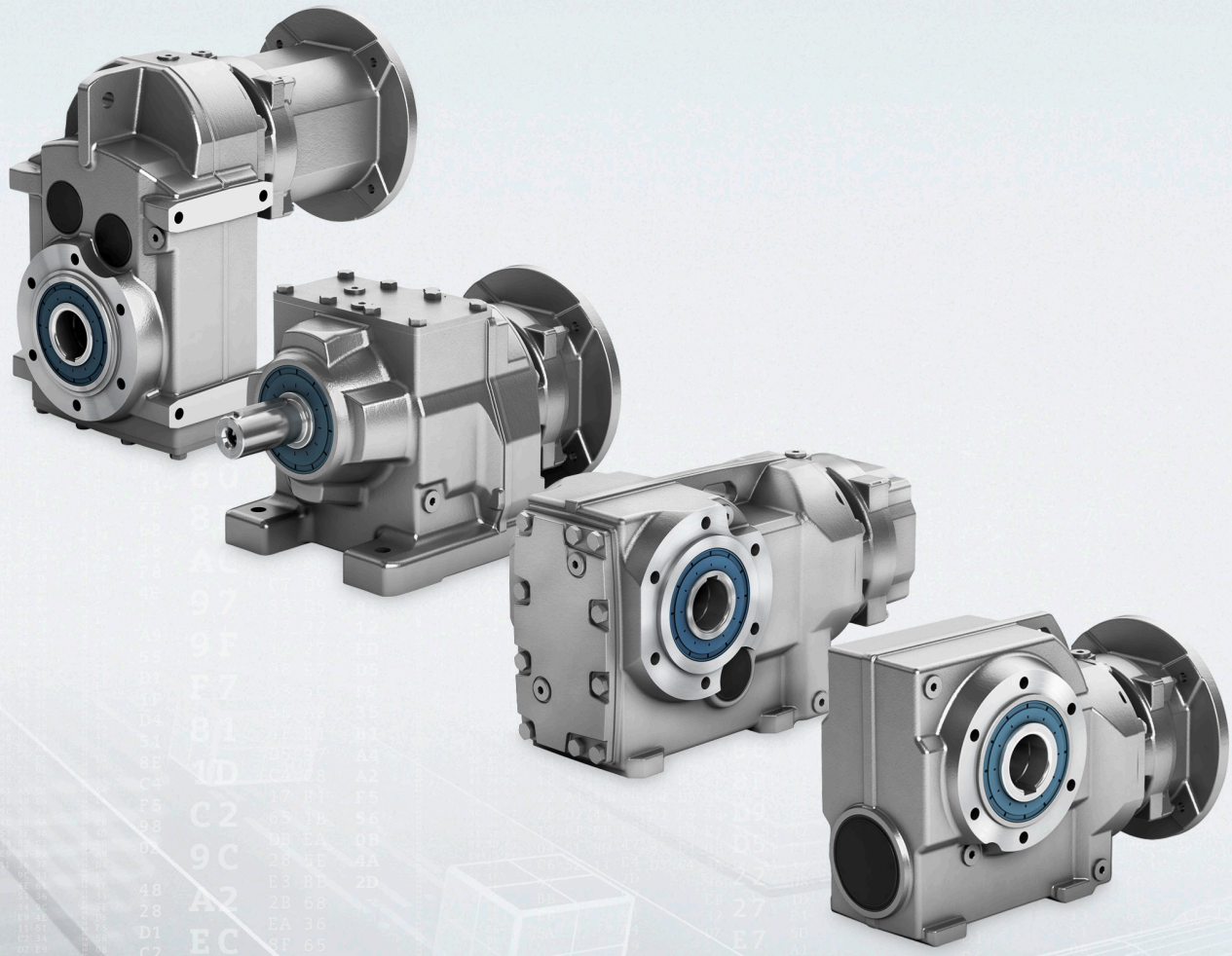
SIEMENS



Motion Control

SIMOGEAR
Gearboxes with adapter

Mounting of IEC, NEMA and servo motors

product design award 2013

Catalog D 50.21

Edition 2018

siemens.com/gearedmotors

Related catalogs

SIMOGEAR D 50.2
Geared Motors
Helical, parallel shaft, bevel, helical worm geared motors

E86060-L5250-A121-A1-7600



SIMOTICS GP, SD, XP, DP D 81.1
Low-Voltage Motors
Type series 1FP1, 1LE1, 1LE5, 1MB1 and 1PC1
Frame sizes 63 to 355
Power range 0.09 to 500 kW
E86060-K5581-A111-B2-7600



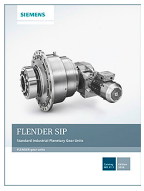
FLENDER Couplings MD 10.1
Standard Couplings

E86060-K5710-A111-A5-7600



FLENDER SIP MD 31.1
Standard Industrial Planetary Gear Units

E86060-K5731-A111-A5-7600



Motion Control Drives D 31.1
SINAMICS Inverters for Single-Axis Drives
Built-In Units

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Motion Control Drives D 31.2
SINAMICS Inverters for Single-Axis Drives
Distributed Inverters

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SIMOTICS S-1FG1 D 41
Servo geared motors
Helical, Parallel shaft, Bevel and Helical worm geared motors

E86060-K5541-A101-A3-7600



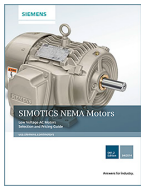
Industrial Communication IK PI
SIMATIC NET

E86060-K6710-A101-B8-7600



SIMOTICS NEMA Motors D 81.2
Low Voltage AC Motors
Selection and Pricing Guide

Further details available on the Internet at:
www.usa.siemens.com/motors



Additional documentation

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:

www.siemens.com/gearedmotors

You can order the listed documentation or download it in common file formats (PDF, ZIP).



SIEMENS

SIMOGEAR
Gearboxes with adapter

Helical, parallel shaft, bevel, helical worm gearboxes

Catalog D 50.21 · 2018

Dear customer,

We are happy to present you with the new PDF of Catalog D 50.21 Edition 2018.

The catalog has new content:

- The KS adapter for mounting on defined SIEMENS servo motors has been included as a new item.
- The A/AZ adapter with a free input shaft has been included as a new item.
- The single-stage helical gearboxes with torques of up to 1 490 Nm have now been added.
- Tandem gearboxes of the helical, parallel shaft, bevel and helical worm gearbox series have also been added.
- Helical gearboxes with the VLplus or XLplus reinforced bearing system as well as parallel shaft gearboxes and bevel gearboxes with the VLplus reinforced bearing system have also been included.

We hope that you often use our new Catalog D 50.21 and find it helpful.
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

As a supplement to this catalog, the Drive Technology Configurator (DT Configurator) will help you when selecting the optimum geared motor. You can call up the 2D and 3D data in all of the usual file formats and directly process it further.

The DT Configurator can be used on the Internet without requiring any installation.
The DT Configurator can be found in the Siemens Industry Mall at the following address:
www.siemens.com/dt-configurator

Please contact your local Siemens office if you would like to obtain this software.
Up-to-date information about SIMOGEAR geared motors is available on the Internet at:
www.siemens.com/gearedmotors

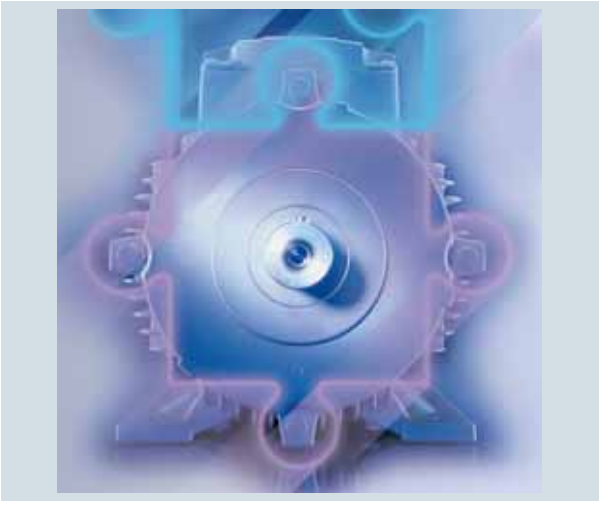
Best regards,

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

SIMOGEAR

Gearboxes with adapter

Motion Control



Catalog D 50.21 · 2018

Refer to the Industry Mall for current updates of this catalog:
www.siemens.com/industrymall

The products contained in this catalog can also be found in the Interactive Catalog CA 01.
The Catalog CA 01 can be downloaded at:
www.siemens.com/automation/ca01

Please contact your local Siemens sales office.

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Appendix 11

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.

Digital Enterprise

The building blocks that ensure everything works together perfectly in the digital enterprise

Digitalization is already changing all areas of life and existing business models. It is placing greater pressure on industry while at the same time creating new business opportunities. Today, thanks to scalable solutions from Siemens, companies can already become a digital enterprise and ensure their competitiveness.



Industry faces tremendous challenges

Reduce time-to-market

Today manufacturers have to bring products to market at an ever-increasing pace despite the growing complexity of these products. In the past, a major manufac-turer would push aside a small one, but now it is a fast manufacturer that overtakes a slow one.

Boost flexibility

Consumers want customized products, but at a price they would pay for a mass-produced item. That only works if production is more flexible than ever before.

Improve quality

To ensure a high level of quality while meeting legal requirements, companies have to establish closed quality loops and enable the traceability of products.

Boost efficiency

Today the product itself needs to be sustainable and environmentally friendly, while energy efficiency in production has become a competitive advantage.

Increase security

Increasing networking escalates the threat to production facilities of cyberattacks. Today more than ever, com-panies need suitable security measures.



The digital enterprise has already become a reality

To fully benefit from all the advantages of digitalization, companies first have to achieve complete consistency of their data. Fully digitally integrated business processes, including those of suppliers, can help to create a digital representation of the entire value chain. This requires

- the integration of industrial software and automation,
- expansion of the communication networks,
- security in automation,
- and the use of business-specific industrial services.

MindSphere

The cloud-based open IoT operating system from Siemens

With MindSphere, Siemens offers a cost-effective and scalable cloud platform as a service (PaaS) for the development of applications. The platform, designed as an open operating system for the Internet of Things, makes it possible to improve the efficiency of plants by collecting and analyzing large volumes of production data.

Totally Integrated Automation (TIA)

Where digitalization becomes reality

Totally Integrated Automation (TIA) ensures the seamless transition from the virtual to the real world. It already encompasses all the necessary conditions for transforming the benefits of digitalization into true added value. The data that will form the digital twin for actual production is generated from a common base.

Digital Plant
Learn more about the digital enterprise for the process industry
www.siemens.com/digitalplant

Digital Enterprise Suite
Learn more about the digital enterprise for the discrete industry
www.siemens.com/digital-enterprise-suite

IA/DT Digital Enterprise En 05.03.18

Integrated Drive Systems

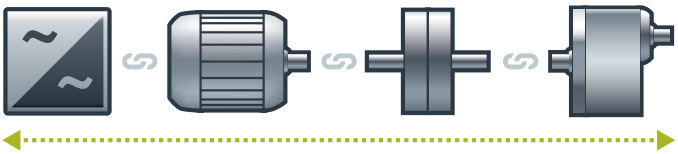
Faster on the market and in the black with Integrated Drive Systems

Integrated Drive Systems are Siemens' trendsetting answer to the high degree of complexity that characterizes drive and automation technology today. The world's only true one-stop solution for entire drive systems is characterized in particular by its threefold integration: Horizontal, vertical, and lifecycle integration ensure that every drive system component fits seamlessly into the whole system, into any automation environment, and even into the entire lifecycle of a plant.

The outcome is an optimal workflow – from engineering all the way to service that entails more productivity, increased efficiency, and better availability. That's how Integrated Drive Systems reduce time to market and time to profit.

Horizontal integration

Integrated drive portfolio: The core elements of a fully integrated drive portfolio are frequency converters, motors, couplings, and gear units. At Siemens, they're all available from a single source. Perfectly integrated, perfectly interacting. For all power and performance classes. As standard solutions or fully customized. No other player in the market can offer a comparable portfolio. Moreover, all Siemens drive components are perfectly matched, so they are optimally interacting.



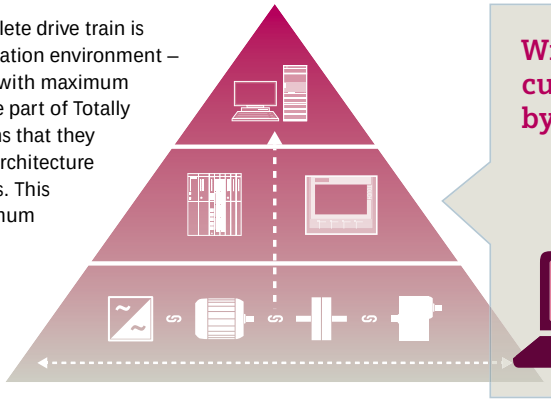
You can boost the availability of your application or plant to up to

99 %*

*e.g., conveyor application

Vertical integration

Thanks to **vertical integration**, the complete drive train is seamlessly integrated in the entire automation environment – an important prerequisite for production with maximum value added. Integrated Drive Systems are part of Totally Integrated Automation (TIA), which means that they are perfectly embedded into the system architecture of the entire industrial production process. This enables optimal processes through maximum communication and control.



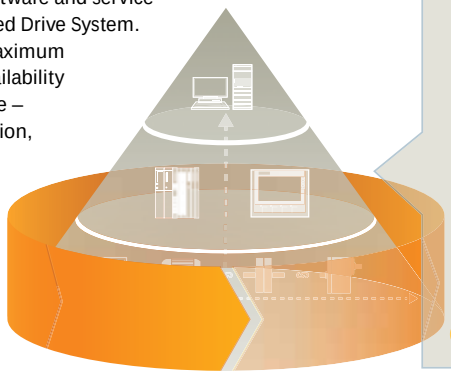
With TIA Portal you can cut your engineering time by up to

30 %

Lifecycle integration

Lifecycle integration adds the factor of time: Software and service are available for the entire lifecycle of an Integrated Drive System. That way, important optimization potential for maximum productivity, increased efficiency, and highest availability can be leveraged throughout the system's lifecycle – from planning, design, and engineering to operation, maintenance, and all the way even to modernization.

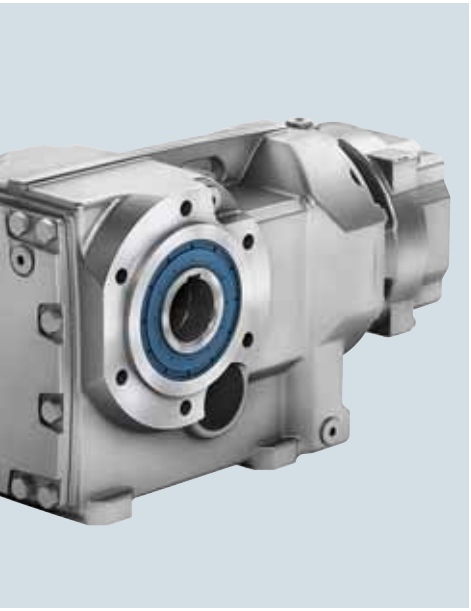
With Integrated Drive Systems, assets become important success factors. They ensure shorter time to market, maximum productivity and efficiency in operation, and shorter time to profit.



With Integrated Drive Systems you can reduce your maintenance costs by up to

15 %

www.siemens.com/ids



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Gearboxes

SIMOGEAR gearboxes are available as helical, parallel shaft, bevel, helical worm gearboxes.

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

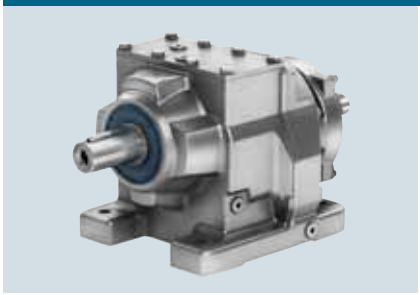
Gearbox type	Gearbox designation	Number of sizes	Maximum output torque T_{2N} Nm	Transmission ratio i -	Maximum motor power[1] P_1 kW
Helical gearbox					
	Z19 … Z189 (2-stage)	13	100 … 19 000	3.4 … 57	200
	D19 … D189 (3-stage)	13	100 … 19 000	36 … 328	200

Fig. 1/1 Helical gearbox D/Z

	E39 … E149 (1-stage)	7	30 … 1 490	1.29 … 9.79	200

Fig. 1/2 Helical gearbox E

Parallel shaft gearbox					
	FZ29 … FZ189 (2-stage)	11	150 … 19 000	4 … 48	200
	FD29 … FD189 (3-stage)	11	150 … 19 000	58 … 377	200

Fig. 1/3 Parallel shaft gearbox FD/FZ

Bevel gearbox					
	B19 … B49 (2-stage)	4	50 … 450	3.6 … 59	7.5

Fig. 1/4 Bevel gearbox B

[1] With 4-pole motor for a 50 Hz line frequency

Gearboxes (continued)

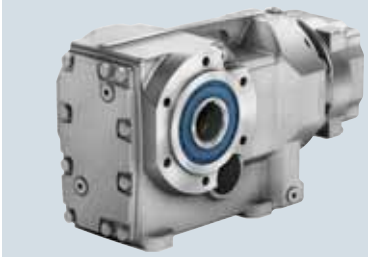
Gearbox type	Gearbox designation	Number of sizes	Maximum output torque T_{2N} Nm	Transmission ratio i -	Maximum motor power[1)] P_1 kW
Bevel gearbox					
	K39 … K189 (3-stage)	10	150 … 19 500	5.7 … 237	200

Fig. 1/5 Bevel gearbox K

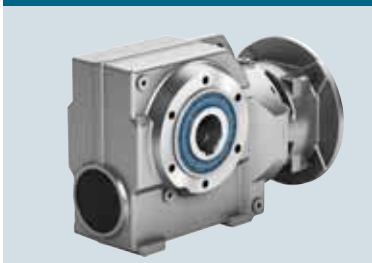
Helical worm gearbox					
	C29 … C89 (2-stage)	5	61 … 1 450	6.5 ... 363	7.5

Fig. 1/6 Helical worm gearbox C

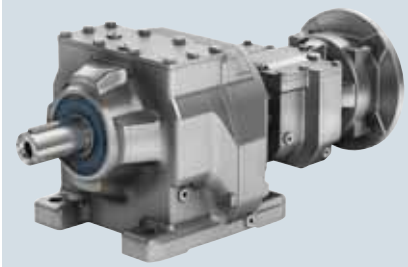
Tandem gearbox					
	D-29-Z19 ... D.189-D69 (4-stage to 6-stage)	12	140 ... 19 000	325 ... 27 816	7.5
	FZ.29-Z19 ... FD.189-D69 (4-stage to 6-stage)	11	150 … 19 000	274 … 29 900	7.5
	K.39-D/Z19 … K189-DZ69 (5-stage or 6-stage)	10	220 … 19 500	170 … 14 900	7.5
	C.29-D/Z19 … C.89-D/Z39 (4-stage or 5-stage)	5	80 … 1 310	270 … 19 000	7.5

Fig. 1/7 Example of a tandem gearbox

[1)] With 4-pole motor for a 50 Hz line frequency

Gearboxes (continued)

Torque classes

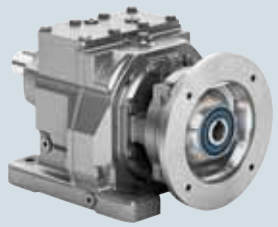
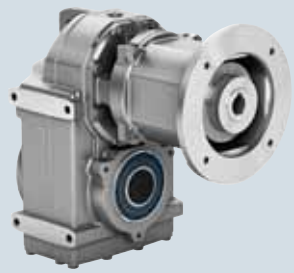
SIMOGEAR gearboxes are classified according to fixed torque steps. Within a torque class, for the various gearbox types, almost the same output torques are achieved.

Helical gearboxes Z and D (2-stage and 3-stage)															
Size		-	19	29	39	49	59	69	79	89	109	129	149	169	189
Maximum output torque	Nm	-	100	140	200	320	450	600	840	1 680	3 100	5 000	8 000	14 000	19 000
Helical gearboxes E (1-stage)															
Size		-	-	-	39	49	-	69	-	89	109	129	149	-	-
Maximum output torque	Nm	-	-	-	65	108	-	205	-	365	565	800	1 490	-	-
Parallel shaft gearboxes FZ and FD (2-stage and 3-stage)															
Size		-	-	29	39	-	49	69	79	89	109	129	149	169	189
Maximum output torque	Nm	-	-	150	290	-	480	600	1 000	1 850	3 100	4 850	8 000	13 600	19 000
Bevel gearbox B (2-stage)															
Size		-	19	29	39	-	49	-	-	-	-	-	-	-	-
Maximum output torque	Nm	-	50	110	250	-	450	-	-	-	-	-	-	-	-
Bevel gearbox K (3-stage)															
Size		-	-	-	39	-	49	69	79	89	109	129	149	169	189
Maximum output torque	Nm	-	-	-	220	-	420	600	820	1 600	2 900	4 400	8 000	13 000	19 500
Helical worm gearbox C (2-stage)															
Size		-	-	29	39	-	49	69	-	89	-	-	-	-	-
Maximum output torque	Nm	-	-	110	235	-	400	675	-	1 450	-	-	-	-	-

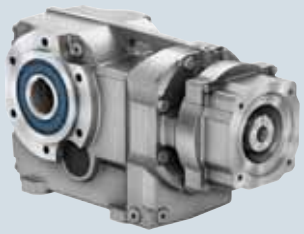
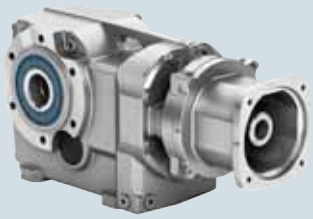
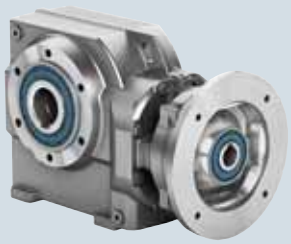
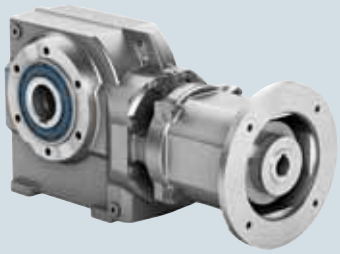
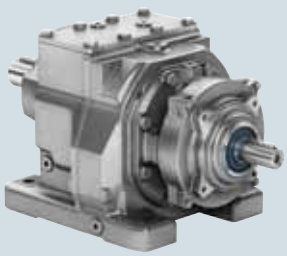
Adapters

With directly mounted, highly efficient motors from the LEN&LHN range, SIMOGEAR offers a broad spectrum of geared motors for the most common drive applications.

Gearboxes of size 29 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.

Adapters	Field of application	Options		
		Backstop	Slip clutch with proximity switch	Condensation drain hole
Adapters for mounting an IEC motor				
K4 Short adapter with plug-in connection				
	• Universal solution • Short design			
K2 Coupling adapter with flexible coupling				
	• Rugged solution • Harsher environmental conditions • Torsionally flexible cam coupling	✓	✓	✓

Adapters (continued)

Adapters	Fields of application	Options		
		Backstop	Slip clutch with proximity switch	Condensation drain hole
Adapters for mounting a servo motor				
KS Coupling adapter with flexible coupling exclusively for mounting defined Siemens servo motors				
	• Square shape • Version for motor shafts without feather key • Compact design • Zero-backlash coupling			
K8 Coupling adapter with flexible coupling for mounting a servo motor from the SIMOTICS M-1PH8 range				
	• Square or round shape • Version for motor shafts with feather key • Zero-backlash coupling			
Adapters for mounting a NEMA motor				
K5 Short adapter with plug-in connection				
	• Universal solution • Short design			
K3 Coupling adapter with flexible coupling				
	• Rugged solution • Harsher environmental conditions • Torsionally flexible cam coupling	✓	✓	✓
Adapters with free input shaft				
A/AZ				
	• Flexible solutions for mounting on motors via - Belt pulleys, - chain wheels, or - couplings • Adapter AZ with centering and threaded hole • Adapter A without centering and without threaded hole			

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 ≥ 96 % can be used.

2-stage SIMOGEAR bevel gearboxes B have a mechanical efficiency of ≥ 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 D/Z29 to D/Z39 (200 Nm), parallel shaft gearboxes F29 (150 Nm), bevel gearboxes B29 to B49 (450 Nm), and helical worm gearboxes C29 (100 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 size 29 is 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.

For example, the following types of motor can be mounted:

- Standard IEC motors
- Synchronous servo motors
- Asynchronous servo motors

Integration

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

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

The complete portfolio is exhaustively tested – also in the field – for maximum availability. The components are harmonized and coordinated with one another with standard interfaces and power bus systems.

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

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

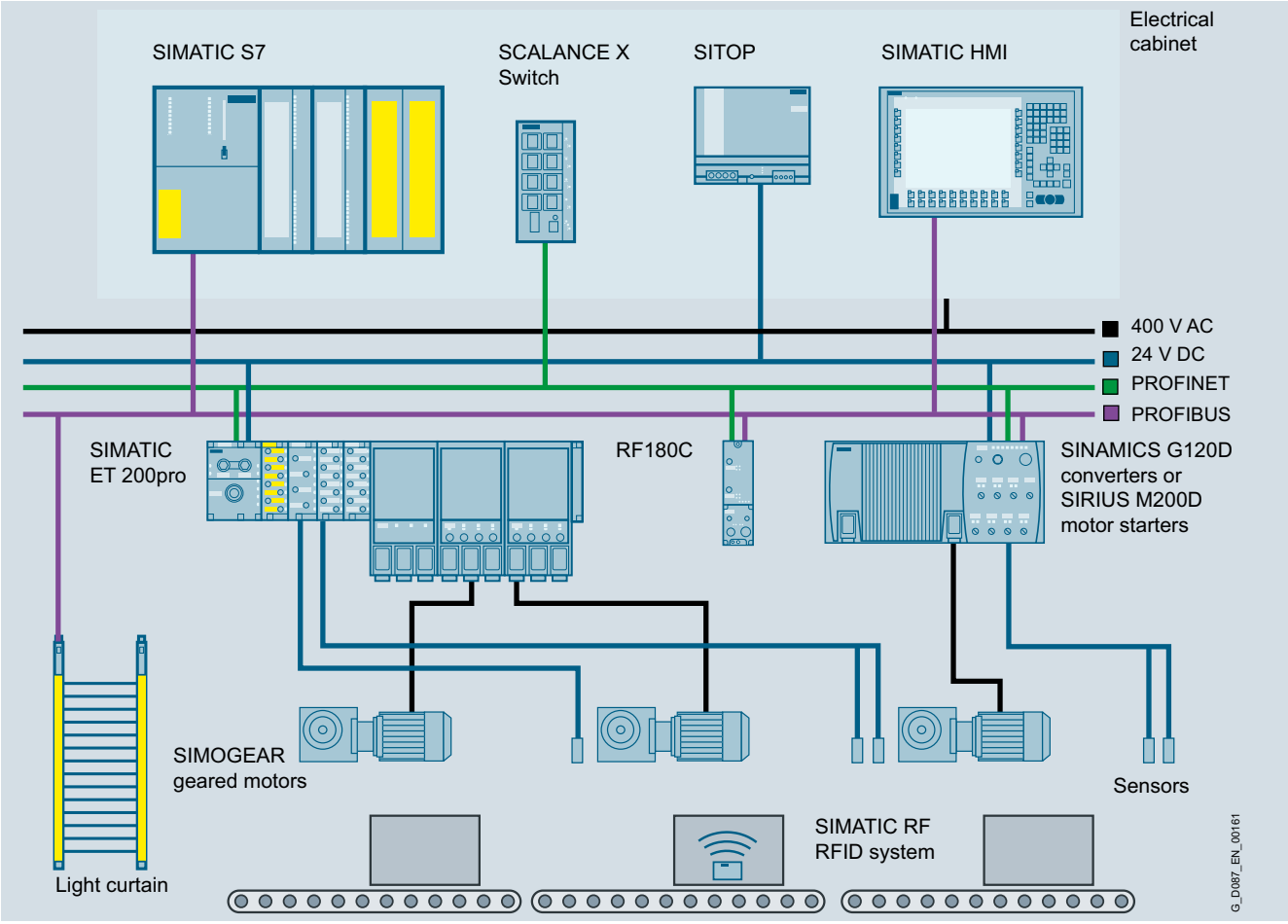


Fig. 1/8 Example of the Siemens Integrated Drive System (IDS) for sophisticated conveyor applications

Configuration

Drive Technology Configurator (DT Configurator) within the CA 01

The Interactive Catalog CA 01 – the offline Industry Mall of Siemens – contains over 100 000 products with approximately 5 million possible drive system product variants. The Drive Technology Configurator (DT Configurator) has been developed to facilitate selection of the correct geared motor and/or converter from the wide spectrum of drives. It is integrated as a selection tool in Catalog CA 01.

Description	Link
Interactive Catalog CA 01 including Drive Technology Configurator, English	www.siemens.com/automation/ca01

Drive Technology Configurator (DT Configurator)

The Drive Technology Configurator (DT Configurator) helps you to configure the optimum drive technology products for your application – starting with gearboxes, motors, converters as well as the associated options and components and ending with controllers, software licenses and connection systems. With or without detailed knowledge of products:
Preselected product groups, targeted navigation through selection menus and direct product selection through entry of the article number support quick, efficient and convenient configuration.

In addition to all this, comprehensive documentation comprising technical data sheets, 2D dimensional drawings/3D CAD models, operating instructions, certificates, etc. can be selected in the DT Configurator. Immediate ordering is possible by simply transferring a parts list to the shopping cart of the Industry Mall.

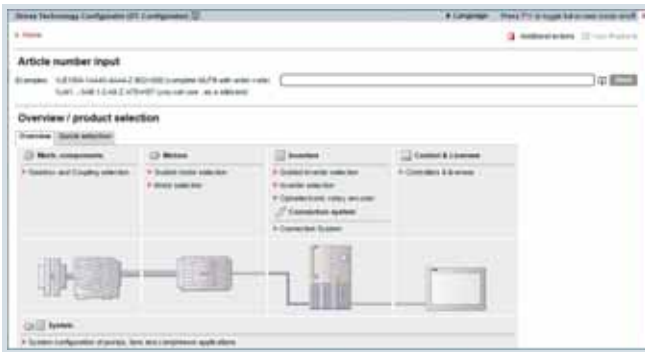


Fig. 1/9 DT Configurator

Drive Technology Configurator for efficient drive configuration with the following functions

- Fast, efficient configuration of drive products and associated components – gearboxes, motors, converters, controllers, connection systems
- Configuration of drive systems for pumps, fans and compressor applications from 1 kW to 2.6 MW
- Displayable documentation for configured products and components, such as
  - Data sheets in PDF or RTF format
  - 2D dimensional drawings/3D CAD models in various formats
  - Operating instructions
  - Certificates
  - Start-up calculation for SIMOTICS motors
- Support with retrofitting in conjunction with Spares On Web (www.siemens.com/sow)
- Ability to order products directly in the Siemens Industry Mall

Access to the Drive Technology Configurator

The Drive Technology Configurator can be called up without registration and without a login:
www.siemens.com/dt-configurator

STARTER commissioning tool

The STARTER commissioning tool (V4.3 SP3 and higher) simplifies the commissioning and maintenance of the SINAMICS G110M motor integrated frequency converter. The operator guidance combined with comprehensive, user-friendly functions for the relevant drive solution allow you to commission the device quickly and easily.

Additional information about the STARTER commissioning tool is available on the Internet at:
www.siemens.com/starter

SINAMICS Startdrive commissioning tool

SINAMICS Startdrive is a tool for configuring, commissioning, and diagnosing the SINAMICS family of drives and is integrated into the TIA Portal. SINAMICS Startdrive can be used to implement drive tasks with the SINAMICS G110M (SINAMICS Startdrive V13 and higher), SINAMICS G120, SINAMICS G120C, SINAMICS G120D and SINAMICS G120P converter series. The commissioning tool has been optimized with regard to user friendliness and consistent use of the TIA Portal benefits of a common working environment for PLC, HMI and drives.

The SINAMICS Startdrive commissioning tool is available free on the Internet at:
www.siemens.com/startdrive

SIZER for Siemens Drives

For the project engineering of SIMOGEAR geared motors operating on SINAMICS frequency converters, the engineering tool "Sizer for Siemens Drives" should be used. This ensures that all the relevant aspects are taken into consideration (line voltage, type of DC link (regulated/unregulated), utilization of the motor in accordance with temperature class B or F, motor current for converter operation in Y circuit or D circuit, calculation of the regenerative power, dimensioning of the braking resistor with reference to the entered cyclic operation, etc.)

The SIZER for Siemens Drives engineering tool is available free on the Internet at:
www.siemens.com/sizer

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:

2KJ4105-1EA04-0AS1+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).

Ordering data

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

To order the correct adapter design, the input speed of the gearbox and the motor power must be specified with order code Y00 and in plain text (see Table "Additional order codes").

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
SIMOGEAR geared motors																					
1st to 5th position:	Helical gearbox E, 1-stage	**2**	**K**	**J**	**4**	**0**															
Digit, letter,	Helical gearbox Z, 2-stage	**2**	**K**	**J**	**4**	**1**															
Letter, digit, digit	Helical gearbox D, 3-stage	**2**	**K**	**J**	**4**	**2**															
	Parallel shaft gearbox FZ, 2-stage	**2**	**K**	**J**	**4**	**3**															
	Parallel shaft gearbox FD, 3-stage	**2**	**K**	**J**	**4**	**4**															
	Bevel gearbox B, 2-stage	**2**	**K**	**J**	**4**	**5**															
	Bevel gearbox K, 3-stage	**2**	**K**	**J**	**4**	**5**															
	Helical worm gearbox C, 2-stage	**2**	**K**	**J**	**4**	**6**															
6th to 7th position:	Gearbox size																				
Digit, digit																					
8th position:	Output shaft								-												
Digit																					
9th position:	Motor size																				
Letter																					
10th position:	Performance indicator (customs tariff number) for gearbox without motor											**A**									
Letter																					
11th position:	Delivery without motor												**0**								
Letter																					
12th position:	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**							
	KS coupling adapter 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**							
13th position:	Frequency, voltage														-	**0**					
Digit																					
14th position:	Foot-mounted design																**A**				
Letter	Foot/flange-mounted design																**B**				
	Torque arm																**D**				
	Flange-mounted design																**F**				
	Housing flange design																**H**				
15th to 16th position:	Transmission ratio																				
Letter, digit																					
Special designs																					
Coded	Order code required																			-	**Z**
Non-coded	Plain text required																				

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

Overview (continued)

Additional order codes

Information	Input speed	Input power
	in continuous operation	**Rated motor power**
when ordering	rpm	kW
Order code	**Y00**	**Y00**
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	Always	Always

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**	**4**	**1**	**0**	**5**	-	■	.	.	■	■	-	■	■	■	■	-	■	+	.	+	.
Output shaft	Solid shaft V35 x 70	**2**	**K**	**J**	**4**	**1**	**0**	**5**	-	**1**															
Adapter size	Size 90	**2**	**K**	**J**	**4**	**1**	**0**	**5**	-	**1**	**E**	**A**													
Gearbox without motor		**2**	**K**	**J**	**4**	**1**	**0**	**5**	-	**1**	**E**	**A**	**0**												
Adapter type	K4 for mounting a standard IEC motor	**2**	**K**	**J**	**4**	**1**	**0**	**5**	-	**1**	**E**	**A**	**0**	**4**											
Voltage	Not relevant	**2**	**K**	**J**	**4**	**1**	**0**	**5**	-	**1**	**E**	**A**	**0**	**4**	-	**0**									
Mounting type	Foot-mounted design	**2**	**K**	**J**	**4**	**1**	**0**	**5**	-	**1**	**E**	**A**	**0**	**4**	-	**0**	**A**								
Transmission ratio	*i* = 28.89	**2**	**K**	**J**	**4**	**1**	**0**	**5**	-	**1**	**E**	**A**	**0**	**4**	-	**0**	**A**	**S**	**1**						
Mounting position	M1	**2**	**K**	**J**	**4**	**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**	**4**	**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
Gearbox type										
Helical gearbox	**-**									
Parallel shaft gearbox	**F**									
Bevel gearbox, 2-stage	**B**									
Bevel gearbox, 3-stage	**K**									
Helical worm gearbox	**C**									
Gearbox stages										
1-stage (for helical gearbox only)		**E**								
2-stage		**Z**						-		
3-stage		**D**								
Type										
Shaft										
Solid shaft			**-**							
Hollow shaft			**A**							
Mounting										
Foot-mounted design				**-**						
Foot/flange-mounted design				**B**						
Flange-mounted design				**F**						
Housing flange design				**Z**						
Torque arm				**D**						
Connection										
Feather key / without feather key					**-**					
Shrink disk					**S**					
Splined shaft					**T**					
Special features										
Reduced-backlash version					-	**W**				
Gearbox size										
Helical gearbox, 1-stage							**39 ... 149**			
Helical gearbox, 2-stage/3-stage							**19 ... 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**			
Gearbox type - intermediate gearbox										
Helical gearbox								-	**-**	
Gearbox stages - intermediate gearbox										
2-stage								-	**Z**	
3-stage								-	**D**	
Gearbox size										
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)
Gearboxes											
Adapters											
Adapter type											
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 input shaft									**A**		
Adapter A with free input shaft and centering									**AZ**		
Special features											
Backstop										**X**	
Motor size											
Mountable motor size											**63 ... 315**

Overview

Helical gearbox

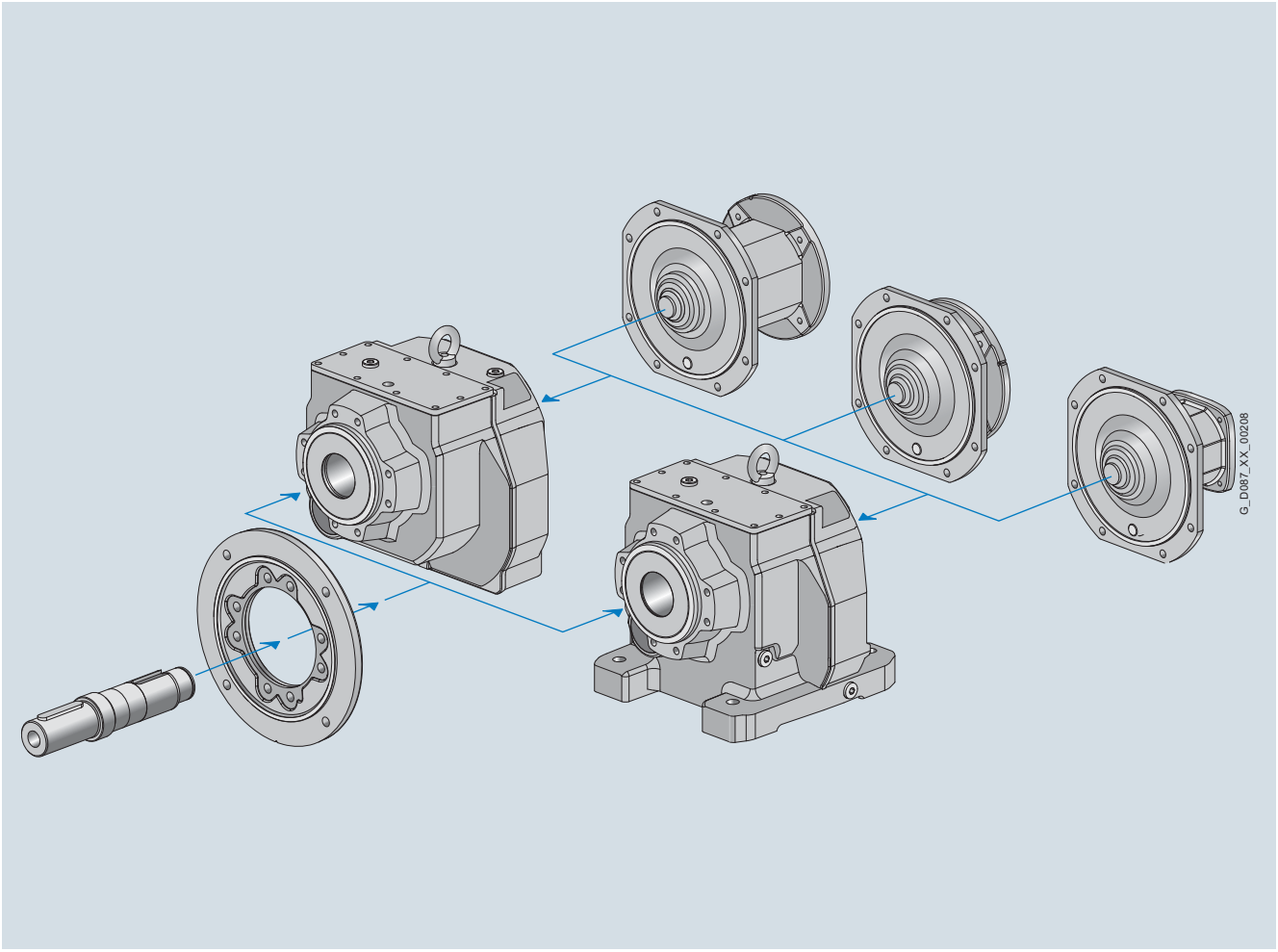


Fig. 1/10 Modular system, helical gearbox

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

Overview (continued)

Parallel shaft gearbox

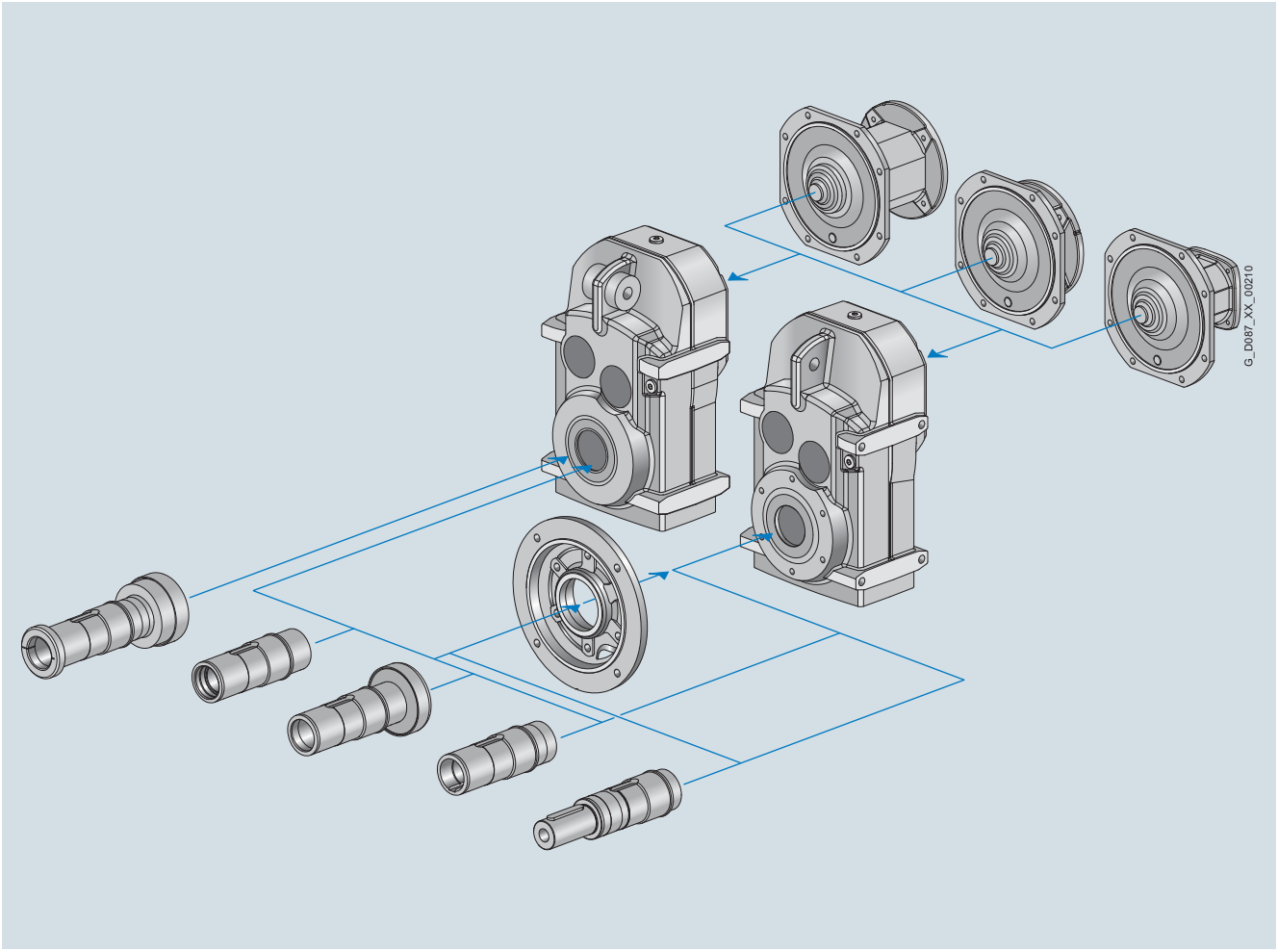


Fig. 1/11 Modular system, parallel shaft gearbox

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
- Solid shaft design with and without feather key

Overview (continued)

Bevel gearbox B

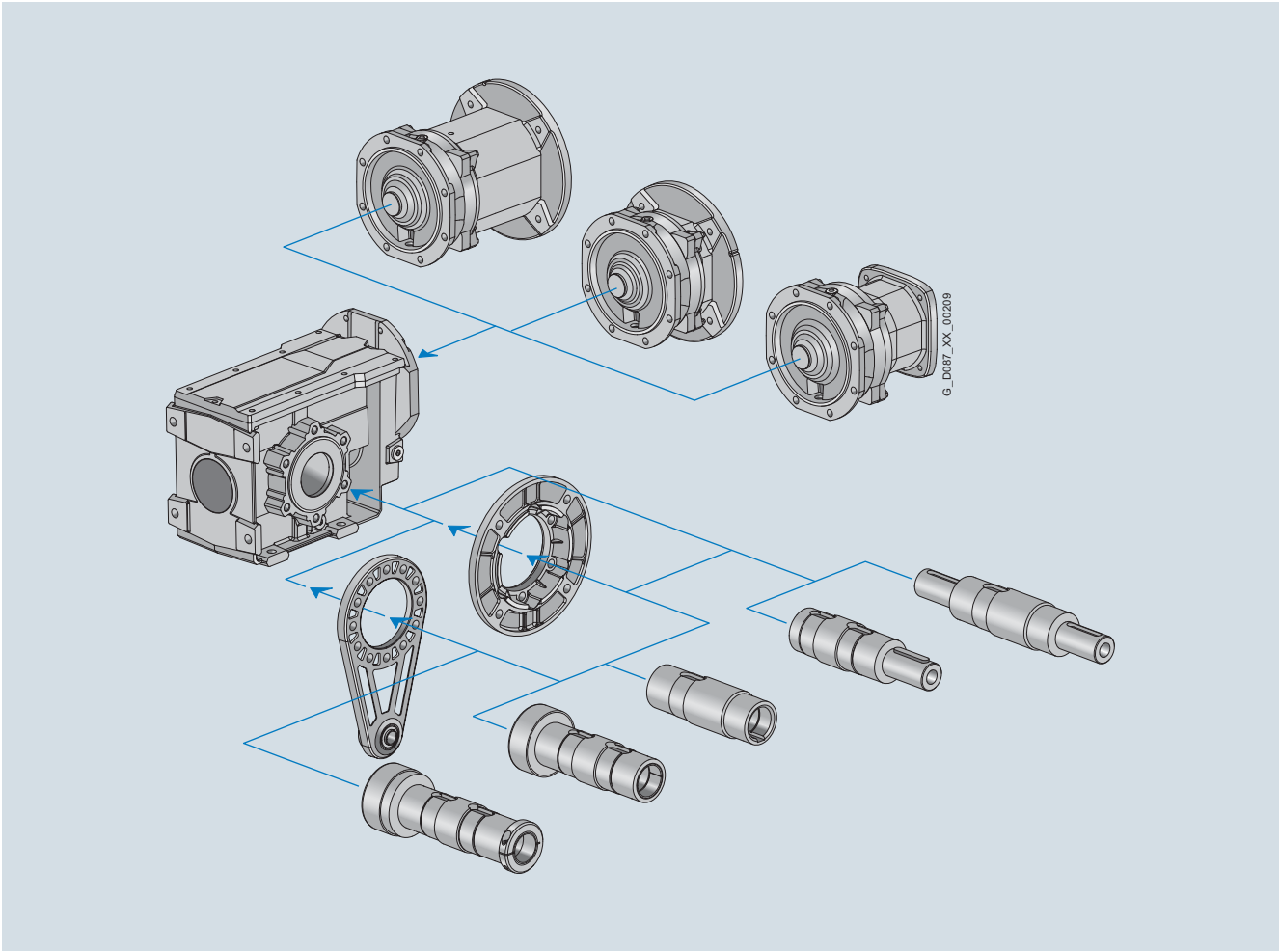


Fig. 1/12 Modular system, bevel gearbox B

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
- 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.

Overview (continued)

Bevel gearbox K

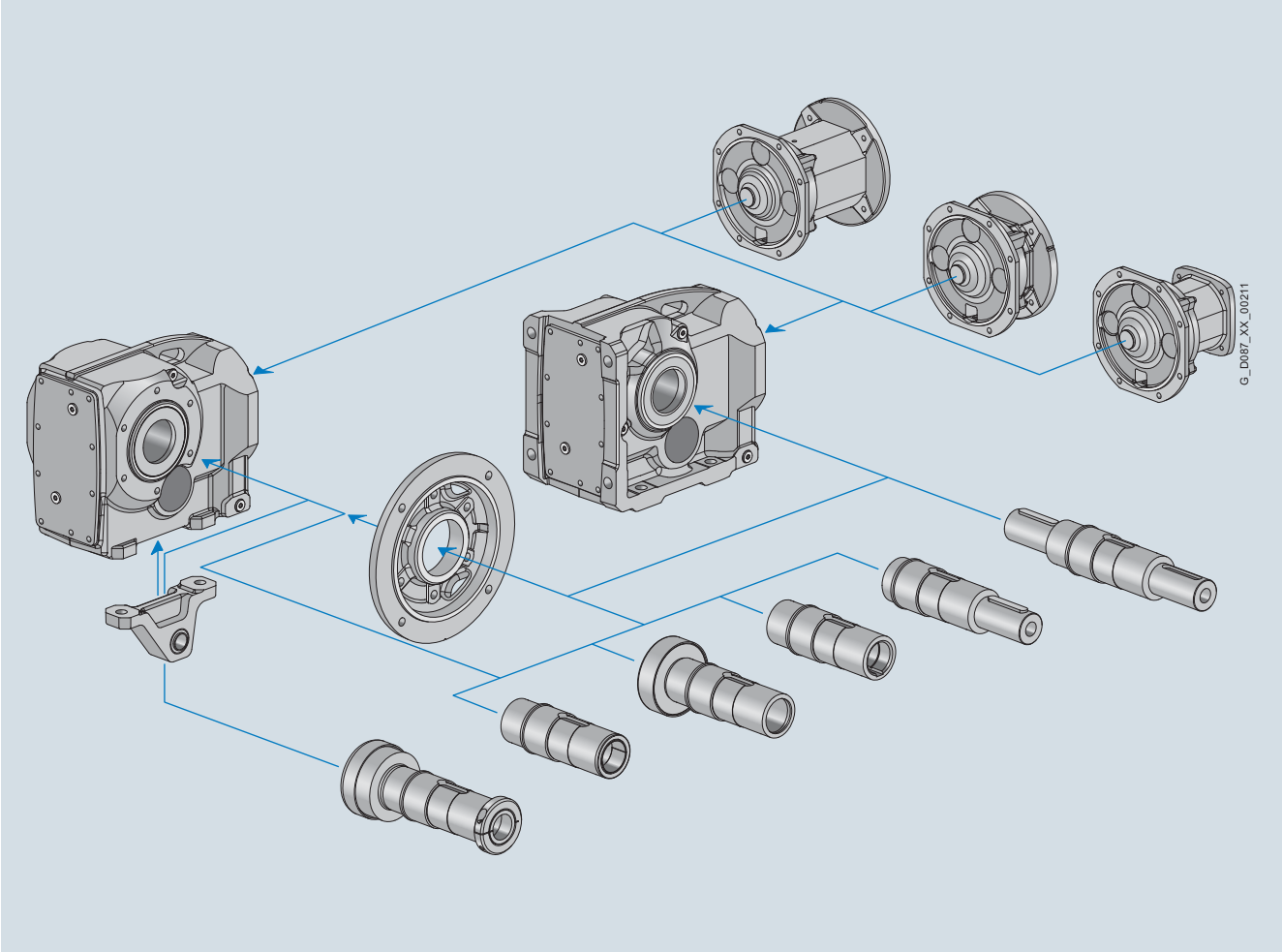


Fig. 1/13 Modular system, bevel gearbox K

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
- Solid shaft design with and without feather key (at one end or both ends)

Overview (continued)

Helical worm gearbox

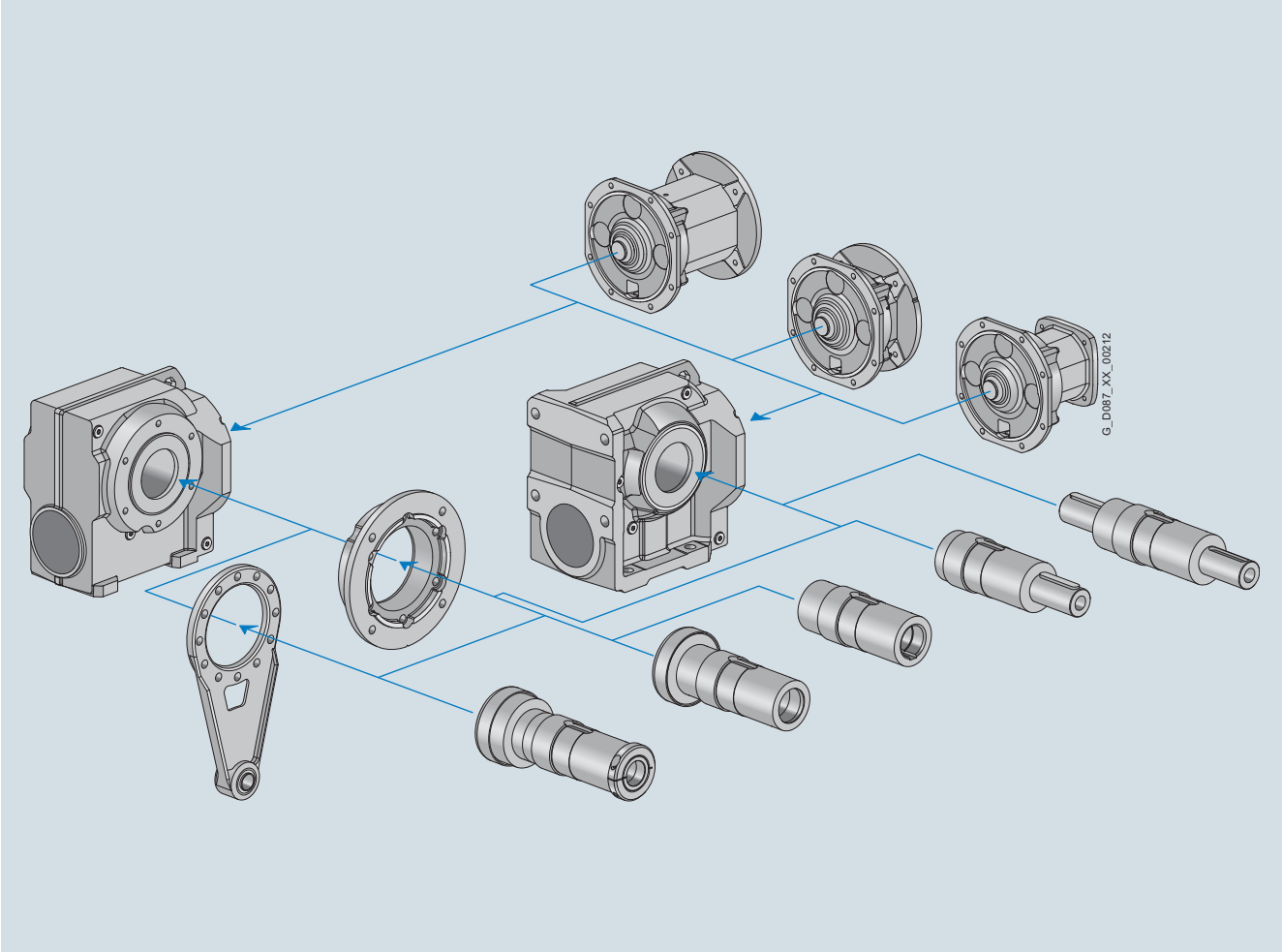


Fig. 1/14 Modular system, helical worm gearbox

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
- 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.

1

Notes on selection tables

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}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.29																					
217.89	6.7	140	3 710	21	0.02	7626/35		✓	✓												**2KJ4202 - ■ ■ A 0 ■ - 0 ■ Q1**
⬇ (1)	⬇ (2)	⬇ (3)	⬇ (4)	⬇ (5)	⬇ (6)	⬇ (7)		⬇ (8)	⬇ (9)												⬇ (10)

Article No. supplement																		
Shaft design	➞ page 9/43	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E		F	G	H					5
	K3		A		B	C		D	E		F	G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	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 efficiency tables

Left-hand side

	n_{mot} = 700 rpm				n_{mot} = 500 rpm				n_{mot} = 100 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	Article No.
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.29													
265.20	2.6	104	<0.06	57	1.9	103	<0.06	54	0.38	95	<0.06	47	**2KJ4601 - ■ ■ 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	Tolerance
mm	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	Tolerance
mm	mm
≤ 50	ISO k6
> 50	ISO m6

Centering holes according to DIN 332, form DR:

Diameter	Thread size
mm	-
> 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	Undercut acc. to DIN 509	Suggested construction, minimum hollow on mating piece
mm		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 parallel key

Diameter tolerance Ø: ISO H7 measured using a mandrel gauge

Feather key: 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 ≥ 360 N/mm²
- Module of elasticity, approx. 206 kN/mm²
- 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

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	Tolerance
mm	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.

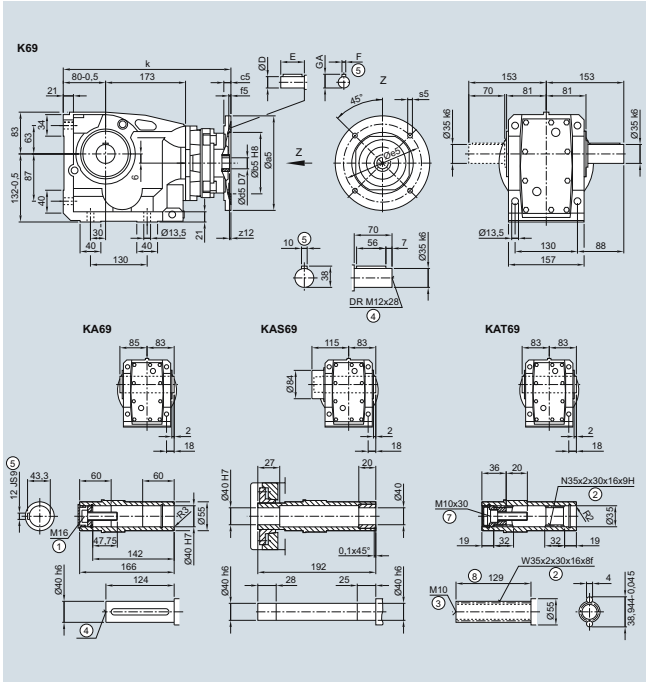


Fig. 1/15 Example, dimensional drawing

Recycling and disposal of SIMOGEAR geared motors

WEEE Directive

EU Directive 2012/19/EU governs the disposal of used electrical and electronic devices that are placed on the market in the EU. Since 2018-08-15, geared motors have also been subject to EU Directive 2012/19/EU and are marked accordingly:



Disposal

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

Geared motor noise

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

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

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

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

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

Direction of rotation

Overview

Direction of rotation	Clockwise	Counterclockwise
Abbreviation	CW (clockwise)	CCW (counter clockwise)
Description	Clockwise direction of rotation (when viewing the input/output shaft)	Counter clockwise direction of rotation (when viewing the input/output shaft)
Order code	**K18**	**K19**

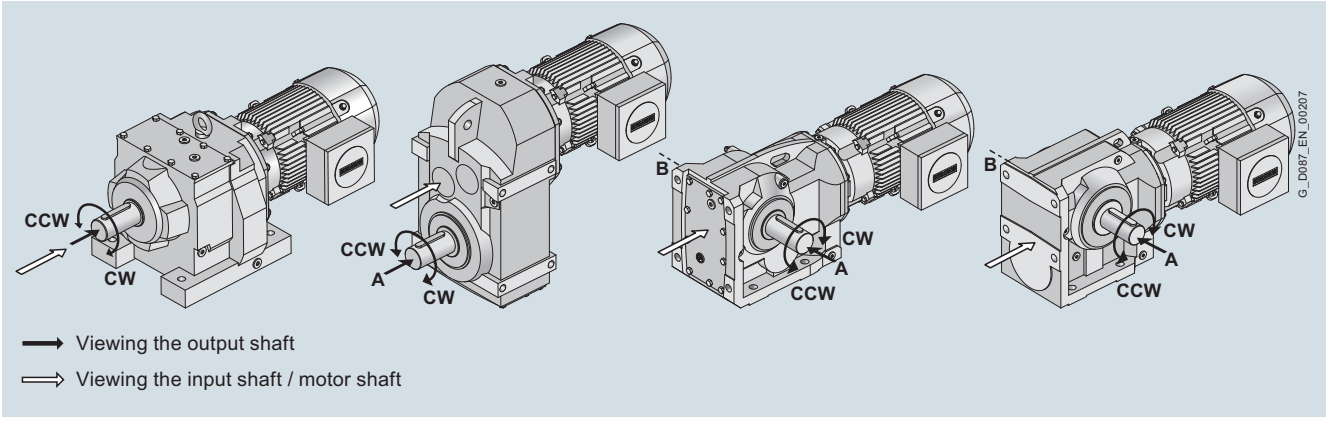


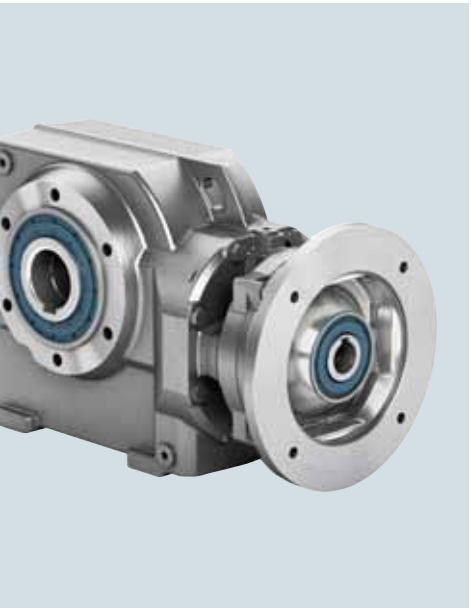
Fig. 1/16 Definition of the direction of rotation

Direction of rotation, input to output

Gearbox type	Size	Gearbox stages	Output side	Direction of rotation	
				Input shaft	Output shaft
Z	29 … 189	2	-	CW	CW
D	29 … 189	3	-	CW	CCW
E	39 … 189	1	-	CW	CCW
FZ	29 … 189	2	-	CW	CW
FD	29 … 189	3	-	CW	CCW
B	29 … 49	2	A	CW	CW
			B	CW	CCW
K	39 … 189	3	A	CW	CCW
			B	CW	CCW
C	29 … 89	2	A	CW	CW
			B	CW	CCW

Note:

For bevel gearboxes B and K, helical worm gearboxes C, the direction of rotation must be specified when viewing the output side A or B.



2/2	**Determining the drive data**
2/2	Configuring sequence
2/3	Checklist
2/4	**Configuring a gearbox**
2/4	Gearbox efficiency
2/4	• Helical, parallel shaft and bevel gearboxes
2/4	• Helical worm gearboxes
2/4	• Self-locking with worm gearboxes
2/4	• Efficiency optimization
2/4	• Splashing losses
2/5	Service factor
2/5	• Service factor
2/5	• Determining the required service factor
2/5	• Determining the service factor for a driven machine
2/5	• Mass acceleration factor
2/6	• Determining the service factor for the ambient temperature
2/6	• Determining the service factor for short-time duty
2/7	Required torque
2/7	Input speed
2/8	Gearbox fastening
2/9	Shaft load and bearing service life
2/9	• Available radial force
2/9	• Additional factor C for the transmission element type
2/9	• Additional factor T for the ambient temperature
2/9	• Permissible radial force
2/9	• Permissible axial force
2/9	• Higher permissible radial and axial force
2/10	• Definition of the point of application of radial and axial forces
2/10	• Radial force conversion for out of center force application point
2/12	**Configuring the adapter**
2/12	Maximum input speed
2/12	Permissible input torque
2/12	Permissible loading by built-in motor

Configuring sequence

2

Overview

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

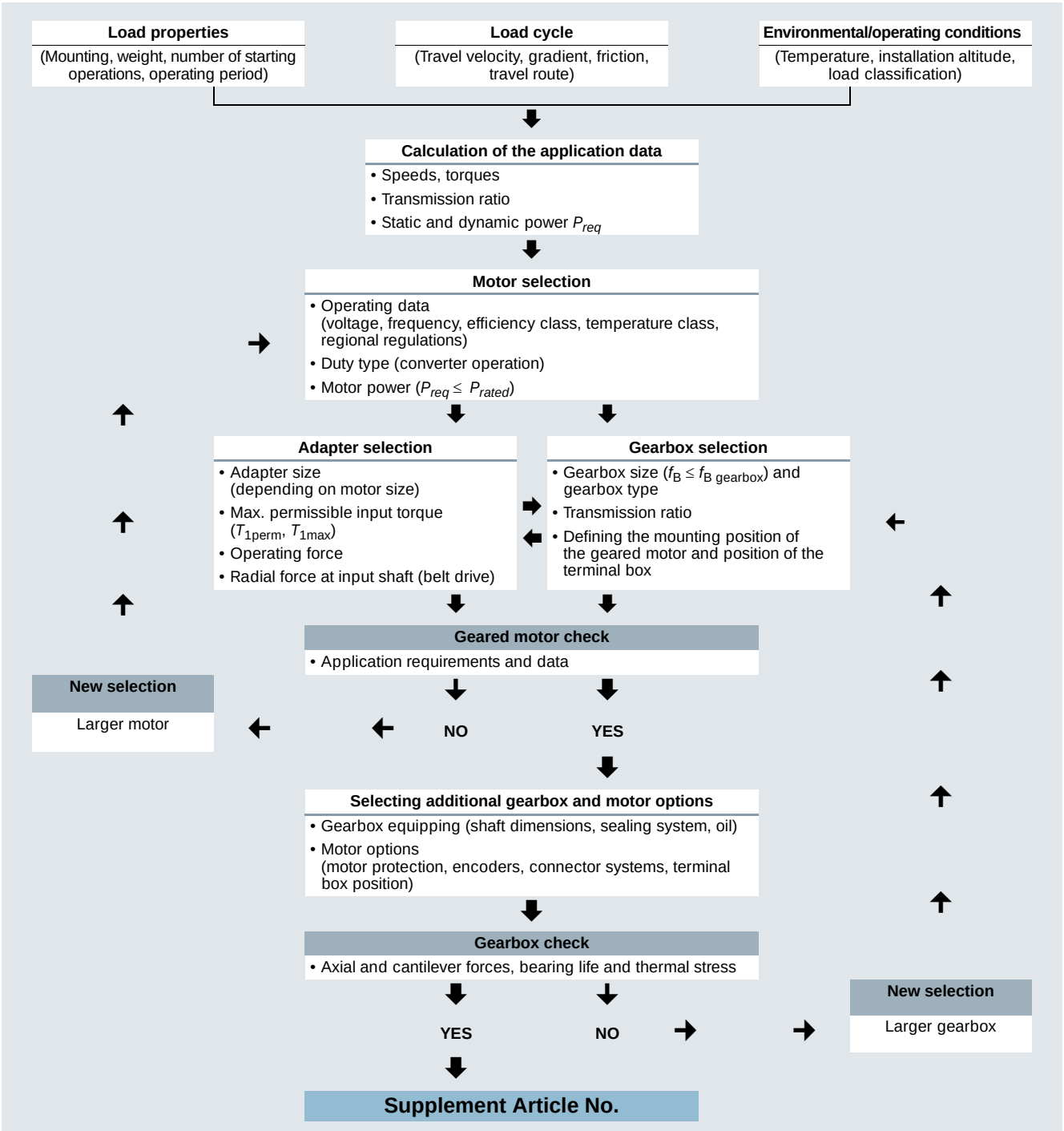
SIMOGEAR gearboxes permit individual solutions to be created for a wide range of drive applications. In order to select the correct drive, initially specific data for the application must be known or determined.

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.

You will find additional information on our website at

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

Gearbox type: ☐ Helical gearbox ☐ Parallel shaft gearbox ☐ Bevel gearbox ☐ Helical worm gearbox

Power rating: _____ kW

Output speed: _____ rpm **Output torque:** _____ Nm

Service factor: _____

Starting operations/hour: _____ s/h

Line voltage: _____ V

Line frequency: ☐ 50 Hz ☐ 60 Hz ☐ For converter operation ☐ Maximum frequency _____ Hz

Operating period/day: ☐ 8 hours ☐ 16 hours ☐ 24 hours

Environmental conditions

Installation altitude: _____ m ☐ Outdoor operation ☐ Increased environmental stress

Air humidity: _____ % ☐ Normal environmental stress ☐ Aggressive environmental stress

Temperature: from _____ to _____ °C

Brief description of the system: (e.g. sector, conveyor system, etc.)

Gearbox

Mounting and mounting position

Mounting position: ☐ M1 ☐ M2 ☐ M3 ☐ M4 ☐ M5 ☐ M6

Mounting type: ☐ Foot-mounted design ☐ Flange-mounted design ☐ Housing flange design ☐ Shaft-mounted design

Shafts

Design: ☐ Solid shaft with/without feather key ☐ Hollow shaft with feather key ☐ Hollow shaft with shrink disk ☐ Hollow shaft with splined shaft

Shaft dimensions: (d x l) _____ x _____ mm

Other options: (e.g. axial/radial force)

Adapter

Basic version (motor connection)

Adapter type: ☐ K4 (IEC) ☐ K2* (IEC) ☐ KS (for servo motors) ☐ K8 (for 1PH8) ☐ K5 (NEMA) ☐ K3* (NEMA) ☐ A/AZ (free input shaft)

* selectable with backstop

Motor mounting

Article No. Motor: _____

Other options: (e.g. backstop)

General options

Surface treatment

Surface protection: ☐ C1 ☐ C2 ☐ C3 ☐ C4 ☐ C5 ☐ unpainted ☐ C3 primed ☐ C4 primed ☐ RAL color: _____

Other options:

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 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.

SIMOGEAR helical worm gearboxes exhibit efficiency levels of between 65 and 90 %. 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 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 the DT 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 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)
I Almost shock-free	≤ 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
II Moderate shock loads	≤ 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
III Heavy shock loads	≤ 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	kgm²
J_{AD}	Moment of inertia of the adapter referred to the input speed	kgm²
J_B	Moment of inertia of the brake	kgm²
J_G	Moment of inertia of the gearbox referred to the input speed	kgm²
J_{mot}	Moment of inertia of the motor	kgm²
J_X	Moment of inertia of the load referred to the input speed	kgm²
J_Z	Additional moment of inertia of a high inertia fan	kgm²
m_{BF}	Mass acceleration factor	-
n_1	Input speed of the gearbox	rpm
n_2	Output speed of the gearbox	rpm

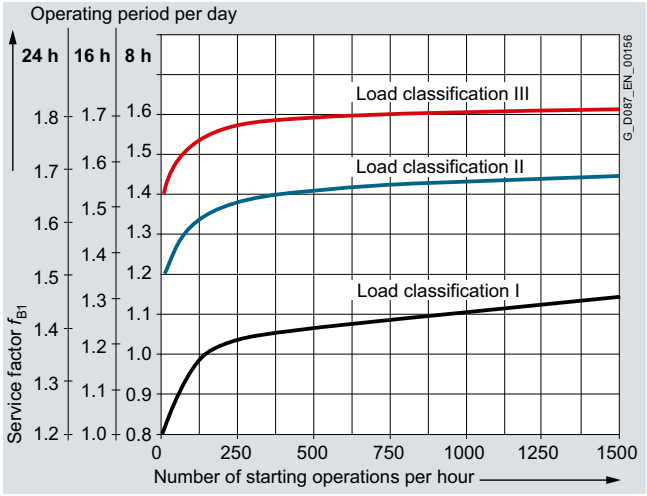


Fig. 2/1 Service factor f_{B1}

2

Service factor

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

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

For helical, parallel shaft and bevel gearboxes

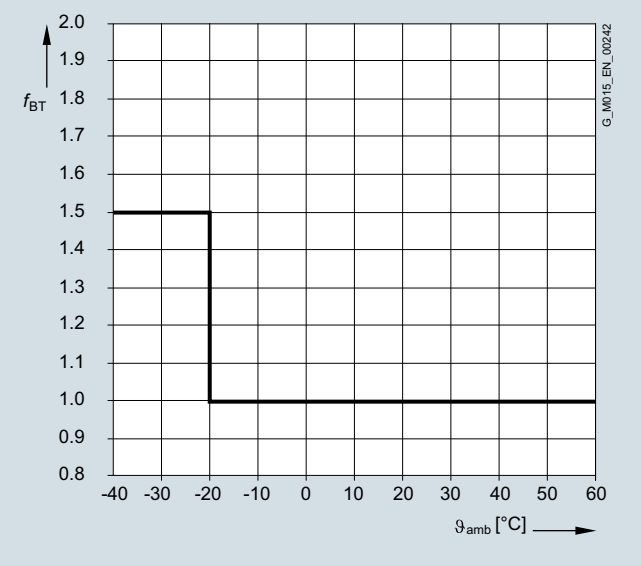


Fig. 2/2 Service factor "ambient temperature"

For helical worm gearboxes

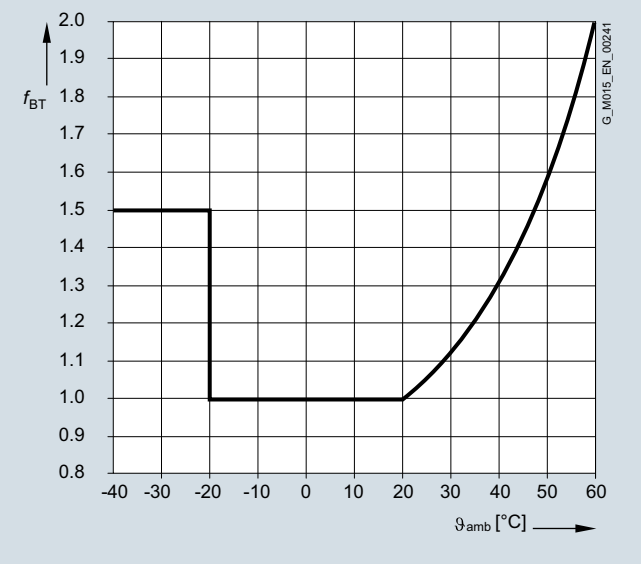


Fig. 2/3 Service factor "ambient temperature" for worm gearboxes

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

For helical worm gearboxes

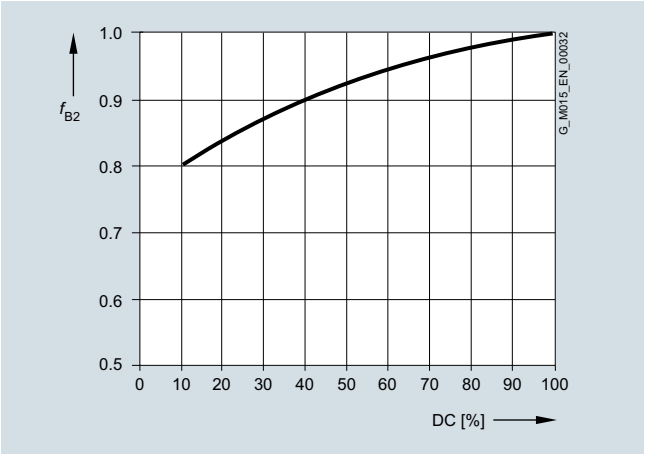


Fig. 2/4 Service factor "short-time duty"

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.

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

Code	Description	Unit
η	Gearbox efficiency	%
i	Transmission ratio	-
n_1	Input speed of the gearbox	rpm
n_2	Output speed of the gearbox	rpm
P_{mot}	Motor power	kW
T_2	Required output torque of the driven machine	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 1 500 rpm.

At higher motor speeds above 1 500 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 of the gearbox and service intervals.

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.

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

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.

Gearbox type		Flange	Strength class of bolt/nut
DZ/ZZ29	DF/ZF29	A120	10.9 [1)]
DZ/ZZ39	DF/ZF39	A120	10.9 [1)]
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

[1)] 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.

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	10.9	10.9	10.9
FF/FAF169	KF/KAF169	A550					8.8	8.8	8.8	8.8	10.9	10.9	10.9	10.9
FF/FAF189	KF/KAF189	A660						8.8	8.8	8.8	8.8	8.8	8.8	10.9

Shaft load and bearing service life

Available radial force

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

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

- The required geared motor output torque T_2
- Average diameter of the mounted transmission element d_0
- Transmission element type, e.g. chain wheel
- Ambient temperature

The transmission element type determines the additional factor *C*.

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 foot-mounted gearboxes with solid shaft. 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, 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 angle α 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
α	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

2

Shaft load and bearing service life (continued)

Definition of the point of application of radial and axial forces

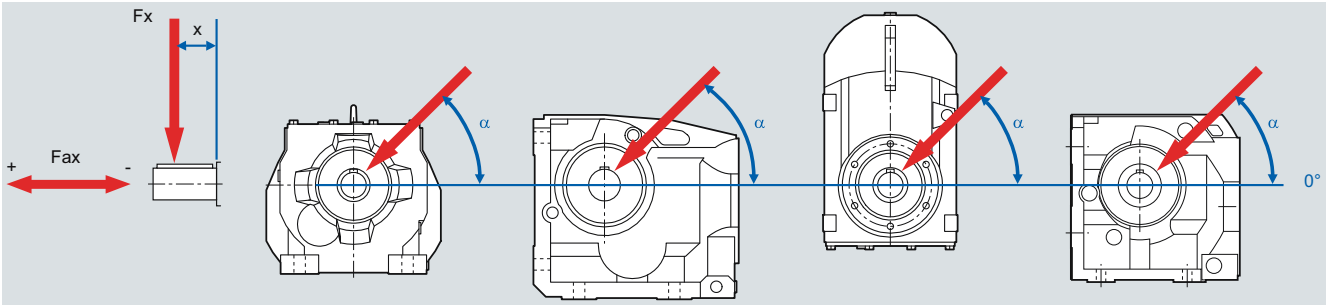


Fig. 2/5 Diagram showing force application point

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					
	y	z	a	b	d	l
	mm	mm	kNmm	mm	mm	mm
Helical gearboxes Z and D						
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	1 212	0	60	120
129	297	227	2 051	0	70	140
149	319	234	4 930	0	90	170
169	398	293	7 350	0	110	210
189	469	364	11 235	0	120	210
Parallel shaft gearbox F						
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	1 500	0	60	120
129	324	254	2 625	0	70	140
149	385	300	5 525	0	90	170
169	459.5	354.4	7 728	0	110	210
189	538	433	11 655	0	120	210
Bevel gearbox 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 (continued)

Gearbox constants for calculating the radial force

Gearbox size	Constants					
	y	**z**	**a**	**b**	**d**	**l**
	mm	mm	kNmm	mm	mm	mm
Bevel gearbox K						
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	1 470	0	60	120
129	324	254	2 800	0	70	140
149	385	300	5 525	0	90	170
169	459.5	354.5	7 350	0	110	210
189	538	433	10 920	0	120	210
Helical worm gearbox C						
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

2

Maximum input speed

Unless otherwise specified, SIMOGEAR gearboxes can be operated at a motor speed of up to 4 500 rpm for brief periods. Since the speed is rarely constant with high-speed applications, it is necessary to determine a root-mean-square speed as a basis for further calculations.

We recommend that 4-pole motors are mounted in order to achieve optimum gearbox service life. Higher input speeds can have an effect on bearing service life and the thermal properties of the gearbox.
See section "Input speed", page 2/7.

Permissible input torque

The adapters are primarily designed for 4-pole standard three-phase AC motors. Considerably higher torques, which are above the maximum permissible input torque, may occur with special motors.

First of all, the continuous torque of the motor T_{1mot} and the permissible input torque of the adapter T_{1perm} must be checked. along with the maximum torques (starting, breakdown, and braking).

$$T_{1perm} > T_{1mot}$$

Higher input torques are permitted for brief periods provided that they do not exceed 2.5 times the permissible input torque.

The permissible input torques of the adapters can be found in chapter 7 "Adapters".

Variable input torque

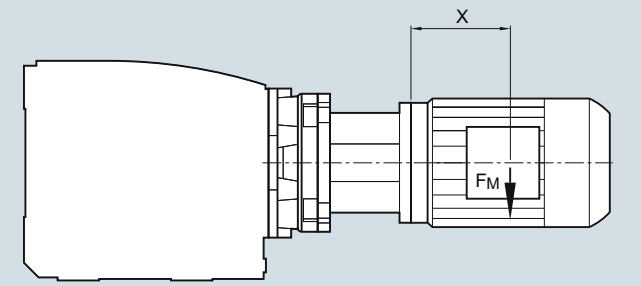
Code	Description	Unit
T_{1mot}	Continuous torque of the motor	Nm
T_{1perm}	Permissible input torque of the adapter	Nm

Permissible loading by built-in motor

When a motor is mounted using an adapter, the dimensions of the final unit can be relatively long. In such cases, the maximum permissible operating force F_M must be checked.

The operating force comprises the net weight of the mounted motor plus any acceleration and deceleration forces.

The maximum permissible operating force F_M must not be exceeded!



Variable maximum motor length

Code	Description	Unit
X	Distance from center of gravity	mm
F_M	Maximum permissible operating force from mounted motor	N
F_{Mred}	Reduced maximum permissible operating force from mounted motor	N

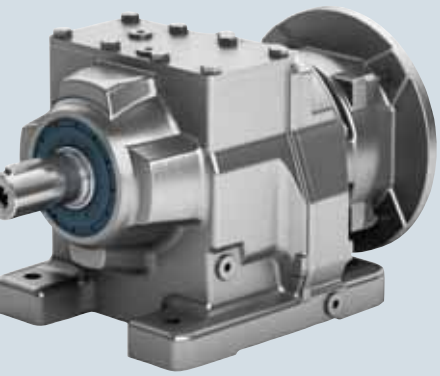
When the distance from the center of gravity is increased, the permissible operating force from the mounted motor F_M must be reduced according to a linear function.

Example:
Distance from center of gravity > X
Motor size = 90
Distance from center of gravity = 150

$$F_{Mred} = F_M \times \frac{115}{150}$$

Maximum permissible operating force from mounted motor

Gearbox type					**Adapter size**													
					IEC	63	71	80	90	100	112	132	160	180	200	225	250	280	315
					NEMA		56		140	180		210	250	280		320	360		
					KS		3.1/3.2 4.1/4.2		5.1 5.2 5.3	6.1 6.2	8.1	10.1 10.2							
					K8								813			816		818	
					X [mm]	80	80	115	115	145	145	190	250	250	300	300	400	400	470
D./Z.	**F.**	**K.**	**B.**	**C.**	**Maximum permissible operating force from mounted motor F_M** [N]														
19			19				315												
29	29		29	29		315	315	305	305										
39	39	39	39	39		340	630	650	650	720									
49; 59; 69	49; 69	49; 69; 79	49	49; 69		340	720	705	705	1 490	1 690	1 480							
79	79	89		89			720	1 070	1 160	1 590	2 320	2 570	2 740						
89	89	109						1 050	1 440	2 260	2 540	3 140	2 920	2 920					
109	109	129							1 560	2 240	2 530	3 850	5 230	4 500	3 720	6 380			
129	129	149							1 540	2 220	2 500	4 490	5 230	4 500	3 720	6 980	6 200		
149	149	169								2 210	2 490	4 480	5 230	4 500	3 720	7 100	6 880	11 400	
169; 189	169; 189	189									2 450	4 420	5 230	4 500	3 720	7 100	6 880	11 400	15 000



3/2 **Orientation**

3/3 **Transmission ratios and torques**
3/3 Selection and ordering data

3/28 **Transmission ratios and torques for high speeds**
3/28 Selection and ordering data

3/35 **Transmission ratios and torques for very low speeds**
3/35 Selection and ordering data

3/53 **Dimensions**
3/53 Dimensional drawing overview

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3/148 Helical gearbox D./Z.79
3/151 Helical gearbox D./Z.89
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Dimensions (continued)

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3/216 Helical tandem gearbox with adapter K3
3/217 Helical tandem gearbox with adapter A
3/218 Helical tandem gearbox with adapter AZ
3/219 Inner contour of the flange design

SIMOGEAR helical gearboxes Z and D

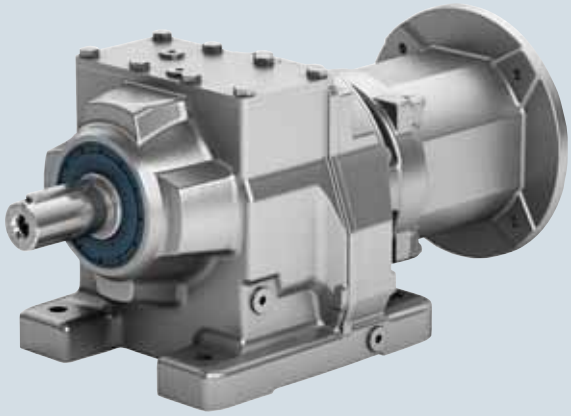


Fig. 3/1 Helical geared motor Z and D

SIMOGEAR helical gearbox E

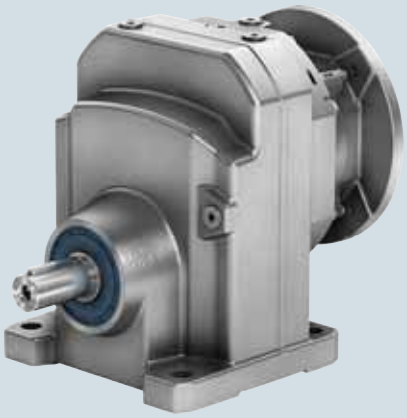


Fig. 3/2 Helical geared motor E

Gearbox designation	Number of sizes	Maximum output torque T_{2N} Nm	Transmission ratio i -	Maximum motor power P_1 kW
Z19 ... Z189 (2-stage)	13	100 ... 19 000	3.4 ... 57	55
D19 ... D189 (3-stage)	13	100 ... 19 000	36 ... 328	55
E39 ... E149 (1-stage)	7	30 ... 1 490	1.29 ... 9.79	55
D-29-Z19 ... D.189-D69 (4-stage to 6-stage)	12	140 ... 19 000	325 ... 27 816	7.5

SIMOGEAR helical gearboxes are available in the following versions:

Gearbox stages

- 2-stage or 3-stage helical gearboxes
- 1-stage helical gearbox 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}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
D.19													
184.86	7.8	100	1 650	13.1	0.02	50468/273		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ Q1**
163.69	8.9	100	1 650	13.2	0.03	74481/455		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ P1**
142.23	10	100	1 650	13.2	0.04	64713/455		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ N1**
129.30	11	100	1 650	13.2	0.04	11766/91		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ M1**
110.02	13	100	1 650	13.2	0.06	50061/455		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ L1**
100.02	14	100	1 650	13.2	0.07	9102/91		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ K1**
87.21	17	100	1 650	13.3	0.08	1221/14		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ J1**
78.07	19	100	1 650	13.3	0.11	7104/91		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ H1**
69.32	21	100	1 650	13.3	0.13	12617/182		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ G1**
63.99	23	100	1 650	13.3	0.16	75702/1183		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ F1**
55.59	26	100	1 650	13.4	0.17	35409/637		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ E1**
48.30	30	100	1 650	13.3	0.18	21978/455		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ D1**
43.61	33	100	1 650	13.3	0.22	1221/28		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ C1**
41.04	35	100	1 650	13.3	0.26	4884/119		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ B1**
35.78	41	100	1 650	13.4	0.29	3256/91		✓					**2KJ4201 - ■ ■ A 0 ■ - 0 ■ A1**
Z.19													
34.97	41	100	1 650	12.6	0.02	1364/39		✓					**2KJ4101 - ■ ■ A 0 ■ - 0 ■ W1**
30.97	47	100	1 650	13.2	0.03	2013/65		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ V1**
26.91	54	100	1 650	13.3	0.04	1749/65		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ U1**
24.46	59	100	1 650	13.3	0.05	318/13		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ T1**
20.82	70	100	1 650	13.5	0.06	1353/65		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ S1**
18.92	77	100	1 790	13.5	0.08	246/13		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ R1**
16.50	88	99	1 900	13.7	0.09	33/2		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ Q1**
14.77	98	95	1 870	13.8	0.12	192/13		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ P1**
13.12	111	91	1 830	13.9	0.15	341/26		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ N1**
12.11	120	88	1 810	13.9	0.18	2046/169		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ M1**
10.52	138	82	1 760	14.3	0.20	957/91		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ L1**
9.14	159	78	1 710	13.9	0.21	594/65		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ K1**
8.25	176	74	1 670	14.1	0.27	33/4		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ J1**
7.76	187	73	1 650	14.1	0.32	132/17		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ H1**
6.77	214	68	1 600	14.5	0.36	88/13		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ G1**
6.25	232	56	1 460	20.3	0.19	1705/273		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ F1**
5.43	267	53	1 420	21.0	0.22	1595/294		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ E1**
4.71	308	49	1 380	20.3	0.22	33/7		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ D1**
4.26	340	47	1 350	20.7	0.29	715/168		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ C1**
4.01	362	46	1 330	20.7	0.32	1430/357		✓	✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ B1**
3.49	415	43	1 290	21.5	0.39	220/63			✓				**2KJ4101 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement								
Shaft design	→ page 9/43		**1 or 9**					
Adapter size		**KS**	**A**	**E**	**H**	**K**	**M**	**1**
			B	**F**	**J**		**N**	**1**
			C	**G**				**1**
			D					**1**
Adapter type								
Gearbox mounting type	→ page 9/37		**A, B, F or H**					

Transmission ratios and torques

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}															(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-															
							K4	63	71	80	90	100	112	132	160	180	200	225	250		
							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		5.3										
									4.2												
							K8									813		816		818	
							K5		56		140	180		210	250	280		320	360		
							K3		56		140	180		210	250	280		320	360		
							A/AZ			80	90	100	112	132	160	180	200	225	250		
D.29																					
217.89	6.7	140	3 710	10.7	0.02	7626/35		✓	✓												**2KJ4202 - ■ ■ A0 ■ - 0 ■ Q1**
192.93	7.5	140	3 710	10.8	0.03	67527/350		✓	✓	✓	✓										**2KJ4202 - ■ ■ A0 ■ - 0 ■ P1**
167.63	8.7	140	3 710	10.8	0.04	58671/350		✓	✓	✓	✓										**2KJ4202 - ■ ■ A0 ■ - 0 ■ N1**
152.39	9.5	140	3 710	10.8	0.05	58671/385		✓	✓	✓	✓										**2KJ4202 - ■ ■ A0 ■ - 0 ■ M1**
129.68	11	140	3 710	10.9	0.06	45387/350		✓	✓	✓	✓										**2KJ4202 - ■ ■ A0 ■ - 0 ■ L1**
117.89	12	140	3 710	10.9	0.08	45387/385		✓	✓	✓	✓										**2KJ4202 - ■ ■ A0 ■ - 0 ■ K1**
102.79	14	140	3 710	10.9	0.09	14391/140		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ J1**
92.01	16	140	3 710	10.9	0.12	35424/385		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ H1**
81.71	18	140	3 710	10.9	0.14	11439/140		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ G1**
75.42	19	140	3 710	10.9	0.17	34317/455		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ F1**
65.52	22	140	3 710	11.0	0.19	32103/490		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ E1**
56.93	25	140	3 710	10.9	0.19	9963/175		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ D1**
51.40	28	140	3 710	11.0	0.25	14391/280		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ C1**
48.37	30	140	3 710	11.0	0.29	28782/595		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ B1**
42.17	34	140	3 710	11.0	0.33	1476/35		✓	✓	✓	✓	✓									**2KJ4202 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/43		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											1
				C		G														1
				D																1
		K8									C		D		E					8
		K5		A		B	C		D	E	F		G	H						5
		K3		A		B	C		D	E	F		G	H						3
		A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																				
Gearbox mounting type	➞ page 9/37		A, B, F or H																	

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}															(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-															
							K4	63	71	80	90	100	112	132	160	180	200	225	250		
							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		5.3										
									4.2												
							K8									813		816		818	
							K5		56		140	180		210	250	280		320	360		
							K3		56		140	180		210	250	280		320	360		
							A/AZ			80	90	100	112	132	160	180	200	225	250		
Z.29																					
41.40	35	140	3 710	10.8	0.04	207/5		✓	✓												2KJ4102 - ■ ■ A0 ■ - 0 ■ A2
36.72	39	140	3 670	10.8	0.05	918/25		✓	✓	✓	✓										2KJ4102 - ■ ■ A0 ■ - 0 ■ X1
31.86	46	140	3 330	10.9	0.06	1593/50		✓	✓	✓	✓										2KJ4102 - ■ ■ A0 ■ - 0 ■ W1
28.96	50	140	3 110	10.9	0.07	1593/55		✓	✓	✓	✓										2KJ4102 - ■ ■ A0 ■ - 0 ■ V1
24.84	58	140	2 770	11.0	0.09	621/25		✓	✓	✓	✓										2KJ4102 - ■ ■ A0 ■ - 0 ■ U1
22.58	64	140	2 570	11.0	0.11	1242/55		✓	✓	✓	✓										2KJ4102 - ■ ■ A0 ■ - 0 ■ T1
19.80	73	140	2 300	11.2	0.13	99/5		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ S1
17.67	82	140	2 070	11.3	0.15	972/55		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ R1
15.75	92	140	1 850	11.4	0.18	63/4		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ Q1
14.54	100	120	2 240	11.4	0.23	189/13		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ P1
12.73	114	140	1 470	11.6	0.26	891/70		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ N1
11.16	130	140	1 250	11.9	0.27	279/25		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ M1
10.12	143	140	1 090	12.1	0.34	81/8		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ L1
9.53	152	140	1 000	12.1	0.40	162/17		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ K1
8.40	173	138	855	11.7	0.45	42/5		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ J1
7.29	199	130	860	11.9	0.60	729/100		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ H1
6.92	210	75	1 900	17.4	0.29	90/13		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ G1
6.06	239	100	945	17.9	0.34	297/49		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ F1
5.31	273	91	1 050	18.6	0.37	186/35		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ E1
4.82	301	86	1 080	18.9	0.46	135/28		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ D1
4.54	319	84	1 070	18.9	0.54	540/119		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ C1
4.00	362	76	1 160	18.2	0.63	4/1		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ B1
3.47	418	70	1 240	18.5	0.84	243/70		✓	✓	✓	✓	✓									2KJ4102 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/43	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	→ page 9/37	A, B, F or H																

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

Transmission ratios and torques

Selection and ordering data

3

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.39																						
235.29	6.2	200	4 370	8.1	0.03	179998/765		✓	✓													**2KJ4203 - ■ ■ A0 ■ - 0 ■ R1**
208.69	6.9	200	4 370	8.2	0.05	15652/75		✓	✓	✓	✓											**2KJ4203 - ■ ■ A0 ■ - 0 ■ Q1**
181.07	8	200	4 370	8.2	0.05	230867/1275		✓	✓	✓	✓											**2KJ4203 - ■ ■ A0 ■ - 0 ■ P1**
164.61	8.8	200	4 370	8.2	0.07	461734/2805		✓	✓	✓	✓											**2KJ4203 - ■ ■ A0 ■ - 0 ■ N1**
141.17	10	200	4 370	8.2	0.08	179998/1275		✓	✓	✓	✓											**2KJ4203 - ■ ■ A0 ■ - 0 ■ M1**
128.34	11	200	4 370	8.2	0.10	359996/2805		✓	✓	✓	✓											**2KJ4203 - ■ ■ A0 ■ - 0 ■ L1**
112.53	13	200	4 370	8.2	0.12	86086/765		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ K1**
100.44	14	200	4 370	8.3	0.15	93912/935		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ J1**
89.51	16	200	4 370	8.3	0.17	27391/306		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ H1**
82.63	18	200	4 370	8.3	0.21	4214/51		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ G1**
72.34	20	200	4 370	8.3	0.25	6149/85		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ F1**
63.43	23	200	4 370	8.4	0.23	242606/3825		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ E1**
57.54	25	200	4 370	8.4	0.33	3913/68		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ D1**
54.16	27	200	4 370	8.4	0.39	15652/289		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ C1**
47.74	30	200	4 350	8.3	0.43	109564/2295		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ B1**
41.43	35	200	3 920	8.4	0.58	35217/850		✓	✓	✓	✓	✓	✓									**2KJ4203 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																							
Shaft design	➞ page 9/43		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														1
				C		G																	1
				D																			1
		K8									C		D		E								8
		K5		A		B	C		D	E	F		G	H									5
		K3		A		B	C		D	E	F		G	H									3
		A/AZ*			D	E	F	G	H	J	K	L	M	N									9
Adapter type																							
Gearbox mounting type	➞ page 9/37		A, B, F or H																				

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.39																					
55.95	26	200	4 370	7.7	0.06	7553/135		✓	✓												**2KJ4103 - ■ ■ A0 ■ - 0 ■ A2**
49.75	29	200	4 370	7.7	0.07	3731/75		✓	✓	✓	✓										**2KJ4103 - ■ ■ A0 ■ - 0 ■ X1**
43.68	33	200	4 070	7.8	0.08	1092/25		✓	✓	✓	✓										**2KJ4103 - ■ ■ A0 ■ - 0 ■ W1**
39.71	37	200	3 790	7.8	0.10	2184/55		✓	✓	✓	✓										**2KJ4103 - ■ ■ A0 ■ - 0 ■ V1**
33.97	43	200	3 340	7.9	0.12	2548/75		✓	✓	✓	✓										**2KJ4103 - ■ ■ A0 ■ - 0 ■ U1**
30.88	47	200	3 080	7.9	0.14	5096/165		✓	✓	✓	✓										**2KJ4103 - ■ ■ A0 ■ - 0 ■ T1**
27.30	53	200	2 760	8.0	0.17	273/10		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ S1**
24.82	58	200	2 520	8.0	0.22	273/11		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ R1**
21.74	67	200	2 190	8.1	0.25	3913/180		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ Q1**
20.07	72	200	2 000	8.1	0.31	301/15		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ P1**
17.77	82	200	1 720	8.3	0.36	533/30		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ N1**
14.79	98	193	1 500	8.4	0.47	1183/80		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ M1**
13.92	104	189	1 470	8.4	0.55	1183/85		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ L1**
12.47	116	180	1 470	8.6	0.60	3367/270		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ K1**
10.62	137	169	1 440	8.8	0.78	637/60		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ J1**
9.10	159	158	1 430	9.0	1.02	91/10				✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ H1**
7.84	185	148	1 420	9.3	1.30	2821/360				✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ G1**
6.46	224	146	225	13.4	0.57	2379/368		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ F1**
6.08	238	147	100	13.4	0.66	2379/391		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ E1**
5.45	266	140	150	13.8	0.74	2257/414		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ D1**
4.64	312	130	490	14.3	0.97	427/92		✓	✓	✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ C1**
3.98	364	121	820	14.8	1.28	183/46				✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ B1**
3.43	423	112	1 070	15.4	1.65	1891/552				✓	✓	✓	✓								**2KJ4103 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/43	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	→ page 9/37	A, B, F or H																

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}															(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-															
							K4	63	71	80	90	100	112	132	160	180	200	225	250		
							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		5.3										
									4.2												
							K8									813		816		818	
							K5		56		140	180		210	250	280		320	360		
							K3		56		140	180		210	250	280		320	360		
							A/AZ			80	90	100	112	132	160	180	200	225	250		
D.49																					
280.89	5.2	320	5 780	7.3	0.06	60673/216		✓	✓												**2KJ4204 - ■ ■ A0 ■ - 0 ■ S1**
249.76	5.8	320	5 780	7.3	0.07	29971/120		✓	✓	✓	✓										**2KJ4204 - ■ ■ A0 ■ - 0 ■ R1**
219.30	6.6	320	5 780	7.4	0.08	2193/10		✓	✓	✓	✓										**2KJ4204 - ■ ■ A0 ■ - 0 ■ Q1**
199.36	7.3	320	5 780	7.4	0.10	2193/11		✓	✓	✓	✓										**2KJ4204 - ■ ■ A0 ■ - 0 ■ P1**
170.57	8.5	320	5 780	7.4	0.12	5117/30		✓	✓	✓	✓										**2KJ4204 - ■ ■ A0 ■ - 0 ■ N1**
155.06	9.4	320	5 780	7.4	0.14	5117/33		✓	✓	✓	✓										**2KJ4204 - ■ ■ A0 ■ - 0 ■ M1**
137.06	11	320	5 780	7.4	0.17	2193/16		✓	✓	✓	✓	✓	✓								**2KJ4204 - ■ ■ A0 ■ - 0 ■ L1**
124.60	12	320	5 780	7.4	0.22	10965/88		✓	✓	✓	✓	✓	✓								**2KJ4204 - ■ ■ A0 ■ - 0 ■ K1**
109.14	13	320	5 780	7.4	0.25	31433/288		✓	✓	✓	✓	✓	✓								**2KJ4204 - ■ ■ A0 ■ - 0 ■ J1**
100.75	14	320	5 780	7.4	0.31	31433/312		✓	✓	✓	✓	✓	✓								**2KJ4204 - ■ ■ A0 ■ - 0 ■ H1**
89.20	16	320	5 780	7.4	0.37	29971/336		✓	✓	✓	✓	✓	✓	✓							**2KJ4204 - ■ ■ A0 ■ - 0 ■ G1**
74.24	20	320	5 780	7.5	0.50	9503/128		✓	✓	✓	✓	✓	✓	✓							**2KJ4204 - ■ ■ A0 ■ - 0 ■ F1**
69.88	21	320	5 780	7.5	0.58	559/8		✓	✓	✓	✓	✓	✓	✓							**2KJ4204 - ■ ■ A0 ■ - 0 ■ E1**
62.61	23	320	5 780	7.5	0.65	27047/432		✓	✓	✓	✓	✓	✓	✓							**2KJ4204 - ■ ■ A0 ■ - 0 ■ D1**
53.30	27	320	5 780	7.5	0.85	5117/96		✓	✓	✓	✓	✓	✓	✓							**2KJ4204 - ■ ■ A0 ■ - 0 ■ C1**
45.69	32	320	5 780	7.6	1.12	731/16				✓	✓	✓	✓	✓							**2KJ4204 - ■ ■ A0 ■ - 0 ■ B1**
39.34	37	320	5 540	7.6	1.43	22661/576				✓	✓	✓	✓	✓							**2KJ4204 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																								
Shaft design	→ page 9/43		**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**															**1**
				C		**G**																		**1**
				D																				**1**
		K8									**C**		**D**		**E**									**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**										**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**										**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**										**9**
Adapter type																								
Gearbox mounting type	→ page 9/37		**A, B, F or H**																					

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.49																					
52.14	28	320	5 900	7.0	0.17	4171/80		✓	✓	✓	✓										**2KJ4104 - ■ ■ A0 ■ - 0 ■ B2**
47.40	31	320	5 780	7.0	0.21	4171/88		✓	✓	✓	✓										**2KJ4104 - ■ ■ A0 ■ - 0 ■ A2**
40.31	36	320	5 650	7.1	0.25	645/16		✓	✓	✓	✓										**2KJ4104 - ■ ■ A0 ■ - 0 ■ X1**
36.65	40	320	5 220	7.1	0.31	3225/88		✓	✓	✓	✓										**2KJ4104 - ■ ■ A0 ■ - 0 ■ W1**
32.70	44	320	5 520	7.1	0.36	3139/96		✓	✓	✓	✓	✓	✓								**2KJ4104 - ■ ■ A0 ■ - 0 ■ V1**
29.32	49	320	5 280	7.2	0.43	645/22		✓	✓	✓	✓	✓	✓								**2KJ4104 - ■ ■ A0 ■ - 0 ■ U1**
26.43	55	320	5 060	7.2	0.50	2537/96		✓	✓	✓	✓	✓	✓								**2KJ4104 - ■ ■ A0 ■ - 0 ■ T1**
24.39	59	320	4 890	7.2	0.59	2537/104		✓	✓	✓	✓	✓	✓								**2KJ4104 - ■ ■ A0 ■ - 0 ■ S1**
22.27	65	320	4 710	7.2	0.71	1247/56		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ R1**
18.48	78	320	4 350	7.4	0.90	2365/128		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ Q1**
17.39	83	320	4 230	7.4	1.03	2365/136		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ P1**
16.42	88	320	4 130	7.4	1.17	2365/144		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ N1**
13.98	104	320	3 850	7.5	1.44	559/40		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ M1**
11.97	121	320	3 590	7.5	1.76	2107/176				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ L1**
10.53	138	320	3 390	7.5	2.10	2021/192				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ K1**
8.88	163	320	3 130	7.8	2.70	817/92				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ J1**
7.74	187	320	3 100	8.0	3.60	387/50				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ H1**
7.64	190	295	3 000	11.8	1.18	649/85		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ G1**
7.21	201	290	2 980	11.8	1.34	649/90		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ F1**
6.14	236	265	2 940	12.2	1.67	767/125		✓	✓	✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ E1**
5.26	276	245	2 880	12.2	2.10	2891/550				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ D1**
4.62	314	225	2 820	12.2	2.60	2773/600				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ C1**
3.90	372	205	2 740	12.2	3.30	2242/575				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ B1**
3.40	426	191	2 210	12.2	4.40	2124/625				✓	✓	✓	✓	✓							**2KJ4104 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/43		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										1
				C		G													1
				D															1
		K8									C		D		E				8
		K5		A		B	C		D	E	F		G	H					5
		K3		A		B	C		D	E	F		G	H					3
		A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																				
Gearbox mounting type	→ page 9/37		A, B, F or H																	

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

Transmission ratios and torques

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.59																						
307.02	4.7	450	7 660	6.8	0.06	66317/216		✓	✓													**2KJ4205 - ■ ■ A0 ■ - 0 ■ S1**
272.99	5.3	450	7 660	6.8	0.07	32759/120		✓	✓	✓	✓											**2KJ4205 - ■ ■ A0 ■ - 0 ■ R1**
239.70	6	450	7 660	6.8	0.08	2397/10		✓	✓	✓	✓											**2KJ4205 - ■ ■ A0 ■ - 0 ■ Q1**
217.91	6.7	450	7 660	6.8	0.10	2397/11		✓	✓	✓	✓											**2KJ4205 - ■ ■ A0 ■ - 0 ■ P1**
186.43	7.8	450	7 660	6.9	0.12	5593/30		✓	✓	✓	✓											**2KJ4205 - ■ ■ A0 ■ - 0 ■ N1**
169.48	8.6	450	7 660	6.9	0.14	5593/33		✓	✓	✓	✓											**2KJ4205 - ■ ■ A0 ■ - 0 ■ M1**
149.81	9.7	450	7 660	6.9	0.17	2397/16		✓	✓	✓	✓	✓	✓									**2KJ4205 - ■ ■ A0 ■ - 0 ■ L1**
136.19	11	450	7 660	6.9	0.22	11985/88		✓	✓	✓	✓	✓	✓									**2KJ4205 - ■ ■ A0 ■ - 0 ■ K1**
119.30	12	450	7 660	6.9	0.26	34357/288		✓	✓	✓	✓	✓	✓									**2KJ4205 - ■ ■ A0 ■ - 0 ■ J1**
110.12	13	450	7 660	6.9	0.31	34357/312		✓	✓	✓	✓	✓	✓									**2KJ4205 - ■ ■ A0 ■ - 0 ■ H1**
97.50	15	450	7 660	6.9	0.37	32759/336		✓	✓	✓	✓	✓	✓	✓								**2KJ4205 - ■ ■ A0 ■ - 0 ■ G1**
81.15	18	450	7 660	7.0	0.50	10387/128		✓	✓	✓	✓	✓	✓	✓								**2KJ4205 - ■ ■ A0 ■ - 0 ■ F1**
76.38	19	450	7 660	7.0	0.59	611/8		✓	✓	✓	✓	✓	✓	✓								**2KJ4205 - ■ ■ A0 ■ - 0 ■ E1**
68.43	21	450	7 660	7.0	0.65	29563/432		✓	✓	✓	✓	✓	✓	✓								**2KJ4205 - ■ ■ A0 ■ - 0 ■ D1**
58.26	25	450	7 660	7.0	0.85	5593/96		✓	✓	✓	✓	✓	✓	✓								**2KJ4205 - ■ ■ A0 ■ - 0 ■ C1**
49.94	29	450	7 660	7.1	1.12	799/16				✓	✓	✓	✓	✓								**2KJ4205 - ■ ■ A0 ■ - 0 ■ B1**
43.00	34	450	7 230	7.1	1.44	24769/576				✓	✓	✓	✓	✓								**2KJ4205 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																							
Shaft design	➞ page 9/43	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														1
				C		G																	1
				D																			1
		K8									C		D		E								8
		K5		A		B	C		D	E	F		G	H									5
		K3		A		B	C		D	E	F		G	H									3
		A/AZ*			D	E	F	G	H	J	K	L	M	N									9
Adapter type																							
Gearbox mounting type	➞ page 9/37	A, B, F or H																					

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.59																						
56.99	25	450	7 660	6.5	0.18	4559/80		✓	✓	✓	✓											**2KJ4105 - ■ ■ A0 ■ - 0 ■ A2**
51.81	28	450	7 660	6.5	0.21	4559/88		✓	✓	✓	✓											**2KJ4105 - ■ ■ A0 ■ - 0 ■ X1**
44.06	33	450	7 310	6.6	0.26	705/16		✓	✓	✓	✓											**2KJ4105 - ■ ■ A0 ■ - 0 ■ W1**
40.06	36	450	7 020	6.6	0.32	3525/88		✓	✓	✓	✓											**2KJ4105 - ■ ■ A0 ■ - 0 ■ V1**
35.74	41	450	6 690	6.6	0.37	3431/96		✓	✓	✓	✓	✓	✓									**2KJ4105 - ■ ■ A0 ■ - 0 ■ U1**
32.05	45	450	6 180	6.7	0.44	705/22		✓	✓	✓	✓	✓	✓									**2KJ4105 - ■ ■ A0 ■ - 0 ■ T1**
28.89	50	450	5 690	6.7	0.52	2773/96		✓	✓	✓	✓	✓	✓									**2KJ4105 - ■ ■ A0 ■ - 0 ■ S1**
26.66	54	450	5 330	6.7	0.62	2773/104		✓	✓	✓	✓	✓	✓									**2KJ4105 - ■ ■ A0 ■ - 0 ■ R1**
24.34	60	450	4 930	6.7	0.73	1363/56		✓	✓	✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ Q1**
20.20	72	450	5 230	6.9	0.94	2585/128		✓	✓	✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ P1**
19.01	76	450	5 090	6.9	1.08	2585/136		✓	✓	✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ N1**
17.95	81	450	4 960	6.9	1.23	2585/144		✓	✓	✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ M1**
15.27	95	450	4 600	7.0	1.51	611/40		✓	✓	✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ L1**
13.09	111	450	4 280	7.2	1.85	2303/176				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ K1**
11.51	126	450	4 030	7.3	2.30	2209/192				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ J1**
9.71	149	450	3 710	7.5	2.90	893/92				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ H1**
8.46	171	450	3 600	8.0	3.90	423/50				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ G1**
8.07	180	410	3 500	10.6	1.45	121/15		✓	✓	✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ F1**
6.86	211	410	3 480	11.0	1.81	858/125		✓	✓	✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ E1**
5.88	247	410	3 440	11.3	2.30	147/25				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ D1**
5.17	280	410	2 210	11.6	2.80	517/100				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ C1**
4.36	333	405	2 650	12.0	3.60	2508/575				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ B1**
3.80	382	405	2 920	13.4	4.90	2376/625				✓	✓	✓	✓	✓								**2KJ4105 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/43	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												1
			C		G															1
			D																	1
	K8									C		D		E						8
	K5		A		B	C		D	E	F		G	H							5
	K3		A		B	C		D	E	F		G	H							3
	A/AZ*			D	E	F	G	H	J	K	L	M	N							9
Adapter type																				
Gearbox mounting type	→ page 9/37	A, B, F or H																		

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

Transmission ratios and torques

Selection and ordering data

3

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.69																						
328.49	4.4	600	11 000	6.5	0.06	62084/189		✓	✓													**2KJ4206 - ■ ■ A0 ■ - 0 ■ S1**
292.08	5.0	600	11 000	6.5	0.07	30668/105		✓	✓	✓	✓											**2KJ4206 - ■ ■ A0 ■ - 0 ■ R1**
256.46	5.7	600	11 000	6.6	0.08	8976/35		✓	✓	✓	✓											**2KJ4206 - ■ ■ A0 ■ - 0 ■ Q1**
233.14	6.2	600	11 000	6.6	0.10	1632/7		✓	✓	✓	✓											**2KJ4206 - ■ ■ A0 ■ - 0 ■ P1**
199.47	7.3	600	11 000	6.6	0.12	2992/15		✓	✓	✓	✓											**2KJ4206 - ■ ■ A0 ■ - 0 ■ N1**
181.33	8	600	11 000	6.6	0.14	544/3		✓	✓	✓	✓											**2KJ4206 - ■ ■ A0 ■ - 0 ■ M1**
160.29	9	600	11 000	6.6	0.17	1122/7		✓	✓	✓	✓	✓	✓									**2KJ4206 - ■ ■ A0 ■ - 0 ■ L1**
145.71	10	600	11 000	6.6	0.22	1020/7		✓	✓	✓	✓	✓	✓									**2KJ4206 - ■ ■ A0 ■ - 0 ■ K1**
127.63	11	600	11 000	6.6	0.26	8041/63		✓	✓	✓	✓	✓	✓									**2KJ4206 - ■ ■ A0 ■ - 0 ■ J1**
117.82	12	600	11 000	6.6	0.31	32164/273		✓	✓	✓	✓	✓	✓									**2KJ4206 - ■ ■ A0 ■ - 0 ■ H1**
104.31	14	600	11 000	6.6	0.37	15334/147		✓	✓	✓	✓	✓	✓	✓								**2KJ4206 - ■ ■ A0 ■ - 0 ■ G1**
86.82	17	600	11 000	6.7	0.50	2431/28		✓	✓	✓	✓	✓	✓	✓								**2KJ4206 - ■ ■ A0 ■ - 0 ■ F1**
81.71	18	600	11 000	6.7	0.59	572/7		✓	✓	✓	✓	✓	✓	✓								**2KJ4206 - ■ ■ A0 ■ - 0 ■ E1**
73.22	20	600	11 000	6.7	0.66	13838/189		✓	✓	✓	✓	✓	✓	✓								**2KJ4206 - ■ ■ A0 ■ - 0 ■ D1**
62.33	23	600	11 000	6.7	0.86	187/3		✓	✓	✓	✓	✓	✓	✓								**2KJ4206 - ■ ■ A0 ■ - 0 ■ C1**
53.43	27	600	11 000	6.7	1.14	374/7				✓	✓	✓	✓	✓								**2KJ4206 - ■ ■ A0 ■ - 0 ■ B1**
46.01	32	600	11 000	6.7	1.46	5797/126				✓	✓	✓	✓	✓								**2KJ4206 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																						
Shaft design	➞ page 9/43	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													1
				C		G																1
				D																		1
		K8									C		D		E							8
		K5		A		B	C		D	E	F		G	H								5
		K3		A		B	C		D	E	F		G	H								3
		A/AZ*			D	E	F	G	H	J	K	L	M	N								9
Adapter type																						
Gearbox mounting type	➞ page 9/37	A, B, F or H																				

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.69																					
60.97	24	600	11 000	6.2	0.18	2134/35		✓	✓	✓	✓										2KJ4106 - ■ ■ A0 ■ - 0 ■ A2
55.43	26	600	11 000	6.2	0.22	388/7		✓	✓	✓	✓										2KJ4106 - ■ ■ A0 ■ - 0 ■ X1
47.14	31	600	11 000	6.3	0.28	330/7		✓	✓	✓	✓										2KJ4106 - ■ ■ A0 ■ - 0 ■ W1
42.86	34	600	11 000	6.3	0.34	300/7		✓	✓	✓	✓										2KJ4106 - ■ ■ A0 ■ - 0 ■ V1
38.24	38	600	11 000	6.4	0.39	803/21		✓	✓	✓	✓	✓	✓								2KJ4106 - ■ ■ A0 ■ - 0 ■ U1
34.29	42	600	11 000	6.4	0.47	240/7		✓	✓	✓	✓	✓	✓								2KJ4106 - ■ ■ A0 ■ - 0 ■ T1
30.90	47	600	10 400	6.4	0.56	649/21		✓	✓	✓	✓	✓	✓								2KJ4106 - ■ ■ A0 ■ - 0 ■ S1
28.53	51	600	9 860	6.4	0.66	2596/91		✓	✓	✓	✓	✓	✓								2KJ4106 - ■ ■ A0 ■ - 0 ■ R1
26.04	56	600	9 200	6.5	0.79	1276/49		✓	✓	✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ Q1
21.61	67	600	7 910	6.6	1.01	605/28		✓	✓	✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ P1
20.34	71	600	7 510	6.6	1.16	2420/119		✓	✓	✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ N1
19.21	75	600	7 140	6.6	1.32	1210/63		✓	✓	✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ M1
16.34	89	600	9 850	6.7	1.64	572/35		✓	✓	✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ L1
14.00	104	600	9 260	6.8	2.00	14/1				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ K1
12.31	118	600	8 790	7.0	2.50	517/42				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ J1
10.39	140	600	8 200	7.1	3.20	1672/161				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ H1
9.05	160	591	7 920	7.7	4.30	1584/175				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ G1
8.50	171	446	8 000	10.0	1.67	1760/207		✓	✓	✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ F1
7.23	201	447	7 540	10.3	2.10	832/115		✓	✓	✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ E1
6.20	234	445	7 290	10.6	2.70	1568/253				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ D1
5.45	266	429	7 090	10.9	3.40	376/69				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ C1
4.60	315	446	6 810	11.3	4.40	2432/529				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ B1
4.01	362	445	5 440	11.6	5.80	2304/575				✓	✓	✓	✓	✓							2KJ4106 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	→ page 9/43	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											1
			C		G														1
			D																1
	K8									C		D		E					8
	K5		A		B	C		D	E	F		G	H						5
	K3		A		B	C		D	E	F		G	H						3
	A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																			
Gearbox mounting type	→ page 9/37	A, B, F or H																	

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

Transmission ratios and torques

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.79																					
330.23	4.4	840	13 400	6.1	0.17	369861/1120			✓	✓	✓											**2KJ4207 - ■ ■ A0 ■ - 0 ■ S1**
300.21	4.8	840	13 400	6.1	0.20	369861/1232			✓	✓	✓											**2KJ4207 - ■ ■ A0 ■ - 0 ■ R1**
255.33	5.7	840	13 400	6.2	0.25	57195/224			✓	✓	✓											**2KJ4207 - ■ ■ A0 ■ - 0 ■ Q1**
232.12	6.2	840	13 400	6.2	0.30	285975/1232			✓	✓	✓											**2KJ4207 - ■ ■ A0 ■ - 0 ■ P1**
207.10	7	840	13 400	6.2	0.35	92783/448			✓	✓	✓	✓	✓									**2KJ4207 - ■ ■ A0 ■ - 0 ■ N1**
185.70	7.8	840	13 400	6.2	0.42	57195/308			✓	✓	✓	✓	✓									**2KJ4207 - ■ ■ A0 ■ - 0 ■ M1**
167.39	8.7	840	13 400	6.2	0.49	74989/448			✓	✓	✓	✓	✓									**2KJ4207 - ■ ■ A0 ■ - 0 ■ L1**
154.51	9.4	840	13 400	6.2	0.58	224967/1456			✓	✓	✓	✓	✓									**2KJ4207 - ■ ■ A0 ■ - 0 ■ K1**
141.04	10	840	13 400	6.2	0.69	110577/784			✓	✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ J1**
117.03	12	840	13 400	6.2	0.87	209715/1792			✓	✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ H1**
110.14	13	840	13 400	6.2	1.00	209715/1904			✓	✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ G1**
104.03	14	840	13 400	6.2	1.14	69905/672			✓	✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ F1**
88.52	16	840	13 400	6.2	1.39	49569/560			✓	✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ E1**
75.83	19	840	13 400	6.2	1.69	26691/352				✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ D1**
66.67	22	840	13 400	6.2	2.10	59737/896				✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ C1**
56.25	26	840	13 400	6.2	2.60	72447/1288				✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ B1**
49.02	30	840	12 600	6.2	3.50	34317/700				✓	✓	✓	✓	✓	✓							**2KJ4207 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																					
Shaft design	→ page 9/43		**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**												**1**
				C		**G**															**1**
				D																	**1**
		K8									**C**		**D**		**E**						**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**							**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**							**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**							**9**
Adapter type																					
Gearbox mounting type	→ page 9/37		**A, B, F or H**																		

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.79																						
54.47	27	840	13 400	6.1	0.43	3813/70			✓	✓	✓											2KJ4107 - ■ ■ A0 ■ - 0 ■ A2
49.52	29	840	12 600	6.1	0.53	3813/77			✓	✓	✓											2KJ4107 - ■ ■ A0 ■ - 0 ■ X1
44.42	33	840	11 700	6.2	0.73	533/12			✓	✓	✓	✓	✓									2KJ4107 - ■ ■ A0 ■ - 0 ■ W1
39.94	36	840	10 900	6.2	0.83	3075/77			✓	✓	✓	✓	✓									2KJ4107 - ■ ■ A0 ■ - 0 ■ V1
36.12	40	840	10 100	6.2	0.92	1517/42			✓	✓	✓	✓	✓									2KJ4107 - ■ ■ A0 ■ - 0 ■ U1
33.34	43	840	13 400	6.2	1.08	3034/91			✓	✓	✓	✓	✓									2KJ4107 - ■ ■ A0 ■ - 0 ■ T1
30.54	47	840	13 400	6.3	1.41	2993/98			✓	✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ S1
25.62	57	840	13 300	6.0	1.52	205/8			✓	✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ R1
24.12	60	840	13 000	6.0	1.73	410/17			✓	✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ Q1
22.13	66	840	12 600	6.1	1.90	1394/63			✓	✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ P1
19.33	75	840	11 900	6.1	2.7	1353/70			✓	✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ N1
17.31	84	840	11 400	6.2	3.3	2665/154				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ M1
15.13	96	840	10 800	6.3	3.9	1271/84				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ L1
12.99	112	840	10 100	6.3	4.3	2091/161				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ K1
11.48	126	840	9 640	6.7	5.5	287/25				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ J1
9.76	149	815	9 080	6.9	7.0	205/21						✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ H1
8.37	173	790	8 580	7.1	9.3	410/49						✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ G1
8.19	177	715	8 460	9.2	4.0	3965/484				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ F1
7.16	203	730	8 030	9.4	4.8	1891/264				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ E1
6.15	236	715	7 850	9.6	5.4	3111/506				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ D1
5.43	267	685	7 690	10.5	6.9	2989/550				✓	✓	✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ C1
4.62	314	775	7 460	10.9	9.1	305/66						✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ B1
3.96	366	775	3 730	11.3	12.0	305/77						✓	✓	✓	✓							2KJ4107 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/43		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											1
				C		G														1
				D																1
		K8									C		D		E					8
		K5		A		B	C		D	E	F		G	H						5
		K3		A		B	C		D	E	F		G	H						3
		A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																				
Gearbox mounting type	→ page 9/37		A, B, F or H																	

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

Transmission ratios and torques

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}																(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-																
							K4	63	71	80	90	100	112	132	160	180	200	225	250		
							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		5.3										
									4.2												
							K8									813		816		818	
							K5		56		140	180		210	250	280		320	360		
							K3		56		140	180		210	250	280		320	360		
							A/AZ			80	90	100	112	132	160	180	200	225	250		
D.89																						
311.60	4.7	1 680	18 500	5.7	0.41	132432/425				✓	✓											**2KJ4208 - ■ ■ A0 ■ - 0 ■ S1**
283.28	5.1	1 680	18 500	5.7	0.50	264864/935				✓	✓											**2KJ4208 - ■ ■ A0 ■ - 0 ■ R1**
254.09	5.7	1 680	18 500	5.7	0.70	64792/255				✓	✓	✓	✓									**2KJ4208 - ■ ■ A0 ■ - 0 ■ Q1**
228.45	6.3	1 680	18 500	5.7	0.79	42720/187				✓	✓	✓	✓									**2KJ4208 - ■ ■ A0 ■ - 0 ■ P1**
206.62	7	1 680	18 500	5.7	0.87	52688/255				✓	✓	✓	✓									**2KJ4208 - ■ ■ A0 ■ - 0 ■ N1**
190.73	7.6	1 680	18 500	5.7	1.03	210752/1105				✓	✓	✓	✓									**2KJ4208 - ■ ■ A0 ■ - 0 ■ M1**
174.71	8.3	1 680	18 500	5.7	1.35	103952/595				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ L1**
146.59	9.9	1 680	18 500	5.7	1.43	2492/17				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ K1**
137.97	11	1 680	18 500	5.7	1.63	39872/289				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ J1**
126.58	11	1 680	18 500	5.7	1.78	5696/45				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ H1**
110.57	13	1 680	18 500	5.7	2.5	46992/425				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ G1**
98.99	15	1 680	18 500	5.7	3.1	18512/187				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ F1**
86.56	17	1 680	18 500	5.7	3.7	22072/255				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ E1**
74.30	20	1 680	18 500	5.7	4.0	8544/115				✓	✓	✓	✓	✓	✓							**2KJ4208 - ■ ■ A0 ■ - 0 ■ D1**
65.67	22	1 680	18 500	5.7	5.0	139552/2125				✓	✓	✓	✓	✓	✓	✓						**2KJ4208 - ■ ■ A0 ■ - 0 ■ C1**
55.84	26	1 680	18 500	5.7	6.4	2848/51						✓	✓	✓	✓	✓						**2KJ4208 - ■ ■ A0 ■ - 0 ■ B1**
47.87	30	1 680	18 500	5.7	8.5	5696/119						✓	✓	✓	✓	✓						**2KJ4208 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																						
Shaft design	➞ page 9/43	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													1
				C		G																1
				D																		1
		K8									C		D		E							8
		K5		A		B	C		D	E	F		G	H								5
		K3		A		B	C		D	E	F		G	H								3
		A/AZ*			D	E	F	G	H	J	K	L	M	N								9
Adapter type																						
Gearbox mounting type	➞ page 9/37	A, B, F or H																				

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.89																						
57.36	25	1 680	18 500	5.4	1.34	2581/45				✓	✓	✓	✓									**2KJ4108 - ■ ■ A0 ■ - 0 ■ A2**
51.78	28	1 680	18 500	5.4	1.46	2848/55				✓	✓	✓	✓									**2KJ4108 - ■ ■ A0 ■ - 0 ■ X1**
46.97	31	1 680	18 500	5.4	1.71	1691/36				✓	✓	✓	✓									**2KJ4108 - ■ ■ A0 ■ - 0 ■ W1**
43.36	33	1 680	18 500	5.4	2.0	1691/39				✓	✓	✓	✓									**2KJ4108 - ■ ■ A0 ■ - 0 ■ V1**
39.41	37	1 680	18 500	5.5	2.3	2759/70				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ U1**
33.38	43	1 680	18 500	5.5	2.8	267/8				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ T1**
31.41	46	1 680	18 500	5.5	2.8	534/17				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ S1**
29.01	50	1 680	18 500	5.6	4.3	3916/135				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ R1**
25.81	56	1 680	18 500	5.6	5.3	2581/100				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ Q1**
22.92	63	1 680	17 400	5.6	6.4	1513/66				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ P1**
20.52	71	1 680	16 000	5.7	6.4	7387/360				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ N1**
17.54	83	1 680	14 200	5.7	7.5	6052/345				✓	✓	✓	✓	✓	✓							**2KJ4108 - ■ ■ A0 ■ - 0 ■ M1**
15.66	93	1 680	12 900	6.0	9.5	1958/125				✓	✓	✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ L1**
13.84	105	1 680	11 500	6.1	11	623/45						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ K1**
12.15	119	1 630	10 700	5.9	15	3827/315						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ J1**
10.58	137	1 590	10 700	6.0	19	3649/345						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ H1**
9.04	160	1 560	11 900	6.1	24	2848/315						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ G1**
7.74	187	1 530	12 700	6.3	30	178/23						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ F1**
6.89	210	1 050	10 100	8.6	12	62/9						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ E1**
6.05	240	1 060	10 900	8.8	17	2666/441						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ D1**
5.26	276	1 060	11 600	9.0	21	2542/483						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ C1**
4.50	322	1 060	11 500	9.3	28	1984/441						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ B1**
3.85	377	1 060	11 100	9.7	35	620/161						✓	✓	✓	✓	✓						**2KJ4108 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/43	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												1
			C		G															1
			D																	1
	K8									C		D		E						8
	K5		A		B	C		D	E	F		G	H							5
	K3		A		B	C		D	E	F		G	H							3
	A/AZ*			D	E	F	G	H	J	K	L	M	N							9
Adapter type																				
Gearbox mounting type	→ page 9/37	A, B, F or H																		

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

Transmission ratios and torques

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.109																					
348.88	4.2	3 100	20 200	5.5	1.27	263755/756					✓	✓	✓								**2KJ4210 - ■ ■ A0 ■ - 0 ■ T1**
314.98	4.6	3 100	20 200	5.5	1.36	72760/231					✓	✓	✓								**2KJ4210 - ■ ■ A0 ■ - 0 ■ S1**
285.72	5.1	3 100	20 200	5.5	1.60	864025/3024					✓	✓	✓								**2KJ4210 - ■ ■ A0 ■ - 0 ■ R1**
263.74	5.5	3 100	20 200	5.5	1.88	864025/3276					✓	✓	✓								**2KJ4210 - ■ ■ A0 ■ - 0 ■ Q1**
239.75	6	3 100	20 200	5.5	2.1	281945/1176					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ P1**
203.01	7.1	3 100	20 200	5.5	2.6	45475/224					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ N1**
191.07	7.6	3 100	20 200	5.5	2.6	2675/14					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ M1**
176.45	8.2	3 100	20 200	5.6	4.0	100045/567					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ L1**
157.00	9.2	3 100	20 200	5.6	5.0	52751/336					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ K1**
139.44	10	3 100	20 200	5.6	5.9	773075/5544					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ J1**
124.82	12	3 100	20 200	5.6	5.8	754885/6048					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ H1**
106.70	14	3 100	20 200	5.6	6.7	154615/1449					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ G1**
95.28	15	3 100	20 200	5.6	8.5	20009/210					✓	✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ F1**
84.21	17	3 100	20 200	5.6	9.6	9095/108						✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ E1**
73.90	20	3 100	20 200	5.6	13	391085/5292						✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ D1**
64.34	23	3 100	20 200	5.6	16	372895/5796						✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ C1**
55.00	26	3 090	20 200	5.6	20	72760/1323						✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ B1**
47.08	31	2 930	20 200	5.7	25	45475/966						✓	✓	✓	✓						**2KJ4210 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/43		**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**											**1**
				C		**G**														**1**
				D																**1**
		K8									**C**		**D**		**E**					**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**						**9**
Adapter type																				
Gearbox mounting type	→ page 9/37		**A, B, F or H**																	

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.109																						
51.17	28	3 100	20 200	5.4	4.7	5015/98					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ X1
43.64	33	3 100	20 200	5.4	6.0	9775/224					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ W1
41.07	35	3 100	20 200	5.4	6.8	575/14					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ V1
38.12	38	3 100	20 200	5.4	7.4	9605/252					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ U1
33.70	43	3 100	20 200	5.4	9.0	1887/56					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ T1
30.08	48	3 100	20 000	5.5	11	9265/308					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ S1
27.07	54	3 040	19 300	5.5	13	9095/336					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ R1
23.49	62	2 920	18 400	5.5	15	7565/322					✓	✓	✓	✓	✓							2KJ4110 - ■ ■ A0 ■ - 0 ■ Q1
21.13	69	2 830	17 900	5.7	18	1479/70					✓	✓	✓	✓	✓	✓						2KJ4110 - ■ ■ A0 ■ - 0 ■ P1
18.47	79	2 720	17 100	5.8	21	6205/336						✓	✓	✓	✓	✓	✓					2KJ4110 - ■ ■ A0 ■ - 0 ■ N1
16.48	88	2 630	16 600	5.8	25	1615/98						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ M1
14.52	100	2 570	15 900	5.9	30	4675/322						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ L1
12.72	114	2 510	15 100	6.0	37	1870/147						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ K1
11.09	131	2 460	14 400	6.1	44	255/23						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ J1
10.12	143	2 430	13 900	6.1	51	425/42						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ H1
8.71	166	2 380	13 200	6.3	64	2805/322								✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ G1
8.41	172	2 290	12 800	8.6	29	589/70						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ F1
7.41	196	2 280	12 300	8.7	34	341/46						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ E1
6.50	223	2 280	12 300	8.8	42	682/105						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ D1
5.66	256	2 290	12 200	9.0	51	651/115						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ C1
5.17	280	2 280	12 200	9.1	60	31/6						✓	✓	✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ B1
4.45	326	2 150	12 000	9.4	75	1023/230								✓	✓	✓	✓	✓				2KJ4110 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																					
Shaft design	➞ page 9/43	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													1
			C		G																1
			D																		1
	K8									C		D		E							8
	K5		A		B	C		D	E	F		G	H								5
	K3		A		B	C		D	E	F		G	H								3
	A/AZ*			D	E	F	G	H	J	K	L	M	N								9
Adapter type																					
Gearbox mounting type	➞ page 9/37	A, B, F or H																			

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

Transmission ratios and torques

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.129																					
373.00	3.9	5 000	27 000	6.4	3.3	523481/1404					✓	✓	✓								**2KJ4211 - ■ ■ A0 ■ - 0 ■ S1**
344.17	4.2	5 000	27 000	6.4	3.9	523481/1521					✓	✓	✓								**2KJ4211 - ■ ■ A0 ■ - 0 ■ R1**
316.90	4.6	5 000	27 000	6.4	4.5	259541/819					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ Q1**
270.24	5.4	5 000	27 000	6.4	5.6	505885/1872					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ P1**
254.34	5.7	5 000	27 000	6.4	6.4	505885/1989					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ N1**
236.03	6.1	5 000	27 000	6.4	6.9	497087/2106					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ M1**
208.67	6.9	5 000	27 000	6.4	8.4	162763/780					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ L1**
186.28	7.8	5 000	27 000	6.4	9.9	479491/2574					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ K1**
167.63	8.7	5 000	27 000	6.4	12	470693/2808					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ J1**
145.49	10	5 000	27 000	6.4	14	391511/2691					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ H1**
130.84	11	5 000	27 000	6.4	16	127571/975					✓	✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ G1**
114.36	13	5 000	27 000	6.5	19	321127/2808						✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ F1**
102.05	14	5 000	27 000	6.5	23	83581/819						✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ E1**
89.91	16	5 000	27 000	6.5	27	241945/2691						✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ D1**
78.78	18	5 000	27 000	6.5	31	193556/2457						✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ C1**
68.66	21	5 000	27 000	6.5	37	61586/897						✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ B1**
62.66	23	5 000	27 000	6.5	44	21995/351						✓	✓	✓	✓						**2KJ4211 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																					
Shaft design	➞ page 9/43	**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												**1**
				C		G															**1**
				D																	**1**
		K8									C		D		E						**8**
		K5		A		B	C		D	E	F		G	H							**5**
		K3		A		B	C		D	E	F		G	H							**3**
		A/AZ*			D	E	F	G	H	J	K	L	M	N							**9**
Adapter type																					
Gearbox mounting type	➞ page 9/37	**A, B, F or H**																			

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.129																						
62.48	23	5 000	27 000	6.2	7.5	11371/182					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ X1**
53.47	27	5 000	27 000	6.2	9.5	5561/104					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ W1**
50.33	29	5 000	27 000	6.2	11	11122/221					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ V1**
47.18	31	5 000	27 000	6.2	12	11039/234					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ U1**
41.82	35	5 000	27 000	6.3	14	10873/260					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ T1**
37.15	39	5 000	26 000	6.3	17	5312/143					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ S1**
33.52	43	5 000	24 900	6.3	20	1743/52					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ R1**
29.70	49	5 000	23 700	6.3	25	8881/299					✓	✓	✓	✓	✓							**2KJ4111 - ■ ■ A0 ■ - 0 ■ Q1**
26.30	55	5 000	22 600	6.4	28	8549/325					✓	✓	✓	✓	✓	✓						**2KJ4111 - ■ ■ A0 ■ - 0 ■ P1**
23.41	62	5 000	21 500	6.4	33	913/39						✓	✓	✓	✓	✓	✓					**2KJ4111 - ■ ■ A0 ■ - 0 ■ N1**
20.98	69	5 000	20 500	6.5	40	1909/91						✓	✓	✓	✓	✓	✓	✓				**2KJ4111 - ■ ■ A0 ■ - 0 ■ M1**
18.60	78	5 000	19 500	6.5	47	5561/299						✓	✓	✓	✓	✓	✓	✓				**2KJ4111 - ■ ■ A0 ■ - 0 ■ L1**
16.42	88	5 000	18 100	6.6	57	1494/91						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ K1**
14.43	100	4 940	16 200	6.6	69	332/23						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ J1**
13.07	111	4 850	16 600	6.6	78	3569/273						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ H1**
11.38	127	4 760	17 200	6.6	95	3403/299								✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ G1**
9.33	155	4 660	17 000	6.7	126	1577/169								✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ F1**
8.53	170	3 640	16 200	7.4	66	162/19						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ E1**
7.50	193	3 630	16 100	8.3	80	3276/437						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ D1**
6.79	214	3 630	15 900	8.3	91	129/19						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ C1**
5.91	245	3 610	15 700	8.5	112	2583/437								✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ B1**
4.85	299	3 270	15 300	8.8	151	63/13								✓	✓	✓	✓	✓	✓			**2KJ4111 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/43	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												1
			C		G															1
			D																	1
	K8									C		D		E						8
	K5		A		B	C		D	E	F		G	H							5
	K3		A		B	C		D	E	F		G	H							3
	A/AZ*			D	E	F	G	H	J	K	L	M	N							9
Adapter type																				
Gearbox mounting type	→ page 9/37	A, B, F or H																		

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

3

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.149																						
328.38	4.4	8 000	51 200	5.5	7.1	321813/980						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ W1**
281.04	5.2	8 000	51 200	5.5	9	157383/560						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ V1**
264.51	5.5	8 000	51 200	5.5	10	157383/595						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ U1**
247.95	5.8	8 000	51 200	5.5	11	4959/20						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ T1**
219.80	6.6	8 000	51 200	5.5	14	307719/1400						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ S1**
195.24	7.4	8 000	51 200	5.5	16	75168/385						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ R1**
176.18	8.2	8 000	51 200	5.5	19	7047/40						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ Q1**
156.11	9.3	8 000	51 200	5.5	23	251343/1610						✓	✓	✓	✓							**2KJ4212 - ■ ■ A0 ■ - 0 ■ P1**
138.26	10	8 000	51 200	5.5	26	241947/1750						✓	✓	✓	✓	✓						**2KJ4212 - ■ ■ A0 ■ - 0 ■ N1**
123.04	12	8 000	51 200	5.5	31	8613/70						✓	✓	✓	✓	✓	✓					**2KJ4212 - ■ ■ A0 ■ - 0 ■ M1**
110.26	13	8 000	51 200	5.5	37	54027/490						✓	✓	✓	✓	✓	✓	✓				**2KJ4212 - ■ ■ A0 ■ - 0 ■ L1**
97.75	15	8 000	51 200	5.5	43	157383/1610						✓	✓	✓	✓	✓	✓	✓				**2KJ4212 - ■ ■ A0 ■ - 0 ■ K1**
86.29	17	8 000	51 200	5.5	52	21141/245						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ J1**
75.87	19	8 000	51 200	5.5	63	61074/805						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ H1**
68.71	21	8 000	51 200	5.6	70	33669/490						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ G1**
59.82	24	8 000	51 200	5.6	85	96309/1610								✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ F1**
49.05	30	8 000	47 700	5.6	110	44631/910								✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ E1**
43.51	33	8 000	45 700	5.8	72	55042/1265						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ D1**
39.41	37	8 000	44 000	5.8	82	91031/2310						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ C1**
34.31	42	8 000	41 800	5.8	101	86797/2530								✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ B1**
28.13	52	8 000	38 700	5.9	133	40223/1430								✓	✓	✓	✓	✓	✓			**2KJ4212 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/43		**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**										**1**
			C		**G**													**1**
			D															**1**
	K8									**C**		**D**		**E**				**8**
	K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**					**5**
	K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**					**3**
	A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**					**9**
Adapter type																		
Gearbox mounting type	→ page 9/37		**A, B, F or H**															

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.149																						
56.64	26	8 000	50 300	5.2	19	4814/85						✓	✓	✓	✓							**2KJ4112 - ■ ■ A0 ■ - 0 ■ W1**
52.84	27	7 710	49 500	5.2	21	2378/45						✓	✓	✓	✓							**2KJ4112 - ■ ■ A0 ■ - 0 ■ V1**
46.98	31	7 570	47 600	5.2	25	2349/50						✓	✓	✓	✓							**2KJ4112 - ■ ■ A0 ■ - 0 ■ U1**
42.18	34	7 660	45 600	5.2	30	464/11						✓	✓	✓	✓							**2KJ4112 - ■ ■ A0 ■ - 0 ■ T1**
38.18	38	7 550	44 100	5.2	35	2291/60						✓	✓	✓	✓							**2KJ4112 - ■ ■ A0 ■ - 0 ■ S1**
33.54	43	8 000	41 400	5.2	43	3857/115						✓	✓	✓	✓							**2KJ4112 - ■ ■ A0 ■ - 0 ■ R1**
30.39	48	8 000	39 900	5.2	50	3799/125						✓	✓	✓	✓	✓						**2KJ4112 - ■ ■ A0 ■ - 0 ■ Q1**
27.07	54	8 000	38 100	5.3	59	406/15						✓	✓	✓	✓	✓	✓					**2KJ4112 - ■ ■ A0 ■ - 0 ■ P1**
24.30	60	8 000	36 600	5.3	70	2552/105						✓	✓	✓	✓	✓	✓	✓				**2KJ4112 - ■ ■ A0 ■ - 0 ■ N1**
21.69	67	8 000	35 000	5.3	81	2494/115						✓	✓	✓	✓	✓	✓	✓				**2KJ4112 - ■ ■ A0 ■ - 0 ■ M1**
19.33	75	8 000	33 400	5.4	96	58/3						✓	✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ L1**
17.15	85	8 000	31 900	5.4	113	1972/115						✓	✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ K1**
15.74	92	8 000	30 800	5.4	127	551/35						✓	✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ J1**
13.87	105	8 000	29 200	5.5	150	319/23								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ H1**
11.38	127	8 000	28 700	5.5	203	1479/130								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ G1**
9.98	145	8 000	28 300	5.6	227	1247/125								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ F1**
7.80	186	8 000	27 500	5.9	360	39/5								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ E1**
7.27	199	4 880	27 500	7.5	173	836/115								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ D1**
5.96	243	4 870	26 600	7.7	237	1938/325								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ C1**
5.23	277	4 870	26 000	7.7	273	3268/625								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ B1**
4.09	355	4 870	24 700	7.7	432	2964/725								✓	✓	✓	✓	✓	✓	✓		**2KJ4112 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	→ page 9/43		**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**										**1**
				C		**G**													**1**
				D															**1**
		K8									**C**		**D**		**E**				**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**					**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**					**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**					**9**
Adapter type																			
Gearbox mounting type	→ page 9/37		**A, B, F or H**																

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

Transmission ratios and torques

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
D.169																						
327.18	4.4	14 000	70 100	5.0	18	472768 / 1445							✓	✓	✓							**2KJ4213 - ■ ■ A0 ■ - 0 ■ V1**
305.28	4.7	14 000	70 100	5.0	19	233536 / 765							✓	✓	✓							**2KJ4213 - ■ ■ A0 ■ - 0 ■ U1**
271.40	5.3	14 000	70 100	5.0	23	115344 / 425							✓	✓	✓							**2KJ4213 - ■ ■ A0 ■ - 0 ■ T1**
243.68	6.0	14 000	70 100	5.0	28	45568 / 187							✓	✓	✓							**2KJ4213 - ■ ■ A0 ■ - 0 ■ S1**
220.58	6.6	14 000	70 100	5.0	33	56248 / 255							✓	✓	✓							**2KJ4213 - ■ ■ A0 ■ - 0 ■ R1**
193.75	7.5	14 000	70 100	5.0	40	378784 / 1955							✓	✓	✓							**2KJ4213 - ■ ■ A0 ■ - 0 ■ Q1**
175.57	8.3	14 000	70 100	5.0	46	373088 / 2125							✓	✓	✓	✓						**2KJ4213 - ■ ■ A0 ■ - 0 ■ P1**
156.36	9.3	14 000	70 100	5.0	54	39872 / 255							✓	✓	✓	✓	✓					**2KJ4213 - ■ ■ A0 ■ - 0 ■ N1**
140.41	10	14 000	70 100	5.0	64	250624 / 1785							✓	✓	✓	✓	✓	✓				**2KJ4213 - ■ ■ A0 ■ - 0 ■ M1**
125.28	12	14 000	70 100	5.0	74	244928 / 1955							✓	✓	✓	✓	✓	✓				**2KJ4213 - ■ ■ A0 ■ - 0 ■ L1**
111.69	13	14 000	70 100	5.0	85	5696 / 51							✓	✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ K1**
99.06	15	14 000	70 100	5.0	101	11392 / 115							✓	✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ J1**
90.94	16	14 000	70 100	5.0	112	54112 / 595							✓	✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ H1**
80.12	18	14 000	70 100	5.0	132	31328 / 391								✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ G1**
65.72	22	14 000	70 100	5.1	176	4272 / 65								✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ F1**
57.63	25	14 000	70 100	5.1	193	122464 / 2125								✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ E1**
45.06	32	14 000	70 100	5.1	301	111072 / 2465								✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ D1**
41.43	35	14 000	70 100	5.2	200	134657 / 3250								✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ C1**
36.33	40	14 000	70 500	5.2	225	340603 / 9375								✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ B1**
28.41	51	14 000	69 200	5.3	353	102973 / 3625								✓	✓	✓	✓	✓	✓			**2KJ4213 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/43																			**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											**1**
				C		G														**1**
				D																**1**
		K8									C		D		E					**8**
		K5		A		B	C		D	E	F		G	H						**5**
		K3		A		B	C		D	E	F		G	H						**3**
		A/AZ*			D	E	F	G	H	J	K	L	M	N						**9**
Adapter type																				
Gearbox mounting type	→ page 9/37																			**A, B, F or H**

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.169																					
36.55	40	12 100	70 800	4.7	79	13706/375							✓	✓	✓	✓						**2KJ4113 - ■ ■ A0 ■ - 0 ■ Q1**
32.88	44	14 000	68 200	4.7	94	11837/360							✓	✓	✓	✓	✓					**2KJ4113 - ■ ■ A0 ■ - 0 ■ P1**
29.38	49	14 000	65 300	4.8	109	9256/315							✓	✓	✓	✓	✓	✓				**2KJ4113 - ■ ■ A0 ■ - 0 ■ N1**
26.57	55	14 000	62 900	4.8	131	9167/345							✓	✓	✓	✓	✓	✓				**2KJ4113 - ■ ■ A0 ■ - 0 ■ M1**
23.45	62	14 000	60 200	4.8	154	7387/315							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ L1**
20.90	69	14 000	59 400	4.8	183	2403/115							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ K1**
18.93	77	14 000	58 600	4.8	203	5963/315							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ J1**
17.03	85	14 000	57 800	4.8	245	1958/115								✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ H1**
14.15	102	14 000	56 100	4.8	308	2759/195								✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ G1**
12.58	115	13 900	54 900	4.8	377	4717/375								✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ F1**
10.03	145	13 900	52 600	5.1	521	4361/435								✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ E1**
7.98	182	13 800	50 100	5.3	689	1157/145										✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ D1**
7.37	197	7 960	49 100	7.0	409	848/115								✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ C1**
5.88	247	7 900	46 700	7.1	571	3920/667								✓	✓	✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ B1**
4.68	310	7 820	44 200	7.3	768	3120/667										✓	✓	✓	✓	✓		**2KJ4113 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/43		**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											**1**
				C		G														**1**
				D																**1**
		K8									C		D		E					**8**
		K5		A		B	C		D	E	F		G	H						**5**
		K3		A		B	C		D	E	F		G	H						**3**
		A/AZ*			D	E	F	G	H	J	K	L	M	N						**9**
Adapter type																				
Gearbox mounting type	➞ page 9/37		**A, B, F or H**																	

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}																(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-																
D.189																						
313.63	4.6	19 000	107 000	4.7	36	533169/1700	K4						✓	✓	✓							**2KJ4214 - ■ ■ A0 ■ - 0 ■ T1**
280.59	5.2	19 000	107 000	4.7	43	262353/935	K4						✓	✓	✓							**2KJ4214 - ■ ■ A0 ■ - 0 ■ S1**
253.06	5.7	19 000	107 000	4.7	49	172081/680	K4						✓	✓	✓							**2KJ4214 - ■ ■ A0 ■ - 0 ■ R1**
223.66	6.5	19 000	107 000	4.7	61	87451/391	K4						✓	✓	✓							**2KJ4214 - ■ ■ A0 ■ - 0 ■ Q1**
204.44	7.1	19 000	107 000	4.7	71	434434/2125	K4						✓	✓	✓	✓						**2KJ4214 - ■ ■ A0 ■ - 0 ■ P1**
183.92	7.9	19 000	107 000	4.7	84	375193/2040	K4						✓	✓	✓	✓	✓					**2KJ4214 - ■ ■ A0 ■ - 0 ■ N1**
164.36	8.8	19 000	107 000	4.7	98	41912/255	K4						✓	✓	✓	✓	✓	✓				**2KJ4214 - ■ ■ A0 ■ - 0 ■ M1**
148.63	9.8	19 000	107 000	4.7	116	290563/1955	K4						✓	✓	✓	✓	✓	✓				**2KJ4214 - ■ ■ A0 ■ - 0 ■ L1**
131.17	11	19 000	107 000	4.7	136	33449/255	K4						✓	✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ K1**
116.88	12	19 000	107 000	4.7	160	228501/1955	K4						✓	✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ J1**
105.89	14	19 000	107 000	4.7	175	27001/255	K4						✓	✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ H1**
95.24	15	19 000	107 000	4.7	210	186186/1955	K4							✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ G1**
79.14	18	19 000	107 000	4.7	257	6727/85	K4							✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ F1**
70.36	21	19 000	107 000	4.7	314	149513/2125	K4							✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ E1**
56.08	26	19 000	107 000	4.7	421	138229/2465	K4							✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ D1**
44.63	32	19 000	107 000	4.8	531	110019/2465	K4									✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ C1**
36.67	40	19 000	104 200	4.8	475	10633/290	K4							✓	✓	✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ B1**
29.18	50	19 000	97 800	4.8	617	8463/290	K4									✓	✓	✓	✓			**2KJ4214 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/43	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	→ page 9/37	A, B, F or H																

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
Z.189																						
34.25	42	19 000	101 700	4.5	140	3596/105							✓	✓	✓	✓	✓	✓				2KJ4114 - ■ ■ A0 ■ - 0 ■ L1
30.73	47	19 000	97 900	4.5	166	3534/115							✓	✓	✓	✓	✓	✓				2KJ4114 - ■ ■ A0 ■ - 0 ■ K1
27.46	53	19 000	94 100	4.6	199	961/35							✓	✓	✓	✓	✓	✓	✓	✓		2KJ4114 - ■ ■ A0 ■ - 0 ■ J1
24.53	59	19 000	90 400	4.6	236	2821/115							✓	✓	✓	✓	✓	✓	✓	✓		2KJ4114 - ■ ■ A0 ■ - 0 ■ H1
22.44	65	19 000	87 500	4.6	262	2356/105							✓	✓	✓	✓	✓	✓	✓	✓	✓	2KJ4114 - ■ ■ A0 ■ - 0 ■ G1
19.95	73	19 000	83 900	4.6	314	2294/115								✓	✓	✓	✓	✓	✓	✓	✓	2KJ4114 - ■ ■ A0 ■ - 0 ■ F1
16.93	86	19 000	79 000	4.6	400	2201/130								✓	✓	✓	✓	✓	✓	✓	✓	2KJ4114 - ■ ■ A0 ■ - 0 ■ E1
14.63	99	19 000	74 900	4.7	481	1829/125								✓	✓	✓	✓	✓	✓	✓	✓	2KJ4114 - ■ ■ A0 ■ - 0 ■ D1
11.97	121	19 000	72 500	4.8	666	1736/145								✓	✓	✓	✓	✓	✓	✓	✓	2KJ4114 - ■ ■ A0 ■ - 0 ■ C1
9.83	148	18 800	70 100	4.8	875	1426/145										✓	✓	✓	✓	✓	✓	2KJ4114 - ■ ■ A0 ■ - 0 ■ B1
7.65	190	16 000	66 800	4.8	1 283	1147/150													✓	✓	✓	2KJ4114 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	→ page 9/43		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										1
				C		G													1
				D															1
		K8									C		D		E				8
		K5		A		B	C		D	E	F		G	H					5
		K3		A		B	C		D	E	F		G	H					3
		A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																			
Gearbox mounting type	→ page 9/37		A, B, F or H																

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

Transmission ratios and torques for high speeds

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
E.39																						
9.22	157	30	3 000	-	0.001	83/9		✓	✓													2KJ4001 - ■ ■ A0 ■ - 0 ■ S1
8.20	177	34	3 000	-	0.001	41/5		✓	✓	✓	✓											2KJ4001 - ■ ■ A0 ■ - 0 ■ R1
7.20	201	40	3 000	-	0.003	36/5		✓	✓	✓	✓											2KJ4001 - ■ ■ A0 ■ - 0 ■ Q1
6.55	221	40	3 000	-	0.004	72/11		✓	✓	✓	✓											2KJ4001 - ■ ■ A0 ■ - 0 ■ P1
5.60	259	40	3 000	-	0.007	28/5		✓	✓	✓	✓											2KJ4001 - ■ ■ A0 ■ - 0 ■ N1
5.09	285	40	3 000	-	0.01	56/11		✓	✓	✓	✓											2KJ4001 - ■ ■ A0 ■ - 0 ■ M1
4.50	322	48	3 000	-	0.02	9/2		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ L1
4.09	355	48	3 000	-	0.02	45/11		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ K1
3.58	405	58	2 550	-	0.03	43/12		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ J1
3.31	438	58	2 400	-	0.05	43/13		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ H1
2.93	495	65	1 620	-	0.07	41/14		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ G1
2.44	594	65	1 200	-	0.13	39/16		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ F1
2.29	633	66	1 330	-	0.16	39/17		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ E1
2.06	704	66	1 370	-	0.19	37/18		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ D1
1.75	829	66	1 490	-	0.29	7/4		✓	✓	✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ C1
1.50	967	61	1 560	-	0.45	3/2				✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ B1
1.29	1 124	54	1 600	-	0.64	31/24				✓	✓	✓	✓									2KJ4001 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/43	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												1
			C		G															1
			D																	1
	K8									C		D		E						8
	K5		A		B	C		D	E	F		G	H							5
	K3		A		B	C		D	E	F		G	H							3
	A/AZ*			D	E	F	G	H	J	K	L	M	N							9
Adapter type																				
Gearbox mounting type	➞ page 9/37	A, B, F or H																		

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
E.49																						
9.70	149	86	4 000	-	0.003	97/10		✓	✓	✓	✓											**2KJ4002 - ■ ■ A0 ■ - 0 ■ S1**
8.82	164	108	4 000	-	0.004	97/11		✓	✓	✓	✓											**2KJ4002 - ■ ■ A0 ■ - 0 ■ R1**
7.50	193	107	4 000	-	0.007	15/2		✓	✓	✓	✓											**2KJ4002 - ■ ■ A0 ■ - 0 ■ Q1**
6.82	213	104	4 000	-	0.01	75/11		✓	✓	✓	✓											**2KJ4002 - ■ ■ A0 ■ - 0 ■ P1**
6.08	238	104	4 000	-	0.02	73/12		✓	✓	✓	✓	✓	✓									**2KJ4002 - ■ ■ A0 ■ - 0 ■ N1**
5.45	266	103	4 000	-	0.02	60/11		✓	✓	✓	✓	✓	✓									**2KJ4002 - ■ ■ A0 ■ - 0 ■ M1**
4.92	295	102	4 000	-	0.03	59/12		✓	✓	✓	✓	✓	✓									**2KJ4002 - ■ ■ A0 ■ - 0 ■ L1**
4.54	319	102	4 000	-	0.05	59/13		✓	✓	✓	✓	✓	✓									**2KJ4002 - ■ ■ A0 ■ - 0 ■ K1**
4.14	350	102	4 000	-	0.09	29/7		✓	✓	✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ J1**
3.44	422	101	3 510	-	0.15	55/16		✓	✓	✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ H1**
3.24	448	101	3 350	-	0.19	55/17		✓	✓	✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ G1**
3.06	474	101	3 200	-	0.23	55/18		✓	✓	✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ F1**
2.60	558	102	2 540	-	0.36	13/5		✓	✓	✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ E1**
2.23	650	102	1 930	-	0.55	49/22				✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ D1**
1.96	740	103	1 420	-	0.78	47/24				✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ C1**
1.65	879	103	975	-	1.1	38/23				✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ B1**
1.44	1 007	102	1 140	-	1.81	36/25				✓	✓	✓	✓	✓								**2KJ4002 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																						
Shaft design	➞ page 9/43		**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**													**1**
				C		**G**																**1**
				D																		**1**
		K8									**C**		**D**		**E**							**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**								**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**								**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**								**9**
Adapter type																						
Gearbox mounting type	➞ page 9/37		**A, B, F or H**																			

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

Transmission ratios and torques for high speeds

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
E.69																						
9.30	156	120	6 100	-	0.007	93/10			✓	✓	✓											**2KJ4003 - ■ ■ A0 ■ - 0 ■ S1**
8.45	172	105	6 100	-	0.01	93/11			✓	✓	✓											**2KJ4003 - ■ ■ A0 ■ - 0 ■ R1**
7.58	191	205	6 100	-	0.02	91/12			✓	✓	✓	✓	✓									**2KJ4003 - ■ ■ A0 ■ - 0 ■ Q1**
6.82	213	170	6 100	-	0.02	75/11			✓	✓	✓	✓	✓									**2KJ4003 - ■ ■ A0 ■ - 0 ■ P1**
6.17	235	205	6 100	-	0.03	37/6			✓	✓	✓	✓	✓									**2KJ4003 - ■ ■ A0 ■ - 0 ■ N1**
5.69	255	165	6 100	-	0.05	74/13			✓	✓	✓	✓	✓									**2KJ4003 - ■ ■ A0 ■ - 0 ■ M1**
5.21	278	200	6 100	-	0.09	73/14			✓	✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ L1**
4.38	331	200	6 100	-	0.15	35/8			✓	✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ K1**
4.12	352	165	6 100	-	0.19	70/17			✓	✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ J1**
3.78	384	200	6 100	-	0.23	34/9			✓	✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ H1**
3.30	439	200	6 100	-	0.36	33/10			✓	✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ G1**
2.95	492	200	5 680	-	0.55	65/22				✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ F1**
2.58	562	197	5 120	-	0.78	31/12				✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ E1**
2.22	653	196	4 500	-	1.10	51/23				✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ D1**
1.96	740	196	4 050	-	1.81	49/25				✓	✓	✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ C1**
1.67	868	196	4 130	-	2.6	5/3						✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ B1**
1.43	1 014	195	4 170	-	3.7	10/7						✓	✓	✓	✓							**2KJ4003 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																							
Shaft design	→ page 9/43		**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**														**1**
				C		**G**																	**1**
				D																			**1**
		K8									**C**		**D**		**E**								**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**									**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**									**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**									**9**
Adapter type																							
Gearbox mounting type	→ page 9/37		**A, B, F or H**																				

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
E.89																						
9.67	150	280	8 000	-	0.02	29/3				✓	✓	✓	✓									**2KJ4004 - ■ ■ A0 ■ - 0 ■ T1**
8.73	166	280	8 000	-	0.02	96/11				✓	✓	✓	✓									**2KJ4004 - ■ ■ A0 ■ - 0 ■ S1**
7.92	183	280	8 000	-	0.03	95/12				✓	✓	✓	✓									**2KJ4004 - ■ ■ A0 ■ - 0 ■ R1**
7.31	198	260	8 000	-	0.05	95/13				✓	✓	✓	✓									**2KJ4004 - ■ ■ A0 ■ - 0 ■ Q1**
6.64	218	260	8 000	-	0.09	93/14				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ P1**
5.62	258	320	8 000	-	0.15	45/8				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ N1**
5.29	274	210	8 000	-	0.19	90/17				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ M1**
4.89	297	360	8 000	-	0.23	44/9				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ L1**
4.35	333	360	8 000	-	0.36	87/20				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ K1**
3.86	376	360	7 520	-	0.55	85/22				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ J1**
3.46	419	365	6 830	-	0.78	83/24				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ H1**
2.96	490	360	6 030	-	1.1	68/23				✓	✓	✓	✓	✓	✓							**2KJ4004 - ■ ■ A0 ■ - 0 ■ G1**
2.64	549	360	5 410	-	1.81	66/25				✓	✓	✓	✓	✓	✓	✓						**2KJ4004 - ■ ■ A0 ■ - 0 ■ F1**
2.33	622	360	5 260	-	2.6	7/3						✓	✓	✓	✓	✓						**2KJ4004 - ■ ■ A0 ■ - 0 ■ E1**
2.05	707	360	5 430	-	3.7	43/21						✓	✓	✓	✓	✓						**2KJ4004 - ■ ■ A0 ■ - 0 ■ D1**
1.78	815	365	5 550	-	5.4	41/23						✓	✓	✓	✓	✓						**2KJ4004 - ■ ■ A0 ■ - 0 ■ C1**
1.52	954	360	5 580	-	7.6	32/21						✓	✓	✓	✓	✓						**2KJ4004 - ■ ■ A0 ■ - 0 ■ B1**
1.3	1 115	360	5 580	-	11	30/23						✓	✓	✓	✓	✓						**2KJ4004 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																						
Shaft design	➞ page 9/43		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													1
				C		G																1
				D																		1
		K8									C		D		E							8
		K5		A		B	C		D	E	F		G	H								5
		K3		A		B	C		D	E	F		G	H								3
		A/AZ*			D	E	F	G	H	J	K	L	M	N								9
Adapter type																						
Gearbox mounting type	➞ page 9/37		A, B, F or H																			

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

Transmission ratios and torques for high speeds

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
E.109																						
7.19	202	565	10 500	-	0.15	115/16					✓	✓	✓	✓	✓							**2KJ4005 - ■ ■ A0 ■ - 0 ■ Q1**
6.76	214	565	10 500	-	0.19	115/17					✓	✓	✓	✓	✓							**2KJ4005 - ■ ■ A0 ■ - 0 ■ P1**
6.28	231	565	10 500	-	0.23	113/18					✓	✓	✓	✓	✓							**2KJ4005 - ■ ■ A0 ■ - 0 ■ N1**
5.55	261	560	10 500	-	0.36	111/20					✓	✓	✓	✓	✓							**2KJ4005 - ■ ■ A0 ■ - 0 ■ M1**
4.95	293	560	10 500	-	0.55	109/22					✓	✓	✓	✓	✓							**2KJ4005 - ■ ■ A0 ■ - 0 ■ L1**
4.46	325	560	10 500	-	0.78	107/24					✓	✓	✓	✓	✓							**2KJ4005 - ■ ■ A0 ■ - 0 ■ K1**
3.87	375	555	10 000	-	1.10	89/23					✓	✓	✓	✓	✓							**2KJ4005 - ■ ■ A0 ■ - 0 ■ J1**
3.48	417	550	9 390	-	1.81	87/25					✓	✓	✓	✓	✓	✓						**2KJ4005 - ■ ■ A0 ■ - 0 ■ H1**
3.04	477	545	8 440	-	2.6	73/24						✓	✓	✓	✓	✓	✓					**2KJ4005 - ■ ■ A0 ■ - 0 ■ G1**
2.71	535	545	7 670	-	3.7	19/7						✓	✓	✓	✓	✓	✓	✓				**2KJ4005 - ■ ■ A0 ■ - 0 ■ F1**
2.39	607	540	6 850	-	5.4	55/23						✓	✓	✓	✓	✓	✓	✓				**2KJ4005 - ■ ■ A0 ■ - 0 ■ E1**
2.10	690	535	5 980	-	7.8	44/21						✓	✓	✓	✓	✓	✓	✓				**2KJ4005 - ■ ■ A0 ■ - 0 ■ D1**
1.83	792	530	5 060	-	11	42/23						✓	✓	✓	✓	✓	✓	✓				**2KJ4005 - ■ ■ A0 ■ - 0 ■ C1**
1.67	868	530	5 170	-	14	5/3						✓	✓	✓	✓	✓	✓	✓				**2KJ4005 - ■ ■ A0 ■ - 0 ■ B1**
1.43	1 014	465	5 420	-	21	33/23								✓	✓	✓	✓	✓				**2KJ4005 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																					
Shaft design	→ page 9/43	**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												**1**
				C		G															**1**
				D																	**1**
		K8									C		D		E						**8**
		K5		A		B	C		D	E	F		G	H							**5**
		K3		A		B	C		D	E	F		G	H							**3**
		A/AZ*			D	E	F	G	H	J	K	L	M	N							**9**
Adapter type																					
Gearbox mounting type	→ page 9/37	**A, B, F or H**																			

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
E.129																						
9.79	148	665	13 500	-	0.09	137/14					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ T1**
8.38	173	665	13 500	-	0.15	67/8					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ S1**
7.88	184	665	13 500	-	0.19	134/17					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ R1**
7.39	196	800	13 500	-	0.23	133/18					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ Q1**
6.55	221	800	13 100	-	0.36	131/20					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ P1**
5.82	249	800	12 500	-	0.55	64/11					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ N1**
5.25	276	795	12 000	-	0.78	21/4					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ M1**
4.65	312	795	11 100	-	1.10	107/23					✓	✓	✓	✓	✓							**2KJ4006 - ■ ■ A0 ■ - 0 ■ L1**
4.12	352	785	10 200	-	1.81	103/25					✓	✓	✓	✓	✓	✓						**2KJ4006 - ■ ■ A0 ■ - 0 ■ K1**
3.67	395	780	9 380	-	2.6	11/3						✓	✓	✓	✓	✓	✓					**2KJ4006 - ■ ■ A0 ■ - 0 ■ J1**
3.29	441	780	8 570	-	3.7	23/7						✓	✓	✓	✓	✓	✓	✓				**2KJ4006 - ■ ■ A0 ■ - 0 ■ H1**
2.91	498	770	7 780	-	5.4	67/23						✓	✓	✓	✓	✓	✓	✓				**2KJ4006 - ■ ■ A0 ■ - 0 ■ G1**
2.57	564	765	6 880	-	9.5	18/7						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4006 - ■ ■ A0 ■ - 0 ■ F1**
2.26	642	760	5 930	-	14	52/23						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4006 - ■ ■ A0 ■ - 0 ■ E1**
2.05	707	765	5 450	-	18	43/21						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4006 - ■ ■ A0 ■ - 0 ■ D1**
1.78	815	760	5 830	-	25	41/23								✓	✓	✓	✓	✓	✓			**2KJ4006 - ■ ■ A0 ■ - 0 ■ C1**
1.46	993	755	6 190	-	40	19/13								✓	✓	✓	✓	✓	✓			**2KJ4006 - ■ ■ A0 ■ - 0 ■ B1**
1.24	1 169	745	6 350	-	66	31/25								✓	✓	✓	✓	✓	✓			**2KJ4006 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																					
Shaft design	➞ page 9/43		**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**												**1**
				C		**G**															**1**
				D																	**1**
		K8									**C**		**D**		**E**						**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**							**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**							**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**							**9**
Adapter type																					
Gearbox mounting type	➞ page 9/37		**A, B, F or H**																		

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

Transmission ratios and torques for high speeds

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
E.149																						
9.76	149	1 200	16 000	-	0.17	166/17						✓	✓	✓	✓							**2KJ4007 - ■ ■ A0 ■ - 0 ■ S1**
9.11	159	1 260	16 000	-	0.22	82/9						✓	✓	✓	✓							**2KJ4007 - ■ ■ A0 ■ - 0 ■ R1**
8.10	179	1 330	15 200	-	0.33	81/10						✓	✓	✓	✓							**2KJ4007 - ■ ■ A0 ■ - 0 ■ Q1**
7.27	199	1 350	14 300	-	0.5	80/11						✓	✓	✓	✓							**2KJ4007 - ■ ■ A0 ■ - 0 ■ P1**
6.58	220	1 330	13 500	-	0.69	79/12						✓	✓	✓	✓							**2KJ4007 - ■ ■ A0 ■ - 0 ■ N1**
5.78	251	1 490	10 800	-	1.08	133/23						✓	✓	✓	✓							**2KJ4007 - ■ ■ A0 ■ - 0 ■ M1**
5.24	277	1 490	9 900	-	1.58	131/25						✓	✓	✓	✓	✓						**2KJ4007 - ■ ■ A0 ■ - 0 ■ L1**
4.67	310	1 480	8 900	-	2.3	14/3						✓	✓	✓	✓	✓	✓					**2KJ4007 - ■ ■ A0 ■ - 0 ■ K1**
4.19	346	1 480	7 940	-	4.0	88/21						✓	✓	✓	✓	✓	✓	✓				**2KJ4007 - ■ ■ A0 ■ - 0 ■ J1**
3.74	388	1 480	6 890	-	4.6	86/23						✓	✓	✓	✓	✓	✓	✓				**2KJ4007 - ■ ■ A0 ■ - 0 ■ H1**
3.33	435	1 480	5 850	-	6.7	10/3						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4007 - ■ ■ A0 ■ - 0 ■ G1**
2.96	490	1 460	4 950	-	9.6	68/23						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4007 - ■ ■ A0 ■ - 0 ■ F1**
2.71	535	1 460	4 140	-	12	19/7						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4007 - ■ ■ A0 ■ - 0 ■ E1**
2.39	607	1 460	3 530	-	18	55/23								✓	✓	✓	✓	✓	✓			**2KJ4007 - ■ ■ A0 ■ - 0 ■ D1**
1.96	740	1 470	4 840	-	9.6	51/26								✓	✓	✓	✓	✓	✓			**2KJ4007 - ■ ■ A0 ■ - 0 ■ C1**
1.72	843	1 460	5 130	-	42	43/25								✓	✓	✓	✓	✓	✓			**2KJ4007 - ■ ■ A0 ■ - 0 ■ B1**
1.34	1 082	1 280	5 810	-	119	39/29								✓	✓	✓	✓	✓	✓			**2KJ4007 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/43		**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**											**1**
				C		**G**														**1**
				D																**1**
		K8									**C**		**D**		**E**					**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**						**9**
Adapter type																				
Gearbox mounting type	➞ page 9/37		**A, B, F or H**																	

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

Selection and ordering data

Gearbox							Adapter							Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
D.29-Z19													
8 025	0.18	140	3 710	-	0.08	1966032/245		✓					**2KJ4221 - ■ ■ A 0 ■ - 0 ■ C1**
7 183	0.20	140	3 710	-	0.11	251652096/35035		✓					**2KJ4221 - ■ ■ A 0 ■ - 0 ■ B1**
6 379	0.23	140	3 710	-	0.13	20315664/3185		✓					**2KJ4221 - ■ ■ A 0 ■ - 0 ■ A1**
Z.29-D19													
5 890	0.25	140	3 710	-	0.02	13399254/2275		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ P1**
5 215	0.28	140	3 710	-	0.03	118648233/22750		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ N1**
4 531	0.32	140	3 710	-	0.04	103087809/22750		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ M1**
4 119	0.35	140	3 710	-	0.04	9371619/2275		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ L1**
3 505	0.41	140	3 710	-	0.06	79747173/22750		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ K1**
3 187	0.45	140	3 710	-	0.07	7249743/2275		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ J1**
2 779	0.52	140	3 710	-	0.08	1945053/700		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ H1**
2 487	0.58	140	3 710	-	0.11	5658336/2275		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ G1**
2 209	0.66	140	3 710	-	0.13	20098881/9100		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ F1**
2 039	0.71	140	3 710	-	0.16	60296643/29575		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ E1**
1 771	0.82	140	3 710	-	0.17	56406537/31850		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ D1**
1 539	0.94	140	3 710	-	0.18	17505477/11375		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ C1**
1 389	1.0	140	3 710	-	0.22	1945053/1400		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ B1**
1 308	1.1	140	3 710	-	0.26	3890106/2975		✓					**2KJ4121 - ■ ■ A 0 ■ - 0 ■ A1**
Z.29-Z19													
1 114	1.3	140	3 710	-	0.02	362142/325		✓					**2KJ4120 - ■ ■ A 0 ■ - 0 ■ P1**
987	1.5	140	3 710	-	0.03	3206709/3250		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ N1**
857	1.7	140	3 710	-	0.04	2786157/3250		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ M1**
779	1.9	140	3 710	-	0.05	253287/325		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ L1**
663	2.2	140	3 710	-	0.07	2155329/3250		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ K1**
603	2.4	140	3 710	-	0.08	195939/325		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ J1**
526	2.8	140	3 710	-	0.09	52569/100		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ H1**
471	3.1	140	3 710	-	0.12	152928/325		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ G1**
418	3.5	140	3 710	-	0.15	543213/1300		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ F1**
386	3.8	140	3 710	-	0.18	1629639/4225		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ E1**
335.06	4.3	140	3 710	-	0.20	1524501/4550		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ D1**
291.15	5.0	140	3 710	-	0.21	473121/1625		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ C1**
262.85	5.5	140	3 710	-	0.27	52569/200		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ B1**
247.38	5.9	140	3 710	-	0.32	105138/425		✓	✓				**2KJ4120 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	➞ page 9/43		**1 or 9**						
Adapter size		**KS**	**A**	**E**	**H**	**K**	**M**		**1**
			B	**F**	**J**		**N**		**1**
			C	**G**					**1**
			D						**1**
Adapter type									
Gearbox mounting type	➞ page 9/37		**A, B, F or H**						

Transmission ratios and torques for very low speeds

Selection and ordering data

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
D.39-D19													
8 760	0.17	200	4 370	-	0.08	744588/85		✓					**2KJ4223 - ■ ■ A 0 ■ - 0 ■ A1**
Z.39-D19													
8 075	0.18	200	4 370	-	0.02	201872/25		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ P1**
7 150	0.2	200	4 370	-	0.03	893772/125		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ N1**
6 212	0.23	200	4 370	-	0.04	776556/125		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ M1**
5 648	0.26	200	4 370	-	0.04	141192/25		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ L1**
4 806	0.3	200	4 370	-	0.06	600732/125		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ K1**
4 369	0.33	200	4 370	-	0.07	109224/25		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ J1**
3 810	0.38	200	4 370	-	0.08	95238/25		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ H1**
3 410	0.43	200	4 370	-	0.11	85248/25		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ G1**
3 028	0.48	200	4 370	-	0.13	75702/25		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ F1**
2 795	0.52	200	4 370	-	0.16	908424/325		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ E1**
2 428	0.6	200	4 370	-	0.17	424908/175		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ D1**
2 110	0.69	200	4 370	-	0.18	263736/125		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ C1**
1 905	0.76	200	4 370	-	0.22	47619/25		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ B1**
1 793	0.81	200	4 370	-	0.26	761904/425		✓					**2KJ4123 - ■ ■ A 0 ■ - 0 ■ A1**
Z.39-Z19													
1 528	0.95	200	4 370	-	0.02	38192/25		✓					**2KJ4122 - ■ ■ A 0 ■ - 0 ■ S1**
1 353	1.1	200	4 370	-	0.03	169092/125		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ R1**
1 175	1.2	200	4 370	-	0.04	146916/125		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ Q1**
1 068	1.4	200	4 370	-	0.05	26712/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ P1**
909	1.6	200	4 370	-	0.07	113652/125		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ N1**
827	1.8	200	4 370	-	0.08	20664/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ M1**
721	2.0	200	4 370	-	0.09	18018/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ L1**
645	2.2	200	4 370	-	0.12	16128/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ K1**
573	2.5	200	4 370	-	0.15	14322/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ J1**
529	2.7	200	4 370	-	0.18	171864/325		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ H1**
459	3.2	200	4 370	-	0.20	11484/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ G1**
399	3.6	200	4 370	-	0.21	49896/125		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ F1**
360	4.0	200	4 370	-	0.27	9009/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ E1**
339.16	4.3	200	4 370	-	0.32	144144/425		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ D1**
295.68	4.9	200	4 370	-	0.36	7392/25		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ C1**
272.80	5.3	200	4 370	-	0.19	1364/5		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ B1**
236.97	6.1	200	4 370	-	0.22	8294/35		✓	✓				**2KJ4122 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	→ page 9/43		**1 or 9**						
Adapter size		**KS**	**A**	**E**	**H**	**K**	**M**		**1**
			B	**F**	**J**		**N**		**1**
			C	**G**					**1**
			D						**1**
Adapter type									
Gearbox mounting type	→ page 9/37		**A, B, F or H**						

Selection and ordering data

Gearbox							Adapter							Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
D.49-D19													
13 709	0.11	320	5 780	-	0.06	9980343/728		✓					**2KJ4225 - ■ ■ A0 ■ - 0 ■ D1**
12 463	0.12	320	5 780	-	0.07	49901715/4004		✓					**2KJ4225 - ■ ■ A0 ■ - 0 ■ C1**
10 867	0.13	320	5 780	-	0.08	1217115/112		✓					**2KJ4225 - ■ ■ A0 ■ - 0 ■ B1**
9 727	0.15	320	5 780	-	0.11	9736920/1001		✓					**2KJ4225 - ■ ■ A0 ■ - 0 ■ A1**
Z.49-D19													
9 638	0.15	320	5 900	-	0.02	52625507/5460		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ P1**
8 535	0.17	320	5 900	-	0.03	310660251/36400		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ N1**
7 415	0.20	320	5 900	-	0.04	269917923/36400		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ M1**
6 741	0.22	320	5 900	-	0.04	24537993/3640		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ L1**
5 736	0.25	320	5 900	-	0.06	208804431/36400		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ K1**
5 215	0.28	320	5 900	-	0.07	18982221/3640		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ J1**
4 547	0.32	320	5 900	-	0.08	5092791/1120		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ H1**
4 070	0.36	320	5 900	-	0.11	1851924/455		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ G1**
3 614	0.40	320	5 900	-	0.13	52625507/14560		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ F1**
3 336	0.43	320	5 900	-	0.16	157876521/47320		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ E1**
2 898	0.50	320	5 900	-	0.17	147690939/50960		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ D1**
2 518	0.58	320	5 900	-	0.18	45835119/18200		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ C1**
2 274	0.64	320	5 900	-	0.22	5092791/2240		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ B1**
2 140	0.68	320	5 900	-	0.26	5092791/2380		✓					**2KJ4125 - ■ ■ A0 ■ - 0 ■ A1**
Z.49-Z19													
1 823	0.80	320	5 900	-	0.02	1422311/780		✓					**2KJ4124 - ■ ■ A0 ■ - 0 ■ S1**
1 615	0.90	320	5 900	-	0.03	8396223/5200		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ R1**
1 403	1.0	320	5 900	-	0.04	7295079/5200		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ Q1**
1 275	1.1	320	5 900	-	0.05	663189/520		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ P1**
1 085	1.3	320	5 900	-	0.07	5643363/5200		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ N1**
987	1.5	320	5 900	-	0.08	513033/520		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ M1**
860	1.7	320	5 900	-	0.09	137643/160		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ L1**
770	1.9	320	5 900	-	0.12	50052/65		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ K1**
684	2.1	320	5 900	-	0.15	1422311/2080		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ J1**
631	2.3	320	5 900	-	0.18	4266933/6760		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ H1**
548	2.6	320	5 900	-	0.20	3991647/7280		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ G1**
476	3.0	320	5 900	-	0.21	1238787/2600		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ F1**
430	3.4	320	5 900	-	0.27	137643/320		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ E1**
405	3.6	320	5 900	-	0.32	137643/340		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ D1**
353	4.1	320	5 900	-	0.36	45881/130		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ C1**
325.62	4.5	320	5 900	-	0.19	1422311/4368		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ B1**
282.85	5.1	320	5 900	-	0.22	1330549/4704		✓	✓				**2KJ4124 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	→ page 9/43	**1 or 9**							
Adapter size	**KS**	**A**	**E**	**H**	**K**	**M**			**1**
		B	**F**	**J**		**N**			**1**
		C	**G**						**1**
		D							**1**
Adapter type									
Gearbox mounting type	→ page 9/37	**A, B, F or H**							

Transmission ratios and torques for very low speeds

Selection and ordering data

Gearbox							Adapter							Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
D.59-D19													
14 985	0.10	450	7 660	-	0.06	10908747/728		✓					**2KJ4227 - ■ ■ A 0 ■ - 0 ■ D1**
13 622	0.11	450	7 660	-	0.07	54543735/4004		✓					**2KJ4227 - ■ ■ A 0 ■ - 0 ■ C1**
11 878	0.12	450	7 660	-	0.08	1330335/112		✓					**2KJ4227 - ■ ■ A 0 ■ - 0 ■ B1**
10 632	0.14	450	7 660	-	0.11	10642680/1001		✓					**2KJ4227 - ■ ■ A 0 ■ - 0 ■ A1**
D.59-D19													
739	2.0	450	7 660	-	0.22	579275/784		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ J1**
642	2.3	450	7 660	-	0.23	35955/56		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ H1**
580	2.5	450	7 660	-	0.30	259675/448		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ G1**
546	2.7	450	7 660	-	0.35	15275/28		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ F1**
507	2.9	450	7 660	-	0.20	1362295/2688		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ E1**
440	3.3	450	7 660	-	0.23	16567265/37632		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ D1**
383	3.8	450	7 660	-	0.24	342771/896		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ C1**
345.36	4.2	450	7 660	-	0.31	7426705/21504		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ B1**
325.05	4.5	450	7 660	-	0.37	436865/1344		✓	✓				**2KJ4226 - ■ ■ A 0 ■ - 0 ■ A1**
Z.59-D19													
9 577	0.15	450	7 660	-	0.02	5229173/546		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ P1**
8 480	0.17	450	7 660	-	0.03	30868989/3640		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ N1**
7 368	0.20	450	7 660	-	0.04	26820597/3640		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ M1**
6 698	0.22	450	7 660	-	0.04	26820597/4004		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ L1**
5 700	0.25	450	7 660	-	0.06	20748009/3640		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ K1**
5 182	0.28	450	7 660	-	0.07	20748009/4004		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ J1**
4 518	0.32	450	7 660	-	0.08	506049/112		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ H1**
4 044	0.36	450	7 660	-	0.11	4048392/1001		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ G1**
3 591	0.40	450	7 660	-	0.13	5229173/1456		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ F1**
3 315	0.44	450	7 660	-	0.16	15687519/4732		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ E1**
2 880	0.50	450	7 660	-	0.17	14675421/5096		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ D1**
2 502	0.58	450	7 660	-	0.18	4554441/1820		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ C1**
2 259	0.64	450	7 660	-	0.22	506049/224		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ B1**
2 126	0.68	450	7 660	-	0.26	506049/238		✓					**2KJ4127 - ■ ■ A 0 ■ - 0 ■ A1**
Z.59-Z19													
1 812	0.80	450	7 660	-	0.02	141329/78		✓					**2KJ4126 - ■ ■ A 0 ■ - 0 ■ G1**
1 604	0.90	450	7 660	-	0.03	834297/520		✓	✓				**2KJ4126 - ■ ■ A 0 ■ - 0 ■ F1**
1 394	1.0	450	7 660	-	0.04	724881/520		✓	✓				**2KJ4126 - ■ ■ A 0 ■ - 0 ■ E1**
1 267	1.1	450	7 660	-	0.05	724881/572		✓	✓				**2KJ4126 - ■ ■ A 0 ■ - 0 ■ D1**
1 078	1.3	450	7 660	-	0.07	560757/520		✓	✓				**2KJ4126 - ■ ■ A 0 ■ - 0 ■ C1**
980	1.5	450	7 660	-	0.08	560757/572		✓	✓				**2KJ4126 - ■ ■ A 0 ■ - 0 ■ B1**
855	1.7	450	7 660	-	0.09	13677/16		✓	✓				**2KJ4126 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement												
Shaft design	→ page 9/43	**1 or 9**										
Adapter size	**KS**	**A**	**E**	**H**	**K**	**M**						**1**
		B	**F**	**J**		**N**						**1**
		C	**G**									**1**
		D										**1**
Adapter type												
Gearbox mounting type	→ page 9/37	**A, B, F or H**										

Selection and ordering data

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
D.69-D19													
14 575	0.10	600	11 000	-	0.07	9284040/637		✓					**2KJ4230 - ■ ■ A 0 ■ - 0 ■ C1**
12 708	0.11	600	11 000	-	0.08	622710/49		✓					**2KJ4230 - ■ ■ A 0 ■ - 0 ■ B1**
11 375	0.13	600	11 000	-	0.11	7246080/637		✓					**2KJ4230 - ■ ■ A 0 ■ - 0 ■ A1**
D.69-Z19													
1 532	0.95	600	11 000	-	0.20	976140/637		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ Q1**
1 332	1.1	600	11 000	-	0.21	121176/91		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ P1**
1 202	1.2	600	11 000	-	0.27	8415/7		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ N1**
1 131	1.3	600	11 000	-	0.32	7920/7		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ M1**
986	1.5	600	11 000	-	0.37	89760/91		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ L1**
910	1.6	600	11 000	-	0.19	579700/637		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ K1**
791	1.8	600	11 000	-	0.22	271150/343		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ J1**
687	2.1	600	11 000	-	0.23	33660/49		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ H1**
620	2.3	600	11 000	-	0.30	60775/98		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ G1**
584	2.5	600	11 000	-	0.35	28600/49		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ F1**
542	2.7	600	11 000	-	0.20	318835/588		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ E1**
471	3.1	600	11 000	-	0.23	3877445/8232		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ D1**
409	3.5	600	11 000	-	0.24	80223/196		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ C1**
370	3.9	600	11 000	-	0.31	1738165/4704		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ B1**
347.77	4.2	600	11 000	-	0.37	102245/294		✓	✓				**2KJ4228 - ■ ■ A 0 ■ - 0 ■ A1**
Z.69-D19													
10 247	0.14	600	11 000	-	0.02	19581584/1911		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ Q1**
9 073	0.16	600	11 000	-	0.03	28898628/3185		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ P1**
7 883	0.18	600	11 000	-	0.04	25108644/3185		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ N1**
7 167	0.2	600	11 000	-	0.04	4565208/637		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ M1**
6 098	0.24	600	11 000	-	0.06	19423668/3185		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ L1**
5 544	0.26	600	11 000	-	0.07	3531576/637		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ K1**
4 834	0.3	600	11 000	-	0.08	236874/49		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ J1**
4 327	0.34	600	11 000	-	0.11	2756352/637		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ H1**
3 843	0.38	600	11 000	-	0.13	2447698/637		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ G1**
3 547	0.41	600	11 000	-	0.16	29372376/8281		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ F1**
3 081	0.47	600	11 000	-	0.17	13738692/4459		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ E1**
2 677	0.54	600	11 000	-	0.18	8527464/3185		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ D1**
2 417	0.6	600	11 000	-	0.22	118437/49		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ C1**
2 275	0.64	600	11 000	-	0.26	1894992/833		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ B1**
1 983	0.73	600	11 000	-	0.29	1263328/637		✓					**2KJ4130 - ■ ■ A 0 ■ - 0 ■ A1**
Z.69-Z19													
1 939	0.75	600	11 000	-	0.02	529232/273		✓					**2KJ4128 - ■ ■ A 0 ■ - 0 ■ B1**
1 717	0.84	600	11 000	-	0.03	781044/455		✓	✓				**2KJ4128 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement												
Shaft design	→ page 9/43	**1 or 9**										
Adapter size		**KS**	**A**	**E**	**H**	**K**	**M**					**1**
			B	**F**	**J**		**N**					**1**
			C	**G**								**1**
			D									**1**
Adapter type												
Gearbox mounting type	→ page 9/37	**A, B, F or H**										

Transmission ratios and torques for very low speeds

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.79-D39																
15 344	0.09	840	13 400	-	0.21	5738565/374			✓	✓	✓	✓	✓	✓			**2KJ4232 - ■ ■ A0 ■ - 0 ■ D1**
13 434	0.11	840	13 400	-	0.25	6394401/476			✓	✓	✓	✓	✓	✓			**2KJ4232 - ■ ■ A0 ■ - 0 ■ C1**
11 778	0.12	840	13 400	-	0.23	22025159/1870			✓	✓	✓	✓	✓	✓			**2KJ4232 - ■ ■ A0 ■ - 0 ■ B1**
10 686	0.14	840	13 400	-	0.33	31972005/2992			✓	✓	✓	✓	✓	✓			**2KJ4232 - ■ ■ A0 ■ - 0 ■ A1**
Z.79-D39																
10 451	0.14	840	13 400	-	0.03	47969467/4590			✓	✓							**2KJ4132 - ■ ■ A0 ■ - 0 ■ R1**
9 269	0.16	840	13 400	-	0.05	2085629/225			✓	✓							**2KJ4132 - ■ ■ A0 ■ - 0 ■ Q1**
8 043	0.18	840	13 400	-	0.05	123052111/15300			✓	✓							**2KJ4132 - ■ ■ A0 ■ - 0 ■ P1**
7 311	0.20	840	13 400	-	0.07	123052111/16830			✓	✓	✓	✓					**2KJ4132 - ■ ■ A0 ■ - 0 ■ N1**
6 271	0.23	840	13 400	-	0.08	47969467/7650			✓	✓	✓	✓					**2KJ4132 - ■ ■ A0 ■ - 0 ■ M1**
5 700	0.25	840	13 400	-	0.10	47969467/8415			✓	✓	✓	✓					**2KJ4132 - ■ ■ A0 ■ - 0 ■ L1**
4 998	0.29	840	13 400	-	0.12	22941919/4590			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ K1**
4 461	0.33	840	13 400	-	0.15	4171258/935			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ J1**
3 976	0.36	840	13 400	-	0.17	14599403/3672			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ H1**
3 670	0.40	840	13 400	-	0.21	1123031/306			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ G1**
3 213	0.45	840	13 400	-	0.25	3277417/1020			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ F1**
2 817	0.51	840	13 400	-	0.23	64654499/22950			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ E1**
2 556	0.57	840	13 400	-	0.33	2085629/816			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ D1**
2 406	0.60	840	13 400	-	0.39	2085629/867			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ C1**
2 120	0.68	840	13 400	-	0.43	14599403/6885			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ B1**
1 840	0.79	840	13 400	-	0.58	6256887/3400			✓	✓	✓	✓	✓	✓			**2KJ4132 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/43	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			1
			C		G						1
			D								1
	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	→ page 9/37	A, B, F or H									

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
Z.79-Z39																
2 485	0.58	840	13 400	-	0.06	4025749/1620		✓	✓							2KJ4131 - ■ ■ A0 ■ - 0 ■ T1
2 210	0.66	840	13 400	-	0.07	1988623/900		✓	✓	✓	✓					2KJ4131 - ■ ■ A0 ■ - 0 ■ S1
1 940	0.75	840	13 400	-	0.08	48503/25		✓	✓	✓	✓					2KJ4131 - ■ ■ A0 ■ - 0 ■ R1
1 764	0.82	840	13 400	-	0.10	97006/55		✓	✓	✓	✓					2KJ4131 - ■ ■ A0 ■ - 0 ■ Q1
1 509	0.96	840	13 400	-	0.12	339521/225		✓	✓	✓	✓					2KJ4131 - ■ ■ A0 ■ - 0 ■ P1
1 372	1.1	840	13 400	-	0.14	679042/495		✓	✓	✓	✓					2KJ4131 - ■ ■ A0 ■ - 0 ■ N1
1 213	1.2	840	13 400	-	0.17	48503/40		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ M1
1 102	1.3	840	13 400	-	0.22	48503/44		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ L1
966	1.5	840	13 400	-	0.26	2085629/2160		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ K1
891	1.6	840	13 400	-	0.31	160433/180		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ J1
789	1.8	840	13 400	-	0.36	284089/360		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ H1
657	2.2	840	13 400	-	0.48	630539/960		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ G1
618	2.3	840	13 400	-	0.56	630539/1020		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ F1
554	2.6	840	13 400	-	0.61	1794611/3240		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ E1
472	3.1	840	13 400	-	0.79	339521/720		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ D1
455	3.2	840	13 400	-	0.36	21853/48		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ C1
379	3.8	840	13 400	-	0.48	48503/128		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ B1
357	4.1	840	13 400	-	0.56	48503/136		✓	✓	✓	✓	✓	✓			2KJ4131 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/43	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			1
			C		G						1
			D								1
	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	➞ page 9/37	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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.89-D39																
16 496	0.09	1 680	18 500	-	0.12	214526312/13005		✓	✓	✓	✓	✓	✓			**2KJ4234 - ■ ■ A0 ■ - 0 ■ B1**
14 723	0.1	1 680	18 500	-	0.15	234028704/15895		✓	✓	✓	✓	✓	✓			**2KJ4234 - ■ ■ A0 ■ - 0 ■ A1**
D.89-Z39																
715	2.0	1 680	18 500	-	0.63	6987123/9775		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ H1**
673	2.2	1 680	18 500	-	0.73	111793968/166175		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ G1**
603	2.4	1 680	18 500	-	0.83	17676824/29325		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ F1**
513	2.8	1 680	18 500	-	1.09	5016396/9775		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ E1**
480	3.0	1 680	18 500	-	0.66	1270386/2645		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ D1**
452	3.2	1 680	18 500	-	0.77	20326176/44965		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ C1**
405	3.6	1 680	18 500	-	0.87	3213968/7935		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ B1**
345	4.2	1 680	18 500	-	1.15	912072/2645		✓	✓	✓	✓	✓	✓			**2KJ4233 - ■ ■ A0 ■ - 0 ■ A1**
Z.89-D39																
13 495	0.11	1 680	18 500	-	0.03	464574838/34425		✓	✓							**2KJ4134 - ■ ■ A0 ■ - 0 ■ N1**
11 970	0.12	1 680	18 500	-	0.05	40397812/3375		✓	✓							**2KJ4134 - ■ ■ A0 ■ - 0 ■ M1**
10 385	0.14	1 680	18 500	-	0.05	595867727/57375		✓	✓							**2KJ4134 - ■ ■ A0 ■ - 0 ■ L1**
9 441	0.15	1 680	18 500	-	0.07	1191735454/126225		✓	✓	✓	✓					**2KJ4134 - ■ ■ A0 ■ - 0 ■ K1**
8 097	0.18	1 680	18 500	-	0.08	464574838/57375		✓	✓	✓	✓					**2KJ4134 - ■ ■ A0 ■ - 0 ■ J1**
7 361	0.20	1 680	18 500	-	0.1	929149676/126225		✓	✓	✓	✓					**2KJ4134 - ■ ■ A0 ■ - 0 ■ H1**
6 454	0.22	1 680	18 500	-	0.12	222187966/34425		✓	✓	✓	✓	✓	✓			**2KJ4134 - ■ ■ A0 ■ - 0 ■ G1**
5 761	0.25	1 680	18 500	-	0.15	80795624/14025		✓	✓	✓	✓	✓	✓			**2KJ4134 - ■ ■ A0 ■ - 0 ■ F1**
5 134	0.28	1 680	18 500	-	0.17	70696171/13770		✓	✓	✓	✓	✓	✓			**2KJ4134 - ■ ■ A0 ■ - 0 ■ E1**
4 739	0.31	1 680	18 500	-	0.21	10876334/2295		✓	✓	✓	✓	✓	✓			**2KJ4134 - ■ ■ A0 ■ - 0 ■ D1**
4 149	0.35	1 680	18 500	-	0.25	15870569/3825		✓	✓	✓	✓	✓	✓			**2KJ4134 - ■ ■ A0 ■ - 0 ■ C1**
3 638	0.40	1 680	18 500	-	0.23	626166086/172125		✓	✓	✓	✓	✓	✓			**2KJ4134 - ■ ■ A0 ■ - 0 ■ B1**
3 300	0.44	1 680	18 500	-	0.33	10099453/3060		✓	✓	✓	✓	✓	✓			**2KJ4134 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/43	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			1
			C		G						1
			D								1
	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	➞ page 9/37	A, B, F or H									

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										
							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		**5.3**					
									4.2							
							K5		**56**		**140**	**180**		**210**	**250**	
							K3		**56**		**140**	**180**		**210**	**250**	
							A/AZ			**80**	**90**	**100**	**112**	**132**	**160**	
Z.89-Z39																
3 209	0.45	1 680	18 500	-	0.06	19494293/6075		✓	✓							**2KJ4133 - ■ ■ A0 ■ - 0 ■ N1**
2 853	0.51	1 680	18 500	-	0.07	9629711/3375		✓	✓	✓	✓					**2KJ4133 - ■ ■ A0 ■ - 0 ■ M1**
2 505	0.58	1 680	18 500	-	0.08	939484/375		✓	✓	✓	✓					**2KJ4133 - ■ ■ A0 ■ - 0 ■ .L1**
2 278	0.64	1 680	18 500	-	0.10	1878968/825		✓	✓	✓	✓					**2KJ4133 - ■ ■ A0 ■ - 0 ■ K1**
1 949	0.74	1 680	18 500	-	0.12	6576388/3375		✓	✓	✓	✓					**2KJ4133 - ■ ■ A0 ■ - 0 ■ J1**
1 771	0.82	1 680	18 500	-	0.14	13152776/7425		✓	✓	✓	✓					**2KJ4133 - ■ ■ A0 ■ - 0 ■ H1**
1 566	0.93	1 680	18 500	-	0.17	234871/150		✓	✓	✓	✓	✓	✓			**2KJ4133 - ■ ■ A0 ■ - 0 ■ G1**
1 423	1.0	1 680	18 500	-	0.22	234871/165		✓	✓	✓	✓	✓	✓			**2KJ4133 - ■ ■ A0 ■ - 0 ■ F1**
1 247	1.2	1 680	18 500	-	0.26	10099453/8100		✓	✓	✓	✓	✓	✓			**2KJ4133 - ■ ■ A0 ■ - 0 ■ E1**
1 151	1.3	1 680	18 500	-	0.31	776881/675		✓	✓	✓	✓	✓	✓			**2KJ4133 - ■ ■ A0 ■ - 0 ■ D1**
1 019	1.4	1 680	18 500	-	0.36	1375673/1350		✓	✓	✓	✓	✓	✓			**2KJ4133 - ■ ■ A0 ■ - 0 ■ C1**
848	1.7	1 680	18 500	-	0.48	3053323/3600		✓	✓	✓	✓	✓	✓			**2KJ4133 - ■ ■ A0 ■ - 0 ■ B1**
798	1.8	1 680	18 500	-	0.56	3053323/3825		✓	✓	✓	✓	✓	✓			**2KJ4133 - ■ ■ A0 ■ - 0 ■ A1**
D.109-D39																
19 321	0.08	3 100	20 200	-	0.05	59992439/3105		✓	✓							**2KJ4236 - ■ ■ A0 ■ - 0 ■ T1**
17 565	0.08	3 100	20 200	-	0.07	119984878/6831		✓	✓	✓	✓					**2KJ4236 - ■ ■ A0 ■ - 0 ■ S1**
15 064	0.1	3 100	20 200	-	0.08	2033642/135		✓	✓	✓	✓					**2KJ4236 - ■ ■ A0 ■ - 0 ■ R1**
13 695	0.11	3 100	20 200	-	0.10	4067284/297		✓	✓	✓	✓					**2KJ4236 - ■ ■ A0 ■ - 0 ■ Q1**
12 008	0.12	3 100	20 200	-	0.12	22370062/1863		✓	✓	✓	✓	✓	✓			**2KJ4236 - ■ ■ A0 ■ - 0 ■ P1**
10 717	0.14	3 100	20 200	-	0.15	8134568/759		✓	✓	✓	✓	✓	✓			**2KJ4236 - ■ ■ A0 ■ - 0 ■ N1**
9 551	0.15	3 100	20 200	-	0.18	35588735/3726		✓	✓	✓	✓	✓	✓			**2KJ4236 - ■ ■ A0 ■ - 0 ■ M1**
8 817	0.16	3 100	20 200	-	0.21	5475190/621		✓	✓	✓	✓	✓	✓			**2KJ4236 - ■ ■ A0 ■ - 0 ■ L1**
7 719	0.19	3 100	20 200	-	0.25	11185031/1449		✓	✓	✓	✓	✓	✓			**2KJ4236 - ■ ■ A0 ■ - 0 ■ K1**
6 768	0.21	3 100	20 200	-	0.23	63042902/9315		✓	✓	✓	✓	✓	✓			**2KJ4236 - ■ ■ A0 ■ - 0 ■ J1**
6 140	0.24	3 100	20 200	-	0.33	5084105/828		✓	✓	✓	✓	✓	✓			**2KJ4236 - ■ ■ A0 ■ - 0 ■ H1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/43	**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**		**1**
			C		**G**					**1**
			D							**1**
	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	➞ page 9/37	**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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.109-Z39																
5 970	0.24	3 100	20 200	-	0.06	33365917/5589		✓	✓							2KJ4235 - ■ ■ A0 ■ - 0 ■ A2
5 308	0.27	3 100	20 200	-	0.07	16481959/3105		✓	✓	✓	✓					2KJ4235 - ■ ■ A0 ■ - 0 ■ X1
4 661	0.31	3 100	20 200	-	0.09	1607996/345		✓	✓	✓	✓					2KJ4235 - ■ ■ A0 ■ - 0 ■ W1
4 237	0.34	3 100	20 200	-	0.10	3215992/759		✓	✓	✓	✓					2KJ4235 - ■ ■ A0 ■ - 0 ■ V1
3 625	0.4	3 100	20 200	-	0.12	11255972/3105		✓	✓	✓	✓					2KJ4235 - ■ ■ A0 ■ - 0 ■ U1
3 296	0.44	3 100	20 200	-	0.15	22511944/6831		✓	✓	✓	✓					2KJ4235 - ■ ■ A0 ■ - 0 ■ T1
2 913	0.5	3 100	20 200	-	0.17	401999/138		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ S1
2 648	0.55	3 100	20 200	-	0.23	2009995/759		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ R1
2 320	0.62	3 100	20 200	-	0.27	17285957/7452		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ Q1
2 141	0.68	3 100	20 200	-	0.32	1329689/621		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ P1
1 896	0.76	3 100	20 200	-	0.38	16481959/8694		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ N1
1 578	0.92	3 100	20 200	-	0.50	5225987/3312		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ M1
1 485	0.98	3 100	20 200	-	0.59	307411/207		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ L1
1 331	1.1	3 100	20 200	-	0.64	14873963/11178		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ K1
1 133	1.3	3 100	20 200	-	0.84	2813993/2484		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ J1
971	1.5	3 100	20 200	-	1.10	401999/414				✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ H1
836	1.7	3 100	20 200	-	1.40	12461969/14904				✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ G1
690	2.1	3 100	20 200	-	0.73	122609695/177744		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ F1
649	2.2	3 100	20 200	-	0.84	7212335/11109		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ E1
582	2.5	3 100	20 200	-	0.96	348966055/599886		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ D1
495	2.9	3 100	20 200	-	1.28	9431515/19044		✓	✓	✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ C1
424	3.4	3 100	20 200	-	1.69	9431515/22218				✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ B1
366	4	3 100	20 200	-	2.20	292376965/799848				✓	✓	✓	✓			2KJ4235 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/43				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			1
			C		G						1
			D								1
	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	➞ page 9/37				A, B, F or H						

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.129-D49																
19 506	0.07	5 000	27 000	-	0.12	1643206859/84240			✓	✓	✓	✓					**2KJ4238 - ■ ■ A0 ■ - 0 ■ L1**
17 733	0.08	5 000	27 000	-	0.14	1643206859/92664			✓	✓	✓	✓					**2KJ4238 - ■ ■ A0 ■ - 0 ■ K1**
15 675	0.09	5 000	27 000	-	0.17	234743837/14976			✓	✓	✓	✓	✓	✓			**2KJ4238 - ■ ■ A0 ■ - 0 ■ J1**
14 250	0.1	5 000	27 000	-	0.22	1173719185/82368			✓	✓	✓	✓	✓	✓			**2KJ4238 - ■ ■ A0 ■ - 0 ■ H1**
12 482	0.12	5 000	27 000	-	0.26	10093984991/808704			✓	✓	✓	✓	✓	✓			**2KJ4238 - ■ ■ A0 ■ - 0 ■ G1**
11 522	0.13	5 000	27 000	-	0.31	10093984991/876096			✓	✓	✓	✓	✓	✓			**2KJ4238 - ■ ■ A0 ■ - 0 ■ F1**
10 201	0.14	5 000	27 000	-	0.37	9624497317/943488			✓	✓	✓	✓	✓	✓	✓		**2KJ4238 - ■ ■ A0 ■ - 0 ■ E1**
8 490	0.17	5 000	27 000	-	0.50	234743837/27648			✓	✓	✓	✓	✓	✓	✓		**2KJ4238 - ■ ■ A0 ■ - 0 ■ D1**
7 991	0.18	5 000	27 000	-	0.59	13808461/1728			✓	✓	✓	✓	✓	✓	✓		**2KJ4238 - ■ ■ A0 ■ - 0 ■ C1**
7 160	0.2	5 000	27 000	-	0.65	8685521969/1213056			✓	✓	✓	✓	✓	✓	✓		**2KJ4238 - ■ ■ A0 ■ - 0 ■ B1**
6 096	0.24	5 000	27 000	-	0.85	1643206859/269568			✓	✓	✓	✓	✓	✓	✓		**2KJ4238 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/43			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			1
			C		G						1
			D								1
	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	→ page 9/37	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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.129-Z49																
5 963	0.24	5 000	27 000	-	0.18	1339420717/224640			✓	✓	✓	✓					**2KJ4237 - ■ ■ A0 ■ - 0 ■ B2**
5 420	0.27	5 000	27 000	-	0.21	1339420717/247104			✓	✓	✓	✓					**2KJ4237 - ■ ■ A0 ■ - 0 ■ A2**
4 610	0.31	5 000	27 000	-	0.27	69042305/14976			✓	✓	✓	✓					**2KJ4237 - ■ ■ A0 ■ - 0 ■ X1**
4 191	0.35	5 000	27 000	-	0.32	345211525/82368			✓	✓	✓	✓					**2KJ4237 - ■ ■ A0 ■ - 0 ■ W1**
3 739	0.39	5 000	27 000	-	0.37	1008017653/269568			✓	✓	✓	✓	✓	✓			**2KJ4237 - ■ ■ A0 ■ - 0 ■ V1**
3 353	0.43	5 000	27 000	-	0.45	69042305/20592			✓	✓	✓	✓	✓	✓			**2KJ4237 - ■ ■ A0 ■ - 0 ■ U1**
3 022	0.48	5 000	27 000	-	0.53	814699199/269568			✓	✓	✓	✓	✓	✓			**2KJ4237 - ■ ■ A0 ■ - 0 ■ T1**
2 790	0.52	5 000	27 000	-	0.63	814699199/292032			✓	✓	✓	✓	✓	✓			**2KJ4237 - ■ ■ A0 ■ - 0 ■ S1**
2 547	0.57	5 000	27 000	-	0.74	400445369/157248			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ R1**
2 113	0.69	5 000	27 000	-	0.95	759465355/359424			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ Q1**
1 989	0.73	5 000	27 000	-	1.09	759465355/381888			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ P1**
1 878	0.77	5 000	27 000	-	1.24	759465355/404352			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ N1**
1 598	0.91	5 000	27 000	-	1.53	13808461/8640			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ M1**
1 369	1.1	5 000	27 000	-	1.89	676614589/494208					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ L1**
1 204	1.2	5 000	27 000	-	2.3	648997667/539136					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ K1**
1 016	1.4	5 000	27 000	-	2.9	262360759/258336					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ J1**
885	1.6	5 000	27 000	-	3.9	13808461/15600					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ H1**
873	1.7	5 000	27 000	-	1.51	208411423/238680			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ G1**
825	1.8	5 000	27 000	-	1.71	208411423/252720			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ F1**
702	2.1	5 000	27 000	-	2.2	18946493/27000			✓	✓	✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ E1**
601	2.4	5 000	27 000	-	2.8	928378157/1544400					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ D1**
529	2.7	5 000	27 000	-	3.4	890485171/1684800					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ C1**
446	3.3	5 000	27 000	-	4.5	359983367/807300					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ B1**
389	3.7	5 000	27 000	-	6	18946493/48750					✓	✓	✓	✓	✓		**2KJ4237 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/43	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		1
			C		G					1
			D							1
	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	➞ page 9/37	A, B, F or H								

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.149-D49																
24 180	0.06	8 000	51 200	-	0.08	118481211/4900		✓	✓							**2KJ4241 - ■ ■ A0 ■ - 0 ■ N1**
21 982	0.07	8 000	51 200	-	0.10	118481211/5390		✓	✓	✓	✓					**2KJ4241 - ■ ■ A0 ■ - 0 ■ M1**
18 807	0.08	8 000	51 200	-	0.12	13164579/700		✓	✓	✓	✓					**2KJ4241 - ■ ■ A0 ■ - 0 ■ L1**
17 097	0.08	8 000	51 200	-	0.14	13164579/770		✓	✓	✓	✓					**2KJ4241 - ■ ■ A0 ■ - 0 ■ K1**
15 112	0.10	8 000	51 200	-	0.17	118481211/7840		✓	✓	✓	✓	✓	✓			**2KJ4241 - ■ ■ A0 ■ - 0 ■ J1**
13 739	0.11	8 000	51 200	-	0.22	118481211/8624		✓	✓	✓	✓	✓	✓			**2KJ4241 - ■ ■ A0 ■ - 0 ■ H1**
12 034	0.12	8 000	51 200	-	0.26	188692299/15680		✓	✓	✓	✓	✓	✓			**2KJ4241 - ■ ■ A0 ■ - 0 ■ G1**
11 108	0.13	8 000	51 200	-	0.31	566076897/50960		✓	✓	✓	✓	✓	✓			**2KJ4241 - ■ ■ A0 ■ - 0 ■ F1**
9 835	0.15	8 000	51 200	-	0.37	539747739/54880		✓	✓	✓	✓	✓	✓	✓		**2KJ4241 - ■ ■ A0 ■ - 0 ■ E1**
8 186	0.18	8 000	51 200	-	0.50	513418581/62720		✓	✓	✓	✓	✓	✓	✓		**2KJ4241 - ■ ■ A0 ■ - 0 ■ D1**
7 704	0.19	8 000	51 200	-	0.59	30201093/3920		✓	✓	✓	✓	✓	✓	✓		**2KJ4241 - ■ ■ A0 ■ - 0 ■ C1**
6 903	0.21	8 000	51 200	-	0.66	54121047/7840		✓	✓	✓	✓	✓	✓	✓		**2KJ4241 - ■ ■ A0 ■ - 0 ■ B1**
5 877	0.25	8 000	51 200	-	0.86	13164579/2240		✓	✓	✓	✓	✓	✓	✓		**2KJ4241 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/43	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			1
			C		G						1
			D								1
	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	➞ page 9/37	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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.149-Z49																
5 749	0.25	8 000	51 200	-	0.18	225346617/39200			✓	✓	✓	✓					**2KJ4240 - ■ ■ A0 ■ - 0 ■ B2**
5 226	0.28	8 000	51 200	-	0.22	225346617/43120			✓	✓	✓	✓					**2KJ4240 - ■ ■ A0 ■ - 0 ■ A2**
4 445	0.33	8 000	51 200	-	0.28	6969483/1568			✓	✓	✓	✓					**2KJ4240 - ■ ■ A0 ■ - 0 ■ X1**
4 041	0.36	8 000	51 200	-	0.34	34847415/8624			✓	✓	✓	✓					**2KJ4240 - ■ ■ A0 ■ - 0 ■ W1**
3 605	0.4	8 000	51 200	-	0.39	56530251/15680			✓	✓	✓	✓	✓	✓			**2KJ4240 - ■ ■ A0 ■ - 0 ■ V1**
3 233	0.45	8 000	51 200	-	0.47	6969483/2156			✓	✓	✓	✓	✓	✓			**2KJ4240 - ■ ■ A0 ■ - 0 ■ U1**
2 914	0.5	8 000	51 200	-	0.55	45688833/15680			✓	✓	✓	✓	✓	✓			**2KJ4240 - ■ ■ A0 ■ - 0 ■ T1**
2 690	0.54	8 000	51 200	-	0.66	137066499/50960			✓	✓	✓	✓	✓	✓			**2KJ4240 - ■ ■ A0 ■ - 0 ■ S1**
2 455	0.59	8 000	51 200	-	0.78	67371669/27440			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ R1**
2 037	0.71	8 000	51 200	-	1.0	25554771/12544			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ Q1**
1 917	0.76	8 000	51 200	-	1.16	25554771/13328			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ P1**
1 811	0.80	8 000	51 200	-	1.31	2839419/1568			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ N1**
1 541	0.94	8 000	51 200	-	1.62	30201093/19600			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ M1**
1 320	1.1	8 000	51 200	-	2.0	2323161/1760					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ L1**
1 161	1.2	8 000	51 200	-	2.5	36396189/31360					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ K1**
979	1.5	8 000	51 200	-	3.2	1919133/1960					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ J1**
853	1.7	8 000	51 200	-	4.2	20908449/24500					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ H1**
842	1.7	8 000	51 200	-	1.81	35063523/41650			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ G1**
795	1.8	8 000	51 200	-	2.0	3895947/4900			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ F1**
677	2.1	8 000	51 200	-	2.6	41438709/61250			✓	✓	✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ E1**
580	2.5	8 000	51 200	-	3.4	3187593/5500					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ D1**
510	2.8	8 000	51 200	-	4.3	49938957/98000					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ C1**
430	3.4	8 000	51 200	-	5.7	2633229/6125					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ B1**
375	3.9	8 000	51 200	-	7.5	57376674/153125					✓	✓	✓	✓	✓		**2KJ4240 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/43			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		1
			C		G					1
			D							1
	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	➞ page 9/37			A, B, F or H						

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.169-D69																
23 323	0.06	14 000	70 100	-	0.08	28571136/1225			✓	✓	✓	✓				**2KJ4243 - ■ ■ A0 ■ - 0 ■ N1**
21 203	0.07	14 000	70 100	-	0.10	5194752/245			✓	✓	✓	✓				**2KJ4243 - ■ ■ A0 ■ - 0 ■ M1**
18 140	0.08	14 000	70 100	-	0.12	9523712/525			✓	✓	✓	✓				**2KJ4243 - ■ ■ A0 ■ - 0 ■ L1**
16 491	0.09	14 000	70 100	-	0.15	1731584/105			✓	✓	✓	✓				**2KJ4243 - ■ ■ A0 ■ - 0 ■ K1**
14 577	0.10	14 000	70 100	-	0.17	3571392/245			✓	✓	✓	✓	✓	✓		**2KJ4243 - ■ ■ A0 ■ - 0 ■ J1**
13 252	0.11	14 000	70 100	-	0.23	649344/49			✓	✓	✓	✓	✓	✓		**2KJ4243 - ■ ■ A0 ■ - 0 ■ H1**
11 608	0.12	14 000	70 100	-	0.26	25594976/2205			✓	✓	✓	✓	✓	✓		**2KJ4243 - ■ ■ A0 ■ - 0 ■ G1**
10 715	0.14	14 000	70 100	-	0.32	102379904/9555			✓	✓	✓	✓	✓	✓		**2KJ4243 - ■ ■ A0 ■ - 0 ■ F1**
9 487	0.15	14 000	70 100	-	0.39	48809024/5145			✓	✓	✓	✓	✓	✓	✓	**2KJ4243 - ■ ■ A0 ■ - 0 ■ E1**
7 896	0.18	14 000	70 100	-	0.52	1934504/245			✓	✓	✓	✓	✓	✓	✓	**2KJ4243 - ■ ■ A0 ■ - 0 ■ D1**
7 431	0.2	14 000	70 100	-	0.61	30952064/4165			✓	✓	✓	✓	✓	✓	✓	**2KJ4243 - ■ ■ A0 ■ - 0 ■ C1**
6 659	0.22	14 000	70 100	-	0.68	44047168/6615			✓	✓	✓	✓	✓	✓	✓	**2KJ4243 - ■ ■ A0 ■ - 0 ■ B1**
5 669	0.26	14 000	70 100	-	0.89	595232/105			✓	✓	✓	✓	✓	✓	✓	**2KJ4243 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/43				**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**		**1**
				C		**G**					**1**
				D							**1**
		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	➞ page 9/37				**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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.169-Z.69																
5 545	0.26	14 000	70 100	-	0.21	115475008/20825			✓	✓	✓	✓					**2KJ4242 - ■ ■ A0 ■ - 0 ■ A2**
5 041	0.29	14 000	70 100	-	0.26	20995456/4165			✓	✓	✓	✓					**2KJ4242 - ■ ■ A0 ■ - 0 ■ X1**
4 287	0.34	14 000	70 100	-	0.33	3571392/833			✓	✓	✓	✓					**2KJ4242 - ■ ■ A0 ■ - 0 ■ W1**
3 898	0.37	14 000	70 100	-	0.40	3246720/833			✓	✓	✓	✓					**2KJ4242 - ■ ■ A0 ■ - 0 ■ V1**
3 478	0.42	14 000	70 100	-	0.47	43451936/12495			✓	✓	✓	✓	✓	✓			**2KJ4242 - ■ ■ A0 ■ - 0 ■ U1**
3 118	0.47	14 000	70 100	-	0.57	2597376/833			✓	✓	✓	✓	✓	✓			**2KJ4242 - ■ ■ A0 ■ - 0 ■ T1**
2 811	0.52	14 000	70 100	-	0.67	35118688/12495			✓	✓	✓	✓	✓	✓			**2KJ4242 - ■ ■ A0 ■ - 0 ■ S1**
2 594	0.56	14 000	70 100	-	0.8	140474752/54145			✓	✓	✓	✓	✓	✓			**2KJ4242 - ■ ■ A0 ■ - 0 ■ R1**
2 368	0.61	14 000	70 100	-	0.95	69046912/29155			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ Q1**
1 965	0.74	14 000	70 100	-	1.25	1636888/833			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ P1**
1 849	0.78	14 000	70 100	-	1.44	26190208/14161			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ N1**
1 747	0.83	14 000	70 100	-	1.62	13095104/7497			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ M1**
1 486	0.98	14 000	70 100	-	2.1	30952064/20825			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ L1**
1 273	1.1	14 000	70 100	-	2.6	108224/85			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ K1**
1 119	1.3	14 000	70 100	-	3.2	13987952/12495			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ J1**
944	1.5	14 000	70 100	-	4.2	90475264/95795					✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ H1**
823	1.8	14 000	70 100	-	5.7	85713408/104125					✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ G1**
773	1.9	14 000	70 100	-	3.2	19047424/24633					✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ F1**
658	2.2	14 000	70 100	-	4.3	45021184/68425					✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ E1**
564	2.6	14 000	70 100	-	5.6	12121088/21505			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ D1**
496	2.9	14 000	70 100	-	7.1	20346112/41055			✓	✓	✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ C1**
418	3.5	14 000	70 100	-	9.7	131600384/314755					✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ B1**
364	4.0	14 000	70 100	-	13	124674048/342125					✓	✓	✓	✓	✓		**2KJ4242 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/43				**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		**1**
			C		G					**1**
			D							**1**
	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	➞ page 9/37				**A, B, F or H**					

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.189-D69																
27 816	0.05	19 000	107 000	-	0.07	15994264/575		✓	✓	✓	✓					**2KJ4245 - ■ ■ A0 ■ - 0 ■ P1**
24 424	0.06	19 000	107 000	-	0.09	14043744/575		✓	✓	✓	✓					**2KJ4245 - ■ ■ A0 ■ - 0 ■ N1**
22 204	0.07	19 000	107 000	-	0.11	2553408/115		✓	✓	✓	✓					**2KJ4245 - ■ ■ A0 ■ - 0 ■ M1**
18 996	0.08	19 000	107 000	-	0.12	10922912/575		✓	✓	✓	✓					**2KJ4245 - ■ ■ A0 ■ - 0 ■ L1**
17 269	0.08	19 000	107 000	-	0.15	1985984/115		✓	✓	✓	✓					**2KJ4245 - ■ ■ A0 ■ - 0 ■ K1**
15 265	0.09	19 000	107 000	-	0.18	1755468/115		✓	✓	✓	✓	✓	✓			**2KJ4245 - ■ ■ A0 ■ - 0 ■ J1**
13 877	0.1	19 000	107 000	-	0.23	319176/23		✓	✓	✓	✓	✓	✓			**2KJ4245 - ■ ■ A0 ■ - 0 ■ H1**
12 155	0.12	19 000	107 000	-	0.27	4193618/345		✓	✓	✓	✓	✓	✓			**2KJ4245 - ■ ■ A0 ■ - 0 ■ G1**
11 220	0.13	19 000	107 000	-	0.32	1290344/115		✓	✓	✓	✓	✓	✓			**2KJ4245 - ■ ■ A0 ■ - 0 ■ F1**
9 934	0.15	19 000	107 000	-	0.39	7997132/805		✓	✓	✓	✓	✓	✓	✓		**2KJ4245 - ■ ■ A0 ■ - 0 ■ E1**
8 269	0.18	19 000	107 000	-	0.53	1901757/230		✓	✓	✓	✓	✓	✓	✓		**2KJ4245 - ■ ■ A0 ■ - 0 ■ D1**
7 782	0.19	19 000	107 000	-	0.62	15214056/1955		✓	✓	✓	✓	✓	✓	✓		**2KJ4245 - ■ ■ A0 ■ - 0 ■ C1**
6 973	0.21	19 000	107 000	-	0.69	7216924/1035		✓	✓	✓	✓	✓	✓	✓		**2KJ4245 - ■ ■ A0 ■ - 0 ■ B1**
5 936	0.24	19 000	107 000	-	0.91	682682/115		✓	✓	✓	✓	✓	✓	✓		**2KJ4245 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/43	**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**			**1**
			C		**G**						**1**
			D								**1**
	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	➞ page 9/37	**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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
D.189-Z69																
5 807	0.25	19 000	107 000	-	0.24	56760132/9775		✓	✓	✓	✓					**2KJ4244 - ■ ■ A0 ■ - 0 ■ A2**
5 279	0.27	19 000	107 000	-	0.29	10320024/1955		✓	✓	✓	✓					**2KJ4244 - ■ ■ A0 ■ - 0 ■ X1**
4 490	0.32	19 000	107 000	-	0.37	1755468/391		✓	✓	✓	✓					**2KJ4244 - ■ ■ A0 ■ - 0 ■ W1**
4 082	0.36	19 000	107 000	-	0.45	1595880/391		✓	✓	✓	✓					**2KJ4244 - ■ ■ A0 ■ - 0 ■ V1**
3 642	0.4	19 000	107 000	-	0.53	7119398/1955		✓	✓	✓	✓	✓	✓			**2KJ4244 - ■ ■ A0 ■ - 0 ■ U1**
3 265	0.44	19 000	107 000	-	0.64	1276704/391		✓	✓	✓	✓	✓	✓			**2KJ4244 - ■ ■ A0 ■ - 0 ■ T1**
2 943	0.49	19 000	107 000	-	0.77	5754034/1955		✓	✓	✓	✓	✓	✓			**2KJ4244 - ■ ■ A0 ■ - 0 ■ S1**
2 717	0.53	19 000	107 000	-	0.91	5311416/1955		✓	✓	✓	✓	✓	✓			**2KJ4244 - ■ ■ A0 ■ - 0 ■ R1**
2 480	0.58	19 000	107 000	-	1.08	33939048/13685		✓	✓	✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ Q1**
2 058	0.7	19 000	107 000	-	1.45	1609179/782		✓	✓	✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ P1**
1 937	0.75	19 000	107 000	-	1.65	12873432/6647		✓	✓	✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ N1**
1 829	0.79	19 000	107 000	-	1.87	2145572/1173		✓	✓	✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ M1**
1 556	0.93	19 000	107 000	-	2.4	15214056/9775		✓	✓	✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ L1**
1 333	1.1	19 000	107 000	-	3.1	2606604/1955				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ K1**
1 172	1.2	19 000	107 000	-	3.8	2291861/1955				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ J1**
989	1.5	19 000	107 000	-	5.1	44471856/44965				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ H1**
862	1.7	19 000	107 000	-	6.8	42131232/48875				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ G1**
810	1.8	19 000	107 000	-	4.5	21845824/26979		✓	✓	✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ F1**
689	2.1	19 000	107 000	-	6	154906752/224825		✓	✓	✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ E1**
590	2.5	19 000	107 000	-	8	26539968/44965				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ D1**
519	2.8	19 000	107 000	-	10	23335312/44965				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ C1**
438	3.3	19 000	107 000	-	14	452804352/1034195				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ B1**
382	3.8	19 000	107 000	-	18	428972544/1124125				✓	✓	✓	✓	✓		**2KJ4244 - ■ ■ A0 ■ - 0 ■ A1**

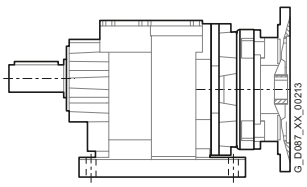
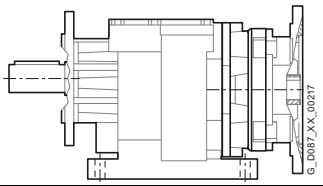
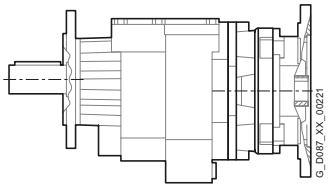
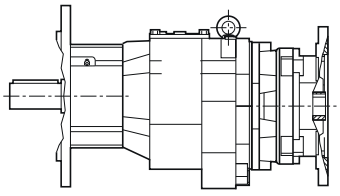
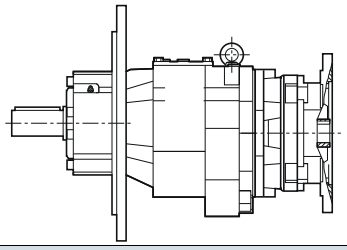
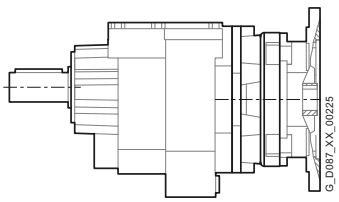
[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/43	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		1
			C		G					1
			D							1
	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	➞ page 9/37	A, B, F or H								

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

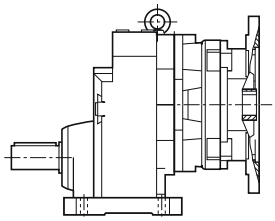
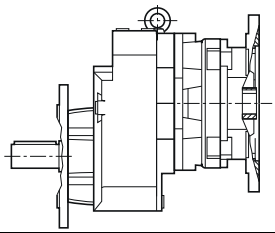
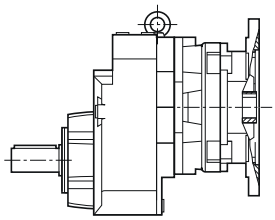
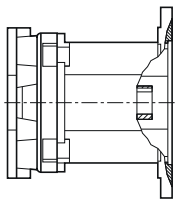
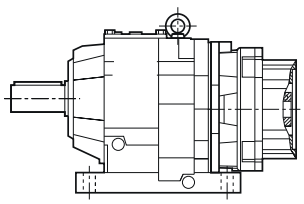
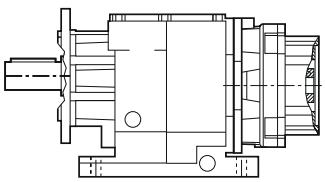
Dimensional drawing overview

Information about dimensional drawings can be found in chapter "Introduction" on page 1/19.

