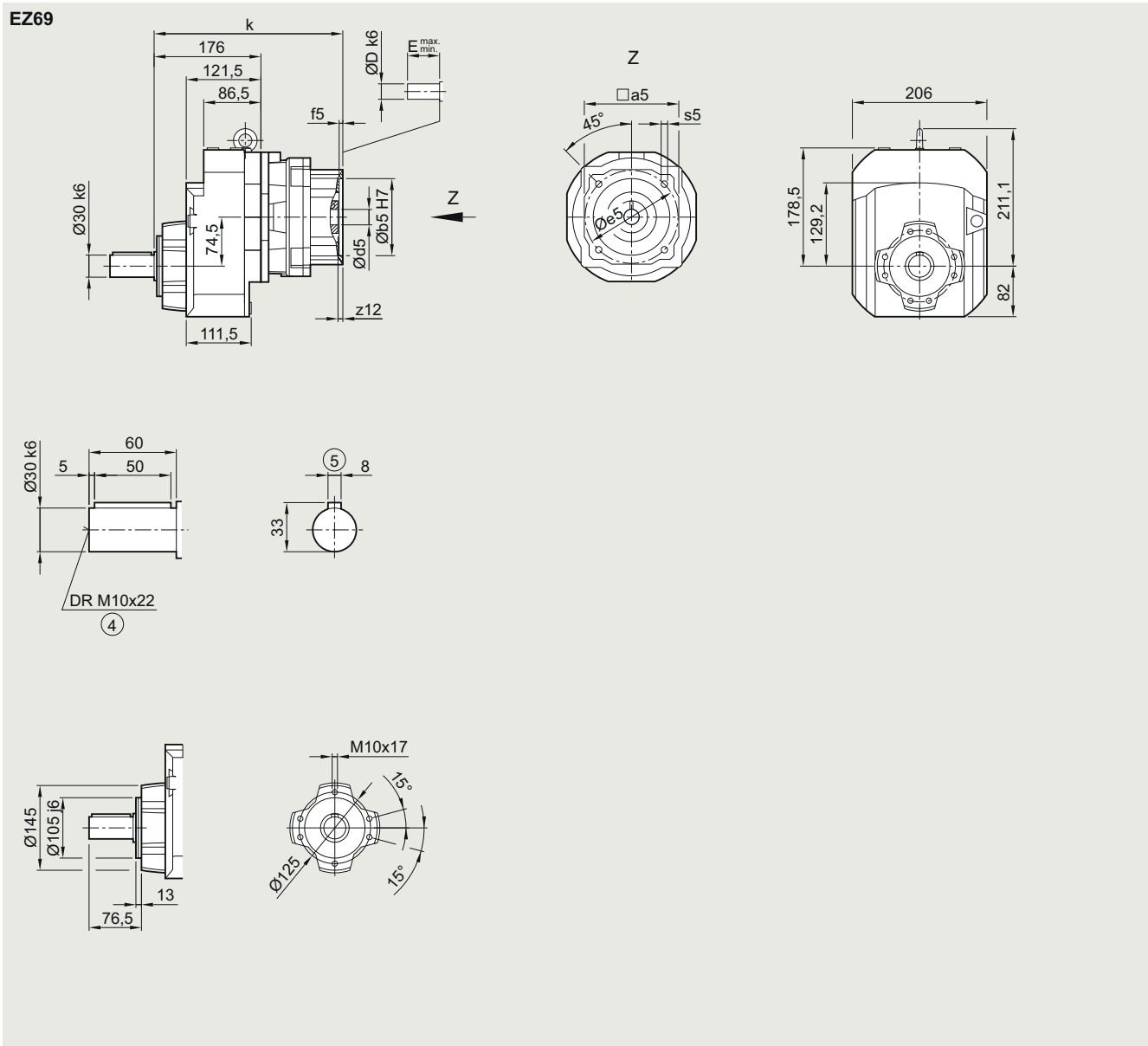
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### EZ69 gearbox in a housing flange design

##### EZ030KS



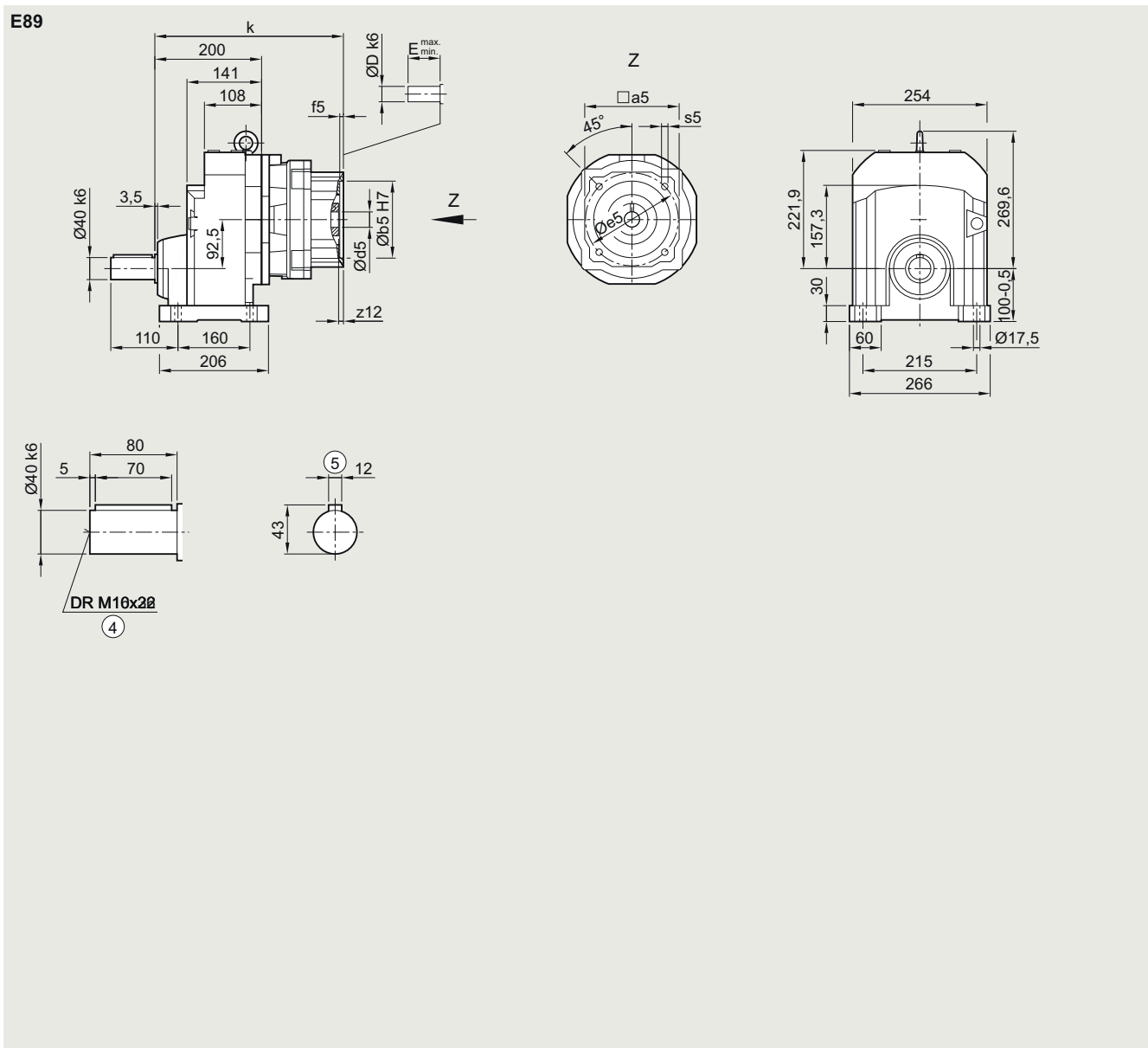
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	246.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	246.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	259
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	259
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	271
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	271
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	296
KS6.2	130	110	7	145	M8x15	8	22	40	58	296
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	308.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	344.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	344.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## E89 gearbox in a foot-mounted design

## E030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	303
KS6.2	130	110	7	145	M8x15	8	22	40	58	303
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	315.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	351.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	351.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

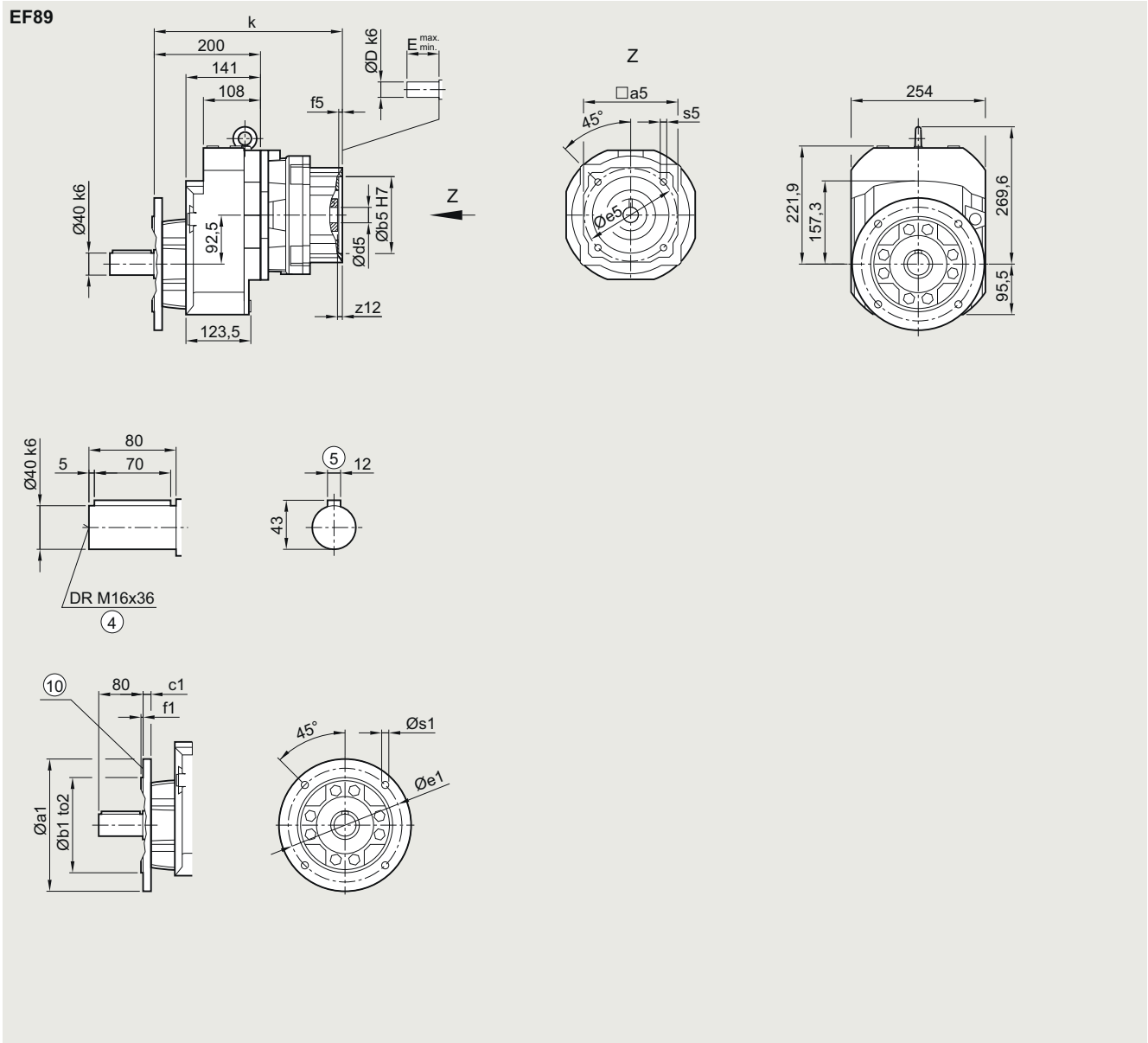
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### EF89 gearbox in a flange-mounted design

##### EF030KS

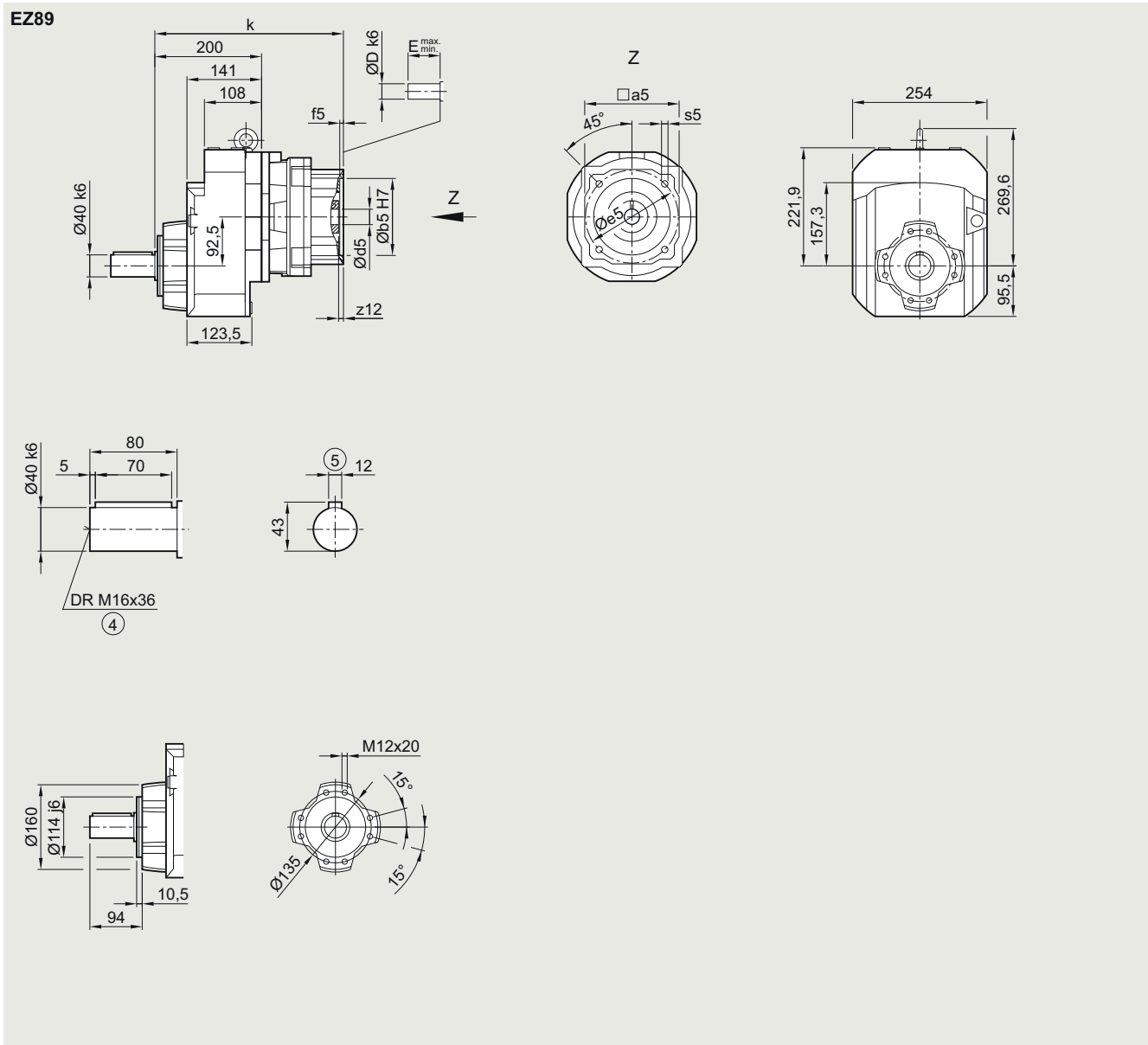


Flange	a1	b1	to2	c1	e1	f1	s1			
	250	180	j6	15	215	4.0	13.5			
	300	230	j6	16	265	4.0	13.5			
	350	250	j6	16	300	5.0	17.5			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	303
KS6.2	130	110	7	145	M8x15	8	22	40	58	303
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	315.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	351.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	351.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

**EZ89 gearbox in a housing flange design****EZ030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	303
KS6.2	130	110	7	145	M8x15	8	22	40	58	303
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	315.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	351.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	351.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

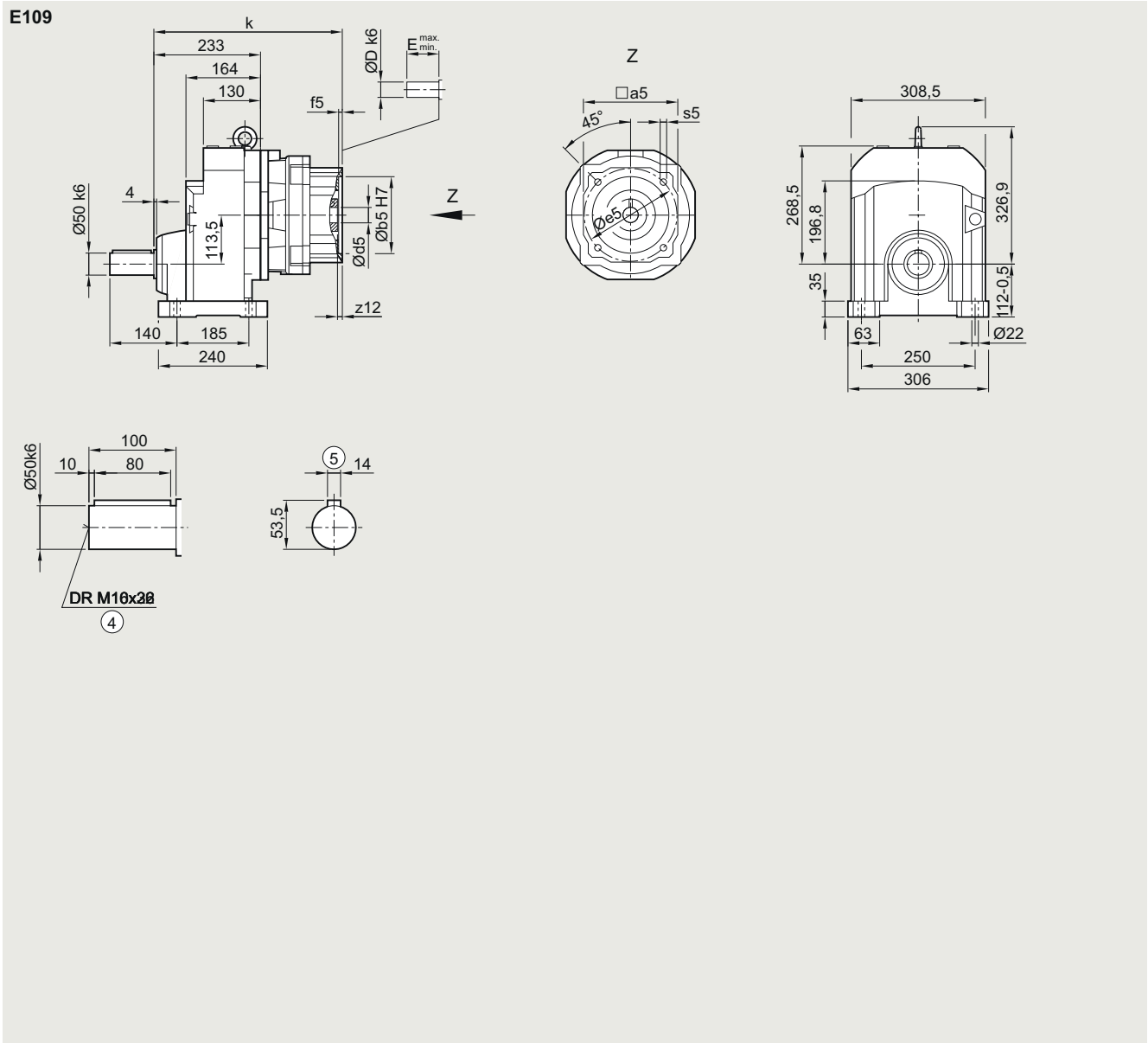
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### E109 gearbox in a foot-mounted design

##### E030KS



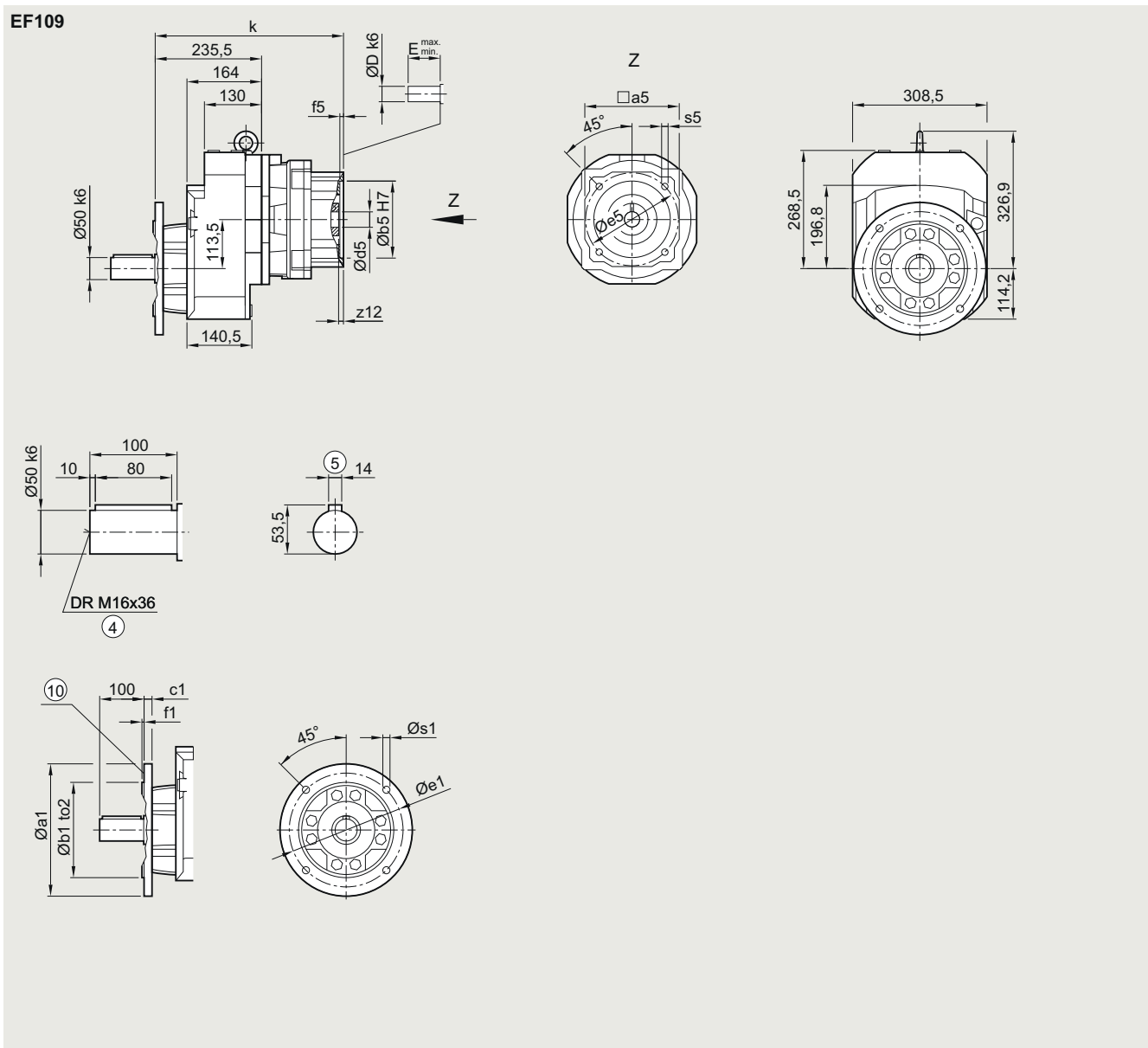
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	327
KS6.2	130	110	7	145	M8x15	8	22	40	58	327
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	339.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	375.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	375.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## EF109 gearbox in a flange-mounted design

## EF030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	327
KS6.2	130	110	7	145	M8x15	8	22	40	58	327
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	339.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	375.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	375.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

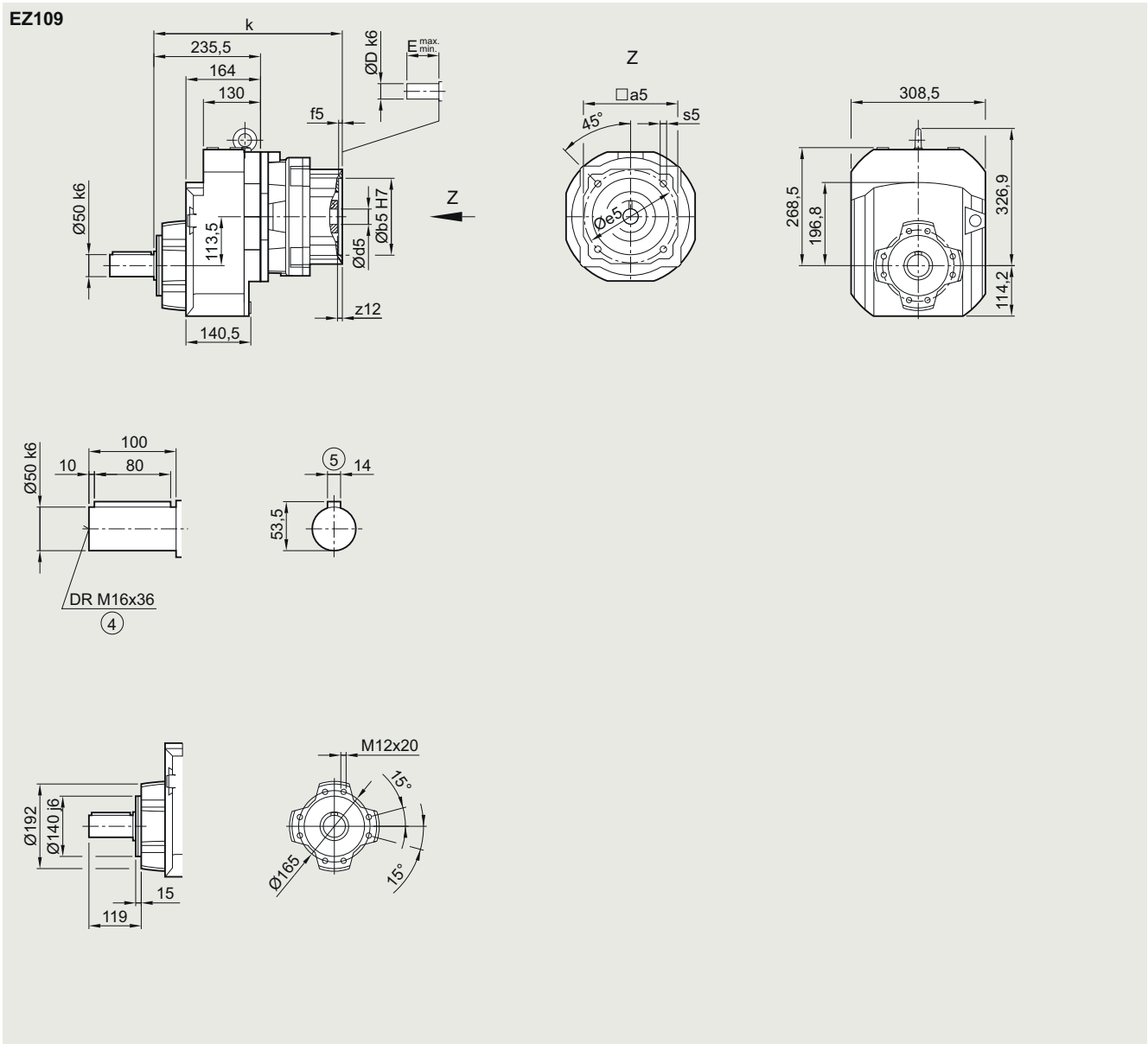
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### EZ109 gearbox in a housing flange design

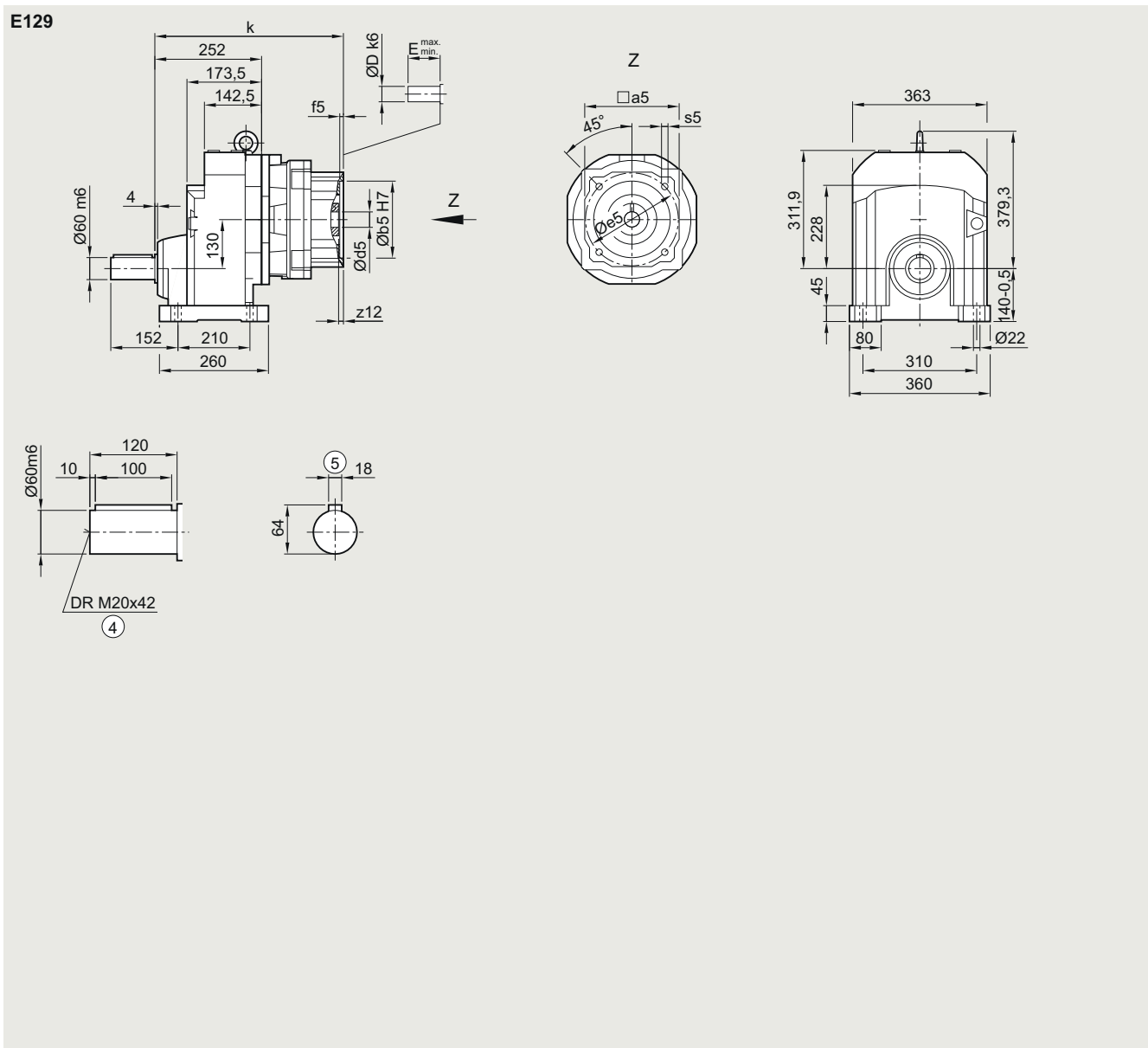
##### EZ030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	327
KS6.2	130	110	7	145	M8x15	8	22	40	58	327
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	339.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	375.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	375.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

**E129 gearbox in a foot-mounted design****E030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	320
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	320
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	337
KS6.2	130	110	7	145	M8x15	8	22	40	58	337
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	349.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	383.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	383.5

④ DIN 332

⑤ Feather key/keyway DIN 6885



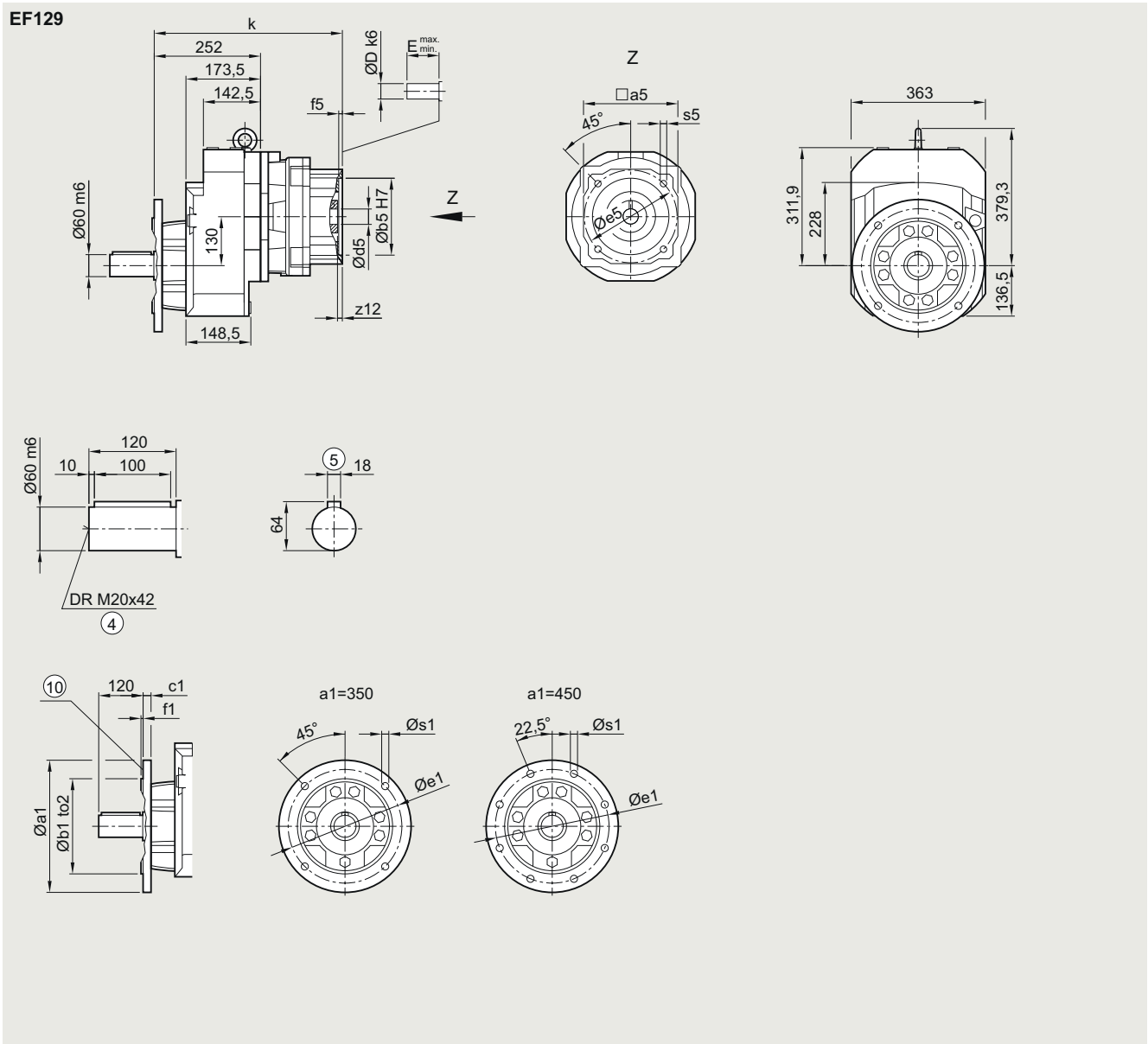
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### EF129 gearbox in a flange-mounted design

##### EF030KS



Flange	a1	b1	to2	c1	e1	f1	s1			
	350	250	h6	18	300	5	17.5			
	450	350	h6	22	400	5	17.5			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	320
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	320
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	337
KS6.2	130	110	7	145	M8x15	8	22	40	58	337
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	349.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	383.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	383.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218



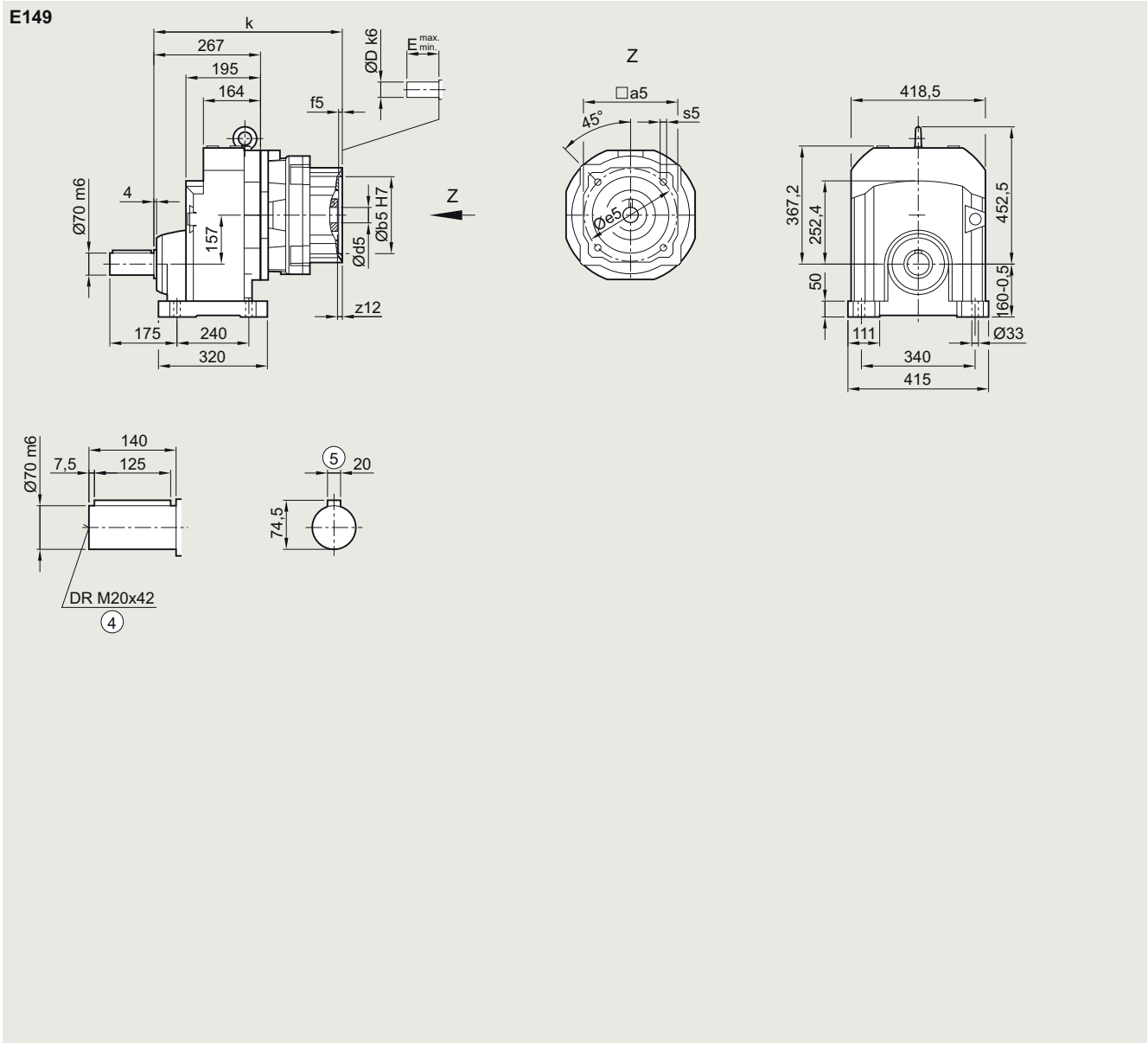
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### E149 gearbox in a foot-mounted design

##### E030KS



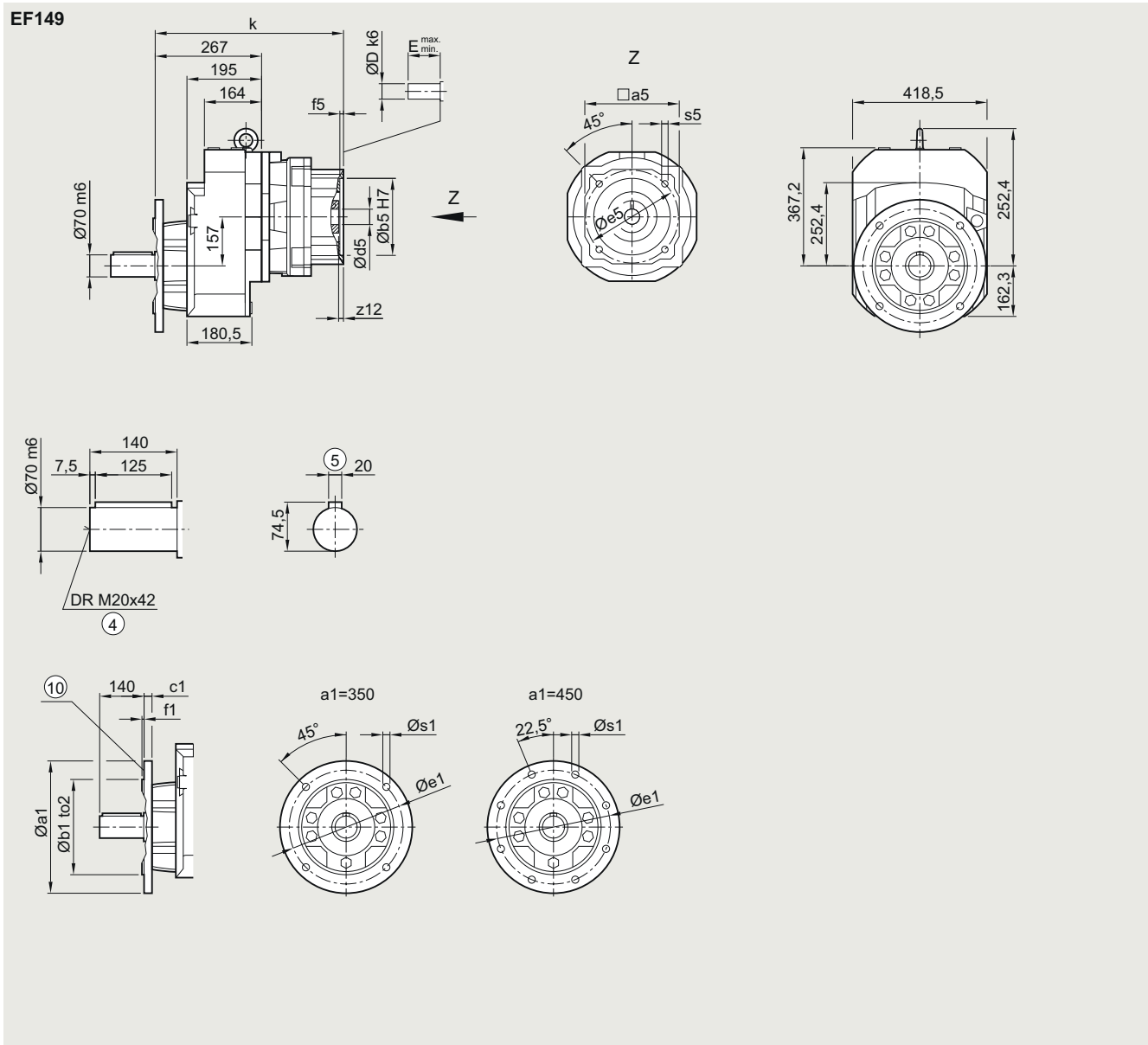
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	350.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	350.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	363
KS10.1	196	180	5	215	M12x22	5	38	50	80	392
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	392

④ DIN 332

⑤ Feather key/keyway DIN 6885

## EF149 gearbox in a flange-mounted design

## EF030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	350.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	350.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	363
KS10.1	196	180	5	215	M12x22	5	38	50	80	392
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	392

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 3/218

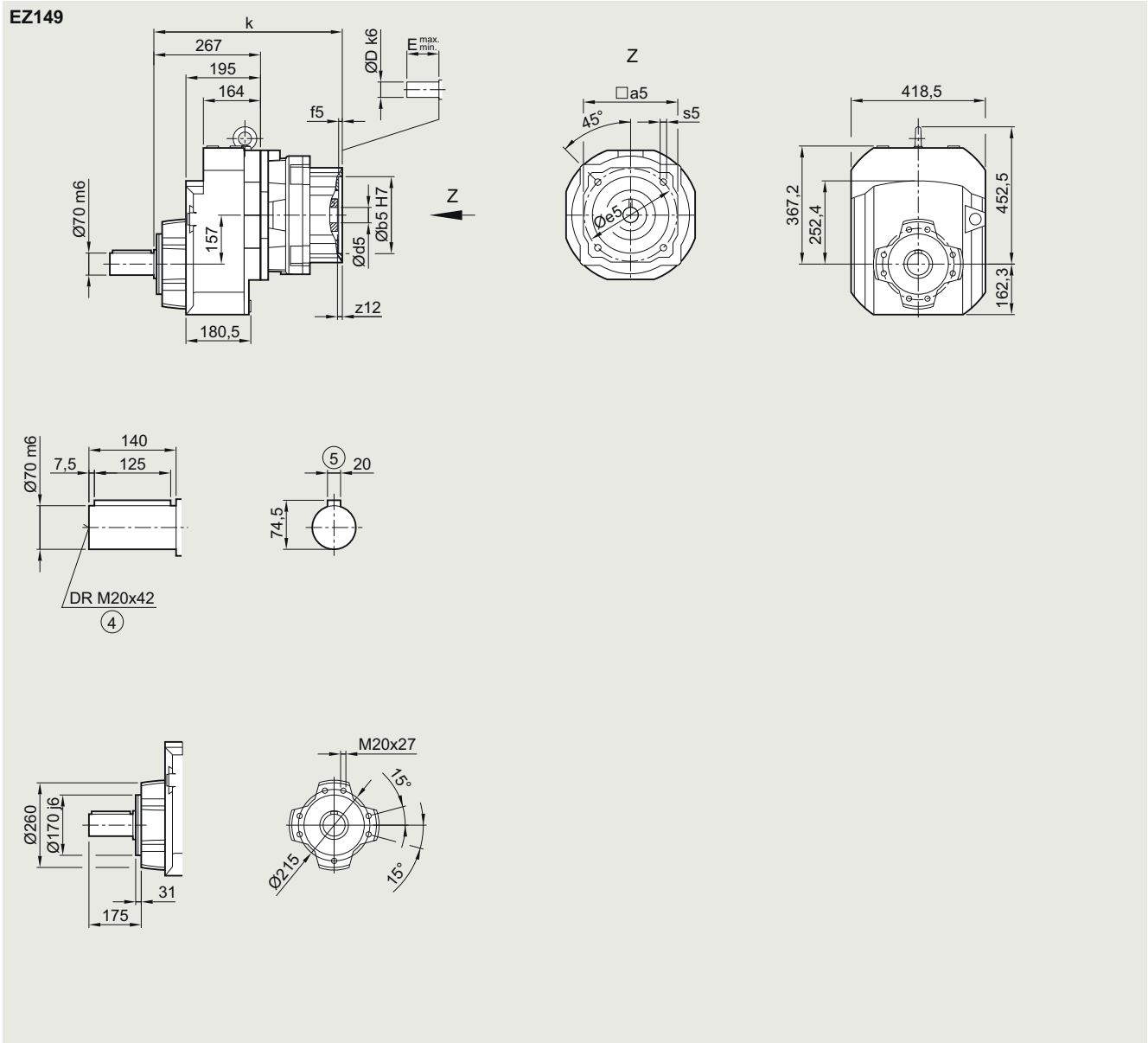
## SIMOGEAR gearboxes

Helical gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### EZ149 gearbox in a housing flange design

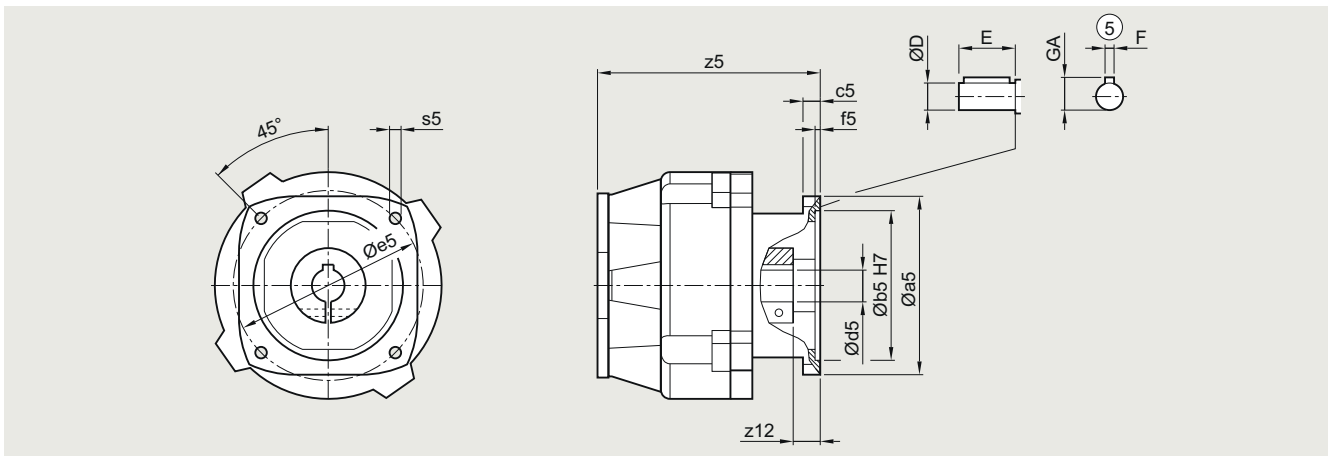
##### EZ030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	350.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	350.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	363
KS10.1	196	180	5	215	M12x22	5	38	50	80	392
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	392

④ DIN 332

⑤ Feather key/keyway DIN 6885

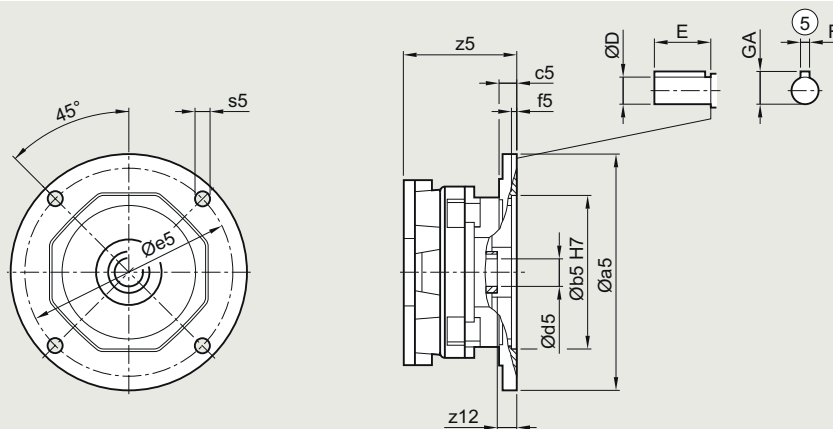
**Z./D.89 to Z./D.189 and E.89 to E.149 gearboxes****DZ030K8, DZB030K8, DZF030K8, DZZ030K8**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.89</b>												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	317.5
<b>Z./D.109</b>												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	308.5
816	314	300	-	6.0	350	M16x29	60	55	110	16	59.0	365.0
<b>Z./D.129</b>												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	297.5
816	314	300	-	6.0	350	M16x29	60	55	110	16	59.0	354.0
<b>Z./D.149</b>												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	291.0
816	314	300	-	6.0	350	M16x29	60	55	110	16	59.0	347.5
818	550	350	22.0	12.0	400	M16	73	65	140	18	69	336.5
<b>Z./D.169</b>												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	278.0
816	314	300	-	6.0	350	M16x29	60	55	110	16	59.0	333.0
818	550	350	22.0	12.0	400	M16	73	65	140	18	69	319.5
<b>Z./D.189</b>												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	278.0
816	314	300	-	6.0	350	M16x29	60	55	110	16	59.0	333.0
818	550	350	22.0	12.0	400	M16	73	65	140	18	69	319.5
<b>E.89</b>												
813	260	250	25	6.0	300	M16	60.0	48	110	14	51.5	317.5
<b>E.109</b>												
813	260	250	25	6.0	300	M16	60.0	48	110	14	51.5	308.5
816	314	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	365.0
<b>E.129</b>												
813	260	250	25	6.0	300	M16	60.0	48	110	14	51.5	297.5
816	314	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	354.0
<b>E.149</b>												
813	260	250	25	6.0	300	M16	60.0	48	110	14	51.5	291.0
816	314	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	347.5

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**SIMOGEAR gearboxes**

Helical gearbox with adapter K5 for mounting a NEMA motor

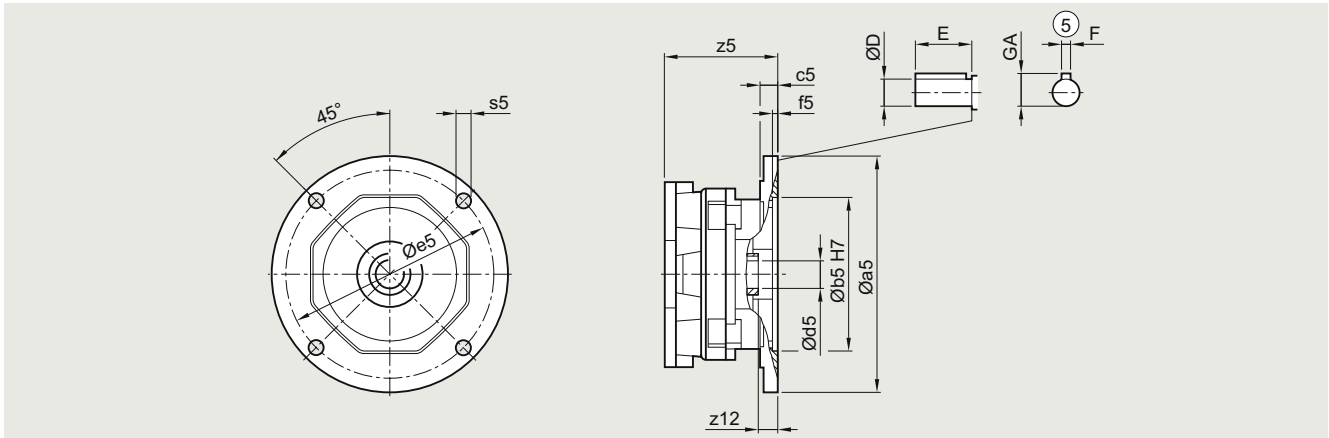
**Dimensional drawings****Z./D.29 to Z./D.109 gearboxes****DZ030K5, DZB030K5, DZF030K5, DZZ030K5**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.29</b>												
56	168	114.3	15.0	5.0	149.2	11.0	16.0	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	200.5
<b>Z./D.39</b>												
56	168	114.3	15.0	5.0	149.2	11.0	16.0	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	200.5
<b>Z./D.49</b>												
56	168	114.3	15.0	5.0	149.2	11.0	16.0	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	207.0
<b>Z./D.59</b>												
56	168	114.3	15.0	5.0	149.2	11.0	16.0	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	207.0
<b>Z./D.69</b>												
56	168	114.3	15.0	5.0	149.2	11.0	16.0	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	207.0
<b>Z./D.79</b>												
56	168	114.3	15.0	5.0	149.2	11.0	16.0	15.875	47.752	4.763	17.895	103.0
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	103.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	185.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	201.0
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	201.0
<b>Z./D.89</b>												
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	90.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	168.0
210	226	215.9	22.0	5.5	184.1	13.6	12.0	34.925	85.850	7.938	38.443	184.0
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	184.0
<b>Z./D.109</b>												
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	83.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	159.0
210	226	215.9	22.0	5.5	184.1	13.6	12.0	34.925	85.850	7.938	38.443	175.0
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	175.0
280	285	266.7	24.5	5.5	228.6	13.2	22.0	47.625	117.602	12.7	53.111	188.0
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.7	59.563	264.5

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## Z./D.129 to Z./D.189 and E.39 to E.49 gearboxes

## DZ030K5, DZB030K5, DZF030K5, DZZ030K5



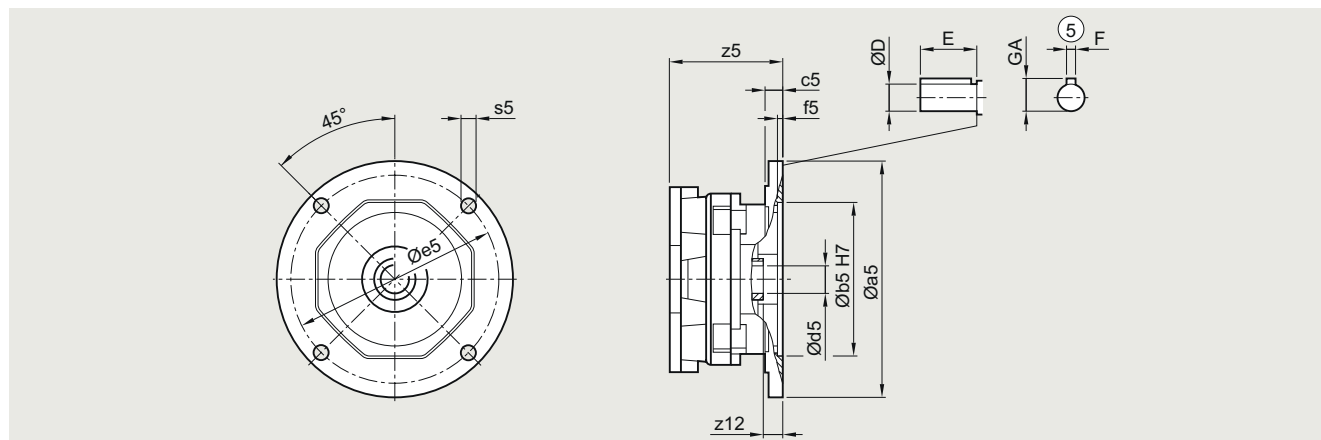
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.129</b>												
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	76.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	150.0
210	226	215.9	22.0	5.5	184.1	13.6	12.0	34.925	85.850	7.938	38.443	164.0
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	164.0
280	285	266.7	24.5	5.5	228.6	13.2	22.0	47.625	117.602	12.7	53.111	177.0
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.7	59.563	253.5
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	278.0
<b>Z./D.149</b>												
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	148.5
210	226	215.9	22.0	5.5	184.1	13.6	12.0	34.925	85.850	7.938	38.443	157.5
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	157.5
280	285	266.7	24.5	5.5	228.6	13.2	22.0	47.625	117.602	12.7	53.111	170.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.7	59.563	247.0
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	271.5
<b>Z./D.169</b>												
210	226	215.9	22.0	5.5	184.1	13.6	12.0	34.925	85.850	7.938	38.443	144.5
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	144.5
280	285	266.7	24.5	5.5	228.6	13.2	22.0	47.625	117.602	12.7	53.111	157.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.7	59.563	232.5
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	253.0
<b>Z./D.189</b>												
210	226	215.9	22.0	5.5	184.1	13.6	12.0	34.925	85.850	7.938	38.443	144.5
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	144.5
280	285	266.7	24.5	5.5	228.6	13.2	22.0	47.625	117.602	12.7	53.111	157.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.7	59.563	232.5
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	253.0
<b>E.39</b>												
56	168	114.3	15.0	5.0	149.2	11	16.0	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15.0	5.0	149.2	11	16.0	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	200.5
<b>E.49</b>												
56	168	114.3	15.0	5.0	149.2	11	16.0	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15.0	5.0	149.2	11	16.0	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	207.0

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**SIMOGEAR gearboxes**

Helical gearbox with adapter K5 for mounting a NEMA motor

**Dimensional drawings****E.69 to E.149 gearboxes****DZ030K5, DZB030K5, DZF030K5, DZZ030K5**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>E.69</b>												
56	168	114.3	15.0	5.0	149.2	11	16.0	15.875	47.752	4.763	17.895	103.0
140	168	114.3	15.0	5.0	149.2	11	16.0	22.225	57.150	4.763	24.346	103.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	185.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	201.0
250	226a	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	201.0
<b>E.89</b>												
140	168	114.3	15.0	5.0	149.2	11	16.0	22.225	57.150	4.763	24.346	90.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	168.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	184.0
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	184.0
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.700	53.111	197.0
<b>E.109</b>												
140	168	114.3	15.0	5.0	149.2	11	16.0	22.225	57.150	4.763	24.346	83.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	159.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	175.0
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	175.0
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.700	53.111	188.0
320	340	317.5	26.5	5.5	279.4	17	32.5	53.975	133.350	12.700	59.563	264.5
<b>E.129</b>												
140	168	114.3	15.0	5.0	149.2	11	16.0	22.225	57.150	4.763	24.346	76.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	150.0
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	164.0
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	164.0
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.700	53.111	177.0
320	340	317.5	26.5	5.5	279.4	17	32.5	53.975	133.350	12.700	59.563	253.5
360	340	317.5	26.5	5.5	279.4	17	34.5	60.325	149.352	15.875	67.208	278.0
<b>E.149</b>												
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	148.5
210	226	215.9	22.0	5.5	184.1	13.5	12.0	34.925	85.850	7.938	38.443	157.5
250	226	215.9	22.0	5.5	184.1	13.5	12.0	41.275	101.600	9.525	45.491	157.5
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.700	53.111	170.5
320	340	317.5	26.5	5.5	279.4	17	32.5	53.975	133.350	12.700	59.563	247.0
360	340	317.5	26.5	5.5	279.4	17	34.5	60.325	149.352	15.875	67.208	271.5

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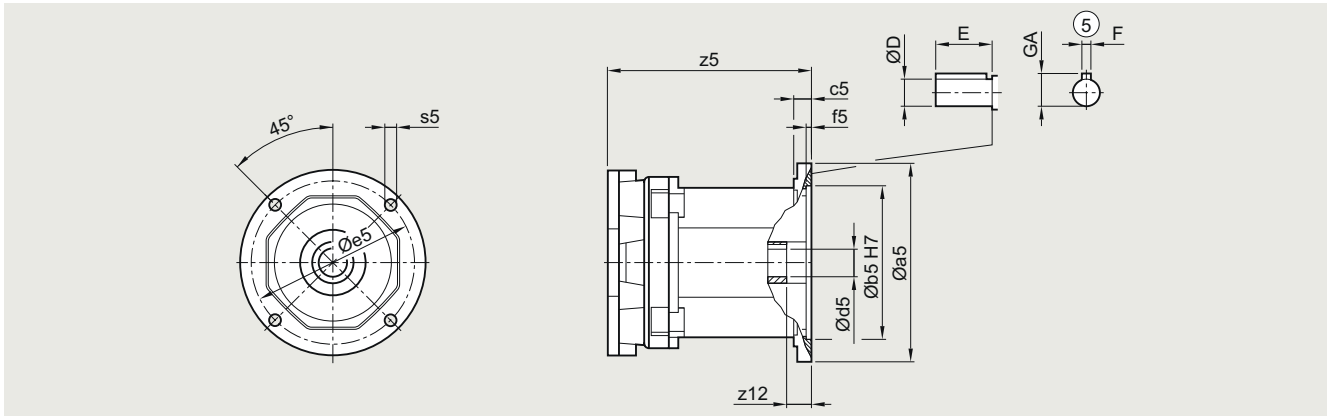
# SIMOGEAR gearboxes

## Helical gearbox with adapter K3 for mounting a NEMA motor

### Dimensional drawings

#### Z./D.29 to Z./D.109 gearboxes

#### DZ030K3, DZB030K3, DZF030K3, DZZ030K3

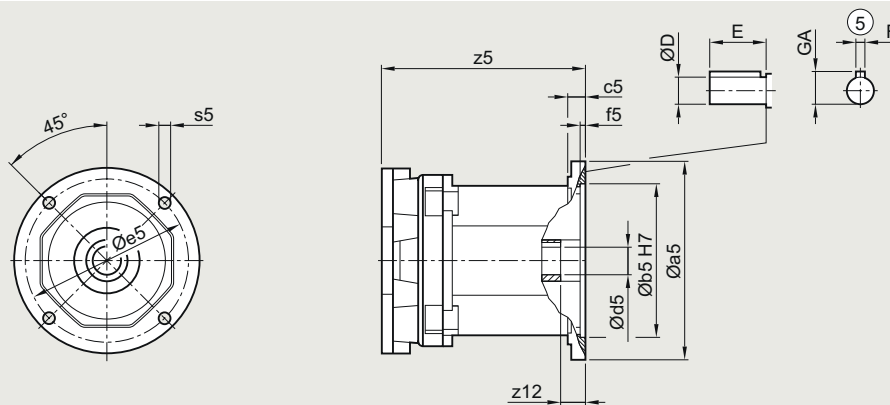


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.29</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22.0	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	257.0
<b>Z./D.39</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>Z./D.49</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>Z./D.59</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>Z./D.69</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>Z./D.79</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	185.5
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	185.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	241.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	312.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	342.0
<b>Z./D.89</b>												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	172.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	224.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	295.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	325.0
<b>Z./D.109</b>												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	165.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	215.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	286.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	316.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	334.0
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.35	12.7	59.563	411.5

Ⓢ Feather key/keyway DIN 6885

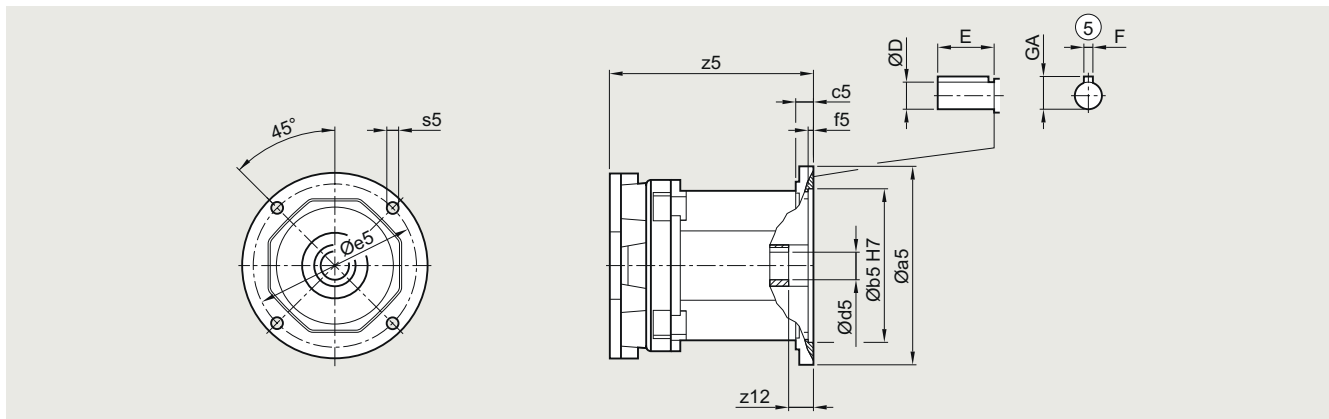
**SIMOGEAR gearboxes**

Helical gearbox with adapter K3 for mounting a NEMA motor

**Dimensional drawings****Z./D.129 to Z./D.189 and E.39 to E.89 gearboxes****DZ030K3, DZB030K3, DZF030K3, DZZ030K3, E030K3, EF030K3, EZ030K3**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>Z./D.129</b>												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	158.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	206.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	275.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	305.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.700	53.111	323.0
<b>Z./D.149</b>												
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	205.0
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	268.5
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	298.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.700	53.111	316.5
<b>Z./D.169</b>												
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	255.5
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	285.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.700	53.111	303.5
<b>Z./D.189</b>												
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	255.5
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	285.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.700	53.111	303.5
<b>E.39</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>E.49</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>E.69</b>												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	185.5
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	185.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	241.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	312.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	342.0
<b>E.89</b>												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	172.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	224.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	295.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	325.0

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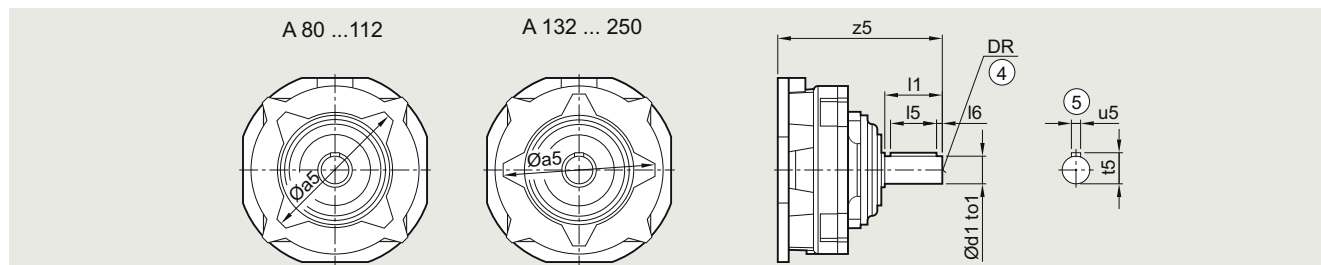
**E.109 to E.149 gearboxes****E030K3, EF030K3, EZ030K3**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>E.109</b>												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	165.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	215.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	286.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	316.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.700	53.111	334.0
<b>E.129</b>												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	158.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	206.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	275.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	305.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.700	53.111	323.0
<b>E.149</b>												
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	205.0
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	268.5
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	298.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.700	53.111	316.5

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**SIMOGEAR gearboxes**

Helical gearbox with adapter A with free output shaft

**Dimensional drawings****Z./D.29 to Z./D.129 gearboxes****DZ030A, DZB030A, DZF030A, DZZ030A**

Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
<b>Z./D.29</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	143.5
90	132	24	k6	50	40	5	8	27	DR M8	153.5
<b>Z./D.39</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	143.5
90	132	24	k6	50	40	5	8	27	DR M8	153.5
<b>Z./D.49</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	134
90	132	24	k6	50	40	5	8	27	DR M8	144
100	170	28	k6	60	50	5	8	31	DR M10	211
112	170	28	k6	60	50	5	8	31	DR M10	211
<b>Z./D.59</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	134
90	132	24	k6	50	40	5	8	27	DR M8	144
100	170	28	k6	60	50	5	8	31	DR M10	211
112	170	28	k6	60	50	5	8	31	DR M10	211
<b>Z./D.69</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	134
90	132	24	k6	50	40	5	8	27	DR M8	144
100	170	28	k6	60	50	5	8	31	DR M10	211
112	170	28	k6	60	50	5	8	31	DR M10	211
<b>Z./D.79</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	128
90	132	24	k6	50	40	5	8	27	DR M8	138
100	170	28	k6	60	50	5	8	31	DR M10	205
112	170	28	k6	60	50	5	8	31	DR M10	205
132	215	38	k6	80	70	5	10	41	DR M12	255
<b>Z./D.89</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	115
90	132	24	k6	50	40	5	8	27	DR M8	125
100	170	28	k6	60	50	5	8	31	DR M10	188
112	170	28	k6	60	50	5	8	31	DR M10	188
132	215	38	k6	80	70	5	10	41	DR M12	238
160	215.3	42	k6	110	90	10	12	45	DR M16	290
<b>Z./D.109</b>										
112	170	28	k6	60	50	5	8	31	DR M10	179
132	215	38	k6	80	70	5	10	41	DR M12	229
160	215.3	42	k6	110	90	10	12	45	DR M16	281
180	215.3	48	m6	110	90	10	14	51.5	DR M16	281
200	266	55	m6	110	90	10	16	59	DR M20	317.5
<b>Z./D.129</b>										
112	170	28	k6	60	50	5	8	31	DR M10	170
132	215	38	k6	80	70	5	10	41	DR M12	218
160	215.3	42	k6	110	90	10	12	45	DR M16	270
180	215.3	48	m6	110	90	10	14	51.5	DR M16	270
200	266	55	m6	110	90	10	16	59	DR M20	306.5
225	266	55	m6	110	90	10	16	59	DR M20	306.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

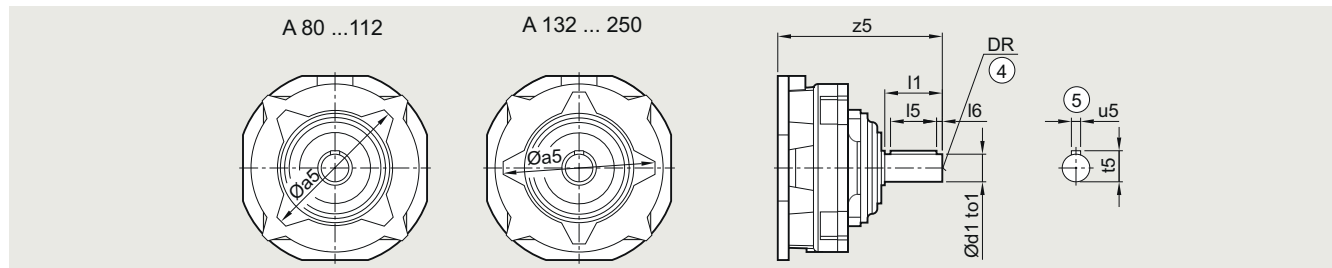
# SIMOGEAR gearboxes

Helical gearbox with adapter A with free output shaft

## Dimensional drawings

### Z./D.149 to Z./D.189 and E.39 to E.109 gearboxes

**DZ030A, DZB030A, DZF030A, DZZ030A, E030A, EF030A, EZ030A**



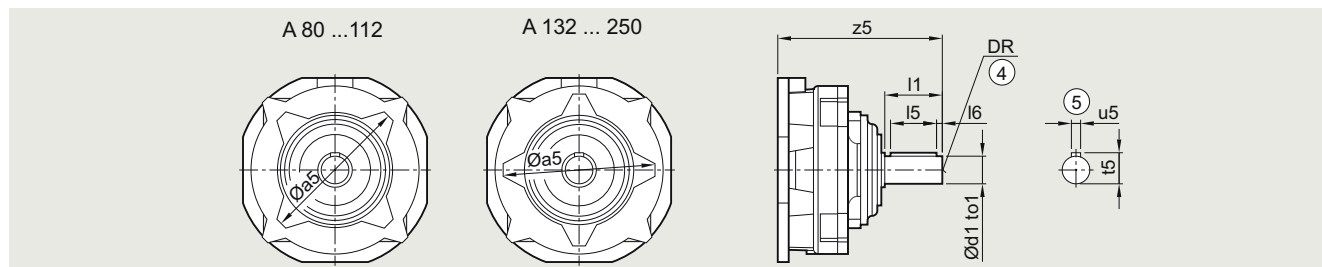
Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
<b>Z./D.149</b>										
132	215	38	k6	80	70	5	10	41	DR M12	211.5
160	215.3	42	k6	110	90	10	12	45	DR M16	263.5
180	215.3	48	m6	110	90	10	14	51.5	DR M16	263.5
200	266	55	m6	110	90	10	16	59	DR M20	300
225	266	55	m6	110	90	10	16	59	DR M20	300
250	266	55	m6	110	90	10	16	59	DR_M20	300
<b>Z./D.169</b>										
160	215.3	42	k6	110	90	10	12	45	DR M16	250.5
180	215.3	48	m6	110	90	10	14	51.5	DR M16	250.5
200	266	55	m6	110	90	10	16	59	DR M20	286.5
225	266	55	m6	110	90	10	16	59	DR M20	286.5
250	266	55	m6	110	90	10	16	59	DR_M20	286.5
<b>Z./D.189</b>										
160	215.3	42	k6	110	90	10	12	45	DR M16	250.5
180	215.3	48	m6	110	90	10	14	51.5	DR M16	250.5
200	266	55	m6	110	90	10	16	59	DR M20	286.5
225	266	55	m6	110	90	10	16	59	DR M20	286.5
250	266	55	m6	110	90	10	16	59	DR_M20	286.5
<b>E.39</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	143.5
90	132	24	k6	50	40	5	8	27	DR M8	153.5
<b>E.49</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	134
90	132	24	k6	50	40	5	8	27	DR M8	144
100	170	28	k6	60	50	5	8	31	DR M10	211
112	170	28	k6	60	50	5	8	31	DR M10	211
<b>E.69</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	128
90	132	24	k6	50	40	5	8	27	DR M8	138
100	170	28	k6	60	50	5	8	31	DR M10	205
112	170	28	k6	60	50	5	8	31	DR M10	205
132	215	38	k6	80	70	5	10	41	DR M12	255
<b>E.89</b>										
80	132	19	k6	40	32	4	6	21.5	DR M6	115
90	132	24	k6	50	40	5	8	27	DR M8	125
100	170	28	k6	60	50	5	8	31	DR M10	188
112	170	28	k6	60	50	5	8	31	DR M10	188
132	215	38	k6	80	70	5	10	41	DR M12	238
160	215.3	42	k6	110	90	10	12	45	DR M16	290
<b>E.109</b>										
112	170	28	k6	60	50	5	8	31	DR M10	179
132	215	38	k6	80	70	5	10	41	DR M12	229
160	215.3	42	k6	110	90	10	12	45	DR M16	281
180	215.3	48	m6	110	90	10	14	51.5	DR M16	281
200	266	55	m6	110	90	10	16	59	DR M20	317.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Helical gearbox with adapter A with free output shaft

**Dimensional drawings****E.129 to E.149 gearboxes****E030A, EF030A, EZ030A**

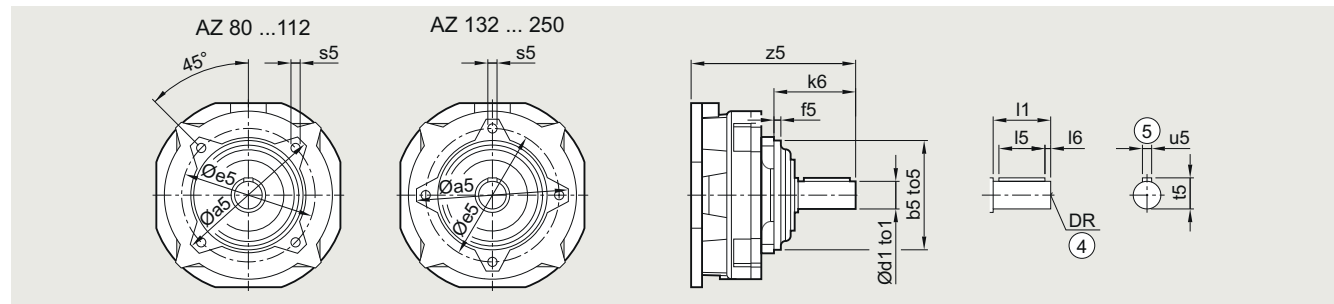
Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
<b>E.129</b>										
112	170	28	k6	60	50	5	8	31	DR M10	170
132	215	38	k6	80	70	5	10	41	DR M12	218
160	215.3	42	k6	110	90	10	12	45	DR M16	270
180	215.3	48	m6	110	90	10	14	51.5	DR M16	270
200	266	55	m6	110	90	10	16	59	DR M20	306.5
225	266	55	m6	110	90	10	16	59	DR M20	306.5
<b>E.149</b>										
132	215	38	k6	80	70	5	10	41	DR M12	211.5
160	215.3	42	k6	110	90	10	12	45	DR M16	263.5
180	215.3	48	m6	110	90	10	14	51.5	DR M16	263.5
200	266	55	m6	110	90	10	16	59	DR M20	300
225	266	55	m6	110	90	10	16	59	DR M20	300
250	266	55	m6	110	90	10	16	59	DR_M20	300

④ DIN 332

⑤ Feather key/keyway DIN 6885

## Z./D.29 to Z./D.129 gearboxes

## DZ030AZ, DZB030AZ, DZF030AZ, DZZ030AZ



Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>Z./D.29</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	153.5
<b>Z./D.39</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	153.5
<b>Z./D.49</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
<b>Z./D.59</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
<b>Z./D.69</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
<b>Z./D.79</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	128
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	138
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	205
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	205
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	255
<b>Z./D.89</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	115
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	125
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	188
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	188
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	238
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	290
<b>Z./D.109</b>																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	179
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	229
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	281
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	281
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	317.5
<b>Z./D.129</b>																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	170
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	218
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	270
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	270
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	306.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	306.5

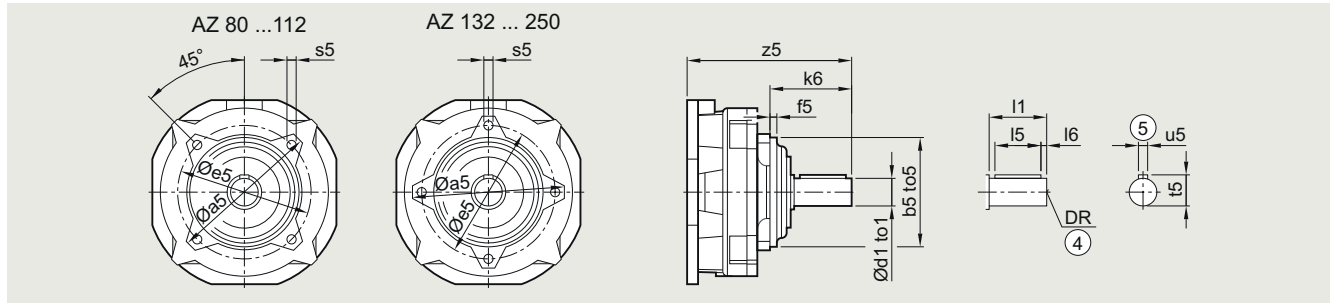
① DIN 332

② Feather key/keyway DIN 6885



**SIMOGEAR gearboxes**

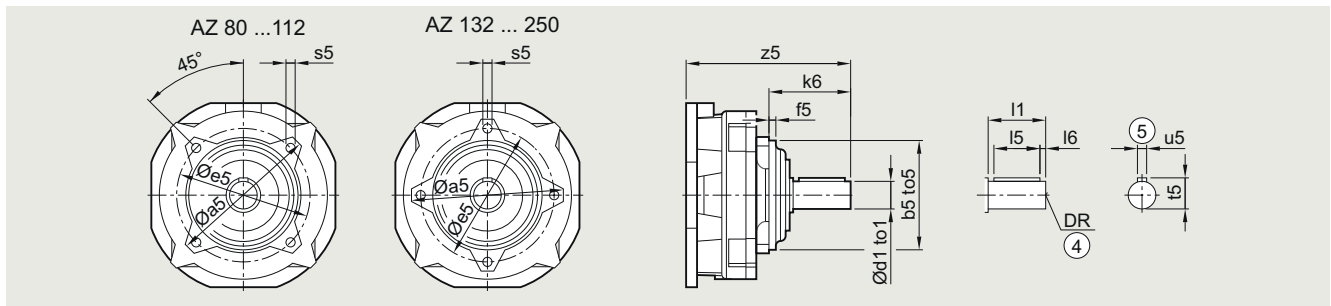
Helical gearbox with adapter AZ with free output shaft and centering

**Dimensional drawings****Z./D.149 to Z./D.189 and E.39 to E.89 gearboxes****DZ030AZ, DZB030AZ, DZF030AZ, DZZ030AZ**

Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>Z./D.149</b>																
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	211.5
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	263.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	263.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	300
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	300
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR_M20	134	300
<b>Z./D.169</b>																
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	250.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	250.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	286.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	286.5
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR_M20	134	286.5
<b>Z./D.189</b>																
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	250.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	250.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	286.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	286.5
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	286.5
<b>E.39</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	153.5
<b>E.49</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	211
<b>E.69</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	128
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	138
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	205
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	205
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	255
<b>E.89</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	115
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	125
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	188
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	188
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	238
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	290

④ DIN 332

⑤ Feather key/keyway DIN 6885

**E.109 to E.149 gearboxes****E030AZ, EF030AZ, EZ030AZ**

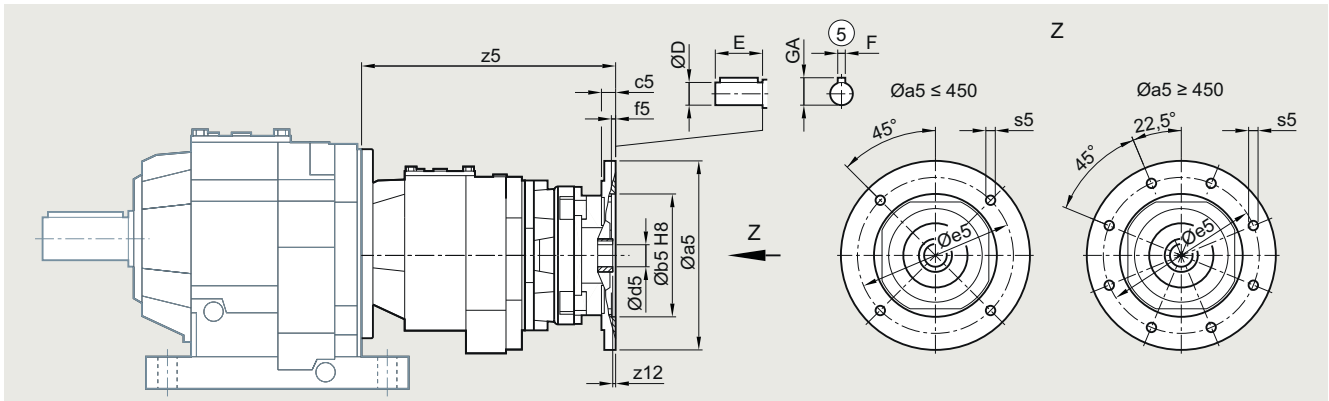
Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>E.109</b>																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	179
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	229
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	281
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	281
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	317.5
<b>E.129</b>																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	170
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	218
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	270
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	270
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	306.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	306.5
<b>E.149</b>																
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	211.5
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	263.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	263.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	300
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	300
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR_M20	134	300

④ DIN 332

④ Feather key/keyway DIN 6885

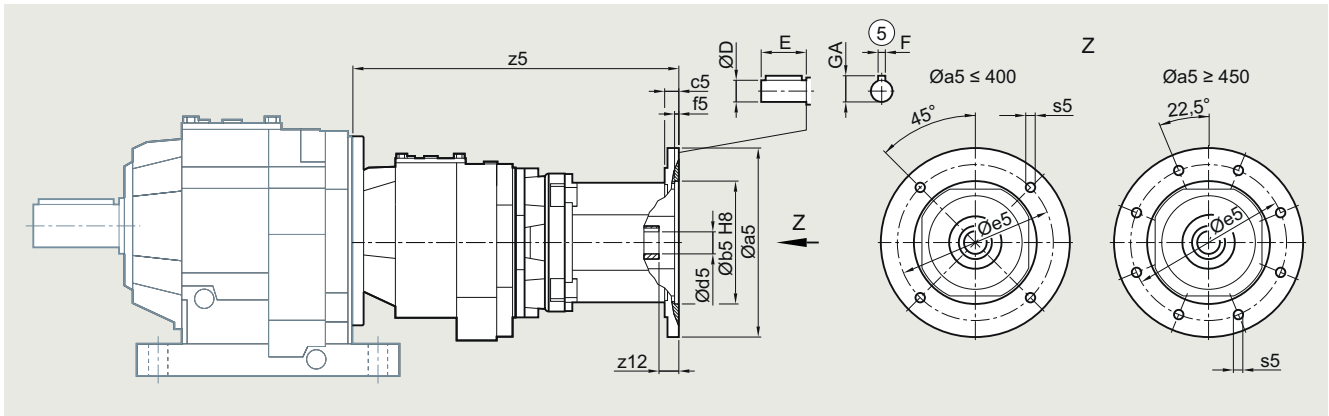
**SIMOGEAR gearboxes**

Helical tandem gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****Helical tandem gearbox with adapter K4**

Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
Z./D.79-Z/D39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	257
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	285
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	285
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	339.5
Z./D.89-Z/D39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	240
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	240
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	268
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	268
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	322.5
D.109-Z/D39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	231
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	231
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	259
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	259
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	313.5
D.129-Z/D49	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	260
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	260
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	288
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	288
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	342.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	342.5
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	360
D.149-Z/D49	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	249.5
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	249.5
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	277.5
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	277.5
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	332
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	332
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	349.5
D.169-Z/D69	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	275
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	303
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	303
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	375
D.189-Z/D69	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	275
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	303
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	303
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	375

Ⓢ Feather key/keyway DIN 6885

**Helical tandem gearbox with adapter K2**

Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
Z./D.79-Z/D39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	377.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	377.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	424.5
Z./D.89-Z/D39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	360.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	360.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	407.5
D.109-Z/D39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	351.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	351.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	398.5
D.129-Z/D49	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	380.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	380.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	427.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	427.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	505.5
D.149-Z/D49	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	370
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	370
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	417
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	417
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	495
D.169-Z/D69	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	395.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	395.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	520.5
D.189-Z/D69	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	395.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	395.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	520.5

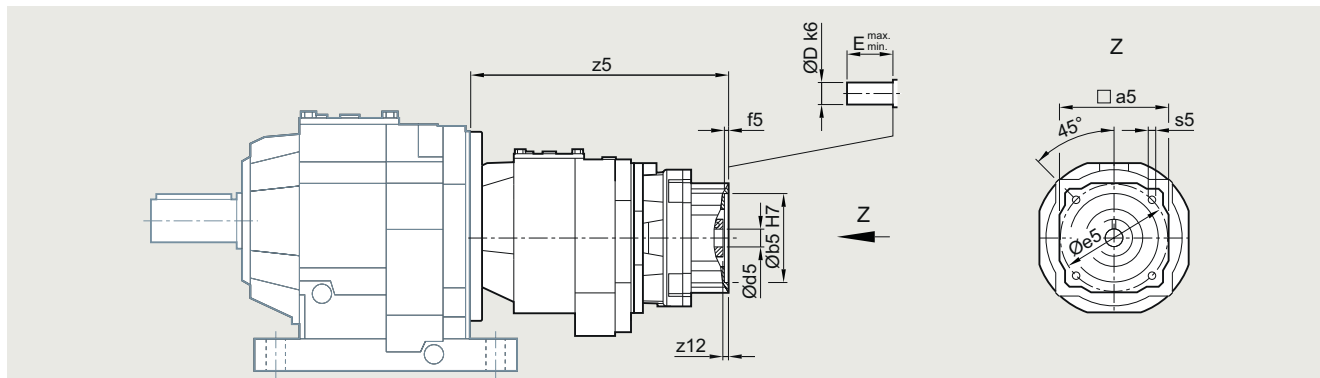
⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

Helical tandem gearbox with KS adapter for mounting defined Siemens servo motors

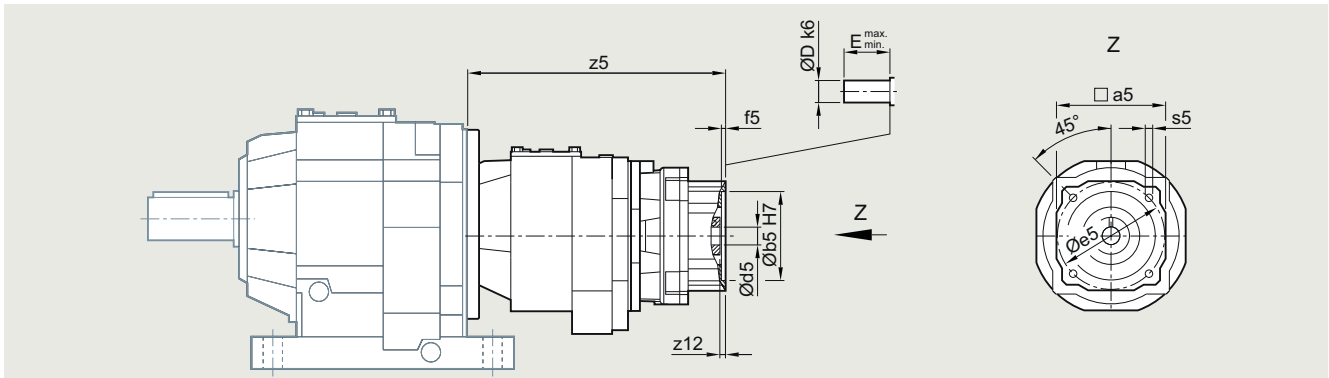
### Dimensional drawings

#### Helical tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
Z./D.29-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
Z./D.39-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
Z./D.49-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
Z./D.59-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
Z./D.69-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
Z./D.79-Z/D39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	261.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	261.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315
	KS6.2	130	110	7	145	M8x15	8	22	40	58	315
Z./D.89-Z/D39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	244.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	244.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	257
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	257
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	273
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	273
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	298
	KS6.2	130	110	7	145	M8x15	8	22	40	58	298
D.109-Z/D39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	235.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	235.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	248
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	248
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	264
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	264
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	289
	KS6.2	130	110	7	145	M8x15	8	22	40	58	289
D.109-Z/D39	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	301.5

## Helical tandem gearbox with KS adapter



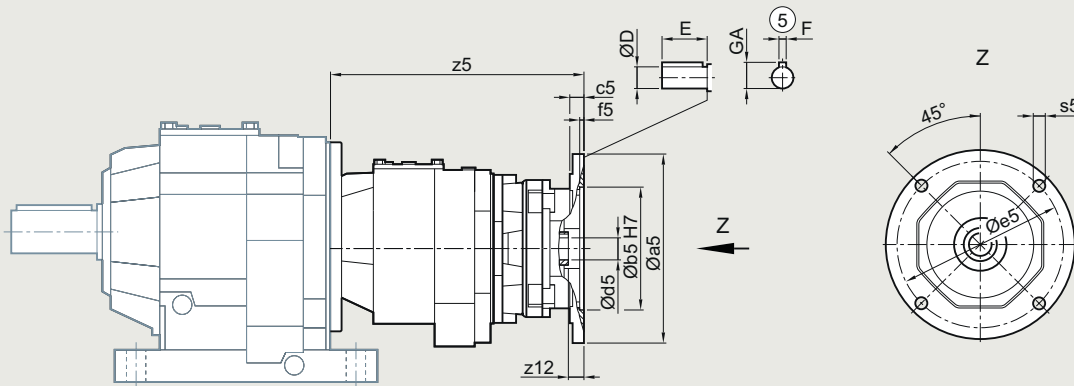
Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
D.129-Z/D49	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	264.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	264.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	277
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	277
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	293
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	293
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	318
	KS6.2	130	110	7	145	M8x15	8	22	40	58	318
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	330.5
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	366.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	366.5	
D.149-Z/D49	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	254
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	254
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	266.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	266.5
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282.5
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282.5
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	307.5
	KS6.2	130	110	7	145	M8x15	8	22	40	58	307.5
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	320
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	356
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	356	
D.169-Z/D69	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	279.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	279.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	292
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	292
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	333
	KS6.2	130	110	7	145	M8x15	8	22	40	58	333
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	345.5
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	381.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	381.5	
D.189-Z/D69	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	279.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	279.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	292
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	292
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	333
	KS6.2	130	110	7	145	M8x15	8	22	40	58	333
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	345.5
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	381.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	381.5	

## SIMOGEAR gearboxes

Helical tandem gearbox with adapter K5 for mounting NEMA motors

### Dimensional drawings

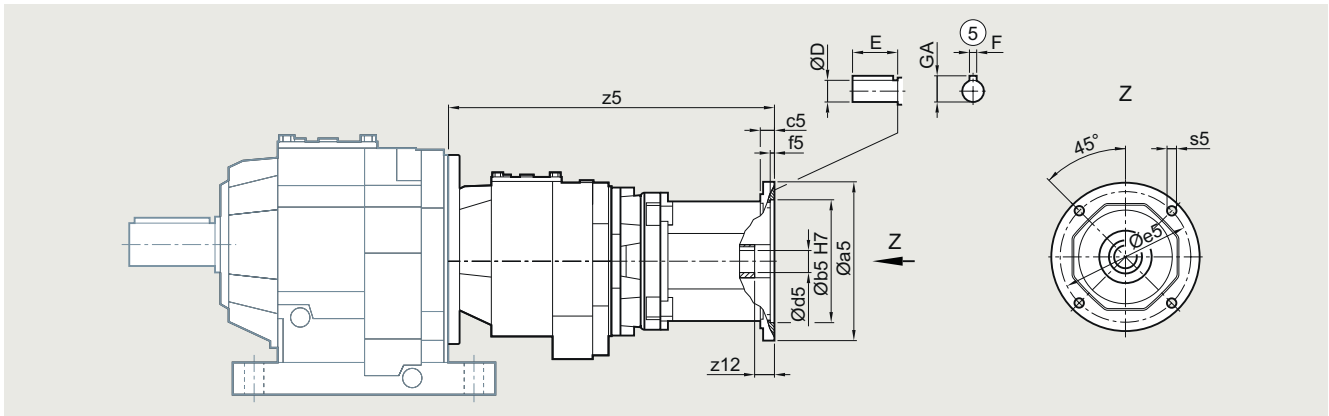
#### Helical tandem gearbox with adapter K5



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
Z./D.79-Z/D39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	298
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	298
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	380
Z./D.89-Z/D39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	281
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	281
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	363
D.109-Z/D39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	272
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	272
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	354
D.129-Z/D49	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	301
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	301
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	383
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	399
D.149-Z/D49	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	290.5
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	290.5
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	372.5
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	388.5
D.169-Z/D69	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	316
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	316
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	398
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	414
D.189-Z/D69	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	316
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	316
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	398
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	414

⊕ Feather key/keyway DIN 6885

## Helical tandem gearbox with adapter K3



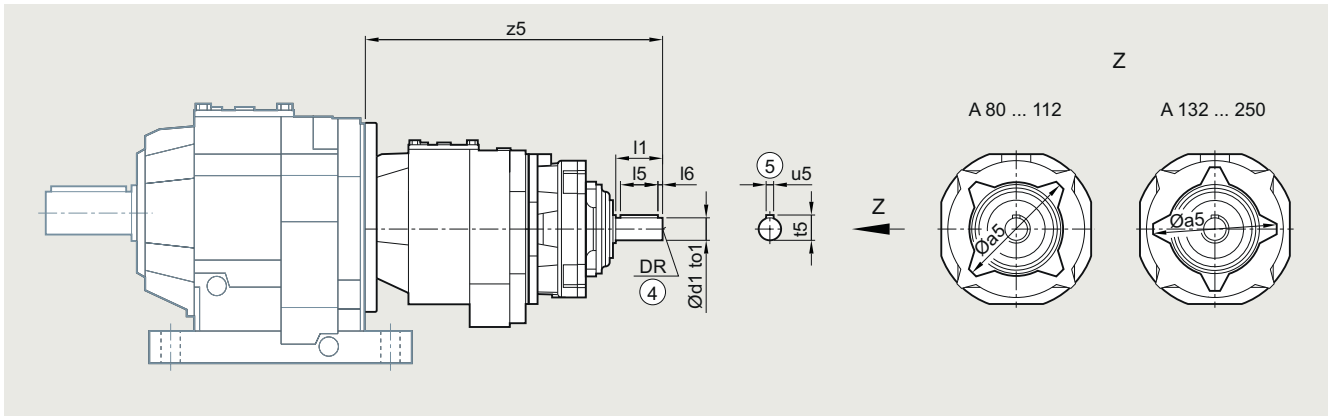
Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
Z./D.79-Z/D39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	380.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.150	4.763	24.346	380.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.850	6.350	31.394	436.5
Z./D.89-Z/D39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	363.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.150	4.763	24.346	363.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.850	6.350	31.394	419.5
D.109-Z/D39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	354.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.150	4.763	24.346	354.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.850	6.350	31.394	410.5
D.129-Z/D49	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	383.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.150	4.763	24.346	383.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.850	6.350	31.394	439.5
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	510
D.149-Z/D49	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	373
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.150	4.763	24.346	373
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.850	6.350	31.394	429
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	499.5
D.169-Z/D69	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	398.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.150	4.763	24.346	398.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.850	6.350	31.394	454.5
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	525
D.189-Z/D69	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	398.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.150	4.763	24.346	398.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.850	6.350	31.394	454.5
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	525

⑤ Feather key/keyway DIN 6885



**SIMOGEAR gearboxes**

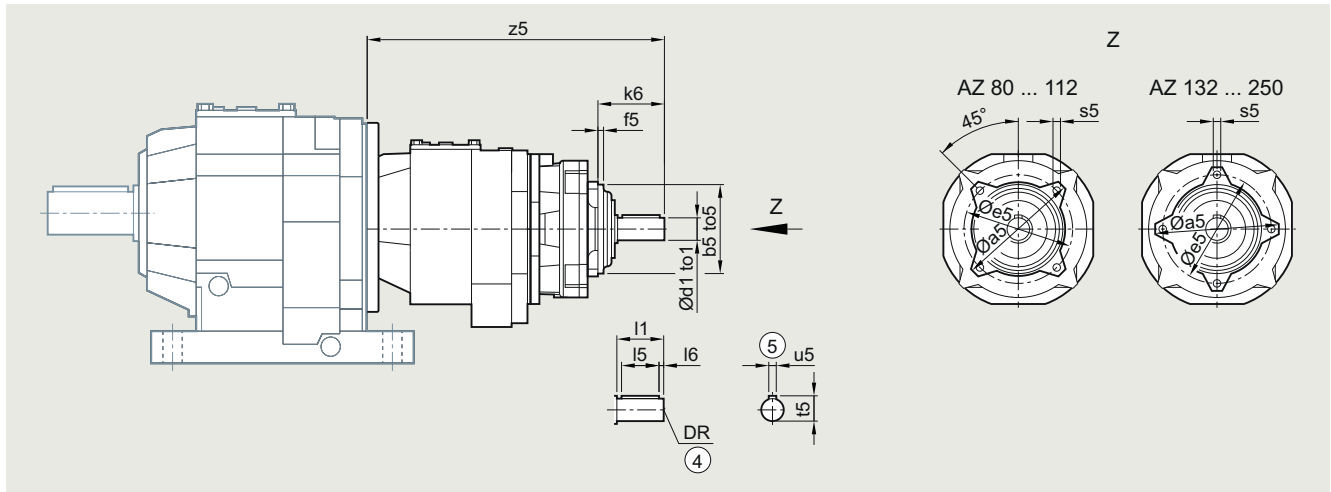
Helical tandem gearbox with adapter A with free output shaft

**Dimensional drawings****Helical tandem gearbox with adapter A**

Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
Z./D.79-Z/D39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	323
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	333
Z./D.89-Z/D39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	306
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	316
D.109-Z/D39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	297
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	307
D.129-Z/D49	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	326
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	336
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	403
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	403
D.149-Z/D49	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	315.5
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	325.5
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	392.5
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	392.5
D.169-Z/D69	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	341
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	351
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	418
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	418
D.189-Z/D69	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	341
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	351
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	418
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	418

④ DIN 332

⑤ Feather key/keyway DIN 6885

**Helical tandem gearbox with adapter AZ**

Gearbox	Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
Z./D.79-Z/D39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	323
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	333
Z./D.89-Z/D39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	306
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	316
D.109-Z/D39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	297
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	307
D.129-Z/D49	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	326
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	336
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	403
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	403
D.149-Z/D49	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	315.5
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	325.5
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	392.5
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	392.5
D.169-Z/D69	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	341
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	351
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418
D.189-Z/D69	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	341
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	351
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418

④ DIN 332

⑤ Feather key/keyway DIN 6885

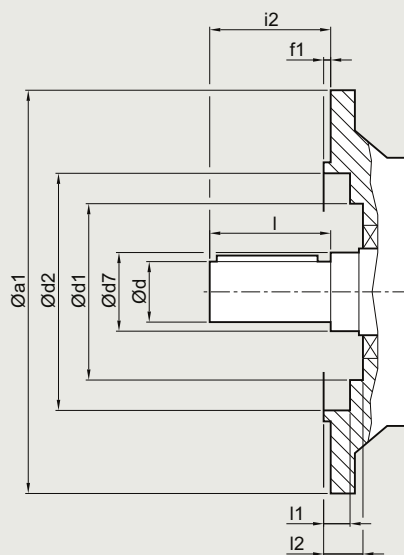
## SIMOGEAR gearboxes

### Helical gearboxes

#### Dimensional drawings

##### Inner contour of the flange design

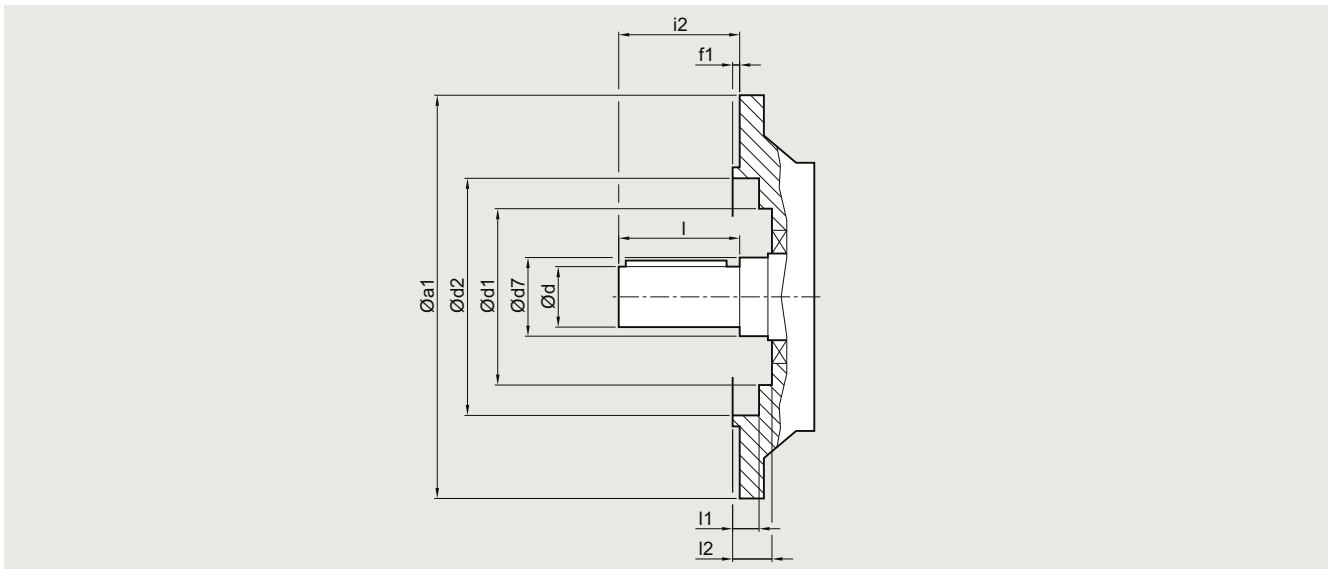
Notes regarding the design of the customer's interface.



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/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
	160	25	30	56.0	-	102.0	3.5	50	50	2.0	-	7.5
ZF/DF39, ZB/DB39	120	25	35	69.0	66.0	72.0	3.0	50	50	4.0	4.0	9
ZF/DF39	160	25	35	66.5	-	102.0	3.5	50	50	1.5	-	6.5
	200	25	35	66.5	-	120.0	3.5	50	50	1.5	-	6.5
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
	200	30	35	79.0	-	121.0	3.5	60	60	4.5	-	10
ZF/DF59, ZB/DB59	160	35	40	88.0	88.0	94.5	3.5	70	70	4.5	4.5	11
ZF/DF59	200	35	40	88.0	-	115.0	3.5	70	70	4.5	-	9
	250	35	40	88.0	-	168.0	4.0	70	70	4.0	-	10.5
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
ZF/DF79, ZB/DB79	250	40	52	113.0	114.5	168.0	4.0	80	80	0.5	2.5	7.5
ZF/DF79	300	40	52	113.0	-	217.0	4.0	80	80	0.5	-	7.5
	350	40	52	113.0	-	238.0	5.0	80	80	0.5	-	8.5
ZF/DF89, ZB/DB89	300	50	62	143.0	143.0	218.0	4.0	100	100	1.5	1.5	8
ZF/DF89	350	50	62	143.0	-	238.0	5.0	100	100	2.5	-	9
	450	50	62	143.0	-	334.0	5.0	100	100	0.5	-	9
ZF/DF109	350	60	65	157.0	-	236.0	5.0	120	120	2.0	-	9
	450	60	65	168.0	-	335.0	5.0	120	120	0	-	9
ZF/DF129	350	70	75	180.0	-	236.0	5.0	140	140	7.5	-	9
	450	70	75	180.0	-	330.0	5.0	140	140	7.5	-	9
	550	70	75	180.0	-	428.0	5.0	140	140	5.0	-	9
ZF/DF149	450	90	100	225	-	330.0	5.0	170	170	2.5	-	10
	550	90	100	225	-	430.0	5.0	170	170	2.5	-	10
ZF/DF169	450	110	120	235	-	330.0	5	210	210	0.5	-	10
	550	110	120	235	-	430.0	5	210	210	0.5	-	10
	660	110	120	235	-	530.0	6.0	210	210	0	-	11
ZF/DF189	550	120	140	274	-	430.0	5	210	210	0	-	10
	660	120	140	274	-	530.0	6	210	210	1	-	11

**Inner contour of the flange design**

Notes regarding the design of the customer's interface.



Gearbox	a1	d	d7	d1	d2	f1	i2	l	l1	l2
<b>ZF/DF helical gearbox with VLplus reinforced bearing system (G30)</b>										
ZF/DF89	300	60	70	143	218	4.0	120	120	1.5	8
	350	60	70	143	238	5.0	120	120	2.5	9
	450	60	70	143	334	5.0	120	120	0.5	9
ZF/DF109	350	70	75	157	236	5.0	140	140	2.0	9
	450	70	75	168	335	5.0	140	140	0	9
ZF/DF129	350	90	95	180	236	5.0	170	170	7.5	10
	450	90	95	180	330	5.0	170	170	7.5	10
	550	90	95	180	428	5.0	170	170	5.0	10
ZF/DF149	550	100	120	225	430	5.0	210	210	5.5	11
ZF/DF169	450	120	140	235	330	5.0	210	210	0.5	10
	550	120	140	235	430	5.0	210	210	0.5	10
	660	120	140	235	530	6.0	210	210	0	11
<b>Helical gearbox EF</b>										
EF39	120	20	35	-	72	3	40	40	6	-
	140	20	35	-	80	3	40	40	6	-
	160	20	35	87	100	3.5	40	40	5.5	6.5
	200	20	35	87	121	3.5	40	40	5.5	6.5
EF49	160	25	40	88	94.5	3.5	50	50	4.5	11
	200	25	40	88	115.0	3.5	50	50	4.5	9
	250	25	40	88	168.0	4.0	50	50	4.0	10.5
EF69	200	30	40	105	115.0	3.5	60	60	4.5	11
	250	30	40	105	168.0	4.0	60	60	4.0	10.5
EF89	250	40	45	113	168.0	4.0	80	80	0.5	7.5
	300	40	45	113	217.0	4.0	80	80	0.5	7.5
	350	40	45	113	238.0	5.0	80	80	0.5	8.5
EF109	300	50	55	143	218.0	4.0	100	100	1.5	8
	350	50	55	143	238.0	5.0	100	100	2.5	9
	450	50	55	143	334.0	5.0	100	100	0.5	9
EF129	350	60	65	157	236.0	5.0	120	120	2.0	9
	450	60	65	168	335.0	5.0	120	120	0	9
EF149	350	70	75	180	236.0	5.0	140	140	7.5	9
	450	70	75	180	330.0	5.0	140	140	7.5	9
	550	70	75	180	428.0	5.0	140	140	5.0	9

## SIMOGEAR gearboxes

### Notes

3

## Parallel shaft gearboxes



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4/53	Parallel shaft gearbox FD../FZ..39	4/167	Protective covers
4/57	Parallel shaft gearbox FD../FZ..49	4/169	Inner contour of the flange design
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4/70	Parallel shaft gearbox FD../FZ..89		
4/75	Parallel shaft gearbox FD../FZ..109		
4/80	Parallel shaft gearbox FD../FZ..129		
4/85	Parallel shaft gearbox FD../FZ..149		
4/90	Parallel shaft gearbox FD../FZ..169		
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	<u>Parallel shaft gearbox with adapter K2</u>		
4/95	FD../FZ..29 to FD../FZ..189		
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	<u>Parallel shaft gearbox with adapter K8</u>		
4/147	FD../FZ..89 to FD../FZ..189		
	<u>Parallel shaft gearbox with adapter K5</u>		
4/148	FD../FZ..29 to FD../FZ..189		
	<u>Parallel shaft gearbox with adapter K3</u>		
4/150	FD../FZ..29 to FD../FZ..189		
	<u>Parallel shaft gearbox with adapter A</u>		
4/152	FD../FZ..29 to FD../FZ..189		
	<u>Parallel shaft gearbox with adapter AZ</u>		
4/154	FD../FZ..29 to FD../FZ..189		

## SIMOGEAR gearboxes

### Parallel shaft gearboxes

#### Orientation

#### SIMOGEAR parallel shaft gearbox F



Fig. 4/1 Parallel shaft gearbox 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	55
FD29 ... FD189 (3-stage)	11	150 ... 19000	32 ... 413	55
FZ.29-Z19 ... FD.189-D69 (4- to 6-stage)	11	150 ... 19000	274 ... 29900	7.5

SIMOGEAR parallel shaft gearboxes are available in the following versions:

#### Gearbox stages

- 2-stage or 3-stage parallel shaft gearboxes
- 4-stage to 6-stage parallel shaft gearboxes 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 with feather key
- Hollow shaft with splined shaft
- Hollow shaft with shrink disk
- Hollow shaft with SIMOLOC assembly system
- Solid shaft with and without feather key





# SIMOGEAR gearboxes

## Parallel shaft gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox							Adapter													Article No.			
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement, see below)	
-	rpm	Nm	N	'	$10^{-4}$	-	K2																
							KS		3.1		5.1	6.1	8.1	10.1									
								4.1			5.2	6.2		10.2									
								4.2															
							K8									813		816		818			
							K5		56		140	180		210	250	280		320	360				
							K3		56		140	180		210	250	280							
							A/AZ			80	90	100	112	132	160	180	200	225	250				
<b>FZ.29</b>																							
<b>56.73</b>	26	150	5220	7.6	0.04	851/15	✓	✓															2KJ3301 - ■ A0 ■ - 0 ■ C2
<b>50.32</b>	29	150	5220	8.0	0.05	1258/25	✓	✓	✓	✓													2KJ3301 - ■ A0 ■ - 0 ■ B2
<b>43.66</b>	33	150	5220	8.0	0.06	2183/50	✓	✓	✓	✓													2KJ3301 - ■ A0 ■ - 0 ■ A2
<b>39.69</b>	37	150	5220	8.0	0.08	2183/55	✓	✓	✓	✓													2KJ3301 - ■ A0 ■ - 0 ■ X1
<b>34.04</b>	43	150	4910	8.1	0.10	851/25	✓	✓	✓	✓													2KJ3301 - ■ A0 ■ - 0 ■ W1
<b>30.95</b>	47	150	4720	8.1	0.12	1702/55	✓	✓	✓	✓													2KJ3301 - ■ A0 ■ - 0 ■ V1
<b>27.13</b>	53	150	4460	8.2	0.14	407/15	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ U1
<b>24.22</b>	60	150	4250	8.3	0.17	1332/55	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ T1
<b>21.58</b>	67	150	4040	8.4	0.20	259/12	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ S1
<b>19.92</b>	73	150	3910	8.4	0.24	259/13	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ R1
<b>17.44</b>	83	150	3680	8.6	0.28	1221/70	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ Q1
<b>15.29</b>	95	150	3470	8.8	0.30	1147/75	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ P1
<b>13.88</b>	104	150	3320	8.9	0.38	111/8	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ N1
<b>13.06</b>	111	150	3230	8.9	0.44	222/17	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ M1
<b>11.51</b>	126	143	3100	8.6	0.50	518/45	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ L1
<b>9.99</b>	145	136	2960	8.8	0.67	999/100	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ K1
<b>9.69</b>	150	143	2660	13.8	0.26	2664/275	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ J1
<b>8.63</b>	168	130	2640	14.0	0.32	259/30	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ H1
<b>7.97</b>	182	120	2630	14.0	0.38	518/65	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ G1
<b>6.98</b>	208	123	2440	14.5	0.46	1221/175	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ F1
<b>6.12</b>	237	114	2370	15.0	0.53	2294/375	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ E1
<b>5.55</b>	261	108	2320	15.3	0.66	111/20	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ D1
<b>5.22</b>	278	106	2300	15.3	0.76	444/85	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ C1
<b>4.60</b>	315	97	2280	15.3	0.92	1036/225	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ B1
<b>4.00</b>	362	91	2250	15.0	1.21	999/250	✓	✓	✓	✓	✓ <sup>2)</sup>												2KJ3301 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Only available for KS adapter

Article No. supplement																								
Shaft design	<b>1 or 9</b>	see page 9/47																						
Adapter size	<b>K4</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>										<b>4</b>	
	<b>K2</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>P</b>	<b>Q</b>									<b>2</b>
	<b>KS</b>		<b>A</b>		<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>																<b>1</b>
			<b>B</b>		<b>F</b>	<b>J</b>	<b>N</b>																	
			<b>C</b>																					
		<b>D</b>																						
	<b>K8</b>									<b>C</b>		<b>D</b>		<b>E</b>									<b>8</b>	
	<b>K5</b>		<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>	<b>F</b>		<b>G</b>	<b>H</b>										<b>5</b>	
	<b>K3</b>		<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>	<b>F</b>													<b>3</b>	
	<b>A/AZ*</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>										<b>9</b>	
Adapter type																								
Gearbox mounting type	<b>A, F, H or D</b>	see page 9/40																						

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox								Adapter											Article No.					
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>		K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement, see below)	
-	rpm	Nm	N	'	10 <sup>-4</sup>	-		K2			80	90	100	112	132	160	180	200	225	250	280	315		
								KS		3.1		5.1	6.1	8.1	10.1									
										3.2		5.2	6.2		10.2									
										4.1														
										4.2														
								K8								813		816		818				
								K5	56		140	180			210	250	280		320	360				
								K3	56		140	180			210	250	280							
								A/AZ		80	90	100	112	132	160	180	200	225	250					

**FD.39**

274.26	5.3	290	5820	6.9	0.04	32637/119	✓	✓															2KJ3402 - ■ A0 ■ - 0 ■ R1
243.26	6	290	5820	7.0	0.05	8514/35	✓	✓	✓	✓													2KJ3402 - ■ A0 ■ - 0 ■ Q1
211.06	6.9	290	5820	7.0	0.06	251163/1190	✓	✓	✓	✓													2KJ3402 - ■ A0 ■ - 0 ■ P1
191.87	7.6	290	5820	7.0	0.07	22833/119	✓	✓	✓	✓													2KJ3402 - ■ A0 ■ - 0 ■ N1
164.56	8.8	290	5820	7.0	0.09	97911/595	✓	✓	✓	✓													2KJ3402 - ■ A0 ■ - 0 ■ M1
149.60	9.7	290	5820	7.0	0.11	17802/119	✓	✓	✓	✓													2KJ3402 - ■ A0 ■ - 0 ■ L1
131.17	11	290	5820	7.0	0.12	15609/119	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ K1
117.08	12	290	5820	7.0	0.15	13932/119	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ J1
104.34	14	290	5820	7.0	0.18	7095/68	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ H1
96.31	15	290	5820	7.0	0.21	21285/221	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ G1
84.32	17	290	5820	7.1	0.25	140481/1666	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ F1
73.93	20	290	5820	7.1	0.24	43989/595	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ E1
67.07	22	290	5820	7.2	0.34	63855/952	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ D1
63.13	23	290	5820	7.2	0.40	127710/2023	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ C1
55.65	26	290	5820	7.2	0.44	946/17	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ B1
48.29	30	290	5820	7.2	0.59	114939/2380	✓	✓	✓	✓	√ <sup>2)</sup>	√ <sup>2)</sup> <sub>3)</sub>											2KJ3402 - ■ A0 ■ - 0 ■ A1

- 1) Only in conjunction with reduced-backlash version
- 2) Not available for adapter A/AZ
- 3) Only available for KS adapter

Article No. supplement																				
Shaft design	1 or 9	see page 9/47																		
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N							4
	K2				D	E	F	G	H	J	K	L	M	N	P	Q			2	
	KS	A				E	H	K	M								1			
		B				F	J	N												
		C																		
	K8									C	D	E							8	
	K5				A	B	C	D	E	F	G	H							5	
	K3				A	B	C	D	E	F							3			
	A/AZ*				D	E	F	G	H	J	K	L	M	N				9		
Adapter type																				
Gearbox mounting type	A, F, H or D	see page 9/40																		

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



## Selection and ordering data

Gearbox							Adapter													Article No.																		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	180	200	225	250																			(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-	K2			80	90	100	112	132	160	180	200	225	250	280	315																	
							KS		3.1		5.1	6.1	8.1	10.1																								
									3.2		5.2	6.2		10.2																								
									4.1																													
									4.2																													
							K8									813																						
							K5		56		140	180		210	250	280			816																			
							K3		56		140	180		210	250	280																						
							A/AZ			80	90	100	112	132	160	180	200	225	250																			
<b>FD.49</b>																																						
<b>330.98</b>	4.4	480	7960	6.2	0.06	26809/81		✓	✓																											2KJ3403 - ■ A0 ■ - 0 ■ S1		
<b>294.29</b>	4.9	480	7960	6.3	0.07	13243/45		✓	✓	✓	✓																									2KJ3403 - ■ A0 ■ - 0 ■ R1		
<b>258.40</b>	5.6	480	7960	6.3	0.08	1292/5		✓	✓	✓	✓																									2KJ3403 - ■ A0 ■ - 0 ■ Q1		
<b>234.91</b>	6.2	480	7960	6.3	0.10	2584/11		✓	✓	✓	✓																									2KJ3403 - ■ A0 ■ - 0 ■ P1		
<b>200.98</b>	7.2	480	7960	6.3	0.12	9044/45		✓	✓	✓	✓																									2KJ3403 - ■ A0 ■ - 0 ■ N1		
<b>182.71</b>	7.9	480	7960	6.3	0.14	18088/99		✓	✓	✓	✓																									2KJ3403 - ■ A0 ■ - 0 ■ M1		
<b>161.50</b>	9	480	7960	6.3	0.17	323/2		✓	✓	✓	✓	✓	✓																							2KJ3403 - ■ A0 ■ - 0 ■ L1		
<b>146.82</b>	9.9	480	7960	6.3	0.22	1615/11		✓	✓	✓	✓	✓	✓																							2KJ3403 - ■ A0 ■ - 0 ■ K1		
<b>128.60</b>	11	480	7960	6.3	0.26	13889/108		✓	✓	✓	✓	✓	✓																							2KJ3403 - ■ A0 ■ - 0 ■ J1		
<b>118.71</b>	12	480	7960	6.3	0.31	13889/117		✓	✓	✓	✓	✓	✓																							2KJ3403 - ■ A0 ■ - 0 ■ H1		
<b>105.10</b>	14	480	7960	6.4	0.37	13243/126		✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3403 - ■ A0 ■ - 0 ■ G1		
<b>87.48</b>	17	480	7960	6.4	0.50	4199/48		✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3403 - ■ A0 ■ - 0 ■ F1		
<b>82.33</b>	18	480	7960	6.4	0.59	247/3		✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3403 - ■ A0 ■ - 0 ■ E1		
<b>73.77</b>	20	480	7630	6.4	0.66	11951/162		✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3403 - ■ A0 ■ - 0 ■ D1		
<b>62.81</b>	23	480	7070	6.4	0.86	2261/36		✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3403 - ■ A0 ■ - 0 ■ C1		
<b>53.83</b>	27	480	6560	6.5	1.13	323/6				✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3403 - ■ A0 ■ - 0 ■ B1		
<b>46.36</b>	31	480	6080	6.5	1.46	10013/216				✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3403 - ■ A0 ■ - 0 ■ A1		

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

Article No. supplement																				
Shaft design	1 or 9		see page 9/47																	
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N							4
	K2			D	E	F	G	H	J	K	L	M	N	P	Q			2		
	KS		A		E	H	K	M										1		
			B		F	J	N													
			C																	
	D																			
Adapter type	K8									C	D	E							8	
	K5		A		B	C		D	E	F		G	H					5		
	K3		A		B	C		D	E	F							3			
	A/AZ*				D	E	F	G	H	J	K	L	M	N				9		
Gearbox mounting type	A, F, H or D		see page 9/40																	

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

# SIMOGEAR gearboxes

## Parallel shaft gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox								Adapter											Article No.					
<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>		K4	63	71	80	90	100	112	132	160	180	200	225	250				(Article No. supplement, see below)
-								K2			80	90	100	112	132	160	180	200	225	250	280	315		
								KS		3.1		5.1	6.1	8.1	10.1									
										3.2		5.2	6.2		10.2									
										4.1														
										4.2														
								K8								813			816		818			
								K5		56		140	180		210	250	280		320	360				
								K3		56		140	180		210	250	280							
								A/AZ			80	90	100	112	132	160	180	200	225	250				

FZ.49							Adapter																Article No.		
<b>61.43</b>	24	480	6990	6.0	0.18	1843/30	✓	✓	✓	✓															2KJ3303 - A0 - 0 X1
<b>55.85</b>	26	480	6680	6.0	0.22	1843/33	✓	✓	✓	✓															2KJ3303 - A0 - 0 W1
<b>47.50</b>	31	480	6160	6.0	0.27	95/2	✓	✓	✓	✓															2KJ3303 - A0 - 0 V1
<b>43.18</b>	34	480	5870	6.0	0.33	475/11	✓	✓	✓	✓															2KJ3303 - A0 - 0 U1
<b>38.53</b>	38	480	5530	6.1	0.39	1387/36	✓	✓	✓	✓	✓	✓													2KJ3303 - A0 - 0 T1
<b>34.55</b>	42	480	5220	6.1	0.47	380/11	✓	✓	✓	✓	✓	✓													2KJ3303 - A0 - 0 S1
<b>31.14</b>	47	480	4940	6.2	0.55	1121/36	✓	✓	✓	✓	✓	✓													2KJ3303 - A0 - 0 R1
<b>28.74</b>	50	480	4730	6.1	0.65	1121/39	✓	✓	✓	✓	✓	✓													2KJ3303 - A0 - 0 Q1
<b>26.24</b>	55	480	4490	6.2	0.77	551/21	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 P1
<b>21.77</b>	67	480	4030	6.3	0.99	1045/48	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 N1
<b>20.49</b>	71	480	3890	6.3	1.15	1045/51	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 M1
<b>19.35</b>	75	480	3750	6.3	1.30	1045/54	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 L1
<b>16.47</b>	88	480	3390	6.4	1.61	247/15	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 K1
<b>14.11</b>	103	480	3060	6.6	1.99	931/66			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 J1
<b>12.40</b>	117	480	3010	6.7	2.50	893/72			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 H1
<b>10.46</b>	139	480	3140	6.8	3.10	722/69			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 G1
<b>9.12</b>	159	480	3210	7.4	4.20	228/25			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 F1
<b>8.40</b>	173	450	3010	9.3	2.20	42/5	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 E1
<b>7.20</b>	201	450	3070	9.6	2.80	1029/143			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 D1
<b>6.33</b>	229	430	3090	9.9	3.50	329/52			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 C1
<b>5.34</b>	272	400	3080	10.2	4.60	1596/299			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 B1
<b>4.65</b>	312	375	3060	11.3	6.10	1512/325			✓	✓	✓	✓	✓	✓ <sup>2)</sup>											2KJ3303 - A0 - 0 A1

1) Only in conjunction with reduced-backlash version  
 2) Not available for adapter A/AZ

Article No. supplement		see page 9/47																				
Shaft design	1 or 9																					
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N								4	
	K2				D	E	F	G	H	J	K	L	M	N	P	Q						2
	KS	A			E	H	J	K	M								1					
		B			F	J		N														
		C																				
K8									C	D	E						8					
K5	A			B	C	D	E	F	G	H						5						
K3	A			B	C	D	E	F						3								
A/AZ*				D	E	F	G	H	J	K	L	M	N						9			
Adapter type																						
Gearbox mounting type	A, F, H or D	see page 9/40																				

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

Selection and ordering data

Gearbox							Adapter												Article No. (Article No. supplement, see below)			
i	n <sub>2</sub>	T <sub>2N</sub>	F <sub>R2</sub>	φ <sup>1)</sup>	J <sub>G</sub>	R <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	180	200	225		250	280	315
-	rpm	Nm	N	'	10 <sup>-4</sup>	-	K2			80	90	100	112	132	160	180	200	225	250			
							KS	3.1		5.1	6.1	8.1	10.1									
								3.2		5.2	6.2		10.2									
								4.1														
								4.2														
							K8								813		816		818			
							K5	56		140	180		210	250	280		320	360				
							K3	56		140	180		210	250	280							
							A/AZ		80	90	100	112	132	160	180	200	225	250				
<b>FD.69</b>																						
348.40	4.2	600	10800	6.0	0.06	28220/81	✓	✓													2KJ3404 - A0 - 0 S1	
309.78	4.7	600	10800	6.0	0.07	2788/9	✓	✓	✓	✓												2KJ3404 - A0 - 0 R1
272.00	5.3	600	10800	6.0	0.08	272/1	✓	✓	✓	✓												2KJ3404 - A0 - 0 Q1
247.27	5.9	600	10800	6.0	0.10	2720/11	✓	✓	✓	✓												2KJ3404 - A0 - 0 P1
211.56	6.9	600	10800	6.0	0.12	1904/9	✓	✓	✓	✓												2KJ3404 - A0 - 0 N1
192.32	7.5	600	10800	6.0	0.14	19040/99	✓	✓	✓	✓												2KJ3404 - A0 - 0 M1
170.00	8.5	600	10800	6.1	0.17	170/1	✓	✓	✓	✓	✓	✓										2KJ3404 - A0 - 0 L1
154.55	9.4	600	10800	6.1	0.22	1700/11	✓	✓	✓	✓	✓	✓										2KJ3404 - A0 - 0 K1
135.37	11	600	10800	6.1	0.26	3655/27	✓	✓	✓	✓	✓	✓										2KJ3404 - A0 - 0 J1
124.96	12	600	10800	6.1	0.31	14620/117	✓	✓	✓	✓	✓	✓	✓									2KJ3404 - A0 - 0 H1
110.63	13	600	10800	6.1	0.38	6970/63	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3404 - A0 - 0 G1
92.08	16	600	10800	6.1	0.51	1105/12	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3404 - A0 - 0 F1
86.67	17	600	10800	6.1	0.60	260/3	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3404 - A0 - 0 E1
77.65	19	600	10400	6.2	0.66	6290/81	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3404 - A0 - 0 D1
66.11	22	600	9720	6.2	0.87	595/9	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3404 - A0 - 0 C1
56.67	26	600	9050	6.2	1.15	170/3			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3404 - A0 - 0 B1
48.80	30	600	8430	6.2	1.47	2635/54			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3404 - A0 - 0 A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

Article No. supplement

Shaft design	<b>1 or 9</b>	see page 9/47																								
Adapter size	<b>K4</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>									4				
	<b>K2</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>P</b>	<b>Q</b>								2			
	<b>KS</b>	<b>A</b>		<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>																1			
		<b>B</b>		<b>F</b>	<b>J</b>	<b>N</b>																				
	<b>C</b>																									
	<b>D</b>																									
	<b>K8</b>														<b>C</b>	<b>D</b>	<b>E</b>					8				
	<b>K5</b>	<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>	<b>F</b>		<b>G</b>	<b>H</b>										5				
	<b>K3</b>	<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>	<b>F</b>													3				
	<b>A/AZ*</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>									9				

Adapter type

Gearbox mounting type

**A, F, H or D**

see page 9/40

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



## Selection and ordering data

Gearbox							Adapter											Article No.						
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement, see below)		
-	rpm	Nm	N	'	$10^{-4}$	-	K2			80	90	100	112	132	160	180	200	225	250					
					$\text{kgm}^2$		KS		3.1		5.1	6.1	8.1	10.1										
									3.2		5.2	6.2		10.2										
									4.1															
									4.2															
							K8								813		816		818					
							K5		56		140	180		210	250	280		320	360					
							K3		56		140	180		210	250	280								
							A/AZ			80	90	100	112	132	160	180	200	225	250					
<b>FD.79</b>																								
357.00	4.1	1000	13600	5.6	0.17	57133/160			✓	✓	✓												2KJ3405 - ■ A0 ■ - 0 ■ S1	
324.62	4.5	1000	13600	5.6	0.20	57133/176			✓	✓	✓													2KJ3405 - ■ A0 ■ - 0 ■ R1
276.09	5.3	1000	13600	5.6	0.25	8835/32			✓	✓	✓													2KJ3405 - ■ A0 ■ - 0 ■ Q1
250.99	5.8	1000	13600	5.6	0.30	44175/176			✓	✓	✓													2KJ3405 - ■ A0 ■ - 0 ■ P1
223.94	6.5	1000	13600	5.6	0.35	42997/192			✓	✓	✓	✓	✓											2KJ3405 - ■ A0 ■ - 0 ■ N1
200.80	7.2	1000	13600	5.6	0.42	8835/44			✓	✓	✓	✓	✓											2KJ3405 - ■ A0 ■ - 0 ■ M1
180.99	8	1000	13600	5.6	0.49	34751/192			✓	✓	✓	✓	✓											2KJ3405 - ■ A0 ■ - 0 ■ L1
167.07	8.7	1000	13600	5.6	0.58	34751/208			✓	✓	✓	✓	✓											2KJ3405 - ■ A0 ■ - 0 ■ K1
152.51	9.5	1000	13600	5.6	0.69	17081/112			✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ J1
126.54	11	1000	13600	5.7	0.87	32395/256			✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ H1
119.10	12	1000	13600	5.7	1.01	32395/272			✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ G1
112.48	13	1000	13600	5.7	1.15	32395/288			✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ F1
95.71	15	1000	13600	5.7	1.39	7657/80			✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ E1
81.99	18	1000	13600	5.7	1.70	28861/352				✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ D1
72.09	20	1000	13600	5.7	2.10	27683/384				✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ C1
60.82	24	1000	13600	5.7	2.60	11191/184				✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ B1
53.01	27	1000	13600	5.8	3.50	5301/100				✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3405 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

Article No. supplement		see page 9/47																
Shaft design	1 or 9																	
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N					4
	K2			D	E	F	G	H	J	K	L	M	N	P	Q			2
	KS		A		E	H	K	M										1
			B		F	J	N											
			C															
		D																
	K8									C		D		E				
K5		A		B	C		D	E	F		G	H					5	
K3		A		B	C		D	E	F							3		
A/AZ*				D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	A, F, H or D	see page 9/40																

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



# SIMOGEAR gearboxes

## Parallel shaft gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox							Adapter											Article No.					
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	180	200	225	250				(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-	K2			80	90	100	112	132	160	180	200	225	250	280	315		
							KS		3.1		5.1	6.1	8.1	10.1									
									3.2		5.2	6.2		10.2									
									4.1														
									4.2														
							K8									813		816		818			
							K5		56		140	180		210	250	280		320	360				
							K3		56		140	180		210	250	280							
							A/AZ			80	90	100	112	132	160	180	200	225	250				

#### FZ.79

53.55	27	1000	13600	5.6	0.56	589/11	✓	✓	✓													2KJ3305 - ■ A0 ■ - 0 ■ X1
48.03	30	1000	13600	5.6	0.77	1729/36	✓	✓	✓	✓	✓											2KJ3305 - ■ A0 ■ - 0 ■ W1
43.18	34	1000	13600	5.7	0.87	475/11	✓	✓	✓	✓	✓											2KJ3305 - ■ A0 ■ - 0 ■ V1
39.06	37	1000	13600	5.7	0.97	703/18	✓	✓	✓	✓	✓											2KJ3305 - ■ A0 ■ - 0 ■ U1
36.05	40	1000	13600	5.7	1.15	1406/39	✓	✓	✓	✓	✓											2KJ3305 - ■ A0 ■ - 0 ■ T1
33.02	44	1000	13600	5.7	1.49	1387/42	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ S1
27.71	52	1000	13600	5.7	1.62	665/24	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ R1
26.08	56	1000	13600	5.7	1.85	1330/51	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ Q1
23.93	61	1000	13600	5.7	2.0	646/27	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ P1
20.90	69	1000	13600	5.7	2.9	209/10	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ N1
18.71	77	1000	12900	5.7	3.6	1235/66			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ M1
16.36	89	1000	12200	5.7	4.2	589/36			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ L1
14.04	103	1000	11400	5.8	4.7	323/23			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ K1
12.41	117	1000	10800	6.2	6.0	931/75			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ J1
10.56	137	1000	10100	6.3	7.8	95/9					✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ H1
9.05	160	1000	9980	6.5	10	190/21					✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ G1
8.51	170	720	10300	8.9	4.6	468/55			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ F1
7.44	195	725	9770	9.2	5.5	186/25			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ E1
6.39	227	720	9690	9.3	6.5	3672/575			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ D1
5.64	257	700	9620	10.2	8.3	3528/625			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ C1
4.80	302	650	9480	10.6	11	24/5					✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ B1
4.11	353	605	9310	11.0	15	144/35					✓	✓	✓ <sup>2)</sup>									2KJ3305 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

#### Article No. supplement

Shaft design	1 or 9	see page 9/47																					
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N								4		
	K2			D	E	F	G	H	J	K	L	M	N	P	Q								2
	KS	A			E	H	K	M								1							
		B			F	J	N																
K8									C		D		E								8		
K5			A		B	C		D	E	F		G	H								5		
K3			A		B	C		D	E	F								3					
A/AZ*				D	E	F	G	H	J	K	L	M	N								9		
Adapter type																							
Gearbox mounting type	A, F, H or D	see page 9/40																					

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Selection and ordering data**

Gearbox							Adapter											Article No.				
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-	K2			80	90	100	112	132	160	180	200	225	250			
					$kgm^2$		KS		3.1		5.1	6.1	8.1	10.1								
									3.2		5.2	6.2		10.2								
									4.1													
									4.2													
							K8									813		816		818		
							K5	56		140	180			210	250	280		320	360			
							K3	56		140	180			210	250	280						
							A/AZ		80	90	100	112	132	160	180	200	225	250				
<b>FD.89</b>																						
<b>335.30</b>	4.3	1850	17400	5.1	0.42	370512/1105				✓	✓											2KJ3406 - A0 - 0 S1
<b>304.82</b>	4.8	1850	17400	5.1	0.51	741024/2431				✓	✓											2KJ3406 - A0 - 0 R1
<b>273.41</b>	5.3	1850	17400	5.1	0.71	4648/17				✓	✓	✓	✓									2KJ3406 - A0 - 0 Q1
<b>245.82</b>	5.9	1850	17400	5.1	0.79	597600/2431				✓	✓	✓	✓									2KJ3406 - A0 - 0 P1
<b>222.33</b>	6.5	1850	17400	5.1	0.88	49136/221				✓	✓	✓	✓									2KJ3406 - A0 - 0 N1
<b>205.23</b>	7.1	1850	17400	5.1	1.03	589632/2873				✓	✓	✓	✓									2KJ3406 - A0 - 0 M1
<b>188.00</b>	7.7	1850	17400	5.1	1.35	290832/1547				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 L1
<b>157.74</b>	9.2	1850	17400	5.1	1.43	34860/221				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 K1
<b>148.46</b>	9.8	1850	17400	5.1	1.64	557760/3757				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 J1
<b>136.21</b>	11	1850	17400	5.1	1.79	5312/39				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 H1
<b>118.98</b>	12	1850	17400	5.1	2.6	131472/1105				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 G1
<b>106.52</b>	14	1850	17400	5.1	3.1	19920/187				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 F1
<b>93.14</b>	16	1850	17400	5.1	3.7	20584/221				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 E1
<b>79.95</b>	18	1850	17400	5.2	4.0	23904/299				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 D1
<b>70.67</b>	21	1850	17400	5.2	5.1	390432/5525				✓	✓	✓	✓	✓	✓							2KJ3406 - A0 - 0 C1
<b>60.09</b>	24	1850	17400	5.3	6.5	13280/221						✓	✓	✓	✓							2KJ3406 - A0 - 0 B1
<b>51.51</b>	28	1850	17400	5.3	8.5	79680/1547						✓	✓	✓	✓							2KJ3406 - A0 - 0 A1

1) Only in conjunction with reduced-backlash version

Article No. supplement															
Shaft design	1 or 9		see page 9/47												
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N	4	
	K2			D	E	F	G	H	J	K	L	M	N	P	2
	KS	A			E	H	K	M							1
		B			F	J	N								
		C													
	K8									C		D	E	8	
	K5		A		B	C		D	E	F		G	H	5	
K3		A		B	C		D	E	F				3		
A/AZ*			D	E	F	G	H	J	K	L	M	N	9		
Adapter type															
Gearbox mounting type	A, F, H or D		see page 9/40												

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

# SIMOGEAR gearboxes

## Parallel shaft gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox								Adapter														Article No.		
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>F</i> <sub>ex</sub>		K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315		(Article No. supplement, see below)
-	rpm	Nm	N	'	10 <sup>-4</sup>	-																		
					<i>kgm</i> <sup>2</sup>																			
								K8									813		816		818			
								K5	56		140	180			210	250	280		320	360				
								K3	56		140	180			210	250	280							
								A/AZ		80	90	100	112	132	160	180	200	225	250					

#### FZ.89

<b>61.72</b>	23	1850	17400	4.8	1.38	2407/39																			2KJ3306 - <b>A0</b> - 0 <b>B2</b>
<b>55.72</b>	26	1850	17400	4.8	1.51	7968/143																			2KJ3306 - <b>A0</b> - 0 <b>A2</b>
<b>50.54</b>	29	1850	17400	4.8	1.77	7885/156																			2KJ3306 - <b>A0</b> - 0 <b>X1</b>
<b>46.66</b>	31	1850	17400	4.8	2.1	7885/169																			2KJ3306 - <b>A0</b> - 0 <b>W1</b>
<b>42.41</b>	34	1850	17400	4.9	2.4	7719/182																			2KJ3306 - <b>A0</b> - 0 <b>V1</b>
<b>35.91</b>	40	1850	17400	4.9	2.9	3735/104																			2KJ3306 - <b>A0</b> - 0 <b>U1</b>
<b>33.80</b>	43	1850	17400	4.9	3.0	7470/221																			2KJ3306 - <b>A0</b> - 0 <b>T1</b>
<b>31.21</b>	46	1850	17400	5.0	4.5	3652/117																			2KJ3306 - <b>A0</b> - 0 <b>S1</b>
<b>27.77</b>	52	1850	17400	5.0	5.5	7221/260																			2KJ3306 - <b>A0</b> - 0 <b>R1</b>
<b>24.67</b>	59	1850	17400	5.0	6.7	7055/286																			2KJ3306 - <b>A0</b> - 0 <b>Q1</b>
<b>22.08</b>	66	1850	17400	5.1	6.7	6889/312																			2KJ3306 - <b>A0</b> - 0 <b>P1</b>
<b>18.88</b>	77	1850	17200	5.1	7.9	5644/299																			2KJ3306 - <b>A0</b> - 0 <b>N1</b>
<b>16.86</b>	86	1850	16400	5.4	10	5478/325																			2KJ3306 - <b>A0</b> - 0 <b>M1</b>
<b>14.90</b>	97	1850	15500	5.5	12	581/39																			2KJ3306 - <b>A0</b> - 0 <b>L1</b>
<b>13.07</b>	111	1850	14600	5.3	16	3569/273																			2KJ3306 - <b>A0</b> - 0 <b>K1</b>
<b>11.38</b>	127	1850	14600	5.3	20	3403/299																			2KJ3306 - <b>A0</b> - 0 <b>J1</b>
<b>9.73</b>	149	1850	14600	5.5	26	2656/273																			2KJ3306 - <b>A0</b> - 0 <b>H1</b>
<b>8.33</b>	174	1740	14500	5.6	33	2490/299																			2KJ3306 - <b>A0</b> - 0 <b>G1</b>
<b>7.60</b>	191	1100	14100	9.0	14	4752/625																			2KJ3306 - <b>A0</b> - 0 <b>F1</b>
<b>6.72</b>	216	1110	14000	9.2	17	168/25																			2KJ3306 - <b>A0</b> - 0 <b>E1</b>
<b>5.90</b>	246	1110	13800	9.2	23	1032/175																			2KJ3306 - <b>A0</b> - 0 <b>D1</b>
<b>5.13</b>	283	1110	13600	9.2	28	2952/575																			2KJ3306 - <b>A0</b> - 0 <b>C1</b>
<b>4.39</b>	330	1060	13300	9.2	39	768/175																			2KJ3306 - <b>A0</b> - 0 <b>B1</b>
<b>3.76</b>	386	985	12900	9.5	50	432/115																			2KJ3306 - <b>A0</b> - 0 <b>A1</b>

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

#### Article No. supplement

Shaft design	<b>1 or 9</b>		see page 9/47																			
Adapter size	<b>K4</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>								<b>4</b>	
	<b>K2</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>P</b>	<b>Q</b>							<b>2</b>
	<b>KS</b>		<b>A</b>		<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>											<b>1</b>			
			<b>B</b>		<b>F</b>	<b>J</b>	<b>N</b>															
			<b>C</b>																			
Adapter type	<b>K8</b>									<b>C</b>	<b>D</b>	<b>E</b>								<b>8</b>		
	<b>K5</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>								<b>5</b>					
	<b>K3</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>								<b>3</b>							
	<b>A/AZ*</b>		<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>					<b>9</b>					

Adapter type

Gearbox mounting type **A, F, H or D**

see page 9/40

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox								Adapter													Article No.						
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^1$	$J_G$	$R_{ex}$		<b>K4</b>	63	71	80	90	100	112	132	160	180	200	225	250					(Article No. supplement, see below)		
-	rpm	Nm	N	'	$10^{-4}$	-		<b>K2</b>			80	90	100	112	132	160	180	200	225	250	280	315					
								<b>KS</b>			3.1	5.1	6.1	8.1	10.1												
											3.2	5.2	6.2		10.2												
											4.1																
											4.2																
								<b>K8</b>									813		816		818						
								<b>K5</b>		56	140	180			210	250	280		320	360							
								<b>K3</b>		56	140	180			210	250	280										
								<b>A/AZ</b>			80	90	100	112	132	160	180	200	225	250							
<b>FD.109</b>																											
410.00	3.5	3100	25000	6.5	1.27	332021/810						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓											2KJ3407 - ■ A0 ■ - 0 ■ T1		
370.00	3.9	3100	25000	6.5	1.37	183184/495						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓											2KJ3407 - ■ A0 ■ - 0 ■ S1		
335.70	4.3	3100	25000	6.5	1.61	217531/648						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓											2KJ3407 - ■ A0 ■ - 0 ■ R1		
309.87	4.7	3100	25000	6.5	1.89	217531/702						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓											2KJ3407 - ■ A0 ■ - 0 ■ Q1		
281.68	5.1	3100	25000	6.5	2.2	354919/1260						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ P1		
238.52	6.1	3100	25000	6.5	2.6	11449/48						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ N1		
224.49	6.5	3100	25000	6.5	2.6	11449/51						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ M1		
207.31	7	3100	25000	6.5	4.0	251878/1215						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ L1		
184.46	7.9	3100	25000	6.5	5.0	332021/1800						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ K1		
163.83	8.9	3100	25000	6.5	5.9	194633/1188						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ J1		
146.65	9.9	3100	25000	6.5	5.9	950267/6480						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ H1		
125.37	12	3100	25000	6.5	6.7	389266/3105						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ G1		
111.95	13	3100	25000	6.5	8.6	125939/1125						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓									2KJ3407 - ■ A0 ■ - 0 ■ F1		
98.94	15	3100	25000	6.5	9.6	80143/810						✓ <sup>2)</sup>	✓	✓	✓										2KJ3407 - ■ A0 ■ - 0 ■ E1		
86.83	17	3100	25000	6.5	14	492307/5670						✓ <sup>2)</sup>	✓	✓	✓										2KJ3407 - ■ A0 ■ - 0 ■ D1		
75.59	19	3100	25000	6.5	16	469409/6210						✓ <sup>2)</sup>	✓	✓	✓										2KJ3407 - ■ A0 ■ - 0 ■ C1		
64.62	22	3100	25000	6.5	21	183184/2835						✓ <sup>2)</sup>	✓	✓	✓										2KJ3407 - ■ A0 ■ - 0 ■ B1		
55.31	26	3100	25000	6.5	25	11449/207						✓ <sup>2)</sup>	✓	✓	✓										2KJ3407 - ■ A0 ■ - 0 ■ A1		

1) Only in conjunction with reduced-backlash version  
2) Not available for adapter A/AZ

<b>Article No. supplement</b>																												
Shaft design	1 or 9												see page 9/47															
Adapter size	<b>K4</b>	B	C	D	E	F	G	H	J	K	L	M	N															4
	<b>K2</b>				D	E	F	G	H	J	K	L	M	N	P	Q												2
	<b>KS</b>	A				E	H	K	M																			1
		B				F	J	N																				
		C																										
		D																										
	<b>K8</b>											C	D	E												8		
	<b>K5</b>	A			B	C	D	E	F	G	H																	5
	<b>K3</b>	A			B	C	D	E	F																			3
	<b>A/AZ*</b>				D	E	F	G	H	J	K	L	M	N														9
Adapter type																												
Gearbox mounting type	A, F, H or D												see page 9/40															

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



**Selection and ordering data**

Gearbox								Adapter													Article No.																	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^1$	$J_G$	$F_{ex}$		K4	63	71	80	90	100	112	132	160	180	200	225	250																		(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-		K2			80	90	100	112	132	160	180	200	225	250	280	315																
						$kgm^2$		KS		3.1		5.1	6.1	8.1	10.1																							
										3.2		5.2	6.2		10.2																							
										4.1																												
										4.2																												
								K8									813																					
								K5		56	140	180			210	250	280																					
								K3		56	140	180			210	250	280																					
								A/AZ			80	90	100	112	132	160	180	200	225	250																		
<b>FD.129</b>																																						
413.00	3.5	4850	37200	5.5	3.3	9911/24						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓																						2KJ3408 - ■ A0 ■ - 0 ■ T1		
381.00	3.8	4850	37200	5.5	3.9	9911/26						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓																							2KJ3408 - ■ A0 ■ - 0 ■ S1	
351.00	4.1	4850	37200	5.5	4.5	34397/98						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ R1	
299.31	4.8	4850	37200	5.5	5.6	67045/224						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ Q1	
281.70	5.1	4850	37200	5.5	6.4	67045/238						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ P1	
261.42	5.5	4850	37200	5.5	6.9	65879/252						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ N1	
231.12	6.3	4850	37200	5.5	8.4	64713/280						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ M1	
206.32	7	4850	37200	5.5	10	5777/28						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ L1	
185.66	7.8	4850	37200	5.5	12	62381/336						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ K1	
161.14	9	4850	37200	5.5	14	51887/322						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ J1	
144.92	10	4850	37200	5.5	16	50721/350						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ H1	
126.66	11	4850	37200	5.5	19	42559/336							✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ G1	
113.03	13	4850	37200	5.5	23	11077/98							✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ F1	
99.58	15	4850	37200	5.5	27	32065/322							✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ E1	
87.25	17	4850	37200	5.5	32	12826/147							✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ D1	
76.04	19	4850	37200	5.5	37	1749/23							✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ C1	
69.40	21	4850	37200	5.5	44	2915/42							✓ <sup>2)</sup>	✓	✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ B1	
59.75	24	4850	37200	5.5	53	19239/322									✓	✓																					2KJ3408 - ■ A0 ■ - 0 ■ A1	

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

**Article No. supplement**

Shaft design	1 or 9	see page 9/47																																																												
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N																											4																						
	K2			D	E	F	G	H	J	K	L	M	N	P	Q																									2																						
	KS	A		E	H	K	M																																	1																						
		B		F	J	N																																																								
C																																																														
	D																																																													
Adapter type	K8																C	D	E																			8																								
	K5		A		B	C		D	E	F		G	H																										5																							
	K3		A		B	C		D	E	F																													3																							
	A/AZ*				D	E	F	G	H	J	K	L	M	N																										9																						
Gearbox mounting type	A, F, H or D	see page 9/40																																																												

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

# SIMOGEAR gearboxes

## Parallel shaft gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox							Adapter														Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^1$	$J_G$	$F_{ex}$	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement, see below)	
-	rpm	Nm	N	'	$10^{-4}$	-	K2			80	90	100	112	132	160	180	200	225	250	280	315		
							KS		3.1		5.1	6.1	8.1	10.1									
									3.2		5.2	6.2		10.2									
									4.1														
									4.2														
							K8									813		816		818			
							K5	56		140	180			210	250	280		320	360				
							K3	56		140	180			210	250	280							
							A/AZ		80	90	100	112	132	160	180	200	225	250					
<b>FZ.129</b>																							
<b>69.20</b>	21	4850	37200	5.1	7.7	13563/196					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ A2	
<b>59.22</b>	24	4850	37200	5.1	9.7	6633/112					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ X1	
<b>55.74</b>	26	4850	37200	5.1	11	6633/119					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ W1	
<b>52.25</b>	28	4850	36600	5.1	12	209/4					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ V1	
<b>46.32</b>	31	4850	34800	5.1	15	12969/280					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ U1	
<b>41.14</b>	35	4850	33100	5.1	18	288/7					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ T1	
<b>37.12</b>	39	4850	31700	5.1	21	297/8					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ S1	
<b>32.90</b>	44	4850	30100	5.2	26	10593/322					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓							2KJ3308 - ■ A0 ■ - 0 ■ R1	
<b>29.13</b>	50	4850	28500	5.3	29	10197/350					✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓						2KJ3308 - ■ A0 ■ - 0 ■ Q1	
<b>25.93</b>	56	4850	27100	5.3	35	363/14					✓ <sup>2)</sup>	✓	✓	✓	✓	✓						2KJ3308 - ■ A0 ■ - 0 ■ P1	
<b>23.23</b>	62	4850	25800	5.3	41	2277/98					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓					2KJ3308 - ■ A0 ■ - 0 ■ N1	
<b>20.60</b>	70	4850	24400	5.3	49	6633/322					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓					2KJ3308 - ■ A0 ■ - 0 ■ M1	
<b>18.18</b>	80	4850	23000	5.4	60	891/49					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ L1	
<b>15.99</b>	91	4800	21700	5.4	73	2574/161					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ K1	
<b>14.48</b>	100	4690	21000	5.5	83	1419/98					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ J1	
<b>12.61</b>	115	4530	20100	5.5	101	4059/322							✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ H1	
<b>10.34</b>	140	4320	20400	5.5	135	1881/182							✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ G1	
<b>9.80</b>	148	3630	19600	8.1	64	2479/253					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓					2KJ3308 - ■ A0 ■ - 0 ■ F1	
<b>8.65</b>	168	3640	19700	8.1	79	666/77					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ E1	
<b>7.60</b>	191	3620	19800	8.1	97	1924/253					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ D1	
<b>6.89</b>	210	3630	19700	8.2	112	1591/231					✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ C1	
<b>6.00</b>	242	3640	19600	8.3	140	1517/253							✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ B1	
<b>4.92</b>	295	3030	19300	8.5	192	703/143							✓	✓	✓	✓	✓	✓ <sup>2)</sup>				2KJ3308 - ■ A0 ■ - 0 ■ A1	

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

#### Article No. supplement

Shaft design	1 or 9		see page 9/47																							
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N									4				
	K2			D	E	F	G	H	J	K	L	M	N	P	Q								2			
	KS		A		E	H	K	M															1			
			B		F	J	N																			
			C																							
	D																									
Adapter type	K8								C		D		E									8				
	K5		A		B	C		D	E	F		G	H									5				
	K3		A		B	C		D	E	F												3				
	A/AZ*				D	E	F	G	H	J	K	L	M	N									9			
Gearbox mounting type	A, F, H or D		see page 9/40																							

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox							Adapter											Article No.					
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>F</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement, see below)	
-	rpm	Nm	N	'	10 <sup>-4</sup>	-	K2			80	90	100	112	132	160	180	200	225	250				
							KS		3.1		5.1	6.1	8.1	10.1									
									3.2		5.2	6.2		10.2									
									4.1														
									4.2														
							K8								813		816		818				
							K5	56		140	180			210	250	280		320	360				
							K3	56		140	180			210	250	280							
							A/AZ		80	90	100	112	132	160	180	200	225	250					
<b>FD.149</b>																							
377.00	3.8	8000	65000	4.8	7.1	18495/49						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 W1	
323.04	4.5	8000	65000	4.8	9	9045/28						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 V1	
304.03	4.8	8000	65000	4.8	10	36180/119						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 U1	
285.00	5.1	8000	65000	4.8	11	285/1						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 T1	
252.64	5.7	8000	65000	4.8	14	3537/14						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 S1	
224.42	6.5	8000	65000	4.8	16	17280/77						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 R1	
202.50	7.2	8000	65000	4.8	19	405/2						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 Q1	
179.44	8.1	8000	65000	4.8	23	28890/161						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓							2KJ3410 - A0 - 0 P1	
158.91	9.1	8000	65000	4.8	26	5562/35						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓						2KJ3410 - A0 - 0 N1	
141.43	10	8000	65000	4.8	31	990/7						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓					2KJ3410 - A0 - 0 M1	
126.73	11	8000	65000	4.8	37	6210/49						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓				2KJ3410 - A0 - 0 L1	
112.36	13	8000	63600	4.8	43	18090/161						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓				2KJ3410 - A0 - 0 K1	
99.18	15	8000	60700	4.8	53	4860/49						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 J1	
87.20	17	8000	57700	4.8	63	14040/161						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 H1	
78.98	18	8000	54800	4.8	71	3870/49						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 G1	
68.76	21	8000	52600	4.9	85	11070/161								✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 F1	
56.37	26	8000	49600	4.9	111	5130/91								✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 E1	
50.01	29	8000	45600	5.2	73	37960/759						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 D1	
45.30	32	8000	43300	5.2	83	31390/693						✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 C1	
39.43	37	7970	41400	5.2	102	29930/759								✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 B1	
32.33	45	7510	39000	5.2	135	13870/429								✓	✓	✓	✓	✓	✓			2KJ3410 - A0 - 0 A1	

1) Only in conjunction with reduced-backlash version  
2) Not available for adapter A/AZ

Article No. supplement		see page 9/47																
Shaft design	1 or 9																	
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N					4
	K2			D	E	F	G	H	J	K	L	M	N	P	Q			2
	KS	A		E	H	K	M										1	
		B		F	J	N												
		C																
	D																	
Adapter type	K8								C		D		E					8
	K5		A		B	C		D	E	F		G	H				5	
	K3		A		B	C		D	E	F						3		
	A/AZ*			D	E	F	G	H	J	K	L	M	N				9	
Gearbox mounting type	A, F, H or D	see page 9/40																

\* Article No. supplement adapter A: M1A, adapter AZ: M1B









## Selection and ordering data

Gearbox								Adapter														Article No.																	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$		K4	63	71	80	90	100	112	132	160	180	200	225	250																			(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-		K2			80	90	100	112	132	160	180	200	225	250	280	315																	
								KS			3.1	5.1	6.1	8.1	10.1																								
											3.2	5.2	6.2		10.2																								
											4.1																												
											4.2																												
								K8									813																						
								K5		56		140	180		210	250	280			816																			
								K3		56		140	180		210	250	280																						
								A/AZ			80	90	100	112	132	160	180	200	225	250																			
<b>FD.189</b>																																							
347.35	4.2	19000	110900	4.1	36	590499/1700								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓																				2KJ3412 - ■ A0 - 0 ■ T1			
310.76	4.7	19000	110900	4.1	43	290563/935								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓																				2KJ3412 - ■ A0 - 0 ■ S1			
280.27	5.2	19000	110900	4.1	49	571753/2040								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓																				2KJ3412 - ■ A0 - 0 ■ R1			
247.71	5.9	19000	110900	4.1	61	290563/1173								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓																				2KJ3412 - ■ A0 - 0 ■ Q1			
226.42	6.4	19000	110900	4.1	71	1443442/6375								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓																			2KJ3412 - ■ A0 - 0 ■ P1			
203.69	7.1	19000	110900	4.1	84	1246609/6120								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓																		2KJ3412 - ■ A0 - 0 ■ N1			
182.03	8	19000	110900	4.1	98	139256/765								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓																	2KJ3412 - ■ A0 - 0 ■ M1			
164.61	8.8	19000	110900	4.1	117	965419/5865								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓																	2KJ3412 - ■ A0 - 0 ■ L1			
145.28	10	19000	110900	4.1	136	111137/765								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ K1			
129.45	11	19000	110900	4.1	160	253071/1955								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ J1			
117.27	12	19000	110900	4.1	175	89713/765								✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ H1			
105.48	14	19000	110900	4.1	210	206206/1955									✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ G1			
87.65	17	19000	108200	4.1	258	22351/255									✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ F1			
77.92	19	19000	103200	4.1	314	496769/6375									✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ E1			
62.11	23	19000	94000	4.2	422	459277/7395									✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ D1			
49.43	29	19000	85400	4.2	533	121849/2465											✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ C1			
40.61	36	19000	78400	4.4	478	35329/870									✓ <sup>2)</sup>	✓	✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ B1			
32.32	45	19000	70800	4.4	621	9373/290											✓	✓	✓	✓																2KJ3412 - ■ A0 - 0 ■ A1			

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

## Article No. supplement

Shaft design	1 or 9	see page 9/47																																	
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N														4								
	K2			D	E	F	G	H	J	K	L	M	N	P	Q														2						
	KS		A		E	H	K	M														1													
			B		F	J	N																												
			C																																
			D						C	D	E														8										
	K8																																		
	K5		A		B	C		D	E	F		G	H														5								
	K3		A		B	C		D	E	F														3											
	A/AZ*			D	E	F	G	H	J	K	L	M	N														9								
Adapter type																																			
Gearbox mounting type	A, F, H or D	see page 9/40																																	

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox							Adapter					Article No.	
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi$ <sup>1)</sup>	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement, see below)
-	-	-	-	-	-	-		3.2	5.2	6.2	8.2	10.2	
								4.1					
								4.2					
<b>FZ.29-D19</b>													
8237	0.18	150	5220	-	0.03	93697098/11375	✓						2KJ3321 - ■ A0 ■ - 0 ■ P1
7157	0.20	150	5220	-	0.04	81408954/11375	✓						2KJ3321 - ■ A0 ■ - 0 ■ N1
6506	0.22	150	5220	-	0.04	14801628/2275	✓						2KJ3321 - ■ A0 ■ - 0 ■ M1
5536	0.26	150	5220	-	0.06	62976738/11375	✓						2KJ3321 - ■ A0 ■ - 0 ■ L1
5033	0.29	150	5220	-	0.07	11450316/2275	✓						2KJ3321 - ■ A0 ■ - 0 ■ K1
4389	0.33	150	5220	-	0.08	768009/175	✓						2KJ3321 - ■ A0 ■ - 0 ■ J1
3928	0.37	150	5220	-	0.11	8936832/2275	✓						2KJ3321 - ■ A0 ■ - 0 ■ H1
3488	0.42	150	5220	-	0.13	7936093/2275	✓						2KJ3321 - ■ A0 ■ - 0 ■ G1
3220	0.45	150	5220	-	0.16	95233116/29575	✓						2KJ3321 - ■ A0 ■ - 0 ■ F1
2797	0.52	150	5220	-	0.17	44544522/15925	✓						2KJ3321 - ■ A0 ■ - 0 ■ E1
2431	0.60	150	5220	-	0.18	27648324/11375	✓						2KJ3321 - ■ A0 ■ - 0 ■ D1
2194	0.66	150	5220	-	0.22	768009/350	✓						2KJ3321 - ■ A0 ■ - 0 ■ C1
2065	0.70	150	5220	-	0.26	361416/175	✓						2KJ3321 - ■ A0 ■ - 0 ■ B1
1800	0.81	150	5220	-	0.29	4096048/2275	✓						2KJ3321 - ■ A0 ■ - 0 ■ A1
<b>FZ.29-Z19</b>													
1760	0.82	150	5220	-	0.02	1715912/975	✓						2KJ3320 - ■ A0 ■ - 0 ■ R1
1558	0.93	150	5220	-	0.03	2532354/1625	✓						2KJ3320 - ■ A0 ■ - 0 ■ Q1
1354	1.1	150	5220	-	0.04	2200242/1625	✓						2KJ3320 - ■ A0 ■ - 0 ■ P1
1231	1.2	150	5220	-	0.05	400044/325	✓						2KJ3320 - ■ A0 ■ - 0 ■ N1
1047	1.4	150	5220	-	0.07	1702074/1625	✓						2KJ3320 - ■ A0 ■ - 0 ■ M1
952	1.5	150	5220	-	0.08	309468/325	✓						2KJ3320 - ■ A0 ■ - 0 ■ L1
830	1.7	150	5220	-	0.09	20757/25	✓						2KJ3320 - ■ A0 ■ - 0 ■ K1
743	2	150	5220	-	0.12	241536/325	✓						2KJ3320 - ■ A0 ■ - 0 ■ J1
660	2.2	150	5220	-	0.15	214489/325	✓						2KJ3320 - ■ A0 ■ - 0 ■ H1
609	2.4	150	5220	-	0.18	2573868/4225	✓						2KJ3320 - ■ A0 ■ - 0 ■ G1
529	2.7	150	5220	-	0.2	1203906/2275	✓						2KJ3320 - ■ A0 ■ - 0 ■ F1
460	3.2	150	5220	-	0.21	747252/1625	✓						2KJ3320 - ■ A0 ■ - 0 ■ E1
415	3.5	150	5220	-	0.27	20757/50	✓						2KJ3320 - ■ A0 ■ - 0 ■ D1
391	3.7	150	5220	-	0.32	9768/25	✓						2KJ3320 - ■ A0 ■ - 0 ■ C1
340.63	4.3	150	5220	-	0.36	110704/325	✓						2KJ3320 - ■ A0 ■ - 0 ■ B1
314.27	4.6	150	5220	-	0.19	428978/1365	✓						2KJ3320 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

Article No. supplement								
Shaft design	1 or 9	see page 9/47						
Adapter size	KS	A	E	H	K	M	1	
		B	F	J		N		
		C						
		D						
Adapter type								
Gearbox mounting type	A, F, H or D	see page 9/40						



**Transmission ratios and torques for very low speeds**
**Selection and ordering data**

Gearbox							Adapter					Article No.	
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi$ <sup>1)</sup>	$J_G$ $10^{-4} \text{ kgm}^2$	$R_{ex}$	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1 8.2	10.1 10.2	(Article No. supplement, see below)
<b>FD.49-D19</b>													
14685	0.10	480	7960	-	0.07	14699730/1001	✓						2KJ3425 - ■ A0 ■ - 0 ■ C1
12805	0.11	480	7960	-	0.08	179265/14	✓						2KJ3425 - ■ A0 ■ - 0 ■ B1
11461	0.13	480	7960	-	0.11	11472960/1001	✓						2KJ3425 - ■ A0 ■ - 0 ■ A1
<b>FD.49-Z19</b>													
752	1.9	480	7960	-	0.21	3762/5	✓						2KJ3424 - ■ A0 ■ - 0 ■ J1
679	2.1	480	7960	-	0.28	2717/4	✓						2KJ3424 - ■ A0 ■ - 0 ■ H1
639	2.3	480	7960	-	0.32	10868/17	✓						2KJ3424 - ■ A0 ■ - 0 ■ G1
557	2.6	480	7960	-	0.37	1672/3	✓						2KJ3424 - ■ A0 ■ - 0 ■ F1
514	2.8	480	7960	-	0.20	32395/63	✓						2KJ3424 - ■ A0 ■ - 0 ■ E1
447	3.2	480	7960	-	0.23	393965/882	✓						2KJ3424 - ■ A0 ■ - 0 ■ D1
388	3.7	480	7960	-	0.25	2717/7	✓						2KJ3424 - ■ A0 ■ - 0 ■ C1
350	4.1	480	7960	-	0.32	176605/504	✓						2KJ3424 - ■ A0 ■ - 0 ■ B1
329.79	4.4	480	7960	-	0.37	353210/1071	✓						2KJ3424 - ■ A0 ■ - 0 ■ A1
<b>FZ.49-D19</b>													
11357	0.13	480	7960	-	0.02	46506262/4095	✓						2KJ3325 - ■ A0 ■ - 0 ■ Q1
10056	0.14	480	7960	-	0.03	45756161/4550	✓						2KJ3325 - ■ A0 ■ - 0 ■ P1
8737	0.17	480	7960	-	0.04	39755353/4550	✓						2KJ3325 - ■ A0 ■ - 0 ■ N1
7943	0.18	480	7960	-	0.04	3614123/455	✓						2KJ3325 - ■ A0 ■ - 0 ■ M1
6759	0.21	480	7960	-	0.06	30754141/4550	✓						2KJ3325 - ■ A0 ■ - 0 ■ L1
6145	0.24	480	7960	-	0.07	2795831/455	✓						2KJ3325 - ■ A0 ■ - 0 ■ K1
5358	0.27	480	7960	-	0.08	750101/140	✓						2KJ3325 - ■ A0 ■ - 0 ■ J1
4796	0.3	480	7960	-	0.11	2182112/455	✓						2KJ3325 - ■ A0 ■ - 0 ■ H1
4259	0.34	480	7960	-	0.13	23253131/5460	✓						2KJ3325 - ■ A0 ■ - 0 ■ G1
3931	0.37	480	7960	-	0.16	23253131/5915	✓						2KJ3325 - ■ A0 ■ - 0 ■ F1
3415	0.42	480	7960	-	0.17	21752929/6370	✓						2KJ3325 - ■ A0 ■ - 0 ■ E1
2967	0.49	480	7960	-	0.18	6750909/2275	✓						2KJ3325 - ■ A0 ■ - 0 ■ D1
2679	0.54	480	7960	-	0.22	750101/280	✓						2KJ3325 - ■ A0 ■ - 0 ■ C1
2521	0.58	480	7960	-	0.26	1500202/595	✓						2KJ3325 - ■ A0 ■ - 0 ■ B1
2198	0.66	480	7960	-	0.29	3000404/1365	✓						2KJ3325 - ■ A0 ■ - 0 ■ A1
<b>FZ.49-Z19</b>													
2149	0.67	480	7960	-	0.02	1256926/585	✓						2KJ3324 - ■ A0 ■ - 0 ■ J1
1903	0.76	480	7960	-	0.03	1236653/650	✓						2KJ3324 - ■ A0 ■ - 0 ■ H1
1653	0.88	480	7960	-	0.04	1074469/650	✓						2KJ3324 - ■ A0 ■ - 0 ■ G1
1503	0.96	480	7960	-	0.05	97679/65	✓						2KJ3324 - ■ A0 ■ - 0 ■ F1
1279	1.1	480	7960	-	0.07	831193/650	✓						2KJ3324 - ■ A0 ■ - 0 ■ E1
1163	1.2	480	7960	-	0.08	75563/65	✓						2KJ3324 - ■ A0 ■ - 0 ■ D1
1014	1.4	480	7960	-	0.09	20273/20	✓						2KJ3324 - ■ A0 ■ - 0 ■ C1
907	1.6	480	7960	-	0.13	58976/65	✓						2KJ3324 - ■ A0 ■ - 0 ■ B1
806	1.8	480	7960	-	0.15	628463/780	✓						2KJ3324 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

**Article No. supplement**

Shaft design	1 or 9	see page 9/47											
Adapter size	KS	A	E	H	K	M							1
		B	F	J		N							
		C											
		D											
Adapter type													
Gearbox mounting type	A, F, H or D	see page 9/40											



## SIMOGEAR gearboxes

### Parallel shaft gearboxes

#### Transmission ratios and torques for very low speeds

##### Selection and ordering data

Gearbox							Adapter					Article No. (Article No. supplement, see below)
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi$ <sup>1)</sup>	$J_G$ $10^{-4} \text{ kgm}^2$	$R_{ex}$	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1 8.2	
<b>FD.69-D19</b>												
13479	0.11	600	10800	-	0.08	94350/7	✓					2KJ3427 - ■ A0 ■ - 0 ■ B1
12065	0.12	600	10800	-	0.11	12076800/1001	✓					2KJ3427 - ■ A0 ■ - 0 ■ A1
<b>FD.69-Z19</b>												
1200	1.2	600	10800	-	0.32	1200/1	✓					2KJ3426 - ■ A0 ■ - 0 ■ M1
1046	1.4	600	10800	-	0.37	13600/13	✓					2KJ3426 - ■ A0 ■ - 0 ■ L1
965	1.5	600	10800	-	0.19	263500/273	✓					2KJ3426 - ■ A0 ■ - 0 ■ K1
838	1.7	600	10800	-	0.22	123250/147	✓					2KJ3426 - ■ A0 ■ - 0 ■ J1
729	2.0	600	10800	-	0.23	5100/7	✓					2KJ3426 - ■ A0 ■ - 0 ■ H1
658	2.2	600	10800	-	0.30	27625/42	✓					2KJ3426 - ■ A0 ■ - 0 ■ G1
619	2.3	600	10800	-	0.35	13000/21	✓					2KJ3426 - ■ A0 ■ - 0 ■ F1
587	2.5	600	10800	-	0.37	1760/3	✓					2KJ3426 - ■ A0 ■ - 0 ■ E1
541	2.7	600	10800	-	0.20	34100/63	✓					2KJ3426 - ■ A0 ■ - 0 ■ D1
470	3.1	600	10800	-	0.23	207350/441	✓					2KJ3426 - ■ A0 ■ - 0 ■ C1
409	3.5	600	10800	-	0.25	2860/7	✓					2KJ3426 - ■ A0 ■ - 0 ■ B1
369	3.9	600	10800	-	0.32	46475/126	✓					2KJ3426 - ■ A0 ■ - 0 ■ A1
<b>FZ.69-D19</b>												
11955	0.12	600	10800	-	0.02	9790792/819	✓					2KJ3327 - ■ A0 ■ - 0 ■ Q1
10586	0.14	600	10800	-	0.03	4816438/455	✓					2KJ3327 - ■ A0 ■ - 0 ■ P1
9197	0.16	600	10800	-	0.04	4184774/455	✓					2KJ3327 - ■ A0 ■ - 0 ■ N1
8361	0.17	600	10800	-	0.04	760868/91	✓					2KJ3327 - ■ A0 ■ - 0 ■ M1
7115	0.20	600	10800	-	0.06	3237278/455	✓					2KJ3327 - ■ A0 ■ - 0 ■ L1
6468	0.22	600	10800	-	0.07	588596/91	✓					2KJ3327 - ■ A0 ■ - 0 ■ K1
5640	0.26	600	10800	-	0.08	39479/7	✓					2KJ3327 - ■ A0 ■ - 0 ■ J1
5048	0.29	600	10800	-	0.11	459392/91	✓					2KJ3327 - ■ A0 ■ - 0 ■ H1
4483	0.32	600	10800	-	0.13	1223849/273	✓					2KJ3327 - ■ A0 ■ - 0 ■ G1
4138	0.35	600	10800	-	0.16	4895396/1183	✓					2KJ3327 - ■ A0 ■ - 0 ■ F1
3595	0.4	600	10800	-	0.17	2289782/637	✓					2KJ3327 - ■ A0 ■ - 0 ■ E1
3124	0.46	600	10800	-	0.18	1421244/455	✓					2KJ3327 - ■ A0 ■ - 0 ■ D1
2820	0.51	600	10800	-	0.22	39479/14	✓					2KJ3327 - ■ A0 ■ - 0 ■ C1
2654	0.55	600	10800	-	0.26	315832/119	✓					2KJ3327 - ■ A0 ■ - 0 ■ B1
2314	0.63	600	10800	-	0.29	631664/273	✓					2KJ3327 - ■ A0 ■ - 0 ■ A1
<b>FZ.69-Z19</b>												
2262	0.64	600	10800	-	0.02	264616/117	✓					2KJ3326 - ■ A0 ■ - 0 ■ F1
2003	0.72	600	10800	-	0.03	130174/65	✓					2KJ3326 - ■ A0 ■ - 0 ■ E1
1740	0.83	600	10800	-	0.04	113102/65	✓					2KJ3326 - ■ A0 ■ - 0 ■ D1
1582	0.92	600	10800	-	0.05	20564/13	✓					2KJ3326 - ■ A0 ■ - 0 ■ C1
1346	1.1	600	10800	-	0.07	87494/65	✓					2KJ3326 - ■ A0 ■ - 0 ■ B1
1224	1.2	600	10800	-	0.08	15908/13	✓					2KJ3326 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

##### Article No. supplement

Shaft design	1 or 9	see page 9/47
Adapter size	KS	A B C D E F H J K M N 1
Adapter type		
Gearbox mounting type	A, F, H or D	see page 9/40

**Transmission ratios and torques for very low speeds**

**Selection and ordering data**

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.79-D39</b>																
17865	0.08	1000	13600	-	0.08	583103521/32640	✓	✓	✓	✓						2KJ3430 - ■ A0 ■ - 0 ■ E1
16241	0.09	1000	13600	-	0.10	53009411/3264	✓	✓	✓	✓						2KJ3430 - ■ A0 ■ - 0 ■ D1
14240	0.10	1000	13600	-	0.12	278875597/19584	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3430 - ■ A0 ■ - 0 ■ C1
12710	0.11	1000	13600	-	0.15	6914271/544	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3430 - ■ A0 ■ - 0 ■ B1
11327	0.13	1000	13600	-	0.17	887331445/78336	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3430 - ■ A0 ■ - 0 ■ A1
<b>FZ.79-D39</b>																
11301	0.13	1000	13600	-	0.03	155608271/13770	✓	✓								2KJ3330 - ■ A0 ■ - 0 ■ N1
10023	0.14	1000	13600	-	0.05	6765577/675	✓	✓								2KJ3330 - ■ A0 ■ - 0 ■ M1
8696	0.17	1000	13600	-	0.05	399169043/45900	✓	✓								2KJ3330 - ■ A0 ■ - 0 ■ L1
7906	0.18	1000	13600	-	0.07	399169043/50490	✓	✓	✓	✓						2KJ3330 - ■ A0 ■ - 0 ■ K1
6780	0.21	1000	13600	-	0.08	155608271/22950	✓	✓	✓	✓						2KJ3330 - ■ A0 ■ - 0 ■ J1
6164	0.24	1000	13600	-	0.10	155608271/25245	✓	✓	✓	✓						2KJ3330 - ■ A0 ■ - 0 ■ H1
5405	0.27	1000	13600	-	0.12	74421347/13770	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3330 - ■ A0 ■ - 0 ■ G1
4824	0.30	1000	13600	-	0.15	13531154/2805	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3330 - ■ A0 ■ - 0 ■ F1
4299	0.34	1000	13600	-	0.17	47359039/11016	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3330 - ■ A0 ■ - 0 ■ E1
3968	0.37	1000	13600	-	0.21	3643003/918	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3330 - ■ A0 ■ - 0 ■ D1
3474	0.42	1000	13600	-	0.25	10631621/3060	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3330 - ■ A0 ■ - 0 ■ C1
3046	0.48	1000	13600	-	0.23	209732887/68850	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3330 - ■ A0 ■ - 0 ■ B1
2764	0.52	1000	13600	-	0.33	6765577/2448	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3330 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

Article No. supplement																	
Shaft design	1 or 9 <span style="float: right;">see page 9/47</span>																
Adapter size	K4	B	C	D	E	F	G	H	J								4
	K2				D	E	F	G	H	J						2	
	KS	A				E	H	K	M								1
		B				F	J	N									
		C															
		D															
K5	A				B	C			D	E						5	
K3	A				B	C			D	E						3	
A/AZ*				D	E	F	G	H	J							9	
Adapter type																	
Gearbox mounting type	A, B, F or H <span style="float: right;">see page 9/40</span>																

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

### Parallel shaft gearboxes

#### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox							Adapter								Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)	
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160		
							KS		3.1		5.1	6.1	8.1	10.1			
									3.2		5.2	6.2		10.2			
									4.1								
									4.2								
							K5		56		140	180		210	250		
							K3		56		140	180		210	250		
							A/AZ			80	90	100	112	132	160		
<b>FZ.79-Z39</b>																	
<b>2687</b>	0.54	1000	13600	-	0.06	13059137/4860	✓	✓								2KJ3328 - ■ A0 ■ - 0 ■ S2	
<b>2389</b>	0.61	1000	13600	-	0.07	6450899/2700	✓	✓	✓	✓						2KJ3328 - ■ A0 ■ - 0 ■ R1	
<b>2098</b>	0.69	1000	13600	-	0.08	157339/75	✓	✓	✓	✓						2KJ3328 - ■ A0 ■ - 0 ■ Q1	
<b>1907</b>	0.76	1000	13600	-	0.10	314678/165	✓	✓	✓	✓						2KJ3328 - ■ A0 ■ - 0 ■ P1	
<b>1632</b>	0.89	1000	13600	-	0.12	1101373/675	✓	✓	✓	✓						2KJ3328 - ■ A0 ■ - 0 ■ N1	
<b>1483</b>	0.98	1000	13600	-	0.14	2202746/1485	✓	✓	✓	✓						2KJ3328 - ■ A0 ■ - 0 ■ M1	
<b>1311</b>	1.1	1000	13600	-	0.17	157339/120	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ L1	
<b>1192</b>	1.2	1000	13600	-	0.22	157339/132	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ K1	
<b>1044</b>	1.4	1000	13600	-	0.26	6765577/6480	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ J1	
<b>964</b>	1.5	1000	13600	-	0.31	520429/540	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ H1	
<b>853</b>	1.7	1000	13600	-	0.36	921557/1080	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ G1	
<b>710</b>	2.0	1000	13600	-	0.48	2045407/2880	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ F1	
<b>668</b>	2.2	1000	13600	-	0.56	2045407/3060	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ E1	
<b>599</b>	2.4	1000	13600	-	0.61	5821543/9720	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ D1	
<b>510</b>	2.8	1000	13600	-	0.79	1101373/2160	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ C1	
<b>437</b>	3.3	1000	13600	-	1.03	157339/360			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ B1	
<b>376</b>	3.9	1000	13600	-	1.31	4877509/12960			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3328 - ■ A0 ■ - 0 ■ A1	

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

Article No. supplement		see page 9/47														
Shaft design	<b>1 or 9</b>															
Adapter size	<b>K4</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>							<b>4</b>
	<b>K2</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>							<b>2</b>
	<b>KS</b>	<b>A</b>			<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>								<b>1</b>
		<b>B</b>			<b>F</b>	<b>J</b>		<b>N</b>								
		<b>C</b>														
	<b>D</b>															
	<b>K5</b>	<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>							<b>5</b>	
	<b>K3</b>	<b>A</b>		<b>B</b>	<b>C</b>		<b>D</b>	<b>E</b>							<b>3</b>	
	<b>A/AZ*</b>			<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>J</b>						<b>9</b>	
Adapter type																
Gearbox mounting type	<b>A, B, F or H</b>	see page 9/40														

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox							Adapter								Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)	
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160		
							KS		3.1		5.1	6.1	8.1	10.1			
									3.2		5.2	6.2		10.2			
									4.1								
									4.2								
							K5		56		140	180		210	250		
							K3		56		140	180		210	250		
							A/AZ			80	90	100	112	132	160		
<b>FD.89-D39</b>																	
17750	0.08	1850	17400	-	0.12	15389528/867	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3432 - ■ A0 ■ - 0 ■ B1	
15843	0.09	1850	17400	-	0.15	50365728/3179	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3432 - ■ A0 ■ - 0 ■ A1	
<b>FD.89-Z39</b>																	
648	2.2	1850	17400	-	0.75	47389680/73117	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3431 - ■ A0 ■ - 0 ■ E1	
581	2.5	1850	17400	-	0.85	7493240/12903	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3431 - ■ A0 ■ - 0 ■ D1	
494	2.9	1850	17400	-	1.12	2126460/4301	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3431 - ■ A0 ■ - 0 ■ C1	
424	3.4	1850	17400	-	1.48	1822680/4301			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3431 - ■ A0 ■ - 0 ■ B1	
365	4	1850	17400	-	1.91	1569530/4301			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3431 - ■ A0 ■ - 0 ■ A1	
<b>FZ.89-D39</b>																	
14522	0.1	1850	17400	-	0.03	33327322/2295	✓	✓								2KJ3332 - ■ A0 ■ - 0 ■ N1	
12880	0.11	1850	17400	-	0.05	2898028/225	✓	✓								2KJ3332 - ■ A0 ■ - 0 ■ M1	
11175	0.13	1850	17400	-	0.05	42745913/3825	✓	✓								2KJ3332 - ■ A0 ■ - 0 ■ L1	
10159	0.14	1850	17400	-	0.07	85491826/8415	✓	✓	✓	✓						2KJ3332 - ■ A0 ■ - 0 ■ K1	
8713	0.17	1850	17400	-	0.08	33327322/3825	✓	✓	✓	✓						2KJ3332 - ■ A0 ■ - 0 ■ J1	
7921	0.18	1850	17400	-	0.10	66654644/8415	✓	✓	✓	✓						2KJ3332 - ■ A0 ■ - 0 ■ H1	
6945	0.21	1850	17400	-	0.12	15939154/2295	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3332 - ■ A0 ■ - 0 ■ G1	
6299	0.23	1850	17400	-	0.15	5796056/935	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3332 - ■ A0 ■ - 0 ■ F1	
5525	0.26	1850	17400	-	0.17	5071549/918	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3332 - ■ A0 ■ - 0 ■ E1	
5100	0.28	1850	17400	-	0.21	10143098/1989	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3332 - ■ A0 ■ - 0 ■ D1	
4465	0.32	1850	17400	-	0.25	1138511/255	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3332 - ■ A0 ■ - 0 ■ C1	
3915	0.37	1850	17400	-	0.23	44919434/11475	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3332 - ■ A0 ■ - 0 ■ B1	
3552	0.41	1850	17400	-	0.33	724507/204	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3332 - ■ A0 ■ - 0 ■ A1	

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

Article No. supplement										
Shaft design	1 or 9									see page 9/47
Adapter size	K4	B	C	D	E	F	G	H	J	4
	K2			D	E	F	G	H	J	2
	KS	A		E	H	K	M			1
		B		F	J		N			
		C								
		D								
	K5	A		B	C		D	E		5
	K3	A		B	C		D	E		3
	A/AZ*			D	E	F	G	H	J	9
Adapter type										
Gearbox mounting type	A, B, F or H									see page 9/40

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

# SIMOGEAR gearboxes

## Parallel shaft gearboxes

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FZ.89-Z39</b>																
3453	0.42	1850	17400	-	0.06	1398467/405	✓	✓								2KJ3331 - ■ A0 ■ - 0 ■ P1
3070	0.47	1850	17400	-	0.07	690809/225	✓	✓	✓	✓						2KJ3331 - ■ A0 ■ - 0 ■ N1
2696	0.54	1850	17400	-	0.08	67396/25	✓	✓	✓	✓						2KJ3331 - ■ A0 ■ - 0 ■ M1
2451	0.59	1850	17400	-	0.10	134792/55	✓	✓	✓	✓						2KJ3331 - ■ A0 ■ - 0 ■ L1
2097	0.69	1850	17400	-	0.12	471772/225	✓	✓	✓	✓						2KJ3331 - ■ A0 ■ - 0 ■ K1
1906	0.76	1850	17400	-	0.14	943544/495	✓	✓	✓	✓						2KJ3331 - ■ A0 ■ - 0 ■ J1
1685	0.86	1850	17400	-	0.17	16849/10	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ H1
1532	0.95	1850	17400	-	0.22	16849/11	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ G1
1342	1.1	1850	17400	-	0.26	724507/540	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ F1
1238	1.2	1850	17400	-	0.31	724507/585	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ E1
1097	1.3	1850	17400	-	0.36	98687/90	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ D1
913	1.6	1850	17400	-	0.48	219037/240	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ C1
859	1.7	1850	17400	-	0.56	219037/255	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ B1
770	1.9	1850	17400	-	0.61	623413/810	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3331 - ■ A0 ■ - 0 ■ A1
<b>FD.109-D39</b>																
22701	0.06	3100	25000	-	0.05	5286392566/232875	✓	✓								2KJ3434 - ■ A0 ■ - 0 ■ L1
20637	0.07	3100	25000	-	0.07	10572785132/512325	✓	✓	✓	✓						2KJ3434 - ■ A0 ■ - 0 ■ K1
17699	0.08	3100	25000	-	0.08	179199748/10125	✓	✓	✓	✓						2KJ3434 - ■ A0 ■ - 0 ■ J1
16090	0.09	3100	25000	-	0.10	358399496/22275	✓	✓	✓	✓						2KJ3434 - ■ A0 ■ - 0 ■ H1
14108	0.10	3100	25000	-	0.12	1971197228/139725	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3434 - ■ A0 ■ - 0 ■ G1
12592	0.12	3100	25000	-	0.15	716798992/56925	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3434 - ■ A0 ■ - 0 ■ F1
11222	0.13	3100	25000	-	0.18	313599559/27945	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3434 - ■ A0 ■ - 0 ■ E1
10359	0.14	3100	25000	-	0.21	96492172/9315	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3434 - ■ A0 ■ - 0 ■ D1
9069	0.16	3100	25000	-	0.25	140799802/15525	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3434 - ■ A0 ■ - 0 ■ C1
7952	0.18	3100	25000	-	0.23	5555192188/698625	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3434 - ■ A0 ■ - 0 ■ B1
7214	0.2	3100	25000	-	0.33	44799937/6210	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>			2KJ3434 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

Article No. supplement																	
Shaft design	1 or 9																
Adapter size	see page 9/47																
	K4	B	C	D	E	F	G	H	J								4
	K2	D			E	F	G	H	J								2
	KS	A			E	H	K	M								1	
		B			F	J	N										
		C															
		D															
	K5	A	B	C			D	E								5	
	K3	A	B	C			D	E								3	
	A/AZ*	D			E	F	G	H	J								9
Adapter type																	
Gearbox mounting type	A, B, F or H																
	see page 9/40																

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox							Adapter									Article No.
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.109-Z39</b>																
7014	0.21	3100	25000	-	0.06	2940126098/419175	✓	✓								2KJ3433 - ■ A0 ■ - 0 ■ A2
6237	0.23	3100	25000	-	0.07	1452351446/232875	✓	✓	✓	✓						2KJ3433 - ■ A0 ■ - 0 ■ X1
5476	0.26	3100	25000	-	0.09	141692824/25875	✓	✓	✓	✓						2KJ3433 - ■ A0 ■ - 0 ■ W1
4978	0.29	3100	25000	-	0.10	283385648/56925	✓	✓	✓	✓						2KJ3433 - ■ A0 ■ - 0 ■ V1
4259	0.34	3100	25000	-	0.12	991849768/232875	✓	✓	✓	✓						2KJ3433 - ■ A0 ■ - 0 ■ U1
3872	0.37	3100	25000	-	0.15	1983699536/512325	✓	✓	✓	✓						2KJ3433 - ■ A0 ■ - 0 ■ T1
3423	0.42	3100	25000	-	0.17	17711603/5175	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ S1
3111	0.47	3100	25000	-	0.23	35423206/11385	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ R1
2725	0.53	3100	25000	-	0.27	761598929/279450	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ Q1
2516	0.58	3100	25000	-	0.32	117169066/46575	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ P1
2227	0.65	3100	25000	-	0.38	103739389/46575	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ N1
1854	0.78	3100	25000	-	0.50	230250839/124200	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ M1
1745	0.83	3100	25000	-	0.59	27088334/15525	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ L1
1563	0.93	3100	25000	-	0.64	655329311/419175	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ K1
1331	1.1	3100	25000	-	0.84	123981221/93150	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ J1
1141	1.3	3100	25000	-	1.10	17711603/15525			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ H1
982	1.5	3100	25000	-	1.40	549059693/558900			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ G1
810	1.8	3100	25000	-	0.73	154343969/190440	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ F1
763	1.9	3100	25000	-	0.84	18158114/23805	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ E1
683	2.1	3100	25000	-	0.96	439286681/642735	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ D1
582	2.5	3100	25000	-	1.28	83108291/142830	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ C1
499	2.9	3100	25000	-	1.70	11872613/23805			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ B1
429	3.4	3100	25000	-	2.20	368051003/856980			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3433 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

**Article No. supplement**

Shaft design	1 or 9	see page 9/47														
Adapter size	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS	A		E	H	K	M									1
		B		F	J		N									
		C														
		D														
	K5	A		B	C		D	E								5
	K3	A		B	C		D	E								3
	A/AZ*			D	E	F	G	H	J							9
Adapter type																
Gearbox mounting type	A, B, F or H	see page 9/40														

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Parallel shaft gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.129-D49</b>																
<b>27777</b>	0.05	4850	37200	-	0.08	31110629/1120	✓	✓								2KJ3436 - ■ A0 ■ - 0 ■ N1
<b>25252</b>	0.06	4850	37200	-	0.10	2828239/112	✓	✓	✓	✓						2KJ3436 - ■ A0 ■ - 0 ■ M1
<b>21605</b>	0.07	4850	37200	-	0.12	31110629/1440	✓	✓	✓	✓						2KJ3436 - ■ A0 ■ - 0 ■ L1
<b>19641</b>	0.07	4850	37200	-	0.14	2828239/144	✓	✓	✓	✓						2KJ3436 - ■ A0 ■ - 0 ■ K1
<b>17361</b>	0.08	4850	37200	-	0.17	31110629/1792	✓	✓	✓	✓	✓	✓	✓			2KJ3436 - ■ A0 ■ - 0 ■ J1
<b>15783</b>	0.09	4850	37200	-	0.22	14141195/896	✓	✓	✓	✓	✓	✓	✓			2KJ3436 - ■ A0 ■ - 0 ■ H1
<b>13824</b>	0.10	4850	37200	-	0.26	1337757047/96768	✓	✓	✓	✓	✓	✓	✓			2KJ3436 - ■ A0 ■ - 0 ■ G1
<b>12761</b>	0.11	4850	37200	-	0.31	1337757047/104832	✓	✓	✓	✓	✓	✓	✓			2KJ3436 - ■ A0 ■ - 0 ■ F1
<b>11298</b>	0.13	4850	37200	-	0.37	1275535789/112896	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3436 - ■ A0 ■ - 0 ■ E1
<b>9404</b>	0.15	4850	37200	-	0.50	404438177/43008	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3436 - ■ A0 ■ - 0 ■ D1
<b>8851</b>	0.16	4850	37200	-	0.59	23790481/2688	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3436 - ■ A0 ■ - 0 ■ C1
<b>7930</b>	0.18	4850	37200	-	0.65	1151093273/145152	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3436 - ■ A0 ■ - 0 ■ B1
<b>6751</b>	0.21	4850	37200	-	0.85	31110629/4608	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3436 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

Article No. supplement																		
Shaft design	1 or 9							see page 9/47										
Adapter size	K4	B	C	D	E	F	G	H	J							4		
	K2			D	E	F	G	H	J							2		
	KS		A			E	H	K	M							1		
			B			F	J		N									
			C															
			D															
	K5		A		B	C		D	E							5		
K3		A		B	C		D	E							3			
A/AZ*			D	E	F	G	H	J							9			
Adapter type																		
Gearbox mounting type	A, B, F or H							see page 9/40										

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Transmission ratios and torques for very low speeds**
**Selection and ordering data**

Gearbox							Adapter								Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)	
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160		
							KS		3.1		5.1	6.1	8.1	10.1			
									3.2		5.2	6.2		10.2			
									4.1								
									4.2								
							K5		56		140	180		210	250		
							K3		56		140	180		210	250		
							A/AZ			80	90	100	112	132	160		
<b>FD.129-Z49</b>																	
6604	0.22	4850	37200	-	0.18	177513589/26880	✓	✓	✓	✓						2KJ3435 - ■ A0 ■ - 0 ■ B2	
6004	0.24	4850	37200	-	0.21	16137599/2688	✓	✓	✓	✓						2KJ3435 - ■ A0 ■ - 0 ■ A2	
5106	0.28	4850	37200	-	0.27	9150185/1792	✓	✓	✓	✓						2KJ3435 - ■ A0 ■ - 0 ■ X1	
4642	0.31	4850	37200	-	0.32	4159175/896	✓	✓	✓	✓						2KJ3435 - ■ A0 ■ - 0 ■ W1	
4142	0.35	4850	37200	-	0.38	133592701/32256	✓	✓	✓	✓	✓	✓				2KJ3435 - ■ A0 ■ - 0 ■ V1	
3714	0.39	4850	37200	-	0.45	831835/224	✓	✓	✓	✓	✓	✓				2KJ3435 - ■ A0 ■ - 0 ■ U1	
3347	0.43	4850	37200	-	0.53	107972183/32256	✓	✓	✓	✓	✓	✓				2KJ3435 - ■ A0 ■ - 0 ■ T1	
3090	0.47	4850	37200	-	0.63	107972183/34944	✓	✓	✓	✓	✓	✓				2KJ3435 - ■ A0 ■ - 0 ■ S1	
2821	0.51	4850	37200	-	0.75	53071073/18816	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ R1	
2340	0.62	4850	37200	-	0.95	100652035/43008	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ Q1	
2203	0.66	4850	37200	-	1.10	100652035/45696	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ P1	
2080	0.70	4850	37200	-	1.25	100652035/48384	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ N1	
1770	0.82	4850	37200	-	1.53	23790481/13440	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ M1	
1516	0.96	4850	37200	-	1.89	1164569/768			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ L1	
1333	1.1	4850	37200	-	2.3	86011739/64512			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ K1	
1125	1.3	4850	37200	-	2.9	34770703/30912			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ J1	
980	1.5	4850	37200	-	3.9	5490111/5600			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ H1	
967	1.5	4850	37200	-	1.51	27620791/28560	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ G1	
913	1.6	4850	37200	-	1.71	27620791/30240	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ F1	
777	1.9	4850	37200	-	2.2	32642753/42000	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ E1	
666	2.2	4850	37200	-	2.8	1597897/2400			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ D1	
585	2.5	4850	37200	-	3.5	118016107/201600			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ C1	
494	2.9	4850	37200	-	4.5	47708639/96600			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ B1	
430	3.4	4850	37200	-	6.0	7532943/17500			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3435 - ■ A0 ■ - 0 ■ A1	

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement												
Shaft design	1 or 9										see page 9/47	
Adapter size	K4	B	C	D	E	F	G	H	J		4	
	K2			D	E	F	G	H	J		2	
	KS		A		E	H	K	M				1
			B		F	J		N				
			C									
			D									
	K5		A		B	C		D	E		5	
K3		A		B	C		D	E		3		
A/AZ*			D	E	F	G	H	J		9		
Adapter type												
Gearbox mounting type	A, B, F or H										see page 9/40	

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



## SIMOGEAR gearboxes

### Parallel shaft gearboxes

#### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.149-D49</b>																
<b>27793</b>	0.05	8000	65000	-	0.08	1361853/49	✓	✓								2KJ3438 - ■ A0 ■ - 0 ■ N1
<b>25266</b>	0.06	8000	65000	-	0.10	13618530/539	✓	✓	✓	✓						2KJ3438 - ■ A0 ■ - 0 ■ M1
<b>21617</b>	0.07	8000	65000	-	0.12	151317/7	✓	✓	✓	✓						2KJ3438 - ■ A0 ■ - 0 ■ L1
<b>19652</b>	0.07	8000	65000	-	0.14	1513170/77	✓	✓	✓	✓						2KJ3438 - ■ A0 ■ - 0 ■ K1
<b>17371</b>	0.08	8000	65000	-	0.17	6809265/392	✓	✓	✓	✓	✓	✓	✓			2KJ3438 - ■ A0 ■ - 0 ■ J1
<b>15791</b>	0.09	8000	65000	-	0.22	34046325/2156	✓	✓	✓	✓	✓	✓	✓			2KJ3438 - ■ A0 ■ - 0 ■ H1
<b>13832</b>	0.10	8000	65000	-	0.26	10844385/784	✓	✓	✓	✓	✓	✓	✓			2KJ3438 - ■ A0 ■ - 0 ■ G1
<b>12768</b>	0.11	8000	65000	-	0.31	32533155/2548	✓	✓	✓	✓	✓	✓	✓			2KJ3438 - ■ A0 ■ - 0 ■ F1
<b>11305</b>	0.13	8000	65000	-	0.37	31019985/2744	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3438 - ■ A0 ■ - 0 ■ E1
<b>9409</b>	0.15	8000	65000	-	0.50	29506815/3136	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3438 - ■ A0 ■ - 0 ■ D1
<b>8856</b>	0.16	8000	65000	-	0.59	1735695/196	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3438 - ■ A0 ■ - 0 ■ C1
<b>7935</b>	0.18	8000	65000	-	0.66	3110405/392	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3438 - ■ A0 ■ - 0 ■ B1
<b>6755</b>	0.21	8000	65000	-	0.86	756585/112	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3438 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement																		
Shaft design	1 or 9							see page 9/47										
Adapter size	K4							B	C	D	E	F	G	H	J		4	
	K2									D	E	F	G	H	J		2	
	KS								A		E	H	K	M			1	
									B		F	J		N				
									C									
									D									
	K5							A		B	C		D	E			5	
	K3							A		B	C		D	E			3	
	A/AZ*									D	E	F	G	H	J		9	
Adapter type																		
Gearbox mounting type	A, B, F or H							see page 9/40										

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.149-Z49</b>																
6608	0.22	8000	65000	-	0.18	2590191/392	✓	✓	✓	✓						2KJ3437 - ■ A0 ■ - 0 ■ B2
6007	0.24	8000	65000	-	0.22	12950955/2156	✓	✓	✓	✓						2KJ3437 - ■ A0 ■ - 0 ■ A2
5109	0.28	8000	65000	-	0.28	2002725/392	✓	✓	✓	✓						2KJ3437 - ■ A0 ■ - 0 ■ X1
4545	0.32	8000	65000	-	0.34	10013625/2156	✓	✓	✓	✓						2KJ3437 - ■ A0 ■ - 0 ■ W1
4144	0.35	8000	65000	-	0.39	3248865/784	✓	✓	✓	✓	✓	✓	✓			2KJ3437 - ■ A0 ■ - 0 ■ V1
3716	0.39	8000	65000	-	0.47	2002725/539	✓	✓	✓	✓	✓	✓	✓			2KJ3437 - ■ A0 ■ - 0 ■ U1
3349	0.43	8000	65000	-	0.55	2625795/784	✓	✓	✓	✓	✓	✓	✓			2KJ3437 - ■ A0 ■ - 0 ■ T1
3092	0.47	8000	65000	-	0.66	7877385/2548	✓	✓	✓	✓	✓	✓	✓			2KJ3437 - ■ A0 ■ - 0 ■ S1
2822	0.51	8000	65000	-	0.78	3871935/1372	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ R1
2342	0.62	8000	65000	-	1.0	7343325/3136	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ Q1
2204	0.66	8000	65000	-	1.16	7343325/3332	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ P1
2081	0.70	8000	65000	-	1.31	815925/392	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ N1
1771	0.82	8000	65000	-	1.62	347139/196	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ M1
1517	0.96	8000	65000	-	2.0	133515/88			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ L1
1334	1.1	8000	65000	-	2.5	2091735/1568			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ K1
1125	1.3	8000	65000	-	3.2	110295/98			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ J1
981	1.5	8000	65000	-	4.2	240327/245			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ H1
968	1.5	8000	65000	-	1.81	806058/833	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ G1
914	1.6	8000	65000	-	2.0	44781/49	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ F1
778	1.9	8000	65000	-	2.6	952614/1225	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ E1
666	2.2	8000	65000	-	3.4	36639/55			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ D1
586	2.5	8000	65000	-	4.3	574011/980			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ C1
494	2.9	8000	65000	-	5.7	121068/245			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ B1
431	3.4	8000	65000	-	7.5	2638008/6125			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3437 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement																
Shaft design	1 or 9															see page 9/47
Adapter size	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS	A			E	H	K	M								1
		B			F	J		N								
		C														
		D														
	K5	A		B	C		D	E								5
	K3	A		B	C		D	E								3
	A/AZ*			D	E	F	G	H	J							9
Adapter type																
Gearbox mounting type	A, B, F or H															see page 9/40

 \* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

### Parallel shaft gearboxes

#### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.169-D69</b>																
29846	0.05	13600	73500	-	0.07	4387328/147	✓	✓	✓	✓						2KJ3441 - ■ A0 ■ - 0 ■ P1
26206	0.06	13600	73500	-	0.08	1284096/49	✓	✓	✓	✓						2KJ3441 - ■ A0 ■ - 0 ■ N1
23824	0.06	13600	73500	-	0.10	1167360/49	✓	✓	✓	✓						2KJ3441 - ■ A0 ■ - 0 ■ M1
20382	0.07	13600	73500	-	0.12	428032/21	✓	✓	✓	✓						2KJ3441 - ■ A0 ■ - 0 ■ L1
18530	0.08	13600	73500	-	0.15	389120/21	✓	✓	✓	✓						2KJ3441 - ■ A0 ■ - 0 ■ K1
16379	0.09	13600	73500	-	0.17	802560/49	✓	✓	✓	✓	✓	✓				2KJ3441 - ■ A0 ■ - 0 ■ J1
14890	0.10	13600	73500	-	0.23	729600/49	✓	✓	✓	✓	✓	✓				2KJ3441 - ■ A0 ■ - 0 ■ H1
13042	0.11	13600	73500	-	0.26	5751680/441	✓	✓	✓	✓	✓	✓				2KJ3441 - ■ A0 ■ - 0 ■ G1
12039	0.12	13600	73500	-	0.32	23006720/1911	✓	✓	✓	✓	✓	✓				2KJ3441 - ■ A0 ■ - 0 ■ F1
10659	0.14	13600	73500	-	0.39	10968320/1029	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3441 - ■ A0 ■ - 0 ■ E1
8872	0.16	13600	73500	-	0.52	434720/49	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3441 - ■ A0 ■ - 0 ■ D1
8350	0.17	13600	73500	-	0.61	6955520/833	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3441 - ■ A0 ■ - 0 ■ C1
7482	0.19	13600	73500	-	0.68	9898240/1323	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3441 - ■ A0 ■ - 0 ■ B1
6370	0.23	13600	73500	-	0.89	133760/21	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3441 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement																		
Shaft design	1 or 9							see page 9/47										
Adapter size	K4	B	C	D	E	F	G	H	J							4		
	K2			D	E	F	G	H	J							2		
	KS		A		E	H	K	M								1		
			B		F	J		N										
			C															
			D															
K5		A		B	C		D	E							5			
K3		A		B	C		D	E							3			
A/AZ*			D	E	F	G	H	J							9			
Adapter type																		
Gearbox mounting type	A, B, F or H							see page 9/40										

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Transmission ratios and torques for very low speeds**

**Selection and ordering data**

Gearbox							Adapter							Article No.		
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	10 <sup>-4</sup> kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.169-Z69</b>																
6230	0.23	13600	73500	-	0.21	5189888/833	✓	✓	✓	✓						2KJ3440 - ■ A0 ■ - 0 ■ A2
5664	0.26	13600	73500	-	0.26	4718080/833	✓	✓	✓	✓						2KJ3440 - ■ A0 ■ - 0 ■ X1
4817	0.30	13600	73500	-	0.33	4012800/833	✓	✓	✓	✓						2KJ3440 - ■ A0 ■ - 0 ■ W1
4379	0.33	13600	73500	-	0.40	3648000/833	✓	✓	✓	✓						2KJ3440 - ■ A0 ■ - 0 ■ V1
3907	0.37	13600	73500	-	0.47	9764480/2499	✓	✓	✓	✓	✓	✓	✓	✓		2KJ3440 - ■ A0 ■ - 0 ■ U1
3503	0.41	13600	73500	-	0.57	2918400/833	✓	✓	✓	✓	✓	✓	✓			2KJ3440 - ■ A0 ■ - 0 ■ T1
3158	0.46	13600	73500	-	0.67	7891840/2499	✓	✓	✓	✓	✓	✓	✓			2KJ3440 - ■ A0 ■ - 0 ■ S1
2915	0.50	13600	73500	-	0.80	31567360/10829	✓	✓	✓	✓	✓	✓	✓			2KJ3440 - ■ A0 ■ - 0 ■ R1
2661	0.54	13600	73500	-	0.95	15516160/5831	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ Q1
2208	0.66	13600	73500	-	1.25	1839200/833	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ P1
2078	0.70	13600	73500	-	1.44	29427200/14161	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ N1
1963	0.74	13600	73500	-	1.63	14713600/7497	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ M1
1670	0.87	13600	73500	-	2.1	1391104/833	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ L1
1431	1.0	13600	73500	-	2.6	24320/17			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ K1
1258	1.2	13600	73500	-	3.2	3143360/2499			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ J1
1061	1.4	13600	73500	-	4.2	20331520/19159			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ H1
925	1.6	13600	73500	-	5.7	3852288/4165			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ G1
869	1.7	13600	73500	-	3.2	21401600/24633			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ F1
739	2.0	13600	73500	-	4.3	2023424/2737	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ E1
633	2.3	13600	73500	-	5.6	2723840/4301			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ D1
557	2.6	13600	73500	-	7.1	4572160/8211			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ C1
470	3.1	13600	73500	-	9.7	29573120/62951			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ B1
409	3.5	13600	73500	-	13	5603328/13685			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3440 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

<b>Article No. supplement</b>																		
Shaft design	1 or 9							see page 9/47										
Adapter size	K4	B	C	D	E	F	G	H	J							4		
	K2			D	E	F	G	H	J							2		
	KS		A		E	H	K	M								1		
			B		F	J		N										
			C															
	D																	
Adapter type	K5		A		B	C		D	E							5		
	K3		A		B	C		D	E							3		
	A/AZ*			D	E	F	G	H	J							9		
Gearbox mounting type	A, B, F or H							see page 9/40										

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Parallel shaft gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4} \text{ kgm}^2$	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.189-D69</b>																
<b>27341</b>	0.05	19000	110900	-	0.10	2870816/105	✓	✓	✓	✓						2KJ3443 - ■ A0 ■ - 0 ■ M1
<b>23392</b>	0.06	19000	110900	-	0.12	15789488/675	✓	✓	✓	✓						2KJ3443 - ■ A0 ■ - 0 ■ L1
<b>21265</b>	0.07	19000	110900	-	0.15	2870816/135	✓	✓	✓	✓						2KJ3443 - ■ A0 ■ - 0 ■ K1
<b>18797</b>	0.08	19000	110900	-	0.17	1973686/105	✓	✓	✓	✓	✓	✓	✓			2KJ3443 - ■ A0 ■ - 0 ■ J1
<b>17088</b>	0.08	19000	110900	-	0.23	358852/21	✓	✓	✓	✓	✓	✓	✓			2KJ3443 - ■ A0 ■ - 0 ■ H1
<b>14968</b>	0.10	19000	110900	-	0.27	42434249/2835	✓	✓	✓	✓	✓	✓	✓			2KJ3443 - ■ A0 ■ - 0 ■ G1
<b>13817</b>	0.10	19000	110900	-	0.32	13056692/945	✓	✓	✓	✓	✓	✓	✓			2KJ3443 - ■ A0 ■ - 0 ■ F1
<b>12233</b>	0.12	19000	110900	-	0.39	80921126/6615	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3443 - ■ A0 ■ - 0 ■ E1
<b>10182</b>	0.14	19000	110900	-	0.53	12828959/1260	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3443 - ■ A0 ■ - 0 ■ D1
<b>9583</b>	0.15	19000	110900	-	0.62	51315836/5355	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3443 - ■ A0 ■ - 0 ■ C1
<b>8586</b>	0.17	19000	110900	-	0.69	73026382/8505	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3443 - ■ A0 ■ - 0 ■ B1
<b>7310</b>	0.20	19000	110900	-	0.90	986843/135	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3443 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

Article No. supplement																		
Shaft design	1 or 9							see page 9/47										
Adapter size	K4	B	C	D	E	F	G	H	J							4		
	K2			D	E	F	G	H	J							2		
	KS		A		E	H	K	M								1		
			B		F	J		N										
			C															
		D																
	K5	A		B	C		D	E							5			
	K3	A		B	C		D	E							3			
	A/AZ*			D	E	F	G	H	J						9			
Adapter type																		
Gearbox mounting type	A, B, F or H							see page 9/40										

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Transmission ratios and torques for very low speeds**

**Selection and ordering data**

Gearbox							Adapter							Article No.		
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	10 <sup>-4</sup> kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>FD.189-Z69</b>																
7150	0.20	19000	110900	-	0.23	191447542/26775	✓	✓	✓	✓						2KJ3442 - ■ A0 ■ - 0 ■ C2
6500	0.22	19000	110900	-	0.28	34808644/5355	✓	✓	✓	✓						2KJ3442 - ■ A0 ■ - 0 ■ B2
5529	0.26	19000	110900	-	0.35	1973686/357	✓	✓	✓	✓						2KJ3442 - ■ A0 ■ - 0 ■ A2
5026	0.29	19000	110900	-	0.43	1794260/357	✓	✓	✓	✓						2KJ3442 - ■ A0 ■ - 0 ■ X1
4484	0.32	19000	110900	-	0.51	72039539/16065	✓	✓	✓	✓	✓	✓	✓			2KJ3442 - ■ A0 ■ - 0 ■ W1
4021	0.36	19000	110900	-	0.62	1435408/357	✓	✓	✓	✓	✓	✓	✓			2KJ3442 - ■ A0 ■ - 0 ■ V1
3624	0.40	19000	110900	-	0.73	58223737/16065	✓	✓	✓	✓	✓	✓	✓			2KJ3442 - ■ A0 ■ - 0 ■ U1
3345	0.43	19000	110900	-	0.87	17914996/5355	✓	✓	✓	✓	✓	✓	✓			2KJ3442 - ■ A0 ■ - 0 ■ T1
3054	0.47	19000	110900	-	1.04	114473788/37485	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ S1
2534	0.57	19000	110900	-	1.38	10855273/4284	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ R1
2385	0.61	19000	110900	-	1.57	43421092/18207	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ Q1
2252	0.64	19000	110900	-	1.78	21710546/9639	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ P1
1917	0.76	19000	110900	-	2.3	51315836/26775	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ N1
1642	0.88	19000	110900	-	2.9	1255982/765	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ M1
1444	1.0	19000	110900	-	3.6	46381621/32130			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ L1
1218	1.2	19000	110900	-	4.8	15000136/123165			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ K1
1061	1.4	19000	110900	-	6.4	15789488/14875			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ J1
997	1.5	19000	110900	-	4.0	31578976/31671			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ H1
848	1.7	19000	110900	-	5.4	74641216/87975	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ G1
727	2.0	19000	110900	-	7.1	140669984/193545	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ F1
639	2.3	19000	110900	-	9.1	33732088/52785			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ E1
539	2.7	19000	110900	-	12	218182016/404685			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ D1
478	3.0	19000	110900	-	12	8403976/17595			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ C1
403	3.6	19000	110900	-	16	54357632/134895			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ B1
351	4.1	19000	110900	-	21	17165568/48875			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3442 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version  
2) Not available for adapter A/AZ

Article No. supplement																		
Shaft design	1 or 9							see page 9/47										
Adapter size	K4	B	C	D	E	F	G	H	J							4		
	K2			D	E	F	G	H	J							2		
	KS		A		E	H	K	M								1		
			B		F	J		N										
			C															
			D															
K5		A		B	C		D	E							5			
K3		A		B	C		D	E							3			
A/AZ*			D	E	F	G	H	J							9			
Adapter type																		
Gearbox mounting type	A, B, F or H							see page 9/40										

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

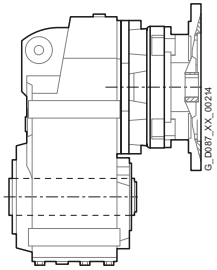
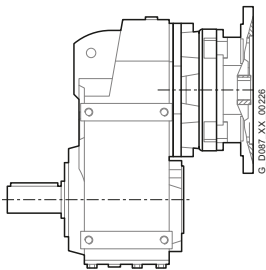
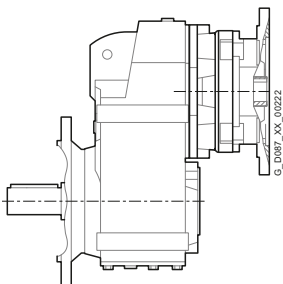
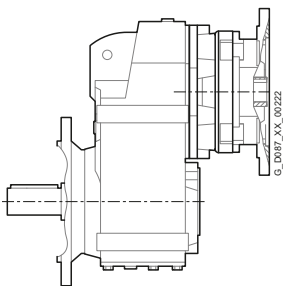
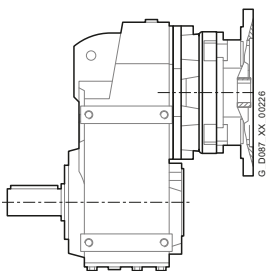
## SIMOGEAR gearboxes

### Parallel shaft gearboxes

#### Dimensional drawings

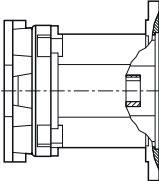
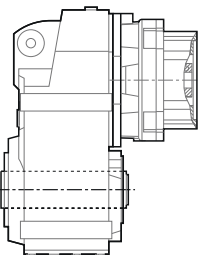
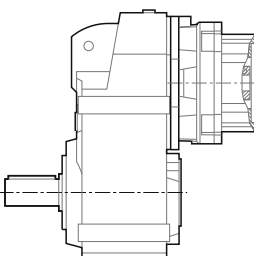
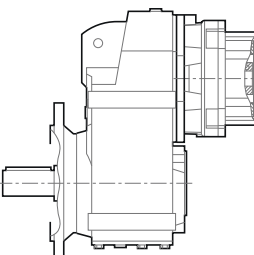
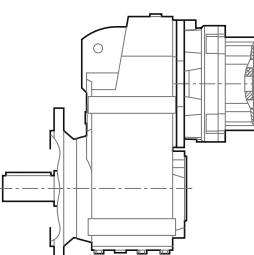
##### Dimensional drawing overview

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing on page
<b>Parallel shaft gearbox with adapter K4</b>		
<i>Shaft-mounted design</i>		
	FZAD./FDAD.29	4/46
	FZAD./FDAD.39	4/50
	FZAD./FDAD.49	4/54
	FZAD./FDAD.69	4/58
	FZAD./FDAD.79	4/62
	FZAD./FDAD.89	4/66
	FZAD./FDAD.109	4/71
	FZAD./FDAD.129	4/76
	FZAD./FDAD.149	4/81
	FZAD./FDAD.169	4/86
	FZAD./FDAD.189	4/91
<i>Housing flange design</i>		
	FZ.Z./FDZ.29	4/47
	FZ.Z./FDZ.39	4/51
	FZ.Z./FDZ.49	4/55
	FZ.Z./FDZ.69	4/59
	FZ.Z./FDZ.79	4/63
	FZ.Z./FDZ.89	4/67
	FZ.Z./FDZ.109	4/72
	FZ.Z./FDZ.129	4/77
	FZ.Z./FDZ.149	4/82
	FZ.Z./FDZ.169	4/87
	FZ.Z./FDZ.189	4/92
<i>Flange-mounted design</i>		
	FZ.F./FD.F.29	4/48
	FZ.F./FD.F.39	4/52
	FZ.F./FD.F.49	4/56
	FZ.F./FD.F.69	4/60
	FZ.F./FD.F.79	4/64
	FZ.F./FD.F.89	4/68
	FZ.F./FD.F.109	4/73
	FZ.F./FD.F.129	4/78
	FZ.F./FD.F.149	4/83
	FZ.F./FD.F.169	4/88
	FZ.F./FD.F.189	4/93
<i>Flange-mounted design with VLplus reinforced bearing system</i>		
	FZ.F./FD.F.89	4/69
	FZ.F./FD.F.109	4/74
	FZ.F./FD.F.129	4/79
	FZ.F./FD.F.149	4/84
	FZ.F./FD.F.169	4/89
<i>Foot-mounted design</i>		
	FZ../FD..29	4/49
	FZ../FD..39	4/53
	FZ../FD..49	4/57
	FZ../FD..69	4/61
	FZ../FD..79	4/65
	FZ../FD..89	4/70
	FZ../FD..109	4/75
	FZ../FD..129	4/80
	FZ../FD..149	4/85
	FZ../FD..169	4/90
	FZ../FD..189	4/94

**Dimensional drawing overview**

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing on page
<b>Parallel shaft gearbox with adapter K2</b>		
	FZ../FD..29 ... FZ../FD..189	4/95
<b>Parallel shaft gearbox with KS adapter</b>		
<i>Shaft-mounted design</i>		
	FZAD./FDAD.29	4/98
	FZAD./FDAD.39	4/102
	FZAD./FDAD.49	4/106
	FZAD./FDAD.69	4/110
	FZAD./FDAD.79	4/114
	FZAD./FDAD.89	4/118
	FZAD./FDAD.109	4/123
	FZAD./FDAD.129	4/128
	FZAD./FDAD.149	4/133
	FZAD./FDAD.169	4/138
FZAD./FDAD.189	4/143	
<i>Housing flange design</i>		
	FZ.Z./FDZ.29	4/99
	FZ.Z./FDZ.39	4/103
	FZ.Z./FDZ.49	4/107
	FZ.Z./FDZ.69	4/111
	FZ.Z./FDZ.79	4/115
	FZ.Z./FDZ.89	4/119
	FZ.Z./FDZ.109	4/124
	FZ.Z./FDZ.129	4/129
	FZ.Z./FDZ.149	4/134
	FZ.Z./FDZ.169	4/139
FZ.Z./FDZ.189	4/144	
<i>Flange-mounted design</i>		
	FZ.F./FD.F.29	4/100
	FZ.F./FD.F.39	4/104
	FZ.F./FD.F.49	4/108
	FZ.F./FD.F.69	4/112
	FZ.F./FD.F.79	4/116
	FZ.F./FD.F.89	4/120
	FZ.F./FD.F.109	4/125
	FZ.F./FD.F.129	4/130
	FZ.F./FD.F.149	4/135
	FZ.F./FD.F.169	4/140
FZ.F./FD.F.189	4/145	
<i>Flange-mounted design with VLplus reinforced bearing system</i>		
	FZ.F./FD.F.89	4/121
	FZ.F./FD.F.109	4/126
	FZ.F./FD.F.129	4/131
	FZ.F./FD.F.149	4/136
	FZ.F./FD.F.169	4/141



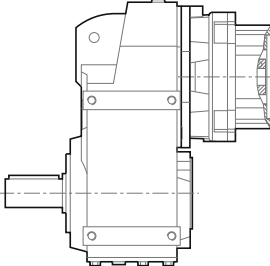
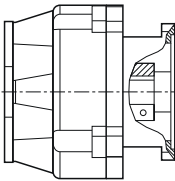
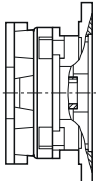
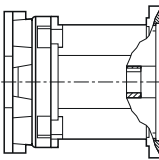
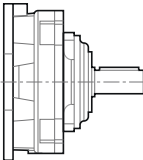
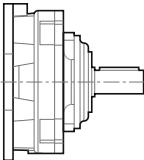
## SIMOGEAR gearboxes