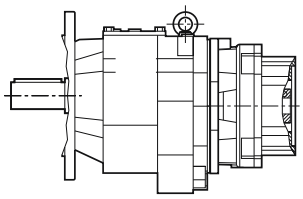
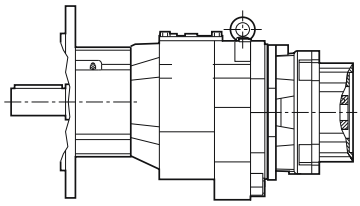
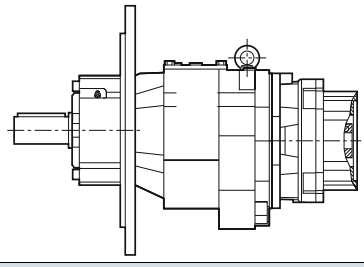
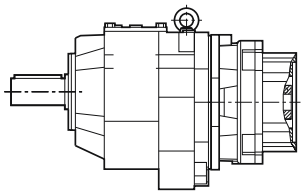
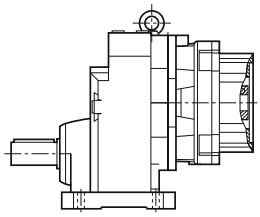
Design	Size	Dimensional drawing on page
Helical gearboxes Z and D with adapter K4		
Foot-mounted design		
	D/Z29	3/58
	D/Z39	3/62
	D/Z49	3/66
	D/Z59	3/69
	D/Z69	3/72
	D/Z79	3/75
	D/Z89	3/78
	D/Z109	3/83
	D/Z129	3/88
	D/Z149	3/93
	D/Z169	3/97
	D/Z189	3/101
Foot/flange-mounted design		
	DB/ZB29	3/59
	DB/ZB39	3/63
	DB/ZB49	3/66
	DB/ZB59	3/69
	DB/ZB69	3/72
	DB/ZB79	3/75
	DB/ZB89	3/78
Flange-mounted design		
	DF/ZF29	3/60
	DF/ZF39	3/64
	DF/ZF49	3/67
	DF/ZF59	3/70
	DF/ZF69	3/73
	DF/ZF79	3/76
	DF/ZF89	3/79
	DF/ZF109	3/84
	DF/ZF129	3/89
	DF/ZF149	3/94
	DF/ZF169	3/98
	DF/ZF189	3/102
Flange-mounted design with VLplus reinforced bearing system		
	DF/ZF89	3/80
	DF/ZF109	3/85
	DF/ZF129	3/90
	DF/ZF149	3/95
	DF/ZF169	3/99
Flange-mounted design with VLplus reinforced bearing system		
	DF/ZF89	3/81
	DF/ZF109	3/86
	DF/ZF129	3/91
	DF/ZF149	3/96
	DF/ZF169	3/100
Housing flange design		
	DZ/ZZ29	3/61
	DZ/ZZ39	3/65
	DZ/ZZ49	3/68
	DZ/ZZ59	3/71
	DZ/ZZ69	3/74
	DZ/ZZ79	3/77
	DZ/ZZ89	3/82
	DZ/ZZ109	3/87
	DZ/ZZ129	3/92

3

Dimensional drawing overview (continued)

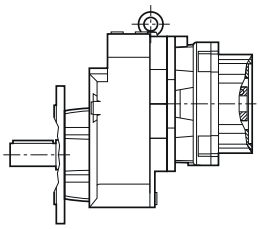
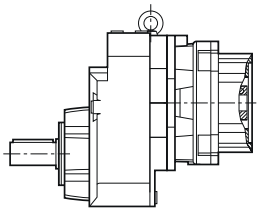
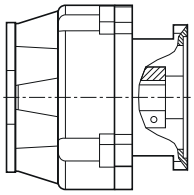
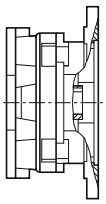
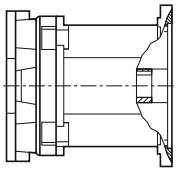
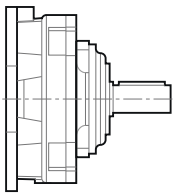
Design	Size	Dimensional drawing on page
Helical gearbox E with adapter K4		
Foot-mounted design		
	E39	3/103
	E49	3/106
	E69	3/109
	E89	3/112
	E109	3/115
	E129	3/118
	E149	3/121
Flange-mounted design		
	EF39	3/104
	EF49	3/107
	EF69	3/110
	EF89	3/113
	EF109	3/116
	EF129	3/119
	EF149	3/122
Housing flange design		
	EZ39	3/105
	EZ49	3/108
	EZ69	3/111
	EZ89	3/114
	EZ109	3/117
	EZ129	3/120
	EZ149	3/123
Helical gearbox with adapter K2		
	D./Z.29 … D./Z.189	3/124 ... 3/126
	E.39 ... E.149	3/126 ... 3/127
Helical gearboxes Z and D with KS adapter		
Foot-mounted design		
	D/Z19	3/128
	D/Z29	3/131
	D/Z39	3/135
	D/Z49	3/139
	D/Z59	3/142
	D/Z69	3/145
	D/Z79	3/148
	D/Z89	3/151
	D/Z109	3/156
	D/Z129	3/161
	D/Z149	3/166
	D/Z169	3/170
	D/Z189	3/174
Foot/flange-mounted design		
	DB/ZB29	3/132
	DB/ZB39	3/136
	DB/ZB49	3/139
	DB/ZB59	3/142
	DB/ZB69	3/145
	DB/ZB79	3/148
	DB/ZB89	3/151

Dimensional drawing overview (continued)

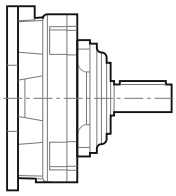
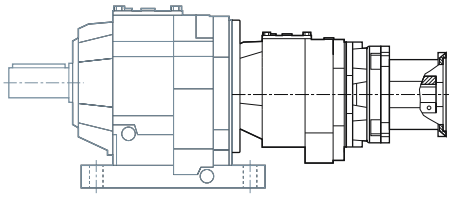
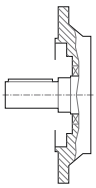
Design	Size	Dimensional drawing on page
Helical gearboxes Z and D with KS adapter		
Flange-mounted design		
	DF/ZF19	3/129
	DF/ZF29	3/133
	DF/ZF39	3/137
	DF/ZF49	3/140
	DF/ZF59	3/143
	DF/ZF69	3/146
	DF/ZF79	3/149
	DF/ZF89	3/152
	DF/ZF109	3/157
	DF/ZF129	3/162
	DF/ZF149	3/167
	DF/ZF169	3/171
	DF/ZF189	3/175
Flange-mounted design with VLplus reinforced bearing system		
	DF/ZF89	3/153
	DF/ZF109	3/158
	DF/ZF129	3/163
	DF/ZF149	3/168
	DF/ZF169	3/172
Flange-mounted design with XLplus reinforced bearing system		
	DF/ZF89	3/154
	DF/ZF109	3/159
	DF/ZF129	3/164
	DF/ZF149	3/169
	DF/ZF169	3/173
Housing flange design		
	DZ/ZZ19	3/130
	DZ/ZZ29	3/134
	DZ/ZZ39	3/138
	DZ/ZZ49	3/141
	DZ/ZZ59	3/144
	DZ/ZZ69	3/147
	DZ/ZZ79	3/150
	DZ/ZZ89	3/155
	DZ/ZZ109	3/160
	DZ/ZZ129	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

3

Dimensional drawing overview (continued)

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

Dimensional drawing overview (continued)

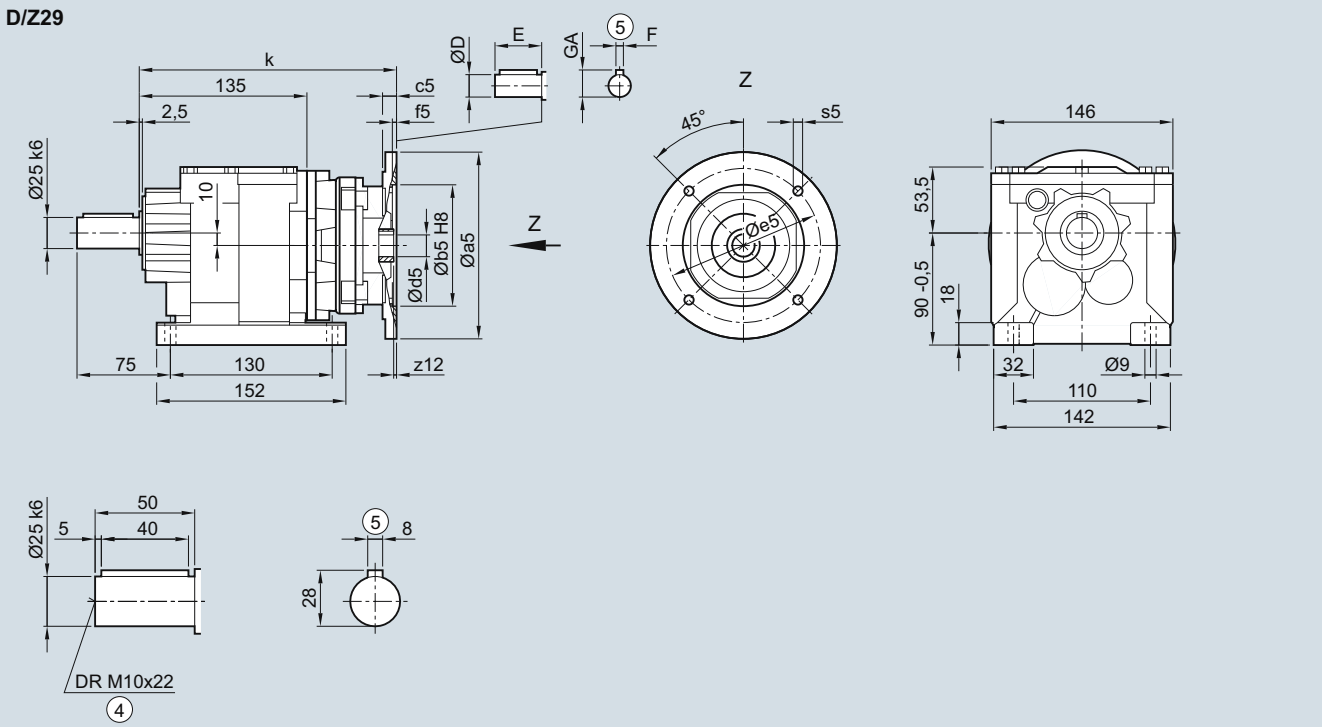
Design		Size	Dimensional drawing on page
Helical gearbox with adapter AZ			
		D./Z.29 … D./Z.189	3/207 ... 3/208
		E.39 ... E.149	3/209 ... 3/210
Helical tandem gearbox	**with adapter**		
	**- K4**	D./Z.79-D/Z39 ... D.189-D/Z69	3/211
	- K2	D./Z.79-D/Z39 ... D.189-D/Z69	3/212
	- KS	D./Z.29-D/Z19 ... D.189-D/Z69	3/213 ... 3/214
	- K5	D./Z.79-D/Z39 ... D.189-D/Z69	3/215
	- K3	D./Z.79-D/Z39 ... D.189-D/Z69	3/216
	- A	D./Z.79-D/Z39 ... D.189-D/Z69	3/217
	- AZ	D./Z.79-D/Z39 ... D.189-D/Z69	3/218
Additional versions and options			
		Inner contour of the flange design	3/219

Dimensions

D/Z29 gearbox in a foot-mounted design

DZ030K4

D/Z29



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
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	295.0

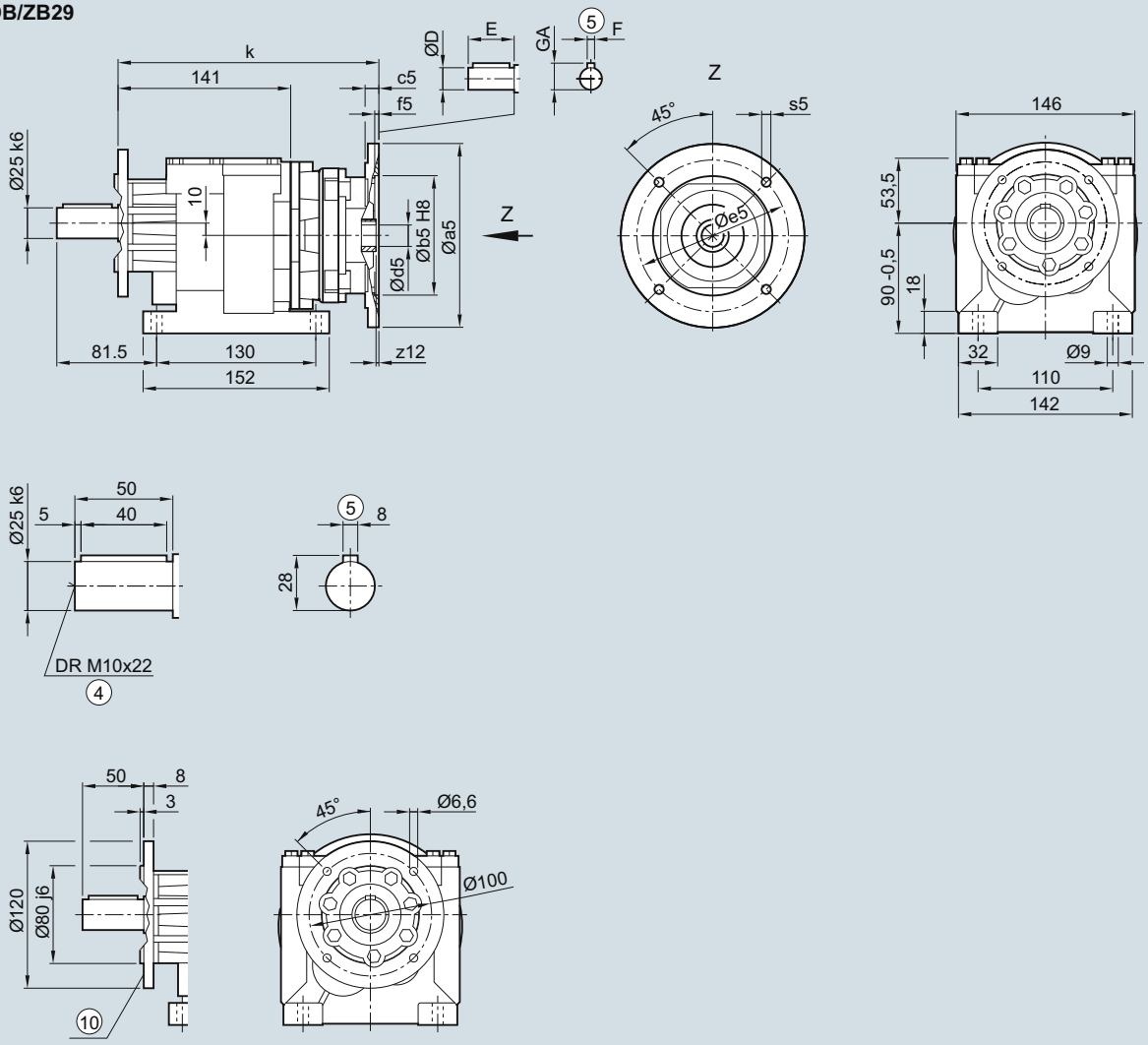
④ DIN 332

⑤ Feather key/keyway DIN 6885

DB/ZB29 gearbox in a foot/flange-mounted design

DZB030K4

DB/ZB29



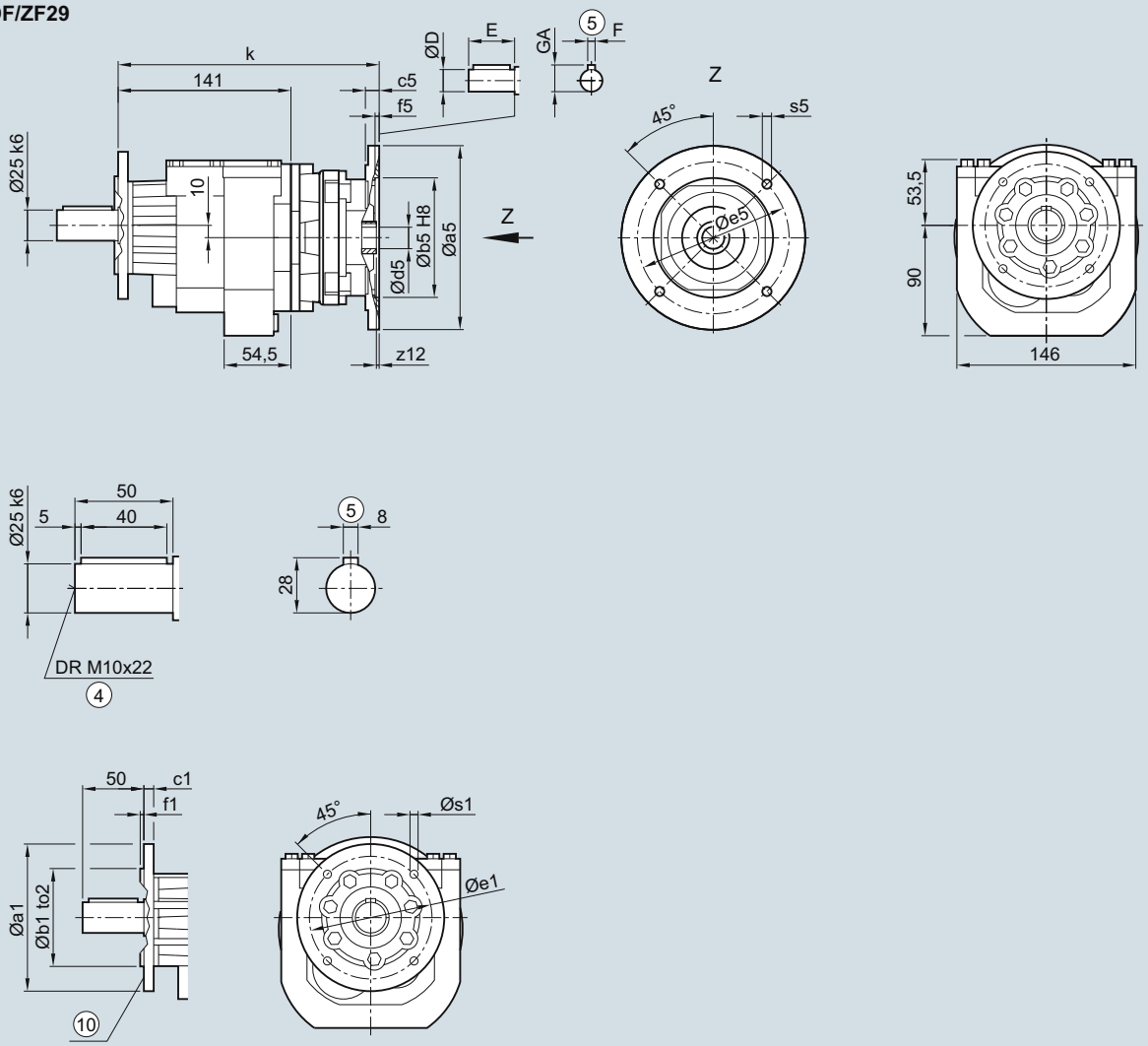
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	218.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	218.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	246.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	246.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	301.0

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DF/ZF29 gearbox in a flange-mounted design

DZF030K4

DF/ZF29



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
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	301.0

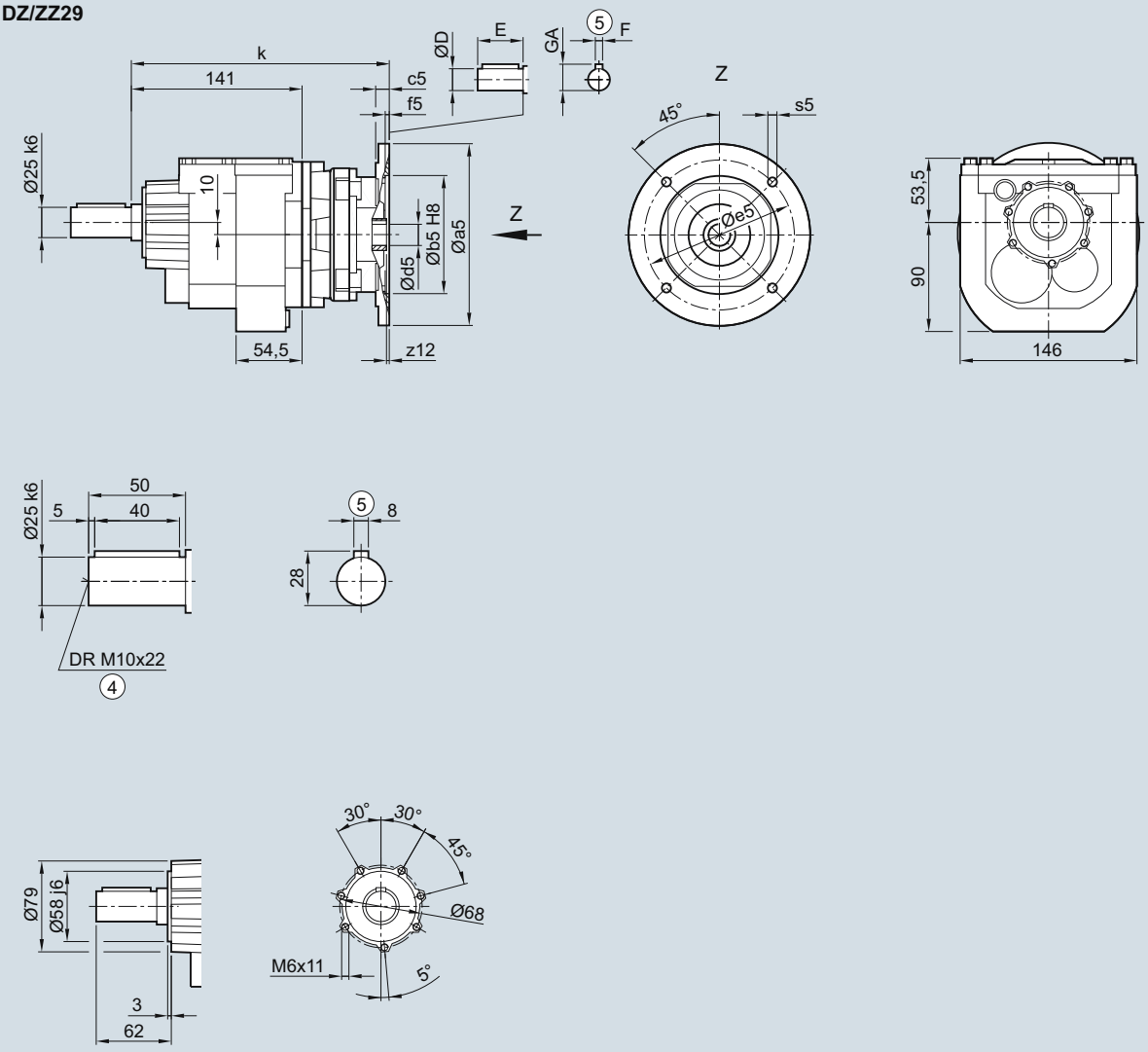
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

3

DZ/ZZ29 gearbox in a housing flange design

DZZ030K4

DZ/ZZ29



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
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	301.0

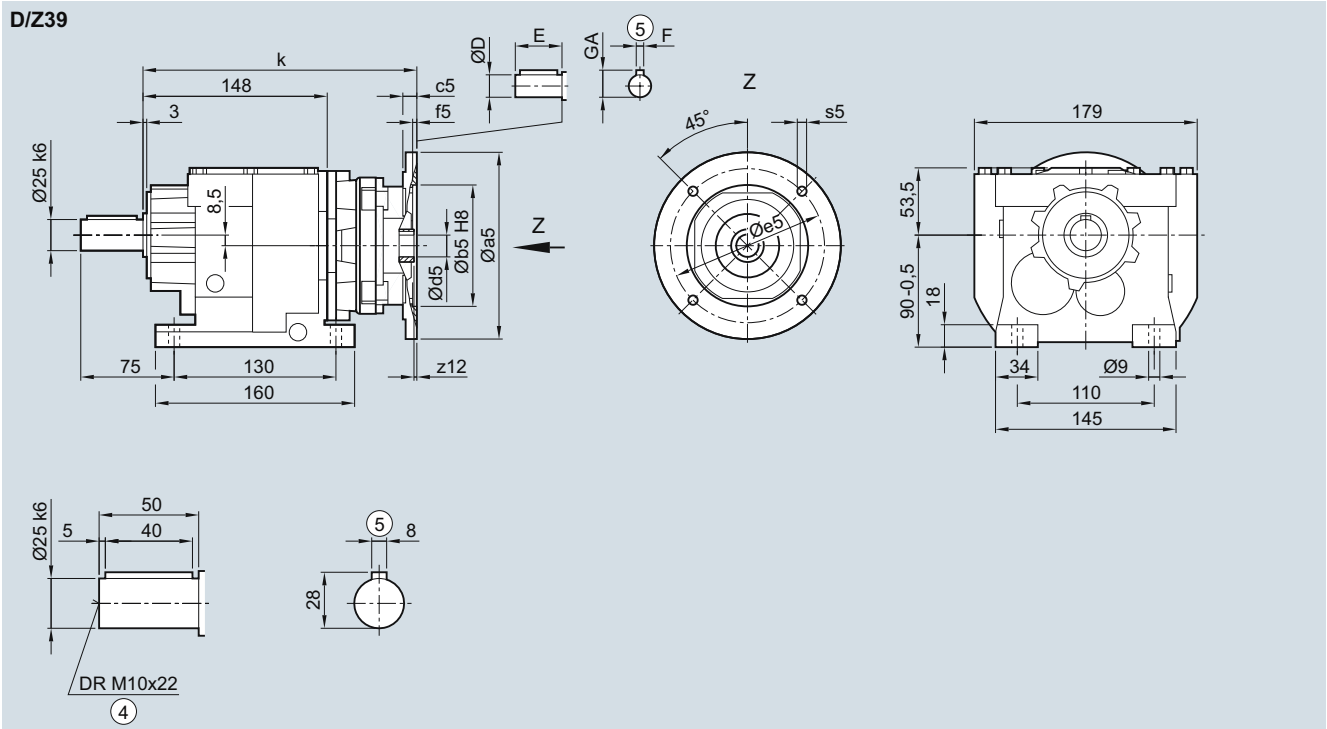
④ DIN 332

⑤ Feather key/keyway DIN 6885

Dimensions

D/Z39 gearbox in a foot-mounted design

DZ030K4



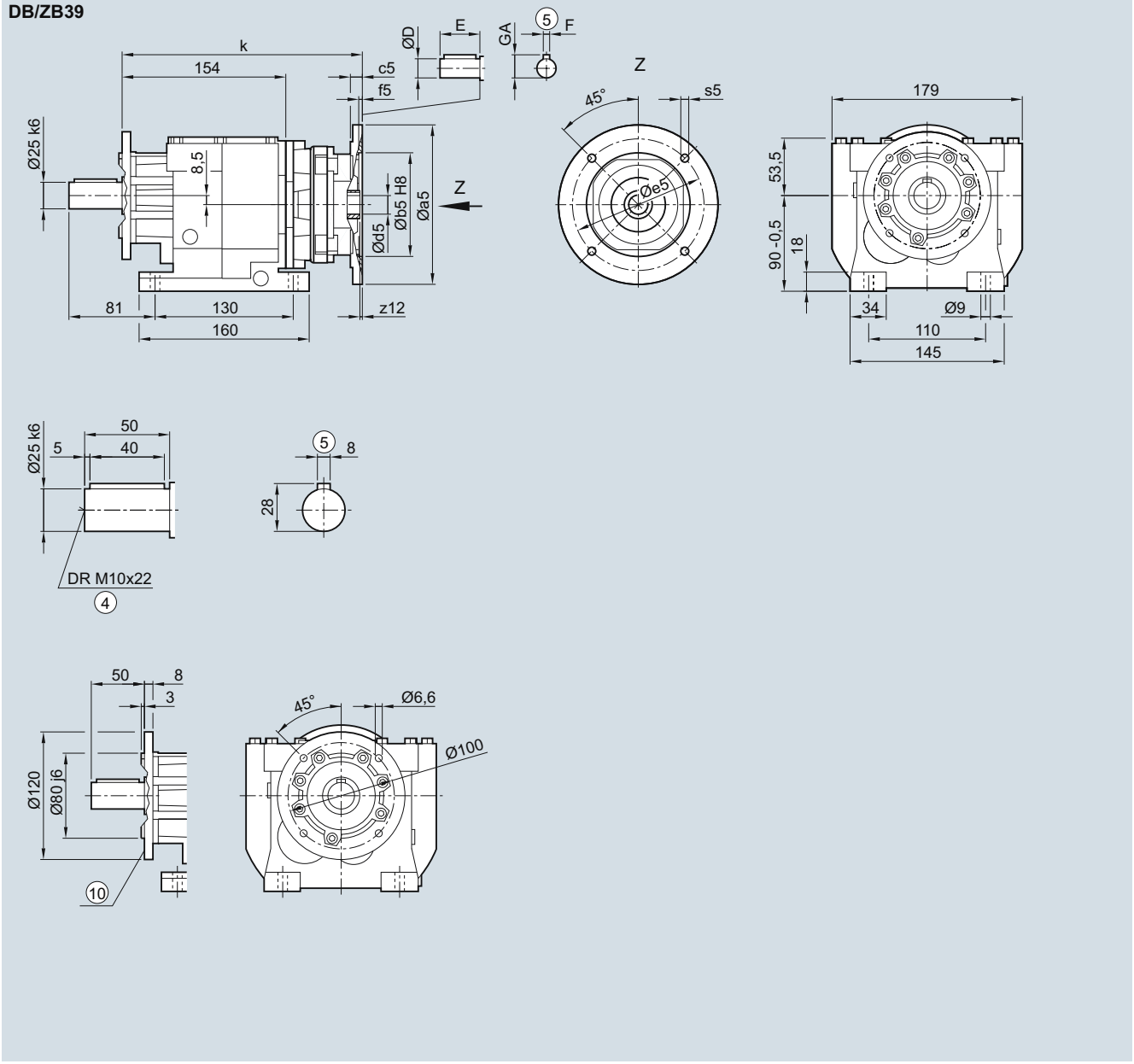
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	225.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	225.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	253.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	308.0

④ DIN 332 ⑤ Feather key/keyway DIN 6885

DB/ZB39 gearbox in a foot/flange-mounted design

DZB030K4

DB/ZB39



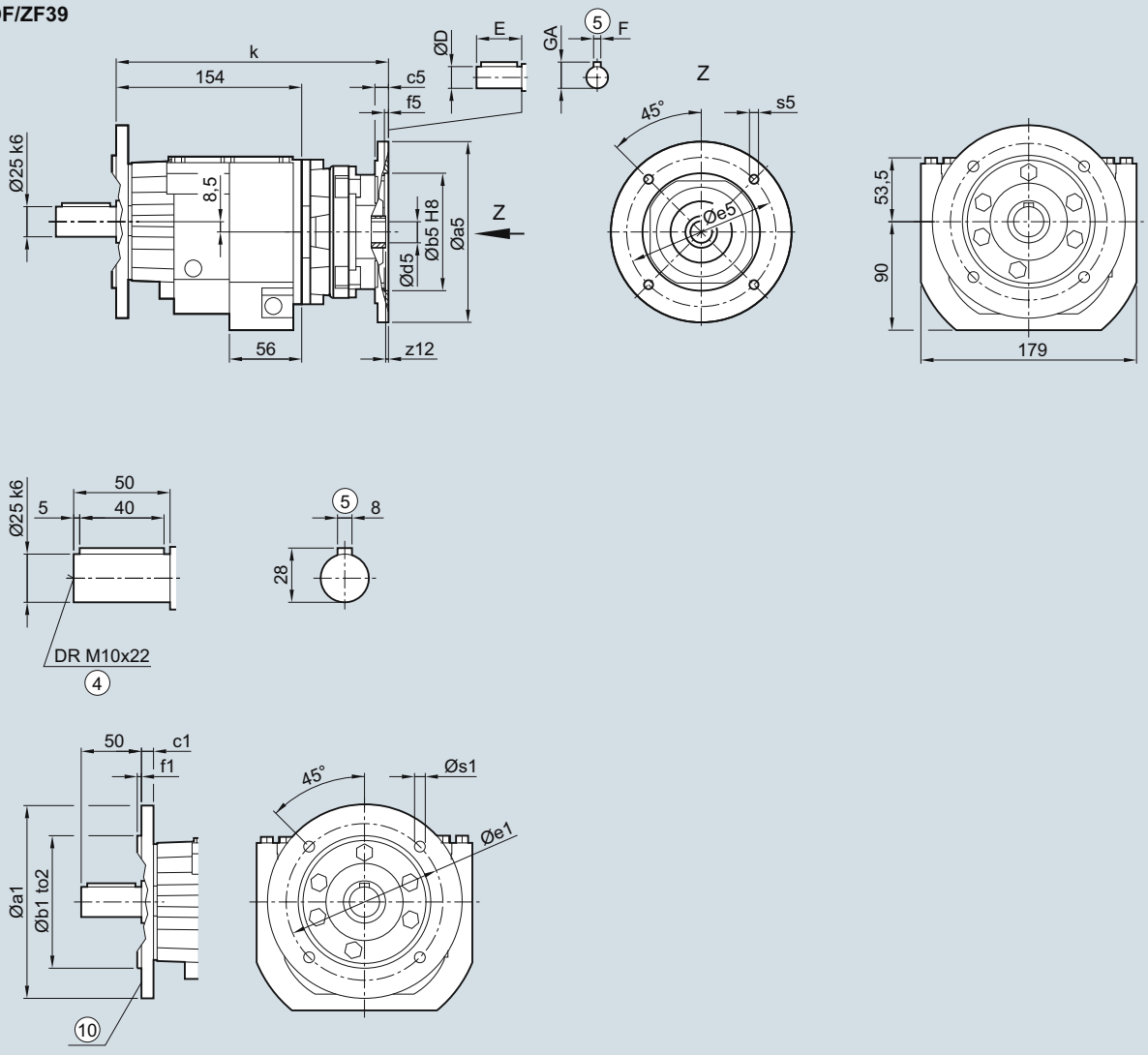
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	231.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	231.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	259.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	259.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	314.0

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DF/ZF39 gearbox in a flange-mounted design

DZF030K4

DF/ZF39



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	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

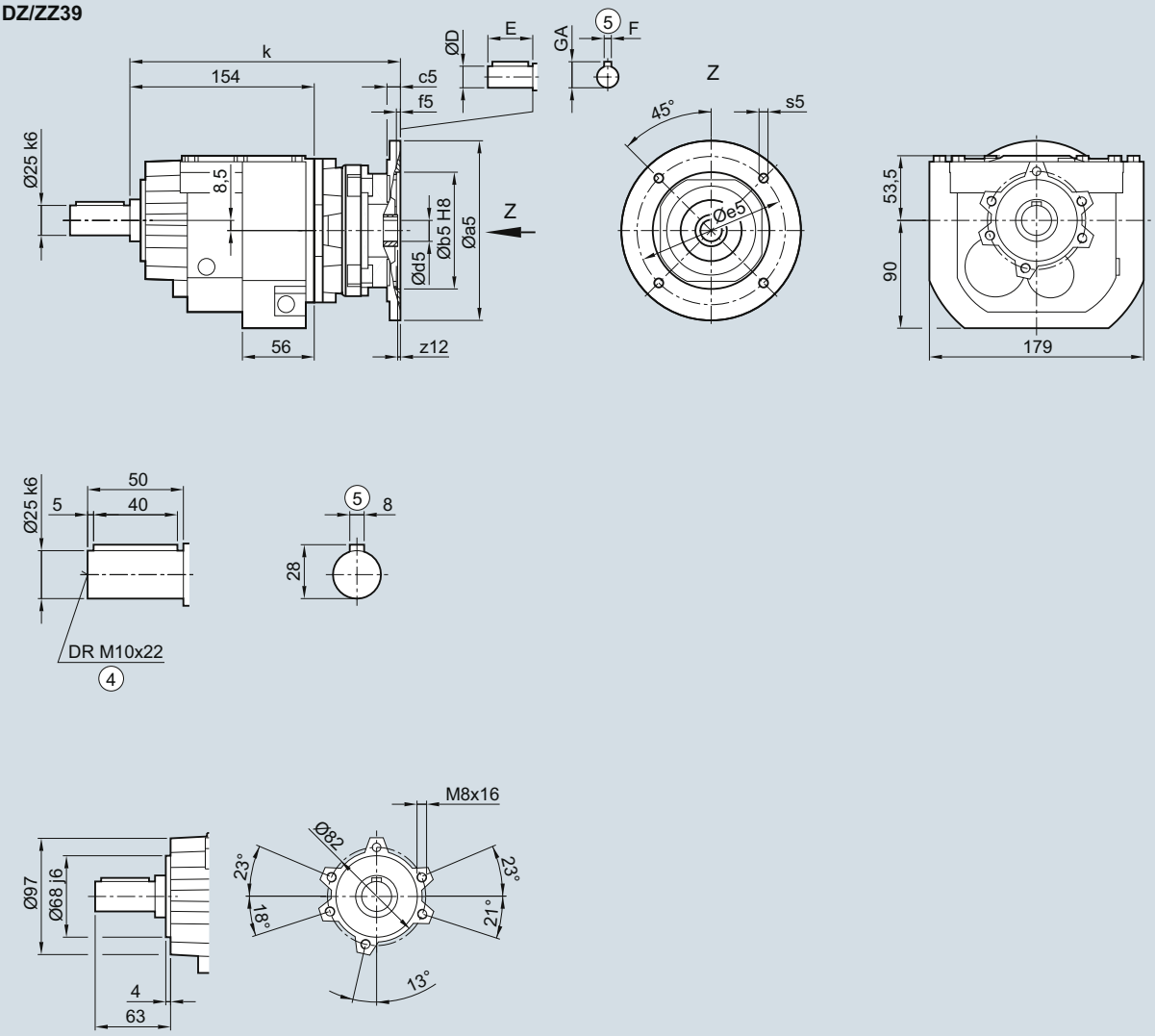
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

3

DZ/ZZ39 gearbox in a housing flange design

DZZ030K4

DZ/ZZ39



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

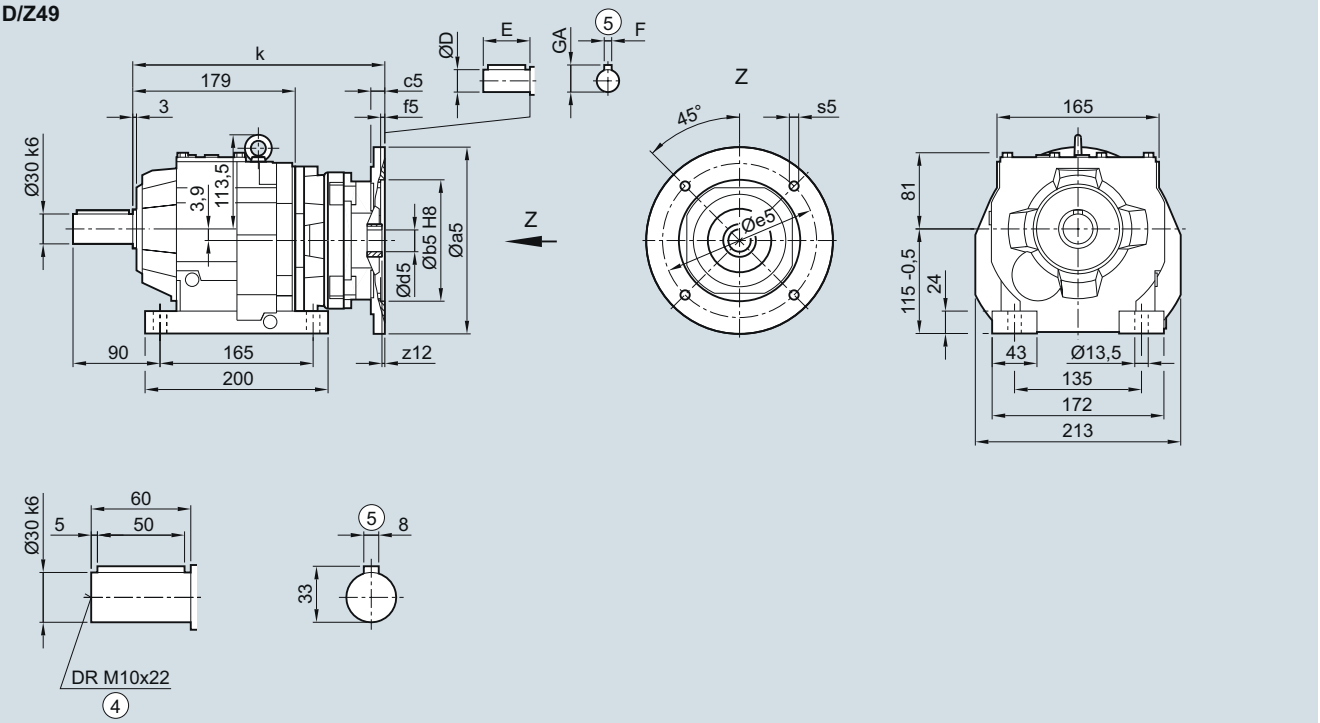
⑤ Feather key/keyway DIN 6885

Dimensions

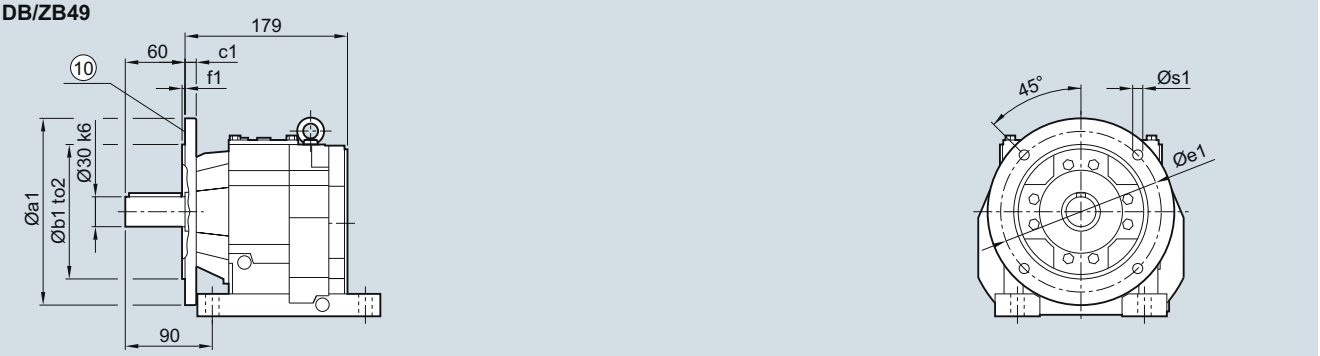
D/Z49 and DB/ZB49 gearboxes in a foot and foot/flange-mounted design

DZ030K4, DZB030K4

D/Z49



DB/ZB49



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

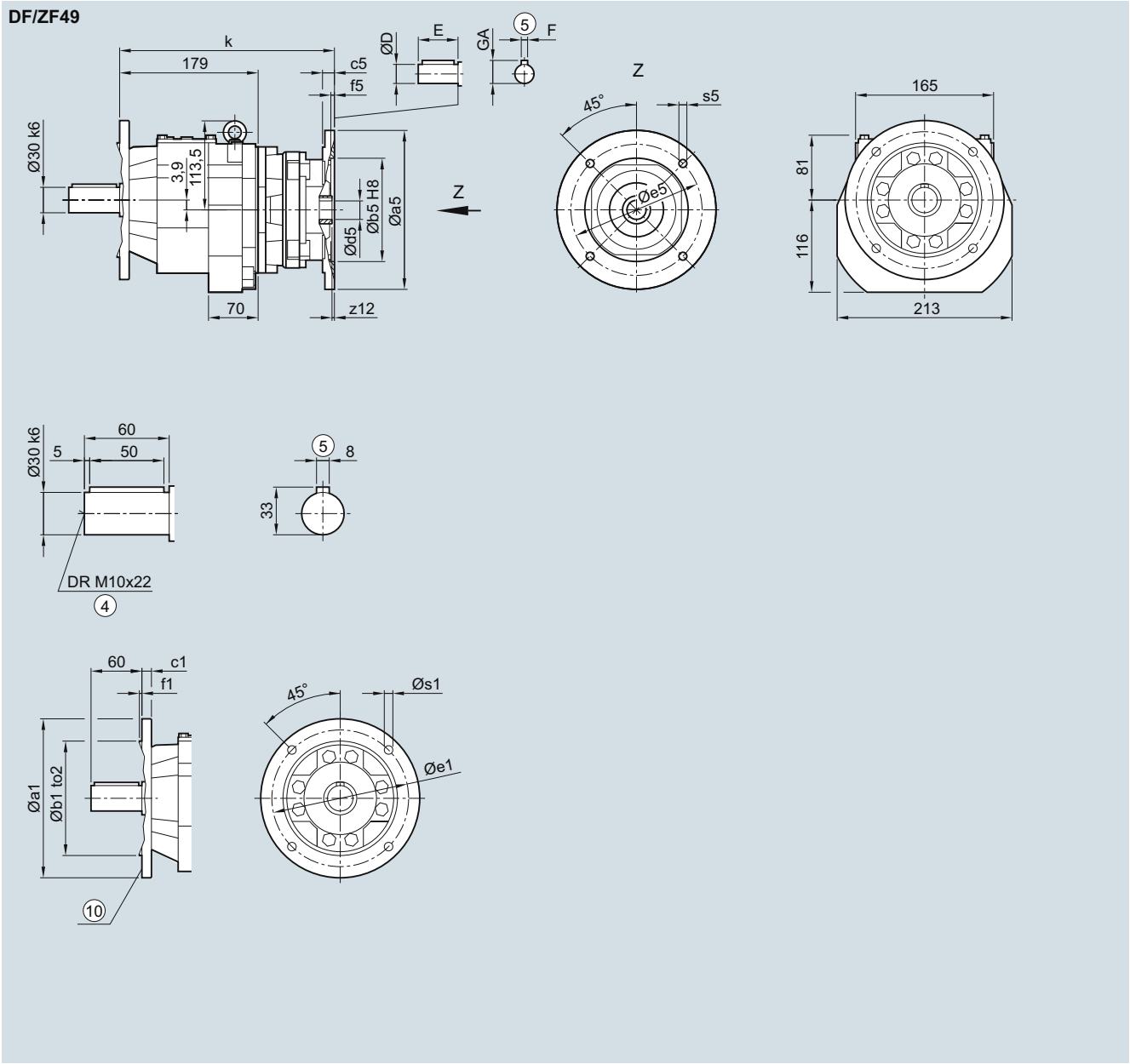
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
112	250	180	16	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 3/219

DF/ZF49 gearbox in a flange-mounted design

DZF030K4

DF/ZF49



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

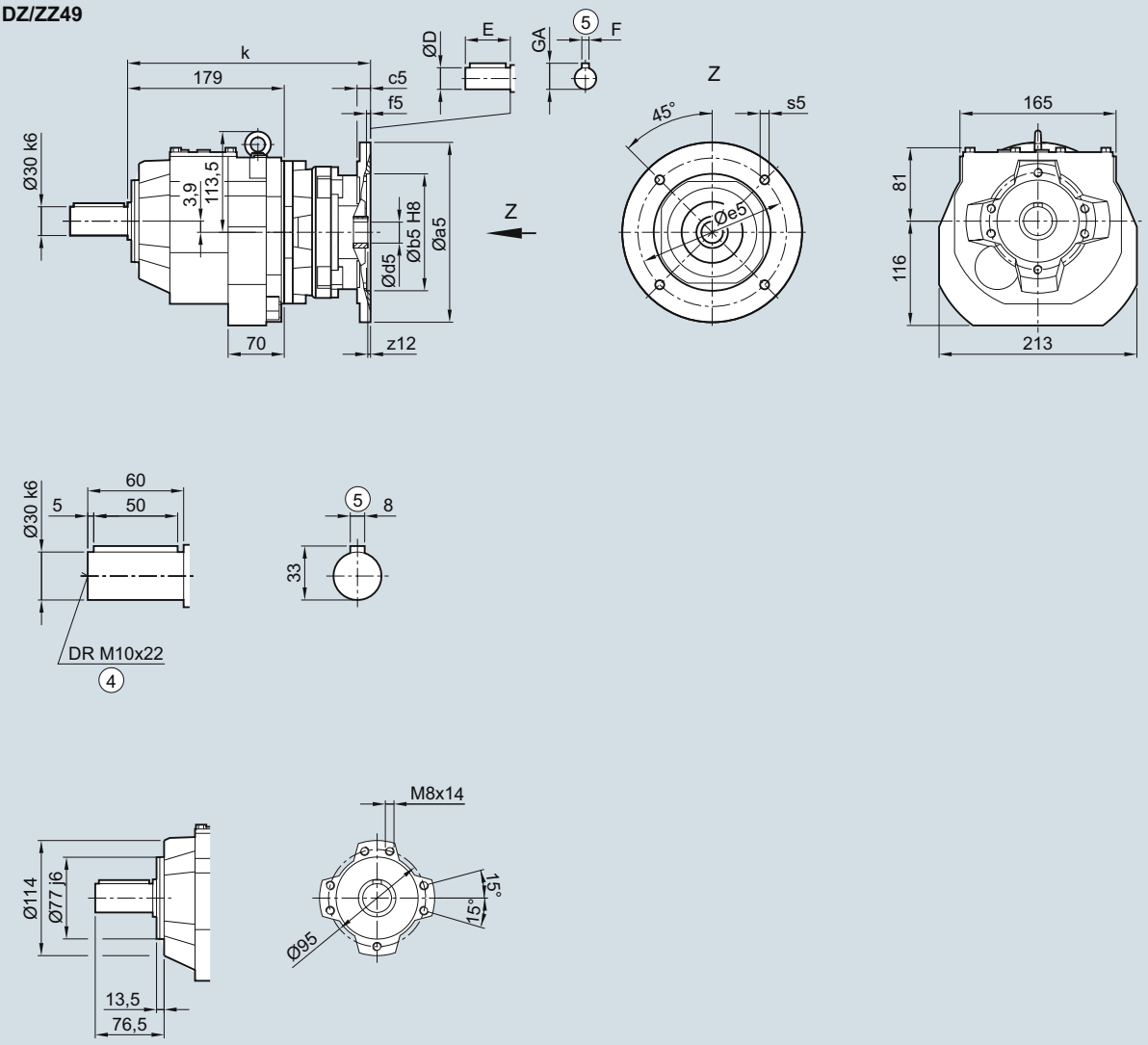
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

Dimensions

DZ/ZZ49 gearbox in a housing flange design

DZZ030K4

DZ/ZZ49



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

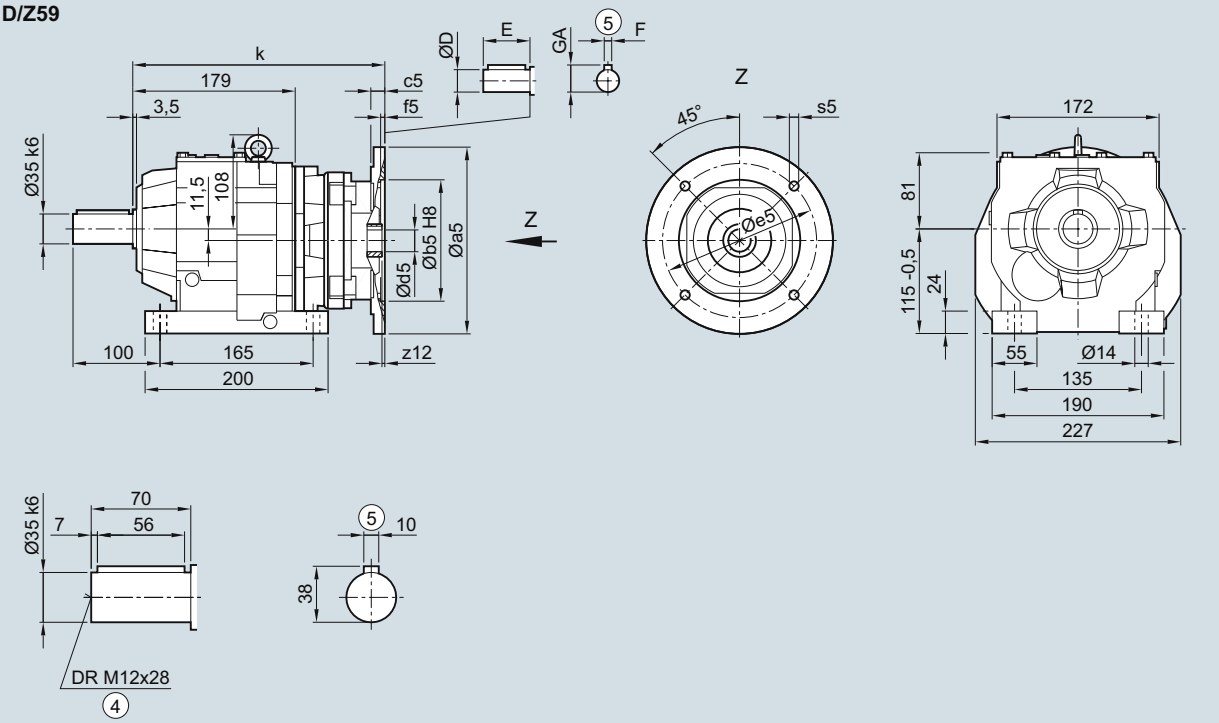
④ DIN 332

⑤ Feather key/keyway DIN 6885

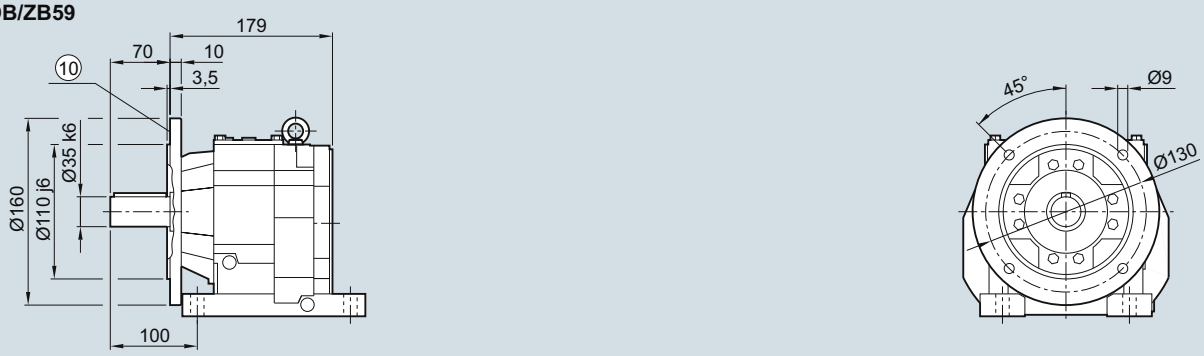
D/Z59 and DB/ZB59 gearboxes in a foot and foot/flange-mounted design

DZ030K4, DZB030K4

D/Z59



DB/ZB59



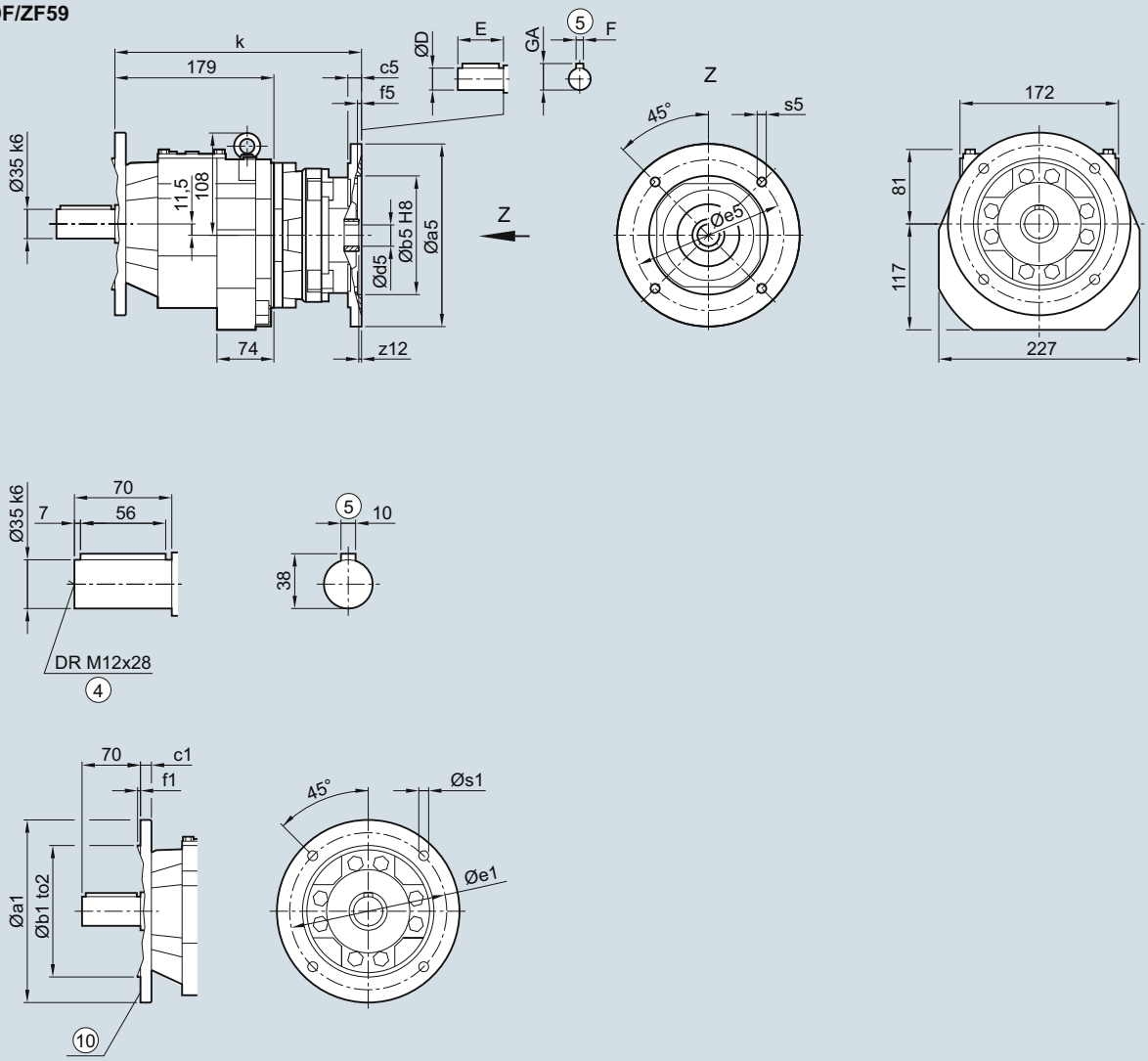
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
112	250	180	16	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 3/219

DF/ZF59 gearbox in a flange-mounted design

DZF030K4

DF/ZF59



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

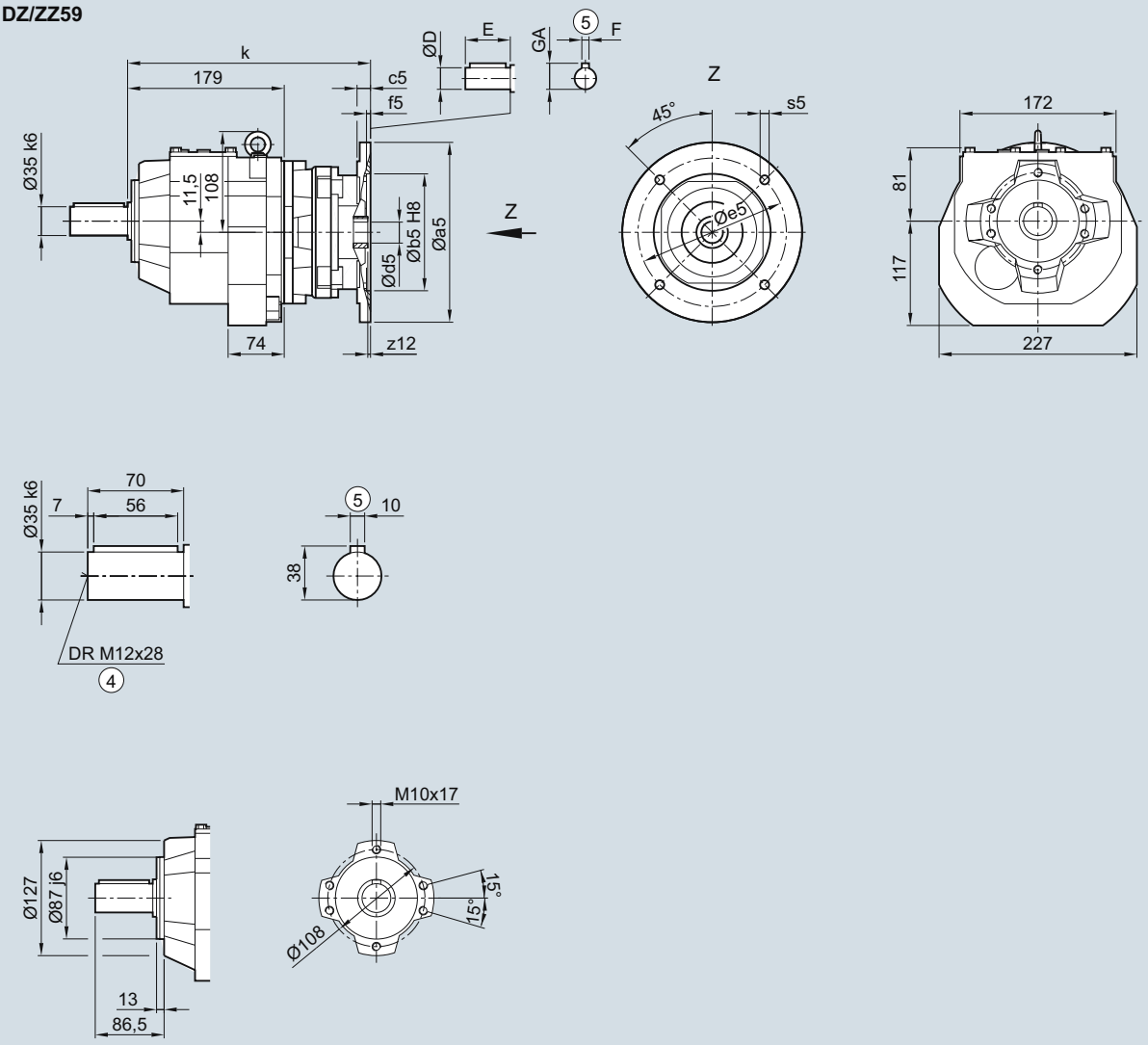
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	247.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	247.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	275.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	275.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	329.5
112	250	180	16	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 3/219

DZ/ZZ59 gearbox in a housing flange design

DZZ030K4

DZ/ZZ59



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

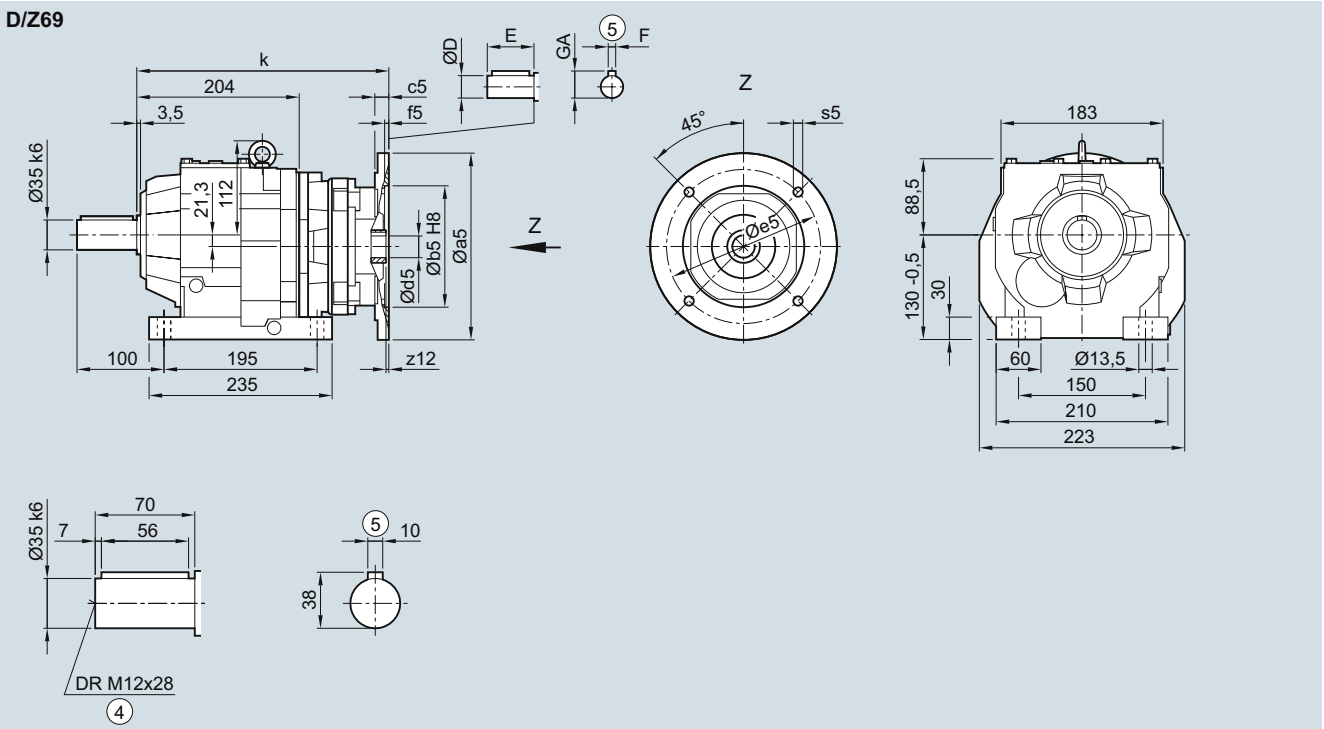
④ DIN 332

⑤ Feather key/keyway DIN 6885

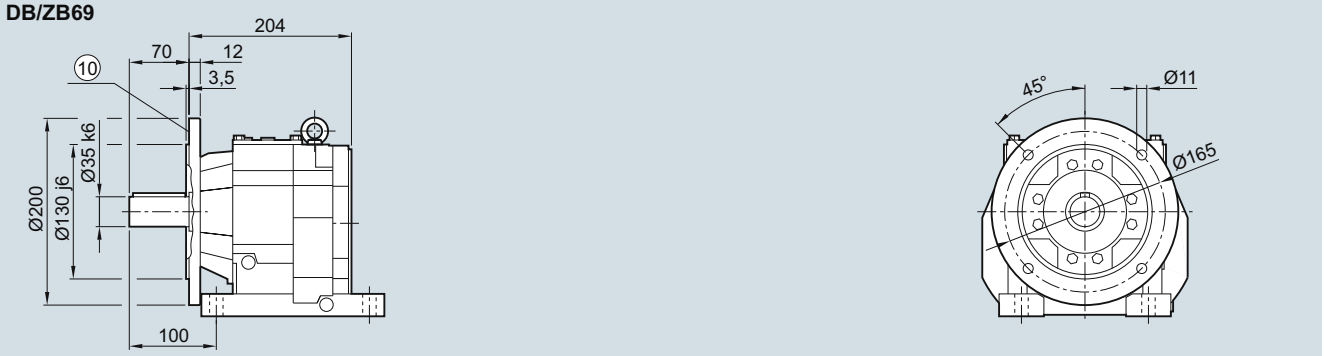
D/Z69 and DB/ZB69 gearboxes in a foot and foot/flange-mounted design

DZ030K4, DZB030K4

D/Z69



DB/ZB69



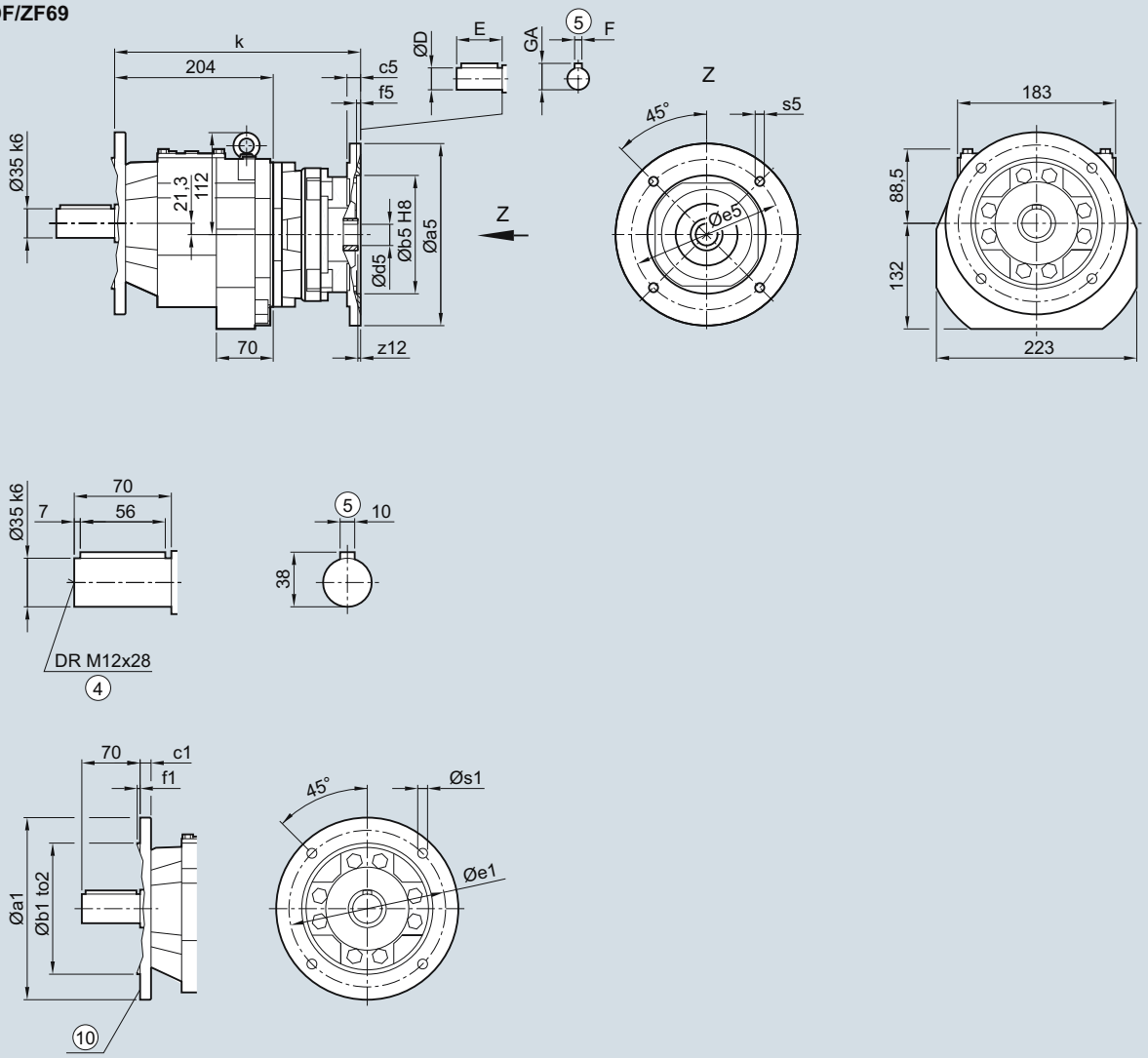
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	272.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	272.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	300.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	300.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
112	250	180	16	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 3/219

DF/ZF69 gearbox in a flange-mounted design

DZF030K4

DF/ZF69



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

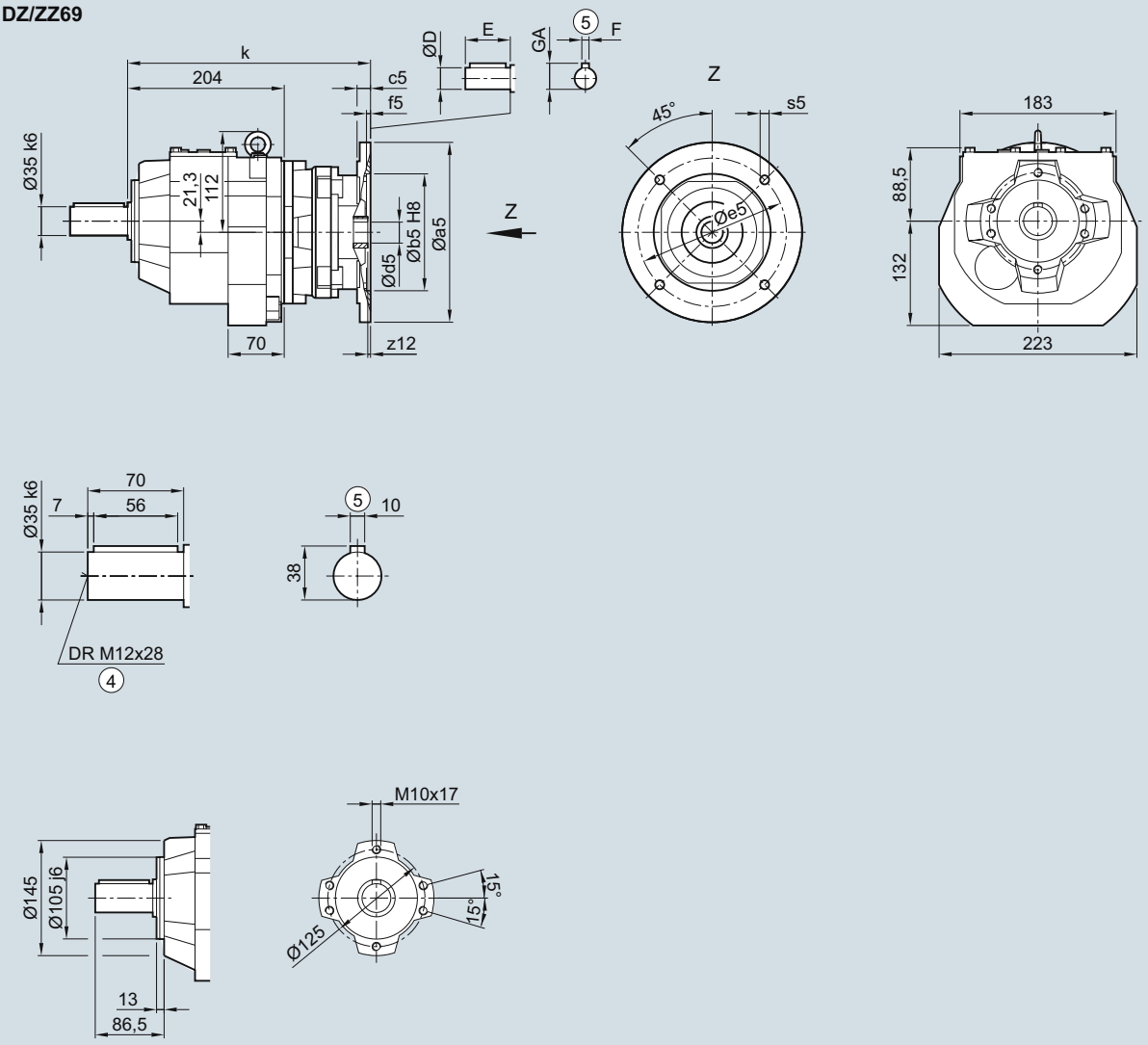
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	272.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	272.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	300.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	300.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	354.5
112	250	180	16	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 3/219

DZ/ZZ69 gearbox in a housing flange design

DZZ030K4

DZ/ZZ69



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

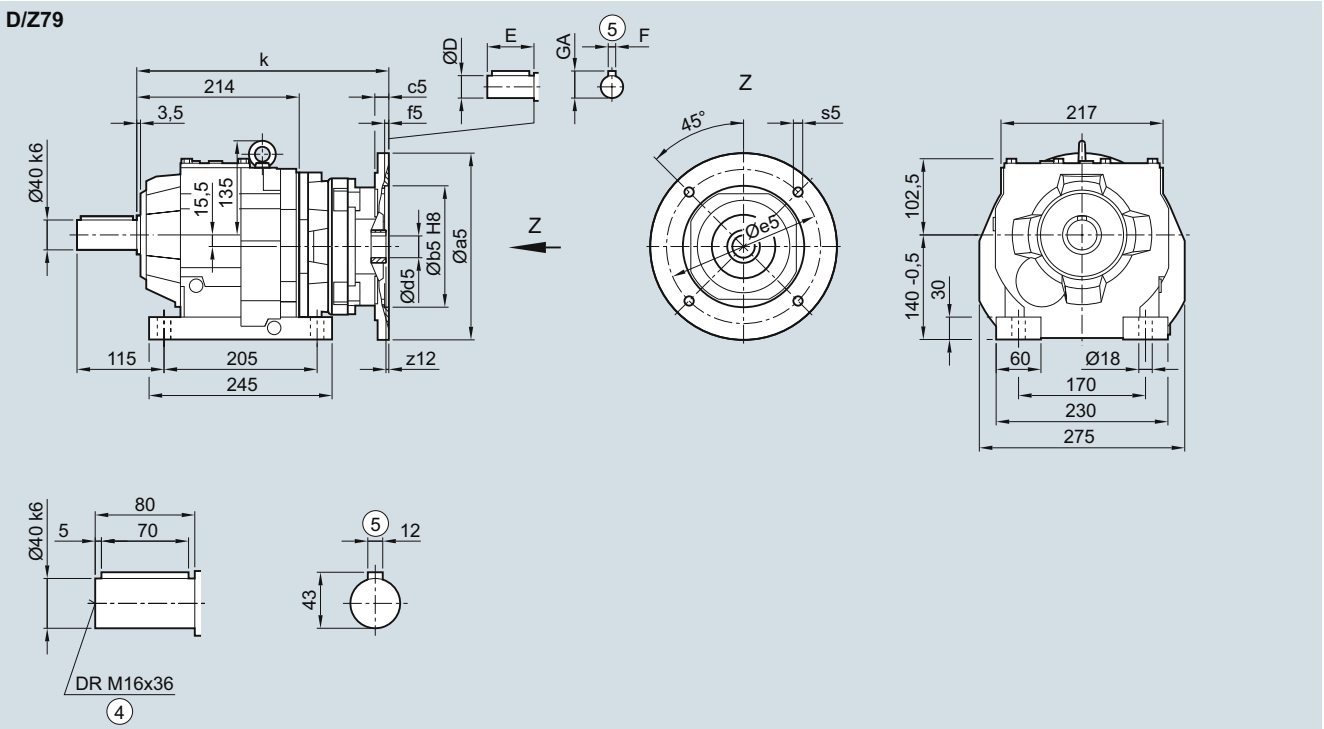
⑤ Feather key/keyway DIN 6885

3

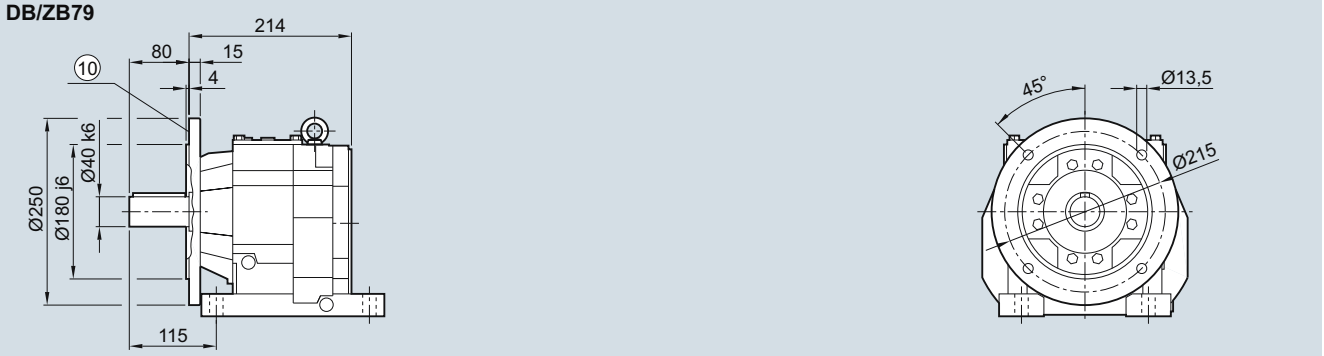
D/Z79 and DB/ZB79 gearboxes in a foot and foot/flange-mounted design

DZ030K4, DZB030K4

D/Z79



DB/ZB79



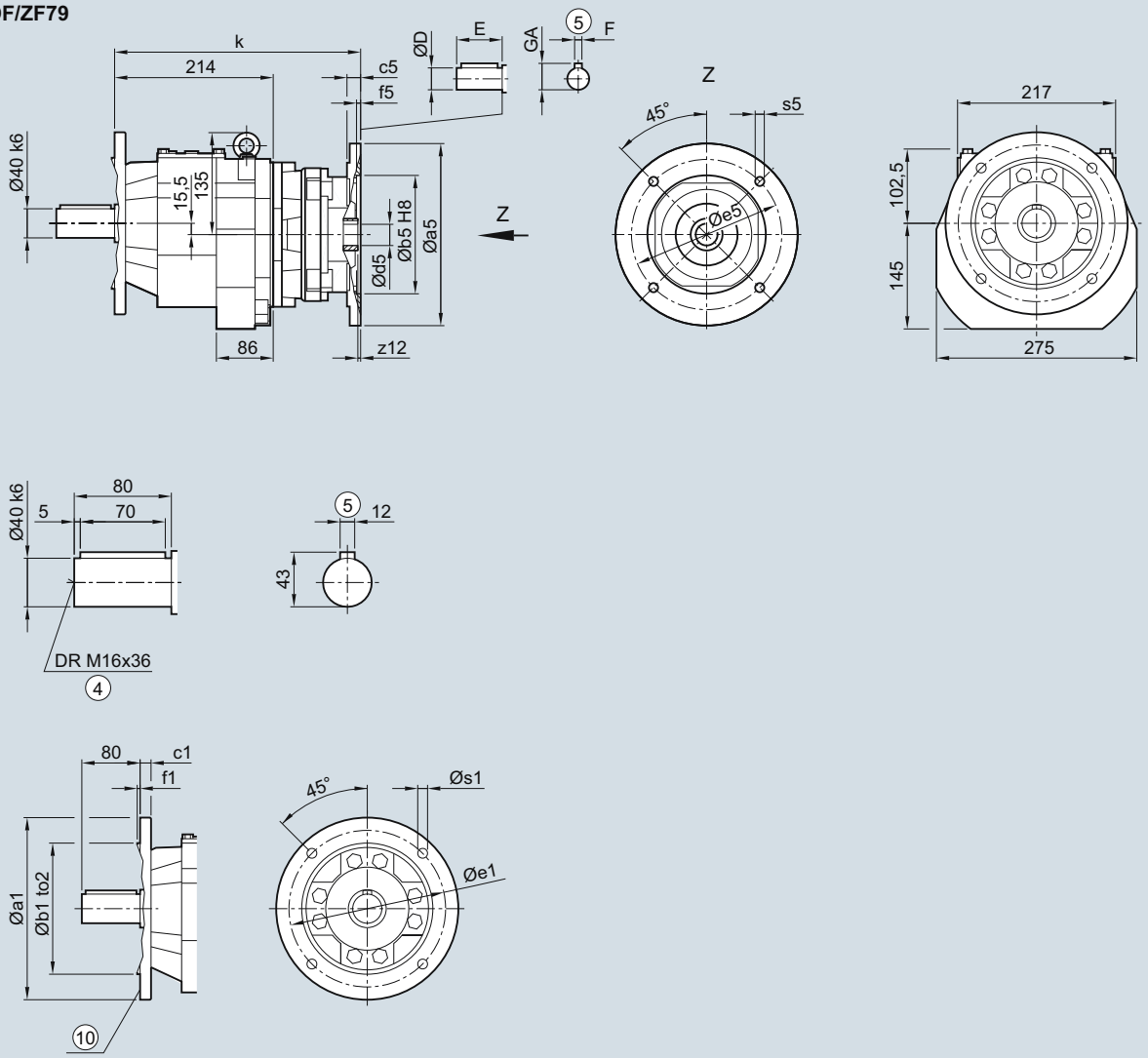
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	280.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	304.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	304.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
132	300	230	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 3/219

DF/ZF79 gearbox in a flange-mounted design

DZF030K4

DF/ZF79



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

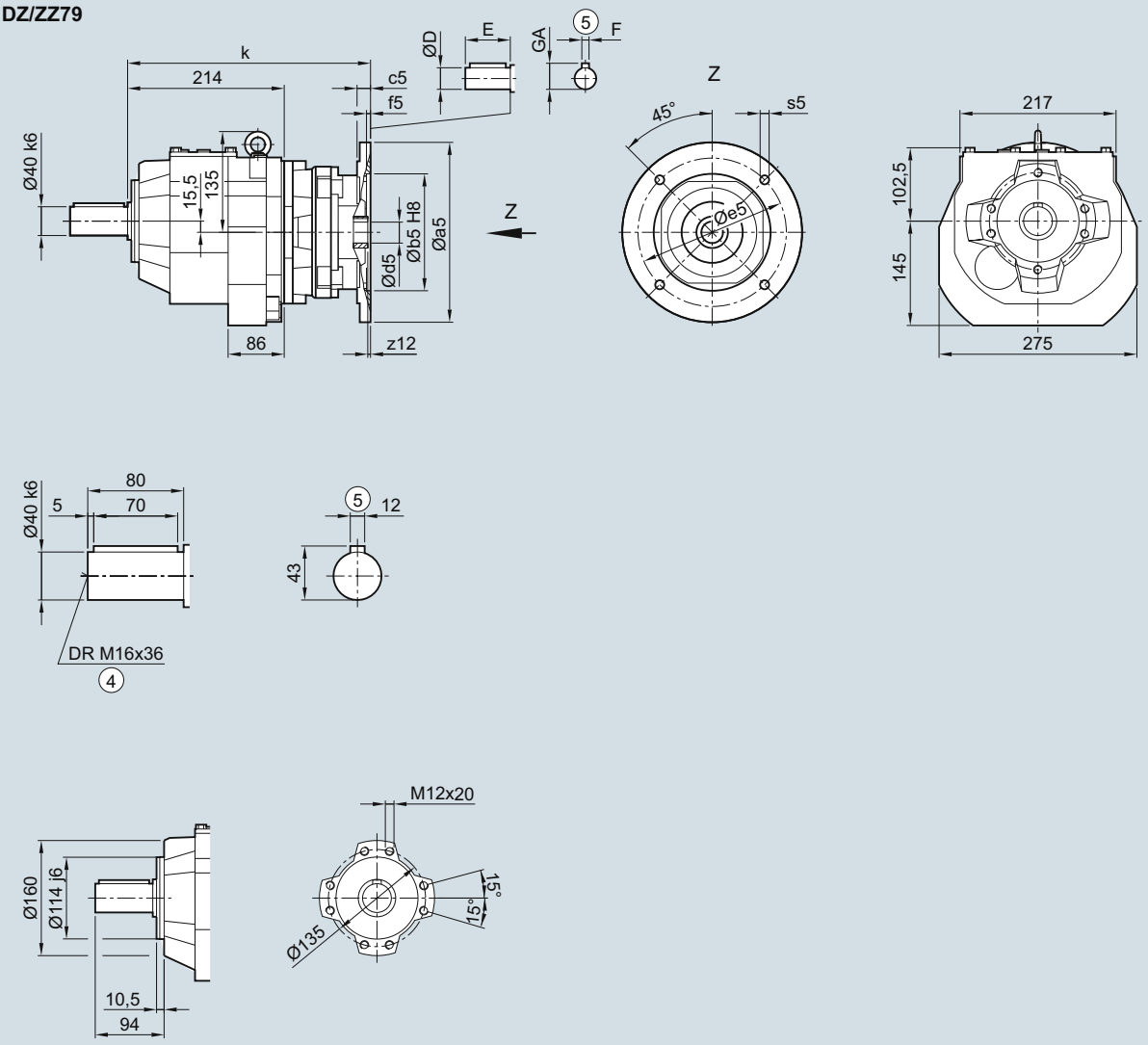
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	280.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	304.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	304.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
132	300	230	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 3/219

DZ/ZZ79 gearbox in a housing flange design

DZZ030K4

DZ/ZZ79



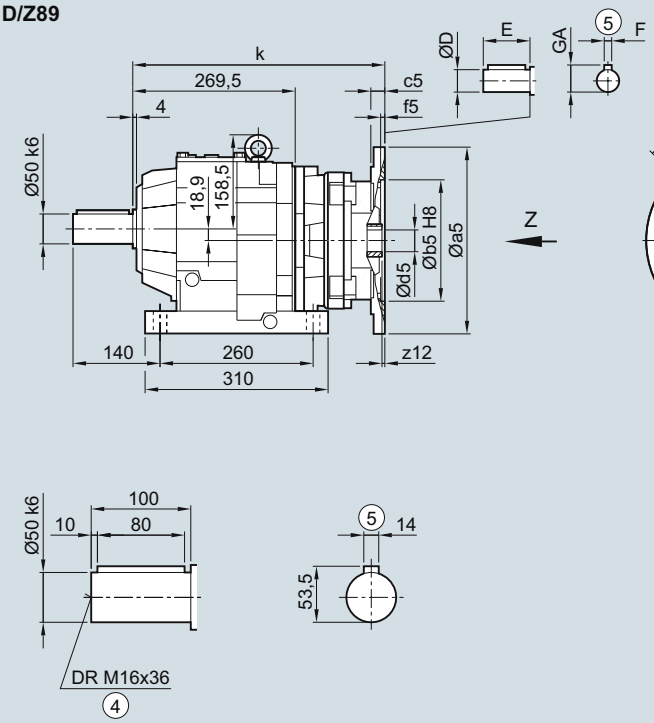
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	280.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	304.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	304.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.5
132	300	230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

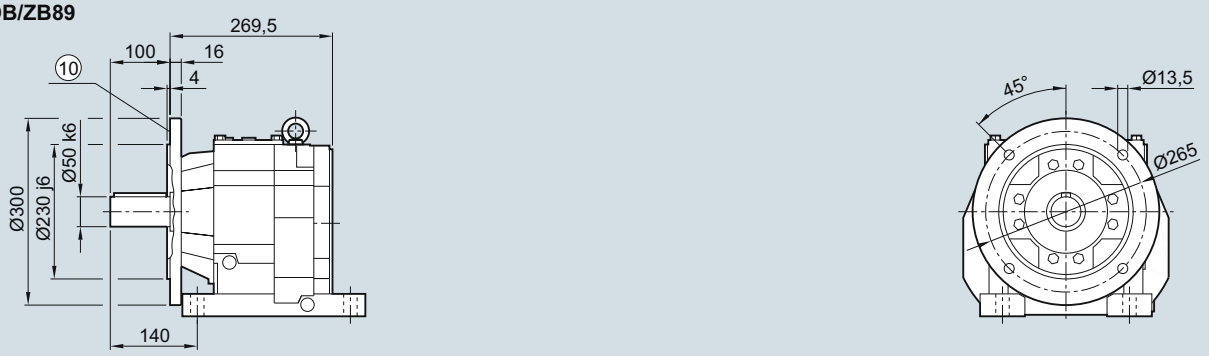
D/Z89 and DB/ZB89 gearboxes in a foot and foot/flange-mounted design

DZ030K4, DZB030K4

D/Z89



DB/ZB89



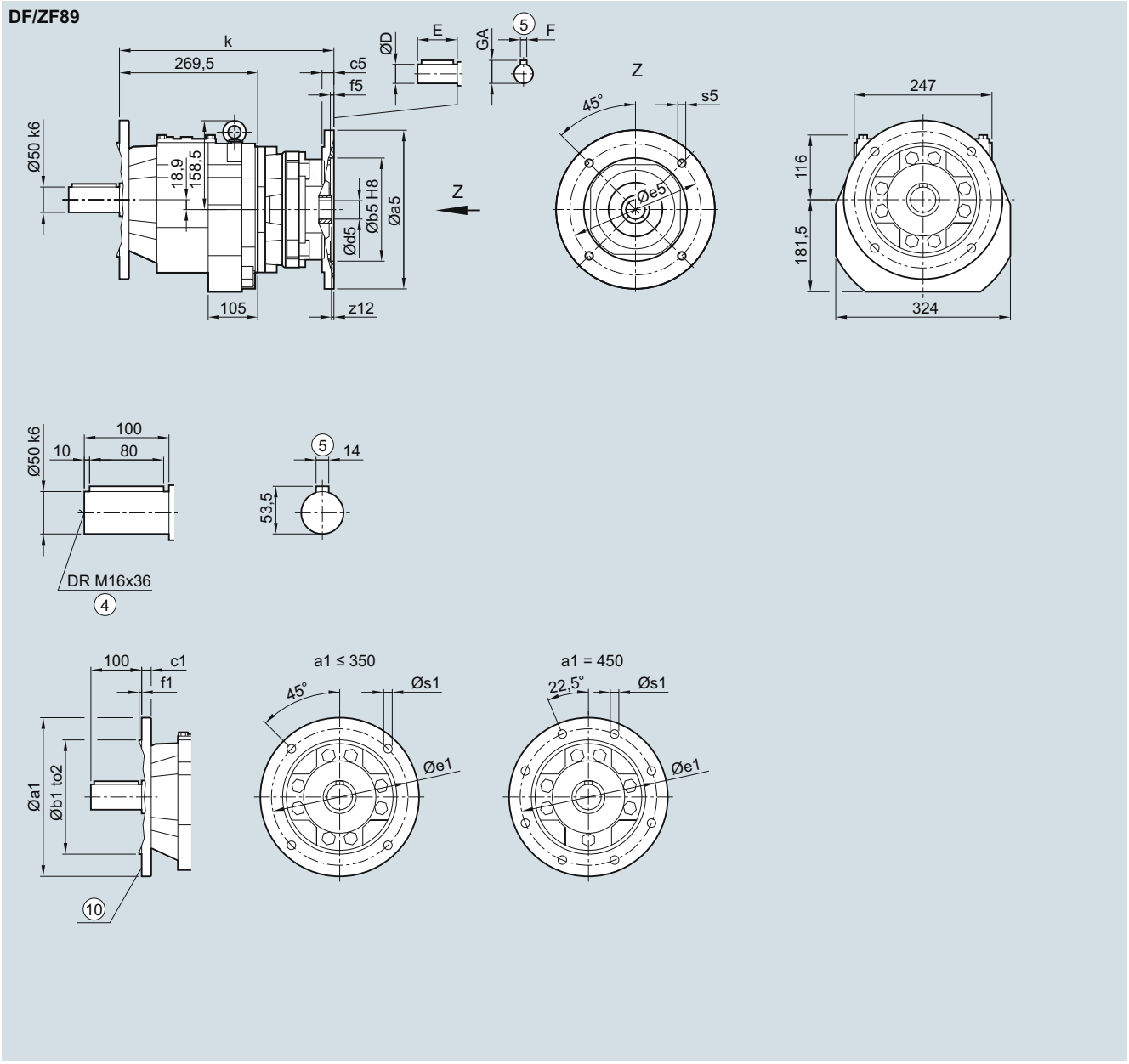
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350	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 3/219

DF/ZF89 gearbox in a flange-mounted design

DZF030K4

DF/ZF89



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

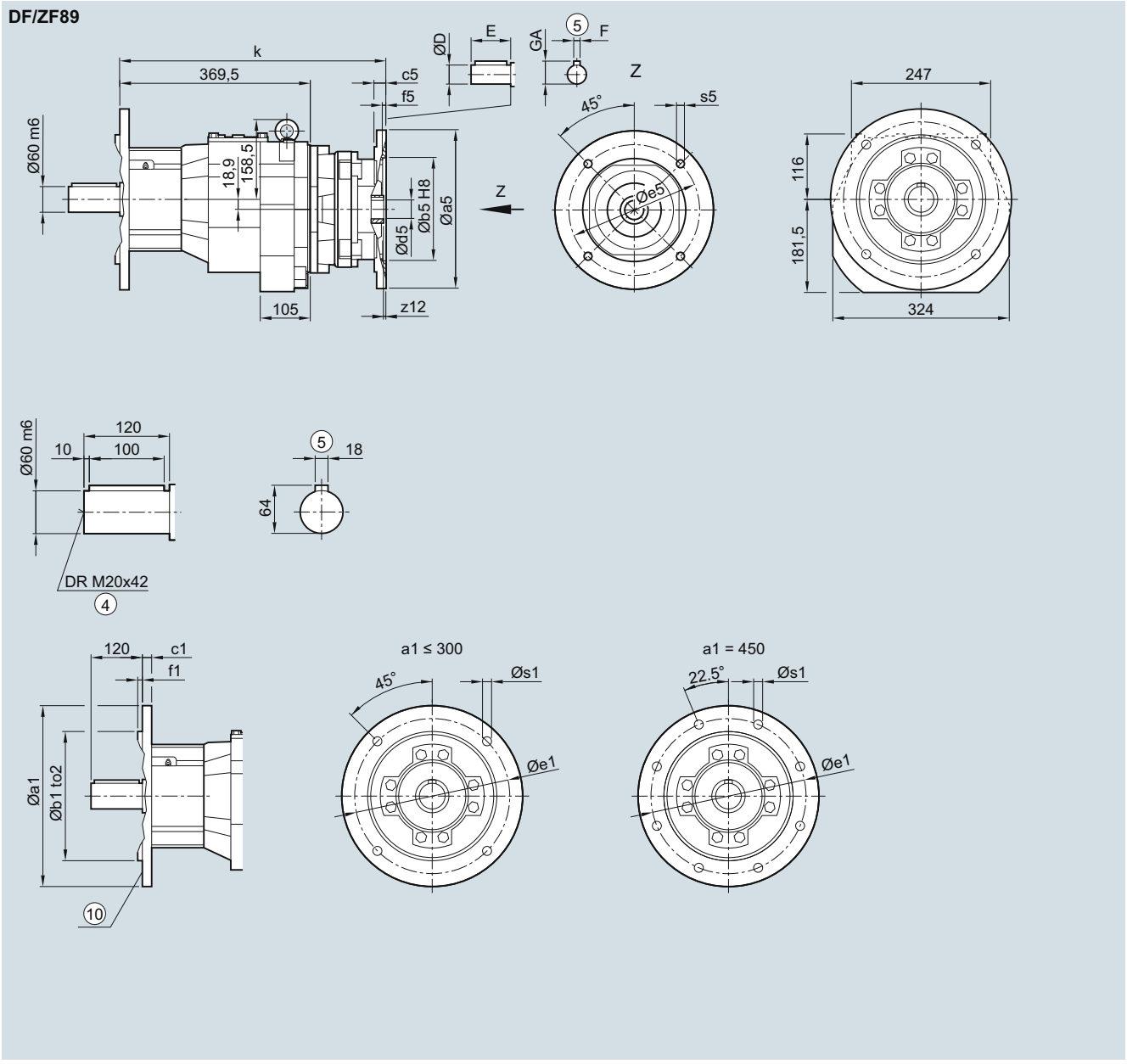
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

Dimensions

DF/ZF89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040K4

DF/ZF89



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

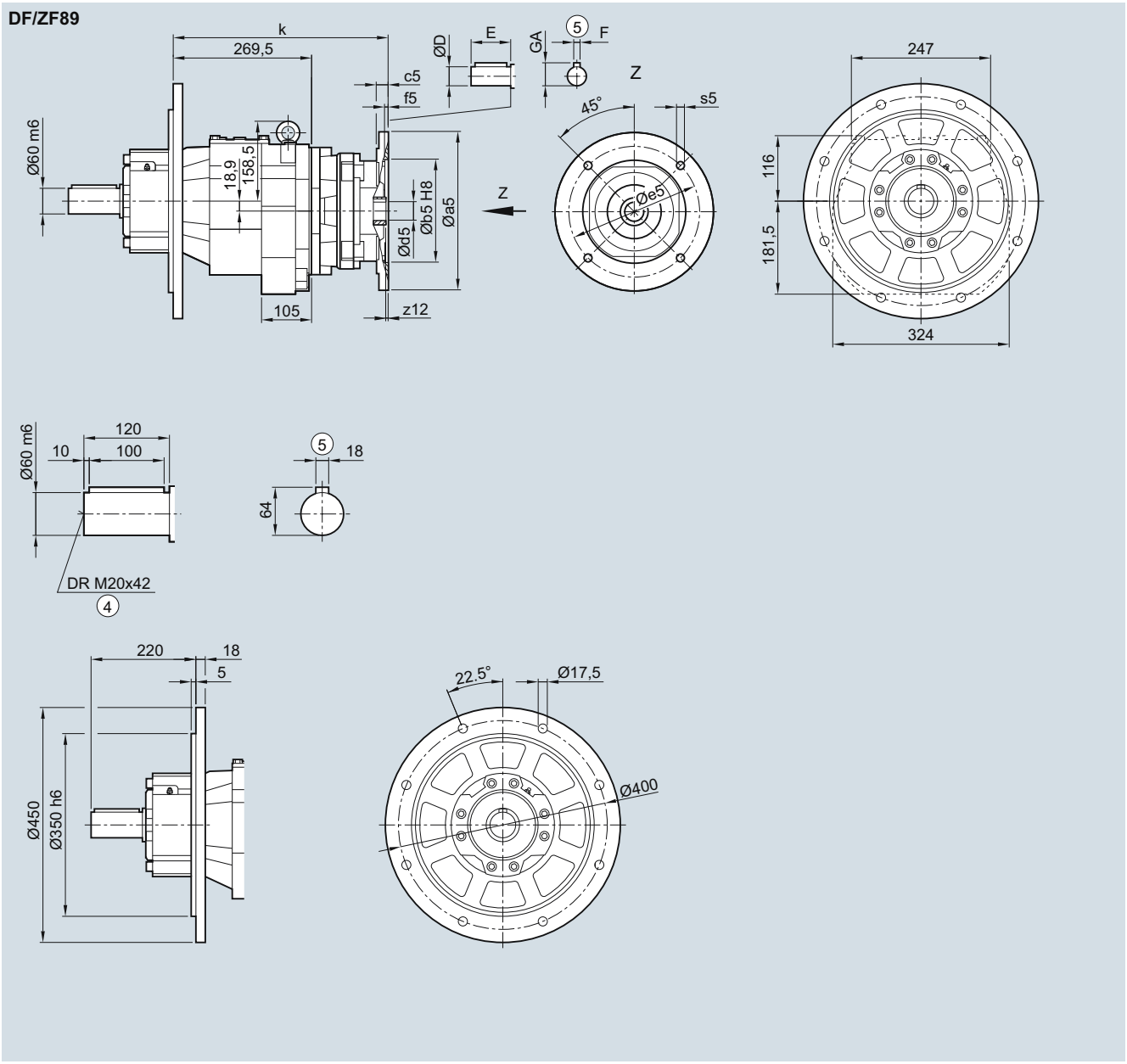
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350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

DF/ZF89 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

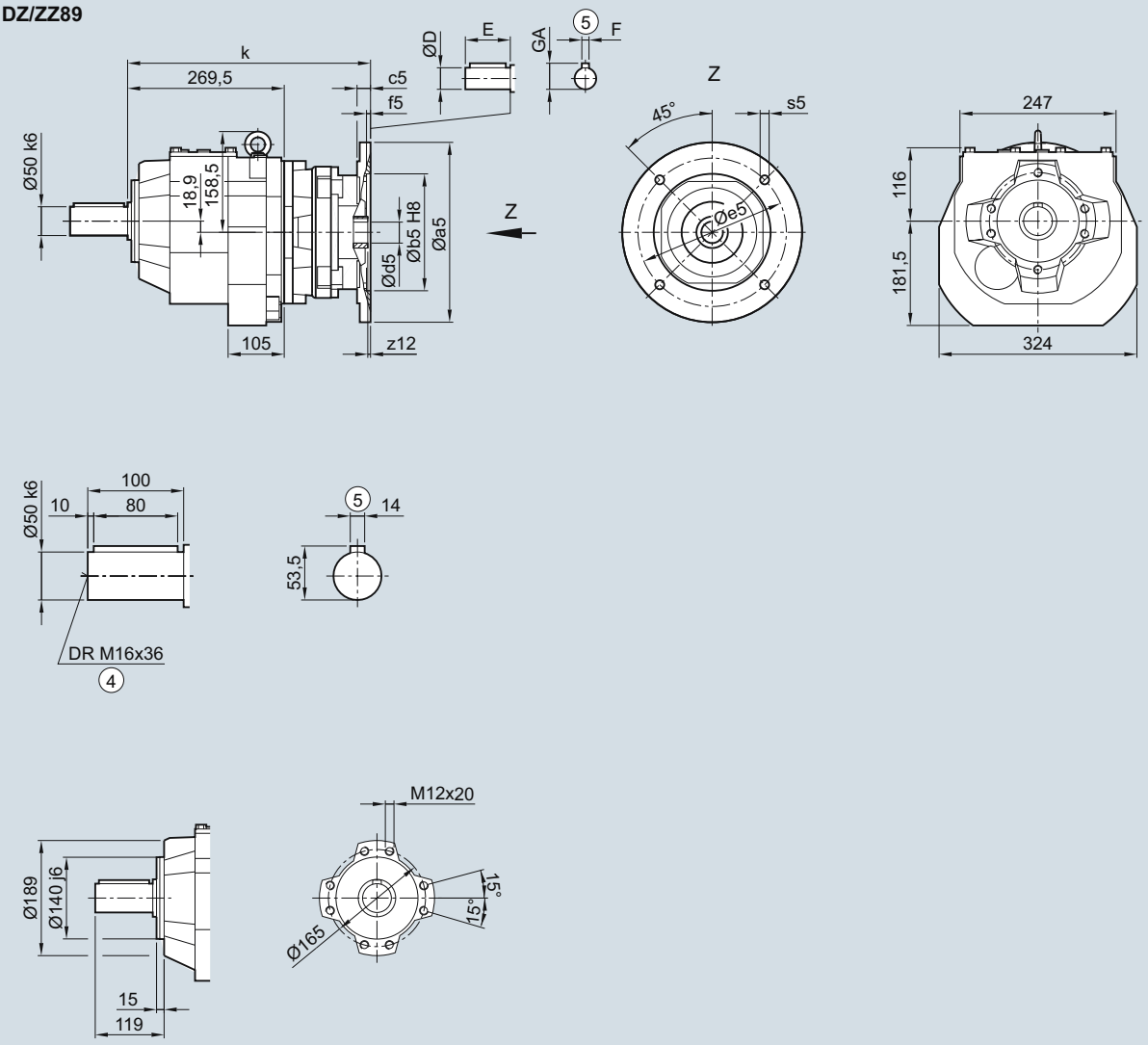
⑤ Feather key/keyway DIN 6885

Dimensions

DZ/ZZ89 gearbox in a housing flange design

DZZ030K4

DZ/ZZ89



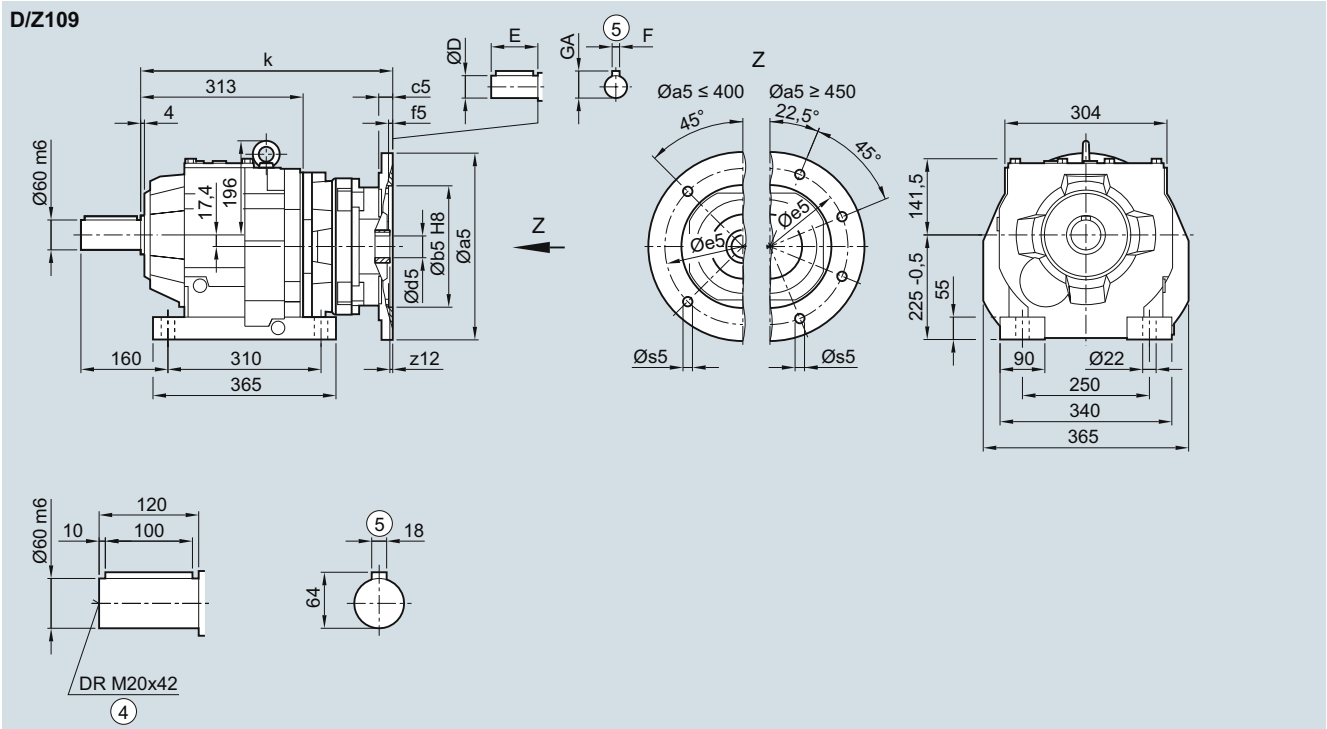
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	21.5	346.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	346.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	397.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	414.5
160	350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

D/Z109 gearbox in a foot-mounted design

DZ030K4



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

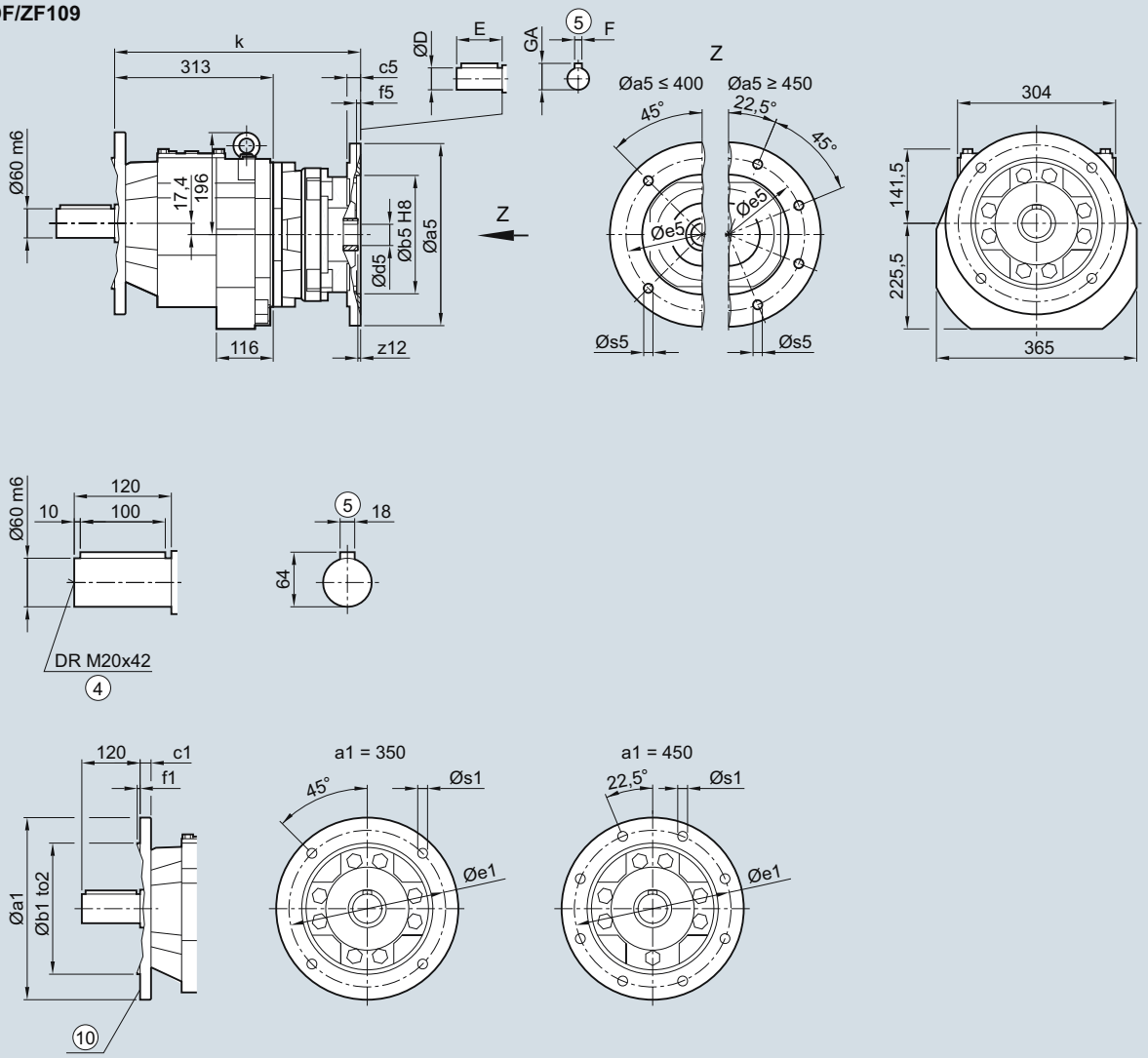
④ DIN 332

⑤ Feather key/keyway DIN 6885

DF/ZF109 gearbox in a flange-mounted design

DZF030K4

DF/ZF109



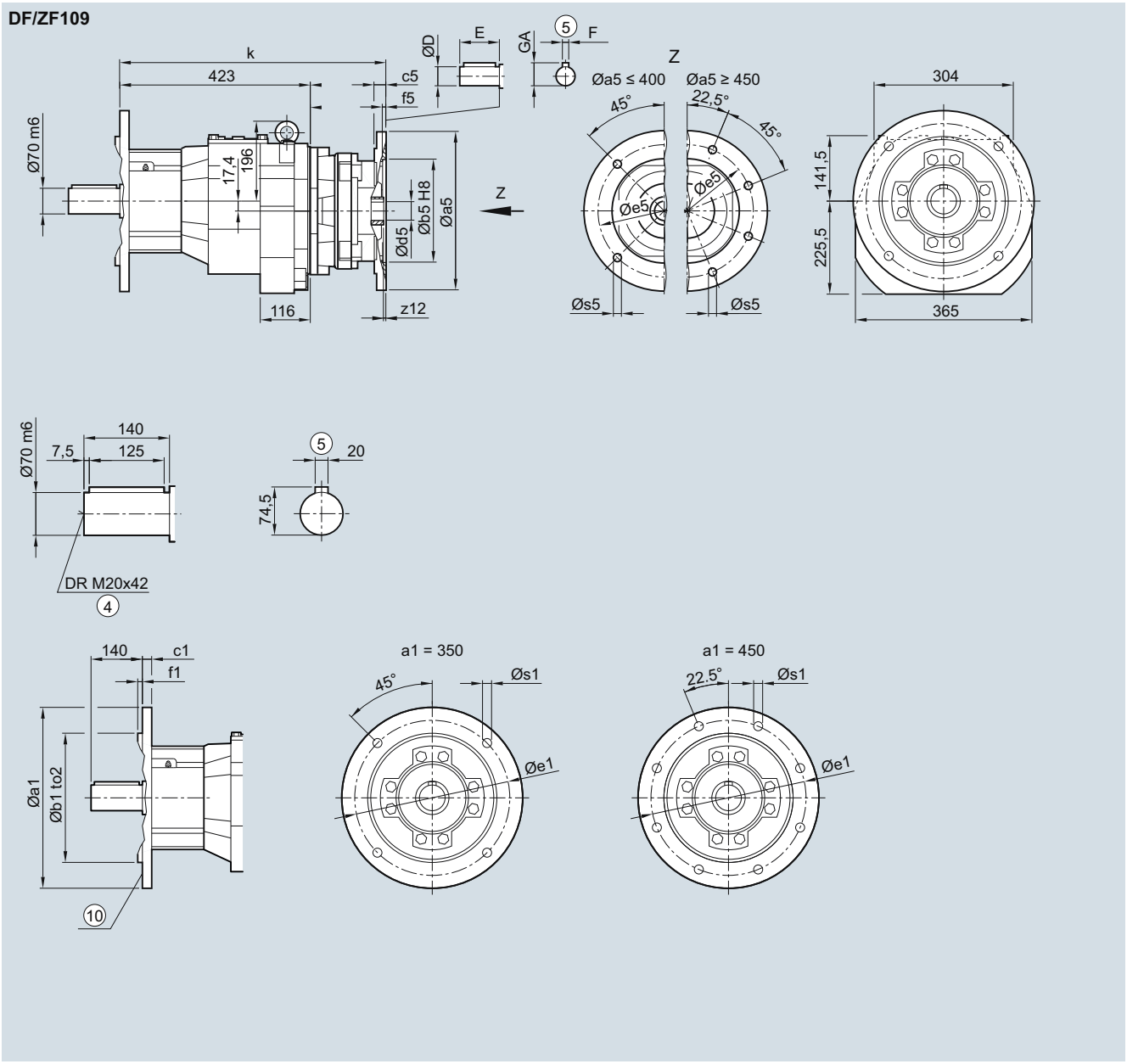
Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

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 ⑩ For inner contour, see page 3/219

DF/ZF109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040K4



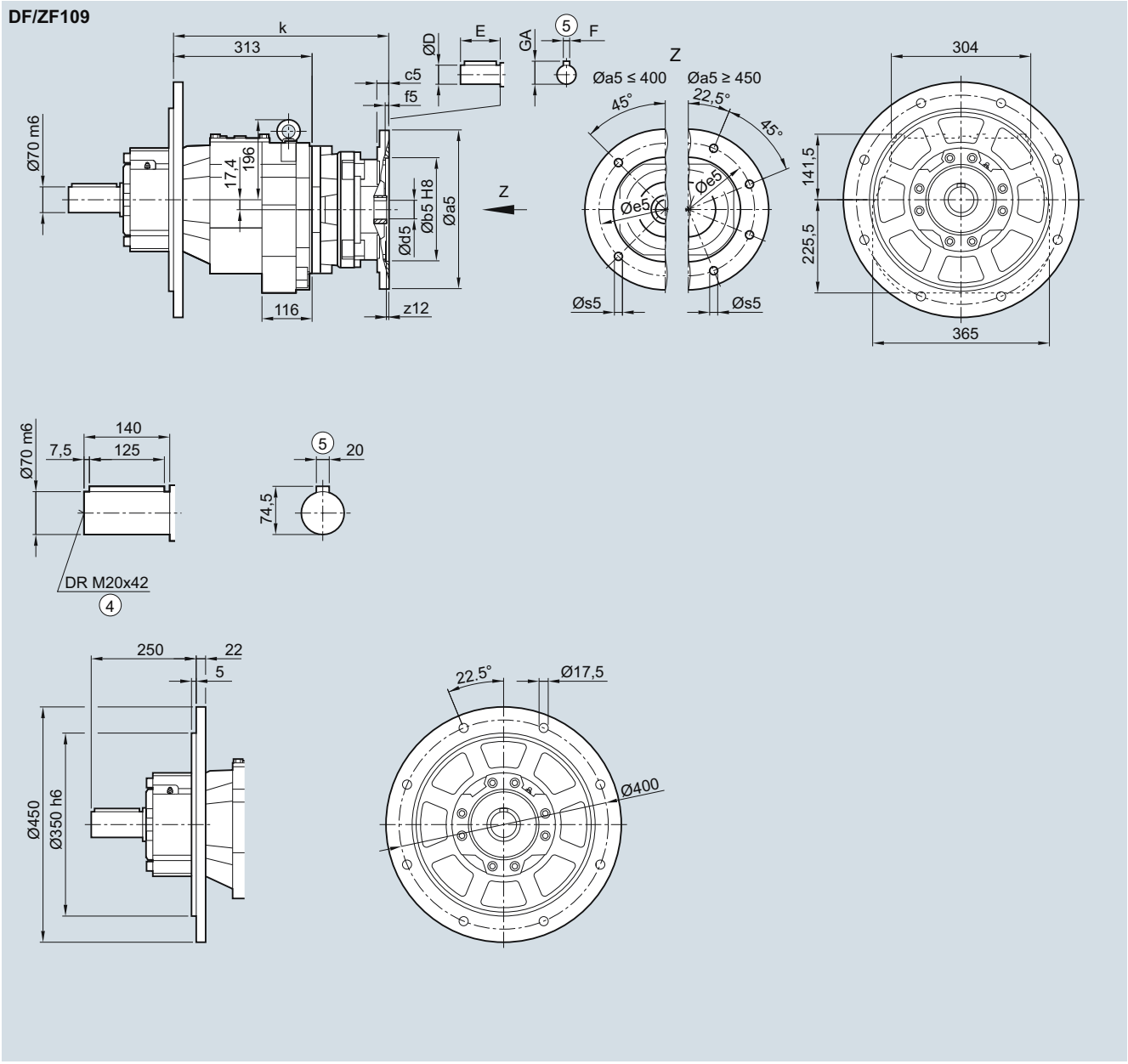
Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

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 ⑩ For inner contour, see page 3/219

DF/ZF109 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

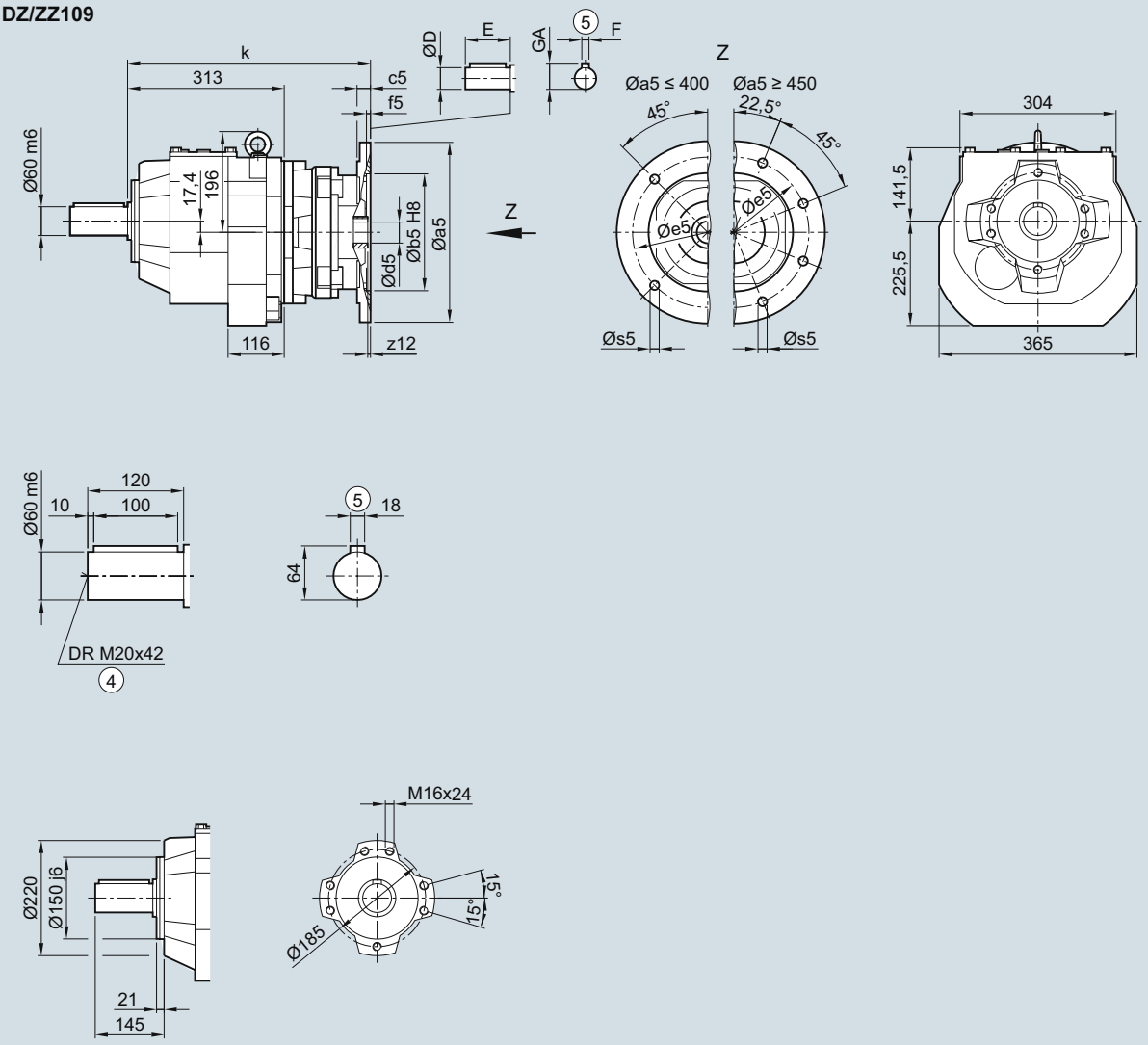
④ DIN 332

⑤ Feather key/keyway DIN 6885

DZ/ZZ109 gearbox in a housing flange design

DZZ030K4

DZ/ZZ109



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

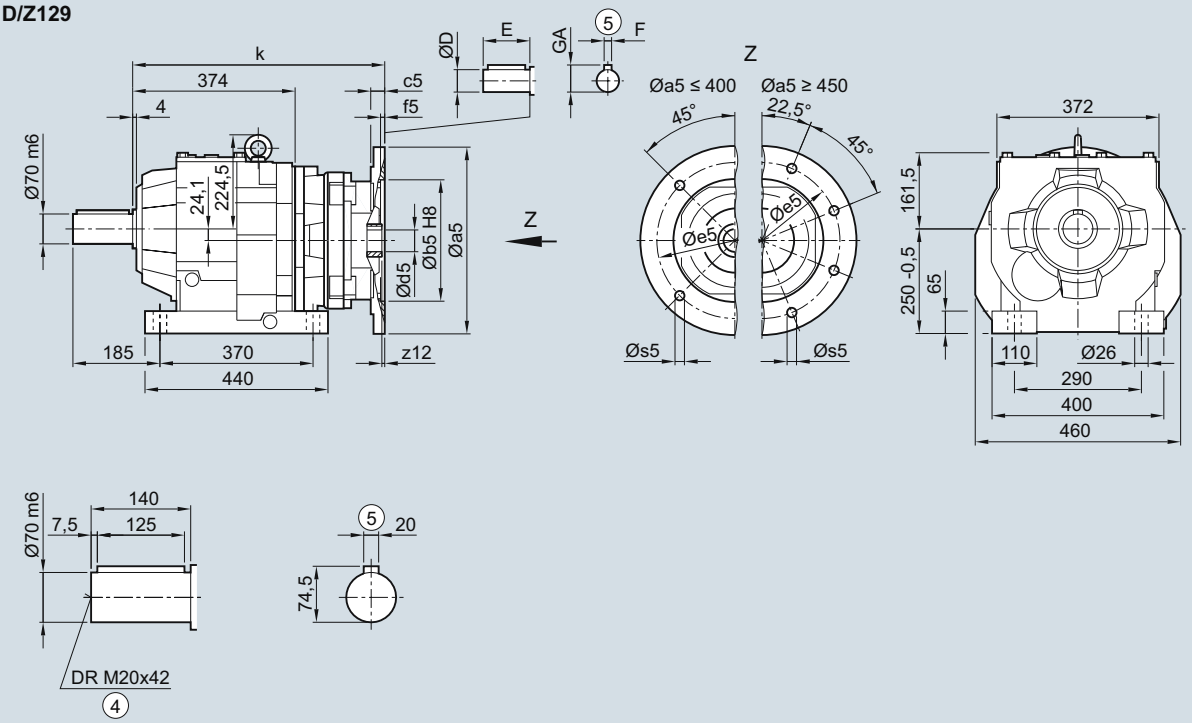
⑤ Feather key/keyway DIN 6885

Dimensions

D/Z129 gearbox in a foot-mounted design

DZ030K4

D/Z129



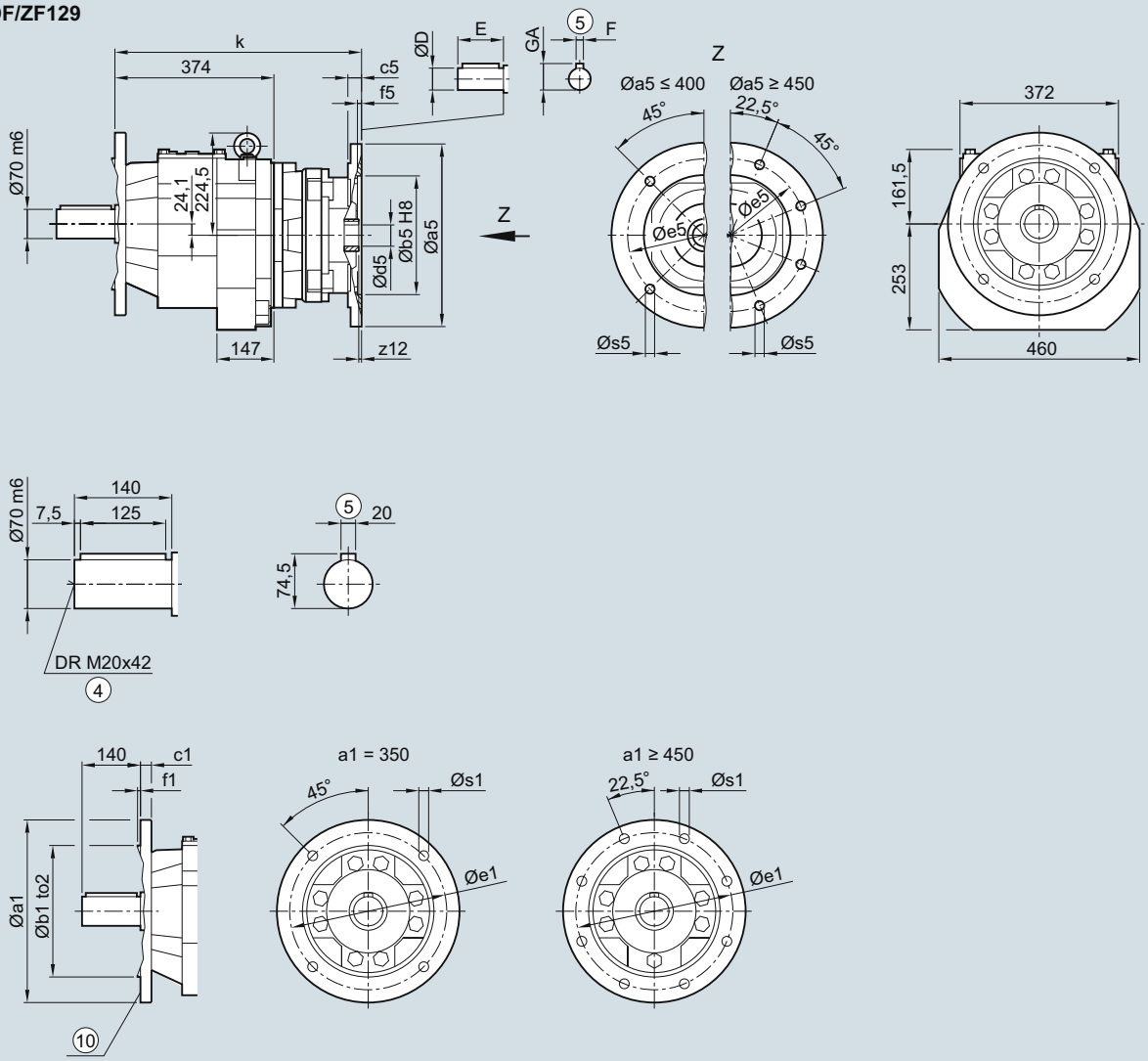
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	437
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	499
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	529
180	350	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

DF/ZF129 gearbox in a flange-mounted design

DZF030K4

DF/ZF129



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

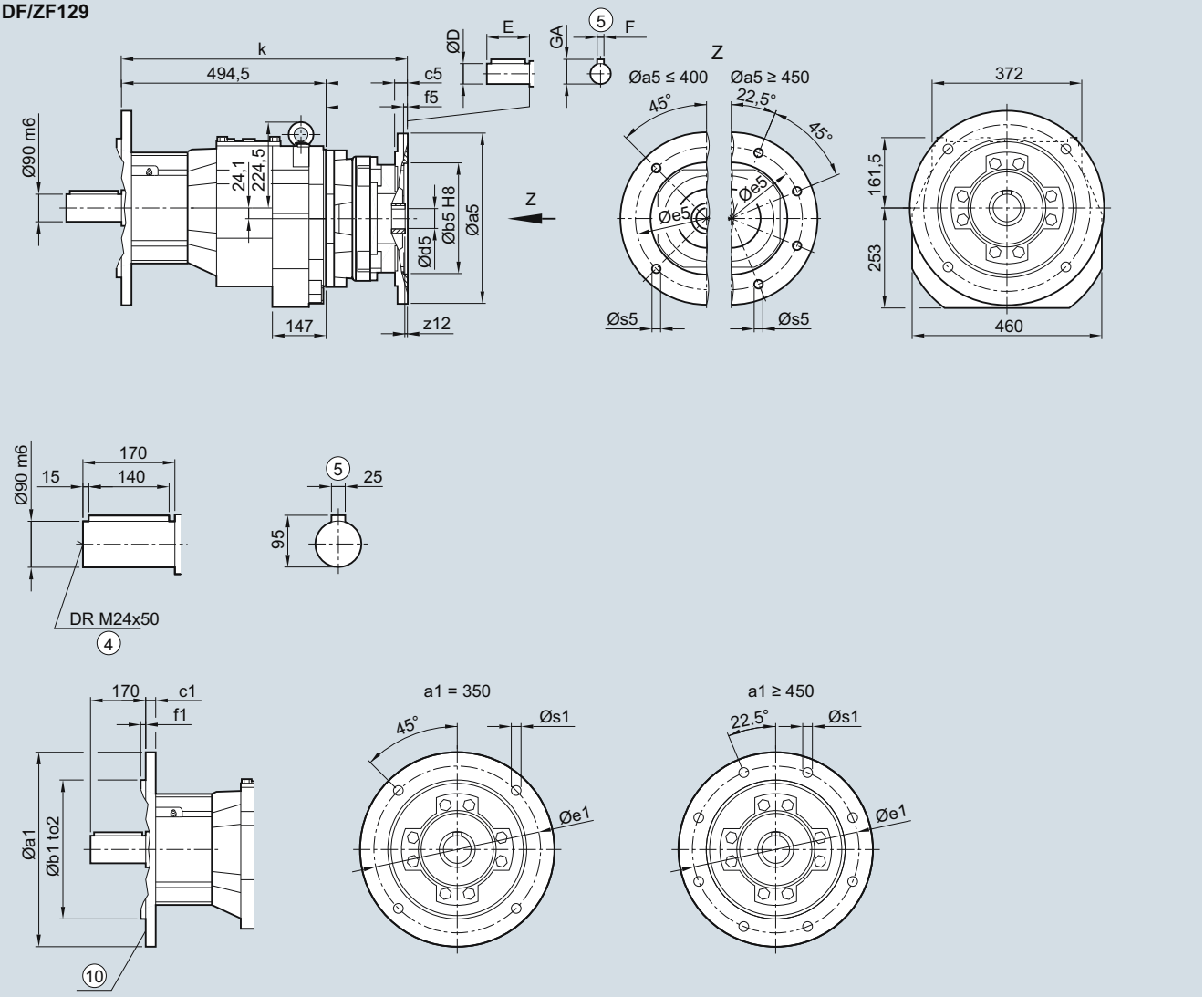
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	437
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	499
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	529
180	350	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 3/219

DF/ZF129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040K4

DF/ZF129



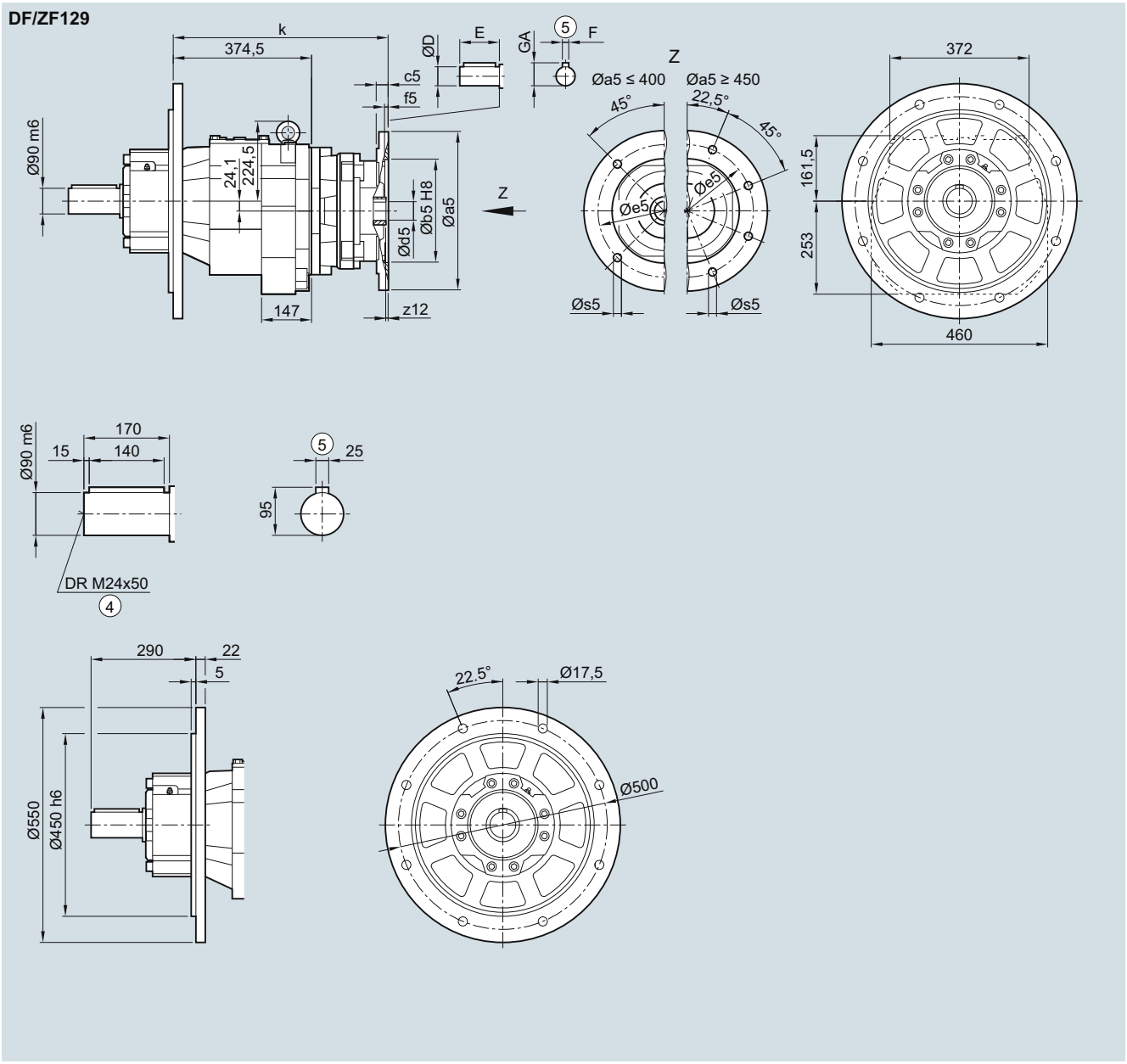
Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	20	300	5	17.5
	450	350	h6	22	400	5	17.5
	550	450	h6	22	500	5	17.5

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 3/219

DF/ZF129 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

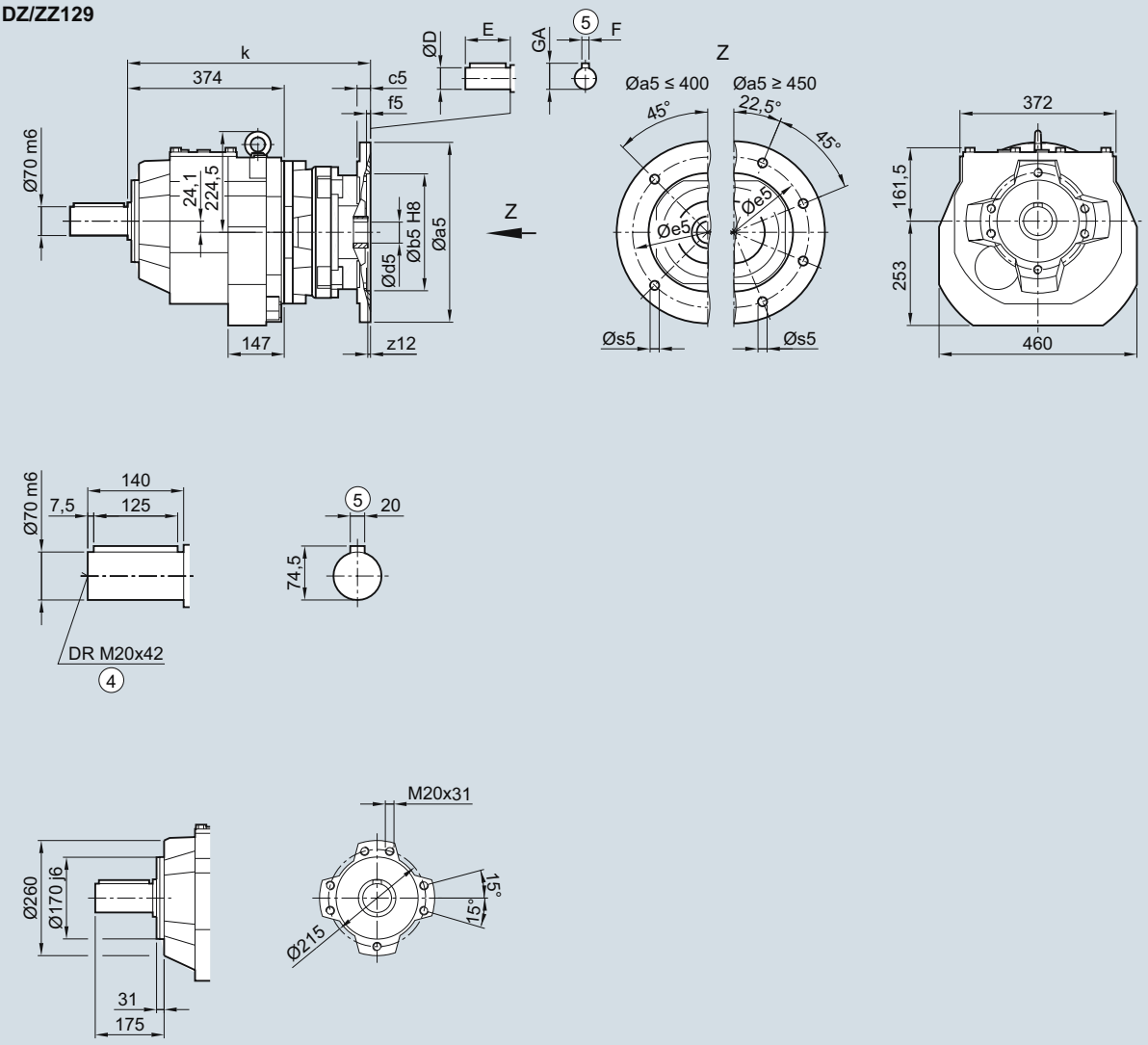
④ DIN 332

⑤ Feather key/keyway DIN 6885

DZ/ZZ129 gearbox in a housing flange design

DZZ030K4

DZ/ZZ129



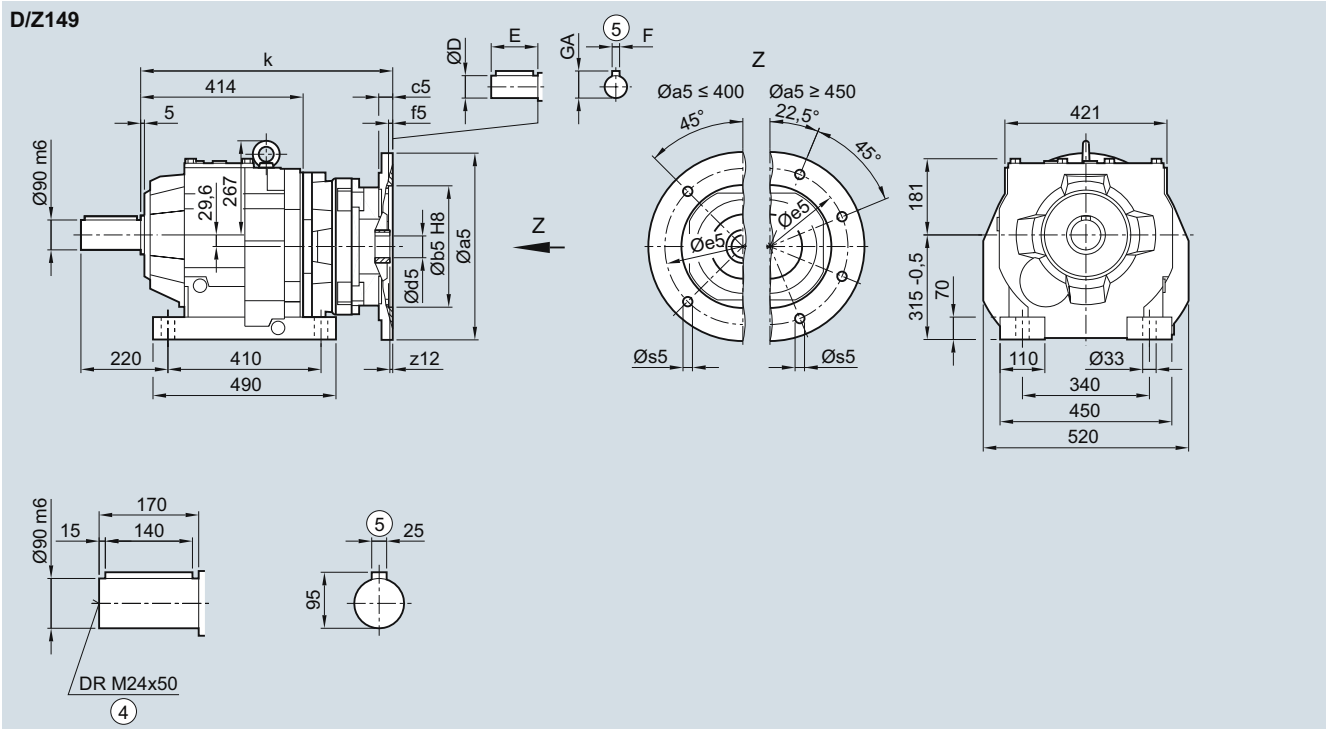
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	437
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	483.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	499
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	529
180	350	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

D/Z149 gearbox in a foot-mounted design

DZ030K4



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

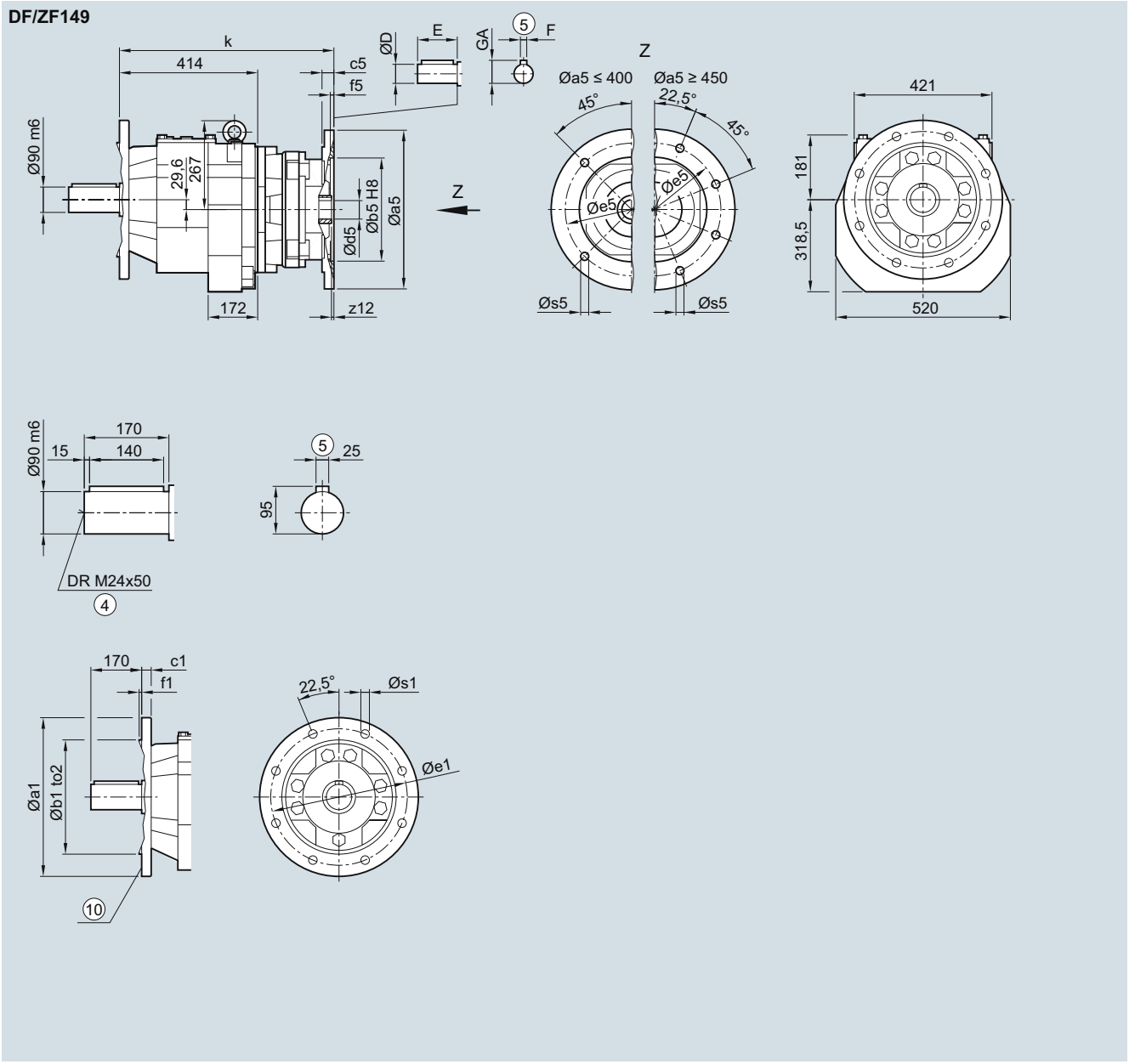
④ DIN 332

⑤ Feather key/keyway DIN 6885

DF/ZF149 gearbox in a flange-mounted design

DZF030K4

DF/ZF149



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

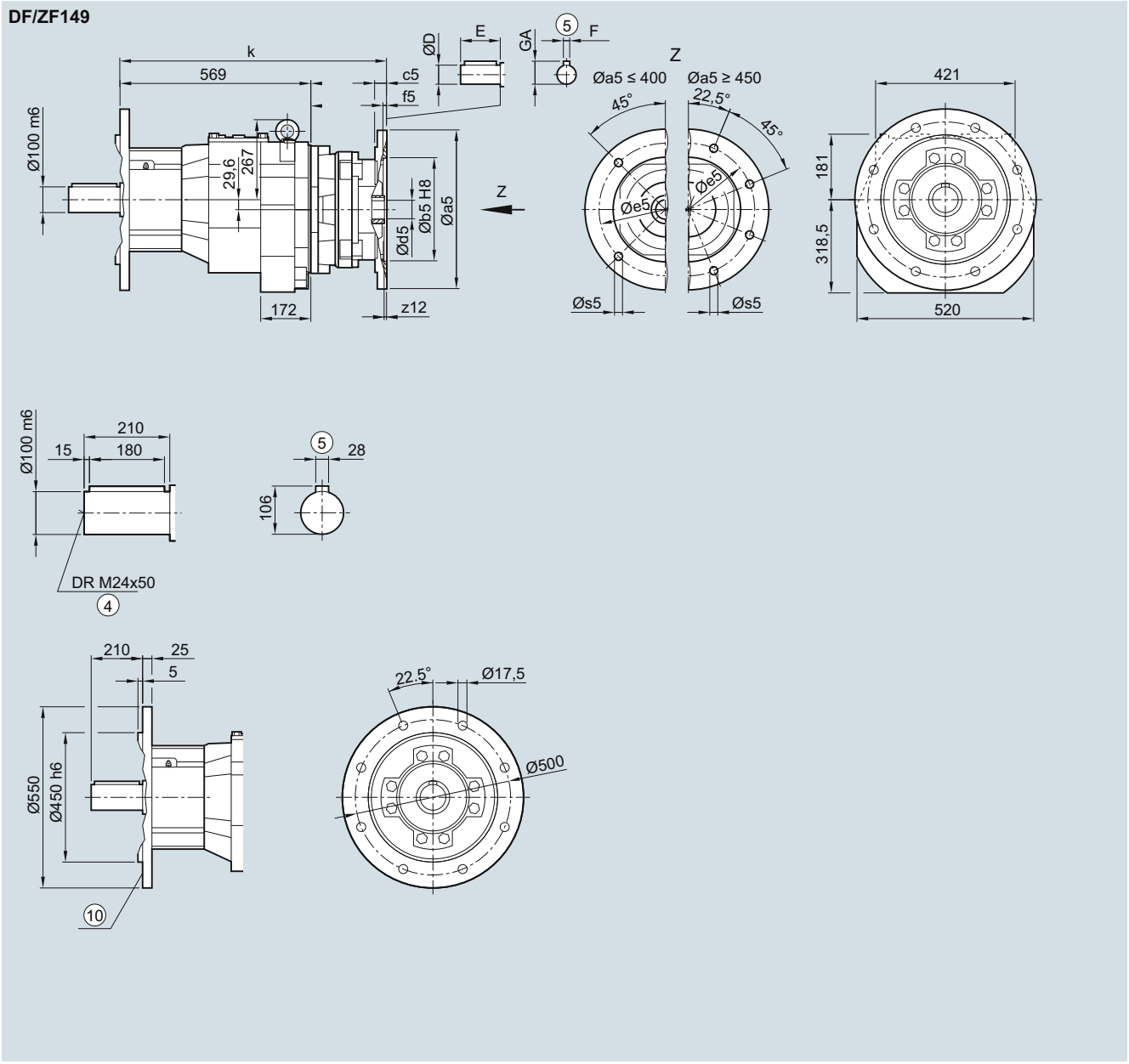
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

3

DF/ZF149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040K4

DF/ZF149

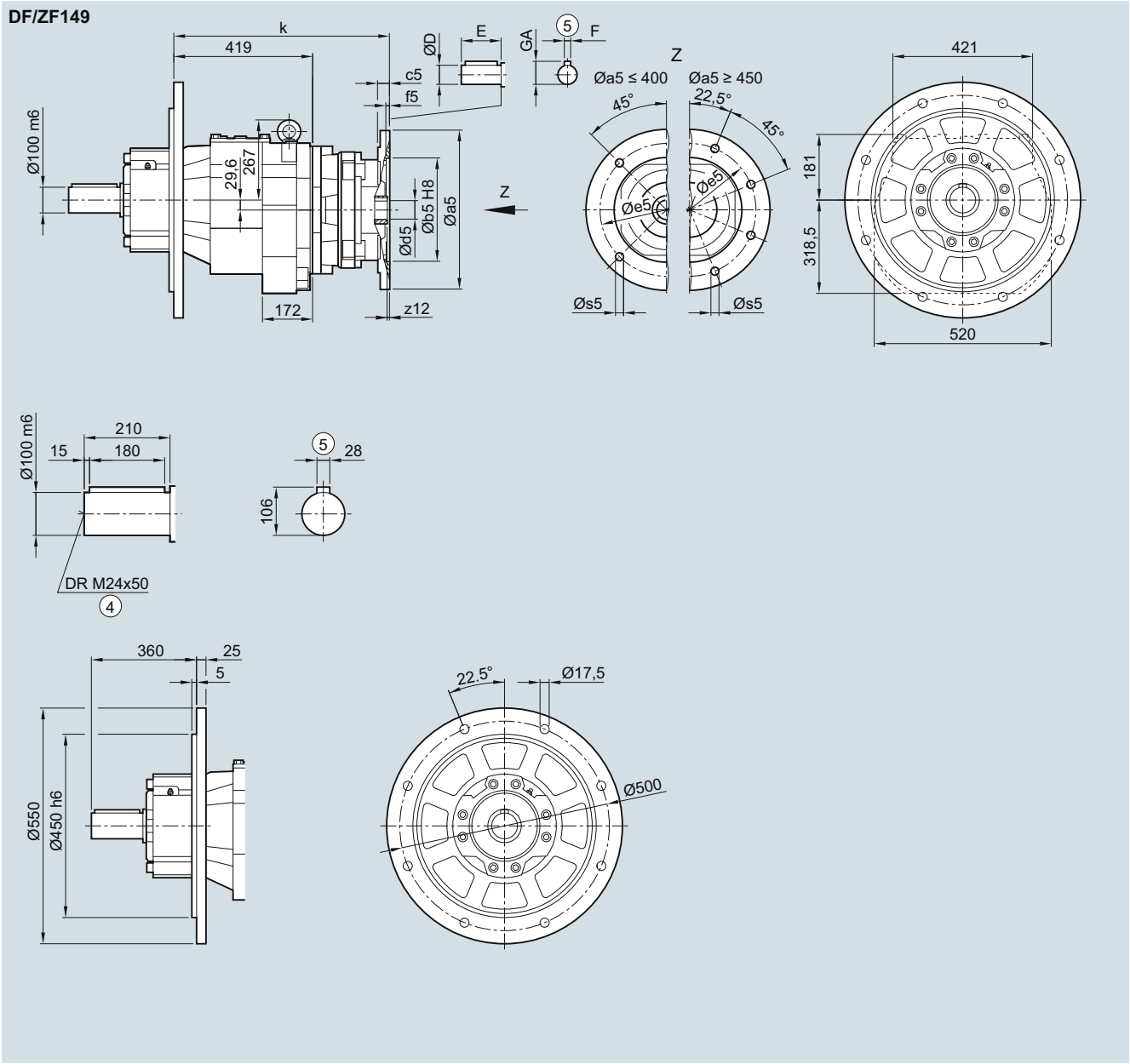


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	522.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	522.0
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	532.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	562.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	562.5
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 3/219

DF/ZF149 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040K4



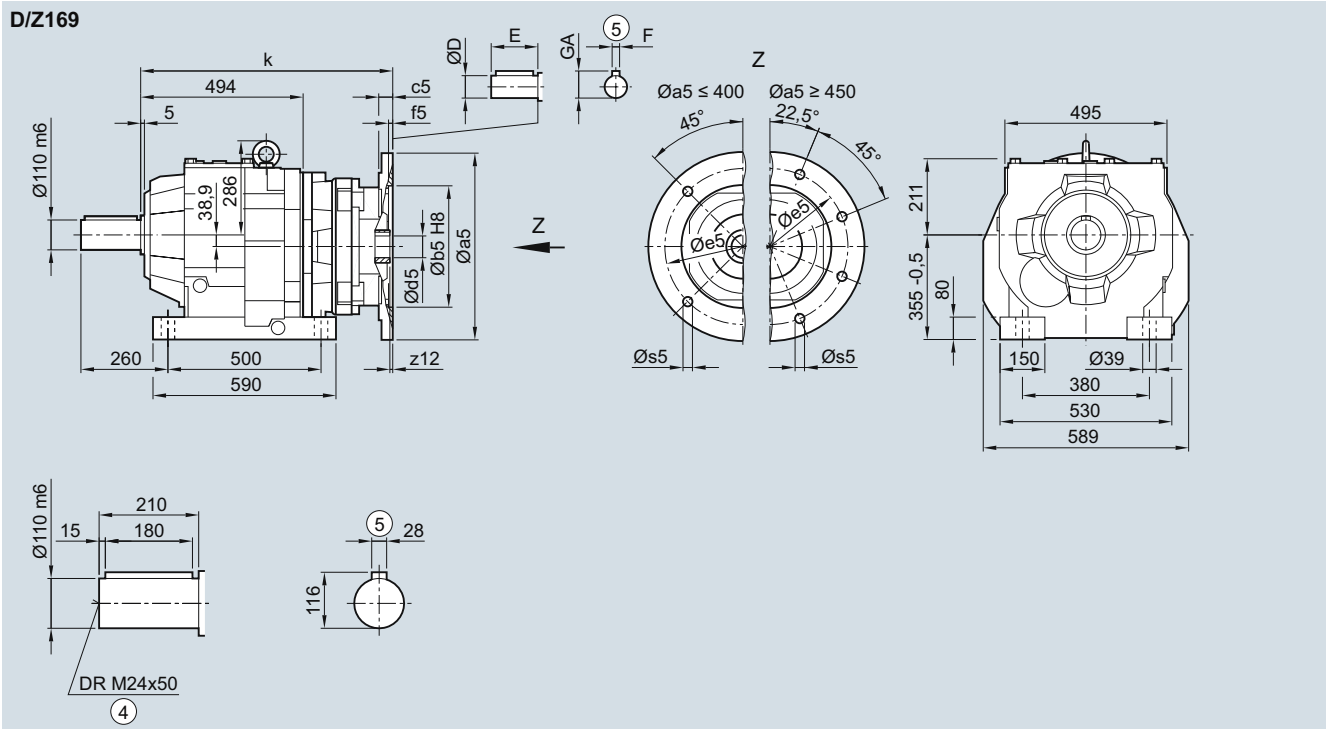
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5	215	M12	7.5	28	60	8	31.0	522.0
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	522.0
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	532.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	562.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	562.5
200	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

D/Z169 gearbox in a foot-mounted design

DZ030K4



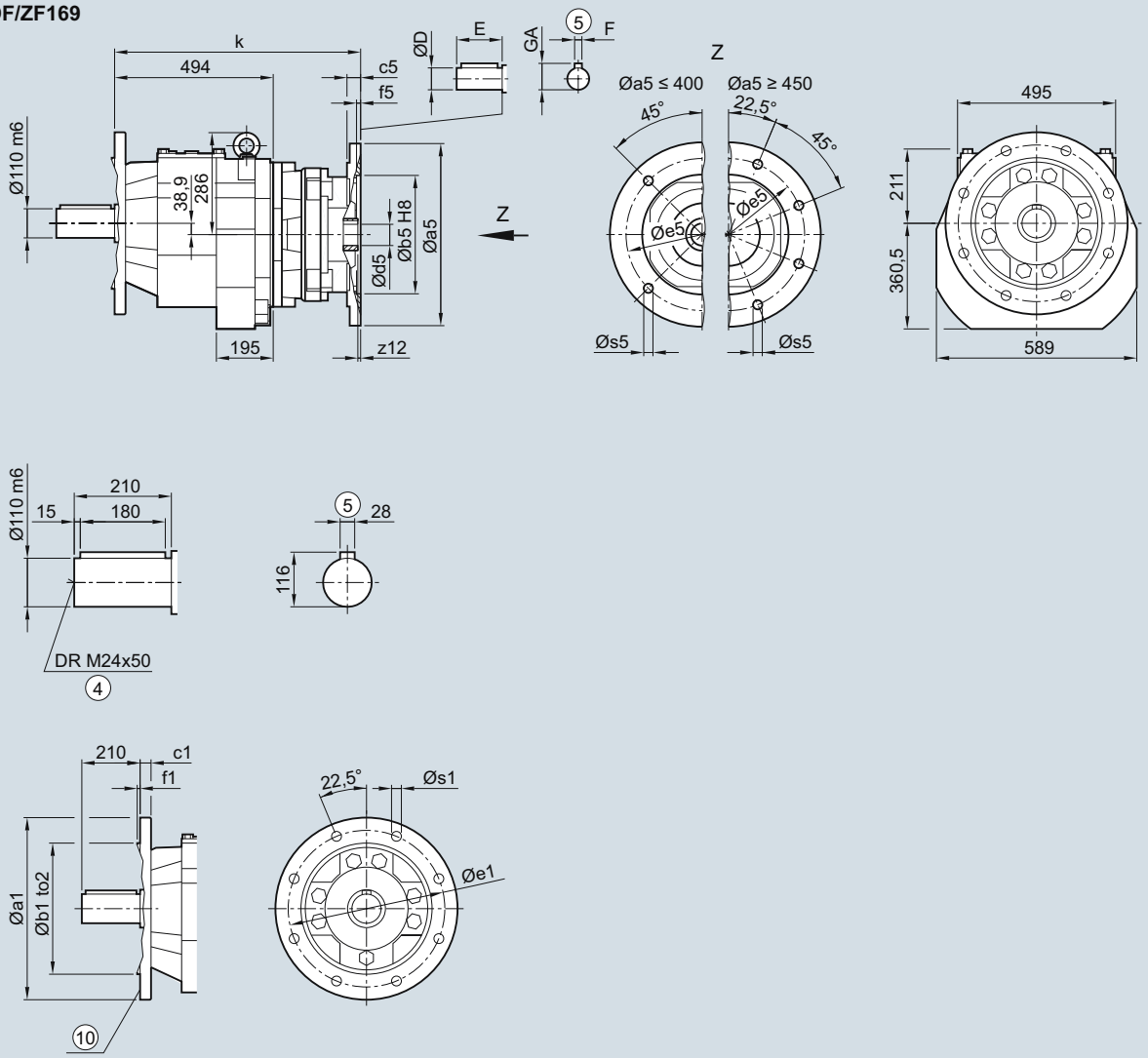
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	589.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	599.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	629.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	629.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	669.5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

DF/ZF169 gearbox in a flange-mounted design

DZF030K4

DF/ZF169



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

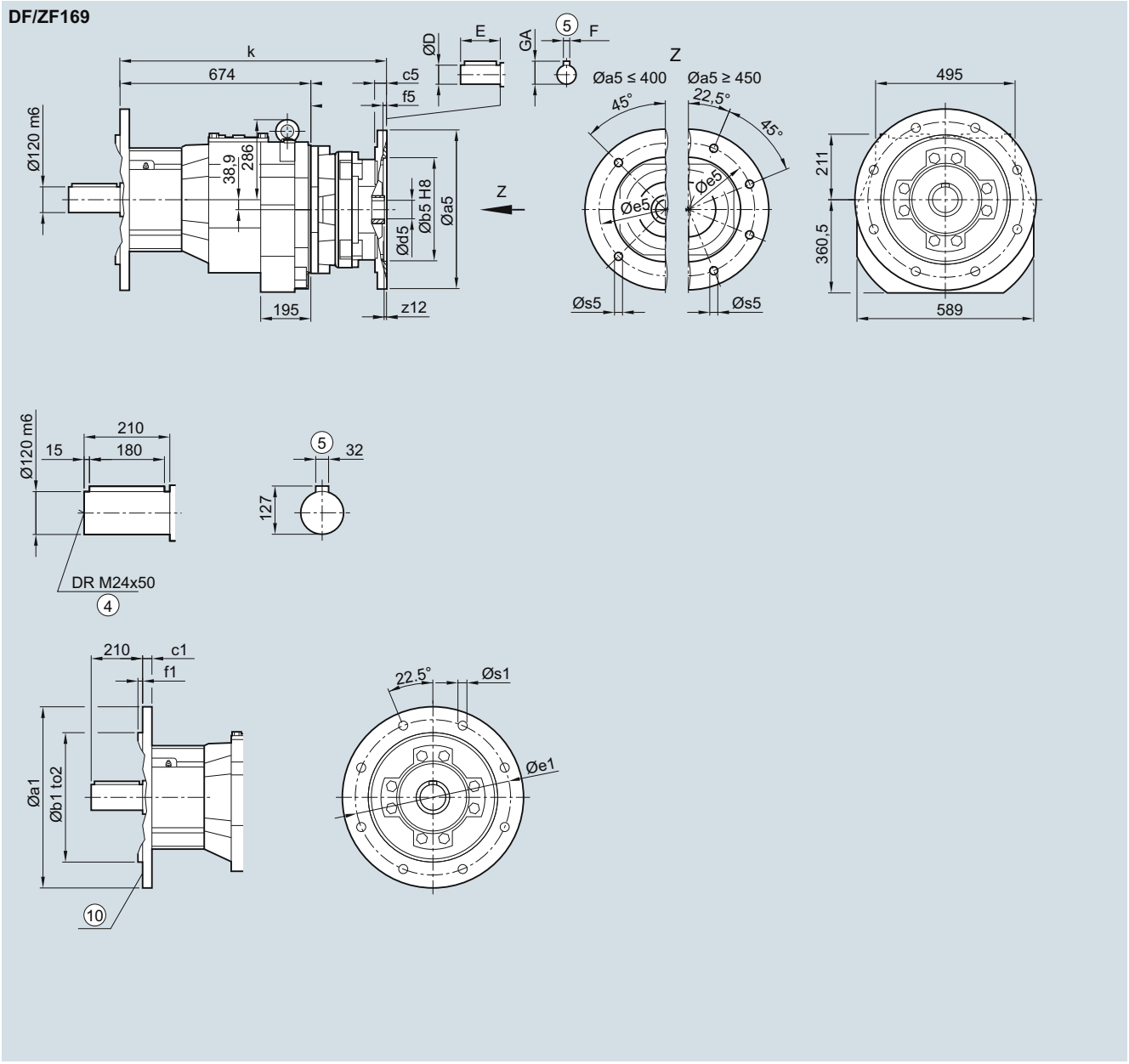
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	589.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	599.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	629.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	629.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	669.5
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 3/219

DF/ZF169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040K4

DF/ZF169



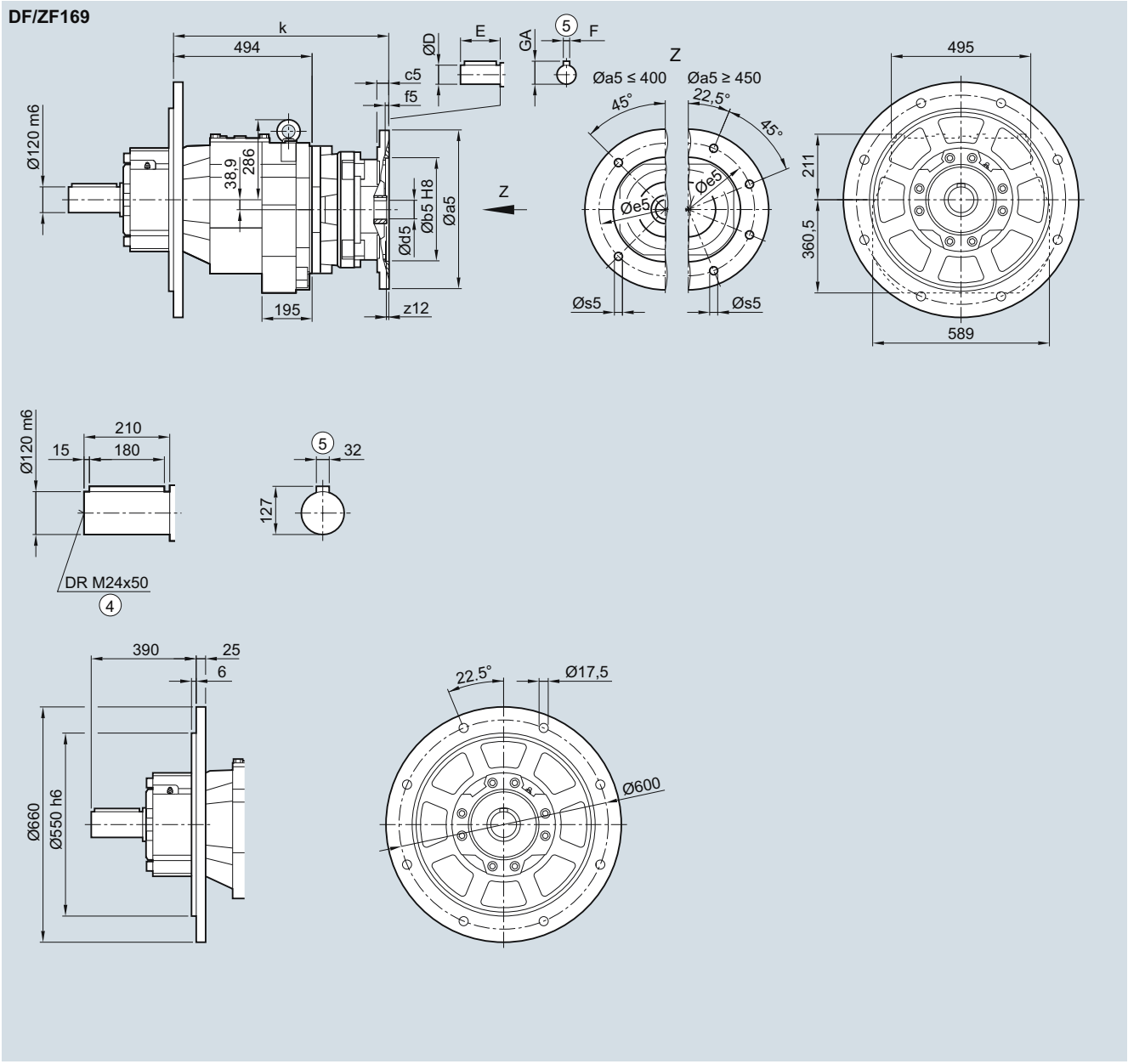
Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5
	660	550	h6	25	600	6	17.5

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 3/219

DF/ZF169 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

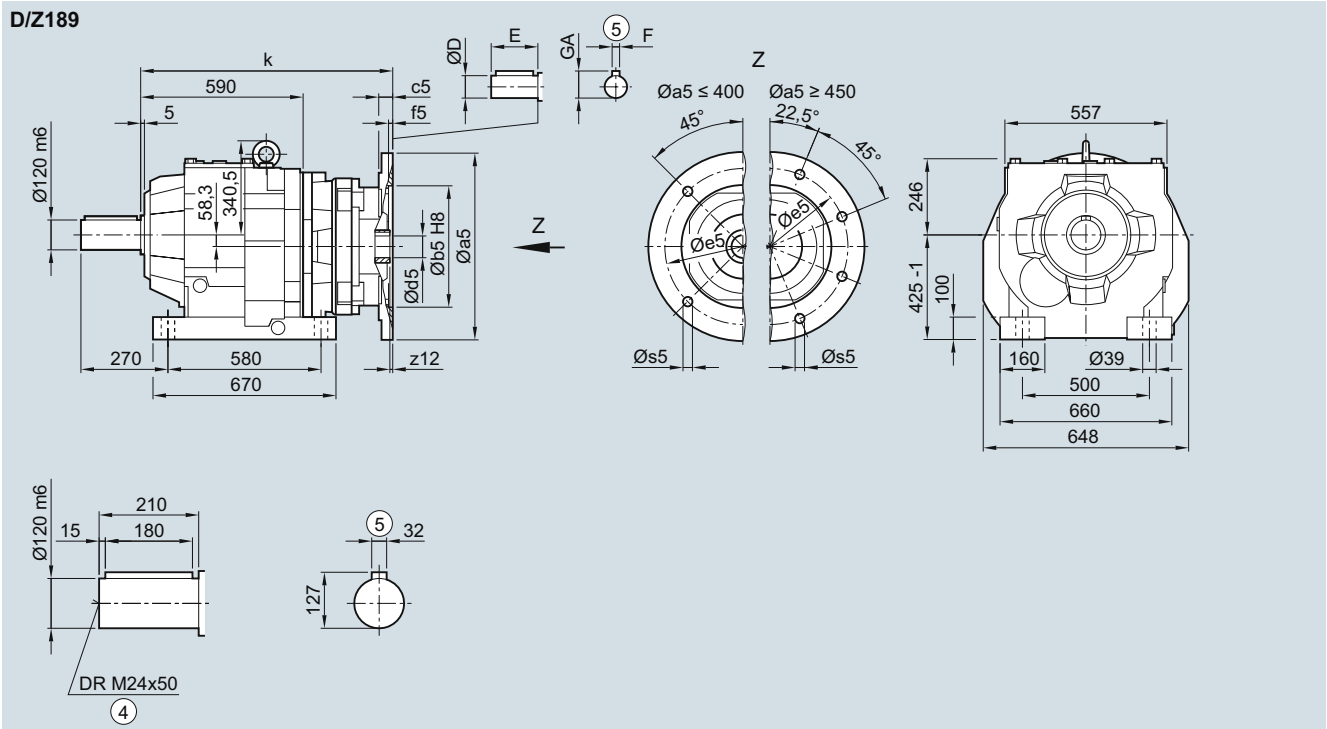
④ DIN 332

⑤ Feather key/keyway DIN 6885

3

D/Z189 gearbox in a foot-mounted design

DZ030K4



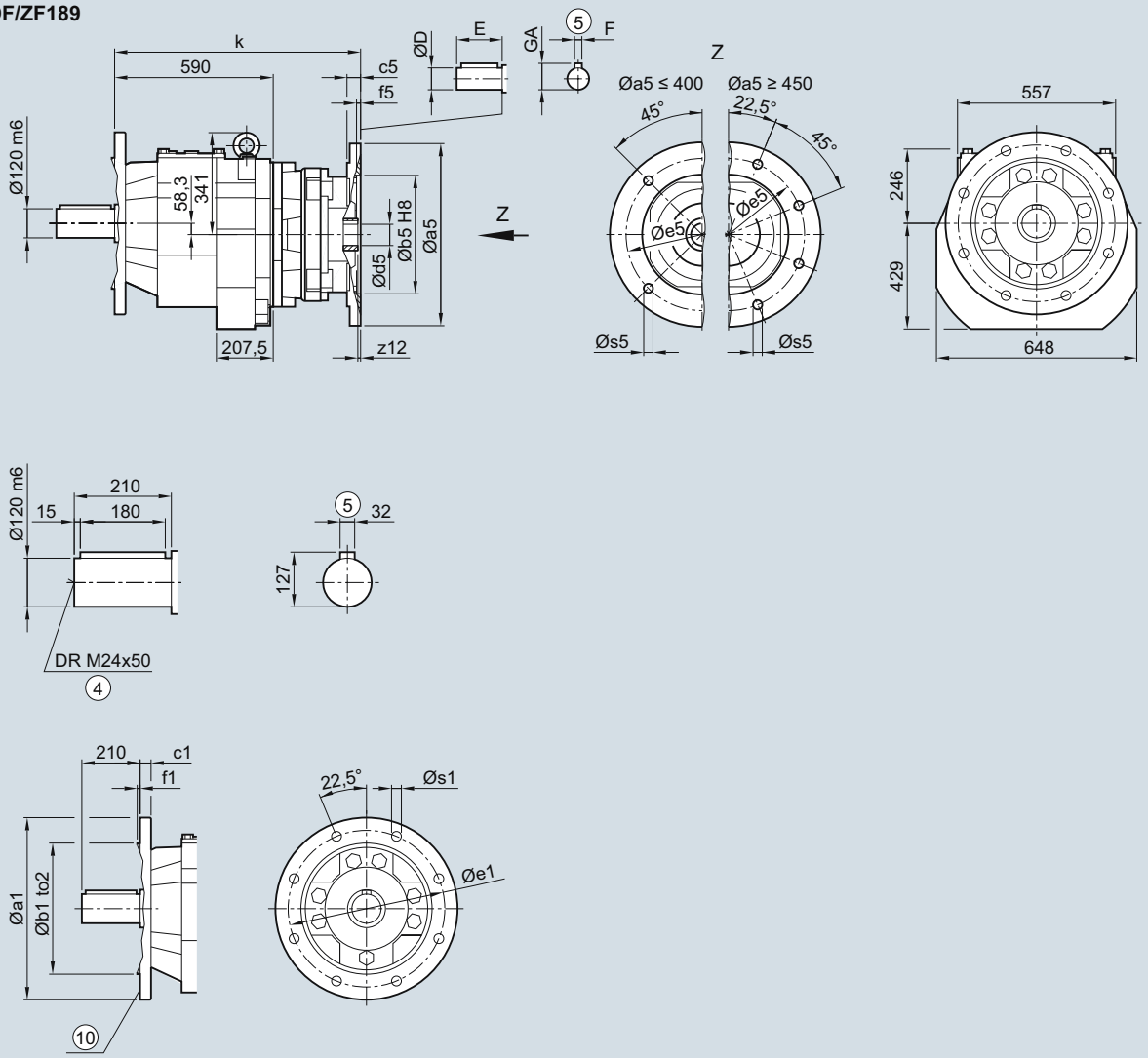
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	685.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	695.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	725.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	725.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	765.5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

DF/ZF189 gearbox in a flange-mounted design

DZF030K4

DF/ZF189



Flange	a1	b1	to2	c1	e1	f1	s1
	550	450	h6	25	500	5	17.5
	660	550	h6	28	600	6	22.0

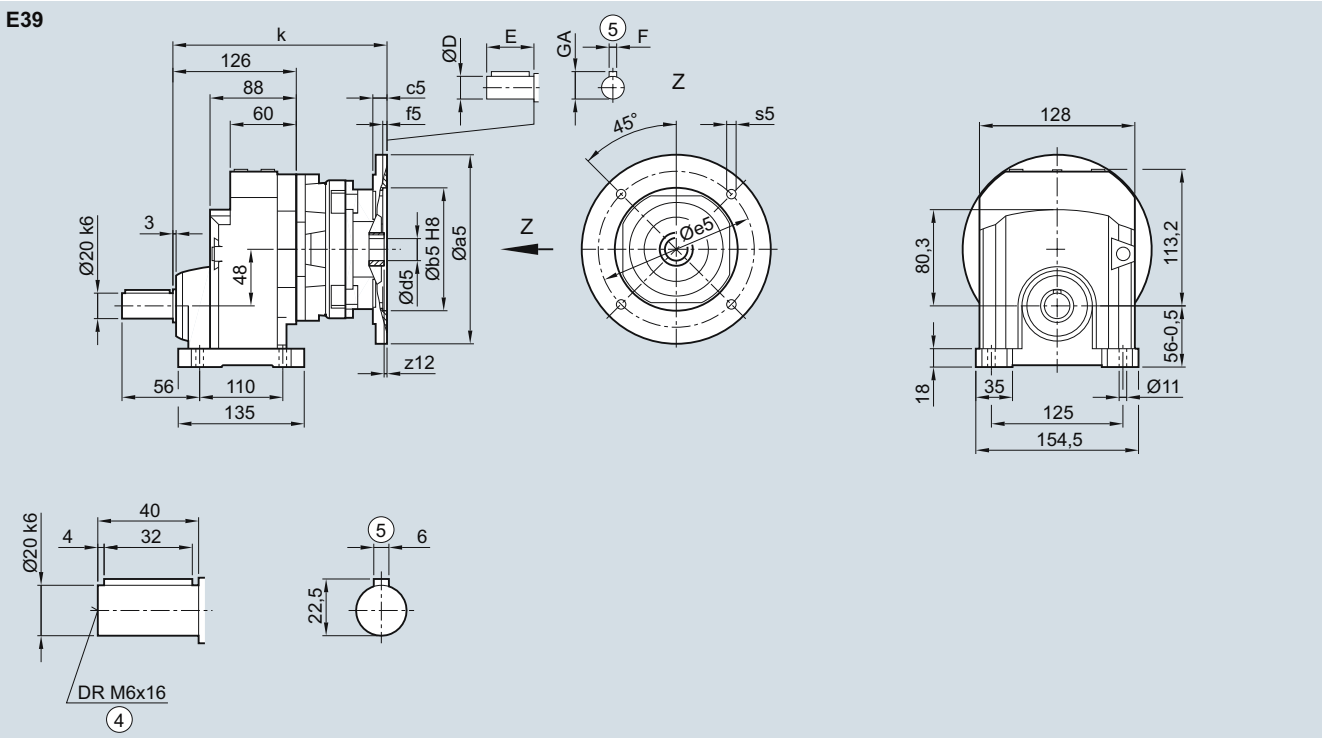
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5	215	M12	7.5	28	60	8	31.0	685.5
132	300	230	12	5	265	M12x20	3.0	38	80	10	41.0	695.5
160	350	250	15	6	300	M16x25	3.0	42	110	12	45.0	725.5
180	350	250	15	6	300	M16x25	3.0	48	110	14	51.5	725.5
200	400	300	20	6	350	M16x29	7.0	55	110	16	59.0	765.5
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 3/219

E39 gearbox in a foot-mounted design

E030K4

E39



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

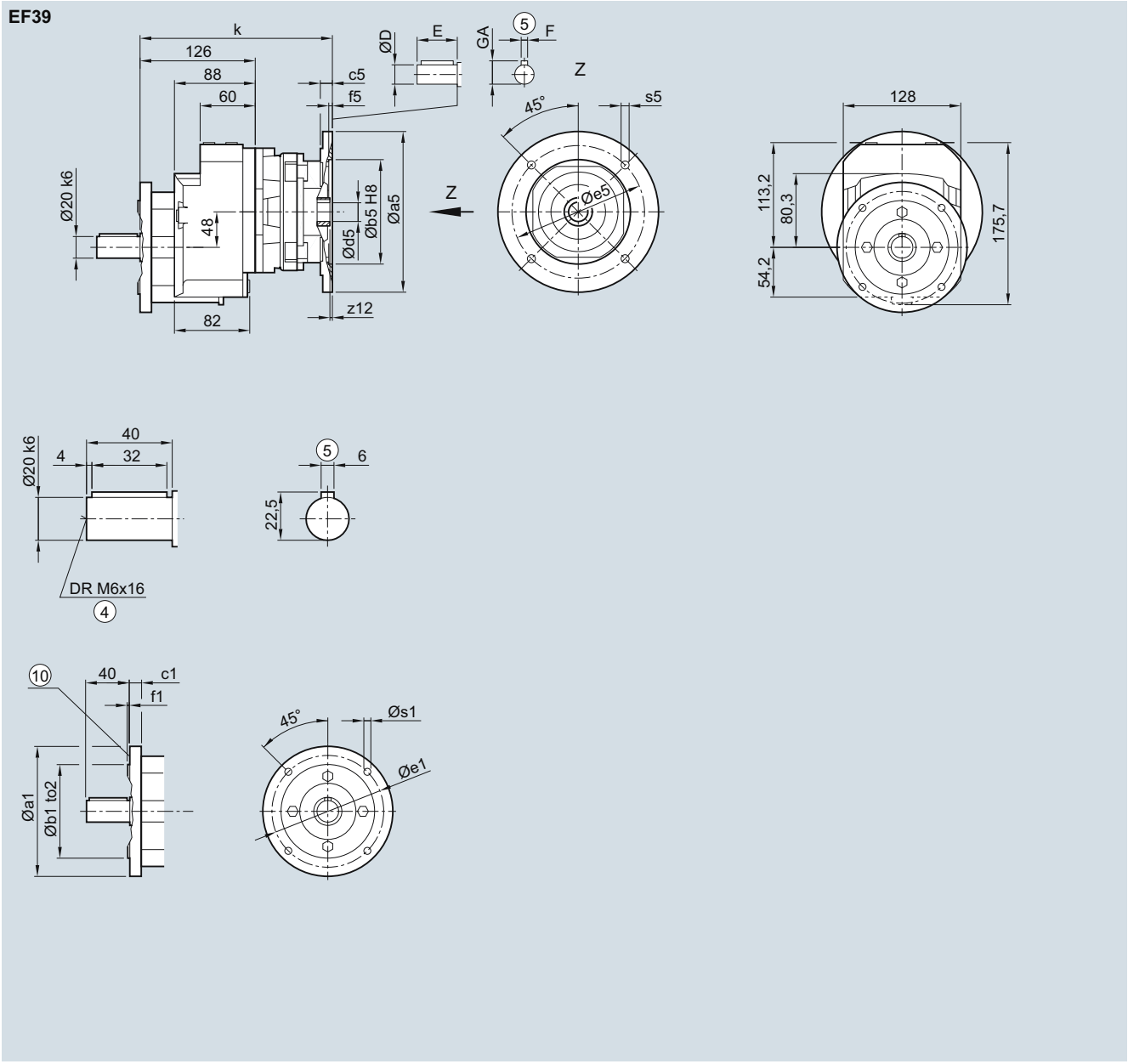
⑤ Feather key/keyway DIN 6885

Dimensions

EF39 gearbox in a flange-mounted design

EF030K4

EF39



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

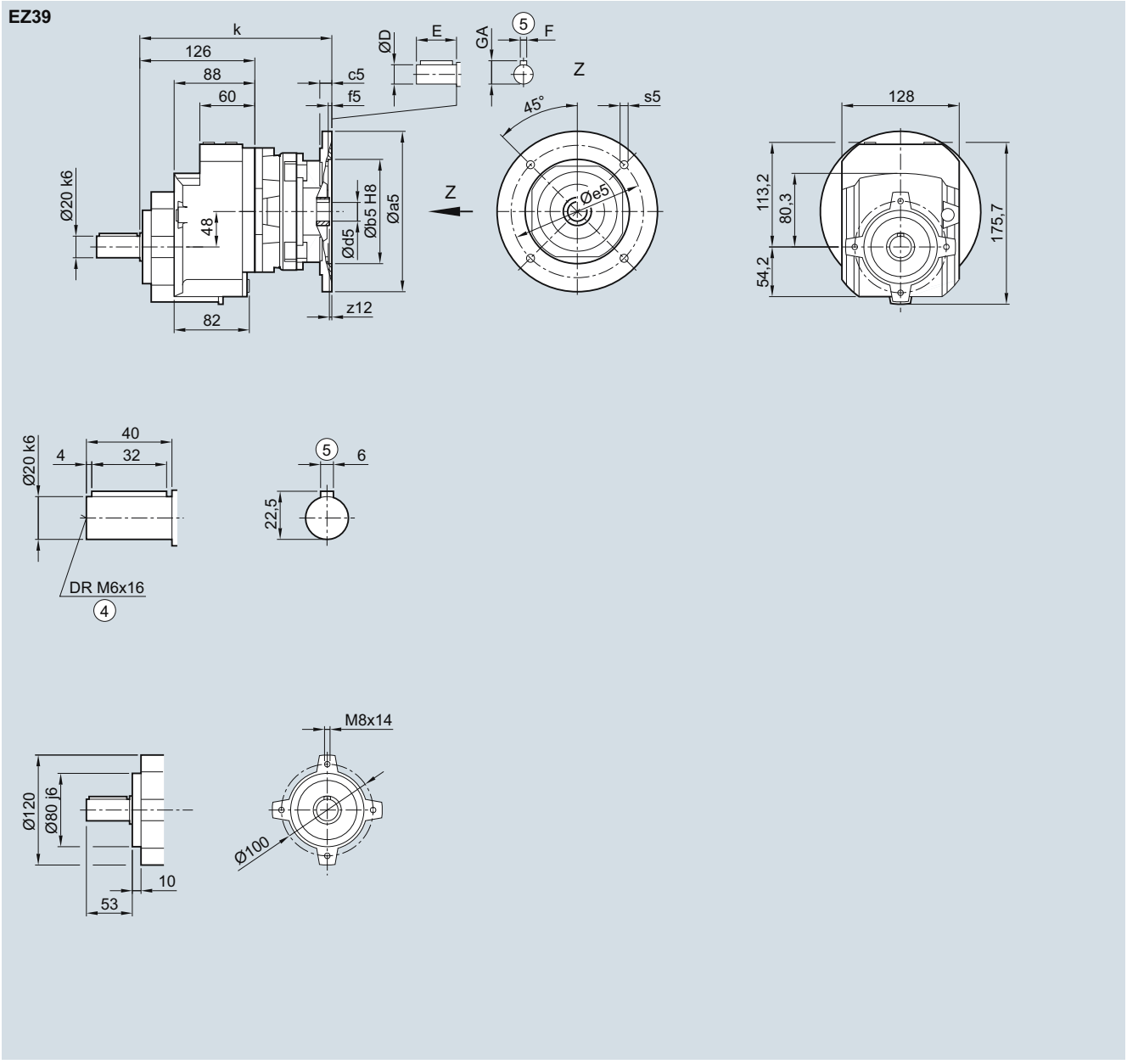
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

3

EZ39 gearbox in a housing flange design

EZ030K4

EZ39



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

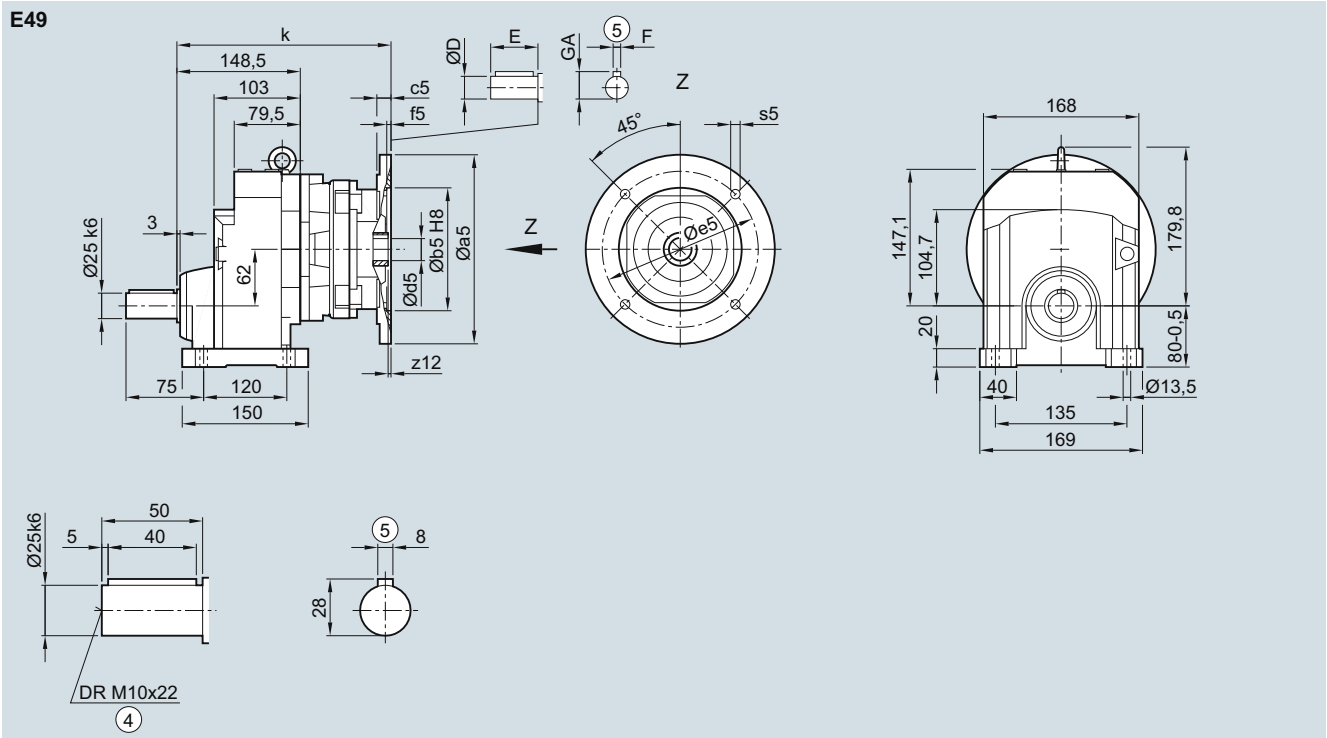
④ DIN 332

⑤ Feather key/keyway DIN 6885

Dimensions

E49 gearbox in a foot-mounted design

E030K4



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

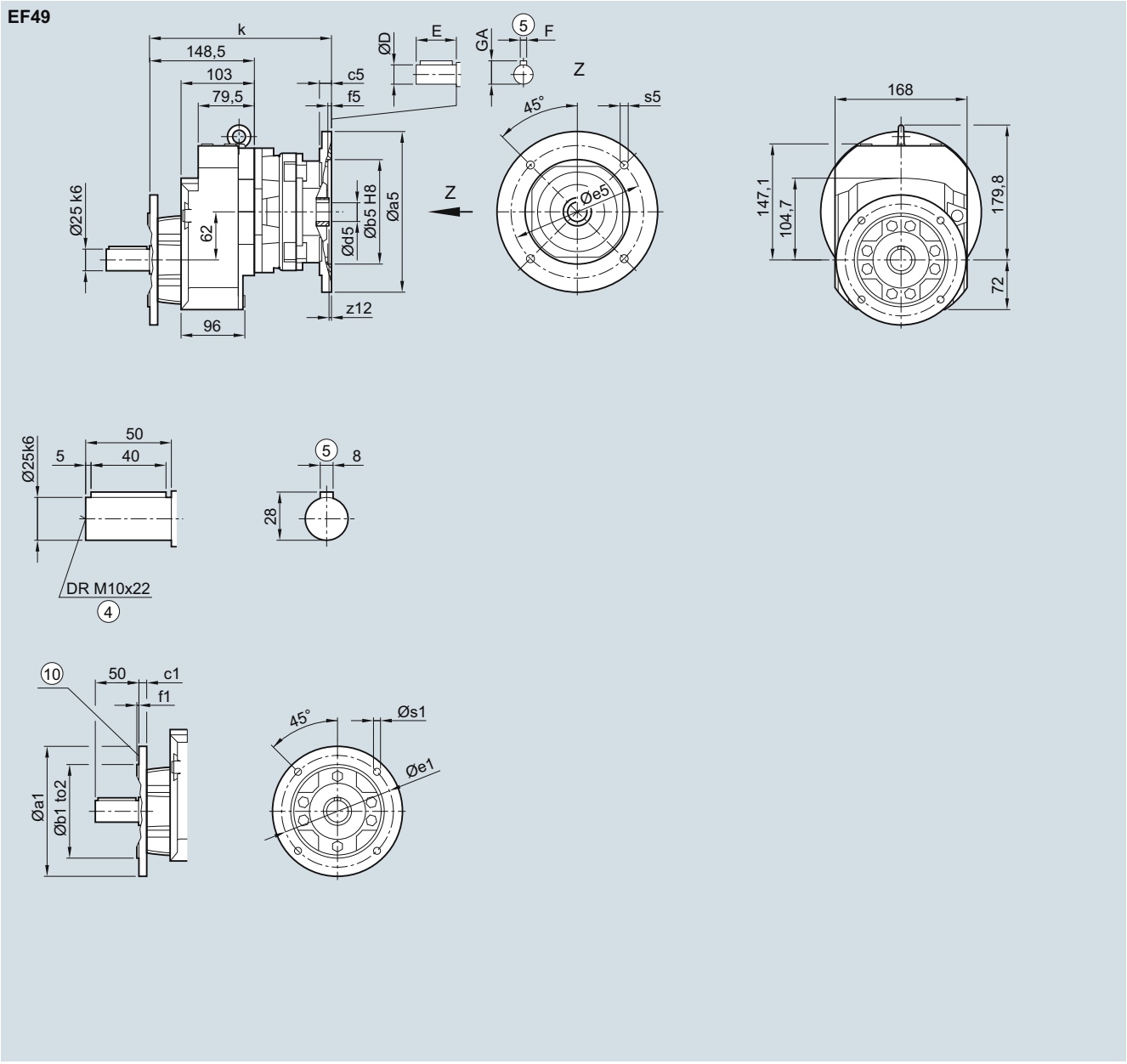
④ DIN 332

⑤ Feather key/keyway DIN 6885

EF49 gearbox in a flange-mounted design

EF030K4

EF49



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

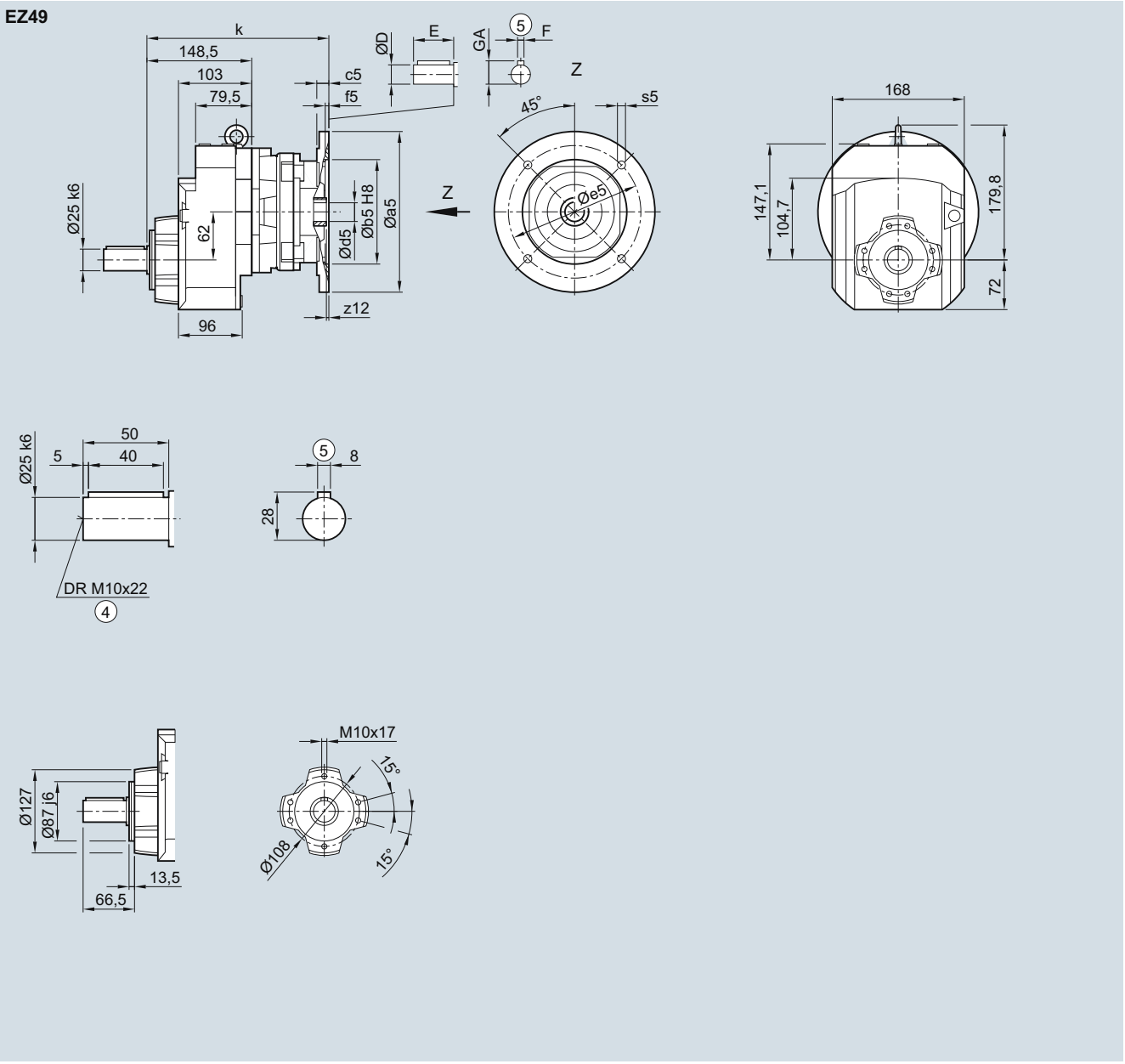
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	216.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	216.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	244.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	244.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.0
112	250	180	16	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 ⑩ For inner contour, see page 3/219

EZ49 gearbox in a housing flange design

EZ030K4

EZ49



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

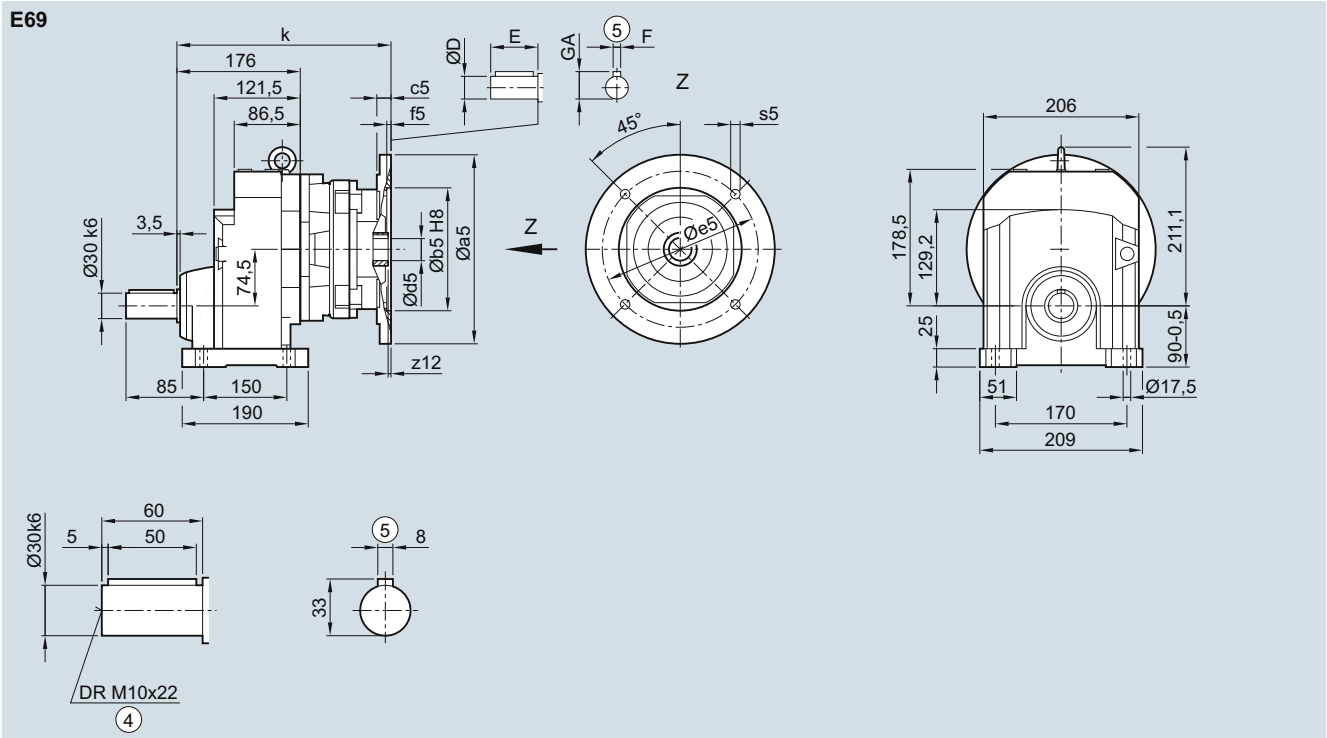
④ DIN 332

⑤ Feather key/keyway DIN 6885

3

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

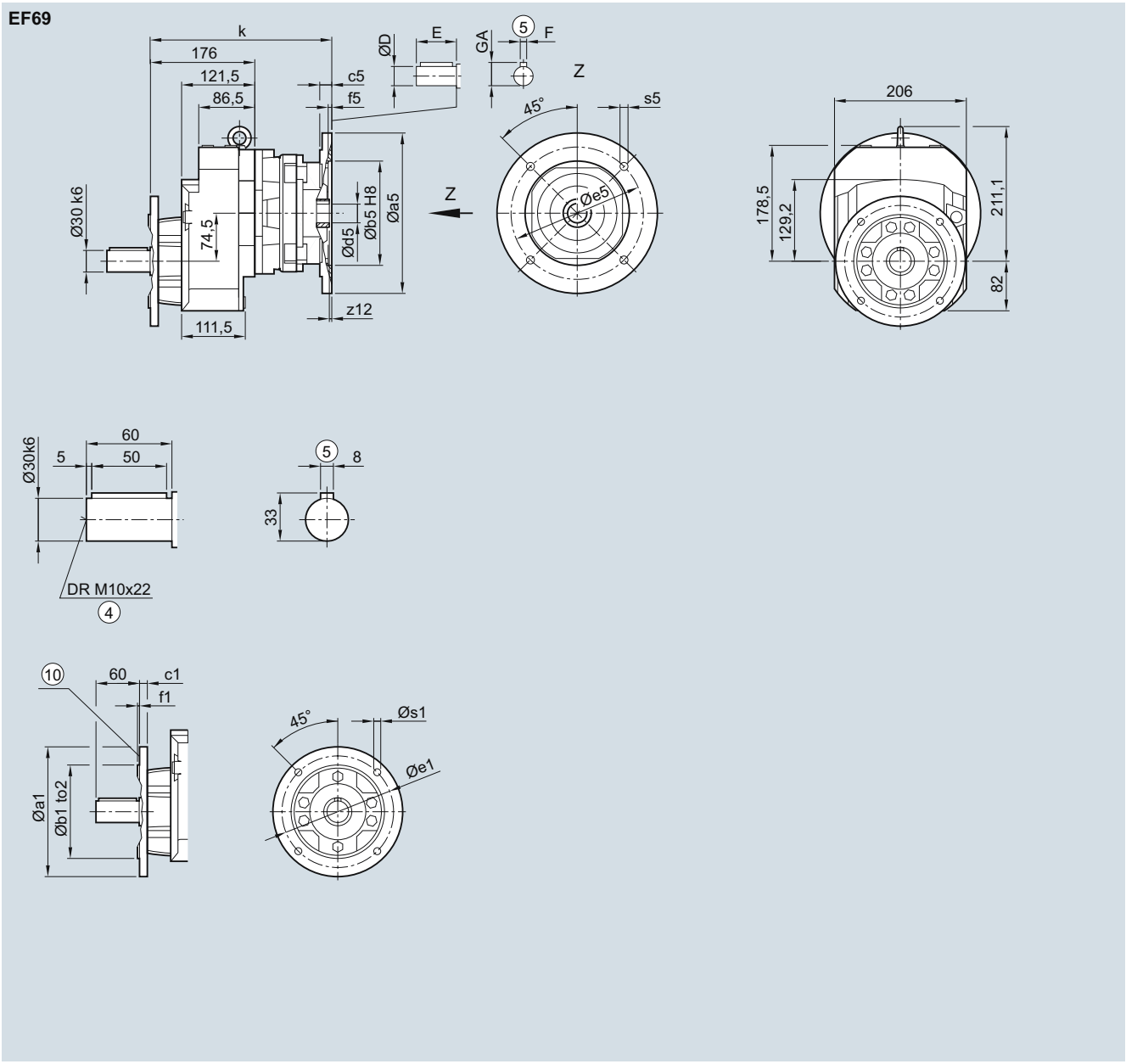
⑤ Feather key/keyway DIN 6885

Dimensions

EF69 gearbox in a flange-mounted design

EF030K4

EF69



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

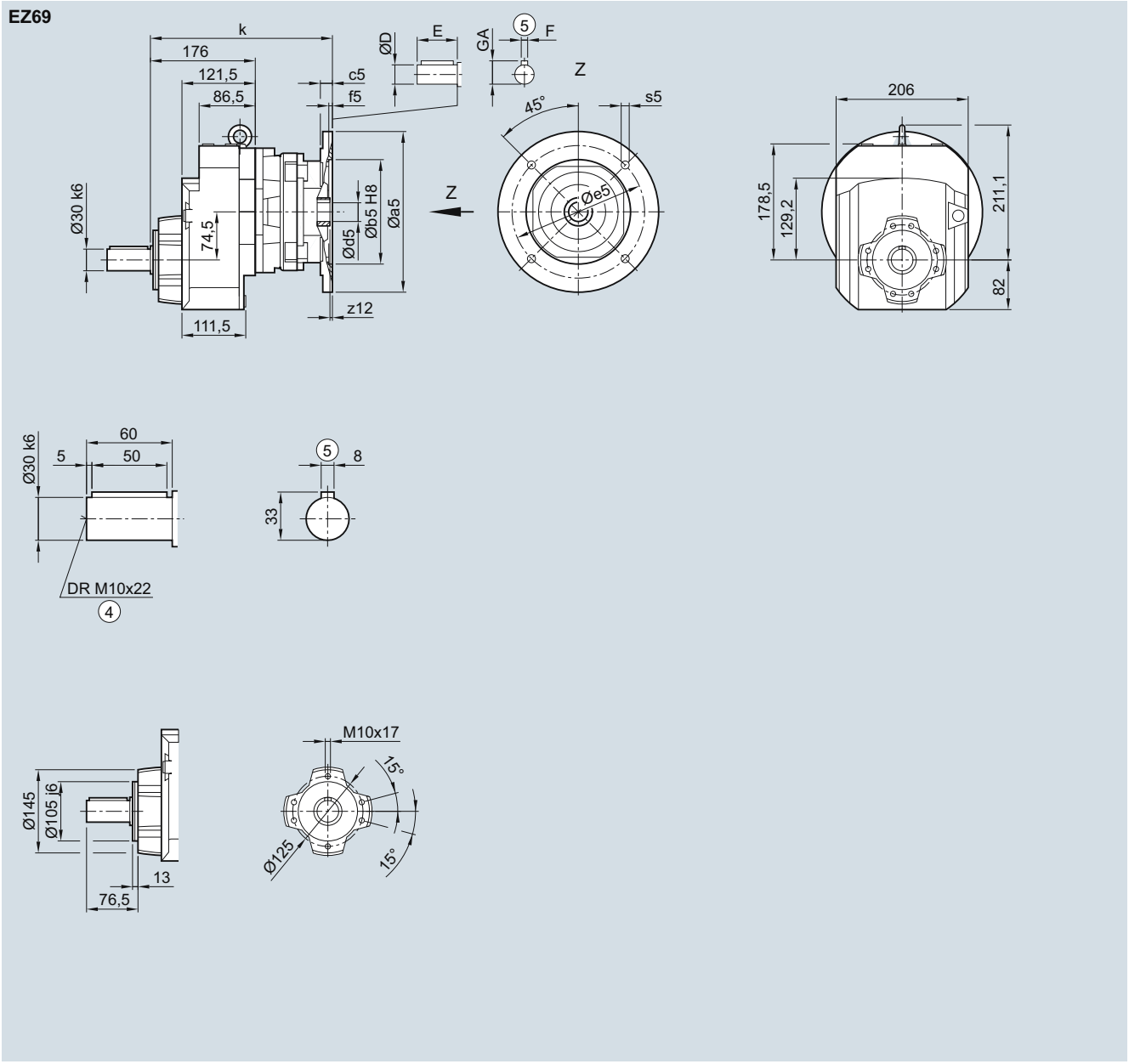
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	242.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	266.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	266.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	320.5
132	300	230	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 3/219

EZ69 gearbox in a housing flange design

EZ030K4

EZ69



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

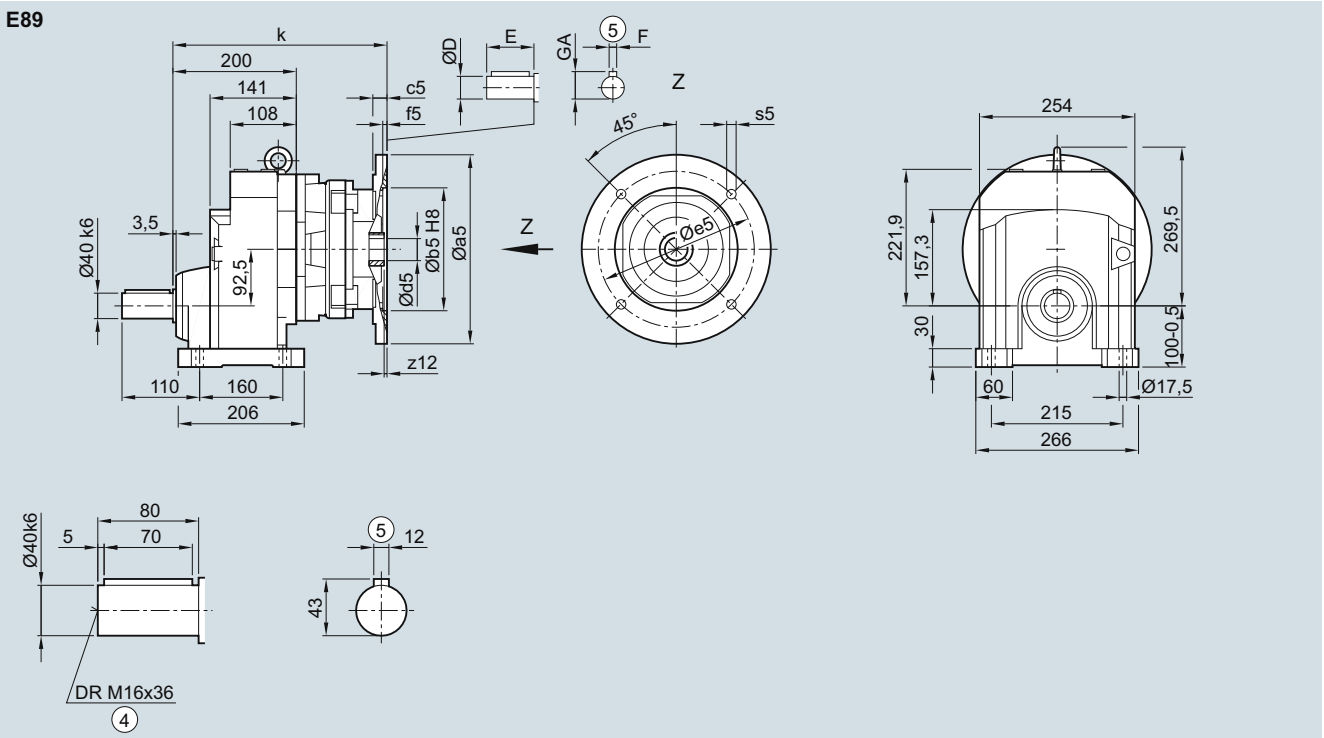
⑤ Feather key/keyway DIN 6885

Dimensions

E89 gearbox in a foot-mounted design

E030K4

E89



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	277.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	277.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	345.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	375.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	375.0

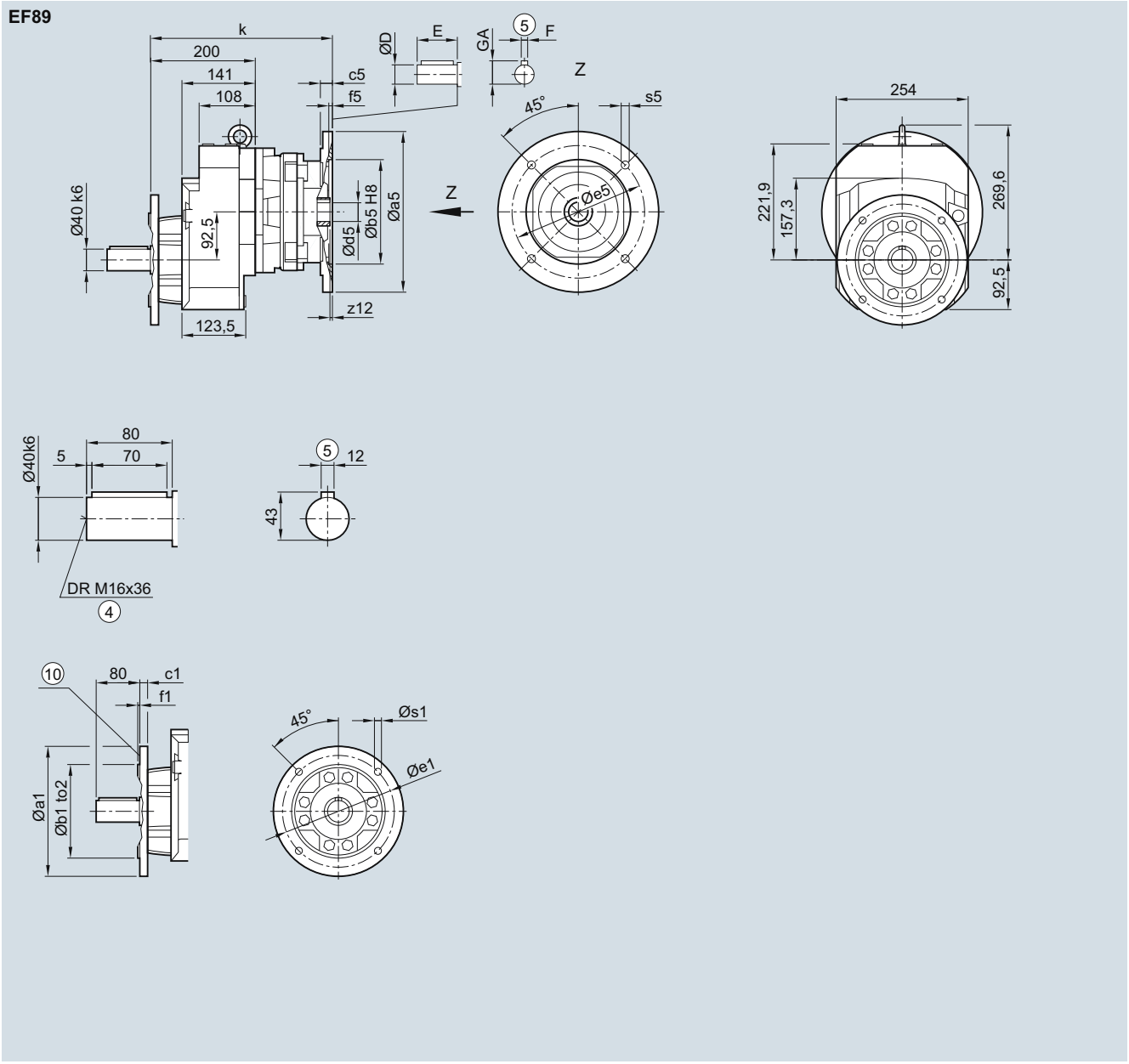
④ DIN 332

⑤ Feather key/keyway DIN 6885

EF89 gearbox in a flange-mounted design

EF030K4

EF89



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
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	277.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	277.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	345.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	375.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	375.0

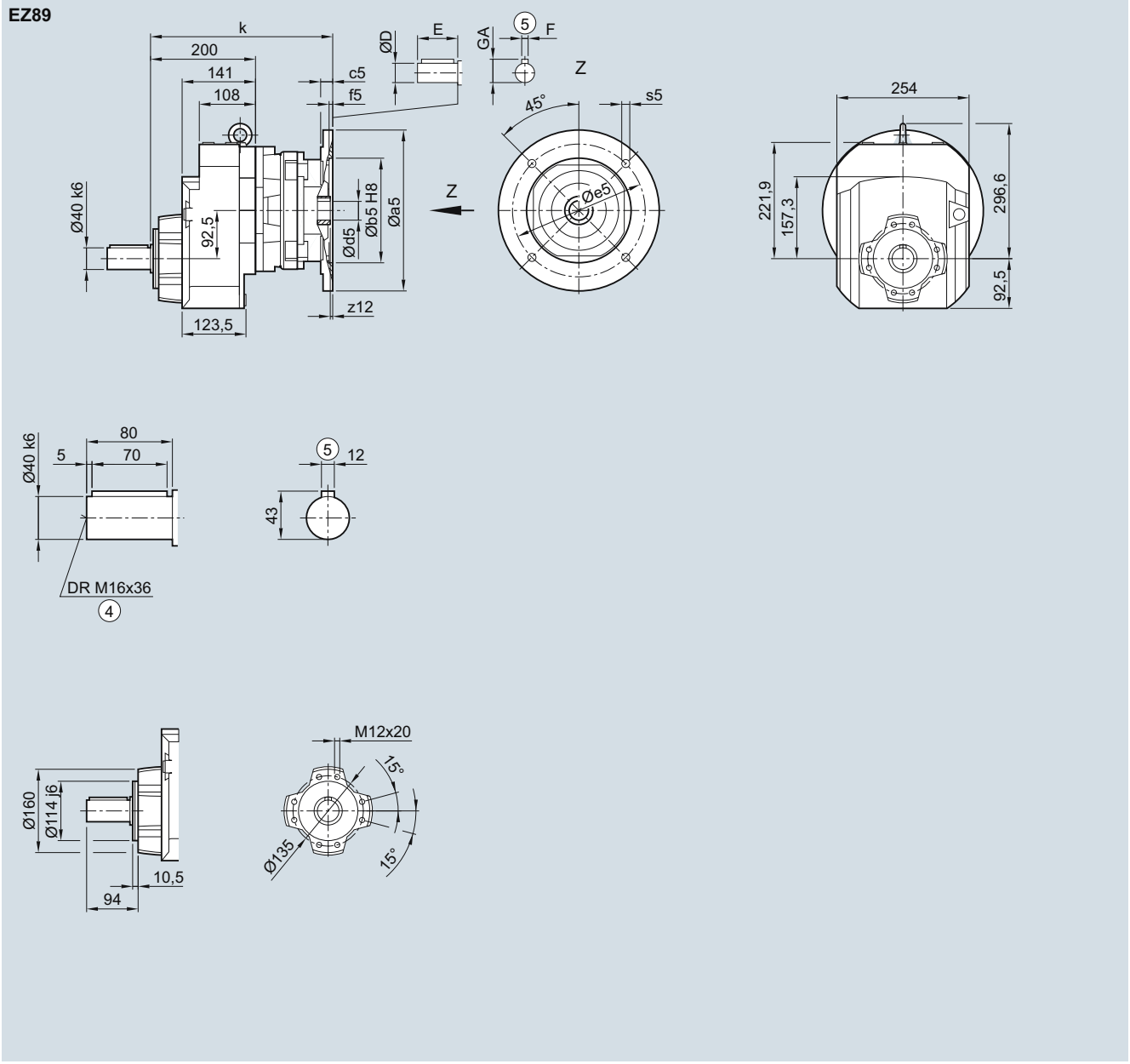
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

Dimensions

EZ89 gearbox in a housing flange design

EZ030K4

EZ89



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	277.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	277.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	345.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	375.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	375.0

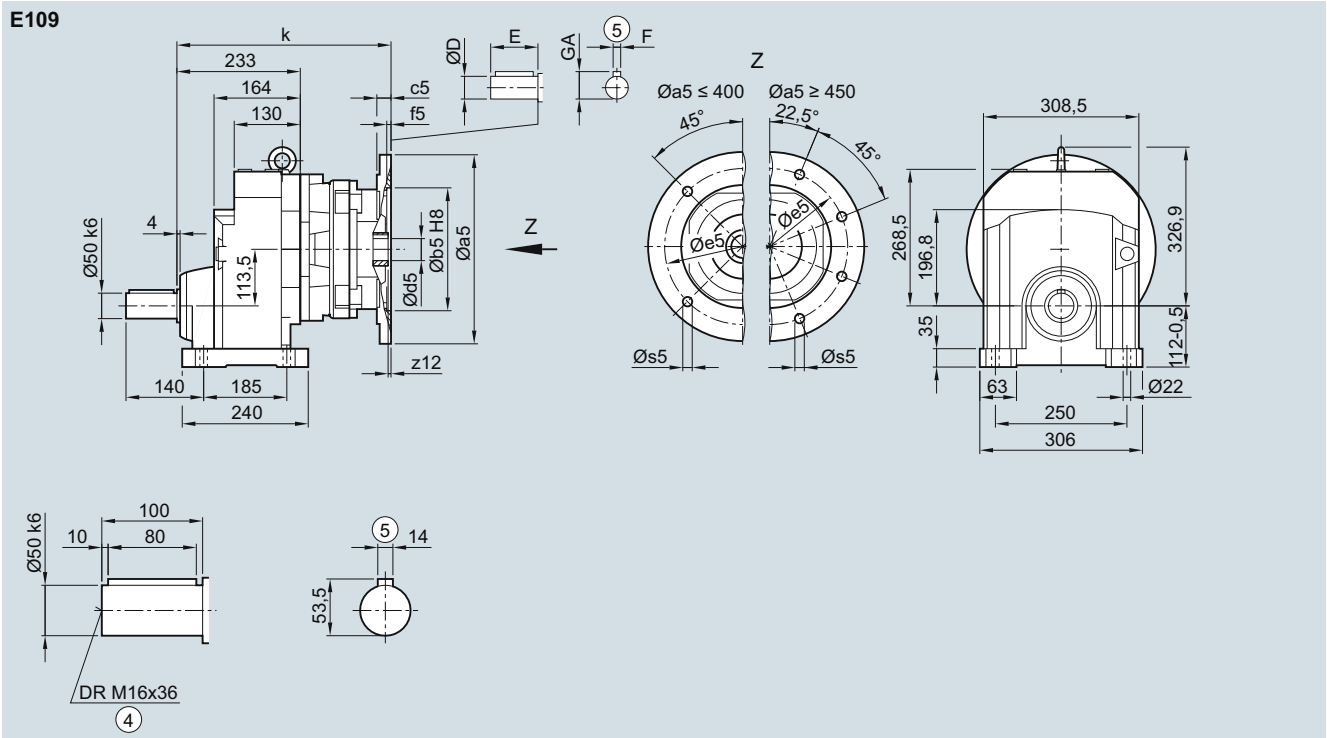
④ DIN 332

⑤ Feather key/keyway DIN 6885

3

E109 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	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

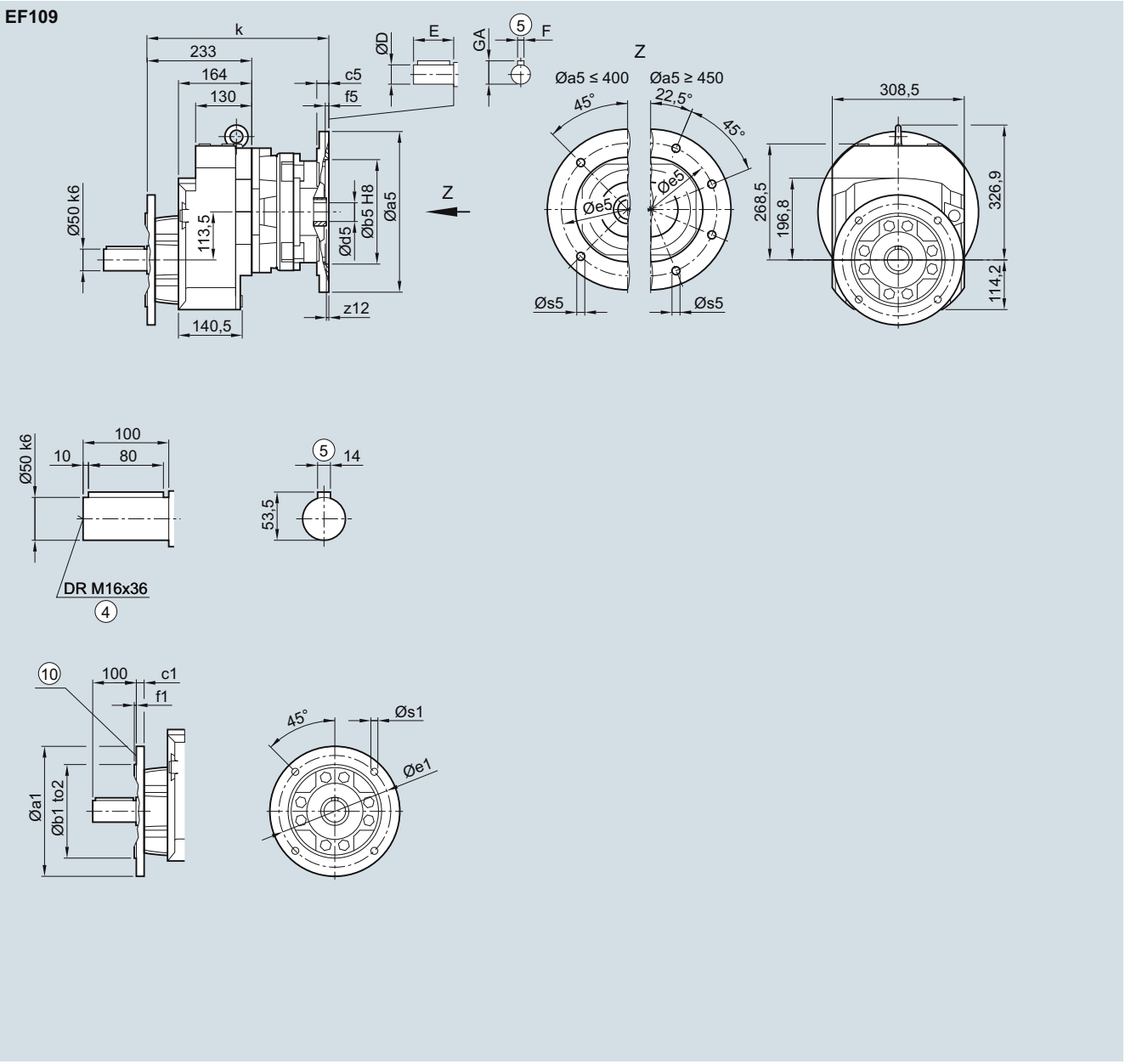
④ DIN 332

⑤ Feather key/keyway DIN 6885

EF109 gearbox in a flange-mounted design

EF030K4

EF109



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

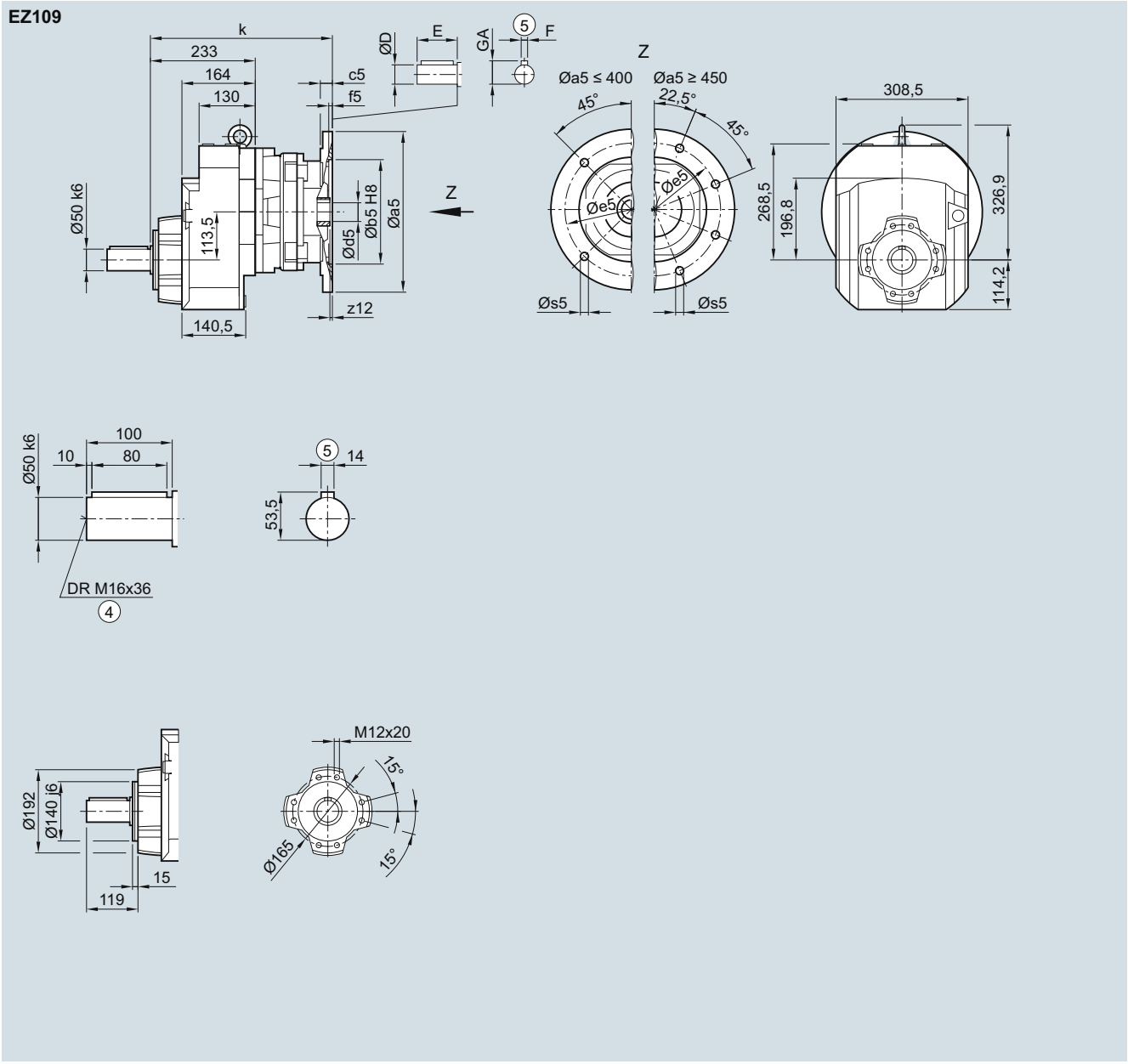
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	303.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	369.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	399.0
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 3/219

3

EZ109 gearbox in a housing flange design

EZ030K4



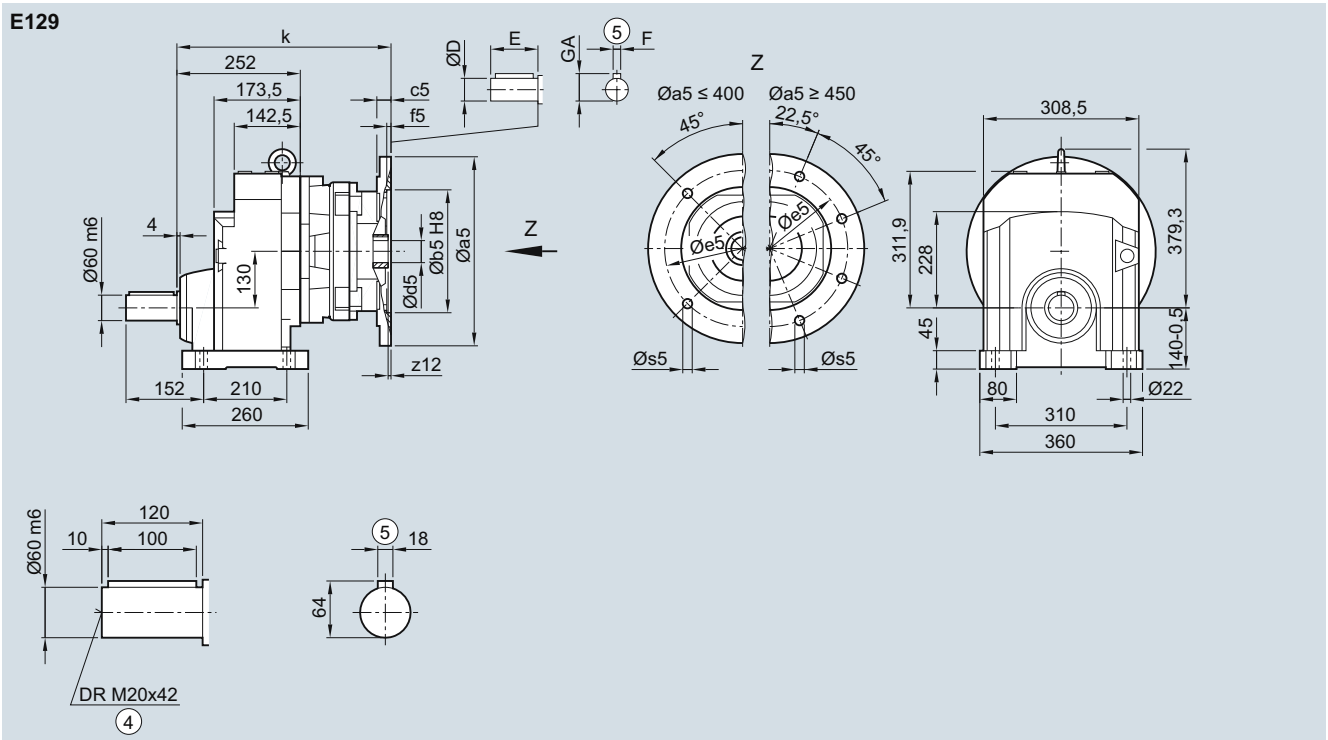
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	303.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	351.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	369.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	399.0
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

E129 gearbox in a foot-mounted design

E030K4



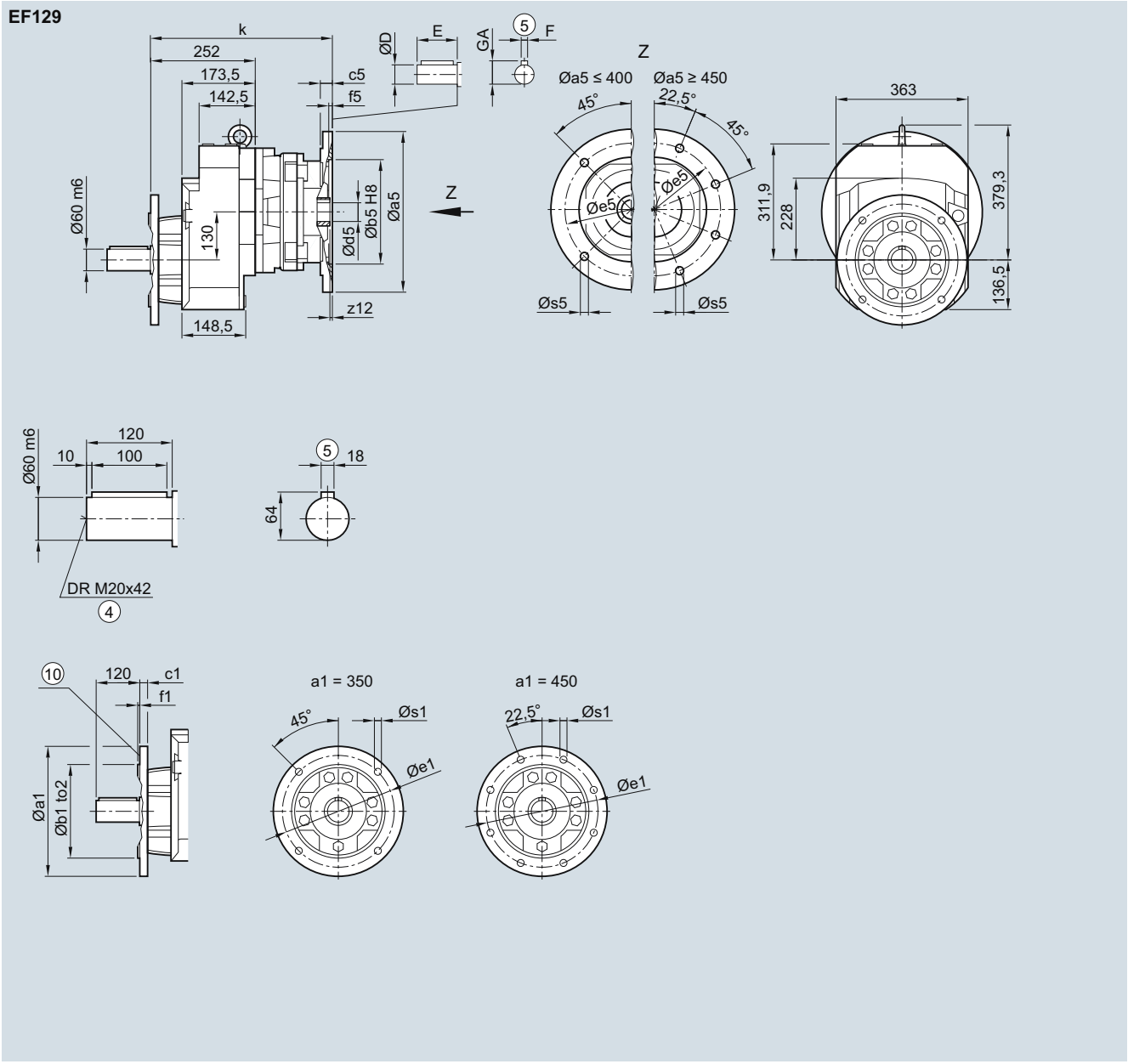
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	315.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	377.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	407.0
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

EF129 gearbox in a flange-mounted design

EF030K4



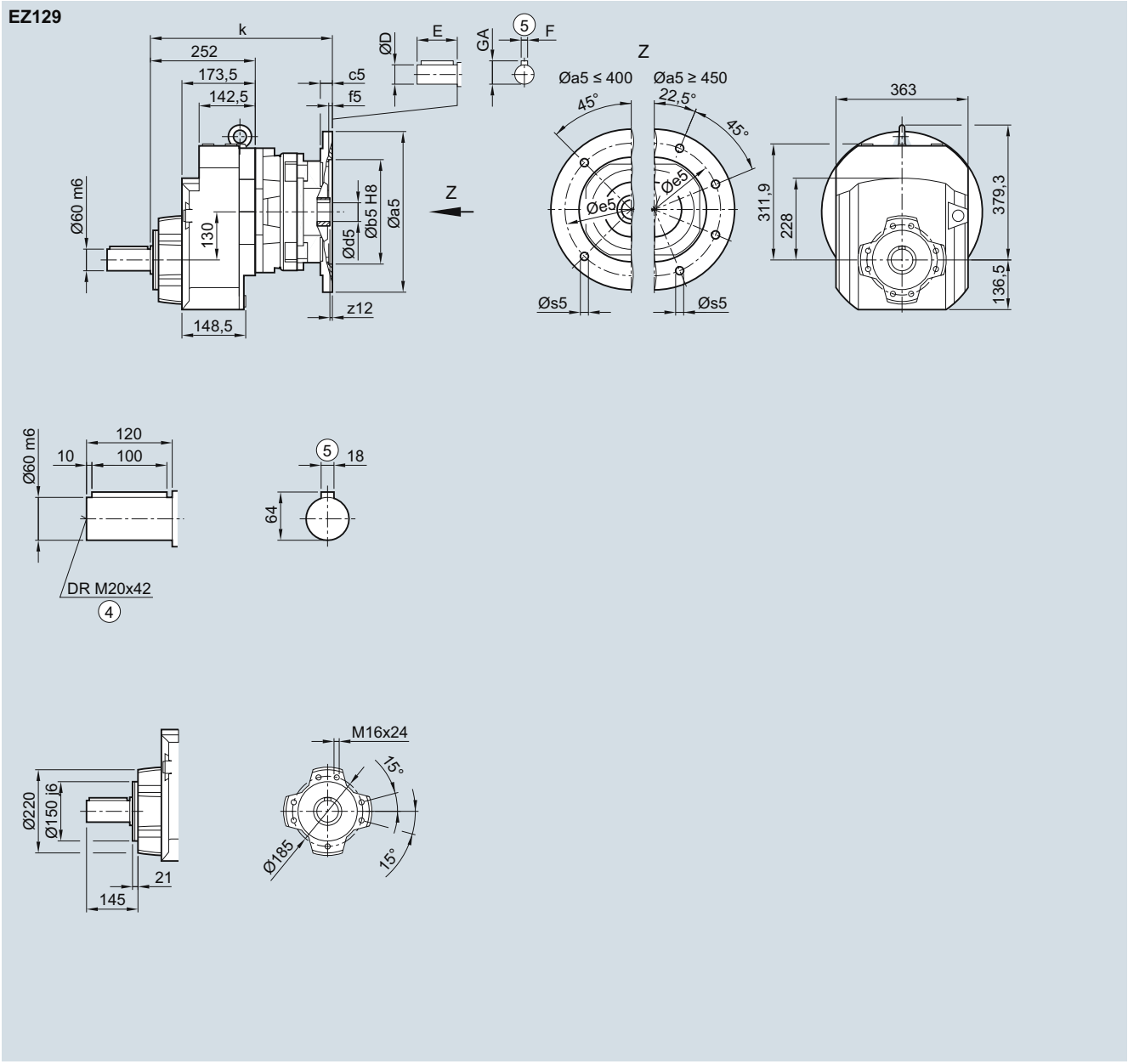
Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

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	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 ⑩ For inner contour, see page 3/219

EZ129 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	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

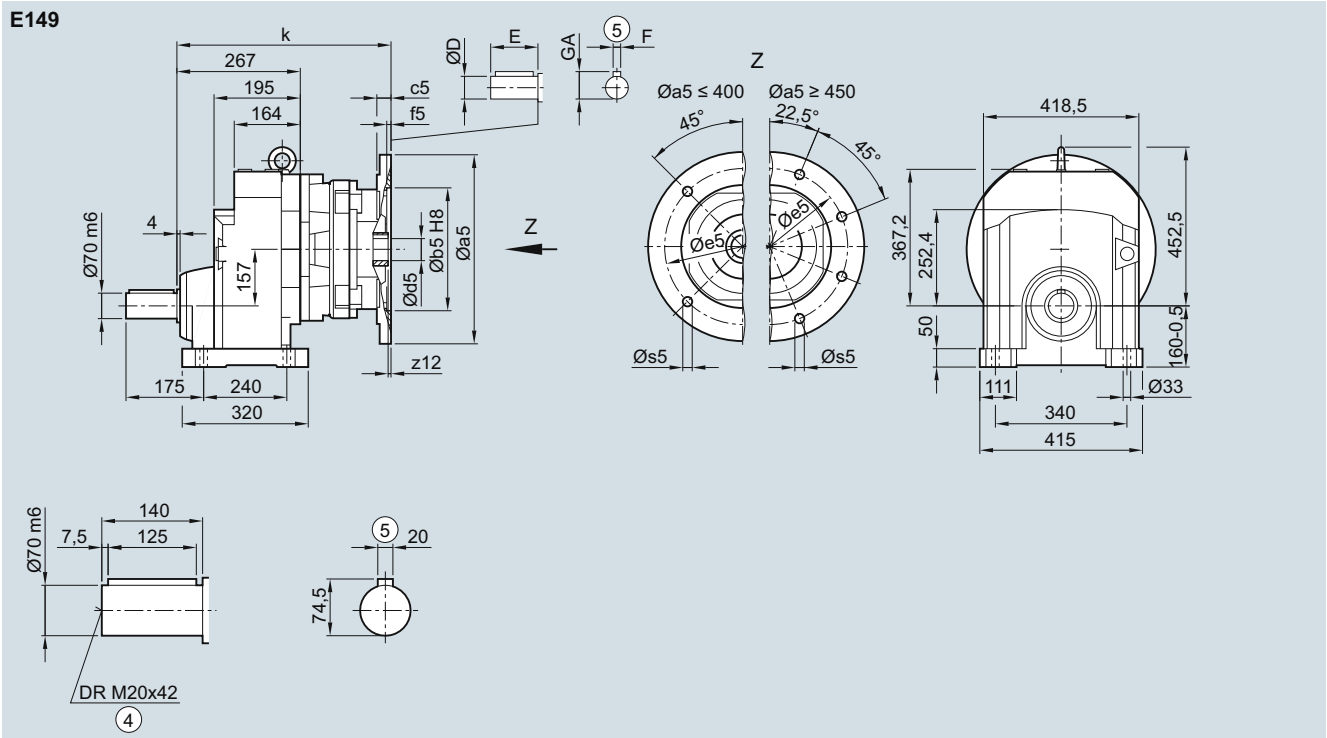
④ DIN 332

⑤ Feather key/keyway DIN 6885

3

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

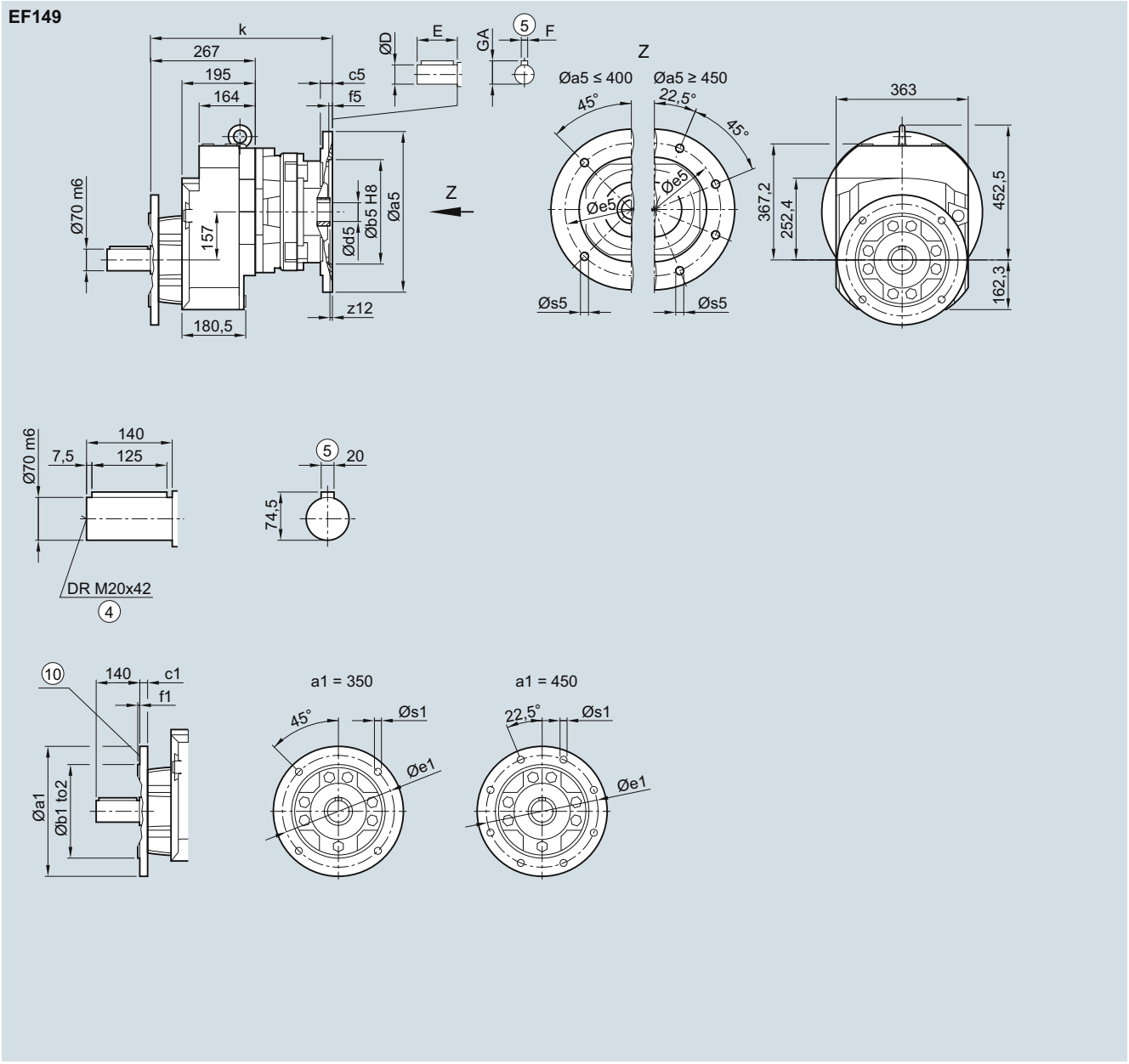
④ DIN 332

⑤ Feather key/keyway DIN 6885

EF149 gearbox in a flange-mounted design

EF030K4

EF149



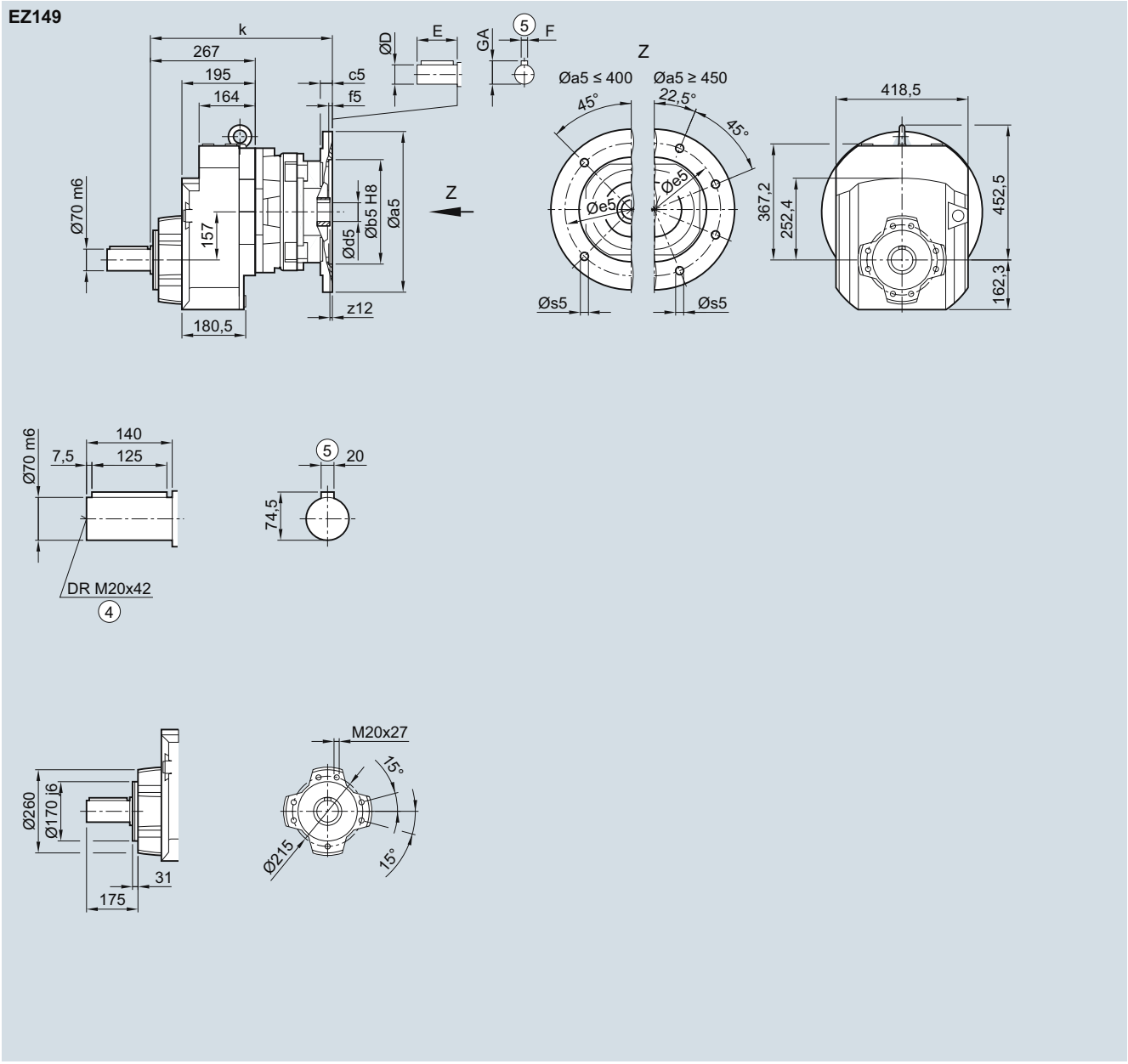
Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	20	300	5	17.5
	450	350	h6	22	400	5	17.5
	550	450	h6	22	500	5	17.5

Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
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 ⑩ For inner contour, see page 3/219

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

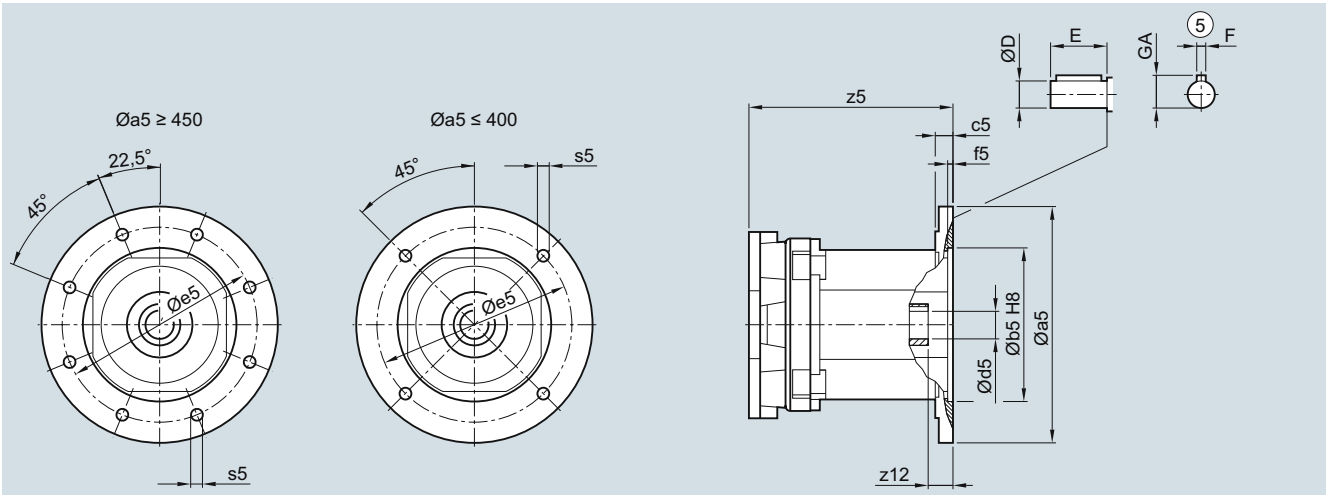
④ DIN 332

⑤ Feather key/keyway DIN 6885

Dimensions

D./Z.29 to D./Z.89 gearboxes

DZ030K2, DZB030K2, DZF030K2, DZZ030K2

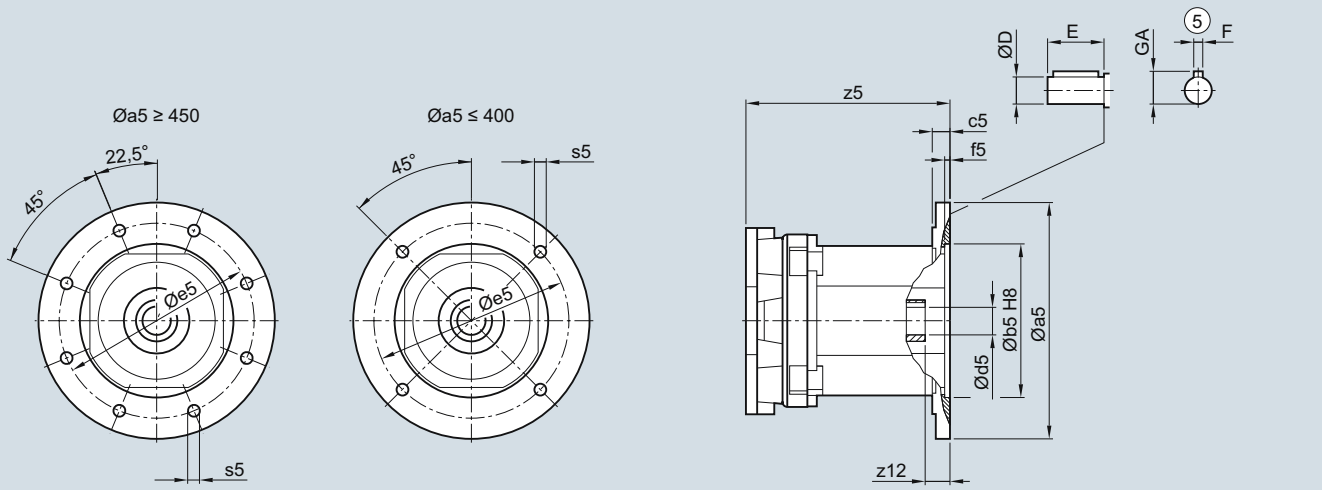


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.29												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
D./Z.39												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
D./Z.49												
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
D./Z.59												
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
D./Z.69												
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
D./Z.79												
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
D./Z.89												
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

⑤ Feather key/keyway DIN 6885

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

DZ030K2, DZB030K2, DZF030K2, DZZ030K2



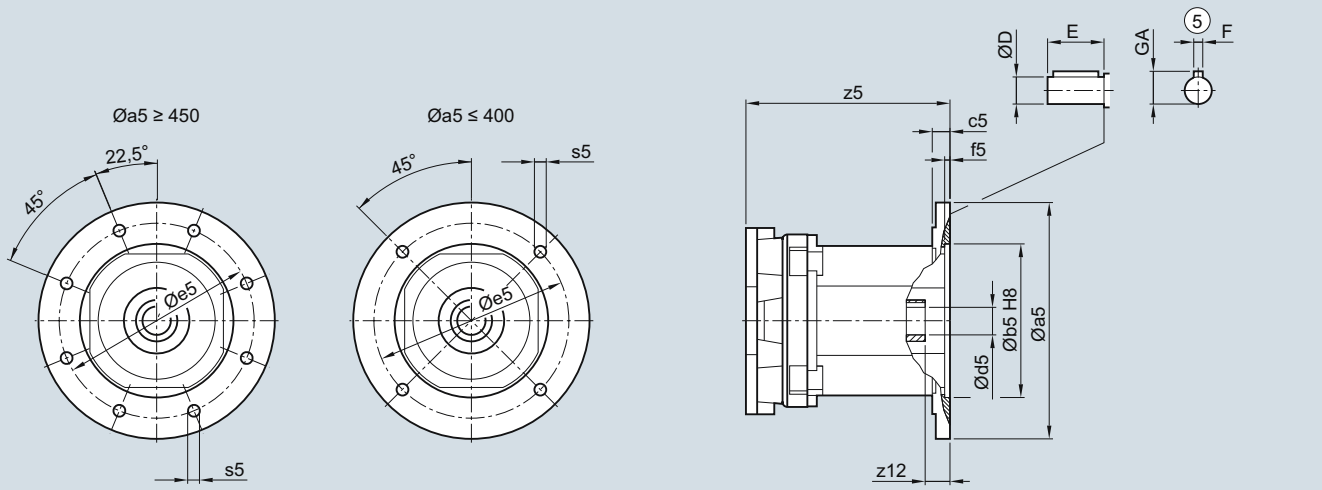
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.109												
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	162.5
100	250	180	18	5	215	M12	30	28	60	8	31.0	203.5
112	250	180	18	5	215	M12	30	28	60	8	31.0	203.5
132	300	230	18	5	265	M12	45	38	80	10	41.0	281.5
160	350	250	25	6	300	M16	66	42	110	12	45.0	326.5
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
D./Z.129												
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
D./Z.149												
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
D./Z.169												
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

⑤ Feather key/keyway DIN 6885

() Dimension in brackets for 2-pole motor

D./Z.189 and E.39 to E.89 gearboxes

DZ030K2, DZB030K2, DZF030K2, DZZ030K2, E030K2, EF030K2, EZ030K2



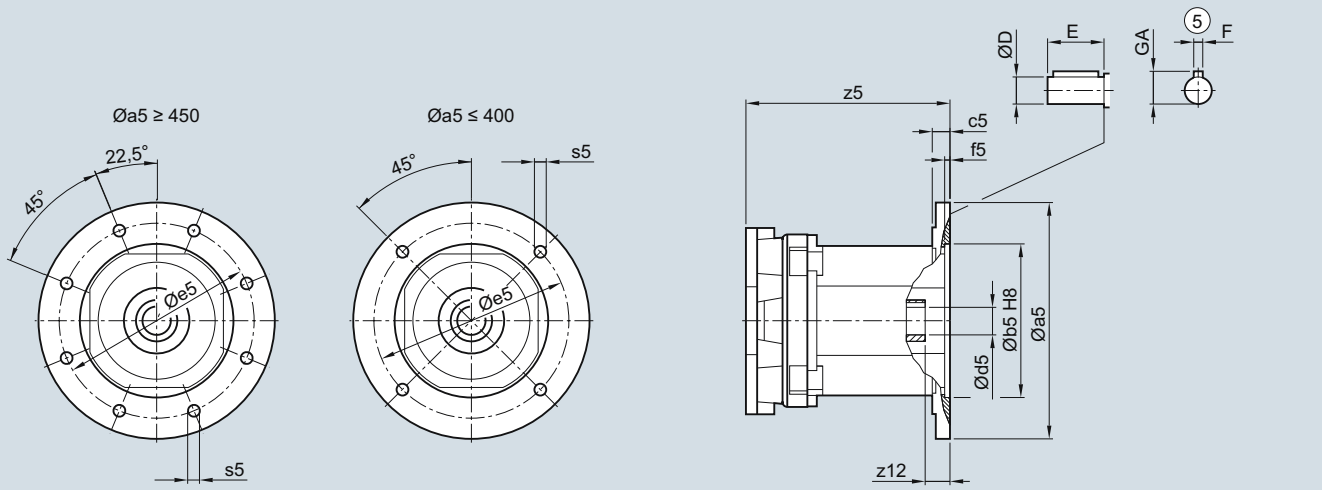
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.189												
112	250	180	18	5	215	M12	30	28	60	8	31.0	180.5
132	300	230	18	5	265	M12	45	38	80	10	41.0	251.0
160	350	250	25	6	300	M16	66	42	110	12	45.0	296.0
180	350	250	25	6	300	M16	59	48	110	14	51.5	296.0
200	400	300	20	6	350	M16x29	60	55	110	16	59.0	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
E.39												
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
E.49												
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
E.69												
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
E.89												
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

⑤ Feather key/keyway DIN 6885

() 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
E.109												
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
E.129												
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
E.149												
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

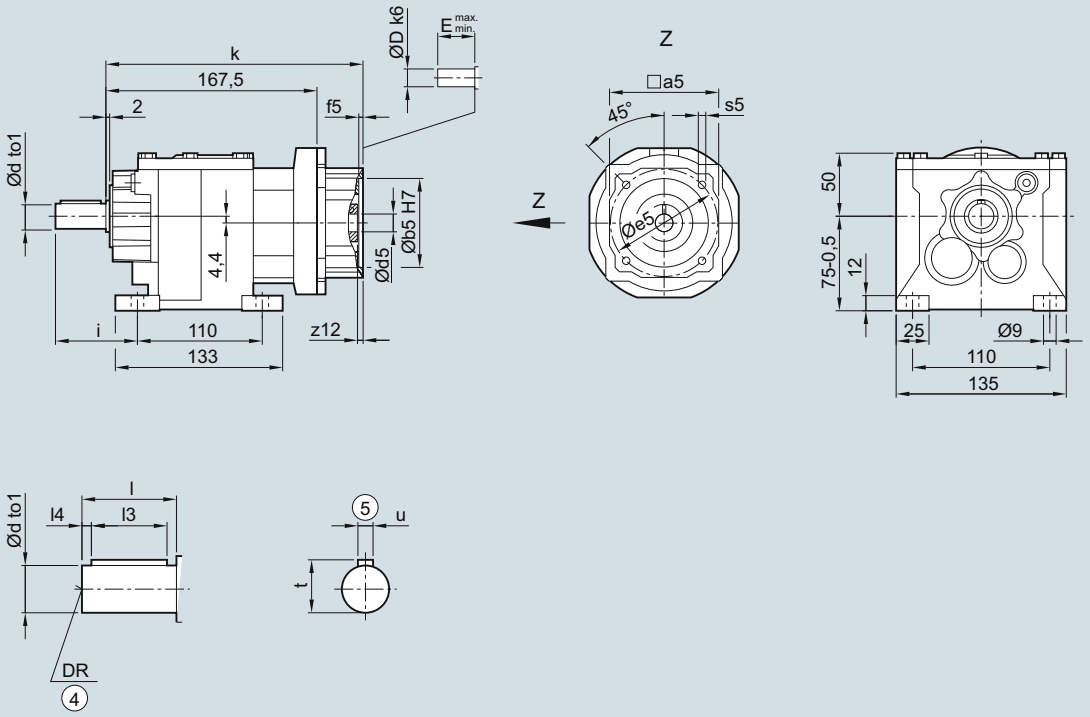
⑤ Feather key/keyway DIN 6885

() Dimension in brackets for 2-pole motor

D/Z19 gearbox in a foot-mounted design

DZ030KS

D/Z19



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	$E_{min.}$	$E_{max.}$	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

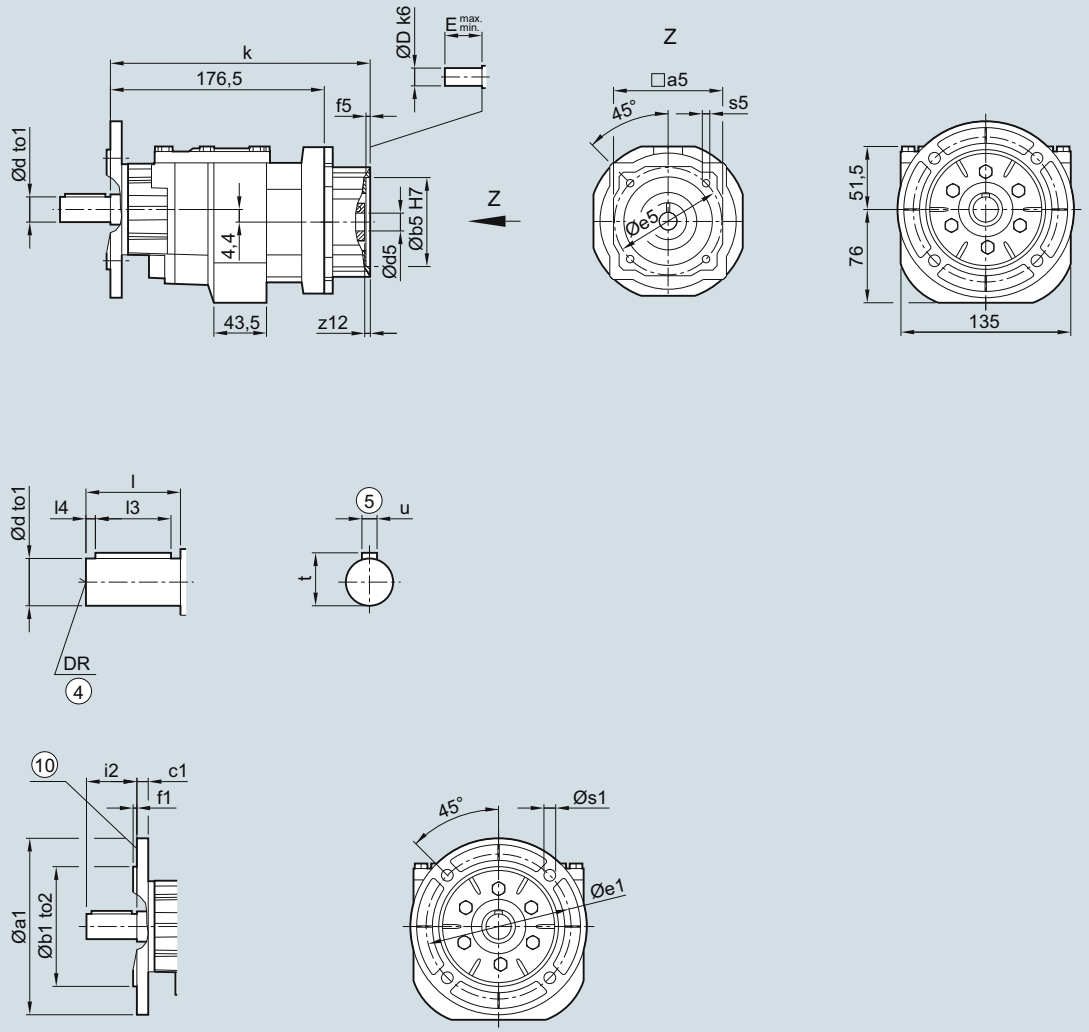
④ DIN 332

⑤ Feather key/keyway DIN 6885

DF/ZF19 gearbox in a flange-mounted design

DZF030KS

DF/ZF19



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

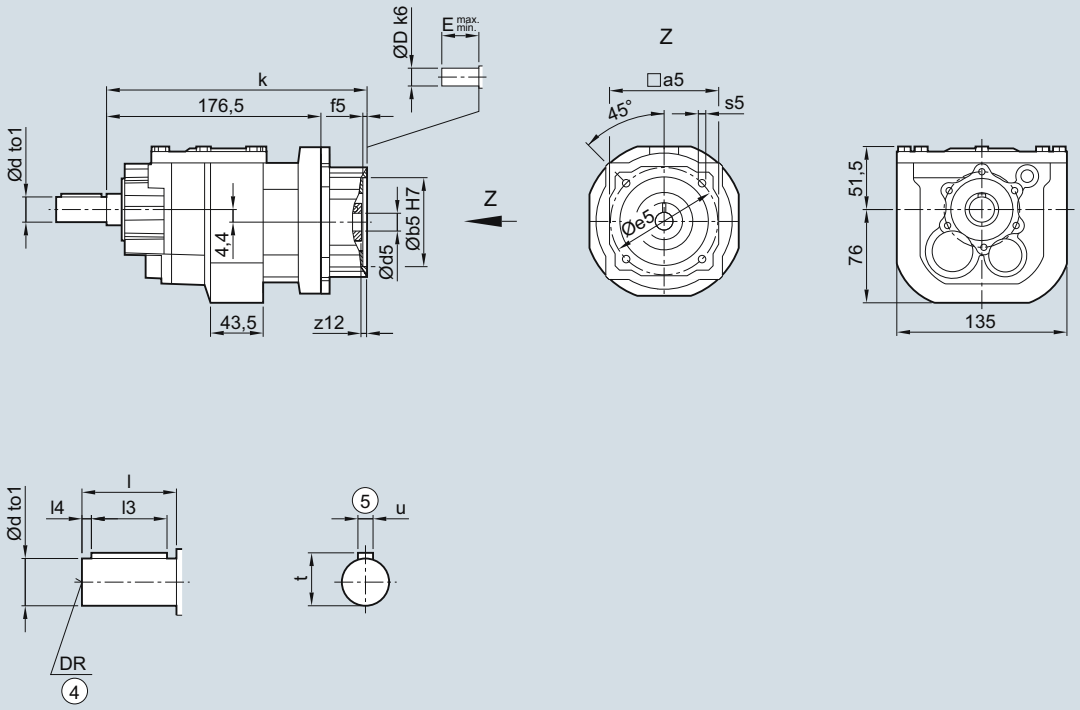
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	217
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	217
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	229.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	229.5

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DZ/ZZ19 gearbox in a housing flange design

DZZ030KS

DZ/ZZ19



Shaft	d	to1	l	l3	l4	t	u	i2	DR
	16	k6	28	22	3	18.0	5	42	M5
	16	k6	40	32	4	18.0	5	54	M8
	20	k6	40	32	4	22.5	6	54	M6x16

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	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

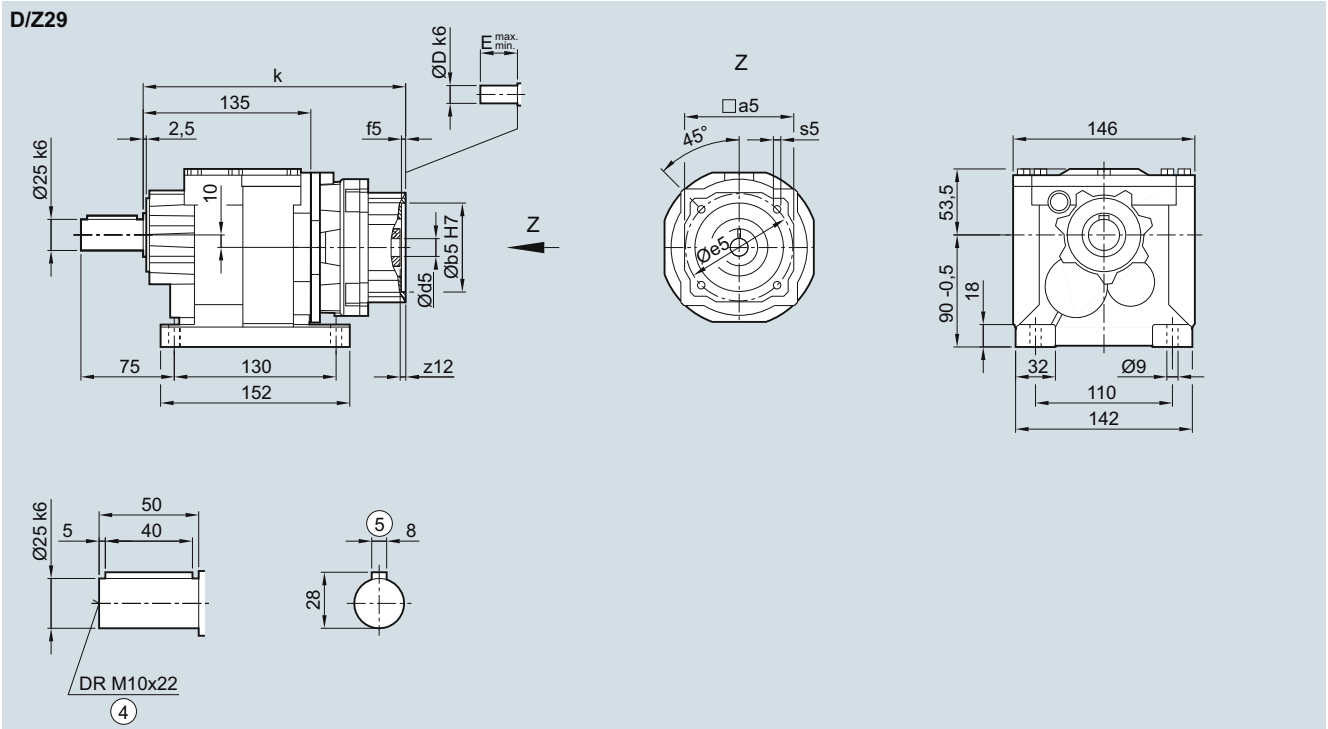
④ DIN 332

⑤ Feather key/keyway DIN 6885

3

D/Z29 gearbox in a foot-mounted design

DZ030KS



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	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
KS5.3	117	95	4.5	115	M6x11	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

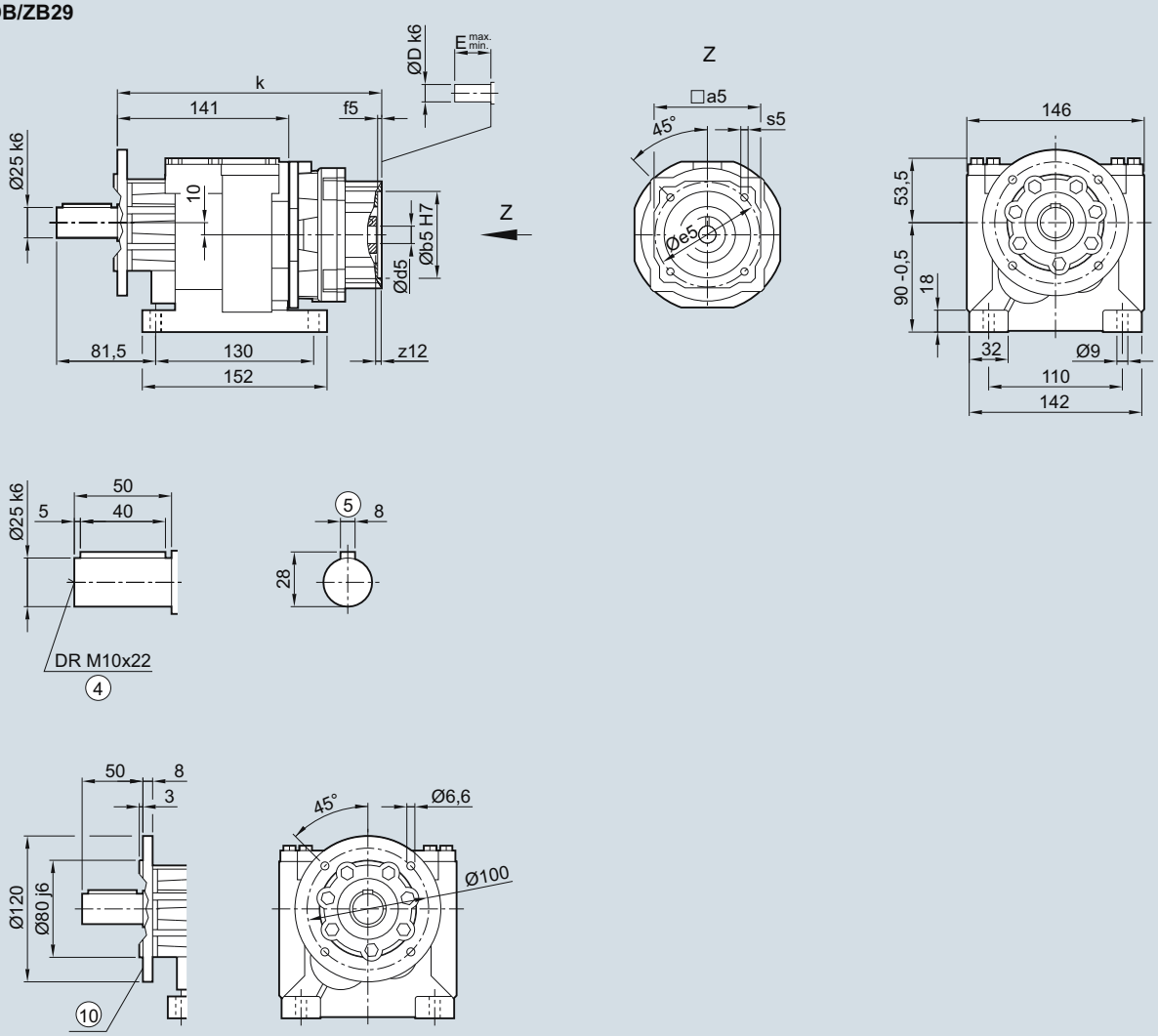
④ DIN 332

⑤ Feather key/keyway DIN 6885

DB/ZB29 gearbox in a foot/flange-mounted design

DZB030KS

DB/ZB29



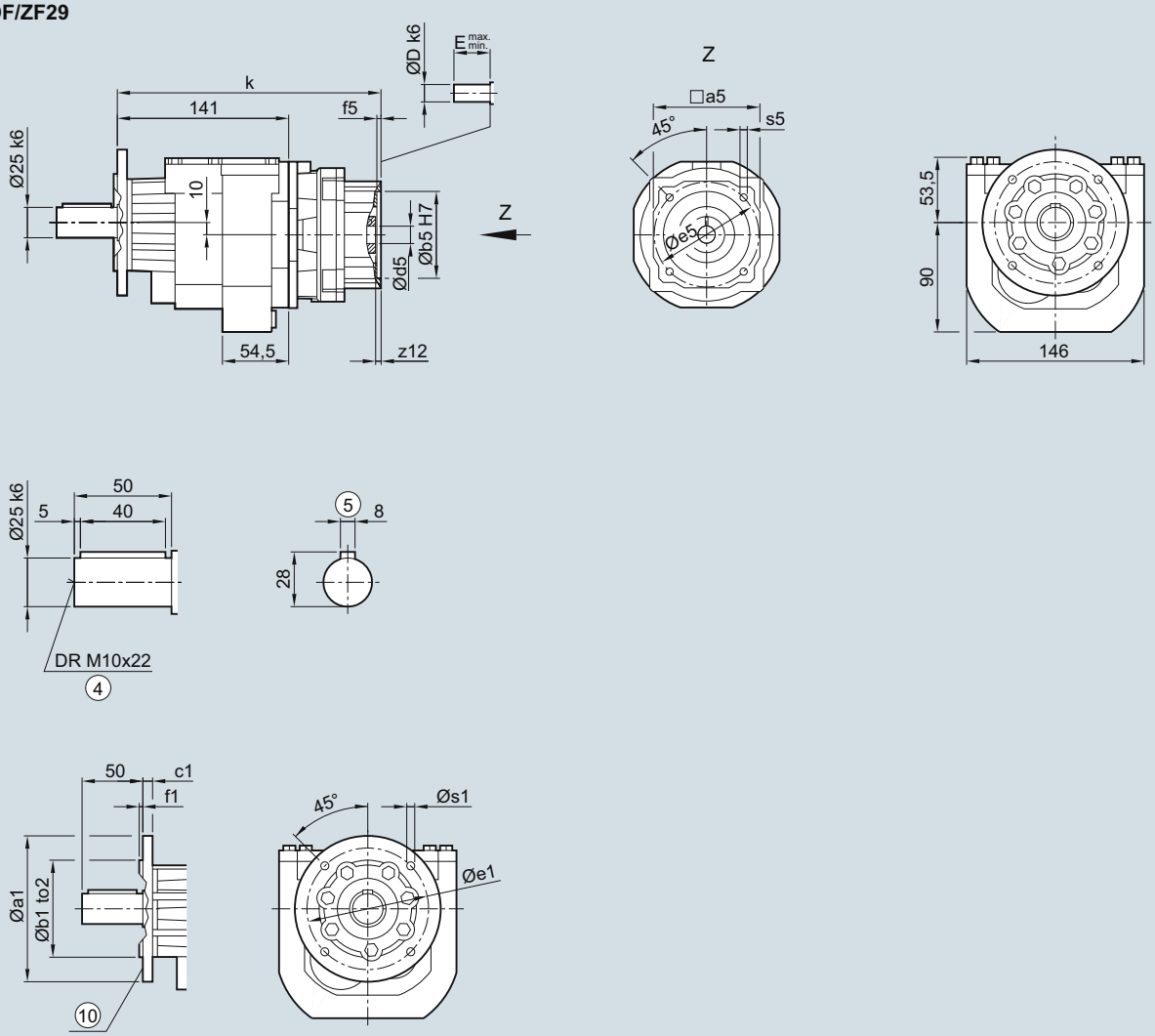
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	223
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	223
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	235.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	235.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	251.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	251.5
KS5.3	117	95	4.5	115	M6x11	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 3/219

DF/ZF29 gearbox in a flange-mounted design

DZF030KS

DF/ZF29



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

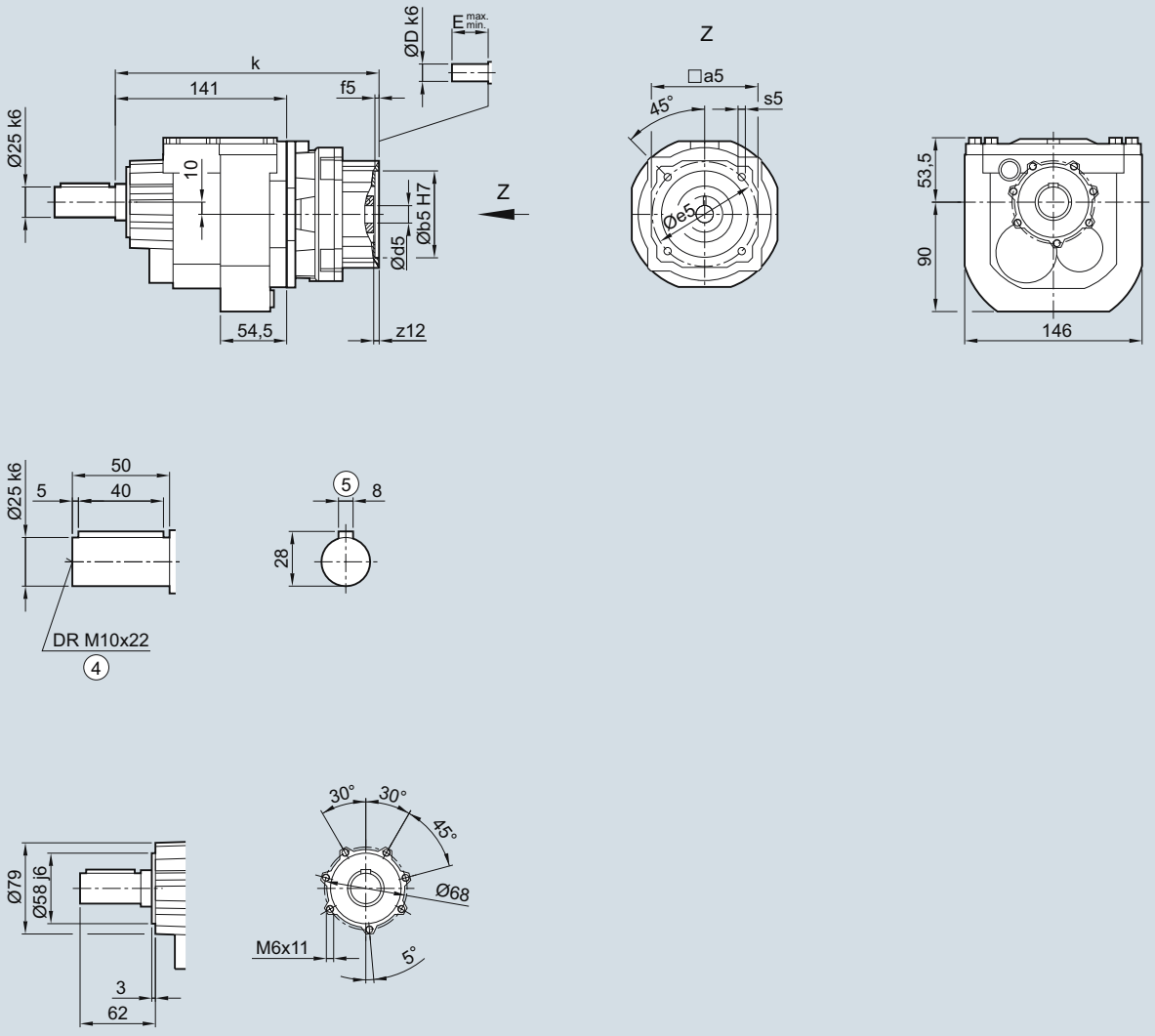
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	223
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	223
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	235.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	235.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	251.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	251.5
KS5.3	117	95	4.5	115	M6x11	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 3/219

DZ/ZZ29 gearbox in a housing flange design

DZZ030KS

DZ/ZZ29



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	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
KS5.3	117	95	4.5	115	M6x11	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

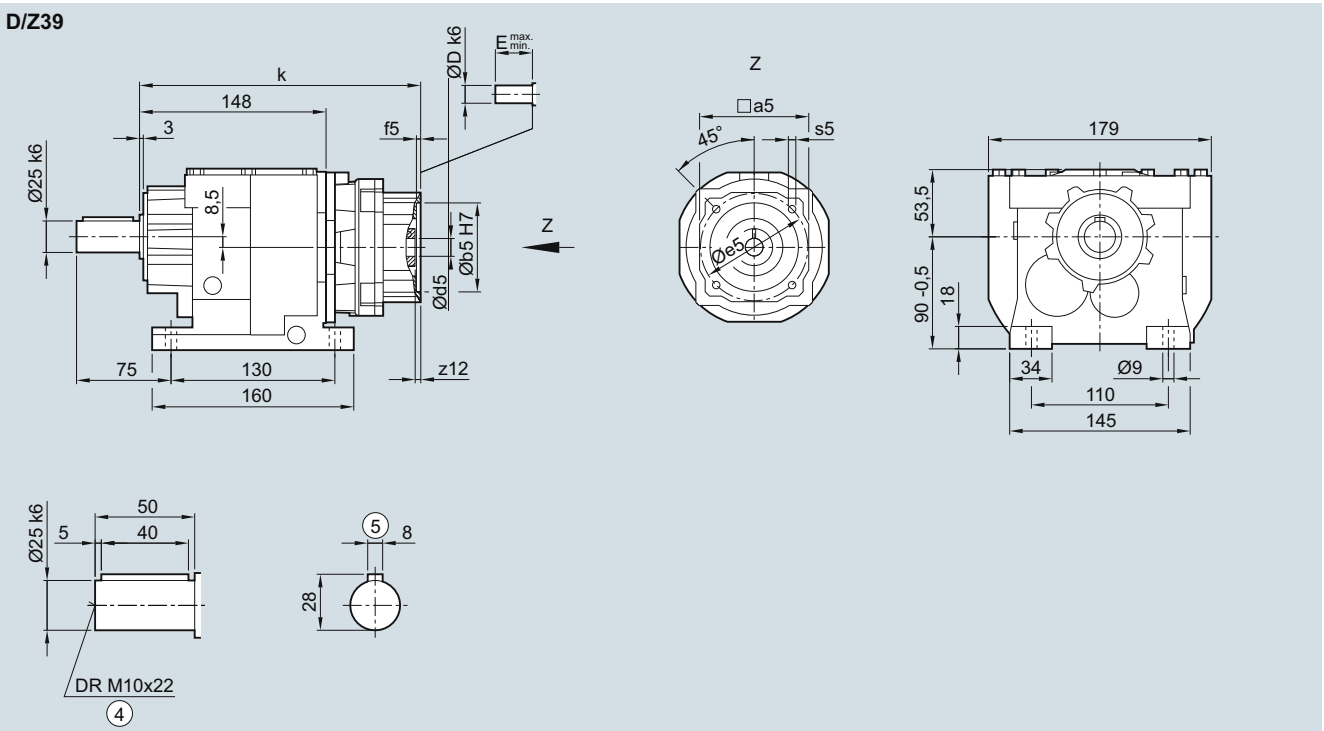
④ DIN 332

⑤ Feather key/keyway DIN 6885

D/Z39 gearbox in a foot-mounted design

DZ030KS

D/Z39



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	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
KS5.3	117	95	4.5	115	M6x11	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

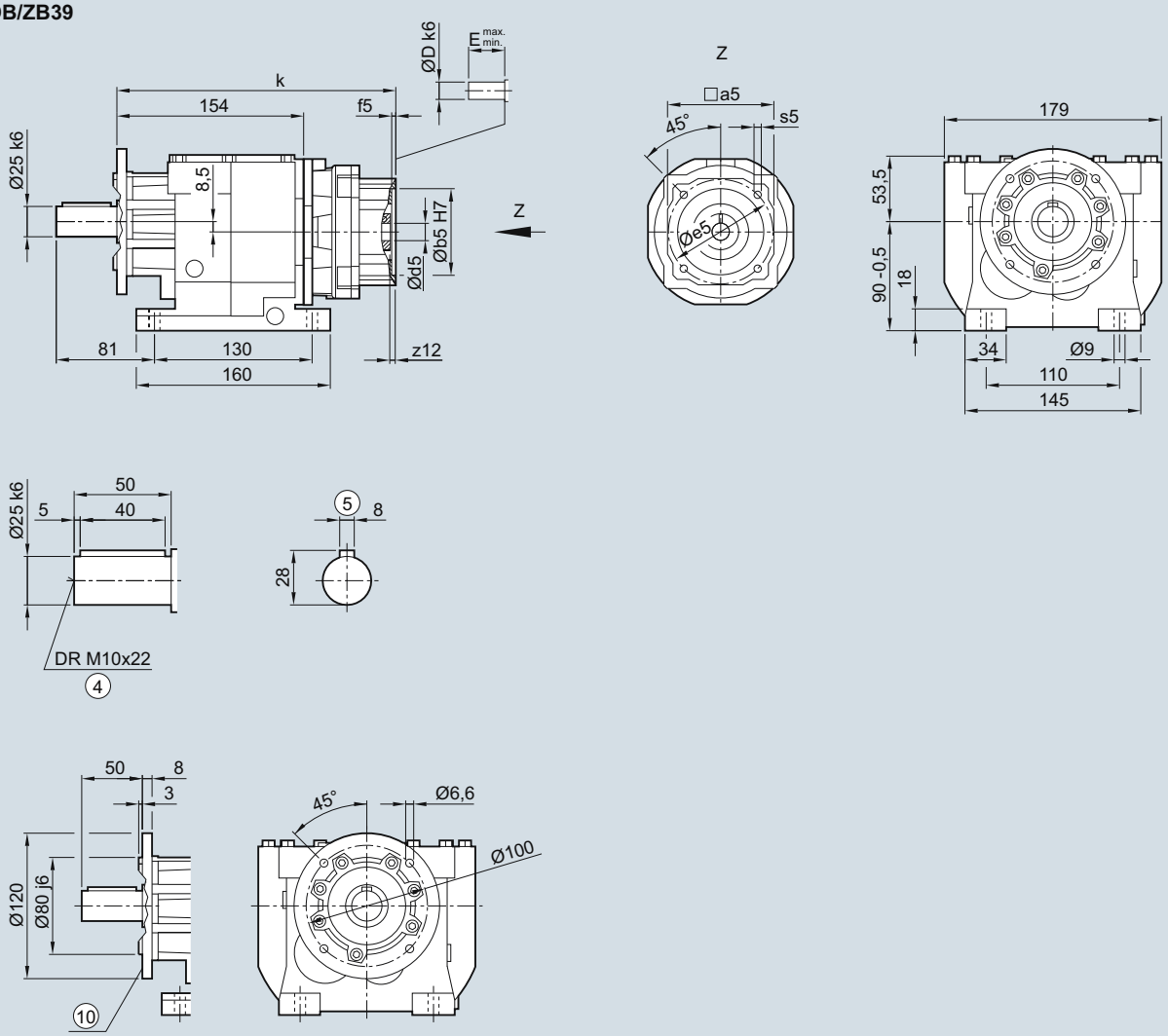
④ DIN 332

⑤ Feather key/keyway DIN 6885

DB/ZB39 gearbox in a foot/flange-mounted design

DZB030KS

DB/ZB39



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	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
KS5.3	117	95	4.5	115	M6x11	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

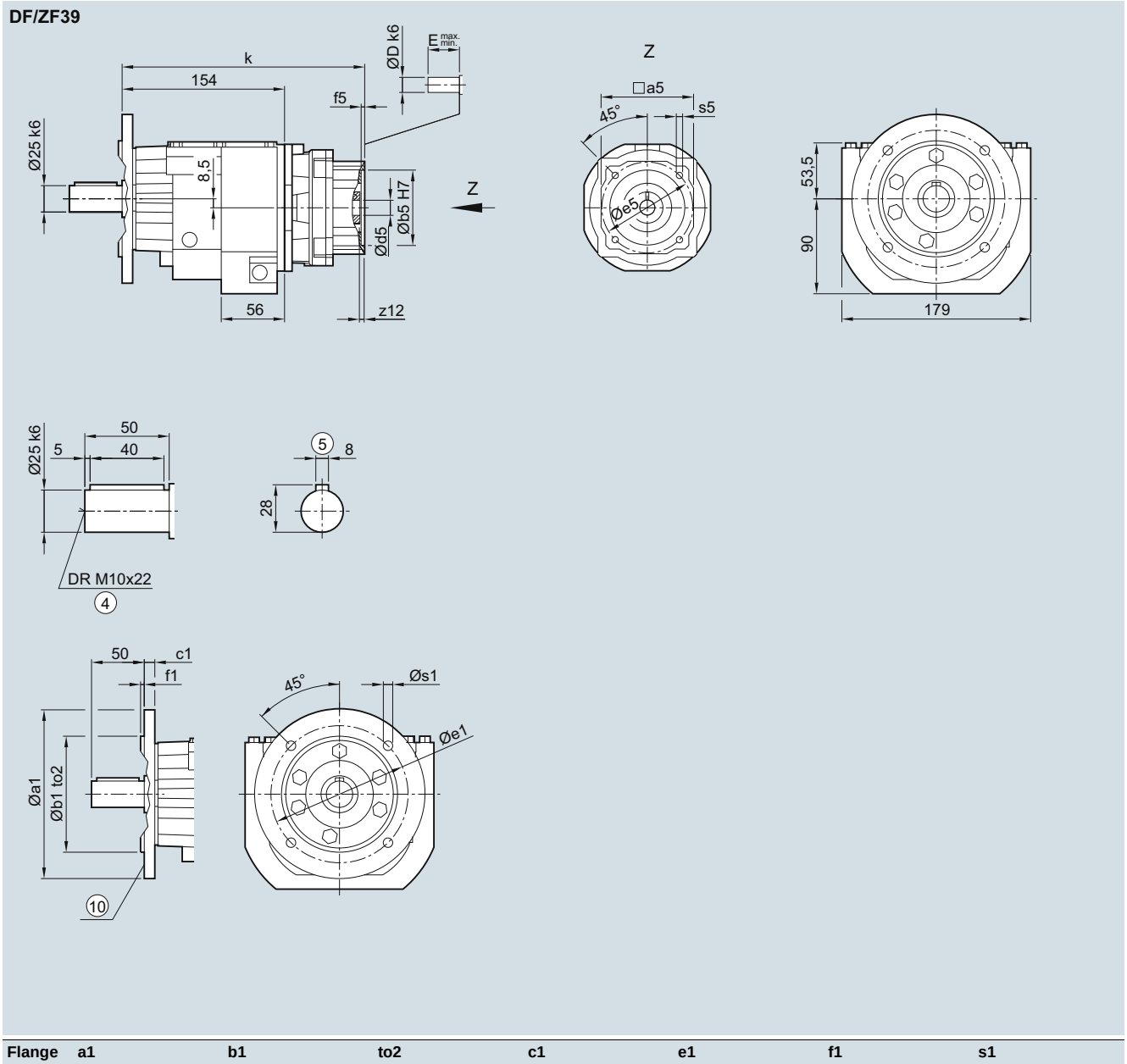
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

3

DF/ZF39 gearbox in a flange-mounted design

DZF030KS

DF/ZF39



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

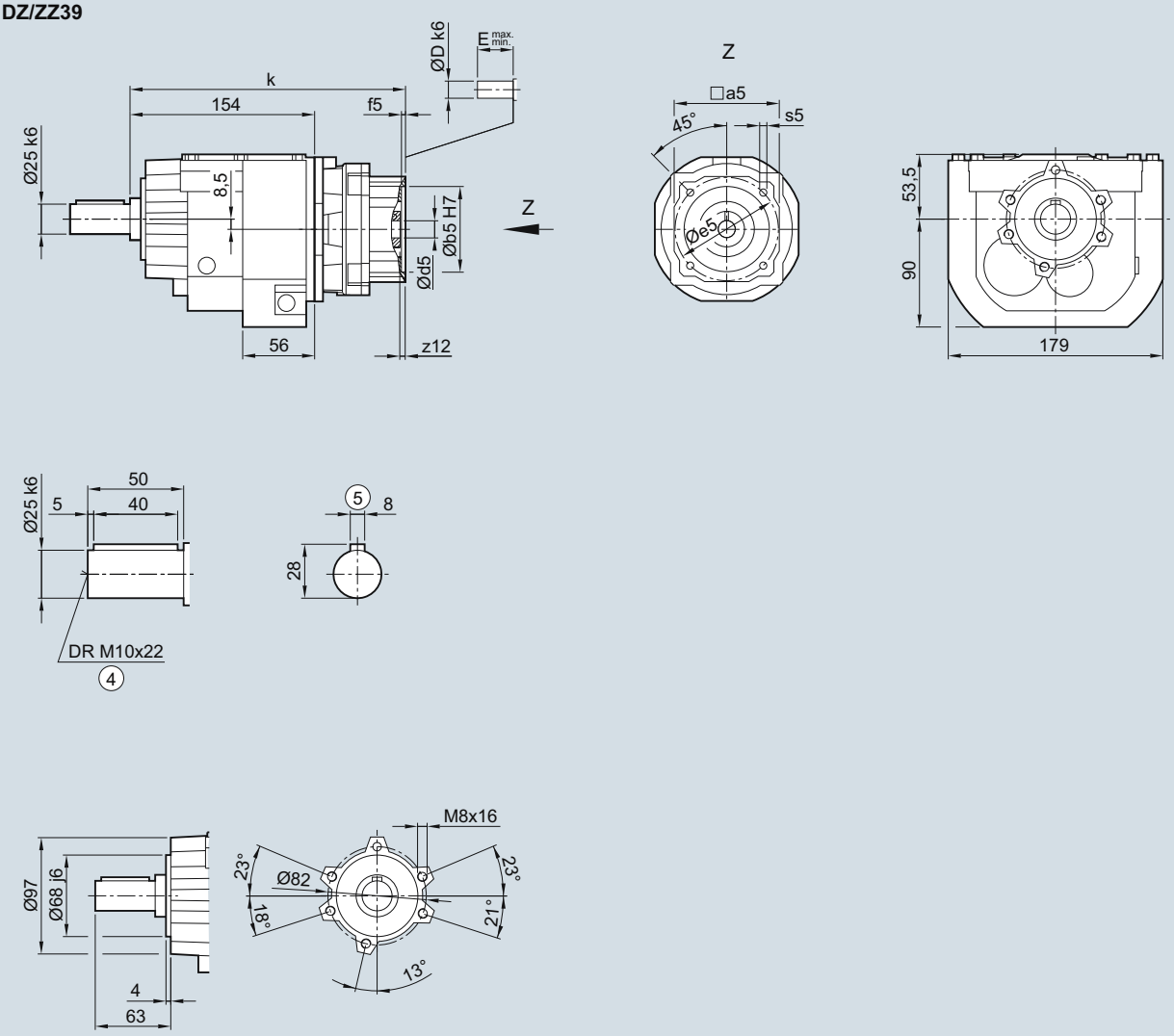
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	236
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	236
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	248.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	248.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	264.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	264.5
KS5.3	117	95	4.5	115	M6x11	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 3/219

DZ/ZZ39 gearbox in a housing flange design

DZZ030KS

DZ/ZZ39



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	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
KS5.3	117	95	4.5	115	M6x11	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

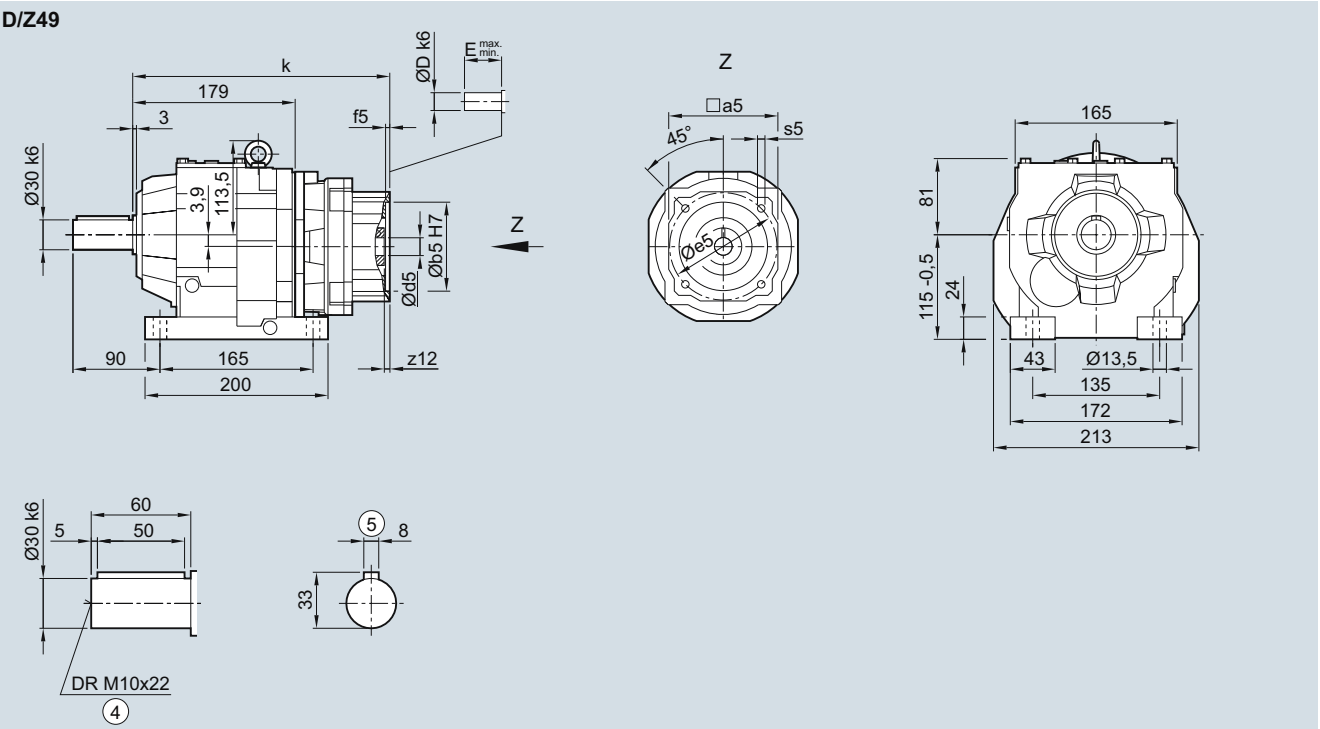
④ DIN 332

⑤ Feather key/keyway DIN 6885

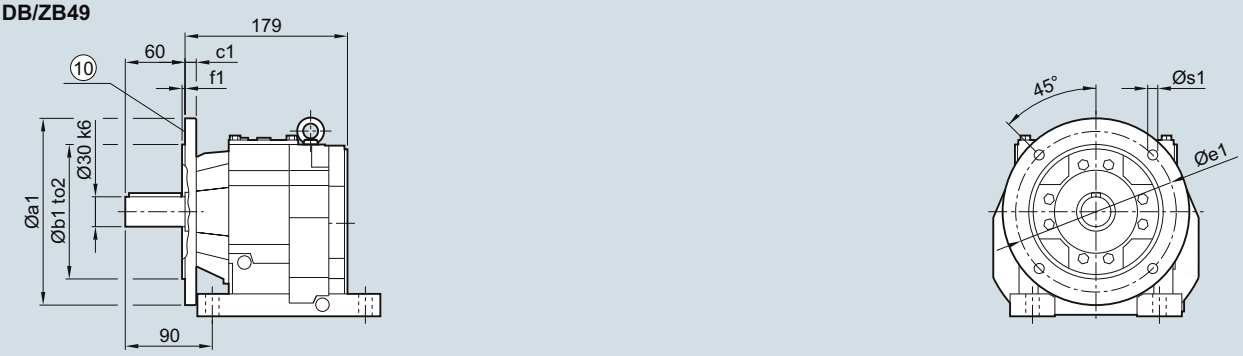
D/Z49 and DB/ZB49 gearboxes in a foot and foot/flange-mounted design

DZ030KS, DZB030KS

D/Z49



DB/ZB49



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

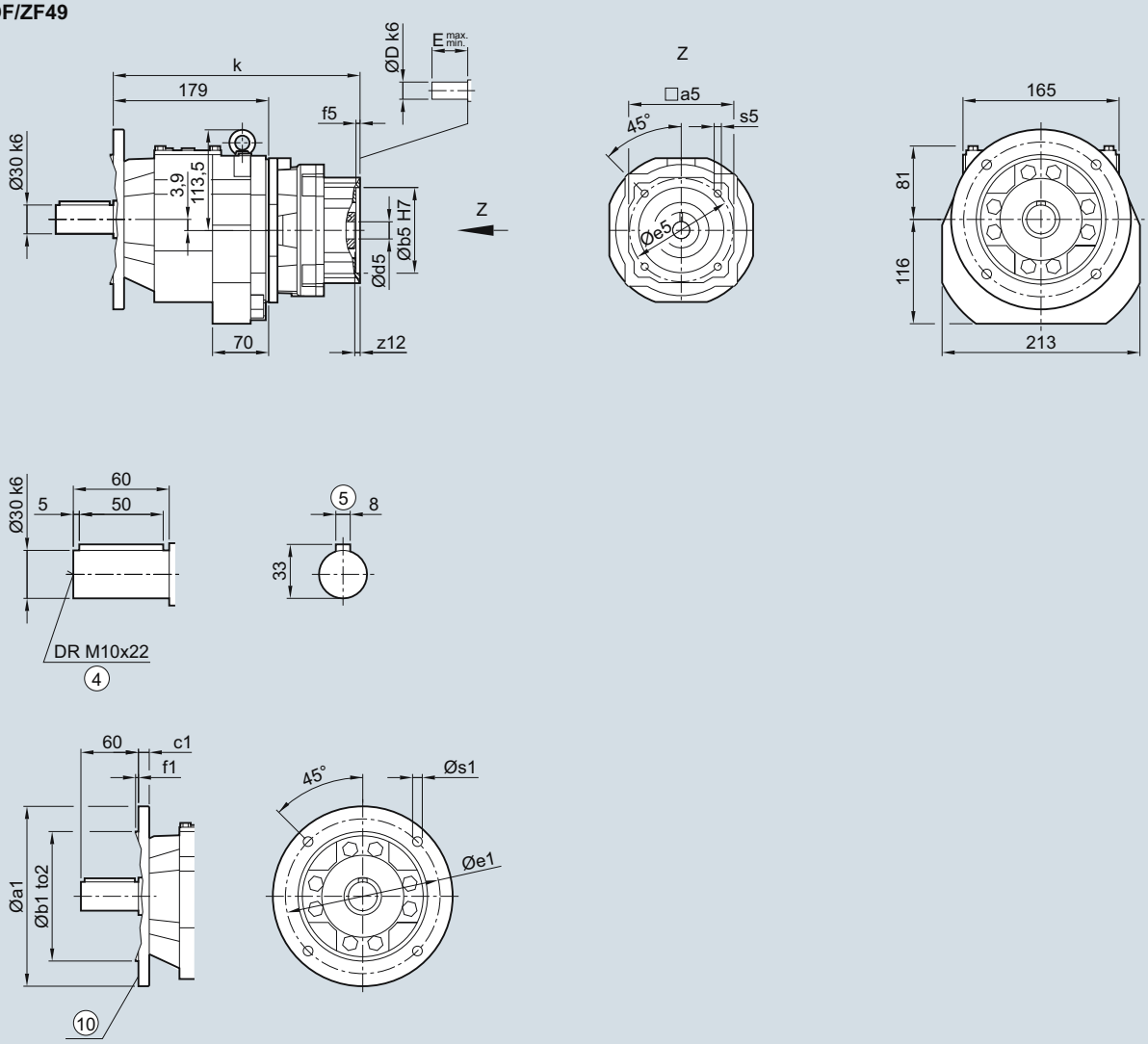
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DF/ZF49 gearbox in a flange-mounted design

DZF030KS

DF/ZF49



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

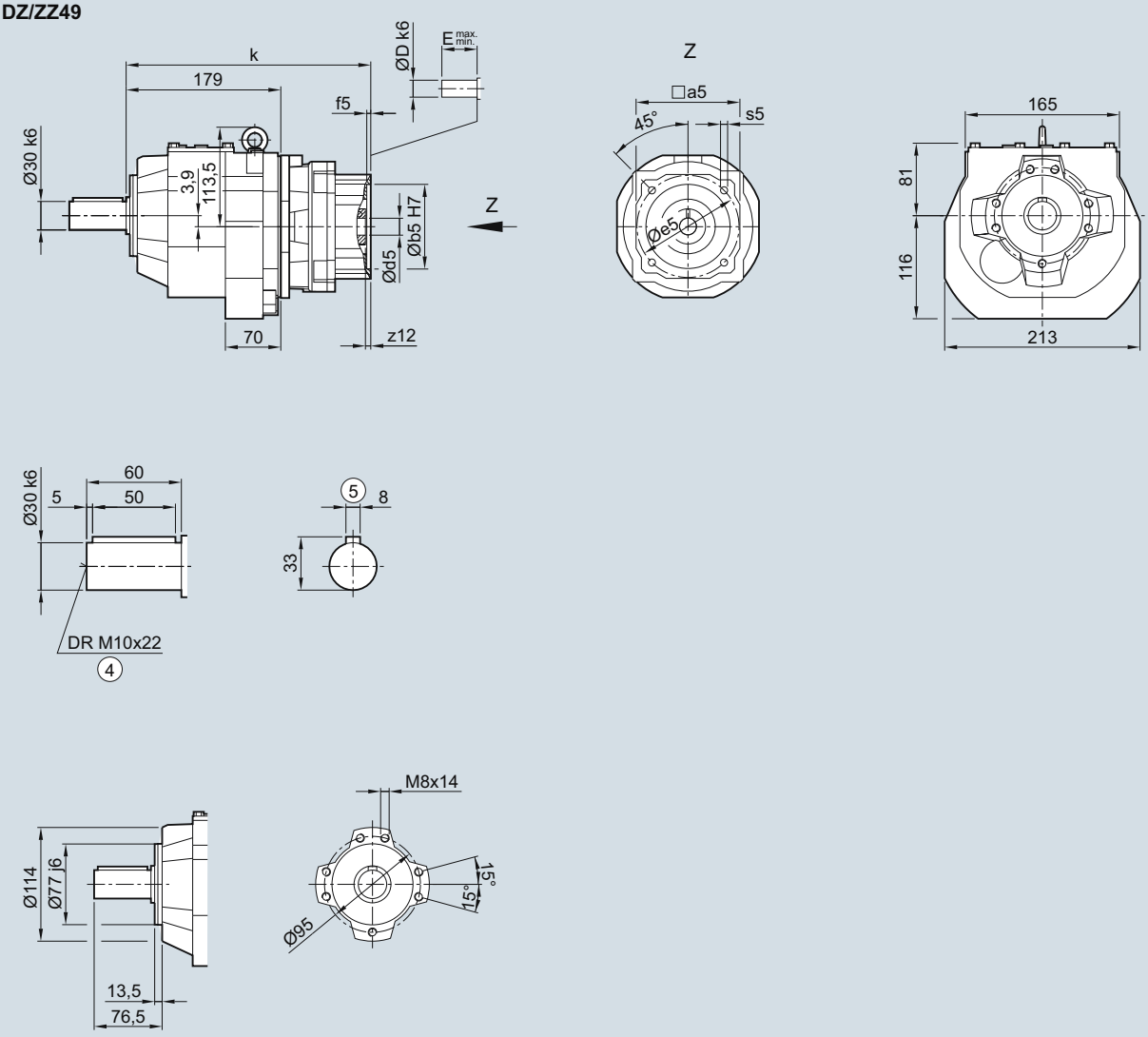
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DZ/ZZ49 gearbox in a housing flange design

DZZ030KS

DZ/ZZ49



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
KS5.3	117	95	4.5	115	M6x11	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

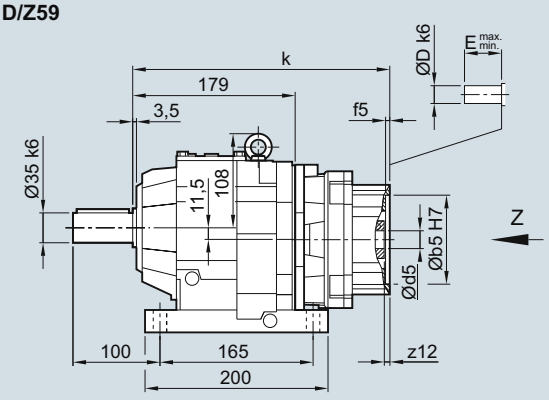
④ DIN 332

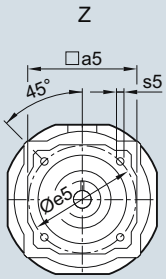
⑤ Feather key/keyway DIN 6885

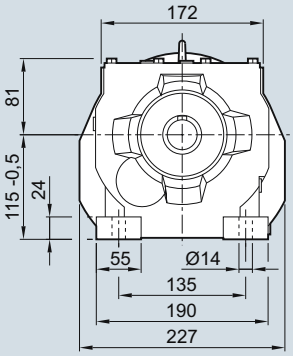
D/Z59 and DB/ZB59 gearboxes in a foot and foot/flange-mounted design

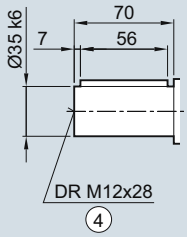
DZ030KS, DZB030KS

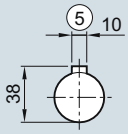
D/Z59



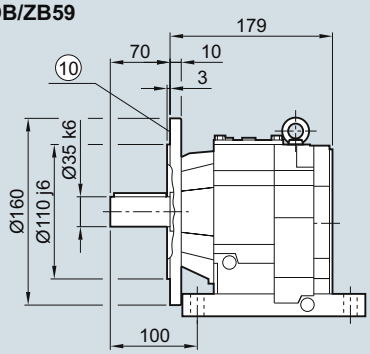


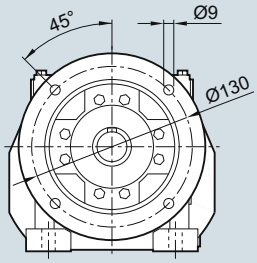






DB/ZB59





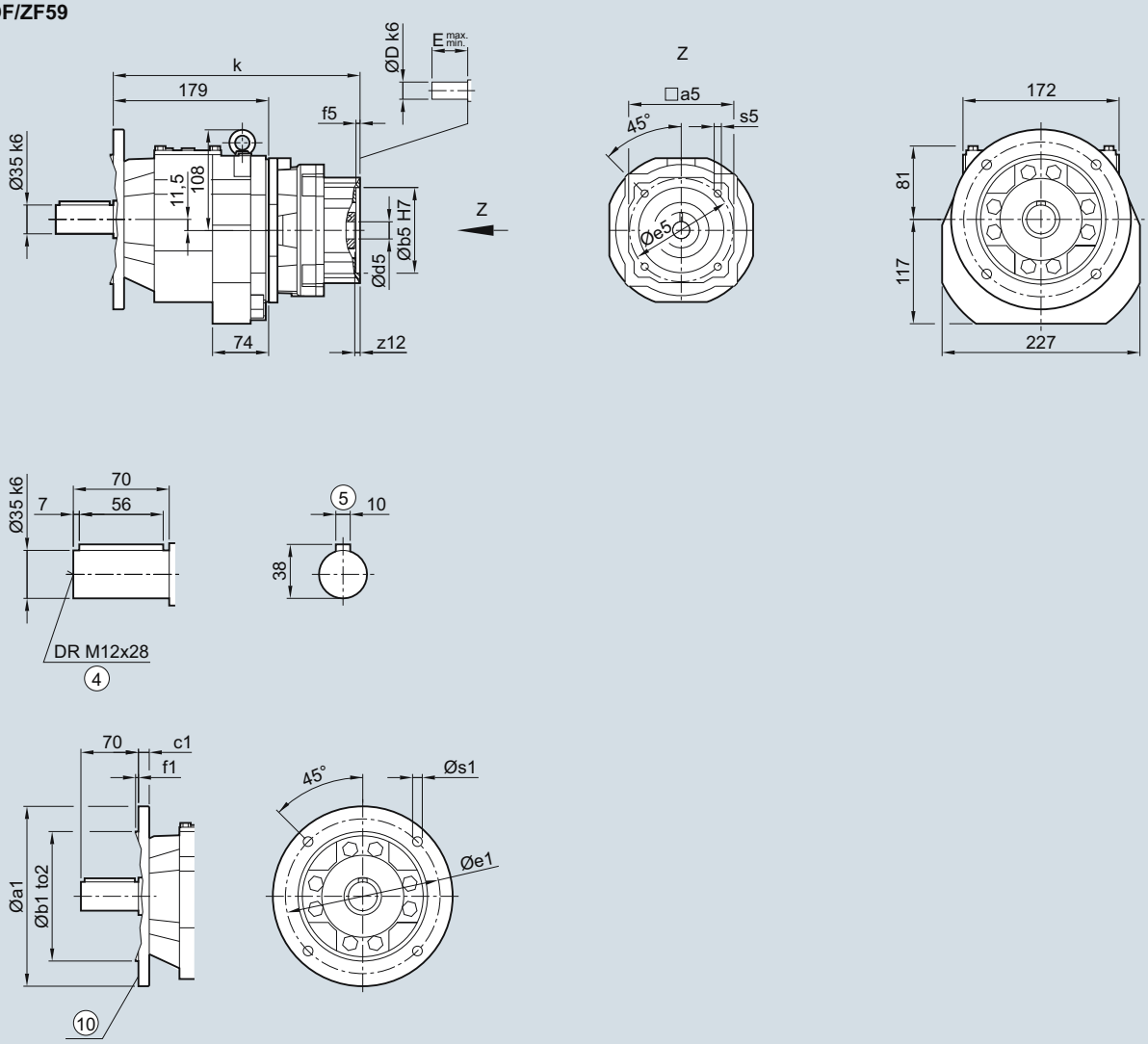
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DF/ZF59 gearbox in a flange-mounted design

DZF030KS

DF/ZF59



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

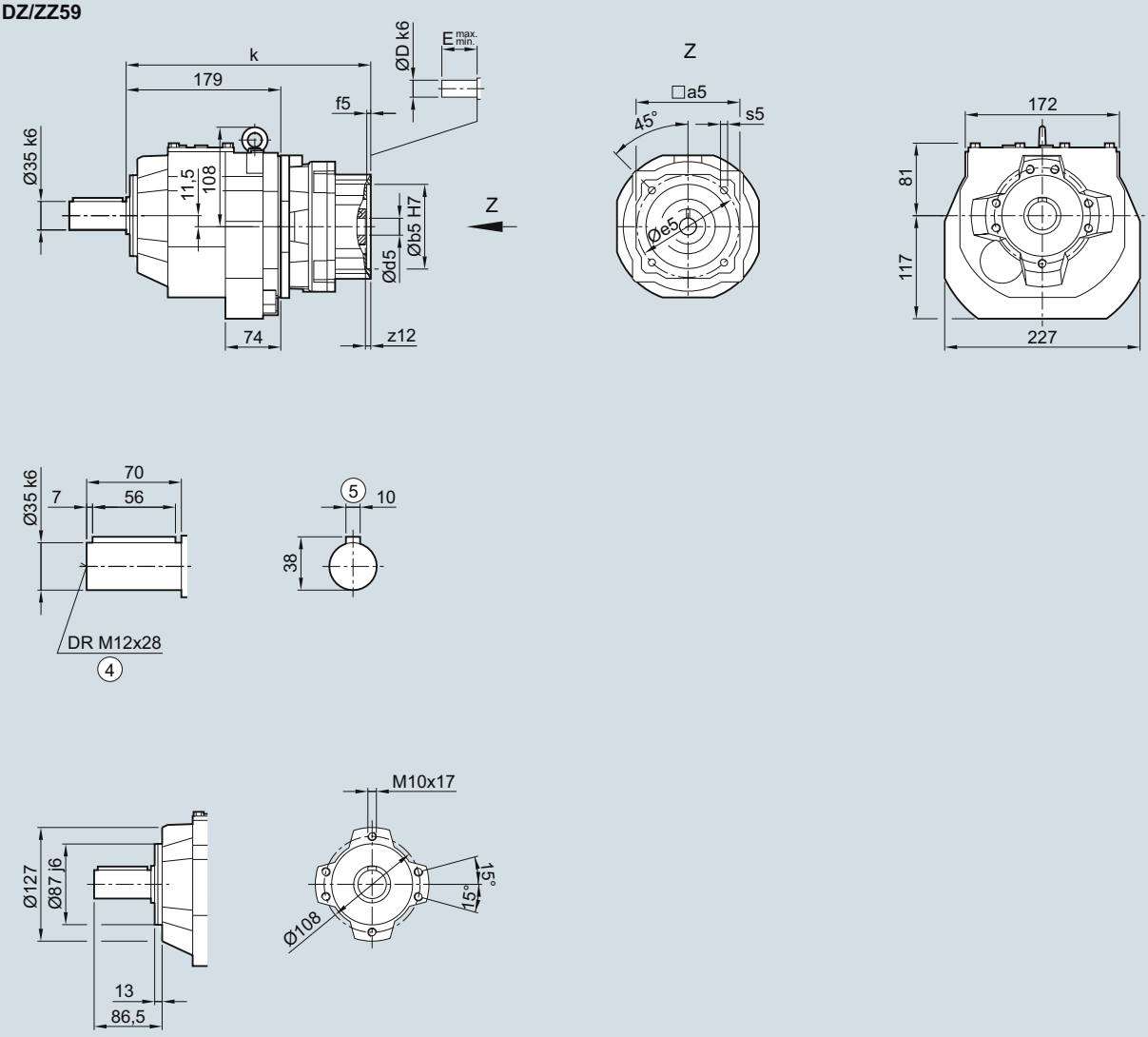
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DZ/ZZ59 gearbox in a housing flange design

DZZ030KS

DZ/ZZ59



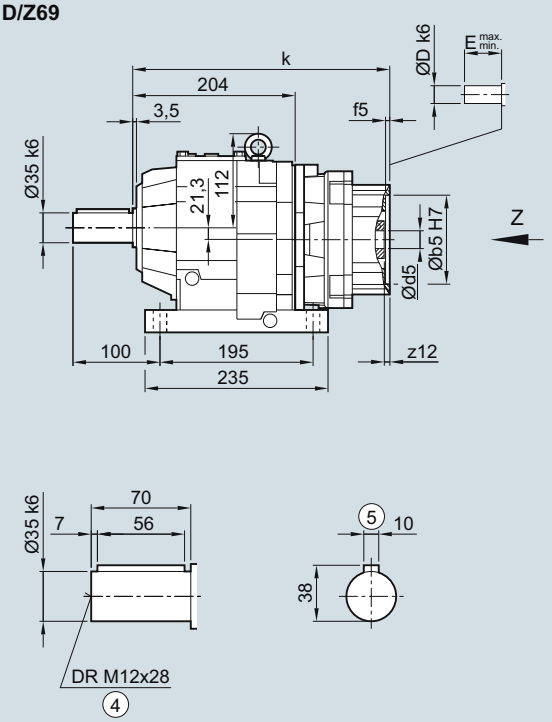
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	251.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	251.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	264
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	264
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	280
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	280
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885

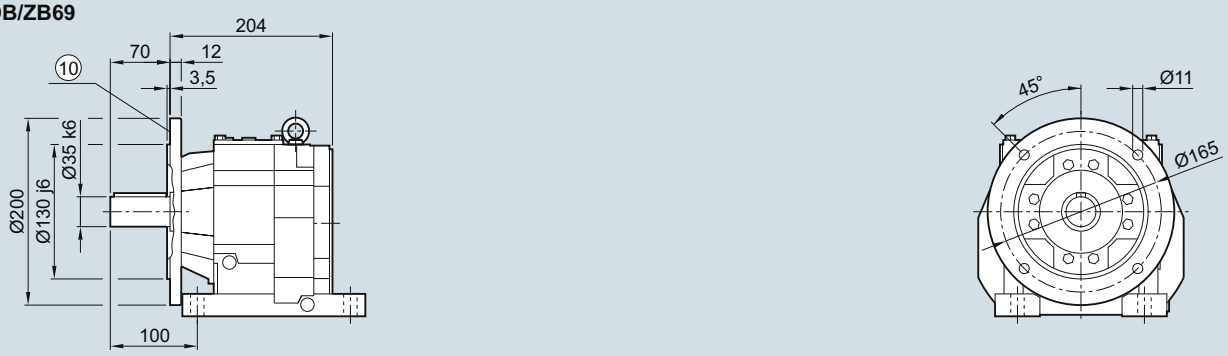
D/Z69 and DB/ZB69 gearboxes in a foot and foot/flange-mounted design

DZ030KS, DZB030KS

D/Z69



DB/ZB69



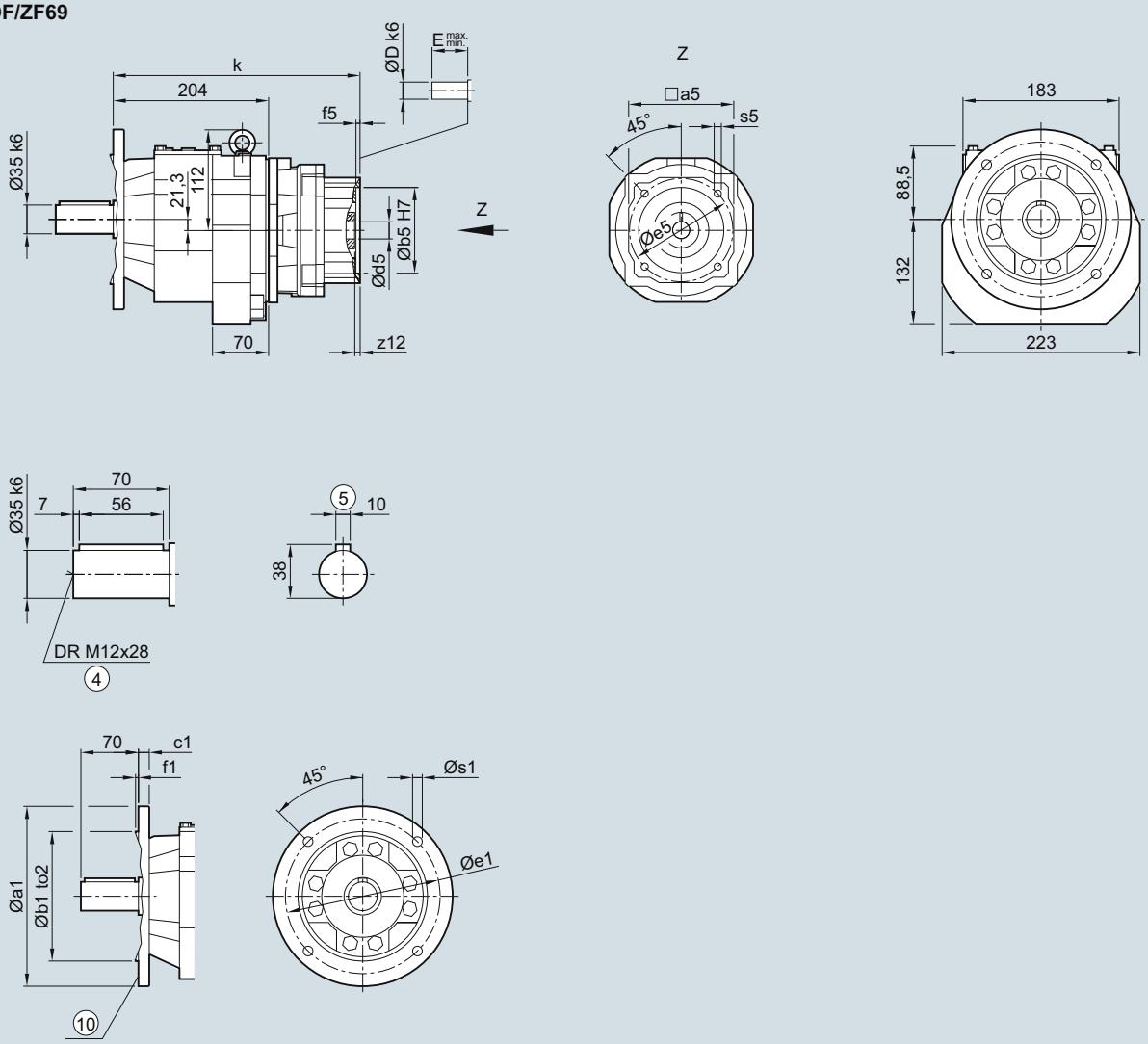
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	276.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	276.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	289
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	289
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	305
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	305
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DF/ZF69 gearbox in a flange-mounted design

DZF030KS

DF/ZF69



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

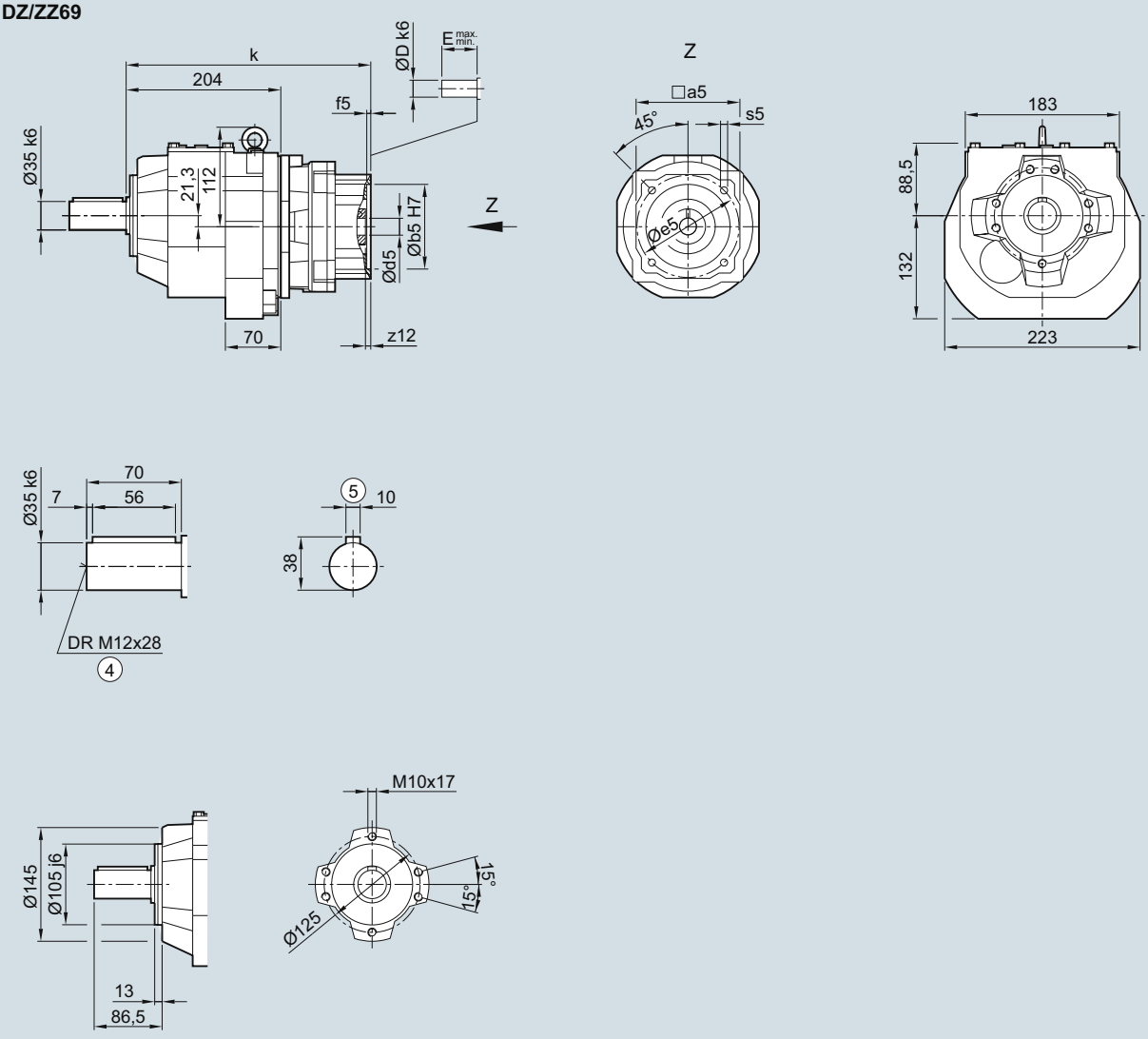
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	276.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	276.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	289
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	289
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	305
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	305
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DZ/ZZ69 gearbox in a housing flange design

DZZ030KS

DZ/ZZ69



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	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
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332

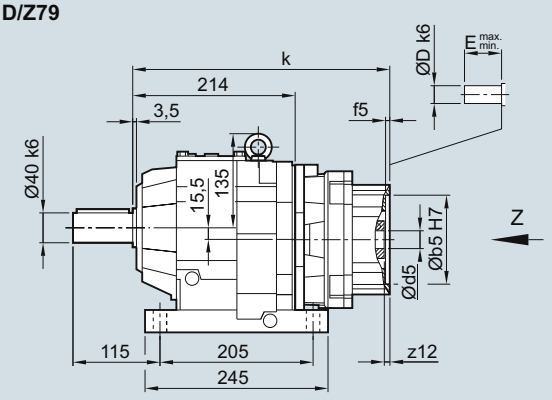
⑤ Feather key/keyway DIN 6885

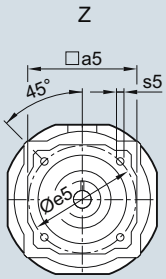
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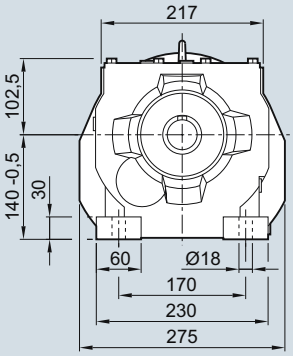
D/Z79 and DB/ZB79 gearboxes in a foot and foot/flange-mounted design

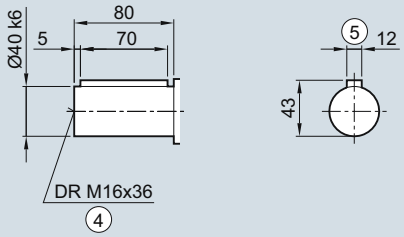
DZ030KS, DZB030KS

D/Z79

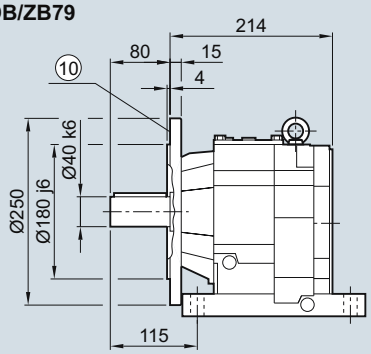


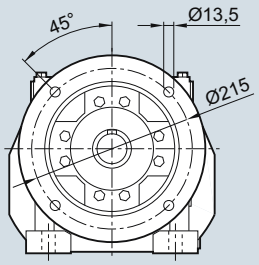






DB/ZB79





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	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
KS5.3	117	95	4.5	115	M6x11	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

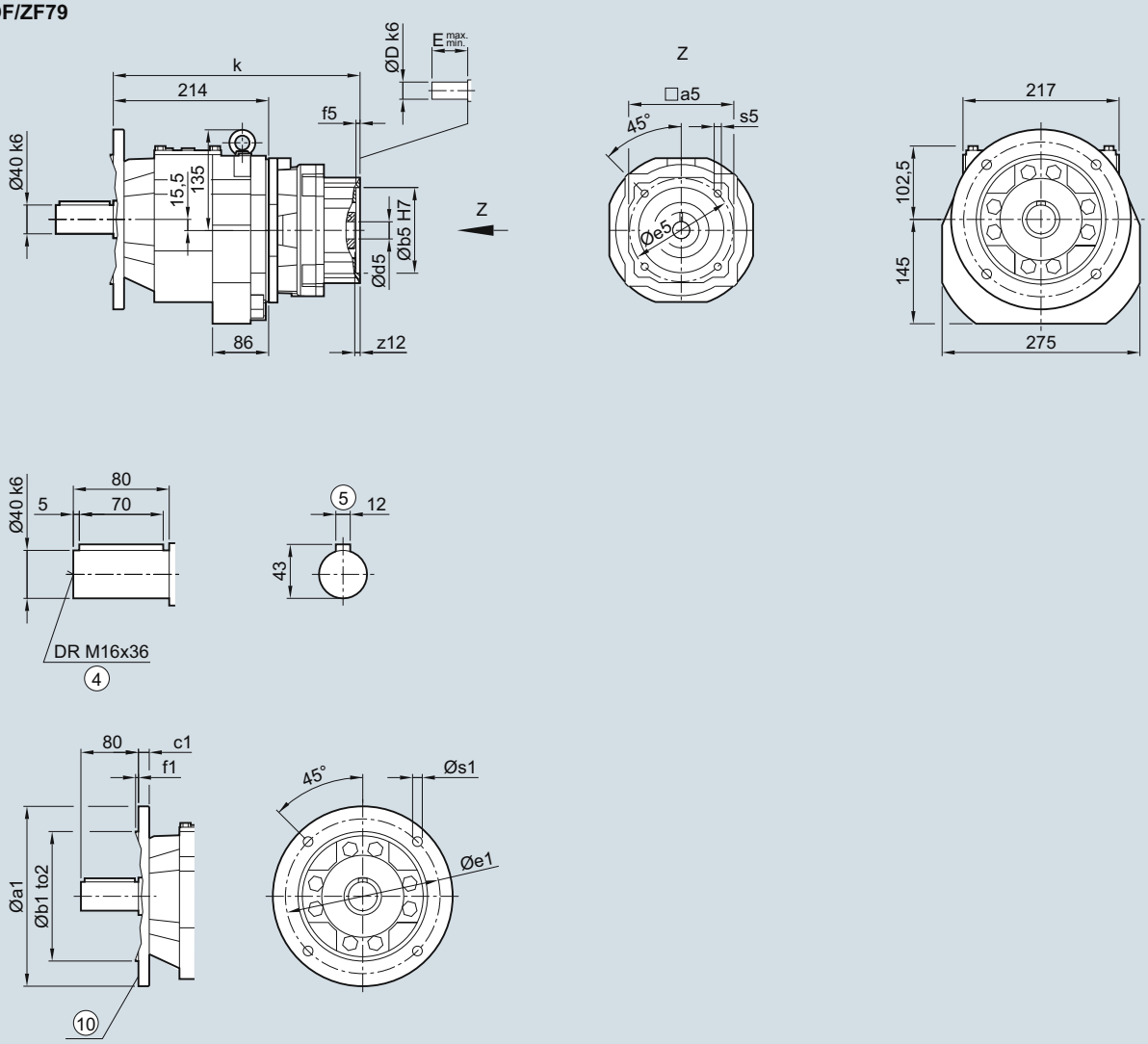
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

3

DF/ZF79 gearbox in a flange-mounted design

DZF030KS

DF/ZF79



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

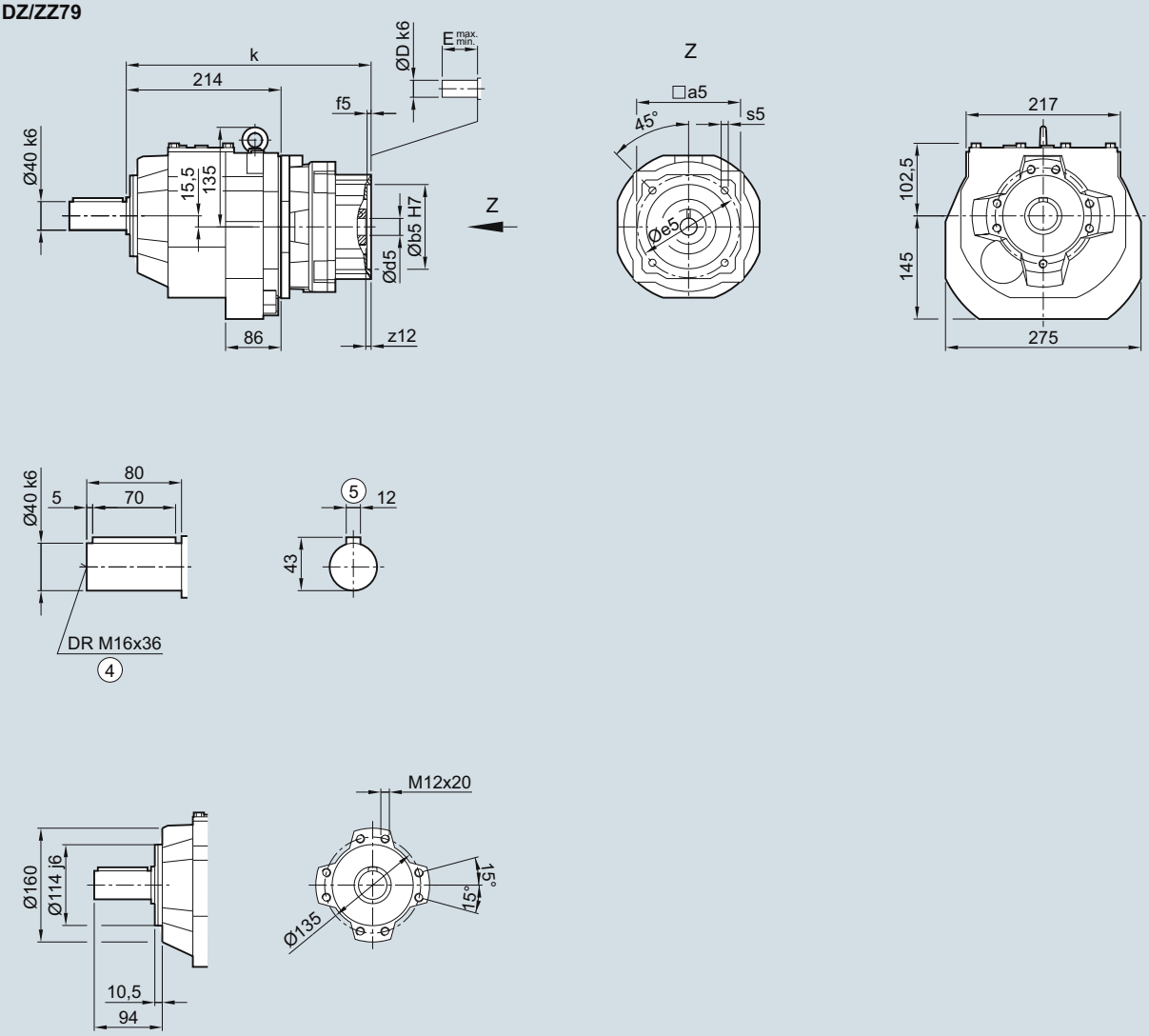
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	284.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	284.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	297
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	297
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	309
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	309
KS5.3	117	95	4.5	115	M6x11	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 3/219

DZ/ZZ79 gearbox in a housing flange design

DZZ030KS

DZ/ZZ79



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	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
KS5.3	117	95	4.5	115	M6x11	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

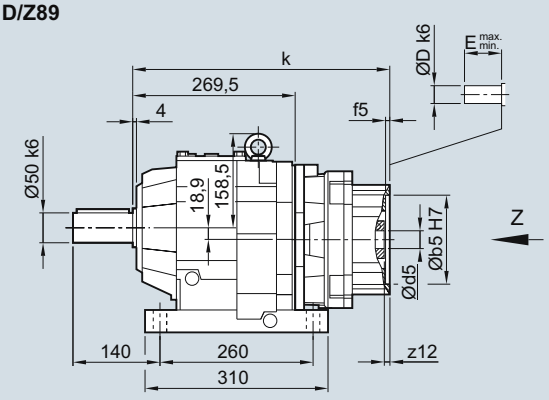
④ DIN 332

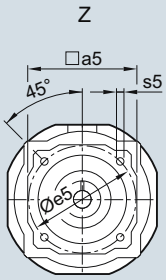
⑤ Feather key/keyway DIN 6885

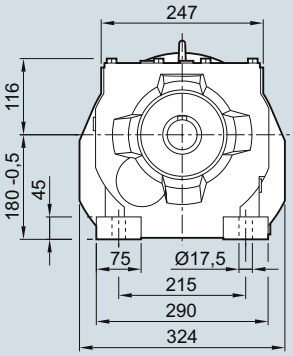
D/Z89 and DB/ZB89 gearboxes in a foot and foot/flange-mounted design

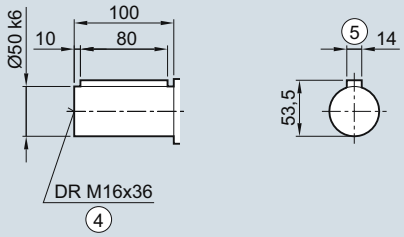
DZ030KS, DZB030KS

D/Z89

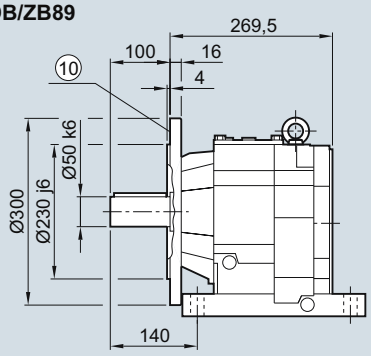


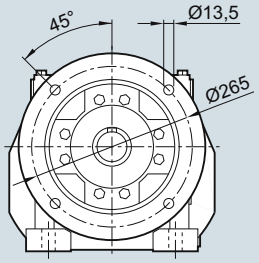






DB/ZB89





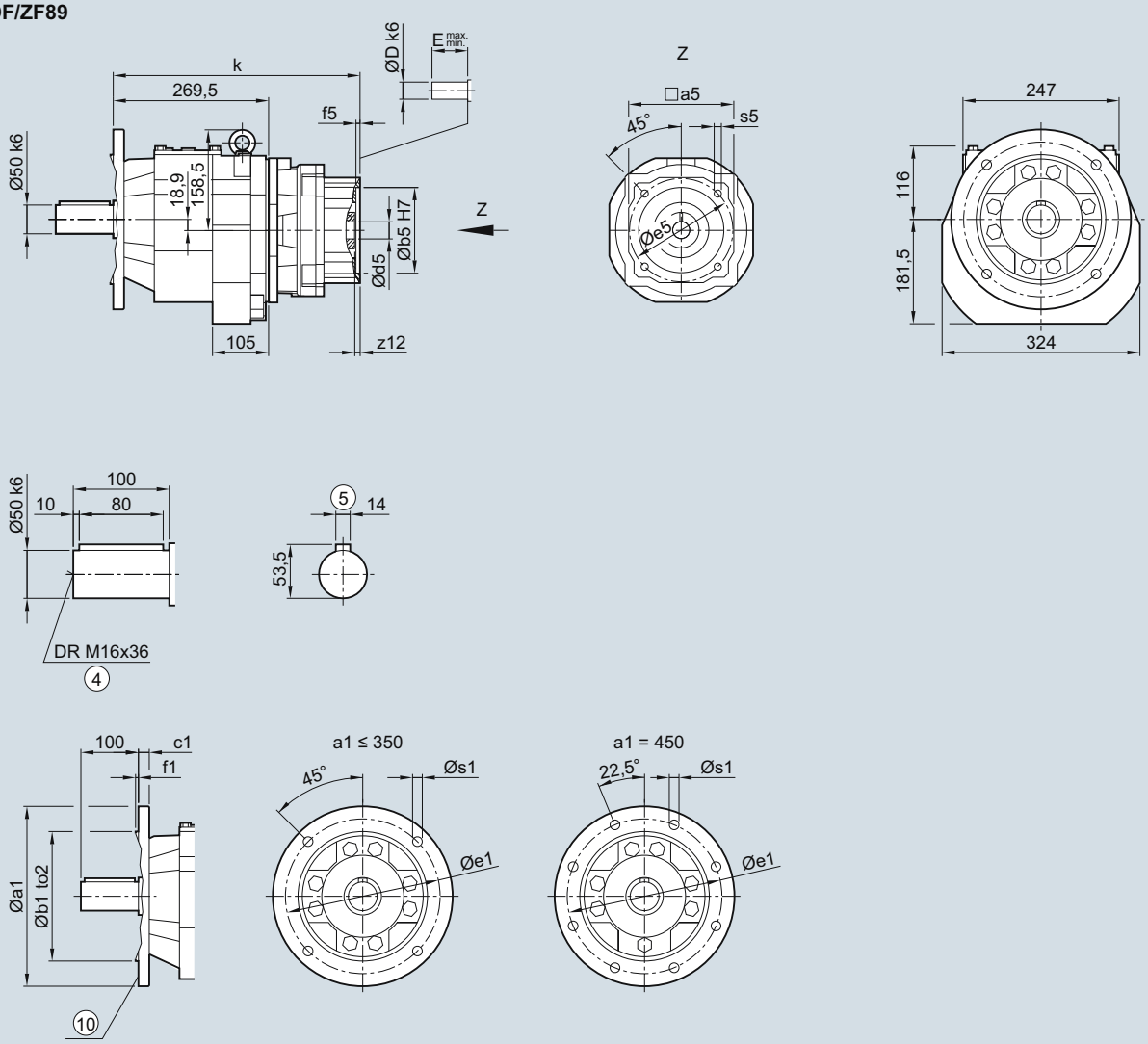
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	351.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	351.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	351.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	372.5
KS8.1	155	130	4.5	165	M10x14	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 3/219

DF/ZF89 gearbox in a flange-mounted design

DZF030KS

DF/ZF89



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

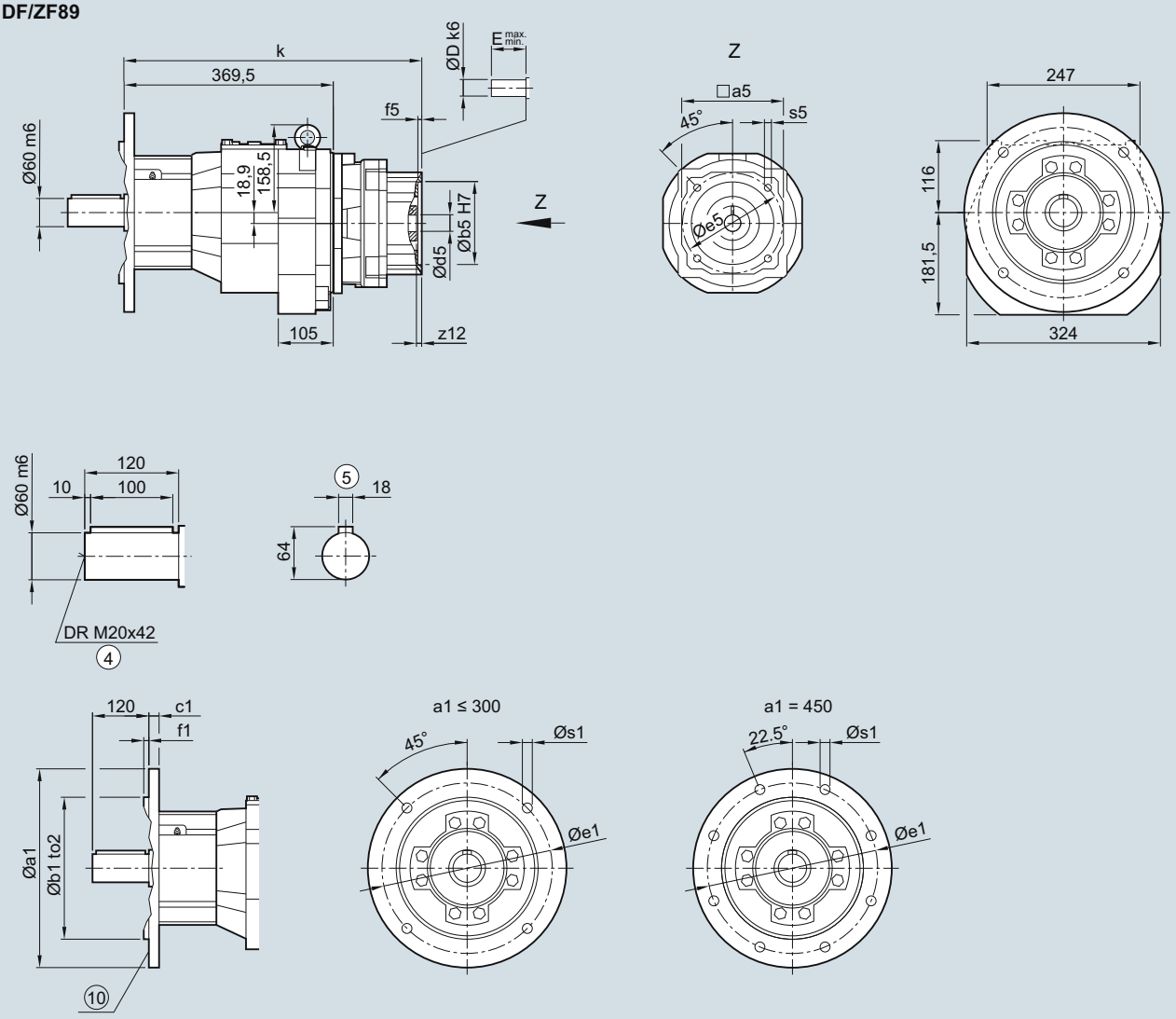
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	351.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	351.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	351.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	372.5
KS8.1	155	130	4.5	165	M10x14	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 3/219

DF/ZF89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040KS

DF/ZF89



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

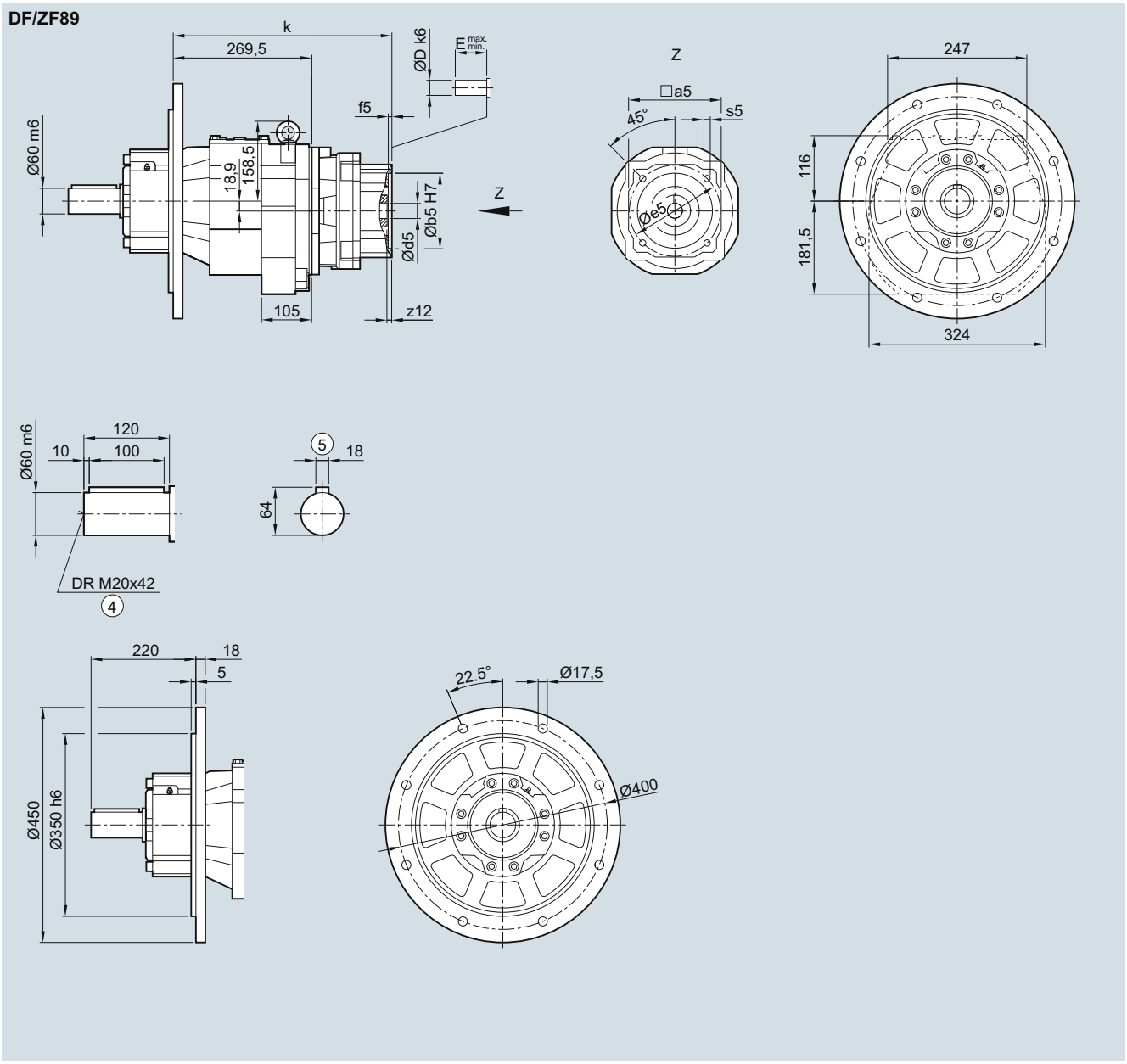
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	451.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	451.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	451.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	472.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	472.5
KS8.1	155	130	4.5	165	M10x14	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 3/219

DF/ZF89 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040KS

DF/ZF89



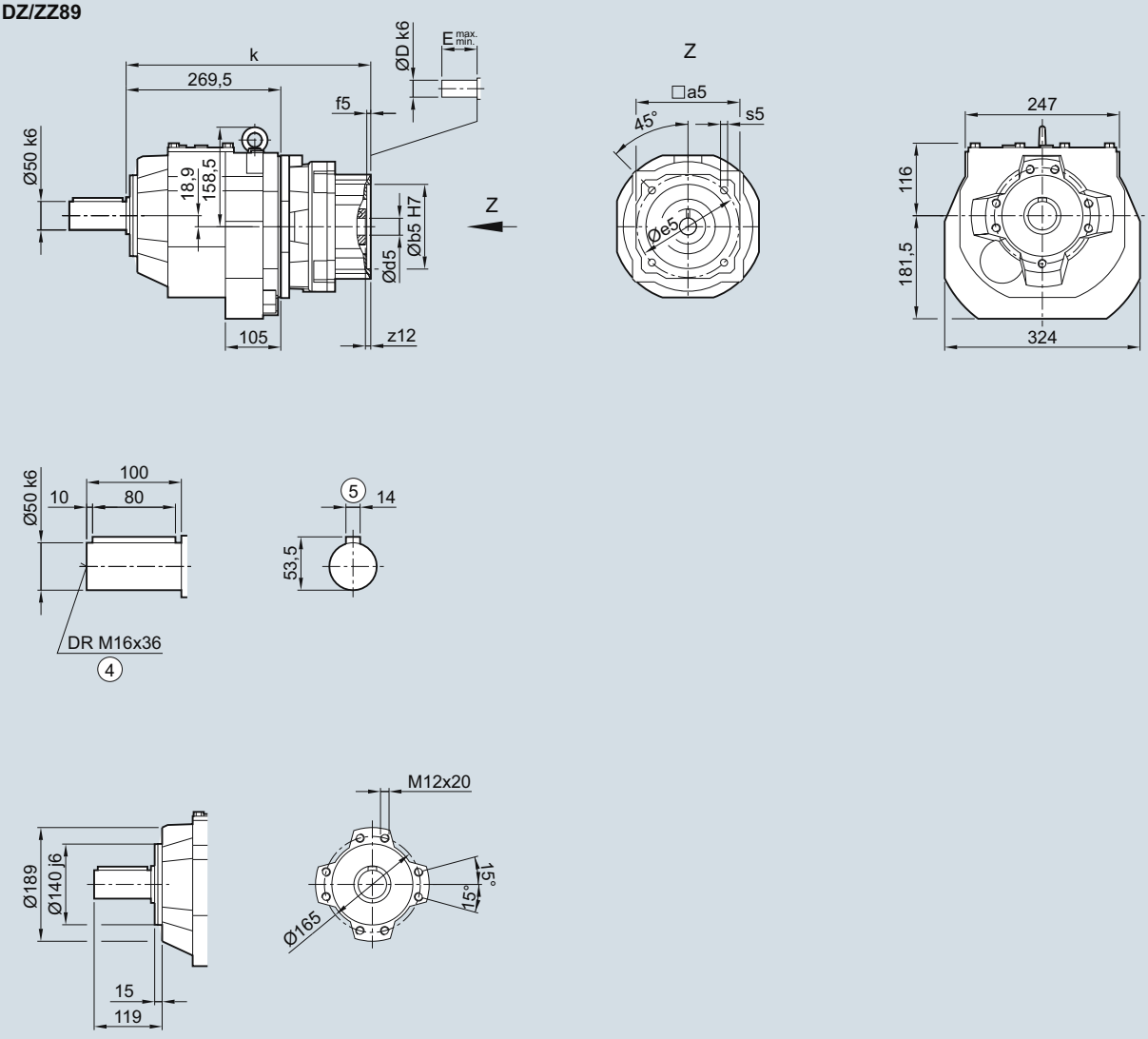
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	351.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	351.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	351.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	372.5
KS8.1	155	130	4.5	165	M10x14	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

DZ/ZZ89 gearbox in a housing flange design

DZZ030KS

DZ/ZZ89



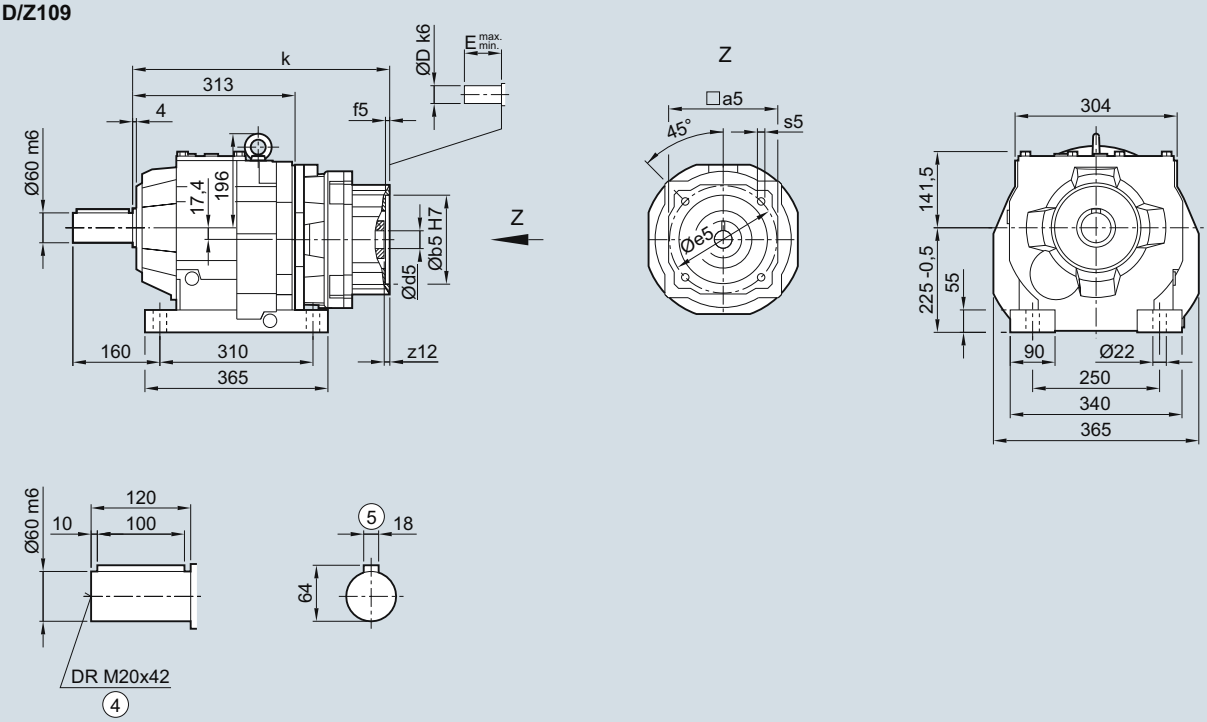
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	351.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	351.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	351.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	372.5
KS8.1	155	130	4.5	165	M10x14	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

D/Z109 gearbox in a foot-mounted design

DZ030KS

D/Z109



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

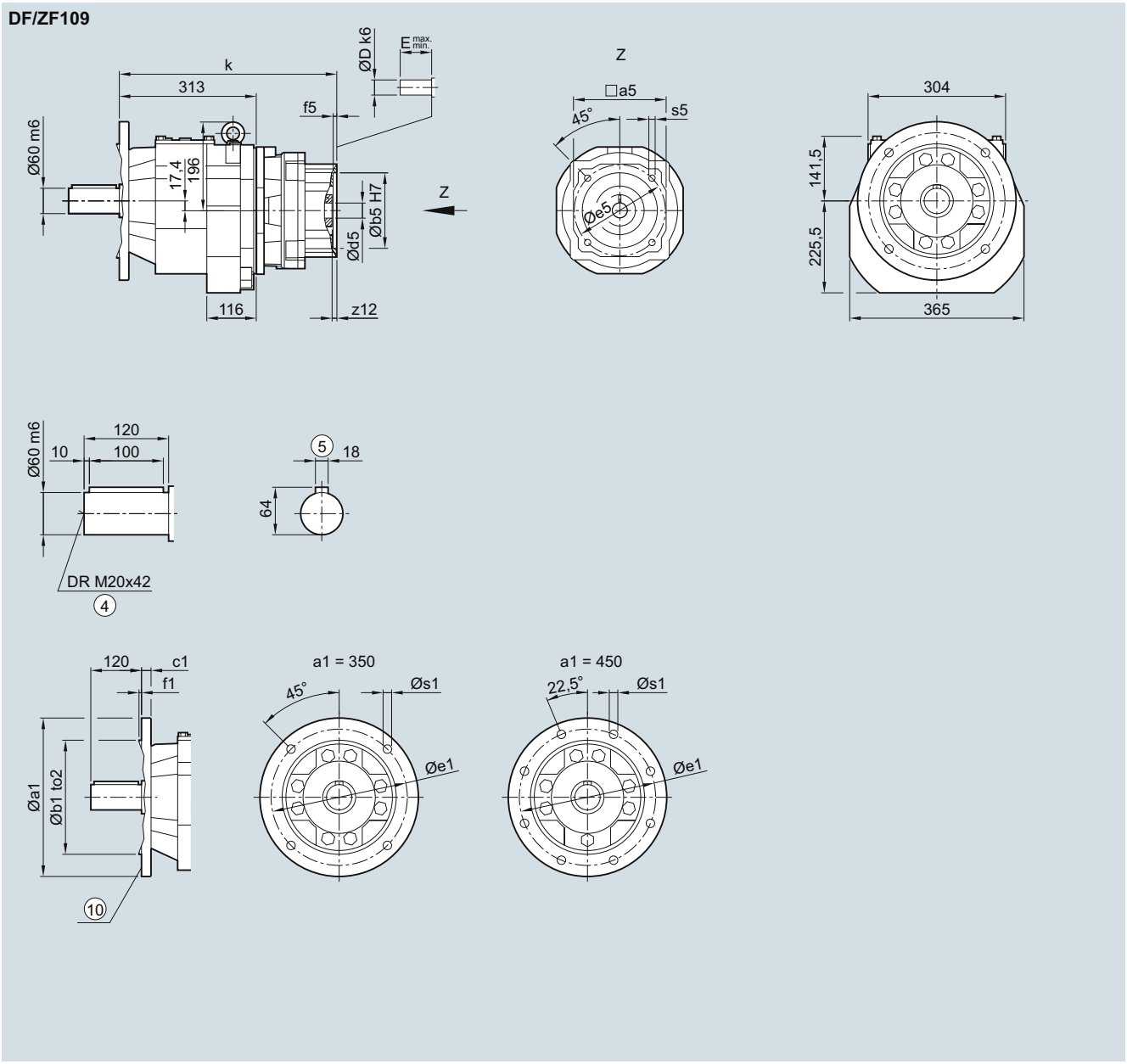
④ DIN 332 ⑤ Feather key/keyway DIN 6885

3

DF/ZF109 gearbox in a flange-mounted design

DZF030KS

DF/ZF109



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

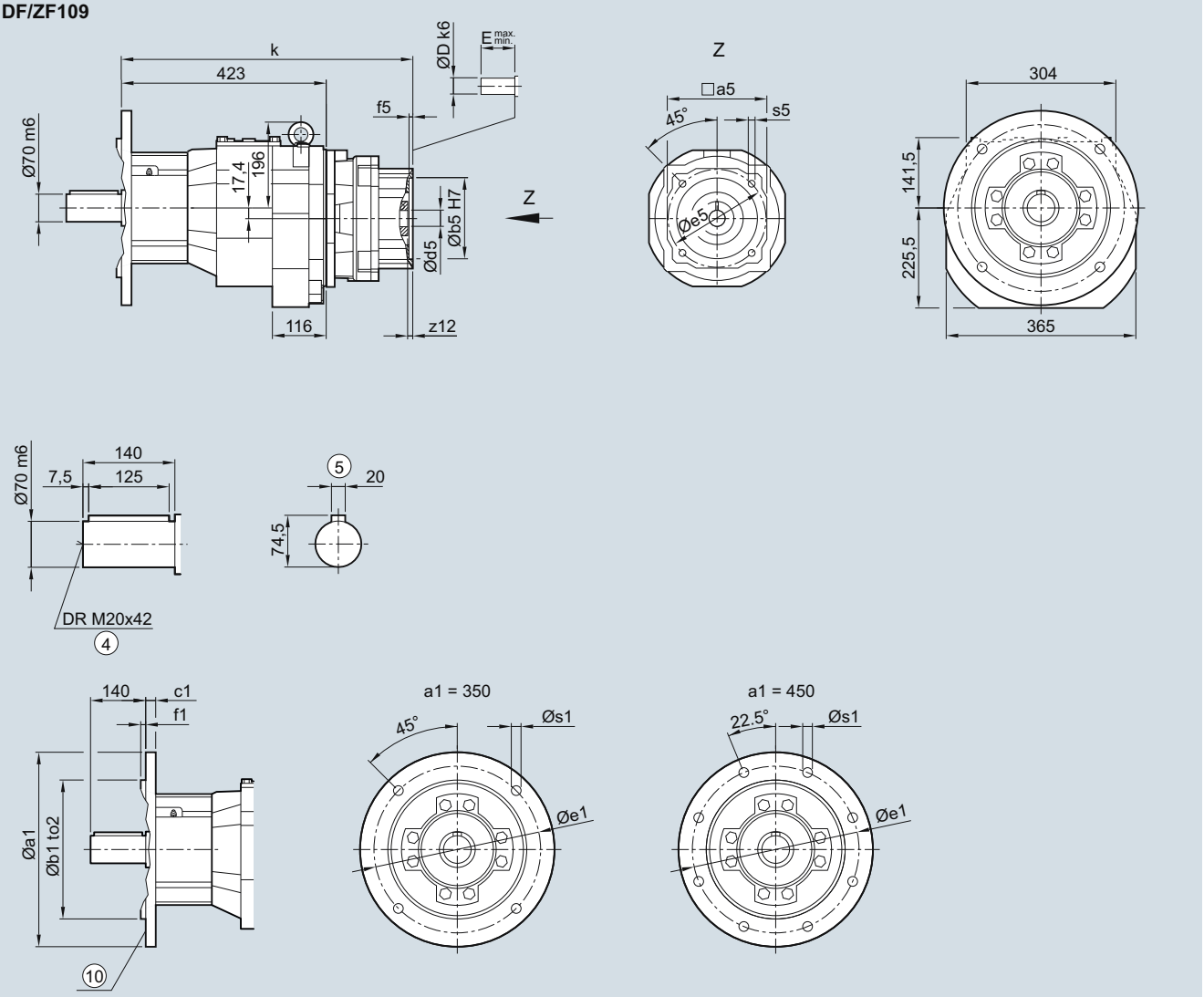
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	388
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	388
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	388
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	407
KS6.2	130	110	7	145	M8x15	8	22	40	58	407
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 3/219

DF/ZF109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040KS

DF/ZF109



Flange	a1	b1	to2	c1	e1	f1	s1
	350	250	h6	18	300	5	17.5
	450	350	h6	22	400	5	17.5

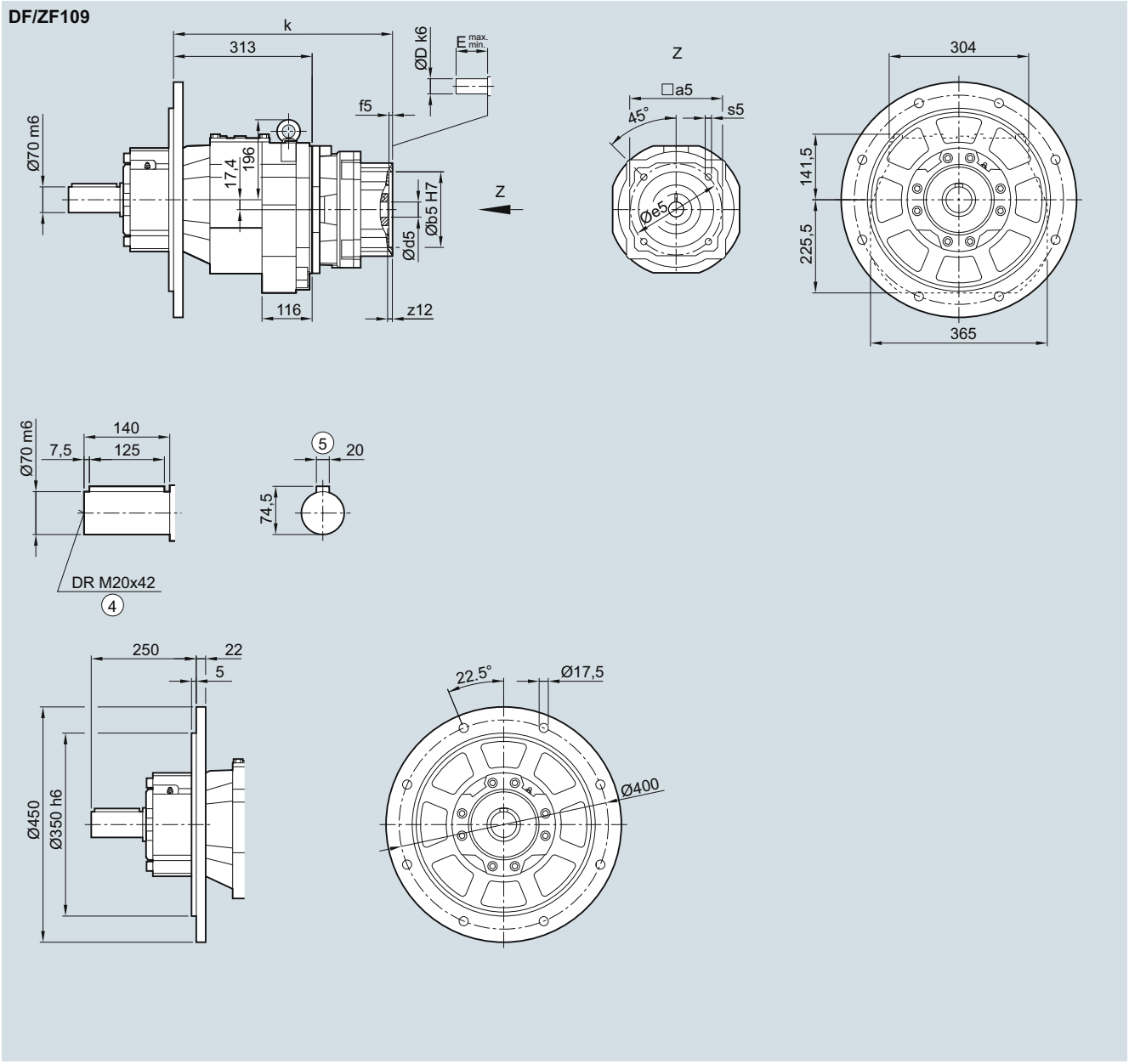
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	498
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	498
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	498
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	517
KS6.2	130	110	7	145	M8x15	8	22	40	58	517
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 3/219

DF/ZF109 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040KS

DF/ZF109



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

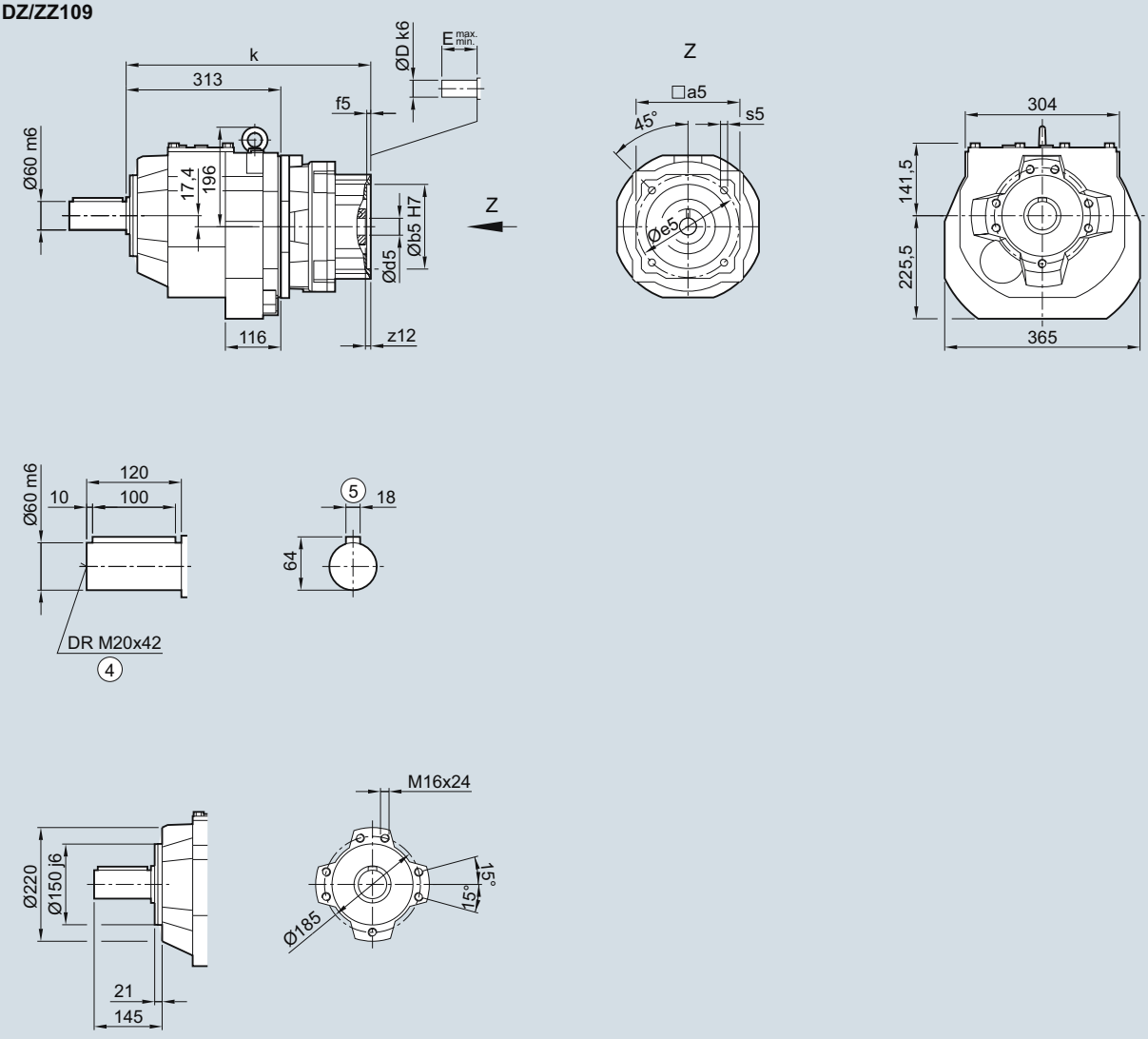
④ DIN 332

⑤ Feather key/keyway DIN 6885

DZ/ZZ109 gearbox in a housing flange design

DZZ030KS

DZ/ZZ109



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

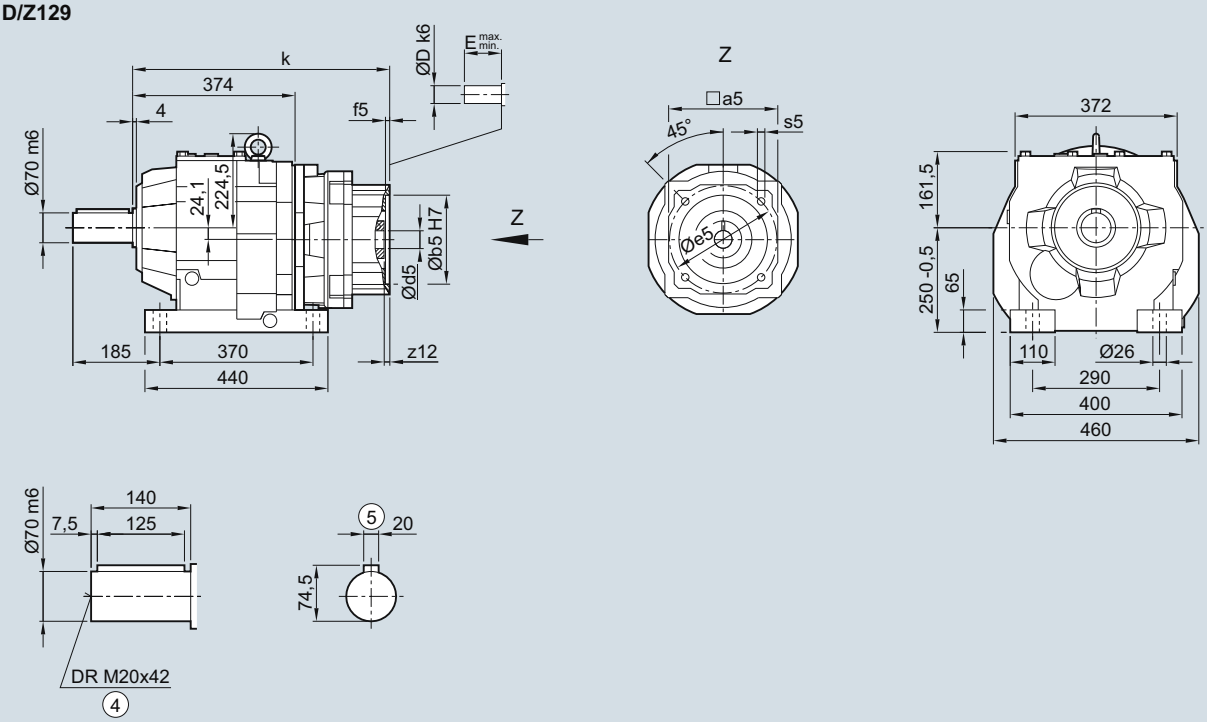
④ DIN 332

⑤ Feather key/keyway DIN 6885

D/Z129 gearbox in a foot-mounted design

DZ030KS

D/Z129



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

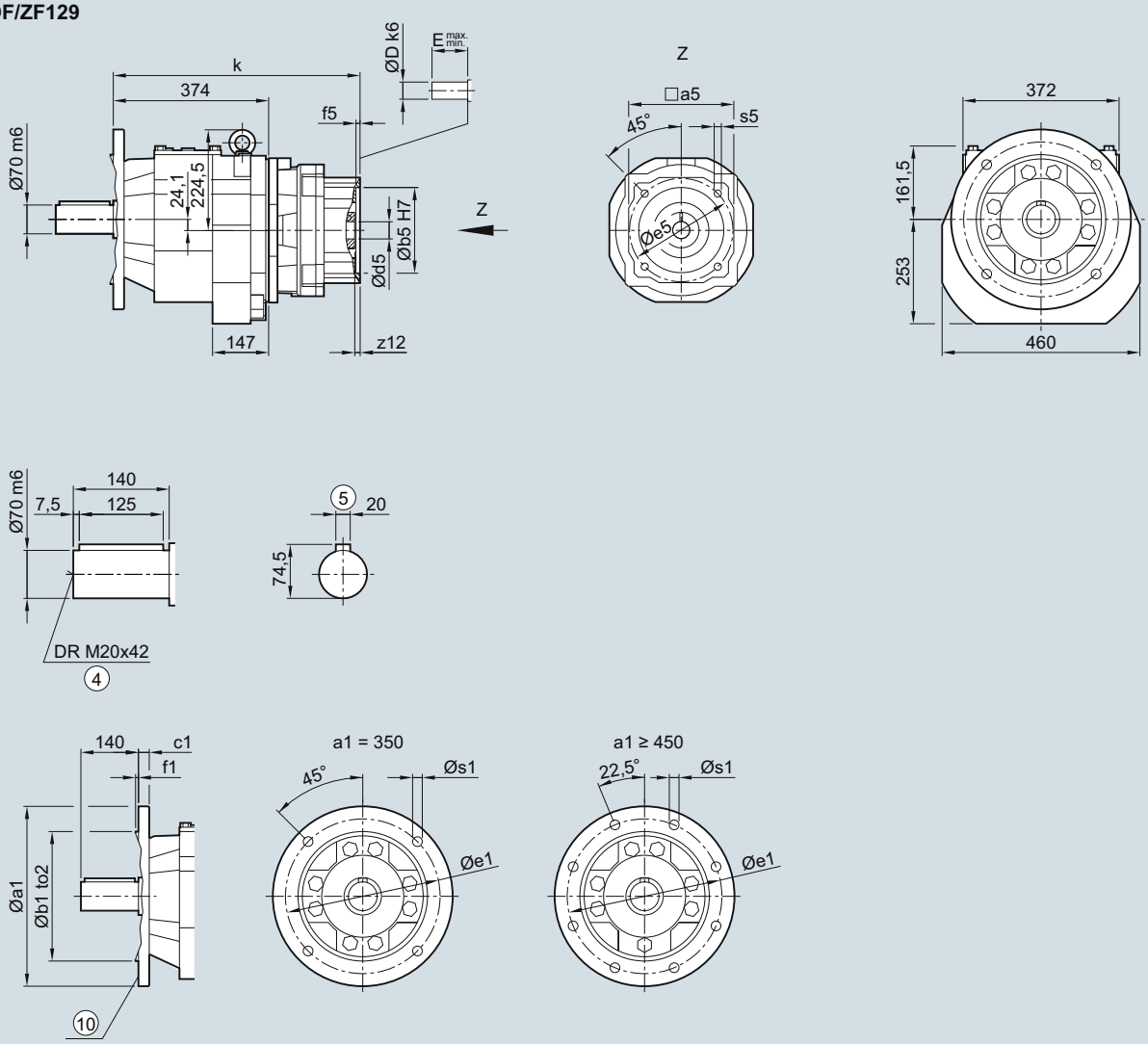
④ DIN 332

⑤ Feather key/keyway DIN 6885

DF/ZF129 gearbox in a flange-mounted design

DZF030KS

DF/ZF129



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

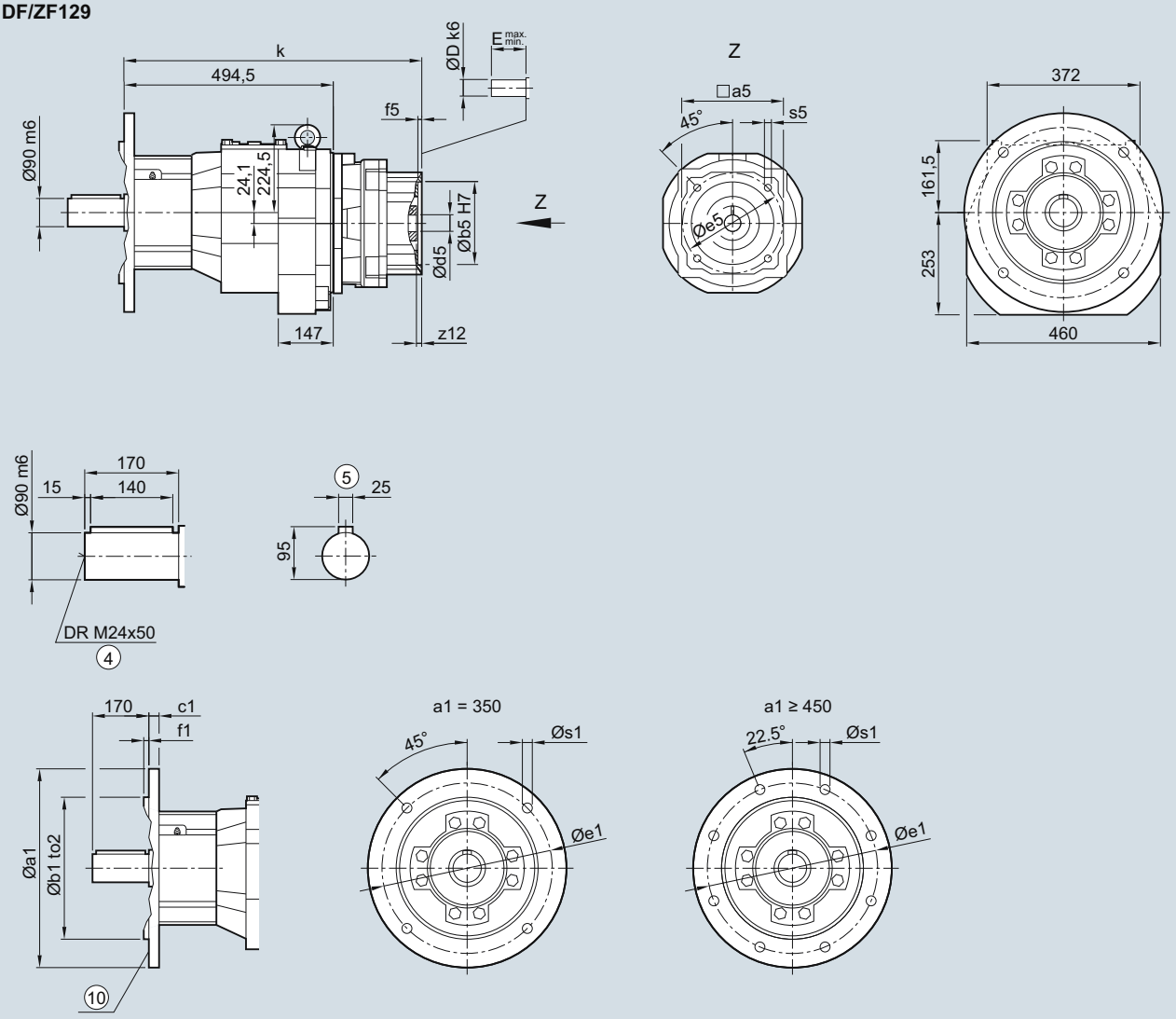
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	442
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	442
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	442
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	459
KS6.2	130	110	7	145	M8x15	8	22	40	58	459
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 3/219

DF/ZF129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040KS

DF/ZF129



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

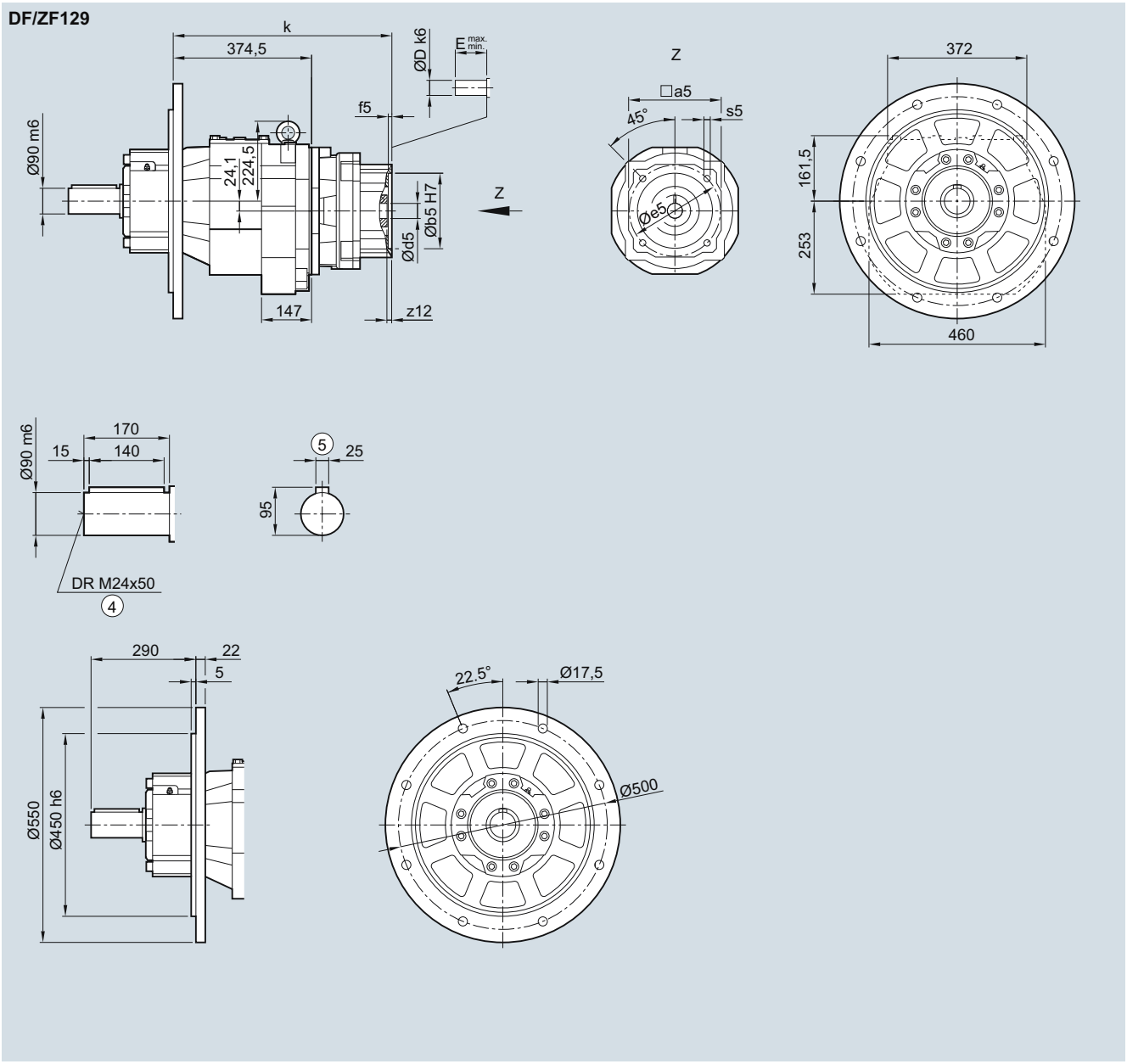
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	562.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	562.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	562.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	579.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	579.5
KS8.1	155	130	4.5	165	M10x14	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 3/219

DF/ZF129 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040KS

DF/ZF129



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

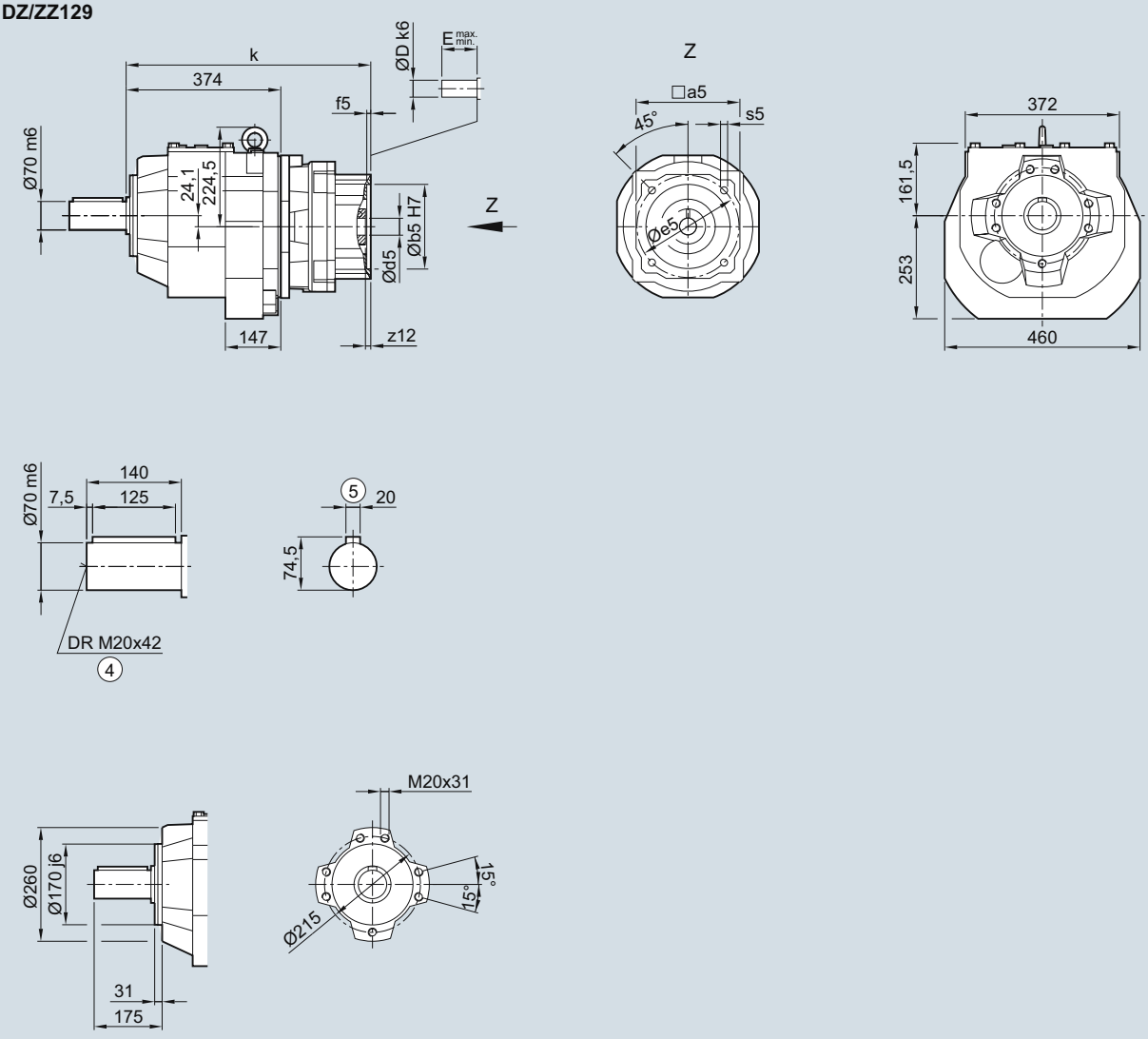
⑤ Feather key/keyway DIN 6885

3

DZ/ZZ129 gearbox in a housing flange design

DZZ030KS

DZ/ZZ129



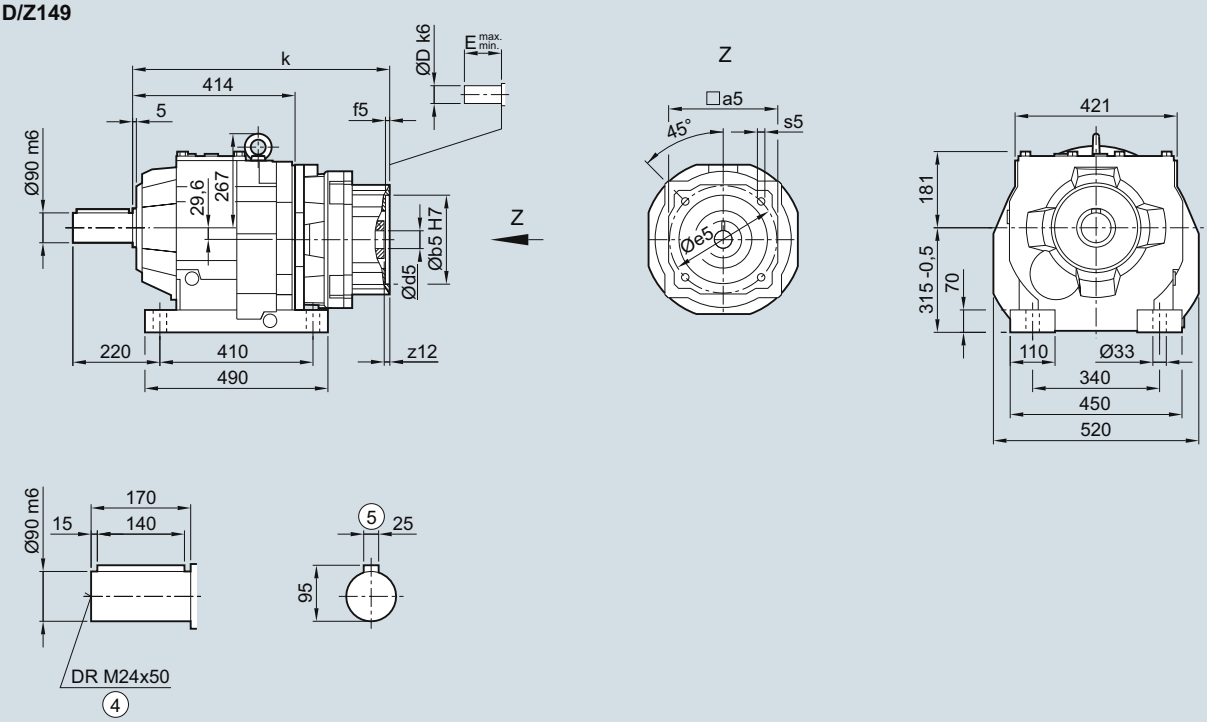
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	442
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	442
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	442
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	459
KS6.2	130	110	7	145	M8x15	8	22	40	58	459
KS8.1	155	130	4.5	165	M10x14	2	32	40	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

D/Z149 gearbox in a foot-mounted design

DZ030KS

D/Z149



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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

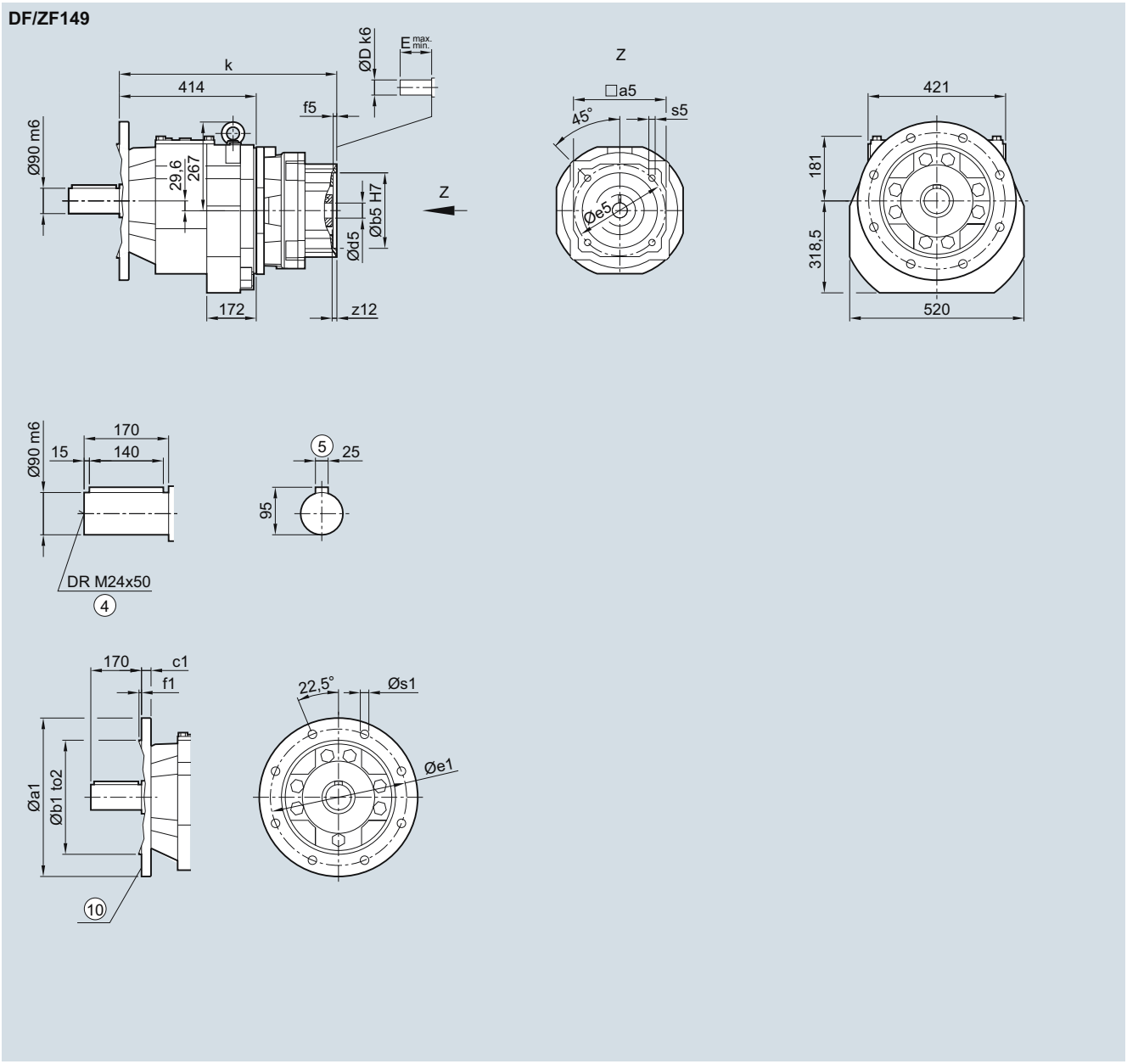
④ DIN 332

⑤ Feather key/keyway DIN 6885

DF/ZF149 gearbox in a flange-mounted design

DZF030KS

DF/ZF149



Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5

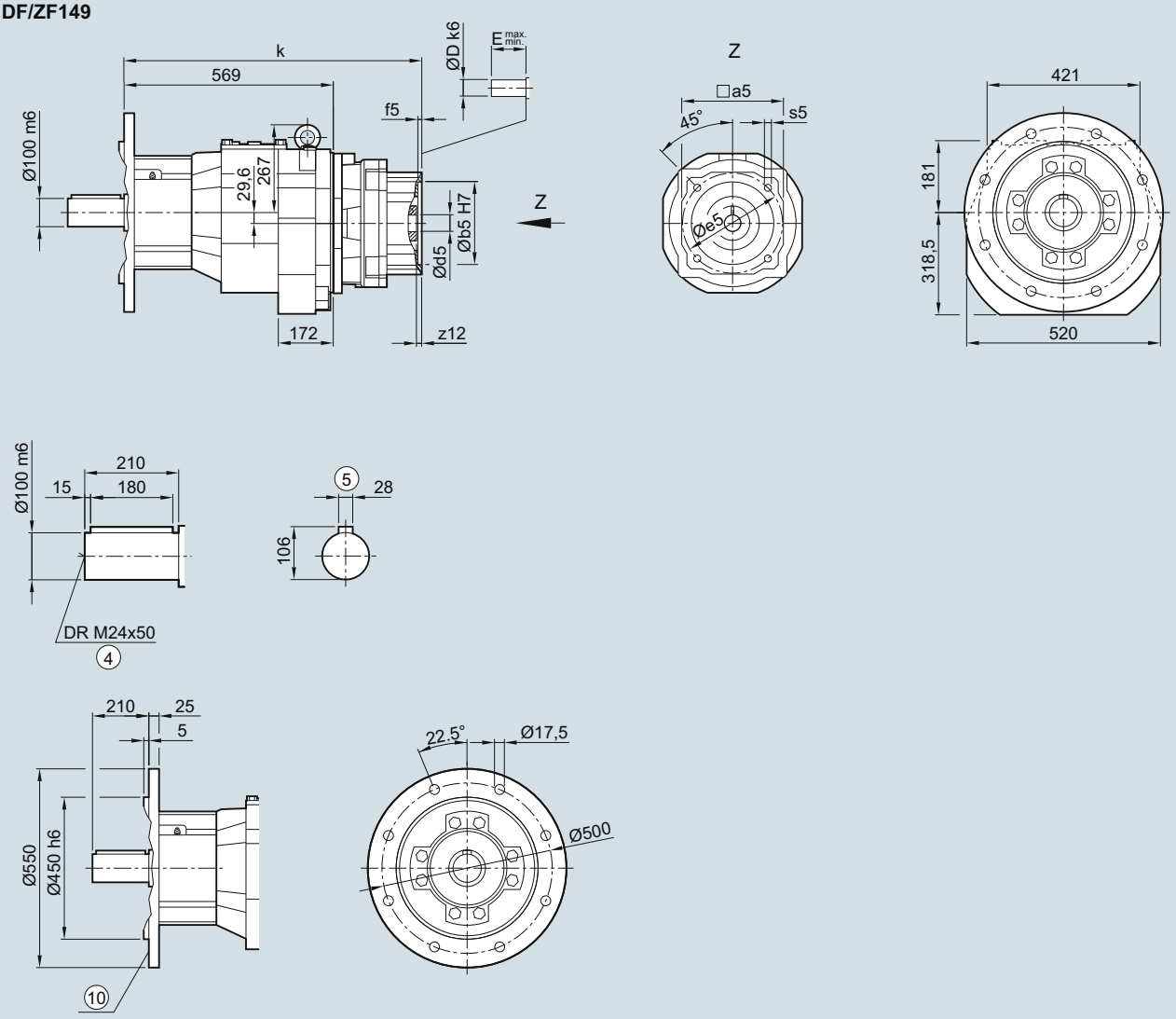
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	497.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	497.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	510
KS10.1	196	180	5	215	M12x22	5	38	50	80	539
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	539

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DF/ZF149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040KS

DF/ZF149



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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

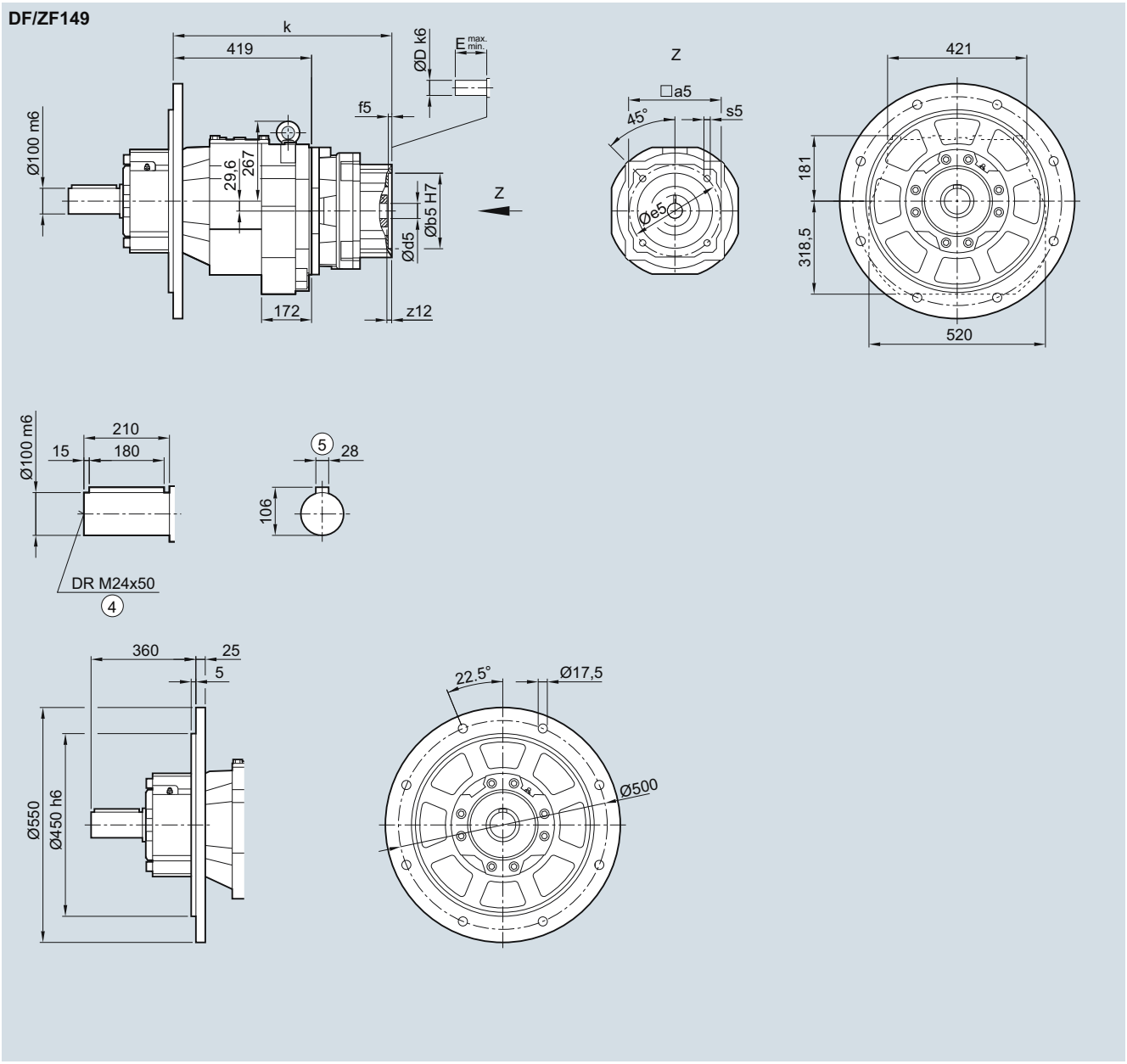
④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

3

DF/ZF149 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040KS

DF/ZF149



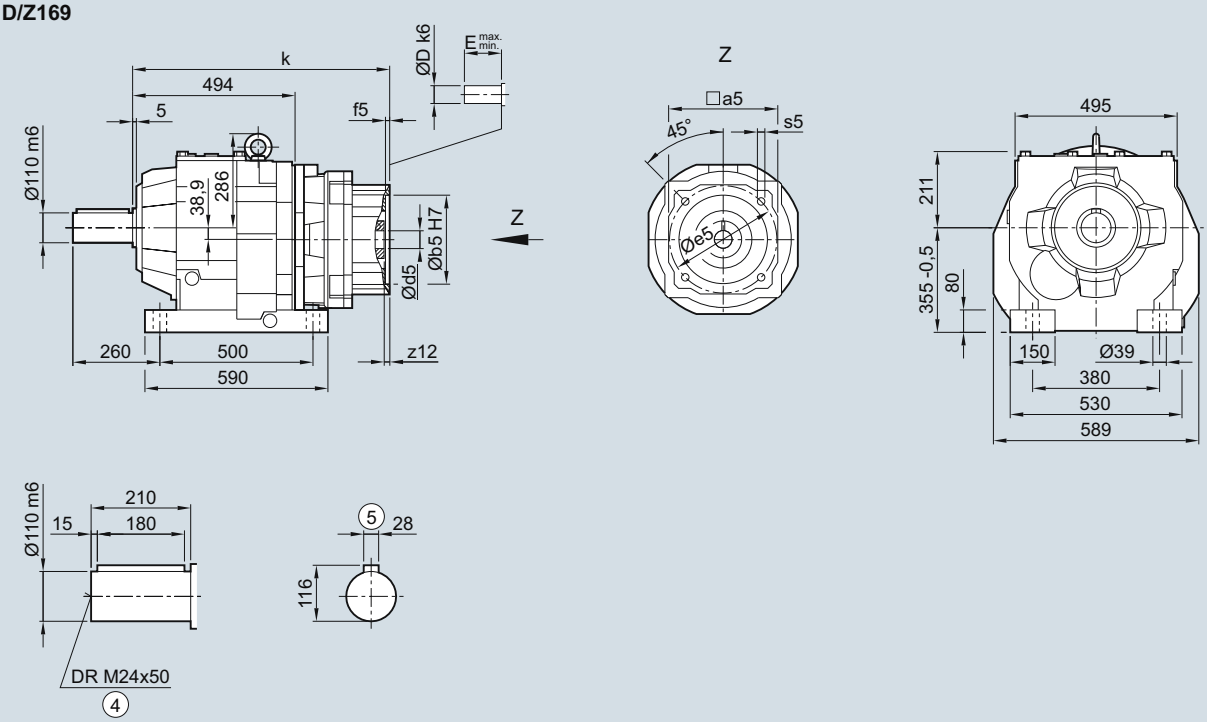
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	497.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	497.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	510
KS10.1	196	180	5	215	M12x22	5	38	50	80	539
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	539

④ DIN 332 ⑤ Feather key/keyway DIN 6885

D/Z169 gearbox in a foot-mounted design

DZ030KS

D/Z169



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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

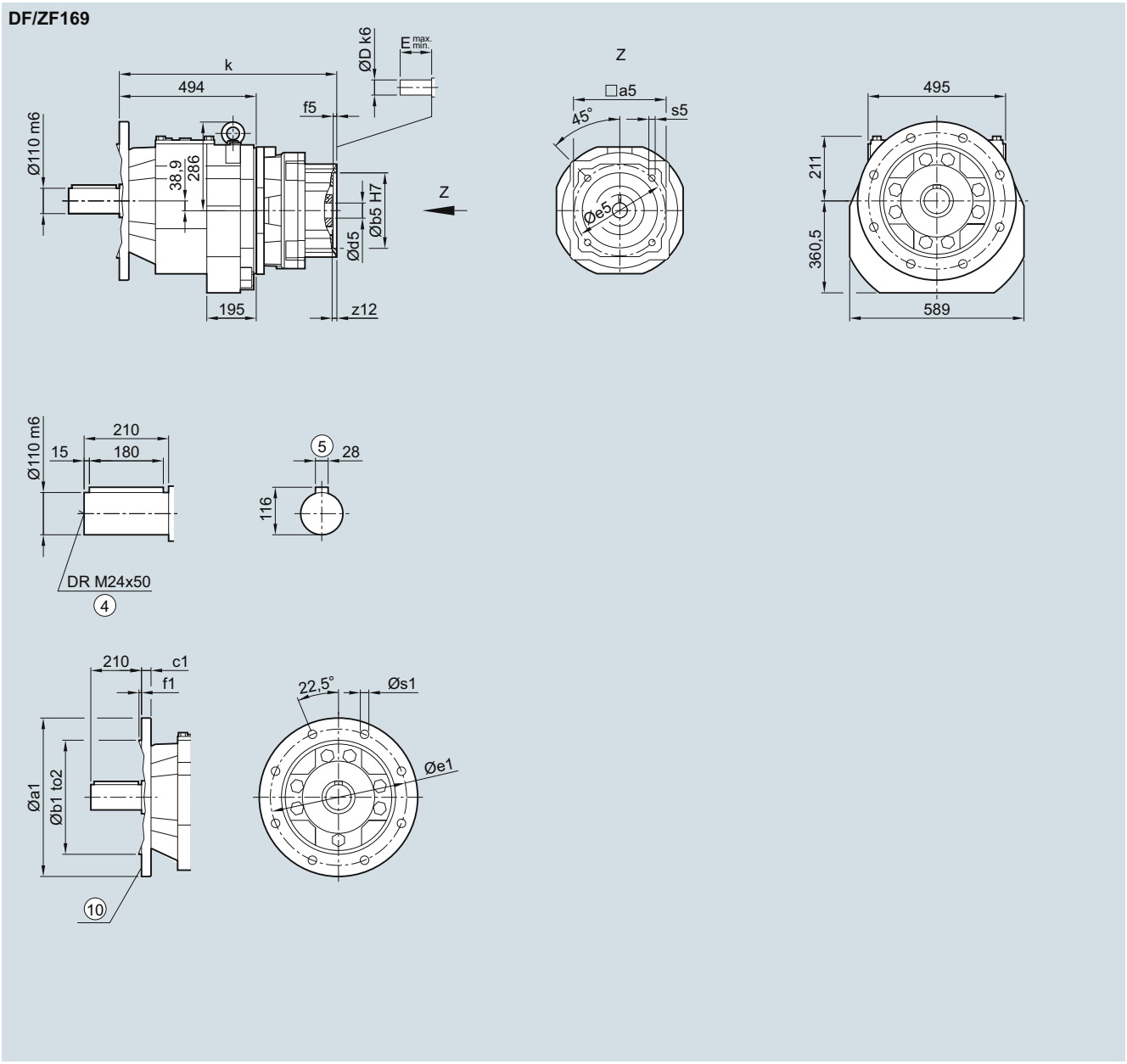
⑤ Feather key/keyway DIN 6885

3

DF/ZF169 gearbox in a flange-mounted design

DZF030KS

DF/ZF169



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

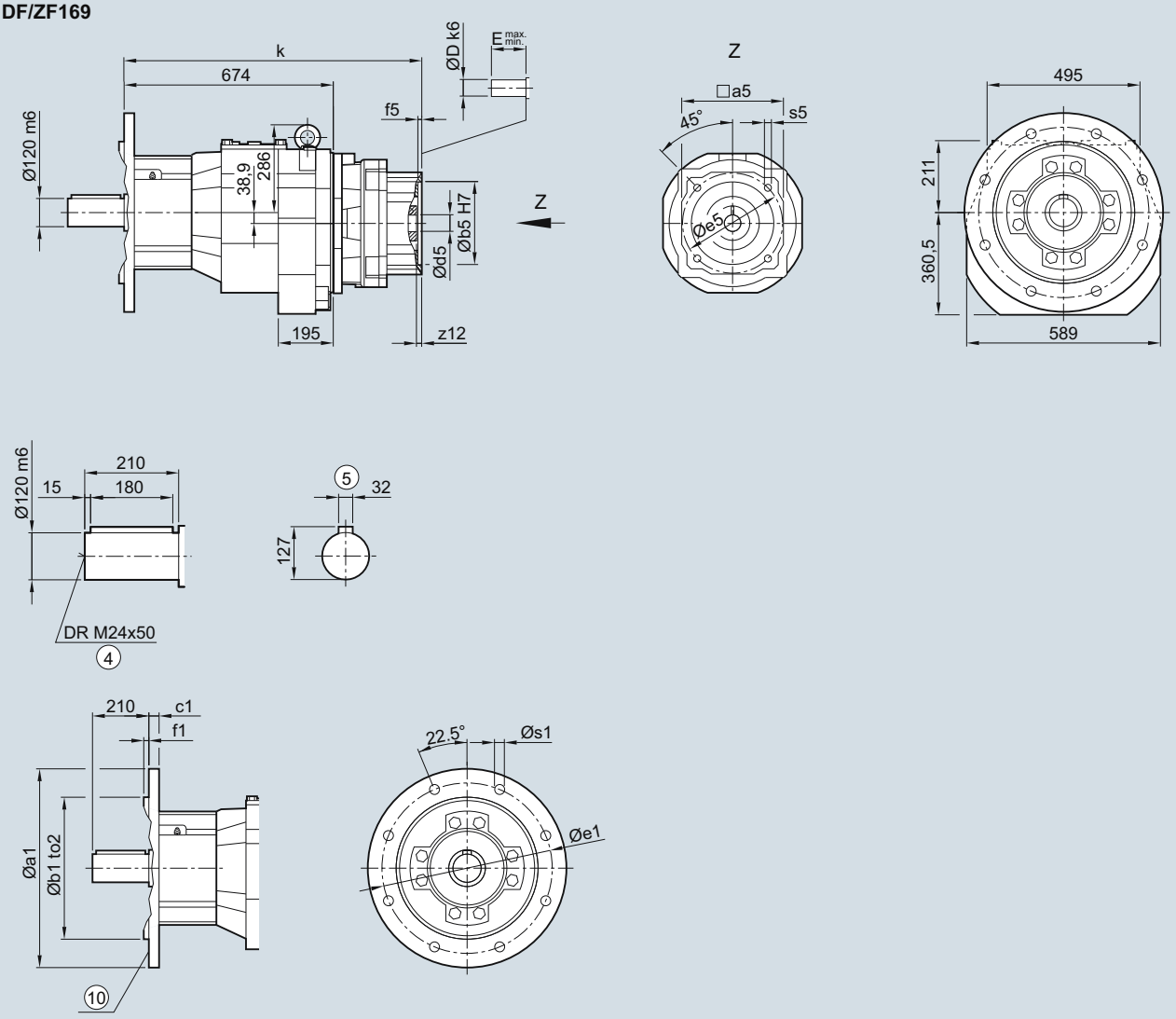
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	577.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	606
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	606

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

DF/ZF169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

DZF040KS

DF/ZF169



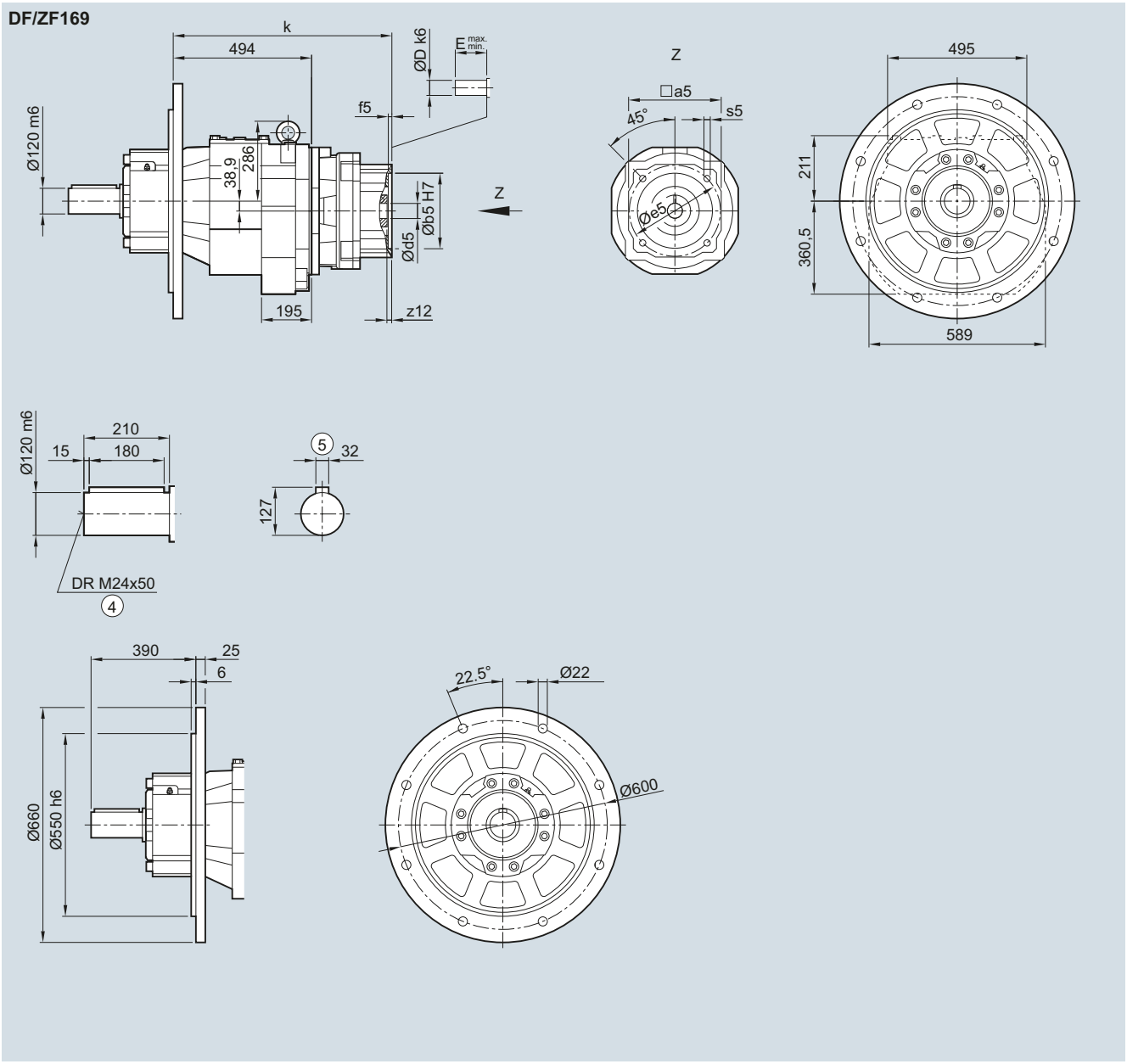
Flange	a1	b1	to2	c1	e1	f1	s1
	450	350	h6	22	400	5	17.5
	550	450	h6	25	500	5	17.5
	660	550	h6	25	600	6	17.5

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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 3/219

DF/ZF169 gearbox in a flange-mounted design with XLplus reinforced bearing system (G31)

DZF040KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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

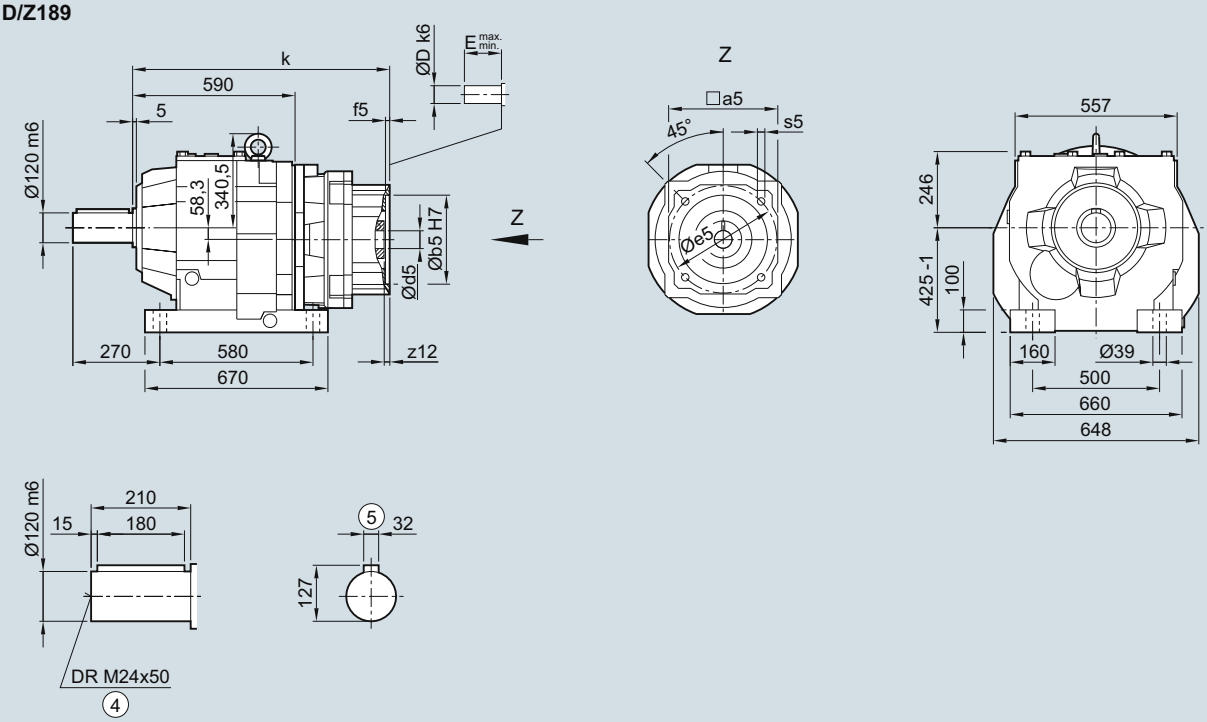
④ DIN 332

⑤ Feather key/keyway DIN 6885

D/Z189 gearbox in a foot-mounted design

DZ030KS

D/Z189



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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

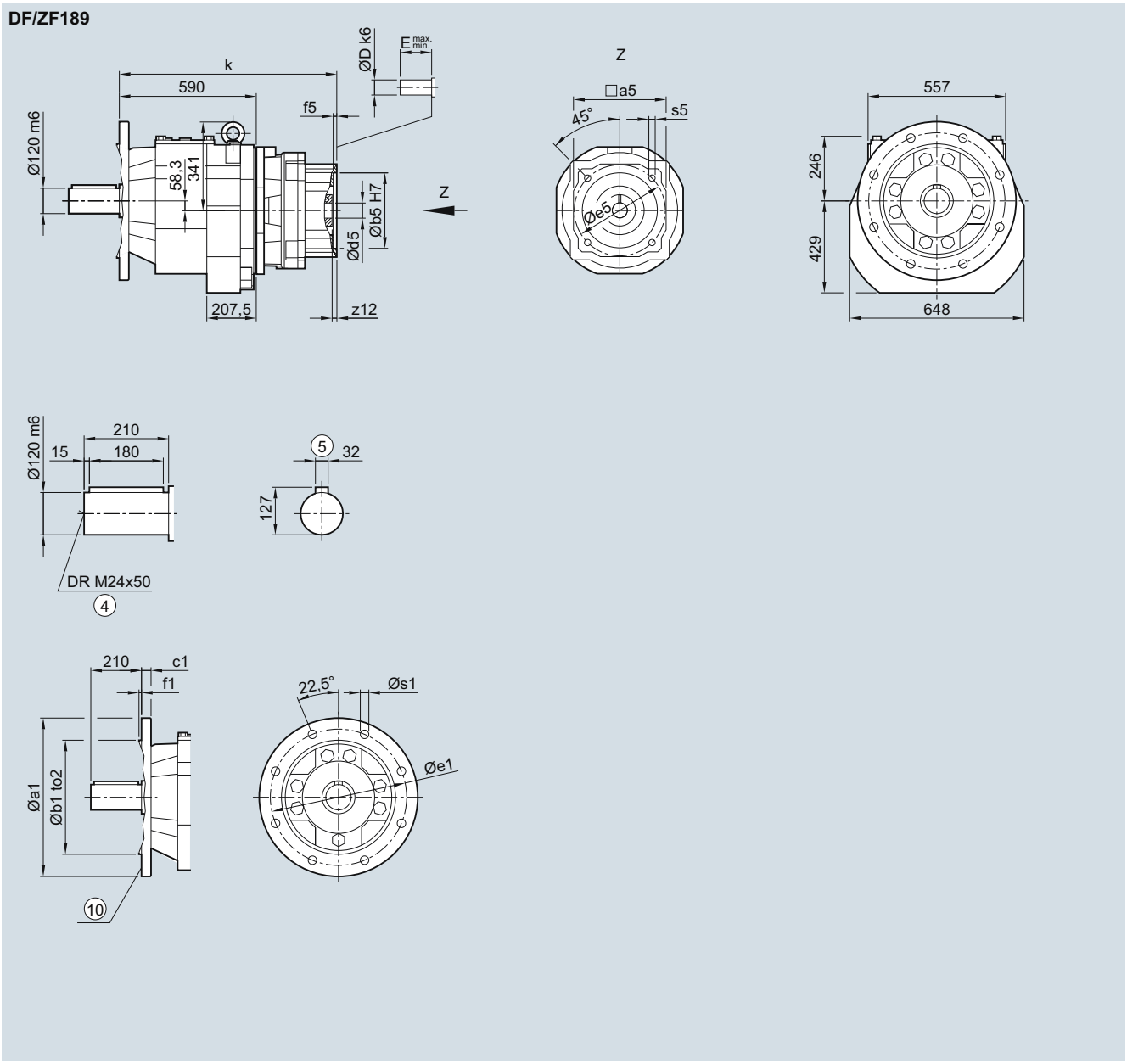
⑤ Feather key/keyway DIN 6885

3

DF/ZF189 gearbox in a flange-mounted design

DZF030KS

DF/ZF189



Flange	a1	b1	to2	c1	e1	f1	s1
	550	450	h6	25	500	5	17.5
	660	550	h6	28	600	6	22.0

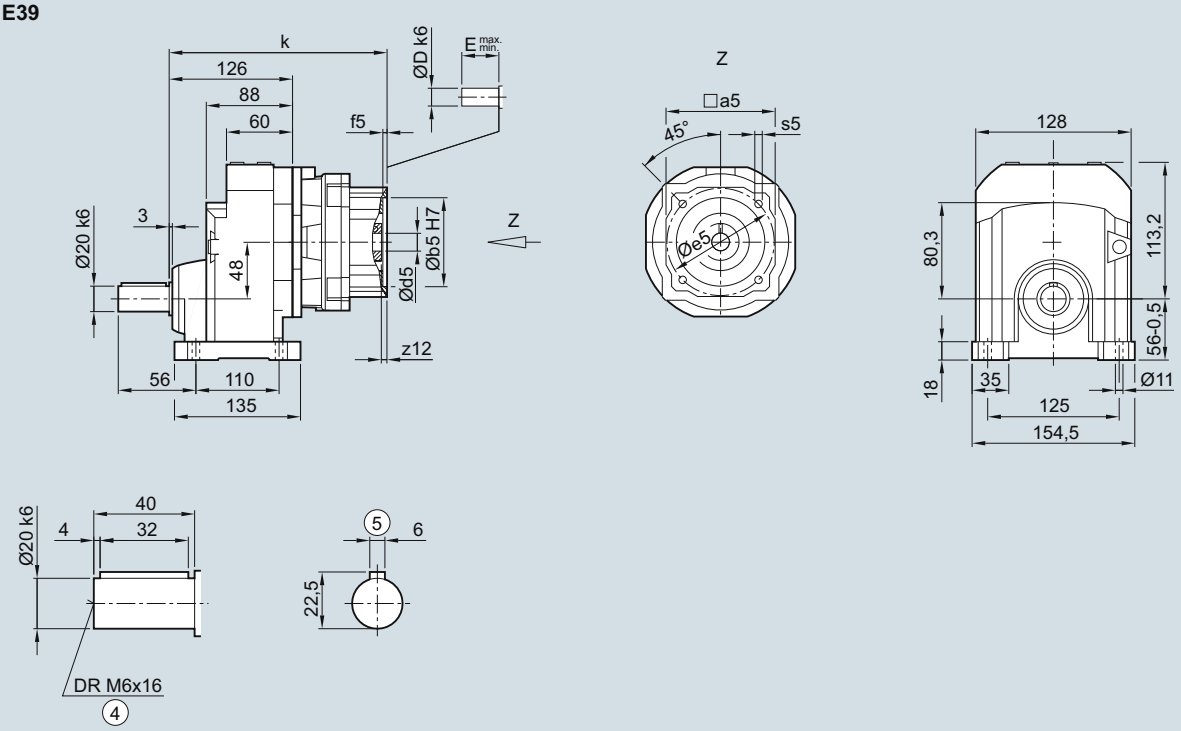
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	673.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	702
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	702

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

E39 gearbox in a foot-mounted design

E030KS

E39



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	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
KS5.3	117	95	4.5	115	M6x11	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

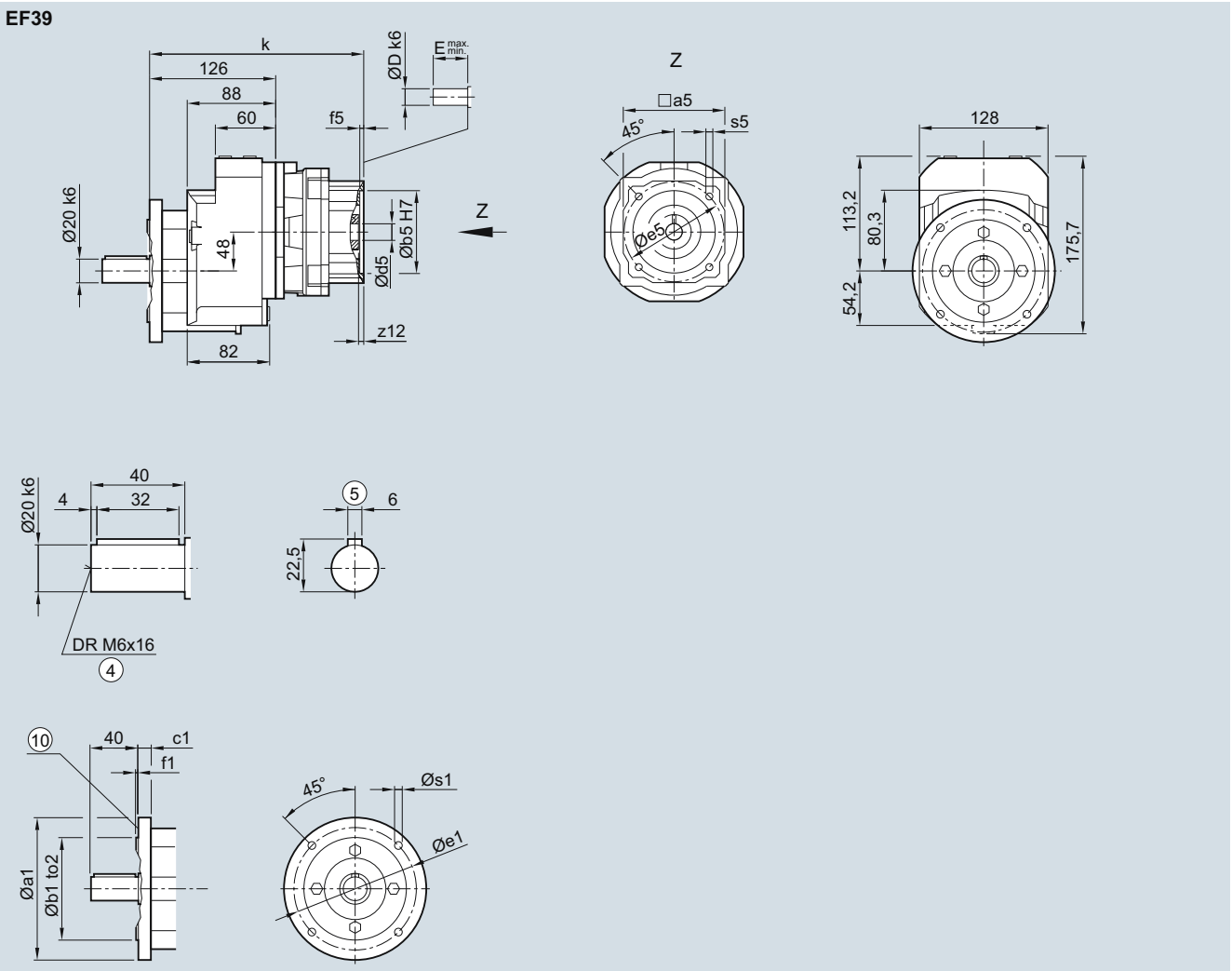
④ DIN 332

⑤ Feather key/keyway DIN 6885

EF39 gearbox in a flange-mounted design

EF030KS

EF39



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

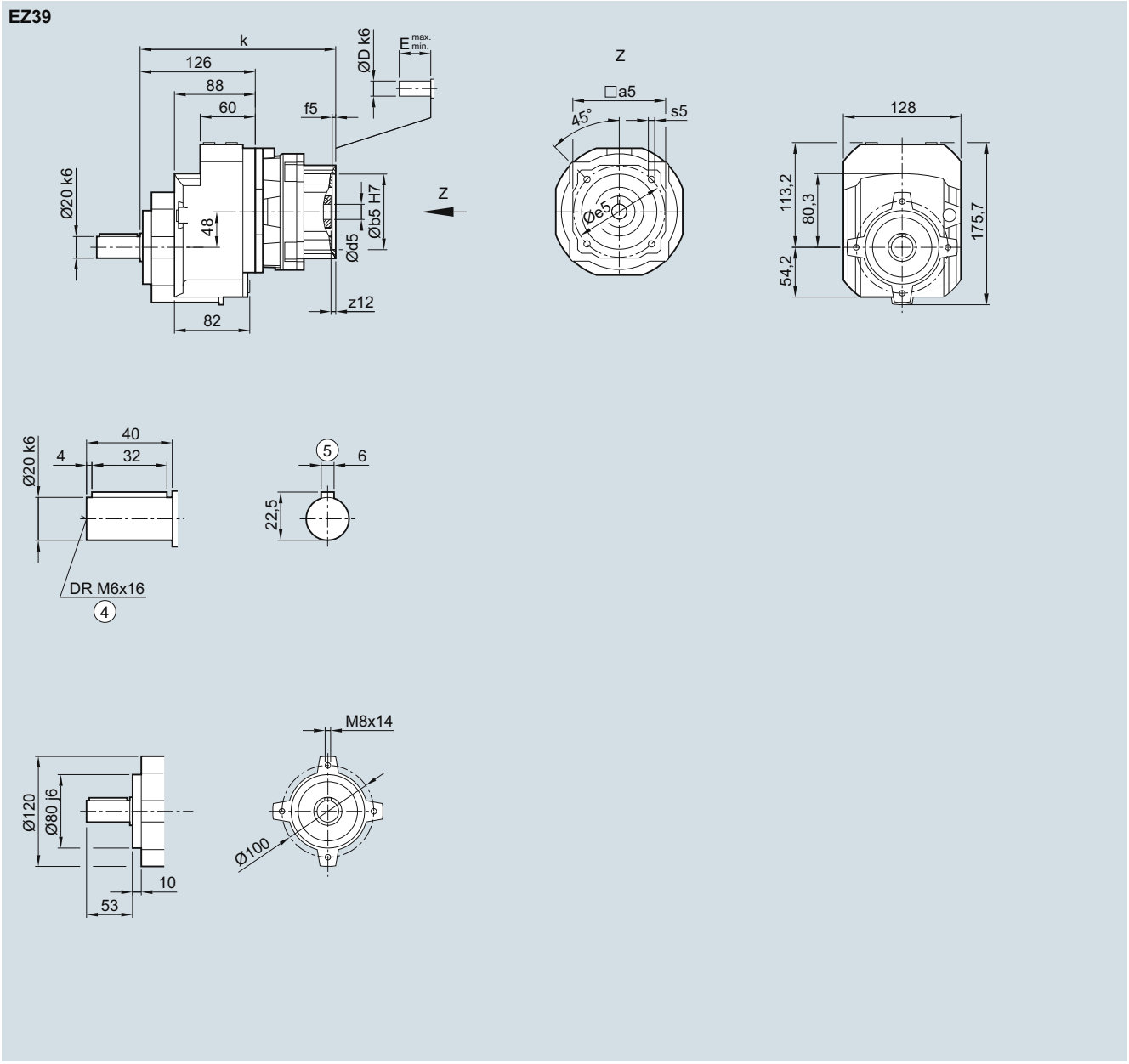
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	208
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	208
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	220.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	220.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	236.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	236.5
KS5.3	117	95	4.5	115	M6x11	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 3/219

EZ39 gearbox in a housing flange design

EZ030KS

EZ39

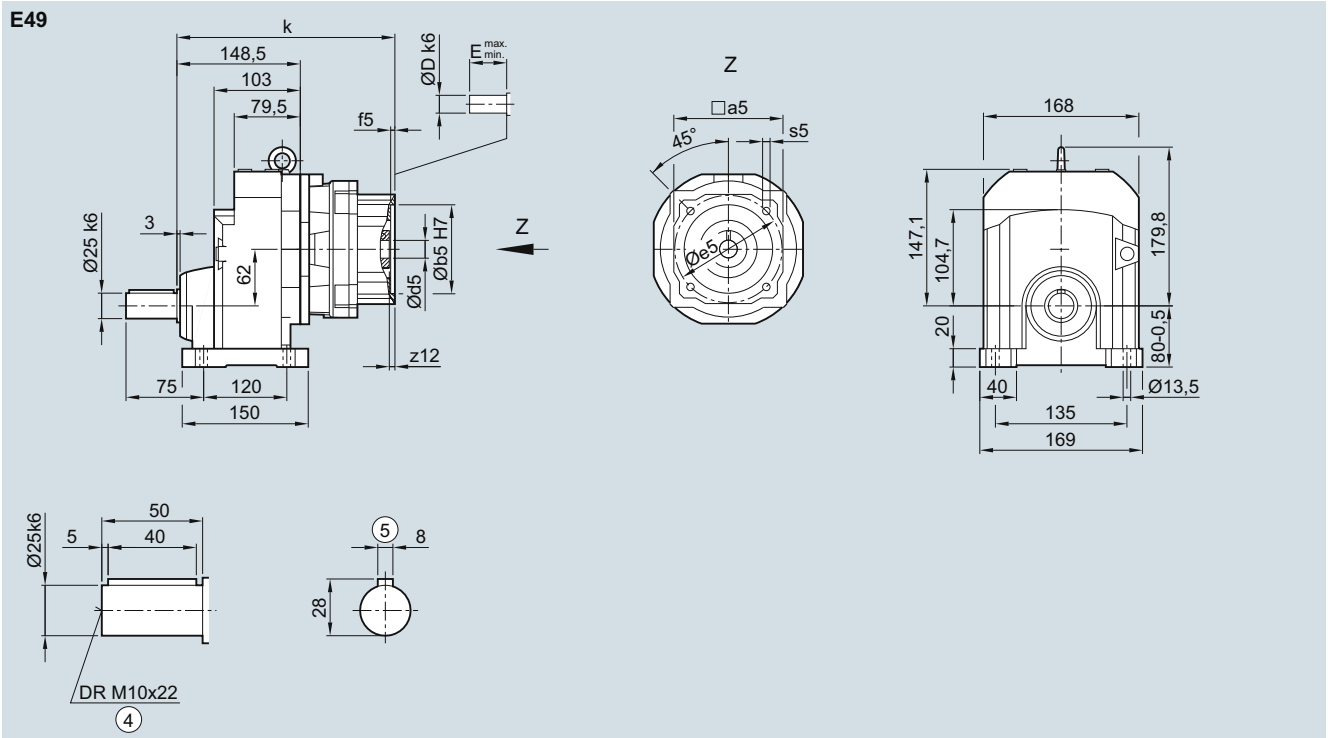


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	208
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	208
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	220.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	220.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	236.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	236.5
KS5.3	117	95	4.5	115	M6x11	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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

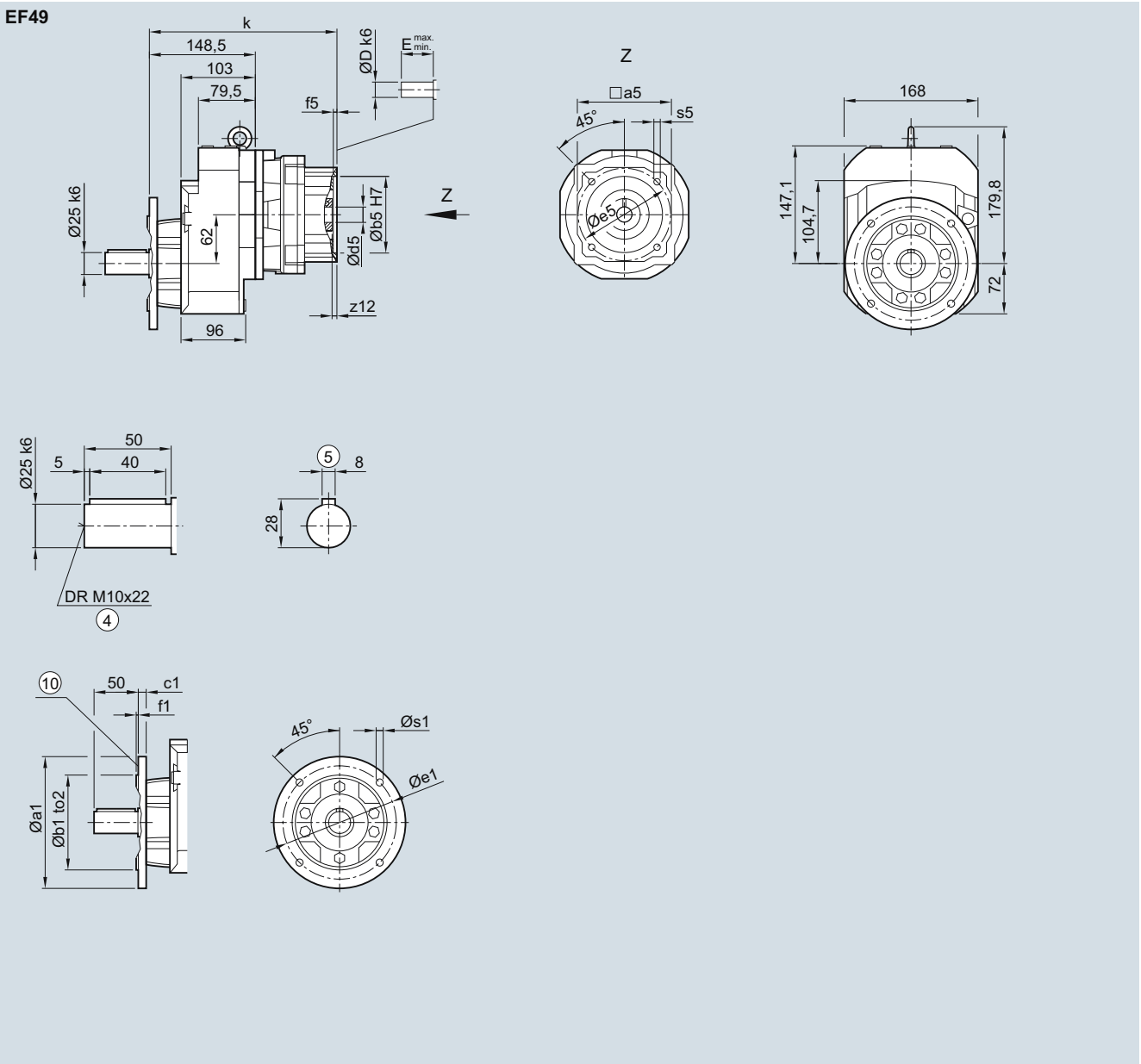
④ DIN 332

⑤ Feather key/keyway DIN 6885

EF49 gearbox in a flange-mounted design

EF030KS

EF49



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

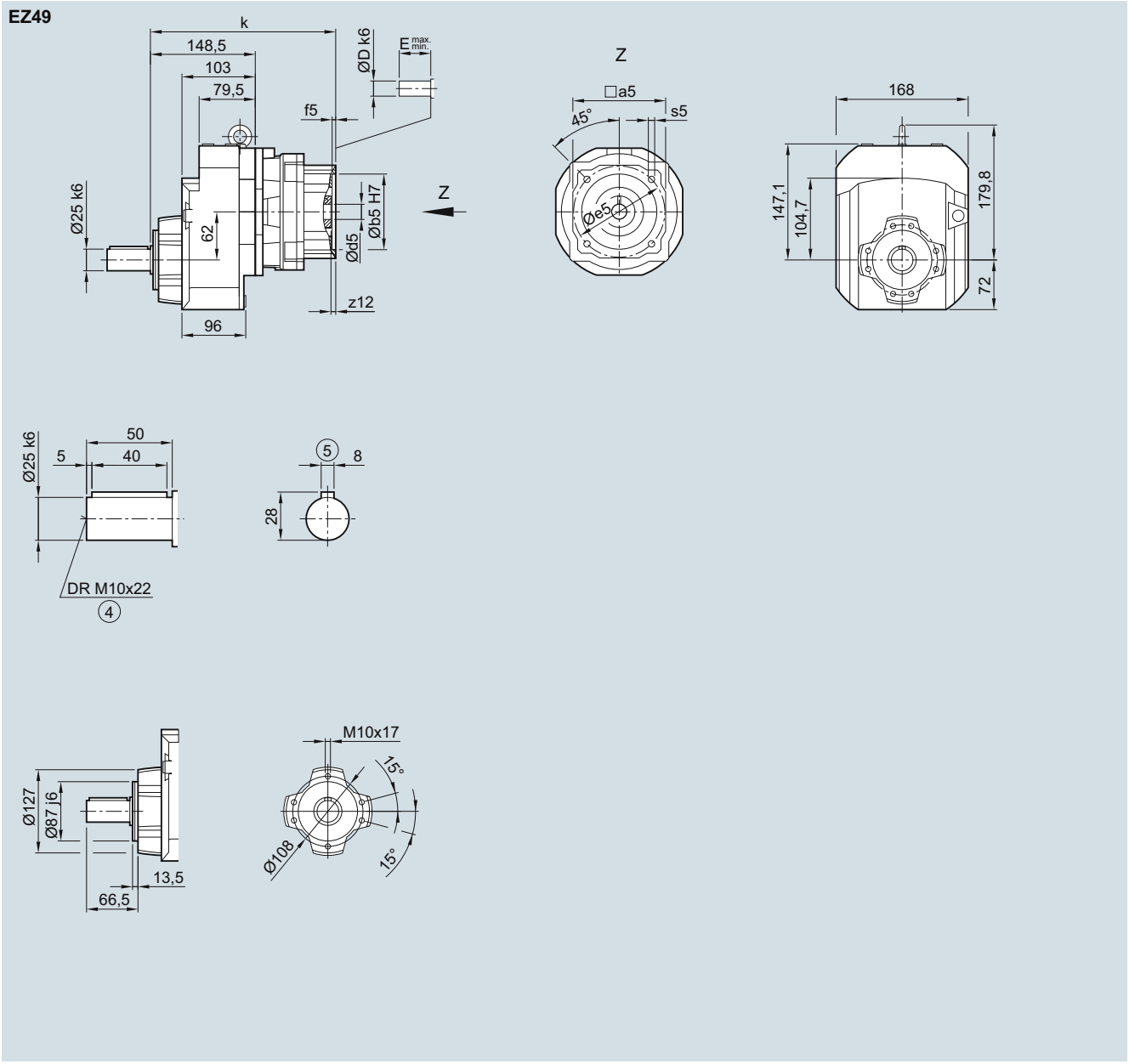
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	233.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	233.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	249.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	249.5
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

EZ49 gearbox in a housing flange design

EZ030KS

EZ49



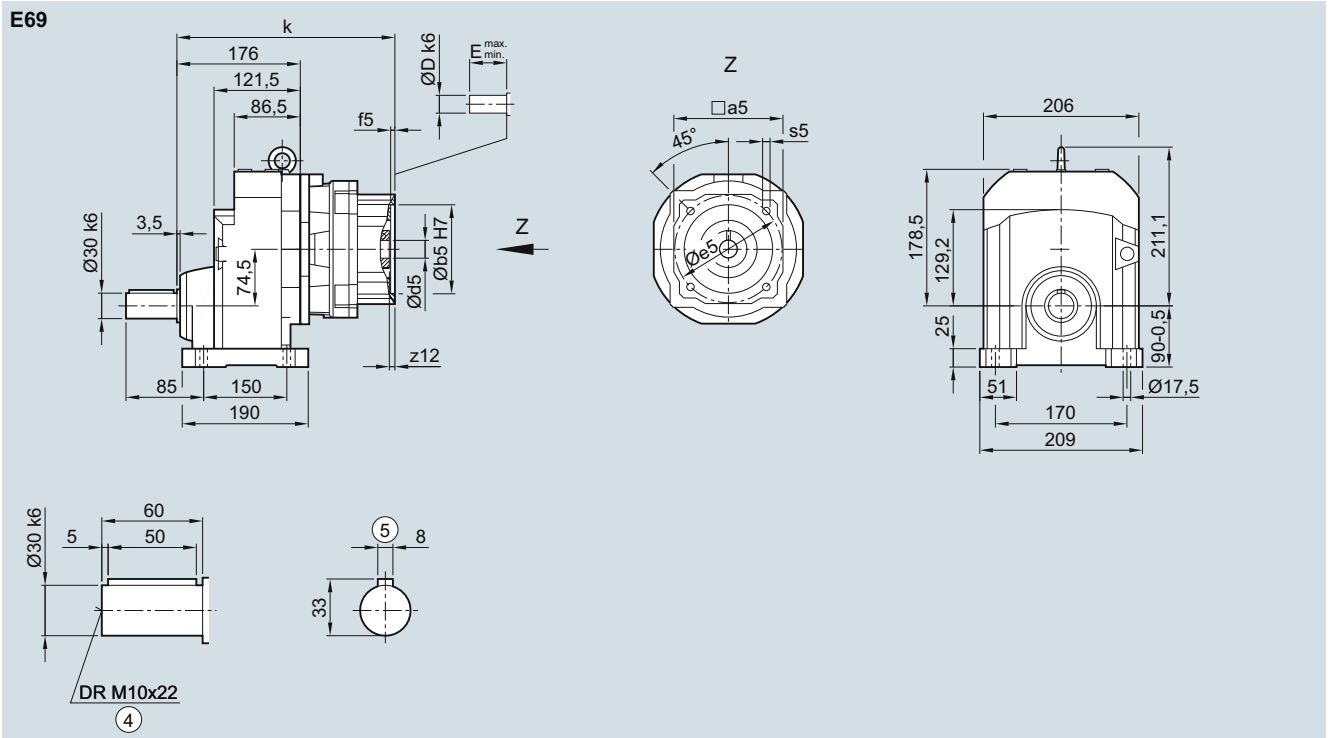
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	233.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	233.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	249.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	249.5
KS5.3	117	95	4.5	115	M6x11	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

④ DIN 332

⑤ Feather key/keyway DIN 6885

E69 gearbox in a foot-mounted design

E030KS



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	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
KS5.3	117	95	4.5	115	M6x11	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

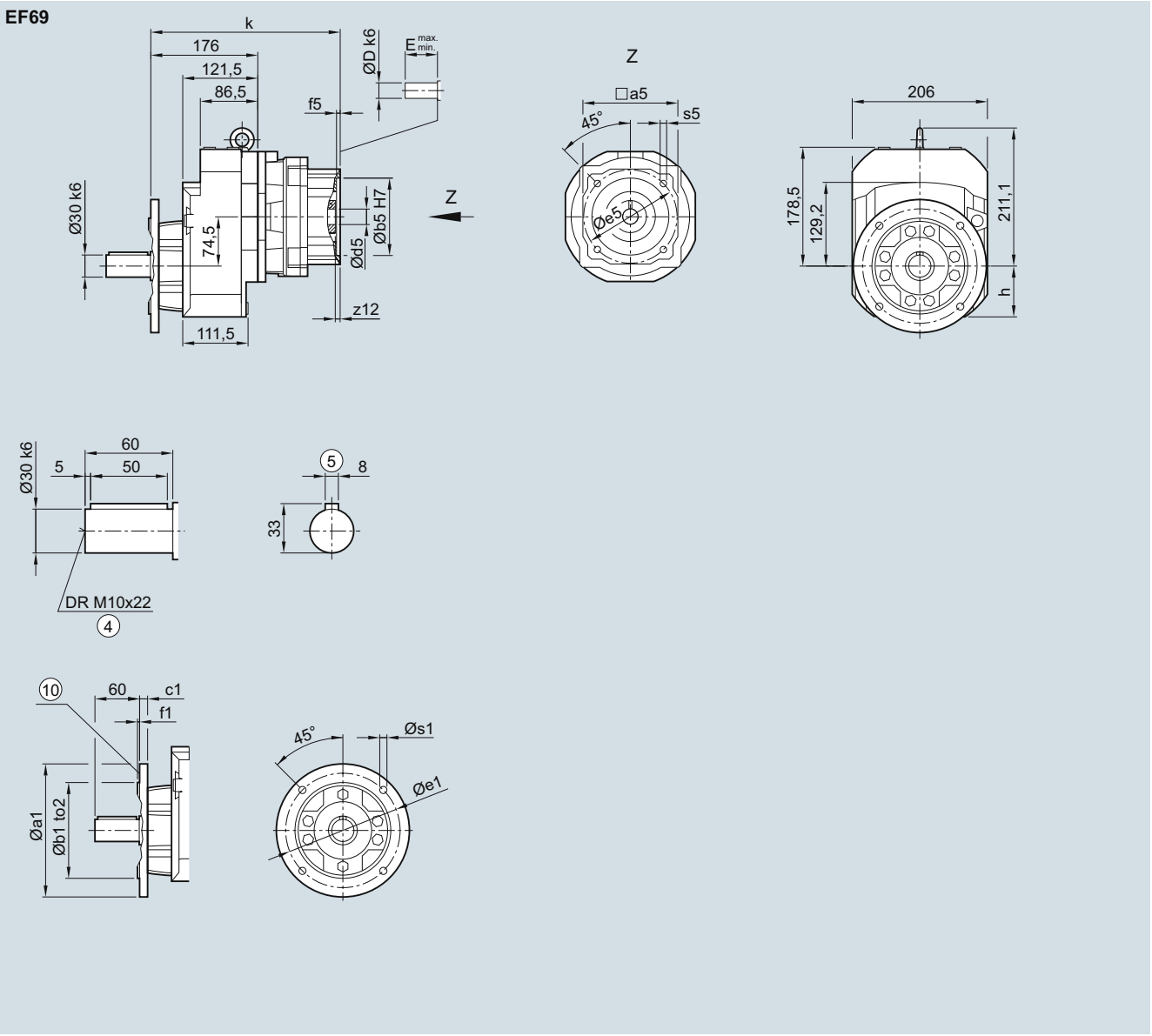
④ DIN 332 ⑤ Feather key/keyway DIN 6885

3

EF69 gearbox in a flange-mounted design

EF030KS

EF69



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

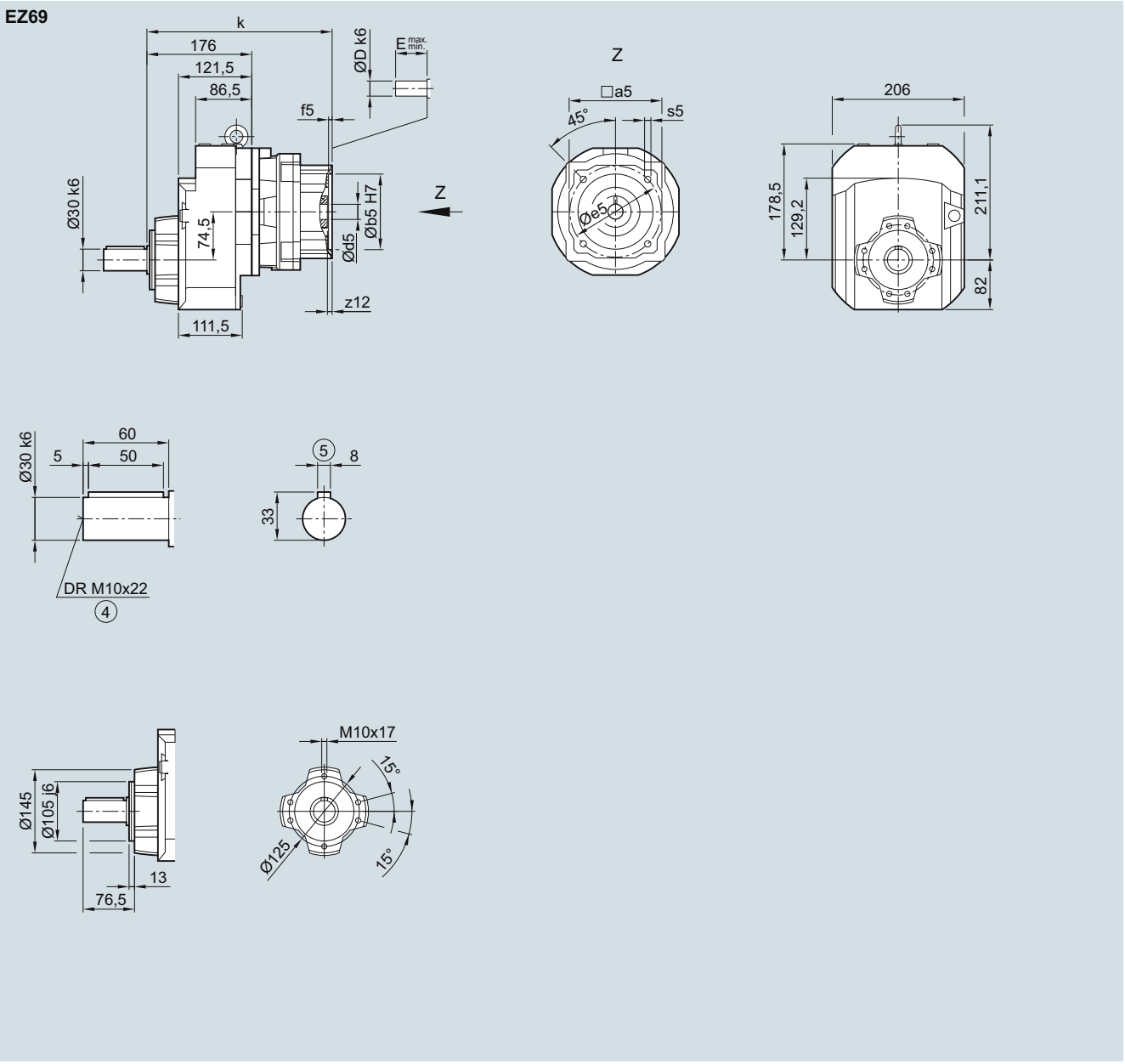
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	246.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	246.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	259
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	259
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	271
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	271
KS5.3	117	95	4.5	115	M6x11	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 ⑩ For inner contour, see page 3/219

EZ69 gearbox in a housing flange design

EZ030KS

EZ69



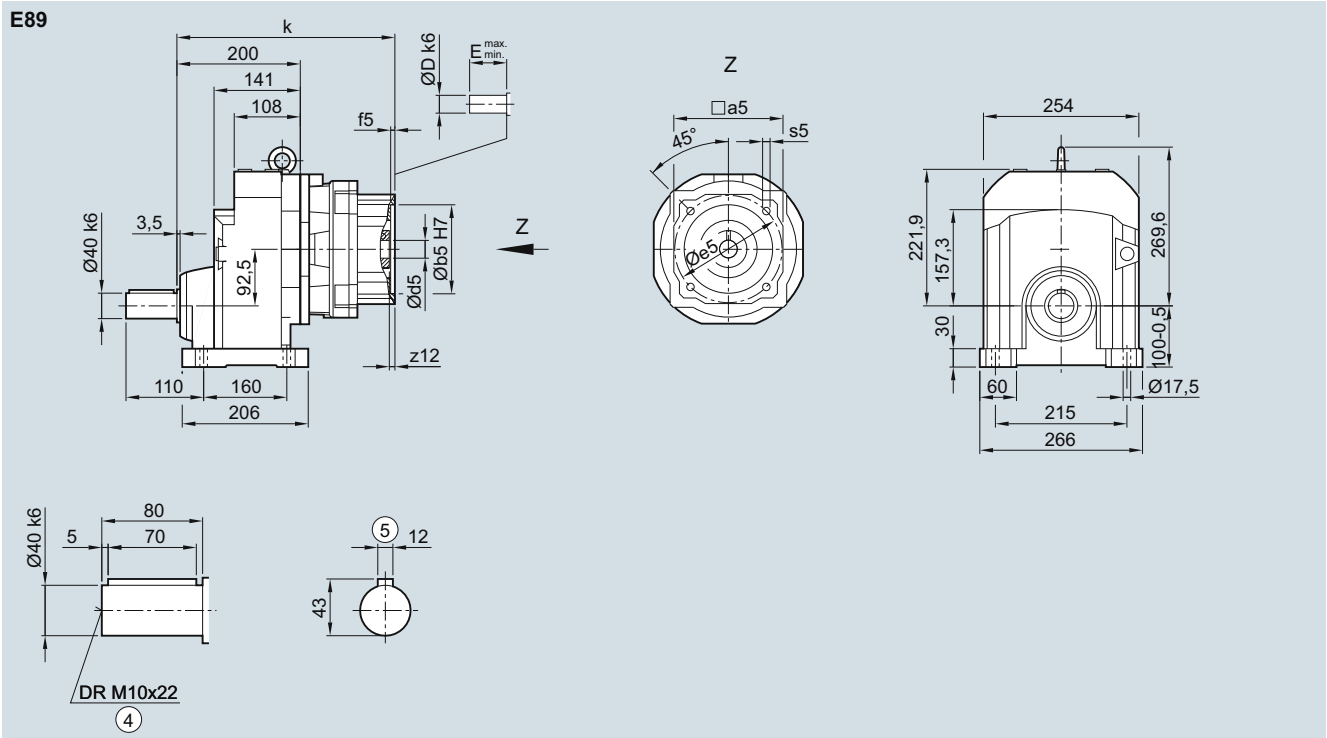
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	246.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	246.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	259
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	259
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	271
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	271
KS5.3	117	95	4.5	115	M6x11	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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

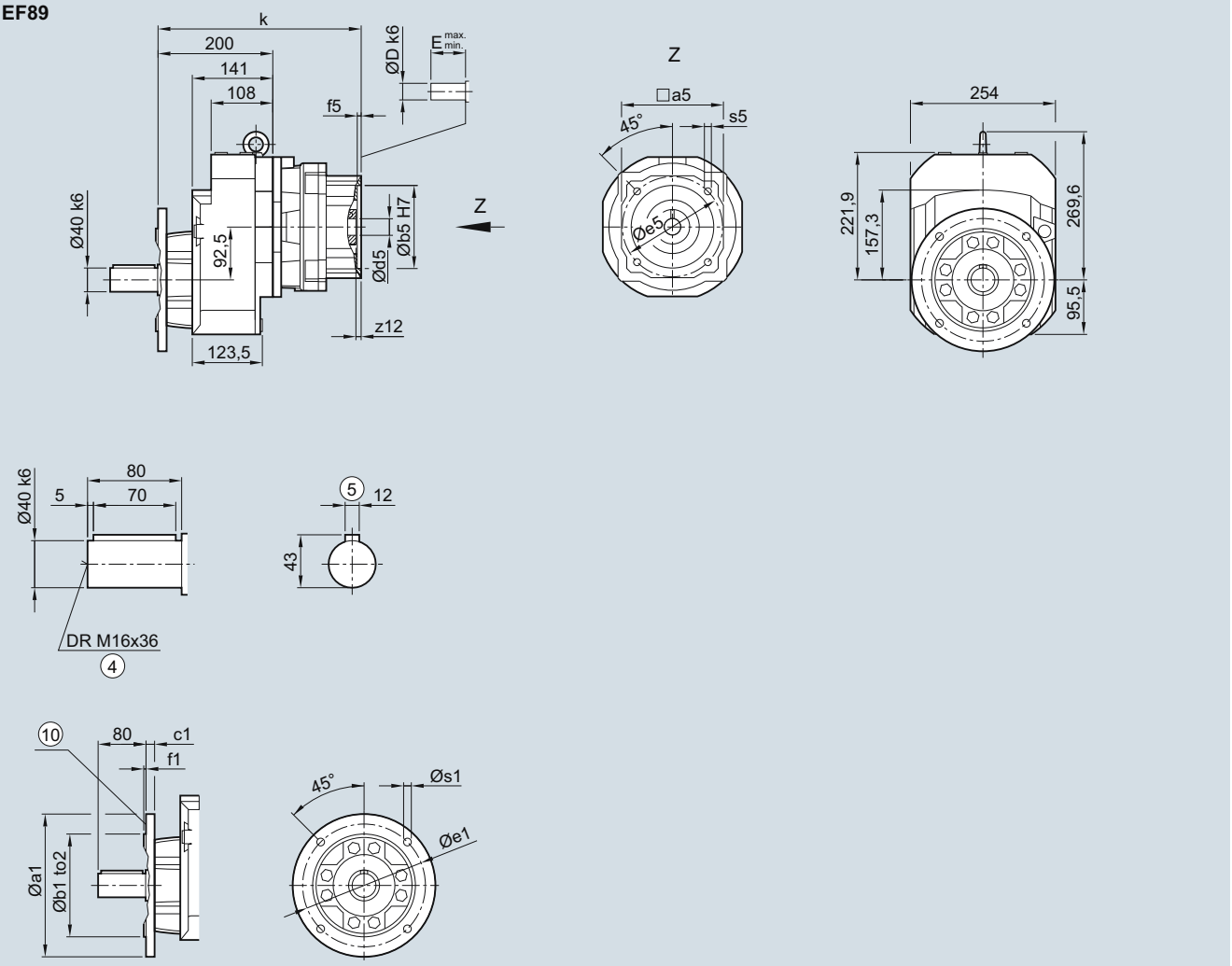
④ DIN 332

⑤ Feather key/keyway DIN 6885

EF89 gearbox in a flange-mounted design

EF030KS

EF89



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

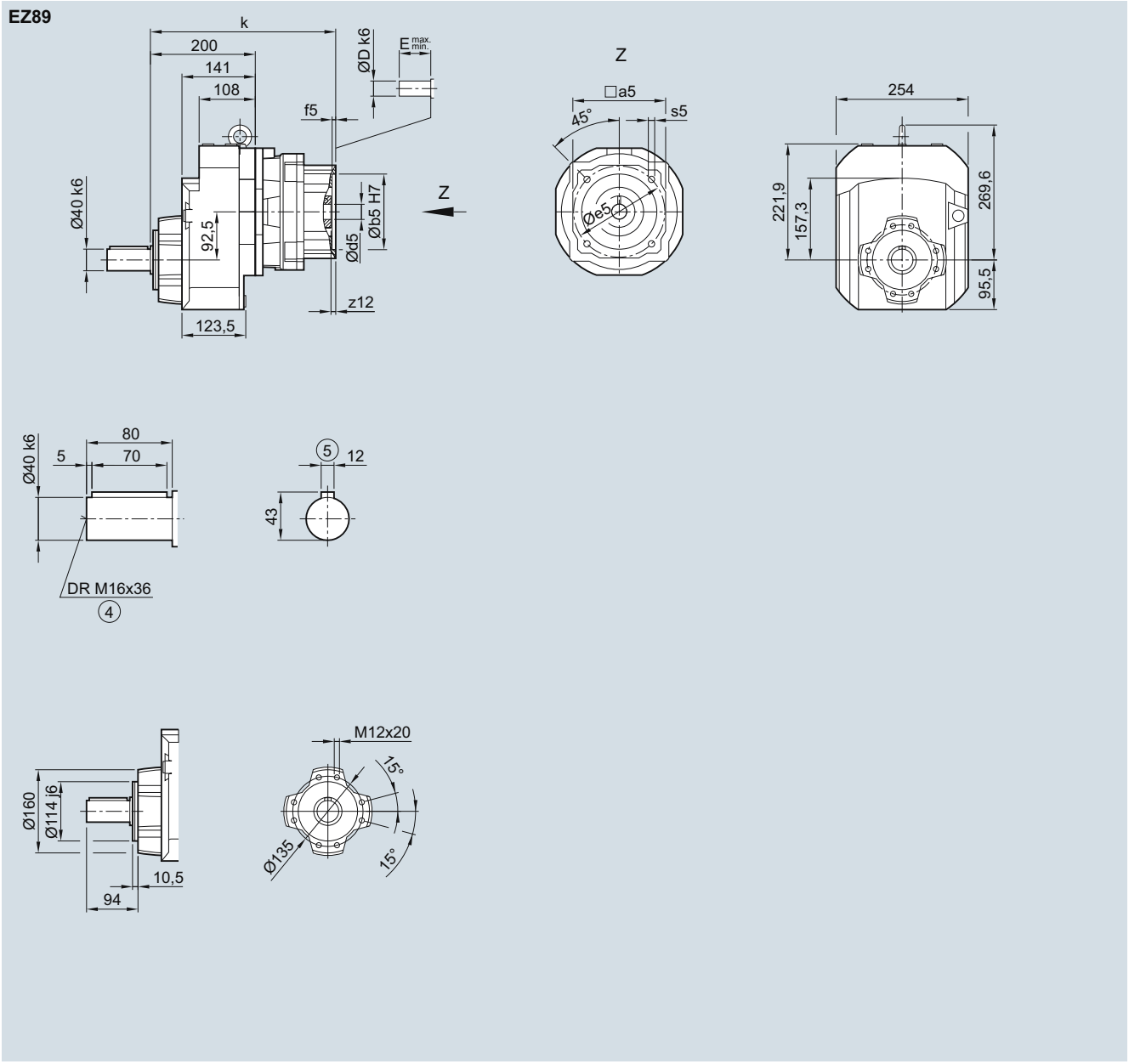
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	282
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	303
KS6.2	130	110	7	145	M8x15	8	22	40	58	303
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 3/219

EZ89 gearbox in a housing flange design

EZ030KS

EZ89

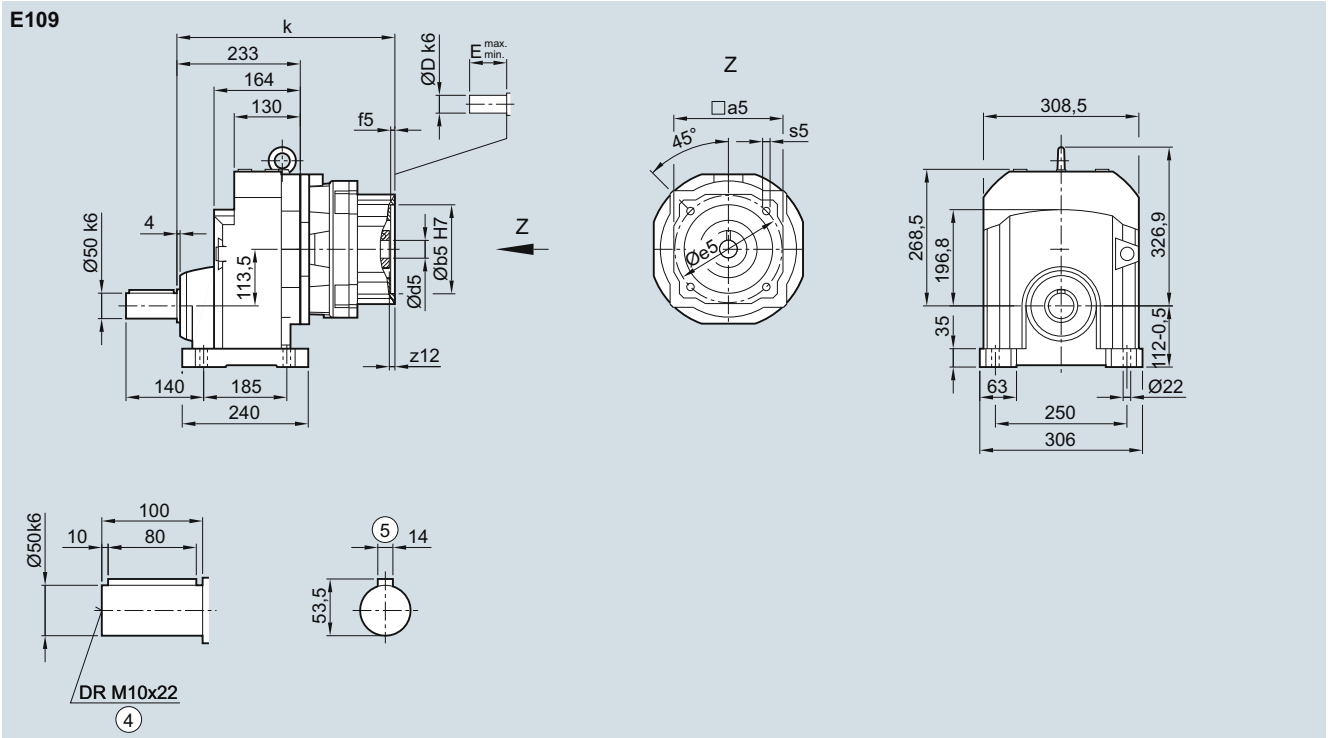


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	282
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	282
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	282
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	303
KS6.2	130	110	7	145	M8x15	8	22	40	58	303
KS8.1	155	130	4.5	165	M10x14	2	32	40	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

E109 gearbox in a foot-mounted design

E030KS



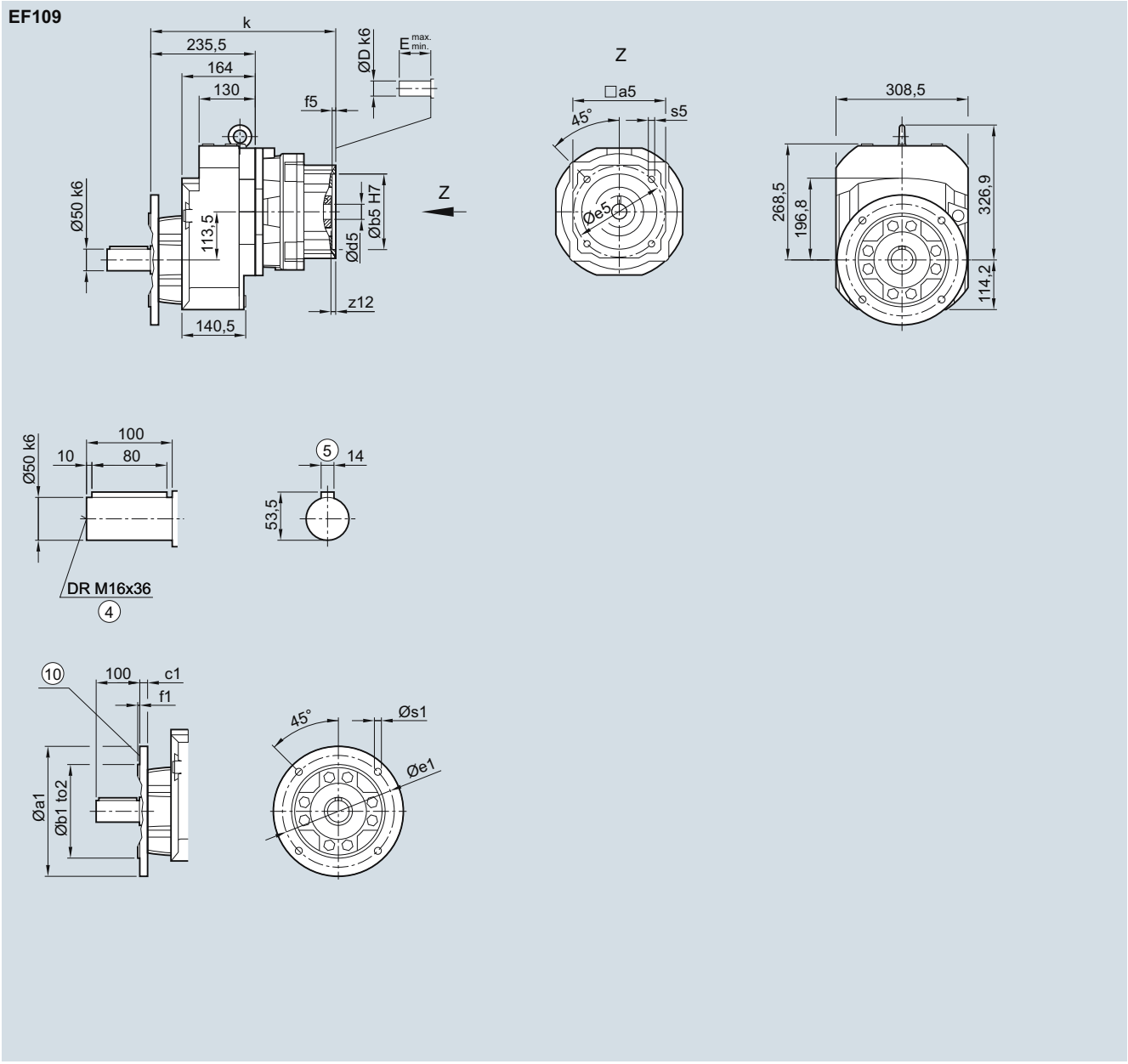
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	308
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	327
KS6.2	130	110	7	145	M8x15	8	22	40	58	327
KS8.1	155	130	4.5	165	M10x14	2	32	40	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

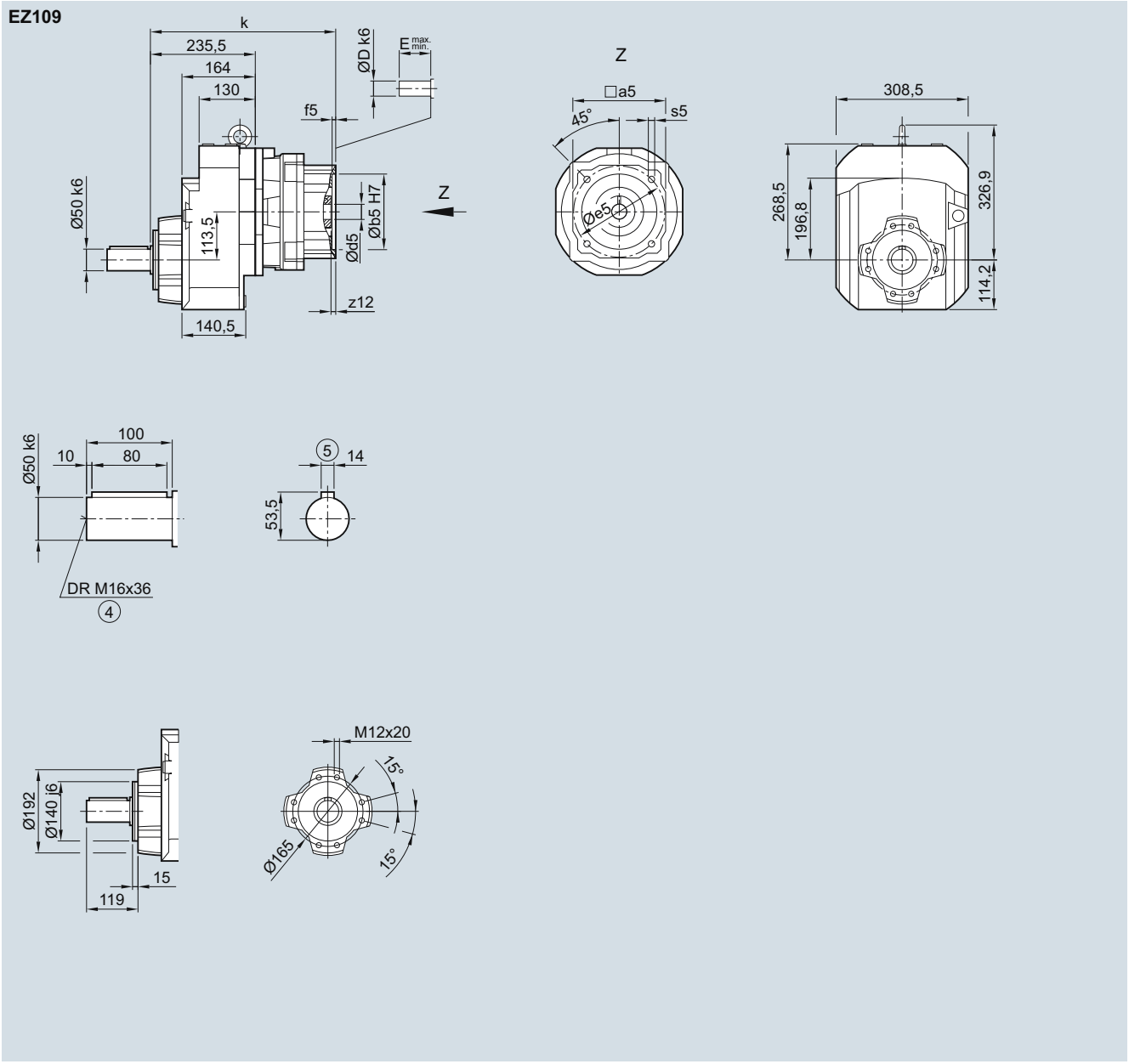
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	308
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	327
KS6.2	130	110	7	145	M8x15	8	22	40	58	327
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 3/219

EZ109 gearbox in a housing flange design

EZ030KS

EZ109



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

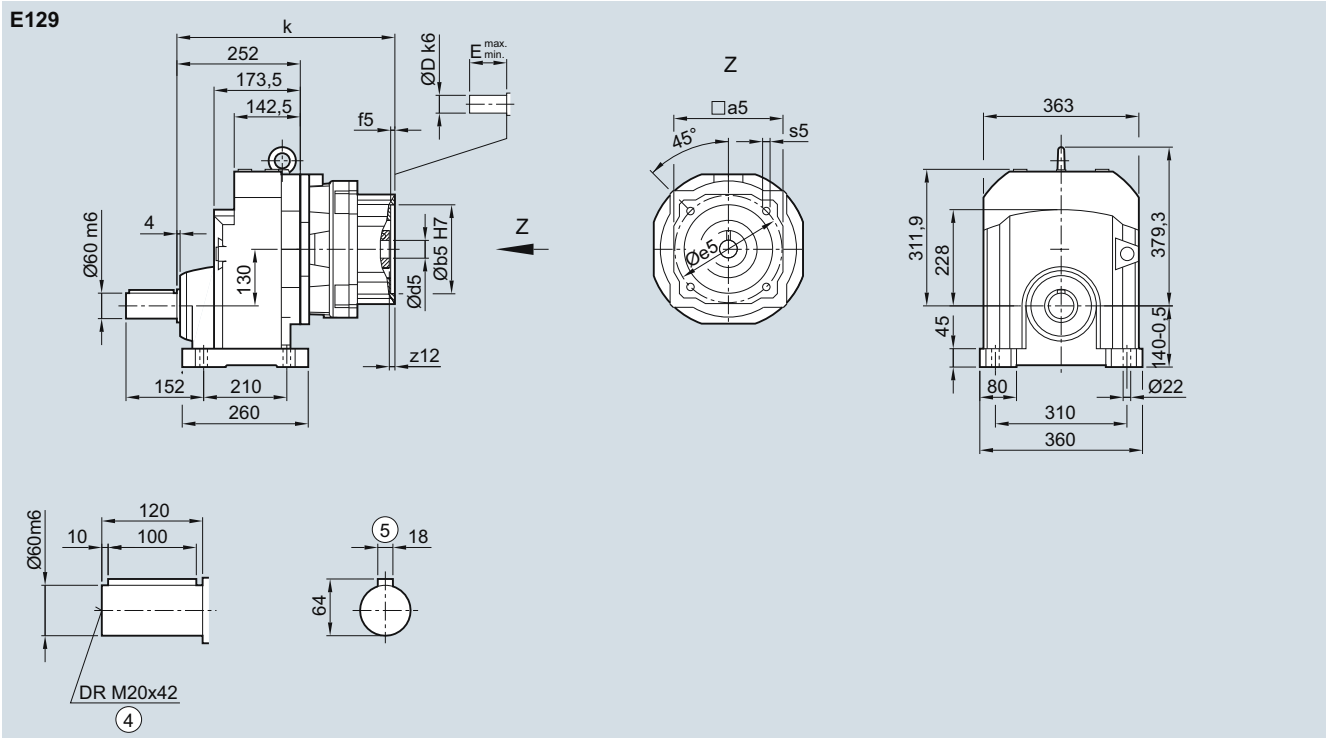
④ DIN 332

⑤ Feather key/keyway DIN 6885

3

E129 gearbox in a foot-mounted design

E030KS



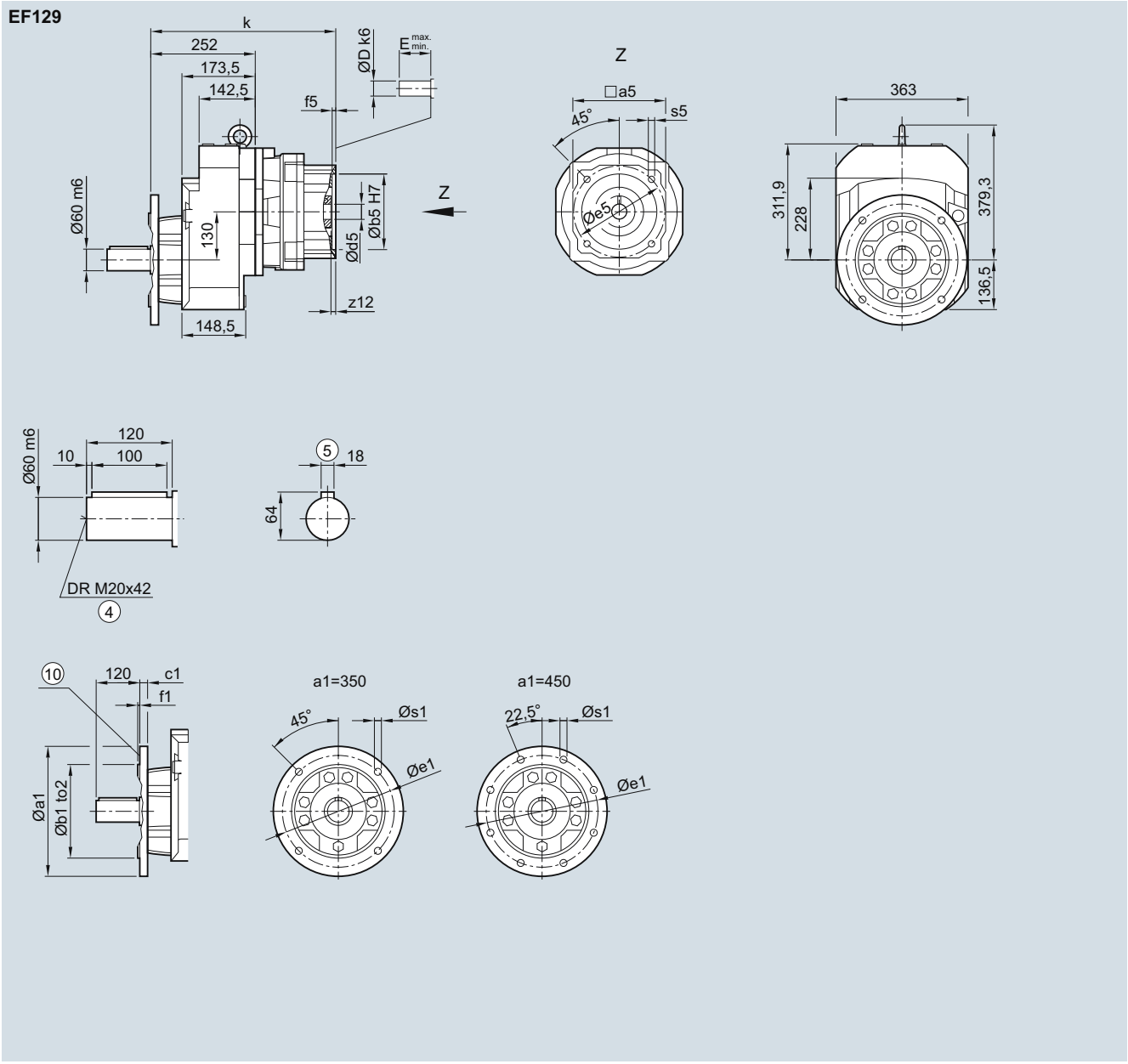
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	320
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	320
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	320
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	337
KS6.2	130	110	7	145	M8x15	8	22	40	58	337
KS8.1	155	130	4.5	165	M10x14	2	32	40	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

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

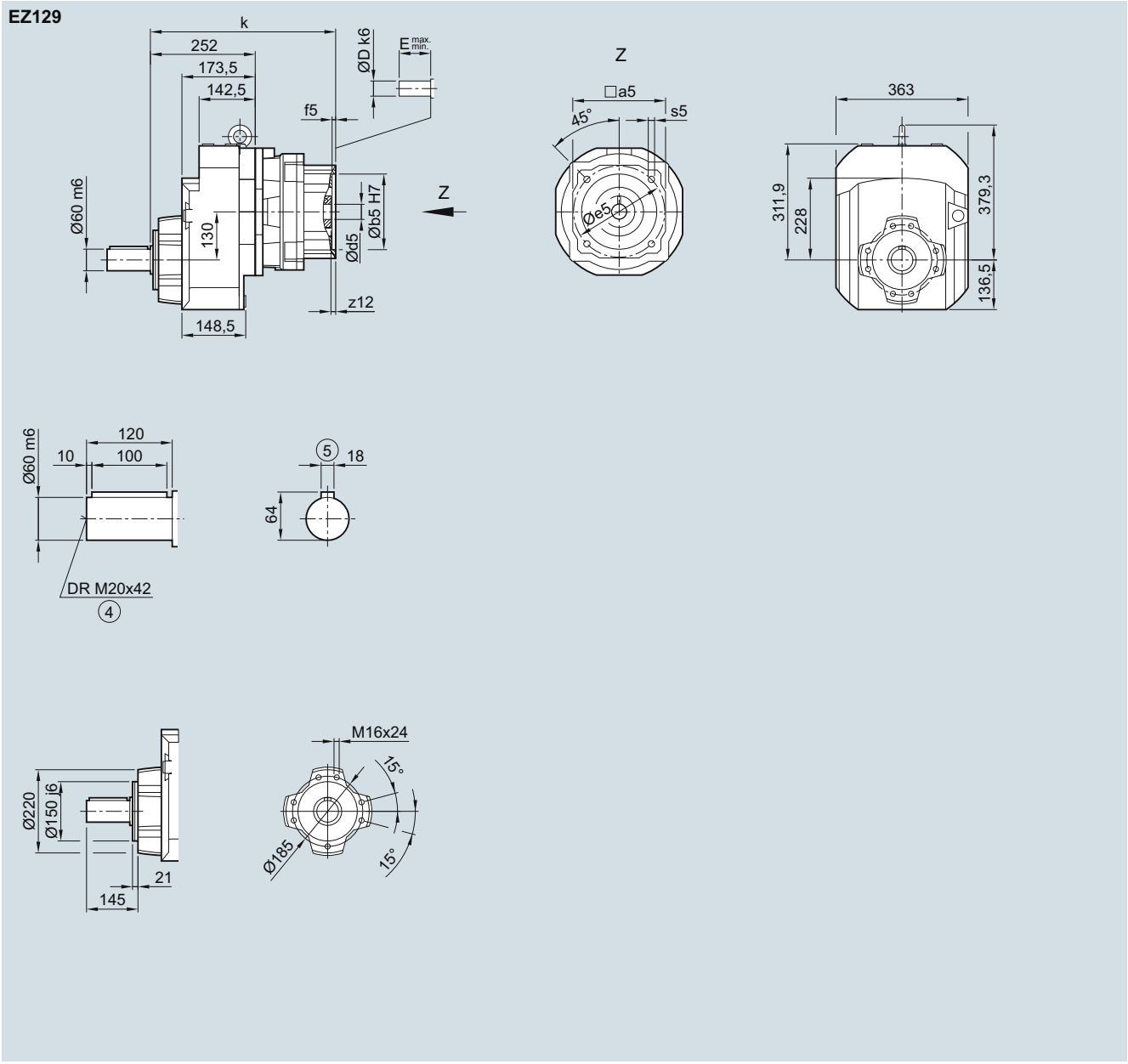
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	320
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	320
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	320
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	337
KS6.2	130	110	7	145	M8x15	8	22	40	58	337
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 3/219

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EZ129 gearbox in a housing flange design

EZ030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

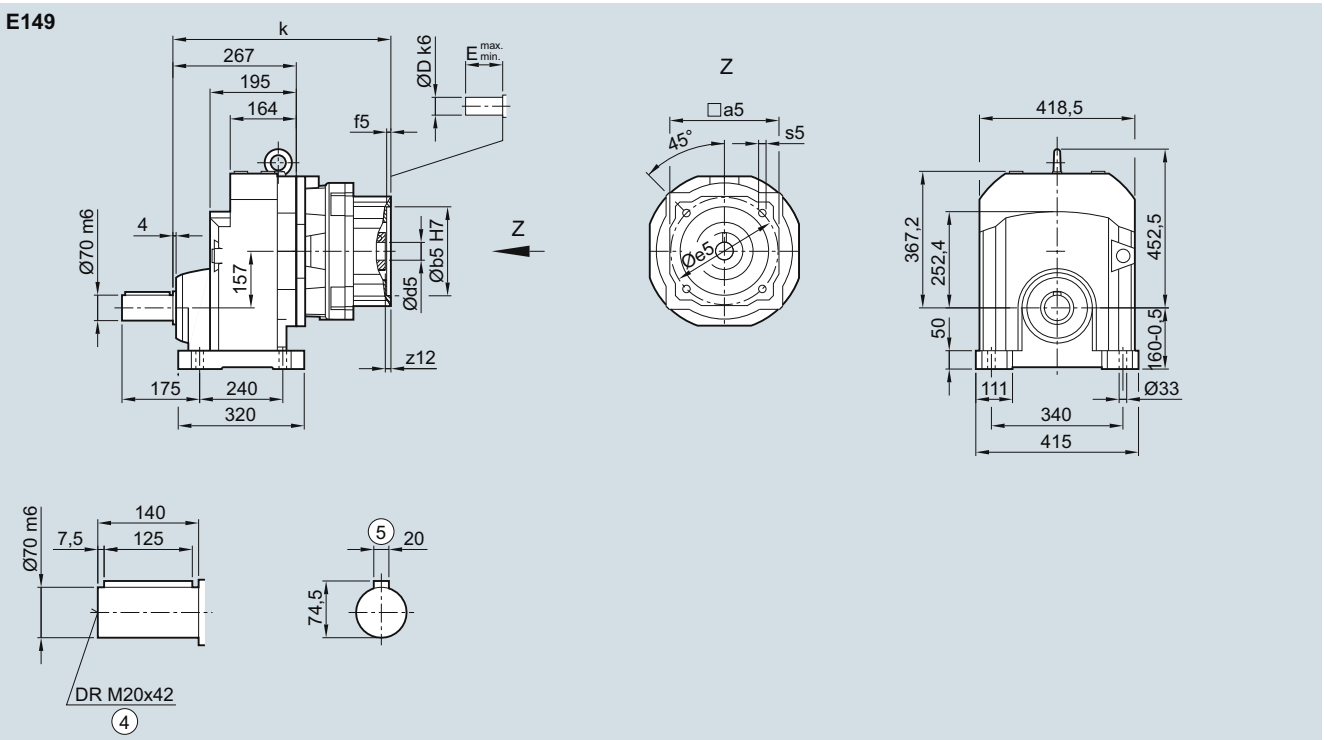
④ DIN 332

⑤ Feather key/keyway DIN 6885

E149 gearbox in a foot-mounted design

E030KS

E149

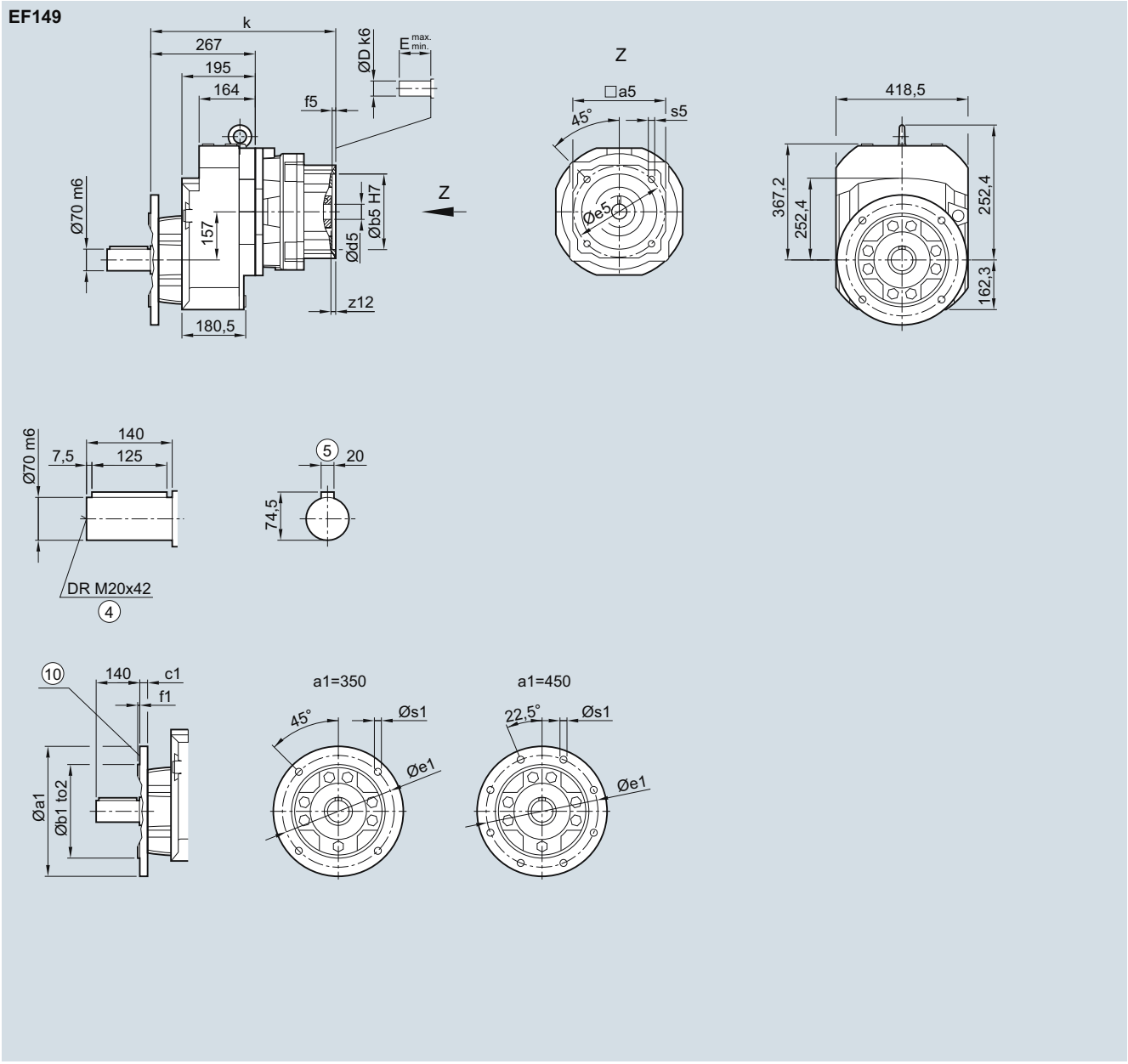


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	350.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	350.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	363
KS10.1	196	180	5	215	M12x22	5	38	50	80	392
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	392

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

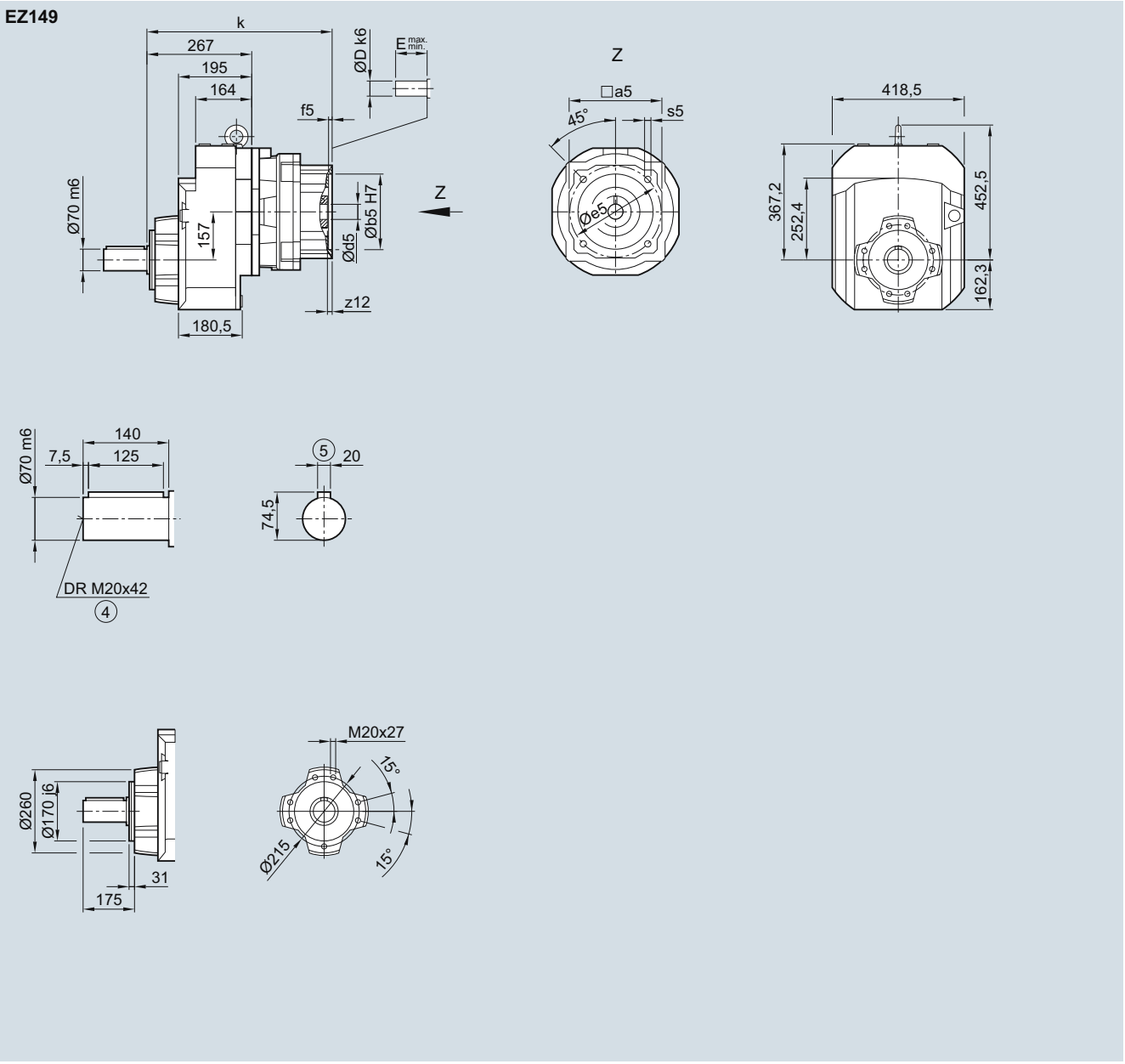
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	350.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	350.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	363
KS10.1	196	180	5	215	M12x22	5	38	50	80	392
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	392

④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 3/219

EZ149 gearbox in a housing flange design

EZ030KS

EZ149

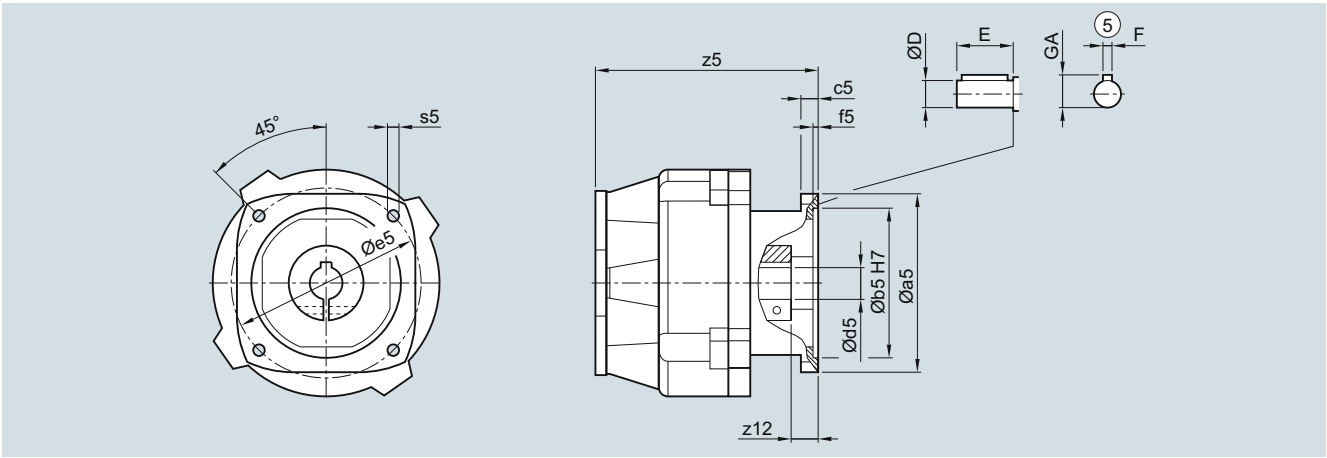


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	350.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	350.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	363
KS10.1	196	180	5	215	M12x22	5	38	50	80	392
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	392

④ DIN 332 ⑤ Feather key/keyway DIN 6885

D./Z.89 to D./Z.189 and E.89 to E.149 gearboxes

DZ030K8, DZB030K8, DZF030K8, DZZ030K8



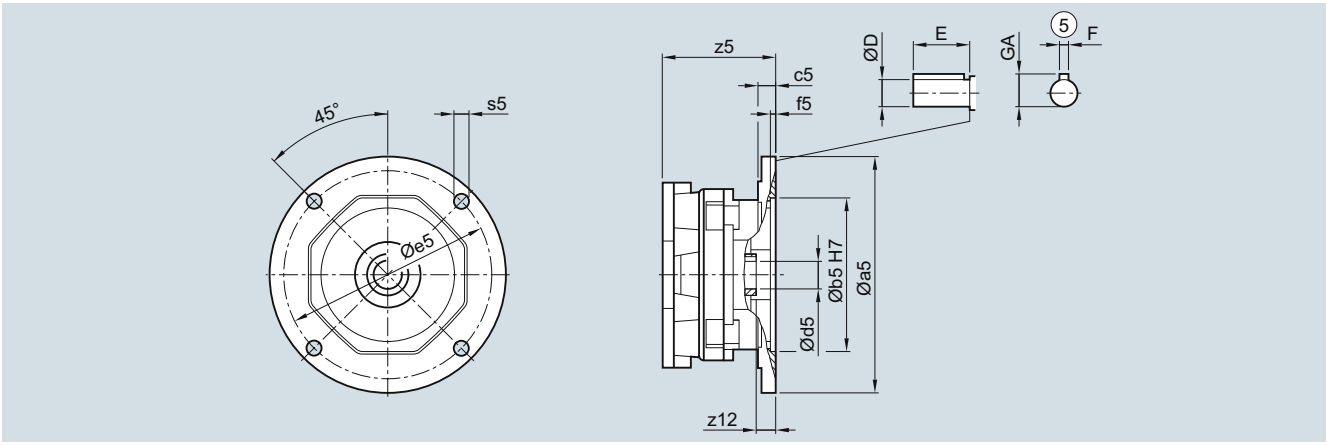
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.89												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	317.5
D./Z.109												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	308.5
816	314	300	-	6.0	350	M16x29	60	55	110	16	59.0	365.0
D./Z.129												
813	260.0	250	25.0	6.0	300	M16	60	48	110	14	51.5	297.5
816	314	300	-	6.0	350	M16x29	60	55	110	16	59.0	354.0
D./Z.149												
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
D./Z.169												
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
D./Z.189												
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
E.89												
813	260	250	25	6.0	300	M16	60.0	48	110	14	51.5	317.5
E.109												
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
E.129												
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
E.149												
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

⑤ Feather key/keyway DIN 6885

Dimensions

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

DZ030K5, DZB030K5, DZF030K5, DZZ030K5

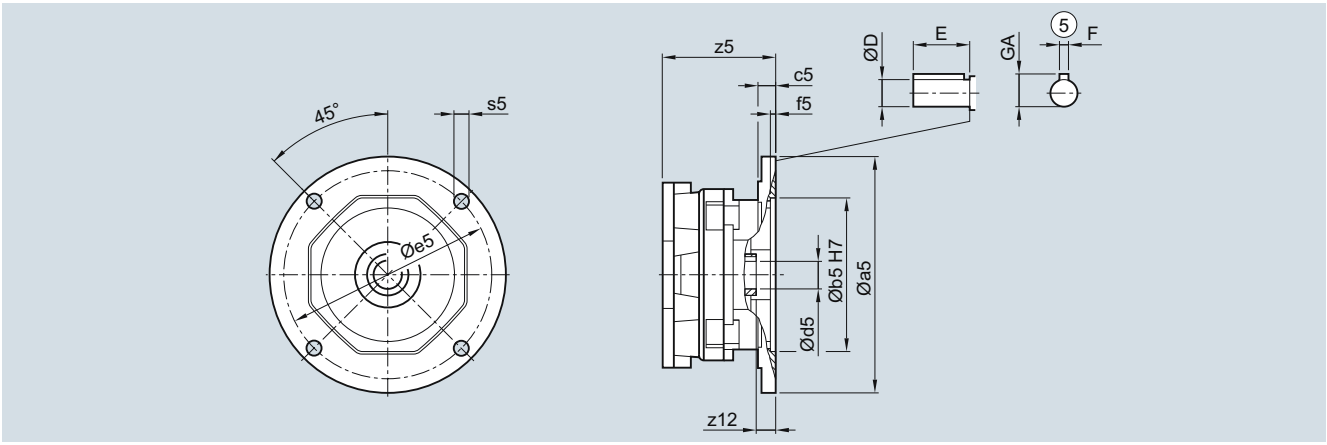


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.29												
56	168	114.3	15.0	5.0	149.2	11.0	16.0	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	200.5
D./Z.39												
56	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
D./Z.49												
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
D./Z.59												
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
D./Z.69												
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
D./Z.79												
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
D./Z.89												
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
D./Z.109												
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

⑤ Feather key/keyway DIN 6885

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

DZ030K5, DZB030K5, DZF030K5, DZZ030K5

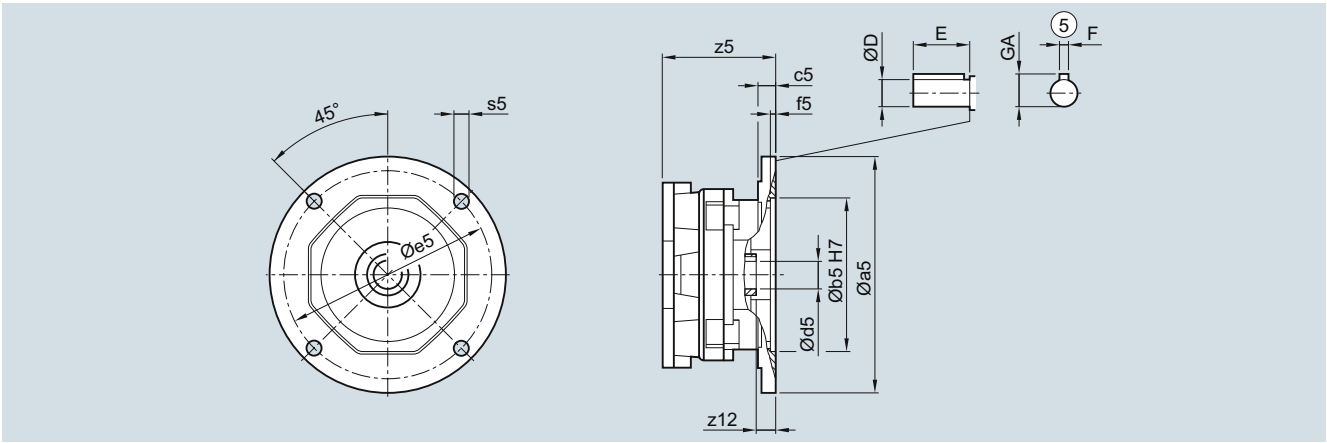


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.129												
140	168	114.3	15.0	5.0	149.2	11.0	16.0	22.225	57.150	4.763	24.346	76.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	150.0
210	226	215.9	22.0	5.5	184.1	13.6	12.0	34.925	85.850	7.938	38.443	164.0
250	226	215.9	22.0	5.5	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
D./Z.149												
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
D./Z.169												
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
D./Z.189												
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
E.39												
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
E.49												
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

⑤ Feather key/keyway DIN 6885

E.69 to E.149 gearboxes

DZ030K5, DZB030K5, DZF030K5, DZZ030K5

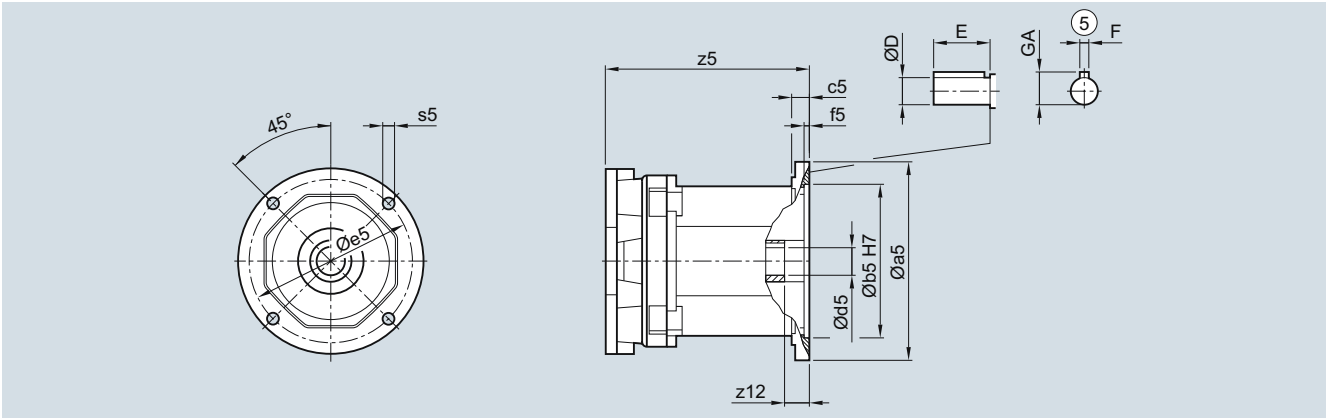


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
E.69												
56	168	114.3	15.0	5.0	149.2	11	16.0	15.875	47.752	4.763	17.895	103.0
140	168	114.3	15.0	5.0	149.2	11	16.0	22.225	57.150	4.763	24.346	103.0
180	226	215.9	22.0	5.5	184.1	13.5	26.0	28.575	69.850	6.350	31.394	185.0
210	226	215.9	22.0	5.5	184.1	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
E.89												
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
E.109												
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
E.129												
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
E.149												
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

⑤ Feather key/keyway DIN 6885

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

DZ030K3, DZB030K3, DZF030K3, DZZ030K3



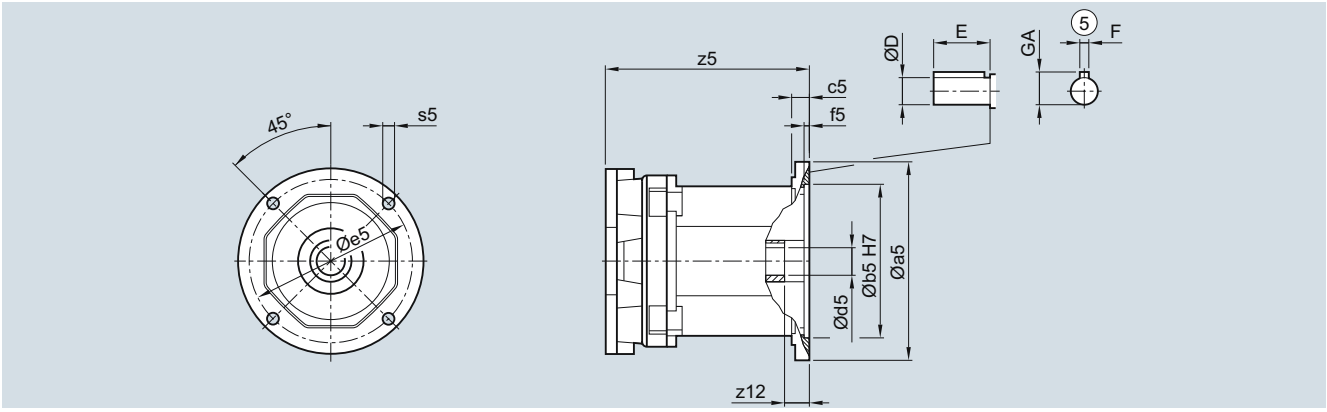
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.29												
56	168	114.3	15.0	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22.0	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	257.0
D./Z.39												
56	168	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
D./Z.49												
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
D./Z.59												
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
D./Z.69												
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
D./Z.79												
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
D./Z.89												
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
D./Z.109												
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

⑤ Feather key/keyway DIN 6885

Dimensions

D./Z.129 to D./Z.189 and E.39 to E.69 gearboxes

DZ030K3, DZB030K3, DZF030K3, DZZ030K3, E030K3, EF030K3, EZ030K3

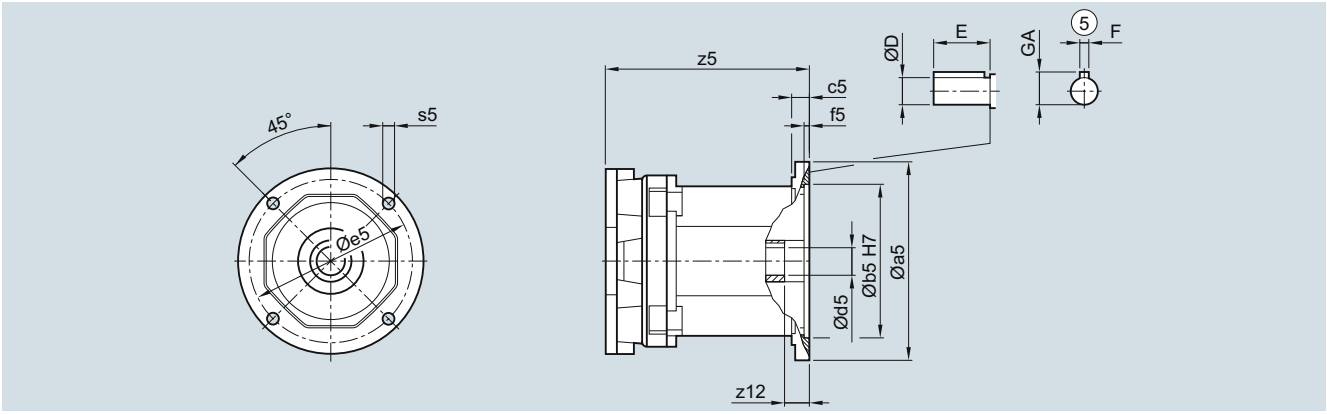


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.129												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	158.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	206.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	275.0
250	226	215.9	22.0	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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.35	12.700	59.563	400.5
360	340	317.5	26.5	5.5	279.4	17.0	76.5	60.325	149.352	15.875	67.21	454.0
D./Z.149												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.35	12.700	59.563	394.0
360	340	317.5	26.5	5.5	279.4	17.0	76.5	60.325	149.352	15.875	67.21	447.5
D./Z.169												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.35	12.700	59.563	379.0
360	340	317.5	26.5	5.5	279.4	17.0	76.5	60.325	149.352	15.875	67.21	429.0
D./Z.189												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.35	12.700	59.563	379.0
360	340	317.5	26.5	5.5	279.4	17.0	76.5	60.325	149.352	15.875	67.21	429.0
E.39												
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
E.49												
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
E.69												
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

⑤ Feather key/keyway DIN 6885

E.89 to E.149 gearboxes

E030K3, EF030K3, EZ030K3



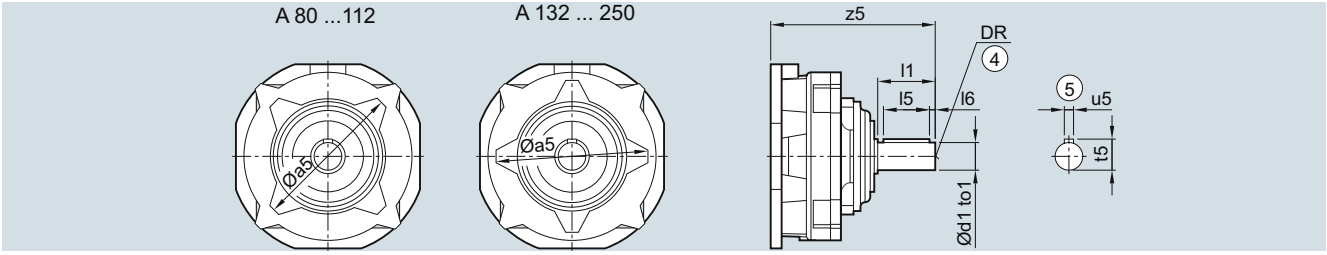
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
E.89												
140	168	114.3	15.0	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	172.5
180	226	215.9	22.0	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	224.5
210	226	215.9	22.0	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	295.0
250	226	215.9	22.0	5.5	184.1	13.5	55.5	41.275	101.600	9.525	45.491	325.0
E.109												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.700	59.563	411.5
E.129												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.700	59.563	400.5
360	340	317.5	26.5	5.5	279.4	17.0	83.5	60.325	149.352	15.875	67.210	454.0
E.149												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.700	59.563	394.0
360	340	317.5	26.5	5.5	279.4	17.0	83.5	60.325	149.352	15.875	67.210	447.5

⑤ Feather key/keyway DIN 6885

Dimensions

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

DZ030A, DZB030A, DZF030A, DZZ030A

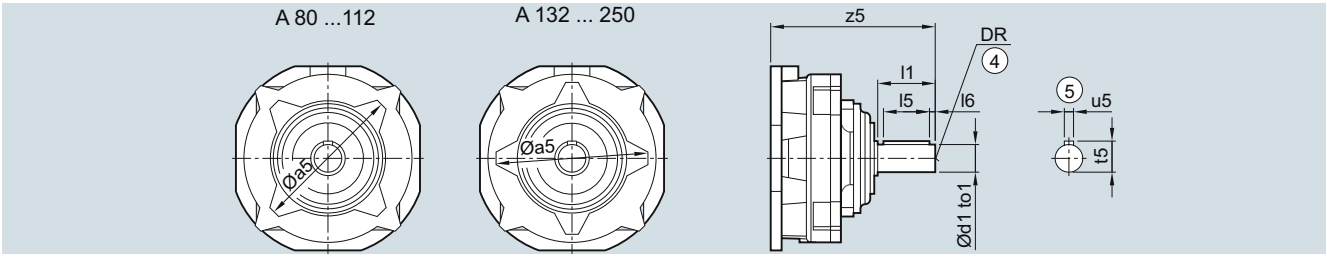


Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
D./Z.29										
80	132	19	k6	40	32	4	6	21.5	DR M6	143.5
90	132	24	k6	50	40	5	8	27	DR M8	153.5
100	170	28	k6	60	50	5	8	31	DR M10	220.5
D./Z.39										
80	132	19	k6	40	32	4	6	21.5	DR M6	143.5
90	132	24	k6	50	40	5	8	27	DR M8	153.5
100	170	28	k6	60	50	5	8	31	DR M10	220.5
D./Z.49										
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
132	215	38	k6	80	70	5	10	41	DR M12	261
D./Z.59										
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
132	215	38	k6	80	70	5	10	41	DR M12	261
D./Z.69										
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
132	215	38	k6	80	70	5	10	41	DR M12	261
D./Z.79										
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
160	215.3	42	k6	110	90	10	12	45	DR M16	307
D./Z.89										
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
180	215.3	48	m6	110	90	10	14	51.5	DR M16	290
D./Z.109										
90	132	24	k6	50	40	5	8	27	DR M8	118
100	170	28	k6	60	50	5	8	31	DR M10	179
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
225	266	55	m6	110	90	10	16	59	DR M20	317.5

④ DIN 332 ⑤ Feather key/keyway DIN 6885

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

DZ030A, DZB030A, DZF030A, DZZ030A



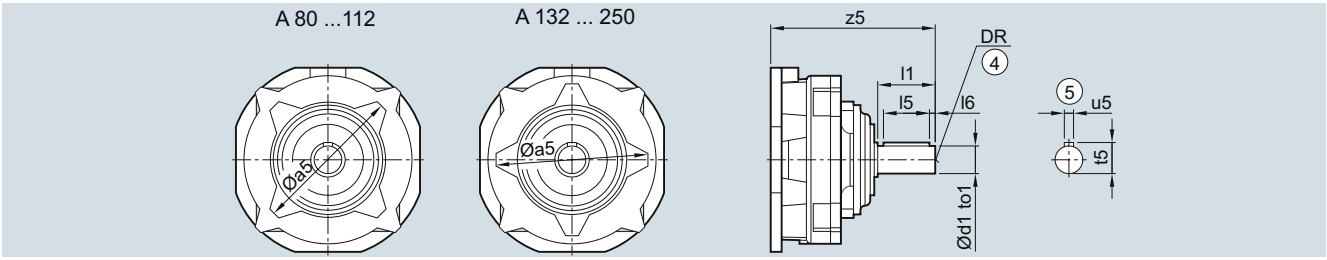
Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
D./Z.129										
90	132	24	k6	50	40	5	8	27	DR M8	111
100	170	28	k6	60	50	5	8	31	DR M10	170
112	170	28	k6	60	50	5	8	31	DR M10	170
132	215	38	k6	80	70	5	10	41	DR M12	218
160	215.3	42	k6	110	90	10	12	45	DR M16	270
180	215.3	48	m6	110	90	10	14	51.5	DR M16	270
200	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
250	266	55	m6	110	90	10	16	59	DR_M20	306.5
D./Z.149										
100	170	28	k6	60	50	5	8	31	DR M10	168.5
112	170	28	k6	60	50	5	8	31	DR M10	168.5
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
D./Z.169										
112	170	28	k6	60	50	5	8	31	DR M10	156
132	215	38	k6	80	70	5	10	41	DR M12	198.5
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
D./Z.189										
112	170	28	k6	60	50	5	8	31	DR M10	156
132	215	38	k6	80	70	5	10	41	DR M12	198.5
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
E.39										
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
100	170	28	k6	60	50	5	8	31	DR M10	220.5
112	170	28	k6	60	50	5	8	31	DR M10	220.5
E.49										
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
132	215	38	k6	80	70	5	10	41	DR M12	261

④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

E.69 to E.149 gearboxes

E030A, EF030A, EZ030A

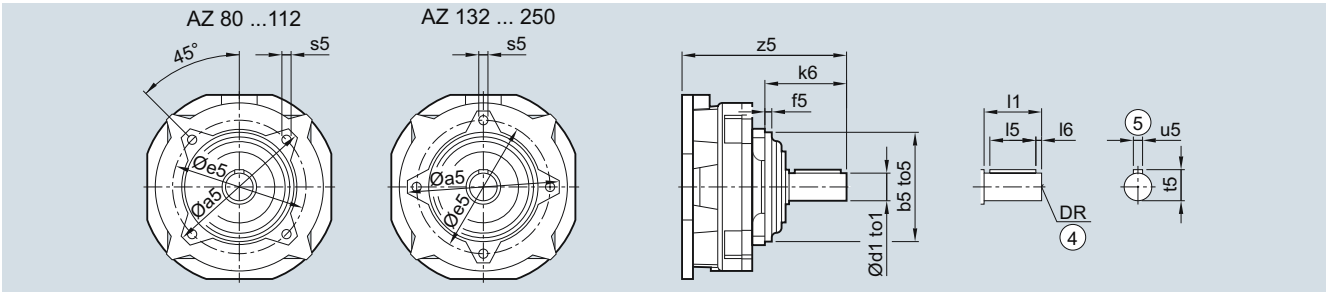


Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
E.69										
80	132	19	k6	40	32	4	6	21.5	DR M6	128
90	132	24	k6	50	40	5	8	27	DR M8	138
100	170	28	k6	60	50	5	8	31	DR M10	205
112	170	28	k6	60	50	5	8	31	DR M10	205
132	215	38	k6	80	70	5	10	41	DR M12	255
160	215.3	42	k6	110	90	10	12	45	DR M16	307
E.89										
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
180	215.3	48	m6	110	90	10	14	51.5	DR M16	290
E.109										
90	132	24	k6	50	40	5	8	27	DR M8	118
100	170	28	k6	60	50	5	8	31	DR M10	179
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
225	266	55	m6	110	90	10	16	59	DR M20	317.5
E.129										
90	132	24	k6	50	40	5	8	27	DR M8	111
100	170	28	k6	60	50	5	8	31	DR M10	170
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
250	266	55	m6	110	90	10	16	59	DR_M20	306.5
E.149										
100	170	28	k6	60	50	5	8	31	DR M10	168.5
112	170	28	k6	60	50	5	8	31	DR M10	168.5
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

D./Z.29 to D./Z.89 gearboxes

DZ030AZ, DZB030AZ, DZF030AZ, DZZ030AZ



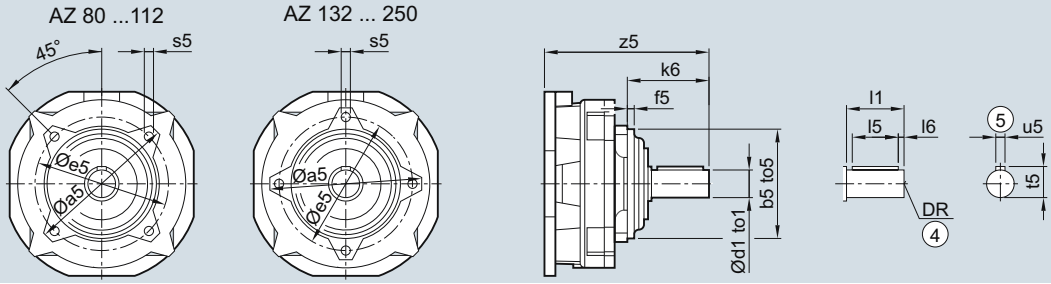
Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
D./Z.29																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	153.5
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	220.5
D./Z.39																
80	132	95	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
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	220.5
D./Z.49																
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
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	261
D./Z.59																
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
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	261
D./Z.69																
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
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	261
D./Z.79																
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
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	307
D./Z.89																
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
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	290

④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

D./Z.109 to D./Z.189 gearboxes

DZ030AZ, DZB030AZ, DZF030AZ, DZZ030AZ

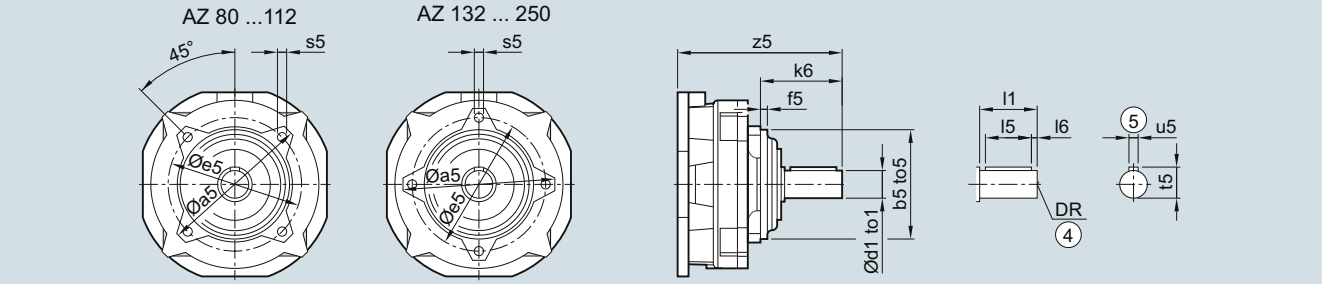


Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
D./Z.109																
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	118
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	179
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	179
132	215	160	j6	184	6	M16x22	38	k6	80	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
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	317.5
D./Z.129																
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	111
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	170
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
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR_M20	134	306.5
D./Z.149																
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	168.5
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	168.5
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
D./Z.169																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	156
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	198.5
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
D./Z.189																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	156
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	198.5
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

④ DIN 332 ⑤ Feather key/keyway DIN 6885

E.39 to E.129 gearboxes

E030AZ, EF030AZ, EZ030AZ



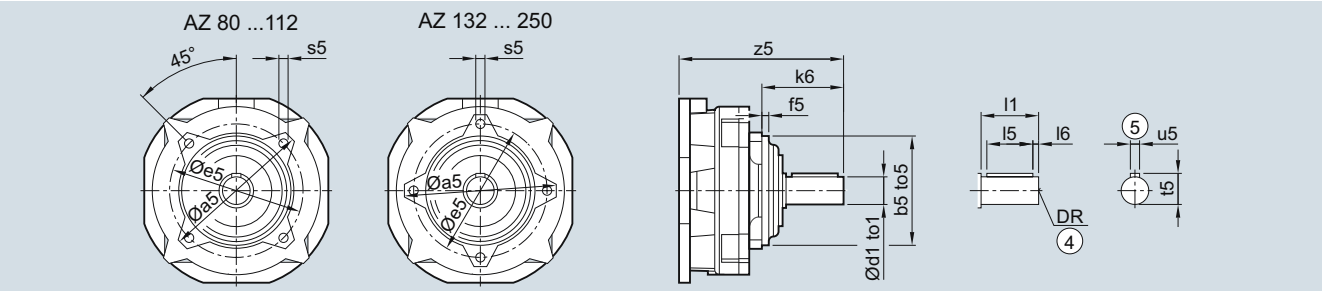
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E.39																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	DR M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	153.5
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	220.5
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	220.5
E.49																
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
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	DR M12	98.5	261
E.69																
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
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	DR M16	150.5	307
E.89																
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
180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	DR M16	150.5	290
E.109																
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	118
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	179
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
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	317.5
E.129																
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	DR M8	71	111
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	170
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
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	DR M20	134	306.5

④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

E.149 gearbox

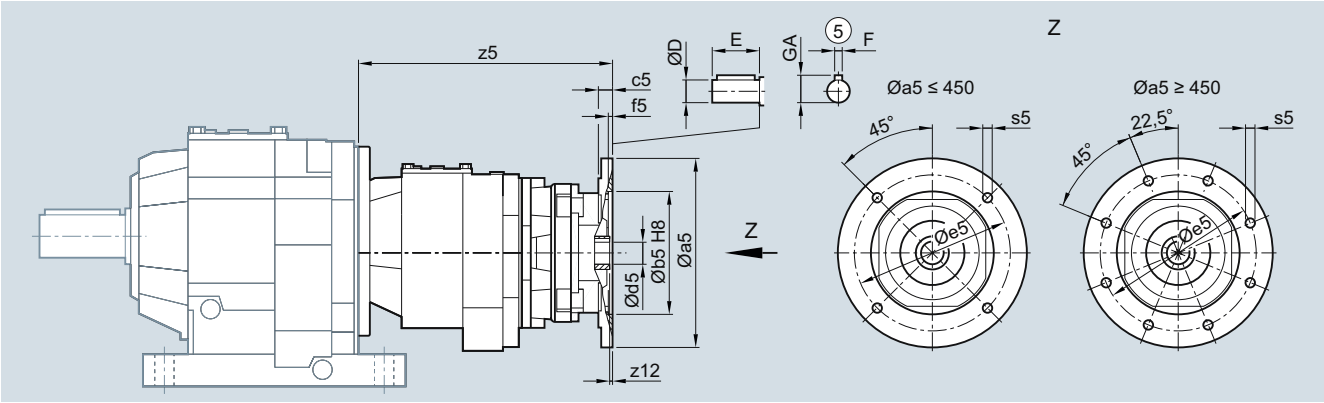
E030AZ, EF030AZ, EZ030AZ



Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
E.149																
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	168.5
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	DR M10	70.5	168.5
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 ⑤ Feather key/keyway DIN 6885

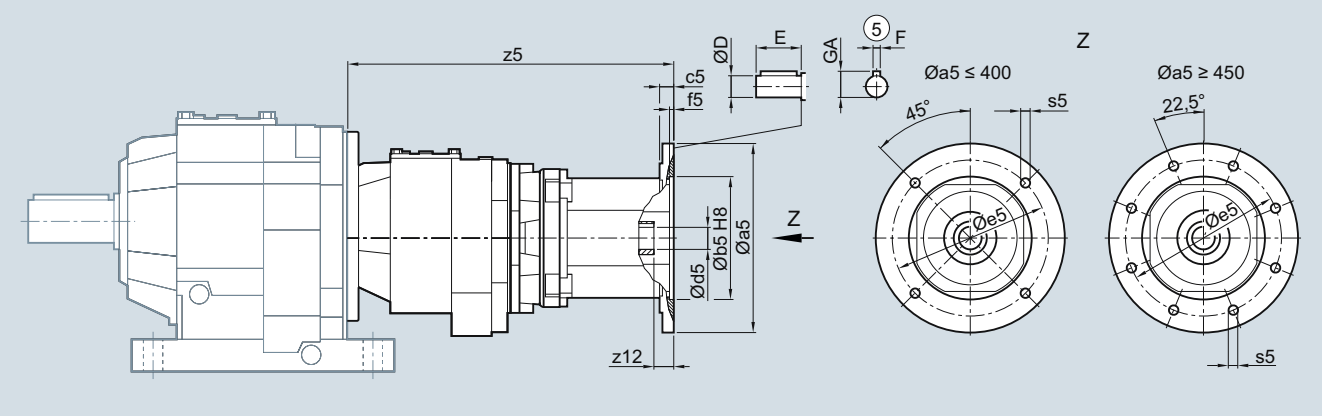
Helical tandem gearbox with adapter K4



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.79-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
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	339.5
D./Z.89-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
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	322.5
D.109-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
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	313.5
D.129-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
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	360
D.149-D/Z49	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-D/Z69	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-D/Z69	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

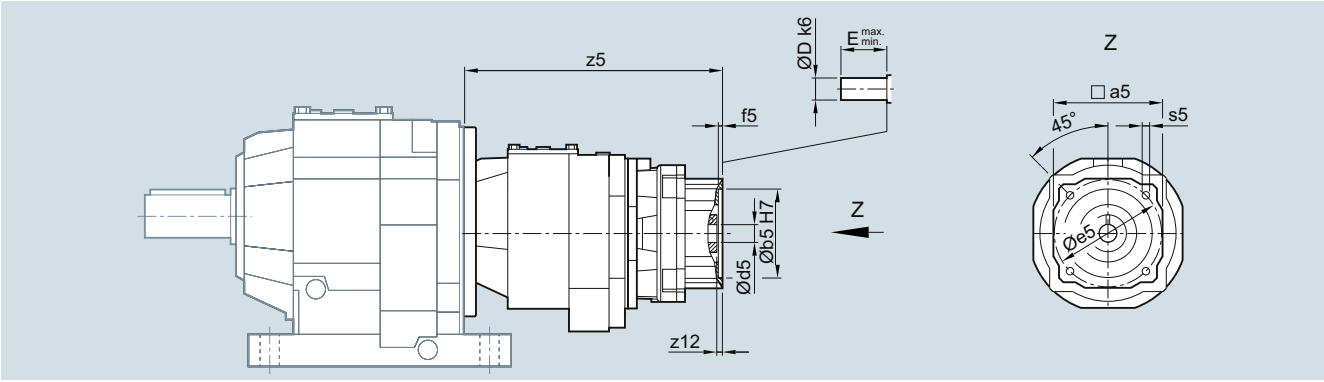
Helical tandem gearbox with adapter K2



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.79-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
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	424.5
D./Z.89-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
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	407.5
D.109-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
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	398.5
D.129-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
D.149-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
D.169-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
D.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

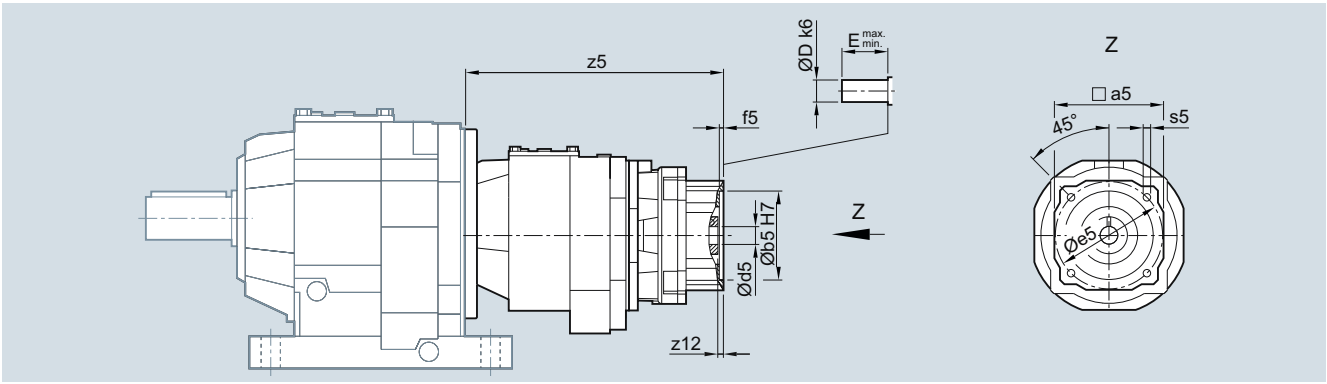
Helical tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	z5
D./Z.29-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
D./Z.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
D./Z.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
D./Z.59-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
D./Z.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
D./Z.79-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
	KS5.3	117	95	4.5	115	M6x11	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
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	327.5
D./Z.89-D/Z39	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
	KS5.3	117	95	4.5	115	M6x11	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

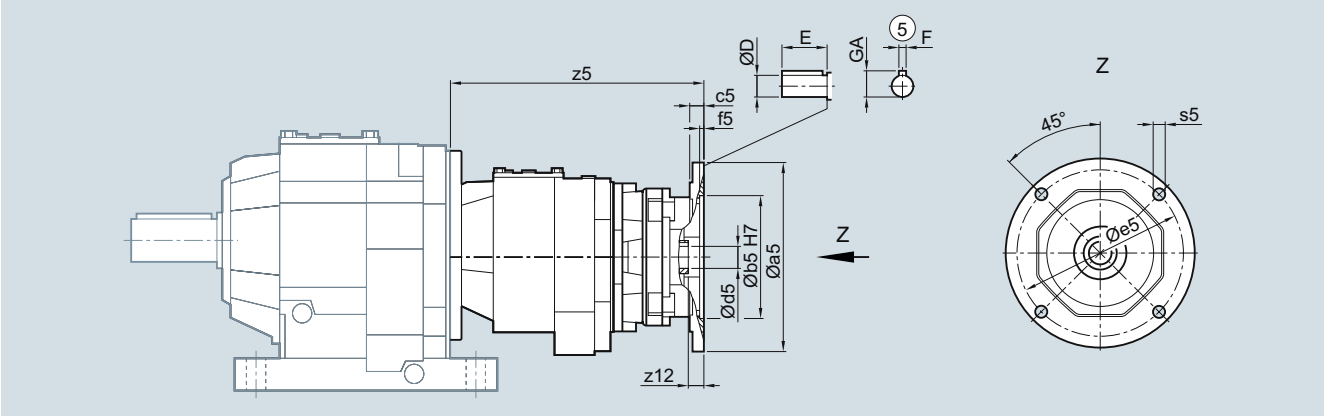
3

Helical tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	z5
D.109-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
	KS5.3	117	95	4.5	115	M6x11	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
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	301.5
D.129-D/Z49	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
	KS5.3	117	95	4.5	115	M6x11	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
D.149-D/Z49	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
	KS5.3	117	95	4.5	115	M6x11	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
D.169-D/Z69	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
	KS5.3	117	95	4.5	115	M6x11	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
D.189-D/Z69	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
	KS5.3	117	95	4.5	115	M6x11	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

Helical tandem gearbox with adapter K5

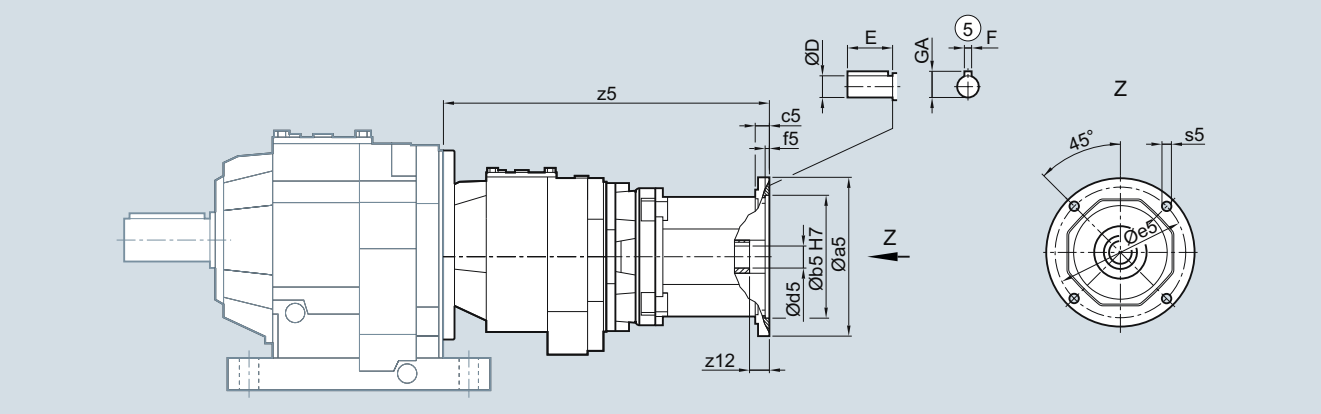


Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.79-D/Z39	K5-(56)	168	114.3	15	5	149.2	11	16	15.875	47.752	4.763	17.895	298
	K5-(140)	168	114.3	15	5	149.2	11	16	22.225	57.150	4.763	24.346	298
	K5-(180)	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	380
D./Z.89-D/Z39	K5-(56)	168	114.3	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
D.109-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
D.129-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
D.149-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
D.169-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
D.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

⑤ Feather key/keyway DIN 6885

Dimensions

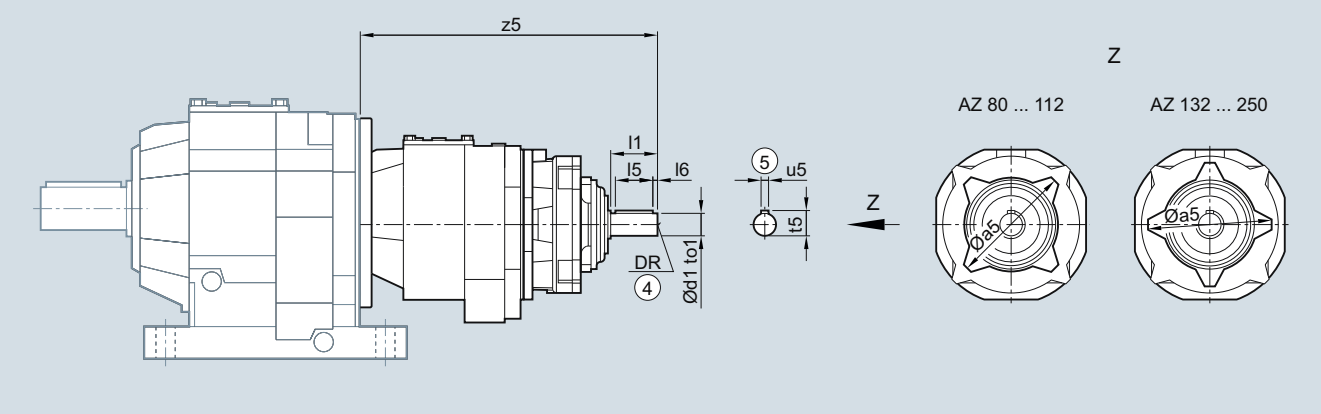
Helical tandem gearbox with adapter K3



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
D./Z.79-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	57.150	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
D./Z.89-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	57.150	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-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	57.150	4.763	24.346	354.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.350	31.394	410.5
D.129-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	57.150	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-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	57.150	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-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	57.150	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-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	57.150	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

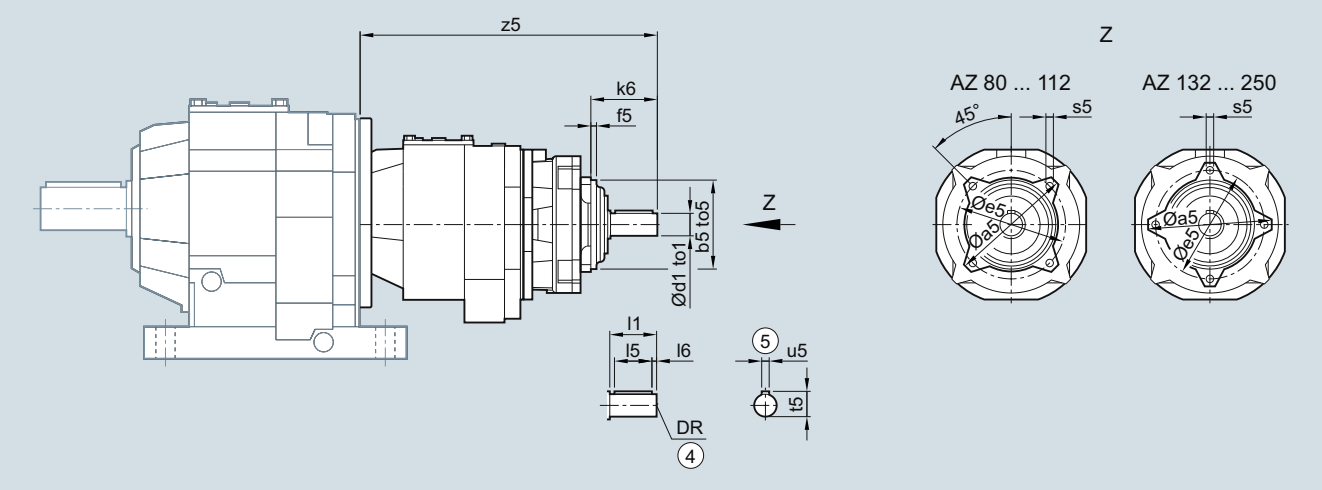
Helical tandem gearbox with adapter A



Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
D./Z.79-D/Z39	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	323
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	333
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	400
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	400
D./Z.89-D/Z39	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	306
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	316
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	383
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	383
D.109-D/Z39	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	297
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	307
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	374
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	374
D.129-D/Z49	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	326
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	336
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	403
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	403
	AZ-132	215	38	k6	80	70	5	10	41	M12x28	453
D.149-D/Z49	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	315.5
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	325.5
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	392.5
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	392.5
	AZ-132	215	38	k6	80	70	5	10	41	M12x28	442.5
D.169-D/Z69	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	341
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	351
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	418
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	418
	AZ-132	215	38	k6	80	70	5	10	41	M12x28	468
D.189-D/Z69	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	341
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	351
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	418
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	418
	AZ-132	215	38	k6	80	70	5	10	41	M12x28	468

⑤ DIN 332 Feather key/keyway DIN 6885

Helical tandem gearbox with adapter AZ



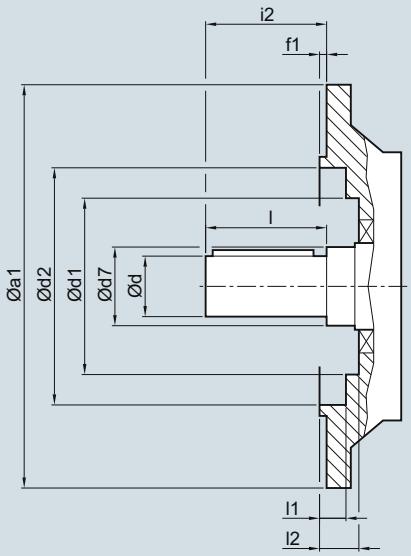
Gearbox	Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
D./Z.79-D/Z39	AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	323
	AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	333
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	400
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	400
D./Z.89-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
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	383
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	383
D.109-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
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	374
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	374
D.129-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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	453
D.149-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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	442.5
D.169-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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	468
D.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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	468

④ DIN 332

⑤ Feather key/keyway DIN 6885

Inner contour of the flange design

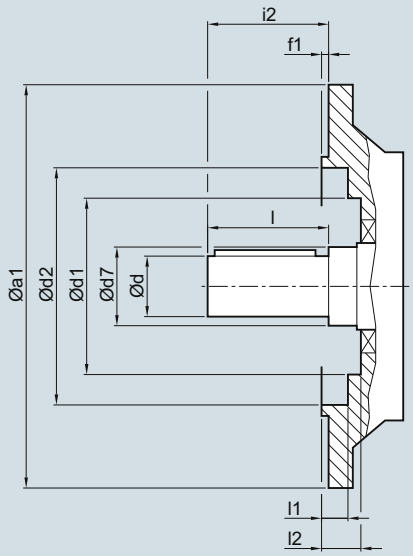
Notes regarding the design of the customer's interface.