### Parallel shaft gearboxes

#### Dimensional drawings

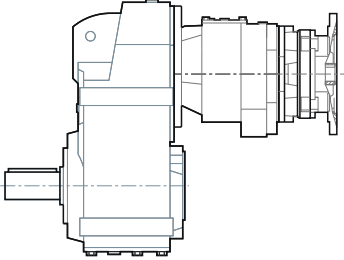
#### Dimensional drawing overview

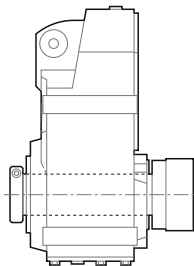
Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Gearbox type	Dimensional drawing on page
<b>Parallel shaft gearbox with KS adapter</b>		
<i>Foot-mounted design</i>		
	FZ../FD..29	4/101
	FZ../FD..39	4/105
	FZ../FD..49	4/109
	FZ../FD..69	4/113
	FZ../FD..79	4/117
	FZ../FD..89	4/122
	FZ../FD..109	4/127
	FZ../FD..129	4/132
	FZ../FD..149	4/137
	FZ../FD..169	4/142
FZ../FD..189	4/146	
<b>Parallel shaft gearbox with adapter K8</b>		
	FZ../FD..89 ... FZ../FD..189	4/147
<b>Parallel shaft gearbox with adapter K5</b>		
	FZ../FD..29 ... FZ../FD..189	4/148
<b>Parallel shaft gearbox with adapter K3</b>		
	FZ../FD..29 ... FZ../FD..189	4/150
<b>Parallel shaft gearbox with adapter A</b>		
	FZ../FD..29 ... FZ../FD..189	4/152
<b>Parallel shaft gearbox with adapter AZ</b>		
	FZ../FD..29 ... FZ../FD..189	4/154

**Dimensional drawing overview**

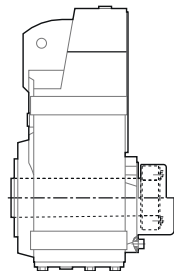
Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing on page	
<b>Parallel shaft tandem gearboxes with adapter</b>			
	- K4	FZ./FD.79-Z/D39 ... FD.189-Z/D69	4/156
	- K2	FZ./FD.79-Z/D39 ... FD.189-Z/D69	4/158
	- KS	FZ./FD.29-Z/D19 ... FD.189-Z/D69	4/159
	- K5	FZ./FD.79-Z/D39 ... FD.189-Z/D69	4/162
	- K3	FZ./FD.79-Z/D39 ... FD.189-Z/D69	4/163
	- A	FZ./FD.79-Z/D39 ... FD.189-Z/D69	4/164
	- AZ	FZ./FD.79-Z/D39 ... FD.189-Z/D69	4/165

**Additional versions and options**
**SIMOLOC assembly system**


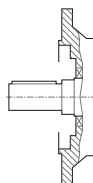
FZ./FD..29 ... FZ./FD..189

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**Protective covers**


FZ./FD..29 ... FZ./FD..189

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**Inner contour of the flange design**


FZ./FD..29 ... FZ./FD..189

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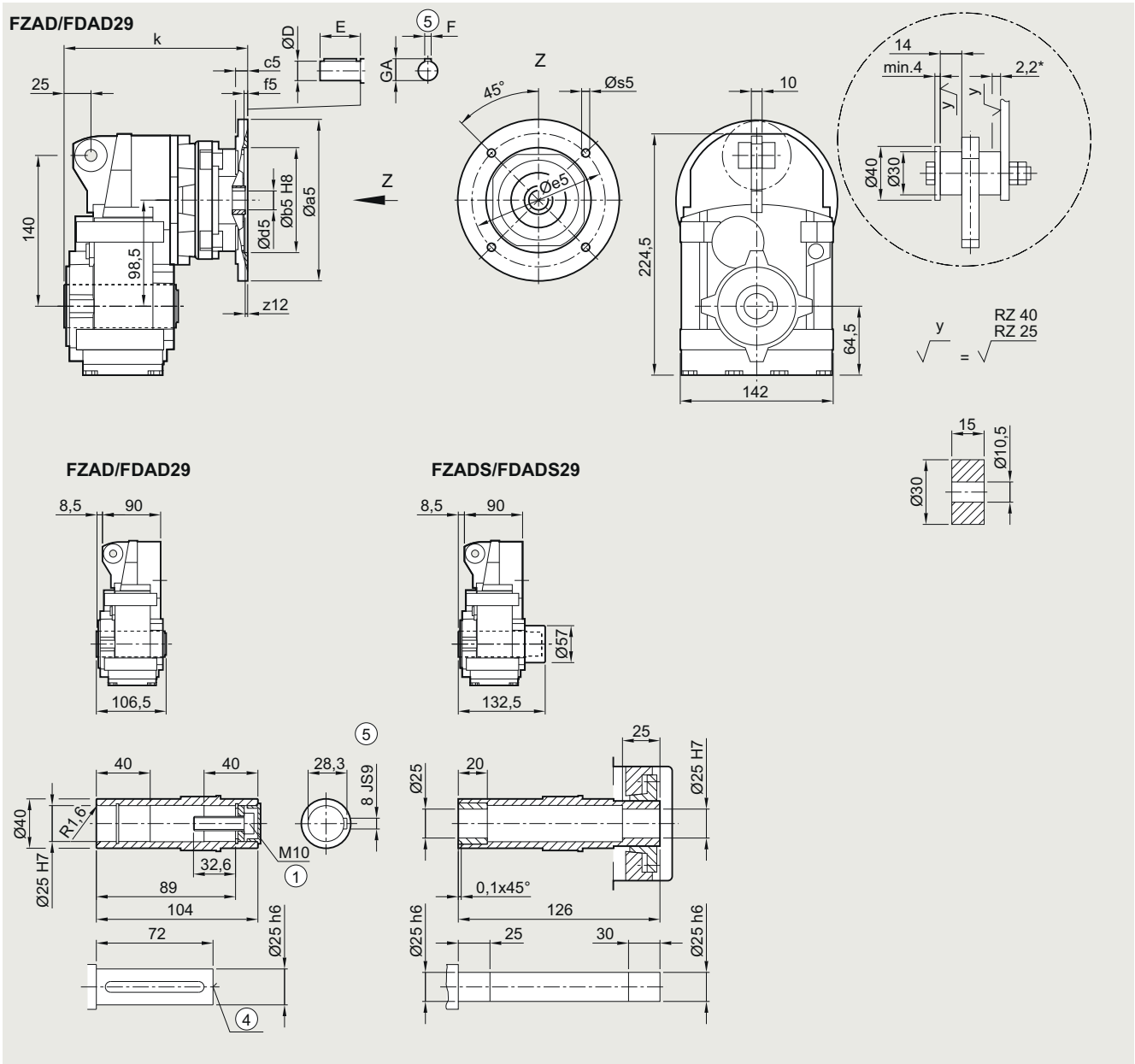
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FDAD./FZAD.29 gearbox in a shaft-mounted design

FAD030K4, FADS030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	177.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	177.0
80 <sup>1)</sup>	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	205.0
90 <sup>1)</sup>	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	205.0

① ISO 4017

④ DIN 332

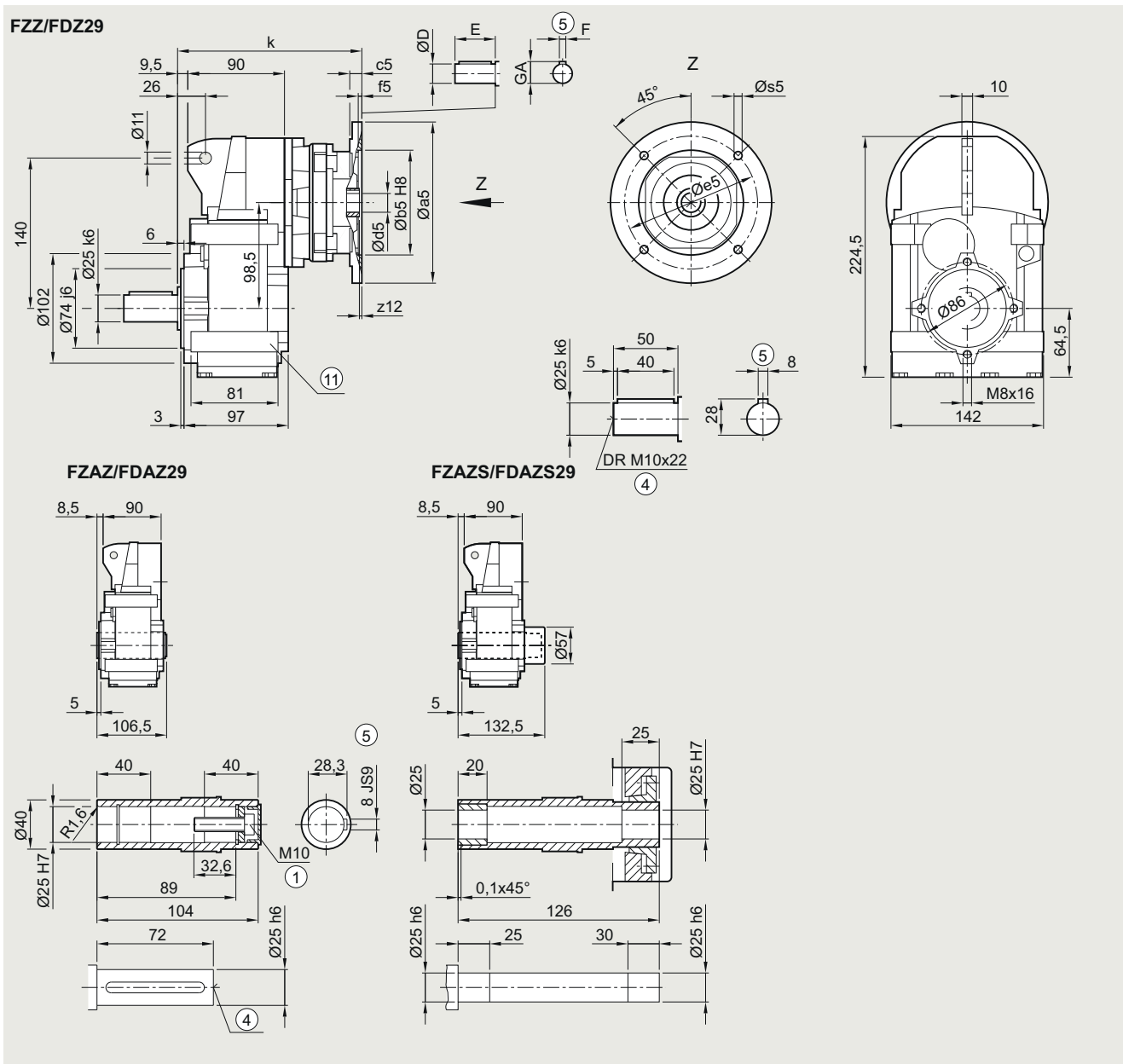
⑤ Feather key/keyway DIN 6885

<sup>1)</sup> FDADS/FZADS not possible

\* Spring compression at max. torque

**FZ.Z./FZ.Z.29 gearbox in a housing flange design**

**FZ030K4, FAZ030K4, FAZS030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	177.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	177.0
80 <sup>1)</sup>	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	205.0
90 <sup>1)</sup>	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	205.0

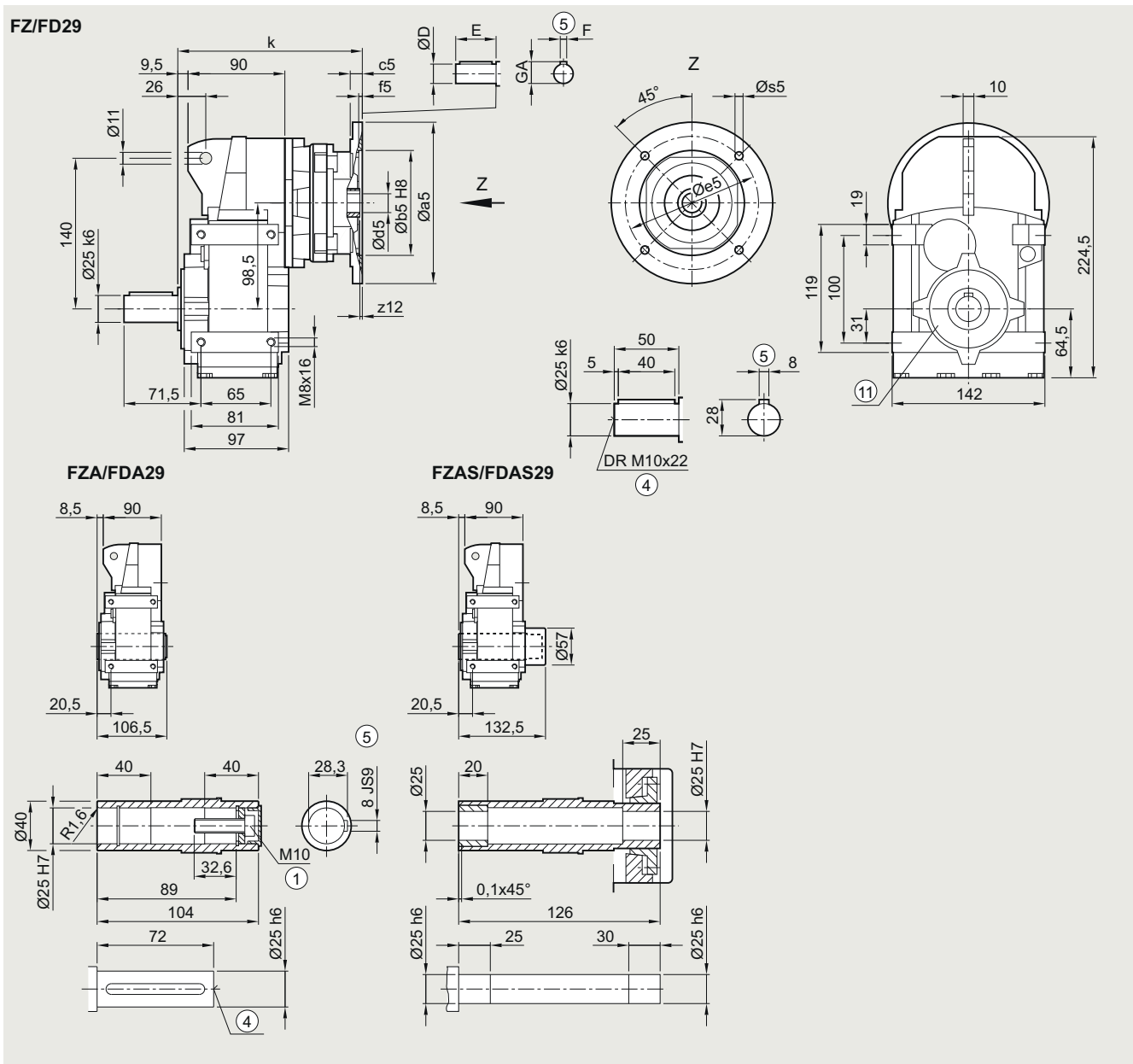
① ISO 4017

④ DIN 332

⑤ Feather key/keyway DIN 6885 <sup>1)</sup> FDADS/FZADS not possible

⑩ Use bores only for foot-mounted design



**FD../FZ..29 gearbox in a foot-mounted design****F030K4, FA030K4, FAS030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	177.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	177.0
80 <sup>1)</sup>	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	205.0
90 <sup>1)</sup>	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	205.0

① ISO 4017

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

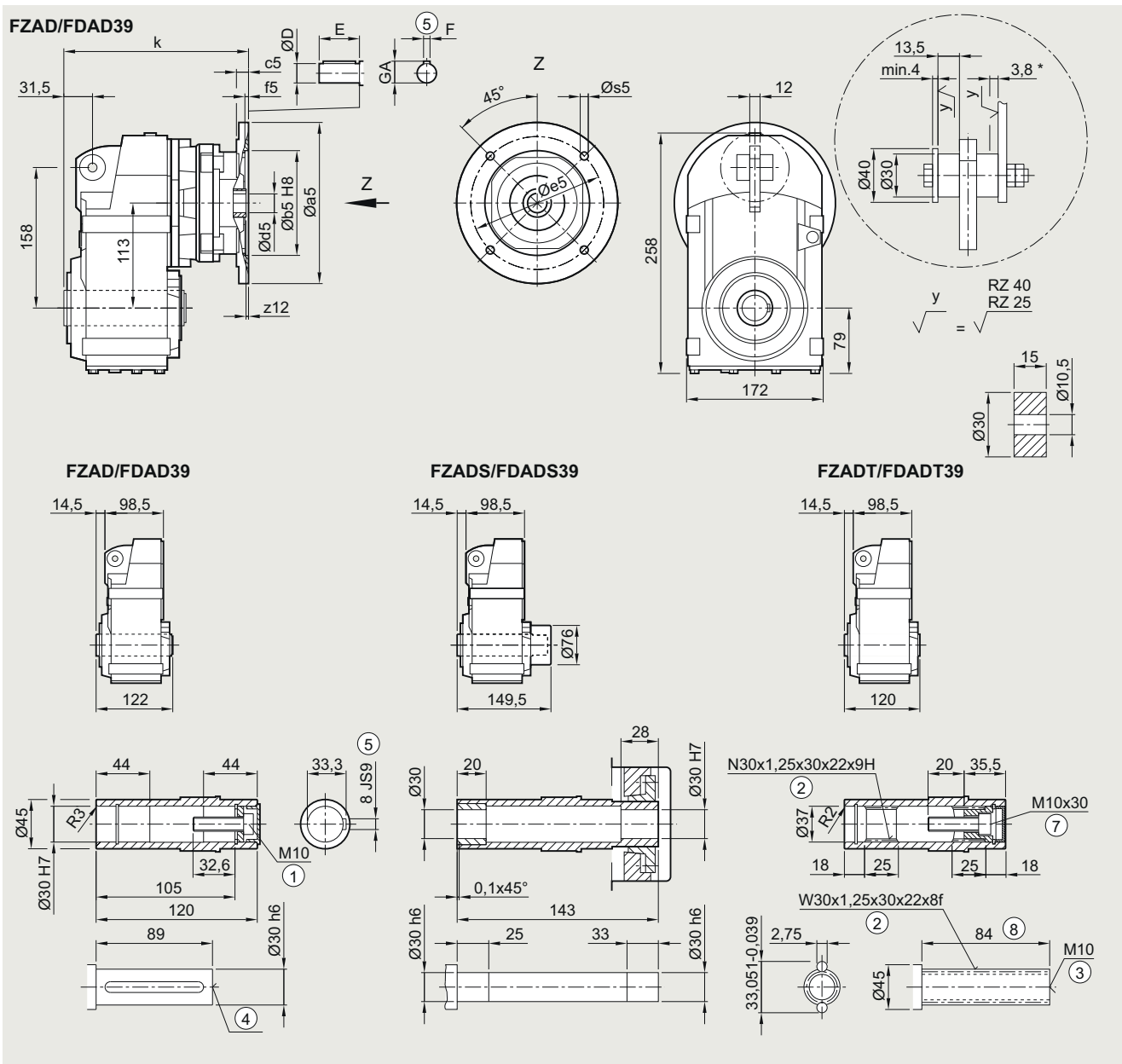
# SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

## Dimensional drawings

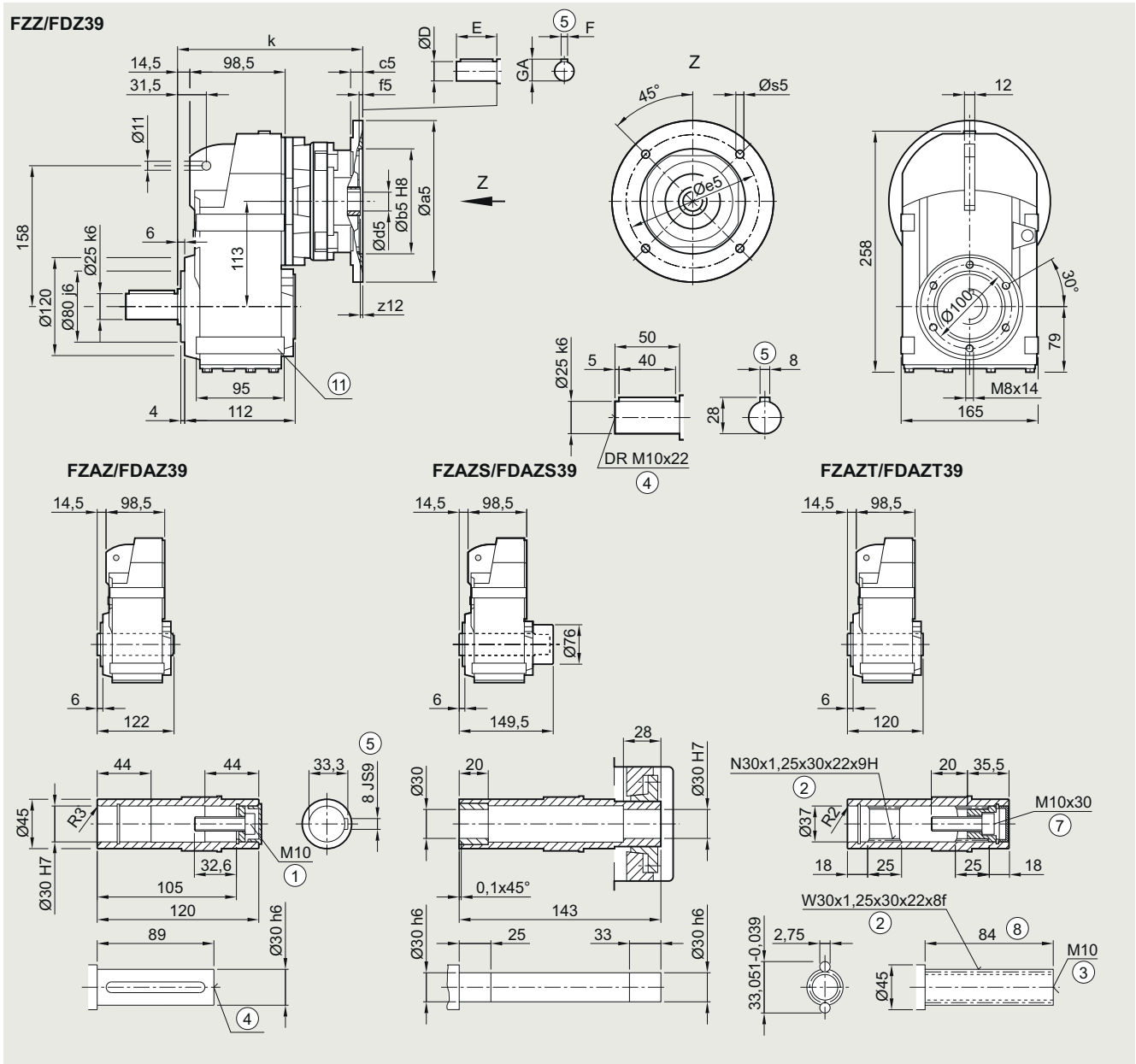
### FDAD./FZAD.39 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	190.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	190.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	218.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	218.5
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	273.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 \* Spring compression at max. torque    1) FDADS/FZADS not possible

**FD.Z./FZ.Z.39 gearbox in a housing flange design****FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	190.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	190.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	218.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	218.5
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	273.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

1) FDADS/FZADS not possible



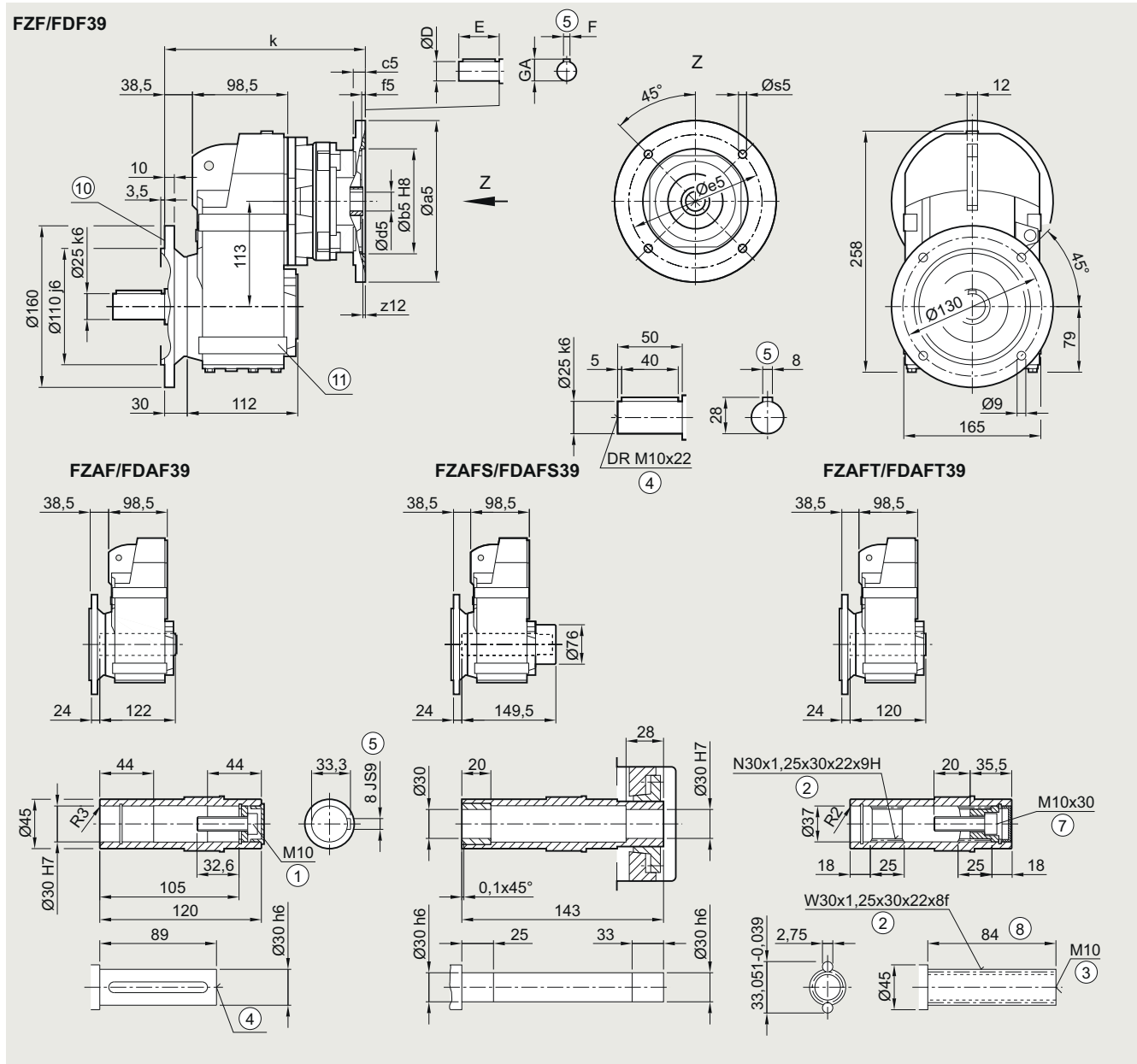
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FD.F/FZ.F.39 in a flange-mounted design

FF030K4, FAF030K4, FAFS030K4, FAFT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11.0	23	4	12.5	214.5
71	160	110	12	4.5	130	M8	2.5	14.0	30	5	16.0	214.5
80	200	130	15	4.5	165	M10	4.0	19.0	40	6	12.5	242.5
90	200	130	15	4.5	165	M10	4.0	24.0	50	8	27.0	242.5
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	297.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

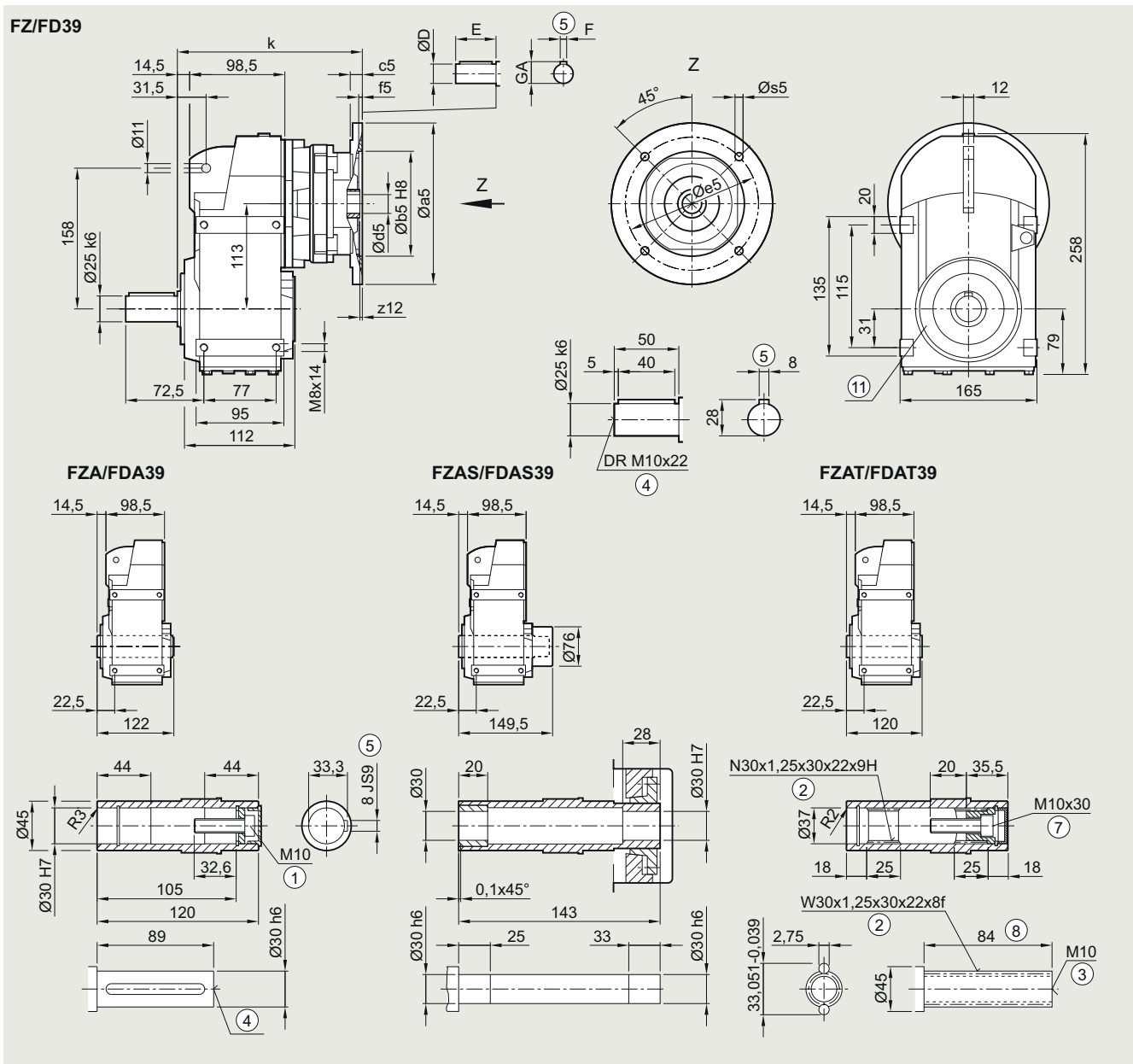
⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

<sup>1)</sup> FDADS/FZADS not possible

**FD../FZ..39 gearbox in a foot-mounted design****F030K4, FA030K4, FAS030K4, FAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	190.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	190.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	218.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	218.5
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	273.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑧ Without locating shoulder + 1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

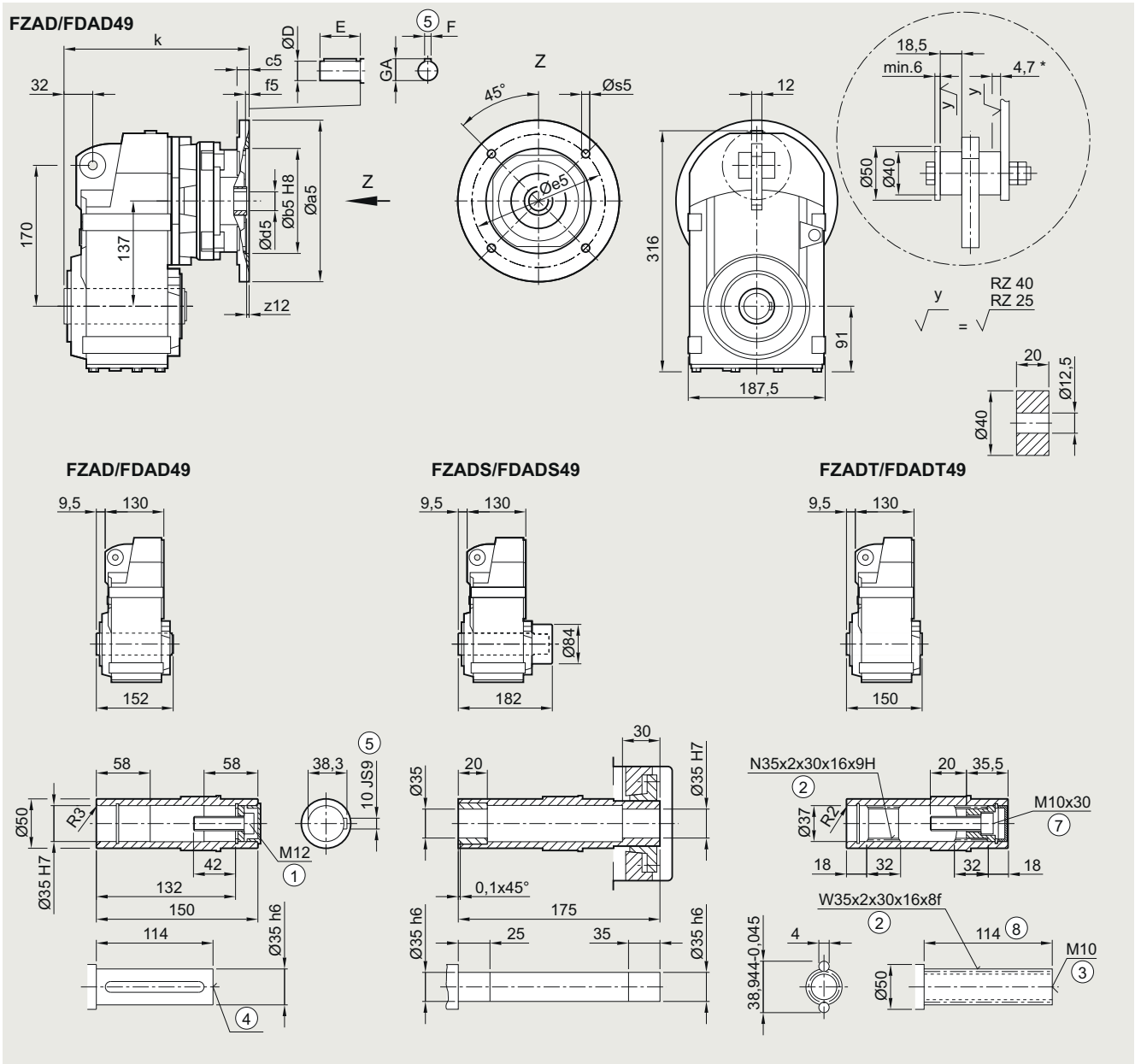
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FDAD./FZAD.49 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	207.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	207.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	235.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	235.5
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
112 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
132 <sup>1)</sup>	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	307.5

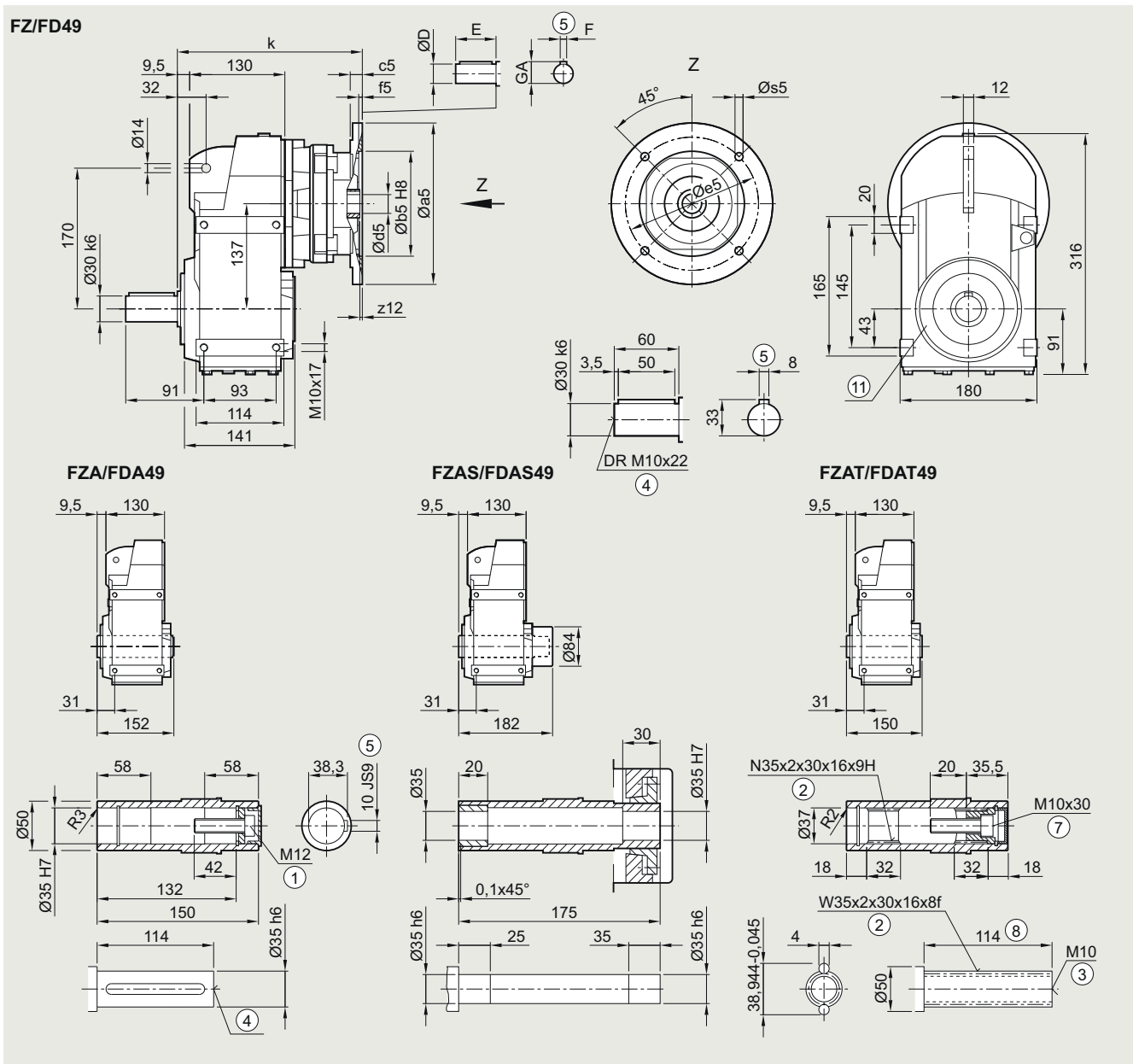
① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible





**FD../FZ..49 gearbox in a foot-mounted design****F030K4, FA030K4, FAS030K4, FAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	207.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	207.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	235.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	235.5
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
112 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
132 <sup>1)</sup>	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	307.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

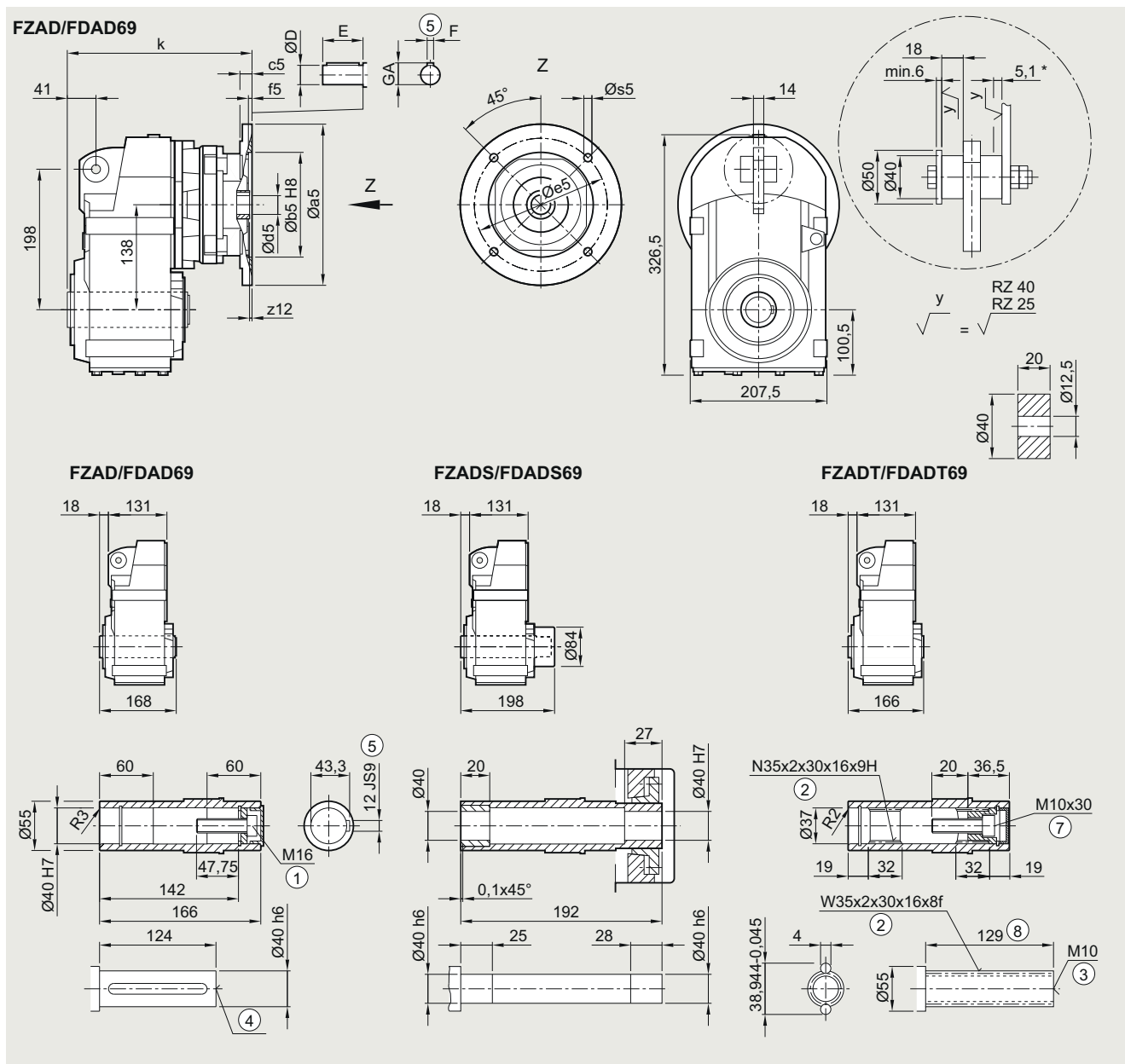
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FDAD./FZAD.69 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	217.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	217.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	245.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	245.0
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
112 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
132 <sup>1)</sup>	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	317.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

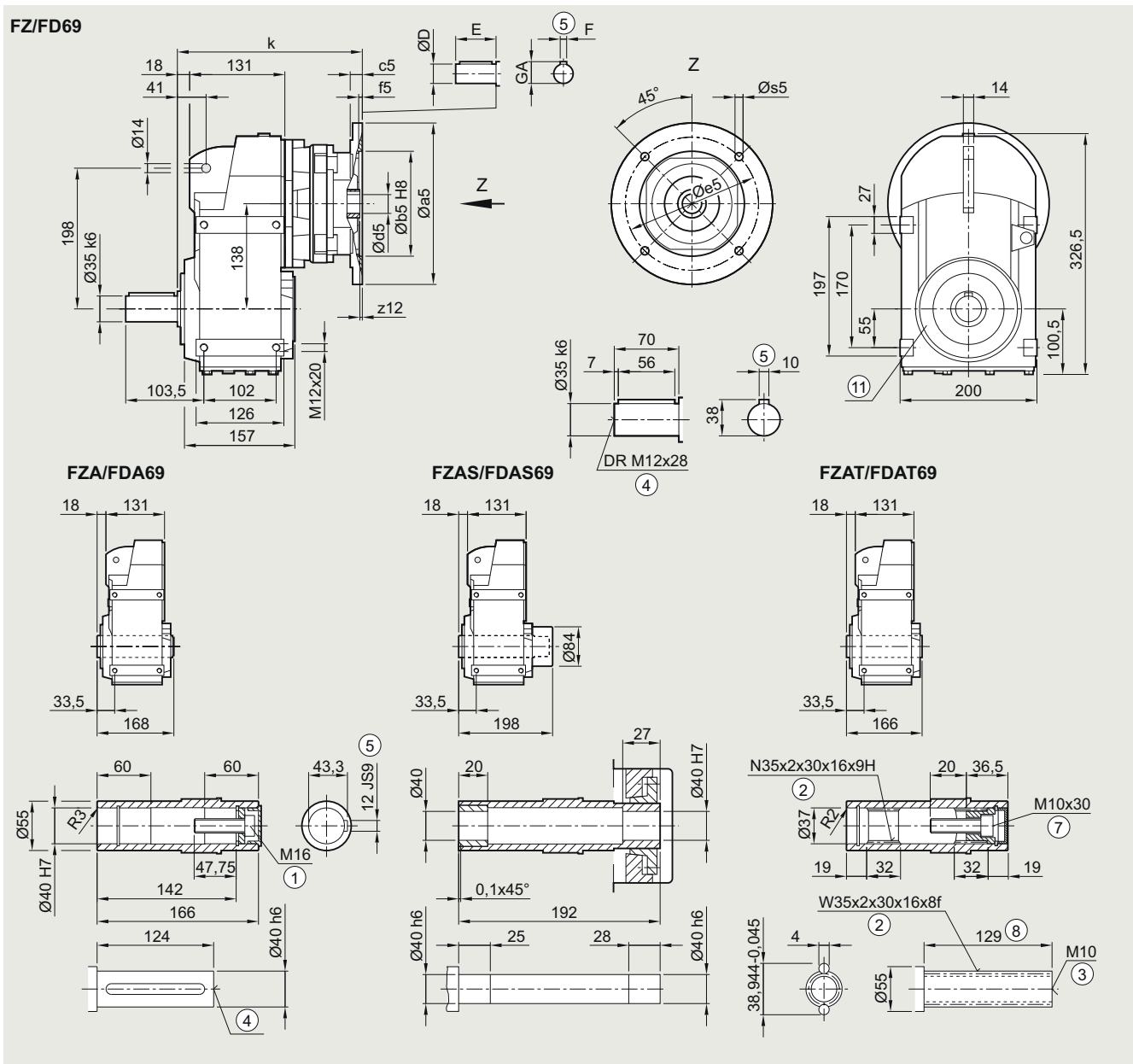
\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible







**FD../FZ..69 gearbox in a foot-mounted design****F030K4, FA030K4, FAS030K4, FAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	217.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	217.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	245.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	245.0
100 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
112 <sup>1)</sup>	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
132 <sup>1)</sup>	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	317.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

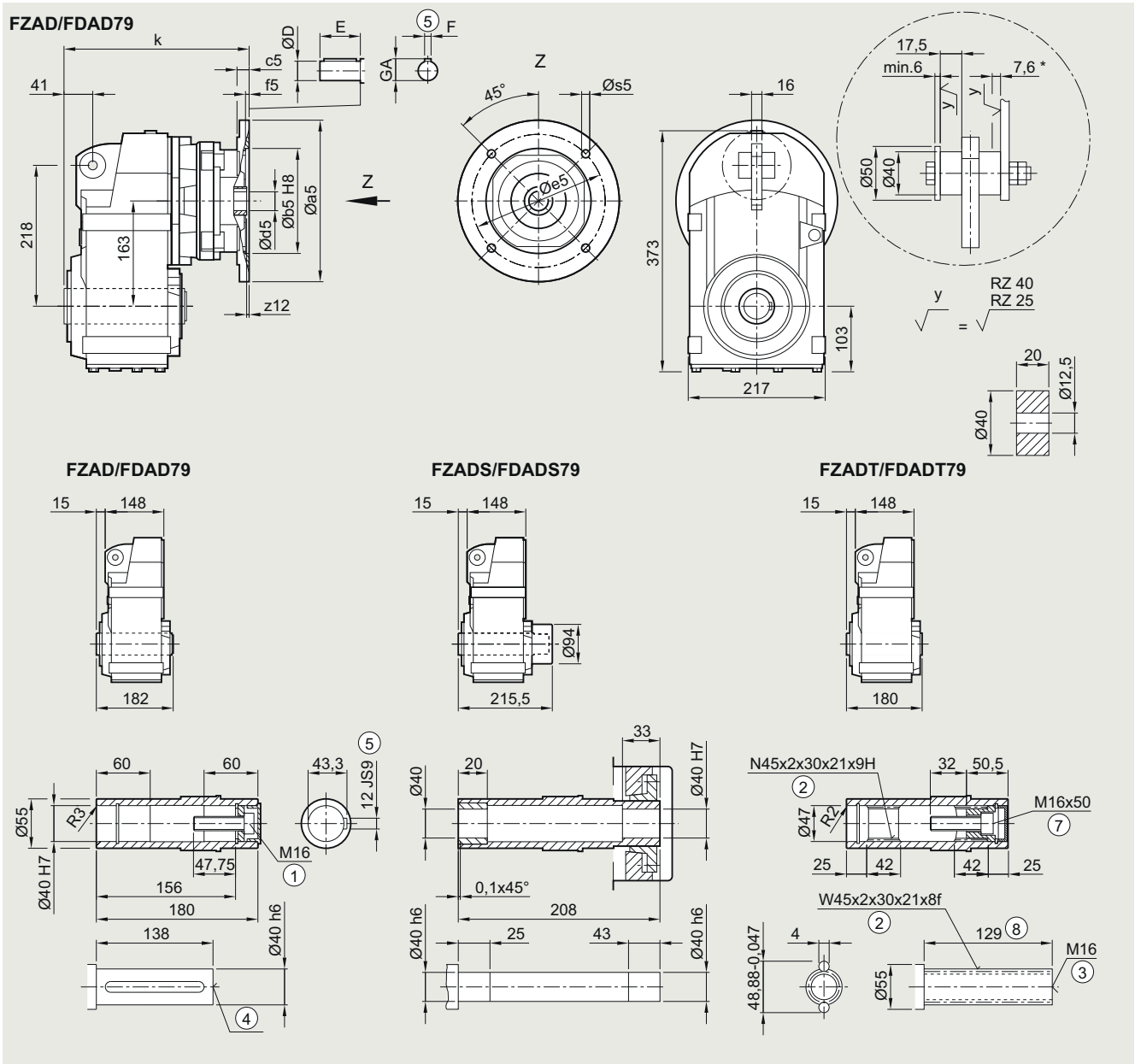
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FDAD./FZAD.79 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	229.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	253.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
132 <sup>1)</sup>	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	325.0
160 <sup>1)</sup>	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	355.0

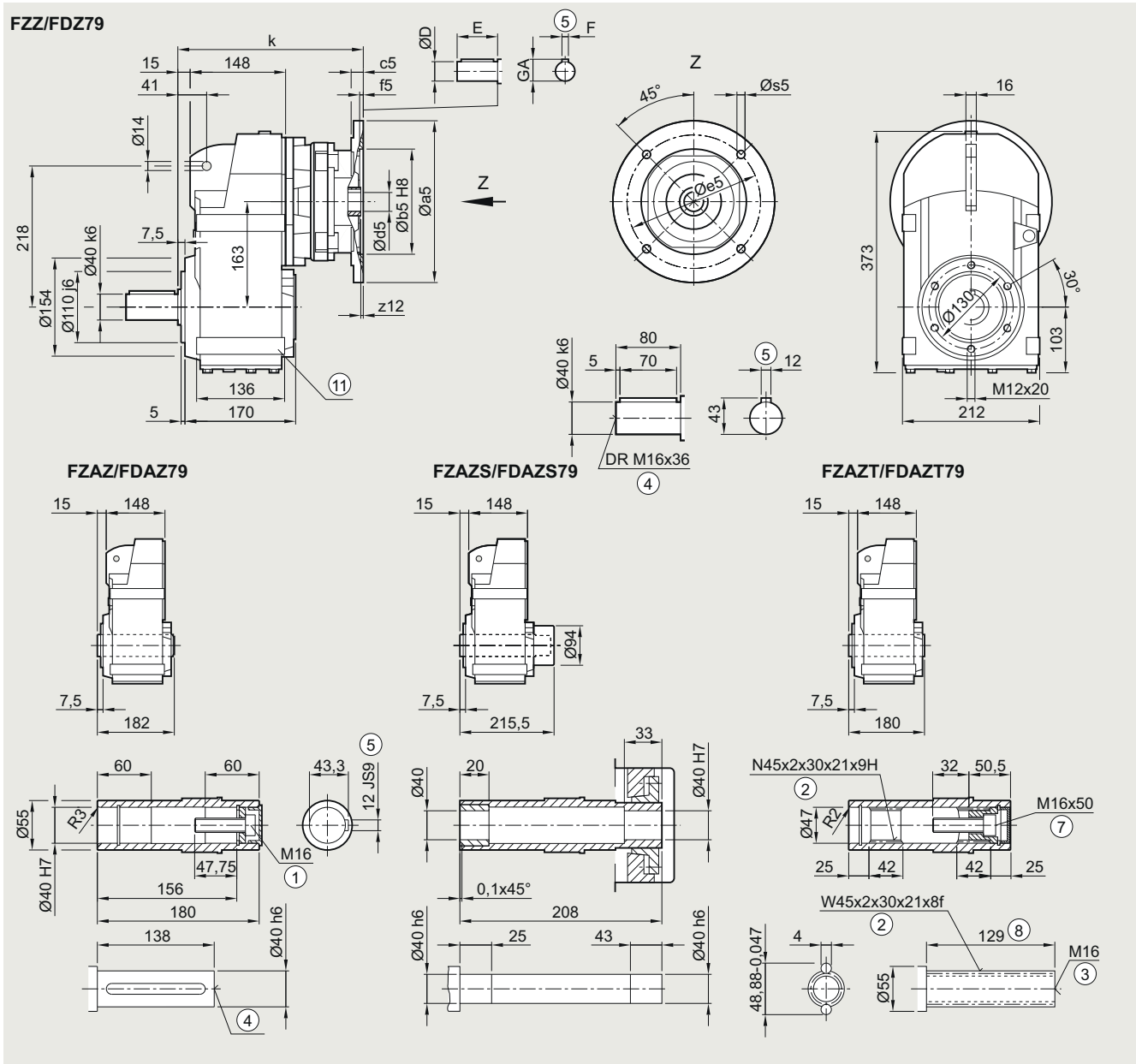
① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible

## FD.Z./FZ.Z.79 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	229.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	253.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
132 <sup>1)</sup>	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	325.0
160 <sup>1)</sup>	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	355.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

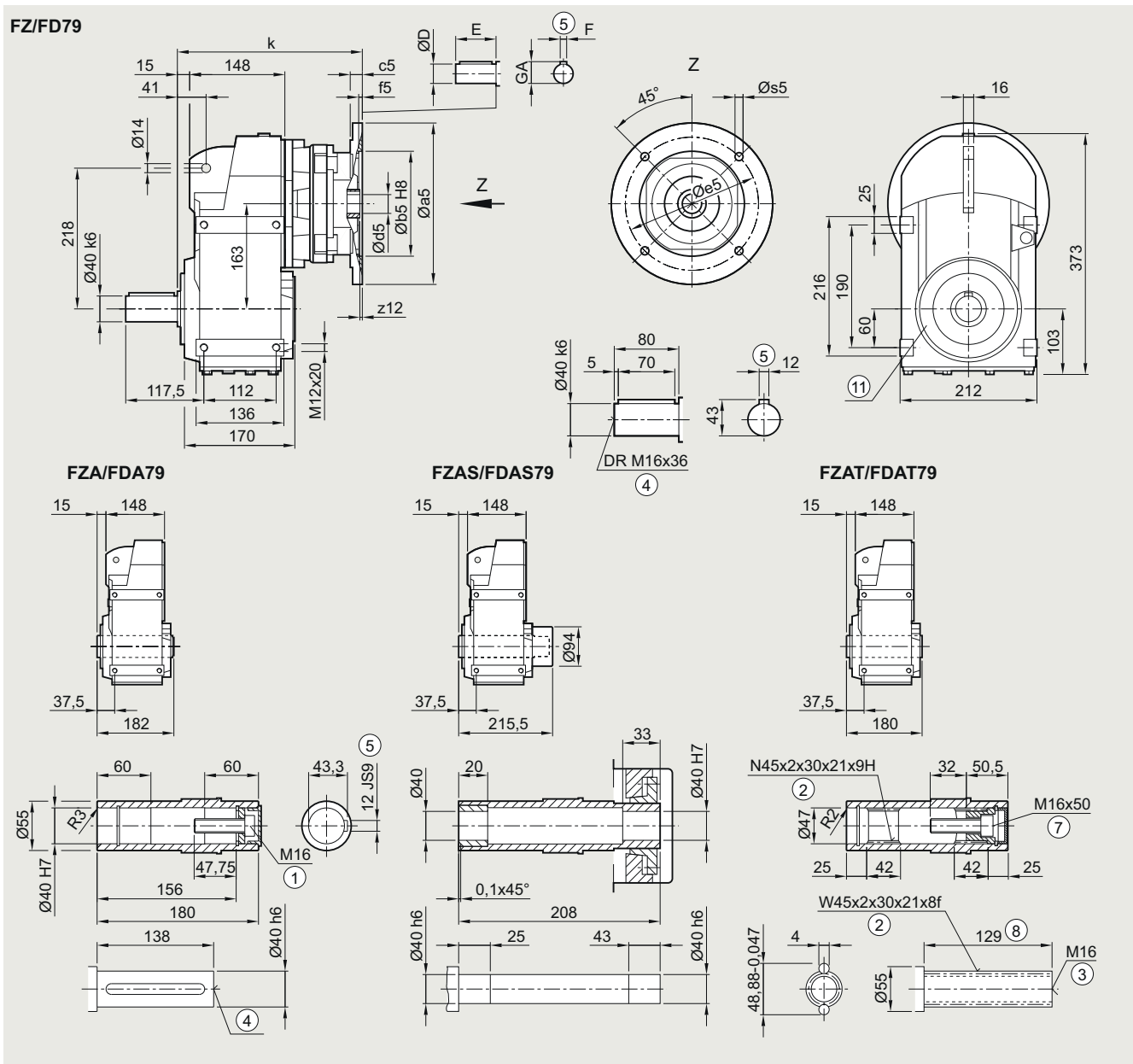
⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

①) FDADS/FZADS not possible



## FD../FZ..79 gearbox in a foot-mounted design

F030K4, FA030K4, FAS030K4, FAT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	229.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	253.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
132 <sup>1)</sup>	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	325.0
160 <sup>1)</sup>	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	355.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

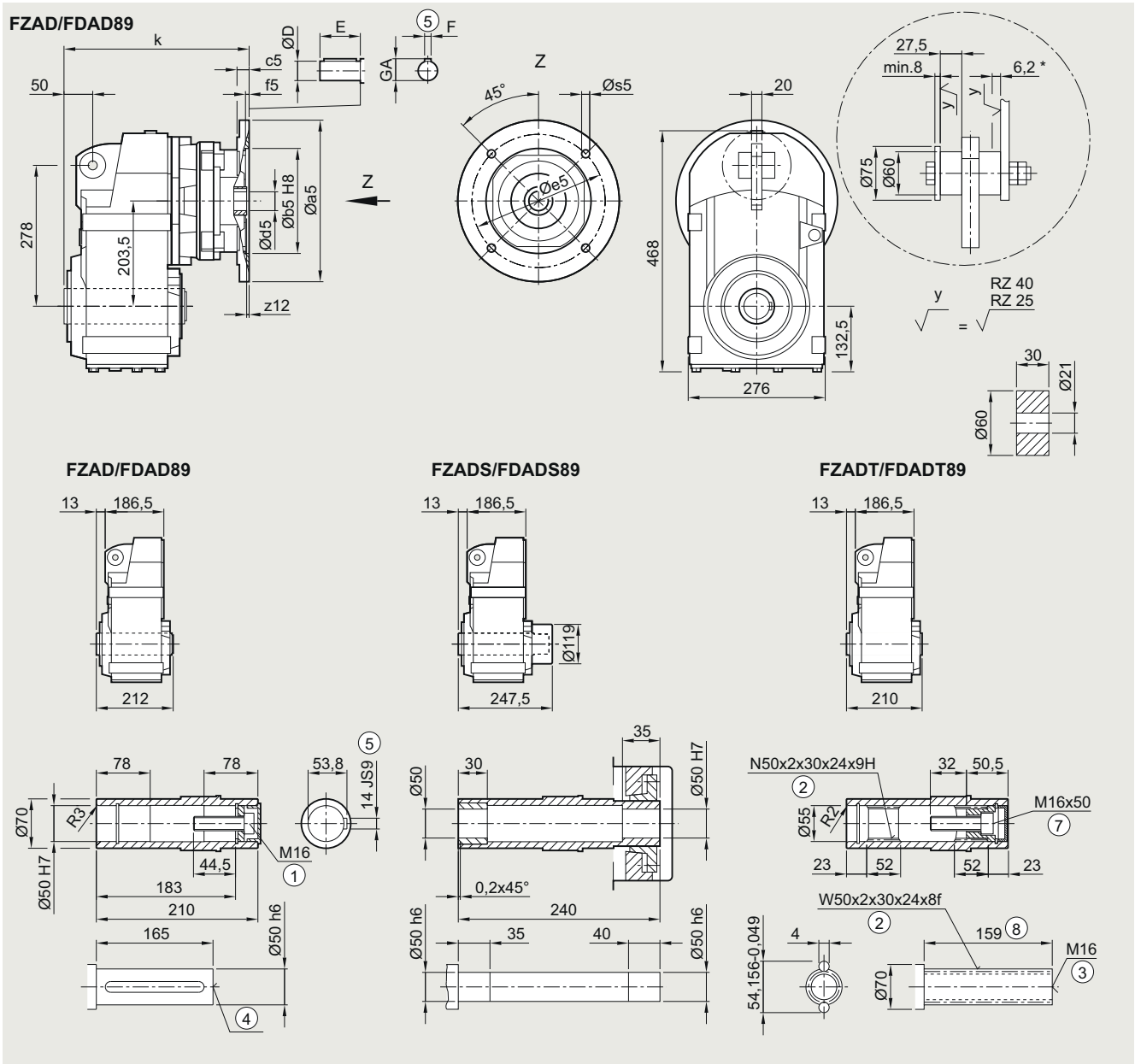
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FDAD./FZAD.89 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	276.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	276.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	344.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	374.5
180 <sup>1)</sup>	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	374.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible

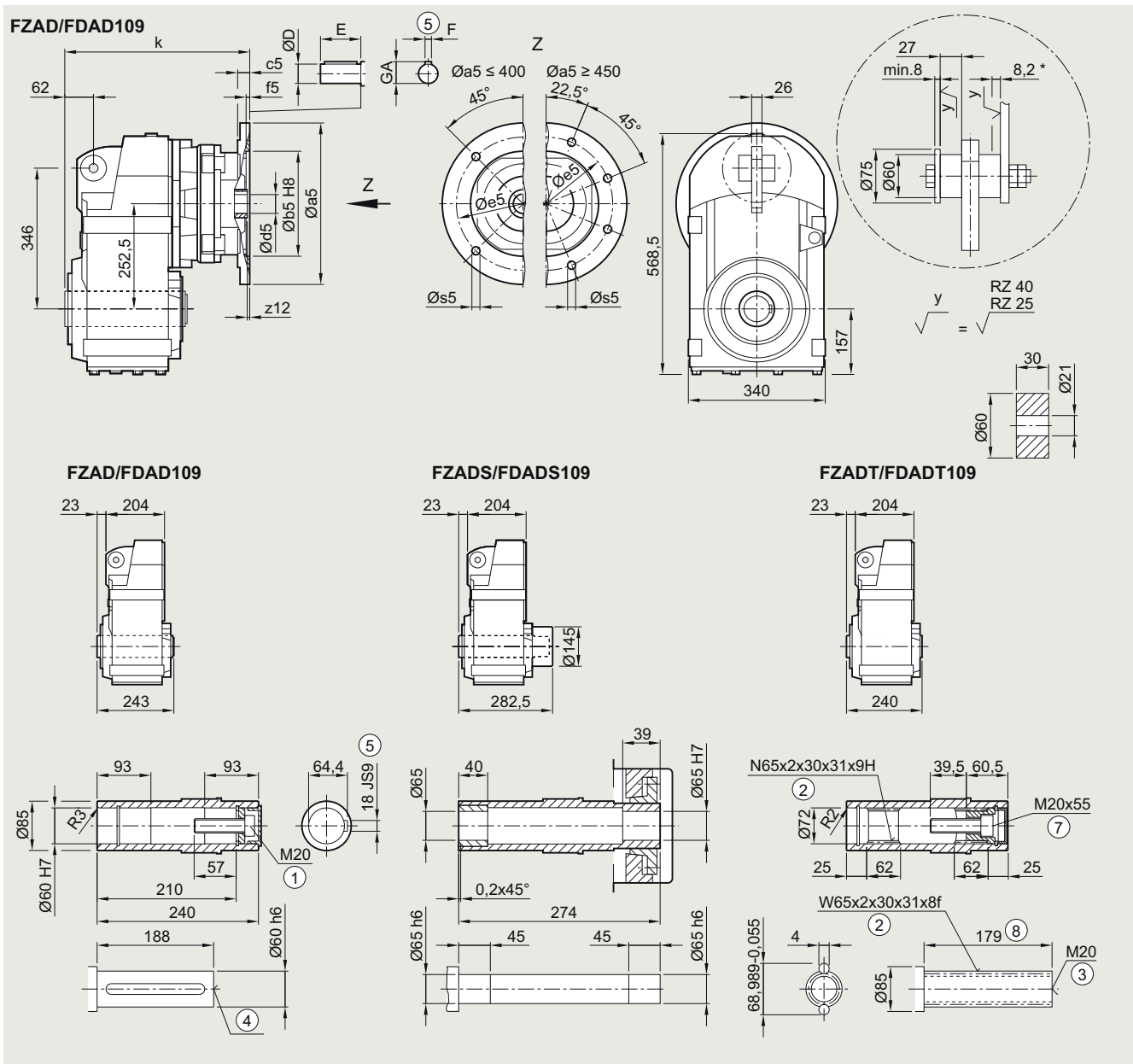










**FDAD./FZAD.109 gearbox in a shaft-mounted design****FAD030K4, FADS030K4, FADT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	297.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	363.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	393.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	393.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	433.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	440.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque





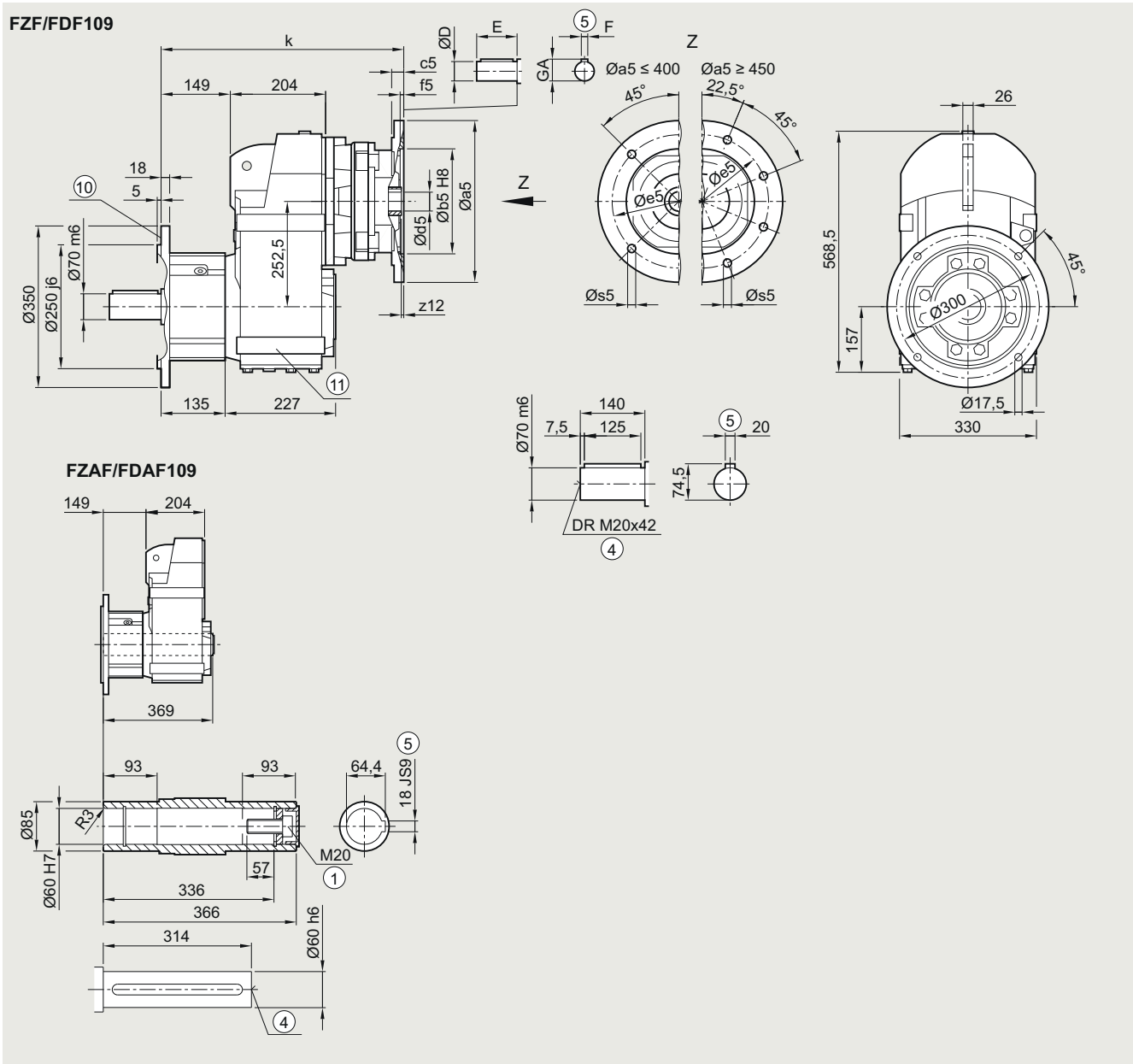
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FD.F/FZ.F.109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040K4, FAF040K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	423.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	471.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	471.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	489.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	519.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	519.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	559.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	566.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design





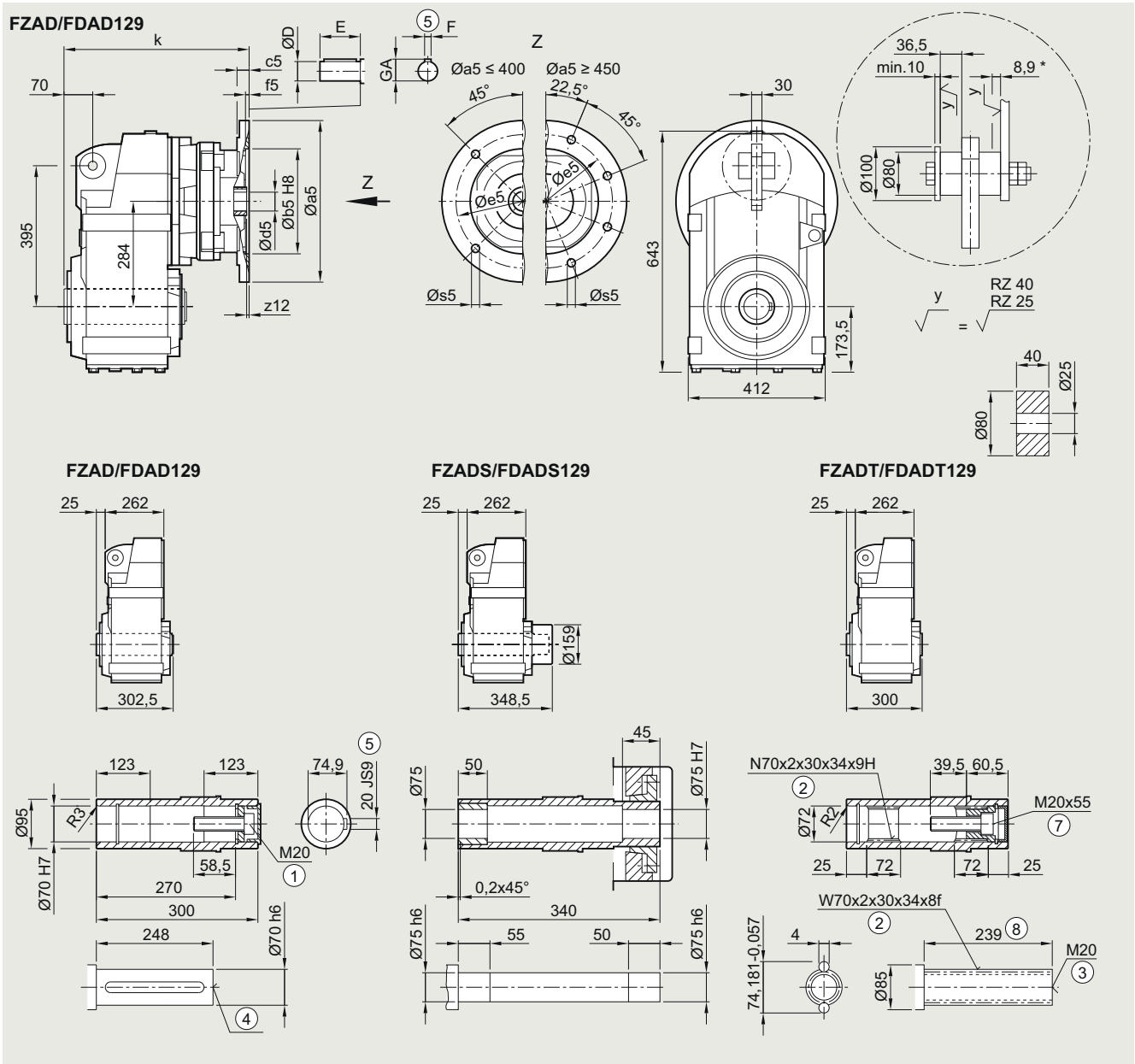
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FDAD./FZAD.129 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	350.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	412.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	442.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	442.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	482.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	489.0
250 <sup>1)</sup>	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	523.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑥ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible

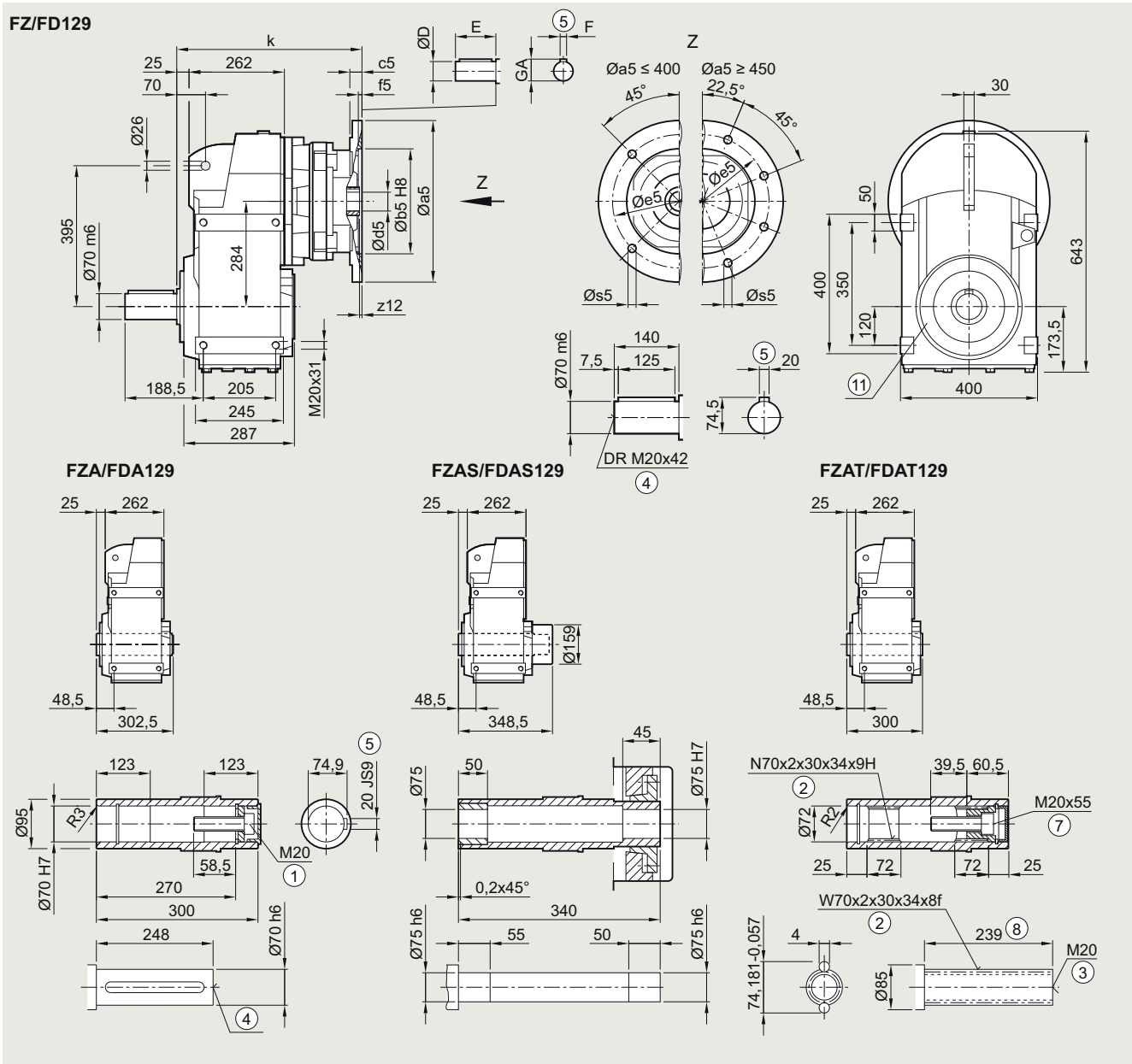






**SIMOGEAR gearboxes**

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****FD../FZ..129 gearbox in a foot-mounted design****F030K4, FA030K4, FAS030K4, FAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	350.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	412.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	442.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	442.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	482.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	489.0
250 <sup>1)</sup>	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	523.5

① ISO 4014

② DIN 5480

③ DIN 332-D

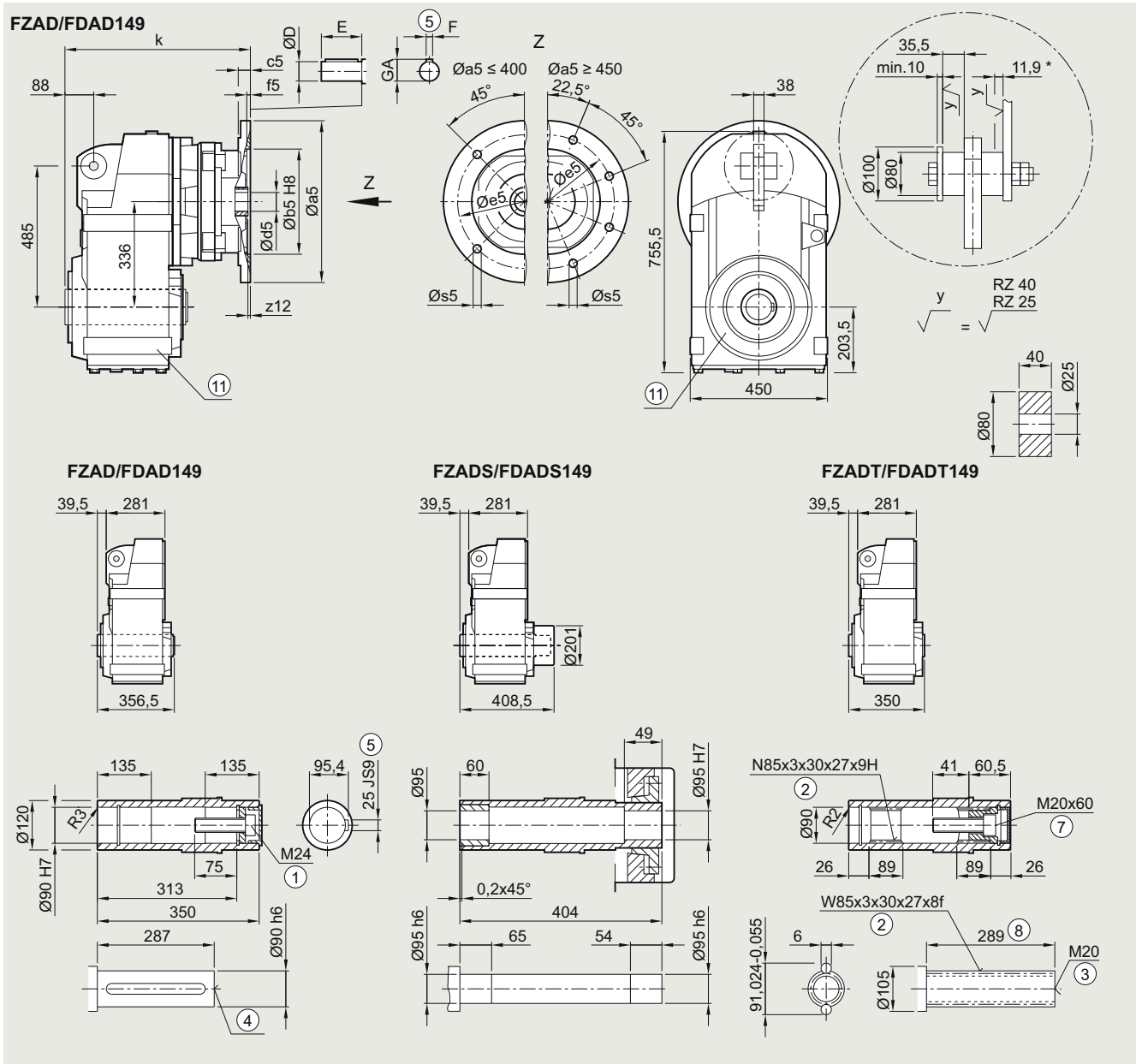
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

**FDAD./FZAD.149 gearbox in a shaft-mounted design****FAD030K4, FADS030K4, FADT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	439.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	469.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	469.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	509.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	516.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	550.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

⑩ Use bores only for foot-mounted, flange-mounted or housing flange design

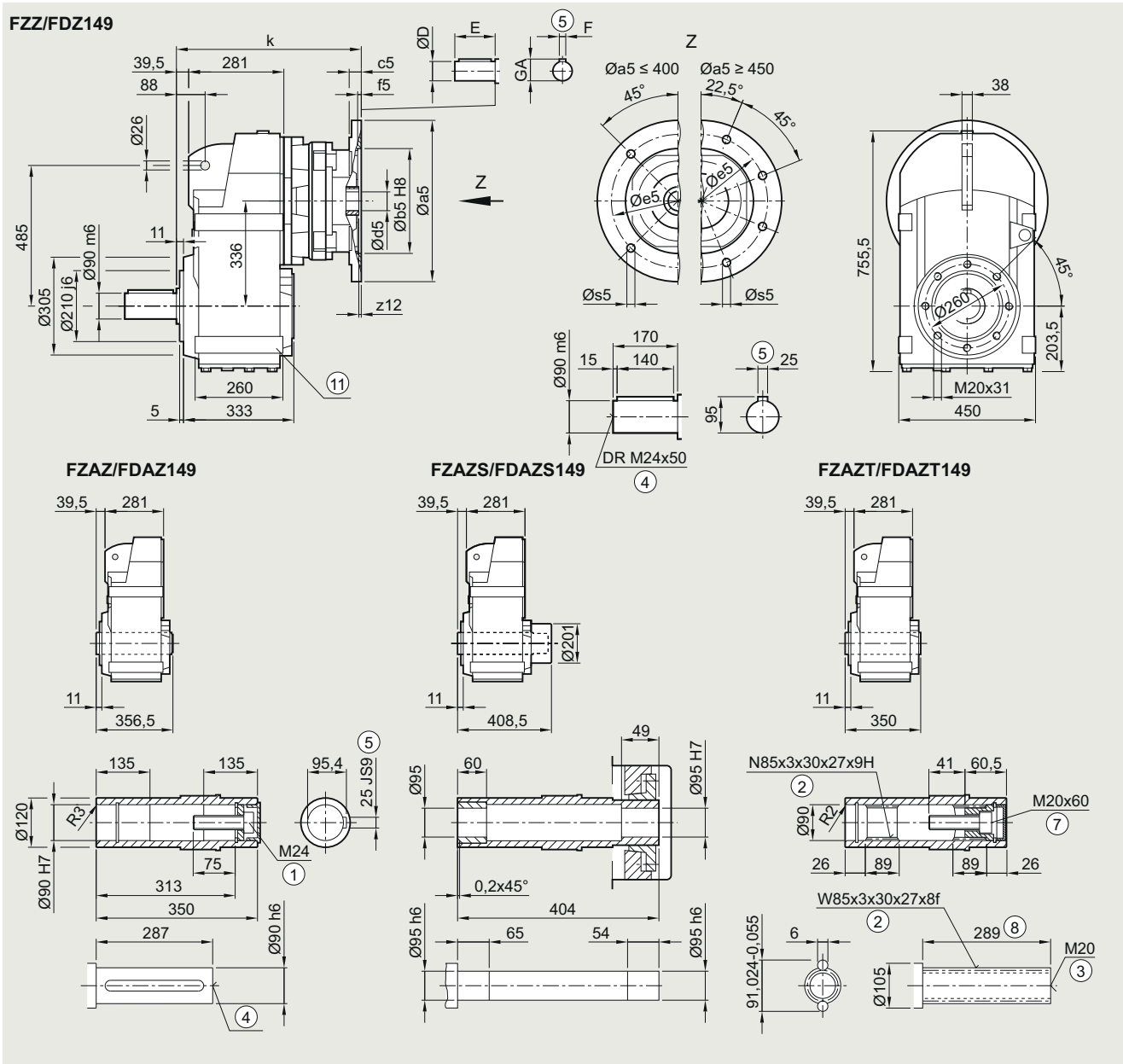
# SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

## Dimensional drawings

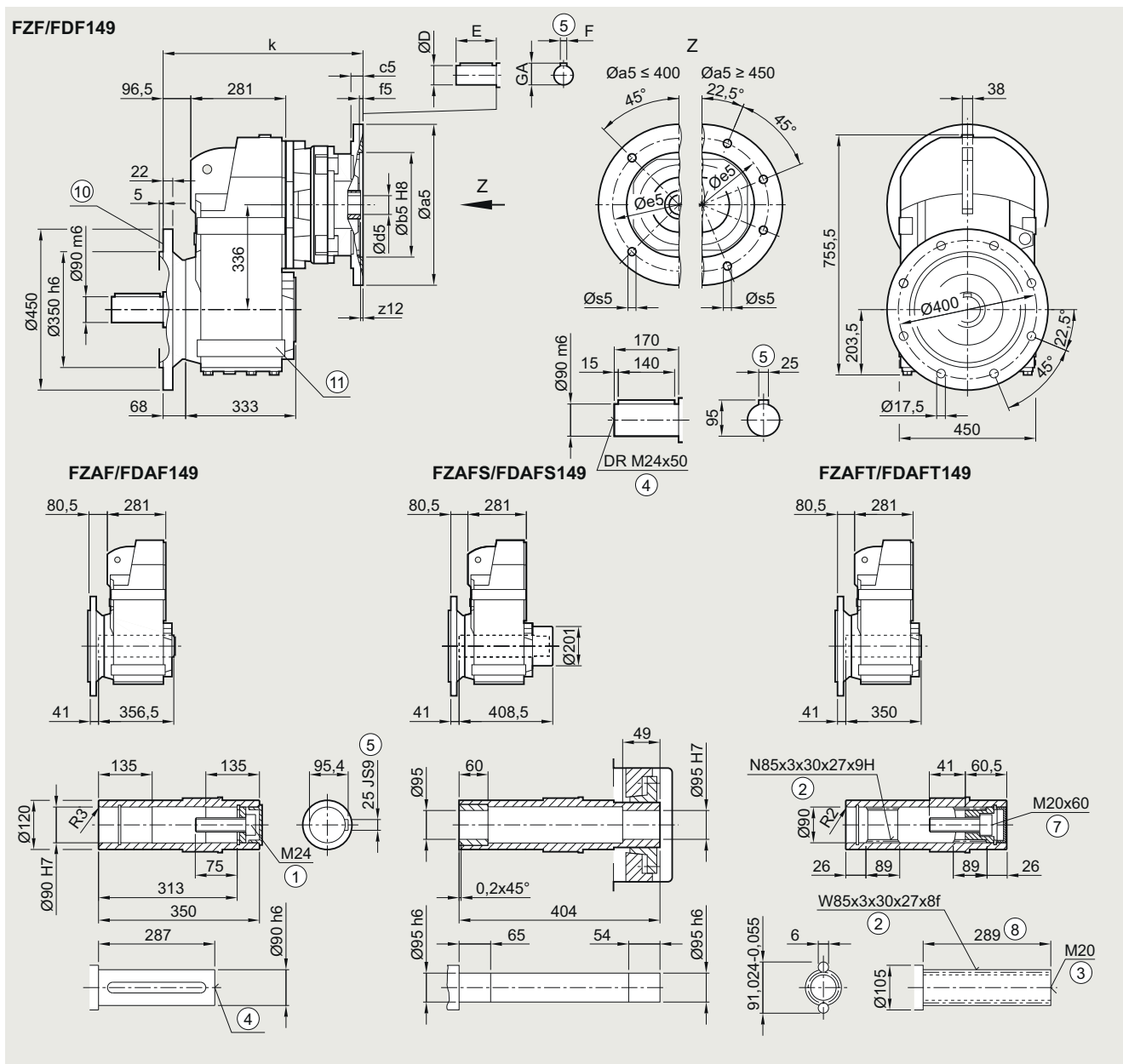
### FD.Z./FZ.Z.149 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	439.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	469.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	469.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	509.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	516.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	550.5

- ① ISO 4014                      ② DIN 5480                      ③ DIN 332-D                      ④ DIN 332
- ⑤ Feather key/keyway DIN 6885                      ⑦ ISO 4762                      ⑧ Without locating shoulder +1 mm                      ⑩ Use bores only for foot-mounted design

**FD.F/FZ.F.149 gearbox in a flange-mounted design****FF030K4, FAF030K4, FAFS030K4, FAFT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	485.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	485.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	496.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	526.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	526.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	566.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	573.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	607.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 4/169

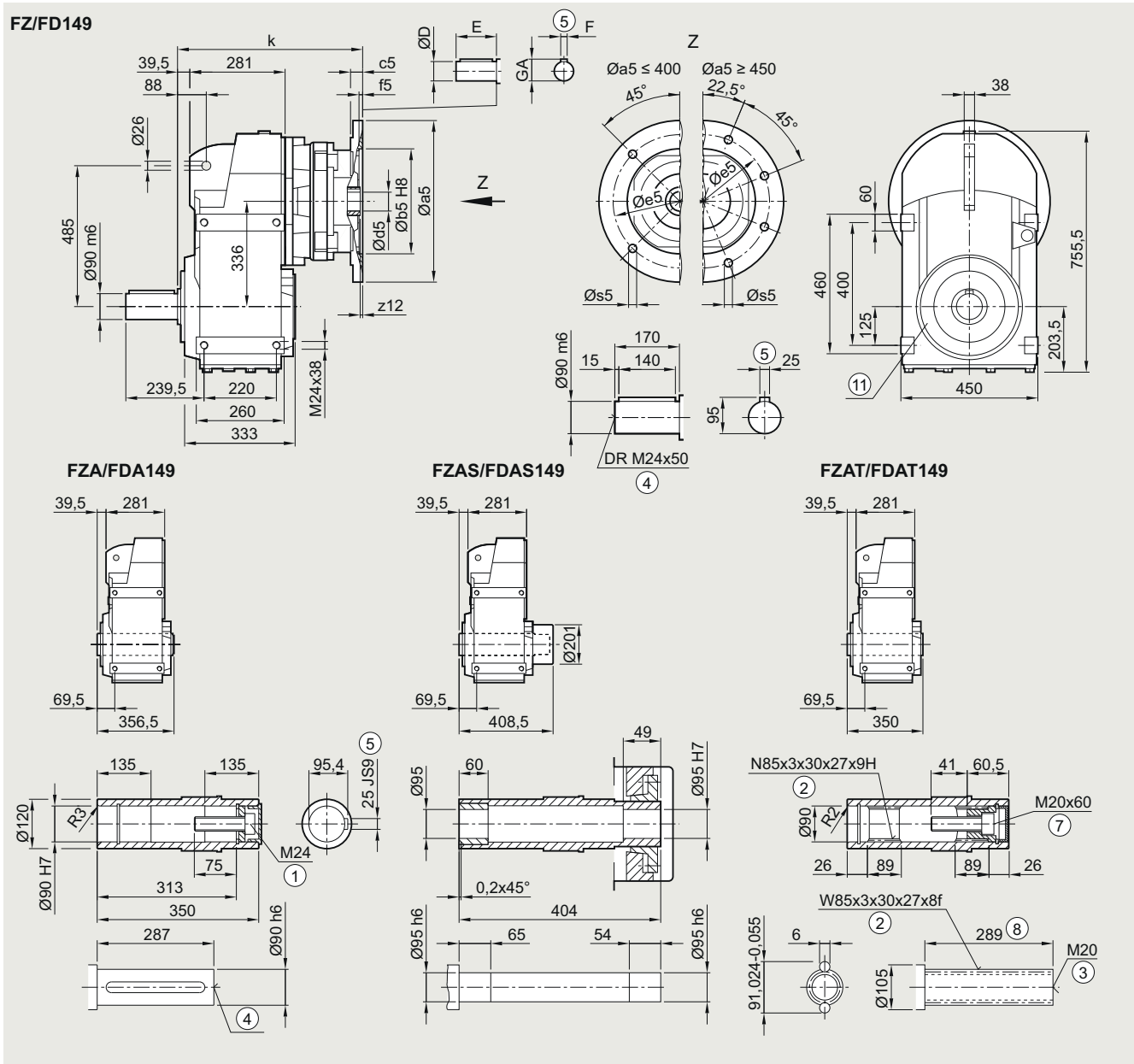
⑪ Use bores only for foot-mounted design





## FD../FZ..149 gearbox in a foot-mounted design

F030K4, FA030K4, FAS030K4, FAT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	439.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	469.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	469.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	509.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	516.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	550.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

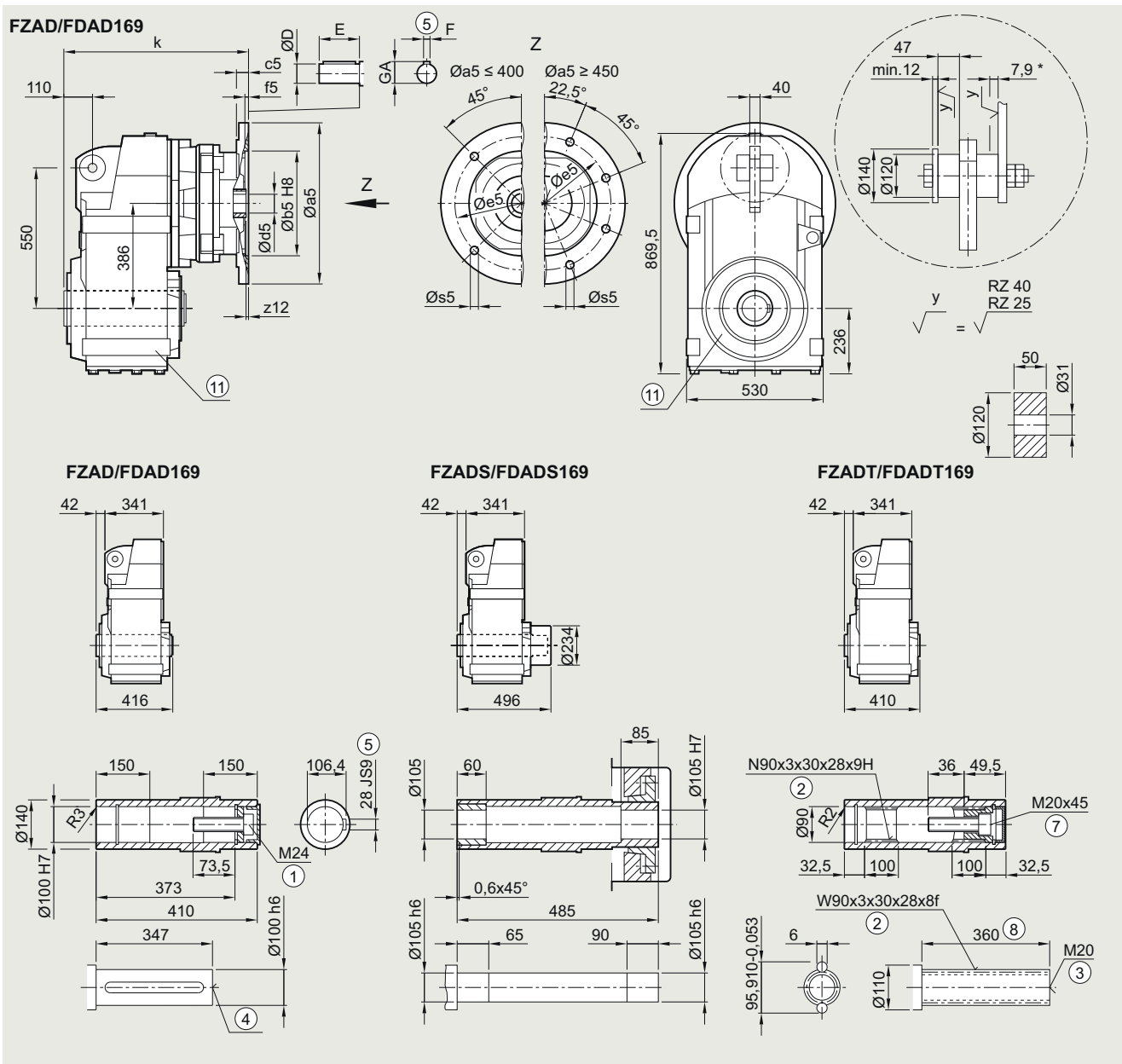
# SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

## Dimensional drawings

### FDAD./FZAD.169 gearbox in a shaft-mounted design

*FAD030K4, FADS030K4, FADT030K4*



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	481.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	491.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	521.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	521.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	561.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	567.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	597.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 \* Spring compression at max. torque    ⑩ Use bores only for foot-mounted, flange-mounted or housing flange design



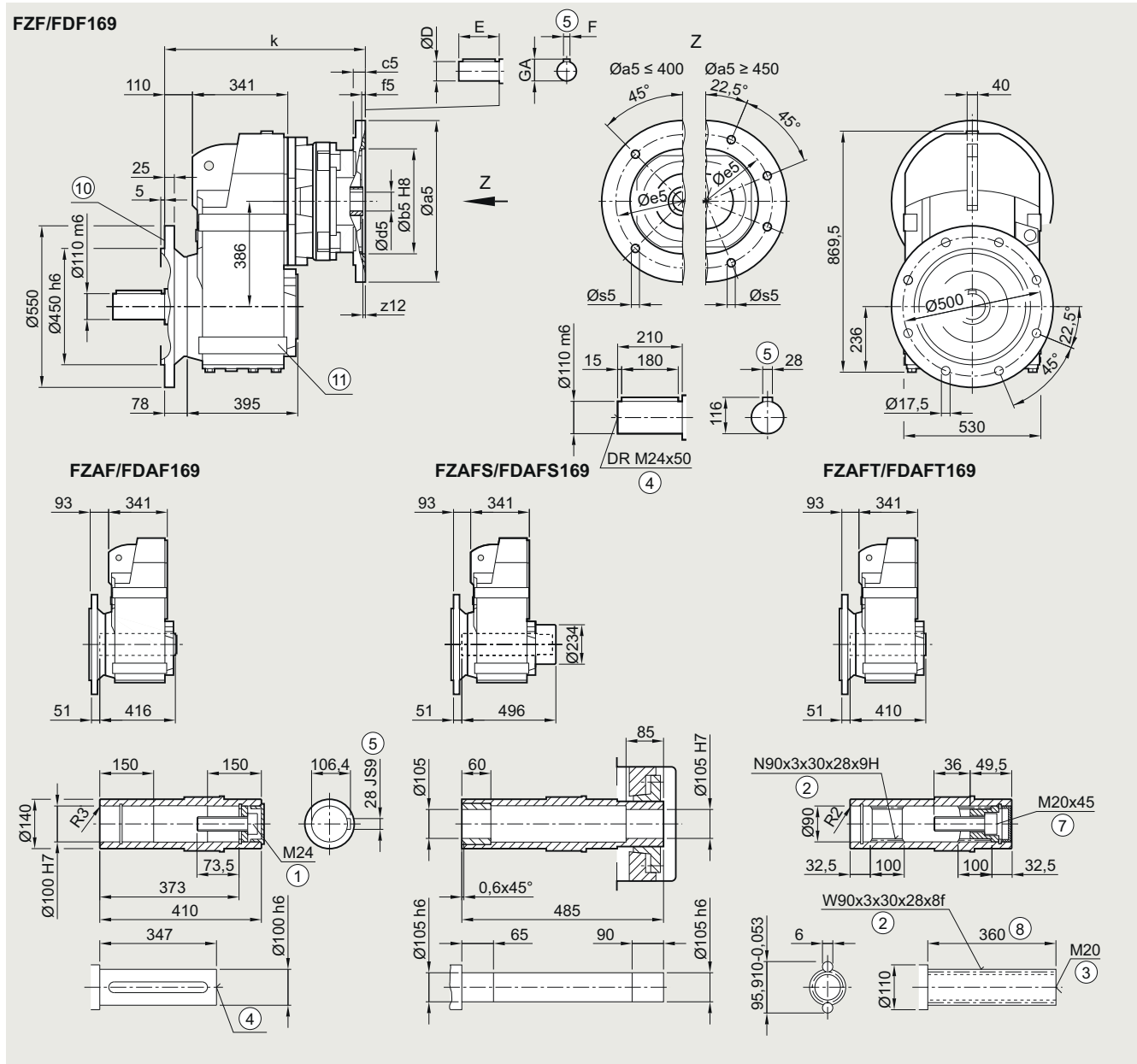
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FD.F/FZ.F.169 gearbox in a flange-mounted design

FF030K4, FAF030K4, FAFS030K4, FAFT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	546.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	556.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	586.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	586.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	626.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	632.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	662.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

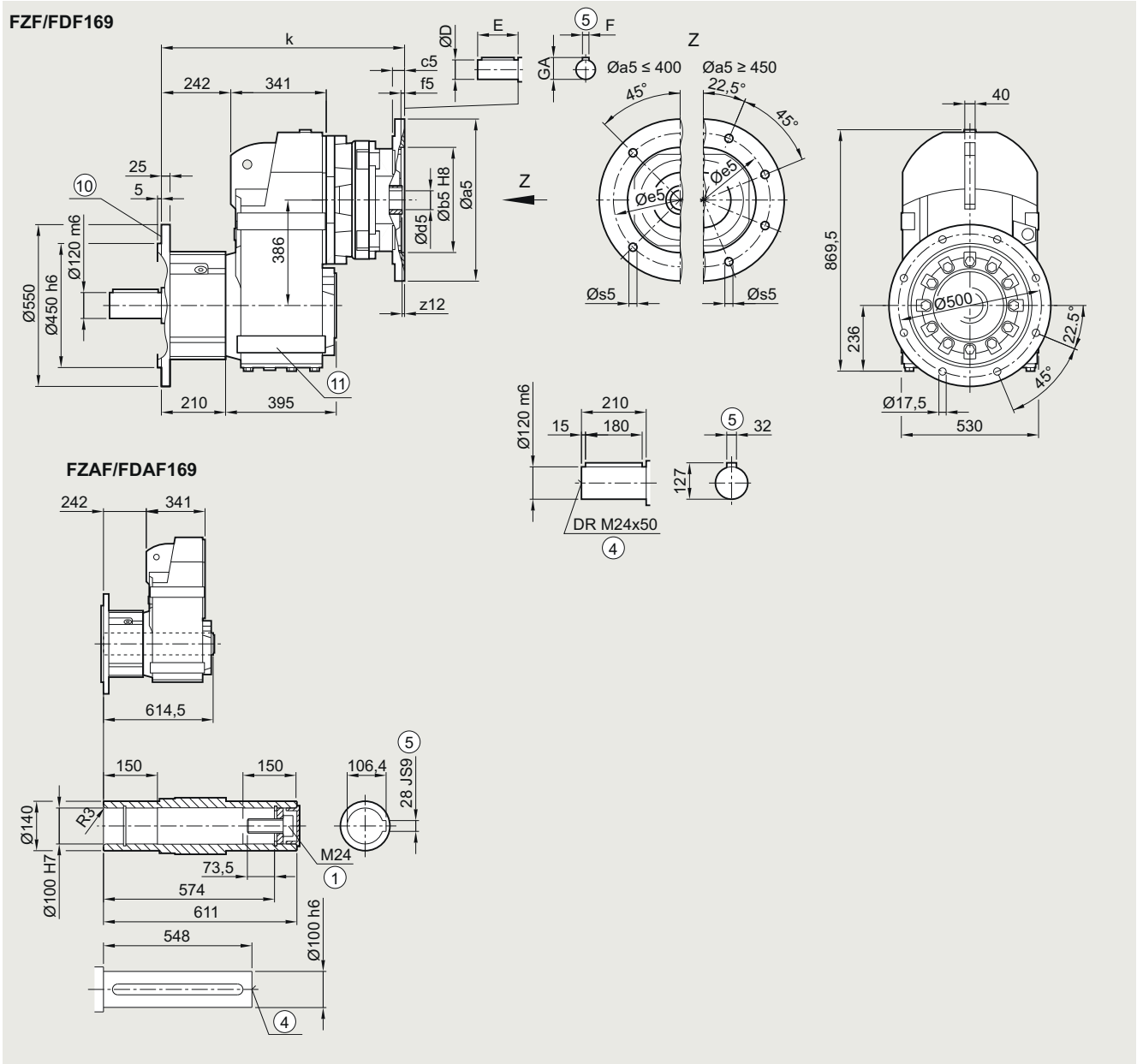
⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

**FD.F/FZ.F.169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)**

**FF040K4, FAF040K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	678.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	688.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	718.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	718.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	758.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	764.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	794.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

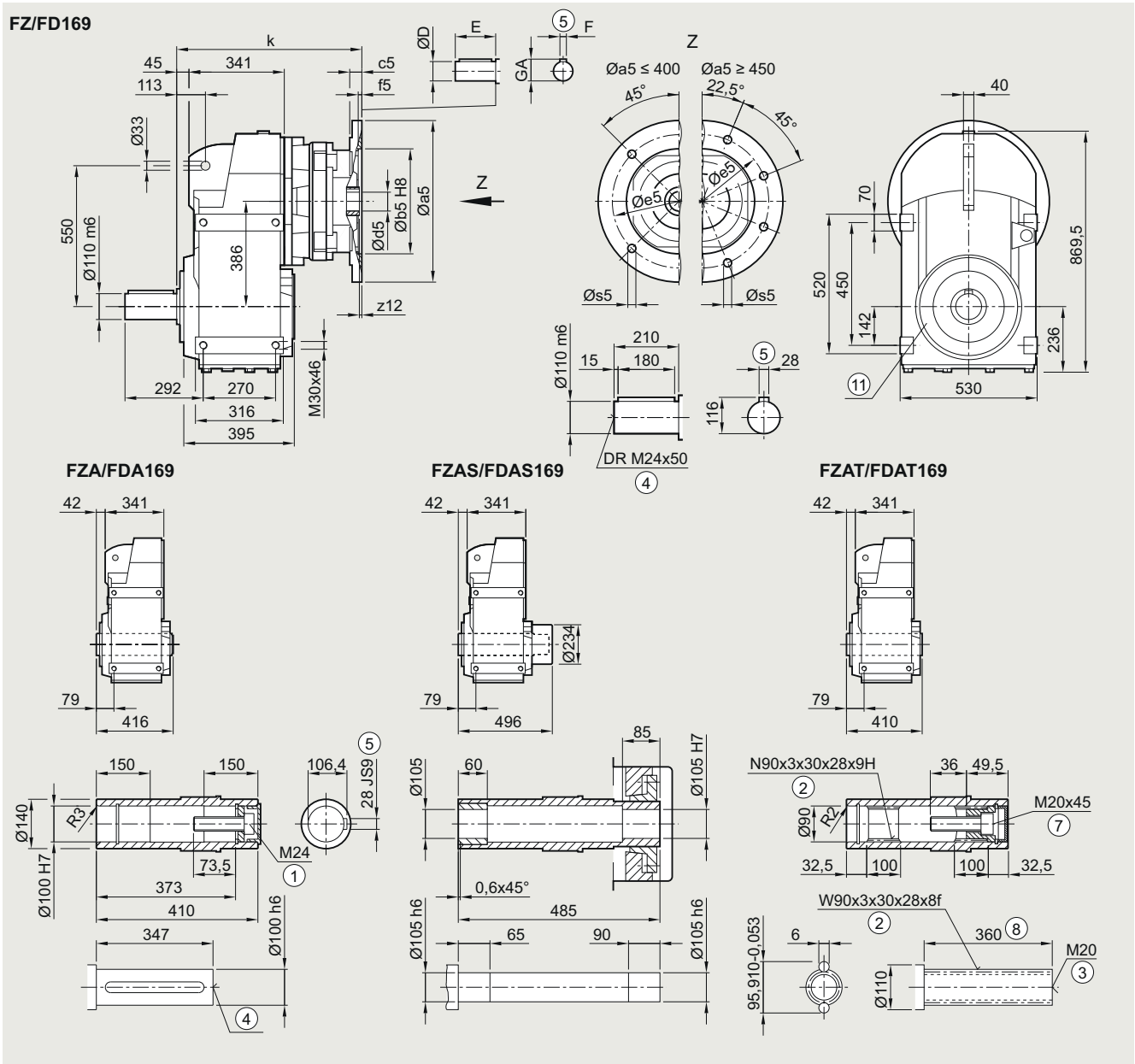
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FD../FZ..169 gearbox in a foot-mounted design

F030K4, FA030K4, FAS030K4, FAT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	481.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	491.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	521.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	521.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	561.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	567.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	597.5

① ISO 4014

② DIN 5480

③ DIN 332-D

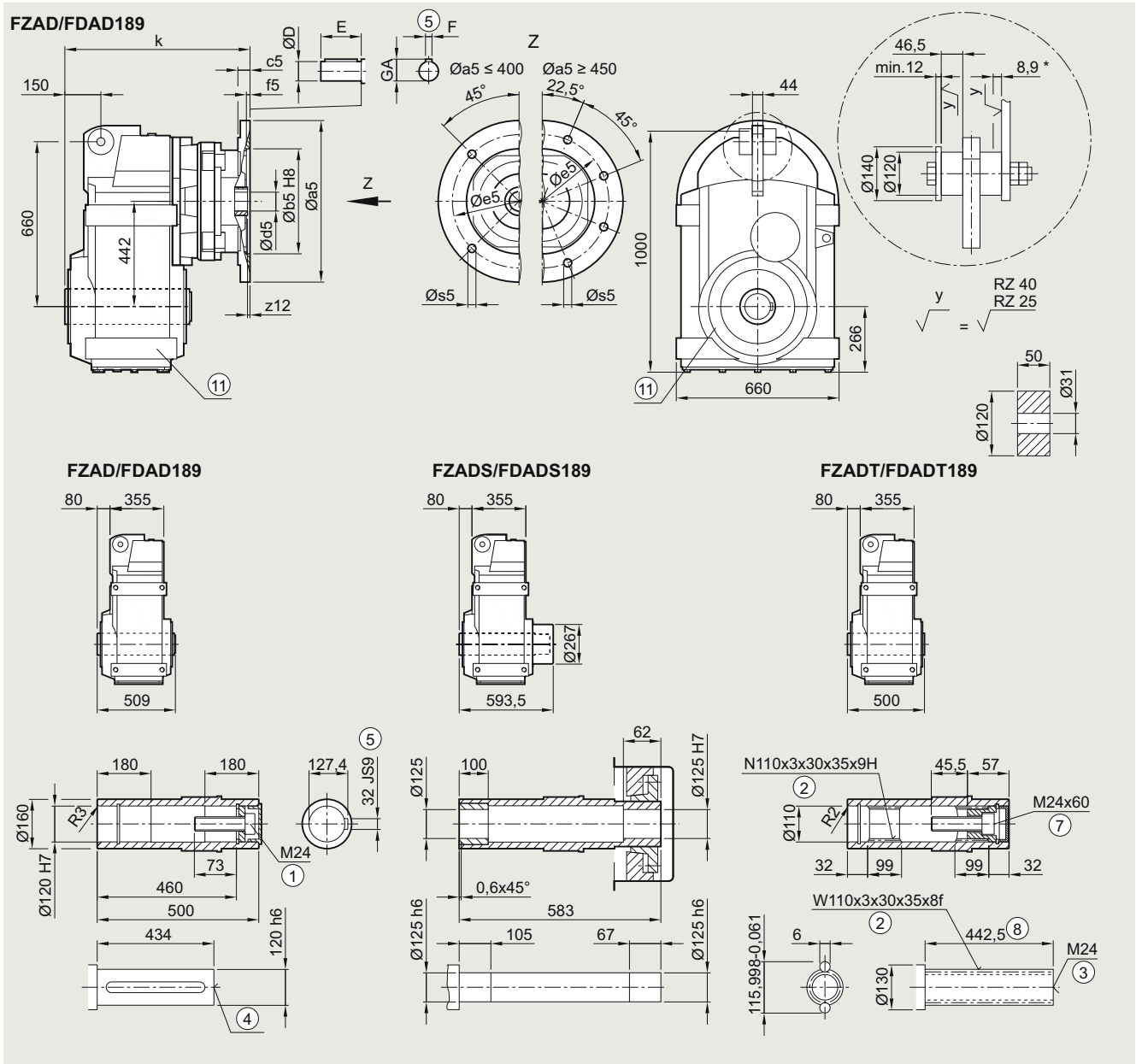
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

**FZAD./FZAD.189 gearbox in a shaft-mounted design****FAD030K4, FADS030K4, FADT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	530.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	540.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	570.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	570.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	610.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	616.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	646.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

⑩ Use bores only for foot-mounted, flange-mounted or housing flange design



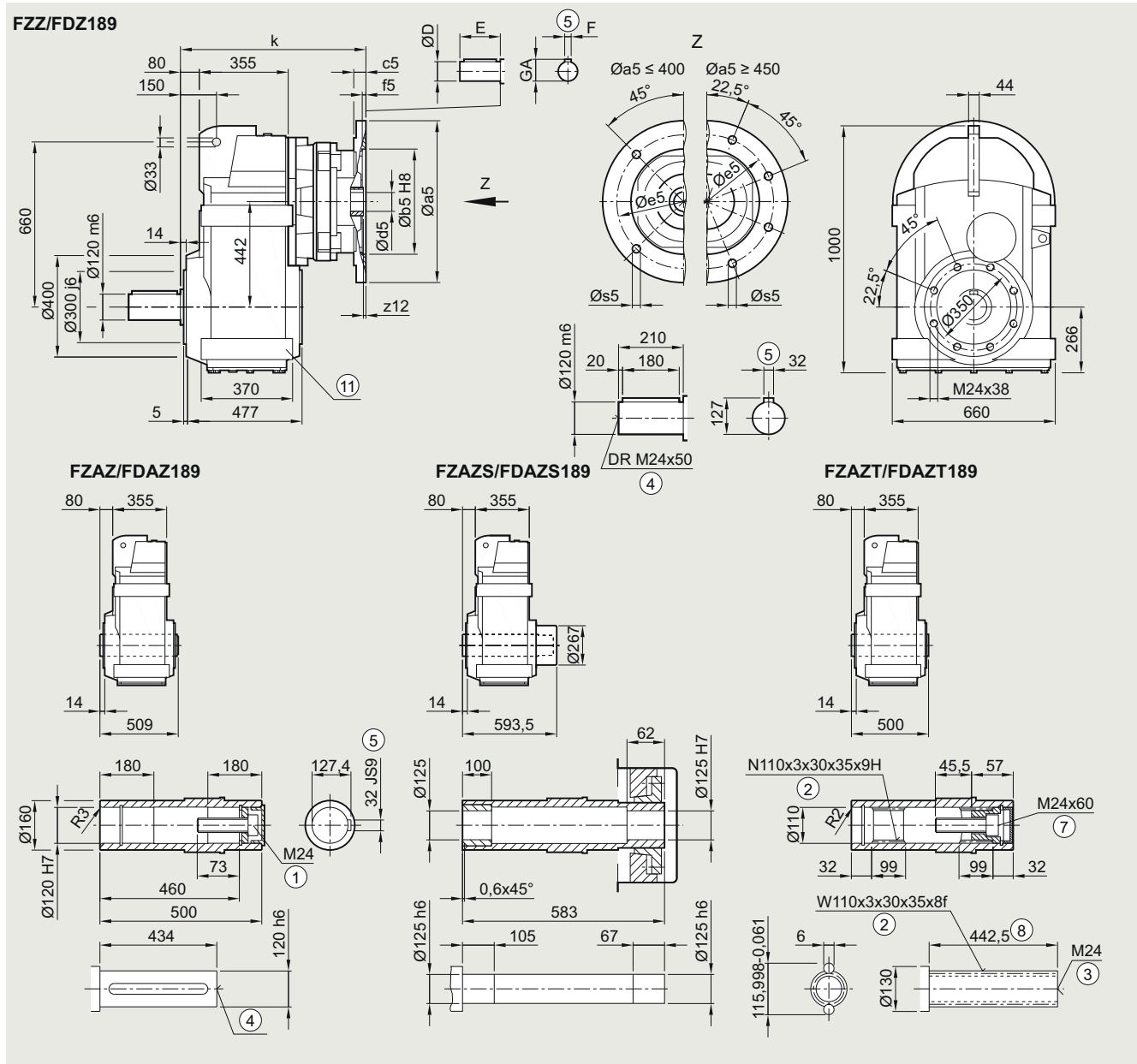
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### FZ.Z./FZ.Z.189 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	530.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	540.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	570.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	570.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	610.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	616.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	646.5

① ISO 4014

② DIN 5480

③ DIN 332-D

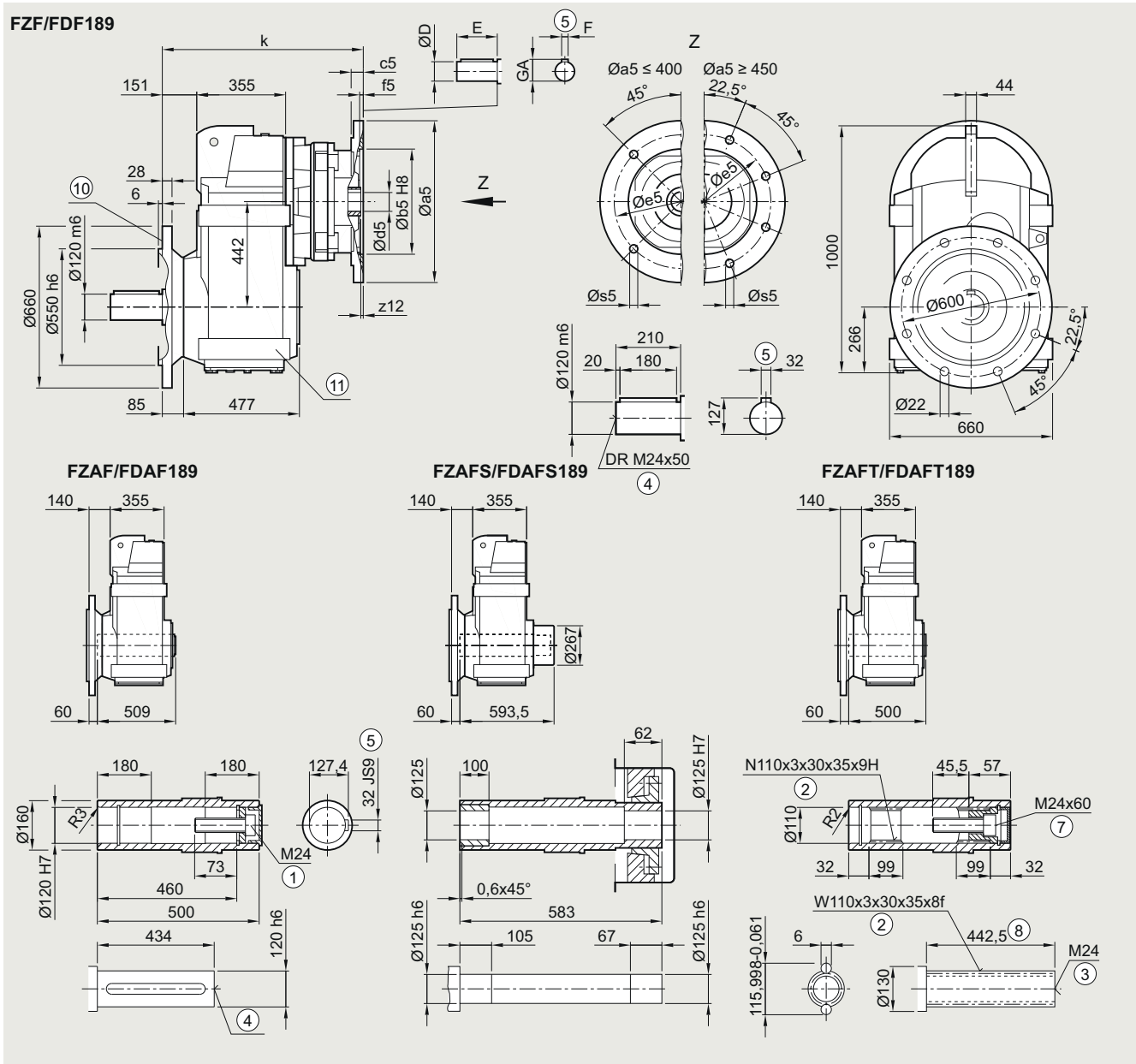
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ Use bores only for foot-mounted design

**FD.F/FZ.F.189 gearbox in a flange-mounted design****FF030K4, FAF030K4, FAFS030K4, FAFT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	601.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	611.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	641.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	641.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	681.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	687.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	717.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

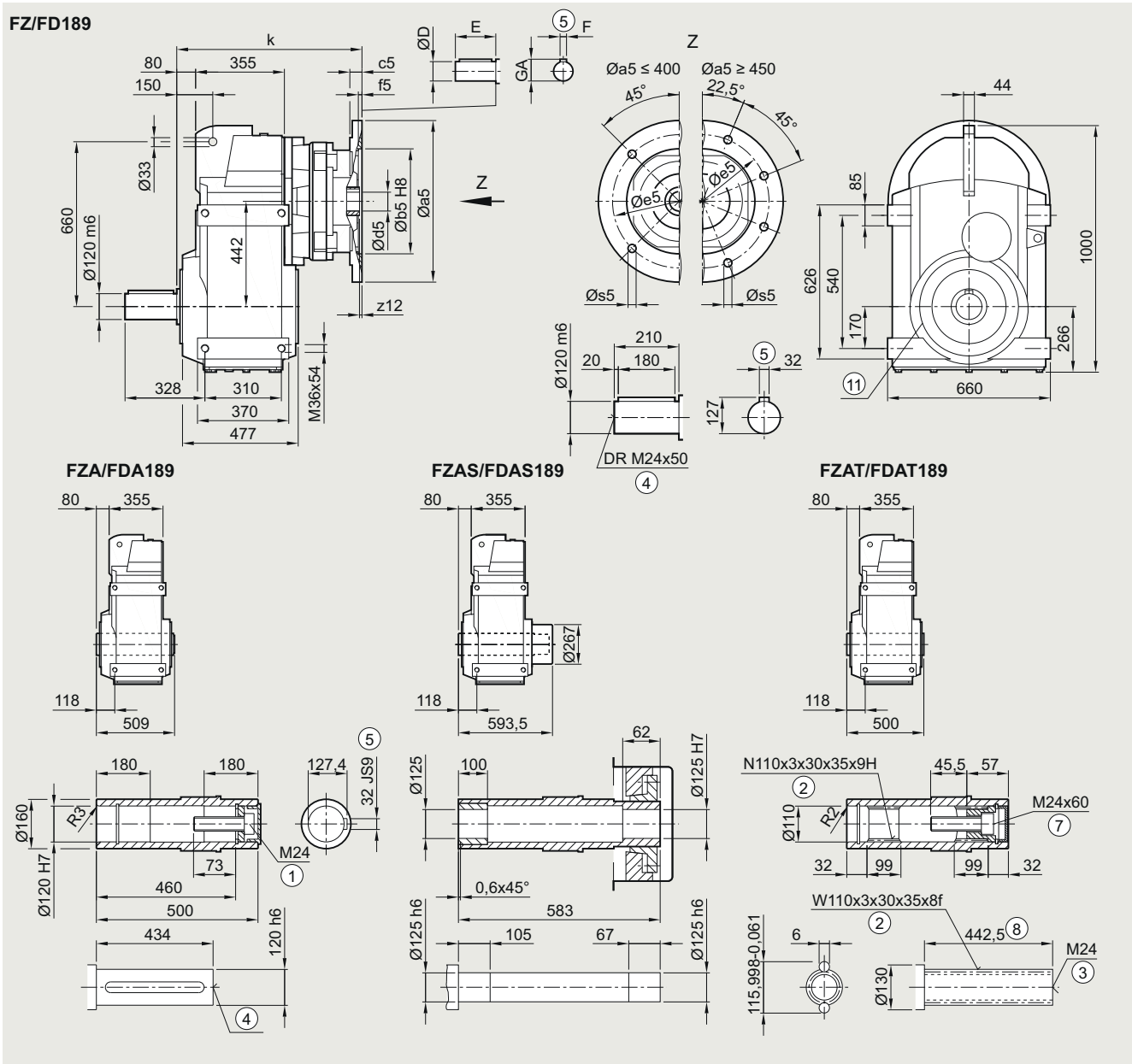
⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

**SIMOGEAR gearboxes**

Parallel shaft gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****FD../FZ..189 gearbox in a foot-mounted design****F030K4, FA030K4, FAS030K4, FAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	530.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	540.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	570.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	570.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	610.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	616.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	646.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

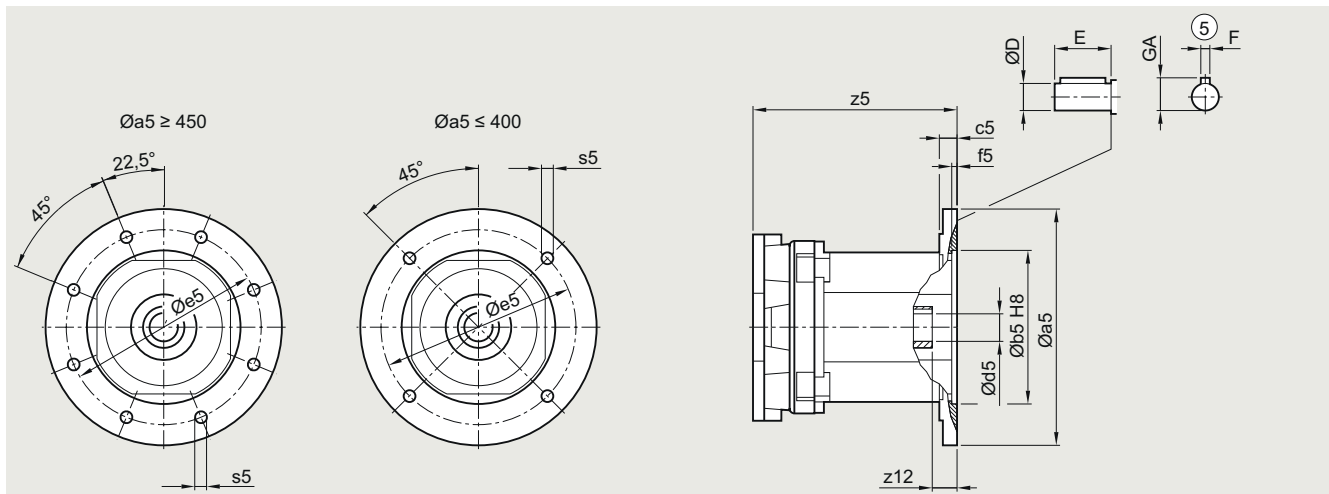
# SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K2 for mounting an IEC motor

## Dimensional drawings

### FD.../FZ...29 to FD.../FZ...79 gearboxes

*F.AD.030K2, F.Z.030K2, F.F.030K2, F..030K2*



4

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...29</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
<b>FZ.../FD...39</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
<b>FZ.../FD...49</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>FZ.../FD...69</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>FZ.../FD...79</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	182.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	182.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	307.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	352.5

© Feather key/keyway DIN 6885

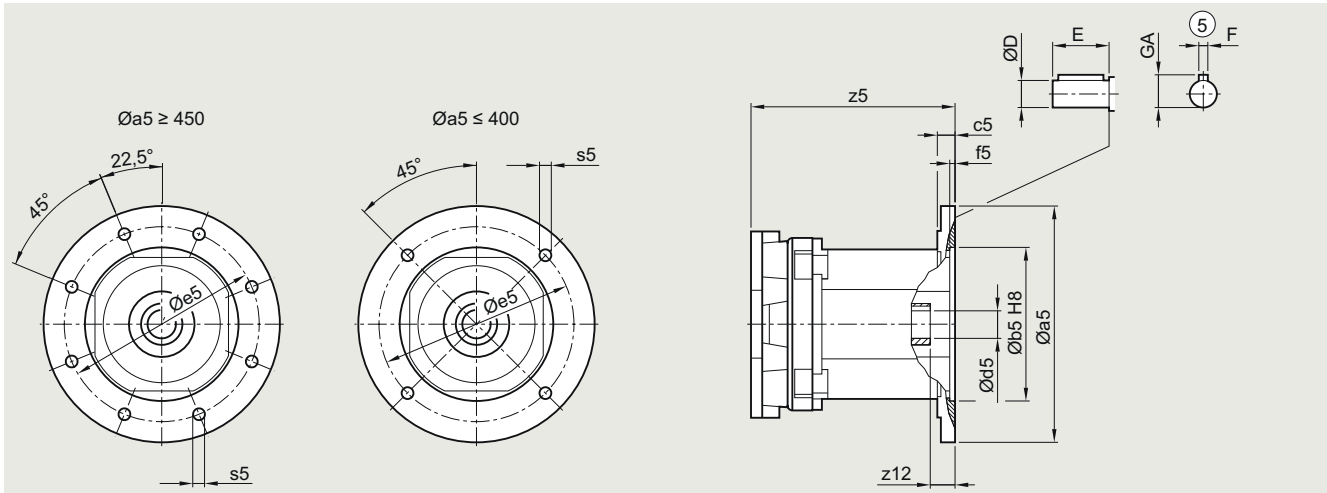
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K2 for mounting an IEC motor

### Dimensional drawings

#### FD.../FZ...89 to FD.../FZ...129 gearboxes

*F.AD.030K2, F.Z.030K2, F.F.030K2, F..030K2*



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...89</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	169.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	169.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	290.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	335.5
<b>FZ.../FD...109</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	162.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	203.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	203.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	281.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	326.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	326.5
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	371.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	419.0
<b>FZ.../FD...129</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	155.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	194.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	194.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	270.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	315.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	315.5
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	360.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	408.0
250	550	450	27	6.0	500	M16	75	65 (60)	140	18	69.0 (64.0)	445.5

⑤ Feather key/keyway DIN 6885

( ) Dimension in brackets for 2-pole motor

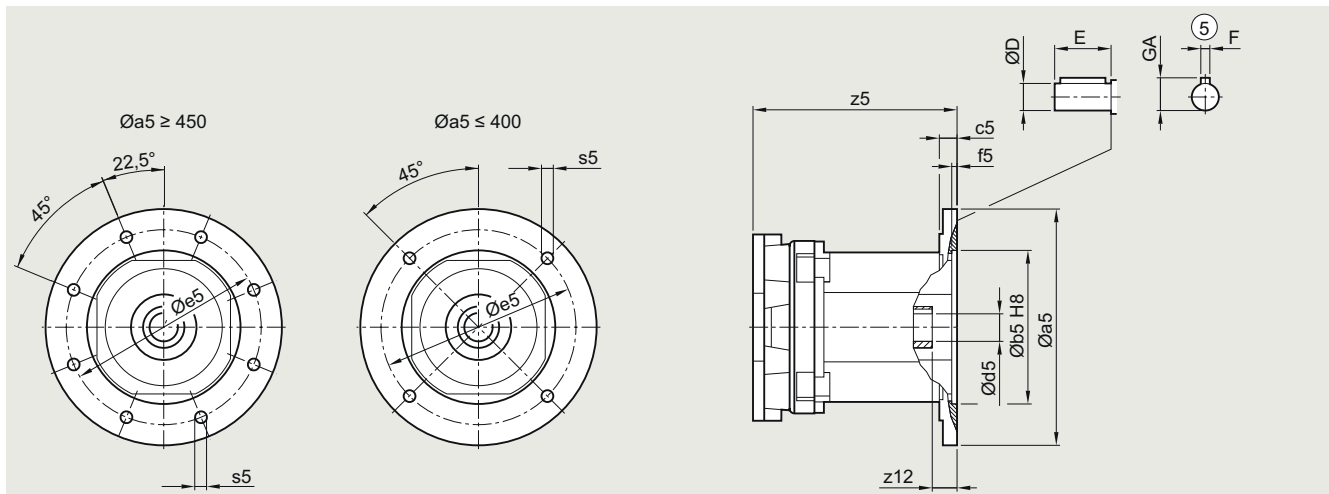
# SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K2 for mounting an IEC motor

## Dimensional drawings

### FD.../FZ...149 to FD.../FZ...189 gearboxes

F.AD.030K2, F.Z.030K2, F.F.030K2, F..030K2



4

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...149</b>												
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	193.0
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	193.0
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	264.0
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	309.0
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	309.0
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	354.0
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	401.5
250	550	450	27	6.0	500	M16	75	65 (60)	140	18	69.0 (64.0)	439.0
280	550	450	27	6.0	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	314.5
<b>FZ.../FD...169</b>												
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	180.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	251.0
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	296.0
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	296.0
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	340.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	387.0
250	550	450	27	6.0	500	M16	75	65 (60)	140	18	69.0 (64.0)	420.5
280	550	450	27	6.0	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	297.5
<b>FZ.../FD...189</b>												
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	180.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	251.0
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	296.0
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	296.0
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	340.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	387.0
250	550	450	27	6.0	500	M16	75	65 (60)	140	18	69.0 (64.0)	420.5
280	550	450	27	6.0	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	297.5
315	660	550	33	8.0	600	M20	33.5	80 (65)	170 (140)	22 (18)	85.0 (69.0)	321.5

Ⓞ Feather key/keyway DIN 6885

( ) Dimension in brackets for 2-pole motor

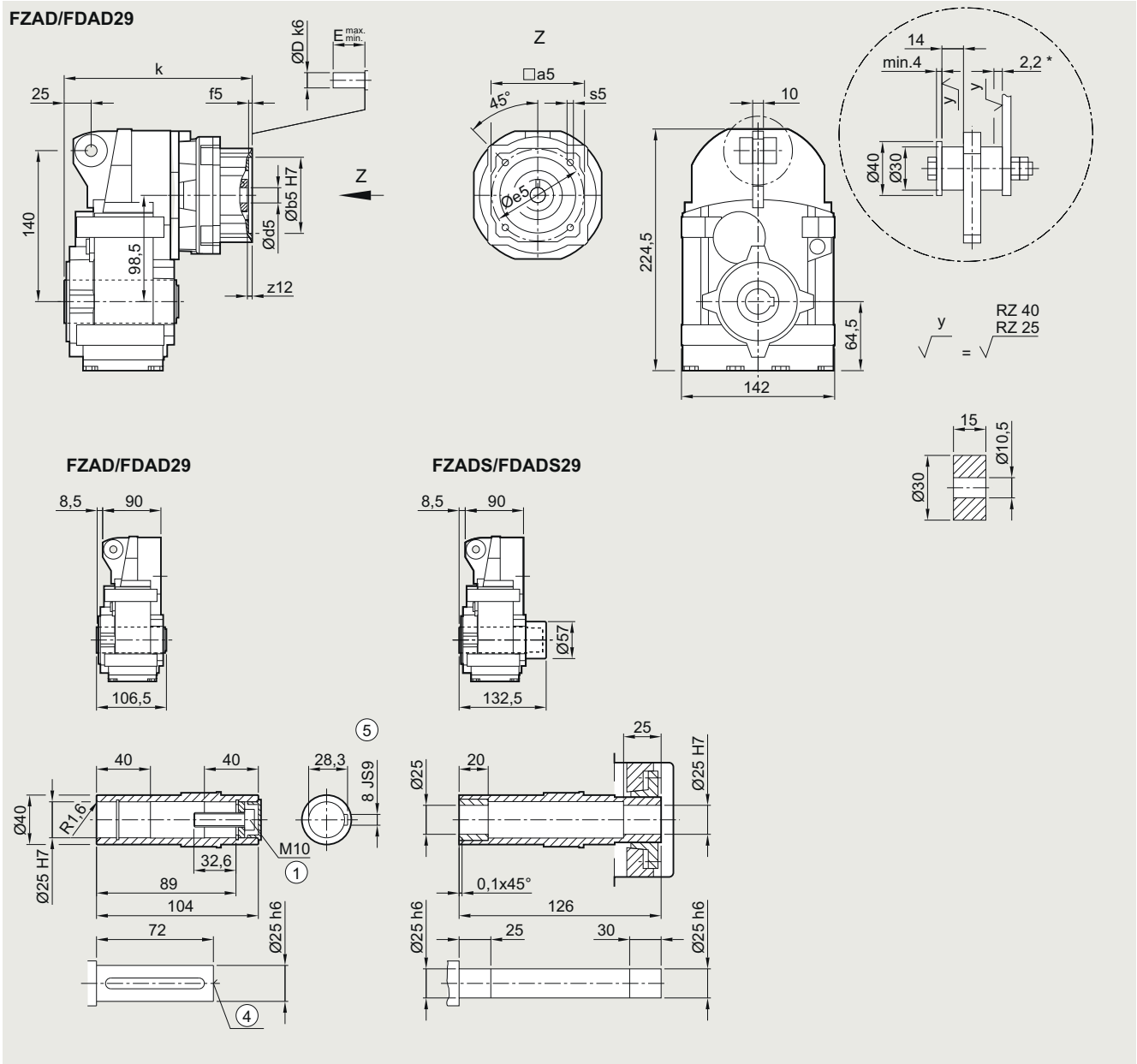
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FDAD./FZAD.29 gearbox in a shaft-mounted design

FAD030KS, FADS030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	181.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	181.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	194
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	194
KS5.1 <sup>1)</sup>	117	80	4.5	100	M6x11	5	19	35	45	210
KS5.2 <sup>1)</sup>	117	95	4.5	115	M8x14	5	19	35	45	210
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	235
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	235

① ISO 4017

② DIN 332

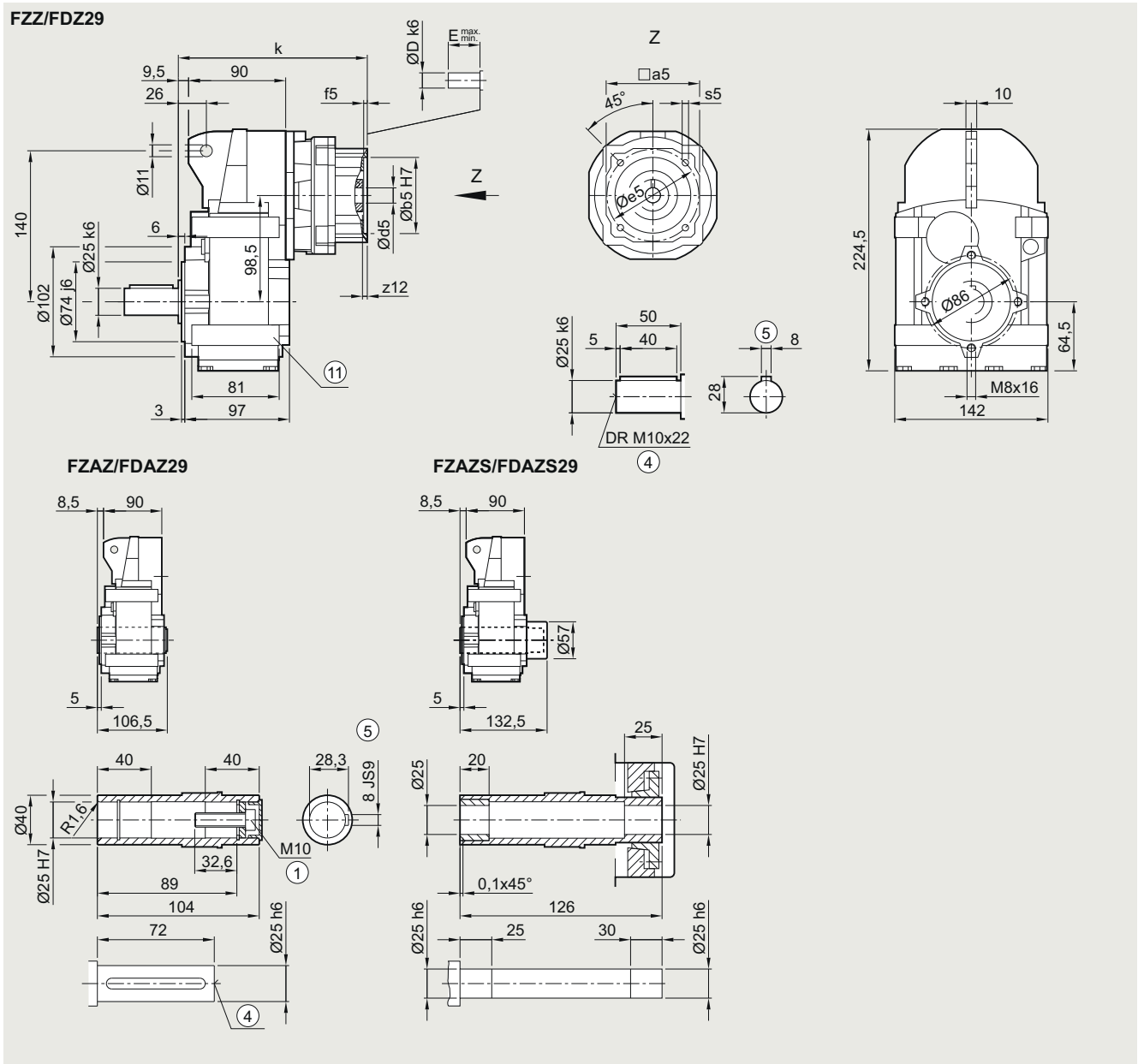
③ Feather key/keyway DIN 6885

<sup>1)</sup> FDADS/FZADS not possible

\* Spring compression at max. torque

## FD.Z./FZ.Z.29 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	181.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	181.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	194
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	194
KS5.1 <sup>1)</sup>	117	80	4.5	100	M6x11	5	19	35	45	210
KS5.2 <sup>1)</sup>	117	95	4.5	115	M8x14	5	19	35	45	210
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	235
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	235

① ISO 4017

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑥ Use bores only for foot-mounted design

<sup>1)</sup> FDADS/FZADS not possible



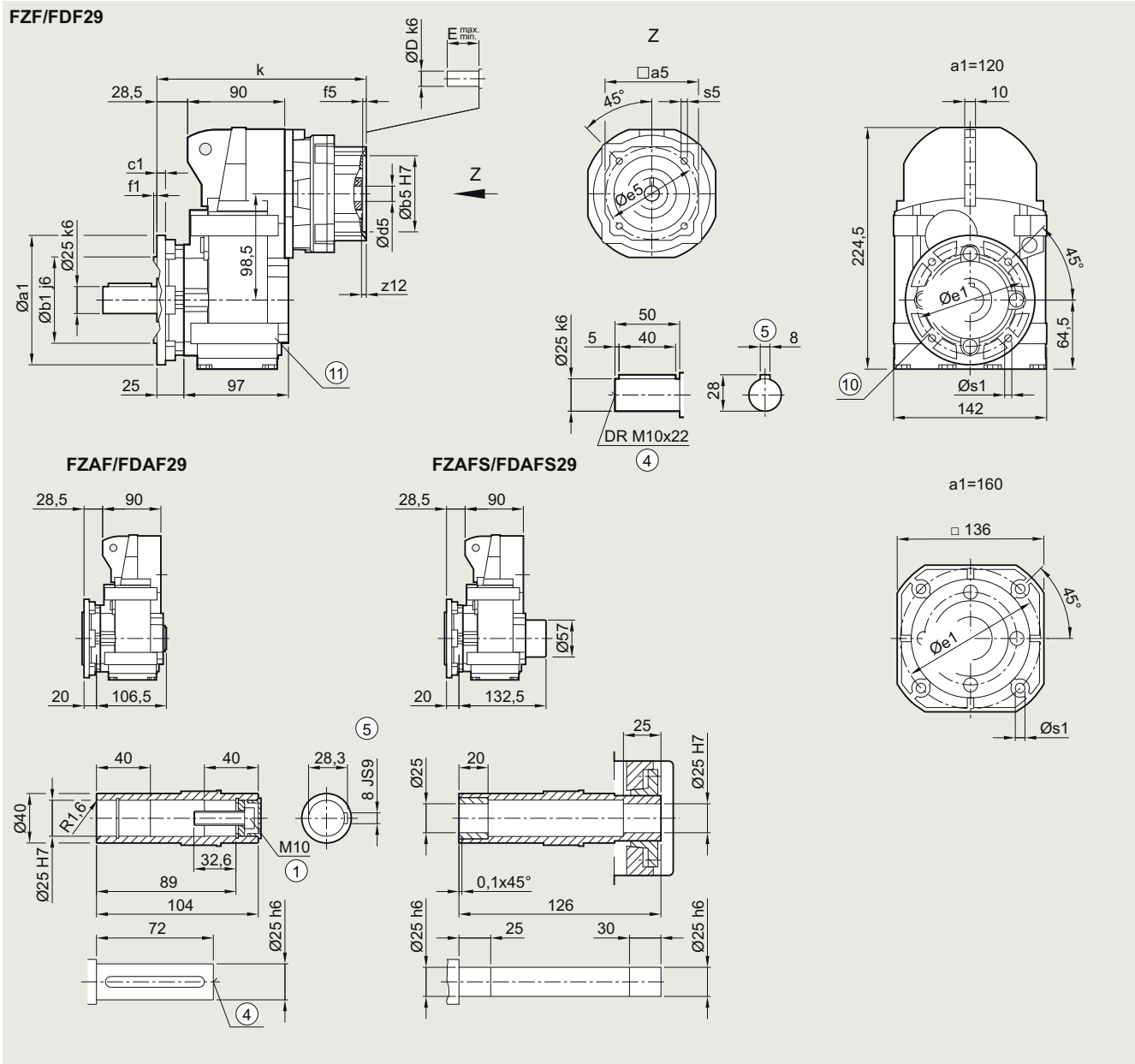
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD.F/FZ.F.29 gearbox in a flange-mounted design

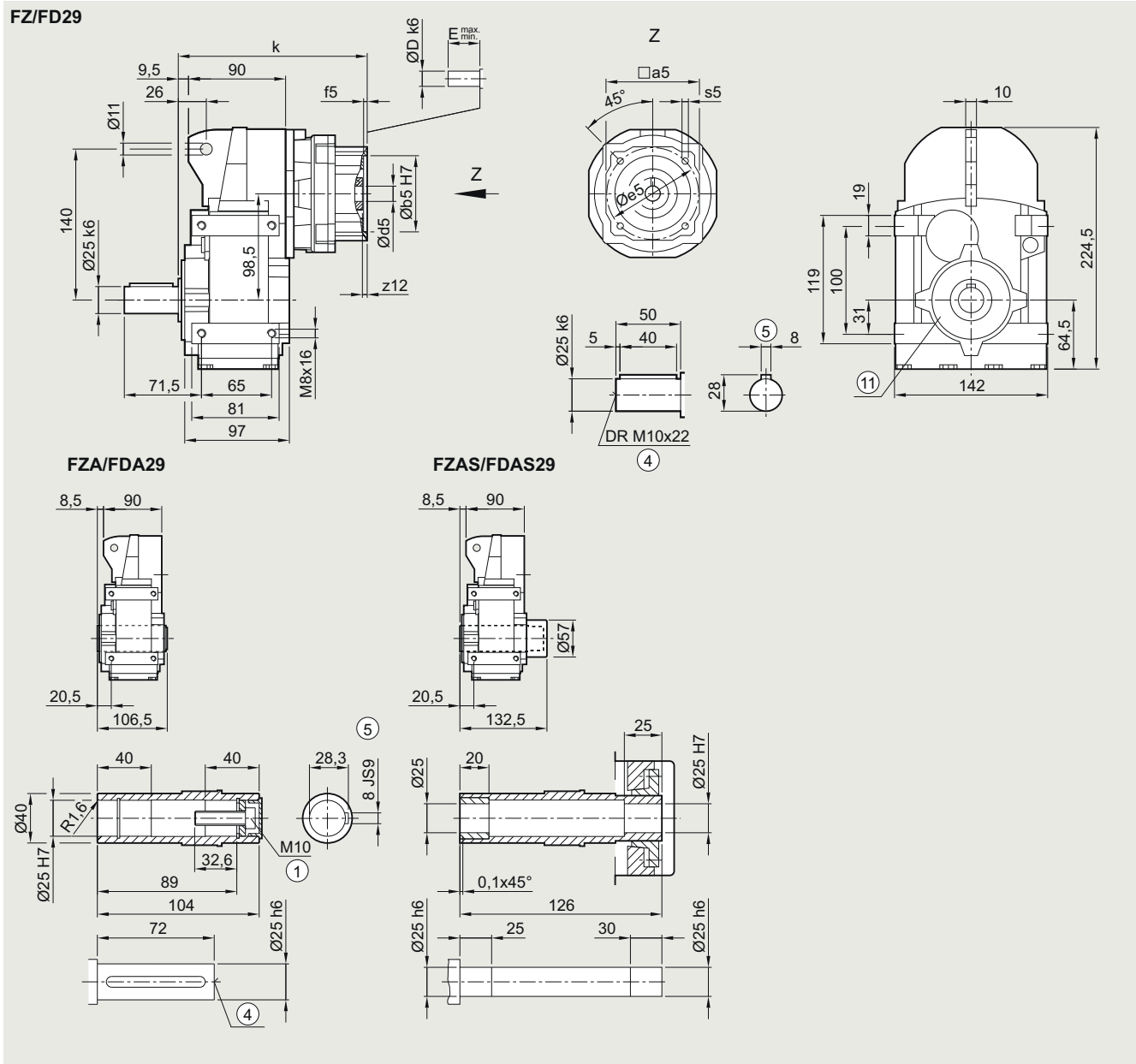
FF030KS, FAF030KS, FAFS030KS



Flange	a1	b1	c1	e1	f1	s1				
	120	80	8	100	3.0	6.6				
	160	110	9	130	3.5	9.0				
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	200.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	200.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	213
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	213
KS5.1 <sup>1)</sup>	117	80	4.5	100	M6x11	5	19	35	45	229
KS5.2 <sup>1)</sup>	117	95	4.5	115	M8x14	5	19	35	45	229
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	254
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	254

① ISO 4017    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑩ For inner contour, see page 4/169    ⑪ Use bores only for foot-mounted design

<sup>1)</sup> FDADS/FZADS not possible

**FD../FZ..29 gearbox in a foot-mounted design****F030KS, FA030KS, FAS030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	181.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	181.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	194
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	194
KS5.1 <sup>1)</sup>	117	80	4.5	100	M6x11	5	19	35	45	210
KS5.2 <sup>1)</sup>	117	95	4.5	115	M8x14	5	19	35	45	210
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	235
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	235

① ISO 4017

② DIN 332

③ Feather key/keyway DIN 6885

④ Use bores only for housing flange design

1) FDADS/FZADS not possible

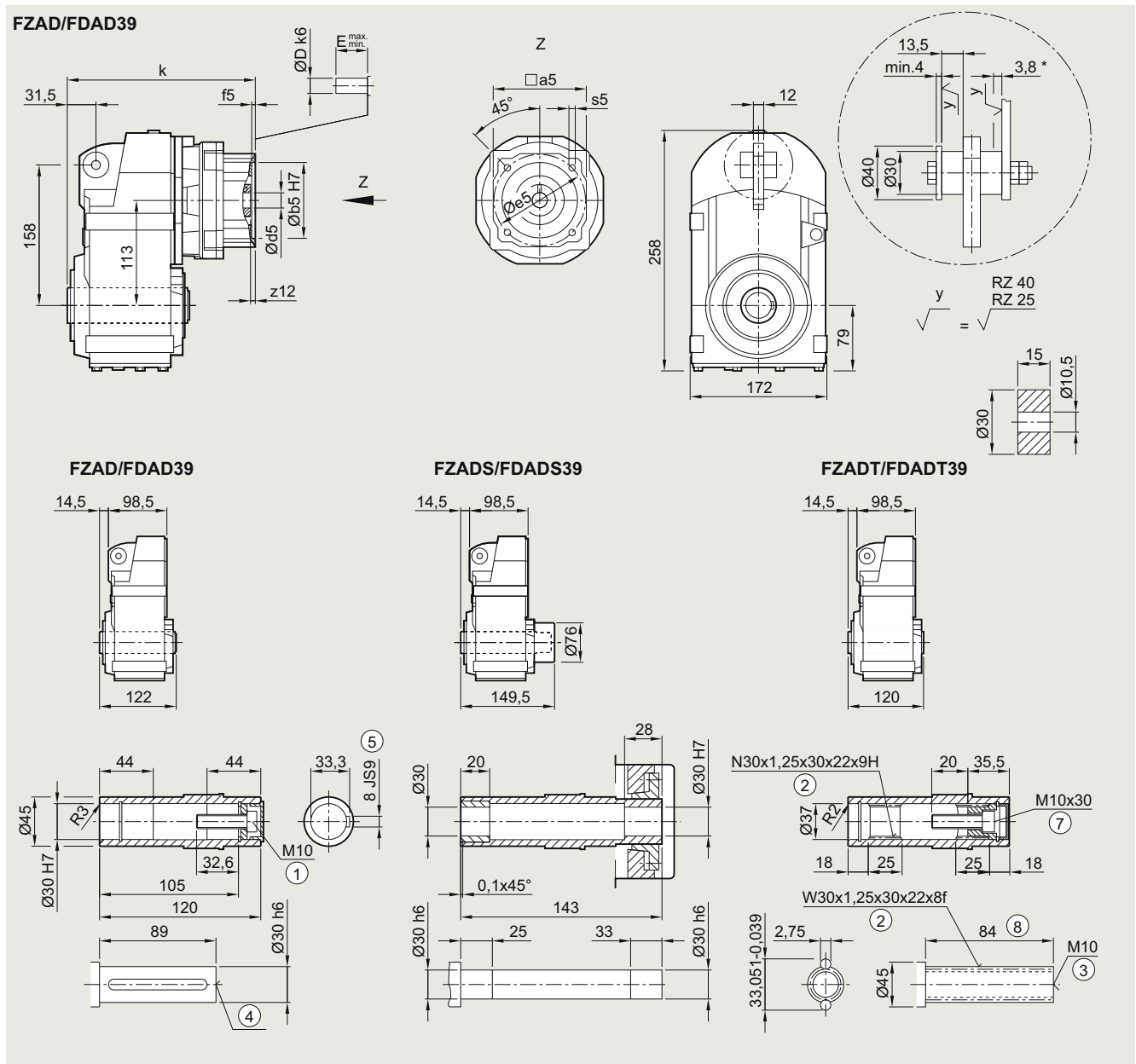
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FDAD./FZAD.39 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	195
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	195
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	207.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	207.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	223.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	223.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	248.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	248.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	261

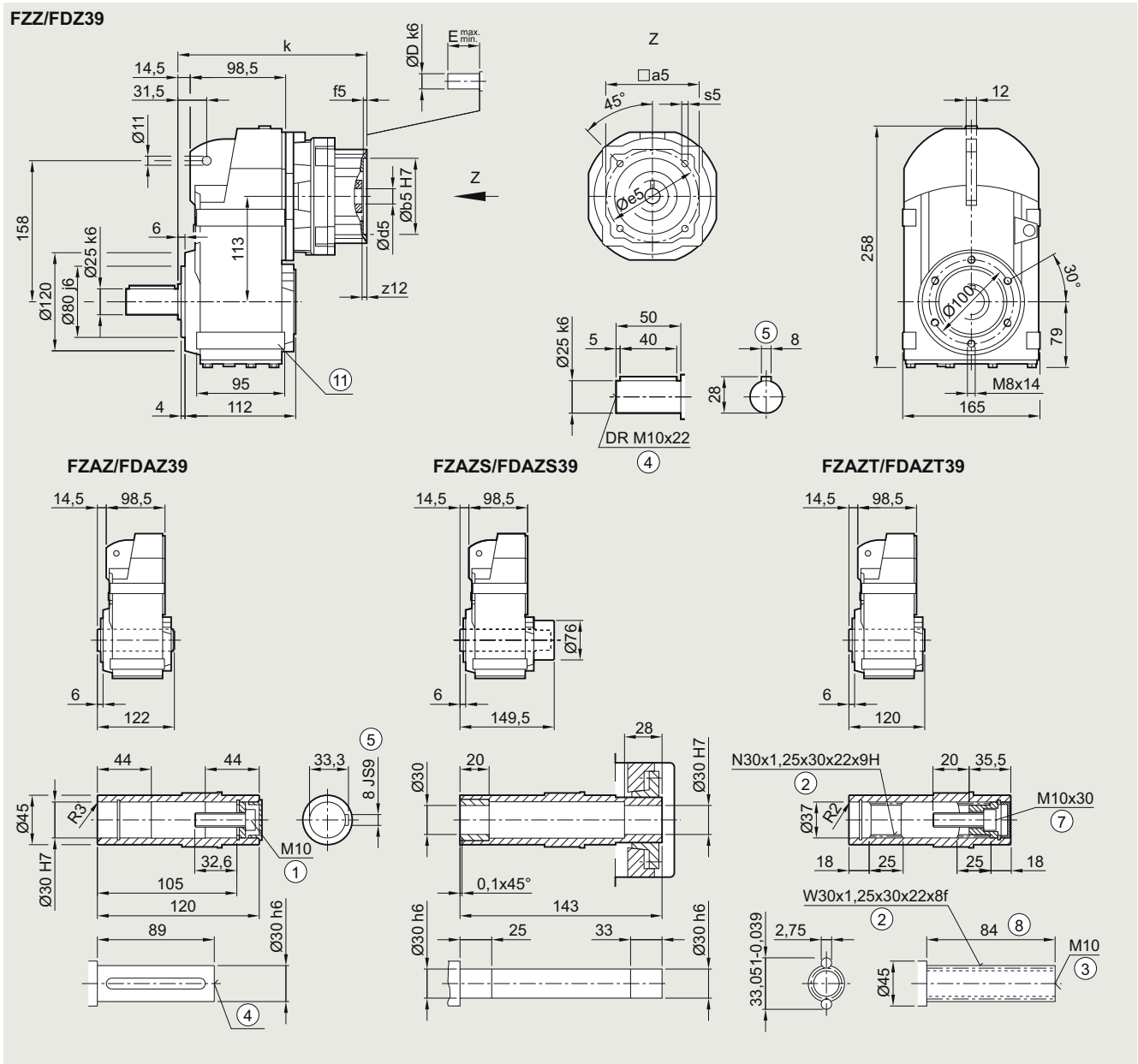
① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible

## FD.Z./FZ.Z.39 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	195
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	195
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	207.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	207.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	223.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	223.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	248.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	248.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	261

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

1) FDADS/FZADS not possible

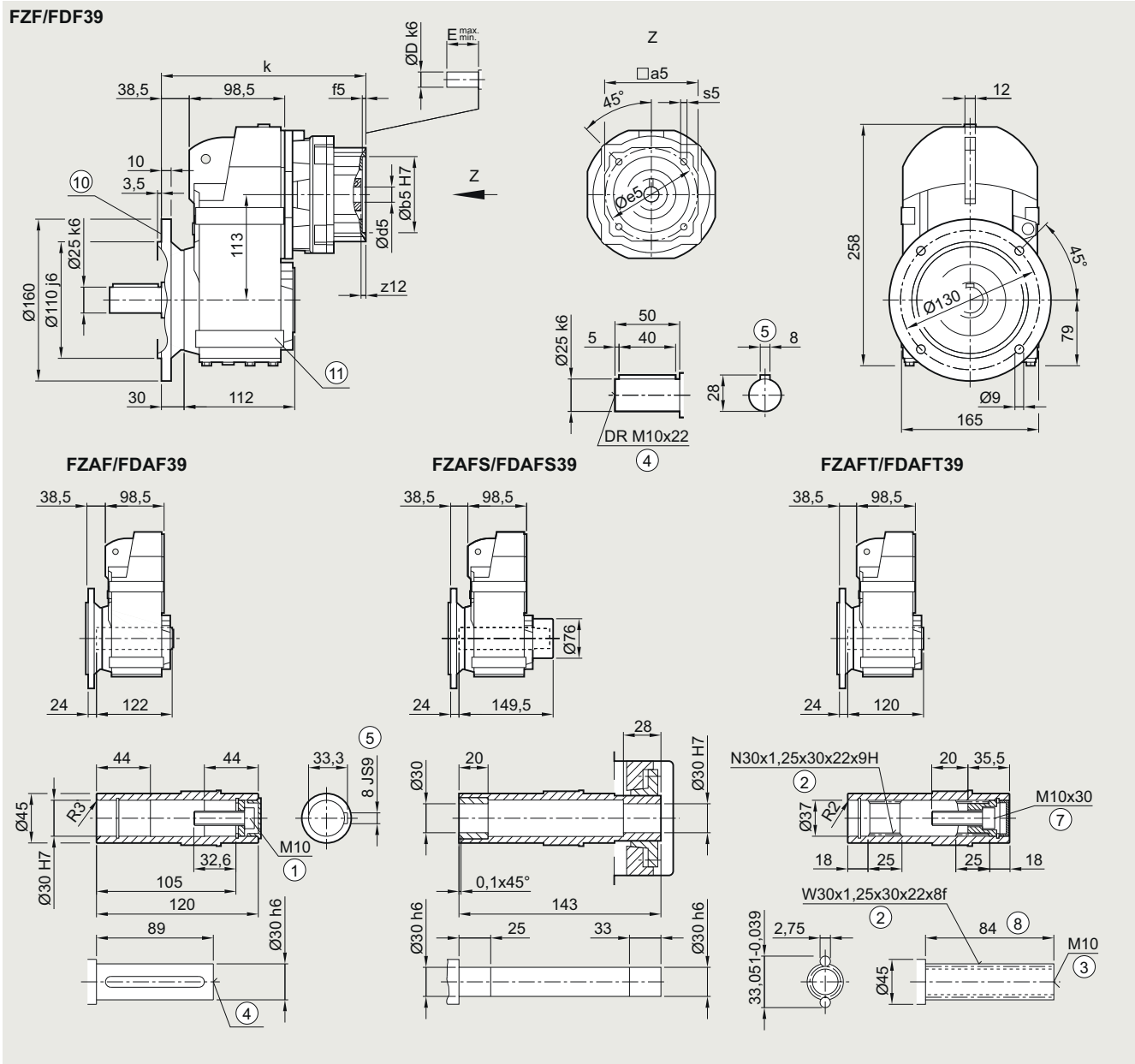
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD.F/FZ.F.39 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	247.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	247.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	272.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	272.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	285

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885

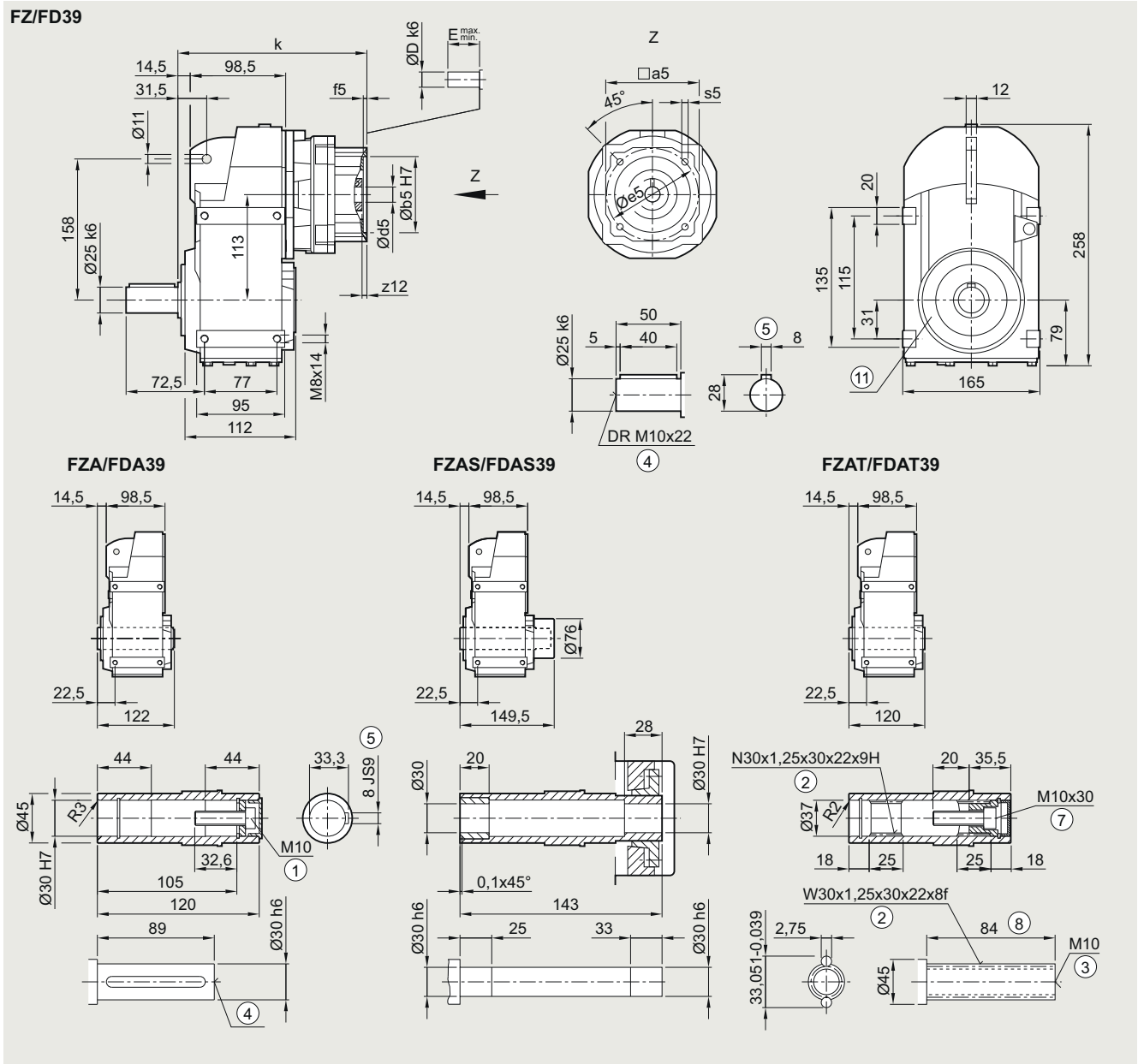
⑦ ISO 4762

⑧ Without locating shoulder +1 mm    ⑩ For inner contour, see page 4/169    ⑪ Use bores only for foot-mounted design

<sup>1)</sup> FDADS/FZADS not possible

## FD./FZ..39 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	195
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	195
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	207.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	207.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	223.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	223.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	248.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	248.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	261

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

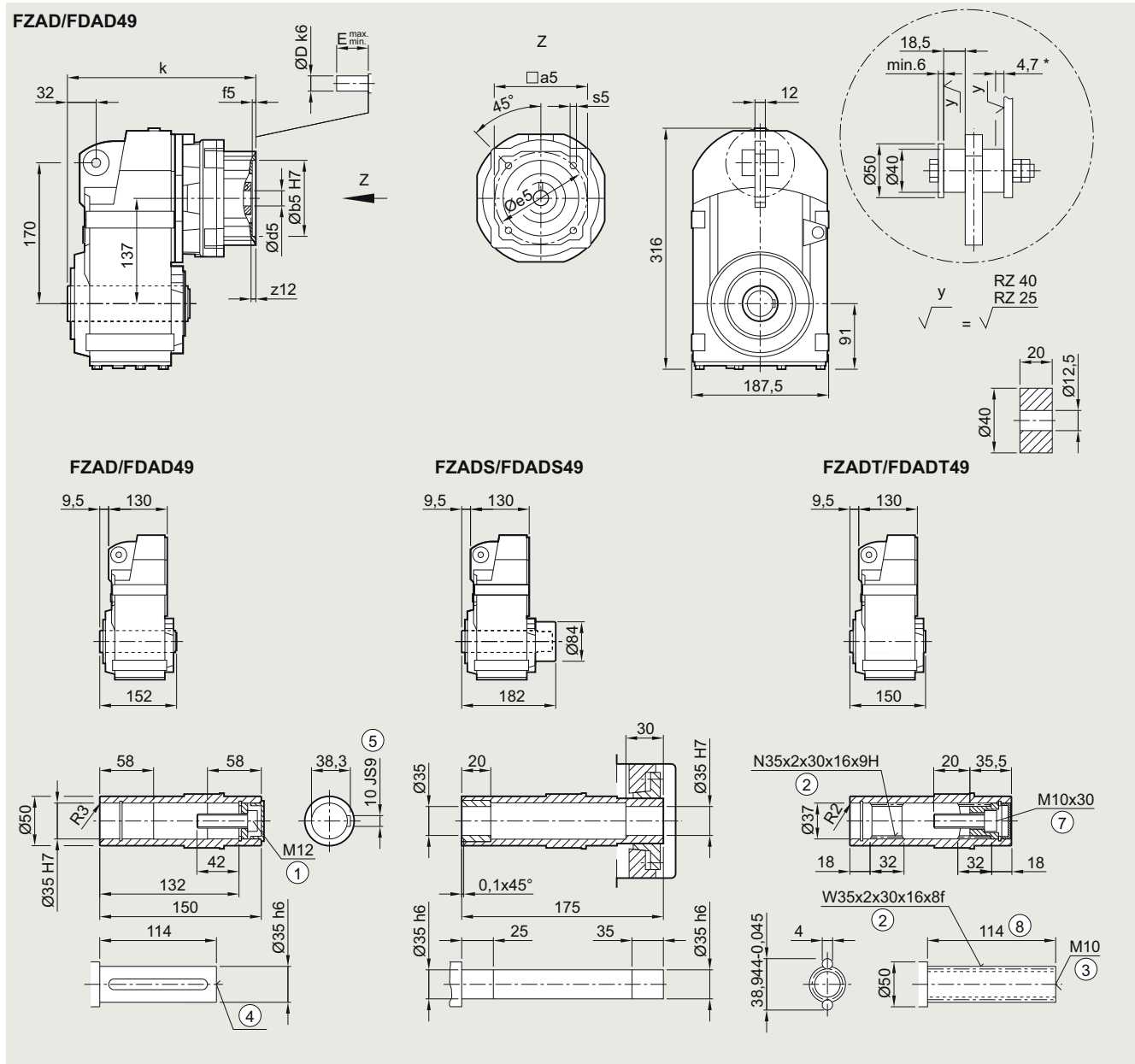
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FDAD./FZAD.49 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	212
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	212
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	224.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	224.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	240.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	240.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	265.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	265.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	278
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	314
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	314

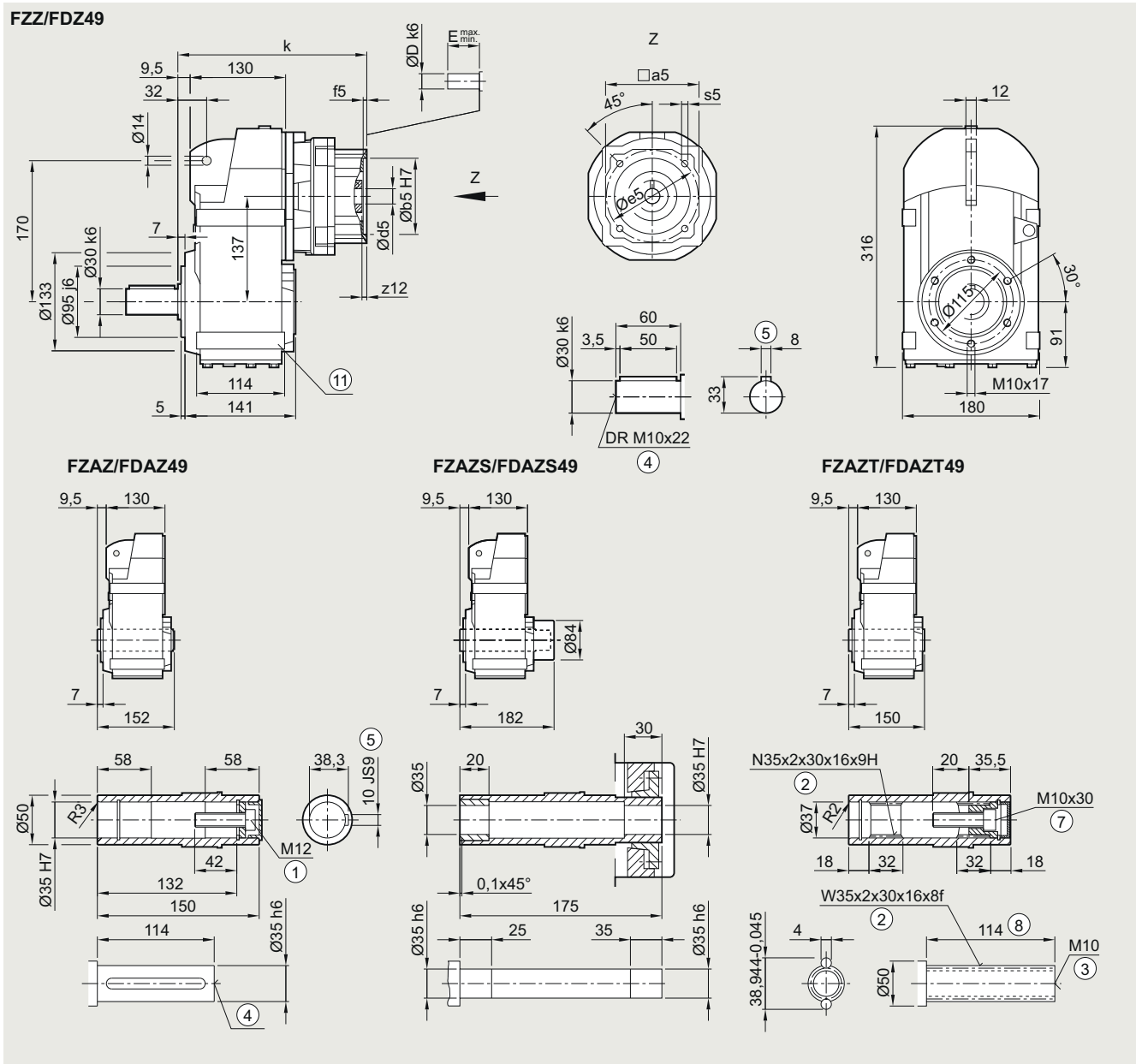
① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible

## FD.Z./FZ.Z.49 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	212
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	212
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	224.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	224.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	240.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	240.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	265.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	265.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	278
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	314
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	314

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

1) FDADS/FZADS not possible



## SIMOGEAR gearboxes

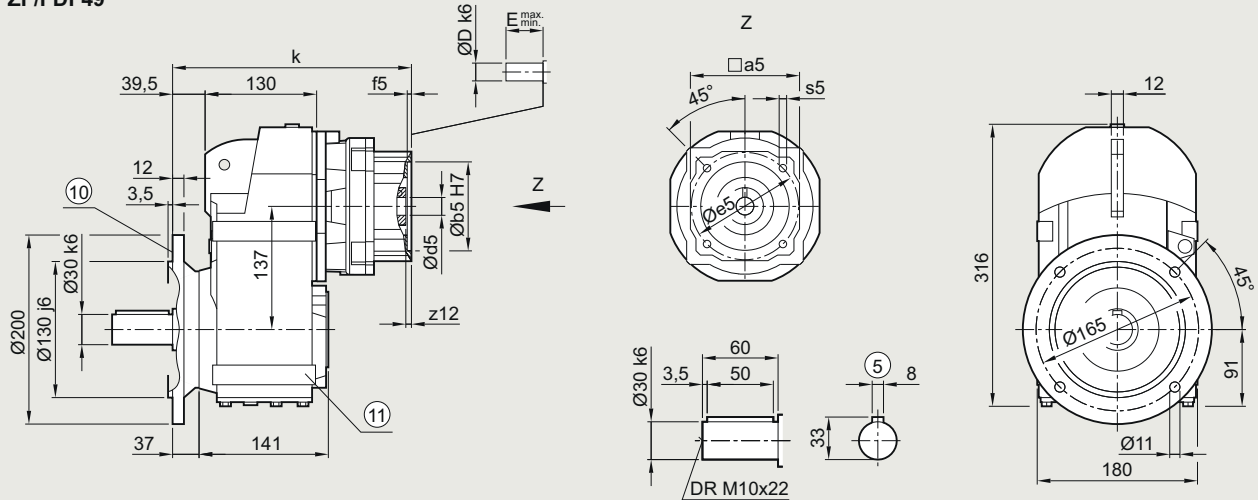
Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

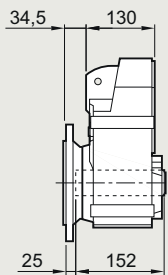
#### FD.F/FZ.F.49 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

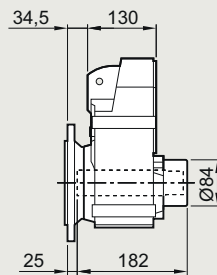
#### FZF/FDF49



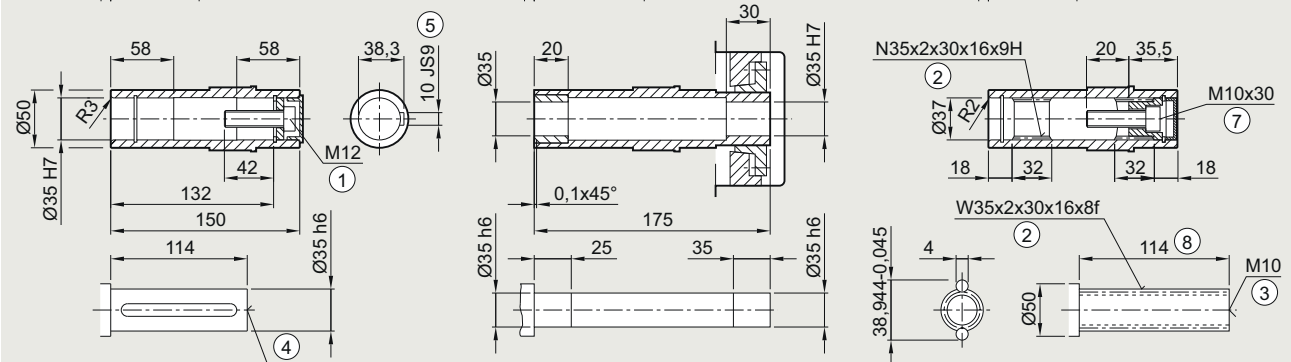
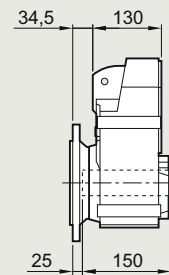
#### FZAF/FDAF49



#### FZAFS/FDAFS49



#### FZAFT/FDAFT49



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	242
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	242
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	254.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	254.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	270.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	270.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	295.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	295.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	308
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	339
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	339

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885

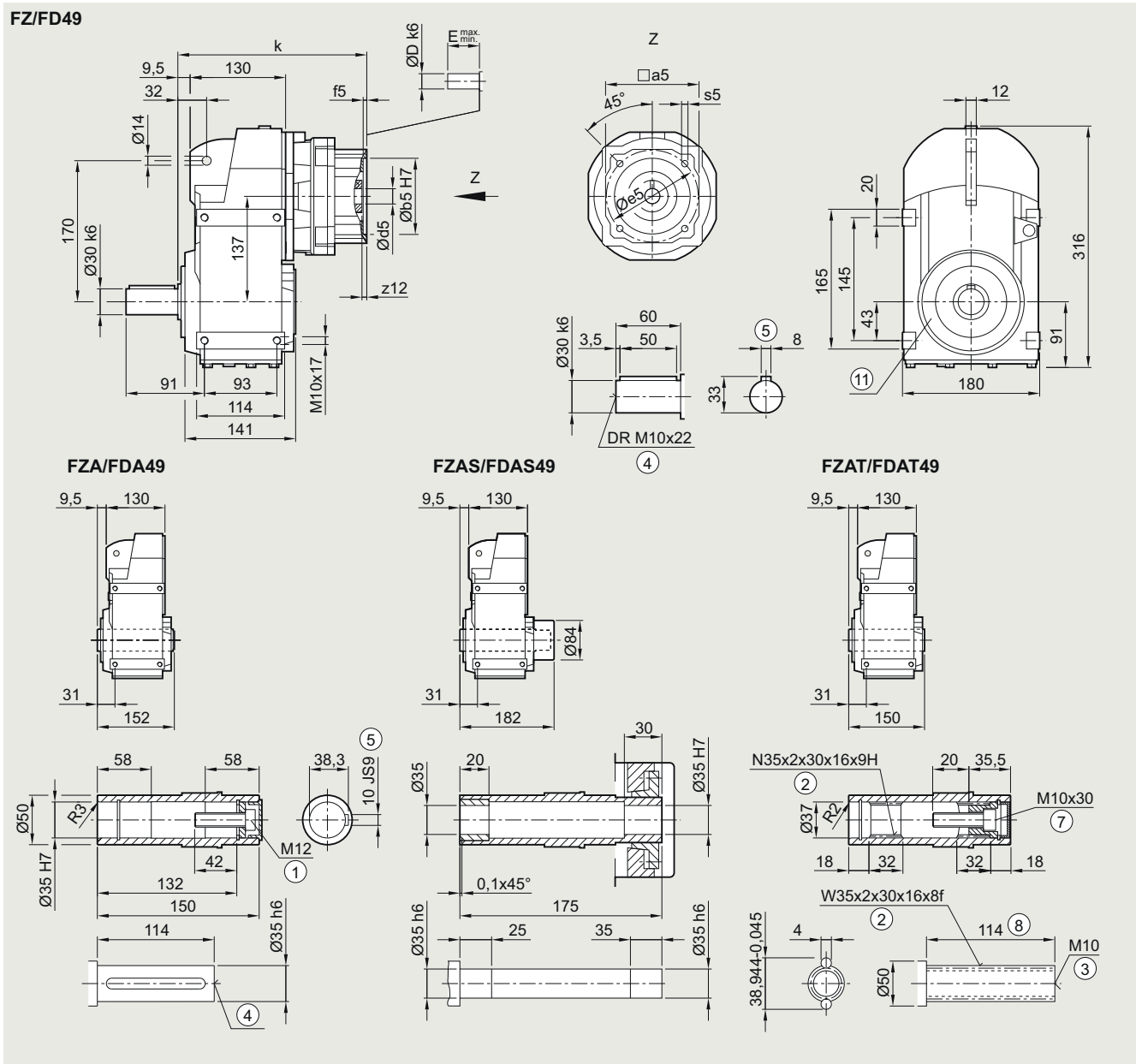
⑦ ISO 4762

⑧ Without locating shoulder +1 mm    ⑩ For inner contour, see page 4/169    ⑪ Use bores only for foot-mounted design

<sup>1)</sup> FDADS/FZADS not possible

## FD../FZ..49 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	212
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	212
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	224.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	224.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	240.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	240.5
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	265.5
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	265.5
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	278
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	314
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	314

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

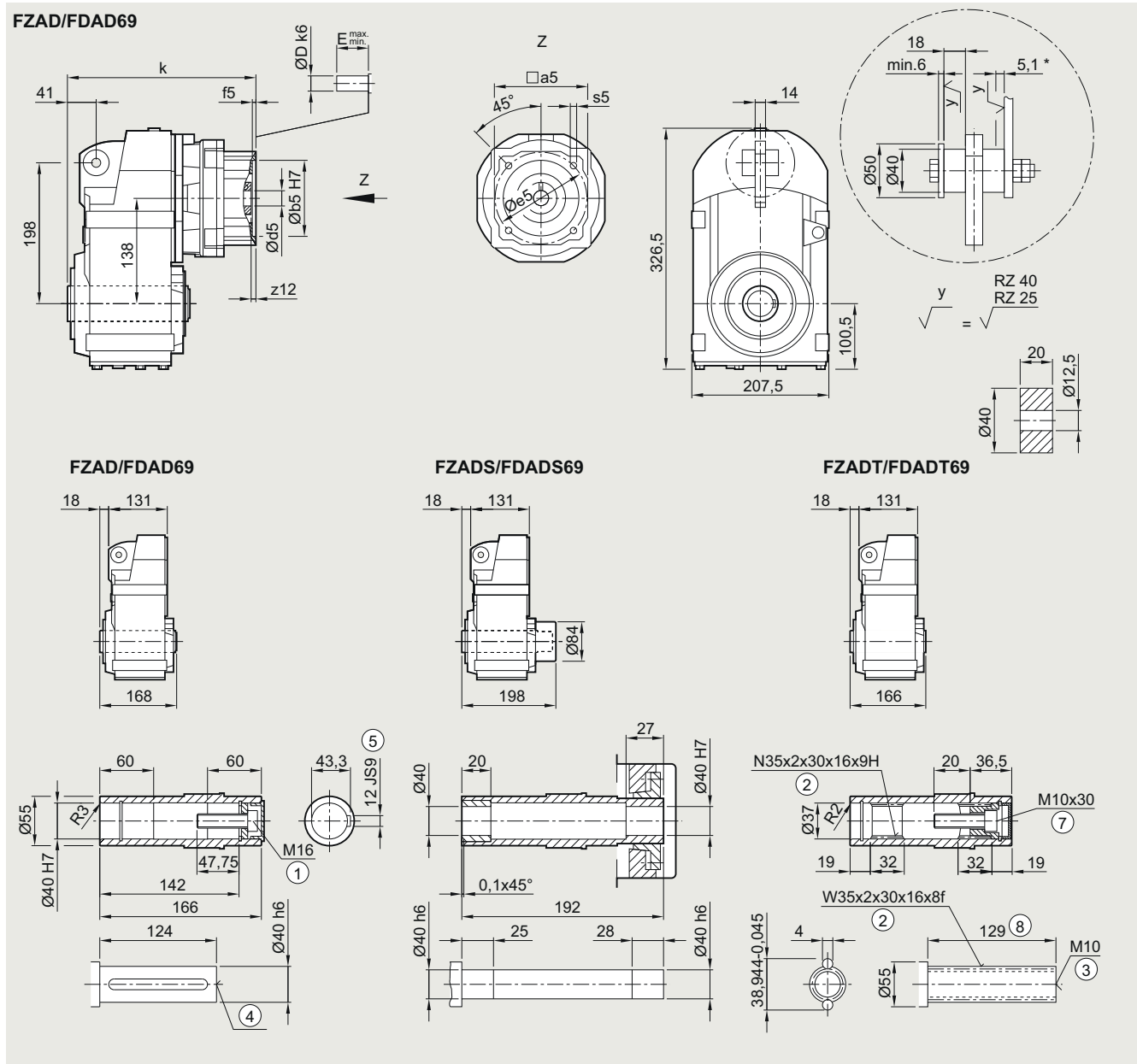
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FDAD./FZAD.69 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	234
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	234
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	250
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	250
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	275
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	275
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	287.5
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	323.5
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	323.5

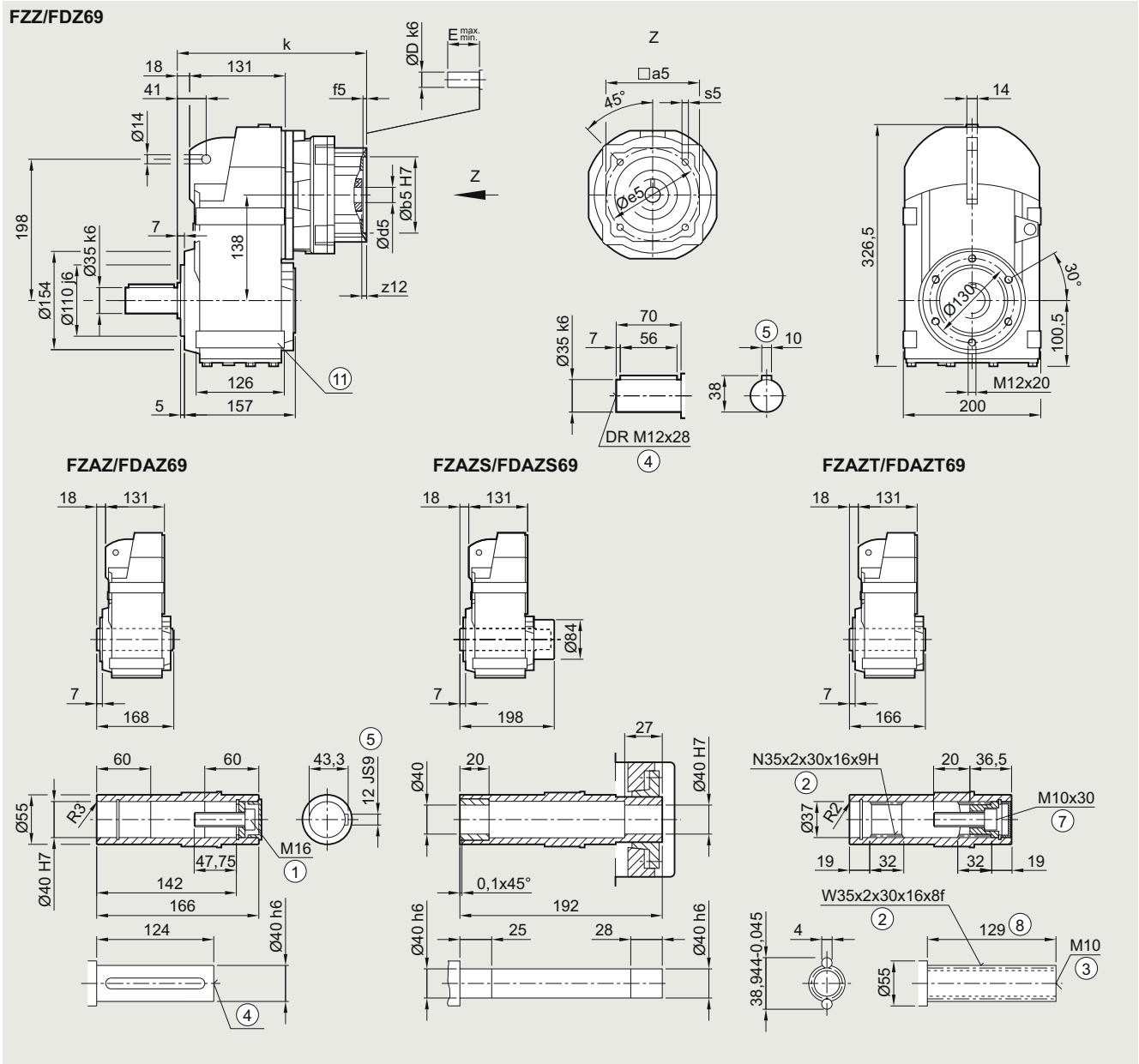
① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible

## FD.Z./FZ.Z.69 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	234
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	234
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	250
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	250
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	275
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	275
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	287.5
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	323.5
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	323.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

1) FDADS/FZADS not possible

## SIMOGEAR gearboxes

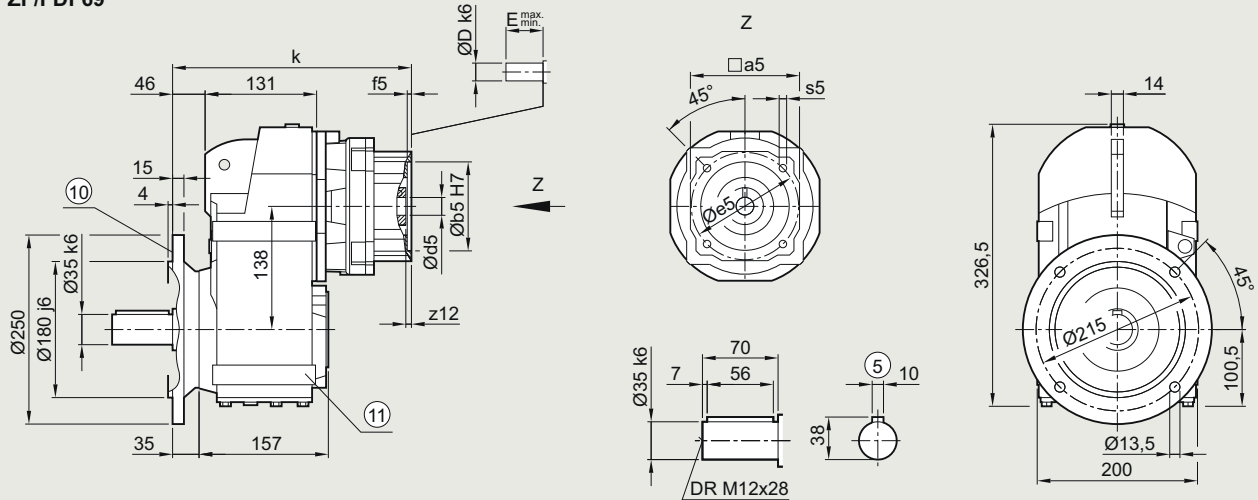
Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

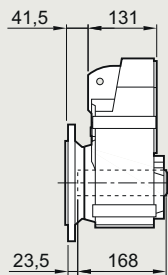
#### FD.F/FZ.F.69 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

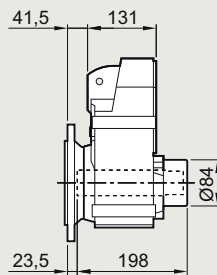
#### FZF/FDF69



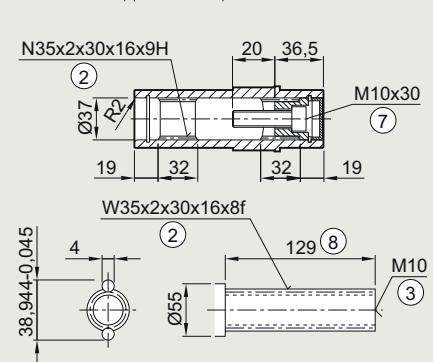
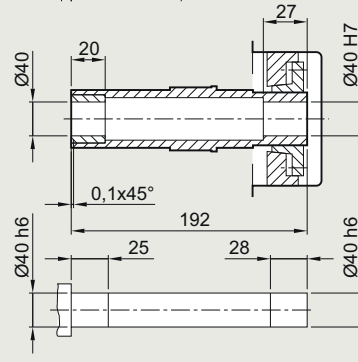
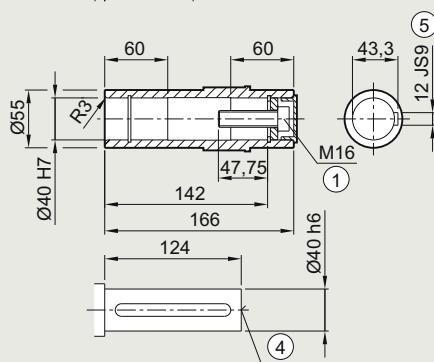
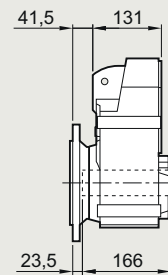
#### FZAF/FDAF69



#### FZAFS/FDAFS69



#### FZAFS/FDAFT69



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	249.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	249.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	262
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	262
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	278
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	278
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	303
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	303
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	315.5
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	347
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	347

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885

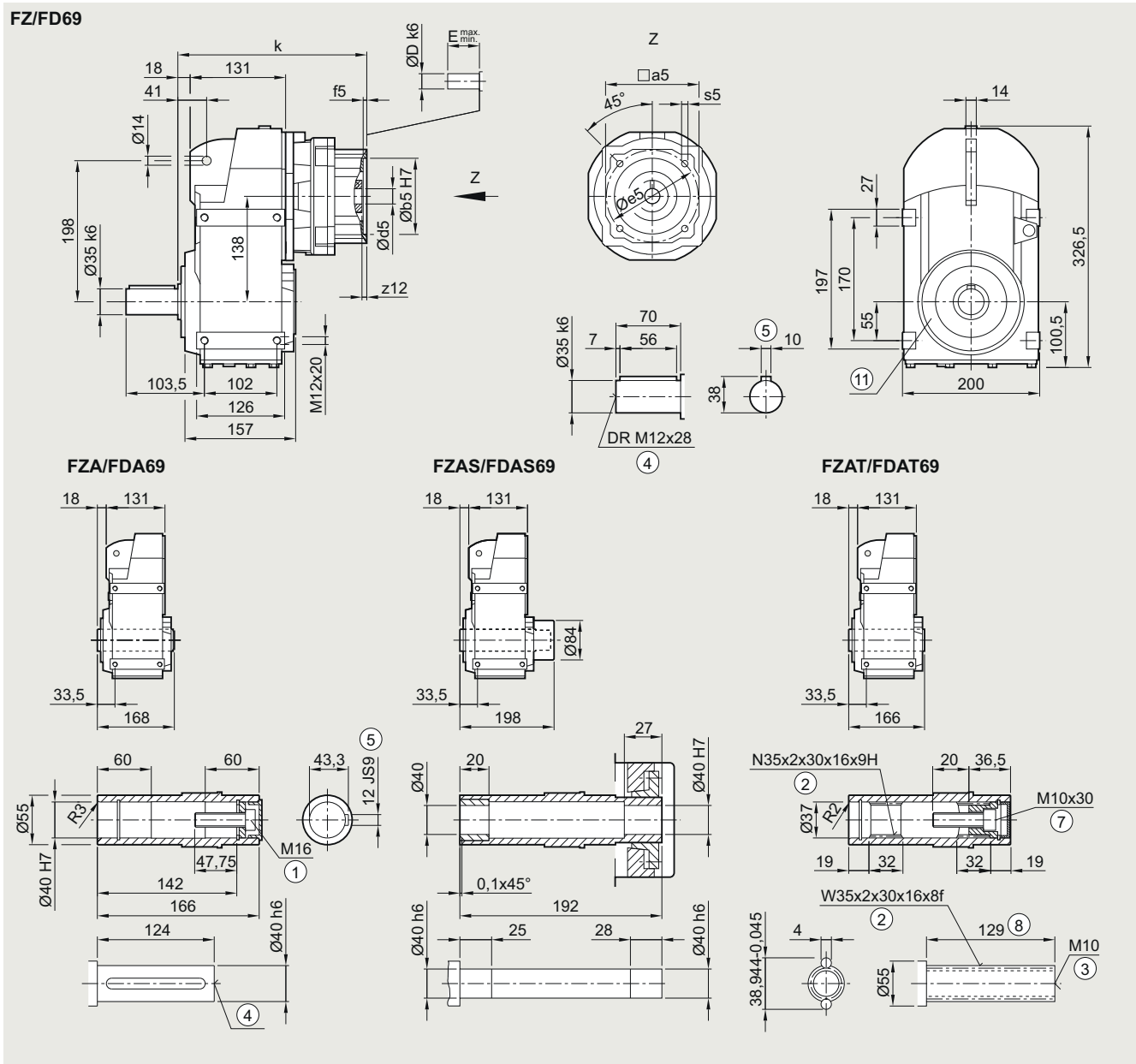
⑦ ISO 4762

⑧ Without locating shoulder +1 mm    ⑩ For inner contour, see page 4/169    ⑪ Use bores only for foot-mounted design

<sup>1)</sup> FDADS/FZADS not possible

## FD./FZ..69 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	234
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	234
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	250
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	250
KS6.1 <sup>1)</sup>	130	110	4.5	130	M8x15	8	24	40	58	275
KS6.2 <sup>1)</sup>	130	110	7	145	M8x15	8	22	40	58	275
KS8.1 <sup>1)</sup>	155	130	4.5	165	M10x14	2	32	40	80	287.5
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	323.5
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	323.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

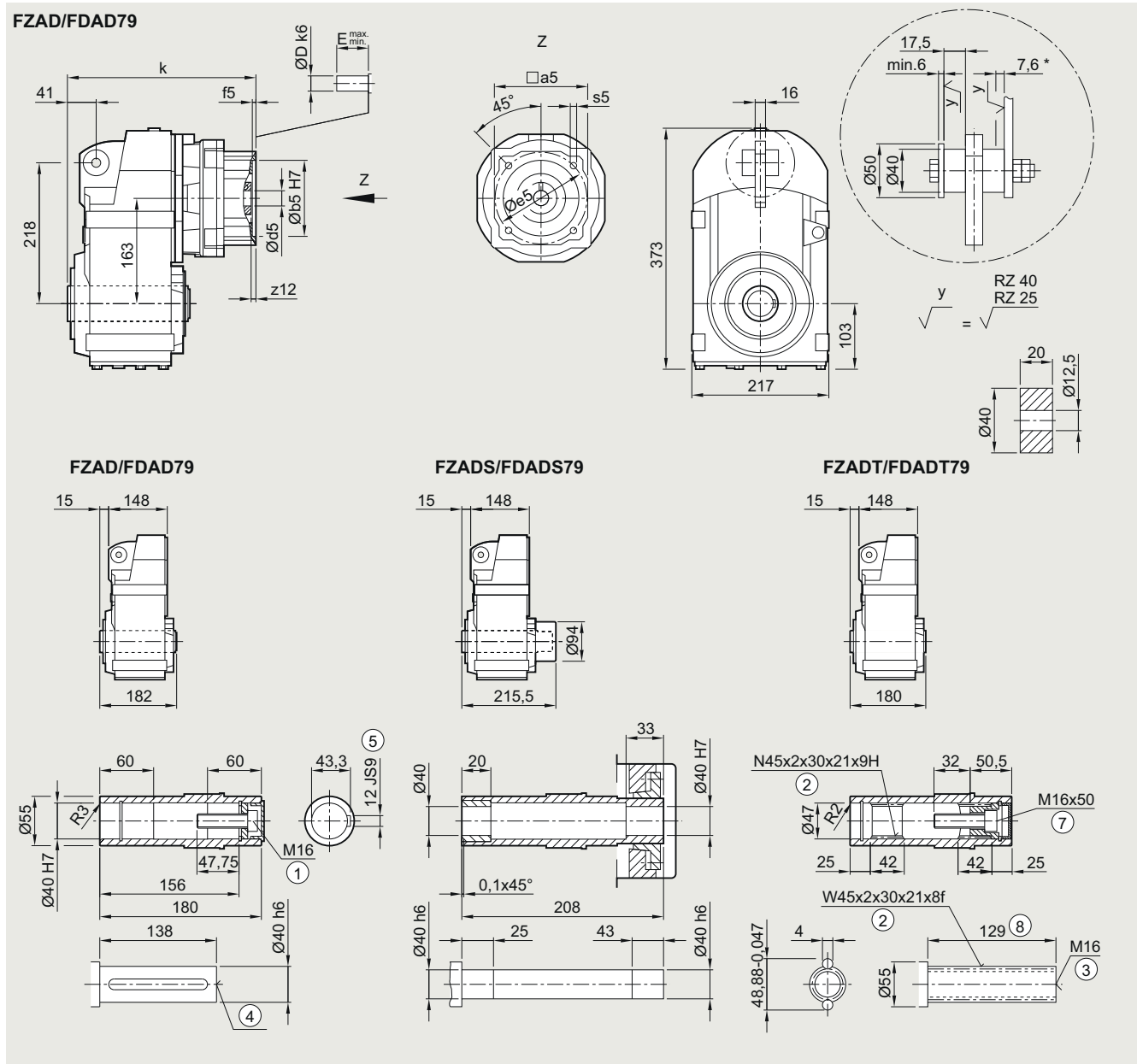
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FDAD./FZAD.79 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	233.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	233.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	246
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	246
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	258
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	258
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	283
KS6.2	130	110	7	145	M8x15	8	22	40	58	283
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	295.5
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	331.5
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	331.5

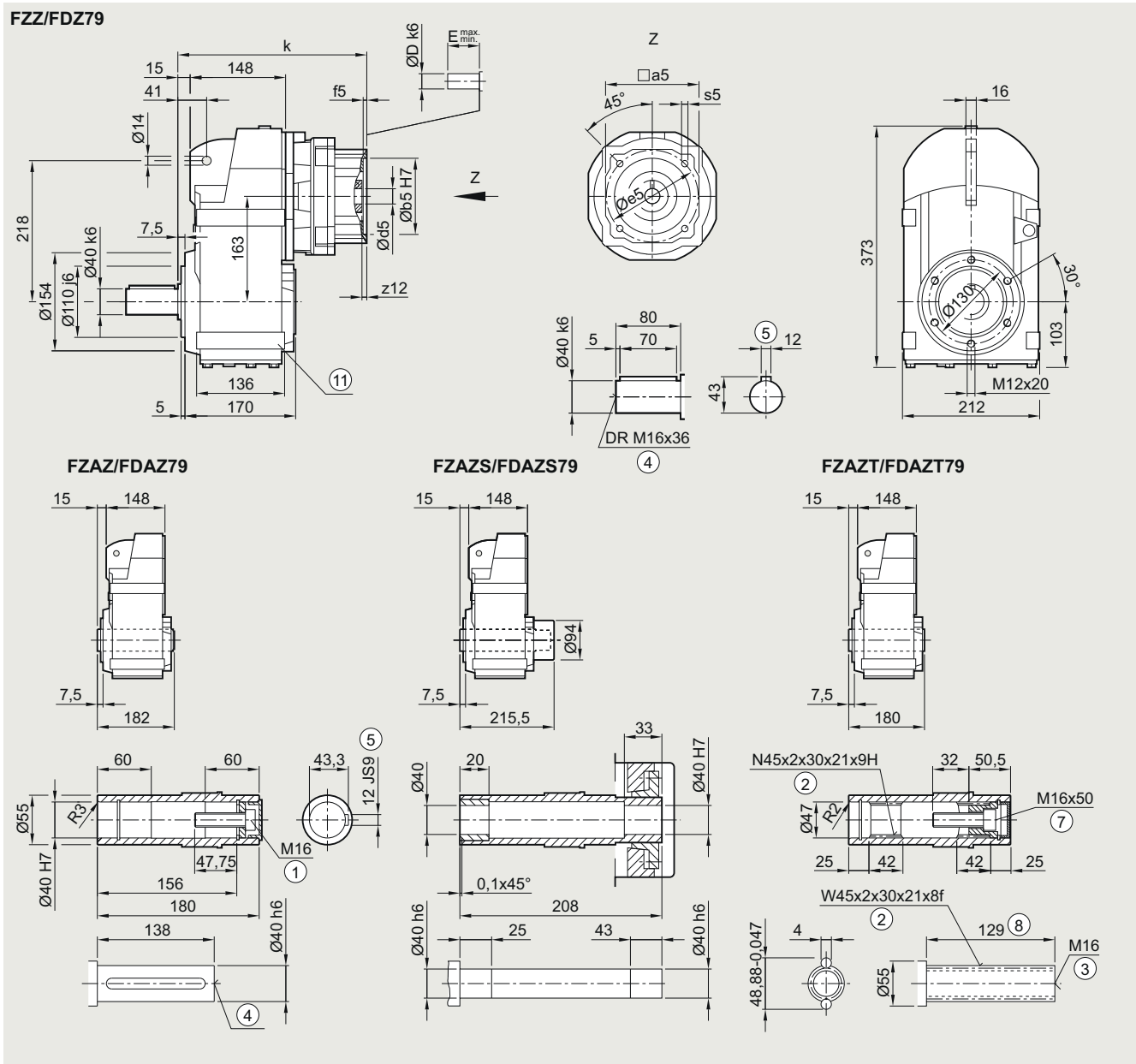
① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

<sup>1)</sup> FDADS/FZADS not possible

## FD.Z./FZ.Z.79 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	233.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	233.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	246
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	246
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	258
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	258
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	283
KS6.2	130	110	7	145	M8x15	8	22	40	58	283
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	295.5
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	331.5
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	331.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

1) FDADS/FZADS not possible



## SIMOGEAR gearboxes

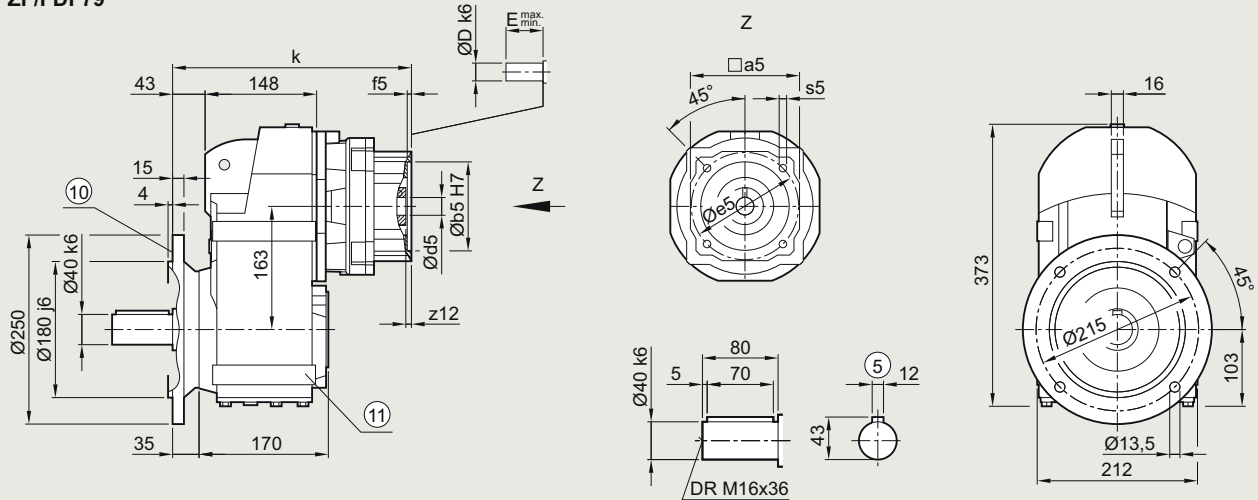
Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

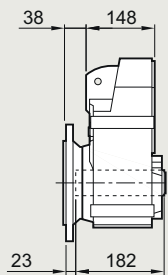
#### FD.F/FZ.F.79 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

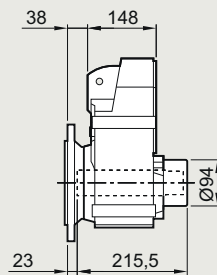
#### FZF/FDF79



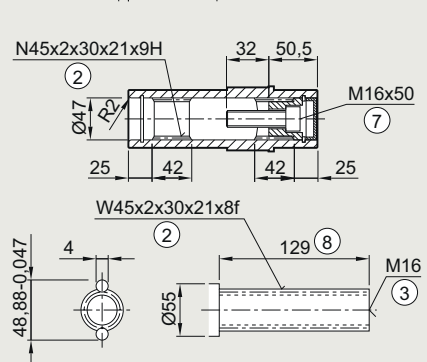
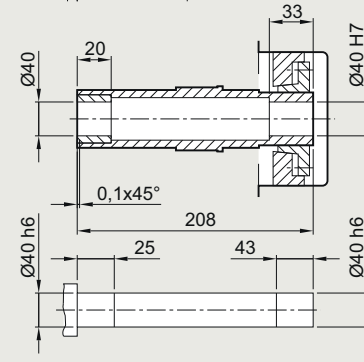
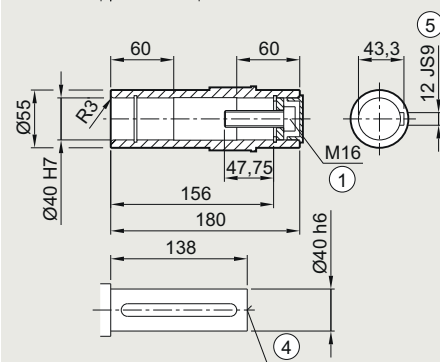
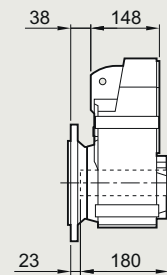
#### FZAF/FDAF79



#### FZAFS/FDAFS79



#### FZAFS/FDAFS79



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	261
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	261
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	273.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	273.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	285.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	285.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	310.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	310.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	323
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	359
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	359

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885

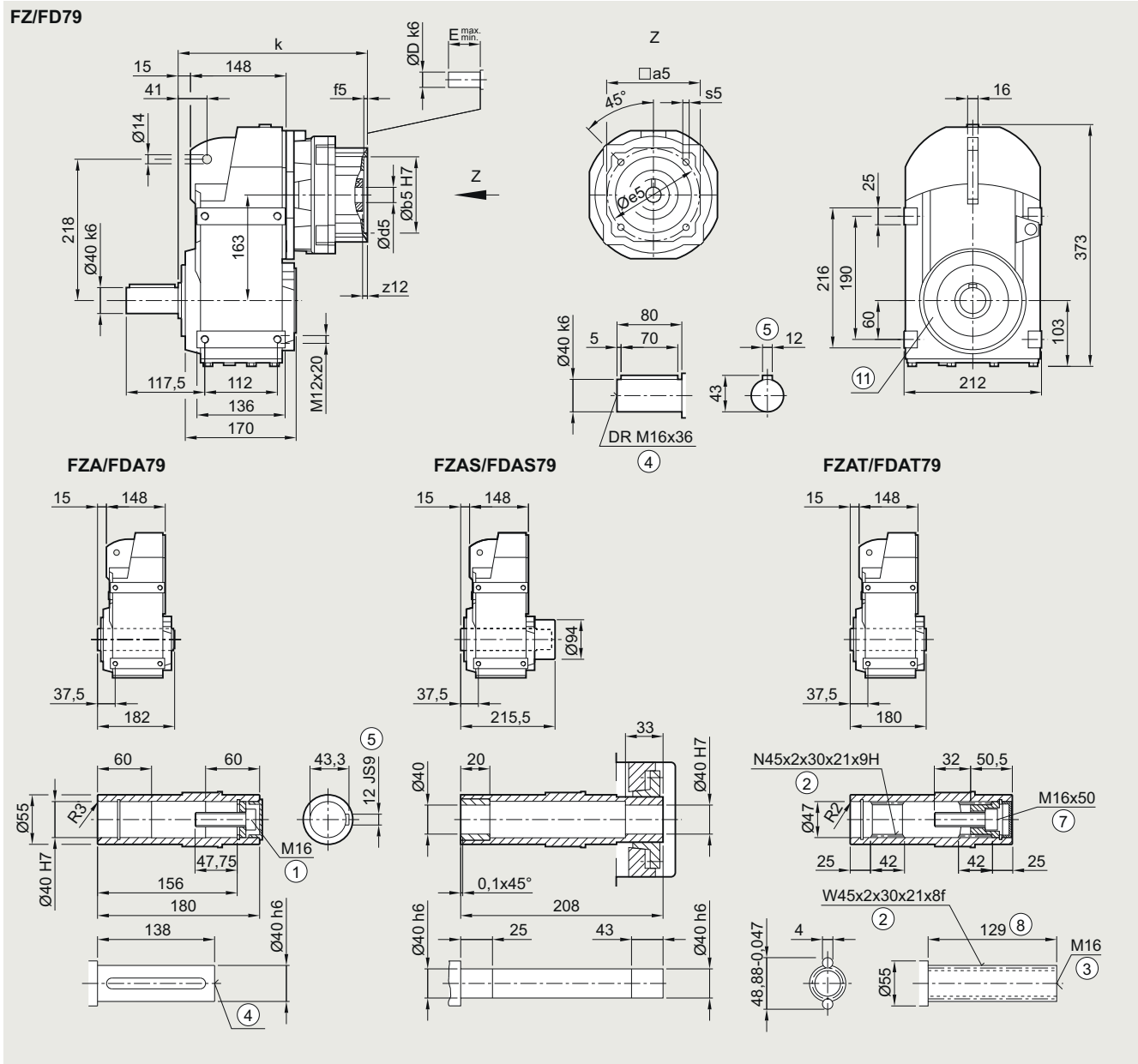
⑦ ISO 4762

⑧ Without locating shoulder +1 mm    ⑩ For inner contour, see page 4/169    ⑪ Use bores only for foot-mounted design

<sup>1)</sup> FDADS/FZADS not possible

## FD../FZ..79 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	233.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	233.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	246
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	246
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	258
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	258
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	283
KS6.2	130	110	7	145	M8x15	8	22	40	58	283
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	295.5
KS10.1 <sup>1)</sup>	196	180	5	215	M12x22	5	38	50	80	331.5
KS10.2 <sup>1)</sup>	196	114.3	5	200	M12x22	5	35	50	80	331.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

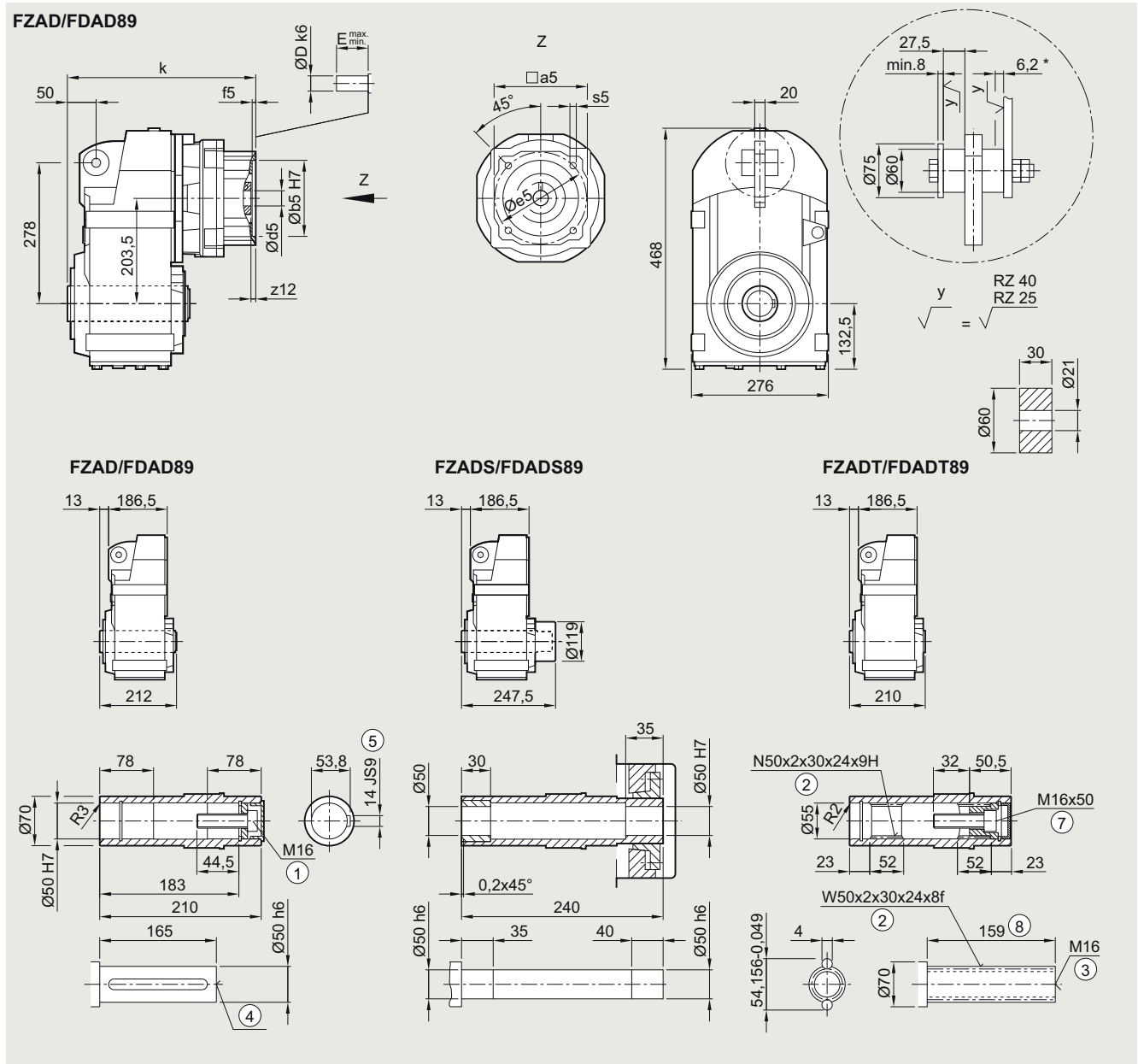
⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for housing flange design

1) FDADS/FZADS not possible

**SIMOGEAR gearboxes**

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

**Dimensional drawings****FDAD./FZAD.89 gearbox in a shaft-mounted design****FAD030KS, FADS030KS, FADT030KS**

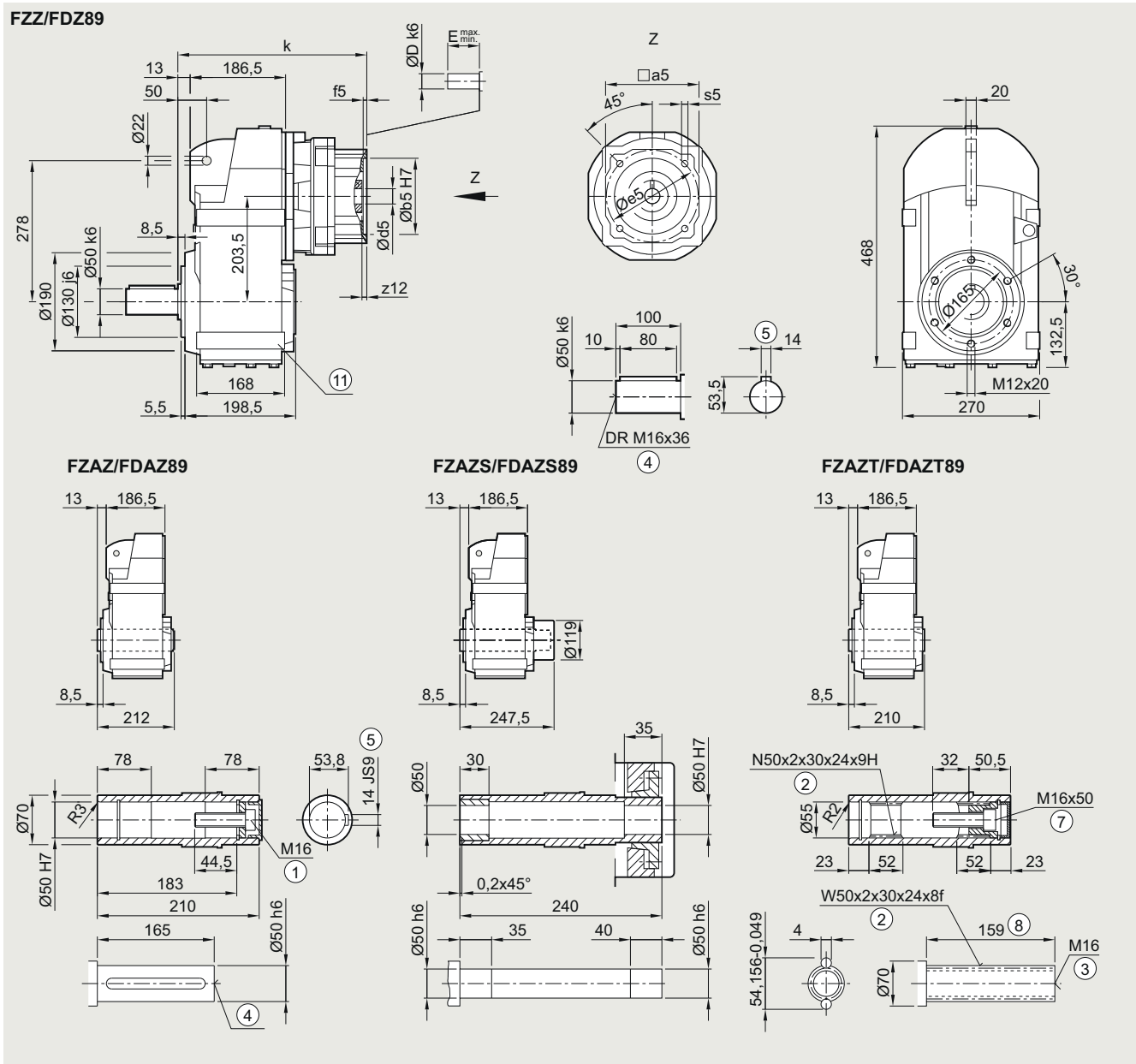
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	281.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	281.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	302.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	302.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	315
KS10.1	196	180	5	215	M12x22	5	38	50	80	351
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	351

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

## FD.Z./FZ.Z.89 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	281.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	281.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	302.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	302.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	315
KS10.1	196	180	5	215	M12x22	5	38	50	80	351
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	351

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

Ⓜ Use bores only for foot-mounted design

## SIMOGEAR gearboxes

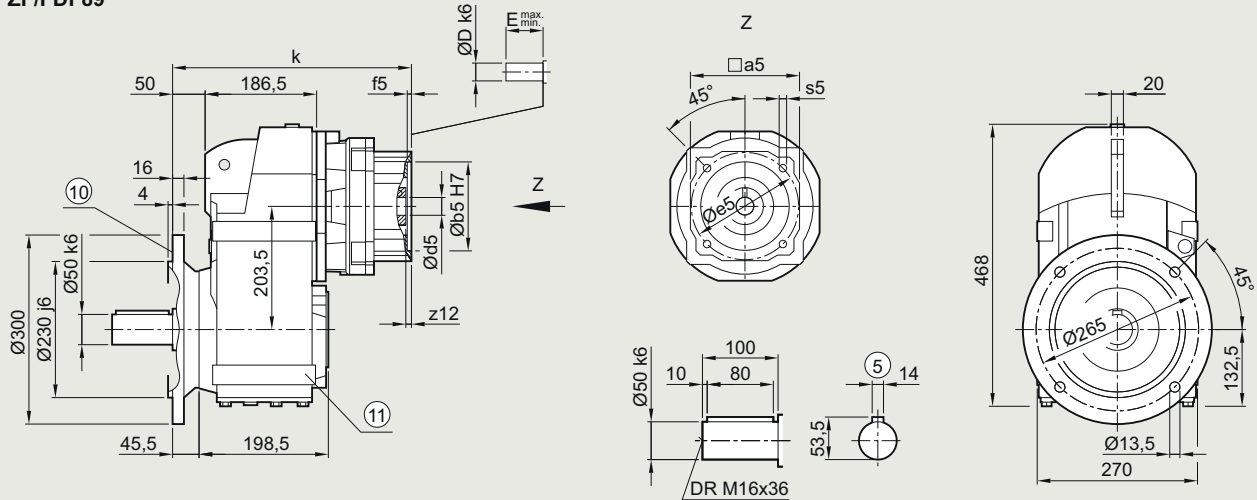
Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

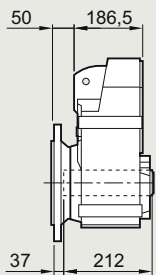
#### FD.F/FZ.F.89 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

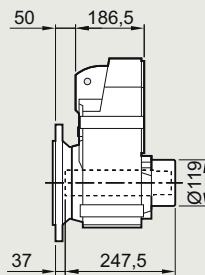
#### FZF/FDF89



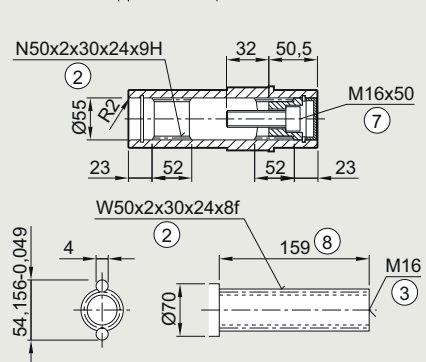
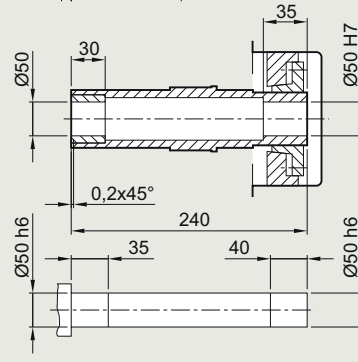
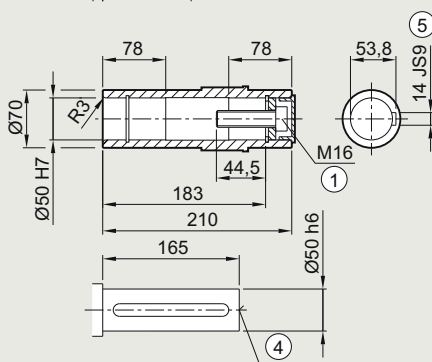
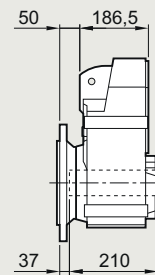
#### FZAF/FDAF89



#### FZAFS/FDAFS89



#### FZAFS/FDAFT89



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	318.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	318.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	339.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	339.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	352
KS10.1	196	180	5	215	M12x22	5	38	50	80	388
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	388

① ISO 4014  
② ISO 4762

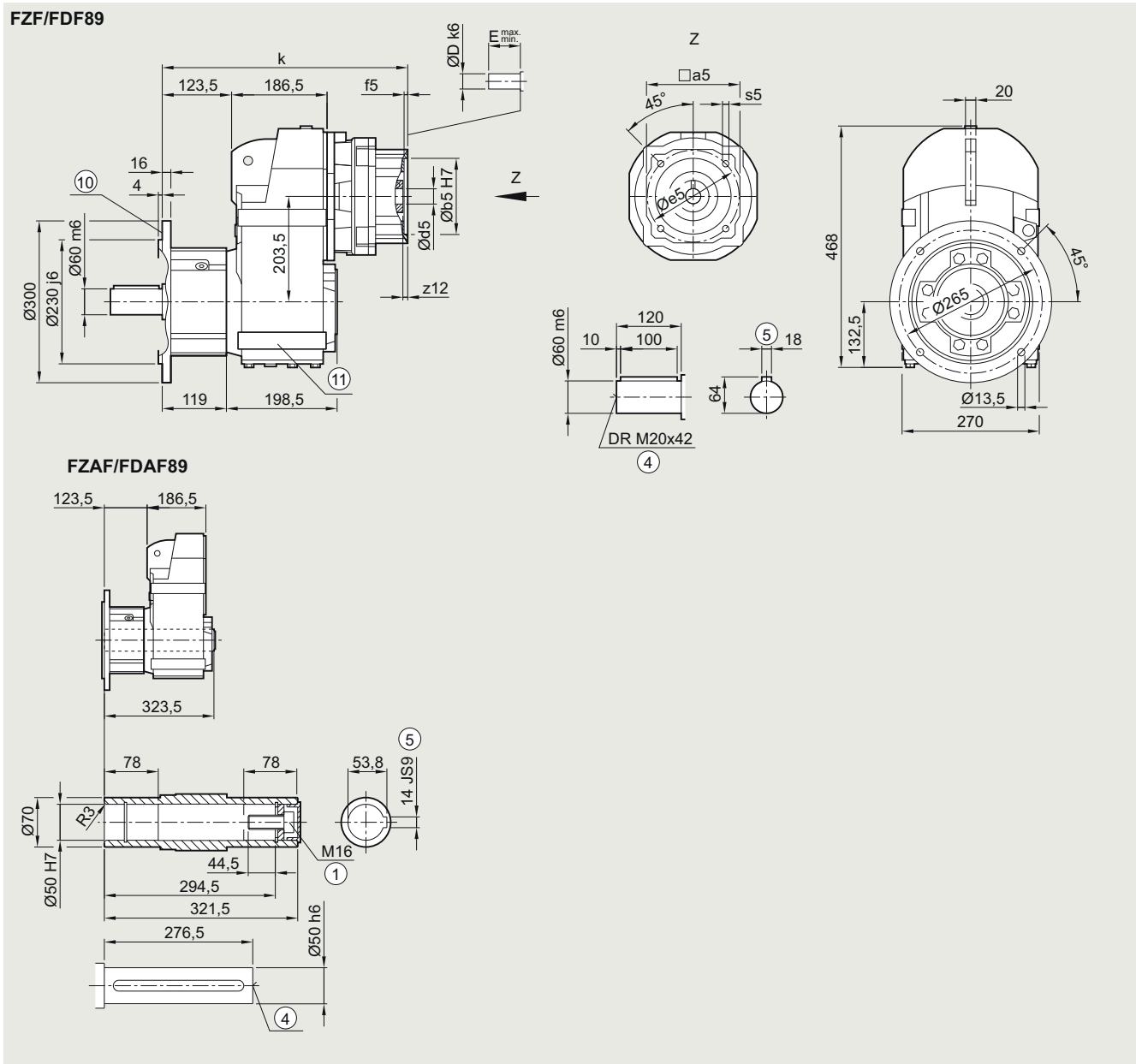
③ DIN 332-D  
④ Without locating shoulder +1 mm

⑤ DIN 332  
⑥ For inner contour, see page 4/169

⑦ Feather key/keyway DIN 6885  
⑧ Use bores only for foot-mounted design

## FD.F./FZ.F.89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	392
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	392
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	413
KS6.2	130	110	7	145	M8x15	8	22	40	58	413
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	425.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	461.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	461.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

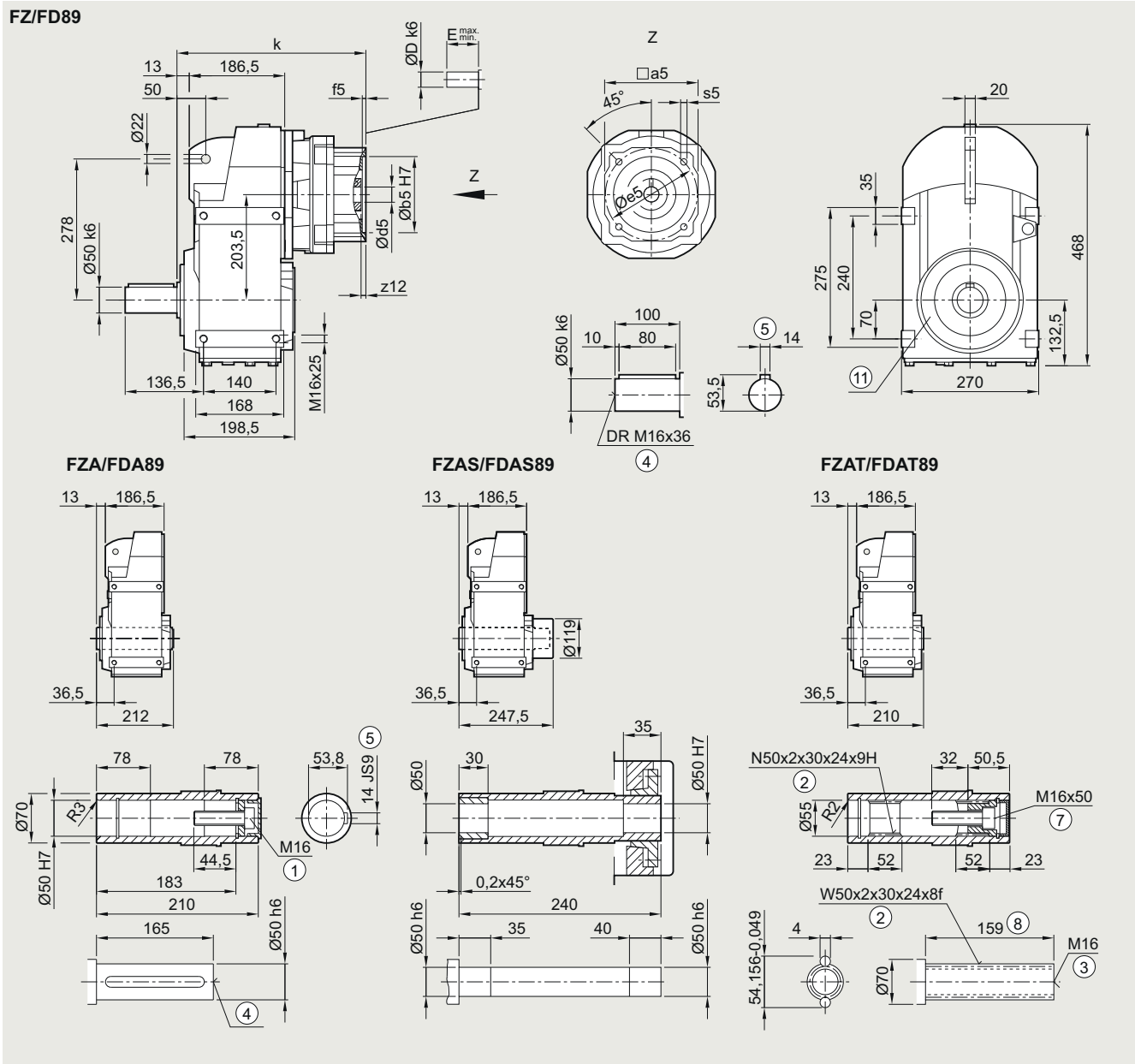
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD../FZ..89 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	281.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	281.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	302.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	302.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	315
KS10.1	196	180	5	215	M12x22	5	38	50	80	351
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	351

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

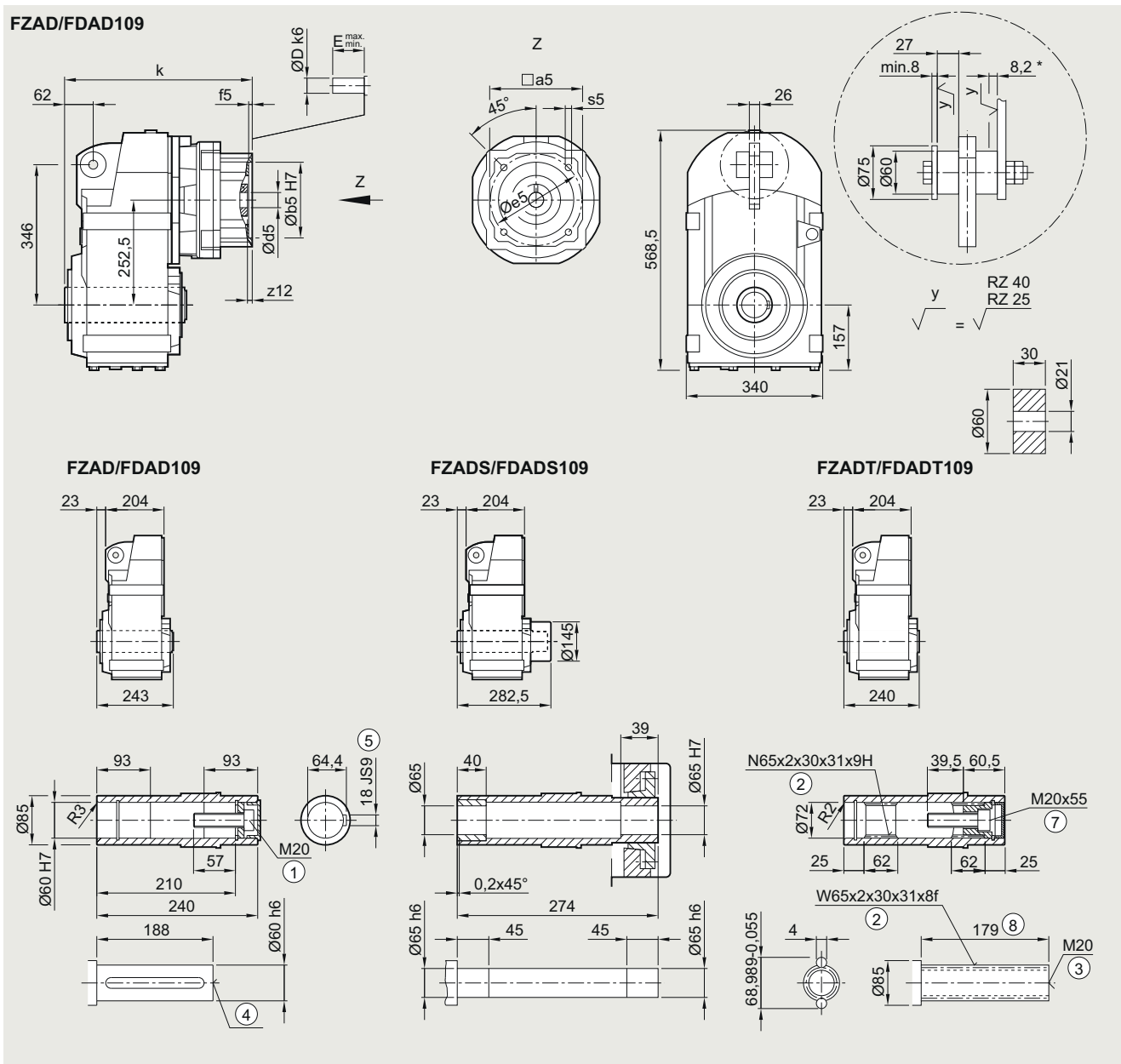
⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

**FDAD./FZAD.109 gearbox in a shaft-mounted design**

**FAD030KS, FADS030KS, FADT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	302
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	302
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	321
KS6.2	130	110	7	145	M8x15	8	22	40	58	321
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	333.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	369.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	369.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque



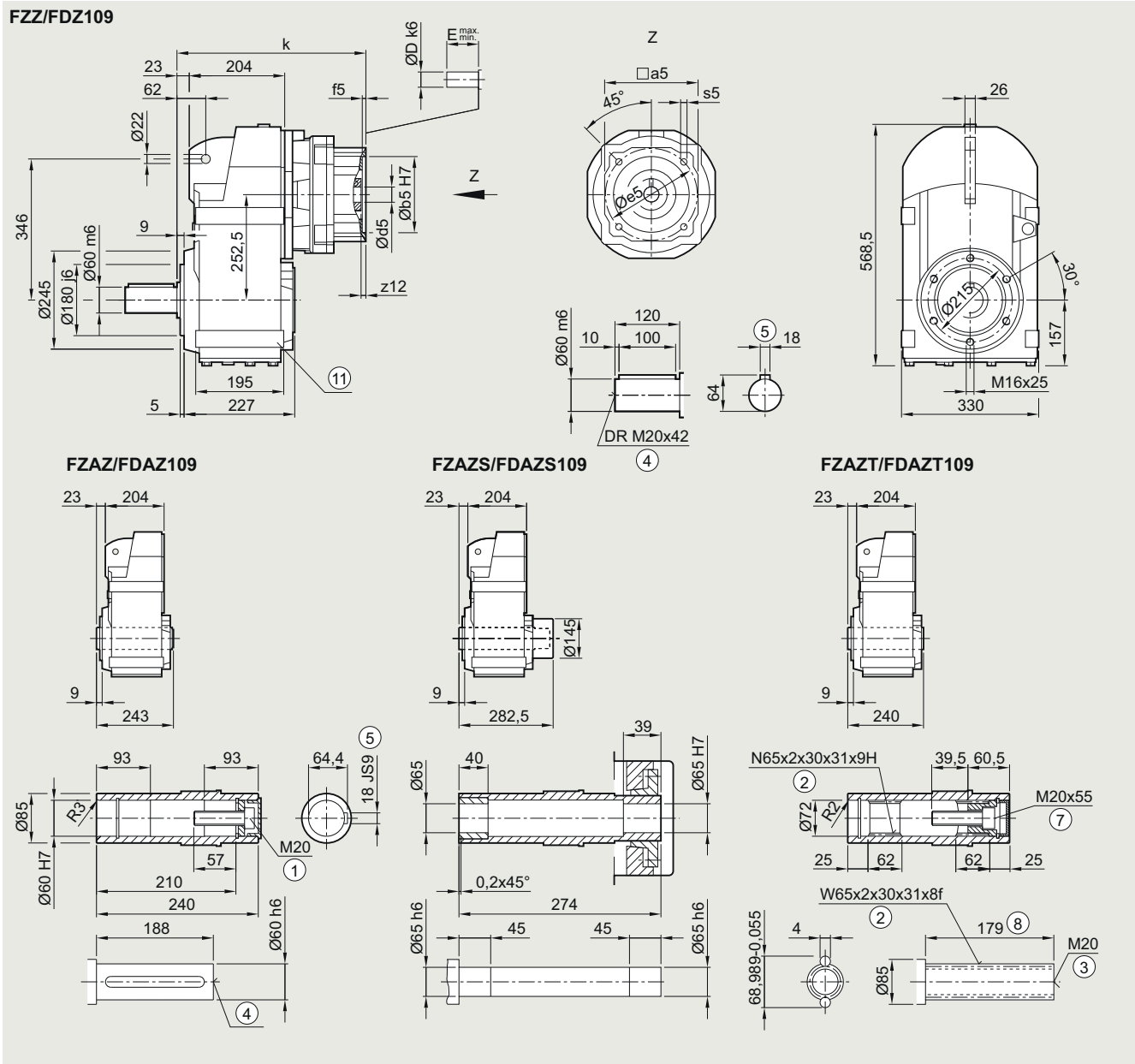
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD.Z./FZ.Z.109 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	302
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	302
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	321
KS6.2	130	110	7	145	M8x15	8	22	40	58	321
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	333.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	369.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	369.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

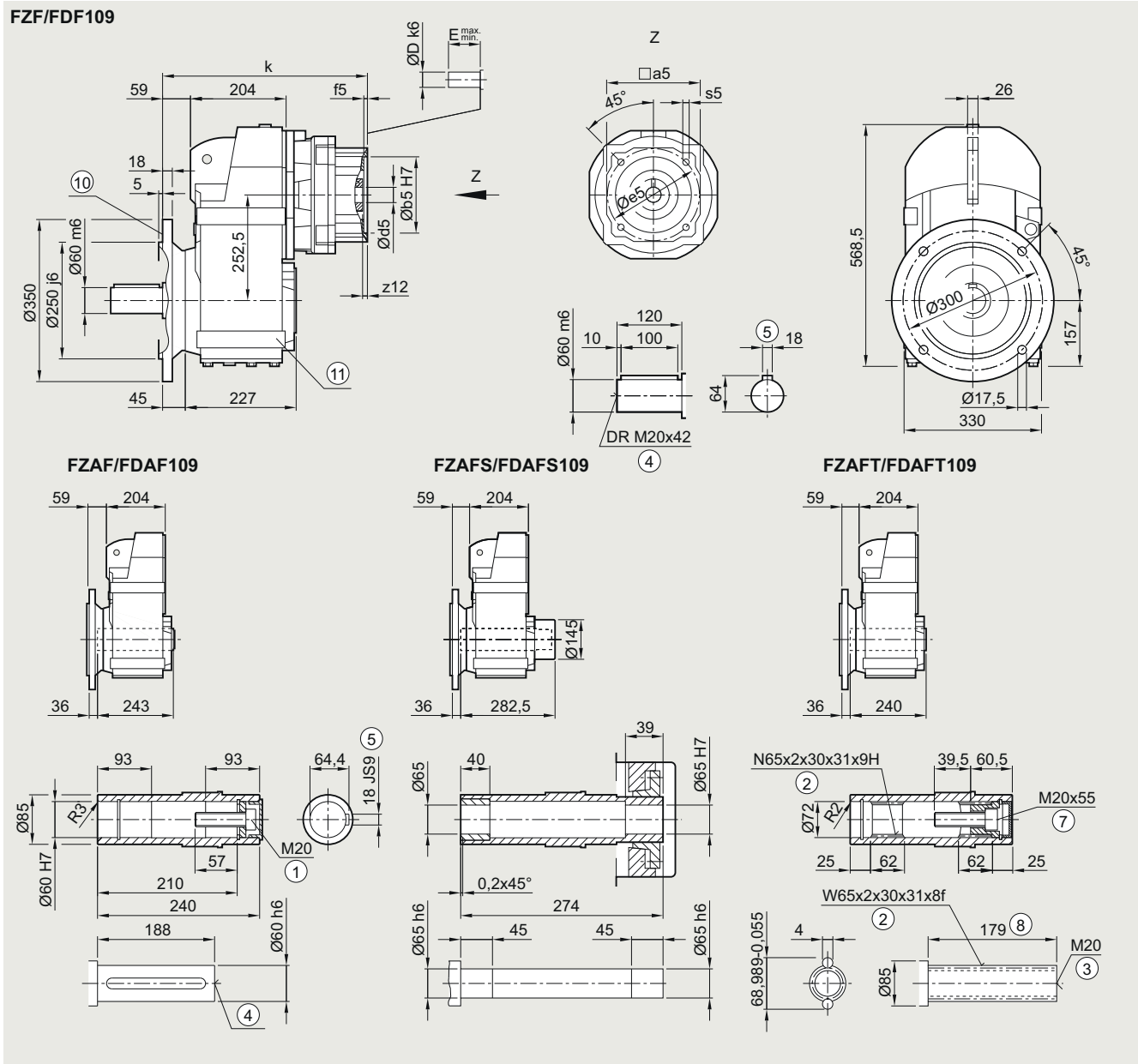
⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design

## FD.F/FZ.F.109 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	338
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	338
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	357
KS6.2	130	110	7	145	M8x15	8	22	40	58	357
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	369.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	405.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	405.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

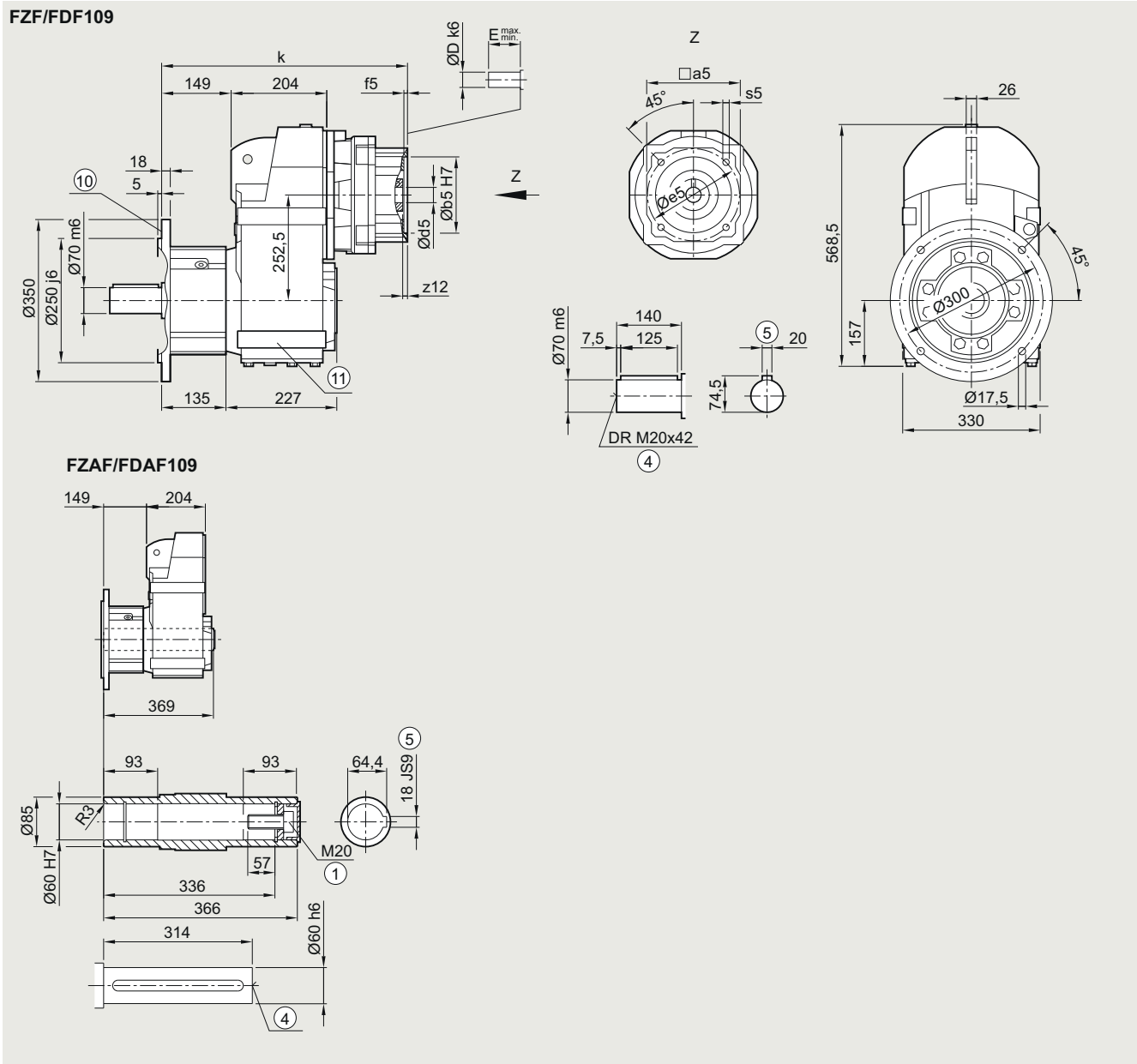
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD.F/FZ.F.109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	428
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	428
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	447
KS6.2	130	110	7	145	M8x15	8	22	40	58	447
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	459.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	495.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	495.5

① ISO 4014

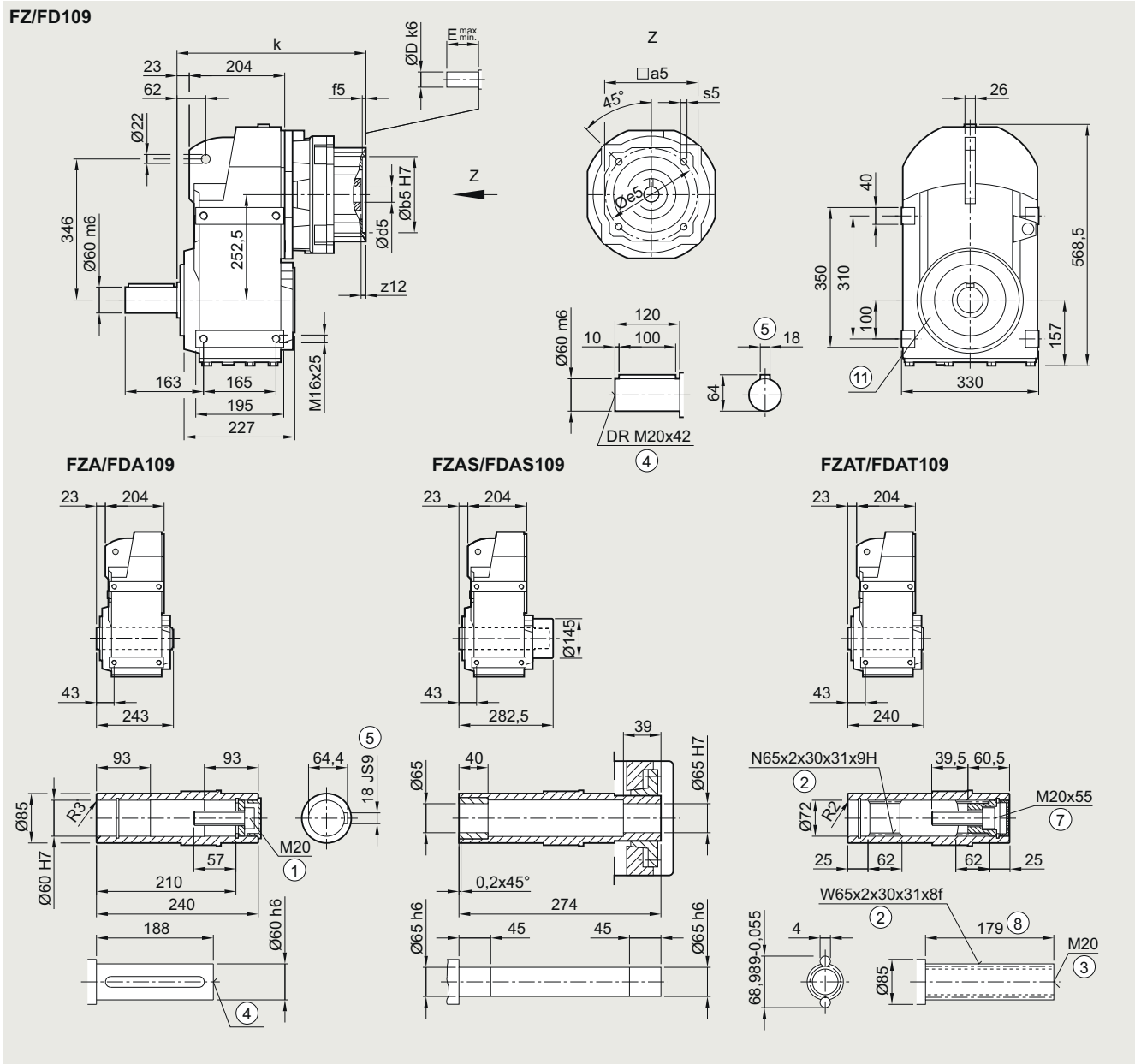
④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

## FD../FZ..109 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	302
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	302
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	321
KS6.2	130	110	7	145	M8x15	8	22	40	58	321
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	333.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	369.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	369.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ Use bores only for housing flange design

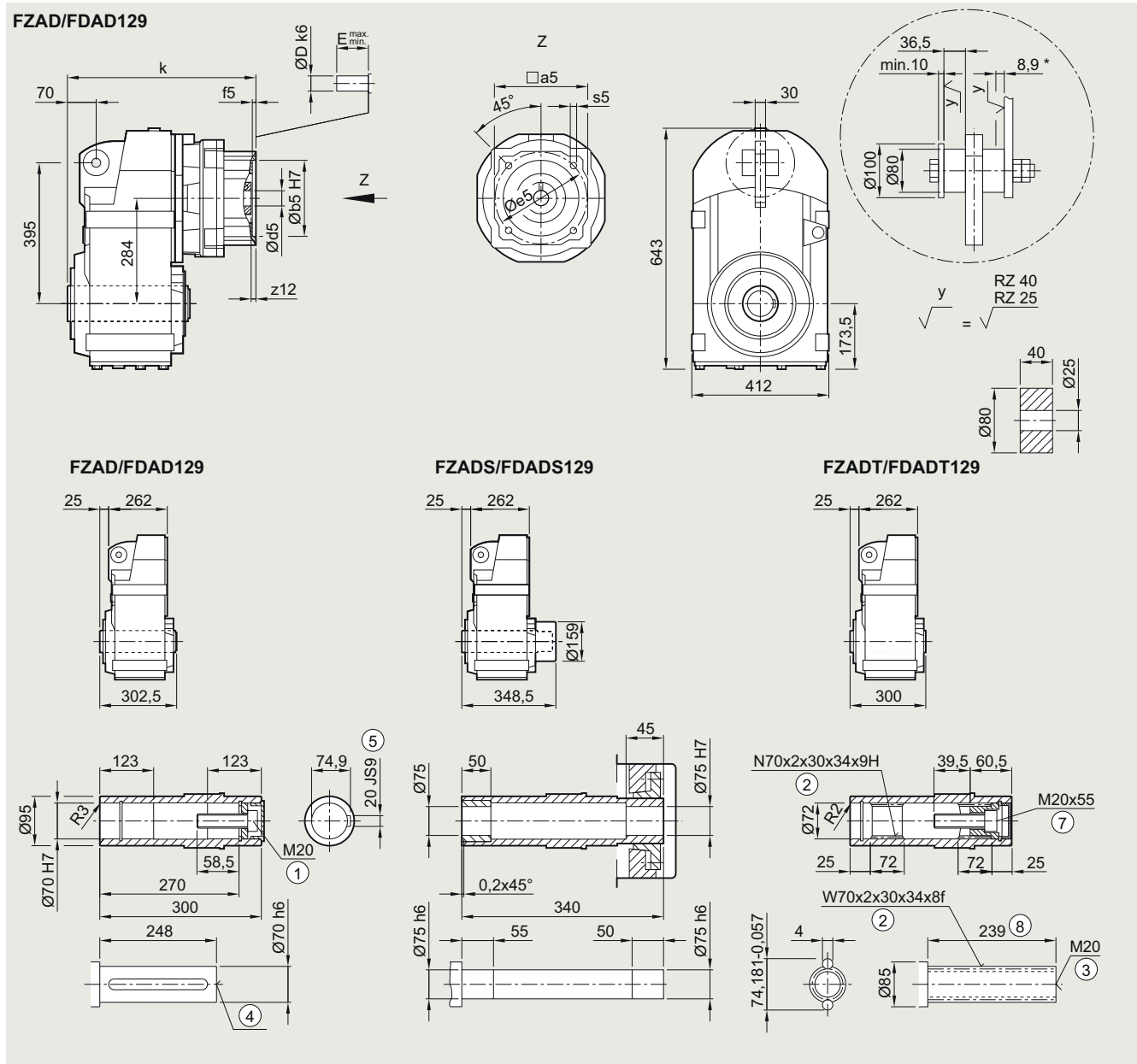
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FDAD./FZAD.129 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



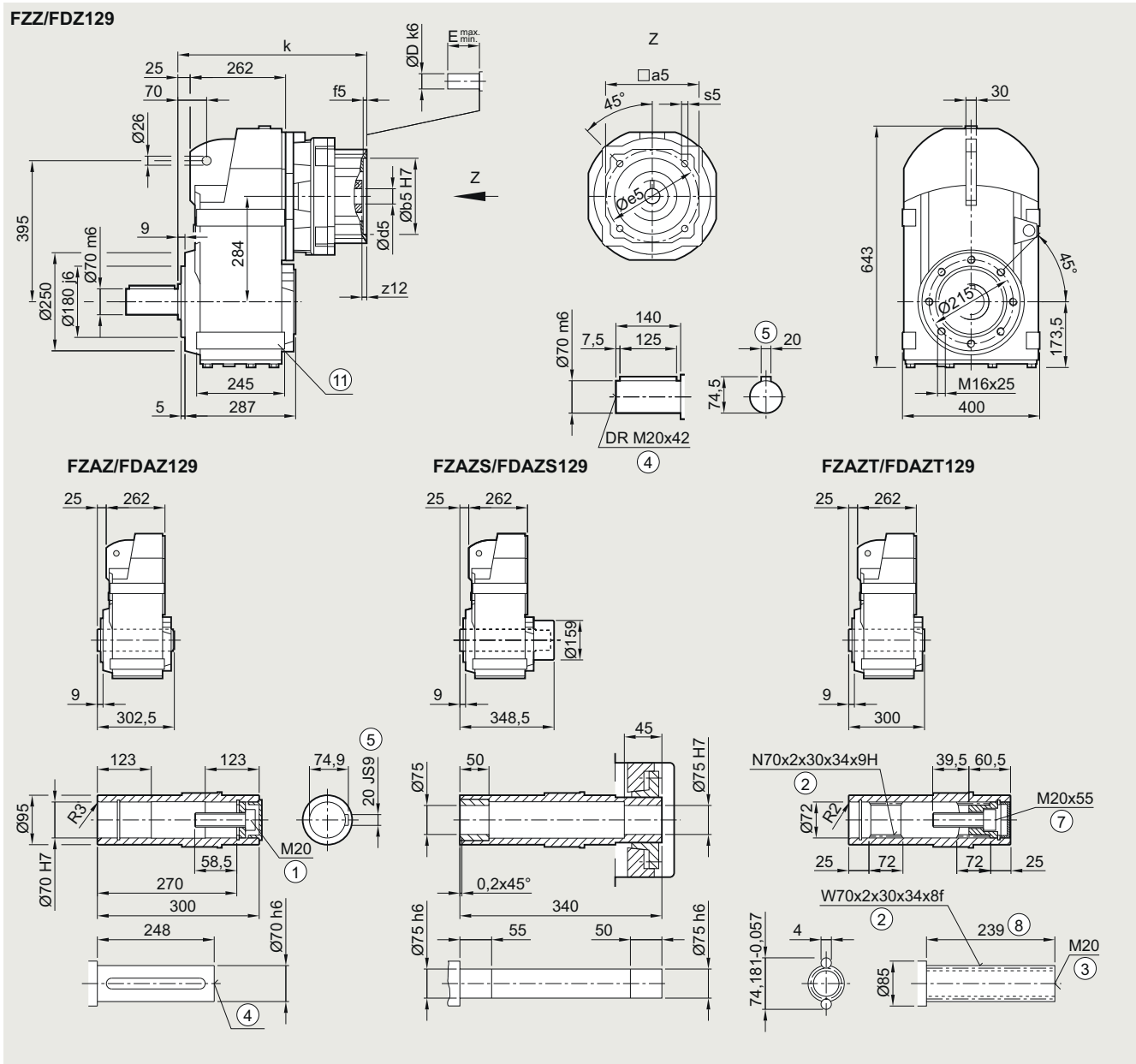
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	355
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	355
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372
KS6.2	130	110	7	145	M8x15	8	22	40	58	372
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	384.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	418.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	418.5

① ISO 4014   ② DIN 5480   ③ DIN 332-D   ④ DIN 332   ⑤ Feather key/keyway DIN 6885   ⑦ ISO 4762   ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

## FD.Z./FZ.Z.129 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	355
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	355
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372
KS6.2	130	110	7	145	M8x15	8	22	40	58	372
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	384.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	418.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	418.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ Use bores only for foot-mounted design

## SIMOGEAR gearboxes

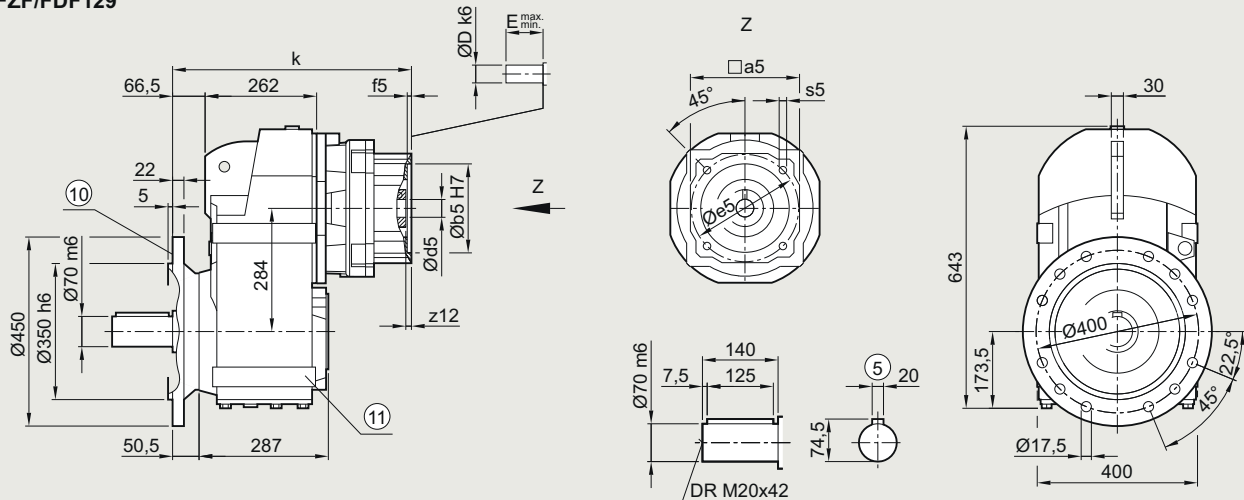
Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

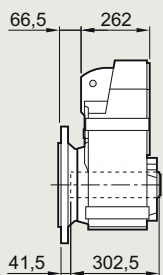
#### FD.F/FZ.F.129 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

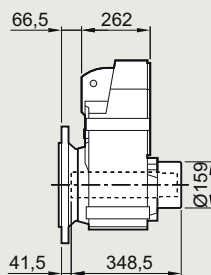
#### FZF/FDF129



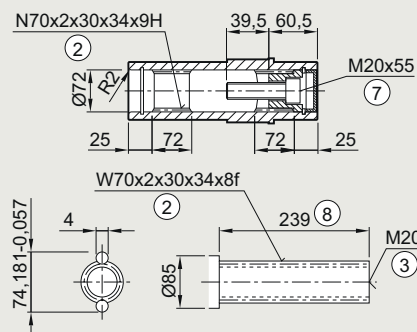
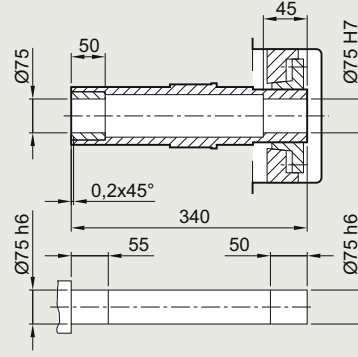
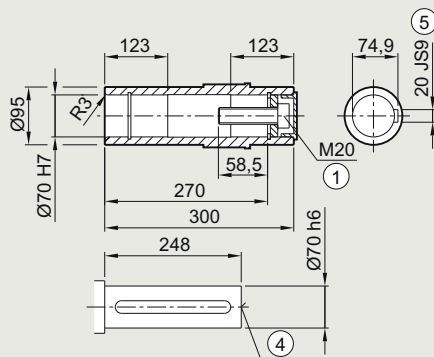
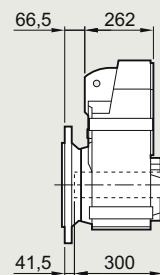
#### FZAF/FDAF129



#### FZAFS/FDAFS129



#### FZAFS/FDAFS129



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	396.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	396.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	413.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	413.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	426
KS10.1	196	180	5	215	M12x22	5	38	50	80	460
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	460

① ISO 4014  
② ISO 4762

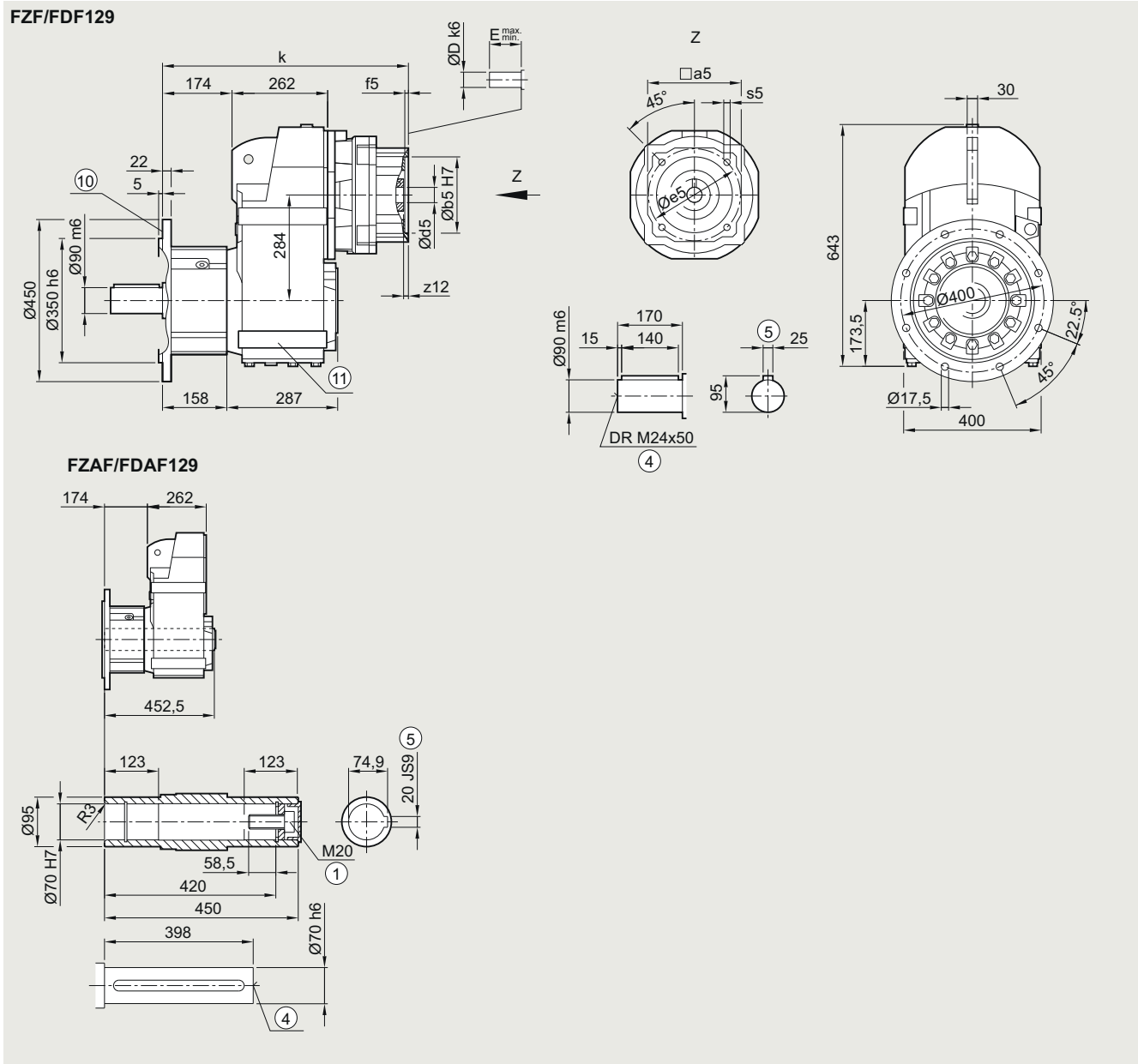
③ DIN 332-D  
④ Without locating shoulder +1 mm

⑤ DIN 332  
⑥ For inner contour, see page 4/169

⑦ Feather key/keyway DIN 6885  
⑧ Use bores only for foot-mounted design

## FD.F/FZ.F.129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	504
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	504
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	521
KS6.2	130	110	7	145	M8x15	8	22	40	58	521
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	533.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	567.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	567.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design



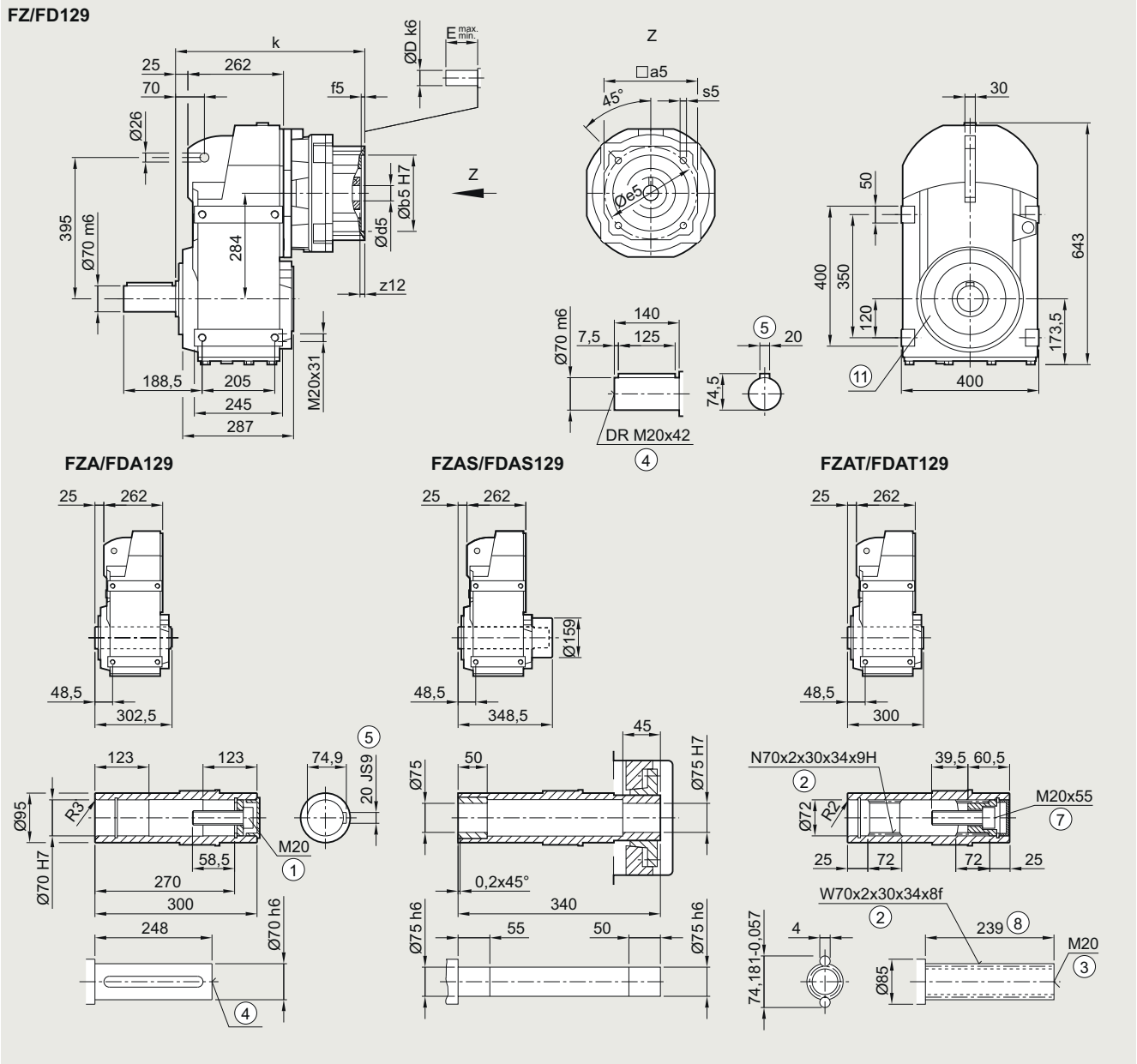
# SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

## Dimensional drawings

### FD../FZ..129 gearbox in a foot-mounted design

**F030KS, FA030KS, FAS030KS, FAT030KS**



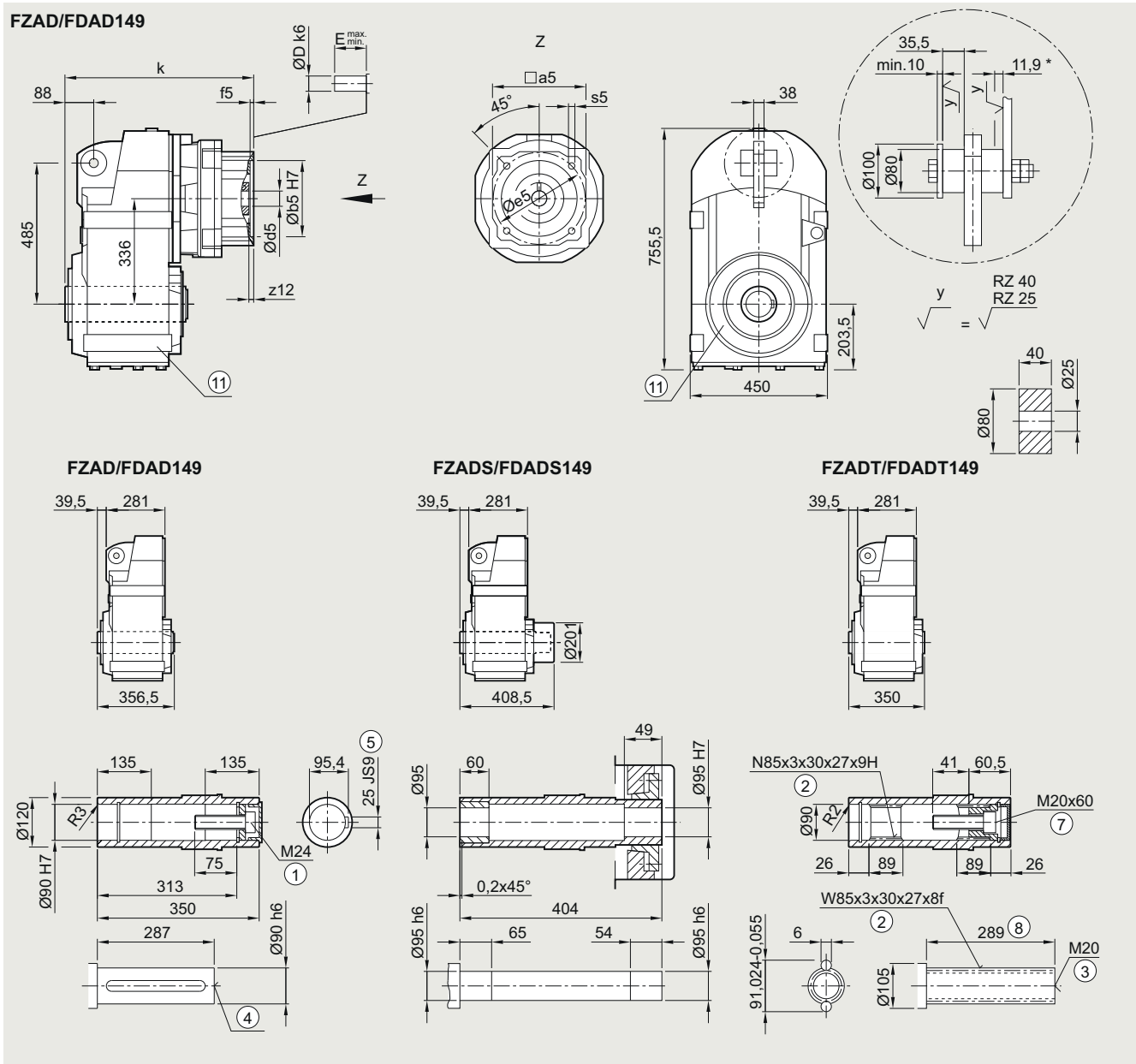
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	355
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	355
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372
KS6.2	130	110	7	145	M8x15	8	22	40	58	372
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	384.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	418.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	418.5

① ISO 4014                      ② DIN 5480                      ③ DIN 332-D                      ④ DIN 332  
 ⑤ Feather key/keyway DIN 6885      ⑦ ISO 4762                      ⑧ Without locating shoulder +1 mm      ⑩ Use bores only for housing flange design



## FDAD./FZAD.149 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	404
KS6.2	130	110	7	145	M8x15	8	22	40	58	404
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	416.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	445.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	445.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

Ⓜ Use bores only for foot-mounted, flange-mounted or housing flange design

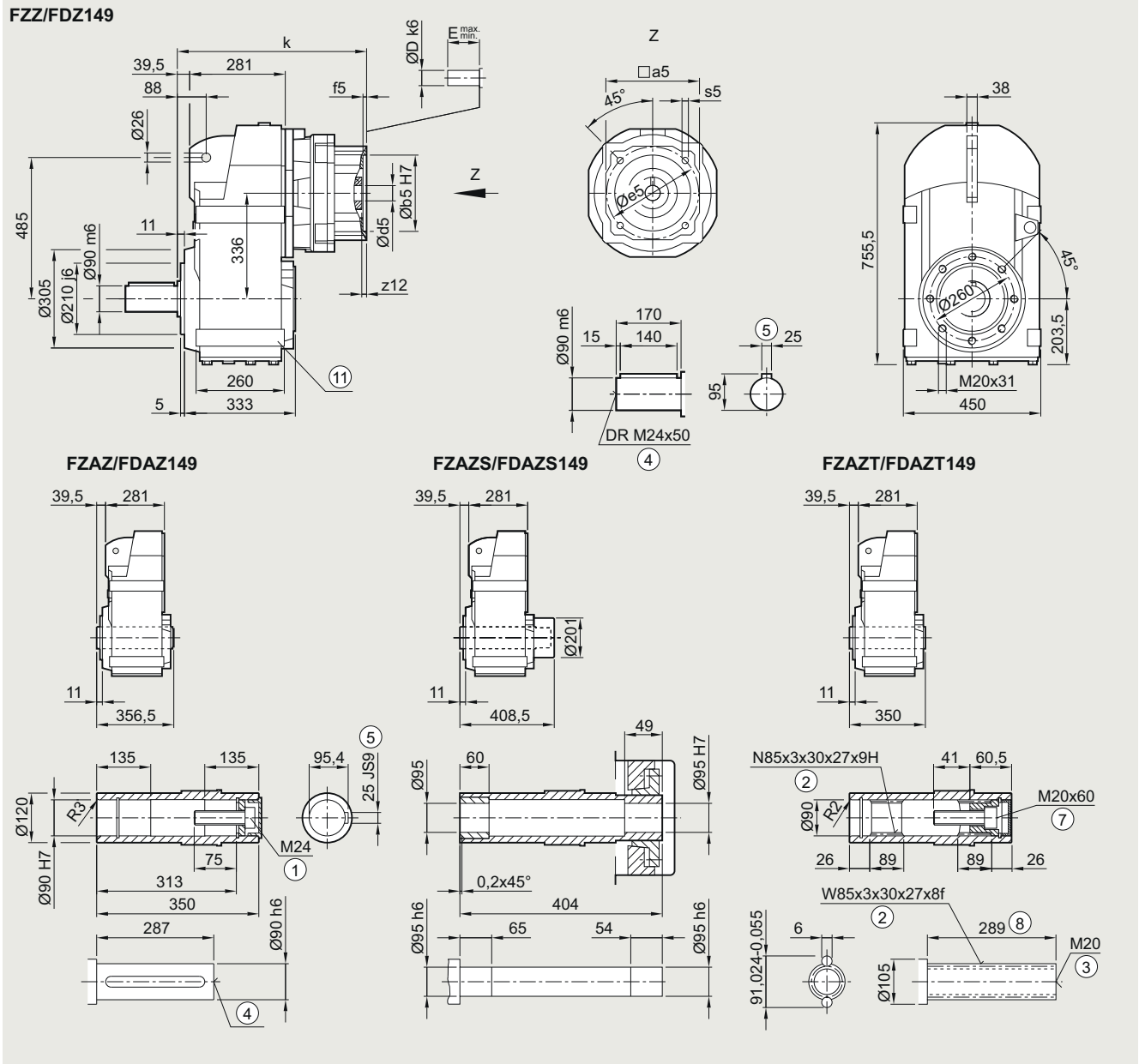
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD.Z./FZ.Z.149 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	404
KS6.2	130	110	7	145	M8x15	8	22	40	58	404
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	416.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	445.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	445.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

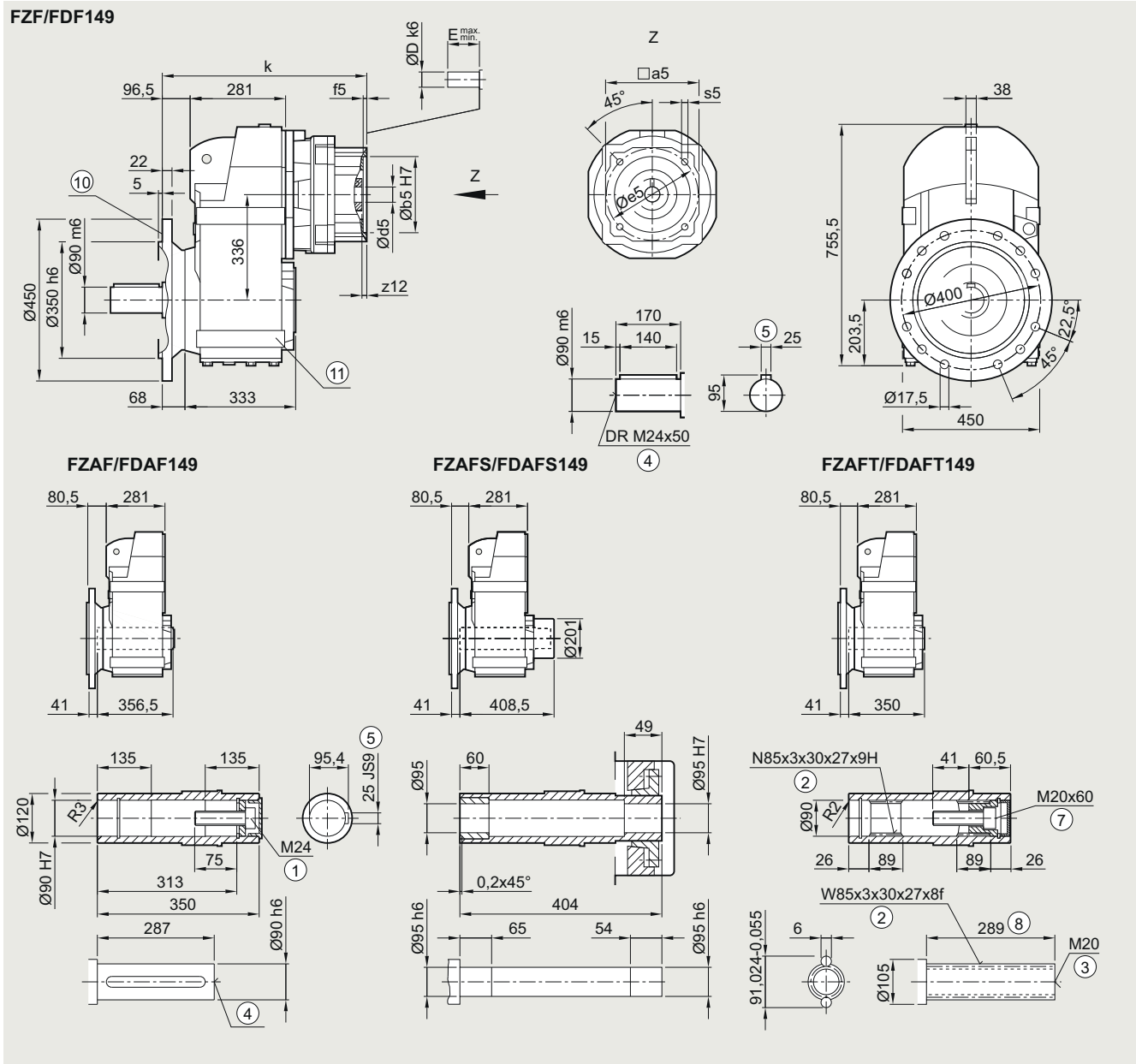
⑦ ISO 4762

⑧ Without locating shoulder +1 mm

Ⓜ Use bores only for foot-mounted design

## FD.F/FZ.F.149 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	461
KS6.2	130	110	7	145	M8x15	8	22	40	58	461
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	473.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	502.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	502.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

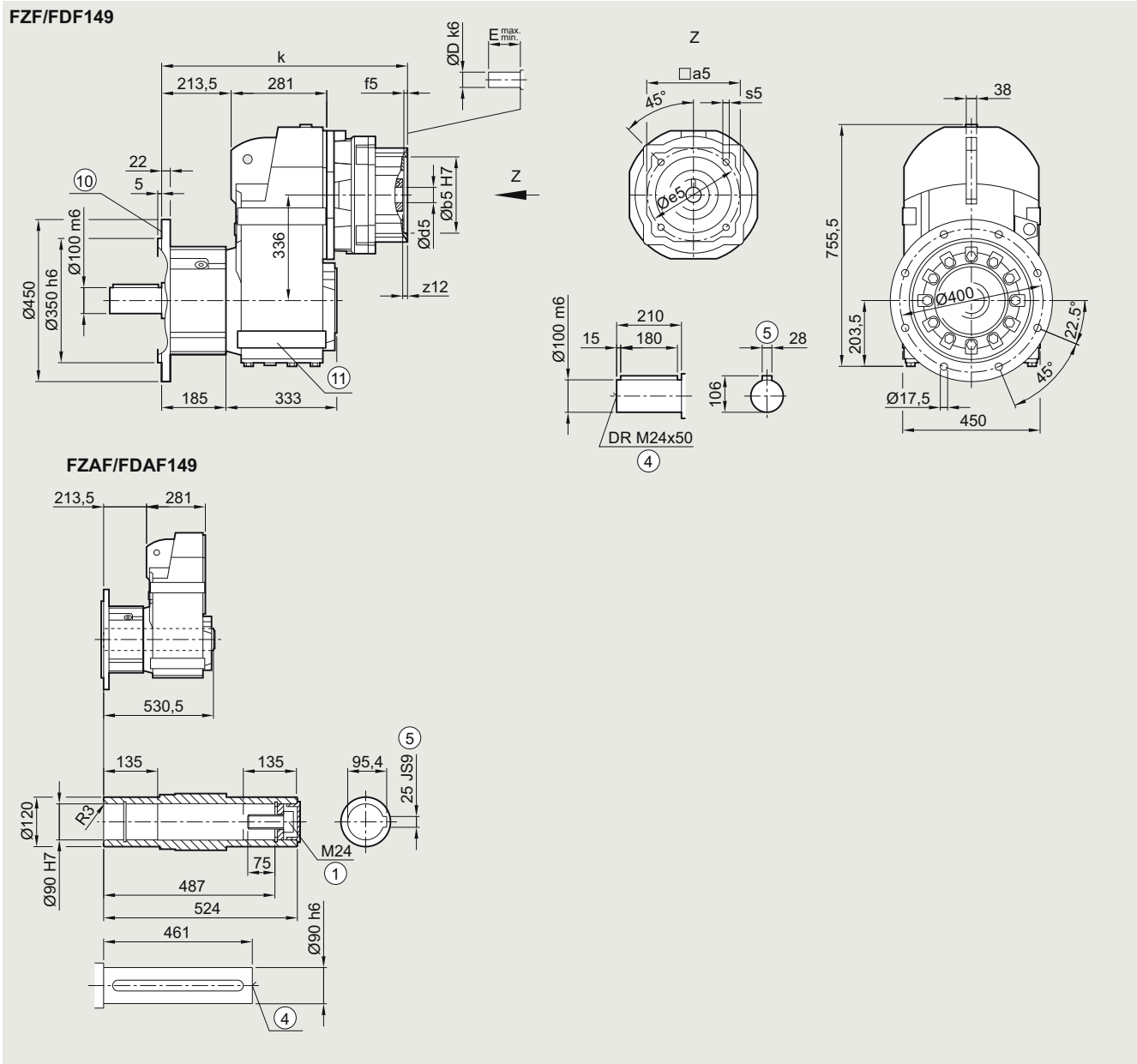
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD.F/FZ.F.149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	578
KS6.2	130	110	7	145	M8x15	8	22	40	58	578
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	590.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	619.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	619.5

① ISO 4014

④ DIN 332

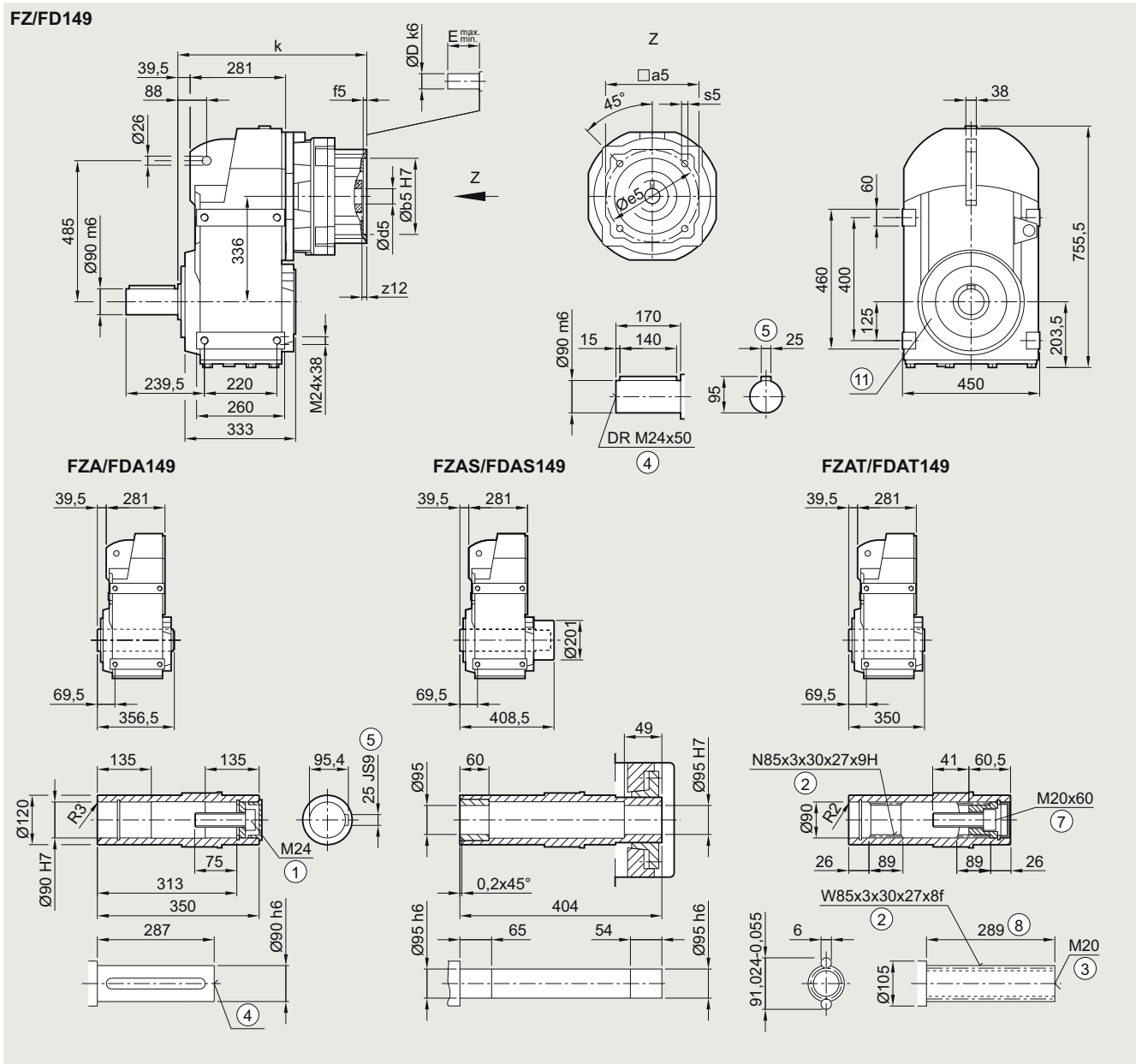
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

## FD../FZ..149 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	404
KS6.2	130	110	7	145	M8x15	8	22	40	58	404
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	416.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	445.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	445.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

Ⓜ Use bores only for foot-mounted design

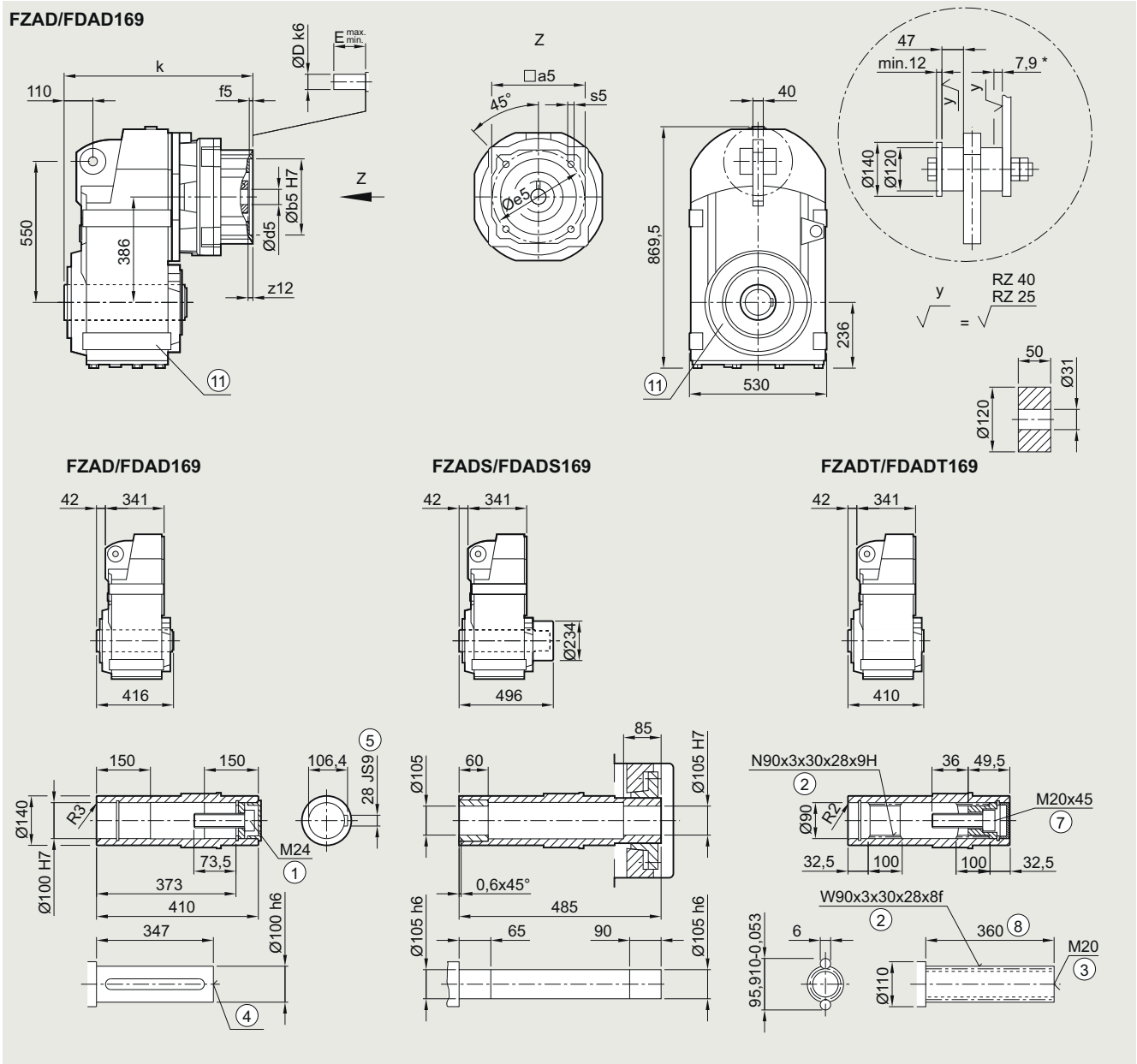
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FDAD./FZAD.169 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	469.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	498
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	498

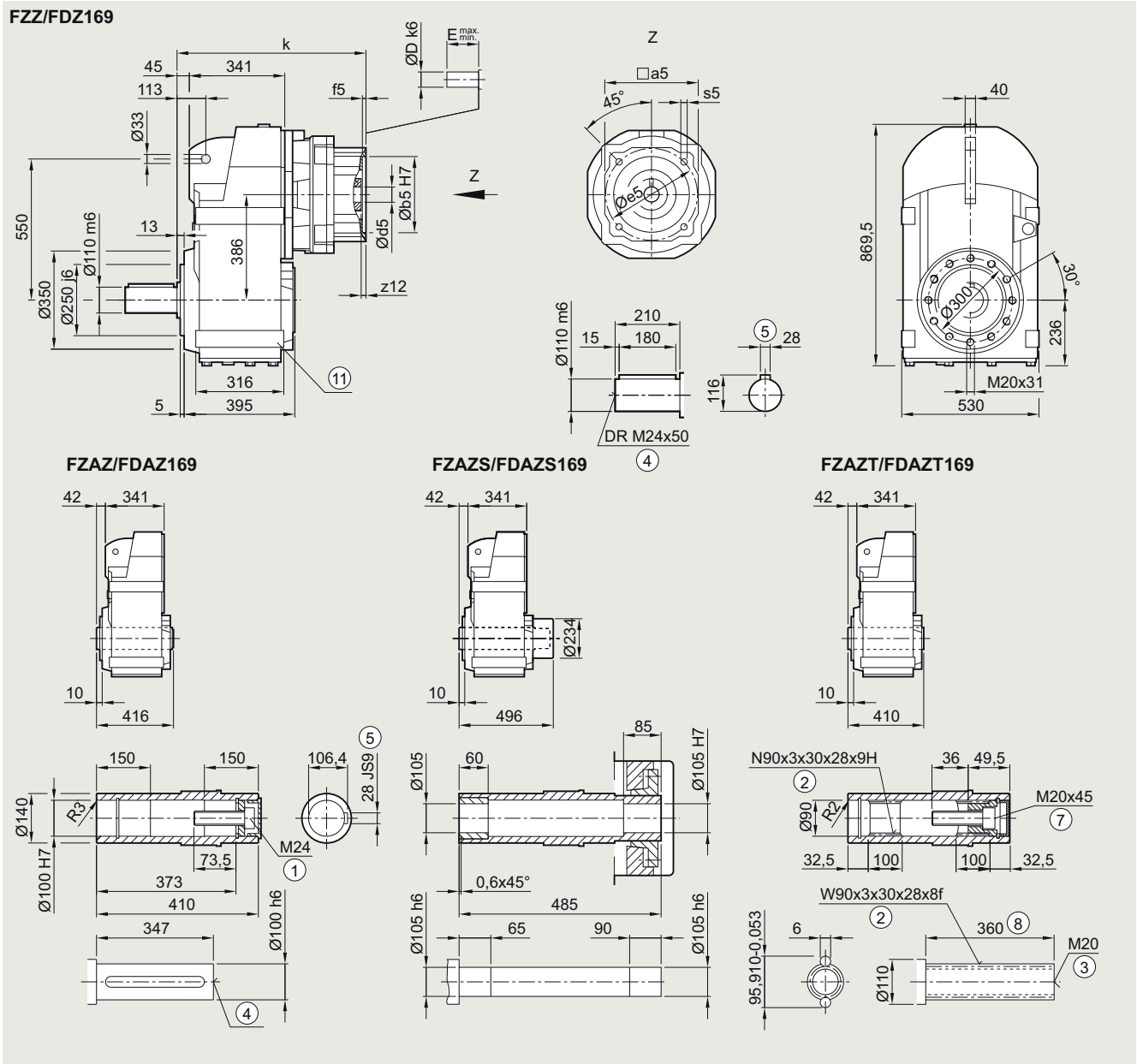
① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

\* Spring compression at max. torque

Ⓜ Use bores only for foot-mounted, flange-mounted or housing flange design

## FD.Z./FZ.Z.169 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	469.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	498
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	498

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ Use bores only for foot-mounted design



## SIMOGEAR gearboxes

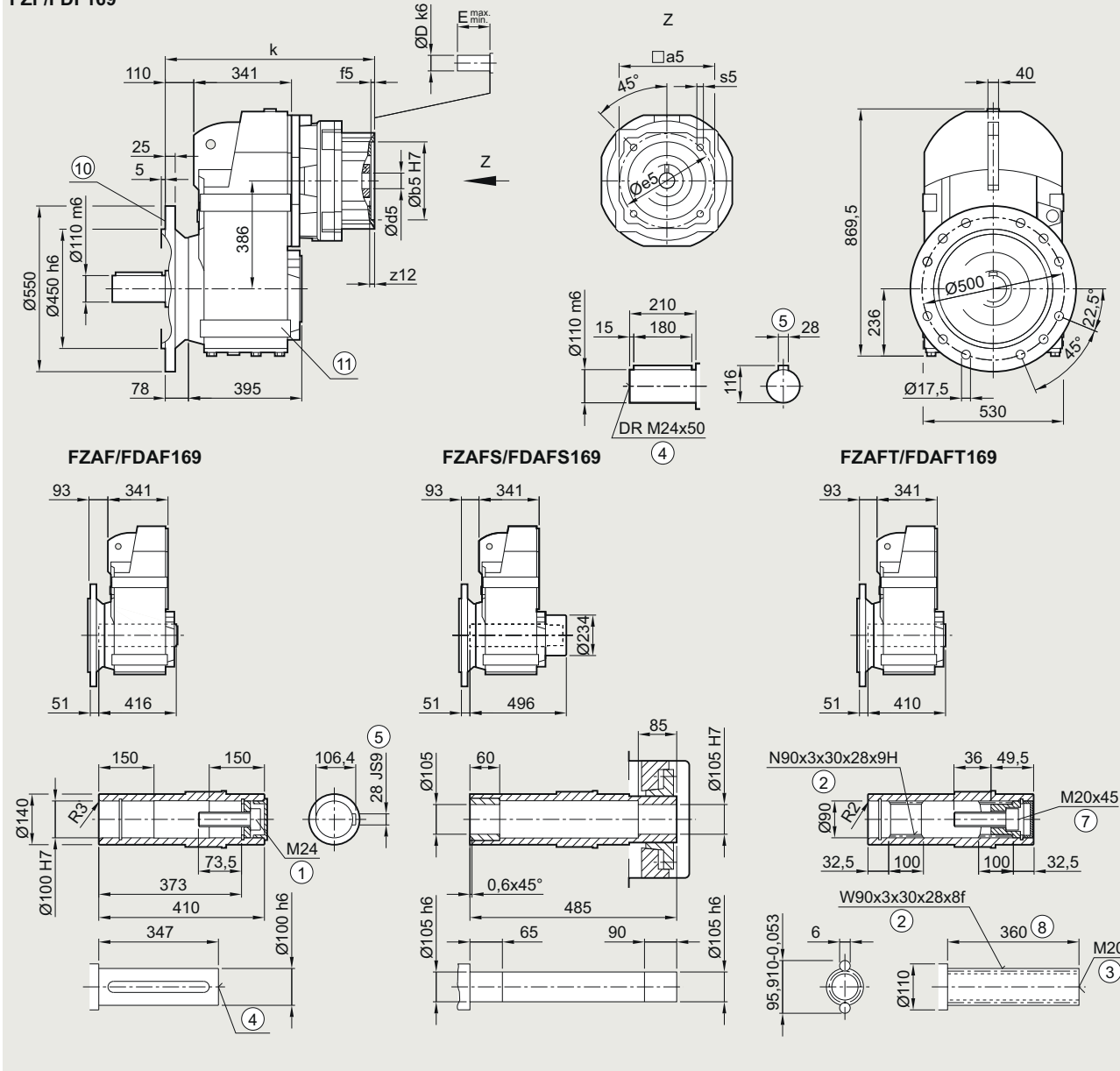
Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD.F/FZ.F.169 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

##### FZF/FDF169



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	534.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	563
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	563

① ISO 4014  
② ISO 4762

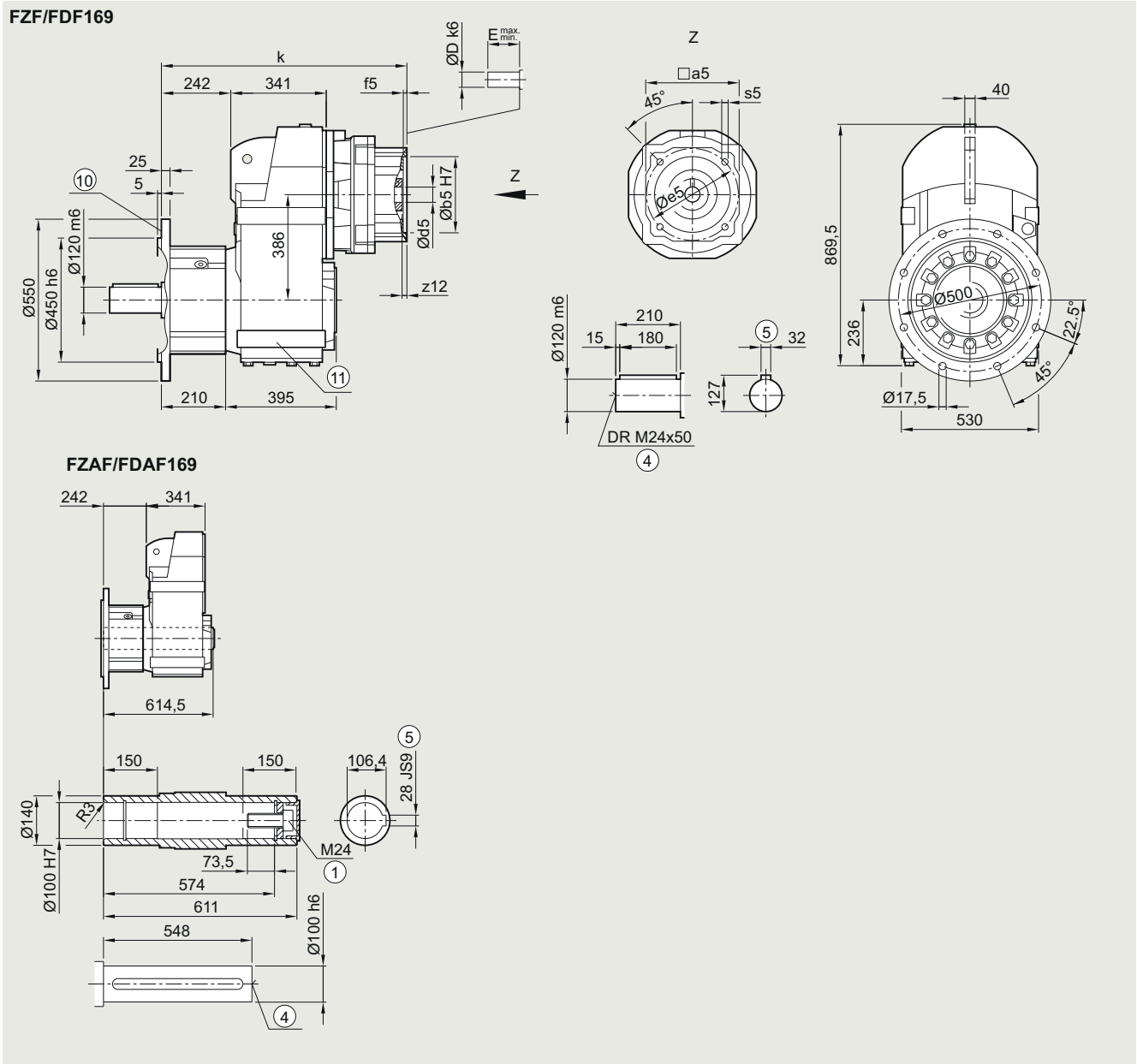
③ DIN 332-D  
④ Without locating shoulder +1 mm

⑤ DIN 332  
⑥ For inner contour, see page 4/169

⑦ Feather key/keyway DIN 6885  
⑧ Use bores only for foot-mounted design

## FD.F/FZ.F.169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	666.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	695
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	695

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

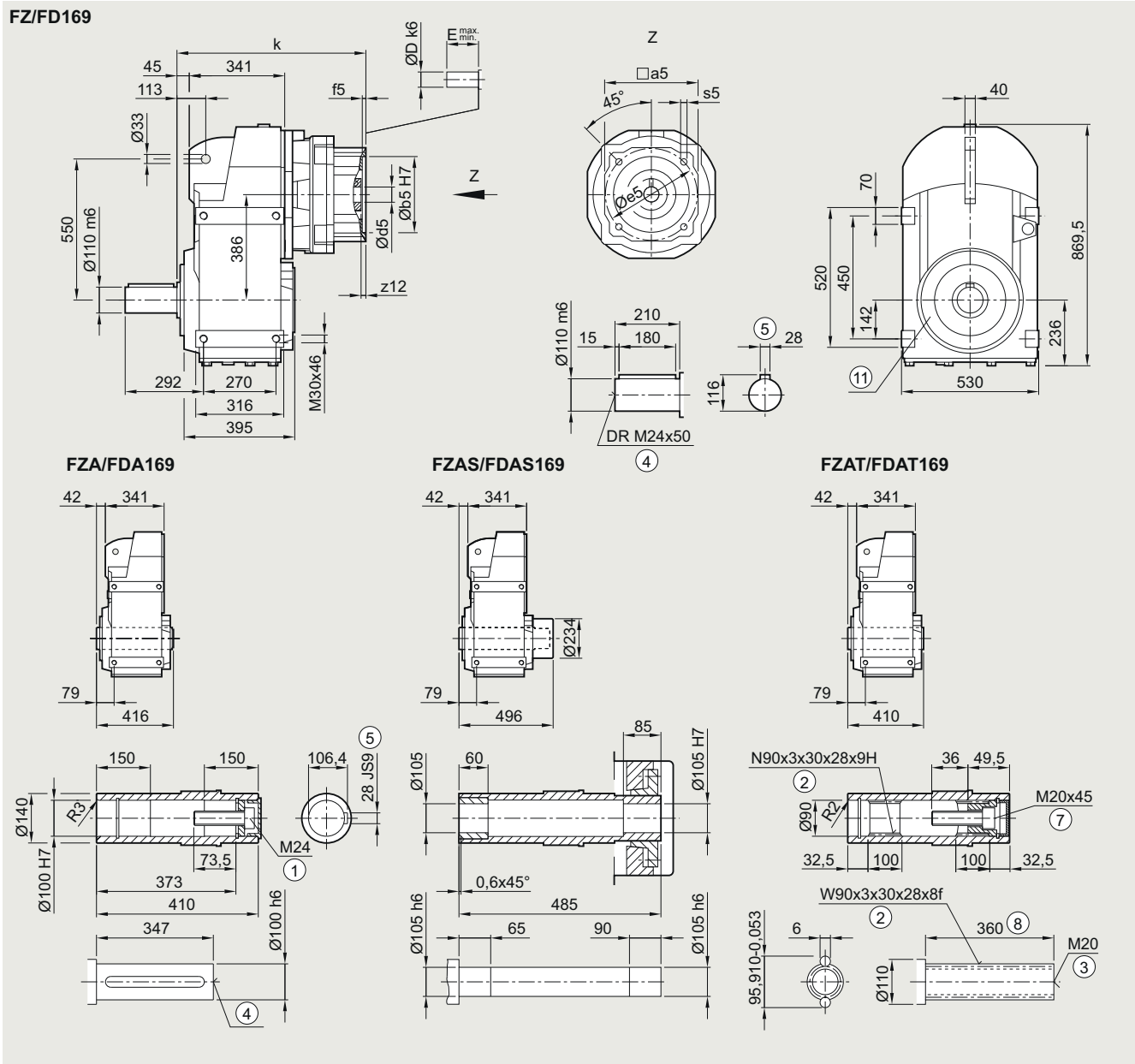
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD../FZ..169 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	469.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	498
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	498

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

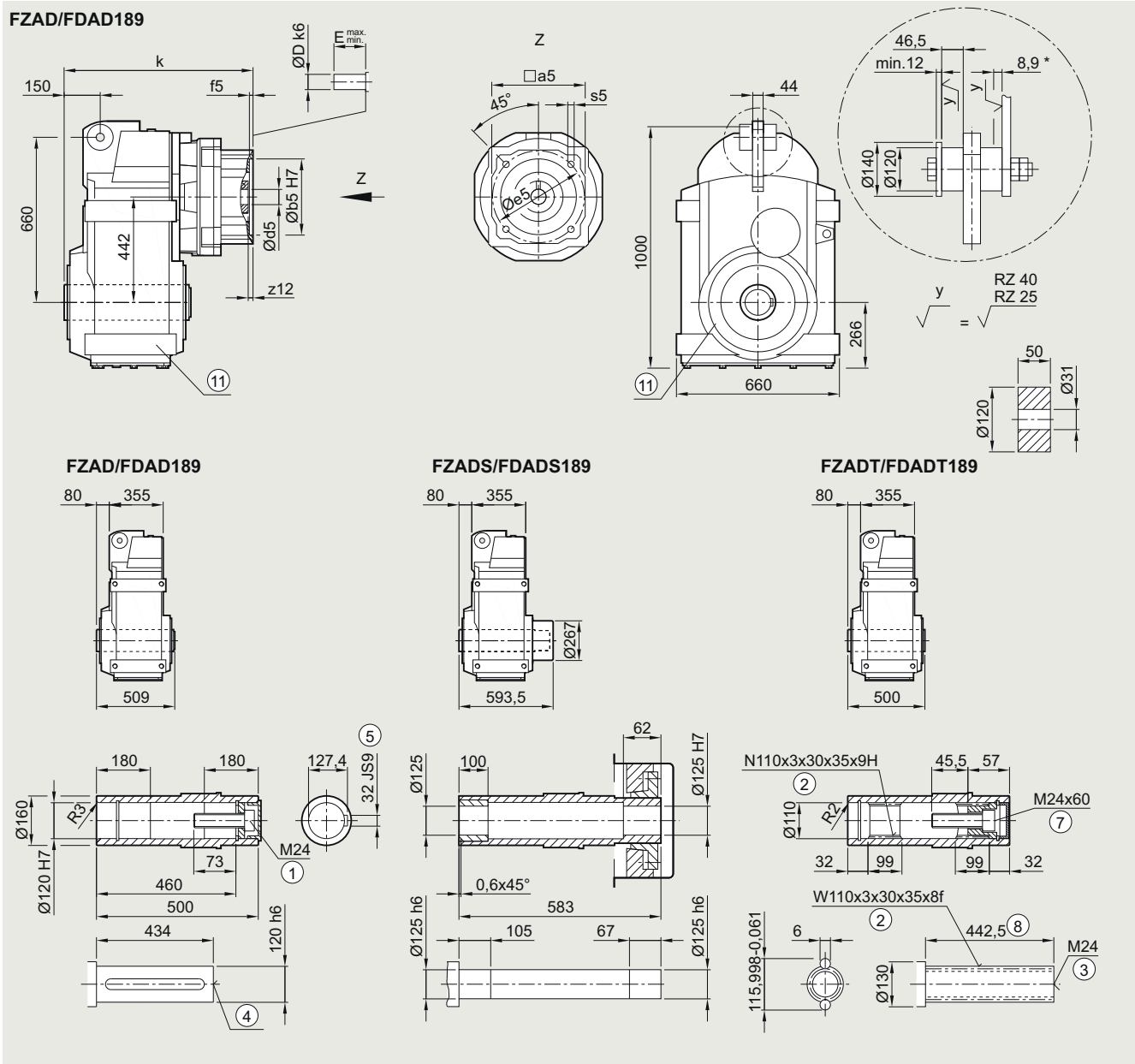
⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

**FDAD./FZAD.189 gearbox in a shaft-mounted design**

**FAD030KS, FADS030KS, FADT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	518.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	547
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	547

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm  
 \* Spring compression at max. torque    ⑩ Use bores only for foot-mounted, flange-mounted or housing flange design

## SIMOGEAR gearboxes

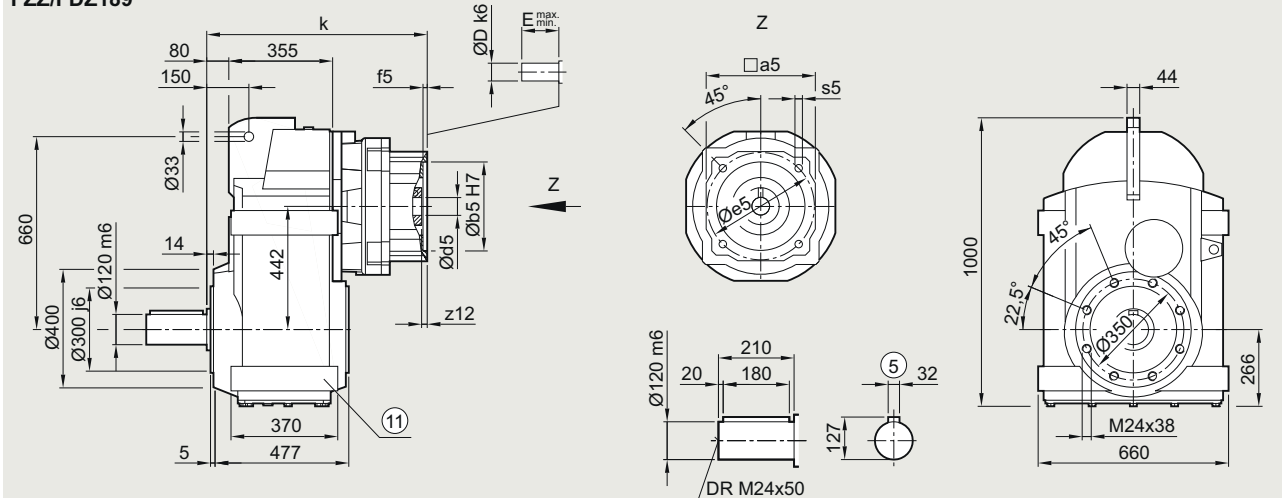
Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

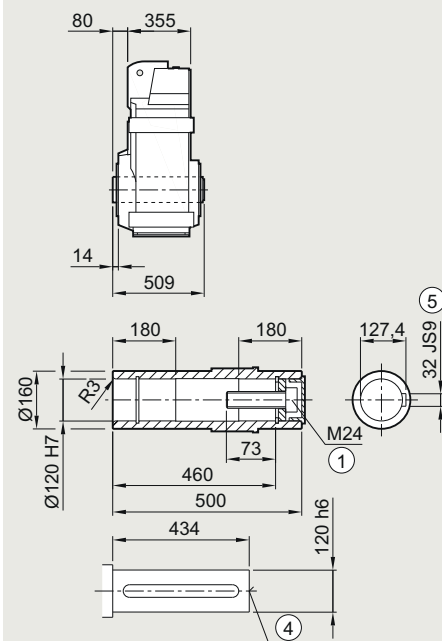
#### FD.Z./FZ.Z.189 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS

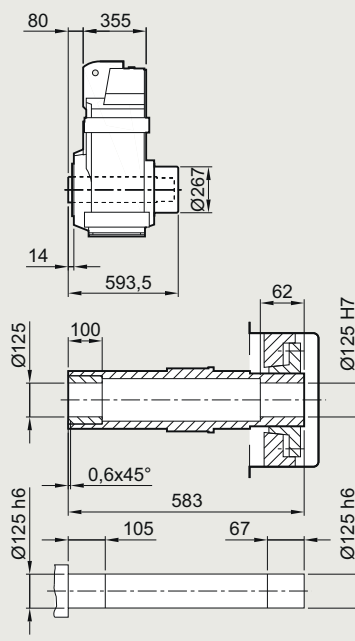
##### FZZ/FDZ189



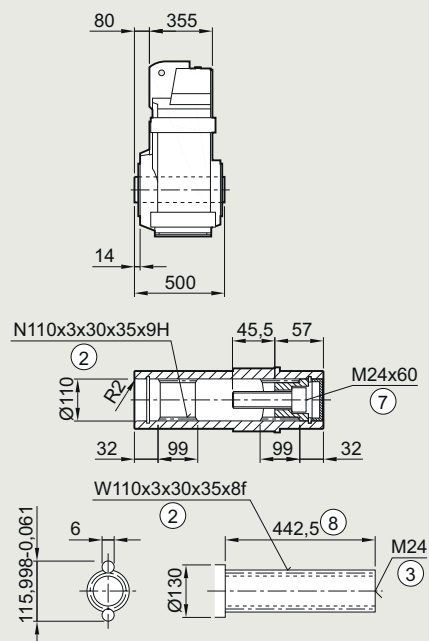
##### FZAZ/FDAZ189



##### FZAZS/FDAZS189



##### FZAZT/FDAZT189



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	518.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	547
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	547

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

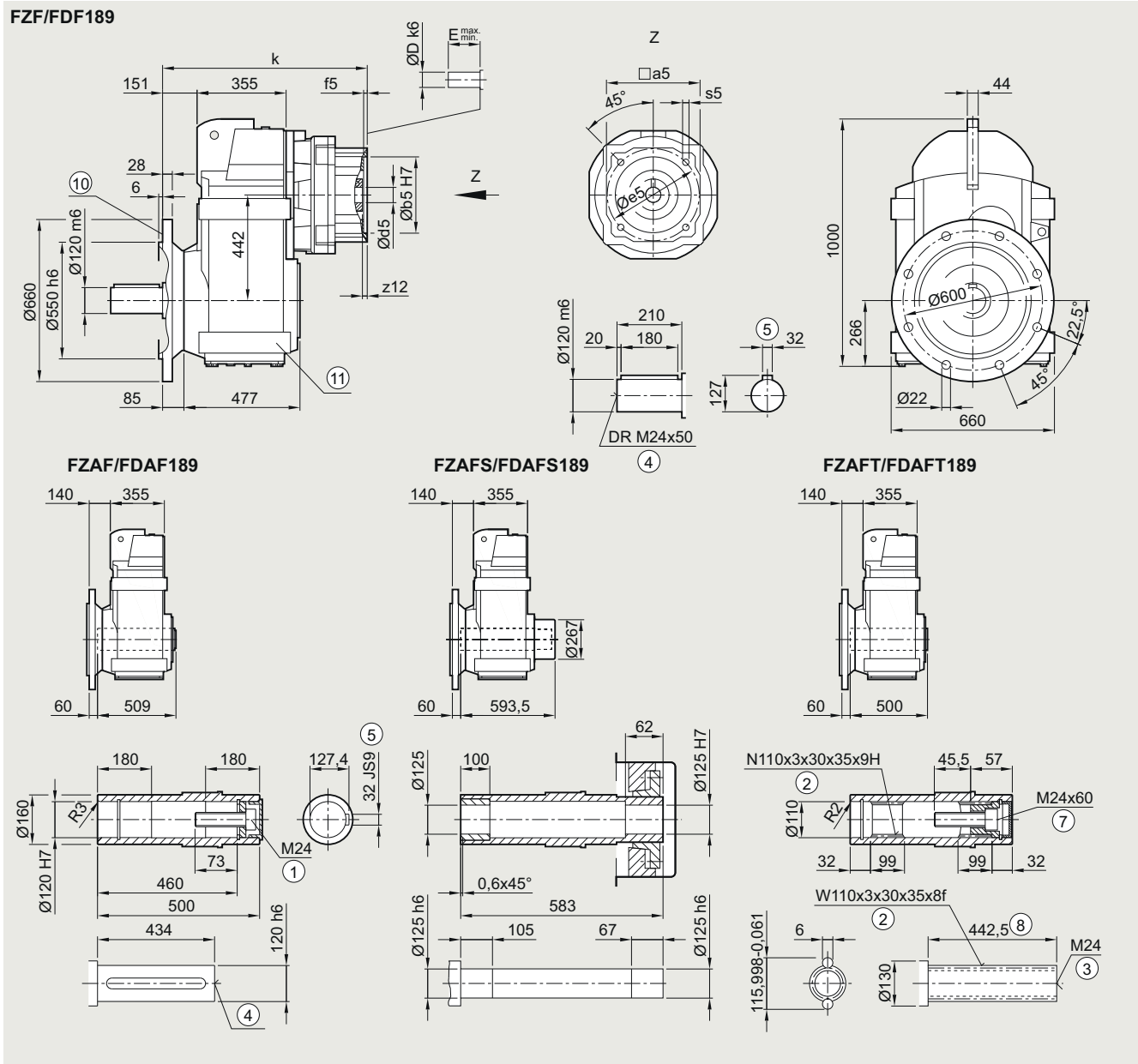
⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ Use bores only for foot-mounted design

## FD.F/FZ.F.189 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	589.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	618
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	618

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 4/169

⑪ Use bores only for foot-mounted design

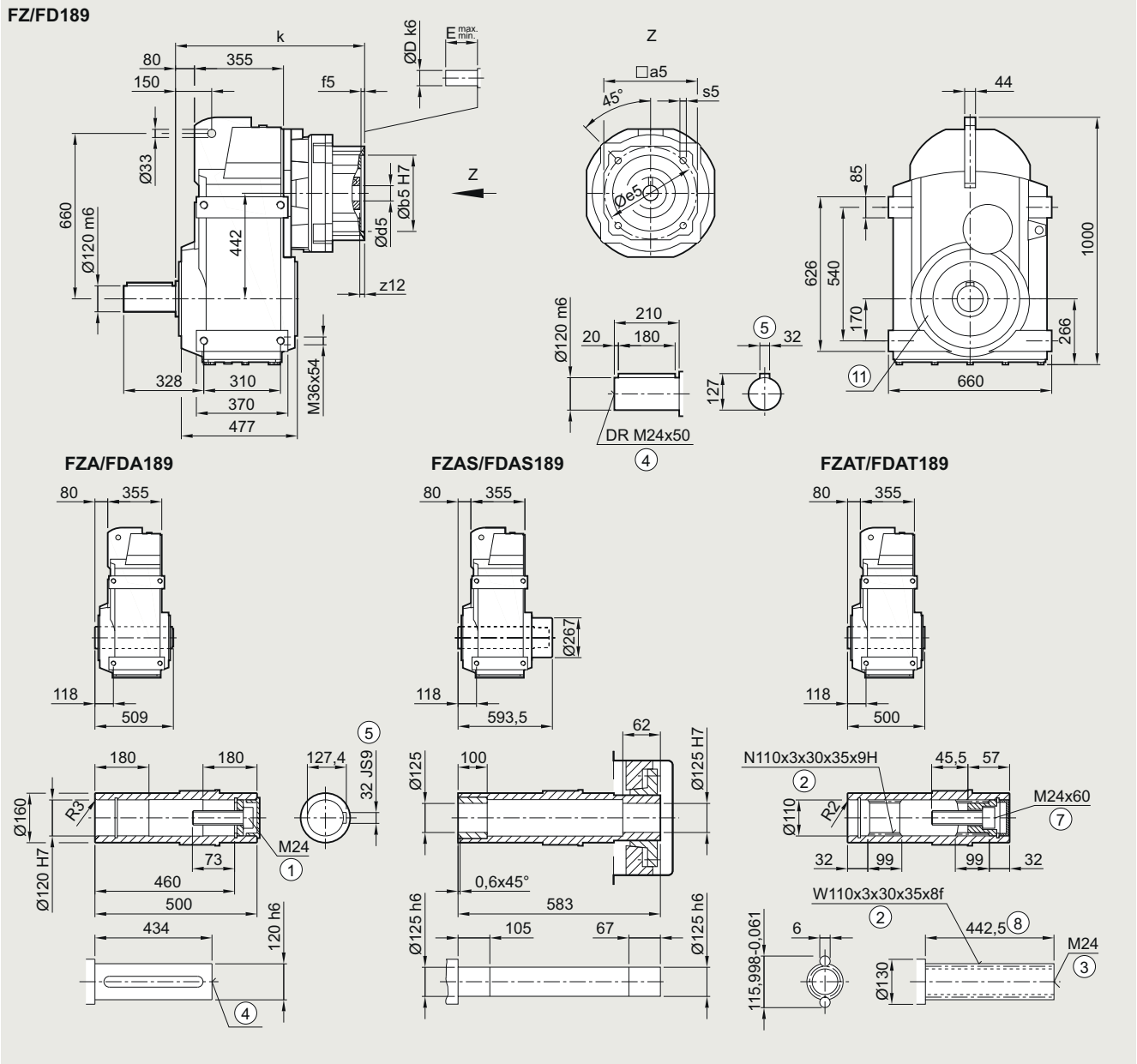
## SIMOGEAR gearboxes

Parallel shaft gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### FD../FZ..189 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	518.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	547
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	547

① ISO 4014

② DIN 5480

③ DIN 332-D

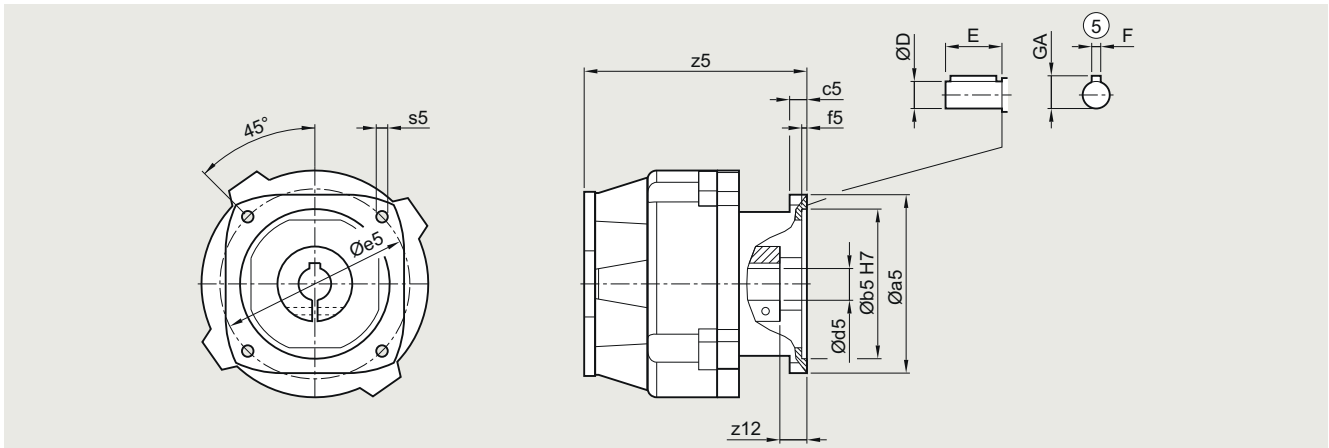
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ Use bores only for housing flange design

**FD.../FZ...89 to FD.../FZ...189 gearboxes****F.AD.030K8, F.Z.030K8, F.F.030K8, F..030K8**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...89</b>												
813	260	250	25	6.0	300	M16	60.0	48	110	14	51.5	317.5
<b>FZ.../FD...109</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	308.5
816	314.0	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	365.0
<b>FZ.../FD...129</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	297.5
816	314.0	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	354.0
<b>FZ.../FD...149</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	291.0
816	314.0	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	347.5
818	550	350	22.0	12.0	400	M16	73	65	140	18	69	336.5
<b>FZ.../FD...169</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	278.0
816	314.0	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	333.0
818	550	350	22.0	12.0	400	M16	73	65	140	18	69	319.5
<b>FZ.../FD...189</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	278.0
816	314.0	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	333.0
818	550	350	22.0	12.0	400	M16	73	65	140	18	69	319.5

© Feather key/keyway DIN 6885



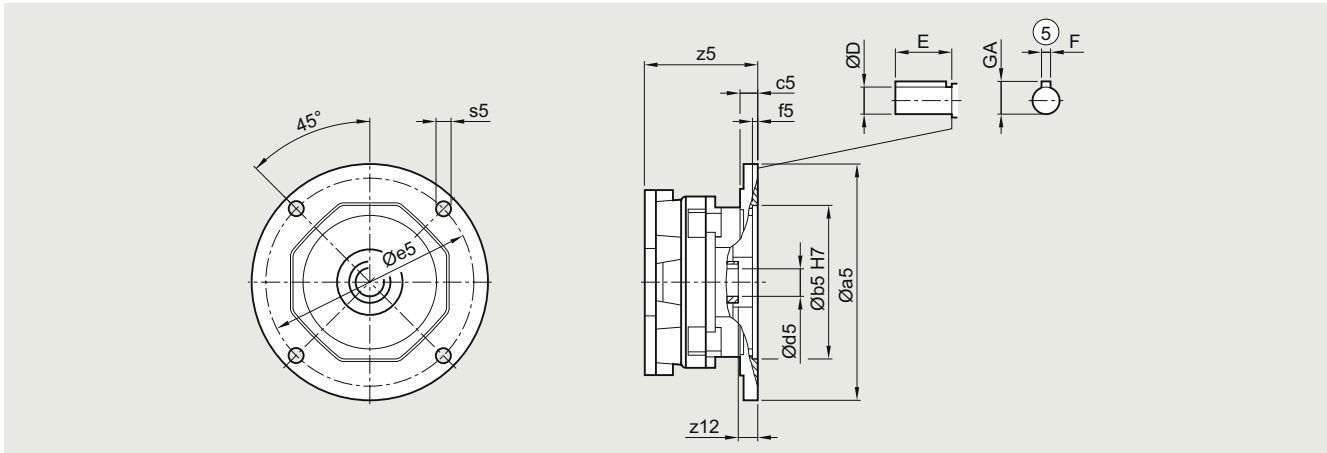
## SIMOGEAR gearboxes

Parallel shaft gearbox with adapter K5 for mounting a NEMA motor

### Dimensional drawings

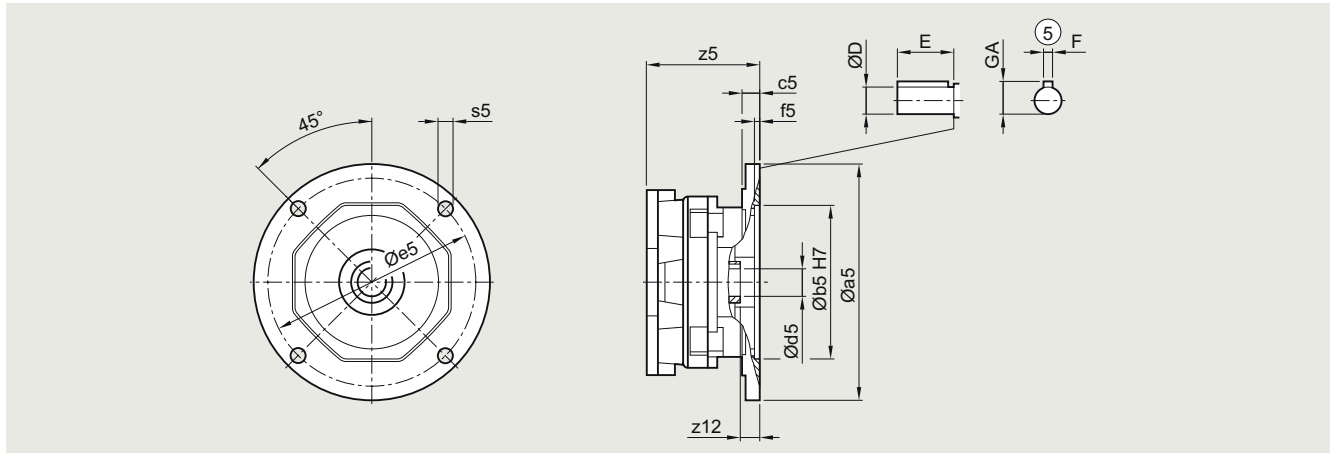
#### FD.../FZ...29 to FD.../FZ...89 gearboxes

*F.AD.030K5, F.Z.030K5, F.F.030K5, F..030K5*



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...29</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
<b>FD.../FZ...39</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
<b>FZ.../FD...49</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	207.0
<b>FZ.../FD...69</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	207.0
<b>FZ.../FD...79</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	103.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	103.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	185.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	201.0
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	201.0
<b>FZ.../FD...89</b>												
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	90.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	168.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	184.0
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	184.0

Ⓢ Feather key/keyway DIN 6885

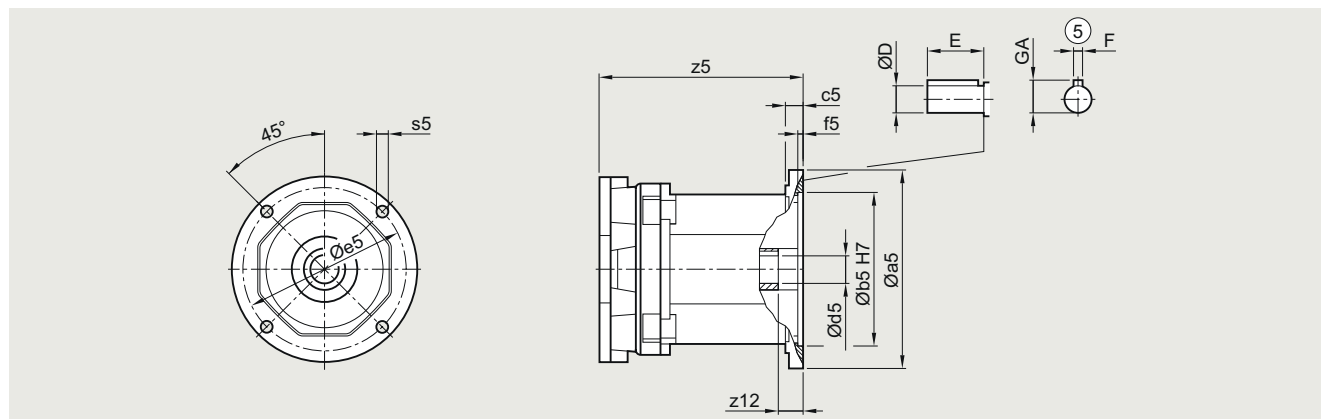
**FD.../FZ...109 to FD.../FZ...189 gearboxes****F.AD.030K5, F.Z.030K5, F.F.030K5, F..030K5**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...109</b>												
140	168	114.3	15.0	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	83.0
180	226	215.9	22.0	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	159.0
210	226	215.9	22.0	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	175.0
250	226	215.9	22.0	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	175.0
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.70	53.111	188.0
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.350	12.70	59.563	264.5
<b>FZ.../FD...129</b>												
140	168	114.3	15.0	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	76.0
180	226	215.9	22.0	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	150.0
210	226	215.9	22.0	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	164.0
250	226	215.9	22.0	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	164.0
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.70	53.111	177.0
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.350	12.70	59.563	253.5
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	278.0
<b>FZ.../FD...149</b>												
180	226	215.9	22.0	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	148.5
210	226	215.9	22.0	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	157.5
250	226	215.9	22.0	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	157.5
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.70	53.111	170.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.350	12.70	59.563	247.0
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	271.5
<b>FZ.../FD...169</b>												
210	226	215.9	22.0	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	144.5
250	226	215.9	22.0	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	144.5
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.70	53.111	157.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.350	12.70	59.563	232.0
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	253.0
<b>FZ.../FD...189</b>												
210	226	215.9	22.0	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	144.5
250	226	215.9	22.0	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	144.5
280	285	266.7	24.5	5.5	228.6	13.5	22.0	47.625	117.602	12.70	53.111	157.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.350	12.70	59.563	232.0
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	253.0

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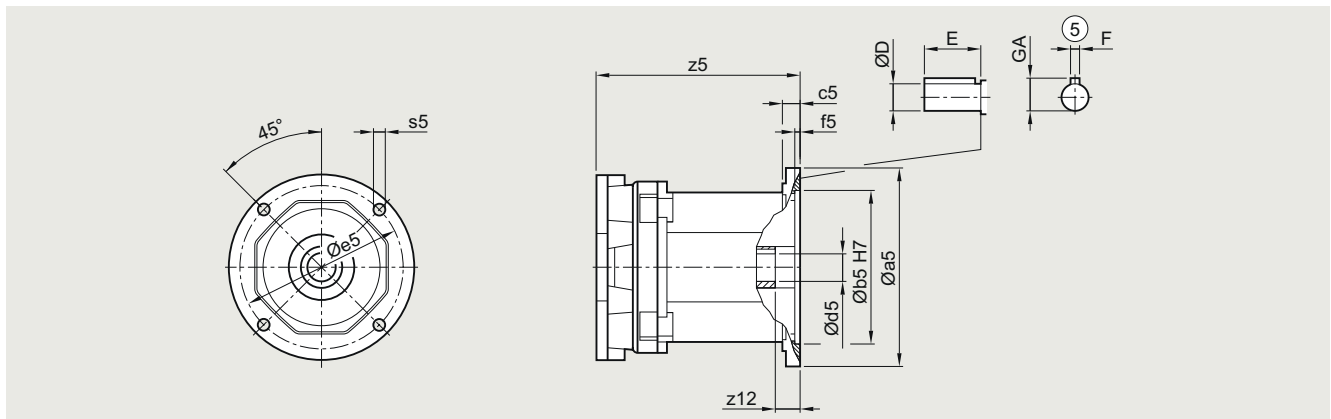
**SIMOGEAR gearboxes**

Parallel shaft gearbox with adapter K3 for mounting a NEMA motor

**Dimensional drawings****FD.../FZ...29 to FD.../FZ...89 gearboxes****F.AD.030K3, F.Z.030K3, F.F.030K3, F..030K3**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...29</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>FZ.../FD...39</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>FZ.../FD...49</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>FZ.../FD...69</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>FZ.../FD...79</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	185.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	185.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	241.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	312.0
250	236	215.9	22	5.5	184.1	13.5	50.0	41.275	101.600	9.525	45.491	342.0
<b>FZ.../FD...89</b>												
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	172.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	224.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	295.0
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	325.0

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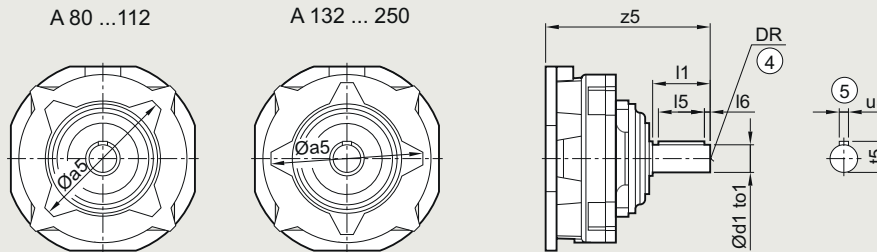
**FD.../FZ...109 to FD.../FZ...189 gearboxes****F.AD.030K3, F.Z.030K3, F.F.030K3, F..030K3**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>FZ.../FD...109</b>												
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	172.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	224.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	295.0
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	325.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	334.0
<b>FZ.../FD...129</b>												
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	158.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	206.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	275.0
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	302.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	323.0
<b>FZ.../FD...149</b>												
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	205.0
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	268.5
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	298.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	316.5
<b>FZ.../FD...169</b>												
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	255.5
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	285.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	303.5
<b>FZ.../FD...189</b>												
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	255.5
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	285.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	303.5

© Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

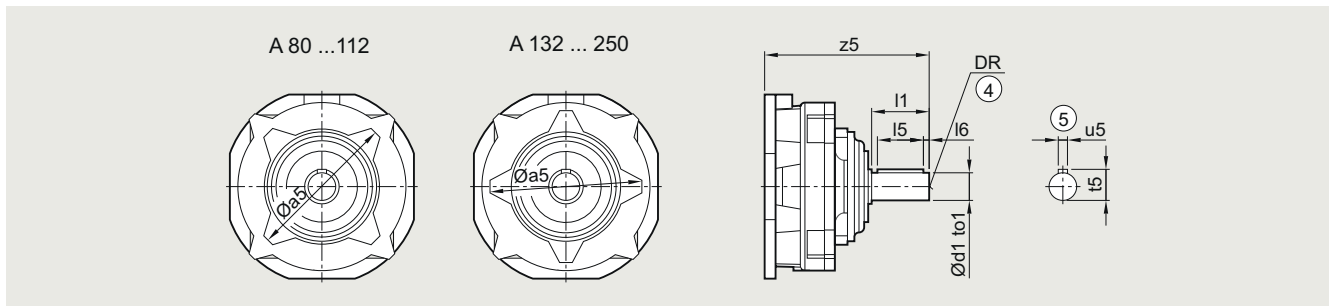
Parallel shaft gearbox with adapter A with free output shaft

**Dimensional drawings****FD.../FZ...29 to FD.../FZ...89 gearboxes****F.AD.030A, F.Z.030A, F.F.030A, F.030A**

Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
<b>FZ.../FD...29</b>										
80	132	19	k6	40	32	4	6	21.5	M6	143.5
90	132	24	k6	50	40	5	8	27	M8	153.5
<b>FZ.../FD...39</b>										
80	132	19	k6	40	32	4	6	21.5	M6	143.5
90	132	24	k6	50	40	5	8	27	M8	153.5
<b>FZ.../FD...49</b>										
80	132	19	k6	40	32	4	6	21.5	M6	134
90	132	24	k6	50	40	5	8	27	M8	144
100	170	28	k6	60	50	5	8	31	M10	211
112	170	28	k6	60	50	5	8	31	M10	211
<b>FZ.../FD...69</b>										
80	132	19	k6	40	32	4	6	21.5	M6	134
90	132	24	k6	50	40	5	8	27	M8	144
100	170	28	k6	60	50	5	8	31	M10	211
112	170	28	k6	60	50	5	8	31	M10	211
<b>FZ.../FD...79</b>										
80	132	19	k6	40	32	4	6	21.5	M6	128
90	132	24	k6	50	40	5	8	27	M8	138
100	170	28	k6	60	50	5	8	31	M10	205
112	170	28	k6	60	50	5	8	31	M10	205
132	215	38	k6	80	70	5	10	41	M12	255
<b>FZ.../FD...89</b>										
80	132	19	k6	40	32	4	6	21.5	M6	115
90	132	24	k6	50	40	5	8	27	M8	125
100	170	28	k6	60	50	5	8	31	M10	188
112	170	28	k6	60	50	5	8	31	M10	188
132	215	38	k6	80	70	5	10	41	M12	238
160	215.3	42	k6	110	90	10	12	45	M16	290

⑤ Feather key/keyway DIN 6885

④ DIN 332

**FD.../FZ...109 to FD.../FZ...189 gearboxes****F.AD.030A, F.Z.030A, F.F.030A, F.030A**

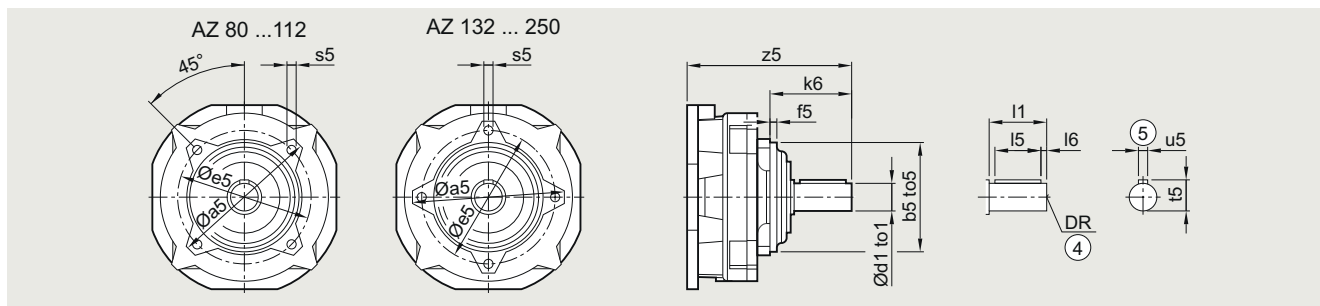
Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
<b>FZ.../FD...109</b>										
112	170	28	k6	60	50	5	8	31	M10	179
132	215	38	k6	80	70	5	10	41	M12	229
160	215.3	42	k6	110	90	10	12	45	M16	281
180	215.3	48	m6	110	90	10	14	51.5	M16	281
200	266	55	m6	110	90	10	16	59	M20	317.5
<b>FZ.../FD...129</b>										
112	170	28	k6	60	50	5	8	31	M10	170
132	215	38	k6	80	70	5	10	41	M12	218
160	215.3	42	k6	110	90	10	12	45	M16	270
180	215.3	48	m6	110	90	10	14	51.5	M16	270
200	266	55	m6	110	90	10	16	59	M20	306.5
225	266	55	m6	110	90	10	16	59	M20	306.5
<b>FZ.../FD...149</b>										
132	215	38	k6	80	70	5	10	41	M12	211.5
160	215.3	42	k6	110	90	10	12	45	M16	263.5
180	215.3	48	m6	110	90	10	14	51.5	M16	263.5
200	266	55	m6	110	90	10	16	59	M20	300
225	266	55	m6	110	90	10	16	59	M20	300
250	266	55	m6	110	90	10	16	59	M20	300
<b>FZ.../FD...169</b>										
160	215.3	42	k6	110	90	10	12	45	M16	250.5
180	215.3	48	m6	110	90	10	14	51.5	M16	250.5
200	266	55	m6	110	90	10	16	59	M20	286.5
225	266	55	m6	110	90	10	16	59	M20	286.5
250	266	55	m6	110	90	10	16	59	M20	286.5
<b>FZ.../FD...189</b>										
160	215.3	42	k6	110	90	10	12	45	M16	250.5
180	215.3	48	m6	110	90	10	14	51.5	M16	250.5
200	266	55	m6	110	90	10	16	59	M20	286.5
225	266	55	m6	110	90	10	16	59	M20	286.5
250	266	55	m6	110	90	10	16	59	M20	286.5

⑤ Feather key/keyway DIN 6885

④ DIN 332

**SIMOGEAR gearboxes**

Parallel shaft gearbox with adapter AZ with free output shaft and centering

**Dimensional drawings****FD.../FZ...29 to FD.../FZ...89 gearboxes****F.AD.030AZ, F.Z.030AZ, F.F.030AZ, F..030AZ**

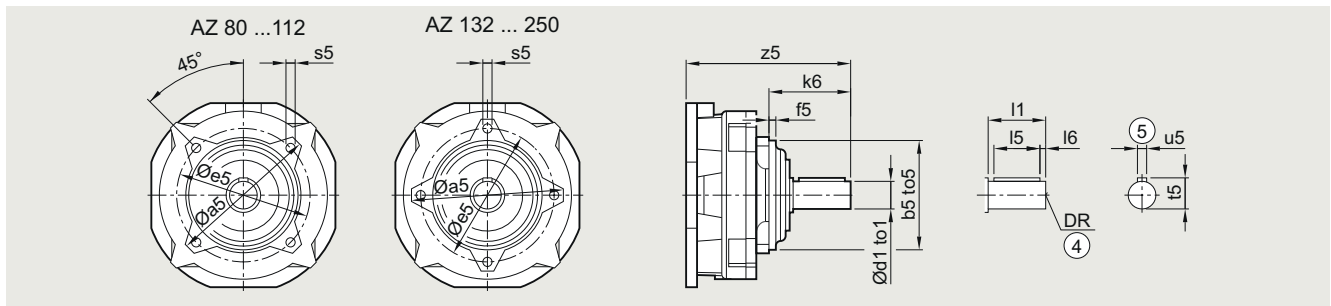
Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>FZ.../FD...29</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
<b>FZ.../FD...39</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
<b>FZ.../FD...49</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
<b>FZ.../FD...69</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
<b>FZ.../FD...79</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	128
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	138
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	205
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	205
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	255
<b>FZ.../FD...89</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	115
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	125
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	188
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	188
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	238
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	290

⑤ Feather key/keyway DIN 6885

④ DIN 332

## FD.../FZ...109 to FD.../FZ...189 gearboxes

## F.AD.030AZ, F.Z.030AZ, F.F.030AZ, F..030AZ



Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>FZ.../FD...109</b>																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	179
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	229
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	281
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	281
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	317.5
<b>FZ.../FD...129</b>																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	170
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	218
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	270
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	270
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
<b>FZ.../FD...149</b>																
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	211.5
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	263.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	263.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
<b>FZ.../FD...169</b>																
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	250.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	250.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
<b>FZ.../FD...189</b>																
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	250.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	250.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5

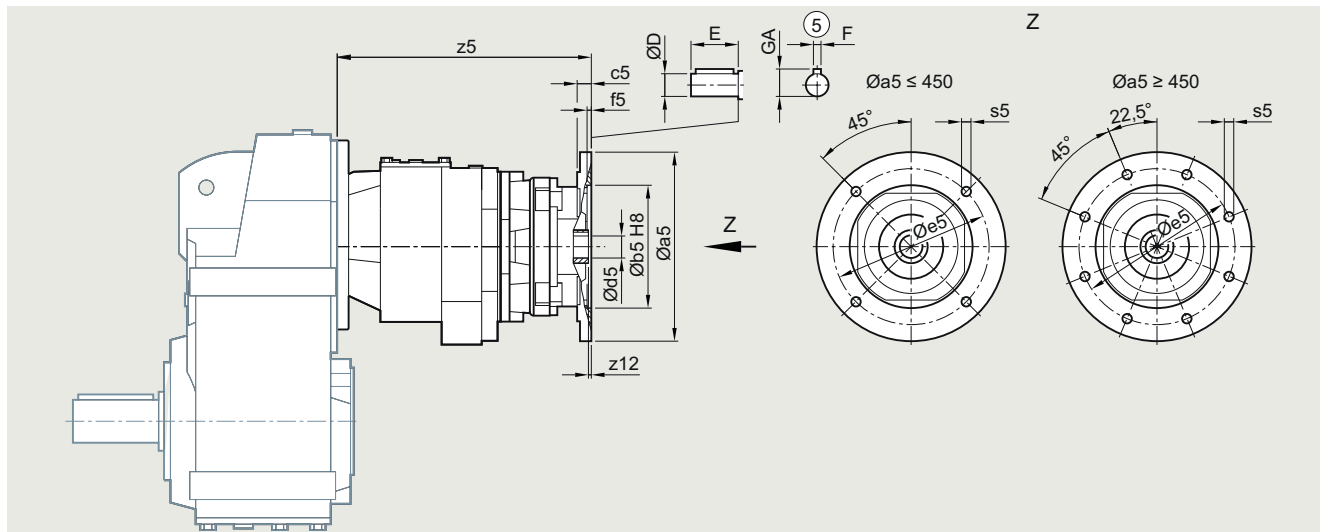
⑤ Feather key/keyway DIN 6885

④ DIN 332



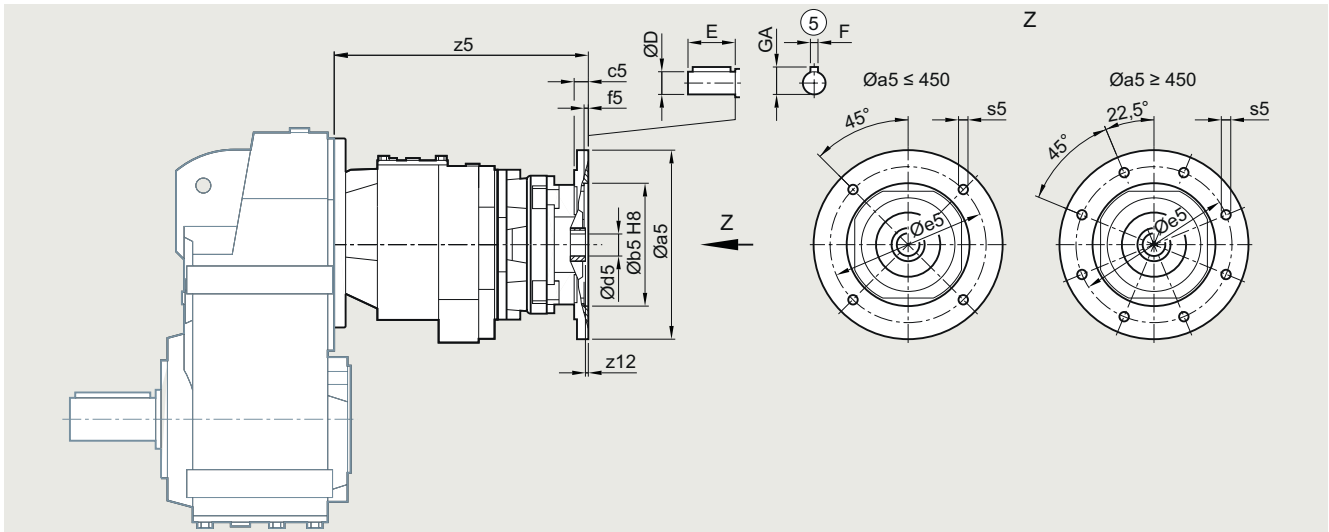
**SIMOGEAR gearboxes**

Parallel shaft tandem gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****Parallel shaft tandem gearbox with adapter K4**

Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FZ../FD../79-Z/D39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	257
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	285
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	285
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	339.5
FZ../FD../89-Z/D39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	240
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	240
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	268
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	268
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	322.5
FD../109-Z/D39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	231
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	231
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	259
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	259
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	313.5
FD../129-Z/D49	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	260
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	260
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	288
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	288
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	342.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	342.5
FD../149-Z/D49	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	360
	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	249.5
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	249.5
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	277.5
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	277.5
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	332
FD../149-Z/D49	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	332
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	349.5

⑤ Feather key/keyway DIN 6885

**Parallel shaft tandem gearbox with adapter K4**

Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD..169-Z/D69	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	275
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	303
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	303
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
FD..189-Z/D69	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	375
	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	275
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	303
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	303
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	375	

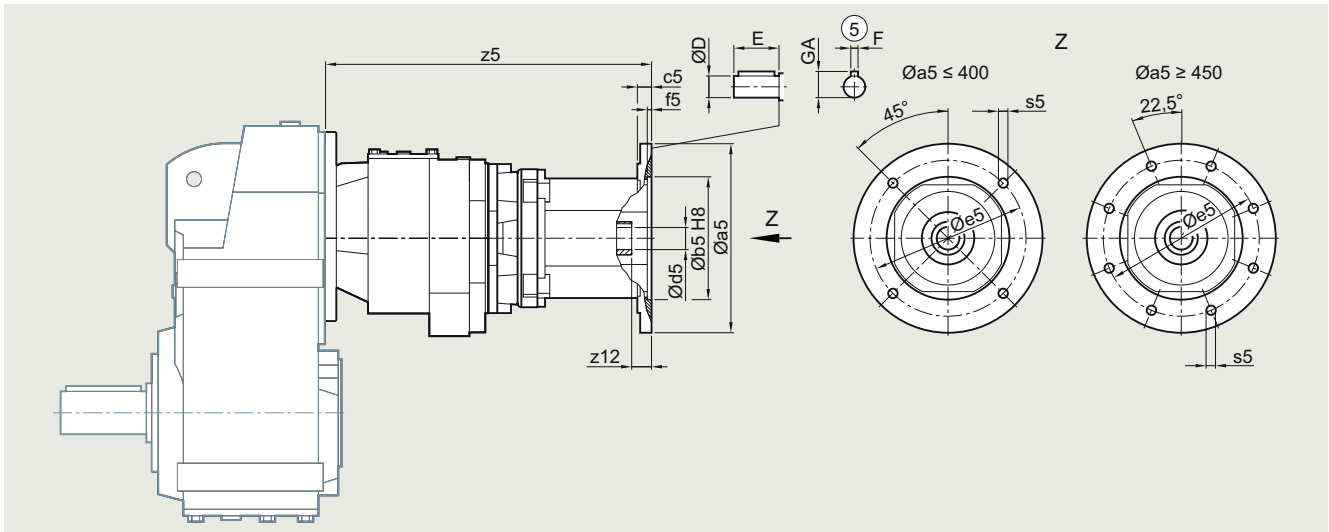
⑤ Feather key/keyway DIN 6885

## SIMOGEAR gearboxes

Parallel shaft tandem gearbox with adapter K2 for mounting an IEC motor

### Dimensional drawings

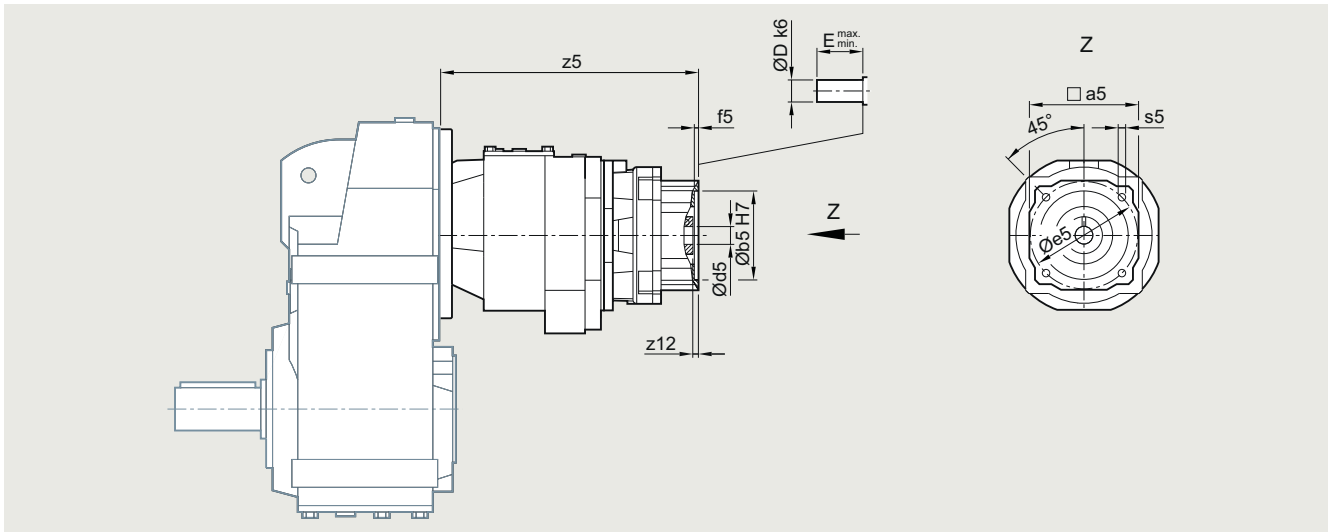
#### Parallel shaft tandem gearbox with adapter K2



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FZ../FD../79-Z/D39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	377.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	377.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	424.5
FZ../FD../89-Z/D39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	360.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	360.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	407.5
FD../109-Z/D39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	351.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	351.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	398.5
FD../129-Z/D49	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	380.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	380.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	427.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	427.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	505.5
FD../149-Z/D49	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	370.0
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	370.0
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	417.0
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	417.0
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	495.0
FD../169-Z/D69	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	395.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	395.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	520.5
FD../189-Z/D69	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	395.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	395.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	520.5

⑤ Feather key/keyway DIN 6885

## Parallel shaft tandem gearbox with KS adapter



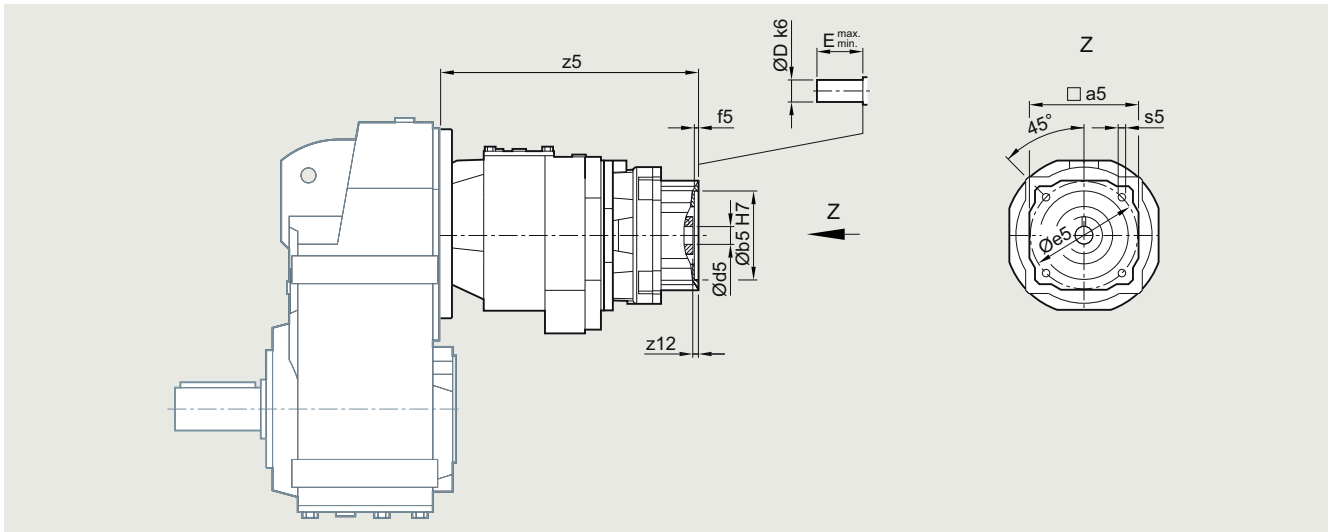
Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
FZ../FD../29-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
FZ../FD../39-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
FZ../FD../49-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
FZ../FD../69-Z/D19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
FZ../FD../79-Z/D39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	261.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	261.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315
	KS6.2	130	110	7	145	M8x15	8	22	40	58	315
FZ../FD../89-Z/D39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	244.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	244.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	257
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	257
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	273
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	273
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	298
	KS6.2	130	110	7	145	M8x15	8	22	40	58	298
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	310.5	

## SIMOGEAR gearboxes

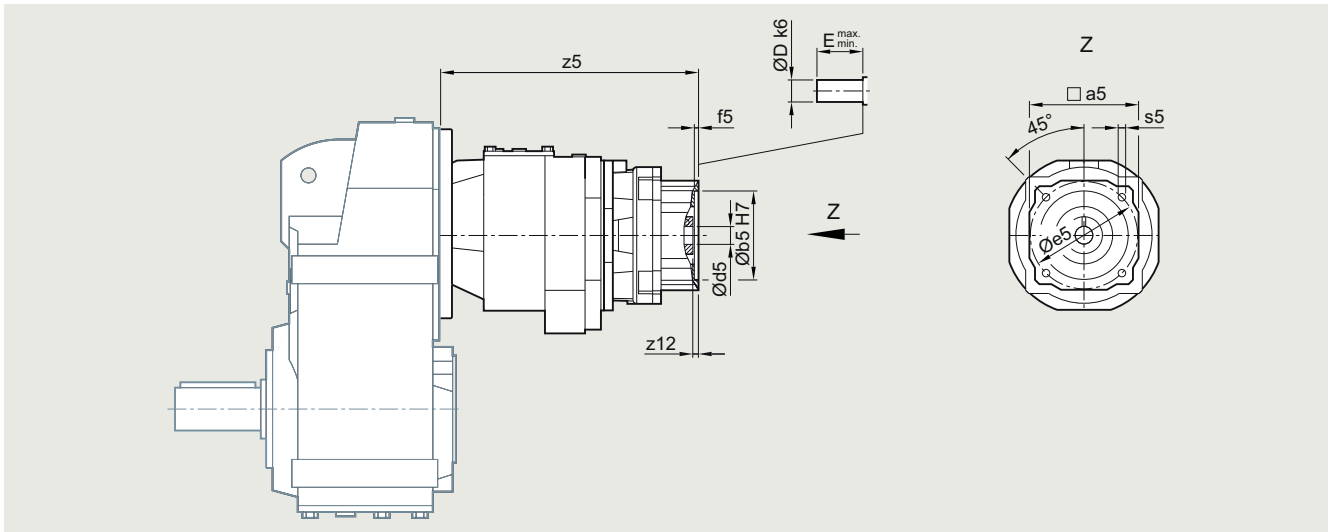
Parallel shaft tandem gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

#### Parallel shaft tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
FD..109-Z/D39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	235.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	235.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	248
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	248
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	264
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	264
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	289
	KS6.2	130	110	7	145	M8x15	8	22	40	58	289
FD..129-Z/D49	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	301.5
	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	264.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	264.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	277
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	277
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	293
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	293
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	318
	KS6.2	130	110	7	145	M8x15	8	22	40	58	318
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	330.5
FD..149-Z/D49	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	366.5
	KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	366.5
FD..149-Z/D49	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	254
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	254
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	266.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	266.5
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282.5
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282.5
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	307.5
	KS6.2	130	110	7	145	M8x15	8	22	40	58	307.5
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	320
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	356
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	356	

**Parallel shaft tandem gearbox with KS adapter**

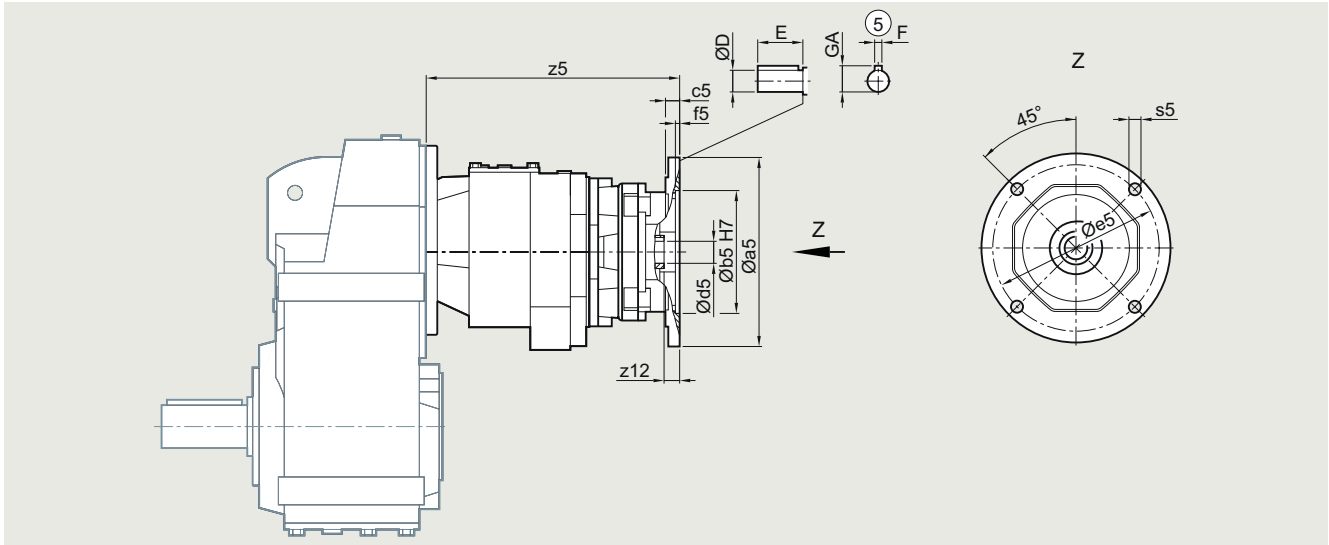
Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
FD.169-Z/D69	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	279.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	279.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	292
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	292
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	333
	KS6.2	130	110	7	145	M8x15	8	22	40	58	333
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	345.5
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	381.5
FD..189-Z/D69	KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	381.5
	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	279.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	279.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	292
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	292
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	333
	KS6.2	130	110	7	145	M8x15	8	22	40	58	333
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	345.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	381.5	
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	381.5	

## SIMOGEAR gearboxes

Parallel shaft tandem gearbox with adapter K5 for mounting NEMA motors

### Dimensional drawings

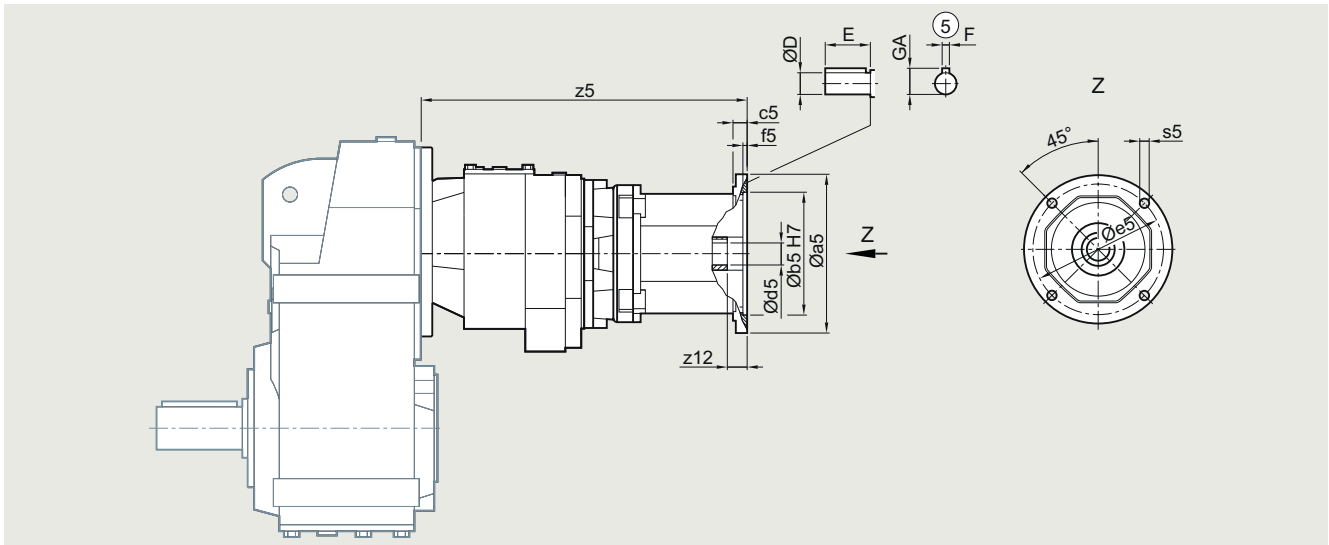
#### Parallel shaft tandem gearbox with adapter K5



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FZ../FD../79-Z/D39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	298
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	298
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.85	6.35	31.394	380
FZ../FD../89-Z/D39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	281
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	281
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.85	6.35	31.394	363
FD../109-Z/D39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	272
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	272
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.85	6.35	31.394	354
FD../129-Z/D49	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	301
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	301
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.85	6.35	31.394	383
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.85	7.938	38.443	399
FD../149-Z/D49	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	290.5
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	290.5
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.85	6.35	31.394	372.5
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.85	7.938	38.443	388.5
FD../169-Z/D69	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	316
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	316
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.85	6.35	31.394	398
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.85	7.938	38.443	414
FD../189-Z/D69	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	316
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	316
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.85	6.35	31.394	398
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.85	7.938	38.443	414

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## Parallel shaft tandem gearbox with adapter K3



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FZ../FD../79-Z/D39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	380.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	380.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	436.5
FZ../FD../89-Z/D39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	363.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	363.5
FD../109-Z/D39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	354.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	354.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	410.5
FD../129-Z/D49	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	383.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	383.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	439.5
FD../149-Z/D49	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.85	7.938	38.443	510
	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	373
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	373
FD../169-Z/D69	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	429
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.85	7.938	38.443	499.5
	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	398.5
FD../189-Z/D69	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	398.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	454.5
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.85	7.938	38.443	525

⑤ Feather key/keyway DIN 6885

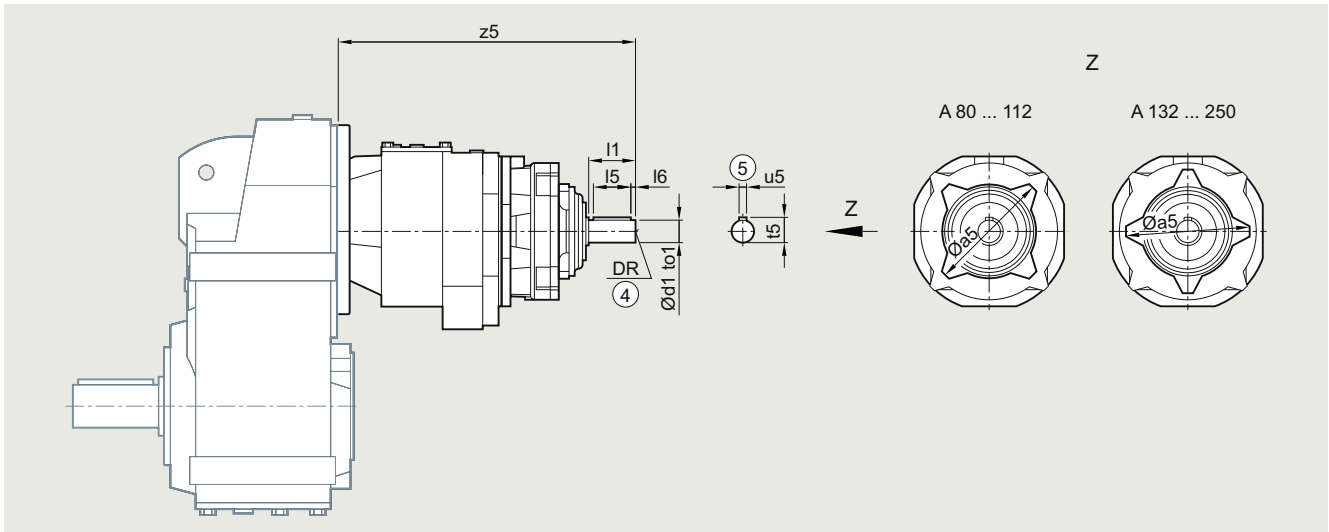


## SIMOGEAR gearboxes

Parallel shaft tandem gearbox with adapter A with free output shaft

### Dimensional drawings

#### Parallel shaft tandem gearbox with adapter A

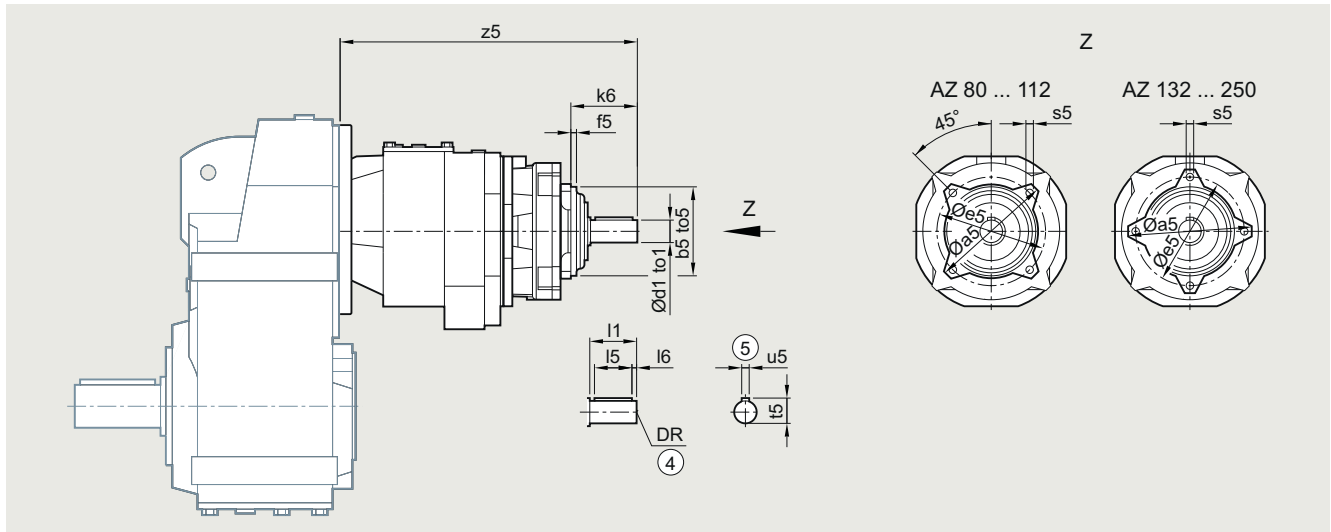


Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
FZ../FD../79-Z/D39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	323
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	333
FZ../FD../89-Z/D39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	306
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	316
FD../109-Z/D39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	297
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	307
FD../129-Z/D49	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	326
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	336
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	403
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	403
FD../149-Z/D49	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	315.5
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	325.5
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	392.5
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	392.5
FD../169-Z/D69	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	341
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	351
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	418
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	418
FD../189-Z/D69	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	341
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	351
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	418
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	418

⑤ Feather key/keyway DIN 6885

④ DIN 332

## Parallel shaft tandem gearbox with adapter AZ



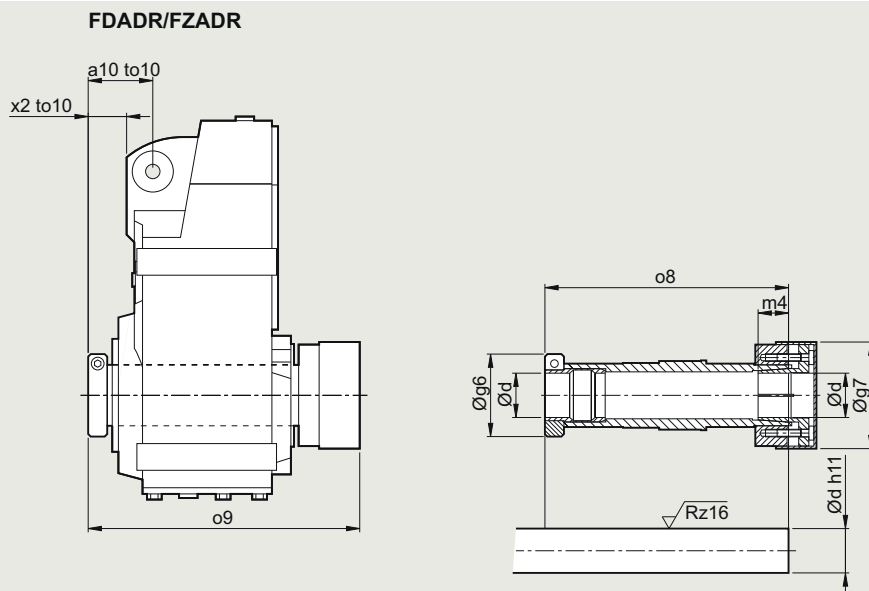
Gearbox	Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
FZ../FD../79-Z/D39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	323
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	333
FZ../FD../89-Z/D39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	306
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	316
FD../109-Z/D39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	297
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	307
FD../129-Z/D49	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	326
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	336
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	403
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	403
FD../149-Z/D49	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	315.5
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	325.5
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	392.5
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	392.5
FD../169-Z/D69	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	341
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	351
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418
FD../189-Z/D69	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	341
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	351
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418

⑤ Feather key/keyway DIN 6885

④ DIN 332

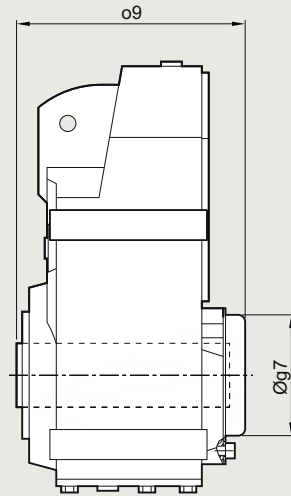
**SIMOGEAR gearboxes**

Parallel shaft gearboxes

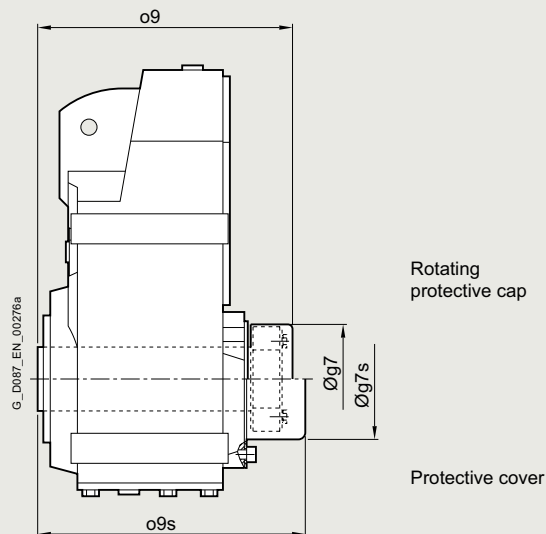
**Dimensional drawings****SIMOLOC assembly system**

Note mounting tolerance to10 when positioning the torque arm.

d	g6	g7	m4	o8	o9	a10	to10	x2
<b>FDADR/FZADR29</b>								
25	58.5	56	18.5	140.5	161	40.0	+2.1	23.5
20							+0.6	
1"								
0.75"								
<b>FDADR/FZADR39</b>								
30	62.0	76	22	160.5	181	46.5	+2.2	29.5
25							+0.7	
1.25"								
1.1875"								
1"								
<b>FDADR/FZADR49</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>FDADR/FZADR.69</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>FDADR/FZADR79</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>FDADR/FZADR89</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"								

**Protective covers**
**Protective cover for hollow shaft**
**F.A, F.AF, F.AZ, F.AD**


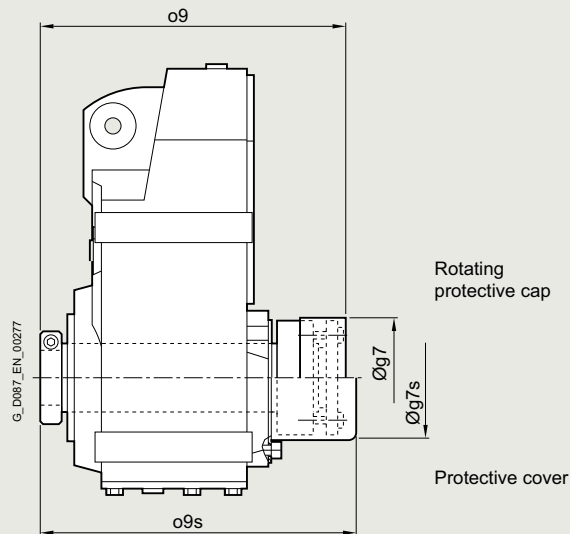
Gearbox type	F.A..29	F.A..39	F.A..49	F.A..69	F.A..79	F.A..89	F.A..109	F.A..129	F.A..149	F.A..169	F.A..189
<b>Protective cover</b>											
g7	67.0	82.5	80.0	99.0	99.0	137.0	187.0	187.0	218.0	257.5	309.5
o9	120.5	134.0	177.0	179.0	192.5	232.5	281.5	348.0	425.0	520.0	623.5

**Protective cover for hollow shaft with shrink disk**
**F.A.S, F.AFS, F.AZS, F.ADS**


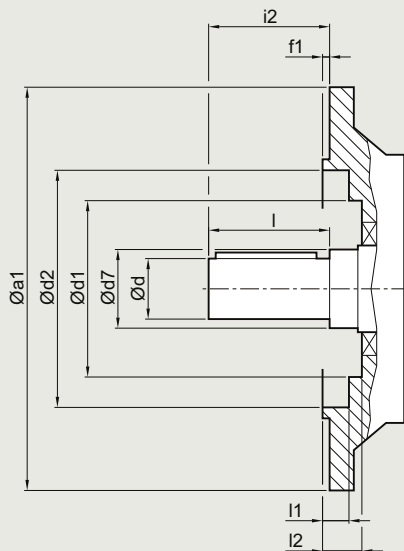
Gearbox type	F.A..29	F.A..39	F.A..49	F.A..69	F.A..79	F.A..89	F.A..109	F.A..129	F.A..149	F.A..169	F.A..189
<b>Rotating protective cap with shrink disk version</b>											
max. motor size that can be mounted	80	90	100	100	132	160	200	225	250	250	250
g7	57.0	76.0	84.0	84.0	94.0	119.0	145.0	159.0	201.0	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 size that can be mounted	71	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

**SIMOGEAR gearboxes**

Parallel shaft gearboxes

**Dimensional drawings****Protective covers****Protective cover for hollow shaft with SIMOLOC assembly system****F.ADR**

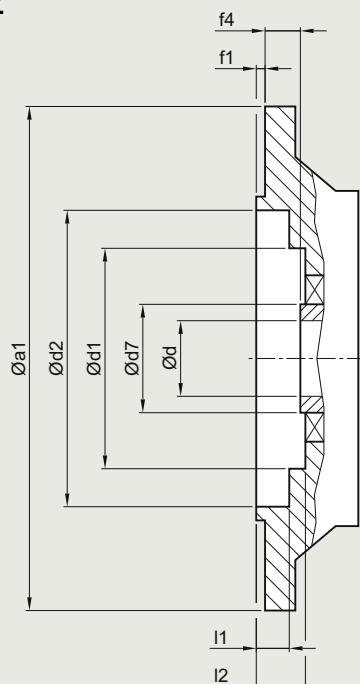
Gearbox type	F.ADR29	F.ADR39	F.ADR49	F.ADR69	F.ADR79	F.ADR89
<b>Rotating protective cap</b>						
max. motor size that can be mounted	80	90	100	100	132	160
g7	56.0	76.0	84.0	94.0	94.0	114.0
o9	161.0	181.0	214.0	240.0	259.0	295.0
<b>Protective cover</b>						
max. motor size that can be mounted	71	80	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

**Inner contour of the flange design**
*Notes regarding the design of the customer's interface for the solid shaft design*
**DFD/FZF**


Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
DFD/FZF29	120	25	40	-	70	3.0	40	40	24.0	-
	160	25	40	70	101	3.5	40	40	8.5	24.5
DFD/FZF39	160	25	30	-	100	3.5	50	50	5.0	-
DFD/FZF49	200	30	35	-	118	3.5	60	60	5.5	-
DFD/FZF69	250	35	45	-	165	4.0	70	70	6.5	-
DFD/FZF79	250	40	55	-	165	4.0	80	80	6.5	-
DFD/FZF89	300	50	55	-	165	4.0	100	100	8.0	-
DFD/FZF109	350	60	65	-	235	5.0	120	120	9.0	-
DFD/FZF129	450	70	75	-	336	5.0	140	140	9.0	-
DFD/FZF149	450	90	100	-	336	5.0	170	170	10.0	-
DFD/FZF169	550	110	120	-	427	5.0	210	210	10.0	-
DFD/FZF189	660	120	160	-	517	6.0	210	210	11.0	-

**With VLplus reinforced bearing system (G30)**

DFD/FZF89	300	60	70	143	218	4.0	120	120	1.5	8
DFD/FZF109	350	70	85	190	234	5.0	140	140	2.0	4
DFD/FZF129	450	90	95	-	336	5.0	170	170	16.5	-
DFD/FZF149	450	100	120	225	336	5.0	210	210	10.5	11
DFD/FZF169	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	30	45	80	102	3.5	24.0	2.0	29.5
FDAF/FZAF.49	200	35	50	90	120	3.5	25.0	4.0	30.5
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
FDAF/FZAF.129	450	70	95	184	336	5.0	41.5	16.5	48.5
FDAF/FZAF.149	450	90	120	214	330	5.0	41.0	10.5	50.0
FDAF/FZAF.169	550	100	140	254	426	5.0	56.0	14.5	56.0
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	-

## SIMOGEAR gearboxes

### Notes

4

## Bevel gearboxes



<b>5/2</b>	<b>Orientation</b>
<b>5/3</b>	<b>Transmission ratios and torques</b>
5/3	Selection and ordering data
<b>5/18</b>	<b>Transmission ratios and torques for very low speeds</b>
5/18	Selection and ordering data
<b>5/31</b>	<b>Dimensional drawings</b>
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5/43	Bevel gearbox B.49
5/47	Bevel gearbox K.39
5/51	Bevel gearbox K.49
5/55	Bevel gearbox K.69
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5/63	Bevel gearbox K.89
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5/73	Bevel gearbox K.129
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	<u>Bevel gearbox with adapter K5</u>
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	<u>Bevel gearbox with adapter A</u>
5/161	B..29 to B..49 and K..39 to K..189
	<u>Bevel gearbox with adapter AZ</u>
5/163	B..29 to B..49 and K..39 to K..189

<b>5/31</b>	<b>Dimensional drawings (continued)</b>
5/165	Bevel tandem gearbox with adapter K4
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5/167	Bevel tandem gearbox with KS adapter
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5/173	SIMOLOC assembly system
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5/177	Inner contour of the flange design



## SIMOGEAR gearboxes

### Bevel gearboxes

#### Orientation

##### SIMOGEAR bevel gearbox B



Fig. 5/1 Bevel gearbox 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 gearbox K

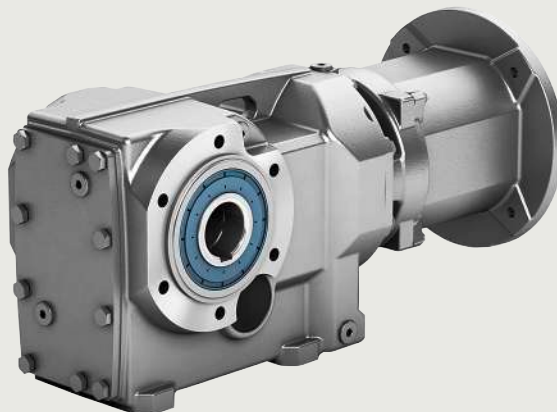


Fig. 5/2 Bevel gearbox K

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	5.7 ... 237	200

SIMOGEAR bevel gearboxes are available in the following versions:

#### Transmission stages

- 2-stage or 3-stage bevel gearboxes
- 5-stage or 6-stage bevel gearboxes 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 with feather key
- Hollow shaft with splined shaft
- Hollow shaft with shrink disk
- Hollow shaft with SIMOLOC assembly system
- Solid shaft 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

Gearbox							Adapter					Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$	-		3.2	5.2	6.2		10.2	
					$\text{kgm}^2$			4.1					
								4.2					
<b>B.19</b>													
<b>42.10</b>	34	50	3880	13.0	0.02	3410/81	✓						2KJ3500 - ■ A0 ■ - 0 ■ A2
<b>37.28</b>	39	50	3700	13.5	0.03	671/18	✓						2KJ3500 - ■ A0 ■ - 0 ■ X1
<b>32.39</b>	45	50	3510	13.6	0.04	583/18	✓						2KJ3500 - ■ A0 ■ - 0 ■ W1
<b>29.44</b>	49	50	3380	13.6	0.04	265/9	✓						2KJ3500 - ■ A0 ■ - 0 ■ V1
<b>25.06</b>	58	50	3170	13.7	0.06	451/18	✓						2KJ3500 - ■ A0 ■ - 0 ■ U1
<b>22.78</b>	64	50	3050	13.7	0.08	205/9	✓						2KJ3500 - ■ A0 ■ - 0 ■ T1
<b>19.86</b>	73	50	2890	13.9	0.09	715/36	✓						2KJ3500 - ■ A0 ■ - 0 ■ S1
<b>17.78</b>	82	50	2770	14.0	0.12	160/9	✓						2KJ3500 - ■ A0 ■ - 0 ■ R1
<b>15.79</b>	92	50	2640	14.1	0.14	1705/108	✓						2KJ3500 - ■ A0 ■ - 0 ■ Q1
<b>14.57</b>	100	50	2550	14.1	0.17	1705/117	✓						2KJ3500 - ■ A0 ■ - 0 ■ P1
<b>12.66</b>	115	50	2410	14.4	0.19	1595/126	✓						2KJ3500 - ■ A0 ■ - 0 ■ N1
<b>11.00</b>	132	50	2270	14.1	0.19	11/1	✓						2KJ3500 - ■ A0 ■ - 0 ■ M1
<b>9.93</b>	146	50	2190	14.2	0.25	715/72	✓						2KJ3500 - ■ A0 ■ - 0 ■ L1
<b>9.35</b>	155	50	2160	14.2	0.29	1430/153	✓						2KJ3500 - ■ A0 ■ - 0 ■ K1
<b>8.15</b>	178	47	2110	14.6	0.33	220/27	✓						2KJ3500 - ■ A0 ■ - 0 ■ J1
<b>7.87</b>	184	38	2160	21.4	0.14	1472/187	✓						2KJ3500 - ■ A0 ■ - 0 ■ H1
<b>6.99</b>	207	38	2100	21.7	0.17	713/102	✓						2KJ3500 - ■ A0 ■ - 0 ■ G1
<b>6.45</b>	225	39	2060	21.6	0.20	1426/221	✓						2KJ3500 - ■ A0 ■ - 0 ■ F1
<b>5.61</b>	258	37	1990	22.3	0.22	667/119	✓						2KJ3500 - ■ A0 ■ - 0 ■ E1
<b>4.87</b>	298	35	1930	21.6	0.24	414/85	✓						2KJ3500 - ■ A0 ■ - 0 ■ D1
<b>4.40</b>	330	34	1880	22.0	0.32	299/68	✓						2KJ3500 - ■ A0 ■ - 0 ■ C1
<b>4.14</b>	350	33	1850	22.0	0.37	1196/289	✓						2KJ3500 - ■ A0 ■ - 0 ■ B1
<b>3.61</b>	402	31	1780	22.8	0.43	184/51	✓						2KJ3500 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

## Article No. supplement

Shaft design	<b>1 or 9</b>	see page 9/49										
Adapter size	<b>KS</b>	<b>A</b>	<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>	<b>N</b>	<b>1</b>				
		<b>B</b>	<b>F</b>	<b>J</b>								
		<b>C</b>	<b>G</b>									
		<b>D</b>										
Adapter type												
Gearbox mounting type	<b>A, B, F or H</b>	see page 9/40										

# SIMOGEAR gearboxes

## Bevel gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox							Adapter													Article No.																	
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	180	200	225	250																	(Article No. supplement, see below)	
-	rpm	Nm	N	'	10 <sup>-4</sup>	-	K2			80	90	100	112	132	160	180	200	225	250	280	315																
							KS		3.1		5.1	6.1	8.1	10.1																							
									3.2		5.2	6.2		10.2																							
									4.1																												
									4.2																												
							K8																														
							K5		56		140	180																									
							K3		56		140	180			210	250	280																				
							A/AZ			80	90	100	112	132	160	180	200	225	250																		

#### B.29

46.85	31	110	4130	10.6	0.04	1265/27	✓	✓																											2KJ3501 - ■ A0 ■ - 0 ■ B2	
41.56	35	110	4130	11.0	0.05	374/9	✓	✓	✓	✓																										2KJ3501 - ■ A0 ■ - 0 ■ A2
36.06	40	110	4130	11.1	0.06	649/18	✓	✓	✓	✓																										2KJ3501 - ■ A0 ■ - 0 ■ X1
32.78	44	110	4130	11.1	0.07	295/9	✓	✓	✓	✓																										2KJ3501 - ■ A0 ■ - 0 ■ W1
28.11	52	110	4130	11.2	0.09	253/9	✓	✓	✓	✓																										2KJ3501 - ■ A0 ■ - 0 ■ V1
25.56	57	110	4130	11.2	0.11	230/9	✓	✓	✓	✓																										2KJ3501 - ■ A0 ■ - 0 ■ U1
22.41	65	110	4130	11.4	0.13	605/27	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ T1
20.00	72	110	4130	11.4	0.16	20/1	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ S1
17.82	81	110	4130	11.5	0.19	1925/108	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ R1
16.45	88	110	4130	11.5	0.23	1925/117	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ Q1
14.40	101	110	4020	11.7	0.28	605/42	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ P1
12.63	115	110	3800	12.0	0.27	341/27	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ N1
11.46	127	110	3650	12.1	0.38	275/24	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ M1
10.78	135	110	3560	12.1	0.44	550/51	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ L1
9.51	152	110	3370	11.8	0.50	770/81	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ K1
8.25	176	110	3160	12.0	0.67	33/4	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ J1
7.84	185	75	3350	16.5	0.41	345/44	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ H1
7.38	196	75	3260	16.5	0.48	1380/187	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ G1
6.51	223	75	3100	16.1	0.54	644/99	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ F1
5.65	257	75	2920	16.3	0.73	621/110	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ E1
5.07	286	74	2900	18.9	0.60	345/68	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ D1
4.78	303	74	2830	18.9	0.70	1380/289	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ C1
4.21	344	74	2680	18.2	0.82	644/153	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ B1
3.65	397	73	2550	18.6	1.10	621/170	✓	✓	✓	✓	✓ <sup>2)</sup>																									2KJ3501 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Only available for KS adapter

#### Article No. supplement

Shaft design	1 or 9	see page 9/49																																		
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N																							4
	K2			D	E	F	G	H	J	K	L	M	N	P	Q																					2
	KS	A			E	H	K	M																												1
		B			F	J	N																													
		C																																		
	K8															C		D		E															8	
	K5		A		B	C			D	E	F						G	H																		5
K3		A		B	C			D	E	F																									3	
A/AZ*				D	E	F	G	H	J	K	L	M	N																							9
Adapter type																																				
Gearbox mounting type	A, B, F or H	see page 9/40																																		

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Selection and ordering data**

Gearbox							Adapter													Article No.		
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement, see below)
-	rpm	Nm	N	'	10 <sup>-4</sup>	-	K2															
					kgm <sup>2</sup>		KS		3.1		5.1	6.1	8.1	10.1								
								3.2			5.2	6.2		10.2								
								4.1														
								4.2														
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280						
							A/AZ			80	90	100	112	132	160	180	200	225	250			
<b>B.39</b>																						
56.36	26	250	6980	8.5	0.06	4565/81	✓	✓														2KJ3502 - A0 - 0 A2
50.11	29	210	6980	8.8	0.08	451/9	✓	✓	✓	✓												2KJ3502 - A0 - 0 X1
44.00	33	250	6980	8.9	0.09	44/1	✓	✓	✓	✓												2KJ3502 - A0 - 0 W1
40.00	36	230	6980	8.9	0.11	40/1	✓	✓	✓	✓												2KJ3502 - A0 - 0 V1
34.22	42	250	6980	8.9	0.13	308/9	✓	✓	✓	✓												2KJ3502 - A0 - 0 U1
31.11	47	250	6980	8.9	0.16	280/9	✓	✓	✓	✓												2KJ3502 - A0 - 0 T1
27.50	53	250	6980	9.0	0.20	55/2	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 S1
25.00	58	250	6980	9.0	0.26	25/1	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 R1
21.90	66	250	6720	9.2	0.30	2365/108	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 Q1
20.21	72	250	6490	9.2	0.36	2365/117	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 P1
17.90	81	250	6160	9.3	0.43	2255/126	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 N1
14.90	97	250	5680	9.5	0.58	715/48	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 M1
14.02	103	250	5520	9.5	0.67	715/51	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 L1
12.56	115	250	5260	9.6	0.75	2035/162	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 K1
10.69	136	240	4960	9.8	0.98	385/36	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 J1
9.17	158	230	4690	10.1	1.29	55/6			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 H1
7.89	184	220	4550	10.3	1.66	1705/216			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 G1
6.60	220	200	4590	15.1	0.94	897/136	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 F1
6.21	233	200	4550	15.1	1.08	1794/289	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 E1
5.56	261	200	4460	15.5	1.26	851/153	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 D1
4.74	306	200	4330	16.0	1.69	161/34	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 C1
4.06	357	200	4190	16.5	2.30	69/17			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 B1
3.50	414	192	4050	17.1	3.00	713/204			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup>	✓ <sup>3)</sup>									2KJ3502 - A0 - 0 A1

- 1) Only in conjunction with reduced-backlash version
- 2) Not available for adapter A/AZ
- 3) Only available for KS adapter

Article No. supplement																							
Shaft design	1 or 9	see page 9/49																					
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N									4	
	K2			D	E	F	G	H	J	K	L	M	N	P	Q								2
	KS	A			E	H	K	M															1
		B			F	J	N																
		C																					
	D																						
	K8									C		D	E										8
	K5		A		B	C		D	E	F		G	H										5
	K3		A		B	C		D	E	F													3
A/AZ*			D	E	F	G	H	J	K	L	M	N										9	

Adapter type  
Gearbox mounting type **A, B, F or H** see page 9/40

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

# SIMOGEAR gearboxes

## Bevel gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox							Adapter													Article No.				
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	180	200	225	250	280	315	(Article No. supplement, see below)		
-	rpm	Nm	N	'	10 <sup>-4</sup>	-	K2																	
							KS																	
								3.1			5.1	6.1	8.1	10.1										
								3.2			5.2	6.2		10.2										
								4.1																
								4.2																
							K8																	
							K5	56		140	180		210	250	280		813		816		818			
							K3	56		140	180		210	250	280									
							A/AZ		80	90	100	112	132	160	180	200	225	250						
<b>B.49</b>																								
59.28	24	450	9510	8.3	0.19	1067/18	✓	✓	✓	✓												2KJ3503 - A0 - 0 C2		
53.89	27	450	9120	8.3	0.23	485/9	✓	✓	✓	✓												2KJ3503 - A0 - 0 B2		
45.83	32	450	8480	8.3	0.28	275/6	✓	✓	✓	✓												2KJ3503 - A0 - 0 A2		
41.67	35	450	8120	8.3	0.34	125/3	✓	✓	✓	✓												2KJ3503 - A0 - 0 X1		
37.18	39	450	7710	8.4	0.40	4015/108	✓	✓	✓	✓	✓	✓										2KJ3503 - A0 - 0 W1		
33.33	44	450	7320	8.4	0.48	100/3	✓	✓	✓	✓	✓	✓										2KJ3503 - A0 - 0 V1		
30.05	48	450	6970	8.4	0.56	3245/108	✓	✓	✓	✓	✓	✓										2KJ3503 - A0 - 0 U1		
27.74	52	450	6710	8.4	0.67	3245/117	✓	✓	✓	✓	✓	✓										2KJ3503 - A0 - 0 T1		
25.32	57	450	6420	8.5	0.80	1595/63	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 S1		
21.01	69	450	5850	8.6	1.03	3025/144	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 R1		
19.77	73	450	5670	8.6	1.18	3025/153	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 Q1		
18.67	78	450	5510	8.6	1.34	3025/162	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 P1		
15.89	91	450	5060	8.7	1.66	143/9	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 N1		
13.61	107	450	4660	8.9	2.10	245/18			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 M1		
11.97	121	450	4340	9.0	2.50	2585/216			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 L1		
10.10	144	450	3930	9.2	3.30	2090/207			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 K1		
8.80	165	450	3620	9.7	4.40	44/5			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 J1		
8.29	175	330	4540	14.1	1.52	2255/272	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 H1		
7.80	186	330	4410	14.1	1.74	2255/289	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 G1		
7.37	197	330	4290	14.1	1.97	2255/306	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 F1		
6.27	231	330	3970	14.4	2.50	533/85	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 E1		
5.37	270	330	3700	14.8	3.30	2009/374			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 D1		
4.72	307	330	3690	15.1	4.10	1927/408			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 C1		
3.98	364	330	3660	15.6	5.40	1558/391			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 B1		
3.47	418	325	3610	17.0	7.20	1476/425			✓	✓	✓	✓	✓ <sup>2)</sup>									2KJ3503 - A0 - 0 A1		

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

Article No. supplement																		
Shaft design	1 or 9	see page 9/49																
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N					4
	K2			D	E	F	G	H	J	K	L	M	N	P	Q		2	
	KS	A		E	H	K	M											1
		B		F	J	N												
		C																
	K8									C		D		E			8	
K5		A		B	C		D	E	F		G	H					5	
K3		A		B	C		D	E	F								3	
A/AZ*				D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	A, B, F or H	see page 9/40																

\* Article No. supplement adapter A: M1A, adapter AZ: M1B











**Selection and ordering data**

Gearbox								Adapter															Article No.																
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>		K4	63	71	80	90	100	112	132	160	180	200	225	250																			(Article No. supplement, see below)
-	rpm	Nm	N	'	10 <sup>-4</sup>	-		K2																															
					kgm <sup>2</sup>			KS																															
								K8																															
								K5																															
								K3																															
								A/AZ																															
<b>K.79</b>																																							
244.25	5.9	820	13900	5.7	0.17	175861/720		✓	✓	✓	✓																									2KJ3508 - A0 - 0 J2			
222.05	6.5	820	13900	5.7	0.20	175861/792		✓	✓	✓	✓																										2KJ3508 - A0 - 0 H2		
188.85	7.7	820	13900	5.7	0.25	9065/48		✓	✓	✓	✓																										2KJ3508 - A0 - 0 G2		
171.69	8.4	820	13900	5.7	0.31	45325/264		✓	✓	✓	✓																										2KJ3508 - A0 - 0 F2		
153.18	9.5	820	13900	5.8	0.35	132349/864		✓	✓	✓	✓	✓	✓																								2KJ3508 - A0 - 0 E2		
137.35	11	820	13900	5.8	0.42	9065/66		✓	✓	✓	✓	✓	✓																								2KJ3508 - A0 - 0 D2		
123.80	12	820	13900	5.8	0.50	106967/864		✓	✓	✓	✓	✓	✓	✓																							2KJ3508 - A0 - 0 C2		
114.28	13	820	13900	5.8	0.59	106967/936		✓	✓	✓	✓	✓	✓	✓																							2KJ3508 - A0 - 0 B2		
104.32	14	820	13900	5.8	0.70	7511/72		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 A2		
86.56	17	820	13900	5.8	0.89	99715/1152		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 X1		
81.47	18	820	13900	5.8	1.02	99715/1224		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 W1		
76.94	19	820	13900	5.8	1.16	99715/1296		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 V1		
65.47	22	820	13900	5.9	1.42	23569/360		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 U1		
56.08	26	820	13900	5.9	1.73	88837/1584				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 T1		
49.31	29	820	13900	5.9	2.10	85211/1728				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 S1		
41.60	35	800	14000	6.0	2.70	34447/828				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 R1		
36.26	40	770	14000	6.1	3.60	1813/50				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 Q1		
32.78	44	820	13900	7.2	0.94	6293/192		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 P1		
27.20	53	800	14000	7.3	1.23	83545/3072		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 N1		
25.60	57	785	14000	7.3	1.41	83545/3264		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 M1		
24.17	60	770	14000	7.3	1.60	83545/3456		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 L1		
20.57	70	740	14100	7.4	2.00	19747/960		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 K1		
17.62	82	715	13800	7.5	2.60	74431/4224				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 J1		
15.49	94	695	13300	7.6	3.20	71393/4608				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 H1		
13.07	111	665	12600	7.8	4.20	28861/2208				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 G1		
11.39	127	645	12000	8.3	5.50	4557/400				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 F1		
10.51	138	445	12600	10.4	2.30	1209/115		✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 E1		
9.01	161	450	11900	10.6	3.00	4557/506				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 D1		
7.92	183	450	11300	10.8	3.70	1457/184				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 C1		
6.68	217	455	10900	11.1	4.90	3534/529				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 B1		
5.82	249	430	10700	12.1	6.60	3348/575				✓	✓	✓	✓	✓	✓ <sup>2)</sup>																						2KJ3508 - A0 - 0 A1		

<sup>1)</sup> Only in conjunction with reduced-backlash version

<sup>2)</sup> Not available for adapter A/AZ

Article No. supplement																		
Shaft design	1 or 9 see page 9/49																	
Adapter size	K4	B	C	D	E	F	G	H	J	K	L	M	N				4	
	K2			D	E	F	G	H	J	K	L	M	N	P	Q			2
	KS	A		E	H	K	M											1
		B		F	J	N												
		C																
	K8									C	D	E						8
	K5		A		B	C		D	E	F	G	H						5
K3			A		B	C		D	E	F							3	
A/AZ*				D	E	F	G	H	J	K	L	M	N				9	

Adapter type

Gearbox mounting type **A, B, F or H** see page 9/40

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

















## SIMOGEAR gearboxes

## Bevel gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter					Article No. (Article No. supplement, see below)
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi^{1)}$	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	
<b>K.39-D19</b>												
6699	0.22	220	6080	-	0.11	167640192/25025	✓					2KJ3521 - ■ A0 ■ - 0 ■ H1
5949	0.24	220	6080	-	0.13	13533453/2275	✓					2KJ3521 - ■ A0 ■ - 0 ■ G1
5491	0.26	220	6080	-	0.16	162401436/29575	✓					2KJ3521 - ■ A0 ■ - 0 ■ F1
4770	0.30	220	6080	-	0.17	75961962/15925	✓					2KJ3521 - ■ A0 ■ - 0 ■ E1
4145	0.35	220	6080	-	0.18	47148804/11375	✓					2KJ3521 - ■ A0 ■ - 0 ■ D1
3742	0.39	220	6080	-	0.22	1309689/350	✓					2KJ3521 - ■ A0 ■ - 0 ■ C1
3522	0.41	220	6080	-	0.26	10477512/2975	✓					2KJ3521 - ■ A0 ■ - 0 ■ B1
3070	0.47	220	6080	-	0.29	6985008/2275	✓					2KJ3521 - ■ A0 ■ - 0 ■ A1
<b>K.39-Z19</b>												
3001	0.48	220	6080	-	0.02	975384/325	✓					2KJ3520 - ■ A0 ■ - 0 ■ E2
2657	0.55	220	6080	-	0.03	4318434/1625	✓					2KJ3520 - ■ A0 ■ - 0 ■ D2
2309	0.63	220	6080	-	0.04	3752082/1625	✓					2KJ3520 - ■ A0 ■ - 0 ■ C2
2099	0.69	220	6080	-	0.05	7504164/3575	✓					2KJ3520 - ■ A0 ■ - 0 ■ B2
1786	0.81	220	6080	-	0.07	2902554/162	✓					2KJ3520 - ■ A0 ■ - 0 ■ A2
1624	0.89	220	6080	-	0.08	5805108/3575	✓					2KJ3520 - ■ A0 ■ - 0 ■ X1
1416	1.0	220	6080	-	0.09	35397/25	✓					2KJ3520 - ■ A0 ■ - 0 ■ W1
1267	1.1	220	6080	-	0.12	4530816/3575	✓					2KJ3520 - ■ A0 ■ - 0 ■ V1
1125	1.3	220	6080	-	0.15	365769/325	✓					2KJ3520 - ■ A0 ■ - 0 ■ U1
1039	1.4	220	6080	-	0.18	4389228/4225	✓					2KJ3520 - ■ A0 ■ - 0 ■ T1
902	1.6	220	6080	-	0.20	2053026/2275	✓					2KJ3520 - ■ A0 ■ - 0 ■ S1
784	1.8	220	6080	-	0.21	1274292/1625	✓					2KJ3520 - ■ A0 ■ - 0 ■ R1
708	2.0	220	6080	-	0.27	35397/50	✓					2KJ3520 - ■ A0 ■ - 0 ■ Q1
666	2.2	220	6080	-	0.32	283176/425	✓					2KJ3520 - ■ A0 ■ - 0 ■ P1
581	2.5	220	6080	-	0.36	188784/325	✓					2KJ3520 - ■ A0 ■ - 0 ■ N1
536	2.7	220	6080	-	0.19	243846/455	✓					2KJ3520 - ■ A0 ■ - 0 ■ M1
466	3.1	220	6080	-	0.22	114057/245	✓					2KJ3520 - ■ A0 ■ - 0 ■ L1
405	3.6	220	6080	-	0.23	70794/175	✓					2KJ3520 - ■ A0 ■ - 0 ■ K1
365	4.0	220	6080	-	0.29	51129/140	✓					2KJ3520 - ■ A0 ■ - 0 ■ J1
343.72	4.2	220	6080	-	0.35	204516/595	✓					2KJ3520 - ■ A0 ■ - 0 ■ H1
329.29	4.4	220	6080	-	0.32	699732/2125	✓					2KJ3520 - ■ A0 ■ - 0 ■ G1
287.07	5.1	220	6080	-	0.37	466488/1625	✓					2KJ3520 - ■ A0 ■ - 0 ■ F1
264.86	5.5	220	6080	-	0.19	602547/2275	✓					2KJ3520 - ■ A0 ■ - 0 ■ E1
230.07	6.3	220	6080	-	0.22	563673/2450	✓					2KJ3520 - ■ A0 ■ - 0 ■ D1
199.92	7.3	220	6080	-	0.23	174933/875	✓					2KJ3520 - ■ A0 ■ - 0 ■ C1
180.49	8.0	220	6080	-	0.30	252681/1400	✓					2KJ3520 - ■ A0 ■ - 0 ■ B1
169.87	8.5	220	6080	-	0.35	505362/2975	✓					2KJ3520 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	1 or 9	see page 9/49									
Adapter size	KS	A	E	H	K	M					1
		B	F	J		N					
		C	G								
		D									
Adapter type											
Gearbox mounting type	A, B, F or H	see page 9/40									

## Selection and ordering data

Gearbox							Adapter					Article No. (Article No. supplement, see below)	
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$\phi$ <sup>1)</sup>	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$F_{ex}$ -	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1		10.1 10.2
<b>K.49-D19</b>													
9641	0.15	420	7820	-	0.08	67488/7	✓						2KJ3523 - ■ A0 ■ - 0 ■ J1
8630	0.17	420	7820	-	0.11	8638464/1001	✓						2KJ3523 - ■ A0 ■ - 0 ■ H1
7663	0.19	420	7820	-	0.13	697376/91	✓						2KJ3523 - ■ A0 ■ - 0 ■ G1
7074	0.20	420	7820	-	0.16	8368512/1183	✓						2KJ3523 - ■ A0 ■ - 0 ■ F1
6145	0.24	420	7820	-	0.17	3914304/637	✓						2KJ3523 - ■ A0 ■ - 0 ■ E1
5340	0.27	420	7820	-	0.18	2429568/455	✓						2KJ3523 - ■ A0 ■ - 0 ■ D1
4821	0.30	420	7820	-	0.22	33744/7	✓						2KJ3523 - ■ A0 ■ - 0 ■ C1
4537	0.32	420	7820	-	0.26	539904/119	✓						2KJ3523 - ■ A0 ■ - 0 ■ B1
3955	0.37	420	7820	-	0.29	359936/91	✓						2KJ3523 - ■ A0 ■ - 0 ■ A1
<b>K.49-Z19</b>													
3866	0.38	420	7820	-	0.02	150784/39	✓						2KJ3522 - ■ A0 ■ - 0 ■ G2
3424	0.42	420	7820	-	0.03	222528/65	✓						2KJ3522 - ■ A0 ■ - 0 ■ F2
2975	0.49	420	7820	-	0.04	193344/65	✓						2KJ3522 - ■ A0 ■ - 0 ■ E2
2704	0.54	420	7820	-	0.05	386688/143	✓						2KJ3522 - ■ A0 ■ - 0 ■ D2
2301	0.63	420	7820	-	0.07	149568/65	✓						2KJ3522 - ■ A0 ■ - 0 ■ C2
2092	0.69	420	7820	-	0.08	299136/143	✓						2KJ3522 - ■ A0 ■ - 0 ■ B2
1824	0.79	420	7820	-	0.09	1824/1	✓						2KJ3522 - ■ A0 ■ - 0 ■ A2
1633	0.89	420	7820	-	0.12	233472/143	✓						2KJ3522 - ■ A0 ■ - 0 ■ W1
1450	1.0	420	7820	-	0.15	18848/13	✓						2KJ3522 - ■ A0 ■ - 0 ■ V1
1338	1.1	420	7820	-	0.18	226176/169	✓						2KJ3522 - ■ A0 ■ - 0 ■ U1
1163	1.2	420	7820	-	0.20	105792/91	✓						2KJ3522 - ■ A0 ■ - 0 ■ T1
1010	1.4	420	7820	-	0.21	65664/65	✓						2KJ3522 - ■ A0 ■ - 0 ■ S1
912	1.6	420	7820	-	0.27	912/1	✓						2KJ3522 - ■ A0 ■ - 0 ■ R1
858	1.7	420	7820	-	0.32	14592/17	✓						2KJ3522 - ■ A0 ■ - 0 ■ Q1
748	1.9	420	7820	-	0.36	9728/13	✓						2KJ3522 - ■ A0 ■ - 0 ■ P1
690	2.1	420	7820	-	0.19	188480/273	✓						2KJ3522 - ■ A0 ■ - 0 ■ N1
600	2.4	420	7820	-	0.22	88160/147	✓						2KJ3522 - ■ A0 ■ - 0 ■ M1
521	2.8	420	7820	-	0.23	3648/7	✓						2KJ3522 - ■ A0 ■ - 0 ■ L1
470	3.1	420	7820	-	0.30	9880/21	✓						2KJ3522 - ■ A0 ■ - 0 ■ K1
443	3.3	420	7820	-	0.35	158080/357	✓						2KJ3522 - ■ A0 ■ - 0 ■ J1
437	3.3	420	7820	-	0.27	24453/56	✓						2KJ3522 - ■ A0 ■ - 0 ■ H1
411	3.5	420	7820	-	0.32	48906/119	✓						2KJ3522 - ■ A0 ■ - 0 ■ G1
358	4.1	420	7820	-	0.37	2508/7	✓						2KJ3522 - ■ A0 ■ - 0 ■ F1
330.56	4.4	420	7820	-	0.20	32395/98	✓						2KJ3522 - ■ A0 ■ - 0 ■ E1
287.15	5.0	420	7820	-	0.23	393965/1372	✓						2KJ3522 - ■ A0 ■ - 0 ■ D1
249.52	5.8	420	7820	-	0.24	24453/98	✓						2KJ3522 - ■ A0 ■ - 0 ■ C1
225.26	6.4	420	7820	-	0.31	176605/784	✓						2KJ3522 - ■ A0 ■ - 0 ■ B1
212.01	6.8	420	7820	-	0.37	176605/833	✓						2KJ3522 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

## Article No. supplement

Shaft design	1 or 9	see page 9/49
Adapter size	KS	A B C D E F G H J K M N 1
Adapter type		
Gearbox mounting type	A, B, F or H	see page 9/40

## SIMOGEAR gearboxes

## Bevel gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter						Article No. (Article No. supplement, see below)
<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	10.1 10.2	
<b>K.69-D19</b>													
9641	0.15	600	10800	-	0.08	67488/7	✓						2KJ3525 - ■ A0 ■ - 0 ■ J1
8630	0.17	600	10800	-	0.11	8638464/1001	✓						2KJ3525 - ■ A0 ■ - 0 ■ H1
7663	0.19	600	10800	-	0.13	697376/91	✓						2KJ3525 - ■ A0 ■ - 0 ■ G1
7074	0.20	600	10800	-	0.16	8368512/1183	✓						2KJ3525 - ■ A0 ■ - 0 ■ F1
6145	0.24	600	10800	-	0.17	3914304/637	✓						2KJ3525 - ■ A0 ■ - 0 ■ E1
5340	0.27	600	10800	-	0.18	2429568/455	✓						2KJ3525 - ■ A0 ■ - 0 ■ D1
4821	0.30	600	10800	-	0.22	33744/7	✓						2KJ3525 - ■ A0 ■ - 0 ■ C1
4537	0.32	600	10800	-	0.26	539904/119	✓						2KJ3525 - ■ A0 ■ - 0 ■ B1
3955	0.37	600	10800	-	0.29	359936/91	✓						2KJ3525 - ■ A0 ■ - 0 ■ A1
<b>K.69-Z19</b>													
3866	0.38	600	10800	-	0.02	150784/39	✓						2KJ3524 - ■ A0 ■ - 0 ■ F2
3424	0.42	600	10800	-	0.03	222528/65	✓						2KJ3524 - ■ A0 ■ - 0 ■ E2
2975	0.49	600	10800	-	0.04	193344/65	✓						2KJ3524 - ■ A0 ■ - 0 ■ D2
2704	0.54	600	10800	-	0.05	386688/143	✓						2KJ3524 - ■ A0 ■ - 0 ■ C2
2301	0.63	600	10800	-	0.07	149568/65	✓						2KJ3524 - ■ A0 ■ - 0 ■ B2
2092	0.69	600	10800	-	0.08	299136/143	✓						2KJ3524 - ■ A0 ■ - 0 ■ A2
1824	0.79	600	10800	-	0.10	1824/1	✓						2KJ3524 - ■ A0 ■ - 0 ■ W1
1633	0.89	600	10800	-	0.13	233472/143	✓						2KJ3524 - ■ A0 ■ - 0 ■ V1
1450	1.0	600	10800	-	0.15	18848/13	✓						2KJ3524 - ■ A0 ■ - 0 ■ U1
1338	1.1	600	10800	-	0.18	226176/169	✓						2KJ3524 - ■ A0 ■ - 0 ■ T1
1163	1.2	600	10800	-	0.21	105792/91	✓						2KJ3524 - ■ A0 ■ - 0 ■ S1
1010	1.4	600	10800	-	0.21	65664/65	✓						2KJ3524 - ■ A0 ■ - 0 ■ R1
912	1.6	600	10800	-	0.27	912/1	✓						2KJ3524 - ■ A0 ■ - 0 ■ Q1
858	1.7	600	10800	-	0.32	14592/17	✓						2KJ3524 - ■ A0 ■ - 0 ■ P1
748	1.9	600	10800	-	0.37	9728/13	✓						2KJ3524 - ■ A0 ■ - 0 ■ N1
690	2.1	600	10800	-	0.20	188480/273	✓						2KJ3524 - ■ A0 ■ - 0 ■ M1
600	2.4	600	10800	-	0.23	88160/147	✓						2KJ3524 - ■ A0 ■ - 0 ■ L1
521	2.8	600	10800	-	0.24	3648/7	✓						2KJ3524 - ■ A0 ■ - 0 ■ K1
470	3.1	600	10800	-	0.31	9880/21	✓						2KJ3524 - ■ A0 ■ - 0 ■ J1
443	3.3	600	10800	-	0.37	158080/357	✓						2KJ3524 - ■ A0 ■ - 0 ■ H1
419	3.5	600	10800	-	0.38	147136/351	✓						2KJ3524 - ■ A0 ■ - 0 ■ G1
387	3.7	600	10800	-	0.22	2850760/7371	✓						2KJ3524 - ■ A0 ■ - 0 ■ F1
335.96	4.3	600	10800	-	0.25	1333420/3969	✓						2KJ3524 - ■ A0 ■ - 0 ■ E1
291.94	5.0	600	10800	-	0.27	18392/63	✓						2KJ3524 - ■ A0 ■ - 0 ■ D1
263.55	5.5	600	10800	-	0.35	149435/567	✓						2KJ3524 - ■ A0 ■ - 0 ■ C1
248.05	5.8	600	10800	-	0.41	2390960/9639	✓						2KJ3524 - ■ A0 ■ - 0 ■ B1
216.25	6.7	600	10800	-	0.48	367840/1701	✓						2KJ3524 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	1 or 9	see page 9/49							
Adapter size	KS	A	E	H	K	M	1		
		B	F	J		N			
		C	G						
		D							
Adapter type									
Gearbox mounting type	A, B, F or H	see page 9/40							

**Transmission ratios and torques for very low speeds**
**Selection and ordering data**

Gearbox							Adapter						Article No. (Article No. supplement, see below)
<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub> -	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	10.1 10.2	
<b>K.79-D19</b>													
<b>9522</b>	0,15	820	13900	-	0,13	1485365/156	✓						2KJ3527 - ■ A0 ■ - 0 ■ G1
<b>8789</b>	0,16	820	13900	-	0,16	1485365/169	✓						2KJ3527 - ■ A0 ■ - 0 ■ F1
<b>7635</b>	0,19	820	13900	-	0,17	198505/26	✓						2KJ3527 - ■ A0 ■ - 0 ■ E1
<b>6634</b>	0,22	820	13900	-	0,18	86247/13	✓						2KJ3527 - ■ A0 ■ - 0 ■ D1
<b>5989</b>	0,24	820	13900	-	0,22	47915/8	✓						2KJ3527 - ■ A0 ■ - 0 ■ C1
<b>5637</b>	0,26	820	13900	-	0,26	95830/17	✓						2KJ3527 - ■ A0 ■ - 0 ■ B1
<b>4914</b>	0,30	820	13900	-	0,29	191660/39	✓						2KJ3527 - ■ A0 ■ - 0 ■ A1
<b>K.79-Z19</b>													
<b>4804</b>	0,30	820	13900	-	0,02	562030/117	✓						2KJ3526 - ■ A0 ■ - 0 ■ F2
<b>4254</b>	0,34	820	13900	-	0,03	110593/26	✓						2KJ3526 - ■ A0 ■ - 0 ■ E2
<b>3696</b>	0,39	820	13900	-	0,04	96089/26	✓						2KJ3526 - ■ A0 ■ - 0 ■ D2
<b>3360</b>	0,43	820	13900	-	0,05	480445/143	✓						2KJ3526 - ■ A0 ■ - 0 ■ C2
<b>2859</b>	0,51	820	13900	-	0,07	74333/26	✓						2KJ3526 - ■ A0 ■ - 0 ■ B2
<b>2599</b>	0,56	820	13900	-	0,08	371665/143	✓						2KJ3526 - ■ A0 ■ - 0 ■ A2
<b>2266</b>	0,64	820	13900	-	0,10	9065/4	✓						2KJ3526 - ■ A0 ■ - 0 ■ W1
<b>2029</b>	0,71	820	13900	-	0,13	290080/143	✓						2KJ3526 - ■ A0 ■ - 0 ■ V1
<b>1801</b>	0,81	820	13900	-	0,15	281015/156	✓						2KJ3526 - ■ A0 ■ - 0 ■ U1
<b>1663</b>	0,87	820	13900	-	0,18	281015/169	✓						2KJ3526 - ■ A0 ■ - 0 ■ T1
<b>1444</b>	1,0	820	13900	-	0,21	37555/26	✓						2KJ3526 - ■ A0 ■ - 0 ■ S1
<b>1255</b>	1,2	820	13900	-	0,21	16317/13	✓						2KJ3526 - ■ A0 ■ - 0 ■ R1
<b>1133</b>	1,3	820	13900	-	0,27	9065/8	✓						2KJ3526 - ■ A0 ■ - 0 ■ Q1
<b>1066</b>	1,4	820	13900	-	0,32	18130/17	✓						2KJ3526 - ■ A0 ■ - 0 ■ P1
<b>930</b>	1,6	820	13900	-	0,37	36260/39	✓						2KJ3526 - ■ A0 ■ - 0 ■ N1
<b>858</b>	1,7	820	13900	-	0,20	200725/234	✓						2KJ3526 - ■ A0 ■ - 0 ■ M1
<b>745</b>	1,9	820	13900	-	0,23	26825/36	✓						2KJ3526 - ■ A0 ■ - 0 ■ L1
<b>648</b>	2,2	820	13900	-	0,24	1295/2	✓						2KJ3526 - ■ A0 ■ - 0 ■ K1
<b>585</b>	2,5	820	13900	-	0,31	84175/144	✓						2KJ3526 - ■ A0 ■ - 0 ■ J1
<b>550</b>	2,6	820	13900	-	0,37	84175/153	✓						2KJ3526 - ■ A0 ■ - 0 ■ H1
<b>521</b>	2,8	820	13900	-	0,38	1096865/2106	✓						2KJ3526 - ■ A0 ■ - 0 ■ G1
<b>481</b>	3,0	820	13900	-	0,22	24287725/50544	✓						2KJ3526 - ■ A0 ■ - 0 ■ F1
<b>417</b>	3,5	820	13900	-	0,25	3245825/7776	✓						2KJ3526 - ■ A0 ■ - 0 ■ E1
<b>363</b>	4,0	820	13900	-	0,27	156695/432	✓						2KJ3526 - ■ A0 ■ - 0 ■ D1
<b>327,46</b>	4,4	820	13900	-	0,35	10185175/31104	✓						2KJ3526 - ■ A0 ■ - 0 ■ C1
<b>308,19</b>	4,7	820	13900	-	0,41	10185175/33048	✓						2KJ3526 - ■ A0 ■ - 0 ■ B1
<b>268,68</b>	5,4	820	13900	-	0,48	783475/2916	✓						2KJ3526 - ■ A0 ■ - 0 ■ A1

<sup>1)</sup> Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	<b>1 or 9</b>	see page 9/49							
Adapter size	<b>KS</b>	<b>A</b>	<b>E</b>	<b>H</b>	<b>K</b>	<b>M</b>	<b>1</b>		
		<b>B</b>	<b>F</b>	<b>J</b>		<b>N</b>			
		<b>C</b>	<b>G</b>						
		<b>D</b>							
Adapter type									
Gearbox mounting type	<b>A, B, F or H</b>	see page 9/40							

## SIMOGEAR gearboxes

## Bevel gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter							Article No.		
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.89-D39</b>																
9761	0.15	1600	18100	-	0.17	1577036825/161568	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3530 - ■ A0 ■ - 0 ■ E1
9010	0.16	1600	18100	-	0.21	121310525/13464	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3530 - ■ A0 ■ - 0 ■ D1
7888	0.18	1600	18100	-	0.25	6436885/816	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3530 - ■ A0 ■ - 0 ■ C1
6916	0.21	1600	18100	-	0.23	279360809/40392	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3530 - ■ A0 ■ - 0 ■ B1
6275	0.23	1600	18100	-	0.33	225290975/35904	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3530 - ■ A0 ■ - 0 ■ A1
<b>K.89-Z39</b>																
6101	0.24	1600	18100	-	0.06	86972795/14256	✓	✓								2KJ3528 - ■ A0 ■ - 0 ■ F2
5425	0.27	1600	18100	-	0.07	8592493/1584	✓	✓	✓	✓						2KJ3528 - ■ A0 ■ - 0 ■ E2
4763	0.30	1600	18100	-	0.08	209573/44	✓	✓	✓	✓						2KJ3528 - ■ A0 ■ - 0 ■ D2
4330	0.33	1600	18100	-	0.10	1047865/242	✓	✓	✓	✓						2KJ3528 - ■ A0 ■ - 0 ■ C2
3705	0.39	1600	18100	-	0.12	1467011/396	✓	✓	✓	✓						2KJ3528 - ■ A0 ■ - 0 ■ B2
3368	0.43	1600	18100	-	0.14	7335055/2178	✓	✓	✓	✓						2KJ3528 - ■ A0 ■ - 0 ■ A2
2977	0.49	1600	18100	-	0.17	1047865/352	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ W1
2706	0.54	1600	18100	-	0.22	5239325/1936	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ V1
2370	0.61	1600	18100	-	0.26	45058195/19008	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ U1
2188	0.66	1600	18100	-	0.31	3466015/1584	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ T1
1937	0.75	1600	18100	-	0.36	6137495/3168	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ S1
1612	0.90	1600	18100	-	0.48	13622245/8448	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ R1
1518	0.96	1600	18100	-	0.56	13622245/8976	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ Q1
1360	1.1	1600	18100	-	0.61	38771005/28512	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ P1
1158	1.3	1600	18100	-	0.79	7335055/6336	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ N1
992	1.5	1600	18100	-	1.04	1047865/1056			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ M1
854	1.7	1600	18100	-	1.32	32483815/38016			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ L1
705	2.1	1600	18100	-	0.61	45656975/64768	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ K1
663	2.2	1600	18100	-	0.70	45656975/68816	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ J1
594	2.4	1600	18100	-	0.79	129946775/218592	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ H1

1) Only in conjunction with reduced-backlash version

2) Not available for adapter A/AZ

3) Only available for KS adapter

## Article No. supplement

Shaft design	1 or 9	see page 9/49												
Adapter size	K4	B	C	D	E	F	G	H	J				4	
	K2			D	E	F	G	H	J				2	
	KS		A		E	H	K	M					1	
			B		F	J		N						
			C											
			D											
	K5		A		B	C		D	E				5	
	K3		A		B	C		D	E				3	
	A/AZ*			D	E	F	G	H	J				9	

Adapter type

Gearbox mounting type

A, B, F or H

see page 9/40

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Transmission ratios and torques for very low speeds**

**Selection and ordering data**

Gearbox							Adapter									Article No.
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	10 <sup>-4</sup> kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.89-Z39</b>																
506	2.9	1600	18100	-	1.04	24584525/48576	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ G1
476	3.0	1600	18100	-	0.65	84791525/178112	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ F1
448	3.2	1600	18100	-	0.75	84791525/189244	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ E1
401	3.6	1600	18100	-	0.85	241329725/601128	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ D1
341.78	4.2	1600	18100	-	1.12	45656975/133584	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ C1
292.96	4.9	1600	18100	-	1.48	6522425/22264			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ B1
252.27	5.7	1600	18100	-	1.92	202195175/801504			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3528 - ■ A0 ■ - 0 ■ A1
<b>K.109-D39</b>																
13352	0.11	2900	24500	-	0.12	57881096/4335	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3532 - ■ A0 ■ - 0 ■ G1
11918	0.12	2900	24500	-	0.15	2083719456/174845	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3532 - ■ A0 ■ - 0 ■ F1
10621	0.14	2900	24500	-	0.17	101291918/9537	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3532 - ■ A0 ■ - 0 ■ E1
9804	0.15	2900	24500	-	0.21	31166744/3179	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3532 - ■ A0 ■ - 0 ■ D1
8583	0.17	2900	24500	-	0.25	12403092/1445	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3532 - ■ A0 ■ - 0 ■ C1
7526	0.19	2900	24500	-	0.23	1794313976/238425	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3532 - ■ A0 ■ - 0 ■ B1
6828	0.21	2900	24500	-	0.33	21705411/3179	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3532 - ■ A0 ■ - 0 ■ A1
<b>K.109-Z39</b>																
6638	0.22	2900	24500	-	0.06	55861988/8415	✓	✓								2KJ3531 - ■ A0 ■ - 0 ■ F2
5903	0.25	2900	24500	-	0.07	27594476/4675	✓	✓	✓	✓						2KJ3531 - ■ A0 ■ - 0 ■ F2
5183	0.28	2900	24500	-	0.08	24229296/4675	✓	✓	✓	✓						2KJ3531 - ■ A0 ■ - 0 ■ E2
4712	0.31	2900	24500	-	0.10	48458592/10285	✓	✓	✓	✓						2KJ3531 - ■ A0 ■ - 0 ■ D2
4031	0.36	2900	24500	-	0.12	18845008/4675	✓	✓	✓	✓						2KJ3531 - ■ A0 ■ - 0 ■ C2
3665	0.40	2900	24500	-	0.14	37690016/10285	✓	✓	✓	✓						2KJ3531 - ■ A0 ■ - 0 ■ B2
3239	0.45	2900	24500	-	0.17	3028662/935	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3531 - ■ A0 ■ - 0 ■ A2
2945	0.49	2900	24500	-	0.23	6057324/2057	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3531 - ■ A0 ■ - 0 ■ W1
2579	0.56	2900	24500	-	0.26	7235137/2805	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3531 - ■ A0 ■ - 0 ■ V1
2381	0.61	2900	24500	-	0.31	2226196/935	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3531 - ■ A0 ■ - 0 ■ U1

1) Only in conjunction with reduced-backlash version  
 2) Not available for A/AZ adapter  
 3) Only available for KS adapter

Article No. supplement											
Shaft design	1 or 9									see page 9/49	
Adapter size	K4	B	C	D	E	F	G	H	J	4	
	K2	D E F G H J									2
	KS	A	E H K M							1	
		B	F J								
		C									
		D									
	K5	A	B	C	D E						5
K3	A	B	C	D E						3	
A/AZ*	D E F G H J									9	
Adapter type											
Gearbox mounting type	A, B, F or H									see page 9/40	

\* Article No. supplement adapter A: M1A, adapter AZ: M1B



**Transmission ratios and torques for very low speeds**

**Selection and ordering data**

Gearbox							Adapter									Article No.
<i>i</i>	<i>n</i> <sub>2</sub> rpm	<i>T</i> <sub>2N</sub> Nm	<i>F</i> <sub>R2</sub> N	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-							K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.129-D39</b>																
14490	0.10	4400	40000	-	0.09	2494142287/172125	✓	✓	✓	✓						2KJ3534 - ■ A0 ■ - 0 ■ H1
13173	0.11	4400	40000	-	0.10	4988284574/378675	✓	✓	✓	✓						2KJ3534 - ■ A0 ■ - 0 ■ G1
11550	0.13	4400	40000	-	0.12	1192850659/103275	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3534 - ■ A0 ■ - 0 ■ F1
10309	0.14	4400	40000	-	0.15	433763876/42075	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3534 - ■ A0 ■ - 0 ■ E1
9188	0.16	4400	40000	-	0.18	759086783/82620	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3534 - ■ A0 ■ - 0 ■ D1
8481	0.17	4400	40000	-	0.21	58391291/6885	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3534 - ■ A0 ■ - 0 ■ C1
7425	0.20	4400	40000	-	0.25	170407237/22950	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3534 - ■ A0 ■ - 0 ■ B1
6510	0.22	4400	40000	-	0.23	3361670039/516375	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3534 - ■ A0 ■ - 0 ■ A1
<b>K.129-Z39</b>																
5743	0.25	4400	37600	-	0.06	209316289/36450	✓	✓								2KJ3533 - ■ A0 ■ - 0 ■ A2
5106	0.28	4400	37600	-	0.07	103397203/20250	✓	✓	✓	✓						2KJ3533 - ■ A0 ■ - 0 ■ X1
4483	0.32	4400	37600	-	0.09	5043766/1125	✓	✓	✓	✓						2KJ3533 - ■ A0 ■ - 0 ■ W1
4076	0.36	4400	37600	-	0.11	10087532/2475	✓	✓	✓	✓						2KJ3533 - ■ A0 ■ - 0 ■ V1
3487	0.42	4400	37600	-	0.13	35306362/10125	✓	✓	✓	✓						2KJ3533 - ■ A0 ■ - 0 ■ U1
3170	0.46	4400	37600	-	0.15	70612724/22275	✓	✓	✓	✓						2KJ3533 - ■ A0 ■ - 0 ■ T1
2802	0.52	4400	37600	-	0.18	2521883/900	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ S1
2547	0.57	4400	37600	-	0.24	2521883/990	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ R1
2231	0.65	4400	37600	-	0.28	108440969/48600	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ Q1
2060	0.70	4400	37600	-	0.33	8341613/4050	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ P1
1824	0.79	4400	37600	-	0.39	14771029/8100	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ N1
1518	0.96	4400	37600	-	0.53	32784479/21600	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ M1
1429	1.0	4400	37600	-	0.61	32784479/22950	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ L1
1280	1.1	4400	37600	-	0.68	93309671/72900	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ K1
1090	1.3	4400	37600	-	0.88	17653181/16200	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ J1

1) Only in conjunction with reduced-backlash version

2) Not available for A/AZ adapter

3) Only available for KS adapter

Article No. supplement													
Shaft design	1 or 9											see page 9/49	
Adapter size	K4	B	C	D	E	F	G	H	J			4	
	K2			D	E	F	G	H	J			2	
	KS		A		E	H	K	M					1
			B		F	J		N					
			C										
	K5		A		B	C		D	E			5	
	K3			A		B	C		D	E		3	
A/AZ*				D	E	F	G	H	J			9	
Adapter type													
Gearbox mounting type	A, B, F or H											see page 9/40	

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**



## SIMOGEAR gearboxes

## Bevel gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56	140	180			210	250	
							K3		56	140	180			210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.129-Z39</b>																
934	1.6	4400	37600	-	1.16	2521883/2700			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ H1
804	1.8	4400	37600	-	1.48	78178373/97200			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ G1
664	2.2	4400	37600	-	0.85	21976409/33120	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ F1
625	2.3	4400	37600	-	0.98	21976409/35190	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ E1
560	2.6	4400	37600	-	1.13	62548241/111780	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ D1
476	3.0	4400	37600	-	1.51	11833451/24840	✓	✓	✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ C1
408	3.6	4400	37600	-	2.00	1690493/4140			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ B1
352	4.1	4400	37600	-	2.60	52405283/149040			✓	✓	✓ <sup>2)</sup>	✓ <sup>2)</sup> <sub>3)</sub>				2KJ3533 - ■ A0 ■ - 0 ■ A1
<b>K.149-D49</b>																
13575	0.11	8000	65000	-	0.12	23891273/1760	✓	✓	✓	✓						2KJ3536 - ■ A0 ■ - 0 ■ L1
12341	0.12	8000	65000	-	0.14	23891273/1936	✓	✓	✓	✓						2KJ3536 - ■ A0 ■ - 0 ■ K1
10908	0.13	8000	65000	-	0.17	30717351/2816	✓	✓	✓	✓	✓	✓				2KJ3536 - ■ A0 ■ - 0 ■ J1
9917	0.15	8000	65000	-	0.22	153586755/15488	✓	✓	✓	✓	✓	✓				2KJ3536 - ■ A0 ■ - 0 ■ H1
8686	0.17	8000	65000	-	0.26	146760677/16896	✓	✓	✓	✓	✓	✓				2KJ3536 - ■ A0 ■ - 0 ■ G1
8018	0.18	8000	65000	-	0.31	146760677/18304	✓	✓	✓	✓	✓	✓				2KJ3536 - ■ A0 ■ - 0 ■ F1
7099	0.20	8000	65000	-	0.37	19990657/2816	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3536 - ■ A0 ■ - 0 ■ E1
5909	0.25	8000	65000	-	0.50	133108521/22528	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3536 - ■ A0 ■ - 0 ■ D1
5561	0.26	8000	65000	-	0.59	7829913/1408	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3536 - ■ A0 ■ - 0 ■ C1
4983	0.29	8000	65000	-	0.66	126282443/25344	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3536 - ■ A0 ■ - 0 ■ B1
4242	0.34	8000	65000	-	0.86	23891273/5632	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3536 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for A/AZ adapter

3) Only available for KS adapter

Article No. supplement		see page 9/49									
Shaft design	1 or 9										
Adapter size	K4	B	C	D	E	F	G	H	J		4
	K2			D	E	F	G	H	J		2
	KS	A			E	H	K	M			1
		B			F	J		N			
		C									
	D										
K5	A		B	C		D	E			5	
K3	A		B	C		D	E			3	
A/AZ*			D	E	F	G	H	J			9
Adapter type											
Gearbox mounting type	A, B, F or H										

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Transmission ratios and torques for very low speeds**

**Selection and ordering data**

Gearbox							Adapter								Article No.	
<i>i</i>	<i>n</i> <sub>2</sub>	<i>T</i> <sub>2N</sub>	<i>F</i> <sub>R2</sub>	$\phi$ <sup>1)</sup>	<i>J</i> <sub>G</sub>	<i>R</i> <sub>ex</sub>	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	10 <sup>-4</sup> kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.149-Z49</b>																
4149	0.35	8000	65000	-	0.18	58423197/14080	✓	✓	✓	✓						2KJ3535 - ■ A0 ■ - 0 ■ B2
3772	0.38	8000	65000	-	0.22	58423197/15488	✓	✓	✓	✓						2KJ3535 - ■ A0 ■ - 0 ■ A2
3208	0.45	8000	65000	-	0.28	9034515/2816	✓	✓	✓	✓						2KJ3535 - ■ A0 ■ - 0 ■ X1
2917	0.5	8000	65000	-	0.34	45172575/15488	✓	✓	✓	✓						2KJ3535 - ■ A0 ■ - 0 ■ W1
2602	0.56	8000	65000	-	0.39	14655991/5632	✓	✓	✓	✓	✓	✓	✓			2KJ3535 - ■ A0 ■ - 0 ■ V1
2333	0.62	8000	65000	-	0.47	9034515/3872	✓	✓	✓	✓	✓	✓	✓			2KJ3535 - ■ A0 ■ - 0 ■ U1
2103	0.69	8000	65000	-	0.55	11845253/5632	✓	✓	✓	✓	✓	✓	✓			2KJ3535 - ■ A0 ■ - 0 ■ T1
1941	0.75	8000	65000	-	0.66	35535759/18304	✓	✓	✓	✓	✓	✓	✓			2KJ3535 - ■ A0 ■ - 0 ■ S1
1772	0.82	8000	65000	-	0.78	2495247/1408	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ R1
1470	0.99	8000	65000	-	1.00	3011505/2048	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ Q1
1384	1.0	8000	65000	-	1.16	3011505/2176	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ P1
1307	1.1	8000	65000	-	1.31	1003835/768	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ N1
1112	1.3	8000	65000	-	1.62	7829913/7040	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ M1
953	1.5	8000	65000	-	2.00	29512749/30976			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ L1
838	1.7	8000	65000	-	2.50	9436049/11264			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ K1
707	2.1	8000	65000	-	3.20	497553/704			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ J1
616	2.4	8000	65000	-	4.20	5420709/8800			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ H1
608	2.4	8000	65000	-	1.81	826413/1360	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ G1
574	2.5	8000	65000	-	2.00	275471/480	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ F1
488	3.0	8000	65000	-	2.60	10743369/22000	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ E1
418	3.5	8000	65000	-	3.40	40494237/96800			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ D1
368	3.9	8000	65000	-	4.30	12947137/35200			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ C1
310.31	4.7	8000	65000	-	5.70	682689/2200			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ B1
270.46	5.4	8000	65000	-	7.50	7437717/27500			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3535 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for A/AZ adapter

Article No. supplement																	
Shaft design	1 or 9 <span style="float: right;">see page 9/49</span>																
Adapter size	K4	B	C	D	E	F	G	H	J							4	
	K2			D	E	F	G	H	J							2	
	KS		A		E	H	K	M									1
			B		F	J		N									
			C														
		D															
	K5		A	B	C		D	E								5	
	K3		A	B	C		D	E								3	
	A/AZ*			D	E	F	G	H	J							9	
Adapter type																	
Gearbox mounting type	A, B, F or H <span style="float: right;">see page 9/40</span>																

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

# SIMOGEAR gearboxes

## Bevel gearboxes

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.169-D49</b>																
14931	0.10	13000	70000	-	0.22	315340973/21120	✓	✓	✓	✓	✓	✓	✓			2KJ3538 - ■ A0 ■ - 0 ■ H1
13078	0.11	13000	70000	-	0.26	13559661839/1036800	✓	✓	✓	✓	✓	✓	✓			2KJ3538 - ■ A0 ■ - 0 ■ G1
12072	0.12	13000	70000	-	0.31	13559661839/1123200	✓	✓	✓	✓	✓	✓	✓			2KJ3538 - ■ A0 ■ - 0 ■ F1
10689	0.14	13000	70000	-	0.38	12928979893/1209600	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3538 - ■ A0 ■ - 0 ■ E1
8896	0.16	13000	70000	-	0.51	4099432649/460800	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3538 - ■ A0 ■ - 0 ■ D1
8373	0.17	13000	70000	-	0.59	241143097/28800	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3538 - ■ A0 ■ - 0 ■ C1
7502	0.19	13000	70000	-	0.66	11667616001/1555200	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3538 - ■ A0 ■ - 0 ■ B1
6387	0.23	13000	70000	-	0.86	2207386811/345600	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3538 - ■ A0 ■ - 0 ■ A1
<b>K.169-Z49</b>																
6248	0.23	13000	70000	-	0.19	1799298493/288000	✓	✓	✓	✓						2KJ3537 - ■ A0 ■ - 0 ■ C2
5680	0.26	13000	70000	-	0.23	1799298493/316800	✓	✓	✓	✓						2KJ3537 - ■ A0 ■ - 0 ■ B2
4831	0.30	13000	70000	-	0.28	18549469/3840	✓	✓	✓	✓						2KJ3537 - ■ A0 ■ - 0 ■ A2
4391	0.33	13000	70000	-	0.34	18549469/4224	✓	✓	✓	✓						2KJ3537 - ■ A0 ■ - 0 ■ X1
3918	0.37	13000	70000	-	0.40	1354111237/345600	✓	✓	✓	✓	✓	✓				2KJ3537 - ■ A0 ■ - 0 ■ W1
3513	0.41	13000	70000	-	0.48	18549469/5280	✓	✓	✓	✓	✓	✓				2KJ3537 - ■ A0 ■ - 0 ■ V1
3167	0.46	13000	70000	-	0.57	1094418671/345600	✓	✓	✓	✓	✓	✓				2KJ3537 - ■ A0 ■ - 0 ■ U1
2923	0.50	13000	70000	-	0.67	1094418671/374400	✓	✓	✓	✓	✓	✓				2KJ3537 - ■ A0 ■ - 0 ■ T1
2668	0.54	13000	70000	-	0.80	537934601/201600	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ S1
2214	0.65	13000	70000	-	1.03	204044159/92160	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ R1
2084	0.70	13000	70000	-	1.19	204044159/97920	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ Q1
1968	0.74	13000	70000	-	1.35	204044159/103680	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ P1
1675	0.87	13000	70000	-	1.67	241143097/144000	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ N1
1435	1.0	13000	70000	-	2.10	908923981/633600			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ M1
1261	1.1	13000	70000	-	2.60	871825043/691200			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ L1
1064	1.4	13000	70000	-	3.30	352439911/331200			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ K1
927	1.6	13000	70000	-	4.40	18549469/20000			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ J1
915	1.6	13000	70000	-	1.98	279967567/306000	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ H1
864	1.7	13000	70000	-	2.20	279967567/324000	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3537 - ■ A0 ■ - 0 ■ G1

1) Only in conjunction with reduced-backlash version

2) Not available for A/AZ adapter

#### Article No. supplement

Shaft design	1 or 9	see page 9/49														
Adapter size	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS		A		E	H	K	M								1
			B		F	J		N								
			C													
			D													
K5		A		B	C		D	E							5	
K3		A		B	C		D	E							3	
A/AZ*			D	E	F	G	H	J							9	
Adapter type																
Gearbox mounting type	A, B, F or H														see page 9/40	

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Transmission ratios and torques for very low speeds**
**Selection and ordering data**

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi$ <sup>1)</sup>	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.169-Z49</b>																
<b>735</b>	2.0	13000	70000	-	2.90	330870761/450000	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3537 - ■ A0 ■ - 0 ■ F1
<b>630</b>	2.3	13000	70000	-	3.80	1247128253/1980000			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3537 - ■ A0 ■ - 0 ■ E1
<b>554</b>	2.6	13000	70000	-	4.70	1196225059/2160000			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3537 - ■ A0 ■ - 0 ■ D1
<b>467</b>	3.1	13000	70000	-	6.30	483580343/1035000			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3537 - ■ A0 ■ - 0 ■ C1
<b>416</b>	3.5	13000	70000	-	6.90	25840171/62100			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3537 - ■ A0 ■ - 0 ■ B1
<b>363</b>	4.0	13000	70000	-	9.10	1360009/3750			✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3537 - ■ A0 ■ - 0 ■ A1
<b>K.189-D69</b>																
<b>13345</b>	0.11	19500	104000	-	0.26	840736/63	✓	✓	✓	✓	✓	✓	✓			2KJ3541 - ■ A0 ■ - 0 ■ G1
<b>12318</b>	0.12	19500	104000	-	0.32	258688/21	✓	✓	✓	✓	✓	✓	✓			2KJ3541 - ■ A0 ■ - 0 ■ F1
<b>10907</b>	0.13	19500	104000	-	0.38	1603264/147	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3541 - ■ A0 ■ - 0 ■ E1
<b>9078</b>	0.16	19500	104000	-	0.52	63544/7	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3541 - ■ A0 ■ - 0 ■ D1
<b>8544</b>	0.17	19500	104000	-	0.61	1016704/119	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3541 - ■ A0 ■ - 0 ■ C1
<b>7655</b>	0.19	19500	104000	-	0.67	1446848/189	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3541 - ■ A0 ■ - 0 ■ B1
<b>6517</b>	0.22	19500	104000	-	0.89	19552/3	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>		2KJ3541 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

2) Not available for A/AZ adapter

Article No. supplement																	
Shaft design	1 or 9 <span style="float: right;">see page 9/49</span>																
Adapter size	K4	B	C	D	E	F	G	H	J							4	
	K2			D	E	F	G	H	J							2	
	KS		A			E	H	K	M								1
			B			F	J		N								
			C														
		D															
	K5		A		B	C		D	E								5
K3		A		B	C		D	E								3	
A/AZ*				D	E	F	G	H	J							9	
Adapter type																	
Gearbox mounting type	A, B, F or H <span style="float: right;">see page 9/40</span>																

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

## Bevel gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox							Adapter								Article No.	
$i$	$n_2$	$T_{2N}$	$F_{R2}$	$\phi^{1)}$	$J_G$	$R_{ex}$	K4	63	71	80	90	100	112	132	160	(Article No. supplement, see below)
-	rpm	Nm	N	'	$10^{-4}$ kgm <sup>2</sup>	-	K2			80	90	100	112	132	160	
							KS		3.1		5.1	6.1	8.1	10.1		
									3.2		5.2	6.2		10.2		
									4.1							
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
<b>K.189-Z69</b>																
6375	0.23	19500	104000	-	0.21	3793088/595	✓	✓	✓	✓						2KJ3540 - ■ A0 ■ - 0 ■ C2
5795	0.25	19500	104000	-	0.26	7586176/1309	✓	✓	✓	✓						2KJ3540 - ■ A0 ■ - 0 ■ B2
4929	0.29	19500	104000	-	0.32	5865600/119	✓	✓	✓	✓						2KJ3540 - ■ A0 ■ - 0 ■ A2
4481	0.32	19500	104000	-	0.39	5865600/1309	✓	✓	✓	✓						2KJ3540 - ■ A0 ■ - 0 ■ X1
3998	0.36	19500	104000	-	0.46	1427296/357	✓	✓	✓	✓	✓	✓				2KJ3540 - ■ A0 ■ - 0 ■ W1
3585	0.40	19500	104000	-	0.56	4692480/1309	✓	✓	✓	✓	✓	✓				2KJ3540 - ■ A0 ■ - 0 ■ V1
3231	0.45	19500	104000	-	0.66	1153568/357	✓	✓	✓	✓	✓	✓				2KJ3540 - ■ A0 ■ - 0 ■ U1
2983	0.49	19500	104000	-	0.78	354944/119	✓	✓	✓	✓	✓	✓				2KJ3540 - ■ A0 ■ - 0 ■ T1
2723	0.53	19500	104000	-	0.93	2268032/833	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ S1
2259	0.64	19500	104000	-	1.23	268840/119	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ R1
2126	0.68	19500	104000	-	1.41	4301440/2023	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ Q1
2008	0.72	19500	104000	-	1.59	2150720/1071	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ P1
1709	0.85	19500	104000	-	2.0	1016704/595	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ N1
1464	0.99	19500	104000	-	2.5	273728/187			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ M1
1287	1.1	19500	104000	-	3.2	459472/357			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ L1
1086	1.3	19500	104000	-	4.1	2971904/2737			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ K1
946	1.5	19500	104000	-	5.5	2815488/2975			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ J1
889	1.6	19500	104000	-	3.1	3128320/3519	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ H1
756	1.9	19500	104000	-	4.0	16267264/21505	✓	✓	✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ G1
648	2.2	19500	104000	-	5.3	30657536/47311			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ F1
570	2.5	19500	104000	-	6.7	7351552/12903			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ E1
481	3.0	19500	104000	-	9.1	47550464/98923			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ D1
419	3.5	19500	104000	-	12	45047808/107525			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ C1
384	3.8	19500	104000	-	11	37948928/98923			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ B1
334.36	4.3	19500	104000	-	14	35951616/107525			✓	✓	✓	✓	✓ <sup>2)</sup>			2KJ3540 - ■ A0 ■ - 0 ■ A1

1) Only in conjunction with reduced-backlash version

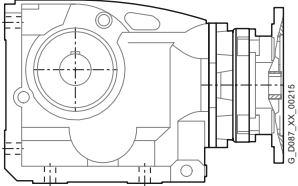
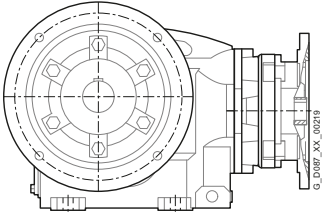
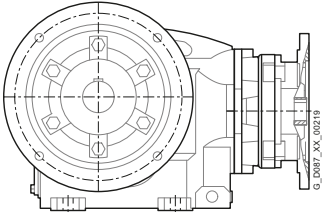
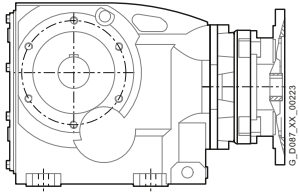
2) Not available for A/AZ adapter

Article No. supplement																
Shaft design	1 or 9								see page 9/49							
Adapter size	K4	B	C	D	E	F	G	H	J							4
	K2			D	E	F	G	H	J							2
	KS		A		E	H	K	M								1
			B		F	J		N								
			C													
		D														
	K5	A		B	C		D	E							5	
	K3	A		B	C		D	E							3	
	A/AZ*			D	E	F	G	H	J						9	
Adapter type																
Gearbox mounting type	A, B, F or H								see page 9/40							

\* Article No. supplement adapter A: M1A, adapter AZ: M1B

**Dimensional drawing overview**

Information about dimensional drawings can be found in chapter "Introduction" page 1/17.