Gearbox	a1	d	d7	d1 DF/ZF	d1 DB/ZB	d2	f1	i2	l	l1 DF/ZF	l1 DB/ZB	l2
Helical gearbox DF/ZF or DB/ZB												
DF/ZF29, DB/ZB29	120	25	30	56.0	56.0	72.0	3.0	50	50	2.0	2.0	8
DF/ZF29	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
DF/ZF39, DB/ZB39	120	25	35	69.0	66.0	72.0	3.0	50	50	4.0	4.0	9
DF/ZF39	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
DF/ZF49, DB/ZB49	140	30	35	79.0	79.0	84.5	3.0	60	60	4.0	4.0	9.5
DF/ZF49	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
DF/ZF59, DB/ZB59	160	35	40	88.0	88.0	94.5	3.5	70	70	4.5	4.5	11
DF/ZF59	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
DF/ZF69, DB/ZB69	200	35	47	105.0	105.0	115.0	3.5	70	70	4.5	4.5	11
DF/ZF69	250	35	47	105.0	-	168.0	4.0	70	70	4.0	-	10.5
DF/ZF79, DB/ZB79	250	40	52	113.0	114.5	168.0	4.0	80	80	0.5	2.5	7.5
DF/ZF79	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
DF/ZF89, DB/ZB89	300	50	62	143.0	143.0	218.0	4.0	100	100	1.5	1.5	8
DF/ZF89	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
DF/ZF109	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
DF/ZF129	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
DF/ZF149	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
DF/ZF169	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
DF/ZF189	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
DF/ZF helical gearbox with VLplus reinforced bearing system (G30)										
DF/ZF89	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
DF/ZF109	350	70	75	157	236	5.0	140	140	2.0	9
	450	70	75	168	335	5.0	140	140	0	9
DF/ZF129	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
DF/ZF149	550	100	120	225	430	5.0	210	210	5.5	11
DF/ZF169	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
Helical gearbox EF										
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



4/2	**Orientation**
4/3	**Transmission ratios and torques**
4/3	Selection and ordering data
4/25	**Transmission ratios and torques for very low speeds**
4/25	Selection and ordering data
4/42	**Dimensions**
4/42	Dimensional drawing overview
	Parallel shaft gearbox with adapter K4
4/46	Parallel shaft gearbox FD../FZ..29
4/50	Parallel shaft gearbox FD../FZ..39
4/54	Parallel shaft gearbox FD../FZ..49
4/58	Parallel shaft gearbox FD../FZ..69
4/62	Parallel shaft gearbox FD../FZ..79
4/66	Parallel shaft gearbox FD../FZ..89
4/71	Parallel shaft gearbox FD../FZ..109
4/76	Parallel shaft gearbox FD../FZ..129
4/81	Parallel shaft gearbox FD../FZ..149
4/86	Parallel shaft gearbox FD../FZ..169
4/91	Parallel shaft gearbox FD../FZ..189
	Parallel shaft gearbox with adapter K2
4/95	FD../FZ..29 to FD../FZ..189
	Parallel shaft gearbox with KS adapter
4/98	Parallel shaft gearbox FD../FZ..29
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4/114	Parallel shaft gearbox FD../FZ..79
4/118	Parallel shaft gearbox FD../FZ..89
4/123	Parallel shaft gearbox FD../FZ..109
4/128	Parallel shaft gearbox FD../FZ..129
4/133	Parallel shaft gearbox FD../FZ..149
4/138	Parallel shaft gearbox FD../FZ..169
4/143	Parallel shaft gearbox FD../FZ..189
	Parallel shaft gearbox with adapter K8
4/147	FD../FZ..89 to FD../FZ..189
	Parallel shaft gearbox with adapter K5
4/148	FD../FZ..29 to FD../FZ..189
	Parallel shaft gearbox with adapter K3
4/150	FD../FZ..29 to FD../FZ..189
	Parallel shaft gearbox with adapter A
4/152	FD../FZ..29 to FD../FZ..189
	Parallel shaft gearbox with adapter AZ
4/154	FD../FZ..29 to FD../FZ..189

4/42	**Dimensions** (continued)
4/156	Parallel shaft tandem gearbox with adapter K4
4/158	Parallel shaft tandem gearbox with adapter K2
4/159	Parallel shaft tandem gearbox with KS adapter
4/162	Parallel shaft tandem gearbox with adapter K5
4/163	Parallel shaft tandem gearbox with adapter K3
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4/165	Parallel shaft tandem gearbox with adapter AZ
4/166	Protective covers
4/167	Inner contour of the flange design

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}	i	P_1
		Nm	-	kW
FZ29 … FZ189 (2-stage)	11	150 … 19 000	3.5 … 70	55
FD29 … FD189 (3-stage)	11	150 … 19 000	32 … 413	55
FZ.29-Z19 ... FD.189-D69 (4-stage to 6-stage)	11	150 … 19 000	274 … 29 900	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
- Solid shaft with and without feather key

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.29																						
298.58	4.9	150	5 220	7.9	0.02	94054/315		✓	✓													**2KJ4401 - ■ ■ A0 ■ - 0 ■ Q1**
264.39	5.5	150	5 220	8.0	0.03	92537/350		✓	✓	✓	✓											**2KJ4401 - ■ ■ A0 ■ - 0 ■ P1**
229.72	6.3	150	5 220	8.0	0.04	80401/350		✓	✓	✓	✓											**2KJ4401 - ■ ■ A0 ■ - 0 ■ N1**
208.83	6.9	150	5 220	8.0	0.05	80401/385		✓	✓	✓	✓											**2KJ4401 - ■ ■ A0 ■ - 0 ■ M1**
177.71	8.2	150	5 220	8.0	0.06	62197/350		✓	✓	✓	✓											**2KJ4401 - ■ ■ A0 ■ - 0 ■ L1**
161.55	9	150	5 220	8.0	0.08	62197/385		✓	✓	✓	✓											**2KJ4401 - ■ ■ A0 ■ - 0 ■ K1**
140.86	10	150	5 220	8.0	0.09	19721/140		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ J1**
126.09	11	150	5 220	8.0	0.12	48544/385		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ H1**
111.97	13	150	5 220	8.0	0.14	47027/420		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ G1**
103.36	14	150	5 220	8.0	0.17	47027/455		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ F1**
89.78	16	150	5 220	8.1	0.19	43993/490		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ E1**
78.02	19	150	5 220	8.0	0.19	13653/175		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ D1**
70.43	21	150	5 220	8.1	0.25	19721/280		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ C1**
66.29	22	150	5 220	8.1	0.29	39442/595		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ B1**
57.79	25	150	5 220	8.1	0.33	6068/105		✓	✓	✓	✓	✓										**2KJ4401 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/44		**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**											**1**
				C		**G**														**1**
				D																**1**
		K8									**C**		**D**		**E**					**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**						**9**
Adapter type																				
Gearbox mounting type	➞ page 9/37		**A, B, F or H**																	

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.29																						
56.73	26	150	5 220	7.6	0.04	851/15		✓	✓													**2KJ4301 - ■ ■ A0 ■ - 0 ■ C2**
50.32	29	150	5 220	8.0	0.05	1258/25		✓	✓	✓	✓											**2KJ4301 - ■ ■ A0 ■ - 0 ■ B2**
43.66	33	150	5 220	8.0	0.06	2183/50		✓	✓	✓	✓											**2KJ4301 - ■ ■ A0 ■ - 0 ■ A2**
39.69	37	150	5 220	8.0	0.08	2183/55		✓	✓	✓	✓											**2KJ4301 - ■ ■ A0 ■ - 0 ■ X1**
34.04	43	150	4 910	8.1	0.10	851/25		✓	✓	✓	✓											**2KJ4301 - ■ ■ A0 ■ - 0 ■ W1**
30.95	47	150	4 720	8.1	0.12	1702/55		✓	✓	✓	✓											**2KJ4301 - ■ ■ A0 ■ - 0 ■ V1**
27.13	53	150	4 460	8.2	0.14	407/15		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ U1**
24.22	60	150	4 250	8.3	0.17	1332/55		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ T1**
21.58	67	150	4 040	8.4	0.20	259/12		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ S1**
19.92	73	150	3 910	8.4	0.24	259/13		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ R1**
17.44	83	150	3 680	8.6	0.28	1221/70		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ Q1**
15.29	95	150	3 470	8.8	0.30	1147/75		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ P1**
13.88	104	150	3 320	8.9	0.38	111/8		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ N1**
13.06	111	150	3 230	8.9	0.44	222/17		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ M1**
11.51	126	143	3 100	8.6	0.50	518/45		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ L1**
9.99	145	136	2 960	8.8	0.67	999/100		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ K1**
9.69	150	143	2 660	13.8	0.26	2664/275		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ J1**
8.63	168	130	2 640	14.0	0.32	259/30		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ H1**
7.97	182	120	2 630	14.0	0.38	518/65		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ G1**
6.98	208	123	2 440	14.5	0.46	1221/175		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ F1**
6.12	237	114	2 370	15.0	0.53	2294/375		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ E1**
5.55	261	108	2 320	15.3	0.66	111/20		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ D1**
5.22	278	106	2 300	15.3	0.76	444/85		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ C1**
4.60	315	97	2 280	15.3	0.92	1036/225		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ B1**
4.00	362	91	2 250	15.0	1.21	999/250		✓	✓	✓	✓	✓										**2KJ4301 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	➞ page 9/44	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											1
			C		G														1
			D																1
	K8									C		D		E					8
	K5		A		B	C		D	E	F		G	H						5
	K3		A		B	C		D	E	F		G	H						3
	A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																			
Gearbox mounting type	➞ page 9/37	A, B, F or H																	

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.39																						
274.26	5.3	290	5 820	6.9	0.04	32637/119			✓	✓												**2KJ4402 - ■ ■ A0 ■ - 0 ■ R1**
243.26	6	290	5 820	7.0	0.05	8514/35			✓	✓	✓	✓										**2KJ4402 - ■ ■ A0 ■ - 0 ■ Q1**
211.06	6.9	290	5 820	7.0	0.06	251163/1190			✓	✓	✓	✓										**2KJ4402 - ■ ■ A0 ■ - 0 ■ P1**
191.87	7.6	290	5 820	7.0	0.07	22833/119			✓	✓	✓	✓										**2KJ4402 - ■ ■ A0 ■ - 0 ■ N1**
164.56	8.8	290	5 820	7.0	0.09	97911/595			✓	✓	✓	✓										**2KJ4402 - ■ ■ A0 ■ - 0 ■ M1**
149.60	9.7	290	5 820	7.0	0.11	17802/119			✓	✓	✓	✓										**2KJ4402 - ■ ■ A0 ■ - 0 ■ L1**
131.17	11	290	5 820	7.0	0.12	15609/119			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ K1**
117.08	12	290	5 820	7.0	0.15	13932/119			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ J1**
104.34	14	290	5 820	7.0	0.18	7095/68			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ H1**
96.31	15	290	5 820	7.0	0.21	21285/221			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ G1**
84.32	17	290	5 820	7.1	0.25	140481/1666			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ F1**
73.93	20	290	5 820	7.1	0.24	43989/595			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ E1**
67.07	22	290	5 820	7.2	0.34	63855/952			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ D1**
63.13	23	290	5 820	7.2	0.40	127710/2023			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ C1**
55.65	26	290	5 820	7.2	0.44	946/17			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ B1**
48.29	30	290	5 820	7.2	0.59	114939/2380			✓	✓	✓	✓	✓	✓								**2KJ4402 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																						
Shaft design	→ page 9/44		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													1
				C		G																1
				D																		1
		K8									C		D		E							8
		K5		A		B	C		D	E	F		G	H								5
		K3		A		B	C		D	E	F		G	H								3
		A/AZ*			D	E	F	G	H	J	K	L	M	N								9
Adapter type																						
Gearbox mounting type	→ page 9/37		A, B, F or H																			

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.39																					
65.21	22	290	6 040	6.3	0.06	913/14		✓	✓												**2KJ4302 - ■ ■ A 0 ■ - 0 ■ B2**
57.99	25	230	6 000	6.6	0.08	4059/70		✓	✓	✓	✓										**2KJ4302 - ■ ■ A 0 ■ - 0 ■ A2**
50.91	28	240	5 950	6.6	0.09	1782/35		✓	✓	✓	✓										**2KJ4302 - ■ ■ A 0 ■ - 0 ■ X1**
46.29	31	255	5 820	6.6	0.11	324/7		✓	✓	✓	✓										**2KJ4302 - ■ ■ A 0 ■ - 0 ■ W1**
39.60	37	290	5 950	6.7	0.13	198/5		✓	✓	✓	✓										**2KJ4302 - ■ ■ A 0 ■ - 0 ■ V1**
36.00	40	255	5 480	6.7	0.16	36/1		✓	✓	✓	✓										**2KJ4302 - ■ ■ A 0 ■ - 0 ■ U1**
31.82	46	285	5 320	6.8	0.19	891/28		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ T1**
28.93	50	275	5 080	6.8	0.26	405/14		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ S1**
25.34	57	265	4 930	6.9	0.30	1419/56		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ R1**
23.39	62	260	4 730	6.9	0.36	4257/182		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ Q1**
20.71	70	250	4 730	7.0	0.42	4059/196		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ P1**
17.24	84	235	4 450	7.2	0.57	3861/224		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ N1**
16.22	89	230	4 360	7.2	0.66	3861/238		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ M1**
14.54	100	220	4 220	7.3	0.74	407/28		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ L1**
12.38	117	210	3 990	7.5	0.97	99/8		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ K1**
10.61	137	199	3 790	7.7	1.28	297/28				✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ J1**
9.13	159	189	3 610	7.9	1.65	1023/112				✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ H1**
8.10	179	167	3 430	12.1	0.70	3403/420		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ G1**
6.74	215	152	3 270	12.5	0.96	1079/160		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ F1**
6.35	228	149	3 200	12.5	1.11	1079/170		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ E1**
5.69	255	140	3 120	12.9	1.29	3071/540		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ D1**
4.84	300	128	3 000	13.4	1.73	581/120		✓	✓	✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ C1**
4.15	349	118	2 950	13.9	2.30	83/20				✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ B1**
3.57	406	108	2 890	14.5	3.00	2573/720				✓	✓	✓	✓								**2KJ4302 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/44		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											1
				C		G														1
				D																1
		K8									C		D		E					8
		K5		A		B	C		D	E	F		G	H						5
		K3		A		B	C		D	E	F		G	H						3
		A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																				
Gearbox mounting type	→ page 9/37		A, B, F or H																	

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.49																						
330.98	4.4	480	7 960	6.2	0.06	26809/81		✓	✓													**2KJ4403 - ■ ■ A0 ■ - 0 ■ S1**
294.29	4.9	480	7 960	6.3	0.07	13243/45		✓	✓	✓	✓											**2KJ4403 - ■ ■ A0 ■ - 0 ■ R1**
258.40	5.6	480	7 960	6.3	0.08	1292/5		✓	✓	✓	✓											**2KJ4403 - ■ ■ A0 ■ - 0 ■ Q1**
234.91	6.2	480	7 960	6.3	0.10	2584/11		✓	✓	✓	✓											**2KJ4403 - ■ ■ A0 ■ - 0 ■ P1**
200.98	7.2	480	7 960	6.3	0.12	9044/45		✓	✓	✓	✓											**2KJ4403 - ■ ■ A0 ■ - 0 ■ N1**
182.71	7.9	480	7 960	6.3	0.14	18088/99		✓	✓	✓	✓											**2KJ4403 - ■ ■ A0 ■ - 0 ■ M1**
161.50	9	480	7 960	6.3	0.17	323/2		✓	✓	✓	✓	✓	✓									**2KJ4403 - ■ ■ A0 ■ - 0 ■ L1**
146.82	9.9	480	7 960	6.3	0.22	1615/11		✓	✓	✓	✓	✓	✓									**2KJ4403 - ■ ■ A0 ■ - 0 ■ K1**
128.60	11	480	7 960	6.3	0.26	13889/108		✓	✓	✓	✓	✓	✓									**2KJ4403 - ■ ■ A0 ■ - 0 ■ J1**
118.71	12	480	7 960	6.3	0.31	13889/117		✓	✓	✓	✓	✓	✓									**2KJ4403 - ■ ■ A0 ■ - 0 ■ H1**
105.10	14	480	7 960	6.4	0.37	13243/126		✓	✓	✓	✓	✓	✓	✓								**2KJ4403 - ■ ■ A0 ■ - 0 ■ G1**
87.48	17	480	7 960	6.4	0.50	4199/48		✓	✓	✓	✓	✓	✓	✓								**2KJ4403 - ■ ■ A0 ■ - 0 ■ F1**
82.33	18	480	7 960	6.4	0.59	247/3		✓	✓	✓	✓	✓	✓	✓								**2KJ4403 - ■ ■ A0 ■ - 0 ■ E1**
73.77	20	480	7 630	6.4	0.66	11951/162		✓	✓	✓	✓	✓	✓	✓								**2KJ4403 - ■ ■ A0 ■ - 0 ■ D1**
62.81	23	480	7 070	6.4	0.86	2261/36		✓	✓	✓	✓	✓	✓	✓								**2KJ4403 - ■ ■ A0 ■ - 0 ■ C1**
53.83	27	480	6 560	6.5	1.13	323/6				✓	✓	✓	✓	✓								**2KJ4403 - ■ ■ A0 ■ - 0 ■ B1**
46.36	31	480	6 080	6.5	1.46	10013/216				✓	✓	✓	✓	✓								**2KJ4403 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/44		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											1
				C		G														1
				D																1
		K8									C		D		E					8
		K5		A		B	C		D	E	F		G	H						5
		K3		A		B	C		D	E	F		G	H						3
		A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																				
Gearbox mounting type	➞ page 9/37		A, B, F or H																	

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

4

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.49																						
61.43	24	480	6 990	6.0	0.18	1843/30			✓	✓	✓	✓										2KJ4303 - ■ ■ A0 ■ - 0 ■ X1
55.85	26	480	6 680	6.0	0.22	1843/33			✓	✓	✓	✓										2KJ4303 - ■ ■ A0 ■ - 0 ■ W1
47.50	31	480	6 160	6.0	0.27	95/2			✓	✓	✓	✓										2KJ4303 - ■ ■ A0 ■ - 0 ■ V1
43.18	34	480	5 870	6.0	0.33	475/11			✓	✓	✓	✓										2KJ4303 - ■ ■ A0 ■ - 0 ■ U1
38.53	38	480	5 530	6.1	0.39	1387/36			✓	✓	✓	✓	✓	✓								2KJ4303 - ■ ■ A0 ■ - 0 ■ T1
34.55	42	480	5 220	6.1	0.47	380/11			✓	✓	✓	✓	✓	✓								2KJ4303 - ■ ■ A0 ■ - 0 ■ S1
31.14	47	480	4 940	6.2	0.55	1121/36			✓	✓	✓	✓	✓	✓								2KJ4303 - ■ ■ A0 ■ - 0 ■ R1
28.74	50	480	4 730	6.1	0.65	1121/39			✓	✓	✓	✓	✓	✓								2KJ4303 - ■ ■ A0 ■ - 0 ■ Q1
26.24	55	480	4 490	6.2	0.77	551/21			✓	✓	✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ P1
21.77	67	480	4 030	6.3	0.99	1045/48			✓	✓	✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ N1
20.49	71	480	3 890	6.3	1.15	1045/51			✓	✓	✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ M1
19.35	75	480	3 750	6.3	1.30	1045/54			✓	✓	✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ L1
16.47	88	480	3 390	6.4	1.61	247/15			✓	✓	✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ K1
14.11	103	480	3 060	6.6	1.99	931/66					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ J1
12.40	117	480	3 010	6.7	2.50	893/72					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ H1
10.46	139	480	3 140	6.8	3.10	722/69					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ G1
9.12	159	480	3 210	7.4	4.20	228/25					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ F1
8.40	173	450	3 010	9.3	2.20	42/5			✓	✓	✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ E1
7.20	201	450	3 070	9.6	2.80	1029/143					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ D1
6.33	229	430	3 090	9.9	3.50	329/52					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ C1
5.34	272	400	3 080	10.2	4.60	1596/299					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ B1
4.65	312	375	3 060	11.3	6.10	1512/325					✓	✓	✓	✓	✓							2KJ4303 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/44		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									1
				C		G												1
				D														1
		K8									C		D		E			8
		K5		A		B	C		D	E	F		G	H				5
		K3		A		B	C		D	E	F		G	H				3
		A/AZ*			D	E	F	G	H	J	K	L	M	N				9
Adapter type																		
Gearbox mounting type	→ page 9/37		A, B, F or H															

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.69																						
348.40	4.2	600	10 800	6.0	0.06	28220/81		✓	✓													**2KJ4404 - ■ ■ A0 ■ - 0 ■ S1**
309.78	4.7	600	10 800	6.0	0.07	2788/9		✓	✓	✓	✓											**2KJ4404 - ■ ■ A0 ■ - 0 ■ R1**
272.00	5.3	600	10 800	6.0	0.08	272/1		✓	✓	✓	✓											**2KJ4404 - ■ ■ A0 ■ - 0 ■ Q1**
247.27	5.9	600	10 800	6.0	0.10	2720/11		✓	✓	✓	✓											**2KJ4404 - ■ ■ A0 ■ - 0 ■ P1**
211.56	6.9	600	10 800	6.0	0.12	1904/9		✓	✓	✓	✓											**2KJ4404 - ■ ■ A0 ■ - 0 ■ N1**
192.32	7.5	600	10 800	6.0	0.14	19040/99		✓	✓	✓	✓											**2KJ4404 - ■ ■ A0 ■ - 0 ■ M1**
170.00	8.5	600	10 800	6.1	0.17	170/1		✓	✓	✓	✓	✓	✓									**2KJ4404 - ■ ■ A0 ■ - 0 ■ L1**
154.55	9.4	600	10 800	6.1	0.22	1700/11		✓	✓	✓	✓	✓	✓									**2KJ4404 - ■ ■ A0 ■ - 0 ■ K1**
135.37	11	600	10 800	6.1	0.26	3655/27		✓	✓	✓	✓	✓	✓									**2KJ4404 - ■ ■ A0 ■ - 0 ■ J1**
124.96	12	600	10 800	6.1	0.31	14620/117		✓	✓	✓	✓	✓	✓									**2KJ4404 - ■ ■ A0 ■ - 0 ■ H1**
110.63	13	600	10 800	6.1	0.38	6970/63		✓	✓	✓	✓	✓	✓	✓								**2KJ4404 - ■ ■ A0 ■ - 0 ■ G1**
92.08	16	600	10 800	6.1	0.51	1105/12		✓	✓	✓	✓	✓	✓	✓								**2KJ4404 - ■ ■ A0 ■ - 0 ■ F1**
86.67	17	600	10 800	6.1	0.60	260/3		✓	✓	✓	✓	✓	✓	✓								**2KJ4404 - ■ ■ A0 ■ - 0 ■ E1**
77.65	19	600	10 400	6.2	0.66	6290/81		✓	✓	✓	✓	✓	✓	✓								**2KJ4404 - ■ ■ A0 ■ - 0 ■ D1**
66.11	22	600	9 720	6.2	0.87	595/9		✓	✓	✓	✓	✓	✓	✓								**2KJ4404 - ■ ■ A0 ■ - 0 ■ C1**
56.67	26	600	9 050	6.2	1.15	170/3				✓	✓	✓	✓	✓								**2KJ4404 - ■ ■ A0 ■ - 0 ■ B1**
48.80	30	600	8 430	6.2	1.47	2635/54				✓	✓	✓	✓	✓								**2KJ4404 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	→ page 9/44		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										1
				C		G													1
				D															1
		K8									C		D		E				8
		K5		A		B	C		D	E	F		G	H					5
		K3		A		B	C		D	E	F		G	H					3
		A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																			
Gearbox mounting type	→ page 9/37		A, B, F or H																

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.69																						
64.67	22	600	9 620	5.7	0.19	194/3			✓	✓	✓	✓										2KJ4304 - ■ ■ A0 ■ - 0 ■ X1
58.79	25	600	9 210	5.7	0.23	1940/33			✓	✓	✓	✓										2KJ4304 - ■ ■ A0 ■ - 0 ■ W1
50.00	29	600	8 530	5.8	0.29	50/1			✓	✓	✓	✓										2KJ4304 - ■ ■ A0 ■ - 0 ■ V1
45.45	32	600	8 140	5.8	0.35	500/11			✓	✓	✓	✓										2KJ4304 - ■ ■ A0 ■ - 0 ■ U1
40.56	36	600	7 700	5.8	0.41	365/9			✓	✓	✓	✓	✓	✓								2KJ4304 - ■ ■ A0 ■ - 0 ■ T1
36.36	40	600	7 290	5.9	0.49	400/11			✓	✓	✓	✓	✓	✓								2KJ4304 - ■ ■ A0 ■ - 0 ■ S1
32.78	44	600	6 920	5.9	0.58	295/9			✓	✓	✓	✓	✓	✓								2KJ4304 - ■ ■ A0 ■ - 0 ■ R1
30.26	48	600	6 640	5.9	0.69	1180/39			✓	✓	✓	✓	✓	✓								2KJ4304 - ■ ■ A0 ■ - 0 ■ Q1
27.62	52	600	6 330	5.9	0.83	580/21			✓	✓	✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ P1
22.92	63	600	5 720	6.0	1.07	275/12			✓	✓	✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ N1
21.57	67	600	5 540	6.0	1.23	1100/51			✓	✓	✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ M1
20.37	71	600	5 360	6.0	1.39	550/27			✓	✓	✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ L1
17.33	84	600	4 890	6.2	1.74	52/3			✓	✓	✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ K1
14.85	98	600	4 450	6.2	2.20	490/33					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ J1
13.06	111	600	4 110	6.2	2.70	235/18					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ H1
11.01	132	600	4 040	6.2	3.50	760/69					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ G1
9.60	151	600	4 140	6.2	4.60	48/5					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ F1
8.90	163	475	4 040	8.9	2.40	89/10			✓	✓	✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ E1
7.62	190	465	4 100	8.9	3.10	4361/572					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ D1
6.70	216	440	4 120	8.9	3.90	4183/624					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ C1
5.66	256	410	4 110	8.9	5.10	1691/299					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ B1
4.93	294	385	4 070	8.9	6.80	1602/325					✓	✓	✓	✓	✓							2KJ4304 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.79																						
357.00	4.1	1 000	13 600	5.6	0.17	57133/160			✓	✓	✓											**2KJ4405 - ■ ■ A0 ■ - 0 ■ S1**
324.62	4.5	1 000	13 600	5.6	0.20	57133/176			✓	✓	✓											**2KJ4405 - ■ ■ A0 ■ - 0 ■ R1**
276.09	5.3	1 000	13 600	5.6	0.25	8835/32			✓	✓	✓											**2KJ4405 - ■ ■ A0 ■ - 0 ■ Q1**
250.99	5.8	1 000	13 600	5.6	0.30	44175/176			✓	✓	✓											**2KJ4405 - ■ ■ A0 ■ - 0 ■ P1**
223.94	6.5	1 000	13 600	5.6	0.35	42997/192			✓	✓	✓	✓	✓									**2KJ4405 - ■ ■ A0 ■ - 0 ■ N1**
200.80	7.2	1 000	13 600	5.6	0.42	8835/44			✓	✓	✓	✓	✓									**2KJ4405 - ■ ■ A0 ■ - 0 ■ M1**
180.99	8	1 000	13 600	5.6	0.49	34751/192			✓	✓	✓	✓	✓									**2KJ4405 - ■ ■ A0 ■ - 0 ■ L1**
167.07	8.7	1 000	13 600	5.6	0.58	34751/208			✓	✓	✓	✓	✓									**2KJ4405 - ■ ■ A0 ■ - 0 ■ K1**
152.51	9.5	1 000	13 600	5.6	0.69	17081/112			✓	✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ J1**
126.54	11	1 000	13 600	5.7	0.87	32395/256			✓	✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ H1**
119.10	12	1 000	13 600	5.7	1.01	32395/272			✓	✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ G1**
112.48	13	1 000	13 600	5.7	1.15	32395/288			✓	✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ F1**
95.71	15	1 000	13 600	5.7	1.39	7657/80			✓	✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ E1**
81.99	18	1 000	13 600	5.7	1.70	28861/352				✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ D1**
72.09	20	1 000	13 600	5.7	2.10	27683/384				✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ C1**
60.82	24	1 000	13 600	5.7	2.60	11191/184				✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ B1**
53.01	27	1 000	13 600	5.8	3.50	5301/100				✓	✓	✓	✓	✓	✓							**2KJ4405 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/44		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											1
				C		G														1
				D																1
		K8									C		D		E					8
		K5		A		B	C		D	E	F		G	H						5
		K3		A		B	C		D	E	F		G	H						3
		A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																				
Gearbox mounting type	→ page 9/37		A, B, F or H																	

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.79																						
53.55	27	1 000	13 600	5.6	0.56	589/11			✓	✓	✓											**2KJ4305 - ■ ■ A 0 ■ - 0 ■ X1**
48.03	30	1 000	13 600	5.6	0.77	1729/36			✓	✓	✓	✓	✓									**2KJ4305 - ■ ■ A 0 ■ - 0 ■ W1**
43.18	34	1 000	13 600	5.7	0.87	475/11			✓	✓	✓	✓	✓									**2KJ4305 - ■ ■ A 0 ■ - 0 ■ V1**
39.06	37	1 000	13 600	5.7	0.97	703/18			✓	✓	✓	✓	✓									**2KJ4305 - ■ ■ A 0 ■ - 0 ■ U1**
36.05	40	1 000	13 600	5.7	1.15	1406/39			✓	✓	✓	✓	✓									**2KJ4305 - ■ ■ A 0 ■ - 0 ■ T1**
33.02	44	1 000	13 600	5.7	1.49	1387/42			✓	✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ S1**
27.71	52	1 000	13 600	5.7	1.62	665/24			✓	✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ R1**
26.08	56	1 000	13 600	5.7	1.85	1330/51			✓	✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ Q1**
23.93	61	1 000	13 600	5.7	2.0	646/27			✓	✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ P1**
20.90	69	1 000	13 600	5.7	2.9	209/10			✓	✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ N1**
18.71	77	1 000	12 900	5.7	3.6	1235/66				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ M1**
16.36	89	1 000	12 200	5.7	4.2	589/36				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ L1**
14.04	103	1 000	11 400	5.8	4.7	323/23				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ K1**
12.41	117	1 000	10 800	6.2	6.0	931/75				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ J1**
10.56	137	1 000	10 100	6.3	7.8	95/9						✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ H1**
9.05	160	1 000	9 980	6.5	10	190/21						✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ G1**
8.51	170	720	10 300	8.9	4.6	468/55				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ F1**
7.44	195	725	9 770	9.2	5.5	186/25				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ E1**
6.39	227	720	9 690	9.3	6.5	3672/575				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ D1**
5.64	257	700	9 620	10.2	8.3	3528/625				✓	✓	✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ C1**
4.80	302	650	9 480	10.6	11	24/5						✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ B1**
4.11	353	605	9 310	11.0	15	144/35						✓	✓	✓	✓							**2KJ4305 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																	
Shaft design	→ page 9/44	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									1
			C		G												1
			D														1
	K8									C		D		E			8
	K5		A		B	C		D	E	F		G	H				5
	K3		A		B	C		D	E	F		G	H				3
	A/AZ*			D	E	F	G	H	J	K	L	M	N				9
Adapter type																	
Gearbox mounting type	→ page 9/37	A, B, F or H															

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.89																						
335.30	4.3	1 850	17 400	5.1	0.42	370512/1105				✓	✓	✓	✓									**2KJ4406 - ■ ■ A0 ■ - 0 ■ S1**
304.82	4.8	1 850	17 400	5.1	0.51	741024/2431				✓	✓	✓	✓									**2KJ4406 - ■ ■ A0 ■ - 0 ■ R1**
273.41	5.3	1 850	17 400	5.1	0.71	4648/17				✓	✓	✓	✓									**2KJ4406 - ■ ■ A0 ■ - 0 ■ Q1**
245.82	5.9	1 850	17 400	5.1	0.79	597600/2431				✓	✓	✓	✓									**2KJ4406 - ■ ■ A0 ■ - 0 ■ P1**
222.33	6.5	1 850	17 400	5.1	0.88	49136/221				✓	✓	✓	✓									**2KJ4406 - ■ ■ A0 ■ - 0 ■ N1**
205.23	7.1	1 850	17 400	5.1	1.03	589632/2873				✓	✓	✓	✓									**2KJ4406 - ■ ■ A0 ■ - 0 ■ M1**
188.00	7.7	1 850	17 400	5.1	1.35	290832/1547				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ L1**
157.74	9.2	1 850	17 400	5.1	1.43	34860/221				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ K1**
148.46	9.8	1 850	17 400	5.1	1.64	557760/3757				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ J1**
136.21	11	1 850	17 400	5.1	1.79	5312/39				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ H1**
118.98	12	1 850	17 400	5.1	2.6	131472/1105				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ G1**
106.52	14	1 850	17 400	5.1	3.1	19920/187				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ F1**
93.14	16	1 850	17 400	5.1	3.7	20584/221				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ E1**
79.95	18	1 850	17 400	5.2	4.0	23904/299				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ D1**
70.67	21	1 850	17 400	5.2	5.1	390432/5525				✓	✓	✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ C1**
60.09	24	1 850	17 400	5.3	6.5	13280/221						✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ B1**
51.51	28	1 850	17 400	5.3	8.5	79680/1547						✓	✓	✓	✓							**2KJ4406 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/44		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									1
				C		G												1
				D														1
		K8									C		D		E			8
		K5		A		B	C		D	E	F		G	H				5
		K3		A		B	C		D	E	F		G	H				3
		A/AZ*			D	E	F	G	H	J	K	L	M	N				9
Adapter type																		
Gearbox mounting type	→ page 9/37		A, B, F or H															

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.89																						
61.72	23	1 850	17 400	4.8	1.38	2407/39				✓	✓	✓	✓									**2KJ4306 - ■ ■ A 0 ■ - 0 ■ B2**
55.72	26	1 850	17 400	4.8	1.51	7968/143				✓	✓	✓	✓									**2KJ4306 - ■ ■ A 0 ■ - 0 ■ A2**
50.54	29	1 850	17 400	4.8	1.77	7885/156				✓	✓	✓	✓									**2KJ4306 - ■ ■ A 0 ■ - 0 ■ X1**
46.66	31	1 850	17 400	4.8	2.1	7885/169				✓	✓	✓	✓									**2KJ4306 - ■ ■ A 0 ■ - 0 ■ W1**
42.41	34	1 850	17 400	4.9	2.4	7719/182				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ V1**
35.91	40	1 850	17 400	4.9	2.9	3735/104				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ U1**
33.80	43	1 850	17 400	4.9	3.0	7470/221				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ T1**
31.21	46	1 850	17 400	5.0	4.5	3652/117				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ S1**
27.77	52	1 850	17 400	5.0	5.5	7221/260				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ R1**
24.67	59	1 850	17 400	5.0	6.7	7055/286				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ Q1**
22.08	66	1 850	17 400	5.1	6.7	6889/312				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ P1**
18.88	77	1 850	17 200	5.1	7.9	5644/299				✓	✓	✓	✓	✓	✓							**2KJ4306 - ■ ■ A 0 ■ - 0 ■ N1**
16.86	86	1 850	16 400	5.4	10	5478/325				✓	✓	✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ M1**
14.90	97	1 850	15 500	5.5	12	581/39						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ L1**
13.07	111	1 850	14 600	5.3	16	3569/273						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ K1**
11.38	127	1 850	14 600	5.3	20	3403/299						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ J1**
9.73	149	1 850	14 600	5.5	26	2656/273						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ H1**
8.33	174	1 740	14 500	5.6	33	2490/299						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ G1**
7.60	191	1 100	14 100	9.0	14	4752/625				✓	✓	✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ F1**
6.72	216	1 110	14 000	9.2	17	168/25						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ E1**
5.90	246	1 110	13 800	9.2	23	1032/175						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ D1**
5.13	283	1 110	13 600	9.2	28	2952/575						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ C1**
4.39	330	1 060	13 300	9.2	39	768/175						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ B1**
3.76	386	985	12 900	9.5	50	432/115						✓	✓	✓	✓	✓						**2KJ4306 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/44		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										1
				C		G													1
				D															1
		K8									C		D		E				8
		K5		A		B	C		D	E	F		G	H					5
		K3		A		B	C		D	E	F		G	H					3
		A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																				
Gearbox mounting type	→ page 9/37		A, B, F or H																	

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}															(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-															
							K4	63	71	80	90	100	112	132	160	180	200	225	250		
							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		5.3										
									4.2												
							K8									813		816		818	
							K5		56		140	180		210	250	280		320	360		
							K3		56		140	180		210	250	280		320	360		
							A/AZ			80	90	100	112	132	160	180	200	225	250		
FD.109																					
410.00	3.5	3 100	25 000	6.5	1.27	332021/810					✓	✓	✓								**2KJ4407 - ■ ■ A0 ■ - 0 ■ T1**
370.00	3.9	3 100	25 000	6.5	1.37	183184/495					✓	✓	✓								**2KJ4407 - ■ ■ A0 ■ - 0 ■ S1**
335.70	4.3	3 100	25 000	6.5	1.61	217531/648					✓	✓	✓								**2KJ4407 - ■ ■ A0 ■ - 0 ■ R1**
309.87	4.7	3 100	25 000	6.5	1.89	217531/702					✓	✓	✓								**2KJ4407 - ■ ■ A0 ■ - 0 ■ Q1**
281.68	5.1	3 100	25 000	6.5	2.2	354919/1260					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ P1**
238.52	6.1	3 100	25 000	6.5	2.6	11449/48					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ N1**
224.49	6.5	3 100	25 000	6.5	2.6	11449/51					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ M1**
207.31	7	3 100	25 000	6.5	4.0	251878/1215					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ L1**
184.46	7.9	3 100	25 000	6.5	5.0	332021/1800					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ K1**
163.83	8.9	3 100	25 000	6.5	5.9	194633/1188					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ J1**
146.65	9.9	3 100	25 000	6.5	5.9	950267/6480					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ H1**
125.37	12	3 100	25 000	6.5	6.7	389266/3105					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ G1**
111.95	13	3 100	25 000	6.5	8.6	125939/1125					✓	✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ F1**
98.94	15	3 100	25 000	6.5	9.6	80143/810						✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ E1**
86.83	17	3 100	25 000	6.5	14	492307/5670						✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ D1**
75.59	19	3 100	25 000	6.5	16	469409/6210						✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ C1**
64.62	22	3 100	25 000	6.5	21	183184/2835						✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ B1**
55.31	26	3 100	25 000	6.5	25	11449/207						✓	✓	✓	✓						**2KJ4407 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/44		**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**											**1**
				C		**G**														**1**
				D																**1**
		K8									**C**		**D**		**E**					**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**						**9**
Adapter type																				
Gearbox mounting type	→ page 9/37		**A, B, F or H**																	

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}															(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-															
							K4	63	71	80	90	100	112	132	160	180	200	225	250		
							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		5.3										
									4.2												
							K8									813		816		818	
							K5		56		140	180		210	250	280		320	360		
							K3		56		140	180		210	250	280		320	360		
							A/AZ			80	90	100	112	132	160	180	200	225	250		
FZ.109																					
70.74	20	3 100	25 000	4.6	3.6	12733/180					✓	✓	✓								**2KJ4307 - ■ ■ A 0 ■ - 0 ■ B2**
65.30	22	3 100	25 000	4.6	4.3	12733/195					✓	✓	✓								**2KJ4307 - ■ ■ A 0 ■ - 0 ■ A2**
60.12	24	3 100	25 000	4.6	4.9	6313/105					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ X1**
51.27	28	3 100	25 000	4.6	6.3	2461/48					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ W1**
48.25	30	3 100	25 000	4.6	7.1	2461/51					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ V1**
44.78	32	3 100	25 000	4.6	7.8	12091/270					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ U1**
39.59	37	3 100	25 000	4.6	9.5	3959/100					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ T1**
35.34	41	3 100	24 700	4.7	11	11663/330					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ S1**
31.80	46	3 100	23 600	4.7	13	11449/360					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ R1**
27.60	53	3 100	22 200	4.7	16	9523/345					✓	✓	✓	✓	✓						**2KJ4307 - ■ ■ A 0 ■ - 0 ■ Q1**
24.82	58	3 100	21 200	4.9	19	3103/125					✓	✓	✓	✓	✓	✓					**2KJ4307 - ■ ■ A 0 ■ - 0 ■ P1**
21.70	67	3 100	19 900	5.0	23	7811/360						✓	✓	✓	✓	✓	✓				**2KJ4307 - ■ ■ A 0 ■ - 0 ■ N1**
19.36	75	3 100	18 900	5.0	27	2033/105						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ M1**
17.06	85	3 100	17 800	5.0	33	1177/69						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ L1**
14.95	97	3 100	16 700	5.1	40	4708/315						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ K1**
13.03	111	3 100	15 600	5.2	48	1498/115						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ J1**
11.89	122	3 060	15 600	5.2	56	107/9						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ H1**
10.23	142	2 880	15 900	5.3	70	1177/115						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ G1**
9.02	161	2 090	16 100	7.6	36	1767/196						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ F1**
7.94	183	2 000	15 800	7.8	44	5115/644						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ E1**
6.96	208	1 900	15 700	7.9	54	341/49						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ D1**
6.07	239	1 800	15 600	8.1	68	279/46						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ C1**
5.54	262	1 730	15 400	8.2	79	155/28						✓	✓	✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ B1**
4.77	304	1 620	15 200	8.4	102	3069/644								✓	✓	✓	✓	✓			**2KJ4307 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/44		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									1
				C		G												1
				D														1
		K8									C		D		E			8
		K5		A		B	C		D	E	F		G	H				5
		K3		A		B	C		D	E	F		G	H				3
		A/AZ*			D	E	F	G	H	J	K	L	M	N				9
Adapter type																		
Gearbox mounting type	→ page 9/37		A, B, F or H															

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.129																						
413.00	3.5	4 850	37 200	5.5	3.3	9911/24					✓	✓	✓									**2KJ4408 - ■ ■ A0 ■ - 0 ■ T1**
381.00	3.8	4 850	37 200	5.5	3.9	9911/26					✓	✓	✓									**2KJ4408 - ■ ■ A0 ■ - 0 ■ S1**
351.00	4.1	4 850	37 200	5.5	4.5	34397/98					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ R1**
299.31	4.8	4 850	37 200	5.5	5.6	67045/224					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ Q1**
281.70	5.1	4 850	37 200	5.5	6.4	67045/238					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ P1**
261.42	5.5	4 850	37 200	5.5	6.9	65879/252					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ N1**
231.12	6.3	4 850	37 200	5.5	8.4	64713/280					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ M1**
206.32	7	4 850	37 200	5.5	10	5777/28					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ L1**
185.66	7.8	4 850	37 200	5.5	12	62381/336					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ K1**
161.14	9	4 850	37 200	5.5	14	51887/322					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ J1**
144.92	10	4 850	37 200	5.5	16	50721/350					✓	✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ H1**
126.66	11	4 850	37 200	5.5	19	42559/336						✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ G1**
113.03	13	4 850	37 200	5.5	23	11077/98						✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ F1**
99.58	15	4 850	37 200	5.5	27	32065/322						✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ E1**
87.25	17	4 850	37 200	5.5	32	12826/147						✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ D1**
76.04	19	4 850	37 200	5.5	37	1749/23						✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ C1**
69.40	21	4 850	37 200	5.5	44	2915/42						✓	✓	✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ B1**
59.75	24	4 850	37 200	5.5	53	19239/322								✓	✓							**2KJ4408 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	→ page 9/44		**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										**1**
				C		G													**1**
				D															**1**
		K8									C		D		E				**8**
		K5		A		B	C		D	E	F		G	H					**5**
		K3		A		B	C		D	E	F		G	H					**3**
		A/AZ*			D	E	F	G	H	J	K	L	M	N					**9**
Adapter type																				
Gearbox mounting type	→ page 9/37		**A, B, F or H**																	

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.129																						
69.20	21	4 850	37 200	5.1	7.7	13563/196					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ A2**
59.22	24	4 850	37 200	5.1	9.7	6633/112					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ X1**
55.74	26	4 850	37 200	5.1	11	6633/119					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ W1**
52.25	28	4 850	36 600	5.1	12	209/4					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ V1**
46.32	31	4 850	34 800	5.1	15	12969/280					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ U1**
41.14	35	4 850	33 100	5.1	18	288/7					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ T1**
37.12	39	4 850	31 700	5.1	21	297/8					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ S1**
32.90	44	4 850	30 100	5.2	26	10593/322					✓	✓	✓	✓	✓							**2KJ4308 - ■ ■ A0 ■ - 0 ■ R1**
29.13	50	4 850	28 500	5.3	29	10197/350					✓	✓	✓	✓	✓	✓						**2KJ4308 - ■ ■ A0 ■ - 0 ■ Q1**
25.93	56	4 850	27 100	5.3	35	363/14						✓	✓	✓	✓	✓	✓					**2KJ4308 - ■ ■ A0 ■ - 0 ■ P1**
23.23	62	4 850	25 800	5.3	41	2277/98						✓	✓	✓	✓	✓	✓	✓				**2KJ4308 - ■ ■ A0 ■ - 0 ■ N1**
20.60	70	4 850	24 400	5.3	49	6633/322						✓	✓	✓	✓	✓	✓	✓				**2KJ4308 - ■ ■ A0 ■ - 0 ■ M1**
18.18	80	4 850	23 000	5.4	60	891/49						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ L1**
15.99	91	4 800	21 700	5.4	73	2574/161						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ K1**
14.48	100	4 690	21 000	5.5	83	1419/98						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ J1**
12.61	115	4 530	20 100	5.5	101	4059/322								✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ H1**
10.34	140	4 320	20 400	5.5	135	1881/182								✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ G1**
9.80	148	3 630	19 600	8.1	64	2479/253						✓	✓	✓	✓	✓	✓	✓				**2KJ4308 - ■ ■ A0 ■ - 0 ■ F1**
8.65	168	3 640	19 700	8.1	79	666/77						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ E1**
7.60	191	3 620	19 800	8.1	97	1924/253						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ D1**
6.89	210	3 630	19 700	8.2	112	1591/231						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ C1**
6.00	242	3 640	19 600	8.3	140	1517/253								✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ B1**
4.92	295	3 030	19 300	8.5	192	703/143								✓	✓	✓	✓	✓	✓			**2KJ4308 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																						
Shaft design	→ page 9/44		**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**													**1**
				C		**G**																**1**
				D																		**1**
		K8									**C**		**D**		**E**							**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**								**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**								**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**								**9**
Adapter type																						
Gearbox mounting type	→ page 9/37		**A, B, F or H**																			

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.149																						
377.00	3.8	8 000	65 000	4.8	7.1	18495/49						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ W1**
323.04	4.5	8 000	65 000	4.8	9	9045/28						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ V1**
304.03	4.8	8 000	65 000	4.8	10	36180/119						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ U1**
285.00	5.1	8 000	6 5000	4.8	11	285/1						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ T1**
252.64	5.7	8 000	65 000	4.8	14	3537/14						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ S1**
224.42	6.5	8 000	65 000	4.8	16	17280/77						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ R1**
202.50	7.2	8 000	65 000	4.8	19	405/2						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ Q1**
179.44	8.1	8 000	65 000	4.8	23	28890/161						✓	✓	✓	✓							**2KJ4410 - ■ ■ A0 ■ - 0 ■ P1**
158.91	9.1	8 000	65 000	4.8	26	5562/35						✓	✓	✓	✓	✓						**2KJ4410 - ■ ■ A0 ■ - 0 ■ N1**
141.43	10	8 000	65 000	4.8	31	990/7						✓	✓	✓	✓	✓	✓					**2KJ4410 - ■ ■ A0 ■ - 0 ■ M1**
126.73	11	8 000	65 000	4.8	37	6210/49						✓	✓	✓	✓	✓	✓	✓				**2KJ4410 - ■ ■ A0 ■ - 0 ■ L1**
112.36	13	8 000	63 600	4.8	43	18090/161						✓	✓	✓	✓	✓	✓	✓				**2KJ4410 - ■ ■ A0 ■ - 0 ■ K1**
99.18	15	8 000	60 700	4.8	53	4860/49						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ J1**
87.20	17	8 000	57 700	4.8	63	14040/161						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ H1**
78.98	18	8 000	54 800	4.8	71	3870/49						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ G1**
68.76	21	8 000	52 600	4.9	85	11070/161								✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ F1**
56.37	26	8 000	49 600	4.9	111	5130/91								✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ E1**
50.01	29	8 000	45 600	5.2	73	37960/759						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ D1**
45.30	32	8 000	43 300	5.2	83	31390/693						✓	✓	✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ C1**
39.43	37	7 970	41 400	5.2	102	29930/759								✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ B1**
32.33	45	7 510	39 000	5.2	135	13870/429								✓	✓	✓	✓	✓	✓			**2KJ4410 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	➞ page 9/44		**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											**1**
			C		G														**1**
			D																**1**
	K8									C		D		E					**8**
	K5		A		B	C		D	E	F		G	H						**5**
	K3		A		B	C		D	E	F		G	H						**3**
	A/AZ*			D	E	F	G	H	J	K	L	M	N						**9**
Adapter type																			
Gearbox mounting type	➞ page 9/37		**A, B, F or H**																

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.149																						
48.48	30	8 000	42 700	4.6	31	1600/33						✓	✓	✓	✓							2KJ4310 - ■ ■ A0 ■ - 0 ■ T1
43.89	33	8 000	40 800	4.6	36	395/9						✓	✓	✓	✓							2KJ4310 - ■ ■ A0 ■ - 0 ■ S1
38.55	38	8 000	38 500	4.6	44	2660/69						✓	✓	✓	✓							2KJ4310 - ■ ■ A0 ■ - 0 ■ R1
34.93	42	8 000	36 800	4.6	51	524/15						✓	✓	✓	✓	✓						2KJ4310 - ■ ■ A0 ■ - 0 ■ Q1
31.11	47	8 000	34 900	4.7	60	280/9						✓	✓	✓	✓	✓	✓					2KJ4310 - ■ ■ A0 ■ - 0 ■ P1
27.94	52	8 000	33 100	4.7	72	1760/63						✓	✓	✓	✓	✓	✓	✓				2KJ4310 - ■ ■ A0 ■ - 0 ■ N1
24.93	58	8 000	31 300	4.7	84	1720/69						✓	✓	✓	✓	✓	✓	✓				2KJ4310 - ■ ■ A0 ■ - 0 ■ M1
22.22	65	8 000	29 600	4.7	98	200/9						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ L1
19.71	74	8 000	27 800	4.7	117	1360/69						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ K1
18.10	80	8 000	26 600	4.8	132	380/21						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ J1
15.94	91	8 000	24 900	4.8	156	1100/69								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ H1
13.08	111	7 620	23 200	4.9	212	170/13								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ G1
11.47	126	7 320	23 700	4.9	241	172/15								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ F1
8.97	162	6 770	24 500	6.2	379	260/29								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ E1
8.09	179	5 690	23 900	6.2	200	2420/299								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ D1
6.64	218	5 690	24 000	6.3	277	1122/169								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ C1
5.82	249	5 680	24 000	6.6	325	1892/325								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ B1
4.55	319	5 650	23 600	7.3	517	132/29								✓	✓	✓	✓	✓	✓	✓		2KJ4310 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/44	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												1
			C		G															1
			D																	1
	K8									C		D		E						8
	K5		A		B	C		D	E	F		G	H							5
	K3		A		B	C		D	E	F		G	H							3
	A/AZ*			D	E	F	G	H	J	K	L	M	N							9
Adapter type																				
Gearbox mounting type	➞ page 9/37	A, B, F or H																		

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.169																						
368.00	3.9	13 600	73 500	4.4	18	106240/289							✓	✓	✓							**2KJ4411 - ■ ■ A0 ■ - 0 ■ V1**
343.01	4.2	13 600	73 500	4.4	19	52480/153							✓	✓	✓							**2KJ4411 - ■ ■ A0 ■ - 0 ■ U1**
304.94	4.8	13 600	73 500	4.4	24	5184/17							✓	✓	✓							**2KJ4411 - ■ ■ A0 ■ - 0 ■ T1**
273.80	5.3	13 600	73 500	4.4	28	51200/187							✓	✓	✓							**2KJ4411 - ■ ■ A0 ■ - 0 ■ S1**
247.84	5.9	13 600	73 500	4.4	33	12640/51							✓	✓	✓							**2KJ4411 - ■ ■ A0 ■ - 0 ■ R1**
217.70	6.7	13 600	73 500	4.4	40	85120/391							✓	✓	✓							**2KJ4411 - ■ ■ A0 ■ - 0 ■ Q1**
197.27	7.4	13 600	73 500	4.4	46	16768/85							✓	✓	✓	✓						**2KJ4411 - ■ ■ A0 ■ - 0 ■ P1**
175.69	8.3	13 600	73 500	4.4	54	8960/51							✓	✓	✓	✓	✓					**2KJ4411 - ■ ■ A0 ■ - 0 ■ N1**
157.76	9.2	13 600	73 500	4.4	64	56320/357							✓	✓	✓	✓	✓	✓				**2KJ4411 - ■ ■ A0 ■ - 0 ■ M1**
140.77	10	13 600	73 500	4.4	74	55040/391							✓	✓	✓	✓	✓	✓				**2KJ4411 - ■ ■ A0 ■ - 0 ■ L1**
125.49	12	13 600	73 500	4.4	86	6400/51							✓	✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ K1**
111.30	13	13 600	73 500	4.4	101	2560/23							✓	✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ J1**
102.18	14	13 600	73 500	4.4	113	12160/119							✓	✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ H1**
90.03	16	13 600	73 500	4.4	132	35200/391								✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ G1**
73.85	20	13 600	71 200	4.5	176	960/13								✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ F1**
64.75	22	13 600	67 400	4.5	194	5504/85								✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ E1**
50.63	29	13 600	60 600	4.5	302	24960/493								✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ D1**
46.55	31	13 600	58 300	4.7	201	3026/65								✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ C1**
40.82	36	13 600	55 000	4.7	226	15308/375								✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ B1**
31.92	45	13 600	53 400	4.8	355	4628/145								✓	✓	✓	✓	✓	✓			**2KJ4411 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/44		**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**											**1**
				C		**G**														**1**
				D																**1**
		K8									**C**		**D**		**E**					**8**
		K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**5**
		K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**						**3**
		A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**						**9**
Adapter type																				
Gearbox mounting type	➞ page 9/37		**A, B, F or H**																	

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.169																						
44.93	32	12 400	59 900	4.2	68	3100/69							✓	✓	✓							**2KJ4311 - ■ ■ A0 ■ - 0 ■ S1**
41.07	35	13 600	55 100	4.3	80	616/15							✓	✓	✓	✓						**2KJ4311 - ■ ■ A0 ■ - 0 ■ R1**
36.94	39	13 600	52 500	4.3	95	665/18							✓	✓	✓	✓	✓					**2KJ4311 - ■ ■ A0 ■ - 0 ■ Q1**
33.02	44	13 600	49 800	4.4	111	2080/63							✓	✓	✓	✓	✓	✓				**2KJ4311 - ■ ■ A0 ■ - 0 ■ P1**
29.86	49	13 600	47 500	4.4	133	2060/69							✓	✓	✓	✓	✓	✓				**2KJ4311 - ■ ■ A0 ■ - 0 ■ N1**
26.35	55	13 600	44 700	4.4	157	1660/63							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ M1**
23.48	62	13 600	42 200	4.4	186	540/23							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ L1**
21.27	68	13 600	42 300	4.3	206	1340/63							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ K1**
19.13	76	13 600	42 800	4.3	249	440/23								✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ J1**
15.90	91	13 500	43 200	4.4	314	620/39								✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ H1**
14.13	103	12 900	43 200	4.4	386	212/15								✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ G1**
11.26	129	11 700	42 800	4.6	534	980/87								✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ F1**
8.97	162	10 400	41 900	4.8	710	260/29										✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ E1**
8.07	180	8 350	39 300	5.9	396	1364/169								✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ D1**
7.18	202	8 310	38 900	5.9	489	2332/325								✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ C1**
5.72	253	8 210	37 800	6.4	697	2156/377								✓	✓	✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ B1**
4.55	319	7 300	36 400	6.8	967	132/29										✓	✓	✓	✓	✓		**2KJ4311 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																						
Shaft design	→ page 9/44		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													1
				C		G																1
				D																		1
		K8									C		D		E							8
		K5		A		B	C		D	E	F		G	H								5
		K3		A		B	C		D	E	F		G	H								3
		A/AZ*			D	E	F	G	H	J	K	L	M	N								9
Adapter type																						
Gearbox mounting type	→ page 9/37		A, B, F or H																			

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

Selection and ordering data

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FD.189																					
347.35	4.2	19 000	110 900	4.1	36	590499/1700							✓	✓	✓							**2KJ4412 - ■ ■ A0 ■ - 0 ■ T1**
310.76	4.7	19 000	110 900	4.1	43	290563/935							✓	✓	✓							**2KJ4412 - ■ ■ A0 ■ - 0 ■ S1**
280.27	5.2	19 000	110 900	4.1	49	571753/2040							✓	✓	✓							**2KJ4412 - ■ ■ A0 ■ - 0 ■ R1**
247.71	5.9	19 000	110 900	4.1	61	290563/1173							✓	✓	✓							**2KJ4412 - ■ ■ A0 ■ - 0 ■ Q1**
226.42	6.4	19 000	110 900	4.1	71	1443442/6375							✓	✓	✓	✓						**2KJ4412 - ■ ■ A0 ■ - 0 ■ P1**
203.69	7.1	19 000	110 900	4.1	84	1246609/6120							✓	✓	✓	✓	✓					**2KJ4412 - ■ ■ A0 ■ - 0 ■ N1**
182.03	8	19 000	110 900	4.1	98	139256/765							✓	✓	✓	✓	✓	✓				**2KJ4412 - ■ ■ A0 ■ - 0 ■ M1**
164.61	8.8	19 000	110 900	4.1	117	965419/5865							✓	✓	✓	✓	✓	✓				**2KJ4412 - ■ ■ A0 ■ - 0 ■ L1**
145.28	10	19 000	110 900	4.1	136	111137/765							✓	✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ K1**
129.45	11	19 000	110 900	4.1	160	253071/1955							✓	✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ J1**
117.27	12	19 000	110 900	4.1	175	89713/765							✓	✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ H1**
105.48	14	19 000	110 900	4.1	210	206206/1955								✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ G1**
87.65	17	19 000	108 200	4.1	258	22351/255								✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ F1**
77.92	19	19 000	103 200	4.1	314	496769/6375								✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ E1**
62.11	23	19 000	94 000	4.2	422	459277/7395								✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ D1**
49.43	29	19 000	85 400	4.2	533	121849/2465										✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ C1**
40.61	36	19 000	78 400	4.4	478	35329/870								✓	✓	✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ B1**
32.32	45	19 000	70 800	4.4	621	9373/290										✓	✓	✓	✓			**2KJ4412 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/44	**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**										**1**
			C		**G**													**1**
			D															**1**
	K8									**C**		**D**		**E**				**8**
	K5		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**					**5**
	K3		**A**		**B**	**C**		**D**	**E**	**F**		**G**	**H**					**3**
	A/AZ*			**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**					**9**
Adapter type																		
Gearbox mounting type	→ page 9/37	**A, B, F or H**																

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

Selection and ordering data

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
FZ.189																						
37.93	38	19 000	76 100	4.0	143	11948/315							✓	✓	✓	✓	✓	✓				**2KJ4312 - ■ ■ A0 ■ - 0 ■ L1**
34.03	43	19 000	72 500	4.1	169	3914/115							✓	✓	✓	✓	✓	✓				**2KJ4312 - ■ ■ A0 ■ - 0 ■ K1**
30.41	48	19 000	68 900	4.1	202	3193/105							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4312 - ■ ■ A0 ■ - 0 ■ J1**
27.17	53	19 000	65 400	4.1	241	9373/345							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4312 - ■ ■ A0 ■ - 0 ■ H1**
24.85	58	19 000	62 700	4.1	269	7828/315							✓	✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4312 - ■ ■ A0 ■ - 0 ■ G1**
22.09	66	19 000	59 300	4.1	321	7622/345								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4312 - ■ ■ A0 ■ - 0 ■ F1**
18.75	77	19 000	54 700	4.2	410	7313/390								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4312 - ■ ■ A0 ■ - 0 ■ E1**
16.21	89	19 000	50 800	4.2	495	6077/375								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4312 - ■ ■ A0 ■ - 0 ■ D1**
13.26	109	17 600	48 700	4.3	687	5768/435								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4312 - ■ ■ A0 ■ - 0 ■ C1**
10.89	133	16 300	50 000	4.4	906	4738/435										✓	✓	✓	✓	✓	✓	**2KJ4312 - ■ ■ A0 ■ - 0 ■ B1**
8.47	171	14 700	50 400	4.8	1 333	3811/450													✓	✓	✓	**2KJ4312 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	→ page 9/44		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									1
				C		G												1
				D														1
		K8									C		D		E			8
		K5		A		B	C		D	E	F		G	H				5
		K3		A		B	C		D	E	F		G	H				3
		A/AZ*			D	E	F	G	H	J	K	L	M	N				9
Adapter type																		
Gearbox mounting type	→ page 9/37		A, B, F or H															

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

Selection and ordering data

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
FZ.29-D19													
8 237	0.18	150	5 220	-	0.03	93697098/11375		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ P1**
7 157	0.20	150	5 220	-	0.04	81408954/11375		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ N1**
6 506	0.22	150	5 220	-	0.04	14801628/2275		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ M1**
5 536	0.26	150	5 220	-	0.06	62976738/11375		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ L1**
5 033	0.29	150	5 220	-	0.07	11450316/2275		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ K1**
4 389	0.33	150	5 220	-	0.08	768009/175		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ J1**
3 928	0.37	150	5 220	-	0.11	8936832/2275		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ H1**
3 488	0.42	150	5 220	-	0.13	7936093/2275		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ G1**
3 220	0.45	150	5 220	-	0.16	95233116/29575		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ F1**
2 797	0.52	150	5 220	-	0.17	44544522/15925		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ E1**
2 431	0.60	150	5 220	-	0.18	27648324/11375		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ D1**
2 194	0.66	150	5 220	-	0.22	768009/350		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ C1**
2 065	0.70	150	5 220	-	0.26	361416/175		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ B1**
1 800	0.81	150	5 220	-	0.29	4096048/2275		✓					**2KJ4321 - ■ ■ A 0 ■ - 0 ■ A1**
FZ.29-Z19													
1 760	0.82	150	5 220	-	0.02	1715912/975		✓					**2KJ4320 - ■ ■ A 0 ■ - 0 ■ R1**
1 558	0.93	150	5 220	-	0.03	2532354/1625		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ Q1**
1 354	1.1	150	5 220	-	0.04	2200242/1625		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ P1**
1 231	1.2	150	5 220	-	0.05	400044/325		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ N1**
1 047	1.4	150	5 220	-	0.07	1702074/1625		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ M1**
952	1.5	150	5 220	-	0.08	309468/325		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ L1**
830	1.7	150	5 220	-	0.09	20757/25		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ K1**
743	2	150	5 220	-	0.12	241536/325		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ J1**
660	2.2	150	5 220	-	0.15	214489/325		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ H1**
609	2.4	150	5 220	-	0.18	2573868/4225		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ G1**
529	2.7	150	5 220	-	0.2	1203906/2275		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ F1**
460	3.2	150	5 220	-	0.21	747252/1625		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ E1**
415	3.5	150	5 220	-	0.27	20757/50		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ D1**
391	3.7	150	5 220	-	0.32	9768/25		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ C1**
340.63	4.3	150	5 220	-	0.36	110704/325		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ B1**
314.27	4.6	150	5 220	-	0.19	428978/1365		✓	✓				**2KJ4320 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/44	**1 or 9**								
Adapter size	KS	**A**	**E**	**H**	**K**	**M**			**1**	
		B	**F**	**J**		**N**			**1**	
		C	**G**						**1**	
		D							**1**	
Adapter type										
Gearbox mounting type	➞ page 9/37	**A, B, F or H**								

Transmission ratios and torques for very low speeds

Selection and ordering data

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
FZ.39-D19													
8 247	0.18	230	6 040	-	0.04	262670067/31850		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ N1**
7 497	0.19	230	6 040	-	0.04	23879097/3185		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ M1**
6 380	0.23	230	6 040	-	0.06	203197599/31850		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ L1**
5 800	0.25	230	6 040	-	0.07	18472509/3185		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ K1**
5 057	0.29	230	6 040	-	0.08	4956039/980		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ J1**
4 527	0.32	230	6 040	-	0.11	14417568/3185		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ H1**
4 020	0.36	230	6 040	-	0.13	51212403/12740		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ G1**
3 711	0.39	230	6 040	-	0.16	153637209/41405		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ F1**
3 223	0.45	230	6 040	-	0.17	143725131/44590		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ E1**
2 801	0.52	230	6 040	-	0.18	44604351/15925		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ D1**
2 529	0.57	230	6 040	-	0.22	4956039/1960		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ C1**
2 380	0.61	230	6 040	-	0.26	9912078/4165		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ B1**
2 075	0.7	230	6 040	-	0.29	6608052/3185		✓					**2KJ4323 - ■ ■ A 0 ■ - 0 ■ A1**
FZ.39-Z19													
2 028	0.71	230	6 040	-	0.02	922746/455		✓					**2KJ4322 - ■ ■ A 0 ■ - 0 ■ T1**
1 796	0.81	230	6 040	-	0.03	8170767/4550		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ S1**
1 560	0.93	230	6 040	-	0.04	7099191/4550		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ R1**
1 418	1.0	230	6 040	-	0.05	645381/455		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ Q1**
1 207	1.2	230	6 040	-	0.07	5491827/4550		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ P1**
1 097	1.3	230	6 040	-	0.08	499257/455		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ N1**
957	1.5	230	6 040	-	0.09	133947/140		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ M1**
856	1.7	230	6 040	-	0.12	389664/455		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ L1**
761	1.9	230	6 040	-	0.15	1384119/1820		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ K1**
702	2.1	230	6 040	-	0.18	4152357/5915		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ J1**
610	2.4	230	6 040	-	0.2	3884463/6370		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ H1**
530	2.7	230	6 040	-	0.21	1205523/2275		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ G1**
478	3.0	230	6 040	-	0.27	133947/280		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ F1**
450	3.2	230	6 040	-	0.32	267894/595		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ E1**
393	3.7	230	6 040	-	0.36	178596/455		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ D1**
362	4.0	230	6 040	-	0.19	461373/1274		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ C1**
314.58	4.6	230	6 040	-	0.22	431607/1372		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ B1**
273.36	5.3	230	6 040	-	0.23	133947/490		✓	✓				**2KJ4322 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement												
Shaft design	→ page 9/44		**1 or 9**									
Adapter size		KS	**A**	**E**	**H**	**K**	**M**					**1**
			B	**F**	**J**		**N**					**1**
			C	**G**								**1**
			D									**1**
Adapter type												
Gearbox mounting type	→ page 9/37		**A, B, F or H**									

Selection and ordering data

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
FD.49-D19													
14 685	0.10	480	7 960	-	0.07	14699730/1001		✓					2KJ4425 - ■ ■ A 0 ■ - 0 ■ C1
12 805	0.11	480	7 960	-	0.08	179265/14		✓					2KJ4425 - ■ ■ A 0 ■ - 0 ■ B1
11 461	0.13	480	7 960	-	0.11	11472960/1001		✓					2KJ4425 - ■ ■ A 0 ■ - 0 ■ A1
FD.49-Z19													
752	1.9	480	7 960	-	0.21	3762/5		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ J1
679	2.1	480	7 960	-	0.28	2717/4		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ H1
639	2.3	480	7 960	-	0.32	10868/17		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ G1
557	2.6	480	7 960	-	0.37	1672/3		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ F1
514	2.8	480	7 960	-	0.20	32395/63		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ E1
447	3.2	480	7 960	-	0.23	393965/882		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ D1
388	3.7	480	7 960	-	0.25	2717/7		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ C1
350	4.1	480	7 960	-	0.32	176605/504		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ B1
329.79	4.4	480	7 960	-	0.37	353210/1071		✓	✓				2KJ4424 - ■ ■ A 0 ■ - 0 ■ A1
FZ.49-D19													
11 357	0.13	480	7 960	-	0.02	46506262/4095		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ Q1
10 056	0.14	480	7 960	-	0.03	45756161/4550		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ P1
8 737	0.17	480	7 960	-	0.04	39755353/4550		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ N1
7 943	0.18	480	7 960	-	0.04	3614123/455		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ M1
6 759	0.21	480	7 960	-	0.06	30754141/4550		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ L1
6 145	0.24	480	7 960	-	0.07	2795831/455		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ K1
5 358	0.27	480	7 960	-	0.08	750101/140		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ J1
4 796	0.3	480	7 960	-	0.11	2182112/455		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ H1
4 259	0.34	480	7 960	-	0.13	23253131/5460		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ G1
3 931	0.37	480	7 960	-	0.16	23253131/5915		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ F1
3 415	0.42	480	7 960	-	0.17	21752929/6370		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ E1
2 967	0.49	480	7 960	-	0.18	6750909/2275		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ D1
2 679	0.54	480	7 960	-	0.22	750101/280		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ C1
2 521	0.58	480	7 960	-	0.26	1500202/595		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ B1
2 198	0.66	480	7 960	-	0.29	3000404/1365		✓					2KJ4325 - ■ ■ A 0 ■ - 0 ■ A1
FZ.49-Z19													
2 149	0.67	480	7 960	-	0.02	1256926/585		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ J1
1 903	0.76	480	7 960	-	0.03	1236653/650		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ H1
1 653	0.88	480	7 960	-	0.04	1074469/650		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ G1
1 503	0.96	480	7 960	-	0.05	97679/65		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ F1
1 279	1.1	480	7 960	-	0.07	831193/650		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ E1
1 163	1.2	480	7 960	-	0.08	75563/65		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ D1
1 014	1.4	480	7 960	-	0.09	20273/20		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ C1
907	1.6	480	7 960	-	0.13	58976/65		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ B1
806	1.8	480	7 960	-	0.15	628463/780		✓	✓				2KJ4324 - ■ ■ A 0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/44		1 or 9							
Adapter size	KS	A	E	H	K	M			1	
		B	F	J		N			1	
		C	G						1	
		D							1	
Adapter type										
Gearbox mounting type	→ page 9/37		A, B, F or H							

Transmission ratios and torques for very low speeds

Selection and ordering data

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
FD.69-D19													
13 479	0.11	600	10 800	-	0.08	94350/7		✓					**2KJ4427 - ■■ A0 ■ - 0 ■ B1**
12 065	0.12	600	10 800	-	0.11	12076800/1001		✓					**2KJ4427 - ■■ A0 ■ - 0 ■ A1**
FD.69-Z19													
1 200	1.2	600	10 800	-	0.32	1200/1		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ M1**
1 046	1.4	600	10 800	-	0.37	13600/13		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ L1**
965	1.5	600	10 800	-	0.19	263500/273		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ K1**
838	1.7	600	10 800	-	0.22	123250/147		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ J1**
729	2.0	600	10 800	-	0.23	5100/7		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ H1**
658	2.2	600	10 800	-	0.30	27625/42		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ G1**
619	2.3	600	10 800	-	0.35	13000/21		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ F1**
587	2.5	600	10 800	-	0.37	1760/3		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ E1**
541	2.7	600	10 800	-	0.20	34100/63		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ D1**
470	3.1	600	10 800	-	0.23	207350/441		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ C1**
409	3.5	600	10 800	-	0.25	2860/7		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ B1**
369	3.9	600	10 800	-	0.32	46475/126		✓	✓				**2KJ4426 - ■■ A0 ■ - 0 ■ A1**
FZ.69-D19													
11 955	0.12	600	10 800	-	0.02	9790792/819		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ Q1**
10 586	0.14	600	10 800	-	0.03	4816438/455		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ P1**
9 197	0.16	600	10 800	-	0.04	4184774/455		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ N1**
8 361	0.17	600	10 800	-	0.04	760868/91		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ M1**
7 115	0.20	600	10 800	-	0.06	3237278/455		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ L1**
6 468	0.22	600	10 800	-	0.07	588596/91		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ K1**
5 640	0.26	600	10 800	-	0.08	39479/7		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ J1**
5 048	0.29	600	10 800	-	0.11	459392/91		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ H1**
4 483	0.32	600	10 800	-	0.13	1223849/273		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ G1**
4 138	0.35	600	10 800	-	0.16	4895396/1183		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ F1**
3 595	0.4	600	10 800	-	0.17	2289782/637		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ E1**
3 124	0.46	600	10 800	-	0.18	1421244/455		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ D1**
2 820	0.51	600	10 800	-	0.22	39479/14		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ C1**
2 654	0.55	600	10 800	-	0.26	315832/119		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ B1**
2 314	0.63	600	10 800	-	0.29	631664/273		✓					**2KJ4327 - ■■ A0 ■ - 0 ■ A1**
FZ.69-Z19													
2 262	0.64	600	10 800	-	0.02	264616/117		✓					**2KJ4326 - ■■ A0 ■ - 0 ■ F1**
2 003	0.72	600	10 800	-	0.03	130174/65		✓	✓				**2KJ4326 - ■■ A0 ■ - 0 ■ E1**
1 740	0.83	600	10 800	-	0.04	113102/65		✓	✓				**2KJ4326 - ■■ A0 ■ - 0 ■ D1**
1 582	0.92	600	10 800	-	0.05	20564/13		✓	✓				**2KJ4326 - ■■ A0 ■ - 0 ■ C1**
1 346	1.1	600	10 800	-	0.07	87494/65		✓	✓				**2KJ4326 - ■■ A0 ■ - 0 ■ B1**
1 224	1.2	600	10 800	-	0.08	15908/13		✓	✓				**2KJ4326 - ■■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	➞ page 9/44		**1 or 9**						
Adapter size		KS	**A**	**E**	**H**	**K**	**M**		**1**
			B	**F**	**J**		**N**		**1**
			C	**G**					**1**
			D						**1**
Adapter type									
Gearbox mounting type	➞ page 9/37		**A, B, F or H**						

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.79-D39																
17 865	0.08	1 000	13 600	-	0.08	583103521/32640		✓	✓	✓	✓					**2KJ4430 - ■ ■ A0 ■ - 0 ■ E1**
16 241	0.09	1 000	13 600	-	0.10	53009411/3264		✓	✓	✓	✓					**2KJ4430 - ■ ■ A0 ■ - 0 ■ D1**
14 240	0.10	1 000	13 600	-	0.12	278875597/19584		✓	✓	✓	✓	✓	✓			**2KJ4430 - ■ ■ A0 ■ - 0 ■ C1**
12 710	0.11	1 000	13 600	-	0.15	6914271/544		✓	✓	✓	✓	✓	✓			**2KJ4430 - ■ ■ A0 ■ - 0 ■ B1**
11 327	0.13	1 000	13 600	-	0.17	887331445/78336		✓	✓	✓	✓	✓	✓			**2KJ4430 - ■ ■ A0 ■ - 0 ■ A1**
FZ.79-D39																
11 301	0.13	1 000	13600	-	0.03	155608271/13770		✓	✓							**2KJ4330 - ■ ■ A0 ■ - 0 ■ N1**
10 023	0.14	1 000	13 600	-	0.05	6765577/675		✓	✓							**2KJ4330 - ■ ■ A0 ■ - 0 ■ M1**
8 696	0.17	1 000	13 600	-	0.05	399169043/45900		✓	✓							**2KJ4330 - ■ ■ A0 ■ - 0 ■ L1**
7 906	0.18	1 000	13 600	-	0.07	399169043/50490		✓	✓	✓	✓					**2KJ4330 - ■ ■ A0 ■ - 0 ■ K1**
6 780	0.21	1 000	13 600	-	0.08	155608271/22950		✓	✓	✓	✓					**2KJ4330 - ■ ■ A0 ■ - 0 ■ J1**
6 164	0.24	1 000	13 600	-	0.10	155608271/25245		✓	✓	✓	✓					**2KJ4330 - ■ ■ A0 ■ - 0 ■ H1**
5 405	0.27	1 000	13 600	-	0.12	74421347/13770		✓	✓	✓	✓	✓	✓			**2KJ4330 - ■ ■ A0 ■ - 0 ■ G1**
4 824	0.30	1 000	13 600	-	0.15	13531154/2805		✓	✓	✓	✓	✓	✓			**2KJ4330 - ■ ■ A0 ■ - 0 ■ F1**
4 299	0.34	1 000	13 600	-	0.17	47359039/11016		✓	✓	✓	✓	✓	✓			**2KJ4330 - ■ ■ A0 ■ - 0 ■ E1**
3 968	0.37	1 000	13 600	-	0.21	3643003/918		✓	✓	✓	✓	✓	✓			**2KJ4330 - ■ ■ A0 ■ - 0 ■ D1**
3 474	0.42	1 000	13 600	-	0.25	10631621/3060		✓	✓	✓	✓	✓	✓			**2KJ4330 - ■ ■ A0 ■ - 0 ■ C1**
3 046	0.48	1 000	13 600	-	0.23	209732887/68850		✓	✓	✓	✓	✓	✓			**2KJ4330 - ■ ■ A0 ■ - 0 ■ B1**
2 764	0.52	1 000	13 600	-	0.33	6765577/2448		✓	✓	✓	✓	✓	✓			**2KJ4330 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/44				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			1
			C		G						1
			D								1
	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	➞ page 9/37				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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	'	10^{-4} kgm²	-										
							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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FZ.79-Z39																
2 687	0.54	1 000	13 600	-	0.06	13059137/4860		✓	✓							**2KJ4328 - ■ ■ A0 ■ - 0 ■ S2**
2 389	0.61	1 000	13 600	-	0.07	6450899/2700		✓	✓	✓	✓					**2KJ4328 - ■ ■ A0 ■ - 0 ■ R1**
2 098	0.69	1 000	13 600	-	0.08	157339/75		✓	✓	✓	✓					**2KJ4328 - ■ ■ A0 ■ - 0 ■ Q1**
1 907	0.76	1 000	13 600	-	0.10	314678/165		✓	✓	✓	✓					**2KJ4328 - ■ ■ A0 ■ - 0 ■ P1**
1 632	0.89	1 000	13 600	-	0.12	1101373/675		✓	✓	✓	✓					**2KJ4328 - ■ ■ A0 ■ - 0 ■ N1**
1 483	0.98	1 000	13 600	-	0.14	2202746/1485		✓	✓	✓	✓					**2KJ4328 - ■ ■ A0 ■ - 0 ■ M1**
1 311	1.1	1 000	13 600	-	0.17	157339/120		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ L1**
1 192	1.2	1 000	13 600	-	0.22	157339/132		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ K1**
1 044	1.4	1 000	13 600	-	0.26	6765577/6480		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ J1**
964	1.5	1 000	13 600	-	0.31	520429/540		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ H1**
853	1.7	1 000	13 600	-	0.36	921557/1080		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ G1**
710	2.0	1 000	13 600	-	0.48	2045407/2880		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ F1**
668	2.2	1 000	13 600	-	0.56	2045407/3060		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ E1**
599	2.4	1 000	13 600	-	0.61	5821543/9720		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ D1**
510	2.8	1 000	13 600	-	0.79	1101373/2160		✓	✓	✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ C1**
437	3.3	1 000	13 600	-	1.03	157339/360				✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ B1**
376	3.9	1 000	13 600	-	1.31	4877509/12960				✓	✓	✓	✓			**2KJ4328 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/44		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			1
			C		G						1
			D								1
	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	→ page 9/37		A, B, F or H								

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.89-D39																
17 750	0.08	1 850	17 400	-	0.12	15389528/867			✓	✓	✓	✓	✓	✓			**2KJ4432 - ■ ■ A0 ■ - 0 ■ B1**
15 843	0.09	1 850	17 400	-	0.15	50365728/3179			✓	✓	✓	✓	✓	✓			**2KJ4432 - ■ ■ A0 ■ - 0 ■ A1**
FD.89-Z39																
648	2.2	1 850	17 400	-	0.75	47389680/73117			✓	✓	✓	✓	✓	✓			**2KJ4431 - ■ ■ A0 ■ - 0 ■ E1**
581	2.5	1 850	17 400	-	0.85	7493240/12903			✓	✓	✓	✓	✓	✓			**2KJ4431 - ■ ■ A0 ■ - 0 ■ D1**
494	2.9	1 850	17 400	-	1.12	2126460/4301			✓	✓	✓	✓	✓	✓			**2KJ4431 - ■ ■ A0 ■ - 0 ■ C1**
424	3.4	1 850	17 400	-	1.48	1822680/4301					✓	✓	✓	✓			**2KJ4431 - ■ ■ A0 ■ - 0 ■ B1**
365	4	1 850	17 400	-	1.91	1569530/4301					✓	✓	✓	✓			**2KJ4431 - ■ ■ A0 ■ - 0 ■ A1**
FZ.89-D39																
14 522	0.1	1 850	17 400	-	0.03	33327322/2295			✓	✓							**2KJ4332 - ■ ■ A0 ■ - 0 ■ N1**
12 880	0.11	1 850	17 400	-	0.05	2898028/225			✓	✓							**2KJ4332 - ■ ■ A0 ■ - 0 ■ M1**
11 175	0.13	1 850	17 400	-	0.05	42745913/3825			✓	✓							**2KJ4332 - ■ ■ A0 ■ - 0 ■ L1**
10 159	0.14	1 850	17 400	-	0.07	85491826/8415			✓	✓	✓	✓					**2KJ4332 - ■ ■ A0 ■ - 0 ■ K1**
8 713	0.17	1 850	17 400	-	0.08	33327322/3825			✓	✓	✓	✓					**2KJ4332 - ■ ■ A0 ■ - 0 ■ J1**
7 921	0.18	1 850	17 400	-	0.10	66654644/8415			✓	✓	✓	✓					**2KJ4332 - ■ ■ A0 ■ - 0 ■ H1**
6 945	0.21	1 850	17 400	-	0.12	15939154/2295			✓	✓	✓	✓	✓	✓			**2KJ4332 - ■ ■ A0 ■ - 0 ■ G1**
6 299	0.23	1 850	17 400	-	0.15	5796056/935			✓	✓	✓	✓	✓	✓			**2KJ4332 - ■ ■ A0 ■ - 0 ■ F1**
5 525	0.26	1 850	17 400	-	0.17	5071549/918			✓	✓	✓	✓	✓	✓			**2KJ4332 - ■ ■ A0 ■ - 0 ■ E1**
5 100	0.28	1 850	17 400	-	0.21	10143098/1989			✓	✓	✓	✓	✓	✓			**2KJ4332 - ■ ■ A0 ■ - 0 ■ D1**
4 465	0.32	1 850	17 400	-	0.25	1138511/255			✓	✓	✓	✓	✓	✓			**2KJ4332 - ■ ■ A0 ■ - 0 ■ C1**
3 915	0.37	1 850	17 400	-	0.23	44919434/11475			✓	✓	✓	✓	✓	✓			**2KJ4332 - ■ ■ A0 ■ - 0 ■ B1**
3 552	0.41	1 850	17 400	-	0.33	724507/204			✓	✓	✓	✓	✓	✓			**2KJ4332 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/44			**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		**1**
			C		G					**1**
			D							**1**
	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	→ page 9/37			**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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FZ.89-Z39																
3 453	0.42	1 850	17 400	-	0.06	1398467/405		✓	✓							**2KJ4331 - ■ ■ A0 ■ - 0 ■ P1**
3 070	0.47	1 850	17 400	-	0.07	690809/225		✓	✓	✓	✓					**2KJ4331 - ■ ■ A0 ■ - 0 ■ N1**
2 696	0.54	1 850	17 400	-	0.08	67396/25		✓	✓	✓	✓					**2KJ4331 - ■ ■ A0 ■ - 0 ■ M1**
2 451	0.59	1 850	17 400	-	0.10	134792/55		✓	✓	✓	✓					**2KJ4331 - ■ ■ A0 ■ - 0 ■ L1**
2 097	0.69	1 850	17 400	-	0.12	471772/225		✓	✓	✓	✓					**2KJ4331 - ■ ■ A0 ■ - 0 ■ K1**
1 906	0.76	1 850	17 400	-	0.14	943544/495		✓	✓	✓	✓					**2KJ4331 - ■ ■ A0 ■ - 0 ■ J1**
1 685	0.86	1 850	17 400	-	0.17	16849/10		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ H1**
1 532	0.95	1 850	17 400	-	0.22	16849/11		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ G1**
1 342	1.1	1 850	17 400	-	0.26	724507/540		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ F1**
1 238	1.2	1 850	17 400	-	0.31	724507/585		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ E1**
1 097	1.3	1 850	17 400	-	0.36	98687/90		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ D1**
913	1.6	1 850	17 400	-	0.48	219037/240		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ C1**
859	1.7	1 850	17 400	-	0.56	219037/255		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ B1**
770	1.9	1 850	17 400	-	0.61	623413/810		✓	✓	✓	✓	✓	✓			**2KJ4331 - ■ ■ A0 ■ - 0 ■ A1**
FD.109-D39																
22 701	0.06	3 100	25 000	-	0.05	5286392566/232875		✓	✓							**2KJ4434 - ■ ■ A0 ■ - 0 ■ L1**
20 637	0.07	3 100	25 000	-	0.07	10572785132/512325		✓	✓	✓	✓					**2KJ4434 - ■ ■ A0 ■ - 0 ■ K1**
17 699	0.08	3 100	25 000	-	0.08	179199748/10125		✓	✓	✓	✓					**2KJ4434 - ■ ■ A0 ■ - 0 ■ J1**
16 090	0.09	3 100	25 000	-	0.10	358399496/22275		✓	✓	✓	✓					**2KJ4434 - ■ ■ A0 ■ - 0 ■ H1**
14 108	0.10	3 100	25 000	-	0.12	1971197228/139725		✓	✓	✓	✓	✓	✓			**2KJ4434 - ■ ■ A0 ■ - 0 ■ G1**
12 592	0.12	3 100	25 000	-	0.15	716798992/56925		✓	✓	✓	✓	✓	✓			**2KJ4434 - ■ ■ A0 ■ - 0 ■ F1**
11 222	0.13	3 100	25 000	-	0.18	313599559/27945		✓	✓	✓	✓	✓	✓			**2KJ4434 - ■ ■ A0 ■ - 0 ■ E1**
10 359	0.14	3 100	25 000	-	0.21	96492172/9315		✓	✓	✓	✓	✓	✓			**2KJ4434 - ■ ■ A0 ■ - 0 ■ D1**
9 069	0.16	3 100	25 000	-	0.25	140799802/15525		✓	✓	✓	✓	✓	✓			**2KJ4434 - ■ ■ A0 ■ - 0 ■ C1**
7 952	0.18	3 100	25 000	-	0.23	5555192188/698625		✓	✓	✓	✓	✓	✓			**2KJ4434 - ■ ■ A0 ■ - 0 ■ B1**
7 214	0.2	3 100	25 000	-	0.33	44799937/6210		✓	✓	✓	✓	✓	✓			**2KJ4434 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/44	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			1
			C		G						1
			D								1
	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	→ page 9/37	A, B, F or H									

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										
							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		**5.3**					
									4.2							
							K5		**56**		**140**	**180**		**210**	**250**	
							K3		**56**		**140**	**180**		**210**	**250**	
							A/AZ			**80**	**90**	**100**	**112**	**132**	**160**	
FD.109-Z39																
7 014	0.21	3 100	25 000	-	0.06	2940126098/419175		✓	✓							**2KJ4433 - ■ ■ A0 ■ - 0 ■ A2**
6 237	0.23	3 100	25 000	-	0.07	1452351446/232875		✓	✓	✓	✓					**2KJ4433 - ■ ■ A0 ■ - 0 ■ X1**
5 476	0.26	3 100	25 000	-	0.09	141692824/25875		✓	✓	✓	✓					**2KJ4433 - ■ ■ A0 ■ - 0 ■ W1**
4 978	0.29	3 100	25 000	-	0.10	283385648/56925		✓	✓	✓	✓					**2KJ4433 - ■ ■ A0 ■ - 0 ■ V1**
4 259	0.34	3 100	25 000	-	0.12	991849768/232875		✓	✓	✓	✓					**2KJ4433 - ■ ■ A0 ■ - 0 ■ U1**
3 872	0.37	3 100	25 000	-	0.15	1983699536/512325		✓	✓	✓	✓					**2KJ4433 - ■ ■ A0 ■ - 0 ■ T1**
3 423	0.42	3 100	25 000	-	0.17	17711603/5175		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ S1**
3 111	0.47	3 100	25 000	-	0.23	35423206/11385		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ R1**
2 725	0.53	3 100	25 000	-	0.27	761598929/279450		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ Q1**
2 516	0.58	3 100	25 000	-	0.32	117169066/46575		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ P1**
2 227	0.65	3 100	25 000	-	0.38	103739389/46575		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ N1**
1 854	0.78	3 100	25 000	-	0.50	230250839/124200		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ M1**
1 745	0.83	3 100	25 000	-	0.59	27088334/15525		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ L1**
1 563	0.93	3 100	25 000	-	0.64	655329311/419175		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ K1**
1 331	1.1	3 100	25 000	-	0.84	123981221/93150		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ J1**
1 141	1.3	3 100	25 000	-	1.10	17711603/15525				✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ H1**
982	1.5	3 100	25 000	-	1.40	549059693/558900				✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ G1**
810	1.8	3 100	25 000	-	0.73	154343969/190440		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ F1**
763	1.9	3 100	25 000	-	0.84	18158114/23805		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ E1**
683	2.1	3 100	25 000	-	0.96	439286681/642735		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ D1**
582	2.5	3 100	25 000	-	1.28	83108291/142830		✓	✓	✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ C1**
499	2.9	3 100	25 000	-	1.70	11872613/23805				✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ B1**
429	3.4	3 100	25 000	-	2.20	368051003/856980				✓	✓	✓	✓			**2KJ4433 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/44	**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**		**1**
			C		**G**					**1**
			D							**1**
	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	→ page 9/37	**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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.129-D49																
27 777	0.05	4 850	37 200	-	0.08	31110629/1120		✓	✓							**2KJ4436 - ■ ■ A0 ■ - 0 ■ N1**
25 252	0.06	4 850	37 200	-	0.10	2828239/112		✓	✓	✓	✓					**2KJ4436 - ■ ■ A0 ■ - 0 ■ M1**
21 605	0.07	4 850	37 200	-	0.12	31110629/1440		✓	✓	✓	✓					**2KJ4436 - ■ ■ A0 ■ - 0 ■ L1**
19 641	0.07	4 850	37 200	-	0.14	2828239/144		✓	✓	✓	✓					**2KJ4436 - ■ ■ A0 ■ - 0 ■ K1**
17 361	0.08	4 850	37 200	-	0.17	31110629/1792		✓	✓	✓	✓	✓	✓			**2KJ4436 - ■ ■ A0 ■ - 0 ■ J1**
15 783	0.09	4 850	37 200	-	0.22	14141195/896		✓	✓	✓	✓	✓	✓			**2KJ4436 - ■ ■ A0 ■ - 0 ■ H1**
13 824	0.10	4 850	37 200	-	0.26	1337757047/96768		✓	✓	✓	✓	✓	✓			**2KJ4436 - ■ ■ A0 ■ - 0 ■ G1**
12 761	0.11	4 850	37 200	-	0.31	1337757047/104832		✓	✓	✓	✓	✓	✓			**2KJ4436 - ■ ■ A0 ■ - 0 ■ F1**
11 298	0.13	4 850	37 200	-	0.37	1275535789/112896		✓	✓	✓	✓	✓	✓	✓		**2KJ4436 - ■ ■ A0 ■ - 0 ■ E1**
9 404	0.15	4 850	37 200	-	0.50	404438177/43008		✓	✓	✓	✓	✓	✓	✓		**2KJ4436 - ■ ■ A0 ■ - 0 ■ D1**
8 851	0.16	4 850	37 200	-	0.59	23790481/2688		✓	✓	✓	✓	✓	✓	✓		**2KJ4436 - ■ ■ A0 ■ - 0 ■ C1**
7 930	0.18	4 850	37 200	-	0.65	1151093273/145152		✓	✓	✓	✓	✓	✓	✓		**2KJ4436 - ■ ■ A0 ■ - 0 ■ B1**
6 751	0.21	4 850	37 200	-	0.85	31110629/4608		✓	✓	✓	✓	✓	✓	✓		**2KJ4436 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/44	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		1
			C		G					1
			D							1
	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	→ page 9/37	A, B, F or H								

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	**K4**	**63**	**71**	**80**	**90**	**100**	**112**	**132**	**160**	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	**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		**5.3**					
									4.2							
							K5		**56**		**140**	**180**		**210**	**250**	
							K3		**56**		**140**	**180**		**210**	**250**	
							A/AZ			**80**	**90**	**100**	**112**	**132**	**160**	
FD.129-Z49																
6 604	0.22	4 850	37 200	-	0.18	177513589/26880		✓	✓	✓	✓					**2KJ4435 - ■ ■ A0 ■ - 0 ■ B2**
6 004	0.24	4 850	37 200	-	0.21	16137599/2688		✓	✓	✓	✓					**2KJ4435 - ■ ■ A0 ■ - 0 ■ A2**
5 106	0.28	4 850	37 200	-	0.27	9150185/1792		✓	✓	✓	✓					**2KJ4435 - ■ ■ A0 ■ - 0 ■ X1**
4 642	0.31	4 850	37 200	-	0.32	4159175/896		✓	✓	✓	✓					**2KJ4435 - ■ ■ A0 ■ - 0 ■ W1**
4 142	0.35	4 850	37 200	-	0.38	133592701/32256		✓	✓	✓	✓	✓	✓			**2KJ4435 - ■ ■ A0 ■ - 0 ■ V1**
3 714	0.39	4 850	37 200	-	0.45	831835/224		✓	✓	✓	✓	✓	✓			**2KJ4435 - ■ ■ A0 ■ - 0 ■ U1**
3 347	0.43	4 850	37 200	-	0.53	107972183/32256		✓	✓	✓	✓	✓	✓			**2KJ4435 - ■ ■ A0 ■ - 0 ■ T1**
3 090	0.47	4 850	37 200	-	0.63	107972183/34944		✓	✓	✓	✓	✓	✓			**2KJ4435 - ■ ■ A0 ■ - 0 ■ S1**
2 821	0.51	4 850	37 200	-	0.75	53071073/18816		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ R1**
2 340	0.62	4 850	37 200	-	0.95	100652035/43008		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ Q1**
2 203	0.66	4 850	37 200	-	1.10	100652035/45696		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ P1**
2 080	0.70	4 850	37 200	-	1.25	100652035/48384		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ N1**
1 770	0.82	4 850	37 200	-	1.53	23790481/13440		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ M1**
1 516	0.96	4 850	37 200	-	1.89	1164569/768				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ L1**
1 333	1.1	4 850	37 200	-	2.3	86011739/64512				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ K1**
1 125	1.3	4 850	37 200	-	2.9	34770703/30912				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ J1**
980	1.5	4 850	37 200	-	3.9	5490111/5600				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ H1**
967	1.5	4 850	37 200	-	1.51	27620791/28560		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ G1**
913	1.6	4 850	37 200	-	1.71	27620791/30240		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ F1**
777	1.9	4 850	37 200	-	2.2	32642753/42000		✓	✓	✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ E1**
666	2.2	4 850	37 200	-	2.8	1597897/2400				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ D1**
585	2.5	4 850	37 200	-	3.5	118016107/201600				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ C1**
494	2.9	4 850	37 200	-	4.5	47708639/96600				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ B1**
430	3.4	4 850	37 200	-	6.0	7532943/17500				✓	✓	✓	✓	✓		**2KJ4435 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/44	**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**			**1**
			C		**G**						**1**
			D								**1**
	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	→ page 9/37	**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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.149-D49																
27 793	0.05	8 000	65 000	-	0.08	1361853/49		✓	✓							**2KJ4438 - ■ ■ A0 ■ - 0 ■ N1**
25 266	0.06	8 000	65 000	-	0.10	13618530/539		✓	✓	✓	✓					**2KJ4438 - ■ ■ A0 ■ - 0 ■ M1**
21 617	0.07	8 000	65 000	-	0.12	151317/7		✓	✓	✓	✓					**2KJ4438 - ■ ■ A0 ■ - 0 ■ L1**
19 652	0.07	8 000	65 000	-	0.14	1513170/77		✓	✓	✓	✓					**2KJ4438 - ■ ■ A0 ■ - 0 ■ K1**
17 371	0.08	8 000	65 000	-	0.17	6809265/392		✓	✓	✓	✓	✓	✓			**2KJ4438 - ■ ■ A0 ■ - 0 ■ J1**
15 791	0.09	8 000	65 000	-	0.22	34046325/2156		✓	✓	✓	✓	✓	✓			**2KJ4438 - ■ ■ A0 ■ - 0 ■ H1**
13 832	0.10	8 000	65 000	-	0.26	10844385/784		✓	✓	✓	✓	✓	✓			**2KJ4438 - ■ ■ A0 ■ - 0 ■ G1**
12 768	0.11	8 000	65 000	-	0.31	32533155/2548		✓	✓	✓	✓	✓	✓			**2KJ4438 - ■ ■ A0 ■ - 0 ■ F1**
11 305	0.13	8 000	65 000	-	0.37	31019985/2744		✓	✓	✓	✓	✓	✓	✓		**2KJ4438 - ■ ■ A0 ■ - 0 ■ E1**
9 409	0.15	8 000	65 000	-	0.50	29506815/3136		✓	✓	✓	✓	✓	✓	✓		**2KJ4438 - ■ ■ A0 ■ - 0 ■ D1**
8 856	0.16	8 000	65 000	-	0.59	1735695/196		✓	✓	✓	✓	✓	✓	✓		**2KJ4438 - ■ ■ A0 ■ - 0 ■ C1**
7 935	0.18	8 000	65 000	-	0.66	3110405/392		✓	✓	✓	✓	✓	✓	✓		**2KJ4438 - ■ ■ A0 ■ - 0 ■ B1**
6 755	0.21	8 000	65 000	-	0.86	756585/112		✓	✓	✓	✓	✓	✓	✓		**2KJ4438 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/44	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		1
			C		G					1
			D							1
	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	→ page 9/37	A, B, F or H								

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	'	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.149-Z49																
6 608	0.22	8 000	65 000	-	0.18	2590191/392			✓	✓	✓	✓					**2KJ4437 - ■ ■ A0 ■ - 0 ■ B2**
6 007	0.24	8 000	65 000	-	0.22	12950955/2156			✓	✓	✓	✓					**2KJ4437 - ■ ■ A0 ■ - 0 ■ A2**
5 109	0.28	8 000	65 000	-	0.28	2002725/392			✓	✓	✓	✓					**2KJ4437 - ■ ■ A0 ■ - 0 ■ X1**
4 545	0.32	8 000	65 000	-	0.34	10013625/2156			✓	✓	✓	✓					**2KJ4437 - ■ ■ A0 ■ - 0 ■ W1**
4 144	0.35	8 000	65 000	-	0.39	3248865/784			✓	✓	✓	✓	✓	✓			**2KJ4437 - ■ ■ A0 ■ - 0 ■ V1**
3 716	0.39	8 000	65 000	-	0.47	2002725/539			✓	✓	✓	✓	✓	✓			**2KJ4437 - ■ ■ A0 ■ - 0 ■ U1**
3 349	0.43	8 000	65 000	-	0.55	2625795/784			✓	✓	✓	✓	✓	✓			**2KJ4437 - ■ ■ A0 ■ - 0 ■ T1**
3 092	0.47	8 000	65 000	-	0.66	7877385/2548			✓	✓	✓	✓	✓	✓			**2KJ4437 - ■ ■ A0 ■ - 0 ■ S1**
2 822	0.51	8 000	65 000	-	0.78	3871935/1372			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ R1**
2 342	0.62	8 000	65 000	-	1.0	7343325/3136			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ Q1**
2 204	0.66	8 000	65 000	-	1.16	7343325/3332			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ P1**
2 081	0.70	8 000	65 000	-	1.31	815925/392			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ N1**
1 771	0.82	8 000	65 000	-	1.62	347139/196			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ M1**
1 517	0.96	8 000	65 000	-	2.0	133515/88					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ L1**
1 334	1.1	8 000	65 000	-	2.5	2091735/1568					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ K1**
1 125	1.3	8 000	65 000	-	3.2	110295/98					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ J1**
981	1.5	8 000	65 000	-	4.2	240327/245					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ H1**
968	1.5	8 000	65 000	-	1.81	806058/833			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ G1**
914	1.6	8 000	65 000	-	2.0	44781/49			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ F1**
778	1.9	8 000	65 000	-	2.6	952614/1225			✓	✓	✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ E1**
666	2.2	8 000	65 000	-	3.4	36639/55					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ D1**
586	2.5	8 000	65 000	-	4.3	574011/980					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ C1**
494	2.9	8 000	65 000	-	5.7	121068/245					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ B1**
431	3.4	8 000	65 000	-	7.5	2638008/6125					✓	✓	✓	✓	✓		**2KJ4437 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/44	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			1
			C		G						1
			D								1
	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	→ page 9/37	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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.169-D69																
29 846	0.05	13 600	73 500	-	0.07	4387328/147		✓	✓	✓	✓					**2KJ4441 - ■ ■ A0 ■ - 0 ■ P1**
26 206	0.06	13 600	73 500	-	0.08	1284096/49		✓	✓	✓	✓					**2KJ4441 - ■ ■ A0 ■ - 0 ■ N1**
23 824	0.06	13 600	73 500	-	0.10	1167360/49		✓	✓	✓	✓					**2KJ4441 - ■ ■ A0 ■ - 0 ■ M1**
20 382	0.07	13 600	73 500	-	0.12	428032/21		✓	✓	✓	✓					**2KJ4441 - ■ ■ A0 ■ - 0 ■ L1**
18 530	0.08	13 600	73 500	-	0.15	389120/21		✓	✓	✓	✓					**2KJ4441 - ■ ■ A0 ■ - 0 ■ K1**
16 379	0.09	13 600	73 500	-	0.17	802560/49		✓	✓	✓	✓	✓	✓			**2KJ4441 - ■ ■ A0 ■ - 0 ■ J1**
14 890	0.10	13 600	73 500	-	0.23	729600/49		✓	✓	✓	✓	✓	✓			**2KJ4441 - ■ ■ A0 ■ - 0 ■ H1**
13 042	0.11	13 600	73 500	-	0.26	5751680/441		✓	✓	✓	✓	✓	✓			**2KJ4441 - ■ ■ A0 ■ - 0 ■ G1**
12 039	0.12	13 600	73 500	-	0.32	23006720/1911		✓	✓	✓	✓	✓	✓			**2KJ4441 - ■ ■ A0 ■ - 0 ■ F1**
10 659	0.14	13 600	73 500	-	0.39	10968320/1029		✓	✓	✓	✓	✓	✓	✓		**2KJ4441 - ■ ■ A0 ■ - 0 ■ E1**
8 872	0.16	13 600	73 500	-	0.52	434720/49		✓	✓	✓	✓	✓	✓	✓		**2KJ4441 - ■ ■ A0 ■ - 0 ■ D1**
8 350	0.17	13 600	73 500	-	0.61	6955520/833		✓	✓	✓	✓	✓	✓	✓		**2KJ4441 - ■ ■ A0 ■ - 0 ■ C1**
7 482	0.19	13 600	73 500	-	0.68	9898240/1323		✓	✓	✓	✓	✓	✓	✓		**2KJ4441 - ■ ■ A0 ■ - 0 ■ B1**
6 370	0.23	13 600	73 500	-	0.89	133760/21		✓	✓	✓	✓	✓	✓	✓		**2KJ4441 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/44	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			1
			C		G						1
			D								1
	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	→ page 9/37	A, B, F or H									

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.169-Z69																
6 230	0.23	13 600	73 500	-	0.21	5189888/833		✓	✓	✓	✓					**2KJ4440 - ■ ■ A0 ■ - 0 ■ A2**
5 664	0.26	13 600	73 500	-	0.26	4718080/833		✓	✓	✓	✓					**2KJ4440 - ■ ■ A0 ■ - 0 ■ X1**
4 817	0.30	13 600	73 500	-	0.33	4012800/833		✓	✓	✓	✓					**2KJ4440 - ■ ■ A0 ■ - 0 ■ W1**
4 379	0.33	13 600	73 500	-	0.40	3648000/833		✓	✓	✓	✓					**2KJ4440 - ■ ■ A0 ■ - 0 ■ V1**
3 907	0.37	13 600	73 500	-	0.47	9764480/2499		✓	✓	✓	✓	✓	✓			**2KJ4440 - ■ ■ A0 ■ - 0 ■ U1**
3 503	0.41	13 600	73 500	-	0.57	2918400/833		✓	✓	✓	✓	✓	✓			**2KJ4440 - ■ ■ A0 ■ - 0 ■ T1**
3 158	0.46	13 600	73 500	-	0.67	7891840/2499		✓	✓	✓	✓	✓	✓			**2KJ4440 - ■ ■ A0 ■ - 0 ■ S1**
2 915	0.50	13 600	73 500	-	0.80	31567360/10829		✓	✓	✓	✓	✓	✓			**2KJ4440 - ■ ■ A0 ■ - 0 ■ R1**
2 661	0.54	13 600	73 500	-	0.95	15516160/5831		✓	✓	✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ Q1**
2 208	0.66	13 600	73 500	-	1.25	1839200/833		✓	✓	✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ P1**
2 078	0.70	13 600	73 500	-	1.44	29427200/14161		✓	✓	✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ N1**
1 963	0.74	13 600	73 500	-	1.63	14713600/7497		✓	✓	✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ M1**
1 670	0.87	13 600	73 500	-	2.1	1391104/833		✓	✓	✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ L1**
1 431	1.0	13 600	73 500	-	2.6	24320/17				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ K1**
1 258	1.2	13 600	73 500	-	3.2	3143360/2499				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ J1**
1 061	1.4	13 600	73 500	-	4.2	20331520/19159				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ H1**
925	1.6	13 600	73 500	-	5.7	3852288/4165				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ G1**
869	1.7	13 600	73 500	-	3.2	21401600/24633				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ F1**
739	2.0	13 600	73 500	-	4.3	2023424/2737		✓	✓	✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ E1**
633	2.3	13 600	73 500	-	5.6	2723840/4301				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ D1**
557	2.6	13 600	73 500	-	7.1	4572160/8211				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ C1**
470	3.1	13 600	73 500	-	9.7	29573120/62951				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ B1**
409	3.5	13 600	73 500	-	13	5603328/13685				✓	✓	✓	✓	✓		**2KJ4440 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design → page 9/44				**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		1
			C		G					1
			D							1
	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 → page 9/37				**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	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.189-D69																
27 341	0.05	19 000	110 900	-	0.10	2870816/105		✓	✓	✓	✓					**2KJ4443 - ■ ■ A0 ■ - 0 ■ M1**
23 392	0.06	19 000	110 900	-	0.12	15789488/675		✓	✓	✓	✓					**2KJ4443 - ■ ■ A0 ■ - 0 ■ L1**
21 265	0.07	19 000	110 900	-	0.15	2870816/135		✓	✓	✓	✓					**2KJ4443 - ■ ■ A0 ■ - 0 ■ K1**
18 797	0.08	19 000	110 900	-	0.17	1973686/105		✓	✓	✓	✓	✓	✓			**2KJ4443 - ■ ■ A0 ■ - 0 ■ J1**
17 088	0.08	19 000	110 900	-	0.23	358852/21		✓	✓	✓	✓	✓	✓			**2KJ4443 - ■ ■ A0 ■ - 0 ■ H1**
14 968	0.10	19 000	110 900	-	0.27	42434249/2835		✓	✓	✓	✓	✓	✓			**2KJ4443 - ■ ■ A0 ■ - 0 ■ G1**
13 817	0.10	19 000	110 900	-	0.32	13056692/945		✓	✓	✓	✓	✓	✓			**2KJ4443 - ■ ■ A0 ■ - 0 ■ F1**
12 233	0.12	19 000	110 900	-	0.39	80921126/6615		✓	✓	✓	✓	✓	✓	✓		**2KJ4443 - ■ ■ A0 ■ - 0 ■ E1**
10 182	0.14	19 000	110 900	-	0.53	12828959/1260		✓	✓	✓	✓	✓	✓	✓		**2KJ4443 - ■ ■ A0 ■ - 0 ■ D1**
9 583	0.15	19 000	110 900	-	0.62	51315836/5355		✓	✓	✓	✓	✓	✓	✓		**2KJ4443 - ■ ■ A0 ■ - 0 ■ C1**
8 586	0.17	19 000	110 900	-	0.69	73026382/8505		✓	✓	✓	✓	✓	✓	✓		**2KJ4443 - ■ ■ A0 ■ - 0 ■ B1**
7 310	0.20	19 000	110 900	-	0.90	986843/135		✓	✓	✓	✓	✓	✓	✓		**2KJ4443 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/44	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		1
			C		G					1
			D							1
	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	→ page 9/37	A, B, F or H								

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

Selection and ordering data

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
FD.189-Z69																
7 150	0.20	19 000	110 900	-	0.23	191447542/26775		✓	✓	✓	✓					**2KJ4442 - ■ ■ A0 ■ - 0 ■ C2**
6 500	0.22	19 000	110 900	-	0.28	34808644/5355		✓	✓	✓	✓					**2KJ4442 - ■ ■ A0 ■ - 0 ■ B2**
5 529	0.26	19 000	110 900	-	0.35	1973686/357		✓	✓	✓	✓					**2KJ4442 - ■ ■ A0 ■ - 0 ■ A2**
5 026	0.29	19 000	110 900	-	0.43	1794260/357		✓	✓	✓	✓					**2KJ4442 - ■ ■ A0 ■ - 0 ■ X1**
4 484	0.32	19 000	110 900	-	0.51	72039539/16065		✓	✓	✓	✓	✓	✓			**2KJ4442 - ■ ■ A0 ■ - 0 ■ W1**
4 021	0.36	19 000	110 900	-	0.62	1435408/357		✓	✓	✓	✓	✓	✓			**2KJ4442 - ■ ■ A0 ■ - 0 ■ V1**
3 624	0.40	19 000	110 900	-	0.73	58223737/16065		✓	✓	✓	✓	✓	✓			**2KJ4442 - ■ ■ A0 ■ - 0 ■ U1**
3 345	0.43	19 000	110 900	-	0.87	17914996/5355		✓	✓	✓	✓	✓	✓			**2KJ4442 - ■ ■ A0 ■ - 0 ■ T1**
3 054	0.47	19 000	110 900	-	1.04	114473788/37485		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ S1**
2 534	0.57	19 000	110 900	-	1.38	10855273/4284		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ R1**
2 385	0.61	19 000	110 900	-	1.57	43421092/18207		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ Q1**
2 252	0.64	19 000	110 900	-	1.78	21710546/9639		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ P1**
1 917	0.76	19 000	110 900	-	2.3	51315836/26775		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ N1**
1 642	0.88	19 000	110 900	-	2.9	1255982/765		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ M1**
1 444	1.0	19 000	110 900	-	3.6	46381621/32130				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ L1**
1 218	1.2	19 000	110 900	-	4.8	150000136/123165				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ K1**
1 061	1.4	19 000	110 900	-	6.4	15789488/14875				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ J1**
997	1.5	19 000	110 900	-	4.0	31578976/31671				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ H1**
848	1.7	19 000	110 900	-	5.4	74641216/87975		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ G1**
727	2.0	19 000	110 900	-	7.1	140669984/193545		✓	✓	✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ F1**
639	2.3	19 000	110 900	-	9.1	33732088/52785				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ E1**
539	2.7	19 000	110 900	-	12	218182016/404685				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ D1**
478	3.0	19 000	110 900	-	12	8403976/17595				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ C1**
403	3.6	19 000	110 900	-	16	54357632/134895				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ B1**
351	4.1	19 000	110 900	-	21	17165568/48875				✓	✓	✓	✓	✓		**2KJ4442 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

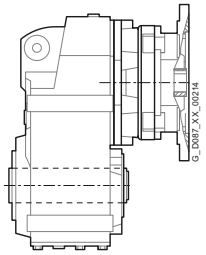
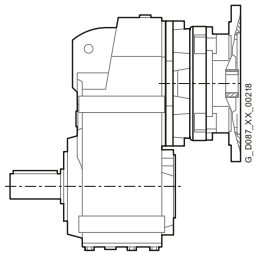
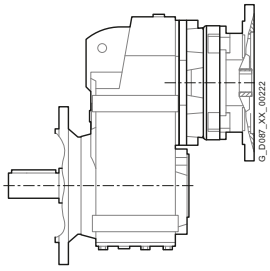
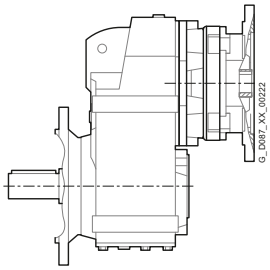
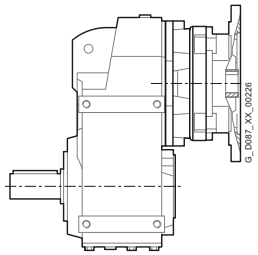
Article No. supplement										
Shaft design	→ page 9/44	**1 or 9**								
Adapter size	**K4**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**4**
	K2			**D**	**E**	**F**	**G**	**H**	**J**	**2**
	KS		**A**		**E**	**H**	**K**	**M**		**1**
			B		**F**	**J**		**N**		**1**
			C		**G**					**1**
			D							**1**
	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	→ page 9/37	**A, B, F or H**								

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

4

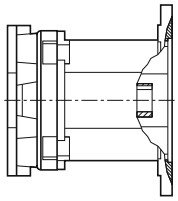
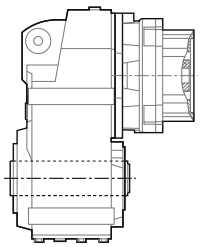
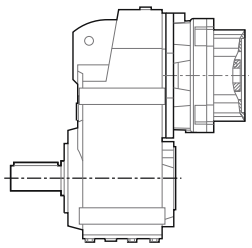
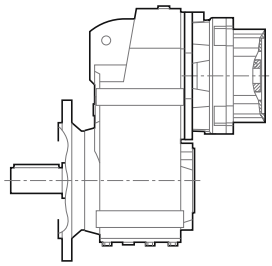
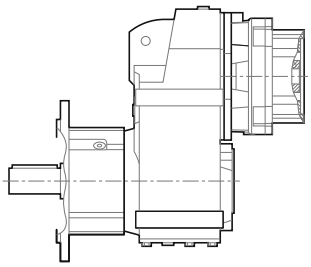
Dimensional drawing overview

Information about dimensional drawings can be found in chapter "Introduction" on page 1/19.

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

Dimensional drawing overview (continued)

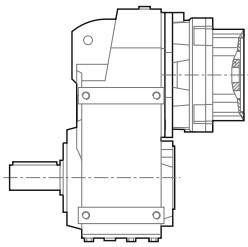
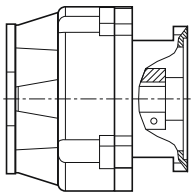
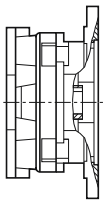
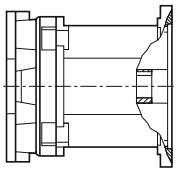
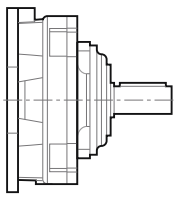
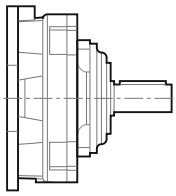
Information about dimensional drawings can be found in chapter "Introduction" on page 1/19.

Design	Size	Dimensional drawing on page
Parallel shaft gearbox with adapter K2		
	FD../FZ..29 … FD../FZ..189	4/95 ... 4/97
Parallel shaft gearbox with KS adapter		
Shaft-mounted design		
	FDAD./FZAD.29	4/98
	FDAD./FZAD.39	4/102
	FDAD./FZAD.49	4/106
	FDAD./FZAD.69	4/110
	FDAD./FZAD.79	4/114
	FDAD./FZAD.89	4/118
	FDAD./FZAD.109	4/123
	FDAD./FZAD.129	4/128
	FDAD./FZAD.149	4/133
	FDAD./FZAD.169	4/138
	FDAD./FZAD.189	4/143
Housing flange design		
	FD.Z./FZZ.29	4/99
	FD.Z./FZZ.39	4/103
	FD.Z./FZZ.49	4/107
	FD.Z./FZZ.69	4/111
	FD.Z./FZZ.79	4/115
	FD.Z./FZZ.89	4/119
	FD.Z./FZZ.109	4/124
	FD.Z./FZZ.129	4/129
	FD.Z./FZZ.149	4/134
	FD.Z./FZZ.169	4/139
	FD.Z./FZZ.189	4/144
Flange-mounted design		
	FD.F./FZ.F.29	4/100
	FD.F./FZ.F.39	4/104
	FD.F./FZ.F.49	4/108
	FD.F./FZ.F.69	4/112
	FD.F./FZ.F.79	4/116
	FD.F./FZ.F.89	4/120
	FD.F./FZ.F.109	4/125
	FD.F./FZ.F.129	4/130
	FD.F./FZ.F.149	4/135
	FD.F./FZ.F.169	4/140
	FD.F./FZ.F.189	4/145
Flange-mounted design with VLplus reinforced bearing system		
	FD.F./FZ.F.89	4/120
	FD.F./FZ.F.109	4/126
	FD.F./FZ.F.129	4/131
	FD.F./FZ.F.149	4/136
	FD.F./FZ.F.169	4/141

4

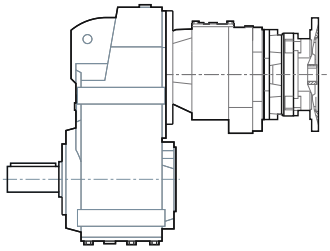
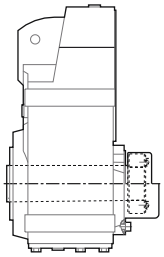
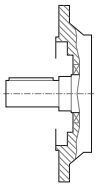
Dimensional drawing overview (continued)

Information about dimensional drawings can be found in chapter "Introduction" on page 1/19.

Design	Gearbox type	Dimensional drawing on page
Parallel shaft gearbox with KS adapter		
Foot-mounted design		
	FD../FZ..29	4/101
	FD../FZ..39	4/105
	FD../FZ..49	4/109
	FD../FZ..69	4/113
	FD../FZ..79	4/117
	FD../FZ..89	4/122
	FD../FZ..109	4/127
	FD../FZ..129	4/132
	FD../FZ..149	4/137
	FD../FZ..169	4/142
	FD../FZ..189	4/146
Parallel shaft gearbox with adapter K8		
	FD../FZ..89 ... FD../FZ..189	4/147
Parallel shaft gearbox with adapter K5		
	FD../FZ..29 ... FD../FZ..189	4/148 ... 4/149
Parallel shaft gearbox with adapter K3		
	FD../FZ..29 ... FD../FZ..189	4/150 ... 4/151
Parallel shaft gearbox with adapter A		
	FD../FZ..29 ... FD../FZ..189	4/152 ... 4/153
Parallel shaft gearbox with adapter AZ		
	FD../FZ..29 ... FD../FZ..189	4/154 ... 4/155

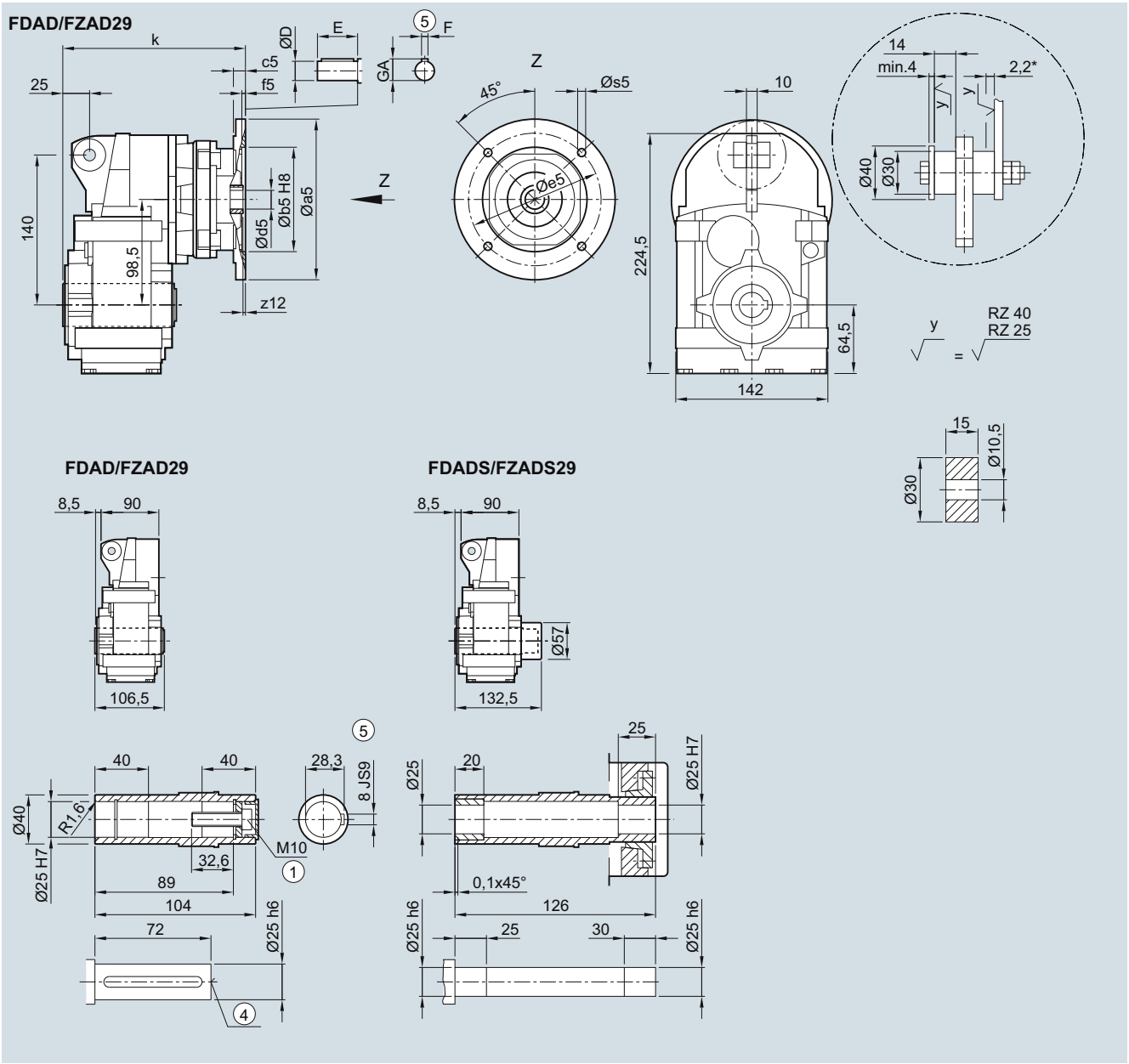
Dimensional drawing overview (continued)

Information about dimensional drawings can be found in chapter "Introduction" on page 1/19.

Design		Size	Dimensional drawing on page
Parallel shaft tandem gearboxes	**with adapter**		
	**- K4**	FD../FZ..79-D/Z39 ... FD..189-D/Z69	4/156 ... 4/157
	- K2	FD../FZ..79-D/Z39 ... FD..189-D/Z69	4/158
	- KS	FD../FZ..29-D/Z19 ... FD..189-D/Z69	4/159 ... 4/161
	- K5	FD../FZ..79-D/Z39 ... FD..189-D/Z69	4/162
	- K3	FD../FZ..79-D/Z39 ... FD..189-D/Z69	4/163
	- A	FD../FZ..79-D/Z39 ... FD..189-D/Z69	4/164
	- AZ	FD../FZ..79-D/Z39 ... FD..189-D/Z69	4/165
Additional versions and options			
Protective covers			
		FD../FZ..29 ... FD../FZ..189	4/167 ... 4/167
Inner contour of the flange design			
		FDF/FZF.29 ... FDF/FZF.189 FDAF/FZAF.29 ... FDAF/FZAF.189	4/169

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

FAD030K4, FADS030K4

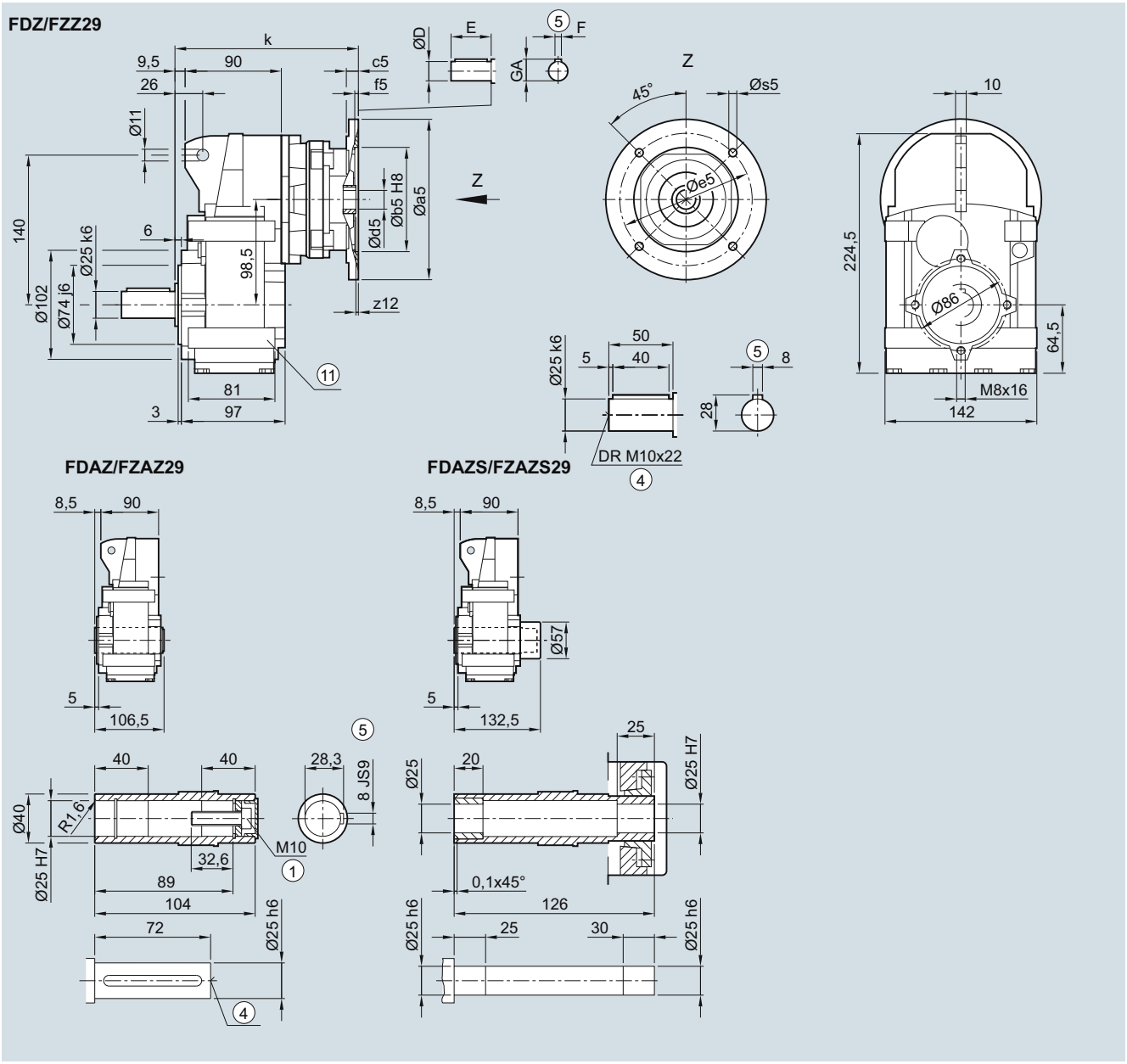


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	177.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	177.0
80 [1)]	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	205.0
90 [1)]	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	205.0
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	259.5

① ISO 4017 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 [1)] FDADS/FZADS not possible * Spring compression at max. torque

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

FZ030K4, FAZ030K4, FAZS030K4



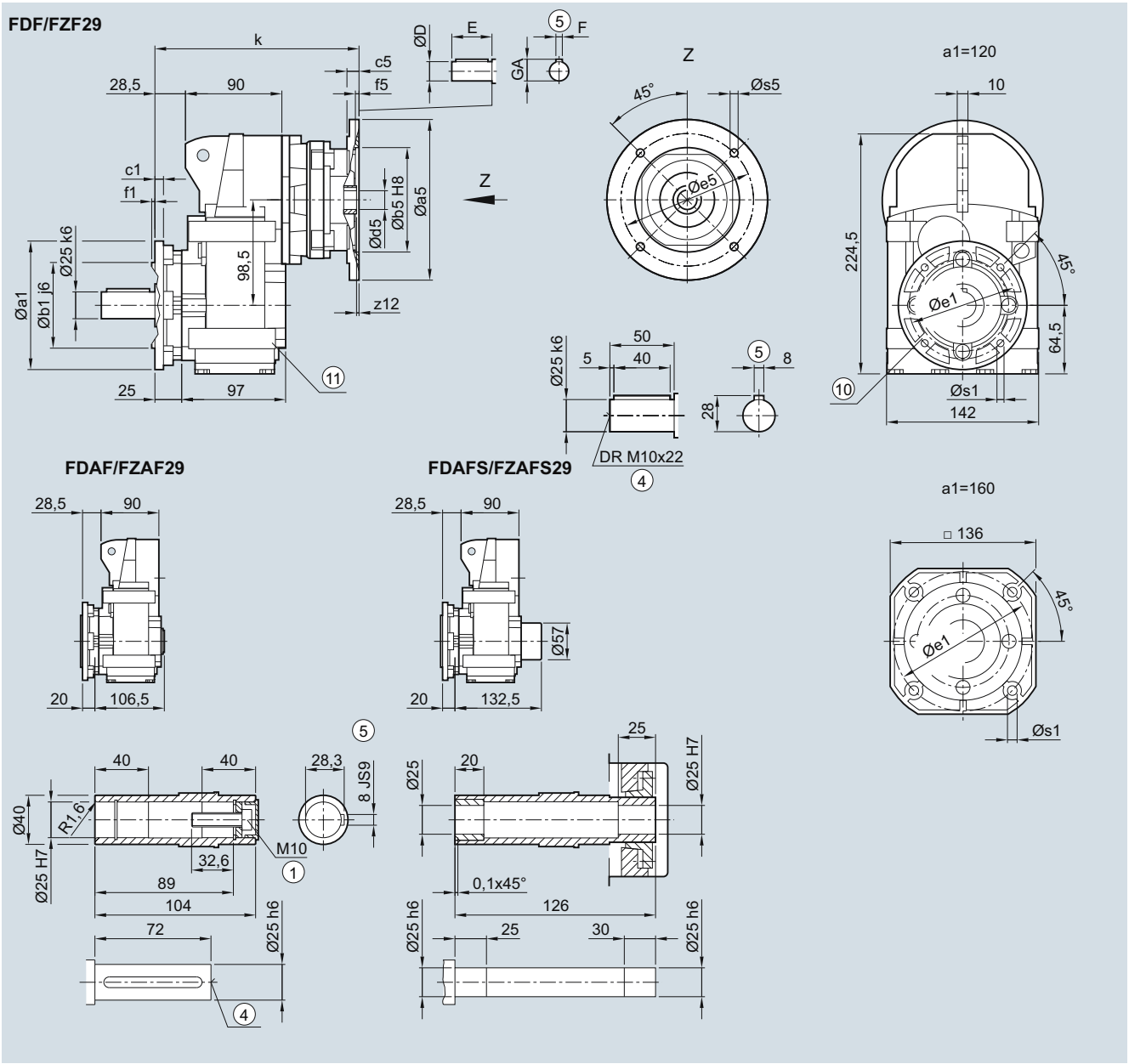
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	177.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	177.0
80 [1]	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	205.0
90 [1]	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	205.0
100 [1]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	259.5

① ISO 4017 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 [1] FDADS/FZADS not possible ⑪ Use bores only for foot-mounted design

Dimensions

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

FF030K4, FAF030K4, FAFS030K4



Flange	a1	b1	c1	e1	f1	s1
	120	80	8	100	3.0	6.6
	160	110	9	130	3.5	9.0

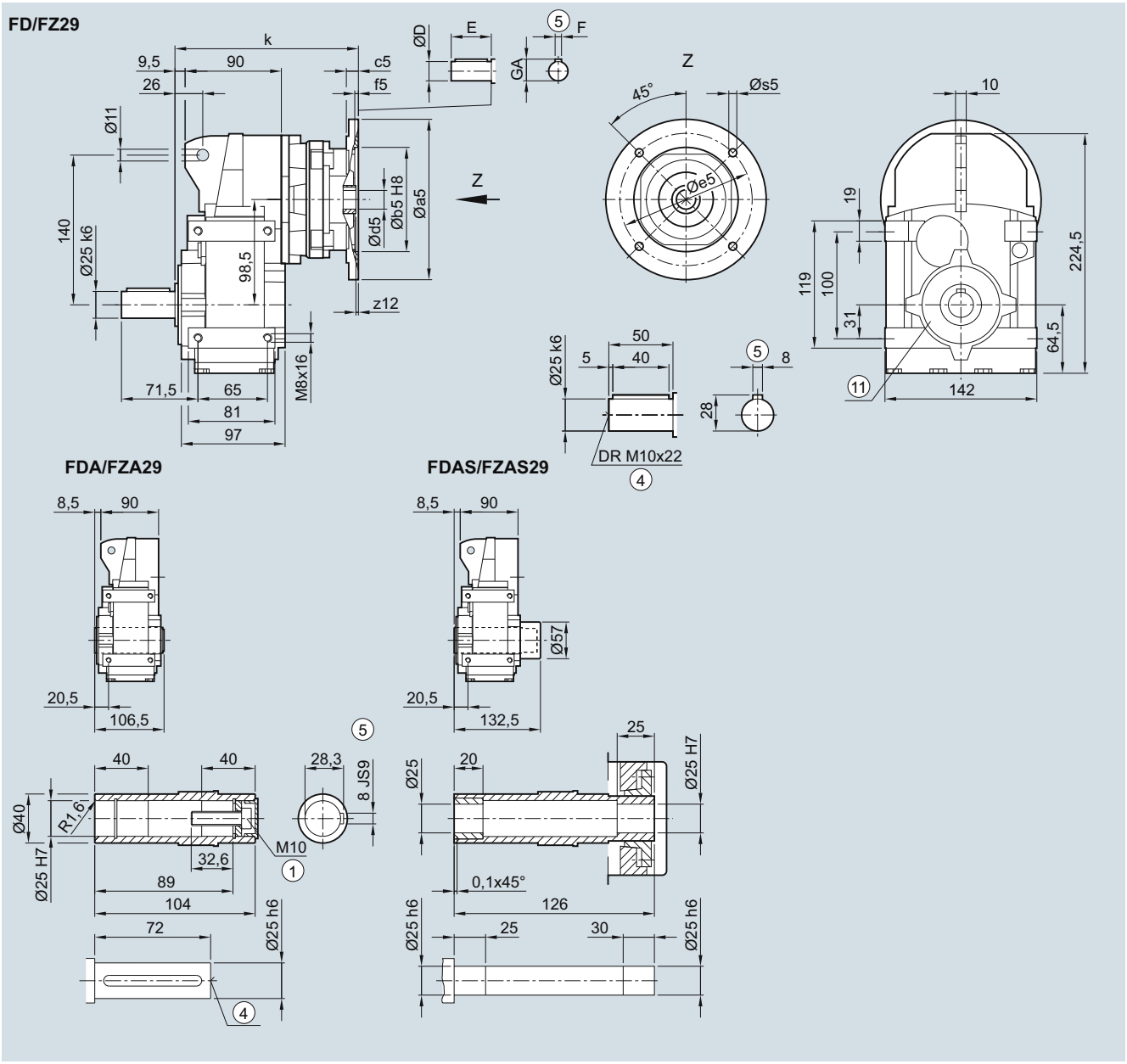
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	196.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	196.0
80 [1]	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	224.0
90 [1]	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	224.0
100 [1]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	278.5

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

[1] FDADS/FZADS not possible

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 [1)]	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	205.0
90 [1)]	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	205.0
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	259.5

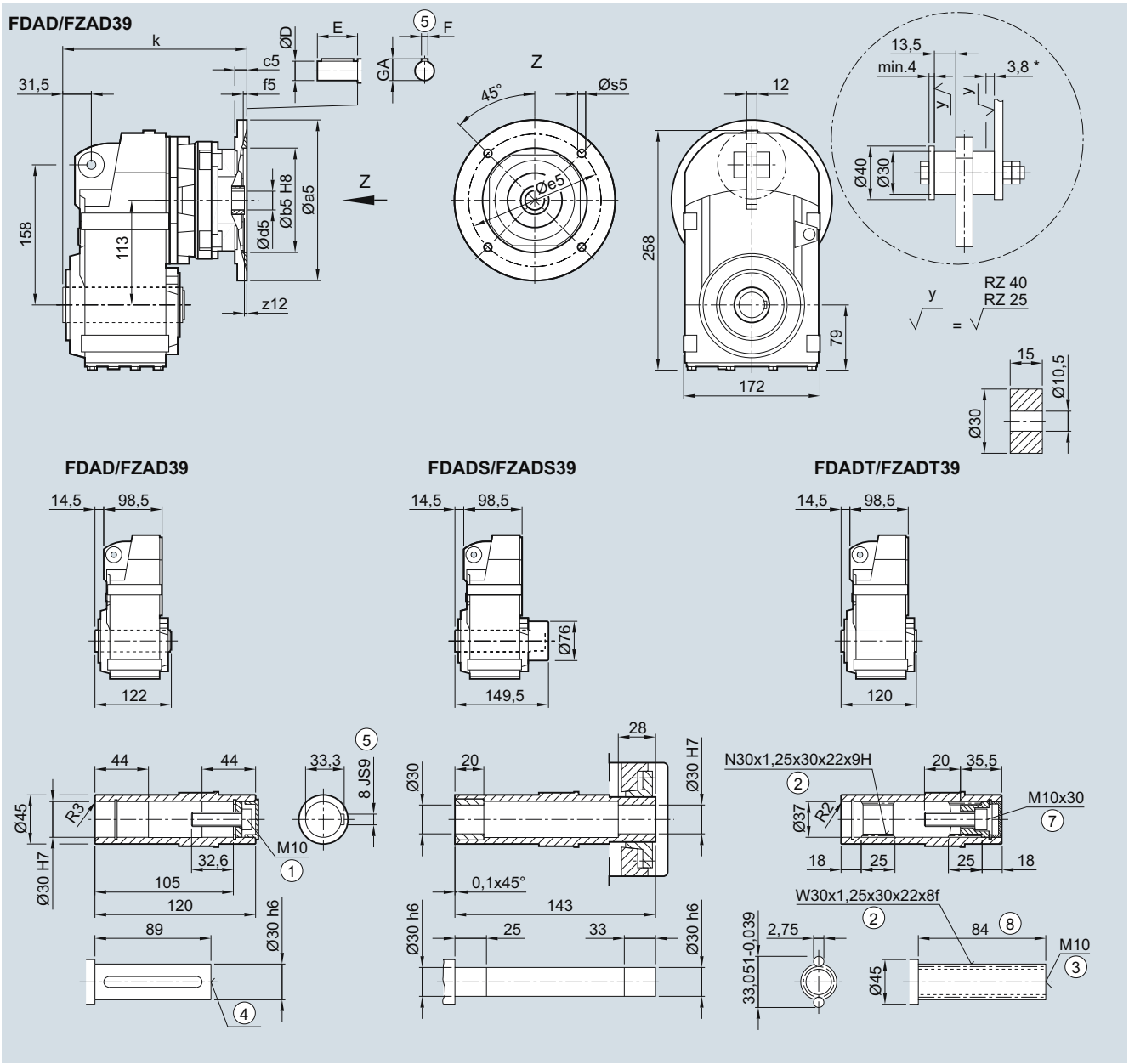
① ISO 4017 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for housing flange design

1) FDADS/FZADS not possible

Dimensions

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

FAD030K4, FADS030K4, FADT030K4



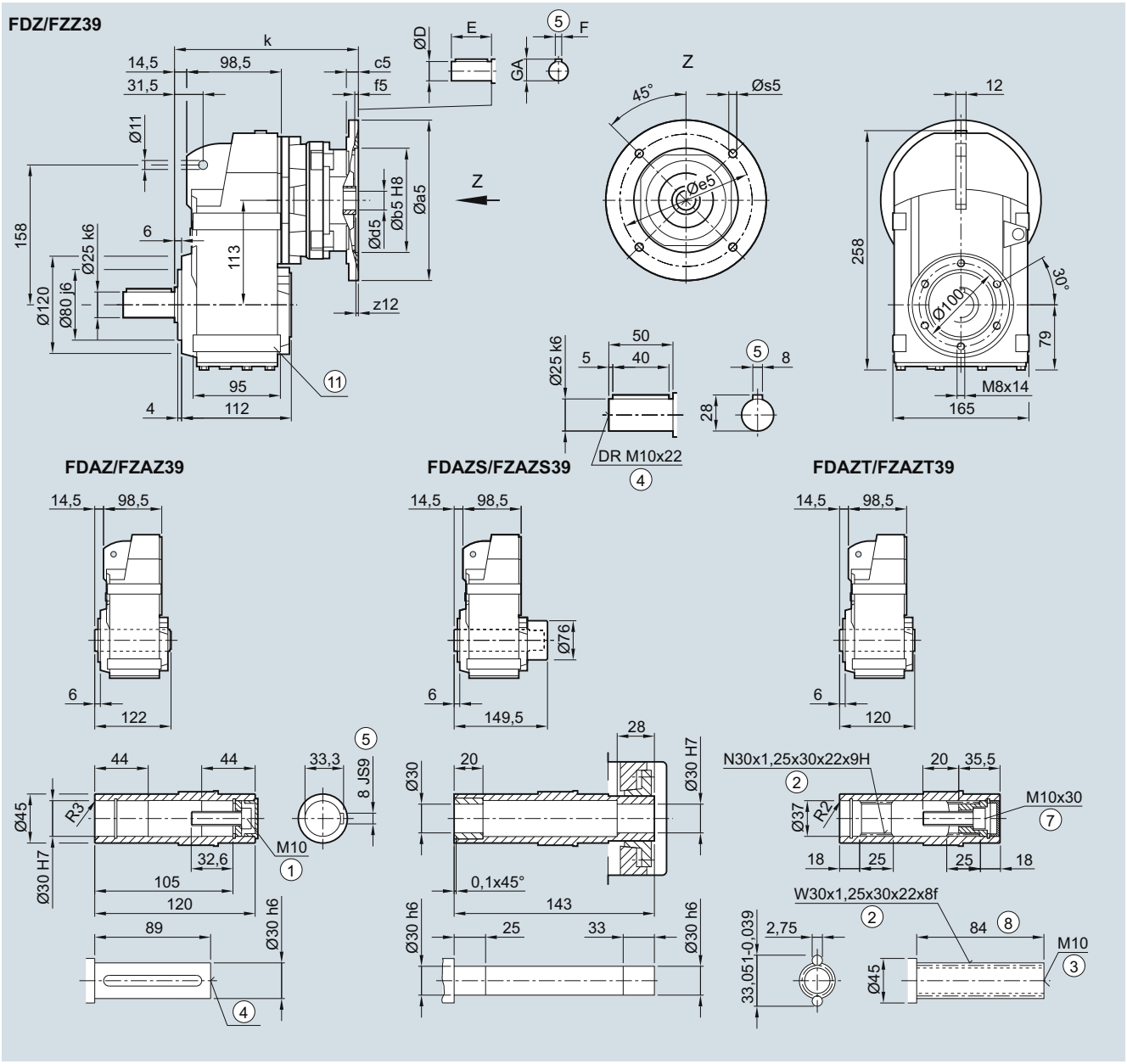
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	190.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	190.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	218.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	218.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	273.0
112 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	273.0

① SO 4014 ② IDIN 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



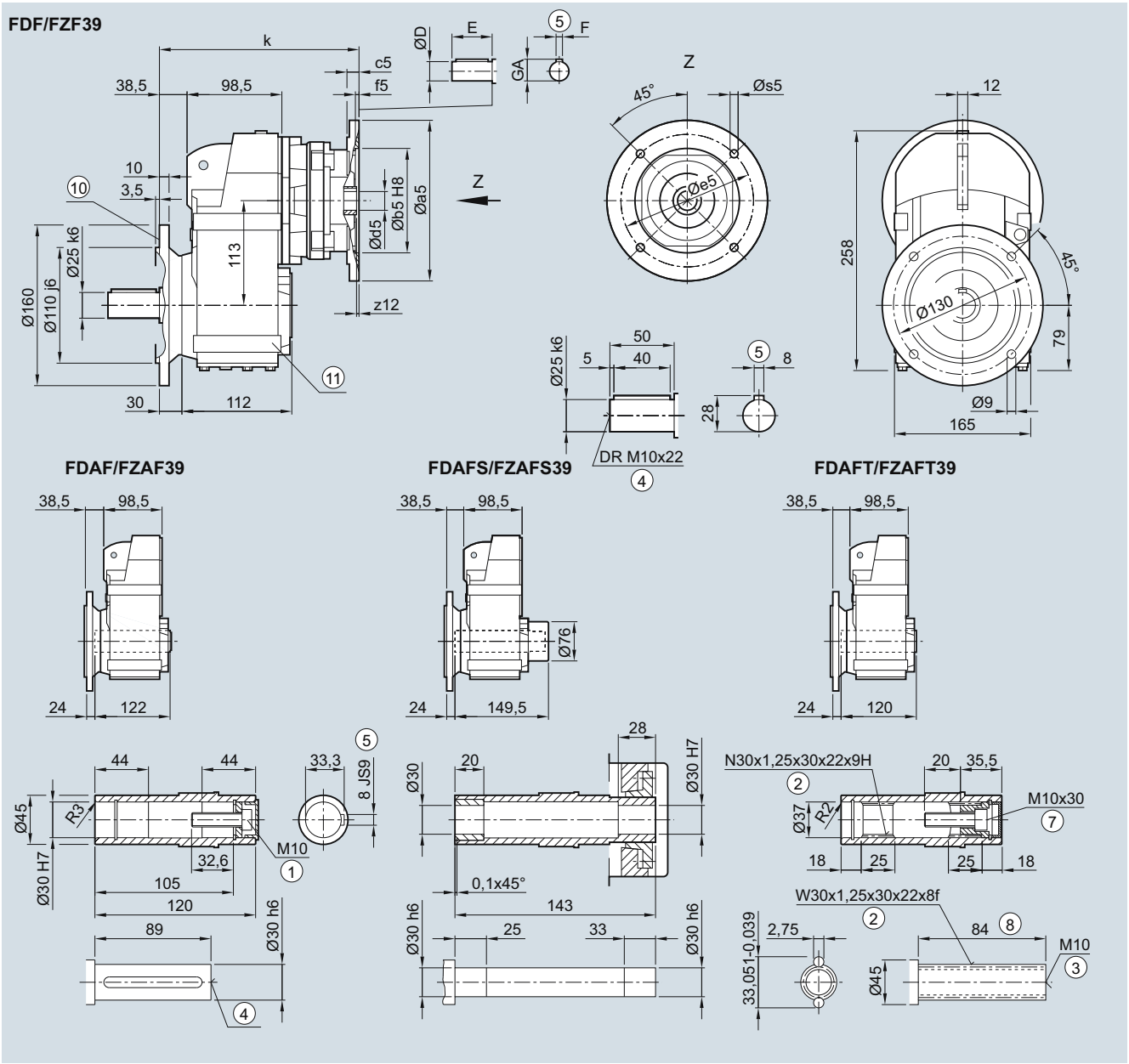
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	190.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	190.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	218.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	218.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	273.0
112 [1)]	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 ⑪ Use bores only for foot-mounted design [1)] FDADS/FZADS not possible

Dimensions

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

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

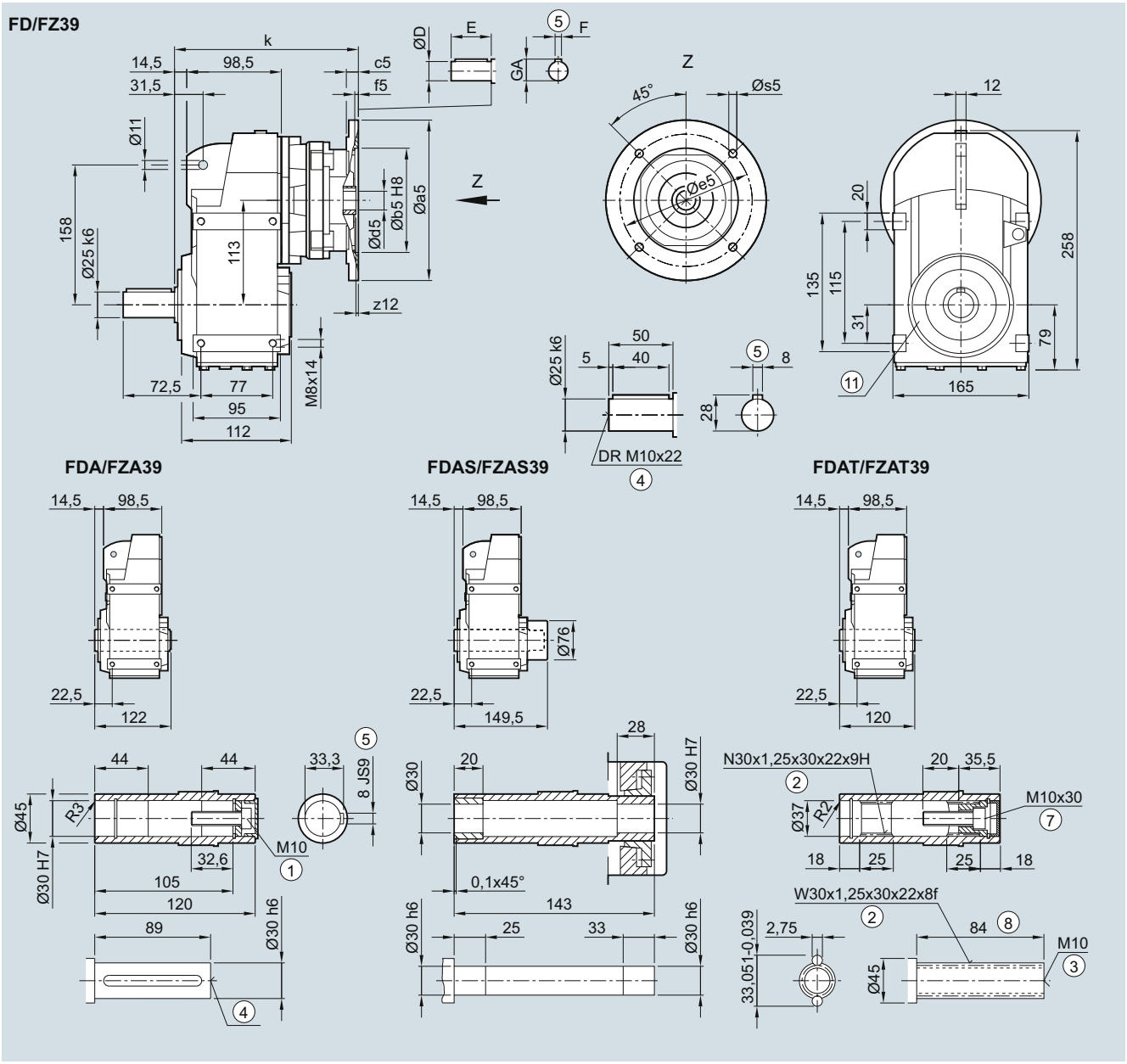


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11.0	23	4	12.5	214.5
71	160	110	12	4.5	130	M8	2.5	14.0	30	5	16.0	214.5
80	200	130	15	4.5	165	M10	4.0	19.0	40	6	12.5	242.5
90	200	130	15	4.5	165	M10	4.0	24.0	50	8	27.0	242.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	297.0
112 [1)]	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 1) FDADS/FZADS not possible

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

F030K4, FA030K4, FAS030K4, FAT030K4



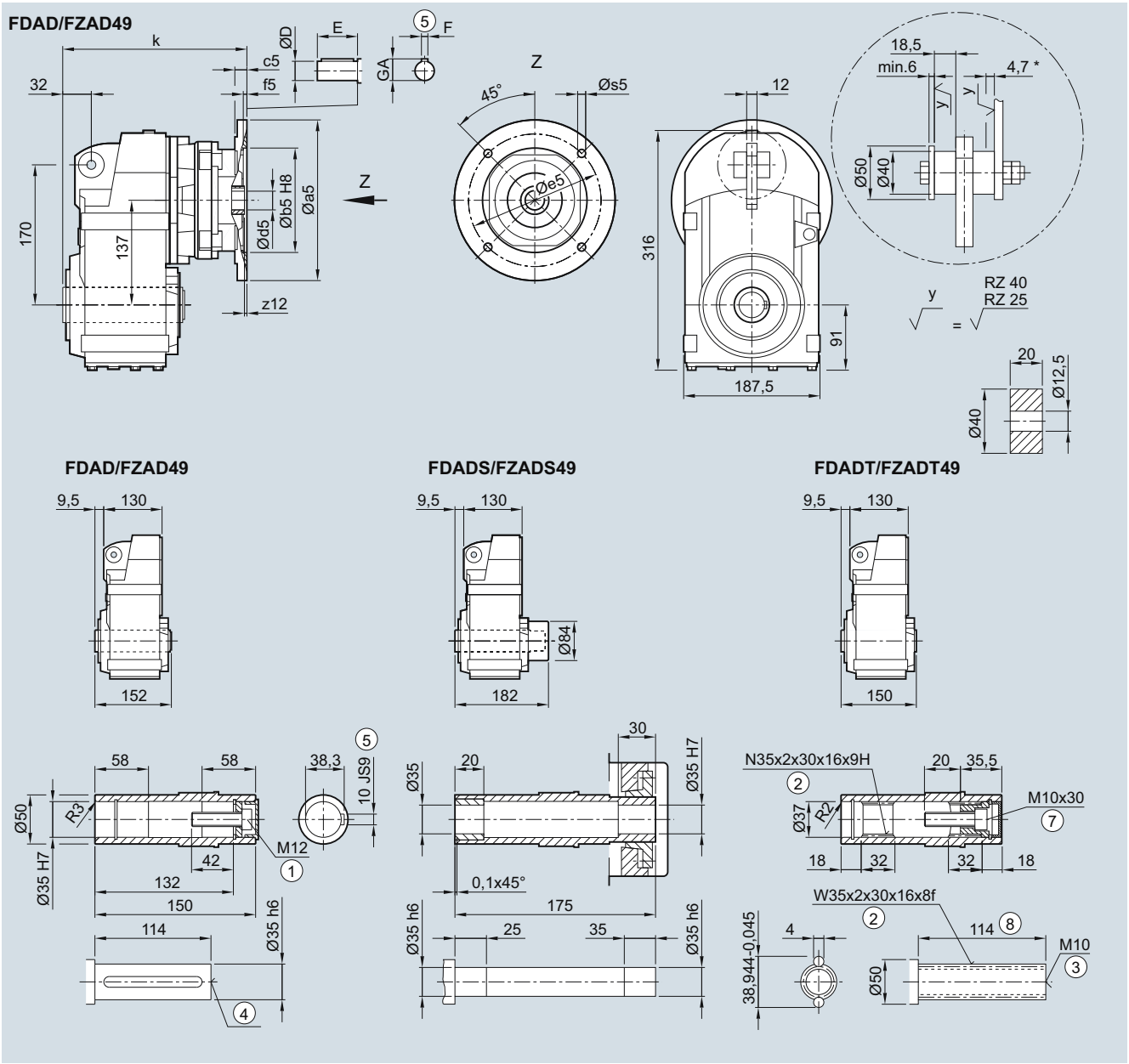
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	190.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	190.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	218.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	218.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	273.0
112 [1)]	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 ⑪ Use bores only for housing flange design 1) FDADS/FZADS not possible

Dimensions

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

FAD030K4, FADS030K4, FADT030K4



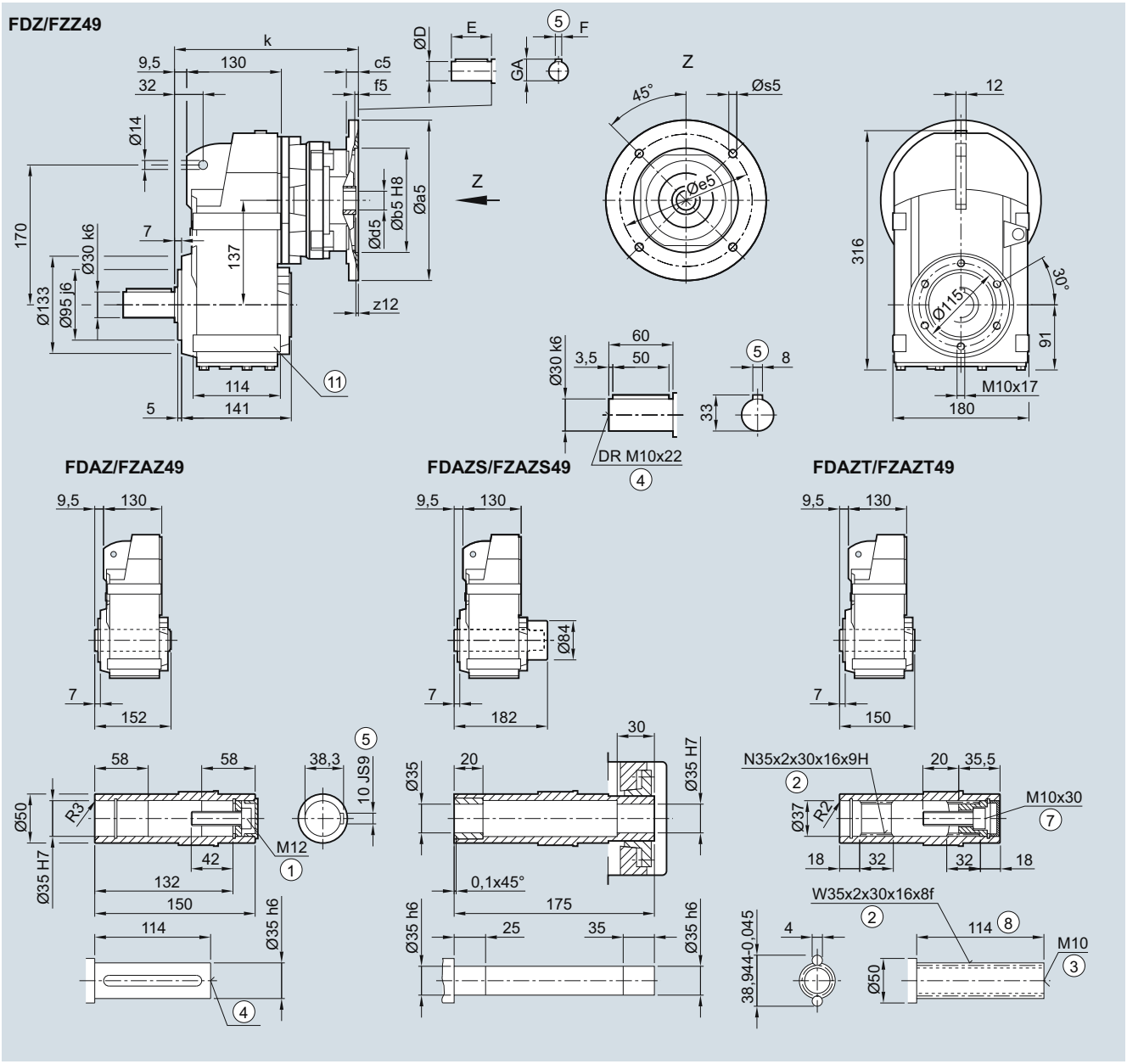
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	207.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	207.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	235.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	235.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
112 [1)]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

① SO 4014 ② IDIN 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.49 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4

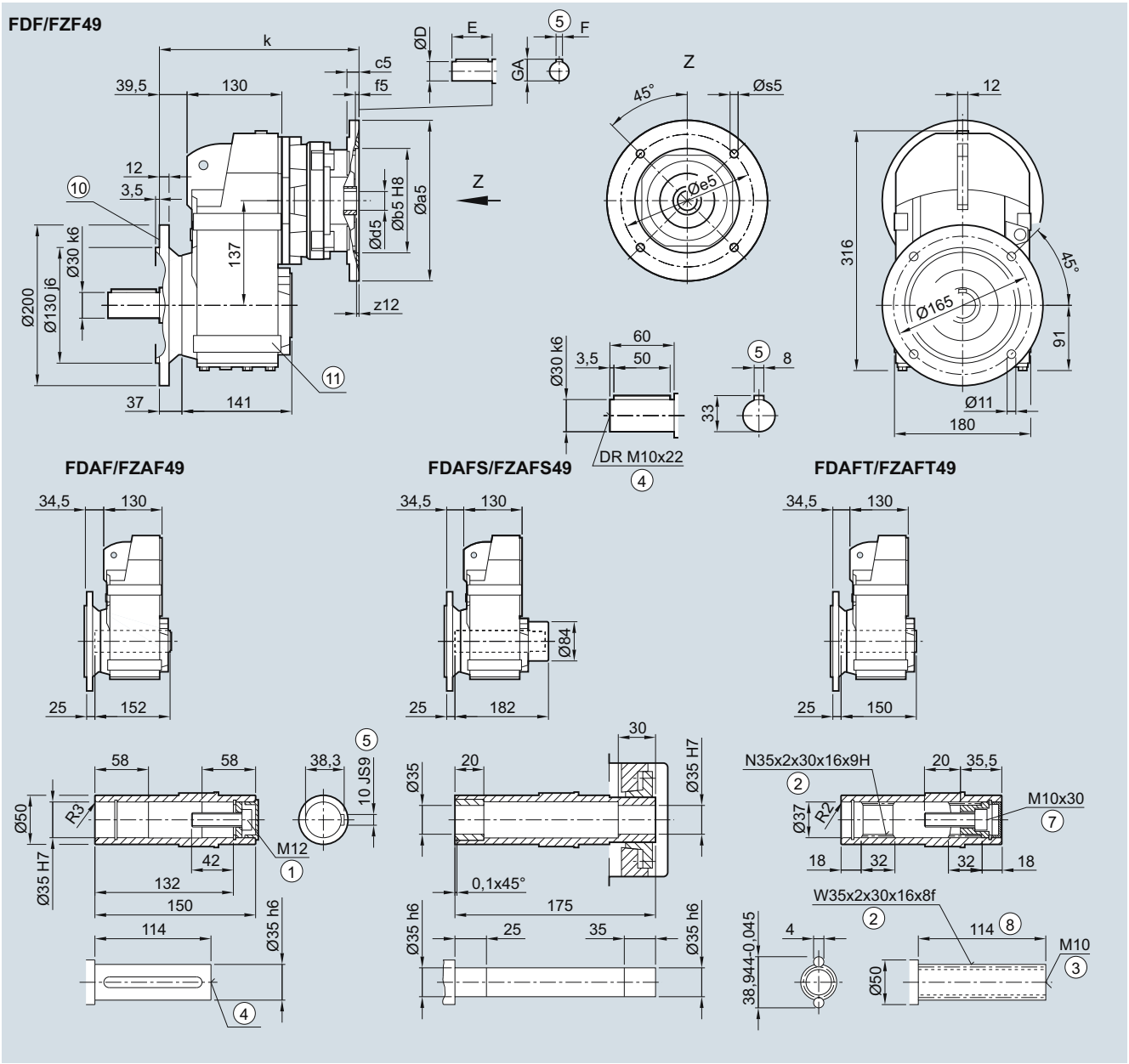


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	207.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	207.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	235.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	235.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
112 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
132 [1)]	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 ⑪ Use bores only for foot-mounted design [1)] FDADS/FZADS not possible

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

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

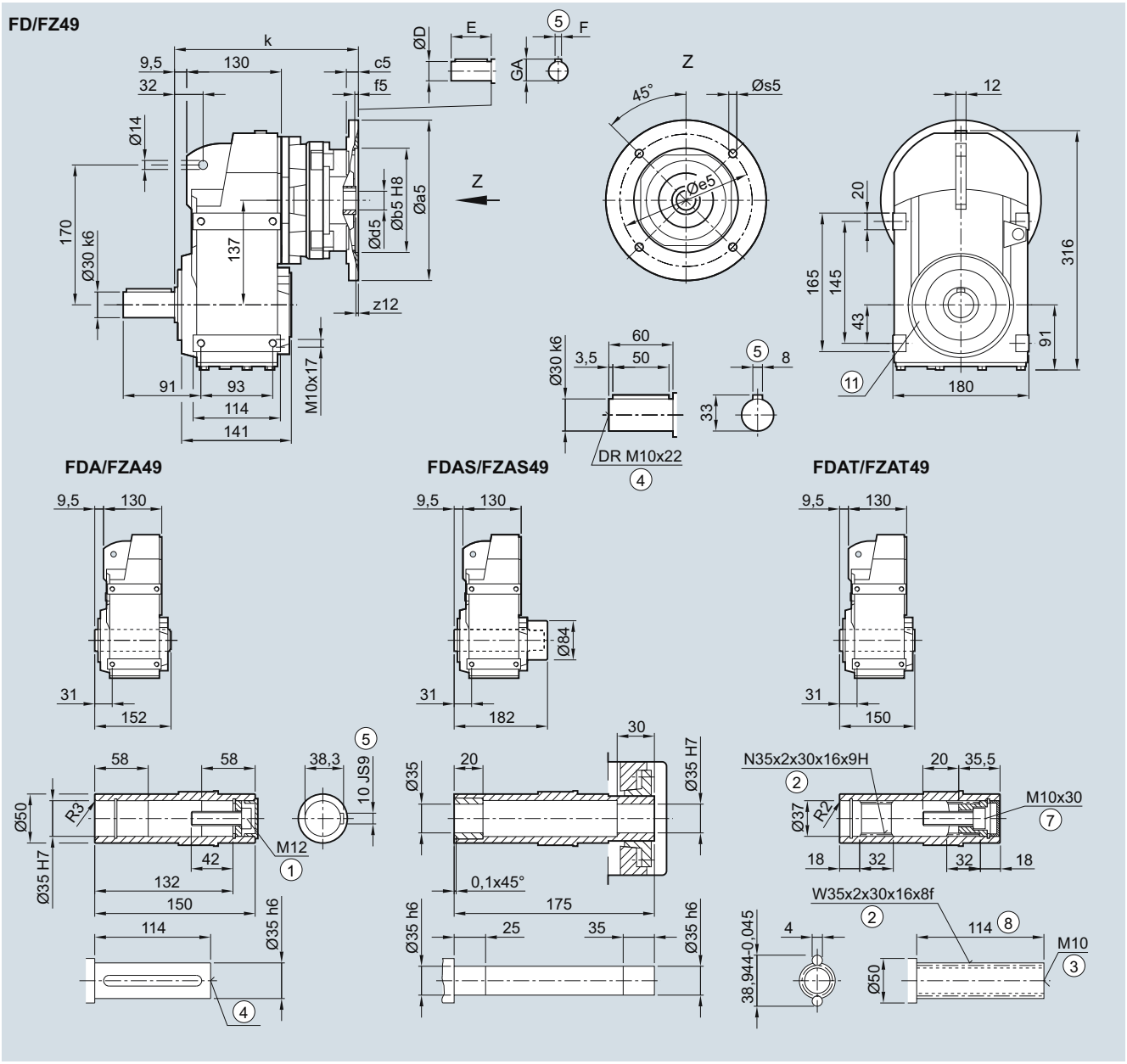


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11.0	23	4	12.5	237.5
71	160	110	12	4.5	130	M8	2.5	14.0	30	5	16.0	237.5
80	200	130	15	4.5	165	M10	4.0	19.0	40	6	12.5	265.5
90	200	130	15	4.5	165	M10	4.0	24.0	50	8	27.0	265.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	320.0
112 [1)]	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	320.0
132 [1)]	300	230	12	6.0	265	M12x20	3.0	38.0	80	10	41.0	337.5

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 [1)] FDADS/FZADS not possible

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

F030K4, FA030K4, FAS030K4, FAT030K4



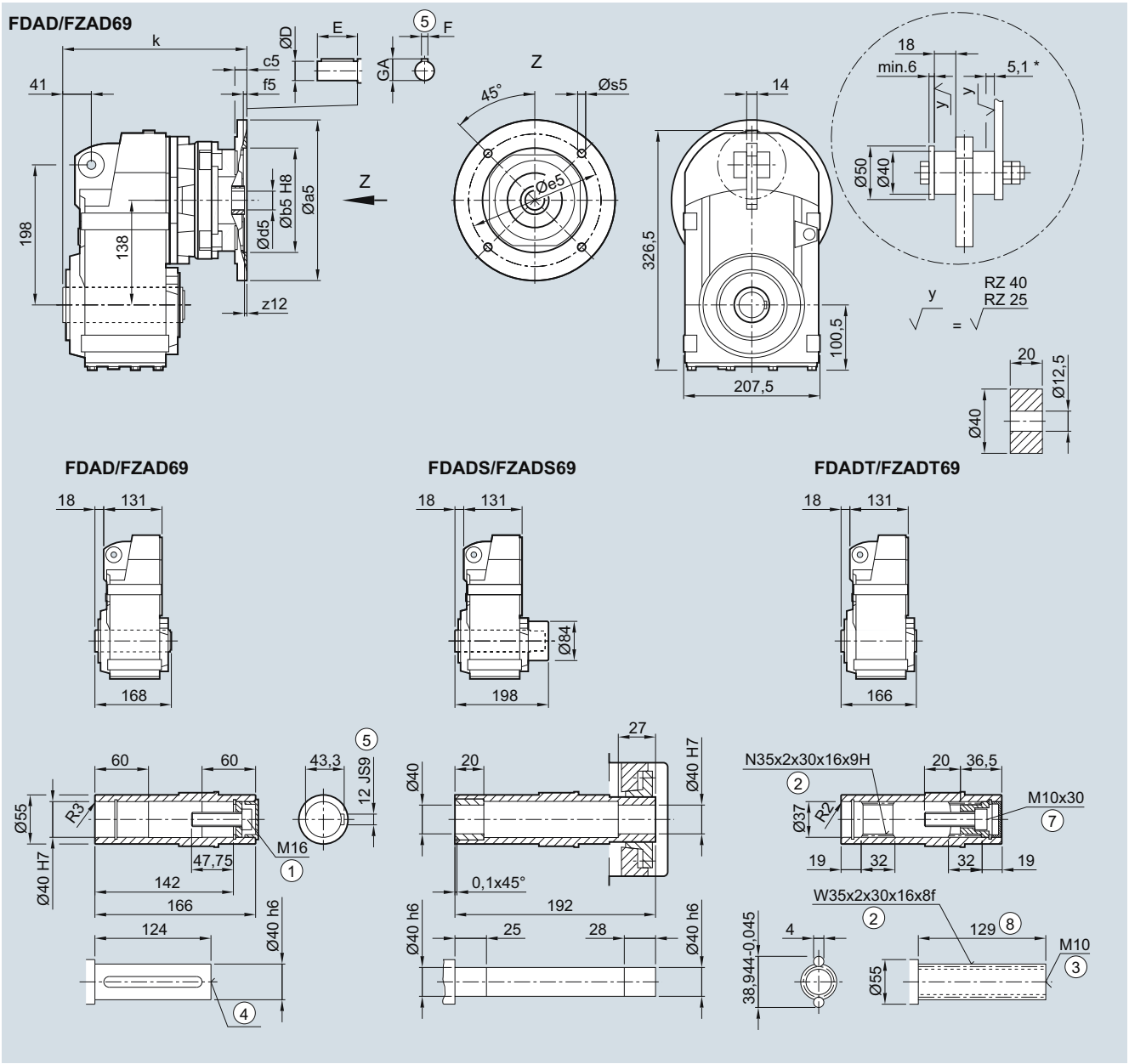
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	207.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	207.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	235.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	235.5
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
112 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	290.0
132 [1)]	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 ⑪ Use bores only for housing flange design 1) FDADS/FZADS not possible

Dimensions

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

FAD030K4, FADS030K4, FADT030K4



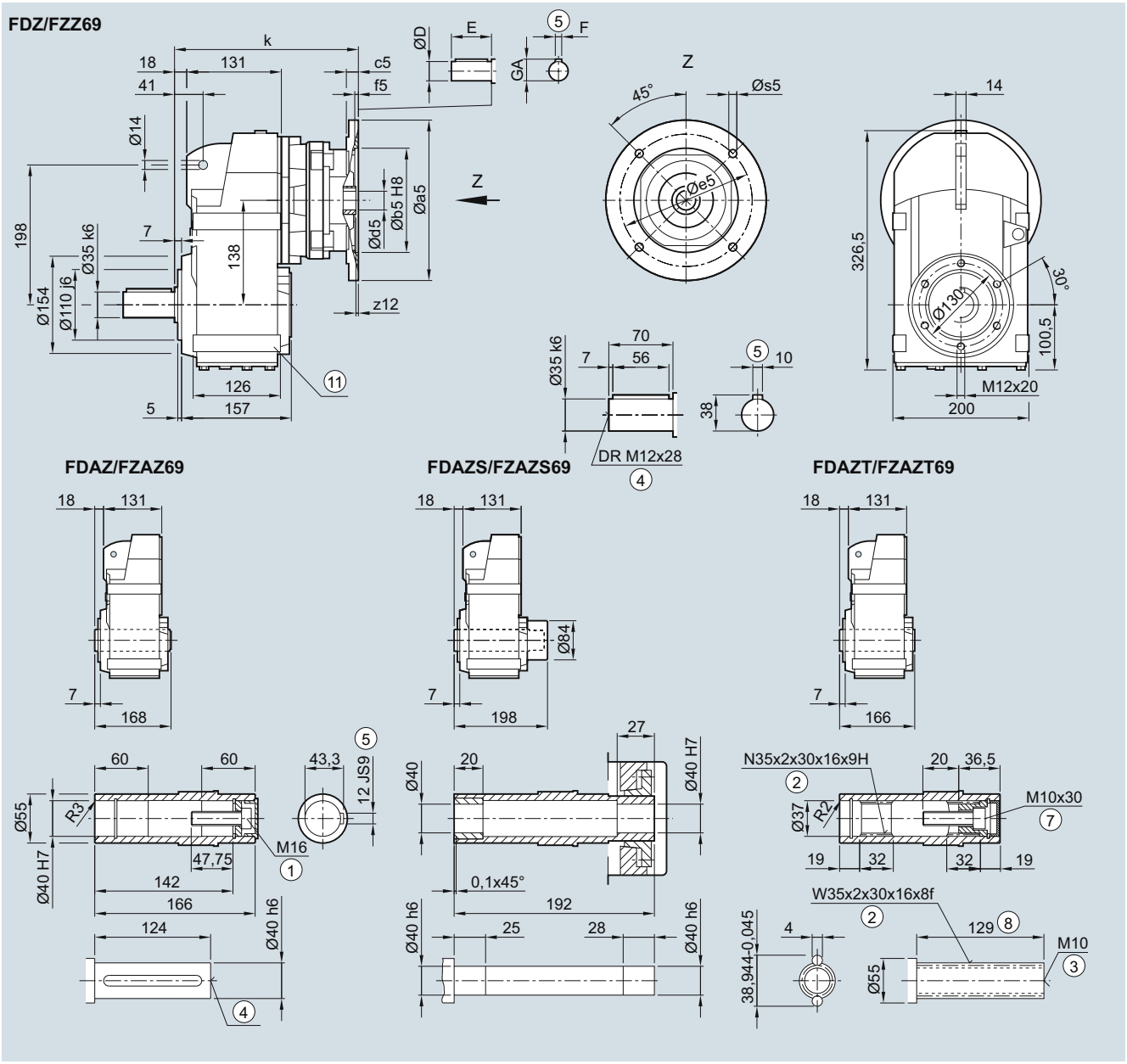
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	217.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	217.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	245.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	245.0
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
112 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
132 [1)]	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 1) FDADS/FZADS not possible

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

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



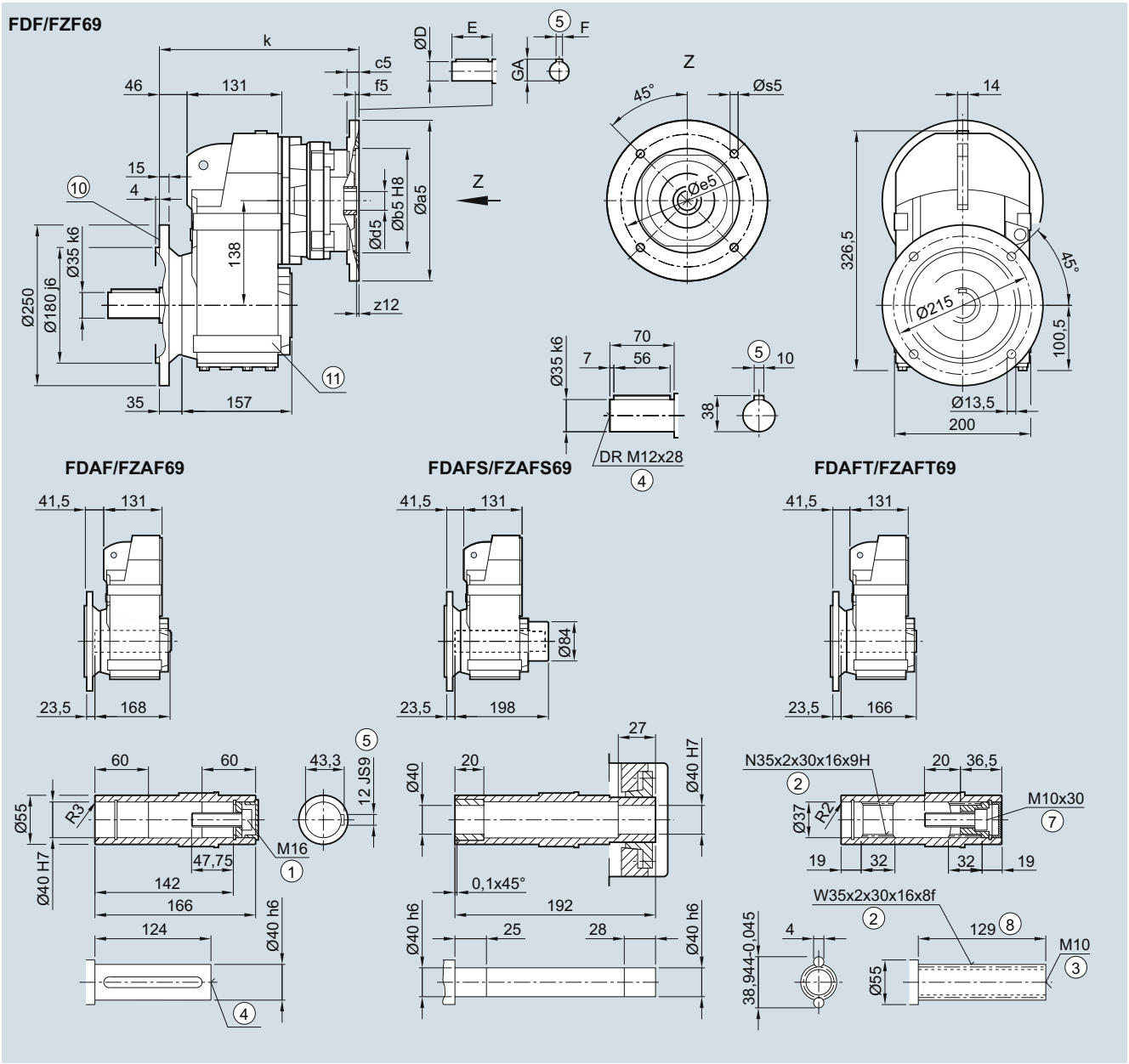
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	217.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	217.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	245.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	245.0
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
112 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
132 [1)]	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 ⑪ Use bores only for foot-mounted design [1)] FDADS/FZADS not possible

Dimensions

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

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

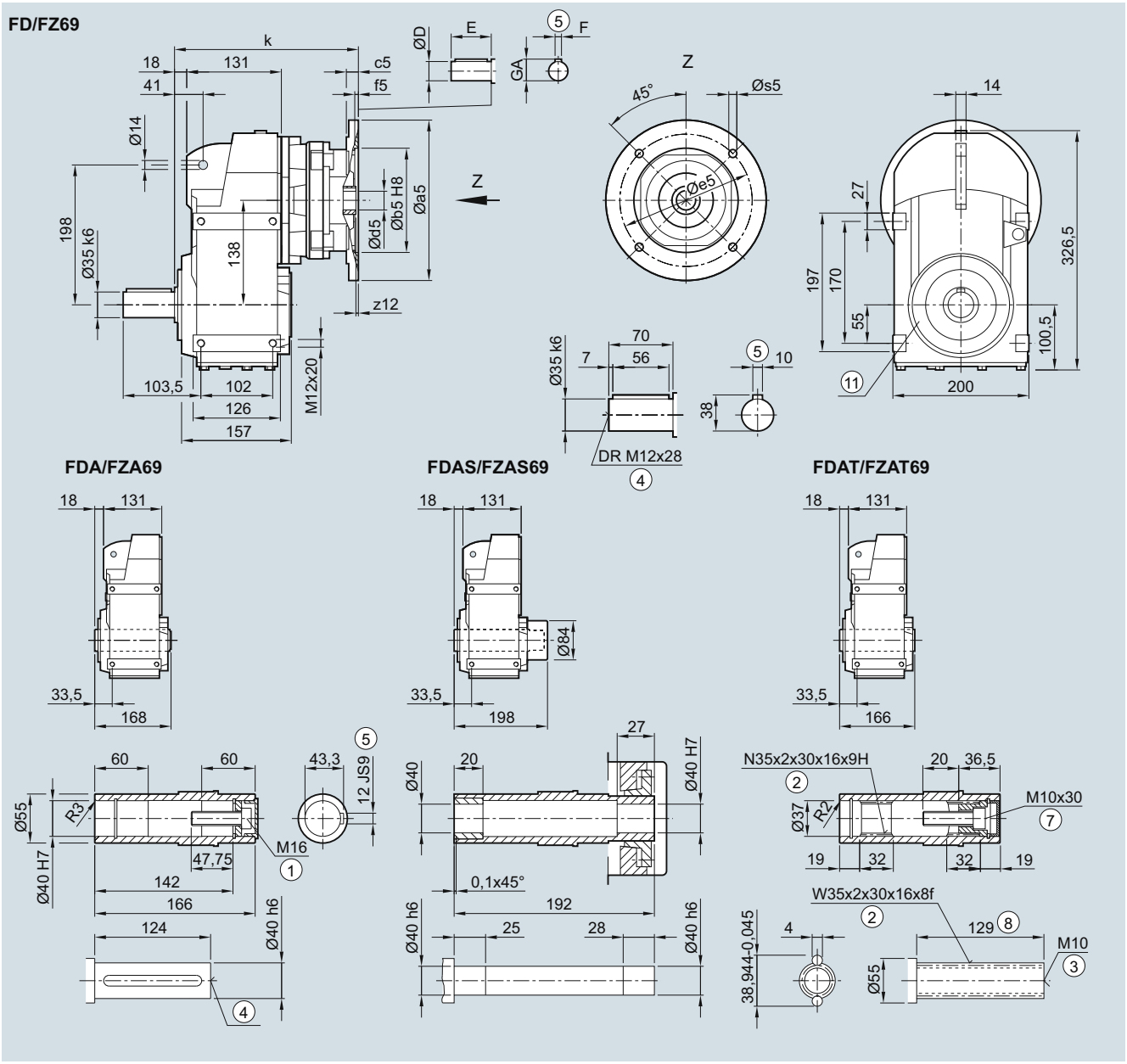


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11.0	23	4	12.5	245.0
71	160	110	12	4.5	130	M8	2.5	14.0	30	5	16.0	245.0
80	200	130	15	4.5	165	M10	4.0	19.0	40	6	12.5	273.0
90	200	130	15	4.5	165	M10	4.0	24.0	50	8	27.0	273.0
100 [1)]	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	327.5
112 [1)]	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	327.5
132 [1)]	300	230	12	6.0	265	M12x20	3.0	38.0	80	10	41.0	345.0

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 [1)] FDADS/FZADS not possible

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

F030K4, FA030K4, FAS030K4, FAT030K4



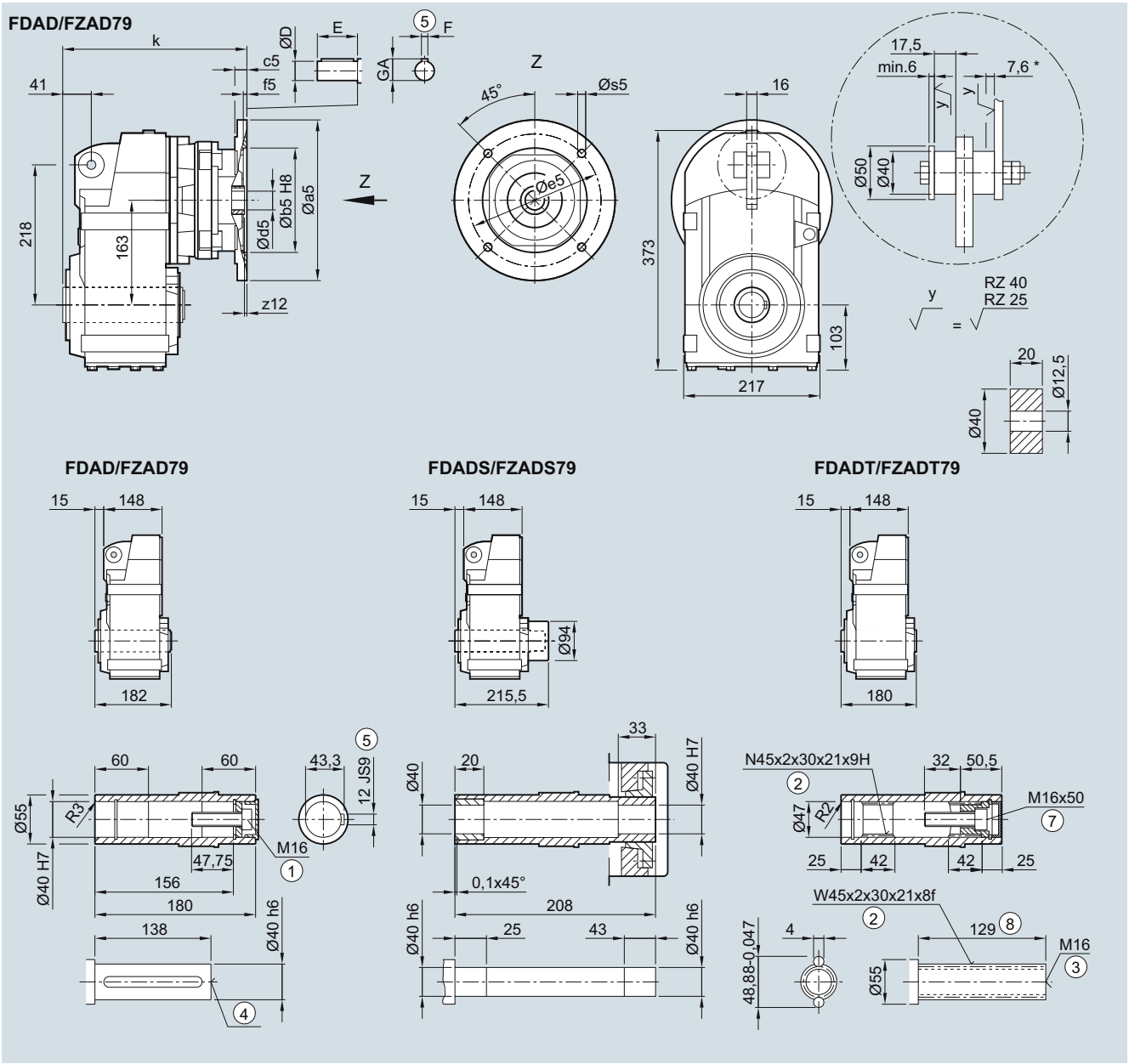
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	217.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	217.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	245.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	245.0
100 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
112 [1)]	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	299.5
132 [1)]	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 ⑪ Use bores only for housing flange design 1) FDADS/FZADS not possible

Dimensions

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

FAD030K4, FADS030K4, FADT030K4



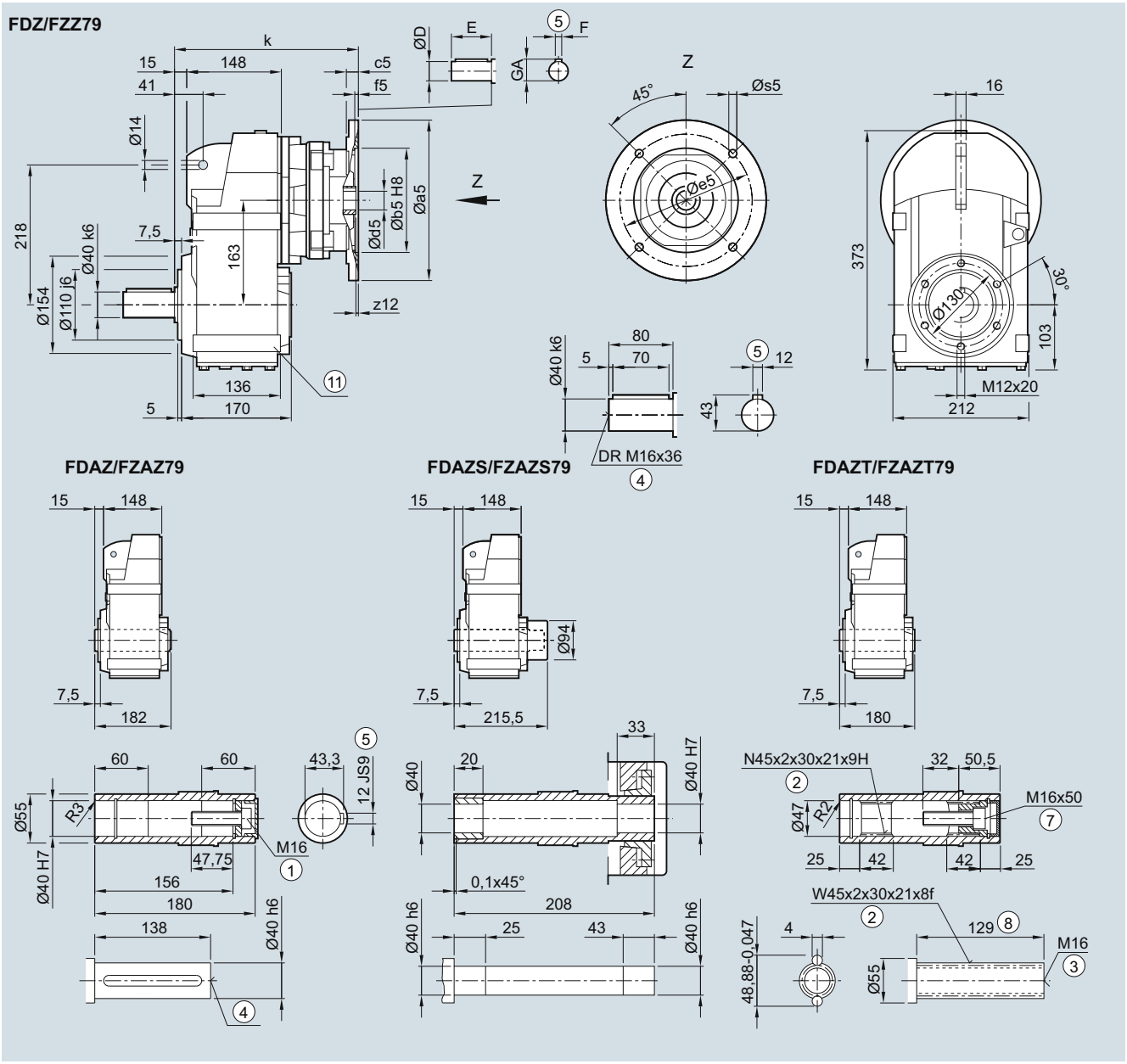
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	229.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	253.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
132 [1)]	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	325.0
160 [1)]	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 1) FDADS/FZADS not possible

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

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



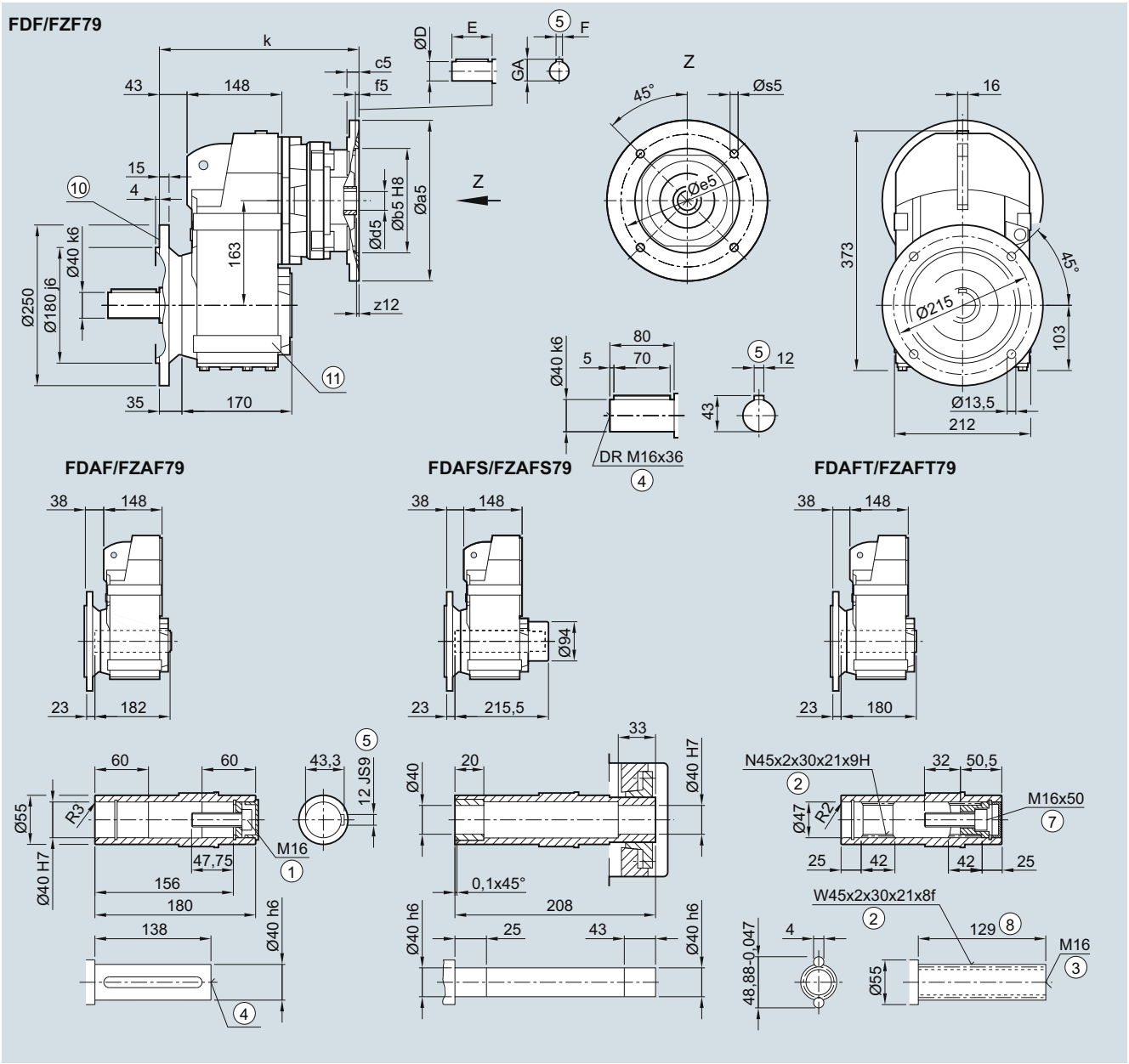
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	229.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	253.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
132 [1)]	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	325.0
160 [1)]	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 ⑪ Use bores only for foot-mounted design [1)] FDADS/FZADS not possible

Dimensions

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

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

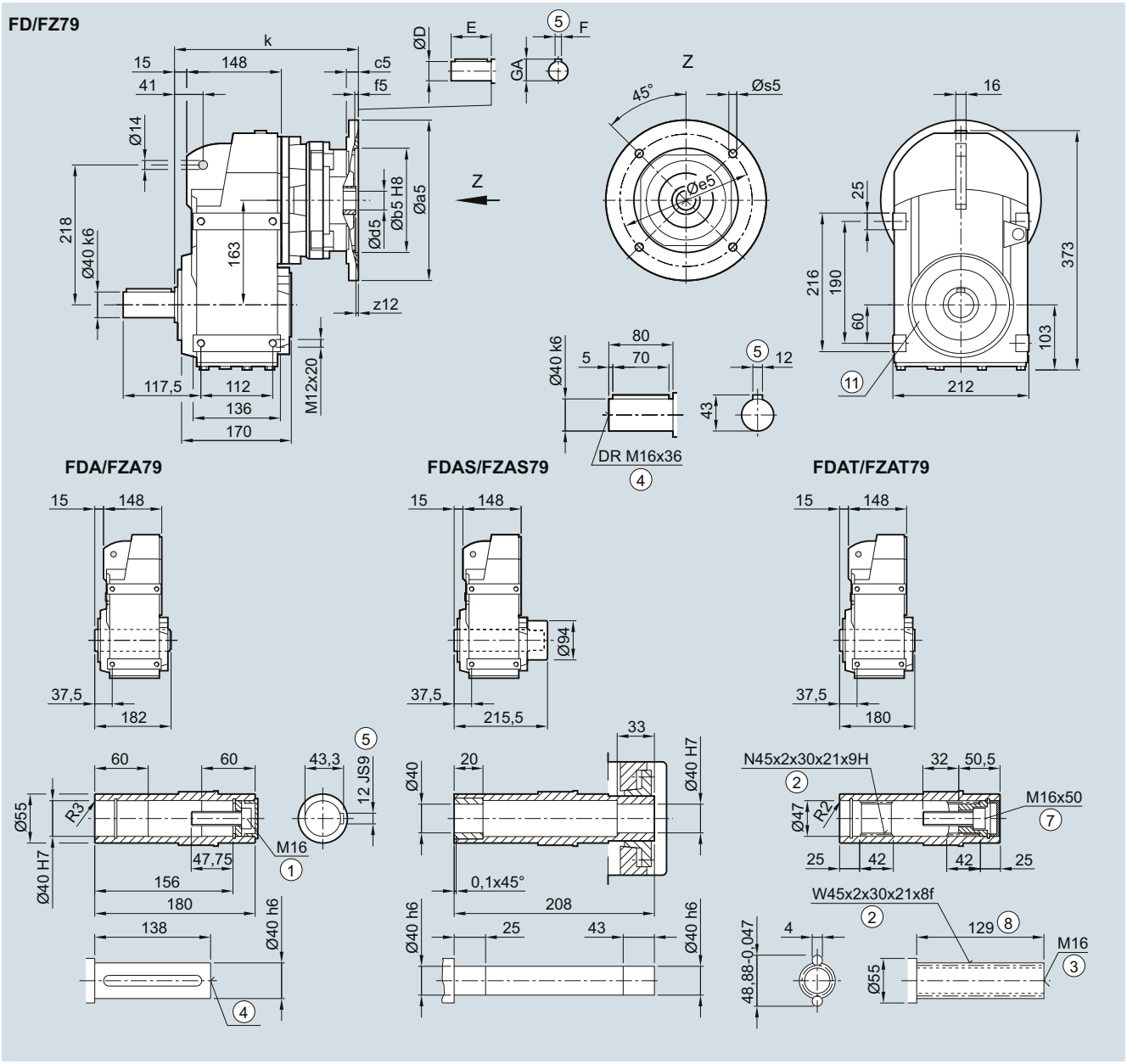


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14.0	30	5	16.0	257.0
80	200	130	15	4.5	165	M10	4.0	19.0	40	6	12.5	281.0
90	200	130	15	4.5	165	M10	4.0	24.0	50	8	27.0	281.0
100	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	335.5
112	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	335.5
132 [1)]	300	230	12	6.0	265	M12x20	3.0	38.0	80	10	41.0	353.0
160 [1)]	350	250	15	6.0	300	M16x25	3.0	42.0	110	12	45.0	383.0

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 1) FDADS/FZADS not possible

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

F030K4, FA030K4, FAS030K4, FAT030K4



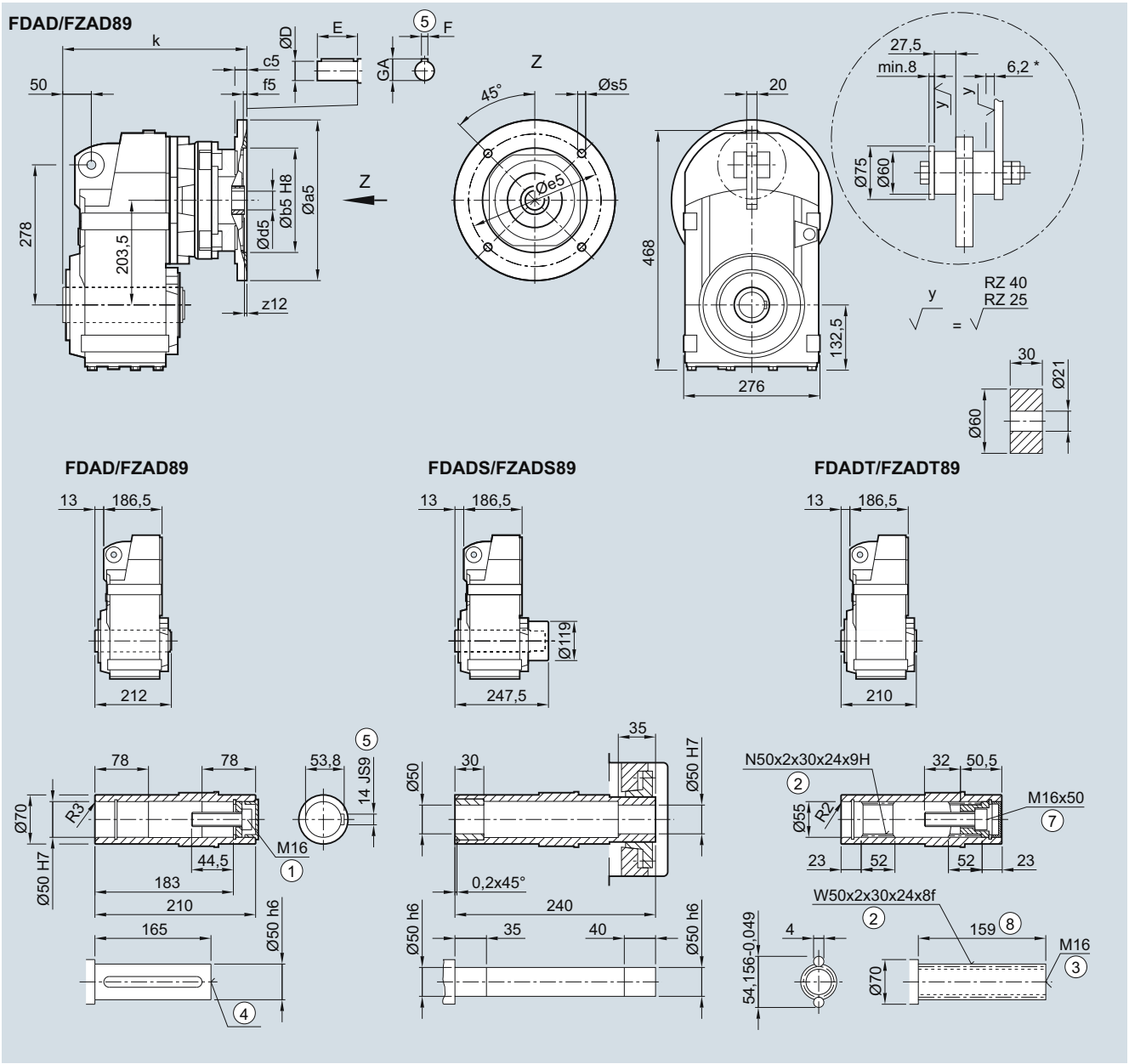
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	229.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	253.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	253.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	307.5
132 [1)]	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	325.0
160 [1)]	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 ⑪ Use bores only for housing flange design 1) FDADS/FZADS not possible

Dimensions

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

FAD030K4, FADS030K4, FADT030K4



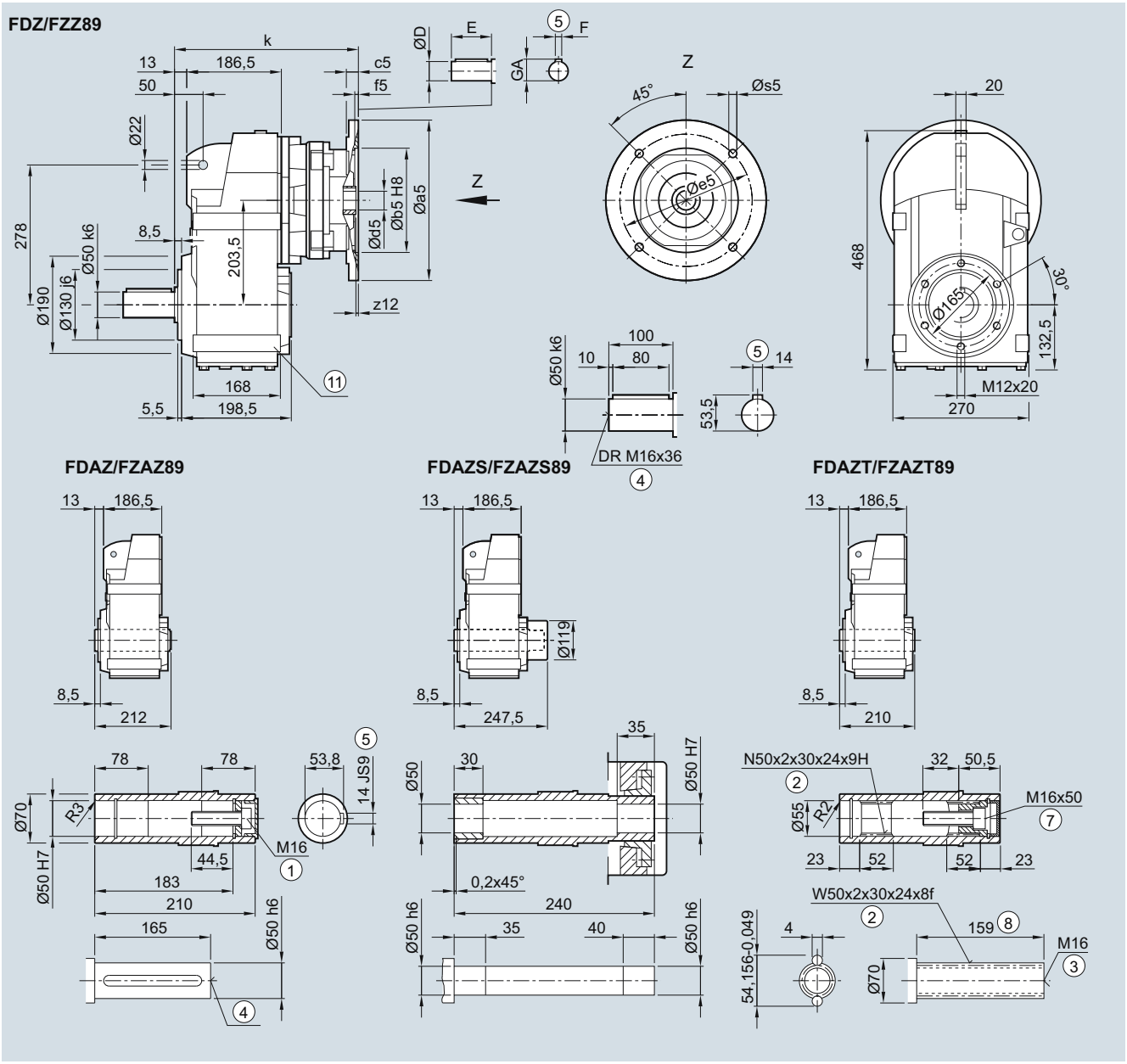
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	276.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	276.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	344.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	374.5
180 [1]	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 [1] FDADS/FZADS not possible

FD.Z./FZ.Z.89 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



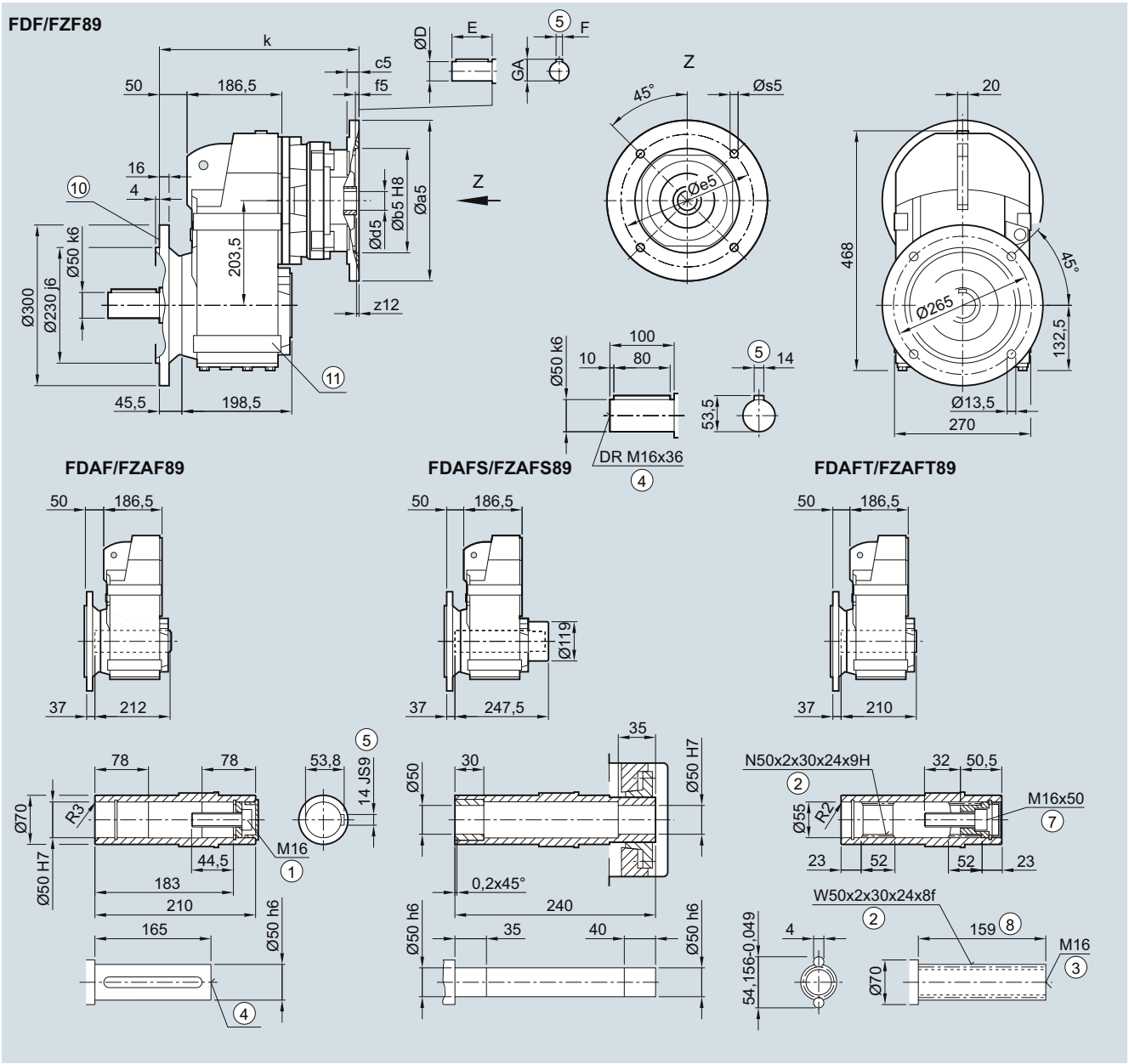
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	276.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	276.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	344.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	374.5
180 [1)]	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 ⑪ Use bores only for foot-mounted design [1)] FDADS/FZADS not possible

Dimensions

FD.F./FZ.F.89 gearbox in a flange-mounted design

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

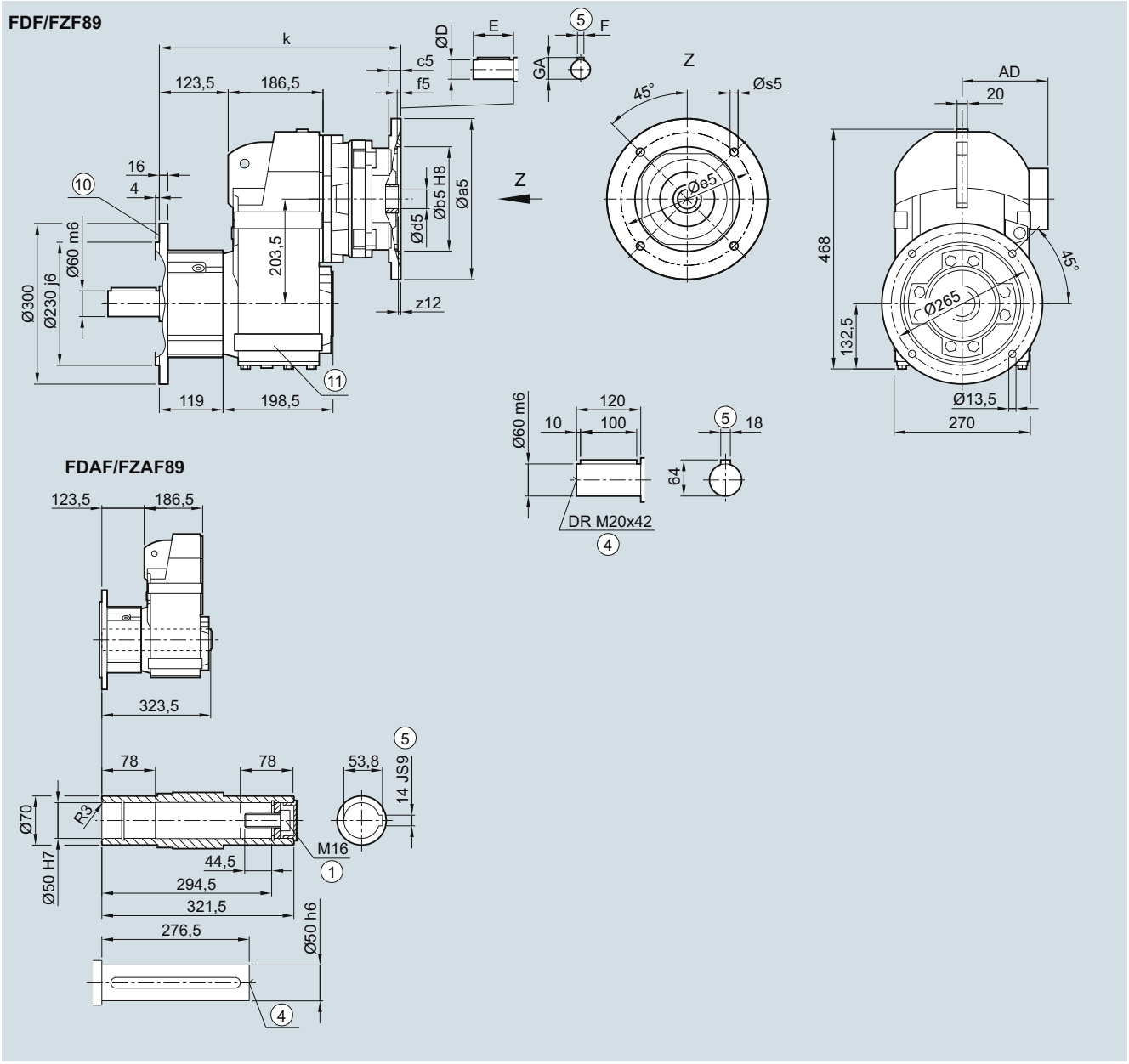


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19.0	40	6	12.5	313.5
90	200	130	15	4.5	165	M10	4.0	24.0	50	8	27.0	313.5
100	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	364.0
112	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	364.0
132	300	230	12	6.0	265	M12x20	3.0	38.0	80	10	41.0	381.5
160	350	250	15	6.0	300	M16x25	3.0	42.0	110	12	45.0	411.5
180 [1)]	350	250	15	6.0	300	M16x25	3.0	48.0	110	14	51.5	411.5

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 [1)] FDADS/FZADS not possible

FD.F./FZ.F.89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040K4, FAF040K4



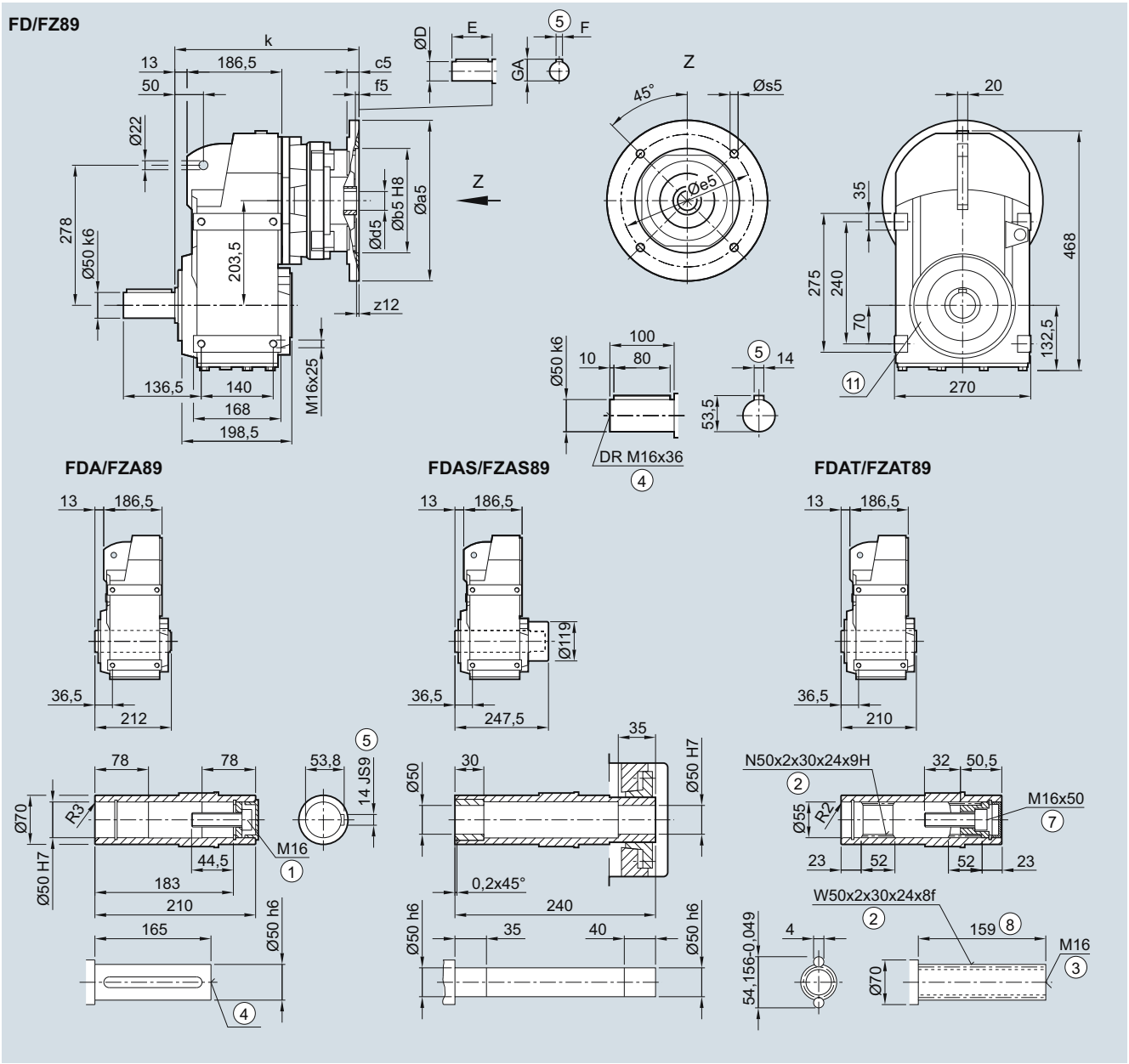
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19.0	40	6	12.5	387.0
90	200	130	15	4.5	165	M10	4.0	24.0	50	8	27.0	387.0
100	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	437.5
112	250	180	16	5.0	215	M12	7.5	28.0	60	8	31.0	437.5
132	300	230	12	6.0	265	M12x20	3.0	38.0	80	10	41.0	455.0
160	350	250	15	6.0	300	M16x25	3.0	42.0	110	12	45.0	485.0
180	350	250	15	6.0	300	M16x25	3.0	48.0	110	14	51.5	485.0

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

Dimensions

FD../FZ..89 gearbox in a foot-mounted design

F030K4, FA030K4, FAS030K4, FAT030K4

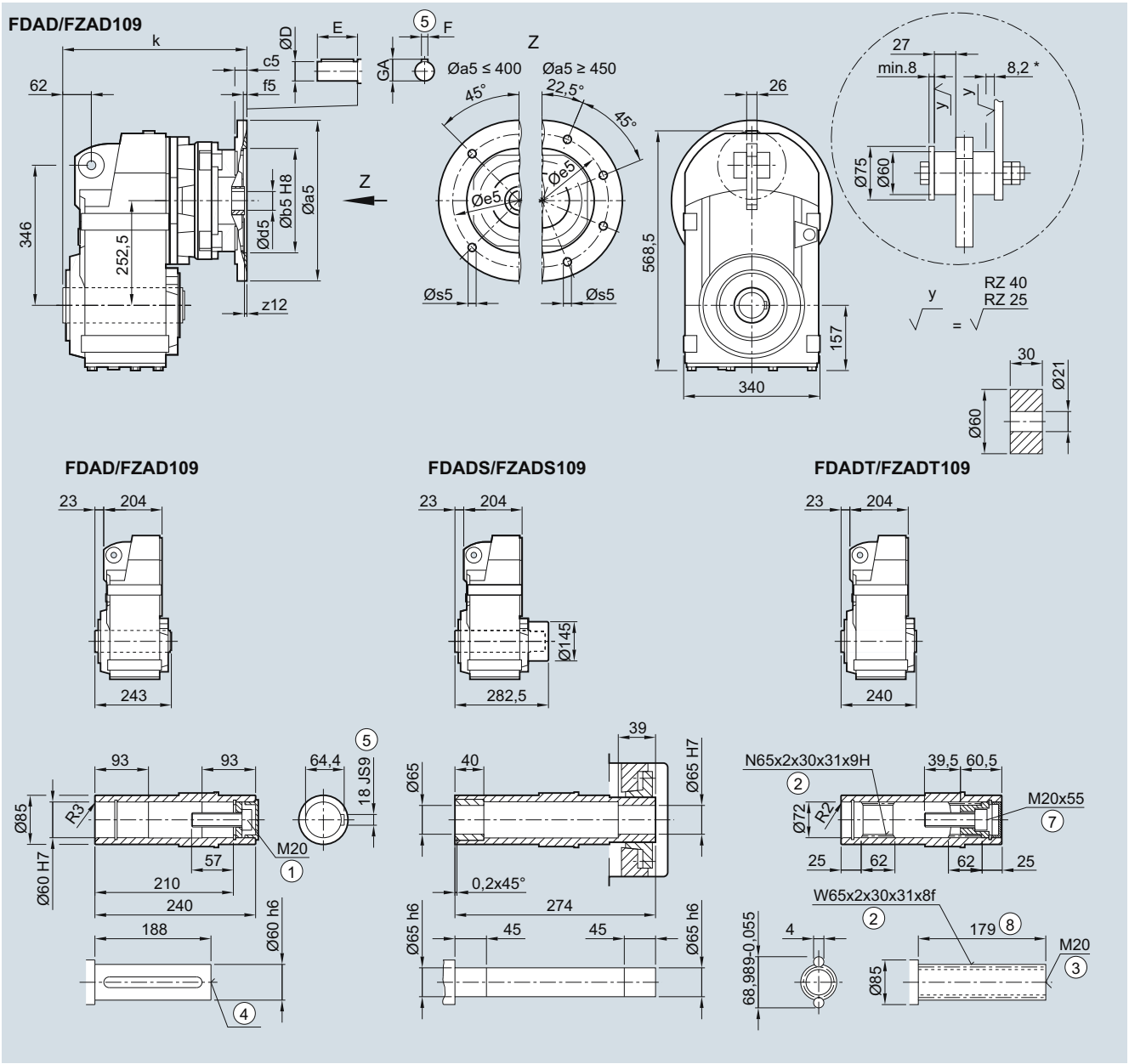


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	276.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	276.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	327.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	344.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	374.5
180 [1)]	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 ⑩ Use bores only for housing flange design 1) FDADS/FZADS not possible

FDAD./FZAD.109 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



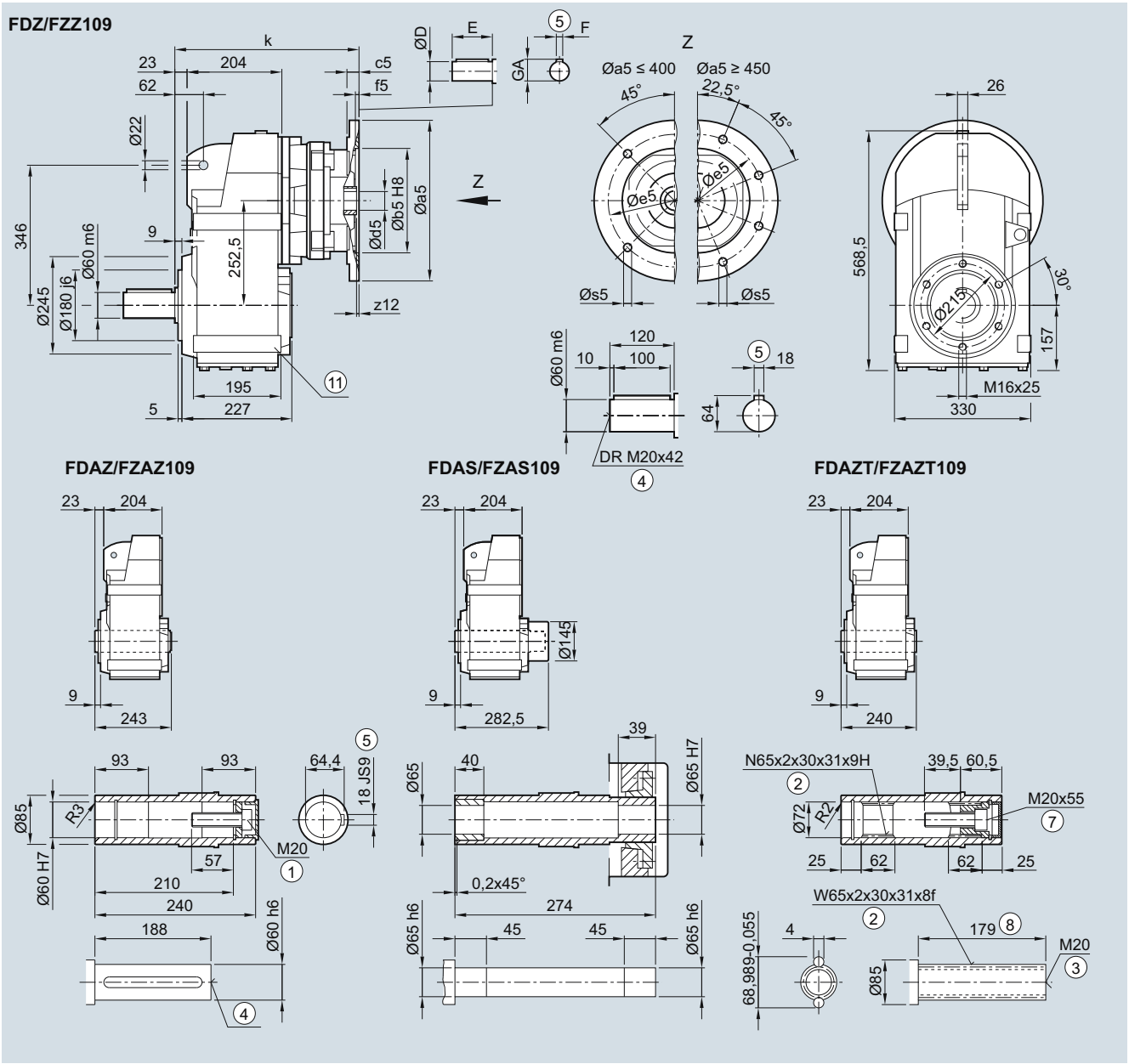
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	297.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	363.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	393.0
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