Design	Size	Dimensional drawing on page
<b>Bevel gearbox with adapter K4</b>		
<b>Foot-mounted design</b>		
	B..29	5/35
	B..39	5/39
	B..49	5/43
	K..39	5/47
	K..49	5/51
	K..69	5/55
	K..79	5/59
	K..89	5/63
	K..109	5/68
	K..129	5/73
	K..149	5/78
	K..169	5/83
	K..189	5/88
<b>Flange-mounted design</b>		
	B.F.29	5/36
	B.F.39	5/40
	B.F.49	5/44
	K.F.39	5/48
	K.F.49	5/52
	K.F.69	5/56
	K.F.79	5/60
	K.F.89	5/64
	K.F.109	5/69
	K.F.129	5/74
	K.F.149	5/79
K.F.169	5/84	
K.F.189	5/89	
<b>Flange-mounted design with VLplus reinforced bearing system</b>		
	K.F.89	5/65
	K.F.109	5/70
	K.F.129	5/75
	K.F.149	5/80
	K.F.169	5/85
<b>Housing flange design</b>		
	B.Z.29	5/37
	B.Z.39	5/41
	B.Z.49	5/45
	K.Z.39	5/49
	K.Z.49	5/53
	K.Z.69	5/57
	K.Z.79	5/61
	K.Z.89	5/66
	K.Z.109	5/71
	K.Z.129	5/76
	K.Z.149	5/81
K.Z.169	5/86	
K.Z.189	5/90	

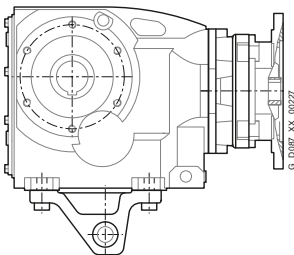
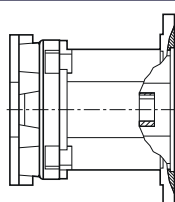
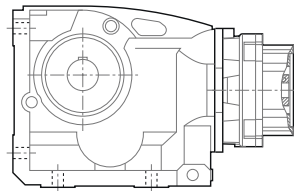
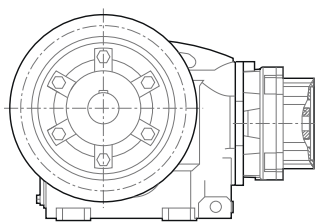
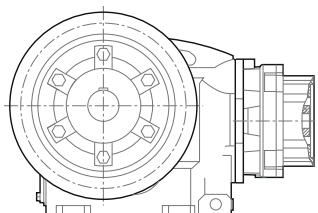
## SIMOGEAR gearboxes

### Bevel gearboxes

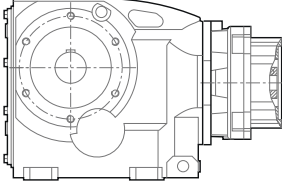
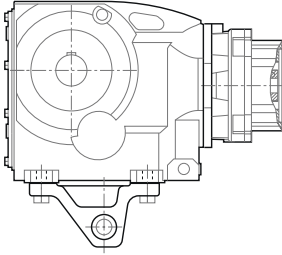
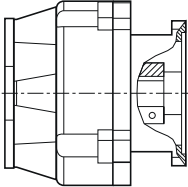
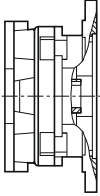
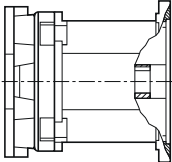
#### Dimensional drawings

#### Dimensional drawing overview

Information about dimensional drawings can be found in chapter "Introduction" page 1/17

Design	Size	Dimensional drawing on page	
<b>Bevel gearbox with adapter K4</b>			
<i>Shaft-mounted design</i>			
	BAD.29	5/38	
	BAD.39	5/42	
	BAD.49	5/46	
	KAD.39	5/50	
	KAD.49	5/54	
	KAD.69	5/58	
	KAD.79	5/62	
	KAD.89	5/67	
	KAD.109	5/72	
	KAD.129	5/77	
	KAD.149	5/82	
	KAD.169	5/87	
	KAD.189	5/91	
	<b>Bevel gearbox with adapter K2</b>		
	B..29 ... B..49	5/92	
	K..39 ... K..189	5/92 ... 5/94	
<b>Bevel gearbox with adapter KS</b>			
<i>Foot-mounted design</i>			
	B..19	5/95	
	B..29	5/99	
	B..39	5/103	
	B..49	5/107	
	K..39	5/111	
	K..49	5/115	
	K..69	5/119	
	K..79	5/123	
	K..89	5/127	
	K..109	5/132	
	K..129	5/137	
	K..149	5/142	
	K..169	5/147	
	K..189	5/152	
<i>Flange-mounted design</i>			
	B.F.19	5/96	
	B.F.29	5/100	
	B.F.39	5/104	
	B.F.49	5/108	
	K.F.39	5/112	
	K.F.49	5/116	
	K.F.69	5/120	
	K.F.79	5/124	
	K.F.89	5/128	
	K.F.109	5/133	
	K.F.129	5/138	
	K.F.149	5/143	
	K.F.169	5/148	
	K.F.189	5/153	
	<i>Flange-mounted design with VLplus reinforced bearing system</i>		
		K.F.89	5/129
K.F.109		5/134	
K.F.129		5/139	
K.F.149		5/144	
K.F.169		5/149	

**Dimensional drawing overview**

Design	Size	Dimensional drawing on page
<b>Bevel gearbox with adapter KS</b>		
<i>Housing flange design</i>		
	B.Z.19	5/97
	B.Z.29	5/101
	B.Z.39	5/105
	B.Z.49	5/109
	K.Z.39	5/113
	K.Z.49	5/117
	K.Z.69	5/121
	K.Z.79	5/125
	K.Z.89	5/130
	K.Z.109	5/135
	K.Z.129	5/140
	K.Z.149	5/145
	K.Z.169	5/150
	K.Z.189	5/154
<i>Shaft-mounted design</i>		
	BAD.19	5/98
	BAD.29	5/102
	BAD.39	5/106
	BAD.49	5/110
	KAD.39	5/114
	KAD.49	5/118
	KAD.69	5/122
	KAD.79	5/126
	KAD.89	5/131
	KAD.109	5/136
	KAD.129	5/141
	KAD.149	5/146
	KAD.169	5/151
	KAD.189	5/155
<b>Bevel gearbox with adapter K8</b>		
	K..109 ... K..189	5/156
<b>Bevel gearbox with adapter K5</b>		
	B..29 ... B..49	5/157
	K..39 ... K..189	5/157 ... 5/158
<b>Bevel gearbox with adapter K3</b>		
	B..29 ... B..49	5/159
	K..39 ... K..189	5/159 ... 5/160

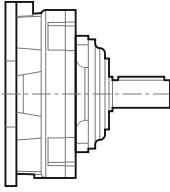


**SIMOGEAR gearboxes**

Bevel gearboxes

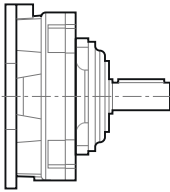
**Dimensional drawings****Dimensional drawing overview**

Design	Size	Dimensional drawing on page
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**Bevel gearbox with adapter A**

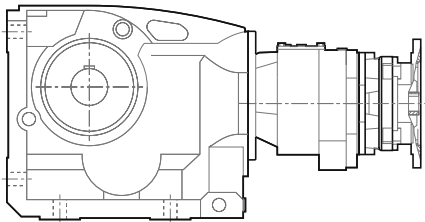
B..29 ... B..49  
K..39 ... K..189

5/161  
5/161 ... 5/162

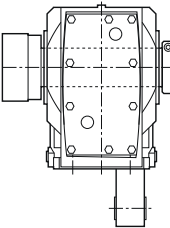
**Bevel gearbox with adapter AZ**

B..29 ... B..49  
K..39 ... K..189

5/163  
5/163 ... 5/164

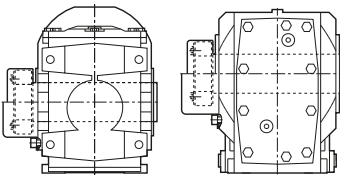
**Bevel tandem gearbox**

- K4	K.89-D/Z39 ... K.189-D/Z69	5/165
- K2	K.89-D/Z39 ... K.189-D/Z69	5/166
- KS	K.39-D/Z19 ... K.189-D/Z69	5/167 ... 5/167
- K5	K.89-D/Z39 ... K.189-D/Z69	5/169
- K3	K.89-D/Z39 ... K.189-D/Z69	5/170
- A	K.89-D/Z39 ... K.189-D/Z69	5/171
- AZ	K.89-D/Z39 ... K.189-D/Z69	5/172

**Additional versions and options****SIMOLOC assembly system**

BADR29 ... BADR49  
KADR39 ... KADR89

5/173  
5/173 ... 5/174

**Protective covers**

BA.29 ... BA.49  
KA.39 ... KA.189

5/175 ... 5/176

**Inner contour of the flange design**

B.F.29 ... B.F.49  
K.F.39 ... K.F.189

5/177



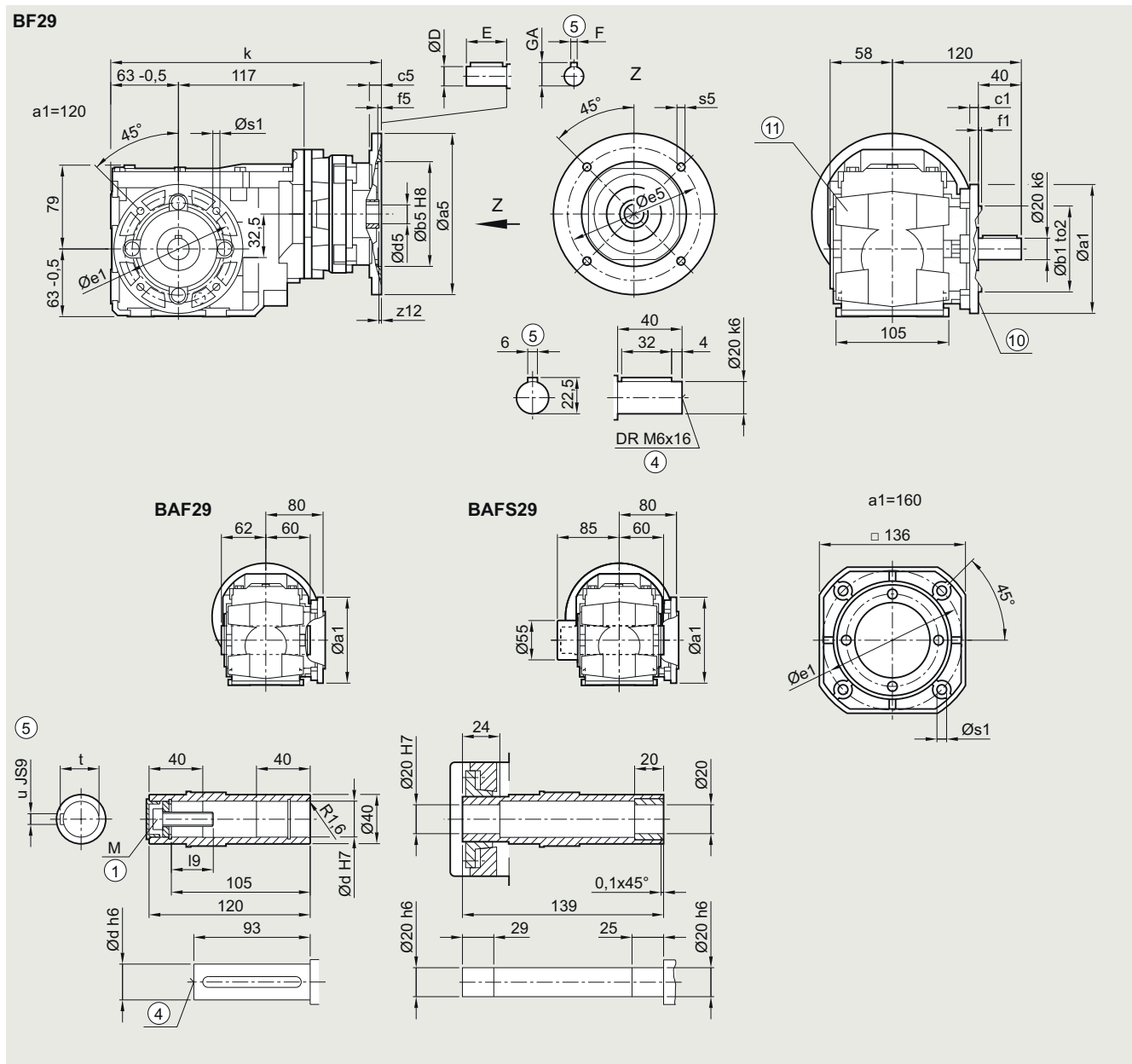
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### B.F.29 gearbox in a flange-mounted design

**BF030K4, BAF030K4, BAFS030K4**



Flange	a1	b1	to2	c1	e1	f1	s1					
	120	80	j6	8	100	3.0	6.6					
	160	110	j6	9	130	3.5	9.0					
Shaft	d	i9	M	t	u							
	20	23.4	M6	22.8	6							
	25	27.6	M10	28.3	8							
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	257.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	285.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	285.5

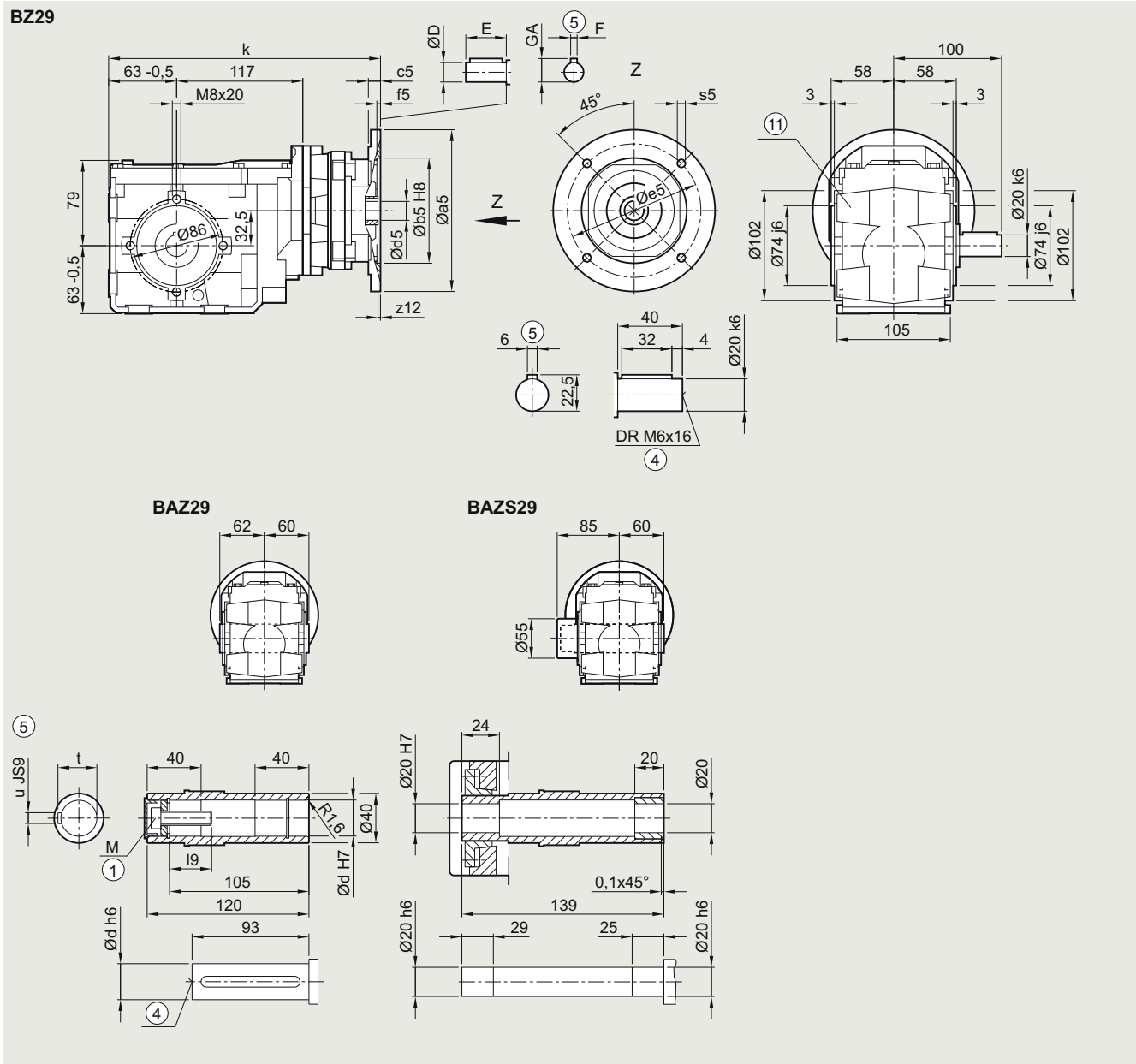
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

**B.Z.29 gearbox in a housing flange design****BZ030K4, BAZ030K4, BAZS030K4**

Shaft	d	I9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	257.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	285.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	285.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

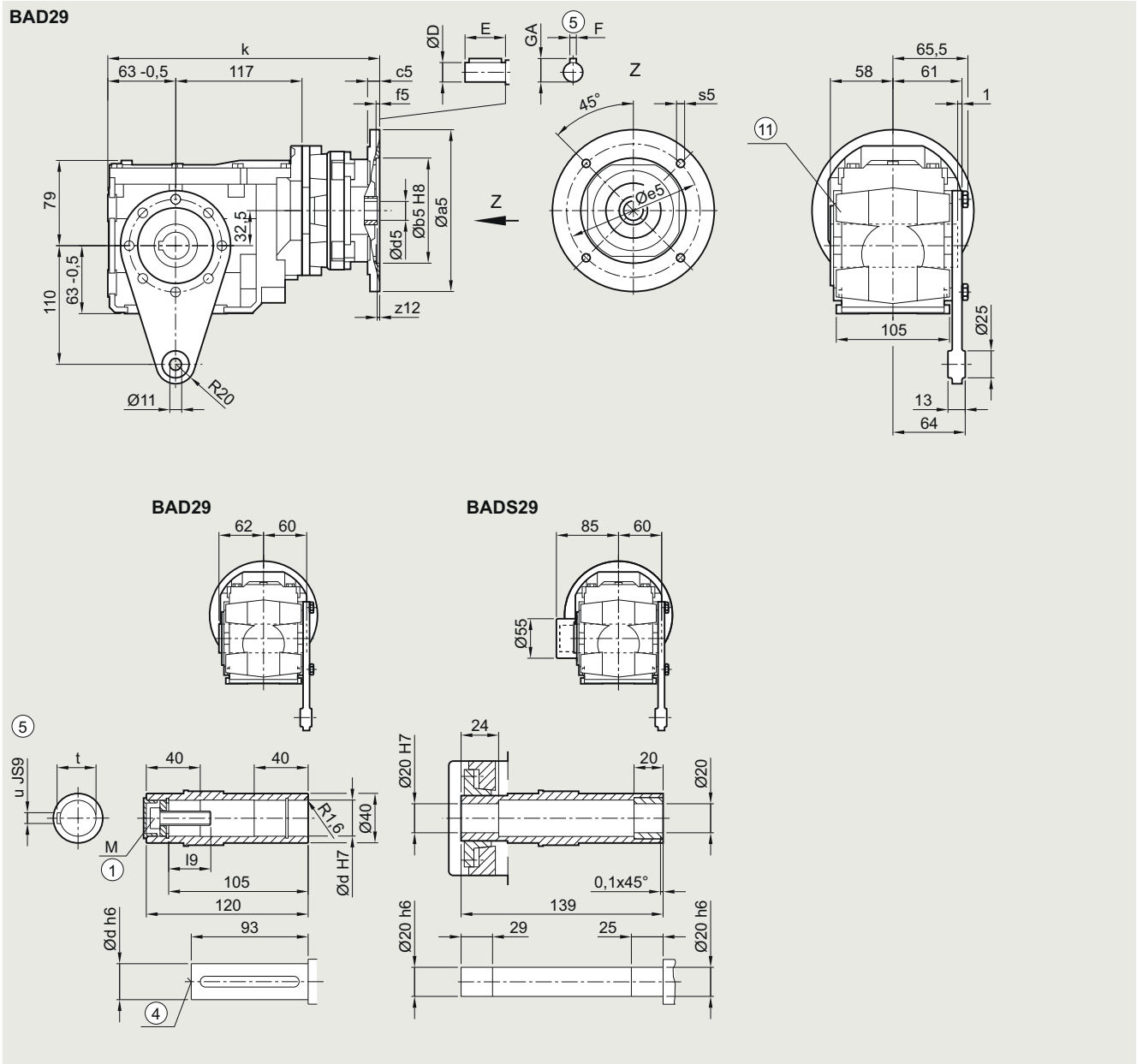
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### BAD.29 gearbox in a shaft-mounted design

**BAD030K4, BADS030K4**



Shaft	d	l9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

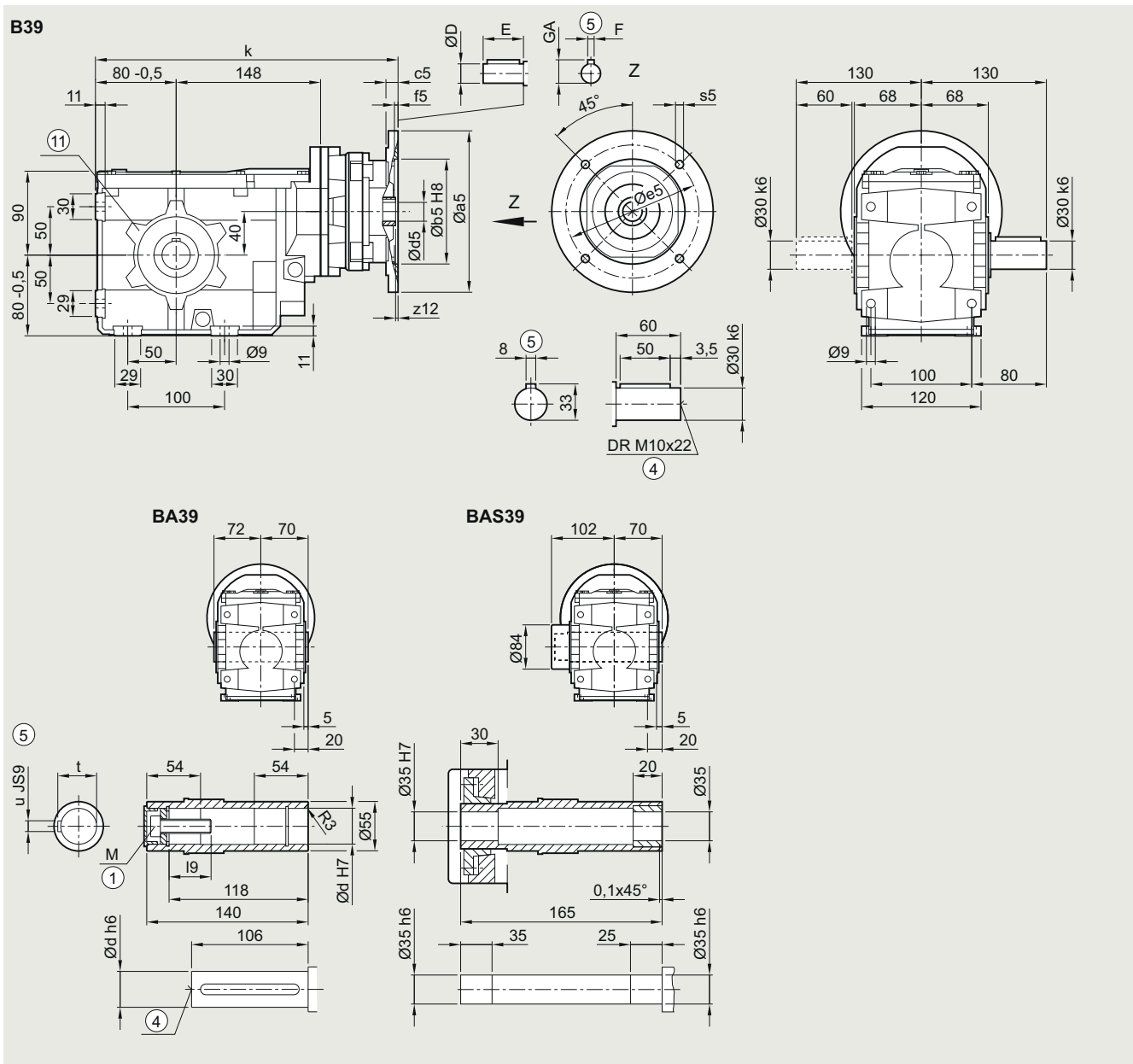
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	257.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	285.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	285.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

**B..39 gearbox in a foot-mounted design****B030K4, BA030K4, BAS030K4**

Shaft	d	l9	M	t	u
	30	32.6	M10	33.3	8
	35	37.0	M12	38.3	10
	40	47.75	M16	43.3	12

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	305.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	305.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	333.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	333.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	388.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for housing flange design

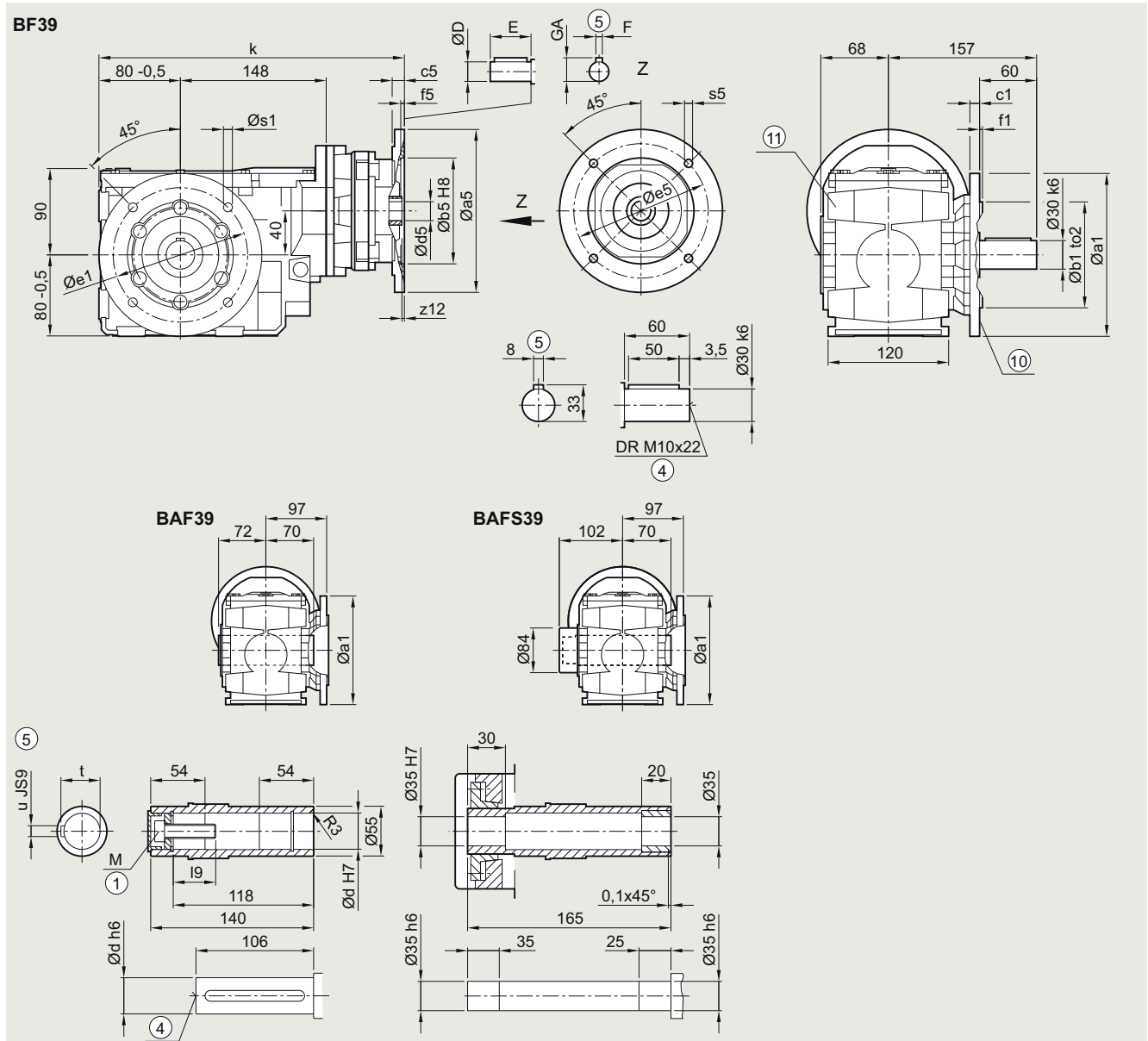
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### B.F.39 gearbox in a flange-mounted design

BF030K4, BAF030K4, BAFS030K4



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					
Shaft	d	l9	M	t	u							
	30	32.6	M10	33.3	8							
	35	37.0	M12	38.3	10							
	40	47.75	M16	43.3	12							
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	305.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	305.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	333.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	333.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	388.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design





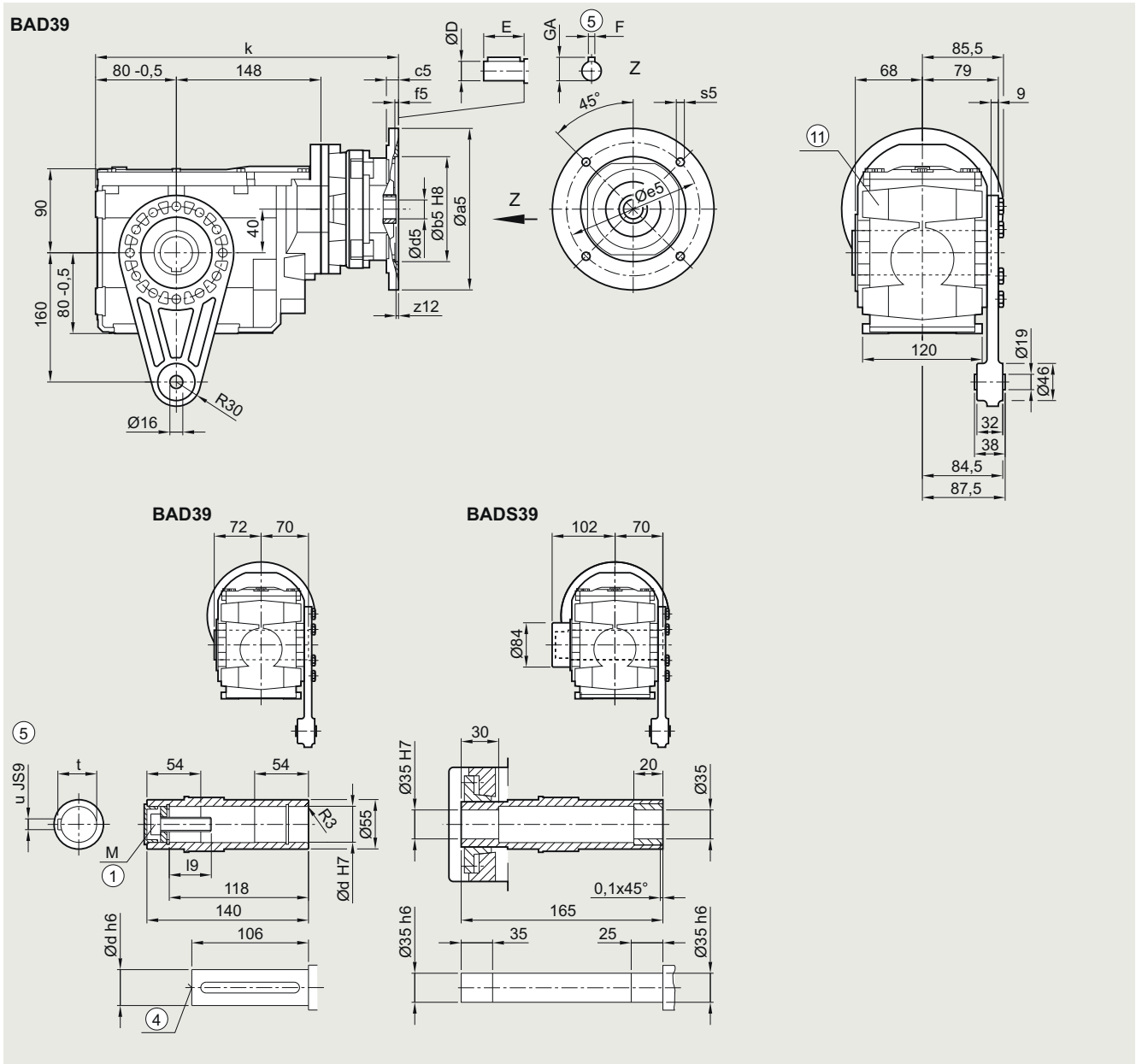
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### BAD.39 gearbox in a shaft-mounted design

**BAD030K4, BADS030K4**



Shaft	d	l9	M	t	u
	30	32.6	M10	33.3	8
	35	37.0	M12	38.3	10
	40	47.75	M16	43.3	12

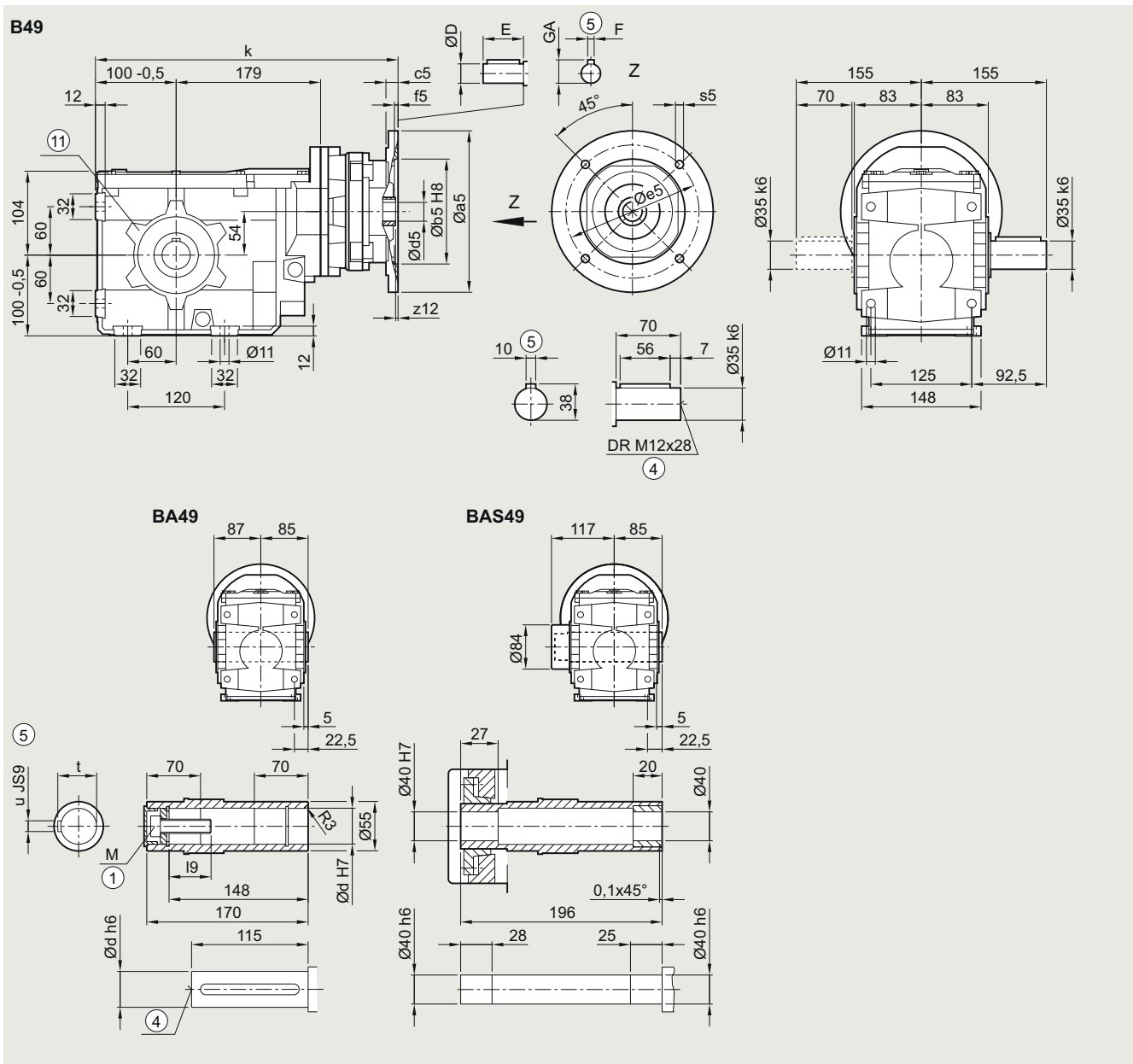
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	305.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	305.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	333.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	333.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	388.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

**B..49 gearbox in a foot-mounted design****B030K4, BA030K4, BAS030K4**

Shaft	d	l9	M	t	u								
	35	57	M12	38.3	10								
	40	67.75	M16	43.3	12								
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k	
	63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	347.0
	71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	347.0
	80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	375.0
	90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	375.0
	100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
	112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
	132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	447.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for housing flange design

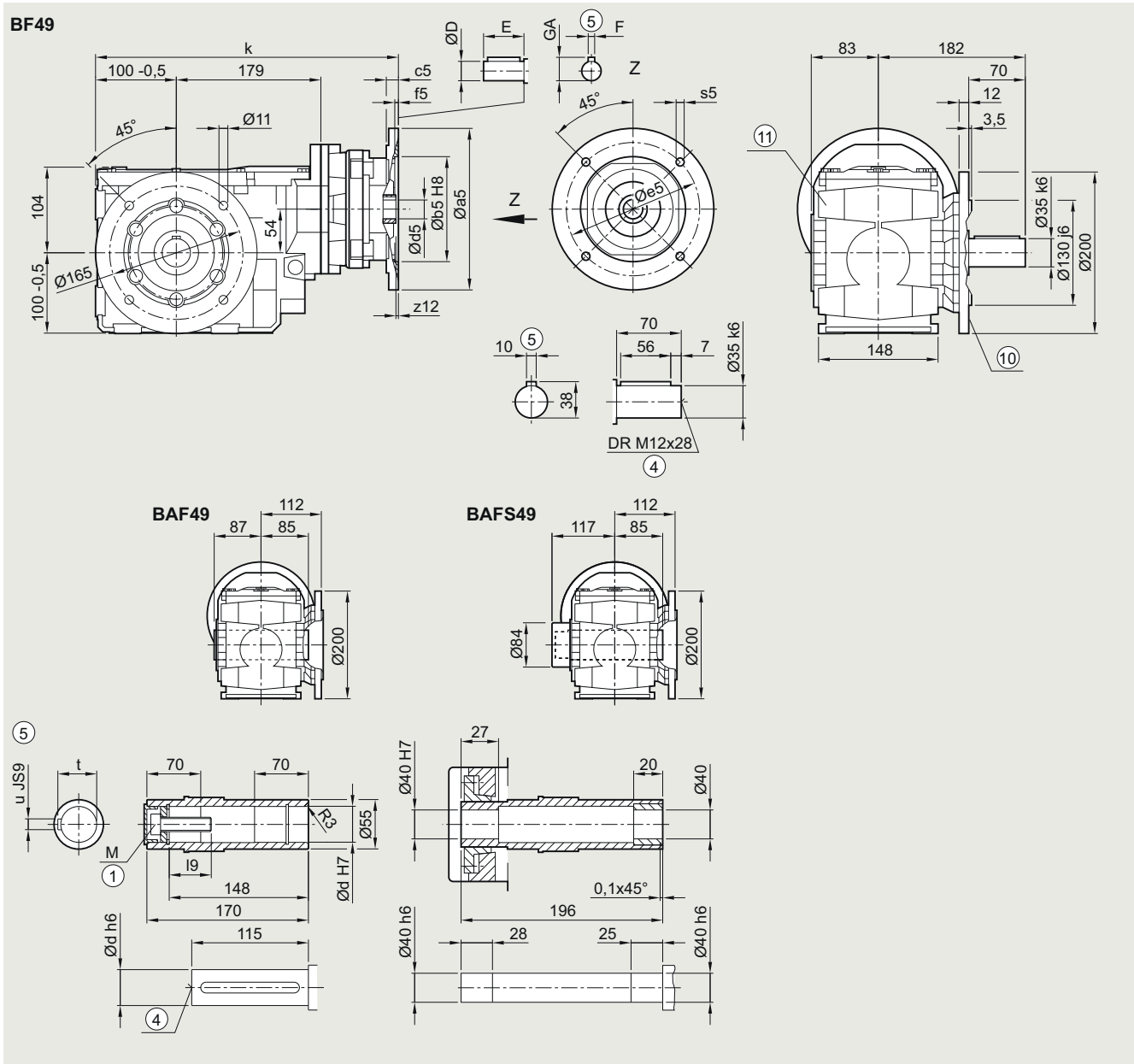
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### B.F.49 gearbox in a flange-mounted design

BF030K4, BAF030K4, BAFS030K4



Shaft	d	l9	M	t	u								
	35	57	M12	38.3	10								
	40	67.75	M16	43.3	12								
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k	
	63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	347.0
	71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	347.0
	80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	375.0
	90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	375.0
	100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
	112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
	132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	447.0

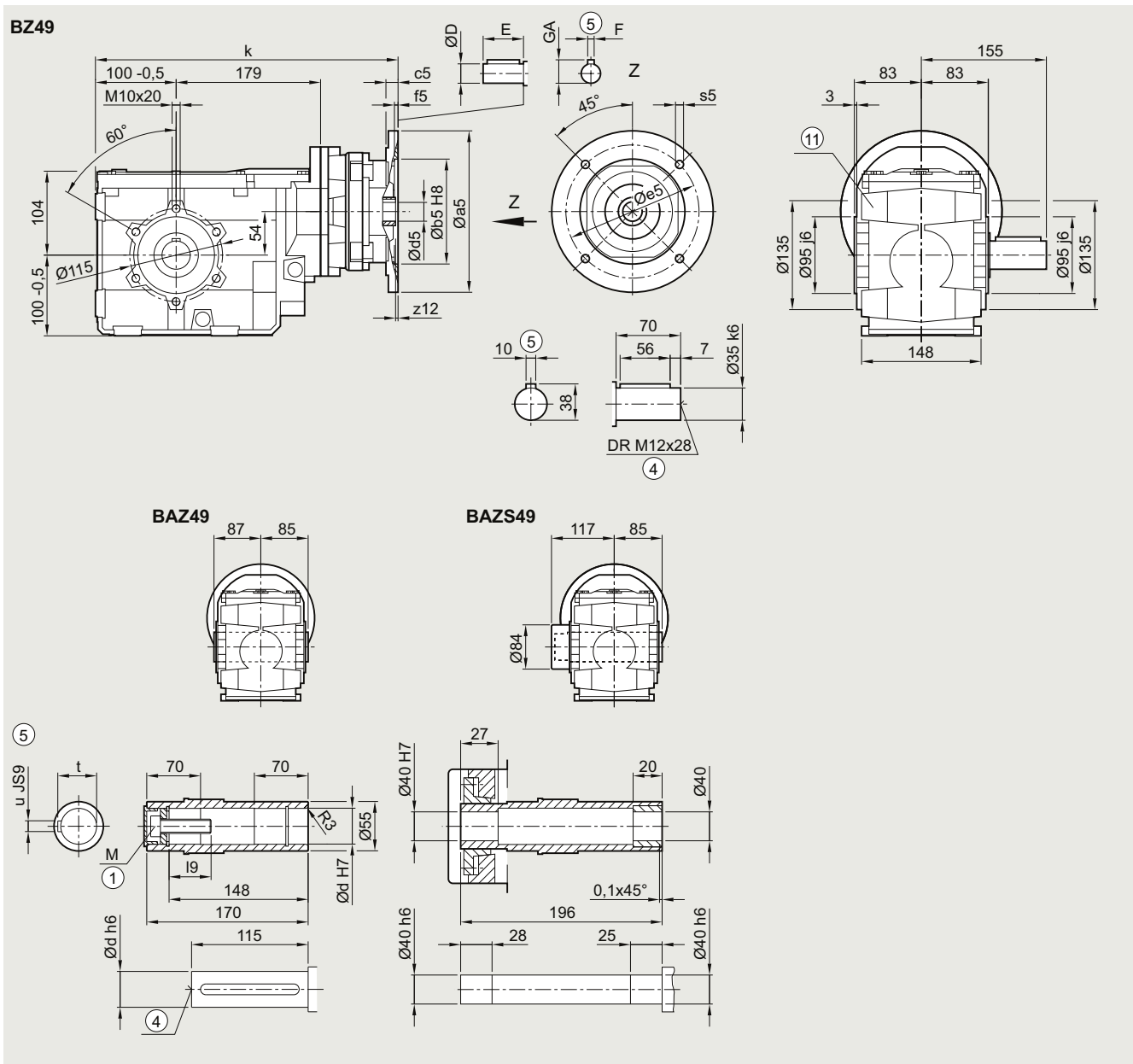
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

**B.Z.49 gearbox in a housing flange design****BZ030K4, BAZ030K4, BAZS030K4**

Shaft	d	l9	M	t	u								
	35	57	M12	38.3	10								
	40	67.75	M16	43.3	12								
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k	
	63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	347.0
	71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	347.0
	80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	375.0
	90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	375.0
	100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
	112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
	132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	447.0

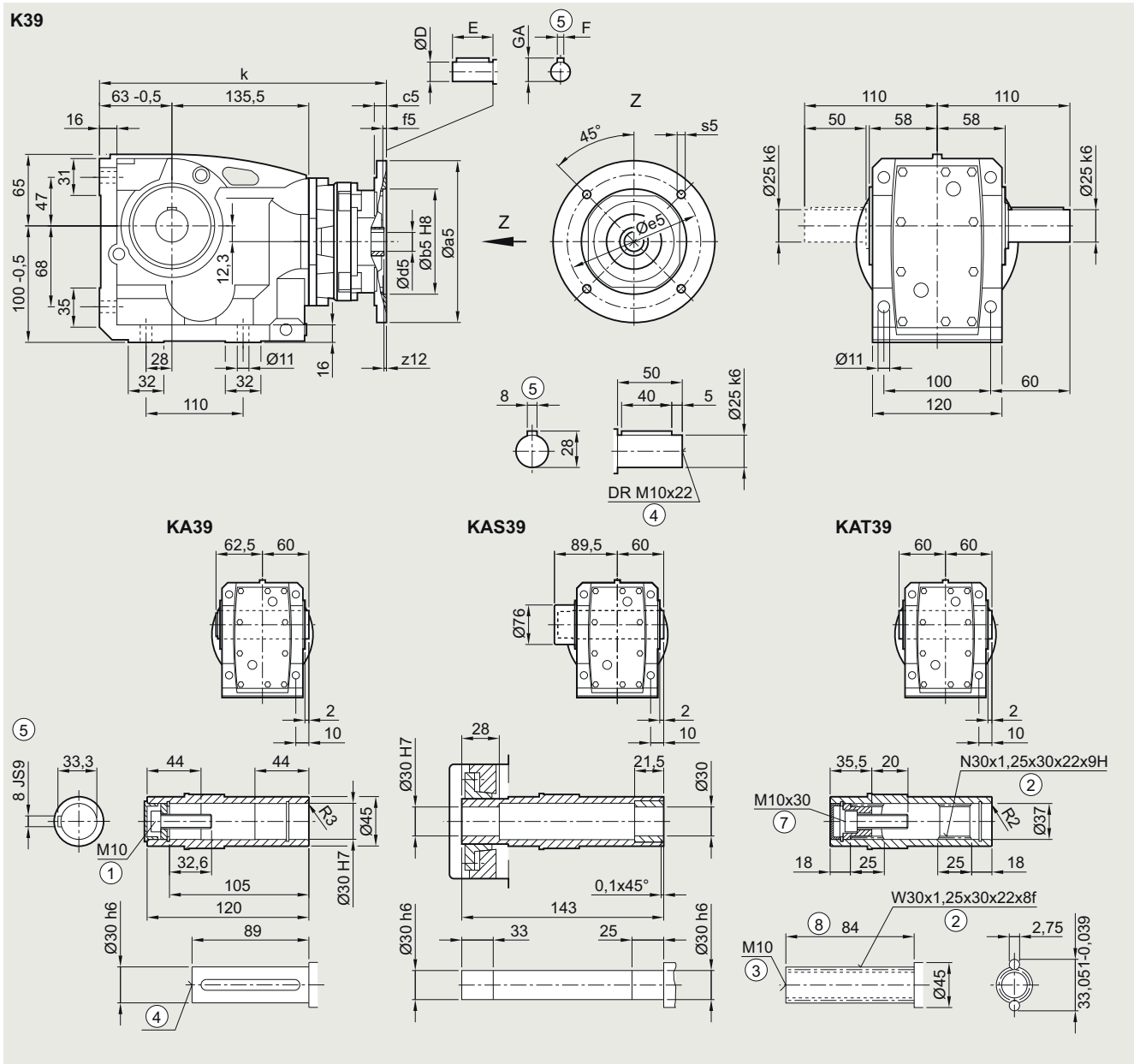
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design



**K.39 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	275.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	303.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	303.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

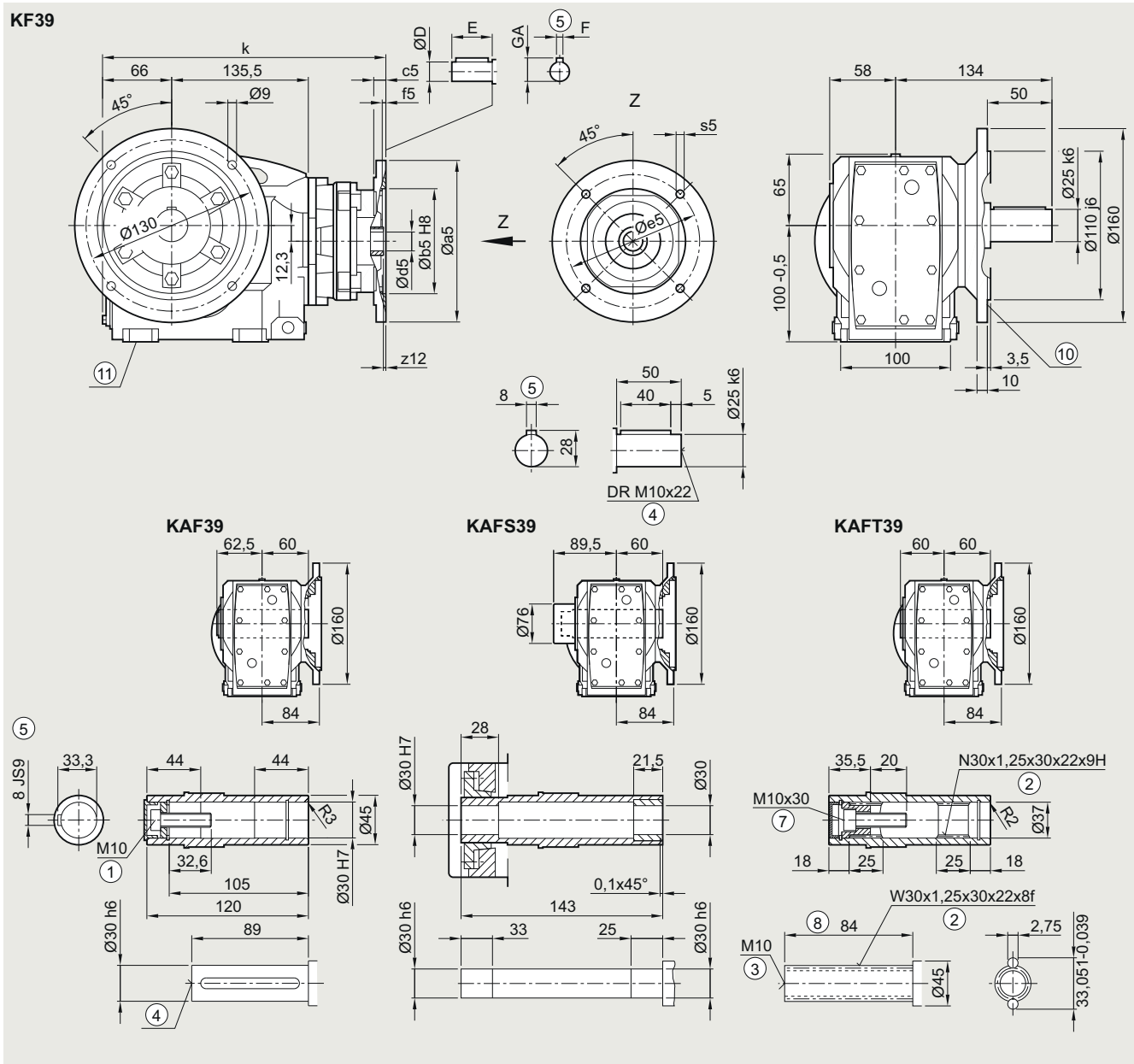
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.39 gearbox in a flange-mounted design

**KF030K4, KAF030K4, KAFS030K4, KAFT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	278.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	278.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	306.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	306.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

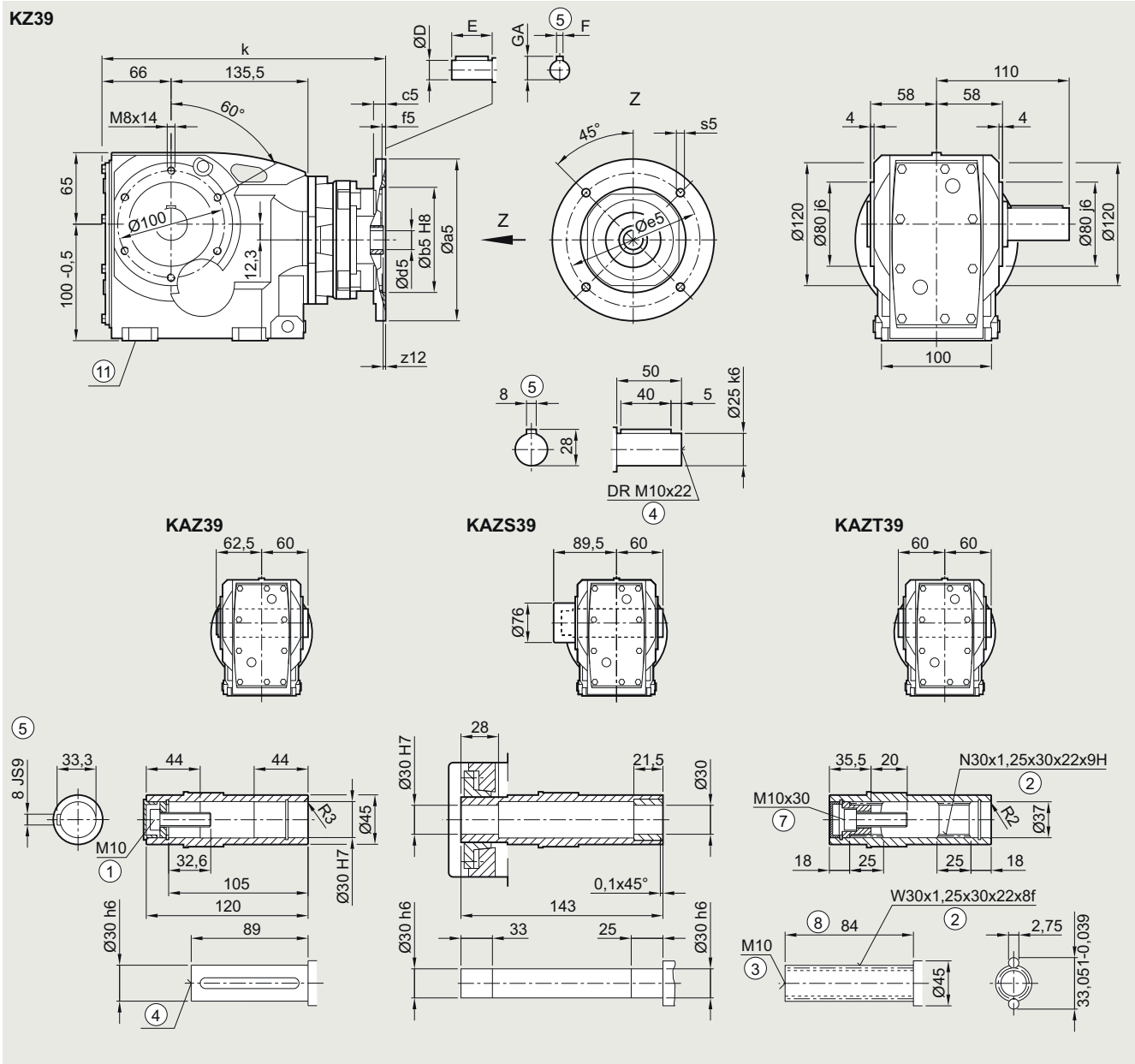
⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

**K.Z.39 gearbox in a housing flange design**

**KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4**



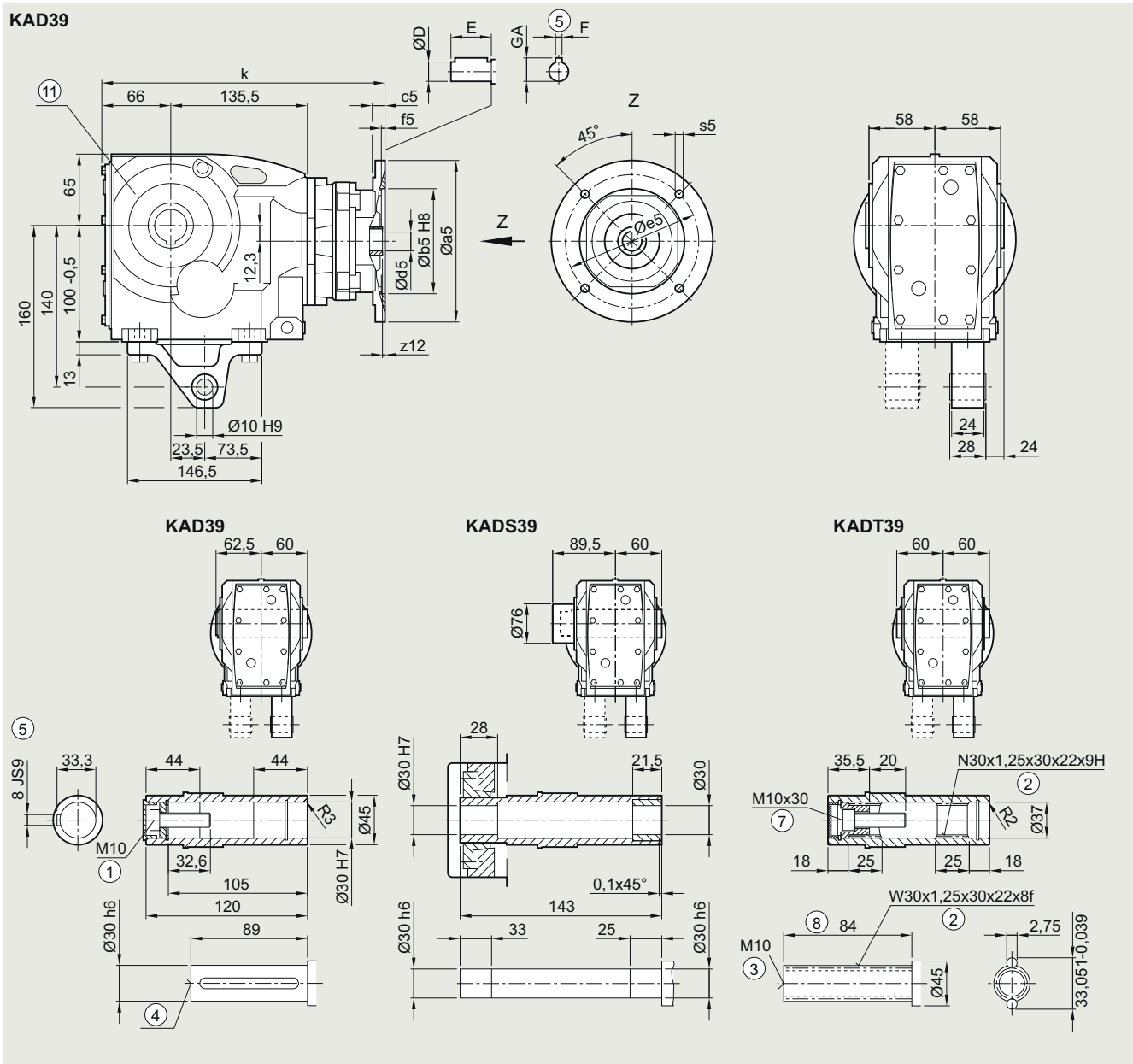
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	278.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	278.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	306.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	306.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.0

① ISO 4014      ② DIN 5480      ③ DIN 332-D      ④ DIN 332      ⑤ Feather key/keyway DIN 6885  
 ⑦ ISO 4762      ⑧ Without locating shoulder +1 mm      ⑥ Use bores only for foot-mounted design



**SIMOGEAR gearboxes**

Bevel gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****KAD.39 gearbox in a shaft-mounted design****KAD031K4, KADS031K4, KADT031K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	278.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	278.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	306.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	306.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.0

① ISO 4014

② DIN 5480

③ DIN 332-D

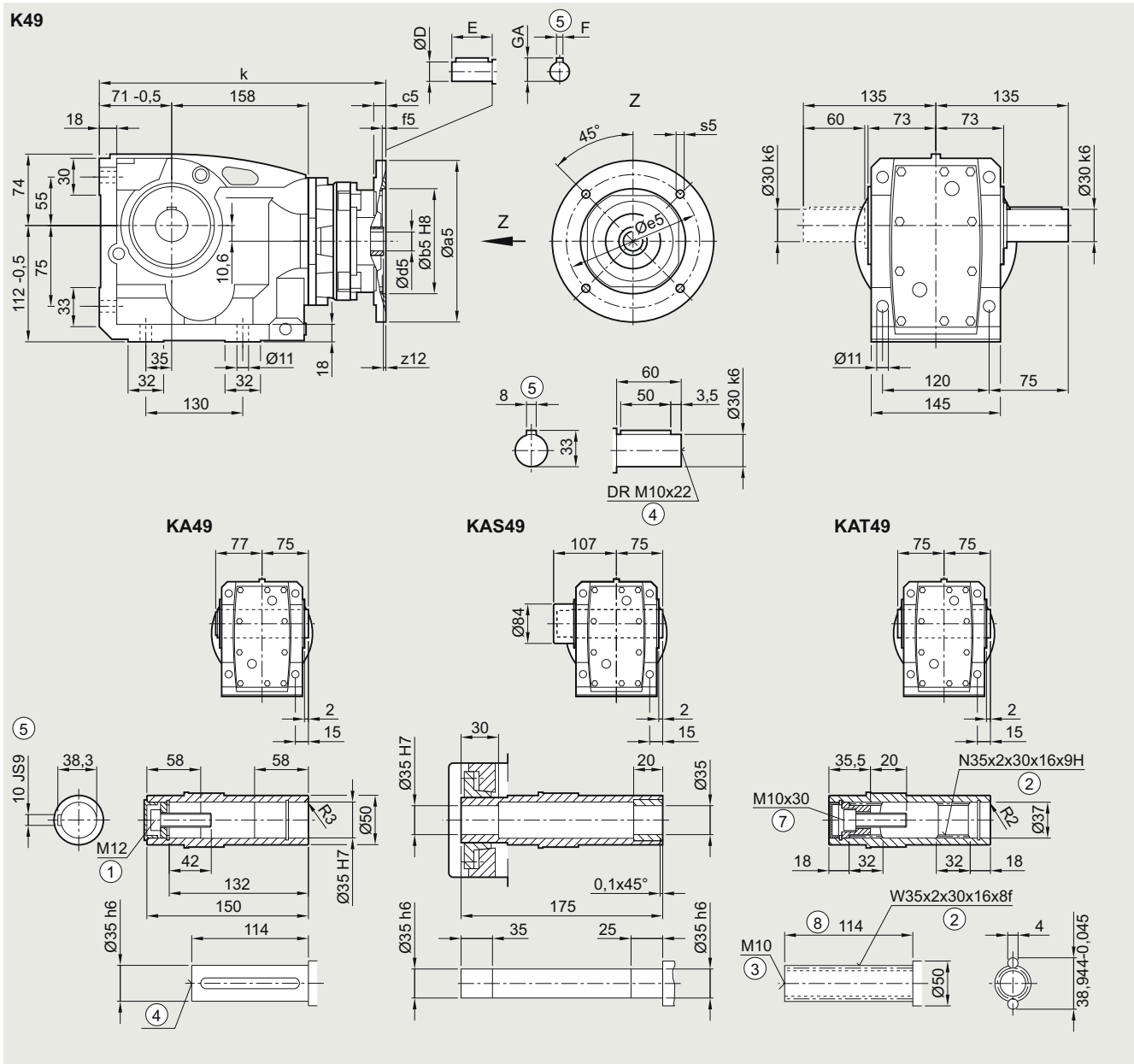
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

**K.49 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	297.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	297.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	325.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	325.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	379.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	379.5
132	300	230	12	6	265	M12x20	3.0	38	80	10	41.0	397.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

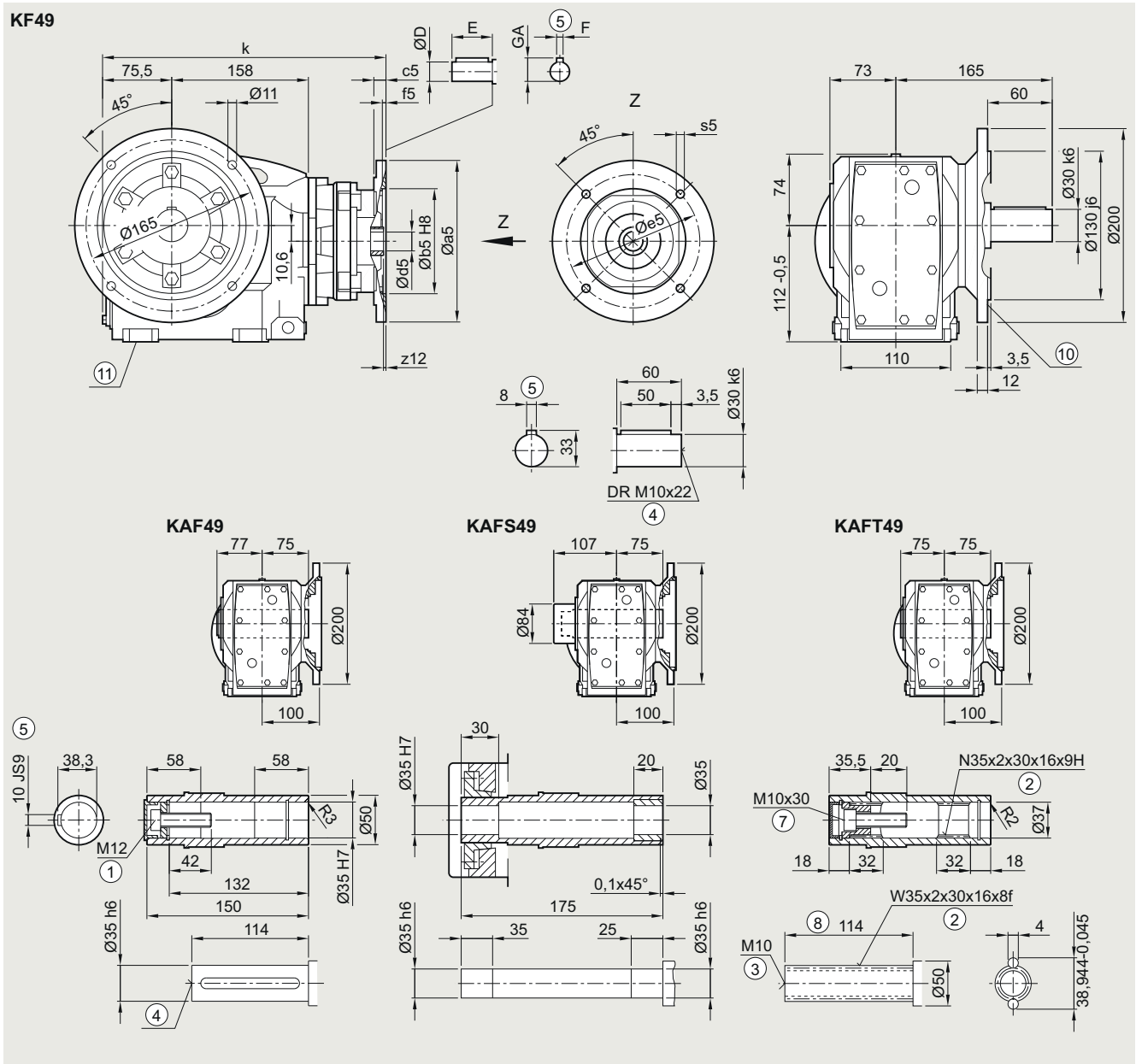
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.49 gearbox in a flange-mounted design

**KF030K4, KAF030K4, KAFS030K4, KAFT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	301.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	301.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	329.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	329.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	401.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

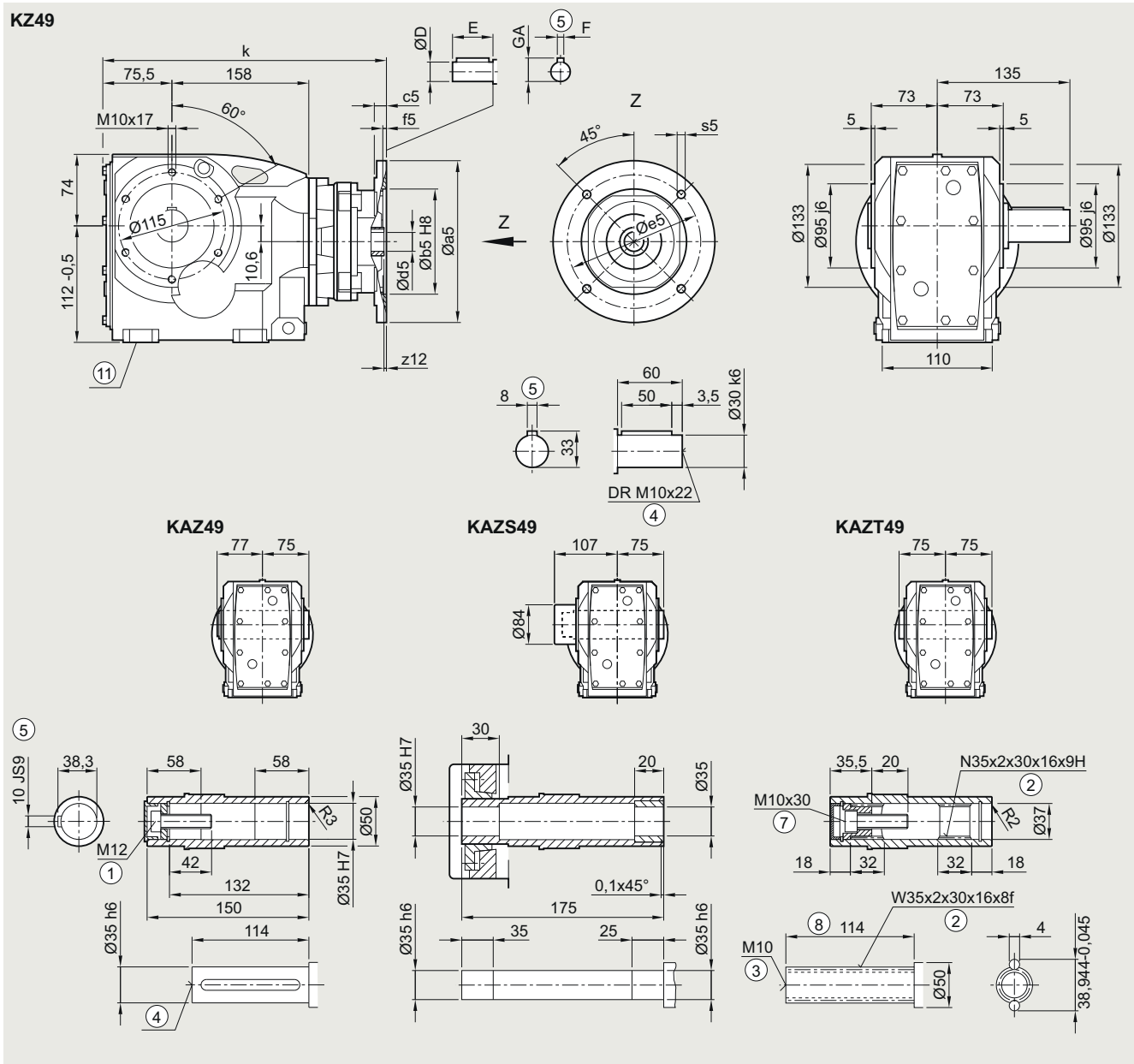
⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

**K.Z.49 gearbox in a housing flange design****KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	301.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	301.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	329.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	329.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	401.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design

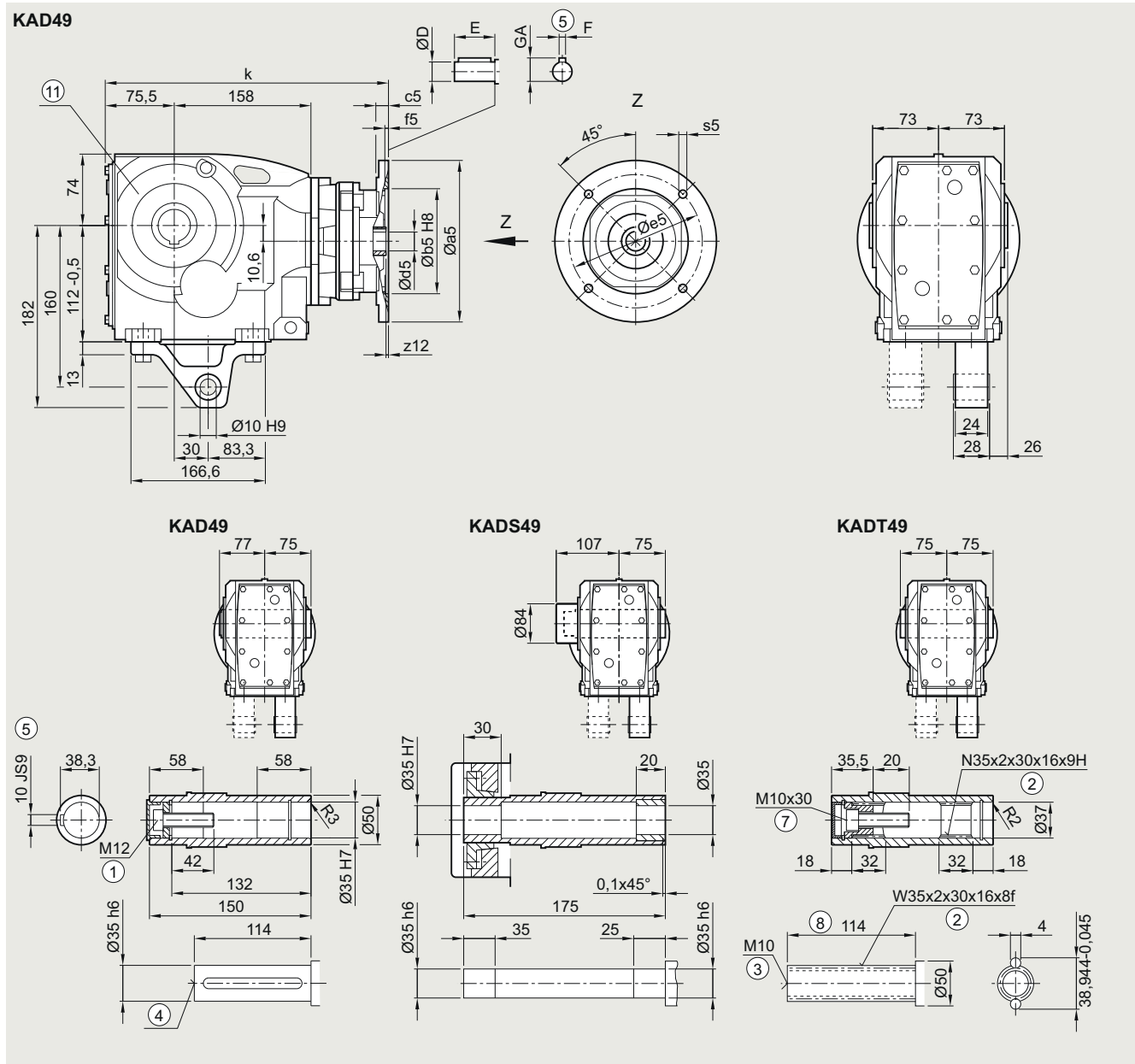
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### KAD.49 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	301.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	301.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	329.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	329.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	401.5

① ISO 4014

② DIN 5480

③ DIN 332-D

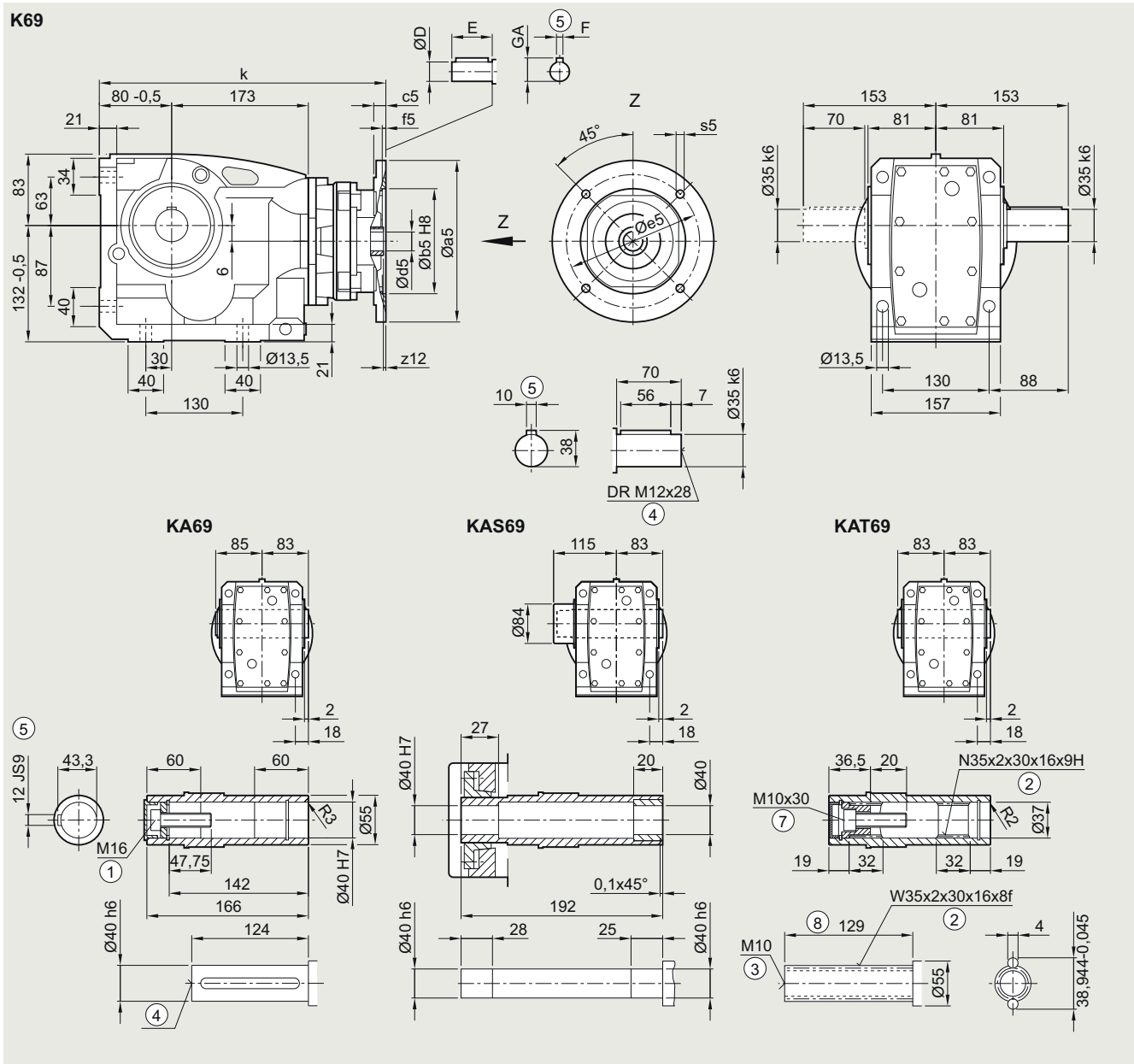
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

**K.69 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115.0	M8	2.5	11	23	4	12.5	321.0
71	160	110	12	4.5	130.0	M8	2.5	14	30	5	16.0	321.0
80	200	130	15	4.5	165.0	M10	4.0	19	40	6	12.5	349.0
90	200	130	15	4.5	165.0	M10	4.0	24	50	8	27.0	349.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	403.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	403.5
132	300	230	12	6	265.0	M12x20	3.0	38	80	10	41.0	421.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

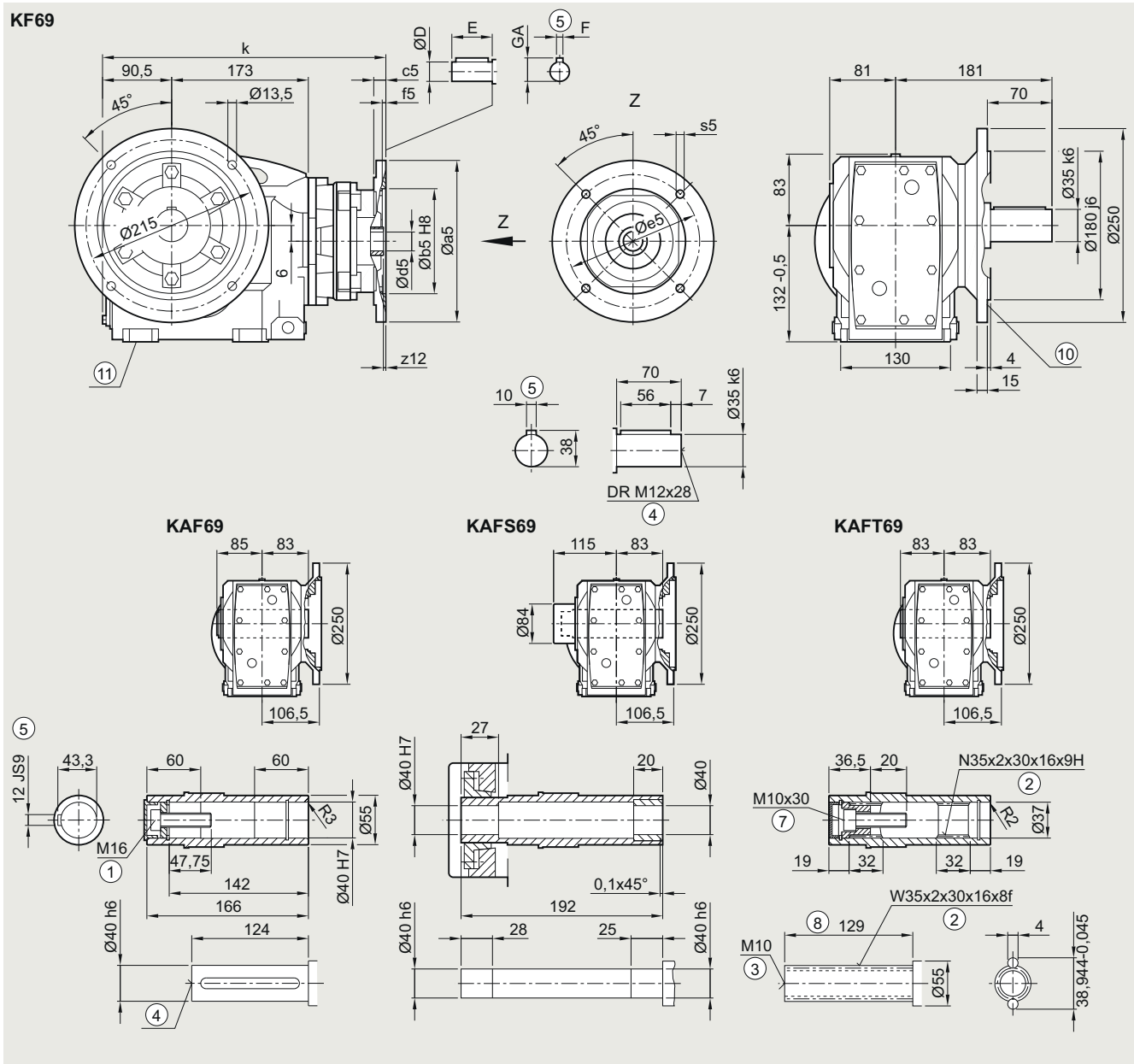
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.69 gearbox in a flange-mounted design

**KF030K4, KAF030K4, KAFS030K4, KAFT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	331.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	331.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	359.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	359.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	431.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

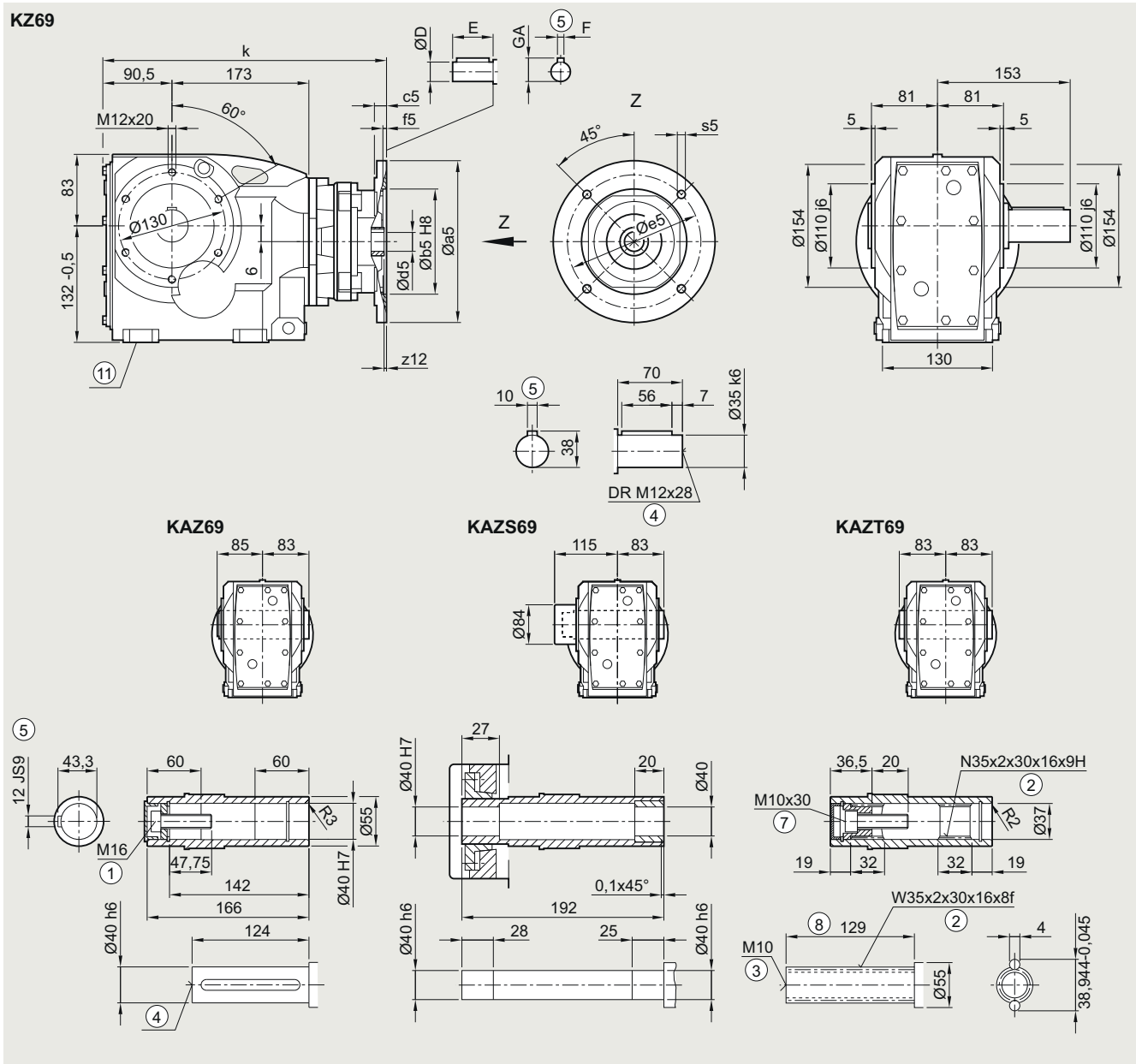
⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

**K.Z.69 gearbox in a housing flange design****KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	331.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	331.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	359.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	359.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	431.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design



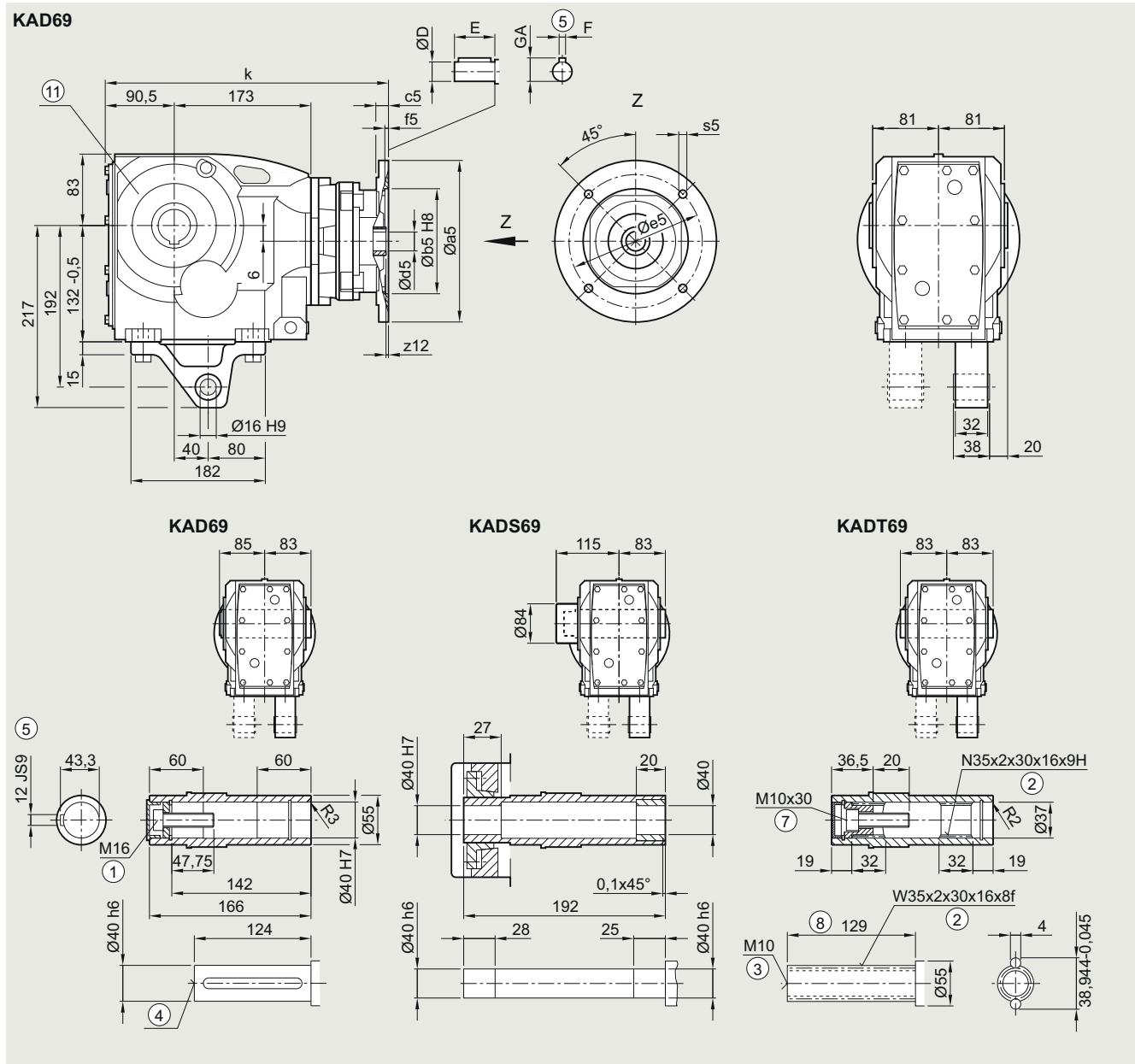
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### KAD.69 gearbox in a shaft-mounted design

**KAD030K4, KADS030K4, KADT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	331.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	331.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	359.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	359.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	431.5

① ISO 4014

② DIN 5480

③ DIN 332-D

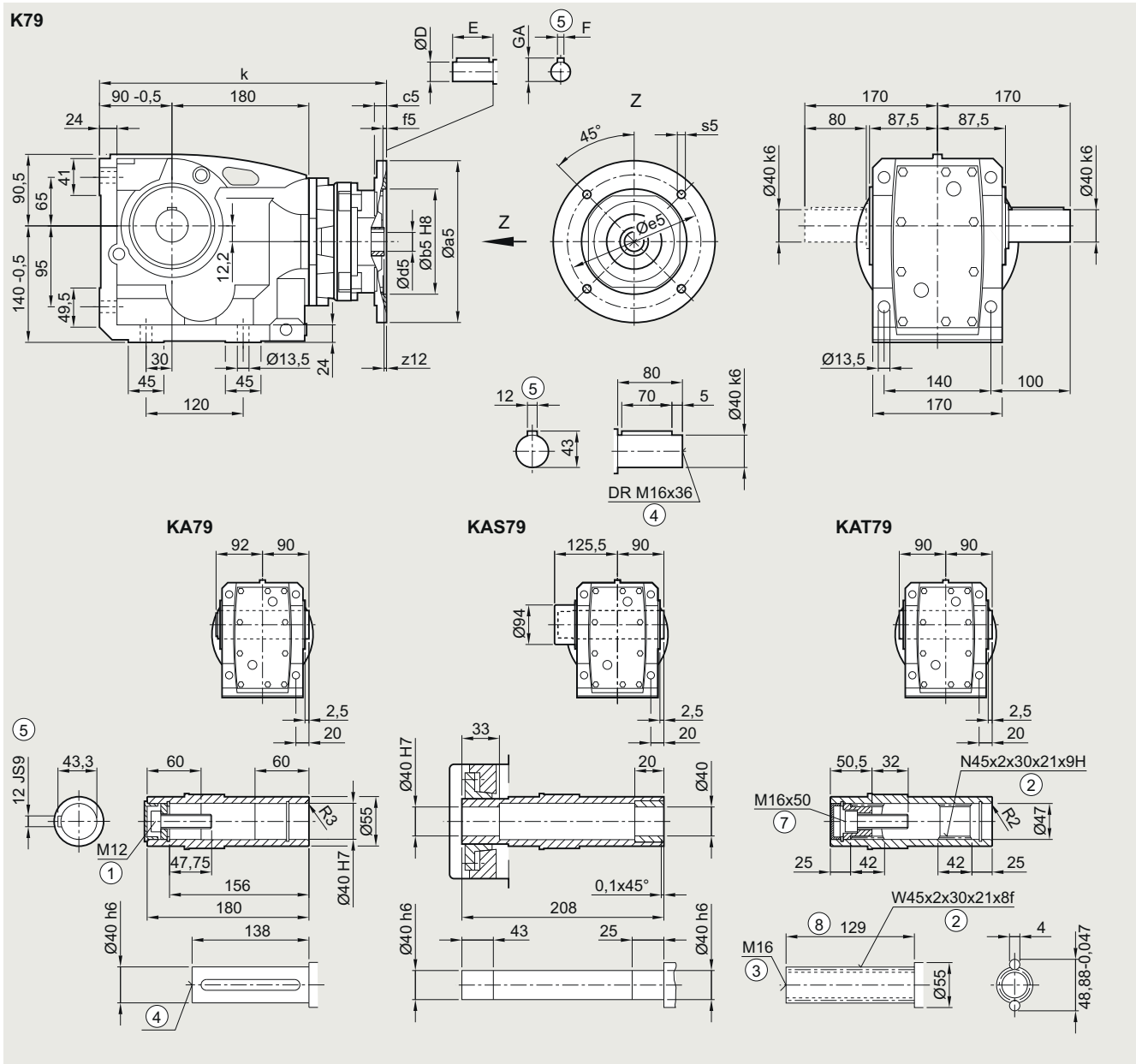
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑥ Without locating shoulder +1 mm

⑦ Use bores only for housing flange design

**K.79 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115.0	M8	2.5	11	23	4	12.5	338.0
71	160	110	12	4.5	130.0	M8	2.5	14	30	5	16.0	338.0
80	200	130	15	4.5	165.0	M10	4.0	19	40	6	12.5	366.0
90	200	130	15	4.5	165.0	M10	4.0	24	50	8	27.0	366.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.5
132	300	230	12	6	265.0	M12x20	3.0	38	80	10	41.0	438.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

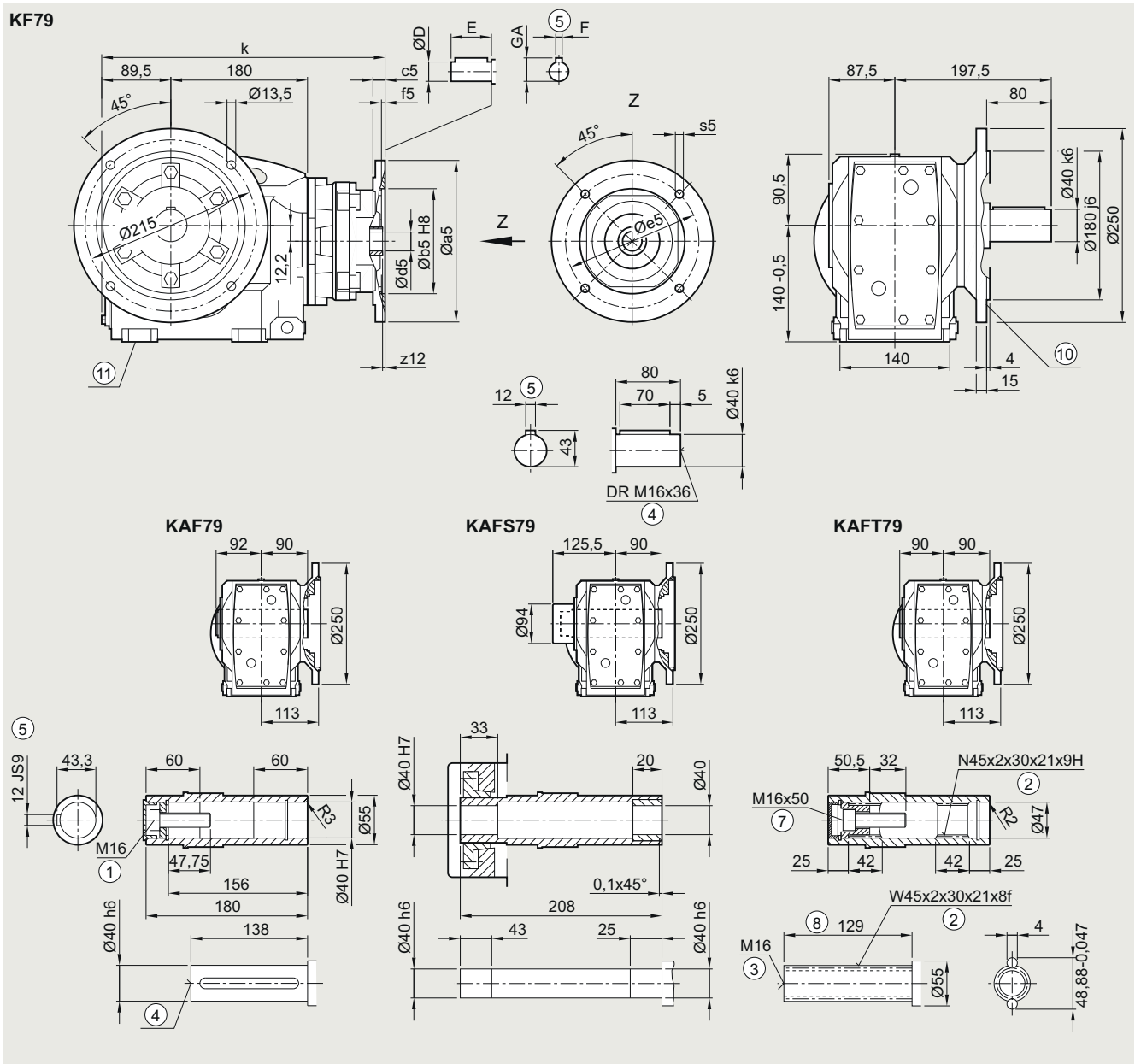
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.79 gearbox in a flange-mounted design

**KF030K4, KAF030K4, KAFS030K4, KAFT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	337.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	337.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	365.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	365.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	437.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

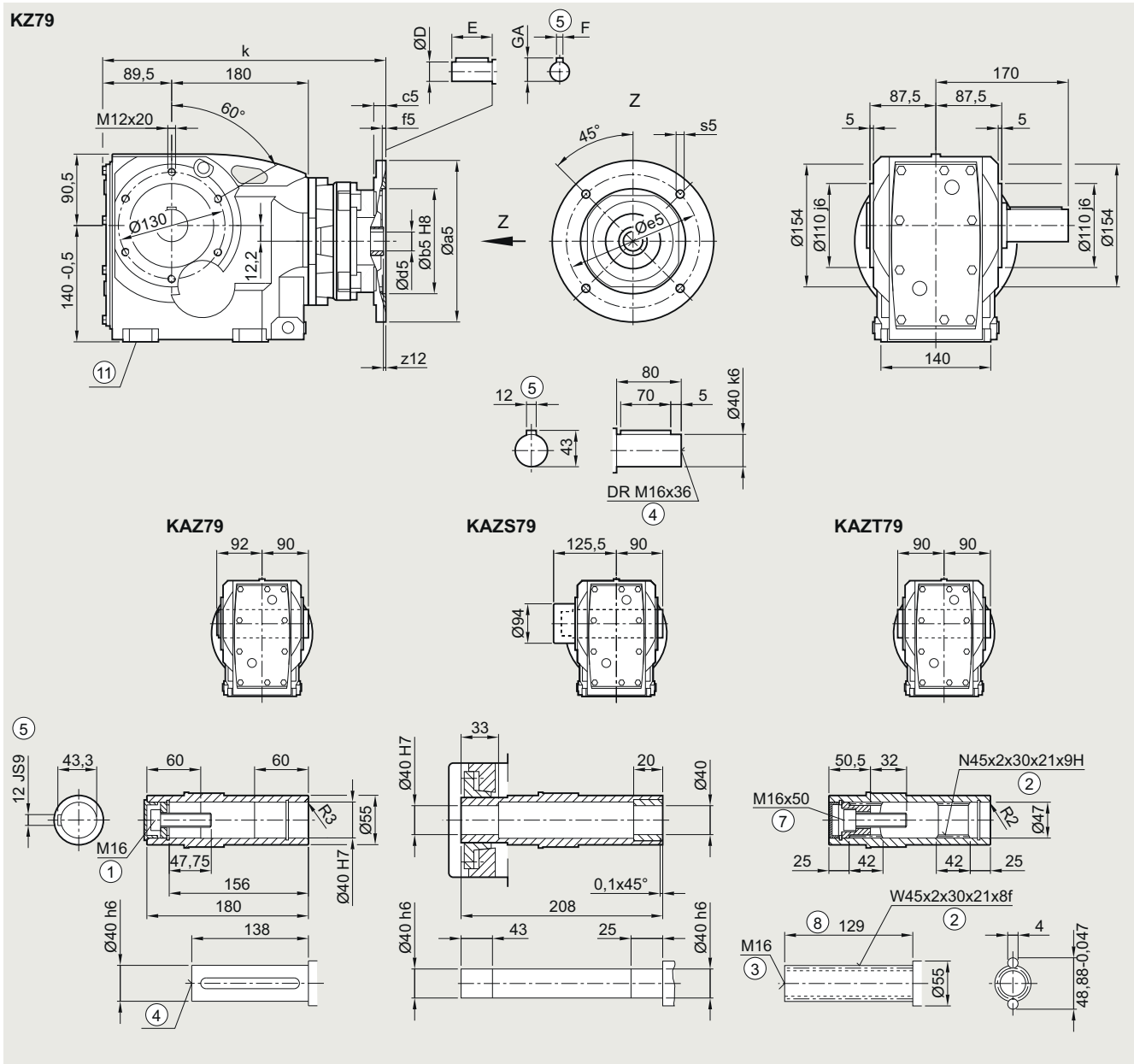
⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ For inner contour, see page 5/177

⑨ Use bores only for foot-mounted design

**K.Z.79 gearbox in a housing flange design****KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	337.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	337.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	365.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	365.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	437.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

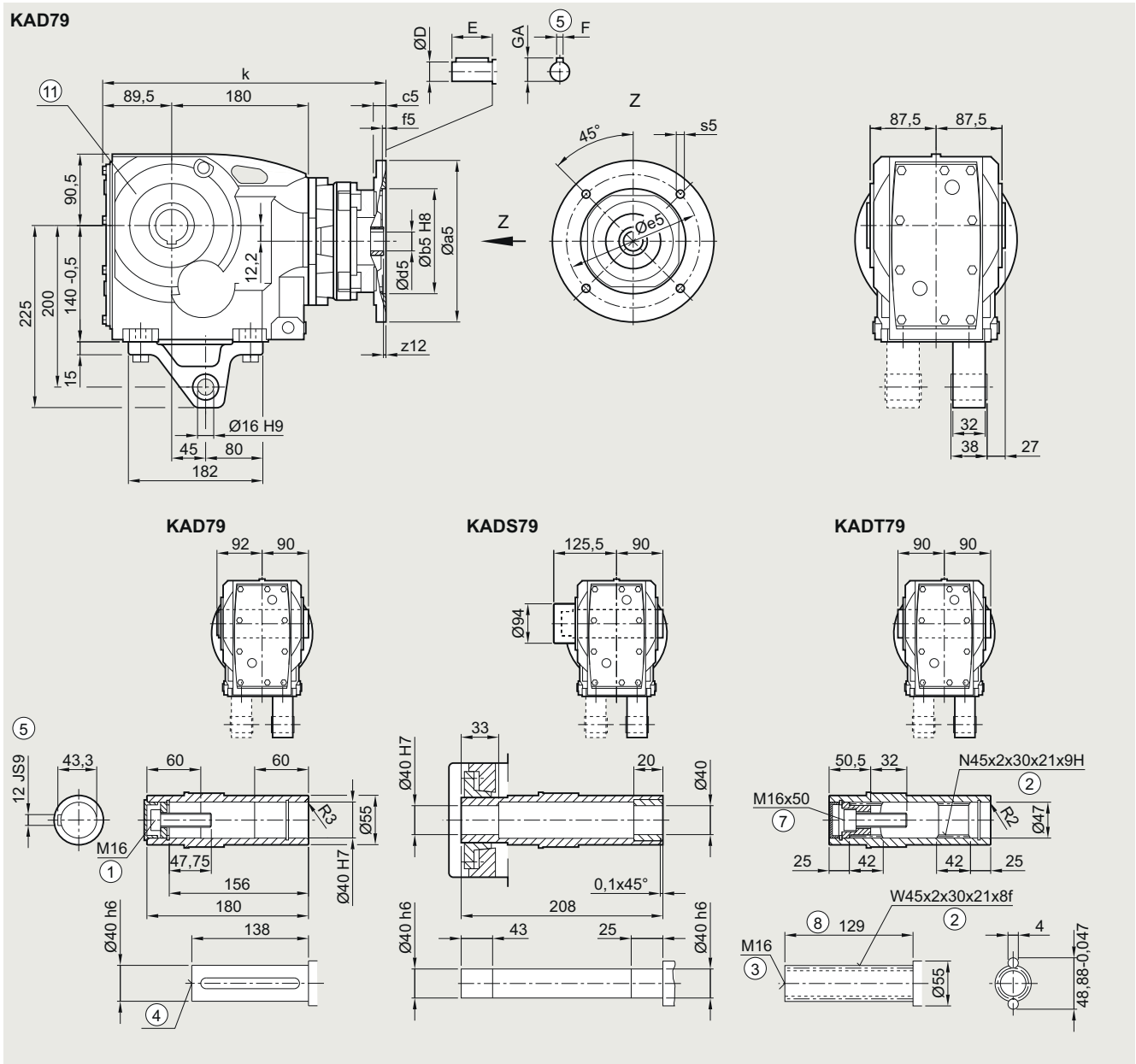
⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for foot-mounted design

**SIMOGEAR gearboxes**

Bevel gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****KAD.79 gearbox in a shaft-mounted design****KAD030K4, KADS030K4, KADT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	337.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	337.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	365.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	365.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	437.5

① ISO 4014

② DIN 5480

③ DIN 332-D

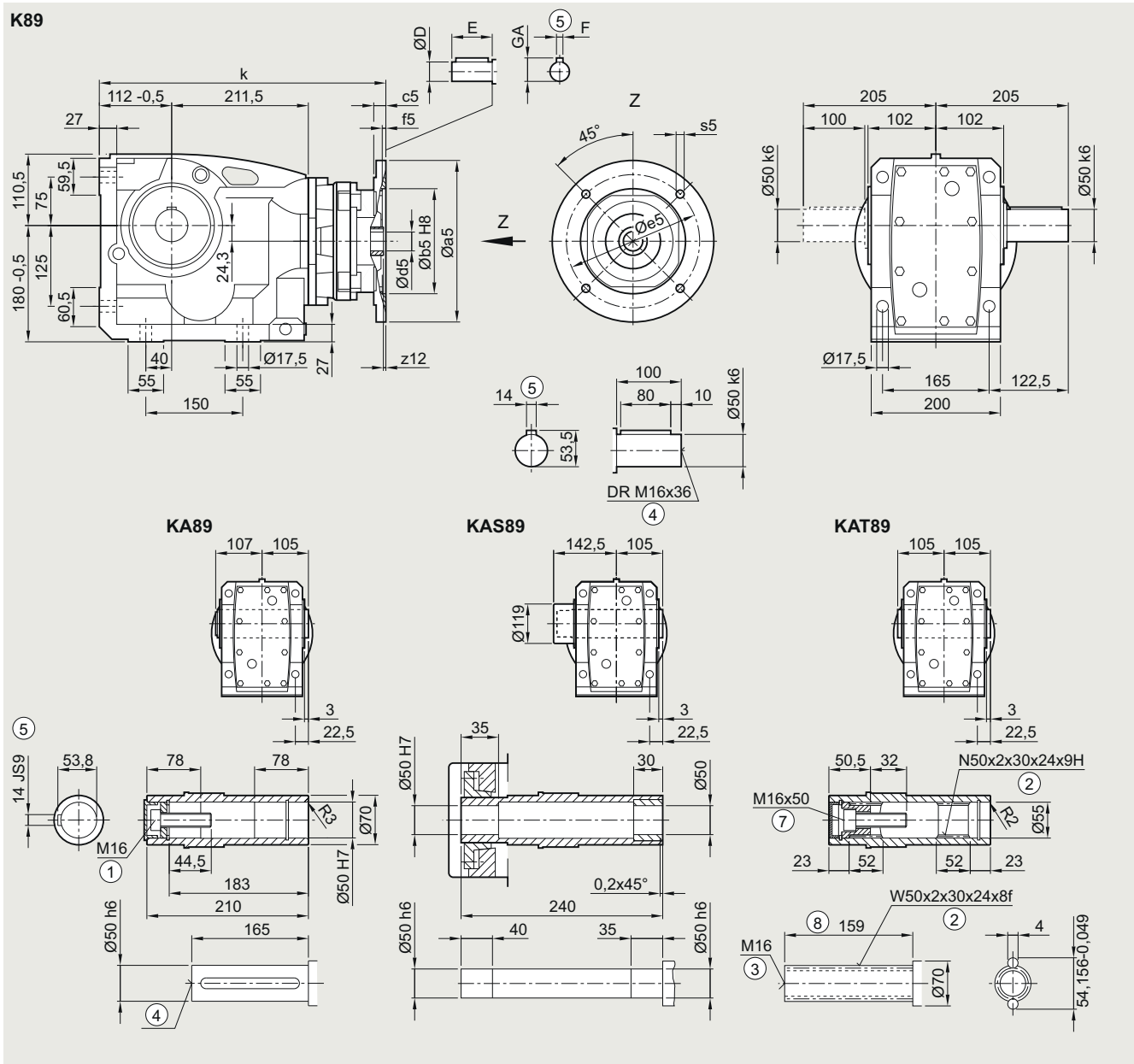
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

**K.89 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130.0	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165.0	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165.0	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215.0	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215.0	M12	7.5	28	60	8	31.0	468.0
132	300	230	12	6.0	265.0	M12x20	3.0	38	80	10	41.0	485.5
160	350	250	15	6.0	300.0	M16x25	3.0	42	110	12	45.0	515.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

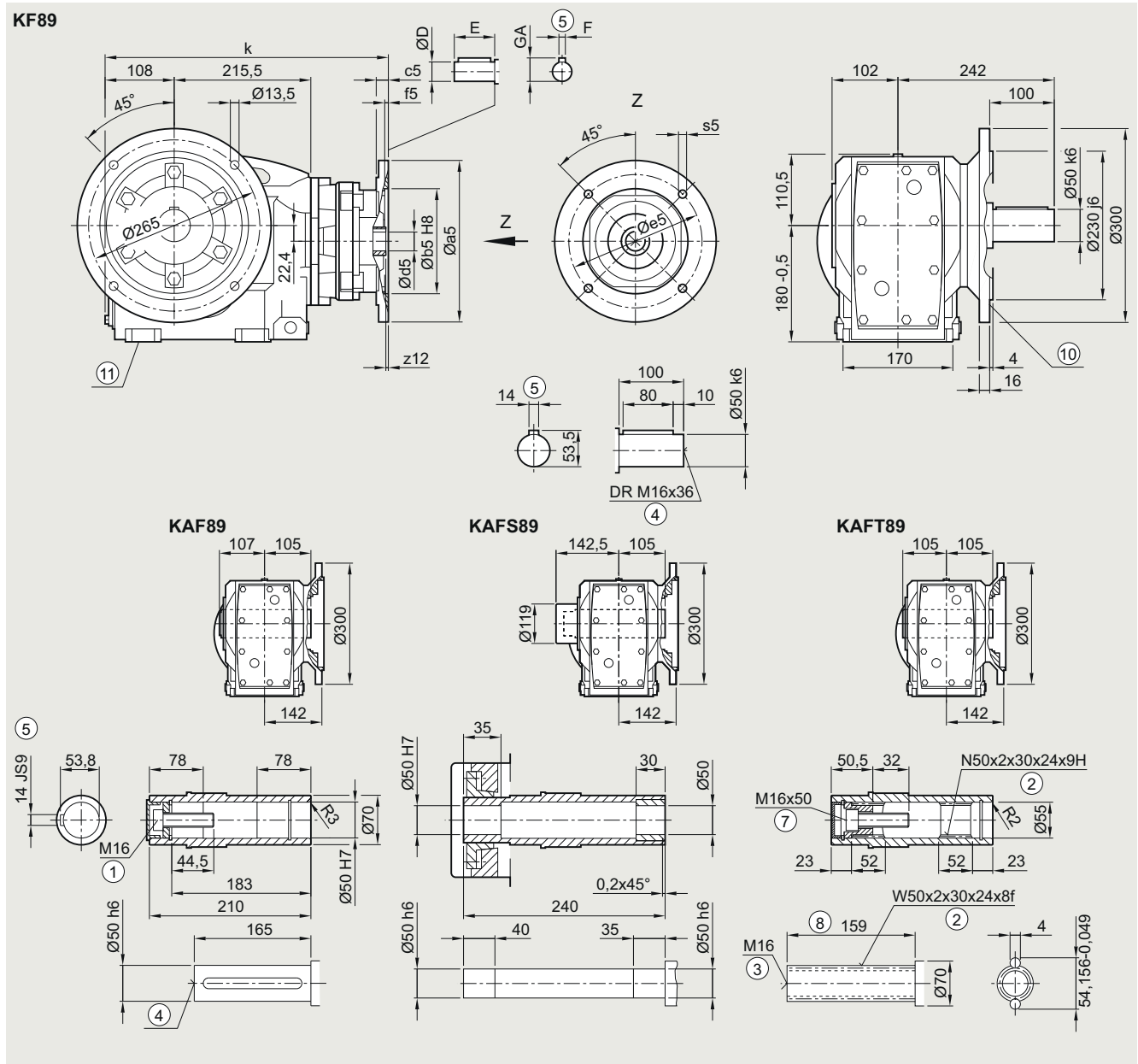
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.89 gearbox in a flange-mounted design

**KF030K4, KAF030K4, KAFS030K4, KAFT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	485.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	515.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

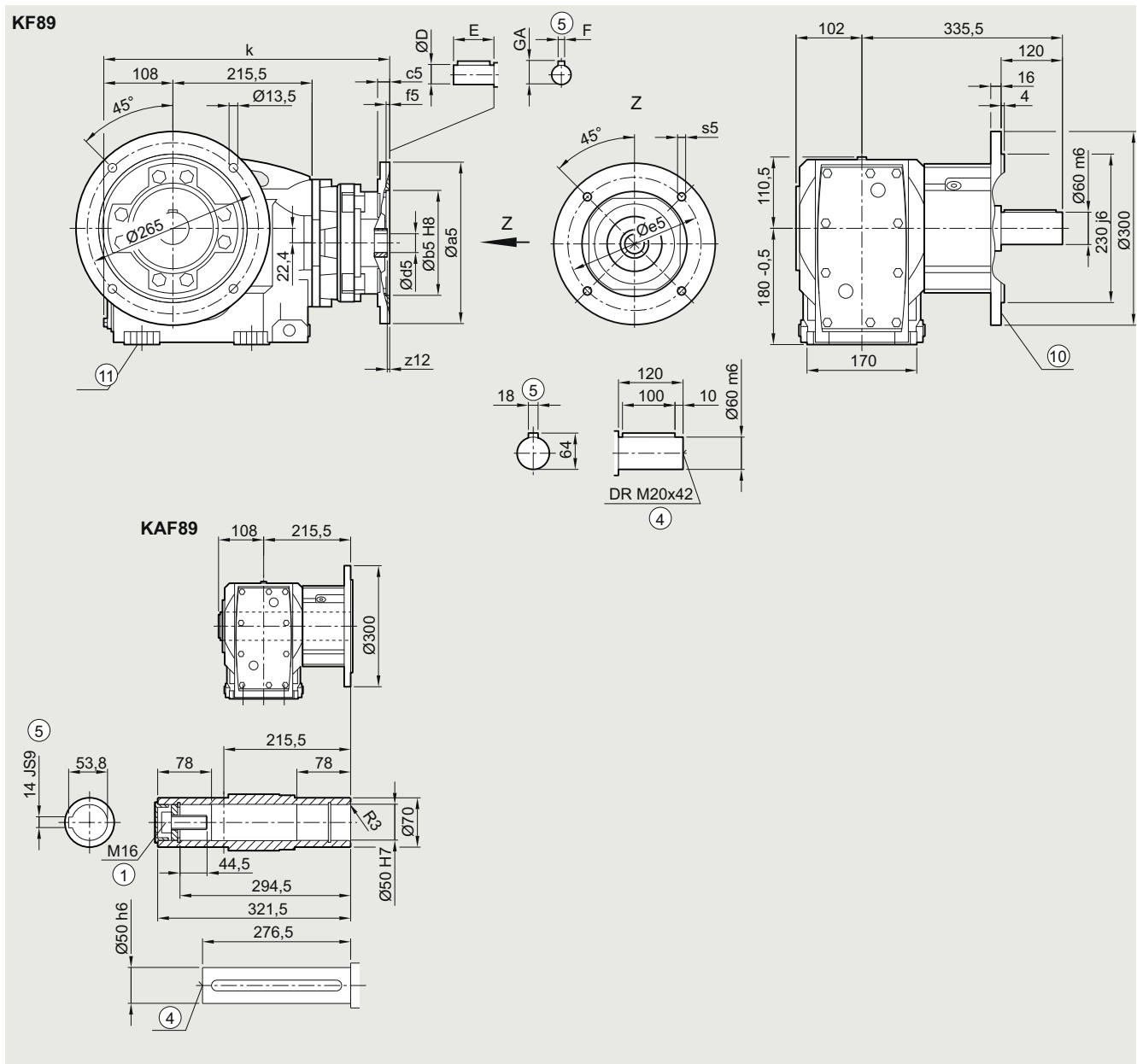
⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ For inner contour, see page 5/177

⑨ Use bores only for foot-mounted design

**K.F.89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****KF040K4, KAF040K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	485.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	515.5

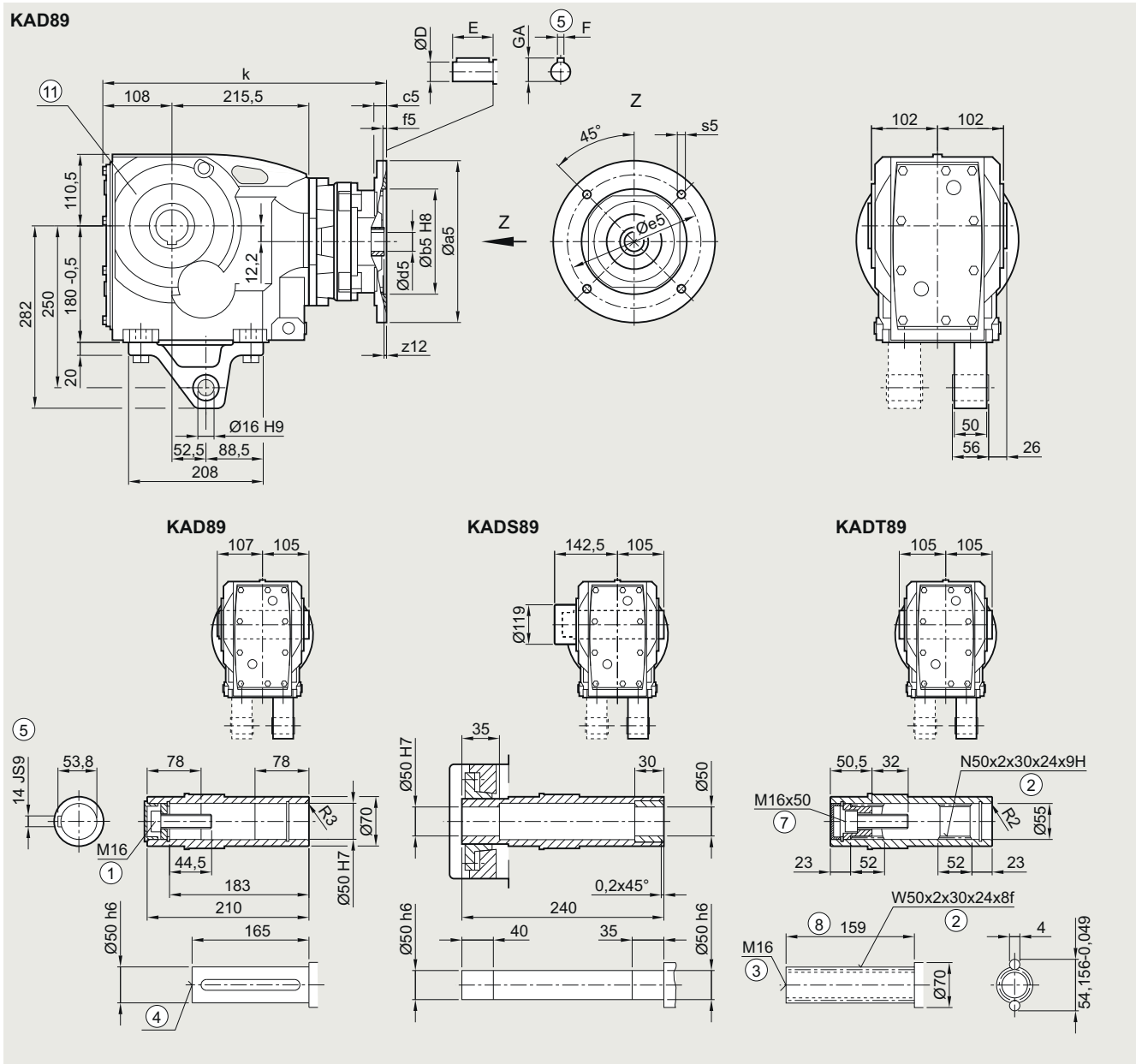
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑥ For inner contour, see page 5/177 ⑦ Use bores only for foot-mounted design





**KAD.89 gearbox in a shaft-mounted design****KAD031K4, KADS031K4, KADT031K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	485.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	515.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

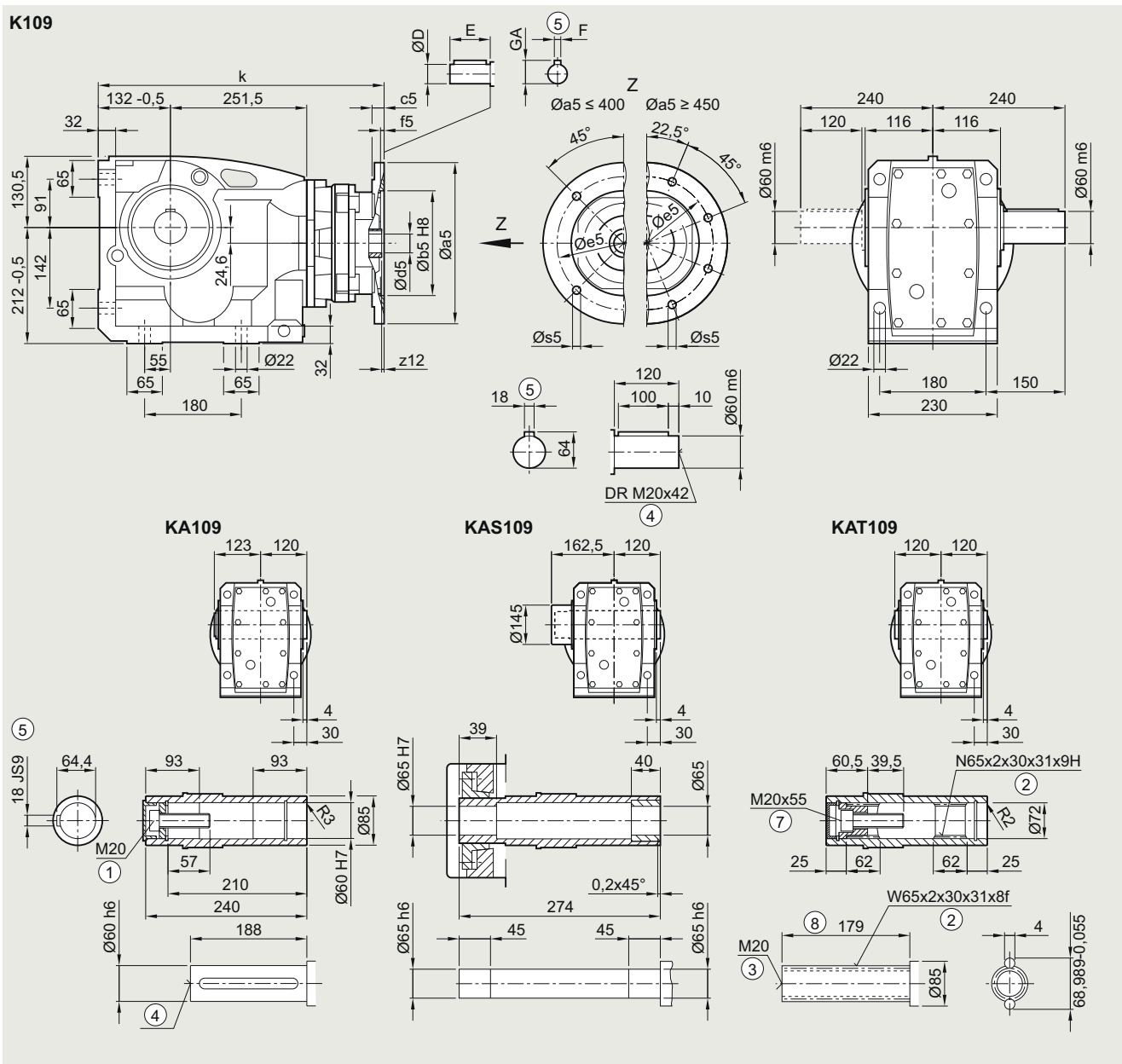
# SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

## Dimensional drawings

### K.109 gearbox in a foot-mounted design

**K030K4, KA030K4, KAS030K4, KAT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	460.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	460.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	511.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	511.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	528.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	558.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	558.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

5

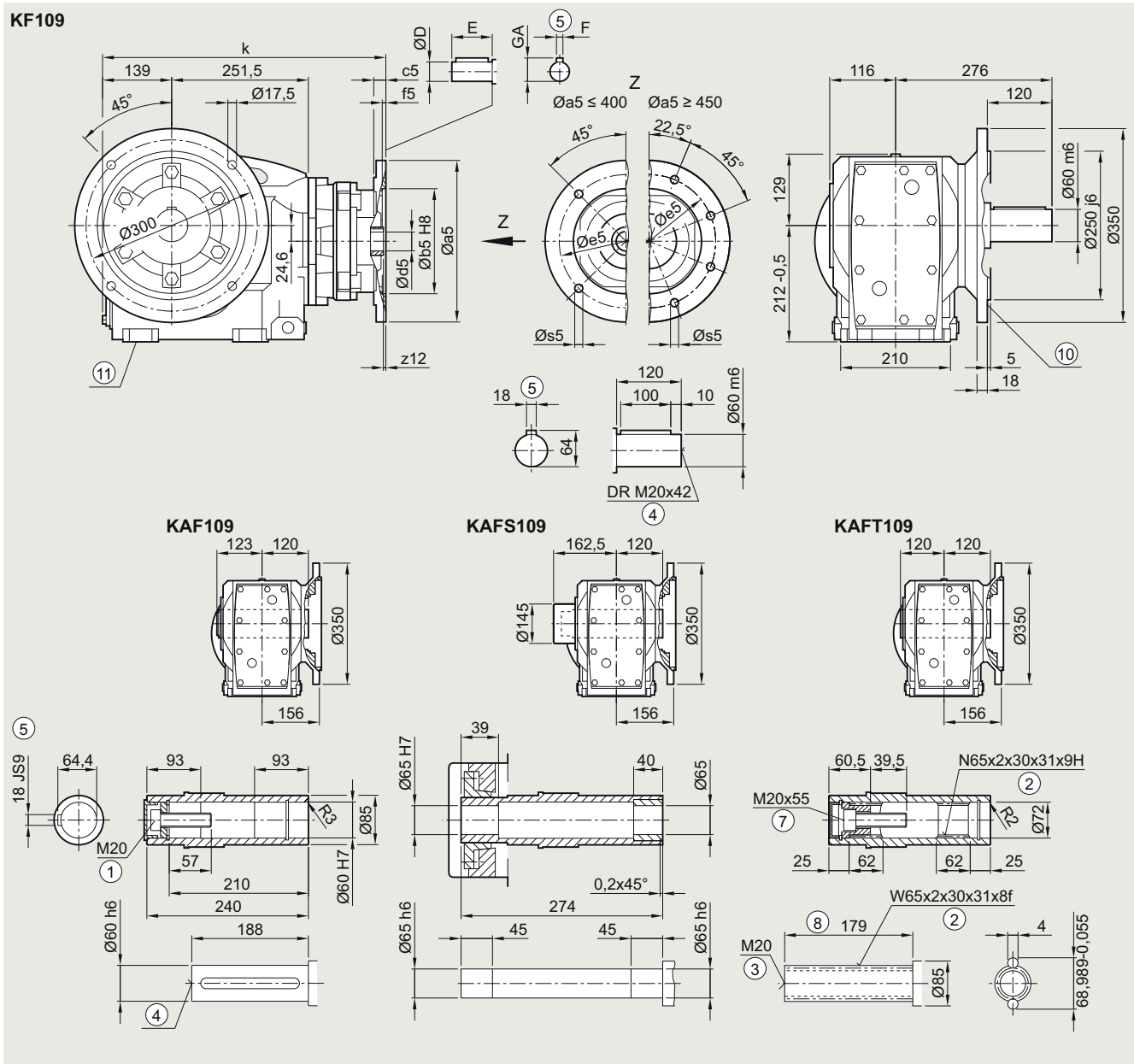
# SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

## Dimensional drawings

### K.F.109 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	467.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	467.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	535.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	565.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	565.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder + 1 mm ⑩ For inner contour, see page 5/177 ⑪ Use bores only for foot-mounted design

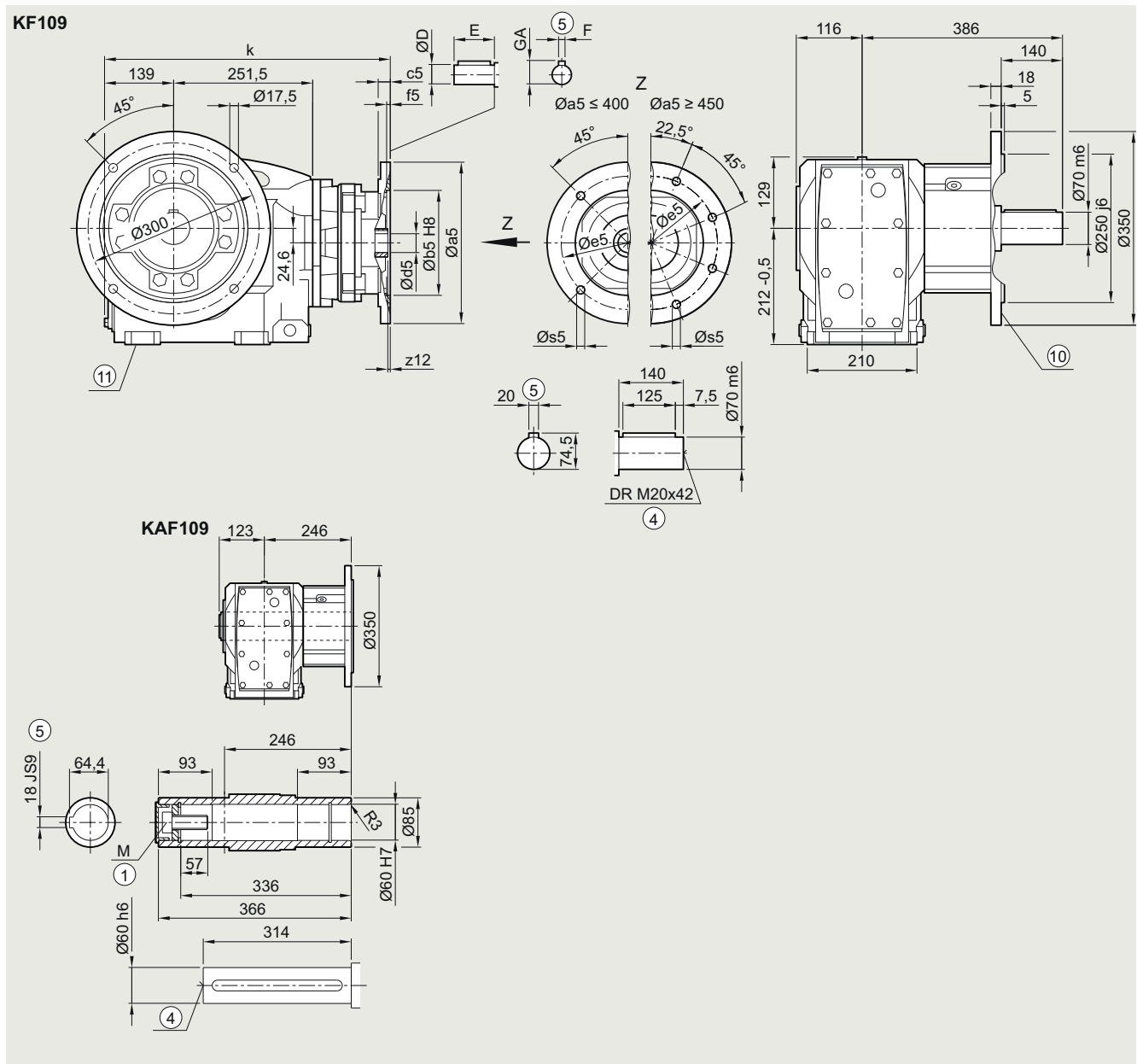
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040K4, KAF040K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	467.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	467.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	535.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	565.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	565.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design



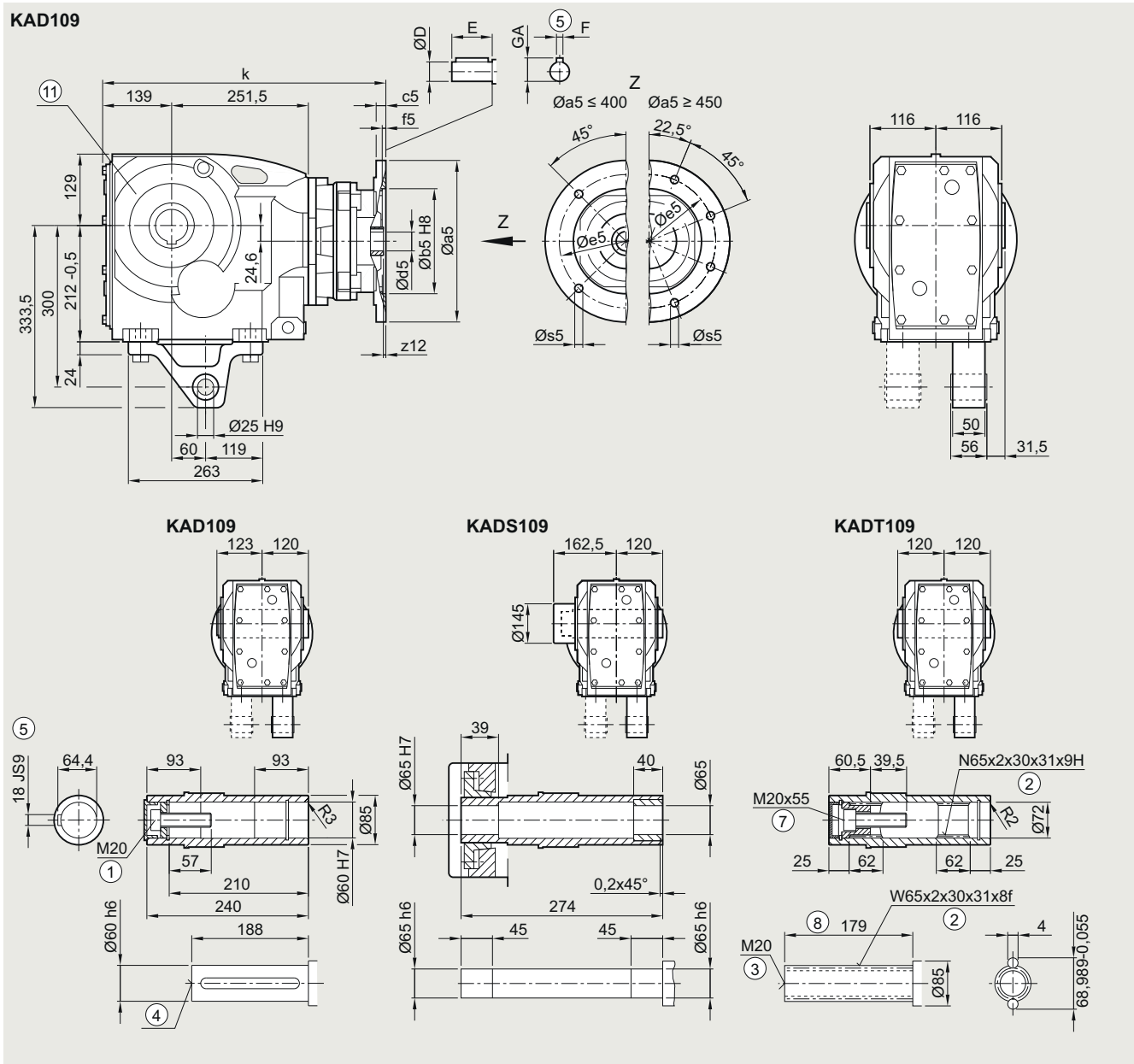
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### KAD.109 gearbox in a shaft-mounted design

*KAD030K4, KADS030K4, KADT030K4*



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	467.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	467.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	535.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	565.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	565.5

① ISO 4014

② DIN 5480

③ DIN 332-D

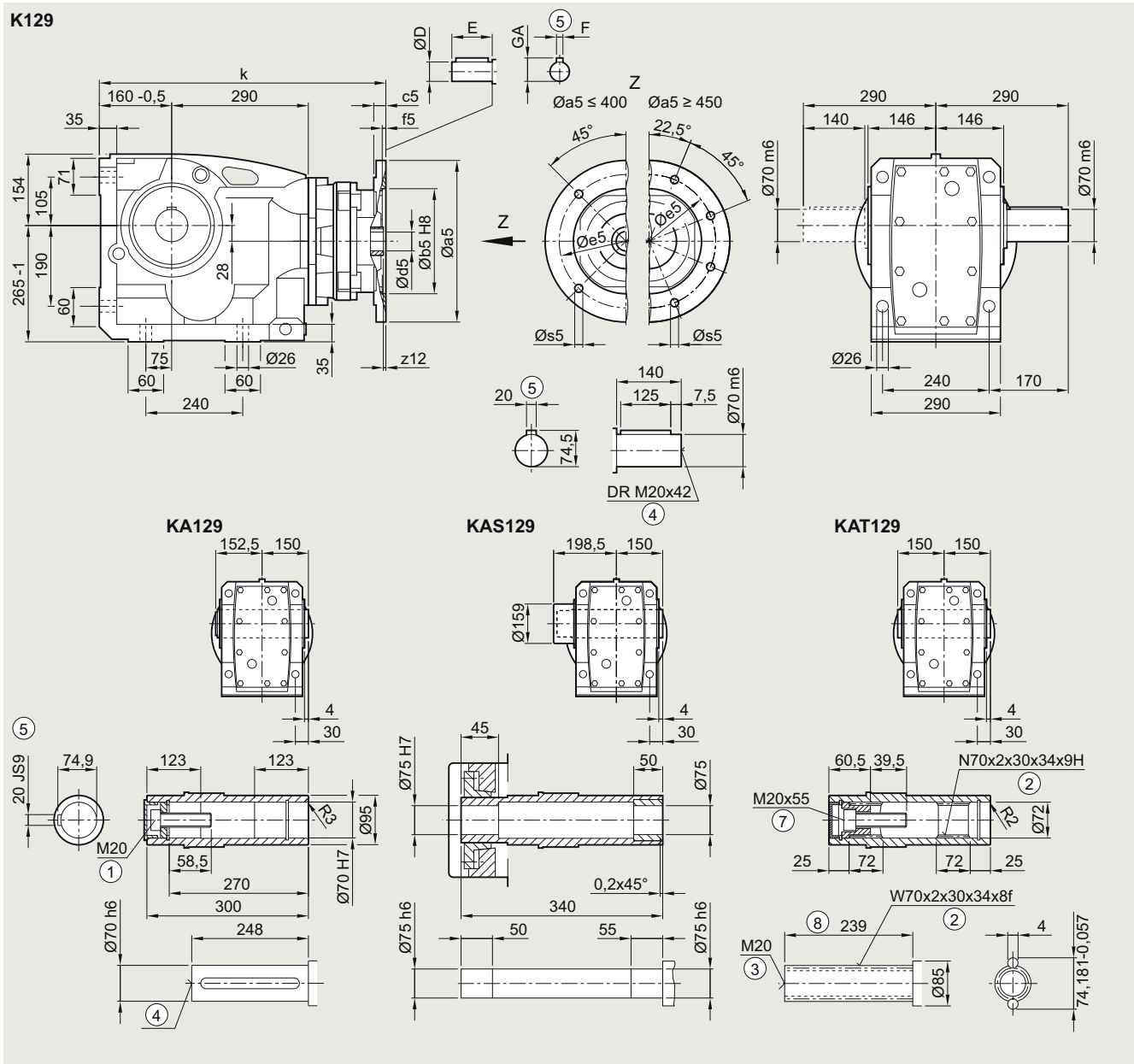
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

**K.129 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	520.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	568.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	568.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	586.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	616.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	616.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	656.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	663.0

① ISO 4014   ② DIN 5480   ③ DIN 332-D   ④ DIN 332   ⑤ Feather key/keyway DIN 6885   ⑦ ISO 4762   ⑧ Without locating shoulder +1 mm



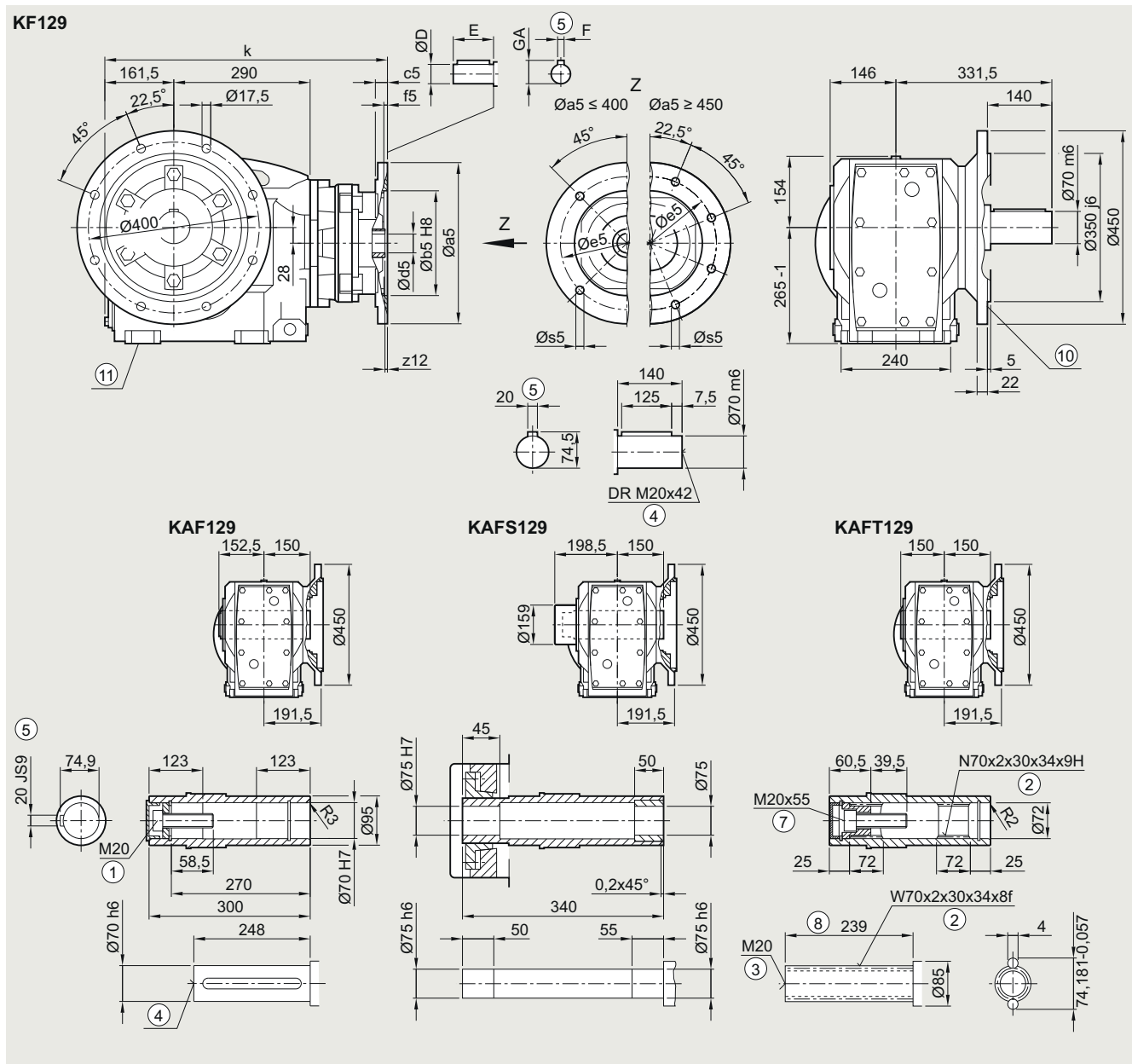
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.129 gearbox in a flange-mounted design

**KF030K4, KAF030K4, KAFS030K4, KAFT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	617.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	658.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	664.5

① ISO 4014

② DIN 5480

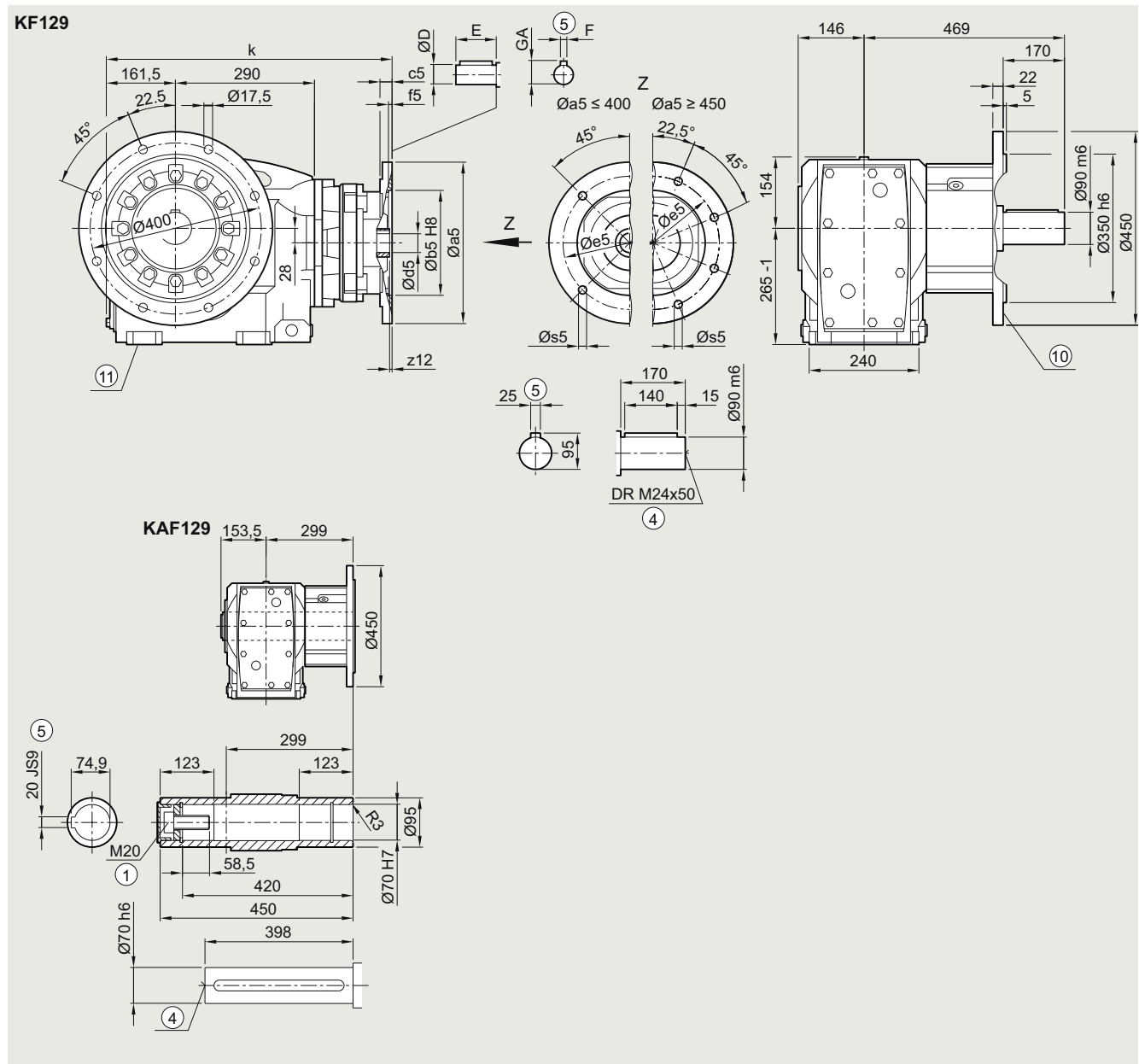
③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm ⑧ For inner contour, see page 5/177 ⑨ Use bores only for foot-mounted design

**K.F.129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****KF040K4, KAF040K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	617.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	658.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	664.5

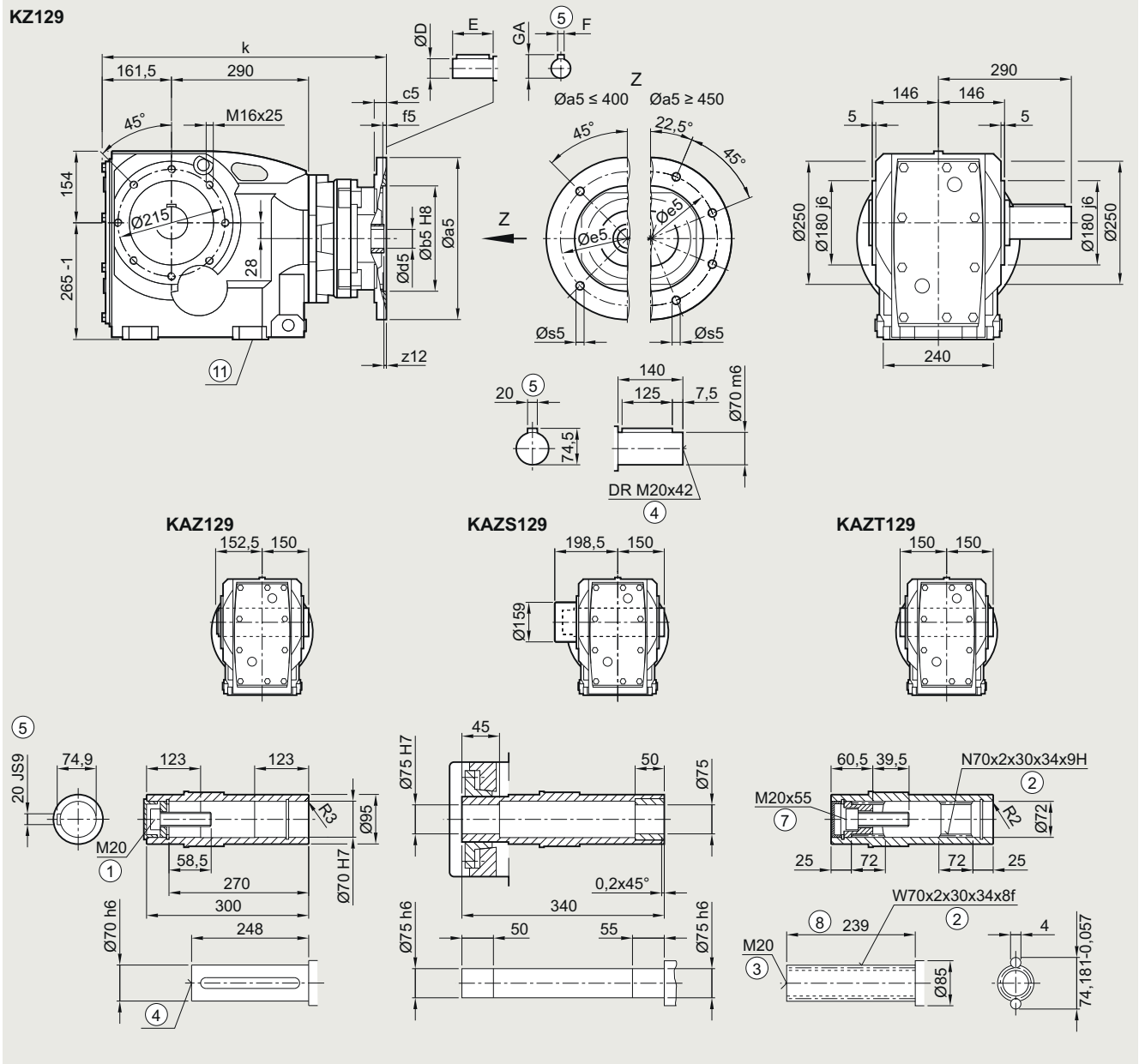
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑥ For inner contour, see page 5/177 ⑩ Use bores only for foot-mounted design

**SIMOGEAR gearboxes**

Bevel gearbox with adapter K4 for mounting an IEC motor

**Dimensional drawings****K.Z.129 gearbox in a housing flange design****KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	617.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	658.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	664.5

① ISO 4014

② DIN 5480

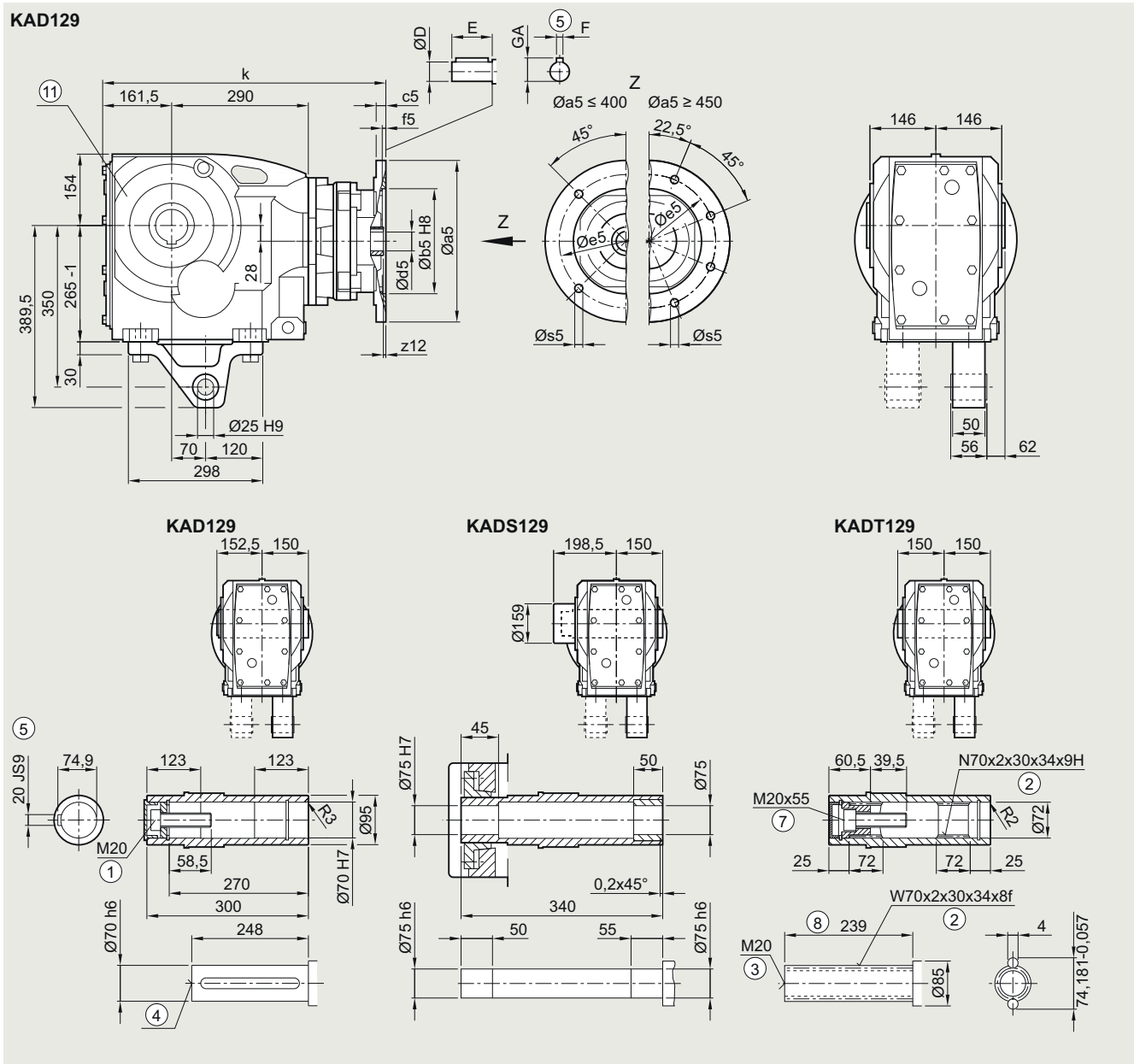
③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑨ Use bores only for foot-mounted design

**KAD.129 gearbox in a shaft-mounted design****KAD030K4, KADS030K4, KADT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	617.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	658.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	664.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

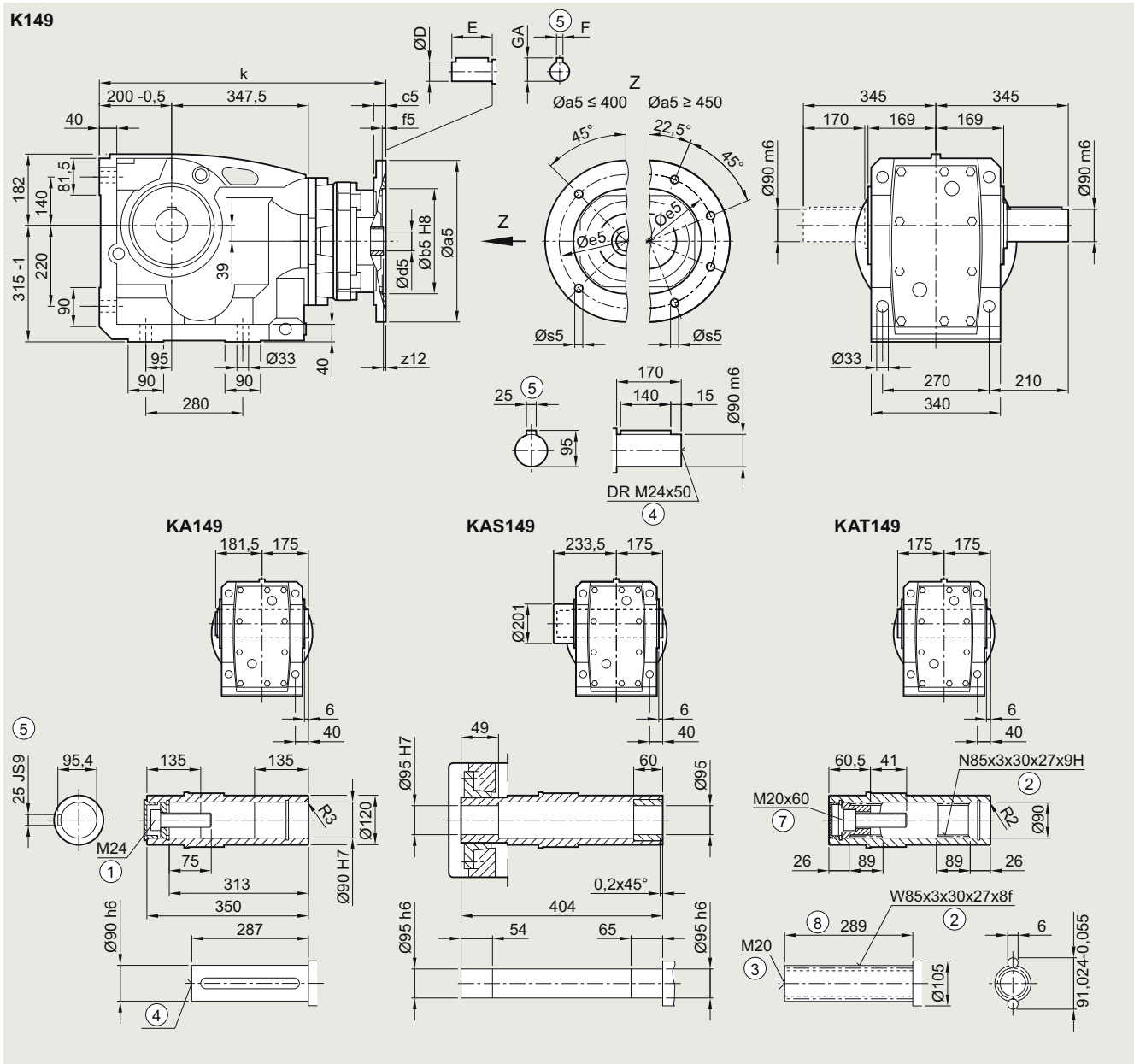
⑦ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

**SIMOGEAR gearboxes**

Bevel gearbox with adapter K4 for mounting an IEC motor

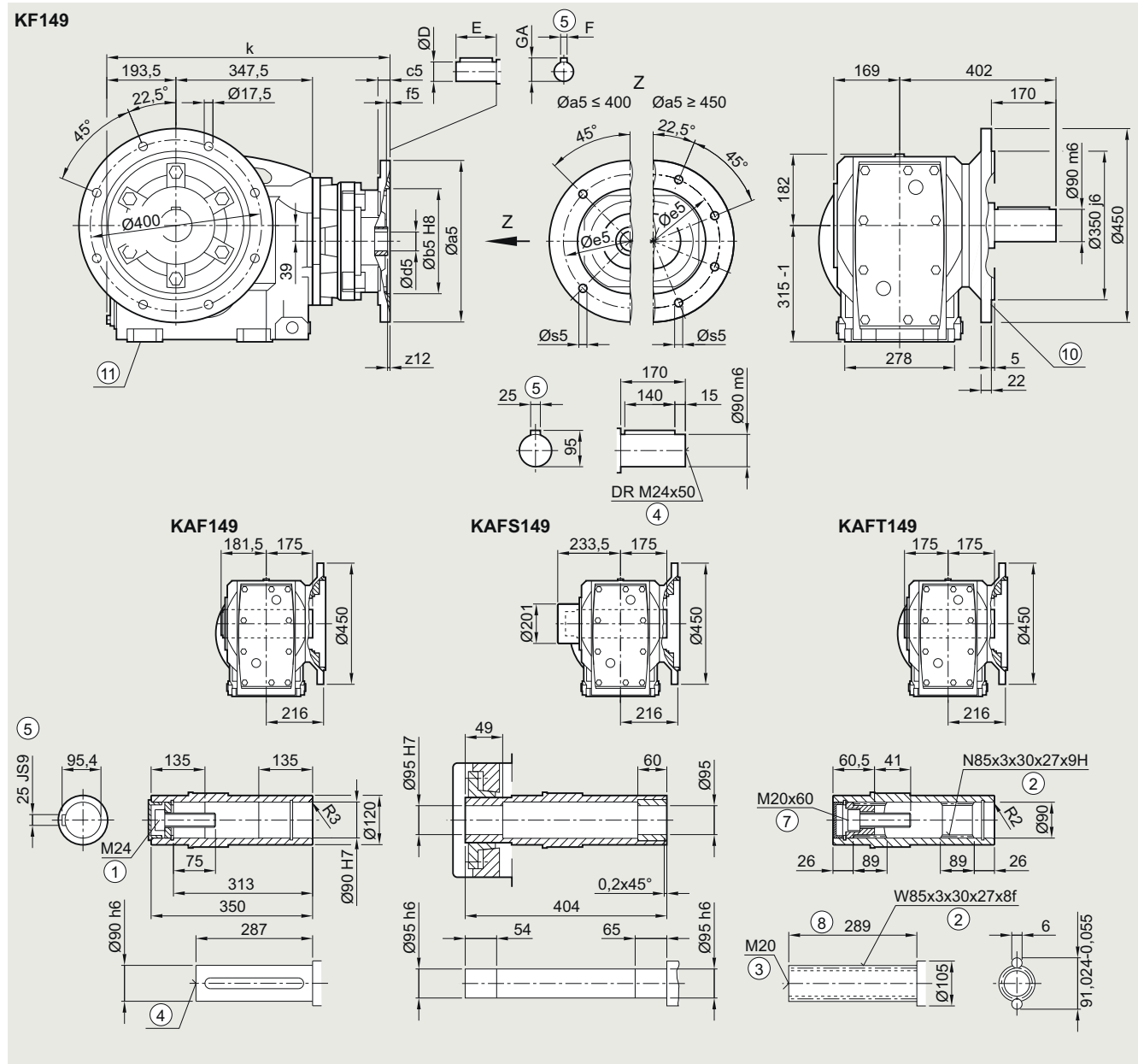
**Dimensional drawings****K.149 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	610.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	657.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	657.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	672.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	702.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	702.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	743.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	749.5
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	784.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

## K.F.149 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	696.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	736.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	743.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	777.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder + 1 mm ⑧ For inner contour, see page 5/177 ⑨ Use bores only for foot-mounted design

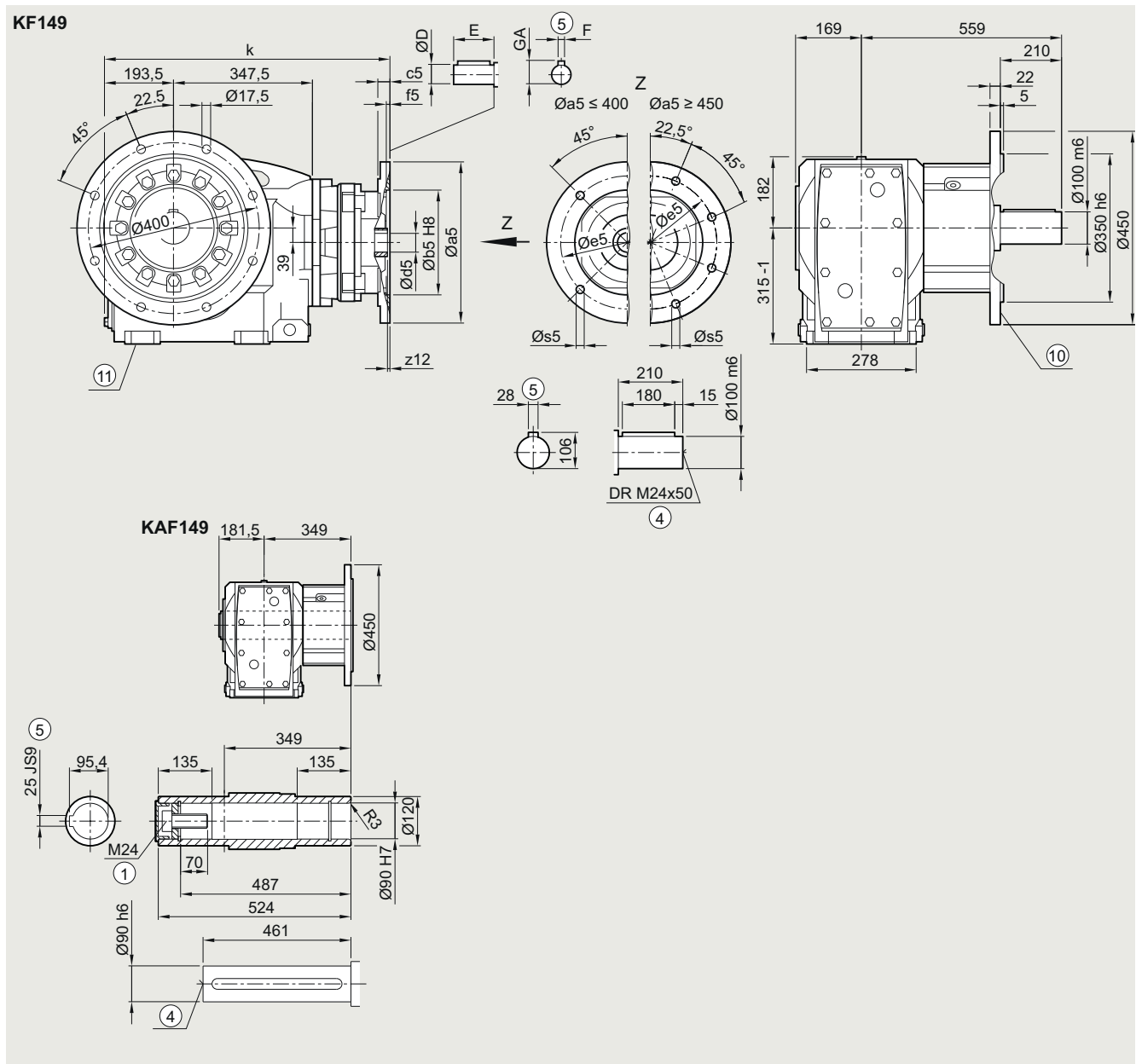
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.F.149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040K4, KAF040K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	696.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	736.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	743.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	777.5

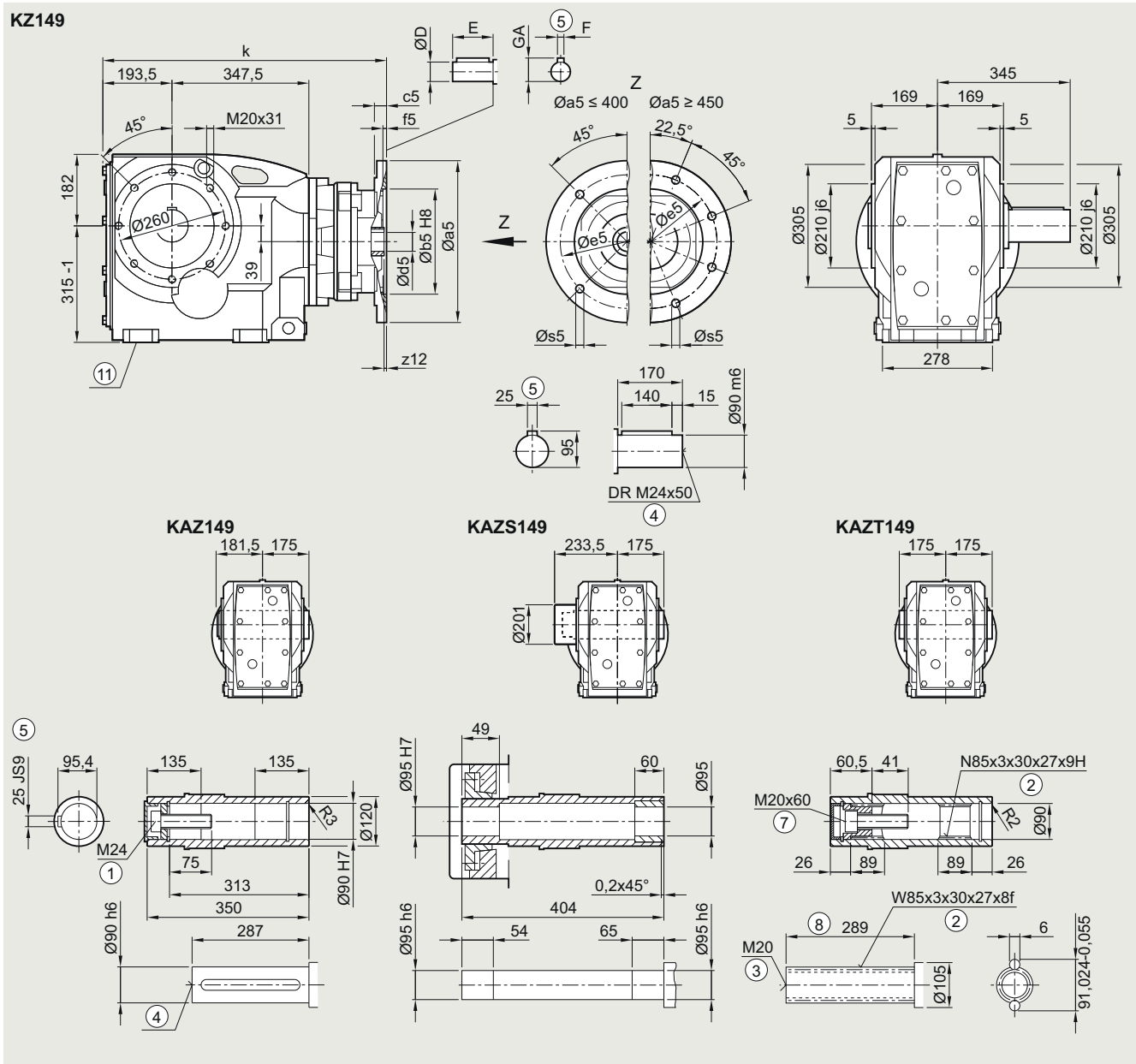
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design

**K.Z.149 gearbox in a housing flange design****KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	696.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	736.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	743.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	777.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for foot-mounted design



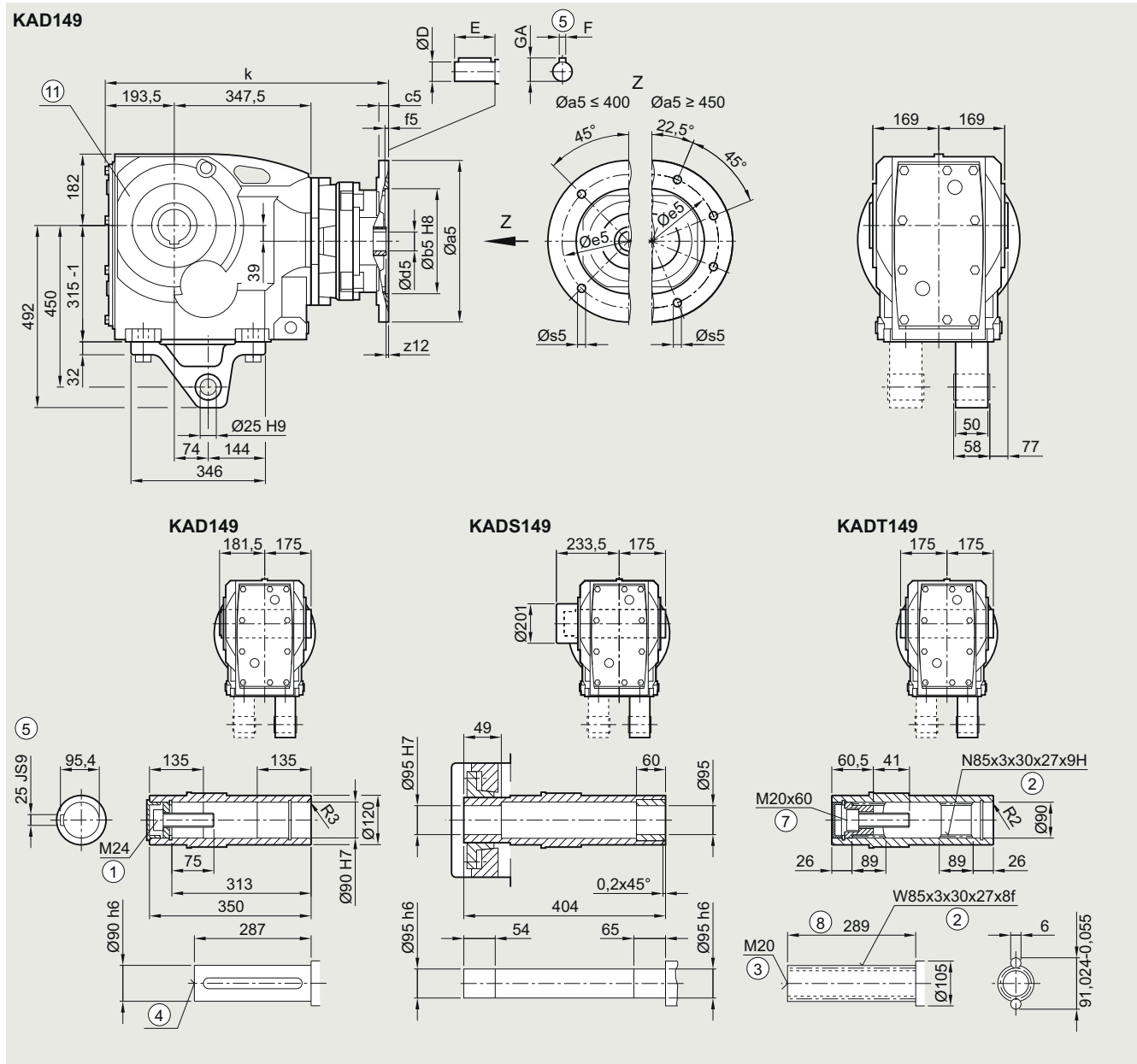
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### KAD.149 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	696.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	736.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	743.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	777.5

① ISO 4014

② DIN 5480

③ DIN 332-D

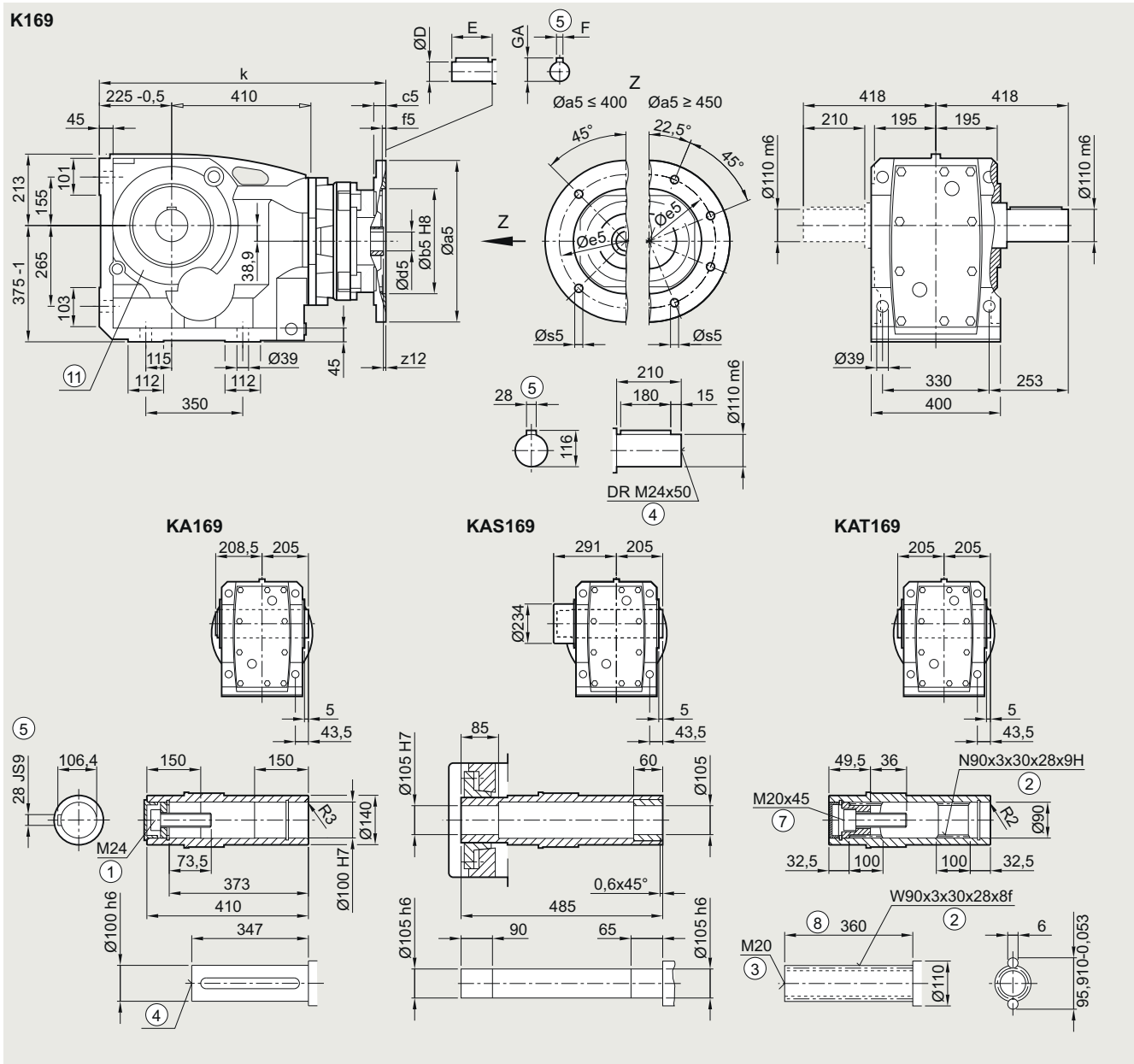
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

**K.169 gearbox in a foot-mounted design****K030K4, KA030K4, KAS030K4, KAT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	783.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	824.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	830.5
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	865.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

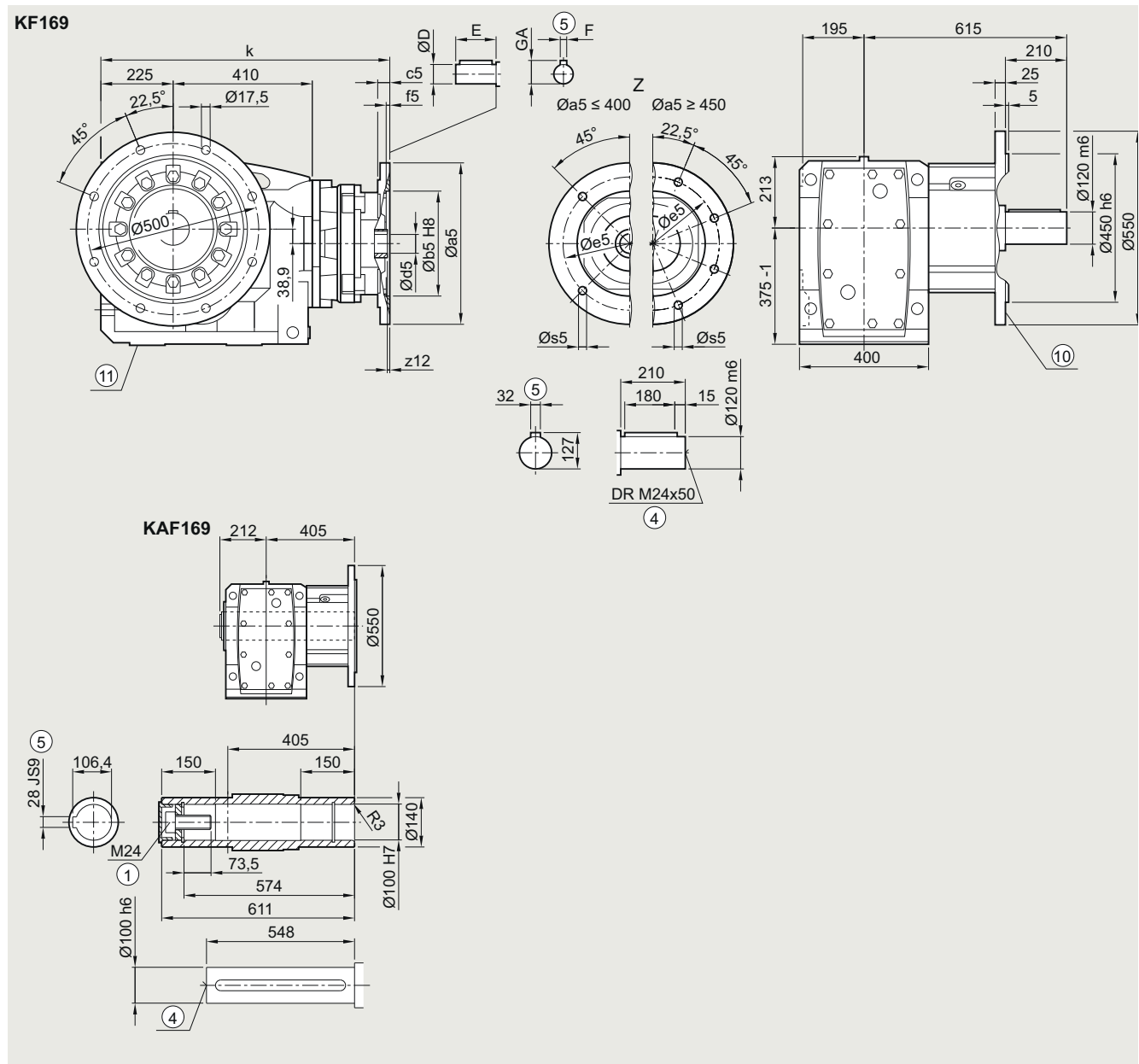
⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design



**K.F.169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****KF040K4, KAF040K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	783.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	824.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	830.5
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	865.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑥ For inner contour, see page 5/177 ⑦ Use bores only for foot-mounted design

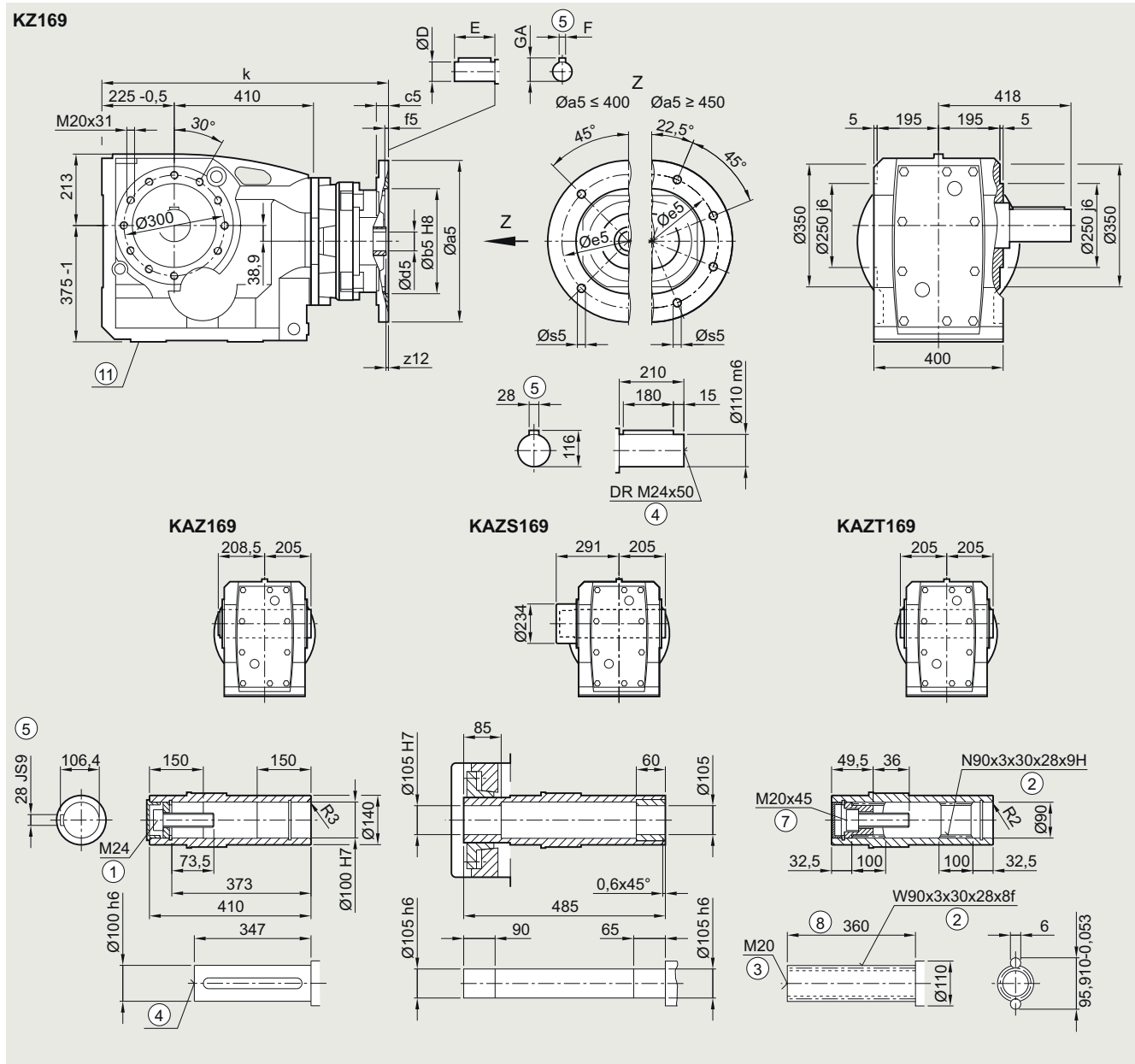
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.Z.169 gearbox in a housing flange design

**KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	783.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	824.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	830.5
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	865.0

① ISO 4014

② DIN 5480

③ DIN 332-D

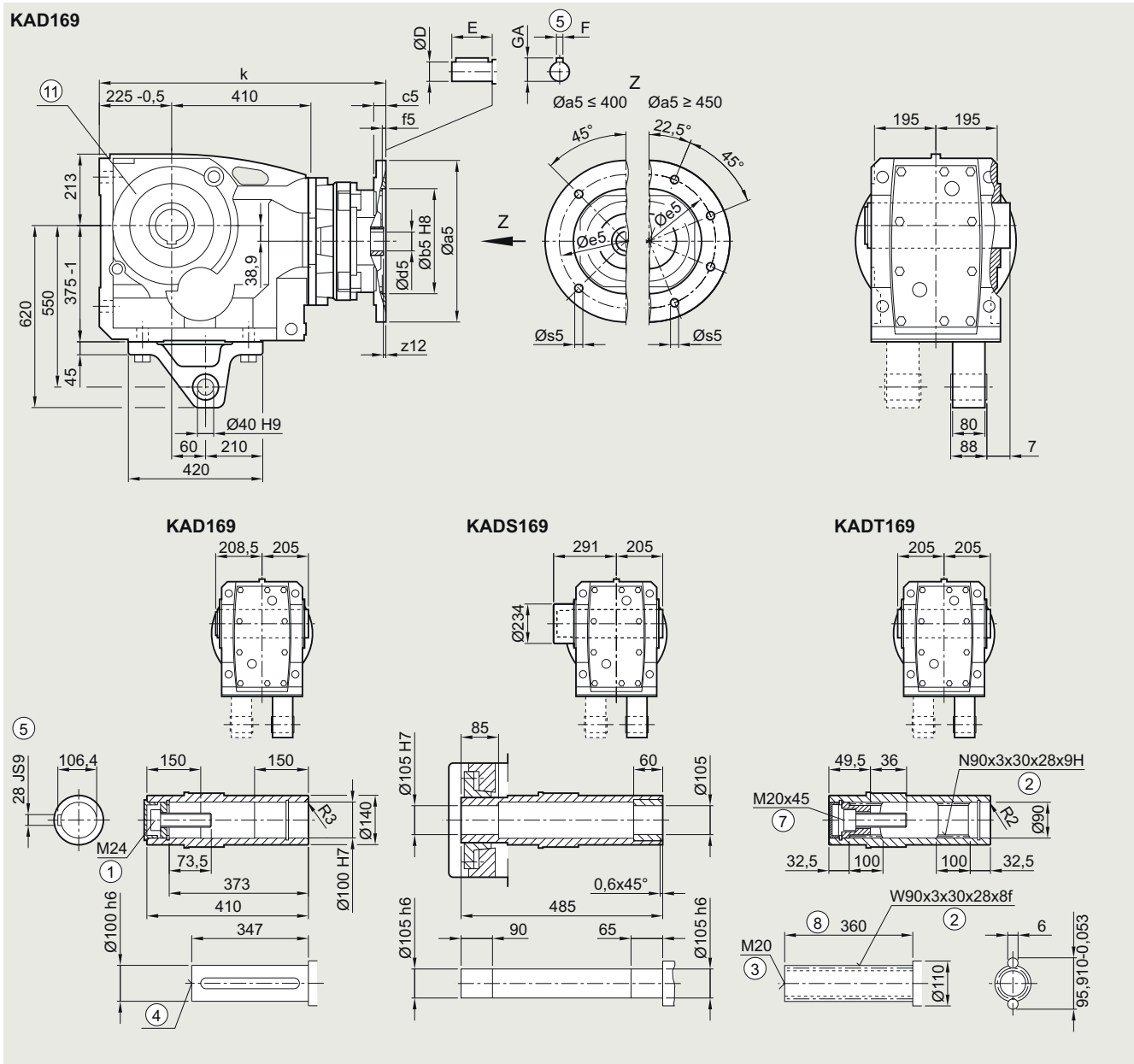
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for foot-mounted design

**KAD.169 gearbox in a shaft-mounted design****KAD031K4, KADS031K4, KADT031K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	783.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	824.0
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	830.5
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	865.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

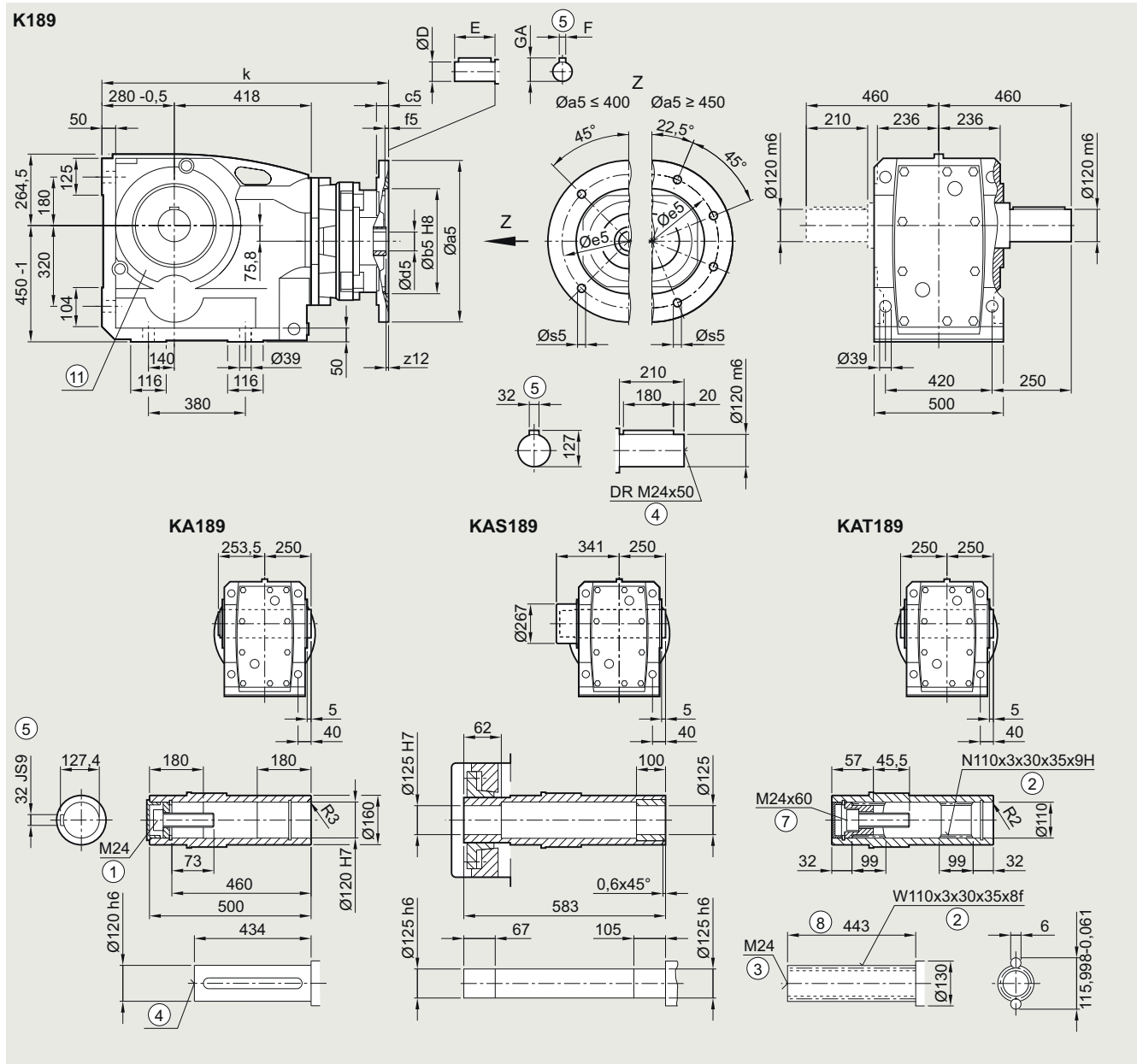
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.189 gearbox in a foot-mounted design

**K030K4, KA030K4, KAS030K4, KAT030K4**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	793.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	803.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	833.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	833.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	873.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	879.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	909.5

① ISO 4014

② DIN 5480

③ DIN 332-D

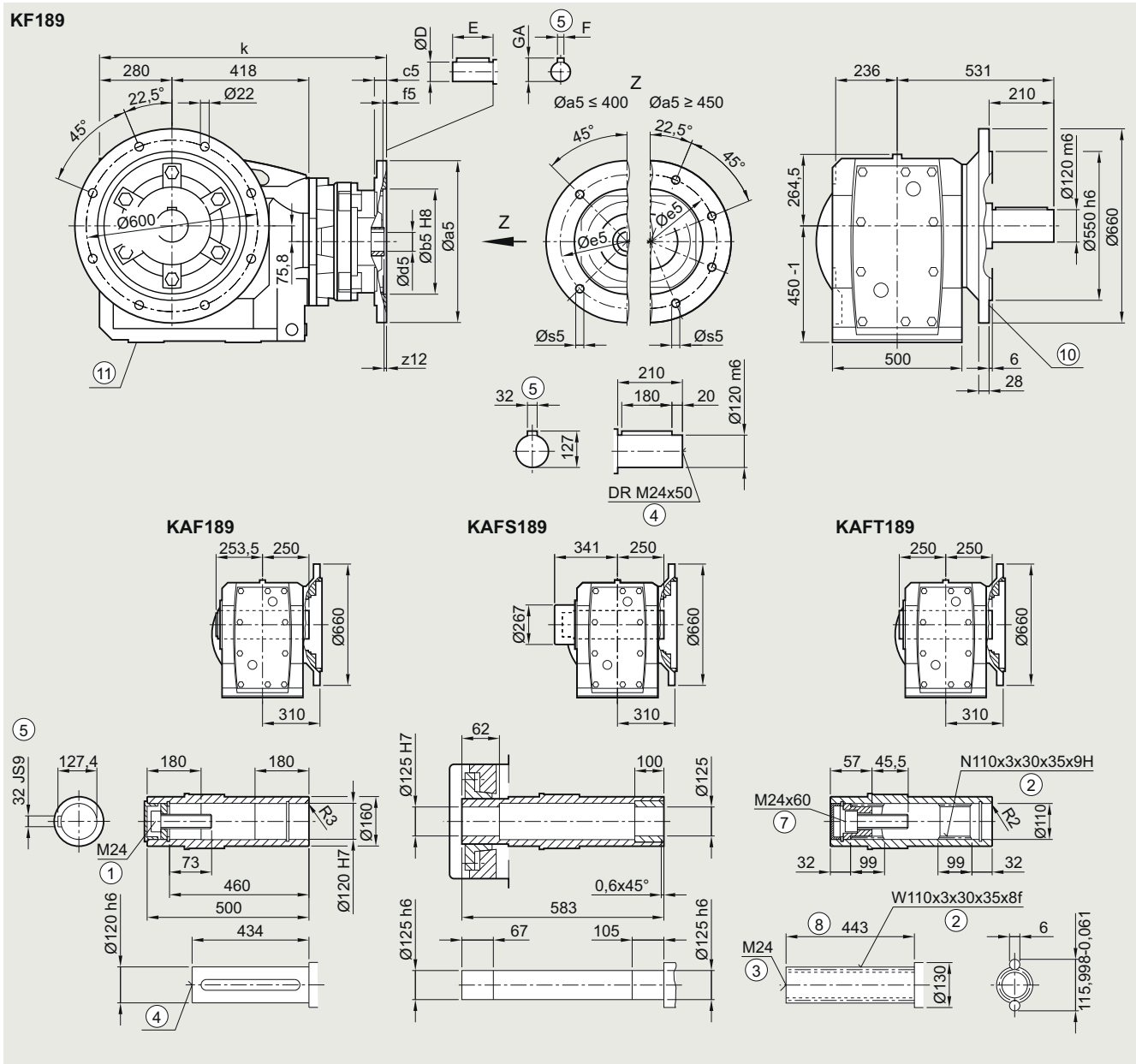
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

**K.F.189 gearbox in a flange-mounted design****KF030K4, KAF030K4, KAFS030K4, KAFT030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	793.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	803.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	833.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	833.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	873.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	879.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	909.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑧ Without locating shoulder + 1 mm ⑩ For inner contour, see page 5/177 ⑪ Use bores only for foot-mounted design



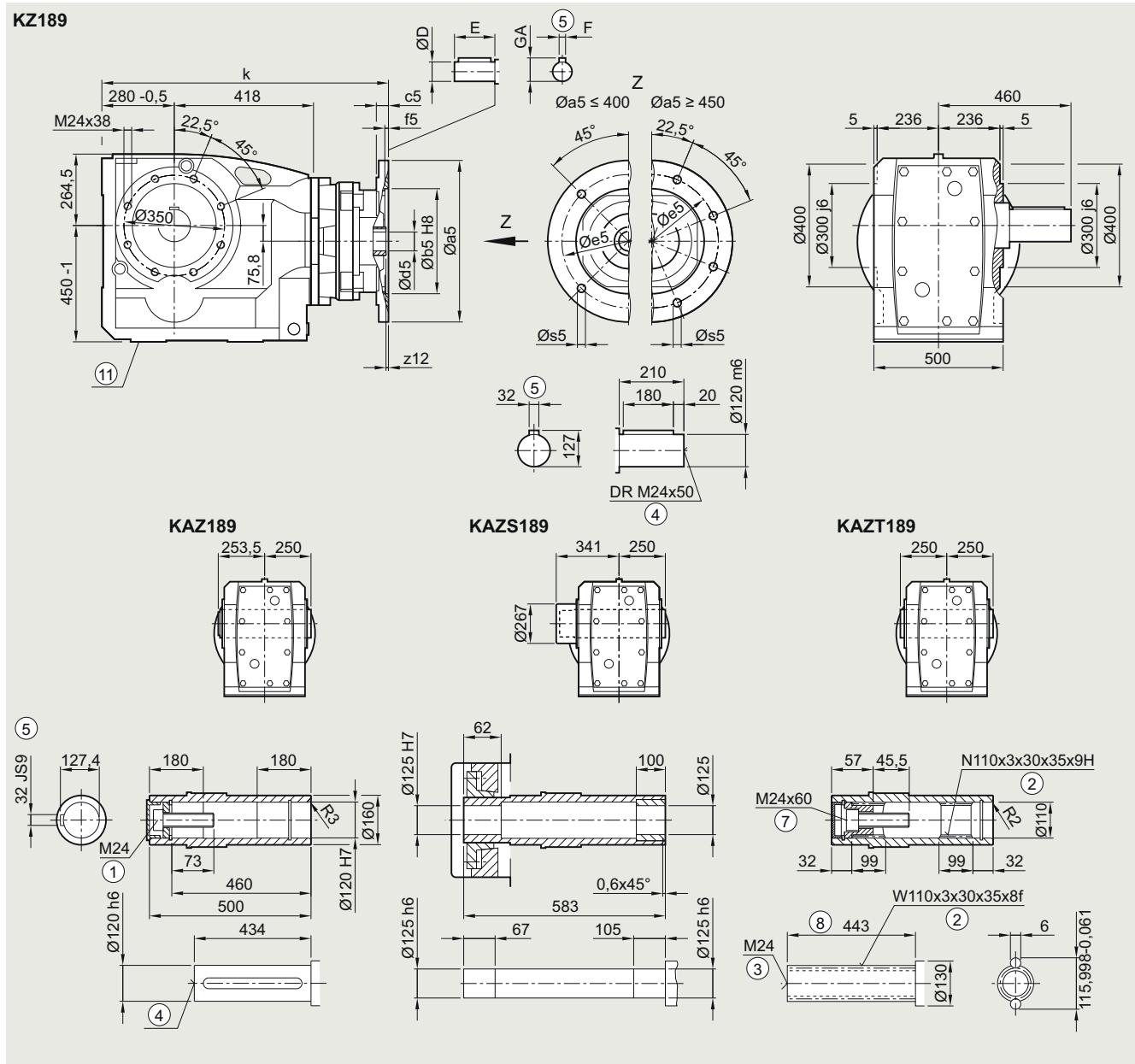
## SIMOGEAR gearboxes

Bevel gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### K.Z.189 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	793.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	803.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	833.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	833.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	873.5
225	450	350	20	6.0	400	M16x29	7.0	60	140	18	64.0	879.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	909.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design



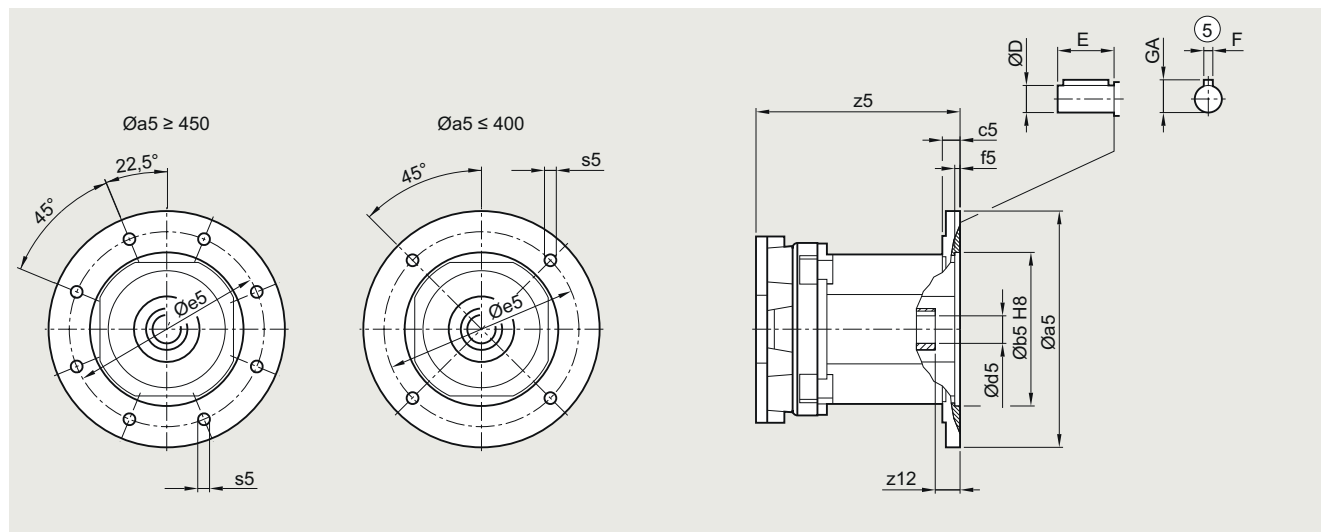
## SIMOGEAR gearboxes

Bevel gearbox with adapter K2 for mounting an IEC motor

### Dimensional drawings

#### B...29 to B...49 and K...39 to K...69 gearboxes

*B..030K2, B.F.030K2, B.Z.030K2, BAD.030K2*  
*K..030K2, K.F.030K2, K.Z.030K2, KAD.030K2*

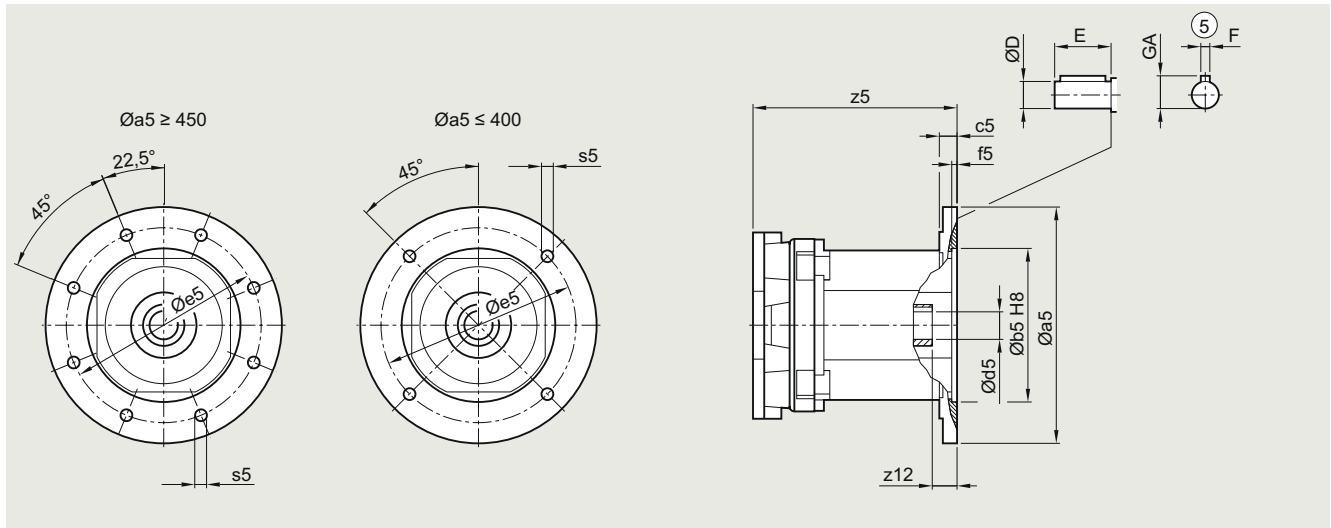


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>B...29</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
<b>B...39</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
<b>B...49</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>K...39</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
<b>K...49</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>K...69</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5

⑤ Feather key/keyway DIN 6885

**K...79 to K...129 gearboxes**

**B..030K2, B.F.030K2, B.Z.030K2, BAD.030K2  
K..030K2, K.F.030K2, K.Z.030K2, KAD.030K2**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>K...79</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>K...89</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	182.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	182.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	307.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	352.5
<b>K...109</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	169.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	169.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	290.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	335.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	335.5
<b>K...129</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	162.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	203.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	203.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	281.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	326.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	326.5
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	371.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	419.0

Ⓢ Feather key/keyway DIN 6885

(i) Dimension in brackets for 2-pole motor

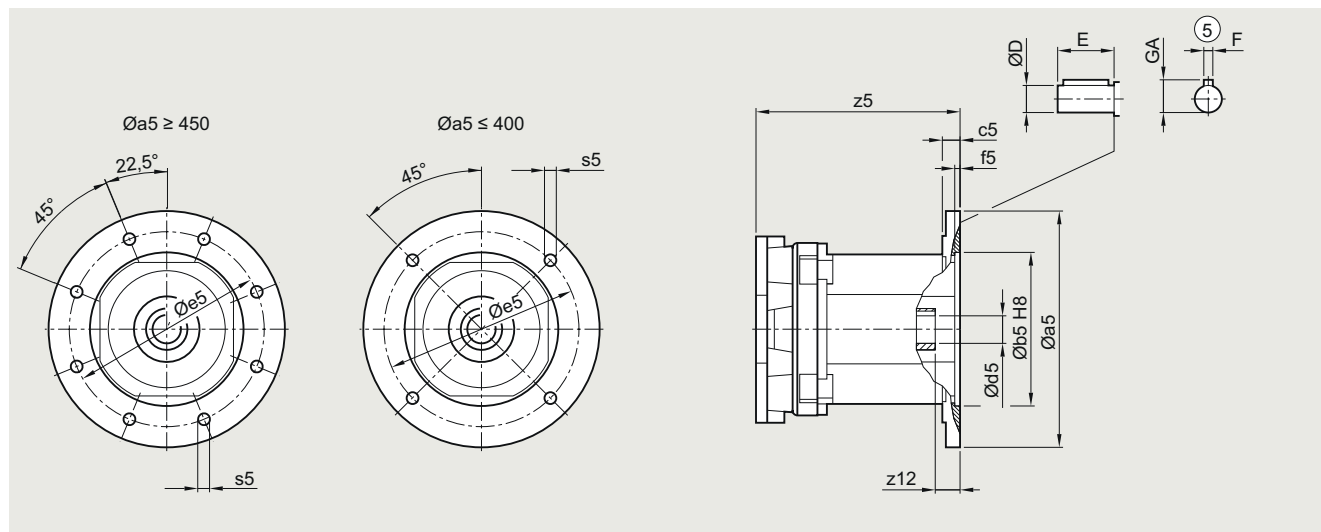
## SIMOGEAR gearboxes

Bevel gearbox with adapter K2 for mounting an IEC motor

### Dimensional drawings

#### K...149 to K...189 gearboxes

*K...030K2, K.F.030K2, K.Z.030K2, KAD.030K2*



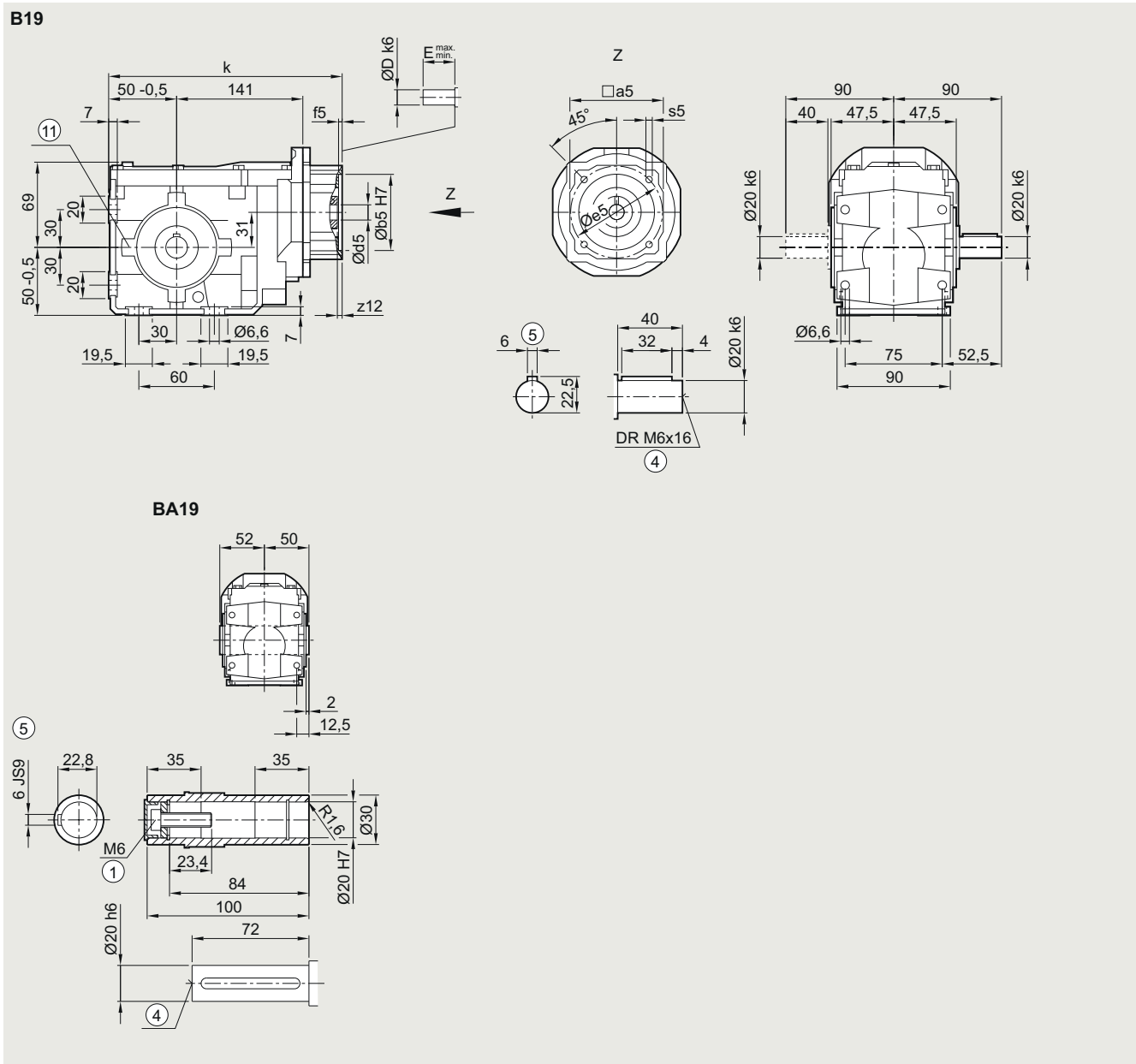
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>K...149</b>												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	155.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	194.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	194.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	270.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	315.5
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	315.5
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	360.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	408.0
250	550	450	27	6.0	500	M16	75	65 (60)	140	18	69.0 (64.0)	445.5
<b>K...169</b>												
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	193.0
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	193.0
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	264.0
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	309.0
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	309.0
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	354.0
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	401.5
250	550	450	27	6.0	500	M16	75	65 (60)	140	18	69.0 (64.0)	439.0
280	550	450	27	6.0	500	M16	51	75 (65)	140	20 (18)	79.5 (69)	314.5
<b>K...189</b>												
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	180.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	251.0
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	296.0
180	350	250	25	6.0	300	M16	59	48	110	14	51.5	296.0
200	400	300	20	6.0	350	M16x29	60	55	110	16	59.0	340.5
225	450	350	50	6.0	400	M16x29	84 (36)	60 (55)	140 (110)	18 (16)	64.0 (59.0)	387.0
250	550	450	27	6.0	500	M16	75	65 (60)	140	18	69.0 (64.0)	420.5
280	550	450	27	6.0	500	M16	51	75 (65)	140	20 (18)	79.5 (69.0)	297.5
315	660	550	33	8.0	600	m20	33,5	80 (65)	170 (140)	22 (18)	85.0 (69.0)	321.5

© Feather key/keyway DIN 6885

( ) Dimension in brackets for 2-pole motor

## B..19 gearbox in a foot-mounted design

B030KS, BA030KS, BAS030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	231.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	231.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	244.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	244.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for housing flange design

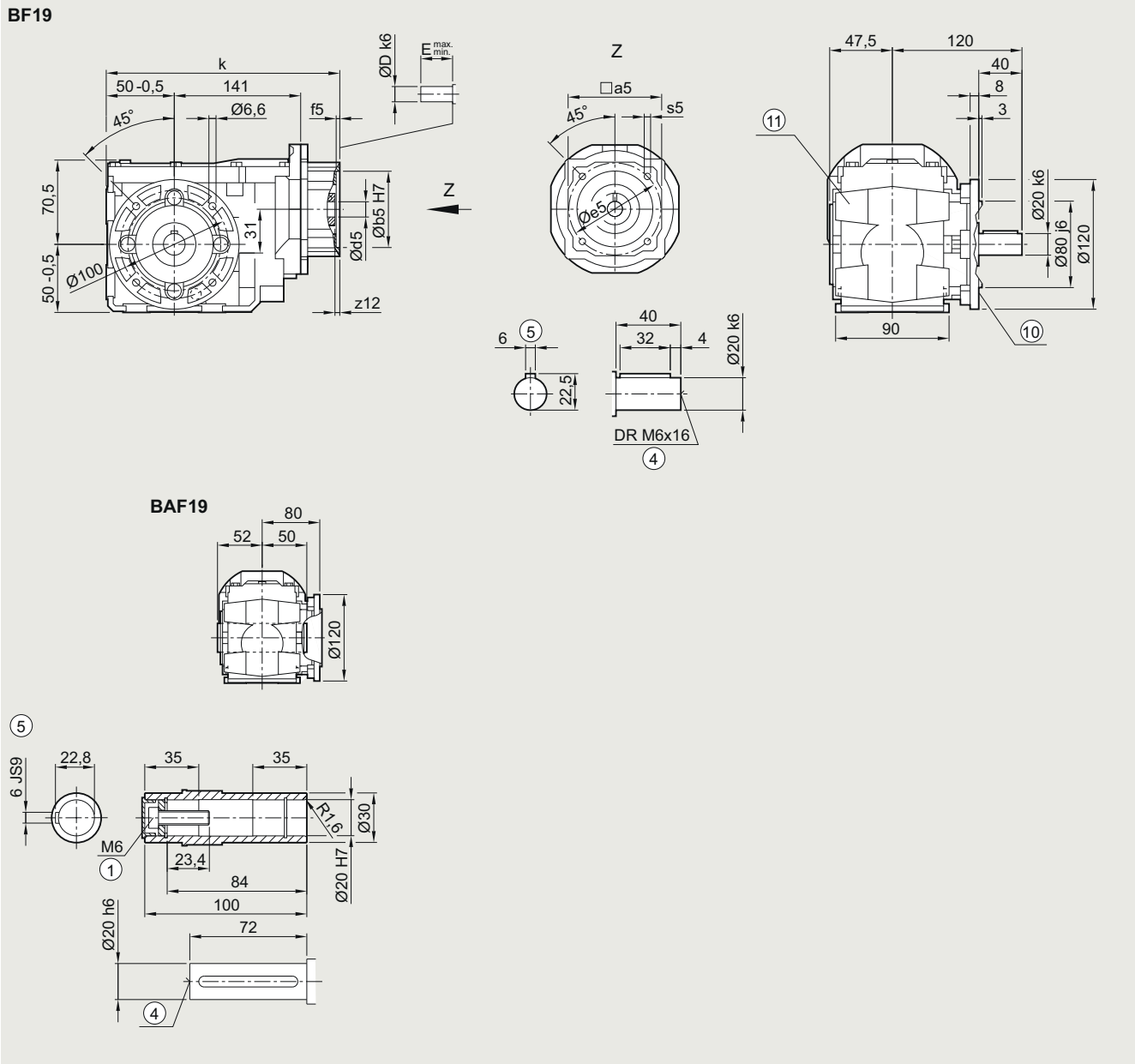
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### B.F.19 gearbox in a flange-mounted design

**BF030KS, BAF030KS, BAFS030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	231.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	231.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	244.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	244.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

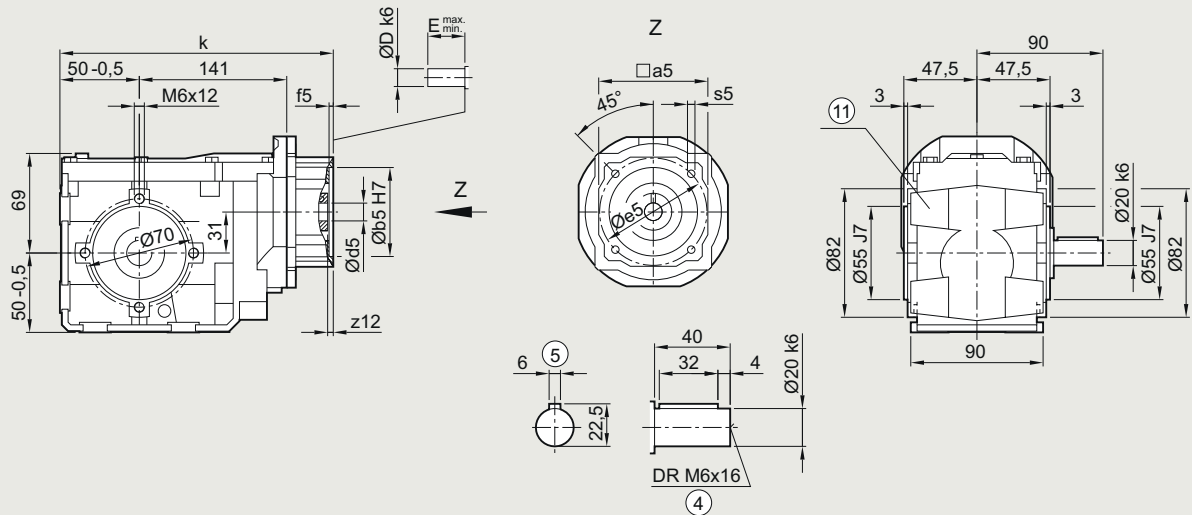
Ⓜ For inner contour, see page 5/177

Ⓜ Use bores only for foot-mounted design

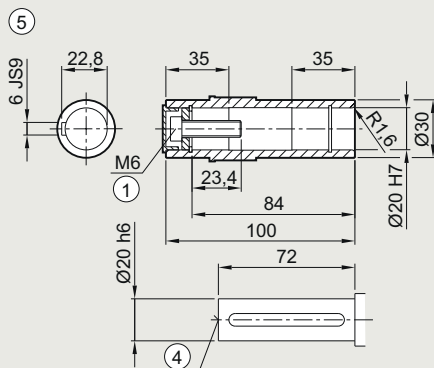
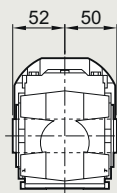
## B.Z.19 gearbox in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS

## BZ19



## BAZ19



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	231.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	231.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	244.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	244.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design



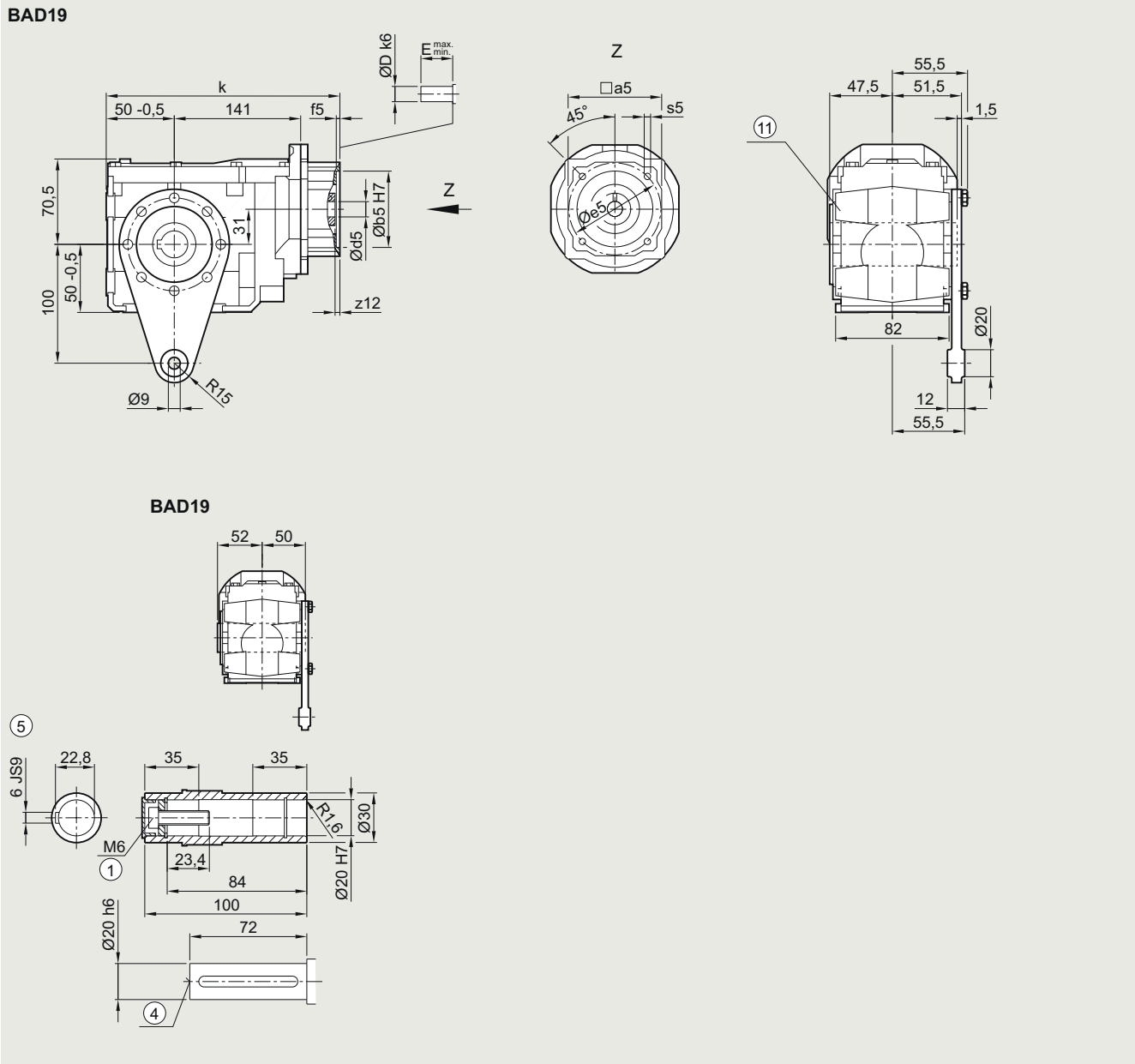
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### BAD.19 gearbox in a shaft-mounted design

**BAD030KS, BADS030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	231.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	231.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	244.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	244.0

① ISO 4014

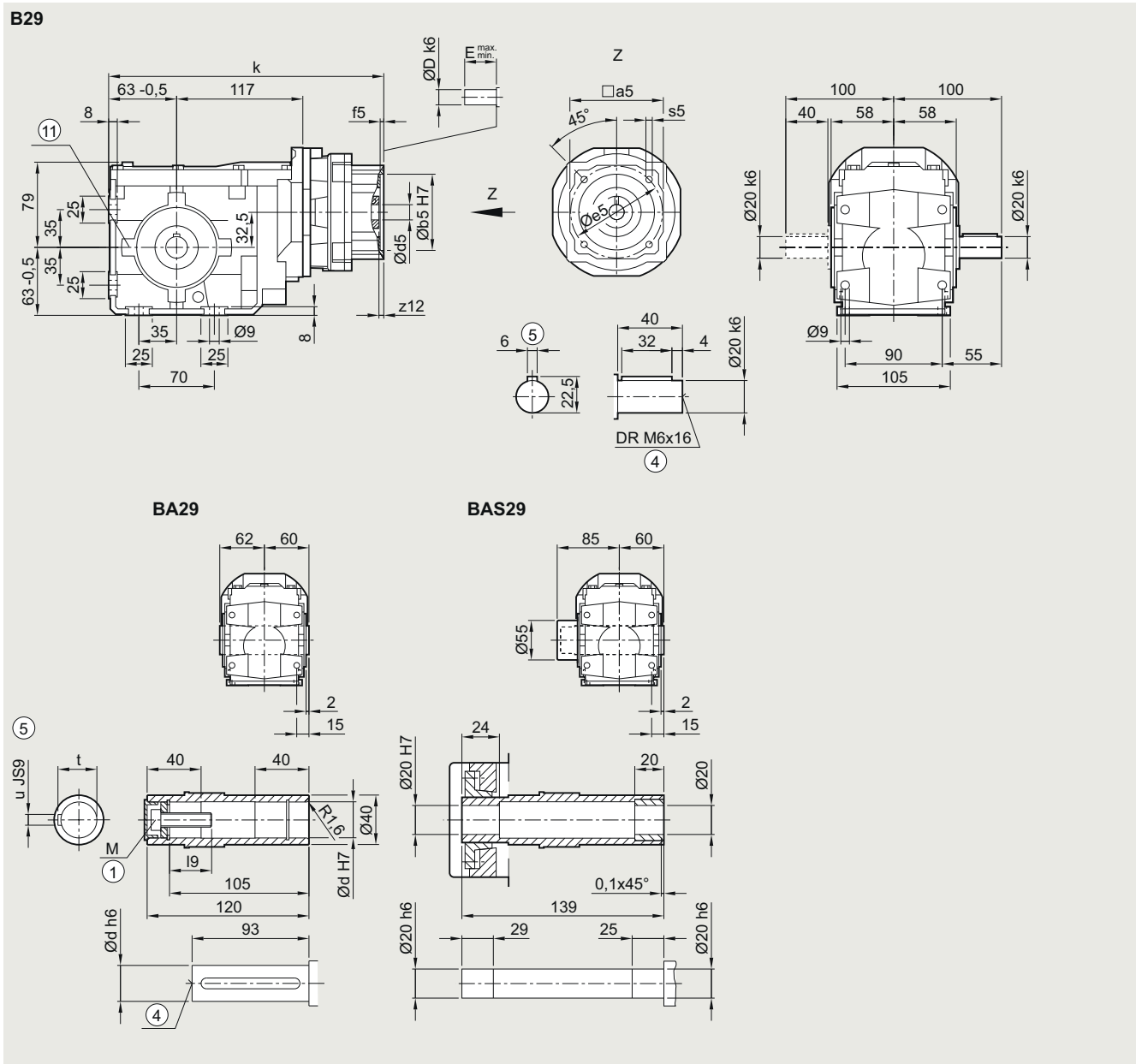
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

## B..29 gearbox in a foot-mounted design

B030KS, BA030KS, BAS030KS



Shaft	d	I9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	262.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	262.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	315.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for housing flange design

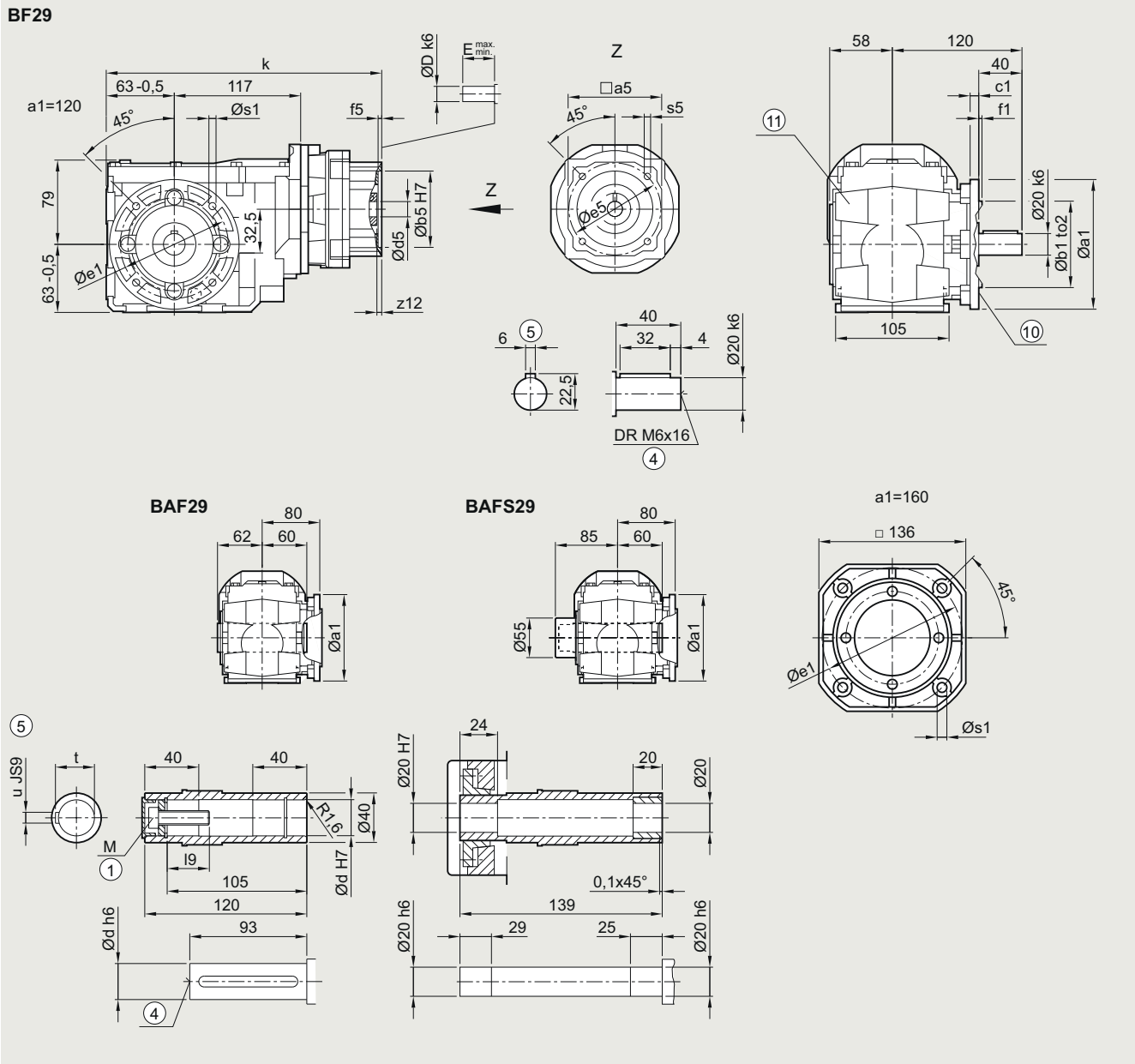
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### B.F.29 gearbox in a flange-mounted design

BF030KS, BAF030KS, BAFS030KS



Flange	a1	b1	to2	c1	e1	f1	s1			
	120	80	j6	8	100	3.0	6.6			
	160	110	j6	9	130	3.5	9.0			
Shaft	d	l9	M	t	u					
	20	23.4	M6	22.8	6					
	25	27.6	M10	28.3	8					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	262.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	262.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	315.5

① ISO 4014

④ DIN 332

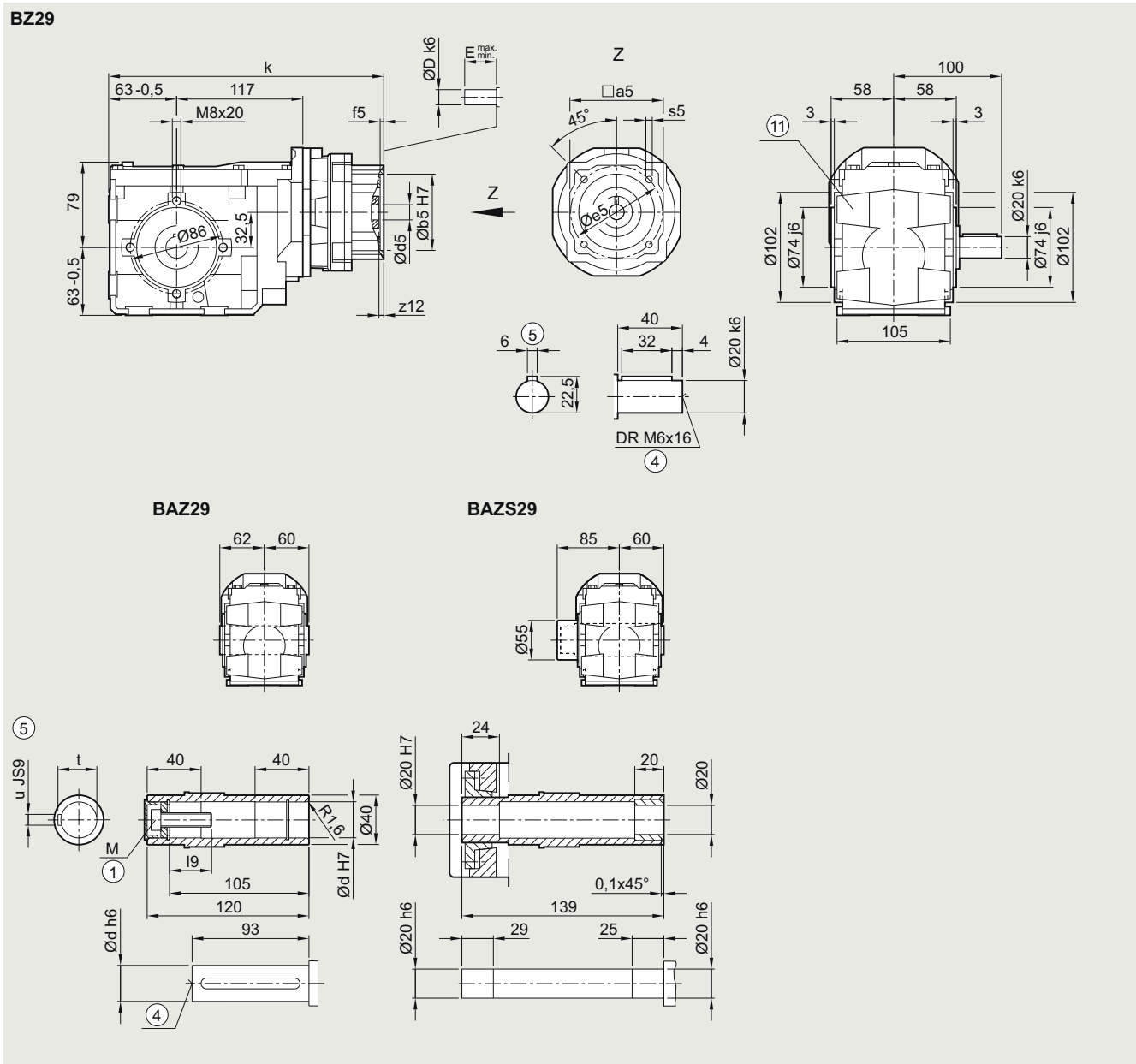
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

## B.Z.29 gearbox in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS



Shaft	d	I9	M	t	u					
	20	23.4	M6	22.8	6					
	25	27.6	M10	28.3	8					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	262.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	262.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	315.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

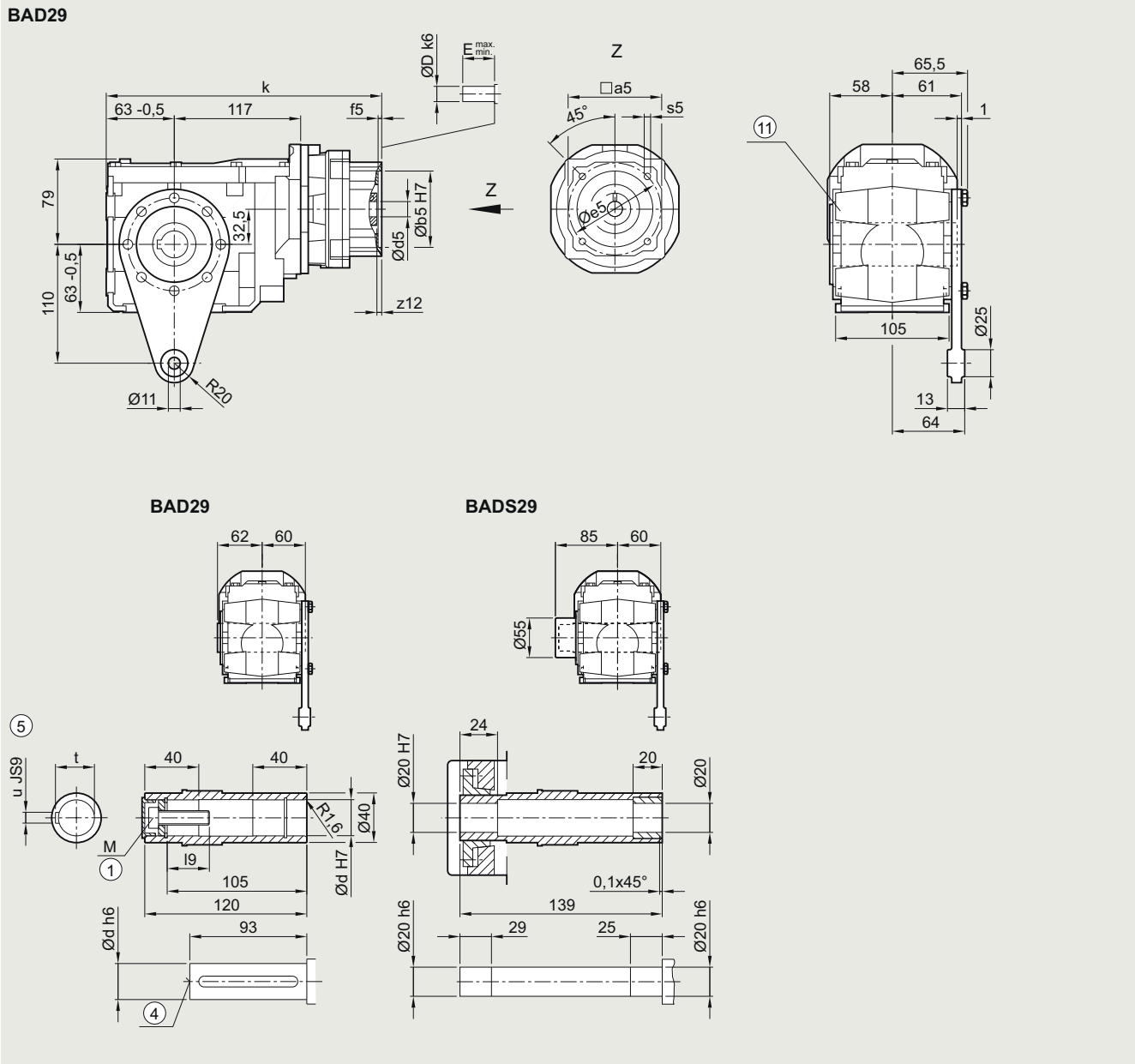
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### BAD.29 gearbox in a shaft-mounted design

**BAD030KS, BADS030KS**



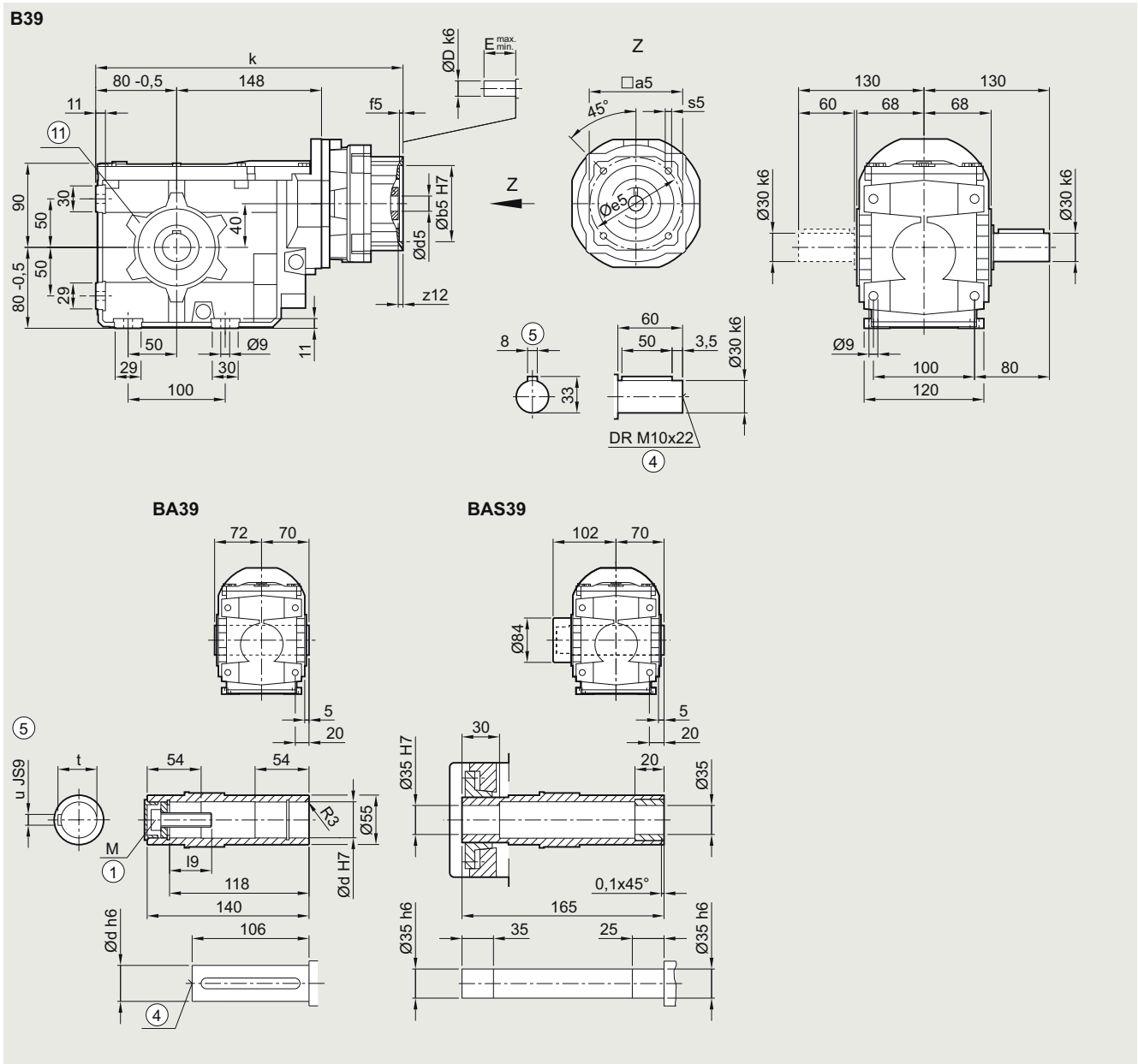
Shaft	d	I9	M	t	u					
	20	23.4	M6	22.8	6					
	25	27.6	M10	28.3	8					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	262.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	262.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	315.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

**B..39 gearbox in a foot-mounted design****B030KS, BA030KS, BAS030KS**

Shaft	d	l9	M	t	u					
	30	32.6	M10	33.3	8					
	35	37.0	M12	38.3	10					
	40	47.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	310.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	310.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	322.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	322.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	338.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	338.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	363.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	363.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	376.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for housing flange design

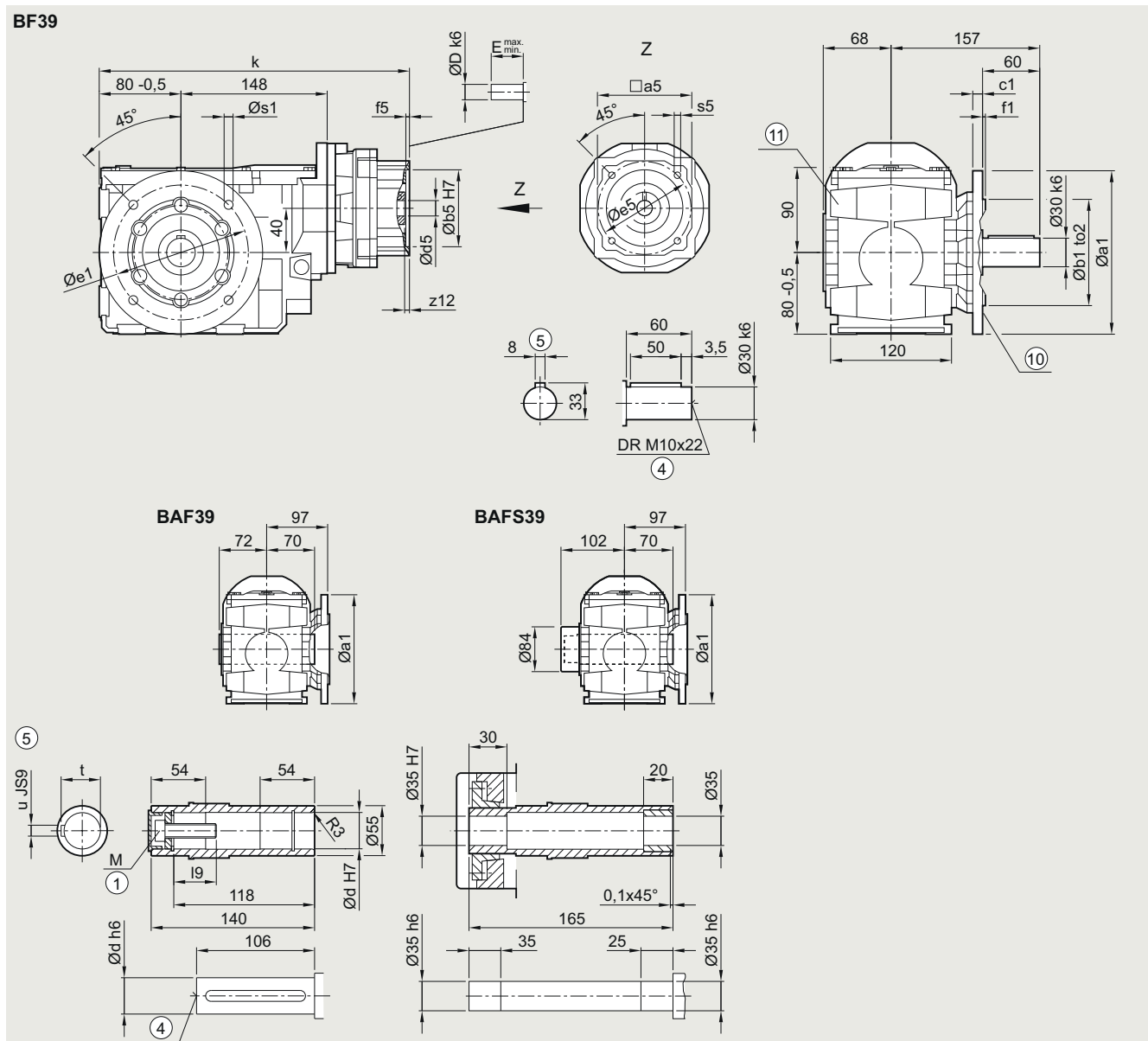
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### B.F.39 gearbox in a flange-mounted design

BF030KS, BAF030KS, BAFS030KS



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			
Shaft	d	i9	M	t	u					
	30	32.6	M10	33.3	8					
	35	37.0	M12	38.3	10					
	40	47.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	310.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	310.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	322.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	322.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	338.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	338.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	363.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	363.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	376.0

① ISO 4014

④ DIN 332

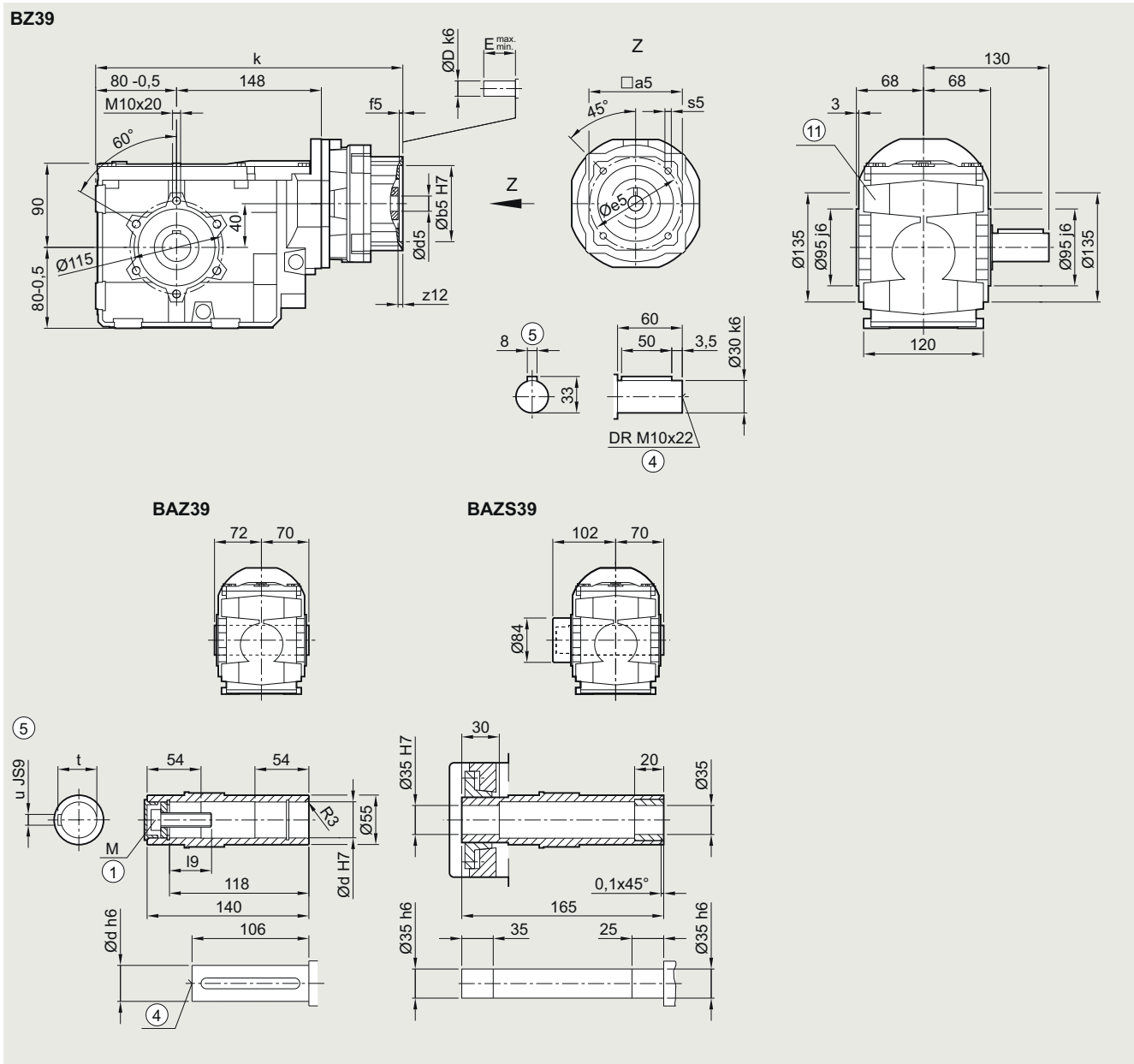
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

## B.Z.39 gearbox in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS



Shaft	d	l9	M	t	u					
	30	32.6	M10	33.3	8					
	35	37.0	M12	38.3	10					
	40	47.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	310.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	310.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	322.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	322.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	338.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	338.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	363.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	363.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	376.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design



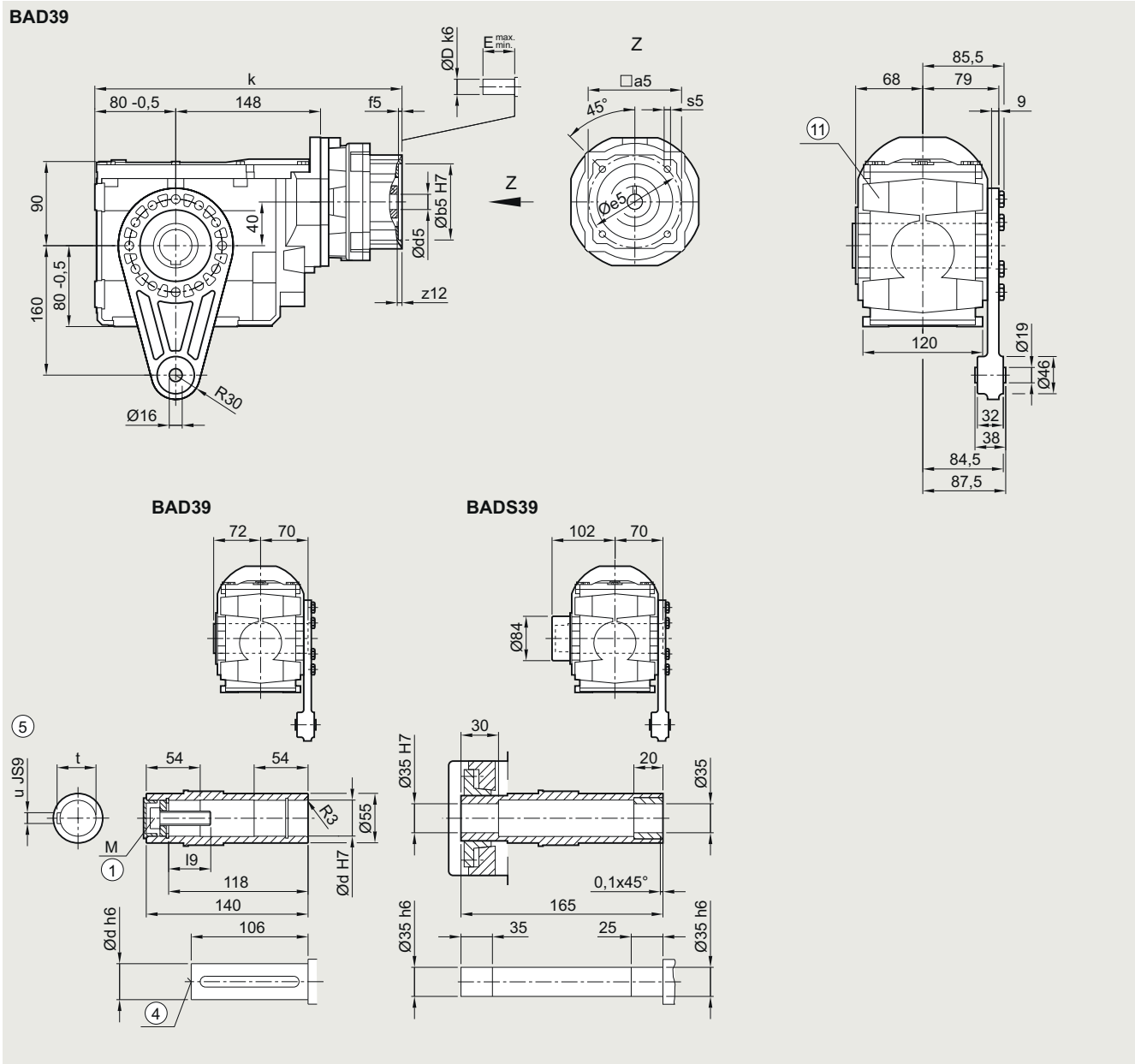
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### BAD.39 gearbox in a shaft-mounted design

**BAD030KS, BADS030KS**



Shaft	d	l9	M	t	u					
	30	32.6	M10	33.3	8					
	35	37.0	M12	38.3	10					
	40	47.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	310.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	310.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	322.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	322.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	338.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	338.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	363.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	363.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	376.0

① ISO 4014

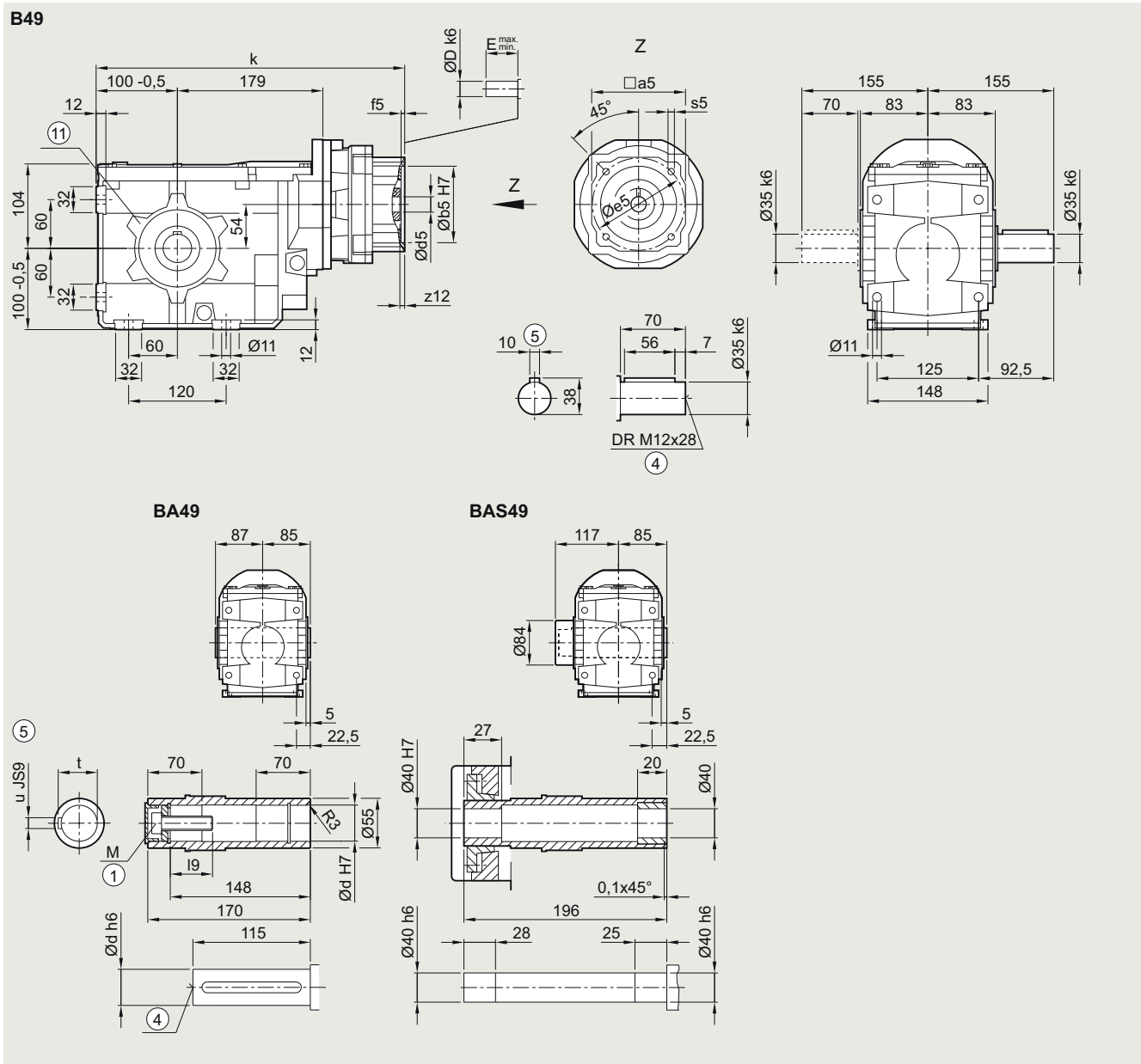
④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

## B..49 gearbox in a foot-mounted design

B030KS, BA030KS, BAS030KS



Shaft	d	l9	M	t	u					
	35	57	M12	38.3	10					
	40	67.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	351.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	351.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	364.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	364.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	380.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	380.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	405.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	405.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	417.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	453.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	453.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for housing flange design

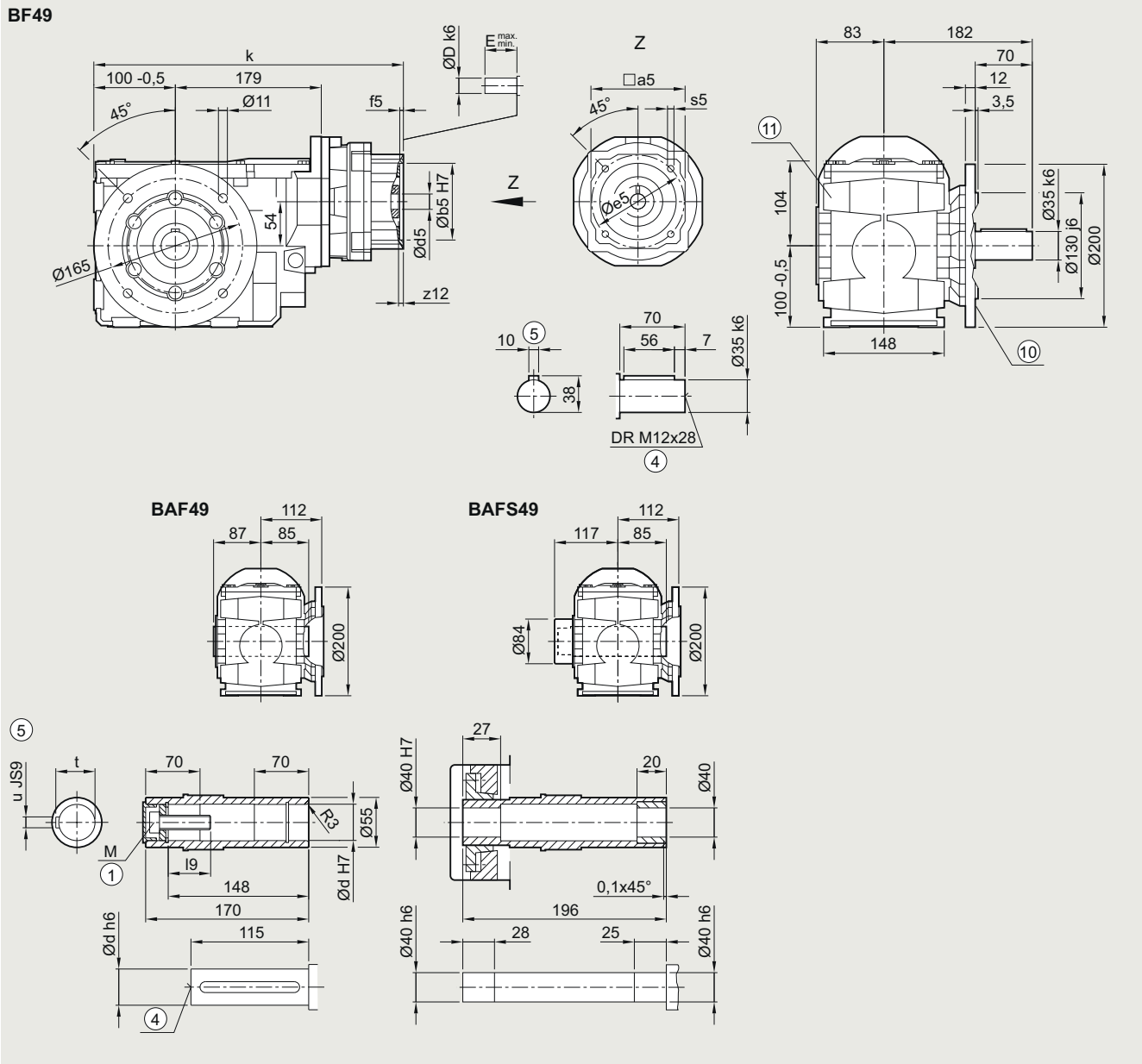
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### B.F.49 gearbox in a flange-mounted design

**BF030KS, BAF030KS, BAFS030KS**



Shaft	d	i9	M	t	u					
	35	57	M12	38.3	10					
	40	67.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	351.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	351.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	364.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	364.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	380.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	380.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	405.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	405.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	417.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	453.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	453.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

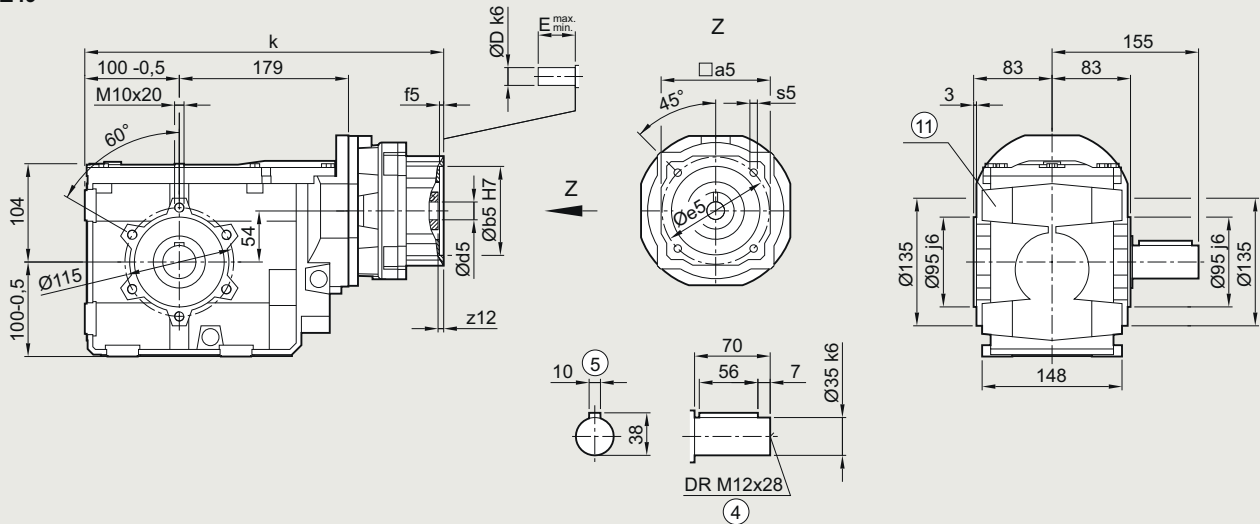
⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

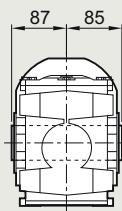
## B.Z.49 gearbox in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS

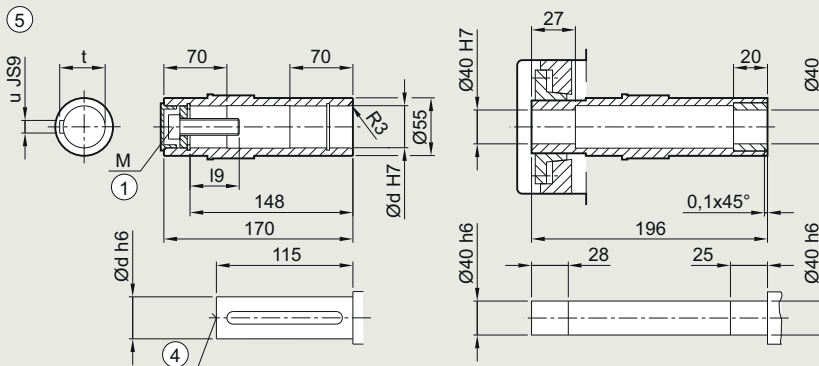
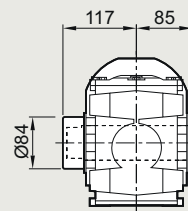
BZ49



BAZ49



BAZS49



Shaft	d	l9	M	t	u					
	35	57	M12	38.3	10					
	40	67.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	351.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	351.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	364.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	364.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	380.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	380.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	405.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	405.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	417.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	453.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	453.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ Use bores only for foot-mounted design

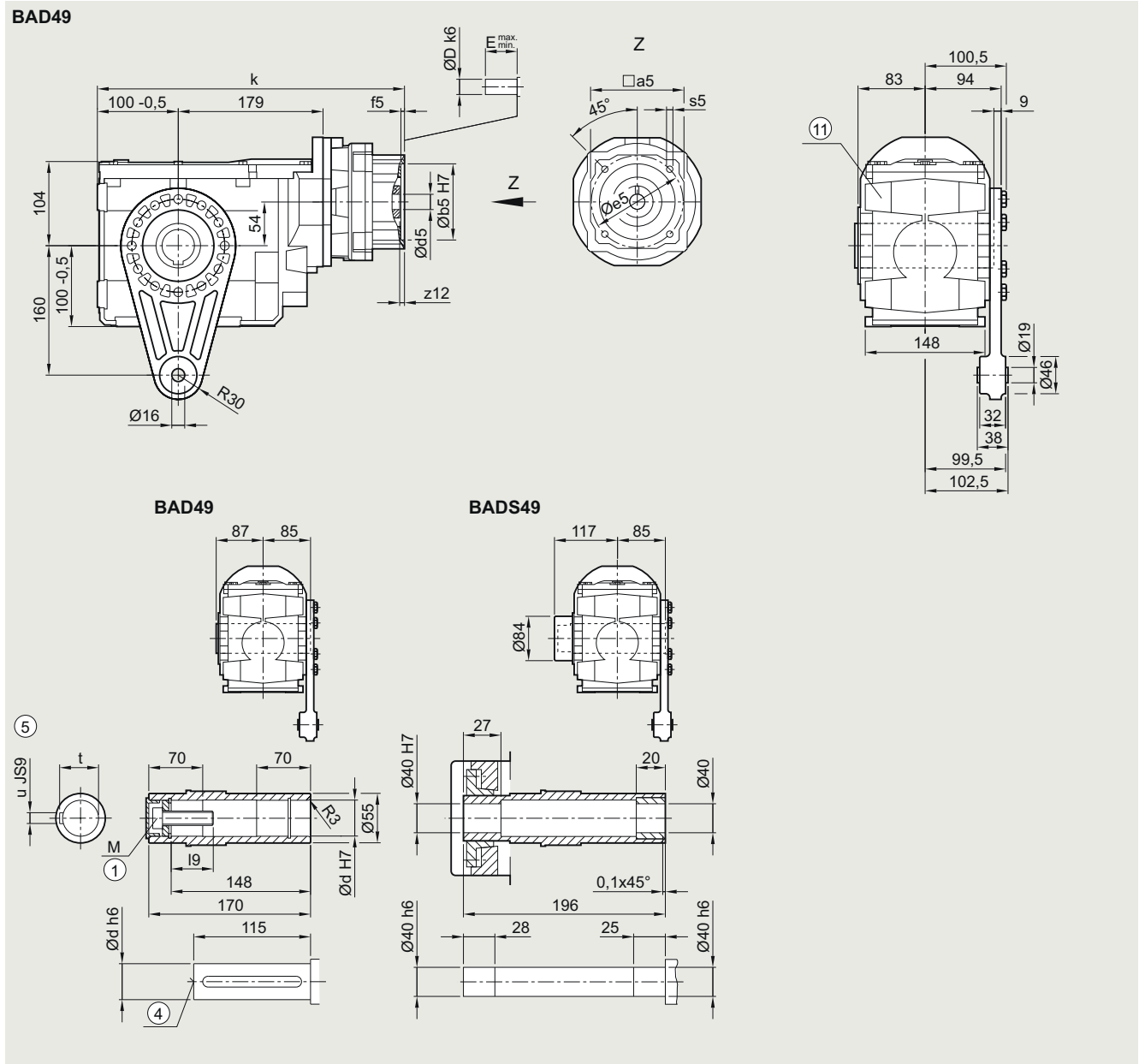
# SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

## Dimensional drawings

### BAD.49 gearbox in a shaft-mounted design

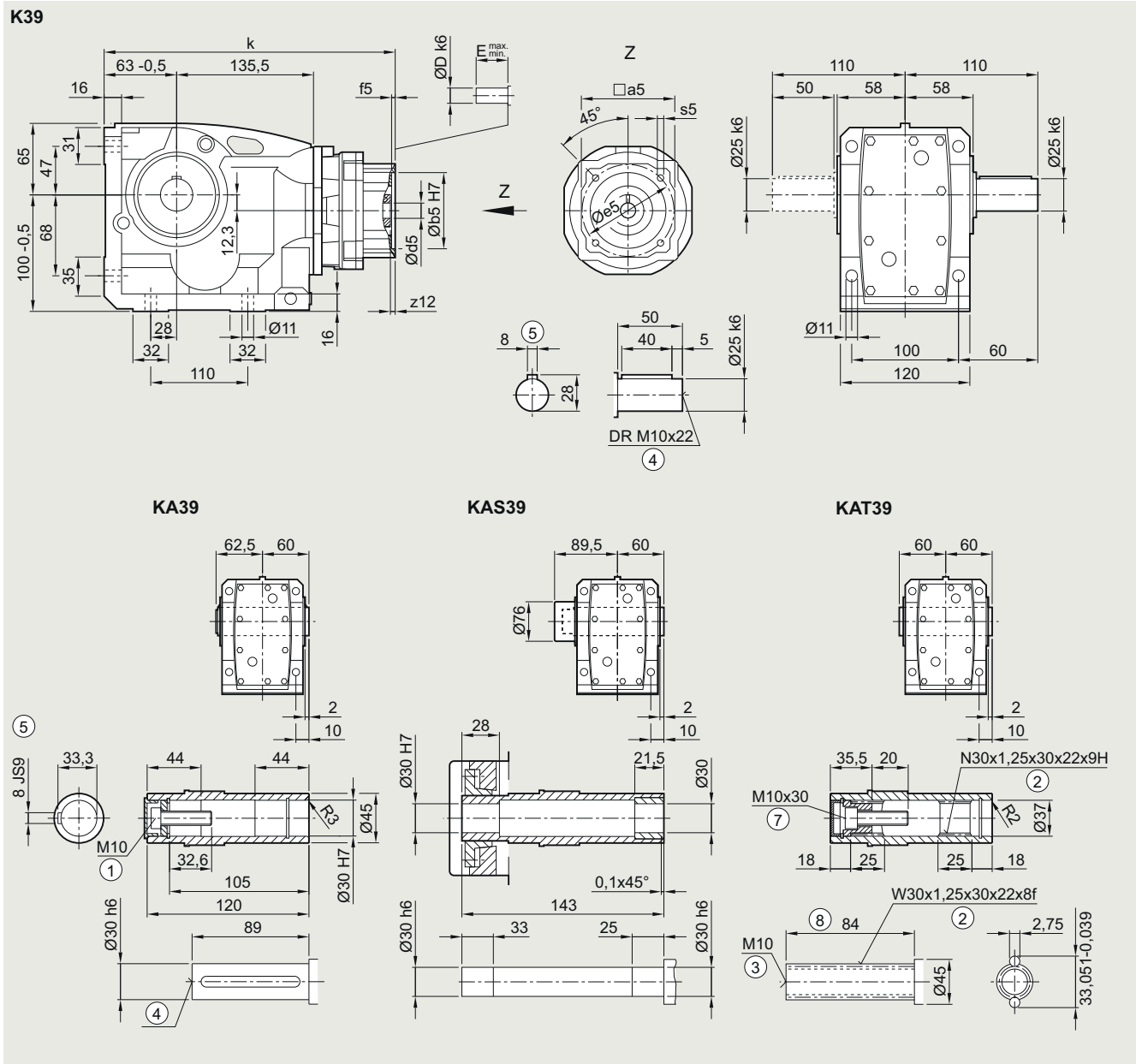
BAD030KS, BADS030KS



Shaft	d	I9	M	t	u					
	35	57	M12	38.3	10					
	40	67.75	M16	43.3	12					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	351.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	351.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	364.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	364.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	380.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	380.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	405.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	405.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	417.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	453.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	453.5

① ISO 4014      ④ DIN 332      ⑤ Feather key/keyway DIN 6885      ⑩ Use bores only for foot-mounted design

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**K.39 gearbox in a foot-mounted design****K030KS, KA030KS, KAS030KS, KAT030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	280.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	280.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	292.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	292.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	333.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	333.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	346.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

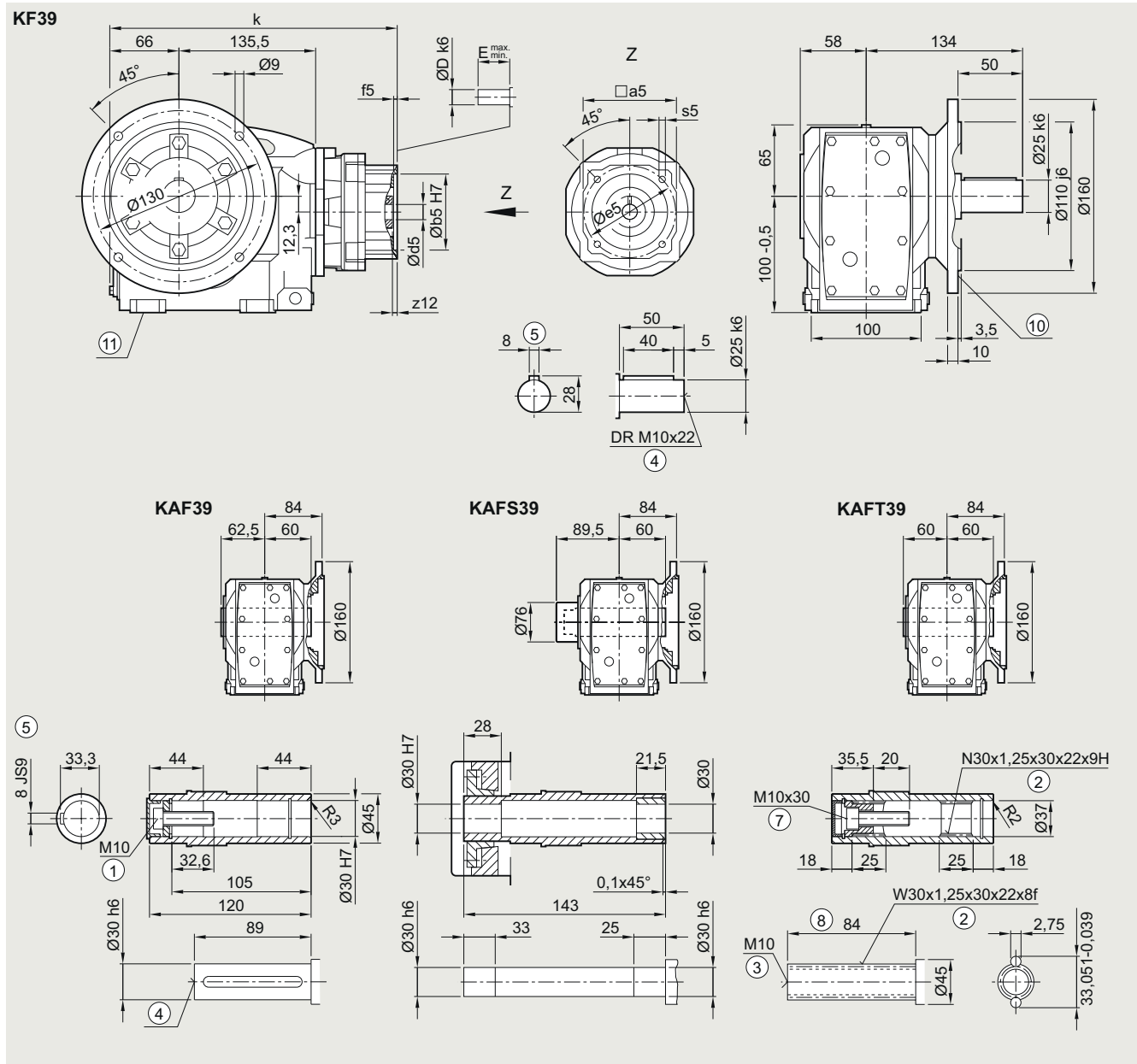
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.39 gearbox in a flange-mounted design

**KF030KS, KAF030KS, KAFS030KS, KAFT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	283.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	283.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	295.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	295.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	311.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	311.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	336.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	336.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	349.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

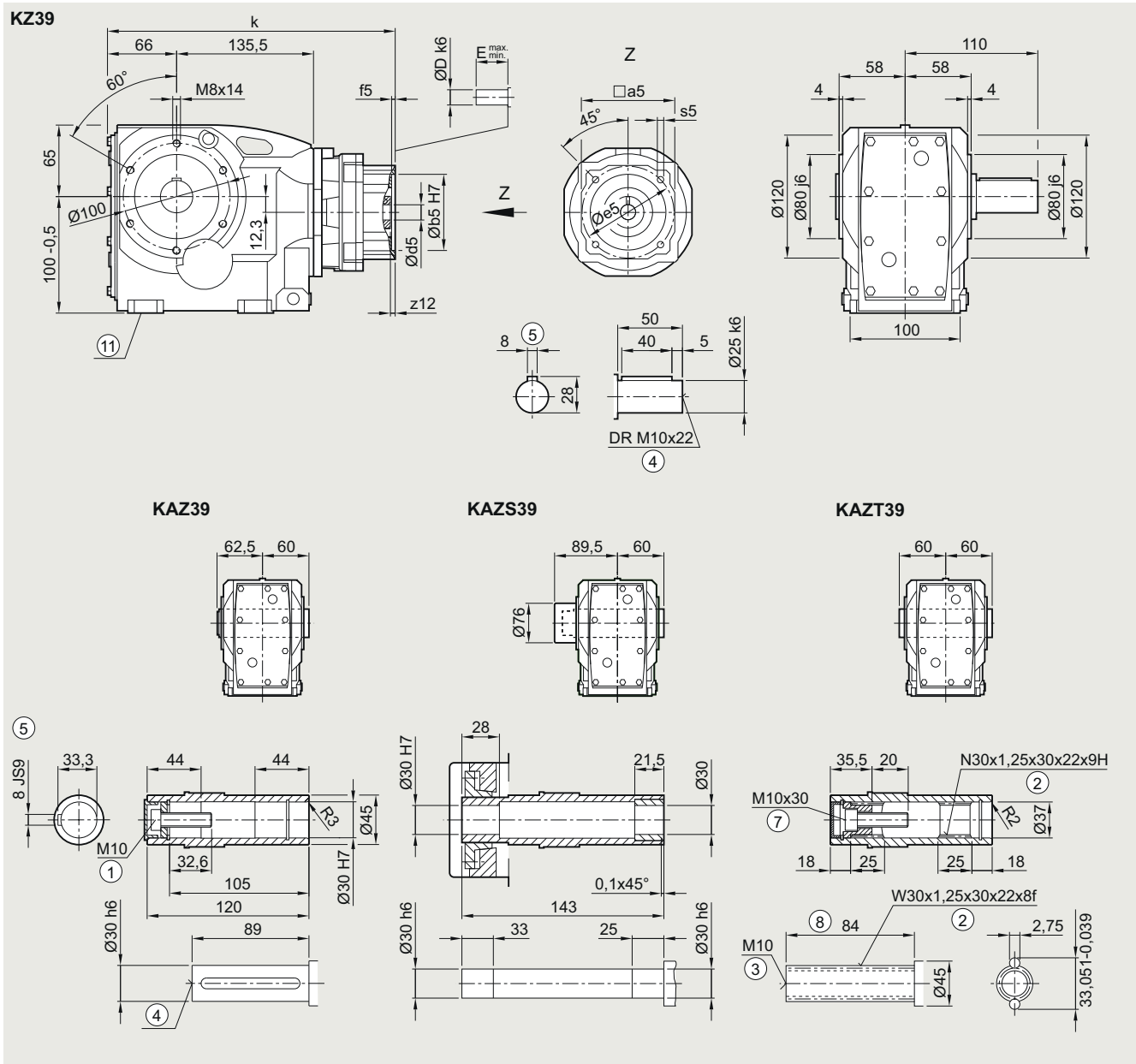
⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design

## K.Z.39 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	283.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	283.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	295.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	295.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	311.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	311.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	336.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	336.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	349.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design



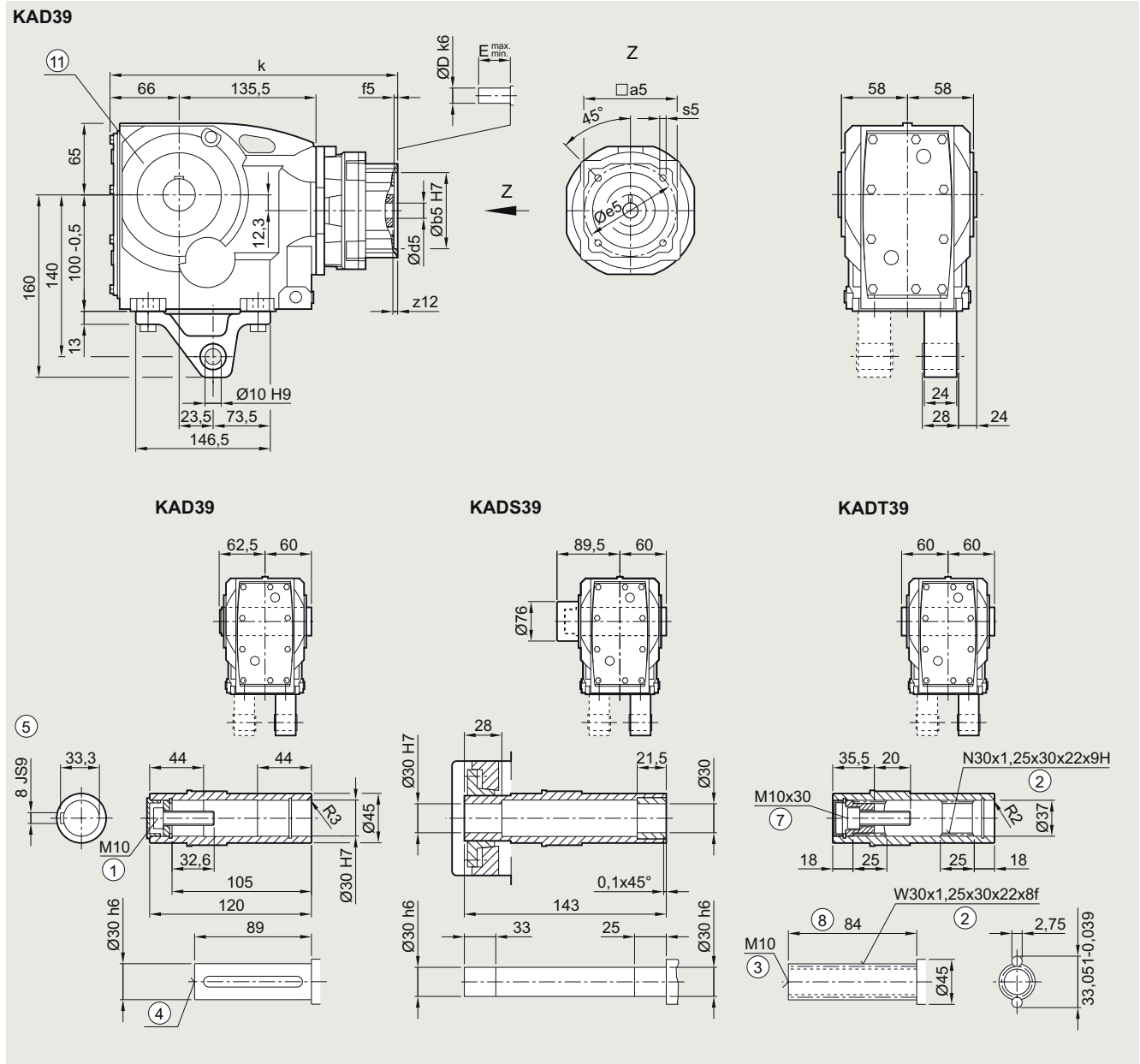
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### KAD.39 gearbox in a shaft-mounted design

**KAD031KS, KADS031KS, KADT031KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	283.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	283.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	295.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	295.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	311.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	311.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	336.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	336.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	349.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

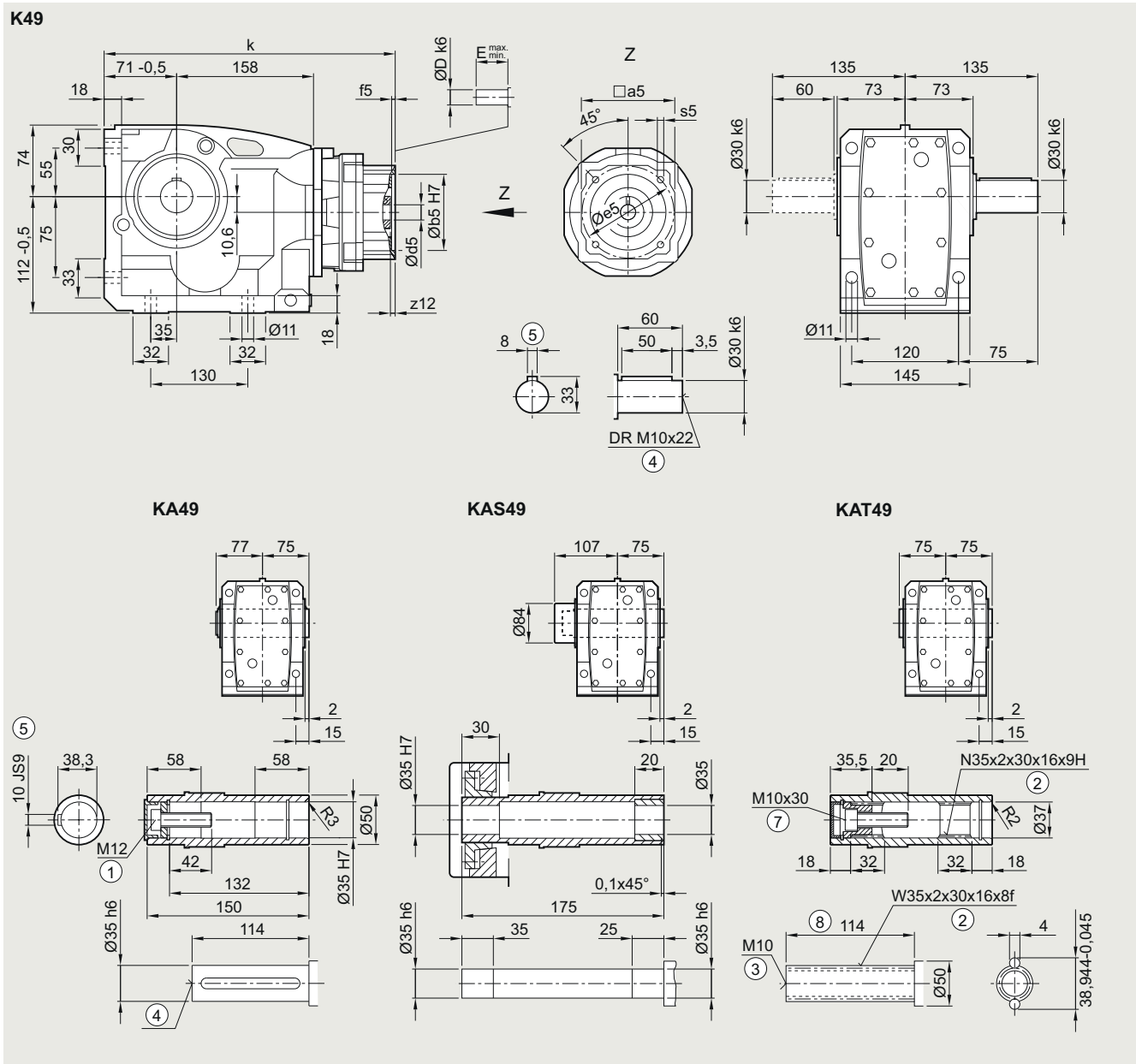
⑥ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

## K.49 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	301.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	301.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	314.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	314.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	330.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	330.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	355.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	355.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	367.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	403.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	403.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

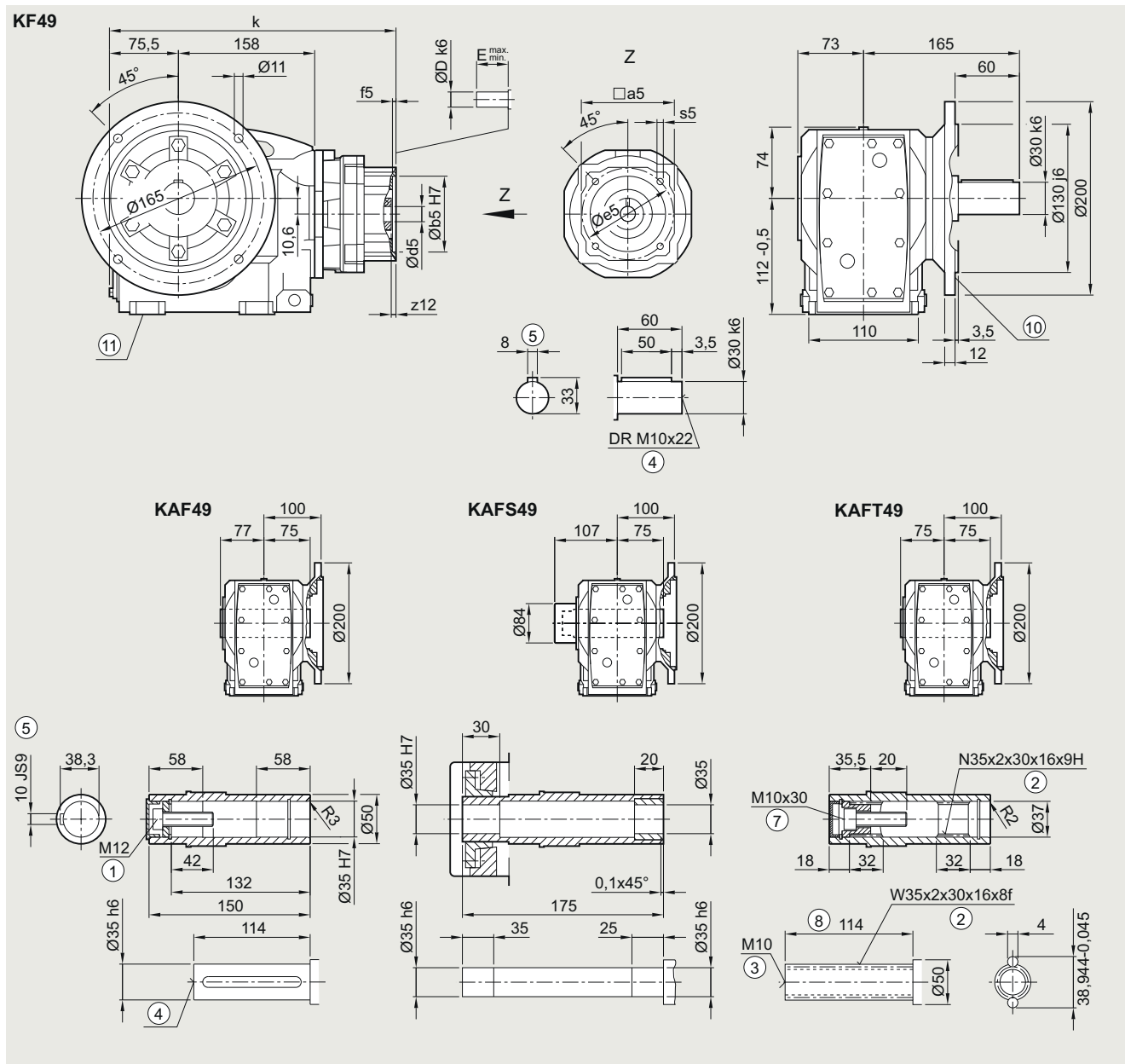
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.49 gearbox in a flange-mounted design

**KF030KS, KAF030KS, KAFS030KS, KAFT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	306.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	306.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	318.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	318.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	334.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	334.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	359.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	359.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	372.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	408.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	408.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

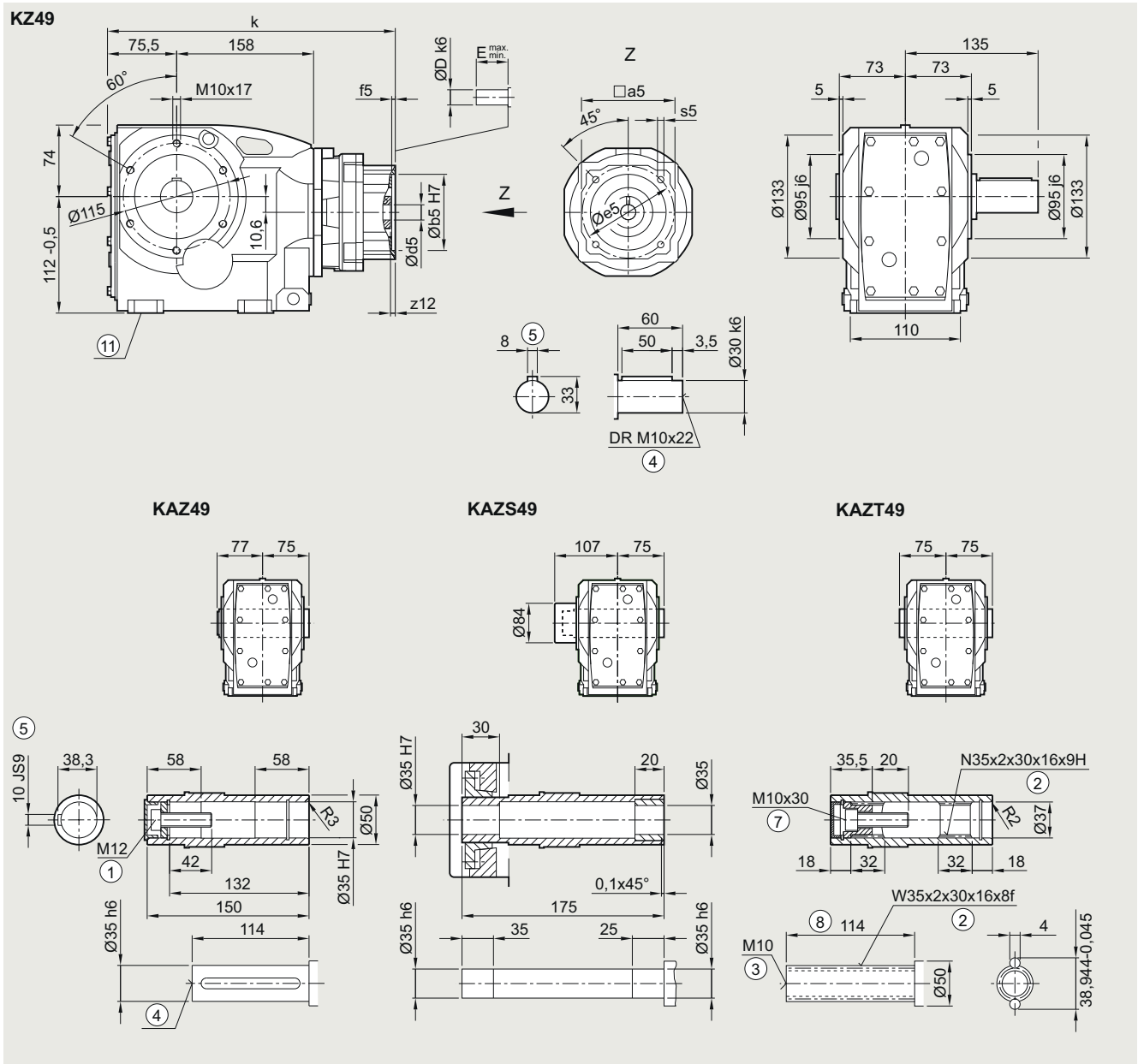
⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design

## K.Z.49 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	306.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	306.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	318.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	318.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	334.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	334.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	359.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	359.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	372.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	408.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	408.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design

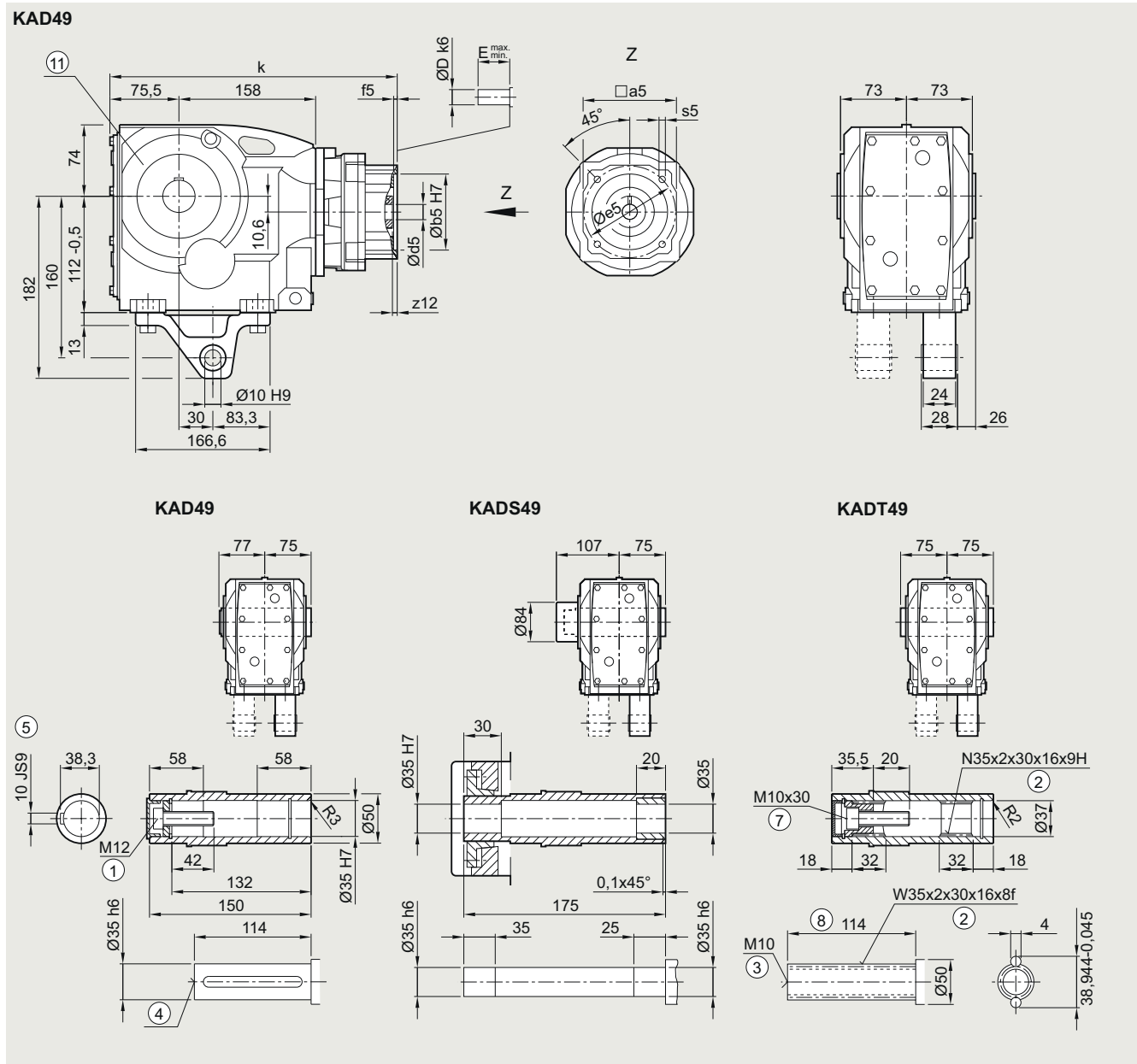
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### KAD.49 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	306.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	306.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	318.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	318.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	334.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	334.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	359.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	359.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	372.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	408.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	408.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

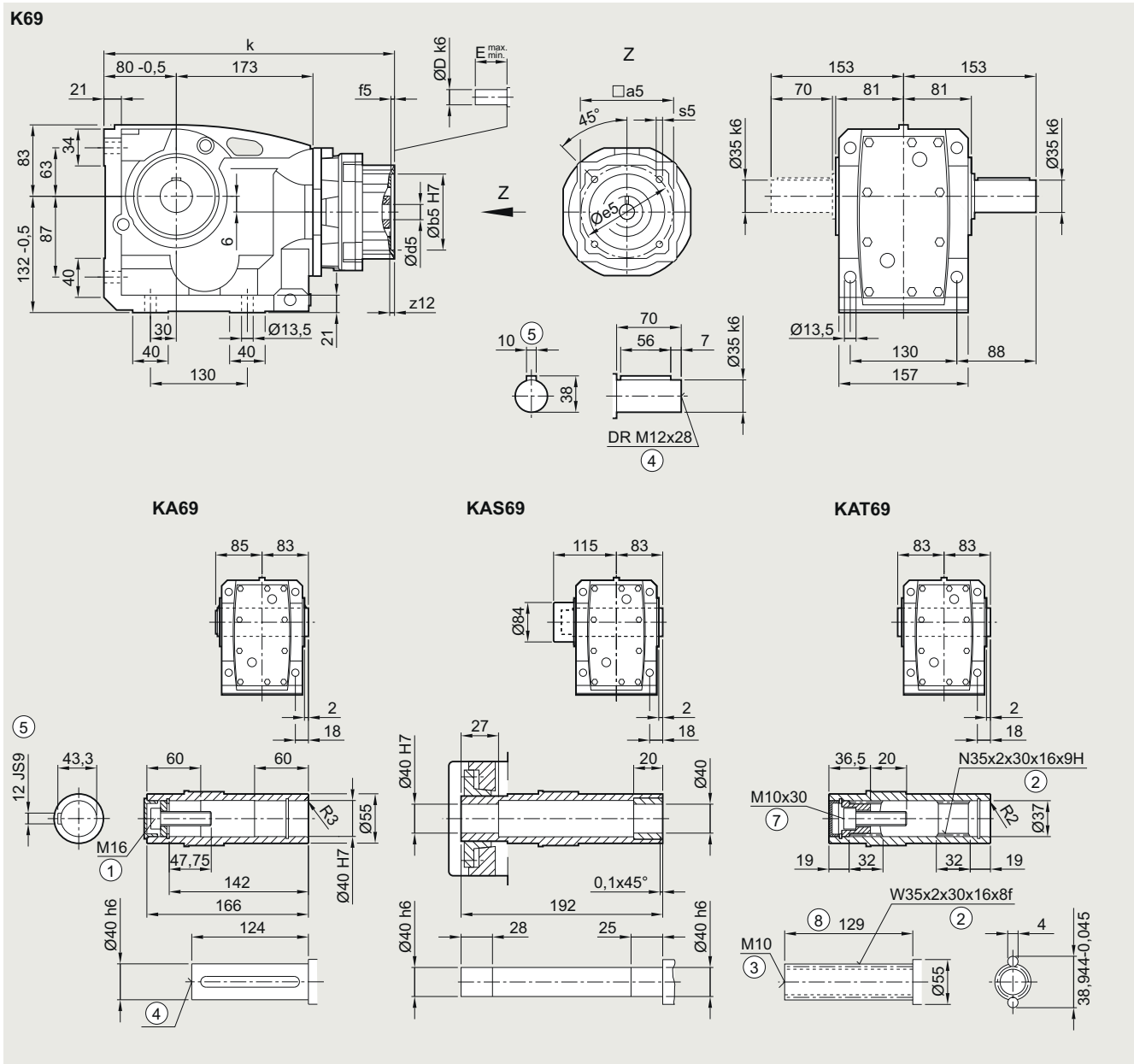
⑥ ISO 4762

⑥ Without locating shoulder +1 mm

⑦ Use bores only for housing flange design

## K.69 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	325.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	325.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	338.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	338.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	354.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	354.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	379.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	379.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	391.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	427.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	427.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

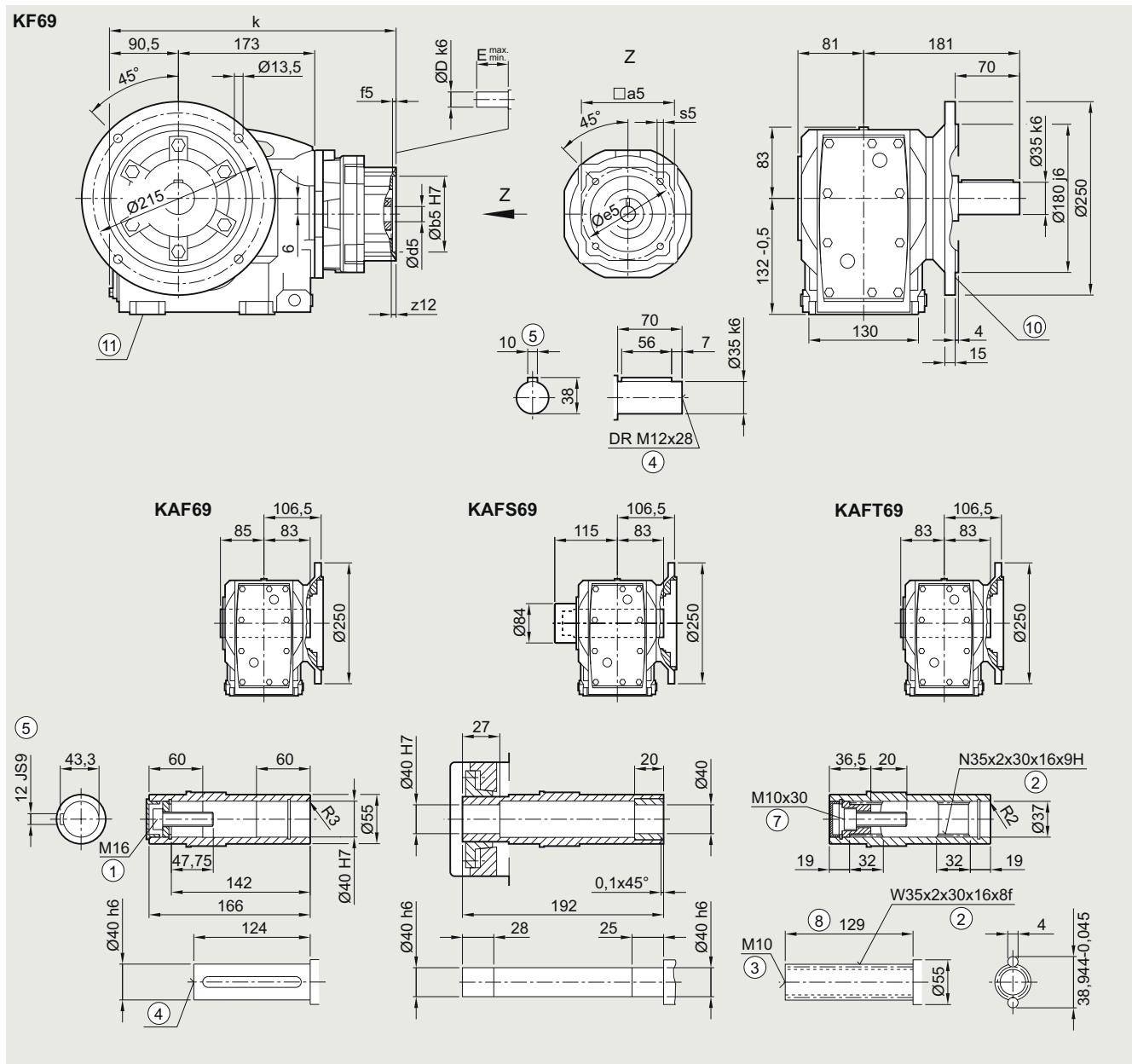
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.69 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	336.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	336.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	348.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	348.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	364.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	364.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	389.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	389.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	402.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	438.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	438.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

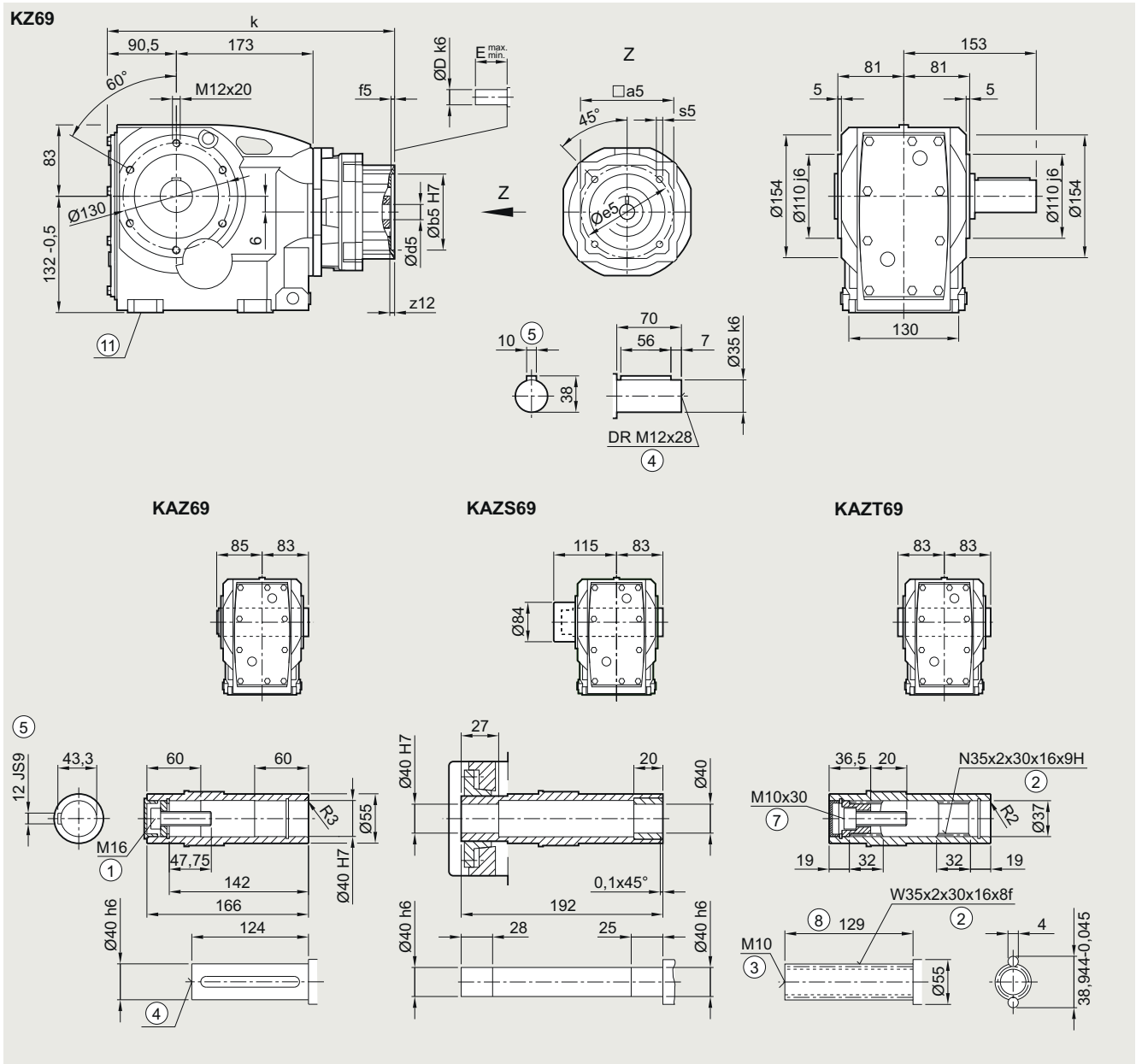
⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design

## K.Z.69 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	336.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	336.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	348.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	348.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	364.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	364.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	389.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	389.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	402.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	438.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	438.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design



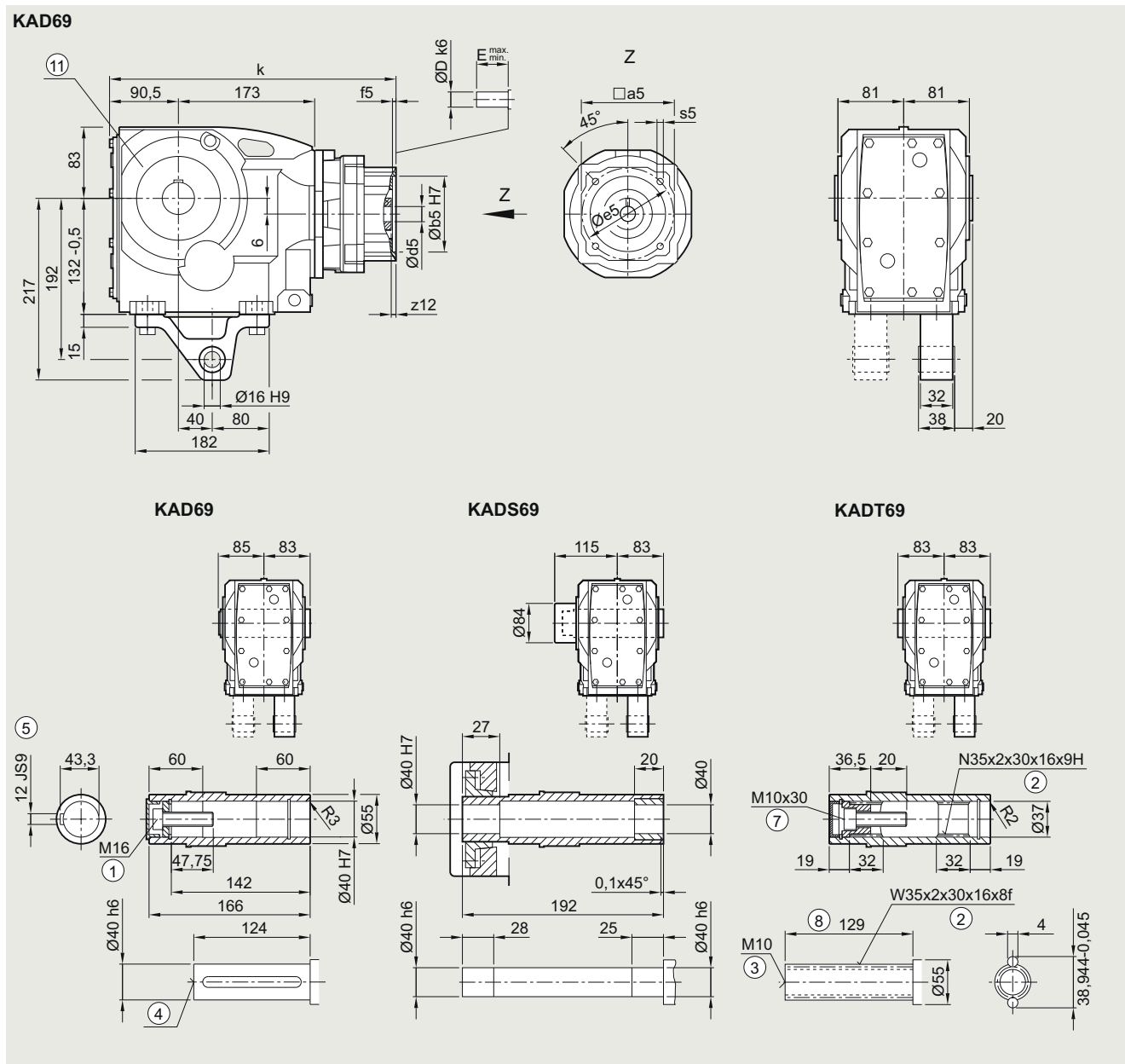
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

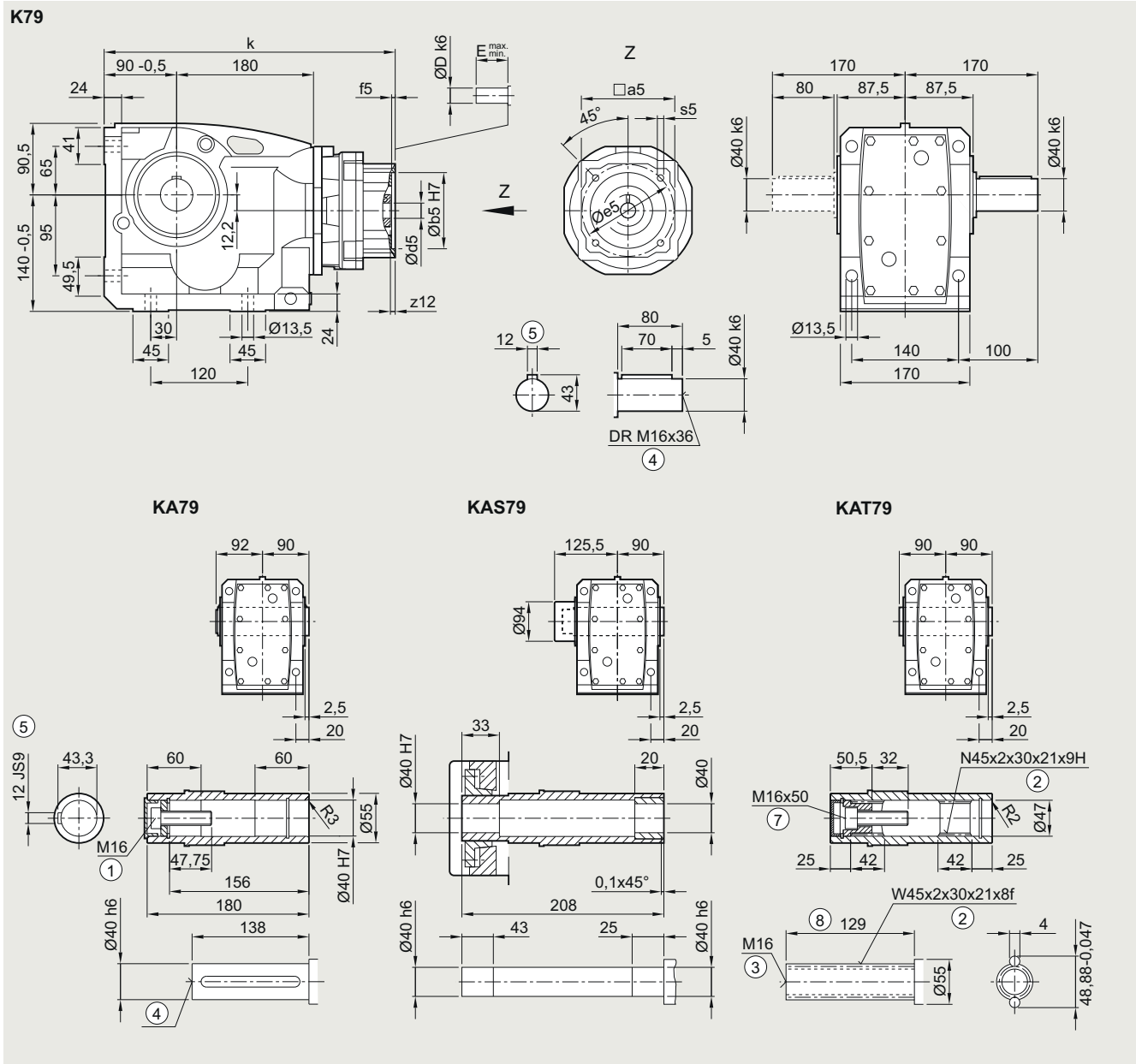
#### KAD.69 gearbox in a shaft-mounted design

KAD030KS, KADS030KS, KADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	336.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	336.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	348.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	348.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	364.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	364.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	389.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	389.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	402.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	438.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	438.0

① ISO 4014      ② DIN 5480      ③ DIN 332-D      ④ DIN 332      ⑤ Feather key/keyway DIN 6885  
 ⑥ ISO 4762      ⑦ Without locating shoulder +1 mm      ⑧ Use bores only for housing flange design

**K.79 gearbox in a foot-mounted design****K030KS, KA030KS, KAS030KS, KAT030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	355.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	355.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	371.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	371.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	396.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	396.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	408.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	444.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	444.5

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

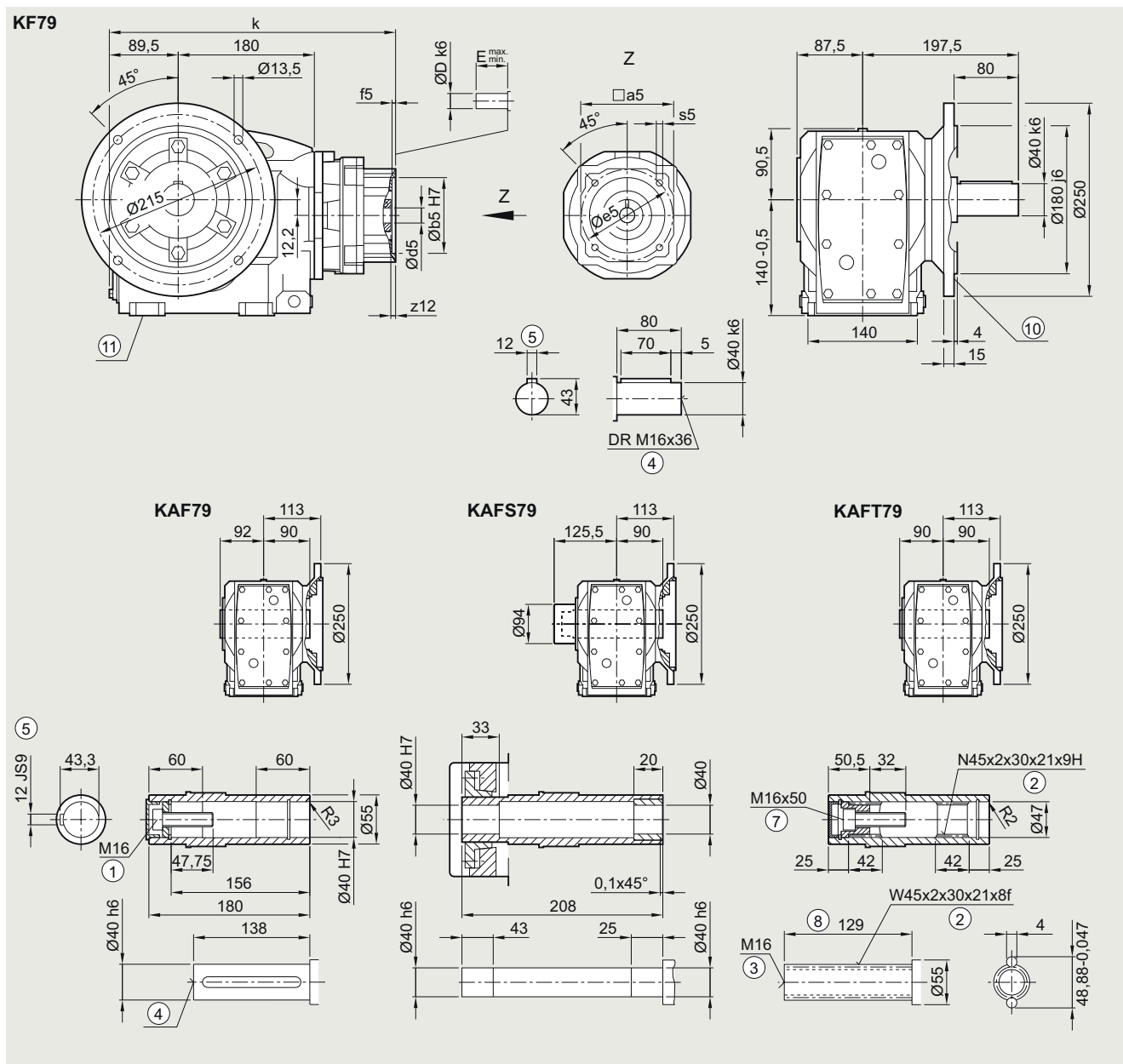
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.79 gearbox in a flange-mounted design

**KF030KS, KAF030KS, KAFS030KS, KAFT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	354.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	354.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	370.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	370.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	395.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	395.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	408.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	444.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	444.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

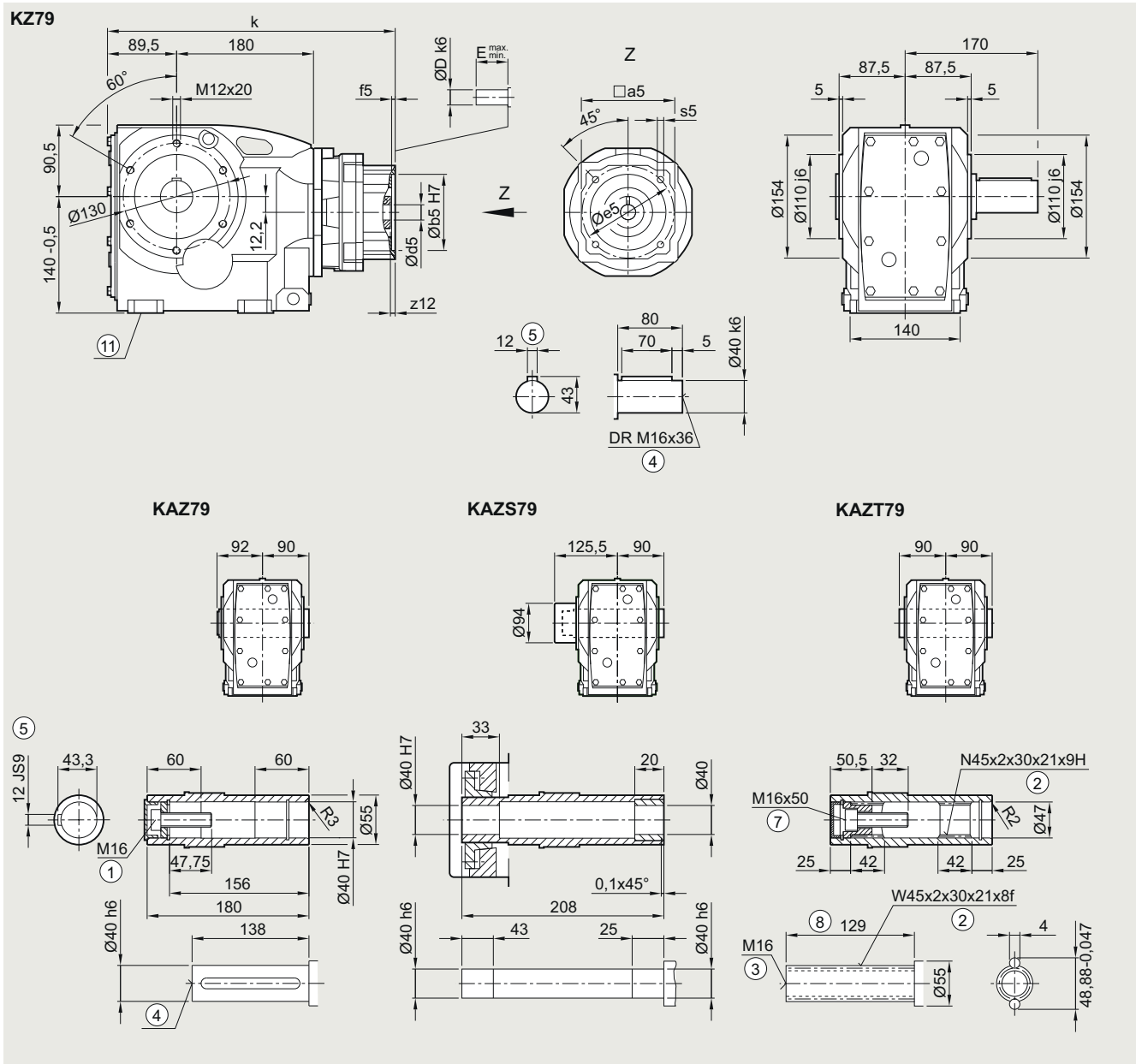
⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/177 ⑪ Use bores only for foot-mounted design

## K.Z.79 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	354.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	354.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	370.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	370.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	395.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	395.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	408.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	444.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	444.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

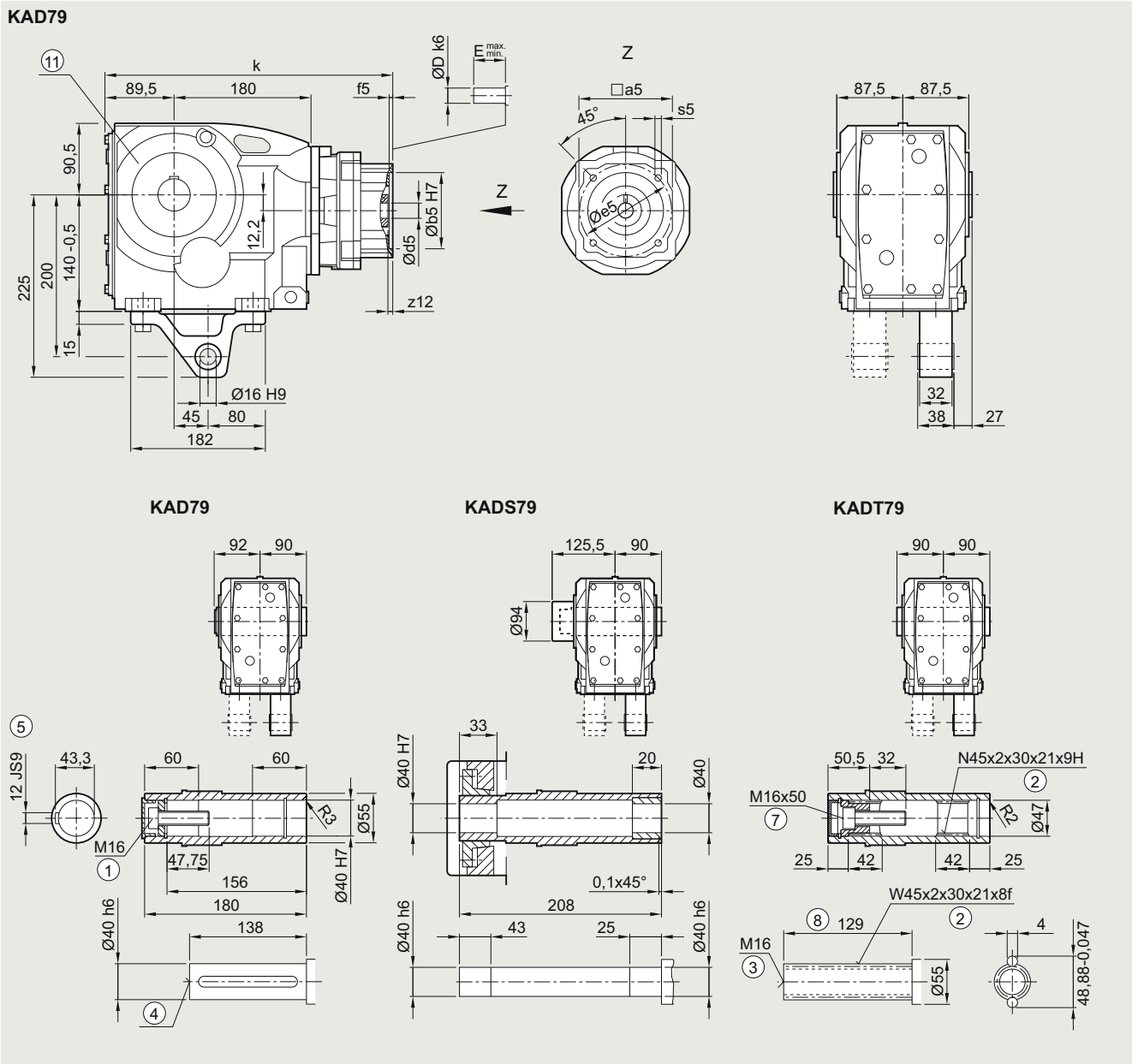
⑦ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design

**SIMOGEAR gearboxes**

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

**Dimensional drawings****KAD.79 gearbox in a shaft-mounted design****KAD030KS, KADS030KS, KADT030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	354.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	354.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	370.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	370.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	395.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	395.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	408.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	444.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	444.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

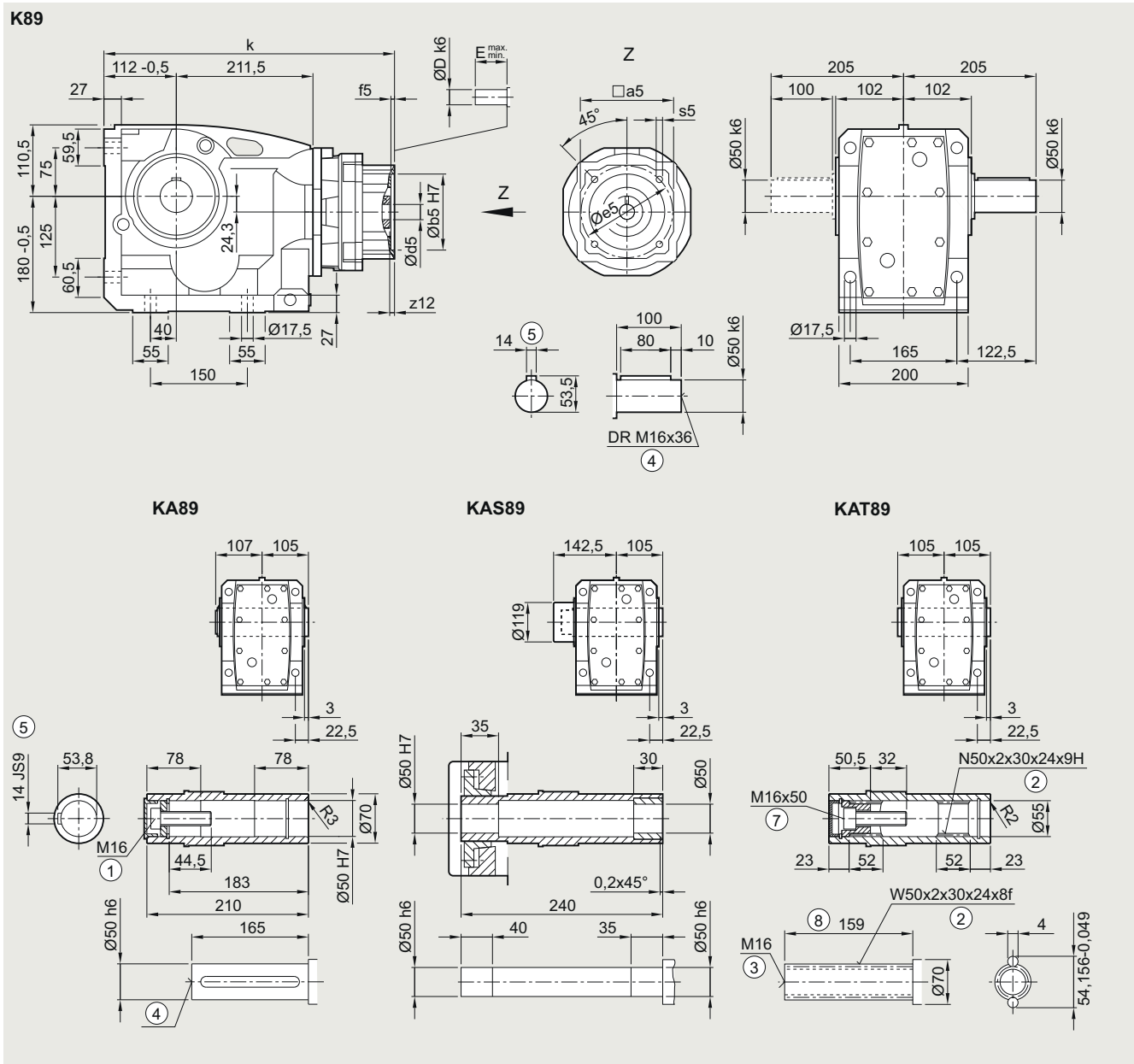
⑥ ISO 4762

⑥ Without locating shoulder +1 mm

⑦ Use bores only for housing flange design

## K.89 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	443.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	443.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	456.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	492.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	492.0

① ISO 4014   ② DIN 5480   ③ DIN 332-D   ④ DIN 332   ⑤ Feather key/keyway DIN 6885   ⑦ ISO 4762   ⑧ Without locating shoulder +1 mm

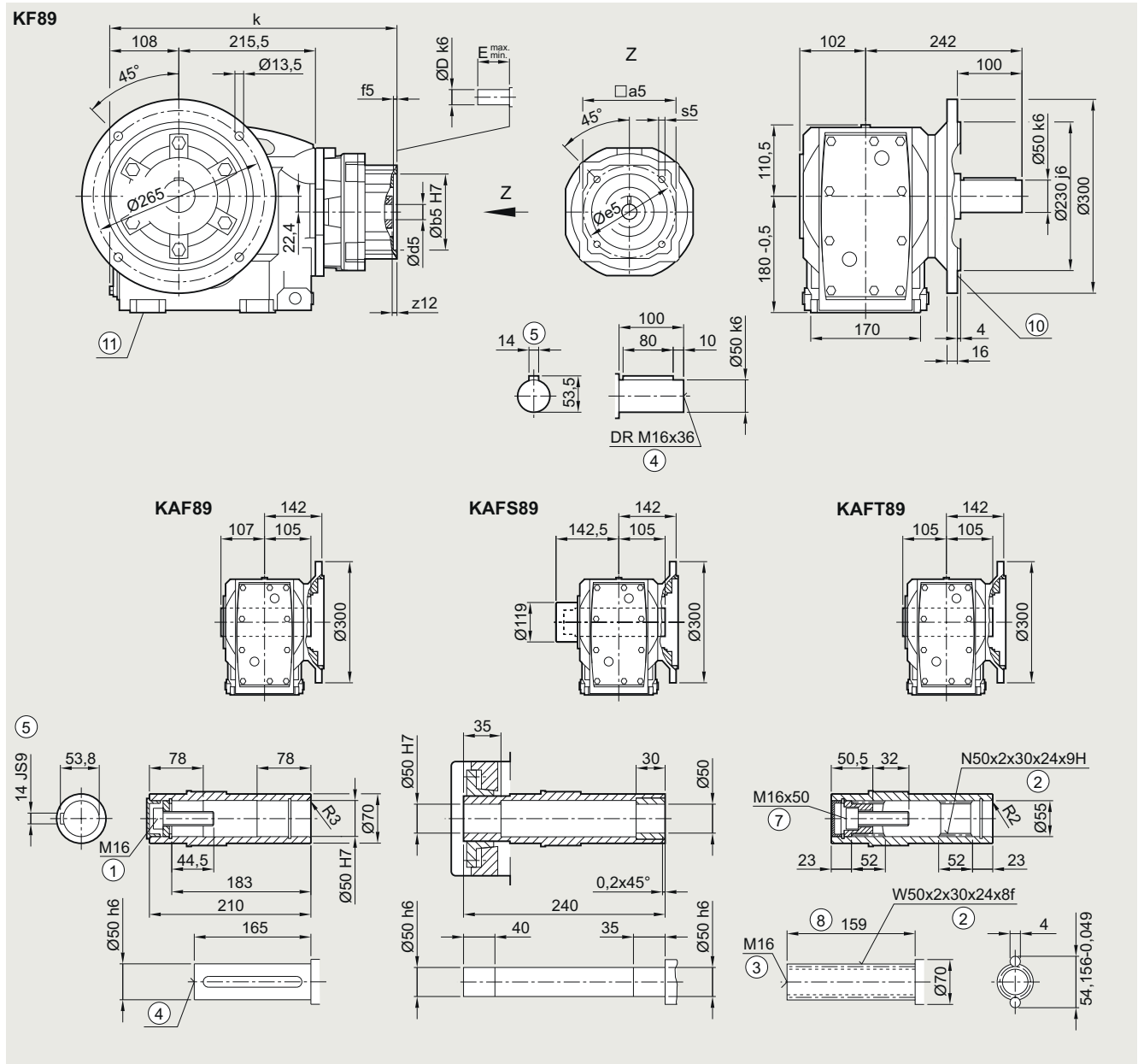
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.89 gearbox in a flange-mounted design

**KF030KS, KAF030KS, KAFS030KS, KAFT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	443.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	443.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	456.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	492.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	492.0

① ISO 4014

② DIN 5480

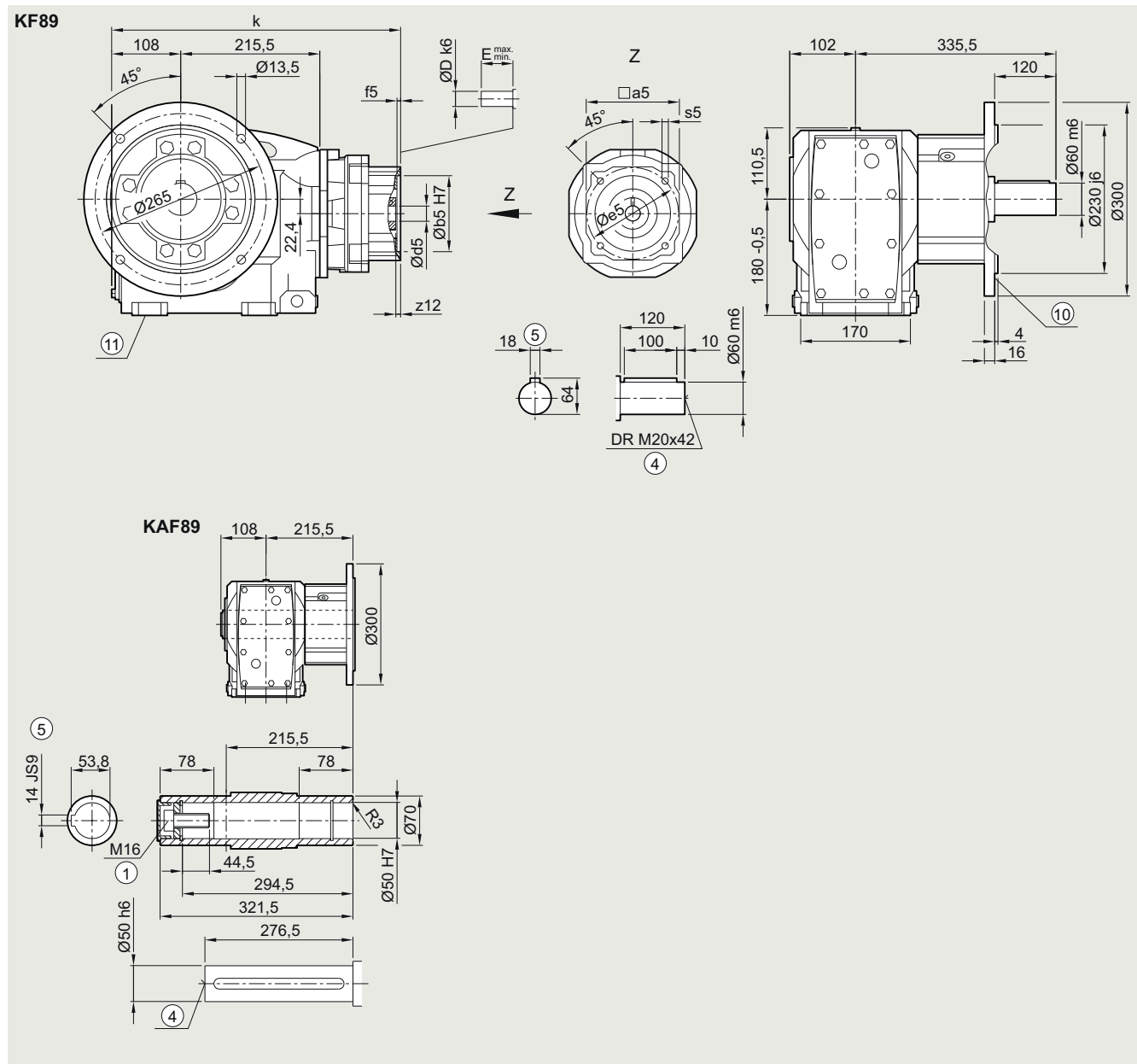
③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/177 ⑪ Use bores only for foot-mounted design

**K.F.89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****KF040KS, KAF040KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	443.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	443.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	456.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	492.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	492.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design



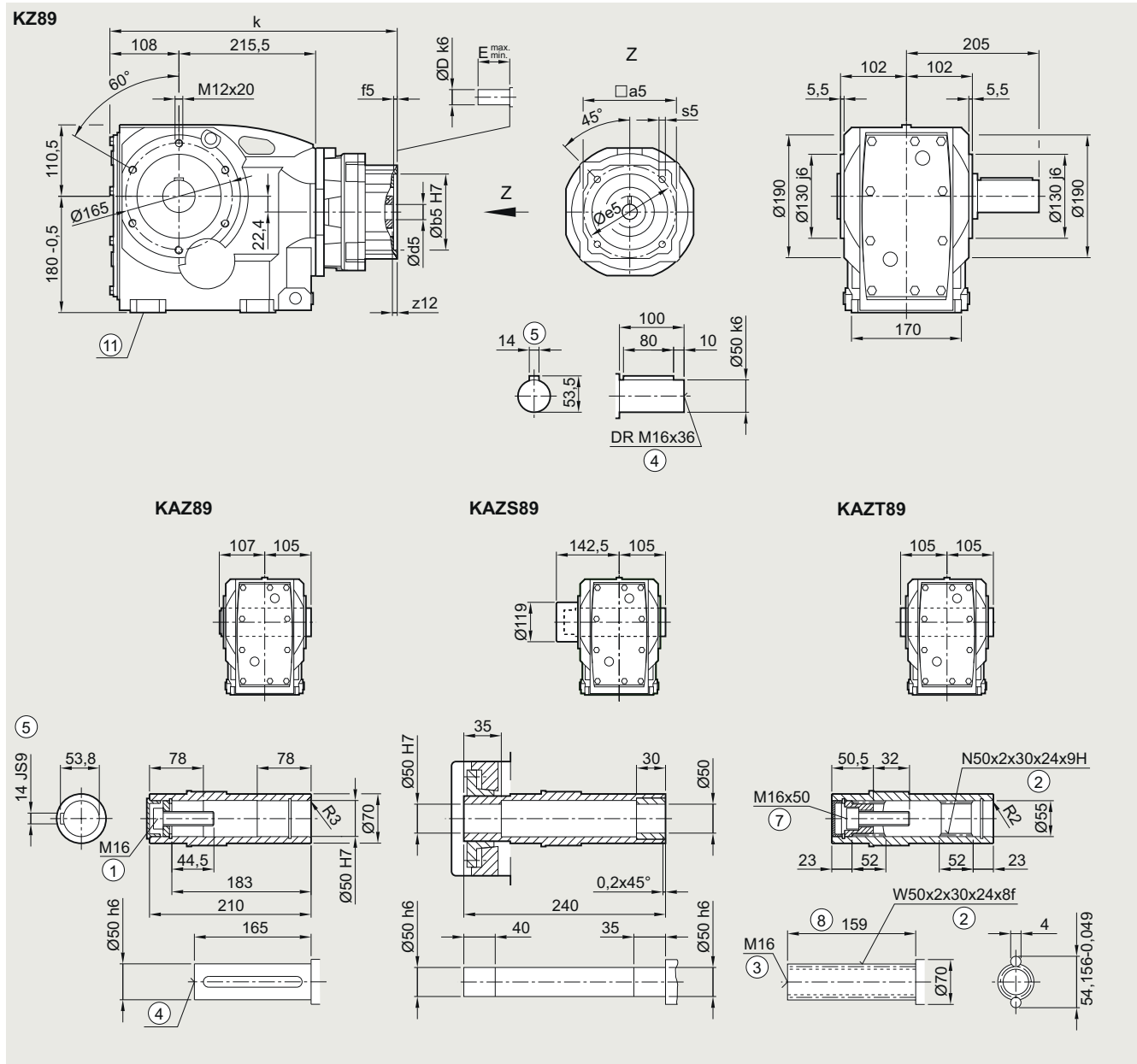
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.Z.89 gearbox in a housing flange design

**KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	443.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	443.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	456.0
KS10.1	196	180	5	215	M12x22	5	38	50	80	492.0
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	492.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

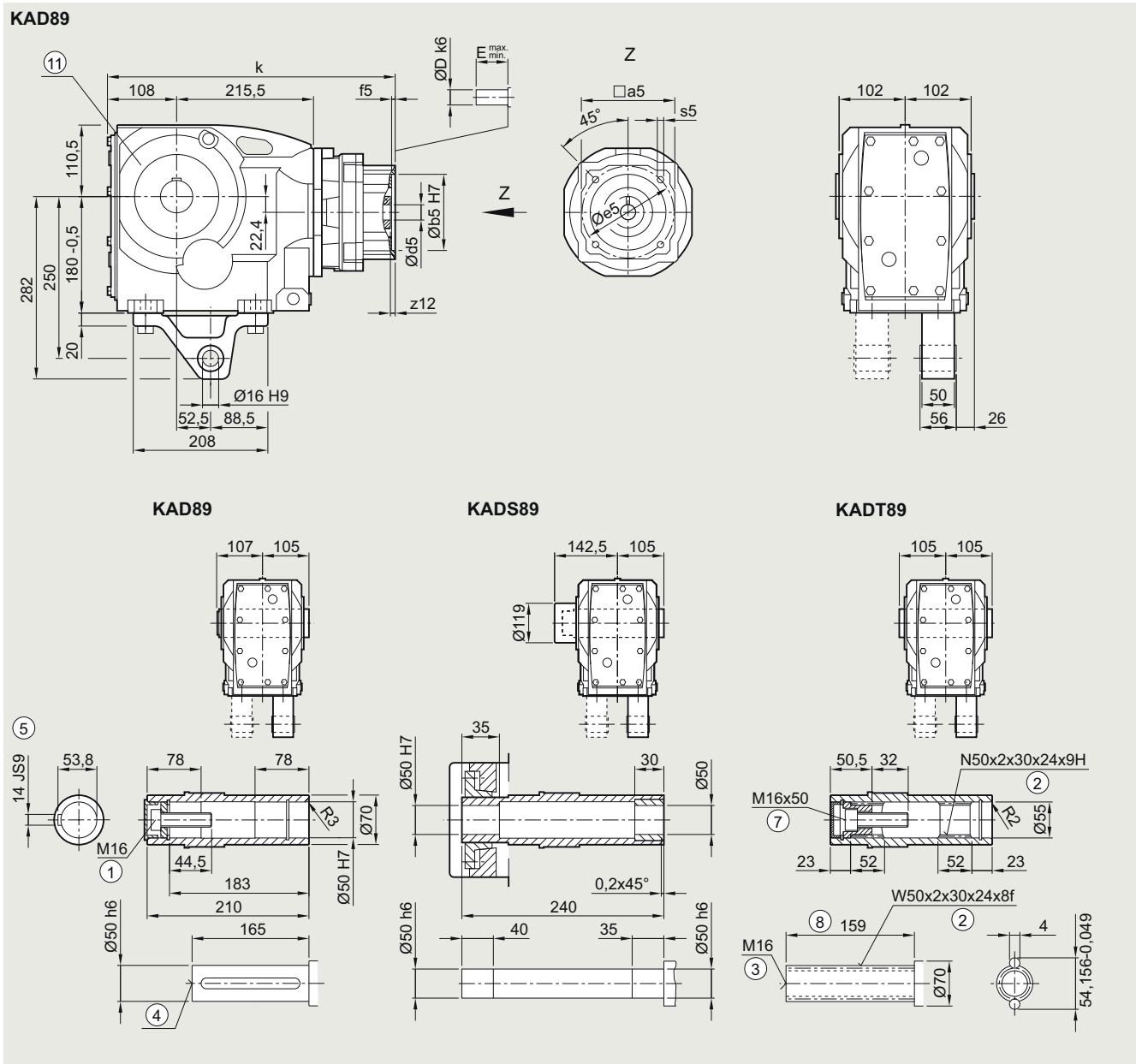
⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design

## KAD.89 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	443.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	443.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	456.0
KS10.1	196	180	5	215	M12x22	5	38	50	80	492.0
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	492.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

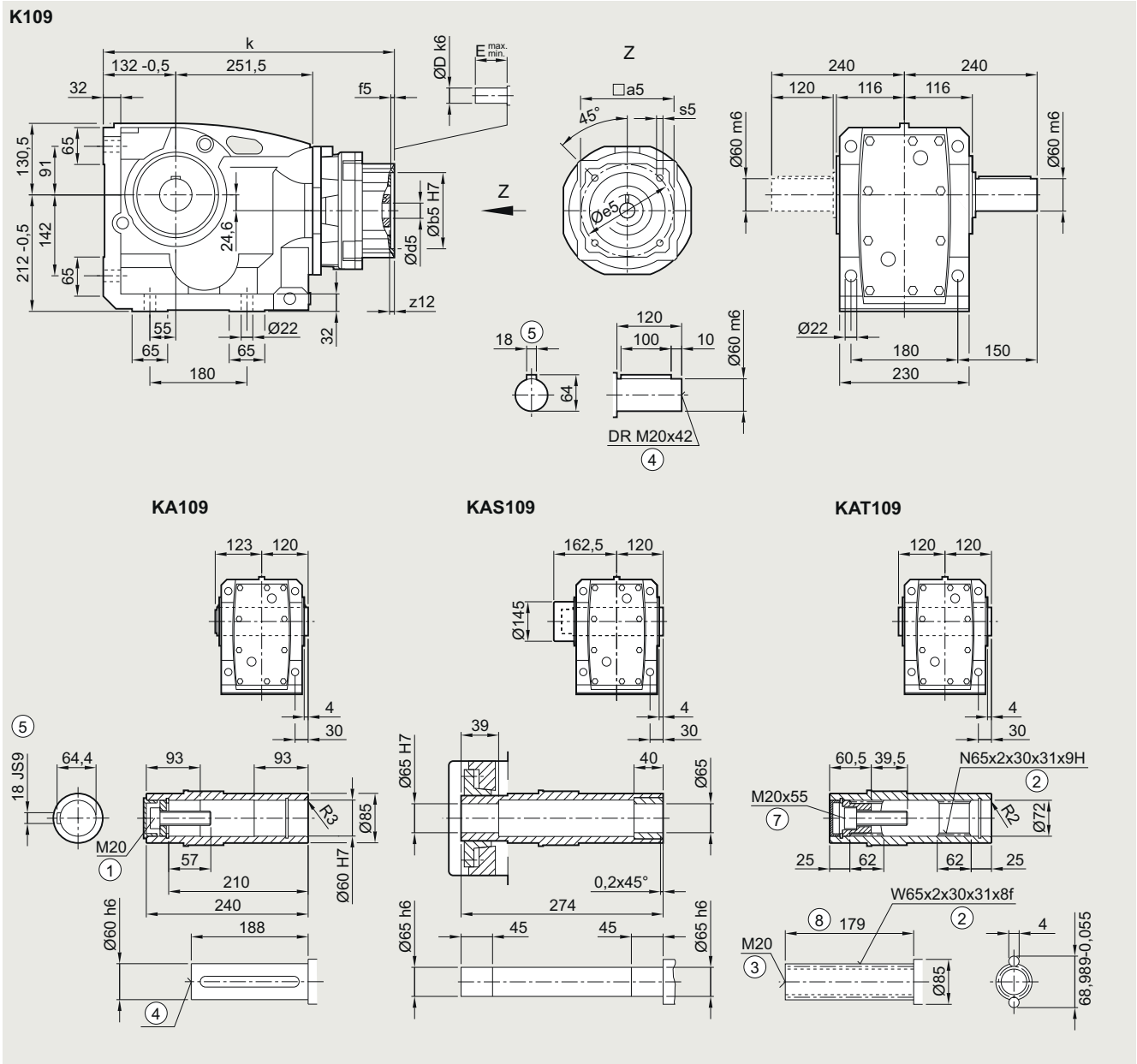
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.109 gearbox in a foot-mounted design

**K030KS, KA030KS, KAS030KS, KAT030KS**

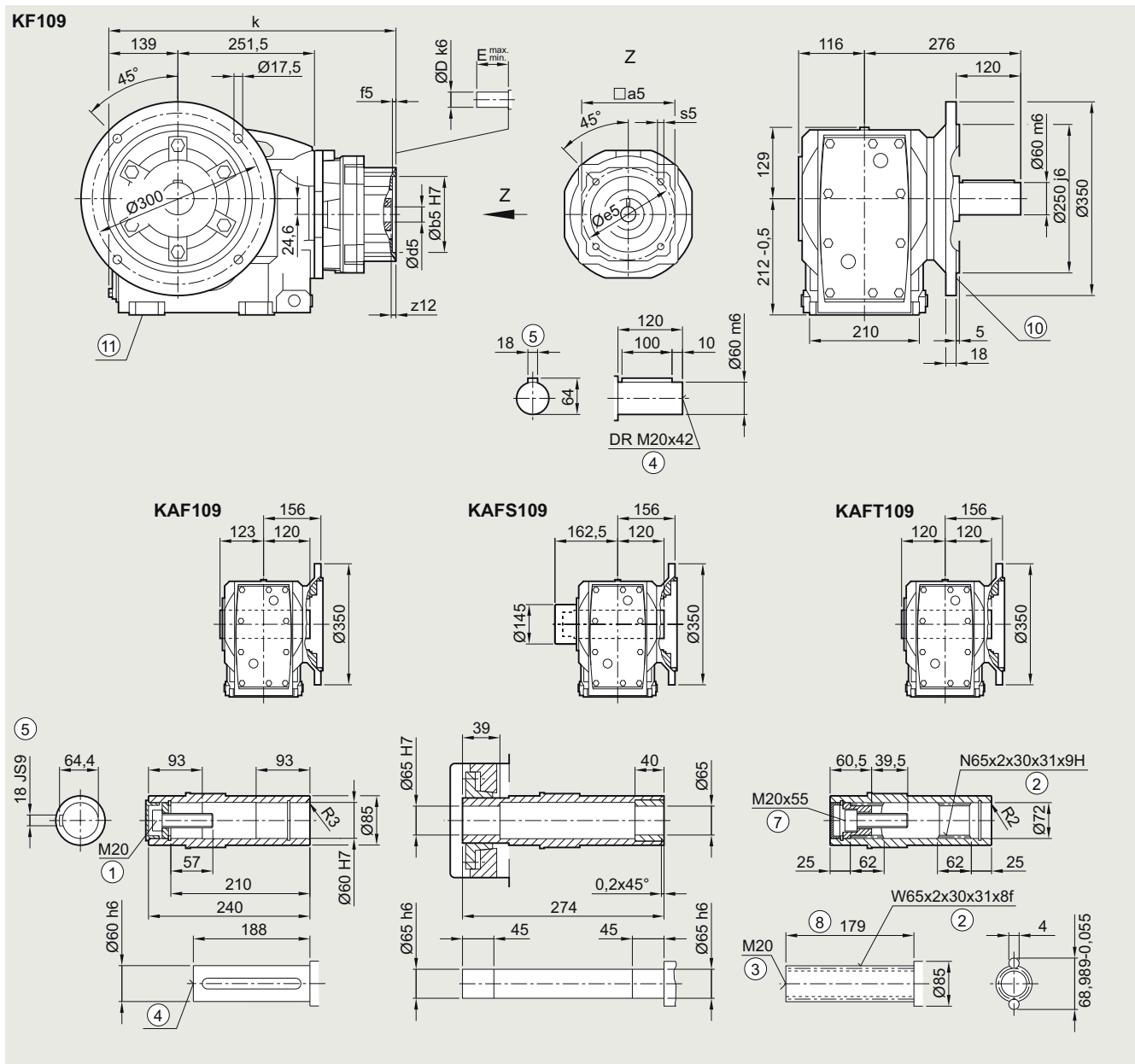


Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	465.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	465.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	486.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	486.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	499.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	535.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	535.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

## K.F.109 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	506.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	542.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	542.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑨ For inner contour, see page 5/177 ⑩ Use bores only for foot-mounted design

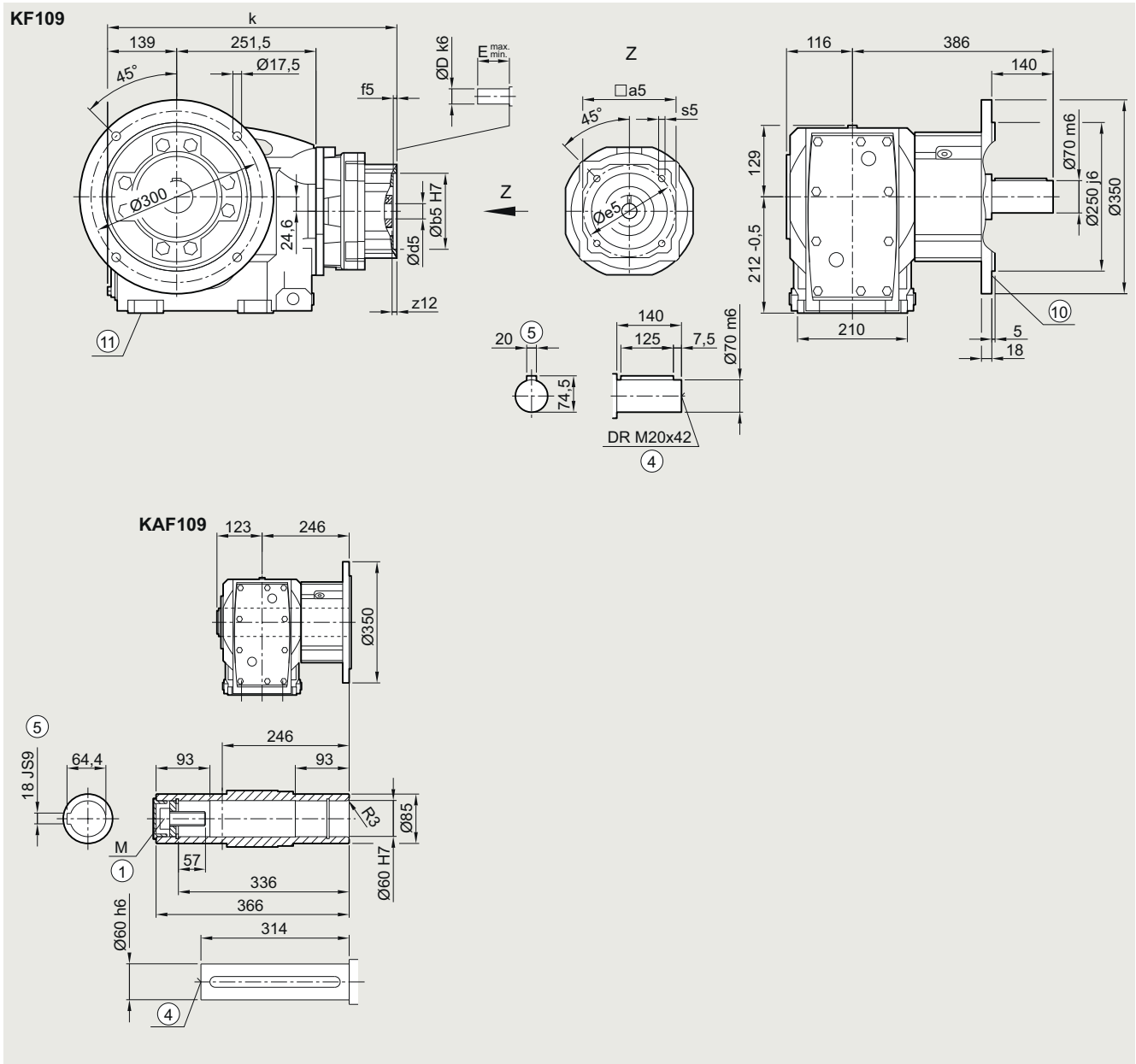
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040KS, KAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	506.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	542.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	542.0

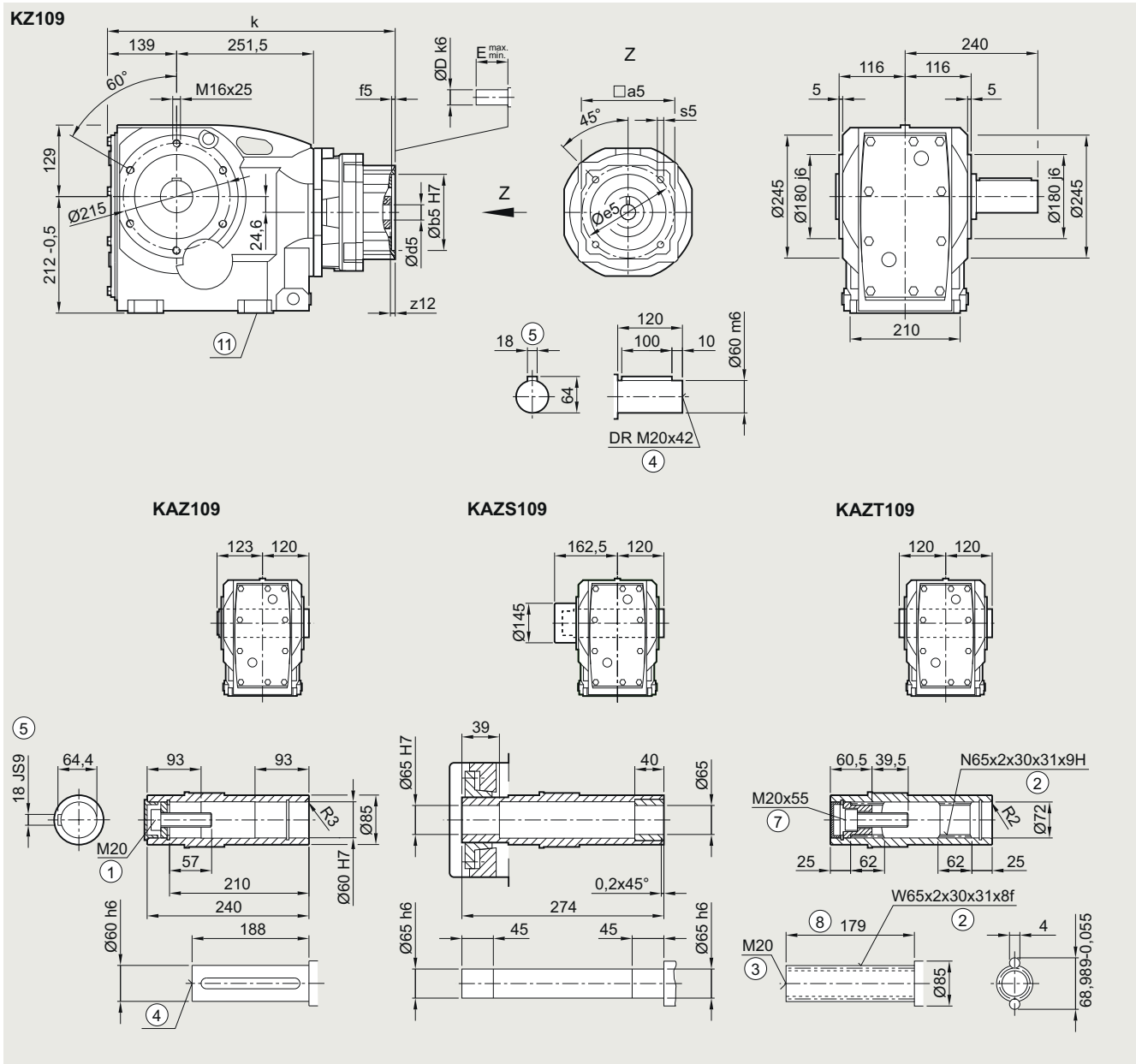
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

**K.Z.109 gearbox in a housing flange design****KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	506.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	542.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	542.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

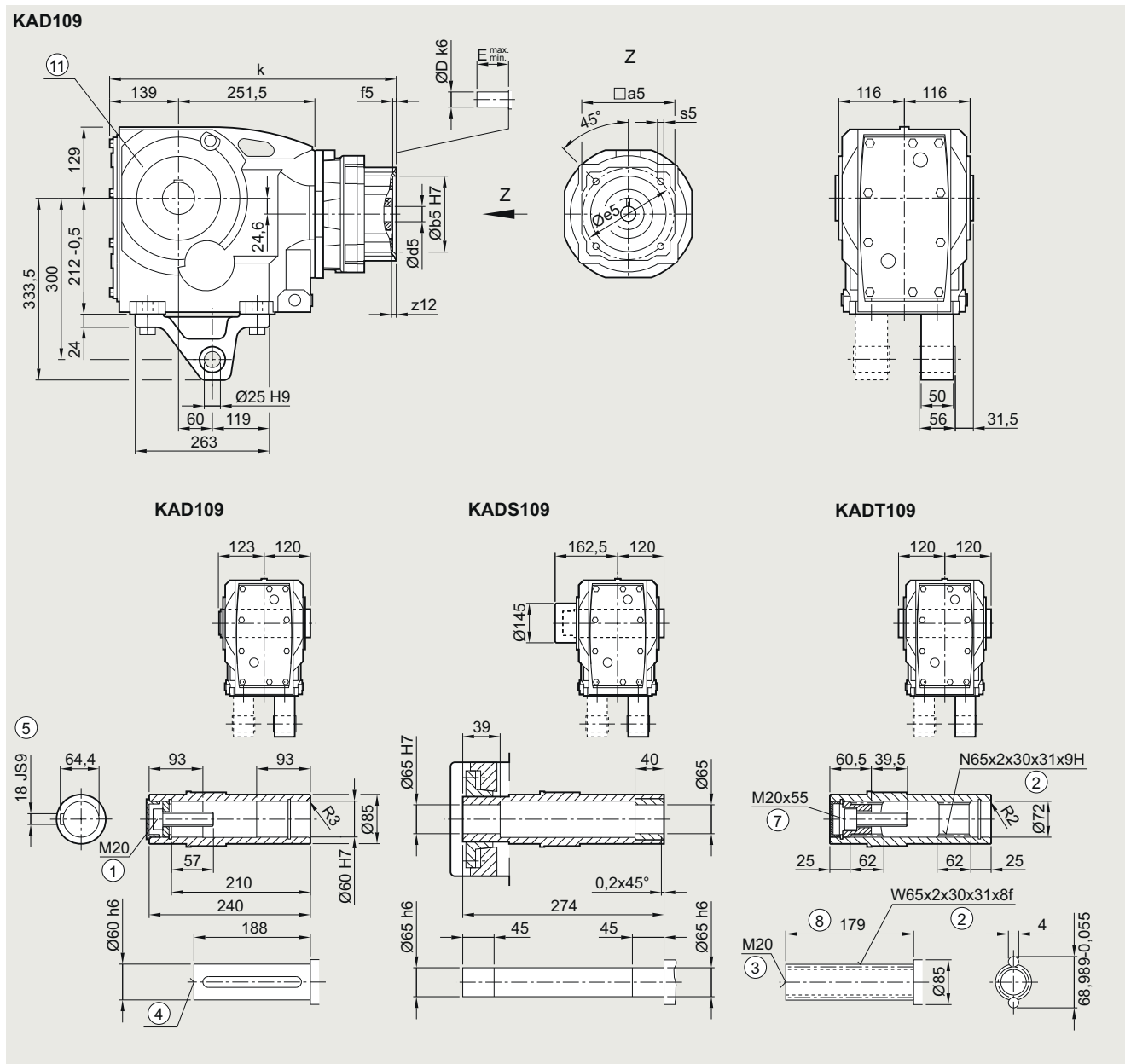
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### KAD.109 gearbox in a shaft-mounted design

*KAD030KS, KADS030KS, KADT030KS*



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	506.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	542.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	542.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

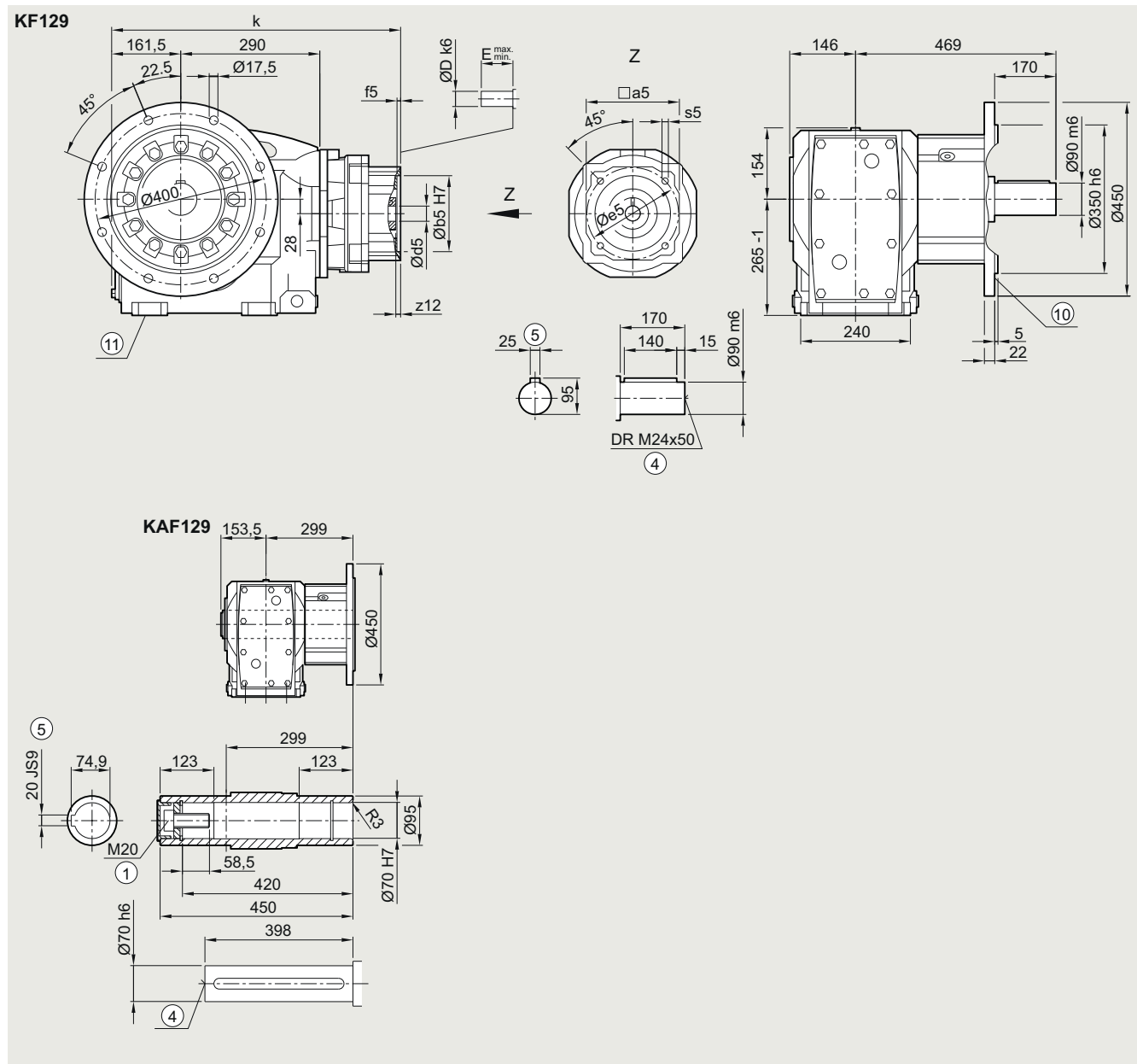






## K.F.129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

## KF040KS, KAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	526.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	526.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	545.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	545.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	558.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	594.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	594.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design

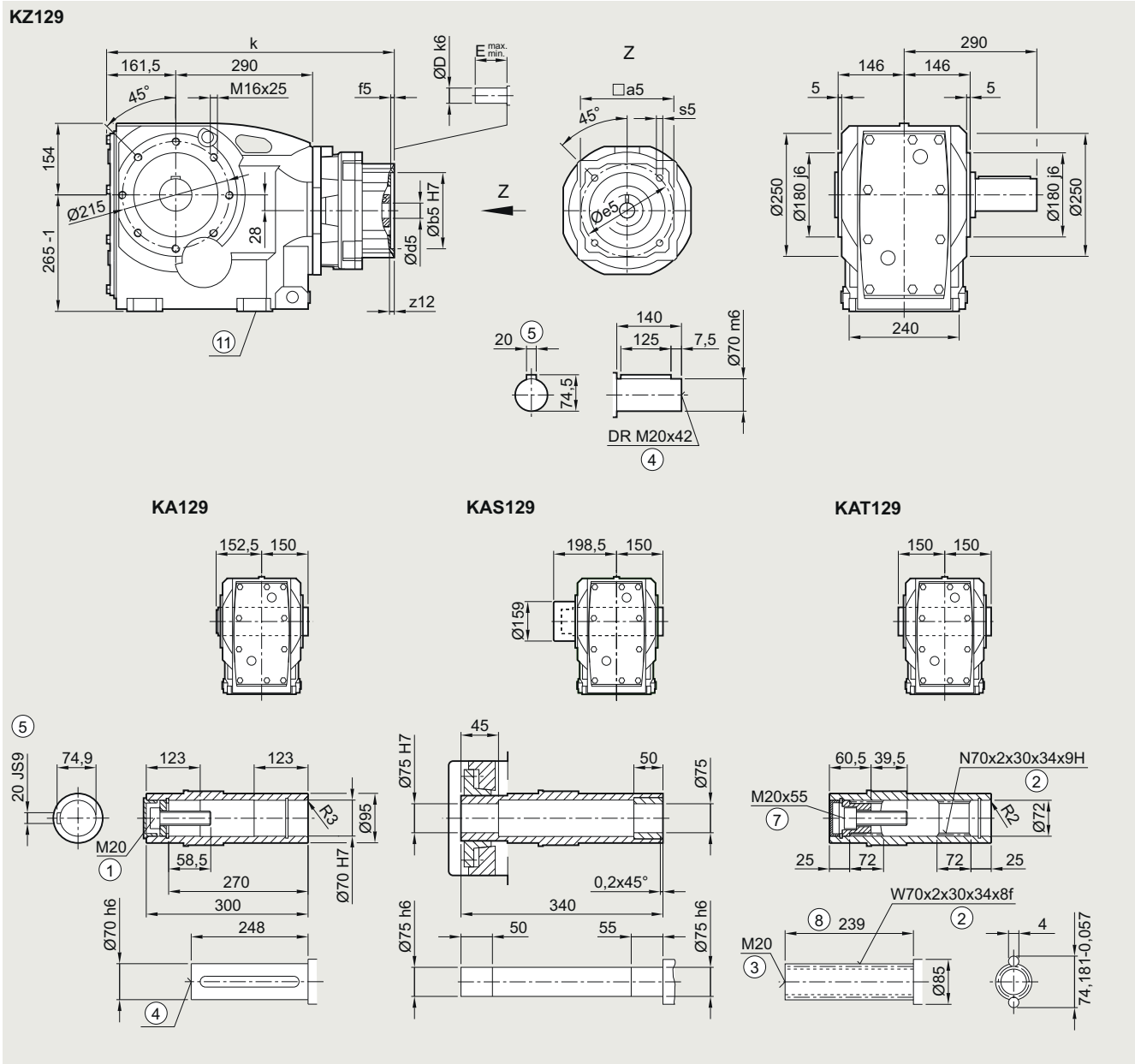
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.Z.129 gearbox in a housing flange design

**KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	526.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	526.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	545.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	545.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	558.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	594.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	594.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

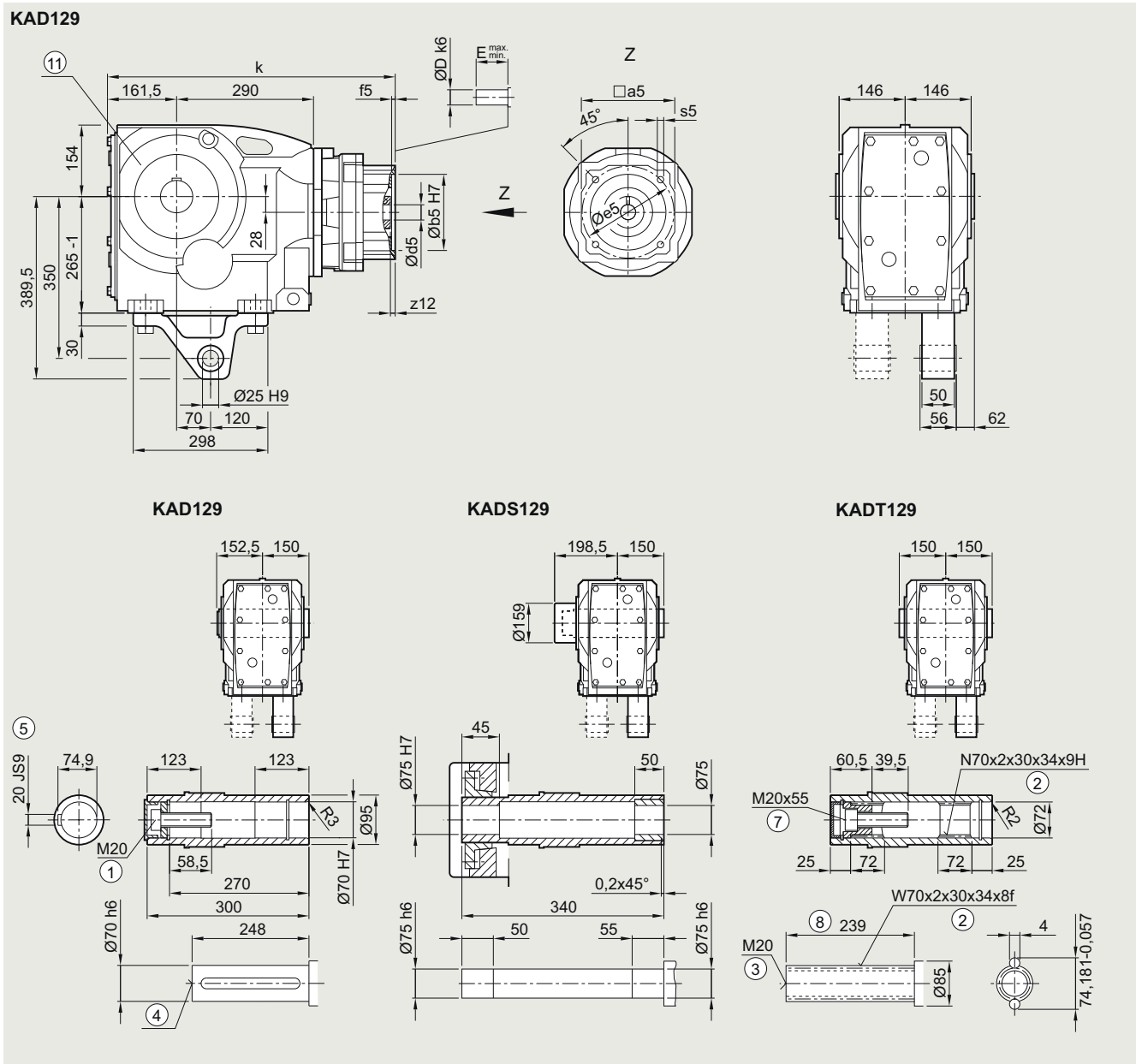
⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑧ Without locating shoulder +1 mm ⑩ Use bores only for foot-mounted design

## KAD129 gearbox in a shaft-mounted design

KAD030KS, KADS030KS, KADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	526.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	526.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	545.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	545.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	558.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	594.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	594.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

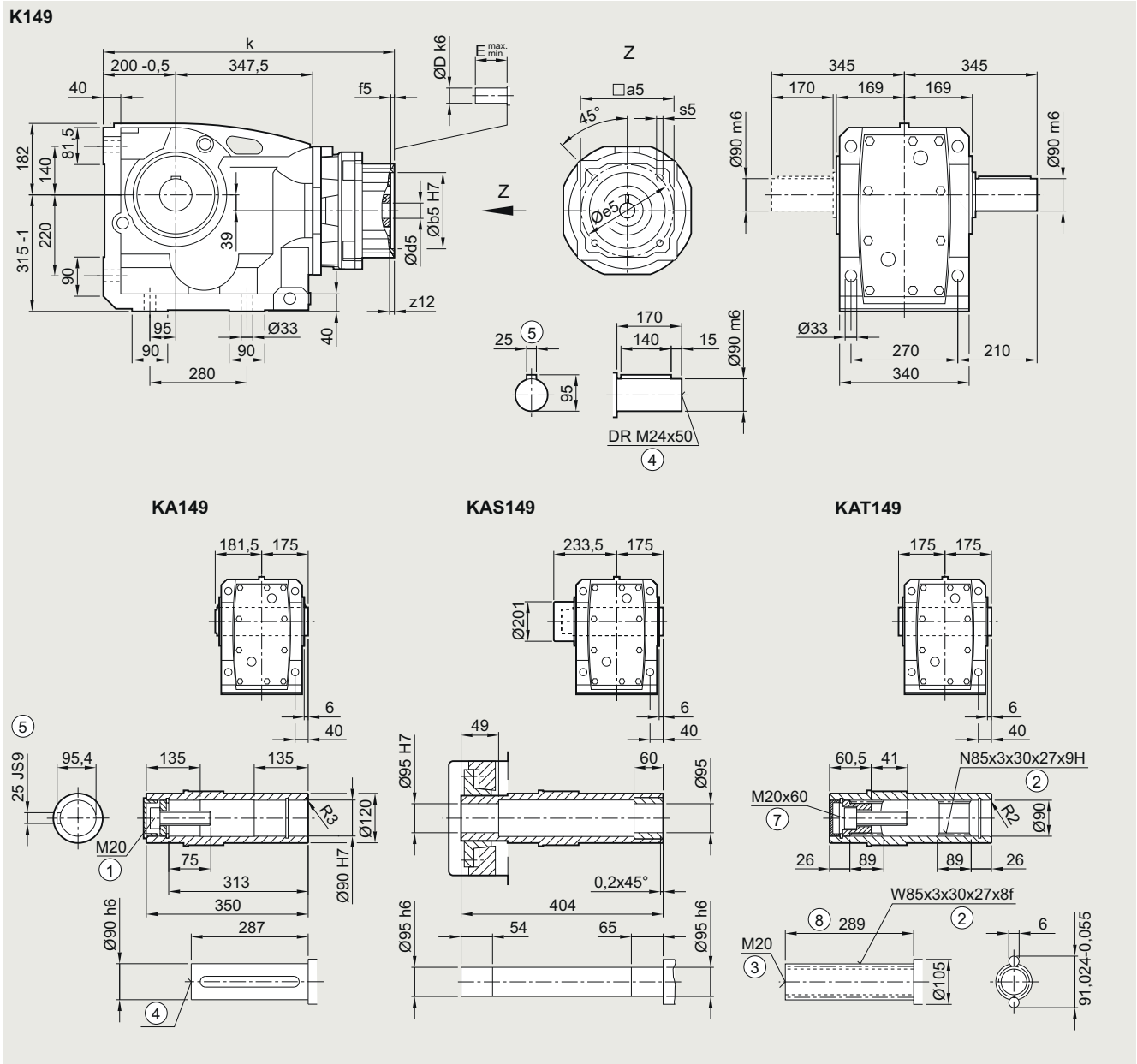
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.149 gearbox in a foot-mounted design

**K030KS, KA030KS, KAS030KS, KAT030KS**

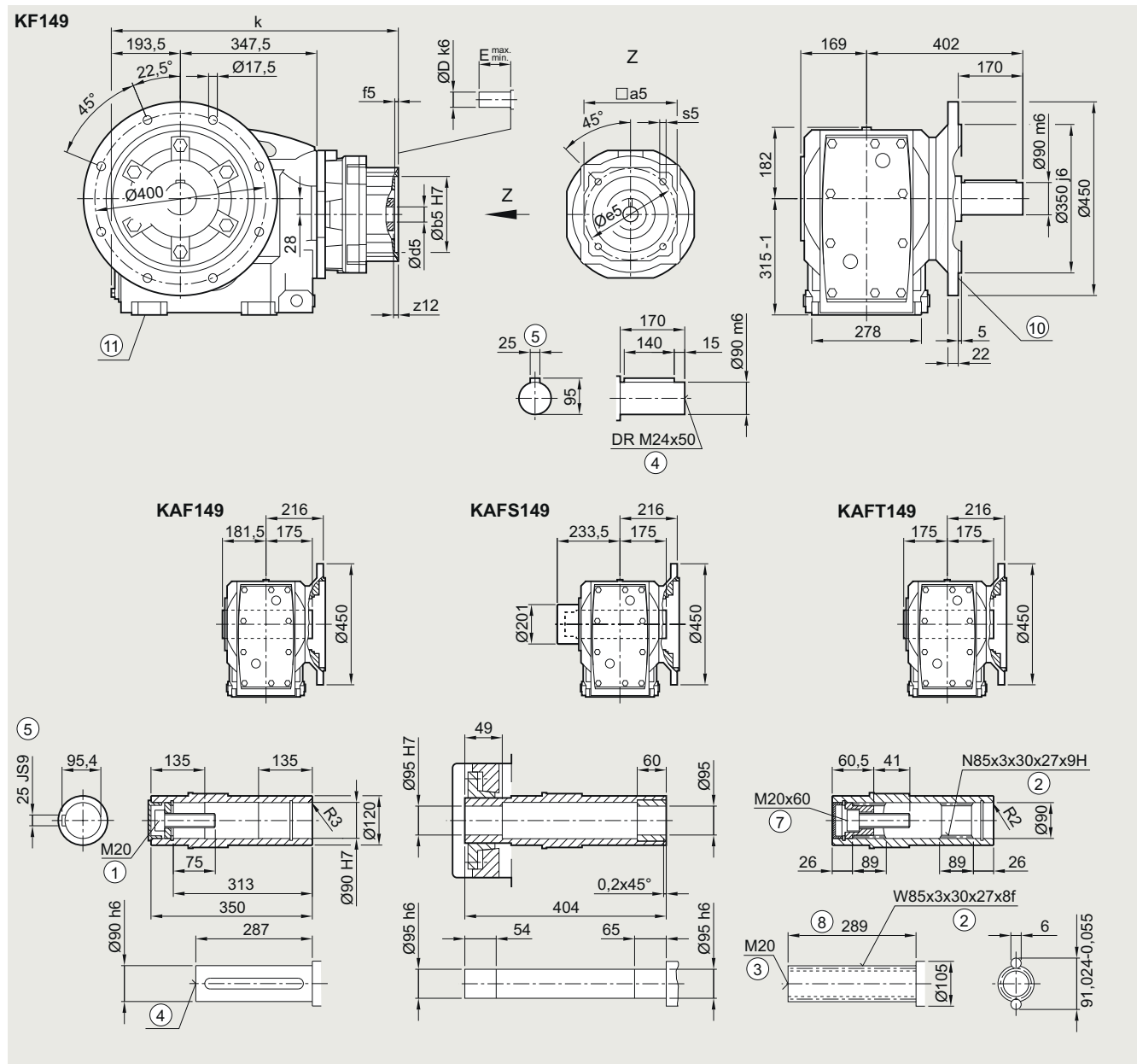


Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	615.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	615.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	632.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	632.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	645.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	679.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	679.0

① ISO 4014    ② DIN 5480    ③ DIN 332-D    ④ DIN 332    ⑤ Feather key/keyway DIN 6885    ⑦ ISO 4762    ⑧ Without locating shoulder +1 mm

## K.F.149 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	609.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	609.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	626.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	626.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	638.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	672.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	672.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design

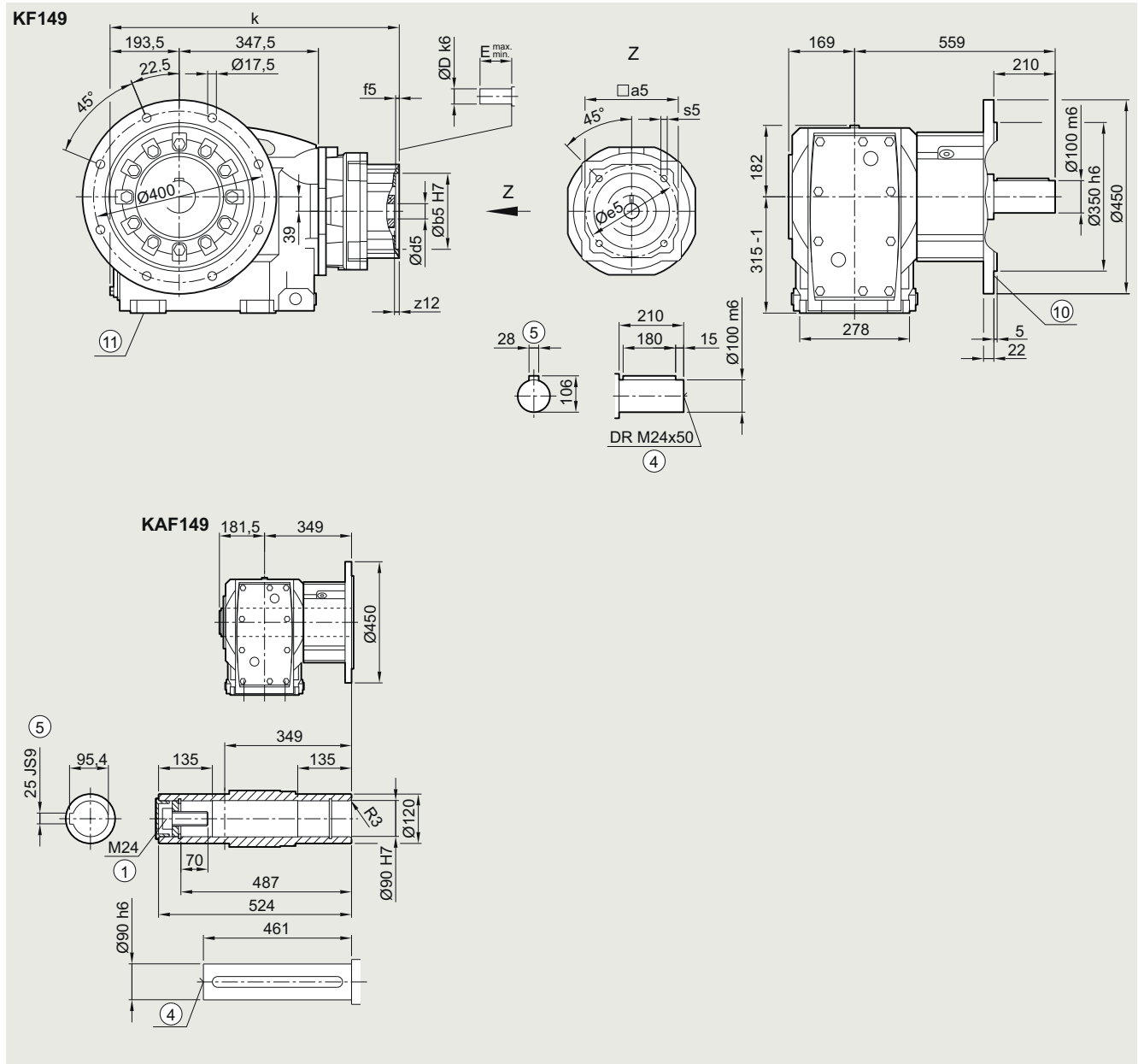
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040KS, KAF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	609.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	609.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	626.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	626.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	638.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	672.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	672.5

① ISO 4014

④ DIN 332

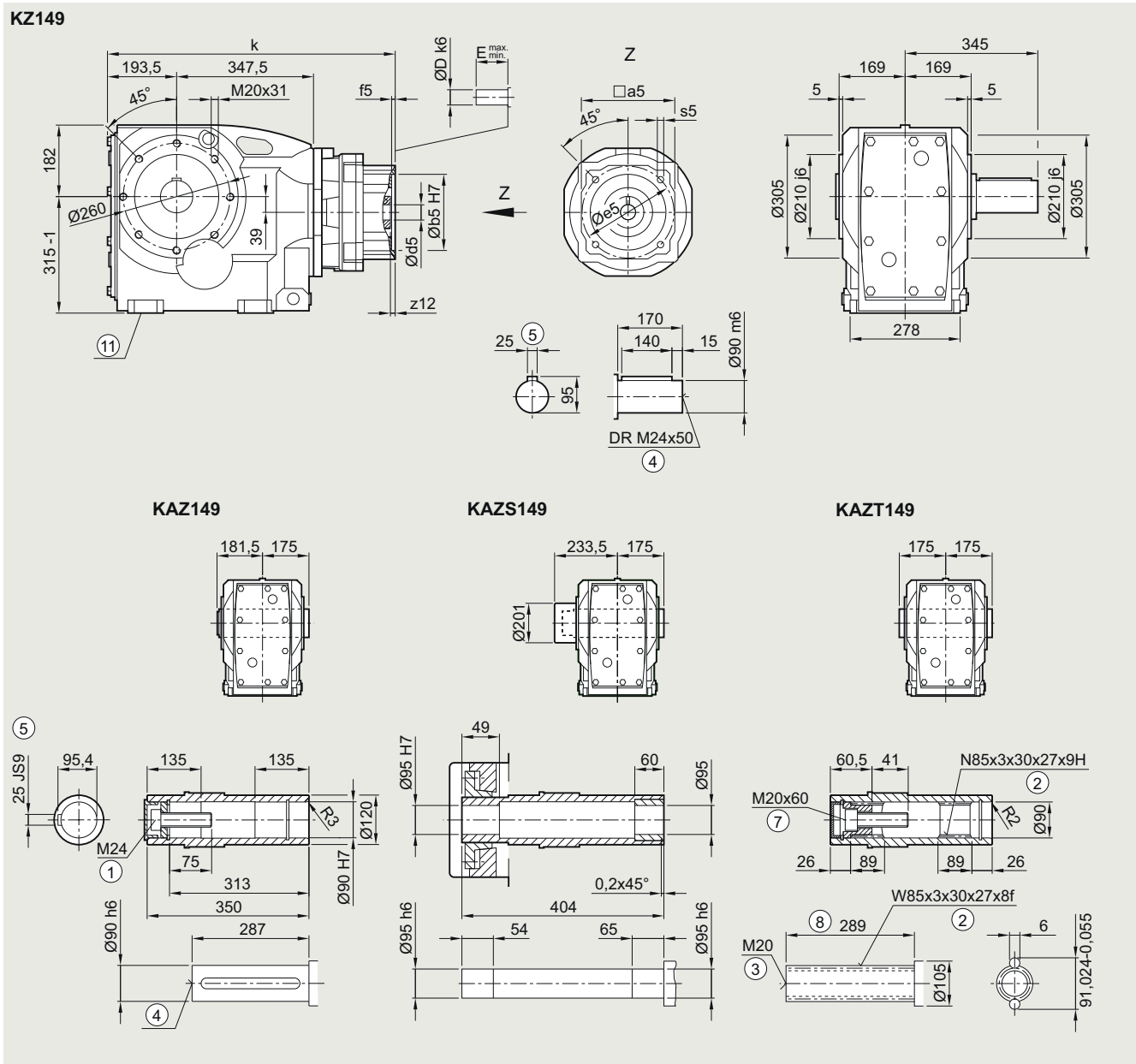
⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

## K.Z.149 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	609.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	609.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	626.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	626.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	638.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	672.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	672.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design



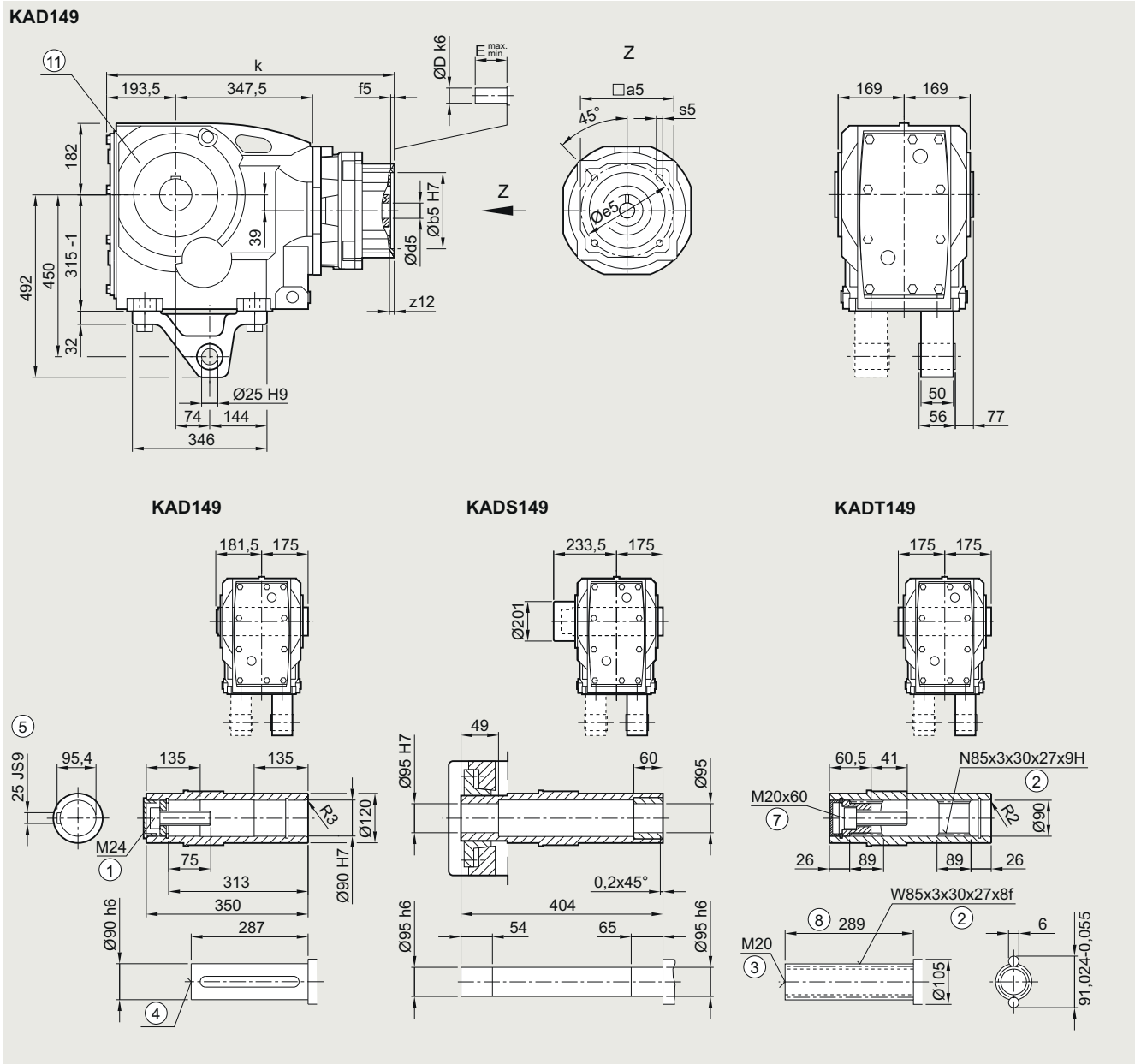
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### KAD.149 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	609.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	609.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	626.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	626.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	638.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	672.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	672.5

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

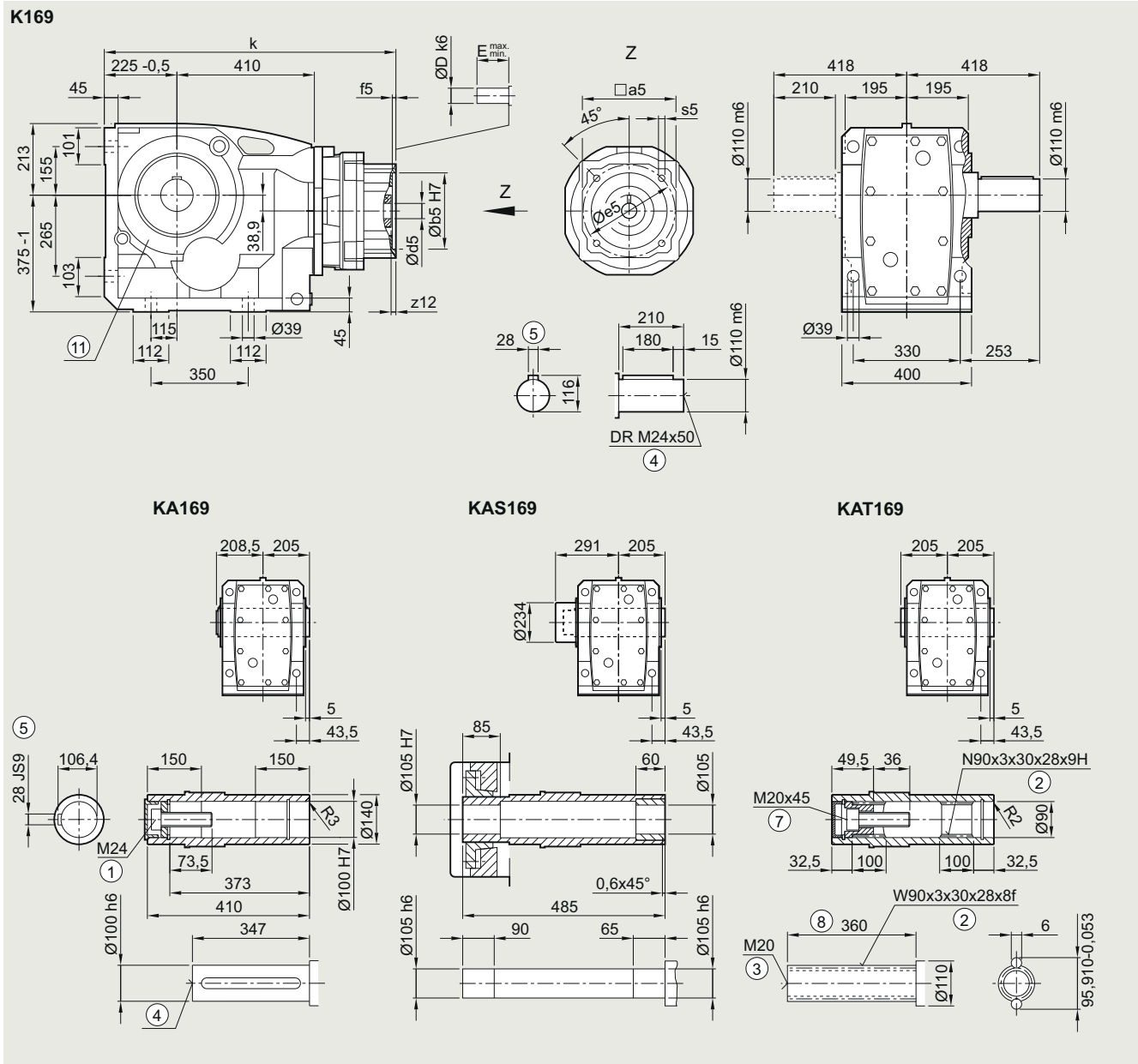
⑥ ISO 4762

⑥ Without locating shoulder +1 mm

⑦ Use bores only for housing flange design

## K.169 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

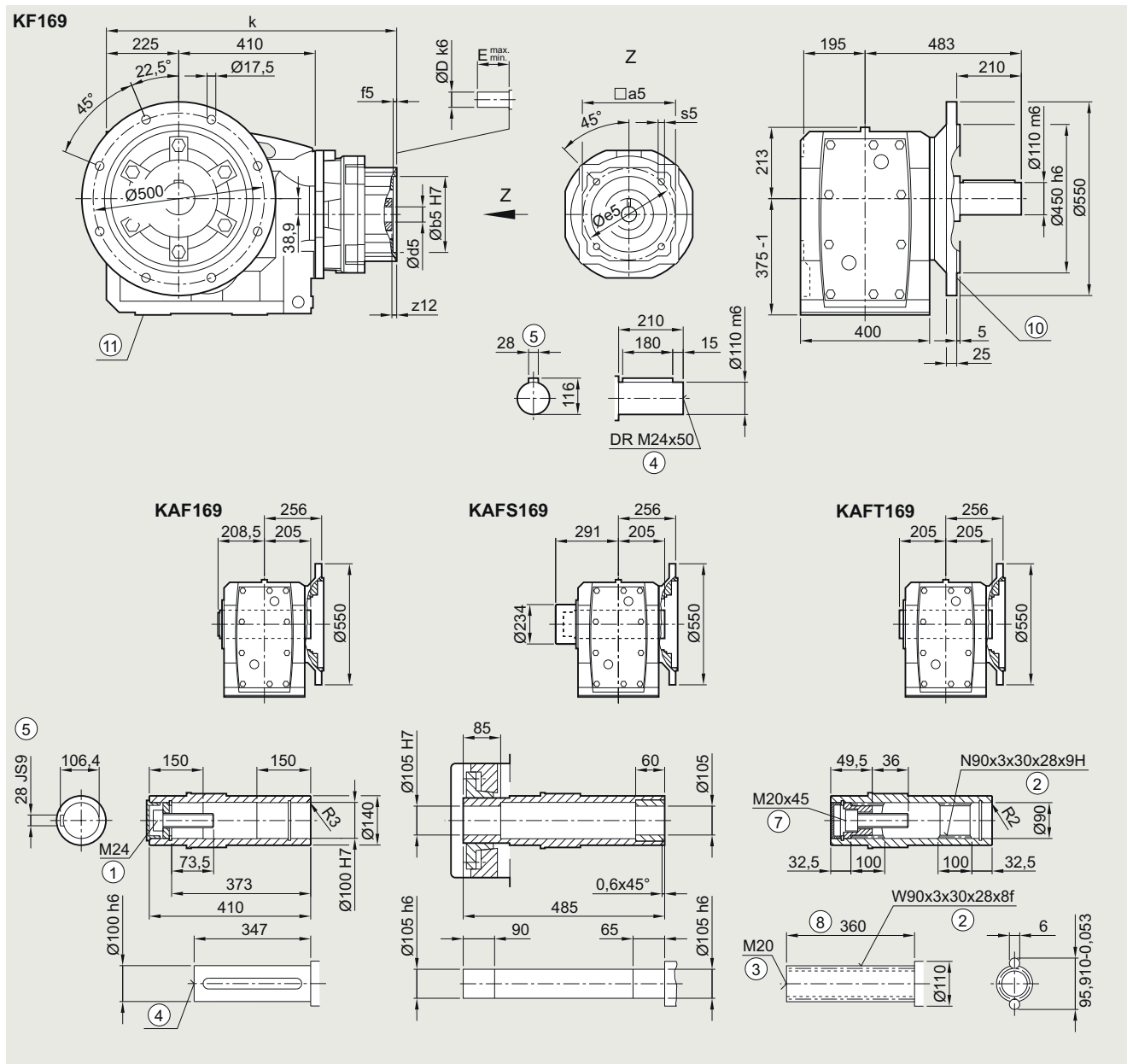
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.F.169 gearbox in a flange-mounted design

**KF030KS, KAF030KS, KAFS030KS, KAFT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

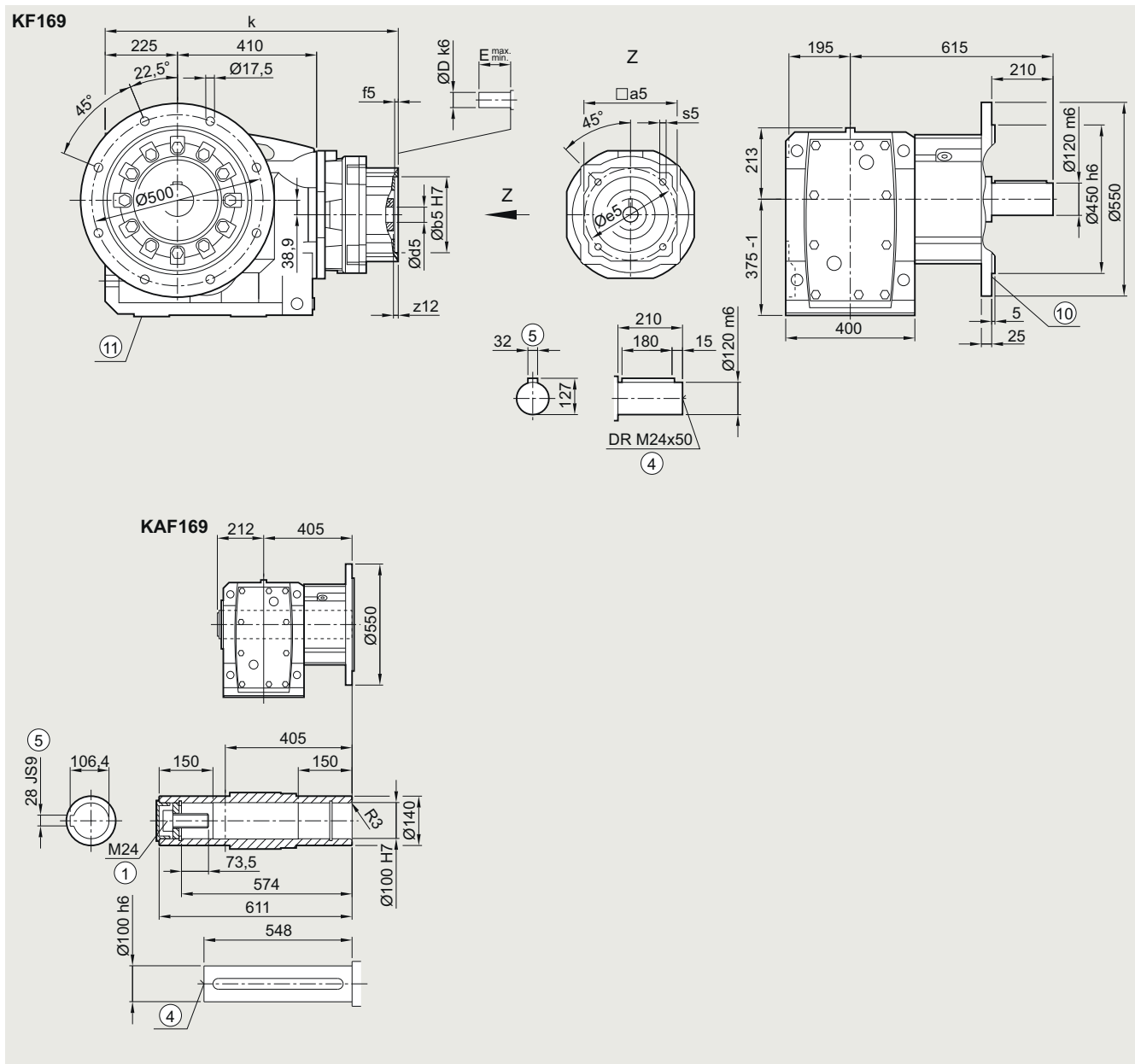
⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design