FD.Z./FZ.Z.109 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4

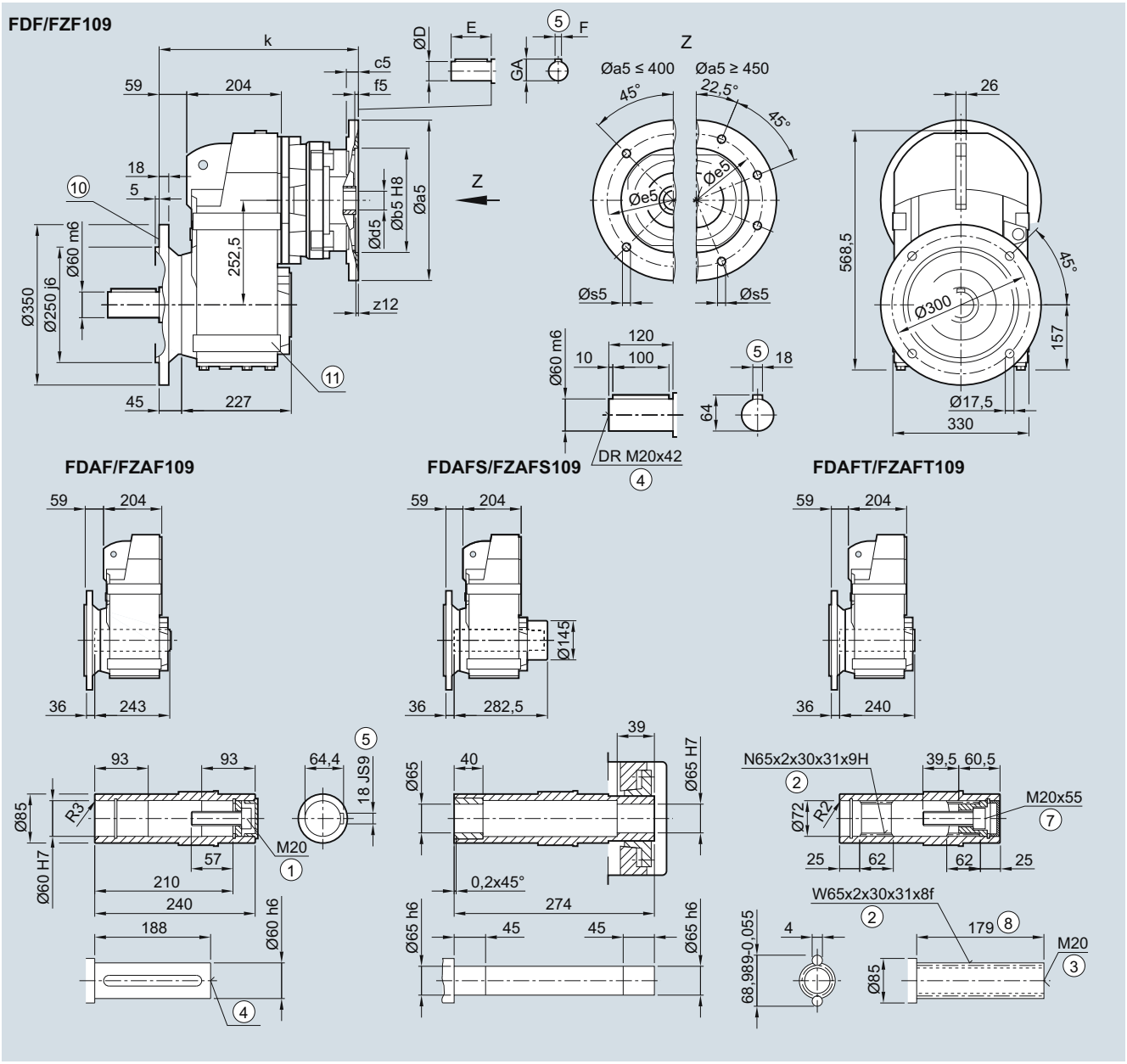


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	297.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	363.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	393.0
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 ⑪ Use bores only for foot-mounted design

FD.F./FZ.F.109 gearbox in a flange-mounted design

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

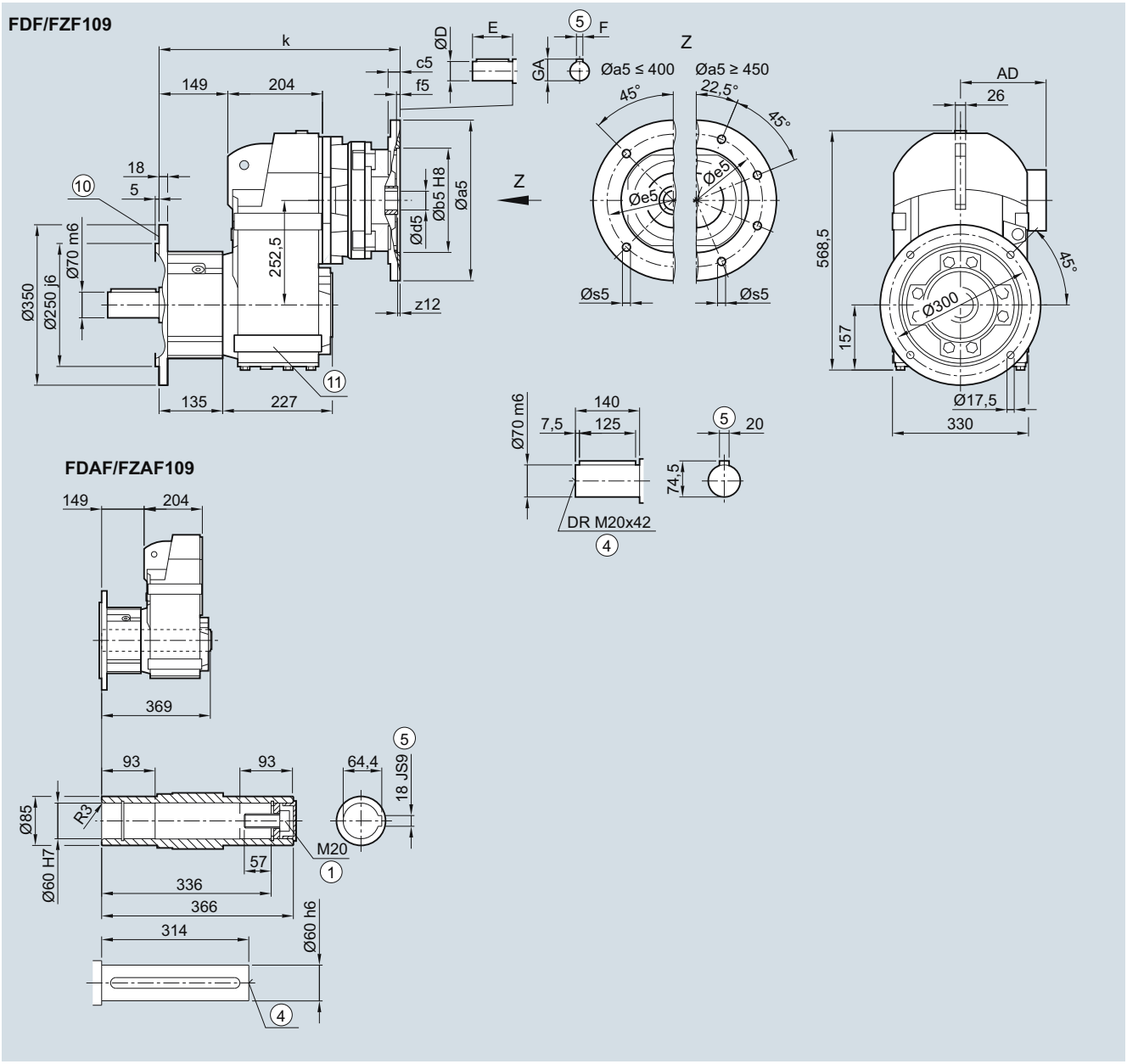


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	333.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	381.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	381.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	399.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	429.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	429.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	469.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	476.0

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

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

FF040K4, FAF040K4

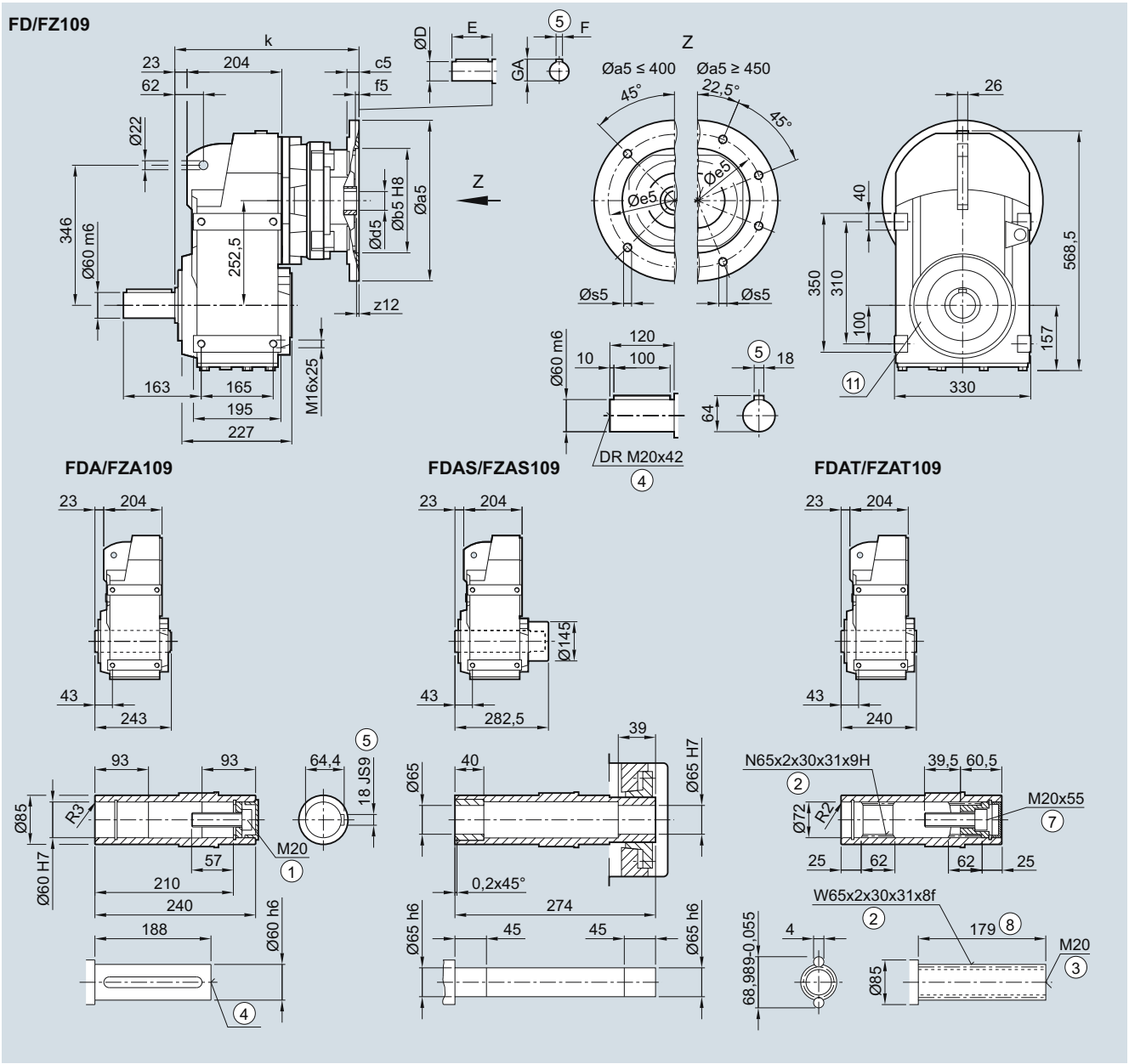


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	423.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	471.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	471.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	489.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	519.0
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 Ø Use bores only for foot-mounted design

FD../FZ..109 gearbox in a foot-mounted design

F030K4, FA030K4, FAS030K4, FAT030K4

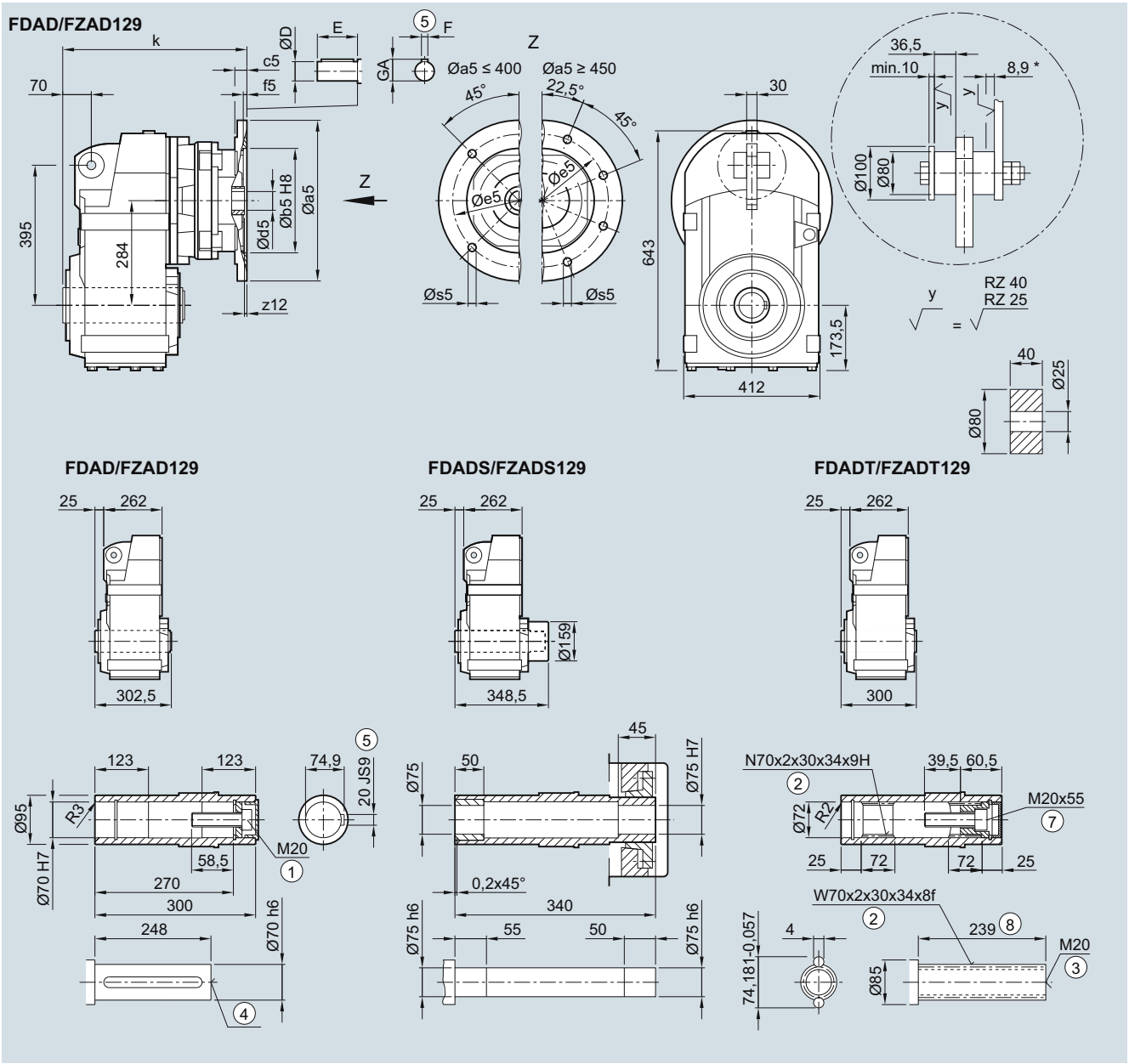


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	297.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	345.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	363.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	393.0
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 ⑪ Use bores only for housing flange design

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

FAD030K4, FADS030K4, FADT030K4



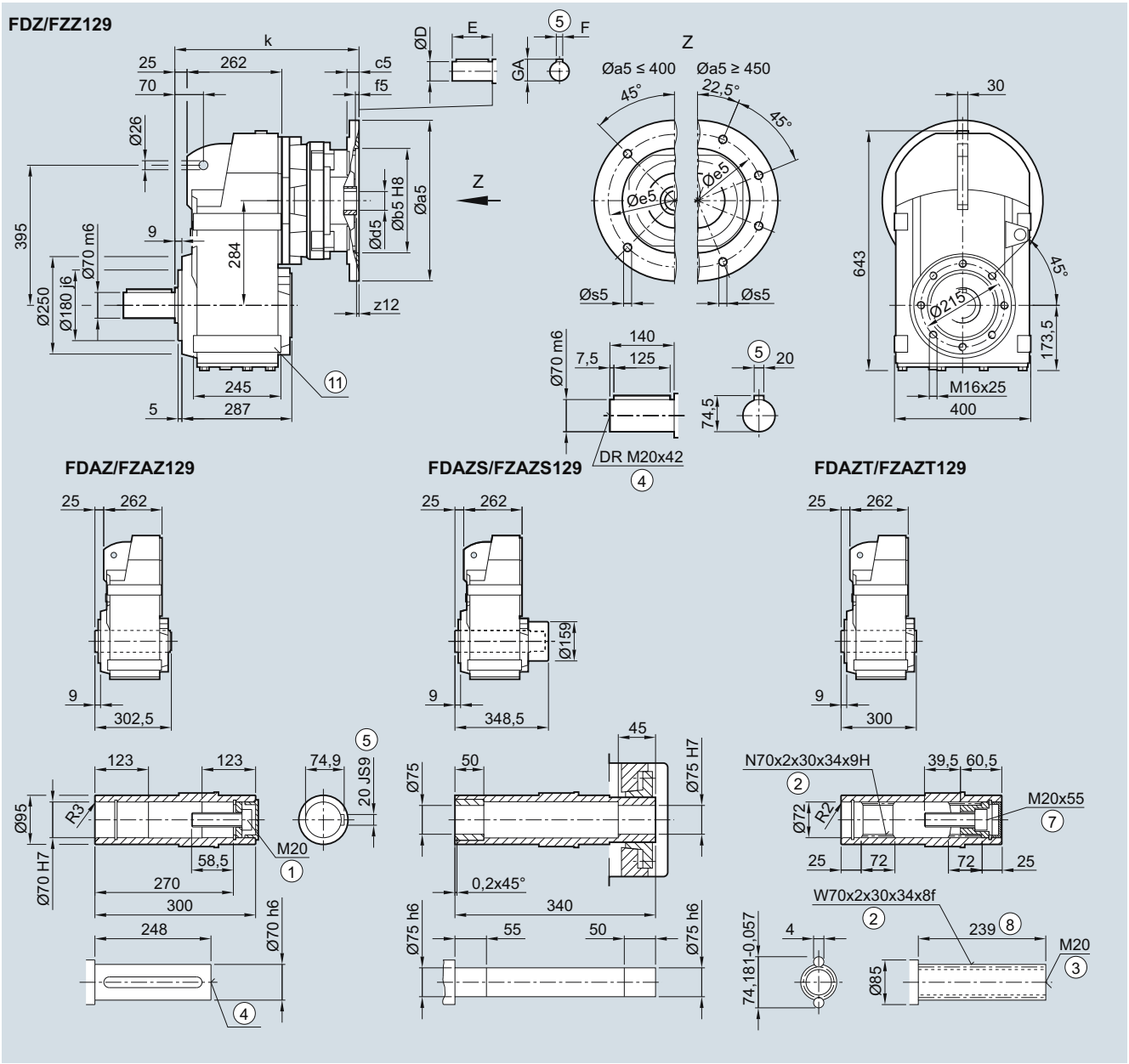
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	350.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	412.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	442.0
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 [1)]	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

* Spring compression at max. torque [1)] FDADS/FZADS not possible

FD.Z./FZ.Z.129 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



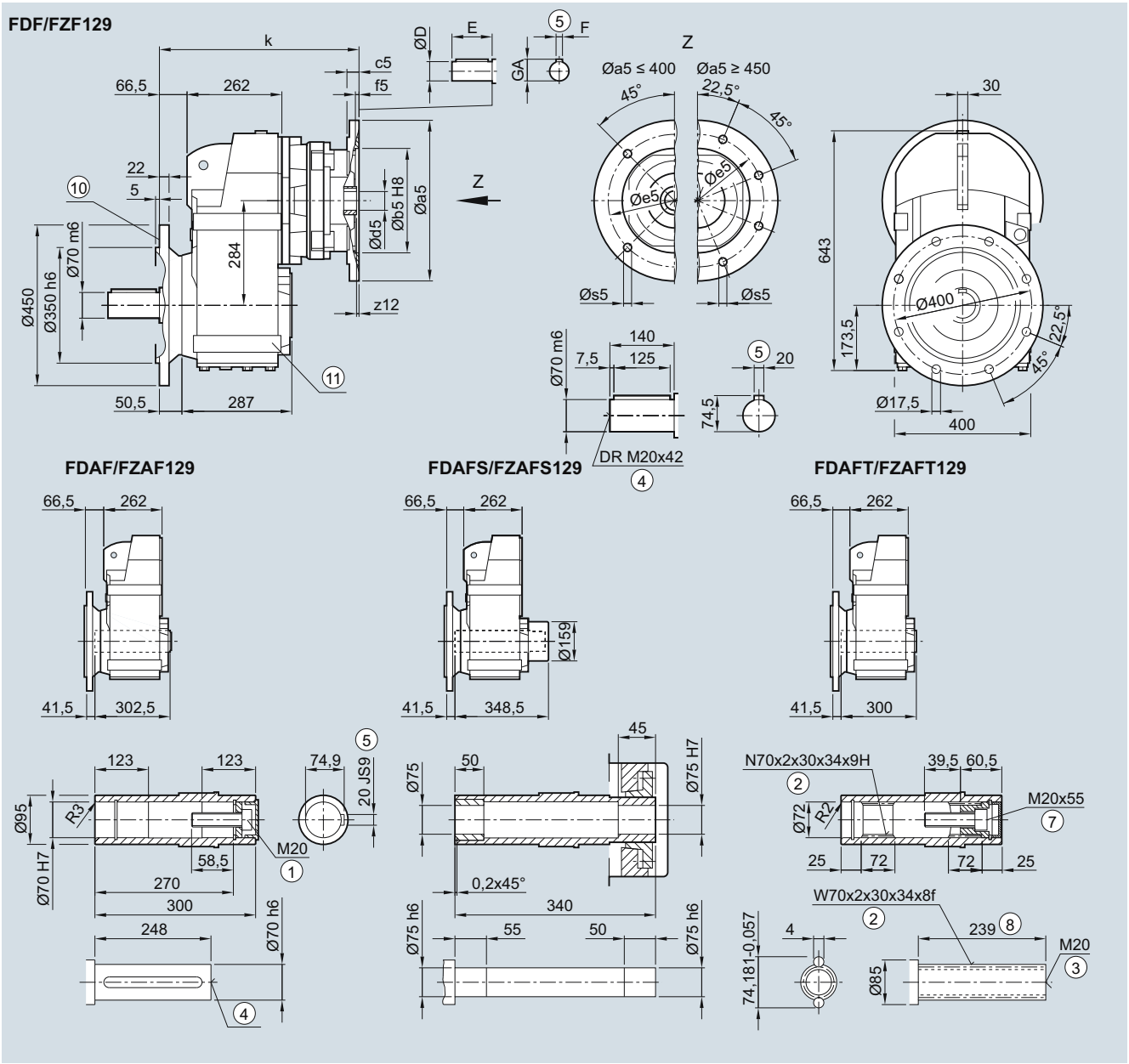
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	350.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	412.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	442.0
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 [1]	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 foot-mounted design [1] FDADS/FZADS not possible

Dimensions

FD.F./FZ.F.129 gearbox in a flange-mounted design

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

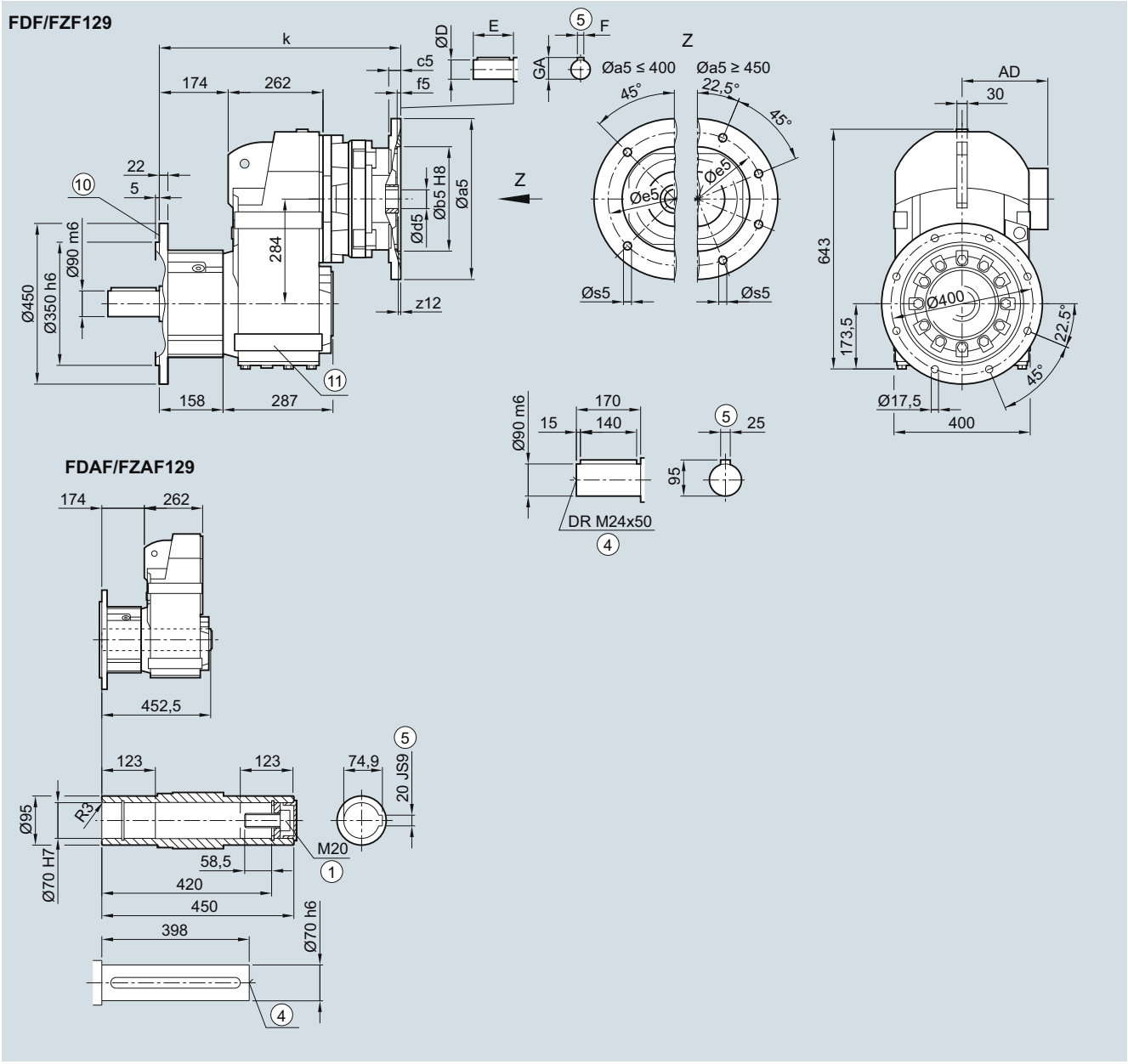


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	391.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	438.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	438.0
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	453.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	483.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	483.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	524.0
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	530.5
250 [1)]	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	565.0

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 [1)] FDADS/FZADS not possible

FD.F./FZ.F.129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040K4, FAF040K4



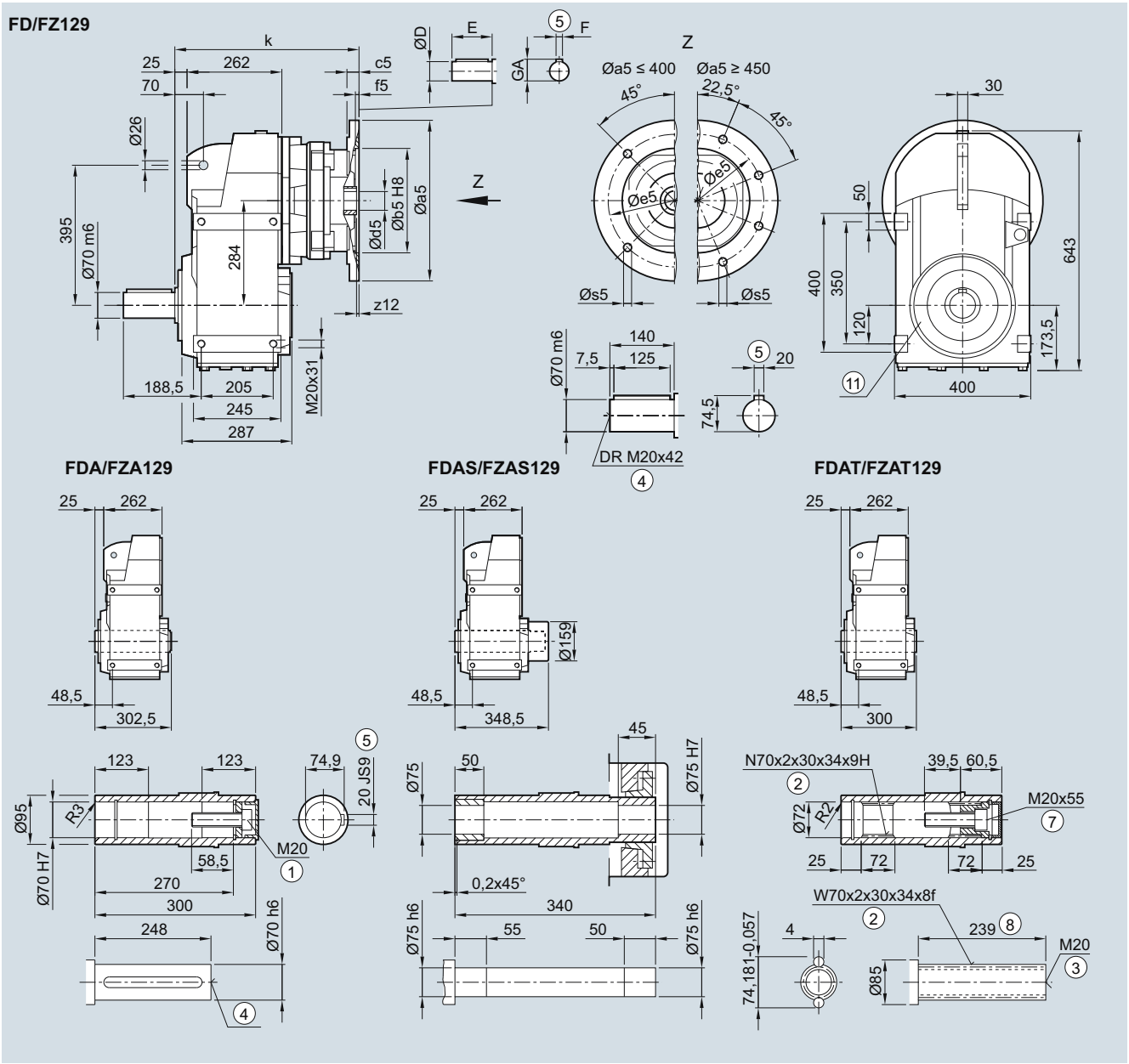
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	499.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	545.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	545.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	561.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	591.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	591.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	631.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	638.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	672.5

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

Dimensions

FD../FZ..129 gearbox in a foot-mounted design

F030K4, FA030K4, FAS030K4, FAT030K4

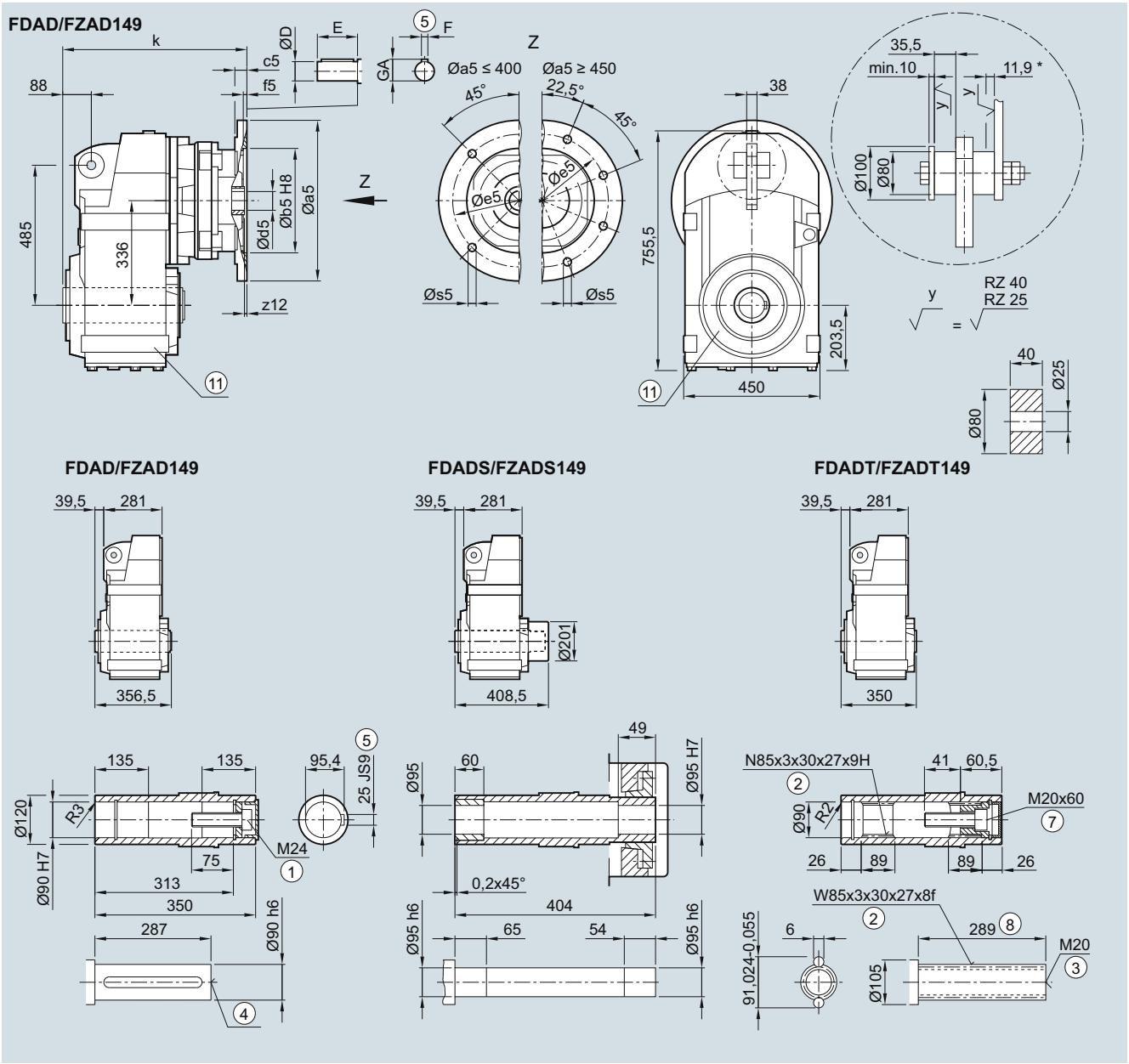


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	350.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	396.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	412.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	442.0
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 [1)]	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 ☎ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design 1) FDADS/FZADS not possible

FDAD./FZAD.149 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



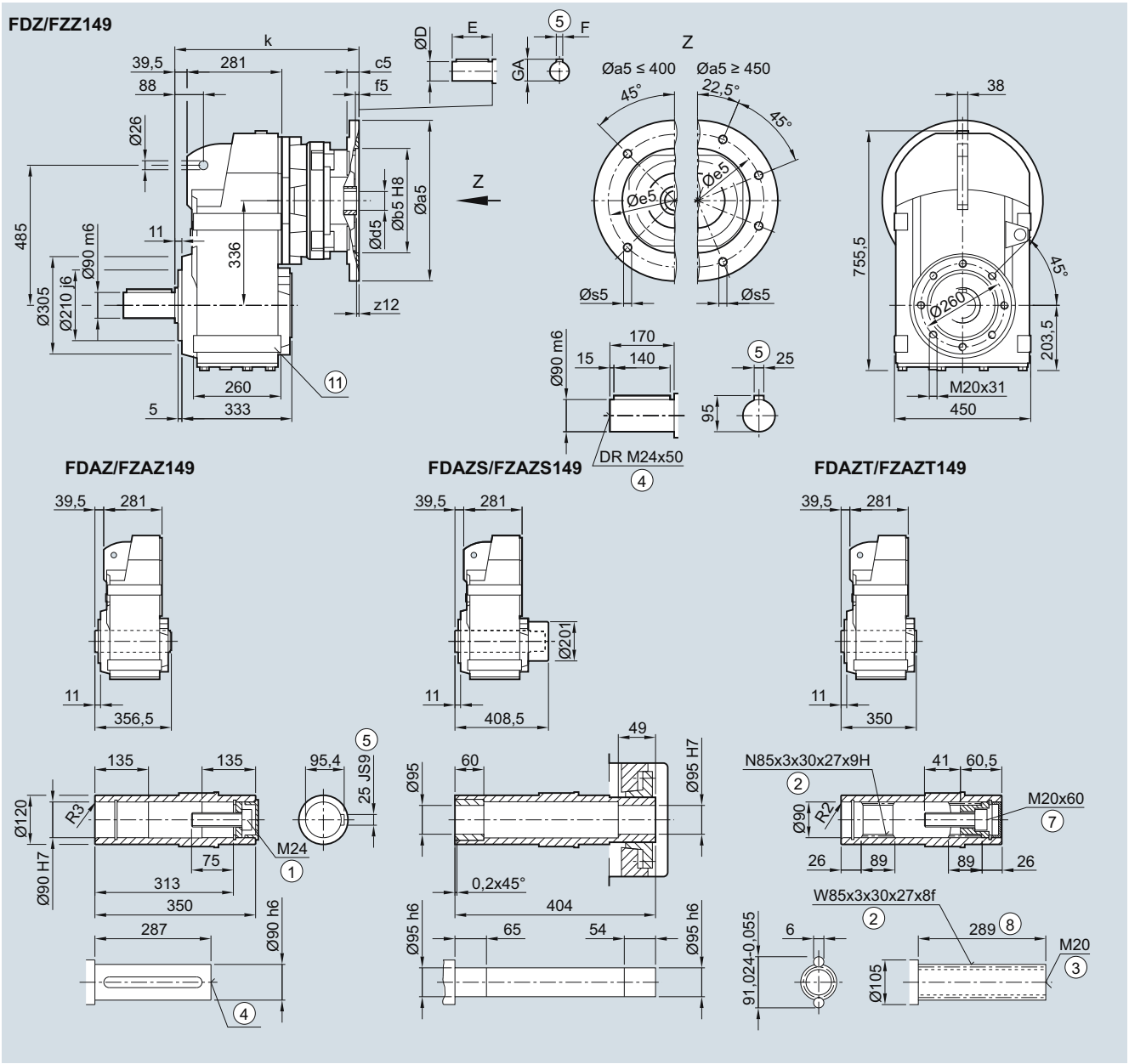
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	439.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	469.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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 ⑪ Use bores only for foot-mounted, flange-mounted or housing flange design

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

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4

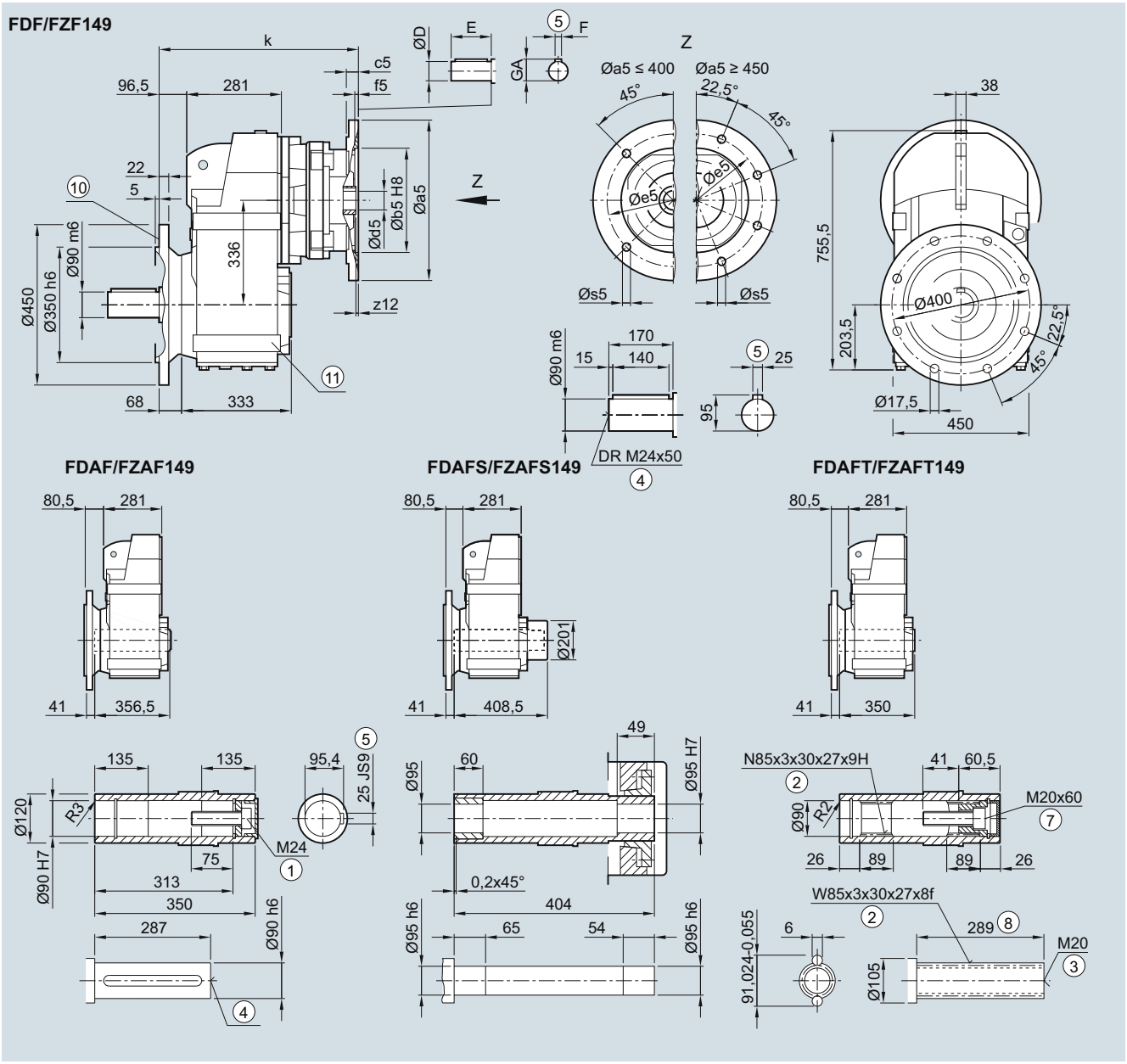


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	439.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	469.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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 ⑪ Use bores only for foot-mounted design

FD.F./FZ.F.149 gearbox in a flange-mounted design

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

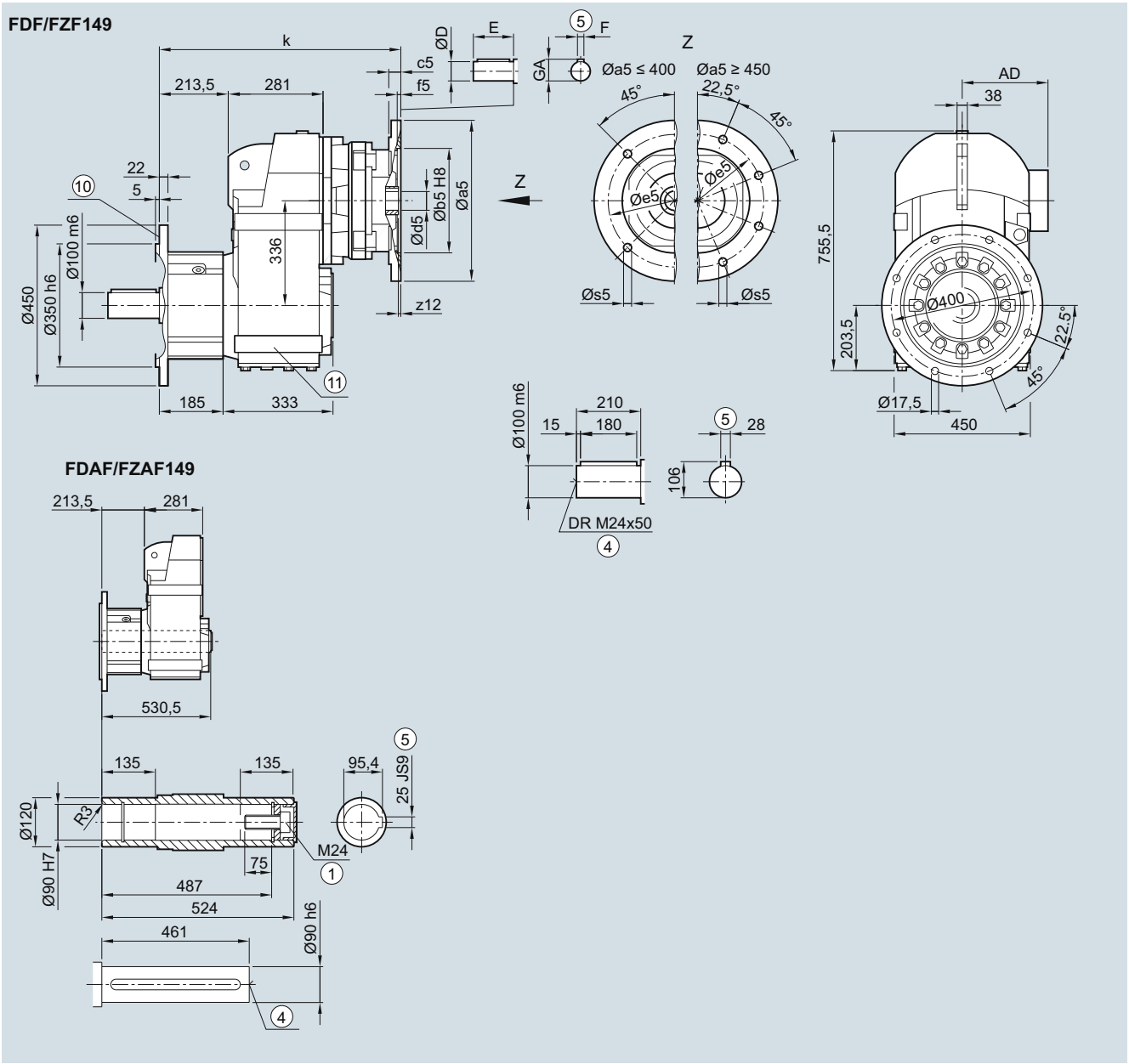


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	485.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	485.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	496.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	526.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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.F./FZ.F.149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040K4, FAF040K4

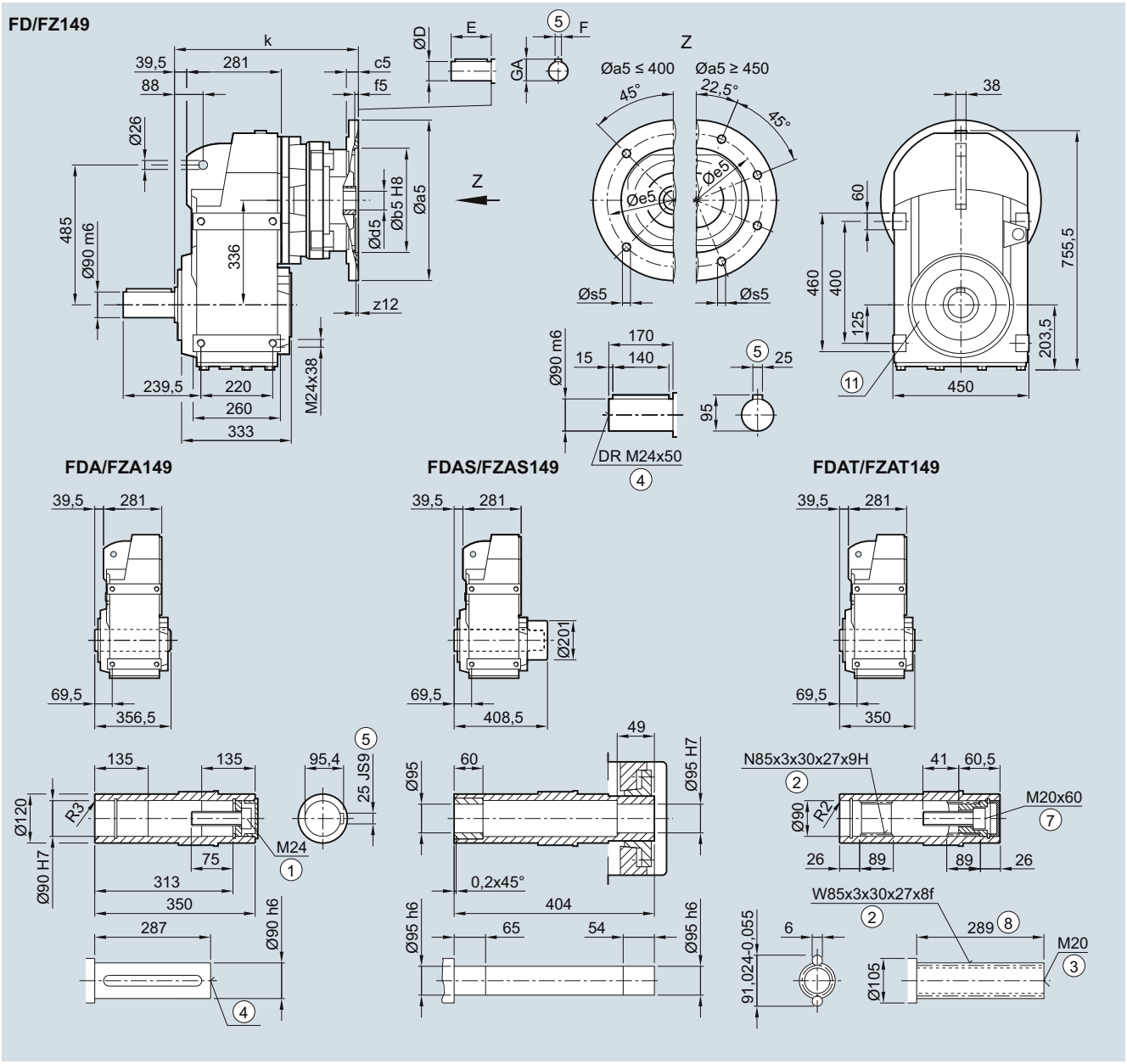


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	602.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	602.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	613.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	643.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	643.0
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	59.0	683.5
225	450	350	20	6	400	M16x29	7.0	60	140	18	64.0	690.0
250	550	450	20	6.0	500	M16x29	10.0	65	140	18	69.0	724.5

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

F030K4, FA030K4, FAS030K4, FAT030K4

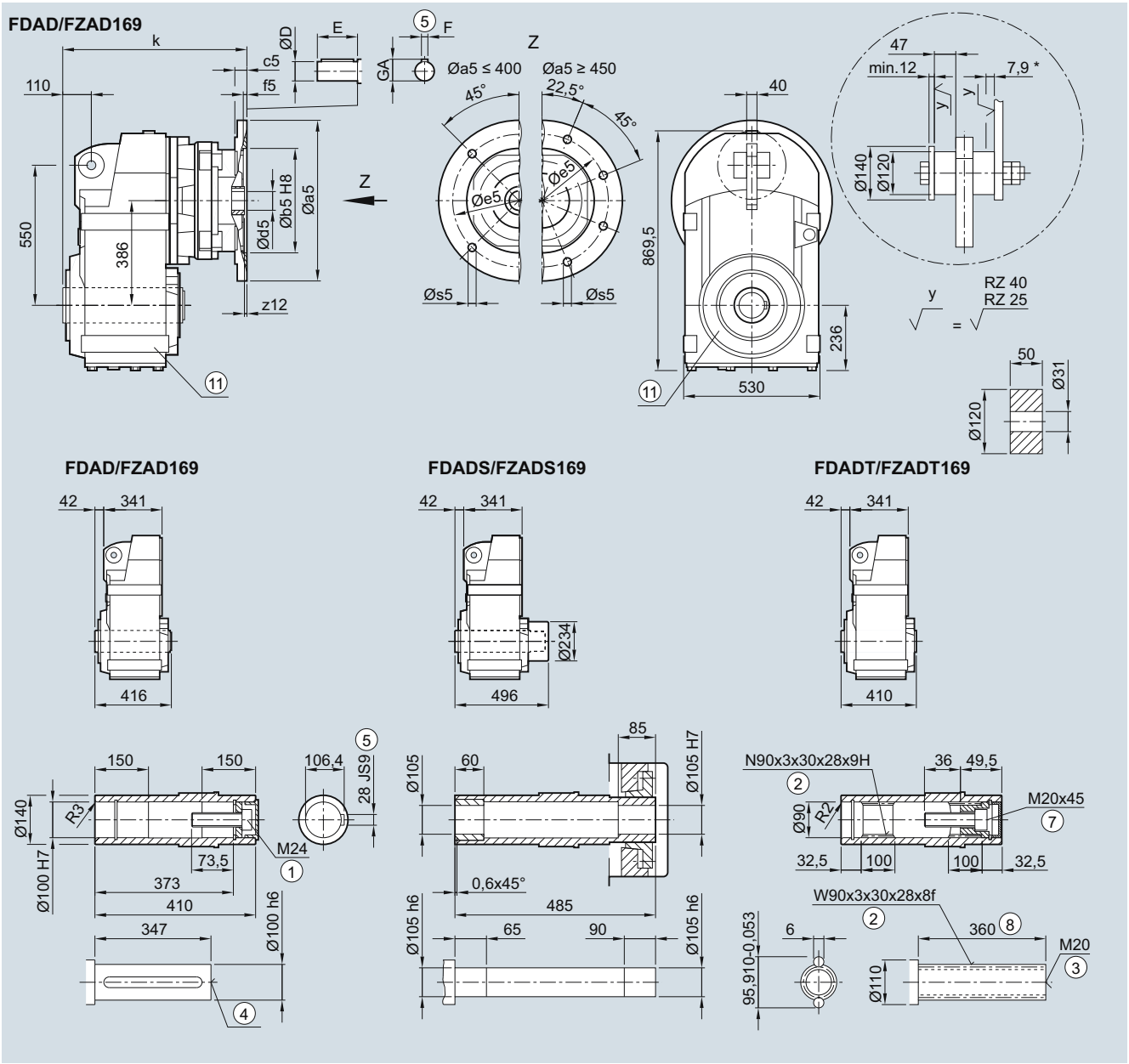


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	428.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	439.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	469.0
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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 ⑪ Use bores only for housing flange design

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

FAD030K4, FADS030K4, FADT030K4



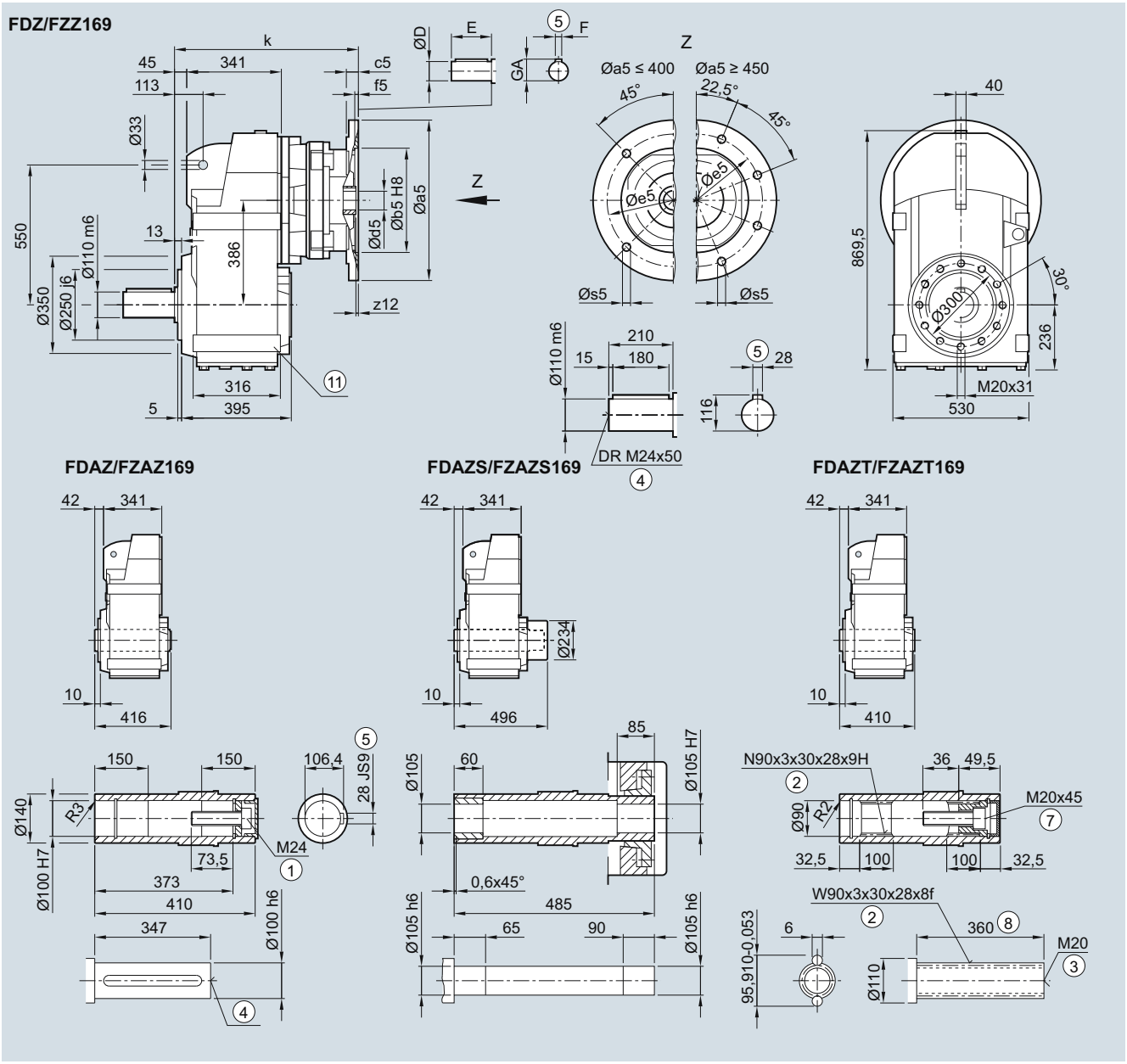
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	481.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	491.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	521.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	521.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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 ⑪ Use bores only for foot-mounted, flange-mounted or housing flange design

FD.Z./FZ.Z.169 gearbox in a housing flange design

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4



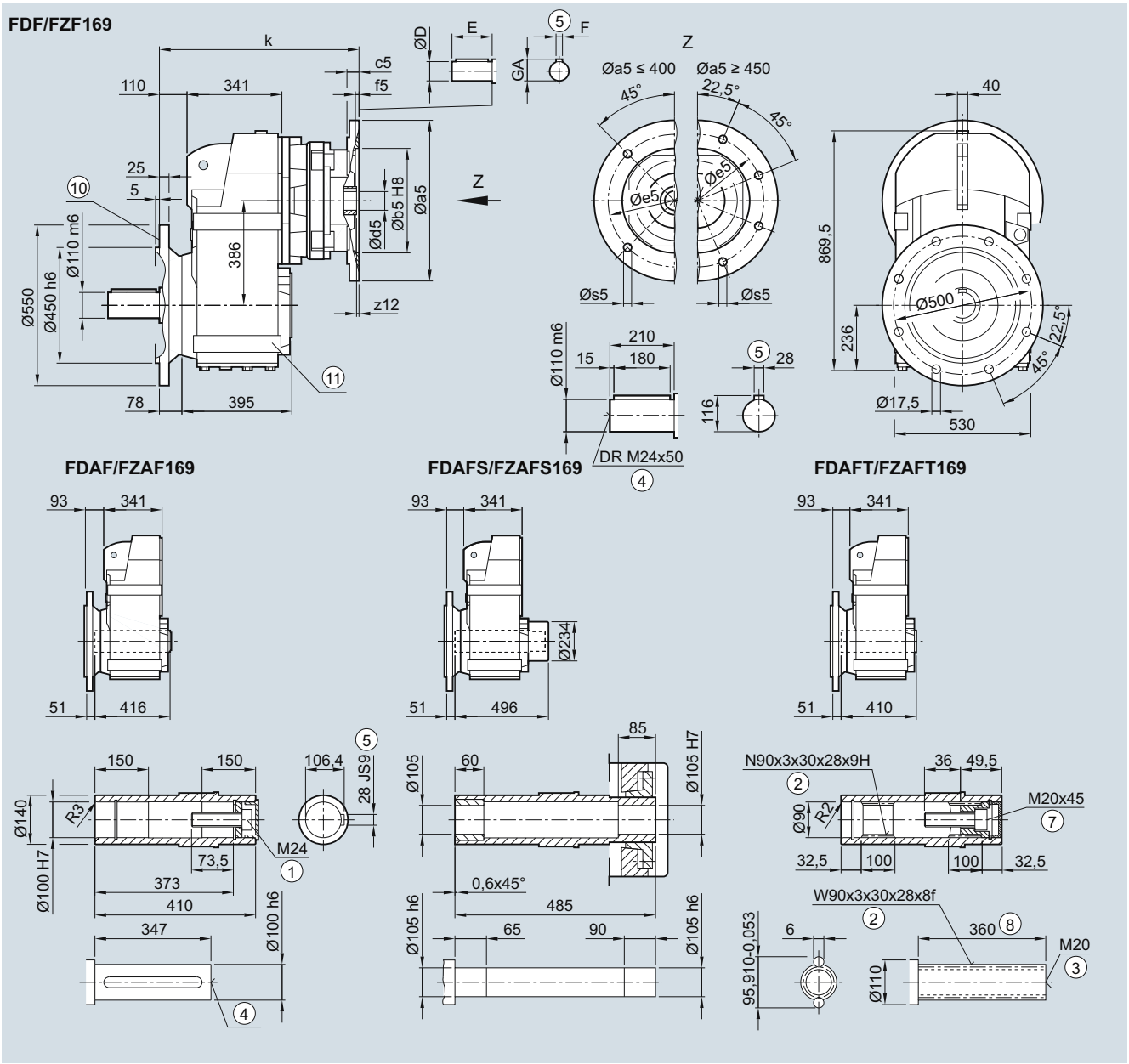
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	481.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	491.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	521.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	521.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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 ⑪ Use bores only for foot-mounted design

Dimensions

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

FF030K4, FAF030K4, FAFS030K4, FAFT030K4

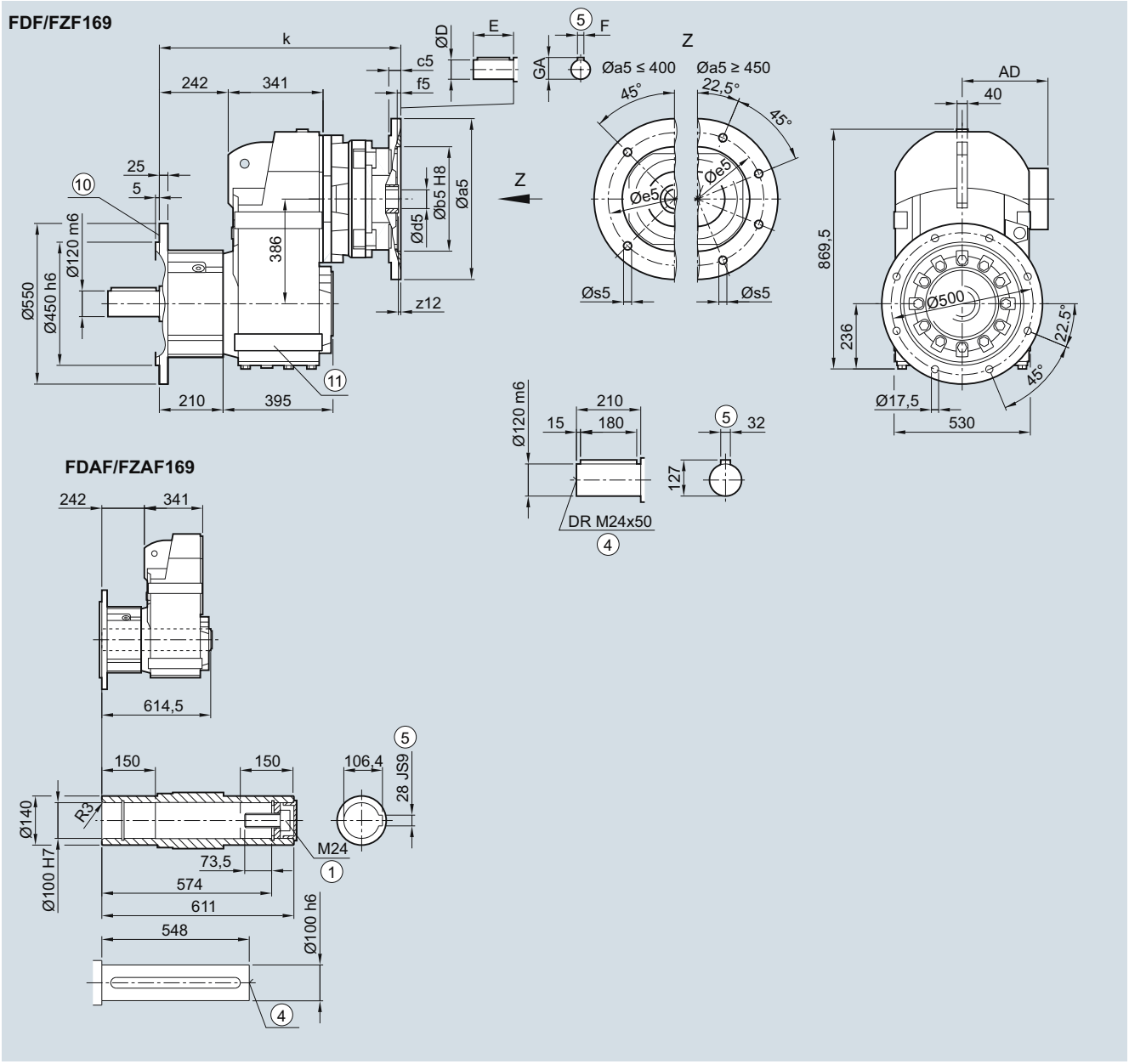


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	546.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	556.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	586.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	586.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16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



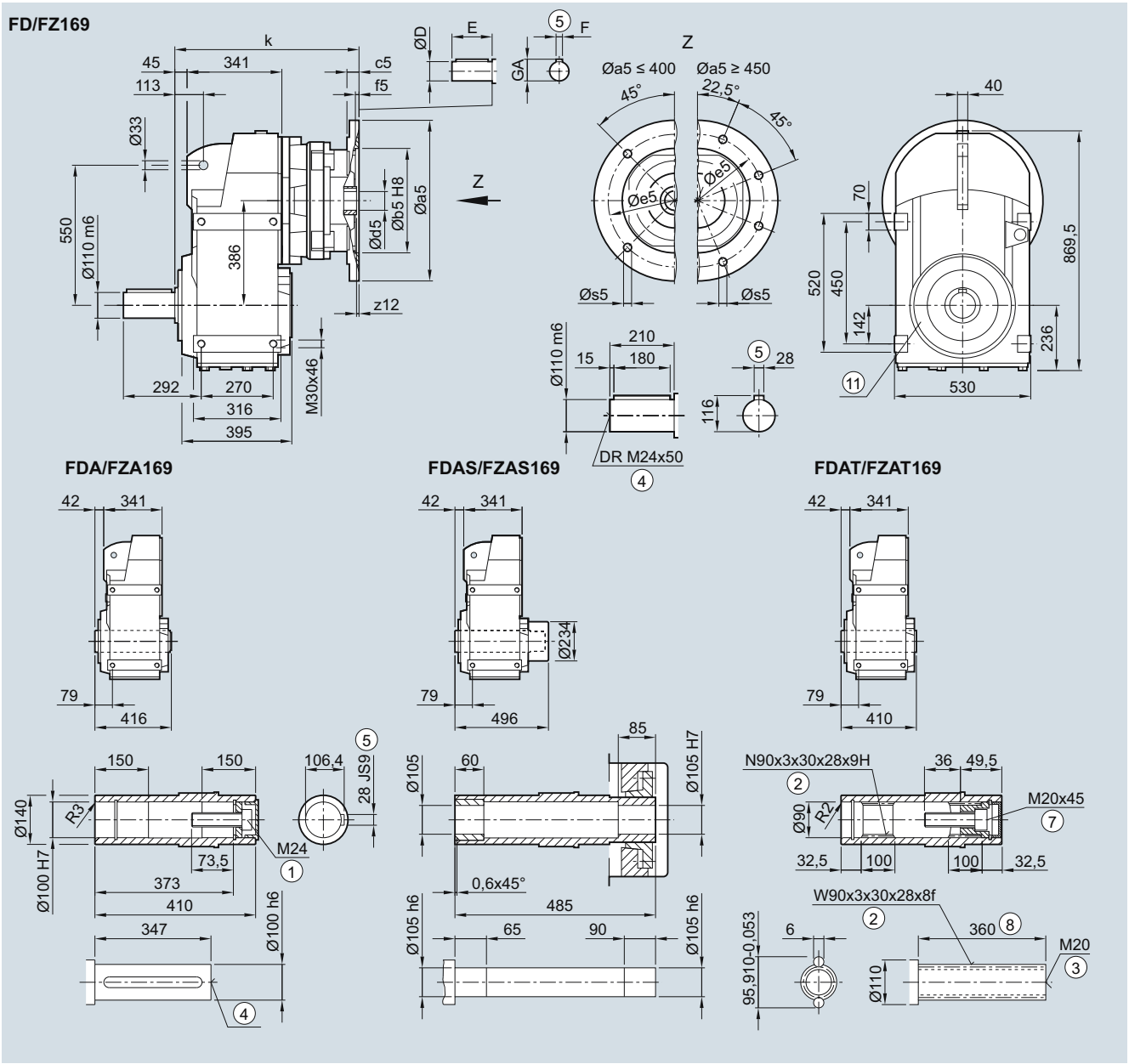
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	678.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	688.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	718.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	718.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16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

Dimensions

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

F030K4, FA030K4, FAS030K4, FAT030K4

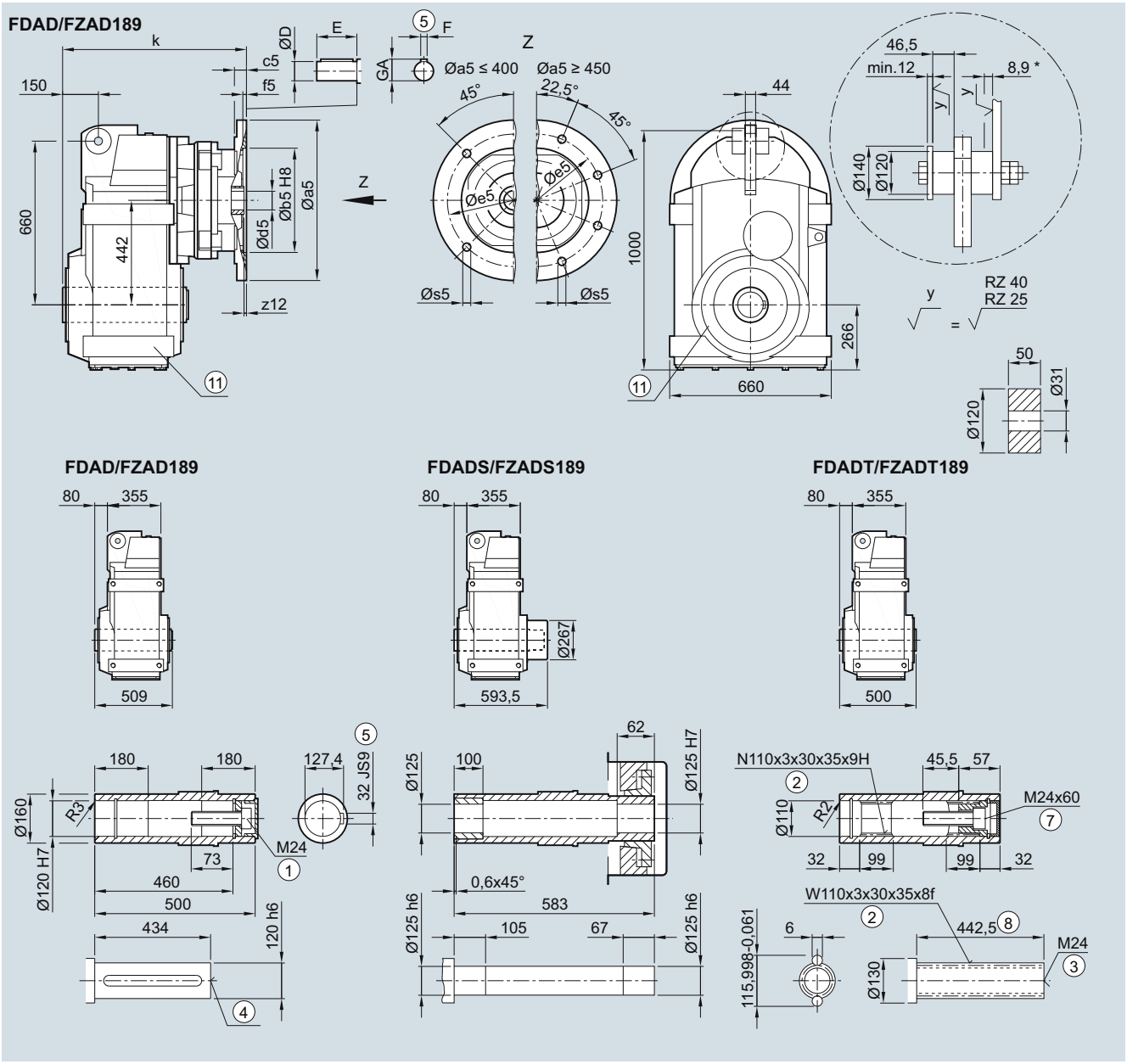


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	481.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	491.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	521.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	521.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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 ⑪ Use bores only for housing flange design

FDAD./FZAD.189 gearbox in a shaft-mounted design

FAD030K4, FADS030K4, FADT030K4



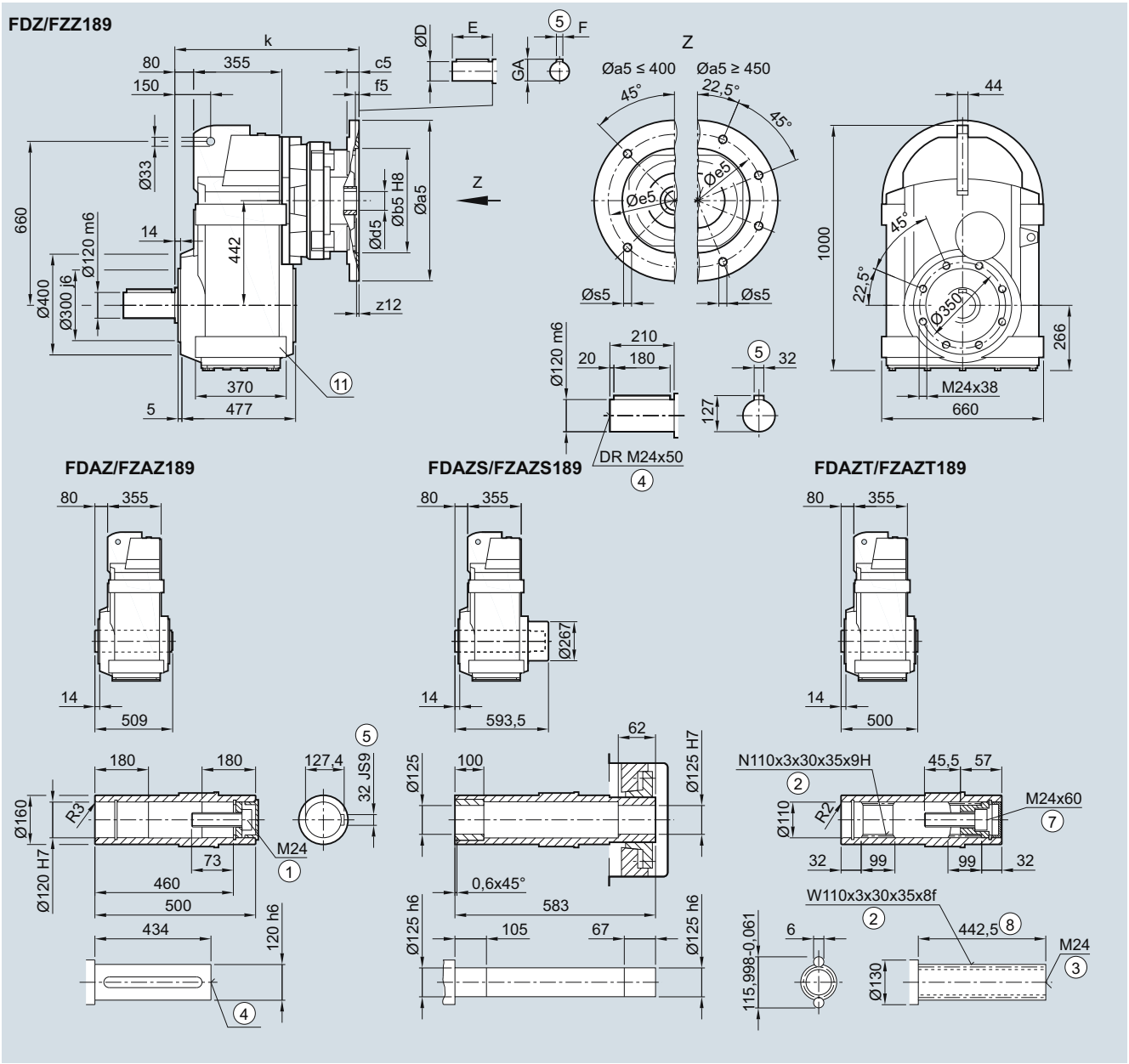
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	530.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	540.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	570.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	570.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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 ⑪ Use bores only for foot-mounted, flange-mounted or housing flange design

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

FZ030K4, FAZ030K4, FAZS030K4, FAZT030K4

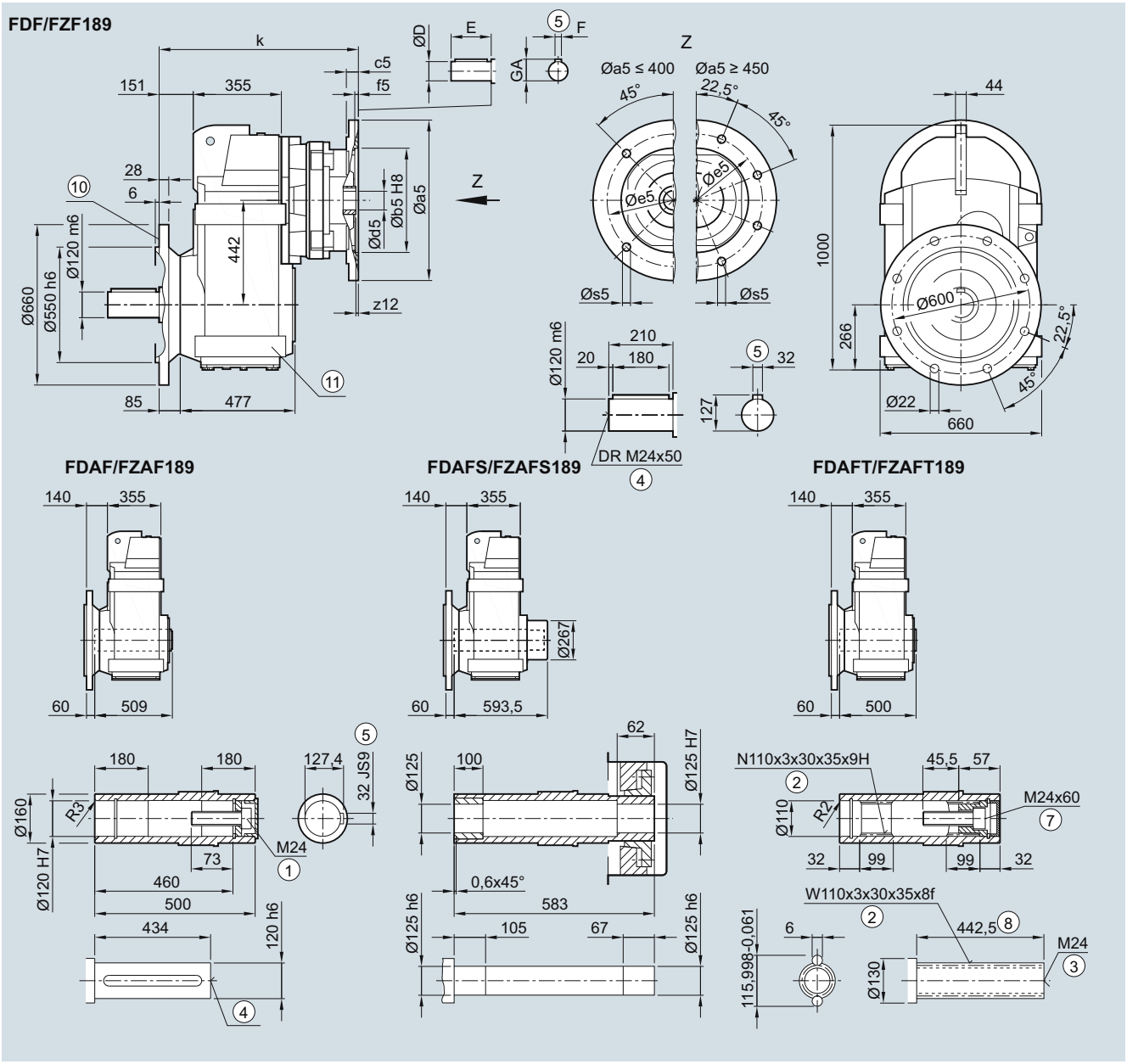


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	530.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	540.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	570.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	570.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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 ⑪ Use bores only for foot-mounted design

FD.F./FZ.F.189 gearbox in a flange-mounted design

FF030K4, FAF030K4, FAFS030K4, FAFT030K4



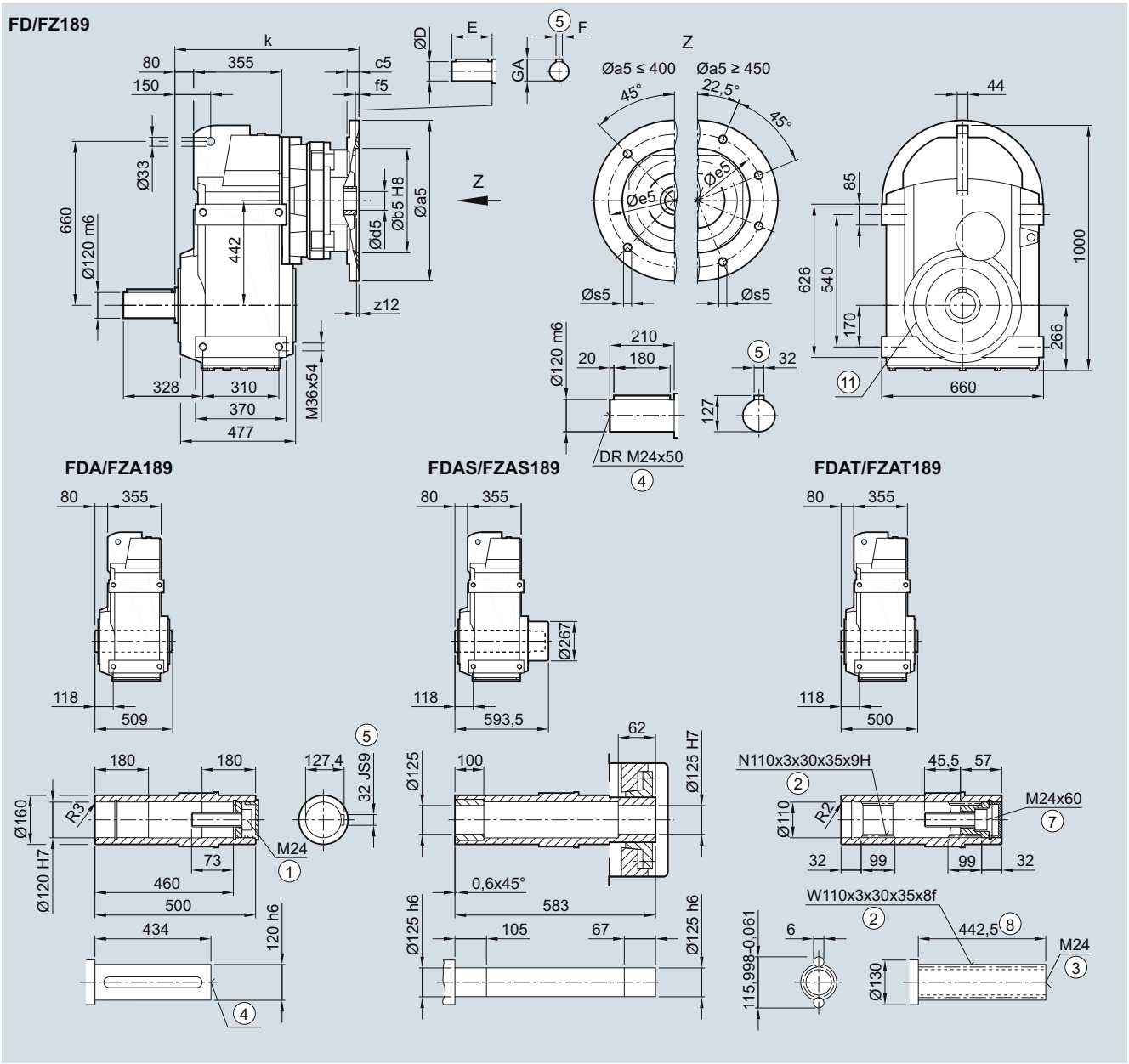
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	601.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	611.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	641.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	641.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16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

Dimensions

FD../FZ..189 gearbox in a foot-mounted design

F030K4, FA030K4, FAS030K4, FAT030K4

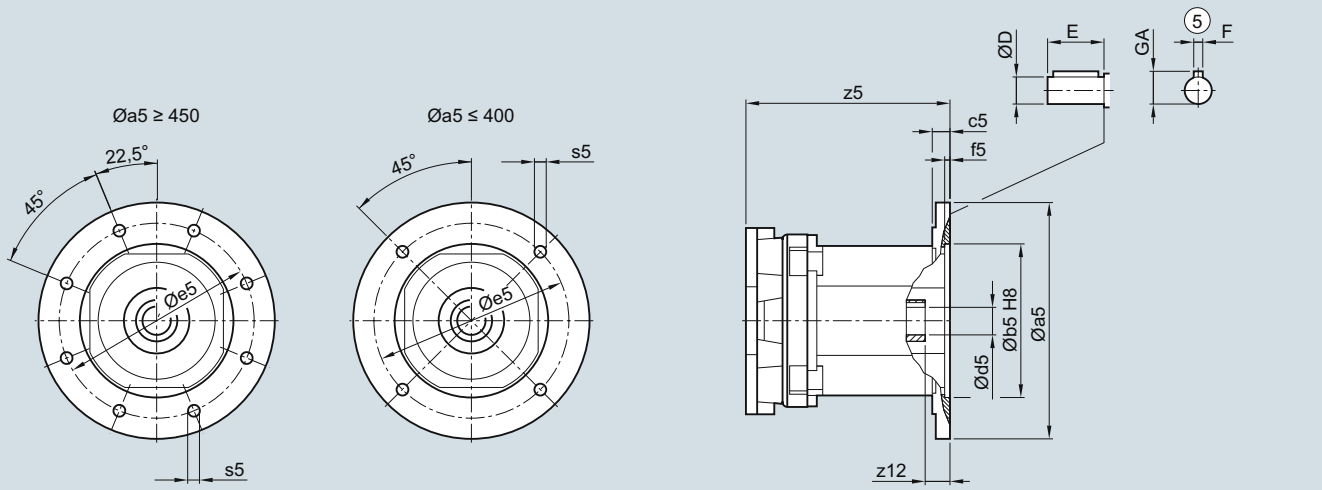


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	530.5
132	300	230	12	5.0	265	M12x20	3.0	38	80	10	41.0	540.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	570.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	570.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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 ⑪ Use bores only for housing flange design

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

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



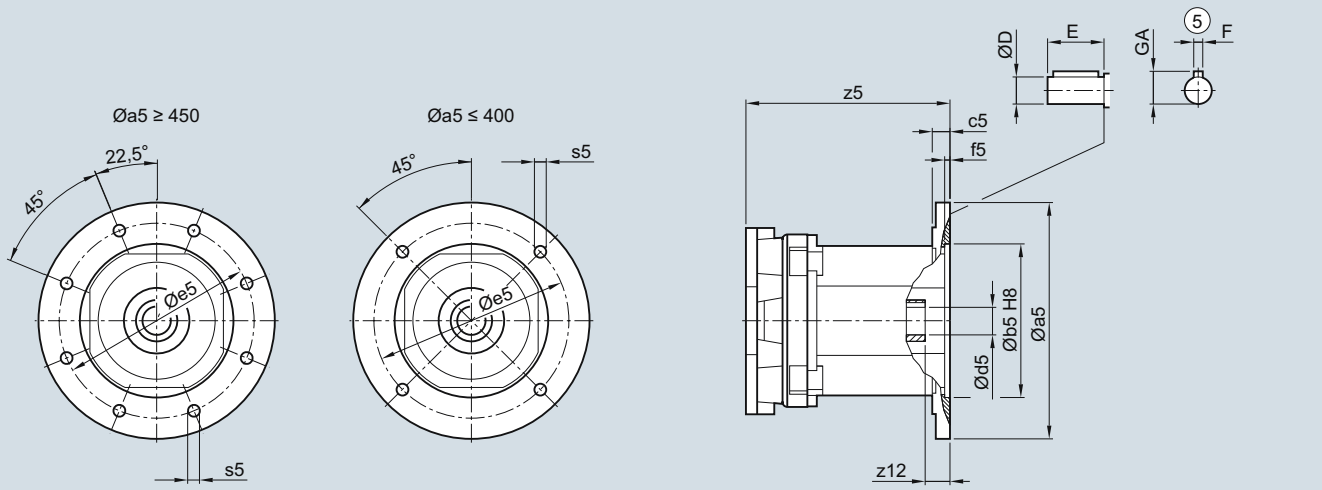
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD.../FZ...29												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
FD.../FZ...39												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
FD.../FZ...49												
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
FD.../FZ...69												
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
FD.../FZ...79												
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

⑤ Feather key/keyway DIN 6885

Dimensions

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

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



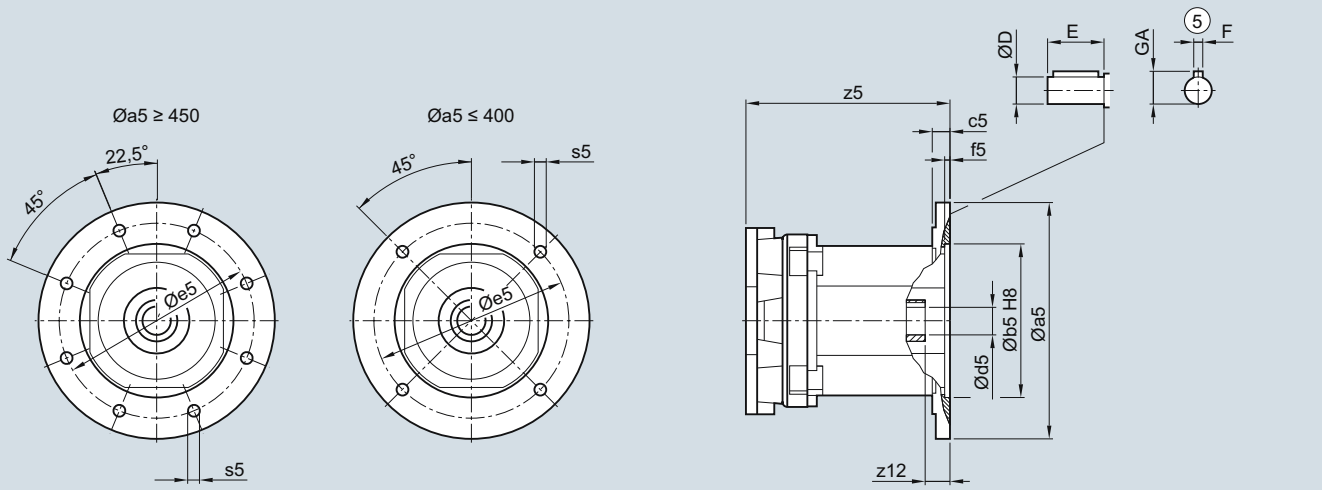
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD.../FZ...89												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	169.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	169.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	212.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	290.5
160	350	250	25	6.0	300	M16	66	42	110	12	45.0	335.5
FD.../FZ...109												
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
FD.../FZ...129												
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

Ⓢ Feather key/keyway DIN 6885

() Dimension in brackets for 2-pole motor

FD.../FZ...149 to FD.../FZ...189 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
FD.../FZ...149												
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
FD.../FZ...169												
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
FD.../FZ...189												
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

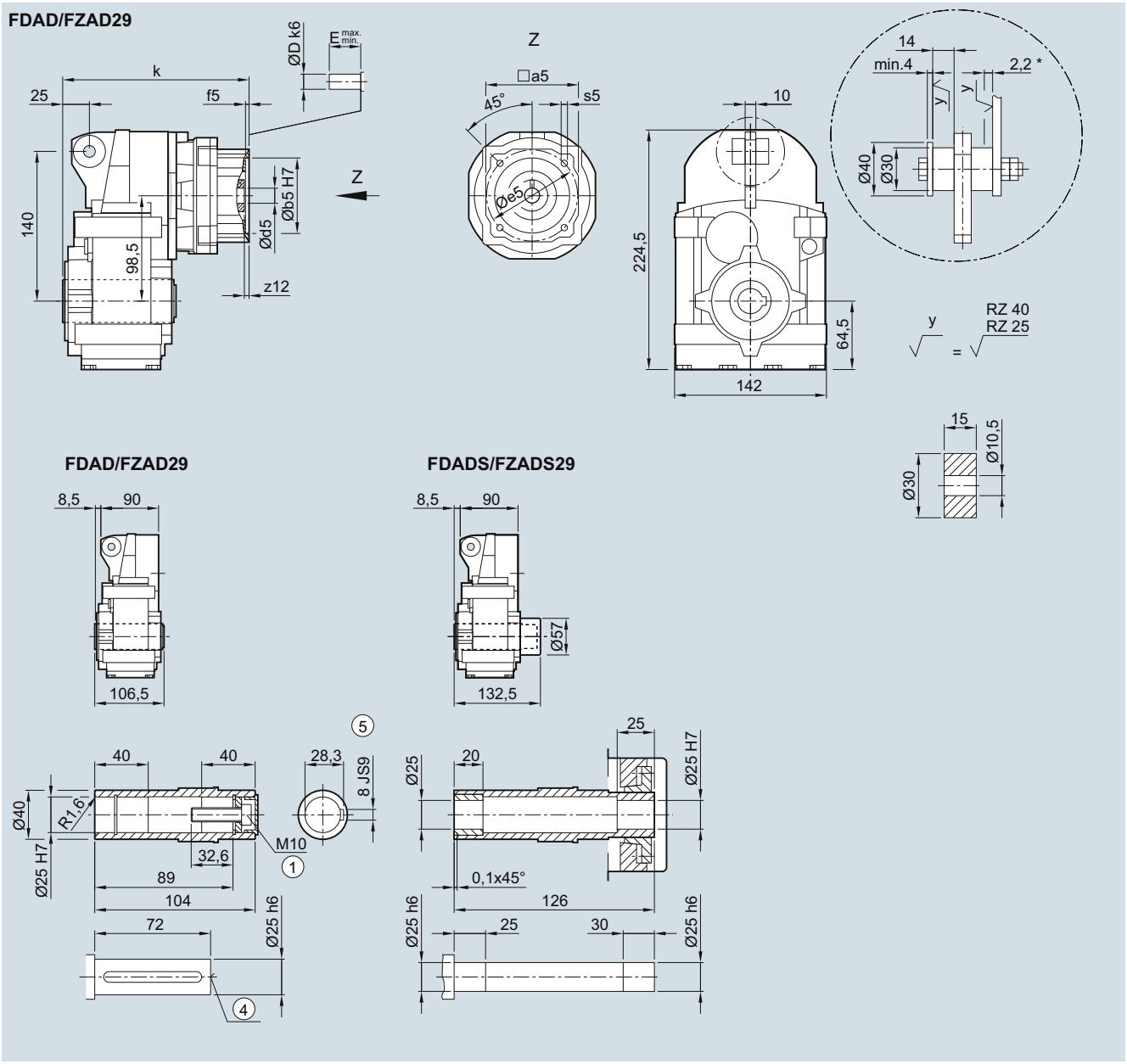
⑤ Feather key/keyway DIN 6885

() Dimension in brackets for 2-pole motor

Dimensions

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

FAD030KS, FADS030KS

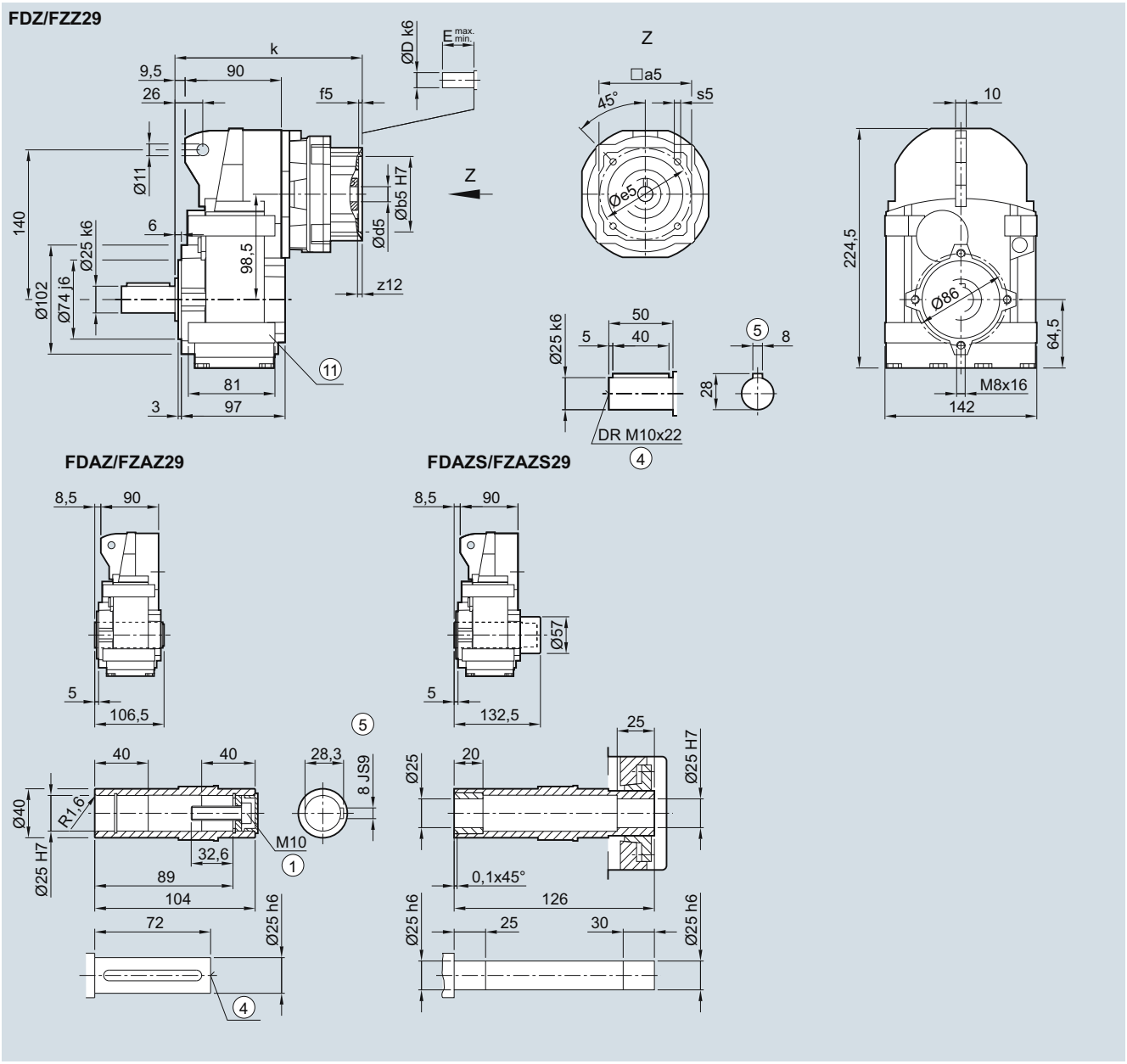


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	181.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	181.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	194
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	194
KS5.1 [1)]	117	80	4.5	100	M6x11	5	19	35	45	210
KS5.2 [1)]	117	95	4.5	115	M8x14	5	19	35	45	210
KS5.3 [1)]	117	95	4.5	115	M6x11	5	19	35	45	210
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	235
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	235

① ISO 4017 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 [1)] FDADS/FZADS not possible * Spring compression at max. torque

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

FZ030KS, FAZ030KS, FAZS030KS



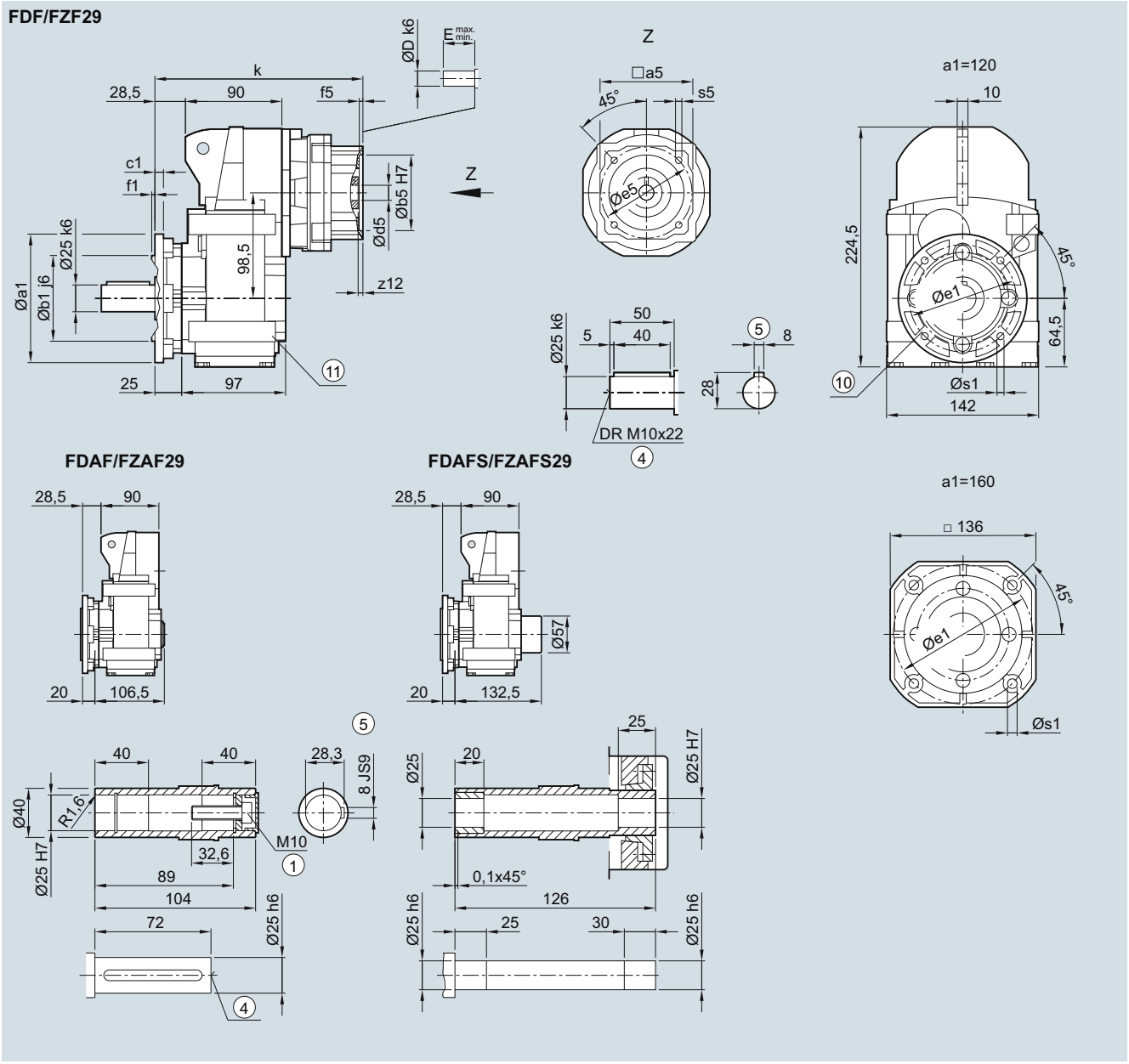
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	181.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	181.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	194
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	194
KS5.1 [1)]	117	80	4.5	100	M6x11	5	19	35	45	210
KS5.2 [1)]	117	95	4.5	115	M8x14	5	19	35	45	210
KS5.3 [1)]	117	95	4.5	115	M6x11	5	19	35	45	210
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	235
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	235

① ISO 4017 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design [1)] FDADS/FZADS not possible

Dimensions

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

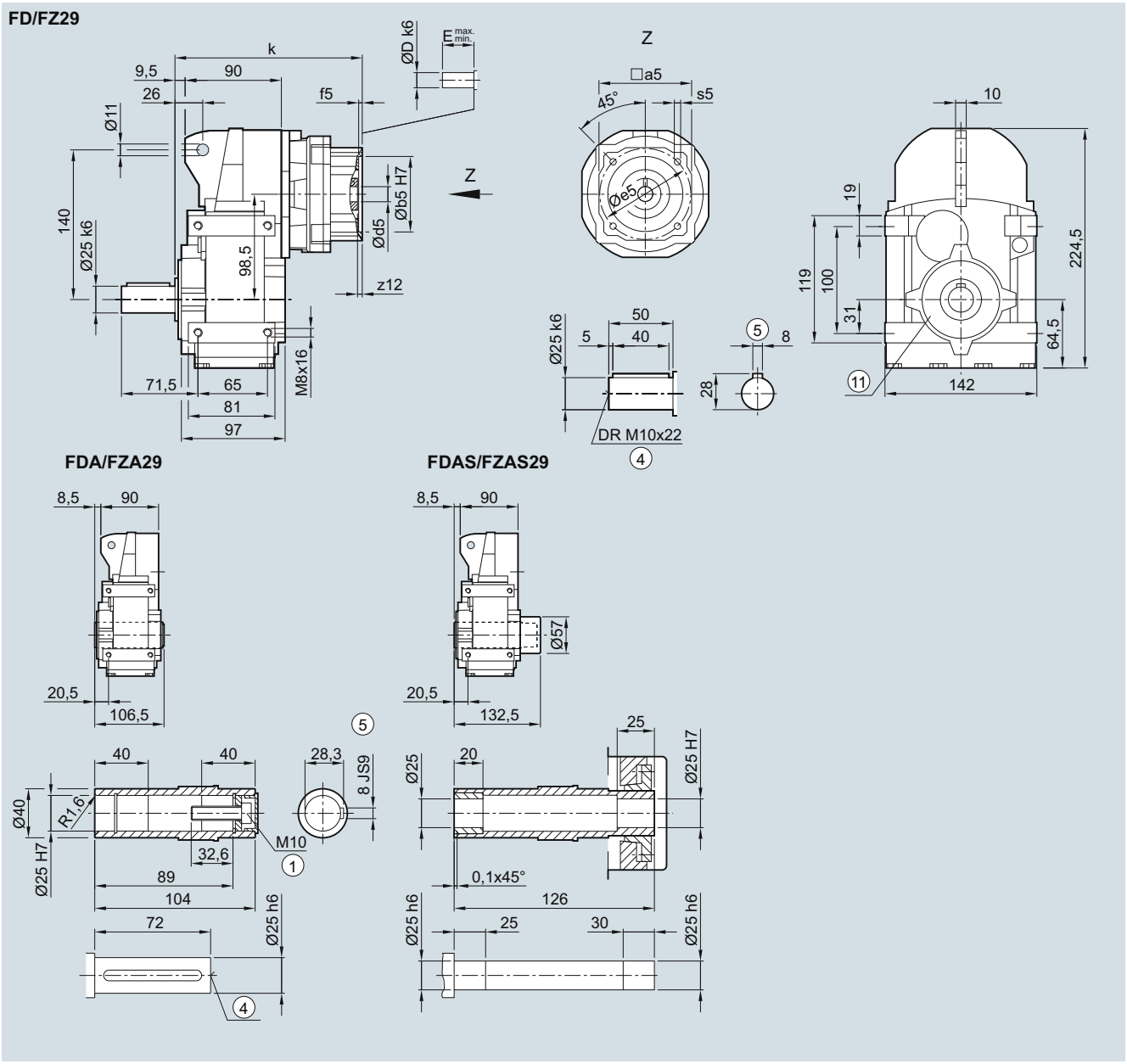
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	200.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	200.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	213
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	213
KS5.1 [1)]	117	80	4.5	100	M6x11	5	19	35	45	229
KS5.2 [1)]	117	95	4.5	115	M8x14	5	19	35	45	229
KS5.3 [1)]	117	95	4.5	115	M6x11	5	19	35	45	229
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	254
KS6.2 [1)]	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

1) 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	$E_{min.}$	$E_{max.}$	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 [1)]	117	80	4.5	100	M6x11	5	19	35	45	210
KS5.2 [1)]	117	95	4.5	115	M8x14	5	19	35	45	210
KS5.3 [1)]	117	95	4.5	115	M6x11	5	19	35	45	210
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	235
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	235

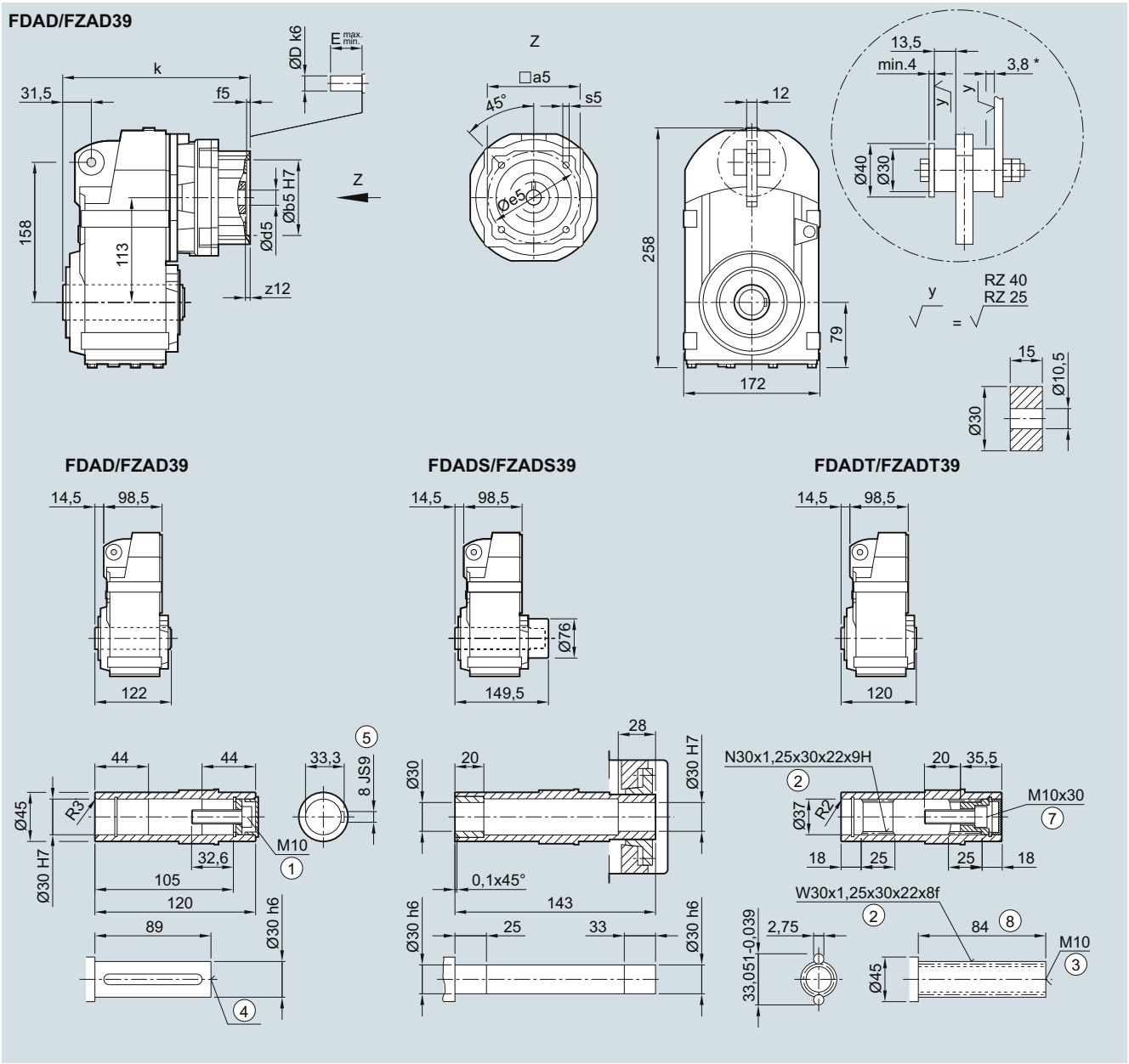
① ISO 4017 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for housing flange design

1) FDADS/FZADS not possible

Dimensions

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

FAD030KS, FADS030KS, FADT030KS



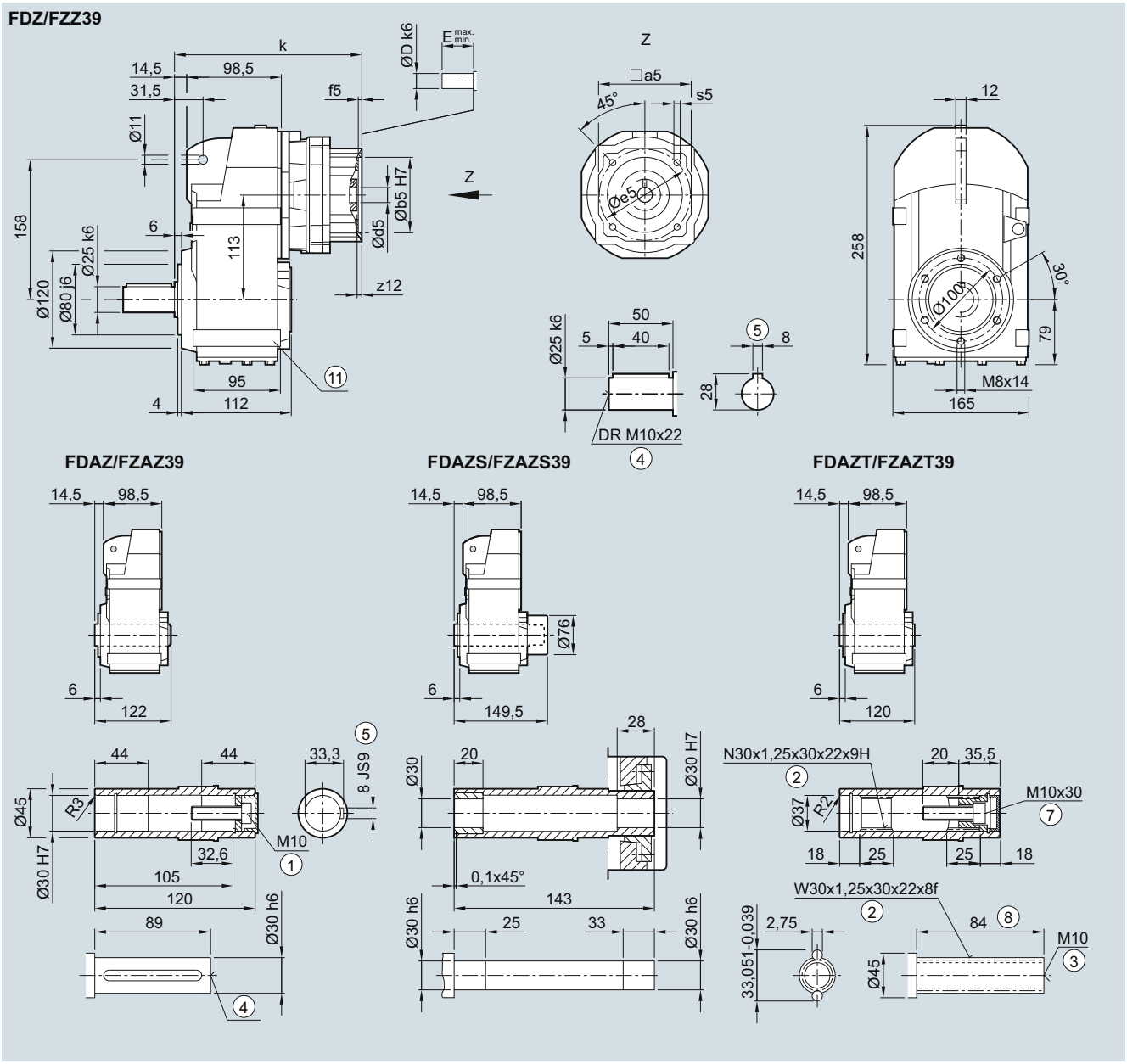
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	195
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	195
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	207.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	207.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	223.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	223.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	223.5
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	248.5
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	248.5
KS8.1 [1)]	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 1) FDADS/FZADS not possible

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

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



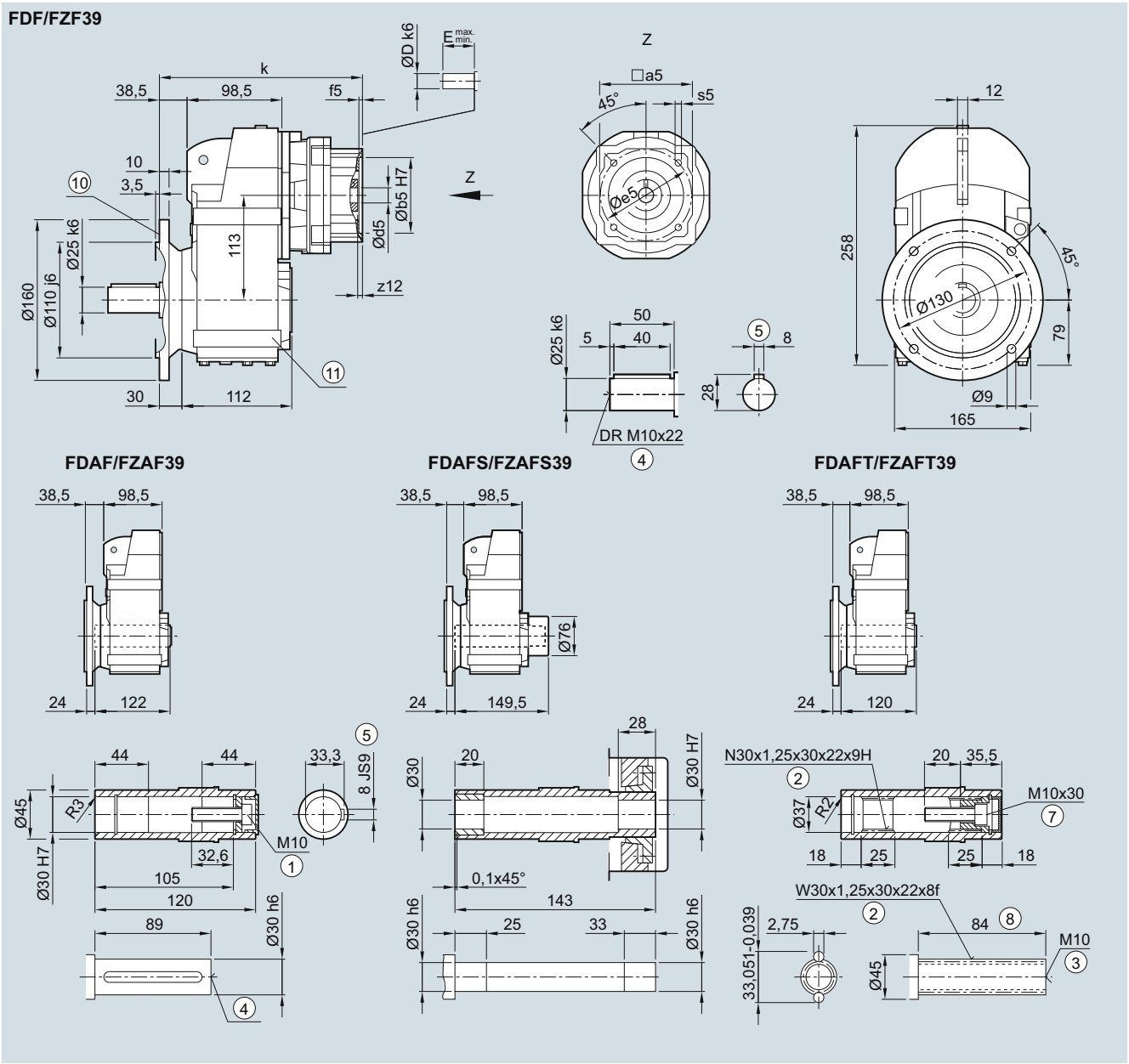
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	195
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	195
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	207.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	207.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	223.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	223.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	223.5
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	248.5
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	248.5
KS8.1 [1)]	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 ⑪ Use bores only for foot-mounted design 1) FDADS/FZADS not possible

Dimensions

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

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

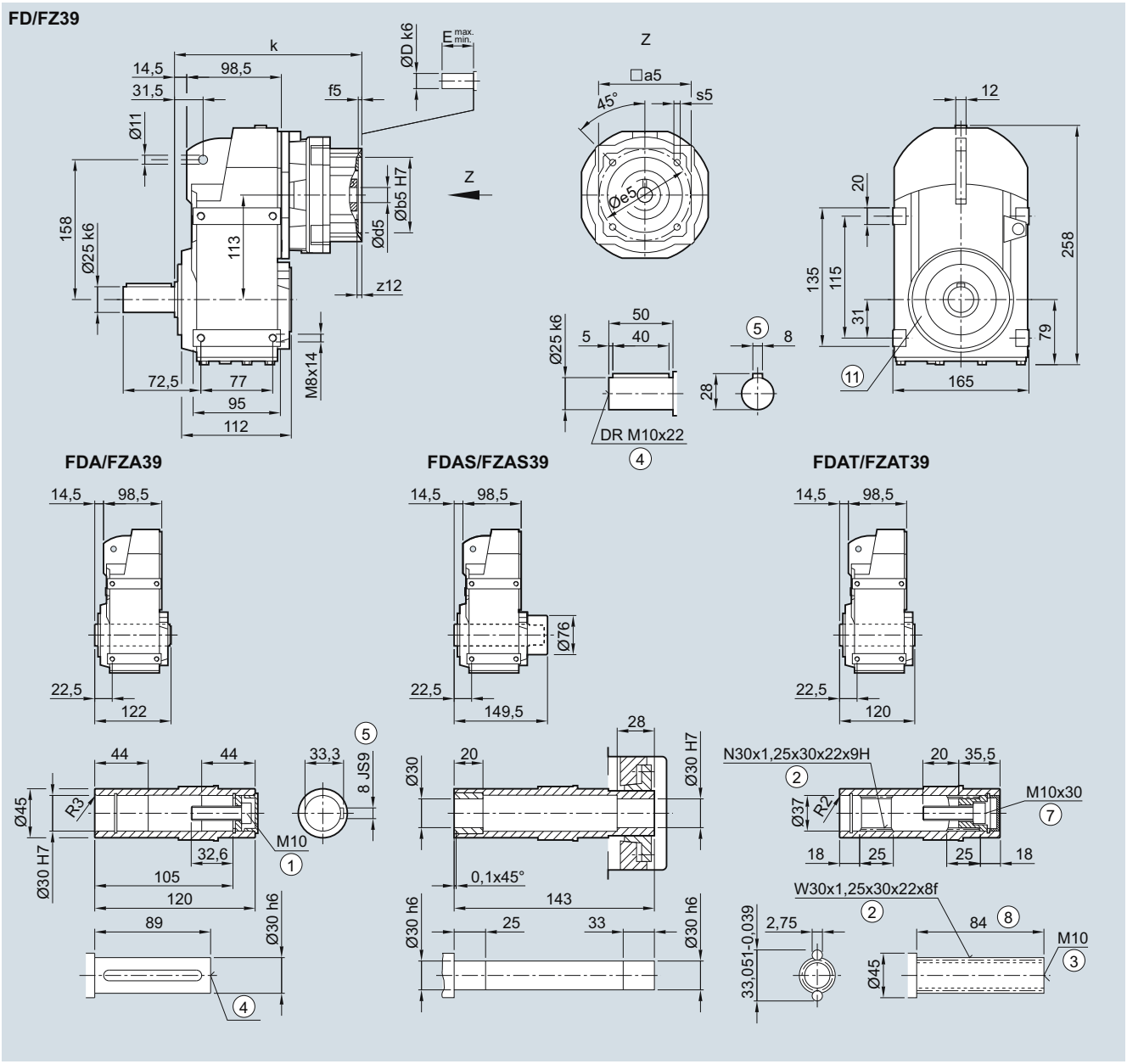


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	219
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	219
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	231.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	231.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	247.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	247.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	247.5
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	272.5
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	272.5
KS8.1 [1)]	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 [1)] FDADS/FZADS not possible

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

F030KS, FA030KS, FAS030KS, FAT030KS



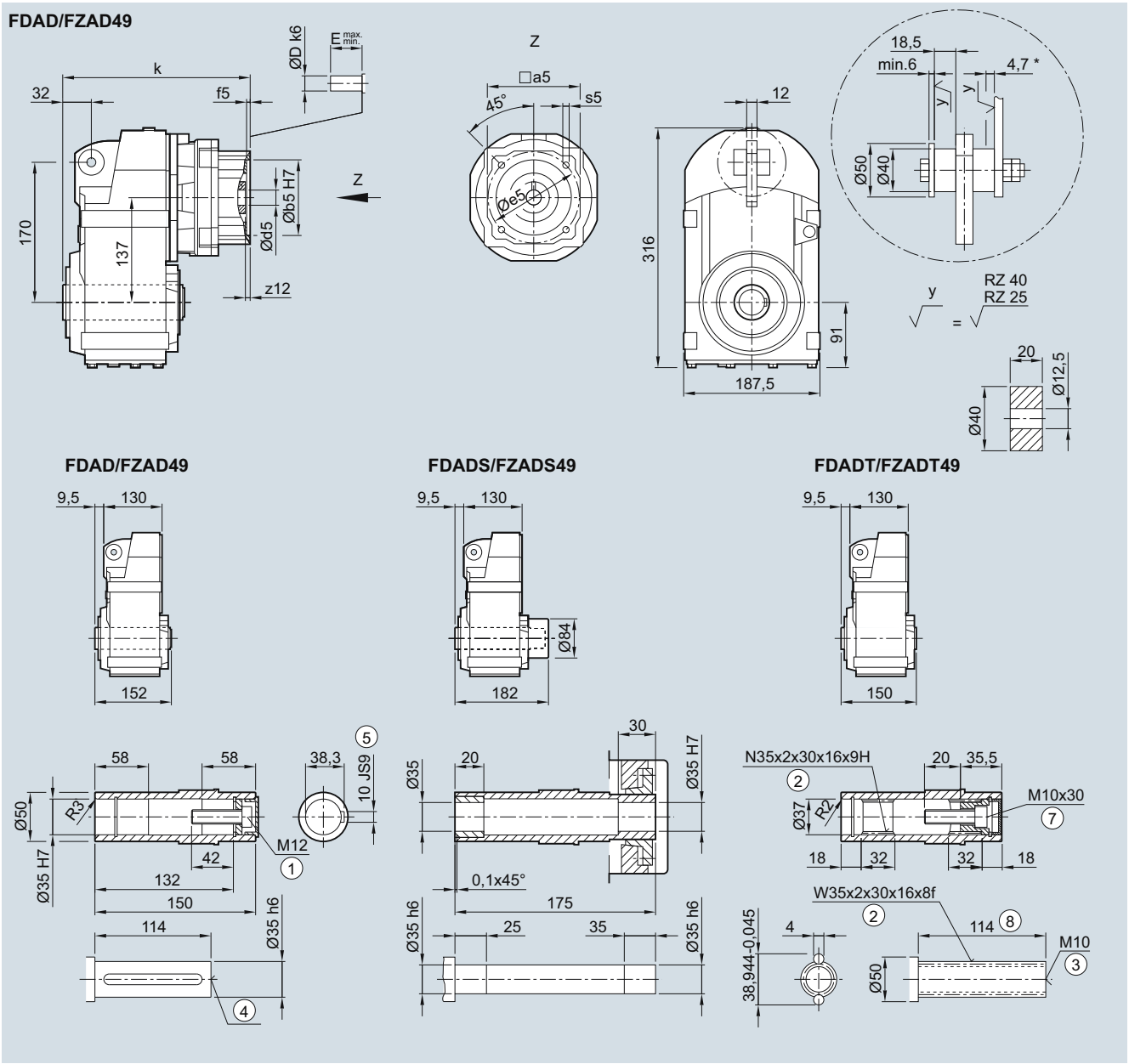
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	195
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	195
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	207.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	207.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	223.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	223.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	223.5
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	248.5
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	248.5
KS8.1 [1)]	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 ⑪ Use bores only for housing flange design 1) FDADS/FZADS not possible

Dimensions

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

FAD030KS, FADS030KS, FADT030KS



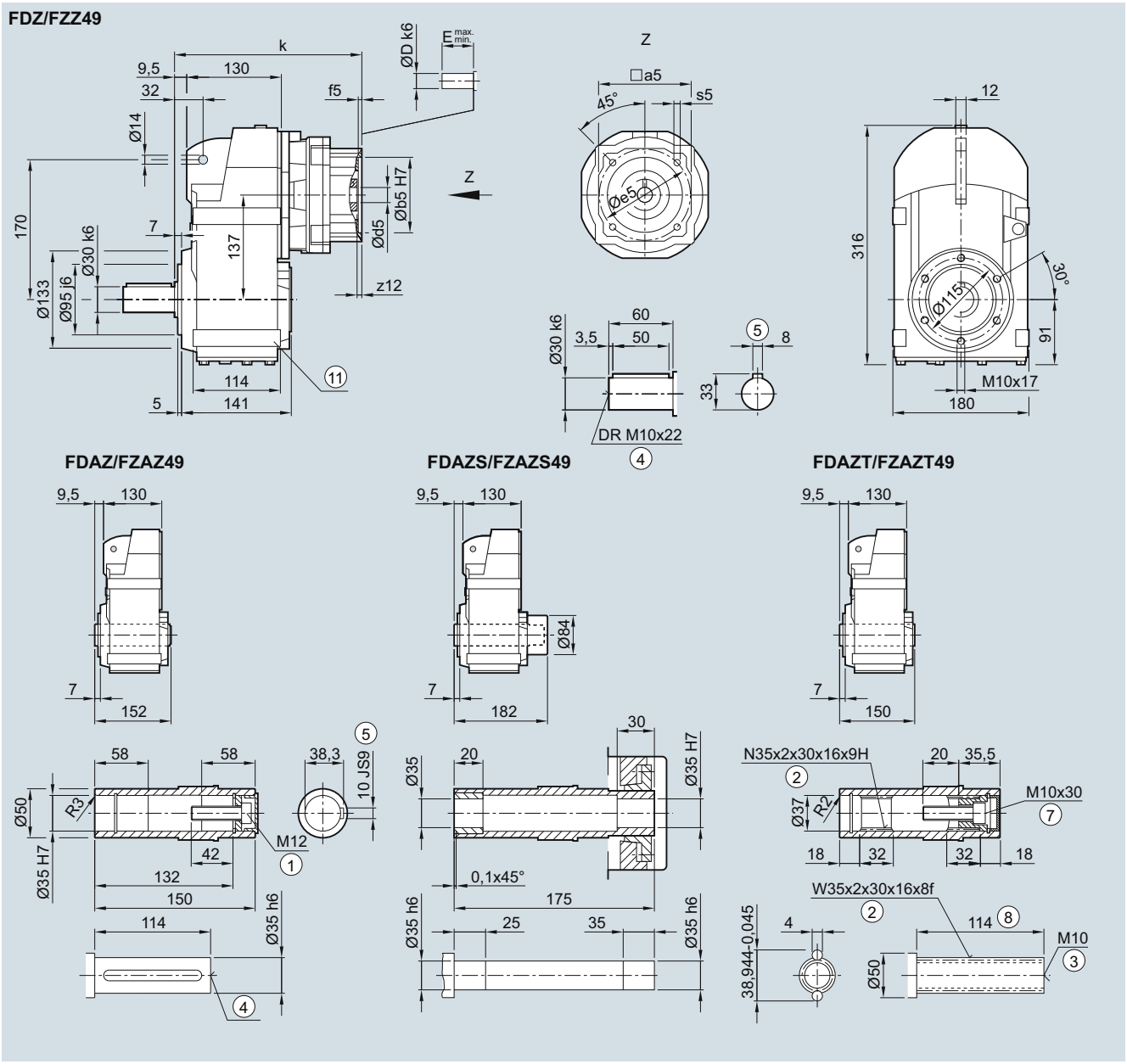
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	212
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	212
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	224.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	224.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	240.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	240.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	240.5
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	265.5
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	265.5
KS8.1 [1)]	155	130	4.5	165	M10x14	2	32	40	80	278

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.49 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



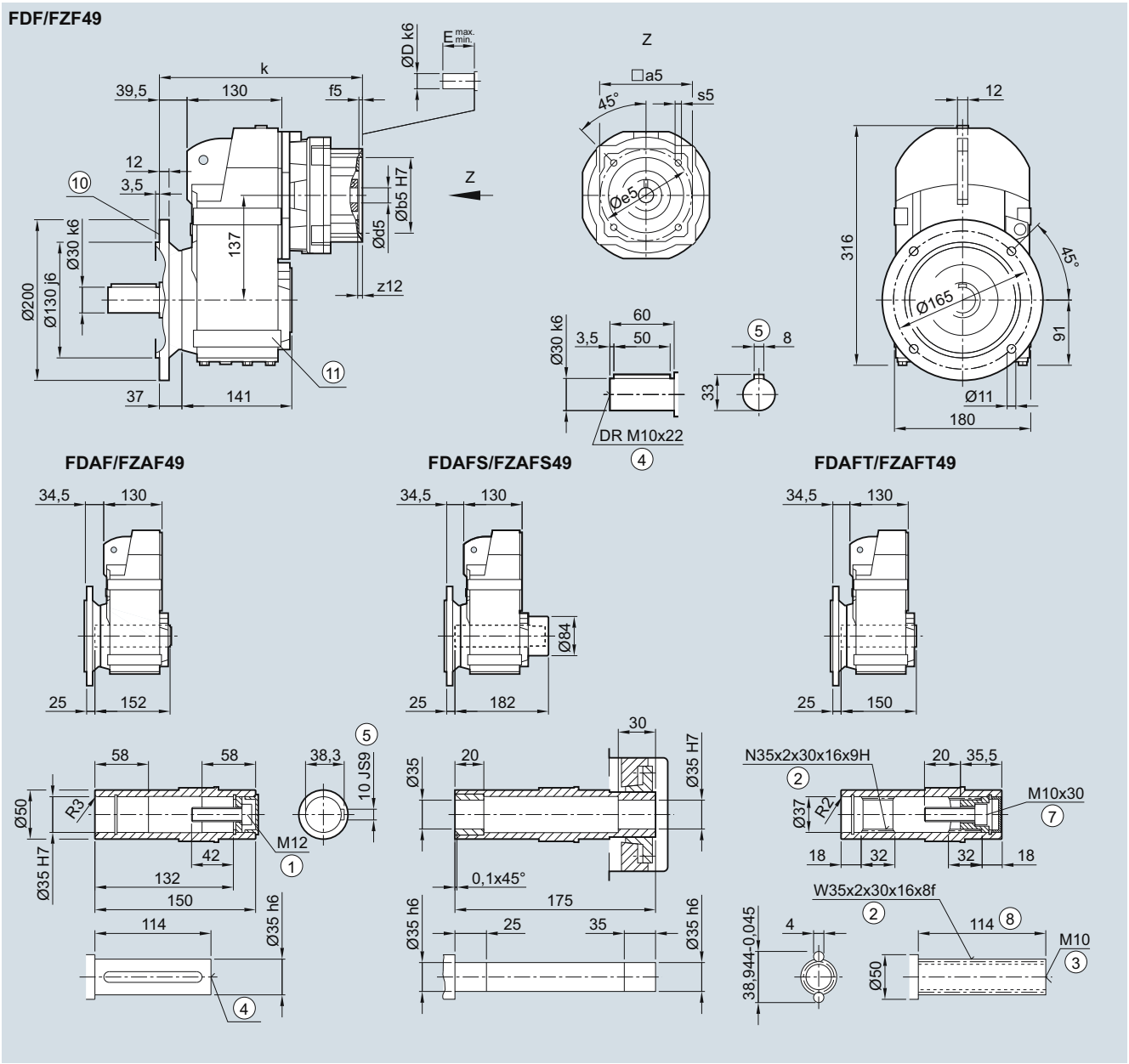
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	212
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	212
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	224.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	224.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	240.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	240.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	240.5
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	265.5
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	265.5
KS8.1 [1)]	155	130	4.5	165	M10x14	2	32	40	80	278

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 ⑪ Use bores only for foot-mounted design 1) FDADS/FZADS not possible

Dimensions

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

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

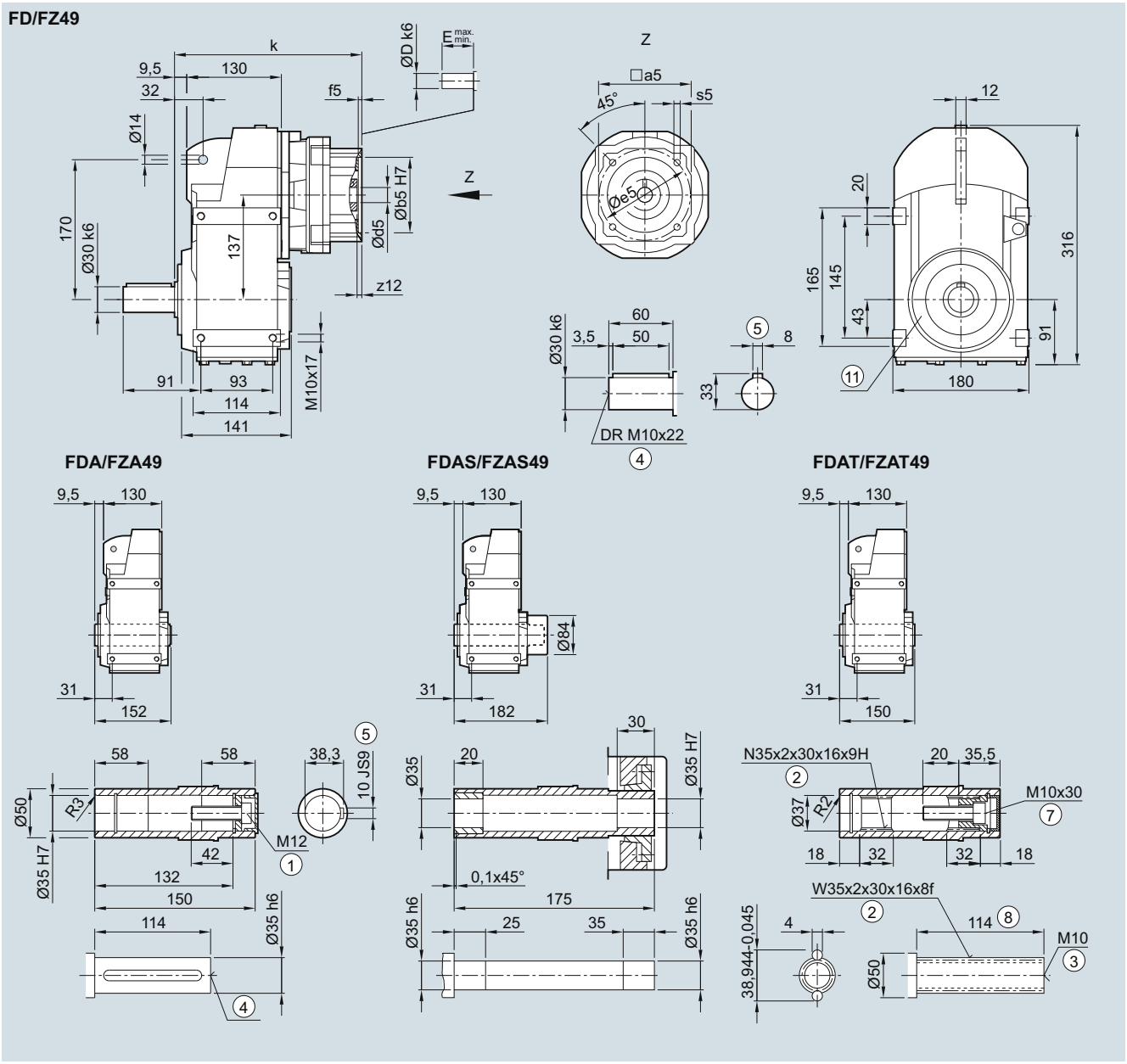


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	242
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	242
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	254.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	254.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	270.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	270.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	270.5
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	295.5
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	295.5
KS8.1 [1)]	155	130	4.5	165	M10x14	2	32	40	80	308

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 1) FDADS/FZADS not possible

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

F030KS, FA030KS, FAS030KS, FAT030KS



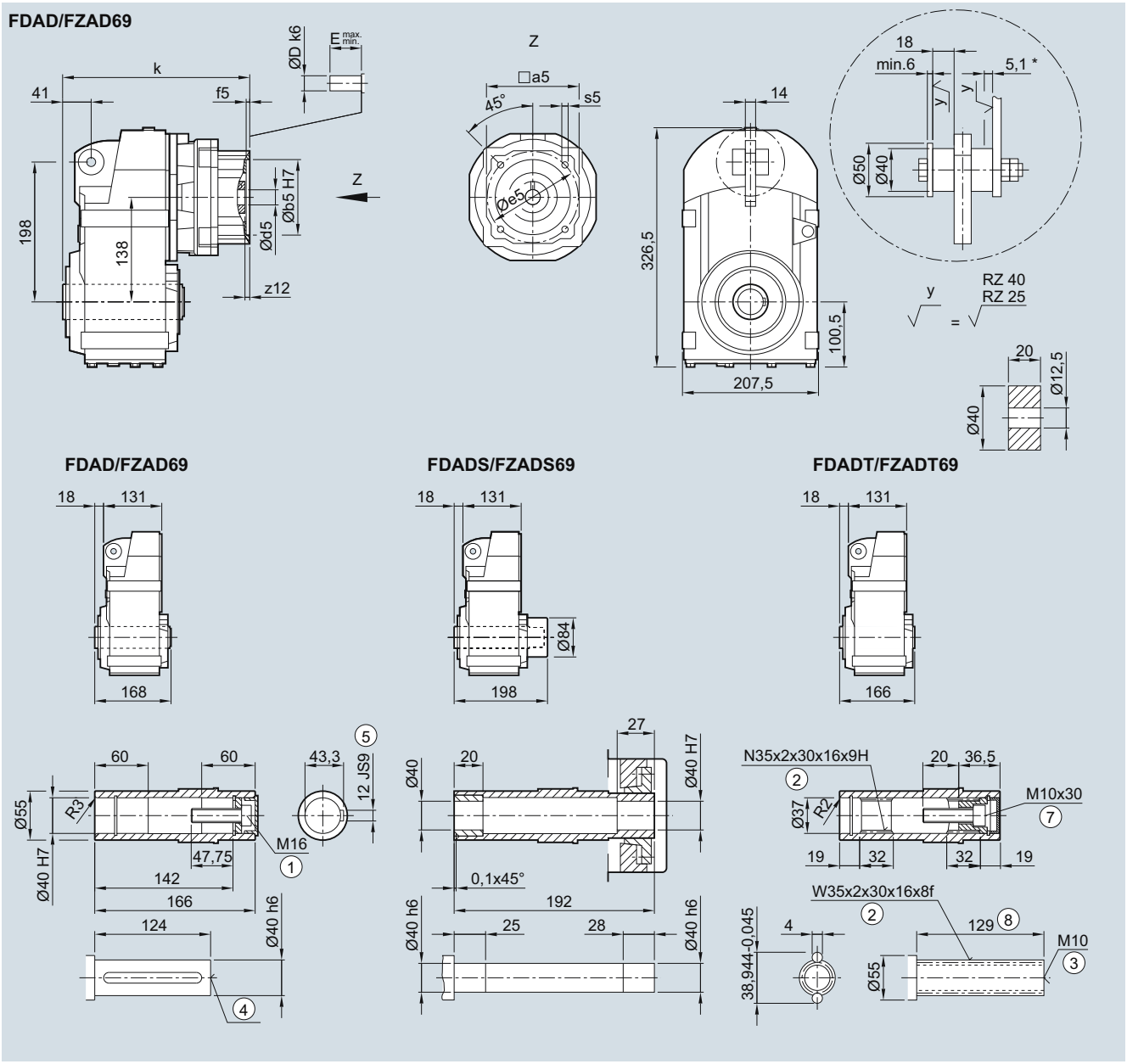
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	212
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	212
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	224.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	224.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	240.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	240.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	240.5
KS6.1 [1]	130	110	4.5	130	M8x15	8	24	40	58	265.5
KS6.2 [1]	130	110	7	145	M8x15	8	22	40	58	265.5
KS8.1 [1]	155	130	4.5	165	M10x14	2	32	40	80	278

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 ⑪ Use bores only for housing flange design [1] FDADS/FZADS not possible

Dimensions

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

FAD030KS, FADS030KS, FADT030KS



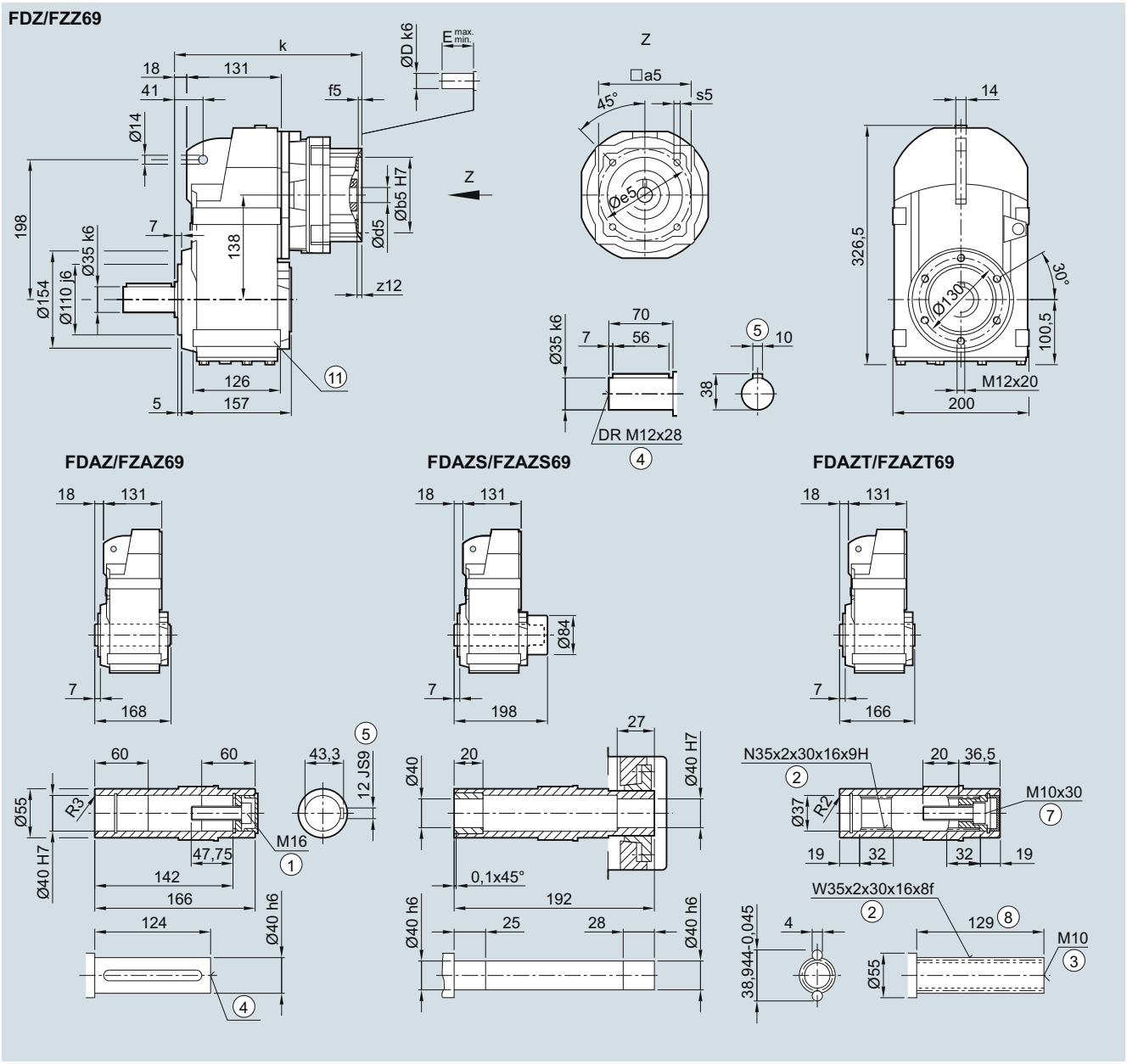
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	234
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	234
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	250
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	250
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	250
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	275
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	275
KS8.1 [1)]	155	130	4.5	165	M10x14	2	32	40	80	287.5

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 1) FDADS/FZADS not possible

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

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS

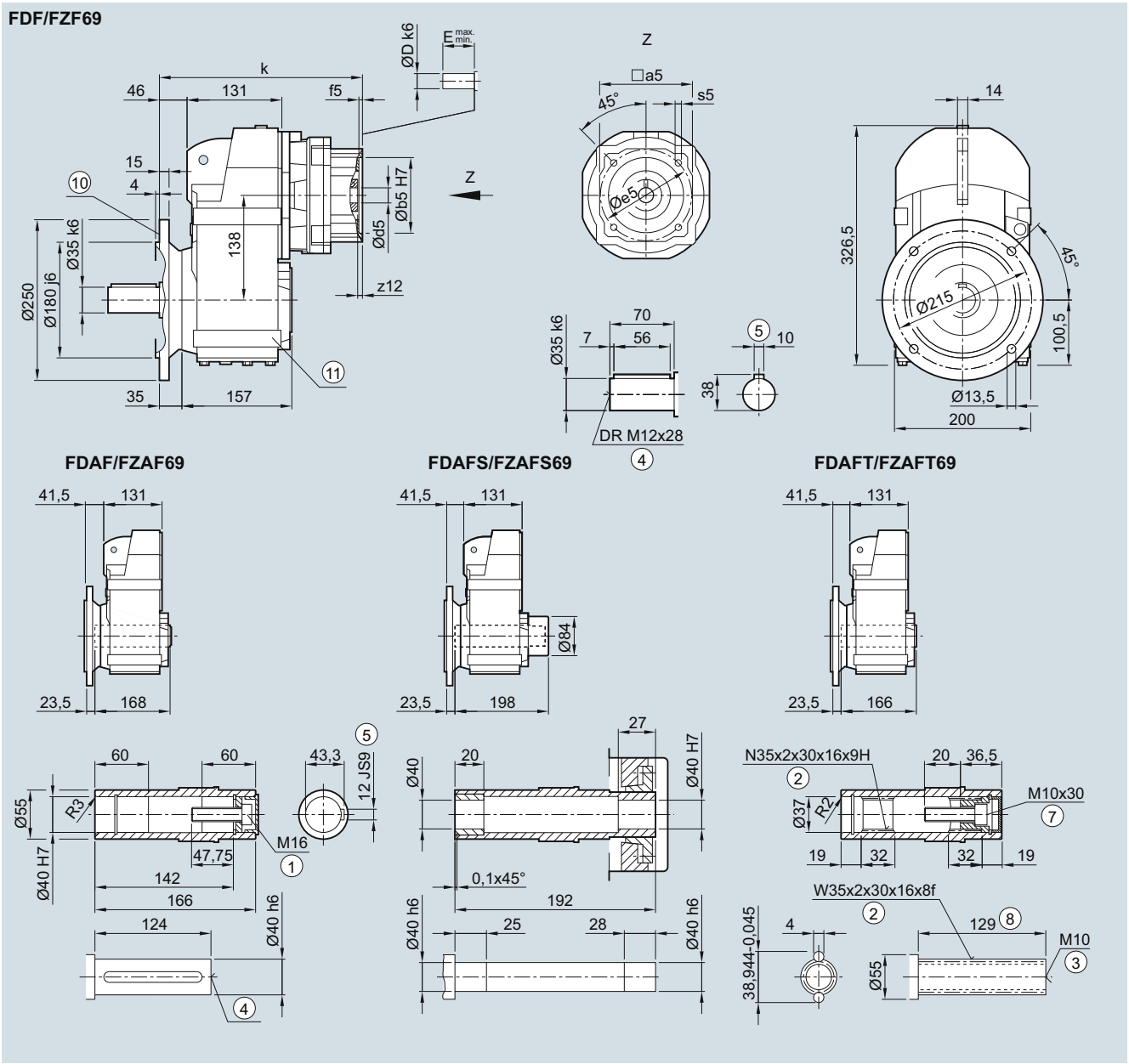


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	234
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	234
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	250
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	250
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	250
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	275
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	275
KS8.1 [1)]	155	130	4.5	165	M10x14	2	32	40	80	287.5

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 ⑪ Use bores only for foot-mounted design 1) FDADS/FZADS not possible

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

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

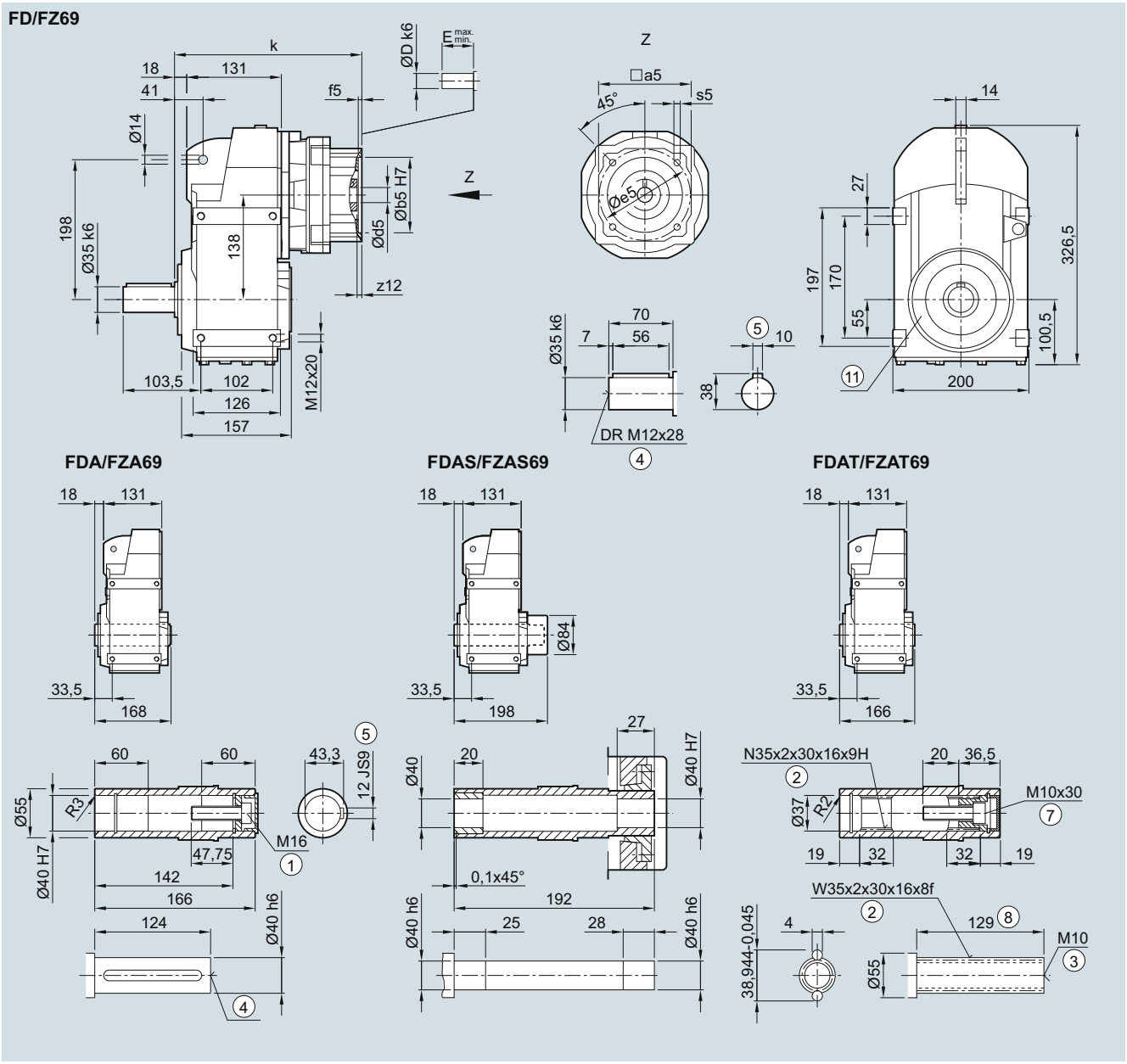


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	249.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	249.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	262
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	262
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	278
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	278
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	278
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	303
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	303
KS8.1 [1)]	155	130	4.5	165	M10x14	2	32	40	80	315.5

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 1) FDADS/FZADS not possible

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

F030KS, FA030KS, FAS030KS, FAT030KS



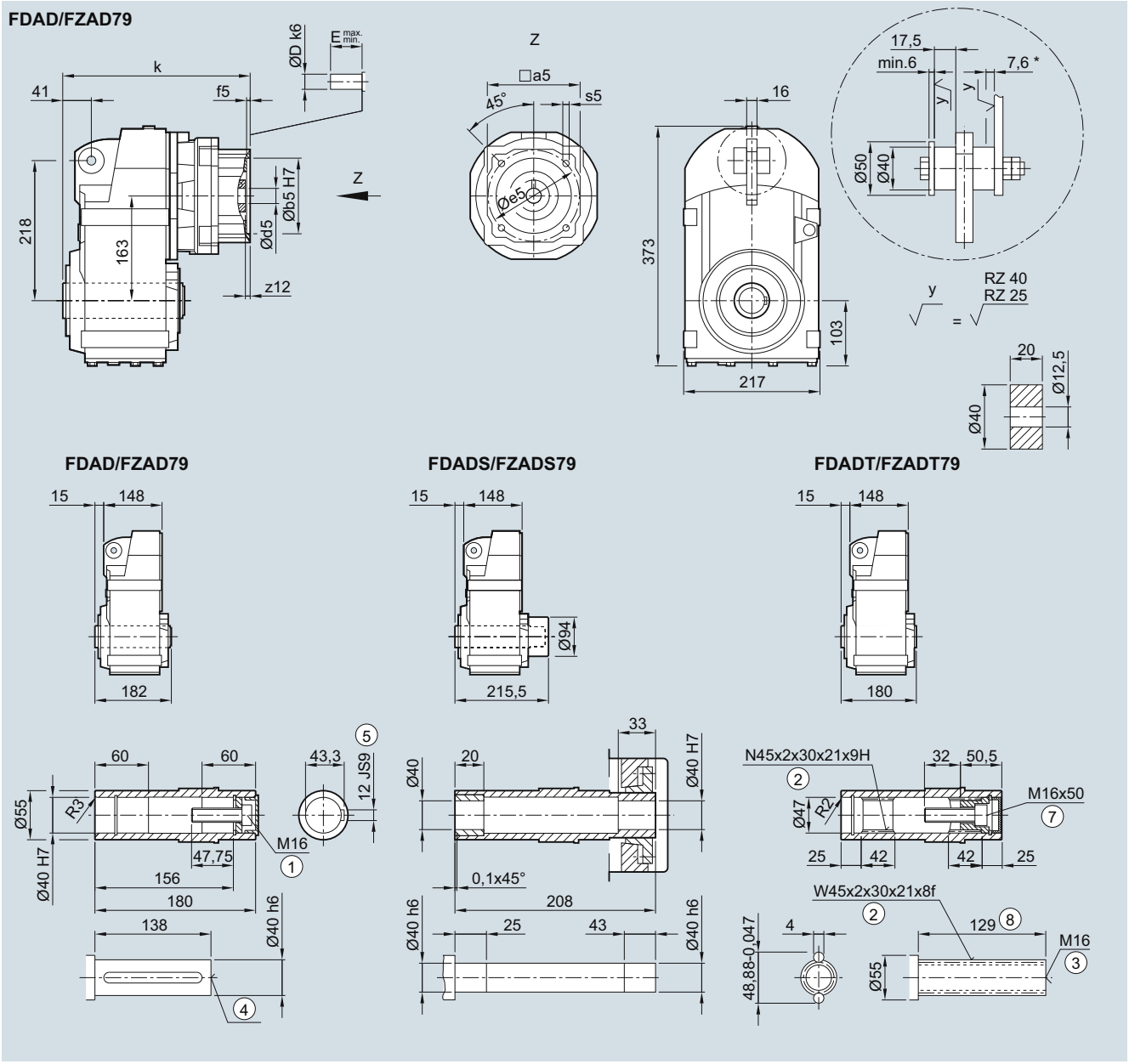
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	221.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	221.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	234
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	234
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	250
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	250
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	250
KS6.1 [1)]	130	110	4.5	130	M8x15	8	24	40	58	275
KS6.2 [1)]	130	110	7	145	M8x15	8	22	40	58	275
KS8.1 [1)]	155	130	4.5	165	M10x14	2	32	40	80	287.5

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 ⑪ Use bores only for housing flange design 1) FDADS/FZADS not possible

Dimensions

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

FAD030KS, FADS030KS, FADT030KS



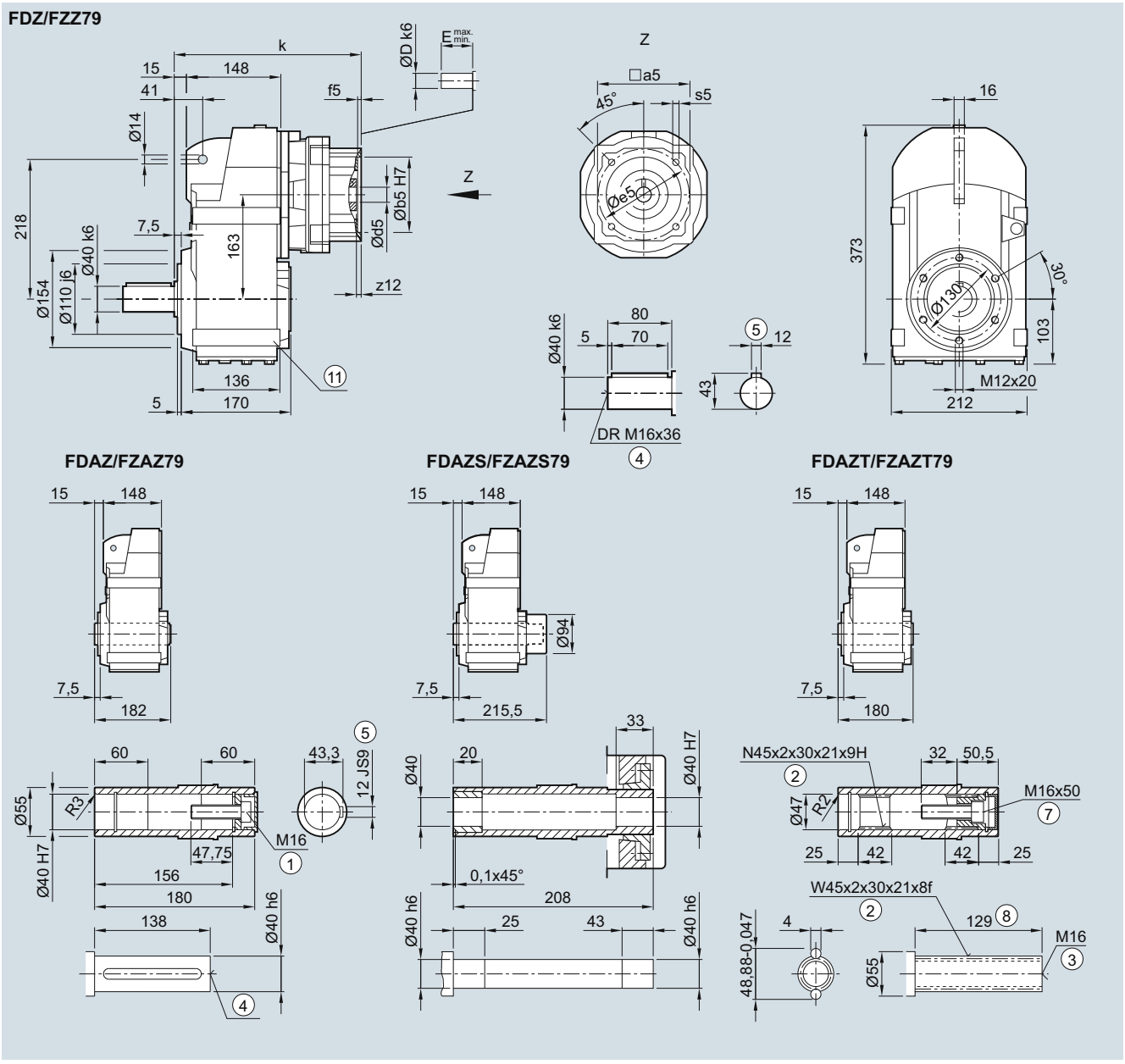
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	233.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	233.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	246
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	246
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	258
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	258
KS5.3	117	95	4.5	115	M6x11	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 [1)]	196	180	5	215	M12x22	5	38	50	80	331.5
KS10.2 [1)]	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 1) FDADS/FZADS not possible

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

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS



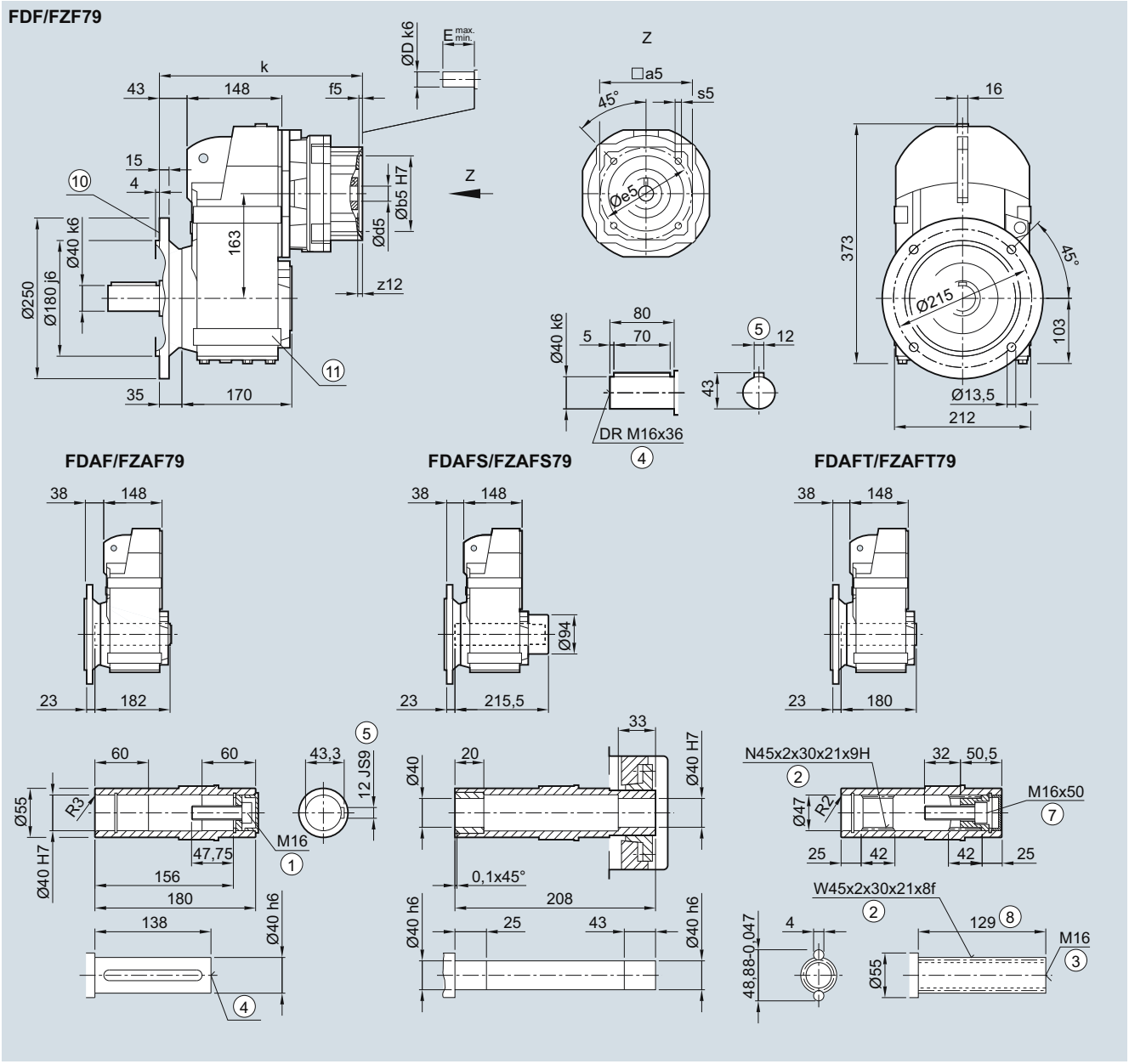
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	233.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	233.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	246
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	246
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	258
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	258
KS5.3	117	95	4.5	115	M6x11	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 [1]	196	180	5	215	M12x22	5	38	50	80	331.5
KS10.2 [1]	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 ⑪ Use bores only for foot-mounted design [1] FDADS/FZADS not possible

Dimensions

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

FF030KS, FAF030KS, FAFS030KS, FAFT030KS

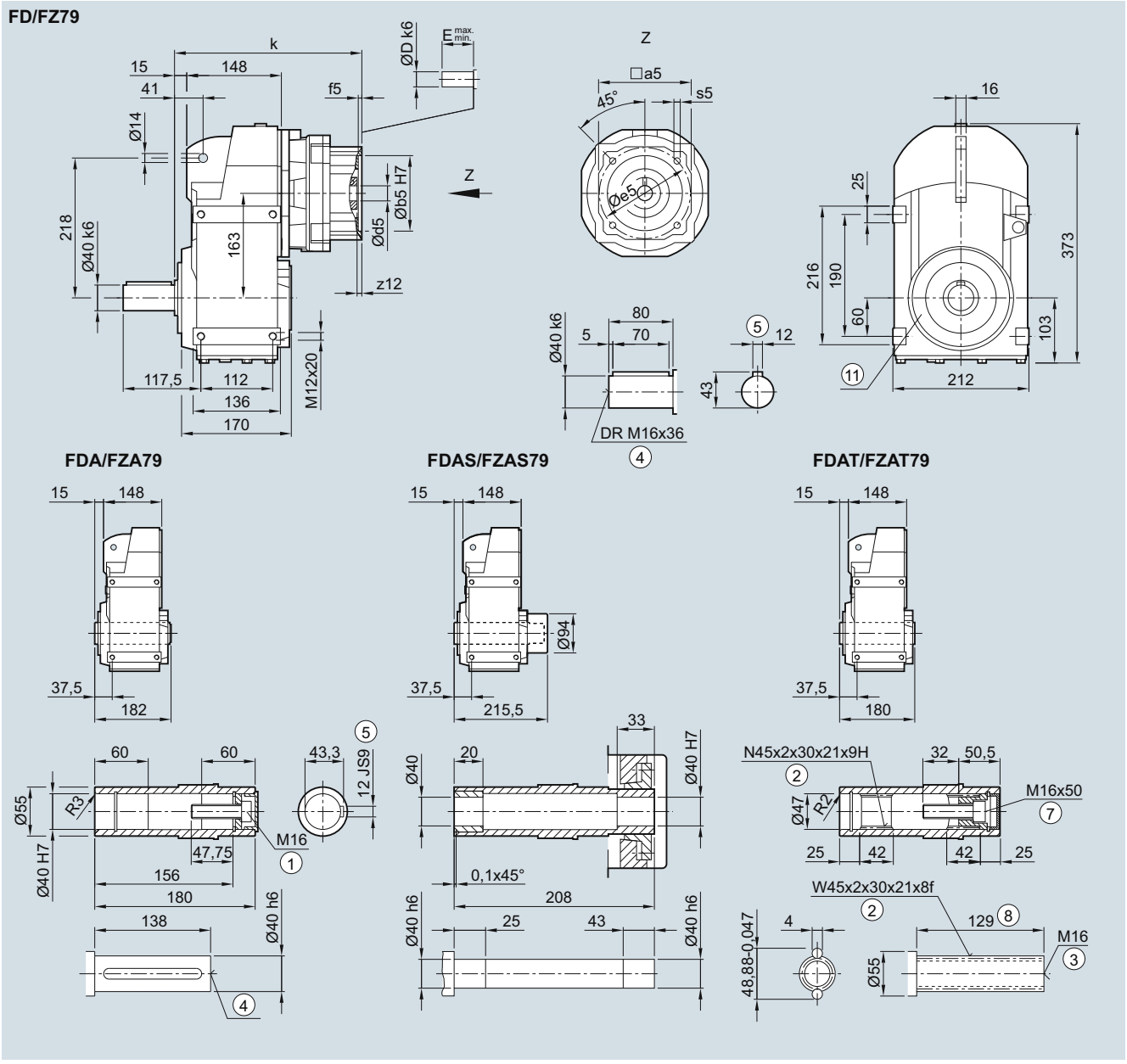


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	261
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	261
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	273.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	273.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	285.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	285.5
KS5.3	117	95	4.5	115	M6x11	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 [1]	196	180	5	215	M12x22	5	38	50	80	359
KS10.2 [1]	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 [1] FDADS/FZADS not possible

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

F030KS, FA030KS, FAS030KS, FAT030KS

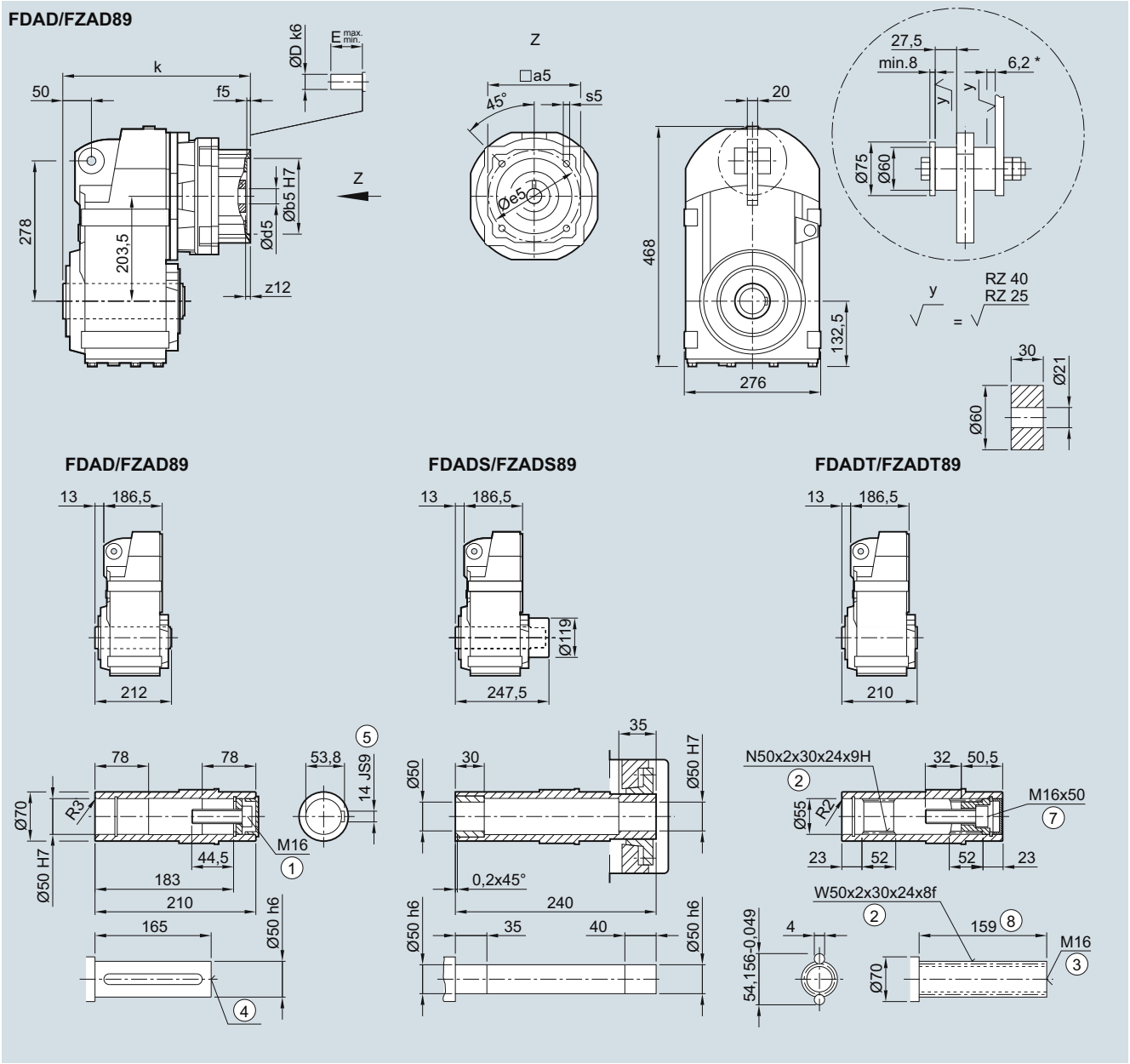


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	233.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	233.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	246
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	246
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	258
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	258
KS5.3	117	95	4.5	115	M6x11	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 [1]	196	180	5	215	M12x22	5	38	50	80	331.5
KS10.2 [1]	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 ⑪ Use bores only for housing flange design [1] FDADS/FZADS not possible

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

FAD030KS, FADS030KS, FADT030KS



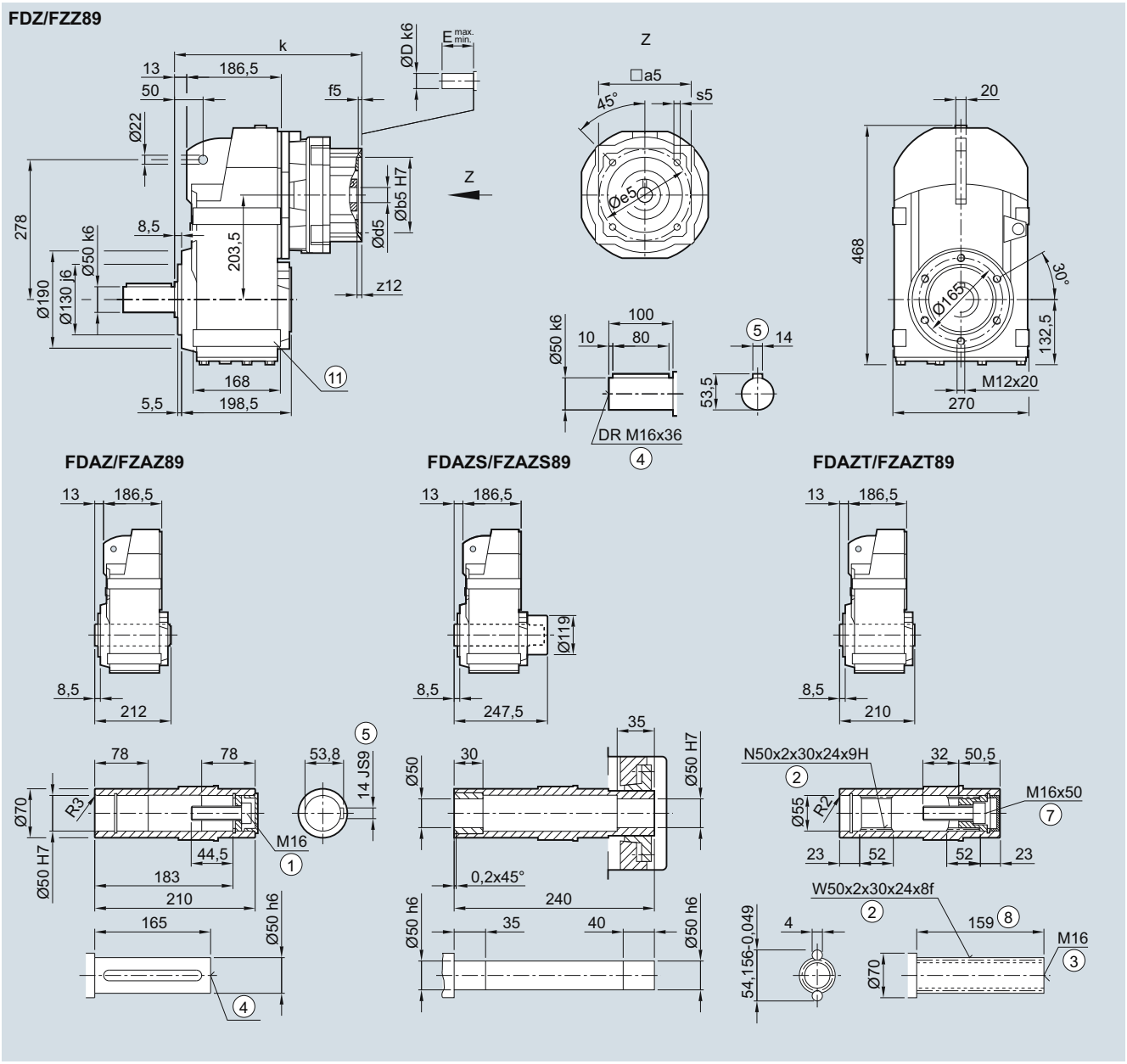
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	281.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	281.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	281.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	302.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	302.5
KS8.1	155	130	4.5	165	M10x14	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



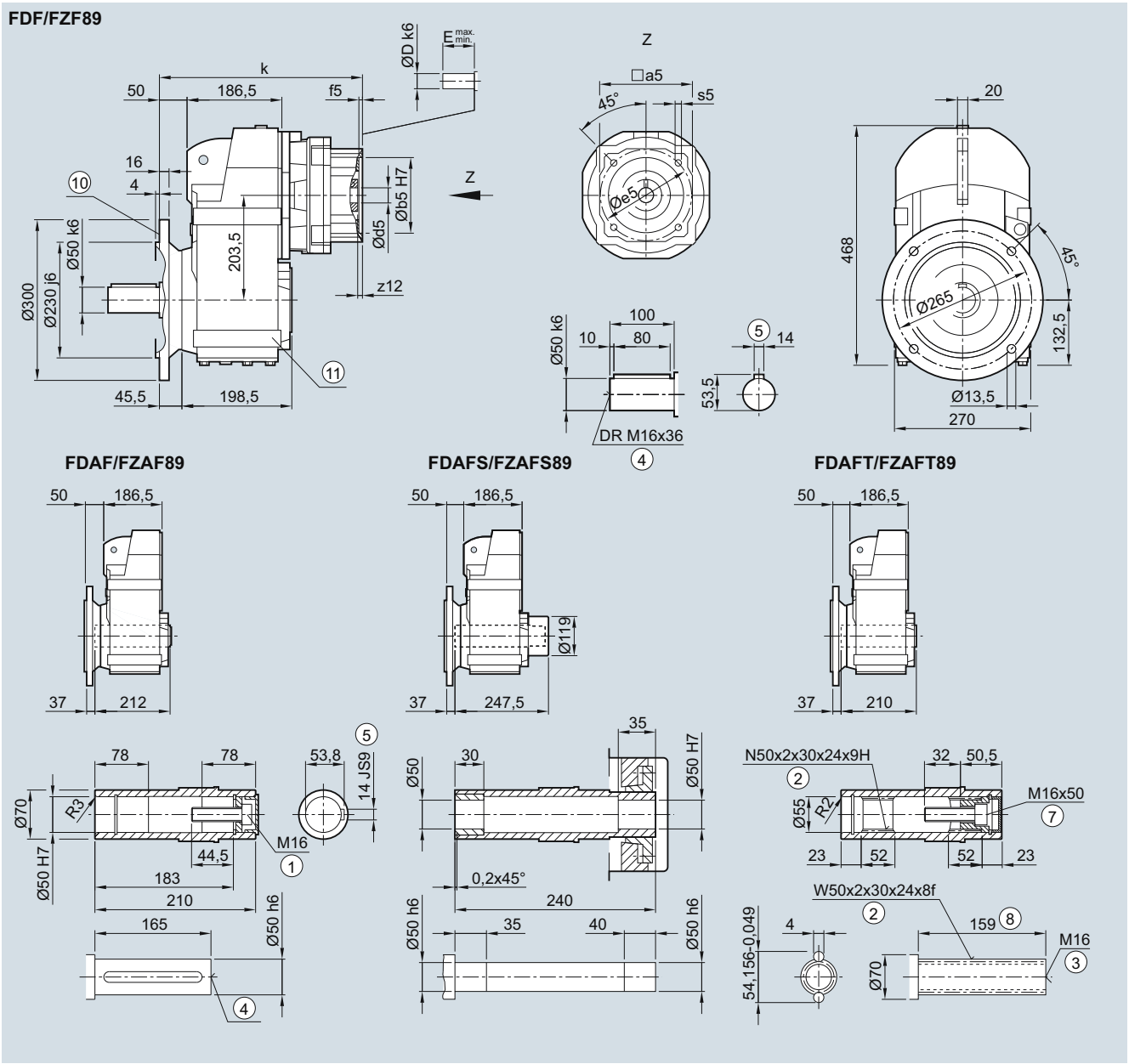
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	281.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	281.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	281.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	302.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	302.5
KS8.1	155	130	4.5	165	M10x14	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 ⑪ Use bores only for foot-mounted design

Dimensions

FD.F./FZ.F.89 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



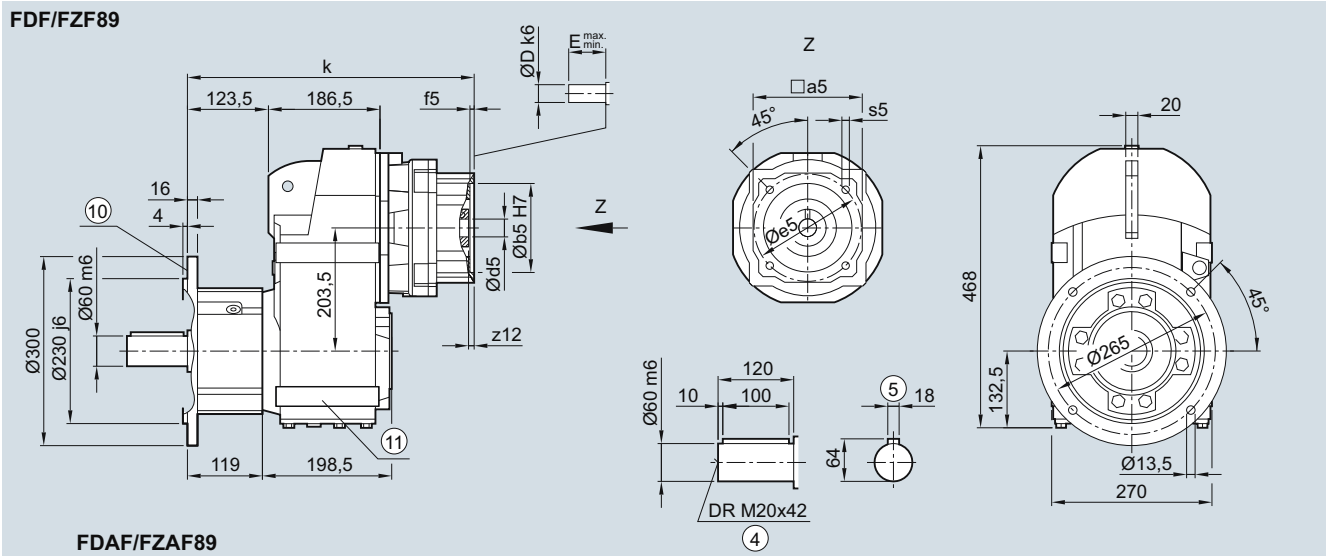
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	318.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	318.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	318.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	339.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	339.5
KS8.1	155	130	4.5	165	M10x14	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 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

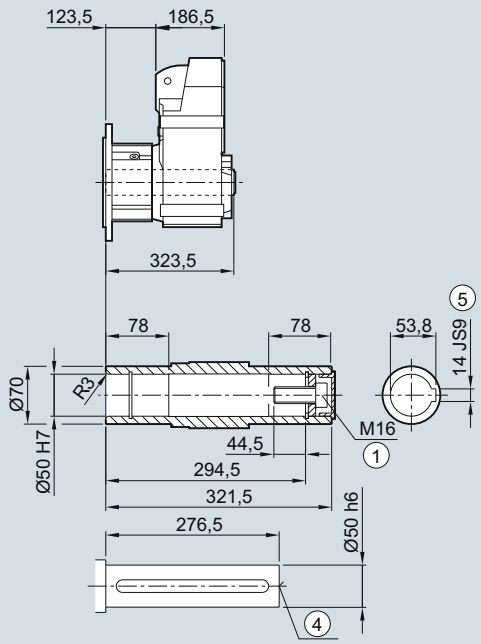
FD.F./FZ.F.89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS

FDF/FZF89



FDAF/FZAF89



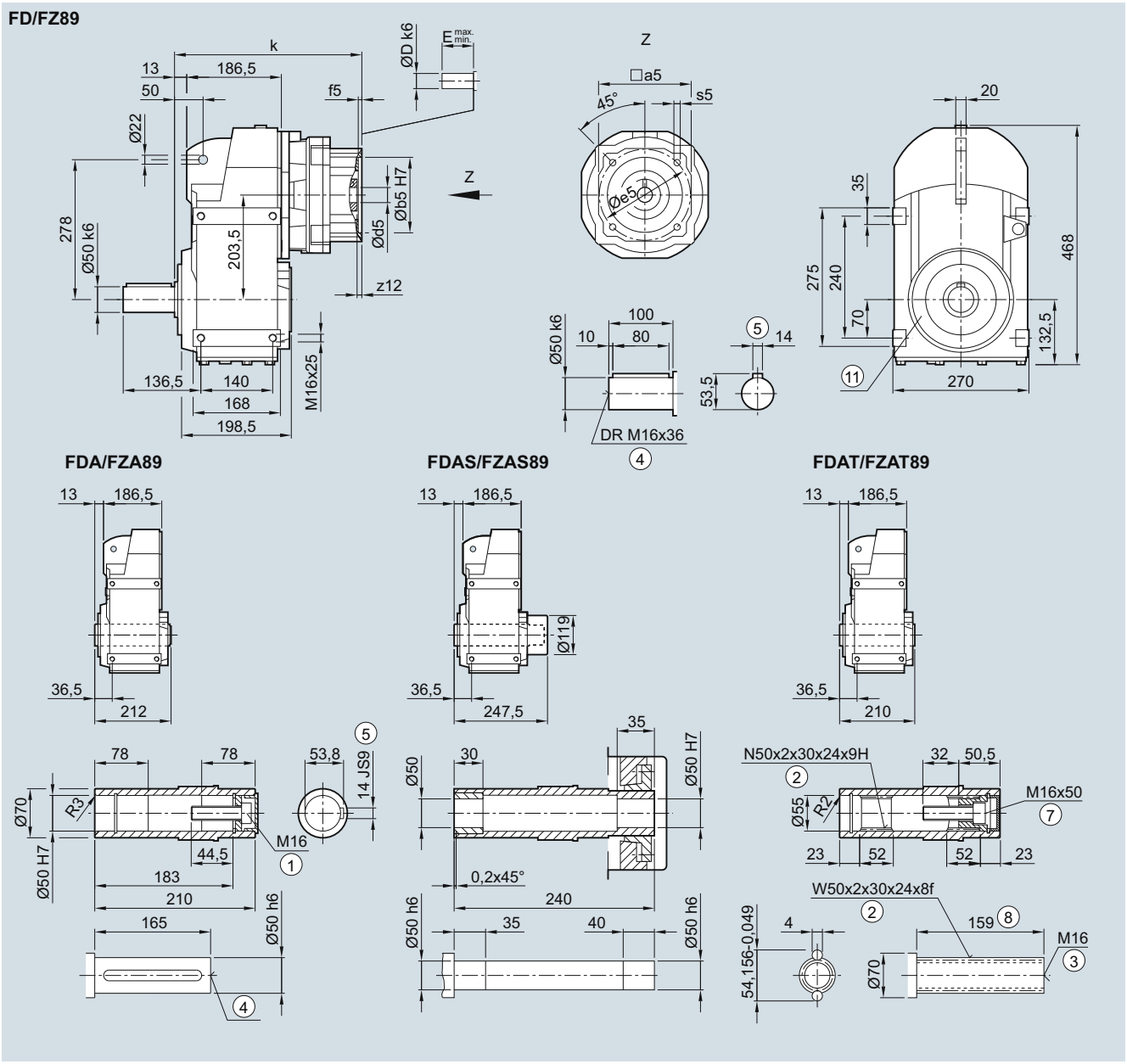
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	392
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	392
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	392
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	413
KS6.2	130	110	7	145	M8x15	8	22	40	58	413
KS8.1	155	130	4.5	165	M10x14	2	32	40	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

Dimensions

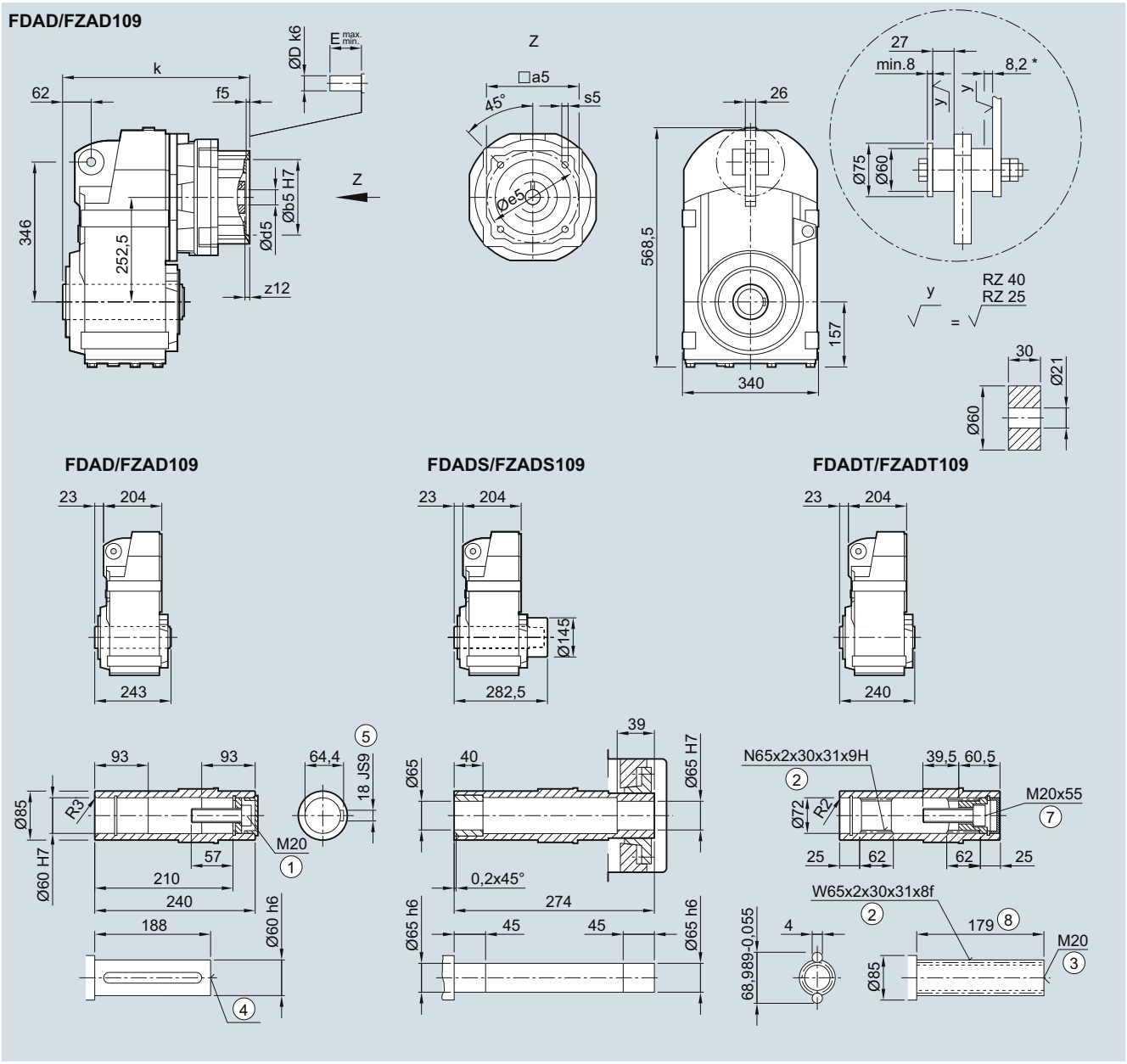
FD../FZ..89 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS


FD/FZ89
k
13
186,5
50
f5
ØD k6
E max. E min.
Ø22
278
Ø50 k6
203,5
Ø50 H7
Ø50 h6
Ø50 h6
Ø50 h6
Ø50 H7
Ø50 H7
Ø50 h6
Ø50 h6
Ø50 h6

FDAD./FZAD.109 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

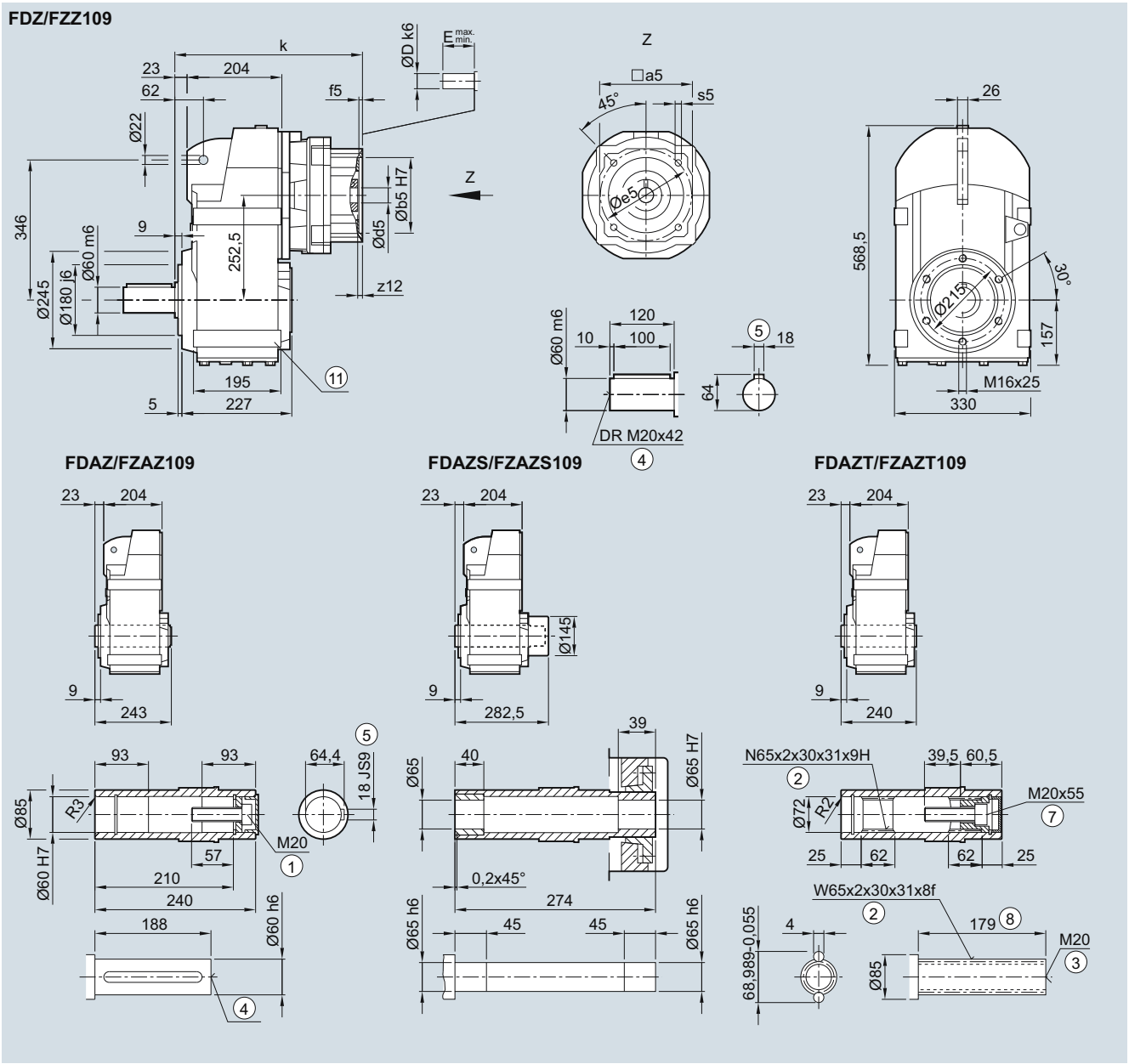
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

* Spring compression at max. torque

Dimensions

FD.Z./FZ.Z.109 gearbox in a housing flange design

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS

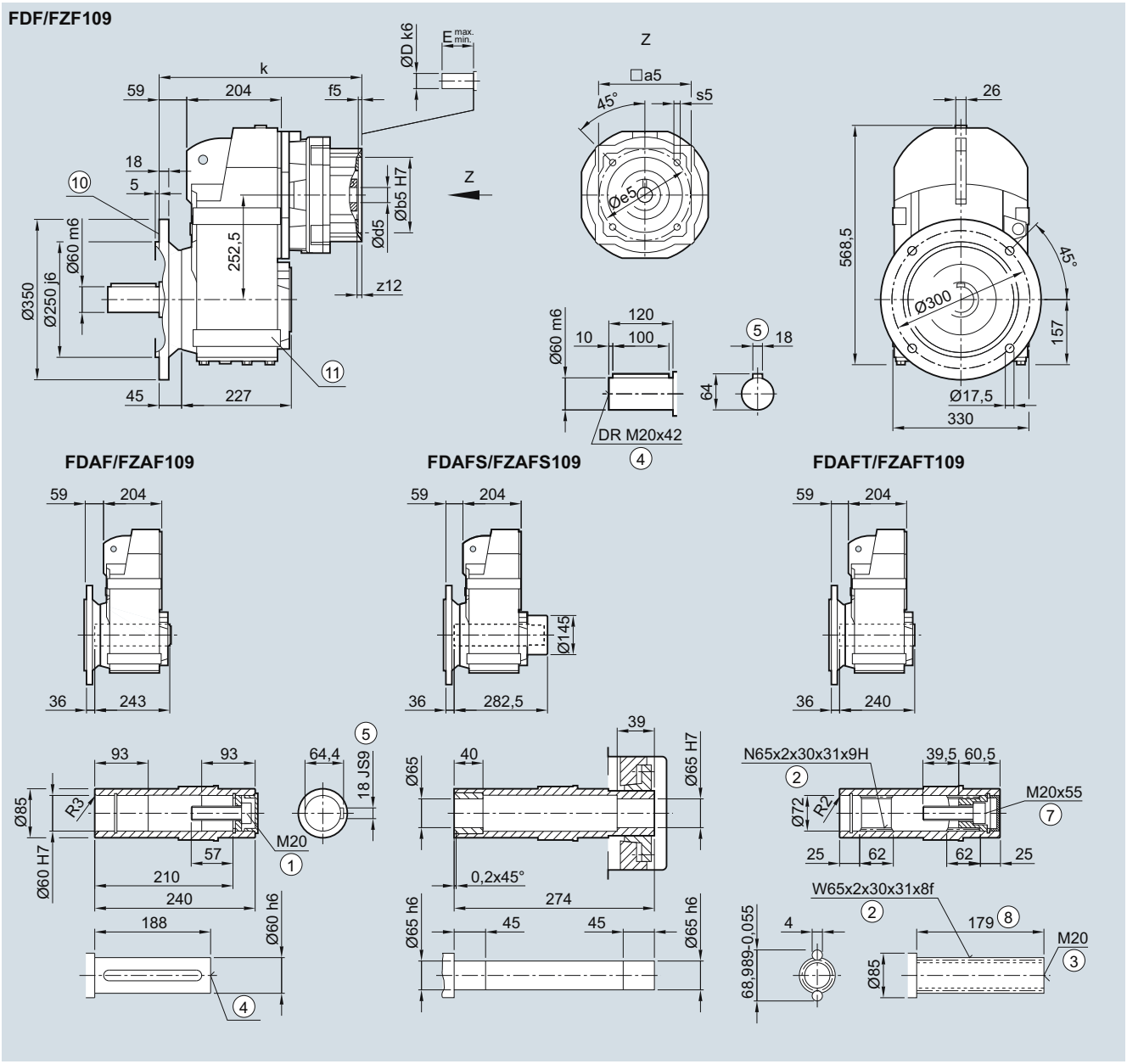


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	302
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	302
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	302
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	321
KS6.2	130	110	7	145	M8x15	8	22	40	58	321
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 ⑪ 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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

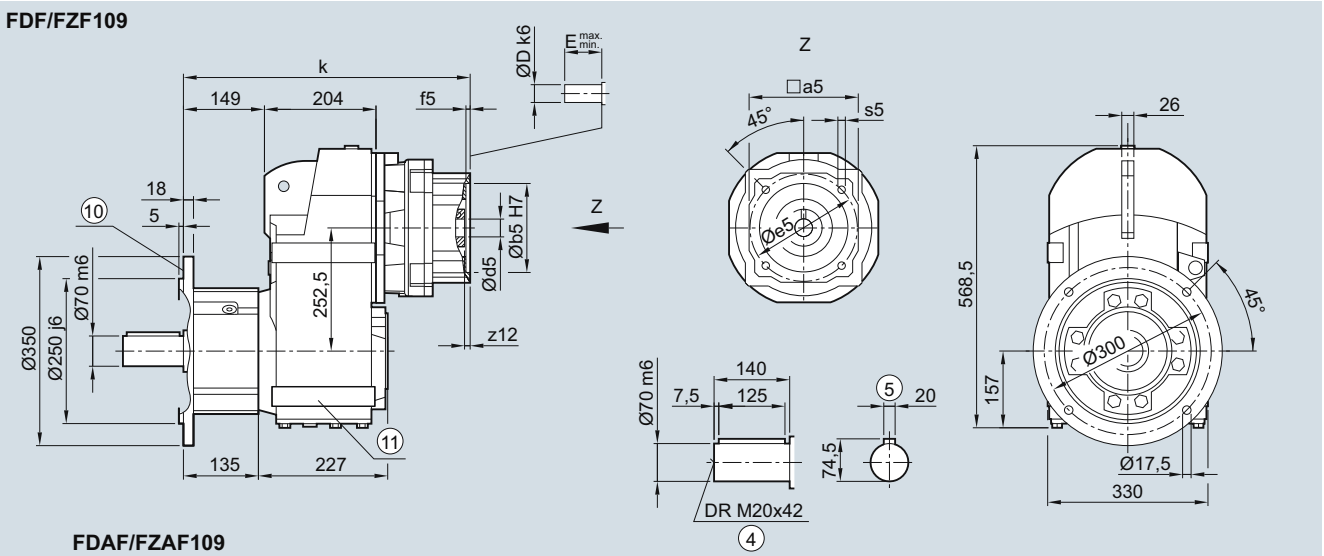
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 4/169 ⑪ Use bores only for foot-mounted design

Dimensions

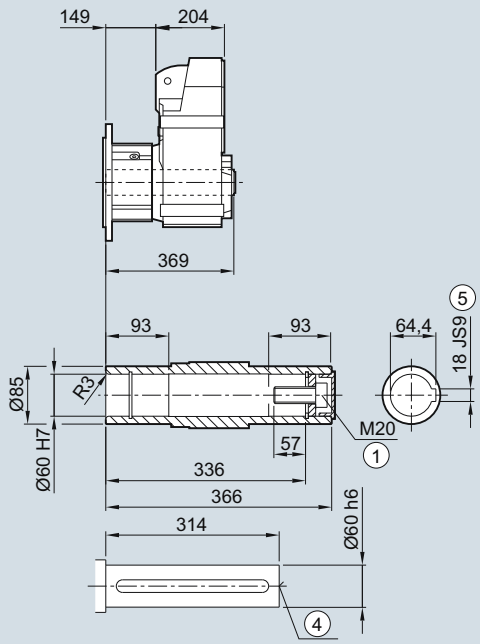
FD.F./FZ.F.109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS

FDF/FZF109



FDAF/FZAF109

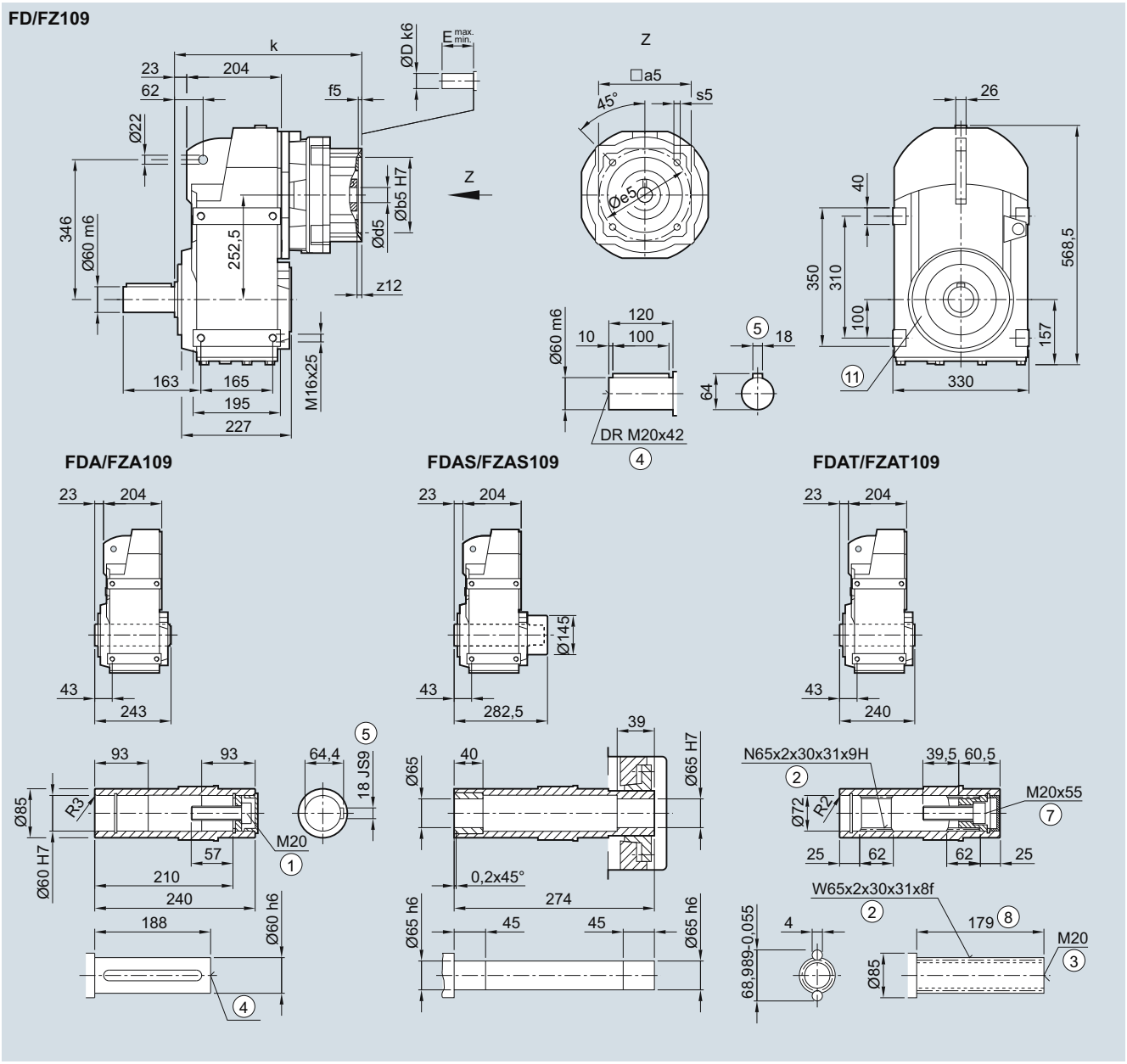


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	428
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	428
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	428
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	447
KS6.2	130	110	7	145	M8x15	8	22	40	58	447
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 Ø Use bores only for foot-mounted design

FD../FZ..109 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS



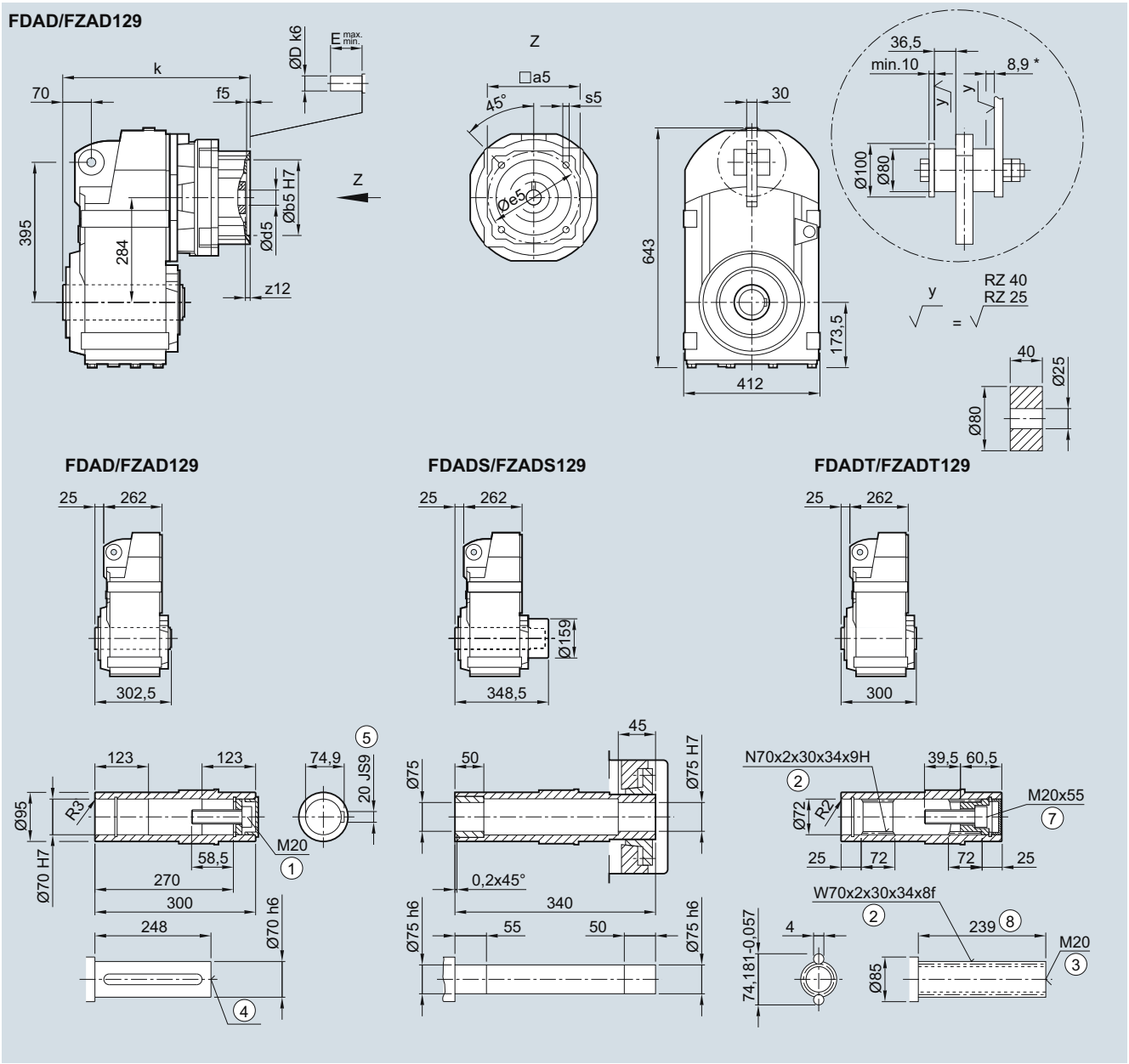
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	302
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	302
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	302
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	321
KS6.2	130	110	7	145	M8x15	8	22	40	58	321
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 ⑪ Use bores only for housing flange design

Dimensions

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

FAD030KS, FADS030KS, FADT030KS



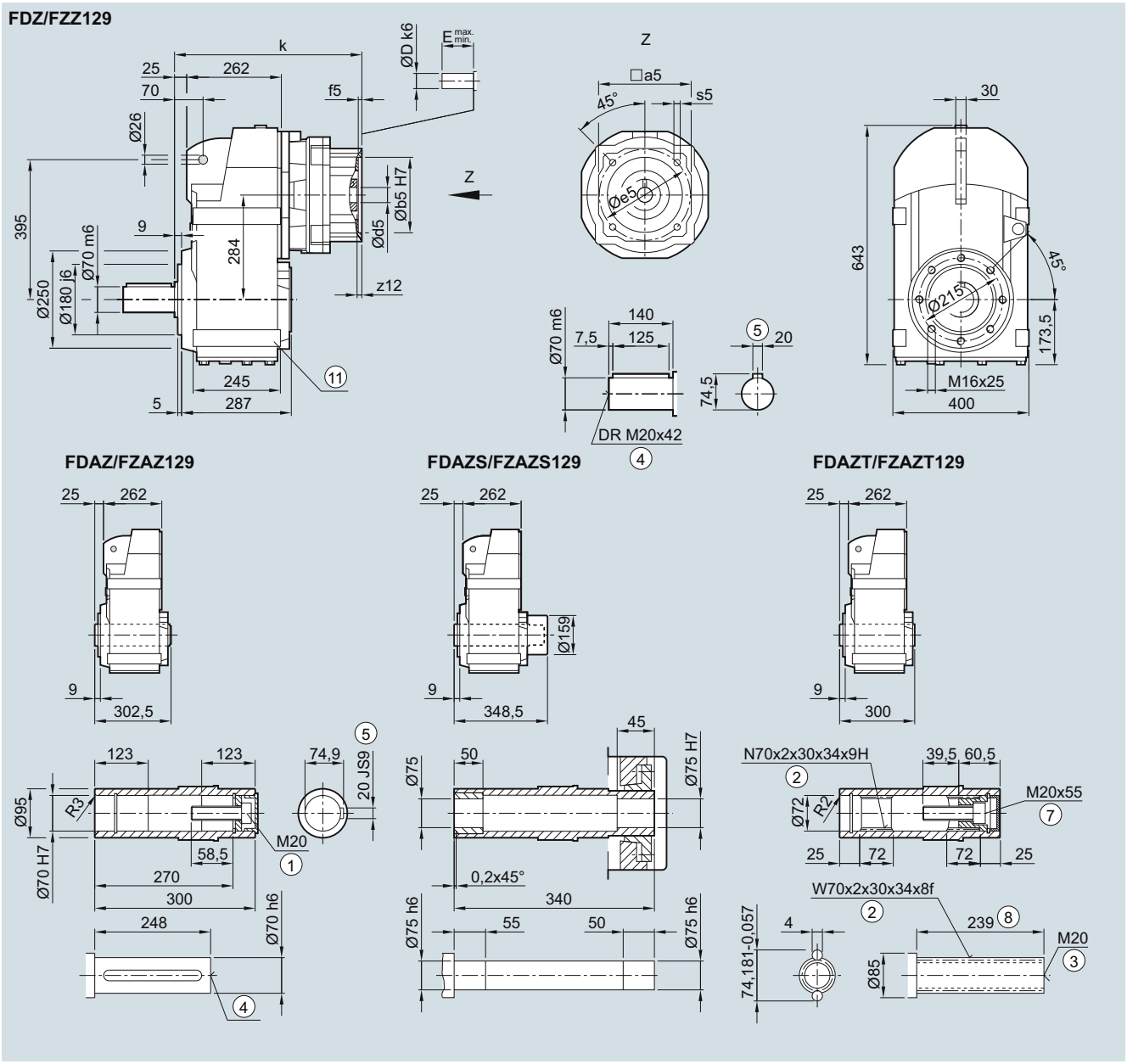
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	355
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	355
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	355
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372
KS6.2	130	110	7	145	M8x15	8	22	40	58	372
KS8.1	155	130	4.5	165	M10x14	2	32	40	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



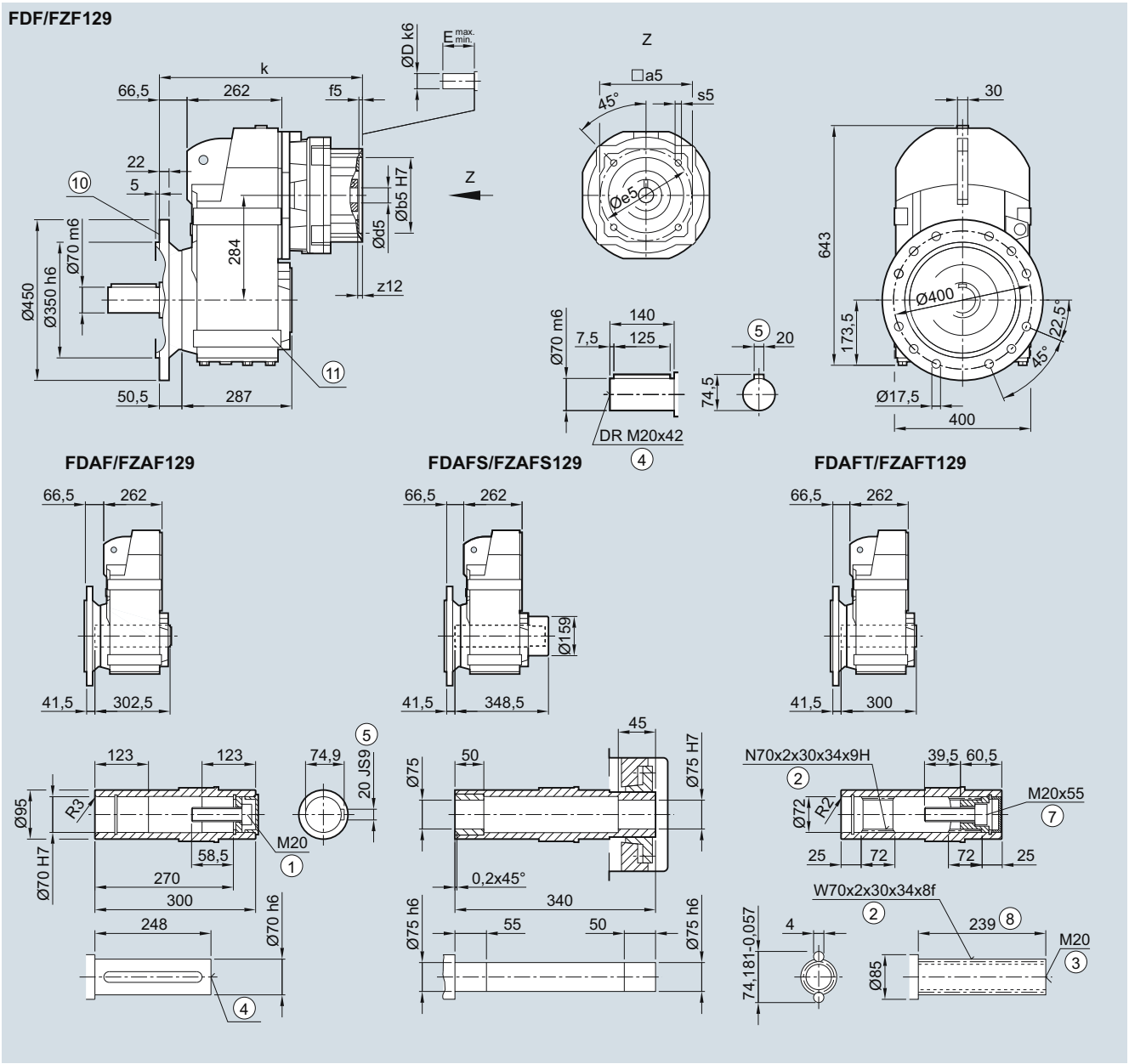
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	355
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	355
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	355
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372
KS6.2	130	110	7	145	M8x15	8	22	40	58	372
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 ⑪ Use bores only for foot-mounted design

Dimensions

FD.F./FZ.F.129 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



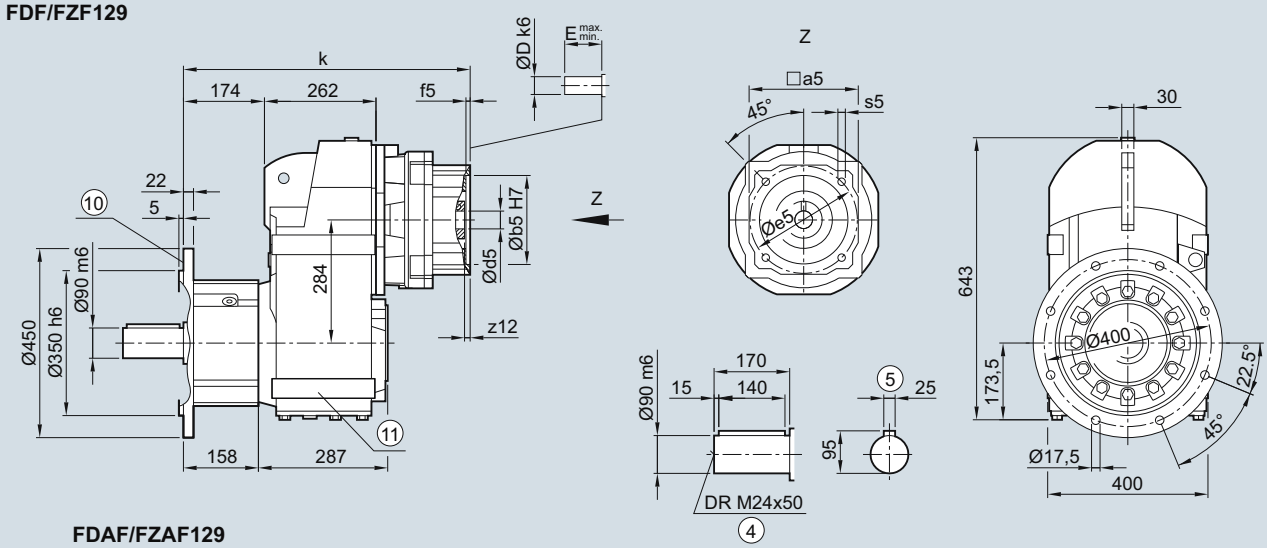
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	396.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	396.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	396.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	413.5
KS6.2	130	110	7	145	M8x15	8	22	40	58	413.5
KS8.1	155	130	4.5	165	M10x14	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 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

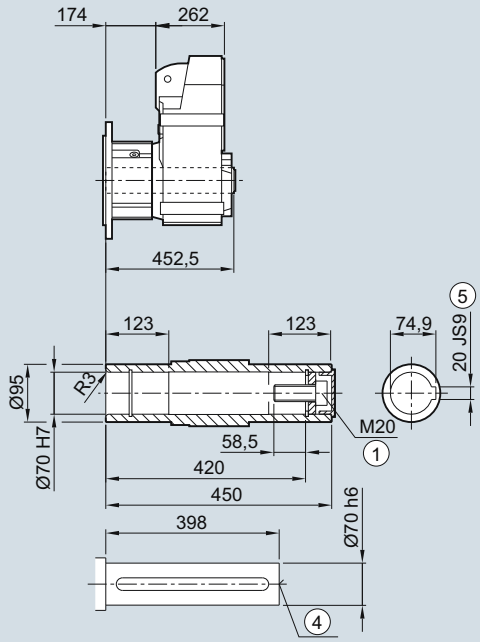
FD.F./FZ.F.129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS

FDF/FZF129



FDAF/FZAF129



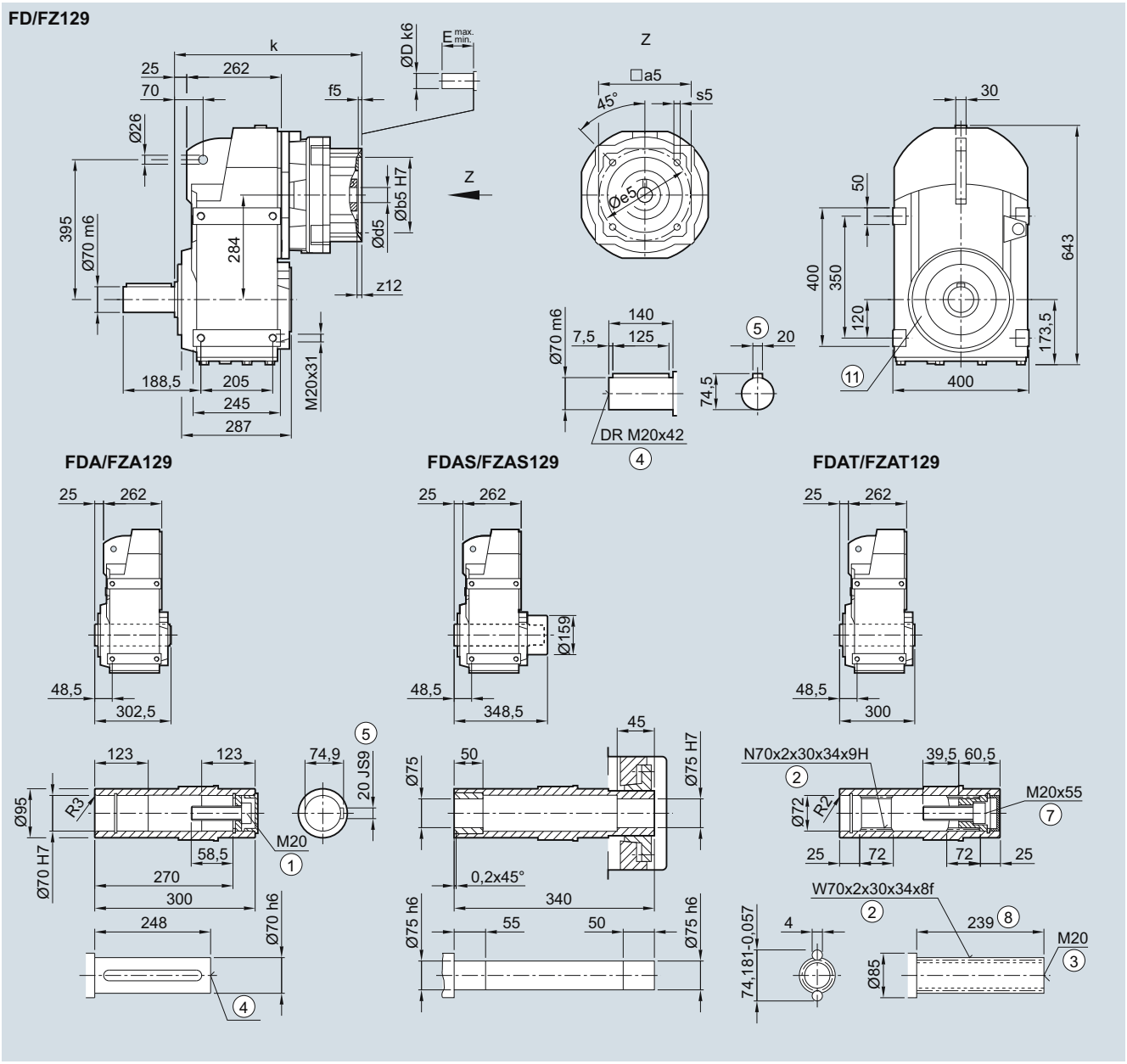
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	504
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	504
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	504
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	521
KS6.2	130	110	7	145	M8x15	8	22	40	58	521
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 Ø Use bores only for foot-mounted design

Dimensions

FD../FZ..129 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS

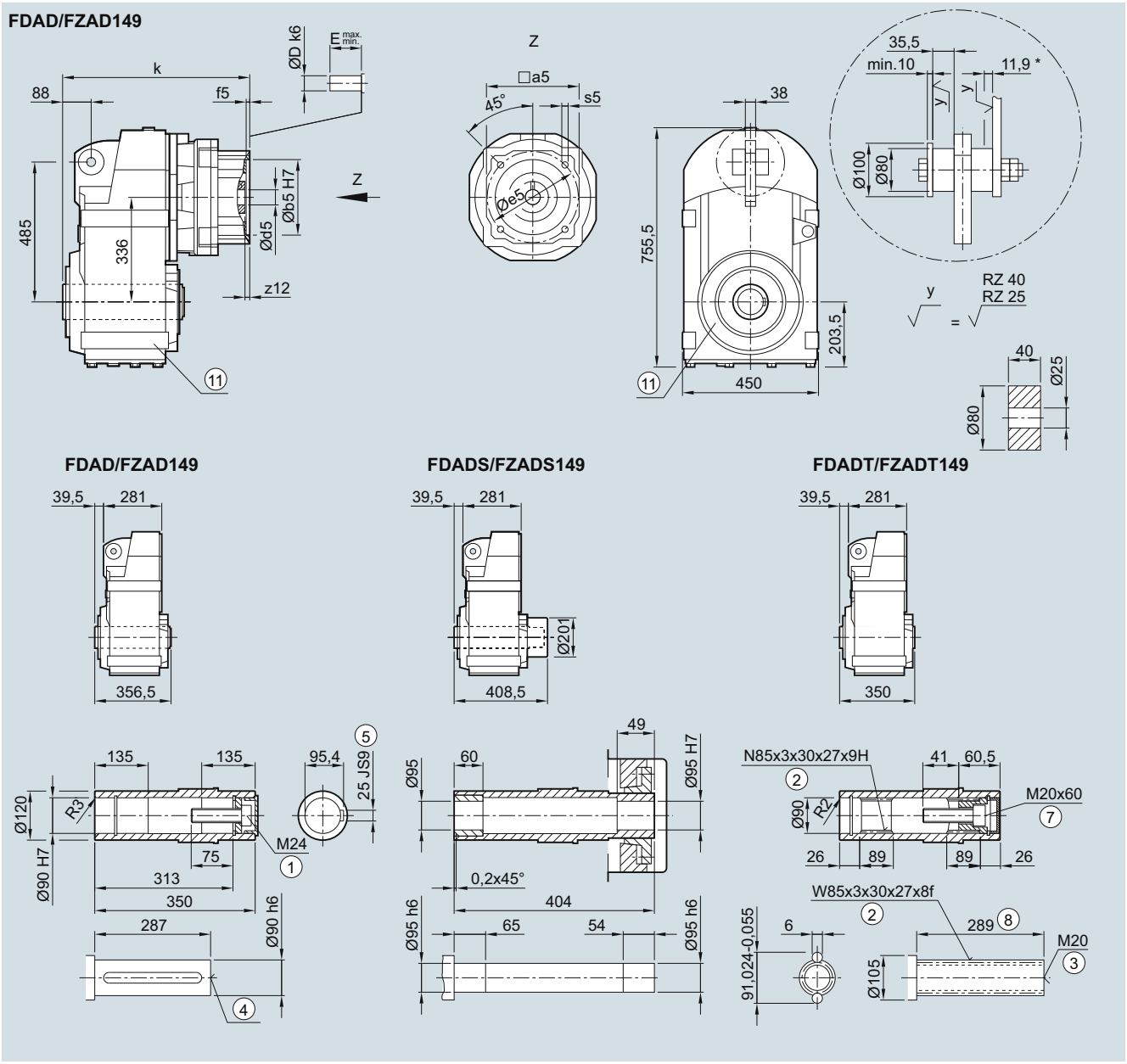


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	355
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	355
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	355
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	372
KS6.2	130	110	7	145	M8x15	8	22	40	58	372
KS8.1	155	130	4.5	165	M10x14	2	32	40	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 ⑪ 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	$E_{min.}$	$E_{max.}$	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

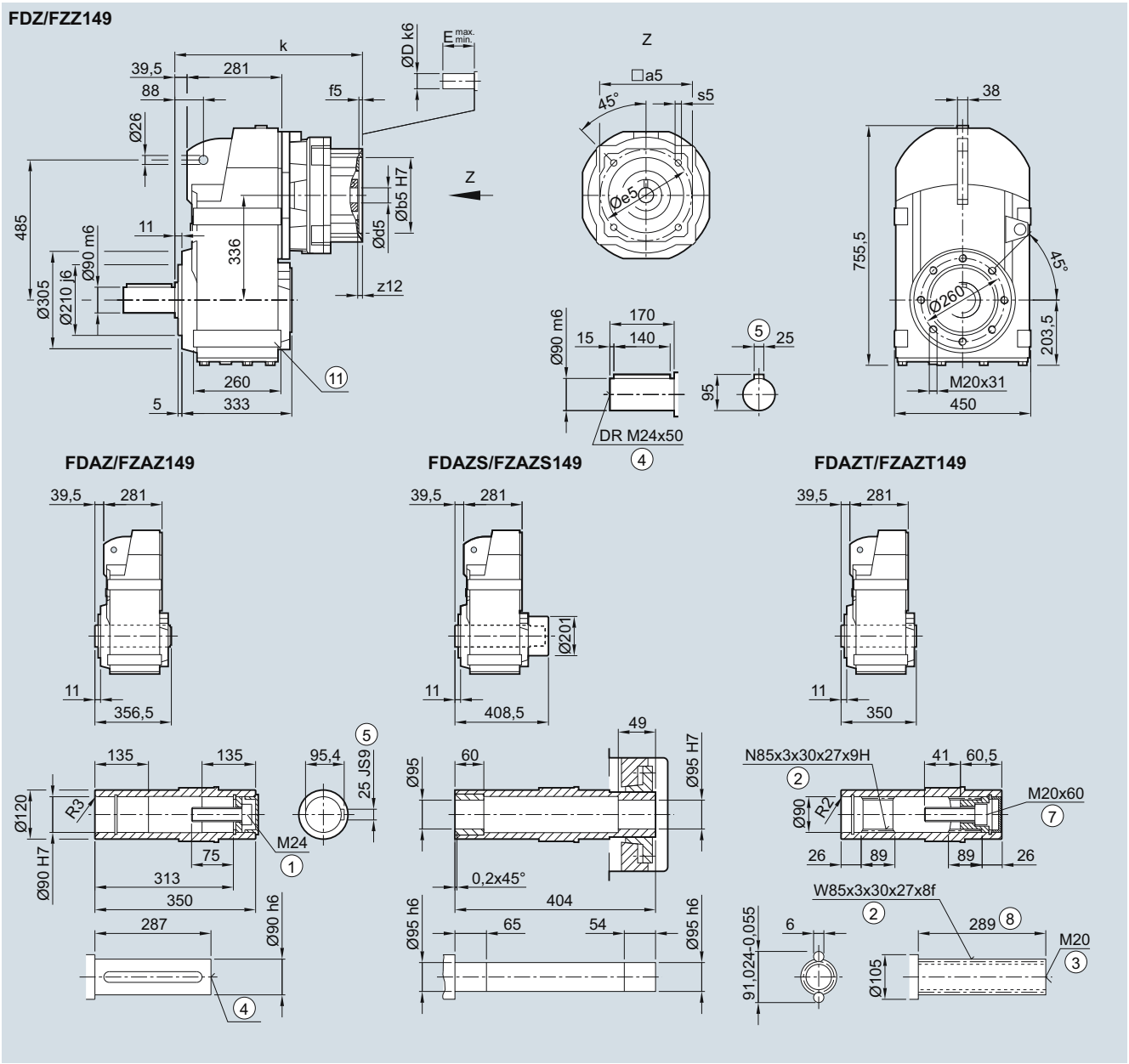
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑦ ISO 4762 ⑧ Without locating shoulder +1 mm

* Spring compression at max. torque ⑪ Use bores only for foot-mounted, flange-mounted or housing flange design

Dimensions

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

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS

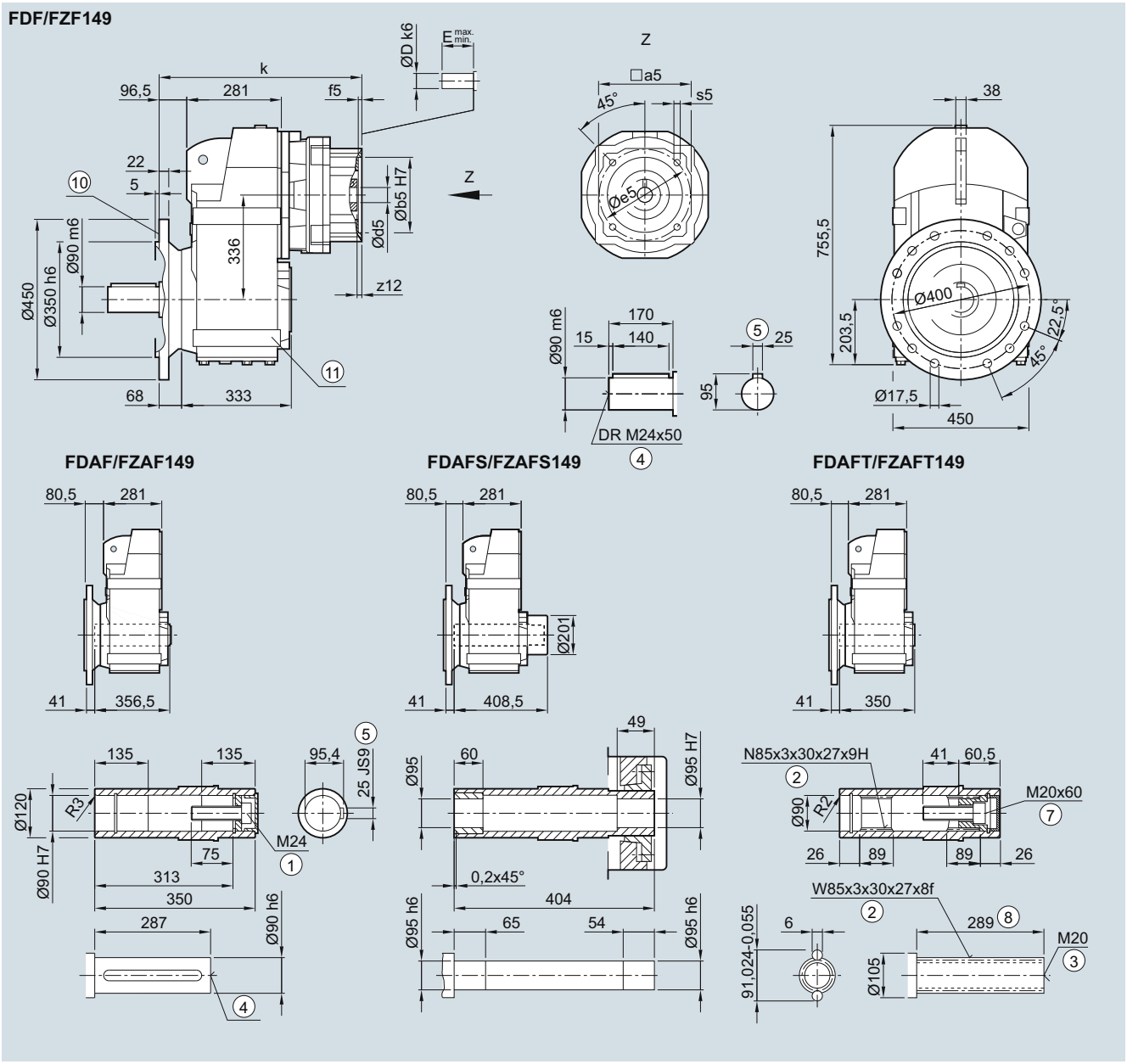


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	404
KS6.2	130	110	7	145	M8x15	8	22	40	58	404
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	416.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	445.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	445.5

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 ⑪ 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	$E_{min.}$	$E_{max.}$	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

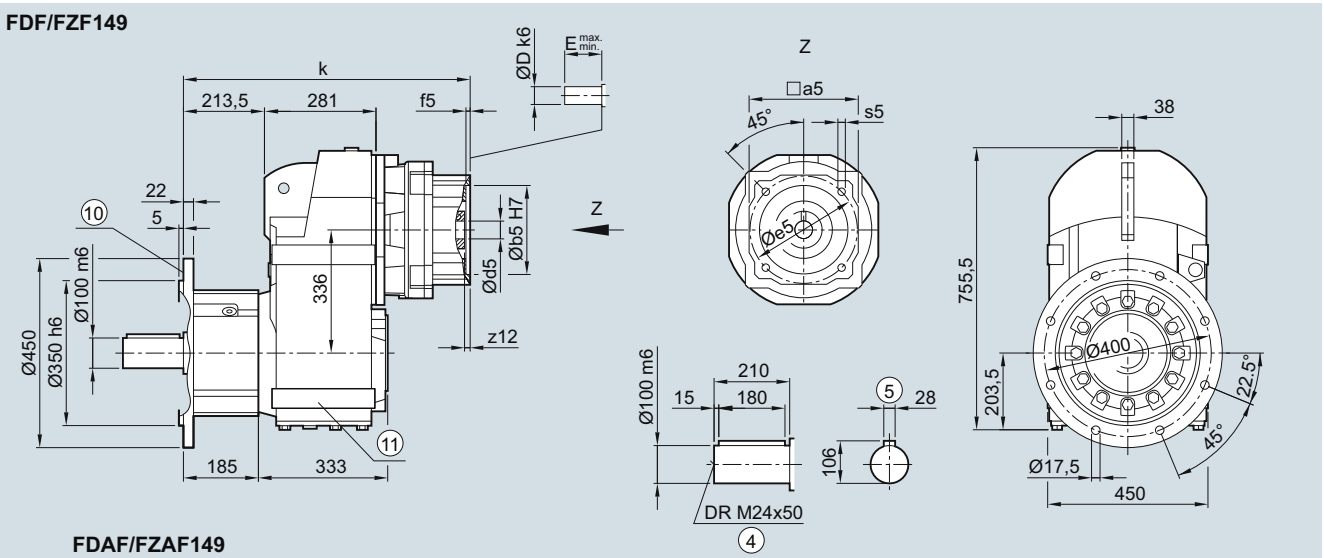
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 4/169 ⑪ Use bores only for foot-mounted design

Dimensions

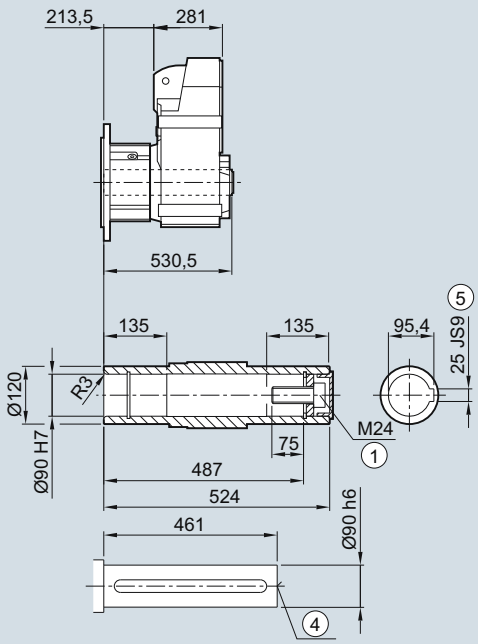
FD.F./FZ.F.149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS

FDF/FZF149



FDAF/FZAF149

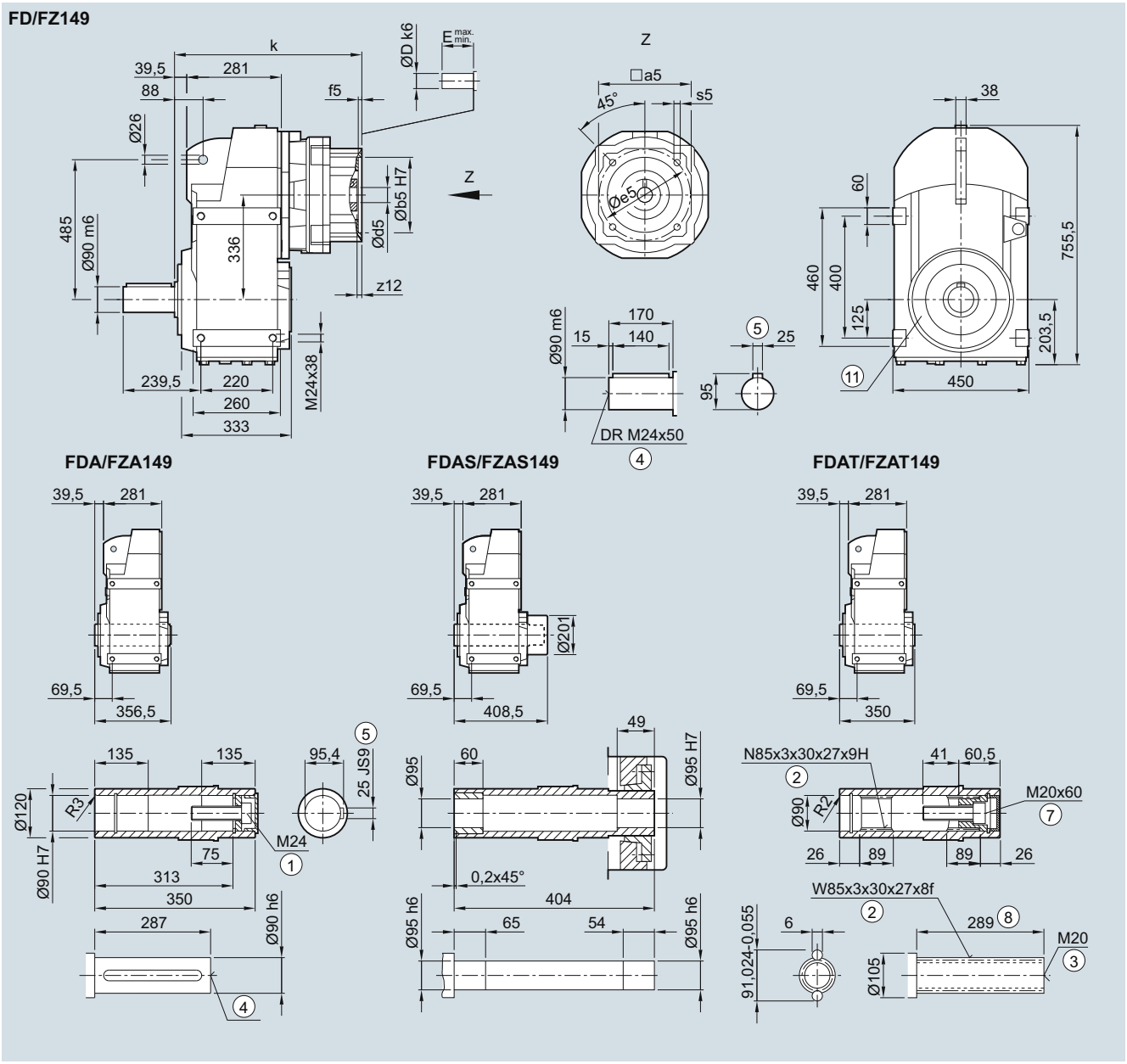


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	578
KS6.2	130	110	7	145	M8x15	8	22	40	58	578
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	590.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	619.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	619.5

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



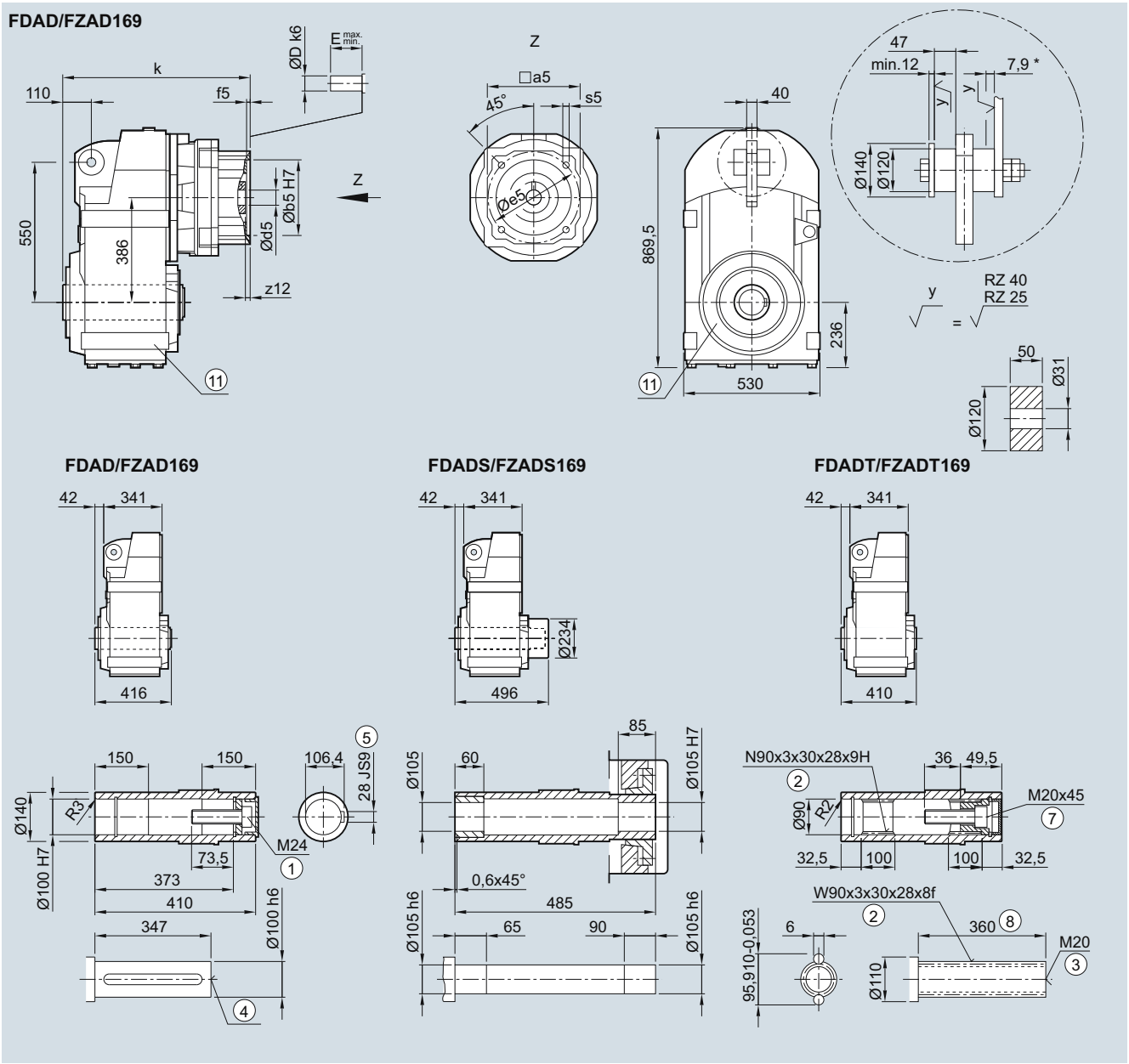
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	404
KS6.2	130	110	7	145	M8x15	8	22	40	58	404
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	416.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	445.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	445.5

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 ⑪ Use bores only for foot-mounted design