**KF.169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)****KF040KS, KAF040KS**

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 5/177

⑪ Use bores only for foot-mounted design

## SIMOGEAR gearboxes

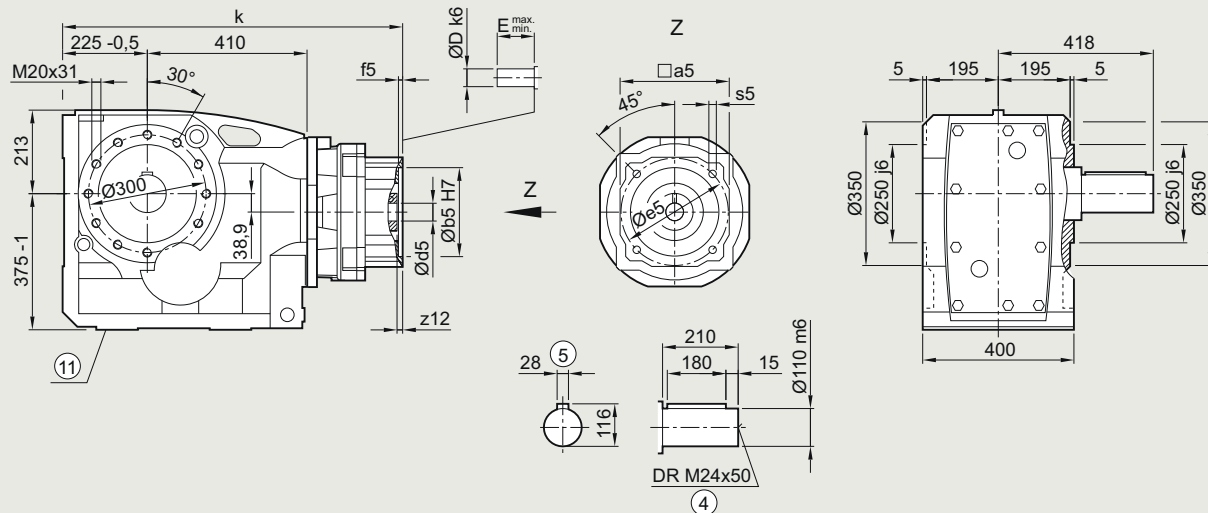
Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

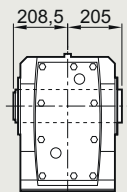
#### K.Z.169 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

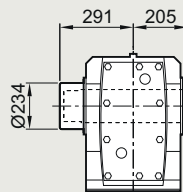
##### KZ169



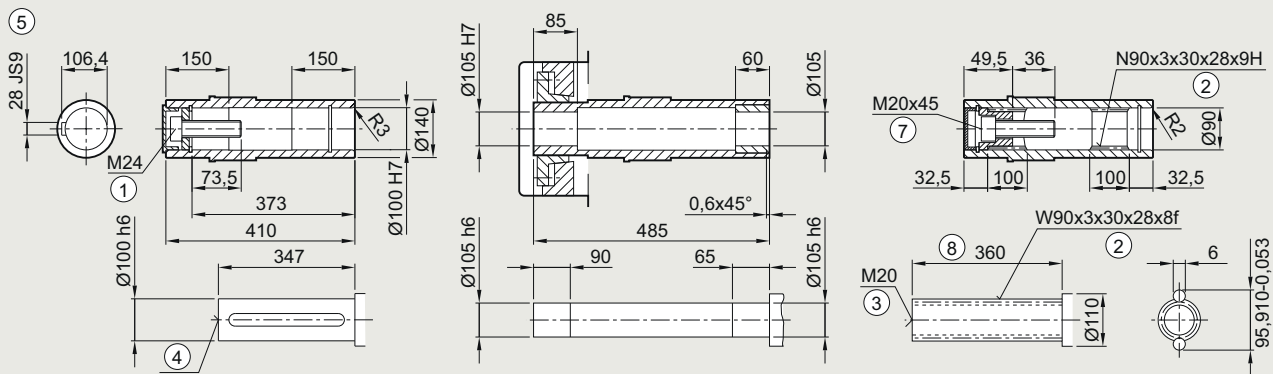
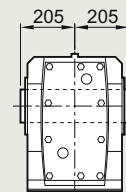
##### KAZ169



##### KAZS169



##### KAZT169



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ ISO 4762

⑦ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design



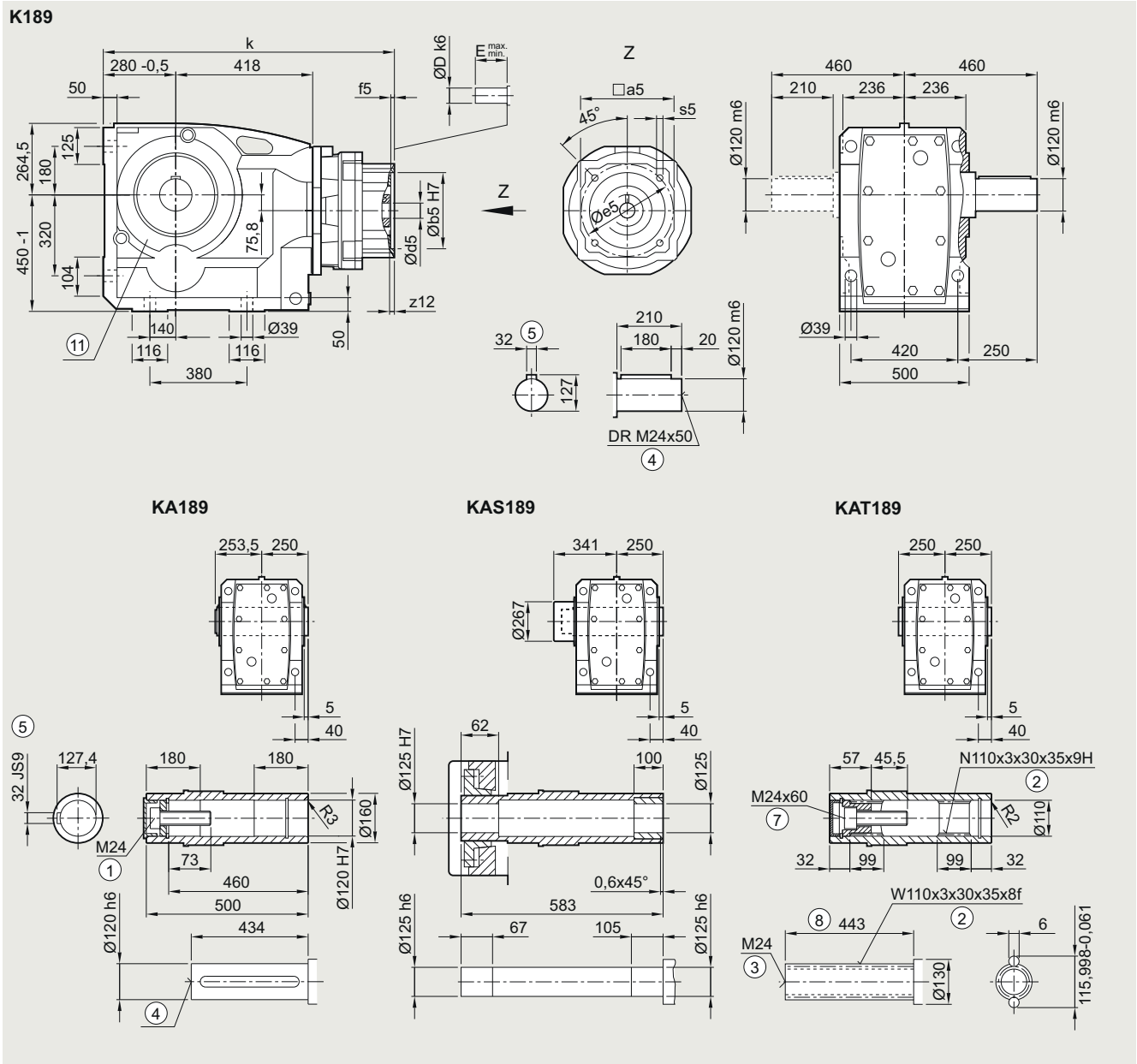
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.189 gearbox in a foot-mounted design

**K030KS, KA030KS, KAS030KS, KAT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	781.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	810.0
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	810.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

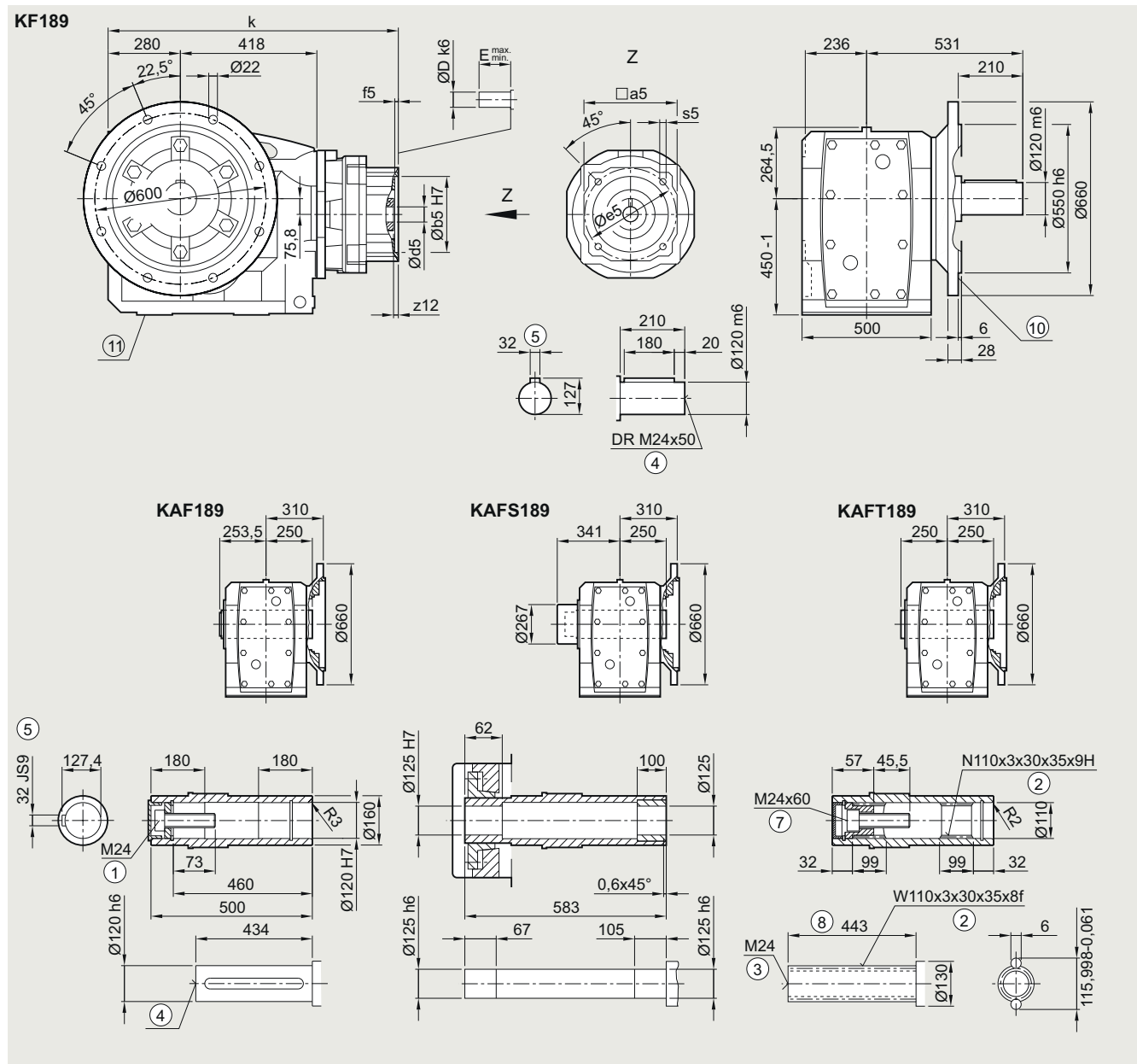
⑦ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for housing flange design

## K.F.189 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	781.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	810.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	810.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ For inner contour, see page 5/177

⑩ Use bores only for foot-mounted design



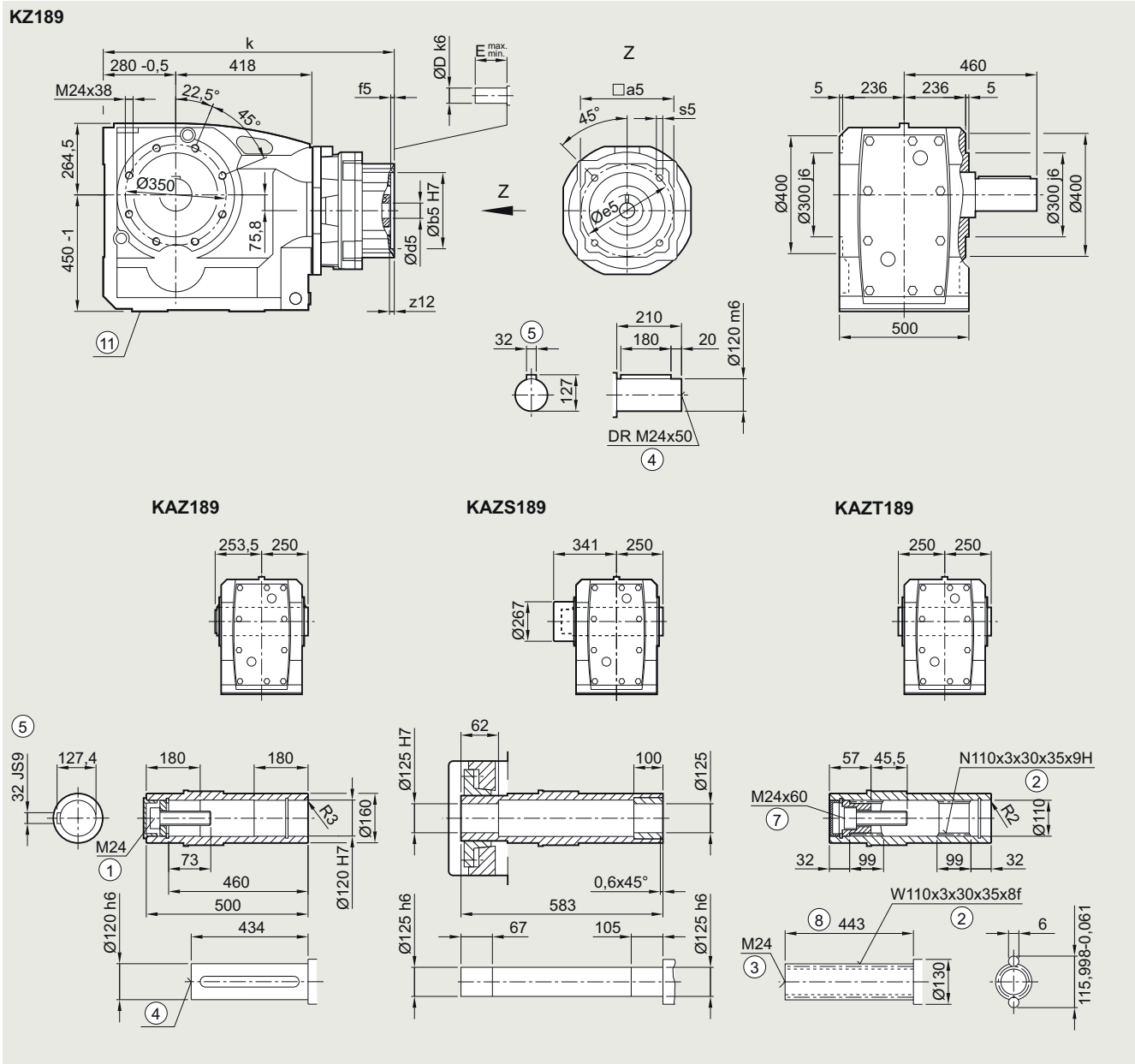
## SIMOGEAR gearboxes

Bevel gearbox with KS adapter exclusively for mounting defined Siemens servo motors

### Dimensional drawings

#### K.Z.189 gearbox in a housing flange design

**KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS**



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	781.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	810.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	810.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

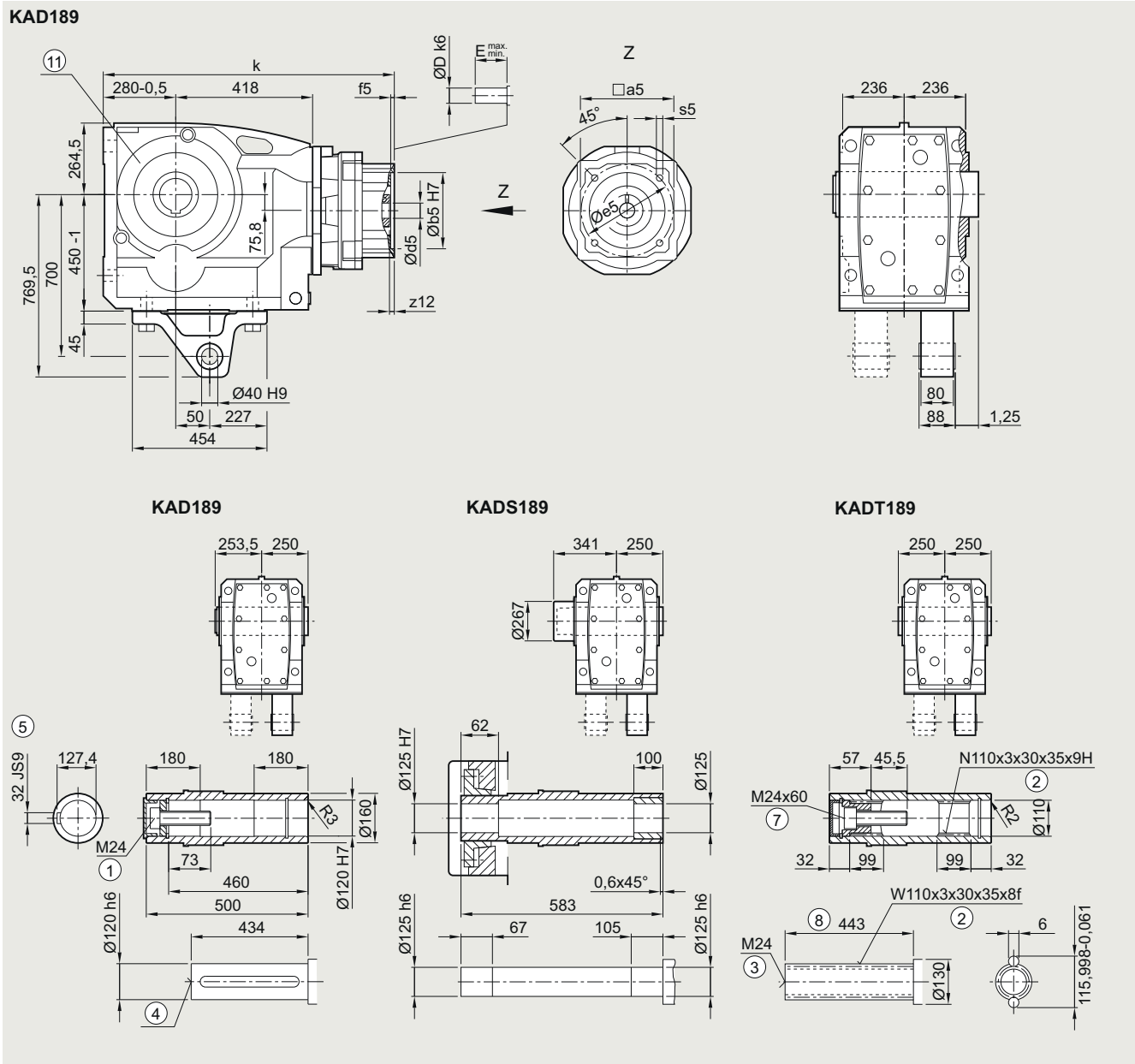
⑦ ISO 4762

⑥ Without locating shoulder +1 mm

⑧ Use bores only for foot-mounted design

## KAD.189 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	781.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	810.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	810.0

① ISO 4014

② DIN 5480

③ DIN 332-D

④ DIN 332

⑤ Feather key/keyway DIN 6885

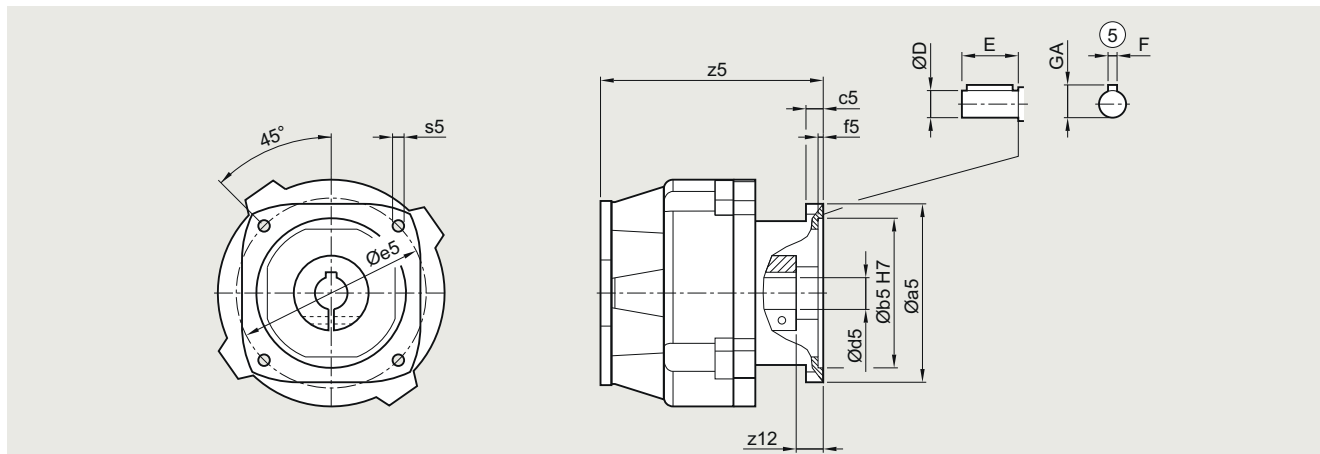
⑦ ISO 4762

⑧ Without locating shoulder +1 mm

⑨ Use bores only for housing flange design

**SIMOGEAR gearboxes**

Bevel gearbox with adapter K8 for mounting a servo motor

**Dimensional drawings****K...109 to K...189 gearboxes****K...030K8, K.F.030K8, K.Z.030K8, KAD.030K8**

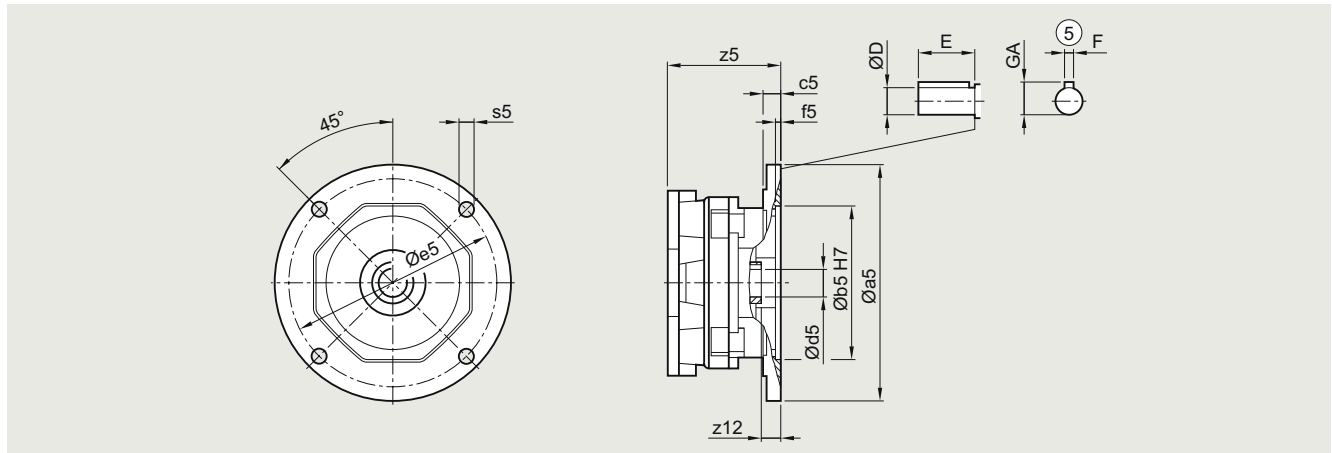
5

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>K...109</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	317.5
<b>K...129</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	308.5
816	314.0	300	-	6.0	350	M16x29	60	55	110	16	59.0	365.0
<b>K...149</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	297.5
816	314.0	300	-	6.0	350	M16x29	60	55	110	16	59.0	354.0
<b>K...169</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	291.0
816	314.0	300	-	6.0	350	M16x29	60	55	110	16	59.0	347.5
818	550	350	22.0	12.0	400	M16	73	65	140	18	69.0	336.5
<b>K...189</b>												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	278.0
816	314.0	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	333.0
818	550	350	22.0	12.0	400	M16	73.0	65	140	18	69.0	319.5

© Feather key/keyway DIN 6885

**B...29 to B...49 and K...39 to K...89 gearboxes**

**B..030K5, B.F.030K5, B.Z.030K5, BAD.030K5  
K..030K5, K.F.030K5, K.Z.030K5, KAD.030K5**



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>B...29</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
<b>B...39</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
<b>B...49</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	207.0
<b>K...39</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
<b>K...49</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	207.0
<b>K...69</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	207.0
<b>K...79</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	207.0
<b>K...89</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	103.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	103.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	185.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	201.0
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	201.0

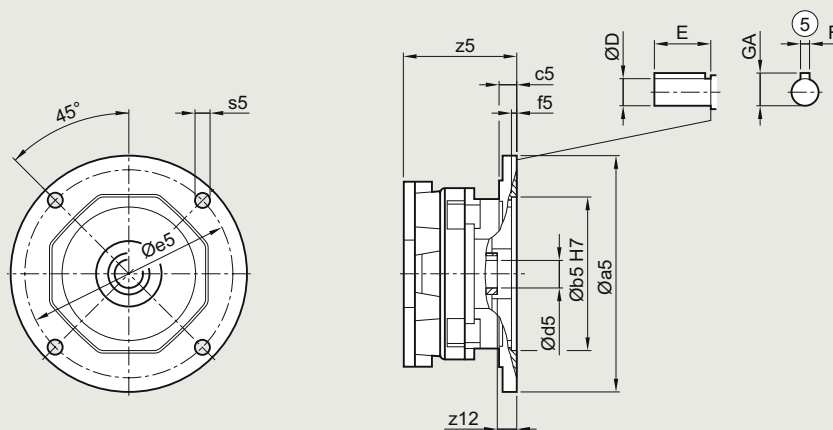
## SIMOGEAR gearboxes

Bevel gearbox with adapter K5 for mounting a NEMA motor

### Dimensional drawings

#### K...109 to K...189 gearboxes

*B...030K5, B.F.030K5, B.Z.030K5, BAD.030K5  
K...030K5, K.F.030K5, K.Z.030K5, KAD.030K5*



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>K...109</b>												
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	90.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	168.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	184.0
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	184.0
280	285	266.7	24.5	5.5	228.6	13.5	22	47.625	117.602	12.700	53.111	197.0
<b>K...129</b>												
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	90.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	168.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	184.0
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	184.0
280	285	266.7	24.5	5.5	228.6	13.5	22	47.625	117.602	12.700	53.111	197.0
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.700	59.563	264.5
<b>K...149</b>												
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	76.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	150.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	164.0
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	164.0
280	285	266.7	24.5	5.5	228.6	13.5	22	47.625	117.602	12.700	53.111	177.0
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.350	12.700	59.563	253.5
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	278.0
<b>K...169</b>												
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	148.5
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	157.5
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	157.5
280	285	266.7	24.5	5.5	228.6	13.5	22	47.625	117.602	12.700	53.111	170.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.700	59.563	247.0
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	241.5
<b>K...189</b>												
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	144.5
250	226	215.9	22	5.5	184.1	13.5	12	41.275	101.600	9.525	45.491	144.5
280	285	266.7	24.5	5.5	228.6	13.5	22	47.625	117.602	12.700	53.111	157.5
320	340	317.5	26.5	5.5	279.4	17.0	32.5	53.975	133.35	12.700	59.563	232.5
360	340	317.5	26.5	5.5	279.4	17.0	34.5	60.325	149.352	15.875	67.208	253.0

Ⓢ Feather key/keyway DIN 6885

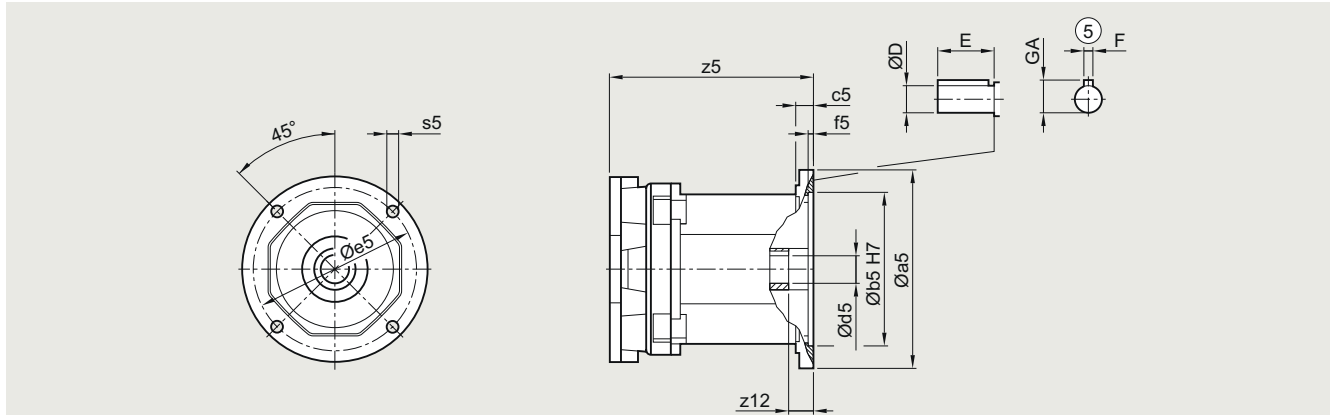
# SIMOGEAR gearboxes

## Bevel gearbox with adapter K3 for mounting a NEMA motor

### Dimensional drawings

#### B...29 to B...49 and K...39 to K...79 gearboxes

*B...030K3, B.F.030K3, B.Z.030K3, BAD.030K3*  
*K...030K3, K.F.030K3, K.Z.030K3, KAD.030K3*

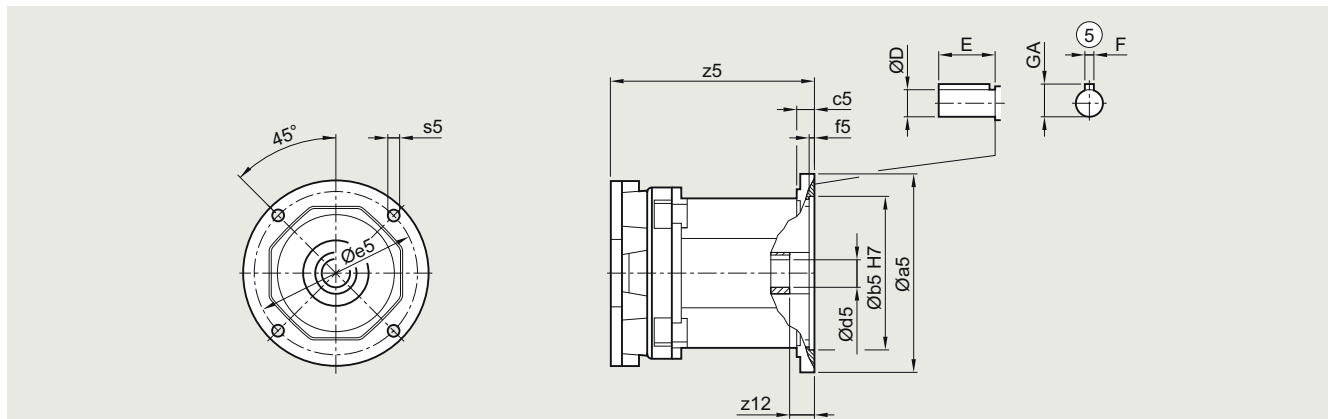


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>B...29</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>B...39</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>B...49</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>K...39</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>K...49</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>K...69</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>K...79</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Bevel gearbox with adapter K3 for mounting a NEMA motor

**Dimensional drawings****K...89 to K...189 gearboxes****K...030K3, K.F.030K3, K.Z.030K3, KAD.030K3**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>K...89</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	185.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	185.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	241.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	312.0
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	342.0
<b>K...109</b>												
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	172.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	224.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	295.0
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	325.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	343.0
<b>K...129</b>												
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	165.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	215.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	286.0
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	316.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	334.0
<b>K...149</b>												
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	158.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	206.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	275.0
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	305.0
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	323.0
<b>K...169</b>												
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	205.0
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	268.5
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	298.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	316.5
<b>K...189</b>												
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	255.5
250	236	215.9	22	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	285.5
280	285	266.7	24.5	5.5	228.6	13.5	66.5	47.625	117.602	12.7	53.111	303.5

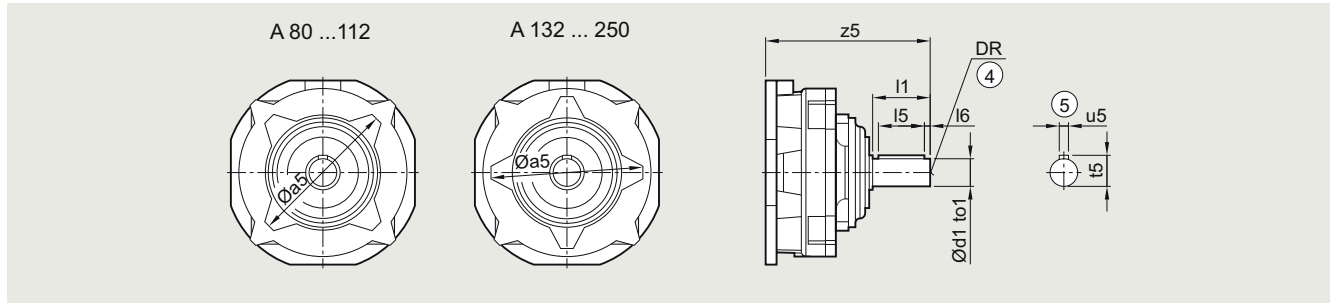
Ⓢ Feather key/keyway DIN 6885





**SIMOGEAR gearboxes**

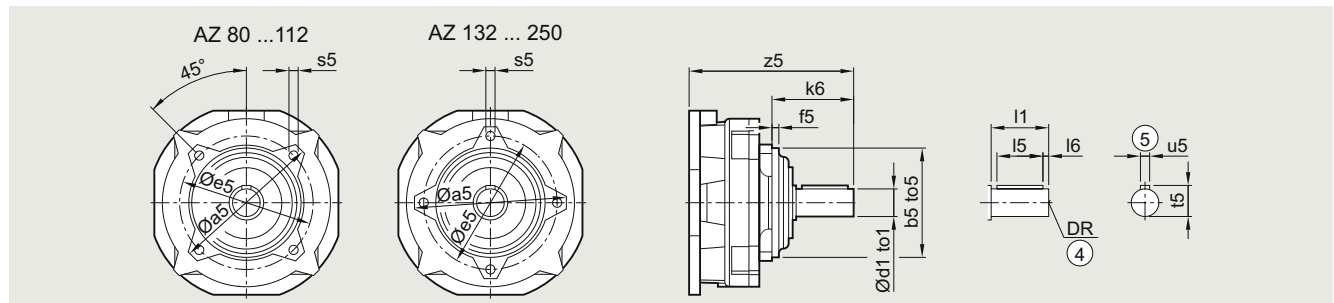
Bevel gearbox with adapter A with free output shaft

**Dimensional drawings****K...109 to K...189 gearboxes****K..030A, K.F.030A, K.Z.030A, KAD.030A**

Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
<b>K...109</b>										
80	132	19	k6	40	32	4	6	21.5	M6	115
90	132	24	k6	50	40	5	8	27	M8	125
100	170	28	k6	60	50	5	8	31	M10	188
112	170	28	k6	60	50	5	8	31	M10	188
132	215	38	k6	80	70	5	10	41	M12	238
160	215.3	42	k6	110	90	10	12	45	M16	290
<b>K...129</b>										
90	132	24	k6	50	40	5	8	27	M8	118
100	170	28	k6	60	50	5	8	31	M10	179
112	170	28	k6	60	50	5	8	31	M10	179
132	215	38	k6	80	70	5	10	41	M12	229
160	215.3	42	k6	110	90	10	12	45	M16	281
180	215.3	48	m6	110	90	10	14	51.5	M16	281
200	266	55	m6	110	90	10	16	59	M20	317.5
<b>K...149</b>										
112	170	28	k6	60	50	5	8	31	M10	170
132	215	38	k6	80	70	5	10	41	M12	218
160	215.3	42	k6	110	90	10	12	45	M16	270
180	215.3	48	m6	110	90	10	14	51.5	M16	270
200	266	55	m6	110	90	10	16	59	M20	306.5
225	266	55	m6	110	90	10	16	59	M20	306.5
<b>K...169</b>										
132	215	38	k6	80	70	5	10	41	M12	211.5
160	215.3	42	k6	110	90	10	12	45	M16	263.5
180	215.3	48	m6	110	90	10	14	51.5	M16	263.5
200	266	55	m6	110	90	10	16	59	M20	300
225	266	55	m6	110	90	10	16	59	M20	300
250	266	55	m6	110	90	10	16	59	M20	300
<b>K...189</b>										
160	215.3	42	k6	110	90	10	12	45	M16	250.5
180	215.3	48	m6	110	90	10	14	51.5	M16	250.5
200	266	55	m6	110	90	10	16	59	M20	286.5
225	266	55	m6	110	90	10	16	59	M20	286.5
250	266	55	m6	110	90	10	16	59	M20	286.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

**B...29 to B...49 and K...39 to K...89 gearboxes****B..030AZ, B.F.030AZ, B.Z.030AZ, BAD.030AZ  
K..030AZ, K.F.030AZ, K.Z.030AZ, KAD.030AZ**

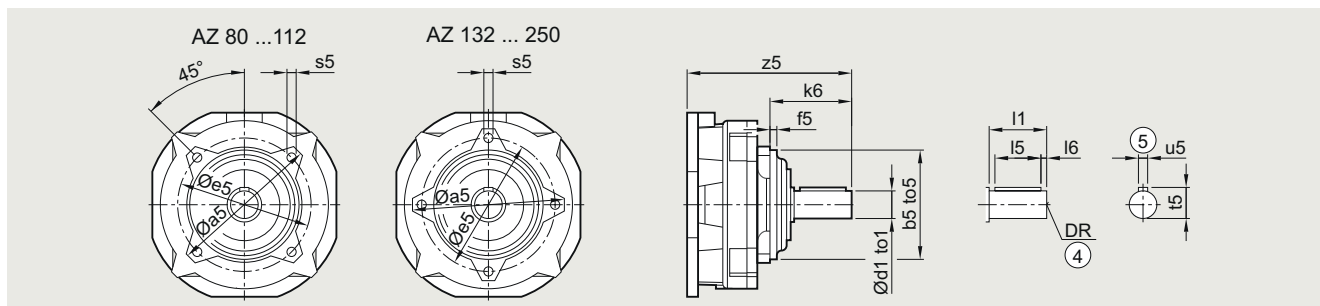
Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>B...29</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
<b>B...39</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
<b>B...49</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
<b>K...39</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
<b>K...49</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
<b>K...69</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
<b>K...79</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
<b>K...89</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	128
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	138
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	205
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	205
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	255

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Bevel gearbox with adapter AZ with free output shaft and centering

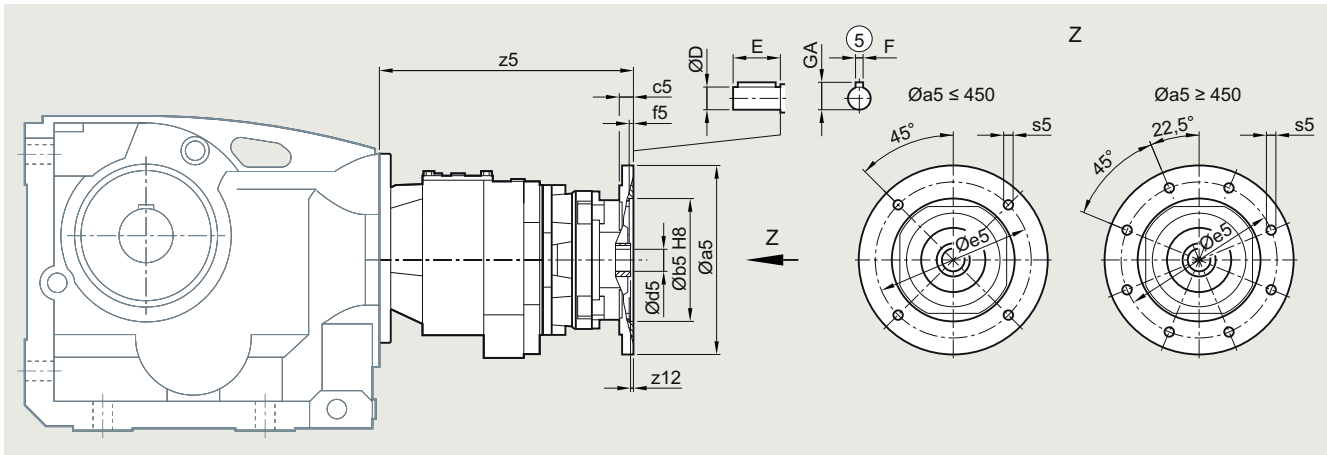
**Dimensional drawings****K...109 to K...189 gearboxes****K...030AZ, K.F.030AZ, K.Z.030AZ, KAD.030AZ**

Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>K...109</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	115
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	125
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	188
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	188
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	238
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	290
<b>K...129</b>																
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	118
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	179
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	179
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	229
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	281
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	281
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	317.5
<b>K...149</b>																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	170
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	218
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	270
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	270
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
<b>K...169</b>																
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	211.5
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	263.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	263.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
<b>K...189</b>																
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	250.5
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	250.5
200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5

④ DIN 332

⑤ Feather key/keyway DIN 6885

## Bevel tandem gearbox with adapter K4



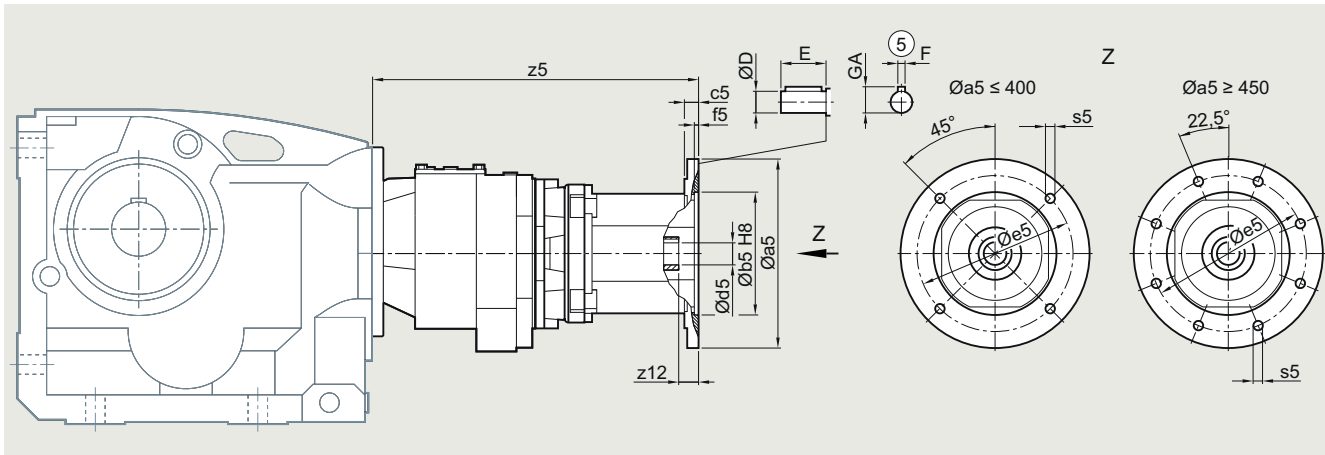
Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K.89-D/Z39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	257
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	285
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	285
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	339.5
K.109-D/Z39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	240
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	240
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	268
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	268
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	322.5
K.129-D/Z39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	231
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	231
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	259
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	259
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	313.5
K.149-D/Z49	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	260
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	260
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	288
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	288
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	342.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	342.5
K.169-D/Z49	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	360
	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	249.5
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	249.5
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	277.5
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	277.5
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	332
K.189-D/Z69	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	332
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	349.5
	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	275
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	303
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	303
K.189-D/Z69	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	357.5
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	375

## SIMOGEAR gearboxes

Bevel tandem gearbox with adapter K2 for mounting an IEC motor

### Dimensional drawings

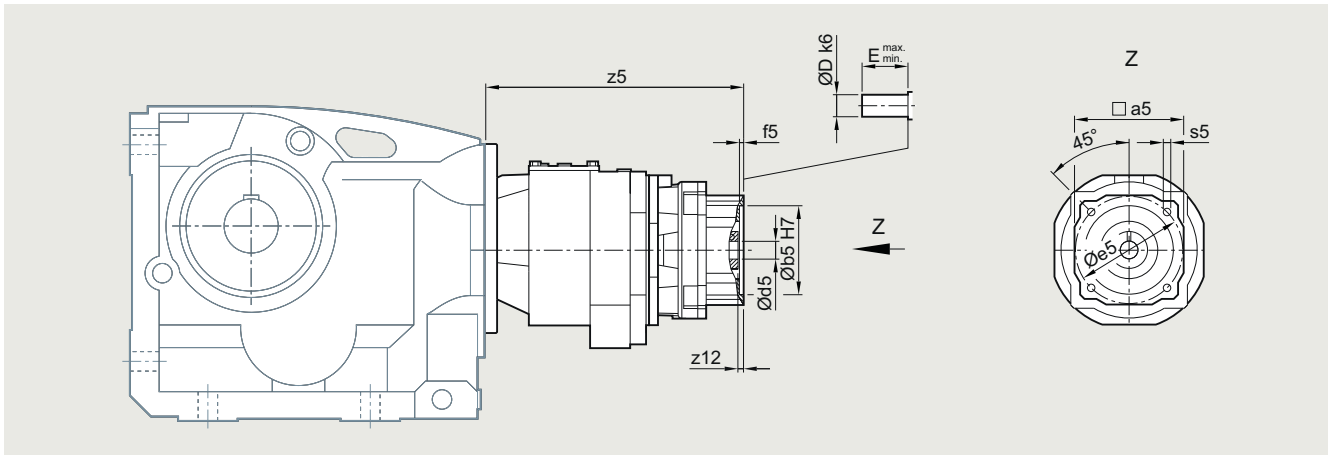
#### Bevel tandem gearbox with adapter K2



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K.89-D/Z39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	377.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	377.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	424.5
K.109-D/Z39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	360.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	360.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	407.5
K.129-D/Z39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	351.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	351.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	398.5
K.149-D/Z49	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	380.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	380.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	427.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	427.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	505.5
K.169-D/Z49	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	370
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	370
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	417
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	417
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	495
K.189-D/Z69	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	395.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27	395.5
	K2-(100)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	442.5
	K2-(132)	300	230	18	5	265	M12	45	38	80	10	41	520.5

⑤ Feather key/keyway DIN 6885

## Bevel tandem gearbox with KS adapter



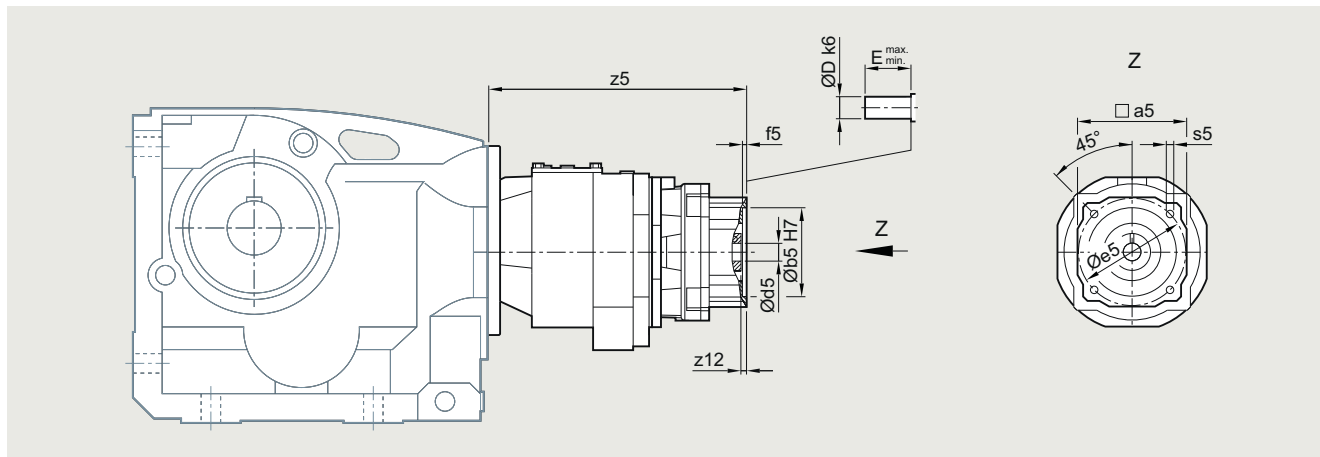
Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
K.39-D/Z19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
K.49-D/Z19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
K.69-D/Z19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
K.79-D/Z39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
K.89-D/Z39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	261.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	261.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315
	KS6.2	130	110	7	145	M8x15	8	22	40	58	315
K.109-D/Z39	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	327.5
	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	244.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	244.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	257
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	257
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	273
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	273
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	298
KS6.2	130	110	7	145	M8x15	8	22	40	58	298	
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	310.5	

## SIMOGEAR gearboxes

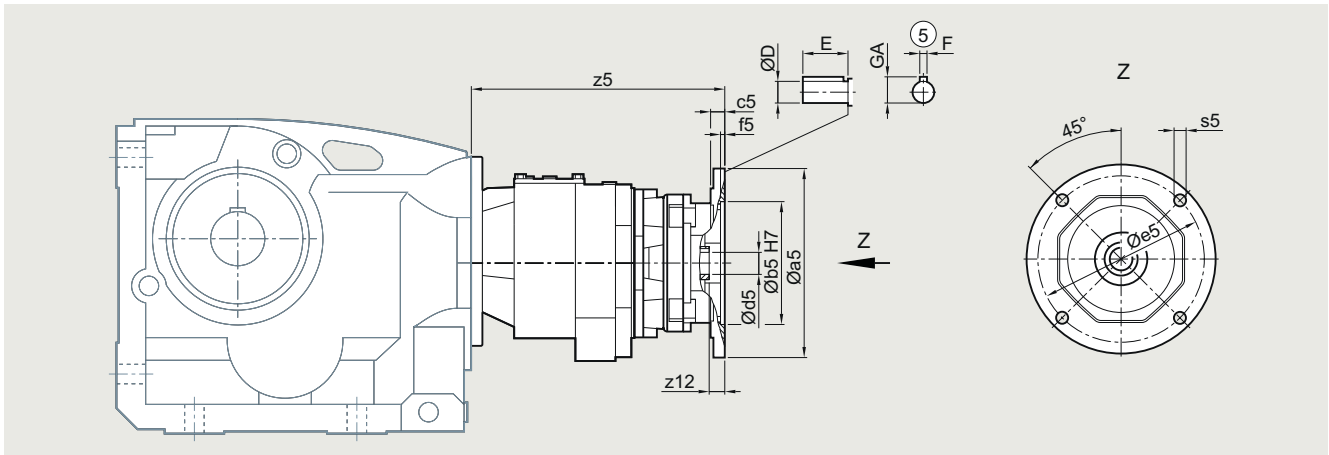
Bevel tandem gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

#### Bevel tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
K.129-D/Z39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	235.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	235.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	248
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	248
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	264
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	264
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	289
	KS6.2	130	110	7	145	M8x15	8	22	40	58	289
K.149-D/Z49	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	301.5
	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	264.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	264.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	277
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	277
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	293
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	293
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	318
K.169-D/Z49	KS6.2	130	110	7	145	M8x15	8	22	40	58	318
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	330.5
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	366.5
	KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	366.5
	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	254
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	254
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	266.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	266.5
K.189-D/Z69	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282.5
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282.5
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	307.5
	KS6.2	130	110	7	145	M8x15	8	22	40	58	307.5
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	320
	KS10.1	196	180	5.0	215	M12x22	5	38	50	80	356
	KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	356
	K.189-D/Z69	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31
KS3.2		73	60	4.5	75	M6x11	5	14	25	31	279.5
KS4.1		85	70	5.5	90	M6x13	5	19	35	40	292
KS4.2		85	80	5.5	100	M6x13	5	19	35	40	292
KS5.1		117	80	4.5	100	M6x11	5	19	35	45	308
KS5.2		117	95	4.5	115	M8x14	5	19	35	45	308
KS6.1		130	110	4.5	130	M8x15	8	24	40	58	333
KS6.2		130	110	7	145	M8x15	8	22	40	58	333
KS8.1		155	130	4.5	165	M10x14	2	32	40	80	345.5
KS10.1		196	180	5.0	215	M12x22	5	38	50	80	381.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	381.5	

**Bevel tandem gearbox with adapter K5**

Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K.89-D/Z39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	298
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.15	4.763	24.346	298
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	380
K.109-D/Z39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	281
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	281
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	363
K.129-D/Z39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	272
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	272
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	354
K.149-D/Z49	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	301
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	301
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	383
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	399
K.169-D/Z49	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	290.5
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	290.5
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	372.5
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	388.5
K.189-D/Z69	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	316
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	316
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	398
	K5-(210)	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	414

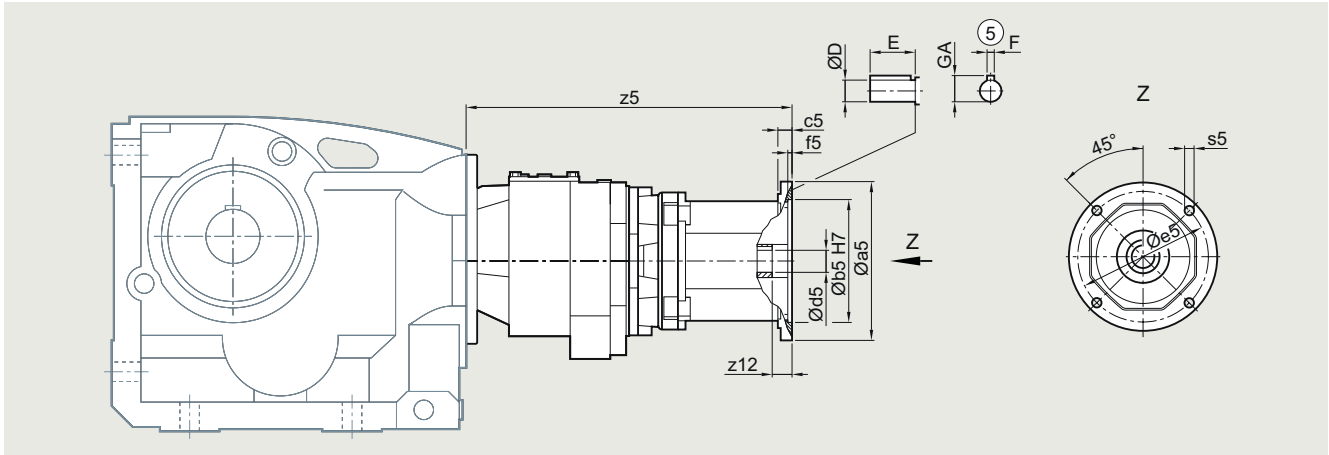


## SIMOGEAR gearboxes

Bevel tandem gearbox with adapter K3 for mounting NEMA motors

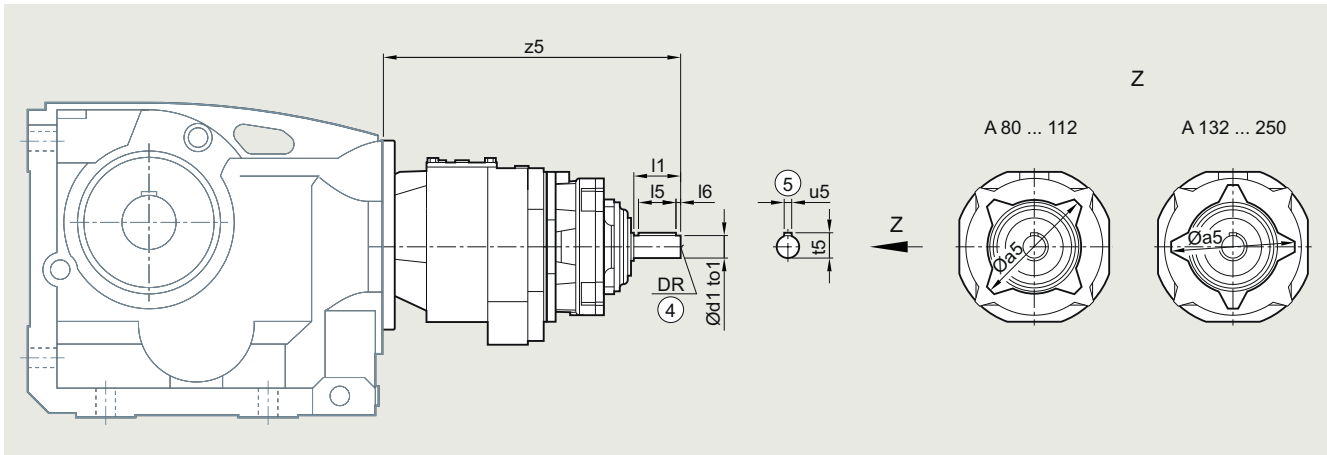
### Dimensional drawings

#### Bevel tandem gearbox with adapter K3



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K.89-D/Z39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	380.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	380.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	436.5
K.109-D/Z39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	363.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	363.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	419.5
K.129-D/Z39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	354.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	354.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	410.5
K.149-D/Z49	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	383.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	383.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	439.5
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.85	7.938	38.443	510
K.169-D/Z49	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	373
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	373
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	429
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.85	7.938	38.443	499.5
K.189-D/Z69	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	398.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	398.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	454.5
	K3-(210)	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.85	7.938	38.443	525

⑤ Feather key/keyway DIN 6885

**Bevel tandem gearbox with adapter A**

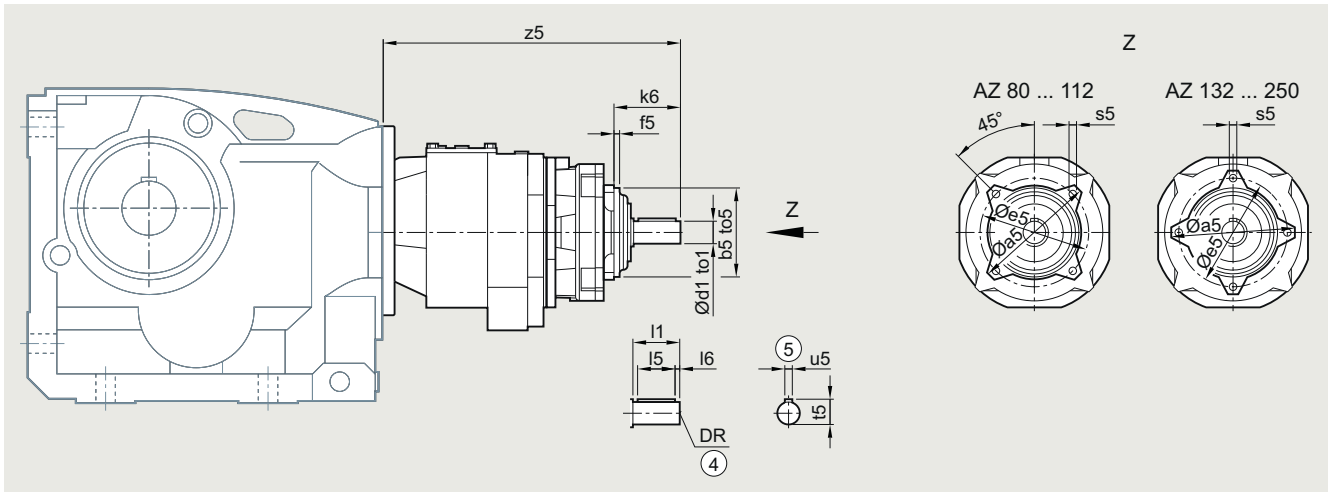
Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
K.89-D/Z39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	323
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	333
K.109-D/Z39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	306
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	316
K.129-D/Z39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	297
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	307
K.149-D/Z49	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	326
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	336
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	403
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	403
K.169-D/Z49	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	315.5
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	325.5
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	392.5
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	392.5
K.189-D/Z69	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	341
	A-(90)	132	24	k6	50	40	5	8	27	M8x19	351
	A-(100)	170	28	k6	60	50	5	8	31	M10x22	418
	A-(112)	170	28	k6	60	50	5	8	31	M10x22	418

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

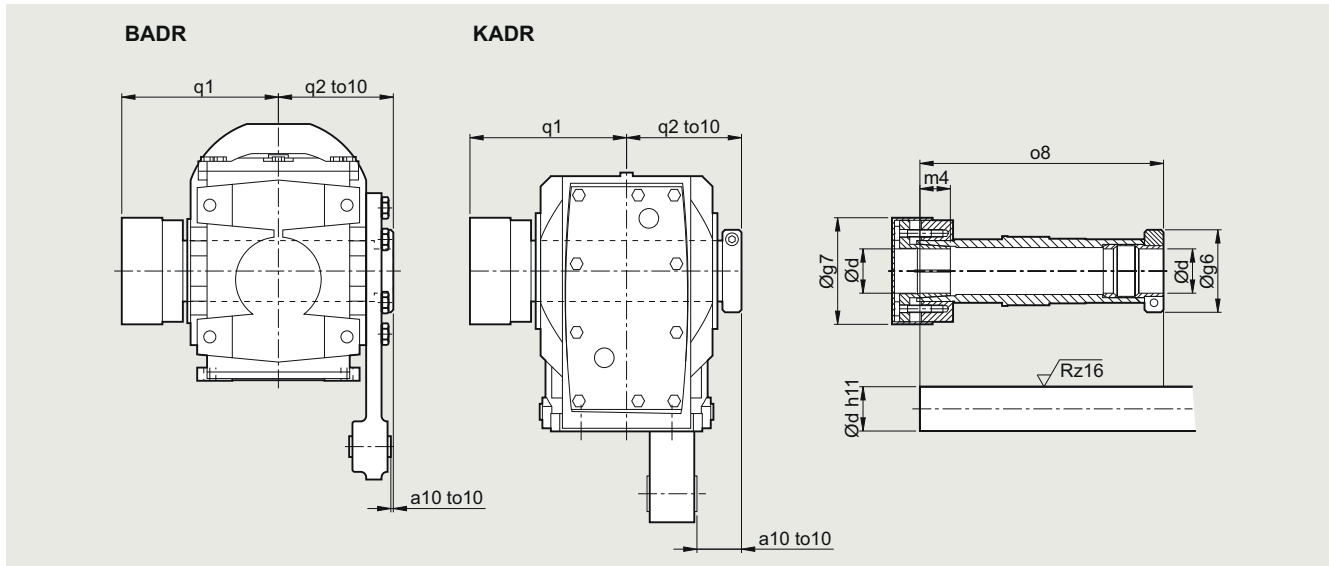
Bevel tandem gearbox with adapter AZ with free output shaft and centering

**Dimensional drawings****Bevel tandem gearbox with adapter AZ**

Gearbox	Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	i5	i6	u5	t5	DR	k6	z5
K.89-D/Z39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	323
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	333
K.109-D/Z39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	306
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	316
K.129-D/Z39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	297
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	307
K.149-D/Z49	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	326
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	336
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	403
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	403
K.169-D/Z49	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	315.5
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	325.5
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	392.5
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	392.5
K.189-D/Z69	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	341
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	351
	AZ-(100)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418
	AZ-(112)	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	418

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOLOC assembly system**


Note mounting tolerance to10 when positioning the torque arm.

d	g6	g7	m4	o8	q1	q2	a10	to10
<b>BADR29</b>								
20	58.5	56	18.5	151	102	75	11	+2.1
1"								+0.6
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"								

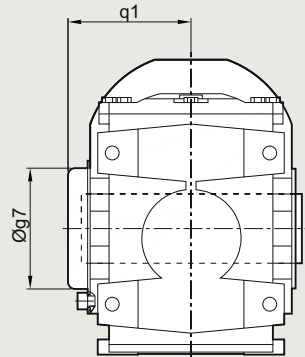
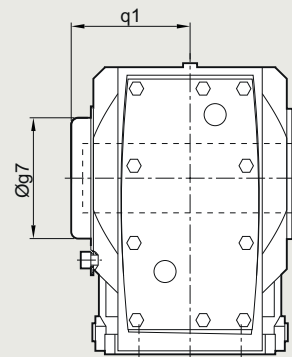
**SIMOGEAR gearboxes**

Bevel gearboxes

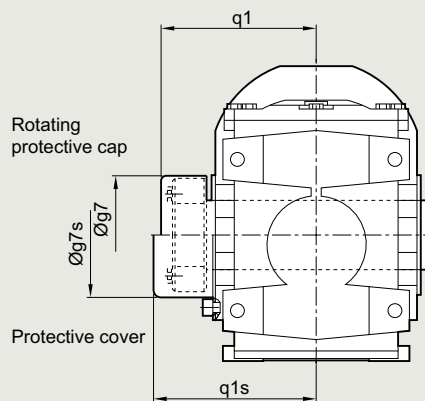
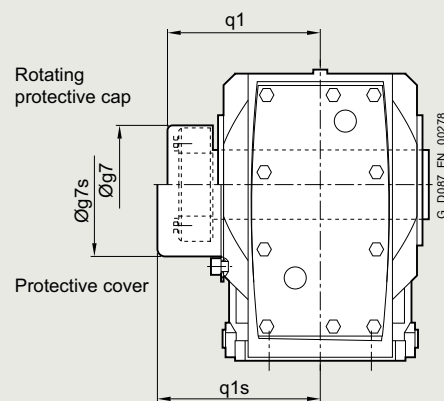
**Dimensional drawings****SIMOLOC assembly system**

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"								

5

**Protective covers**
**Protective cover for hollow shaft**
**BA, BAF, BAZ, BAD**

**KA<sup>1)</sup>, KAF, KAZ, KAD**


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>Protective cover</b>													
g7	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	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 cover for hollow shaft with shrink disk**
**BAS, BAFS, BAZS, BADS**

**KAS<sup>1)</sup>, KAFS, KAZS, KADS**


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

<sup>1)</sup> KA/KAS version valid only for gearbox sizes 169 and 189

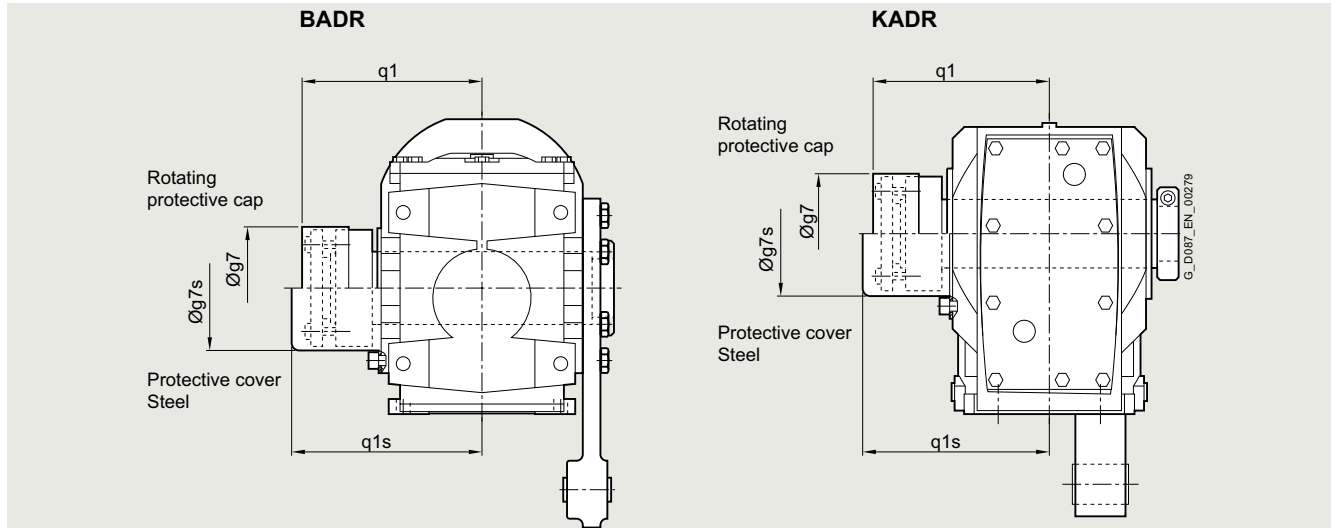
## SIMOGEAR gearboxes

### Bevel gearboxes

#### Dimensional drawings

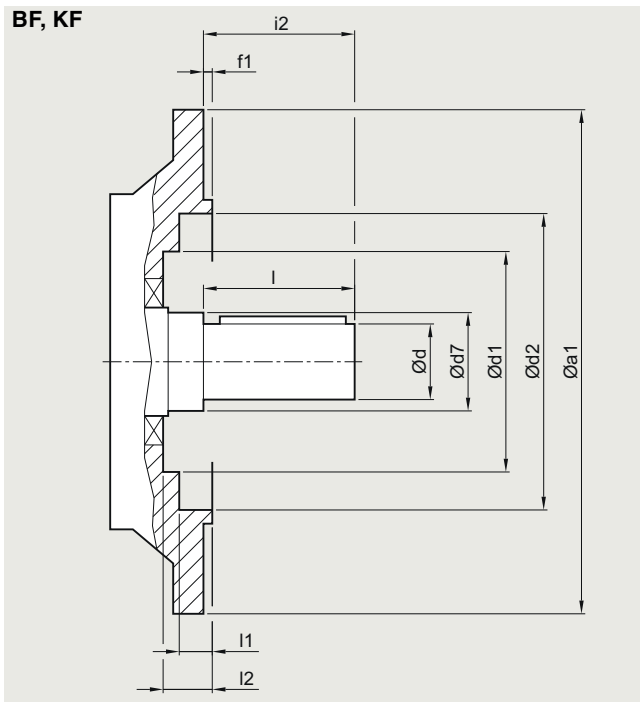
#### Protective covers

#### 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	82.5	86	99	99	137
q1s	102	119.0	138	109	126	145	151.5	176.5

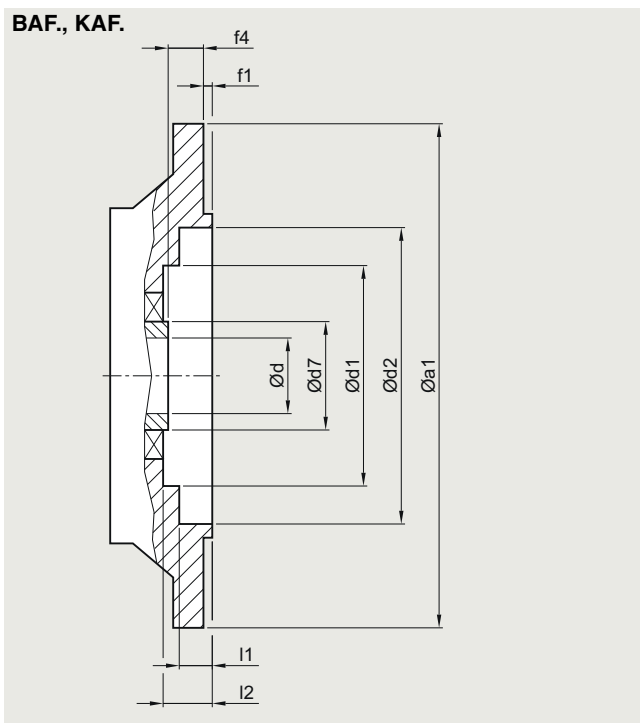
() Dimension in brackets for hollow shaft  $d=40$  and  $d=1.625''$  (can only be selected with rotating protective cap)

**Inner contour of the flange 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
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	-
KF49	200	30	35	-	118	3.5	60	60	5.5	-
KF69	250	35	45	-	165	4.0	70	70	6.5	-
KF79	250	40	55	-	165	4.0	80	80	6.5	-
KF89	300	50	55	-	165	4.0	100	100	8.0	-
KF109	350	60	65	-	235	5.0	120	120	9.0	-
KF129	450	70	75	-	336	5.0	140	140	9.0	-
KF149	450	90	100	-	336	5.0	170	170	10.0	-
KF169	550	110	120	-	427	5.0	210	210	10.0	-
KF189	660	120	160	-	517	6.0	210	210	11.0	-

*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	-

*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.29	120	20/ 25	40	-	70	3.0	20.0	24.0	-
	160	20/ 25	40	70	101	3.5	20.0	8.5	24.5
BAF.39	160	30	55	93	100	3.5	27.0	11.0	31.5
		35							
		40							
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	30	45	80	102	3.5	24.0	2.0	29.5
KAF.49	200	35	50	90	120	3.5	25.0	4.0	30.5
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
KAF.129	450	70	95	184	336	5.0	41.5	16.5	48.5
KAF.149	450	90	120	214	219	5.0	41.0	40.0	50.0
KAF.169	550	100	140	254	426	5.0	56.0	14.5	56.0
KAF.189	660	120	160	306	518	6.0	66.0	6.0	62.0

*With VLplus reinforced bearing system (G30)*

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	-

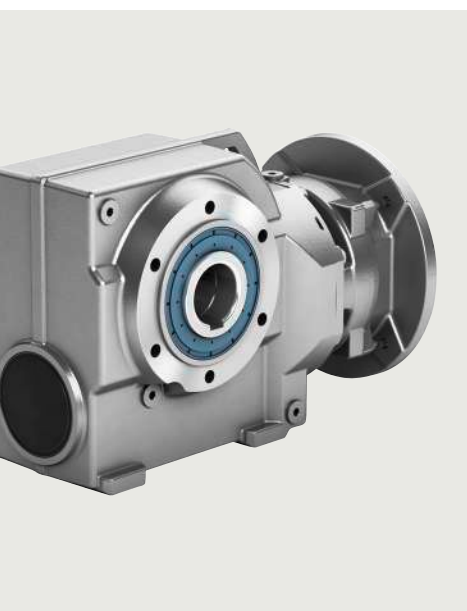


## SIMOGEAR gearboxes

### Notes

5

## Helical worm gearboxes



<b>6/2</b>	<b>Orientation</b>	
<b>6/3</b>	<b>Transmission ratios and torques</b>	
6/3	Selection and ordering data	
<b>6/8</b>	<b>Transmission ratios and torques for very low speeds</b>	
6/8	Selection and ordering data	
<b>6/14</b>	<b>Efficiencies</b>	
6/14	Selection and ordering data	
<b>6/24</b>	<b>Dimensional drawings</b>	
6/24	Dimensional drawing overview	
	<u>Helical worm gearbox with adapter K4</u>	
6/27	Helical worm gearbox C..29	6/72
6/31	Helical worm gearbox C..39	6/72
6/35	Helical worm gearbox C..49	6/73
6/39	Helical worm gearbox C..69	6/74
6/43	Helical worm gearbox C..89	6/74
	<u>Helical worm gearbox with adapter K2</u>	6/75
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	<u>Helical worm gearbox with KS adapter</u>	6/75
6/48	Helical worm gearbox C..29	6/76
6/52	Helical worm gearbox C..39	6/77
6/56	Helical worm gearbox C..49	6/78
6/60	Helical worm gearbox C..69	
6/64	Helical worm gearbox C..89	
	<u>Helical worm gearbox with adapter K5</u>	
6/68	C..29 to C..89	
	<u>Helical worm gearbox with adapter K3</u>	
6/69	C..29 to C..89	
	<u>Helical worm gearbox with adapter A</u>	
6/70	C..29 to C..89	
	<u>Helical worm gearbox with adapter AZ</u>	
6/71	C..29 to C..89	
	<b>Dimensional drawings (continued)</b>	
	Helical worm tandem gearbox with adapter K4	
	Helical worm tandem gearbox with adapter K2	
	Helical worm tandem gearbox with KS adapter	
	Helical worm tandem gearbox with adapter K5	
	Helical worm tandem gearbox with adapter K3	
	Helical worm tandem gearbox with adapter A	
	Helical worm tandem gearbox with adapter AZ	
	SIMOLOC assembly system	
	Protective cover for hollow shaft	
	Inner contour of the flange design	

## SIMOGEAR gearboxes

### Helical worm gearboxes

#### Orientation

#### SIMOGEAR helical worm gearbox C

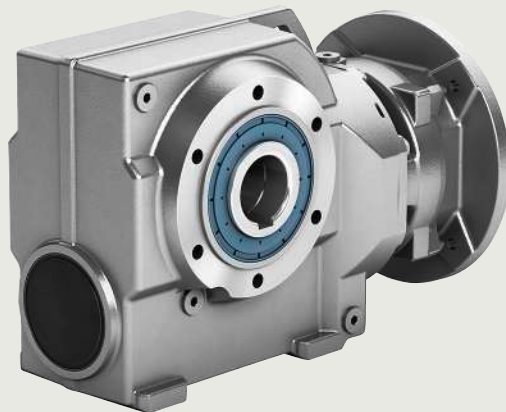


Fig. 6/1 Helical worm gearbox C

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-D/Z19 ... C.89-D/Z39 (4-stage or 5-stage)	5	80 ... 1310	270 ... 19000	7.5

SIMOGEAR helical worm gearboxes are available in the following versions:

#### Transmission stages

- 2-stage helical worm geared motors
- 4-stage 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 with feather key
- Hollow shaft with shrink disk
- Hollow shaft with 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.

## Selection and ordering data

Gearbox						Adapter								Article No.
<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>	K4	63	71	80	90	100	112	132	(Article No. supplement, see below)
-						K2			80	90	100	112	132	
						KS		3.1		5.1	6.1	8.1	10.1	
								3.2		5.2	6.2		10.2	
								4.1						
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
<b>C.29</b>														
265.20	5.5	108	4140	0.05	1326/5	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ M2
230.10	6.3	108	4140	0.05	2301/10	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ L2
209.18	6.9	109	4130	0.07	2301/11	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ K2
179.40	8.1	110	4130	0.08	897/5	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ J2
163.09	8.9	110	4130	0.10	1794/11	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ H2
143.00	10	110	4130	0.11	143/1	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ G2
127.64	11	110	4130	0.14	1404/11	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ F2
113.75	13	110	4130	0.16	455/4	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ E2
105.00	14	110	4130	0.20	105/1	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ D2
91.93	16	110	4130	0.22	1287/14	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ C2
80.60	18	110	4130	0.22	403/5	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ B2
73.12	20	110	4130	0.28	585/8	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ A2
68.82	21	110	4130	0.33	1170/17	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ X1
60.67	24	110	4130	0.36	182/3	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ W1
52.65	28	110	4130	0.48	1053/20	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ V1
49.87	29	102	4170	0.05	748/15	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ U1
43.27	34	103	4160	0.06	649/15	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ T1
39.33	37	103	4160	0.07	118/3	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ S1
33.73	43	104	4160	0.09	506/15	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ R1
32.64	44	90	4230	0.05	816/25	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ Q1
28.32	51	90	4230	0.06	708/25	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ P1
25.75	56	91	4220	0.07	1416/55	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ N1
22.08	66	91	4220	0.09	552/25	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ M1
20.07	72	92	4200	0.11	1104/55	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ L1
17.60	82	92	3970	0.13	88/5	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ K1
15.71	92	92	3770	0.15	864/55	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ J1
14.00	104	93	3560	0.18	14/1	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ H1
12.92	112	93	3430	0.22	168/13	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ G1
11.31	128	94	3210	0.25	396/35	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ F1
9.92	146	94	3020	0.26	248/25	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ E1
9.00	161	91	2960	0.33	9/1	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ D1
8.47	171	90	2950	0.38	144/17	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ C1
7.47	194	86	2920	0.43	112/15	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ B1
6.48	224	82	2880	0.57	162/25	✓	✓	✓	✓					2KJ3601 - ■ ■ A 0 ■ - 0 ■ A1

## Article No. supplement

Shaft design	1 or 9	see page 9/49													
Adapter size	K4	B	C	D	E	F	G	H						4	
	K2			D	E	F	G	H						2	
	KS		A			E	H	K	M						1
			B			F	J		N						
			C												
	K5		A			B	C		D						5
K3		A			B	C		D						3	
A/AZ*				D	E	F	G	H						9	

Adapter type

Gearbox mounting type **A, B, F or H**

see page 9/40

\* Article No. supplement Adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

Helical worm gearboxes

## Transmission ratios and torques

## Selection and ordering data

Gearbox						Adapter							Article No.	
<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	K4	63	71	80	90	100	112	132	(Article No. supplement, see below)
-						K2			80	90	100	112	132	
						KS		3.1		5.1	6.1	8.1	10.1	
								3.2		5.2	6.2		10.2	
								4.1						
								4.2						
						K5		56	140	180			210	
						K3		56	140	180			210	
						A/AZ			80	90	100	112	132	
<b>C.39A</b>														
299.00	4.8	192	6180	0.04	299/1	✓	✓							2KJ3602 - ■ ■ A 0 ■ - 0 ■ N2
265.20	5.5	192	6180	0.05	1326/5	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ M2
230.10	6.3	193	6180	0.06	2301/10	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ L2
209.18	6.9	193	6180	0.07	2301/11	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ K2
179.40	8.1	193	6180	0.09	897/5	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ J2
163.09	8.9	193	6180	0.11	1794/11	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ H2
143.00	10	194	6170	0.13	143/1	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ G2
127.64	11	194	6170	0.16	1404/11	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ F2
113.75	13	194	6170	0.19	455/4	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ E2
105.00	14	194	6170	0.23	105/1	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ D2
91.93	16	194	6170	0.27	1287/14	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ C2
80.60	18	194	6170	0.26	403/5	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ B2
73.12	20	194	6170	0.36	585/8	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ A2
68.82	21	194	6170	0.43	1170/17	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ X1
60.67	24	183	6210	0.47	182/3	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ W1
52.65	28	170	6260	0.64	1053/20	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ V1
49.87	29	198	6160	0.06	748/15	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ U1
43.27	34	199	6150	0.07	649/15	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ T1
39.33	37	200	6140	0.08	118/3	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ S1
33.73	43	200	5730	0.11	506/15	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ R1
32.64	44	215	5260	0.07	816/25	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ Q1
28.32	51	235	4680	0.08	708/25	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ P1
25.75	56	235	4450	0.10	1416/55	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ N1
22.08	66	235	4100	0.13	552/25	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ M1
20.07	72	235	3890	0.16	1104/55	✓	✓	✓	✓					2KJ3602 - ■ ■ A 0 ■ - 0 ■ L1
17.60	82	225	3720	0.19	88/5	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ K1
15.71	92	215	3600	0.23	864/55	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ J1
14.00	104	205	3490	0.28	14/1	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ H1
12.92	112	199	3400	0.34	168/13	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ G1
11.31	128	189	3270	0.41	396/35	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ F1
9.92	146	181	3130	0.44	248/25	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ E1
9.00	161	174	3040	0.59	9/1	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ D1
8.47	171	170	3030	0.68	144/17	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ C1
7.47	194	163	3050	0.81	112/15	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ B1
6.48	224	154	3050	1.08	162/25	✓	✓	✓	✓	✓ <sup>1)</sup>				2KJ3602 - ■ ■ A 0 ■ - 0 ■ A1

2) Not available for A/AZ adapter

## Article No. supplement

Shaft design	1 or 9	see page 9/49												
Adapter size	K4	B	C	D	E	F	G	H						4
	K2			D	E	F	G	H						2
	KS		A		E	H	K	M						1
			B		F	J		N						
			C											
			D											
	K5		A		B	C		D					5	
	K3		A		B	C		D					3	
	A/AZ*			D	E	F	G	H					9	

Adapter type

Gearbox mounting type

A, B, F or H

see page 9/40

\* Article No. supplement Adapter A: M1A, adapter AZ: M1B

## Selection and ordering data

Gearbox						Adapter							Article No.	
<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	K4	63	71	80	90	100	112	132	(Article No. supplement, see below)
-						K2			80	90	100	112	132	
						KS		3.1		5.1	6.1	8.1	10.1	
								3.2		5.2	6.2		10.2	
								4.1						
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
<b>C.49</b>														
299.00	4.8	350	8410	0.04	299/1	✓	✓							2KJ3603 - ■ ■ A 0 ■ - 0 ■ N2
265.20	5.5	350	8410	0.05	1326/5	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ M2
230.10	6.3	355	8400	0.07	2301/10	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ L2
209.18	6.9	355	8400	0.08	2301/11	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ K2
179.40	8.1	355	8260	0.10	897/5	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ J2
163.09	8.9	355	7920	0.13	1794/11	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ H2
143.00	10	355	7480	0.15	143/1	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ G2
127.64	11	355	7110	0.18	1404/11	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ F2
113.75	13	355	6760	0.22	455/4	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ E2
105.00	14	355	6510	0.26	105/1	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ D2
91.93	16	350	6160	0.32	1287/14	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ C2
80.60	18	330	5930	0.32	403/5	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ B2
73.12	20	315	5770	0.44	585/8	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ A2
68.82	21	305	5680	0.51	1170/17	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ X1
60.67	24	285	5500	0.58	182/3	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ W1
52.65	28	265	5290	0.78	1053/20	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ V1
49.87	29	320	4250	0.08	748/15	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ U1
43.27	34	350	3680	0.10	649/15	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ T1
39.33	37	400	3050	0.12	118/3	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ S1
33.73	43	375	2940	0.15	506/15	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ R1
30.67	47	385	2660	0.19	92/3	✓	✓	✓	✓					2KJ3603 - ■ ■ A 0 ■ - 0 ■ Q1
26.89	54	360	2620	0.23	242/9	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ P1
24.00	60	345	2540	0.28	24/1	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ N1
21.39	68	330	2460	0.34	385/18	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ M1
19.74	73	315	2450	0.41	770/39	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ L1
17.29	84	300	2350	0.51	121/7	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ K1
15.16	96	285	2270	0.56	682/45	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ J1
13.75	105	275	2200	0.73	55/4	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ H1
12.94	112	270	2160	0.85	220/17	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ G1
11.41	127	255	2100	1.02	308/27	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ F1
9.90	146	245	1990	1.36	99/10	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ E1
9.00	161	255	1140	1.03	9/1	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ D1
8.47	171	255	1290	1.18	144/17	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ C1
7.47	194	240	1580	1.45	112/15	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ B1
6.48	224	230	1850	1.93	162/25	✓	✓	✓	✓	✓	✓			2KJ3603 - ■ ■ A 0 ■ - 0 ■ A1

## Article No. supplement

Shaft design	1 or 9	see page 9/49											
Adapter size	K4	B	C	D	E	F	G	H					4
	K2			D	E	F	G	H					2
	KS		A		E	H	K	M					1
			B		F	J		N					
			C										
	K5	A		B	C		D						5
K3	A		B	C		D						3	
A/AZ*			D	E	F	G	H					9	
Adapter type													
Gearbox mounting type	A, B, F or H	see page 9/40											

\* Article No. supplement Adapter A: **M1A**, adapter AZ: **M1B**

# SIMOGEAR gearboxes

## Helical worm gearboxes

### Transmission ratios and torques

#### Selection and ordering data

Gearbox						Adapter							Article No.	
<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>	K4	63	71	80	90	100	112	132	(Article No. supplement, see below)
-						K2			80	90	100	112	132	
						KS		3.1		5.1	6.1	8.1	10.1	
								3.2		5.2	6.2		10.2	
								4.1						
								4.2						
						K5		56	140	180			210	
						K3		56	140	180			210	
						A/AZ			80	90	100	112	132	
<b>C.69</b>														
360.00	4.0	675	10600	0.07	1079/3	✓	✓							2KJ3604 - ■ ■ A 0 ■ - 0 ■ M2
319.80	4.5	675	10600	0.09	1599/5	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ L2
280.80	5.2	675	10600	0.11	1404/5	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ K2
255.27	5.7	675	10600	0.13	2808/11	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ J2
218.40	6.6	675	10600	0.16	1092/5	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ H2
198.55	7.3	675	10600	0.19	2184/11	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ G2
175.50	8.3	665	10600	0.23	351/2	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ F2
159.55	9.1	640	10700	0.30	1755/11	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ E2
139.75	10	590	10500	0.35	559/4	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ D2
129.00	11	565	10300	0.42	129/1	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ C2
114.21	13	535	9990	0.52	1599/14	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ B2
102.50	14	675	8310	0.10	205/2	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ A2
90.00	16	675	7790	0.12	90/1	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ X1
81.82	18	675	7410	0.15	900/11	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ W1
70.00	21	660	6920	0.18	70/1	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ V1
63.64	23	640	6700	0.22	700/11	✓	✓	✓	✓					2KJ3604 - ■ ■ A 0 ■ - 0 ■ U1
56.25	26	610	6460	0.27	225/4	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ T1
51.14	28	580	6320	0.34	1125/22	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ S1
44.79	32	545	6110	0.41	1075/24	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ R1
41.35	35	525	5980	0.49	1075/26	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ Q1
36.61	40	500	5770	0.61	1025/28	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ P1
30.00	48	545	4560	0.46	30/1	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ N1
26.28	55	515	4410	0.56	473/18	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ M1
24.26	60	500	4300	0.67	946/39	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ L1
21.48	68	475	4160	0.83	451/21	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ K1
17.88	81	440	3960	1.17	143/8	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ J1
15.88	91	360	3950	0.88	1032/65	✓	✓	✓	✓	✓	✓			2KJ3604 - ■ ■ A 0 ■ - 0 ■ H1
14.06	103	355	3730	1.11	492/35	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ G1
11.70	124	360	3310	1.56	117/10	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ F1
11.01	132	360	3180	1.79	936/85	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ E1
9.87	147	360	2890	2.10	148/15	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ D1
8.40	173	360	3110	2.90	42/5	✓	✓	✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ C1
7.20	201	360	3170	3.90	36/5			✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ B1
6.20	234	355	3190	5.20	31/5			✓	✓	✓	✓	✓ <sup>1)</sup>		2KJ3604 - ■ ■ A 0 ■ - 0 ■ A1

<sup>1)</sup> Not available for A/AZ adapter

#### Article No. supplement

Shaft design	1 or 9	see page 9/49							
Adapter size	K4	B	C	D	E	F	G	H	4
	K2			D	E	F	G	H	2
	KS		A		E	H	K	M	1
			B		F	J	N		
			C						
			D						
	K5		A		B	C		D	5
	K3		A		B	C		D	3
	A/AZ*			D	E	F	G	H	9

Adapter type

Gearbox mounting type

A, B, F or H

see page 9/40

\* Article No. supplement Adapter A: **M1A**, adapter AZ: **M1B**

**Selection and ordering data**

Gearbox						Adapter							Article No.	
<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> -	K4	63	71	80	90	100	112	132	(Article No. supplement, see below)
-						K2			80	90	100	112	132	
						KS		3.1		5.1	6.1	8.1	10.1	
								3.2		5.2	6.2		10.2	
								4.1						
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
<b>C.89</b>														
363.00	4	1450	16200	0.47	3627/10		✓	✓	✓					2KJ3606 - ■ ■ A 0 ■ - 0 ■ N2
329.73	4.4	1450	16200	0.57	3627/11		✓	✓	✓					2KJ3606 - ■ ■ A 0 ■ - 0 ■ M2
295.75	4.9	1450	16200	0.78	1183/4		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ L2
265.91	5.5	1450	16200	0.89	2925/11		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ K2
240.50	6	1450	16200	1.00	481/2		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ J2
222.00	6.5	1450	16200	1.18	222/1		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ H2
203.36	7.1	1450	16200	1.52	2847/14		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ G2
170.62	8.5	1360	16300	1.67	1365/8		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ F2
160.59	9	1330	16300	1.91	2730/17		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ E2
147.33	9.8	1280	16300	2.10	442/3		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ D2
128.70	11	1190	16300	3.00	1287/10		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ C2
115.23	13	1120	15900	3.70	2535/22			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ B2
100.75	14	1050	15300	4.40	403/4			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ A2
86.48	17	985	14600	4.90	1989/23			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ X1
76.44	19	930	14100	6.30	1911/25			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ W1
65.00	22	865	13400	8.10	65/1					✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ V1
55.61	26	1450	8630	0.89	1001/18		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ U1
50.00	29	1430	8160	1.02	50/1		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ T1
45.22	32	1380	7910	1.15	407/9		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ S1
41.74	35	1340	7720	1.35	1628/39		✓	✓	✓	✓	✓			2KJ3606 - ■ ■ A 0 ■ - 0 ■ R1
38.24	38	1300	7510	1.73	803/21		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ Q1
32.08	45	1220	7110	1.97	385/12		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ P1
30.20	48	1200	6950	2.20	1540/51		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ N1
27.70	52	1140	6890	2.50	748/27		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ M1
25.03	58	1090	5490	2.10	876/35		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ L1
21.00	69	1070	4480	2.50	21/1		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ K1
19.76	73	1120	3400	2.80	336/17		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ J1
18.13	80	1110	3180	3.20	272/15		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ H1
15.84	92	1110	4150	4.40	396/25		✓	✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ G1
14.18	102	1070	4810	5.40	156/11			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ F1
12.40	117	1010	5490	6.60	62/5			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ E1
10.64	136	960	5620	8.00	1224/115			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ D1
9.41	154	915	5680	10.00	1176/125			✓	✓	✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ C1
8.00	181	840	5710	14.00	8/1					✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ B1
6.86	211	720	5690	18.00	48/7					✓	✓	✓		2KJ3606 - ■ ■ A 0 ■ - 0 ■ A1



**Article No. supplement**

Shaft design	1 or 9	see page 9/49												
Adapter size	K4	B	C	D	E	F	G	H					4	
	K2			D	E	F	G	H					2	
	KS		A			E	H	K	M					1
			B			F	J		N					
			C											
	K5		A			B	C		D					5
K3		A			B	C		D					3	
A/AZ*				D	E	F	G	H					9	
Adapter type														
Gearbox mounting type	A, B, F or H	see page 9/40												

\* Article No. supplement Adapter A: **M1A**, adapter AZ: **M1B**



# SIMOGEAR gearboxes

## Helical worm gearboxes

### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox						Adapter						Article No.
<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> -	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	10.1 10.2	(Article No. supplement, see below)
<b>C.29-D19</b>												
9219	0.16	80	4280	0.02	37750064/4095	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ Q1
8163	0.18	80	4280	0.03	18570596/2275	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ P1
7092	0.20	81	4270	0.04	16135108/2275	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ N1
6448	0.22	81	4270	0.04	2933656/455	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ M1
5487	0.26	82	4270	0.06	12481876/2275	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ L1
4988	0.29	82	4270	0.07	2269432/455	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ K1
4349	0.33	83	4260	0.08	152218/35	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ J1
3893	0.37	84	4260	0.11	1771264/455	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ H1
3457	0.42	84	4260	0.13	4718758/1365	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ G1
3191	0.45	84	4260	0.16	18875032/5915	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ F1
2772	0.52	85	4250	0.17	8828644/3185	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ E1
2409	0.60	86	4250	0.18	5479848/2275	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ D1
2175	0.67	86	4250	0.22	76109/35	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ C1
2047	0.71	86	4250	0.26	71632/35	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ B1
1784	0.81	87	4240	0.29	2435488/1365	✓						2KJ3621 - ■ ■ A 0 ■ - 0 ■ A1
<b>C.29-Z19</b>												
1744	0.83	87	4240	0.02	1020272/585	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ S1
1544	0.94	87	4240	0.03	501908/325	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ R1
1342	1.1	88	4240	0.04	436084/325	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ Q1
1220	1.2	88	4240	0.05	79288/65	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ P1
1038	1.4	89	4230	0.07	337348/325	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ N1
944	1.5	90	4230	0.08	61336/65	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ M1
823	1.8	90	4230	0.09	4114/5	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ L1
736	2.0	91	4220	0.12	47872/65	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ K1
654	2.2	91	4220	0.15	127534/195	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ J1
604	2.4	91	4220	0.18	510136/845	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ H1
524	2.8	92	4220	0.20	238612/455	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ G1
456	3.2	93	4210	0.21	148104/325	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ F1
411	3.5	93	4210	0.27	2057/5	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ E1
387	3.7	93	4210	0.32	1936/5	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ D1
337.56	4.3	94	4210	0.36	65824/195	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ C1
311.44	4.7	94	4210	0.19	255068/819	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ B1
270.54	5.4	95	4200	0.22	119306/441	✓						2KJ3620 - ■ ■ A 0 ■ - 0 ■ A1

#### Article No. supplement

Shaft design	1 or 9	see page 9/49
Adapter size	KS	A B C D E F H J K M N
Adapter type		
Gearbox mounting type	A, B, F or H	see page 9/40

**Selection and ordering data**

Gearbox						Adapter						Article No.
<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> -	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	10.1 10.2	(Article No. supplement, see below)
<b>C.39A-D19</b>												
11553	0.13	160	6300	0.06	150183/13	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ S1
10502	0.14	160	6300	0.07	136530/13	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ R1
9219	0.16	156	6320	0.02	37750064/4095	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ Q1
8163	0.18	157	6310	0.03	18570596/2275	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ P1
7092	0.20	157	6310	0.04	16135108/2275	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ N1
6448	0.22	158	6310	0.04	2933656/455	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ M1
5487	0.26	159	6300	0.06	12481876/2275	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ L1
4988	0.29	159	6300	0.07	2269432/455	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ K1
4349	0.33	160	6300	0.08	152218/35	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ J1
3893	0.37	161	6300	0.11	1771264/455	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ H1
3457	0.42	161	6300	0.13	4718758/1365	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ G1
3191	0.45	162	6290	0.16	18875032/5915	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ F1
2772	0.52	163	6290	0.17	8828644/3185	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ E1
2409	0.60	165	6280	0.18	5479848/2275	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ D1
2175	0.67	166	6280	0.22	76109/35	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ C1
2047	0.71	167	6270	0.26	71632/35	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ B1
1784	0.81	169	6270	0.29	2435488/1365	✓						2KJ3623 - ■ ■ A 0 ■ - 0 ■ A1
<b>C.39A-Z19</b>												
1744	0.83	169	6270	0.02	1020272/585	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ S1
1544	0.94	171	6260	0.03	501908/325	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ R1
1342	1.1	173	6250	0.04	436084/325	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ Q1
1220	1.2	173	6250	0.05	79288/65	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ P1
1038	1.4	175	6240	0.07	337348/325	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ N1
944	1.5	175	6240	0.08	61336/65	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ M1
823	1.8	176	6240	0.09	4114/5	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ L1
736	2.0	177	6240	0.12	47872/65	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ K1
654	2.2	178	6230	0.15	127534/195	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ J1
604	2.4	179	6230	0.18	510136/845	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ H1
524	2.8	180	6230	0.20	238612/455	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ G1
456	3.2	181	6220	0.21	148104/325	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ F1
411	3.5	182	6220	0.27	2057/5	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ E1
387	3.7	182	6220	0.32	1936/5	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ D1
337.56	4.3	183	6210	0.36	65824/195	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ C1
311.44	4.7	184	6210	0.19	255068/819	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ B1
270.54	5.4	185	6210	0.22	119306/441	✓						2KJ3622 - ■ ■ A 0 ■ - 0 ■ A1

**Article No. supplement**

Shaft design	1 or 9	see page 9/49									
Adapter size	KS	A	E	H	K	M	1				
		B	F	J		N					
		C									
		D									
Adapter type											
Gearbox mounting type	A, B, F or H	see page 9/40									

## SIMOGEAR gearboxes

Helical worm gearboxes

## Transmission ratios and torques for very low speeds

## Selection and ordering data

Gearbox						Adapter					Article No.	
<i>i</i>	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	10.1 10.2	(Article No. supplement, see below)
<b>C.49-D19</b>												
11463	0.13	270	8640	0.04	2006103/175	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ N1
10421	0.14	270	8640	0.04	364746/35	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ M1
8868	0.16	270	8640	0.06	1551891/175	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ L1
8062	0.18	270	8640	0.07	282162/35	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ K1
7029	0.21	275	8630	0.08	492063/70	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ J1
6292	0.23	275	8630	0.11	220224/35	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ H1
5588	0.26	275	8630	0.13	391127/70	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ G1
5158	0.28	275	8630	0.16	2346762/455	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ F1
4480	0.32	280	8610	0.17	1097679/245	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ E1
3893	0.37	280	8730	0.18	681318/175	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ D1
3515	0.41	280	8610	0.22	492063/140	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ C1
3308	0.44	285	8600	0.26	1968252/595	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ B1
2884	0.50	285	8600	0.29	100936/35	✓						2KJ3625 - ■ ■ A 0 ■ - 0 ■ A1
<b>C.49-Z19</b>												
2819	0.51	285	8600	0.02	42284/15	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ V1
2496	0.58	290	8590	0.03	62403/25	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ U1
2169	0.67	295	8570	0.04	54219/25	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ T1
1972	0.74	295	8570	0.05	9858/5	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ S1
1678	0.86	305	8540	0.07	41943/25	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ R1
1525	0.95	305	8540	0.08	7626/5	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ Q1
1330	1.1	315	8510	0.10	13299/10	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ P1
1190	1.2	320	8500	0.13	5952/5	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ N1
1057	1.4	325	8480	0.15	10571/10	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ M1
976	1.5	330	8470	0.18	63426/65	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ L1
848	1.7	340	8440	0.21	29667/35	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ K1
737	2.0	340	8440	0.21	18414/25	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ J1
665	2.2	340	8440	0.27	13299/20	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ H1
626	2.3	345	8430	0.32	53196/85	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ G1
546	2.7	345	8430	0.37	2728/5	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ F1
503	2.9	345	8430	0.20	10571/21	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ E1
437	3.3	345	8430	0.23	128557/294	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ D1
380	3.8	350	8410	0.24	13299/35	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ C1
343.03	4.2	350	8410	0.31	57629/168	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ B1
322.85	4.5	350	8410	0.36	115258/357	✓						2KJ3624 - ■ ■ A 0 ■ - 0 ■ A1

## Article No. supplement

Shaft design	1 or 9	see page 9/49									
Adapter size	KS	A	E	H	K	M	1				
		B	F	J		N					
		C									
		D									
Adapter type											
Gearbox mounting type	A, B, F or H	see page 9/40									

**Transmission ratios and torques for very low speeds**
**Selection and ordering data**

Gearbox						Adapter						Article No.
<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> -	KS	3.1 3.2 4.1 4.2	5.1 5.2	6.1 6.2	8.1	10.1 10.2	(Article No. supplement, see below)
<b>C.69-D19</b>												
18949	0.08	495	11000	0.02	5172970/273	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ Q1
16779	0.09	495	11000	0.03	3053721/182	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ P1
14578	0.10	495	11000	0.04	2653233/182	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ N1
13253	0.11	495	11000	0.04	1206015/91	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ M1
11277	0.13	500	11000	0.06	2052501/182	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ L1
10252	0.14	500	11000	0.07	932955/91	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ K1
8939	0.16	500	11000	0.08	250305/28	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ J1
8002	0.18	500	12200	0.11	728160/91	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ H1
7106	0.20	500	11000	0.13	2586485/364	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ G1
6559	0.22	500	11000	0.16	7759455/1183	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ F1
5698	0.25	500	11000	0.17	7258845/1274	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ E1
4951	0.29	505	11000	0.18	450549/91	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ D1
4470	0.32	505	11000	0.22	250305/56	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ C1
4207	0.34	505	11000	0.26	500610/119	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ B1
3667	0.40	505	11000	0.29	333740/91	✓						2KJ3627 - ■ ■ A 0 ■ - 0 ■ A1
<b>C.69-Z19</b>												
3585	0.40	505	11000	0.02	139810/39	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ V1
3174	0.46	510	11000	0.03	82533/26	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ U1
2758	0.53	510	11000	0.04	71709/26	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ T1
2507	0.58	515	11000	0.05	32595/13	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ S1
2134	0.68	515	11000	0.07	55473/26	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ R1
1940	0.75	520	11000	0.08	25215/13	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ Q1
1691	0.86	520	11000	0.09	6765/4	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ P1
1514	0.96	525	11000	0.12	19680/13	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ N1
1344	1.1	530	11000	0.15	69905/52	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ M1
1241	1.2	530	11000	0.18	209715/169	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ L1
1078	1.3	535	10900	0.20	196185/182	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ K1
937	1.5	540	10900	0.21	12177/13	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ J1
846	1.7	545	10900	0.27	6765/8	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ H1
796	1.8	550	10900	0.32	13530/17	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ G1
694	2.1	555	10900	0.36	9020/13	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ F1
640	2.3	560	10900	0.19	349525/546	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ E1
556	2.6	570	10900	0.22	326975/588	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ D1
483	3.0	580	10800	0.23	6765/14	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ C1
436	3.3	585	10800	0.29	146575/336	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ B1
411	3.5	590	10800	0.35	146575/357	✓						2KJ3626 - ■ ■ A 0 ■ - 0 ■ A1

**Article No. supplement**

Shaft design	1 or 9	see page 9/49										
Adapter size	KS	A	E	H	K	M						1
		B	F	J		N						
		C										
		D										
Adapter type												
Gearbox mounting type	A, B, F or H	see page 9/40										

## SIMOGEAR gearboxes

### Helical worm gearboxes

#### Transmission ratios and torques for very low speeds

#### Selection and ordering data

Gearbox						Adapter								Article No.
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	K4	63	71	80	90	100	112	132	(Article No. supplement, see below)
-						K2			80	90	100	112	132	
						K5		3.1		5.1	6.1	8.1	10.1	
						K3		3.2		5.2	6.2		10.2	
								4.1						
								4.2						
						A/AZ			80	90	100	112	132	
								56		140	180		210	
								56		140	180		210	
<b>C.89-D39</b>														
<b>18243</b>	0.08	850	16300	0.05	93039401/5100		✓	✓						2KJ3630 - ■ ■ A 0 ■ - 0 ■ R1
<b>16585</b>	0.09	855	16300	0.07	93039401/5610		✓	✓	✓	✓				2KJ3630 - ■ ■ A 0 ■ - 0 ■ Q1
<b>14223</b>	0.10	860	16300	0.08	36269597/2550		✓	✓	✓	✓				2KJ3630 - ■ ■ A 0 ■ - 0 ■ P1
<b>13085</b>	0.11	1100	16300	0.03	90088999/6885		✓	✓						2KJ3630 - ■ ■ A 0 ■ - 0 ■ N1
<b>11606</b>	0.12	1100	16300	0.05	7833826/675		✓	✓						2KJ3630 - ■ ■ A 0 ■ - 0 ■ M1
<b>10070</b>	0.14	1100	16300	0.05	231097867/22950		✓	✓						2KJ3630 - ■ ■ A 0 ■ - 0 ■ L1
<b>9154</b>	0.16	1100	16300	0.07	21008897/2295		✓	✓	✓	✓				2KJ3630 - ■ ■ A 0 ■ - 0 ■ K1
<b>7851</b>	0.18	1100	16300	0.08	90088999/11475		✓	✓	✓	✓				2KJ3630 - ■ ■ A 0 ■ - 0 ■ J1
<b>7137</b>	0.20	1100	16300	0.10	16379818/2295		✓	✓	✓	✓				2KJ3630 - ■ ■ A 0 ■ - 0 ■ H1
<b>6258</b>	0.23	1110	16300	0.12	43086043/6885		✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>		2KJ3630 - ■ ■ A 0 ■ - 0 ■ G1
<b>5586</b>	0.26	1110	16300	0.15	1424332/255		✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>		2KJ3630 - ■ ■ A 0 ■ - 0 ■ F1
<b>4978</b>	0.29	1110	16300	0.17	27418391/5508		✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>		2KJ3630 - ■ ■ A 0 ■ - 0 ■ E1
<b>4595</b>	0.32	1110	16300	0.21	2109107/459		✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>		2KJ3630 - ■ ■ A 0 ■ - 0 ■ D1
<b>4023</b>	0.36	1110	16300	0.25	6155149/1530		✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>		2KJ3630 - ■ ■ A 0 ■ - 0 ■ C1
<b>3527</b>	0.41	1120	16300	0.23	121424303/34425		✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>		2KJ3630 - ■ ■ A 0 ■ - 0 ■ B1
<b>3200</b>	0.45	1120	16300	0.33	3916913/1224		✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>		2KJ3630 - ■ ■ A 0 ■ - 0 ■ A1

<sup>1)</sup> Not available for A/AZ adapter

<sup>2)</sup> Only available for KS adapter

Article No. supplement																
Shaft design	1 or 9		see page 9/49													
Adapter size	K4	B	C	D	E	F	G	H							4	
	K2			D	E	F	G	H							2	
	KS		A			E	H	K	M							1
			B			F	J		N							
			C													
	K5		A		B	C		D							5	
K3		A		B	C		D							3		
A/AZ*				D	E	F	G	H							9	
Adapter type																
Gearbox mounting type	A, B, F or H		see page 9/40													

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

**Transmission ratios and torques for very low speeds**
**Selection and ordering data**

Gearbox						Adapter								Article No.
$i$	$n_2$ rpm	$T_{2N}$ Nm	$F_{R2}$ N	$J_G$ $10^{-4}$ kgm <sup>2</sup>	$R_{ex}$ -	K4	63	71	80	90	100	112	132	(Article No. supplement, see below)
-						K2			80	90	100	112	132	
						K5		3.1		5.1	6.1	8.1	10.1	
								3.2		5.2	6.2		10.2	
								4.1						
								4.2						
						K3		56		140	180		210	
						A/AZ		56		140	180		210	
									80	90	100	112	132	
<b>C.89-Z39</b>														
<b>3111</b>	0.47	1120	16300	0.06	7560553/2430	✓	✓							2KJ3628 - ■ ■ A 0 ■ - 0 ■ T1
<b>2766</b>	0.52	1120	16300	0.07	3734731/1350	✓	✓	✓	✓					2KJ3628 - ■ ■ A 0 ■ - 0 ■ S1
<b>2429</b>	0.60	1130	16300	0.08	182182/75	✓	✓	✓	✓					2KJ3628 - ■ ■ A 0 ■ - 0 ■ R1
<b>2208</b>	0.66	1130	16300	0.10	33124/15	✓	✓	✓	✓					2KJ3628 - ■ ■ A 0 ■ - 0 ■ Q1
<b>1889</b>	0.77	1140	16300	0.12	1275274/675	✓	✓	✓	✓					2KJ3628 - ■ ■ A 0 ■ - 0 ■ P1
<b>1718</b>	0.84	1150	16300	0.14	231868/135	✓	✓	✓	✓					2KJ3628 - ■ ■ A 0 ■ - 0 ■ N1
<b>1518</b>	0.96	1150	16300	0.17	91091/60	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ M1
<b>1380</b>	1.1	1160	16300	0.22	8281/6	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ L1
<b>1209</b>	1.2	1170	16300	0.26	3916913/3240	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ K1
<b>1116</b>	1.3	1170	16300	0.31	303301/270	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ J1
<b>988</b>	1.5	1180	16300	0.36	533533/540	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ H1
<b>822</b>	1.8	1200	16300	0.48	1184183/1440	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ G1
<b>774</b>	1.9	1210	16300	0.56	1184183/1530	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ F1
<b>693</b>	2.1	1220	16300	0.61	3370367/4860	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ E1
<b>590</b>	2.5	1230	16300	0.79	637637/1080	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ D1
<b>506</b>	2.9	1260	16300	1.03	91091/180			✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ C1
<b>436</b>	3.3	1280	16300	1.31	2823821/6480			✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ B1
<b>360</b>	4.0	1310	16300	0.59	793793/2208	✓	✓	✓	✓	✓ <sup>1)</sup>	✓ <sup>1)</sup> <sub>2)</sub>			2KJ3628 - ■ ■ A 0 ■ - 0 ■ A1

<sup>1)</sup> Not available for A/AZ adapter

<sup>2)</sup> Only available for KS adapter

Article No. supplement															
Shaft design	1 or 9		see page 9/49												
Adapter size	K4	B	C	D	E	F	G	H						4	
	K2			D	E	F	G	H						2	
	KS		A			E	H	K	M						1
			B			F	J		N						
			C												
	K5		A		B	C		D						5	
K3		A		B	C		D						3		
A/AZ*				D	E	F	G	H						9	
Adapter type															
Gearbox mounting type	A, B, F or H		see page 9/40												

\* Article No. supplement adapter A: **M1A**, adapter AZ: **M1B**

## SIMOGEAR gearboxes

### Helical worm gearboxes

#### Efficiencies

#### Selection and ordering data

i	$n_{\text{mot}} = 2\,800 \text{ rpm}$				$n_{\text{mot}} = 1\,400 \text{ rpm}$				$n_{\text{mot}} = 900 \text{ rpm}$				Article No.
	$n_2$ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ A2</b>
<b>68.82</b>	41	99	0.56	76	20	110	0.31	75	13.1	110	0.21	74	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ X1</b>
<b>60.67</b>	46	95	0.61	75	23	110	0.35	76	14.8	110	0.23	74	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ W1</b>
<b>52.65</b>	53	90	0.67	75	27	110	0.41	76	17.1	110	0.26	75	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ V1</b>
<b>49.87</b>	56	105	0.69	90	28	102	0.34	87	18	100	0.22	84	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ U1</b>
<b>43.27</b>	65	106	0.80	90	32	103	0.39	88	21	101	0.26	86	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ T1</b>
<b>39.33</b>	71	106	0.88	90	36	103	0.44	89	23	101	0.28	86	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ S1</b>
<b>33.73</b>	83	107	1.00	90	42	104	0.51	89	27	102	0.33	87	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ R1</b>
<b>32.64</b>	86	92	0.91	92	43	90	0.45	90	28	88	0.30	87	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ Q1</b>
<b>28.32</b>	99	93	1.10	92	49	90	0.51	90	32	89	0.34	88	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ P1</b>
<b>25.75</b>	109	93	1.20	92	54	90	0.57	91	35	89	0.37	89	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ N1</b>
<b>22.08</b>	127	94	1.40	92	63	91	0.66	91	41	89	0.43	89	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ M1</b>
<b>20.07</b>	140	94	1.50	92	70	91	0.74	91	45	90	0.47	90	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ L1</b>
<b>17.60</b>	159	93	1.7*	92	80	92	0.85	92	51	90	0.54	90	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ K1</b>
<b>15.71</b>	178	89	1.8*	92	89	92	0.95	92	57	91	0.60	91	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ J1</b>
<b>14.00</b>	200	86	2.0*	92	100	93	1.10	92	64	91	0.67	91	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ H1</b>
<b>12.92</b>	217	83	2.1*	92	108	93	1.20	92	70	91	0.74	91	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ G1</b>
<b>11.31</b>	248	79	2.3*	92	124	94	1.30	92	80	92	0.85	91	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ F1</b>
<b>9.92</b>	282	74	2.4*	91	141	94	1.50	92	91	92	0.97	91	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ E1</b>
<b>9.00</b>	311	71	2.6*	92	156	90	1.6*	92	100	93	1.10	92	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ D1</b>
<b>8.47</b>	331	70	2.7*	91	165	88	1.7*	92	106	93	1.10	92	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ C1</b>
<b>7.47</b>	375	66	2.8*	91	187	83	1.8*	92	120	93	1.30	92	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ B1</b>
<b>6.48</b>	432	62	3.1*	91	216	78	1.9*	92	139	91	1.40	92	<b>2KJ3601 - ■ ■ A 0 ■ - 0 ■ A1</b>

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 9/49</a>				
Adapter size	<b>K4</b>	<b>B to H</b>				4
	<b>K2</b>	<b>D to H</b>				2
	<b>KS</b>	<b>A to N</b>				1
	<b>K5</b>	<b>A to D</b>				5
	<b>K3</b>	<b>A to D</b>				3
	<b>A/AZ*</b>	<b>D to H</b>				9
Adapter type						
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 9/40</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 - ■ ■ A 0 ■ - 0 ■ M2
230.10	3	105	0.06	58	2.2	104	<0.06	55	0.43	96	<0.06	48	2KJ3601 - ■ ■ A 0 ■ - 0 ■ L2
209.18	3.3	105	0.06	59	2.4	104	<0.06	56	0.48	97	<0.06	48	2KJ3601 - ■ ■ A 0 ■ - 0 ■ K2
179.40	3.9	106	0.07	61	2.8	105	<0.06	57	0.56	97	<0.06	48	2KJ3601 - ■ ■ A 0 ■ - 0 ■ J2
163.09	4.3	107	0.08	62	3.1	105	0.06	58	0.61	98	<0.06	48	2KJ3601 - ■ ■ A 0 ■ - 0 ■ H2
143.00	4.9	107	0.09	64	3.5	106	0.07	59	0.70	98	<0.06	48	2KJ3601 - ■ ■ A 0 ■ - 0 ■ G2
127.64	5.5	108	0.10	65	3.9	106	0.07	61	0.78	99	<0.06	49	2KJ3601 - ■ ■ A 0 ■ - 0 ■ F2
113.75	6.2	108	0.11	66	4.4	107	0.08	62	0.88	99	<0.06	49	2KJ3601 - ■ ■ A 0 ■ - 0 ■ E2
105.00	6.7	109	0.11	67	4.8	107	0.09	63	0.95	100	<0.06	49	2KJ3601 - ■ ■ A 0 ■ - 0 ■ D2
91.93	7.6	109	0.13	69	5.4	108	0.09	65	1.1	100	<0.06	50	2KJ3601 - ■ ■ A 0 ■ - 0 ■ C2
80.60	8.7	110	0.14	70	6.2	108	0.11	66	1.2	101	<0.06	50	2KJ3601 - ■ ■ A 0 ■ - 0 ■ B2
73.12	9.6	110	0.16	71	6.8	109	0.12	67	1.4	101	<0.06	51	2KJ3601 - ■ ■ A 0 ■ - 0 ■ A2
68.82	10.2	110	0.16	72	7.3	109	0.12	68	1.5	102	<0.06	51	2KJ3601 - ■ ■ A 0 ■ - 0 ■ X1
60.67	11.5	110	0.18	73	8.2	110	0.14	70	1.6	102	<0.06	52	2KJ3601 - ■ ■ A 0 ■ - 0 ■ W1
52.65	13.3	110	0.21	74	9.5	110	0.15	71	1.9	103	<0.06	53	2KJ3601 - ■ ■ A 0 ■ - 0 ■ V1
49.87	14.0	99	0.18	83	10.0	98	0.13	80	2.0	91	<0.06	73	2KJ3601 - ■ ■ A 0 ■ - 0 ■ U1
43.27	16.2	100	0.20	84	11.6	98	0.15	81	2.3	91	<0.06	74	2KJ3601 - ■ ■ A 0 ■ - 0 ■ T1
39.33	17.8	100	0.22	84	12.7	99	0.16	82	2.5	92	<0.06	74	2KJ3601 - ■ ■ A 0 ■ - 0 ■ S1
33.73	21	101	0.26	85	14.8	99	0.19	83	3.0	92	<0.06	74	2KJ3601 - ■ ■ A 0 ■ - 0 ■ R1
32.64	21	87	0.22	86	15.3	86	0.17	84	3.1	80	<0.06	77	2KJ3601 - ■ ■ A 0 ■ - 0 ■ Q1
28.32	25	88	0.27	87	17.7	86	0.19	84	3.5	80	<0.06	78	2KJ3601 - ■ ■ A 0 ■ - 0 ■ P1
25.75	27	88	0.29	87	19.4	87	0.21	85	3.9	81	<0.06	78	2KJ3601 - ■ ■ A 0 ■ - 0 ■ N1
22.08	32	89	0.34	88	23	87	0.25	86	4.5	81	<0.06	78	2KJ3601 - ■ ■ A 0 ■ - 0 ■ M1
20.07	35	89	0.37	89	25	88	0.27	87	5.0	82	<0.06	79	2KJ3601 - ■ ■ A 0 ■ - 0 ■ L1
17.60	40	89	0.42	89	28	88	0.30	87	5.7	82	0.06	79	2KJ3601 - ■ ■ A 0 ■ - 0 ■ K1
15.71	45	90	0.47	90	32	89	0.34	88	6.4	83	0.07	79	2KJ3601 - ■ ■ A 0 ■ - 0 ■ J1
14.00	50	90	0.53	90	36	89	0.38	89	7.1	83	0.08	80	2KJ3601 - ■ ■ A 0 ■ - 0 ■ H1
12.92	54	90	0.57	90	39	89	0.41	89	7.7	83	0.08	80	2KJ3601 - ■ ■ A 0 ■ - 0 ■ G1
11.31	62	91	0.65	91	44	90	0.46	90	8.8	84	0.10	81	2KJ3601 - ■ ■ A 0 ■ - 0 ■ F1
9.92	71	91	0.75	91	50	90	0.53	90	10.1	84	0.11	81	2KJ3601 - ■ ■ A 0 ■ - 0 ■ E1
9.00	78	92	0.82	91	56	91	0.59	91	11.1	85	0.12	82	2KJ3601 - ■ ■ A 0 ■ - 0 ■ D1
8.47	83	92	0.88	91	59	91	0.62	91	11.8	85	0.13	82	2KJ3601 - ■ ■ A 0 ■ - 0 ■ C1
7.47	94	93	1.00	92	67	91	0.71	91	13.4	85	0.15	83	2KJ3601 - ■ ■ A 0 ■ - 0 ■ B1
6.48	108	93	1.20	92	77	92	0.81	91	15.4	86	0.17	84	2KJ3601 - ■ ■ A 0 ■ - 0 ■ A1

## Article No. supplement

Shaft design	1 or 9	see page 9/49											
Adapter size	K4	B to H											4
	K2	D to H											2
	KS	A to N											1
	K5	A to D											5
	K3	A to D											3
	A/AZ*	D to H											9
Adapter type													
Gearbox mounting type	A, F, H or D	see page 9/40											

\*  $P_{\text{mot max}} = 1,5 \text{ kW}$



# SIMOGEAR gearboxes

## Helical worm gearboxes

### 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ G2</b>
<b>127.64</b>	22	194	0.61	73	11	194	0.31	72	7.1	193	0.21	69	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ A2</b>
<b>68.82</b>	41	147	0.88	72	20	185	0.53	73	13.1	194	0.37	72	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ X1</b>
<b>60.67</b>	46	139	0.94	72	23	175	0.58	73	14.8	194	0.41	73	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ W1</b>
<b>52.65</b>	53	131	1.00	72	27	166	0.65	73	17.1	192	0.47	73	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ V1</b>
<b>49.87</b>	56	195	1.30	89	28	198	0.66	89	18	194	0.41	89	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ U1</b>
<b>43.27</b>	65	196	1.50	89	32	199	0.75	89	21	196	0.49	89	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ T1</b>
<b>39.33</b>	71	196	1.60	89	36	200	0.85	89	23	196	0.53	89	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ S1</b>
<b>33.73</b>	83	196	1.90	89	42	200	1.00	89	27	197	0.63	89	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ R1</b>
<b>32.64</b>	86	200	2.00	91	43	210	1.00	91	28	205	0.68	90	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ Q1</b>
<b>28.32</b>	99	200	2.30	91	49	225	1.30	91	32	225	0.84	90	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ P1</b>
<b>25.75</b>	109	200	2.50	91	54	235	1.50	91	35	230	0.95	90	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ N1</b>
<b>22.08</b>	127	198	2.90	91	63	235	1.70	91	41	230	1.10	91	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ M1</b>
<b>20.07</b>	140	188	3.00	91	70	235	1.90	91	45	235	1.20	91	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ L1</b>
<b>17.60</b>	159	180	3.3*	91	80	225	2.10	92	51	235	1.40	91	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ K1</b>
<b>15.71</b>	178	172	3.5*	91	89	215	2.20	91	57	235	1.60	91	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ J1</b>
<b>14.00</b>	200	164	3.8*	91	100	205	2.40	91	64	235	1.70	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ H1</b>
<b>12.92</b>	217	159	4.0*	91	108	200	2.50	92	70	230	1.90	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ G1</b>
<b>11.31</b>	248	152	4.3*	91	124	192	2.70	91	80	220	2.00	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ F1</b>
<b>9.92</b>	282	145	4.7*	91	141	183	3.00	91	91	210	2.20	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ E1</b>
<b>9.00</b>	311	137	4.9*	91	156	177	3.2*	91	100	205	2.30	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ D1</b>
<b>8.47</b>	331	129	4.9*	91	165	173	3.3*	91	106	200	2.40	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ C1</b>
<b>7.47</b>	375	114	4.9*	91	187	166	3.6*	91	120	192	2.60	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ B1</b>
<b>6.48</b>	432	99	4.9*	91	216	157	3.9*	91	139	182	2.90	92	<b>2KJ3642 - ■ ■ A 0 ■ - 0 ■ A1</b>

#### Article No. supplement

Shaft design **1 or 9** [see page 9/49](#)

Adapter size **K4** [B to H](#)

**K2** [D to H](#)

**KS** [A to N](#)

**K5** [A to D](#)

**K3** [A to D](#)

**A/AZ\*** [D to H](#)

Adapter type

Gearbox mounting type **A, F, H or D** [see page 9/40](#)

\*  $P_{\text{mot max}} = 1,5 \text{ kW}$

## 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>													
299.00	2.3	187	0.08	55	1.7	184	0.06	52	0.33	170	<0.06	44	2KJ3642 - ■ ■ A 0 ■ - 0 ■ N2
265.20	2.6	188	0.09	57	1.9	185	0.07	53	0.38	167	<0.06	44	2KJ3642 - ■ ■ A 0 ■ - 0 ■ M2
230.10	3.0	189	0.10	58	2.2	186	0.08	54	0.43	164	<0.06	44	2KJ3642 - ■ ■ A 0 ■ - 0 ■ L2
209.18	3.3	190	0.11	59	2.4	187	0.09	55	0.48	162	<0.06	44	2KJ3642 - ■ ■ A 0 ■ - 0 ■ K2
179.40	3.9	191	0.13	62	2.8	188	0.10	57	0.56	160	<0.06	45	2KJ3642 - ■ ■ A 0 ■ - 0 ■ J2
163.09	4.3	191	0.14	63	3.1	189	0.11	58	0.61	160	<0.06	45	2KJ3642 - ■ ■ A 0 ■ - 0 ■ H2
143.00	4.9	192	0.15	64	3.5	190	0.12	60	0.70	160	<0.06	46	2KJ3642 - ■ ■ A 0 ■ - 0 ■ G2
127.64	5.5	192	0.17	66	3.9	191	0.13	61	0.78	161	<0.06	46	2KJ3642 - ■ ■ A 0 ■ - 0 ■ F2
113.75	6.2	193	0.19	67	4.4	191	0.14	63	0.88	162	<0.06	47	2KJ3642 - ■ ■ A 0 ■ - 0 ■ E2
105.00	6.7	193	0.20	68	4.8	192	0.15	64	0.95	163	<0.06	47	2KJ3642 - ■ ■ A 0 ■ - 0 ■ D2
91.93	7.6	193	0.22	69	5.4	192	0.17	66	1.1	166	<0.06	48	2KJ3642 - ■ ■ A 0 ■ - 0 ■ C2
80.60	8.7	193	0.25	70	6.2	193	0.19	67	1.2	168	<0.06	49	2KJ3642 - ■ ■ A 0 ■ - 0 ■ B2
73.12	9.6	194	0.28	71	6.8	193	0.20	68	1.4	170	<0.06	49	2KJ3642 - ■ ■ A 0 ■ - 0 ■ A2
68.82	10.2	194	0.29	71	7.3	193	0.21	69	1.5	172	<0.06	50	2KJ3642 - ■ ■ A 0 ■ - 0 ■ X1
60.67	11.5	194	0.32	72	8.2	193	0.24	70	1.6	176	0.06	51	2KJ3642 - ■ ■ A 0 ■ - 0 ■ W1
52.65	13.3	194	0.37	73	9.5	194	0.27	71	1.9	180	0.07	53	2KJ3642 - ■ ■ A 0 ■ - 0 ■ V1
49.87	14.0	192	0.32	88	10.0	190	0.23	86	2.0	177	0.06	66	2KJ3642 - ■ ■ A 0 ■ - 0 ■ U1
43.27	16.2	194	0.37	88	11.6	191	0.27	87	2.3	178	0.06	67	2KJ3642 - ■ ■ A 0 ■ - 0 ■ T1
39.33	17.8	194	0.41	88	12.7	192	0.29	88	2.5	179	0.07	68	2KJ3642 - ■ ■ A 0 ■ - 0 ■ S1
33.73	21	196	0.49	89	14.8	193	0.34	88	3.0	180	0.08	71	2KJ3642 - ■ ■ A 0 ■ - 0 ■ R1
32.64	21	200	0.51	88	15.3	197	0.37	86	3.1	174	0.08	76	2KJ3642 - ■ ■ A 0 ■ - 0 ■ Q1
28.32	25	220	0.66	89	17.7	215	0.47	87	3.5	192	0.09	76	2KJ3642 - ■ ■ A 0 ■ - 0 ■ P1
25.75	27	230	0.73	89	19.4	225	0.53	87	3.9	210	0.11	77	2KJ3642 - ■ ■ A 0 ■ - 0 ■ N1
22.08	32	230	0.86	90	23	225	0.62	88	4.5	210	0.13	77	2KJ3642 - ■ ■ A 0 ■ - 0 ■ M1
20.07	35	230	0.94	90	25	230	0.68	89	5.0	215	0.15	78	2KJ3642 - ■ ■ A 0 ■ - 0 ■ L1
17.60	40	230	1.10	91	28	230	0.76	90	5.7	215	0.16	79	2KJ3642 - ■ ■ A 0 ■ - 0 ■ K1
15.71	45	235	1.20	91	32	230	0.86	90	6.4	215	0.18	79	2KJ3642 - ■ ■ A 0 ■ - 0 ■ J1
14.00	50	235	1.40	91	36	230	0.97	91	7.1	215	0.20	80	2KJ3642 - ■ ■ A 0 ■ - 0 ■ H1
12.92	54	235	1.50	92	39	230	1.10	91	7.7	215	0.22	81	2KJ3642 - ■ ■ A 0 ■ - 0 ■ G1
11.31	62	235	1.70	92	44	235	1.20	91	8.8	220	0.25	82	2KJ3642 - ■ ■ A 0 ■ - 0 ■ F1
9.92	71	230	1.90	92	50	235	1.40	91	10.1	220	0.28	83	2KJ3642 - ■ ■ A 0 ■ - 0 ■ E1
9.00	78	220	2.00	92	56	235	1.50	92	11.1	220	0.31	83	2KJ3642 - ■ ■ A 0 ■ - 0 ■ D1
8.47	83	215	2.10	92	59	235	1.60	92	11.8	220	0.33	84	2KJ3642 - ■ ■ A 0 ■ - 0 ■ C1
7.47	94	205	2.30	92	67	230	1.80	92	13.4	220	0.37	85	2KJ3642 - ■ ■ A 0 ■ - 0 ■ B1
6.48	108	198	2.50	92	77	220	2.00	92	15.4	225	0.42	86	2KJ3642 - ■ ■ A 0 ■ - 0 ■ A1

## Article No. supplement

Shaft design	1 or 9	see page 9/49											
Adapter size	K4	B to H											4
	K2	D to H											2
	KS	A to N											1
	K5	A to D											5
	K3	A to D											3
	A/AZ*	D to H											9
Adapter type													
Gearbox mounting type	A, F, H or D	see page 9/40											

\*  $P_{\text{mot max}} = 1,5 \text{ kW}$

# SIMOGEAR gearboxes

## Helical worm gearboxes

### 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>													
299.00	9.4	355	0.48	73	4.7	350	0.26	67	3.0	345	0.18	61	2KJ3603 - ■ ■ A 0 ■ - 0 ■ N2
265.20	10.6	355	0.54	74	5.3	350	0.29	69	3.4	350	0.20	63	2KJ3603 - ■ ■ A 0 ■ - 0 ■ M2
230.10	12.2	355	0.62	74	6.1	350	0.32	70	3.9	350	0.22	65	2KJ3603 - ■ ■ A 0 ■ - 0 ■ L2
209.18	13.4	355	0.68	74	6.7	355	0.35	71	4.3	350	0.24	66	2KJ3603 - ■ ■ A 0 ■ - 0 ■ K2
179.40	15.6	355	0.79	74	7.8	355	0.40	72	5.0	350	0.27	68	2KJ3603 - ■ ■ A 0 ■ - 0 ■ J2
163.09	17.2	340	0.84	74	8.6	355	0.44	73	5.5	350	0.30	69	2KJ3603 - ■ ■ A 0 ■ - 0 ■ H2
143.00	19.6	315	0.89	74	9.8	355	0.50	73	6.3	355	0.33	70	2KJ3603 - ■ ■ A 0 ■ - 0 ■ G2
127.64	22	300	0.95	73	11.0	355	0.56	73	7.1	355	0.37	71	2KJ3603 - ■ ■ A 0 ■ - 0 ■ F2
113.75	25	285	1.00	73	12.3	355	0.62	74	7.9	355	0.41	72	2KJ3603 - ■ ■ A 0 ■ - 0 ■ E2
105.00	27	275	1.10	73	13.3	350	0.66	74	8.6	355	0.44	72	2KJ3603 - ■ ■ A 0 ■ - 0 ■ D2
91.93	30	260	1.10	73	15.2	330	0.72	74	9.8	355	0.50	73	2KJ3603 - ■ ■ A 0 ■ - 0 ■ C2
80.60	35	250	1.30	73	17.4	315	0.78	74	11.2	355	0.57	74	2KJ3603 - ■ ■ A 0 ■ - 0 ■ B2
73.12	38	240	1.30	73	19.1	300	0.82	74	12.3	345	0.61	74	2KJ3603 - ■ ■ A 0 ■ - 0 ■ A2
68.82	41	230	1.40	73	20	295	0.84	74	13.1	340	0.63	74	2KJ3603 - ■ ■ A 0 ■ - 0 ■ X1
60.67	46	220	1.50	73	23	280	0.92	74	14.8	320	0.68	74	2KJ3603 - ■ ■ A 0 ■ - 0 ■ W1
52.65	53	210	1.60	73	27	265	1.00	74	17.1	305	0.74	74	2KJ3603 - ■ ■ A 0 ■ - 0 ■ V1
49.87	56	310	2.10	90	28	310	1.00	89	18	305	0.66	87	2KJ3603 - ■ ■ A 0 ■ - 0 ■ U1
43.27	65	340	2.60	90	32	340	1.30	89	21	335	0.85	88	2KJ3603 - ■ ■ A 0 ■ - 0 ■ T1
39.33	71	335	2.80	89	36	395	1.70	89	23	395	1.10	88	2KJ3603 - ■ ■ A 0 ■ - 0 ■ S1
33.73	83	315	3.10	89	42	365	1.80	90	27	365	1.20	89	2KJ3603 - ■ ■ A 0 ■ - 0 ■ R1
30.67	91	300	3.20	89	46	380	2.10	89	29	400	1.40	89	2KJ3603 - ■ ■ A 0 ■ - 0 ■ Q1
26.89	104	285	3.50	89	52	360	2.20	90	33	400	1.50	89	2KJ3603 - ■ ■ A 0 ■ - 0 ■ P1
24.00	117	275	3.80	89	58	345	2.40	90	38	400	1.80	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ N1
21.39	131	260	4.1*	89	65	330	2.50	90	42	385	1.90	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ M1
19.74	142	255	4.3*	89	71	320	2.70	90	46	370	2.00	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ L1
17.29	162	240	4.6*	89	81	305	2.90	90	52	355	2.20	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ K1
15.16	185	230	5.1*	89	92	290	3.20	90	59	335	2.30	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ J1
13.75	204	220	5.4*	89	102	280	3.40	90	65	325	2.50	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ H1
12.94	216	210	5.3*	89	108	275	3.50	90	70	315	2.60	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ G1
11.41	245	185	5.4*	89	123	260	3.80	90	79	305	2.80	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ F1
9.90	283	161	5.4*	89	141	250	4.1*	89	91	290	3.10	90	2KJ3603 - ■ ■ A 0 ■ - 0 ■ E1
9.00	311	185	6.6*	91	156	260	4.6*	92	100	260	3.00	92	2KJ3603 - ■ ■ A 0 ■ - 0 ■ D1
8.47	331	174	6.6*	91	165	260	4.9*	92	106	260	3.20	92	2KJ3603 - ■ ■ A 0 ■ - 0 ■ C1
7.47	375	153	6.6*	91	187	250	5.3*	92	120	260	3.60	92	2KJ3603 - ■ ■ A 0 ■ - 0 ■ B1
6.48	432	133	6.6*	91	216	235	5.8*	92	139	260	4.1*	92	2KJ3603 - ■ ■ A 0 ■ - 0 ■ A1

#### Article No. supplement

Shaft design	1 or 9	see page 9/49			
Adapter size	K4	B to H			4
	K2	D to H			2
	KS	A to N			1
	K5	A to D			5
	K3	A to D			3
	A/AZ*	D to H			9
Adapter type					
Gearbox mounting type	A, F, H or D	see page 9/40			

\*  $P_{\text{mot max}} = 1,5 \text{ kW}$

## 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 - ■ ■ A 0 ■ - 0 ■ N2
265.20	2.6	340	0.16	60	1.9	315	0.11	55	0.38	255	<0.06	45	2KJ3603 - ■ ■ A 0 ■ - 0 ■ M2
230.10	3.0	345	0.18	61	2.2	320	0.13	57	0.43	255	<0.06	45	2KJ3603 - ■ ■ A 0 ■ - 0 ■ L2
209.18	3.3	345	0.19	63	2.4	320	0.14	58	0.48	255	<0.06	45	2KJ3603 - ■ ■ A 0 ■ - 0 ■ K2
179.40	3.9	350	0.22	65	2.8	330	0.16	60	0.56	255	<0.06	46	2KJ3603 - ■ ■ A 0 ■ - 0 ■ J2
163.09	4.3	350	0.24	66	3.1	330	0.18	61	0.61	255	<0.06	46	2KJ3603 - ■ ■ A 0 ■ - 0 ■ H2
143.00	4.9	350	0.27	68	3.5	340	0.20	63	0.70	255	<0.06	47	2KJ3603 - ■ ■ A 0 ■ - 0 ■ G2
127.64	5.5	350	0.30	69	3.9	350	0.22	65	0.78	260	<0.06	47	2KJ3603 - ■ ■ A 0 ■ - 0 ■ F2
113.75	6.2	355	0.33	70	4.4	350	0.25	66	0.88	260	<0.06	48	2KJ3603 - ■ ■ A 0 ■ - 0 ■ E2
105.00	6.7	355	0.35	71	4.8	350	0.26	67	0.95	265	<0.06	49	2KJ3603 - ■ ■ A 0 ■ - 0 ■ D2
91.93	7.6	355	0.39	72	5.4	350	0.29	69	1.1	270	0.06	50	2KJ3603 - ■ ■ A 0 ■ - 0 ■ C2
80.60	8.7	355	0.45	73	6.2	355	0.33	70	1.2	275	0.07	51	2KJ3603 - ■ ■ A 0 ■ - 0 ■ B2
73.12	9.6	355	0.49	73	6.8	355	0.36	71	1.4	280	0.08	52	2KJ3603 - ■ ■ A 0 ■ - 0 ■ A2
68.82	10.2	355	0.52	73	7.3	355	0.38	72	1.5	280	0.08	52	2KJ3603 - ■ ■ A 0 ■ - 0 ■ X1
60.67	11.5	350	0.57	74	8.2	355	0.42	73	1.6	285	0.09	54	2KJ3603 - ■ ■ A 0 ■ - 0 ■ W1
52.65	13.3	330	0.63	74	9.5	355	0.48	73	1.9	295	0.11	55	2KJ3603 - ■ ■ A 0 ■ - 0 ■ V1
49.87	14.0	295	0.51	86	10.0	285	0.37	83	2.0	245	0.07	71	2KJ3603 - ■ ■ A 0 ■ - 0 ■ U1
43.27	16.2	330	0.65	87	11.6	320	0.47	84	2.3	275	0.09	71	2KJ3603 - ■ ■ A 0 ■ - 0 ■ T1
39.33	17.8	390	0.83	87	12.7	375	0.60	85	2.5	320	0.12	72	2KJ3603 - ■ ■ A 0 ■ - 0 ■ S1
33.73	21	360	0.91	88	14.8	355	0.64	86	3.0	300	0.13	73	2KJ3603 - ■ ■ A 0 ■ - 0 ■ R1
30.67	23	395	1.10	88	16.3	385	0.77	87	3.3	330	0.16	73	2KJ3603 - ■ ■ A 0 ■ - 0 ■ Q1
26.89	26	395	1.20	89	18.6	390	0.87	88	3.7	330	0.17	74	2KJ3603 - ■ ■ A 0 ■ - 0 ■ P1
24.00	29	395	1.40	89	21	390	0.99	88	4.2	335	0.20	75	2KJ3603 - ■ ■ A 0 ■ - 0 ■ N1
21.39	33	395	1.50	89	23	395	1.10	89	4.7	340	0.22	76	2KJ3603 - ■ ■ A 0 ■ - 0 ■ M1
19.74	35	400	1.60	90	25	395	1.20	89	5.1	340	0.24	77	2KJ3603 - ■ ■ A 0 ■ - 0 ■ L1
17.29	40	385	1.80	90	29	395	1.30	89	5.8	345	0.27	78	2KJ3603 - ■ ■ A 0 ■ - 0 ■ K1
15.16	46	365	2.00	90	33	390	1.50	90	6.6	345	0.30	79	2KJ3603 - ■ ■ A 0 ■ - 0 ■ J1
13.75	51	355	2.10	90	36	390	1.60	90	7.3	345	0.33	80	2KJ3603 - ■ ■ A 0 ■ - 0 ■ H1
12.94	54	345	2.20	90	39	385	1.80	90	7.7	350	0.35	80	2KJ3603 - ■ ■ A 0 ■ - 0 ■ G1
11.41	61	330	2.40	90	44	370	1.90	90	8.8	355	0.40	82	2KJ3603 - ■ ■ A 0 ■ - 0 ■ F1
9.90	71	315	2.60	90	51	350	2.10	90	10.1	360	0.46	83	2KJ3603 - ■ ■ A 0 ■ - 0 ■ E1
9.00	78	260	2.30	92	56	255	1.70	91	11.1	235	0.33	84	2KJ3603 - ■ ■ A 0 ■ - 0 ■ D1
8.47	83	260	2.50	92	59	260	1.80	91	11.8	240	0.35	84	2KJ3603 - ■ ■ A 0 ■ - 0 ■ C1
7.47	94	260	2.80	92	67	260	2.00	92	13.4	240	0.40	85	2KJ3603 - ■ ■ A 0 ■ - 0 ■ B1
6.48	108	260	3.20	92	77	260	2.30	92	15.4	245	0.46	87	2KJ3603 - ■ ■ A 0 ■ - 0 ■ A1

## Article No. supplement

Shaft design	1 or 9	see page 9/49											
Adapter size	K4	B to H											4
	K2	D to H											2
	KS	A to N											1
	K5	A to D											5
	K3	A to D											3
	A/AZ*	D to H											9
Adapter type													
Gearbox mounting type	A, F, H or D	see page 9/40											

\*  $P_{\text{mot max}} = 1,5 \text{ kW}$

# SIMOGEAR gearboxes

## Helical worm gearboxes

### 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ W1</b>
<b>70.00</b>	40	515	2.50	87	20	650	1.60	87	12.9	680	1.10	86	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ V1</b>
<b>63.64</b>	44	500	2.70	87	22	630	1.70	87	14.1	720	1.20	86	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ U1</b>
<b>56.25</b>	50	480	2.90	87	25	605	1.80	87	16.0	695	1.30	87	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ T1</b>
<b>51.14</b>	55	455	3.00	87	27	575	1.90	87	17.6	660	1.40	87	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ S1</b>
<b>44.79</b>	63	430	3.30	87	31	545	2.00	87	20	630	1.50	87	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ R1</b>
<b>41.35</b>	68	420	3.40	87	34	525	2.20	87	22	610	1.60	87	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ Q1</b>
<b>36.61</b>	76	400	3.70	87	38	505	2.30	87	25	580	1.80	87	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ P1</b>
<b>30.00</b>	93	435	4.70	90	47	545	3.00	90	30	560	2.00	90	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ N1</b>
<b>26.28</b>	107	410	5.10	90	53	520	3.20	90	34	550	2.20	90	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ M1</b>
<b>24.26</b>	115	400	5.30	90	58	500	3.40	90	37	545	2.30	91	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ L1</b>
<b>21.48</b>	130	380	5.8*	90	65	480	3.60	90	42	540	2.60	91	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ K1</b>
<b>17.88</b>	157	355	6.5*	90	78	450	4.10	90	50	520	3.00	91	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ J1</b>
<b>15.88</b>	176	365	7.3*	92	88	365	3.70	92	57	365	2.40	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ H1</b>
<b>14.06</b>	199	360	8.2*	92	100	360	4.10	92	64	360	2.60	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ G1</b>
<b>11.70</b>	239	345	9.5*	92	120	365	5.00	92	77	365	3.20	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ F1</b>
<b>11.01</b>	254	325	9.5*	92	127	365	5.40	92	82	365	3.50	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ E1</b>
<b>9.87</b>	284	290	9.5*	92	142	365	6.0*	92	91	365	3.80	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ D1</b>
<b>8.40</b>	333	250	9.6*	91	167	370	7.1*	92	107	370	4.50	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ C1</b>
<b>7.20</b>	389	210	9.6*	91	194	365	8.2*	92	125	365	5.30	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ B1</b>
<b>6.20</b>	452	184	9.6*	91	226	365	9.4*	92	145	365	6.1*	92	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ A1</b>

#### Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 9/49</a>					
Adapter size	<b>K4</b>	<a href="#">B to H</a>					<b>4</b>
	<b>K2</b>	<a href="#">D to H</a>					<b>2</b>
	<b>KS</b>	<a href="#">A to N</a>					<b>1</b>
	<b>K5</b>	<a href="#">A to D</a>					<b>5</b>
	<b>K3</b>	<a href="#">A to D</a>					<b>3</b>
	<b>A/AZ*</b>	<a href="#">D to H</a>					<b>9</b>
Adapter type							
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 9/40</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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ A 0 ■ - 0 ■ N1</b>
<b>26.28</b>	27	550	1.70	90	19	545	1.20	90	3.8	480	0.24	78	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ M1</b>
<b>24.26</b>	29	545	1.80	90	21	540	1.30	90	4.1	475	0.26	79	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ L1</b>
<b>21.48</b>	33	540	2.10	91	23	540	1.40	90	4.7	475	0.30	80	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ K1</b>
<b>17.88</b>	39	545	2.50	91	28	545	1.80	91	5.6	490	0.35	82	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ J1</b>
<b>15.88</b>	44	365	1.80	92	31	360	1.30	91	6.3	330	0.26	83	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ H1</b>
<b>14.06</b>	50	360	2.10	92	36	355	1.50	92	7.1	330	0.29	84	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ G1</b>
<b>11.70</b>	60	365	2.50	92	43	365	1.80	92	8.5	340	0.36	85	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ F1</b>
<b>11.01</b>	64	365	2.70	92	45	365	1.90	92	9.1	340	0.38	86	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ E1</b>
<b>9.87</b>	71	365	3.00	92	51	365	2.10	92	10.1	345	0.43	86	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ D1</b>
<b>8.40</b>	83	370	3.50	92	60	370	2.50	92	11.9	350	0.50	87	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ C1</b>
<b>7.20</b>	97	365	4.10	92	69	365	2.90	92	13.9	350	0.59	88	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ B1</b>
<b>6.20</b>	113	365	4.70	92	81	365	3.40	92	16.1	355	0.67	89	<b>2KJ3604 - ■ ■ A 0 ■ - 0 ■ A1</b>

## Article No. supplement

Shaft design	<b>1 or 9</b>	<a href="#">see page 9/49</a>					
Adapter size	<b>K4</b>	<a href="#">B to H</a>					<b>4</b>
	<b>K2</b>	<a href="#">D to H</a>					<b>2</b>
	<b>KS</b>	<a href="#">A to N</a>					<b>1</b>
	<b>K5</b>	<a href="#">A to D</a>					<b>5</b>
	<b>K3</b>	<a href="#">A to D</a>					<b>3</b>
	<b>A/AZ*</b>	<a href="#">D to H</a>					<b>9</b>
Adapter type							
Gearbox mounting type	<b>A, F, H or D</b>	<a href="#">see page 9/40</a>					

# SIMOGEAR gearboxes

## Helical worm gearboxes

### Efficiencies

#### Selection and ordering data

i	$n_{mot} = 2800 \text{ rpm}$				$n_{mot} = 1400 \text{ rpm}$				$n_{mot} = 900 \text{ rpm}$				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	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ 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 - ■ ■ ■ A 0 ■ - 0 ■ W1</b>
<b>65.00</b>	43	695	4.30	73	22	875	2.80	73	13.8	1010	2.00	74	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ V1</b>
<b>55.61</b>	50	1150	6.70	90	25	1450	4.20	91	16.2	1550	2.90	90	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ U1</b>
<b>50.00</b>	56	1130	7.40	90	28	1430	4.60	90	18.0	1560	3.30	90	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ T1</b>
<b>45.22</b>	62	1100	7.90	90	31	1380	5.00	91	19.9	1560	3.60	90	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ S1</b>
<b>41.74</b>	67	1070	8.30	90	34	1350	5.30	91	22	1560	4.00	91	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ R1</b>
<b>38.24</b>	73	1040	8.80	90	37	1310	5.60	91	24	1520	4.20	91	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ Q1</b>
<b>32.08</b>	87	985	10*	90	44	1240	6.30	91	28	1440	4.70	91	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ P1</b>
<b>30.20</b>	93	950	10.3*	90	46	1200	6.40	91	30	1390	4.80	91	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ N1</b>
<b>27.70</b>	101	920	10.8*	90	51	1160	6.90	91	32	1340	5.00	91	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ M1</b>
<b>25.03</b>	112	1080	13.7*	93	56	1090	6.90	93	36	1090	4.50	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ L1</b>
<b>21.00</b>	133	1000	15.1*	93	67	1080	8.20	93	43	1070	5.20	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ K1</b>
<b>19.76</b>	142	980	15.8*	93	71	1120	9.00	93	46	1120	5.80	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ J1</b>
<b>18.13</b>	154	950	16.6*	93	77	1120	9.7*	93	50	1120	6.30	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ H1</b>
<b>15.84</b>	177	865	17.3*	93	88	1140	11.3*	93	57	1140	7.30	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ G1</b>
<b>14.18</b>	197	770	17.3*	92	99	1090	12.2*	93	63	1150	8.20	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ F1</b>
<b>12.40</b>	226	675	17.3*	93	113	1040	13.3*	93	73	1140	9.5*	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ E1</b>
<b>10.64</b>	263	580	17.3*	92	132	985	14.7*	93	85	1140	10.9*	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ D1</b>
<b>9.41</b>	298	510	17.4*	92	149	940	15.9*	93	96	1090	11.8*	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ C1</b>
<b>8.00</b>	350	435	17.4*	92	175	870	17.3*	93	112	1030	13.1*	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ B1</b>
<b>6.86</b>	408	370	17.4*	92	204	745	17.3*	93	131	980	14.5*	93	<b>2KJ3605 - ■ ■ ■ A 0 ■ - 0 ■ A1</b>

#### Article No. supplement

Shaft design **1 or 9** [see page 9/49](#)

Adapter size **K4** [B to H](#)

**K2** [D to H](#)

**KS** [A to N](#)

**K5** [A to D](#)

**K3** [A to D](#)

**A/AZ\*** [D to H](#)

Adapter type

Gearbox mounting type **A, F, H or D** [see page 9/40](#)

\*  $P_{mot \max} = 9,2 \text{ kW}$



## 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>													
363.00	1.9	1360	0.42	64	1.4	1260	0.31	60	0.28	955	0.06	45	2KJ3605 - ■ ■ A 0 ■ - 0 ■ N2
329.73	2.1	1380	0.46	66	1.5	1280	0.33	61	0.30	960	0.07	45	2KJ3605 - ■ ■ A 0 ■ - 0 ■ M2
295.75	2.4	1400	0.53	67	1.7	1310	0.37	62	0.34	965	0.08	45	2KJ3605 - ■ ■ A 0 ■ - 0 ■ L2
265.91	2.6	1420	0.57	68	1.9	1330	0.42	64	0.38	975	0.08	46	2KJ3605 - ■ ■ A 0 ■ - 0 ■ K2
240.50	2.9	1440	0.63	70	2.1	1360	0.46	66	0.42	985	0.09	47	2KJ3605 - ■ ■ A 0 ■ - 0 ■ J2
222.00	3.2	1450	0.69	70	2.3	1380	0.50	67	0.45	995	0.10	47	2KJ3605 - ■ ■ A 0 ■ - 0 ■ H2
203.36	3.4	1470	0.74	71	2.5	1400	0.54	68	0.49	1000	0.11	48	2KJ3605 - ■ ■ A 0 ■ - 0 ■ G2
170.62	4.1	1490	0.89	72	2.9	1440	0.63	70	0.59	1030	0.13	50	2KJ3605 - ■ ■ A 0 ■ - 0 ■ F2
160.59	4.4	1490	0.95	73	3.1	1450	0.67	71	0.62	1040	0.14	50	2KJ3605 - ■ ■ A 0 ■ - 0 ■ E2
147.33	4.8	1500	1.00	73	3.4	1460	0.73	71	0.68	1060	0.15	51	2KJ3605 - ■ ■ A 0 ■ - 0 ■ D2
128.70	5.4	1450	1.10	74	3.9	1480	0.84	72	0.78	1090	0.17	53	2KJ3605 - ■ ■ A 0 ■ - 0 ■ C2
115.23	6.1	1390	1.20	74	4.3	1490	0.92	73	0.87	1110	0.19	54	2KJ3605 - ■ ■ A 0 ■ - 0 ■ B2
100.75	6.9	1310	1.30	74	5.0	1460	1.00	74	0.99	1150	0.21	56	2KJ3605 - ■ ■ A 0 ■ - 0 ■ A2
86.48	8.1	1230	1.40	74	5.8	1380	1.10	74	1.2	1190	0.26	58	2KJ3605 - ■ ■ A 0 ■ - 0 ■ X1
76.44	9.2	1170	1.50	74	6.5	1310	1.20	74	1.3	1220	0.28	60	2KJ3605 - ■ ■ A 0 ■ - 0 ■ W1
65.00	10.8	1100	1.70	74	7.7	1230	1.30	74	1.5	1270	0.32	62	2KJ3605 - ■ ■ A 0 ■ - 0 ■ V1
55.61	12.6	1540	2.30	90	9.0	1510	1.60	88	1.8	1290	0.33	75	2KJ3605 - ■ ■ A 0 ■ - 0 ■ U1
50.00	14.0	1540	2.50	90	10.0	1530	1.80	88	2.0	1430	0.40	75	2KJ3605 - ■ ■ A 0 ■ - 0 ■ T1
45.22	15.5	1550	2.80	90	11.1	1530	2.00	89	2.2	1430	0.43	76	2KJ3605 - ■ ■ A 0 ■ - 0 ■ S1
41.74	16.8	1550	3.00	90	12.0	1540	2.20	89	2.4	1450	0.48	77	2KJ3605 - ■ ■ A 0 ■ - 0 ■ R1
38.24	18.3	1560	3.30	90	13.1	1540	2.40	90	2.6	1450	0.51	77	2KJ3605 - ■ ■ A 0 ■ - 0 ■ Q1
32.08	22	1560	4.00	91	15.6	1550	2.80	90	3.1	1390	0.57	79	2KJ3605 - ■ ■ A 0 ■ - 0 ■ P1
30.20	23	1510	4.00	91	16.6	1550	3.00	90	3.3	1460	0.64	79	2KJ3605 - ■ ■ A 0 ■ - 0 ■ N1
27.70	25	1460	4.20	91	18.1	1560	3.30	91	3.6	1470	0.69	80	2KJ3605 - ■ ■ A 0 ■ - 0 ■ M1
25.03	28	1090	3.50	93	20	1080	2.50	92	4.0	990	0.50	84	2KJ3605 - ■ ■ A 0 ■ - 0 ■ L1
21.00	33	1070	4.00	93	24	1070	2.90	92	4.8	985	0.59	85	2KJ3605 - ■ ■ A 0 ■ - 0 ■ K1
19.76	35	1120	4.50	93	25	1120	3.20	92	5.1	1030	0.65	85	2KJ3605 - ■ ■ A 0 ■ - 0 ■ J1
18.13	39	1110	4.90	93	28	1110	3.50	92	5.5	1030	0.70	85	2KJ3605 - ■ ■ A 0 ■ - 0 ■ H1
15.84	44	1140	5.70	93	32	1130	4.10	93	6.3	1050	0.81	86	2KJ3605 - ■ ■ A 0 ■ - 0 ■ G1
14.18	49	1150	6.40	93	35	1140	4.50	93	7.1	1070	0.92	87	2KJ3605 - ■ ■ A 0 ■ - 0 ■ F1
12.40	56	1140	7.30	93	40	1140	5.20	93	8.1	1080	1.00	88	2KJ3605 - ■ ■ A 0 ■ - 0 ■ E1
10.64	66	1150	8.50	93	47	1140	6.10	93	9.4	1090	1.20	88	2KJ3605 - ■ ■ A 0 ■ - 0 ■ D1
9.41	74	1120	9.4*	93	53	1120	6.70	93	10.6	1070	1.30	89	2KJ3605 - ■ ■ A 0 ■ - 0 ■ C1
8.00	88	1120	11.2*	93	62	1130	7.90	93	12.5	1090	1.60	90	2KJ3605 - ■ ■ A 0 ■ - 0 ■ B1
6.86	102	1060	12.3*	93	73	1110	9.20	93	14.6	1090	1.80	91	2KJ3605 - ■ ■ A 0 ■ - 0 ■ A1

## Article No. supplement

Shaft design	1 or 9	see page 9/49											
Adapter size	K4	B to H											4
	K2	D to H											2
	KS	A to N											1
	K5	A to D											5
	K3	A to D											3
	A/AZ*	D to H											9
Adapter type													
Gearbox mounting type	A, F, H or D	see page 9/40											

\*  $P_{\text{mot max}} = 9,2 \text{ kW}$



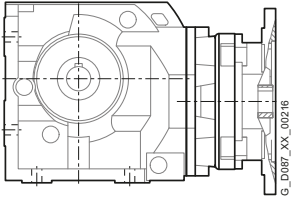
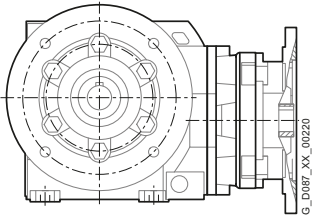
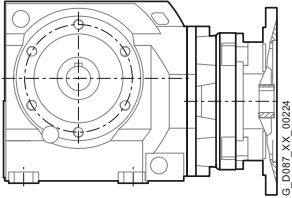
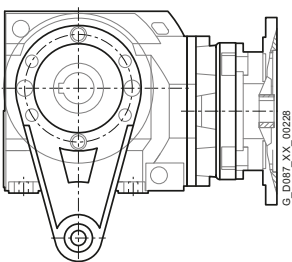
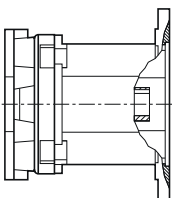
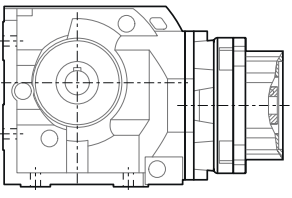
## SIMOGEAR gearboxes

### Helical worm gearboxes

#### Dimensional drawings

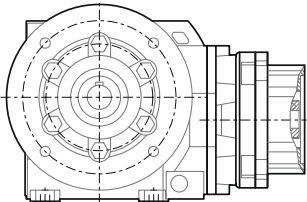
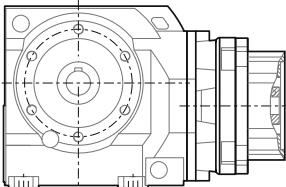
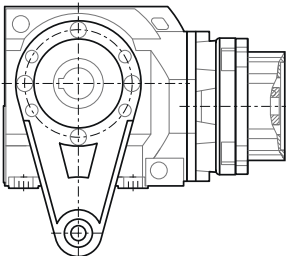
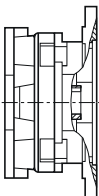
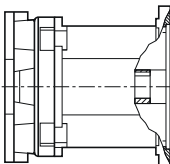
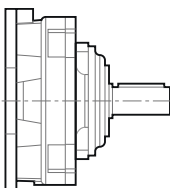
##### Dimensional drawing overview

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing on page
<b>Helical worm gearbox with adapter K4</b>		
<i>Foot-mounted design</i>		
	C..29	6/27
	C..39A	6/31
	C..49	6/35
	C..69	6/39
	C..89	6/43
<i>Flange-mounted design</i>		
	C.F.29	6/28
	C.F.39A	6/32
	C.F.49	6/36
	C.F.69	6/40
	C.F.89	6/44
<i>Housing flange design</i>		
	C.Z.29	6/29
	C.Z.39A	6/33
	C.Z.49	6/37
	C.Z.69	6/41
	C.Z.89	6/45
<i>Shaft-mounted design</i>		
	CAD.29	6/30
	CAD.39A	6/34
	CAD.49	6/38
	CAD.69	6/42
	CAD.89	6/46
<b>Helical worm gearbox with adapter K2</b>		
	C..29 ... C..89	6/47
<b>Helical worm gearbox with KS adapter</b>		
<i>Foot-mounted design</i>		
	C..29	6/48
	C..39A	6/52
	C..49	6/56
	C..69	6/60
	C..89	6/64

**Dimensional drawing overview**

Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing on page
<b>Helical worm gearbox with KS adapter</b>		
<i>Flange-mounted design</i>		
	C.F.29	6/49
	C.F.39A	6/53
	C.F.49	6/57
	C.F.69	6/61
	C.F.89	6/65
<i>Housing flange design</i>		
	C.Z.29	6/50
	C.Z.39A	6/54
	C.Z.49	6/58
	C.Z.69	6/62
	C.Z.89	6/66
<i>Shaft-mounted design</i>		
	CAD.29	6/51
	CAD.39A	6/55
	CAD.49	6/59
	CAD.69	6/63
	CAD.89	6/67
<b>Helical worm gearbox with adapter K5</b>		
	C..29 ... C..89	6/68
<b>Helical worm gearbox with adapter K3</b>		
	C..29 ... C..89	6/69
<b>Helical worm gearbox with adapter A</b>		
	C..29 ... C..89	6/70

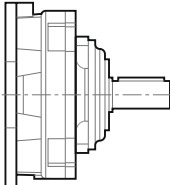
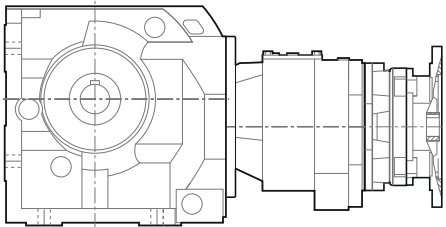
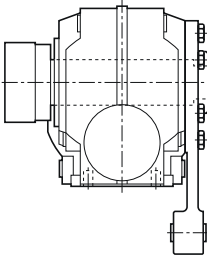
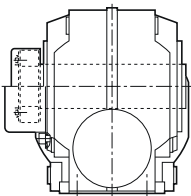

## SIMOGEAR gearboxes

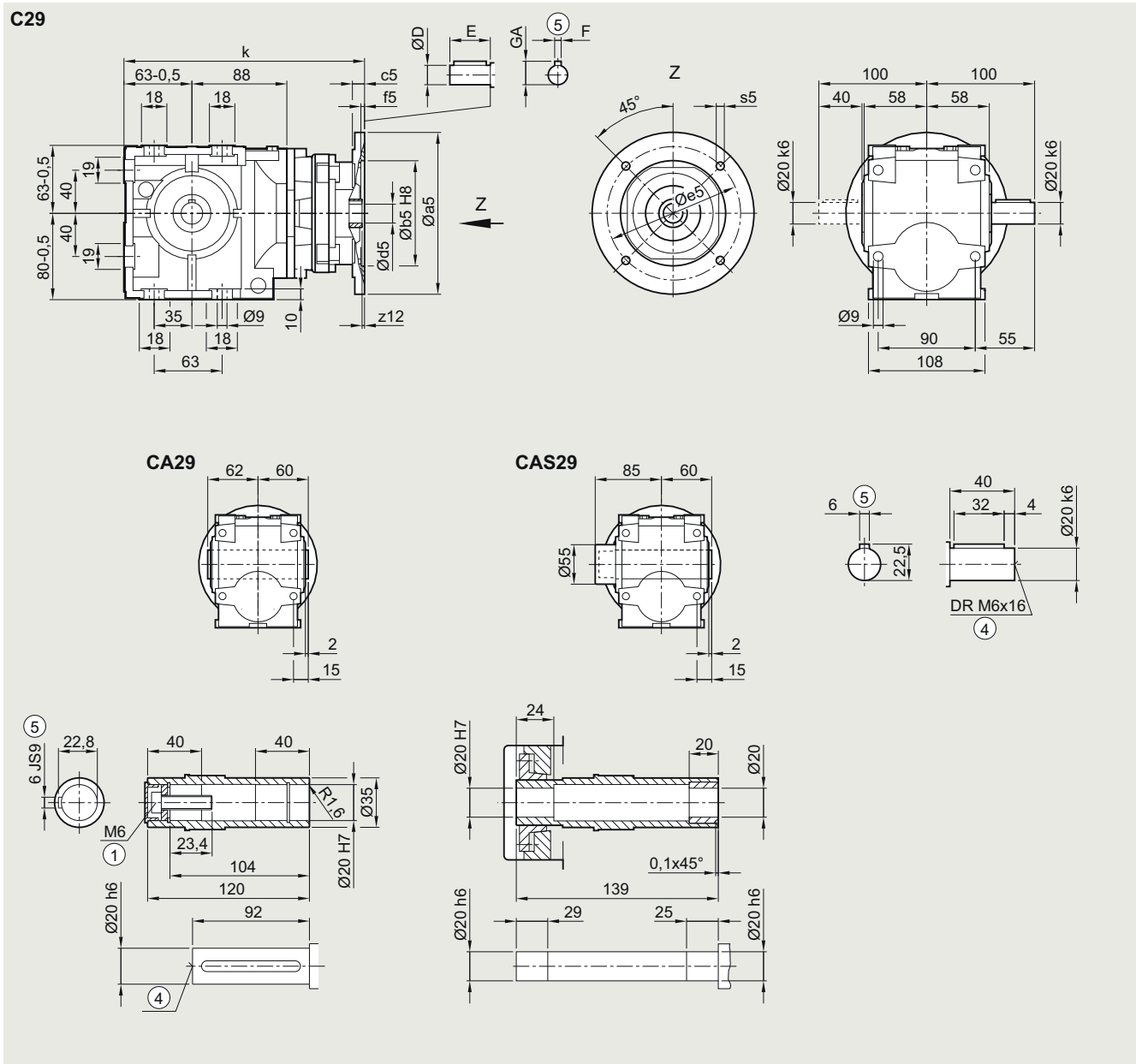
Helical worm gearboxes

### Dimensional drawings

#### Dimensional drawing overview

Information about dimensional drawings can be found in chapter "Introduction" 1/17.

Design	Size	Dimensional drawing on page
<b>Helical worm gearbox with adapter AZ</b>		
	C..29 ... C..89	6/71
<b>Helical worm tandem gearbox with adapter</b>		
	- K4	C.89-D/Z39 6/72
	- K2	C.89-D/Z39 6/72
	- KS	C.29-D/Z19 ... C.89-D/Z39 6/73
	- K5	C.89-D/Z39 6/74
	- K3	C.89-D/Z39 6/74
	- A	C.89-D/Z39 6/75
	- AZ	C.89-D/Z39 6/75
<b>Additional versions and options</b>		
<b>SIMOLOC assembly system</b>		
	CADR29 ... CADR89	6/76
<b>Protective covers</b>		
	CA.29 ... CA.89	6/77
<b>Inner contour of the flange design</b>		
	C.F.29 ... C.F.89	6/78

**C..29 gearbox in a foot-mounted design****C030K4, CA030K4, CAS030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	228.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	228.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	256.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	256.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

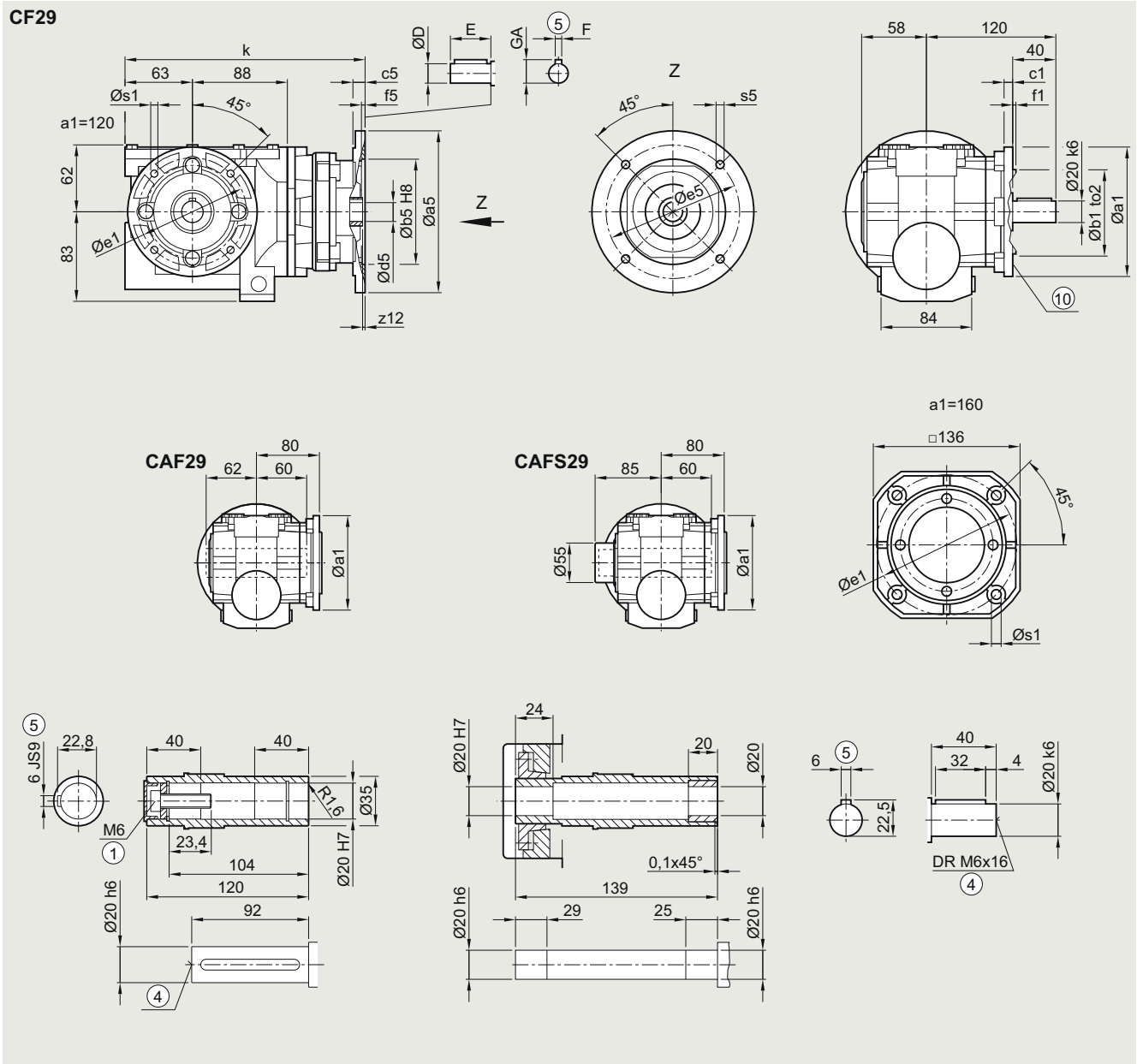
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### C.F.29 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



Flange	a1	b1	to2	c1	e1	f1	s1
	120	80	j6	8	100	3.0	6.6
	160	110	j6	9	130	3.5	9.0

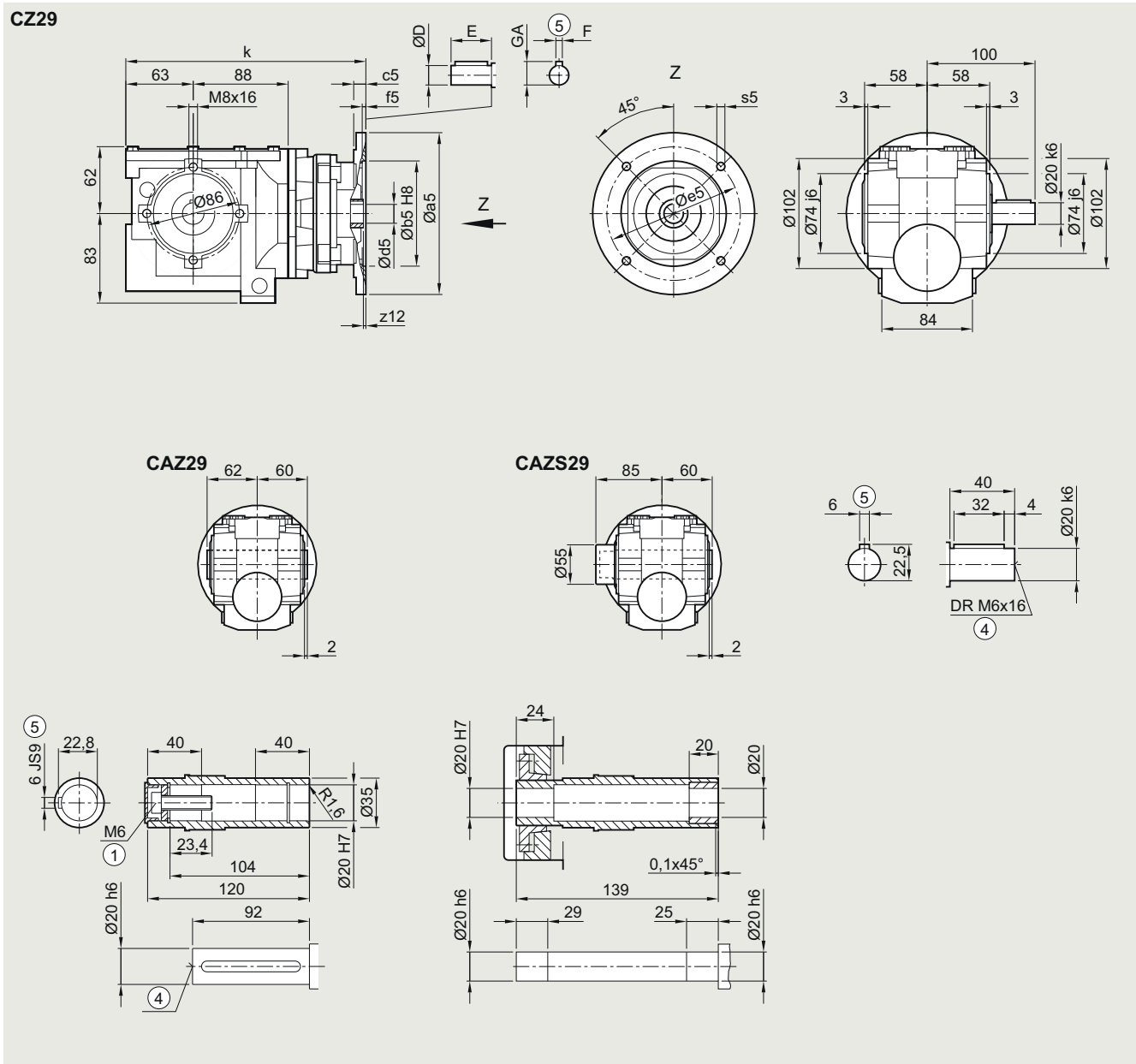
  

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	228.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	228.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	256.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	256.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 6/78

**C.Z.29 gearbox in a housing flange design****CZ030K4, CAZ030K4, CAZS030K4**

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	228.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	228.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	256.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	256.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

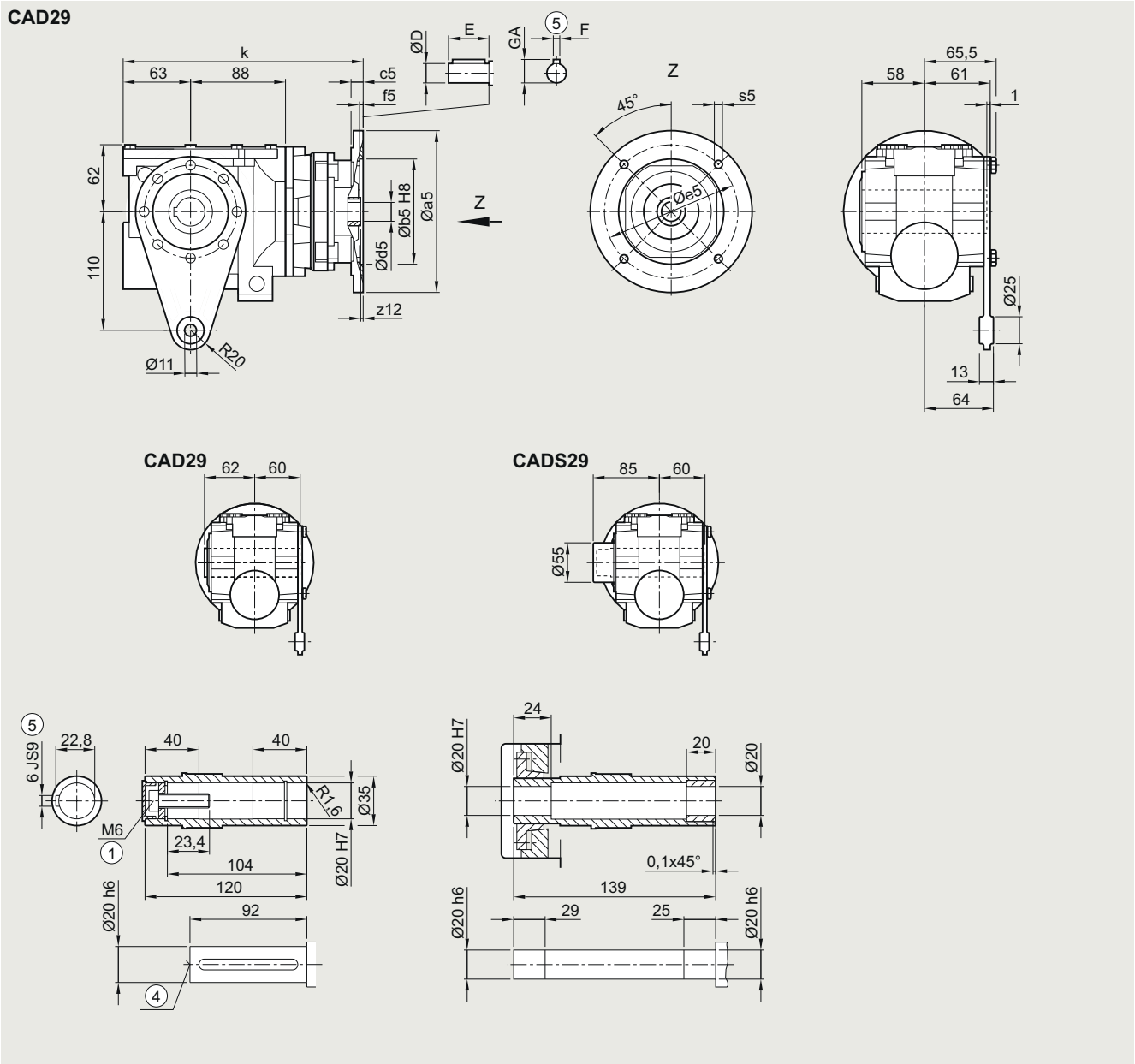
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### CAD.29 gearbox in a shaft-mounted design

CAD030K4, CADS030K4



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	228.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	228.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	256.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	256.0

① ISO 4014

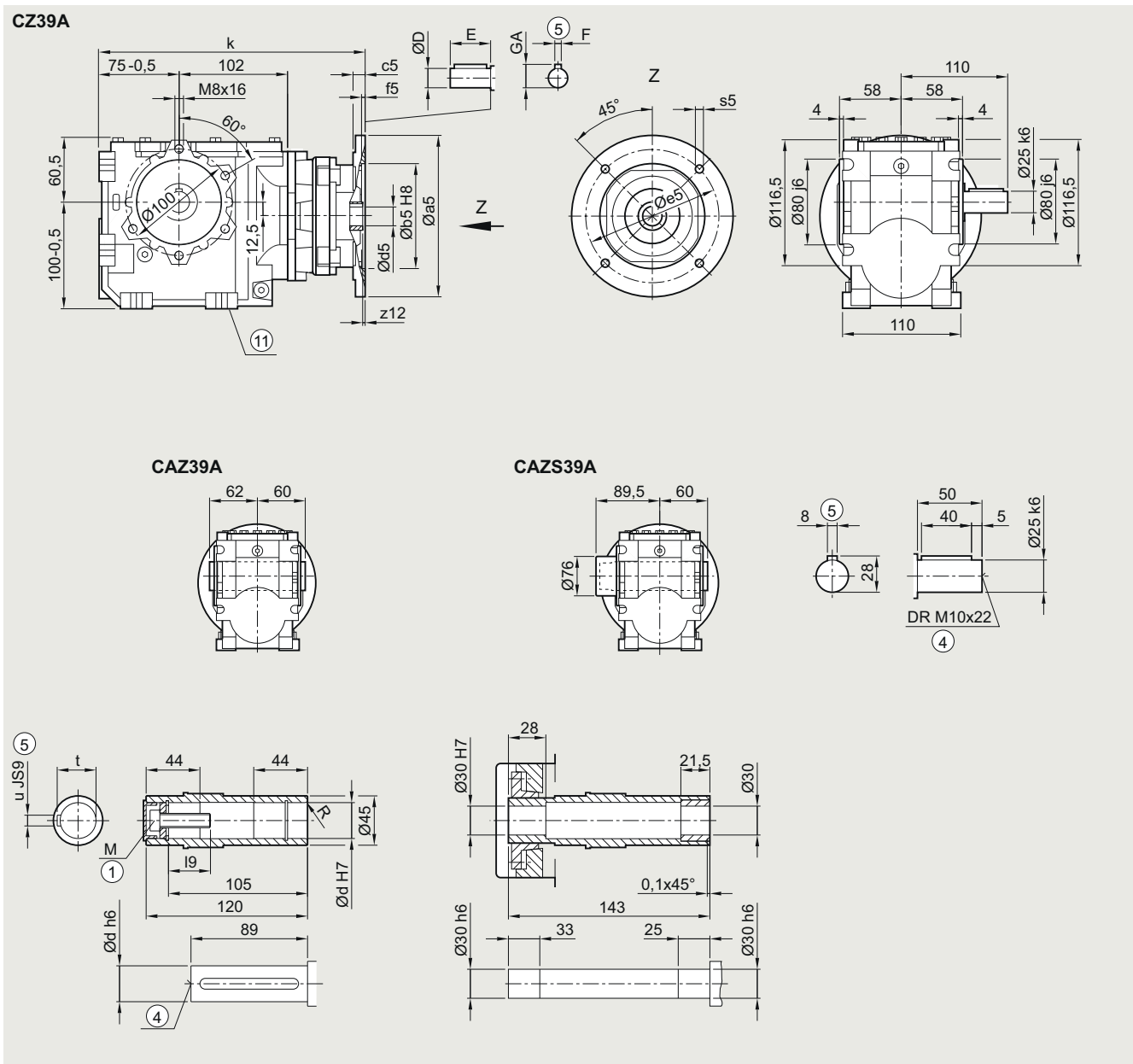
④ DIN 332

⑤ Feather key/keyway DIN 6885







**C.Z.39A gearbox in a housing flange design****CZ030K4, CAZ030K4, CAZS030K4**

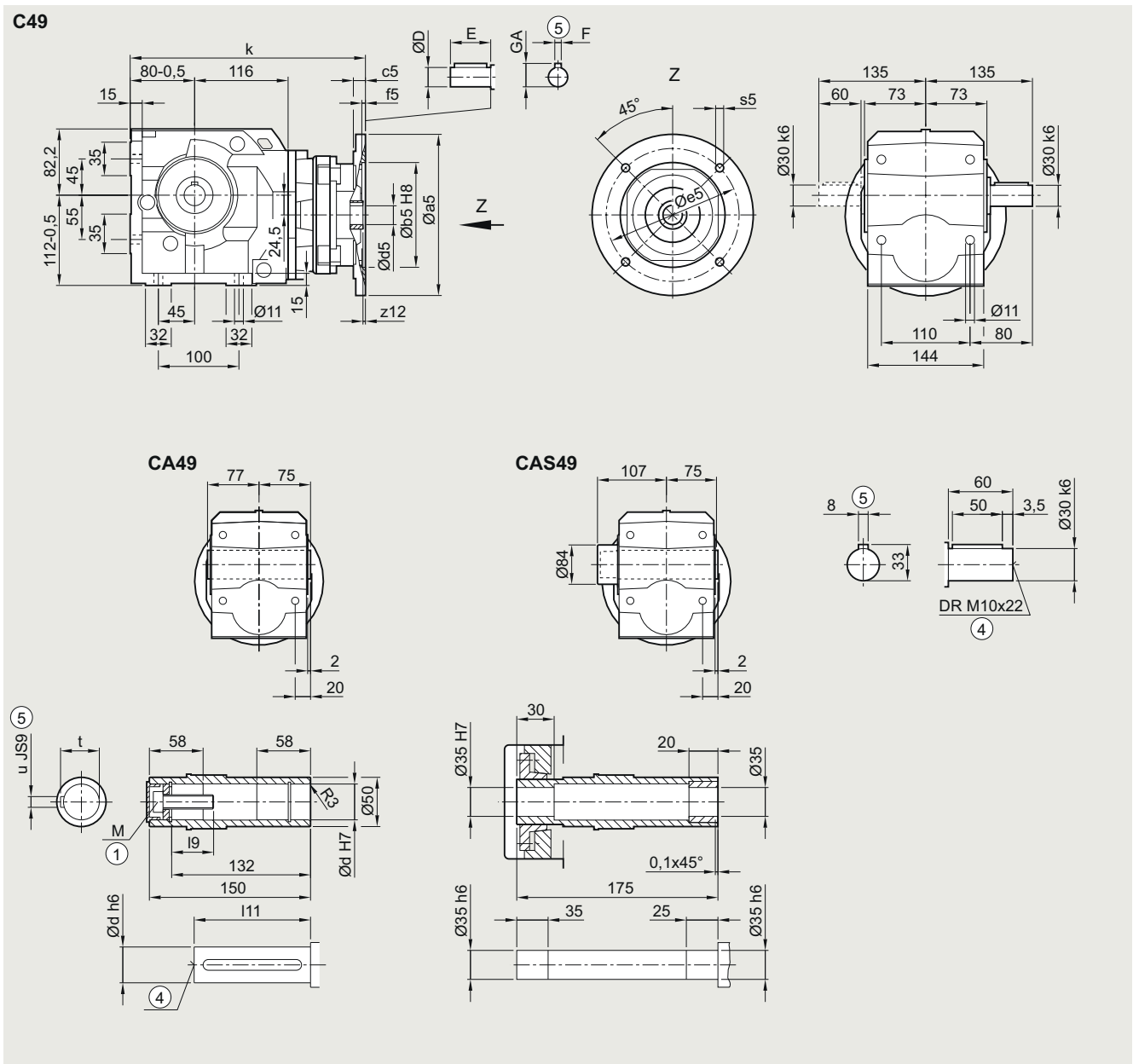
Shaft	d	l9	M	R	t	u						
	25	32.6	M10	1.6	28.3	8						
	30	32.6	M10	3.0	33.3	8						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	254.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	254.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	282.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	282.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	337.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design



**C..49 gearbox in a foot-mounted design****C030K4, CA030K4, CAS030K4**

Shaft	d	l9	l11	M	t	u						
	30	32.6	114	M10	33.3	8						
	35	42	116	M12	38.3	10						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	264.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	264.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	292.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	292.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

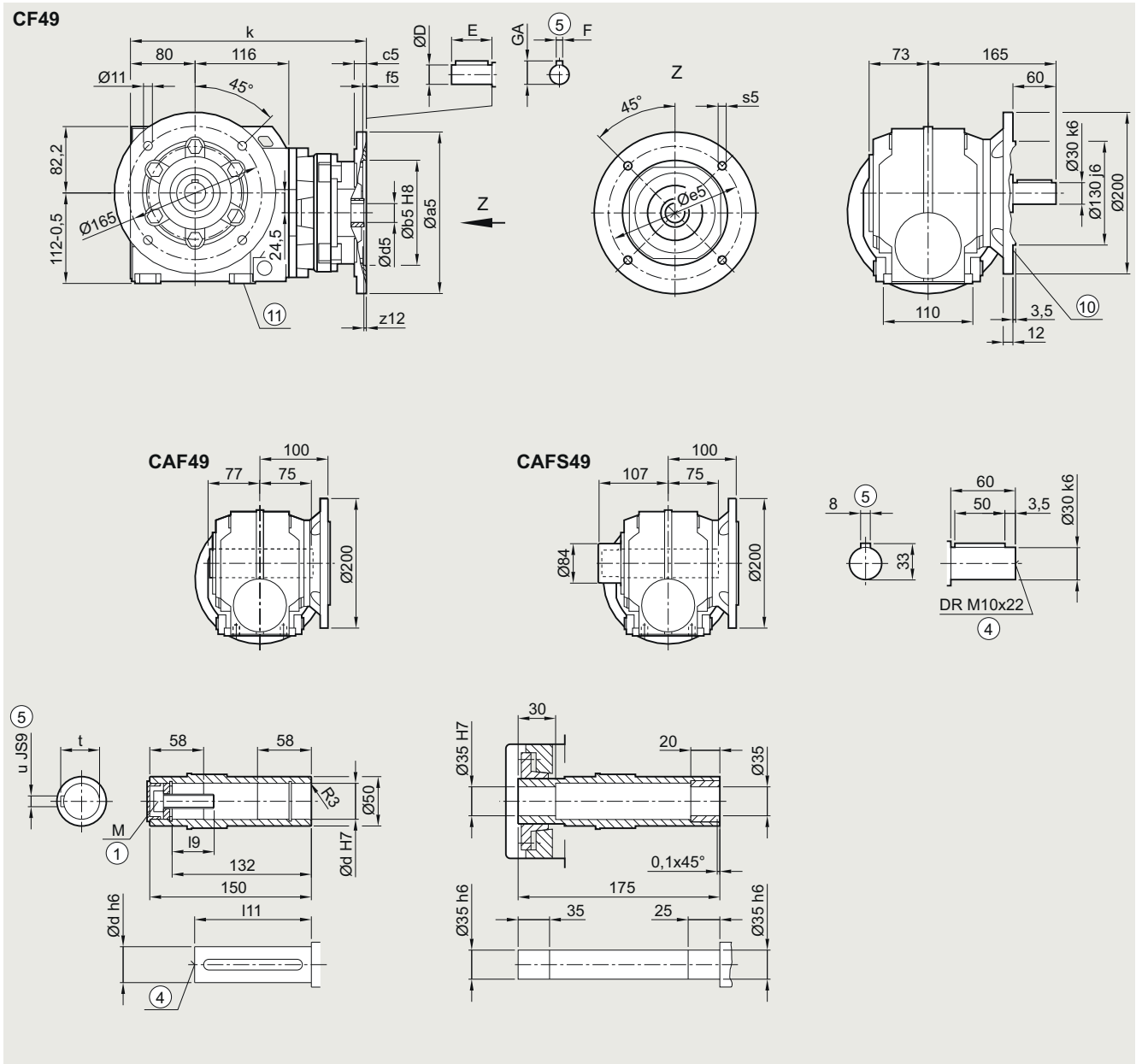
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### C.F.49 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



Shaft	d	l9	l11	M	t	u						
	30	32.6	114	M10	33.3	8						
	35	42	116	M12	38.3	10						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	264.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	264.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	292.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	292.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5

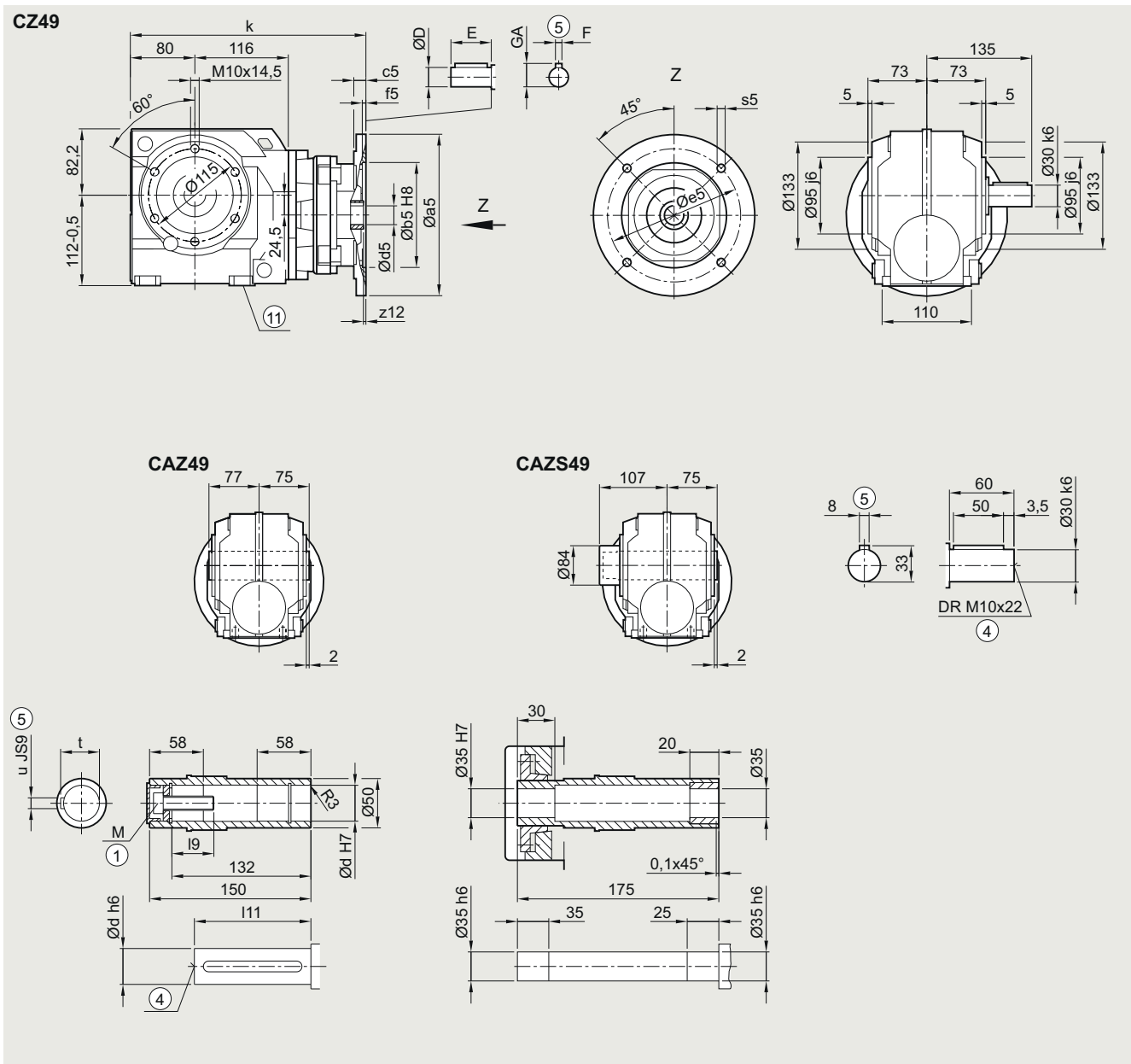
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 6/78

⑪ Use bores only for foot-mounted design

**C.Z.49 gearbox in a housing flange design****CZ030K4, CAZ030K4, CAZS030K4**

Shaft	d	l9	l11	M	t	u						
	30	32.6	114	M10	33.3	8						
	35	42	116	M12	38.3	10						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	264.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	264.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	292.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	292.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

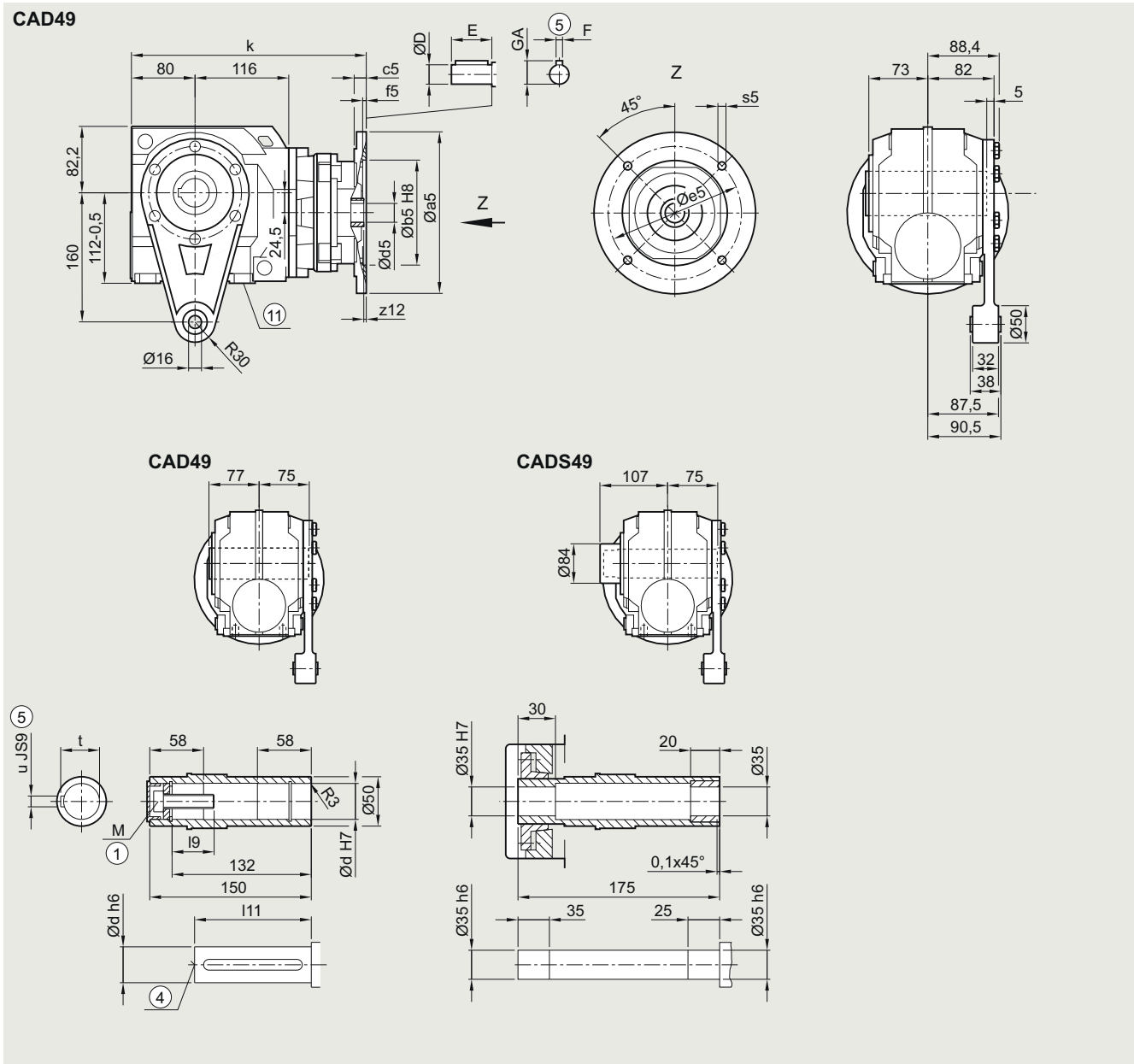
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### CAD.49 gearbox in a shaft-mounted design

CAD030K4, CADS030K4

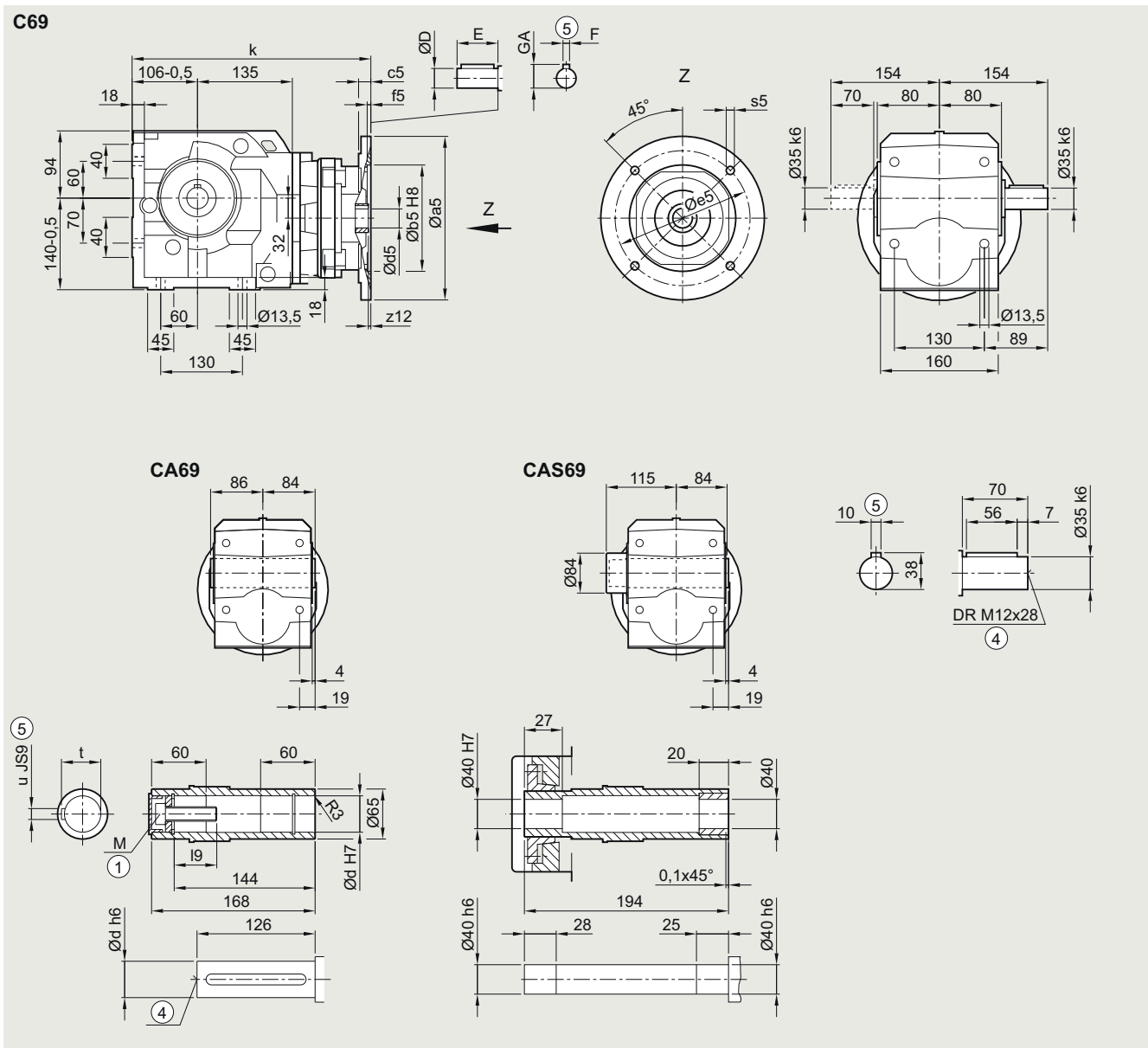


Shaft	d	l9	l11	M	t	u						
	30	32.6	114	M10	33.3	8						
	35	42	116	M12	38.3	10						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	264.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	264.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	292.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	292.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

**C..69 gearbox in a foot-mounted design****C030K4, CA030K4, CAS030K4**

Shaft	d	l9	M	t	u							
	40	47.75	M16	43.3	12							
	45	48.75	M16	48.3	14							
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	309.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	309.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	337.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	337.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885



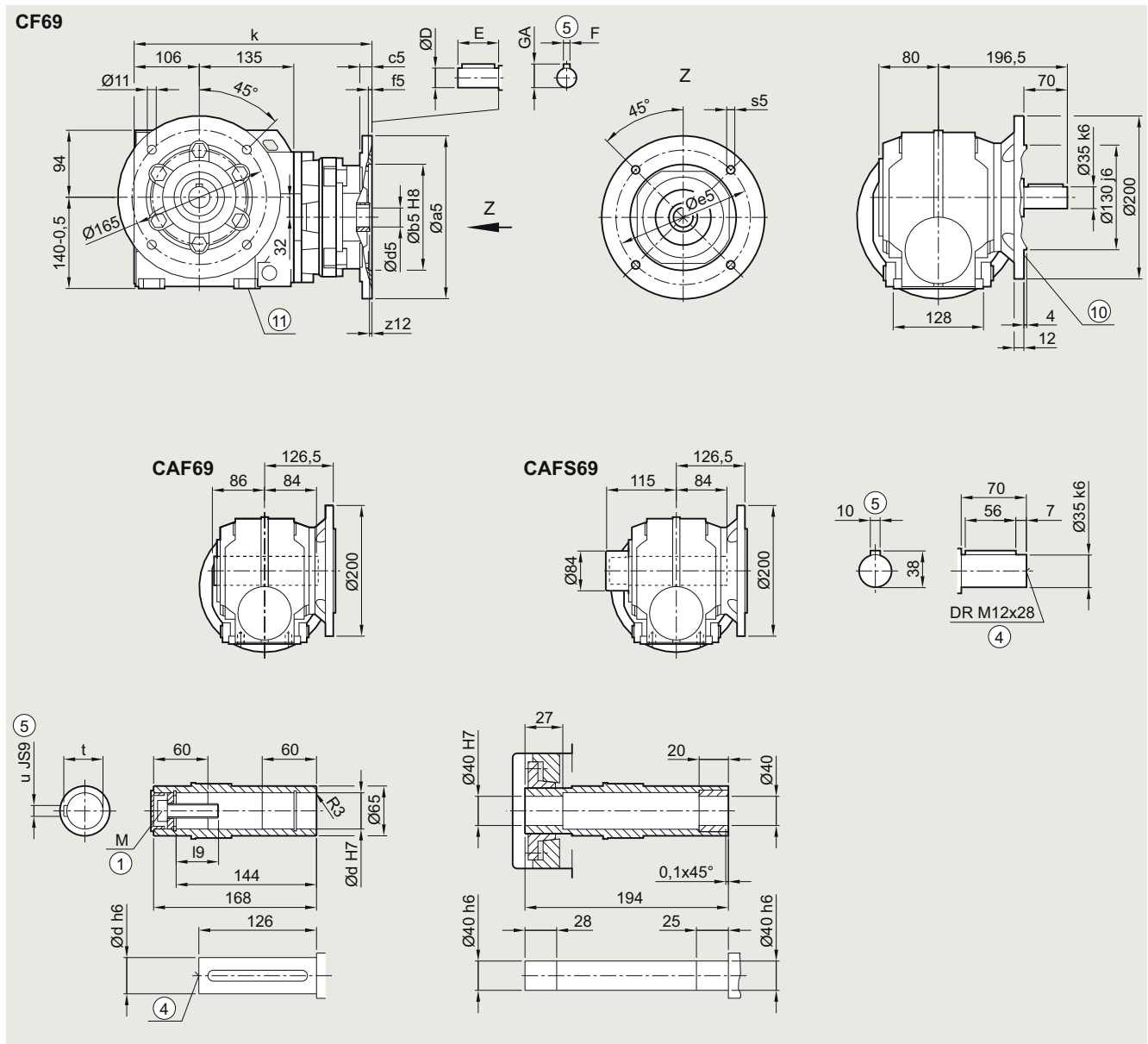
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### C.F.69 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



Shaft	d	l9	M	t	u							
	40	47.75	M16	43.3	12							
	45	48.75	M16	48.3	14							
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	309.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	309.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	337.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	337.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5

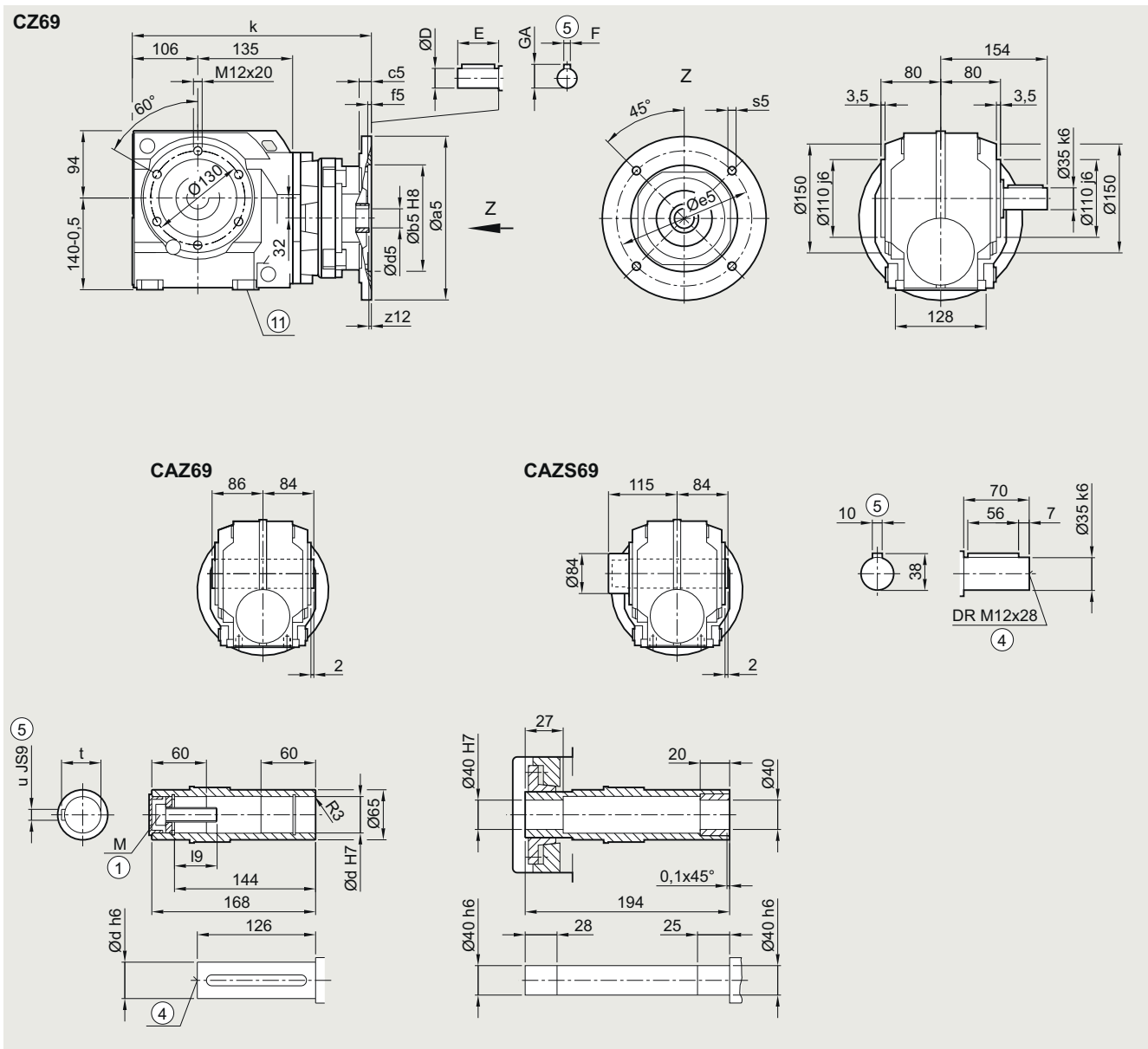
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 6/78

⑪ Use bores only for foot-mounted design

**C.Z.69 gearbox in a housing flange design****CZ030K4, CAZ030K4, CAZS030K4**

Shaft	d	l9	M	t	u							
	40	47.75	M16	43.3	12							
	45	48.75	M16	48.3	14							
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	309.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	309.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	337.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	337.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

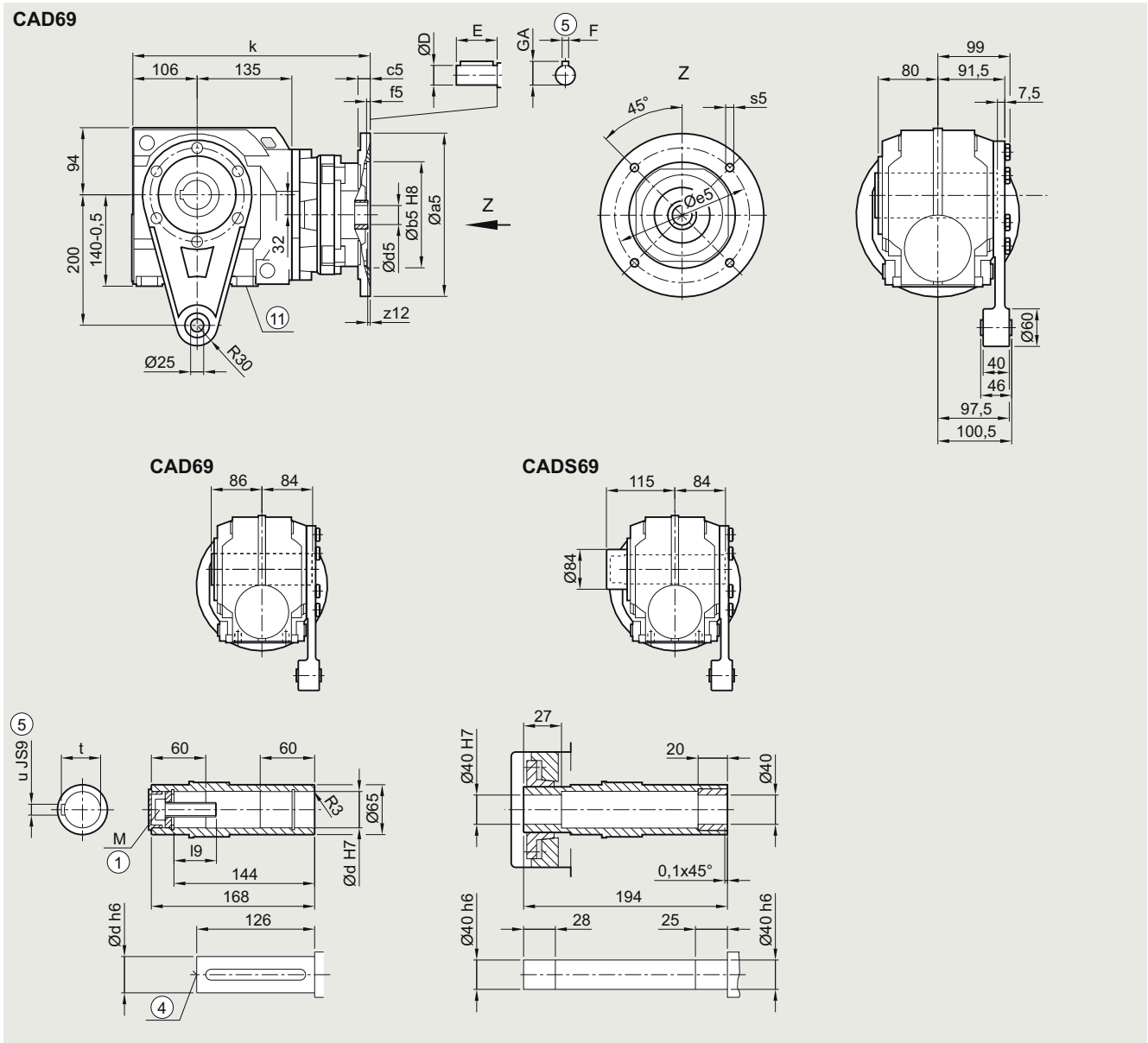
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### CAD.69 gearbox in a shaft-mounted design

CAD030K4, CADS030K4



Shaft	d	l9	M	t	u							
	40	47.75	M16	43.3	12							
	45	48.75	M16	48.3	14							
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	309.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	309.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	337.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	337.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design



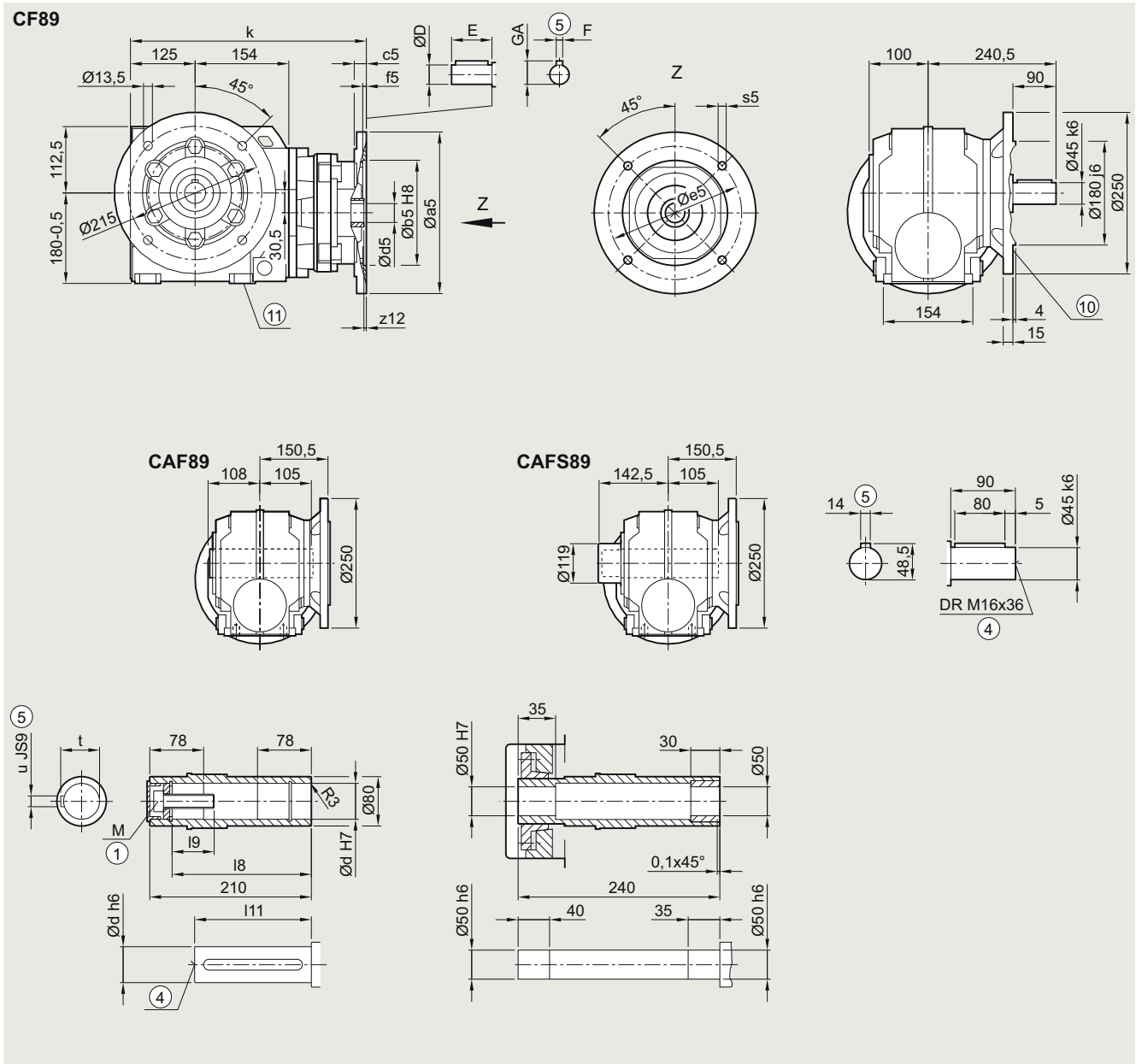
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K4 for mounting an IEC motor

### Dimensional drawings

#### C.F.89 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	345.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	369.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	369.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	441.0

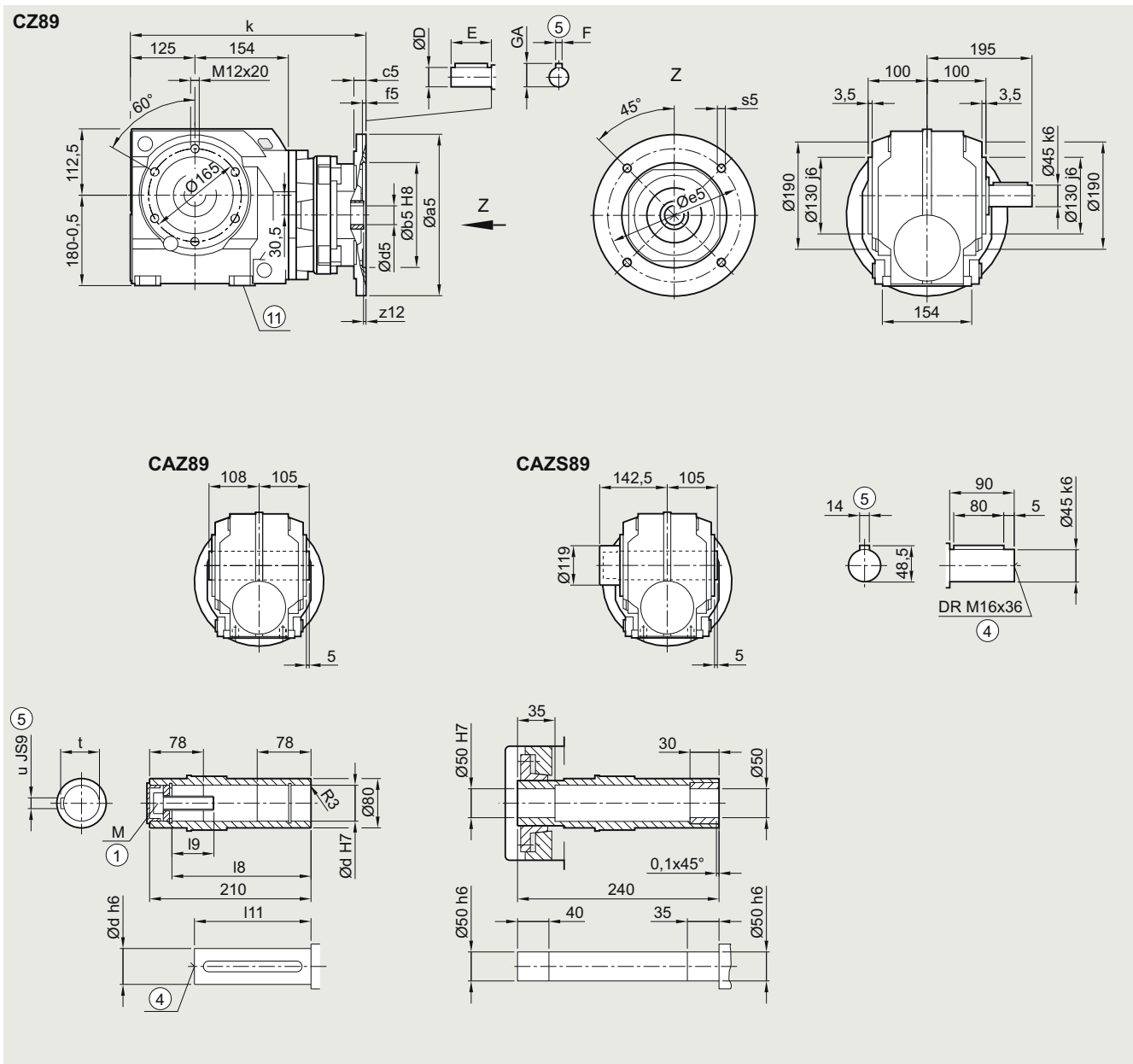
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 6/785