Dimensions

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

FAD030KS, FADS030KS, FADT030KS



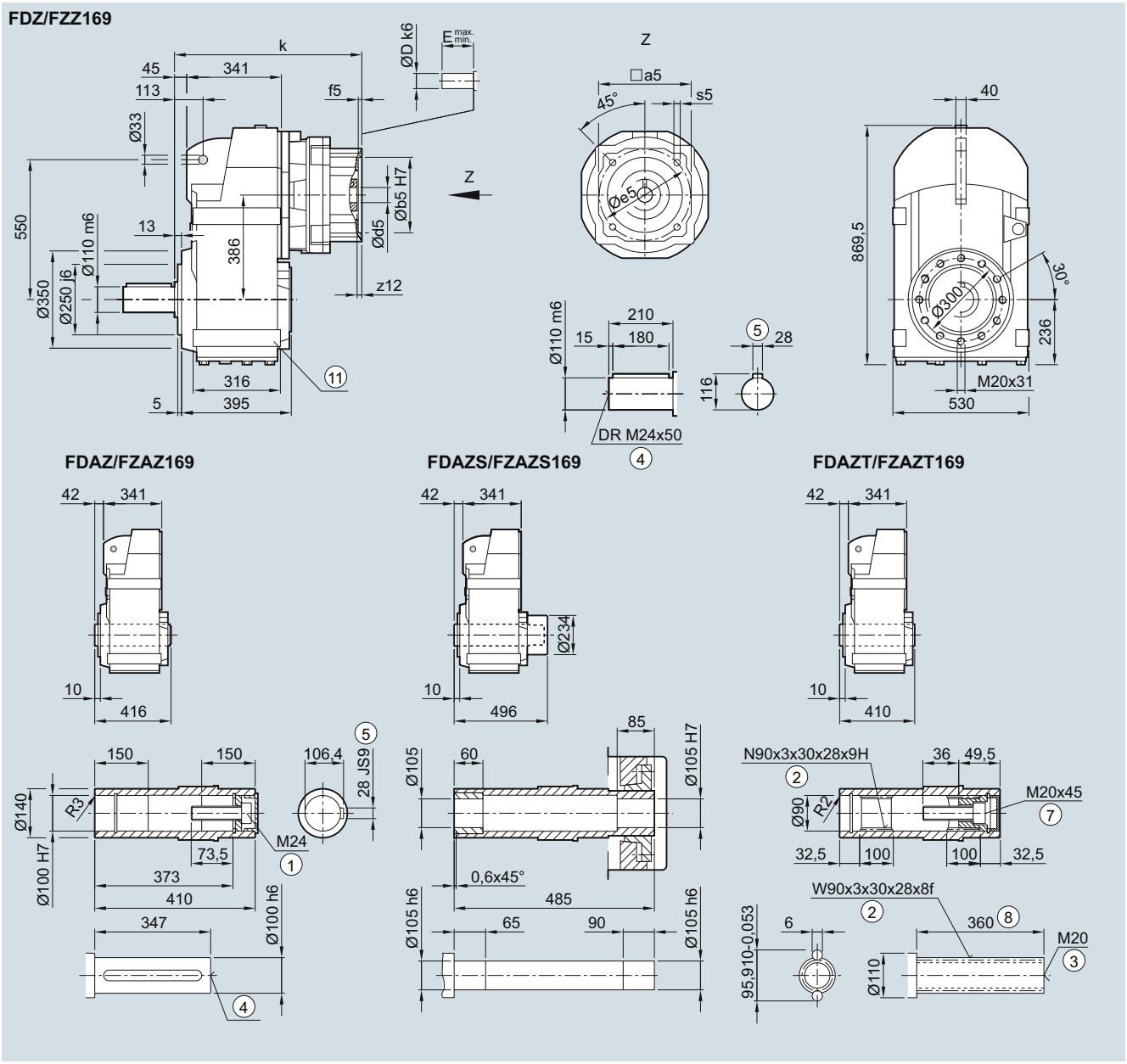
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	469.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	498
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	498

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 ⑪ 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



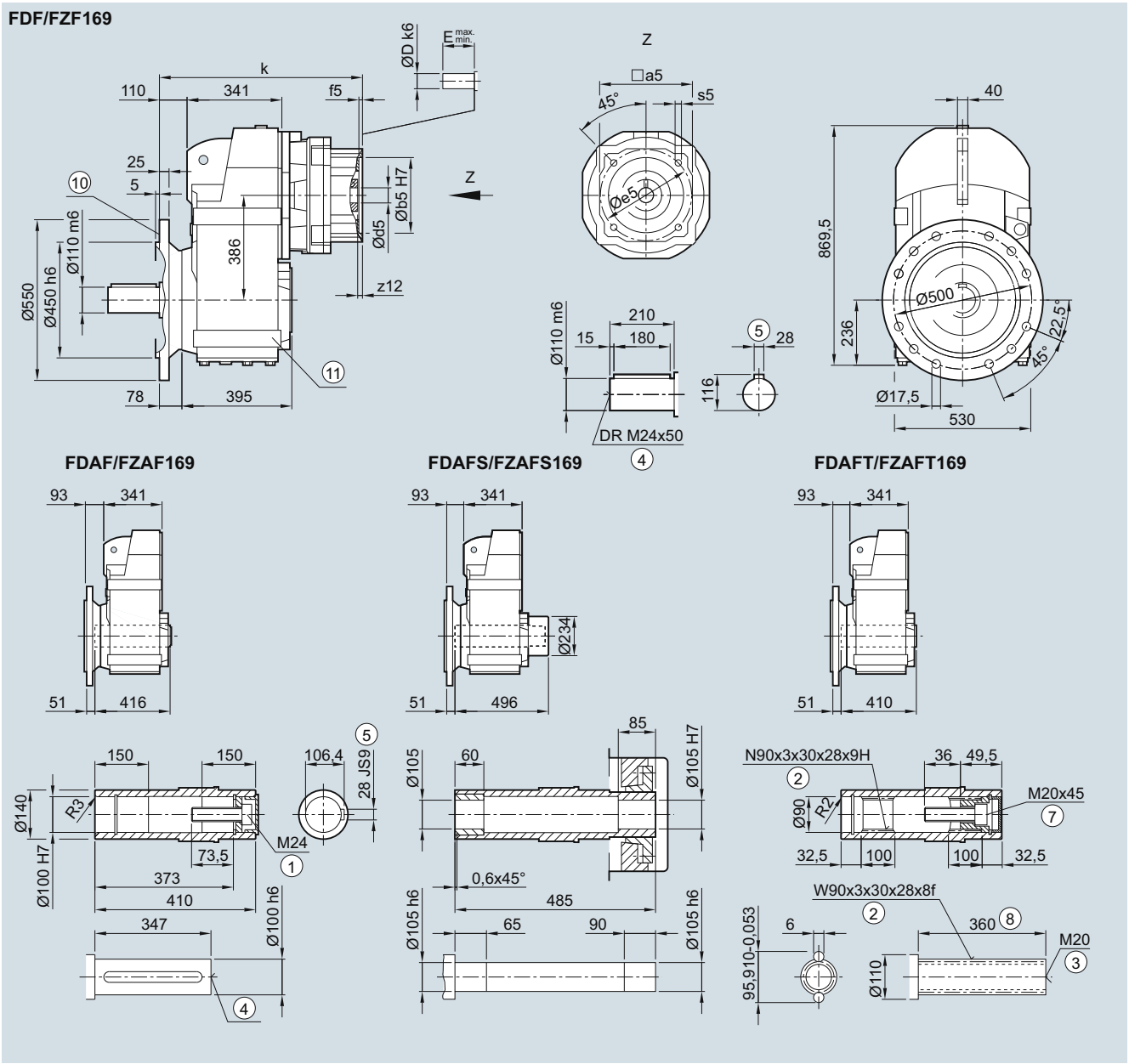
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	469.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	498
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	498

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 ⑪ Use bores only for foot-mounted design

Dimensions

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

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



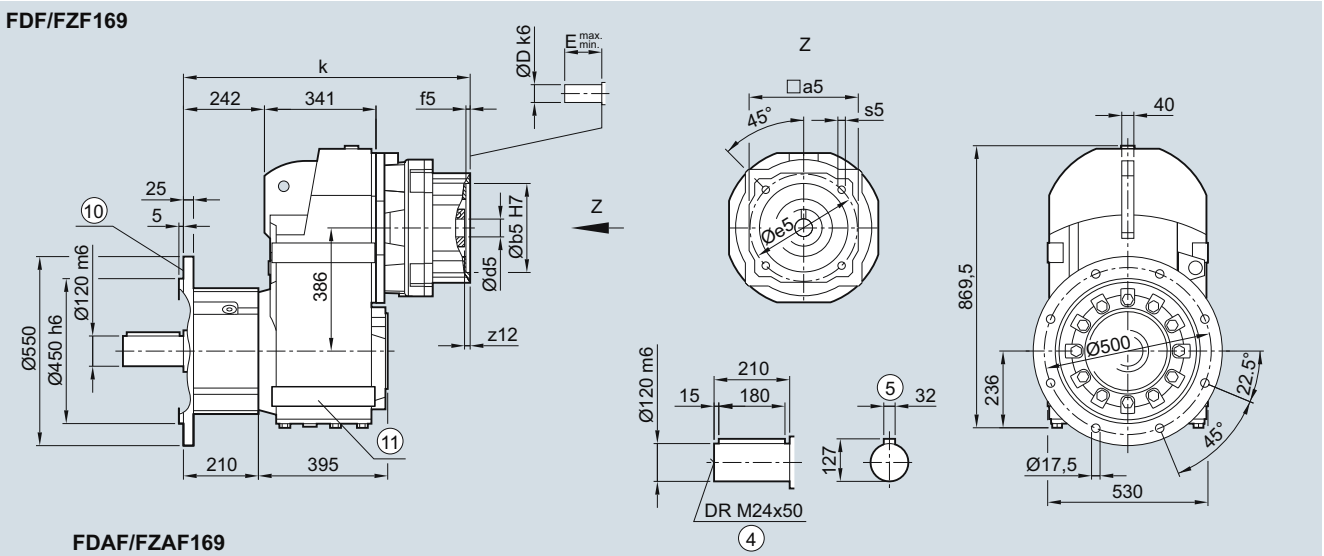
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	534.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	563
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	563

① ISO 4014 ② 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

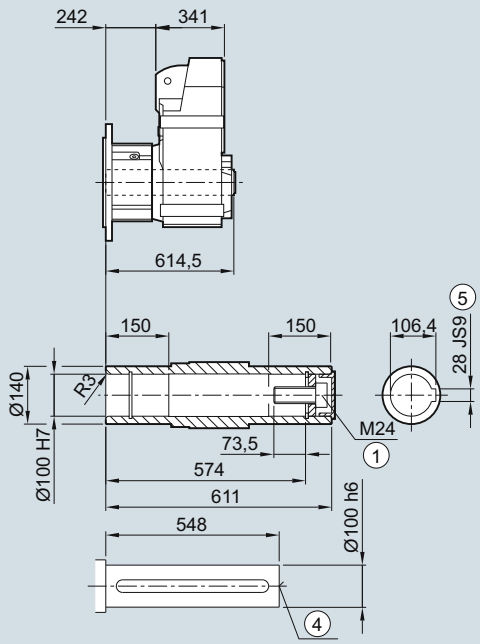
FD.F./FZ.F.169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

FF040KS, FAF040KS

FDF/FZF169



FDAF/FZAF169



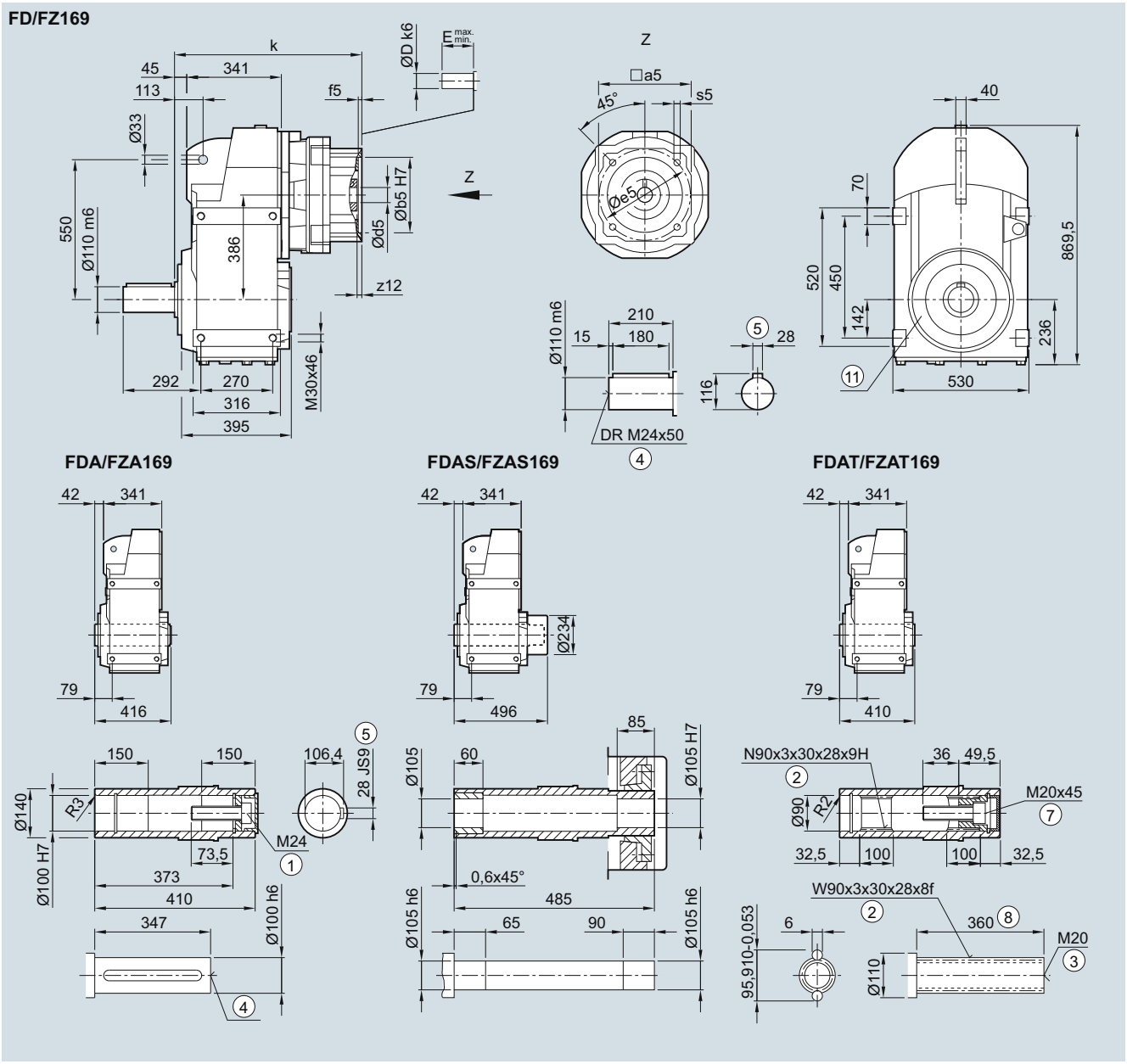
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	666.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	695
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	695

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

Dimensions

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

F030KS, FA030KS, FAS030KS, FAT030KS

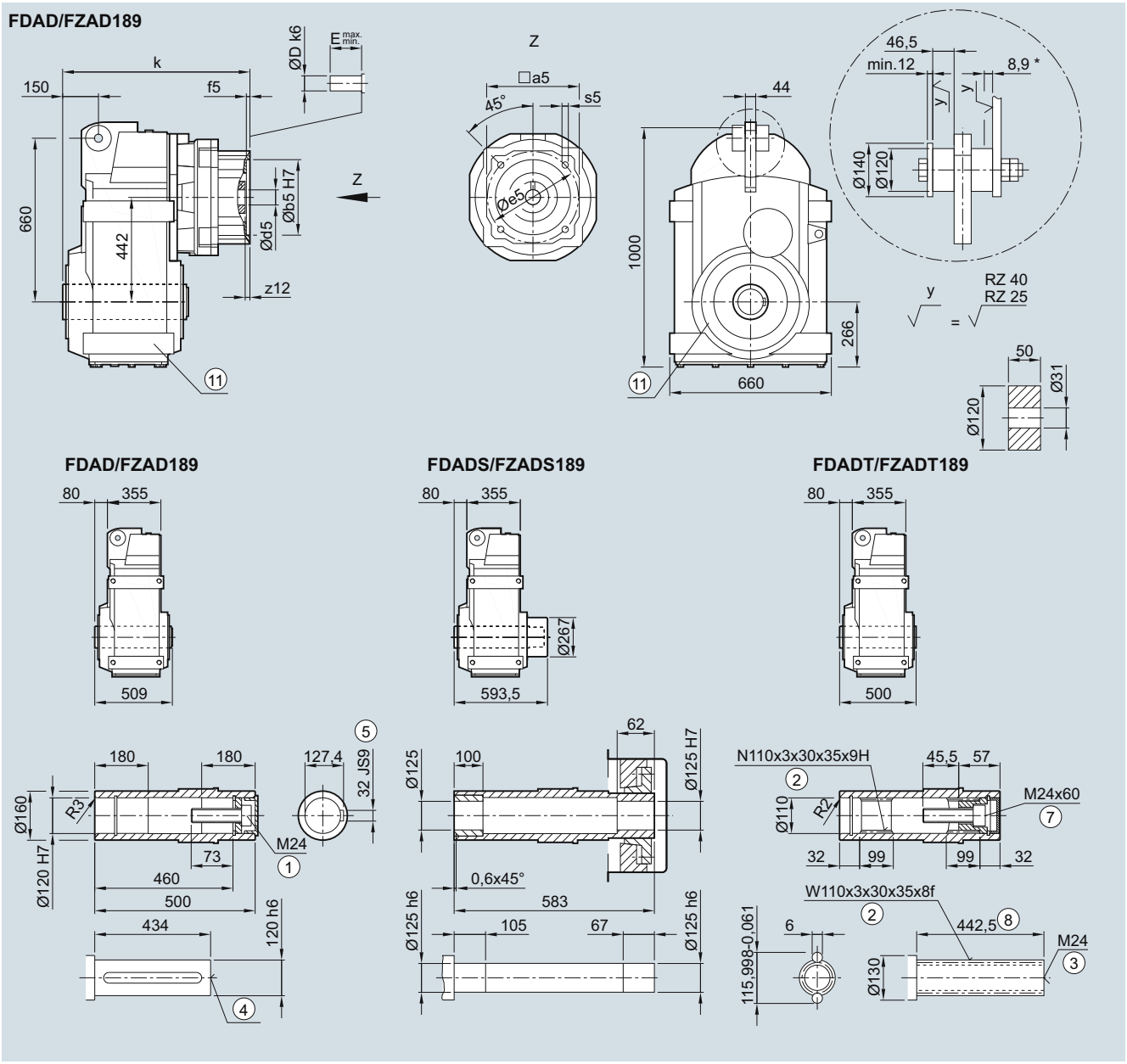


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	469.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	498
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	498

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 ⑪ Use bores only for housing flange design

FDAD./FZAD.189 gearbox in a shaft-mounted design

FAD030KS, FADS030KS, FADT030KS



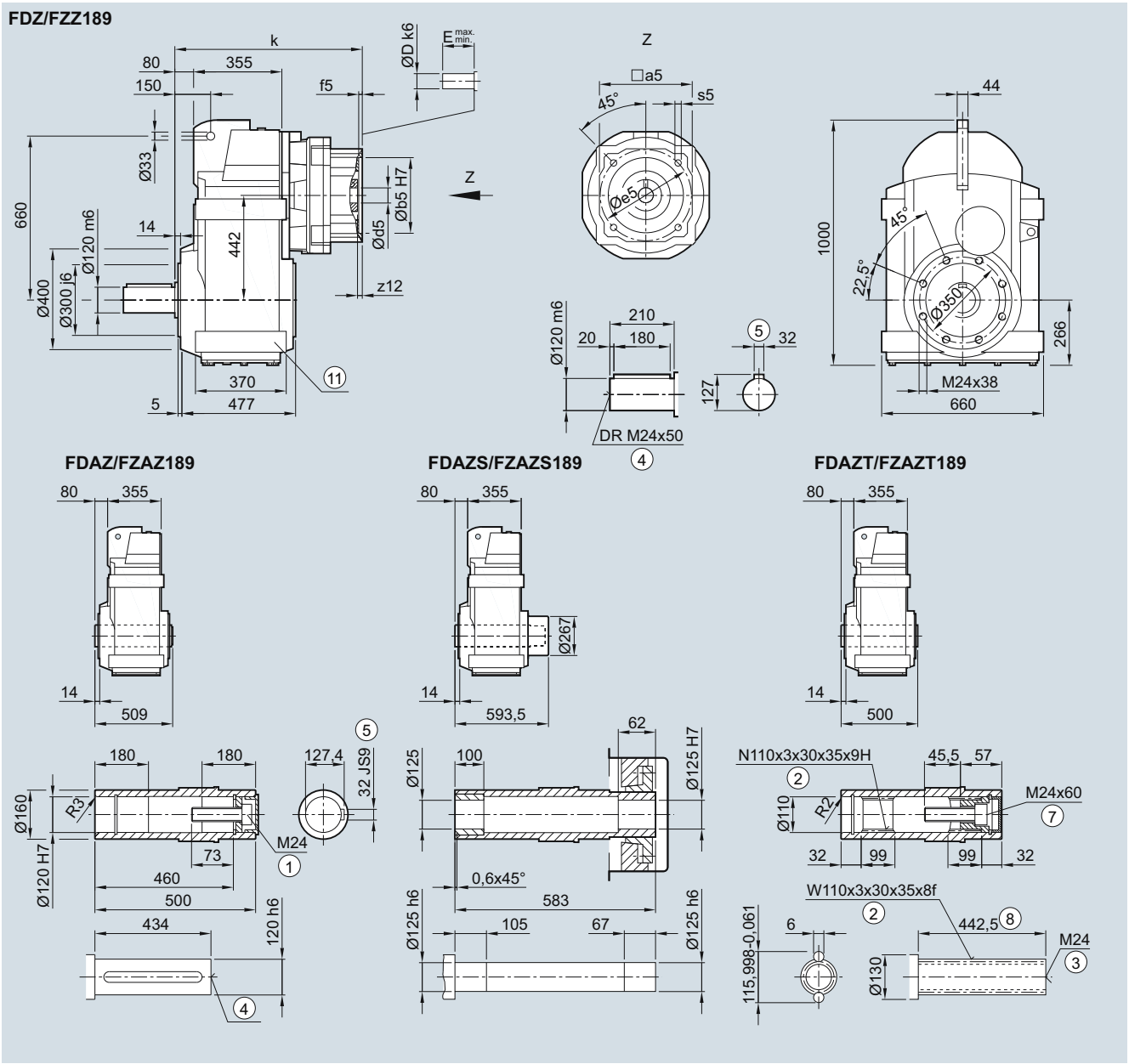
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	518.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	547
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	547

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 ⑪ Use bores only for foot-mounted, flange-mounted or housing flange design

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

FZ030KS, FAZ030KS, FAZS030KS, FAZT030KS

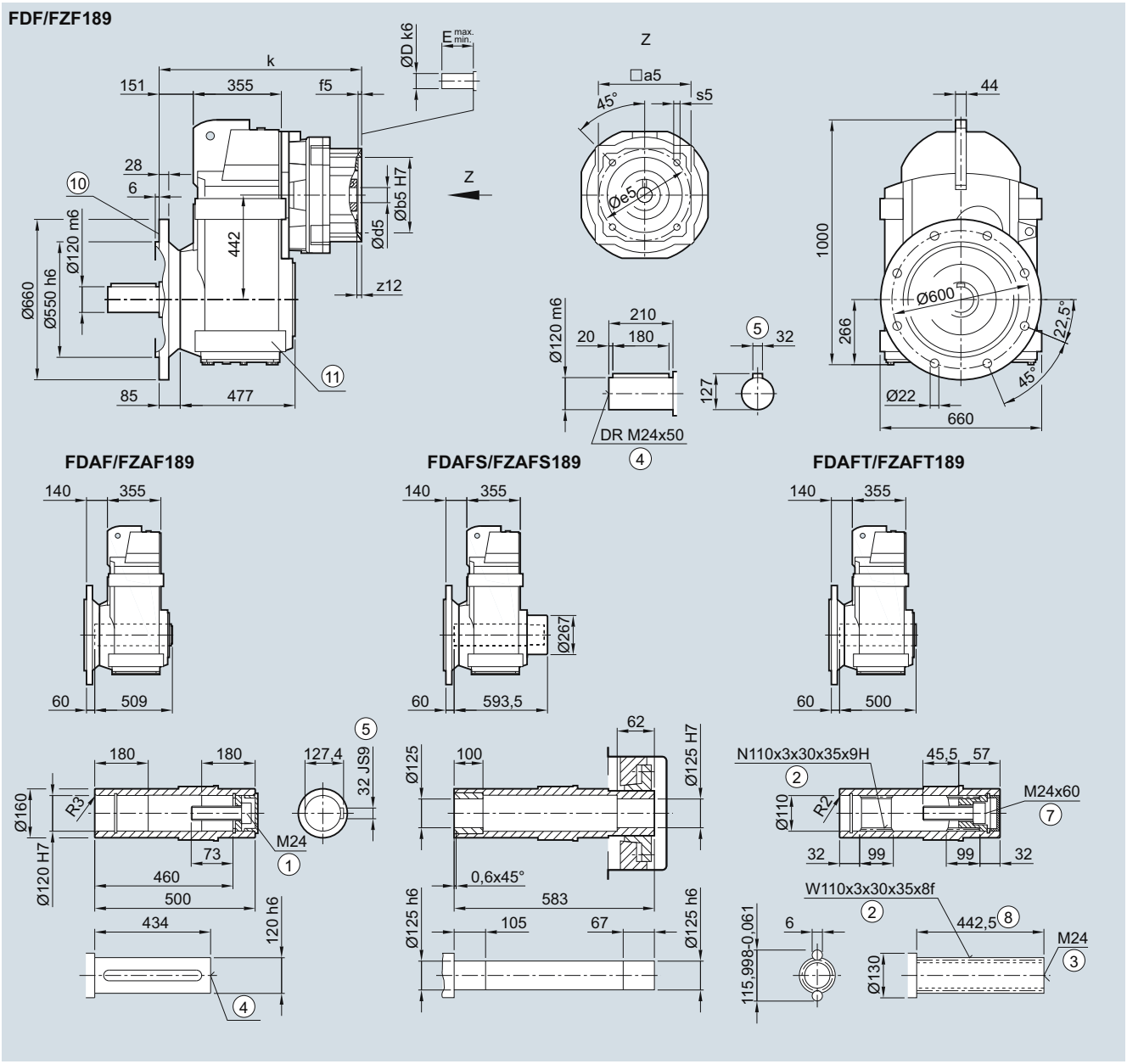


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	518.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	547
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	547

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 ⑪ Use bores only for foot-mounted design

FD.F./FZ.F.189 gearbox in a flange-mounted design

FF030KS, FAF030KS, FAFS030KS, FAFT030KS



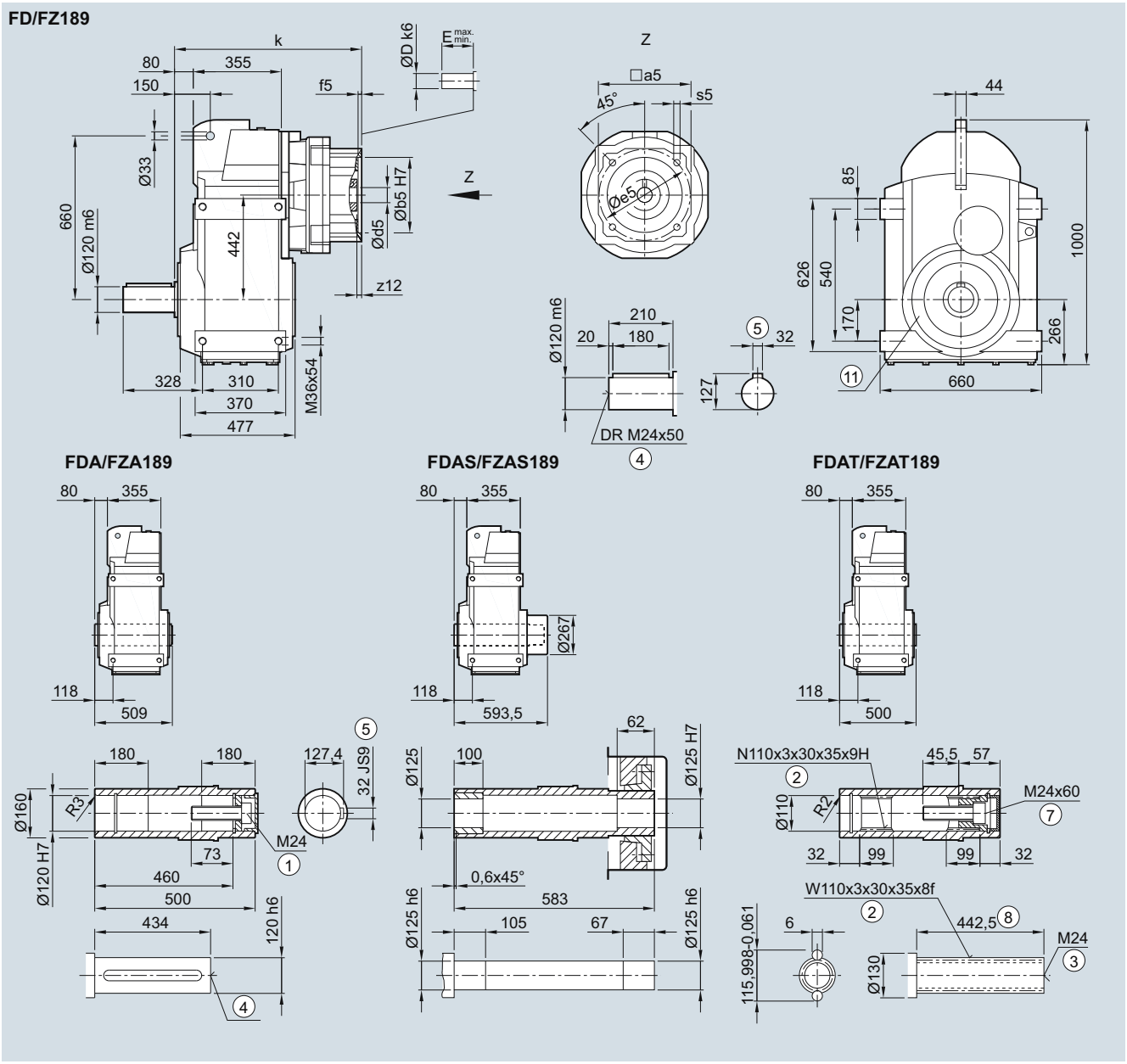
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	589.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	618
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	618

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

Dimensions

FD../FZ..189 gearbox in a foot-mounted design

F030KS, FA030KS, FAS030KS, FAT030KS

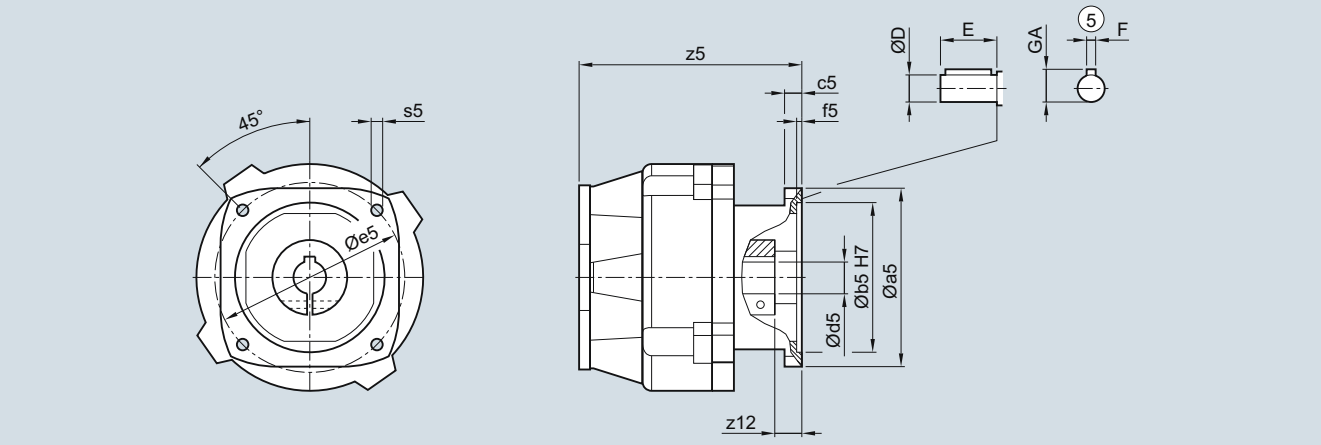


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	518.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	547
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	547

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 ⑪ 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



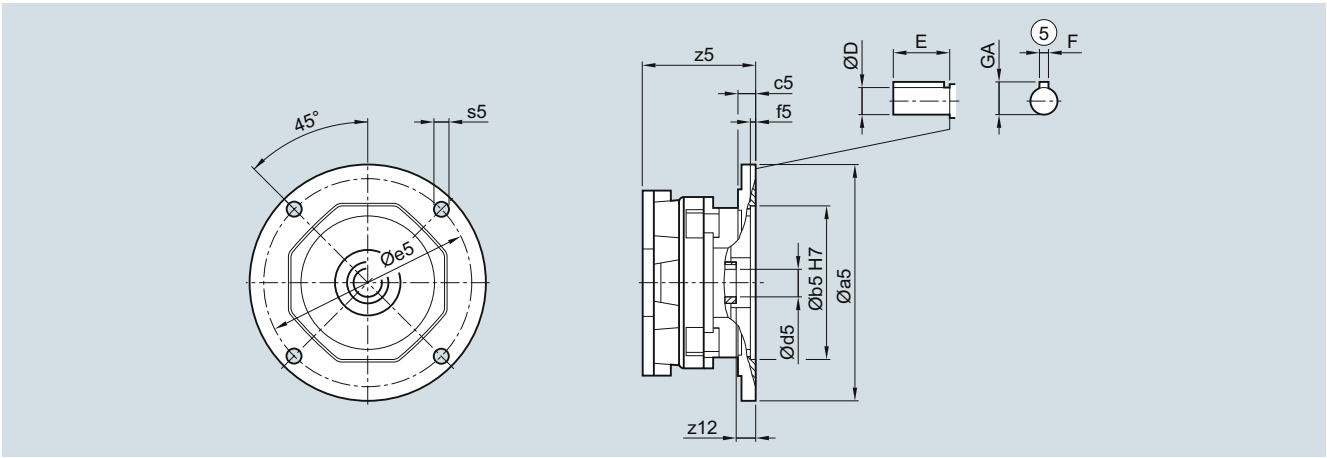
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD.../FZ...89												
813	260	250	25	6.0	300	M16	60.0	48	110	14	51.5	317.5
FD.../FZ...109												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	308.5
816	314.0	300	-	6.0	350	M16x29	60.0	55	110	16	59.0	365.0
FD.../FZ...129												
813	260.0	250	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
FD.../FZ...149												
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
FD.../FZ...169												
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
FD.../FZ...189												
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

⑤ Feather key/keyway DIN 6885

Dimensions

FD.../FZ...29 to FD.../FZ...89 gearboxes

F.AD.030K5, F.Z.030K5, F.F.030K5, F..030K5

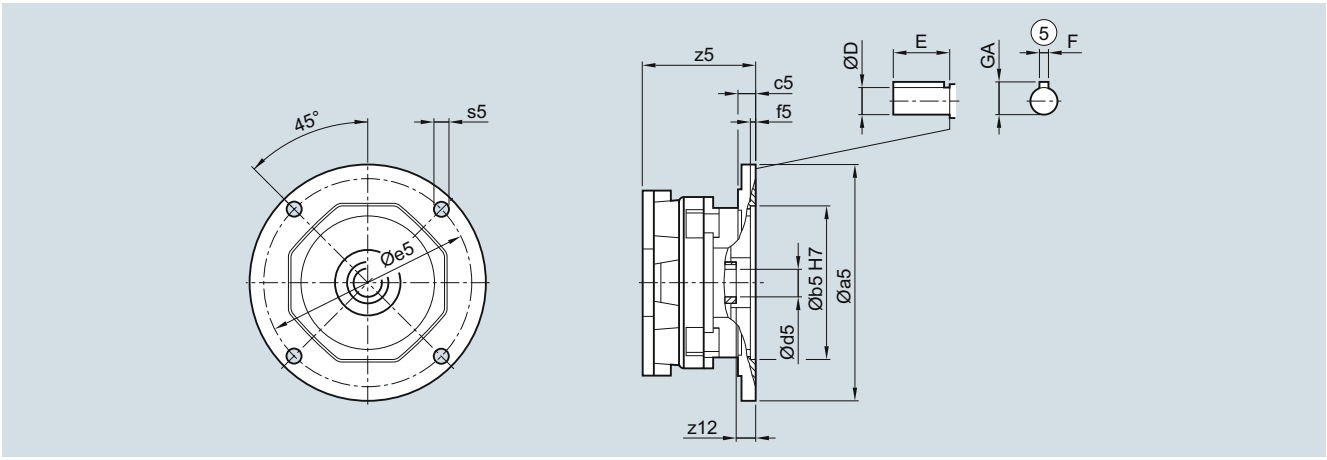


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD.../FZ...29												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
FD..../FZ...39												
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
FD.../FZ...49												
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
FD.../FZ...69												
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
FD.../FZ...79												
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
FD.../FZ...89												
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

⑤ Feather key/keyway DIN 6885

FD.../FZ...109 to FD.../FZ...189 gearboxes

F.AD.030K5, F.Z.030K5, F.F.030K5, F..030K5



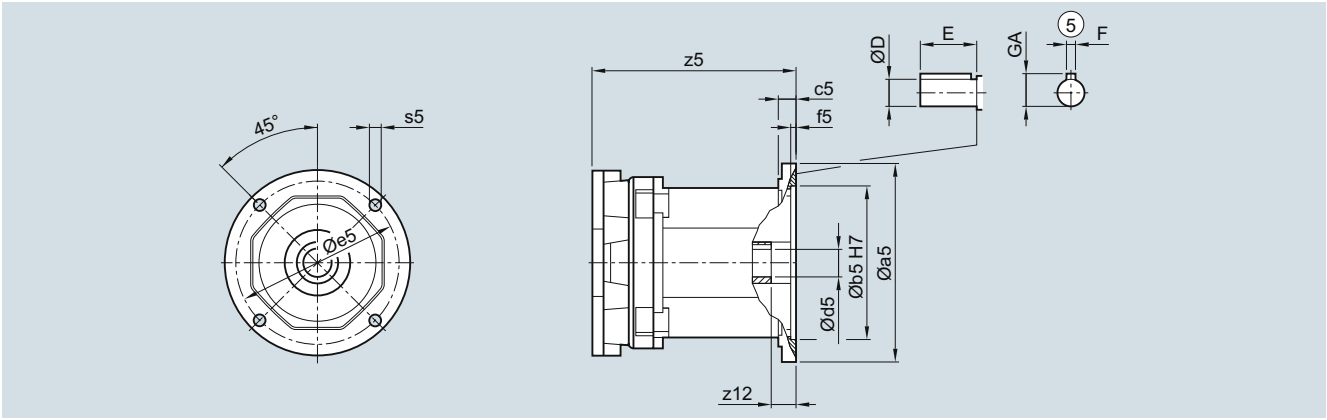
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD.../FZ...109												
140	168	114.3	15.0	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	83.0
180	226	215.9	22.0	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	159.0
210	226	215.9	22.0	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	175.0
250	226	215.9	22.0	5.5	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
FD.../FZ...129												
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
FD.../FZ...149												
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
FD.../FZ...169												
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
FD.../FZ...189												
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

⑤ Feather key/keyway DIN 6885

Dimensions

FD.../FZ...29 to FD.../FZ...89 gearboxes

F.AD.030K3, F.Z.030K3, F.F.030K3, F..030K3

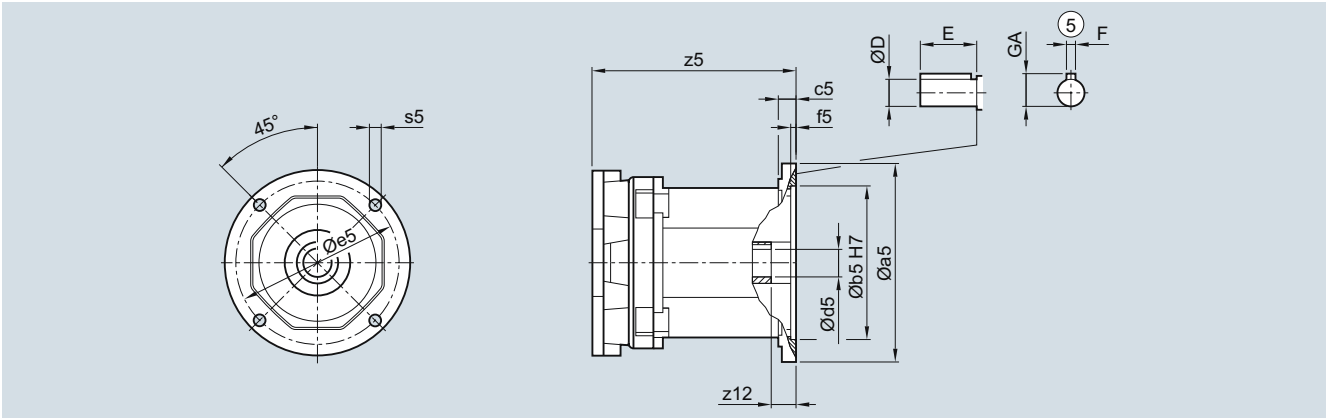


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD.../FZ...29												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
FD.../FZ...39												
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
FD.../FZ...49												
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
FD.../FZ...69												
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
FD.../FZ...79												
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
FD.../FZ...89												
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

⑤ Feather key/keyway DIN 6885

FD.../FZ...109 to FD.../FZ...189 gearboxes

F.AD.030K3, F.Z.030K3, F.F.030K3, F..030K3



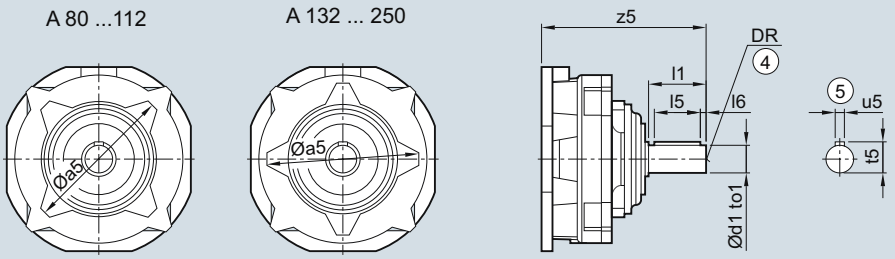
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD.../FZ...109												
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	172.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	224.5
210	226	215.9	22	5.5	184.1	13.5	49.5	34.925	85.850	7.938	38.443	295.0
250	236	215.9	22	5.5	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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.7	59.563	411.5
FD.../FZ...129												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.7	59.563	400.5
360	340	317.5	26.5	5.5	279.4	17.0	83.5	60.325	149.352	15.875	67.21	454.0
FD.../FZ...149												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.7	59.563	394.5
360	340	317.5	26.5	5.5	279.4	17.0	83.5	60.325	149.352	15.875	67.21	447.5
FD.../FZ...169												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.7	59.563	379.5
360	340	317.5	26.5	5.5	279.4	17.0	83.5	60.325	149.352	15.875	67.21	429.0
FD.../FZ...189												
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
320	340	317.5	26.5	5.5	279.4	17.0	76.5	53.975	133.350	12.7	59.563	379.5
360	340	317.5	26.5	5.5	279.4	17.0	83.5	60.325	149.352	15.875	67.21	429.0

Ⓢ Feather key/keyway DIN 6885

Dimensions

FD.../FZ...29 to FD.../FZ...89 gearboxes

F.AD.030A, F.Z.030A, F.F.030A, F..030A



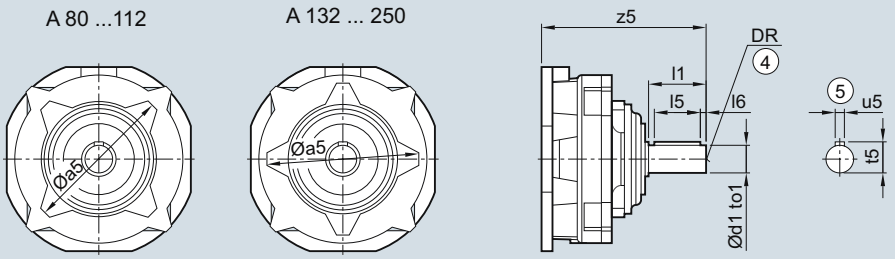
Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
FD.../FZ...29										
80	132	19	k6	40	32	4	6	21.5	M6	143.5
90	132	24	k6	50	40	5	8	27	M8	153.5
100	170	28	k6	60	50	5	8	31	M10	220.5
FD.../FZ...39										
80	132	19	k6	40	32	4	6	21.5	M6	143.5
90	132	24	k6	50	40	5	8	27	M8	153.5
100	170	28	k6	60	50	5	8	31	M10	220.5
112	170	28	k6	60	50	5	8	31	M10	220.5
FD.../FZ...49										
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
132	215	38	k6	80	70	5	10	41	M12	261
FD.../FZ...69										
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
132	215	38	k6	80	70	5	10	41	M12	261
FD.../FZ...79										
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
160	215.3	42	k6	110	90	10	12	45	M16	307
FD.../FZ...89										
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
FD.../FZ...109										
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
225	266	55	m6	110	90	10	16	59	M20	317.5
FD.../FZ...129										
90	132	24	k6	50	40	5	8	27	M8	111
100	170	28	k6	60	50	5	8	31	M10	170
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
250	266	55	m6	110	90	10	16	59	M20	306.5
FD.../FZ...149										
100	170	28	k6	60	50	5	8	31	M10	168.5
112	170	28	k6	60	50	5	8	31	M10	168.5
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
FD.../FZ...169										
112	170	28	k6	60	50	5	8	31	M10	156
132	215	38	k6	80	70	5	10	41	M12	198.5
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
FD.../FZ...189										
112	170	28	k6	60	50	5	8	31	M10	156
132	215	38	k6	80	70	5	10	41	M12	198.5
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

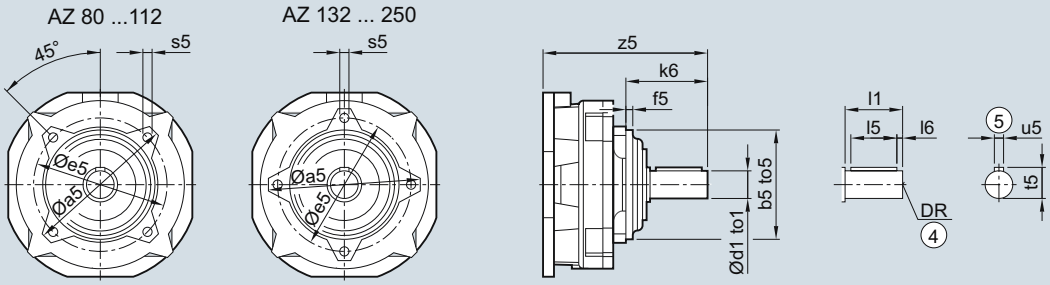
⑤ Feather key/keyway DIN 6885

④ DIN 332

Dimensions

FD.../FZ...29 to FD.../FZ...89 gearboxes

F.AD.030AZ, F.Z.030AZ, F.F.030AZ, F..030AZ



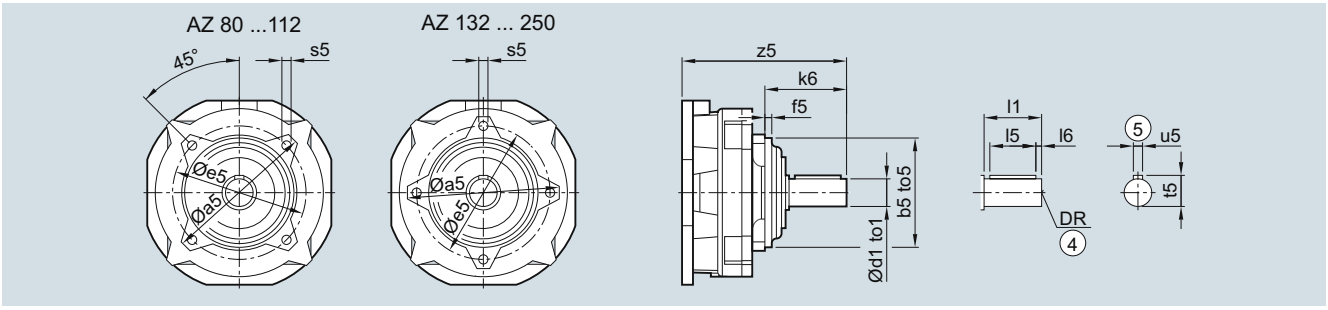
Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
FD.../FZ...29																
80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
FD.../FZ...39																
80	132	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
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
FD.../FZ...49																
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
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	261
FD.../FZ...69																
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
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	261
FD.../FZ...79																
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
160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	307
FD.../FZ...89																
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



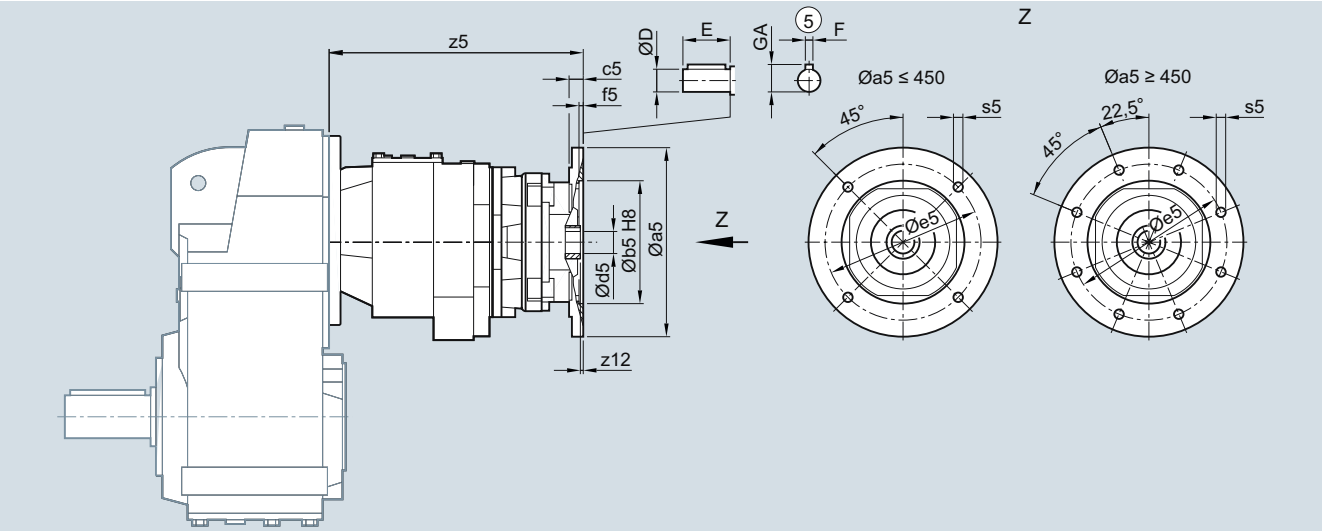
Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
FD.../FZ...109																
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	118
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	179
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	179
132	215	160	j6	184	6	M16x22	38	k6	80	70	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
225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	317.5
FD.../FZ...129																
90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	111
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	170
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
250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
FD.../FZ...149																
100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	168.5
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	168.5
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
FD.../FZ...169																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	156
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	198.5
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
FD.../FZ...189																
112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	156
132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	198.5
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

Dimensions

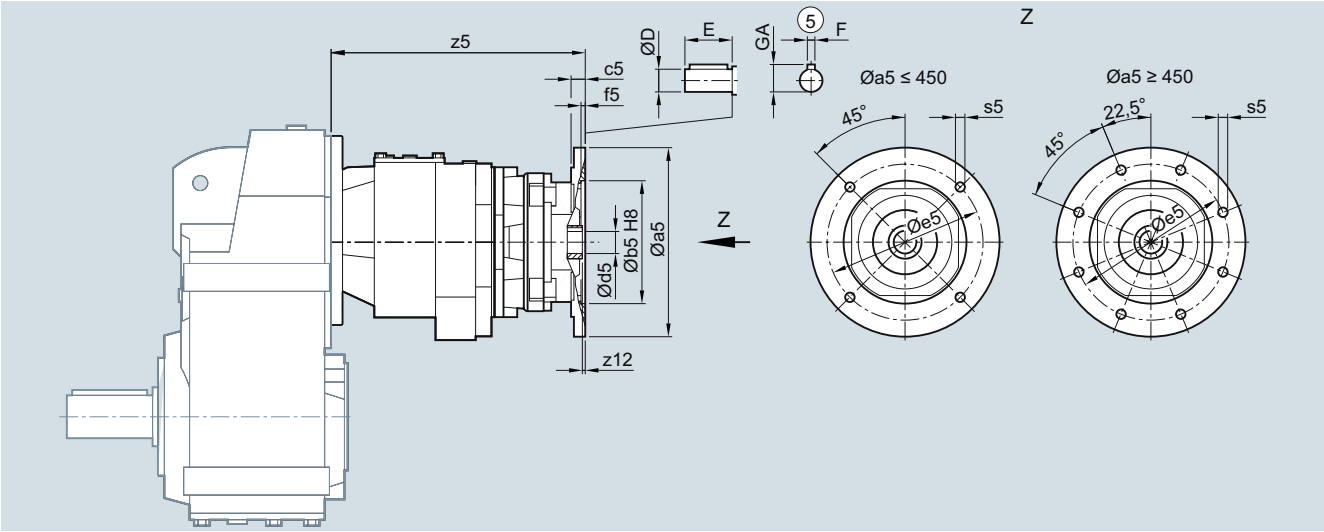
Parallel shaft tandem gearbox with adapter K4



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD../FZ..79-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
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	339.5
FD../FZ..89-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
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	322.5
FD..109-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
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31	313.5
FD..129-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
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	360
FD..149-D/Z49	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

⑤ Feather key/keyway DIN 6885

Parallel shaft tandem gearbox with adapter K4

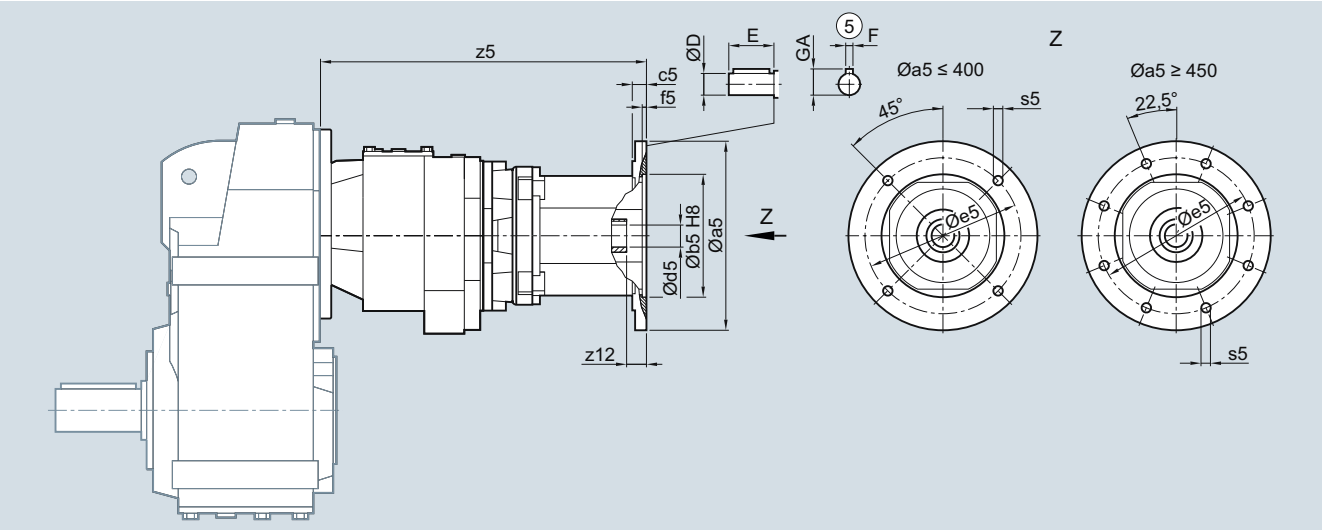


Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD..169-D/Z69	K4-(63)	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275
	K4-(71)	160	110	12	4.5	130	M8	2.5	14	30	5	16	275
	K4-(80)	200	130	15	4.5	165	M10	4	19	40	6	12.5	303
	K4-(90)	200	130	15	4.5	165	M10	4	24	50	8	27	303
	K4-(100)	250	180	16	5	215	M12	7.5	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
FD..189-D/Z69	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

Dimensions

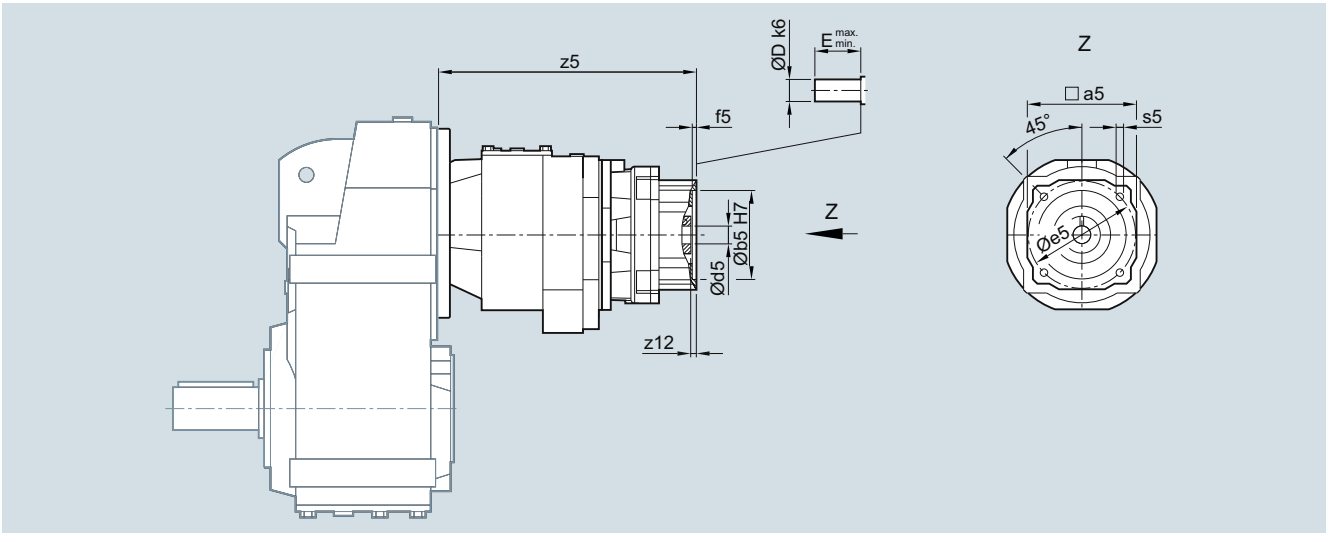
Parallel shaft tandem gearbox with adapter K2



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD../FZ..79-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
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	424.5
FD../FZ..89-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
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	407.5
FD..109-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
	K2-(112)	250	180	18	5	215	M12	30	28	60	8	31	398.5
FD..129-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
FD..149-D/Z49	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-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
FD..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

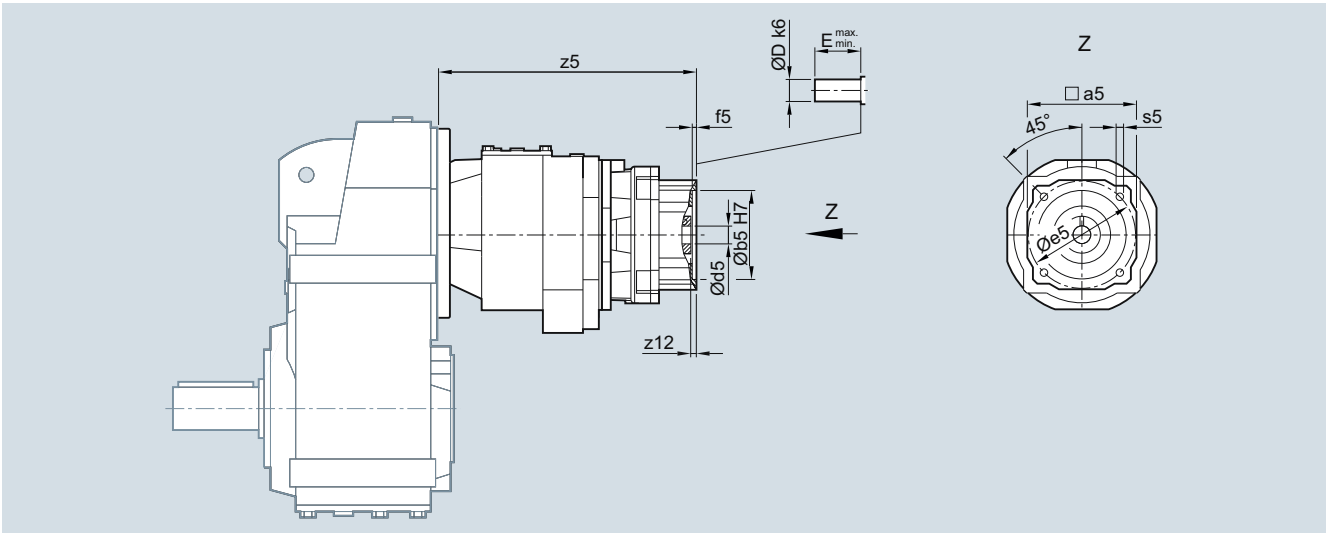
Parallel shaft tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	z5
FD../FZ..29-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
FD../FZ..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
FD../FZ..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
FD../FZ..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
FD../FZ..79-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
	KS5.3	117	95	4.5	115	M6x11	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
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	327.5
FD../FZ..89-D/Z39	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
	KS5.3	117	95	4.5	115	M6x11	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

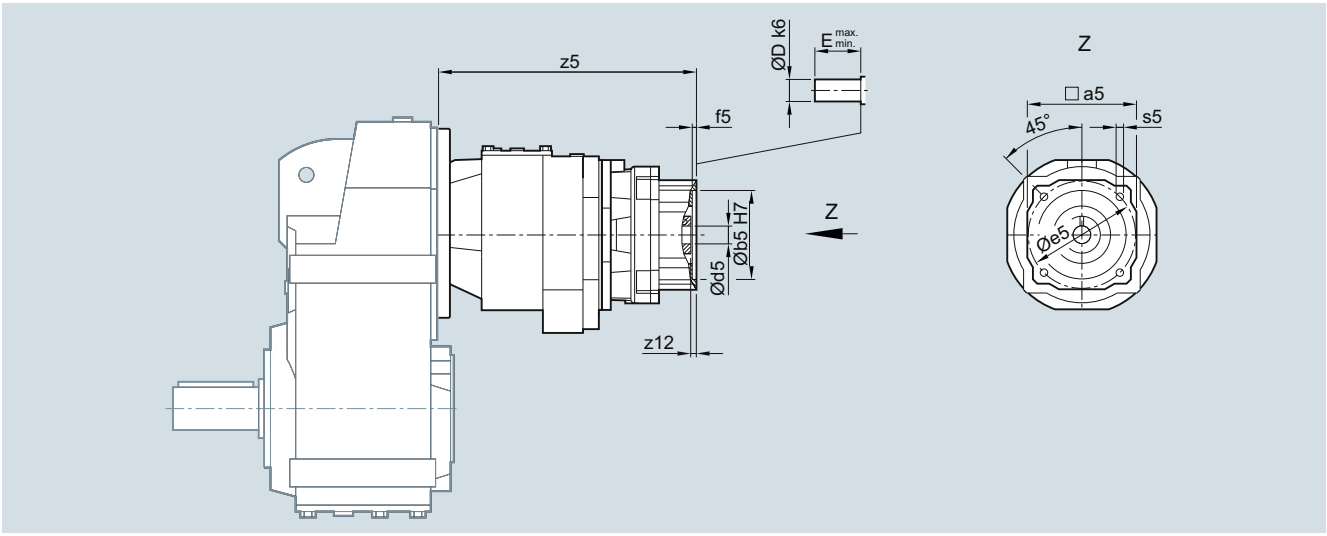
Dimensions

Parallel shaft tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	z5
FD..109-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
	KS5.3	117	95	4.5	115	M6x11	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
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	301.5
FD..129-D/Z49	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
	KS5.3	117	95	4.5	115	M6x11	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-D/Z49	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
	KS5.3	117	95	4.5	115	M6x11	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

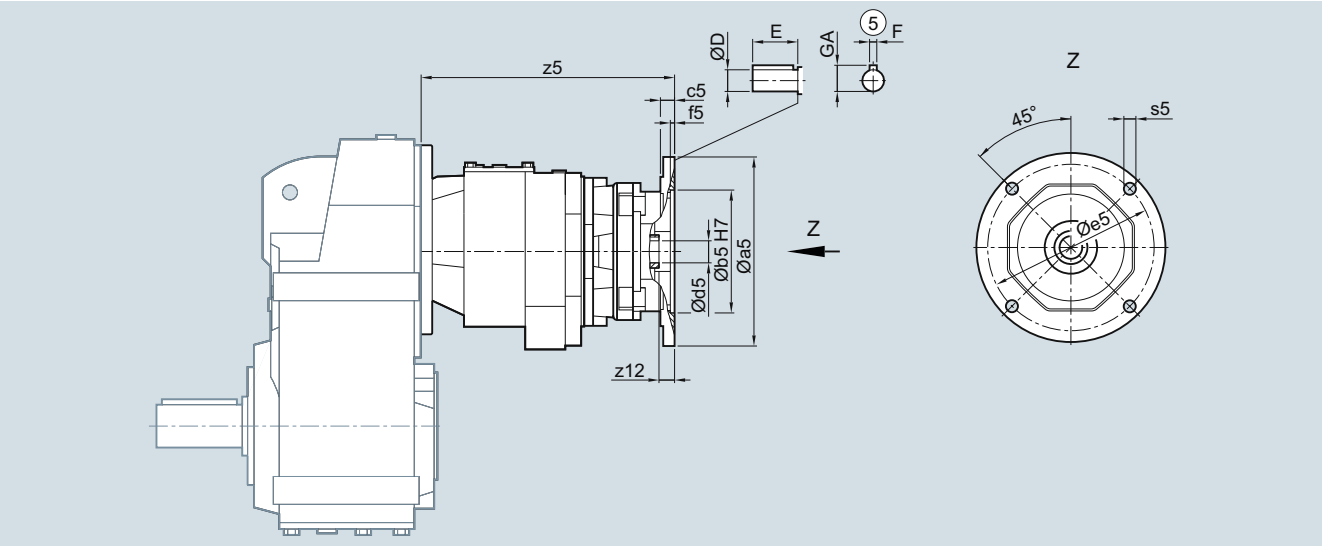
Parallel shaft tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	z5
FD.169-D/Z69	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
	KS5.3	117	95	4.5	115	M6x11	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
FD..189-D/Z69	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
	KS5.3	117	95	4.5	115	M6x11	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

Dimensions

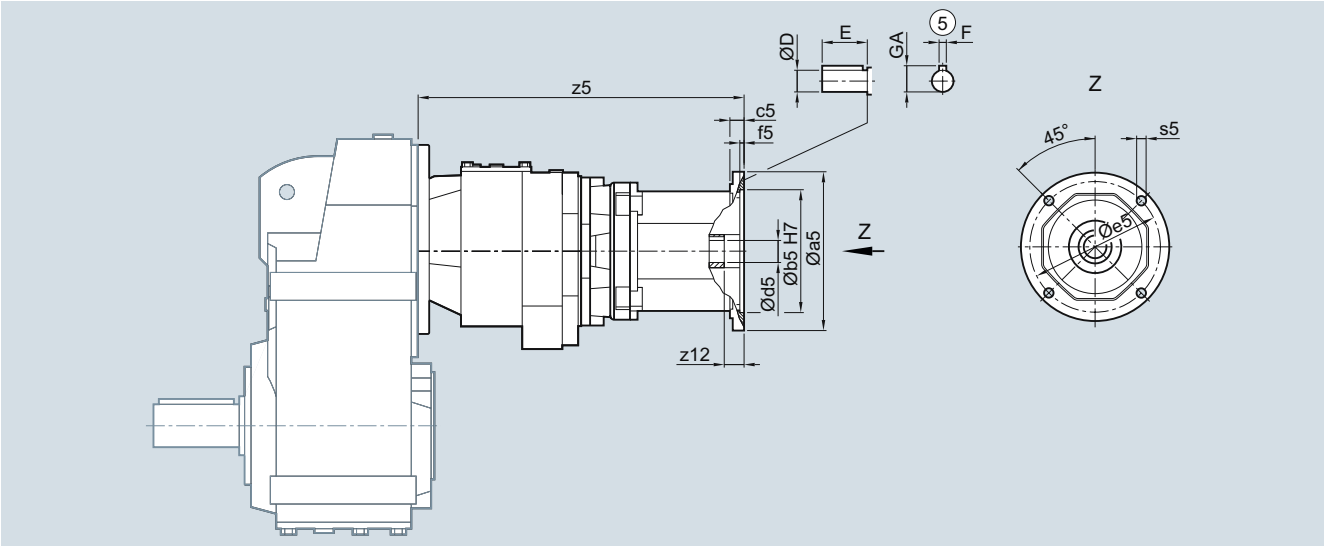
Parallel shaft tandem gearbox with adapter K5



Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD../FZ..79-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	69.85	6.35	31.394	380
FD../FZ..89-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	57.15	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-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	57.15	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-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	57.15	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-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	57.15	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-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	57.15	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-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	57.15	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

⑤ Feather key/keyway DIN 6885

Parallel shaft tandem gearbox with adapter K3

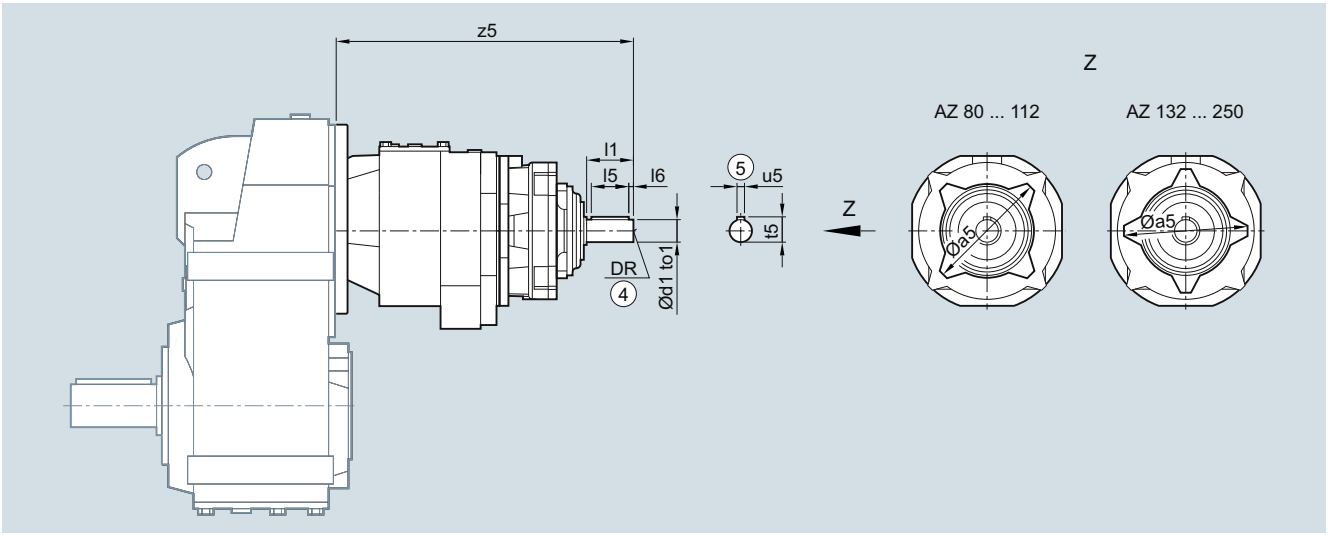


Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
FD../FZ..79-D/Z39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	380.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	380.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	436.5
FD../FZ..89-D/Z39	K3-(56)	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
FD..109-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
FD..129-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
FD..149-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
FD..169-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
FD..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

Dimensions

Parallel shaft tandem gearbox with adapter A

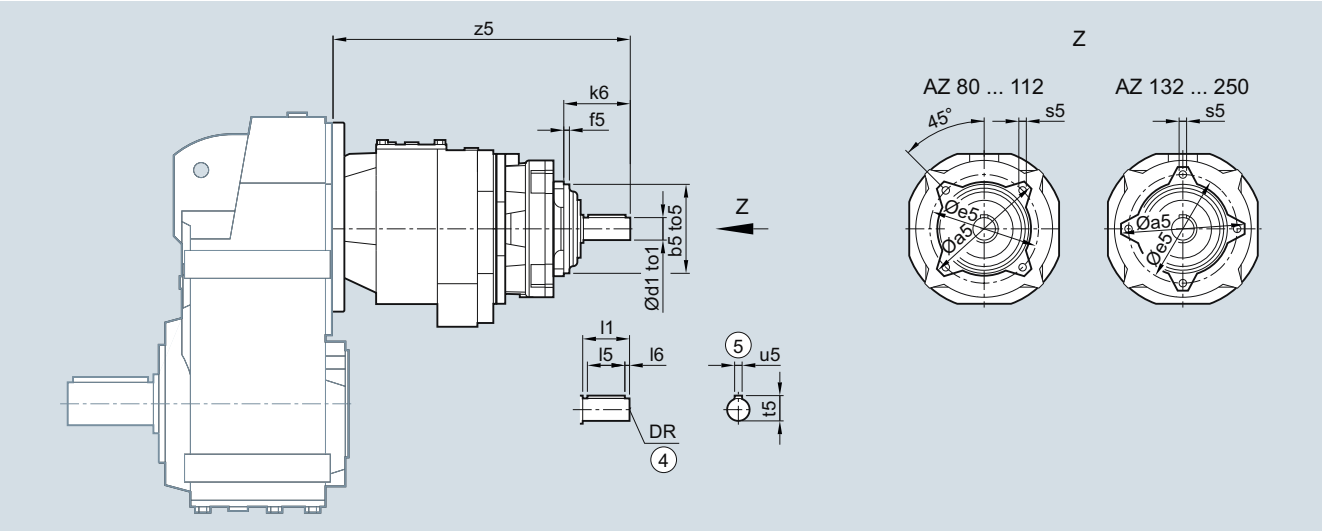


Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
FD../FZ..79-D/Z39	A-80	132	19	k6	40	32	4	6	21.5	M6x16	323
	A-90	132	24	k6	50	40	5	8	27	M8x19	333
	A-100	170	28	k6	60	50	5	8	31	M10x22	400
	A-112	170	28	k6	60	50	5	8	31	M10x22	400
FD../FZ..89-D/Z39	A-80	132	19	k6	40	32	4	6	21.5	M6x16	306
	A-90	132	24	k6	50	40	5	8	27	M8x19	316
	A-100	170	28	k6	60	50	5	8	31	M10x22	383
	A-112	170	28	k6	60	50	5	8	31	M10x22	383
FD..109-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
	A-100	170	28	k6	60	50	5	8	31	M10x22	374
	A-112	170	28	k6	60	50	5	8	31	M10x22	374
FD..129-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
	A-132	215	38	k6	80	70	5	10	41	M12x28	453
FD..149-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
	A-132	215	38	k6	80	70	5	10	41	M12x28	442.5
FD..169-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
	A-132	215	38	k6	80	70	5	10	41	M12x28	468
FD..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
	A-132	215	38	k6	80	70	5	10	41	M12x28	468

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
FD../FZ..79-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
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	400
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	400
FD../FZ..89-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
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	383
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	383
FD..109-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
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	374
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	374
FD..129-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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	453
FD..149-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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	442.5
FD..169-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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	468
FD..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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	468

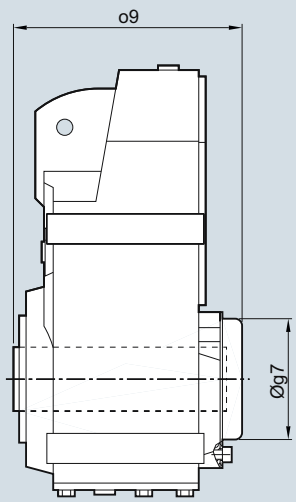
⑤ Feather key/keyway DIN 6885

④ DIN 332

Protective covers

Protective cover for hollow shaft

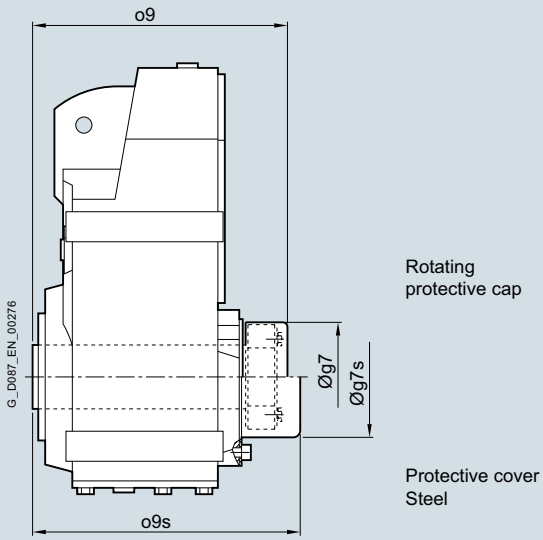
F.A, F.AF, F.AZ, F.AD



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
Protective cover											
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.AS, F.AFS, F.AZS, F.ADS

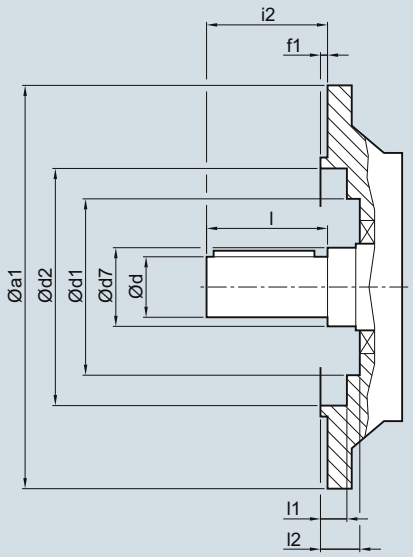


Gearbox type	F.A..29	F.A..39	F.A..49	F.A..69	F.A..79	F.A..89	F.A..109	F.A..129	F.A..149	F.A..169	F.A..189
Rotating protective cap with shrink disk version											
max. motor size that can be mounted	80	90	100	100	132	160	200	225	250	250	250
g7	57.0	76.0	84.0	84.0	94.0	119.0	145.0	159.0	201.0	234.0	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
Protective cover											
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

Inner contour of the flange design

Notes regarding the design of the customer's interface for the solid shaft design

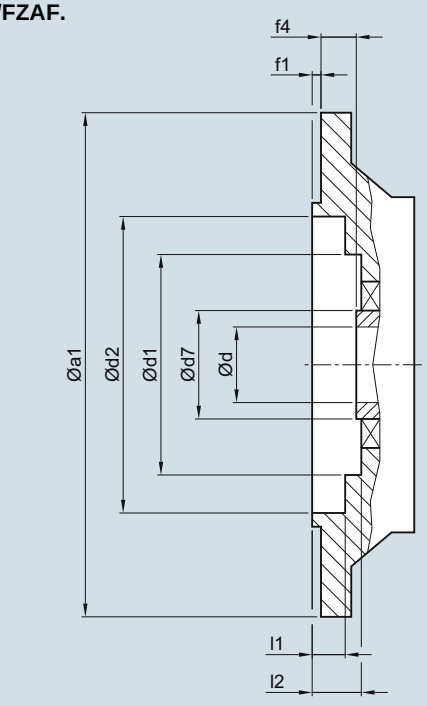
FDF/FZF



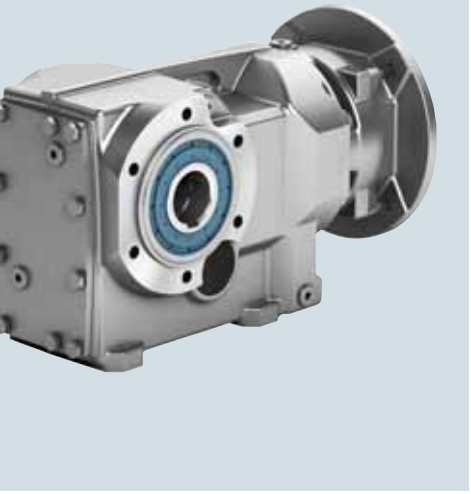
Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
FDF/FZF29	120	25	40	-	70	3.0	40	40	24.0	-
	160	25	40	70	101	3.5	40	40	8.5	24.5
FDF/FZF39	160	25	30	-	100	3.5	50	50	5.0	-
FDF/FZF49	200	30	35	-	118	3.5	60	60	5.5	-
FDF/FZF69	250	35	45	-	165	4.0	70	70	6.5	-
FDF/FZF79	250	40	55	-	165	4.0	80	80	6.5	-
FDF/FZF89	300	50	55	-	165	4.0	100	100	8.0	-
FDF/FZF109	350	60	65	-	235	5.0	120	120	9.0	-
FDF/FZF129	450	70	75	-	336	5.0	140	140	9.0	-
FDF/FZF149	450	90	100	-	336	5.0	170	170	10.0	-
FDF/FZF169	550	110	120	-	427	5.0	210	210	10.0	-
FDF/FZF189	660	120	160	-	517	6.0	210	210	11.0	-
With VLplus reinforced bearing system (G30)										
FDF/FZF89	300	60	70	143	218	4.0	120	120	1.5	8
FDF/FZF109	350	70	85	190	234	5.0	140	140	2.0	4
FDF/FZF129	450	90	95	-	336	5.0	170	170	16.5	-
FDF/FZF149	450	100	120	225	336	5.0	210	210	10.5	11
FDF/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	-



5/2	**Orientation**
5/3	**Transmission ratios and torques**
5/3	Selection and ordering data
5/19	**Transmission ratios and torques for very low speeds**
5/19	Selection and ordering data
5/32	**Dimensions**
5/32	Dimensional drawing overview
	Bevel gearbox with adapter K4
5/36	Bevel gearbox B.29
5/40	Bevel gearbox B.39
5/44	Bevel gearbox B.49
5/48	Bevel gearbox K.39
5/52	Bevel gearbox K.49
5/56	Bevel gearbox K.69
5/60	Bevel gearbox K.79
5/64	Bevel gearbox K.89
5/69	Bevel gearbox K.109
5/74	Bevel gearbox K.129
5/79	Bevel gearbox K.149
5/84	Bevel gearbox K.169
5/89	Bevel gearbox K.189
	Bevel gearbox with adapter K2
5/93	B..29 to B..49 and K..39 to K..189
	Bevel gearbox with KS adapter
5/96	Bevel gearbox B.19
5/100	Bevel gearbox B.29
5/104	Bevel gearbox B.39
5/108	Bevel gearbox B.49
5/112	Bevel gearbox K.39
5/116	Bevel gearbox K.49
5/120	Bevel gearbox K.69
5/124	Bevel gearbox K.79
5/128	Bevel gearbox K.89
5/133	Bevel gearbox K.109
5/138	Bevel gearbox K.129
5/143	Bevel gearbox K.149
5/148	Bevel gearbox K.169
5/153	Bevel gearbox K.189
	Bevel gearbox with adapter K8
5/157	K..109 to K..189
	Bevel gearbox with adapter K5
5/158	B..29 to B..49 and K..39 to K..189
	Bevel gearbox with adapter K3
5/160	B..29 to B..49 and K..39 to K..189
	Bevel gearbox with adapter A
5/162	B..29 to B..49 and K..39 to K..189
	Bevel gearbox with adapter AZ
5/164	B..29 to B..49 and K..39 to K..189

5/32	**Dimensions** (continued)
5/166	Bevel tandem gearbox with adapter K4
5/167	Bevel tandem gearbox with adapter K2
5/168	Bevel tandem gearbox with KS adapter
5/170	Bevel tandem gearbox with adapter K5
5/171	Bevel tandem gearbox with adapter K3
5/172	Bevel tandem gearbox with adapter A
5/173	Bevel tandem gearbox with adapter AZ
5/174	Protective cover for hollow shaft
5/175	Inner contour of the flange design

Orientation

SIMOGEAR bevel gearbox B

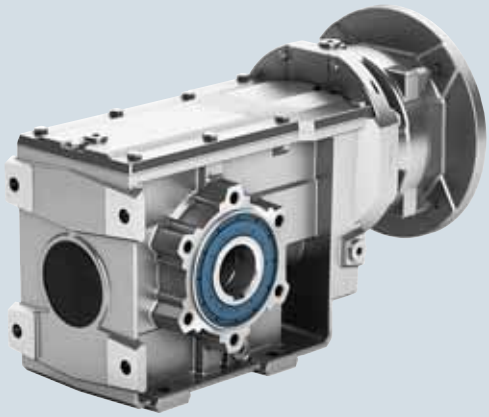


Fig. 5/1 Bevel gearbox B

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		T_{2N}	i	P_1
		Nm	-	kW
B19 … B49 (2-stage)	4	50… 450	3.5 … 59	7.5

SIMOGEAR bevel gearbox K

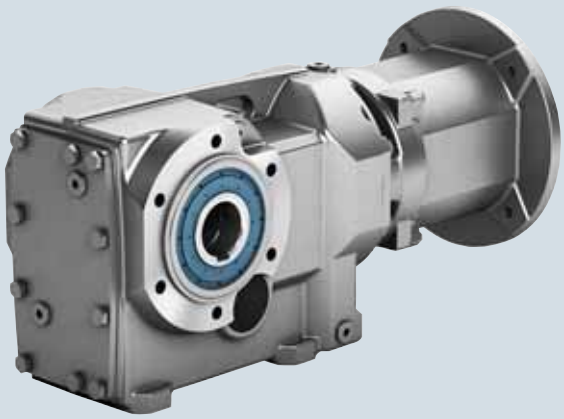


Fig. 5/2 Bevel gearbox K

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		T_{2N}	i	P_1
		Nm	-	kW
K39 … K189 (3-stage)	10	150 … 19 500	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
- 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}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
B.19													
42.10	34	50	3 880	13.0	0.02	3410/81		✓					**2KJ4500 - ■ ■ A0 ■ - 0 ■ A2**
37.28	39	50	3 700	13.5	0.03	671/18		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ X1**
32.39	45	50	3 510	13.6	0.04	583/18		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ W1**
29.44	49	50	3 380	13.6	0.04	265/9		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ V1**
25.06	58	50	3 170	13.7	0.06	451/18		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ U1**
22.78	64	50	3 050	13.7	0.08	205/9		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ T1**
19.86	73	50	2 890	13.9	0.09	715/36		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ S1**
17.78	82	50	2 770	14.0	0.12	160/9		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ R1**
15.79	92	50	2 640	14.1	0.14	1705/108		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ Q1**
14.57	100	50	2 550	14.1	0.17	1705/117		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ P1**
12.66	115	50	2 410	14.4	0.19	1595/126		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ N1**
11.00	132	50	2 270	14.1	0.19	11/1		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ M1**
9.93	146	50	2 190	14.2	0.25	715/72		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ L1**
9.35	155	50	2 160	14.2	0.29	1430/153		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ K1**
8.15	178	47	2 110	14.6	0.33	220/27		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ J1**
7.87	184	38	2 160	21.4	0.14	1472/187		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ H1**
6.99	207	38	2 100	21.7	0.17	713/102		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ G1**
6.45	225	39	2 060	21.6	0.20	1426/221		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ F1**
5.61	258	37	1 990	22.3	0.22	667/119		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ E1**
4.87	298	35	1 930	21.6	0.24	414/85		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ D1**
4.40	330	34	1 880	22.0	0.32	299/68		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ C1**
4.14	350	33	1 850	22.0	0.37	1196/289		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ B1**
3.61	402	31	1 780	22.8	0.43	184/51		✓	✓				**2KJ4500 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement												
Shaft design	→ page 9/44		**1 or 9**									
Adapter size		**KS**	**A**	**E**	**H**	**K**	**M**					**1**
			B	**F**	**J**		**N**					**1**
			C	**G**								**1**
			D									**1**
Adapter type												
Gearbox mounting type	→ page 9/37		**A, B, F or H**									

5

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
B.29																						
46.85	31	110	4 130	10.6	0.04	1265/27		✓	✓													2KJ4501 - ■ ■ A 0 ■ - 0 ■ B2
41.56	35	110	4 130	11.0	0.05	374/9		✓	✓	✓	✓											2KJ4501 - ■ ■ A 0 ■ - 0 ■ A2
36.06	40	110	4 130	11.1	0.06	649/18		✓	✓	✓	✓											2KJ4501 - ■ ■ A 0 ■ - 0 ■ X1
32.78	44	110	4 130	11.1	0.07	295/9		✓	✓	✓	✓											2KJ4501 - ■ ■ A 0 ■ - 0 ■ W1
28.11	52	110	4 130	11.2	0.09	253/9		✓	✓	✓	✓											2KJ4501 - ■ ■ A 0 ■ - 0 ■ V1
25.56	57	110	4 130	11.2	0.11	230/9		✓	✓	✓	✓											2KJ4501 - ■ ■ A 0 ■ - 0 ■ U1
22.41	65	110	4 130	11.4	0.13	605/27		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ T1
20.00	72	110	4 130	11.4	0.16	20/1		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ S1
17.82	81	110	4 130	11.5	0.19	1925/108		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ R1
16.45	88	110	4 130	11.5	0.23	1925/117		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ Q1
14.40	101	110	4 020	11.7	0.28	605/42		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ P1
12.63	115	110	3 800	12.0	0.27	341/27		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ N1
11.46	127	110	3 650	12.1	0.38	275/24		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ M1
10.78	135	110	3 560	12.1	0.44	550/51		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ L1
9.51	152	110	3 370	11.8	0.50	770/81		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ K1
8.25	176	110	3 160	12.0	0.67	33/4		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ J1
7.84	185	75	3 350	16.5	0.41	345/44		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ H1
7.38	196	75	3 260	16.5	0.48	1380/187		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ G1
6.51	223	75	3 100	16.1	0.54	644/99		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ F1
5.65	257	75	2 920	16.3	0.73	621/110		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ E1
5.07	286	74	2 900	18.9	0.60	345/68		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ D1
4.78	303	74	2 830	18.9	0.70	1380/289		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ C1
4.21	344	74	2 680	18.2	0.82	644/153		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ B1
3.65	397	73	2 550	18.6	1.10	621/170		✓	✓	✓	✓	✓										2KJ4501 - ■ ■ A 0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/44	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												1
			C		G															1
			D																	1
	K8									C		D		E						8
	K5		A		B	C		D	E	F		G	H							5
	K3		A		B	C		D	E	F		G	H							3
	A/AZ*			D	E	F	G	H	J	K	L	M	N							9
Adapter type																				
Gearbox mounting type	➞ page 9/37	A, B, F or H																		

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
B.39																						
56.36	26	250	6 980	8.5	0.06	4565/81		✓	✓													2KJ4502 - ■ ■ A 0 ■ - 0 ■ A2
50.11	29	210	6 980	8.8	0.08	451/9		✓	✓	✓	✓											2KJ4502 - ■ ■ A 0 ■ - 0 ■ X1
44.00	33	250	6 980	8.9	0.09	44/1		✓	✓	✓	✓											2KJ4502 - ■ ■ A 0 ■ - 0 ■ W1
40.00	36	230	6 980	8.9	0.11	40/1		✓	✓	✓	✓											2KJ4502 - ■ ■ A 0 ■ - 0 ■ V1
34.22	42	250	6 980	8.9	0.13	308/9		✓	✓	✓	✓											2KJ4502 - ■ ■ A 0 ■ - 0 ■ U1
31.11	47	250	6 980	8.9	0.16	280/9		✓	✓	✓	✓											2KJ4502 - ■ ■ A 0 ■ - 0 ■ T1
27.50	53	250	6 980	9.0	0.20	55/2		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ S1
25.00	58	250	6 980	9.0	0.26	25/1		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ R1
21.90	66	250	6 720	9.2	0.30	2365/108		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ Q1
20.21	72	250	6 490	9.2	0.36	2365/117		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ P1
17.90	81	250	6 160	9.3	0.43	2255/126		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ N1
14.90	97	250	5 680	9.5	0.58	715/48		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ M1
14.02	103	250	5 520	9.5	0.67	715/51		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ L1
12.56	115	250	5 260	9.6	0.75	2035/162		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ K1
10.69	136	240	4 960	9.8	0.98	385/36		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ J1
9.17	158	230	4 690	10.1	1.29	55/6				✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ H1
7.89	184	220	4 550	10.3	1.66	1705/216				✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ G1
6.60	220	200	4 590	15.1	0.94	897/136		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ F1
6.21	233	200	4 550	15.1	1.08	1794/289		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ E1
5.56	261	200	4 460	15.5	1.26	851/153		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ D1
4.74	306	200	4 330	16.0	1.69	161/34		✓	✓	✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ C1
4.06	357	200	4 190	16.5	2.30	69/17				✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ B1
3.50	414	192	4 050	17.1	3.00	713/204				✓	✓	✓	✓									2KJ4502 - ■ ■ A 0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
B.49																						
59.28	24	450	9 510	8.3	0.19	1067/18		✓	✓	✓	✓											2KJ4503 - ■ ■ A 0 ■ - 0 ■ C2
53.89	27	450	9 120	8.3	0.23	485/9		✓	✓	✓	✓											2KJ4503 - ■ ■ A 0 ■ - 0 ■ B2
45.83	32	450	8 480	8.3	0.28	275/6		✓	✓	✓	✓											2KJ4503 - ■ ■ A 0 ■ - 0 ■ A2
41.67	35	450	8 120	8.3	0.34	125/3		✓	✓	✓	✓											2KJ4503 - ■ ■ A 0 ■ - 0 ■ X1
37.18	39	450	7 710	8.4	0.40	4015/108		✓	✓	✓	✓	✓	✓									2KJ4503 - ■ ■ A 0 ■ - 0 ■ W1
33.33	44	450	7 320	8.4	0.48	100/3		✓	✓	✓	✓	✓	✓									2KJ4503 - ■ ■ A 0 ■ - 0 ■ V1
30.05	48	450	6 970	8.4	0.56	3245/108		✓	✓	✓	✓	✓	✓									2KJ4503 - ■ ■ A 0 ■ - 0 ■ U1
27.74	52	450	6 710	8.4	0.67	3245/117		✓	✓	✓	✓	✓	✓									2KJ4503 - ■ ■ A 0 ■ - 0 ■ T1
25.32	57	450	6 420	8.5	0.80	1595/63		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ S1
21.01	69	450	5 850	8.6	1.03	3025/144		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ R1
19.77	73	450	5 670	8.6	1.18	3025/153		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ Q1
18.67	78	450	5 510	8.6	1.34	3025/162		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ P1
15.89	91	450	5 060	8.7	1.66	143/9		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ N1
13.61	107	450	4 660	8.9	2.10	245/18				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ M1
11.97	121	450	4 340	9.0	2.50	2585/216				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ L1
10.10	144	450	3 930	9.2	3.30	2090/207				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ K1
8.80	165	450	3 620	9.7	4.40	44/5				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ J1
8.29	175	330	4 540	14.1	1.52	2255/272		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ H1
7.80	186	330	4 410	14.1	1.74	2255/289		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ G1
7.37	197	330	4 290	14.1	1.97	2255/306		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ F1
6.27	231	330	3 970	14.4	2.50	533/85		✓	✓	✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ E1
5.37	270	330	3 700	14.8	3.30	2009/374				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ D1
4.72	307	330	3 690	15.1	4.10	1927/408				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ C1
3.98	364	330	3 660	15.6	5.40	1558/391				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ B1
3.47	418	325	3 610	17.0	7.20	1476/425				✓	✓	✓	✓	✓								2KJ4503 - ■ ■ A 0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																				
Shaft design	➞ page 9/44		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											1
				C		G														1
				D																1
		K8									C		D		E					8
		K5		A		B	C		D	E	F		G	H						5
		K3		A		B	C		D	E	F		G	H						3
		A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																				
Gearbox mounting type	➞ page 9/37		A, B, F or H																	

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
K.39																						
157.32	9.2	220	6 080	7.3	0.04	3933/25		✓	✓													**2KJ4504 - ■ ■ A 0 ■ - 0 ■ J2**
139.54	10	220	6 080	7.4	0.05	17442/125		✓	✓	✓	✓											**2KJ4504 - ■ ■ A 0 ■ - 0 ■ H2**
121.07	12	220	6 080	7.4	0.06	30267/250		✓	✓	✓	✓											**2KJ4504 - ■ ■ A 0 ■ - 0 ■ G2**
110.06	13	220	6 080	7.4	0.07	30267/275		✓	✓	✓	✓											**2KJ4504 - ■ ■ A 0 ■ - 0 ■ F2**
94.39	15	220	6 080	7.4	0.09	11799/125		✓	✓	✓	✓											**2KJ4504 - ■ ■ A 0 ■ - 0 ■ E2**
85.81	17	220	6 080	7.4	0.11	23598/275		✓	✓	✓	✓											**2KJ4504 - ■ ■ A 0 ■ - 0 ■ D2**
75.24	19	220	6 080	7.5	0.12	1881/25		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ C2**
67.16	22	220	6 080	7.5	0.15	18468/275		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ B2**
59.85	24	220	6 080	7.5	0.18	1197/20		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ A2**
55.25	26	220	6 080	7.5	0.22	3591/65		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ X1**
48.37	30	220	6 080	7.6	0.26	16929/350		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ W1**
42.41	34	220	5 790	7.7	0.24	5301/125		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ V1**
38.47	38	220	5 540	7.7	0.34	1539/40		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ U1**
36.21	40	220	5 390	7.7	0.40	3078/85		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ T1**
31.92	45	220	5 080	7.6	0.44	798/25		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ S1**
27.70	52	220	4 760	7.7	0.60	13851/500		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ R1**
26.89	54	220	4 690	9.2	0.26	6804/253		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ Q1**
23.97	60	220	4 440	9.3	0.32	2205/92		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ P1**
22.12	66	220	4 270	9.3	0.38	6615/299		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ N1**
19.37	75	220	4 000	9.4	0.47	891/46		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ M1**
16.98	85	220	3 740	9.6	0.51	1953/115		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ L1**
15.41	94	220	3 560	9.7	0.67	2835/184		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ K1**
14.50	100	220	3 450	9.7	0.78	5670/391		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ J1**
12.78	113	220	3 220	9.7	0.92	294/23		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ H1**
11.09	131	220	2 990	9.8	1.24	5103/460		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ G1**
10.04	144	184	2 880	14.7	0.55	231/23		✓	✓	✓	✓	✓	✓									**2KJ4504 - ■ ■ A 0 ■ - 0 ■ F1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
8.81	165	183	2 790	15.1	0.62	3038/345		✓	✓	✓	✓	✓	✓									2KJ4504 - ■ ■ A 0 ■ - 0 ■ E1
K.39 (continued)																						
7.99	181	175	2 810	15.3	0.80	735/92		✓	✓	✓	✓	✓	✓									2KJ4504 - ■ ■ A 0 ■ - 0 ■ D1
7.52	193	171	2 810	15.3	0.92	2940/391		✓	✓	✓	✓	✓	✓									2KJ4504 - ■ ■ A 0 ■ - 0 ■ C1
6.63	219	161	2 820	15.3	1.11	1372/207		✓	✓	✓	✓	✓	✓									2KJ4504 - ■ ■ A 0 ■ - 0 ■ B1
5.75	252	150	2 810	15.4	1.49	1323/230		✓	✓	✓	✓	✓	✓									2KJ4504 - ■ ■ A 0 ■ - 0 ■ A1
K.49																						
200.25	7.2	420	7 820	6.7	0.06	12616/63		✓	✓													2KJ4505 - ■ ■ A 0 ■ - 0 ■ J2
178.06	8.1	420	7 820	6.8	0.07	6232/35		✓	✓	✓	✓											2KJ4505 - ■ ■ A 0 ■ - 0 ■ H2
156.34	9.3	420	7 820	6.8	0.08	5472/35		✓	✓	✓	✓											2KJ4505 - ■ ■ A 0 ■ - 0 ■ G2
142.13	10	420	7 820	6.8	0.10	10944/77		✓	✓	✓	✓											2KJ4505 - ■ ■ A 0 ■ - 0 ■ F2
121.60	12	420	7 820	6.8	0.12	608/5		✓	✓	✓	✓											2KJ4505 - ■ ■ A 0 ■ - 0 ■ E2
110.55	13	420	7 820	6.8	0.14	1216/11		✓	✓	✓	✓											2KJ4505 - ■ ■ A 0 ■ - 0 ■ D2
97.71	15	420	7 710	6.8	0.17	684/7		✓	✓	✓	✓	✓	✓									2KJ4505 - ■ ■ A 0 ■ - 0 ■ C2
88.83	16	420	7 370	6.8	0.22	6840/77		✓	✓	✓	✓	✓	✓									2KJ4505 - ■ ■ A 0 ■ - 0 ■ B2
77.81	19	420	6 910	6.9	0.25	1634/21		✓	✓	✓	✓	✓	✓									2KJ4505 - ■ ■ A 0 ■ - 0 ■ A2
71.82	20	420	6 640	6.9	0.30	6536/91		✓	✓	✓	✓	✓	✓									2KJ4505 - ■ ■ A 0 ■ - 0 ■ X1
63.59	23	420	6 250	6.9	0.37	3116/49		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ W1
52.93	27	420	5 680	7.0	0.50	741/14		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ V1
49.82	29	420	5 500	7.0	0.58	5928/119		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ U1
44.63	32	420	5 190	7.0	0.65	2812/63		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ T1
38.00	38	420	4 740	7.1	0.84	38/1		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ S1
32.57	45	420	4 340	7.1	1.11	228/7				✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ R1
28.05	52	420	3 970	7.2	1.43	589/21				✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ Q1
26.30	55	420	3 820	8.6	0.52	55040/2093		✓	✓	✓	✓	✓	✓									2KJ4505 - ■ ■ A 0 ■ - 0 ■ P1
23.28	62	420	3 540	8.7	0.65	26240/1127		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ N1
19.38	75	420	3 130	8.8	0.90	3120/161		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ M1
18.24	79	420	3 000	8.8	1.03	49920/2737		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ L1
16.34	89	420	2 780	9.0	1.21	23680/1449		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ K1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44		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									1
				C		G												1
				D														1
		K8									C		D		E			8
		K5		A		B	C		D	E	F		G	H				5
		K3		A		B	C		D	E	F		G	H				3
		A/AZ*			D	E	F	G	H	J	K	L	M	N				9
Adapter type																		
Gearbox mounting type	➞ page 9/37		A, B, F or H															

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

Selection and ordering data (continued)

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
K.49 (continued)																					
13.91	104	420	2 880	9.1	1.62	320/23		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ J1
11.93	122	420	3 000	9.3	2.20	1920/161				✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ H1
10.27	141	415	3 080	9.5	2.90	4960/483				✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ G1
9.75	149	275	2 960	14.2	1.03	39/4		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ F1
9.18	158	270	2 980	14.2	1.19	156/17		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ E1
8.22	176	255	3 010	14.5	1.40	74/9		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ D1
7.00	207	240	3 030	14.8	1.88	7/1		✓	✓	✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ C1
6.00	242	225	3 020	15.2	2.50	6/1				✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ B1
5.17	280	210	2 990	15.4	3.30	31/6				✓	✓	✓	✓	✓								2KJ4505 - ■ ■ A 0 ■ - 0 ■ A1
K.69																					
196.59	7.4	600	10 800	6.4	0.17	14744/75		✓	✓	✓	✓											2KJ4507 - ■ ■ A 0 ■ - 0 ■ H2
178.72	8.1	600	10 800	6.4	0.20	29488/165		✓	✓	✓	✓											2KJ4507 - ■ ■ A 0 ■ - 0 ■ G2
152.00	9.5	600	10 800	6.4	0.25	152/1		✓	✓	✓	✓											2KJ4507 - ■ ■ A 0 ■ - 0 ■ F2
138.18	10	600	10 800	6.4	0.30	1520/11		✓	✓	✓	✓											2KJ4507 - ■ ■ A 0 ■ - 0 ■ E2
123.29	12	600	10 800	6.4	0.35	5548/45		✓	✓	✓	✓	✓	✓									2KJ4507 - ■ ■ A 0 ■ - 0 ■ D2
110.55	13	600	10 800	6.4	0.42	1216/11		✓	✓	✓	✓	✓	✓									2KJ4507 - ■ ■ A 0 ■ - 0 ■ C2
99.64	15	600	10 800	6.4	0.49	4484/45		✓	✓	✓	✓	✓	✓									2KJ4507 - ■ ■ A 0 ■ - 0 ■ B2
91.98	16	600	10 600	6.4	0.58	17936/195		✓	✓	✓	✓	✓	✓									2KJ4507 - ■ ■ A 0 ■ - 0 ■ A2
83.96	17	600	10 100	6.4	0.69	8816/105		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ X1
69.67	21	600	9 300	6.5	0.87	209/3		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ W1
65.57	22	600	9 030	6.5	1.01	3344/51		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ V1
61.93	23	600	8 770	6.5	1.15	1672/27		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ U1
52.69	28	600	8 090	6.5	1.40	3952/75		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ T1
45.14	32	600	7 470	6.5	1.70	7448/165				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ S1
39.69	37	600	6 980	6.5	2.10	1786/45				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ R1
33.48	43	580	6 500	6.5	2.60	11552/345				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ Q1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44		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									1
				C		G												1
				D														1
		K8									C		D		E			8
		K5		A		B	C		D	E	F		G	H				5
		K3		A		B	C		D	E	F		G	H				3
		A/AZ*			D	E	F	G	H	J	K	L	M	N				9
Adapter type																		
Gearbox mounting type	➞ page 9/37		A, B, F or H															

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
K.69 (continued)																						
29.18	50	555	6 200	6.5	3.50	3648/125				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ P1
26.05	56	600	5 500	7.8	1.25	3751/144		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ N1
24.52	59	595	5 340	7.8	1.44	3751/153		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ M1
23.15	63	585	5 230	7.8	1.63	3751/162		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ L1
19.70	74	555	4 950	8.0	2.10	4433/225		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ K1
16.88	86	530	4 680	8.0	2.60	1519/90				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ J1
14.84	98	515	4 430	8.0	3.30	16027/1080				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ H1
12.52	116	490	4 170	8.0	4.30	12958/1035				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ G1
10.91	133	470	3 960	8.0	5.70	1364/125				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ F1
9.34	155	370	3 640	13.0	2.40	3224/345		✓	✓	✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ E1
8.01	181	365	3 330	13.0	3.10	6076/759				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ D1
7.04	206	365	3 210	13.0	3.90	1457/207				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ C1
5.94	244	345	3 350	13.0	5.10	9424/1587				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ B1
5.18	280	330	3 420	13.0	6.80	2976/575				✓	✓	✓	✓	✓								2KJ4507 - ■ ■ A 0 ■ - 0 ■ A1
K.79																						
244.25	5.9	820	13 900	5.7	0.17	175861/720		✓	✓	✓	✓											2KJ4508 - ■ ■ A 0 ■ - 0 ■ J2
222.05	6.5	820	13 900	5.7	0.20	175861/792		✓	✓	✓	✓											2KJ4508 - ■ ■ A 0 ■ - 0 ■ H2
188.85	7.7	820	13 900	5.7	0.25	9065/48		✓	✓	✓	✓											2KJ4508 - ■ ■ A 0 ■ - 0 ■ G2
171.69	8.4	820	13 900	5.7	0.31	45325/264		✓	✓	✓	✓											2KJ4508 - ■ ■ A 0 ■ - 0 ■ F2
153.18	9.5	820	13 900	5.8	0.35	132349/864		✓	✓	✓	✓	✓	✓									2KJ4508 - ■ ■ A 0 ■ - 0 ■ E2
137.35	11	820	13 900	5.8	0.42	9065/66		✓	✓	✓	✓	✓	✓									2KJ4508 - ■ ■ A 0 ■ - 0 ■ D2
123.80	12	820	13 900	5.8	0.50	106967/864		✓	✓	✓	✓	✓	✓									2KJ4508 - ■ ■ A 0 ■ - 0 ■ C2
114.28	13	820	13 900	5.8	0.59	106967/936		✓	✓	✓	✓	✓	✓									2KJ4508 - ■ ■ A 0 ■ - 0 ■ B2
104.32	14	820	13 900	5.8	0.70	7511/72		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ A2
86.56	17	820	13 900	5.8	0.89	99715/1152		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ X1
81.47	18	820	13 900	5.8	1.02	99715/1224		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ W1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	➞ page 9/44	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											1
			C		G														1
			D																1
	K8									C		D		E					8
	K5		A		B	C		D	E	F		G	H						5
	K3		A		B	C		D	E	F		G	H						3
	A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																			
Gearbox mounting type	➞ page 9/37	A, B, F or H																	

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

Selection and ordering data (continued)

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
K.79 (continued)																					
76.94	19	820	13 900	5.8	1.16	99715/1296		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ V1
65.47	22	820	13 900	5.9	1.42	23569/360		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ U1
56.08	26	820	13 900	5.9	1.73	88837/1584				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ T1
49.31	29	820	13 900	5.9	2.10	85211/1728				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ S1
41.60	35	800	14 000	6.0	2.70	34447/828				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ R1
36.26	40	770	14 000	6.1	3.60	1813/50				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ Q1
32.78	44	820	13 900	7.2	0.94	6293/192		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ P1
27.20	53	800	14 000	7.3	1.23	83545/3072		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ N1
25.60	57	785	14 000	7.3	1.41	83545/3264		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ M1
24.17	60	770	14 000	7.3	1.60	83545/3456		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ L1
20.57	70	740	14 100	7.4	2.00	19747/960		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ K1
17.62	82	715	13 800	7.5	2.60	74431/4224				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ J1
15.49	94	695	13 300	7.6	3.20	71393/4608				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ H1
13.07	111	665	12 600	7.8	4.20	28861/2208				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ G1
11.39	127	645	12 000	8.3	5.50	4557/400				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ F1
10.51	138	445	12 600	10.4	2.30	1209/115		✓	✓	✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ E1
9.01	161	450	11 900	10.6	3.00	4557/506				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ D1
7.92	183	450	11 300	10.8	3.70	1457/184				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ C1
6.68	217	455	10 900	11.1	4.90	3534/529				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ B1
5.82	249	430	10 700	12.1	6.60	3348/575				✓	✓	✓	✓	✓								2KJ4508 - ■ ■ A 0 ■ - 0 ■ A1
K.89																					
231.80	6.3	1 600	18 100	5.6	0.42	10199/44			✓	✓	✓											2KJ4510 - ■ ■ A 0 ■ - 0 ■ K2
210.72	6.9	1 600	18 100	5.6	0.51	50995/242			✓	✓	✓											2KJ4510 - ■ ■ A 0 ■ - 0 ■ J2
189.01	7.7	1 600	18 100	5.6	0.71	149695/792			✓	✓	✓	✓	✓									2KJ4510 - ■ ■ A 0 ■ - 0 ■ H2
169.94	8.5	1 600	18 100	5.6	0.80	41125/242			✓	✓	✓	✓	✓									2KJ4510 - ■ ■ A 0 ■ - 0 ■ G2
153.70	9.4	1 600	18 100	5.6	0.88	60865/396			✓	✓	✓	✓	✓									2KJ4510 - ■ ■ A 0 ■ - 0 ■ F2

[1] Only in conjunction with reduced-backlash version

Article No. supplement																					
Shaft design	➞ page 9/44		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												1
				C		G															1
				D																	1
		K8									C		D		E						8
		K5		A		B	C		D	E	F		G	H							5
		K3		A		B	C		D	E	F		G	H							3
		A/AZ*			D	E	F	G	H	J	K	L	M	N							9
Adapter type																					
Gearbox mounting type	➞ page 9/37		A, B, F or H																		

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

Selection and ordering data (continued)

Gearbox							Adapter														Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
K.89 (continued)																					
141.88	10	1 600	18 100	5.6	1.05	60865/429			✓	✓	✓	✓	✓									2KJ4510 - ■ ■ A 0 ■ - 0 ■ E2
129.96	11	1 600	18 100	5.6	1.37	17155/132			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ D2
109.04	13	1 600	18 100	5.6	1.45	57575/528			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ C2
102.63	14	1 600	18 100	5.6	1.66	57575/561			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ B2
94.16	15	1 600	18 100	5.6	1.81	27965/297			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ A2
82.25	18	1 600	18 100	5.6	2.60	329/4			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ X1
73.64	20	1 600	18 100	5.6	3.20	106925/1452				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ W1
64.39	23	1 600	18 100	5.6	3.70	50995/792				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ V1
55.27	26	1 600	18 100	5.6	4.10	27965/506				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ U1
48.85	30	1 600	18 100	5.6	5.20	16121/330				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ T1
41.54	35	1 570	18 100	5.6	6.60	8225/198						✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ S1
39.29	37	1 600	18 100	7.0	1.86	11315/288			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ R1
32.96	44	1 600	18 100	7.0	2.10	37975/1152			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ Q1
31.03	47	1 600	18 100	7.0	2.40	37975/1224			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ P1
28.46	51	1 600	18 100	7.0	2.70	18445/648			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ N1
24.86	58	1 600	18 100	7.1	3.80	2387/96			✓	✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ M1
22.26	65	1 600	18 100	7.1	4.70	70525/3168				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ L1
19.46	75	1 560	17 900	7.1	5.70	33635/1728				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ K1
16.71	87	1 480	17 200	7.1	6.80	18445/1104				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ J1
14.77	98	1 420	16 600	7.1	8.60	10633/720				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ H1
12.56	115	1 330	16 300	7.1	11.00	5425/432						✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ G1
10.76	135	1 250	16 100	7.1	15.00	775/72						✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ F1
10.51	138	845	16 100	10.8	6.40	6727/640				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ E1
9.02	161	800	15 400	10.8	7.70	33201/3680				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ D1
7.97	182	770	14 800	10.8	9.80	31899/4000				✓	✓	✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ C1
6.78	214	720	14 500	10.8	13.00	217/32						✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ B1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
5.81	250	675	14 200	10.8	17.00	93/16						✓	✓	✓	✓							2KJ4510 - ■ ■ A 0 ■ - 0 ■ A1
K.109																						
216.65	6.7	2 900	24 500	5.6	1.27	107242/495				✓	✓	✓	✓									2KJ4511 - ■ ■ A 0 ■ - 0 ■ H2
195.60	7.4	2 900	24 500	5.6	1.37	118336/605				✓	✓	✓	✓									2KJ4511 - ■ ■ A 0 ■ - 0 ■ G2
177.43	8.2	2 900	24 500	5.6	1.61	35131/198				✓	✓	✓	✓									2KJ4511 - ■ ■ A 0 ■ - 0 ■ F2
163.78	8.9	2 900	24 500	5.6	1.9	70262/429				✓	✓	✓	✓									2KJ4511 - ■ ■ A 0 ■ - 0 ■ E2
148.88	9.7	2 900	24 500	5.6	2.2	57319/385				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ D2
126.07	12	2 900	24 500	5.6	2.6	5547/44				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ C2
118.65	12	2 900	24 500	5.6	2.6	22188/187				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ B2
109.57	13	2 900	24 500	5.6	4.1	14792/135				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ A2
97.49	15	2 900	24 500	5.6	5.0	53621/550				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ X1
86.59	17	2 900	24 500	5.7	6.0	31433/363				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ W1
77.51	19	2 900	24 500	5.7	5.9	153467/1980				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ V1
66.26	22	2 900	24 500	5.7	6.8	251464/3795				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ U1
59.17	25	2 900	24 500	5.8	8.6	7396/125				✓	✓	✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ T1
52.29	28	2 900	24 500	5.8	9.7	25886/495						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ S1
45.89	32	2 900	24 500	5.8	14	159014/3465						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ R1
39.95	36	2 820	23 900	5.8	17	151618/3795						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ Q1
34.15	42	2 710	22 700	5.8	21	118336/3465						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ P1
29.23	50	2 620	21 500	5.8	27	7396/253						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ N1
24.98	58	2 380	21 000	6.9	9.9	163744/6555				✓	✓	✓	✓	✓	✓							2KJ4511 - ■ ■ A 0 ■ - 0 ■ M1
22.31	65	2 380	20 000	7.1	13	52976/2375				✓	✓	✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ L1
19.71	74	2 380	18 900	7.1	15	16856/855						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ K1
17.30	84	2 400	17 800	7.1	20	14792/855						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ J1
15.06	96	2 310	17 500	7.1	25	98728/6555						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ H1
12.87	113	2 200	17 500	7.1	33	11008/855						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ G1
11.02	132	2 100	17 400	7.2	43	4816/437						✓	✓	✓	✓	✓						2KJ4511 - ■ ■ A 0 ■ - 0 ■ F1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
10.45	139	1 260	17 600	10.8	17	784/75						✓	✓	✓	✓	✓						**2KJ4511 - ■ ■ A0 ■ - 0 ■ E1**
K.109 (continued)																						
9.17	158	1 270	16 700	10.8	23	688/75						✓	✓	✓	✓	✓						**2KJ4511 - ■ ■ A0 ■ - 0 ■ D1**
7.99	181	1 280	16 300	10.8	29	4592/575						✓	✓	✓	✓	✓						**2KJ4511 - ■ ■ A0 ■ - 0 ■ C1**
6.83	212	1 300	16 000	10.8	38	512/75						✓	✓	✓	✓	✓						**2KJ4511 - ■ ■ A0 ■ - 0 ■ B1**
5.84	248	1 300	15 700	11.0	49	672/115						✓	✓	✓	✓	✓						**2KJ4511 - ■ ■ A0 ■ - 0 ■ A1**
K.129																						
228.30	6.4	4 400	37 600	6.3	3.3	30821/135					✓	✓	✓									**2KJ4512 - ■ ■ A0 ■ - 0 ■ J2**
210.74	6.9	4 400	37 600	6.3	3.9	123284/585					✓	✓	✓									**2KJ4512 - ■ ■ A0 ■ - 0 ■ H2**
194.04	7.5	4 400	37 600	6.3	4.5	8732/45					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ G2**
165.47	8.8	4 400	37 600	6.3	5.6	5957/36					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ F2**
155.74	9.3	4 400	37 600	6.3	6.4	23828/153					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ E2**
144.53	10	4 400	37 600	6.3	7.0	58534/405					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ D2**
127.77	11	4 400	37 600	6.3	8.4	9583/75					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ C2**
114.06	13	4 400	37 600	6.3	10	56462/495					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ B2**
102.64	14	4 400	37 600	6.3	12	27713/270					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ A2**
89.09	16	4 400	37 600	6.3	14	92204/1035					✓	✓	✓	✓	✓							**2KJ4512 - ■ ■ A0 ■ - 0 ■ X1**
80.12	18	4 400	37 600	6.3	17	30044/375					✓	✓	✓	✓	✓	✓						**2KJ4512 - ■ ■ A0 ■ - 0 ■ W1**
70.03	21	4 400	37 600	6.3	19	18907/270						✓	✓	✓	✓	✓	✓					**2KJ4512 - ■ ■ A0 ■ - 0 ■ V1**
62.49	23	4 400	36 200	6.4	23	2812/45						✓	✓	✓	✓	✓	✓	✓				**2KJ4512 - ■ ■ A0 ■ - 0 ■ U1**
55.05	26	4 400	34 300	6.4	27	11396/207						✓	✓	✓	✓	✓	✓	✓				**2KJ4512 - ■ ■ A0 ■ - 0 ■ T1**
48.24	30	4 400	32 400	6.4	33	6512/135						✓	✓	✓	✓	✓	✓	✓				**2KJ4512 - ■ ■ A0 ■ - 0 ■ S1**
42.04	34	4 400	30 500	6.4	39	14504/345						✓	✓	✓	✓	✓	✓	✓				**2KJ4512 - ■ ■ A0 ■ - 0 ■ R1**
38.37	38	4 400	29 200	6.9	45	1036/27						✓	✓	✓	✓	✓	✓	✓				**2KJ4512 - ■ ■ A0 ■ - 0 ■ Q1**
33.03	44	4 400	27 300	7.0	55	11396/345								✓	✓	✓	✓	✓				**2KJ4512 - ■ ■ A0 ■ - 0 ■ P1**
31.55	46	4 400	26 700	7.0	23	3944/125					✓	✓	✓	✓	✓	✓						**2KJ4512 - ■ ■ A0 ■ - 0 ■ N1**
27.58	53	4 400	25 000	7.0	27	1241/45						✓	✓	✓	✓	✓	✓					**2KJ4512 - ■ ■ A0 ■ - 0 ■ M1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																			
Shaft design	➞ page 9/44	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											1
			C		G														1
			D																1
	K8									C		D		E					8
	K5		A		B	C		D	E	F		G	H						5
	K3		A		B	C		D	E	F		G	H						3
	A/AZ*			D	E	F	G	H	J	K	L	M	N						9
Adapter type																			
Gearbox mounting type	➞ page 9/37	A, B, F or H																	

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
24.61	59	4 400	23 700	7.1	33	2584/105						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ L1
K.129 (continued)																						
21.68	67	4 270	22 700	7.1	40	1496/69						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ K1
19.00	76	4 140	21 700	7.1	50	5984/315						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ J1
16.56	88	4 020	20 600	7.2	62	1904/115						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ H1
15.11	96	3 940	20 000	7.2	72	136/9						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ G1
13.01	111	3 810	19 000	7.2	91	1496/115								✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ F1
11.80	123	2 830	21 400	9.5	46	119680/10143						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ E1
10.34	140	2 850	20 100	9.6	57	95744/9261						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ D1
9.01	161	2 760	19 500	9.7	71	4352/483						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ C1
8.22	176	2 680	19 500	9.8	83	10880/1323						✓	✓	✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ B1
7.08	205	2 530	19 500	9.9	107	23936/3381								✓	✓	✓	✓	✓				2KJ4512 - ■ ■ A0 ■ - 0 ■ A1
K.149																						
237.03	6.1	8 000	65 000	5.3	7.1	83433/352					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ J2
202.86	7.1	8 000	65 000	5.3	9.0	285621/1408					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ H2
190.92	7.6	8 000	65 000	5.3	10	285621/1496					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ G2
178.97	8.1	8 000	65 000	5.3	11	188993/1056					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ F2
158.65	9.1	8 000	65 000	5.3	14	558453/3520					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ E2
140.93	10	8 000	64 100	5.3	16	17052/121					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ D2
127.16	11	8 000	61 400	5.3	19	89523/704					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ C2
112.68	13	8 000	58 400	5.3	23	456141/4048					✓	✓	✓	✓	✓							2KJ4513 - ■ ■ A0 ■ - 0 ■ B2
99.79	15	8 000	55 600	5.4	26	439089/4400					✓	✓	✓	✓	✓	✓						2KJ4513 - ■ ■ A0 ■ - 0 ■ A2
88.81	16	8 000	52 900	5.4	31	1421/16						✓	✓	✓	✓	✓	✓					2KJ4513 - ■ ■ A0 ■ - 0 ■ X1
79.59	18	8 000	50 400	5.4	37	14007/176						✓	✓	✓	✓	✓	✓	✓				2KJ4513 - ■ ■ A0 ■ - 0 ■ W1
70.56	21	8 000	47 900	5.4	43	285621/4048						✓	✓	✓	✓	✓	✓	✓				2KJ4513 - ■ ■ A0 ■ - 0 ■ V1
62.28	23	8 000	45 300	5.4	52	5481/88						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ U1
54.76	26	8 000	42 700	5.4	63	55419/1012						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ T1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
49.60	29	8 000	40 800	5.4	70	8729/176						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ S1
43.18	34	8 000	38 200	5.4	85	174783/4048								✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ R1
K.149 (continued)																						
35.40	41	7 850	35 100	5.5	110	80997/2288								✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ Q1
32.33	45	7 760	33 900	6.1	49	12673/392						✓	✓	✓	✓	✓	✓	✓				2KJ4513 - ■ ■ A0 ■ - 0 ■ P1
28.66	51	7 630	32 200	6.1	59	36917/1288						✓	✓	✓	✓	✓	✓	✓				2KJ4513 - ■ ■ A0 ■ - 0 ■ N1
25.30	57	7 420	30 900	6.1	73	4959/196						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ M1
22.25	65	7 210	29 500	6.2	89	7163/322						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ L1
20.15	72	7 070	28 400	6.2	103	23693/1176						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ K1
17.54	83	6 890	28 500	6.3	128	22591/1288								✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ J1
14.38	101	6 660	29 000	6.3	174	10469/728								✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ H1
14.15	102	4 140	31 100	8.0	79	17328/1225						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ G1
12.44	117	4 030	29 800	8.0	97	150176/12075						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ F1
11.26	129	3 950	28 800	8.1	113	124184/11025						✓	✓	✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ E1
9.81	148	3 850	28 400	8.2	141	118408/12075								✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ D1
8.04	180	3 720	28 000	8.3	194	54872/6825								✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ C1
6.82	213	3 630	27 500	8.4	266	89528/13125								✓	✓	✓	✓	✓	✓			2KJ4513 - ■ ■ A0 ■ - 0 ■ B1
K.169																						
223.30	6.5	13 000	70 000	5.2	18	273319/1224						✓	✓	✓	✓							2KJ4514 - ■ ■ A0 ■ - 0 ■ F2
208.35	7.0	13 000	70 000	5.2	20	135013/648						✓	✓	✓	✓							2KJ4514 - ■ ■ A0 ■ - 0 ■ E2
185.23	7.8	13 000	70 000	5.2	24	29637/160						✓	✓	✓	✓							2KJ4514 - ■ ■ A0 ■ - 0 ■ D2
166.31	8.7	13 000	70 000	5.2	28	16465/99						✓	✓	✓	✓							2KJ4514 - ■ ■ A0 ■ - 0 ■ C2
150.55	9.6	13 000	70 000	5.2	33	260147/1728						✓	✓	✓	✓							2KJ4514 - ■ ■ A0 ■ - 0 ■ B2
132.24	11	13 000	70 000	5.2	40	437969/3312						✓	✓	✓	✓							2KJ4514 - ■ ■ A0 ■ - 0 ■ A2
119.83	12	13 000	70 000	5.2	47	431383/3600						✓	✓	✓	✓	✓						2KJ4514 - ■ ■ A0 ■ - 0 ■ X1
106.72	14	13 000	70 000	5.2	54	23051/216						✓	✓	✓	✓	✓	✓					2KJ4514 - ■ ■ A0 ■ - 0 ■ W1
95.83	15	13 000	70 000	5.2	65	36223/378						✓	✓	✓	✓	✓	✓	✓				2KJ4514 - ■ ■ A0 ■ - 0 ■ V1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
85.51	17	13 000	70 000	5.2	75	141599/1656						✓	✓	✓	✓	✓	✓	✓				2KJ4514 - ■ ■ A0 ■ - 0 ■ U1
76.23	19	13 000	70 000	5.2	88	16465/216						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ T1
67.61	21	13 000	66 900	5.3	103	55981/828						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ S1
K.169 (continued)																						
62.07	23	13 000	64 500	5.3	114	62567/1008						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ R1
54.68	27	13 000	60 900	5.3	134	181115/3312								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ Q1
44.86	32	13 000	55 700	5.3	180	55981/1248								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ P1
39.33	37	13 000	52 300	5.3	198	141599/3600								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ N1
30.75	47	13 000	46 500	5.4	309	42809/1392								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ M1
29.43	49	13 000	45 500	5.8	133	25721/874						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ L1
27.02	54	13 000	43 500	5.9	151	1513/56						✓	✓	✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ K1
23.80	61	13 000	40 800	5.9	181	83215/3496								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ J1
19.53	74	12 700	40 000	6.0	249	77163/3952								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ H1
17.12	85	12 400	40 800	6.0	288	65059/3800								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ G1
13.39	108	11 900	41 300	6.2	457	59007/4408								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ F1
12.20	119	6 760	38 700	8.1	202	143990/11799								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ E1
10.01	145	6 530	37 800	8.3	280	22253/2223								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ D1
8.78	165	6 360	37 800	8.3	328	112574/12825								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ C1
6.86	211	6 130	37 300	8.8	523	34034/4959								✓	✓	✓	✓	✓	✓	✓		2KJ4514 - ■ ■ A0 ■ - 0 ■ B1

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

5

Selection and ordering data (continued)

Gearbox							Adapter															Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	180	200	225	250			(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3											
									4.2													
							K8									813		816		818		
							K5		56		140	180		210	250	280		320	360			
							K3		56		140	180		210	250	280		320	360			
							A/AZ			80	90	100	112	132	160	180	200	225	250			
K.189																						
199.51	7.3	19 100	104 000	4.8	37	186543/935							✓	✓	✓							**2KJ4515 - ■ ■ A 0 ■ - 0 ■ W1**
178.49	8.1	19 500	104 000	4.8	43	367164/2057							✓	✓	✓							**2KJ4515 - ■ ■ A 0 ■ - 0 ■ V1**
160.98	9	19 500	104 000	4.8	50	60207/374							✓	✓	✓							**2KJ4515 - ■ ■ A 0 ■ - 0 ■ U1**
142.28	10	19 500	104 000	4.8	62	611940/4301							✓	✓	✓							**2KJ4515 - ■ ■ A 0 ■ - 0 ■ T1**
130.05	11	19 500	104 000	4.8	73	55272/425							✓	✓	✓	✓						**2KJ4515 - ■ ■ A 0 ■ - 0 ■ S1**
117.00	12	19 500	104 000	4.8	86	43757/374							✓	✓	✓	✓	✓					**2KJ4515 - ■ ■ A 0 ■ - 0 ■ R1**
104.56	14	19 500	104 000	4.8	100	19552/187							✓	✓	✓	✓	✓	✓				**2KJ4515 - ■ ■ A 0 ■ - 0 ■ Q1**
94.55	15	19 500	104 000	4.8	119	406644/4301							✓	✓	✓	✓	✓	✓				**2KJ4515 - ■ ■ A 0 ■ - 0 ■ P1**
83.44	17	19 500	104 000	4.8	140	15604/187							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4515 - ■ ■ A 0 ■ - 0 ■ N1**
74.35	20	19 500	104 000	4.8	164	319788/4301							✓	✓	✓	✓	✓	✓	✓	✓		**2KJ4515 - ■ ■ A 0 ■ - 0 ■ M1**
67.36	22	19 500	104 000	4.8	182	12596/187							✓	✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ L1**
60.58	24	19 500	104 000	4.8	220	23688/391								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ K1**
50.34	29	19 500	104 000	4.8	273	122388/2431								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ J1**
44.76	32	19 500	99 100	4.8	334	209244/4675								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ H1**
35.67	41	19 500	89 900	4.9	455	193452/5423								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ G1**
28.39	51	19 500	81 300	5.0	586	153972/5423										✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ F1**
25.37	57	19 500	77 300	5.3	335	11088/437								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ E1**
21.09	69	19 500	70 900	5.4	439	5208/247								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ D1**
18.75	77	19 500	67 000	5.4	545	8904/475								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ C1**
14.94	97	19 500	60 000	5.6	786	8232/551								✓	✓	✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ B1**
11.89	122	19 500	61 300	5.7	1 109	6552/551										✓	✓	✓	✓	✓	✓	**2KJ4515 - ■ ■ A 0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement																		
Shaft design	➞ page 9/44	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										1
			C		G													1
			D															1
	K8									C		D		E				8
	K5		A		B	C		D	E	F		G	H					5
	K3		A		B	C		D	E	F		G	H					3
	A/AZ*			D	E	F	G	H	J	K	L	M	N					9
Adapter type																		
Gearbox mounting type	➞ page 9/37	A, B, F or H																

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

Selection and ordering data (continued)

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
K.39-D19													
6 699	0.22	220	6 080	-	0.11	167640192/25025		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ H1**
5 949	0.24	220	6 080	-	0.13	13533453/2275		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ G1**
5 491	0.26	220	6 080	-	0.16	162401436/29575		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ F1**
4 770	0.30	220	6 080	-	0.17	75961962/15925		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ E1**
4 145	0.35	220	6 080	-	0.18	47148804/11375		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ D1**
3 742	0.39	220	6 080	-	0.22	1309689/350		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ C1**
3 522	0.41	220	6 080	-	0.26	10477512/2975		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ B1**
3 070	0.47	220	6 080	-	0.29	6985008/2275		✓					**2KJ4521 - ■ ■ A0 ■ - 0 ■ A1**
K.39-Z19													
3 001	0.48	220	6 080	-	0.02	975384/325		✓					**2KJ4520 - ■ ■ A0 ■ - 0 ■ E2**
2 657	0.55	220	6 080	-	0.03	4318434/1625		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ D2**
2 309	0.63	220	6 080	-	0.04	3752082/1625		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ C2**
2 099	0.69	220	6 080	-	0.05	7504164/3575		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ B2**
1 786	0.81	220	6 080	-	0.07	2902554/162		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ A2**
1 624	0.89	220	6 080	-	0.08	5805108/3575		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ X1**
1 416	1.0	220	6 080	-	0.09	35397/25		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ W1**
1 267	1.1	220	6 080	-	0.12	4530816/3575		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ V1**
1 125	1.3	220	6 080	-	0.15	365769/325		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ U1**
1 039	1.4	220	6 080	-	0.18	4389228/4225		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ T1**
902	1.6	220	6 080	-	0.20	2053026/2275		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ S1**
784	1.8	220	6 080	-	0.21	1274292/1625		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ R1**
708	2.0	220	6 080	-	0.27	35397/50		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ Q1**
666	2.2	220	6 080	-	0.32	283176/425		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ P1**
581	2.5	220	6 080	-	0.36	188784/325		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ N1**
536	2.7	220	6 080	-	0.19	243846/455		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ M1**
466	3.1	220	6 080	-	0.22	114057/245		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ L1**
405	3.6	220	6 080	-	0.23	70794/175		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ K1**
365	4.0	220	6 080	-	0.29	51129/140		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ J1**
343.72	4.2	220	6 080	-	0.35	204516/595		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ H1**
329.29	4.4	220	6 080	-	0.32	699732/2125		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ G1**
287.07	5.1	220	6 080	-	0.37	466488/1625		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ F1**
264.86	5.5	220	6 080	-	0.19	602547/2275		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ E1**
230.07	6.3	220	6 080	-	0.22	563673/2450		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ D1**
199.92	7.3	220	6 080	-	0.23	174933/875		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ C1**
180.49	8.0	220	6 080	-	0.30	252681/1400		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ B1**
169.87	8.5	220	6 080	-	0.35	505362/2975		✓	✓				**2KJ4520 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/46	**1 or 9**								
Adapter size	**KS**	**A**	**E**	**H**	**K**	**M**				**1**
		B	**F**	**J**		**N**				**1**
		C	**G**							**1**
		D								**1**
Adapter type										
Gearbox mounting type	→ page 9/37	**A, B, F or H**								

Selection and ordering data (continued)

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
K.49-D19													
9 641	0.15	420	7 820	-	0.08	67488/7		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ J1
8 630	0.17	420	7 820	-	0.11	8638464/1001		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ H1
7 663	0.19	420	7 820	-	0.13	697376/91		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ G1
7 074	0.20	420	7 820	-	0.16	8368512/1183		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ F1
6 145	0.24	420	7 820	-	0.17	3914304/637		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ E1
5 340	0.27	420	7 820	-	0.18	2429568/455		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ D1
4 821	0.30	420	7 820	-	0.22	33744/7		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ C1
4 537	0.32	420	7 820	-	0.26	539904/119		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ B1
3 955	0.37	420	7 820	-	0.29	359936/91		✓					2KJ4523 - ■ ■ A0 ■ - 0 ■ A1
K.49-Z19													
3 866	0.38	420	7 820	-	0.02	150784/39		✓					2KJ4522 - ■ ■ A0 ■ - 0 ■ G2
3 424	0.42	420	7 820	-	0.03	222528/65		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ F2
2 975	0.49	420	7 820	-	0.04	193344/65		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ E2
2 704	0.54	420	7 820	-	0.05	386688/143		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ D2
2 301	0.63	420	7 820	-	0.07	149568/65		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ C2
2 092	0.69	420	7 820	-	0.08	299136/143		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ B2
1 824	0.79	420	7 820	-	0.09	1824/1		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ A2
1 633	0.89	420	7 820	-	0.12	233472/143		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ W1
1 450	1.0	420	7 820	-	0.15	18848/13		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ V1
1 338	1.1	420	7 820	-	0.18	226176/169		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ U1
1 163	1.2	420	7 820	-	0.20	105792/91		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ T1
1 010	1.4	420	7 820	-	0.21	65664/65		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ S1
912	1.6	420	7 820	-	0.27	912/1		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ R1
858	1.7	420	7 820	-	0.32	14592/17		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ Q1
748	1.9	420	7 820	-	0.36	9728/13		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ P1
690	2.1	420	7 820	-	0.19	188480/273		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ N1
600	2.4	420	7 820	-	0.22	88160/147		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ M1
521	2.8	420	7 820	-	0.23	3648/7		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ L1
470	3.1	420	7 820	-	0.30	9880/21		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ K1
443	3.3	420	7 820	-	0.35	158080/357		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ J1
437	3.3	420	7 820	-	0.27	24453/56		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ H1
411	3.5	420	7 820	-	0.32	48906/119		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ G1
358	4.1	420	7 820	-	0.37	2508/7		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ F1
330.56	4.4	420	7 820	-	0.20	32395/98		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ E1
287.15	5.0	420	7 820	-	0.23	393965/1372		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ D1
249.52	5.8	420	7 820	-	0.24	24453/98		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ C1
225.26	6.4	420	7 820	-	0.31	176605/784		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ B1
212.01	6.8	420	7 820	-	0.37	176605/833		✓	✓				2KJ4522 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	➞ page 9/46	1 or 9							
Adapter size	KS	A	E	H	K	M			1
		B	F	J		N			1
		C	G						1
		D							1
Adapter type									
Gearbox mounting type	➞ page 9/37	A, B, F or H							

Selection and ordering data (continued)

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
K.69-D19													
9 641	0.15	600	10 800	-	0.08	67488/7		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ J1
8 630	0.17	600	10 800	-	0.11	8638464/1001		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ H1
7 663	0.19	600	10 800	-	0.13	697376/91		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ G1
7 074	0.20	600	10 800	-	0.16	8368512/1183		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ F1
6 145	0.24	600	10 800	-	0.17	3914304/637		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ E1
5 340	0.27	600	10 800	-	0.18	2429568/455		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ D1
4 821	0.30	600	10 800	-	0.22	33744/7		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ C1
4 537	0.32	600	10 800	-	0.26	539904/119		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ B1
3 955	0.37	600	10 800	-	0.29	359936/91		✓					2KJ4525 - ■ ■ A0 ■ - 0 ■ A1
K.69-Z19													
3 866	0.38	600	10 800	-	0.02	150784/39		✓					2KJ4524 - ■ ■ A0 ■ - 0 ■ F2
3 424	0.42	600	10 800	-	0.03	222528/65		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ E2
2 975	0.49	600	10 800	-	0.04	193344/65		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ D2
2 704	0.54	600	10 800	-	0.05	386688/143		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ C2
2 301	0.63	600	10 800	-	0.07	149568/65		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ B2
2 092	0.69	600	10 800	-	0.08	299136/143		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ A2
1 824	0.79	600	10 800	-	0.10	1824/1		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ W1
1 633	0.89	600	10 800	-	0.13	233472/143		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ V1
1 450	1.0	600	10 800	-	0.15	18848/13		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ U1
1 338	1.1	600	10 800	-	0.18	226176/169		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ T1
1 163	1.2	600	10 800	-	0.21	105792/91		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ S1
1 010	1.4	600	10 800	-	0.21	65664/65		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ R1
912	1.6	600	10 800	-	0.27	912/1		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ Q1
858	1.7	600	10 800	-	0.32	14592/17		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ P1
748	1.9	600	10 800	-	0.37	9728/13		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ N1
690	2.1	600	10 800	-	0.20	188480/273		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ M1
600	2.4	600	10 800	-	0.23	88160/147		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ L1
521	2.8	600	10 800	-	0.24	3648/7		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ K1
470	3.1	600	10 800	-	0.31	9880/21		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ J1
443	3.3	600	10 800	-	0.37	158080/357		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ H1
419	3.5	600	10 800	-	0.38	147136/351		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ G1
387	3.7	600	10 800	-	0.22	2850760/7371		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ F1
335.96	4.3	600	10 800	-	0.25	1333420/3969		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ E1
291.94	5.0	600	10 800	-	0.27	18392/63		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ D1
263.55	5.5	600	10 800	-	0.35	149435/567		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ C1
248.05	5.8	600	10 800	-	0.41	2390960/9639		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ B1
216.25	6.7	600	10 800	-	0.48	367840/1701		✓	✓				2KJ4524 - ■ ■ A0 ■ - 0 ■ A1

[1] Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	→ page 9/46	**1 or 9**							
Adapter size	KS	A	E	H	K	M			1
		B	F	J		N			1
		C	G						1
		D							1
Adapter type									
Gearbox mounting type	→ page 9/37	**A, B, F or H**							

5

Transmission ratios and torques for very low speeds

Selection and ordering data (continued)

Gearbox							Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
								4.1	5.3				
								4.2					
K.79-D19													
9 522	0.15	820	13 900	-	0.13	1485365/156		✓					**2KJ4527 - ■ ■ A0 ■ - 0 ■ G1**
8 789	0.16	820	13 900	-	0.16	1485365/169		✓					**2KJ4527 - ■ ■ A0 ■ - 0 ■ F1**
7 635	0.19	820	13 900	-	0.17	198505/26		✓					**2KJ4527 - ■ ■ A0 ■ - 0 ■ E1**
6 634	0.22	820	13 900	-	0.18	86247/13		✓					**2KJ4527 - ■ ■ A0 ■ - 0 ■ D1**
5 989	0.24	820	13 900	-	0.22	47915/8		✓					**2KJ4527 - ■ ■ A0 ■ - 0 ■ C1**
5 637	0.26	820	13 900	-	0.26	95830/17		✓					**2KJ4527 - ■ ■ A0 ■ - 0 ■ B1**
4 914	0.30	820	13 900	-	0.29	191660/39		✓					**2KJ4527 - ■ ■ A0 ■ - 0 ■ A1**
K.79-Z19													
4 804	0.30	820	13 900	-	0.02	562030/117		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ F2**
4 254	0.34	820	13 900	-	0.03	110593/26		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ E2**
3 696	0.39	820	13 900	-	0.04	96089/26		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ D2**
3 360	0.43	820	13 900	-	0.05	480445/143		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ C2**
2 859	0.51	820	13 900	-	0.07	74333/26		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ B2**
2 599	0.56	820	13 900	-	0.08	371665/143		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ A2**
2 266	0.64	820	13 900	-	0.10	9065/4		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ W1**
2 029	0.71	820	13 900	-	0.13	290080/143		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ V1**
1 801	0.81	820	13 900	-	0.15	281015/156		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ U1**
1 663	0.87	820	13 900	-	0.18	281015/169		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ T1**
1 444	1.0	820	13 900	-	0.21	37555/26		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ S1**
1 255	1.2	820	13 900	-	0.21	16317/13		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ R1**
1 133	1.3	820	13 900	-	0.27	9065/8		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ Q1**
1 066	1.4	820	13 900	-	0.32	18130/17		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ P1**
930	1.6	820	13 900	-	0.37	36260/39		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ N1**
858	1.7	820	13 900	-	0.20	200725/234		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ M1**
745	1.9	820	13 900	-	0.23	26825/36		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ L1**
648	2.2	820	13 900	-	0.24	1295/2		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ K1**
585	2.5	820	13 900	-	0.31	84175/144		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ J1**
550	2.6	820	13 900	-	0.37	84175/153		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ H1**
521	2.8	820	13 900	-	0.38	1096865/2106		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ G1**
481	3.0	820	13 900	-	0.22	24287725/50544		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ F1**
417	3.5	820	13 900	-	0.25	3245825/7776		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ E1**
363	4.0	820	13 900	-	0.27	156695/432		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ D1**
327.46	4.4	820	13 900	-	0.35	10185175/31104		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ C1**
308.19	4.7	820	13 900	-	0.41	10185175/33048		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ B1**
268.68	5.4	820	13 900	-	0.48	783475/2916		✓	✓				**2KJ4526 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement									
Shaft design	→ page 9/46		**1 or 9**						
Adapter size	KS	**A**	**E**	**H**	**K**	**M**			**1**
		B	**F**	**J**		**N**			**1**
		C	**G**						**1**
		D							**1**
Adapter type									
Gearbox mounting type	→ page 9/37	**A, B, F or H**							

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
K.89-D39																
9 761	0.15	1 600	18 100	-	0.17	1577036825/161568		✓	✓	✓	✓	✓	✓			**2KJ4530 - ■ ■ A0 ■ - 0 ■ E1**
9 010	0.16	1 600	18 100	-	0.21	121310525/13464		✓	✓	✓	✓	✓	✓			**2KJ4530 - ■ ■ A0 ■ - 0 ■ D1**
7 888	0.18	1 600	18 100	-	0.25	6436885/816		✓	✓	✓	✓	✓	✓			**2KJ4530 - ■ ■ A0 ■ - 0 ■ C1**
6 916	0.21	1 600	18 100	-	0.23	279360809/40392		✓	✓	✓	✓	✓	✓			**2KJ4530 - ■ ■ A0 ■ - 0 ■ B1**
6 275	0.23	1 600	18 100	-	0.33	225290975/35904		✓	✓	✓	✓	✓	✓			**2KJ4530 - ■ ■ A0 ■ - 0 ■ A1**
K.89-Z39																
6 101	0.24	1 600	18 100	-	0.06	86972795/14256		✓	✓							**2KJ4528 - ■ ■ A0 ■ - 0 ■ F2**
5 425	0.27	1 600	18 100	-	0.07	8592493/1584		✓	✓	✓	✓					**2KJ4528 - ■ ■ A0 ■ - 0 ■ E2**
4 763	0.30	1 600	18 100	-	0.08	209573/44		✓	✓	✓	✓					**2KJ4528 - ■ ■ A0 ■ - 0 ■ D2**
4 330	0.33	1 600	18 100	-	0.10	1047865/242		✓	✓	✓	✓					**2KJ4528 - ■ ■ A0 ■ - 0 ■ C2**
3 705	0.39	1 600	18 100	-	0.12	1467011/396		✓	✓	✓	✓					**2KJ4528 - ■ ■ A0 ■ - 0 ■ B2**
3 368	0.43	1 600	18 100	-	0.14	7335055/2178		✓	✓	✓	✓					**2KJ4528 - ■ ■ A0 ■ - 0 ■ A2**
2 977	0.49	1 600	18 100	-	0.17	1047865/352		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ W1**
2 706	0.54	1 600	18 100	-	0.22	5239325/1936		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ V1**
2 370	0.61	1 600	18 100	-	0.26	45058195/19008		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ U1**
2 188	0.66	1 600	18 100	-	0.31	3466015/1584		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ T1**
1 937	0.75	1 600	18 100	-	0.36	6137495/3168		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ S1**
1 612	0.90	1 600	18 100	-	0.48	13622245/8448		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ R1**
1 518	0.96	1 600	18 100	-	0.56	13622245/8976		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ Q1**
1 360	1.1	1 600	18 100	-	0.61	38771005/28512		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ P1**
1 158	1.3	1 600	18 100	-	0.79	7335055/6336		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ N1**
992	1.5	1 600	18 100	-	1.04	1047865/1056				✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ M1**
854	1.7	1 600	18 100	-	1.32	32483815/38016				✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ L1**
705	2.1	1 600	18 100	-	0.61	45656975/64768		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ K1**
663	2.2	1 600	18 100	-	0.70	45656975/68816		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ J1**
594	2.4	1 600	18 100	-	0.79	129946775/218592		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ H1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	➞ page 9/46	**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			**1**
			C		G						**1**
			D								**1**
	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	➞ page 9/37	**A, B, F or H**									

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										(Article No. supplement → below)
							K4	63	71	80	90	100	112	132	160	
							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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
K.89-Z39 (continued)																
506	2.9	1 600	18 100	-	1.04	24584525/48576		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ G1**
476	3.0	1 600	18 100	-	0.65	84791525/178112		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ F1**
448	3.2	1 600	18 100	-	0.75	84791525/189244		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ E1**
401	3.6	1 600	18 100	-	0.85	241329725/601128		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ D1**
341.78	4.2	1 600	18 100	-	1.12	45656975/133584		✓	✓	✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ C1**
292.96	4.9	1 600	18 100	-	1.48	6522425/22264				✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ B1**
252.27	5.7	1 600	18 100	-	1.92	202195175/801504				✓	✓	✓	✓			**2KJ4528 - ■ ■ A0 ■ - 0 ■ A1**
K.109-D39																
13 352	0.11	2 900	24 500	-	0.12	57881096/4335		✓	✓	✓	✓	✓	✓			**2KJ4532 - ■ ■ A0 ■ - 0 ■ G1**
11 918	0.12	2 900	24 500	-	0.15	2083719456/174845		✓	✓	✓	✓	✓	✓			**2KJ4532 - ■ ■ A0 ■ - 0 ■ F1**
10 621	0.14	2 900	24 500	-	0.17	101291918/9537		✓	✓	✓	✓	✓	✓			**2KJ4532 - ■ ■ A0 ■ - 0 ■ E1**
9 804	0.15	2 900	24 500	-	0.21	31166744/3179		✓	✓	✓	✓	✓	✓			**2KJ4532 - ■ ■ A0 ■ - 0 ■ D1**
8 583	0.17	2 900	24 500	-	0.25	12403092/1445		✓	✓	✓	✓	✓	✓			**2KJ4532 - ■ ■ A0 ■ - 0 ■ C1**
7 526	0.19	2 900	24 500	-	0.23	1794313976/238425		✓	✓	✓	✓	✓	✓			**2KJ4532 - ■ ■ A0 ■ - 0 ■ B1**
6 828	0.21	2 900	24 500	-	0.33	21705411/3179		✓	✓	✓	✓	✓	✓			**2KJ4532 - ■ ■ A0 ■ - 0 ■ A1**
K.109-Z39																
6 638	0.22	2 900	24 500	-	0.06	55861988/8415		✓	✓							**2KJ4531 - ■ ■ A0 ■ - 0 ■ F2**
5 903	0.25	2 900	24 500	-	0.07	27594476/4675		✓	✓	✓	✓					**2KJ4531 - ■ ■ A0 ■ - 0 ■ F2**
5 183	0.28	2 900	24 500	-	0.08	24229296/4675		✓	✓	✓	✓					**2KJ4531 - ■ ■ A0 ■ - 0 ■ E2**
4 712	0.31	2 900	24 500	-	0.10	48458592/10285		✓	✓	✓	✓					**2KJ4531 - ■ ■ A0 ■ - 0 ■ D2**
4 031	0.36	2 900	24 500	-	0.12	18845008/4675		✓	✓	✓	✓					**2KJ4531 - ■ ■ A0 ■ - 0 ■ C2**
3 665	0.40	2 900	24 500	-	0.14	37690016/10285		✓	✓	✓	✓					**2KJ4531 - ■ ■ A0 ■ - 0 ■ B2**
3 239	0.45	2 900	24 500	-	0.17	3028662/935		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ A2**
2 945	0.49	2 900	24 500	-	0.23	6057324/2057		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ W1**
2 579	0.56	2 900	24 500	-	0.26	7235137/2805		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ V1**
2 381	0.61	2 900	24 500	-	0.31	2226196/935		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ U1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/46	**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**			**1**
			C		**G**						**1**
			D								**1**
	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	→ page 9/37	**A, B, F or H**									

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										
							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		**5.3**					
									4.2							
							K5		**56**		**140**	**180**		**210**	**250**	
							K3		**56**		**140**	**180**		**210**	**250**	
							A/AZ			**80**	**90**	**100**	**112**	**132**	**160**	
K.109-Z39 (continued)																
2 108	0.69	2 900	24 500	-	0.36	1971034/935		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ T1**
1 755	0.83	2 900	24 500	-	0.48	6562101/3740		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ S1**
1 651	0.88	2 900	24 500	-	0.57	26248404/15895		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ R1**
1 480	0.98	2 900	24 500	-	0.62	12451166/8415		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ Q1**
1 260	1.2	2 900	24 500	-	0.80	1177813/935		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ P1**
1 080	1.3	2 900	24 500	-	1.05	1009554/935				✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ N1**
930	1.6	2 900	24 500	-	1.34	5216029/5610				✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ M1**
767	1.9	2 900	24 500	-	0.63	13196313/17204		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ L1**
722	2.0	2 900	24 500	-	0.73	52785252/73117		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ K1**
647	2.2	2 900	24 500	-	0.83	8346386/12903		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ J1**
551	2.6	2 900	24 500	-	1.09	2368569/4301		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ H1**
519	2.8	2 900	24 500	-	1.40	88672493/170775				✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ G1**
428	3.4	2 900	24 500	-	0.73	24926369/58190		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ F1**
403	3.6	2 900	24 500	-	0.84	11730056/29095		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ E1**
361	4.0	2 900	24 500	-	0.97	283777124/785565		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ D1**
307.54	4.7	2 900	24 500	-	1.28	26843782/87285		✓	✓	✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ C1**
263.61	5.5	2 900	24 500	-	1.70	7669652/29095				✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ B1**
227	6.4	2 900	24 500	-	2.20	59439803/261855				✓	✓	✓	✓			**2KJ4531 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/46	**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**		**1**
			C		**G**					**1**
			D							**1**
	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	→ page 9/37	**A, B, F or H**								

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										
							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		**5.3**					
									4.2							
							K5		**56**		**140**	**180**		**210**	**250**	
							K3		**56**		**140**	**180**		**210**	**250**	
							A/AZ			**80**	**90**	**100**	**112**	**132**	**160**	
K.129-D39																
14 490	0.10	4 400	40 000	-	0.09	2494142287/172125		✓	✓	✓	✓					**2KJ4534 - ■ ■ A0 ■ - 0 ■ H1**
13 173	0.11	4 400	40 000	-	0.10	4988284574/378675		✓	✓	✓	✓					**2KJ4534 - ■ ■ A0 ■ - 0 ■ G1**
11 550	0.13	4 400	40 000	-	0.12	1192850659/103275		✓	✓	✓	✓	✓	✓			**2KJ4534 - ■ ■ A0 ■ - 0 ■ F1**
10 309	0.14	4 400	40 000	-	0.15	433763876/42075		✓	✓	✓	✓	✓	✓			**2KJ4534 - ■ ■ A0 ■ - 0 ■ E1**
9 188	0.16	4 400	40 000	-	0.18	759086783/82620		✓	✓	✓	✓	✓	✓			**2KJ4534 - ■ ■ A0 ■ - 0 ■ D1**
8 481	0.17	4 400	40 000	-	0.21	58391291/6885		✓	✓	✓	✓	✓	✓			**2KJ4534 - ■ ■ A0 ■ - 0 ■ C1**
7 425	0.20	4 400	40 000	-	0.25	170407237/22950		✓	✓	✓	✓	✓	✓			**2KJ4534 - ■ ■ A0 ■ - 0 ■ B1**
6 510	0.22	4 400	40 000	-	0.23	3361670039/516375		✓	✓	✓	✓	✓	✓			**2KJ4534 - ■ ■ A0 ■ - 0 ■ A1**
K.129-Z39																
5 743	0.25	4 400	37 600	-	0.06	209316289/36450		✓	✓							**2KJ4533 - ■ ■ A0 ■ - 0 ■ A2**
5 106	0.28	4 400	37 600	-	0.07	103397203/20250		✓	✓	✓	✓					**2KJ4533 - ■ ■ A0 ■ - 0 ■ X1**
4 483	0.32	4 400	37 600	-	0.09	5043766/1125		✓	✓	✓	✓					**2KJ4533 - ■ ■ A0 ■ - 0 ■ W1**
4 076	0.36	4 400	37 600	-	0.11	10087532/2475		✓	✓	✓	✓					**2KJ4533 - ■ ■ A0 ■ - 0 ■ V1**
3 487	0.42	4 400	37 600	-	0.13	35306362/10125		✓	✓	✓	✓					**2KJ4533 - ■ ■ A0 ■ - 0 ■ U1**
3 170	0.46	4 400	37 600	-	0.15	70612724/22275		✓	✓	✓	✓					**2KJ4533 - ■ ■ A0 ■ - 0 ■ T1**
2 802	0.52	4 400	37 600	-	0.18	2521883/900		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ S1**
2 547	0.57	4 400	37 600	-	0.24	2521883/990		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ R1**
2 231	0.65	4 400	37 600	-	0.28	108440969/48600		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ Q1**
2 060	0.70	4 400	37 600	-	0.33	8341613/4050		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ P1**
1 824	0.79	4 400	37 600	-	0.39	14771029/8100		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ N1**
1 518	0.96	4 400	37 600	-	0.53	32784479/21600		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ M1**
1 429	1.0	4 400	37 600	-	0.61	32784479/22950		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ L1**
1 280	1.1	4 400	37 600	-	0.68	93309671/72900		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ K1**
1 090	1.3	4 400	37 600	-	0.88	17653181/16200		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ J1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	→ page 9/46	**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**		**1**
			C		**G**					**1**
			D							**1**
	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	→ page 9/37	**A, B, F or H**								

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement → below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
K.129-Z39 (continued)																
934	1.6	4 400	37 600	-	1.16	2521883/2700				✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ H1**
804	1.8	4 400	37 600	-	1.48	78178373/97200				✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ G1**
664	2.2	4 400	37 600	-	0.85	21976409/33120		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ F1**
625	2.3	4 400	37 600	-	0.98	21976409/35190		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ E1**
560	2.6	4 400	37 600	-	1.13	62548241/111780		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ D1**
476	3.0	4 400	37 600	-	1.51	11833451/24840		✓	✓	✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ C1**
408	3.6	4 400	37 600	-	2.00	1690493/4140				✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ B1**
352	4.1	4 400	37 600	-	2.60	52405283/149040				✓	✓	✓	✓			**2KJ4533 - ■ ■ A0 ■ - 0 ■ A1**
K.149-D49																
13 575	0.11	8 000	65 000	-	0.12	23891273/1760		✓	✓	✓	✓					**2KJ4536 - ■ ■ A0 ■ - 0 ■ L1**
12 341	0.12	8 000	65 000	-	0.14	23891273/1936		✓	✓	✓	✓					**2KJ4536 - ■ ■ A0 ■ - 0 ■ K1**
10 908	0.13	8 000	65 000	-	0.17	30717351/2816		✓	✓	✓	✓	✓	✓			**2KJ4536 - ■ ■ A0 ■ - 0 ■ J1**
9 917	0.15	8 000	65 000	-	0.22	153586755/15488		✓	✓	✓	✓	✓	✓			**2KJ4536 - ■ ■ A0 ■ - 0 ■ H1**
8 686	0.17	8 000	65 000	-	0.26	146760677/16896		✓	✓	✓	✓	✓	✓			**2KJ4536 - ■ ■ A0 ■ - 0 ■ G1**
8 018	0.18	8 000	65 000	-	0.31	146760677/18304		✓	✓	✓	✓	✓	✓			**2KJ4536 - ■ ■ A0 ■ - 0 ■ F1**
7 099	0.20	8 000	65 000	-	0.37	19990657/2816		✓	✓	✓	✓	✓	✓	✓		**2KJ4536 - ■ ■ A0 ■ - 0 ■ E1**
5 909	0.25	8 000	65 000	-	0.50	133108521/22528		✓	✓	✓	✓	✓	✓	✓		**2KJ4536 - ■ ■ A0 ■ - 0 ■ D1**
5 561	0.26	8 000	65 000	-	0.59	7829913/1408		✓	✓	✓	✓	✓	✓	✓		**2KJ4536 - ■ ■ A0 ■ - 0 ■ C1**
4 983	0.29	8 000	65 000	-	0.66	126282443/25344		✓	✓	✓	✓	✓	✓	✓		**2KJ4536 - ■ ■ A0 ■ - 0 ■ B1**
4 242	0.34	8 000	65 000	-	0.86	23891273/5632		✓	✓	✓	✓	✓	✓	✓		**2KJ4536 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/46	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			1
			C		G						1
			D								1
	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	→ page 9/37	A, B, F or H									

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										
							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		**5.3**					
									4.2							
							K5		**56**		**140**	**180**		**210**	**250**	
							K3		**56**		**140**	**180**		**210**	**250**	
							A/AZ			**80**	**90**	**100**	**112**	**132**	**160**	
K.149-Z49																
4 149	0.35	8 000	65 000	-	0.18	58423197/14080		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ B2**
3 772	0.38	8 000	65 000	-	0.22	58423197/15488		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ A2**
3 208	0.45	8 000	65 000	-	0.28	9034515/2816		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ X1**
2 917	0.5	8 000	65 000	-	0.34	45172575/15488		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ W1**
2 602	0.56	8 000	65 000	-	0.39	14655991/5632		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ V1**
2 333	0.62	8 000	65 000	-	0.47	9034515/3872		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ U1**
2 103	0.69	8 000	65 000	-	0.55	11845253/5632		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ T1**
1 941	0.75	8 000	65 000	-	0.66	35535759/18304		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ S1**
1 772	0.82	8 000	65 000	-	0.78	2495247/1408		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ R1**
1 470	0.99	8 000	65 000	-	1.00	3011505/2048		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ Q1**
1 384	1.0	8 000	65 000	-	1.16	3011505/2176		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ P1**
1 307	1.1	8 000	65 000	-	1.31	1003835/768		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ N1**
1 112	1.3	8 000	65 000	-	1.62	7829913/7040		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ M1**
953	1.5	8 000	65 000	-	2.00	29512749/30976		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ L1**
838	1.7	8 000	65 000	-	2.50	9436049/11264		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ K1**
707	2.1	8 000	65 000	-	3.20	497553/704		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ J1**
616	2.4	8 000	65 000	-	4.20	5420709/8800		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ H1**
608	2.4	8 000	65 000	-	1.81	826413/1360		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ G1**
574	2.5	8 000	65 000	-	2.00	275471/480		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ F1**
488	3.0	8 000	65 000	-	2.60	10743369/22000		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ E1**
418	3.5	8 000	65 000	-	3.40	40494237/96800		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ D1**
368	3.9	8 000	65 000	-	4.30	12947137/35200		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ C1**
310.31	4.7	8 000	65 000	-	5.70	682689/2200		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ B1**
270.46	5.4	8 000	65 000	-	7.50	7437717/27500		✓	✓	✓	✓	✓	✓	✓		**2KJ4535 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement											
Shaft design	→ page 9/46	**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**			**1**
			C		**G**						**1**
			D								**1**
	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	→ page 9/37	**A, B, F or H**									

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}	K4	63	71	80	90	100	112	132	160	(Article No. supplement ➞ below)
-	rpm	Nm	N	‘	10^{-4} kgm²	-	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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
K.169-D49																
14 931	0.10	13 000	70 000	-	0.22	315340973/21120		✓	✓	✓	✓	✓	✓			**2KJ4538 - ■ ■ A0 ■ - 0 ■ H1**
13 078	0.11	13 000	70 000	-	0.26	13559661839/1036800		✓	✓	✓	✓	✓	✓			**2KJ4538 - ■ ■ A0 ■ - 0 ■ G1**
12 072	0.12	13 000	70 000	-	0.31	13559661839/1123200		✓	✓	✓	✓	✓	✓			**2KJ4538 - ■ ■ A0 ■ - 0 ■ F1**
10 689	0.14	13 000	70 000	-	0.38	12928979893/1209600		✓	✓	✓	✓	✓	✓	✓		**2KJ4538 - ■ ■ A0 ■ - 0 ■ E1**
8 896	0.16	13 000	70 000	-	0.51	4099432649/460800		✓	✓	✓	✓	✓	✓	✓		**2KJ4538 - ■ ■ A0 ■ - 0 ■ D1**
8 373	0.17	13 000	70 000	-	0.59	241143097/28800		✓	✓	✓	✓	✓	✓	✓		**2KJ4538 - ■ ■ A0 ■ - 0 ■ C1**
7 502	0.19	13 000	70 000	-	0.66	11667616001/1555200		✓	✓	✓	✓	✓	✓	✓		**2KJ4538 - ■ ■ A0 ■ - 0 ■ B1**
6 387	0.23	13 000	70 000	-	0.86	2207386811/345600		✓	✓	✓	✓	✓	✓	✓		**2KJ4538 - ■ ■ A0 ■ - 0 ■ A1**
K.169-Z49																
6 248	0.23	13 000	70 000	-	0.19	1799298493/288000		✓	✓	✓	✓					**2KJ4537 - ■ ■ A0 ■ - 0 ■ C2**
5 680	0.26	13 000	70 000	-	0.23	1799298493/316800		✓	✓	✓	✓					**2KJ4537 - ■ ■ A0 ■ - 0 ■ B2**
4 831	0.30	13 000	70 000	-	0.28	18549469/3840		✓	✓	✓	✓					**2KJ4537 - ■ ■ A0 ■ - 0 ■ A2**
4 391	0.33	13 000	70 000	-	0.34	18549469/4224		✓	✓	✓	✓					**2KJ4537 - ■ ■ A0 ■ - 0 ■ X1**
3 918	0.37	13 000	70 000	-	0.40	1354111237/345600		✓	✓	✓	✓	✓	✓			**2KJ4537 - ■ ■ A0 ■ - 0 ■ W1**
3 513	0.41	13 000	70 000	-	0.48	18549469/5280		✓	✓	✓	✓	✓	✓			**2KJ4537 - ■ ■ A0 ■ - 0 ■ V1**
3 167	0.46	13 000	70 000	-	0.57	1094418671/345600		✓	✓	✓	✓	✓	✓			**2KJ4537 - ■ ■ A0 ■ - 0 ■ U1**
2 923	0.50	13 000	70 000	-	0.67	1094418671/374400		✓	✓	✓	✓	✓	✓			**2KJ4537 - ■ ■ A0 ■ - 0 ■ T1**
2 668	0.54	13 000	70 000	-	0.80	537934601/201600		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ S1**
2 214	0.65	13 000	70 000	-	1.03	204044159/92160		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ R1**
2 084	0.70	13 000	70 000	-	1.19	204044159/97920		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ Q1**
1 968	0.74	13 000	70 000	-	1.35	204044159/103680		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ P1**
1 675	0.87	13 000	70 000	-	1.67	241143097/144000		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ N1**
1 435	1.0	13 000	70 000	-	2.10	908923981/633600				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ M1**
1 261	1.1	13 000	70 000	-	2.60	871825043/691200				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ L1**
1 064	1.4	13 000	70 000	-	3.30	352439911/331200				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ K1**
927	1.6	13 000	70 000	-	4.40	18549469/20000				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ J1**
915	1.6	13 000	70 000	-	1.98	279967567/306000		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ H1**
864	1.7	13 000	70 000	-	2.20	279967567/324000		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ G1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/46			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		1
			C		G					1
			D							1
	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	➞ page 9/37			A, B, F or H						

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										
							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		5.3					
									4.2							
							K5		56		140	180		210	250	
							K3		56		140	180		210	250	
							A/AZ			80	90	100	112	132	160	
K.169-Z49 (continued)																
735	2.0	13 000	70 000	-	2.90	330870761/450000		✓	✓	✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ F1**
630	2.3	13 000	70 000	-	3.80	1247128253/1980000				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ E1**
554	2.6	13 000	70 000	-	4.70	1196225059/2160000				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ D1**
467	3.1	13 000	70 000	-	6.30	483580343/1035000				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ C1**
416	3.5	13 000	70 000	-	6.90	25840171/62100				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ B1**
363	4.0	13 000	70 000	-	9.10	1360009/3750				✓	✓	✓	✓	✓		**2KJ4537 - ■ ■ A0 ■ - 0 ■ A1**
K.189-D69																
13 345	0.11	19 500	104 000	-	0.26	840736/63		✓	✓	✓	✓	✓	✓			**2KJ4541 - ■ ■ A0 ■ - 0 ■ G1**
12 318	0.12	19 500	104 000	-	0.32	258688/21		✓	✓	✓	✓	✓	✓			**2KJ4541 - ■ ■ A0 ■ - 0 ■ F1**
10 907	0.13	19 500	104 000	-	0.38	1603264/147		✓	✓	✓	✓	✓	✓	✓		**2KJ4541 - ■ ■ A0 ■ - 0 ■ E1**
9 078	0.16	19 500	104 000	-	0.52	63544/7		✓	✓	✓	✓	✓	✓	✓		**2KJ4541 - ■ ■ A0 ■ - 0 ■ D1**
8 544	0.17	19 500	104 000	-	0.61	1016704/119		✓	✓	✓	✓	✓	✓	✓		**2KJ4541 - ■ ■ A0 ■ - 0 ■ C1**
7 655	0.19	19 500	104 000	-	0.67	1446848/189		✓	✓	✓	✓	✓	✓	✓		**2KJ4541 - ■ ■ A0 ■ - 0 ■ B1**
6 517	0.22	19 500	104 000	-	0.89	19552/3		✓	✓	✓	✓	✓	✓	✓		**2KJ4541 - ■ ■ A0 ■ - 0 ■ A1**

[1] Only in conjunction with reduced-backlash version

Article No. supplement												
Shaft design	→ page 9/46	**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				**1**
			C		G							**1**
			D									**1**
	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	→ page 9/37	**A, B, F or H**										

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

Selection and ordering data (continued)

Gearbox							Adapter									Article No.
i	n_2	T_{2N}	F_{R2}	ϕ [1]	J_G	R_{ex}										
-	rpm	Nm	N	‘	10^{-4} kgm²	-										(Article No. supplement ➞ below)
							K4	**63**	**71**	**80**	**90**	**100**	**112**	**132**	**160**	
							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		**5.3**					
									4.2							
							K5		**56**		**140**	**180**		**210**	**250**	
							K3		**56**		**140**	**180**		**210**	**250**	
							A/AZ			**80**	**90**	**100**	**112**	**132**	**160**	
K.189-Z69																
6 375	0.23	19 500	104 000	-	0.21	3793088/595		✓	✓	✓	✓					**2KJ4540 - ■ ■ A 0 ■ - 0 ■ C2**
5 795	0.25	19 500	104 000	-	0.26	7586176/1309		✓	✓	✓	✓					**2KJ4540 - ■ ■ A 0 ■ - 0 ■ B2**
4 929	0.29	19 500	104 000	-	0.32	586560/119		✓	✓	✓	✓					**2KJ4540 - ■ ■ A 0 ■ - 0 ■ A2**
4 481	0.32	19 500	104 000	-	0.39	5865600/1309		✓	✓	✓	✓					**2KJ4540 - ■ ■ A 0 ■ - 0 ■ X1**
3 998	0.36	19 500	104 000	-	0.46	1427296/357		✓	✓	✓	✓	✓	✓			**2KJ4540 - ■ ■ A 0 ■ - 0 ■ W1**
3 585	0.40	19 500	104 000	-	0.56	4692480/1309		✓	✓	✓	✓	✓	✓			**2KJ4540 - ■ ■ A 0 ■ - 0 ■ V1**
3 231	0.45	19 500	104 000	-	0.66	1153568/357		✓	✓	✓	✓	✓	✓			**2KJ4540 - ■ ■ A 0 ■ - 0 ■ U1**
2 983	0.49	19 500	104 000	-	0.78	354944/119		✓	✓	✓	✓	✓	✓			**2KJ4540 - ■ ■ A 0 ■ - 0 ■ T1**
2 723	0.53	19 500	104 000	-	0.93	2268032/833		✓	✓	✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ S1**
2 259	0.64	19 500	104 000	-	1.23	268840/119		✓	✓	✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ R1**
2 126	0.68	19 500	104 000	-	1.41	4301440/2023		✓	✓	✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ Q1**
2 008	0.72	19 500	104 000	-	1.59	2150720/1071		✓	✓	✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ P1**
1 709	0.85	19 500	104 000	-	2.0	1016704/595		✓	✓	✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ N1**
1 464	0.99	19 500	104 000	-	2.5	273728/187				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ M1**
1 287	1.1	19 500	104 000	-	3.2	459472/357				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ L1**
1 086	1.3	19 500	104 000	-	4.1	2971904/2737				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ K1**
946	1.5	19 500	104 000	-	5.5	2815488/2975				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ J1**
889	1.6	19 500	104 000	-	3.1	3128320/3519		✓	✓	✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ H1**
756	1.9	19 500	104 000	-	4.0	16267264/21505		✓	✓	✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ G1**
648	2.2	19 500	104 000	-	5.3	30657536/47311				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ F1**
570	2.5	19 500	104 000	-	6.7	7351552/12903				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ E1**
481	3.0	19 500	104 000	-	9.1	47550464/98923				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ D1**
419	3.5	19 500	104 000	-	12	45047808/107525				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ C1**
384	3.8	19 500	104 000	-	11	37948928/98923				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ B1**
334.36	4.3	19 500	104 000	-	14	35951616/107525				✓	✓	✓	✓	✓		**2KJ4540 - ■ ■ A 0 ■ - 0 ■ A1**

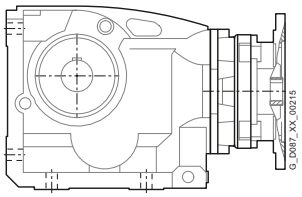
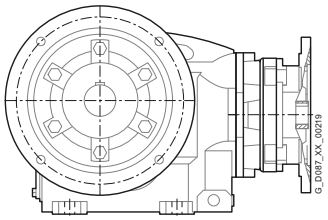
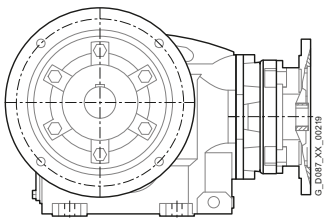
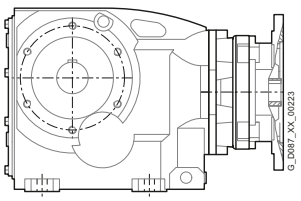
[1] Only in conjunction with reduced-backlash version

Article No. supplement										
Shaft design	➞ page 9/46	**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**		**1**
			C		**G**					**1**
			D							**1**
	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	➞ page 9/37	**A, B, F or H**								

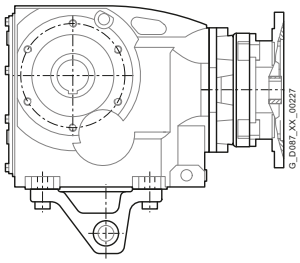
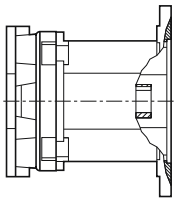
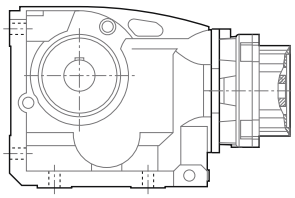
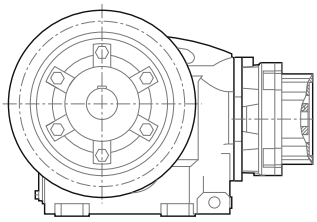
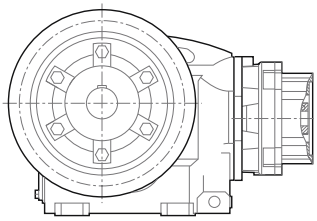
* Article No. supplement Adapter A: **M1A**, adapter AZ: **M1B**

0Dimensional drawing overview

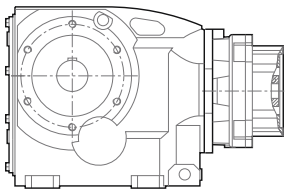
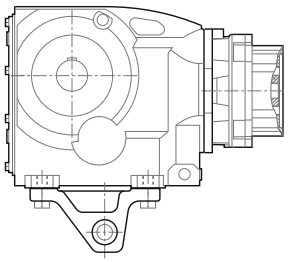
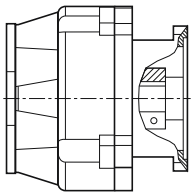
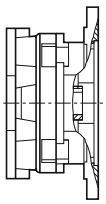
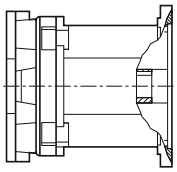
Information about dimensional drawings can be found in chapter "Introduction" on page 1/19.

Design	Size	Dimensional drawing on page
Bevel gearbox with adapter K4		
Foot-mounted design		
	B..29	5/36
	B..39	5/40
	B..49	5/44
	K..39	5/48
	K..49	5/52
	K..69	5/56
	K..79	5/60
	K..89	5/64
	K..109	5/69
	K..129	5/74
	K..149	5/79
	K..169	5/84
	K..189	5/89
Flange-mounted design		
	B.F.29	5/37
	B.F.39	5/41
	B.F.49	5/45
	K.F.39	5/49
	K.F.49	5/53
	K.F.69	5/57
	K.F.79	5/61
	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
	K.F.189	5/90
Flange-mounted design with VLplus reinforced bearing system		
	K.F.89	5/66
	K.F.109	5/71
	K.F.129	5/76
	K.F.149	5/81
	K.F.169	5/86
Housing flange design		
	B.Z.29	5/38
	B.Z.39	5/42
	B.Z.49	5/46
	K.Z.39	5/50
	K.Z.49	5/54
	K.Z.69	5/58
	K.Z.79	5/62
	K.Z.89	5/67
	K.Z.109	5/72
	K.Z.129	5/77
	K.Z.149	5/82
	K.Z.169	5/87
	K.Z.189	5/91

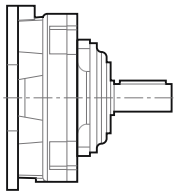
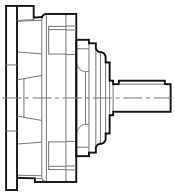
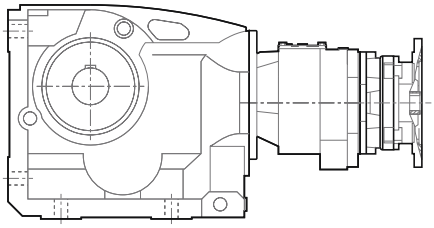
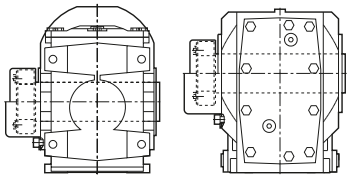
Dimensional drawing overview (continued)

Design	Size	Dimensional drawing on page
Bevel gearbox with adapter K4		
Shaft-mounted design		
	BAD.29	5/39
	BAD.39	5/43
	BAD.49	5/47
	KAD.39	5/51
	KAD.49	5/55
	KAD.69	5/59
	KAD.79	5/63
	KAD.89	5/68
	KAD.109	5/73
	KAD.129	5/78
	KAD.149	5/83
	KAD.169	5/88
	KAD.189	5/92
Bevel gearbox with adapter K2		
	B..29 … B..49	5/93
	K..39 … K..189	5/93 ... 5/95
Bevel gearbox with KS adapter		
Foot-mounted design		
	B..19	5/96
	B..29	5/100
	B..39	5/104
	B..49	5/108
	K..39	5/112
	K..49	5/116
	K..69	5/120
	K..79	5/124
	K..89	5/128
	K..109	5/133
	K..129	5/138
	K..149	5/143
	K..169	5/148
	K..189	5/153
Flange-mounted design		
	B.F.19	5/97
	B.F.29	5/101
	B.F.39	5/105
	B.F.49	5/109
	K.F.39	5/113
	K.F.49	5/117
	K.F.69	5/121
	K.F.79	5/125
	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
	K.F.189	5/154
Flange-mounted design with VLplus reinforced bearing system		
	K.F.89	5/130
	K.F.109	5/135
	K.F.129	5/140
	K.F.149	5/145
	K.F.169	5/150

Dimensional drawing overview (continued)

Design	Size	Dimensional drawing on page
Bevel gearbox with KS adapter		
Housing flange design		
	B.Z.19	5/98
	B.Z.29	5/102
	B.Z.39	5/106
	B.Z.49	5/110
	K.Z.39	5/114
	K.Z.49	5/118
	K.Z.69	5/122
	K.Z.79	5/126
	K.Z.89	5/131
	K.Z.109	5/136
	K.Z.129	5/141
	K.Z.149	5/146
	K.Z.169	5/151
	K.Z.189	5/155
Shaft-mounted design		
	BAD.19	5/99
	BAD.29	5/103
	BAD.39	5/107
	BAD.49	5/111
	KAD.39	5/115
	KAD.49	5/119
	KAD.69	5/123
	KAD.79	5/127
	KAD.89	5/132
	KAD.109	5/137
	KAD.129	5/142
	KAD.149	5/147
	KAD.169	5/152
	KAD.189	5/156
Bevel gearbox with adapter K8		
	K..109 … K..189	5/157
Bevel gearbox with adapter K5		
	B..29 … B..49	5/158
	K..39 … K..189	5/158 ... 5/159
Bevel gearbox with adapter K3		
	B..29 … B..49	5/160
	K..39 … K..189	5/160 ... 5/161

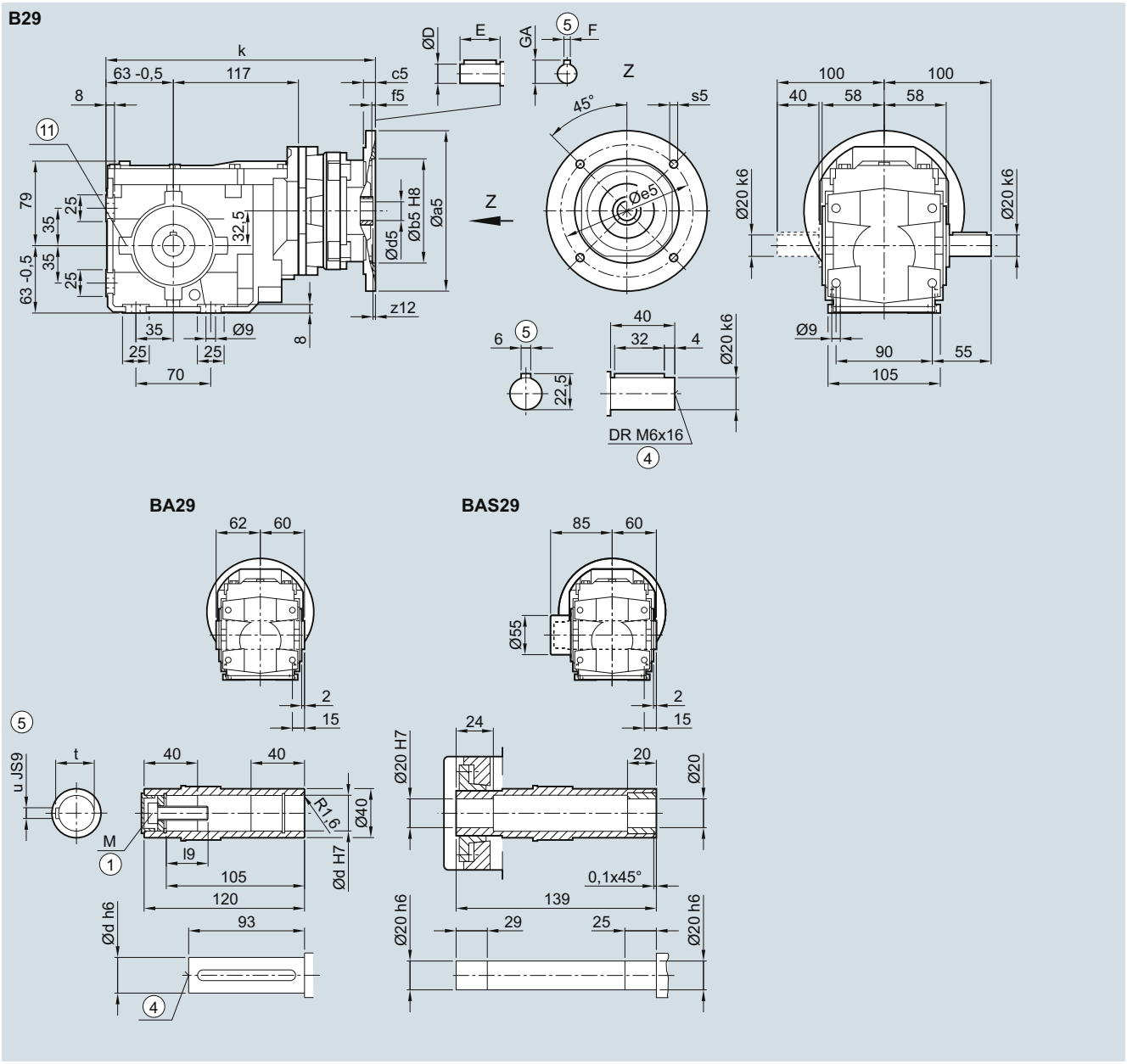
Dimensional drawing overview (continued)

Design		Size	Dimensional drawing on page
Bevel gearbox with adapter A			
		B..29 … B..49 K..39 … K..189	5/162 5/162 ... 5/163
Bevel gearbox with adapter AZ			
		B..29 … B..49 K..39 … K..189	5/164 5/164 ... 5/165
Bevel tandem gearbox	**with adapter**		
	**- K4**	K.89-D/Z39 ... K.189-D/Z69	5/166
	- K2	K.89-D/Z39 ... K.189-D/Z69	5/167
	- KS	K.39-D/Z19 ... K.189-D/Z69	5/168 ... 5/168
	- K5	K.89-D/Z39 ... K.189-D/Z69	5/170
	- K3	K.89-D/Z39 ... K.189-D/Z69	5/171
	- A	K.89-D/Z39 ... K.189-D/Z69	5/172
	- AZ	K.89-D/Z39 ... K.189-D/Z69	5/173
Additional versions and options			
Protective covers			
		BA.29 ... BA.49 KA.39 ... KA.189	5/174 ... 5/177
Inner contour of the flange design			
		B.F.29 ... B.F.49 K.F.39 ... K.F.189	5/175

Dimensions

B..29 gearbox in a foot-mounted design

B030K4, BA030K4, BAS030K4



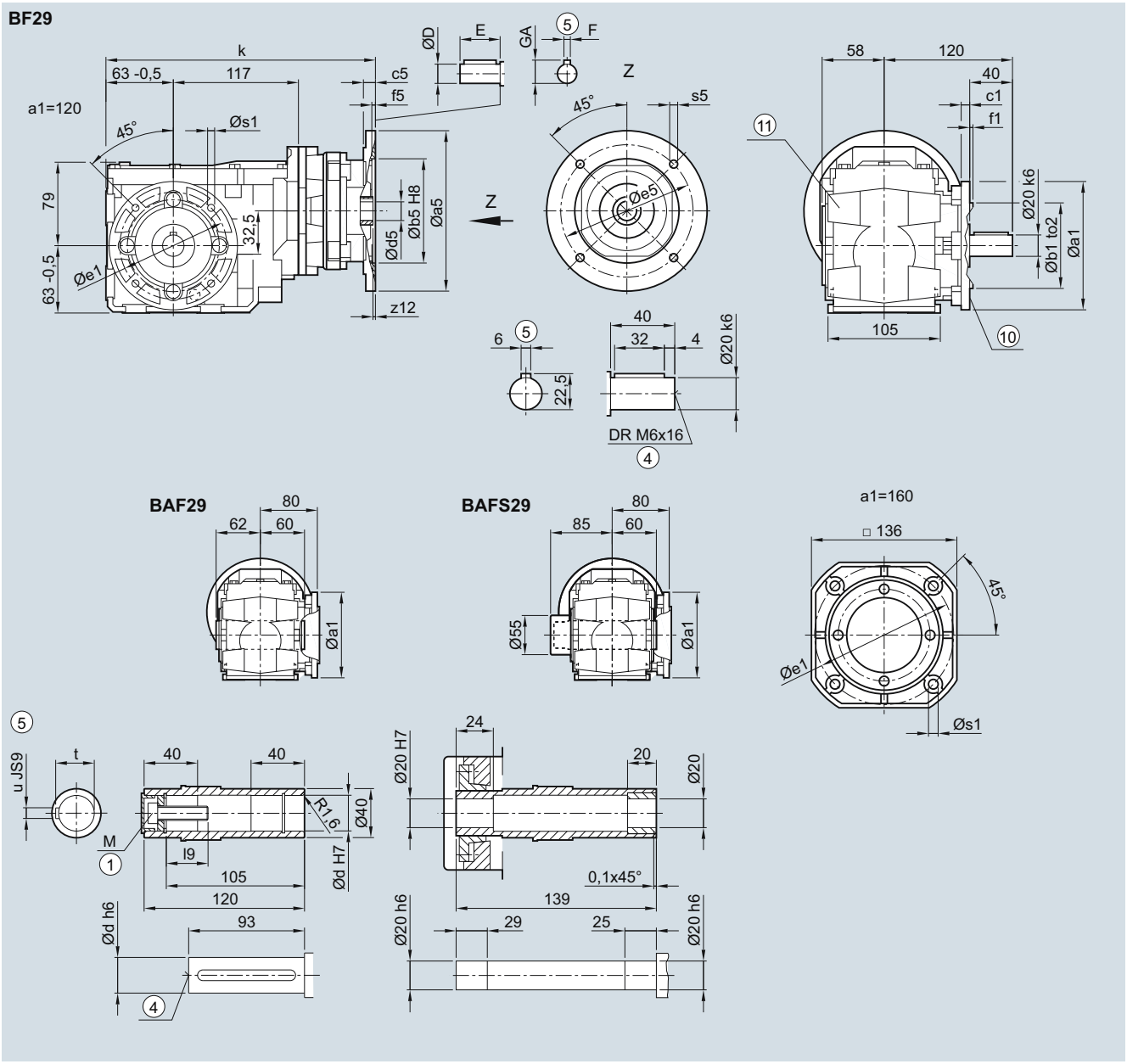
Shaft	d	l9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

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
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	340.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for housing flange design

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	l9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

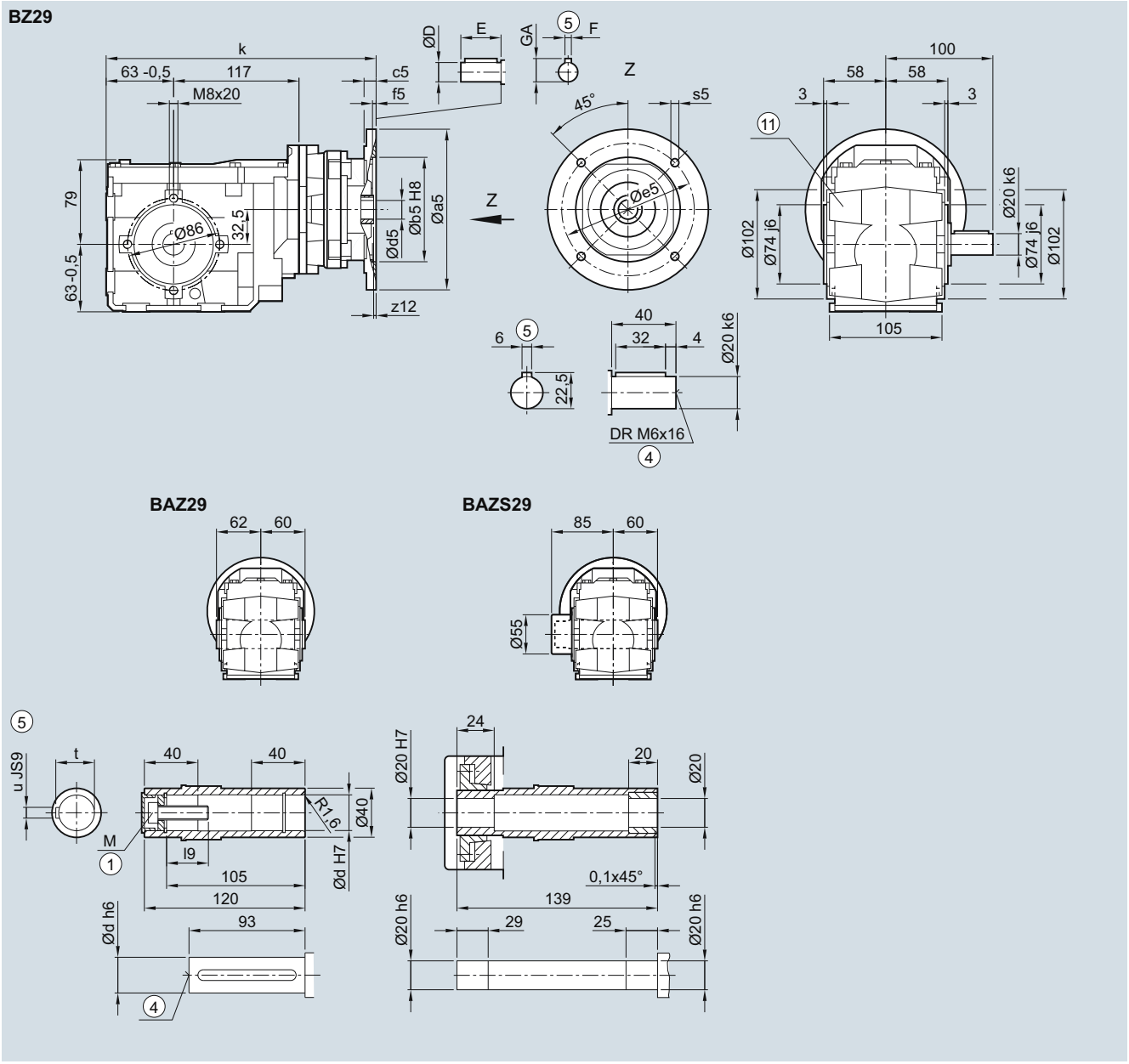
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	257.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	285.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	285.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	340.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

B.Z.29 gearbox in a housing flange design

BZ030K4, BAZ030K4, BAZS030K4



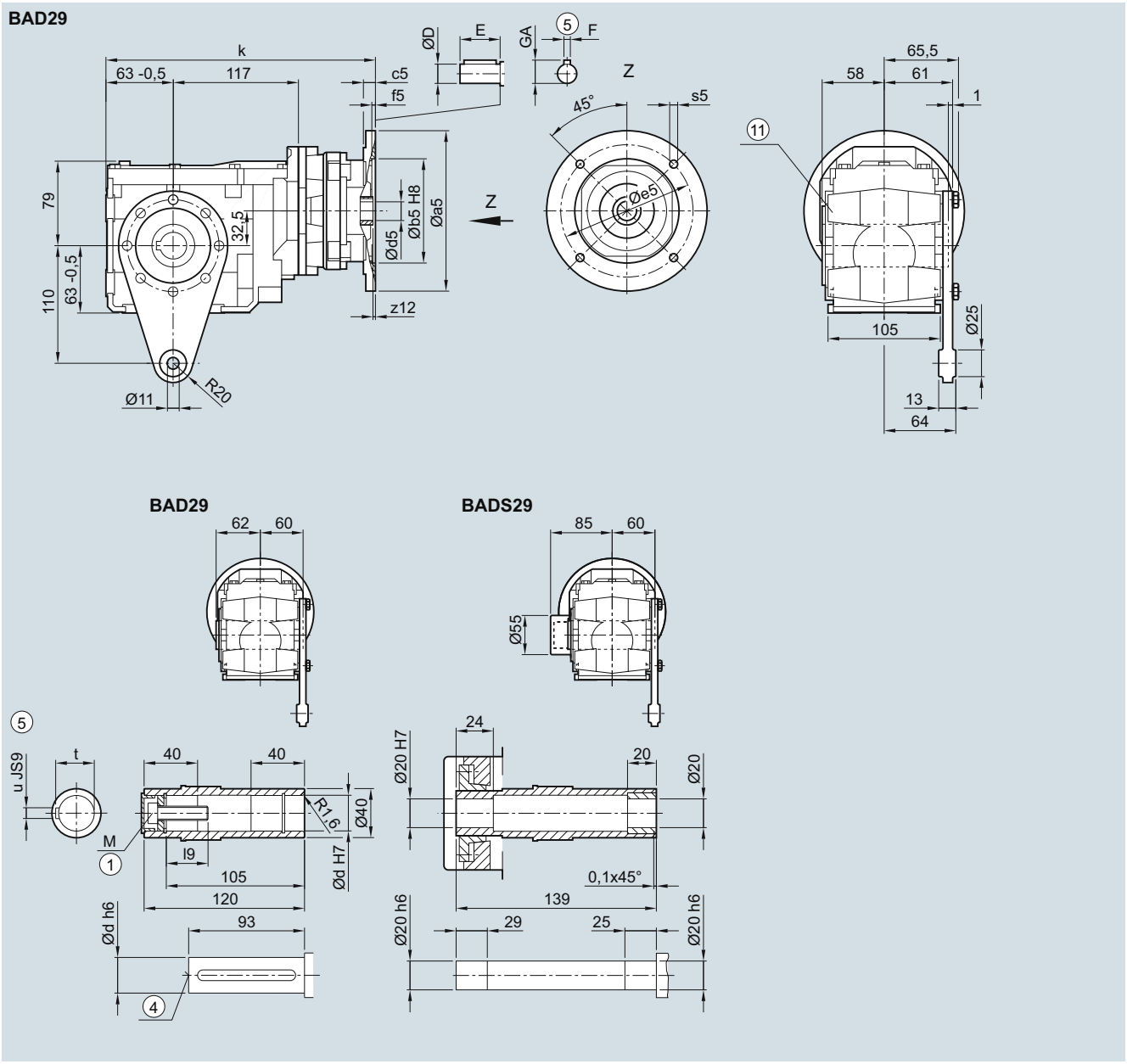
Shaft	d	l9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

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
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	340.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

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

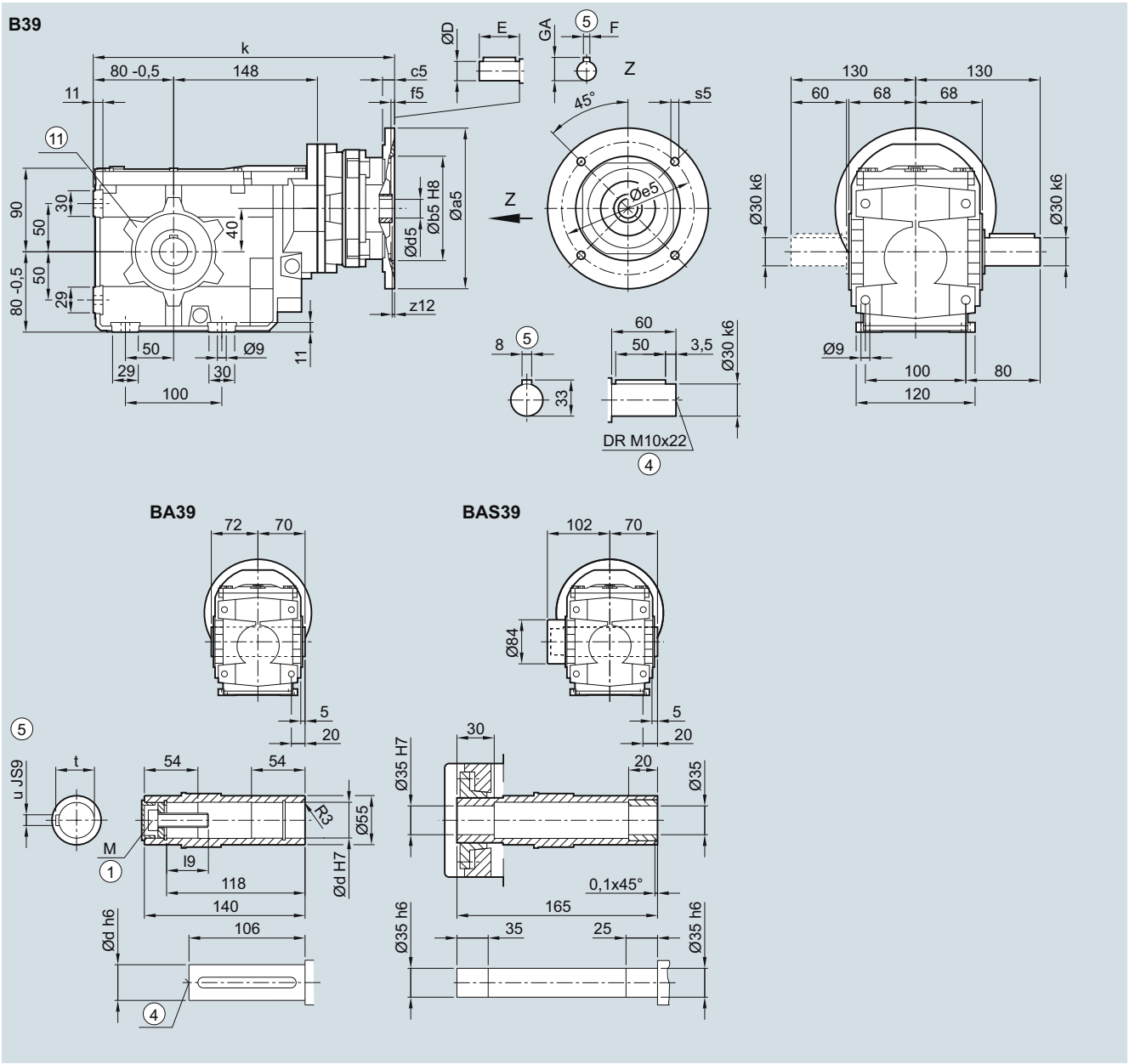
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	257.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	257.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	285.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	285.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	340.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

B..39 gearbox in a foot-mounted design

B030K4, BA030K4, BAS030K4



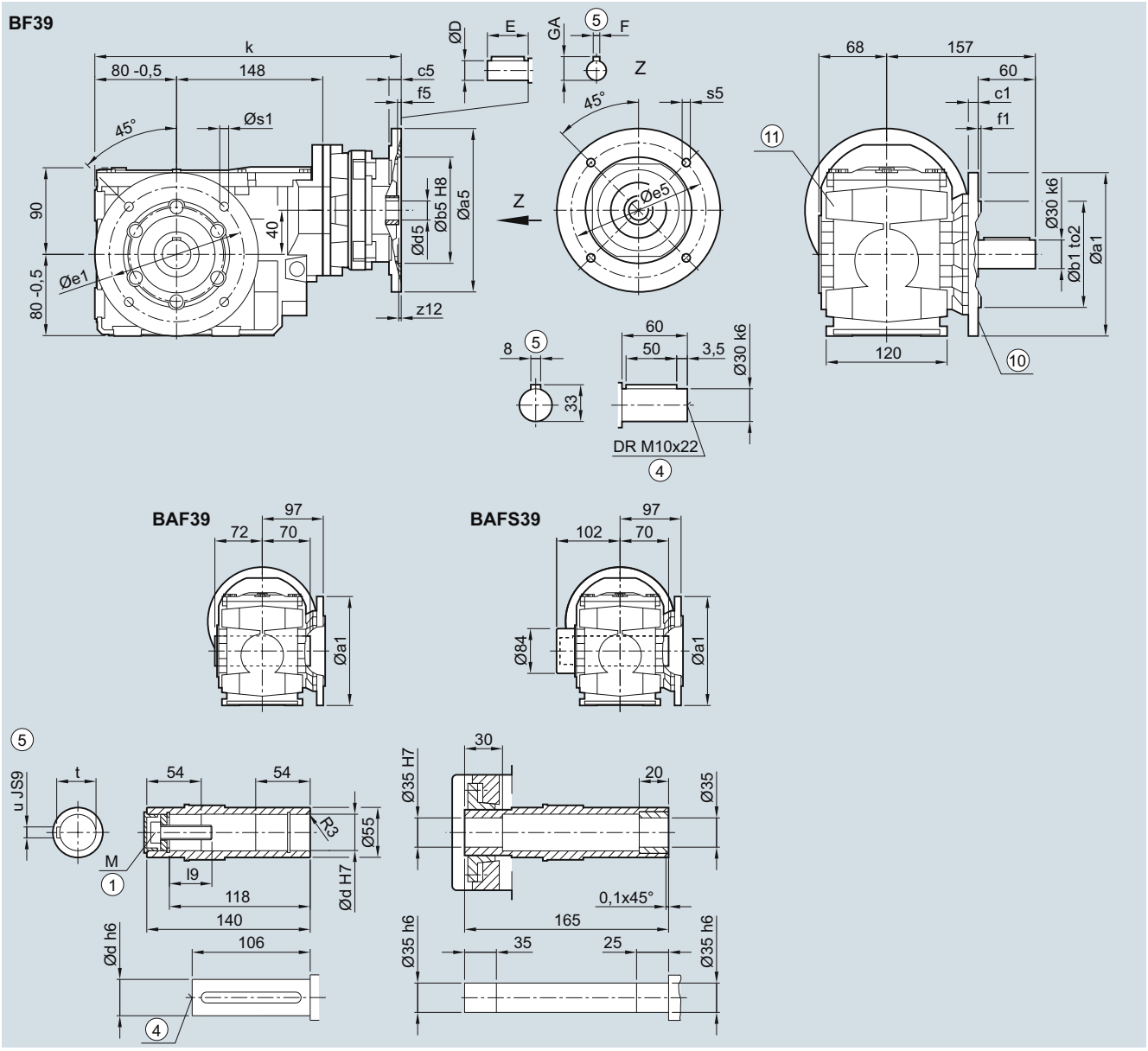
Shaft	d	l9	M	t	u
	30	32.6	M10	33.3	8
	35	37.0	M12	38.3	10
	40	47.75	M16	43.3	12

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
112	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 ⑪ Use bores only for housing flange design

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

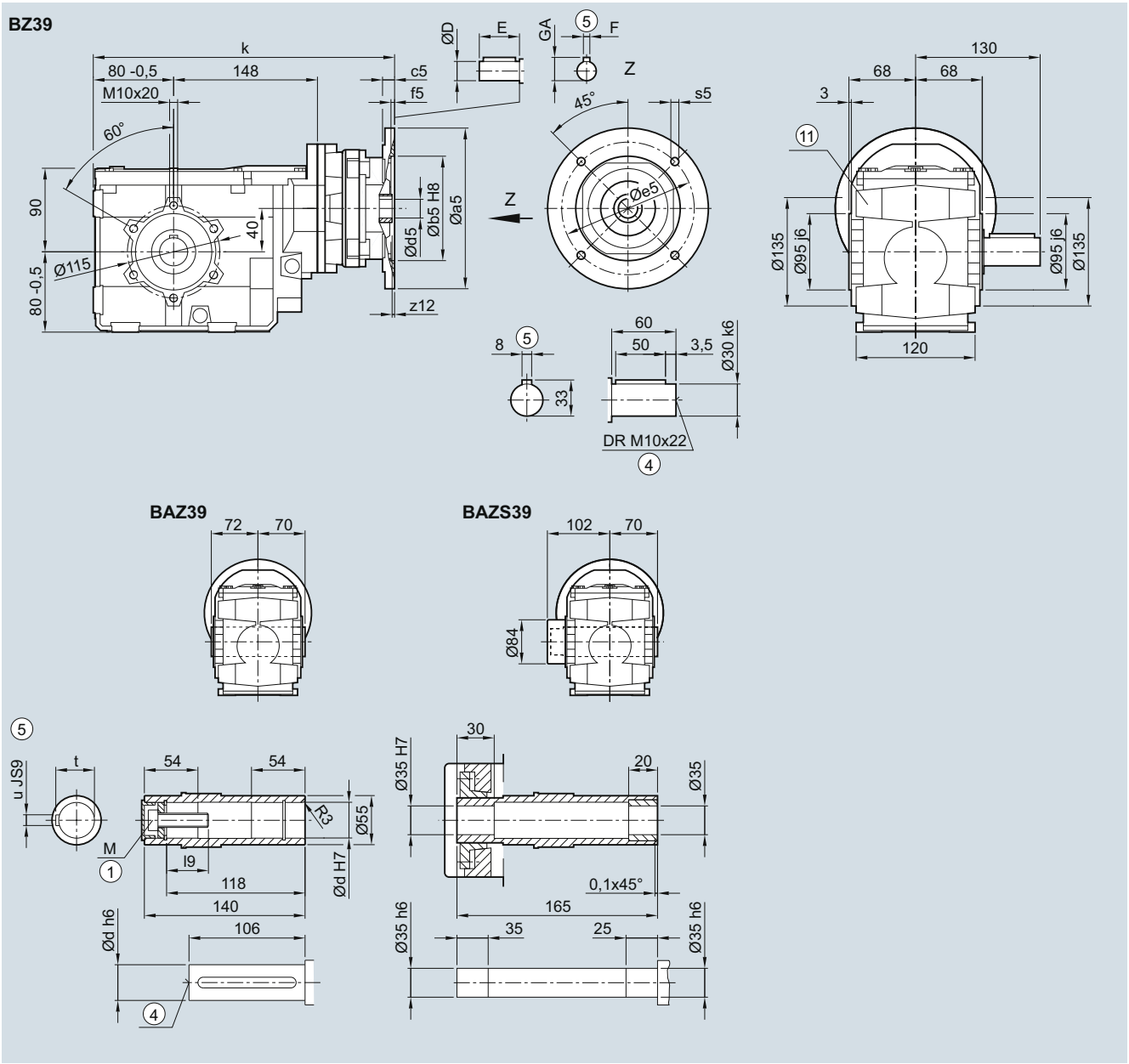
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	305.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	305.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	333.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	333.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	388.0
112	250	180	16	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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

B.Z.39 gearbox in a housing flange design

BZ030K4, BAZ030K4, BAZS030K4



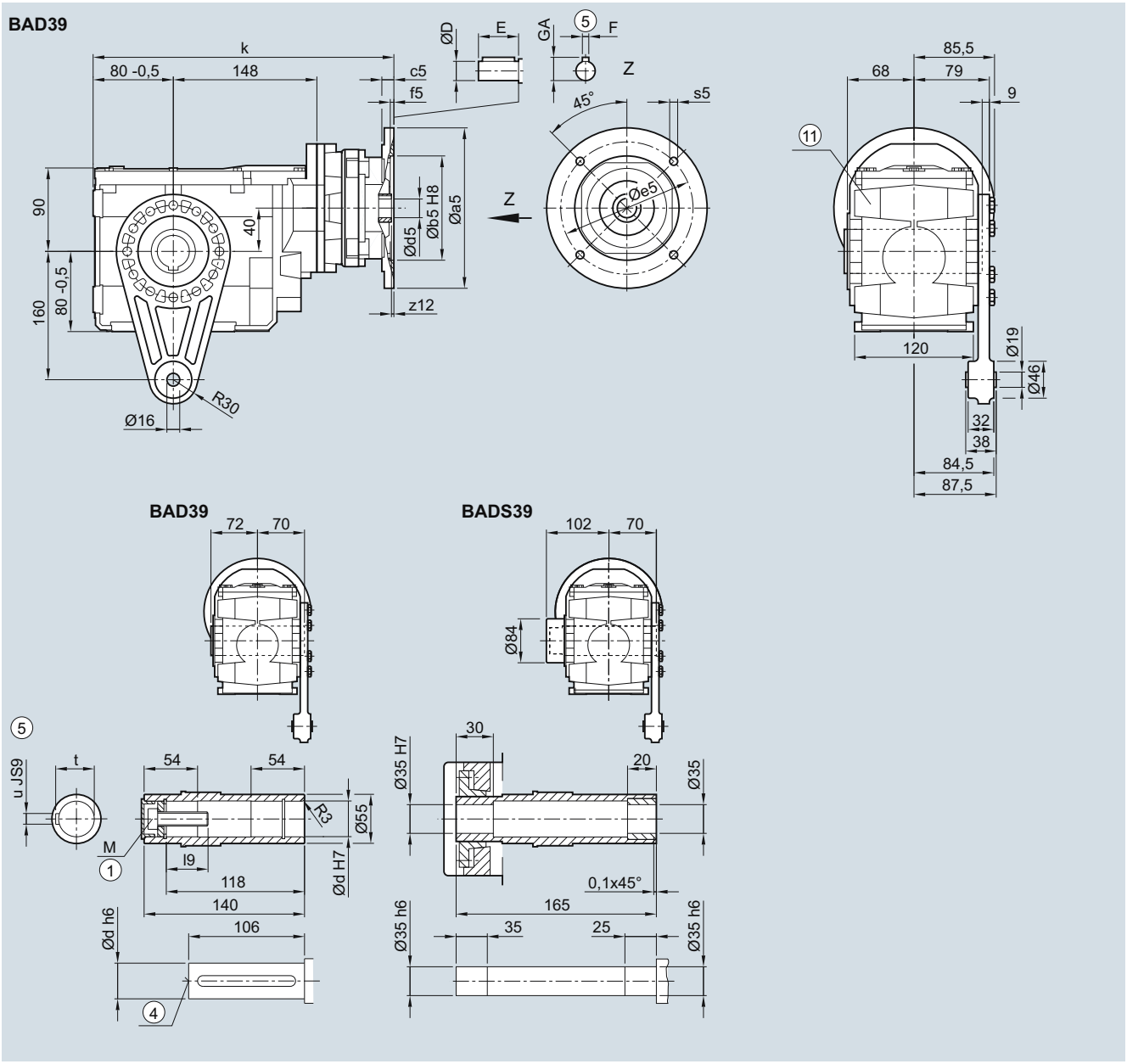
Shaft	d	l9	M	t	u
	30	32.6	M10	33.3	8
	35	37.0	M12	38.3	10
	40	47.75	M16	43.3	12

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
112	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 ⑪ Use bores only for foot-mounted design

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

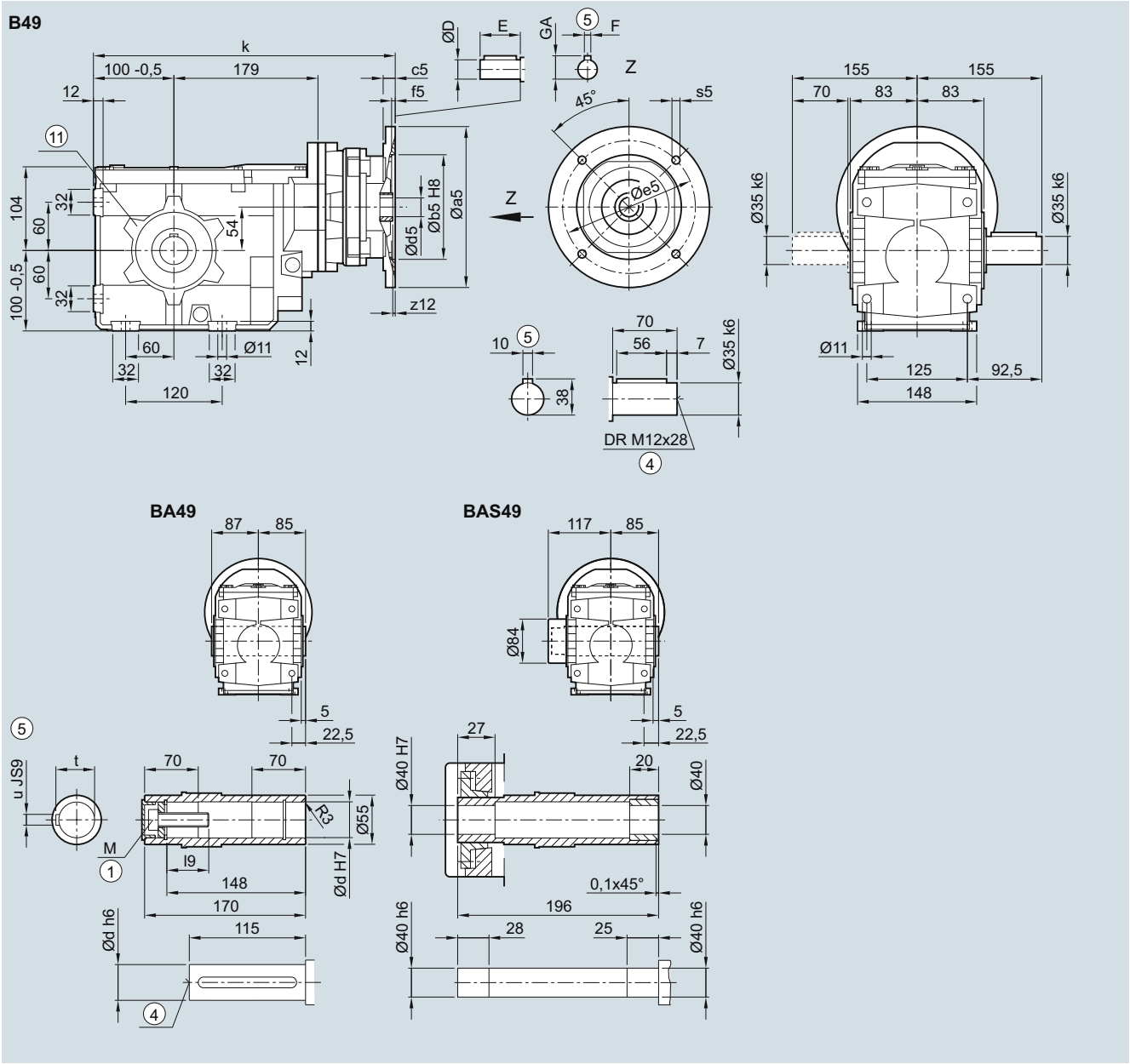
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	305.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	305.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	333.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	333.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	388.0
112	250	180	16	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 ⑪ Use bores only for foot-mounted design

Dimensions

B..49 gearbox in a foot-mounted design

B030K4, BA030K4, BAS030K4



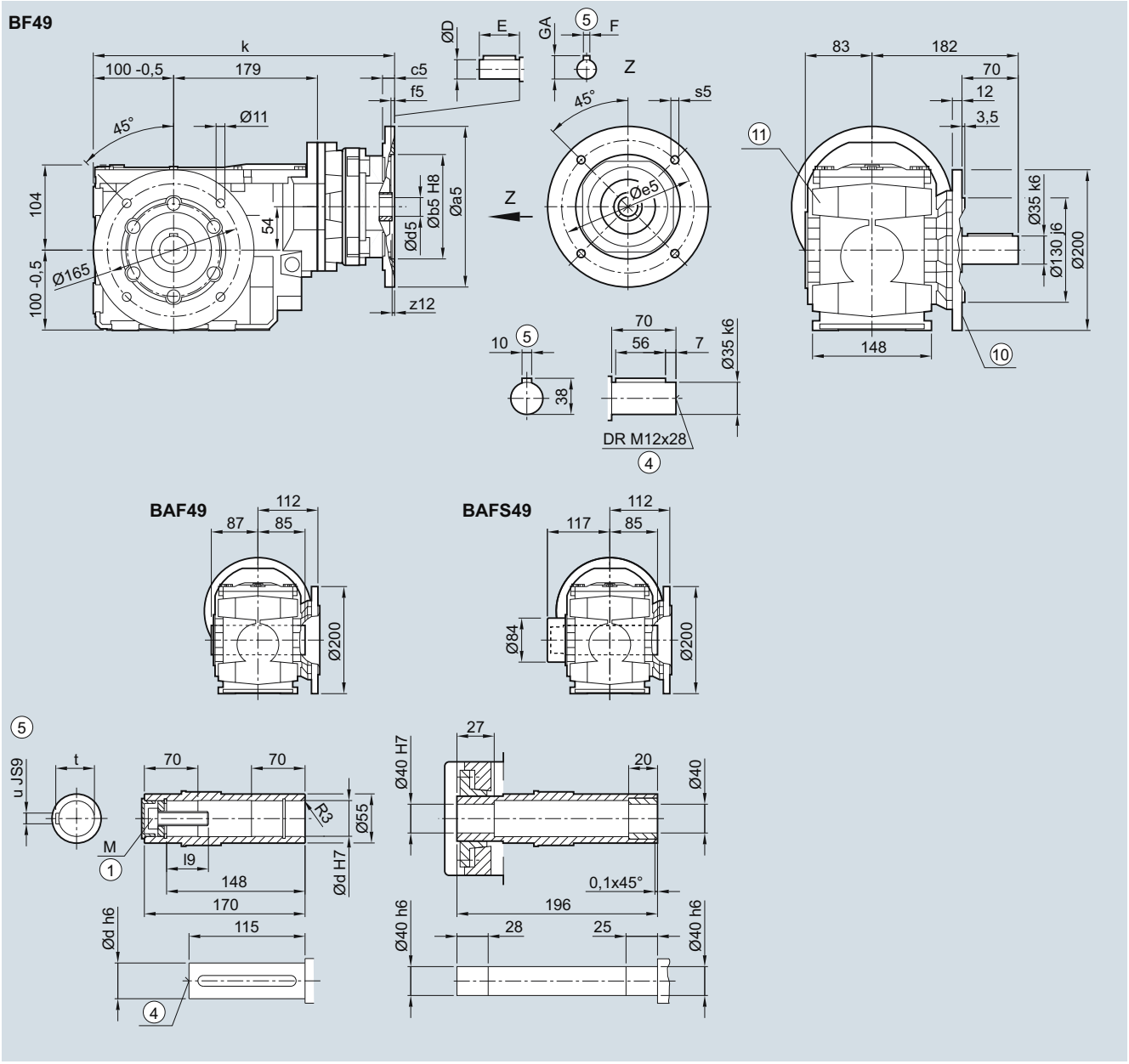
Shaft	d	l9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

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 ⑪ Use bores only for housing flange design

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

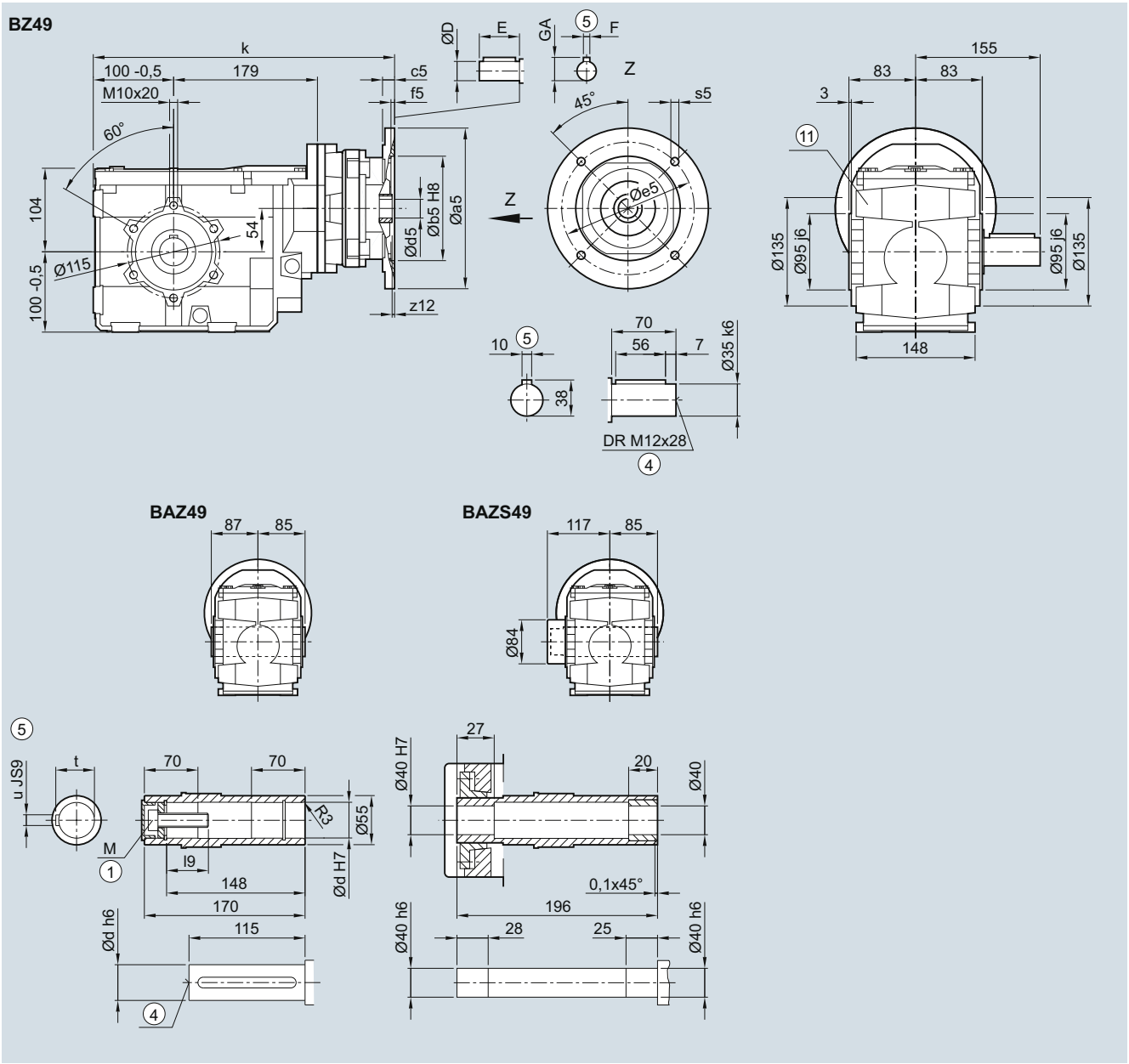
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	347.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	347.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	375.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	375.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
112	250	180	16	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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

B.Z.49 gearbox in a housing flange design

BZ030K4, BAZ030K4, BAZS030K4



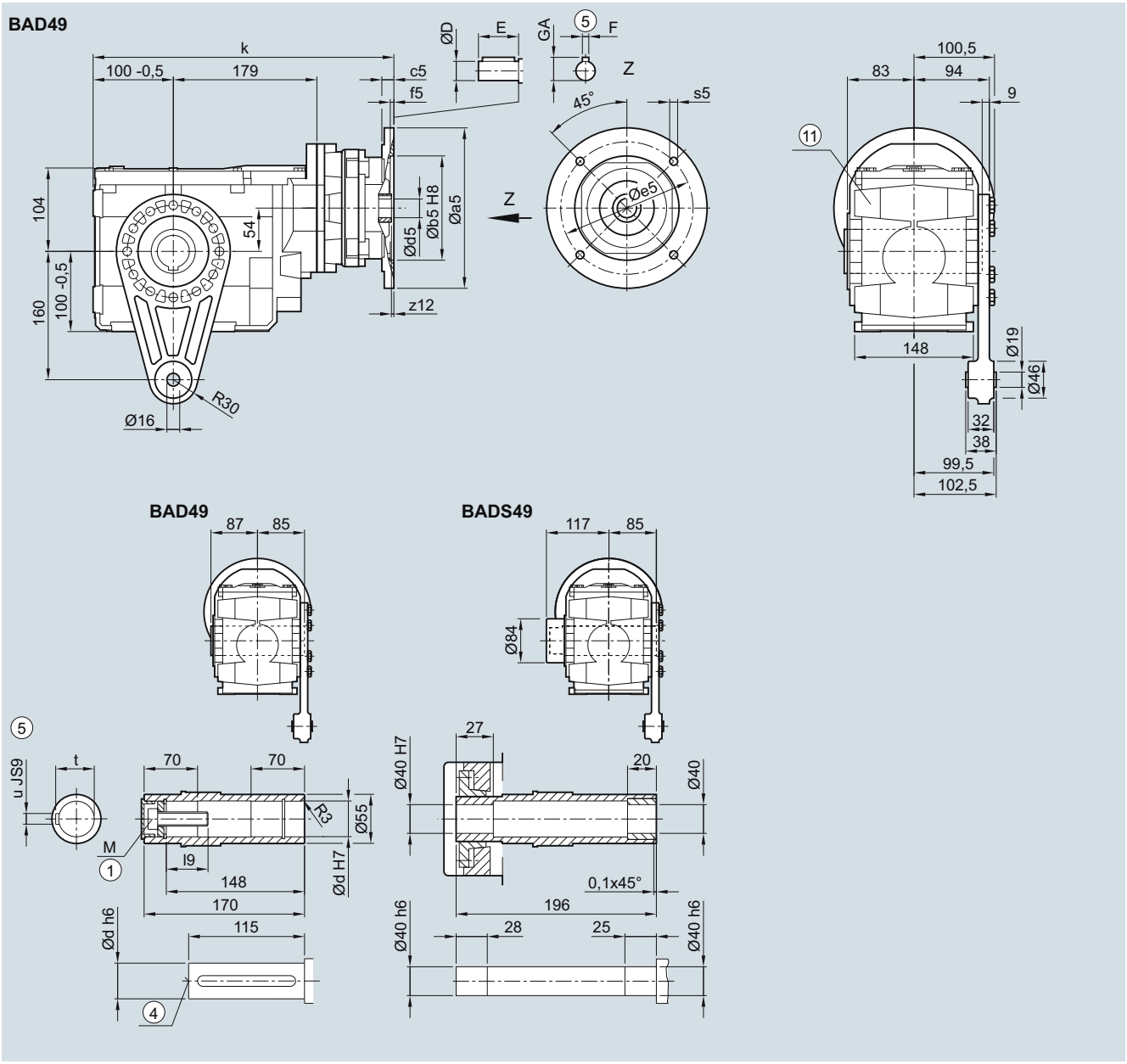
Shaft	d	l9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

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 ⑪ Use bores only for foot-mounted design

BAD.49 gearbox in a shaft-mounted design

BAD030K4, BADS030K4



Shaft	d	l9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

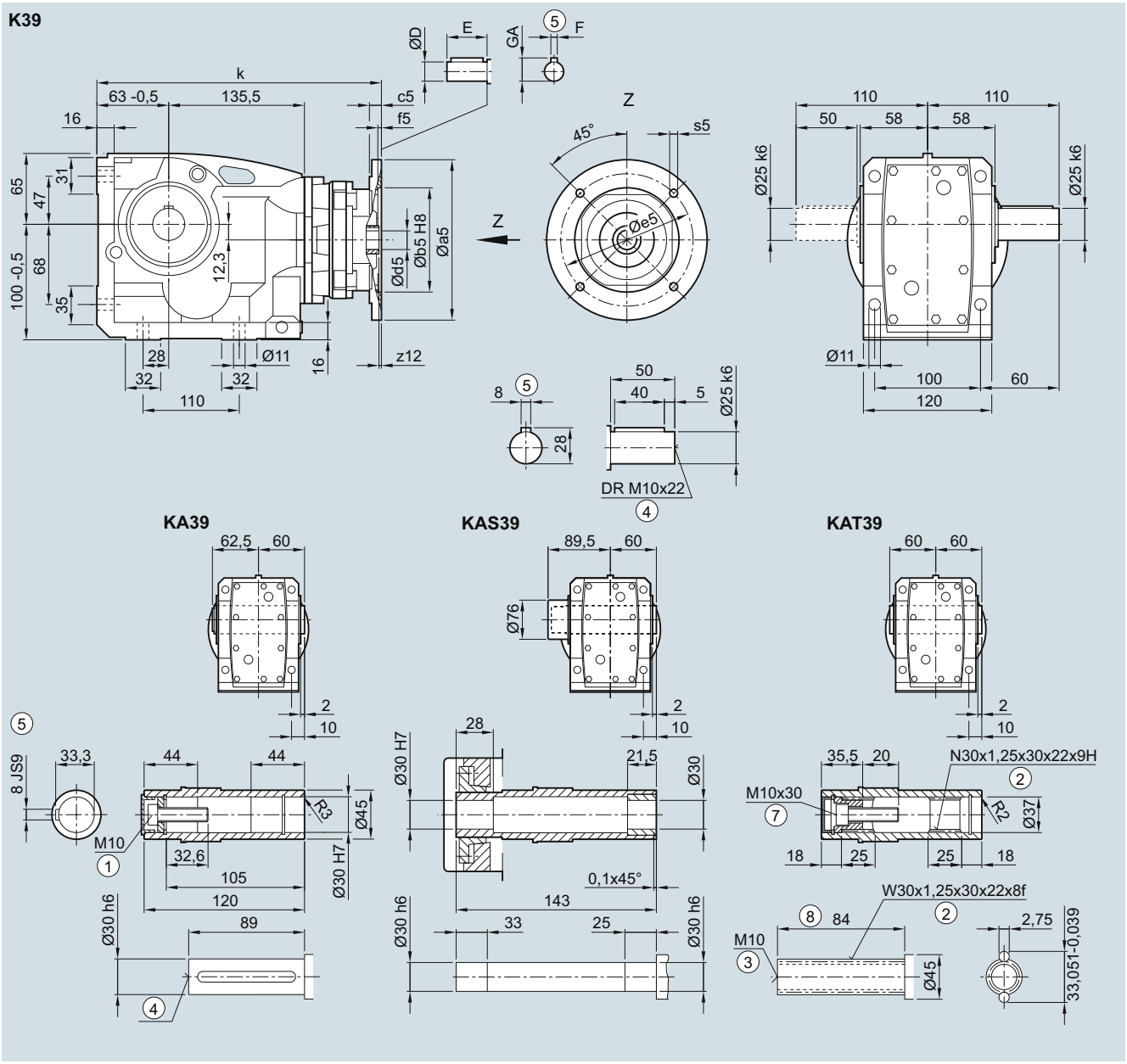
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.0	11	23	4	12.5	341.0
71	160	110	12	4.5	130	M8	2.0	14	30	5	16.0	341.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	375.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	375.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	429.5
132	300	230	12	6.0	265	M12x20	4.0	38	80	10	41.0	447.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

K.39 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4

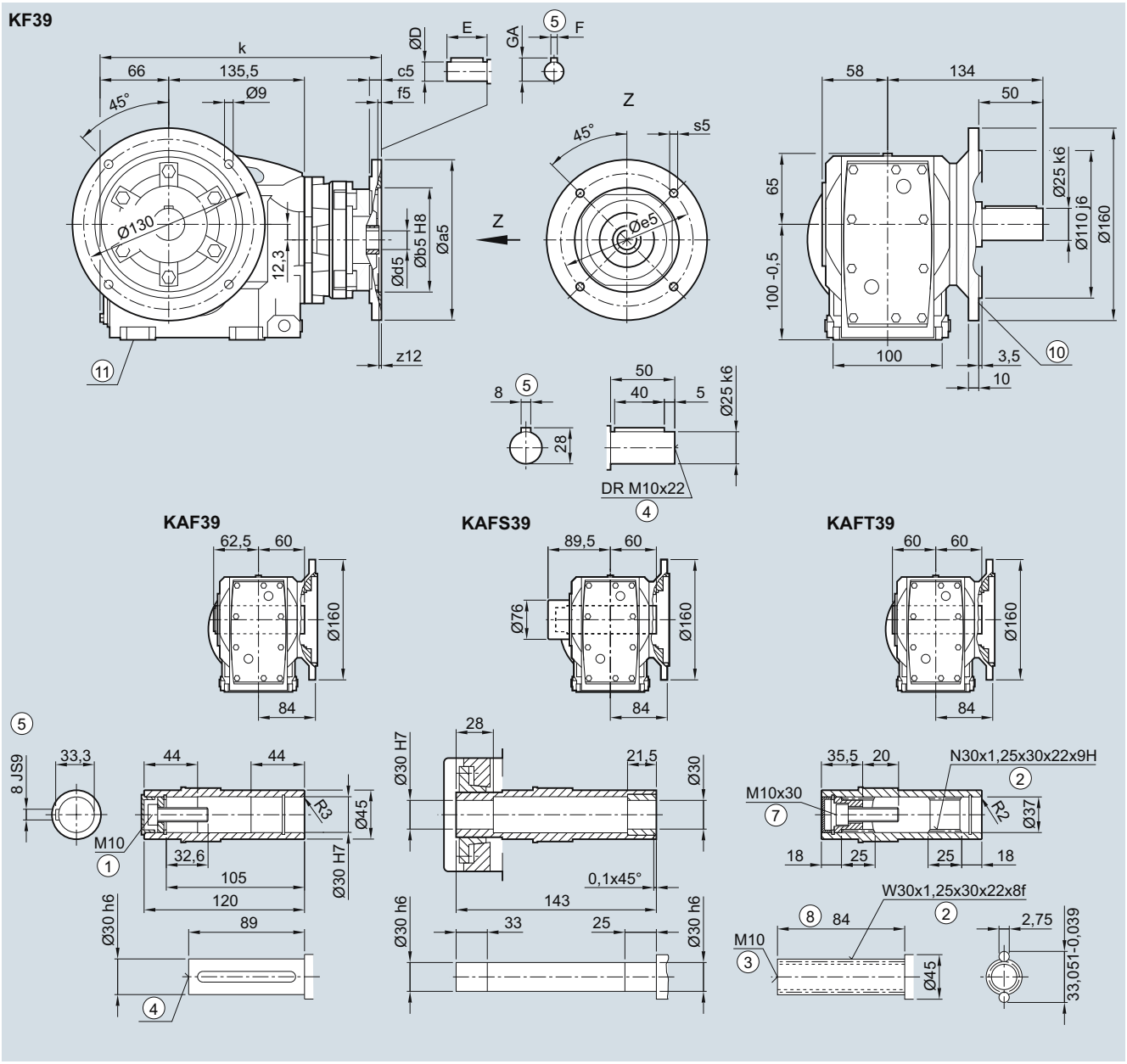


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	275.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	275.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	303.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	303.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	358.0
112	250	180	16	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

K.F.39 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



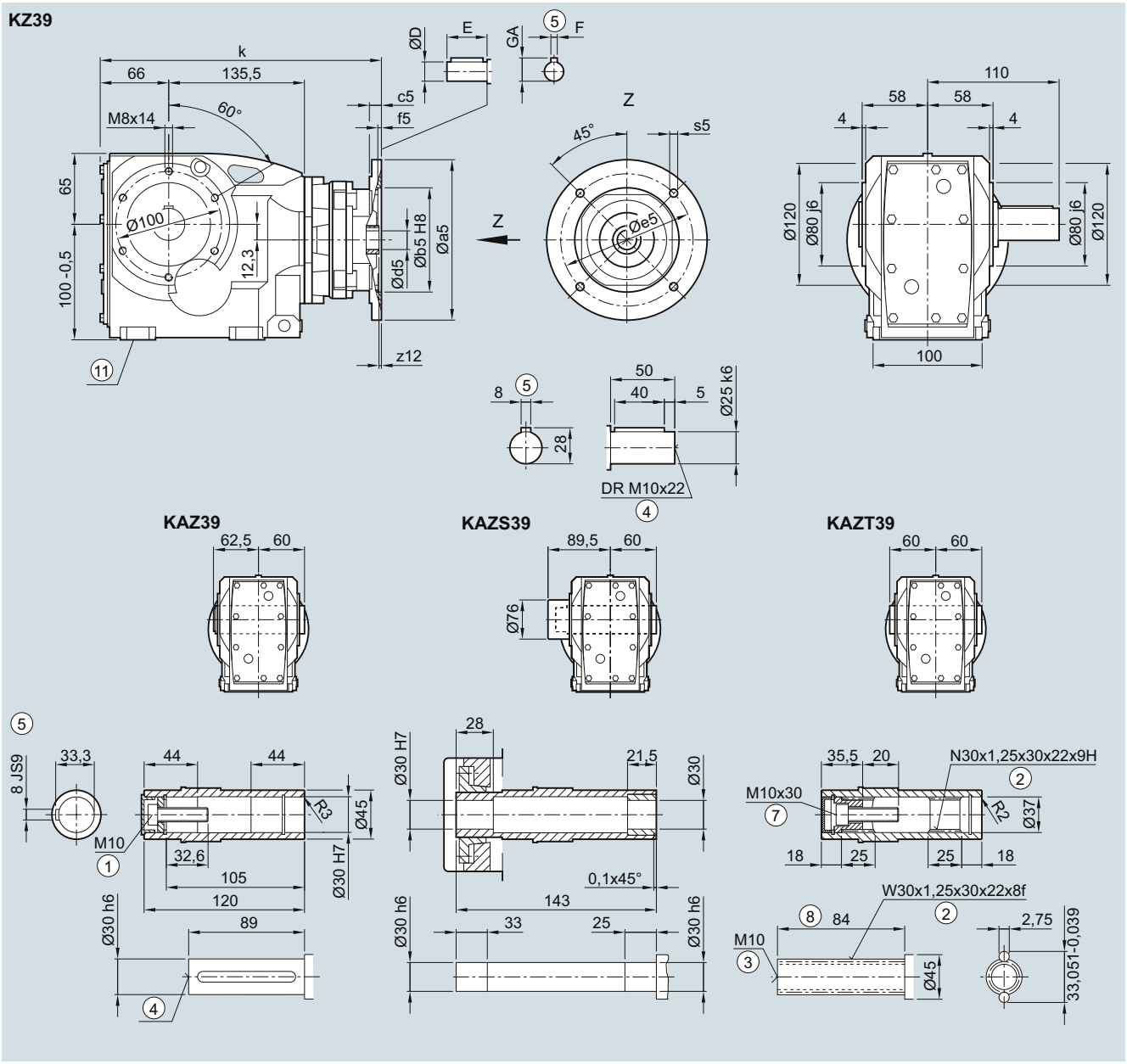
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	278.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	278.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	306.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	306.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.0
112	250	180	16	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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.39 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4

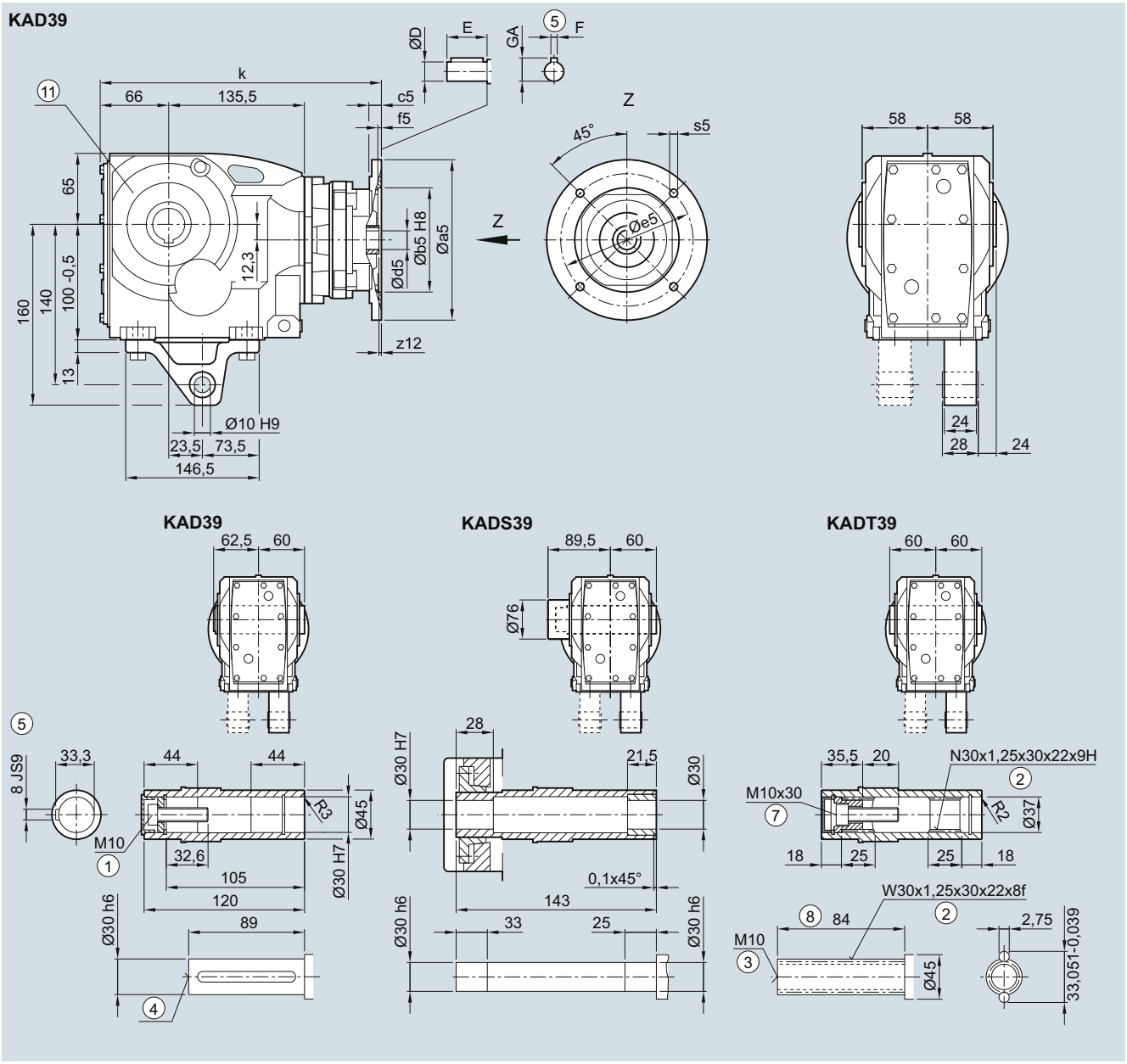


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	278.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	278.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	306.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	306.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.0
112	250	180	16	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 ⑪ Use bores only for foot-mounted design

KAD.39 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4



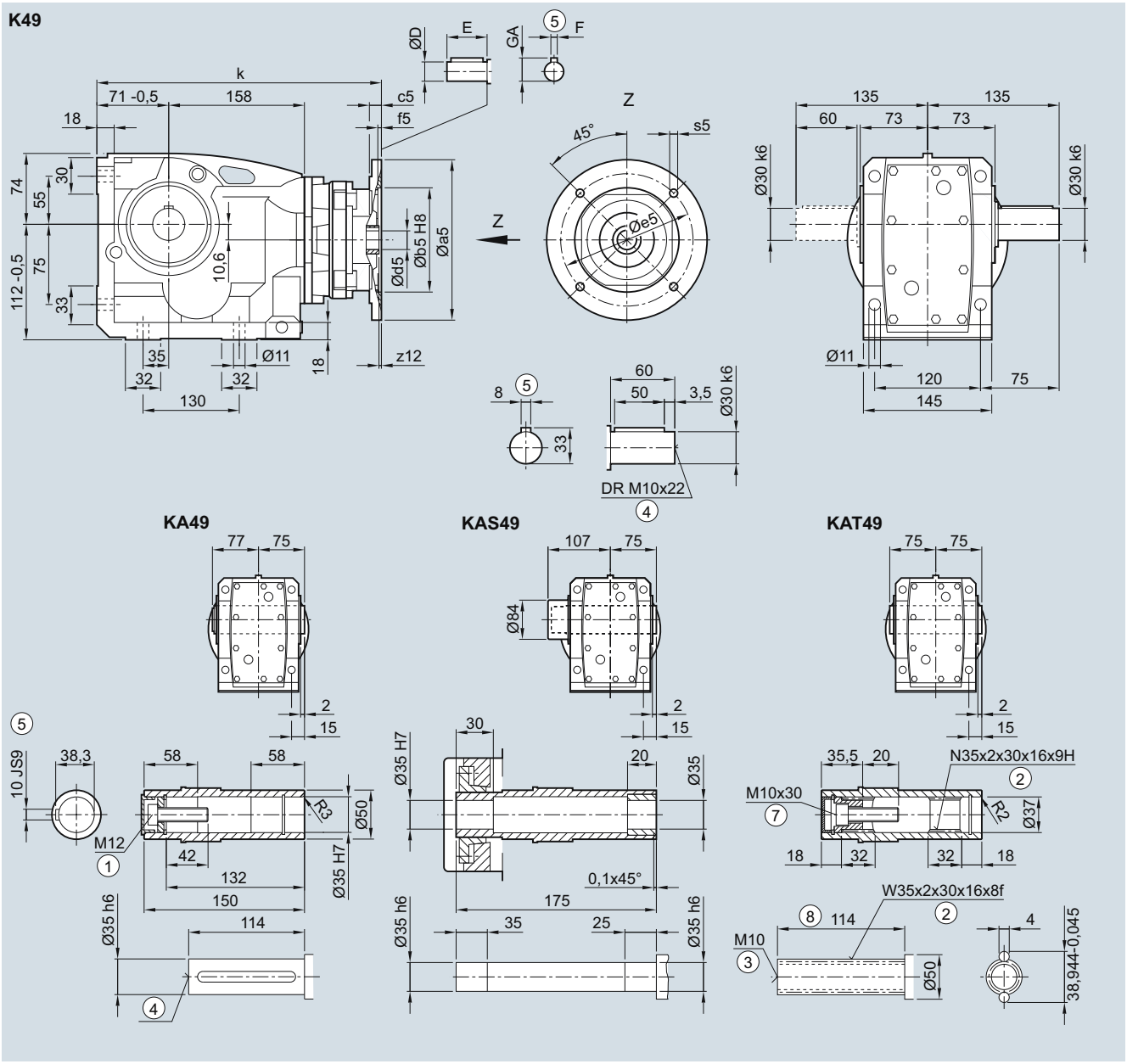
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	278.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	278.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	306.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	306.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	361.0
112	250	180	16	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 ⑪ Use bores only for housing flange design

Dimensions

K.49 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4

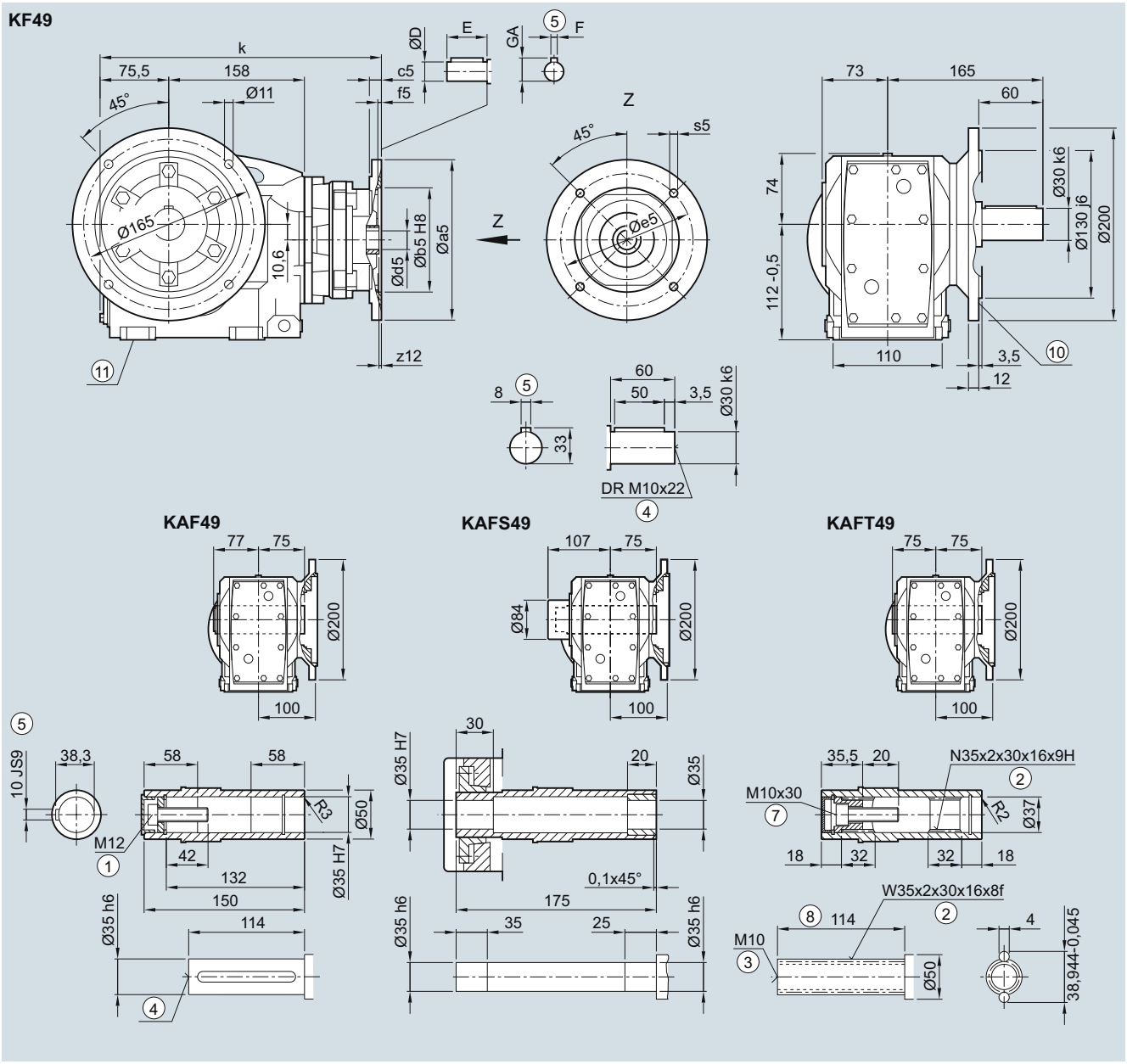


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	297.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	297.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	325.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	325.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	379.5
112	250	180	16	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

K.F.49 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



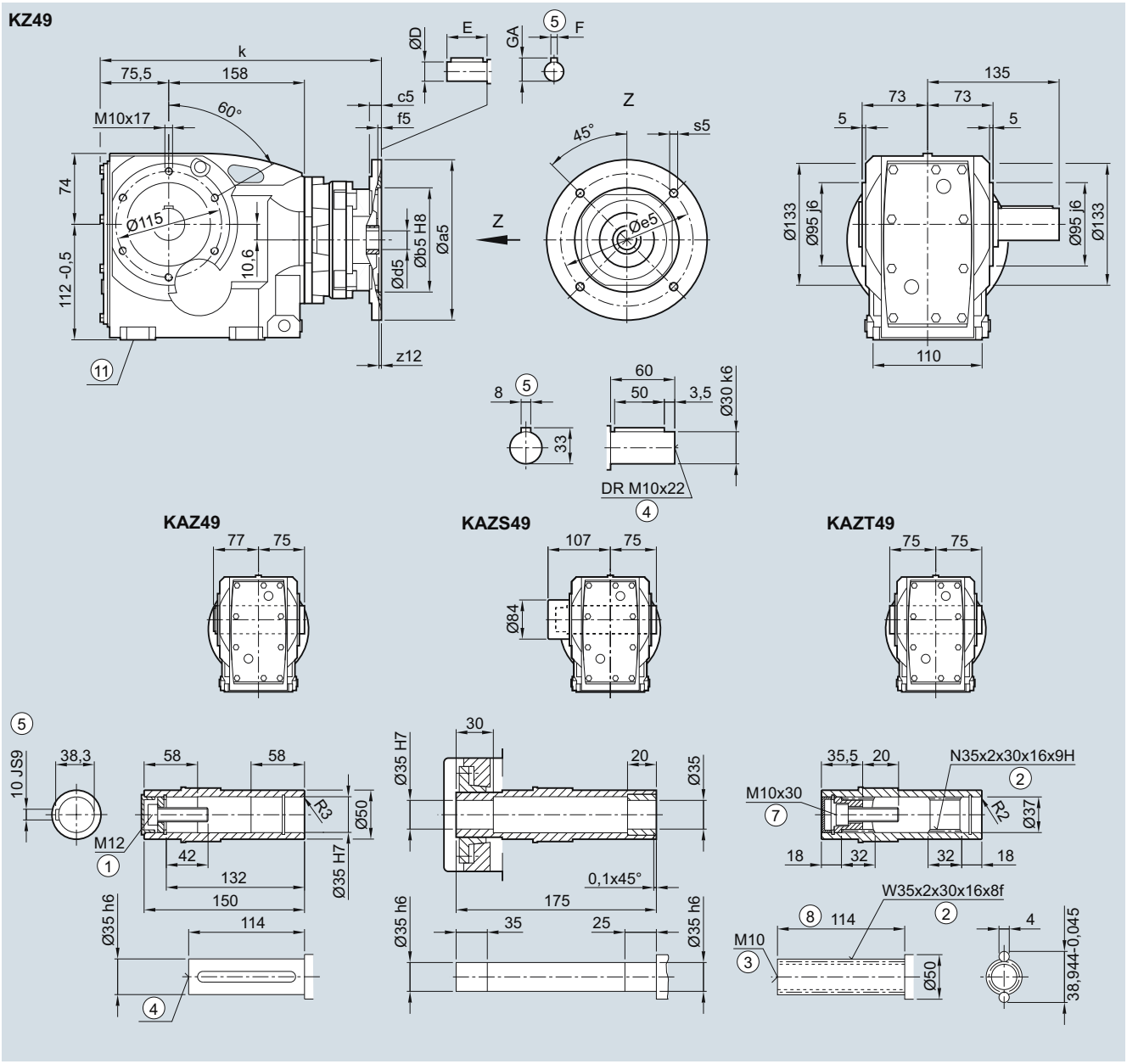
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	301.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	301.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	329.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	329.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
112	250	180	16	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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.49 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4