⑪ Use bores only for foot-mounted design

**C.Z.89 gearbox in a housing flange design****CZ030K4, CAZ030K4, CAZS030K4**

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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	345.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	369.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	369.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	441.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design



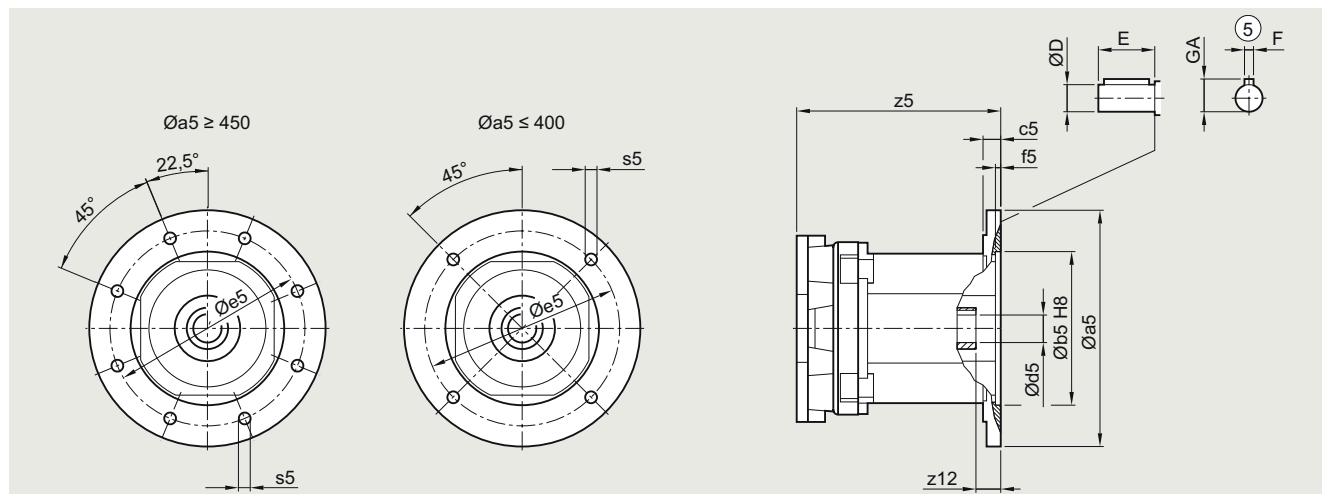
# SIMOGEAR gearboxes

Helical worm gearbox with adapter K2 for mounting an IEC motor

## Dimensional drawings

### C...29 to C...89 gearboxes

C..030K2, C.F.030K2, C.Z.030K2, C.D.030K2



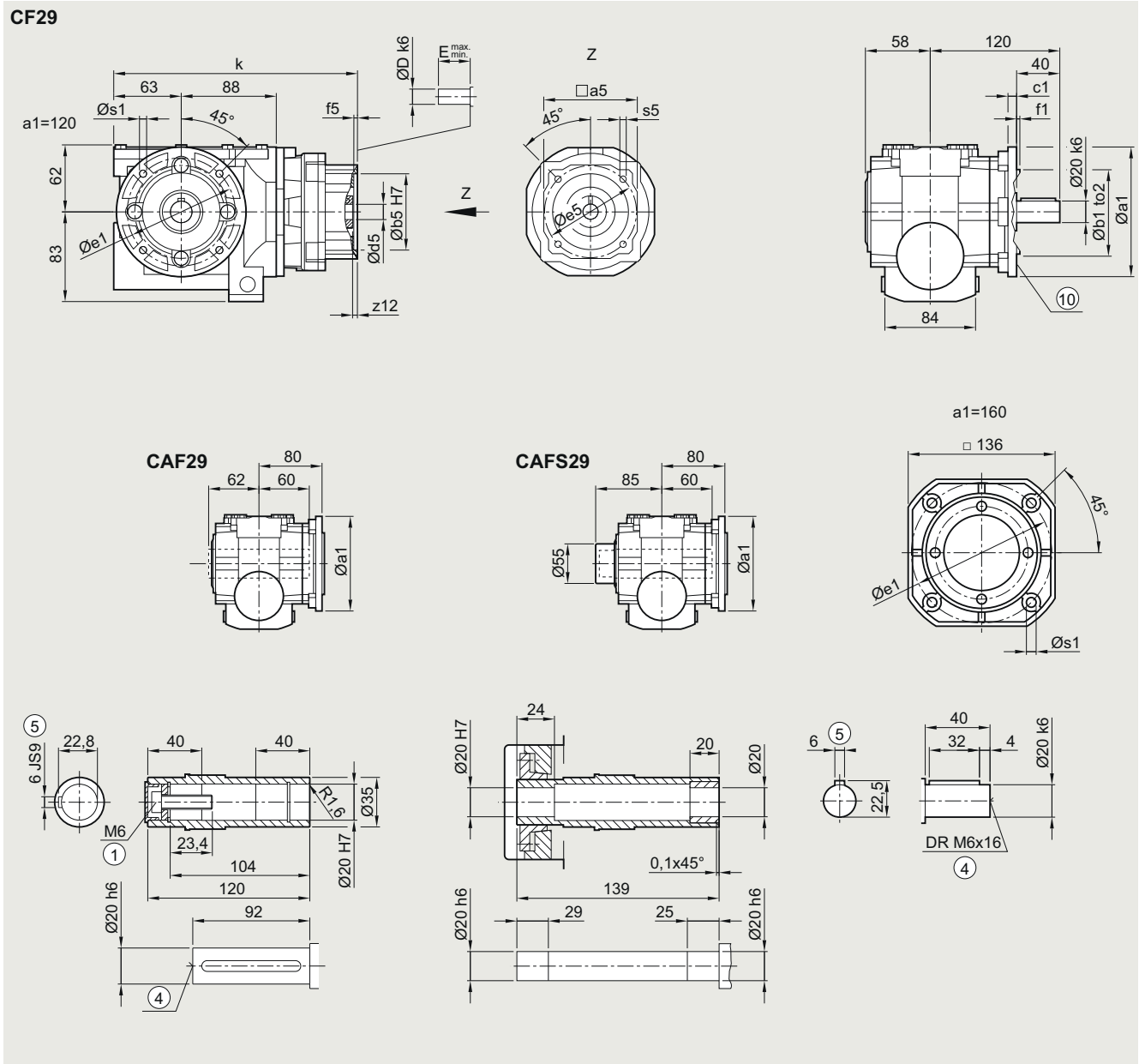
6

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>C...29</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198
<b>C...39</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245
<b>C...49</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
<b>C...69</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
<b>C...89</b>												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	182.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	182.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	229.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	307.5

⑤ Feather key/keyway DIN 6885





**C.F.29 gearbox in a flange-mounted design****CF030KS, CAF030KS, CAFS030KS**

Flange	a1	b1	to2	c1	e1	f1	s1			
	120	80	j6	8	100	3.0	6.6			
	160	110	j6	9	130	3.5	9.0			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	232.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	232.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	245
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	245
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	261
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	261

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 6/78

## SIMOGEAR gearboxes

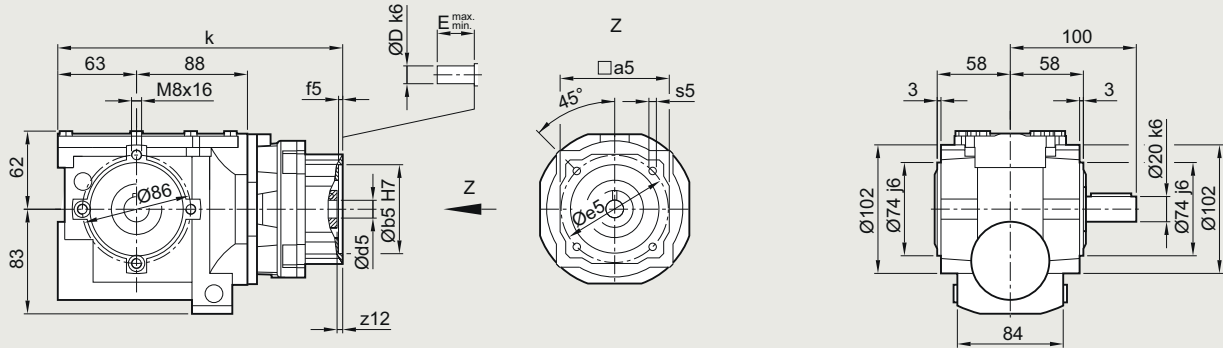
Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

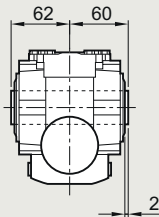
#### C.Z.29 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

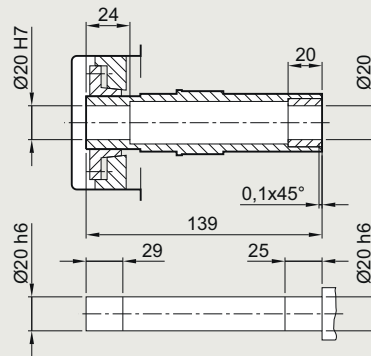
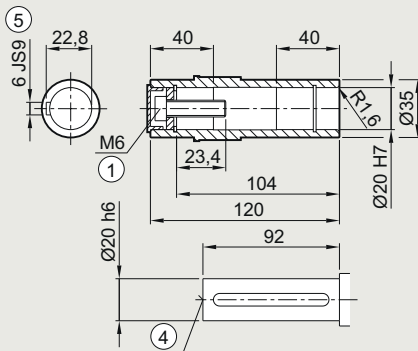
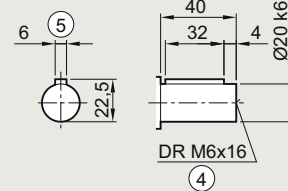
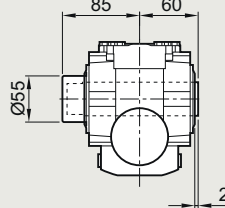
##### CZ29



##### CAZ29



##### CAZS29



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	232.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	232.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	245
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	245
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	261
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	261

① ISO 4014

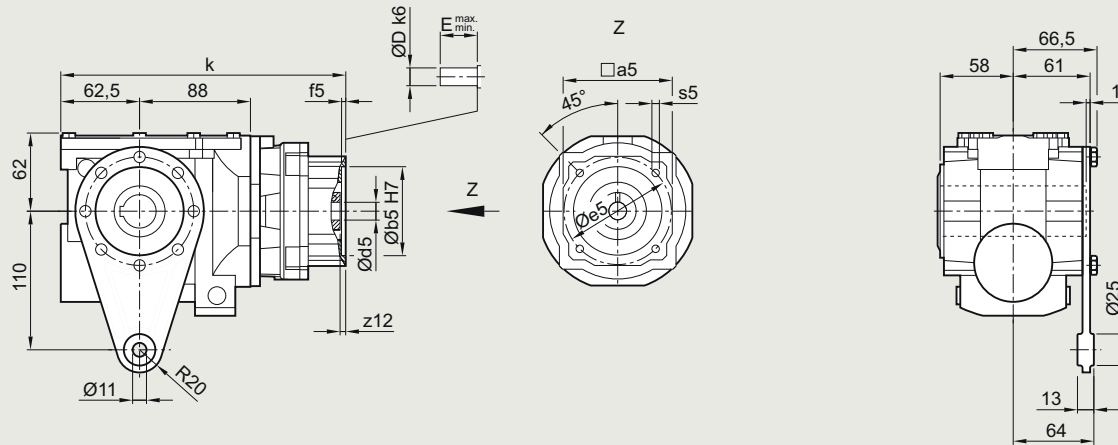
④ DIN 332

⑤ Feather key/keyway DIN 6885

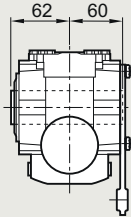
## CAD.29 gearbox in a shaft-mounted design

## CAD030KS, CADS030KS

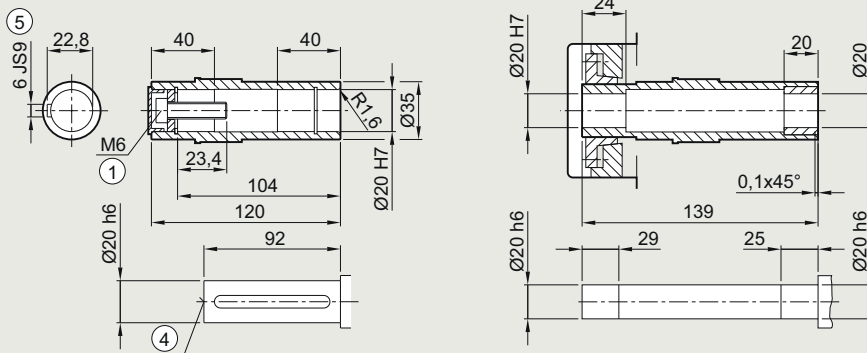
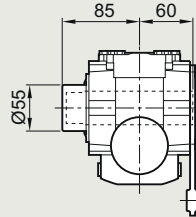
## CAD29



## CAD29



## CADS29



Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	232.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	232.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	245
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	245
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	261
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	261

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

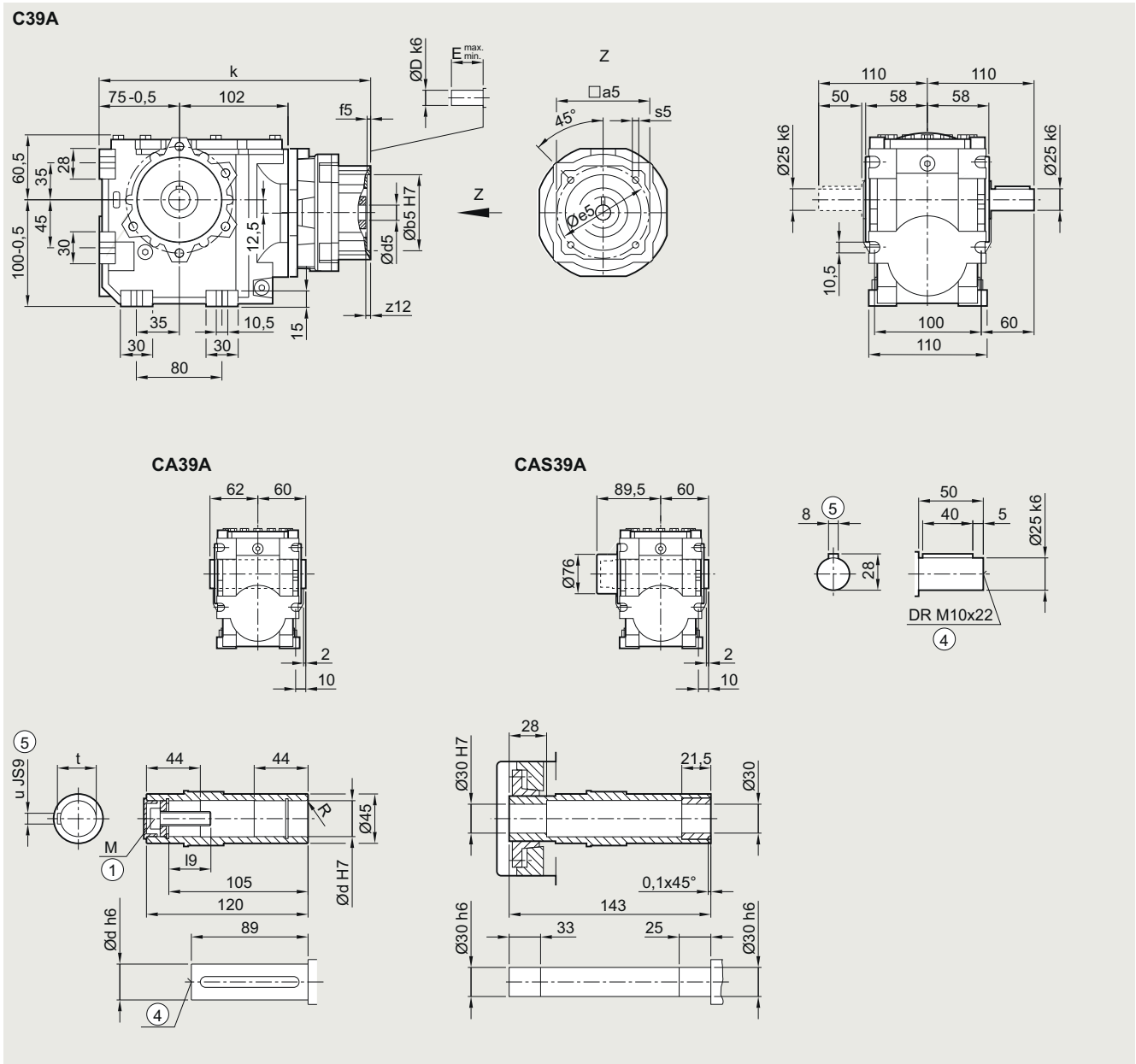
## SIMOGEAR gearboxes

Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

#### C..39A gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

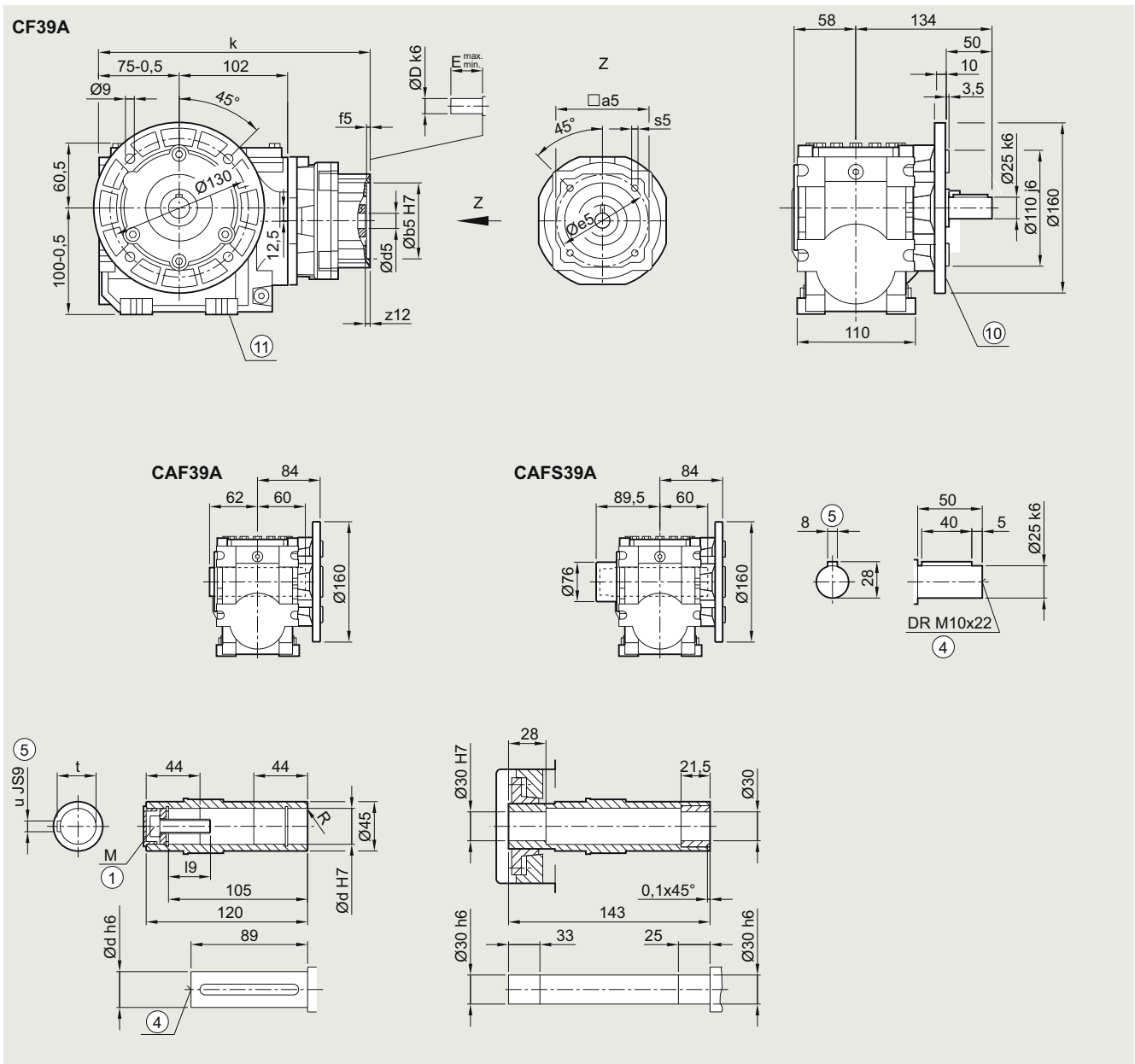


Shaft	d	I9	M	R	t	u				
	25	32.6	M10	1.6	28.3	8				
	30	32.6	M10	3.0	33.3	8				
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	259
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	259
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	271.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	271.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	287.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	287.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	312.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	312.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

**C.F.39A gearbox in a flange-mounted design****CF030KS, CAF030KS CAFS030KS**

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				
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	259
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	259
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	271.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	271.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	287.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	287.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	312.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	312.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 6/78 ⑪ Use bores only for foot-mounted design

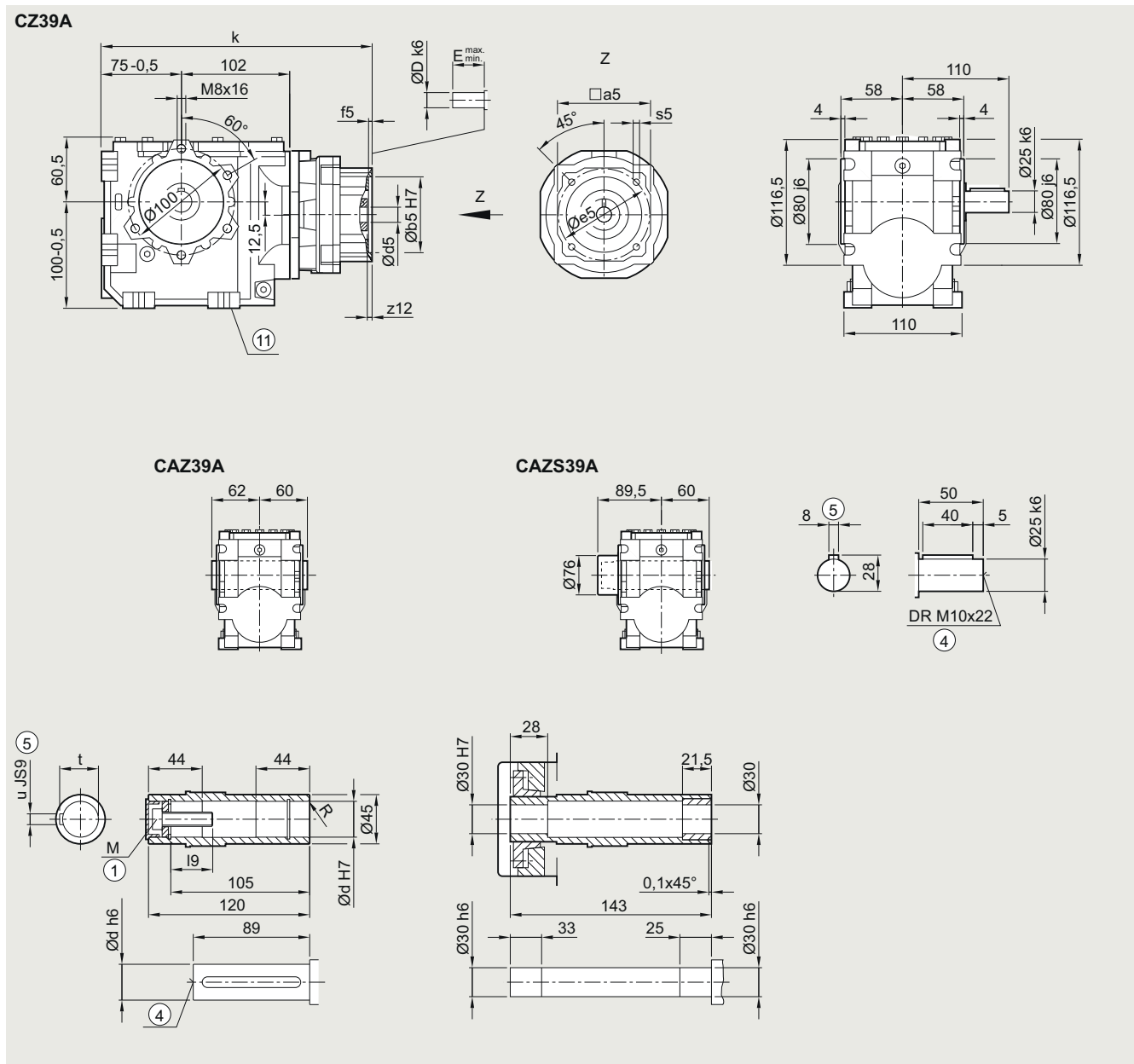
## SIMOGEAR gearboxes

Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

#### C.Z.39A gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS



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

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	259
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	259
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	271.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	271.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	287.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	287.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	312.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	312.5

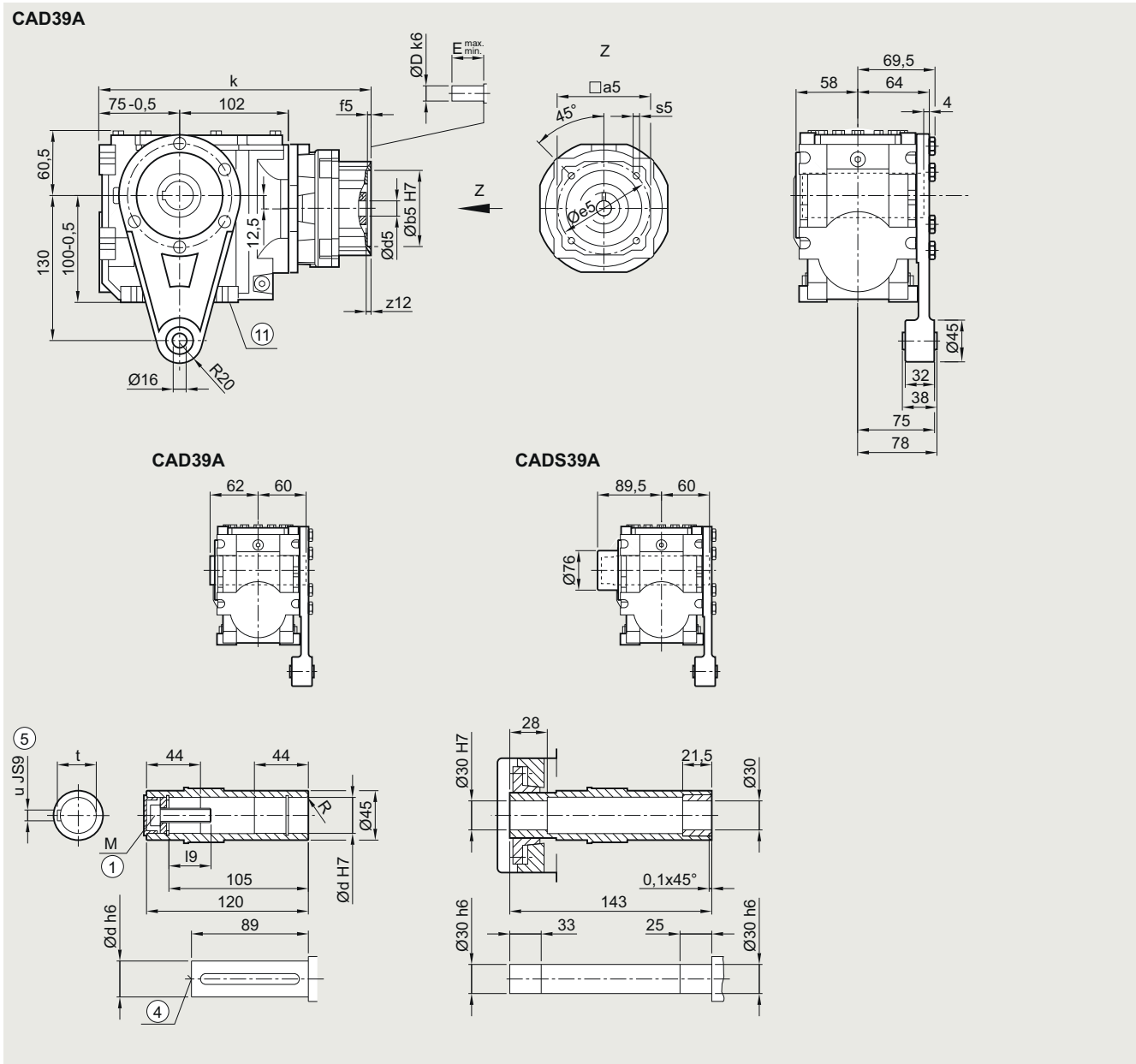
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

## CAD.39A gearbox in a shaft-mounted design

## CAD030KS, CADS030KS



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				
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	259
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	259
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	271.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	271.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	287.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	287.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	312.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	312.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

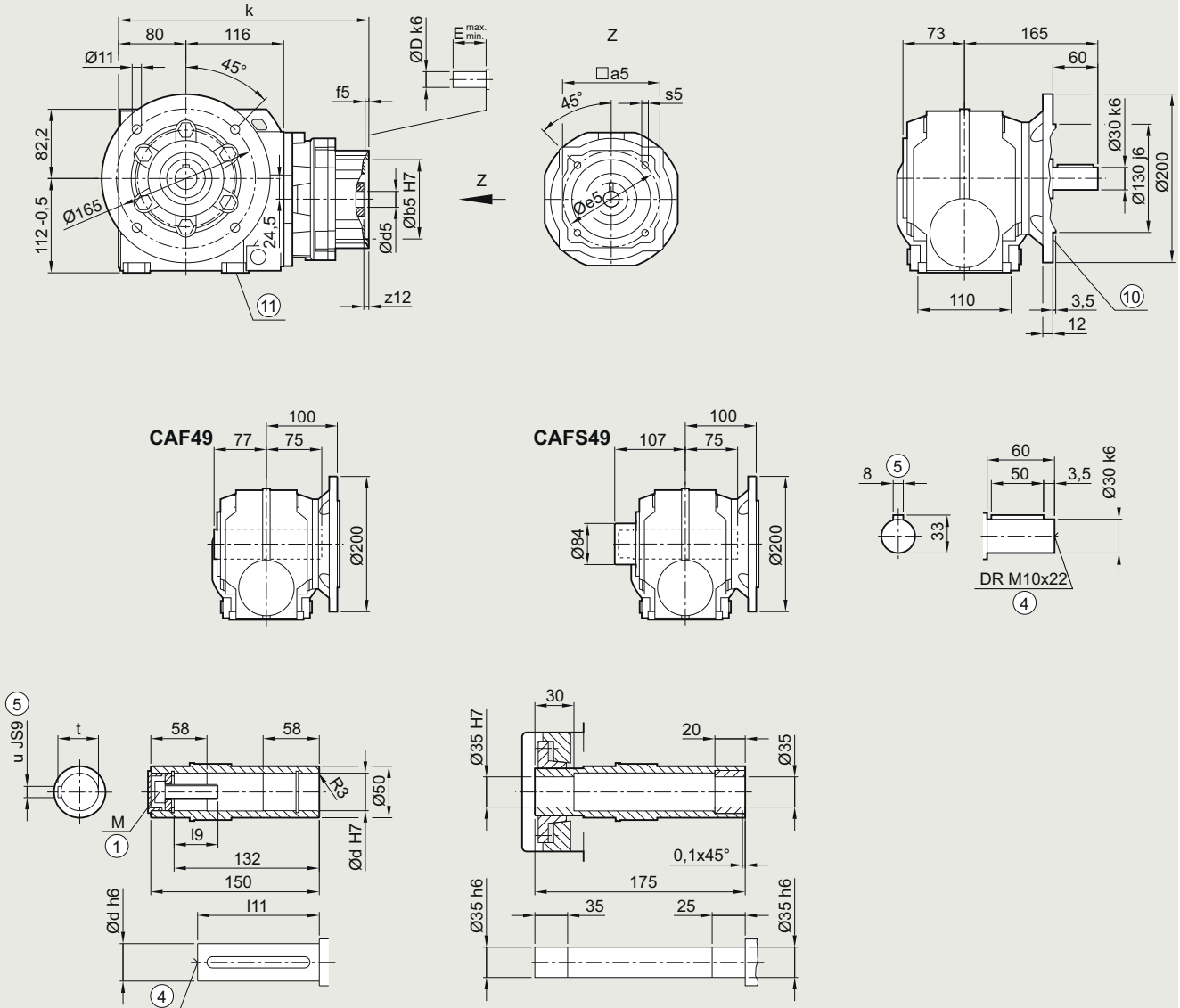




## C.F.49 gearbox in a flange-mounted design

CF030KS, CAF030KS, CAFS030KS

CF49



Shaft	d	i9	i11	M	t	u				
	30	32.6	114	M10	33.3	8				
	35	42	116	M12	38.3	10				
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	268.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	268.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	281
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	281
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	297
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	297
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	322
KS6.2	130	110	7	145	M8x15	8	22	40	58	322
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	334.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 6/78

⑪ Use bores only for foot-mounted design

## SIMOGEAR gearboxes

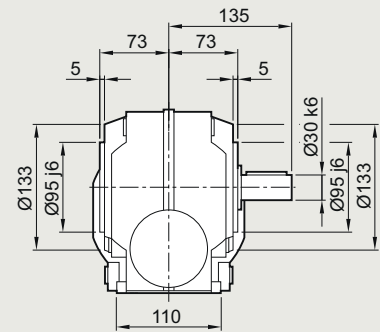
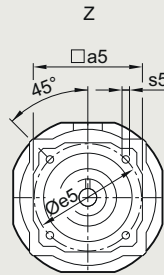
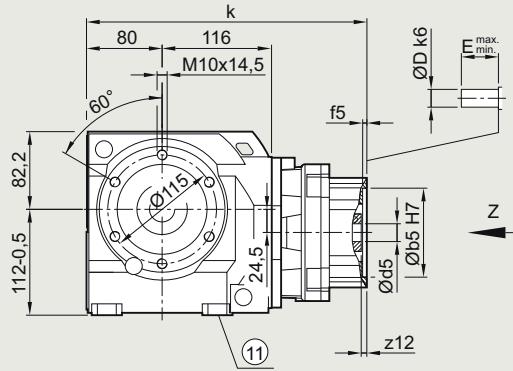
Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

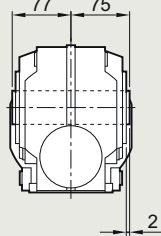
#### C.Z.49 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

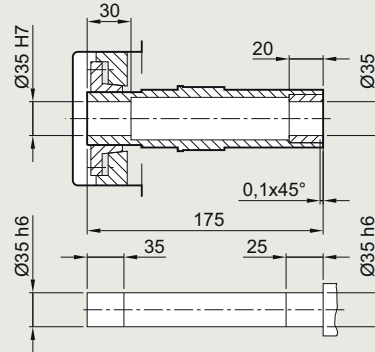
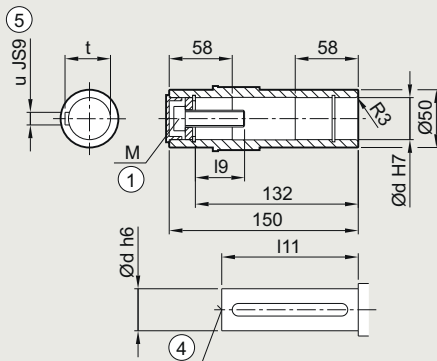
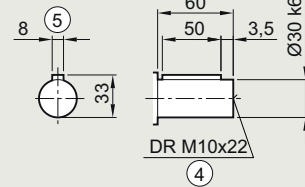
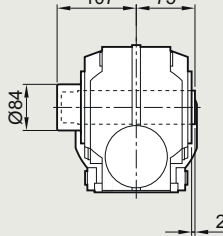
#### CZ49



#### CAZ49



#### CAZS49



Shaft	d	l9	l11	M	t	u				
	30	32.6	114	M10	33.3	8				
	35	42	116	M12	38.3	10				
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	268.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	268.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	281
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	281
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	297
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	297
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	322
KS6.2	130	110	7	145	M8x15	8	22	40	58	322
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	334.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design



## SIMOGEAR gearboxes

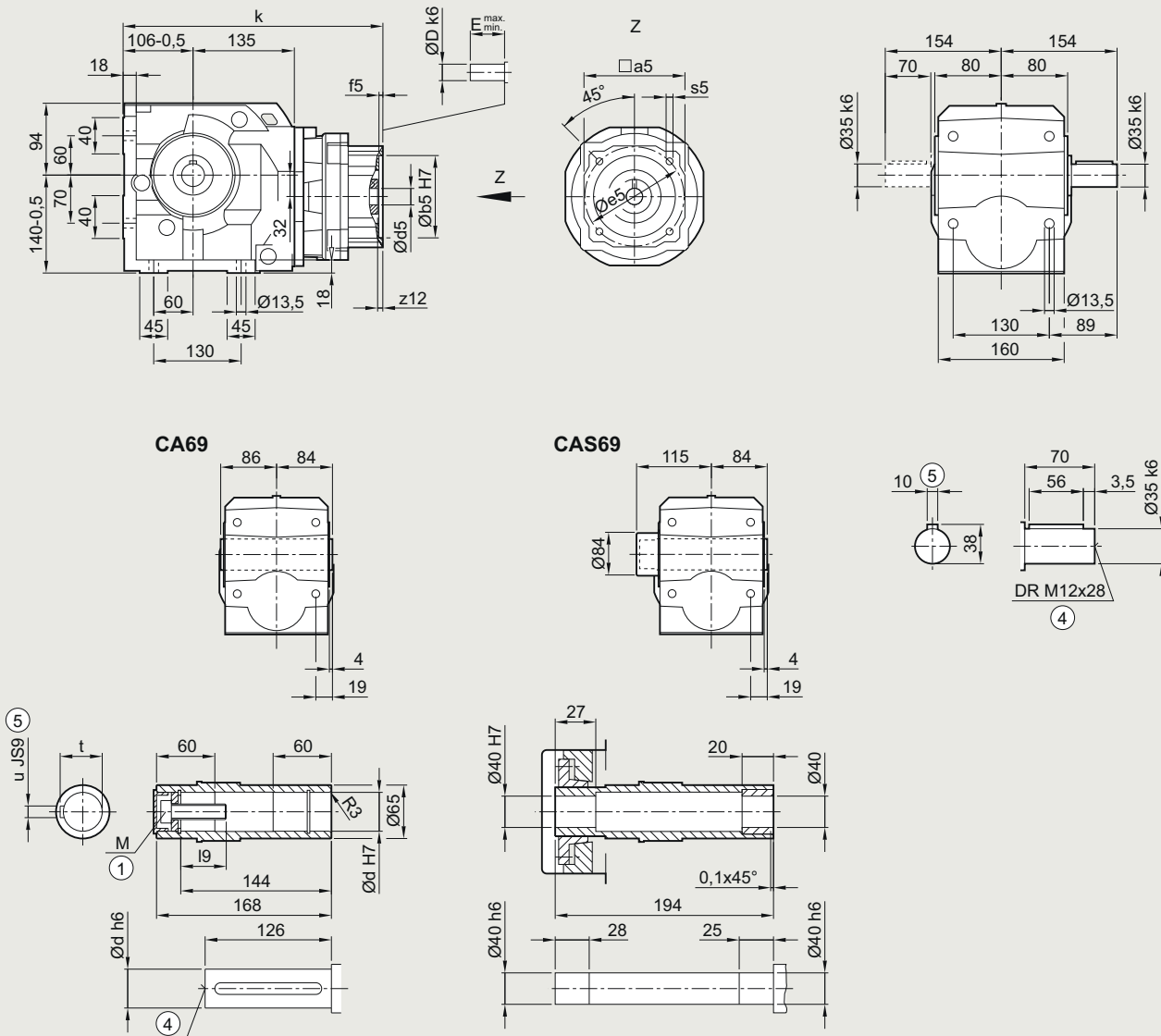
Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

#### C..69 gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

C69



Shaft	d	i9	M	t	u					
	40	47.75	M16	43.3	12					
	45	48.75	M16	48.3	14					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	313.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	313.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	326
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	326
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	342
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	342
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	367
KS6.2	130	110	7	145	M8x15	8	22	40	58	367
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	379.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	415.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	415.5

① ISO 4014

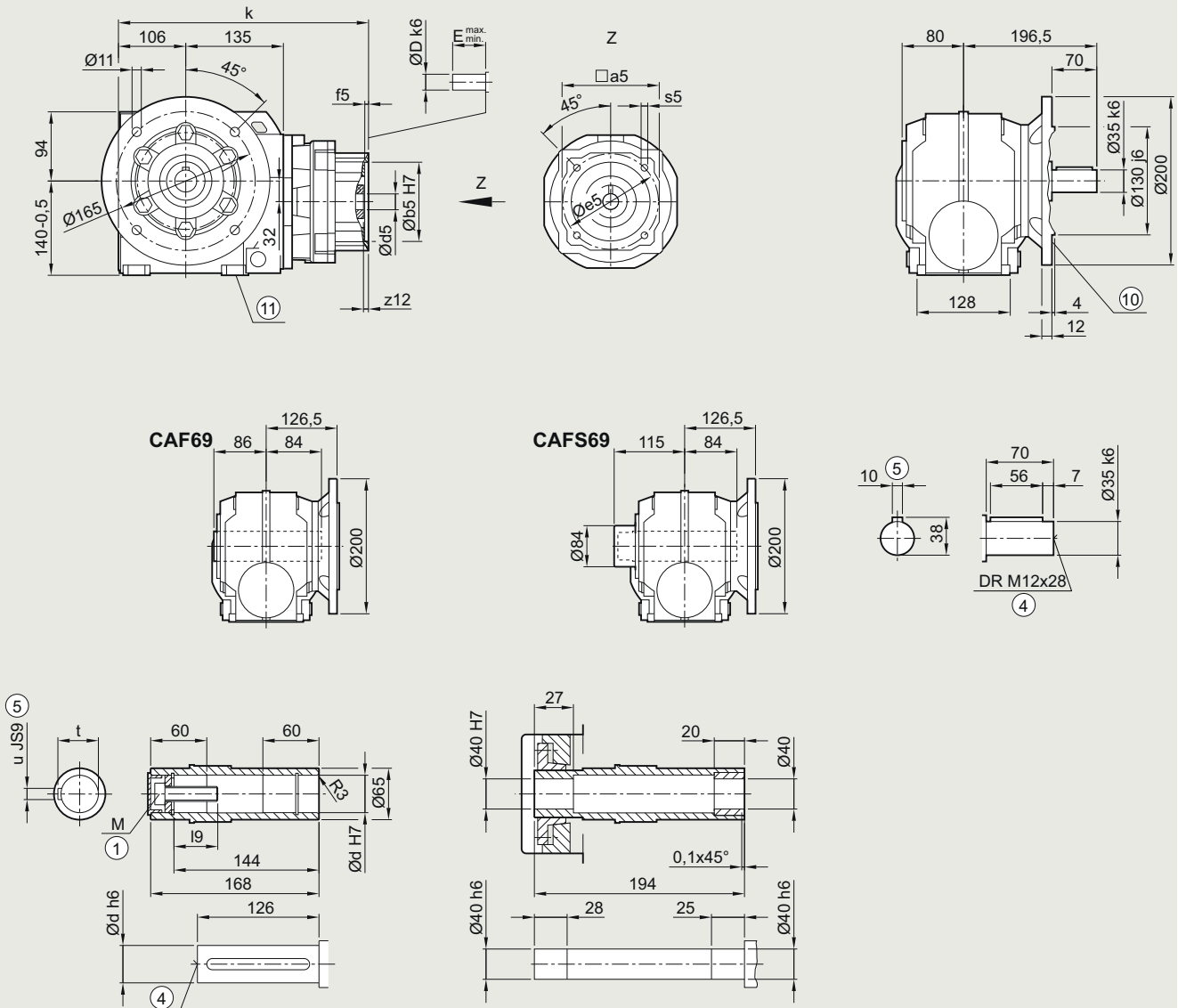
④ DIN 332

⑤ Feather key/keyway DIN 6885

## C.F.69 gearbox in a flange-mounted design

CF030KS, CAF030KS, CAFS030KS

CF69



Shaft	d	i9	M	t	u					
	40	47.75	M16	43.3	12					
	45	48.75	M16	48.3	14					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	313.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	313.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	326
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	326
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	342
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	342
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	367
KS6.2	130	110	7	145	M8x15	8	22	40	58	367
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	379.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	415.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	415.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 6/78

⑪ Use bores only for foot-mounted design

## SIMOGEAR gearboxes

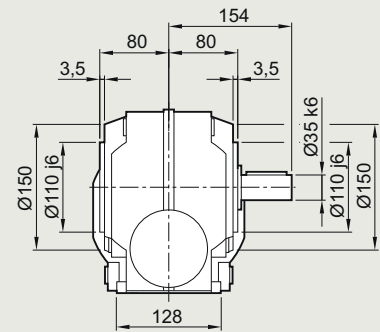
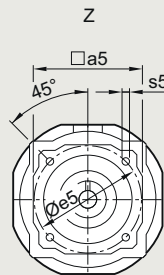
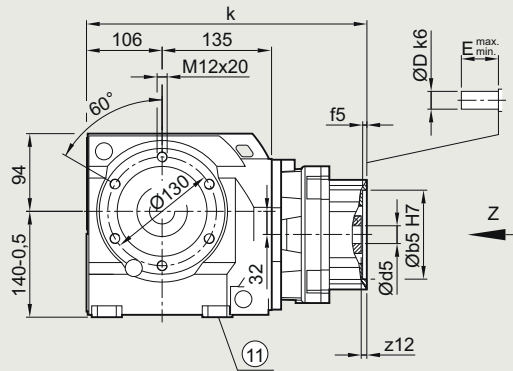
Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

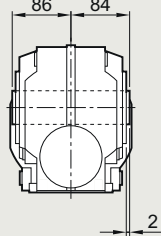
#### C.Z.69 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

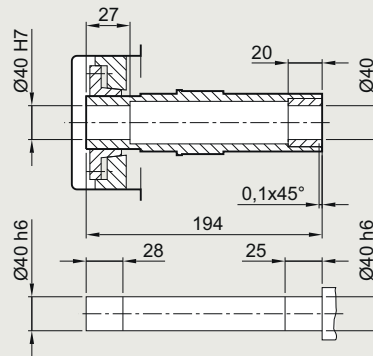
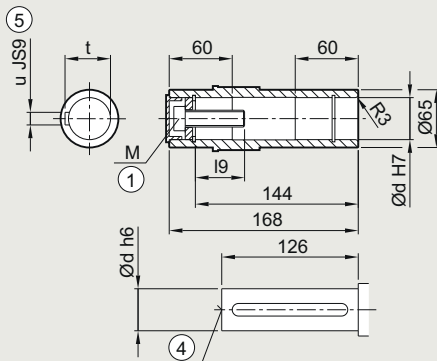
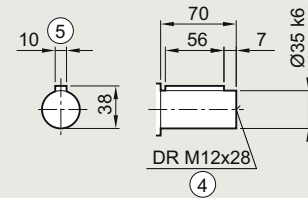
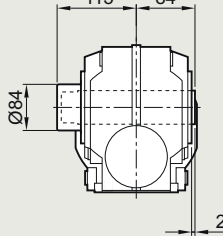
#### CZ69



#### CAZ69



#### CAZS69



Shaft	d	i9	M	t	u					
	40	47.75	M16	43.3	12					
	45	48.75	M16	48.3	14					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	313.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	313.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	326
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	326
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	342
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	342
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	367
KS6.2	130	110	7	145	M8x15	8	22	40	58	367
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	379.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	415.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	415.5

① ISO 4014

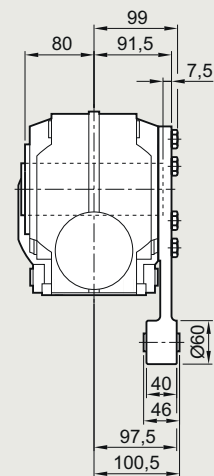
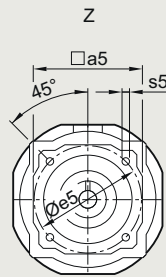
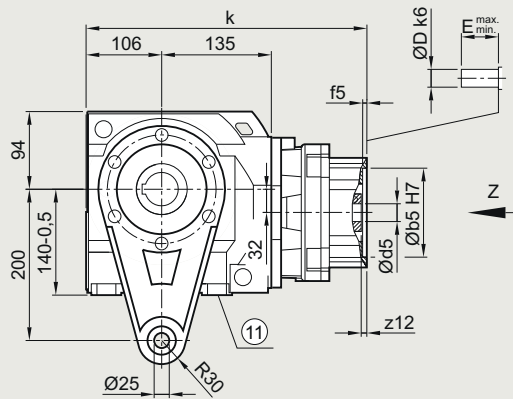
④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

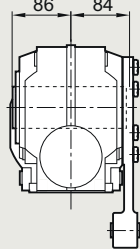
## CAD.69 gearbox in a shaft-mounted design

## CAD030KS, CADS030KS

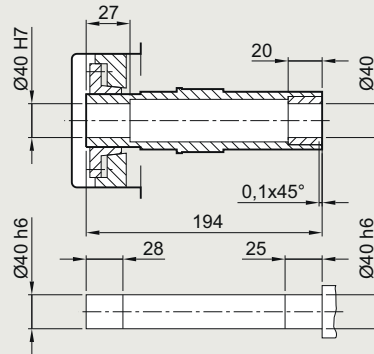
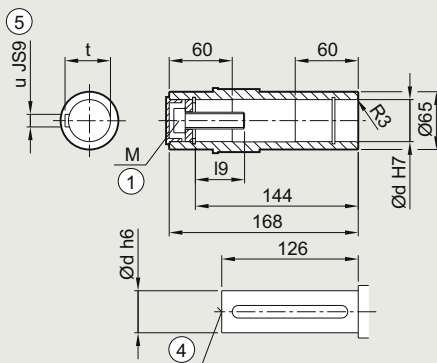
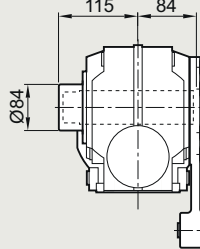
## CAD69



## CAD69



## CADS69



Shaft	d	i9	M	t	u					
	40	47.75	M16	43.3	12					
	45	48.75	M16	48.3	14					
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	313.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	313.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	326
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	326
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	342
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	342
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	367
KS6.2	130	110	7	145	M8x15	8	22	40	58	367
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	379.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	415.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	415.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design



## SIMOGEAR gearboxes

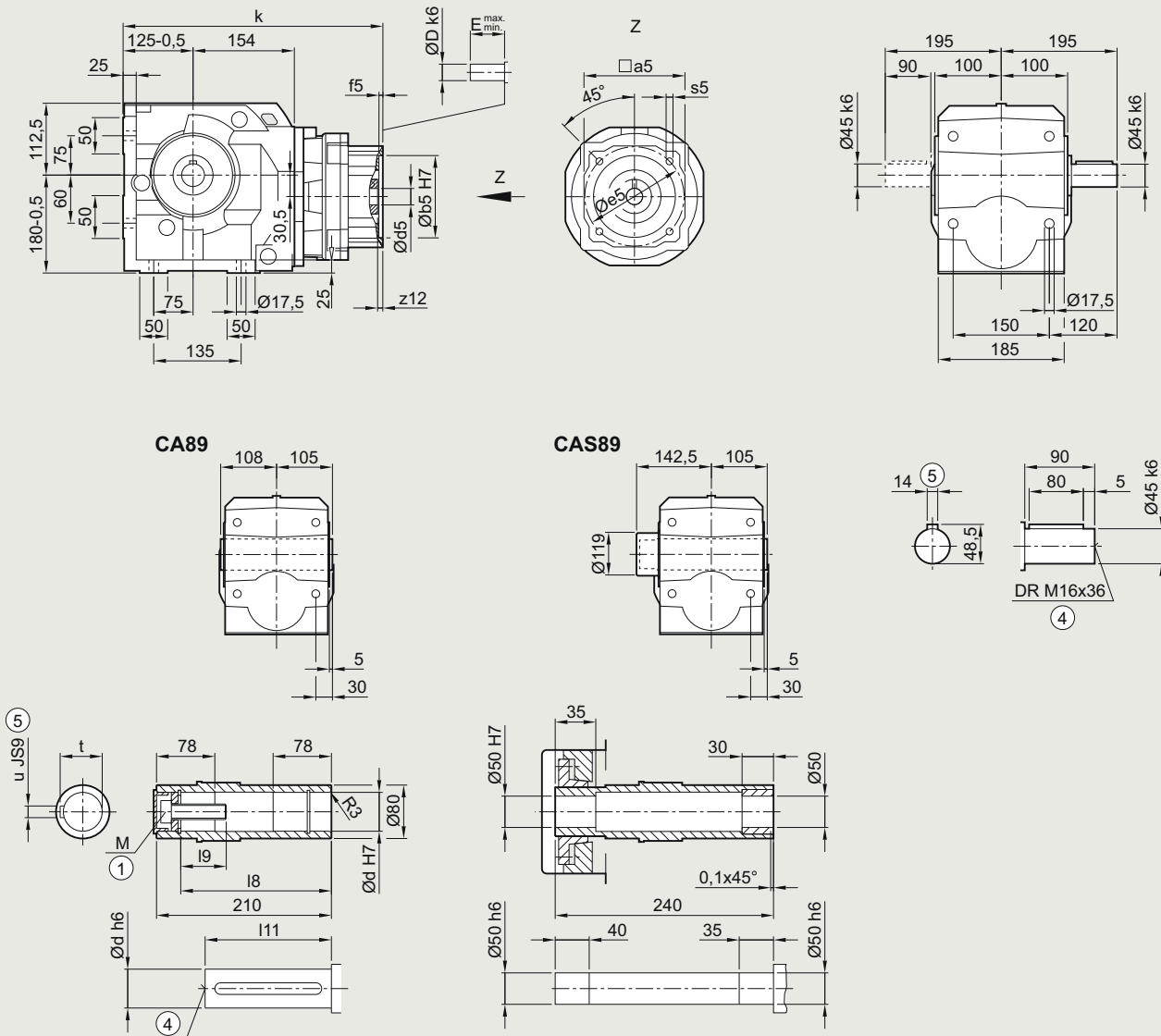
Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

#### C..89 gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

C89



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	399.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	399.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	411.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	447.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	447.5

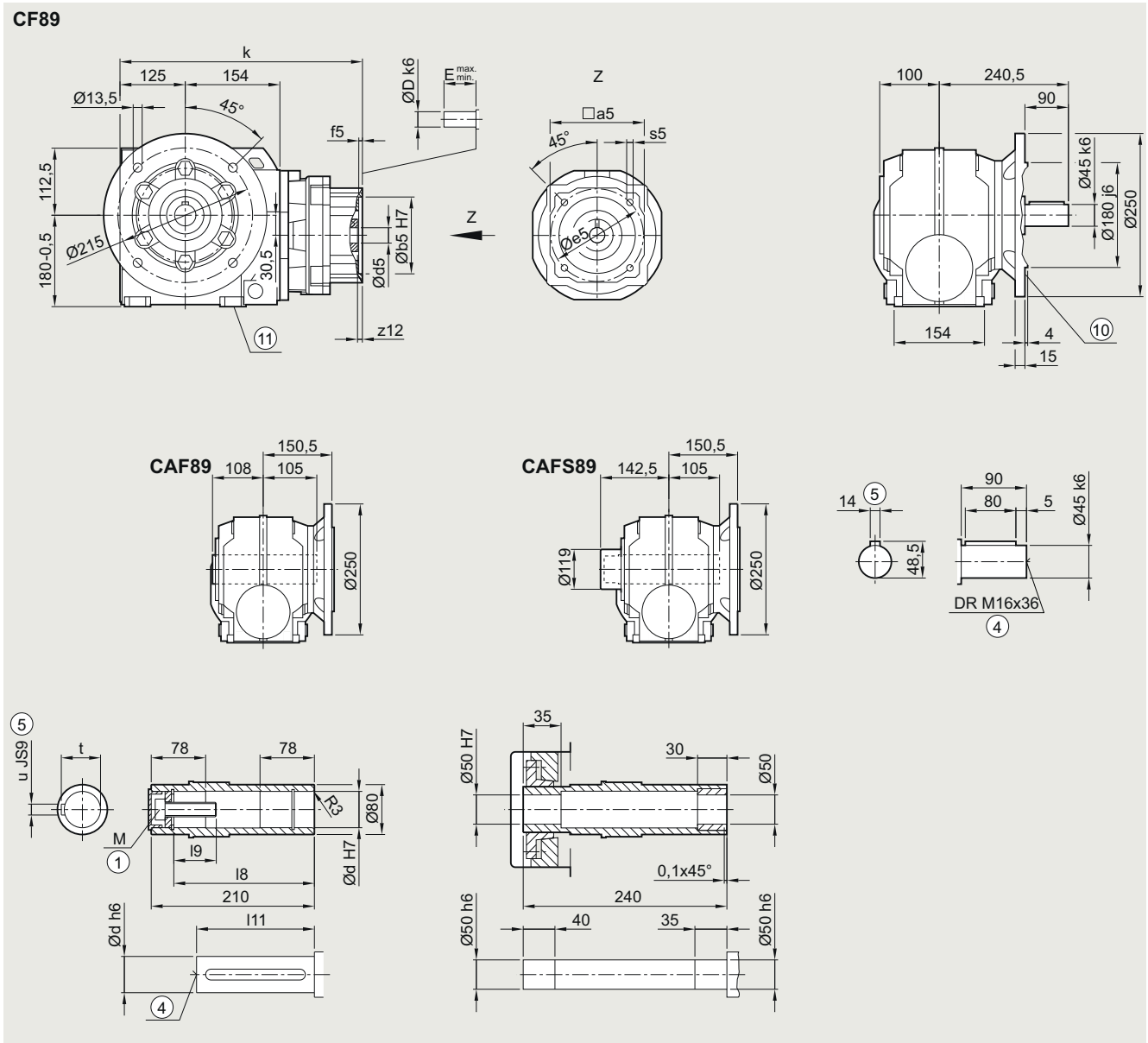
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

## C.F.89 gearbox in a flange-mounted design

CF030KS, CAF030KS, CAFS030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	399.0
KS6.2	130	110	7	145	M8x15	8	22	40	58	399.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	411.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	447.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	447.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑩ For inner contour, see page 6/78

⑪ Use bores only for foot-mounted design

## SIMOGEAR gearboxes

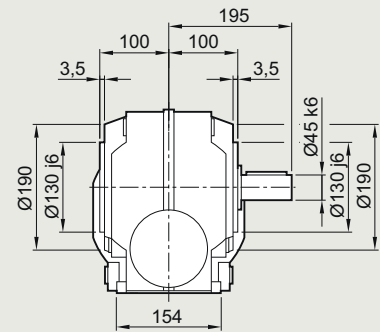
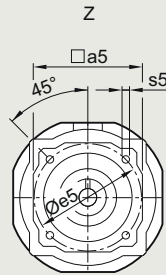
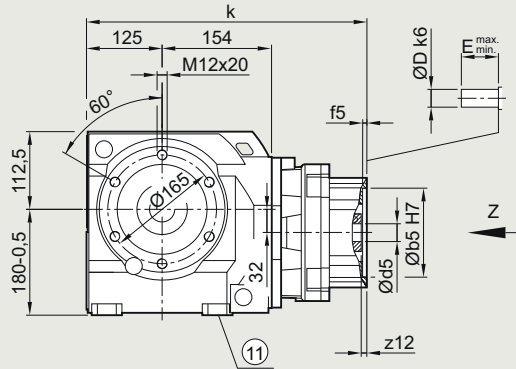
Helical worm gearbox with KS adapter for mounting defined Siemens servo motors

### Dimensional drawings

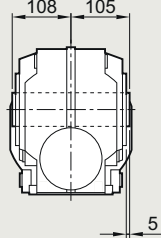
#### C.Z.89 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

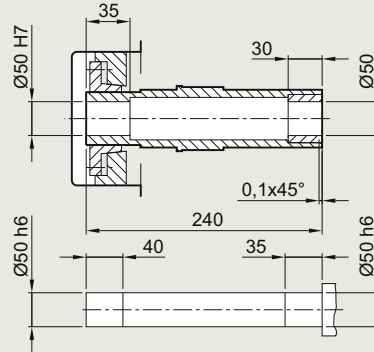
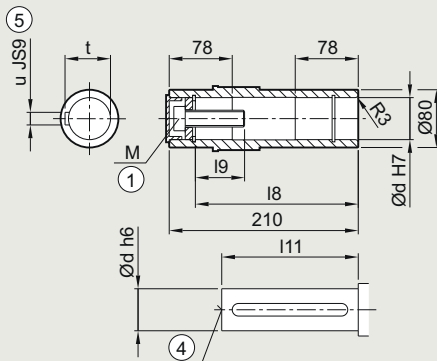
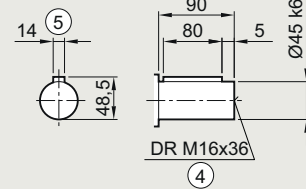
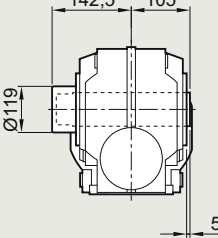
##### CZ89



##### CAZ89



##### CAZS89



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

Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	399.0
KS6.2	130	110	7	145	M8x15	8	22	40	58	399.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	411.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	447.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	447.5

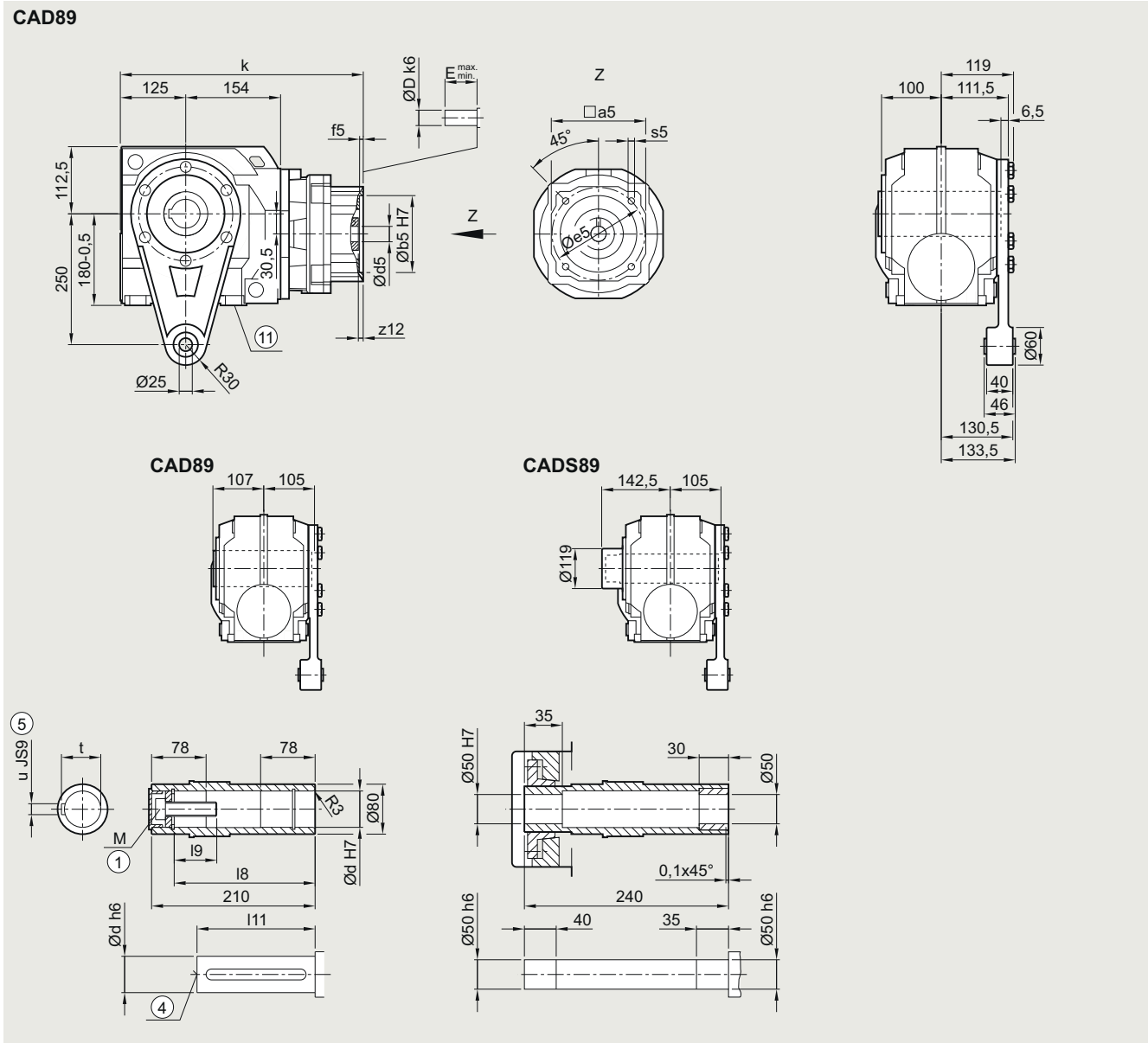
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

## CAD.89 gearbox in a shaft-mounted design

## CAD030KS, CADS030KS



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			
Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	399.0
KS6.2	130	110	7	145	M8x15	8	22	40	58	399.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	411.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	447.5
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	447.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885 ⑩ Use bores only for foot-mounted design

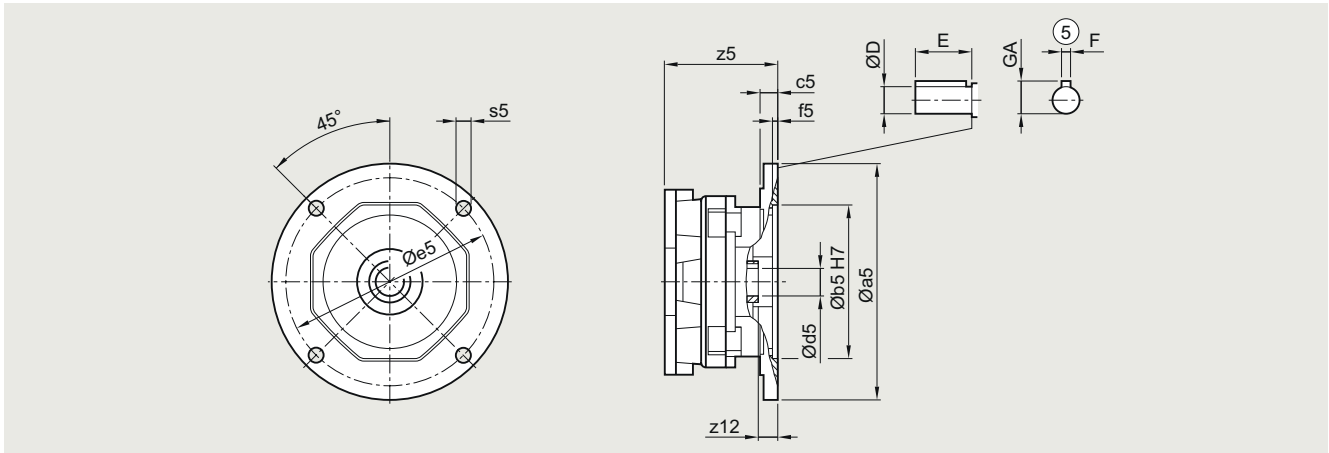
## SIMOGEAR gearboxes

Helical worm gearbox with adapter K5 for mounting a NEMA motor

### Dimensional drawings

#### C...29 to C...89 gearboxes

*C...030K5, C.F.030K5, C.Z.030K5, CAD.030K5*



6

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
<b>C...29</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
<b>C...39A</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
<b>C...49</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
<b>C...69</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	109.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	109.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	191.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	207.0
<b>C...89</b>												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	103.0
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	103.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	185.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	201.0

⑤ Feather key/keyway DIN 6885

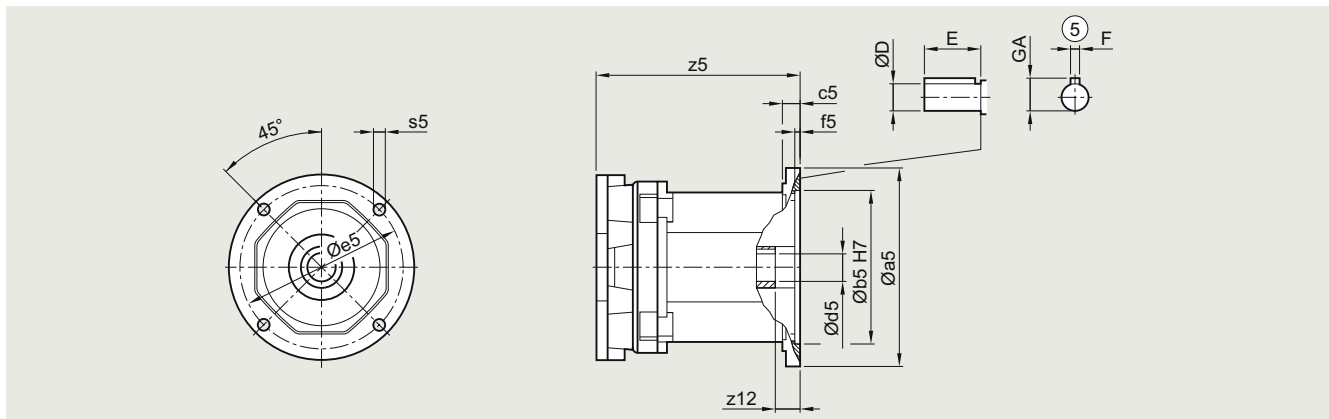
# SIMOGEAR gearboxes

Helical worm gearbox with adapter K3 for mounting a NEMA motor

## Dimensional drawings

### C...29 to C...89 gearboxes

*C...030K3, C.F.030K3, C.Z.030K3, CAD.030K3*

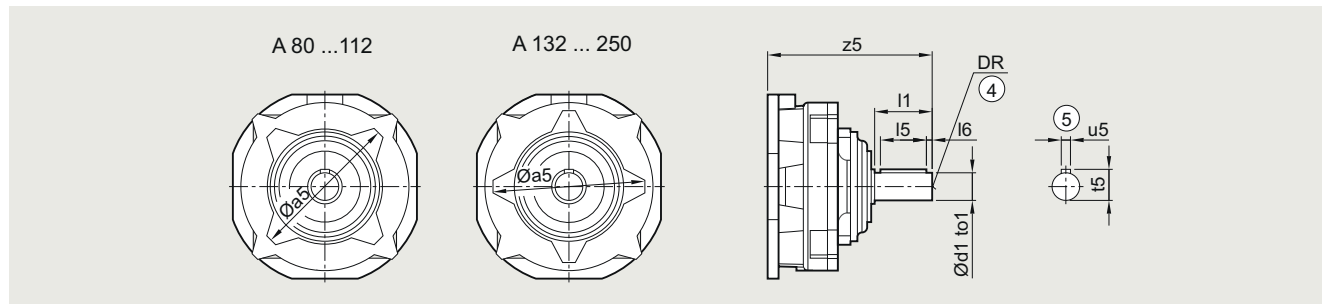


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	GA	F	z5
<b>C...29</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
<b>C...39A</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
<b>C...49</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
<b>C...69</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	191.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	191.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	247.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	318.0
<b>C...89</b>												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	185.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	185.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	241.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	312.0

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Helical worm gearbox with adapter A with free output shaft

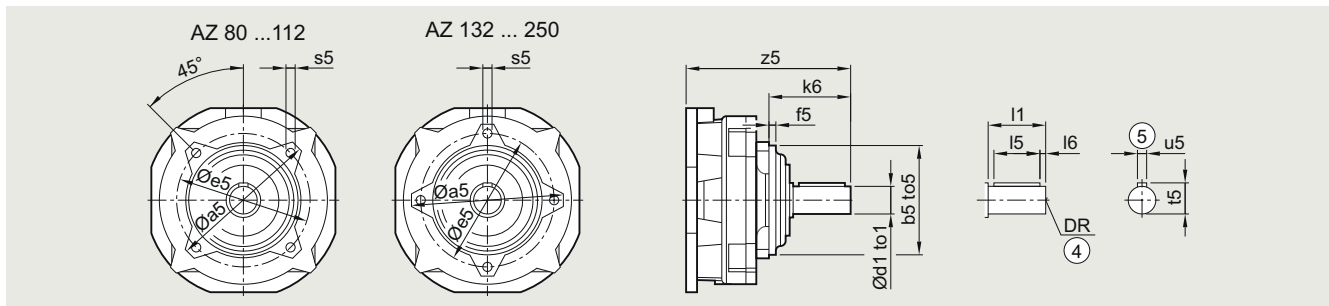
**Dimensional drawings****C...29 to C...89 gearboxes****C..030A, C.F.030A, C.Z.030A, CAD.030A**

6

Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
<b>C...29</b>										
80	132	19	k6	40	32	4	6	21.5	M6	143.5
90	132	24	k6	50	40	5	8	27.0	M8	153.5
<b>C...39A</b>										
80	132	19	k6	40	32	4	6	21.5	M6	143.5
90	132	24	k6	50	40	5	8	27.0	M8	153.5
<b>C...49</b>										
80	132	19	k6	40	32	4	6	21.5	M6	134.0
90	132	24	k6	50	40	5	8	27.0	M8	144.0
100	170	28	k6	60	50	5	8	31.0	M10	211.0
112	170	28	k6	60	50	5	8	31.0	M10	211.0
<b>C...69</b>										
80	132	19	k6	40	32	4	6	21.5	M6	134.0
90	132	24	k6	50	40	5	8	27.0	M8	144.0
100	170	28	k6	60	50	5	8	31.0	M10	211.0
112	170	28	k6	60	50	5	8	31.0	M10	211.0
<b>C...89</b>										
80	132	19	k6	40	32	4	6	21.5	M6	128.0
90	132	24	k6	50	40	5	8	27.0	M8	138.0
100	170	28	k6	60	50	5	8	31.0	M10	205.0
112	170	28	k6	60	50	5	8	31.0	M10	205.0
132	215	38	k6	80	70	5	10	41.0	M12	255.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

**C...29 to C...89 gearboxes****C..030AZ, C.F.030AZ, C.Z.030AZ, CAD.030AZ**

Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
<b>C...29</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	153.5
<b>C...39A</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	153.5
<b>C...49</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	134.0
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	144.0
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
<b>C...69</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	134.0
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	144.0
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
<b>C...89</b>																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	128.0
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	138.0
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	205.0
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	205.0
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41.0	M12	98.5	255.0

④ DIN 332

⑤ Feather key/keyway DIN 6885

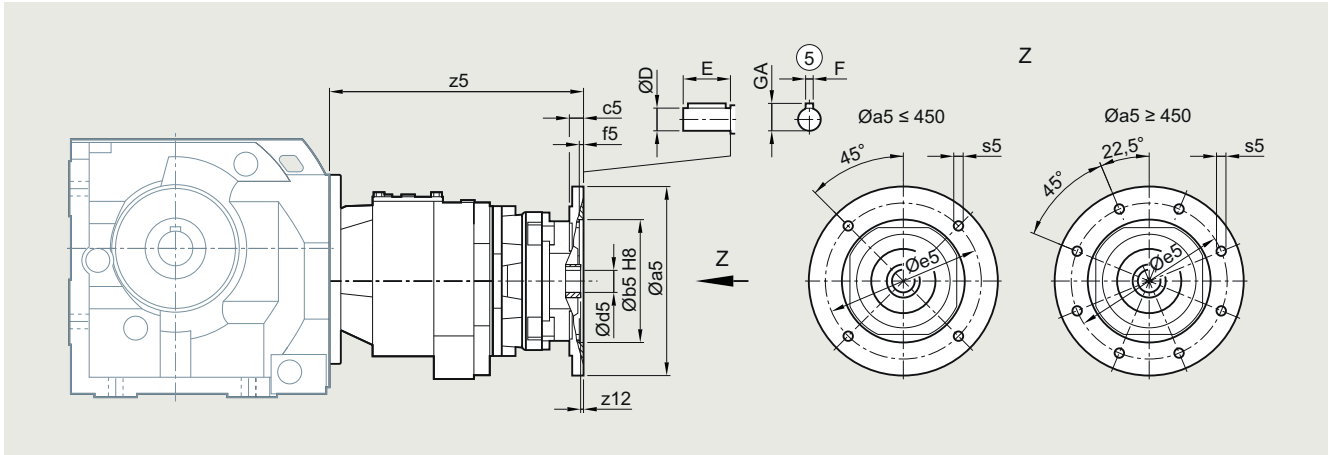


## SIMOGEAR gearboxes

Helical worm tandem gearbox with adapter K4 and K2 for mounting an IEC motor

### Dimensional drawings

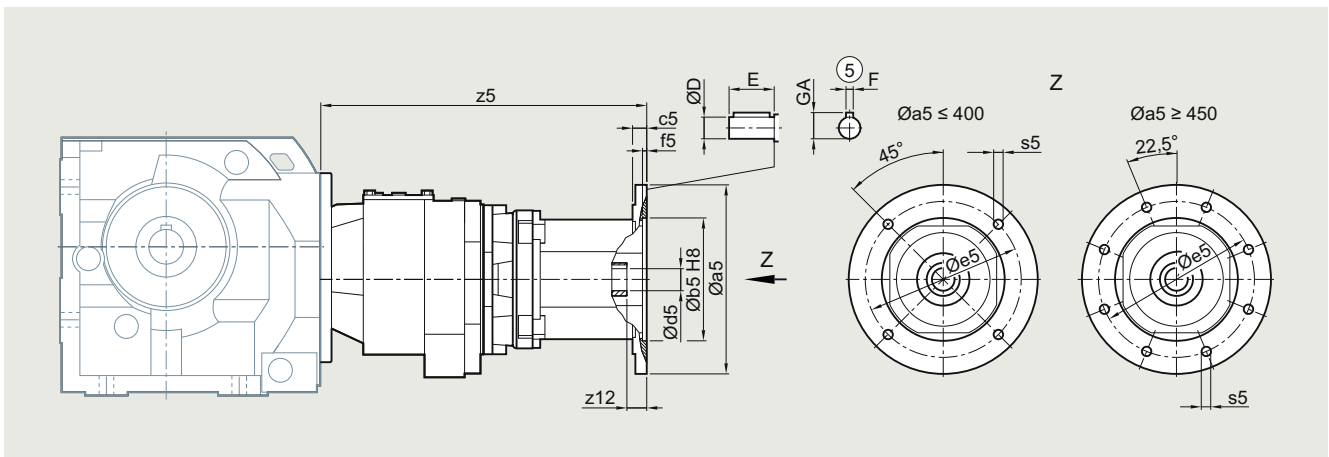
#### Helical worm tandem gearbox with adapter K4



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
C.89-D/Z39	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257.0
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	257.0
	K4-(80)	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	285.0
	K4-(90)	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	285.0
	K4-(100)	250	180	16	5	215	M12	7.5	28	60	8	31.0	339.5

⑤ Feather key/keyway DIN 6885

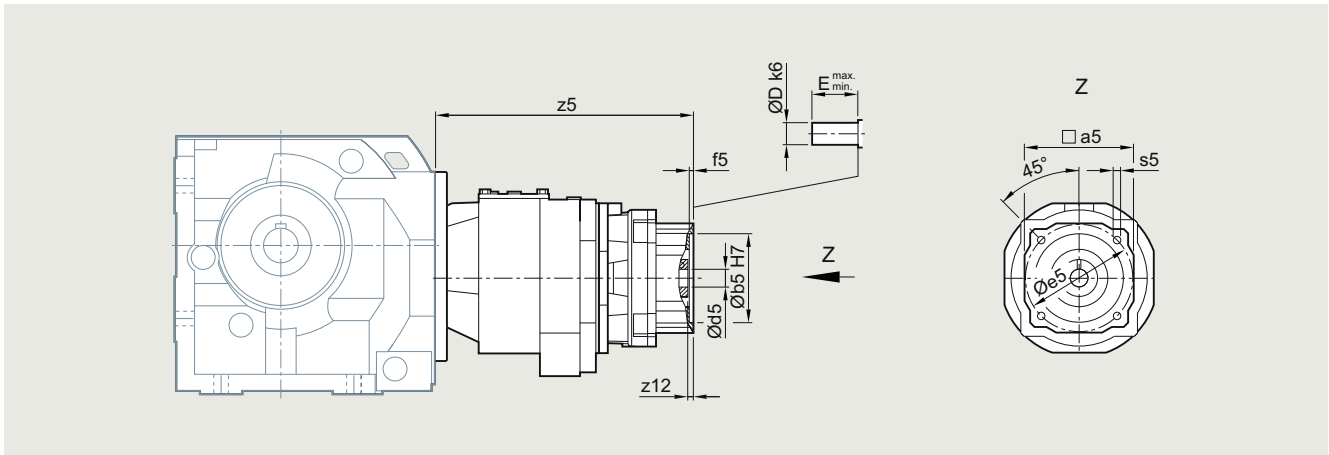
#### Helical worm tandem gearbox with adapter K2



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
C.89-D/Z39	K2-(80)	200	130	15	4.5	165	M10	15	19	40	6	21.5	377.5
	K2-(90)	200	130	15	4.5	165	M10	25	24	50	8	27.0	377.5
	K2-(100)	250	180	18	5.0	215	M12	30	28	60	8	31.0	424.5

⑤ Feather key/keyway DIN 6885

## Helical worm tandem gearbox with KS adapter



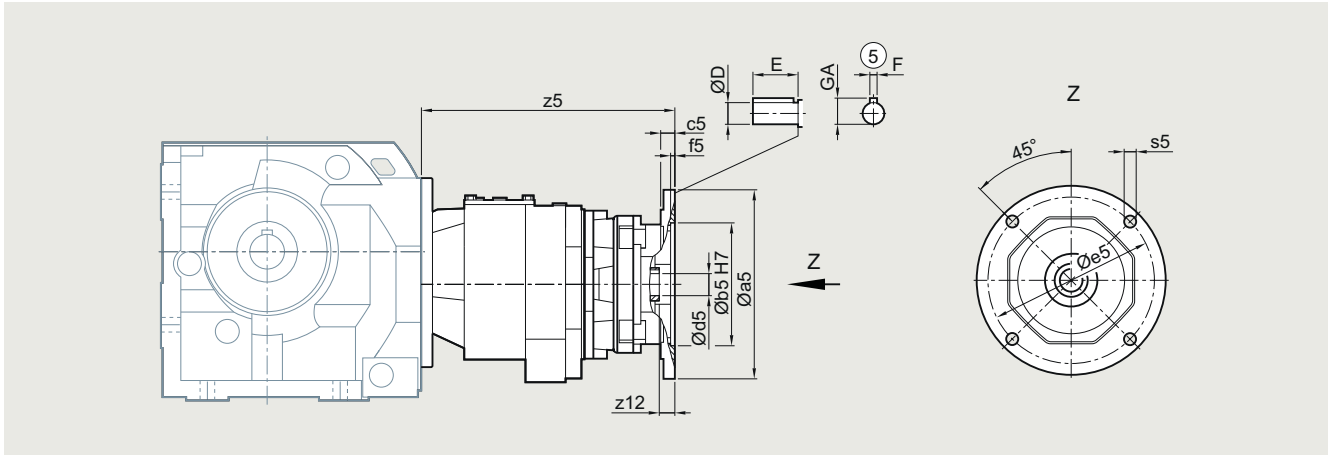
Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	E <sub>min.</sub>	E <sub>max.</sub>	z5
C.29-D/Z19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219.0
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219.0
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
C.39A-D/Z19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219.0
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219.0
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
C.49-D/Z19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210.0
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210.0
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
C.69-D/Z19	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	210.0
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	210.0
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	222.5
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	222.5
C.89-D/Z39	KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	261.5
	KS3.2	73	60	4.5	75	M6x11	5	14	25	31	261.5
	KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274.0
	KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274.0
	KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290.0
	KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290.0
	KS6.1	130	110	4.5	130	M8x15	8	24	40	58	315.0
	KS6.2	130	110	7.0	145	M8x15	8	22	40	58	315.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	327.5	

## SIMOGEAR gearboxes

Helical worm tandem gearbox with adapter K5 and K3 for mounting NEMA motors

### Dimensional drawings

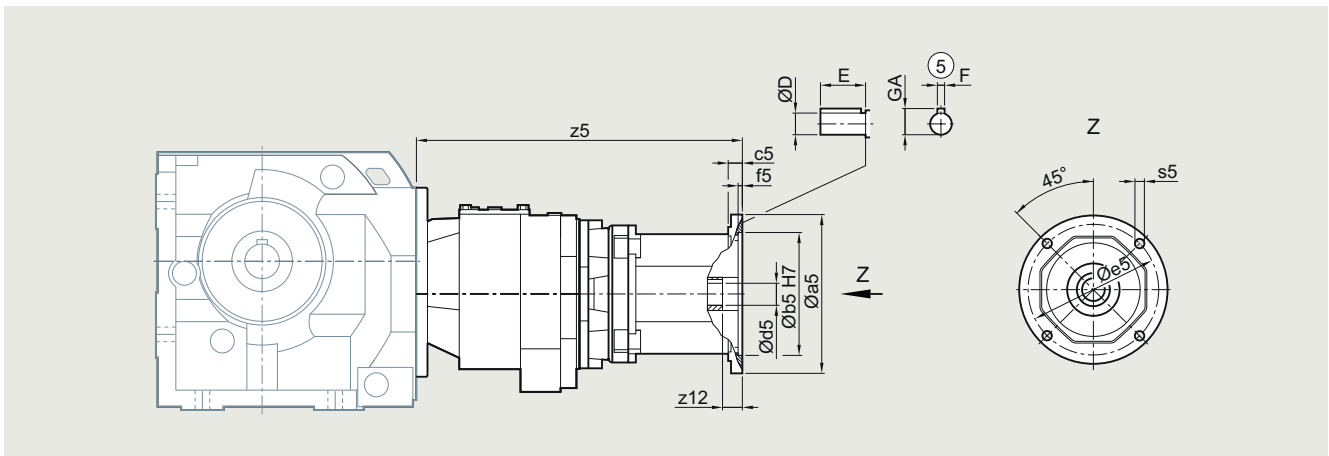
#### Helical worm tandem gearbox with adapter K5



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
C.89-D/Z39	K5-(56)	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	298
	K5-(140)	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	298
	K5-(160)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	380

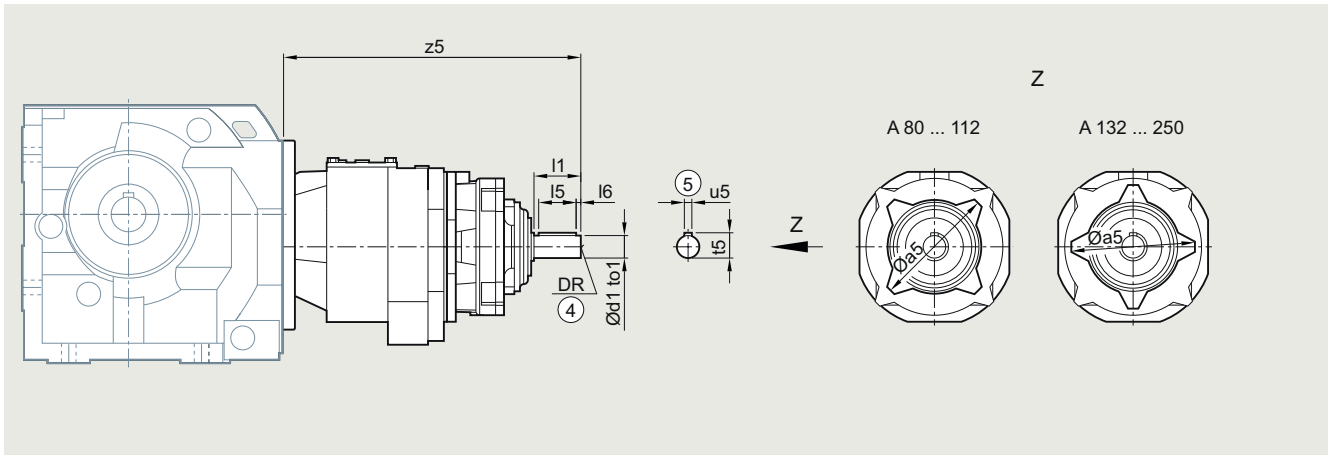
⑤ Feather key/keyway DIN 6885

#### Helical worm tandem gearbox with adapter K3



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
C.89-D/Z39	K3-(56)	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	380.5
	K3-(140)	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	380.5
	K3-(160)	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	436.5

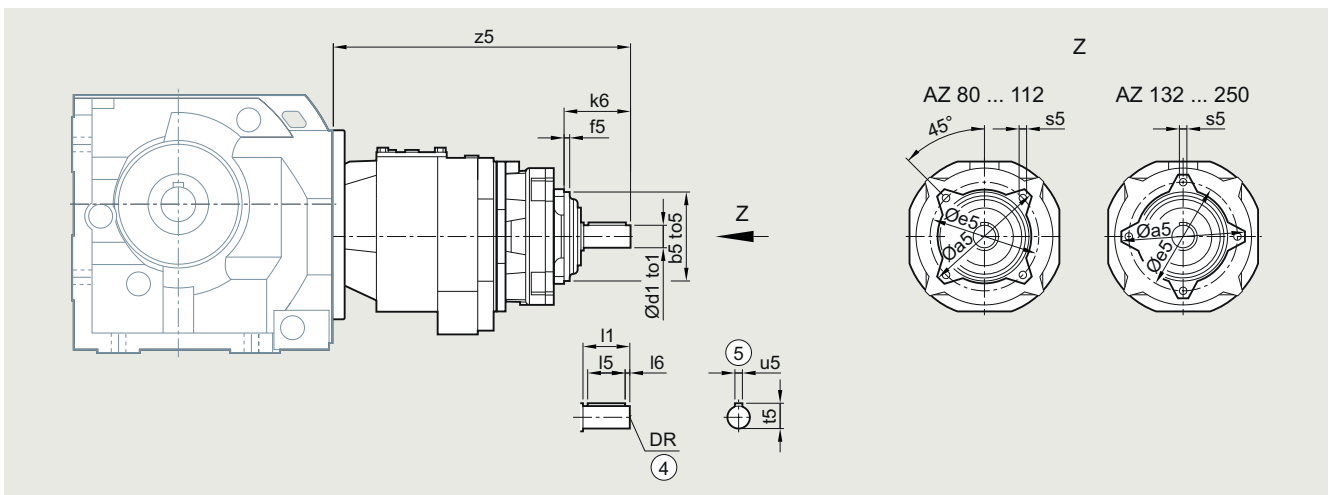
⑤ Feather key/keyway DIN 6885

**Helical worm tandem gearbox with adapter A**

Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
C.89-D/Z39	A-(80)	132	19	k6	40	32	4	6	21.5	M6x16	323
	A-(90)	132	24	k6	50	40	5	8	27.0	M8x19	333

④ DIN 332

⑤ Feather key/keyway DIN 6885

**Helical worm tandem gearbox with adapter AZ**

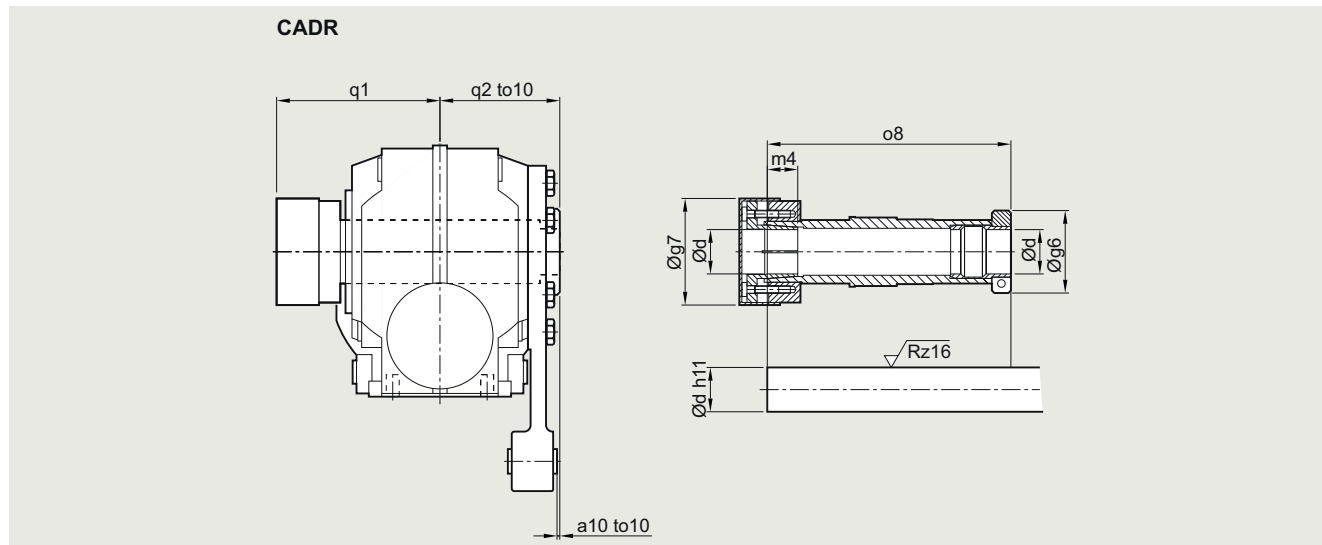
Gearbox	Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
C.89-D/Z39	AZ-(80)	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61.0	323
	AZ-(90)	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8x19	71.0	333

④ DIN 332

⑤ Feather key/keyway DIN 6885

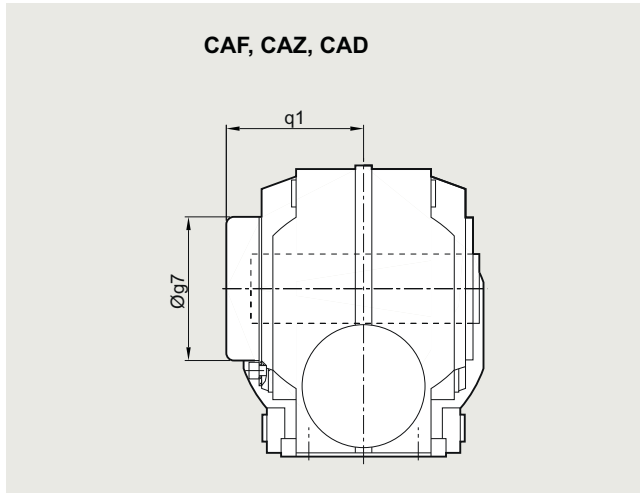
**SIMOGEAR gearboxes**

Helical worm gearboxes

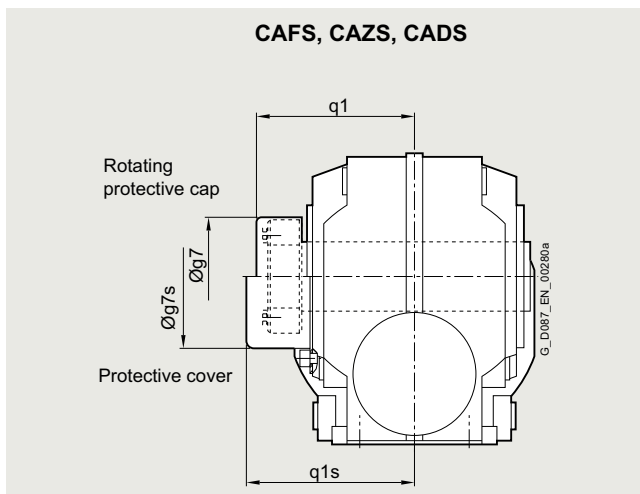
**Dimensional drawings****SIMOLOC assembly system**

Note mounting tolerance to10 when positioning the torque arm.

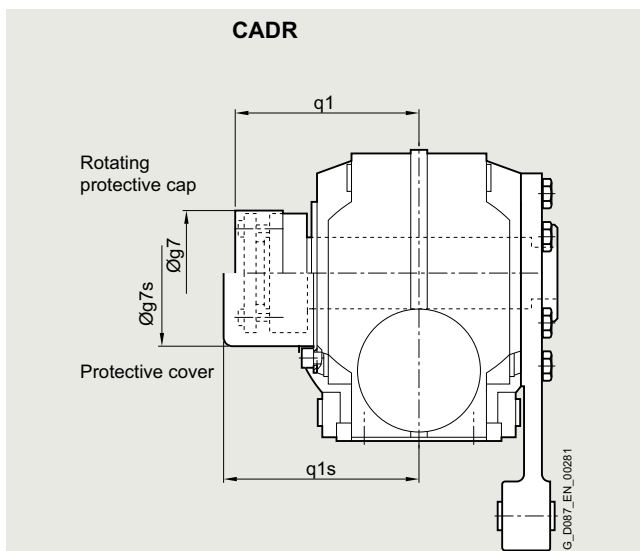
d	g6	g7	m4	o8	q1	q2	a10	to10
<b>CADR.29</b>								
20	58.5	56	18.5	151.0	102	75	11	+2.1
1"								+0.6
0.75"								
<b>CADR39A</b>								
30	62.0	76	22	160.5	106	75	39	+2.2
25								+0.7
1.25"								
1.1875"								
1"								
<b>CADR49</b>								
35	65.0	84	24	192.0	124	90	35	+2.6
30								+0.8
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"								

**Protective covers**
**Protective cover 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

**Protective covers for hollow shaft with shrink disk**


Gearbox type	CA.S29	CA.S39A	CA.S49	CA.S69	CA.S89
<b>Rotating protective cap with 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

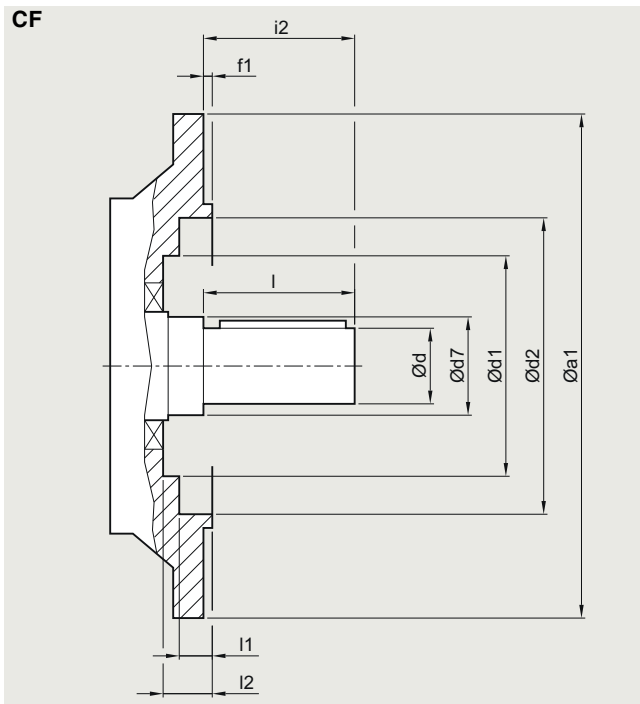
## SIMOGEAR gearboxes

Helical worm gearboxes

### Dimensional drawings

#### Inner contour of the flange design

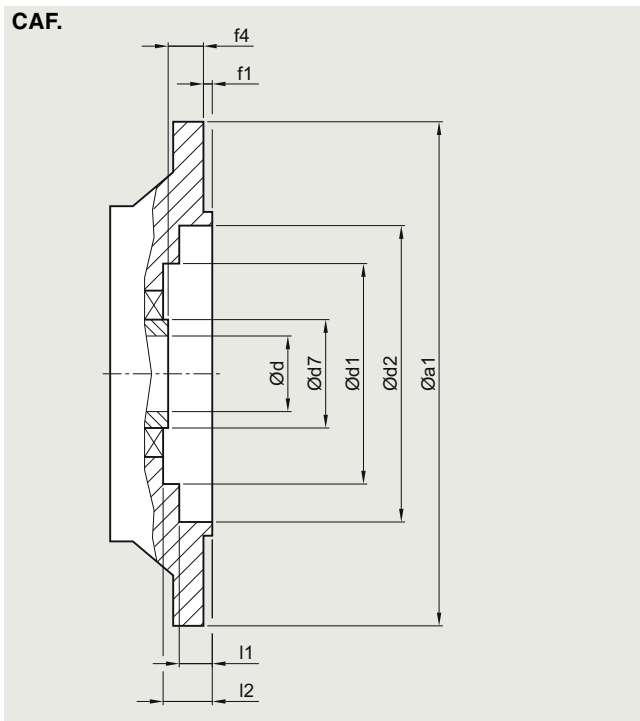
Notes regarding the design of the customer's interface for the solid shaft design



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
CF39	160	25	30	-	100	3.5	50	50	5.0	-
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

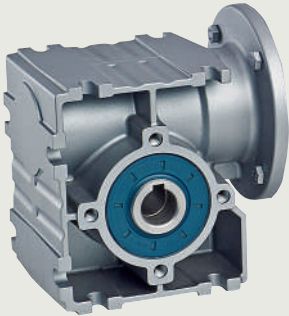
6

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.39	160	25/30	45	80	102	3.5	24.0	2.0	29.5
CAF.49	200	30/35	50	90	120	3.5	25.0	4.0	30.5
CAF.69	200	40/45	65	105	120	4.0	42.0	4.5	48.0
CAF.89	250	50/60	80	134	147	4	45.5	14.0	53.0

## Worm gearboxes



<b>7/2</b>	<b>Orientation</b>
<b>7/3</b> 7/3	<b>Transmission ratios and torques</b> Selection and ordering data
<b>7/5</b> 7/5	<b>General technical specifications</b> Permissible radial force
<b>7/5</b> 7/5 7/6 7/10 7/14 7/18	<b>Dimensional drawings</b> Dimensional drawing overview Worm gearbox S..09 Worm gearbox S..19 Worm gearbox S..29 Protective cover for hollow shaft



## SIMOGEAR gearboxes

### Worm gearboxes

#### Orientation

#### SIMOGEAR worm gearbox S

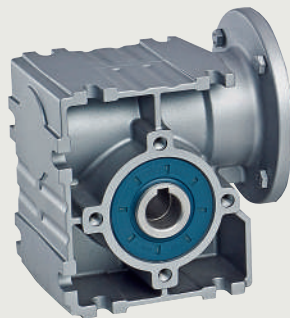


Fig. 7/1 Worm gearbox S

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

#### Transmission stages

- 1-stage worm gearbox

#### Designs

- Shaft-mounted design
- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design

#### Mounting

- Hollow shaft with feather key
- Hollow shaft with plug-in shaft
- Solid shaft design with and without 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

i	Lead angle of the worm $\gamma_m$	$n_{mot} = 2800$ rpm				$n_{mot} = 1400$ rpm				Adapter				Article No.
		$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	K4	63	71	80	
<b>S.09</b>														
80	2.1	35.0	18	0.14	48	17.5	19	0.07	47	✓				2KJ3730 - ■■■ A04 - 0 ■ B1
60	2.7	46.7	22	0.20	55	23.3	24	0.11	52	✓				2KJ3730 - ■■■ A04 - 0 ■ C1
50	3.2	56.0	21	0.21	58	28.0	27	0.14	56	✓				2KJ3730 - ■■■ A04 - 0 ■ D1
40	3.8	70.0	21	0.24	63	35.0	28	0.17	61	✓				2KJ3730 - ■■■ A04 - 0 ■ E1
30	4.6	93.3	20	0.29	68	46.7	28	0.20	67	✓				2KJ3730 - ■■■ A04 - 0 ■ F1
25	5.2	112.0	20	0.33	72	56.0	27	0.23	70	✓				2KJ3730 - ■■■ A04 - 0 ■ G1
20	7.4	140.0	21	0.40	77	70.0	27	0.26	75	✓				2KJ3730 - ■■■ A04 - 0 ■ H1
15	9.2	186.7	20	0.48	81	93.3	27	0.33	80	✓				2KJ3730 - ■■■ A04 - 0 ■ J1
10	14.0	280.0	20	0.68	86	140.0	27	0.47	85	✓				2KJ3730 - ■■■ A04 - 0 ■ K1
7	19.0	400.0	19	0.89	89	200.0	26	0.62	88	✓				2KJ3730 - ■■■ A04 - 0 ■ L1
5	25.0	560.0	19	1.22	91	280.0	25	0.81	91	✓				2KJ3730 - ■■■ A04 - 0 ■ M1
<b>S.19</b>														
80	3.5	35.0	33	0.22	55	17.5	35	0.12	54	✓				2KJ3731 - ■■■ A04 - 0 ■ B1
60	3.5	46.7	33	0.26	61	23.3	44	0.18	59	✓				2KJ3731 - ■■■ A04 - 0 ■ C1
50	4.0	56.0	33	0.30	64	28.0	44	0.20	63	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ D1
40	4.5	70.0	31	0.33	68	35.0	43	0.24	67	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ E1
30	5.5	93.3	31	0.42	73	46.7	41	0.28	72	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ F1
25	6.5	112.0	31	0.48	76	56.0	41	0.32	75	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ G1
20	9.5	140.0	31	0.56	81	70.0	41	0.38	80	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ H1
15	11.0	186.7	30	0.70	84	93.3	41	0.48	84	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ J1
10	17.0	280.0	30	1.00	88	140.0	40	0.67	88	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ K1
7	17.0	400.0	29	1.33	91	200.0	39	0.91	90	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ L1
5	23.0	560.0	28	1.78	92	280.0	37	1.18	92	✓	✓			2KJ3731 - ■■■ A04 - 0 ■ M1
<b>S.29</b>														
100	2.0	28.0	57	0.33	50	14.0	72	0.22	49	✓				2KJ3732 - ■■■ A04 - 0 ■ A1
80	2.5	35.0	57	0.39	54	17.5	80	0.27	54	✓	✓			2KJ3732 - ■■■ A04 - 0 ■ B1
60	3.0	46.7	57	0.46	60	23.3	78	0.32	59	✓	✓			2KJ3732 - ■■■ A04 - 0 ■ C1
50	3.5	56.0	55	0.50	64	28.0	75	0.35	63	✓	✓			2KJ3732 - ■■■ A04 - 0 ■ D1
40	4.5	70.0	55	0.59	68	35.0	74	0.40	68	✓	✓			2KJ3732 - ■■■ A04 - 0 ■ E1
30	5.0	93.3	53	0.71	73	46.7	73	0.49	73	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■ F1
25	6.0	112.0	53	0.82	76	56.0	73	0.56	76	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■ G1
20	8.5	140.0	53	0.96	81	70.0	73	0.67	80	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■ H1
15	10.0	186.7	53	1.23	84	93.3	72	0.84	84	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■ J1
10	15.0	280.0	53	1.77	88	140.0	72	1.20	88	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■ K1
7	15.0	400.0	53	2.44	91	200.0	71	1.63	91	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■ L1
5	21.0	560.0	51	3.22	93	280.0	69	2.18	93	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■ M1

## Article No. supplement

Shaft design → page 9/49

1 or 9

Adapter size

K4 B C D

Gearbox mounting type → page 9/40

A, D, F or H

## SIMOGEAR gearboxes

## Worm gearboxes

## Transmission ratios and torques

## Selection and ordering data

i	Lead angle of the worm $\gamma_m$	$n_{mot} = 900$ rpm				$n_{mot} = 500$ rpm				Adapter				Article No.
		$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	$n_2$ rpm	$T_{2N}$ Nm	$P_{mot}$ kW	$\eta$ %	K4	63	71	80	
<b>S.09</b>														
80	2.1	11.3	19	0.05	44	6.3	20	0.03	40	✓				2KJ3730 - ■■■ A04 - 0 ■■ B1
60	2.7	15.0	24	0.08	50	8.3	24	0.05	45	✓				2KJ3730 - ■■■ A04 - 0 ■■ C1
50	3.2	18.0	27	0.10	53	10.0	28	0.06	49	✓				2KJ3730 - ■■■ A04 - 0 ■■ D1
40	3.8	22.5	31	0.13	58	12.5	31	0.08	54	✓				2KJ3730 - ■■■ A04 - 0 ■■ E1
30	4.6	30.0	32	0.16	64	16.7	33	0.10	60	✓				2KJ3730 - ■■■ A04 - 0 ■■ F1
25	5.2	36.0	32	0.18	68	20.0	32	0.10	64	✓				2KJ3730 - ■■■ A04 - 0 ■■ G1
20	7.4	45.0	31	0.20	73	25.0	31	0.12	70	✓				2KJ3730 - ■■■ A04 - 0 ■■ H1
15	9.2	60.0	33	0.27	78	33.3	33	0.15	75	✓				2KJ3730 - ■■■ A04 - 0 ■■ J1
10	14.0	90.0	32	0.36	84	50.0	33	0.21	81	✓				2KJ3730 - ■■■ A04 - 0 ■■ K1
7	19.0	128.6	31	0.48	87	71.4	33	0.29	85	✓				2KJ3730 - ■■■ A04 - 0 ■■ L1
5	25.0	180.0	30	0.63	90	100.0	33	0.39	88	✓				2KJ3730 - ■■■ A04 - 0 ■■ M1
<b>S.19</b>														
80	3.5	11.3	35	0.08	51	6.3	36	0.05	47	✓				2KJ3731 - ■■■ A04 - 0 ■■ B1
60	3.5	15.0	49	0.14	57	8.3	51	0.09	52	✓				2KJ3731 - ■■■ A04 - 0 ■■ C1
50	4.0	18.0	51	0.16	61	10.0	59	0.11	56	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ D1
40	4.5	22.5	51	0.18	65	12.5	64	0.14	61	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ E1
30	5.5	30.0	50	0.22	70	16.7	63	0.17	66	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ F1
25	6.5	36.0	49	0.25	74	20.0	62	0.19	70	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ G1
20	9.5	45.0	50	0.30	78	25.0	62	0.22	75	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ H1
15	11.0	60.0	50	0.38	82	33.3	62	0.27	79	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ J1
10	17.0	90.0	49	0.53	87	50.0	61	0.38	85	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ K1
7	17.0	128.6	47	0.70	90	71.4	58	0.49	88	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ L1
5	23.0	180.0	44	0.91	91	100.0	56	0.65	90	✓	✓			2KJ3731 - ■■■ A04 - 0 ■■ M1
<b>S.29</b>														
100	2.0	9.0	72	0.14	47	5.0	72	0.09	43	✓				2KJ3732 - ■■■ A04 - 0 ■■ A1
80	2.5	11.3	92	0.21	52	6.3	93	0.13	48	✓	✓			2KJ3732 - ■■■ A04 - 0 ■■ B1
60	3.0	15.0	93	0.26	57	8.3	116	0.19	53	✓	✓			2KJ3732 - ■■■ A04 - 0 ■■ C1
50	3.5	18.0	90	0.28	61	10.0	115	0.21	57	✓	✓			2KJ3732 - ■■■ A04 - 0 ■■ D1
40	4.5	22.5	90	0.32	66	12.5	113	0.24	62	✓	✓			2KJ3732 - ■■■ A04 - 0 ■■ E1
30	5.0	30.0	86	0.38	72	16.7	110	0.28	68	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■■ F1
25	6.0	36.0	85	0.43	75	20.0	109	0.32	71	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■■ G1
20	8.5	45.0	85	0.51	79	25.0	109	0.38	76	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■■ H1
15	10.0	60.0	85	0.64	83	33.3	109	0.47	81	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■■ J1
10	15.0	90.0	85	0.92	87	50.0	109	0.66	86	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■■ K1
7	15.0	128.6	84	1.26	90	71.4	107	0.90	89	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■■ L1
5	21.0	180.0	82	1.68	92	100.0	105	1.21	91	✓	✓	✓		2KJ3732 - ■■■ A04 - 0 ■■ M1

## Article No. supplement

Shaft design → page 9/49

1 or 9

Adapter size

K4 B C D

Gearbox mounting type → page 9/40

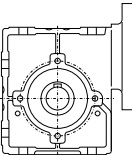
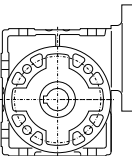
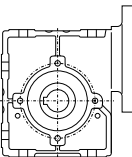
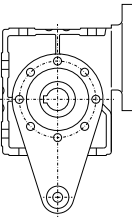
A, D, F or H

**Permissible radial force  $F_{Rperm}$** 

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	36000	1800	1800	1800	1800	1800	1690	1400	1120
SF09			106.0	86.0		1800	1800	1800	1800	1620	1330	1100	880
S19	20	40	98.0	78.0	76000	3800	3800	3800	3200	2650	2180	1780	1420
SF19			128.0	108.0		3200	3120	2920	2450	2030	1670	1360	1090
S29	20	40	120.5	100.5	72000	3600	3600	3600	3600	3600	3290	2680	2120
SF29			153.5	133.5		3600	3600	3600	3600	3150	2580	2110	1660

**Dimensional drawings**
**Dimensional drawing overview**

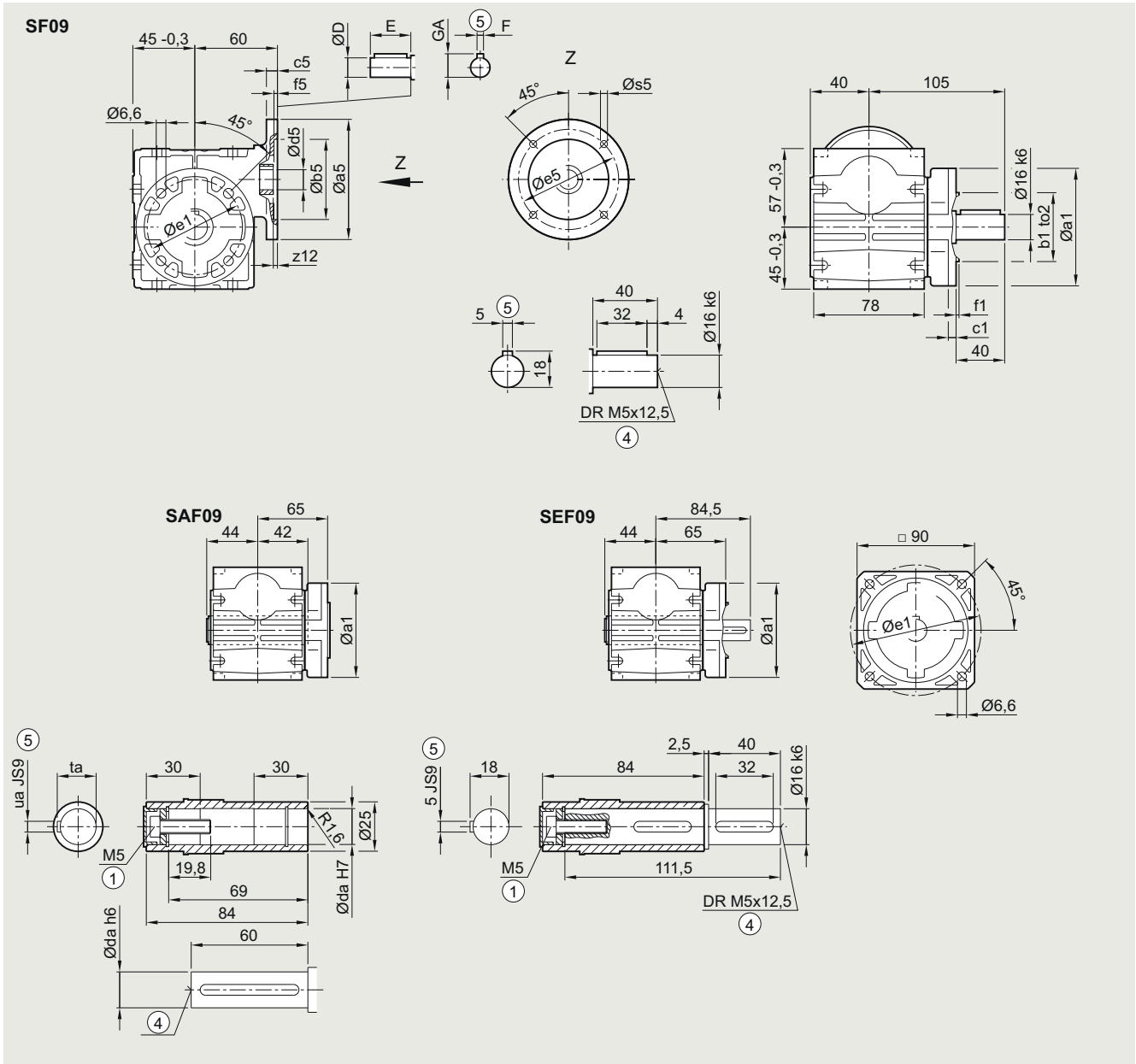
Information about dimensional drawings can be found in chapter "Introduction" on page 1/17.

Design	Size	Dimensional drawing on page
<b>Foot-mounted design</b>		
	S.09	7/6
	S.19	7/10
	S.29	7/14
<b>Flange-mounted design</b>		
	S.F09	7/7
	S.F19	7/11
	S.F29	7/15
<b>Housing flange design</b>		
	S.Z09	7/8
	S.Z19	7/12
	S.Z29	7/16
<b>Shaft-mounted design</b>		
	SAD09	7/9
	SAD19	7/13
	SAD29	7/17
<b>Additional versions and options</b>		
	Protective cover for hollow shafts	7/18



**S.F09 gearbox in a flange-mounted design**

**SF030, SAF030, SEF030**



<b>Hollow shaft</b>	<b>da</b>			<b>ua</b>			<b>ta</b>				
	14			5			16.3				
	16			5			18.3				
<b>Flange</b>	<b>a1</b>	<b>e1</b>	<b>b1</b>	<b>to2</b>	<b>c1</b>	<b>f1</b>					
	80	65	50	j6	7	2.5					
	120	100	80	j6	7	3.0					
<b>Adapter</b>	<b>a5</b>	<b>b5</b>	<b>c5</b>	<b>f5</b>	<b>e5</b>	<b>s5</b>	<b>z12</b>	<b>d5/D</b>	<b>E</b>	<b>F</b>	<b>GA</b>
63	90	60	7	3	75	5.8	2	11	23	4	12.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

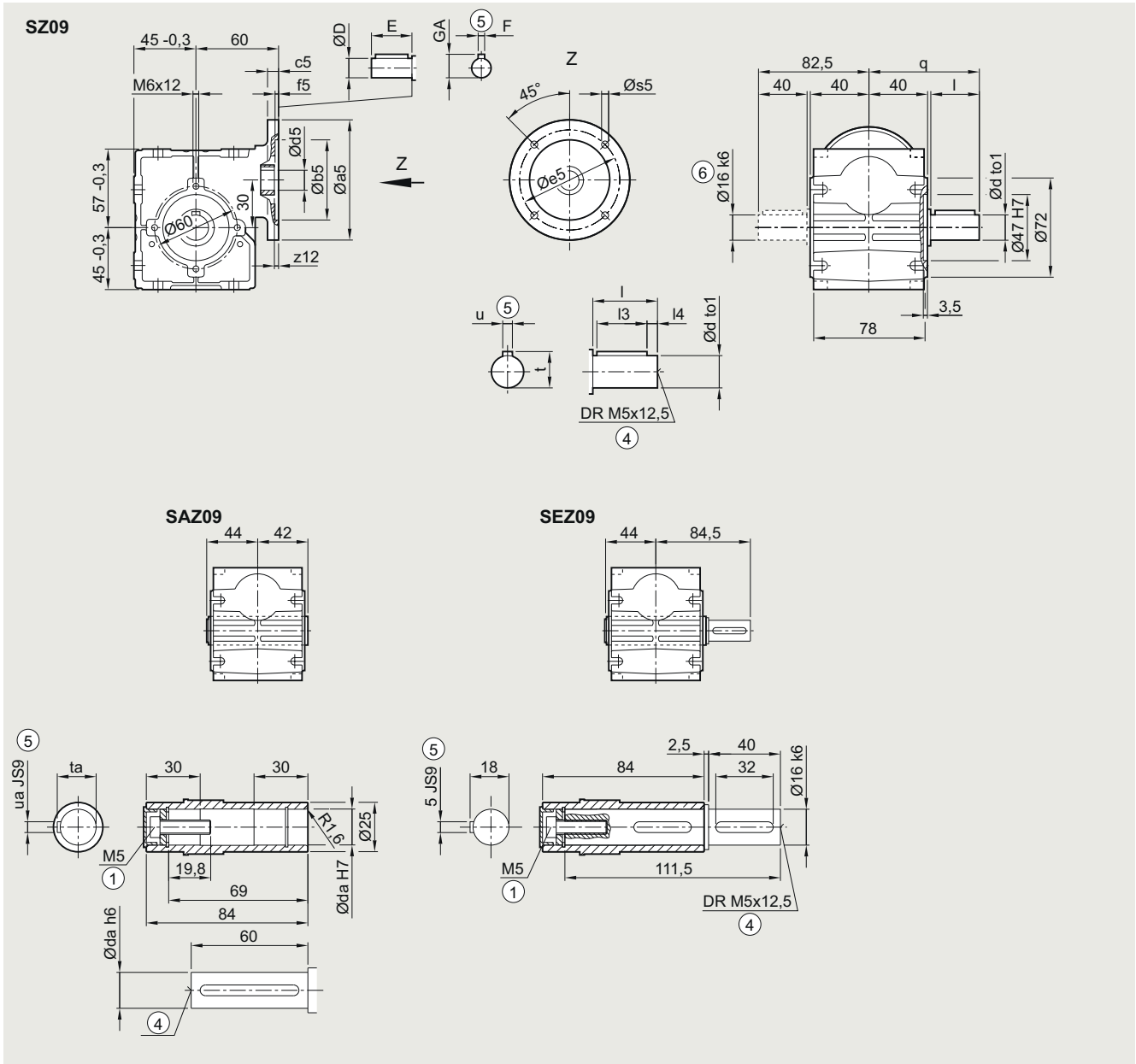
# SIMOGEAR gearboxes

Worm gearbox with adapter K4

## Dimensional drawings

### S.Z09 gearbox in a housing flange design

SZ030, SAZ030, SEZ030



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

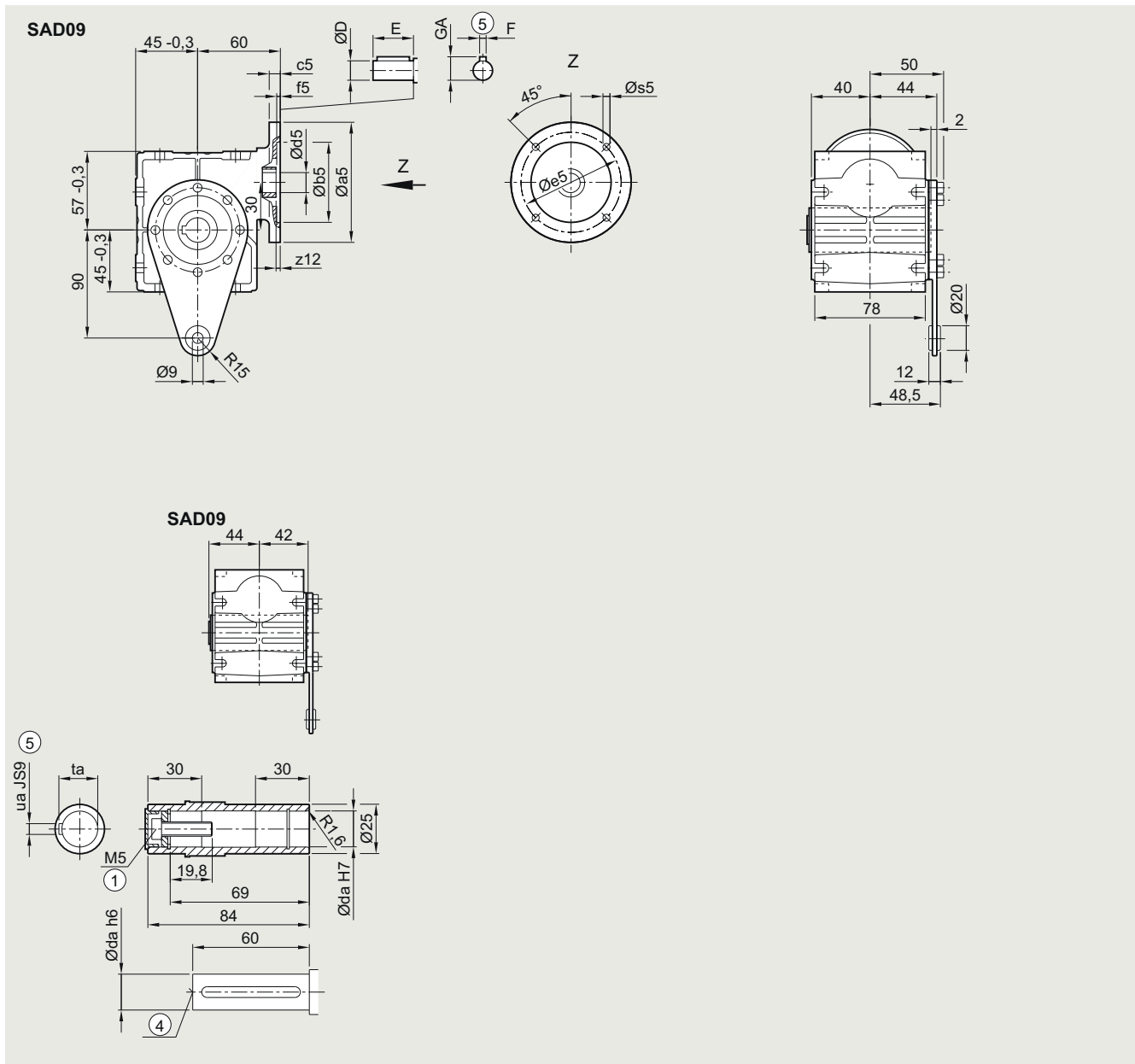
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA
63	90	60	7	3	75	5.8	2	11	23	4	12.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ Solid shaft with 2nd shaft extension only d16

**SAD09 gearbox in a shaft-mounted design**
**SAD030**


Hollow shaft	da		ua		ta						
	14		5		16.3						
	16		5		18.3						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA
63	90	60	7	3	75	5.8	2	11	23	4	12.5

① ISO 4014

④ DIN 332

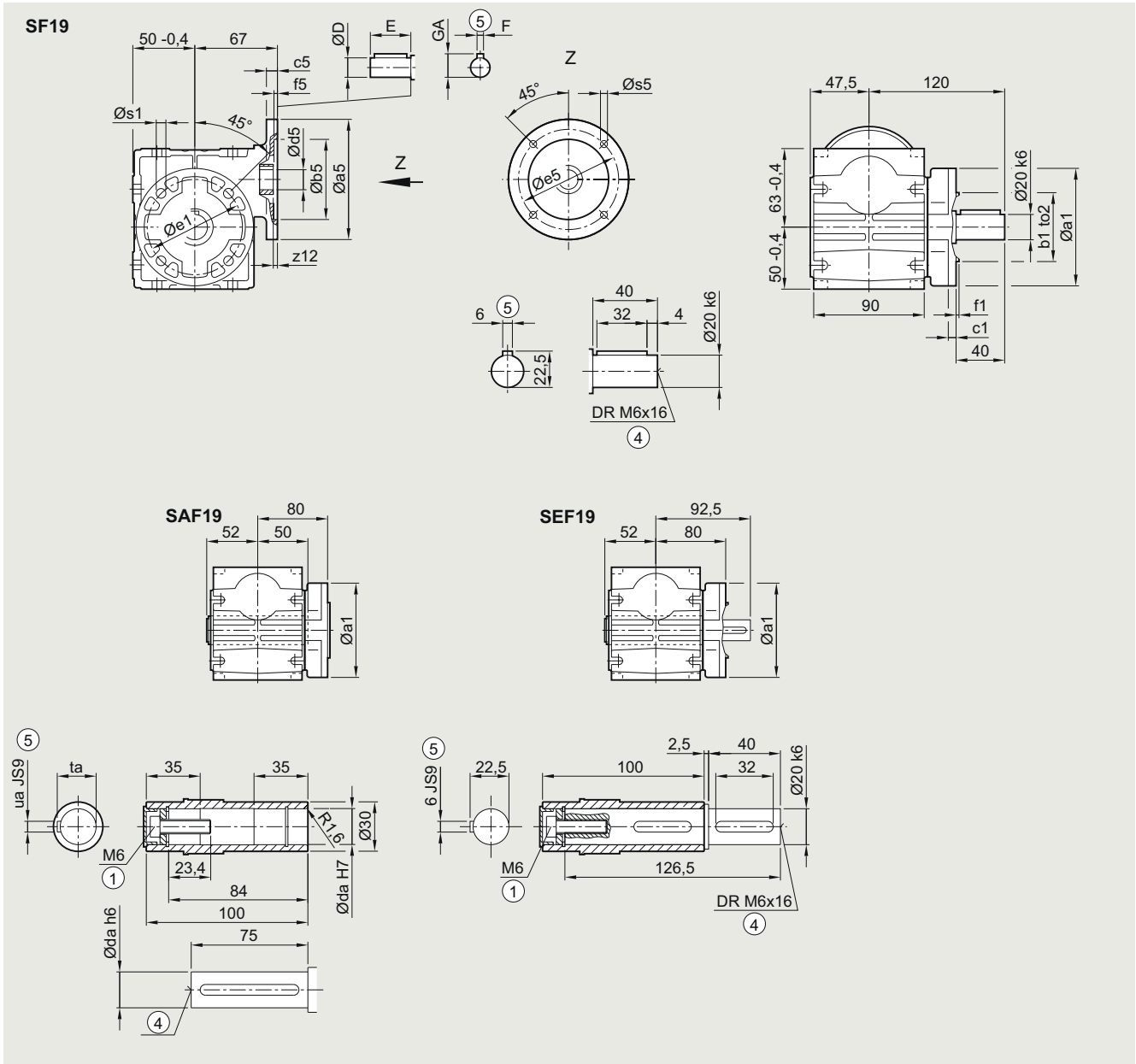
⑤ Feather key/keyway DIN 6885





**S.F19 gearbox in a flange-mounted design**

**SF030, SAF030, SEF030**



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					
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	
	63	90	60	7	3	75	5.8	2	11	23	4	12.5
	71	105	70	7	3	85	7.0	2	14	30	5	16.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

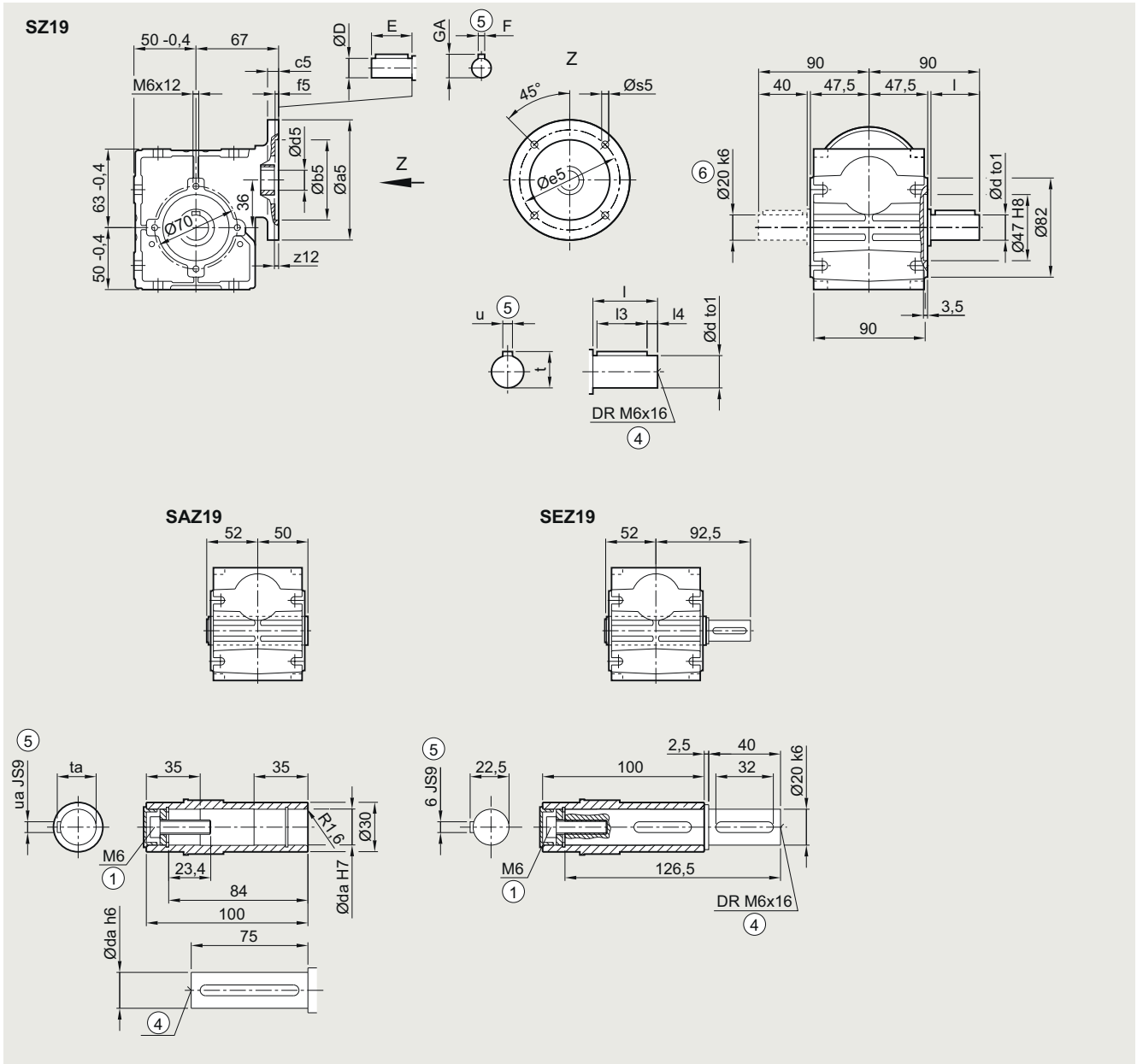
# SIMOGEAR gearboxes

Worm gearbox with adapter K4

## Dimensional drawings

### S.Z19 gearbox in a housing flange design

SZ030, SAZ030, SEZ030



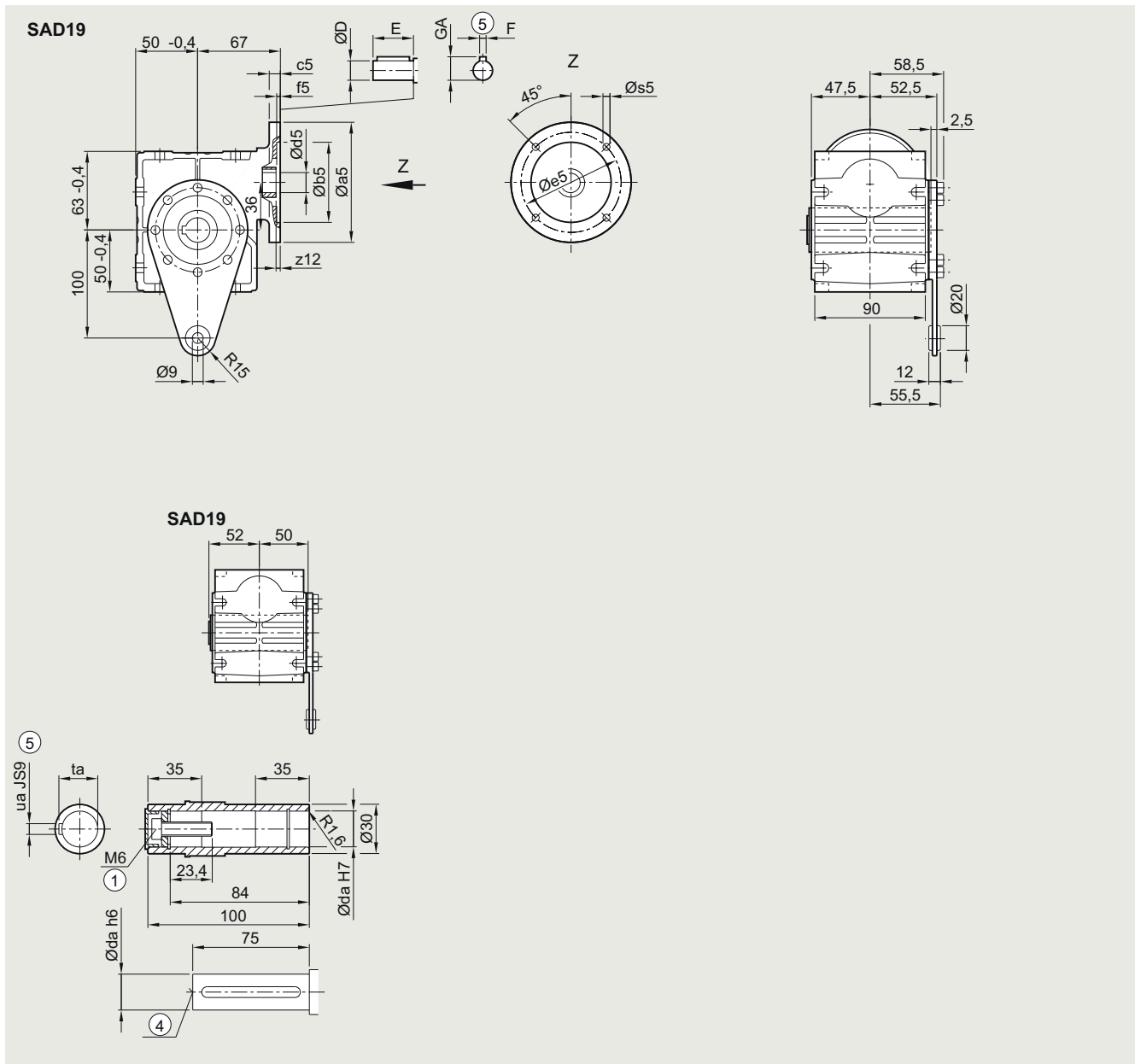
Solid shaft	d	to1	l	l3	l4	u	t	Hollow shaft	da	ua	ta
	18	k6	40	31	4	6	20.5		18	6	20.8
20	k6	40	32	4	6	22.5	20	6	22.8		
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA
	63	90	60	7	3	75	5.8	2	11	23	4
71	105	70	7	3	85	7.0	2	14	30	5	16.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ Solid shaft with 2nd shaft extension only d20

**SAD19 gearbox in a shaft-mounted design**
**SAD030**


Hollow shaft	da	ua	ta								
	18	6	20.8								
	20	6	22.8								
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA
63	90	60	7	3	75	5.8	2	11	23	4	12.5
71	105	70	7	3	85	7.0	2	14	30	5	16.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

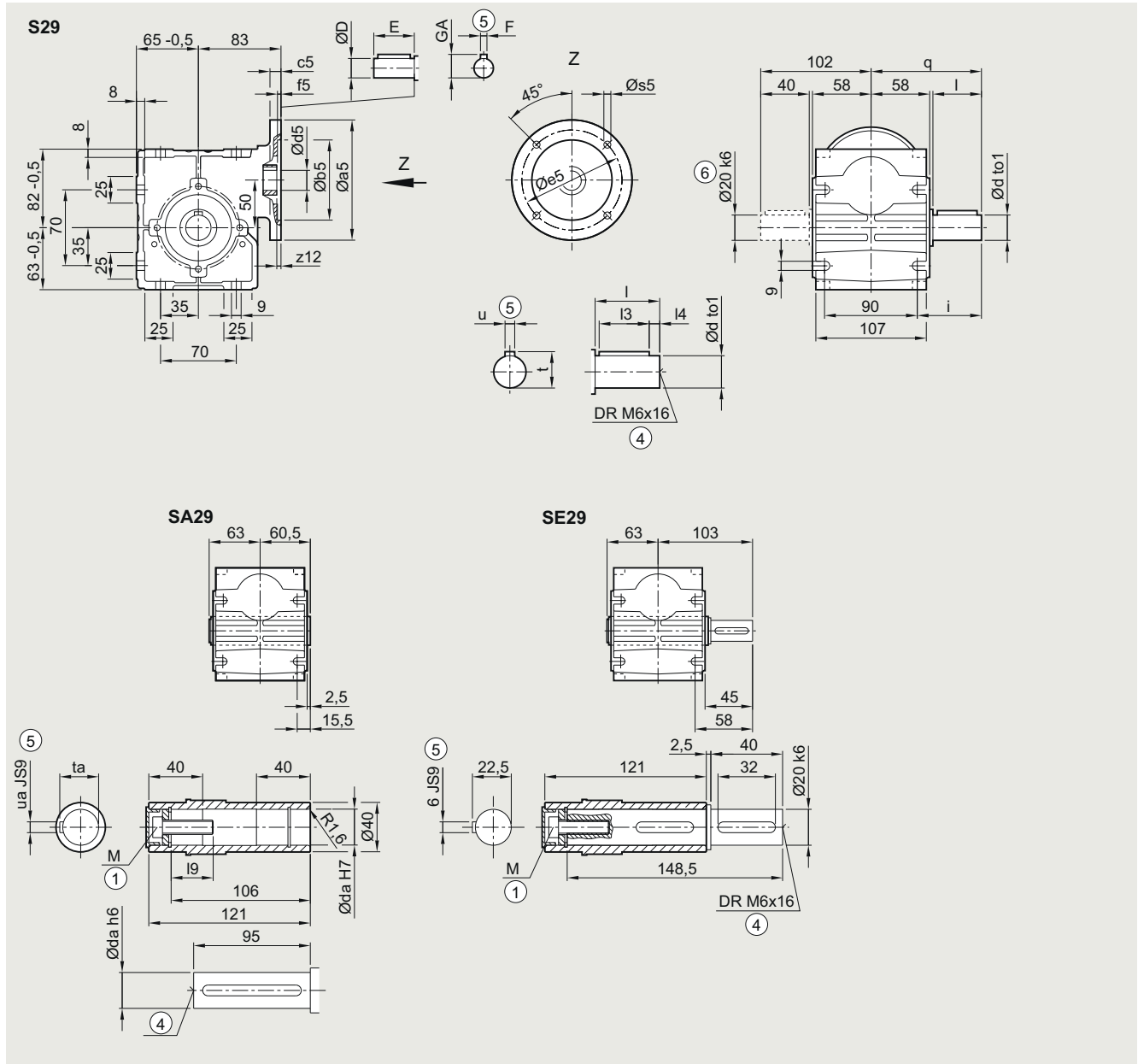
# SIMOGEAR gearboxes

Worm gearbox with adapter K4

## Dimensional drawings

### S.29 gearbox in a foot-mounted design

S030, SA030, SE030



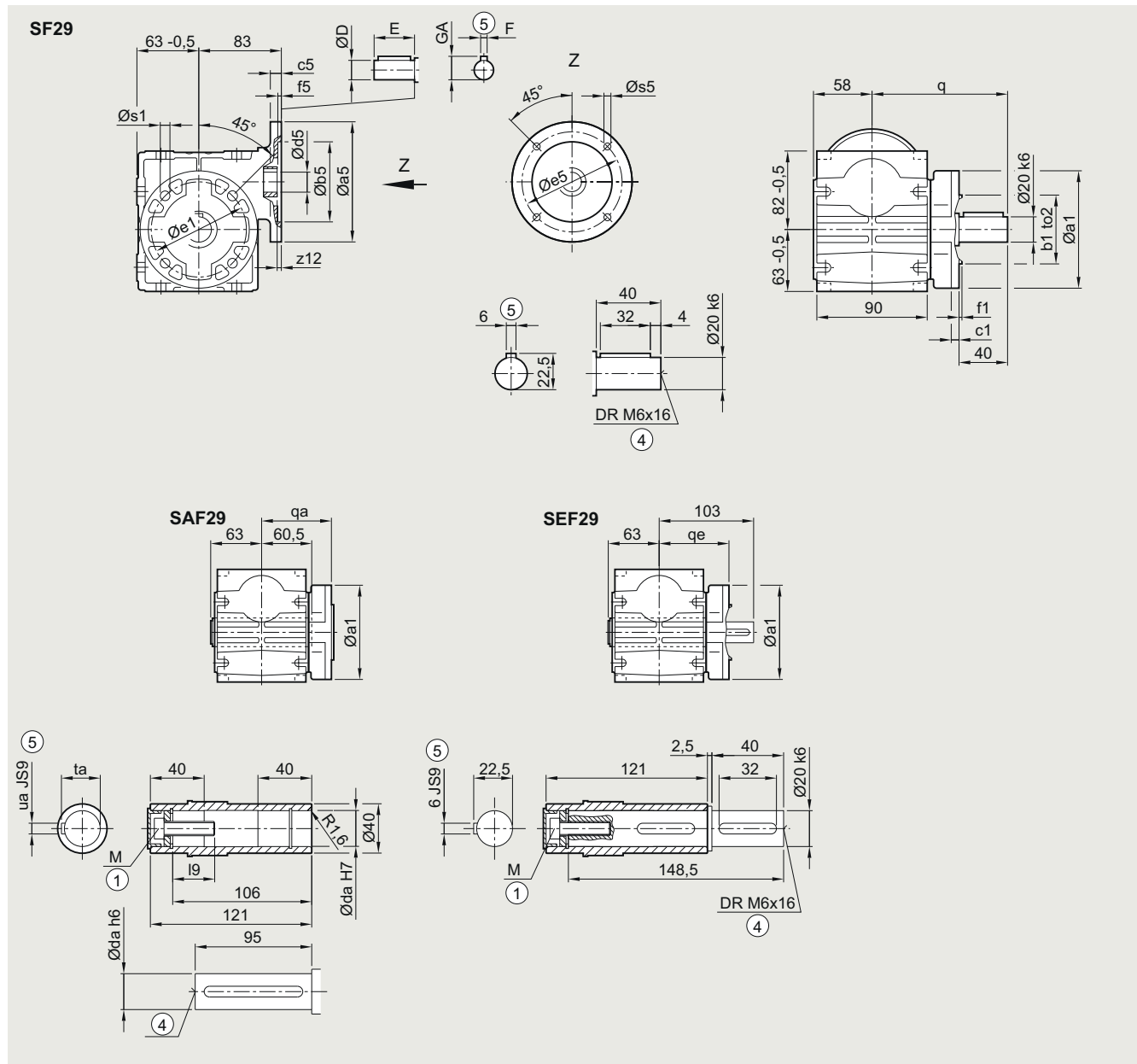
Solid shaft	d	to1	l	l3	l4	u	t	q	i	Hollow shaft	da	ua	ta	l9	M
	20	k6	40	32	4	6	22.5	102	57			20	6	22.8	23.4
25	k6	50	40	5	8	28.0	112	67		25	8	28.3	32.6	M10	
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA				
63	90	60	8	3.0	75	5.8	6	11	23	4	12.5				
71	105	70	8	3.0	85	7.0	6	14	30	5	16.0				
80	120	80	8	3.5	100	7.0	6	19	40	6	21.5				

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ Solid shaft with 2nd shaft extension only d20

**S.F29 gearbox in a flange-mounted design**
**SF030, SAF030, SEF030**


Hollow shaft	da	ua	ta	l9	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	95		
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA
63	90	60	8	3	75	5.8	6	11	23	4	12.5
71	105	70	8	3	85	7.0	6	14	30	5	16.0
80	120	80	8	3.5	100	7.0	6	19	40	6	21.5

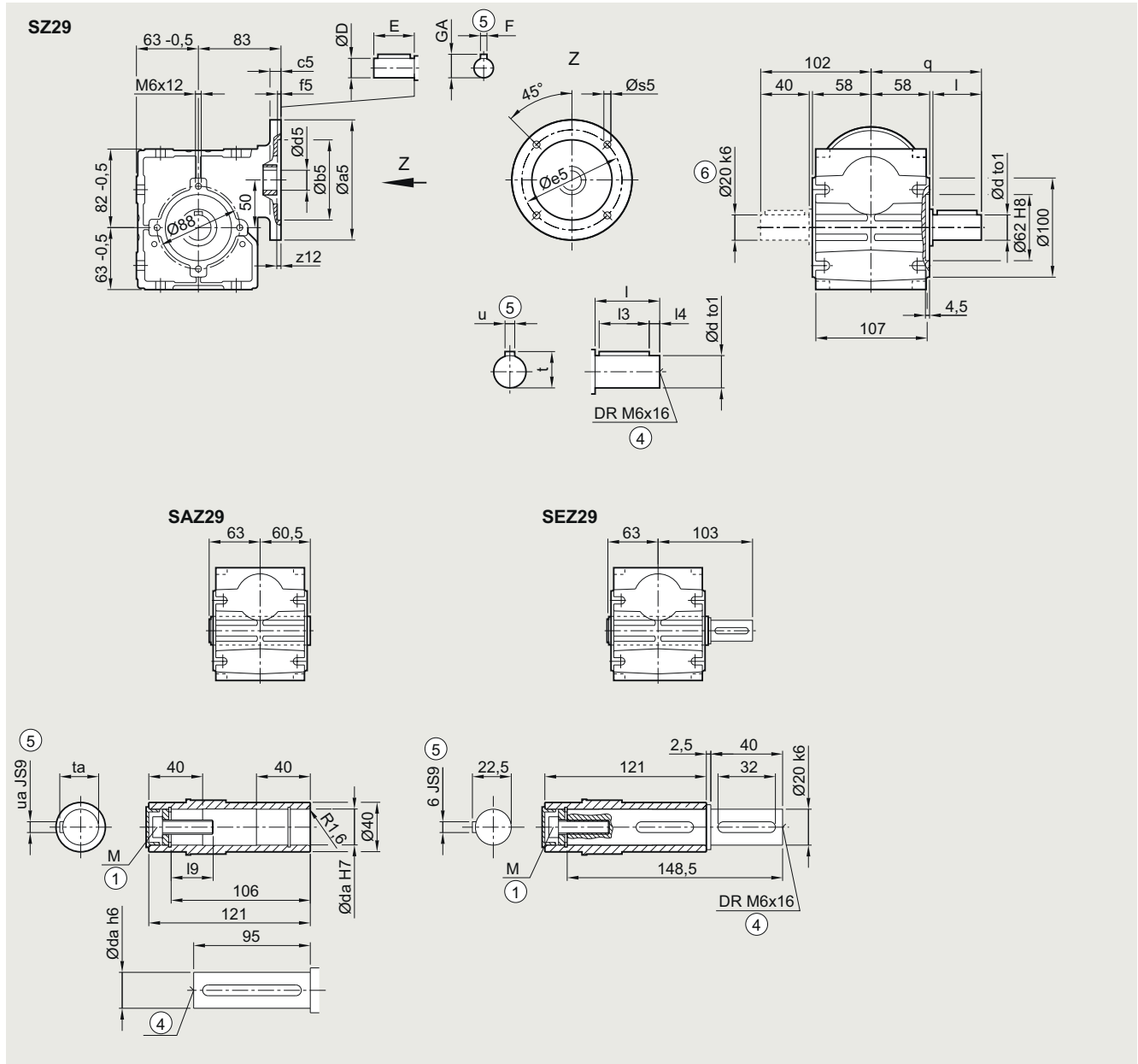
① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

**SIMOGEAR gearboxes**

Worm gearbox with adapter K4

**Dimensional drawings****S.Z29 gearbox in a housing flange design****SZ030, SAZ030, SEZ030**

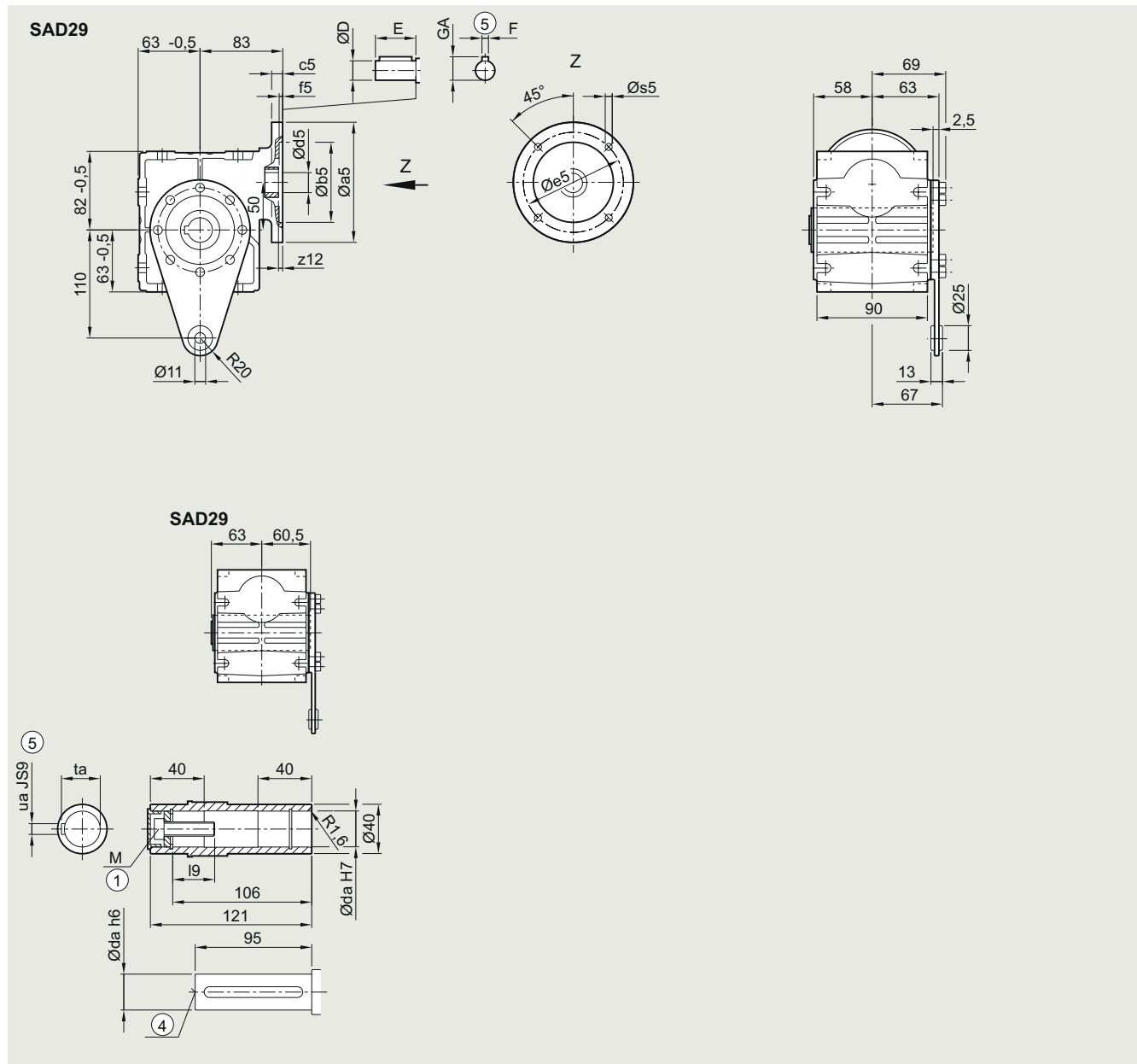
Solid shaft	d	to1	l	l3	l4	u	t	q	Hollow shaft	da	ua	ta	l9	M
	20	k6	40	32	4	6	22.5	102		20	6	22.8	23.4	M6
25	k6	50	40	5	8	28.0	112	25	8	28.3	32.6	M10		
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA			
63	90	60	8	3	75	5.8	6	11	23	4	12.5			
71	105	70	8	3	85	7.0	6	14	30	5	16.0			
80	120	80	8	3.5	100	7.0	6	19	40	6	21.5			

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

⑥ Solid shaft with 2nd shaft extension only d20

**SAD29 gearbox in a shaft-mounted design**
**SAD030**


Hollow shaft	da	ua	ta	l9	M						
	20	6	22.8	23.4	M6						
	25	8	28.3	32.6	M10						
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA
63	90	60	8	3	75	5.8	6	11	23	4	12.5
71	105	70	8	3	85	7.0	6	14	30	5	16.0
80	120	80	8	3.5	100	7.0	6	19	40	6	21.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885

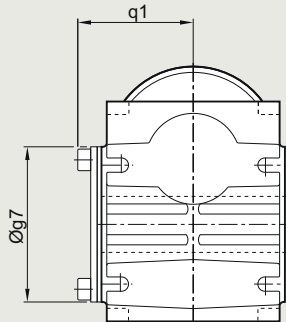


**SIMOGEAR gearboxes**

Worm gearbox with adapter K4

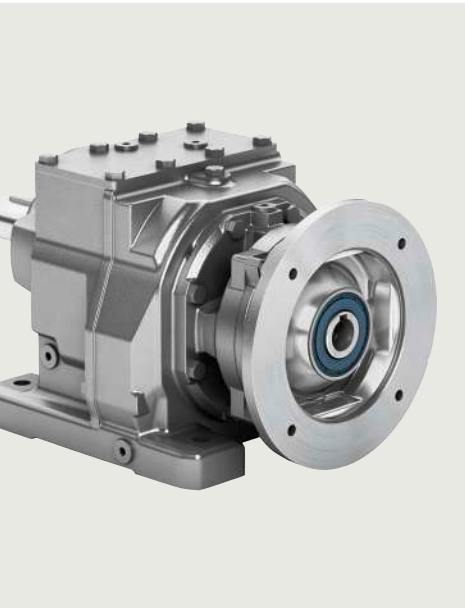
**Dimensional drawings****Protective cover for hollow shaft**

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

## Adapters



### 8/2

#### Orientation

8/2 Overview

8/2 Adapters for mounting an IEC motor

8/3 Adapters for mounting defined  
SIEMENS servo motors

8/4 Adapters for mounting a NEMA motor

### 8/5

#### General technical specifications

8/5 Maximum permissible torques for the  
adapters on SIMOGEAR gearboxes

8/5 Adapters for mounting an IEC motor

8/3 Adapters for mounting a servo motor

8/5 Adapters for mounting a NEMA motor

8/5 Adapters A/AZ with free output shaft

## SIMOGEAR gearboxes

### Adapters

#### Orientation

#### Overview

For most applications, it is best to mount the motor so that it is integrated on the gearbox. This provides an optimum solution in terms of a short overall length and the least weight.

Please refer to our catalogs [MD 50.1](#) and [D 41](#) for SIMOGEAR geared motors with integrated motor mounting.

The SIMOGEAR gearboxes with adapter make it possible to attach IEC and NEMA standard motors and SIEMENS servo motors for special applications, e.g. which require motor versions that are not available as integrated motors.

#### Adapters for mounting an IEC motor

##### Short adapter K4

This adapter is designed for mounting IEC motors with B5 flanges for which a very short overall length is required in order to mount the motor.

The adapter is designed to allow the correction of axial alignment errors. The location bearing of the attached motor can be at the D or the ND end.

Adapter	Article No. in the 12th data position
	2KJ36... -..... ■ -.....-Z
Short adapter K4	4

##### Note:

For applications with high switching frequency and load classification III, we recommend the use of coupling adapter K2.

##### Coupling adapter K2

The adapter K2 for motors in IEC sizes is suitable for general applications with all load types.

The adapter is designed with a torsionally flexible cam coupling and transmits power in such a way as to damp torsional vibrations.

Adapter	Article No. in the 12th data position
	2KJ36... -..... ■ -.....-Z
Coupling adapter K2	2

For mounting on 2-pole motors, we offer a smaller shaft diameter as of motor size 225, see [table Available adapter sizes for IEC motors](#).

2-pole motors	Additional identification code -Z with order code
	2KJ3... -.....-.....-Z
Shaft for 2-pole motor	Order code <b>P20</b>

##### Available adapter sizes for IEC motors

We advise you to check the geometric dimensions of the motor flange. The mounting dimensions and tolerances must correspond to EN 50347.

Adapter type and size		IEC motor	Diameter	
K4	K2	Shaft height	B5 flange	Motor shaft
			mm	mm
63	-	63	140	11
71	-	71	160	14
80	80	80	200	19
90	90	90	200	24
100	100	100	250	28
112	112	112	250	28
132	132	132	300	38
160	160	160	350	42
180	180	180	350	48
200	200	200	400	55
225	225	225	450	60 (55)
250	250	250	550	65 (60)
-	280	280	550	75 (65)
-	315	315	660	80 (65)

( ) Dimensions in brackets for 2-pole motors

For further selection options and information about the IEC motors, please refer to [Catalog D 81.1](#) and [SiePortal](#).

**Adapters for mounting defined SIEMENS servo motors****KS coupling adapter  
only for defined SIEMENS servo motors**

This adapter can be used to attach servo motors from the

- SIMOTICS S-1FK2
- SIMOTICS S-1FK7
- SIMOTICS S-1FT7
- SIMOTICS M-1PH8 (1PH808 and 1PH810) as well as
- SIMOTICS S-1FL6

ranges with square flanges to the gearbox. This provides the geared motor with a solid and attractive design.

The adapter is designed with a zero-backlash, torsionally flexible cam coupling and transmits power in such a way as to damp torsional vibrations.

Adapter	Article No. in the 12th data position
KS coupling adapter	2KJ36... -... -...-Z 1

**Coupling adapter K8  
for mounting a motor from the SIMOTICS M-1PH8 range**

The adapter K8 can be used to attach motors with feather key from the SIMOTICS M-1PH8 (as of 1PH813) range.

The adapter is designed with a torsionally flexible cam coupling and transmits power in such a way as to damp torsional vibrations.

Adapter	Article No. in the 12th data position
Coupling adapter K8	2KJ36... -... -...-Z 8

**Note:**

The KS adapters are designed for mounting on servo motors with plain shafts (without feather key). For the SINAMICS S-1FT7 motors, the classic flange is available for attaching to the KS adapters:

Permissible servo motors for KS adapters	Article No.:
<b>SIMOTICS S-1FK2</b>	
Plain shaft (without shaft sealing ring) <sup>1)</sup>	1FK2...-...0...
<b>SIMOTICS S-1FK7</b>	
Plain shaft	1FK7...-...G 1FK7...-...H
<b>SIMOTICS S-1FT7</b>	
Flange:	1FT7...-...1-...
Classic (compatible with 1FT6/1FK7)	1FT7...-...4-...
Plain shaft	1FT7...-...G 1FT7...-...H 1FT7...-...K 1FT7...-...L
<b>SIMOTICS M-1PH8</b>	
Plain shaft	1PH8...-...0...
<b>SIMOTICS S-1FL6</b>	
Plain shaft	1FL6...-...G 1FL6...-...H

<sup>1)</sup> Because of the attachment to the KS adapters, the version with the shaft sealing ring is not required for the 1FK2 motor to comply with degree of protection IP65.

For further selection options and information about the servo motors, please refer to Catalogs D 21.4, D 32 and SiePortal.

**Available adapter sizes for servo motors**

We advise you to check the geometric dimensions of the motor flange.

Adapter type and size		Flange dimensions				Motor shaft		Mountable motors				
KS	K8	a1 mm	a5 mm	b5 mm	e5 mm	min. mm	max	1FK2	1FK7	1FT7	1PH8	1FL6
KS3.1		Ø91	□73	50	70	14x25	14x31	1FK2103 1FK2203				1FL603LI
KS3.2		Ø91	□73	60	75	14x25	14x31		1FK703	1FT703		
KS4.1		Ø110	□85	70	90	19x35	19x40	1FK2104 1FK2204				1FL604LI
KS4.2		Ø110	□85	80	100	19x35	19x40		1FK704	1FT704		1FL604HI
KS5.1		Ø142	□117	80	100	19x35	19x45	1FK2205	1FK704			
KS5.2		Ø142	□117	95	115	19x35	19x45	1FK2105				1FL605LI
KS6.1		Ø166	□130	110	130	24x40	24x58	1FK2106 1FK2206	1FK706	1FT706		
KS6.2		Ø166	□130	110	145	22x40	22x58					1FL606HI
KS8.1		Ø202	□155	130	165	32x40	32x80	1FK2208	1FK708	1FT708	1PH808	
KS10.1		Ø250	□196	180	215	38x50	38x80	1FK2210	1FK710	1FT710	1PH810	
KS10.2		Ø250	□196	114,3	200	35x50	35x80					1FL609HI
	813	Ø340	□260	250	300	48x110	-				1PH813.	
	816	Ø392	□314	300	350	55x110	-				1PH816	
	818	Ø550	Ø550	450	465	65x140	-				1PH818	

## SIMOGEAR gearboxes

### Adapters

#### Orientation

#### Adapters for mounting a NEMA motor

The adapters for mounting NEMA motors are designed for NEMA TC flanges and make it easy to attach standard NEMA motors.

##### Short adapter K5

This adapter is designed for mounting NEMA motors for NEMA TC flanges for which a very short overall length is required in order to mount the motor.

The adapter is designed to allow the correction of axial alignment errors. The location bearing of the attached motor can be at the D or the ND end.

Adapter	Article No. in the 12th data position
Short adapter K5	2KJ36... -..... ■ -.....-Z 5

##### Note:

For applications with high switching frequency and load classification III, we recommend the use of coupling adapter K3.

##### Coupling adapter K3

The adapter K3 for motors in NEMA sizes is suitable for general applications with all load types.

The adapter is designed with a torsionally flexible cam coupling and transmits power in such a way as to damp torsional vibrations.

Adapter	Article No. in the 12th data position
Coupling adapter K3	2KJ36... -..... ■ -.....-Z 3

#### Available adapter sizes for NEMA motors

We advise you to check the geometric dimensions of the motor flange. The mounting dimensions and tolerances must correspond to NEMA MG1 Part 4.

Adapter type and size		NEMA	Flange dimension	Motor shaft
K5	K3		Zoll	Zoll
56	56	56C	6.61"	0.625"
140	140	140TC (143TC, 145TC)	6.61"	0.875"
180	180	180TC (182TC, 184TC)	8.9"	1.125"
210	210	210TC (213TC, 215TC)	8.9"	1.375"
250	250	250TC (254TC, 256TC)	8.9"	1.625"
280	280	280TC (284TC, 286TC)	11.22"	1.875"
320	-	320TC (324TC, 326TC)	13.386"	2.125"
360	-	360TC (364TC, 365TC)	13.386"	2.375"

For further selection options and information about NEMA motors, please refer to Catalog D 81.2 and SiePortal.

**Maximum permissible torques for the adapters on SIMOGEAR gearboxes**

The permissible drive torques up to  $T_{1perm}$  apply to continuous operation. In short-time operation, 2.5 times the value for  $T_{1perm}$  is permissible (emergency off operation max. 1 000 times).

The permissible drive torque depends on the transmission ratio and the values stated are maximum values.

**Adapters for mounting an IEC motor**

Adapter size	Permissible input torque for continuous operation $T_{1perm}$ Nm	Mass inertia of the adapter $J$ $10^{-4}$ kgm <sup>2</sup>
<b>Adapter K4</b>		
63	5	0.33
71	5	0.32
80	13	2.5
90	13	2.4
100	45	6.4
112	47	6.4
132	127	33
160	153	38
180	330	36
200	355	93
225	415	95
250	545	137
<b>Adapter K2</b>		
80	13	3.0
90	13	3.0
100	45	9.0
112	47	9.0
132	127	36
160	153	43
180	330	75
200	355	124
225	415	179
250	545	293
280	1530	703
315	1700	2267

**Adapters for mounting a servo motor**

Unless otherwise specified, SIMOGEAR gearboxes can be operated at a motor speed of up to 4 500 rpm for brief periods.

Adapter size	Permissible input torque for continuous operation $T_{1perm}$ Nm	Mass inertia of the adapter $J$ $10^{-4}$ kgm <sup>2</sup>	Maximum permissible speed $n_{max}$ rpm
<b>Adapter KS</b>			
KS3.1	5.1	0.30	4500
KS3.2	5.1	0.30	4500
KS4.1	5.1	0.59	4500
KS4.2	5.1	0.59	4500
KS5.1	16.8	1.9	4500
KS5.2	16.8	1.9	4500
KS6.1	28.6	4.5	4500
KS6.2	25.8	4.5	4500
KS8.1	47.0	10	4500
KS10.1	131	29	4500
KS10.2	121	29	4500
<b>Adapter K8</b>			
813	245	73	4500
816	355	134	4500
818	1530	703	4500

**Adapters for mounting a NEMA motor**

Adapter size	Permissible input torque for continuous operation $T_{1perm}$ Nm	Mass inertia of the adapter $J$ $10^{-4}$ kgm <sup>2</sup>
<b>Adapter K5</b>		
56	5	0.32
140	13	2.4
180	47	6.4
210	127	33
250	153	38
280	330	36
320	415	95
360	545	137
<b>Adapter K3</b>		
56	5	2.9
140	13	3
180	47	9
210	127	36
250	153	43
280	330	75

**Adapters A/AZ with free output shaft**

Adapter size	Permissible input torque for continuous operation $T_{1perm}$ Nm	Mass inertia of the adapter $J$ $10^{-4}$ kgm <sup>2</sup>
<b>Adapter A/AZ</b>		
80	19	2.2
90	20	2.3
100	45	8.4
112	47	8.4
132	141	23
160	153	56
180	310	59
200	370	129
225	445	130
250	840	144

## SIMOGEAR gearboxes

### Notes

## Gearbox options



<b>9/2</b>	<b>Mounting position</b>	<b>9/40</b>	<b>Mounting</b>
9/2	Overview		<u>Mounting types</u>
	<u>Helical gearboxes Z and D</u>	9/40	Overview
9/4	Foot-mounted design	9/41	Flange-mounted designs
9/6	Foot/flange-mounted design	9/43	<ul style="list-style-type: none"> <li>Water drain holes at the output flange</li> </ul>
9/8	Flange-mounted design or with housing flange	9/44	<ul style="list-style-type: none"> <li>Output flange sealing</li> </ul>
	<u>Helical gearboxes E</u>	9/44	Parallel shaft gearboxes F.AD in a shaft-mounted design
9/11	Foot-mounted design	9/44	Bevel gearboxes KAD in a shaft-mounted design
9/12	Flange-mounted design or with housing flange	9/44	Bevel gearboxes BAD in a shaft-mounted design
	<u>Parallel shaft gearboxes</u>	9/44	Bevel gearboxes CAD in a shaft-mounted design
9/13	Shaft-mounted design	9/45	Helical worm gearboxes CAD in a shaft-mounted design
9/15	Flange-mounted design or with housing flange	9/46	Worm gearboxes SAD in a shaft-mounted design
9/17	Foot-mounted design		<u>Shaft designs</u>
	<u>Bevel gearboxes B</u>	9/46	Selection and ordering data
9/19	Foot-mounted design	9/50	SIMOLOC assembly system
9/21	Housing flange design and shaft-mounted design	9/50	Hollow shaft cover
9/23	Shaft-mounted design		<b>9/51</b> <b>Output shaft bearings</b>
	<u>Bevel gearboxes K</u>	9/51	Reinforced output shaft bearings
9/25	Foot-mounted design		<b>9/52</b> <b>Output side accessories</b>
9/26	Housing flange design and flange-mounted design		<u>Accessories for VLplus reinforced bearing system</u>
9/27	Shaft-mounted design	9/52	Drywell
	<u>Helical worm gearboxes</u>	9/52	Grease cartridge
9/28	Shaft-mounted design		<b>9/53</b> <b>Lubrication and sealing</b>
9/31	Housing flange design and flange-mounted design		<u>Overview</u>
9/34	Foot-mounted design	9/53	<ul style="list-style-type: none"> <li>Lubrication</li> </ul>
	<u>Worm gearboxes</u>	9/53	<ul style="list-style-type: none"> <li>Oil quantities</li> </ul>
9/37	Foot-mounted, flange-mounted, shaft-mounted and housing flange design	9/53	<ul style="list-style-type: none"> <li>Sealing</li> </ul>
9/38	<u>Tandem gearboxes</u>	9/53	Sealing system
9/39	<u>Special mounting positions</u>	9/54	Rolling bearing greases for gearboxes and motors
		9/54	Selection
			<b>9/56</b> <b>Venting and oil level control</b>
			<u>Venting</u>
		9/56	Overview
		9/58	Pressure breather valve
		9/59	Oil expansion unit
			<u>Oil level control</u>
		9/61	Oil level checking screw
		9/61	Oil drain
		9/62	Pt100 electrical oil temperature monitoring
		9/63	Electrical oil level monitoring system
			<b>9/64</b> <b>Special version</b>
		9/64	Reduced-backlash version
		9/64	Shrink-glued output gearwheel



## 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.

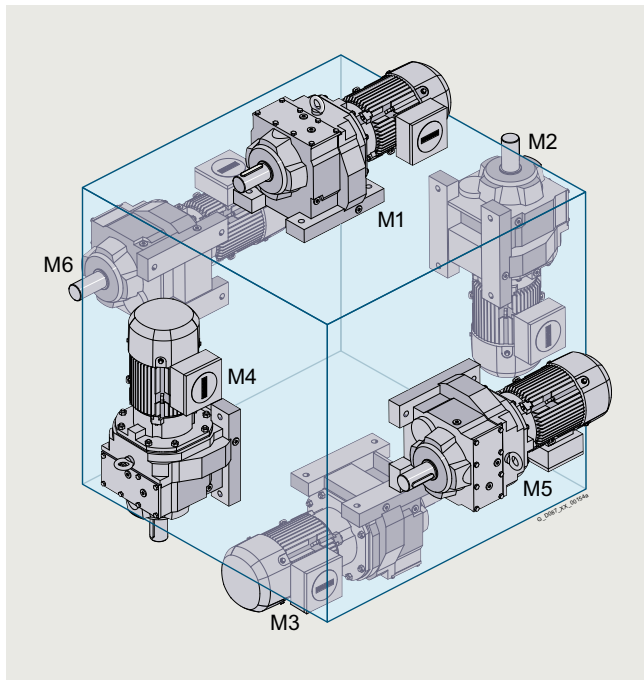


Fig. 9/1 Helical geared motors

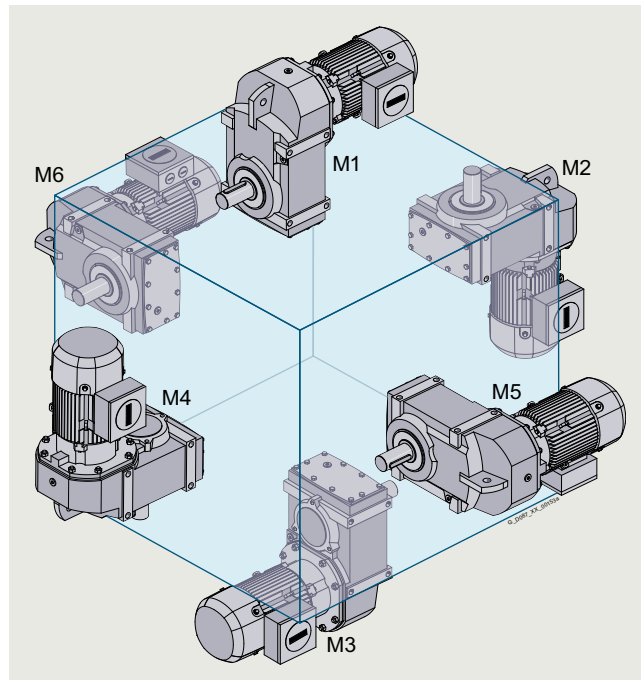


Fig. 9/2 Parallel shaft geared motors

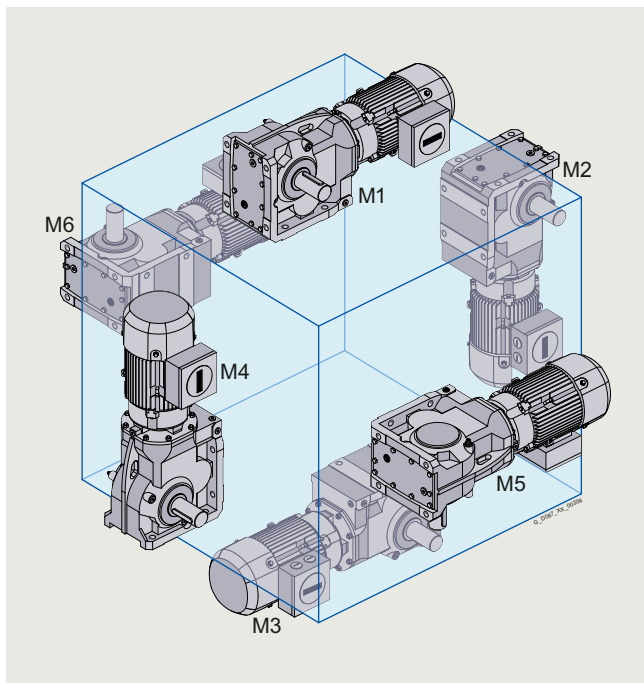


Fig. 9/3 Bevel geared motors

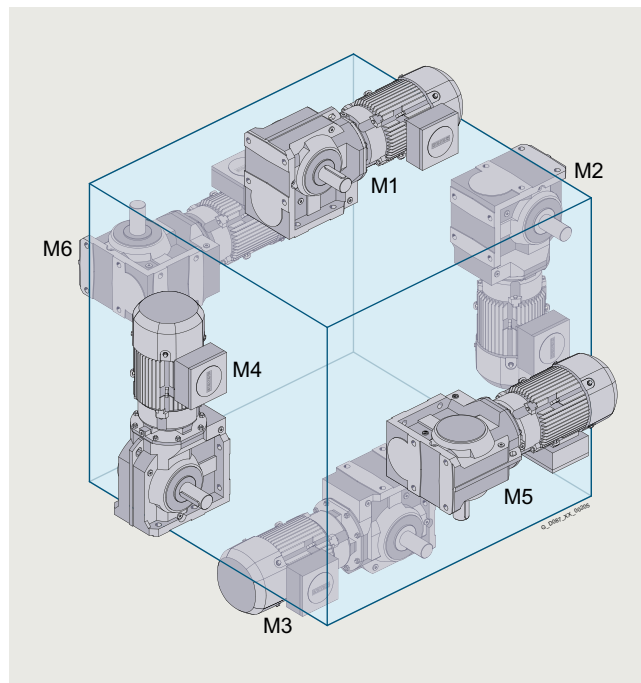


Fig. 9/4 Helical worm geared motors

### Overview

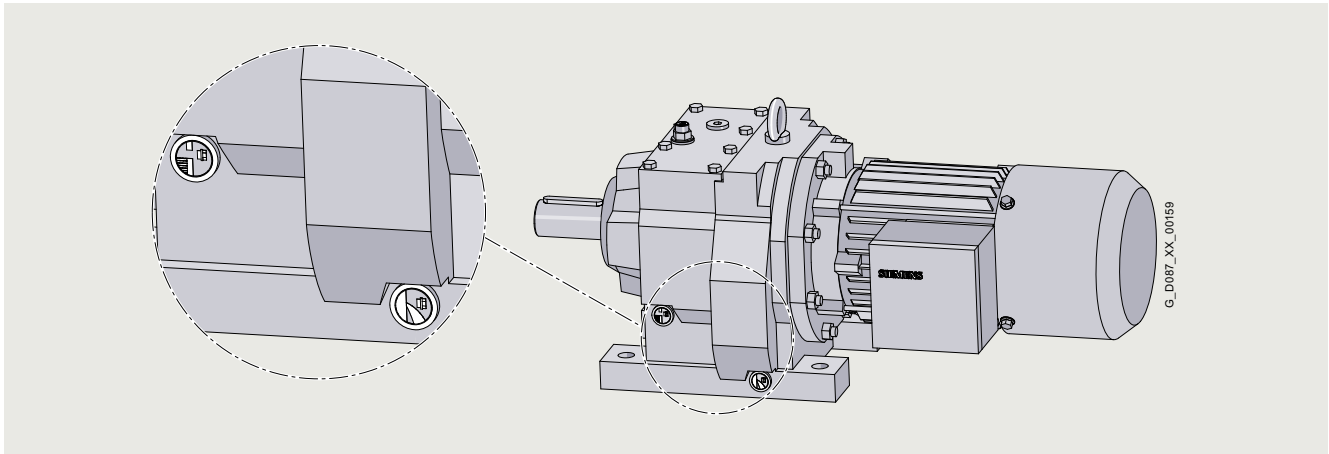








Fig. 9/5 Dimensional drawing from Siemens Product Configurator with details

An explanation of the symbols used to represent mounting positions 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 gearbox
③	3-stage gearbox
④	Oil level checking screw not possible for 3-stage tandem gearbox (main gearbox)
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 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

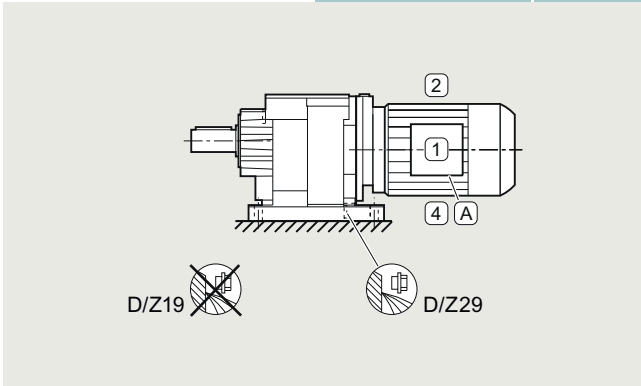
##### Helical gearboxes Z and D, sizes 19 and 29

###### Oil valves

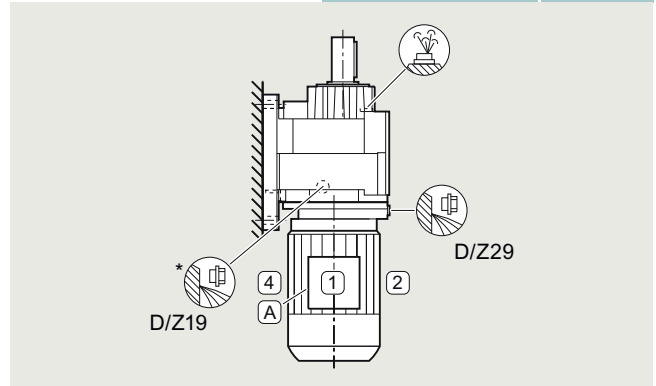
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

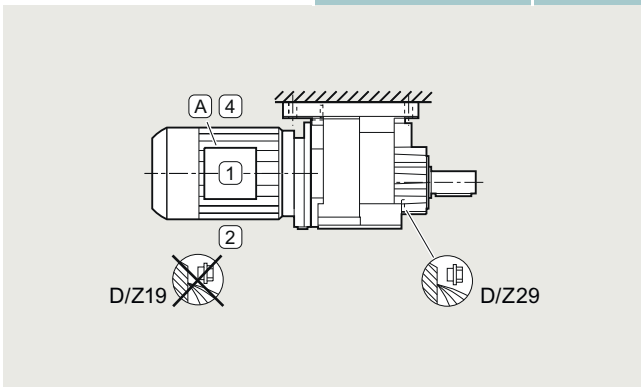
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31.. -.....- .A..-Z 2KJ32.. -.....- .A..-Z	<b>D01</b>



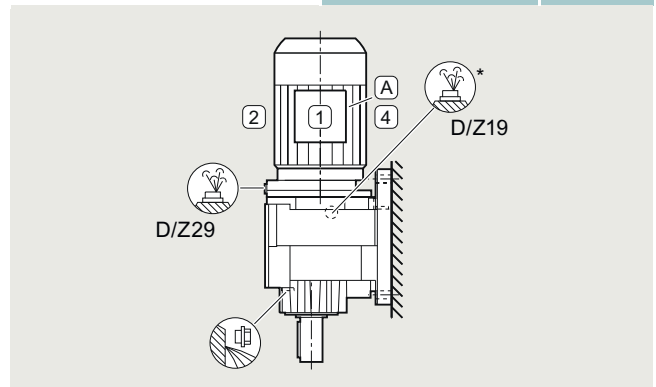
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31.. -.....- .A..-Z 2KJ32.. -.....- .A..-Z	<b>D02</b>



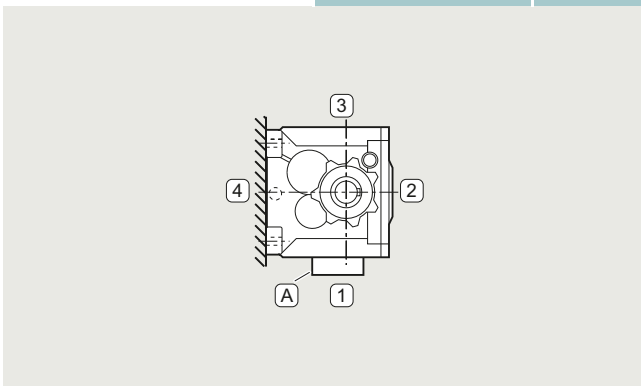
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31.. -.....- .A..-Z 2KJ32.. -.....- .A..-Z	<b>D03</b>



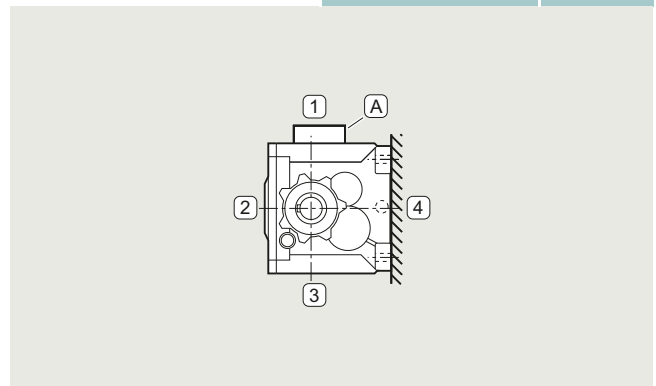
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31.. -.....- .A..-Z 2KJ32.. -.....- .A..-Z	<b>D04</b>



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>



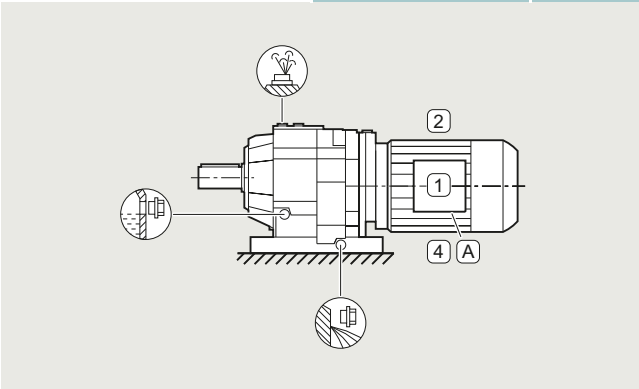
#### Foot-mounted design

#### Helical gearboxes Z and D, sizes 39 to 189

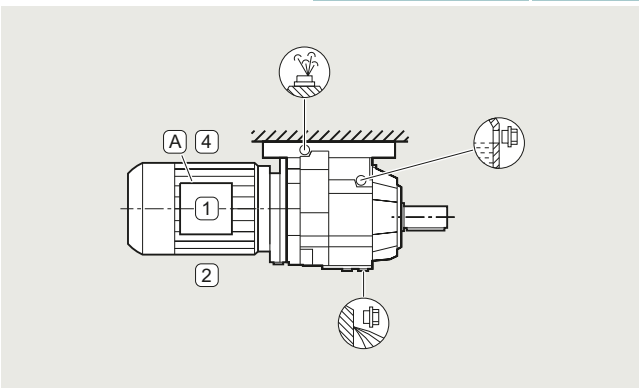
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

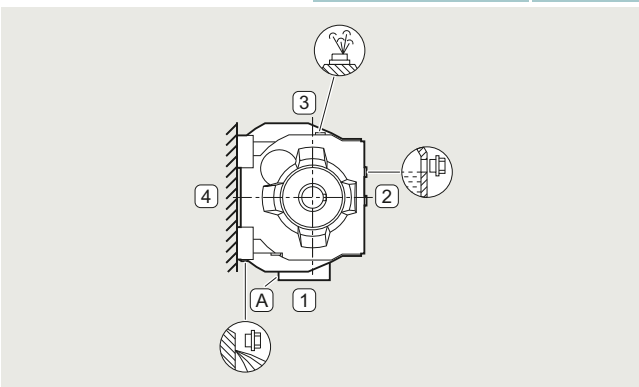
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31... -.....- A..-Z 2KJ32... -.....- A..-Z	<b>D01</b>



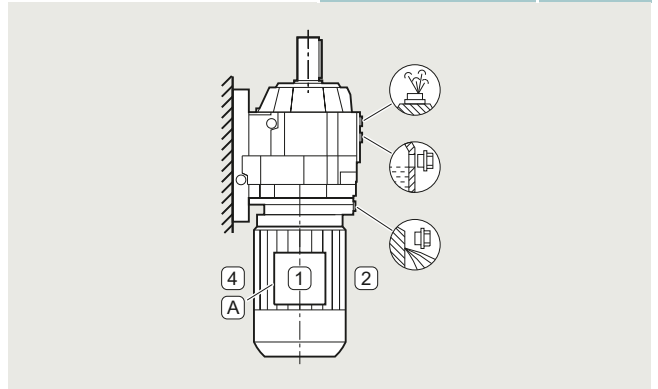
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31... -.....- A..-Z 2KJ32... -.....- A..-Z	<b>D03</b>



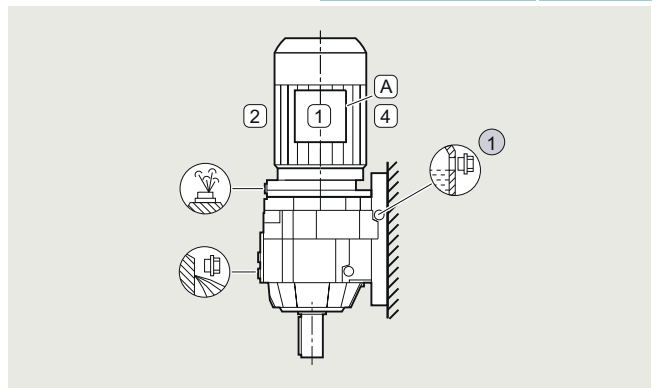
Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ31... -.....- A..-Z 2KJ32... -.....- A..-Z	<b>D05</b>



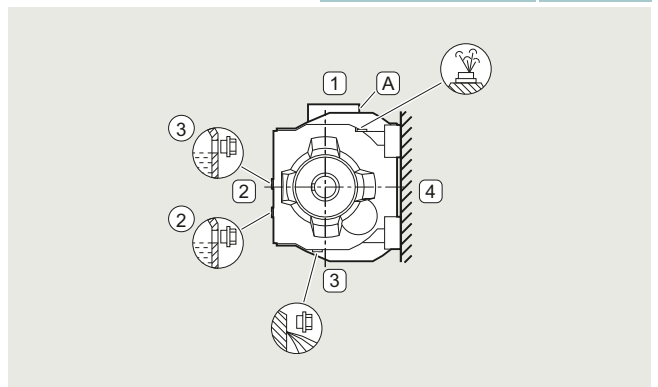
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31... -.....- A..-Z 2KJ32... -.....- A..-Z	<b>D02</b>



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

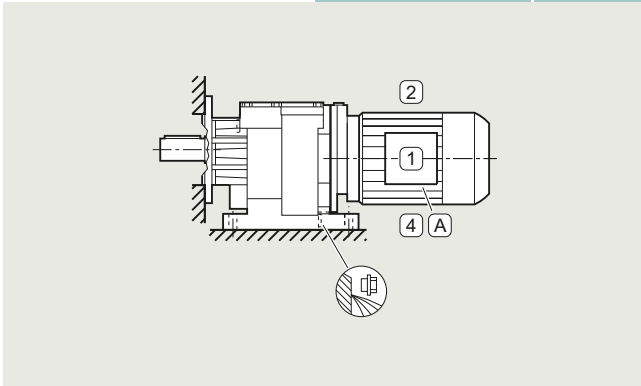
#### Helical gearboxes ZB and DB, size 29

##### Oil valves

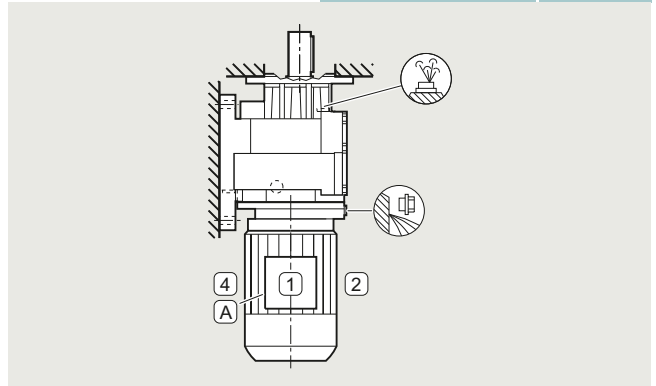
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

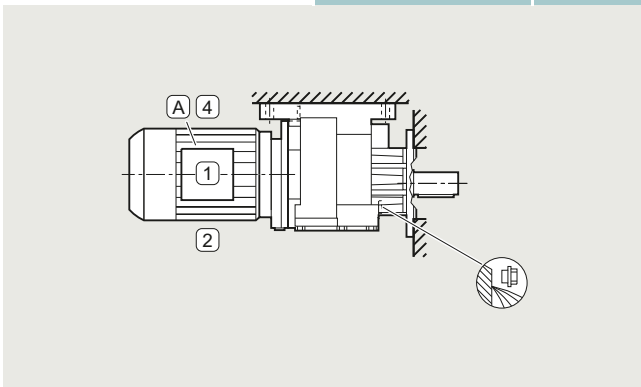
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ310 2 - ..... - B.. -Z 2KJ320 2 - ..... - B.. -Z	<b>D01</b>



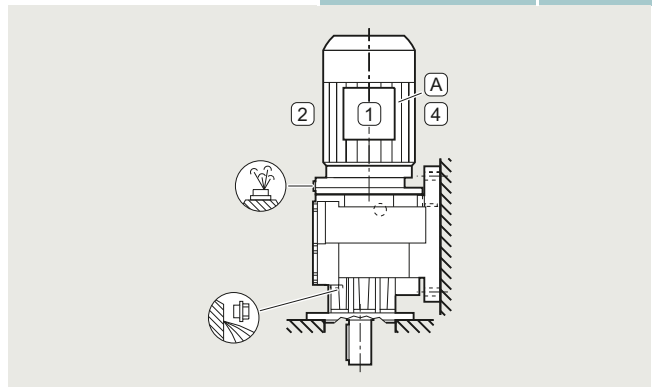
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ310 2 - ..... - B.. -Z 2KJ320 2 - ..... - B.. -Z	<b>D02</b>



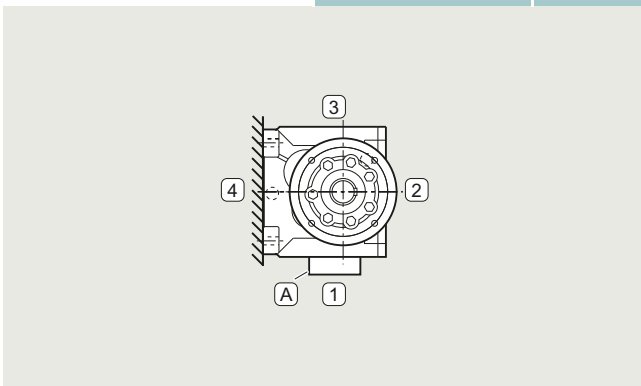
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ310 2 - ..... - B.. -Z 2KJ320 2 - ..... - B.. -Z	<b>D03</b>



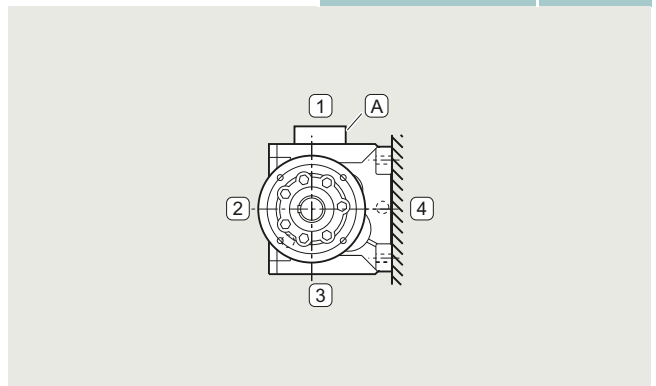
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ310 2 - ..... - B.. -Z 2KJ320 2 - ..... - B.. -Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ310 2 - ..... - B.. -Z 2KJ320 2 - ..... - B.. -Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ310 2 - ..... - B.. -Z 2KJ320 2 - ..... - B.. -Z	<b>D06</b>



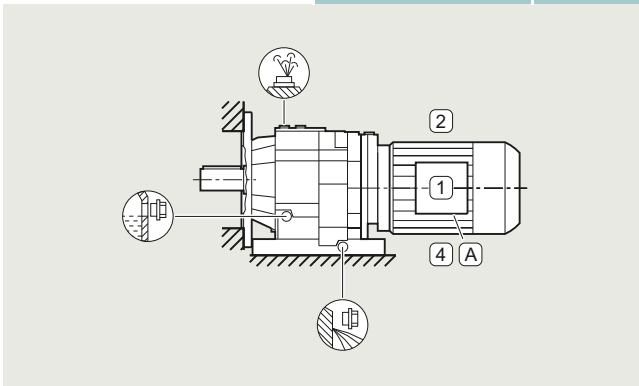
### Foot/flange-mounted design

#### Helical gearboxes ZB and DB, sizes 39 to 89

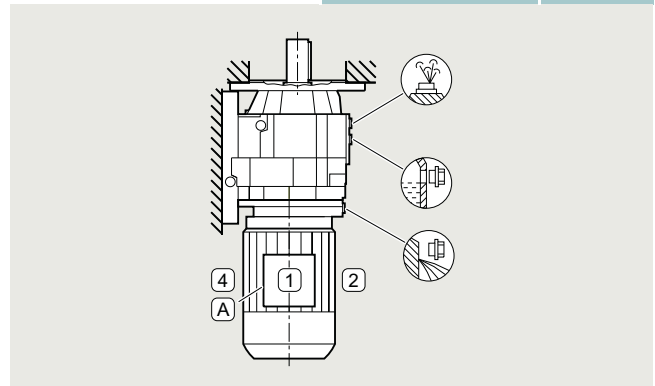
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

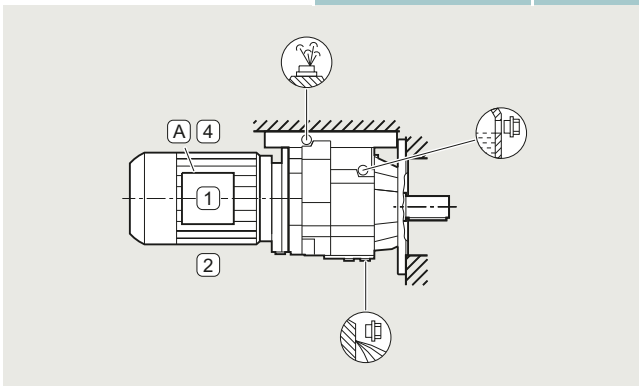
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31.. -.....- B..-Z 2KJ32.. -.....- B..-Z	<b>D01</b>



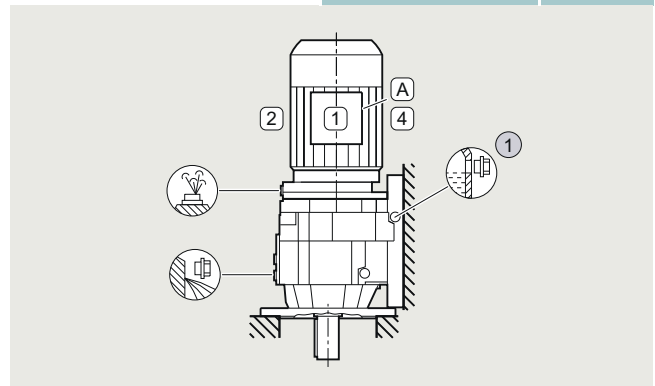
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31.. -.....- B..-Z 2KJ32.. -.....- B..-Z	<b>D02</b>



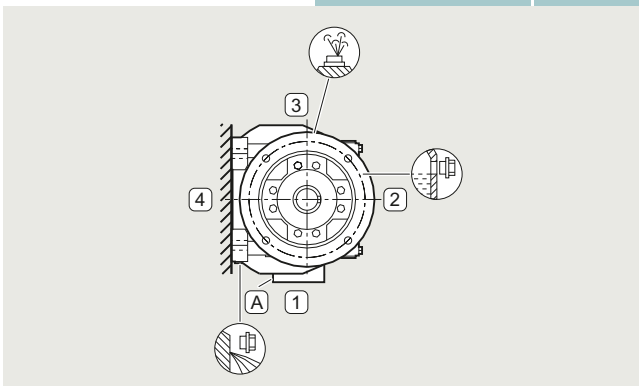
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31.. -.....- B..-Z 2KJ32.. -.....- B..-Z	<b>D03</b>



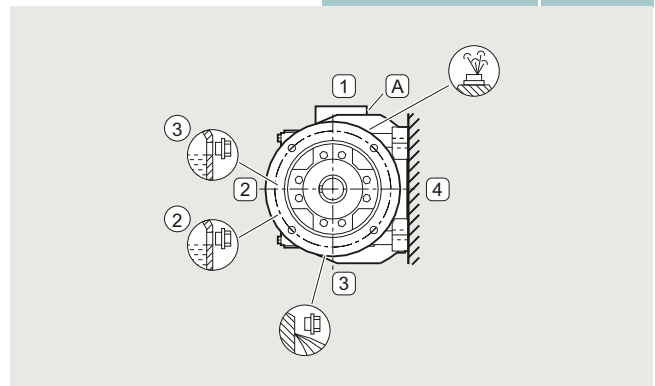
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31.. -.....- B..-Z 2KJ32.. -.....- B..-Z	<b>D04</b>



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

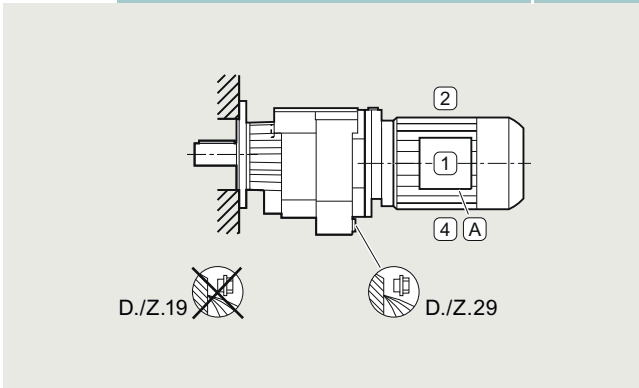
#### Helical gearboxes ZF and DF or ZZ and DZ, sizes 19 and 29

##### Oil valves

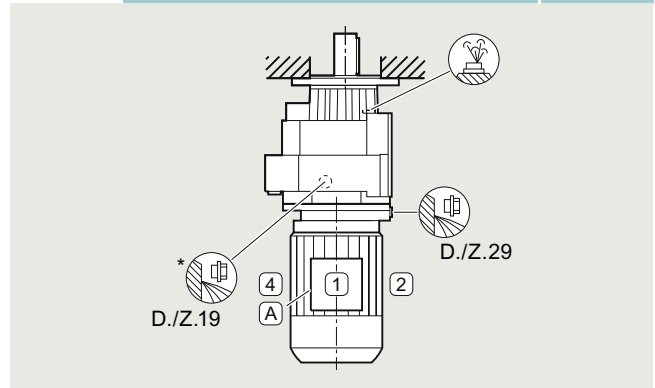
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

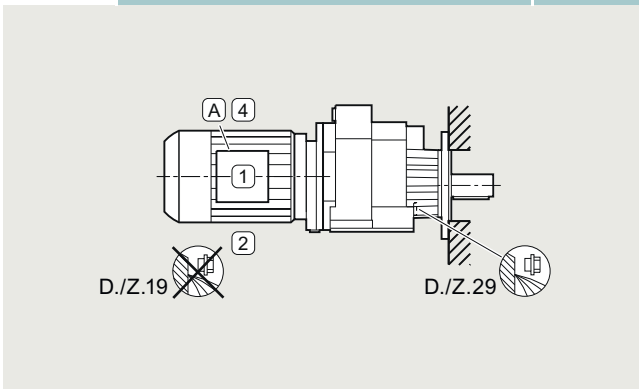
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31...-.....F...-Z, 2KJ31...-.....H...-Z 2KJ32...-.....F...-Z, 2KJ32...-.....H...-Z	<b>D01</b>



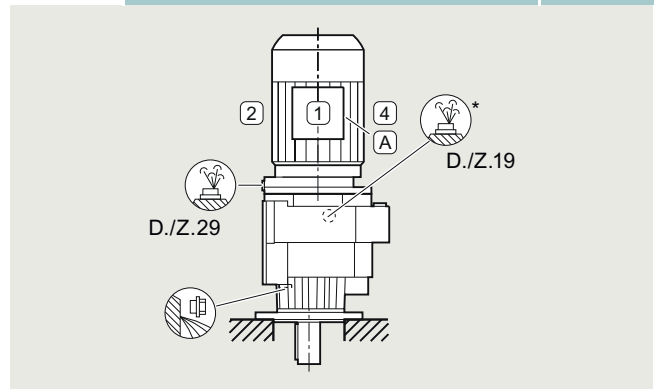
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31...-.....F...-Z, 2KJ31...-.....H...-Z 2KJ32...-.....F...-Z, 2KJ32...-.....H...-Z	<b>D02</b>



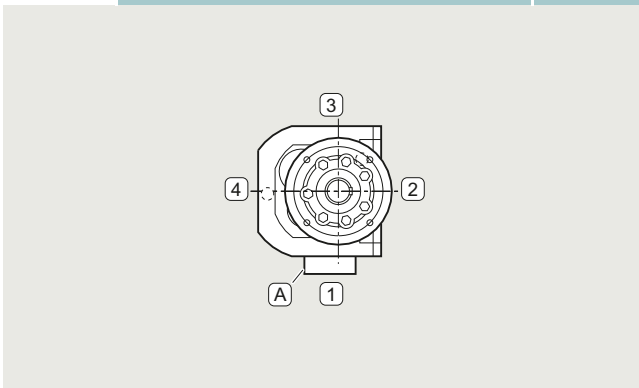
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31...-.....F...-Z, 2KJ31...-.....H...-Z 2KJ32...-.....F...-Z, 2KJ32...-.....H...-Z	<b>D03</b>



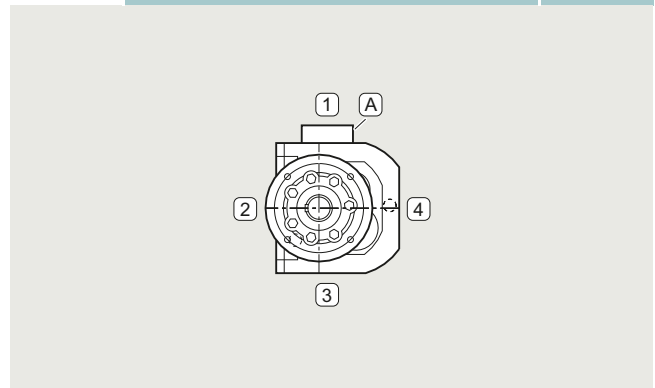
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31...-.....F...-Z, 2KJ31...-.....H...-Z 2KJ32...-.....F...-Z, 2KJ32...-.....H...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ31...-.....F...-Z, 2KJ31...-.....H...-Z 2KJ32...-.....F...-Z, 2KJ32...-.....H...-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ31...-.....F...-Z, 2KJ31...-.....H...-Z 2KJ32...-.....F...-Z, 2KJ32...-.....H...-Z	<b>D06</b>



9

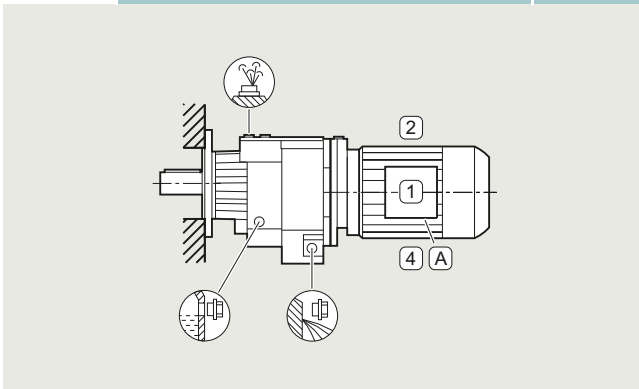
#### Flange-mounted design or with housing flange

#### Helical gearboxes ZF and DF or ZZ and DZ, size 39

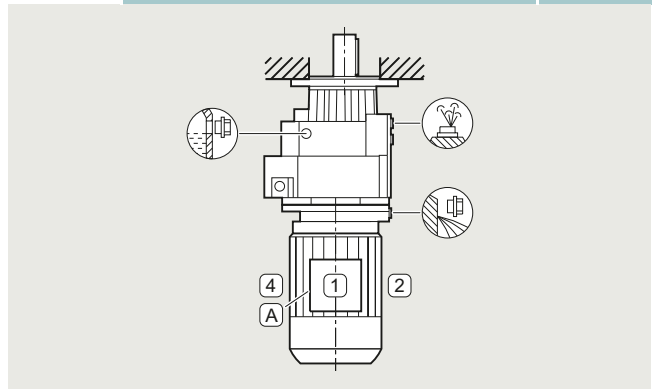
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

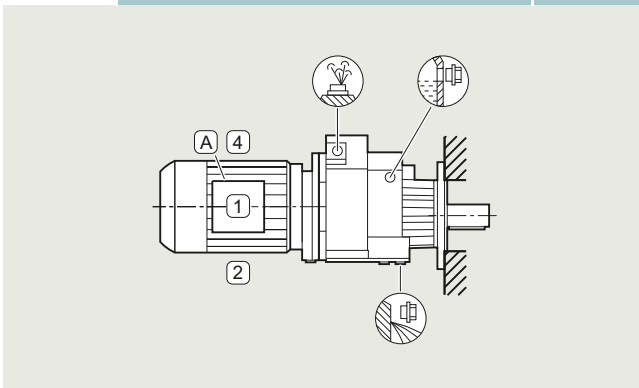
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M1</b>	2KJ3103-.....F... <b>-Z</b> , 2KJ3103-.....H... <b>-Z</b> 2KJ3203-.....F... <b>-Z</b> , 2KJ3203-.....H... <b>-Z</b>	<b>D01</b>



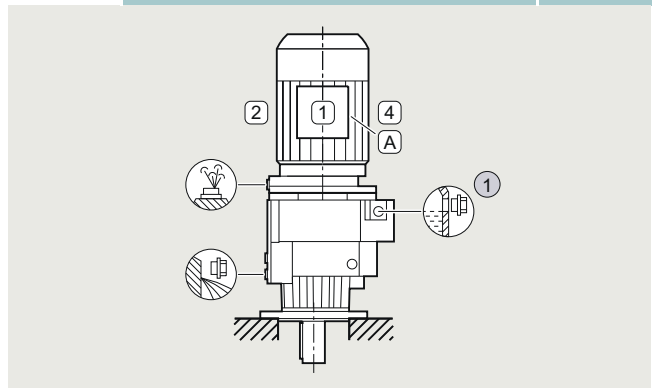
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M2</b>	2KJ3103-.....F... <b>-Z</b> , 2KJ3103-.....H... <b>-Z</b> 2KJ3203-.....F... <b>-Z</b> , 2KJ3203-.....H... <b>-Z</b>	<b>D02</b>



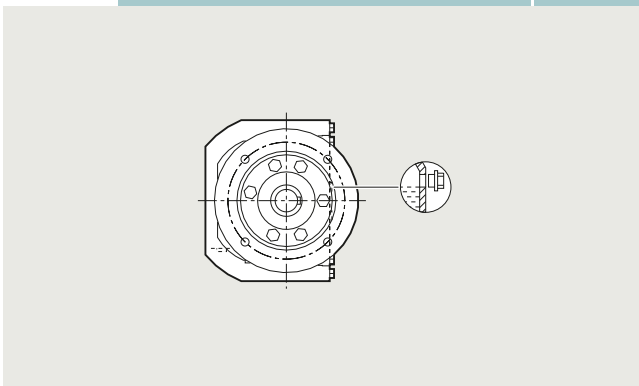
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M3</b>	2KJ3103-.....F... <b>-Z</b> , 2KJ3103-.....H... <b>-Z</b> 2KJ3203-.....F... <b>-Z</b> , 2KJ3203-.....H... <b>-Z</b>	<b>D03</b>



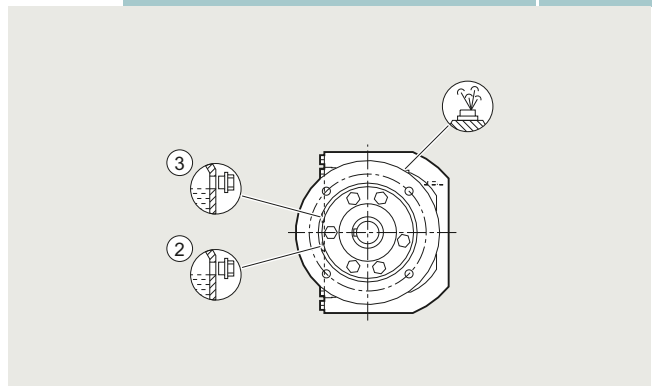
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M4</b>	2KJ3103-.....F... <b>-Z</b> , 2KJ3103-.....H... <b>-Z</b> 2KJ3203-.....F... <b>-Z</b> , 2KJ3203-.....H... <b>-Z</b>	<b>D04</b>



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

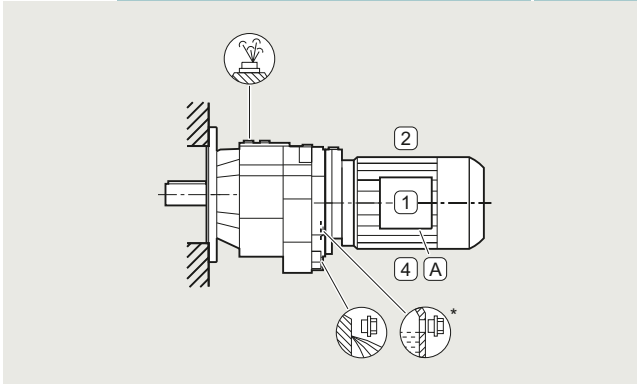
Helical gearboxes ZF and DF with VLplus/XLplus reinforced bearing systems, sizes 89 to 169

#### Oil valves

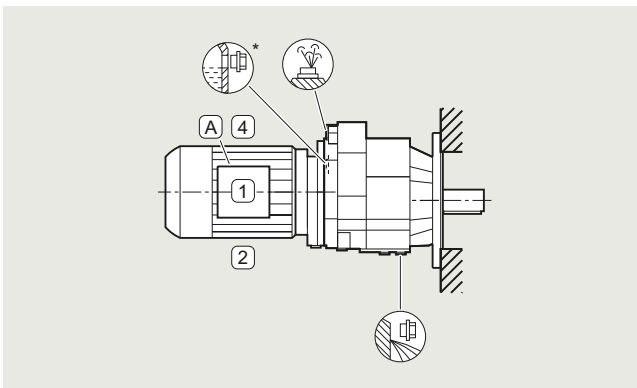
For an explanation of the symbols, see [page 9/3](#).

An oil dipstick is available as an option for 2-stage helical gearboxes ZF89 to ZF189 and ZKF89 to ZKF189 with mounting position M4.

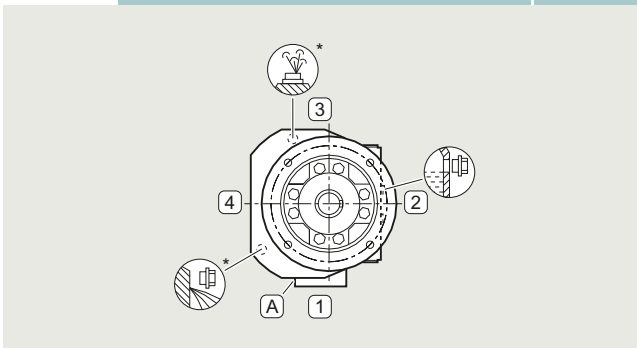
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D01</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	



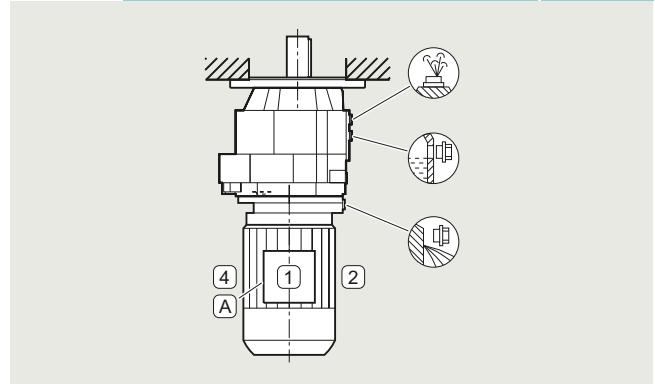
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D03</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	



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	

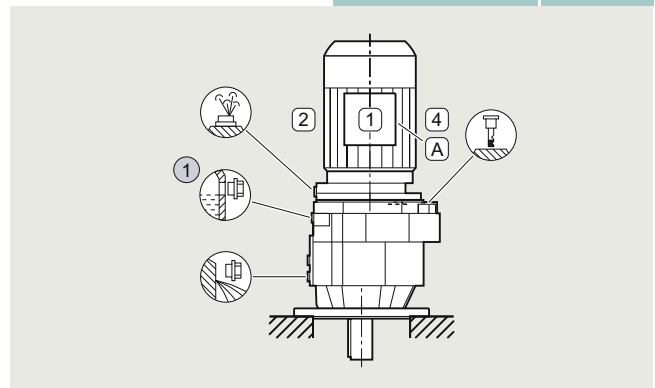


Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D02</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	

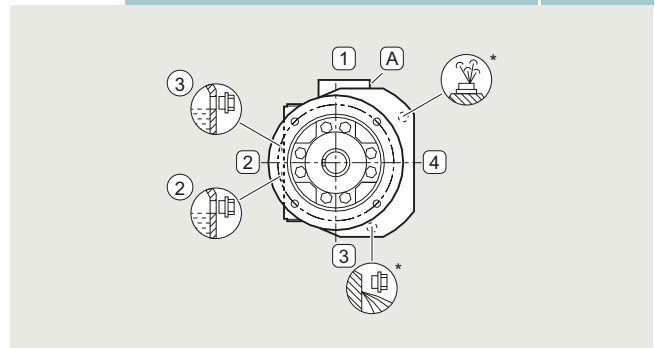


Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ31...-F...-Z, 2KJ31...-H...-Z	<b>D04</b>
	2KJ32...-F...-Z, 2KJ32...-H...-Z	

Oil dipstick (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	



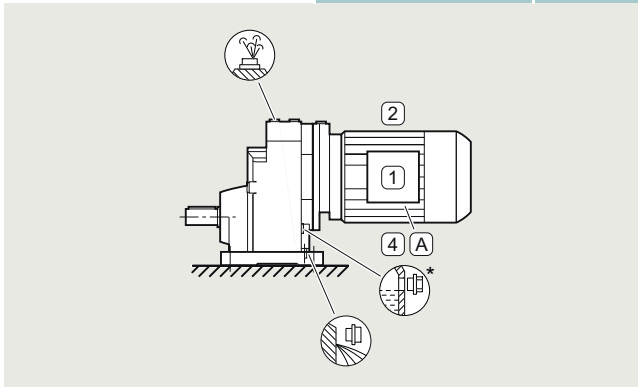
**Foot-mounted design**

**Helical gearboxes E, sizes 39 to 149**

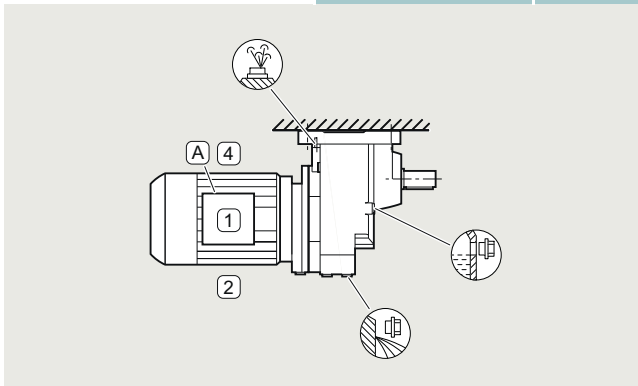
**Oil valves**

For an explanation of the symbols, see [page 9/3](#).