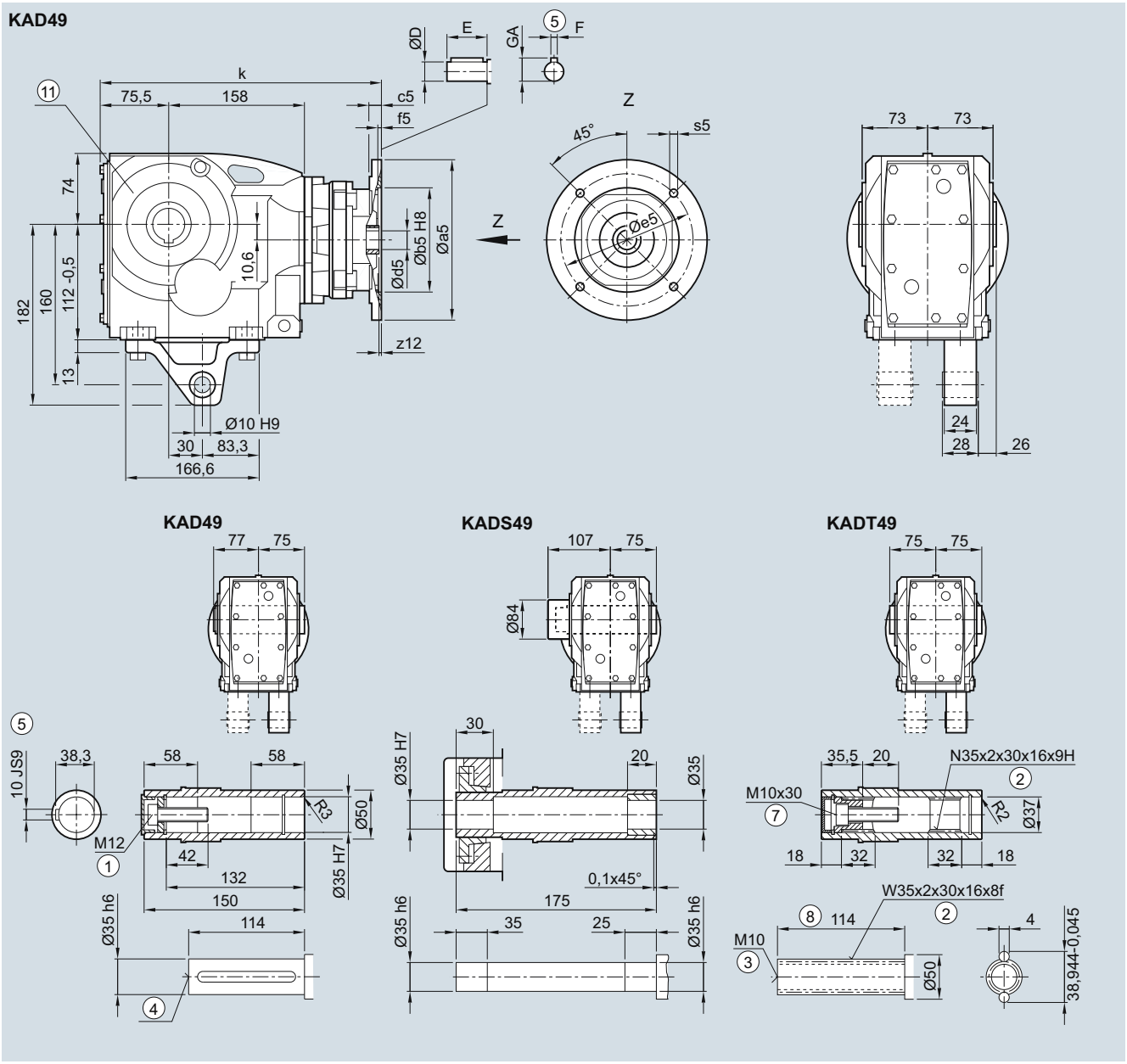


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	301.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	301.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	329.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	329.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
112	250	180	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

KAD.49 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4



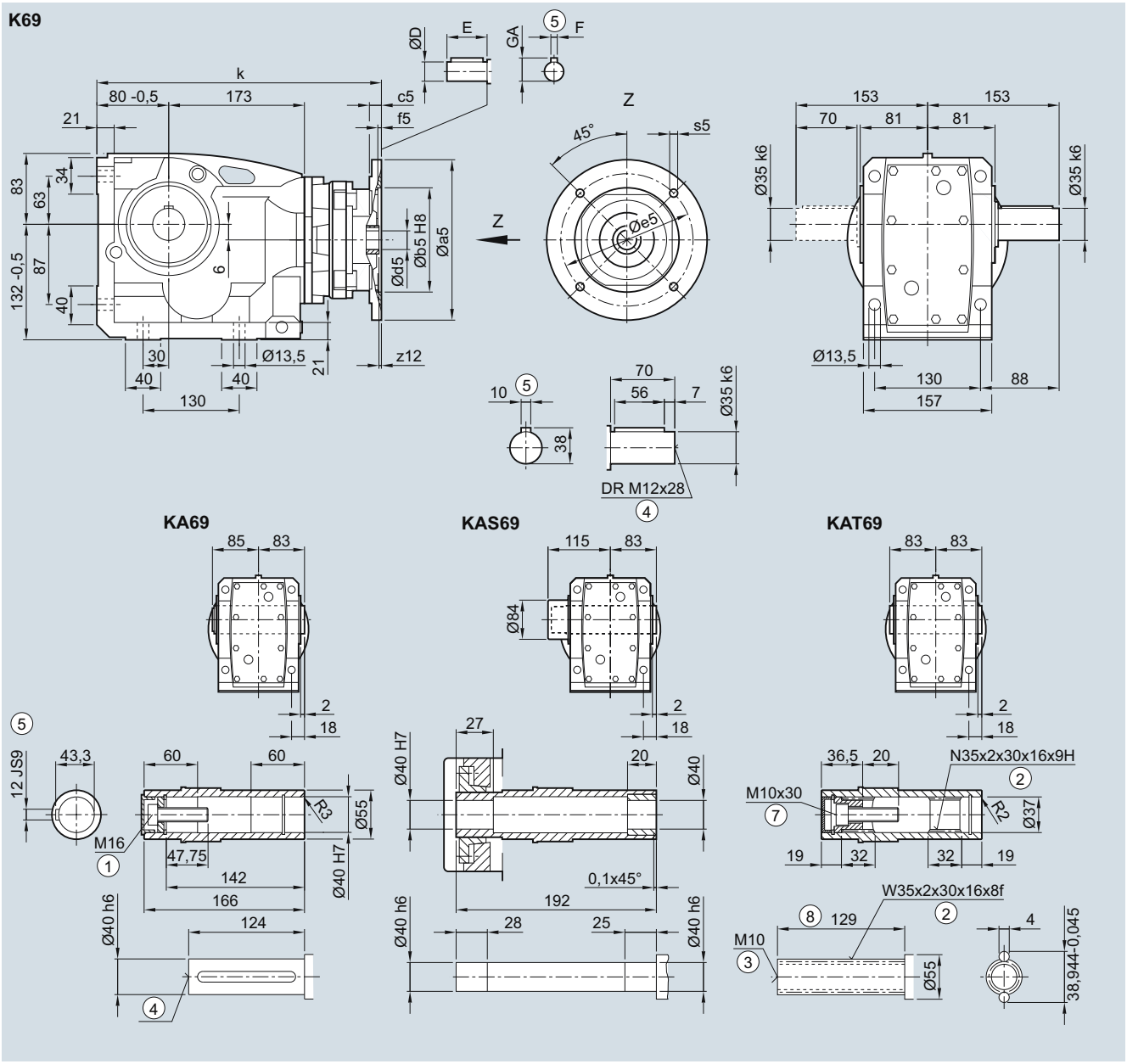
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	301.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	301.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	329.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	329.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	384.0
112	250	180	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

K.69 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4

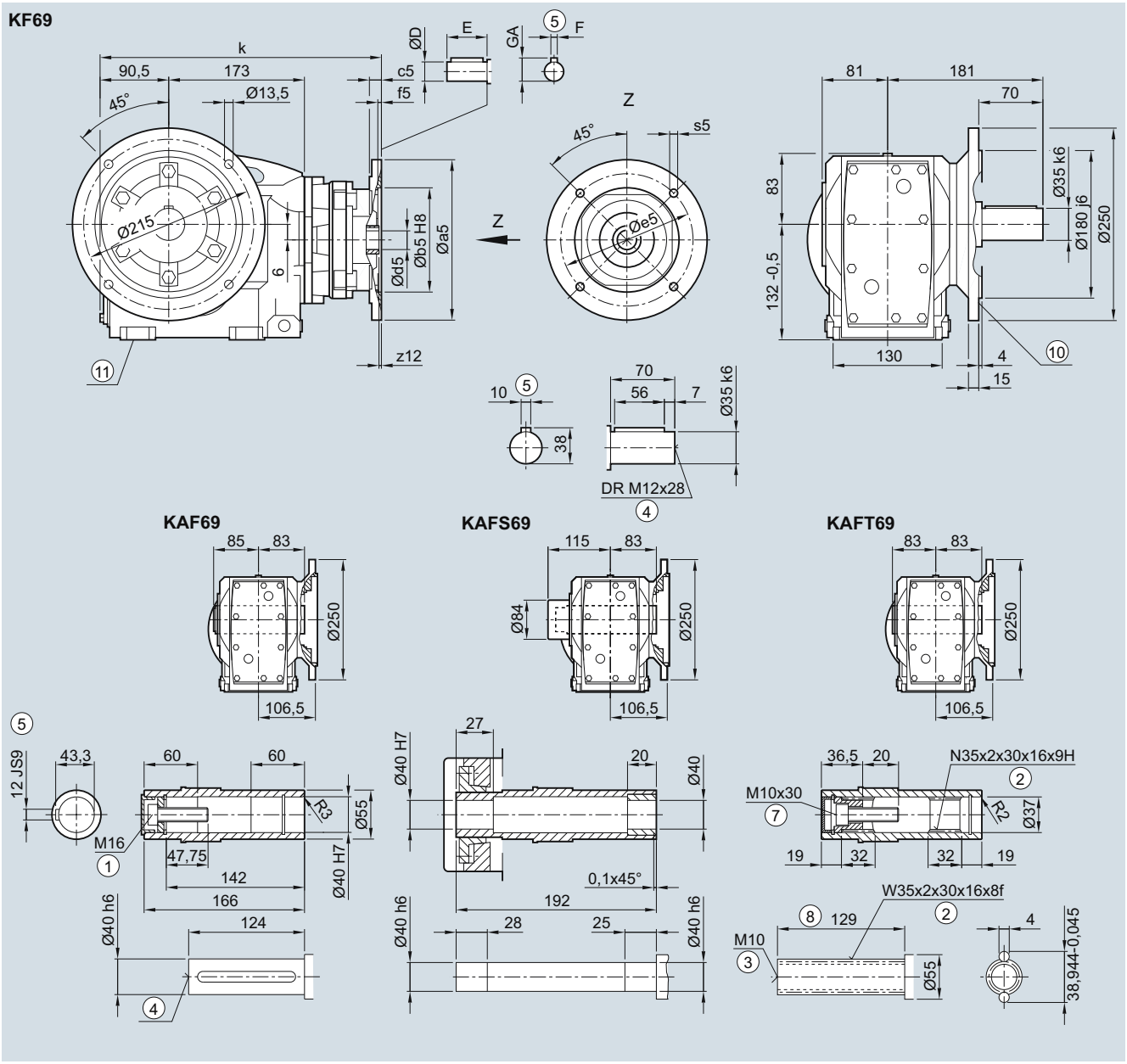


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115.0	M8	2.5	11	23	4	12.5	321.0
71	160	110	12	4.5	130.0	M8	2.5	14	30	5	16.0	321.0
80	200	130	15	4.5	165.0	M10	4.0	19	40	6	12.5	349.0
90	200	130	15	4.5	165.0	M10	4.0	24	50	8	27.0	349.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	403.5
112	250	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

K.F.69 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



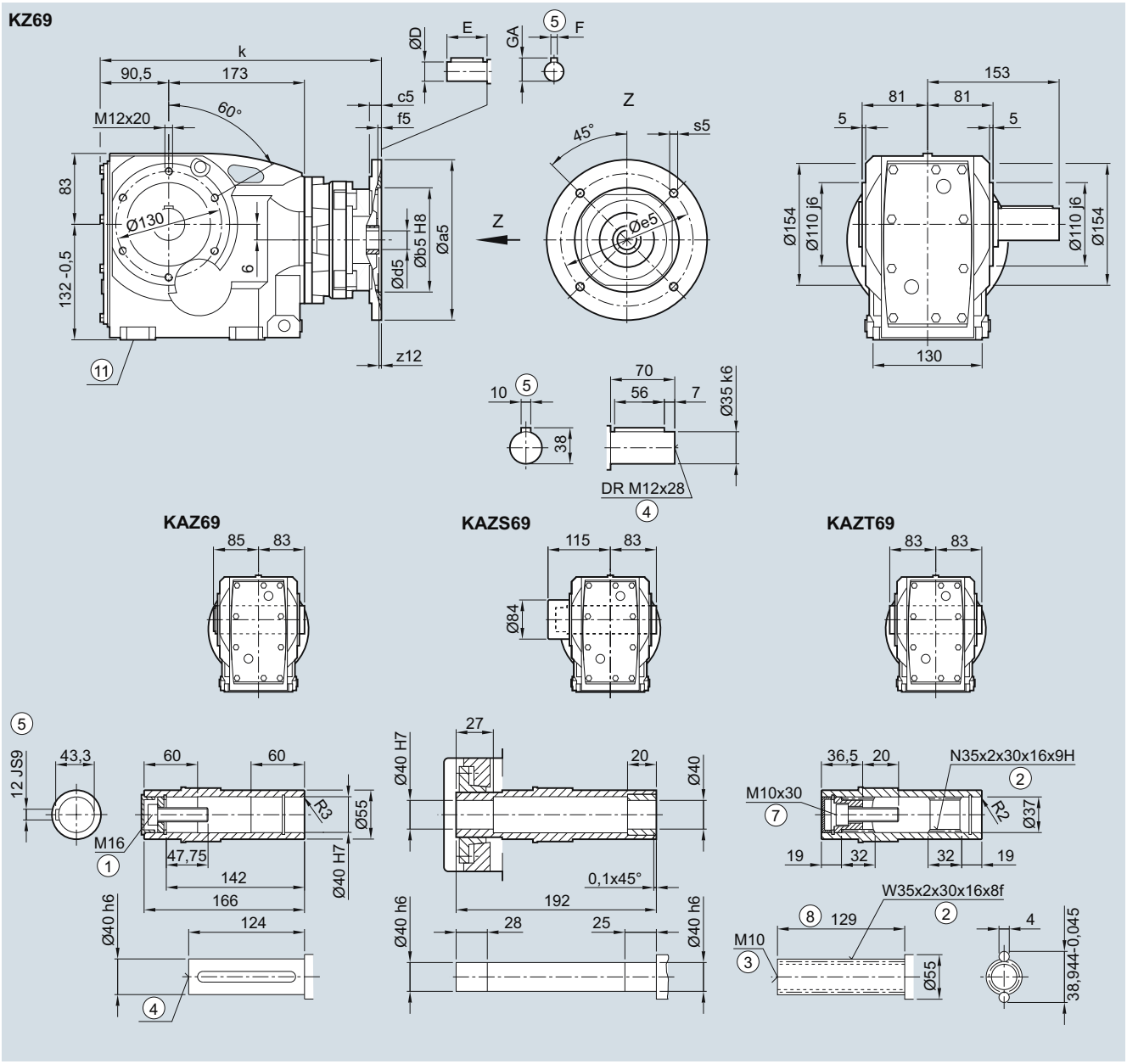
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	331.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	331.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	359.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	359.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
112	250	180	16	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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.69 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4

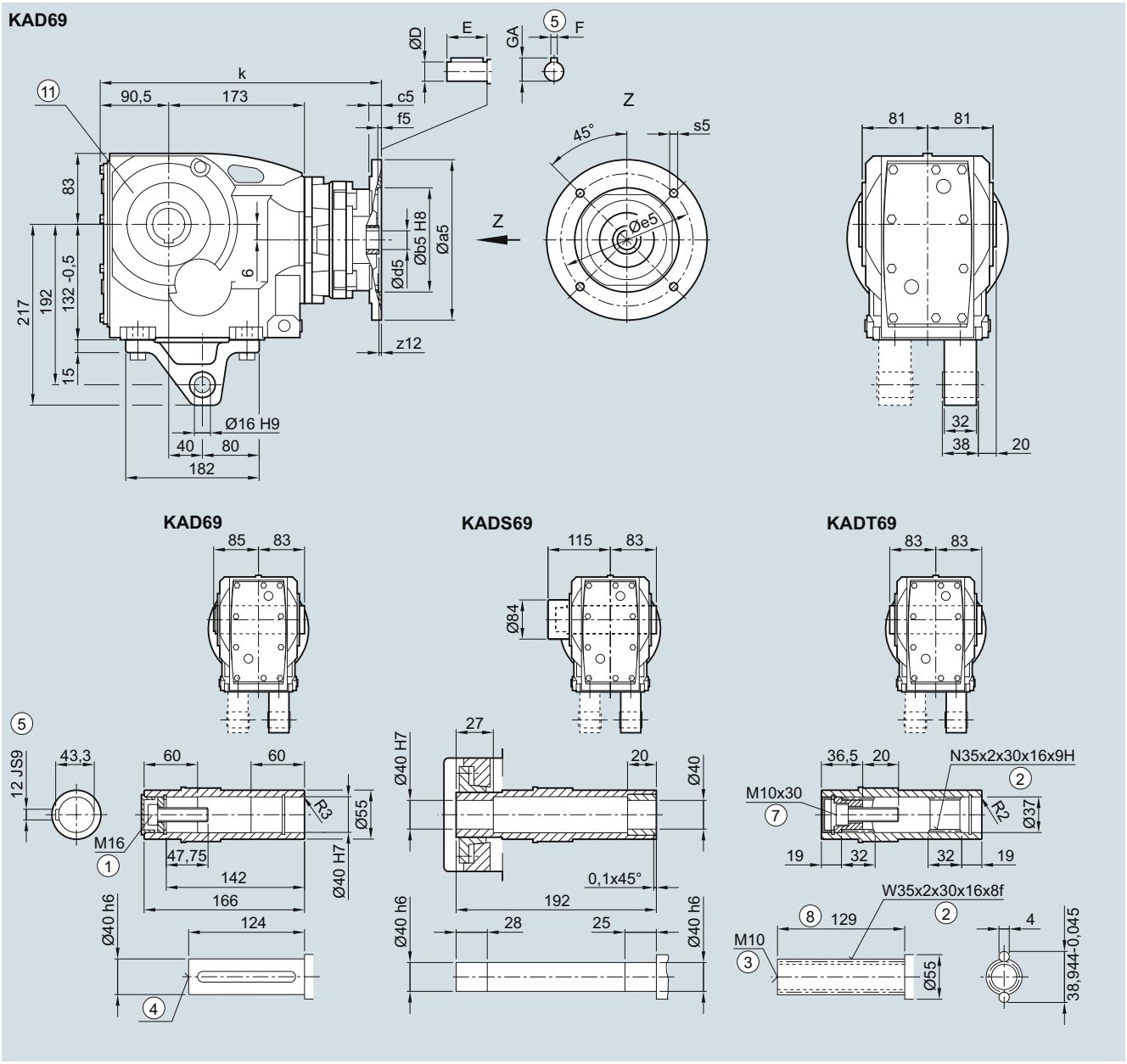


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	331.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	331.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	359.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	359.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
112	250	180	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

KAD.69 gearbox in a shaft-mounted design

KAD030K4, KADS030K4, KADT030K4



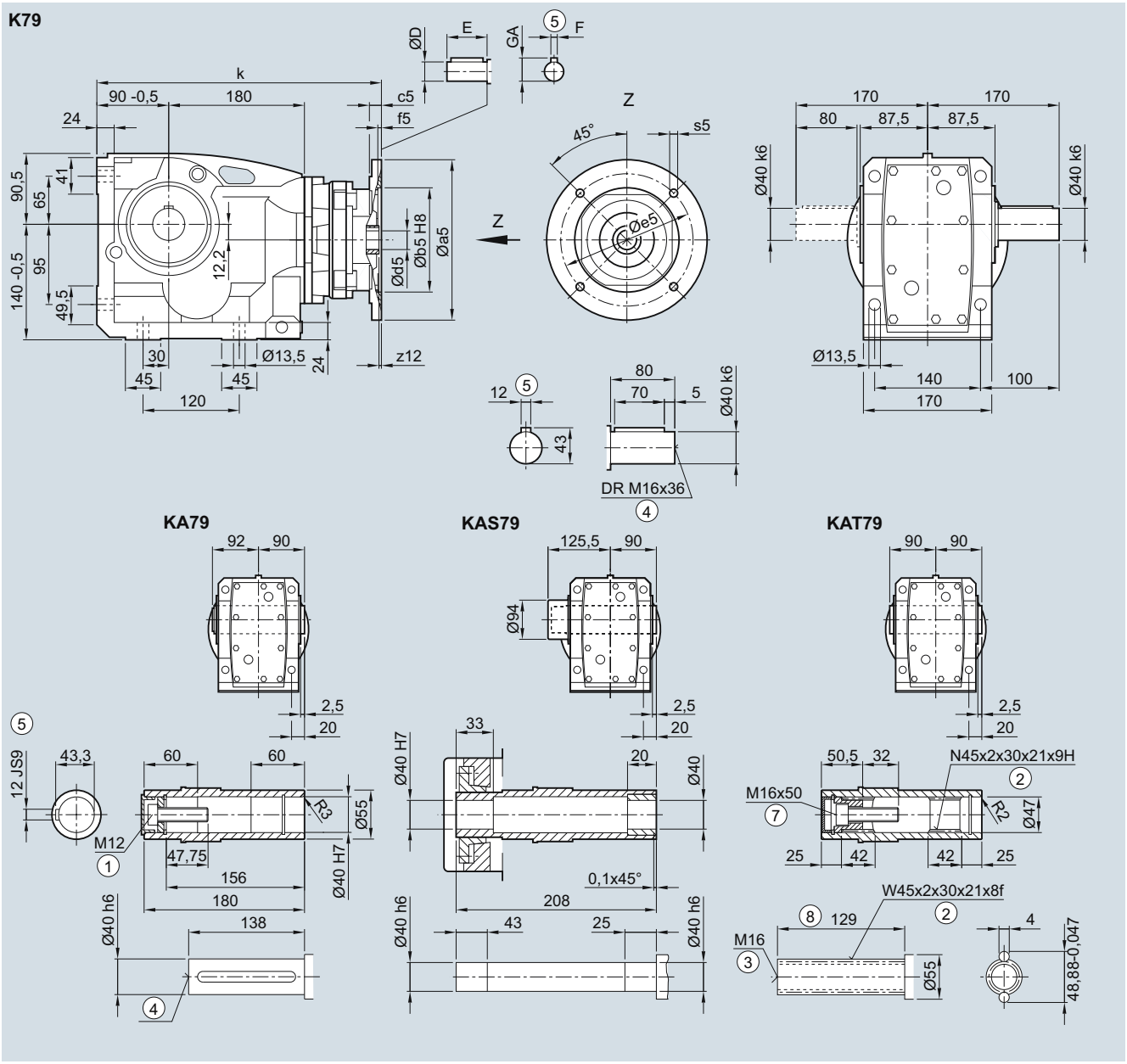
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	331.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	331.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	359.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	359.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	414.0
112	250	180	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

K.79 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4

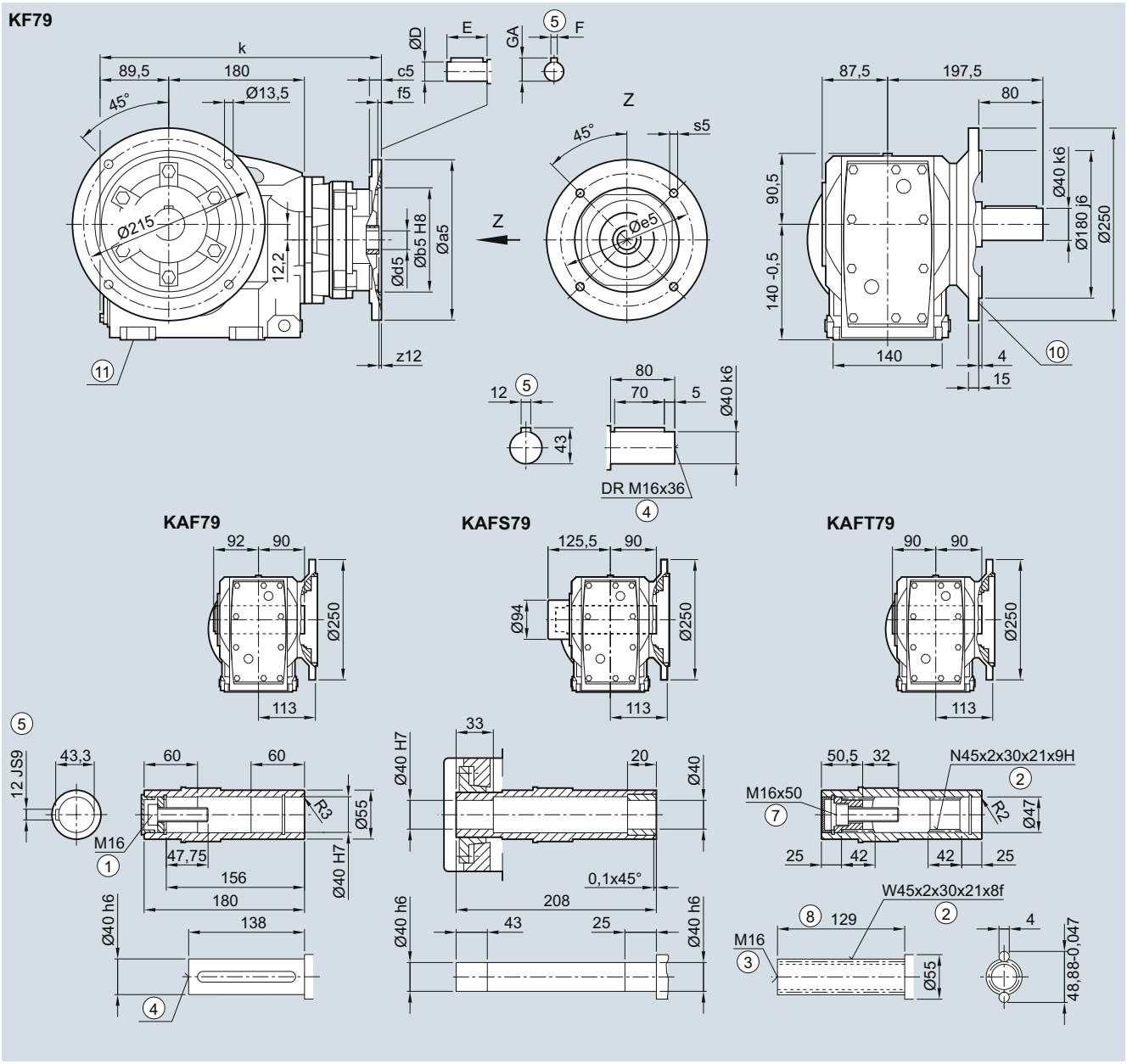


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115.0	M8	2.5	11	23	4	12.5	338.0
71	160	110	12	4.5	130.0	M8	2.5	14	30	5	16.0	338.0
80	200	130	15	4.5	165.0	M10	4.0	19	40	6	12.5	366.0
90	200	130	15	4.5	165.0	M10	4.0	24	50	8	27.0	366.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.5
112	250	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

K.F.79 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



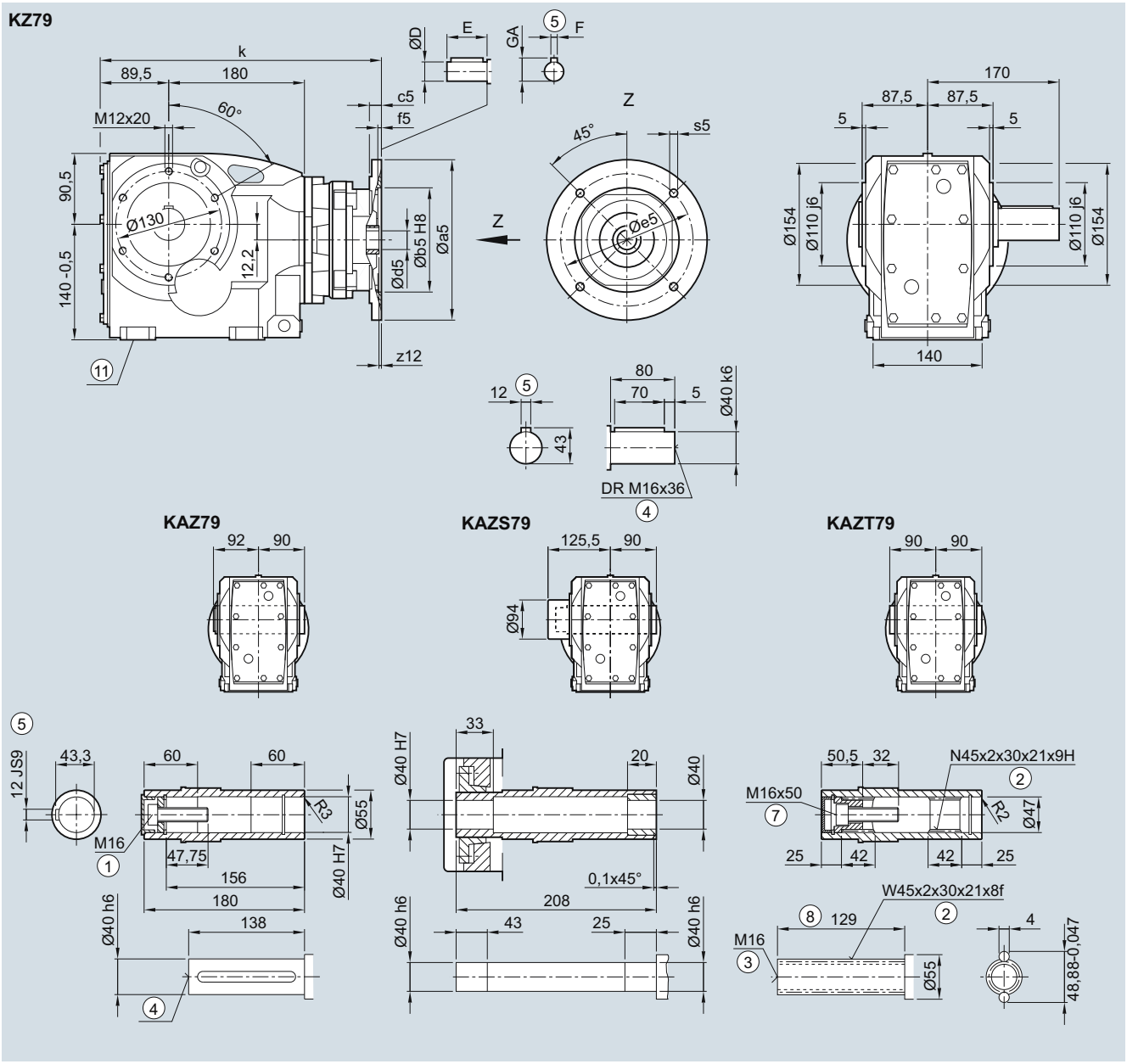
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	337.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	337.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	365.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	365.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
112	250	180	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.79 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4

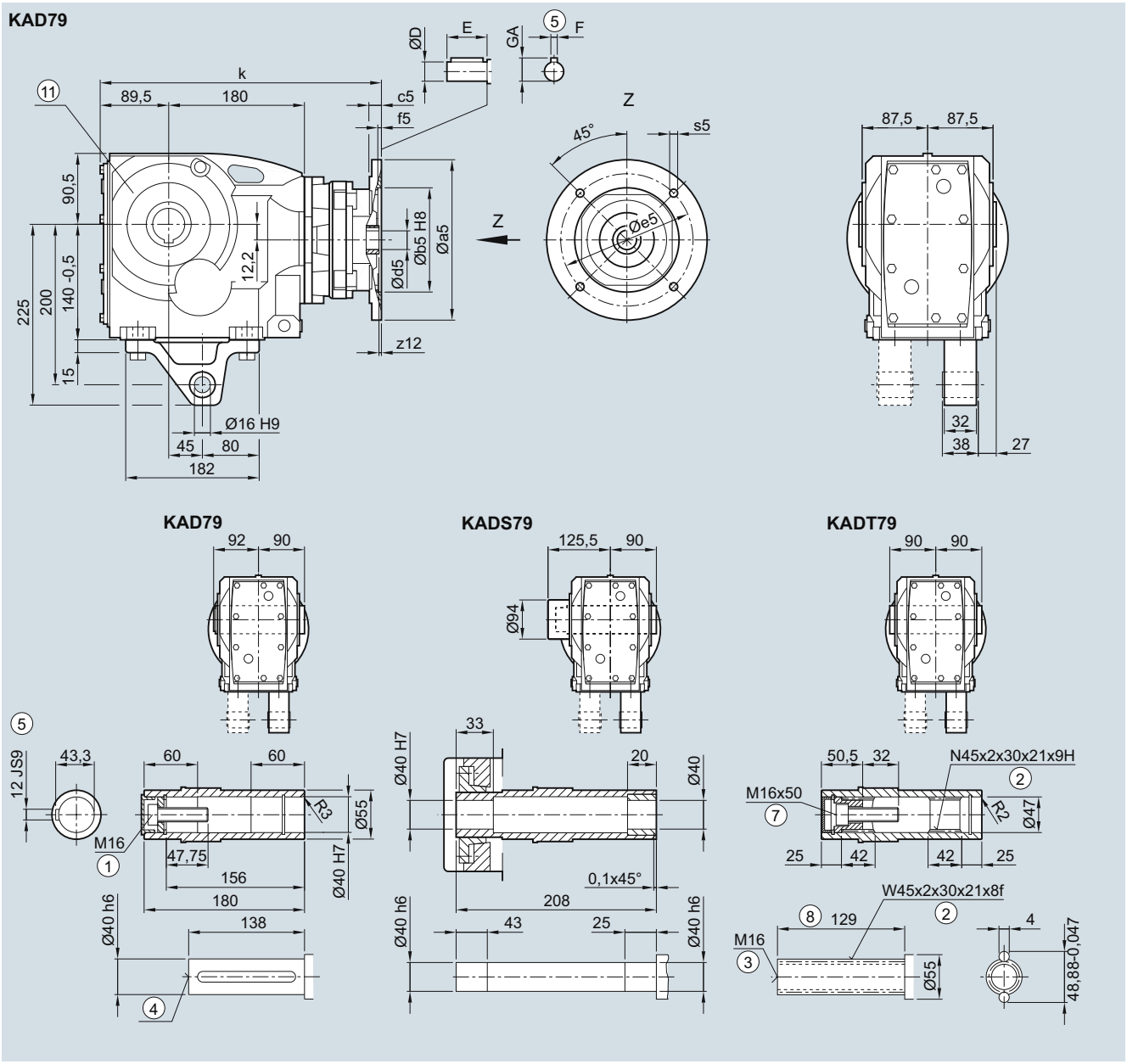


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	337.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	337.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	365.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	365.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
112	250	180	16	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 ⑪ Use bores only for foot-mounted design

KAD.79 gearbox in a shaft-mounted design

KAD030K4, KADS030K4, KADT030K4



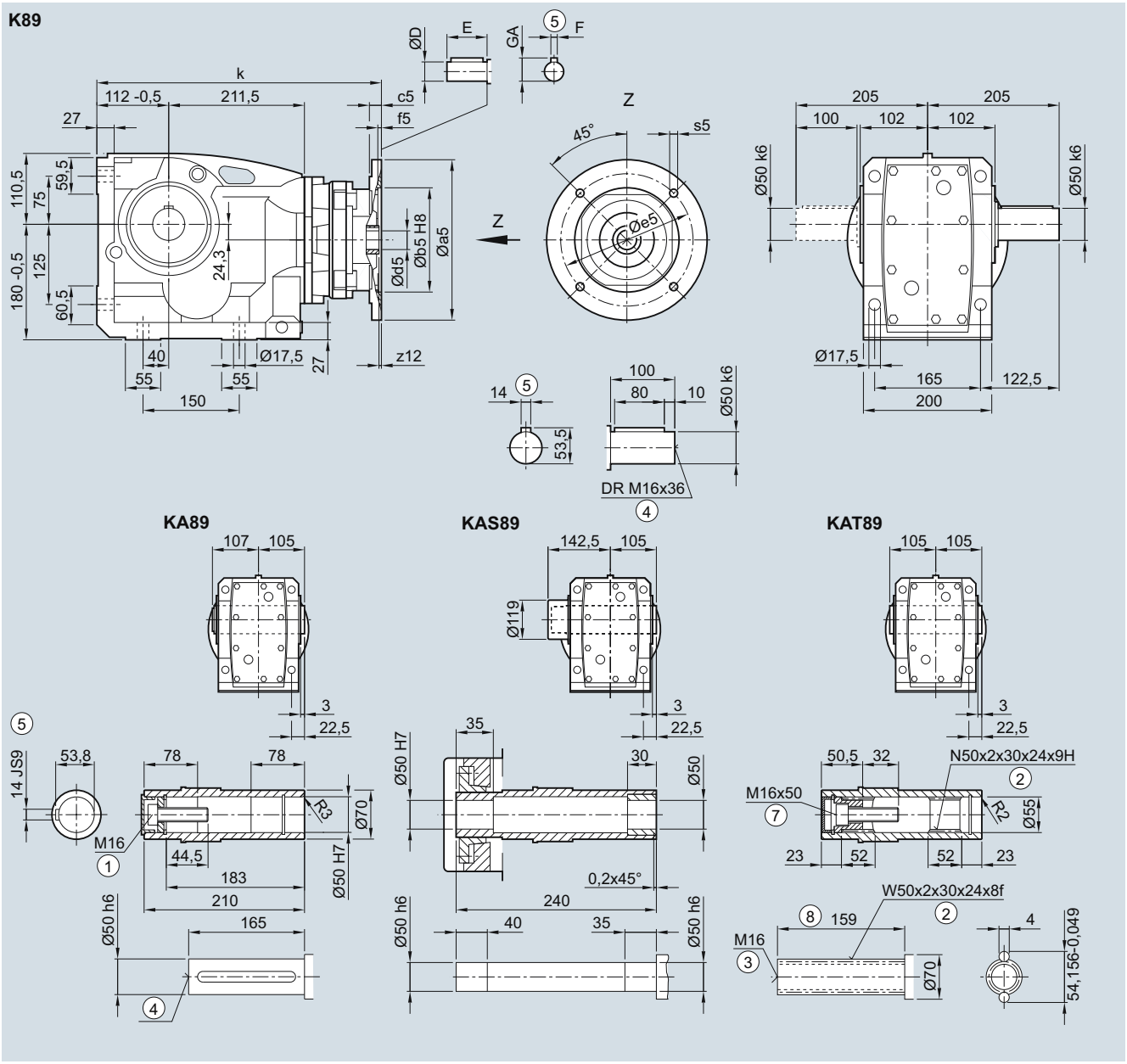
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	337.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	337.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	365.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	365.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	420.0
112	250	180	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

K.89 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4

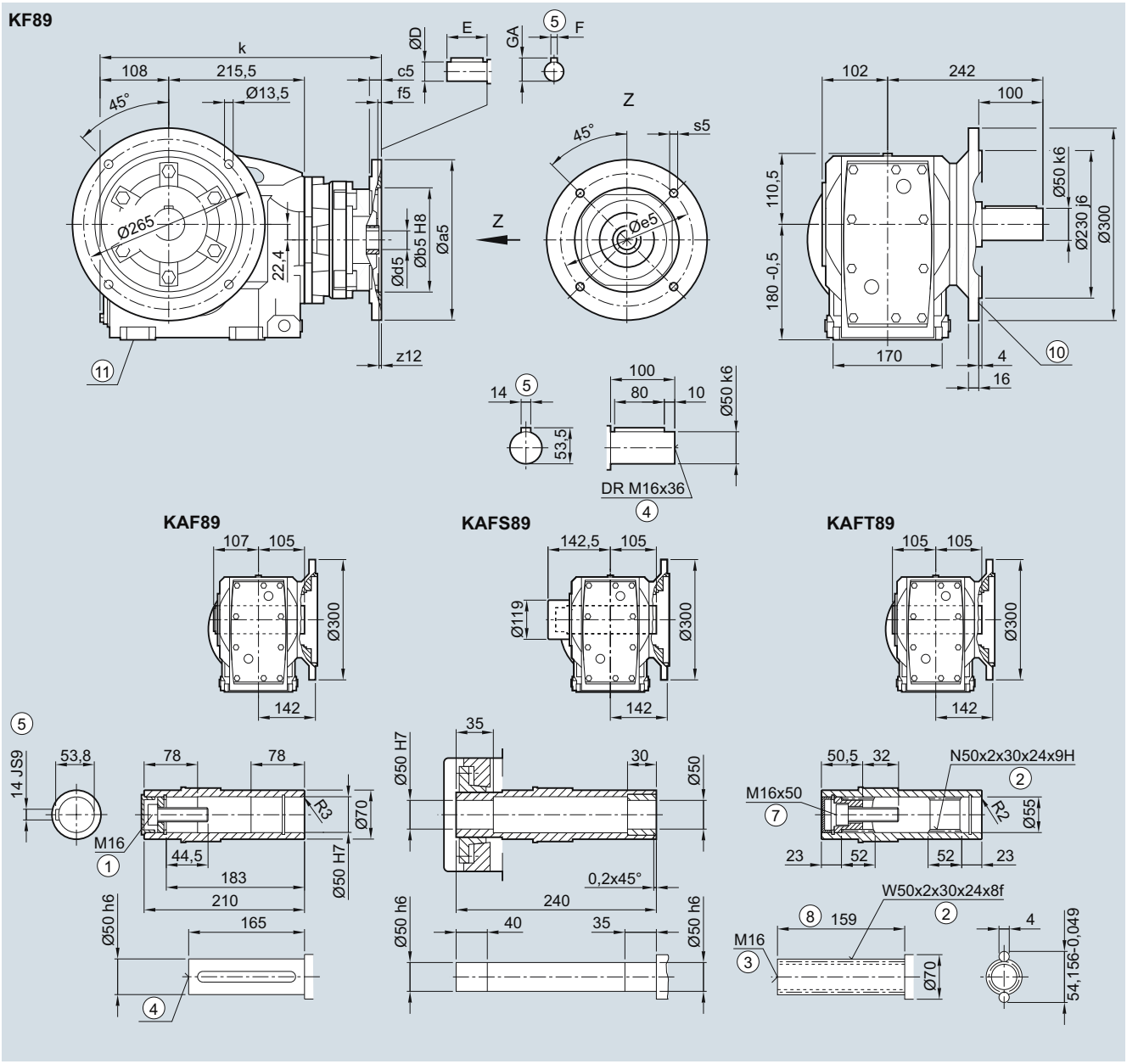


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130.0	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165.0	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165.0	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215.0	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215.0	M12	7.5	28	60	8	31.0	468.0
132	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

K.F.89 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



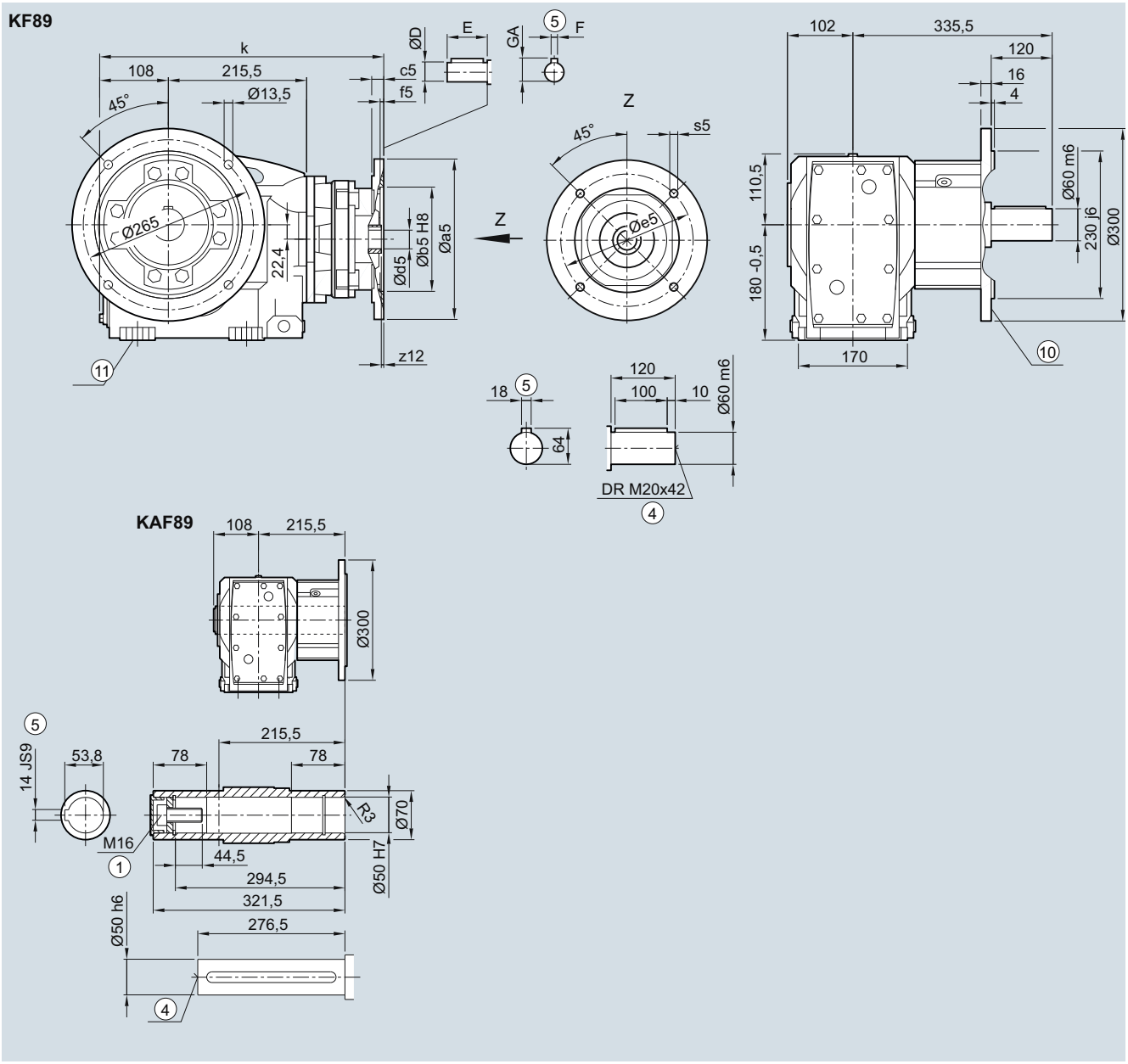
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
132	300	230	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.F.89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040K4, KAF040K4

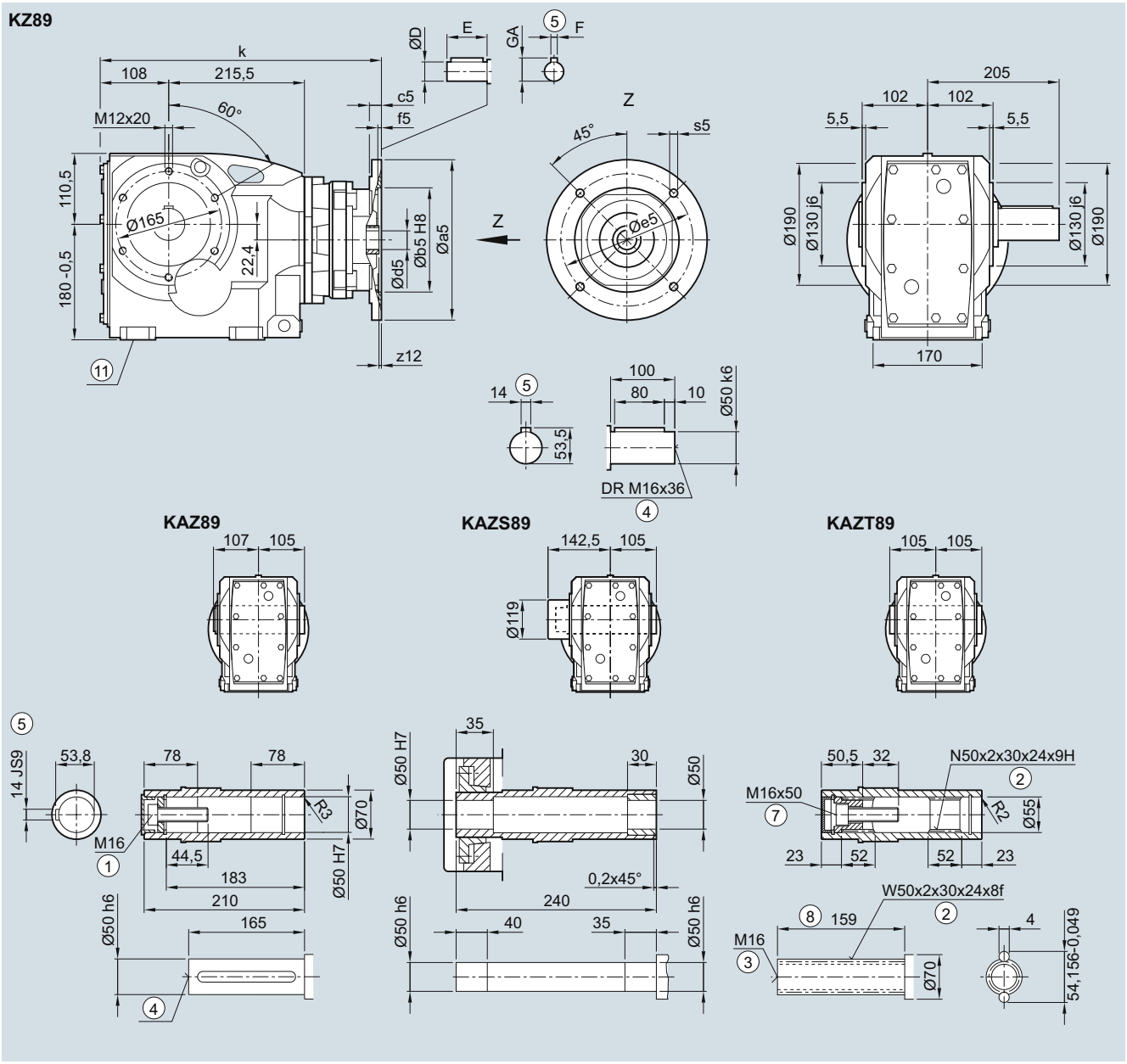


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
132	300	230	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.Z.89 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4



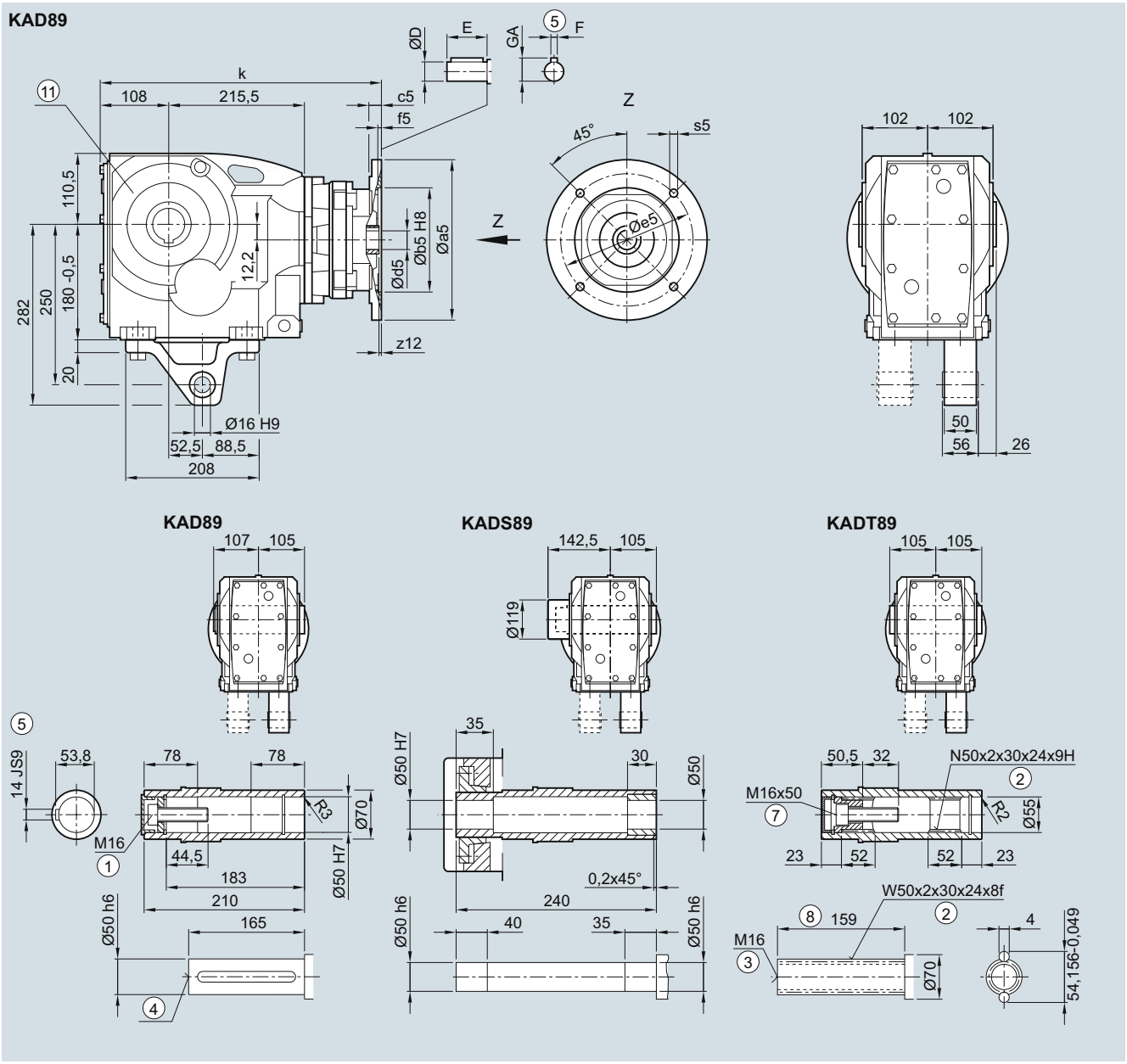
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
132	300	230	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 ⑪ Use bores only for foot-mounted design

Dimensions

KAD.89 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4

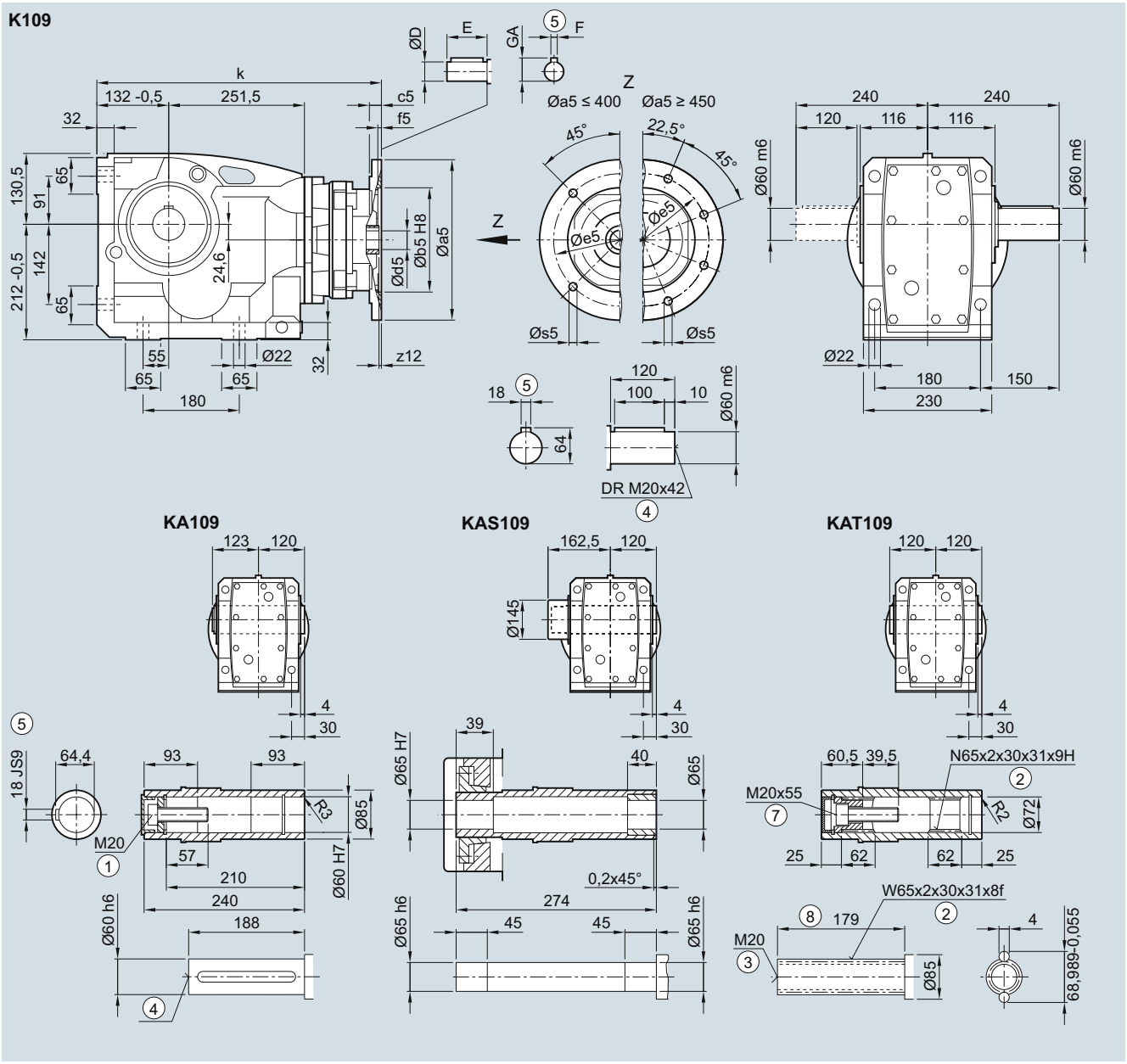


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	389.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	413.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	413.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	468.0
132	300	230	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 ⑪ Use bores only for housing flange design

K.109 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4



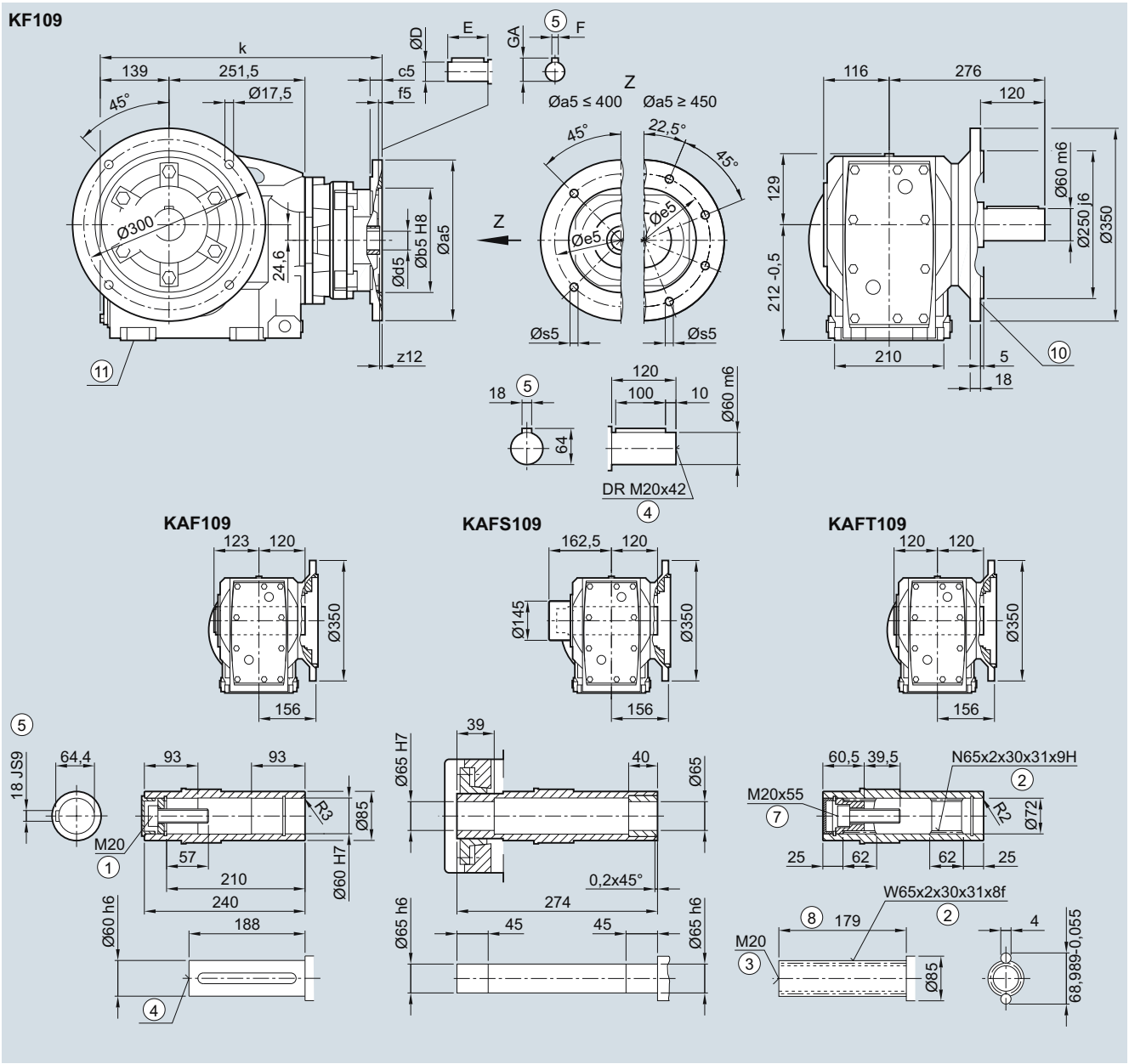
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	460.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	460.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	511.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	511.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	528.5
160	350	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

Dimensions

K.F.109 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4

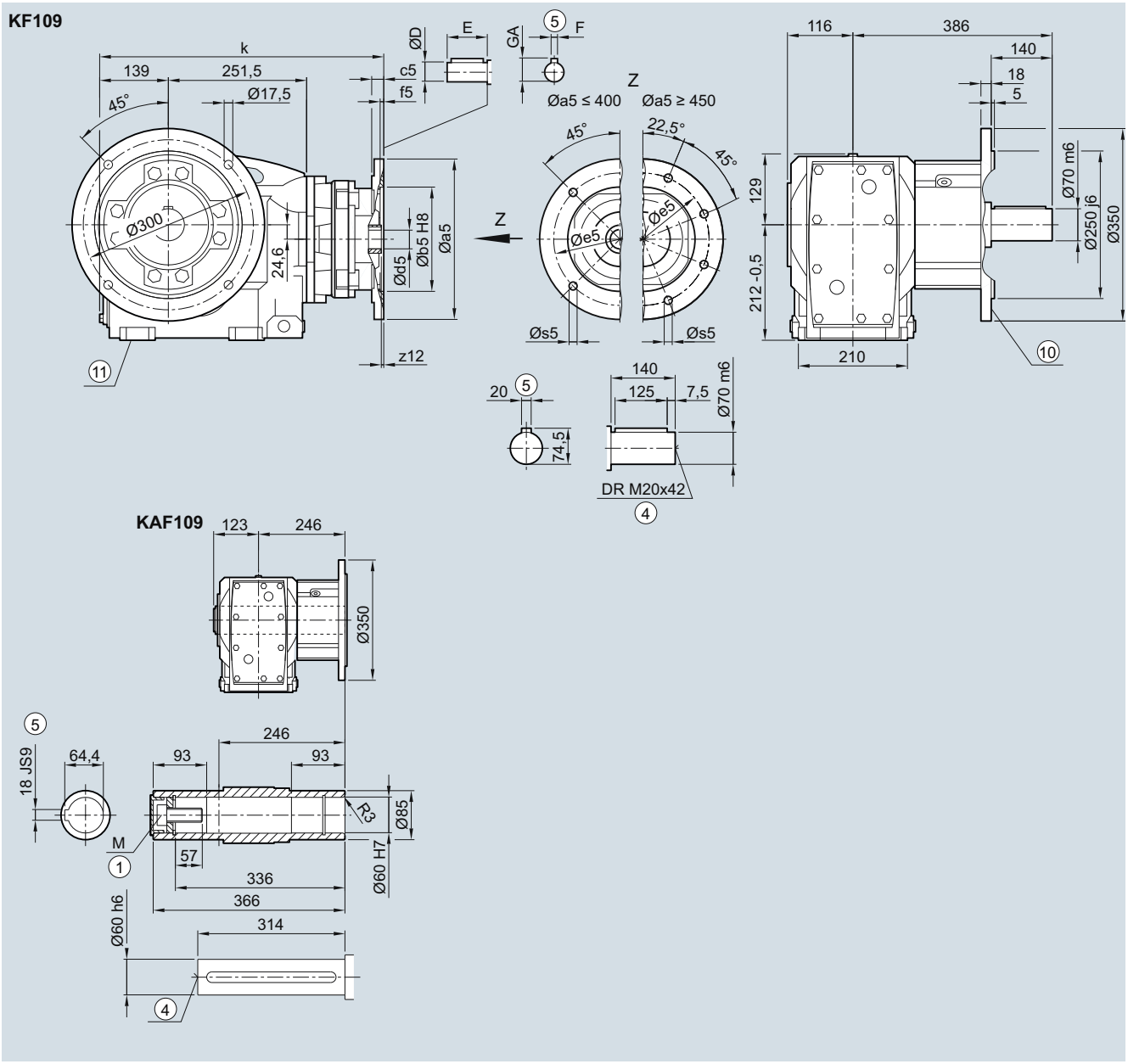


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	467.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	467.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	535.5
160	350	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 5/175 ⑪ Use bores only for foot-mounted design

K.F.109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040K4, KAF040K4



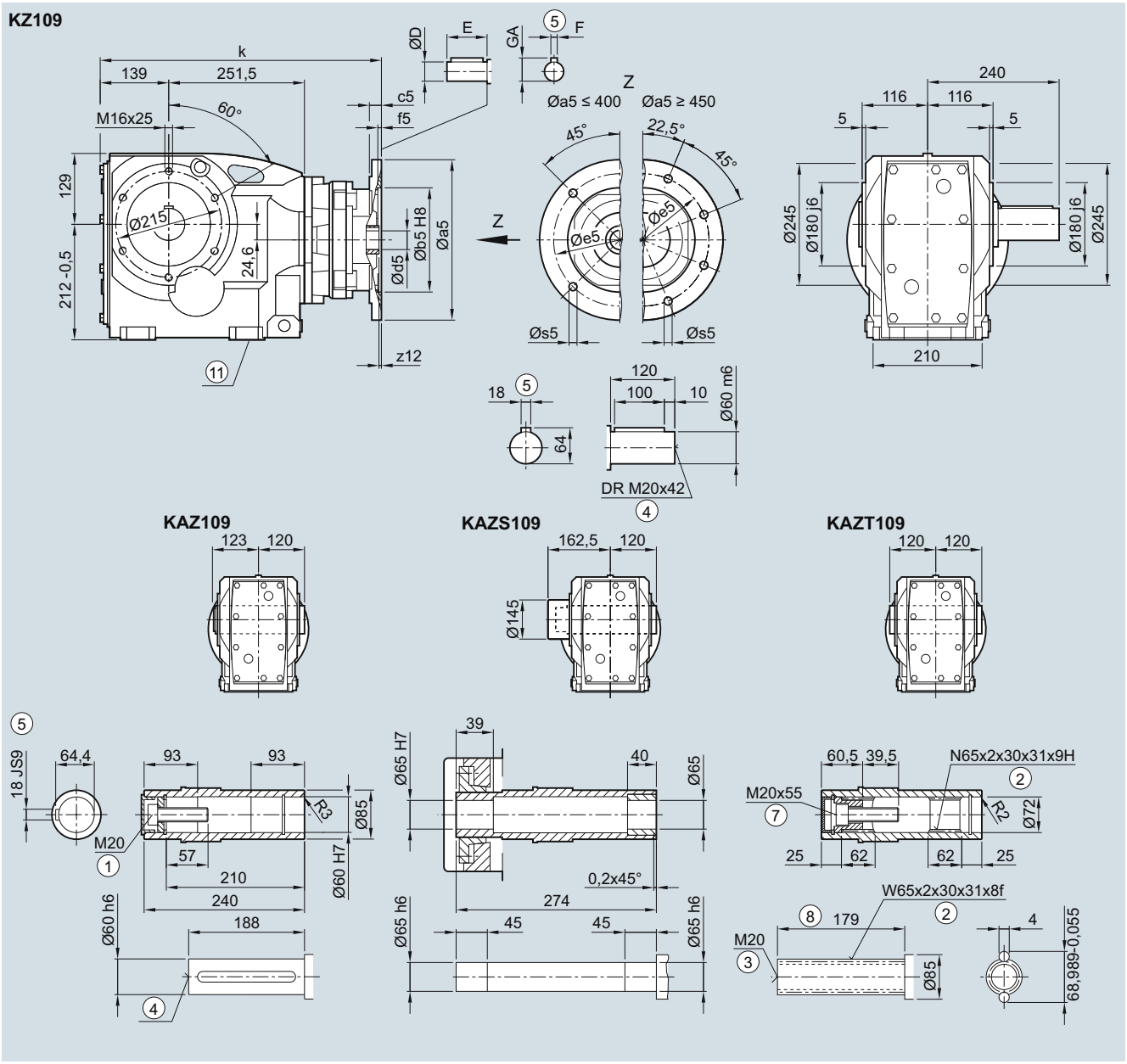
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	467.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	467.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	535.5
160	350	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.109 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4

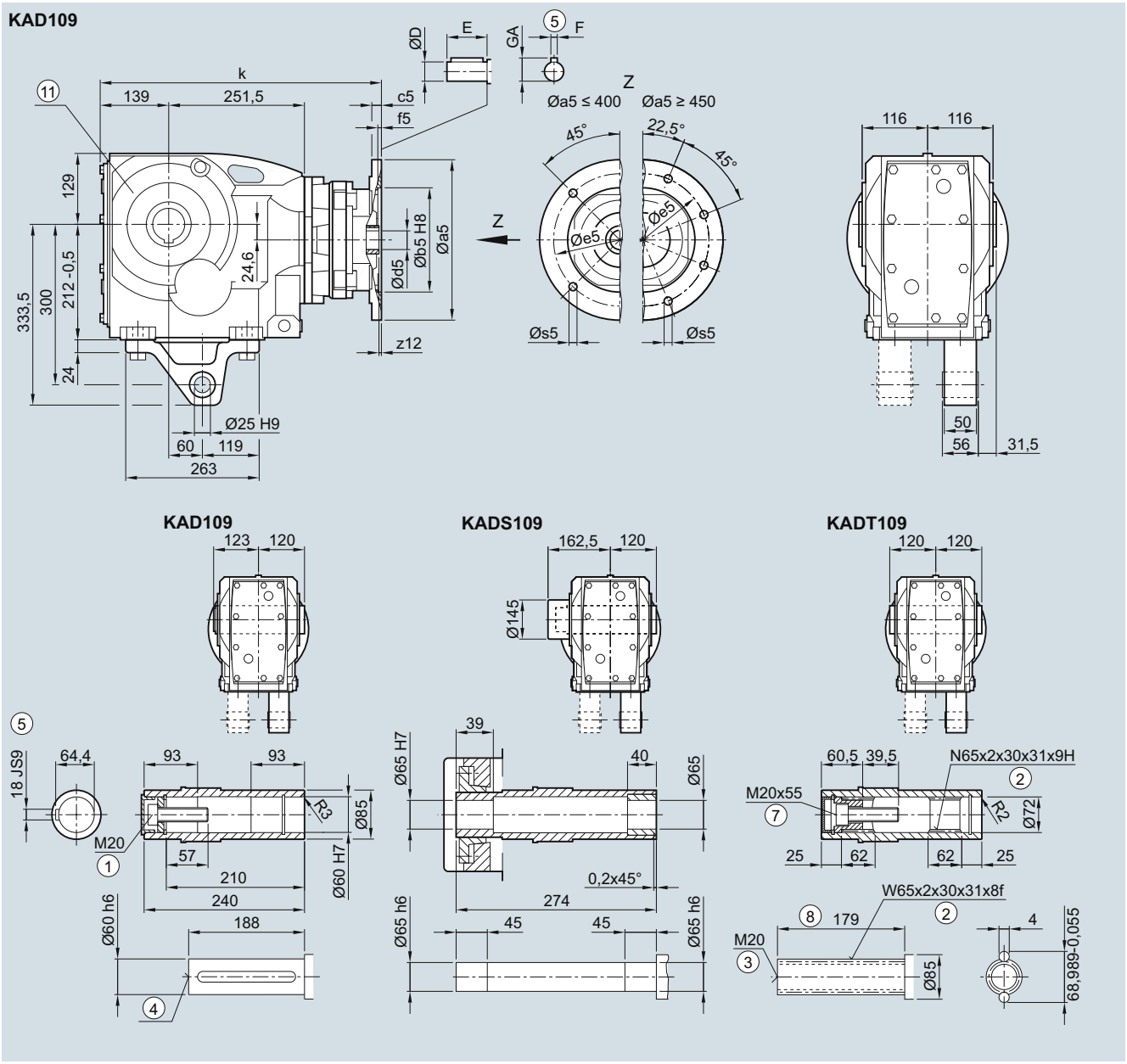


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	467.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	467.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	535.5
160	350	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 ⑪ Use bores only for foot-mounted design

KAD.109 gearbox in a shaft-mounted design

KAD030K4, KADS030K4, KADT030K4



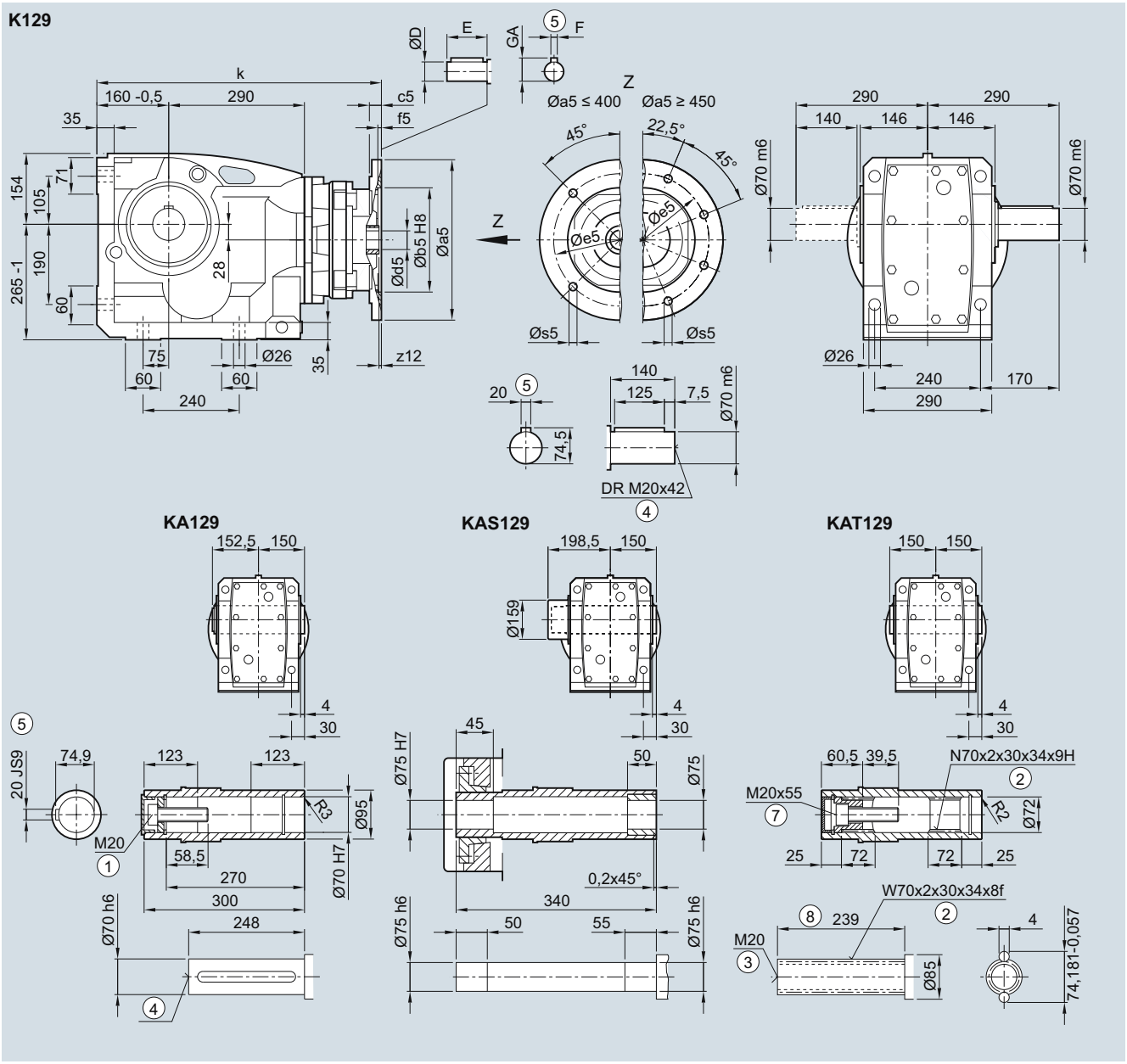
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	467.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	467.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	518.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	535.5
160	350	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

K.129 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4

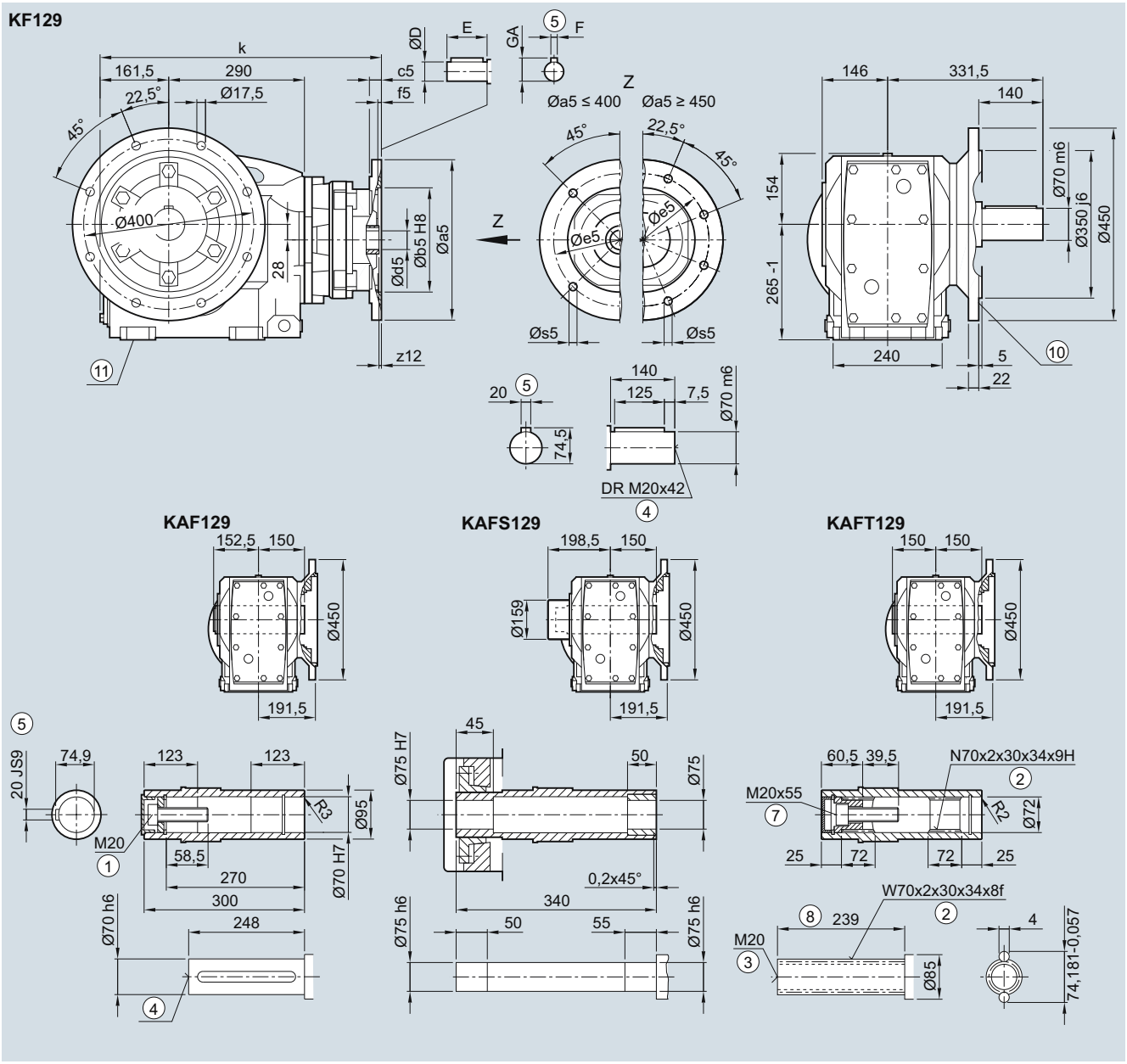


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	520.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	568.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	568.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	586.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	616.0
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

K.F.129 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



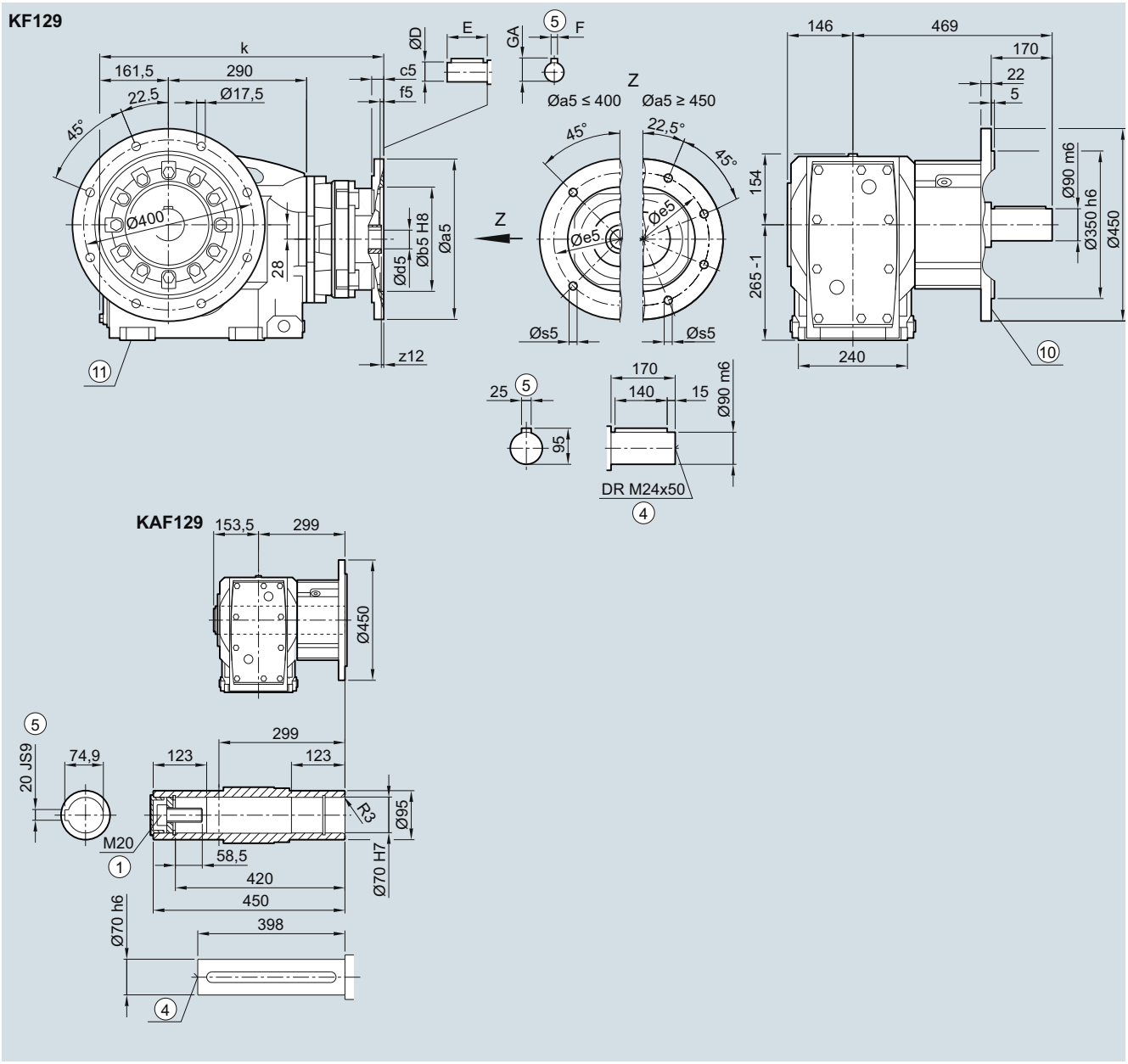
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.F.129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040K4, KAF040K4

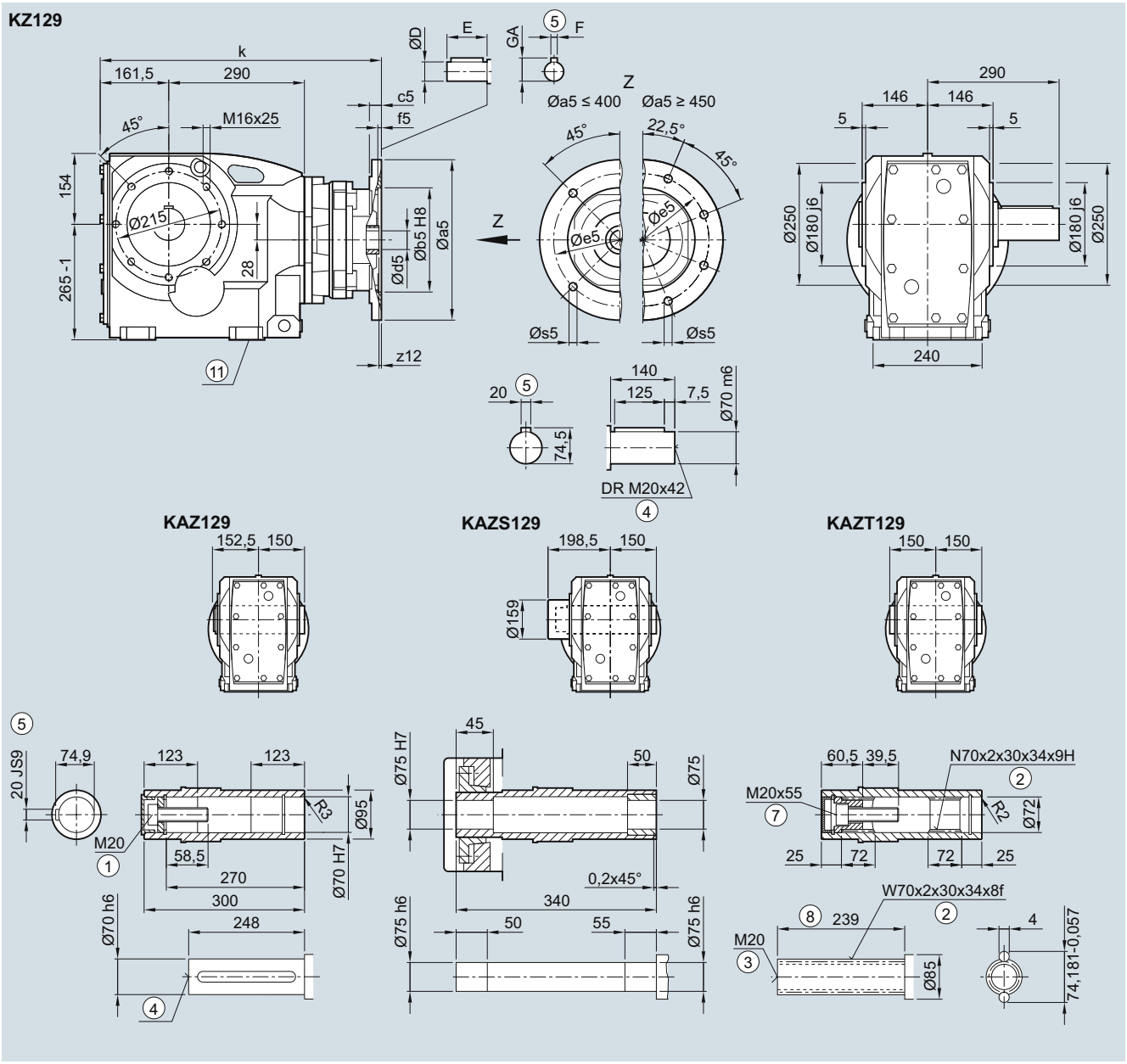


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.Z.129 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4



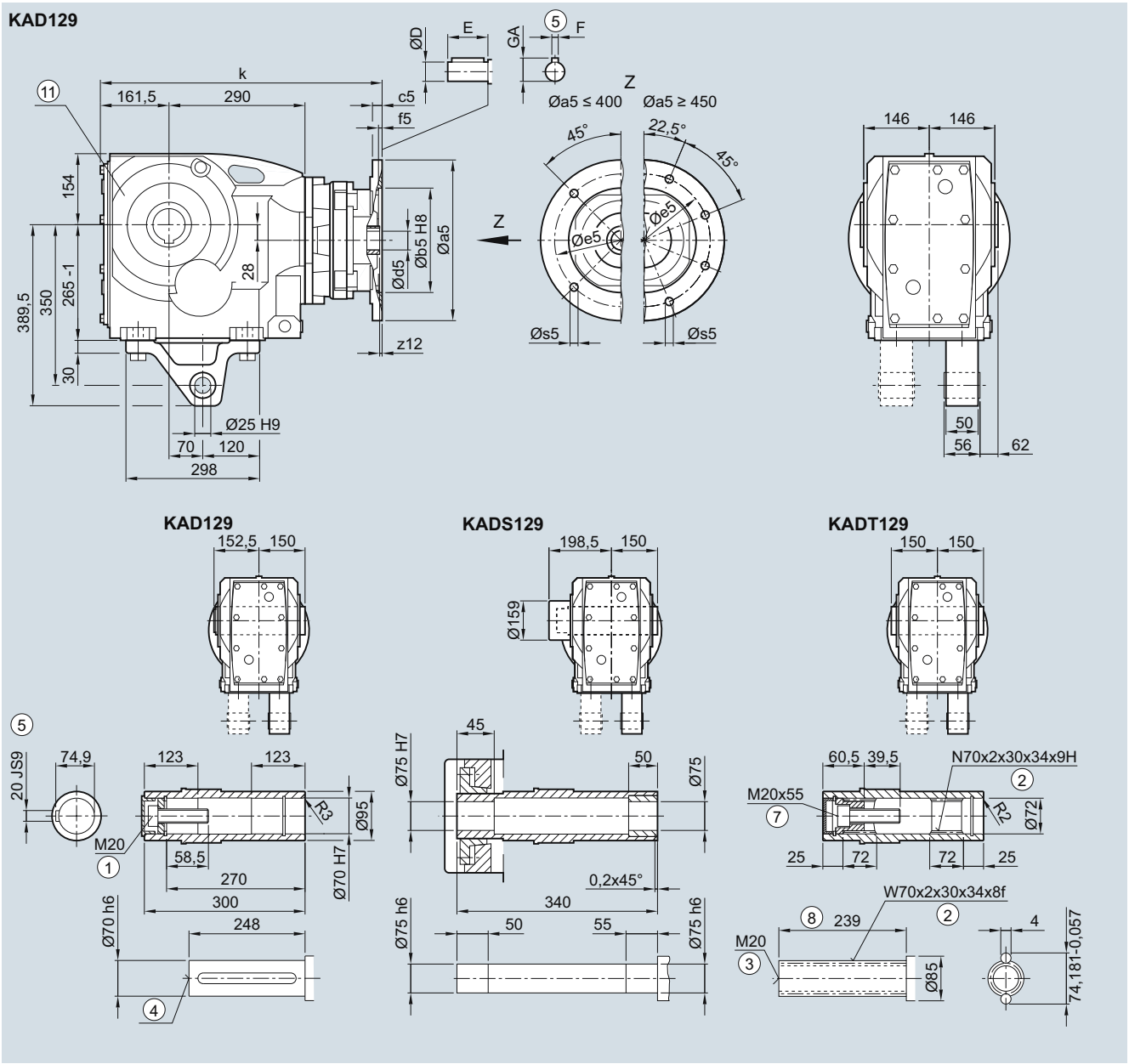
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
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 ⑪ Use bores only for foot-mounted design

Dimensions

KAD.129 gearbox in a shaft-mounted design

KAD030K4, KADS030K4, KADT030K4

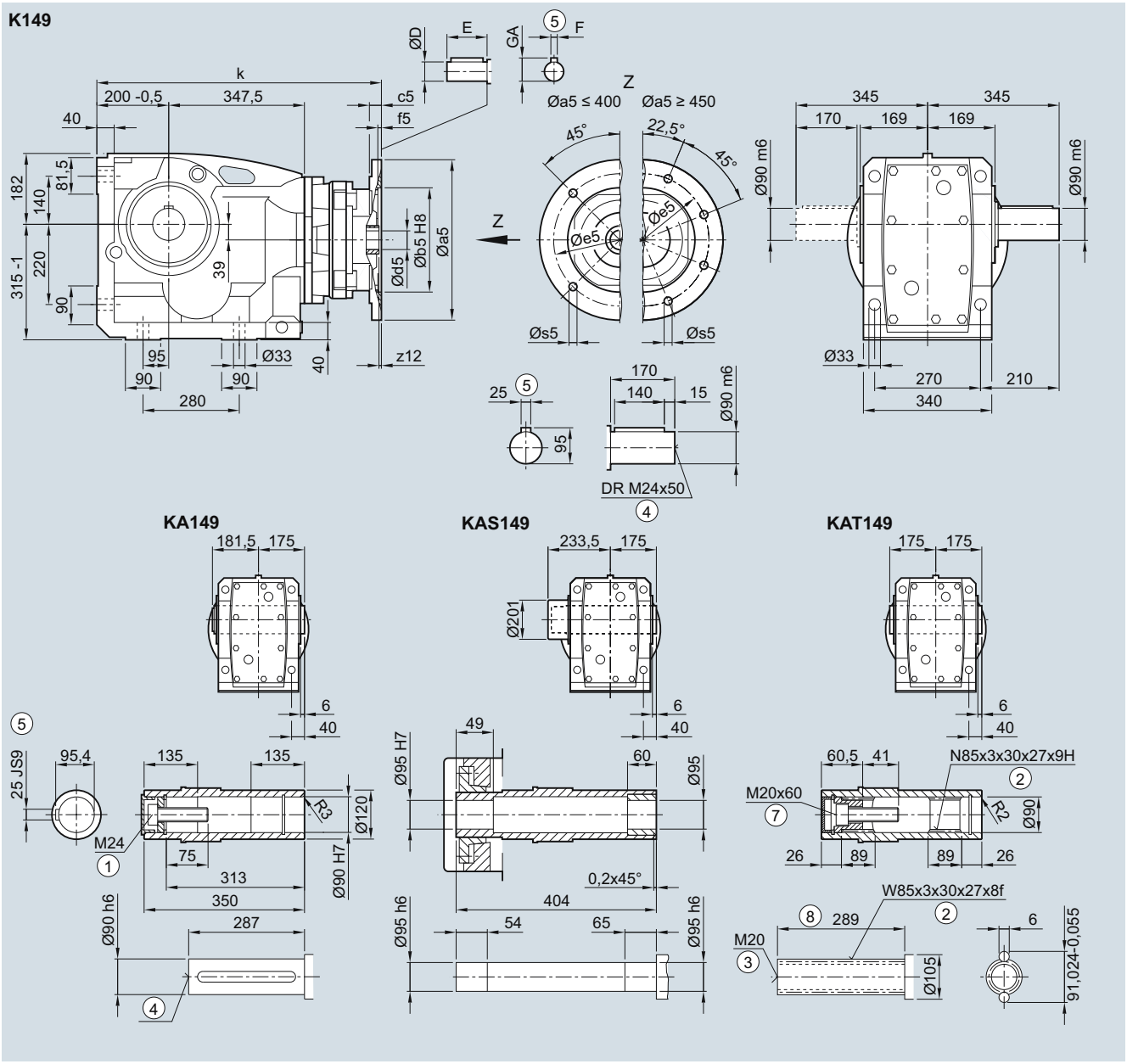


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	521.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	570.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	587.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	617.5
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 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

K.149 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4



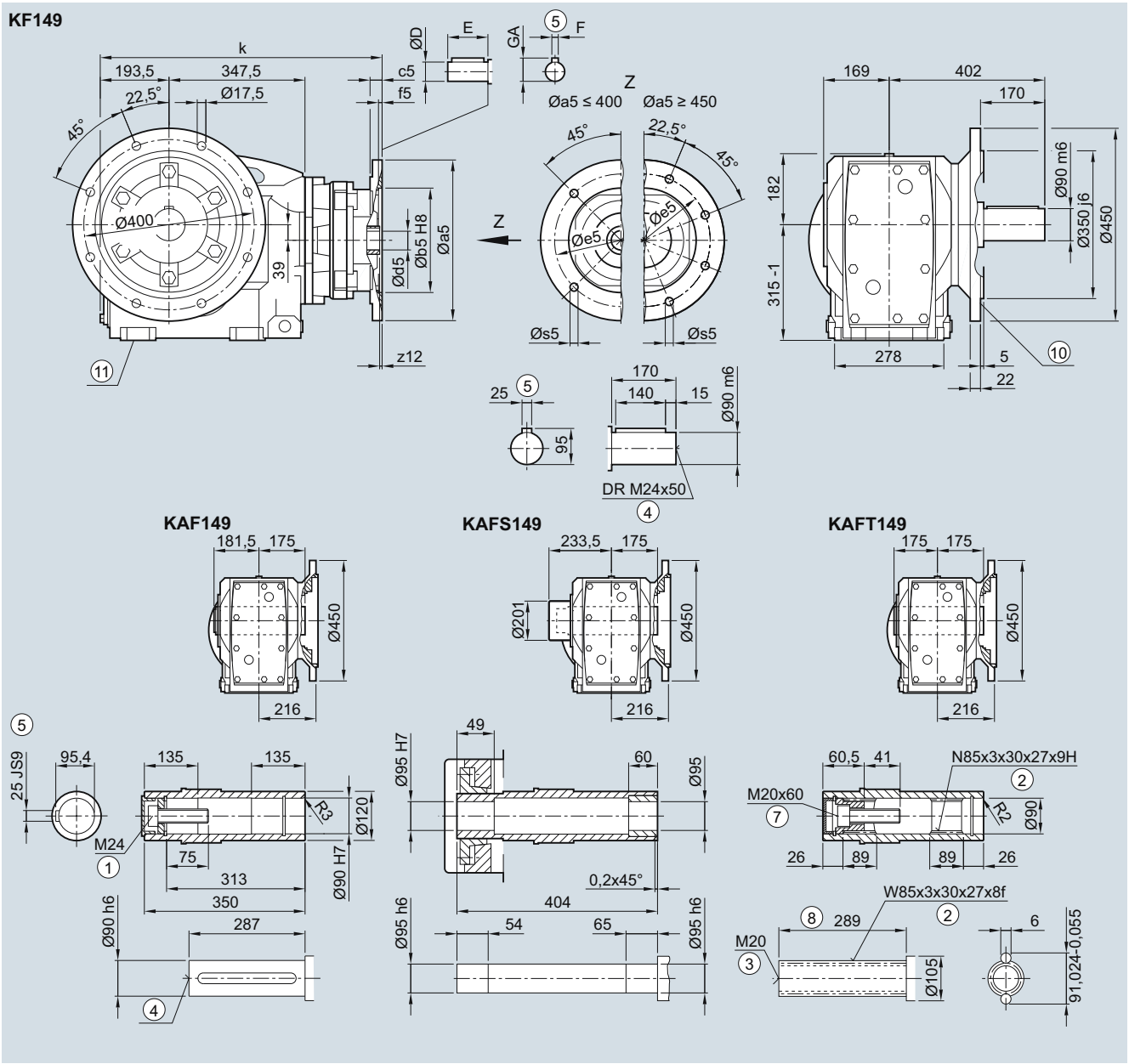
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	610.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	657.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	657.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	672.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	702.5
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

Dimensions

K.F.149 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4

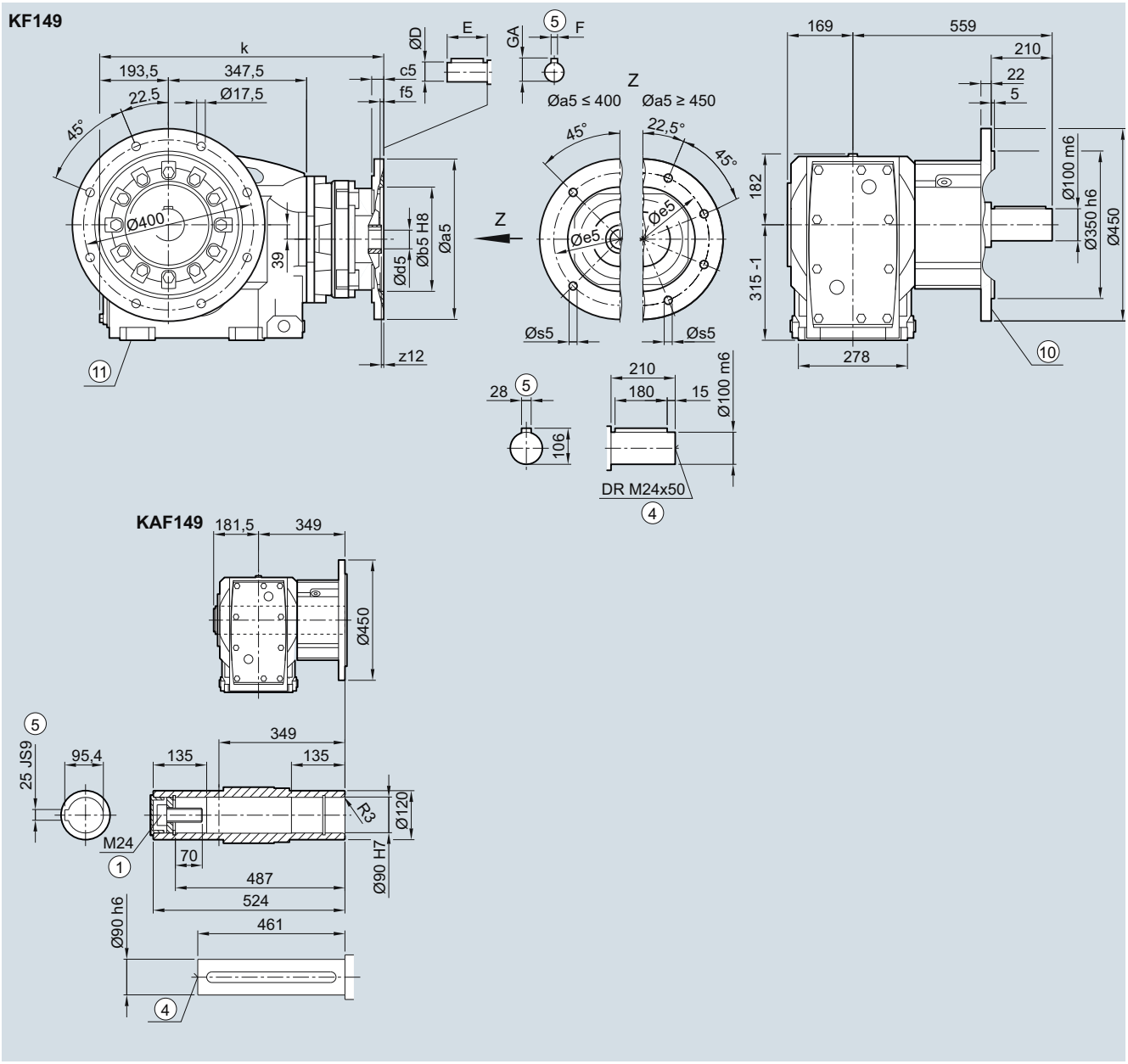


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.F.149 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040K4, KAF040K4



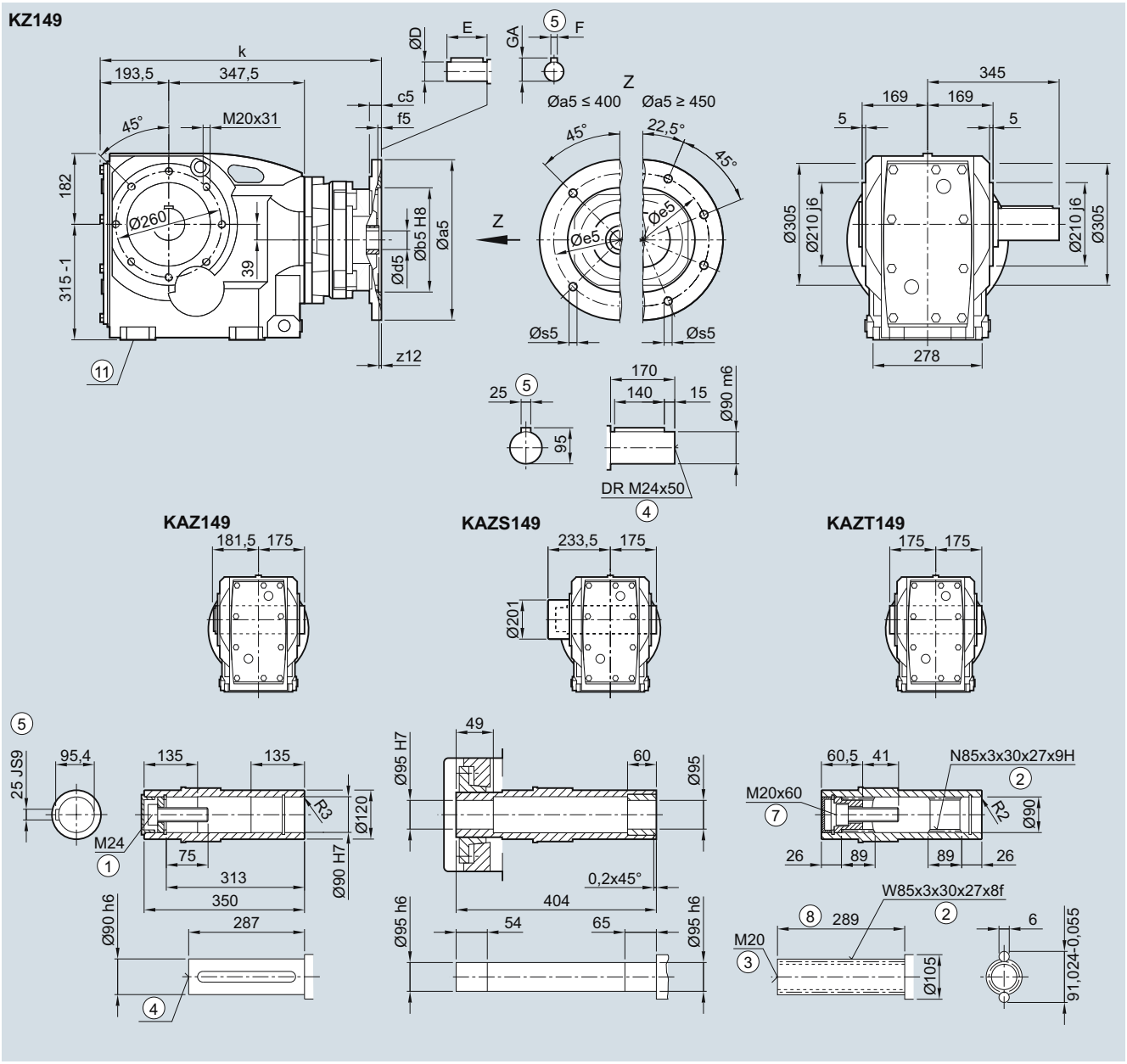
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.149 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4

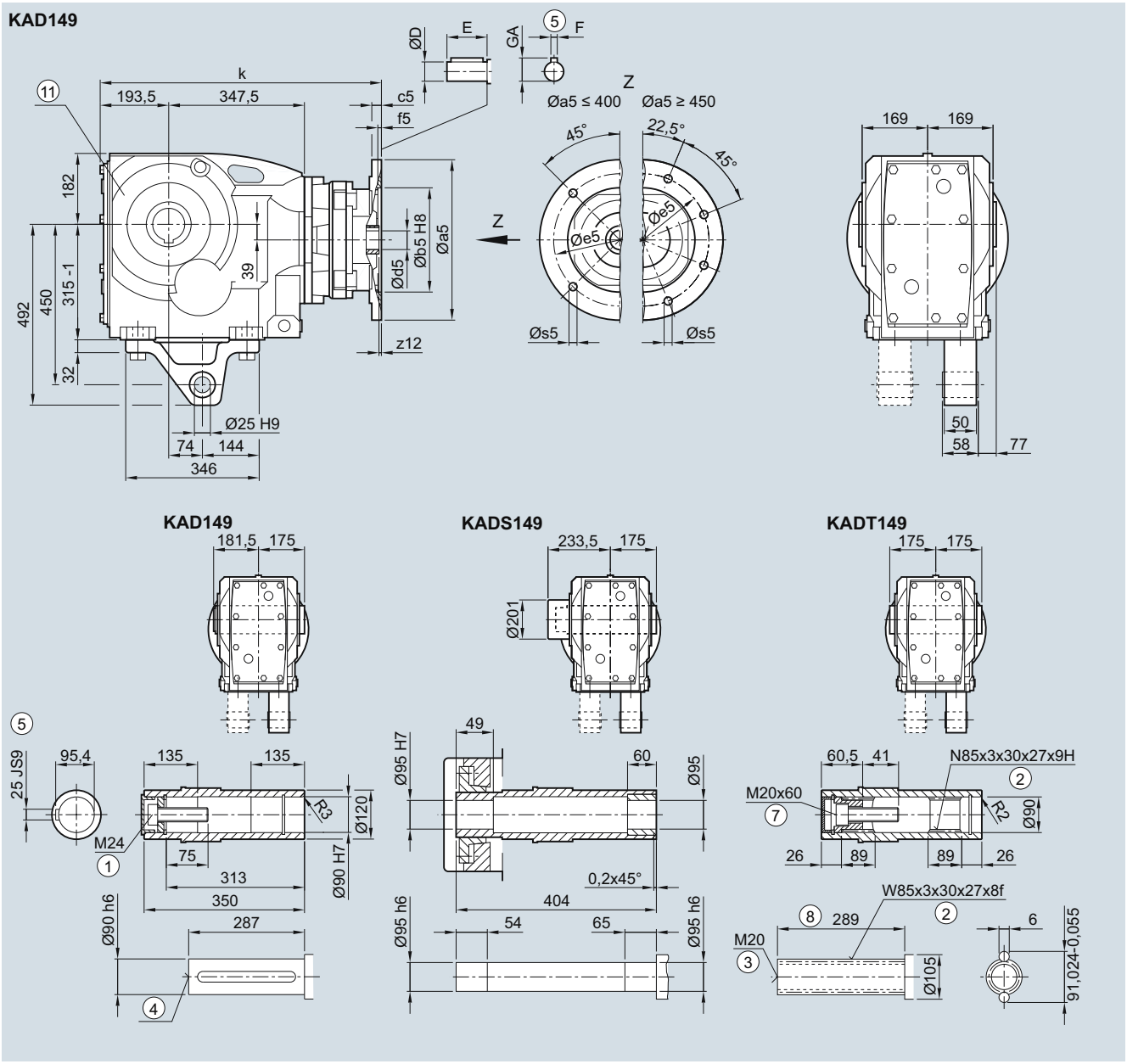


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
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 ⑪ Use bores only for foot-mounted design

KAD.149 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4



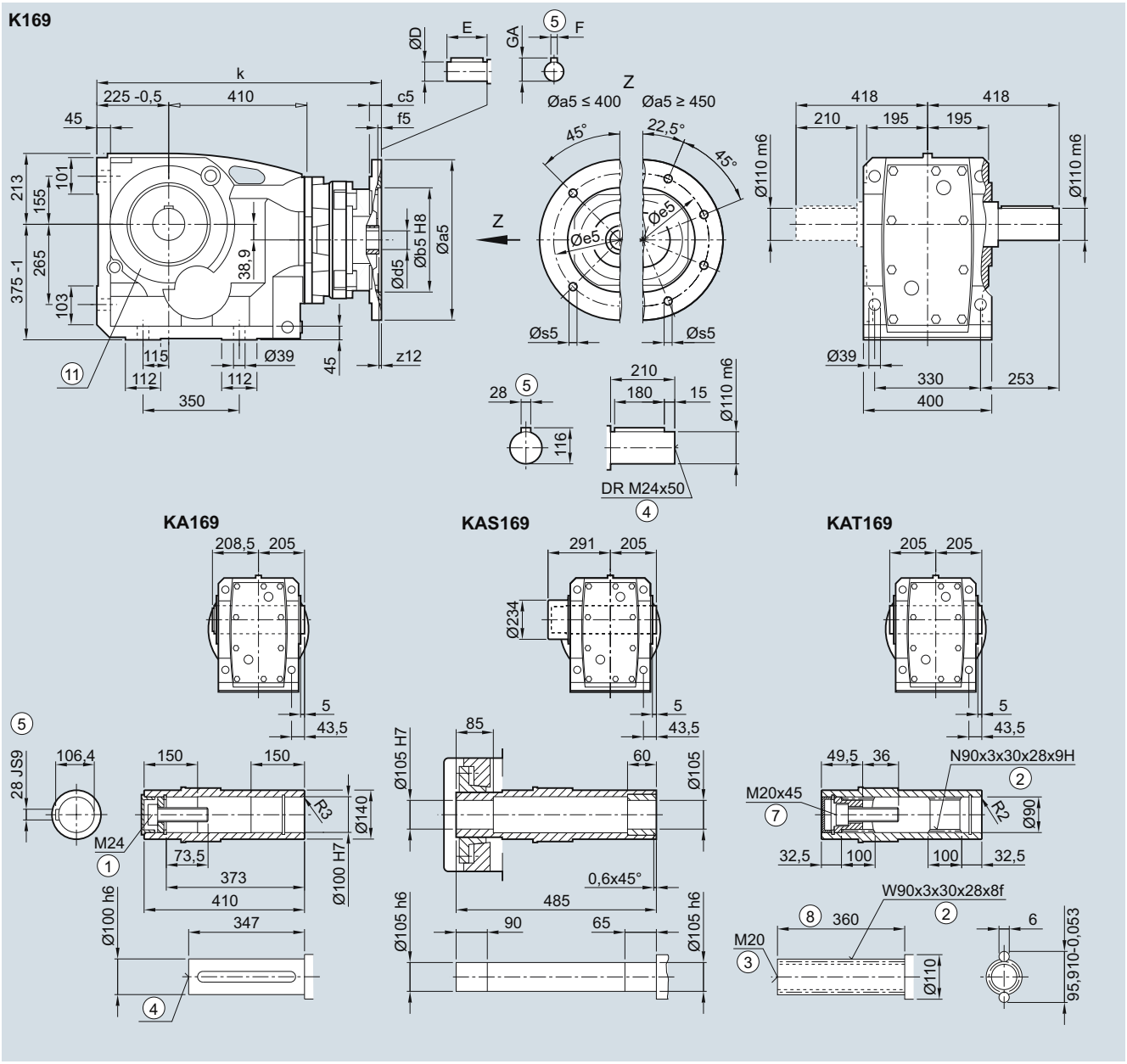
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	604.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	650.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	666.0
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	696.0
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 ⑪ Use bores only for housing flange design

Dimensions

K.169 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4

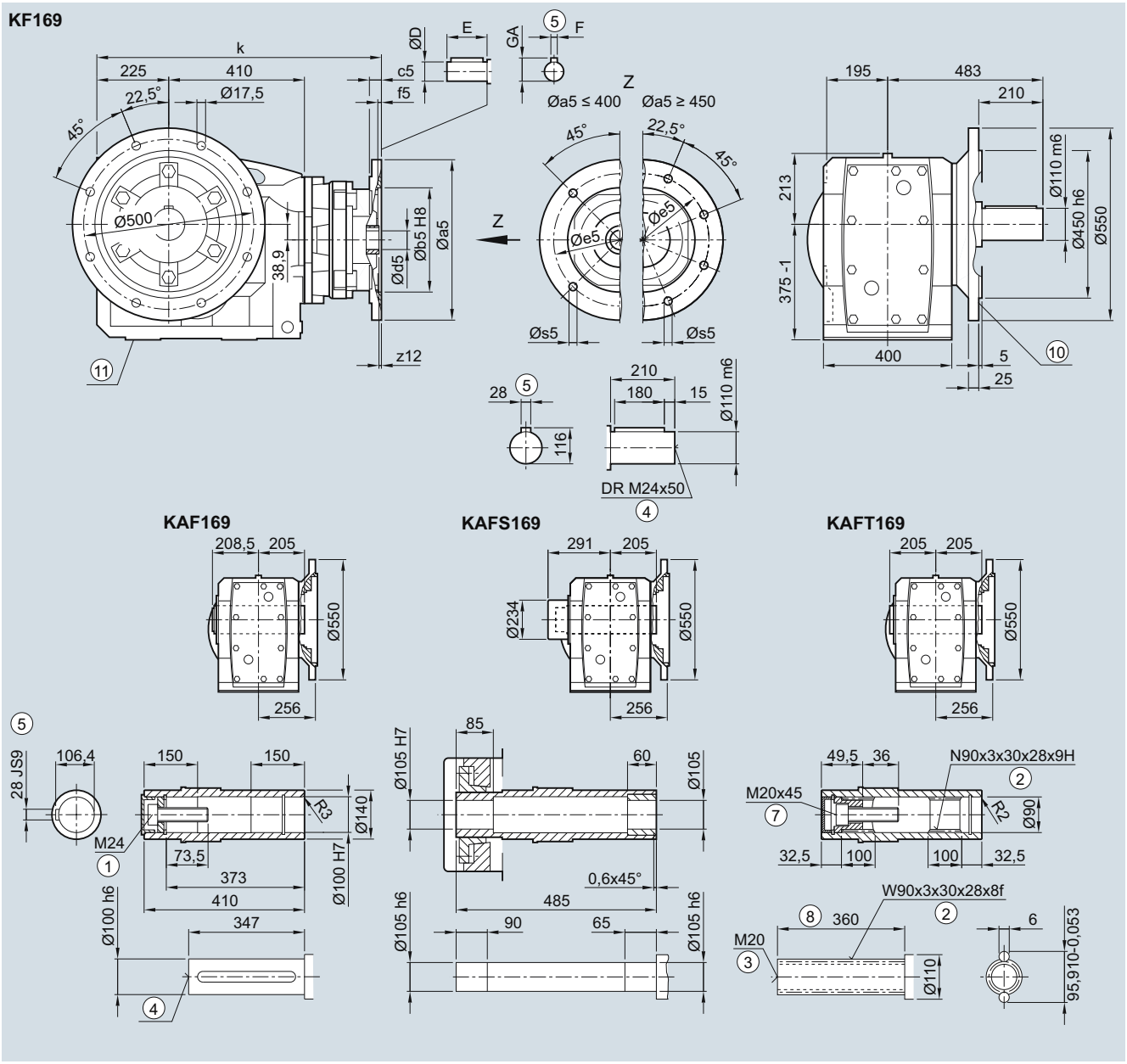


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

K.F.169 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4



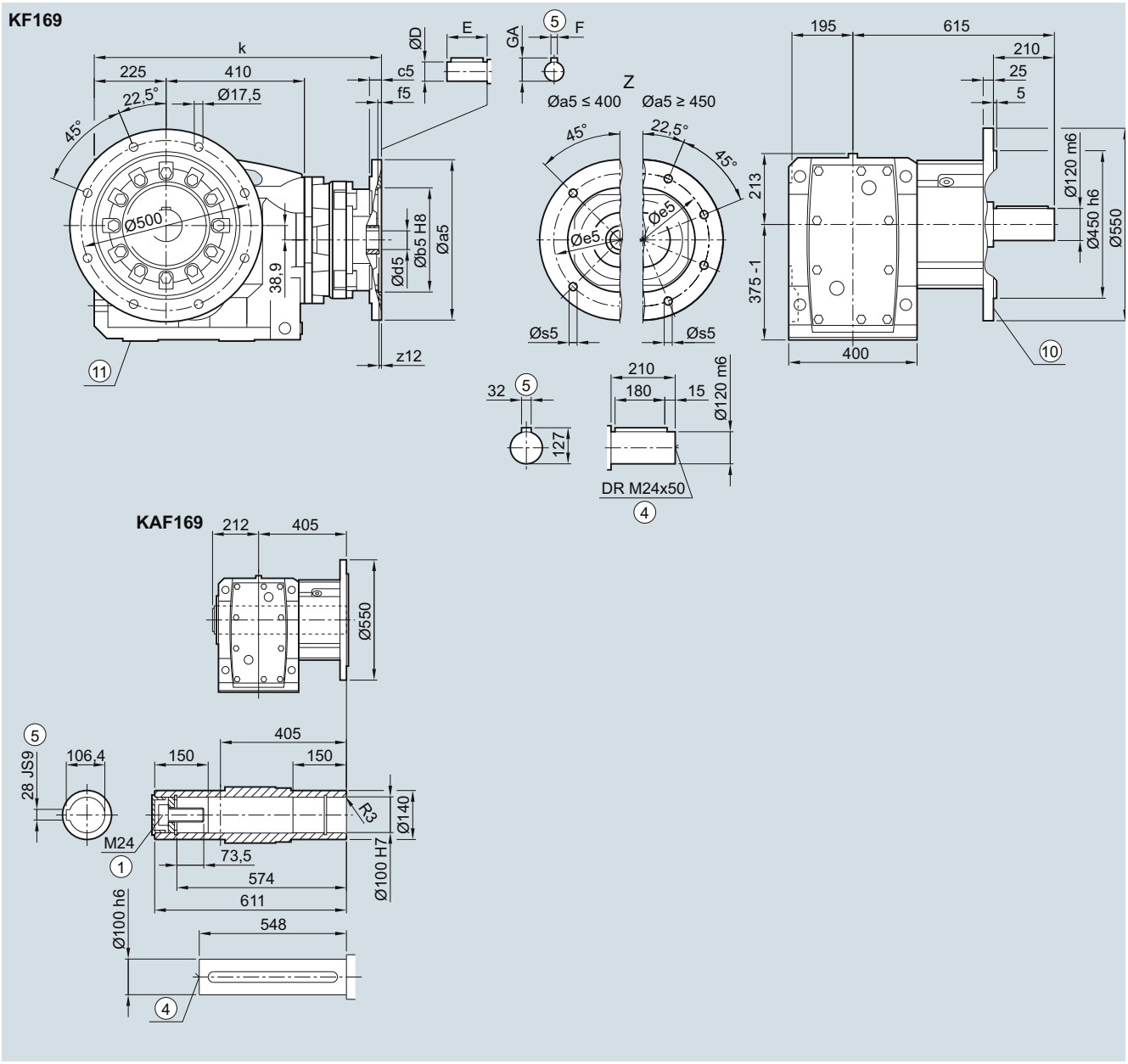
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.F.169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040K4, KAF040K4

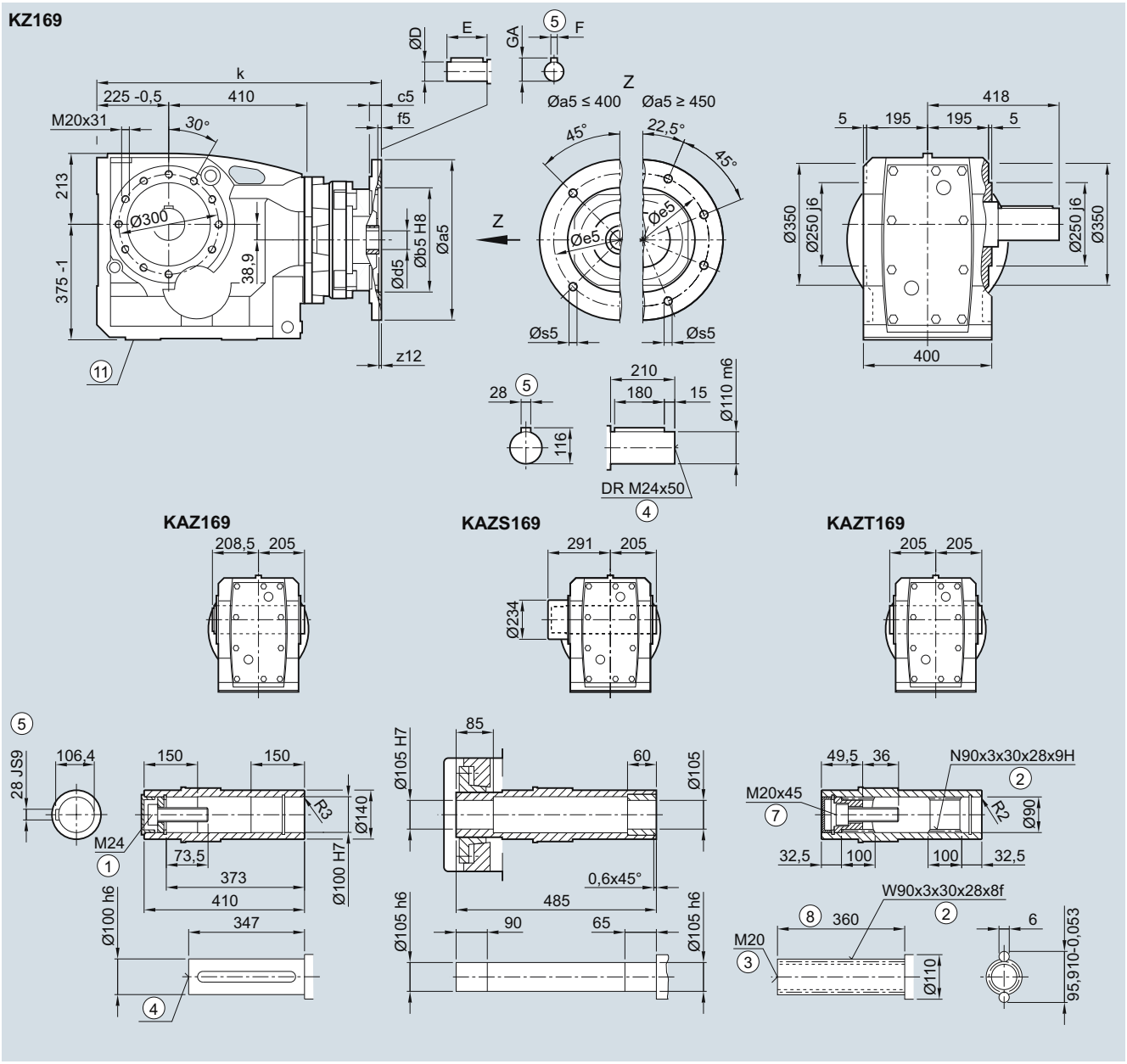


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.Z.169 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4



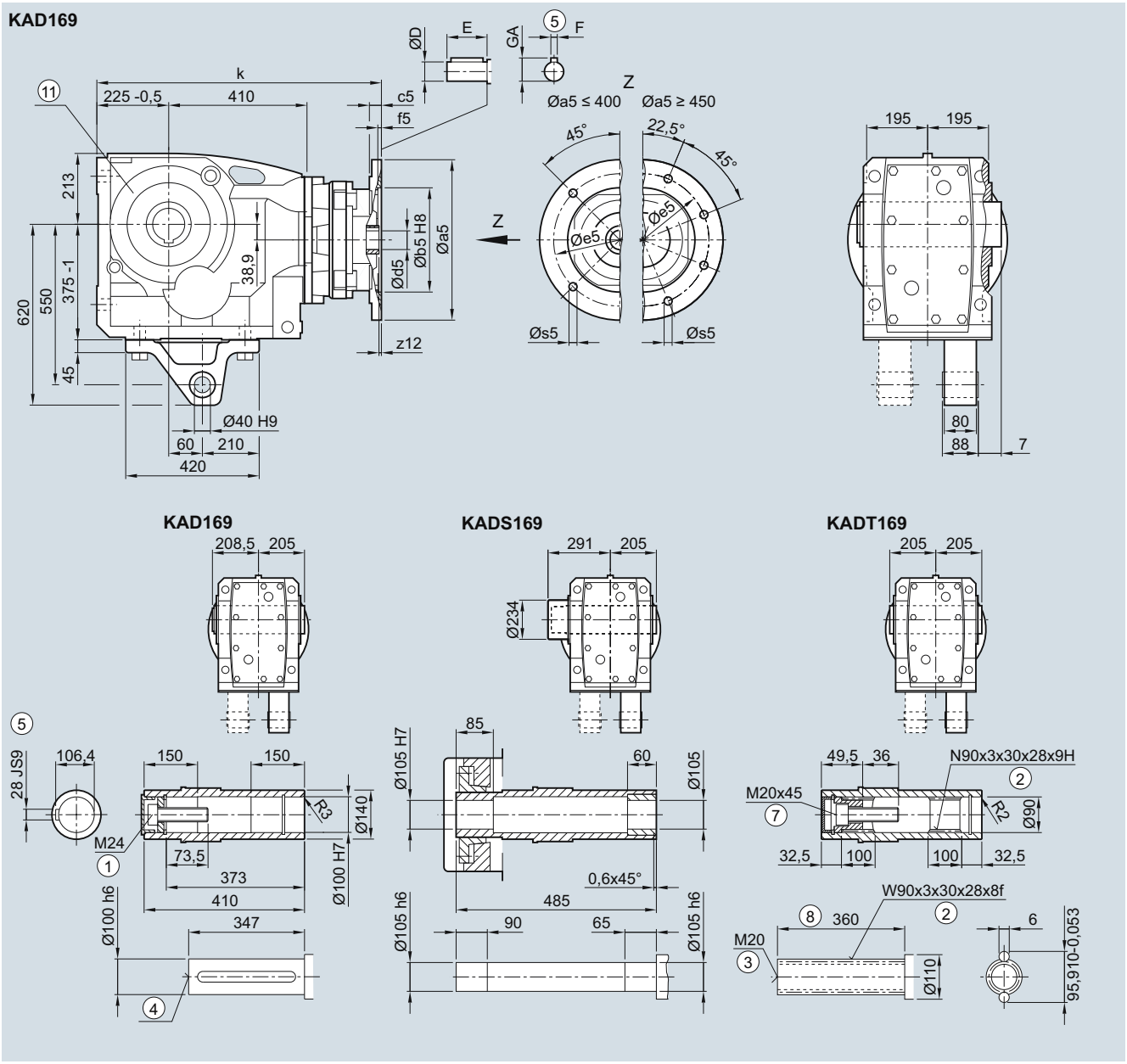
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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 ⑪ Use bores only for foot-mounted design

Dimensions

KAD.169 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4

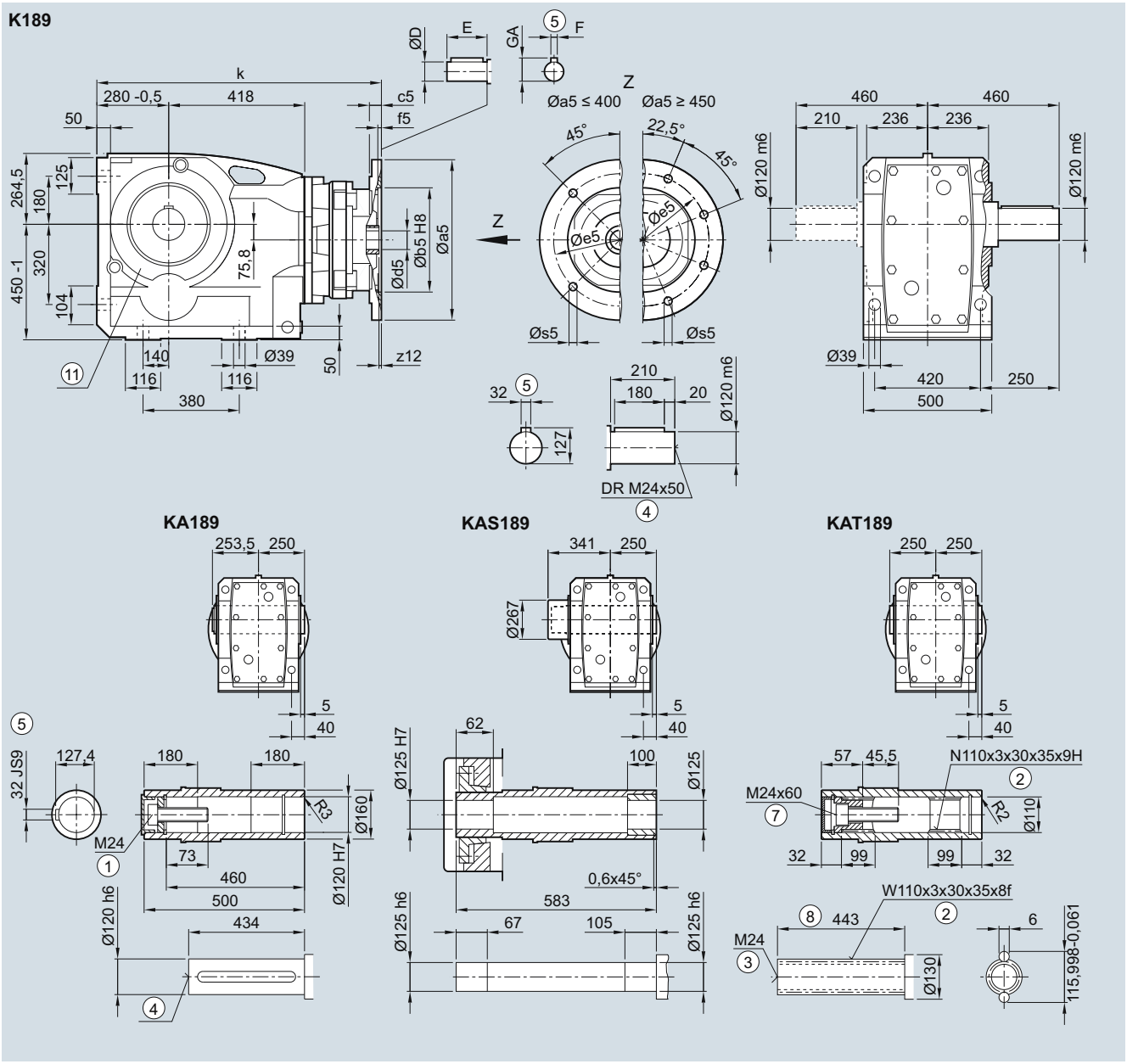


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	743.0
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	753.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	783.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	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 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

K.189 gearbox in a foot-mounted design

K030K4, KA030K4, KAS030K4, KAT030K4



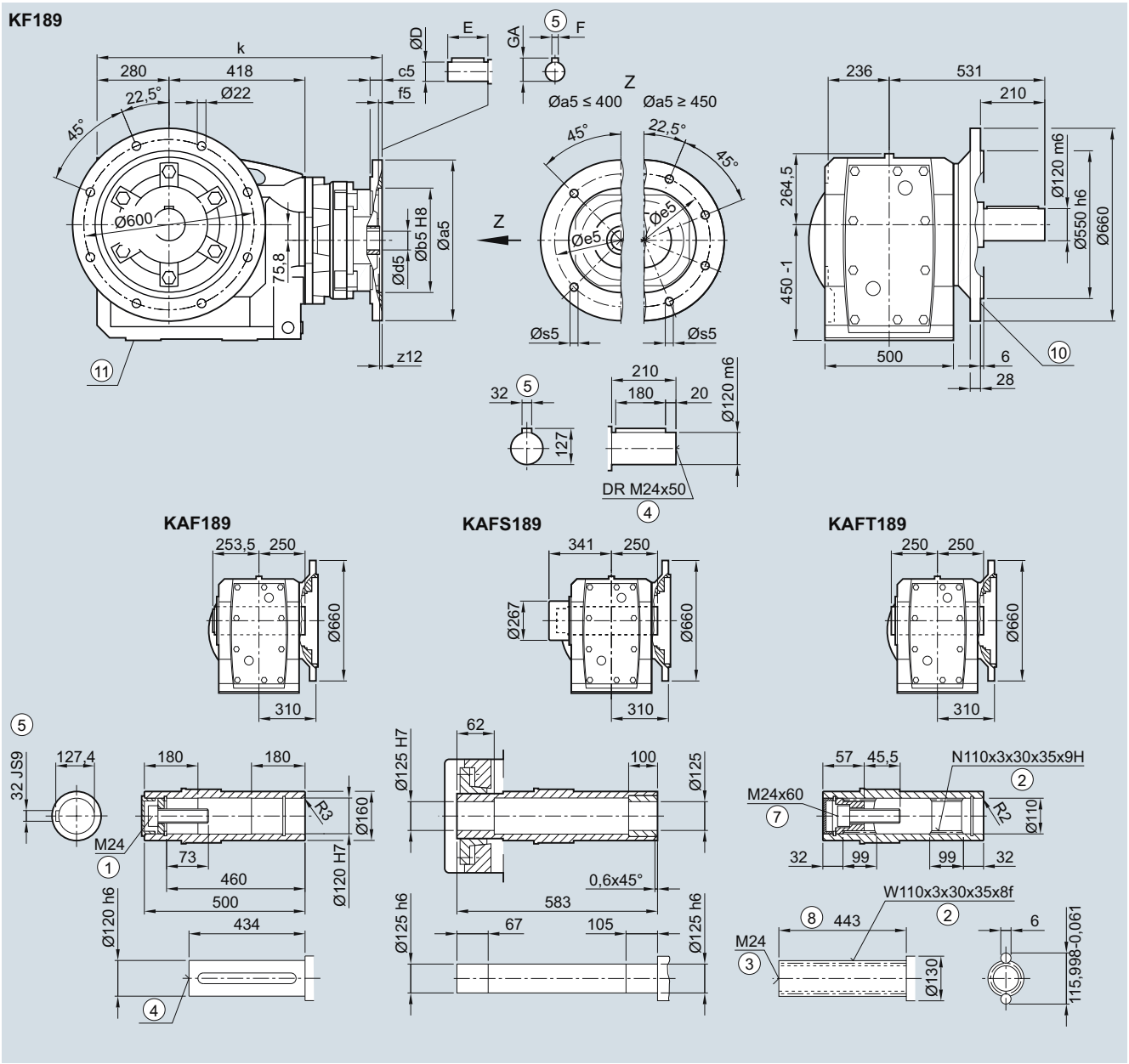
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	793.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	803.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	833.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	833.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

K.F.189 gearbox in a flange-mounted design

KF030K4, KAF030K4, KAFS030K4, KAFT030K4

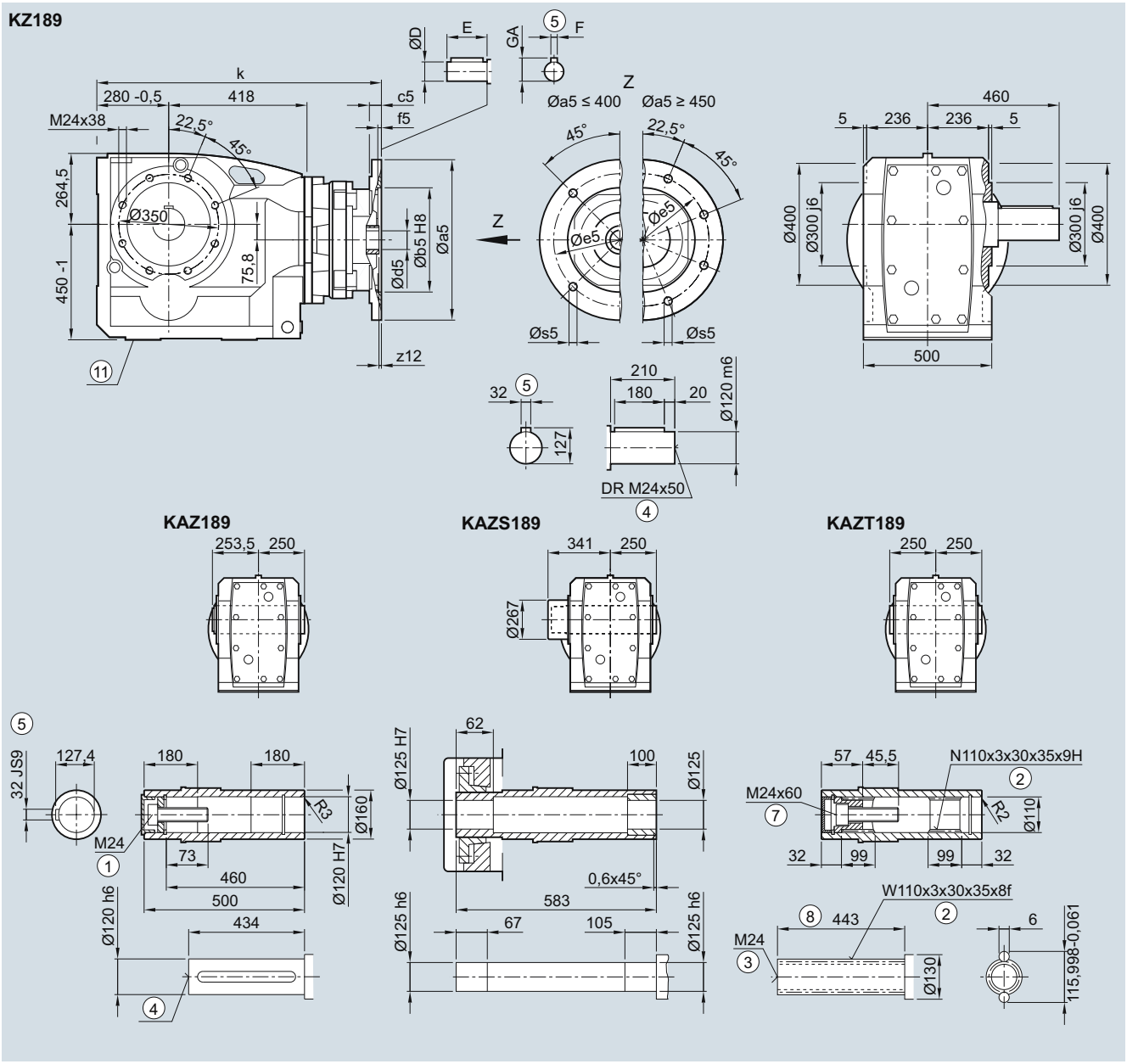


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	793.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	803.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	833.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	833.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.Z.189 gearbox in a housing flange design

KZ030K4, KAZ030K4, KAZS030K4, KAZT030K4



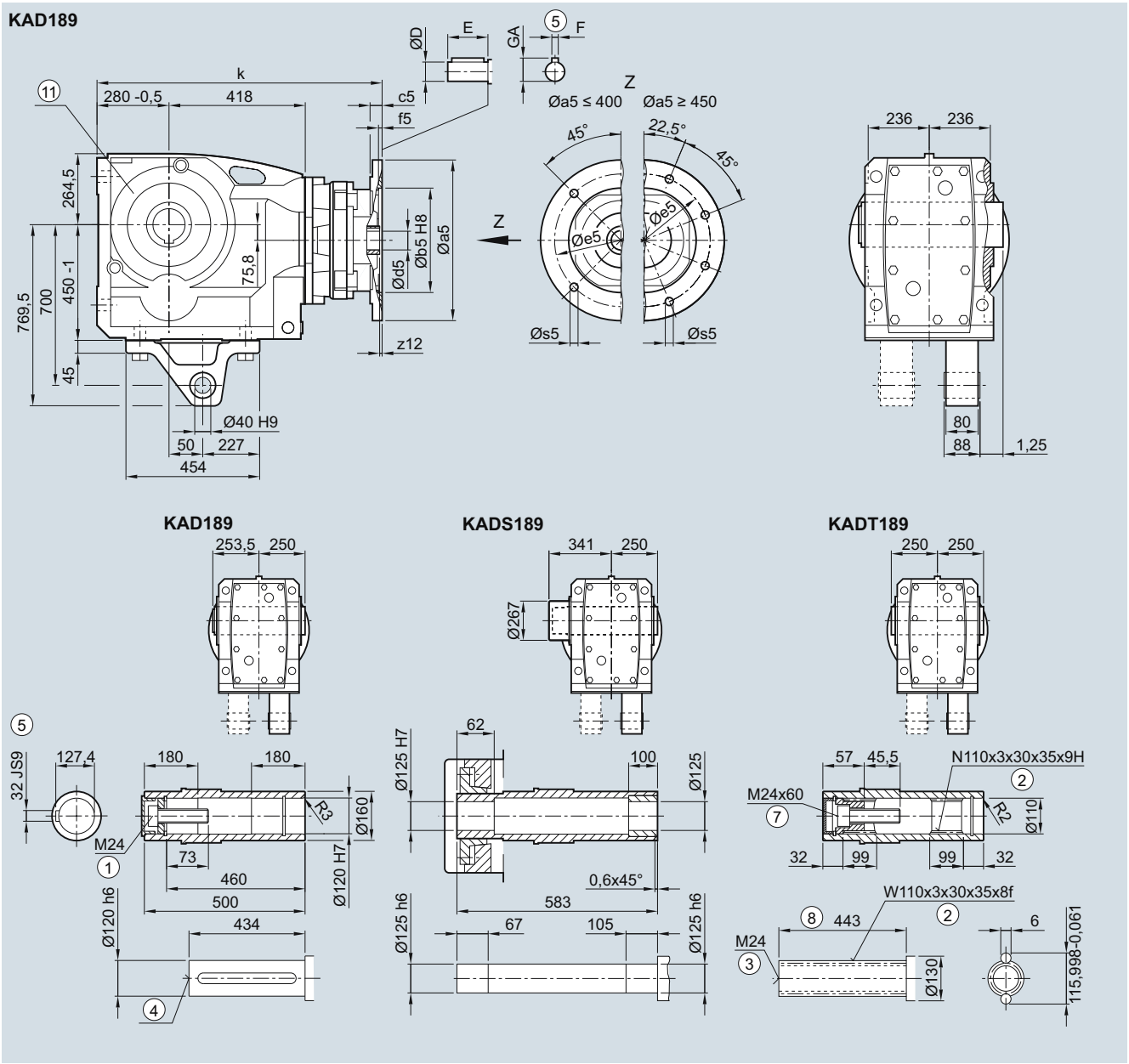
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	793.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	803.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	833.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	833.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

Dimensions

KAD.189 gearbox in a shaft-mounted design

KAD031K4, KADS031K4, KADT031K4

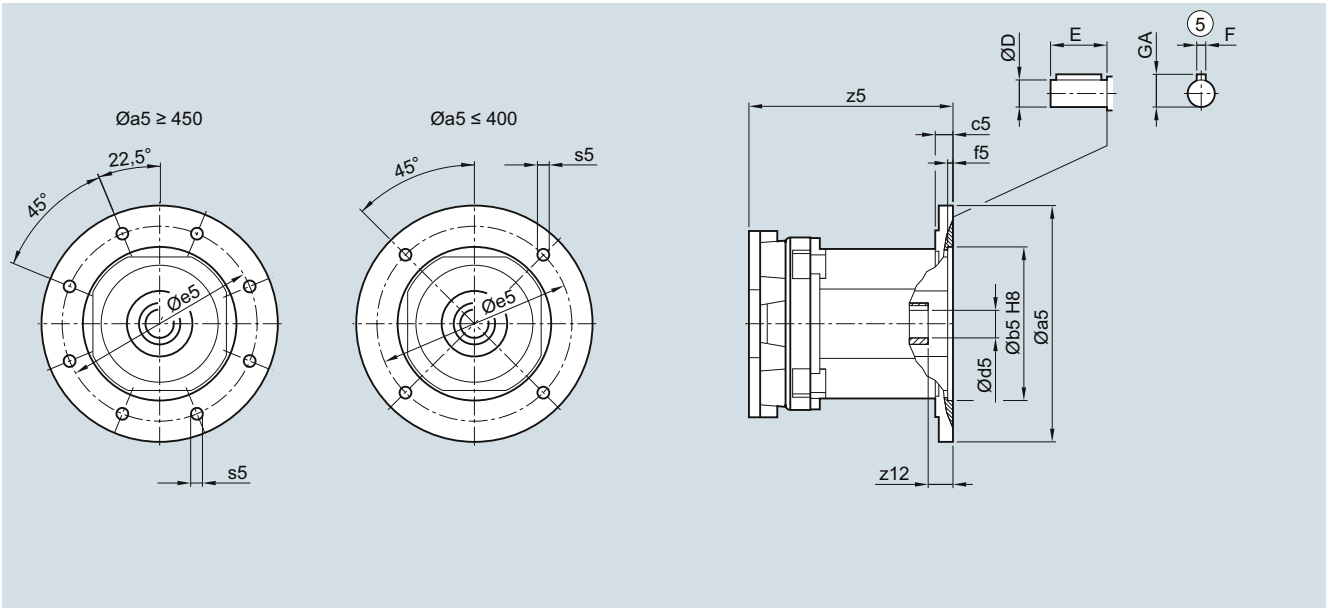


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	793.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	803.5
160	350	250	15	6.0	300	M16x25	3.0	42	110	12	45.0	833.5
180	350	250	15	6.0	300	M16x25	3.0	48	110	14	51.5	833.5
200	400	300	20	6.0	350	M16x29	7.0	55	110	16	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

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

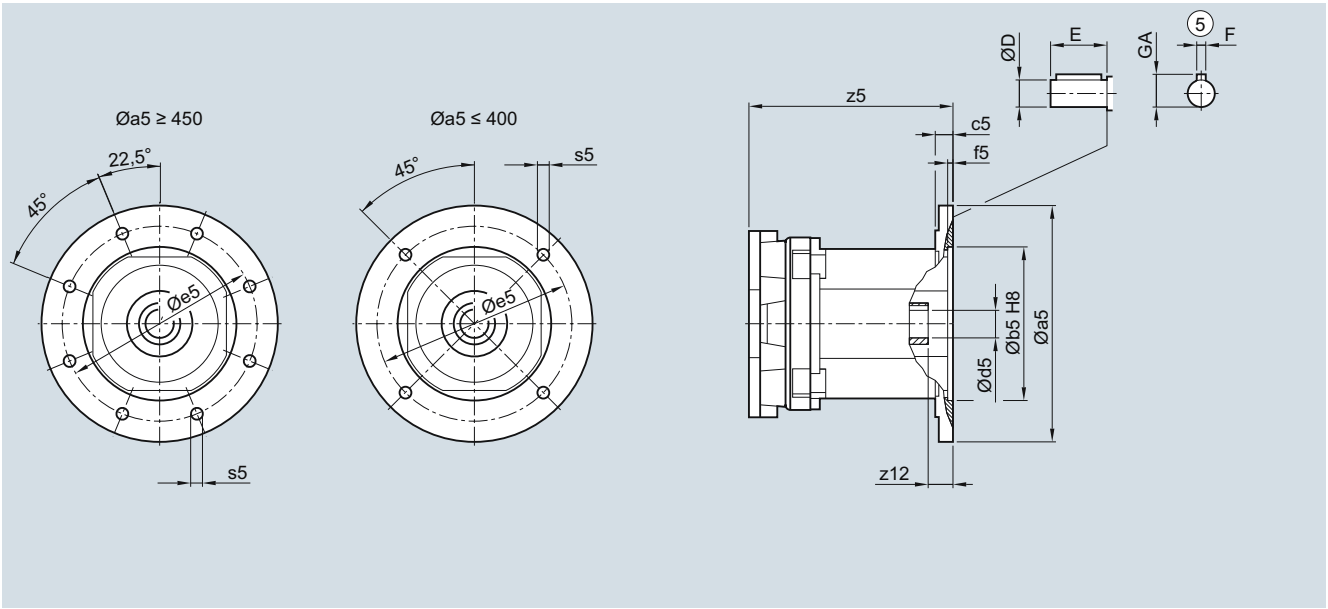


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
B...29												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
B...39												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	198.0
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	198.0
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	245.0
B...49												
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
K...39												
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
K...49												
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
K...69												
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 (continued)

B..030K2, B.F.030K2, B.Z.030K2, BAD.030K2
K..030K2, K.F.030K2, K.Z.030K2, KAD.030K2



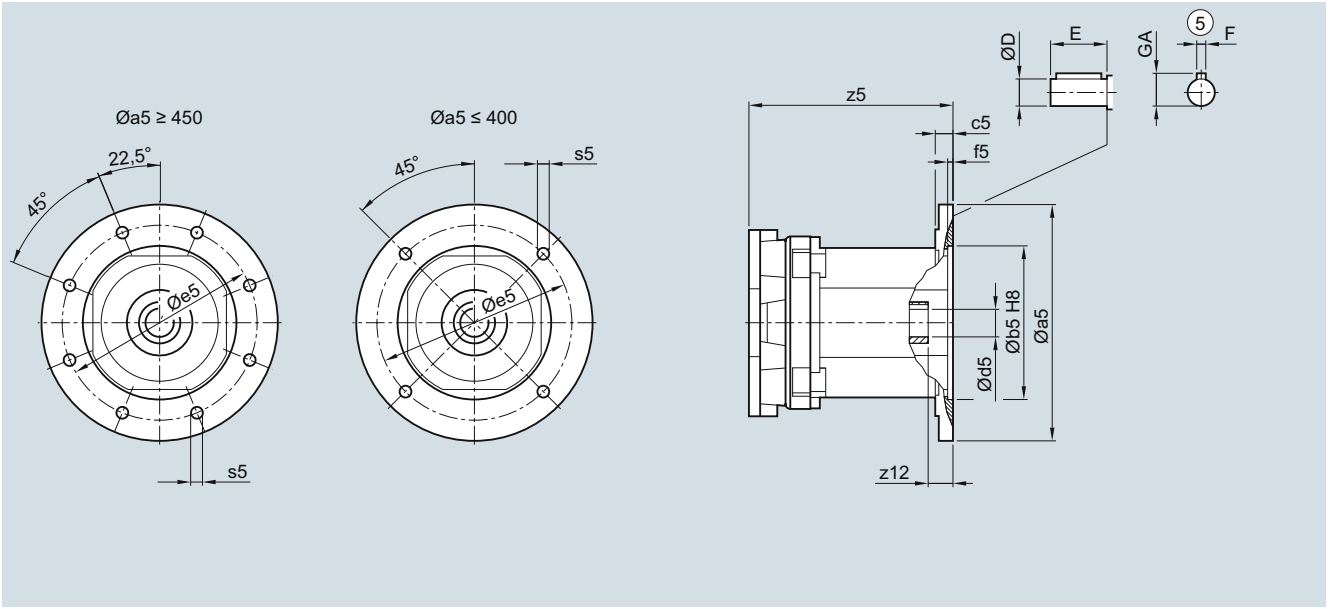
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K...79												
80	200	130	15	4.5	165	M10	15	19	40	6	21.5	188.5
90	200	130	15	4.5	165	M10	25	24	50	8	27.0	188.5
100	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
112	250	180	18	5.0	215	M12	30	28	60	8	31.0	235.5
132	300	230	18	5.0	265	M12	45	38	80	10	41.0	313.5
K...89												
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
K...109												
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
K...129												
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

() Dimension in brackets for 2-pole motor

K...149 to K...189 gearboxes (continued)

K..030K2, K.F.030K2, K.Z.030K2, KAD.030K2



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K...149												
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
K...169												
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
K...189												
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

⑤ Feather key/keyway DIN 6885

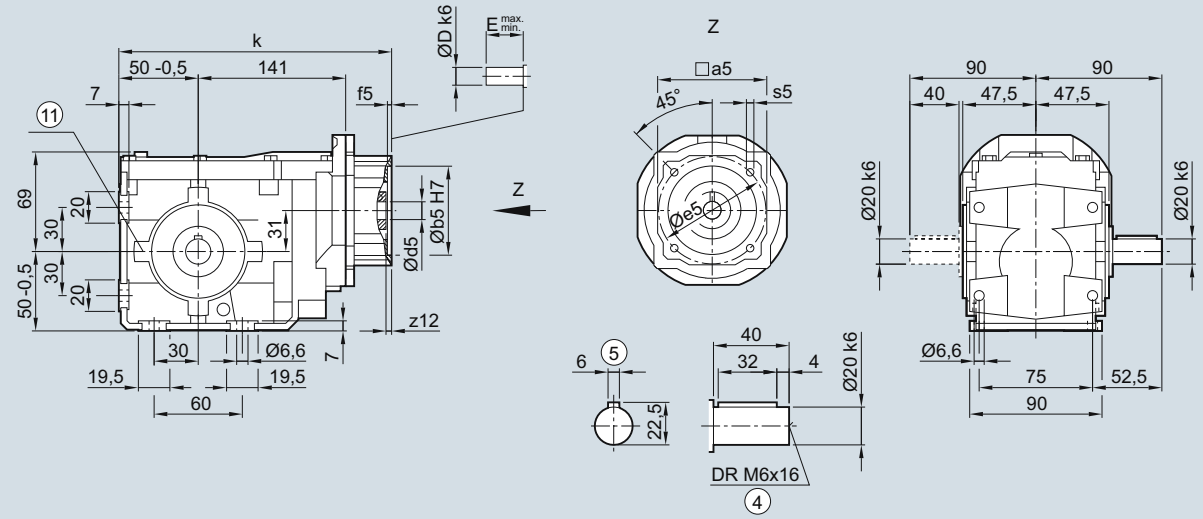
() Dimension in brackets for 2-pole motor

Dimensions

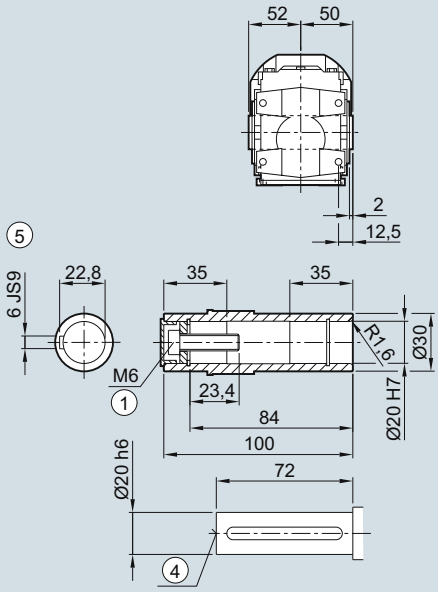
B..19 gearbox in a foot-mounted design

B030KS, BA030KS, BAS030KS

B19



BA19



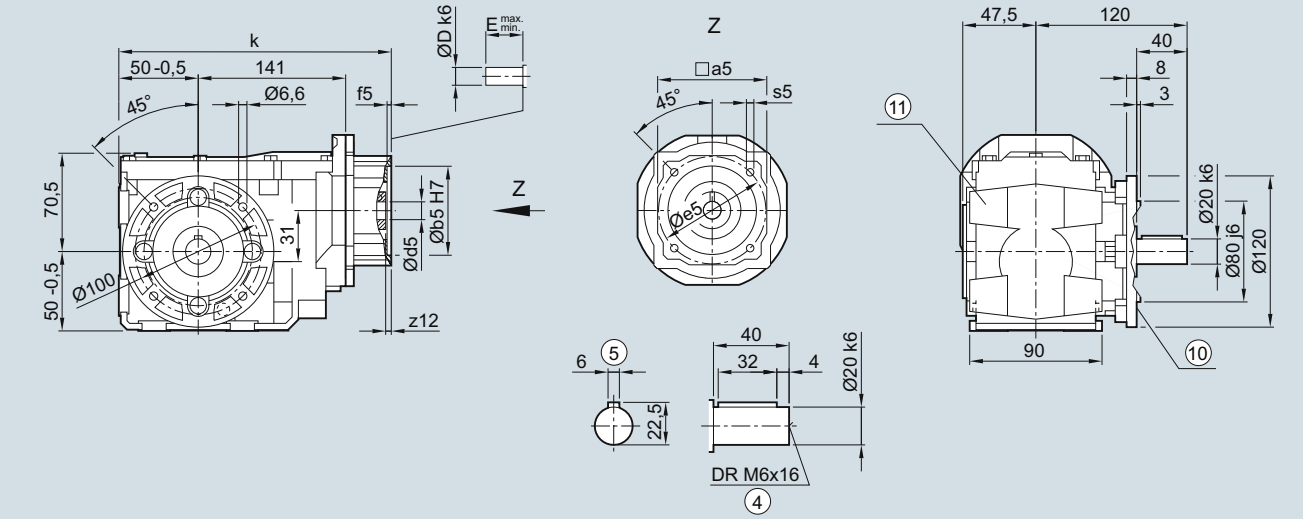
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	231.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	231.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	244.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	244.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for housing flange design

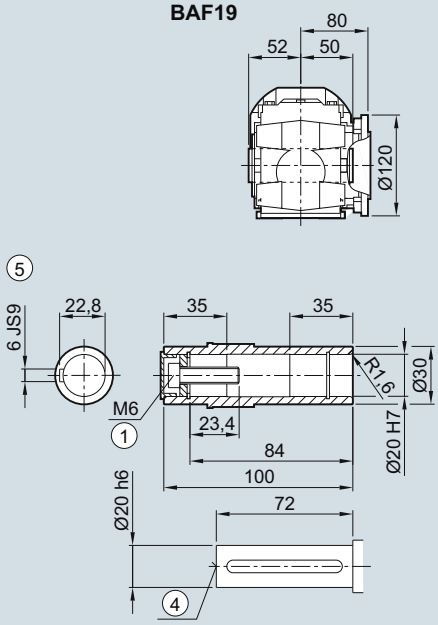
B.F.19 gearbox in a flange-mounted design

BF030KS, BAF030KS, BAFS030KS

BF19



BAF19



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	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

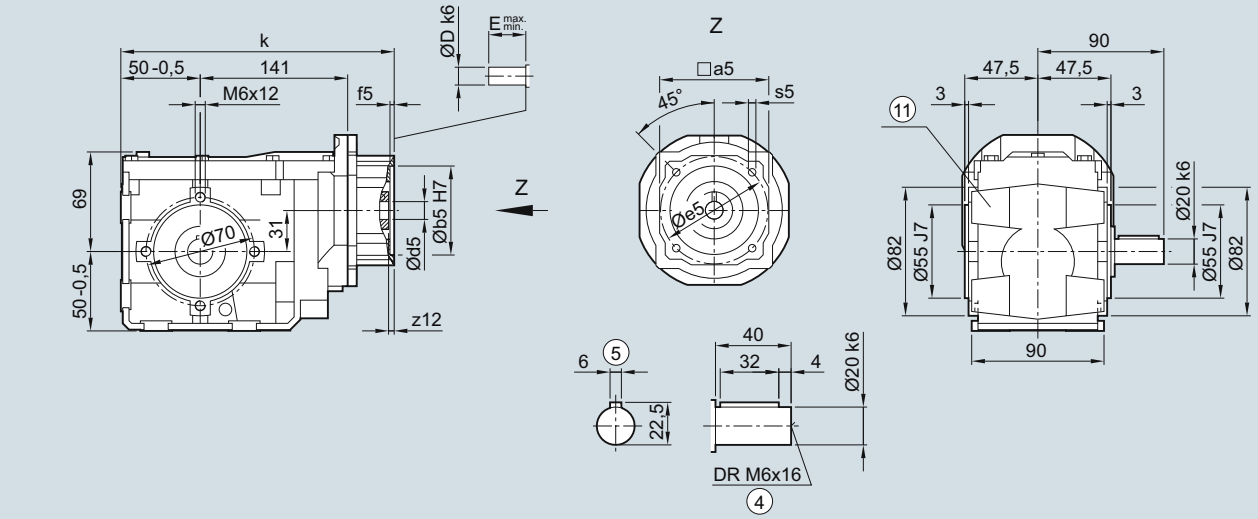
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

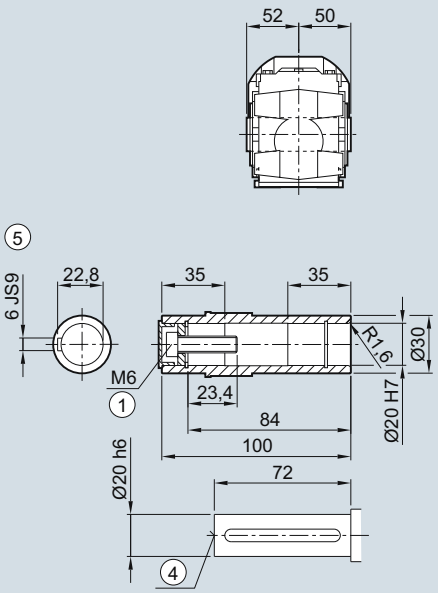
B.Z.19 in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS

BZ19



BAZ19



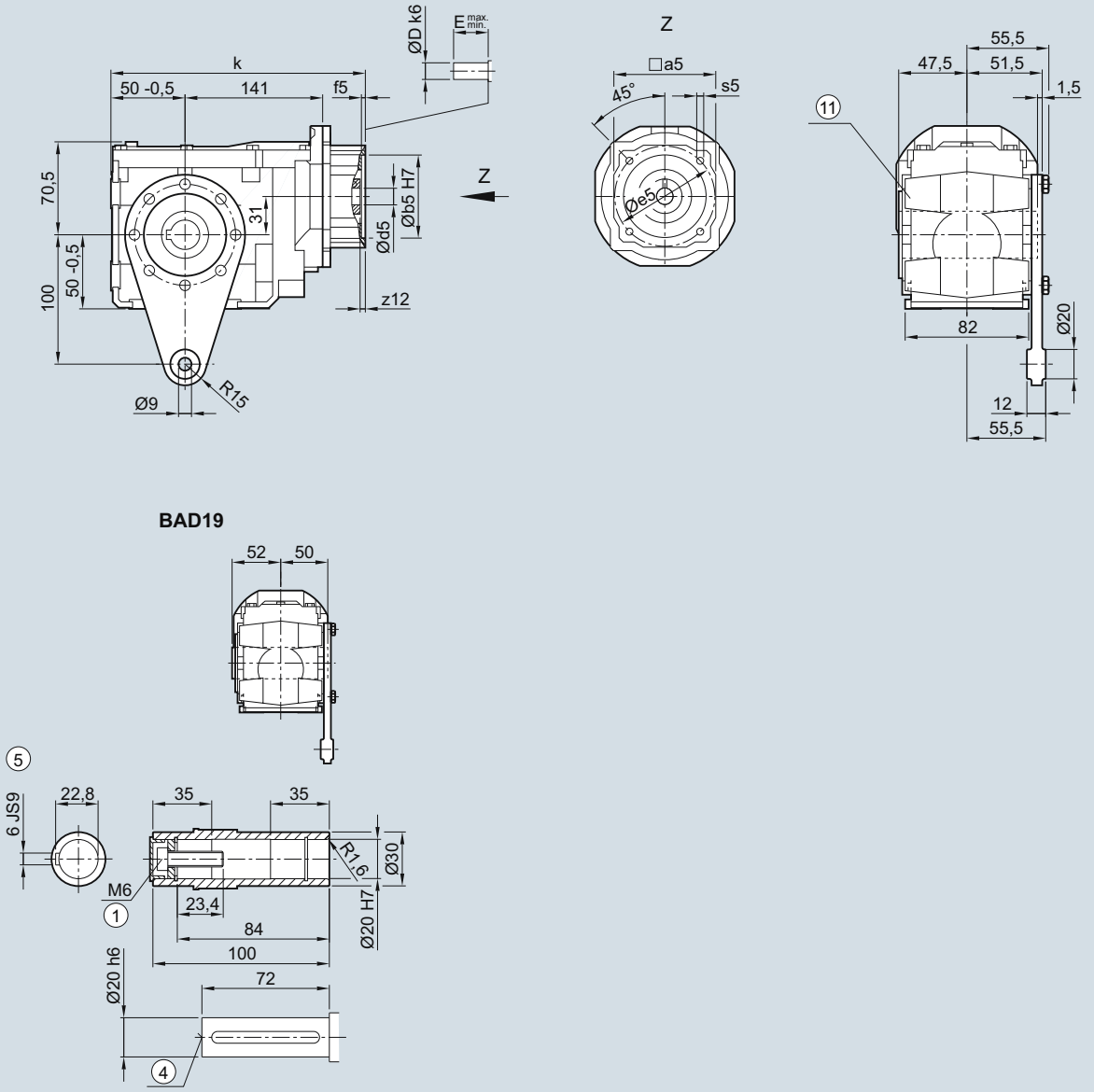
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	231.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	231.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	244.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	244.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

BAD.19 gearbox in a shaft-mounted design

BAD030KS, BADS030KS

BAD19



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	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

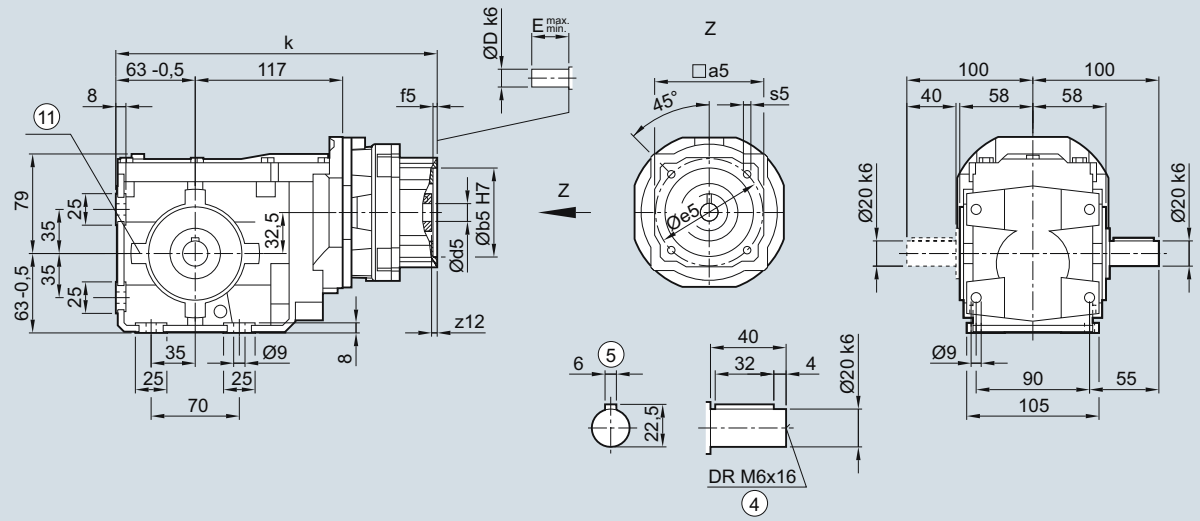
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

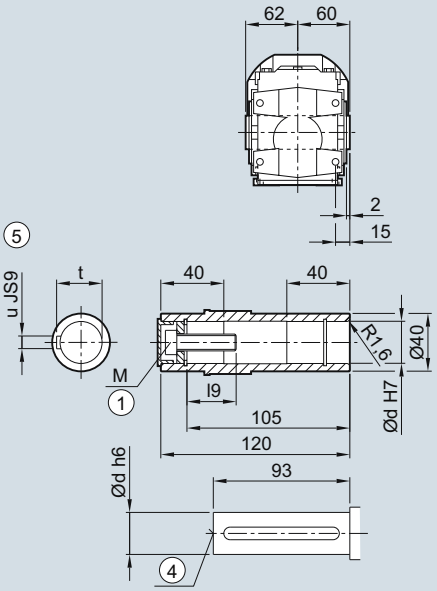
B..29 gearbox in a foot-mounted design

B030KS, BA030KS, BAS030KS

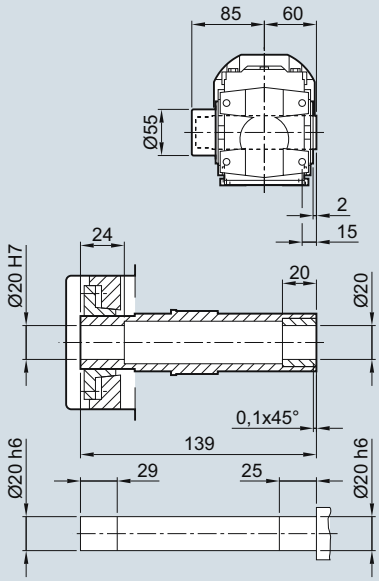
B29



BA29



BAS29



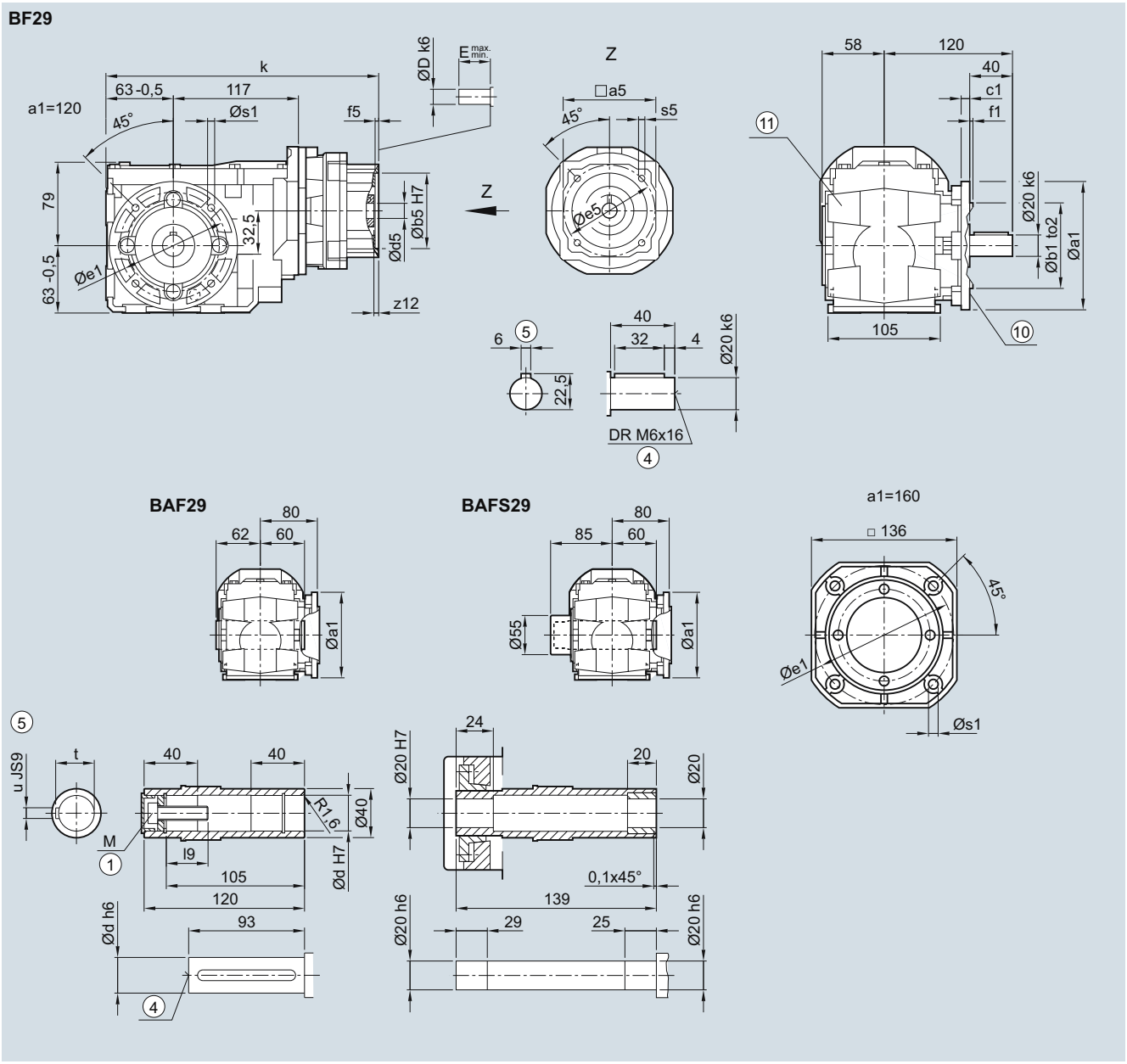
Shaft	d	l9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for housing flange design

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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

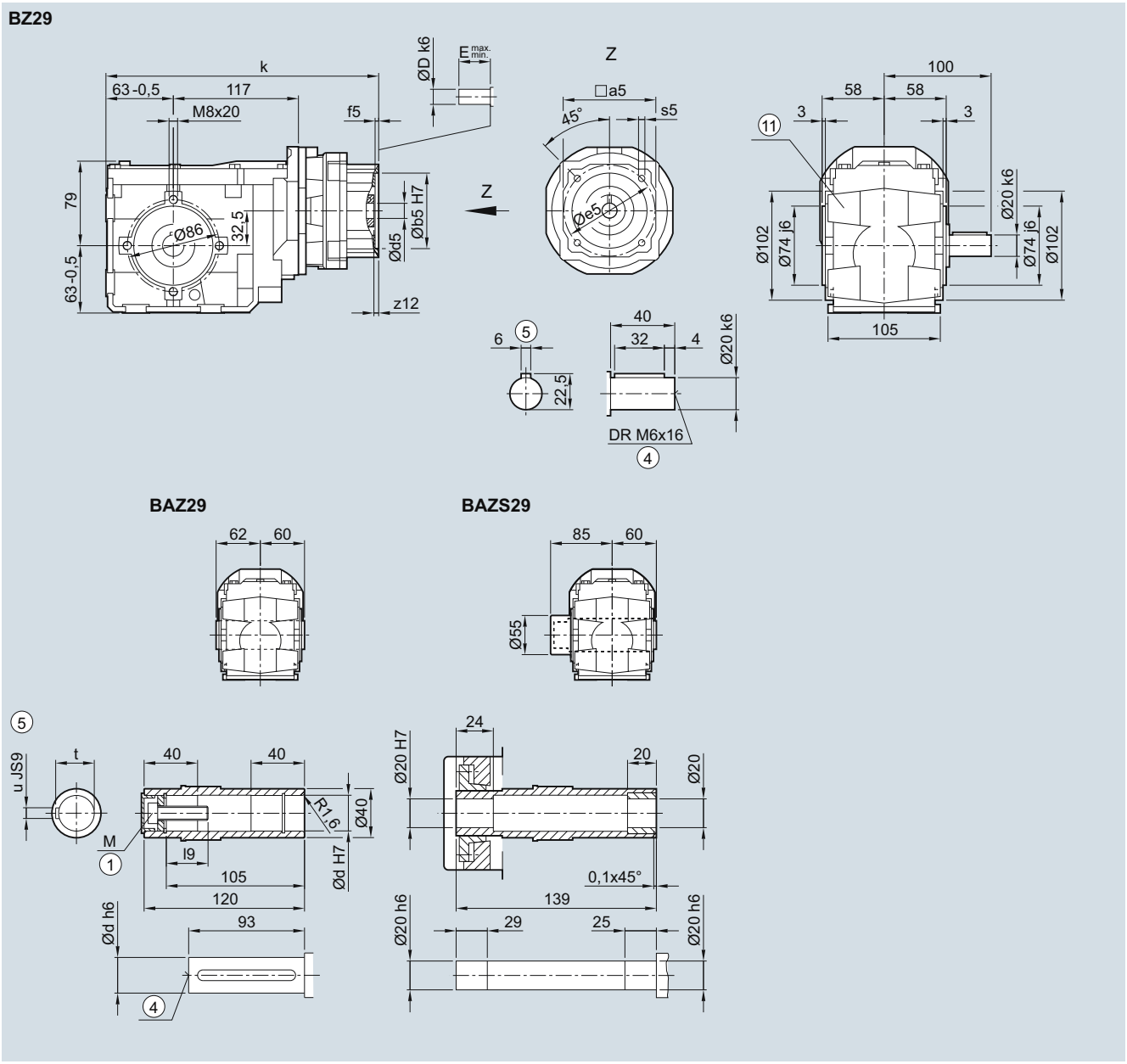
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

B.Z.29 gearbox in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS

BZ29



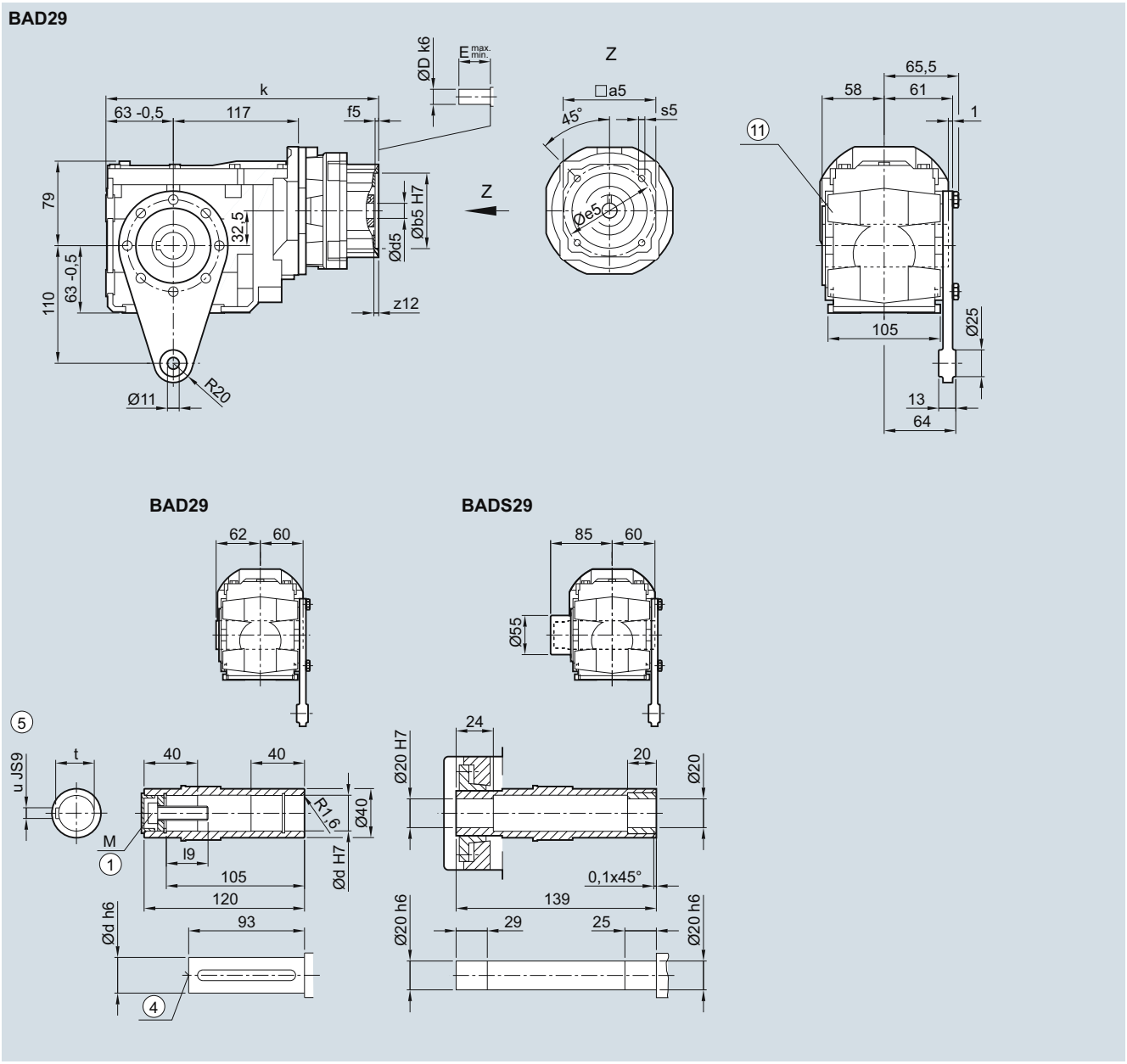
Shaft	d	l9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

BAD.29 gearbox in a shaft-mounted design

BAD030KS, BADS030KS



Shaft	d	l9	M	t	u
	20	23.4	M6	22.8	6
	25	27.6	M10	28.3	8

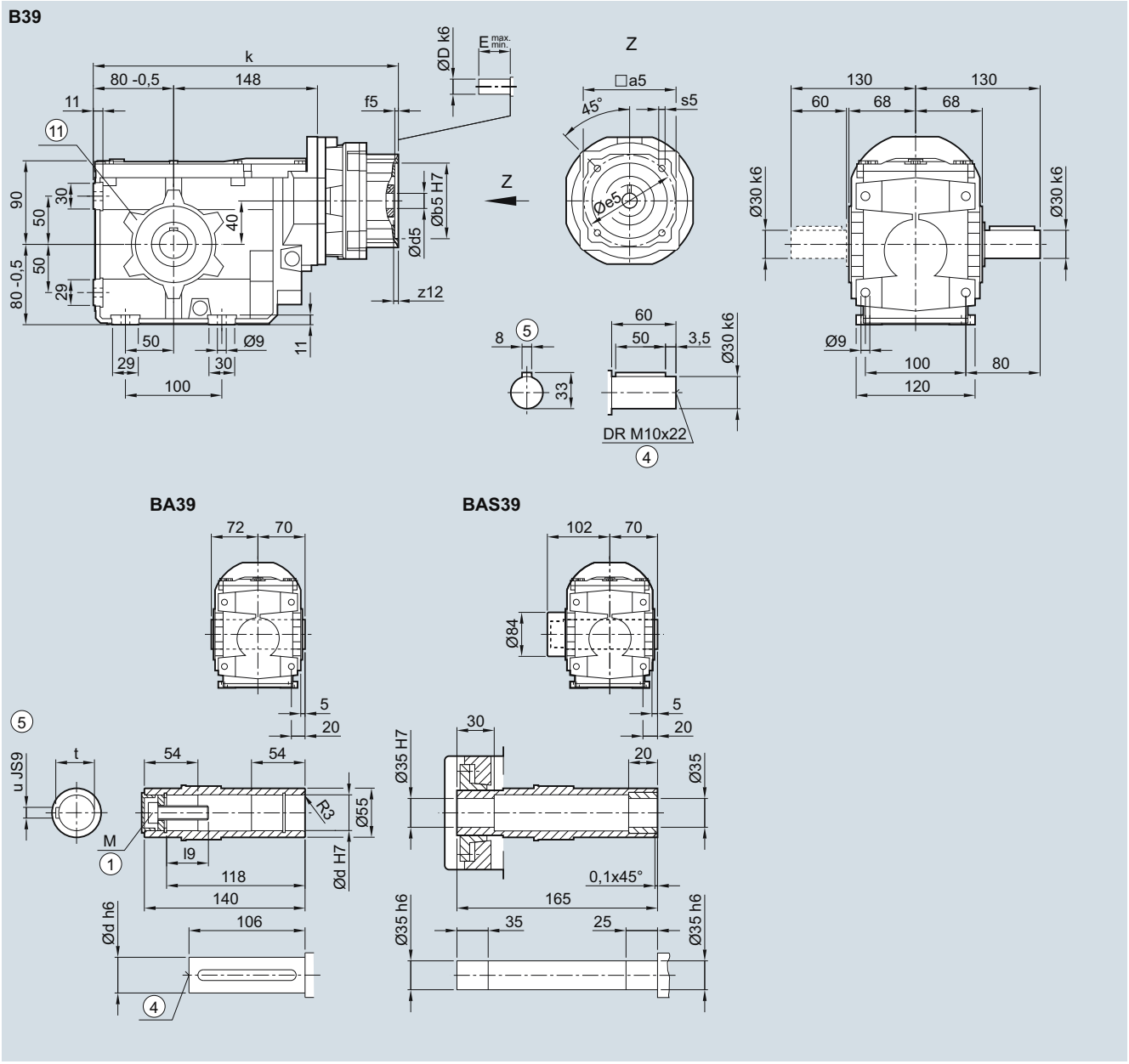
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	262.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	262.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	274.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	274.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	290.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	290.5
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

Dimensions

B..39 gearbox in a foot-mounted design

B030KS, BA030KS, BAS030KS



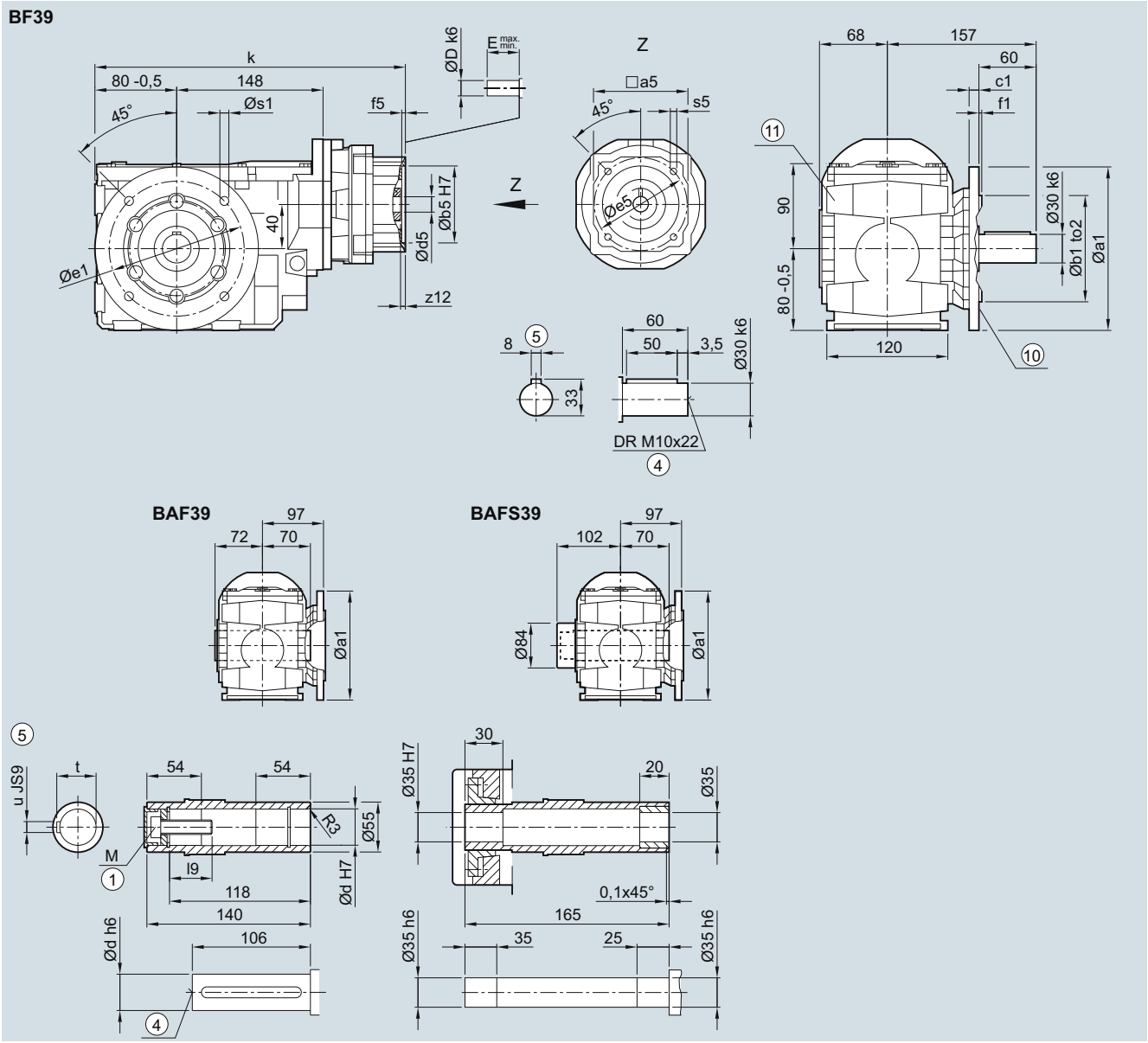
Shaft	d	l9	M	t	u
	30	32.6	M10	33.3	8
	35	37.0	M12	38.3	10
	40	47.75	M16	43.3	12

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for housing flange design

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	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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

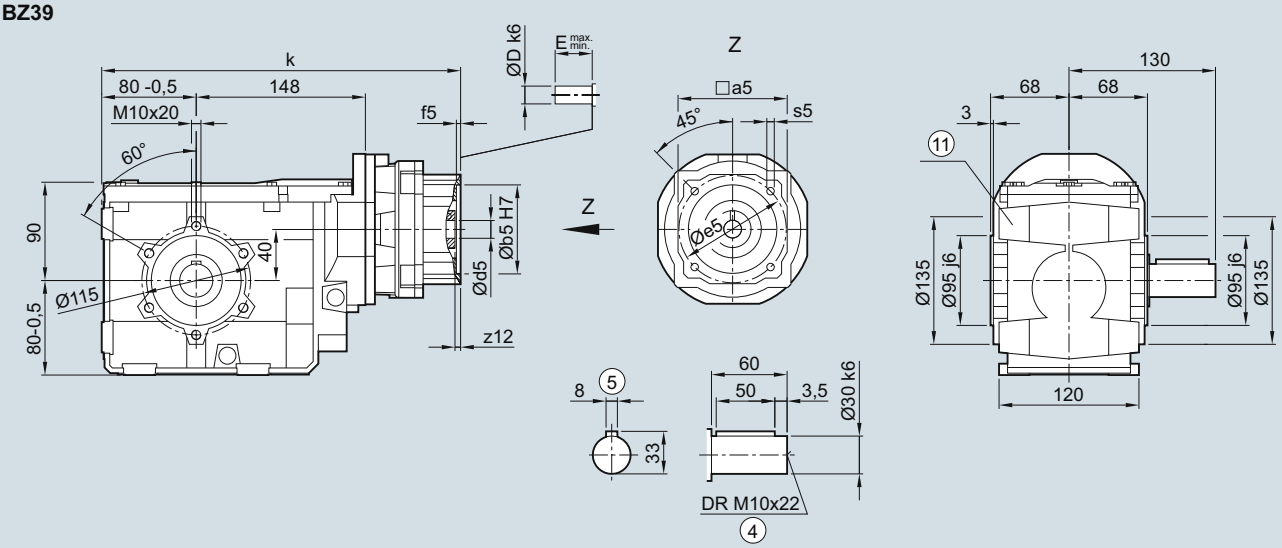
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

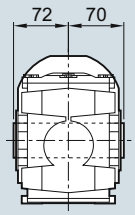
B.Z.39 gearbox in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS

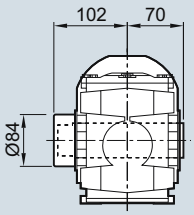
BZ39

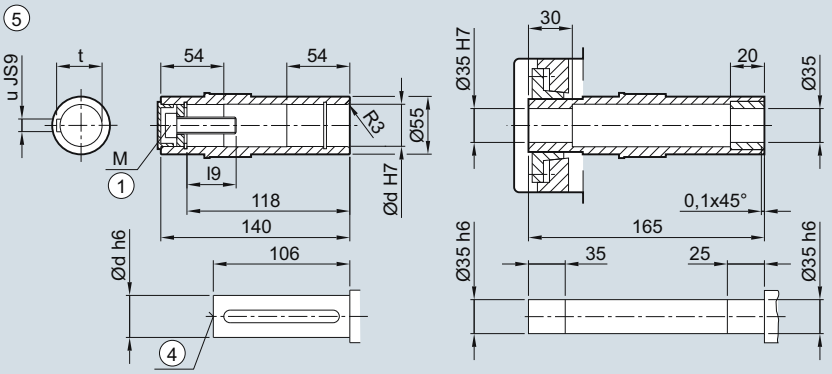


BAZ39



BAZS39





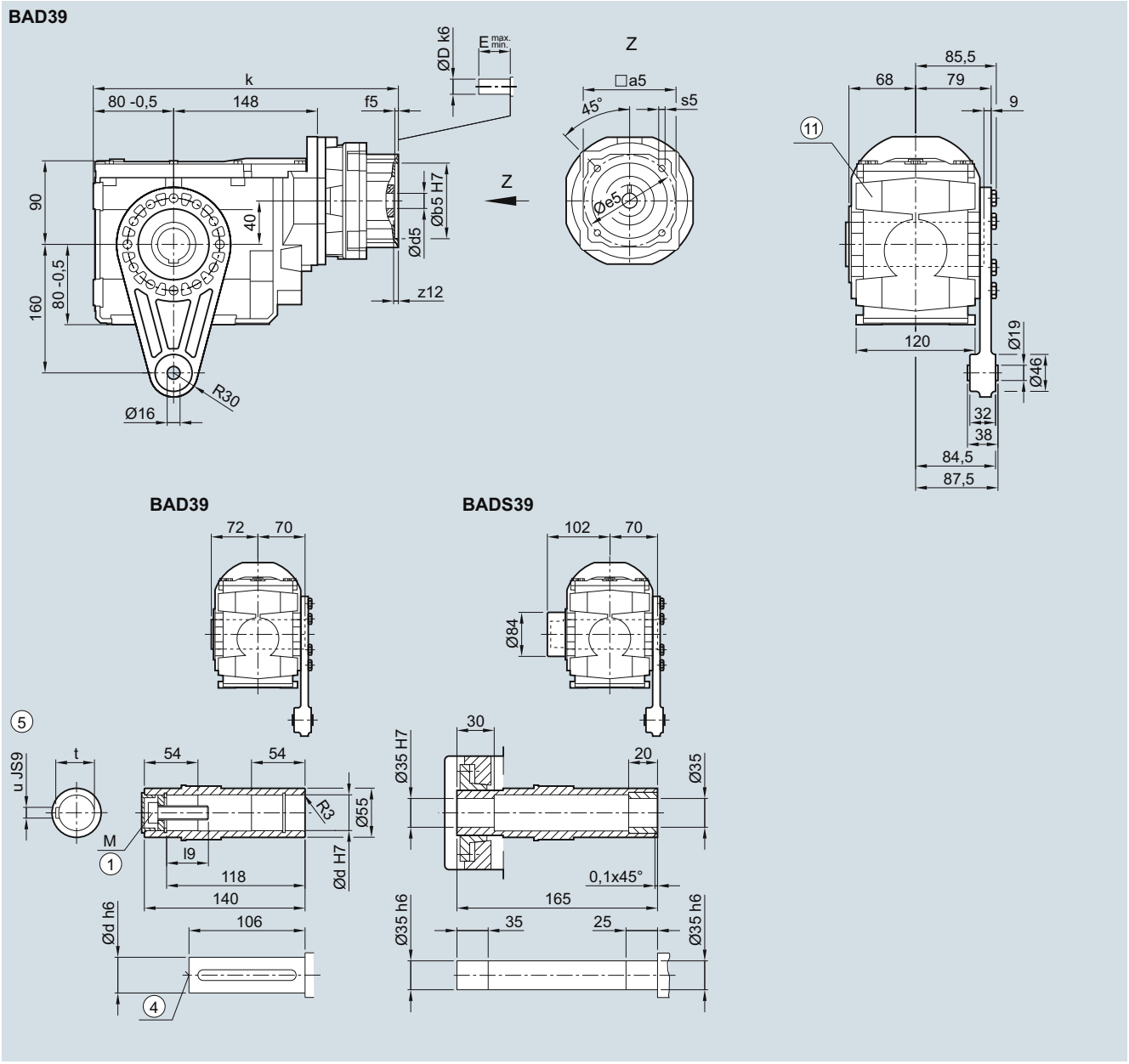
Shaft	d	l9	M	t	u
	30	32.6	M10	33.3	8
	35	37.0	M12	38.3	10
	40	47.75	M16	43.3	12

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

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

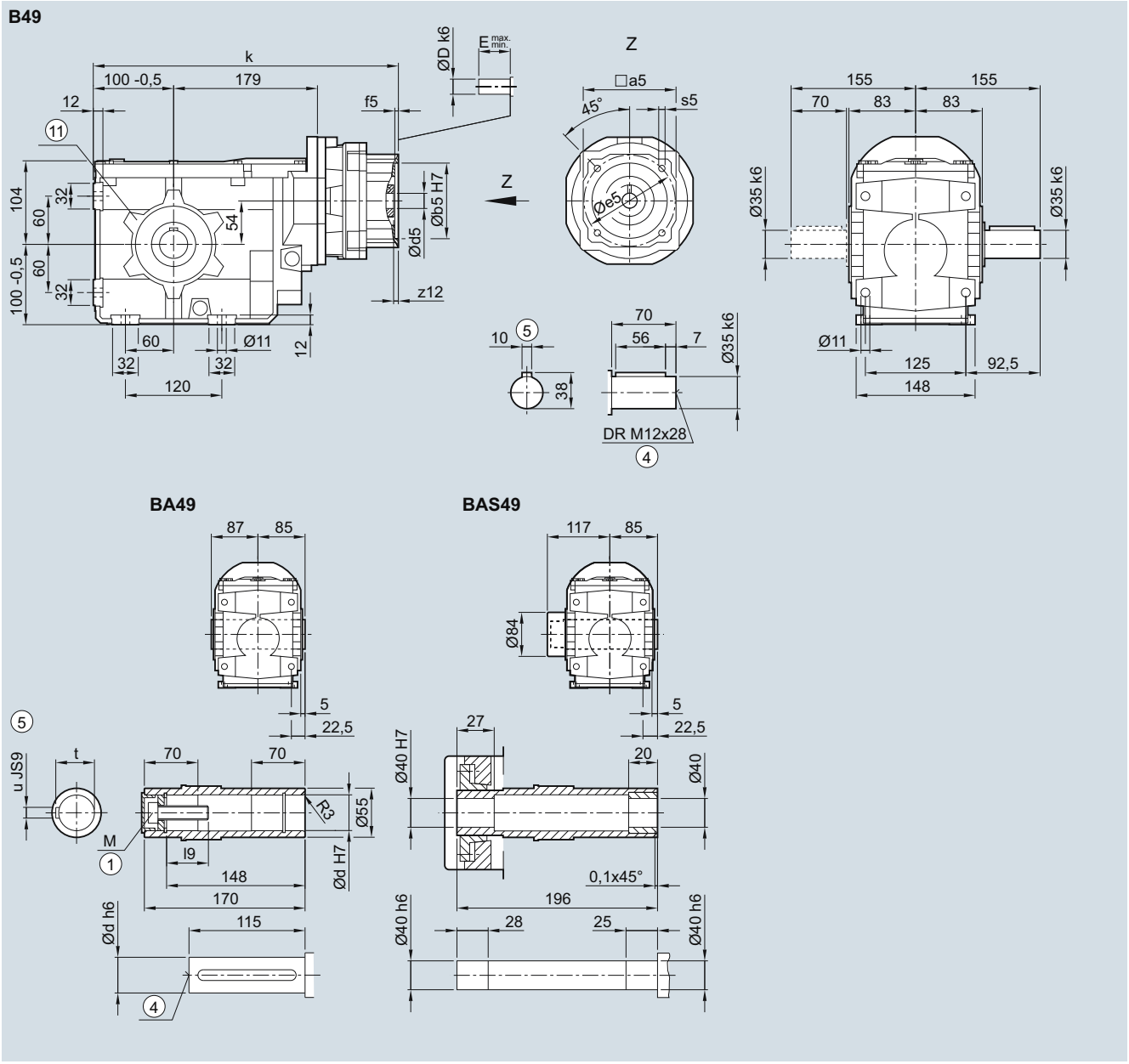
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	310.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	310.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	322.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	322.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	338.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	338.5
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

Dimensions

B..49 gearbox in a foot-mounted design

B030KS, BA030KS, BAS030KS



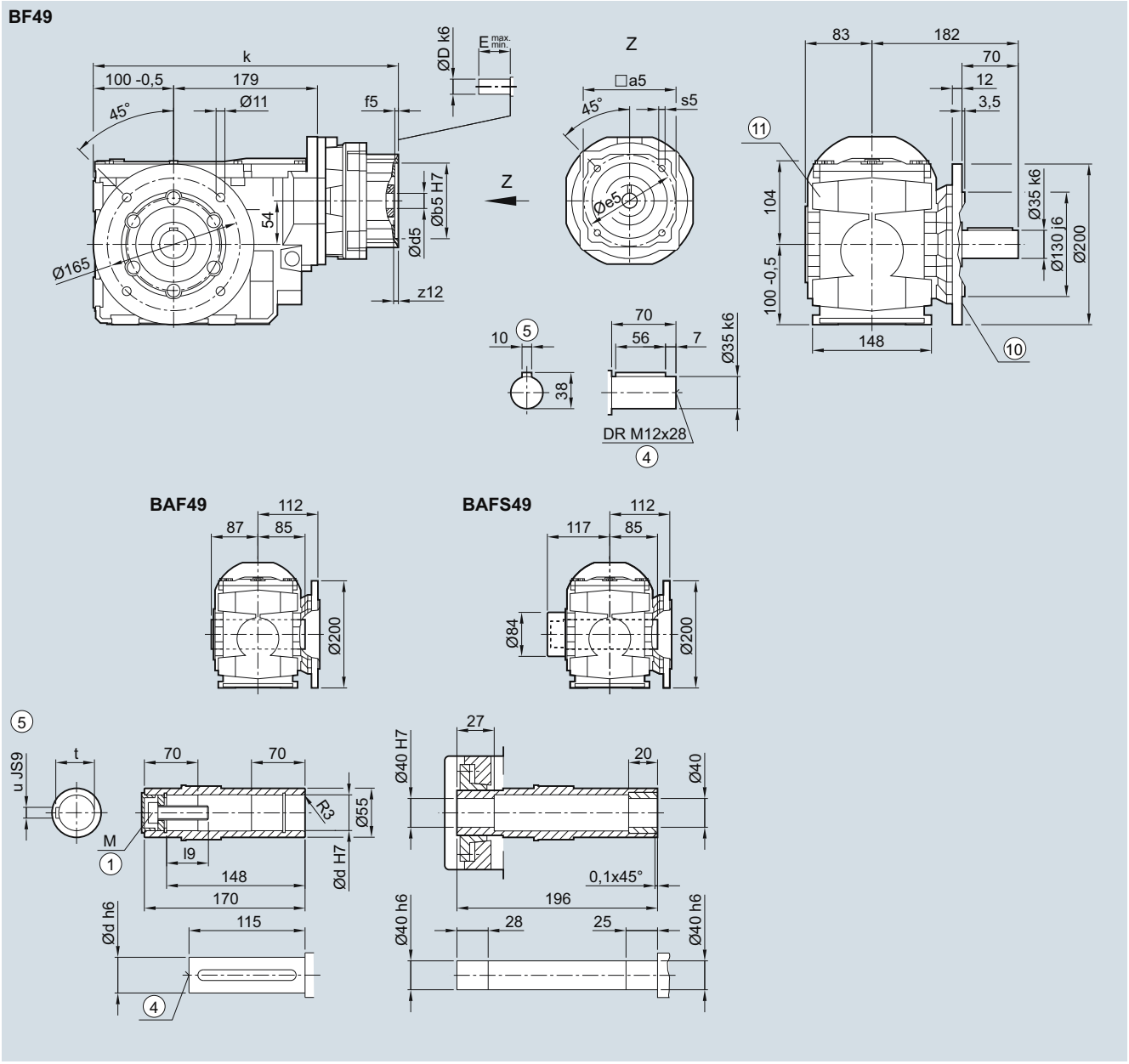
Shaft	d	l9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for housing flange design

B.F.49 gearbox in a flange-mounted design

BF030KS, BAF030KS, BAFS030KS



Shaft	d	l9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

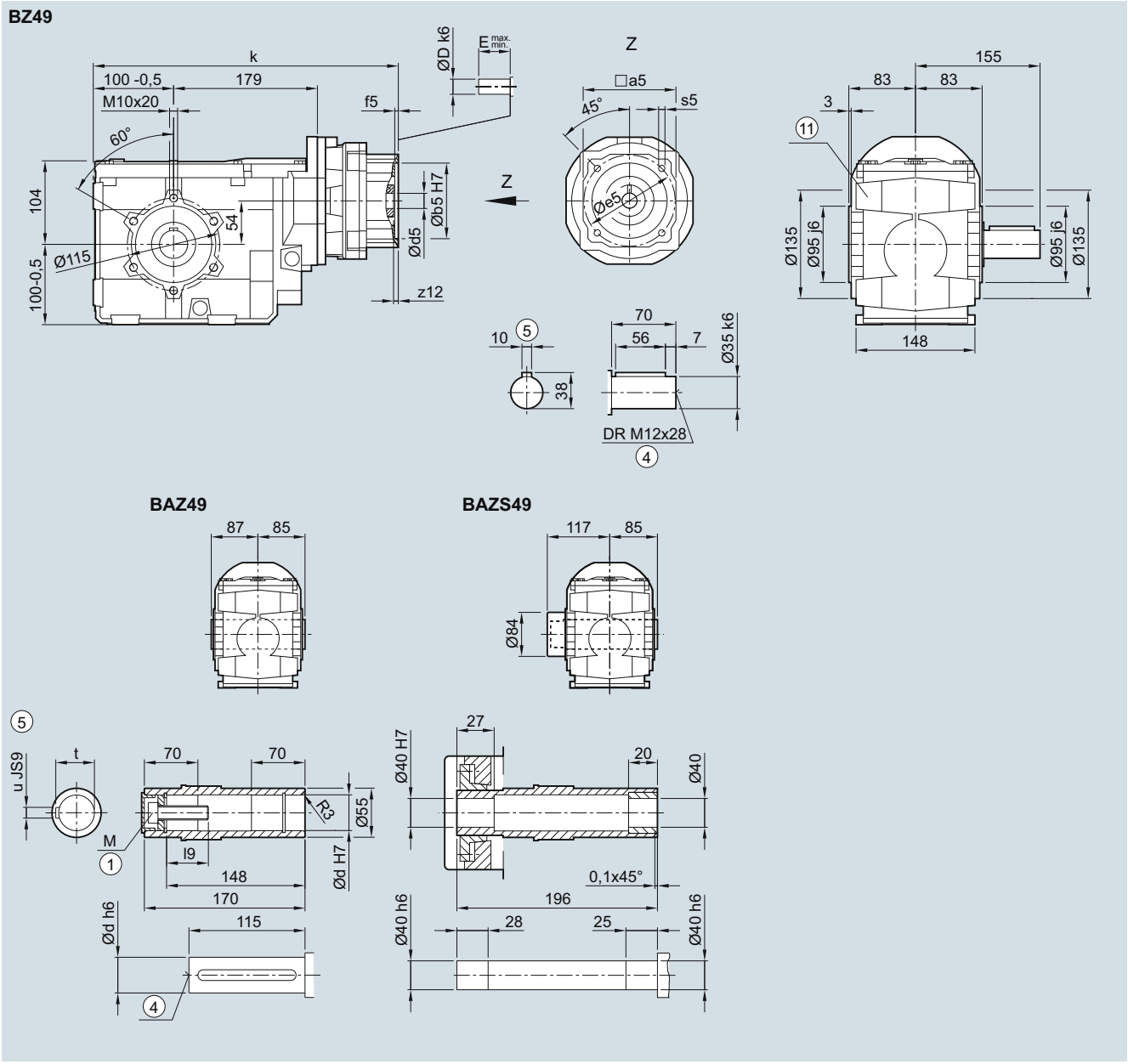
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	351.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	351.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	364.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	364.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	380.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	380.0
KS5.3	117	95	4.5	115	M6x11	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

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

B.Z.49 gearbox in a housing flange design

BZ030KS, BAZ030KS, BAZS030KS



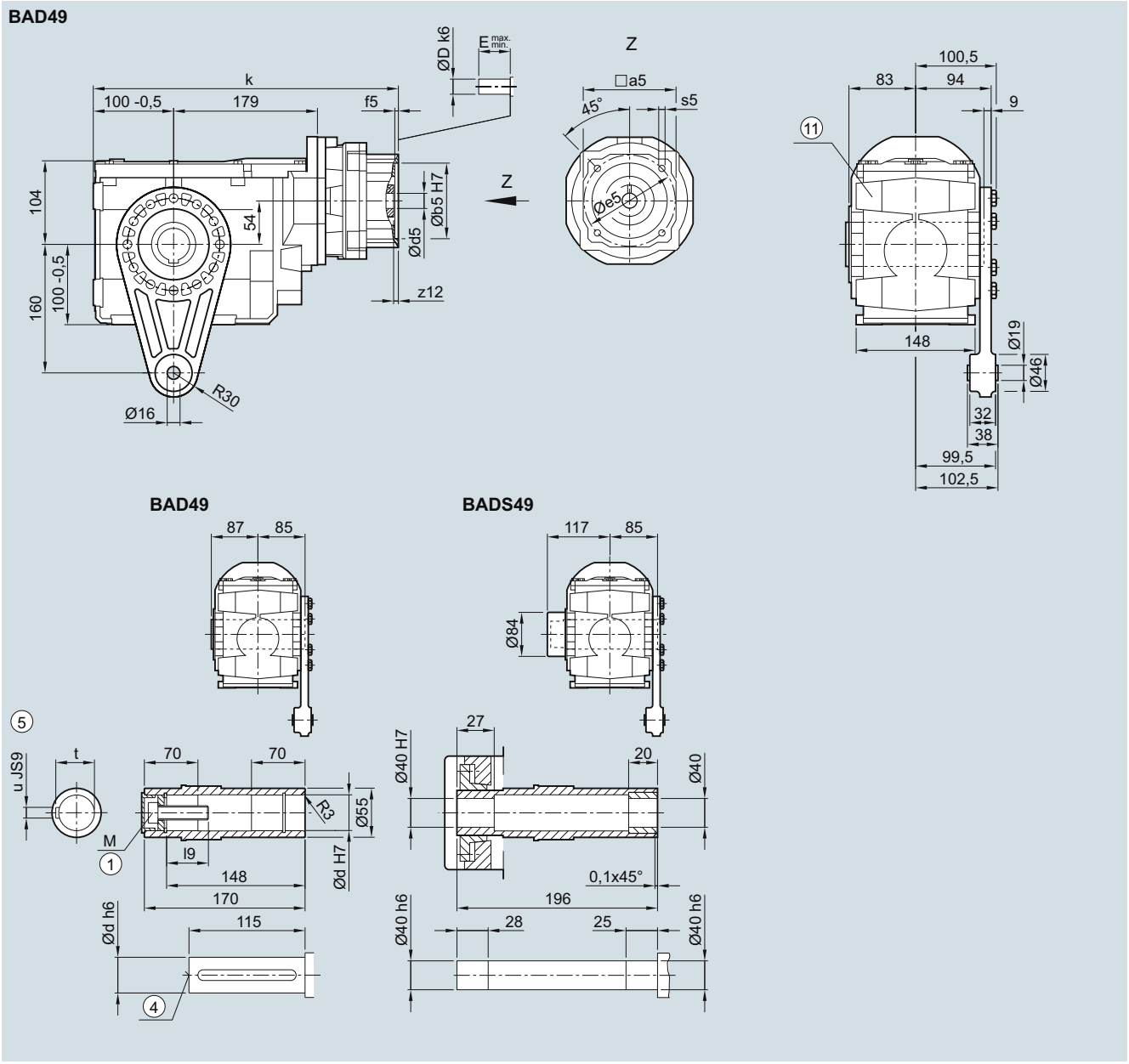
Shaft	d	l9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

BAD.49 gearbox in a shaft-mounted design

BAD030KS, BADS030KS



Shaft	d	l9	M	t	u
	35	57	M12	38.3	10
	40	67.75	M16	43.3	12

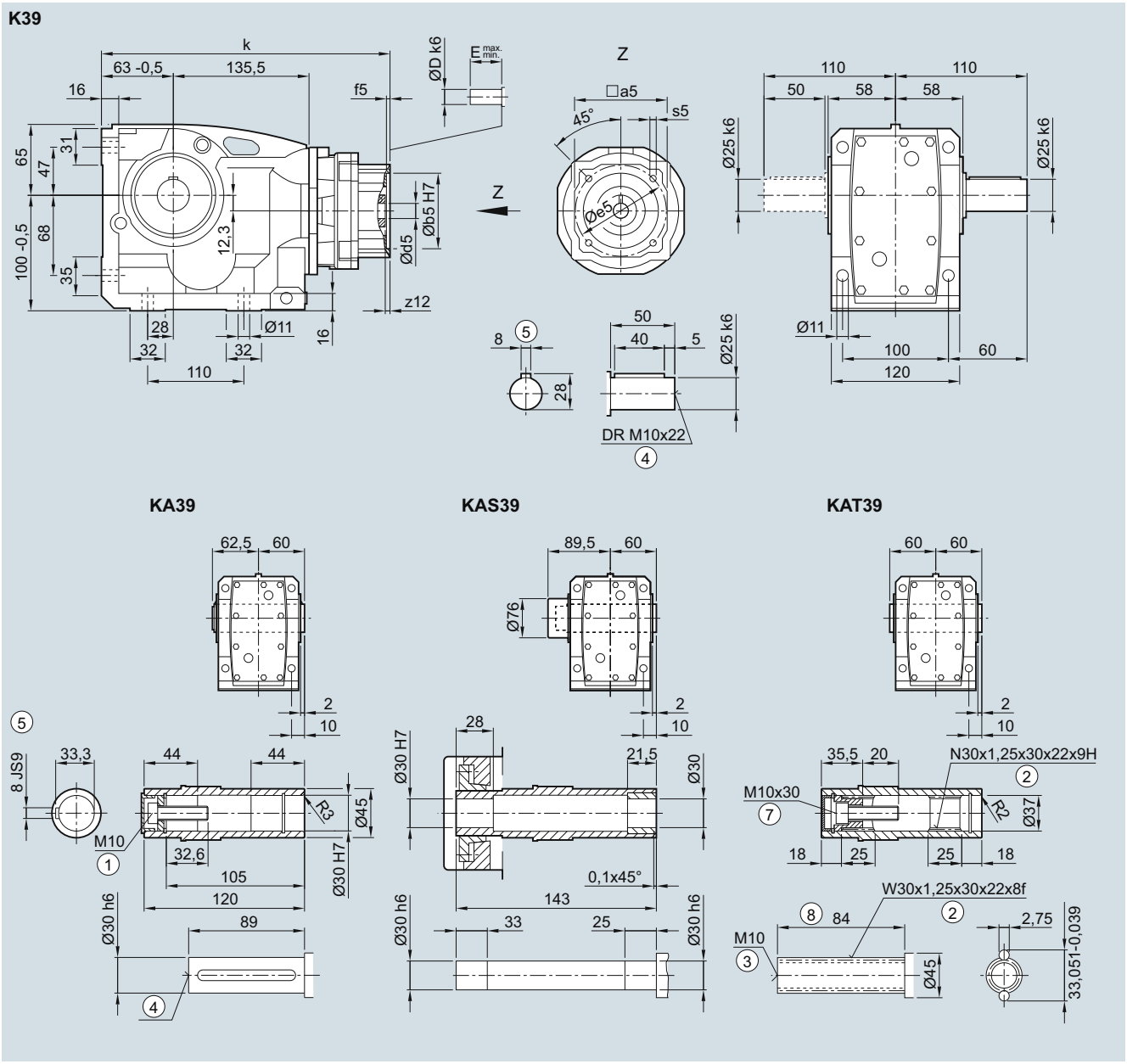
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	351.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	351.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	364.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	364.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	380.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	380.0
KS5.3	117	95	4.5	115	M6x11	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

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

K.39 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS

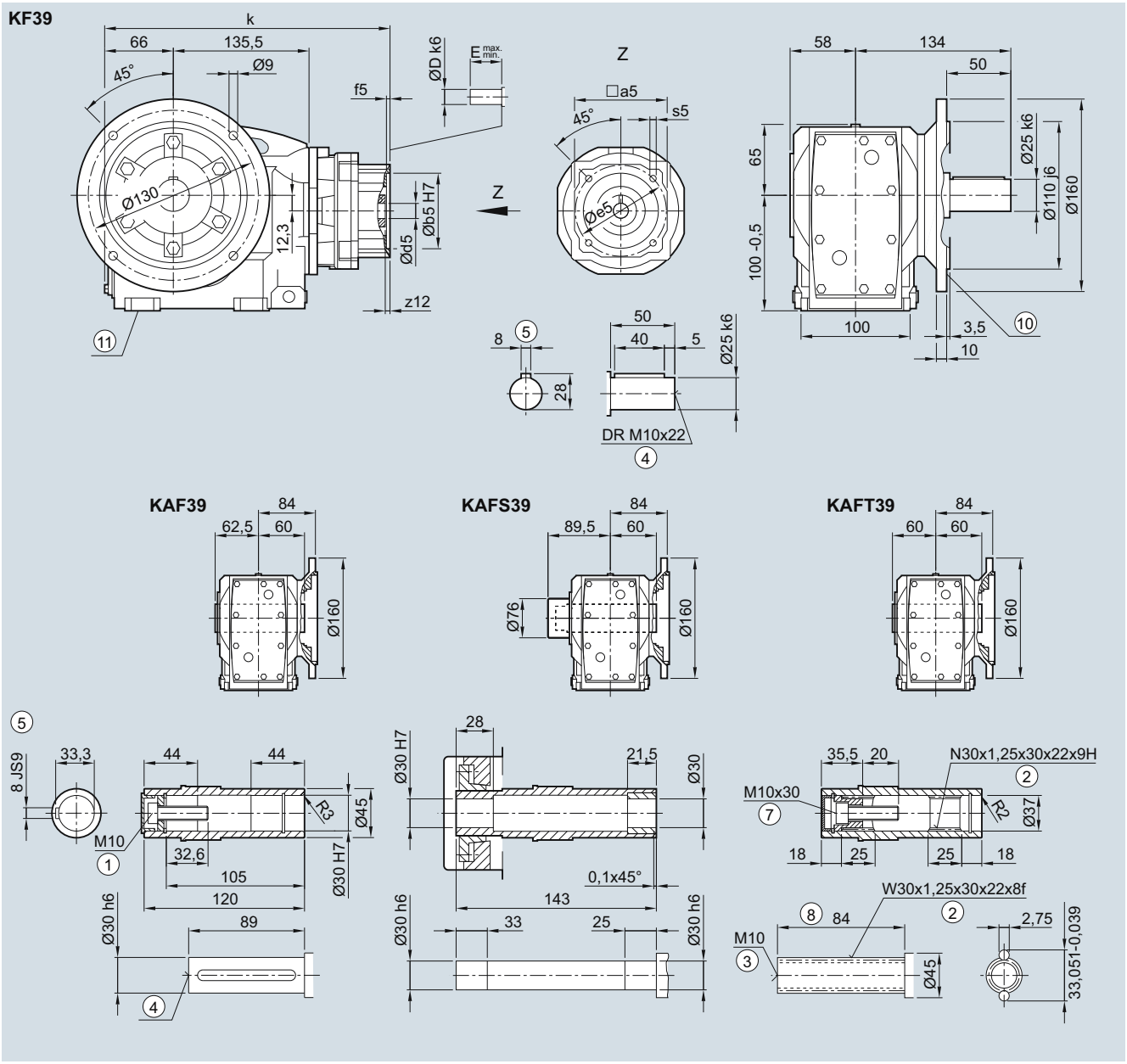


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	280.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	280.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	292.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	292.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	308.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	308.5
KS5.3	117	95	4.5	115	M6x11	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

K.F.39 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



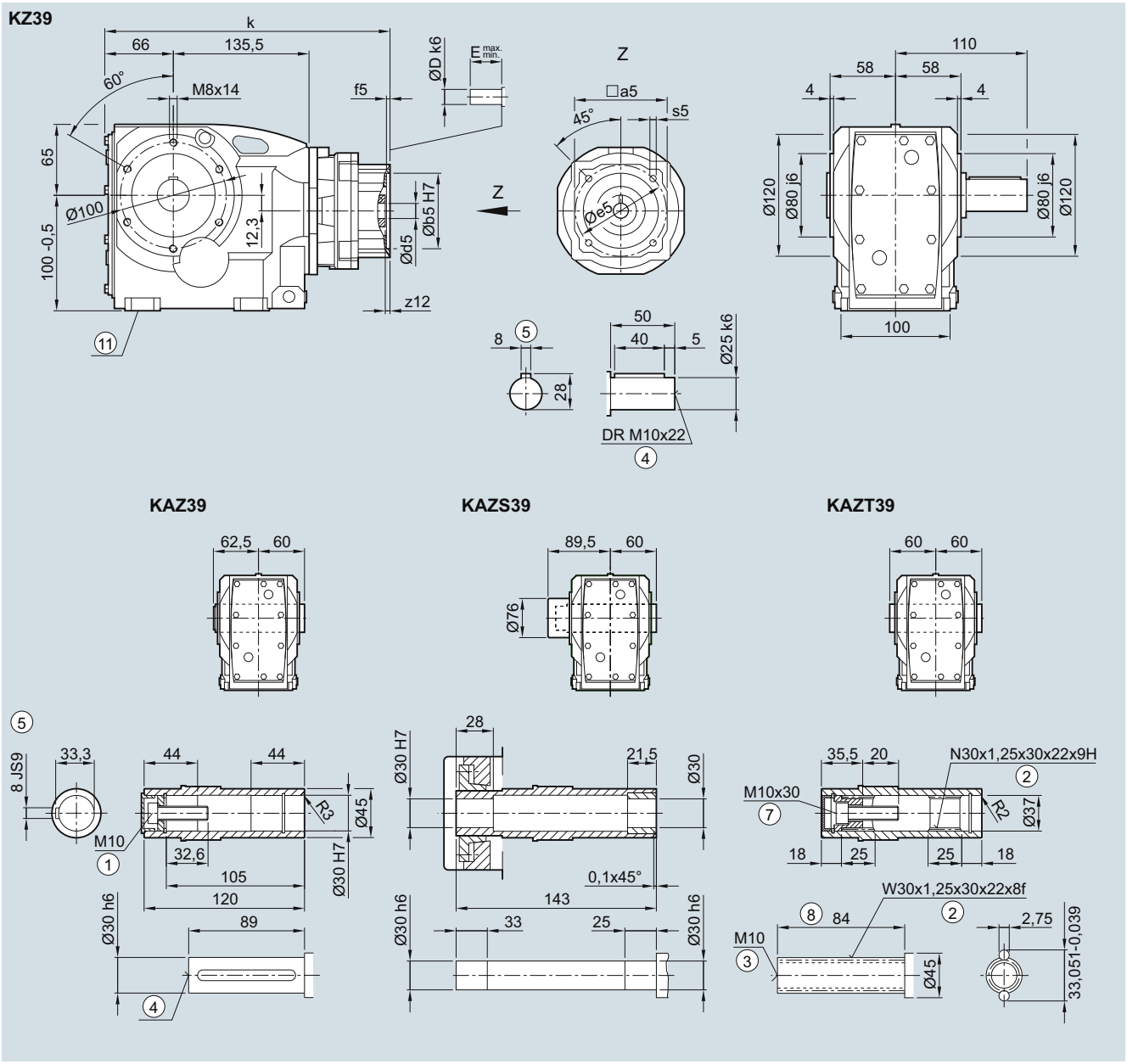
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	283.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	283.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	295.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	295.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	311.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	311.5
KS5.3	117	95	4.5	115	M6x11	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.39 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

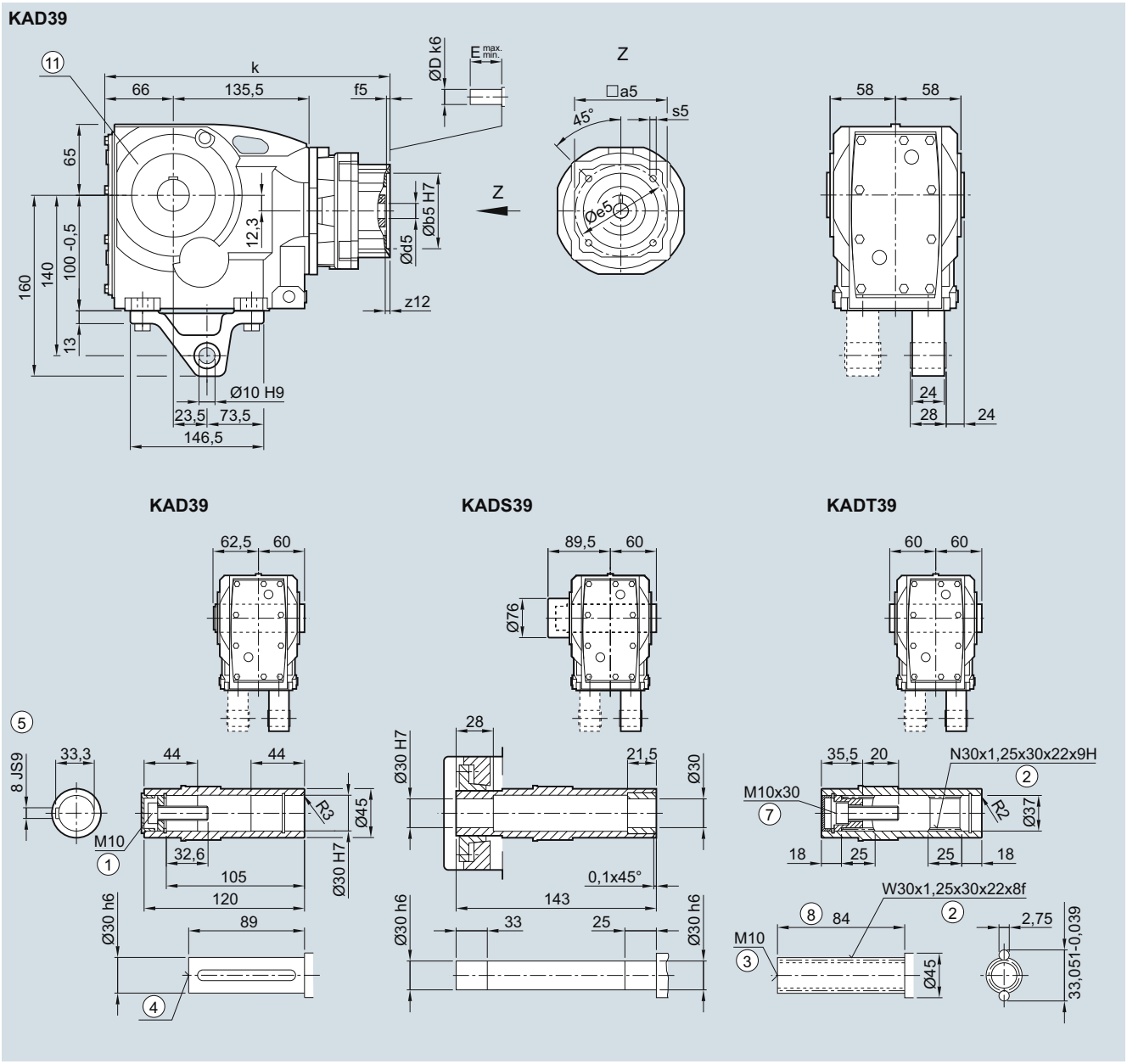


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	283.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	283.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	295.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	295.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	311.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	311.5
KS5.3	117	95	4.5	115	M6x11	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

KAD.39 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS



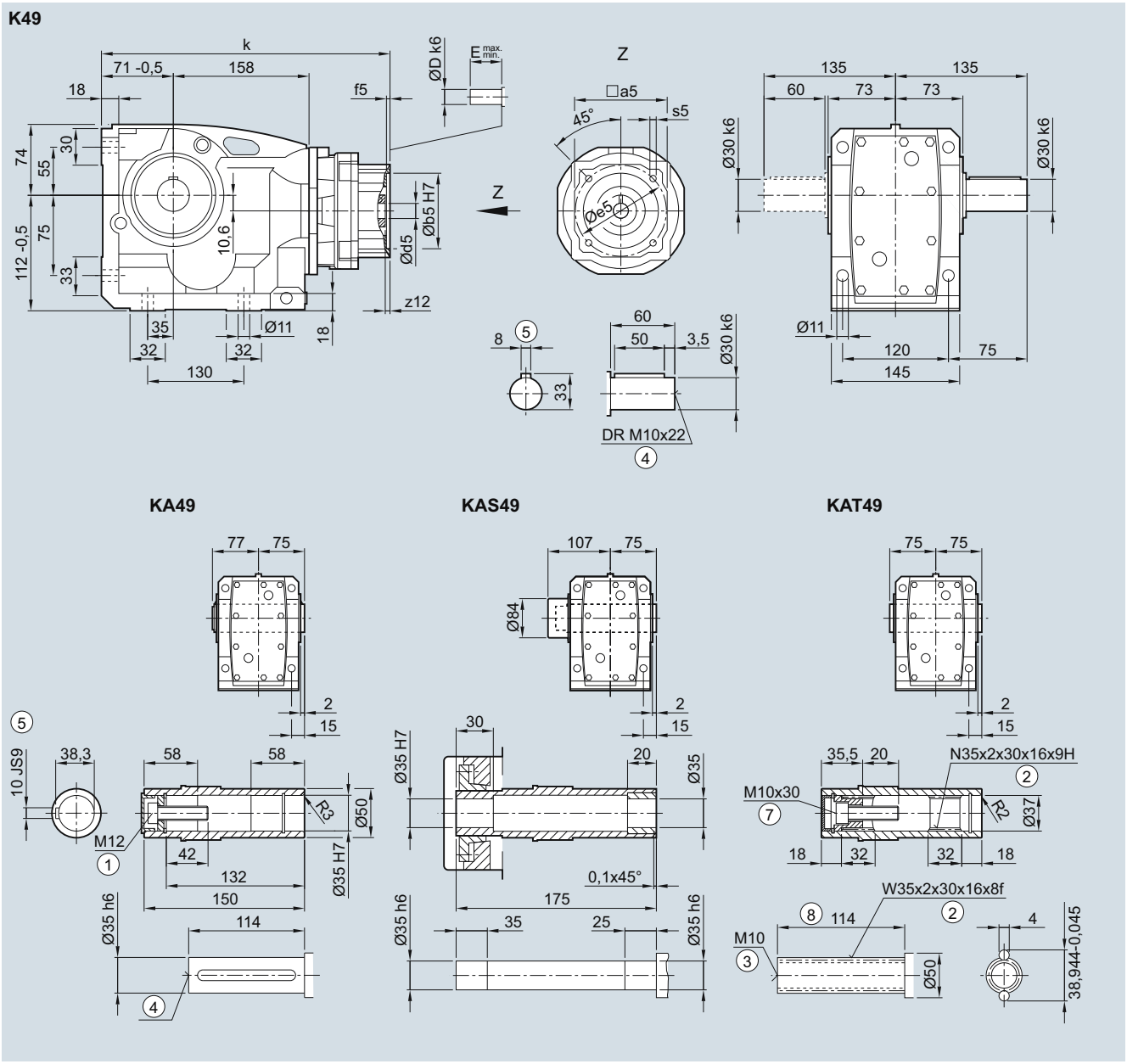
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	283.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	283.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	295.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	295.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	311.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	311.5
KS5.3	117	95	4.5	115	M6x11	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

K.49 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS

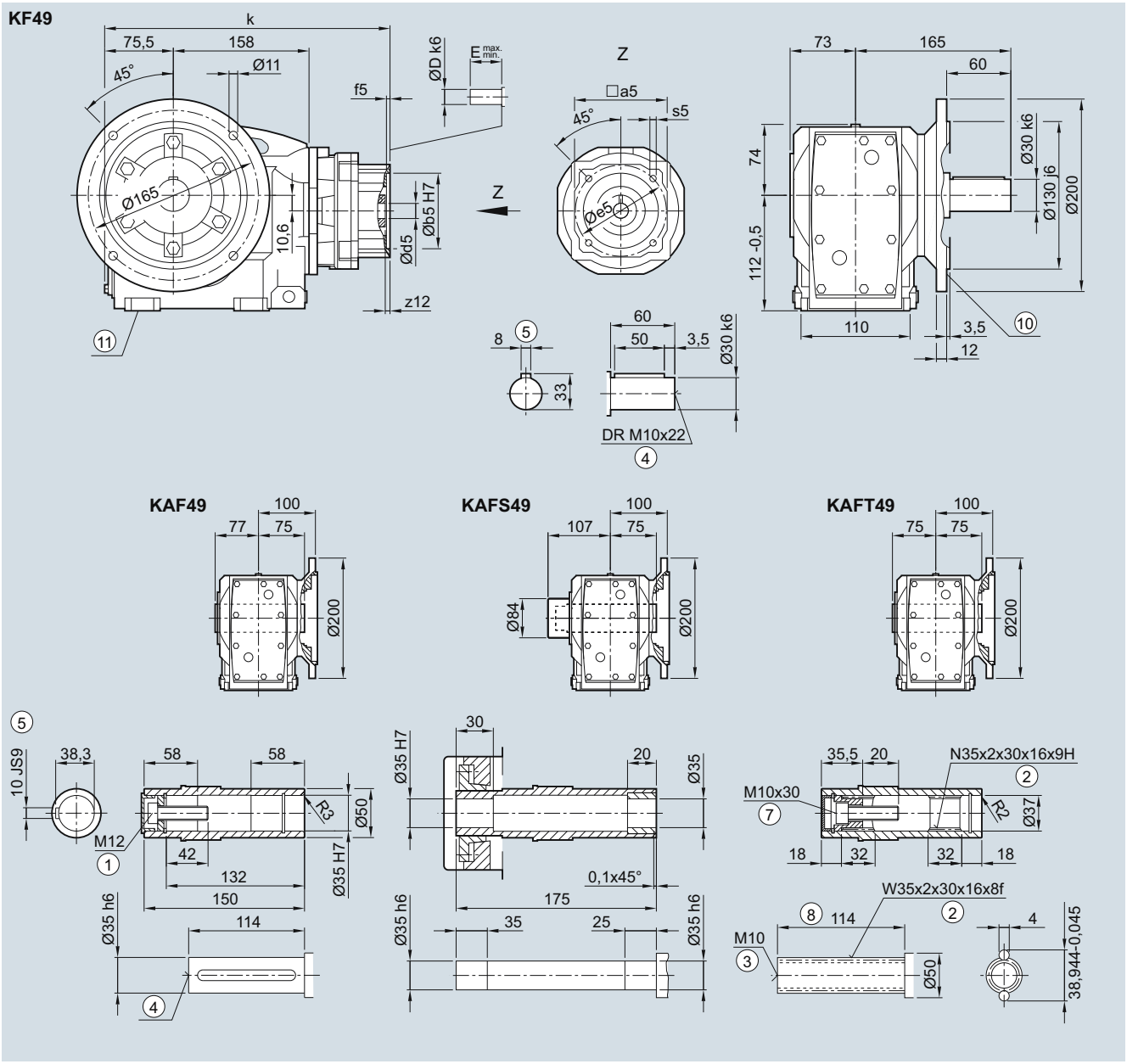


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	301.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	301.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	314.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	314.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	330.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	330.0
KS5.3	117	95	4.5	115	M6x11	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

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.49 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



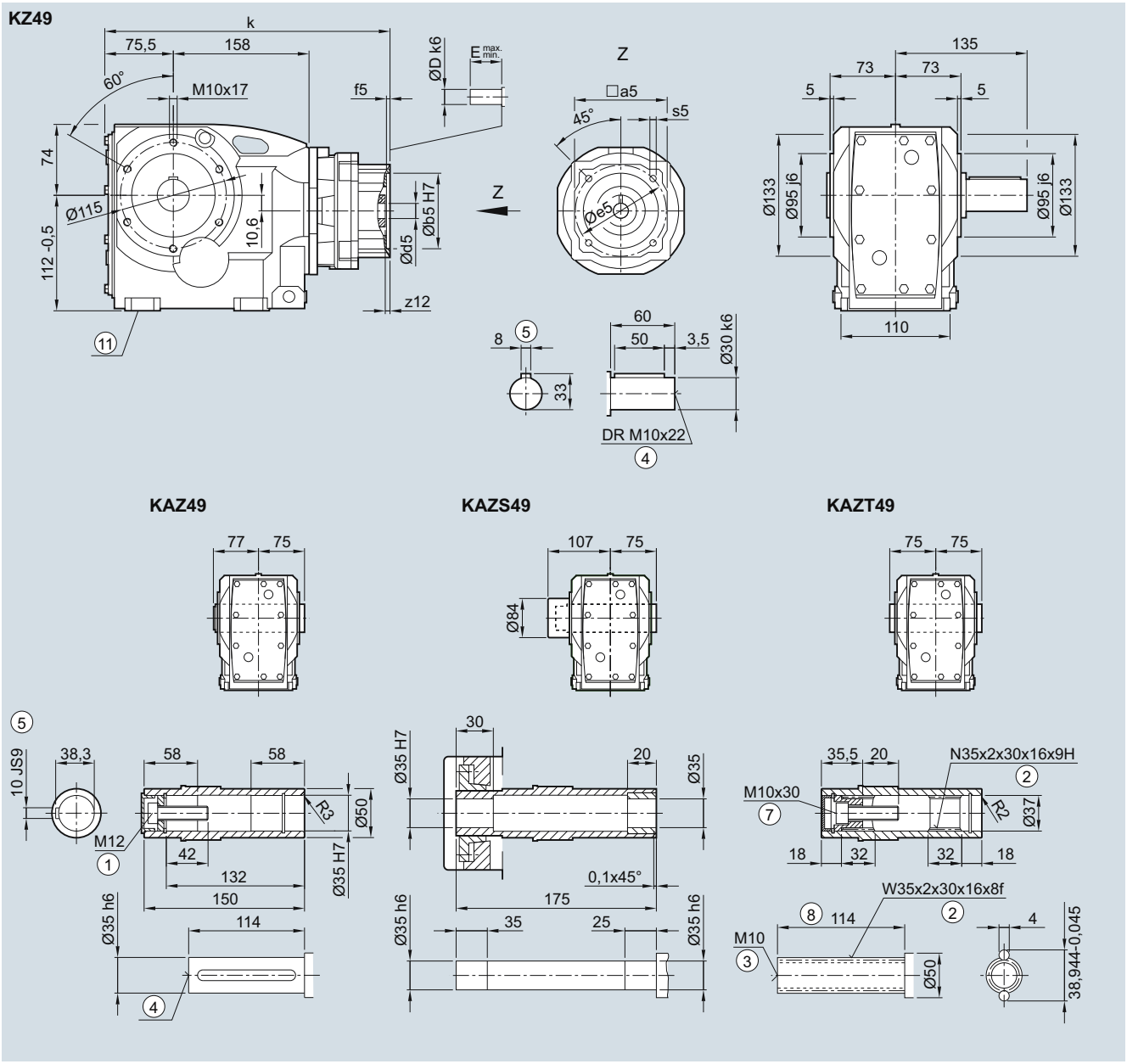
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	306.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	306.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	318.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	318.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	334.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	334.5
KS5.3	117	95	4.5	115	M6x11	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

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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.49 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

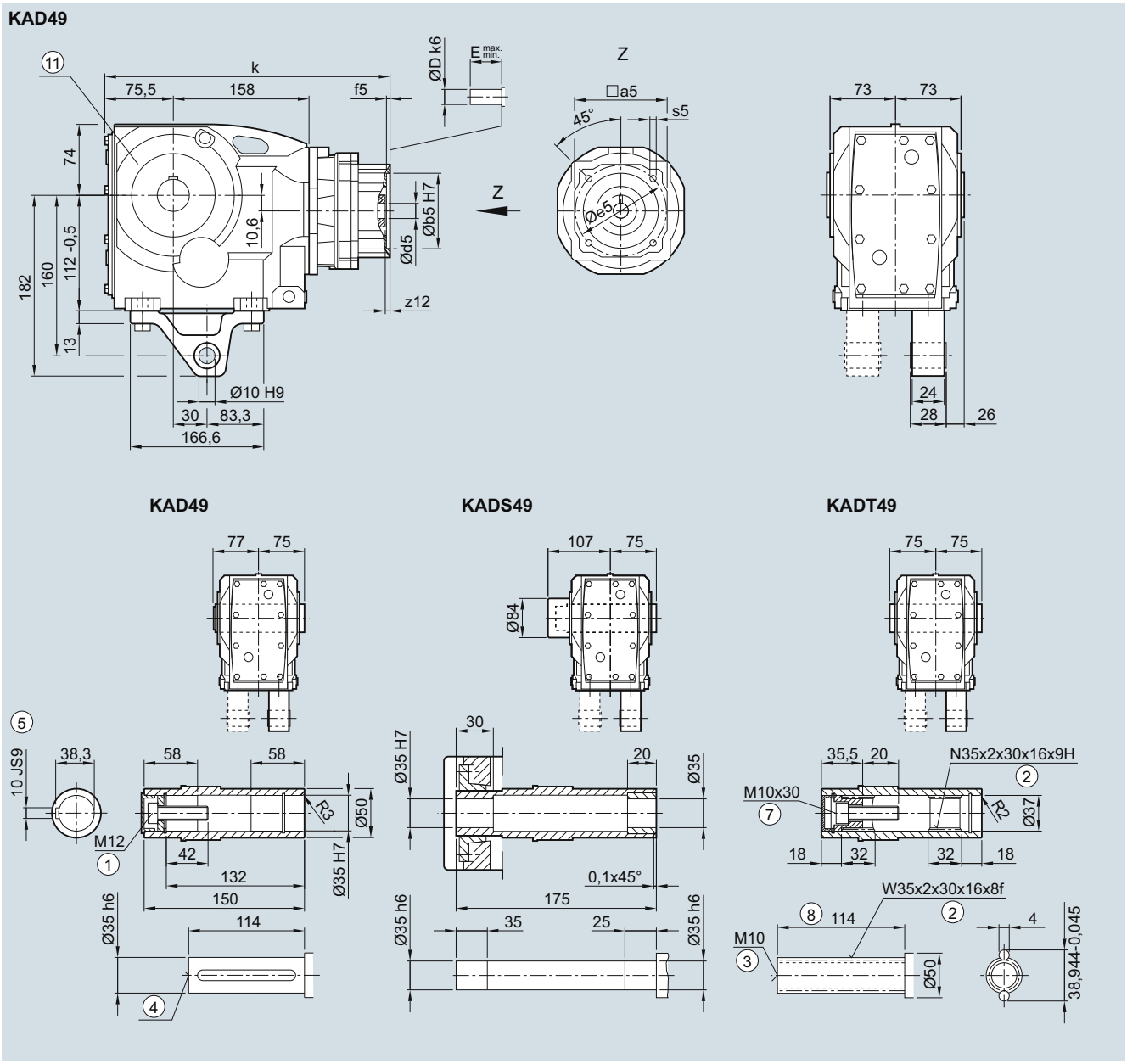


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	306.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	306.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	318.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	318.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	334.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	334.5
KS5.3	117	95	4.5	115	M6x11	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

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 ⑪ Use bores only for foot-mounted design

KAD.49 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS



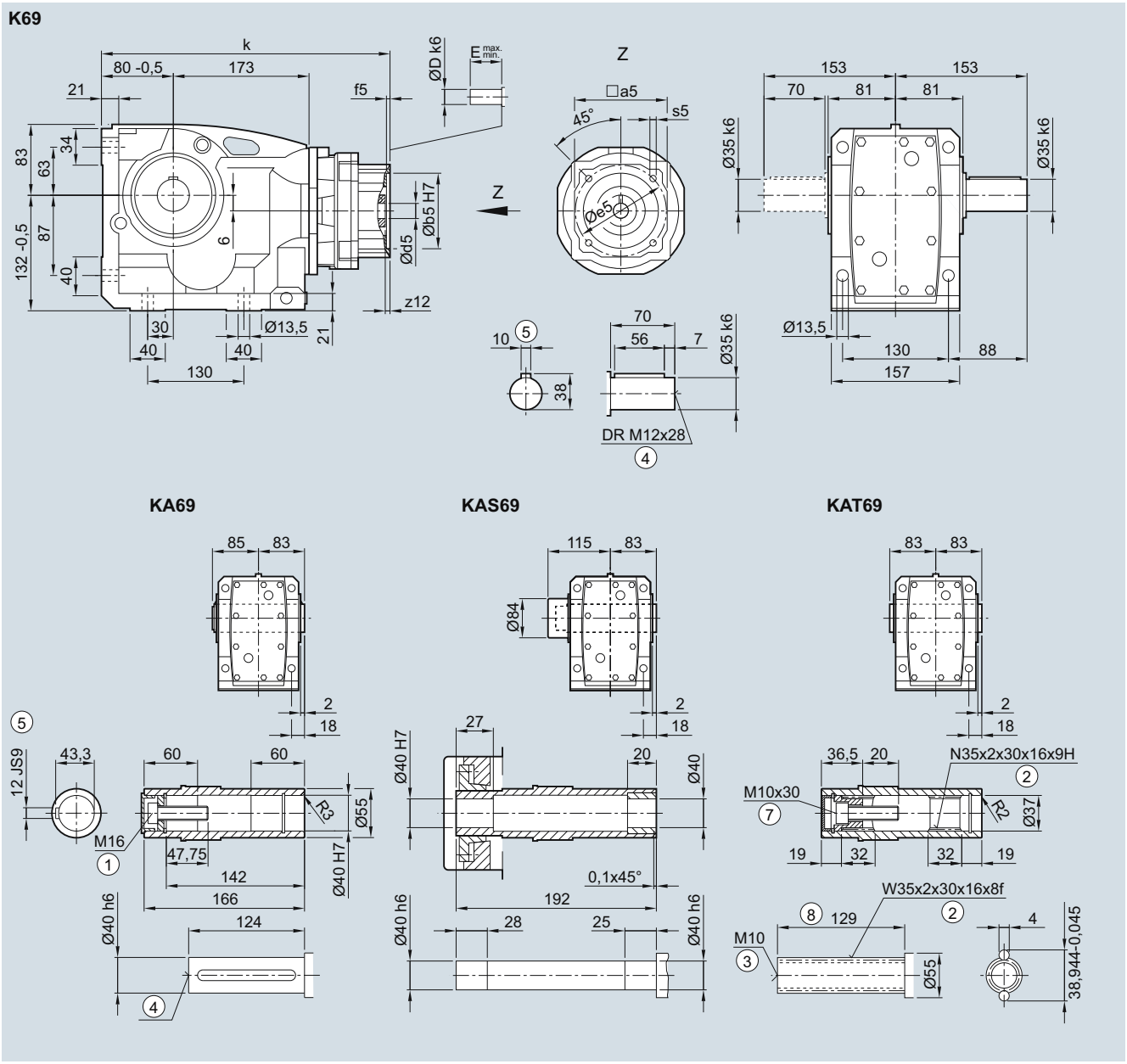
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	306.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	306.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	318.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	318.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	334.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	334.5
KS5.3	117	95	4.5	115	M6x11	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

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 ⑪ Use bores only for housing flange design

Dimensions

K.69 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS

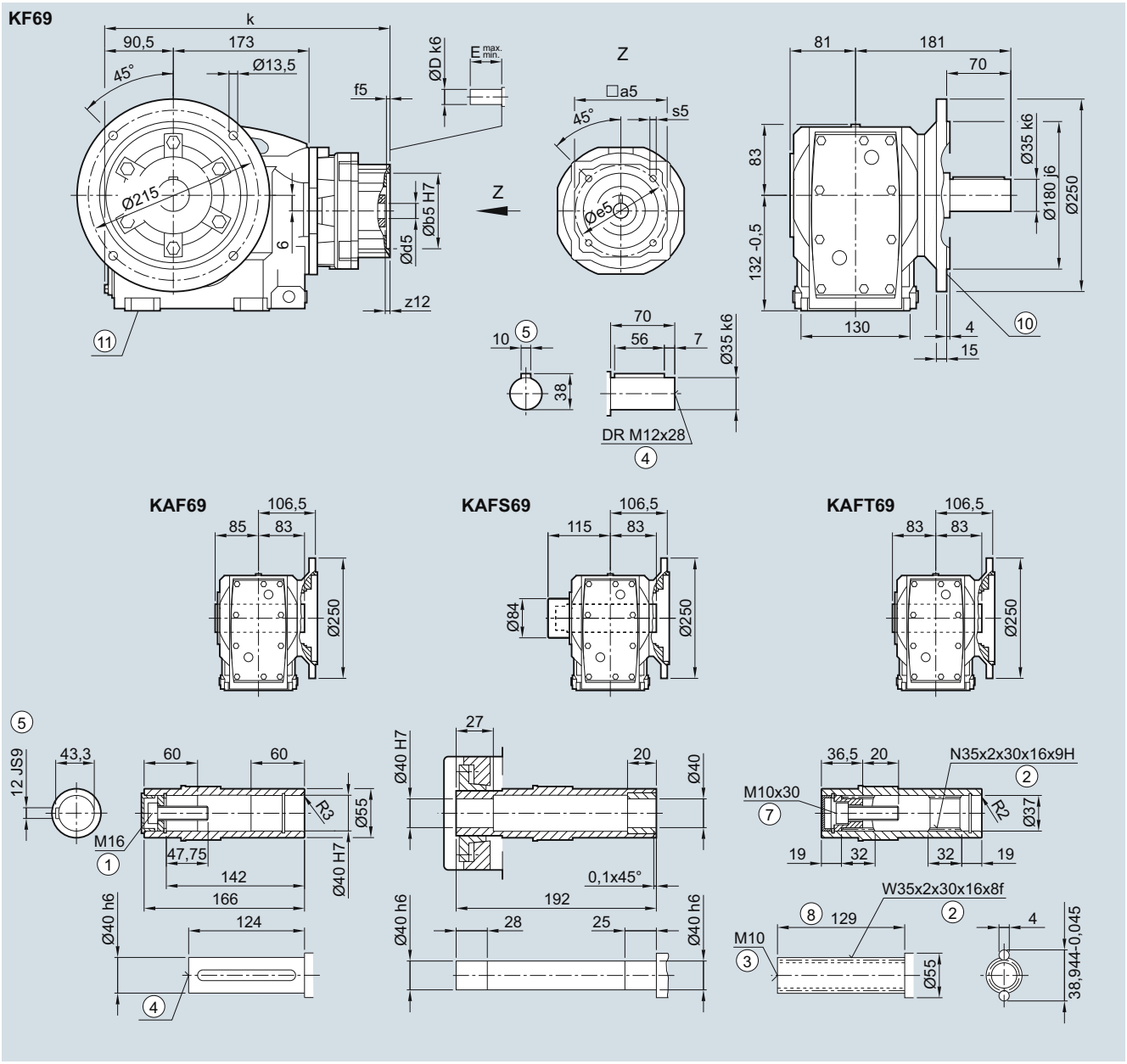


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	325.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	325.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	338.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	338.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	354.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	354.0
KS5.3	117	95	4.5	115	M6x11	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

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.69 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



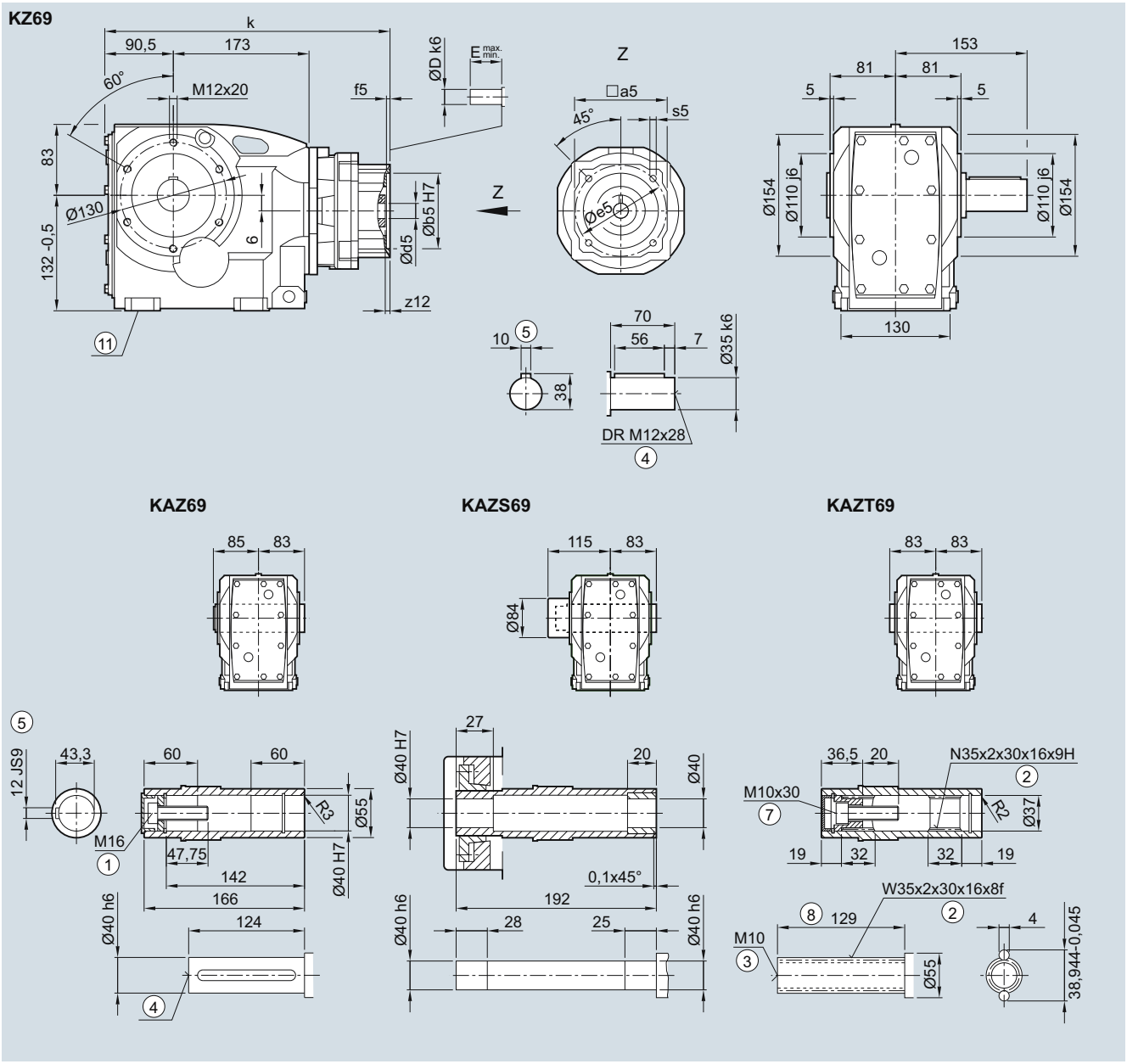
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	336.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	336.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	348.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	348.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	364.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	364.5
KS5.3	117	95	4.5	115	M6x11	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