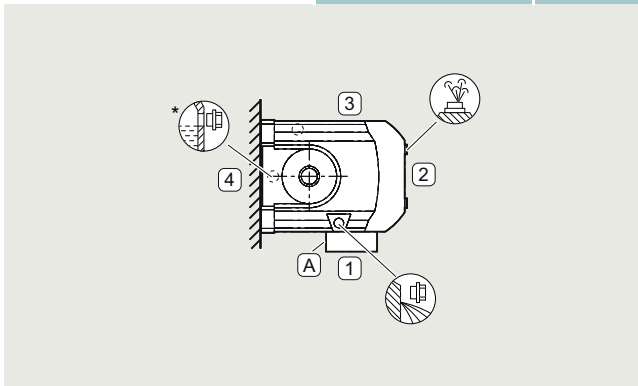
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ30... -.....- A.-Z	<b>D01</b>



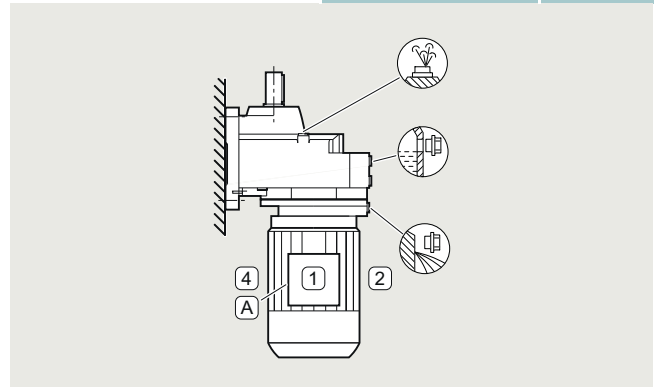
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ30... -.....- A.-Z	<b>D03</b>



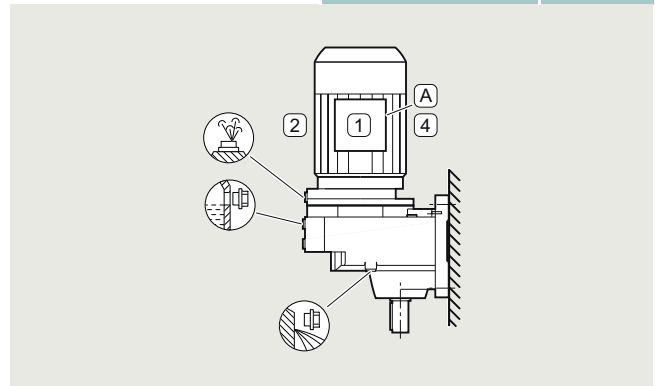
Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ30... -.....- A.-Z	<b>D05</b>



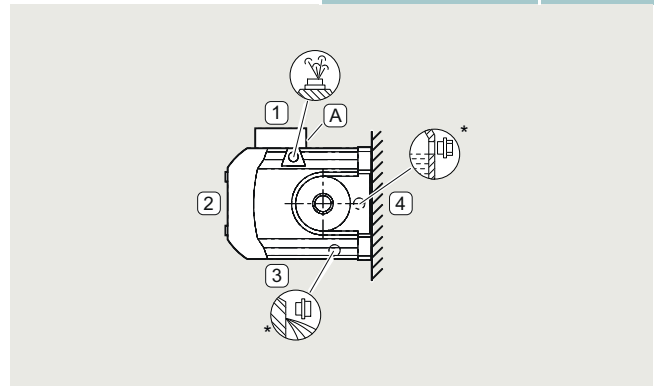
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ30... -.....- A.-Z	<b>D02</b>



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, size 39 to 149

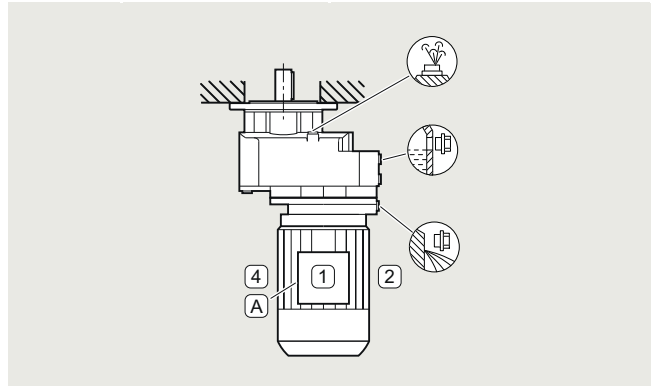
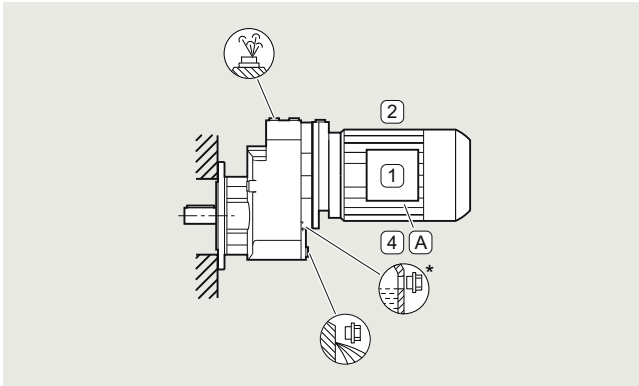
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

An oil dipstick is available as an option for 1-stage helical gearboxes EF89 to EF149 and EKF89 to EKF149 with mounting position M4.

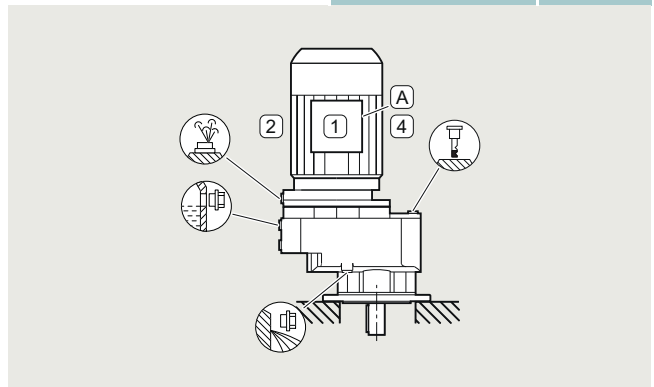
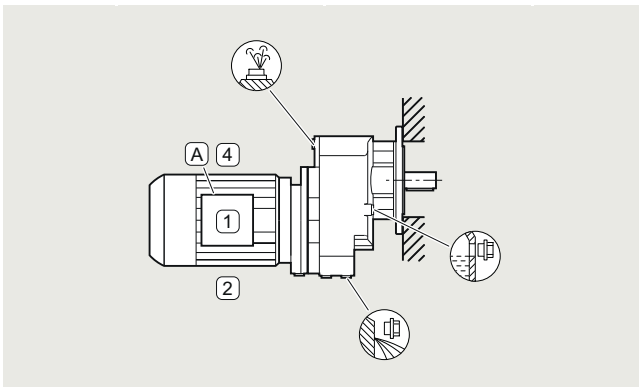
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D01</b>

Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D02</b>



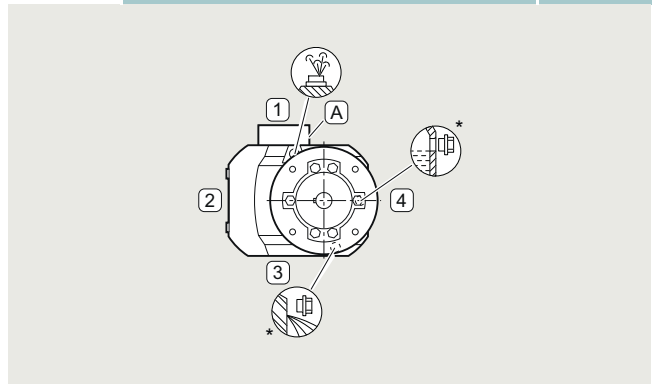
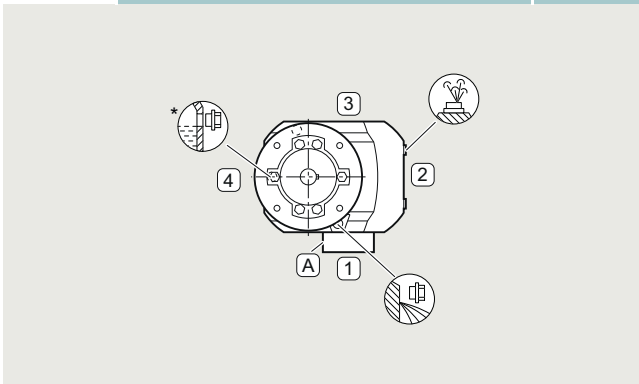
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D03</b>

Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D04</b>
Oil dipstick (mounting position M4)		<b>G48 + D04</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>M6</b>	2KJ30...-.....-F...-Z, 2KJ30...-.....-H...-Z	<b>D06</b>



**Shaft-mounted design**

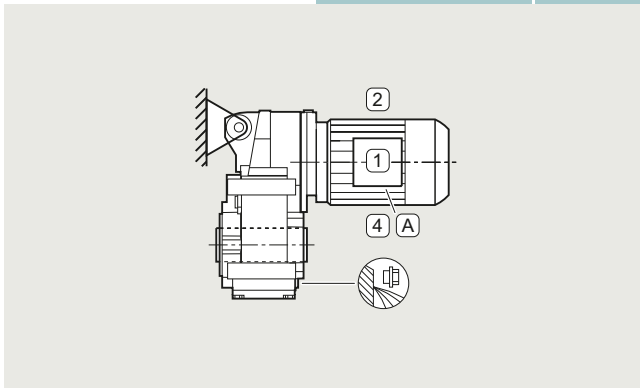
**Parallel shaft gearboxes F.AD, size 29**

**Oil valves**

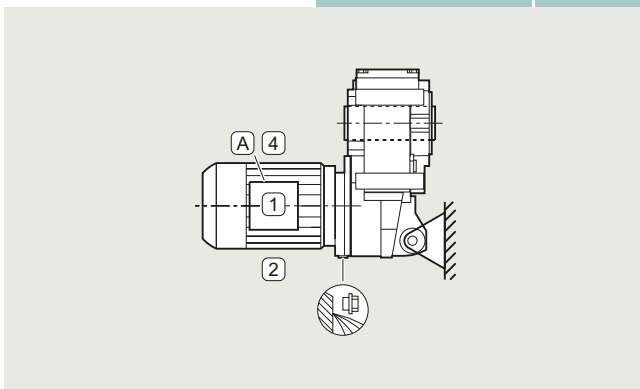
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

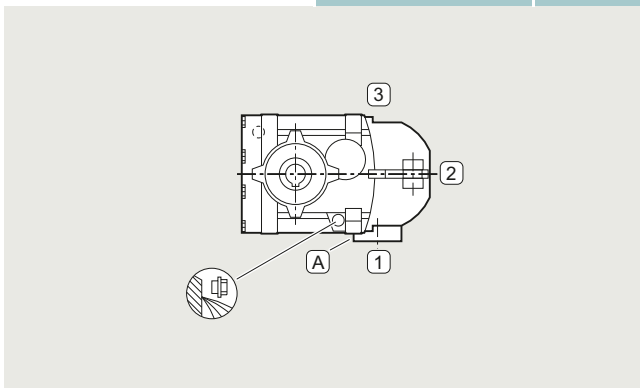
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D01</b>



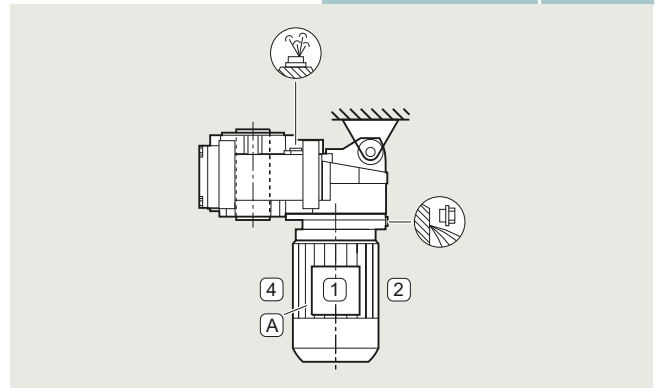
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D03</b>



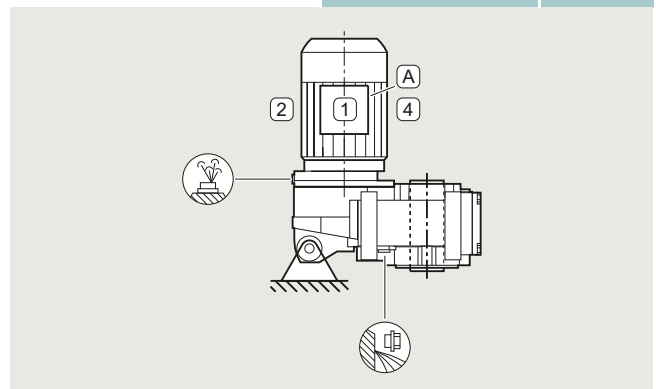
Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D05</b>



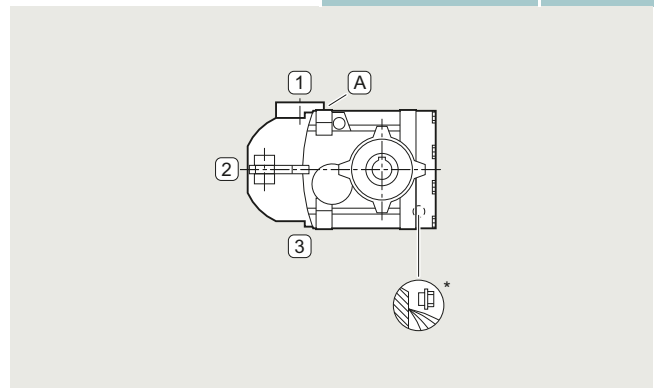
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D02</b>



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>M6</b>	2KJ3301 - ..... - D...-Z 2KJ3401 - ..... - D...-Z	<b>D06</b>



# Gearbox options

## Mounting position

### Parallel shaft gearboxes

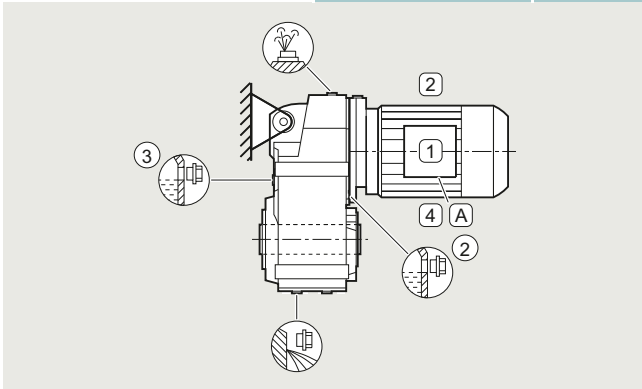
#### Shaft-mounted design

##### Parallel shaft gearboxes F.AD, sizes 39 to 189

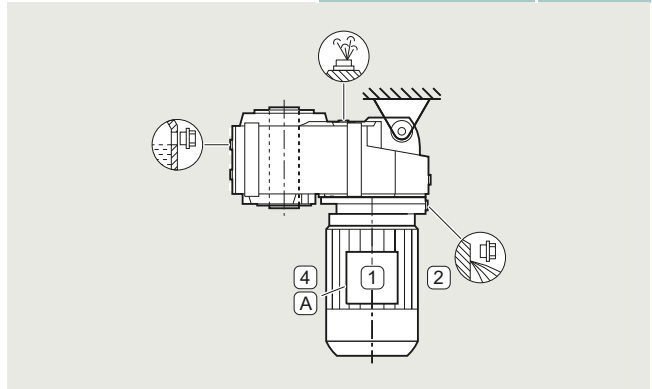
###### Oil valves

For an explanation of the symbols, see [page 9/3](#).

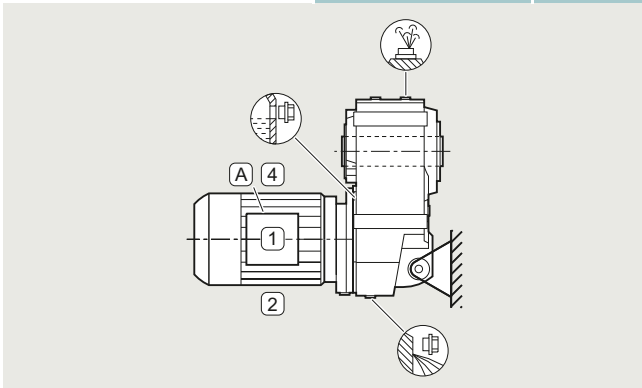
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ33... - ..... - D..-Z 2KJ34... - ..... - D..-Z	<b>D01</b>



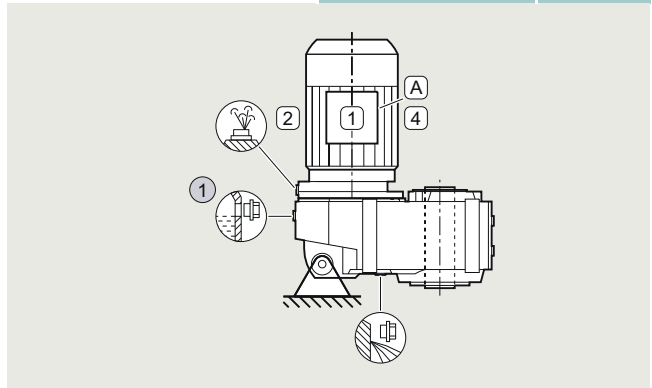
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ33... - ..... - D..-Z 2KJ34... - ..... - D..-Z	<b>D02</b>



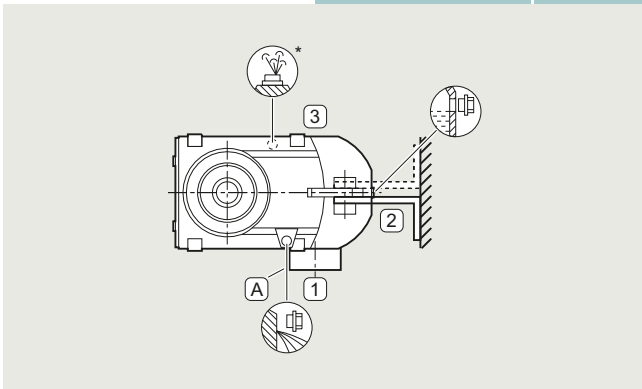
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ33... - ..... - D..-Z 2KJ34... - ..... - D..-Z	<b>D03</b>



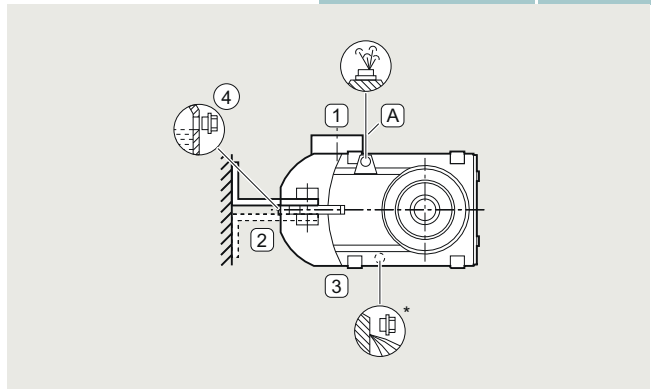
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ33... - ..... - D..-Z 2KJ34... - ..... - D..-Z	<b>D04</b>



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>



**Flange-mounted design or with housing flange**

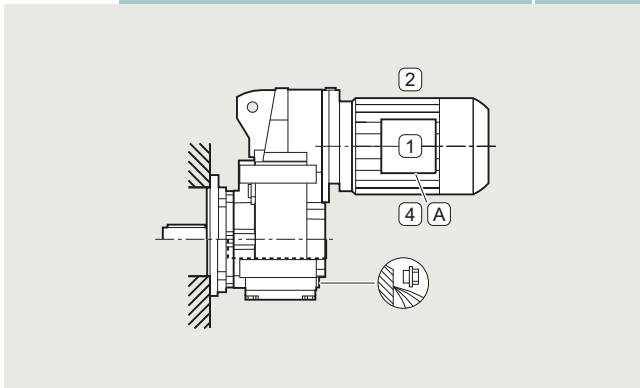
**Parallel shaft gearboxes F..F or F..Z, size 29**

**Oil valves**

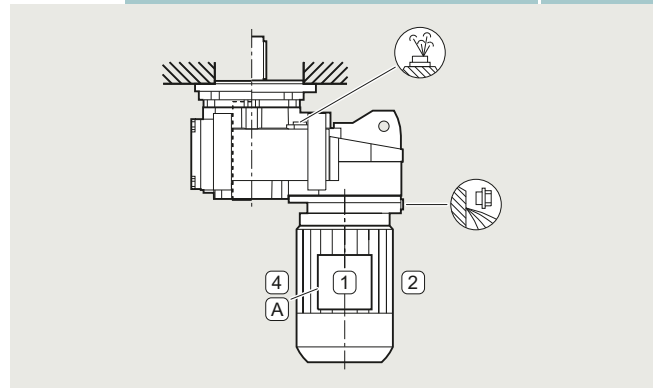
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

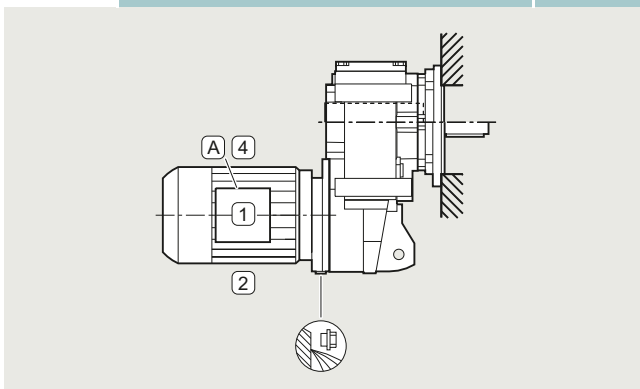
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M1</b>	2KJ3301 - ..... - F..-Z, 2KJ3301 - ..... - H...-Z 2KJ3401 - ..... - F..-Z, 2KJ3401 - ..... - H...-Z	<b>D01</b>



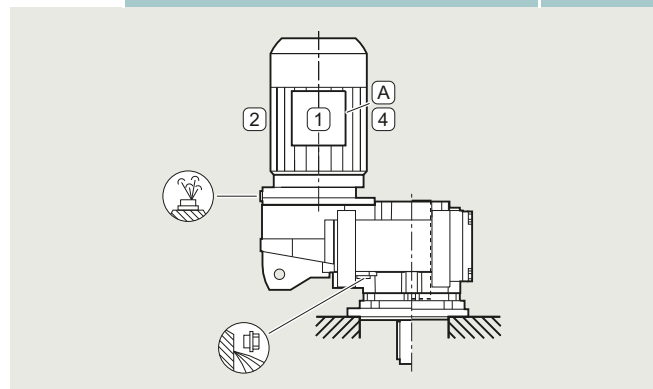
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M2</b>	2KJ3301 - ..... - F..-Z, 2KJ3301 - ..... - H...-Z 2KJ3401 - ..... - F..-Z, 2KJ3401 - ..... - H...-Z	<b>D02</b>



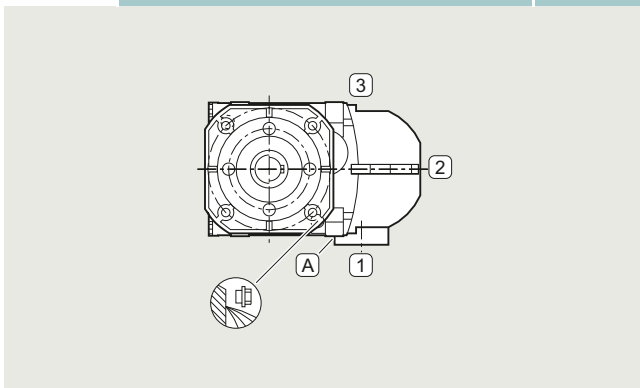
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M3</b>	2KJ3301 - ..... - F..-Z, 2KJ3301 - ..... - H...-Z 2KJ3401 - ..... - F..-Z, 2KJ3401 - ..... - H...-Z	<b>D03</b>



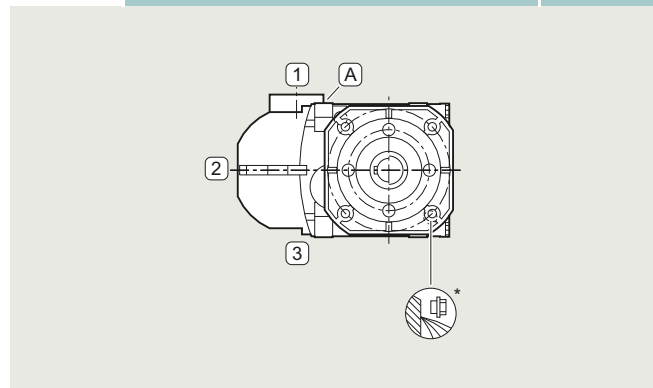
Mounting position	Additional identification code <b>-Z</b> with order code	Order code
<b>M4</b>	2KJ3301 - ..... - F..-Z, 2KJ3301 - ..... - H...-Z 2KJ3401 - ..... - F..-Z, 2KJ3401 - ..... - H...-Z	<b>D04</b>



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

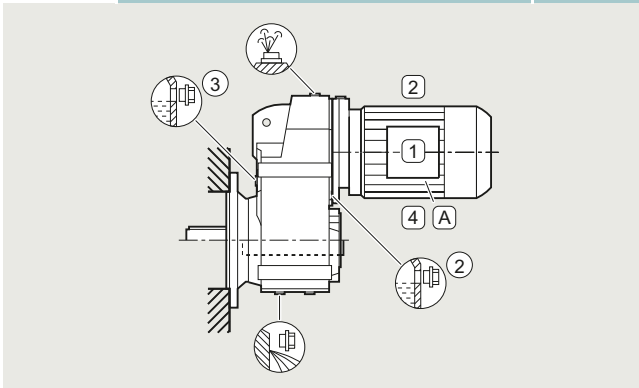
Parallel shaft gearboxes F..F with VLplus reinforced bearing systems, sizes 89 to 169

##### Oil valves

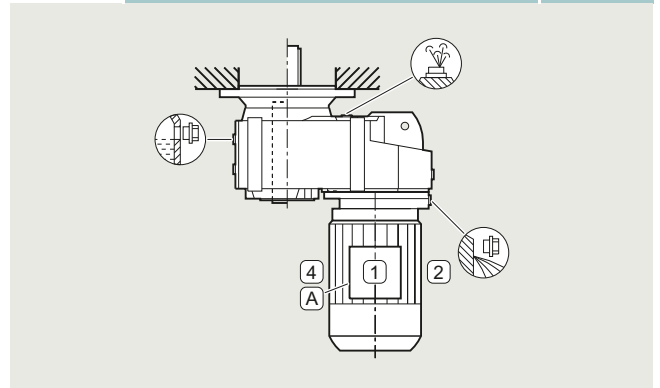
For an explanation of the symbols, see [page 9/3](#).

For parallel shaft gearboxes in flange-mounted or housing flange design, mounting position M1 to M6 is stated without the output side A or B. Output side A is always assumed in these cases.

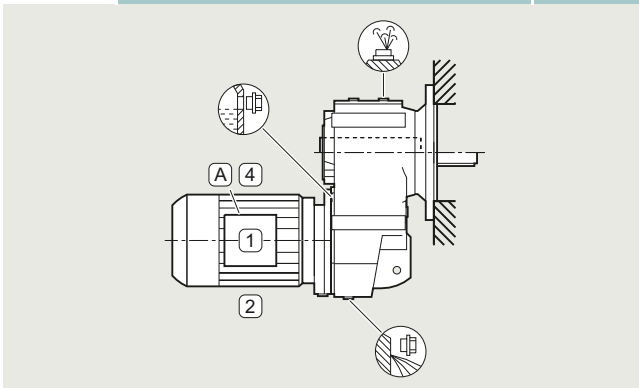
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ33...-.....F..-Z, 2KJ33...-.....H...-Z 2KJ34...-.....F..-Z, 2KJ34...-.....H...-Z	<b>D01</b>



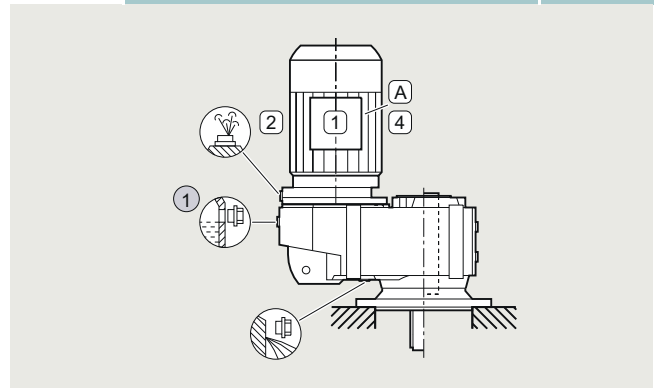
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ33...-.....F..-Z, 2KJ33...-.....H...-Z 2KJ34...-.....F..-Z, 2KJ34...-.....H...-Z	<b>D02</b>



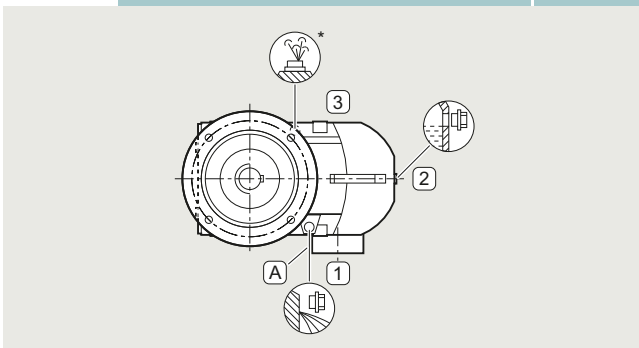
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ33...-.....F..-Z, 2KJ33...-.....H...-Z 2KJ34...-.....F..-Z, 2KJ34...-.....H...-Z	<b>D03</b>



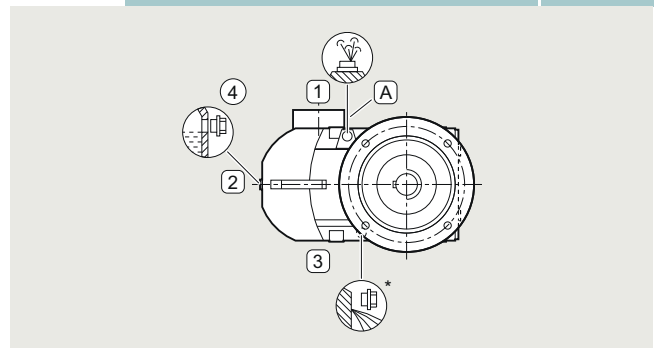
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ33...-.....F..-Z, 2KJ33...-.....H...-Z 2KJ34...-.....F..-Z, 2KJ34...-.....H...-Z	<b>D04</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M5</b>	2KJ33...-.....F..-Z, 2KJ33...-.....H...-Z 2KJ34...-.....F..-Z, 2KJ34...-.....H...-Z	<b>D05</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M6</b>	2KJ33...-.....F..-Z, 2KJ33...-.....H...-Z 2KJ34...-.....F..-Z, 2KJ34...-.....H...-Z	<b>D06</b>



**Foot-mounted design**

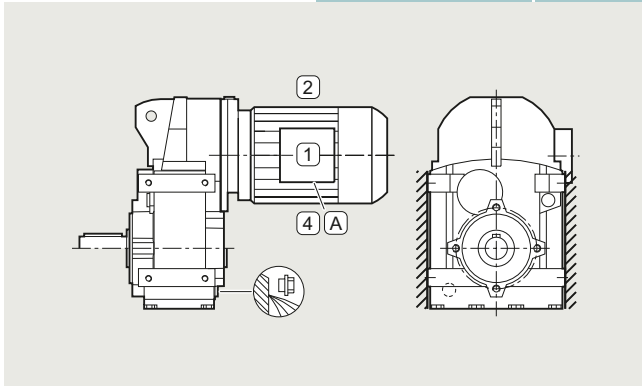
**Parallel shaft gearboxes F, size 29**

**Oil valves**

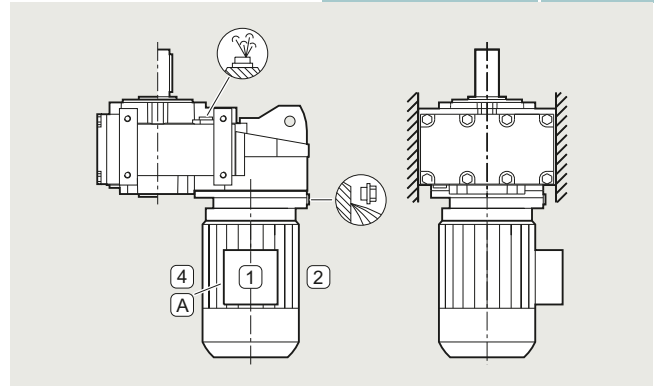
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

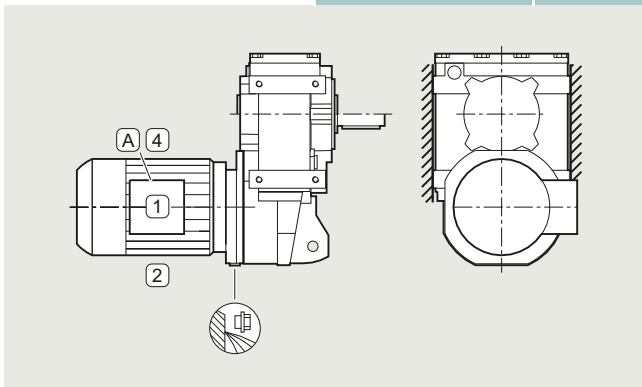
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D01</b>



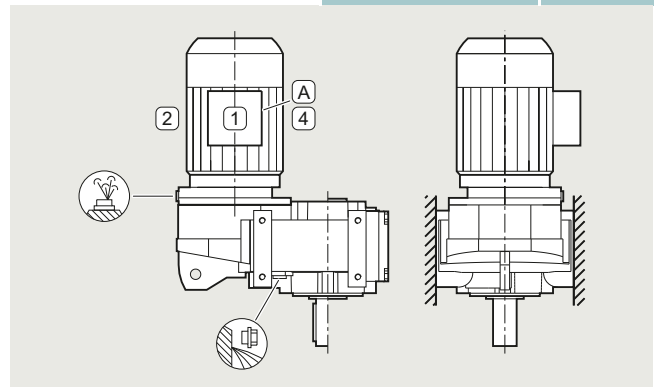
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D02</b>



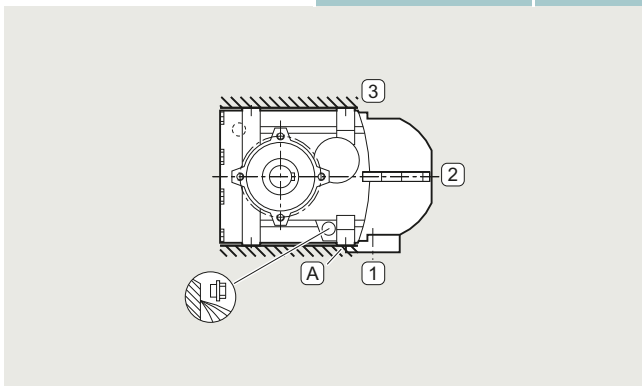
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D03</b>



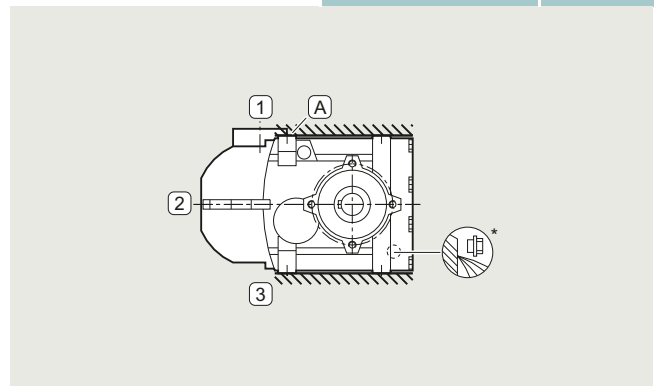
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ3301 - ..... - A..-Z 2KJ3401 - ..... - A..-Z	<b>D04</b>



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

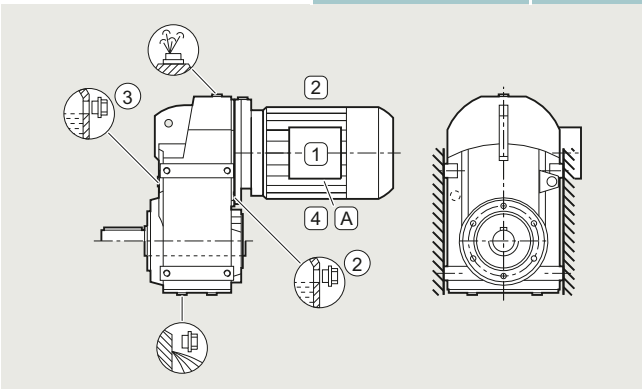
#### Foot-mounted design

#### Parallel shaft gearboxes F, sizes 39 to 189

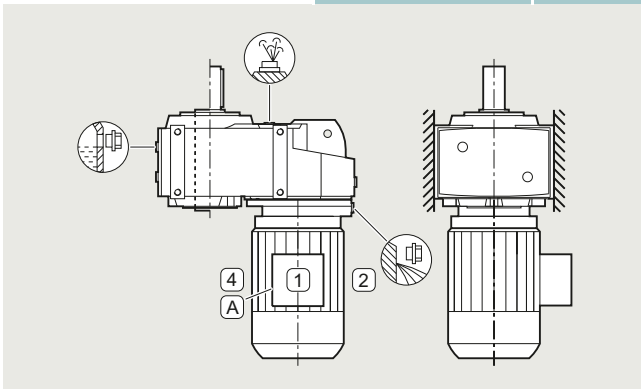
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

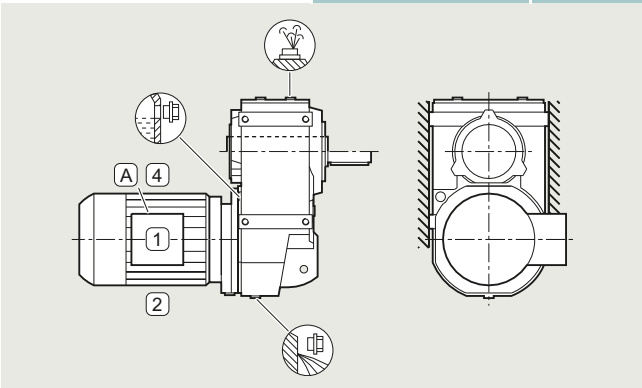
Mounting position	Additional identification code -Z with order code	Order code
<b>M1</b>	2KJ33...-.....-A...-Z 2KJ34...-.....-A...-Z	<b>D01</b>



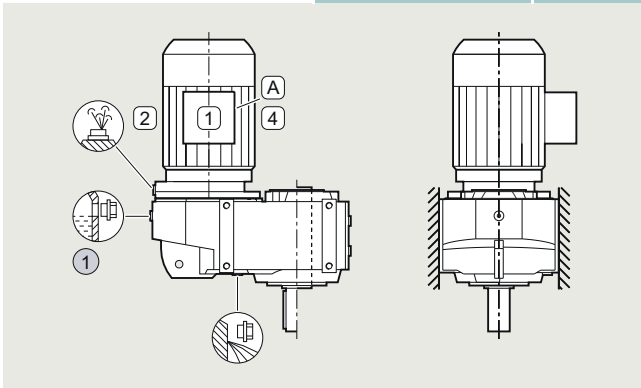
Mounting position	Additional identification code -Z with order code	Order code
<b>M2</b>	2KJ33...-.....-A...-Z 2KJ34...-.....-A...-Z	<b>D02</b>



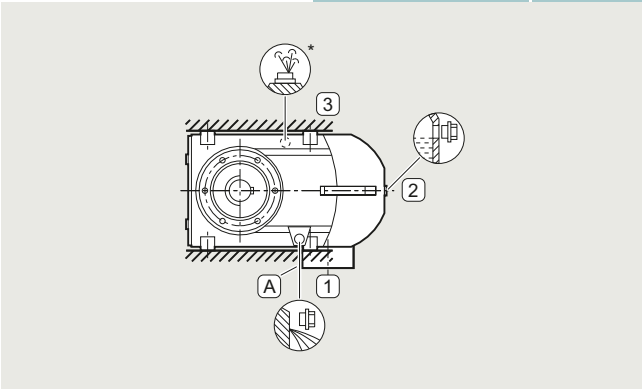
Mounting position	Additional identification code -Z with order code	Order code
<b>M3</b>	2KJ33...-.....-A...-Z 2KJ34...-.....-A...-Z	<b>D03</b>



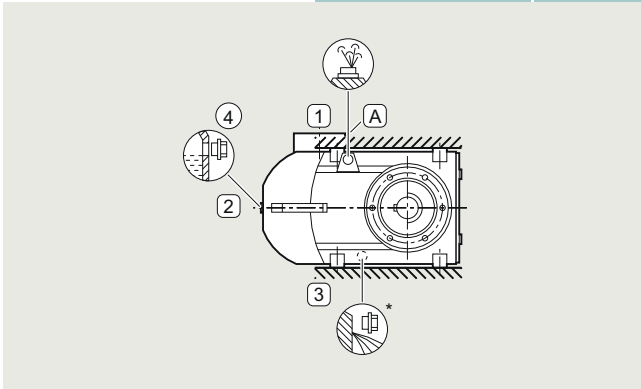
Mounting position	Additional identification code -Z with order code	Order code
<b>M4</b>	2KJ33...-.....-A...-Z 2KJ34...-.....-A...-Z	<b>D04</b>



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>



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**Foot-mounted design**

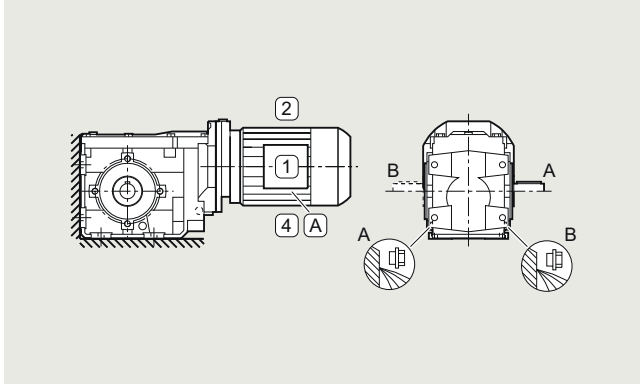
**Bevel gearboxes B, size 19 and 29**

**Oil valves**

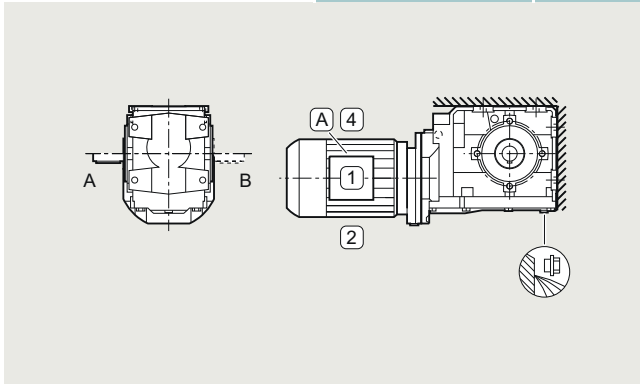
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

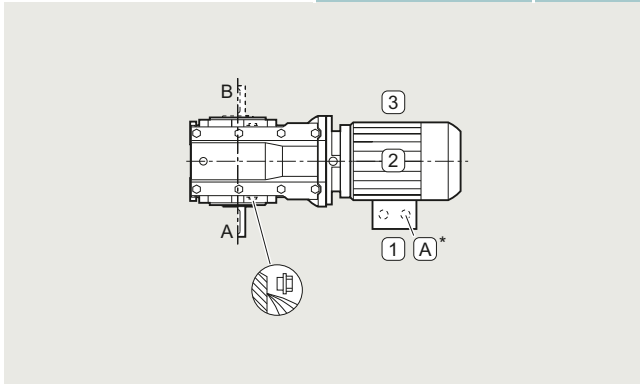
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35... - ..... - A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35... - ..... - A...-Z	<b>D21</b>



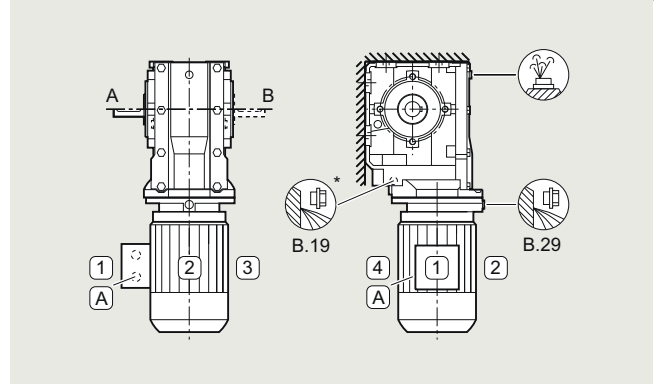
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35... - ..... - A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35... - ..... - A...-Z	<b>D23</b>



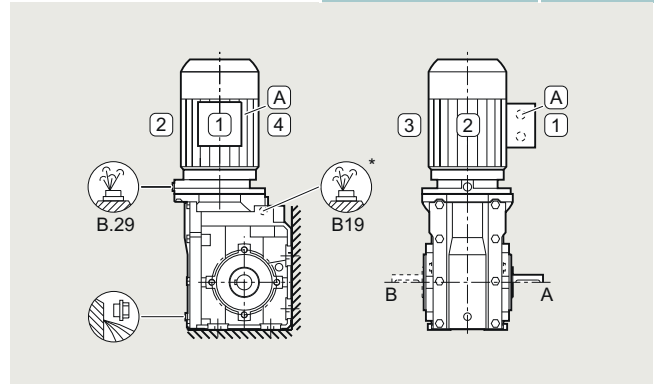
Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35... - ..... - A...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35... - ..... - A...-Z	<b>D25</b>



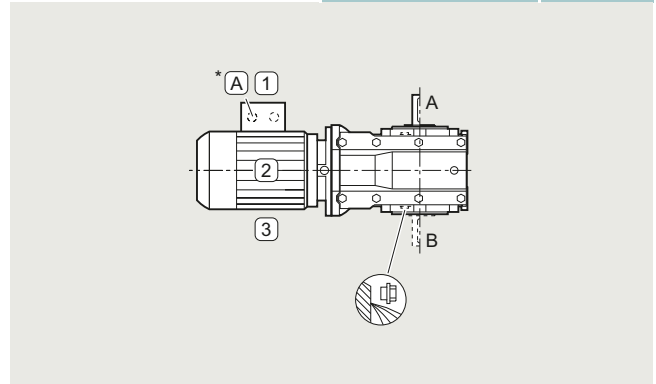
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35... - ..... - A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35... - ..... - A...-Z	<b>D22</b>



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

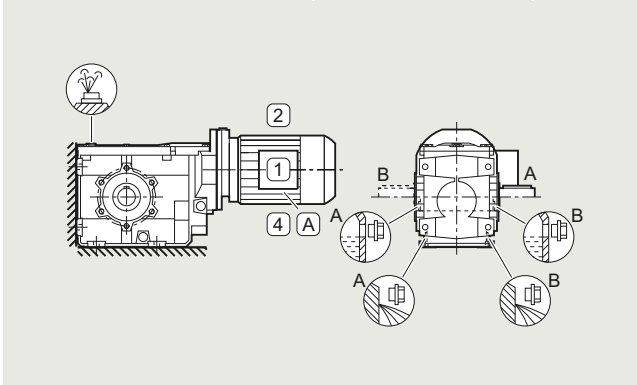
#### Foot-mounted design

#### Bevel gearboxes B, sizes 39 and 49

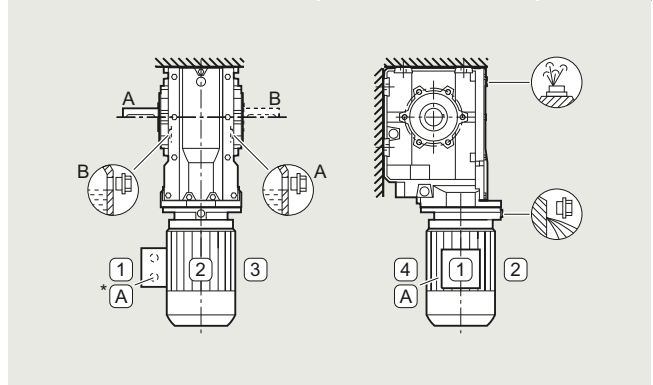
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

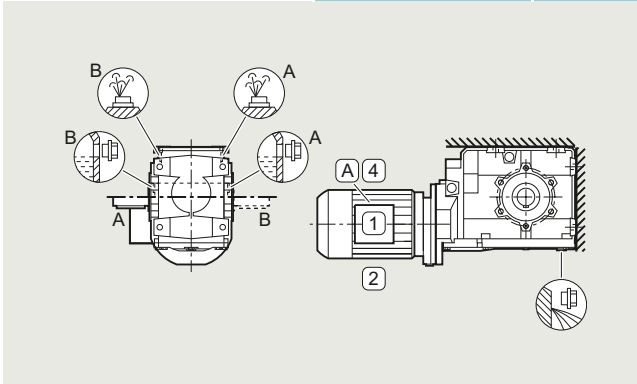
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-A...-Z	<b>D21</b>



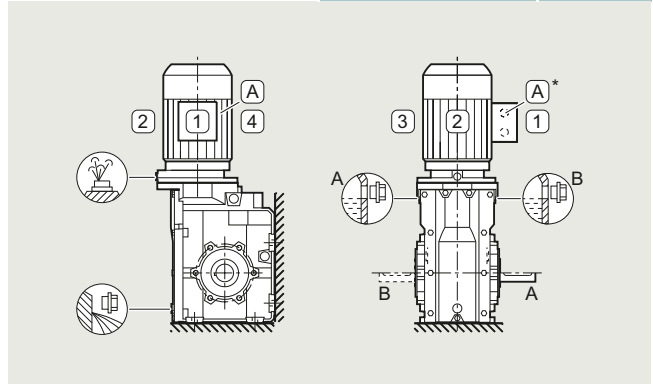
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-A...-Z	<b>D22</b>



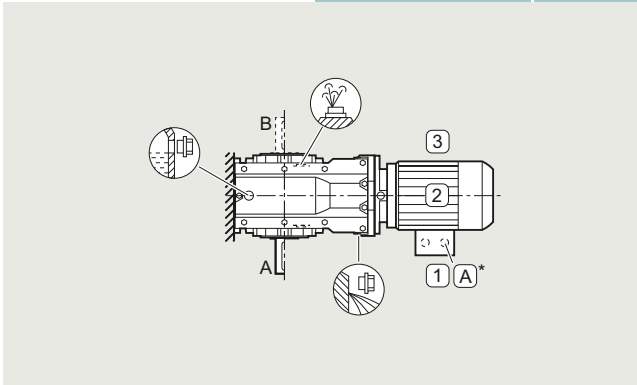
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-A...-Z	<b>D23</b>



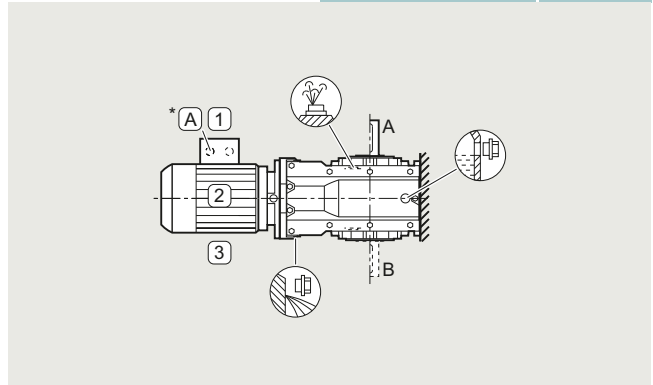
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-A...-Z	<b>D24</b>



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>



**Housing flange design and flange-mounted design**

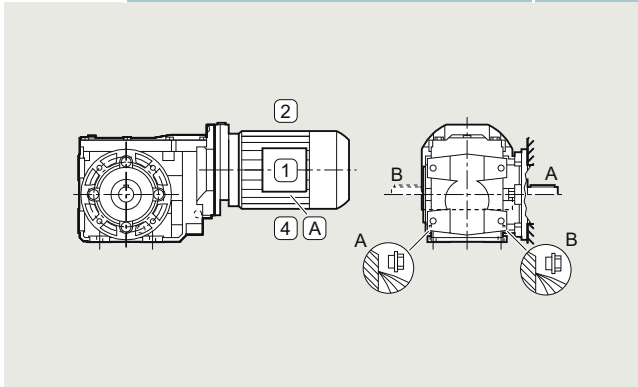
**Bevel gearboxes B.Z and B.F, sizes 19 and 29**

**Oil valves**

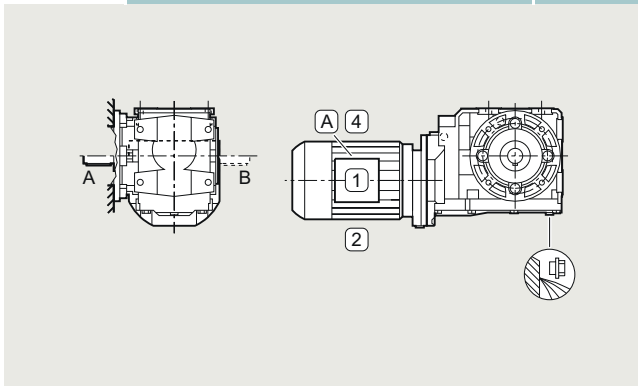
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

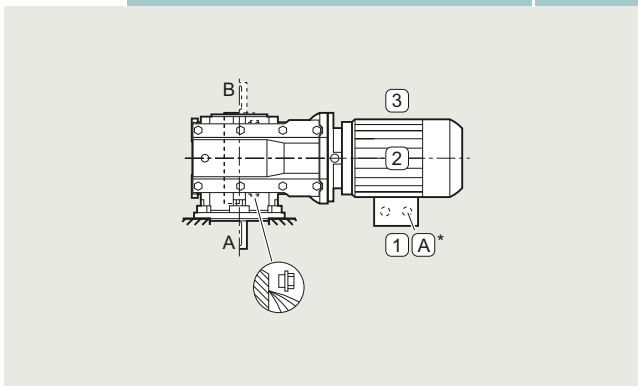
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D21</b>



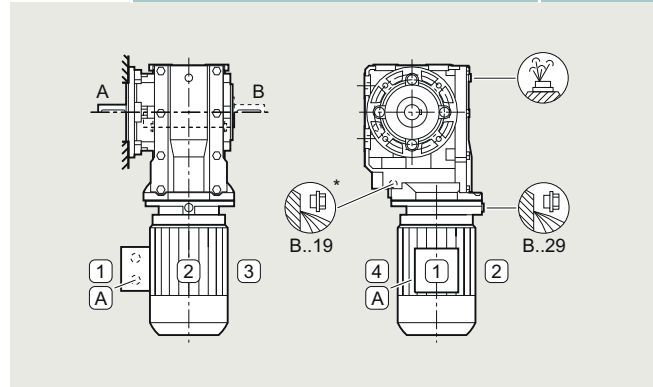
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D23</b>



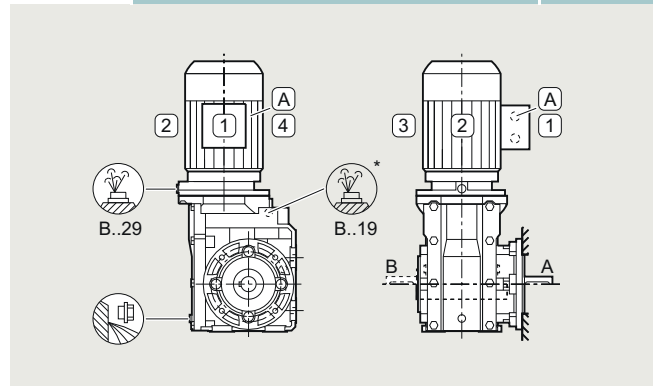
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D25</b>



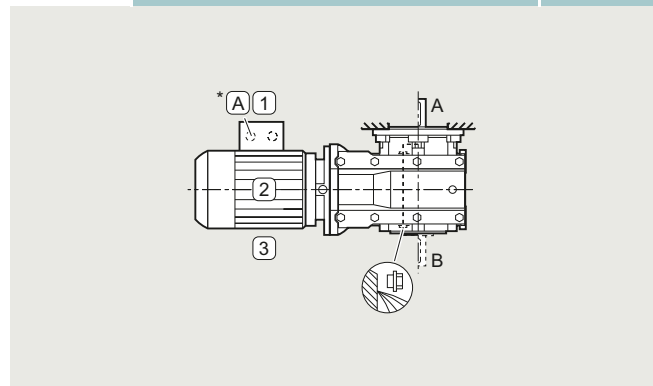
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-F...-Z, 2KJ35...-H...-Z	<b>D22</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>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>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>



# Gearbox options

## Mounting position

### Bevel gearboxes B

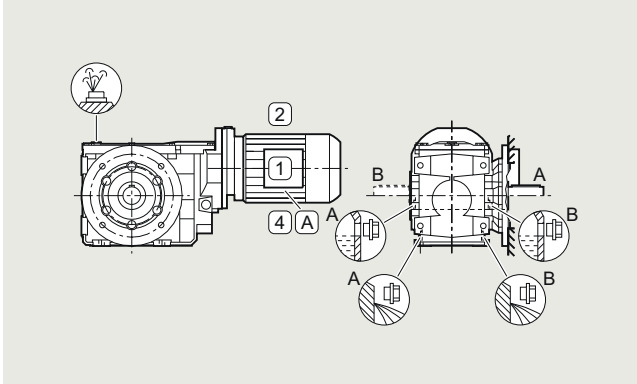
#### Housing flange design and flange-mounted design

##### Bevel gearboxes B.Z and B.F, sizes 39 and 49

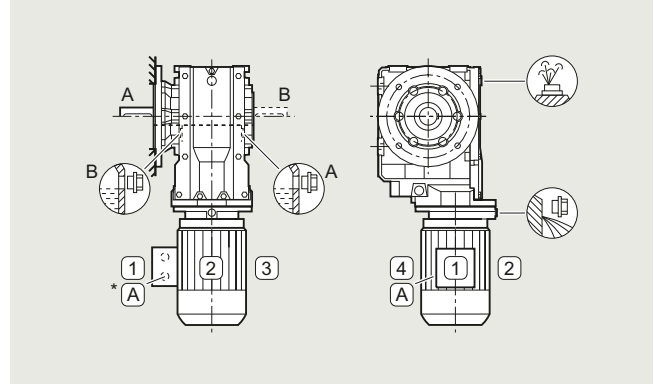
###### Oil valves

For an explanation of the symbols, see [page 9/3](#).

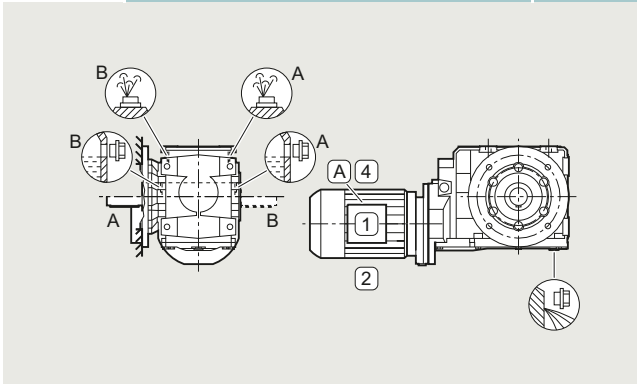
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D21</b>



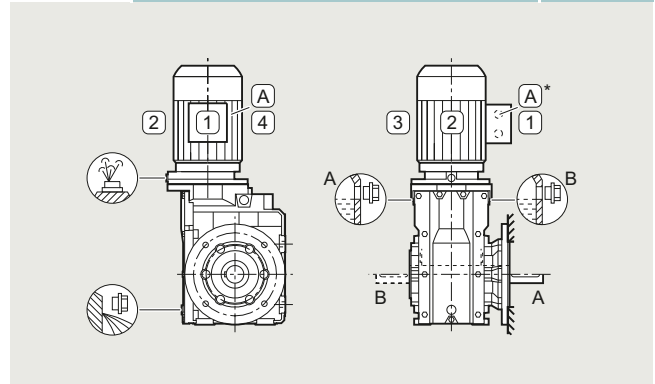
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D22</b>



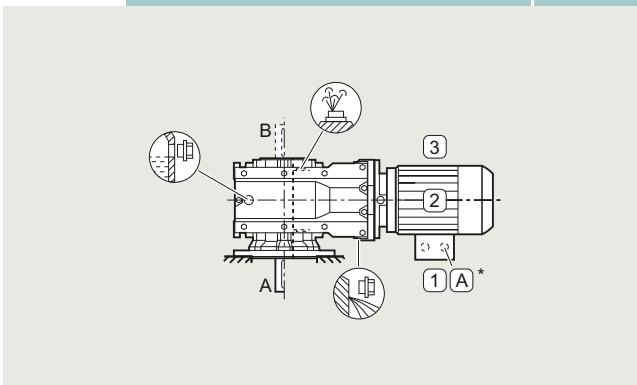
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D23</b>



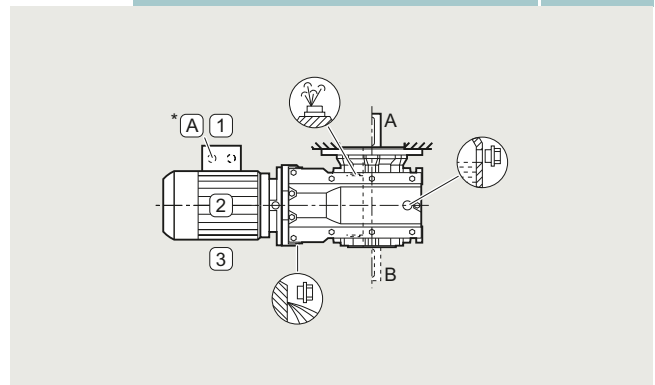
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-F...-Z, 2KJ35...-.....-H...-Z	<b>D24</b>



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>



**Shaft-mounted design**

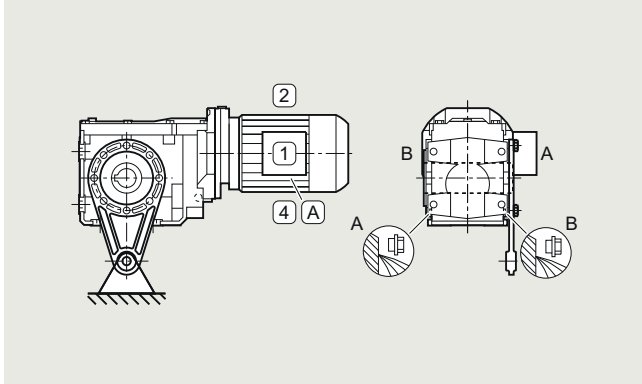
**Bevel gearboxes BAD, sizes 19 and 29**

**Oil valves**

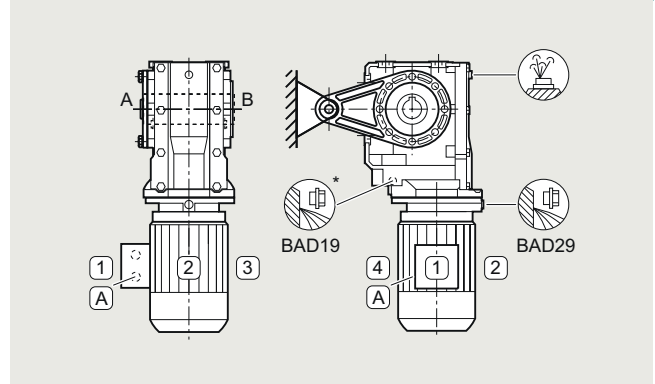
Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

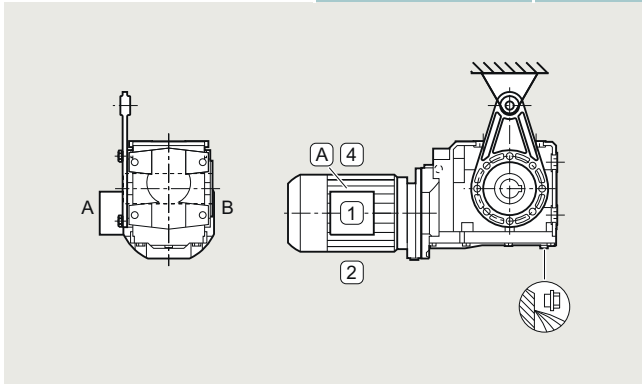
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-D...-Z	<b>D21</b>



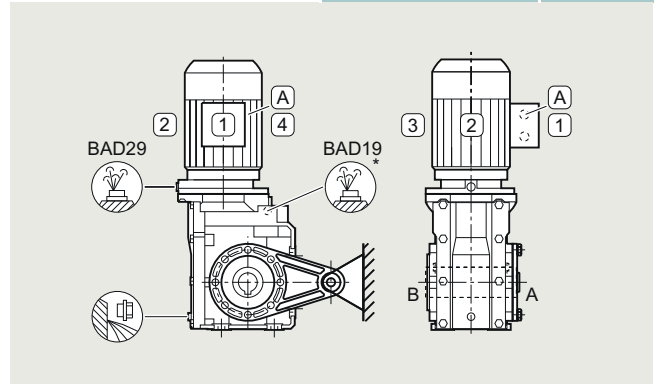
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-D...-Z	<b>D22</b>



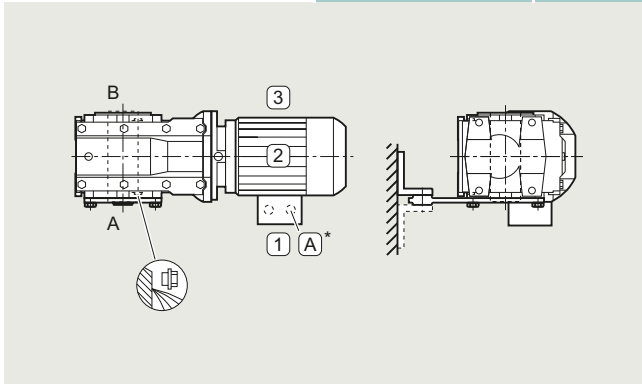
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-D...-Z	<b>D23</b>



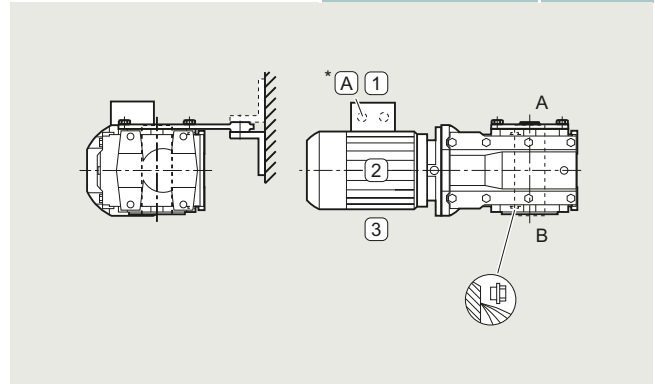
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-D...-Z	<b>D24</b>



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

### Bevel gearboxes B

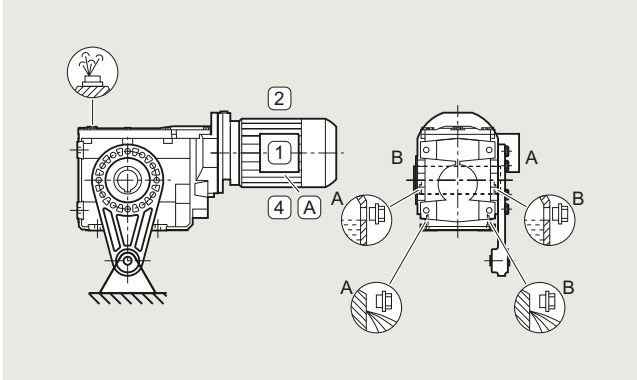
#### Shaft-mounted design

#### Bevel gearboxes BAD, sizes 39 and 49

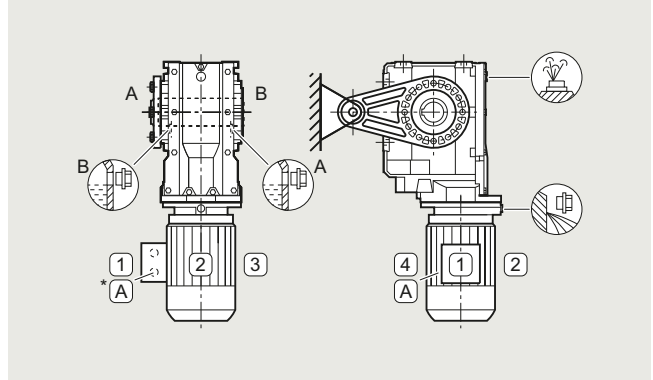
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

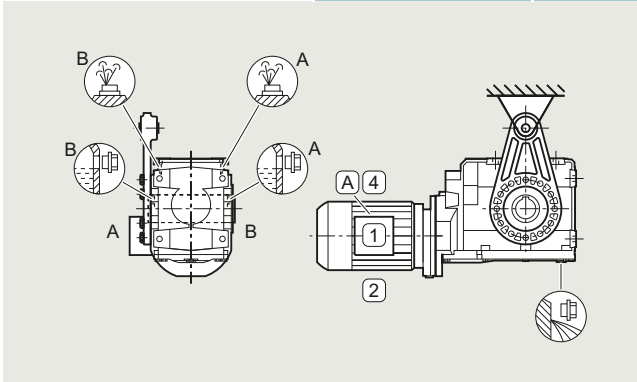
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-.....-D..-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-.....-D..-Z	<b>D21</b>



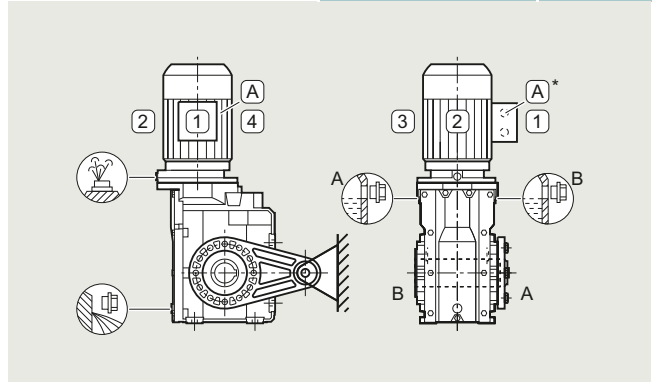
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-.....-D..-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-.....-D..-Z	<b>D22</b>



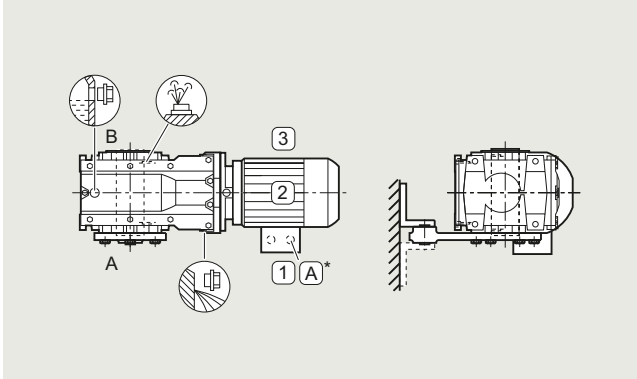
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-.....-D..-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-.....-D..-Z	<b>D23</b>



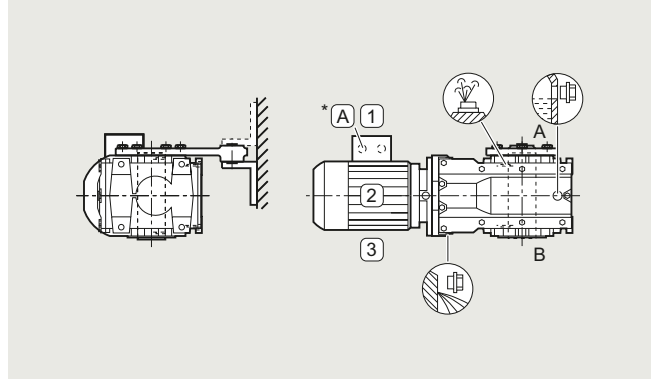
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35...-.....-D..-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35...-.....-D..-Z	<b>D24</b>



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>



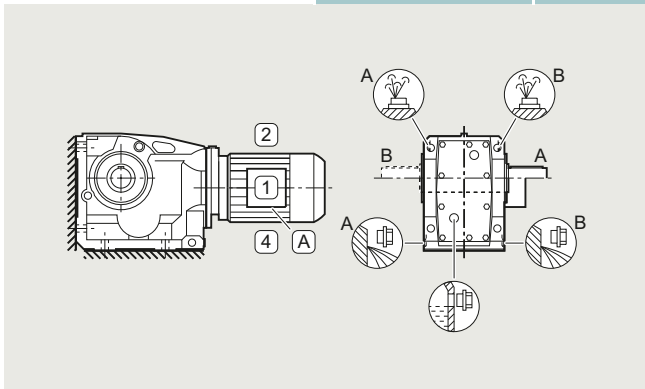
**Foot-mounted design**

**Bevel gearboxes K, sizes 39 to 189**

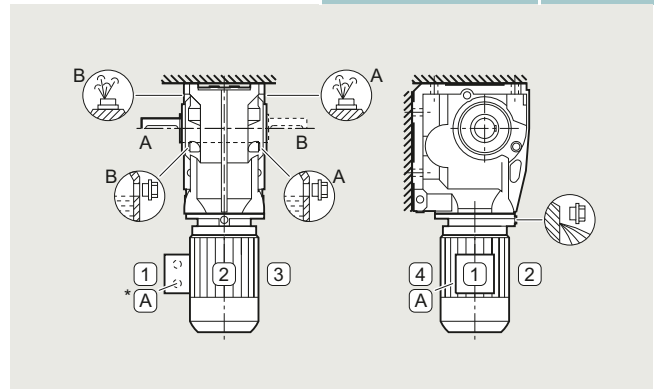
**Oil valves**

For an explanation of the symbols, see [page 9/3](#).

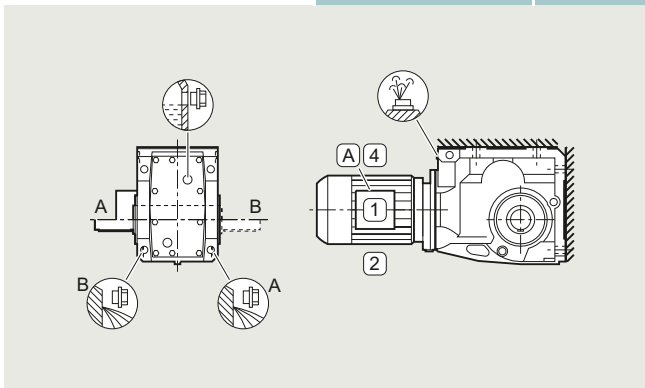
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35... -.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35... -.....-A...-Z	<b>D21</b>



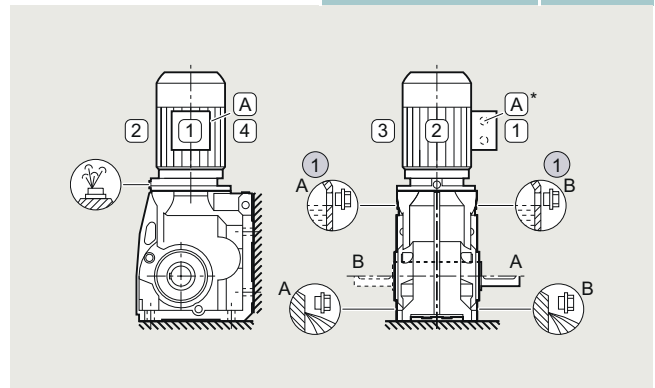
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35... -.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35... -.....-A...-Z	<b>D22</b>



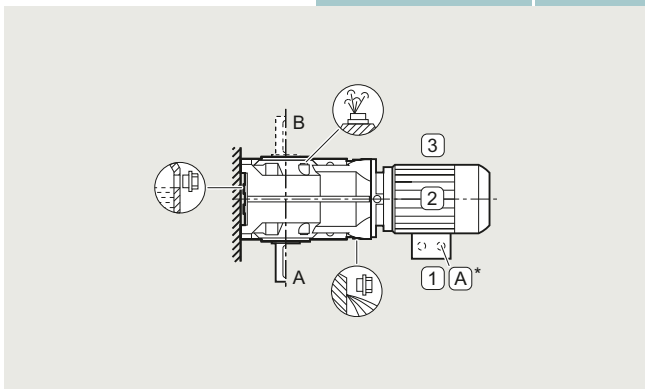
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35... -.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35... -.....-A...-Z	<b>D23</b>



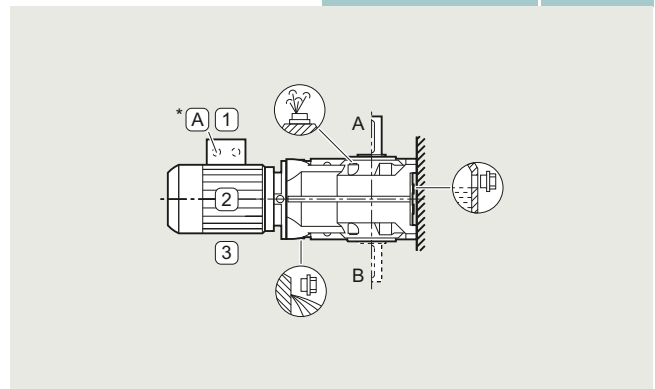
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35... -.....-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35... -.....-A...-Z	<b>D24</b>



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

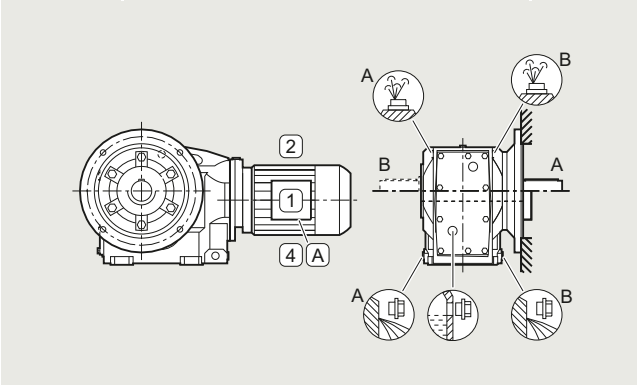
##### Bevel gearboxes KAZ and K.F, sizes 39 to 189

##### Bevel gearboxes K.F with VLplus reinforced bearing systems, sizes 89 to 169

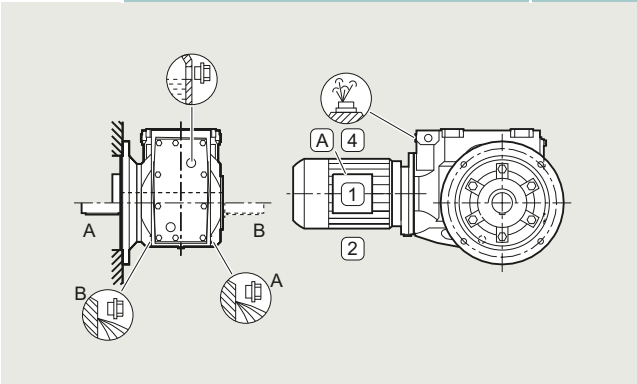
#### Oil valves

For an explanation of the symbols, see [page 9/3](#).

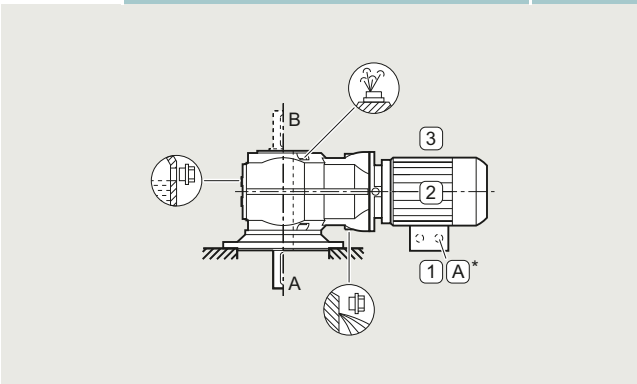
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D21</b>



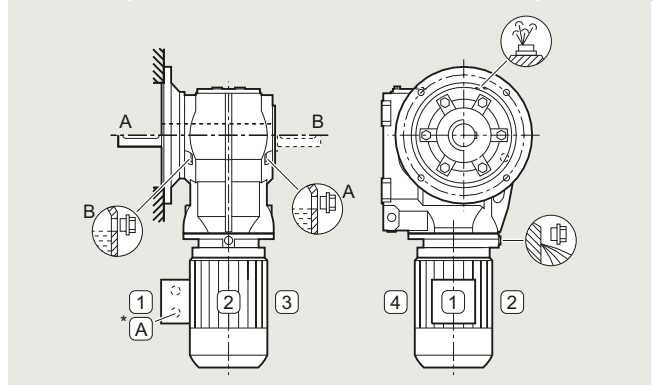
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D23</b>



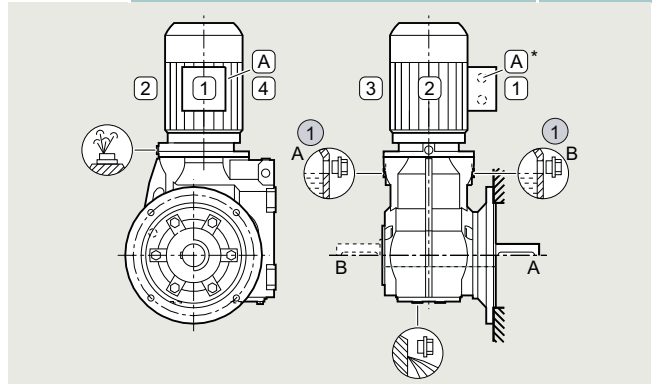
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D25</b>



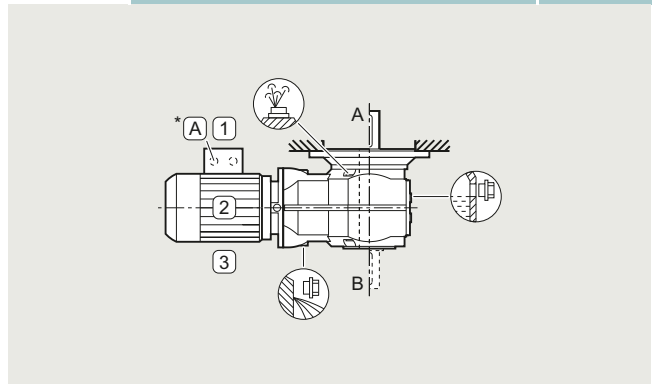
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35...-...-F...-Z, 2KJ35...-...-H...-Z	<b>D22</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>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>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>



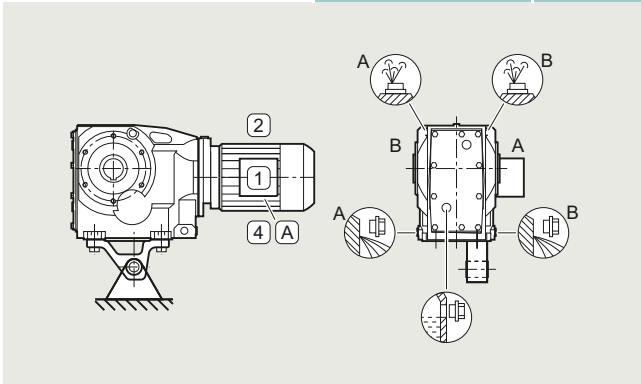
**Shaft-mounted design**

**Bevel gearboxes KAD, sizes 39 to 189**

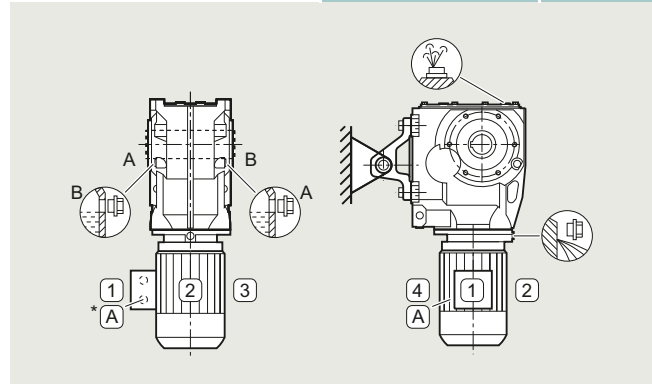
**Oil valves**

For an explanation of the symbols, see [page 9/3](#).

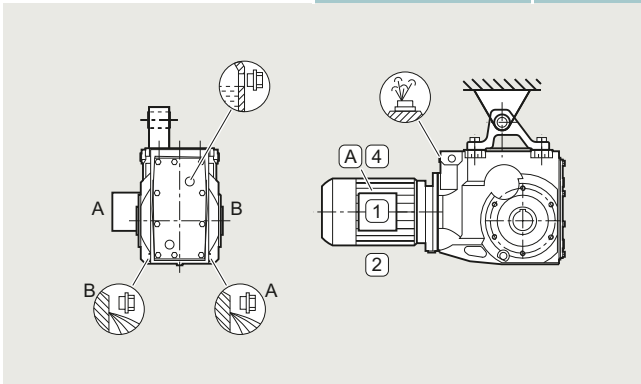
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ35... -.....-D..-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ35... -.....-D..-Z	<b>D21</b>



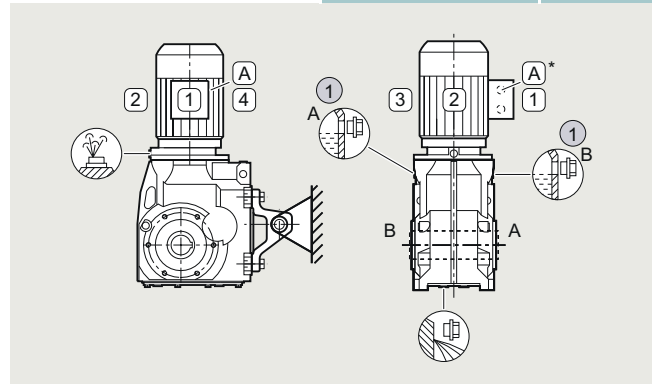
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ35... -.....-D..-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ35... -.....-D..-Z	<b>D22</b>



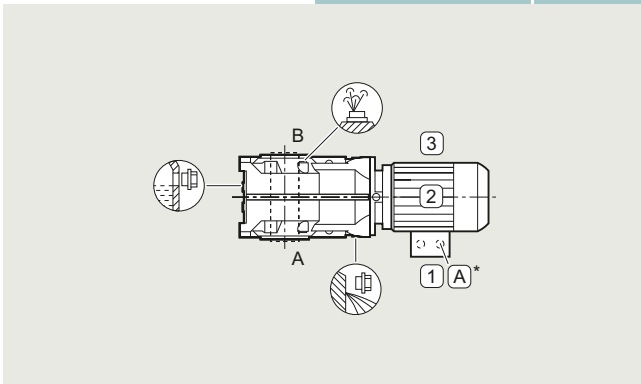
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ35... -.....-D..-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ35... -.....-D..-Z	<b>D23</b>



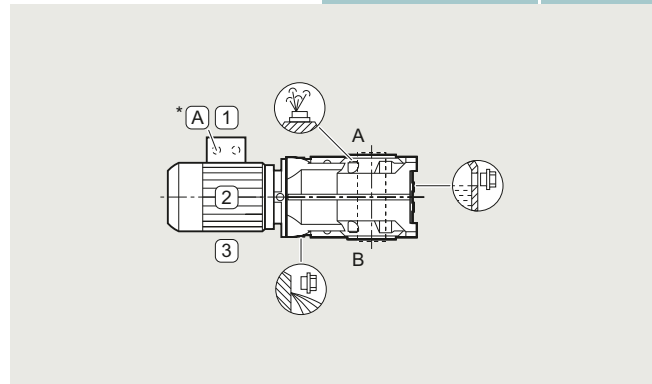
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ35... -.....-D..-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ35... -.....-D..-Z	<b>D24</b>



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

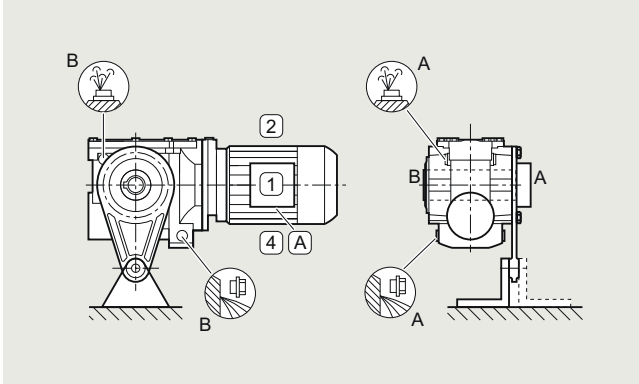
#### Helical worm gearboxes CAD, size 29

##### Oil valves

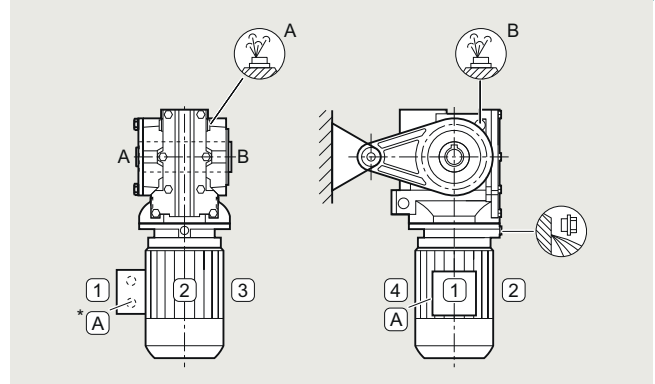
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

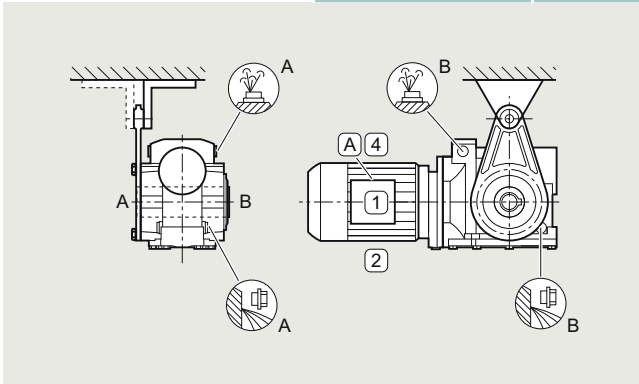
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3601-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3601-.....-D...-Z	<b>D21</b>



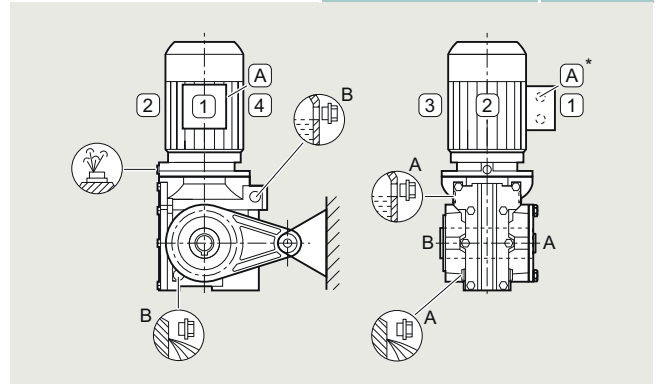
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3601-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3601-.....-D...-Z	<b>D22</b>



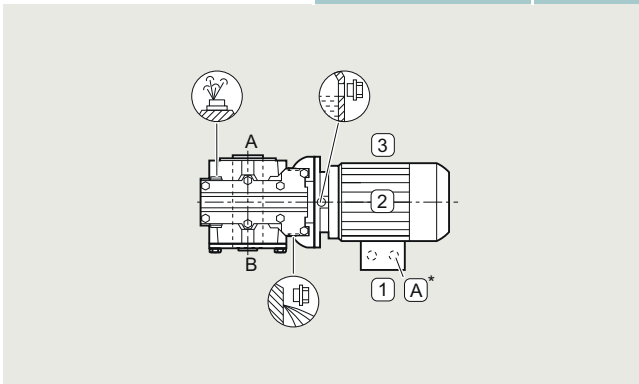
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3601-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3601-.....-D...-Z	<b>D23</b>



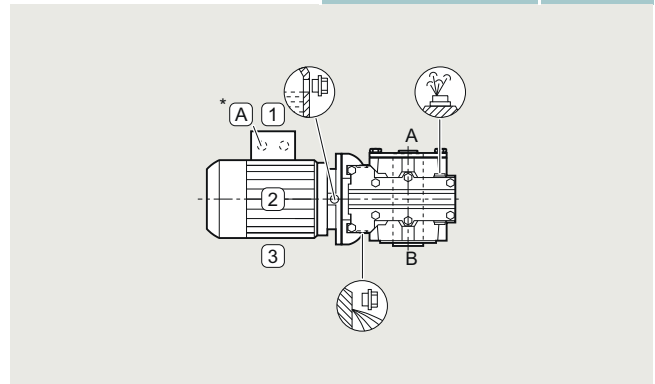
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3601-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3601-.....-D...-Z	<b>D24</b>



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>



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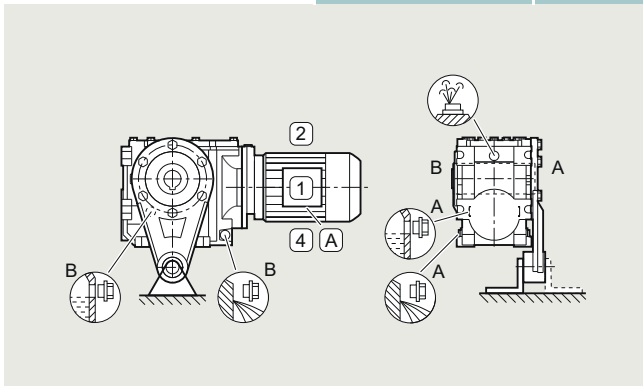
**Shaft-mounted design**

**Helical worm gearboxes CAD, size 39A**

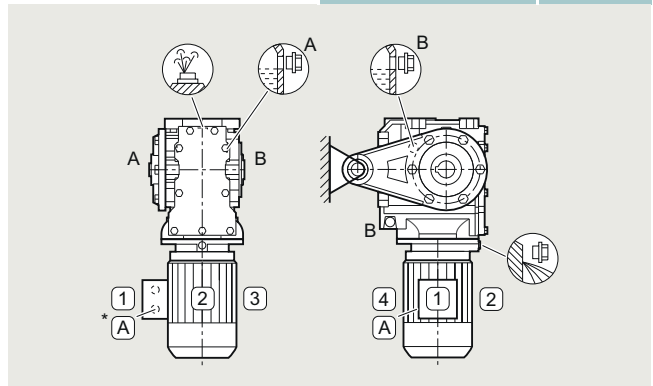
**Oil valves**

For an explanation of the symbols, see [page 9/3](#).

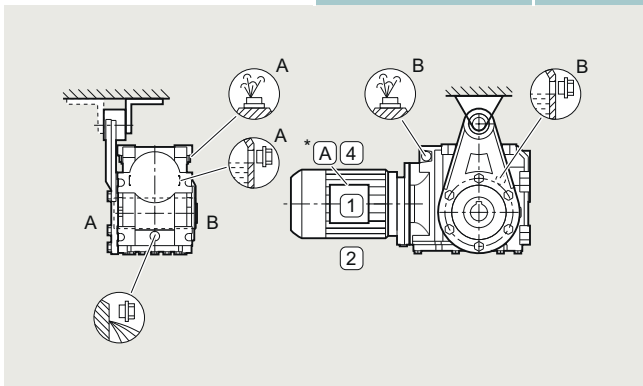
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3642-.....-D...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3642-.....-D...-Z	<b>D21</b>



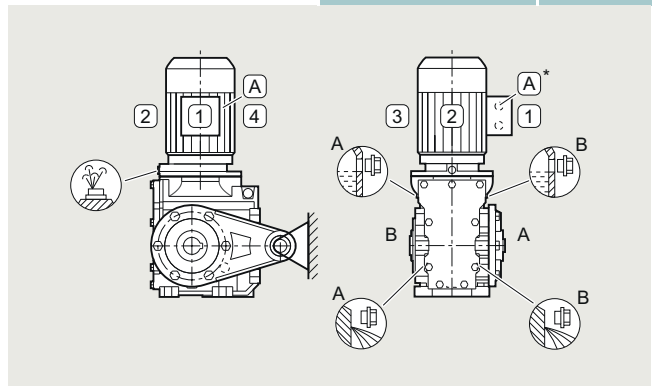
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3642-.....-D...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3642-.....-D...-Z	<b>D22</b>



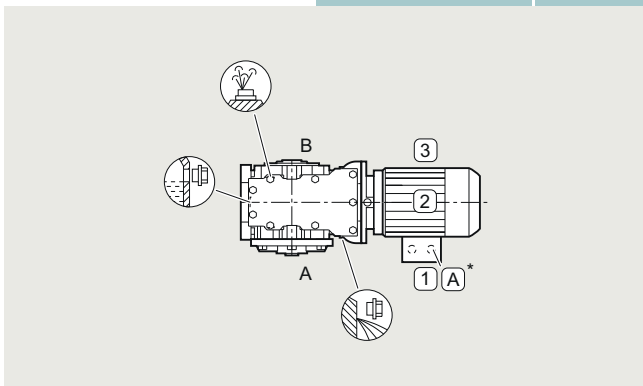
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3642-.....-D...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3642-.....-D...-Z	<b>D23</b>



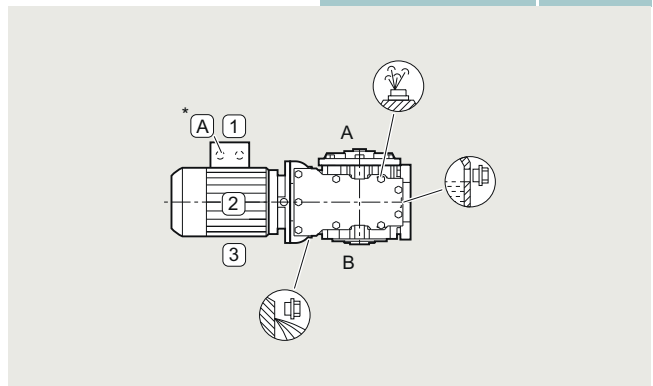
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3642-.....-D...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3642-.....-D...-Z	<b>D24</b>



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

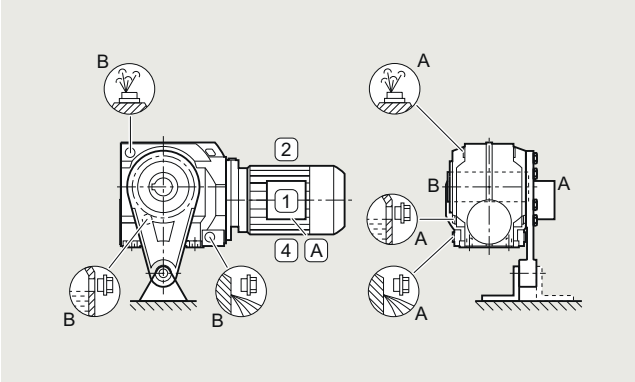
#### Shaft-mounted design

#### Helical worm gearboxes CAD, size 49 to 89

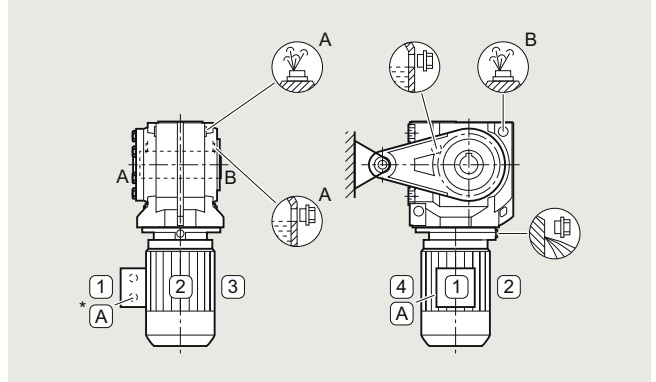
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

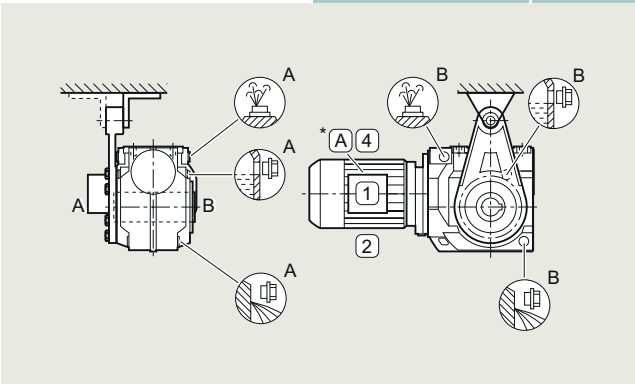
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ360 .- . . . . D . . -Z	<b>D11</b>
<b>M1 output side B</b>	2KJ360 .- . . . . D . . -Z	<b>D21</b>



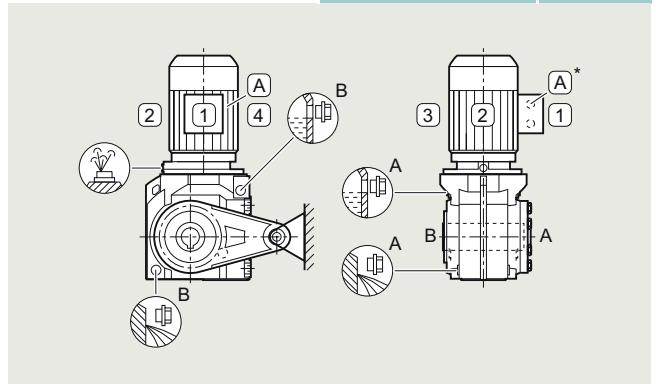
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ360 .- . . . . D . . -Z	<b>D12</b>
<b>M2 output side B</b>	2KJ360 .- . . . . D . . -Z	<b>D22</b>



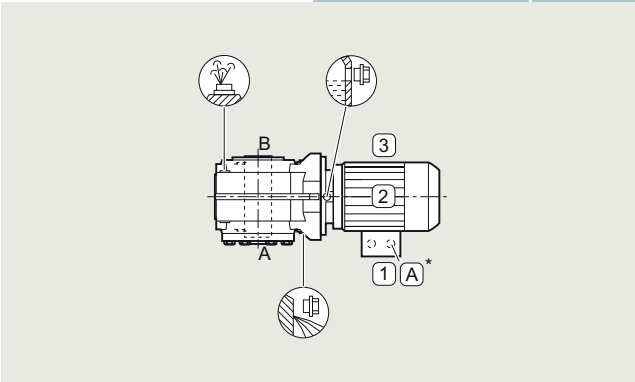
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ360 .- . . . . D . . -Z	<b>D13</b>
<b>M3 output side B</b>	2KJ360 .- . . . . D . . -Z	<b>D23</b>



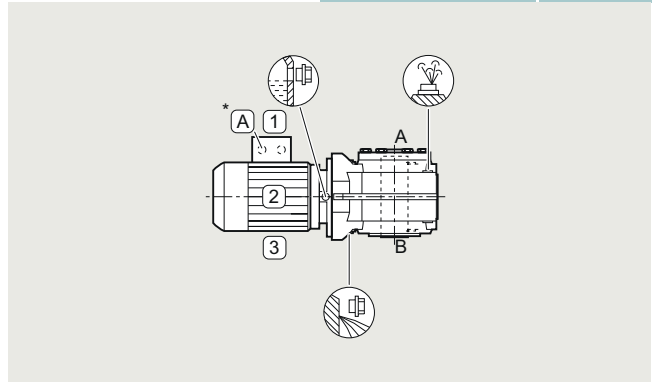
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ360 .- . . . . D . . -Z	<b>D14</b>
<b>M4 output side B</b>	2KJ360 .- . . . . D . . -Z	<b>D24</b>



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>



**Housing flange design and flange-mounted design**

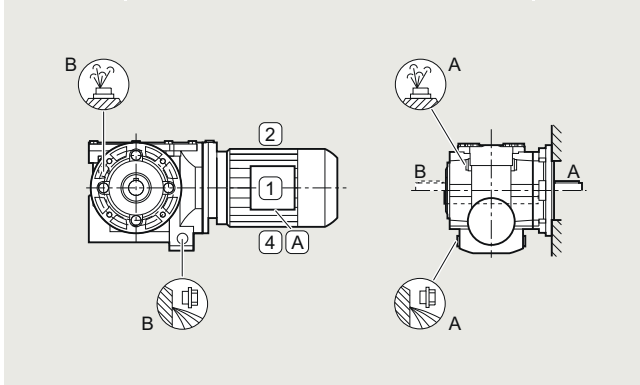
**Helical worm gearboxes C.Z and C.F, size 29**

**Oil valves**

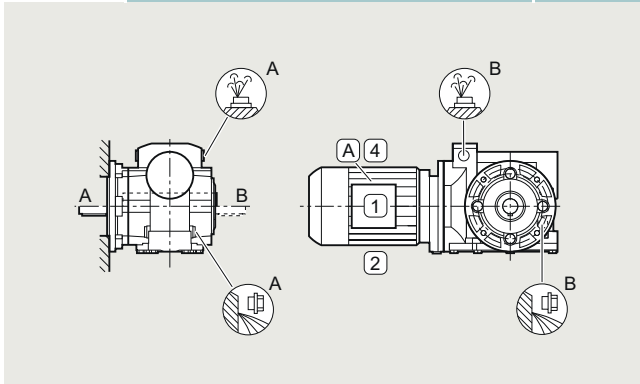
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

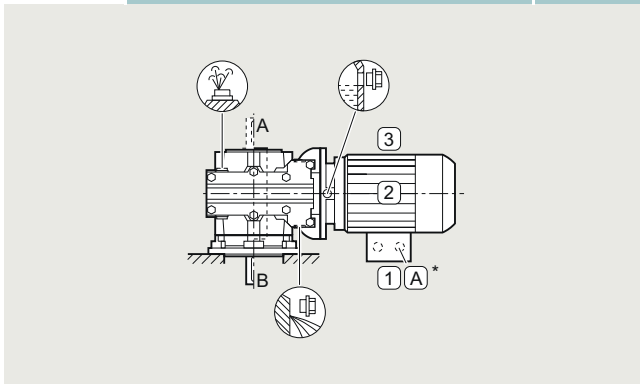
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D21</b>



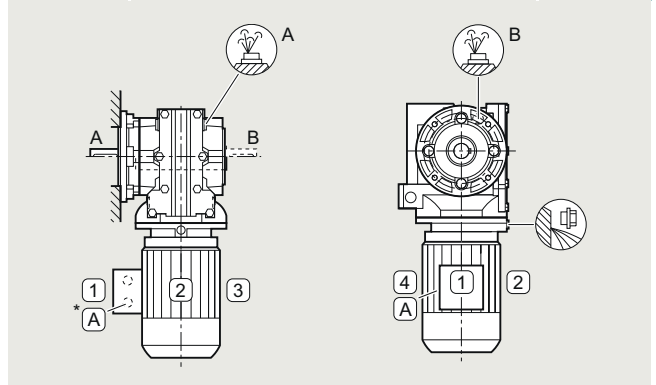
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D23</b>



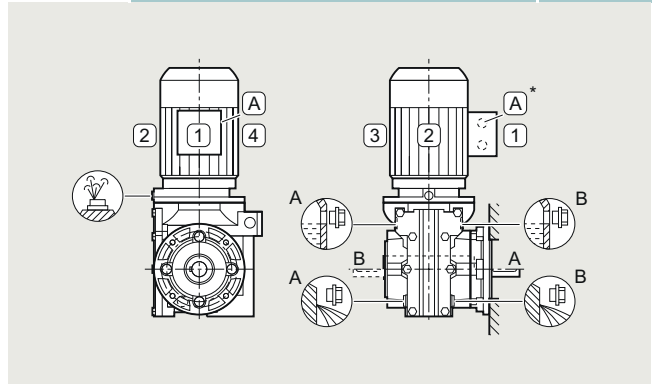
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D25</b>



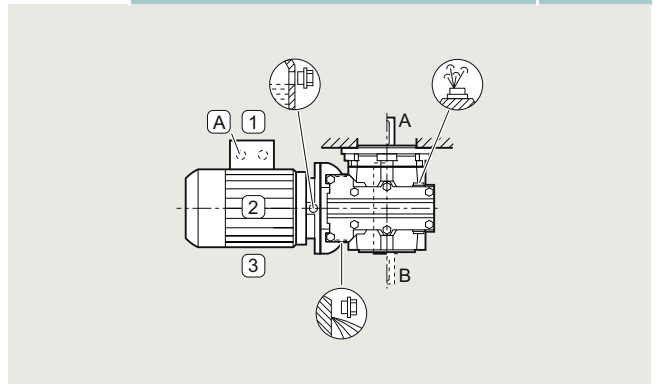
Mounting pos.	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3601-.....-F...-Z, 2KJ3601-.....-H...-Z	<b>D22</b>



Mounting pos.	Additional identification code -Z with order code	Order code
<b>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>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

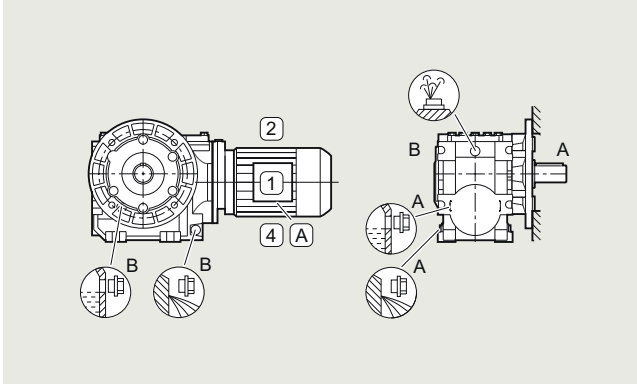
#### Housing flange design and flange-mounted design

##### Helical worm gearboxes C.Z and C.F, size 39A

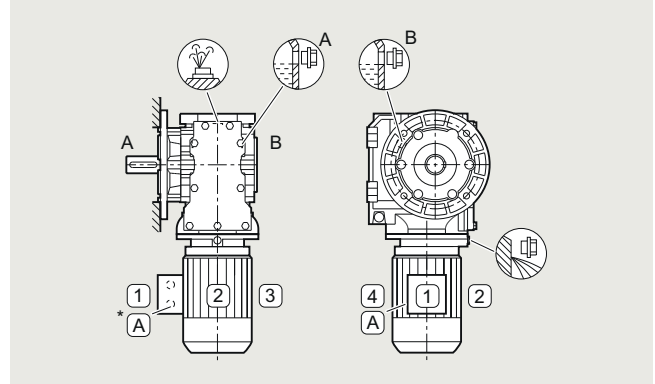
###### Oil valves

For an explanation of the symbols, see [page 9/3](#).

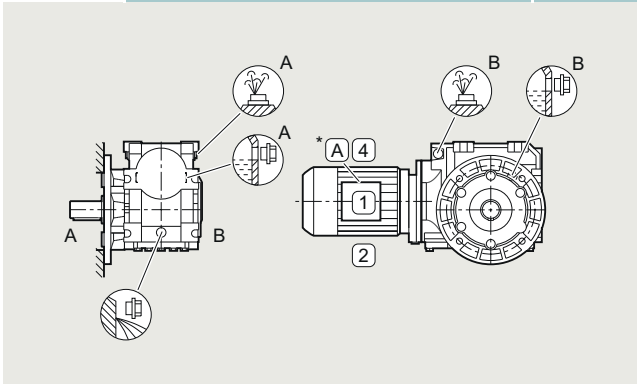
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D21</b>



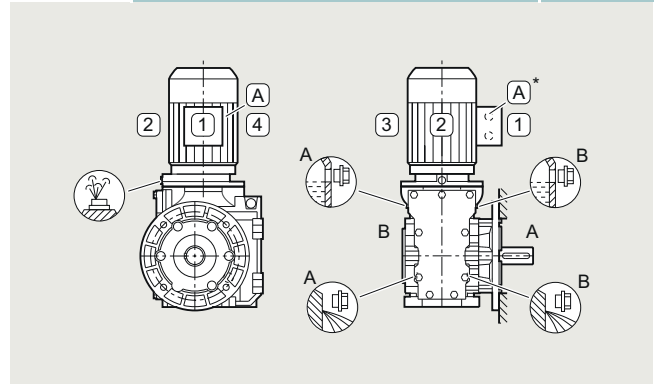
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D22</b>



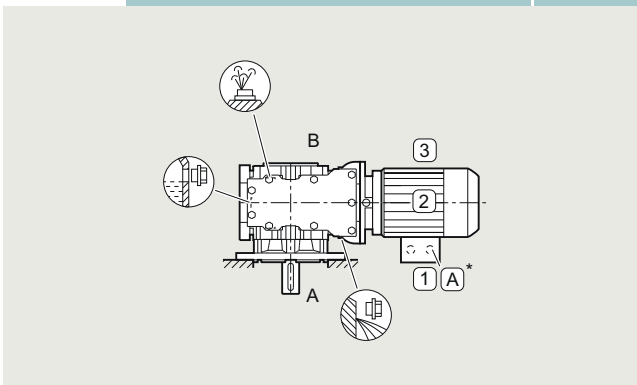
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D23</b>



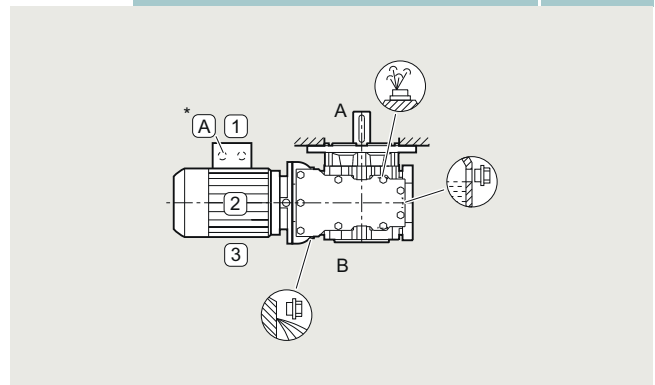
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3642-.....-F...-Z, 2KJ3642-.....-H...-Z	<b>D24</b>



Mounting position	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 position	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>



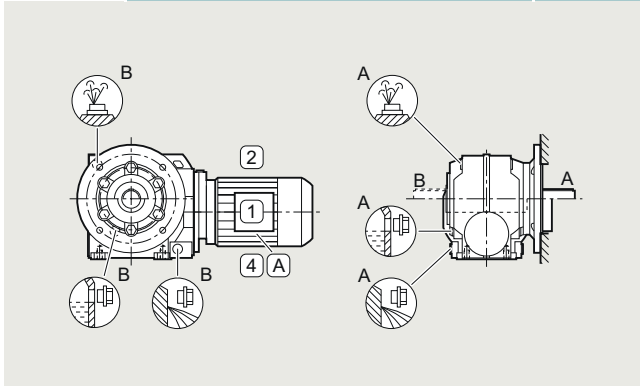
### Housing flange design and flange-mounted design

#### Helical worm gearboxes C.Z and C.F, size 49 to 89

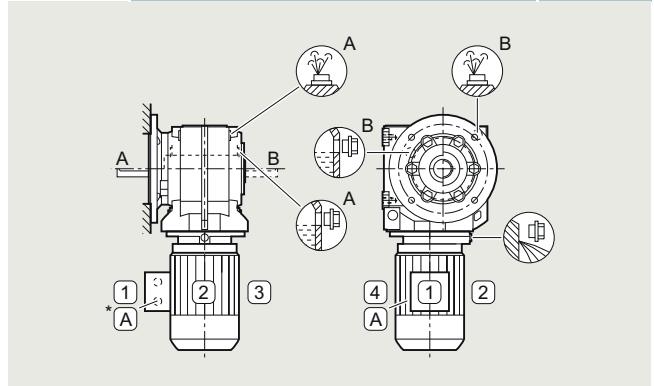
##### Oil valves

For an explanation of the symbols, see [page 9/3](#).

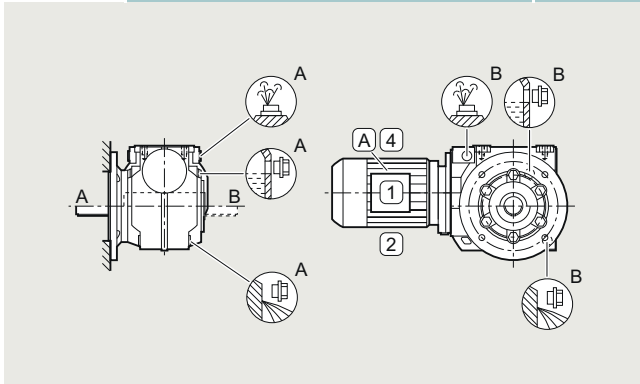
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D21</b>



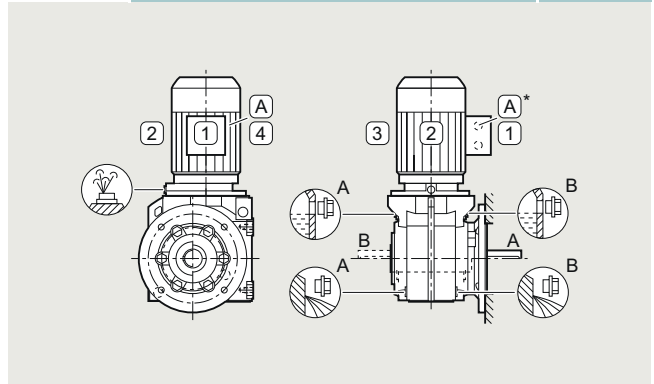
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D22</b>



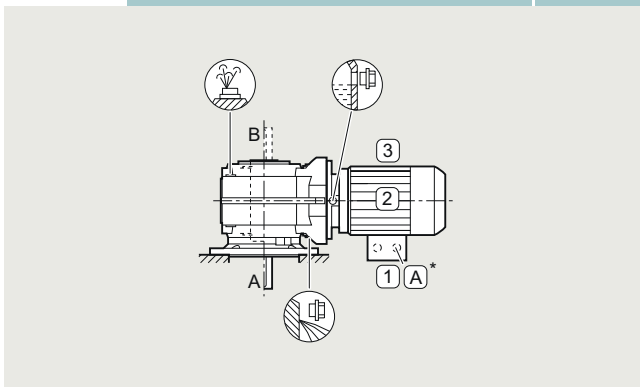
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D23</b>



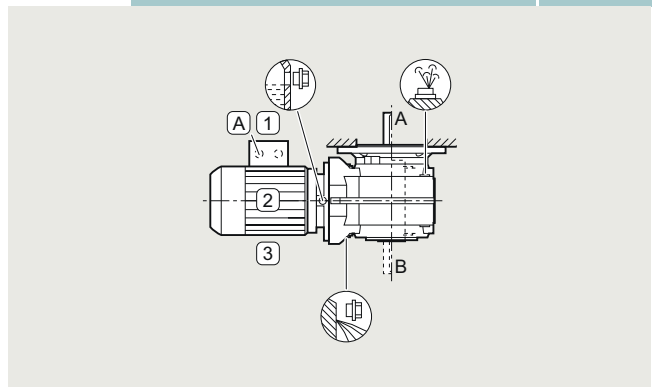
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ360.-.....-F..-Z, 2KJ360.-.....-H...-Z	<b>D24</b>



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

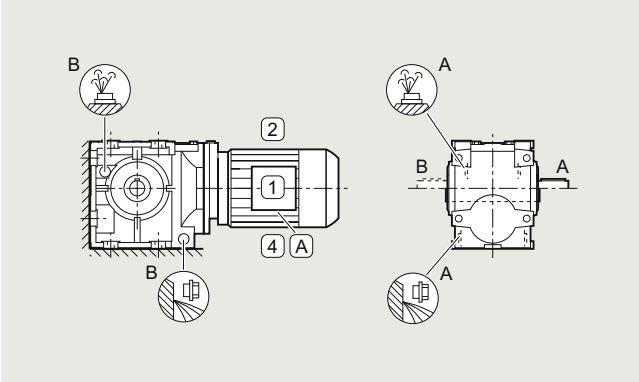
#### Helical worm gearboxes C, size 29

##### Oil valves

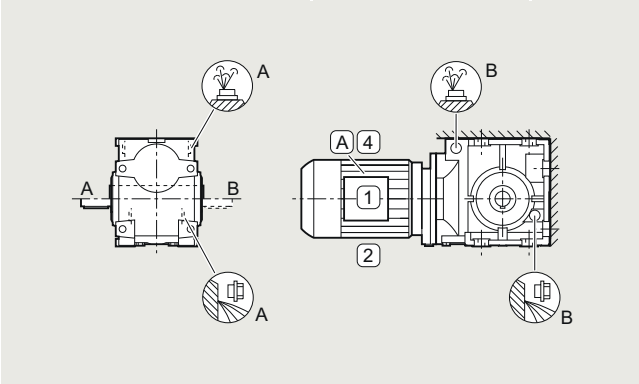
Size 29 is lubricated for life.

For an explanation of the symbols, see [page 9/3](#).

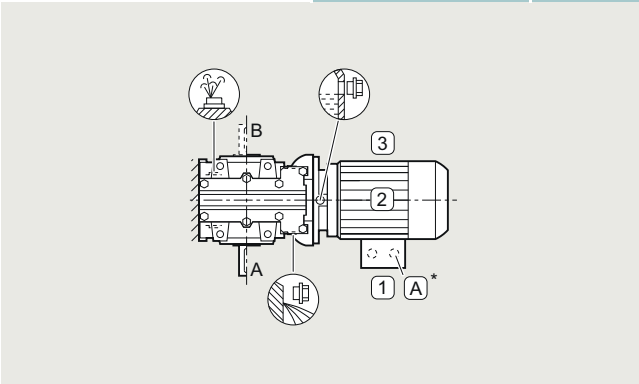
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3601-.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3601-.....-A...-Z	<b>D21</b>



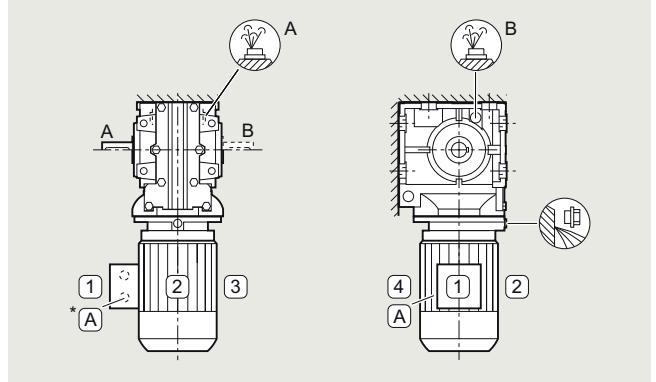
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3601-.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3601-.....-A...-Z	<b>D23</b>



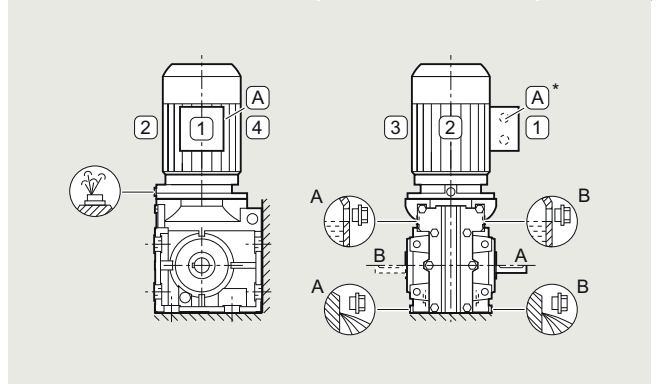
Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ3601-.....-A...-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ3601-.....-A...-Z	<b>D25</b>



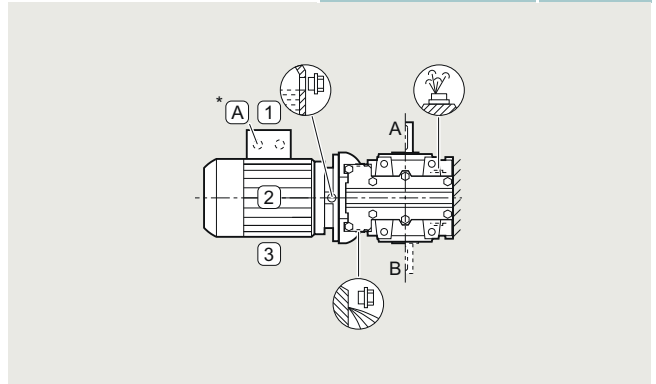
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3601-.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3601-.....-A...-Z	<b>D22</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>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>M6 output side A</b>	2KJ3601-.....-A...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3601-.....-A...-Z	<b>D26</b>



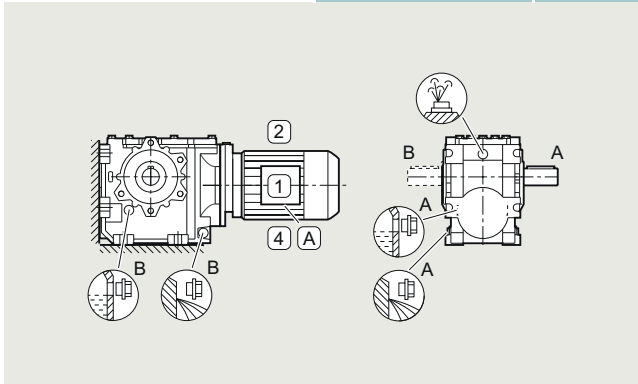
**Foot-mounted design**

**Helical worm gearboxes C, size 39A**

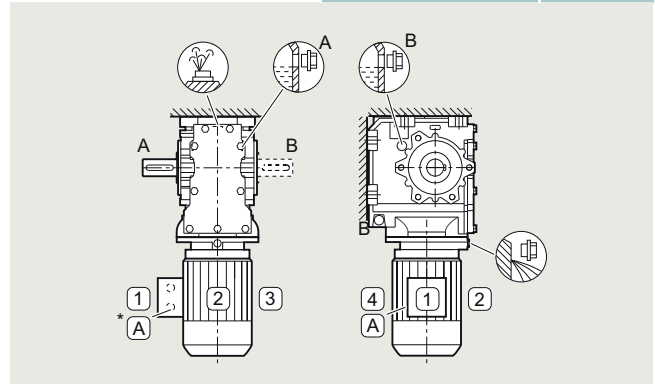
**Oil valves**

For an explanation of the symbols, see [page 9/3](#).

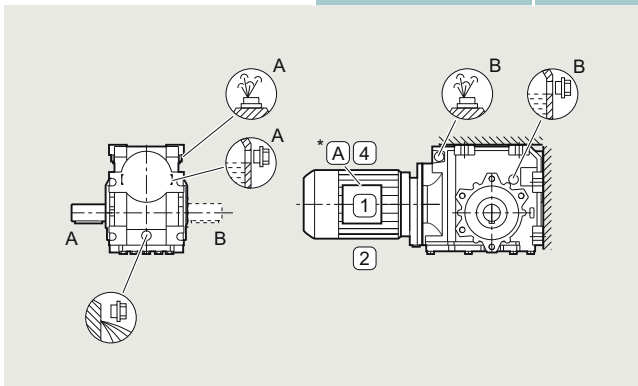
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ3642-.....-A...-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ3642-.....-A...-Z	<b>D21</b>



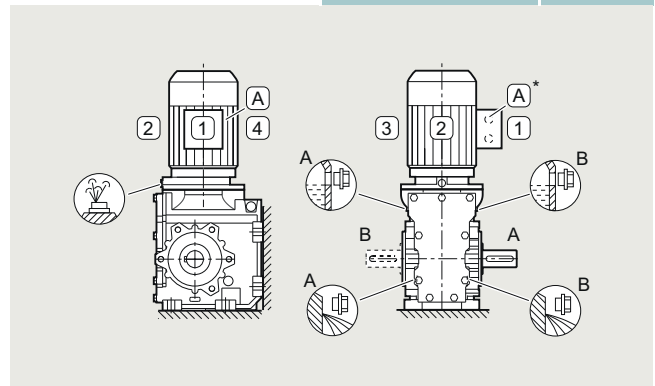
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ3642-.....-A...-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ3642-.....-A...-Z	<b>D22</b>



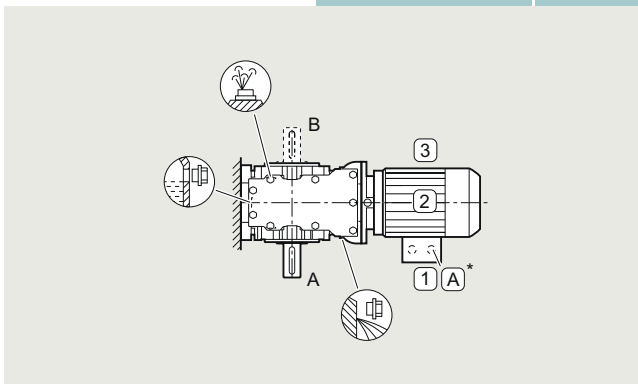
Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ3642-.....-A...-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ3642-.....-A...-Z	<b>D23</b>



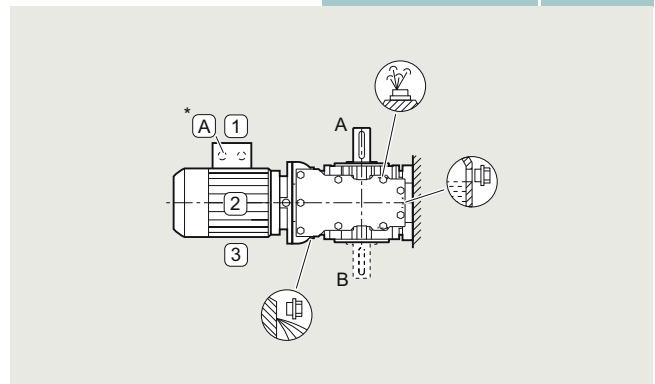
Mounting position	Additional identification code -Z with order code	Order code
<b>M4 output side A</b>	2KJ3642-.....-A...-Z	<b>D14</b>
<b>M4 output side B</b>	2KJ3642-.....-A...-Z	<b>D24</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>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>M6 output side A</b>	2KJ3642-.....-A...-Z	<b>D16</b>
<b>M6 output side B</b>	2KJ3642-.....-A...-Z	<b>D26</b>





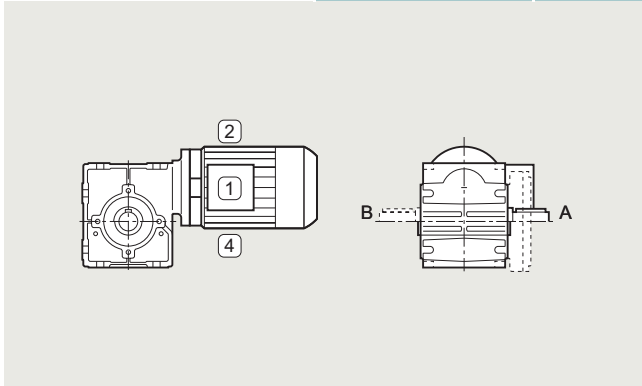
## Foot-mounted, flange-mounted, shaft-mounted and housing flange design

## Worm gearboxes S., sizes 09 to 29

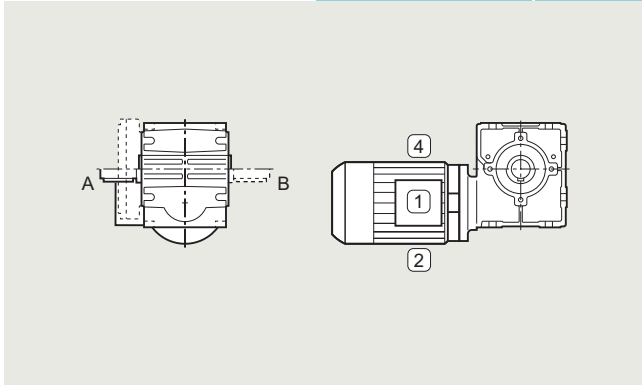
## Oil valves

The worm gearboxes S are lubricated for life.  
For an explanation of the symbols, see [page 9/3](#).

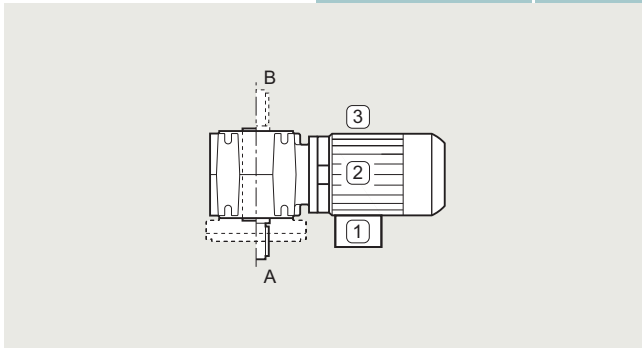
Mounting position	Additional identification code -Z with order code	Order code
<b>M1 output side A</b>	2KJ373.-.....-Z	<b>D11</b>
<b>M1 output side B</b>	2KJ373.-.....-Z	<b>D21</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>M3 output side A</b>	2KJ373.-.....-Z	<b>D13</b>
<b>M3 output side B</b>	2KJ373.-.....-Z	<b>D23</b>



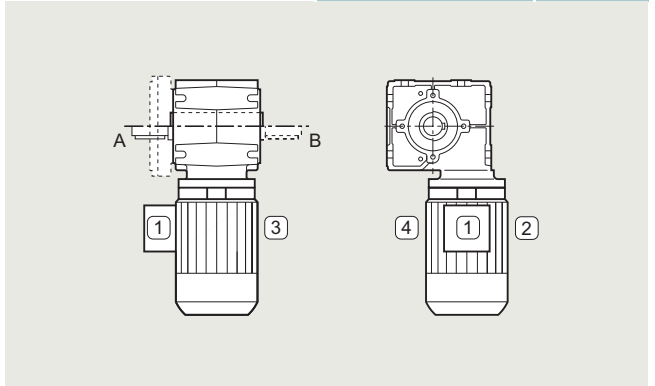
Mounting position	Additional identification code -Z with order code	Order code
<b>M5 output side A</b>	2KJ373.-.....-Z	<b>D15</b>
<b>M5 output side B</b>	2KJ373.-.....-Z	<b>D25</b>



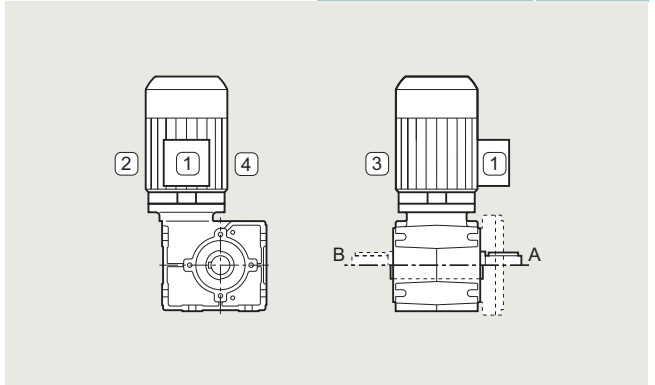
**M0** is a universal mounting position in which the geared motor can be installed in any position.

Mounting position	Additional identification code -Z with order code	Order code
<b>M0 output side A</b>	2KJ373.-.....-Z	<b>D10</b>
<b>M0 output side B</b>	2KJ373.-.....-Z	<b>D20</b>

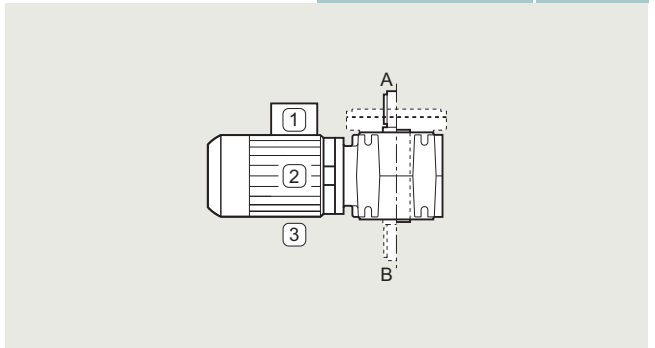
Mounting position	Additional identification code -Z with order code	Order code
<b>M2 output side A</b>	2KJ373.-.....-Z	<b>D12</b>
<b>M2 output side B</b>	2KJ373.-.....-Z	<b>D22</b>



Mounting position	Additional identification code -Z with order code	Order code
<b>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>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

#### Tandem gearboxes

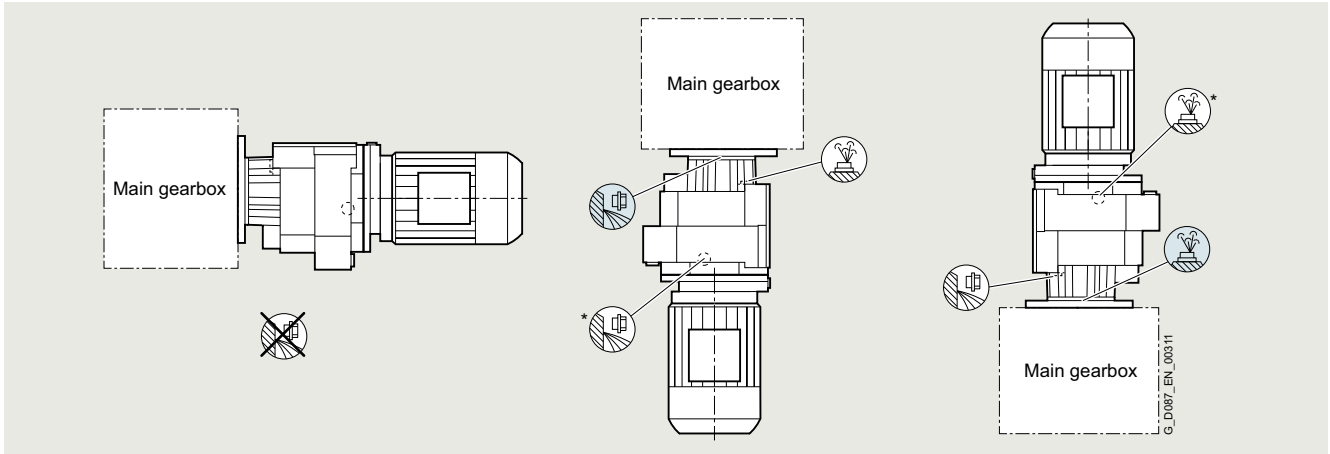
##### Overview

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.

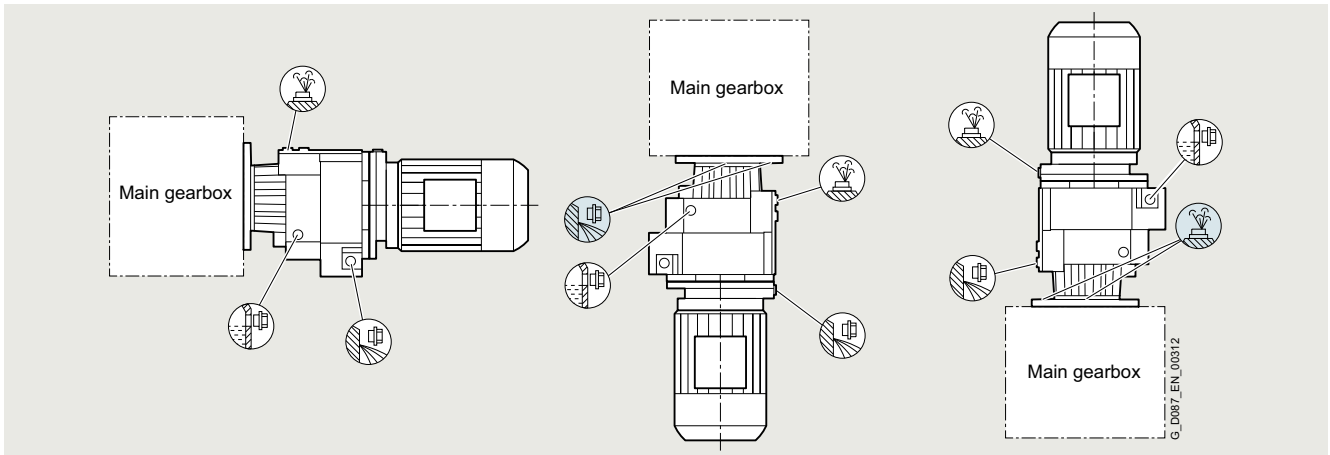
##### Note:

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 9/3](#).

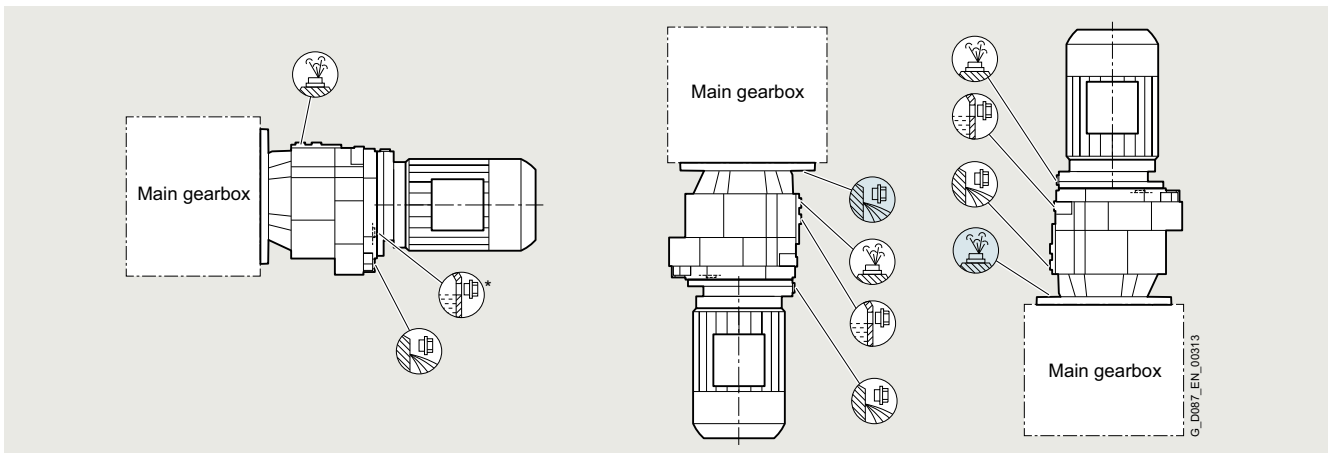
##### Tandem gearboxes: 2nd gearbox size 19



##### 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 angled positions.

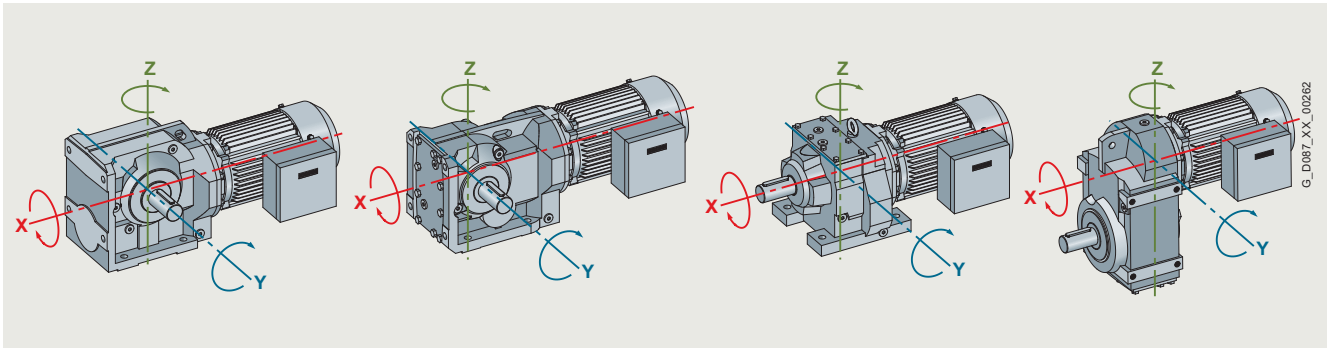


Fig. 9/6 Axes of rotation of the geared motors

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>



**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	
<i>Helical gearboxes VLplus</i>																	
								300								H07 + G30	
								350	350	350						H08 + G30	
								450	450	450		450				H09 + G30	
										550	550	550				H10 + G30	
												660				H11 + G30	
<i>Helical gearboxes XLplus</i>																	
								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	



## 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>													
Gearbox size	29	39	49	69	79	89	109	129	149	169	189	2KJ33... -.....-F..-Z 2KJ34... -.....-F..-Z	Order code
	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>													
Gearbox size	19		29		39			49				2KJ35... -.....-F..-Z	Order code
	120		120										H02
			160		160								H04
					200			200					H05
<b>Bevel gearboxes K.F</b>													
Gearbox size	39	49	69	79	89	109	129	149	169	189	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>													
Gearbox size	29		39A		49		69		89			2KJ36... -.....-F..-Z	Order code
	120												H02
	160		160										H04
					200		200						H05
									250				H06
<b>Worm gearboxes S.F</b>													
Gearbox size	09		19		29							2KJ37... -.....-F..-Z	Order code
	80		110		120								H01
	120 / Q90		120		160 / Q136								H02

## 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>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 sealing

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.

Mounting type	Additional identification code <b>-Z</b> with order code	Order code
Output flange sealing	2KJ3... -.....-F...-Z	<b>G78</b>

##### Parallel shaft gearboxes F.A.D. 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  $70^\circ \pm 5$  Shore A.

Mounting type	14th position of the Article No.
Shaft-mounted design	2KJ33... -.....- ■ ...-Z 2KJ34... -.....- ■ ...-Z <b>D</b>

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  $60^\circ$  Shore A.

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  $90^\circ$  Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between  $-30$  and  $+60^\circ\text{C}$ .

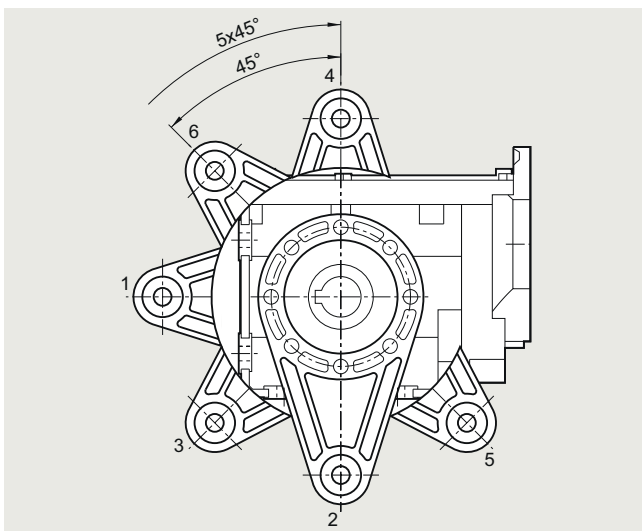


Fig. 9/7 Bevel gearboxes BAD., sizes 19 and 29

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  $60^\circ$  Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between  $-40$  and  $+60^\circ\text{C}$ .

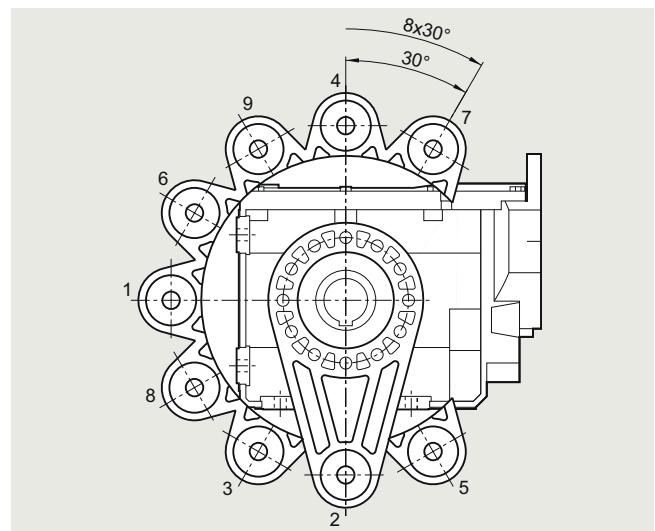


Fig. 9/8 Bevel gearboxes BAD., sizes 39 and 49

**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>D</b> <b>...-Z</b>
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 90° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -30 and +60 °C.

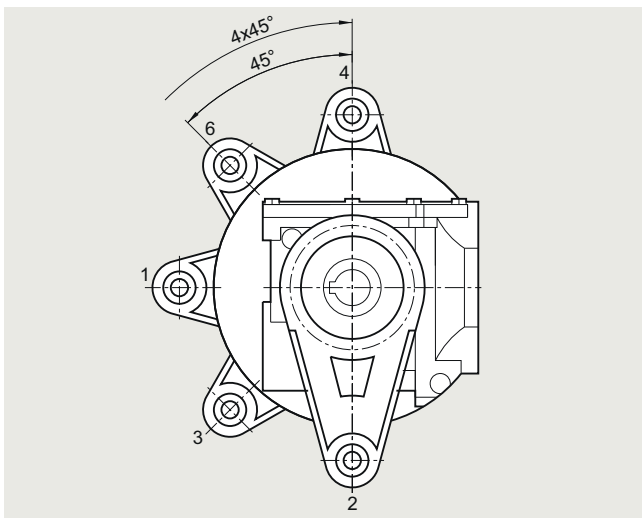


Fig. 9/9 Helical worm gearboxes CAD., size 29

**Shaft-mounted design for sizes 39 to 89**

The elastomer used for support is manufactured out of natural rubber 60° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +60 °C.

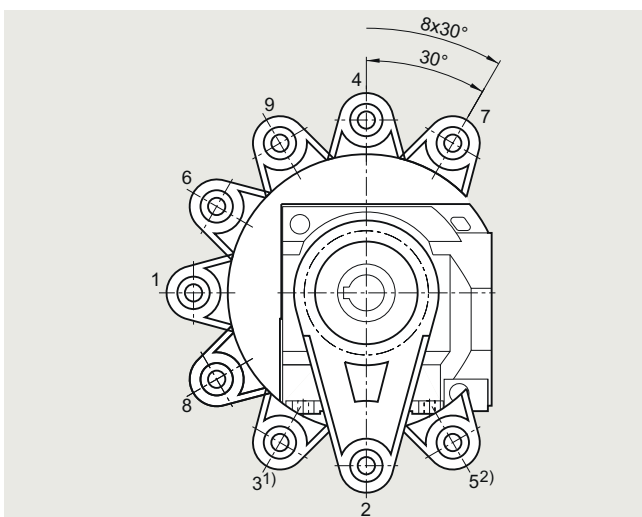


Fig. 9/10 Helical worm gearboxes CAD., Figure 1, sizes 39 to 89

1) Position not possible for sizes CAD.39 and CAD.69

2) Position not possible for size CAD.39

Mounting type	Additional identification code <b>-Z</b> with order code	Order code
	2KJ36... -.....- <b>D</b> <b>...-Z</b>	
Figure 1		<b>G09</b>
Figure 2		<b>G10</b>

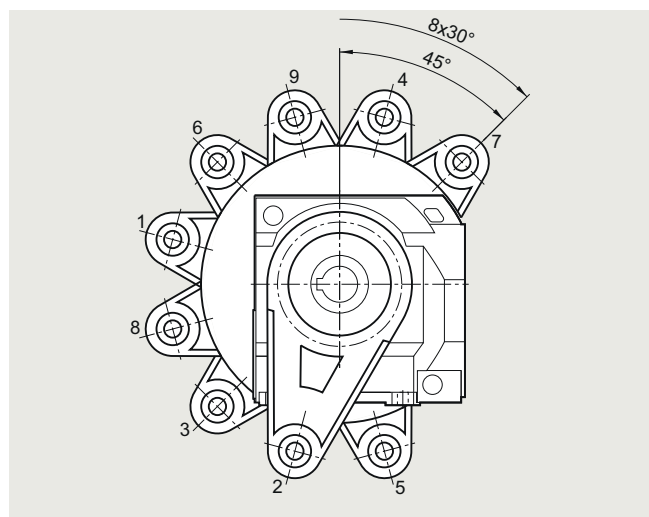


Fig. 9/11 Helical worm gearboxes CAD., Figure 2, sizes 39A to 89

1) Position not possible for sizes CAD.39A and CAD.49



## Selection and ordering data

Shaft design	Dimensions mm						Ambient temperature range	An order code is required when 9 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		<b>H6A</b>
<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		<b>H6A</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>	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	<b>H1G</b>
Solid shaft, both ends <sup>1)2)</sup>		VD25 x 50	VD30 x 60	VD35 x 70	VD40 x 80	VD50 x 100		9	<b>H5A</b>
Solid shaft, both ends without feather key <sup>1)2)</sup>			VDG30 x 60	VDG35 x 70	VDG40 x 80	VDG50 x 100		9	<b>H5B</b>
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	<b>H6A</b>
Solid shaft VLplus						VM60 x 120		9	<b>H1C</b>
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	<b>H7A</b>
Hollow shaft VLplus						HM50		9	<b>H2F</b>
Hollow shaft with shrink disk	HS25	HS30	HS35	HS40	HS40	HS50		9	<b>H3A</b>
SIMOLOC assembly system, metric	HF25 HF20	HF30 HF25	HF35 HF30	HF40 HF35	HF40 HF35	HF50 HF40	-20 ... +60 °C	9 9	<b>H3G</b> <b>H3H</b>
SIMOLOC assembly system, imperial dimensions	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	<b>H3J</b> <b>H3K</b>
		HF1.0" -	HF1.25" HF1.1875"	HF1.4375" HF1.375"	HF1.4375" HF1.375"	HF1.75" HF1.625"		9 9	<b>H3L</b> <b>H3M</b>
Splined hollow shaft		N30	N35	N35	N45	N50	-40 ... +60 °C	9	<b>H4A</b>
<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	<b>H1G</b>
Solid shaft, both ends <sup>1)2)</sup>	VD60 x 120	VD70 x 140	VD90 x 170	VD110 x 210	VD120x210			9	<b>H5A</b>
Solid shaft, both ends without feather key <sup>1)2)</sup>	VDG60 x 120							9	<b>H5B</b>
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	<b>H6A</b>
Solid shaft VLplus	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210				9	<b>H1C</b>
Hollow shaft	H60	H70	H90 H80	H100 H110	H120		-40 ... +60 °C	5 6 7	
Hollow shaft, inches	H2.375"	H2.75"	H3.625"	H4"	H4.5"			9	<b>H7A</b>
Hollow shaft VLplus	HM60	HM70	HM90	HM100				9	<b>H2F</b>
Hollow shaft with shrink disk	HS65	HS75	HS95 HS90	HS105	HS125			9 9	<b>H3A</b> <b>H3B</b>
	HS70							9	<b>H3C</b>
Splined hollow shaft	N65	N70	N85	N90	N110			9	<b>H4A</b>

<sup>1)</sup> Can only be selected in conjunction with foot-mounted or housing flange design.

<sup>2)</sup> Restricted adapter 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	An order code is required when 9 appears in the 8th position of the Article No.			
<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		
					9			H3J		
SIMOLOC assembly system, imperial dimensions		HF1.0"	HF1.25"	HF1.375"		9		H3K		
		HF0.75"	HF1.1875"	HF1.4375"		9		H3L		
			HF1.0"	HF1.25"		9		H3M		
				HF1.1875"		9		H3N		
			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>		VVG30 x 60	VVG35 x 70	VVG40 x 80	VVG50 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, imperial dimensions	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	An order code is required when 9 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 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	-	
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	H90	H100	H120		5	-	
			H80				6	-	
				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	
			HS90				9	H3B	
	HS70					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	-	
		V35 x 70 <sup>1)</sup>	V40 x 80 <sup>1)</sup>	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	H40	H50		5	-	
		H30	H35	H45	H60		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		9	H3A	
				HS50	HS60		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, imperial dimensions	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	-	

<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 SIMOLOC assembly system offers a low-cost, easy-to-fit alternative to conventional shaft connections for gearboxes in a shaft-mounted design.

Use of the SIMOLOC system provides a friction-locked connection of the machine shaft to the hollow shaft in the gearbox.

##### Components of the SIMOLOC assembly system

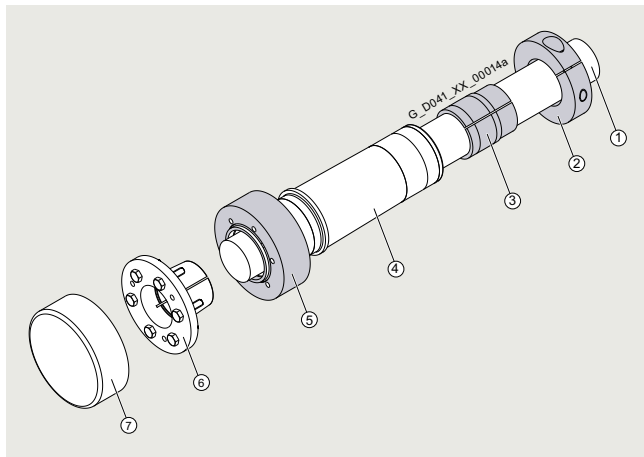


Fig. 9/13 SIMOLOC assembly system

- ① Machine shaft
- ② Clamping ring
- ③ Bronze bushing
- ④ Hollow shaft of gearbox
- ⑤ V-ring
- 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 no made until the taper bushing is inserted.
- The press fit prevents 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

- Fast and simple adaptation of the gearbox to different machine shaft diameters. Only the taper and bronze bushing has to be replaced to achieve this.
- Dimensions can be converted easily between metric and-inches.

The SIMOLOC assembly system can be supplied for shaft-mounted designs of the parallel shaft, bevel and helical worm gearbox. 2 metric versions and 2 to 4 inch versions are available for all sizes.

###### Note:

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 preassembled rotating protective cover. The stationary 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 design.

###### Protective cover

For sizes 29 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 design.

###### Note:

Protective covers made of plastic are generally not painted

Hollow shaft cover	Additional identification code <b>-Z</b> with order code	
	2KJ3... -.....-.....- <b>Z</b>	Order code
Protective cover 1)		<b>G60</b>

- 1) 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>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 system

##### Drywell

To offer increased protection against escaping gear oil in the event of a leakage, the VLplus version can be selected with the Drywell option. Any oil that escapes in the event of a leakage 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-proof (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 oil sensor ATEX -20 to +40 °C

For different ambient temperatures, please contact Siemens.

Drywell is available for the following mounting positions:

Gearbox type	Mounting position
Helical gearbox ZF/DF with VLplus	M4
Parallel shaft gearbox ZF/DF with VLplus	M4
Bevel gearbox 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 oil sensor ATEX		<b>G91</b>
24 V Drywell disconnecter		<b>G88</b>

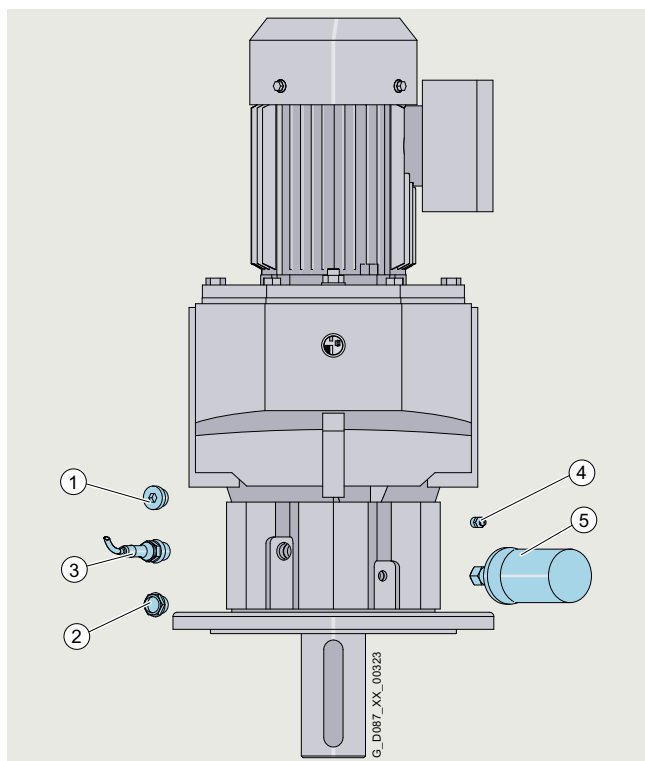


Fig. 9/14 VLplus version with Drywell / grease cartridge

- 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 to +50 °C. For different ambient temperatures, please contact Siemens.

Accessories for reinforced bearing VLplus	Additional identification code -Z with order code	Order code
	2KJ3... -.....-Z G30	
Grease cartridge		<b>G93</b>

### Overview

Gearboxes can be used for different applications. The following lubricants can be selected to ensure that a gearbox is optimally designed for a specific application.

The temperature rise of the gearbox during operation increases the oil sump temperature. In 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 air, 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).
- When using the gearboxes and geared motors in the extended ambient temperature range (K92, K96; K97, K98), a continuous operating state is a prerequisite to ensure sufficient heating of the gearbox and motor lubricants.

### Lubrication

The gearboxes are filled in 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

Application	Oil type Designation acc. to DIN 51502	Perm. oil sump temperature [°C]	Additional identification code -Z with order code		Ambient temperature [°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	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	✓	✓	✓				
<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		K07	✓		✓	✓			
	CLP ISO PAO VG220	-30 ... +100		K12	✓		✓	✓	✓	✓ <sup>1)</sup>	
	CLP ISO PAO VG460	-25 ... +110		K16	✓		✓	✓			
	CLP ISO PAO VG68	-40 ... +60		K13				✓	✓	✓	
	CLP ISO PG VG460	-25 ... +110		K08	✓		✓	✓			
Foodstuff area	CLP ISO H1 VG460	-25 ... +100		K11	✓		✓	✓			
	CLP ISO H1 VG100	-30 ... +90		K14	✓		✓	✓			

<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)

## Gearbox options

### Lubrication and sealing

#### Selection of lubricant

Application	Oil type	Perm. oil sump temperature [°C]	Additional identification code -Z with order code		Ambient temperature [°C]	Extended ambient temperature range [°C]				
	Designation acc. to DIN 51502		2KJ3... -.....-Z	Order code	-	K95	K92	K96	K97	K98
<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>	✓					

CLP = mineral oil

CLP PG = polyglycol oil

CLP H1 = physiologically safe oil (USDA-H1 approval)

#### Rolling bearing greases for gearboxes and motors

The rolling bearings of gearboxes and motors are lubricated in the factory with a rolling 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 rolling bearings.

We recommend that the grease filling of the rolling 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 gear lubricants NT 7300.

#### Sealing system

##### Overview

Output shaft sealing	Description	Ambient condition	Additional identification code -Z with order code
			2KJ3... -.....-Z 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 protective 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.	<b>G23</b>
<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.	<b>G24</b>
<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.	<b>G25</b>

### Sealing system

#### Selection of seal

Seal	Perm. oil sump temperature [°C]	Additional identification code -Z with order code 2KJ3... -.....-.....-Z	Order code	Ambient temperature [°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 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		✓						

1) Not admissible in conjunction with food oils and biodegradable oils.

2) Not possible with bevel gearbox B19

## Gearbox options

### Venting and oil level control

#### Venting

#### 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	Technical 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 9/58
Pressure breather valve stainless steel			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	page 9/58
Oil expansion unit			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	page 9/59
Oil sight glass with reflector				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	page 9/61
Magnetic oil drain screw			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	page 9/61
Oil drain valve, straight			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	page 9/61
Oil drain valve, angled			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	page 9/61
Oil level sensor								✓	✓	✓	✓	✓	✓		<b>G37</b>	page 9/63
Oil level sensor ATEX								✓	✓	✓	✓	✓	✓		<b>G38</b>	page 9/63
Pt100 electrical tempera- ture monitoring				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G69</b>	page 9/62
<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 9/58						
Pressure breather valve stainless steel	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	page 9/58						
Oil expansion unit	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	page 9/59						
Oil sight glass with reflector	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	page 9/61						
Magnetic oil drain screw	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	page 9/61						
Oil drain valve, straight	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	page 9/61						
Oil drain valve, angled	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	page 9/61						
Oil level sensor				✓	✓	✓	✓		<b>G37</b>	page 9/63						
Oil level sensor ATEX				✓	✓	✓	✓		<b>G38</b>	page 9/63						
Pt100 electrical tempera- ture monitoring		✓	✓	✓	✓	✓	✓		<b>G69</b>	page 9/62						
<b>Parallel shaft gearboxes F</b>																
Gearbox size	29	39	49	69	79	89	109	129	149	169	189	2KJ33... -Z 2KJ34... -Z	Order code			
Lubricated for life	✓															
Pressure breather valve		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G45</b>	page 9/58		
Pressure breather valve stainless steel		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	page 9/58		
Oil expansion unit		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	page 9/59		
Oil sight glass with reflector			✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	page 9/61		
Magnetic oil drain screw		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	page 9/61		
Oil drain valve, straight		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	page 9/61		
Oil drain valve, angled		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	page 9/61		
Oil level sensor						✓	✓	✓	✓	✓	✓		<b>G37</b>	page 9/63		
Oil level sensor ATEX						✓	✓	✓	✓	✓	✓		<b>G38</b>	page 9/63		
Pt100 electrical tempera- ture monitoring			✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G69</b>	page 9/62		

### Overview

Possible venting and oil level control options

Design	Possible for										Additional identification code -Z with order code	Technical information	
<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	
Lubricated for life	✓		✓									-	
Pressure breather valve	✓		✓		✓		✓					<b>G45</b>	page 9/58
Pressure breather valve stainless steel	✓		✓		✓		✓					<b>G49</b>	page 9/58
Oil expansion unit			✓		✓		✓					<b>G47</b>	page 9/59
Oil sight glass with reflector							✓					<b>G34</b>	page 9/61
Oil sight glass with reflector on both sides							✓					<b>G35</b>	page 9/61
Magnetic oil drain screw					✓		✓					<b>G53</b>	page 9/61
Oil drain valve, straight					✓		✓					<b>G54</b>	page 9/61
Oil drain valve, angled					✓		✓					<b>G55</b>	page 9/61
Pt100 electrical tempera- ture monitoring							✓					<b>G69</b>	page 9/62
<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	
Pressure breather valve	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G45</b>	page 9/58
Pressure breather valve stainless steel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G49</b>	page 9/58
Oil expansion unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G47</b>	page 9/59
Oil sight glass with reflector		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G34</b>	page 9/61
Oil sight glass with reflector on both sides		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G35</b>	page 9/61
Magnetic oil drain screw	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G53</b>	page 9/61
Oil drain valve, straight	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G54</b>	page 9/61
Oil drain valve, angled	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G55</b>	page 9/61
Oil level sensor					✓	✓	✓	✓	✓	✓		<b>G37</b>	page 9/63
Oil level sensor ATEX					✓	✓	✓	✓	✓	✓		<b>G38</b>	page 9/63
Pt100 electrical tempera- ture monitoring		✓	✓	✓	✓	✓	✓	✓	✓	✓		<b>G69</b>	page 9/62
<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	
Lubricated for life	✓ <sup>1)</sup>											-	
Pressure breather valve	✓		✓		✓		✓		✓			<b>G45</b>	page 9/58
Pressure breather valve stainless steel	✓		✓		✓		✓		✓			<b>G49</b>	page 9/58
Oil expansion unit			✓		✓		✓		✓			<b>G47</b>	page 9/59
Oil sight glass with reflector					✓		✓		✓			<b>G34</b>	page 9/61
Oil sight glass with reflector on both sides					✓		✓		✓			<b>G35</b>	page 9/61
Magnetic oil drain screw			✓		✓		✓		✓			<b>G53</b>	page 9/61
Oil drain valve, straight			✓		✓		✓		✓			<b>G54</b>	page 9/61
Oil drain valve, angled			✓		✓		✓		✓			<b>G55</b>	page 9/61
Pt100 electrical tempera- ture monitoring					✓		✓		✓			<b>G69</b>	page 9/62
<b>Worm gearboxes S</b>													
<b>Gearbox size</b>	<b>09</b>				<b>19</b>		<b>29</b>				2KJ37... -.....-Z	Order code	
Lubricated for life	✓				✓		✓					-	

<sup>1)</sup> Helical worm gearboxes for all mounting positions are equipped with a pressure breather valve.



## 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 indoor and outdoor 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	Order code
	2KJ3... -.....-...- <b>Z</b>	<b>G45</b>
Pressure breather valve		<b>G45</b>
Pressure breather valve stainless steel		<b>G49</b>

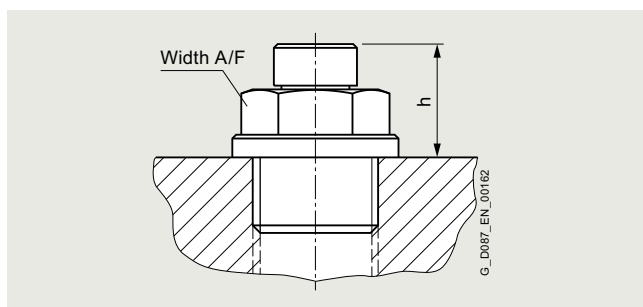


Fig. 9/15 Pressure breather valve

##### 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>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

#### 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 oil 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... -.....-...- <b>Z</b>	<b>G47</b>

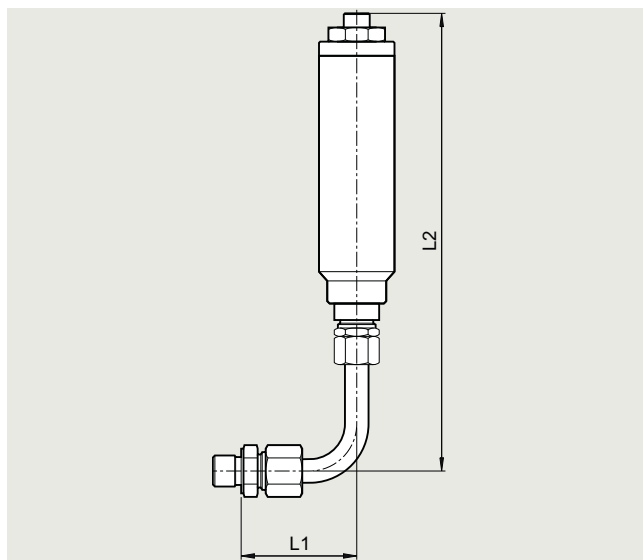


Fig. 9/16 Oil expansion unit type 1

#### Technical specifications

Size	Motor 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 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>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
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
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

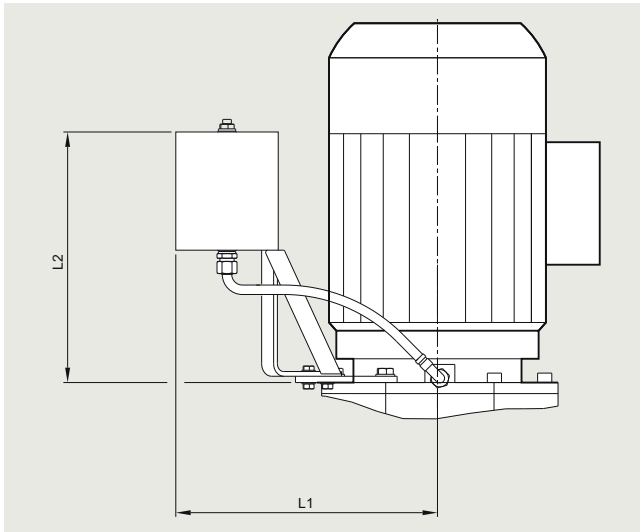


Fig. 9/17 Oil expansion unit type 2

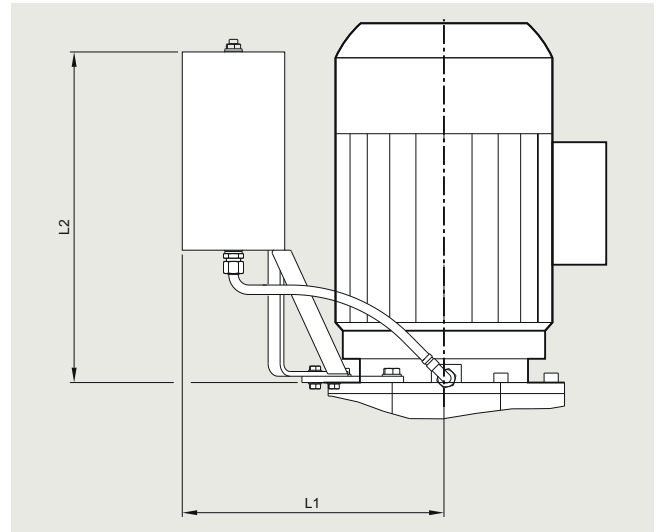


Fig. 9/18 Oil expansion unit type 3

#### Technical specifications

Size	Motor size	Typ	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>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 brackets for mounting position M4

### Oil level checking screw

For gearboxes from size 49, the oil level is checked using the oil level checking screw. The oil sight glass is available with a reflector for 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
	2KJ3... -.....-.....- <b>Z</b>	
Oil sight glass with reflector		<b>G34</b>
Oil sight glass with reflector, on both sides (Not possible for tandem geared motors)		<b>G35</b>

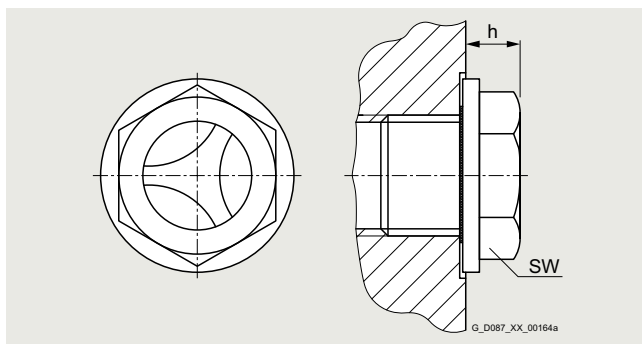


Fig. 9/19 Oil sight glass with reflector

### 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>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

### 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
	2KJ3... -.....-.....- <b>Z</b>	
Magnetic oil drain screw		<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 kit.

Oil level control	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	
Oil drain valve, straight		<b>G54</b>
Oil drain valve, angled		<b>G55</b>

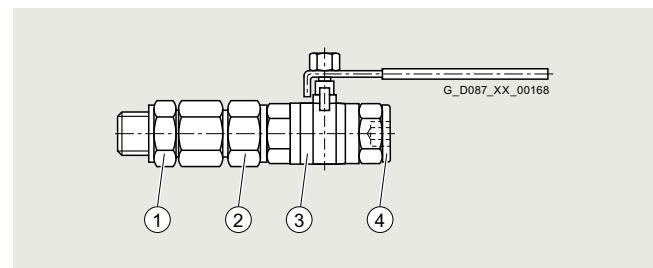


Fig. 9/20 Oil drain valve, straight

- ① Oil drain valve, straight
- ② Screw gland
- ③ Screw gland
- ④ Screw plug

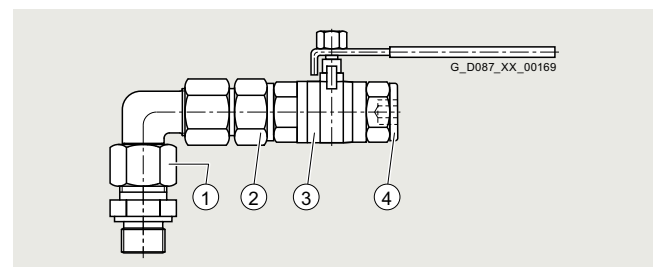


Fig. 9/21 Oil drain valve, angled

- 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).

Oil level control	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3...-.....- <b>Z</b>	
Pt100 electrical temperature monitoring		<b>G69</b>

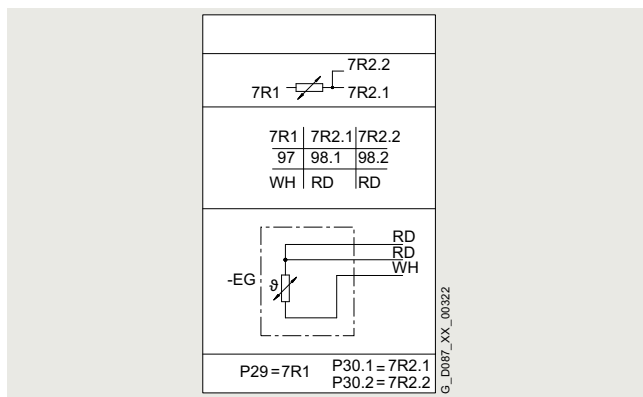


Fig. 9/22 Sensor circuit diagram for Pt100 electrical oil temperature monitoring

#### 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. operating 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

### 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-proof (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 -Z with order code	Order code
	2KJ3... -.....-Z	
Oil level sensor		<b>G37</b>
Oil level sensor ATEX design		<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 ATEX version of 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/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.

For the exact values, refer to the torque tables. 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	
	2KJ3... -.....-.....- <b>Z</b>	Order code
Reduced-backlash version		<b>G99</b>

##### Shrink-glued output gearwheel

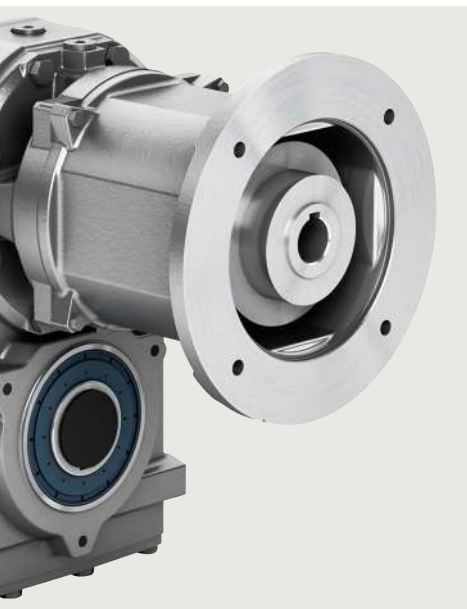
The gearbox output stage is subjected to particular high levels of mechanical stress during rigorous reversing duty or acceleration of high mass moments of inertia. The shrink-glued output gearwheel option ensures the load-bearing capacity of the shaft/hub connection in the event of dynamic load.

Special version	Additional identification code <b>-Z</b> with order code	
	2KJ3... -.....-.....- <b>Z</b>	Order code
Shrink-glued output gearwheel		<b>G97</b>

#### Reduced-backlash versions of the following gearboxes are available

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 available													
Worm gearboxes S	Not available													

## Adapter options



10/2

### Mounted components

- 10/2 Power transmission
- 10/2 Backstop
- 10/2 Slip clutch with proximity switch



## Adapter options

### Mounted components

#### Power transmission

##### Backstop

For applications that only require one permissible direction of rotation, adapters K2 and K3 can be supplied with a backstop. In this case, an **X** is added to the adapter code (K2X, K3X).

The advantage of integrating the backstop into the adapter rather than into the motor is that the motor can be dismantled even under full-load conditions.

The backstop is incorporated into the adapter and does not alter the overall dimensions of the unit.

Power transmission	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	<b>A15</b>
Backstop (X)		

##### Design and mode of operation

The backstops have centrifugal sprags and are suitable for use up to a maximum speed of 4 500 rpm.

The backstops have been designed to offer a long service life, provided that they are used at a higher speed than the minimum specified in the table. Once this speed is reached and exceeded, the sprags lift off so that the backstop is not subject to wear and is maintenance-free.

##### Note:

It is necessary to specify the desired direction of rotation of the output shaft when ordering a gearbox with backstop. The direction of rotation is determined by front view of the output shaft.

See also "Direction of rotation", page 1/19.

With bevel and helical worm gearboxes, it is again necessary to specify the side on which the output shaft is located, i.e. either "Output side A" or "Output side B". The output side is defined by specifying the mounting position.

See also "Mounting position", page 9/2.

The backstop is not suitable for ambient temperatures under -25 °C.

##### Minimum disengage speed of the backstop

Adapter K2		80	90	100	112	132	160	180	200	225	250
Disengage speed	rpm	820	820	750	750	670	670	670	610	610	610
Maximum torque of the backstop	Nm	13	13	45	47	127	153	330	355	415	545

Adapter K3		56	140	180	210	250	280
Disengage speed	rpm	820	820	750	670	670	670
Maximum torque of the backstop	Nm	5	13	45	127	153	330

##### Slip clutch with proximity switch

Gearboxes with adapter K2 or K3 can be fitted with a slip clutch as an option. The slip clutch creates a friction-locked connection between the motor output shaft and the gearbox input shaft until a set torque value is achieved. Once this torque is exceeded the clutch will slip. Slip clutches are used when there is a risk of the geared motor sustaining damage as a result of stalling.

A slip torque setting for the slip clutch can be specified in plain text.

The slip torque should equal approximately 1.4 to 1.6 times the input torque. The slip torque scatter band ( $\pm 20\%$ ) should be taken into account in the specified slip torque value.

The slip clutch can be used for ambient temperatures between -25 to +60 °C. For different ambient temperatures, please contact Siemens.

##### Speed monitoring

In order to prevent uncontrolled slippage of the slip clutch, we recommend the implementation of a speed monitoring system.

Adapters K2 and K3 with slip clutch are equipped with a proximity switch for this purpose.

The proximity switch operates contact-free according to the sampling method and emits one signal per coupling rotation which is evaluated by a speed monitor (not included in the scope of supply).

The signal sequence sent by the proximity switch is compared in the speed monitor with the set setpoint speed. If the speed is below or above the configured setpoint speed, a relay is actuated (depending on the function setting) via an output stage.

The speed monitor and the output stage are not included in the scope of supply.

Power transmission	Additional identification code <b>-Z</b> with order code	Order code
	2KJ3... -.....-.....- <b>Z</b>	
Slip clutch with proximity switch		<b>A17</b>
Slip torque setting		<b>Y00</b>
Plain text:		<b>Y00*RKD@...*</b>

(Example: Required slip torque 125 Nm: **Y00\*RKD@125\***)

##### Slip torque setting

Adapter size	Settable slip torque	
	min.	max.
<b>Adapter K2</b>		
80	1.4	9.3
90	3.6	18.2
100	8.5	48
112	8.5	48
132	19	95
160	40	180
180	100	260
200	125	360
225	180	530
250	225	650
<b>Adapter K3</b>		
56	0.5	4.6
140	3.6	18.2
180	8.5	48
210	19	95
250	40	180
280	100	260

## General options



<b>11/2</b>	<b>Environmental conditions</b>
11/2	Ambient temperatures of the gearboxes
11/2	• Extended ambient temperatures
<b>11/3</b>	<b>Surface treatment and preservation</b>
11/3	Surface treatment
11/3	• Surface pretreatment
11/4	• Painting flange surfaces
11/5	• Colors
11/5	Preservation
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<b>11/6</b>	<b>Rating plate</b>
11/6	Overview
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11/7	Rating plate for ATEX version gearboxes
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<b>11/8</b>	<b>Documentation</b>
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## General options

### Environmental conditions

#### Ambient temperatures of the gearboxes

For the SIMOGEAR gearboxes, different ambient temperature ranges are available.

Ambient temperature	Gearbox type						Additional identification code -Z with order code	Order code
	Helical gearbox Z/D/E	Parallel shaft gearbox FZ/FD	Bevel gearbox K	Bevel gearbox B	Helical worm gearbox C	Worm gearbox S		
<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

1) For the helical, parallel shaft and bevel gearboxes, an additional standard temperature range is available after selection of a synthetic oil.

2) Can be selected for helical gearboxes Z and D from size 49.

3) Can be selected for parallel shaft and worm gearboxes from size 39.

#### Extended ambient temperatures

For extended ambient temperatures, the choice of service factor and the shaft load must be considered. Self-heating during continuous duty of the gearboxes and geared motors is taken into account.

The following restrictions must be considered in conjunction with the extended ambient temperature range:

K92	More information	K96	More information	K97	More information	K98	More information
<b>-20 °C to +45 °C</b>		<b>-25 °C to +40 °C</b>		<b>-30 °C to +40 °C</b>		<b>-40 °C to +40 °C</b>	
<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 9/53</a></li> <li>Venting and oil level control <a href="#">page 9/56</a></li> <li>Accessories for VLplus reinforced bearing systems <a href="#">page 9/52</a></li> </ul>		<ul style="list-style-type: none"> <li>Shaft design <a href="#">page 9/46</a></li> <li>Lubrication and sealing <a href="#">page 9/53</a></li> <li>Oil level control <a href="#">page 9/56</a></li> <li>Accessories for VLplus reinforced bearing system <a href="#">page 9/52</a></li> </ul>		<ul style="list-style-type: none"> <li>Shaft design <a href="#">page 9/46</a></li> <li>Lubrication and sealing <a href="#">page 9/53</a></li> <li>Venting and oil level control <a href="#">page 9/56</a></li> <li>Accessories for VLplus reinforced bearing system <a href="#">page 9/52</a></li> </ul>		<ul style="list-style-type: none"> <li>Mounting type <a href="#">page 9/40</a></li> <li>Shaft design <a href="#">page 9/46</a></li> <li>Lubrication and sealing <a href="#">page 9/53</a></li> <li>Venting and oil level control <a href="#">page 9/56</a></li> <li>Accessories for VLplus reinforced bearing system <a href="#">page 9/52</a></li> </ul>	
<b>Adapter options</b>		<b>Adapter options</b>		<b>Adapter options</b>		<b>Adapter options</b>	
-		-		<ul style="list-style-type: none"> <li>Slip clutch with proximity switch <a href="#">page 10/2</a></li> <li>Backstop <a href="#">page 10/2</a></li> </ul>		<ul style="list-style-type: none"> <li>Slip clutch with proximity switch <a href="#">page 10/2</a></li> <li>Backstop <a href="#">page 10/2</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 11/3</a></li> </ul>		<ul style="list-style-type: none"> <li>Surface treatment <a href="#">page 11/3</a></li> </ul>		<ul style="list-style-type: none"> <li>Surface treatment <a href="#">page 11/3</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 EN ISO 12944-2.

Geared motors, 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.

**Geared motors, 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		
<b>Surface protection</b>					
<b>Aluminum gearbox housing<sup>1)</sup></b>					
<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	–	–	1-component hydro paint	<ul style="list-style-type: none"> <li>Resistant to greases, conditionally resistant to mineral oils,</li> <li>Standard paint</li> </ul>	<b>L02</b>
- Layer thickness	–	–	60 µm		
<b>Cast iron gearbox housing<sup>2)</sup></b>					
<b>C1</b> Normal environmental stress	–	–	1-component hydro paint	<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,</li> <li>Standard paint</li> </ul>	<b>L02</b>
- Layer thickness	–	–	60 µm		
<b>All geared motors</b>					
<b>C2</b> Low environmental stress	2-component epoxy zinc phosphate	–	2-component polyurethane	<ul style="list-style-type: none"> <li>Indoor and outdoor installation</li> <li>Unheated buildings with condensation, production areas with</li> <li>Atmospheres with little pollution, rural areas</li> <li>Resistant to greases, mineral oils and sulfuric acid (10 %),</li> </ul>	<b>L03</b>
- Layer thickness	–	–	100 µm		
<b>C3</b> Average environmental stress	2-component epoxy zinc phosphate	–	2-component polyurethane	<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>
- Layer thickness	90 µm	–	100 µm		
<b>C4</b> High environmental stress	2-component epoxy zinc phosphate	–	2-component polyurethane	<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>
- Layer thickness	90 µm	–	100 µm		
<b>C5</b> Very high environmental stress	2-component epoxy zinc phosphate	2-component polyurethane	2-component polyurethane	<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>
- Layer thickness	90 µm	90 µm	100 µm		

<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

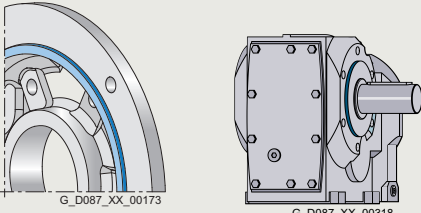
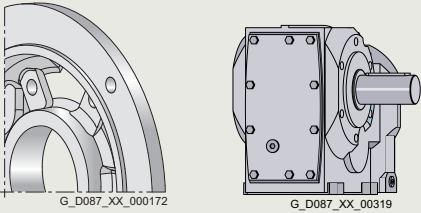
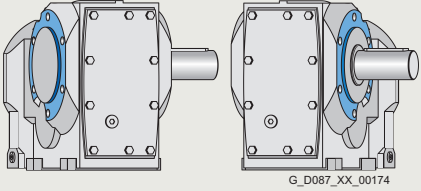
### Surface treatment and preservation

#### Surface treatment

Corrosivity category	Paint system			Description	Additional identification code -Z with order code 2KJ3...-.....-Z Order code
	Base coat	Intermediate coat	Top coat		
<b>Primer</b>				<b>Ability to be painted</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

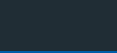




For flange-mounted or housing flange designs, the flange surface and centering are not painted at the selected output end. The versions listed in the table can be optionally selected.

Design	Possible for	Figure	Additional identification code -Z with order code 2KJ3...-.....-Z 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 -Z with order code 2KJ3... -.....-...-Z	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 (corrosivity category C2 or higher)

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](#).

### Note:

For light colors in corrosivity category C1 we recommend selection of surface treatment in the corrosivity category one level higher to ensure adequate and uniform coloring for the geared motor.

## 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 corrosion inhibitor (volatile corrosion inhibitor) is added to the gearbox oil.

Until commissioning, it is not permissible that the gearbox is opened, as otherwise the VCI corrosion inhibitor 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 insects. The storage location must be vibration- and shock-free. The storage conditions must be regularly checked.

Preservation	Additional identification code -Z with order code 2KJ3... -.....-...-Z	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.

A rating plate is attached to the gear end of gearboxes with an adapter. The attached motors have a separate rating plate.

#### Rating plate for helical, parallel shaft, bevel and helical worm gearboxes

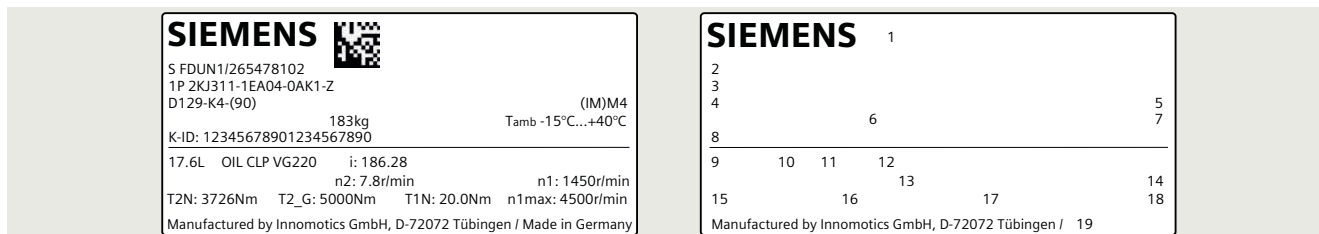


Fig. 11/1 Example, rating plate on helical geared motor

#### General data

- 1 Data matrix code
- 2 Serial No.
- 3 Article No.
- 4 Type designation
- 5 Mounting position
- 6 Weight m [kg]
- 7 Ambient temperature
- 8 Customer ID
- 9 Oil quantity [l] main gearbox/intermediate gearbox
- 10 Oil type
- 11 Oil viscosity ISO VG class to DIN 51519/ISO 3448

#### General data

- 12 Total transmission ratio  $i$
- 13 Gearbox input speed  $n_2$  [rpm]
- 14 Reference input speed  $n_1$  [rpm]
- 15 Max. permissible output torque of the gearbox/adaptor combination for continuous duty  $T_{2N}$  [Nm]
- 16 Max. permissible output torque of the gearbox without adaptor unit for continuous duty  $T_{2,G}$  [Nm]
- 17 Max. permissible input torque of the gearbox/adaptor combination for continuous duty  $T_{1N}$  [Nm]
- 18 Max. short-term permissible input speed  $n_{1max}$  [rpm]
- 19 Manufacturer's address and country of origin

When ordering a replacement/spare part, always specify the serial No.

#### Rating plate worm gearboxes 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.

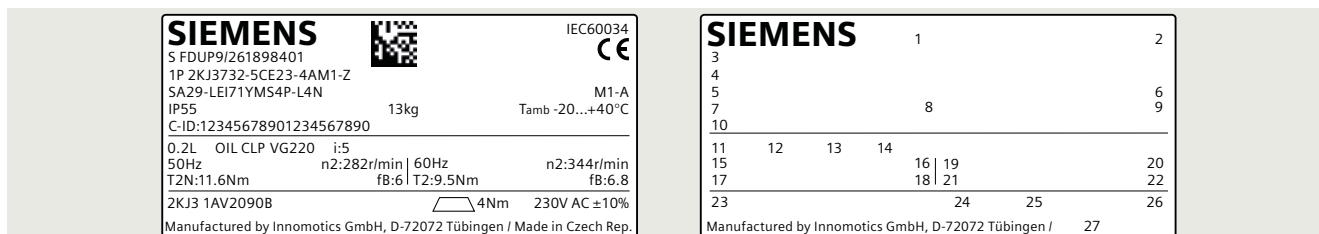


Fig. 11/2 Example of rating plate on gearbox side on worm geared motor S

#### General data

- 1 Data matrix code
- 2 Applicable standard
- 3 Serial No.
- 4 Article No.
- 5 Type designation
- 6 Mounting position
- 7 Degree of protection acc. to IEC 60034-5 or IEC 60529
- 8 Weight m [kg]
- 9 Ambient temperature
- 10 Customer ID
- 11 Oil quantity [l] main gearbox/intermediate gearbox
- 12 Oil type
- 13 Oil viscosity ISO VG class to DIN 51519/ISO 3448
- 14 Total transmission ratio  $i$

#### General data

- Frequency 1
- 15 Rated frequency  $f$  [Hz]
  - 16 Gearbox output speed  $n_2$  [rpm]
  - 17 Geared motor output torque  $T_2$  [Nm]
  - 18 Service factor  $f_B$
- Frequency 2
- 19 Rated frequency  $f$  [Hz]
  - 20 Gearbox output speed  $n_2$  [rpm]
  - 21 Geared motor output torque  $T_2$  [Nm]
  - 22 Service factor  $f_B$
  - 23 Geared motor type
  - 24 Symbols (IEC 60617-2): = brake
  - 25 Rated braking torque  $T_{br}$  [Nm]
  - 26 Brake supply voltage  $U$  [V]
  - 27 Manufacturer's address and country of origin

When ordering a replacement/spare part, always specify the serial No.

## Rating plate for ATEX version gearboxes





<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   n1max: 1415r/min T2: 1341Nm   fB: 1.2   T1max: 9.5Nm Manufactured by Innomatics GmbH, D-72072 Tuebingen / Made in Germany		    (IM)M4-B/M1-B/80 II 2G Ex h IIB T4 Gb II 2D Ex h IIB T120°C Db	<b>SIEMENS</b> 1 2 3 4 5 6 7 8 9 10.1 10.2 11 12 13 14 15 16   17 18 20 19 Manufactured by Innomatics GmbH, D-72072 Tuebingen / 21
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Fig. 11/3 Example of rating plate for ATEX


<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   n1max: 1415r/min T2: 1341Nm   fB: 1.2   T1max: 9.5Nm Manufactured by Innomatics GmbH, D-72072 Tuebingen / Made in Germany		 (IM)M4-B/M1-B/80	<b>SIEMENS</b> 1 2 3 4 5 6 7 8 9 10.1 10.2 11 12 13 14 15 16   17 18 20 19 Manufactured by Innomatics GmbH, D-72072 Tuebingen / 21
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Fig. 11/4 Example of rating plate for ATEX, supplied loose

## General data

- 1 Data matrix code
- 2 CE and UKCA marking
- 3 Ex marking
- 4 Serial No.
- 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 ID

## General data

- 12 Oil quantity [l] main gearbox/intermediate gearbox
- 13 Oil type
- 14 Oil viscosity ISO VG class to DIN 51519/ISO 3448
- 15 Total transmission ratio  $i$
- 16 Gearbox output speed  $n_2$  [rpm]
- 17 Configured output torque of the gearbox/adaptor combination  $T_2$  [Nm]
- 18 Service factor  $f_B$
- 19 Gearbox input speed  $n_{1max}$  [rpm]
- 20 Configured input torque of the gearbox/adaptor combination  $T_{1max}$  [Nm]
- 21 Manufacturer's address and country of origin

When ordering a replacement/spare part, always specify the serial No.

## 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	
	2KJ3... -.....-Z	Order code
Second rating plate, supplied loose		<b>K41</b>



## General options

### 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.

The operating instructions include the following documents:

- Replacement part drawings and lists
- Installation 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 declarations of conformity are available in the Industry Online Support:

<https://support.industry.siemens.com/cs/ww/en/ps/13424/man>

#### Test certificates

On request, the following documents are available by e-mail:

Additional documentation	The following is checked:	Additional identification code <b>-Z</b> with order code	
Declaration of compliance with the order EN 10204-2.1 and factory test report EN 10204-2.2, geared motor	-	2KJ3...-.....-Z	Order code <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 gearboxes	<ul style="list-style-type: none"> <li>• Output shaft bearings</li> <li>• Input shaft diameter (for gearboxes with input unit A only)</li> <li>• No-load speed</li> <li>• Noise (subjective evaluation)</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 cardboard box suitable for sea and air freight - and from frame size 129, in an MC box.

The following packaging options are available.

Packaging options	Gearbox size	Can be selected for the following countries	Minimum order quantity	Additional identification code -Z with order code 2KJ3...-.....-Z Order code
<b>Individual packaging</b>				
Box	19 ... 89	Albania, Austria, Belgium, Bulgaria, Bosnia-Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Serbian Republic, Spain, Sweden, Switzerland, United Kingdom.	-	<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-Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Serbian Republic, Spain, Sweden, Switzerland, United Kingdom.	-	<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-Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Serbian Republic, Spain, Sweden, Switzerland, United Kingdom.	-	<b>W52</b>
Neutral packaging surface freight	19 ... 189	Albania, Austria, Belgium, Bulgaria, Bosnia-Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Serbian Republic, Spain, Sweden, Switzerland, United Kingdom.	-	<b>W48</b>
Neutral packaging overseas	19 ... 189	worldwide	-	<b>W49</b>

## General options

### Fast track

#### Overview

For a faster delivery of our SIMOGEAR gearboxes outside the standard delivery times we offer a fast track option.

On request, SIMOGEAR geared motors can be delivered with a shortened delivery time (usually 2 to 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 adapter K4 sizes 63 to 200
- SIMOGEAR adapter K2 sizes 80 to 160
- SIMOGEAR adapter K5 sizes 56 to 180
- SIMOGEAR KS adapter
- Paint finish in corrosivity category C1 to C3
- Without ATEX design

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****12/2****Overview**

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SIMOGEAR 2KJ3 geared motors

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SINAMICS G115D - 2KJ8 distributed drive system

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SIMOTICS S-1FG1 servo geared motors

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SIMOTICS M main motors

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SIMOTICS GP and SD low-voltage motors







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SIMOTICS XP explosion-protected motors

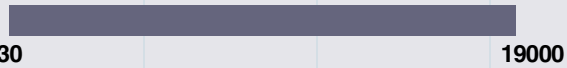
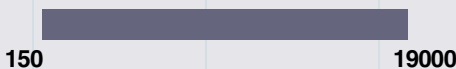
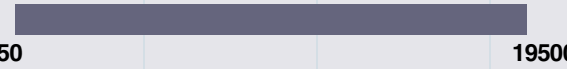



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SIMOGEAR motor system

## SIMOGEAR geared motors and SIMOTICS motors

Geared motors	Features	Degree of protection	Gearbox designation (stages)
<b>SIMOGEAR 2KJ3 geared motors</b>			
 <b>Helical geared motors</b>	1-stage, 2-stage and 3-stage Solid shaft designs	IP65	<i>Z19 ... Z189</i> (2-stage) <i>D19 ... D189</i> (3-stage) <i>E39 ... E149</i> (1-stage)
 <b>Parallel shaft geared motors</b>	2-stage and 3-stage Hollow shaft designs Solid shaft designs	IP65	<i>FZ29 ... FZ189</i> (2-stage) <i>FD29 ... FD189</i> (3-stage)
 <b>Bevel geared motors</b>	2-stage and 3-stage Hollow shaft designs Solid shaft designs	IP65	<i>B19 ... B49</i> (2-stage) <i>K39 ... K189</i> (3-stage)
 <b>Helical worm geared motors</b>	2-stage Hollow shaft designs Solid shaft designs	IP65	<i>C29 ... C89</i> (2-stage)
 <b>Worm geared motors</b>	1-stage Hollow shaft designs Solid shaft designs	IP65	<i>S09 ... S29</i> (2-stage)
 <b>Electric-monorail geared motors</b>	2-stage and 3-stage Hollow shaft designs Solid shaft designs	IP65	<i>BH.29 ... BH.39</i> (2-stage) <i>KHF49 ... KHF79</i> (3-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, 109, 129, 149, 169, 189						1.29 ... 373	D 50.1
29, 39, 49, 69, 79, 89, 109, 129, 149, 169, 189						3.57 ... 413	
19, 29, 39, 49, 69, 79, 89, 109, 129, 149, 169, 189						3.47 ... 244.25	
29, 39A, 49, 69, 89						6.43 ... 363	
09, 19, 29						5 ... 100	
29, 39, 49, 69, 79						7.23 ... 244.25	

## SIMOGEAR geared motors and SIMOTICS motors


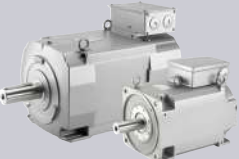
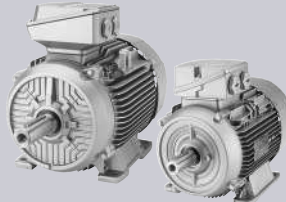


Geared motors		Features	Degree of protection	Gearbox designation (stages)
<b>SINAMICS G115D - 2KJ8 distributed drive system</b>				
	<b>Helical geared motors</b>	1-stage, 2-stage and 3-stage Solid shaft designs	IP65	Z19 ... Z89 (2-stage) D19 ... D89 (3-stage) E39 ... E89 (1-stage)
	<b>Parallel shaft 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						1.29 ... 330.23	D 31.2
29, 39, 49, 69, 79, 89						3.57 ... 357	
19, 29, 39, 49, 69, 79, 89, 109						3.47 ... 244.25	
29, 39A, 49, 69, 89						6.2 ... 363	
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, 109, 129						3.4 ... 62.5	D 41
19, 29, 39, 49, 59, 69, 79, 89, 109, 129						35.8 ... 373	
29, 39, 49, 69, 79, 89, 109, 129						3.6 ... 70.7	
29, 39, 49, 69, 79, 89, 109, 129						46.4 ... 413	
19, 29, 39, 49						3.5 ... 59.3	
39, 49, 69, 79, 89, 109, 129, 149						5.2 ... 244.3	
29, 39, 49, 69, 89						6.2 ... 102.5	



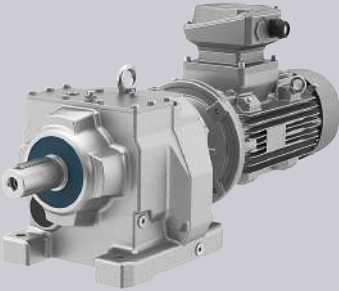
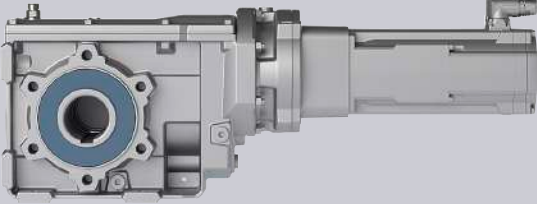
## SIMOGEAR geared motors and SIMOTICS motors

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
 <p><b>SIMOTICS XP 1MB15, 1MB16, 1MB5 explosion-protected motors</b></p>	Seamless series of explosion-protected motors for gas and dust protection in harsh, hazardous areas Motors with cast-iron 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
	SIMOTICS GP/SD low-voltage motors  SIMOTICS XP explosion-protected motors	Helical gearbox Parallel shaft gearbox  Bevel gearbox Helical worm gearbox	K2 adapter K4 adapter
	Servo motors SIMOTICS S-1FK2 SIMOTICS S-1FK7	Helical gearbox Parallel shaft gearbox  Bevel gearbox Helical worm gearbox	KS adapter

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>13/2</b>	<b>Lists</b>
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## Appendix

### Lists

#### List of order codes

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<b>Adapter power transmission</b>		
A15	Adapter backstop	10/2
A17	Slip clutch with proximity switch	10/2
<b>Mounting positions</b>		
D01 ... D06	Mounting positions of the geared motors (helical and parallel shaft gearboxes)	9/4 ... 9/18
D11 ... D16 and D21 ... D26	Mounting position of the geared motors (bevel, helical worm and worm gearboxes)	9/19 ... 9/37
D10 and D20	Output side A or B worm gearbox	9/37
<b>Special mounting positions</b>		
E01 ... E17	Y axis of rotation	9/39
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G09	Figure 1	9/45
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<b>Output sealing</b>		
G23	Seal with longer service life	9/54
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G37	Oil level sensor	9/63
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G40	24 V disconnecter	9/63
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G45	Pressure breather valve	9/58
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<b>Oil drain</b>		
G53	Magnetic oil drain screw	9/61
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G60	Protective cover	9/50
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G77	Water drain holes at the output flange	9/43
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G78	Output flange sealing	9/44
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<b>Shrink-glued output gearwheel</b>		
G97	Shrink-glued output gearwheel	9/64
<b>Reduced-backlash version</b>		
G99	Reduced-backlash version	9/64
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## List of order codes

Order code	Special design Designation	Detailed data Chapter/Page
<b>Lubricants</b>		
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K07	CLP ISO PG VG220	9/53 ... 9/54
K08	CLP ISO PG VG460	9/53 ... 9/54
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K12	CLP ISO PAO VG220	9/53 ... 9/54
K13	CLP ISO PAO VG68	9/53 ... 9/54
K14	CLP ISO H1 VG100	9/53 ... 9/54
K16	CLP ISO PAO VG460	9/53 ... 9/54
<b>Long-term preservation</b>		
K17	Long-term preservation up to 36 months	11/5
<b>Direction of rotation of the output shaft (required with backstop)</b>		
K18	Clockwise	1/19
K19	Counterclockwise	1/19
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K41	Second rating plate, supplied loose	11/7
<b>ATEX explosion protection designation</b>		
K70	Ex II 2G Ex h IIC T4 Gb Ex II 2D Ex h IIIC T120 °C Db	1/18
K80	Ex II 2G Ex h IIB T4 Gb Ex II 2D Ex h IIIB T120 °C Db	1/18
K81	Ex II 3G Ex h IIB T4 Gc Ex II 3D Ex h IIIB T120 °C Dc	1/18
K82	Ex II 3G Ex h IIC T4 Gc Ex II 3D Ex h IIIC T120 °C Dc	1/18
<b>Ambient temperature</b>		
K92	Ambient temperature -20 °C to +40 °C	11/2
K95	Ambient temperature -25 °C to +40 °C	11/2
K96	Ambient temperature -30 °C to +40 °C	11/2
K97	Ambient temperature -30 °C to +40 °C	11/2
K98	Ambient temperature -40 °C to +40 °C	11/2
<b>Surface treatment</b>		
L00	Unpainted	11/4
L01	Primed according to corrosivity category C2 G	11/4
L02	Surface protection for normal environmental stress C1	11/3
L03	Surface protection for low environmental stress C2	11/3
L04	Surface protection for average environmental stress C3	11/3
L05	Surface protection for very high environmental stress C5	11/3
L09	Primed according to corrosivity category C4 G	11/4
L11	Centering not painted	11/4
L12	Flange completely painted	11/4
L19	Special pretreatment	11/3
L20	Surface protection for high environmental stress C4	11/3
L27	Centerings not painted on both sides	11/4
<b>RAL colors</b>		
L50	RAL 5015 sky blue	11/5
L53	RAL 7031 blue gray	11/5
L55	RAL 7030 stone gray	11/5
L75	RAL 7016 anthracite gray	11/5
L80	RAL 9011 graphite black	11/5
L83	RAL 7012 basalt gray	11/5
<b>Documentation</b>		
W11	Acceptance test certificate EN 10204-3.1 for gearboxes	11/8
W12	Acceptance test certificate EN 10204-3.1 for paint finish	11/8
<b>Fast track</b>		
W50	Fast track	11/10

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#### List of order codes

Order code	Special design Designation	Detailed data Chapter/Page
<b>Packaging options</b>		
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<b>W42</b>	Individual packaging overseas	11/9
<b>W44</b>	Individual packaging MC box	11/9
<b>W45</b>	Collective packaging lattice box	11/9
<b>W46</b>	Collective packaging overseas	11/9
<b>W47</b>	Individual packaging VCI corrosion inhibiting film	11/9
<b>W48</b>	Collective packaging neutral packaging land freight	11/9
<b>W49</b>	Collective packaging neutral packaging overseas	11/9
<b>W52</b>	Collective packaging VCI corrosion inhibiting film	11/9
<b>Extension of the liability for defects</b>		
<b>W80</b>	Extension of the liability for defects by 12 months to a total of 24 months from delivery	11/10
<b>W82</b>	Extension of the liability for defects by 24 months to a total of 36 months from delivery	11/10
<b>Speed monitoring</b>		
<b>Y00</b>	Slip torque setting	10/2

## 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
$L_{pIA}$	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
$x1$	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 rate 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 (horsepower 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 rate 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**

SITRAIN - Digital Industry Academy stands for a modern learning culture that focuses on the needs of learners and the demands of innovative companies.

SITRAIN offers a comprehensive range of knowledge on Siemens industrial products and, under the vision "Future of Learning", pursues a holistic approach that combines different forms and methods of learning. Different learning formats allow for more effective, flexible and continuous learning depending on the type of learning.

#### Education and training directly from the manufacturer



##### Industrial Automation Systems SIMATIC

Training available for:  
SIMATIC S7-1500, TIA Portal,  
SIMATIC S7-300/400,  
SIMATIC S7-1200



##### Drive Technology

Training available for:  
SINAMICS S120 and  
SINAMICS G120 low-voltage  
converters,  
SINAMICS G130 / G150 /  
G180 / S150



##### SINUMERIK CNC automation system

Training available for:  
SINUMERIK 840D,  
SINUMERIK 840D sl and  
SINUMERIK ONE



##### Process Control Systems

Training available for:  
SIMATIC PCS 7,  
SIMATIC PCS neo



##### Digital Enterprise

Training available for:  
Openness, SIMIT, OPC UA,  
Industrial Edge, Virtual  
commissioning



##### Industrial Communications

Training available for:  
PROFINET, SCALANCE, R  
UGGEDOM, Industrial Ethernet,  
Fieldbus communication,  
Industrial Security, Remote  
communication



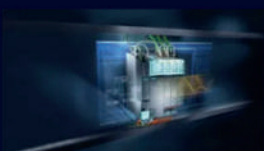
##### Identification and Locating

Training available for:  
RFID, RTLS-Systems



##### Operator Control and Monitoring Systems

Training available for:  
SIMATIC WinCC Unified in TIA  
Portal, SIMATIC WinCC in TIA  
Portal, SIMATIC WinCC V7x



##### Motion Control System SIMOTION

Training available for:  
SIMOTION (Programming,  
Commissioning, Diagnostics,  
Service)



##### Smart Infrastructure

Training available for:  
SIRIUS, SENTRON, SIVACON,  
ALPHA, SIMOCODE,  
Circuit breakers



##### Process Analytics & Instrumentation

Training is available for process  
analytics and instrumentation,  
explosion protection, process  
gas chromatographs



##### Additional training offer

SIMOVE with Automated  
Guided Vehicles (AGV), SIPLUS  
CMS, Guidelines and standards  
for control cabinets

### Introduction

#### **Different learning formats and methods for maximum learning success**

Face-to-face training in the training center or in the virtual classroom, with fixed dates and course times, learning in a group with a learning guide? Or digital training, on your own responsibility and location-independent, on demand, 24/7?

With the learning formats "Learning Journey", "Learning Membership" and "Learning Event", SITRAIN offers a wide range of different learning options in connection with didactically effective methods and modular possibilities.



#### **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.



#### **Live**

Learn together with others, simultaneously and guided by a learning consultant. Online, in the SITRAIN training center or at your company.



#### **Self-reliant**

Expand your knowledge self-determined with industry learning and work on your learning units at your own pace and according to your own schedule.



#### **On demand**

Get the knowledge you need, exactly when you need it. Be it to answer a current question or to work on a special topic.



#### **Individuell**

Talk directly with the learning consultant, clarify detailed questions and get personal coaching for transferring the learned topics to your own application.



#### **Training cases catalog**

<https://www.siemens.com/sitrain-catalog-training-cases>

Find  
your local  
offer here



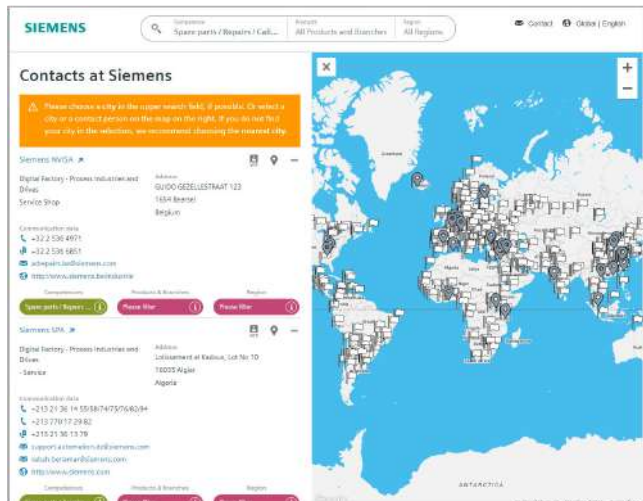
#### **SITRAIN – Digital Industry Academy worldwide**

You will find the regional knowledge offer in the country selection. One click will take you to the corresponding website.

## Appendix

### Partner

#### 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)

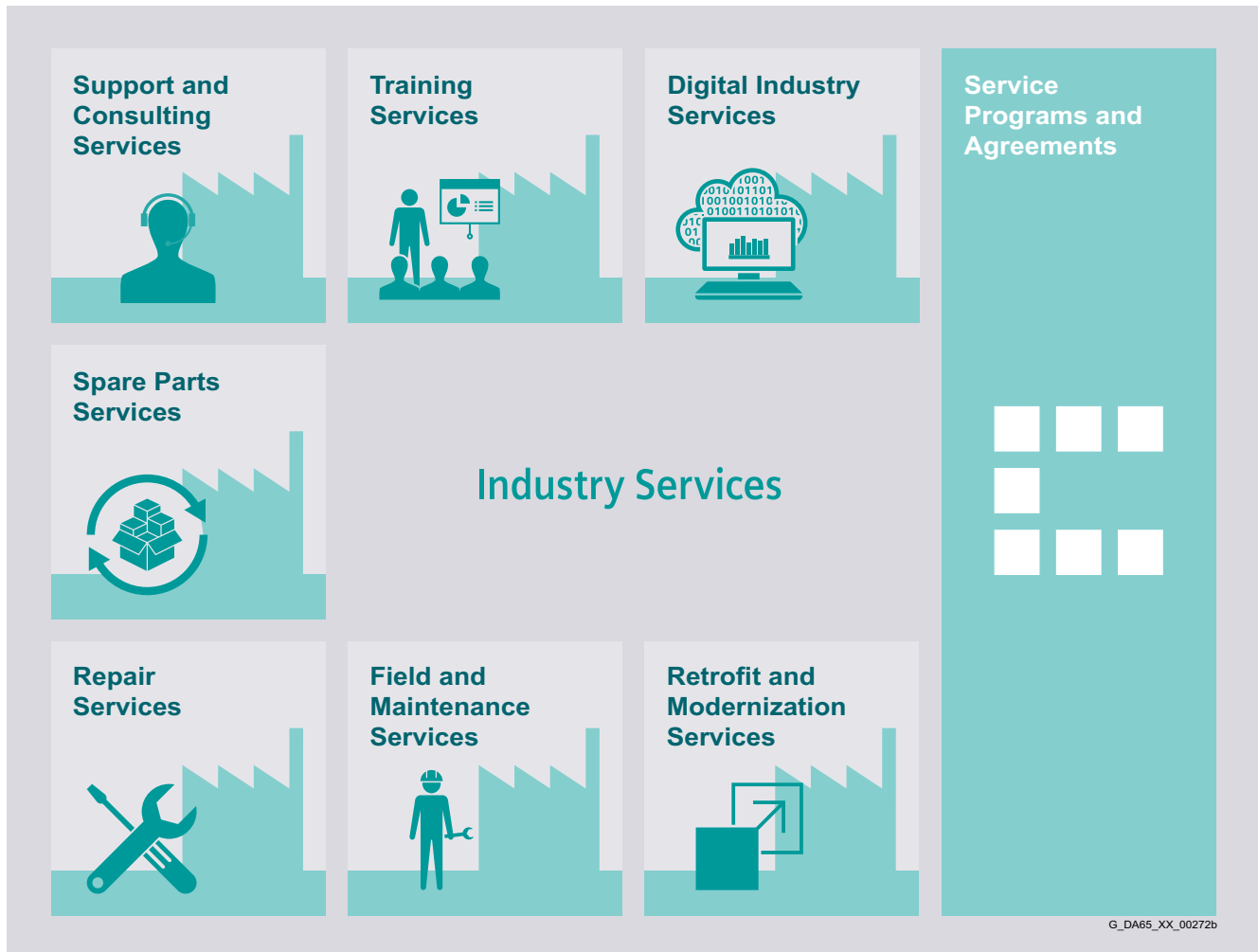
You start by selecting

- 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/industrieservices](http://www.siemens.com/industrieservices)



## Appendix

### Industry Services

#### Industry Services – Portfolio overview

##### Overview



Digital Industry Services

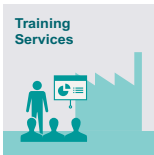
#### Digital Industry Services

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](https://www.siemens.com/global/en/products/services/industry/digital-industry-services.html)



Training Services

#### 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

#### 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 Services

#### 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

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

#### 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

#### 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

#### 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

**App**





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	$0.02835 \times 10^{-3}$	$1.93 \times 10^{-5}$
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

#### Power (to convert from A to B, multiply by entry in table)

A \ B	hp	Watts
hp (English)	1	745.7
(lb-in) (deg./s)	$2.645 \times 10^{-6}$	$1.972 \times 10^{-3}$
(lb-in) (rpm)	$1.587 \times 10^{-5}$	$1.183 \times 10^{-2}$
(lb-ft) (deg./s)	$3.173 \times 10^{-5}$	$2.366 \times 10^{-2}$
(lb-ft) (rpm)	$1.904 \times 10^{-4}$	0.1420
Watts	$1.341 \times 10^{-3}$	1

## Conversion tables

## 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 hard- and software products as well as services (together hereinafter referred to as "products") described therein from Siemens Aktiengesellschaft or from Innomotics GmbH subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as "T&C"). Note, for products purchased from any Siemens entity or Innomotics entity having a registered office outside of Germany, the respective terms and conditions of sale and delivery of the respective Siemens entity or Innomotics entity apply exclusively. The following T&C apply exclusively for orders placed with Siemens Aktiengesellschaft, Germany or Innomotics GmbH, Germany. In the case of an order placed with Innomotics GmbH, the SiePortal T&C and the other terms and conditions are to be read in such a way that Siemens is to be understood as Innomotics GmbH.

#### 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 text of the product description, 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 Conditions for Software Products for Infrastructure & Industry Business (German law)"<sup>1)</sup> and/or
- for consulting services the "Allgemeine Geschäftsbedingungen für Beratungsleistungen für Infrastructure & Industry Geschäft (Deutsches Recht)"<sup>1)</sup> (available only in German) and/or
- for other services, the „Supplementary Terms and Conditions for Services for Infrastructure & Industry Business (German Law) ("BL")"<sup>1)</sup> and/or
- for other products the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"<sup>1)</sup>.

In case such products 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>, the Product will be given a note as to which special conditions apply to this open source software. 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 for Infrastructure & Industry Business (Swiss Law)"<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 products 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 products 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. The metal factor, provided it is relevant, can be found in the respective product description.

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 copper, 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 copper, the official price from two days 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  
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## Appendix

### Conditions of sale and delivery

#### 4. Export Control and Sanctions Compliance

##### 4.1 General

Customer shall comply with all applicable sanctions, embargoes and (re-)export control laws and regulations, and, in any event, with those of the European Union, the United States of America and any locally applicable jurisdiction (collectively "Export Regulations").

##### 4.2 Checks for Products

Prior to any transaction by customer concerning products (including hardware, documentation and technology) delivered by Siemens, or products (including maintenance and technical support) performed by Siemens with a third party, customer shall check and certify by appropriate measures that

- (i) the customer's use, transfer, or distribution of such products, the brokering of contracts or the provision of other economic resources in connection with products will not be in violation of any Export Regulations, also taking into account any prohibitions to circumvent these (e.g., by undue diversion)
- (ii) the products are not intended or provided for prohibited or unauthorized non-civilian purposes (e.g. armaments, nuclear technology, weapons, or any other usage in the field of defense and military);
- (iii) customer has screened all direct and indirect parties involved in the receipt, use, transfer, or distribution of the products against all applicable restricted party lists of the Export Regulations concerning trading with entities, persons and organizations listed therein and
- (iv) products within the scope of items-related restrictions, as specified in the respective annexes to the Export Regulations, will not, unless permitted by the Export Regulations, be
  - (a) exported, directly or indirectly (e.g., via Eurasian Economic Union (EAEU) countries), to Russia or Belarus, or
  - (b) resold to any third party business partner that does not take a prior commitment not to export such products to Russia or Belarus.

##### 4.3 Non-Acceptable Use of Software and Cloud Services

Customer shall not, unless permitted by the Export Regulations or respective governmental licenses or approvals,

- (i) download, install, access or use the products from or in any location prohibited by or subject to comprehensive sanctions or subject or to license requirements according to the Export Regulations;
  - (ii) grant access to, transfer, (re-)export (including any "deemed (re-)exports"), or otherwise make available the products to any entity, person, or organization identified on a restricted party list of the Export Regulations;
  - (iii) use the products for any purpose prohibited by the Export Regulations (e.g. use in connection with armaments, nuclear technology or weapons);
  - (iv) upload to a products platform any customer content unless it is non-controlled (e.g. in the EU: AL = N; in the U.S.: ECCN = N or EAR99);
  - (v) facilitate any of the afore mentioned activities by any user.
- Customer shall provide all users with all information necessary to ensure compliance with the Export Regulations.

#### 4.4 Semiconductor Development

Customer will not, without advance written authorization from Siemens, use offerings for the development or production of integrated circuits at any semiconductor fabrication facility located in China meeting the criteria specified in the U.S. Export Administration Regulations, 15 C.F.R. 744.23.

#### 4.5 Information

Upon request by Siemens, customer shall promptly provide Siemens with all information pertaining to users, the intended use and the location of use or the final destination (in the case of hardware, documentation and technology) of the products. Customer will notify Siemens prior to customer disclosing any information to Siemens that is defense-related or requires controlled or special data handling pursuant to applicable government regulations, and will use the disclosure tools and methods specified by Siemens.

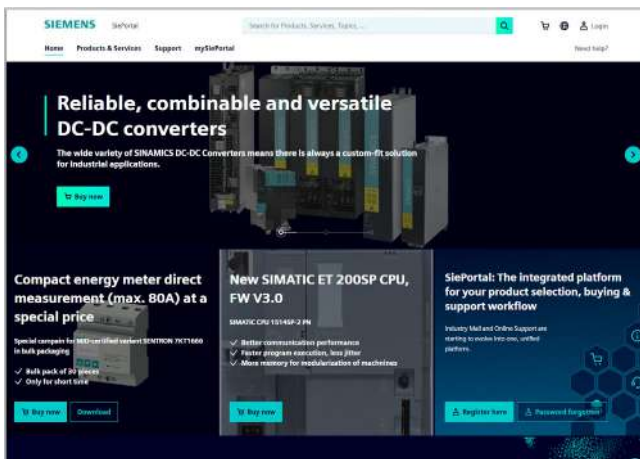
#### 4.6 Reservation

Siemens shall not be obligated to fulfill this agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes or other sanctions. Customer acknowledges that Siemens may be obliged under the Export Regulations to limit or suspend access by customer and/or users to products.

#### 5. Miscellaneous

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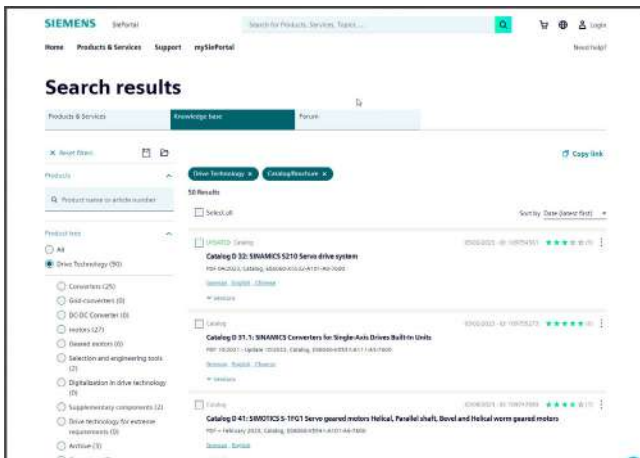
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