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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.69 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

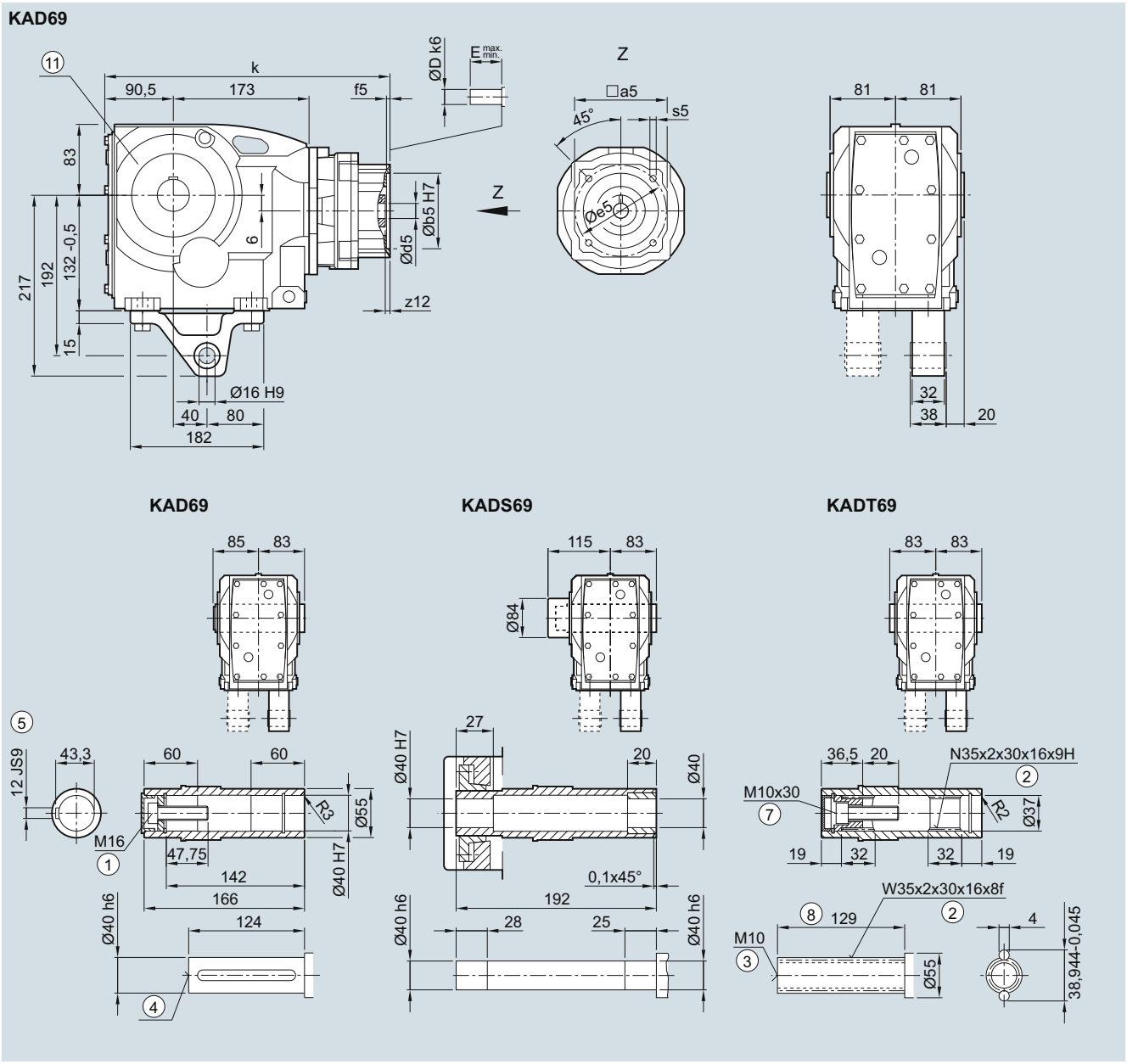


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	336.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	336.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	348.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	348.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	364.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	364.5
KS5.3	117	95	4.5	115	M6x11	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

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 ⑪ Use bores only for foot-mounted design

KAD.69 gearbox in a shaft-mounted design

KAD030KS, KADS030KS, KADT030KS



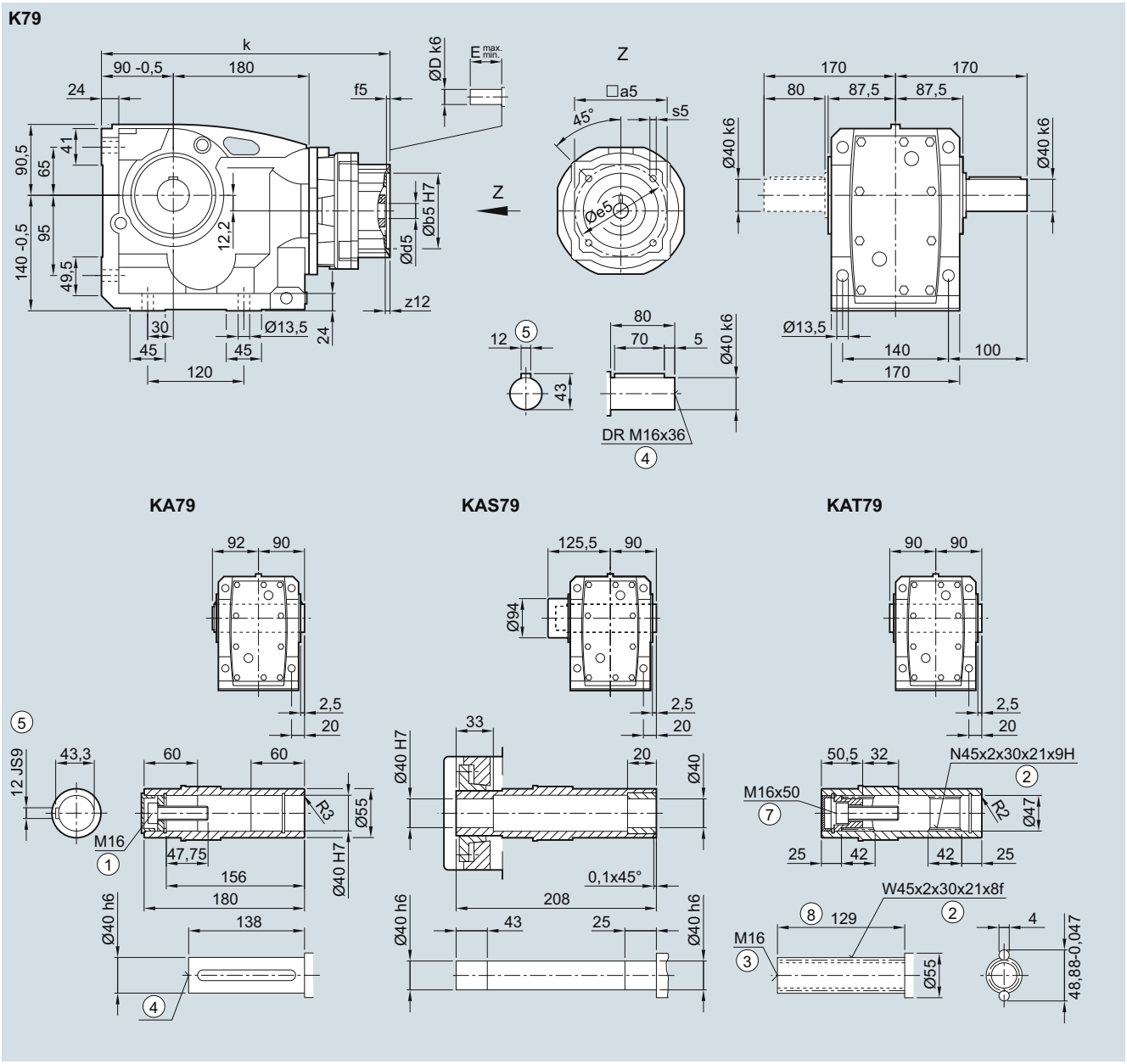
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	336.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	336.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	348.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	348.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	364.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	364.5
KS5.3	117	95	4.5	115	M6x11	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

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 ⑪ Use bores only for housing flange design

Dimensions

K.79 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS

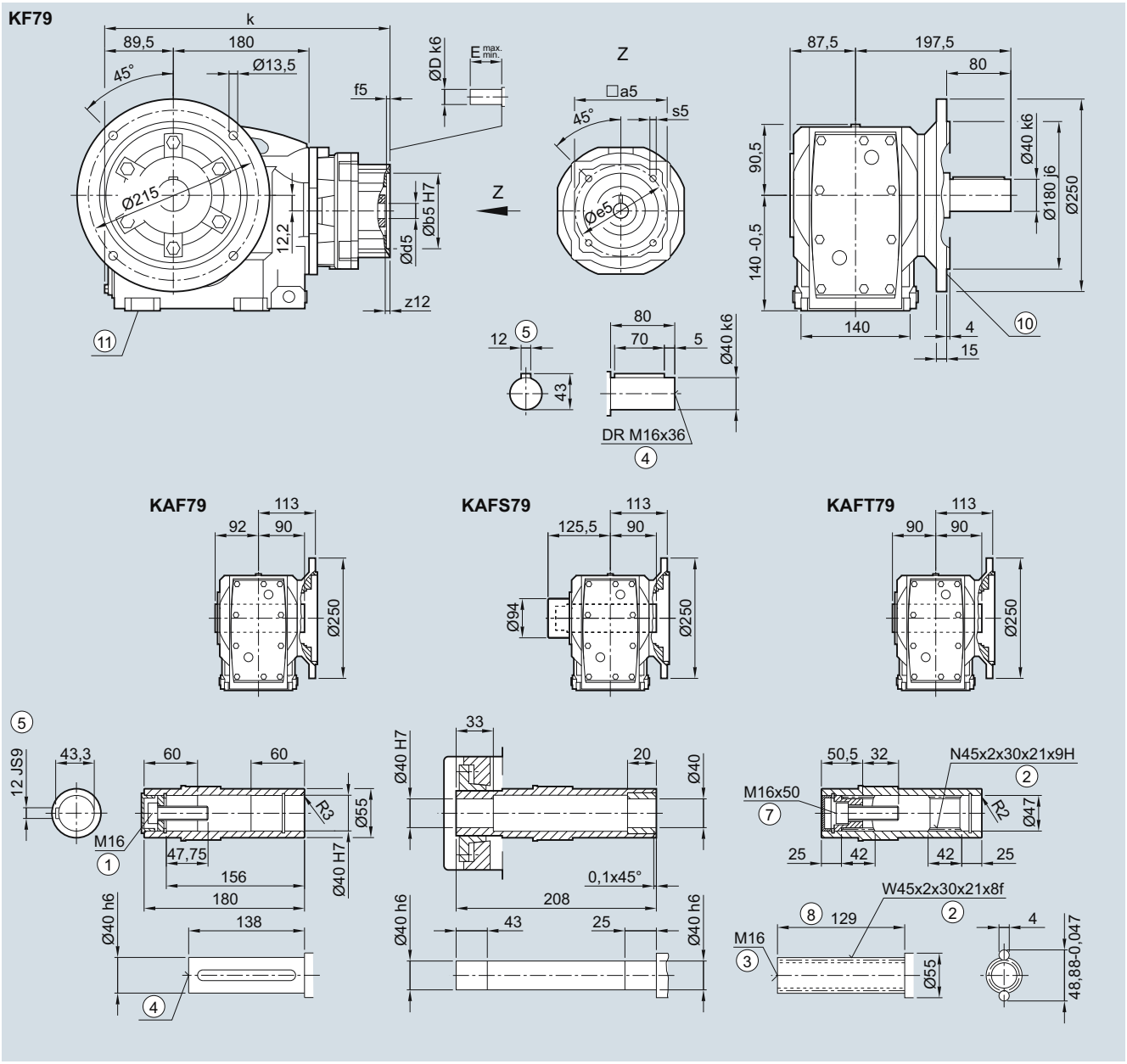


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	355.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	355.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	371.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	371.0
KS5.3	117	95	4.5	115	M6x11	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

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.79 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



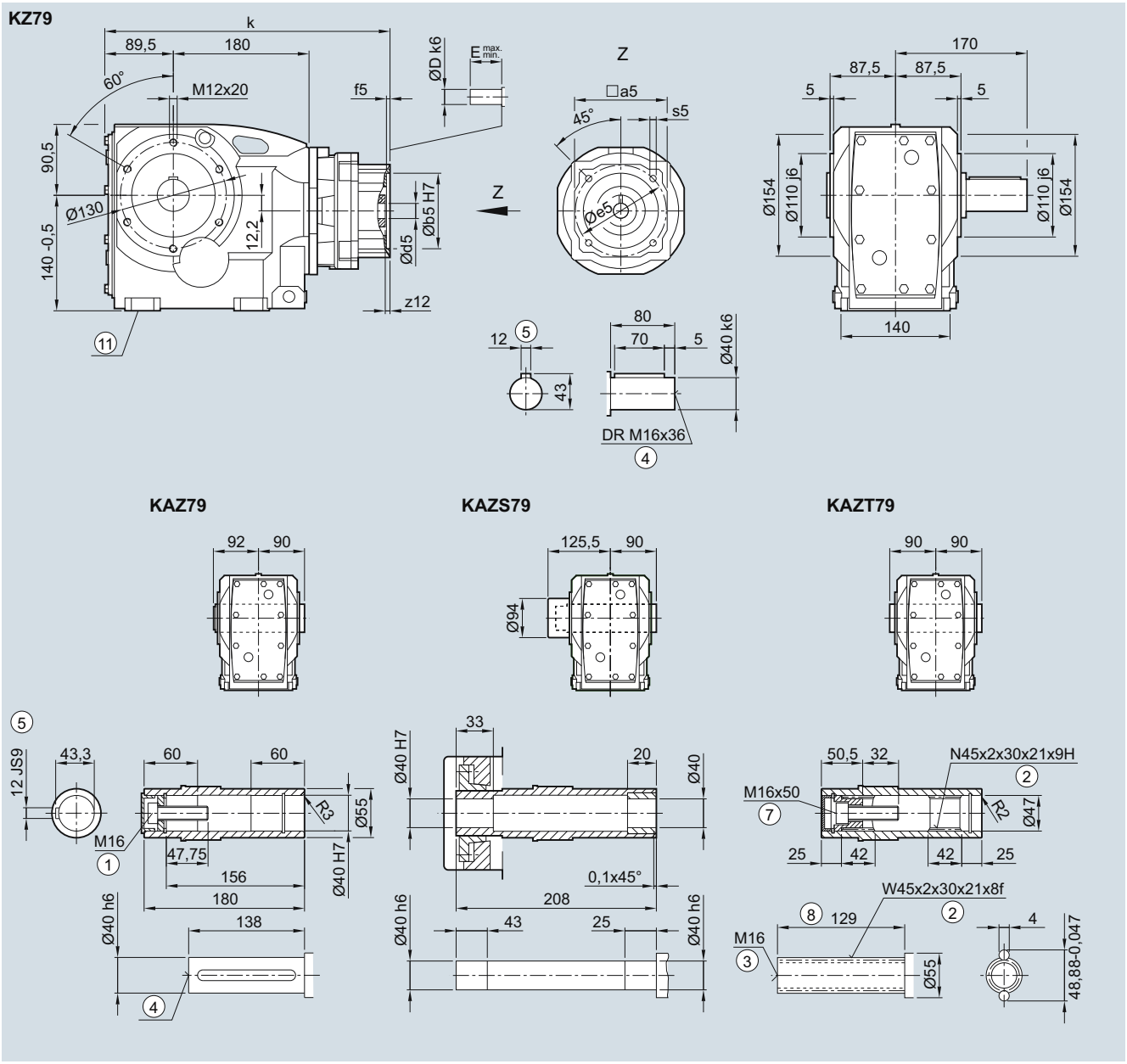
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	354.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	354.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	370.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	370.5
KS5.3	117	95	4.5	115	M6x11	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

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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.79 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

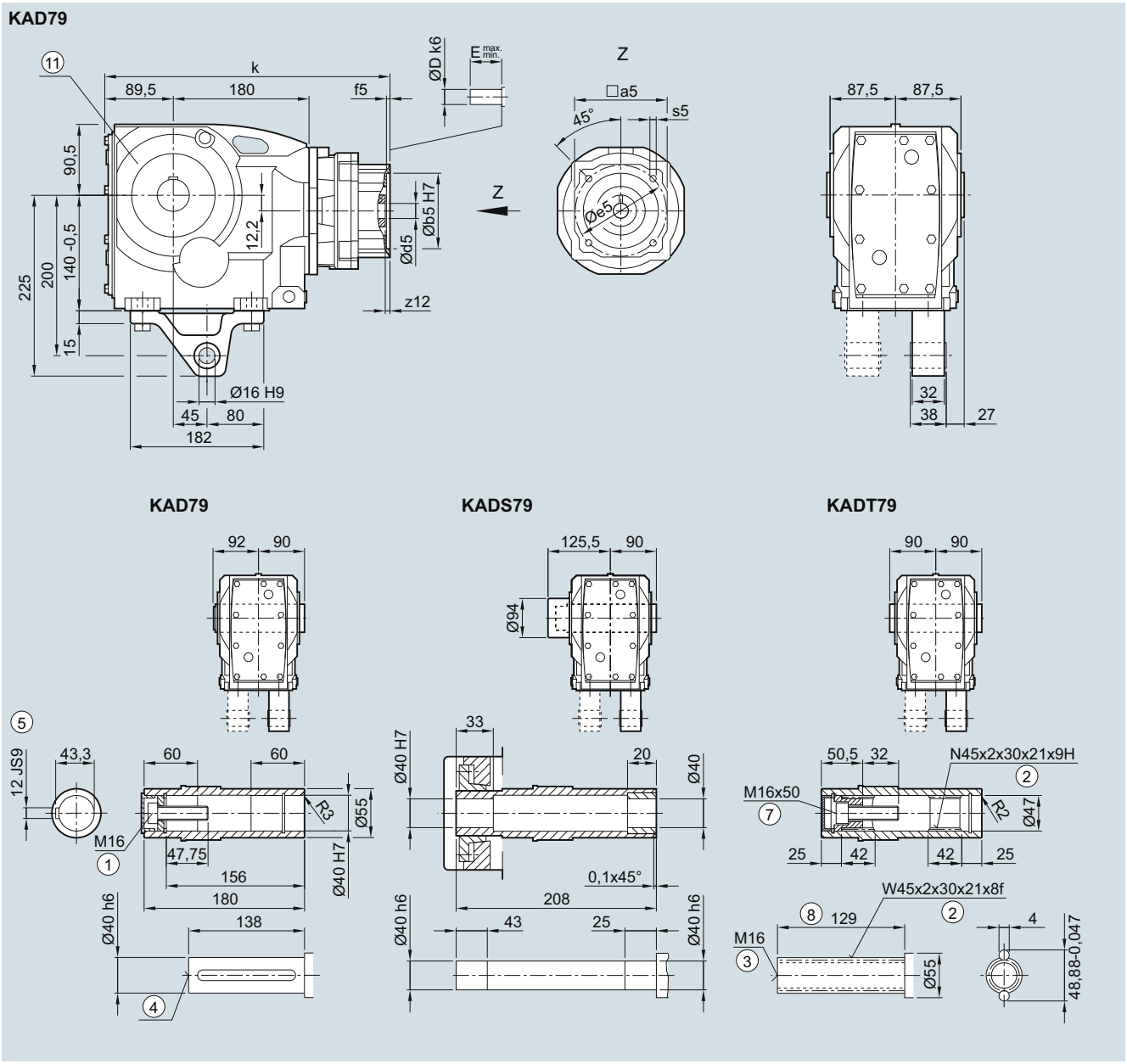


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	354.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	354.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	370.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	370.5
KS5.3	117	95	4.5	115	M6x11	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

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 ⑪ Use bores only for foot-mounted design

KAD.79 gearbox in a shaft-mounted design

KAD030KS, KADS030KS, KADT030KS



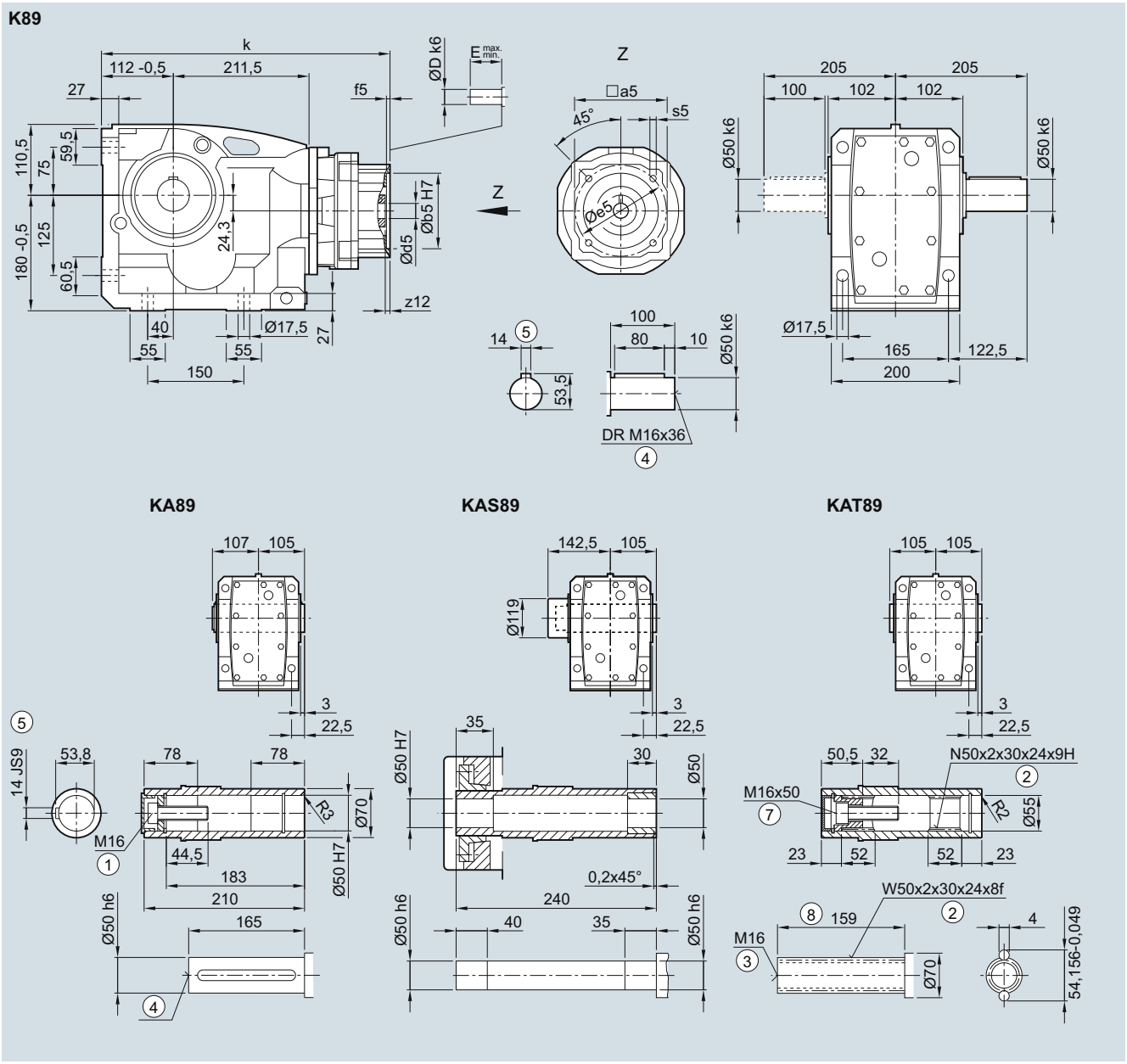
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	342.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	342.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	354.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	354.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	370.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	370.5
KS5.3	117	95	4.5	115	M6x11	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

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 ⑪ Use bores only for housing flange design

Dimensions

K.89 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS

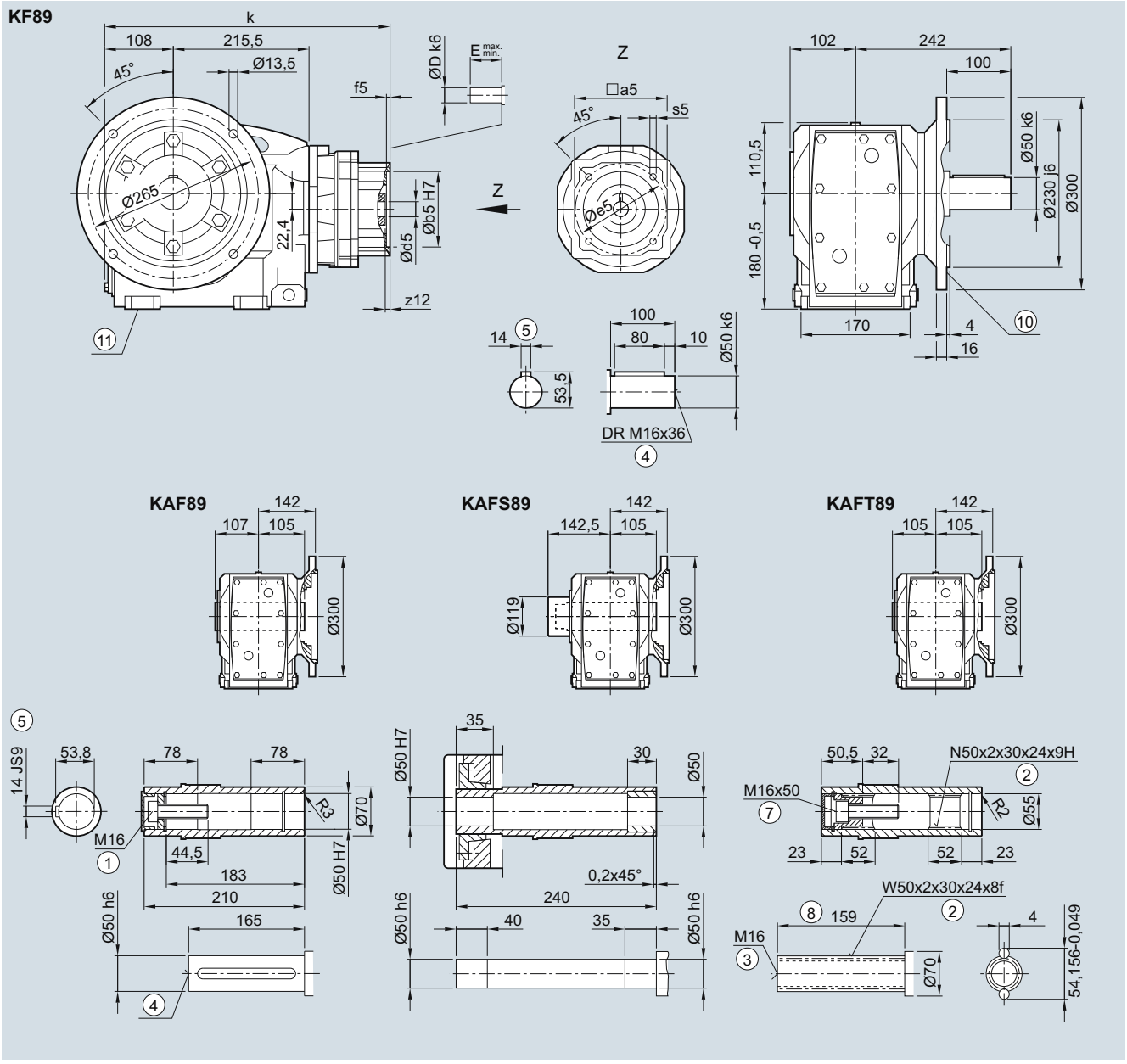


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS5.3	117	95	4.5	115	M6x11	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

K.F.89 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



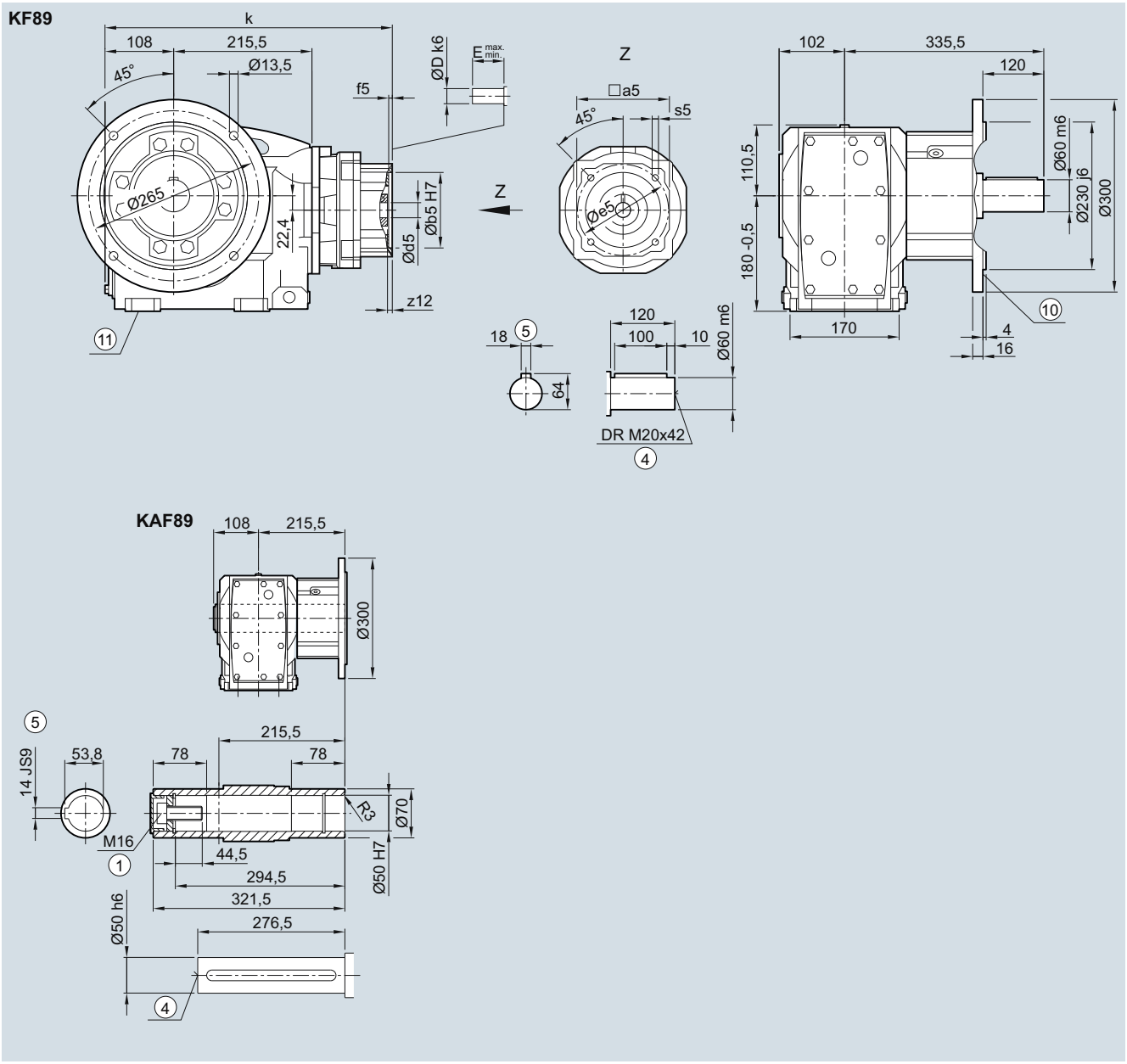
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS5.3	117	95	4.5	115	M6x11	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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.F.89 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040KS, KAF040KS

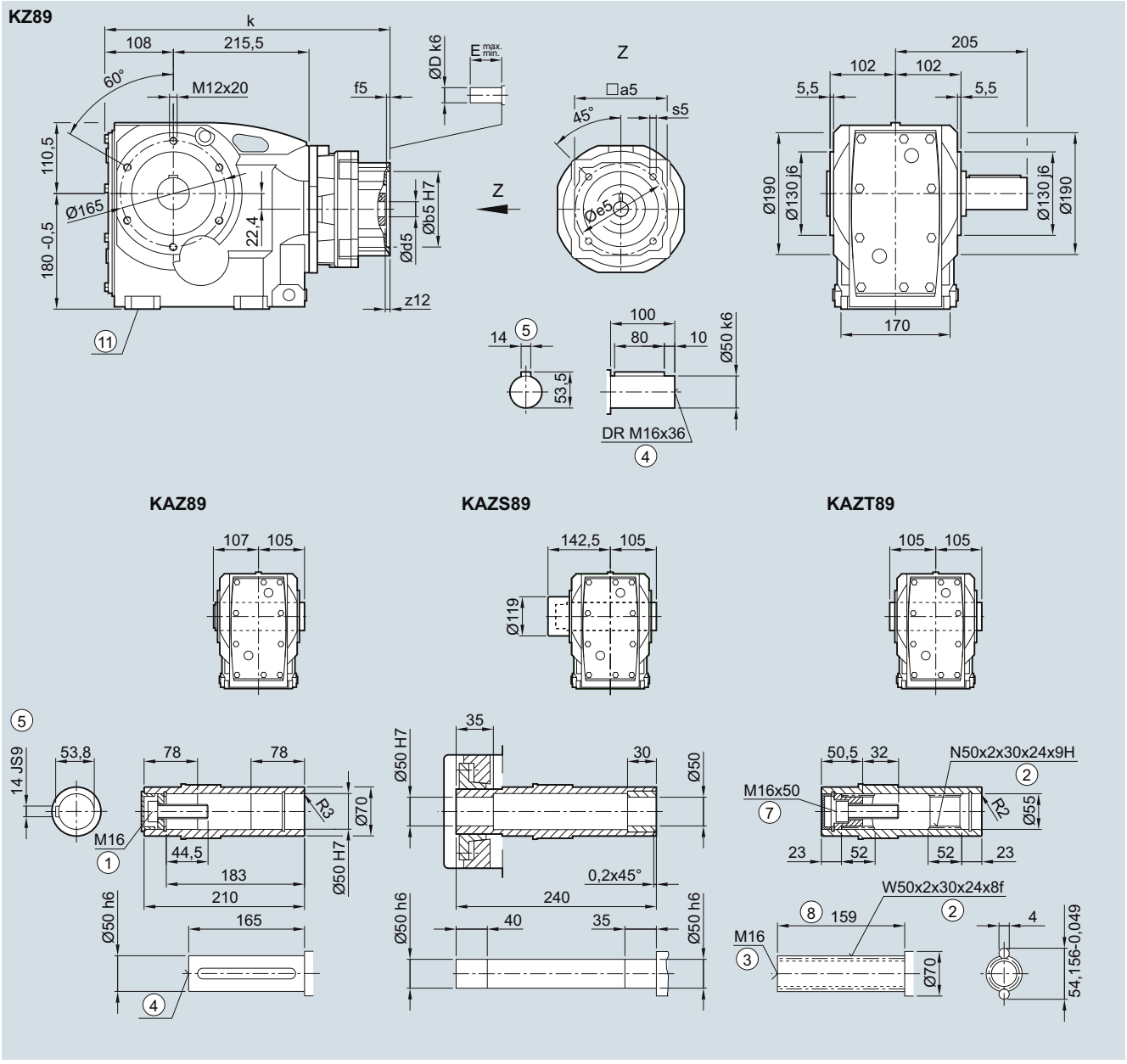


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS5.3	117	95	4.5	115	M6x11	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.Z.89 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS



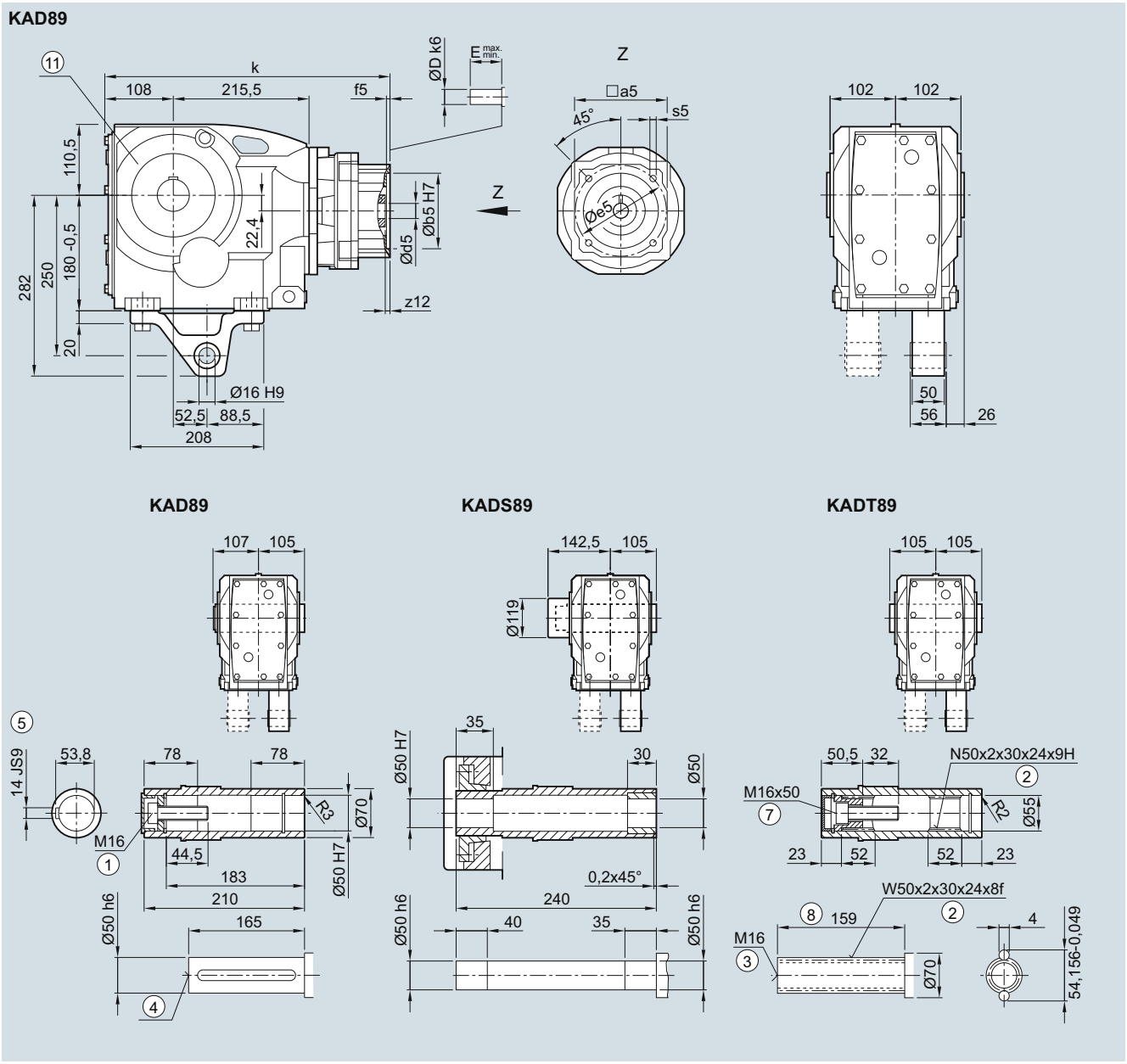
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	394.0
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	394.0
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS5.3	117	95	4.5	115	M6x11	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

Dimensions

KAD.89 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS

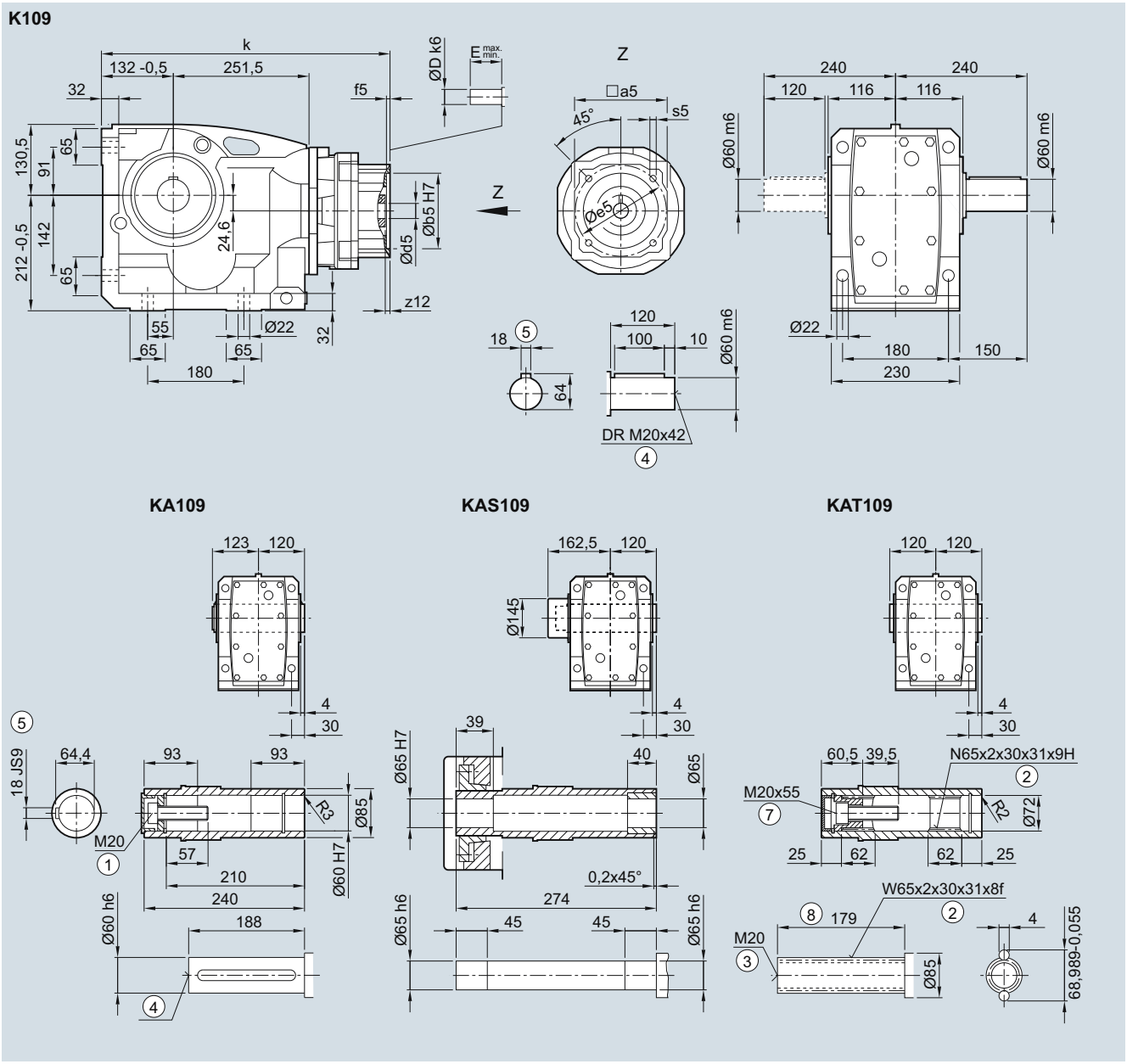


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	406.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	406.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	418.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	418.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	418.5
KS6.1	130	110	4.5	130	M8x15	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

K.109 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS



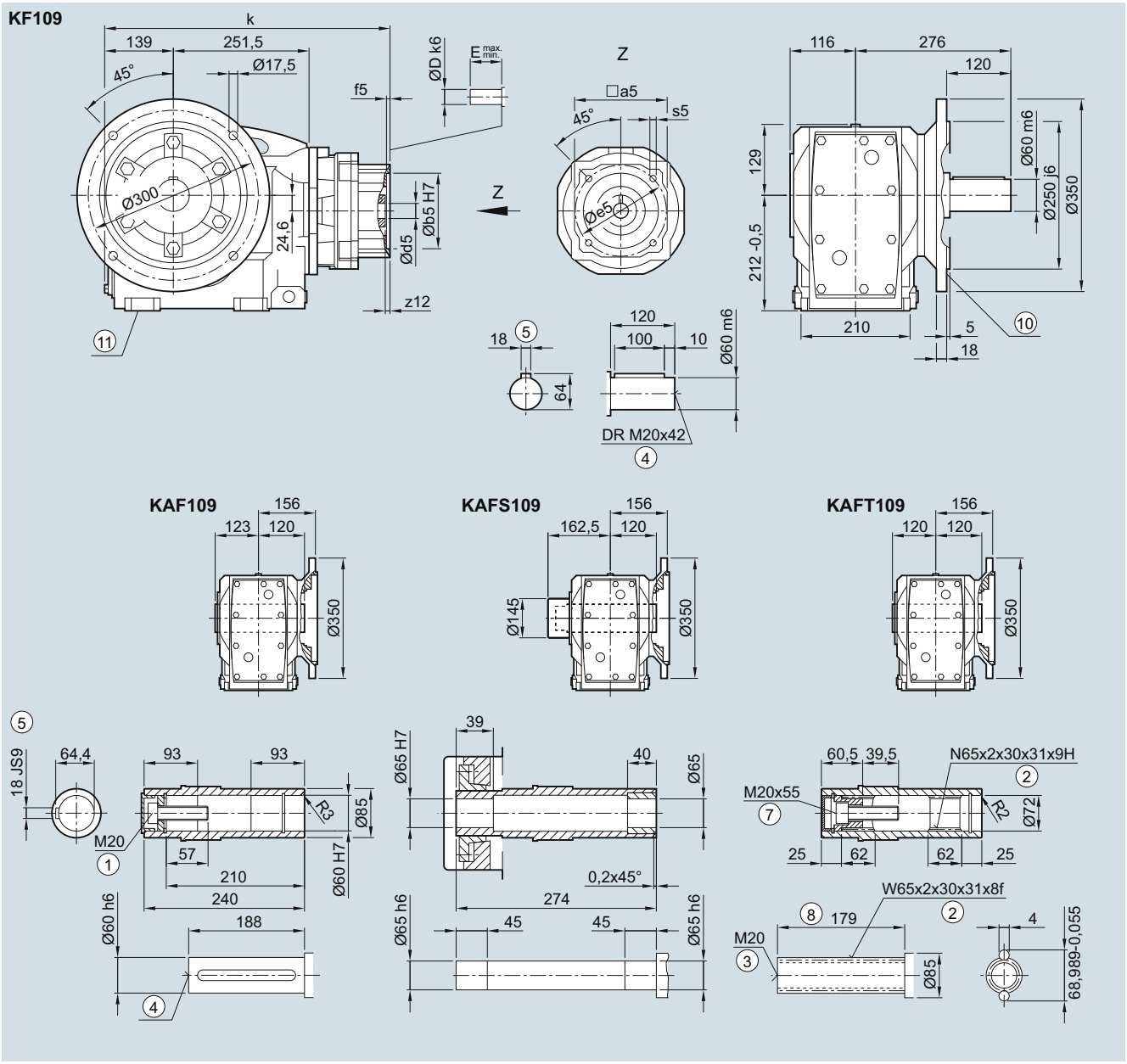
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	465.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	465.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	465.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	486.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	486.5
KS8.1	155	130	4.5	165	M10x14	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

Dimensions

K.F.109 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS

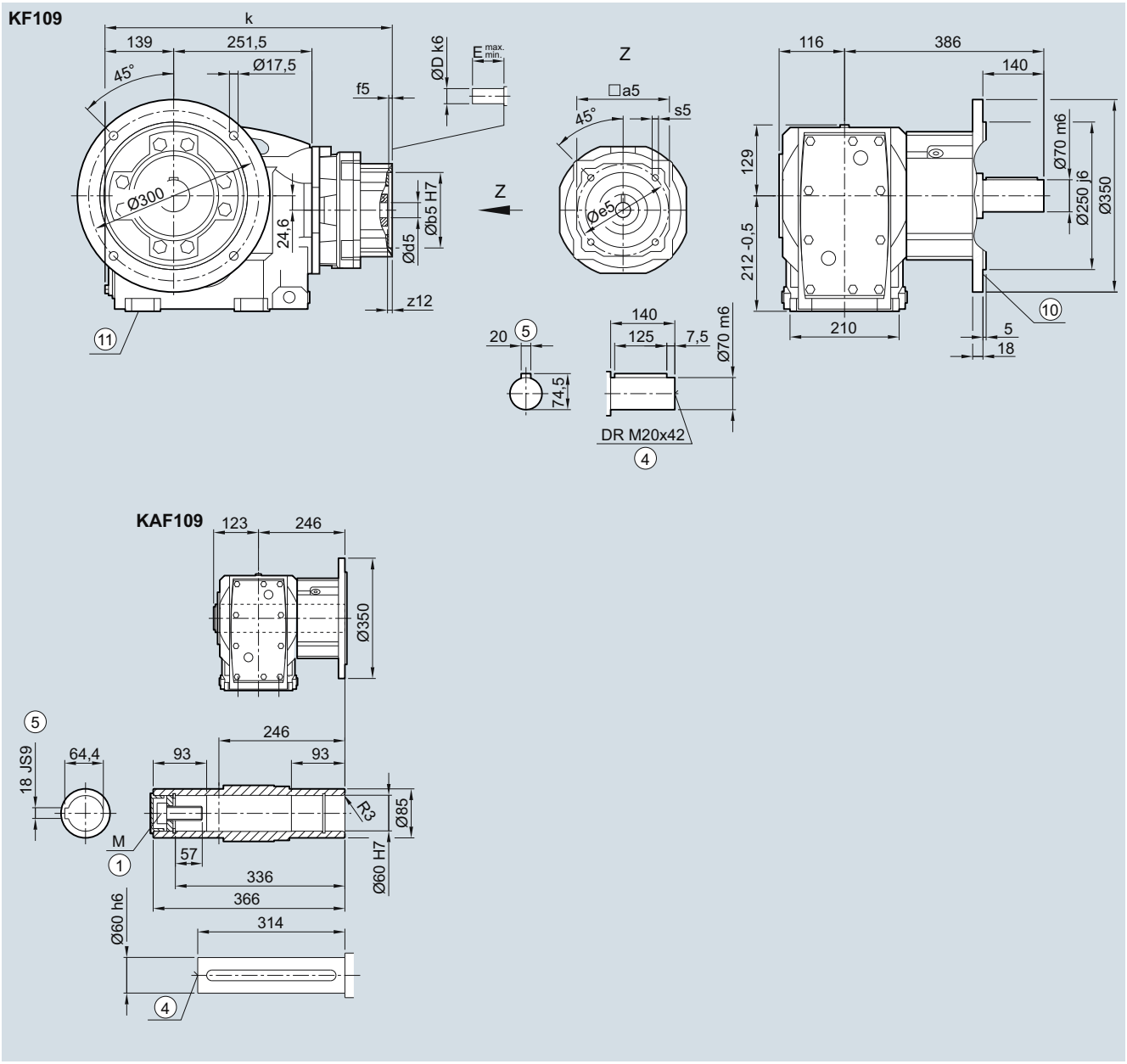


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	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 For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.F.109 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040KS, KAF040KS



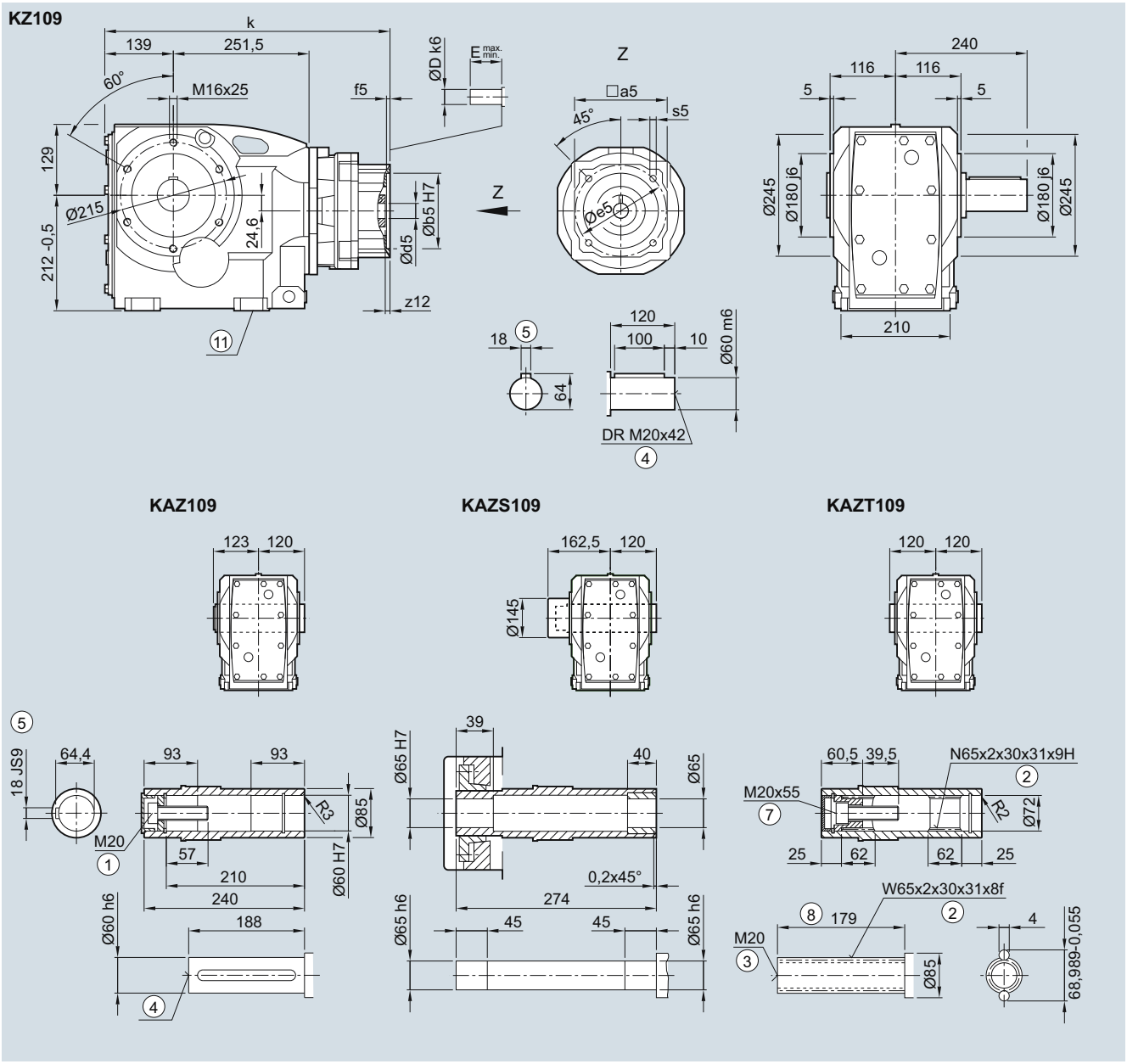
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	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 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.Z.109 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

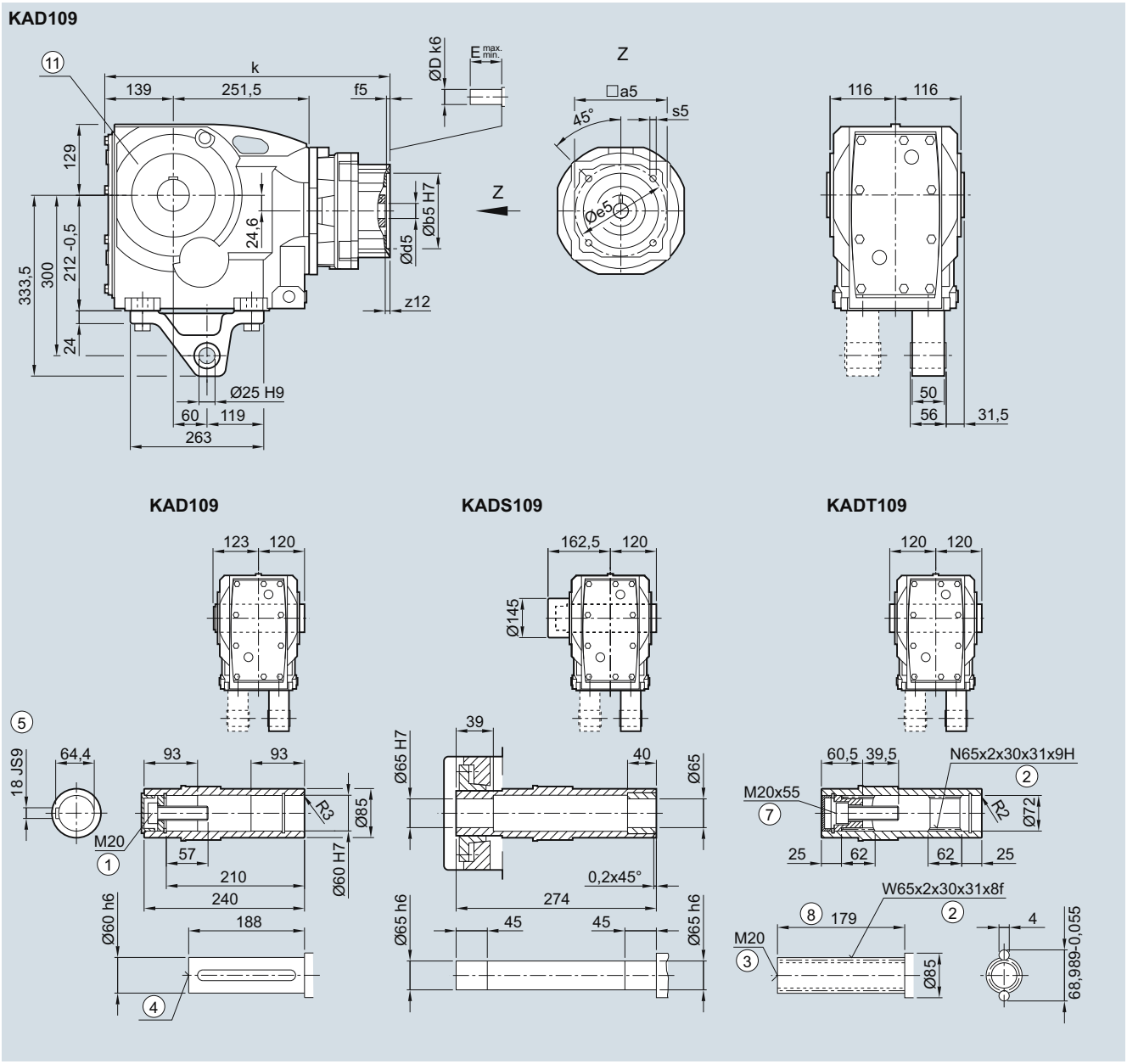


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	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 ⑪ Use bores only for foot-mounted design

KAD.109 gearbox in a shaft-mounted design

KAD030KS, KADS030KS, KADT030KS



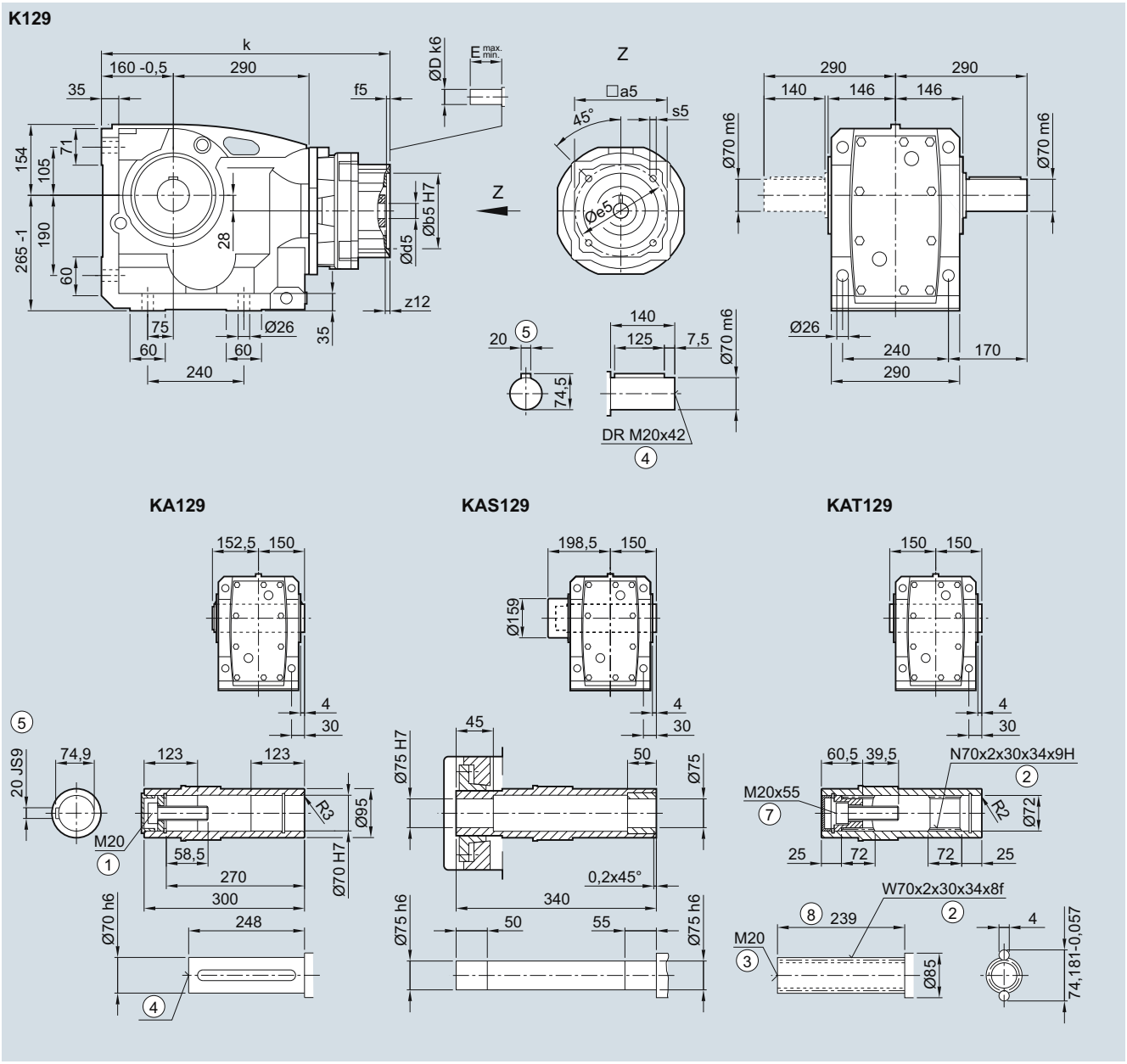
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	472.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	472.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	472.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	493.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	493.5
KS8.1	155	130	4.5	165	M10x14	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 ⑪ Use bores only for housing flange design

Dimensions

K.129 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS

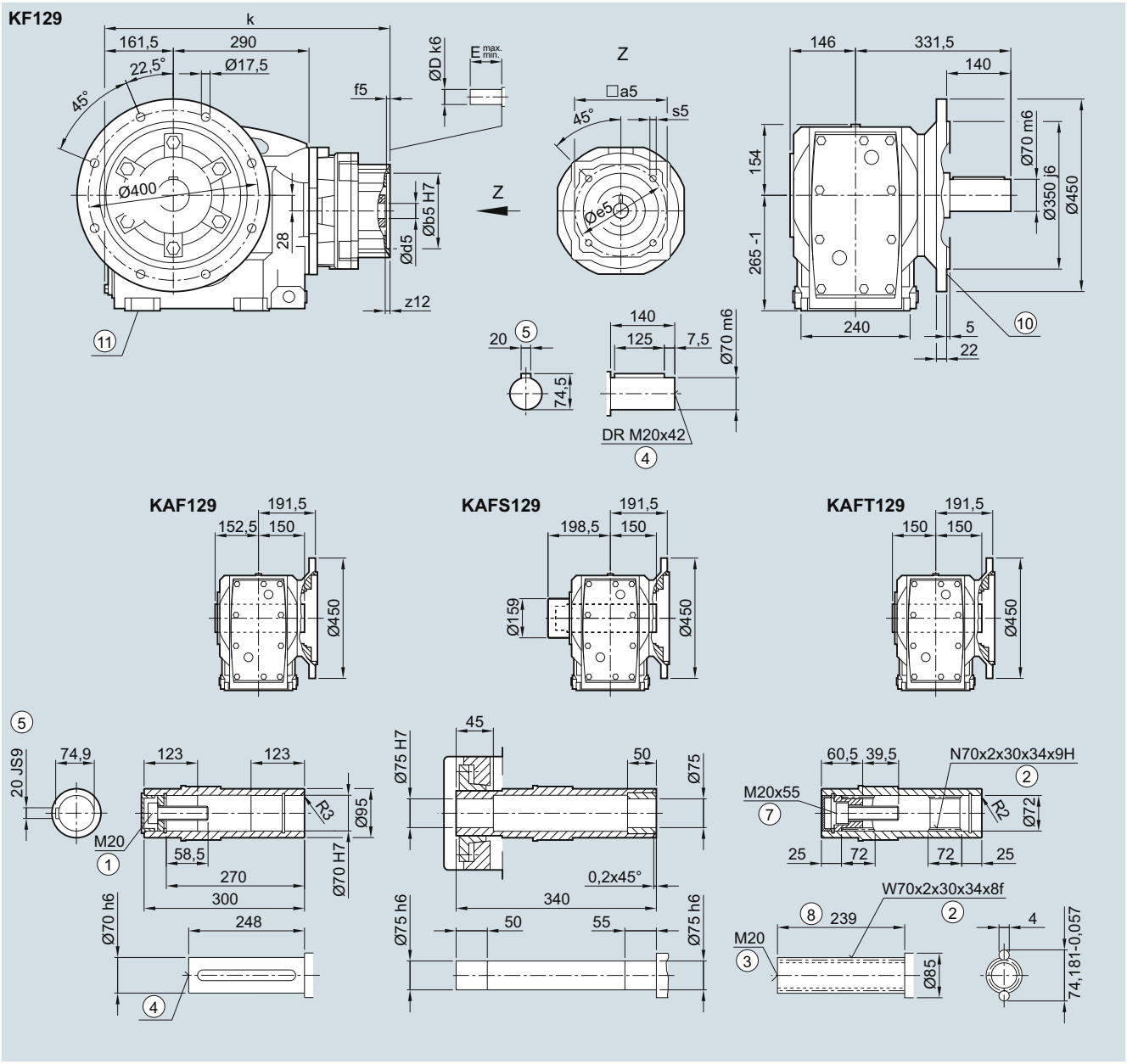


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	525.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	525.0
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	525.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	544.0
KS6.2	130	110	7	145	M8x15	8	22	40	58	544.0
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	556.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	592.5
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	592.5

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

K.F.129 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



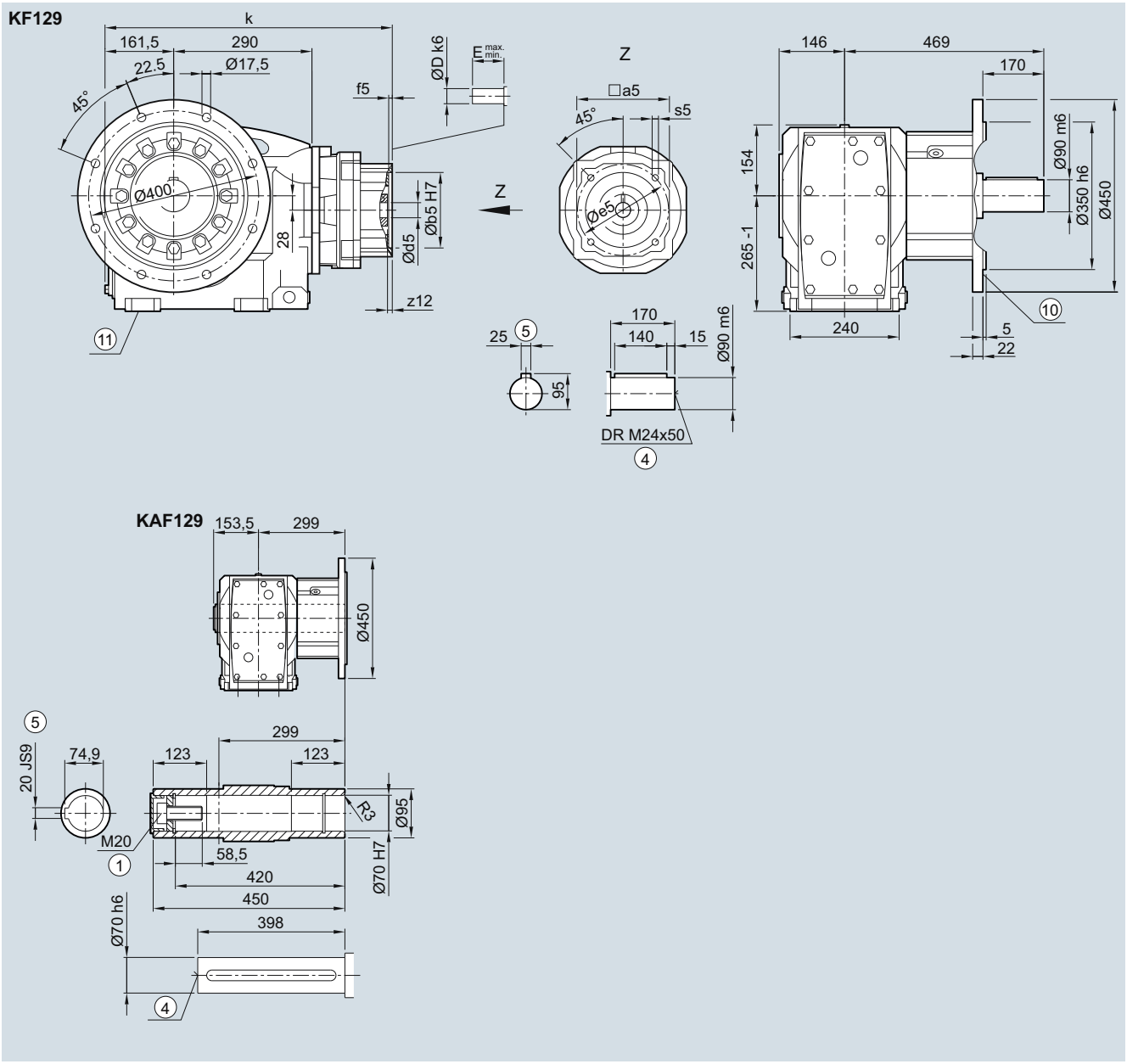
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	526.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	526.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	526.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	545.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	545.5
KS8.1	155	130	4.5	165	M10x14	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.F.129 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040KS, KAF040KS

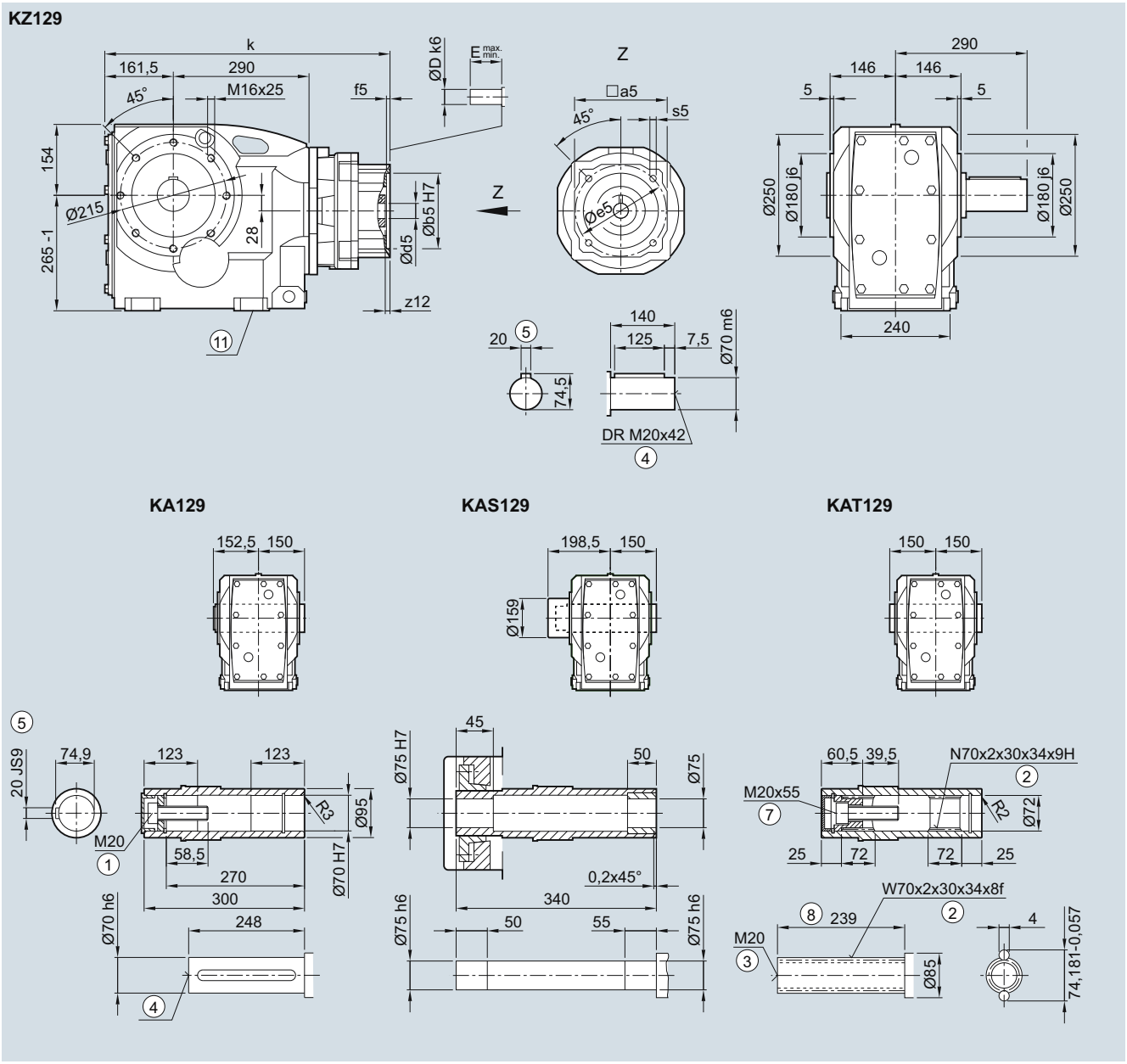


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	526.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	526.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	526.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	545.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	545.5
KS8.1	155	130	4.5	165	M10x14	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.Z.129 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

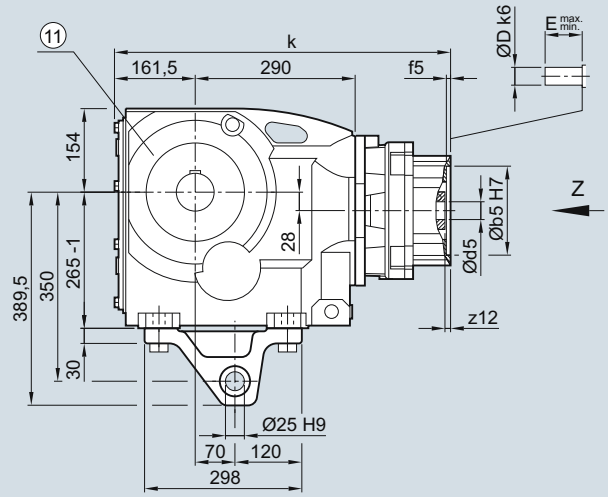
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

Dimensions

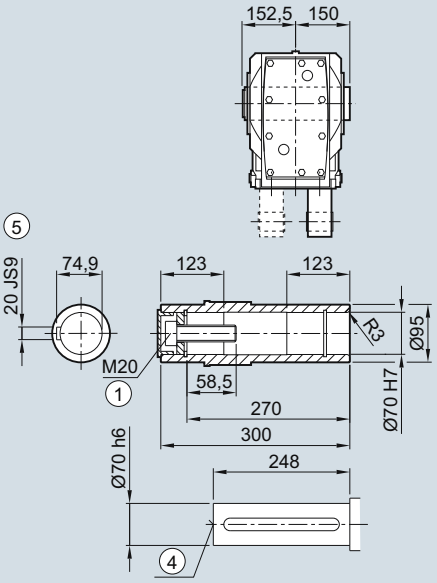
KAD.129 gearbox in a shaft-mounted design

KAD030KS, KADS030KS, KADT030KS

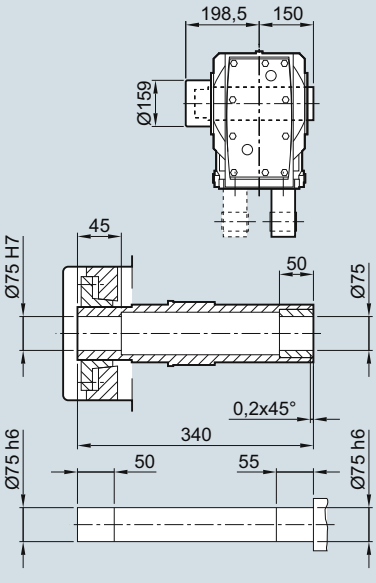
KAD129



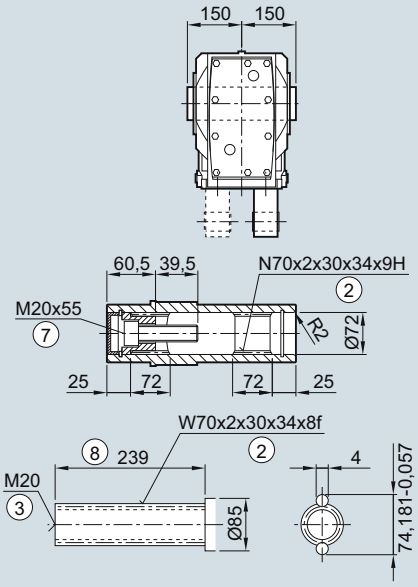
KAD129



KADS129



KADT129

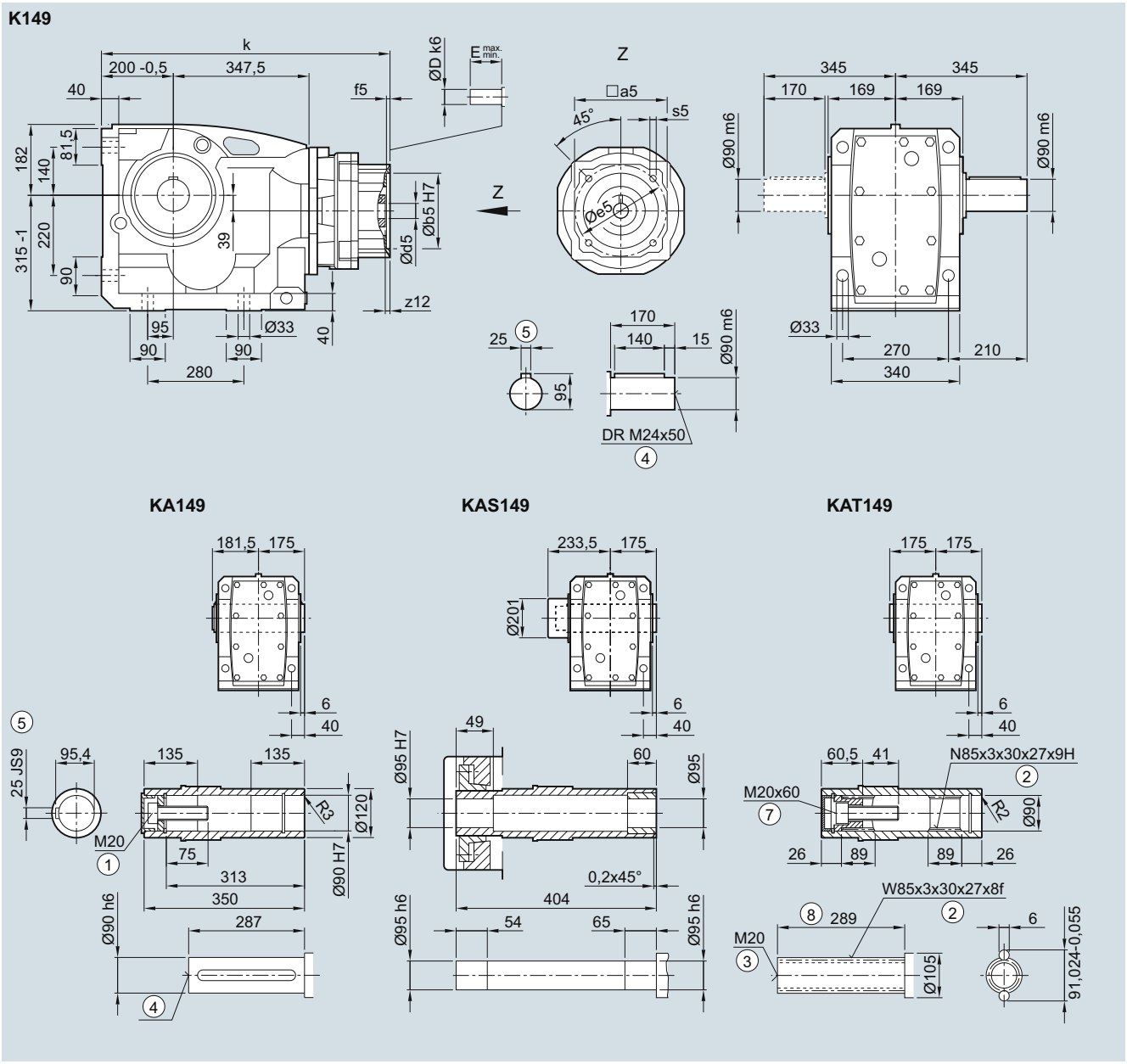


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	526.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	526.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	526.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	545.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	545.5
KS8.1	155	130	4.5	165	M10x14	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
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

K.149 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS



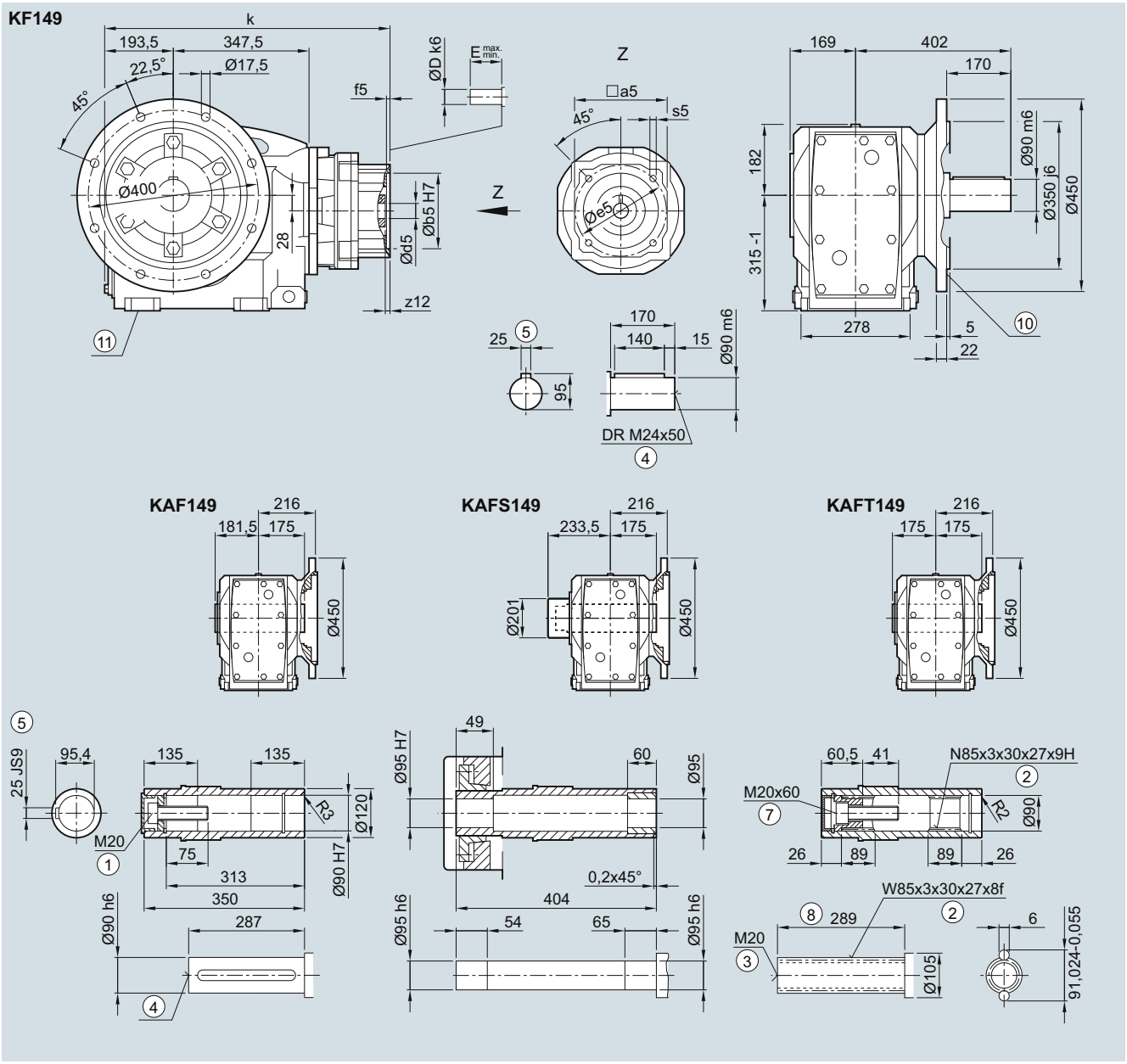
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	615.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	615.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	615.5
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	632.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	632.5
KS8.1	155	130	4.5	165	M10x14	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

Dimensions

K.F.149 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS

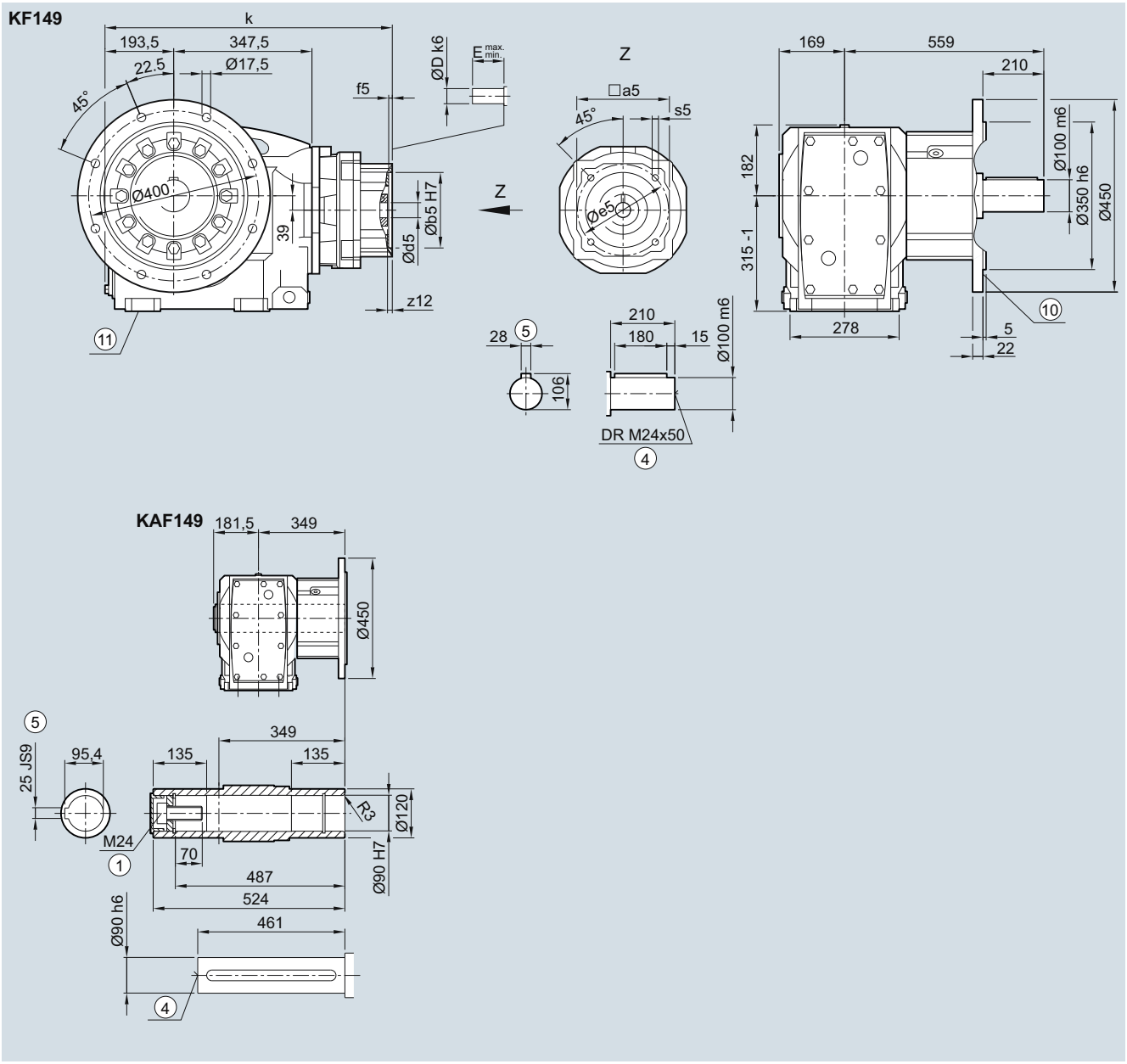


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	609.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	609.0
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	609.0
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	626.0
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	626.0
KS8.1	155	130	4.5	165	M10x14	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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

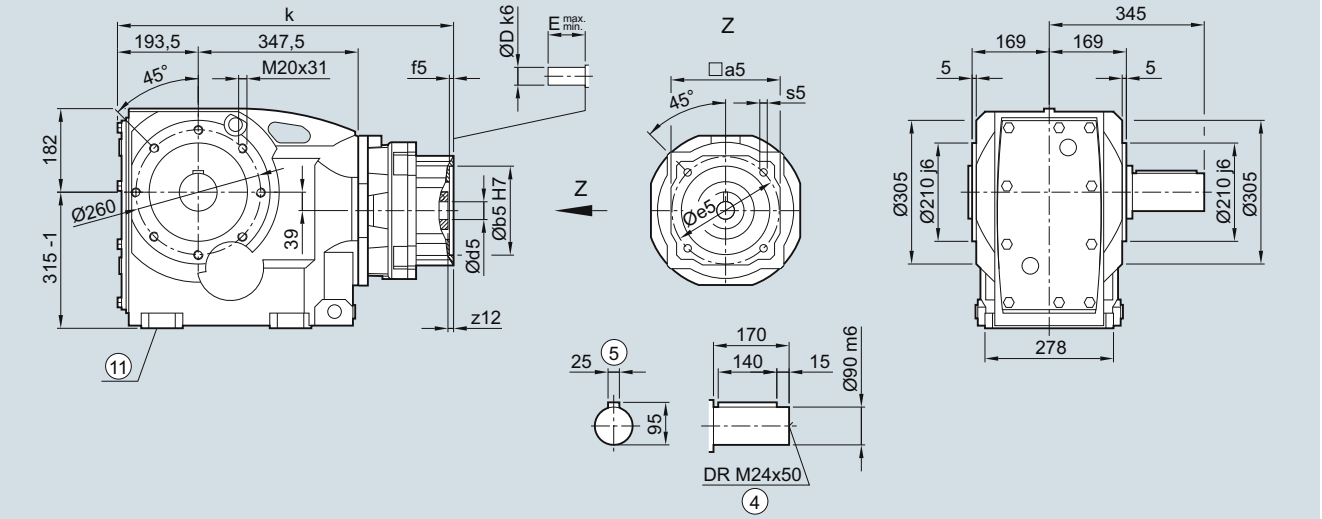
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

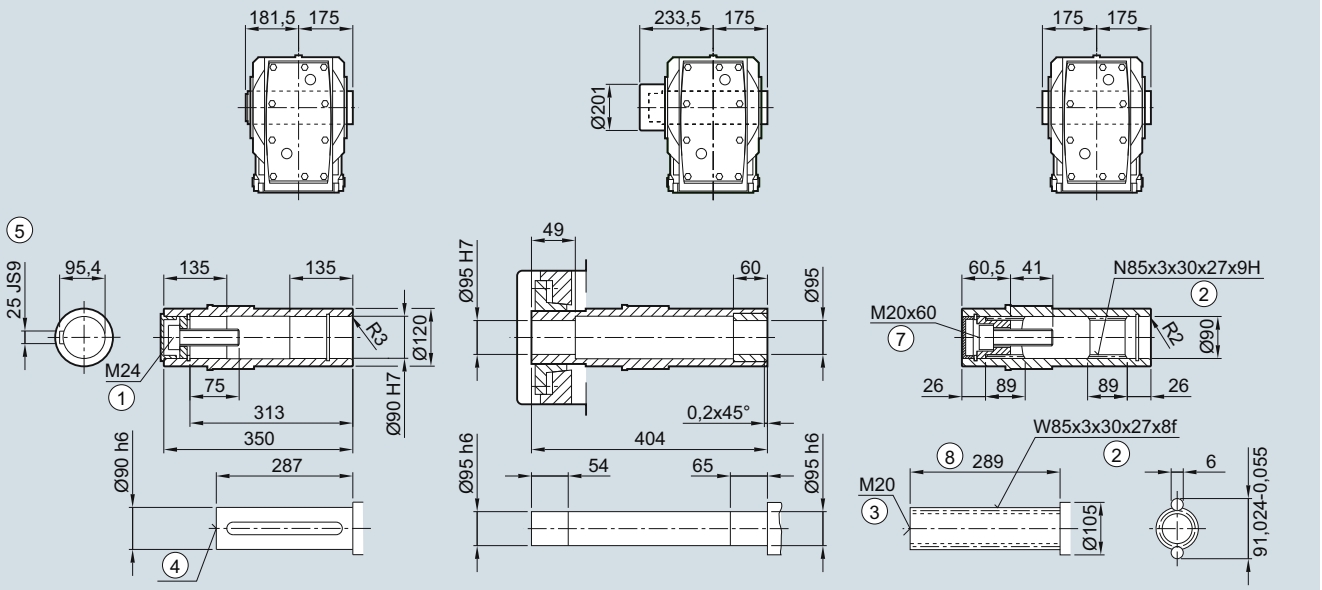
K.Z.149 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

KZ149



KAZ149



KAZS149

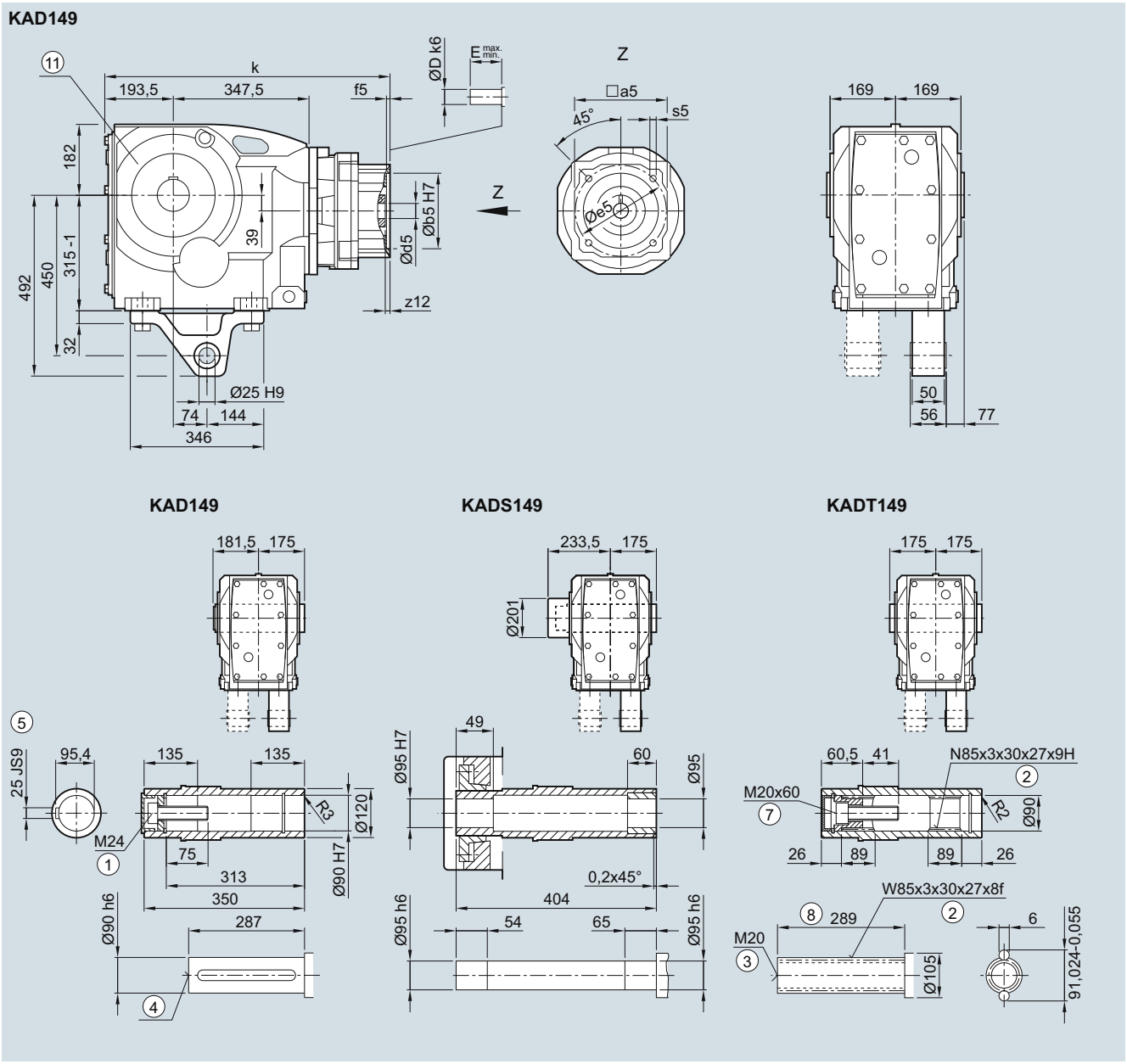
KAZT149

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

KAD.149 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

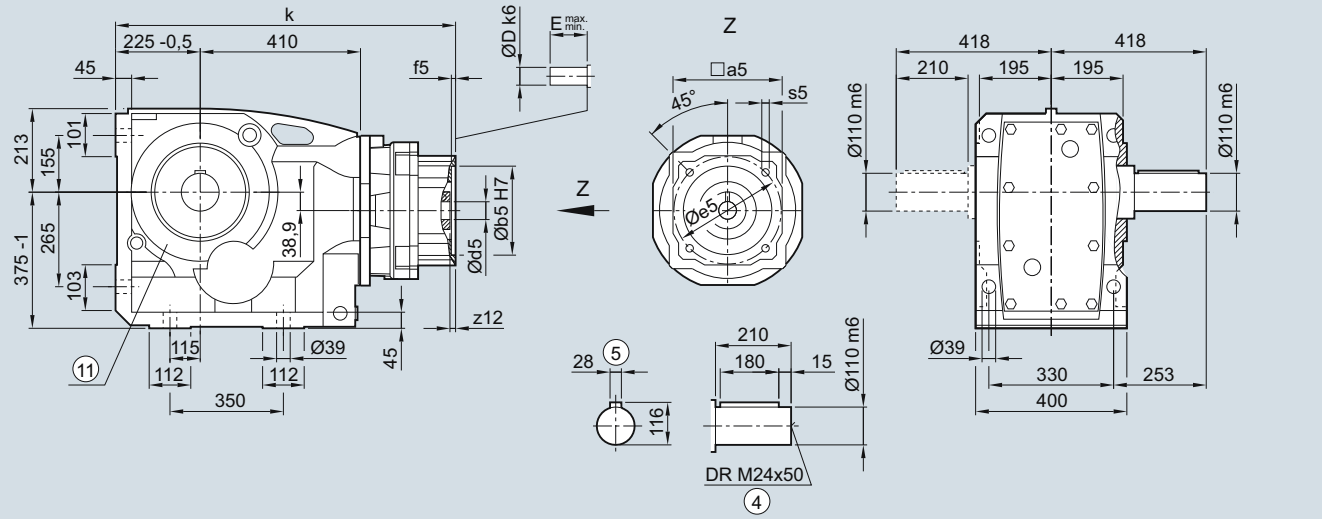
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

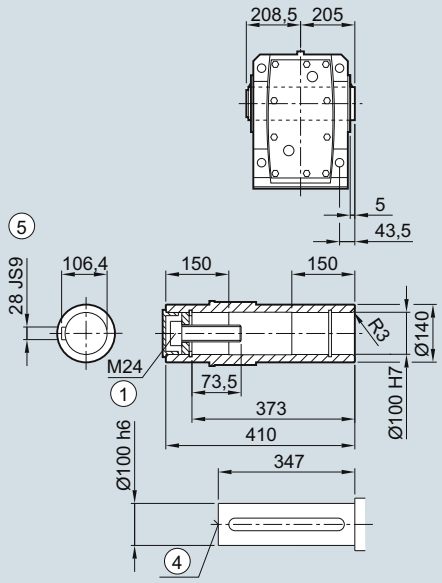
K.169 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS

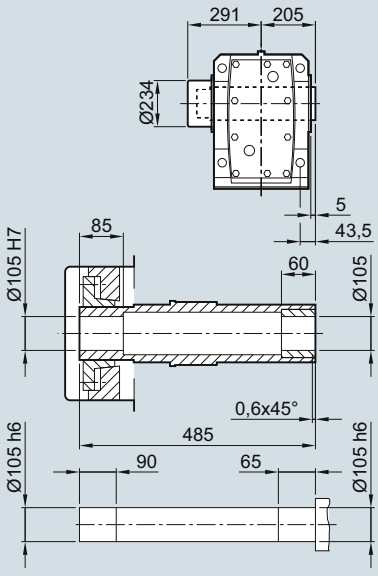
K169



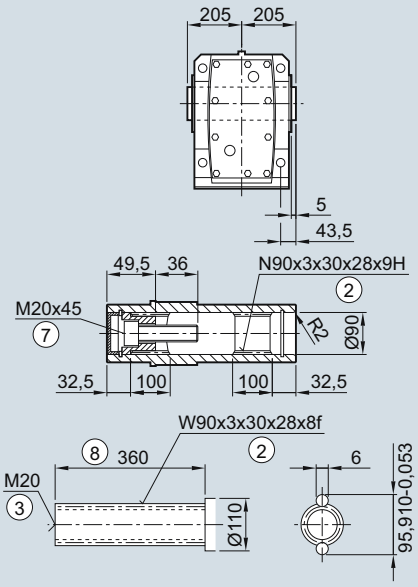
KA169



KAS169



KAT169

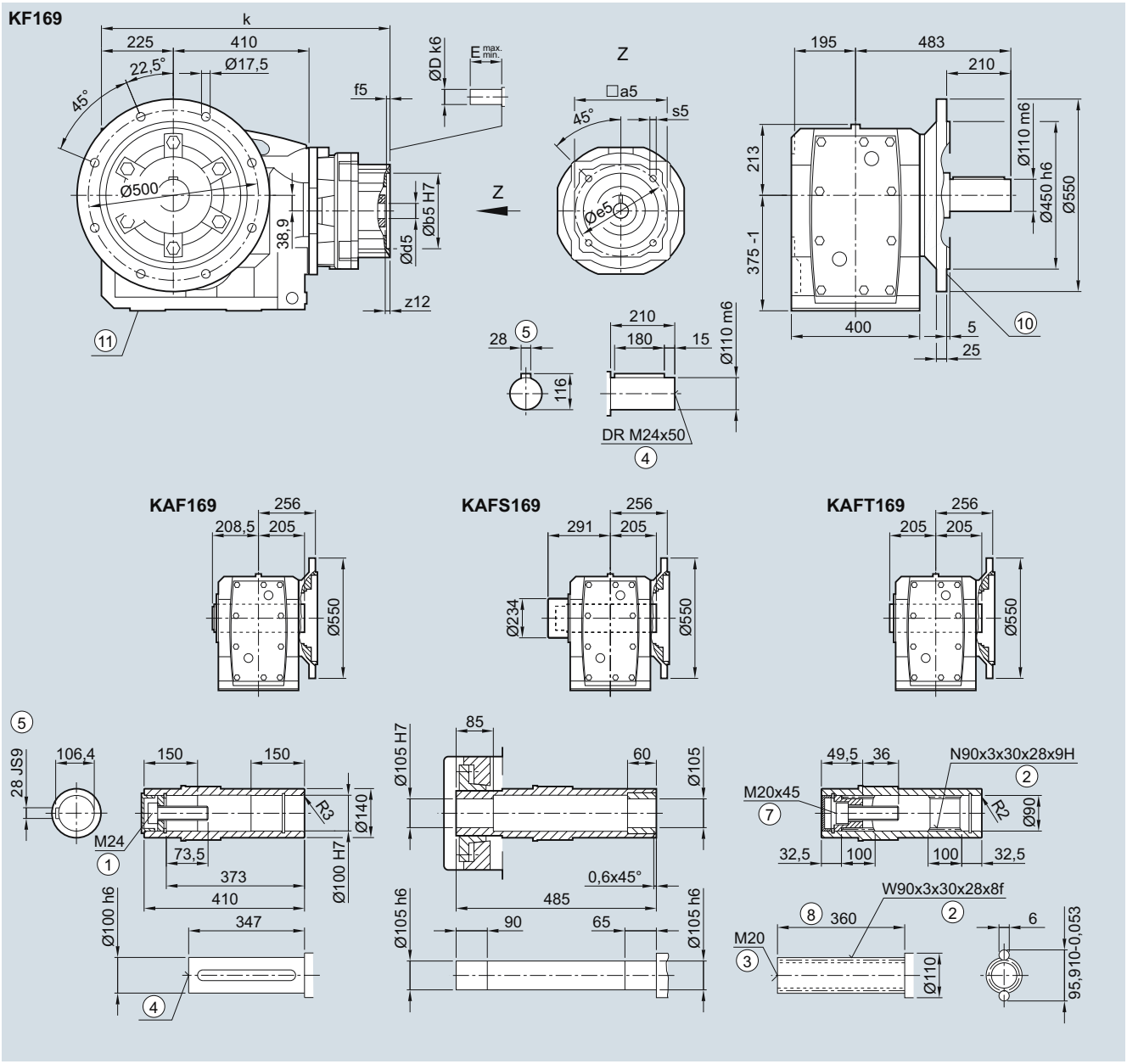


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

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 ⑪ Use bores only for housing flange design

K.F.169 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



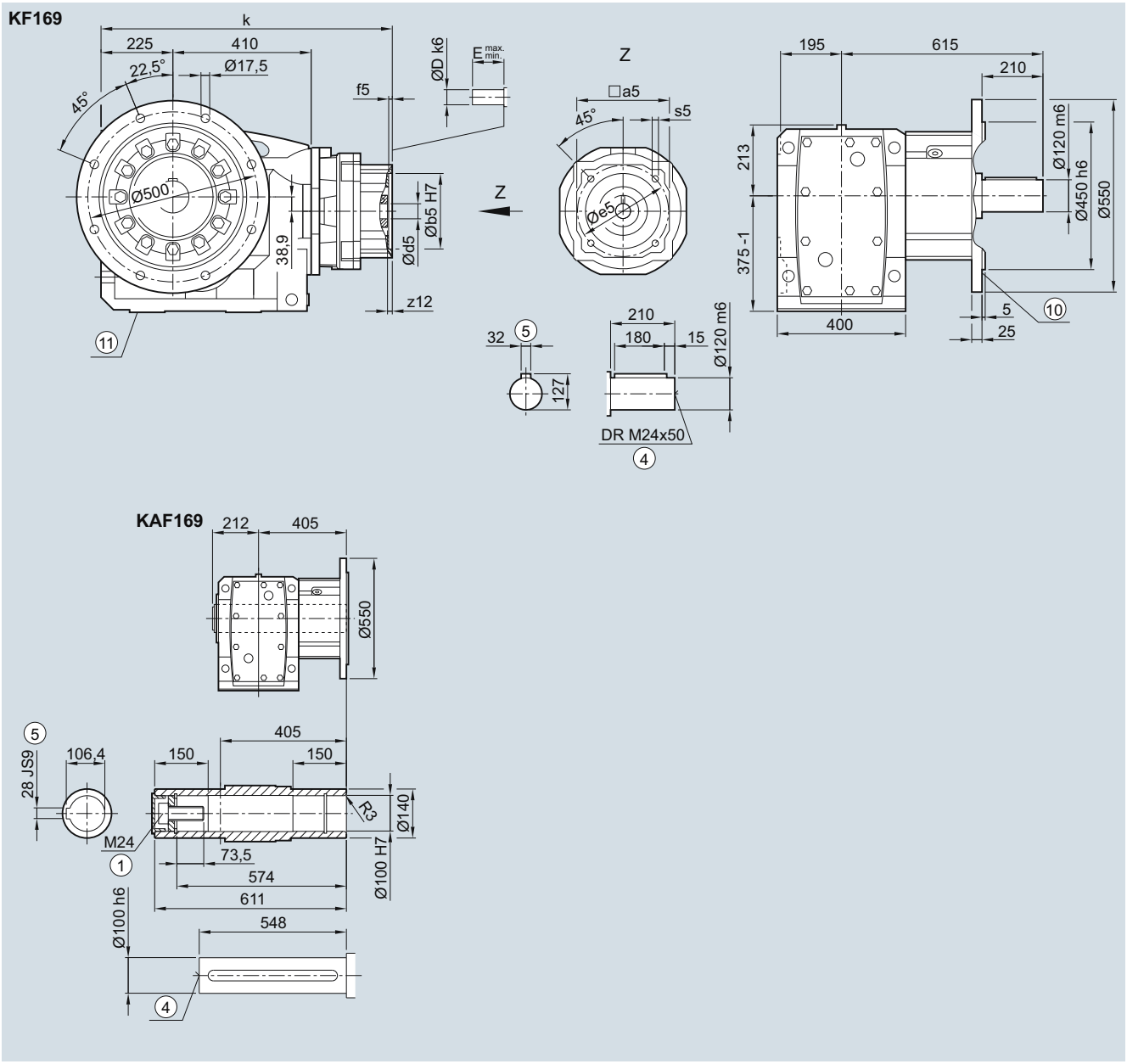
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

Dimensions

K.F.169 gearbox in a flange-mounted design with VLplus reinforced bearing system (G30)

KF040KS, KAF040KS



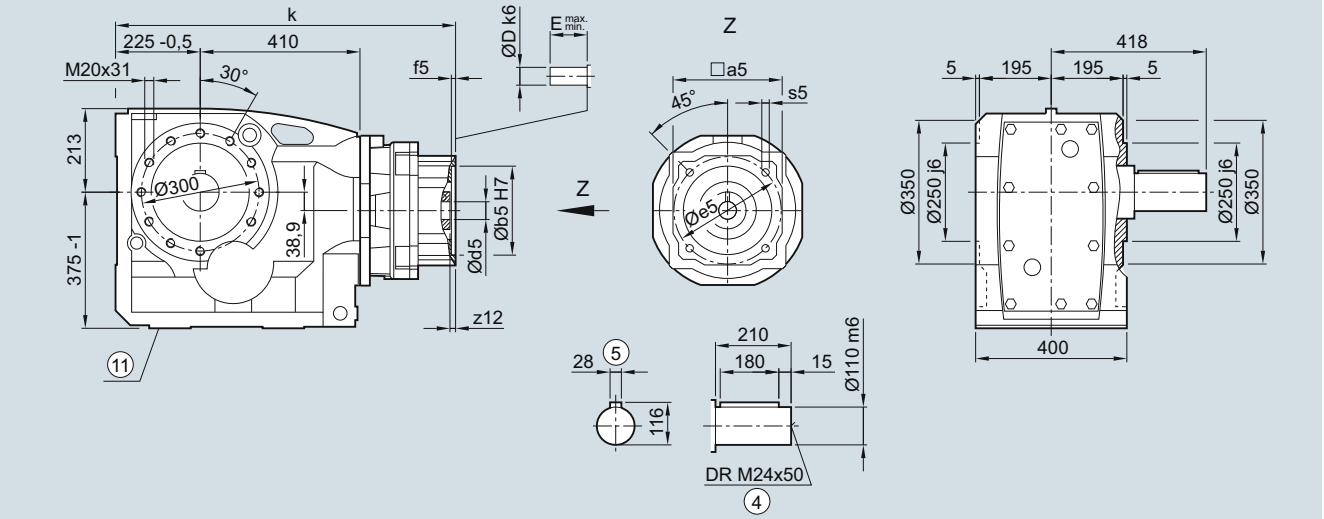
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

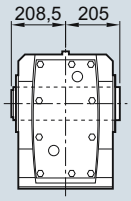
K.Z.169 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

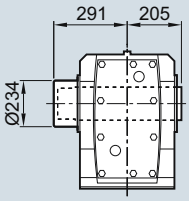
KZ169



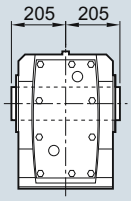
KAZ169

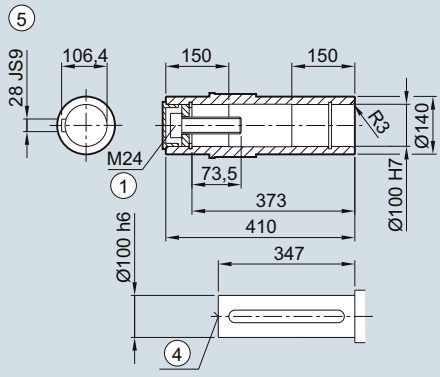


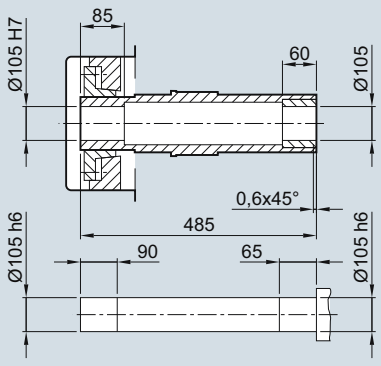
KAZS169

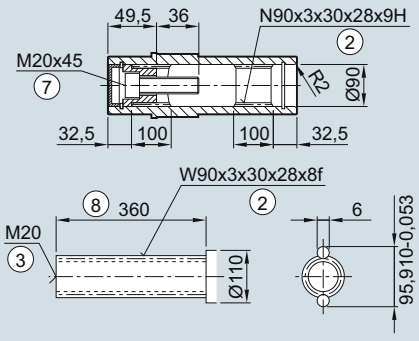


KAZT169









Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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

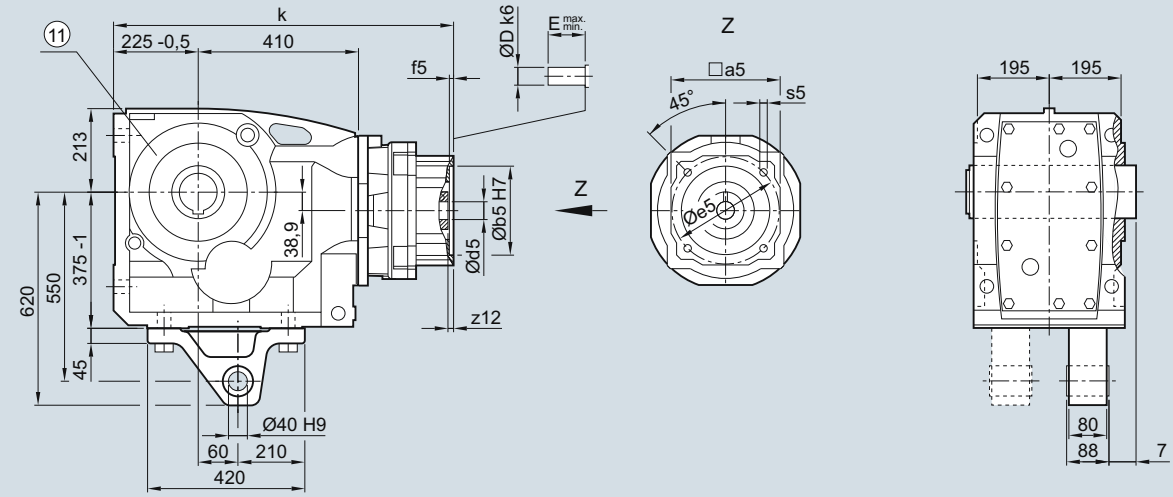
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

Dimensions

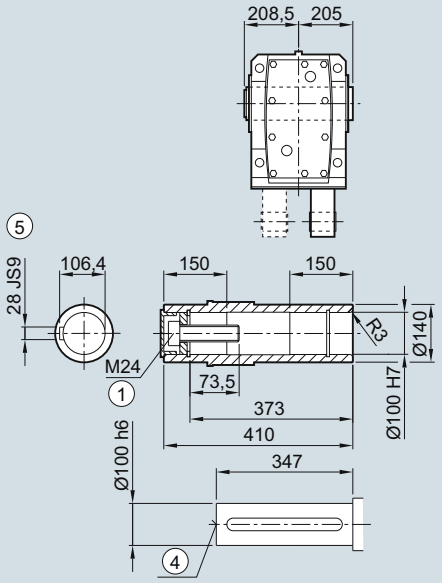
KAD.169 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS

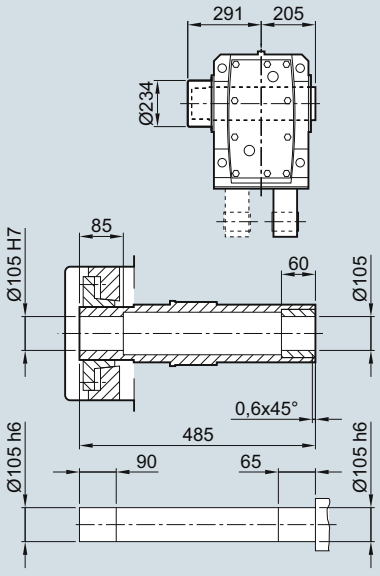
KAD169



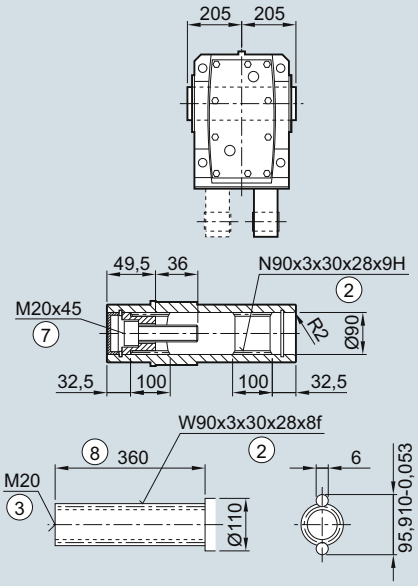
KAD169



KADS169



KADT169

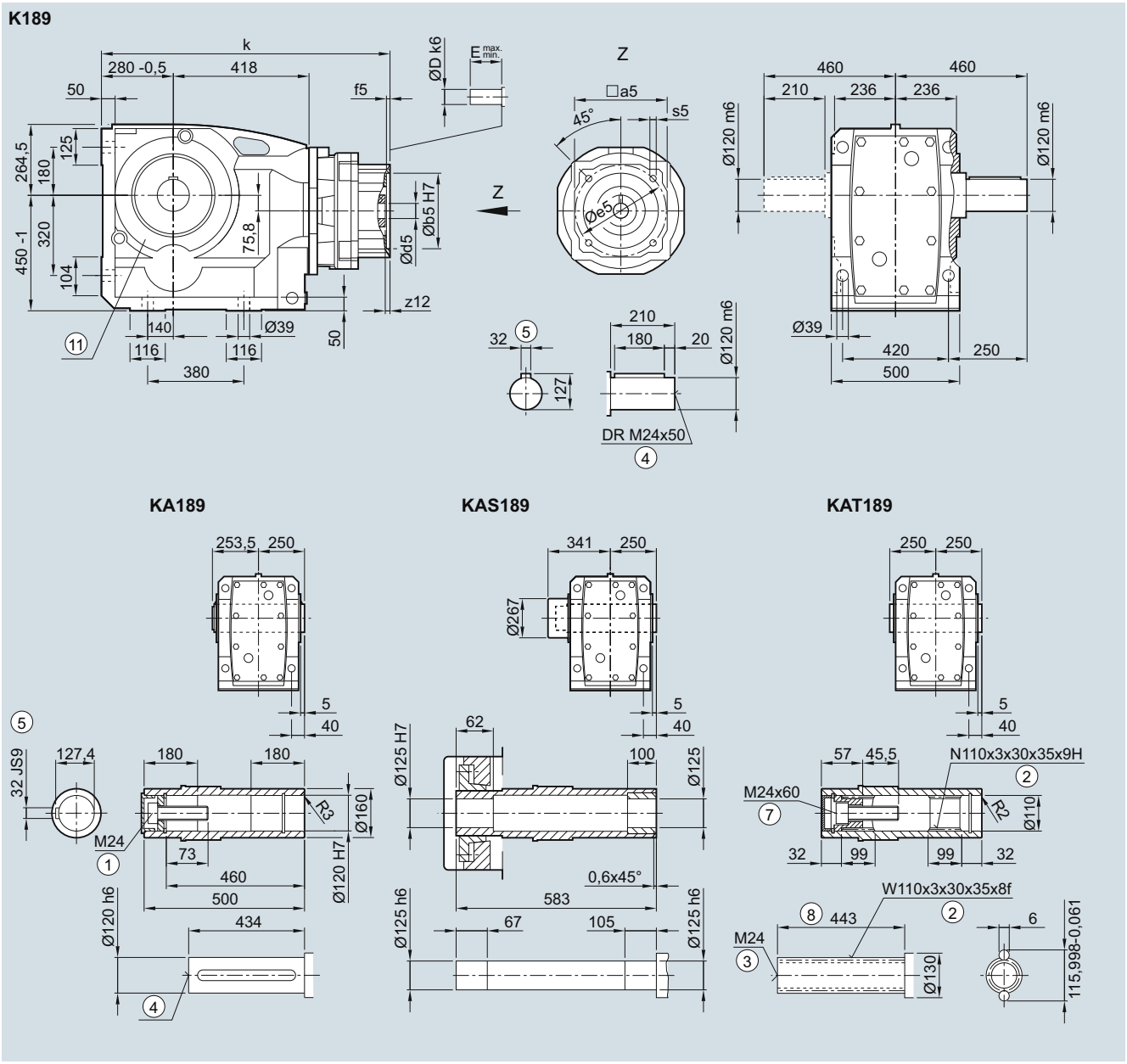


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS6.1	130	110	4.5	130	M8x15	8	24	40	58	718.5
KS6.2	130	110	7.0	145	M8x15	8	22	40	58	718.5
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	731.0
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	760.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	760.0

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 ⑪ Use bores only for housing flange design

K.189 gearbox in a foot-mounted design

K030KS, KA030KS, KAS030KS, KAT030KS



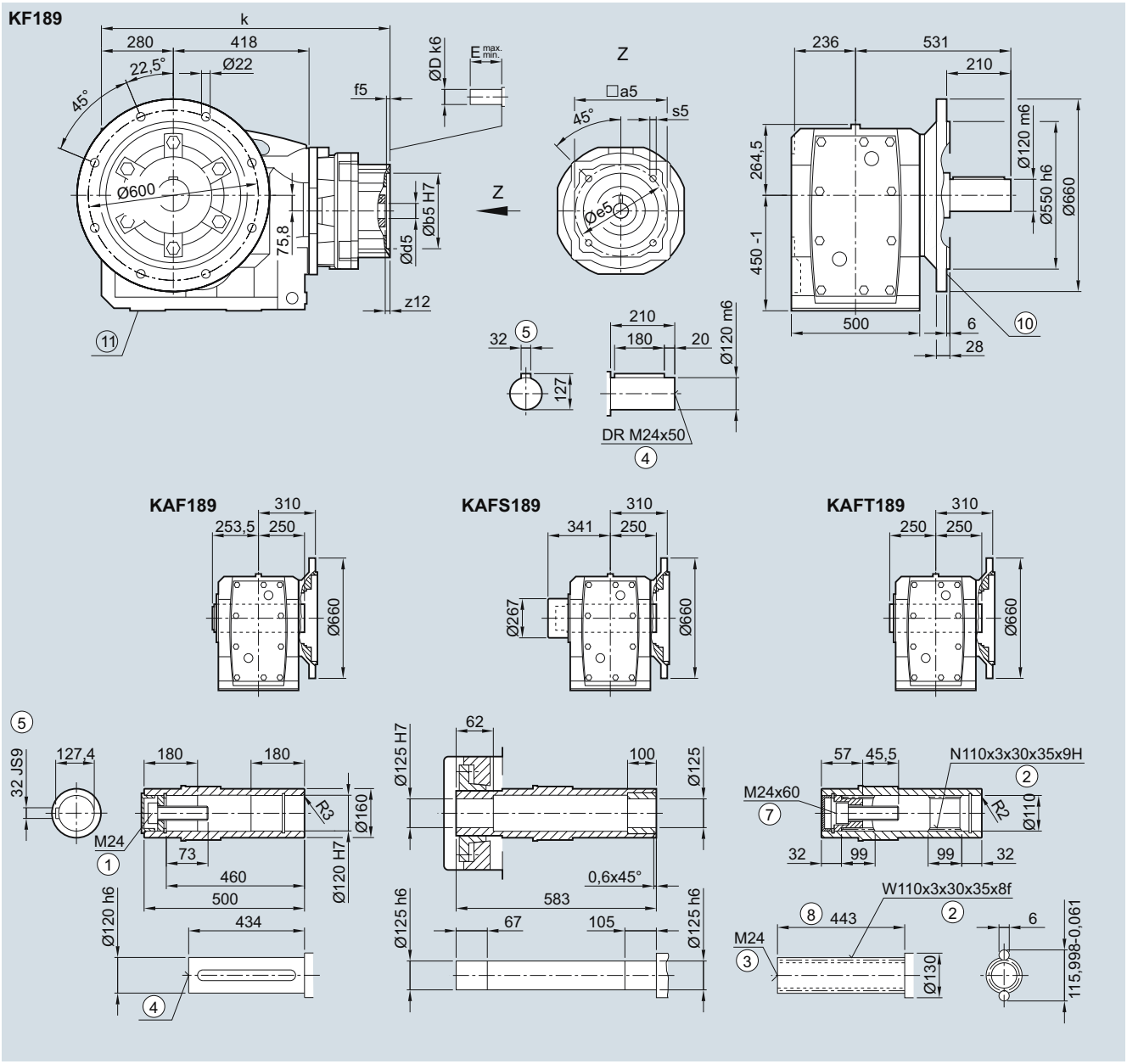
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	781.5
KS10.1	196	180	5	215	M12x22	5	38	50	80	810.0
KS10.2	196	114.3	5	200	M12x22	5	35	50	80	810.0

① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for housing flange design

Dimensions

K.F.189 gearbox in a flange-mounted design

KF030KS, KAF030KS, KAFS030KS, KAFT030KS



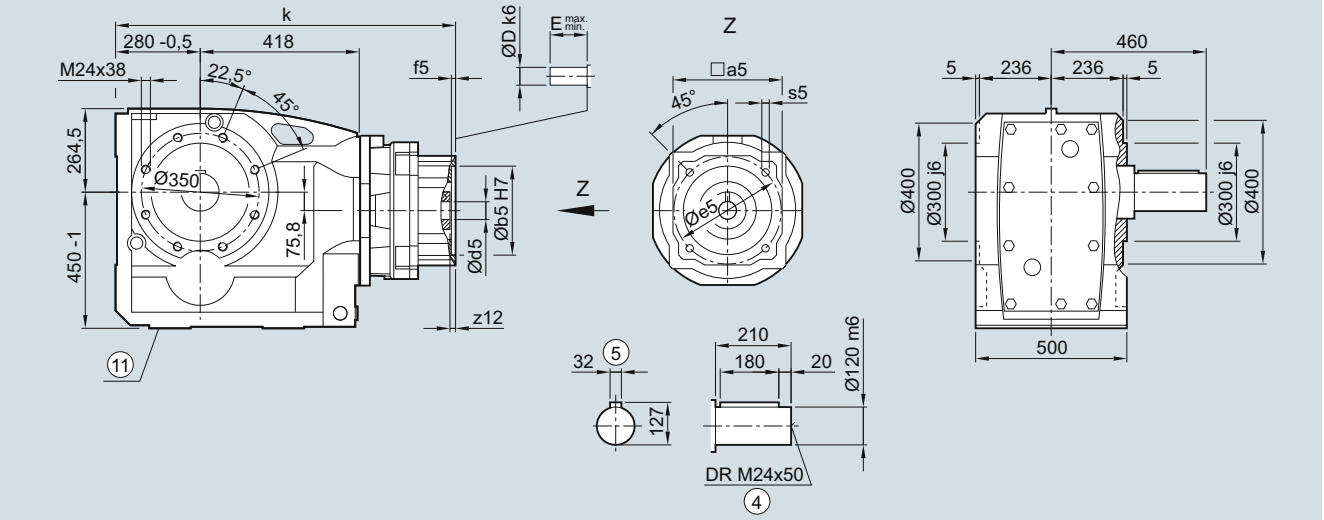
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	781.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	810.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	810.0

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 ⑩ For inner contour, see page 5/175 ⑪ Use bores only for foot-mounted design

K.Z.189 gearbox in a housing flange design

KZ030KS, KAZ030KS, KAZS030KS, KAZT030KS

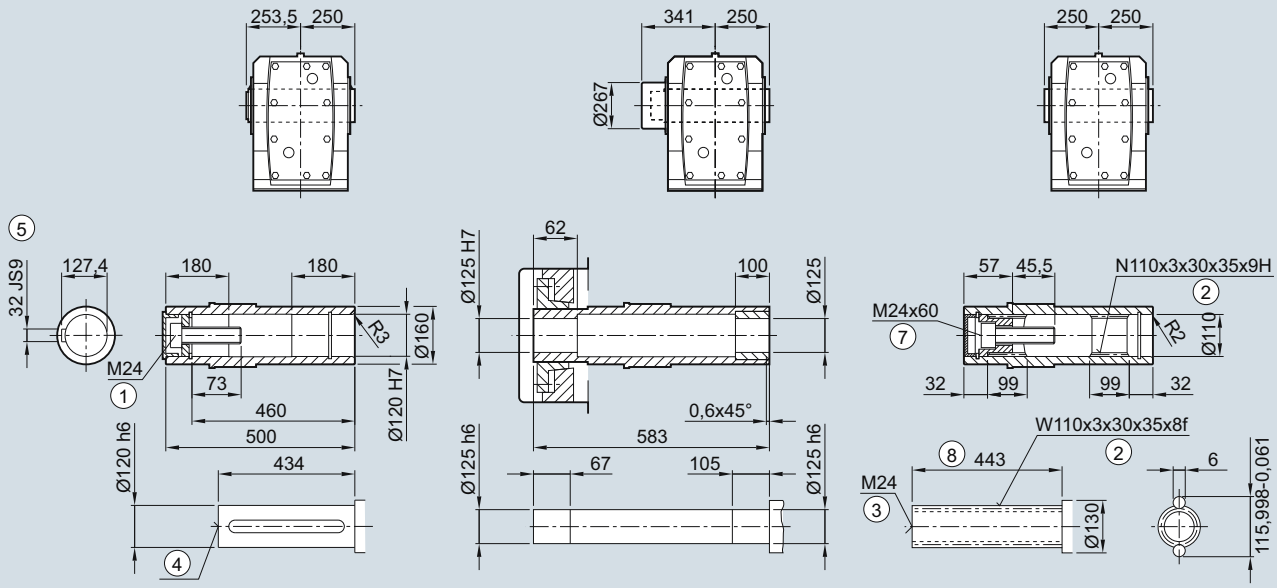
KZ189



KAZ189

KAZS189

KAZT189



Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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

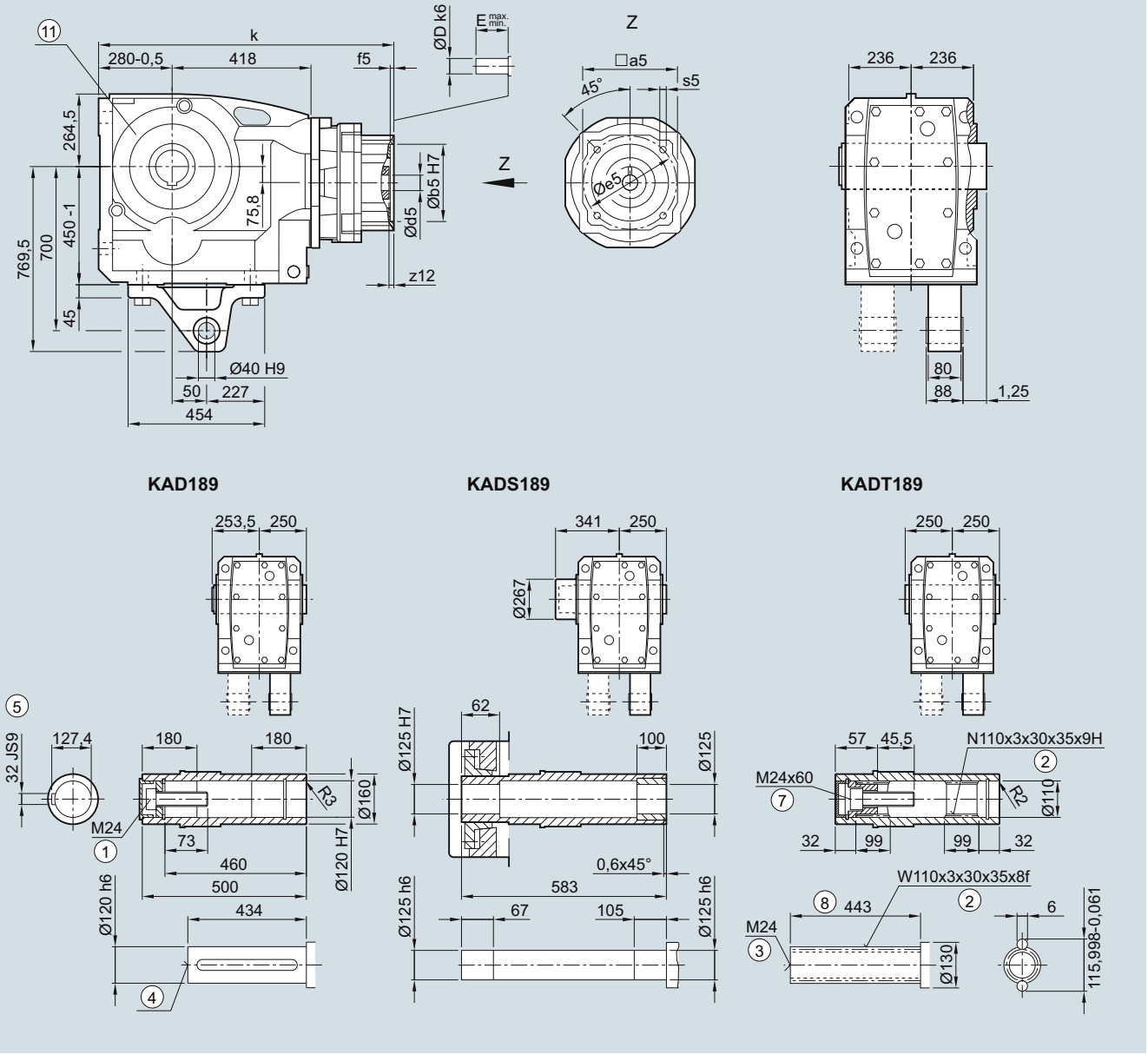
① ISO 4014 ② DIN 5480 ③ DIN 332-D ④ DIN 332 ⑤ Feather key/keyway DIN 6885
⑦ ISO 4762 ⑧ Without locating shoulder +1 mm ⑪ Use bores only for foot-mounted design

Dimensions

KAD.189 gearbox in a shaft-mounted design

KAD031KS, KADS031KS, KADT031KS

KAD189

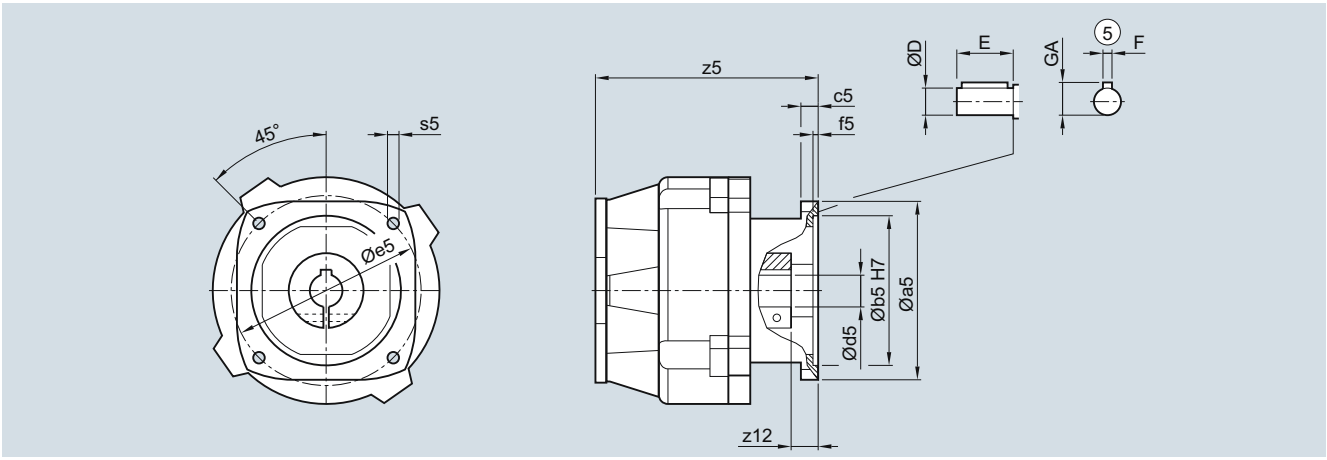


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS8.1	155	130	4.5	165	M10x14	2	32	40	80	781.5
KS10.1	196	180	5.0	215	M12x22	5	38	50	80	810.0
KS10.2	196	114.3	5.0	200	M12x22	5	35	50	80	810.0

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 ⑪ Use bores only for housing flange design

K...109 to K...189 gearboxes

K..030K8, K.F.030K8, K.Z.030K8, KAD.030K8



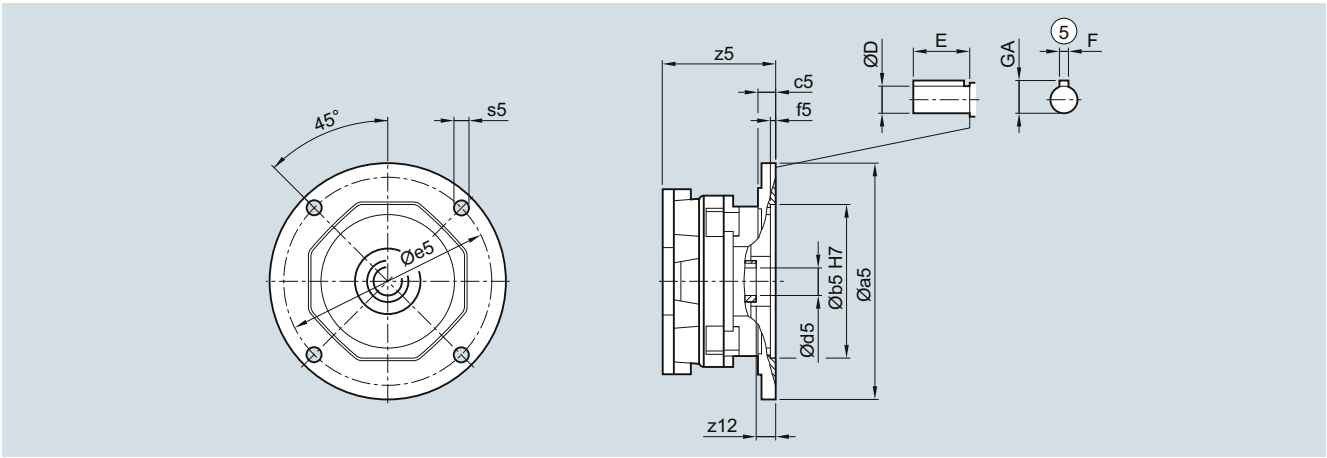
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K...109												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	317.5
K...129												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	308.5
816	314.0	300	-	6.0	350	M16x29	60	55	110	16	59.0	365.0
K...149												
813	260.0	250	25	6.0	300	M16	60.0	48	110	14	51.5	297.5
816	314.0	300	-	6.0	350	M16x29	60	55	110	16	59.0	354.0
K...169												
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
K...189												
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

⑤ Feather key/keyway DIN 6885

Dimensions

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

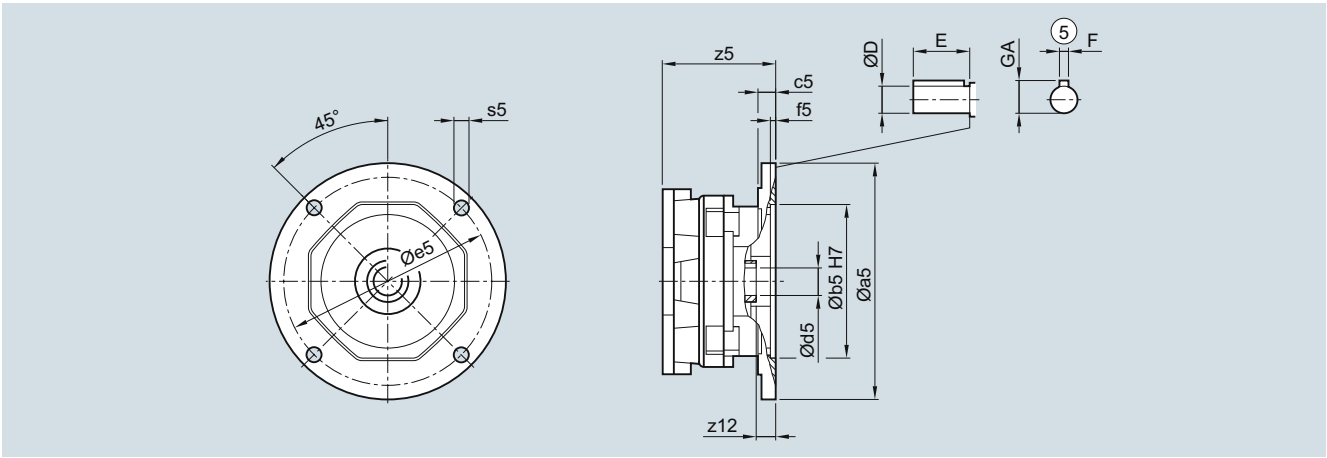


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
B...29												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	200.5
B...39												
56	168	114.3	15	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...49												
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
K...39												
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
K...49												
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
K...69												
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
K...79												
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
K...89												
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

⑤ Feather key/keyway DIN 6885

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



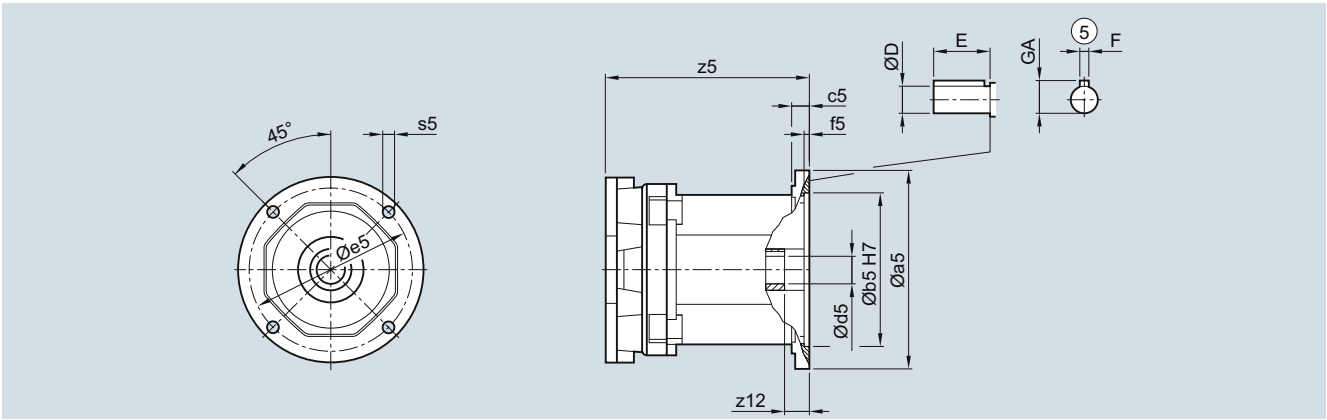
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K...109												
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	90.0
180	226	215.9	22	5.5	184.1	13.5	26	28.575	69.850	6.350	31.394	168.0
210	226	215.9	22	5.5	184.1	13.5	12	34.925	85.850	7.938	38.443	184.0
250	226	215.9	22	5.5	184.1	13.5	12	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
K...129												
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
K...149												
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
K...169												
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
K...189												
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

⑤ Feather key/keyway DIN 6885

Dimensions

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

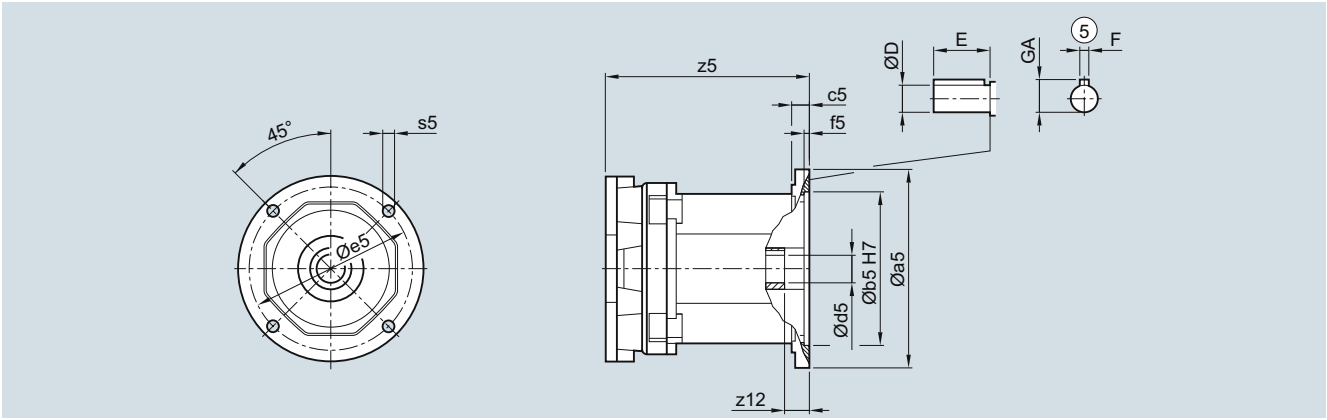


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
B...29												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	257.0
B...39												
56	168	114.3	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...49												
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
K...39												
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
K...49												
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
K...69												
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
K...79												
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

K...89 to K...189 gearboxes

K..030K3, K.F.030K3, K.Z.030K3, KAD.030K3



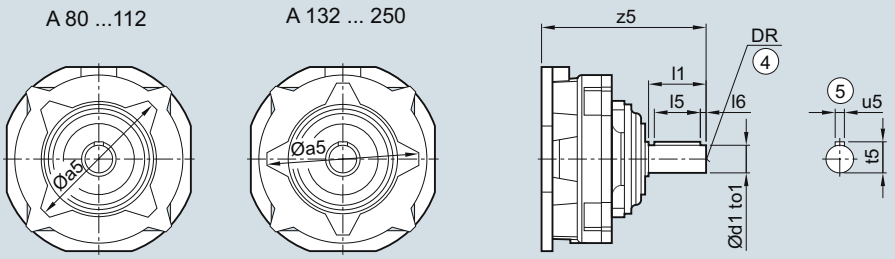
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K...89												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	185.5
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	185.5
180	226	215.9	22	5.5	184.1	13.5	42.0	28.575	69.850	6.350	31.394	241.5
210	226	215.9	22	5.5	184.1	13.5	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
K...109												
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
K...129												
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
320	340	317.5	26.5	5.5	279.4	17	76.5	53.975	133.35	12.7	59.563	411.5
K...149												
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
320	340	317.5	26.5	5.5	279.4	17	76.5	53.975	133.35	12.7	59.563	400.5
360	340	317.5	26.5	5.5	279.4	17	83.5	60.325	149.352	15.875	67.21	454.0
K...169												
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
320	340	317.5	26.5	5.5	279.4	17	76.5	53.975	133.35	12.7	59.563	394.0
360	340	317.5	26.5	5.5	279.4	17	83.5	60.325	149.352	15.875	67.21	447.5
K...189												
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
320	340	317.5	26.5	5.5	279.4	17	76.5	53.975	133.35	12.7	59.563	379.5
360	340	317.5	26.5	5.5	279.4	17	83.5	60.325	149.352	15.875	67.21	429.5

⑤ Feather key/keyway DIN 6885

Dimensions

B...29 to B...49 and K...39 to K...89 gearboxes

B..030A, B.F.030A, B.Z.030A, BAD.030A
K..030A, K.F.030A, K.Z.030A, KAD.030A

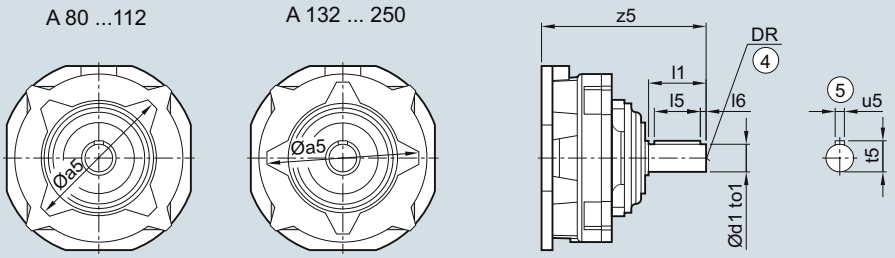


Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
B...29										
A-80	132	19	k6	40	32	4	6	21.5	M6	143.5
A-90	132	24	k6	50	40	5	8	27	M8	153.5
A-100	170	28	k6	60	50	5	8	31	M10	220.5
B...39										
A-80	132	19	k6	40	32	4	6	21.5	M6	143.5
A-90	132	24	k6	50	40	5	8	27	M8	153.5
A-100	170	28	k6	60	50	5	8	31	M10	220.5
A-112	170	28	k6	60	50	5	8	31	M10	220.5
B...49										
A-80	132	19	k6	40	32	4	6	21.5	M6	134
A-90	132	24	k6	50	40	5	8	27	M8	144
A-100	170	28	k6	60	50	5	8	31	M10	211
A-112	170	28	k6	60	50	5	8	31	M10	211
A-132	215	38	k6	80	70	5	10	41	M12	261
K...39										
A-80	132	19	k6	40	32	4	6	21.5	M6	143.5
A-90	132	24	k6	50	40	5	8	27	M8	153.5
A-100	170	28	k6	60	50	5	8	31	M10	220.5
A-112	170	28	k6	60	50	5	8	31	M10	220.5
K...49										
A-80	132	19	k6	40	32	4	6	21.5	M6	134
A-90	132	24	k6	50	40	5	8	27	M8	144
A-100	170	28	k6	60	50	5	8	31	M10	211
A-112	170	28	k6	60	50	5	8	31	M10	211
A-132	215	38	k6	80	70	5	10	41	M12	261
K...69										
A-80	132	19	k6	40	32	4	6	21.5	M6	134
A-90	132	24	k6	50	40	5	8	27	M8	144
A-100	170	28	k6	60	50	5	8	31	M10	211
A-112	170	28	k6	60	50	5	8	31	M10	211
A-132	215	38	k6	80	70	5	10	41	M12	261
K...79										
A-80	132	19	k6	40	32	4	6	21.5	M6	134
A-90	132	24	k6	50	40	5	8	27	M8	144
A-100	170	28	k6	60	50	5	8	31	M10	211
A-112	170	28	k6	60	50	5	8	31	M10	211
A-132	215	38	k6	80	70	5	10	41	M12	261
K...89										
A-80	132	19	k6	40	32	4	6	21.5	M6	128
A-90	132	24	k6	50	40	5	8	27	M8	138
A-100	170	28	k6	60	50	5	8	31	M10	205
A-112	170	28	k6	60	50	5	8	31	M10	205
A-132	215	38	k6	80	70	5	10	41	M12	255
A-160	215.3	42	k6	110	90	10	12	45	M16	307

④ DIN 332 ⑤ Feather key/keyway DIN 6885

K...109 to K...189 gearboxes

K..030A, K.F.030A, K.Z.030A, KAD.030A



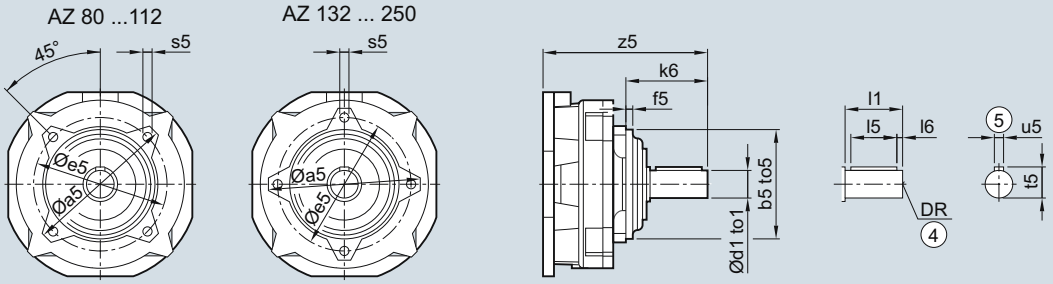
Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
K...109										
A-80	132	19	k6	40	32	4	6	21.5	M6	115
A-90	132	24	k6	50	40	5	8	27	M8	125
A-100	170	28	k6	60	50	5	8	31	M10	188
A-112	170	28	k6	60	50	5	8	31	M10	188
A-132	215	38	k6	80	70	5	10	41	M12	238
A-160	215.3	42	k6	110	90	10	12	45	M16	290
A-180	215.3	48	m6	110	90	10	14	51.5	M16	290
K...129										
A-90	132	24	k6	50	40	5	8	27	M8	118
A-100	170	28	k6	60	50	5	8	31	M10	179
A-112	170	28	k6	60	50	5	8	31	M10	179
A-132	215	38	k6	80	70	5	10	41	M12	229
A-160	215.3	42	k6	110	90	10	12	45	M16	281
A-180	215.3	48	m6	110	90	10	14	51.5	M16	281
A-200	266	55	m6	110	90	10	16	59	M20	317.5
A-225	266	55	m6	110	90	10	16	59	M20	317.5
K...149										
A-90	132	24	k6	50	40	5	8	27	M8	111
A-100	170	28	k6	60	50	5	8	31	M10	170
A-112	170	28	k6	60	50	5	8	31	M10	170
A-132	215	38	k6	80	70	5	10	41	M12	218
A-160	215.3	42	k6	110	90	10	12	45	M16	270
A-180	215.3	48	m6	110	90	10	14	51.5	M16	270
A-200	266	55	m6	110	90	10	16	59	M20	306.5
A-225	266	55	m6	110	90	10	16	59	M20	306.5
A-250	266	55	m6	110	90	10	16	59	M20	306.5
K...169										
A-100	170	28	k6	60	50	5	8	31	M10	168.5
A-112	170	28	k6	60	50	5	8	31	M10	168.5
A-132	215	38	k6	80	70	5	10	41	M12	211.5
A-160	215.3	42	k6	110	90	10	12	45	M16	263.5
A-180	215.3	48	m6	110	90	10	14	51.5	M16	263.5
A-200	266	55	m6	110	90	10	16	59	M20	300
A-225	266	55	m6	110	90	10	16	59	M20	300
A-250	266	55	m6	110	90	10	16	59	M20	300
K...189										
A-112	170	28	k6	60	50	5	8	31	M10	156
A-132	215	38	k6	80	70	5	10	41	M12	198.5
A-160	215.3	42	k6	110	90	10	12	45	M16	250.5
A-180	215.3	48	m6	110	90	10	14	51.5	M16	250.5
A-200	266	55	m6	110	90	10	16	59	M20	286.5
A-225	266	55	m6	110	90	10	16	59	M20	286.5
A-250	266	55	m6	110	90	10	16	59	M20	286.5

④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

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

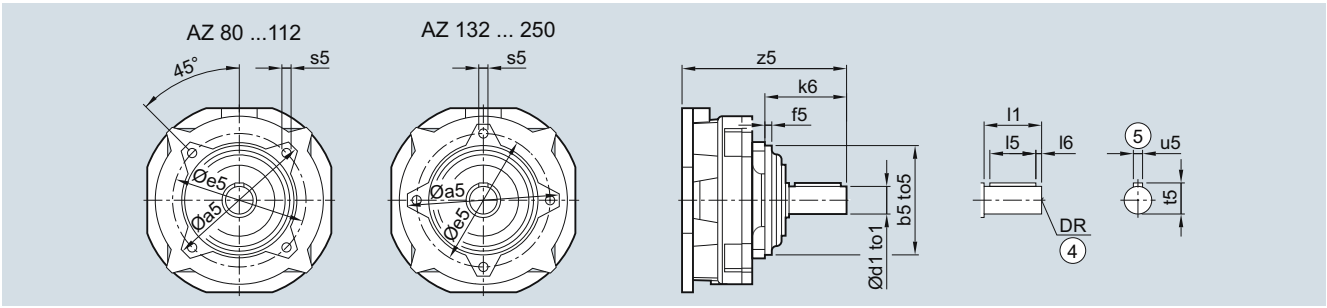


Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
B...29																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
B...39																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
B...49																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	261
K...39																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	143.5
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	153.5
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	220.5
K...49																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	261
K...69																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	261
K...79																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	134
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	144
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	211
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	261
K...89																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	128
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	138
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	205
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	205
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	255
AZ-160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	307

④ DIN 332 ⑤ Feather key/keyway DIN 6885

K...109 to K...189 gearboxes

K..030AZ, K.F.030AZ, K.Z.030AZ, KAD.030AZ

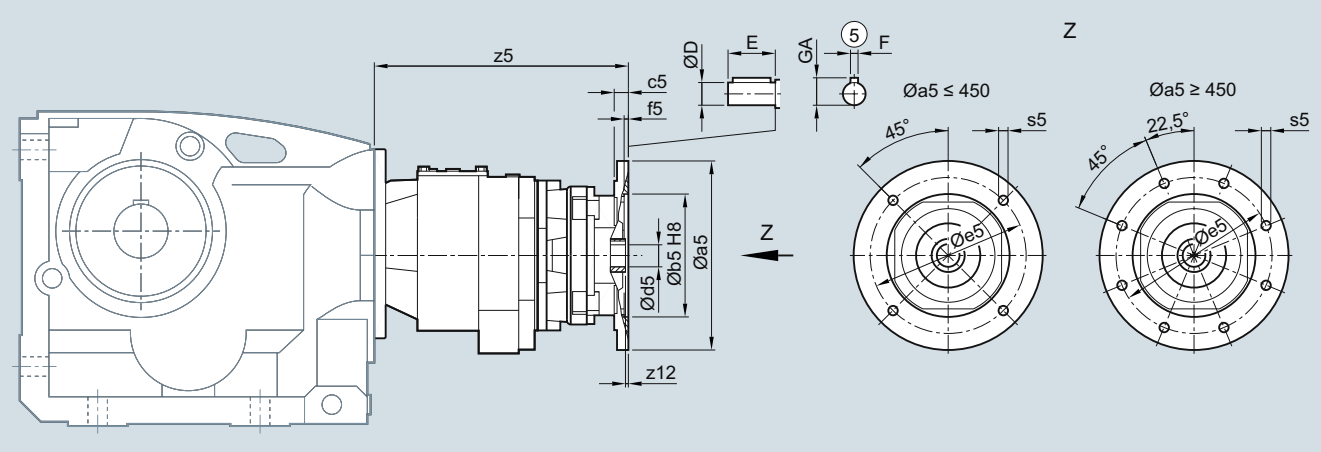


Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
K...109																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61	115
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	125
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	188
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	188
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	238
AZ-160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	290
AZ-180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	290
K...129																
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	118
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	179
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	179
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	229
AZ-160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	281
AZ-180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	281
AZ-200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	317.5
AZ-225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	317.5
K...149																
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8	71	111
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	170
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	170
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	218
AZ-160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	270
AZ-180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	270
AZ-200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
AZ-225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
AZ-250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	306.5
K...169																
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	168.5
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	168.5
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	211.5
AZ-160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	263.5
AZ-180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	263.5
AZ-200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
AZ-225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
AZ-250	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	300
K...189																
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10	70.5	156
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12	98.5	198.5
AZ-160	215.3	160	j6	184	6.5	M16x22	42	k6	110	90	10	12	45	M16	150.5	250.5
AZ-180	215.3	160	j6	184	6.5	M16x22	48	m6	110	90	10	14	51.5	M16	150.5	250.5
AZ-200	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
AZ-225	266	195	j6	230	6.5	M16x28	55	m6	110	90	10	16	59	M20	134	286.5
AZ-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

Dimensions

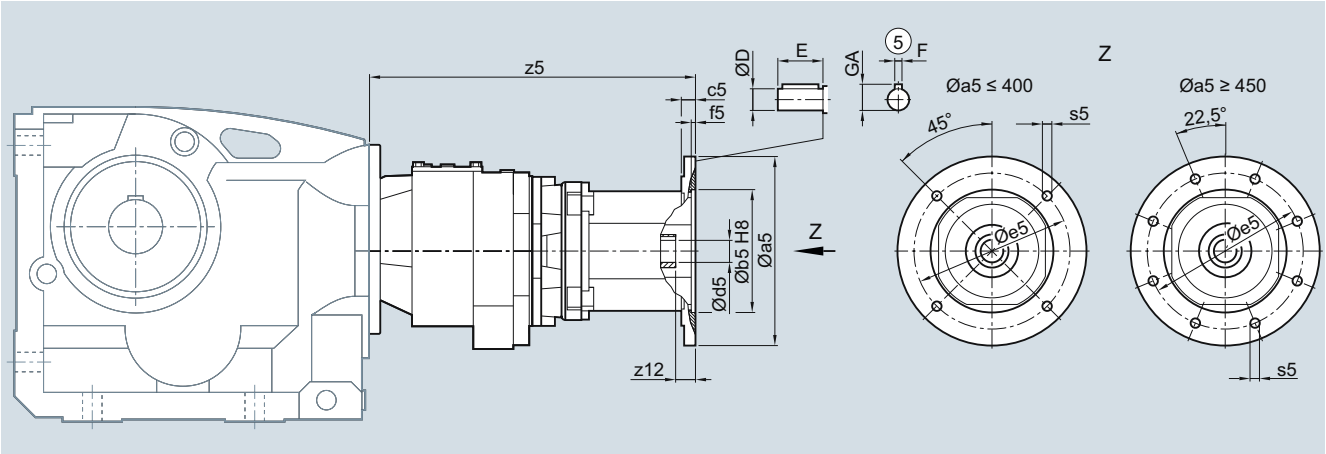
Bevel tandem gearbox with adapter K4



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
	K4-(112)	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
	K4-(112)	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
	K4-(112)	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
	K4-(132)	300	230	12	5	265	M12x20	3	38	80	10	41	360
K.169-D/Z49	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
K.189-D/Z69	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

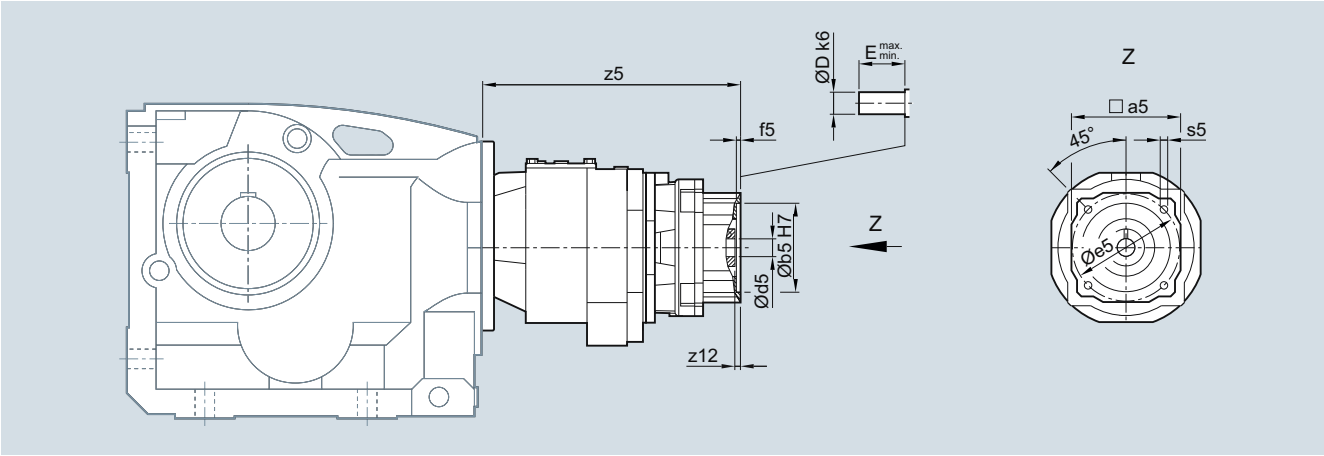
Bevel tandem gearbox with adapter K2



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
	K2-(112)	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
	K2-(112)	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
	K2-(112)	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

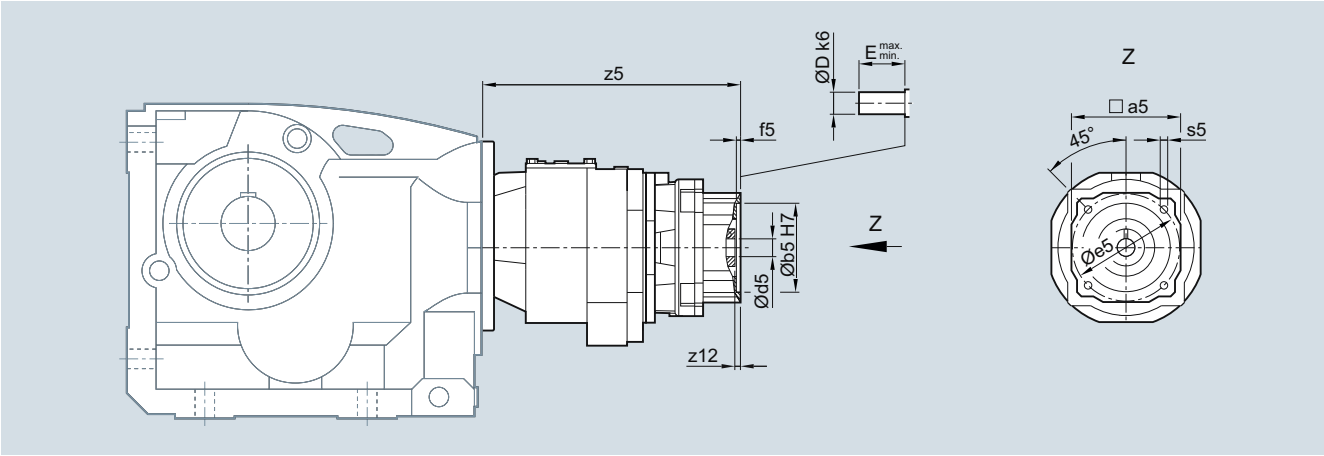
⑤ Feather key/keyway DIN 6885

Bevel tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
	KS5.3	117	95	4.5	115	M6x11	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
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	327.5
K.109-D/Z39	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
	KS5.3	117	95	4.5	115	M6x11	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

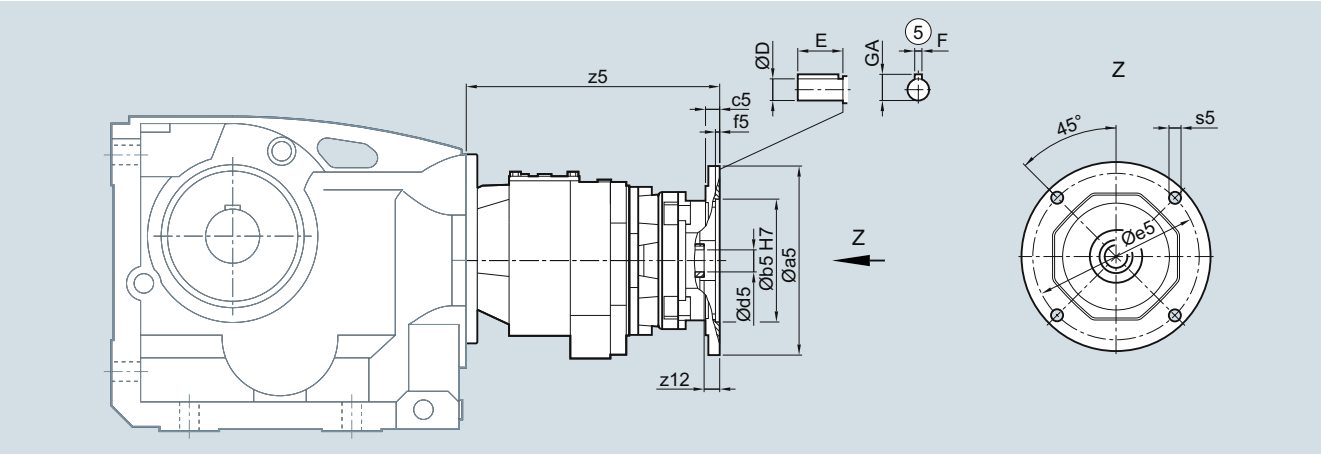
Bevel tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
	KS5.3	117	95	4.5	115	M6x11	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
	KS8.1	155	130	4.5	165	M10x14	2	32	40	80	301.5
K.149-D/Z49	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
	KS5.3	117	95	4.5	115	M6x11	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
K.169-D/Z49	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
	KS5.3	117	95	4.5	115	M6x11	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
K.189-D/Z69	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
	KS5.3	117	95	4.5	115	M6x11	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

Dimensions

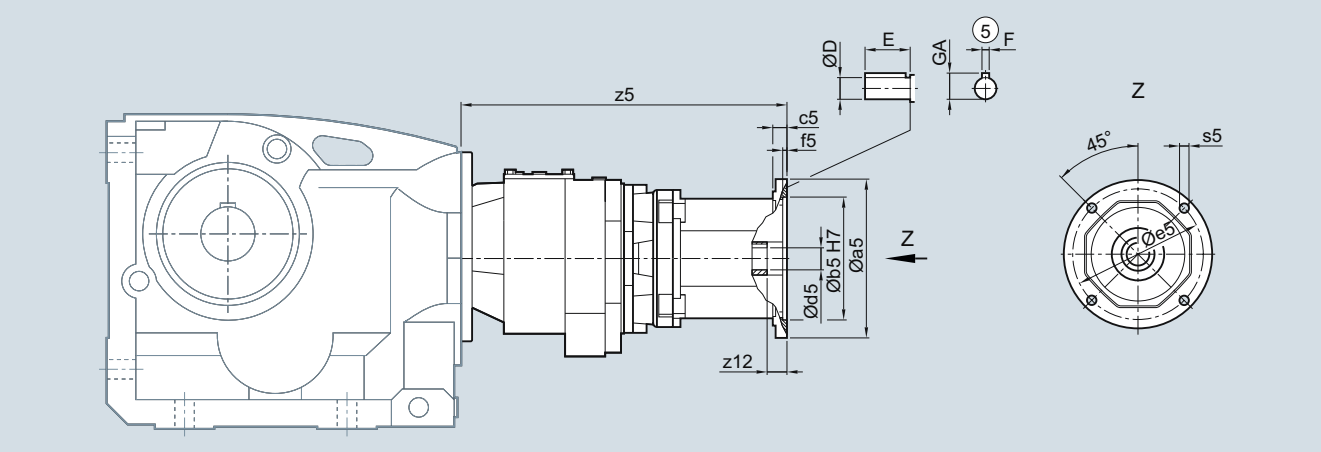
Bevel tandem gearbox with adapter K5



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

Ⓢ Feather key/keyway DIN 6885

Bevel tandem gearbox with adapter K3

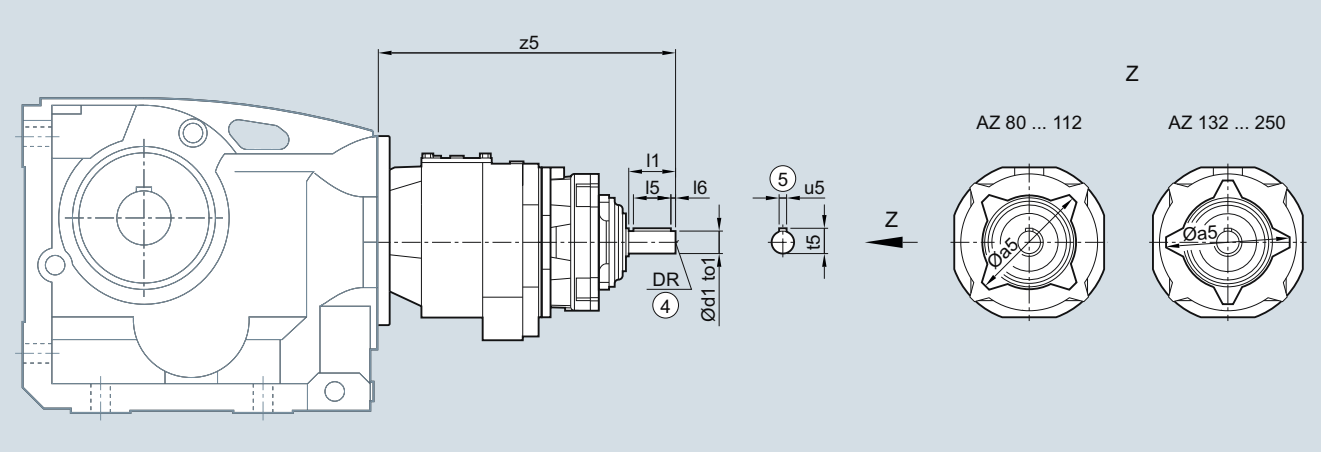


Gearbox	Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
K.89-D/Z39	K3-(56)	168	114.3	15	5	149.2	11	27.5	15.875	47.752	4.763	17.895	380.5
	K3-(140)	168	114.3	15	5	149.2	11	28	22.225	57.15	4.763	24.346	380.5
	K3-(180)	226	215.9	22	5.5	184.1	13.5	42	28.575	69.85	6.35	31.394	436.5
K.109-D/Z39	K3-(56)	168	114.3	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

Dimensions

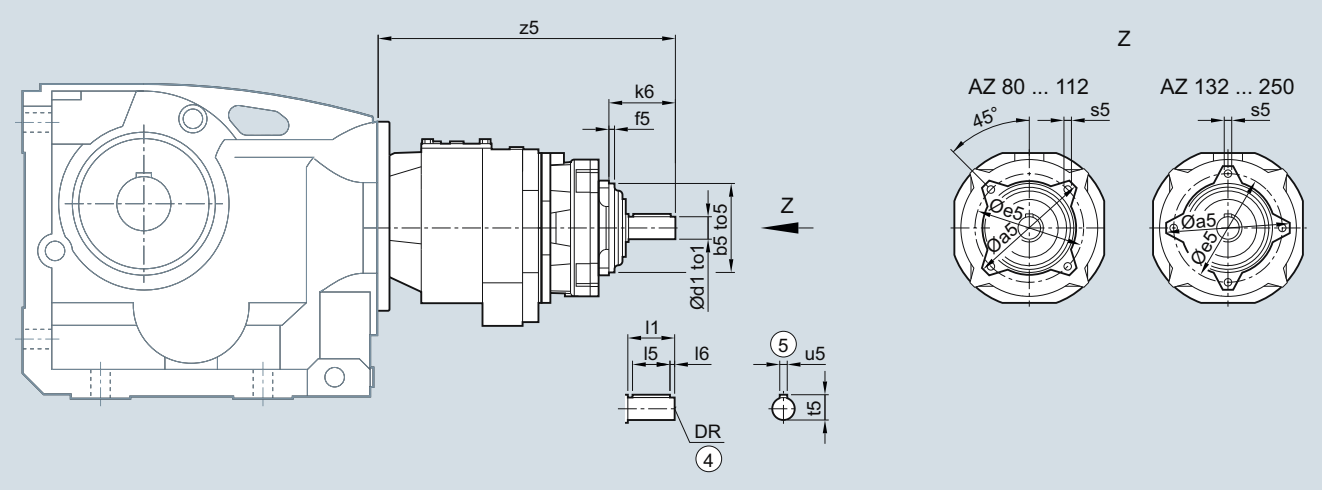
Bevel tandem gearbox with adapter A



Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
K.89-D/Z39	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	323
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	333
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	400
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	400
K.109-D/Z39	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	306
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	316
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	383
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	383
K.129-D/Z39	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	297
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	307
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	374
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	374
K.149-D/Z49	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	326
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	336
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	403
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	403
	AZ-132	215	38	k6	80	70	5	10	41	M12x28	453
K.169-D/Z49	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	315.5
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	325.5
	AZ-100	170	28	k6	60	505	5	8	31	M10x22	392.5
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	392.5
	AZ-132	215	38	k6	80	70	5	10	41	M12x28	442.5
K.189-D/Z69	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	341
	AZ-90	132	24	k6	50	40	5	8	27	M8x19	351
	AZ-100	170	28	k6	60	50	5	8	31	M10x22	418
	AZ-112	170	28	k6	60	50	5	8	31	M10x22	418
	AZ-132	215	38	k6	80	70	5	10	41	M12x28	468

④ DIN 332 ⑤ Feather key/keyway DIN 6885

Bevel tandem gearbox with adapter AZ



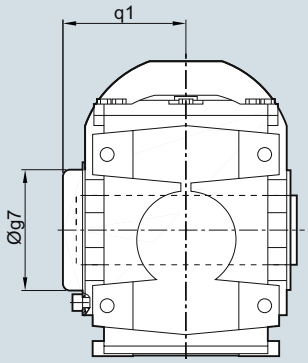
Gearbox	Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
K.89-D/Z39	AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61	323
	AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27	M8x19	71	333
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	400
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	400
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
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	383
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	383
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
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	374
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31	M10x22	70.5	374
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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	453
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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	442.5
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
	AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41	M12x28	98.5	468

④ DIN 332 ⑤ Feather key/keyway DIN 6885

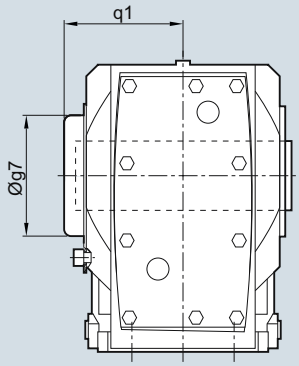
Protective covers

Protective cover for hollow shaft

BA, BAF, BAZ, BAD



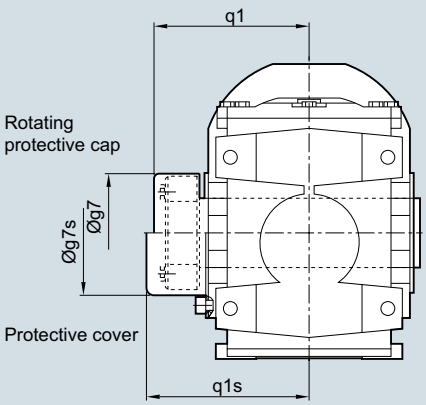
KA[1], KAF, KAZ, KAD



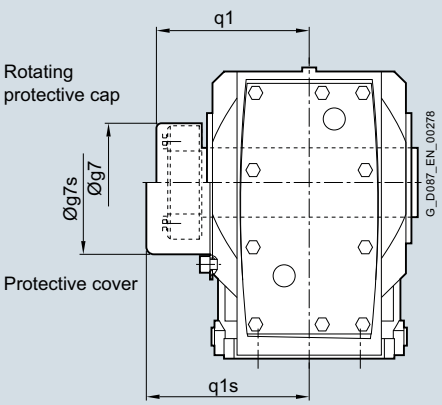
Gearbox type	BA.29	BA.39	BA.49	KA.39	KA.49	KA.69	KA.79	KA.89	KA.109	KA.129	KA.149	KA.169	KA.189
Protective cover													
g7	67.0	80.0	80.0	82.5	80.0	99.0	99.0	137.0	187.0	187.0	218.0	257.5	309.5
q1	76.0	96.0	111.0	73.0	105.0	95.0	101.5	124.5	168.0	198.0	250.0	313.0	373.5

Protective cover for hollow shaft with shrink disk

BAS, BAFS, BAZS, BADS



KAS[1], KAFS,KAZS,KADS



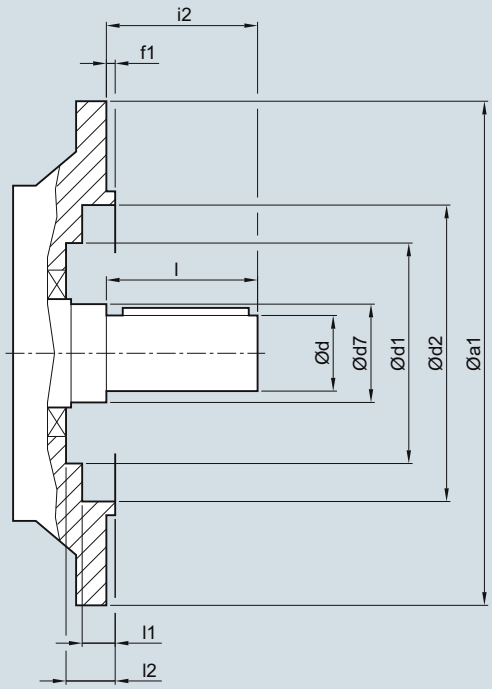
Gearbox type	BA..29	BA..39	BA..49	KA..39	KA..49	KA..69	KA..79	KA..89	KA..109	KA..129	KA..149	KA..169	KA..189
Rotating protective cap with shrink disk version													
g7	55	84	84	76.0	84	84	94.0	119.0	142.0	159.0	201.0	234.0	267.0
q1	85	102	117	89.5	107	115	125.5	142.5	162.5	198.5	233.5	291.0	343.5
Protective cover													
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

[1] KA/KAS version valid only for gearbox sizes 169 and 189

Inner contour of the flange design

Notes regarding the design of the customer's interface for the solid shaft design

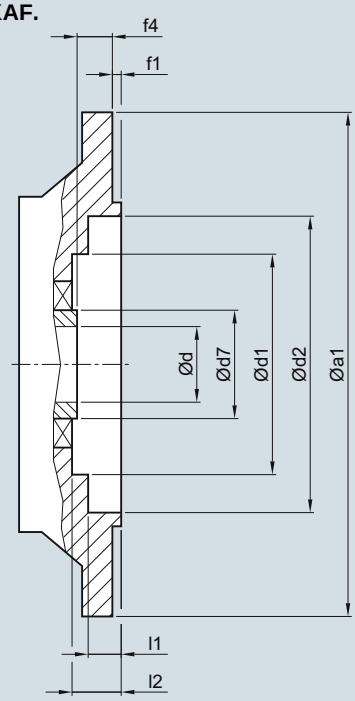
BF, KF



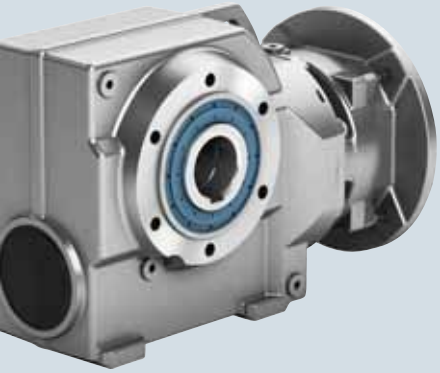
Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
BF29	120	20	40	-	70	3.0	40	40	24.0	-
	160	20	40	70	101	3.5	40	40	8.5	24.5
BF39	160	30	55	93	100	3.5	60	60	11.0	31.5
	200	30	55	93	119	3.5	60	60	16.0	31.5
BF49	200	35	55	93	119	3.5	70	70	16.0	31.5
KF39	160	25	30	-	100	3.5	50	50	5.0	-
KF49	200	30	35	-	118	3.5	60	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

BAF., KAF.



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 / 35 / 40	55	93	100	3.5	27.0	11.0	31.5
BAF.39	200	30 / 35 / 40	55	93	119	3.5	27.0	16.0	31.5
BAF.49	200	35 / 40	55	93	119	3.5	27.0	16.0	31.5
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	-



6/2	**Orientation**
6/3	**Transmission ratios and torques**
6/3	Selection and ordering data
6/10	**Transmission ratios and torques for very low speeds**
6/10	Selection and ordering data
6/16	**Efficiencies**
6/16	Selection and ordering data
6/26	**Dimensions**
6/26	Dimensional drawing overview
	Helical worm gearbox with adapter K4
6/29	Helical worm gearbox C..29
6/33	Helical worm gearbox C..39
6/37	Helical worm gearbox C..49
6/41	Helical worm gearbox C..69
6/45	Helical worm gearbox C..89
	Helical worm gearbox with adapter K2
6/49	C..29 to C..89
	Helical worm gearbox with KS adapter
6/50	Helical worm gearbox C..29
6/54	Helical worm gearbox C..39
6/58	Helical worm gearbox C..49
6/62	Helical worm gearbox C..69
6/66	Helical worm gearbox C..89
	Helical worm gearbox with adapter K5
6/70	C..29 to C..89
	Helical worm gearbox with adapter K3
6/71	C..29 to C..89
	Helical worm gearbox with adapter A
6/72	C..29 to C..89
	Helical worm gearbox with adapter AZ
6/73	C..29 to C..89

6/26	**Dimensions** (continued)
6/74	Helical worm tandem gearbox with adapter K4
6/74	Helical worm tandem gearbox with adapter K2
6/75	Helical worm tandem gearbox with KS adapter
6/76	Helical worm tandem gearbox with adapter K5
6/76	Helical worm tandem gearbox with adapter K3
6/77	Helical worm tandem gearbox with adapter A
6/77	Helical worm tandem gearbox with adapter AZ
6/78	Protective cover for hollow shaft
6/79	Inner contour of the flange design

Orientation

SIMOGEAR helical worm gearbox C

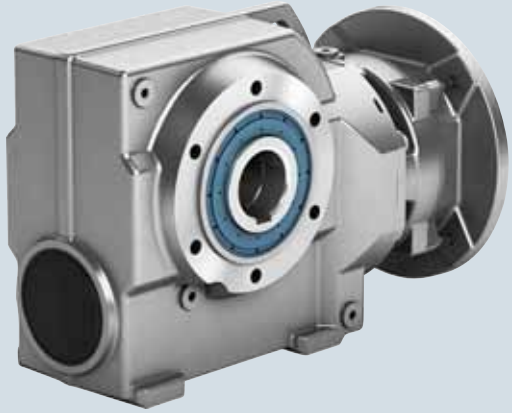


Fig. 6/1 Helical worm gearbox C

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		T_{2N}	i	P_1
		Nm	-	kW
C29 … C89 (2-stage)	5	82 … 1 450	6.48 … 363	7.5
C.29-D/Z19 … C.89-D/Z39 (4-stage or 5-stage)	5	80 … 1 310	270 … 19 000	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
- 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	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.29														
265.20	5.5	108	4 140	0.05	1326/5		✓	✓	✓					**2KJ4601 - ■ ■ A 0 ■ - 0 ■ M2**
230.10	6.3	108	4 140	0.05	2301/10		✓	✓	✓					**2KJ4601 - ■ ■ A 0 ■ - 0 ■ L2**
209.18	6.9	109	4 130	0.07	2301/11		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ K2**
179.40	8.1	110	4 130	0.08	897/5		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ J2**
163.09	8.9	110	4 130	0.10	1794/11		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ H2**
143.00	10	110	4 130	0.11	143/1		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ G2**
127.64	11	110	4 130	0.14	1404/11		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ F2**
113.75	13	110	4 130	0.16	455/4		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ E2**
105.00	14	110	4 130	0.20	105/1		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ D2**
91.93	16	110	4 130	0.22	1287/14		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ C2**
80.60	18	110	4 130	0.22	403/5		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ B2**
73.12	20	110	4 130	0.28	585/8		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ A2**
68.82	21	110	4 130	0.33	1170/17		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ X1**
60.67	24	110	4 130	0.36	182/3		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ W1**
52.65	28	110	4 130	0.48	1053/20		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ V1**
49.87	29	102	4 170	0.05	748/15		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ U1**
43.27	34	103	4 160	0.06	649/15		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ T1**
39.33	37	103	4 160	0.07	118/3		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ S1**
33.73	43	104	4 160	0.09	506/15		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ R1**
32.64	44	90	4 230	0.05	816/25		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ Q1**
28.32	51	90	4 230	0.06	708/25		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ P1**
25.75	56	91	4 220	0.07	1416/55		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ N1**
22.08	66	91	4 220	0.09	552/25		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ M1**
20.07	72	92	4 200	0.11	1104/55		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ L1**
17.60	82	92	3 970	0.13	88/5		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ K1**
15.71	92	92	3 770	0.15	864/55		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ J1**
14.00	104	93	3 560	0.18	14/1		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ H1**

Article No. supplement											
Shaft design	➞ page 9/46		1 or 9								
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			1
			C		G						1
			D								1
	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	➞ page 9/37		A, D, F or H								

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

6

Selection and ordering data

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.29 (continued)														
12.92	112	93	3 430	0.22	168/13		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ G1**
11.31	128	94	3 210	0.25	396/35		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ F1**
9.92	146	94	3 020	0.26	248/25		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ E1**
9.00	161	91	2 960	0.33	9/1		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ D1**
8.47	171	90	2 950	0.38	144/17		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ C1**
7.47	194	86	2 920	0.43	112/15		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ B1**
6.48	224	82	2 880	0.57	162/25		✓	✓	✓	✓				**2KJ4601 - ■ ■ A 0 ■ - 0 ■ A1**
C.39														
299.00	4.8	192	6 180	0.04	299/1		✓	✓						**2KJ4602 - ■ ■ A 0 ■ - 0 ■ N2**
265.20	5.5	192	6 180	0.05	1326/5		✓	✓	✓					**2KJ4602 - ■ ■ A 0 ■ - 0 ■ M2**
230.10	6.3	193	6 180	0.06	2301/10		✓	✓	✓					**2KJ4602 - ■ ■ A 0 ■ - 0 ■ L2**
209.18	6.9	193	6 180	0.07	2301/11		✓	✓	✓	✓				**2KJ4602 - ■ ■ A 0 ■ - 0 ■ K2**
179.40	8.1	193	6 180	0.09	897/5		✓	✓	✓	✓				**2KJ4602 - ■ ■ A 0 ■ - 0 ■ J2**
163.09	8.9	193	6 180	0.11	1794/11		✓	✓	✓	✓				**2KJ4602 - ■ ■ A 0 ■ - 0 ■ H2**
143.00	10	194	6 170	0.13	143/1		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ G2**
127.64	11	194	6 170	0.16	1404/11		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ F2**
113.75	13	194	6 170	0.19	455/4		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ E2**
105.00	14	194	6 170	0.23	105/1		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ D2**
91.93	16	194	6 170	0.27	1287/14		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ C2**
80.60	18	194	6 170	0.26	403/5		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ B2**
73.12	20	194	6 170	0.36	585/8		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ A2**
68.82	21	194	6 170	0.43	1170/17		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ X1**
60.67	24	183	6 210	0.47	182/3		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ W1**
52.65	28	170	6 260	0.64	1053/20		✓	✓	✓	✓	✓			**2KJ4602 - ■ ■ A 0 ■ - 0 ■ V1**
49.87	29	198	6 160	0.06	748/15		✓	✓	✓	✓				**2KJ4602 - ■ ■ A 0 ■ - 0 ■ U1**
43.27	34	199	6 150	0.07	649/15		✓	✓	✓	✓				**2KJ4602 - ■ ■ A 0 ■ - 0 ■ T1**
39.33	37	200	6 140	0.08	118/3		✓	✓	✓	✓				**2KJ4602 - ■ ■ A 0 ■ - 0 ■ S1**

Article No. supplement										
Shaft design	➞ page 9/46	**1 or 9**								
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		1
			C		G					1
			D							1
	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	➞ page 9/37	**A, D, F or H**								

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

Selection and ordering data

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.39 (continued)														
33.73	43	200	5 730	0.11	506/15		✓	✓	✓	✓				2KJ4602 - ■ ■ A 0 ■ - 0 ■ R1
32.64	44	215	5 260	0.07	816/25		✓	✓	✓	✓				2KJ4602 - ■ ■ A 0 ■ - 0 ■ Q1
28.32	51	235	4 680	0.08	708/25		✓	✓	✓	✓				2KJ4602 - ■ ■ A 0 ■ - 0 ■ P1
25.75	56	235	4 450	0.10	1416/55		✓	✓	✓	✓				2KJ4602 - ■ ■ A 0 ■ - 0 ■ N1
22.08	66	235	4 100	0.13	552/25		✓	✓	✓	✓				2KJ4602 - ■ ■ A 0 ■ - 0 ■ M1
20.07	72	235	3 890	0.16	1104/55		✓	✓	✓	✓				2KJ4602 - ■ ■ A 0 ■ - 0 ■ L1
17.60	82	225	3 720	0.19	88/5		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ K1
15.71	92	215	3 600	0.23	864/55		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ J1
14.00	104	205	3 490	0.28	14/1		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ H1
12.92	112	199	3 400	0.34	168/13		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ G1
11.31	128	189	3 270	0.41	396/35		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ F1
9.92	146	181	3 130	0.44	248/25		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ E1
9.00	161	174	3 040	0.59	9/1		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ D1
8.47	171	170	3 030	0.68	144/17		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ C1
7.47	194	163	3 050	0.81	112/15		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ B1
6.48	224	154	3 050	1.08	162/25		✓	✓	✓	✓	✓			2KJ4602 - ■ ■ A 0 ■ - 0 ■ A1
C.49														
299.00	4.8	350	8 410	0.04	299/1		✓	✓						2KJ4603 - ■ ■ A 0 ■ - 0 ■ N2
265.20	5.5	350	8 410	0.05	1326/5		✓	✓	✓					2KJ4603 - ■ ■ A 0 ■ - 0 ■ M2
230.10	6.3	355	8 400	0.07	2301/10		✓	✓	✓					2KJ4603 - ■ ■ A 0 ■ - 0 ■ L2
209.18	6.9	355	8 400	0.08	2301/11		✓	✓	✓	✓				2KJ4603 - ■ ■ A 0 ■ - 0 ■ K2
179.40	8.1	355	8 260	0.10	897/5		✓	✓	✓	✓				2KJ4603 - ■ ■ A 0 ■ - 0 ■ J2
163.09	8.9	355	7 920	0.13	1794/11		✓	✓	✓	✓				2KJ4603 - ■ ■ A 0 ■ - 0 ■ H2
143.00	10	355	7 480	0.15	143/1		✓	✓	✓	✓	✓	✓		2KJ4603 - ■ ■ A 0 ■ - 0 ■ G2
127.64	11	355	7 110	0.18	1404/11		✓	✓	✓	✓	✓	✓		2KJ4603 - ■ ■ A 0 ■ - 0 ■ F2
113.75	13	355	6 760	0.22	455/4		✓	✓	✓	✓	✓	✓		2KJ4603 - ■ ■ A 0 ■ - 0 ■ E2
105.00	14	355	6 510	0.26	105/1		✓	✓	✓	✓	✓	✓		2KJ4603 - ■ ■ A 0 ■ - 0 ■ D2

Article No. supplement										
Shaft design	➞ page 9/46	**1 or 9**								
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		1
			C		G					1
			D							1
	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	➞ page 9/37	**A, D, F or H**								

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

Selection and ordering data

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.49 (continued)														
91.93	16	350	6 160	0.32	1287/14		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ C2**
80.60	18	330	5 930	0.32	403/5		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ B2**
73.12	20	315	5 770	0.44	585/8		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ A2**
68.82	21	305	5 680	0.51	1170/17		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ X1**
60.67	24	285	5 500	0.58	182/3		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ W1**
52.65	28	265	5 290	0.78	1053/20		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ V1**
49.87	29	320	4 250	0.08	748/15		✓	✓	✓	✓				**2KJ4603 - ■ ■ A 0 ■ - 0 ■ U1**
43.27	34	350	3 680	0.10	649/15		✓	✓	✓	✓				**2KJ4603 - ■ ■ A 0 ■ - 0 ■ T1**
39.33	37	400	3 050	0.12	118/3		✓	✓	✓	✓				**2KJ4603 - ■ ■ A 0 ■ - 0 ■ S1**
33.73	43	375	2 940	0.15	506/15		✓	✓	✓	✓				**2KJ4603 - ■ ■ A 0 ■ - 0 ■ R1**
30.67	47	385	2 660	0.19	92/3		✓	✓	✓	✓				**2KJ4603 - ■ ■ A 0 ■ - 0 ■ Q1**
26.89	54	360	2 620	0.23	242/9		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ P1**
24.00	60	345	2 540	0.28	24/1		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ N1**
21.39	68	330	2 460	0.34	385/18		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ M1**
19.74	73	315	2 450	0.41	770/39		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ L1**
17.29	84	300	2 350	0.51	121/7		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ K1**
15.16	96	285	2 270	0.56	682/45		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ J1**
13.75	105	275	2 200	0.73	55/4		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ H1**
12.94	112	270	2 160	0.85	220/17		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ G1**
11.41	127	255	2 100	1.02	308/27		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ F1**
9.90	146	245	1 990	1.36	99/10		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ E1**
9.00	161	255	1 140	1.03	9/1		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ D1**
8.47	171	255	1 290	1.18	144/17		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ C1**
7.47	194	240	1 580	1.45	112/15		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ B1**
6.48	224	230	1 850	1.93	162/25		✓	✓	✓	✓	✓	✓		**2KJ4603 - ■ ■ A 0 ■ - 0 ■ A1**

Article No. supplement										
Shaft design	➞ page 9/46	**1 or 9**								
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		1
			C		G					1
			D							1
	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	➞ page 9/37	**A, D, F or H**								

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

Selection and ordering data

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.69														
360.00	4.0	675	10 600	0.07	1079/3		✓	✓	✓					2KJ4604 - ■ ■ A 0 ■ - 0 ■ M2
319.80	4.5	675	10 600	0.09	1599/5		✓	✓	✓					2KJ4604 - ■ ■ A 0 ■ - 0 ■ L2
280.80	5.2	675	10 600	0.11	1404/5		✓	✓	✓					2KJ4604 - ■ ■ A 0 ■ - 0 ■ K2
255.27	5.7	675	10 600	0.13	2808/11		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ J2
218.40	6.6	675	10 600	0.16	1092/5		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ H2
198.55	7.3	675	10 600	0.19	2184/11		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ G2
175.50	8.3	665	10 600	0.23	351/2		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ F2
159.55	9.1	640	10 700	0.30	1755/11		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ E2
139.75	10	590	10 500	0.35	559/4		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ D2
129.00	11	565	10 300	0.42	129/1		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ C2
114.21	13	535	9 990	0.52	1599/14		✓	✓	✓	✓	✓	✓	✓	2KJ4604 - ■ ■ A 0 ■ - 0 ■ B2
102.50	14	675	8 310	0.10	205/2		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ A2
90.00	16	675	7 790	0.12	90/1		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ X1
81.82	18	675	7 410	0.15	900/11		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ W1
70.00	21	660	6 920	0.18	70/1		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ V1
63.64	23	640	6 700	0.22	700/11		✓	✓	✓	✓				2KJ4604 - ■ ■ A 0 ■ - 0 ■ U1
56.25	26	610	6 460	0.27	225/4		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ T1
51.14	28	580	6 320	0.34	1125/22		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ S1
44.79	32	545	6 110	0.41	1075/24		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ R1
41.35	35	525	5 980	0.49	1075/26		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ Q1
36.61	40	500	5 770	0.61	1025/28		✓	✓	✓	✓	✓	✓	✓	2KJ4604 - ■ ■ A 0 ■ - 0 ■ P1
30.00	48	545	4 560	0.46	30/1		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ N1
26.28	55	515	4 410	0.56	473/18		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ M1
24.26	60	500	4 300	0.67	946/39		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ L1
21.48	68	475	4 160	0.83	451/21		✓	✓	✓	✓	✓	✓	✓	2KJ4604 - ■ ■ A 0 ■ - 0 ■ K1
17.88	81	440	3 960	1.17	143/8		✓	✓	✓	✓	✓	✓	✓	2KJ4604 - ■ ■ A 0 ■ - 0 ■ J1
15.88	91	360	3 950	0.88	1032/65		✓	✓	✓	✓	✓	✓		2KJ4604 - ■ ■ A 0 ■ - 0 ■ H1

Article No. supplement										
Shaft design	➞ page 9/46	**1 or 9**								
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		1
			C		G					1
			D							1
	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	➞ page 9/37	**A, D, F or H**								

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

6

Selection and ordering data

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.69 (continued)														
14.06	103	355	3 730	1.11	492/35		✓	✓	✓	✓	✓	✓	✓	**2KJ4604 - ■ ■ A 0 ■ - 0 ■ G1**
11.70	124	360	3 310	1.56	117/10		✓	✓	✓	✓	✓	✓	✓	**2KJ4604 - ■ ■ A 0 ■ - 0 ■ F1**
11.01	132	360	3 180	1.79	936/85		✓	✓	✓	✓	✓	✓	✓	**2KJ4604 - ■ ■ A 0 ■ - 0 ■ E1**
9.87	147	360	2 890	2.10	148/15		✓	✓	✓	✓	✓	✓	✓	**2KJ4604 - ■ ■ A 0 ■ - 0 ■ D1**
8.40	173	360	3 110	2.90	42/5		✓	✓	✓	✓	✓	✓	✓	**2KJ4604 - ■ ■ A 0 ■ - 0 ■ C1**
7.20	201	360	3 170	3.90	36/5				✓	✓	✓	✓	✓	**2KJ4604 - ■ ■ A 0 ■ - 0 ■ B1**
6.20	234	355	3 190	5.20	31/5				✓	✓	✓	✓	✓	**2KJ4604 - ■ ■ A 0 ■ - 0 ■ A1**
C.89														
363.00	4	1 450	16 200	0.47	3627/10			✓	✓	✓				**2KJ4606 - ■ ■ A 0 ■ - 0 ■ N2**
329.73	4.4	1 450	16 200	0.57	3627/11			✓	✓	✓				**2KJ4606 - ■ ■ A 0 ■ - 0 ■ M2**
295.75	4.9	1 450	16 200	0.78	1183/4			✓	✓	✓	✓	✓		**2KJ4606 - ■ ■ A 0 ■ - 0 ■ L2**
265.91	5.5	1 450	16 200	0.89	2925/11			✓	✓	✓	✓	✓		**2KJ4606 - ■ ■ A 0 ■ - 0 ■ K2**
240.50	6	1 450	16 200	1.00	481/2			✓	✓	✓	✓	✓		**2KJ4606 - ■ ■ A 0 ■ - 0 ■ J2**
222.00	6.5	1 450	16 200	1.18	222/1			✓	✓	✓	✓	✓		**2KJ4606 - ■ ■ A 0 ■ - 0 ■ H2**
203.36	7.1	1 450	16 200	1.52	2847/14			✓	✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ G2**
170.62	8.5	1 360	16 300	1.67	1365/8			✓	✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ F2**
160.59	9	1 330	16 300	1.91	2730/17			✓	✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ E2**
147.33	9.8	1 280	16 300	2.10	442/3			✓	✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ D2**
128.70	11	1 190	16 300	3.00	1287/10			✓	✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ C2**
115.23	13	1 120	15 900	3.70	2535/22				✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ B2**
100.75	14	1 050	15 300	4.40	403/4				✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ A2**
86.48	17	985	14 600	4.90	1989/23				✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ X1**
76.44	19	930	14 100	6.30	1911/25				✓	✓	✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ W1**
65.00	22	865	13 400	8.10	65/1						✓	✓	✓	**2KJ4606 - ■ ■ A 0 ■ - 0 ■ V1**
55.61	26	1 450	8 630	0.89	1001/18			✓	✓	✓	✓	✓		**2KJ4606 - ■ ■ A 0 ■ - 0 ■ U1**
50.00	29	1 430	8 160	1.02	50/1			✓	✓	✓	✓	✓		**2KJ4606 - ■ ■ A 0 ■ - 0 ■ T1**
45.22	32	1 380	7 910	1.15	407/9			✓	✓	✓	✓	✓		**2KJ4606 - ■ ■ A 0 ■ - 0 ■ S1**

Article No. supplement									
Shaft design	➞ page 9/46	**1 or 9**							
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	1
			C		G				1
			D						1
	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	➞ page 9/37	**A, D, F or H**							

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

Selection and ordering data

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.89 (continued)														
41.74	35	1 340	7 720	1.35	1628/39			✓	✓	✓	✓	✓		2KJ4606 - ■ ■ A 0 ■ - 0 ■ R1
38.24	38	1 300	7 510	1.73	803/21			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ Q1
32.08	45	1 220	7 110	1.97	385/12			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ P1
30.20	48	1 200	6 950	2.20	1540/51			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ N1
27.70	52	1 140	6 890	2.50	748/27			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ M1
25.03	58	1 090	5 490	2.10	876/35			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ L1
21.00	69	1 070	4 480	2.50	21/1			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ K1
19.76	73	1 120	3 400	2.80	336/17			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ J1
18.13	80	1 110	3 180	3.20	272/15			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ H1
15.84	92	1 110	4 150	4.40	396/25			✓	✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ G1
14.18	102	1 070	4 810	5.40	156/11				✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ F1
12.40	117	1 010	5 490	6.60	62/5				✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ E1
10.64	136	960	5 620	8.00	1224/115				✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ D1
9.41	154	915	5 680	10.00	1176/125				✓	✓	✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ C1
8.00	181	840	5 710	14.00	8/1						✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ B1
6.86	211	720	5 690	18.00	48/7						✓	✓	✓	2KJ4606 - ■ ■ A 0 ■ - 0 ■ A1

Article No. supplement										
Shaft design	➞ page 9/46		**1 or 9**							
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	1
				C		G				1
				D						1
		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	➞ page 9/37		**A, D, F or H**							

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

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Selection and ordering data (continued)

Gearbox						Adapter						Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-		3.2	5.2	6.2		10.2	
							4.1	5.3				
							4.2					
C.29-D19												
9 219	0.16	80	4 280	0.02	37750064/4095		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ Q1**
8 163	0.18	80	4 280	0.03	18570596/2275		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ P1**
7 092	0.20	81	4 270	0.04	16135108/2275		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ N1**
6 448	0.22	81	4 270	0.04	2933656/455		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ M1**
5 487	0.26	82	4 270	0.06	12481876/2275		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ L1**
4 988	0.29	82	4 270	0.07	2269432/455		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ K1**
4 349	0.33	83	4 260	0.08	152218/35		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ J1**
3 893	0.37	84	4 260	0.11	1771264/455		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ H1**
3 457	0.42	84	4 260	0.13	4718758/1365		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ G1**
3 191	0.45	84	4 260	0.16	18875032/5915		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ F1**
2 772	0.52	85	4 250	0.17	8828644/3185		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ E1**
2 409	0.60	86	4 250	0.18	5479848/2275		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ D1**
2 175	0.67	86	4 250	0.22	76109/35		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ C1**
2 047	0.71	86	4 250	0.26	71632/35		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ B1**
1 784	0.81	87	4 240	0.29	2435488/1365		✓					**2KJ4621 - ■ ■ A 0 ■ - 0 ■ A1**
C.29-Z19												
1 744	0.83	87	4 240	0.02	1020272/585		✓					**2KJ4620 - ■ ■ A 0 ■ - 0 ■ S1**
1 544	0.94	87	4 240	0.03	501908/325		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ R1**
1 342	1.1	88	4 240	0.04	436084/325		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ Q1**
1 220	1.2	88	4 240	0.05	79288/65		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ P1**
1 038	1.4	89	4 230	0.07	337348/325		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ N1**
944	1.5	90	4 230	0.08	61336/65		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ M1**
823	1.8	90	4 230	0.09	4114/5		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ L1**
736	2.0	91	4 220	0.12	47872/65		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ K1**
654	2.2	91	4 220	0.15	127534/195		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ J1**
604	2.4	91	4 220	0.18	510136/845		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ H1**
524	2.8	92	4 220	0.20	238612/455		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ G1**
456	3.2	93	4 210	0.21	148104/325		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ F1**
411	3.5	93	4 210	0.27	2057/5		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ E1**
387	3.7	93	4 210	0.32	1936/5		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ D1**
337.56	4.3	94	4 210	0.36	65824/195		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ C1**
311.44	4.7	94	4 210	0.19	255068/819		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ B1**
270.54	5.4	95	4 200	0.22	119306/441		✓	✓				**2KJ4620 - ■ ■ A 0 ■ - 0 ■ A1**

Article No. supplement											
Shaft design	➞ page 9/46	**1 or 9**									
Adapter size	KS	A	E	H	K	M					1
		B	F	J		N					1
		C	G								1
		D									1
Adapter type											
Gearbox mounting type	➞ page 9/37	**A, D, F or H**									

Selection and ordering data (continued)

Gearbox						Adapter							Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1		(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-		3.2	5.2	6.2		10.2		
							4.1	5.3					
							4.2						
C.39-D19													
11 553	0.13	160	6 300	0.06	150183/13		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ S1**
10 502	0.14	160	6 300	0.07	136530/13		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ R1**
9 219	0.16	156	6 320	0.02	37750064/4095		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ Q1**
8 163	0.18	157	6 310	0.03	18570596/2275		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ P1**
7 092	0.20	157	6 310	0.04	16135108/2275		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ N1**
6 448	0.22	158	6 310	0.04	2933656/455		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ M1**
5 487	0.26	159	6 300	0.06	12481876/2275		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ L1**
4 988	0.29	159	6 300	0.07	2269432/455		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ K1**
4 349	0.33	160	6 300	0.08	152218/35		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ J1**
3 893	0.37	161	6 300	0.11	1771264/455		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ H1**
3 457	0.42	161	6 300	0.13	4718758/1365		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ G1**
3 191	0.45	162	6 290	0.16	18875032/5915		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ F1**
2 772	0.52	163	6 290	0.17	8828644/3185		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ E1**
2 409	0.60	165	6 280	0.18	5479848/2275		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ D1**
2 175	0.67	166	6 280	0.22	76109/35		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ C1**
2 047	0.71	167	6 270	0.26	71632/35		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ B1**
1 784	0.81	169	6 270	0.29	2435488/1365		✓						**2KJ4623 - ■ ■ A 0 ■ - 0 ■ A1**
C.39-Z19													
1 744	0.83	169	6 270	0.02	1020272/585		✓						**2KJ4622 - ■ ■ A 0 ■ - 0 ■ S1**
1 544	0.94	171	6 260	0.03	501908/325		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ R1**
1 342	1.1	173	6 250	0.04	436084/325		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ Q1**
1 220	1.2	173	6 250	0.05	79288/65		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ P1**
1 038	1.4	175	6 240	0.07	337348/325		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ N1**
944	1.5	175	6 240	0.08	61336/65		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ M1**
823	1.8	176	6 240	0.09	4114/5		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ L1**
736	2.0	177	6 240	0.12	47872/65		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ K1**
654	2.2	178	6 230	0.15	127534/195		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ J1**
604	2.4	179	6 230	0.18	510136/845		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ H1**
524	2.8	180	6 230	0.20	238612/455		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ G1**
456	3.2	181	6 220	0.21	148104/325		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ F1**
411	3.5	182	6 220	0.27	2057/5		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ E1**
387	3.7	182	6 220	0.32	1936/5		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ D1**
337.56	4.3	183	6 210	0.36	65824/195		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ C1**
311.44	4.7	184	6 210	0.19	255068/819		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ B1**
270.54	5.4	185	6 210	0.22	119306/441		✓	✓					**2KJ4622 - ■ ■ A 0 ■ - 0 ■ A1**

Article No. supplement																
Shaft design	➞ page 9/46					**1 or 9**										
Adapter size		KS	A	E	H	K	M								1	
			B	F	J		N								1	
			C	G											1	
			D												1	
Adapter type																
Gearbox mounting type	➞ page 9/37					**A, D, F or H**										

Selection and ordering data (continued)

Gearbox						Adapter							Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1		(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-		3.2	5.2	6.2		10.2		
							4.1	5.3					
							4.2						
C.49-D19													
11 463	0.13	270	8 640	0.04	2006103/175		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ N1**
10 421	0.14	270	8 640	0.04	364746/35		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ M1**
8 868	0.16	270	8 640	0.06	1551891/175		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ L1**
8 062	0.18	270	8 640	0.07	282162/35		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ K1**
7 029	0.21	275	8 630	0.08	492063/70		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ J1**
6 292	0.23	275	8 630	0.11	220224/35		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ H1**
5 588	0.26	275	8 630	0.13	391127/70		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ G1**
5 158	0.28	275	8 630	0.16	2346762/455		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ F1**
4 480	0.32	280	8 610	0.17	1097679/245		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ E1**
3 893	0.37	280	8 730	0.18	681318/175		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ D1**
3 515	0.41	280	8 610	0.22	492063/140		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ C1**
3 308	0.44	285	8 600	0.26	1968252/595		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ B1**
2 884	0.50	285	8 600	0.29	100936/35		✓						**2KJ4625 - ■ ■ A 0 ■ - 0 ■ A1**
C.49-Z19													
2 819	0.51	285	8 600	0.02	42284/15		✓						**2KJ4624 - ■ ■ A 0 ■ - 0 ■ V1**
2 496	0.58	290	8 590	0.03	62403/25		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ U1**
2 169	0.67	295	8 570	0.04	54219/25		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ T1**
1 972	0.74	295	8 570	0.05	9858/5		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ S1**
1678	0.86	305	8 540	0.07	41943/25		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ R1**
1 525	0.95	305	8 540	0.08	7626/5		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ Q1**
1 330	1.1	315	8 510	0.10	13299/10		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ P1**
1 190	1.2	320	8 500	0.13	5952/5		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ N1**
1 057	1.4	325	8 480	0.15	10571/10		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ M1**
976	1.5	330	8 470	0.18	63426/65		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ L1**
848	1.7	340	8 440	0.21	29667/35		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ K1**
737	2.0	340	8 440	0.21	18414/25		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ J1**
665	2.2	340	8 440	0.27	13299/20		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ H1**
626	2.3	345	8 430	0.32	53196/85		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ G1**
546	2.7	345	8 430	0.37	2728/5		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ F1**
503	2.9	345	8 430	0.20	10571/21		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ E1**
437	3.3	345	8 430	0.23	128557/294		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ D1**
380	3.8	350	8 410	0.24	13299/35		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ C1**
343.03	4.2	350	8 410	0.31	57629/168		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ B1**
322.85	4.5	350	8 410	0.36	115258/357		✓	✓					**2KJ4624 - ■ ■ A 0 ■ - 0 ■ A1**

Article No. supplement										
Shaft design	➞ page 9/46	**1 or 9**								
Adapter size		KS	A	E	H	K	M			1
			B	F	J		N			1
			C	G						1
			D							1
Adapter type										
Gearbox mounting type	➞ page 9/37	**A, D, F or H**								

Selection and ordering data (continued)

Gearbox						Adapter							Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	KS	3.1	5.1	6.1	8.1	10.1		(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-		3.2	5.2	6.2		10.2		
							4.1	5.3					
							4.2						
C.69-D19													
18 949	0.08	495	11 000	0.02	5172970/273		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ Q1**
16 779	0.09	495	11 000	0.03	3053721/182		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ P1**
14 578	0.10	495	11 000	0.04	2653233/182		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ N1**
13 253	0.11	495	11 000	0.04	1206015/91		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ M1**
11 277	0.13	500	11 000	0.06	2052501/182		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ L1**
10 252	0.14	500	11 000	0.07	932955/91		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ K1**
8 939	0.16	500	11 000	0.08	250305/28		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ J1**
8 002	0.18	500	12 200	0.11	728160/91		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ H1**
7 106	0.20	500	11 000	0.13	2586485/364		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ G1**
6 559	0.22	500	11 000	0.16	7759455/1183		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ F1**
5 698	0.25	500	11 000	0.17	7258845/1274		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ E1**
4 951	0.29	505	11 000	0.18	450549/91		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ D1**
4 470	0.32	505	11 000	0.22	250305/56		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ C1**
4 207	0.34	505	11 000	0.26	500610/119		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ B1**
3 667	0.40	505	11 000	0.29	333740/91		✓						**2KJ4627 - ■ ■ A 0 ■ - 0 ■ A1**
C.69-D19													
3 585	0.40	505	11 000	0.02	139810/39		✓						**2KJ4626 - ■ ■ A 0 ■ - 0 ■ V1**
3 174	0.46	510	11 000	0.03	82533/26		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ U1**
2 758	0.53	510	11 000	0.04	71709/26		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ T1**
2 507	0.58	515	11 000	0.05	32595/13		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ S1**
2 134	0.68	515	11 000	0.07	55473/26		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ R1**
1 940	0.75	520	11 000	0.08	25215/13		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ Q1**
1 691	0.86	520	11 000	0.09	6765/4		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ P1**
1 514	0.96	525	11 000	0.12	19680/13		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ N1**
1 344	1.1	530	11 000	0.15	69905/52		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ M1**
1 241	1.2	530	11 000	0.18	209715/169		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ L1**
1 078	1.3	535	10 900	0.20	196185/182		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ K1**
937	1.5	540	10 900	0.21	12177/13		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ J1**
846	1.7	545	10 900	0.27	6765/8		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ H1**
796	1.8	550	10 900	0.32	13530/17		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ G1**
694	2.1	555	10 900	0.36	9020/13		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ F1**
640	2.3	560	10 900	0.19	349525/546		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ E1**
556	2.6	570	10 900	0.22	326975/588		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ D1**
483	3.0	580	10 800	0.23	6765/14		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ C1**
436	3.3	585	10 800	0.29	146575/336		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ B1**
411	3.5	590	10 800	0.35	146575/357		✓	✓					**2KJ4626 - ■ ■ A 0 ■ - 0 ■ A1**

Article No. supplement									
Shaft design	➞ page 9/46		**1 or 9**						
Adapter size	KS	A	E	H	K	M			1
		B	F	J		N			1
		C	G						1
		D							1
Adapter type									
Gearbox mounting type	➞ page 9/37		**A, D, F or H**						

Selection and ordering data (continued)

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.89-D39														
18 243	0.08	850	16 300	0.05	93039401/5100		✓	✓						**2KJ4630 - ■ ■ A 0 ■ - 0 ■ R1**
16 585	0.09	855	16 300	0.07	93039401/5610		✓	✓	✓	✓				**2KJ4630 - ■ ■ A 0 ■ - 0 ■ Q1**
14 223	0.10	860	16 300	0.08	36269597/2550		✓	✓	✓	✓				**2KJ4630 - ■ ■ A 0 ■ - 0 ■ P1**
13 085	0.11	1 100	16 300	0.03	90088999/6885		✓	✓						**2KJ4630 - ■ ■ A 0 ■ - 0 ■ N1**
11 606	0.12	1 100	16 300	0.05	7833826/675		✓	✓						**2KJ4630 - ■ ■ A 0 ■ - 0 ■ M1**
10 070	0.14	1 100	16 300	0.05	231097867/22950		✓	✓						**2KJ4630 - ■ ■ A 0 ■ - 0 ■ L1**
9 154	0.16	1 100	16 300	0.07	21008897/2295		✓	✓	✓	✓				**2KJ4630 - ■ ■ A 0 ■ - 0 ■ K1**
7 851	0.18	1 100	16 300	0.08	90088999/11475		✓	✓	✓	✓				**2KJ4630 - ■ ■ A 0 ■ - 0 ■ J1**
7 137	0.20	1 100	16 300	0.10	16379818/2295		✓	✓	✓	✓				**2KJ4630 - ■ ■ A 0 ■ - 0 ■ H1**
6 258	0.23	1 110	16 300	0.12	43086043/6885		✓	✓	✓	✓	✓	✓		**2KJ4630 - ■ ■ A 0 ■ - 0 ■ G1**
5 586	0.26	1 110	16 300	0.15	1424332/255		✓	✓	✓	✓	✓	✓		**2KJ4630 - ■ ■ A 0 ■ - 0 ■ F1**
4 978	0.29	1 110	16 300	0.17	27418391/5508		✓	✓	✓	✓	✓	✓		**2KJ4630 - ■ ■ A 0 ■ - 0 ■ E1**
4 595	0.32	1 110	16 300	0.21	2109107/459		✓	✓	✓	✓	✓	✓		**2KJ4630 - ■ ■ A 0 ■ - 0 ■ D1**
4 023	0.36	1 110	16 300	0.25	6155149/1530		✓	✓	✓	✓	✓	✓		**2KJ4630 - ■ ■ A 0 ■ - 0 ■ C1**
3 527	0.41	1 120	16 300	0.23	121424303/34425		✓	✓	✓	✓	✓	✓		**2KJ4630 - ■ ■ A 0 ■ - 0 ■ B1**
3 200	0.45	1 120	16 300	0.33	3916913/1224		✓	✓	✓	✓	✓	✓		**2KJ4630 - ■ ■ A 0 ■ - 0 ■ A1**

Article No. supplement										
Shaft design	➞ page 9/46	**1 or 9**								
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		1
			C		G					1
			D							1
	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	➞ page 9/37	**A, D, F or H**								

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

Selection and ordering data (continued)

Gearbox						Adapter								Article No.
i	n_2	T_{2N}	F_{R2}	J_G	R_{ex}	K4	63	71	80	90	100	112	132	(Article No. supplement ➞ below)
-	rpm	Nm	N	10^{-4} kgm²	-	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		5.3				
								4.2						
						K5		56		140	180		210	
						K3		56		140	180		210	
						A/AZ			80	90	100	112	132	
C.89-Z39														
3 111	0.47	1 120	16 300	0.06	7560553/2430		✓	✓						**2KJ4628 - ■ ■ A 0 ■ - 0 ■ T1**
2 766	0.52	1 120	16 300	0.07	3734731/1350		✓	✓	✓	✓				**2KJ4628 - ■ ■ A 0 ■ - 0 ■ S1**
2 429	0.60	1 130	16 300	0.08	182182/75		✓	✓	✓	✓				**2KJ4628 - ■ ■ A 0 ■ - 0 ■ R1**
2 208	0.66	1 130	16 300	0.10	33124/15		✓	✓	✓	✓				**2KJ4628 - ■ ■ A 0 ■ - 0 ■ Q1**
1 889	0.77	1 140	16 300	0.12	1275274/675		✓	✓	✓	✓				**2KJ4628 - ■ ■ A 0 ■ - 0 ■ P1**
1 718	0.84	1 150	16 300	0.14	231868/135		✓	✓	✓	✓				**2KJ4628 - ■ ■ A 0 ■ - 0 ■ N1**
1 518	0.96	1 150	16 300	0.17	91091/60		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ M1**
1 380	1.1	1 160	16 300	0.22	8281/6		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ L1**
1 209	1.2	1 170	16 300	0.26	3916913/3240		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ K1**
1 116	1.3	1 170	16 300	0.31	303301/270		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ J1**
988	1.5	1 180	16 300	0.36	533533/540		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ H1**
822	1.8	1 200	16 300	0.48	1184183/1440		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ G1**
774	1.9	1 210	16 300	0.56	1184183/1530		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ F1**
693	2.1	1 220	16 300	0.61	3370367/4860		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ E1**
590	2.5	1 230	16 300	0.79	637637/1080		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ D1**
506	2.9	1 260	16 300	1.03	91091/180				✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ C1**
436	3.3	1 280	16 300	1.31	2823821/6480				✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ B1**
360	4.0	1 310	16 300	0.59	793793/2208		✓	✓	✓	✓	✓	✓		**2KJ4628 - ■ ■ A 0 ■ - 0 ■ A1**

Article No. supplement										
Shaft design	➞ page 9/46	**1 or 9**								
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		1
			C		G					1
			D							1
	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	➞ page 9/37	**A, D, F or H**								

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

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Selection and ordering data

	n_{mot} = 2 800 rpm				n_{mot} = 1 400 rpm				n_{mot} = 900 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.29													
265.20	10.6	110	0.17	73	5.3	108	0.09	65	3.4	106	0.06	59	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ M2**
230.10	12.2	110	0.19	74	6.1	108	0.10	67	3.9	106	0.07	61	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ L2**
209.18	13.4	110	0.21	75	6.7	109	0.11	68	4.3	107	0.08	62	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ K2**
179.40	15.6	110	0.24	76	7.8	109	0.13	70	5.0	107	0.09	64	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ J2**
163.09	17.2	110	0.26	76	8.6	110	0.14	71	5.5	108	0.10	65	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ H2**
143.00	19.6	110	0.30	76	9.8	110	0.16	72	6.3	108	0.11	67	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ G2**
127.64	22	110	0.33	76	11.0	110	0.17	73	7.1	109	0.12	68	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ F2**
113.75	25	110	0.38	76	12.3	110	0.19	74	7.9	109	0.13	70	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ E2**
105.00	27	110	0.41	76	13.3	110	0.21	74	8.6	110	0.14	70	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ D2**
91.93	30	110	0.46	76	15.2	110	0.23	75	9.8	110	0.16	72	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ C2**
80.60	35	105	0.51	76	17.4	110	0.27	75	11.2	110	0.18	73	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ B2**
73.12	38	101	0.53	76	19.1	110	0.29	75	12.3	110	0.19	74	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ A2**
68.82	41	99	0.56	76	20	110	0.31	75	13.1	110	0.21	74	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ X1**
60.67	46	95	0.61	75	23	110	0.35	76	14.8	110	0.23	74	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ W1**
52.65	53	90	0.67	75	27	110	0.41	76	17.1	110	0.26	75	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ V1**
49.87	56	105	0.69	90	28	102	0.34	87	18	100	0.22	84	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ U1**
43.27	65	106	0.80	90	32	103	0.39	88	21	101	0.26	86	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ T1**
39.33	71	106	0.88	90	36	103	0.44	89	23	101	0.28	86	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ S1**
33.73	83	107	1.00	90	42	104	0.51	89	27	102	0.33	87	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ R1**
32.64	86	92	0.91	92	43	90	0.45	90	28	88	0.30	87	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ Q1**
28.32	99	93	1.10	92	49	90	0.51	90	32	89	0.34	88	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ P1**
25.75	109	93	1.20	92	54	90	0.57	91	35	89	0.37	89	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ N1**
22.08	127	94	1.40	92	63	91	0.66	91	41	89	0.43	89	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ M1**
20.07	140	94	1.50	92	70	91	0.74	91	45	90	0.47	90	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ L1**
17.60	159	93	1.7*	92	80	92	0.85	92	51	90	0.54	90	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ K1**
15.71	178	89	1.8*	92	89	92	0.95	92	57	91	0.60	91	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ J1**
14.00	200	86	2.0*	92	100	93	1.10	92	64	91	0.67	91	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ H1**
12.92	217	83	2.1*	92	108	93	1.20	92	70	91	0.74	91	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ G1**
11.31	248	79	2.3*	92	124	94	1.30	92	80	92	0.85	91	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ F1**
9.92	282	74	2.4*	91	141	94	1.50	92	91	92	0.97	91	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ E1**
9.00	311	71	2.6*	92	156	90	1.6*	92	100	93	1.10	92	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ D1**
8.47	331	70	2.7*	91	165	88	1.7*	92	106	93	1.10	92	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ C1**
7.47	375	66	2.8*	91	187	83	1.8*	92	120	93	1.30	92	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ B1**
6.48	432	62	3.1*	91	216	78	1.9*	92	139	91	1.40	92	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ A1**

* $P_{mot\ max}$ = 1.5 kW

Selection and ordering data (continued)

	n_{mot} = 700 rpm				n_{mot} = 500 rpm				n_{mot} = 100 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.29													
265.20	2.6	104	<0.06	57	1.9	103	<0.06	54	0.38	95	<0.06	47	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ M2**
230.10	3	105	0.06	58	2.2	104	<0.06	55	0.43	96	<0.06	48	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ L2**
209.18	3.3	105	0.06	59	2.4	104	<0.06	56	0.48	97	<0.06	48	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ K2**
179.40	3.9	106	0.07	61	2.8	105	<0.06	57	0.56	97	<0.06	48	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ J2**
163.09	4.3	107	0.08	62	3.1	105	0.06	58	0.61	98	<0.06	48	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ H2**
143.00	4.9	107	0.09	64	3.5	106	0.07	59	0.70	98	<0.06	48	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ G2**
127.64	5.5	108	0.10	65	3.9	106	0.07	61	0.78	99	<0.06	49	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ F2**
113.75	6.2	108	0.11	66	4.4	107	0.08	62	0.88	99	<0.06	49	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ E2**
105.00	6.7	109	0.11	67	4.8	107	0.09	63	0.95	100	<0.06	49	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ D2**
91.93	7.6	109	0.13	69	5.4	108	0.09	65	1.1	100	<0.06	50	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ C2**
80.60	8.7	110	0.14	70	6.2	108	0.11	66	1.2	101	<0.06	50	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ B2**
73.12	9.6	110	0.16	71	6.8	109	0.12	67	1.4	101	<0.06	51	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ A2**
68.82	10.2	110	0.16	72	7.3	109	0.12	68	1.5	102	<0.06	51	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ X1**
60.67	11.5	110	0.18	73	8.2	110	0.14	70	1.6	102	<0.06	52	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ W1**
52.65	13.3	110	0.21	74	9.5	110	0.15	71	1.9	103	<0.06	53	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ V1**
49.87	14.0	99	0.18	83	10.0	98	0.13	80	2.0	91	<0.06	73	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ U1**
43.27	16.2	100	0.20	84	11.6	98	0.15	81	2.3	91	<0.06	74	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ T1**
39.33	17.8	100	0.22	84	12.7	99	0.16	82	2.5	92	<0.06	74	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ S1**
33.73	21	101	0.26	85	14.8	99	0.19	83	3.0	92	<0.06	74	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ R1**
32.64	21	87	0.22	86	15.3	86	0.17	84	3.1	80	<0.06	77	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ Q1**
28.32	25	88	0.27	87	17.7	86	0.19	84	3.5	80	<0.06	78	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ P1**
25.75	27	88	0.29	87	19.4	87	0.21	85	3.9	81	<0.06	78	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ N1**
22.08	32	89	0.34	88	23	87	0.25	86	4.5	81	<0.06	78	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ M1**
20.07	35	89	0.37	89	25	88	0.27	87	5.0	82	<0.06	79	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ L1**
17.60	40	89	0.42	89	28	88	0.30	87	5.7	82	0.06	79	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ K1**
15.71	45	90	0.47	90	32	89	0.34	88	6.4	83	0.07	79	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ J1**
14.00	50	90	0.53	90	36	89	0.38	89	7.1	83	0.08	80	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ H1**
12.92	54	90	0.57	90	39	89	0.41	89	7.7	83	0.08	80	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ G1**
11.31	62	91	0.65	91	44	90	0.46	90	8.8	84	0.10	81	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ F1**
9.92	71	91	0.75	91	50	90	0.53	90	10.1	84	0.11	81	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ E1**
9.00	78	92	0.82	91	56	91	0.59	91	11.1	85	0.12	82	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ D1**
8.47	83	92	0.88	91	59	91	0.62	91	11.8	85	0.13	82	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ C1**
7.47	94	93	1.00	92	67	91	0.71	91	13.4	85	0.15	83	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ B1**
6.48	108	93	1.20	92	77	92	0.81	91	15.4	86	0.17	84	**2KJ4601 - ■ ■ A 0 ■ - 0 ■ A1**

Selection and ordering data (continued)

	n_{mot} = 2 800 rpm				n_{mot} = 1 400 rpm				n_{mot} = 900 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.39													
299.00	9.4	194	0.27	71	4.7	192	0.15	64	3.0	189	0.10	58	**2KJ4602 - ■■■■■ - ■■ N2**
265.20	10.6	194	0.30	72	5.3	192	0.16	66	3.4	190	0.11	60	**2KJ4602 - ■■■■■ - ■■ M2**
230.10	12.2	194	0.34	73	6.1	193	0.18	68	3.9	191	0.13	62	**2KJ4602 - ■■■■■ - ■■ L2**
209.18	13.4	194	0.38	73	6.7	193	0.20	68	4.3	191	0.14	63	**2KJ4602 - ■■■■■ - ■■ K2**
179.40	15.6	194	0.44	73	7.8	193	0.23	70	5.0	192	0.16	65	**2KJ4602 - ■■■■■ - ■■ J2**
163.09	17.2	194	0.48	73	8.6	193	0.25	71	5.5	192	0.17	66	**2KJ4602 - ■■■■■ - ■■ H2**
143.00	19.6	194	0.55	73	9.8	194	0.28	71	6.3	193	0.19	68	**2KJ4602 - ■■■■■ - ■■ G2**
127.64	22	194	0.61	73	11	194	0.31	72	7.1	193	0.21	69	**2KJ4602 - ■■■■■ - ■■ F2**
113.75	25	181	0.66	73	12.3	194	0.35	72	7.9	193	0.23	70	**2KJ4602 - ■■■■■ - ■■ E2**
105.00	27	175	0.68	73	13.3	194	0.37	72	8.6	193	0.25	70	**2KJ4602 - ■■■■■ - ■■ D2**
91.93	30	165	0.72	72	15.2	194	0.43	72	9.8	194	0.28	71	**2KJ4602 - ■■■■■ - ■■ C2**
80.60	35	157	0.80	72	17.4	194	0.49	73	11.2	194	0.32	72	**2KJ4602 - ■■■■■ - ■■ B2**
73.12	38	150	0.84	72	19.1	189	0.52	73	12.3	194	0.35	72	**2KJ4602 - ■■■■■ - ■■ A2**
68.82	41	147	0.88	72	20	185	0.53	73	13.1	194	0.37	72	**2KJ4602 - ■■■■■ - ■■ X1**
60.67	46	139	0.94	72	23	175	0.58	73	14.8	194	0.41	73	**2KJ4602 - ■■■■■ - ■■ W1**
52.65	53	131	1.00	72	27	166	0.65	73	17.1	192	0.47	73	**2KJ4602 - ■■■■■ - ■■ V1**
49.87	56	195	1.30	89	28	198	0.66	89	18	194	0.41	89	**2KJ4602 - ■■■■■ - ■■ U1**
43.27	65	196	1.50	89	32	199	0.75	89	21	196	0.49	89	**2KJ4602 - ■■■■■ - ■■ T1**
39.33	71	196	1.60	89	36	200	0.85	89	23	196	0.53	89	**2KJ4602 - ■■■■■ - ■■ S1**
33.73	83	196	1.90	89	42	200	1.00	89	27	197	0.63	89	**2KJ4602 - ■■■■■ - ■■ R1**
32.64	86	200	2.00	91	43	210	1.00	91	28	205	0.68	90	**2KJ4602 - ■■■■■ - ■■ Q1**
28.32	99	200	2.30	91	49	225	1.30	91	32	225	0.84	90	**2KJ4602 - ■■■■■ - ■■ P1**
25.75	109	200	2.50	91	54	235	1.50	91	35	230	0.95	90	**2KJ4602 - ■■■■■ - ■■ N1**
22.08	127	198	2.90	91	63	235	1.70	91	41	230	1.10	91	**2KJ4602 - ■■■■■ - ■■ M1**
20.07	140	188	3.00	91	70	235	1.90	91	45	235	1.20	91	**2KJ4602 - ■■■■■ - ■■ L1**
17.60	159	180	3.3*	91	80	225	2.10	92	51	235	1.40	91	**2KJ4602 - ■■■■■ - ■■ K1**
15.71	178	172	3.5*	91	89	215	2.20	91	57	235	1.60	91	**2KJ4602 - ■■■■■ - ■■ J1**
14.00	200	164	3.8*	91	100	205	2.40	91	64	235	1.70	92	**2KJ4602 - ■■■■■ - ■■ H1**
12.92	217	159	4.0*	91	108	200	2.50	92	70	230	1.90	92	**2KJ4602 - ■■■■■ - ■■ G1**
11.31	248	152	4.3*	91	124	192	2.70	91	80	220	2.00	92	**2KJ4602 - ■■■■■ - ■■ F1**
9.92	282	145	4.7*	91	141	183	3.00	91	91	210	2.20	92	**2KJ4602 - ■■■■■ - ■■ E1**
9.00	311	137	4.9*	91	156	177	3.2*	91	100	205	2.30	92	**2KJ4602 - ■■■■■ - ■■ D1**
8.47	331	129	4.9*	91	165	173	3.3*	91	106	200	2.40	92	**2KJ4602 - ■■■■■ - ■■ C1**
7.47	375	114	4.9*	91	187	166	3.6*	91	120	192	2.60	92	**2KJ4602 - ■■■■■ - ■■ B1**
6.48	432	99	4.9*	91	216	157	3.9*	91	139	182	2.90	92	**2KJ4602 - ■■■■■ - ■■ A1**

* $P_{mot\ max}$ = 3 kW

Selection and ordering data (continued)

	n_{mot} = 700 rpm				n_{mot} = 500 rpm				n_{mot} = 100 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.39													
299.00	2.3	187	0.08	55	1.7	184	0.06	52	0.33	170	<0.06	44	**2KJ4602 - ■■■■■ - ■■ N2**
265.20	2.6	188	0.09	57	1.9	185	0.07	53	0.38	167	<0.06	44	**2KJ4602 - ■■■■■ - ■■ M2**
230.10	3.0	189	0.10	58	2.2	186	0.08	54	0.43	164	<0.06	44	**2KJ4602 - ■■■■■ - ■■ L2**
209.18	3.3	190	0.11	59	2.4	187	0.09	55	0.48	162	<0.06	44	**2KJ4602 - ■■■■■ - ■■ K2**
179.40	3.9	191	0.13	62	2.8	188	0.10	57	0.56	160	<0.06	45	**2KJ4602 - ■■■■■ - ■■ J2**
163.09	4.3	191	0.14	63	3.1	189	0.11	58	0.61	160	<0.06	45	**2KJ4602 - ■■■■■ - ■■ H2**
143.00	4.9	192	0.15	64	3.5	190	0.12	60	0.70	160	<0.06	46	**2KJ4602 - ■■■■■ - ■■ G2**
127.64	5.5	192	0.17	66	3.9	191	0.13	61	0.78	161	<0.06	46	**2KJ4602 - ■■■■■ - ■■ F2**
113.75	6.2	193	0.19	67	4.4	191	0.14	63	0.88	162	<0.06	47	**2KJ4602 - ■■■■■ - ■■ E2**
105.00	6.7	193	0.20	68	4.8	192	0.15	64	0.95	163	<0.06	47	**2KJ4602 - ■■■■■ - ■■ D2**
91.93	7.6	193	0.22	69	5.4	192	0.17	66	1.1	166	<0.06	48	**2KJ4602 - ■■■■■ - ■■ C2**
80.60	8.7	193	0.25	70	6.2	193	0.19	67	1.2	168	<0.06	49	**2KJ4602 - ■■■■■ - ■■ B2**
73.12	9.6	194	0.28	71	6.8	193	0.20	68	1.4	170	<0.06	49	**2KJ4602 - ■■■■■ - ■■ A2**
68.82	10.2	194	0.29	71	7.3	193	0.21	69	1.5	172	<0.06	50	**2KJ4602 - ■■■■■ - ■■ X1**
60.67	11.5	194	0.32	72	8.2	193	0.24	70	1.6	176	0.06	51	**2KJ4602 - ■■■■■ - ■■ W1**
52.65	13.3	194	0.37	73	9.5	194	0.27	71	1.9	180	0.07	53	**2KJ4602 - ■■■■■ - ■■ V1**
49.87	14.0	192	0.32	88	10.0	190	0.23	86	2.0	177	0.06	66	**2KJ4602 - ■■■■■ - ■■ U1**
43.27	16.2	194	0.37	88	11.6	191	0.27	87	2.3	178	0.06	67	**2KJ4602 - ■■■■■ - ■■ T1**
39.33	17.8	194	0.41	88	12.7	192	0.29	88	2.5	179	0.07	68	**2KJ4602 - ■■■■■ - ■■ S1**
33.73	21	196	0.49	89	14.8	193	0.34	88	3.0	180	0.08	71	**2KJ4602 - ■■■■■ - ■■ R1**
32.64	21	200	0.51	88	15.3	197	0.37	86	3.1	174	0.08	76	**2KJ4602 - ■■■■■ - ■■ Q1**
28.32	25	220	0.66	89	17.7	215	0.47	87	3.5	192	0.09	76	**2KJ4602 - ■■■■■ - ■■ P1**
25.75	27	230	0.73	89	19.4	225	0.53	87	3.9	210	0.11	77	**2KJ4602 - ■■■■■ - ■■ N1**
22.08	32	230	0.86	90	23	225	0.62	88	4.5	210	0.13	77	**2KJ4602 - ■■■■■ - ■■ M1**
20.07	35	230	0.94	90	25	230	0.68	89	5.0	215	0.15	78	**2KJ4602 - ■■■■■ - ■■ L1**
17.60	40	230	1.10	91	28	230	0.76	90	5.7	215	0.16	79	**2KJ4602 - ■■■■■ - ■■ K1**
15.71	45	235	1.20	91	32	230	0.86	90	6.4	215	0.18	79	**2KJ4602 - ■■■■■ - ■■ J1**
14.00	50	235	1.40	91	36	230	0.97	91	7.1	215	0.20	80	**2KJ4602 - ■■■■■ - ■■ H1**
12.92	54	235	1.50	92	39	230	1.10	91	7.7	215	0.22	81	**2KJ4602 - ■■■■■ - ■■ G1**
11.31	62	235	1.70	92	44	235	1.20	91	8.8	220	0.25	82	**2KJ4602 - ■■■■■ - ■■ F1**
9.92	71	230	1.90	92	50	235	1.40	91	10.1	220	0.28	83	**2KJ4602 - ■■■■■ - ■■ E1**
9.00	78	220	2.00	92	56	235	1.50	92	11.1	220	0.31	83	**2KJ4602 - ■■■■■ - ■■ D1**
8.47	83	215	2.10	92	59	235	1.60	92	11.8	220	0.33	84	**2KJ4602 - ■■■■■ - ■■ C1**
7.47	94	205	2.30	92	67	230	1.80	92	13.4	220	0.37	85	**2KJ4602 - ■■■■■ - ■■ B1**
6.48	108	198	2.50	92	77	220	2.00	92	15.4	225	0.42	86	**2KJ4602 - ■■■■■ - ■■ A1**

Selection and ordering data (continued)

	n_{mot} = 2 800 rpm				n_{mot} = 1 400 rpm				n_{mot} = 900 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.49													
299.00	9.4	355	0.48	73	4.7	350	0.26	67	3.0	345	0.18	61	**2KJ4603 - ■■■■■ - ■■ N2**
265.20	10.6	355	0.54	74	5.3	350	0.29	69	3.4	350	0.20	63	**2KJ4603 - ■■■■■ - ■■ M2**
230.10	12.2	355	0.62	74	6.1	350	0.32	70	3.9	350	0.22	65	**2KJ4603 - ■■■■■ - ■■ L2**
209.18	13.4	355	0.68	74	6.7	355	0.35	71	4.3	350	0.24	66	**2KJ4603 - ■■■■■ - ■■ K2**
179.40	15.6	355	0.79	74	7.8	355	0.40	72	5.0	350	0.27	68	**2KJ4603 - ■■■■■ - ■■ J2**
163.09	17.2	340	0.84	74	8.6	355	0.44	73	5.5	350	0.30	69	**2KJ4603 - ■■■■■ - ■■ H2**
143.00	19.6	315	0.89	74	9.8	355	0.50	73	6.3	355	0.33	70	**2KJ4603 - ■■■■■ - ■■ G2**
127.64	22	300	0.95	73	11.0	355	0.56	73	7.1	355	0.37	71	**2KJ4603 - ■■■■■ - ■■ F2**
113.75	25	285	1.00	73	12.3	355	0.62	74	7.9	355	0.41	72	**2KJ4603 - ■■■■■ - ■■ E2**
105.00	27	275	1.10	73	13.3	350	0.66	74	8.6	355	0.44	72	**2KJ4603 - ■■■■■ - ■■ D2**
91.93	30	260	1.10	73	15.2	330	0.72	74	9.8	355	0.50	73	**2KJ4603 - ■■■■■ - ■■ C2**
80.60	35	250	1.30	73	17.4	315	0.78	74	11.2	355	0.57	74	**2KJ4603 - ■■■■■ - ■■ B2**
73.12	38	240	1.30	73	19.1	300	0.82	74	12.3	345	0.61	74	**2KJ4603 - ■■■■■ - ■■ A2**
68.82	41	230	1.40	73	20	295	0.84	74	13.1	340	0.63	74	**2KJ4603 - ■■■■■ - ■■ X1**
60.67	46	220	1.50	73	23	280	0.92	74	14.8	320	0.68	74	**2KJ4603 - ■■■■■ - ■■ W1**
52.65	53	210	1.60	73	27	265	1.00	74	17.1	305	0.74	74	**2KJ4603 - ■■■■■ - ■■ V1**
49.87	56	310	2.10	90	28	310	1.00	89	18	305	0.66	87	**2KJ4603 - ■■■■■ - ■■ U1**
43.27	65	340	2.60	90	32	340	1.30	89	21	335	0.85	88	**2KJ4603 - ■■■■■ - ■■ T1**
39.33	71	335	2.80	89	36	395	1.70	89	23	395	1.10	88	**2KJ4603 - ■■■■■ - ■■ S1**
33.73	83	315	3.10	89	42	365	1.80	90	27	365	1.20	89	**2KJ4603 - ■■■■■ - ■■ R1**
30.67	91	300	3.20	89	46	380	2.10	89	29	400	1.40	89	**2KJ4603 - ■■■■■ - ■■ Q1**
26.89	104	285	3.50	89	52	360	2.20	90	33	400	1.50	89	**2KJ4603 - ■■■■■ - ■■ P1**
24.00	117	275	3.80	89	58	345	2.40	90	38	400	1.80	90	**2KJ4603 - ■■■■■ - ■■ N1**
21.39	131	260	4.1*	89	65	330	2.50	90	42	385	1.90	90	**2KJ4603 - ■■■■■ - ■■ M1**
19.74	142	255	4.3*	89	71	320	2.70	90	46	370	2.00	90	**2KJ4603 - ■■■■■ - ■■ L1**
17.29	162	240	4.6*	89	81	305	2.90	90	52	355	2.20	90	**2KJ4603 - ■■■■■ - ■■ K1**
15.16	185	230	5.1*	89	92	290	3.20	90	59	335	2.30	90	**2KJ4603 - ■■■■■ - ■■ J1**
13.75	204	220	5.4*	89	102	280	3.40	90	65	325	2.50	90	**2KJ4603 - ■■■■■ - ■■ H1**
12.94	216	210	5.3*	89	108	275	3.50	90	70	315	2.60	90	**2KJ4603 - ■■■■■ - ■■ G1**
11.41	245	185	5.4*	89	123	260	3.80	90	79	305	2.80	90	**2KJ4603 - ■■■■■ - ■■ F1**
9.90	283	161	5.4*	89	141	250	4.1*	89	91	290	3.10	90	**2KJ4603 - ■■■■■ - ■■ E1**
9.00	311	185	6.6*	91	156	260	4.6*	92	100	260	3.00	92	**2KJ4603 - ■■■■■ - ■■ D1**
8.47	331	174	6.6*	91	165	260	4.9*	92	106	260	3.20	92	**2KJ4603 - ■■■■■ - ■■ C1**
7.47	375	153	6.6*	91	187	250	5.3*	92	120	260	3.60	92	**2KJ4603 - ■■■■■ - ■■ B1**
6.48	432	133	6.6*	91	216	235	5.8*	92	139	260	4.1*	92	**2KJ4603 - ■■■■■ - ■■ A1**

* $P_{mot\ max}$ = 4 kW

Selection and ordering data (continued)

	n_{mot} = 700 rpm				n_{mot} = 500 rpm				n_{mot} = 100 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.49													
299.00	2.3	340	0.14	58	1.7	315	0.10	54	0.33	260	<0.06	45	**2KJ4603 - ■■■■■ - ■■ N2**
265.20	2.6	340	0.16	60	1.9	315	0.11	55	0.38	255	<0.06	45	**2KJ4603 - ■■■■■ - ■■ M2**
230.10	3.0	345	0.18	61	2.2	320	0.13	57	0.43	255	<0.06	45	**2KJ4603 - ■■■■■ - ■■ L2**
209.18	3.3	345	0.19	63	2.4	320	0.14	58	0.48	255	<0.06	45	**2KJ4603 - ■■■■■ - ■■ K2**
179.40	3.9	350	0.22	65	2.8	330	0.16	60	0.56	255	<0.06	46	**2KJ4603 - ■■■■■ - ■■ J2**
163.09	4.3	350	0.24	66	3.1	330	0.18	61	0.61	255	<0.06	46	**2KJ4603 - ■■■■■ - ■■ H2**
143.00	4.9	350	0.27	68	3.5	340	0.20	63	0.70	255	<0.06	47	**2KJ4603 - ■■■■■ - ■■ G2**
127.64	5.5	350	0.30	69	3.9	350	0.22	65	0.78	260	<0.06	47	**2KJ4603 - ■■■■■ - ■■ F2**
113.75	6.2	355	0.33	70	4.4	350	0.25	66	0.88	260	<0.06	48	**2KJ4603 - ■■■■■ - ■■ E2**
105.00	6.7	355	0.35	71	4.8	350	0.26	67	0.95	265	<0.06	49	**2KJ4603 - ■■■■■ - ■■ D2**
91.93	7.6	355	0.39	72	5.4	350	0.29	69	1.1	270	0.06	50	**2KJ4603 - ■■■■■ - ■■ C2**
80.60	8.7	355	0.45	73	6.2	355	0.33	70	1.2	275	0.07	51	**2KJ4603 - ■■■■■ - ■■ B2**
73.12	9.6	355	0.49	73	6.8	355	0.36	71	1.4	280	0.08	52	**2KJ4603 - ■■■■■ - ■■ A2**
68.82	10.2	355	0.52	73	7.3	355	0.38	72	1.5	280	0.08	52	**2KJ4603 - ■■■■■ - ■■ X1**
60.67	11.5	350	0.57	74	8.2	355	0.42	73	1.6	285	0.09	54	**2KJ4603 - ■■■■■ - ■■ W1**
52.65	13.3	330	0.63	74	9.5	355	0.48	73	1.9	295	0.11	55	**2KJ4603 - ■■■■■ - ■■ V1**
49.87	14.0	295	0.51	86	10.0	285	0.37	83	2.0	245	0.07	71	**2KJ4603 - ■■■■■ - ■■ U1**
43.27	16.2	330	0.65	87	11.6	320	0.47	84	2.3	275	0.09	71	**2KJ4603 - ■■■■■ - ■■ T1**
39.33	17.8	390	0.83	87	12.7	375	0.60	85	2.5	320	0.12	72	**2KJ4603 - ■■■■■ - ■■ S1**
33.73	21	360	0.91	88	14.8	355	0.64	86	3.0	300	0.13	73	**2KJ4603 - ■■■■■ - ■■ R1**
30.67	23	395	1.10	88	16.3	385	0.77	87	3.3	330	0.16	73	**2KJ4603 - ■■■■■ - ■■ Q1**
26.89	26	395	1.20	89	18.6	390	0.87	88	3.7	330	0.17	74	**2KJ4603 - ■■■■■ - ■■ P1**
24.00	29	395	1.40	89	21	390	0.99	88	4.2	335	0.20	75	**2KJ4603 - ■■■■■ - ■■ N1**
21.39	33	395	1.50	89	23	395	1.10	89	4.7	340	0.22	76	**2KJ4603 - ■■■■■ - ■■ M1**
19.74	35	400	1.60	90	25	395	1.20	89	5.1	340	0.24	77	**2KJ4603 - ■■■■■ - ■■ L1**
17.29	40	385	1.80	90	29	395	1.30	89	5.8	345	0.27	78	**2KJ4603 - ■■■■■ - ■■ K1**
15.16	46	365	2.00	90	33	390	1.50	90	6.6	345	0.30	79	**2KJ4603 - ■■■■■ - ■■ J1**
13.75	51	355	2.10	90	36	390	1.60	90	7.3	345	0.33	80	**2KJ4603 - ■■■■■ - ■■ H1**
12.94	54	345	2.20	90	39	385	1.80	90	7.7	350	0.35	80	**2KJ4603 - ■■■■■ - ■■ G1**
11.41	61	330	2.40	90	44	370	1.90	90	8.8	355	0.40	82	**2KJ4603 - ■■■■■ - ■■ F1**
9.90	71	315	2.60	90	51	350	2.10	90	10.1	360	0.46	83	**2KJ4603 - ■■■■■ - ■■ E1**
9.00	78	260	2.30	92	56	255	1.70	91	11.1	235	0.33	84	**2KJ4603 - ■■■■■ - ■■ D1**
8.47	83	260	2.50	92	59	260	1.80	91	11.8	240	0.35	84	**2KJ4603 - ■■■■■ - ■■ C1**
7.47	94	260	2.80	92	67	260	2.00	92	13.4	240	0.40	85	**2KJ4603 - ■■■■■ - ■■ B1**
6.48	108	260	3.20	92	77	260	2.30	92	15.4	245	0.46	87	**2KJ4603 - ■■■■■ - ■■ A1**

Selection and ordering data (continued)

	n_{mot} = 2 800 rpm				n_{mot} = 1 400 rpm				n_{mot} = 900 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.69													
360.00	7.8	575	0.65	73	3.9	680	0.40	69	2.5	645	0.27	63	**2KJ4604 - ■■■■■ - ■■ M2**
319.80	8.8	570	0.72	73	4.4	680	0.45	70	2.8	655	0.30	65	**2KJ4604 - ■■■■■ - ■■ L2**
280.80	10.0	560	0.81	73	5.0	680	0.50	71	3.2	660	0.33	66	**2KJ4604 - ■■■■■ - ■■ K2**
255.27	11.0	555	0.88	73	5.5	680	0.55	72	3.5	665	0.36	67	**2KJ4604 - ■■■■■ - ■■ J2**
218.40	12.8	530	0.97	74	6.4	655	0.60	73	4.1	675	0.42	70	**2KJ4604 - ■■■■■ - ■■ H2**
198.55	14.1	510	1.00	73	7.1	635	0.65	73	4.5	680	0.46	70	**2KJ4604 - ■■■■■ - ■■ G2**
175.50	16.0	485	1.10	73	8.0	610	0.70	74	5.1	685	0.51	72	**2KJ4604 - ■■■■■ - ■■ F2**
159.55	17.5	470	1.20	73	8.8	590	0.74	74	5.6	670	0.54	72	**2KJ4604 - ■■■■■ - ■■ E2**
139.75	20	440	1.30	73	10.0	550	0.79	74	6.4	630	0.58	73	**2KJ4604 - ■■■■■ - ■■ D2**
129.00	22	425	1.30	74	10.9	535	0.83	74	7.0	610	0.61	73	**2KJ4604 - ■■■■■ - ■■ C2**
114.21	25	405	1.40	73	12.3	510	0.89	74	7.9	585	0.66	74	**2KJ4604 - ■■■■■ - ■■ B2**
102.50	27	555	1.80	87	13.7	645	1.10	86	8.8	625	0.69	84	**2KJ4604 - ■■■■■ - ■■ A2**
90.00	31	555	2.10	87	15.6	665	1.30	86	10.0	650	0.81	84	**2KJ4604 - ■■■■■ - ■■ X1**
81.82	34	545	2.20	87	17.1	680	1.40	87	11.0	775	1.10	85	**2KJ4604 - ■■■■■ - ■■ W1**
70.00	40	515	2.50	87	20	650	1.60	87	12.9	680	1.10	86	**2KJ4604 - ■■■■■ - ■■ V1**
63.64	44	500	2.70	87	22	630	1.70	87	14.1	720	1.20	86	**2KJ4604 - ■■■■■ - ■■ U1**
56.25	50	480	2.90	87	25	605	1.80	87	16.0	695	1.30	87	**2KJ4604 - ■■■■■ - ■■ T1**
51.14	55	455	3.00	87	27	575	1.90	87	17.6	660	1.40	87	**2KJ4604 - ■■■■■ - ■■ S1**
44.79	63	430	3.30	87	31	545	2.00	87	20	630	1.50	87	**2KJ4604 - ■■■■■ - ■■ R1**
41.35	68	420	3.40	87	34	525	2.20	87	22	610	1.60	87	**2KJ4604 - ■■■■■ - ■■ Q1**
36.61	76	400	3.70	87	38	505	2.30	87	25	580	1.80	87	**2KJ4604 - ■■■■■ - ■■ P1**
30.00	93	435	4.70	90	47	545	3.00	90	30	560	2.00	90	**2KJ4604 - ■■■■■ - ■■ N1**
26.28	107	410	5.10	90	53	520	3.20	90	34	550	2.20	90	**2KJ4604 - ■■■■■ - ■■ M1**
24.26	115	400	5.30	90	58	500	3.40	90	37	545	2.30	91	**2KJ4604 - ■■■■■ - ■■ L1**
21.48	130	380	5.8*	90	65	480	3.60	90	42	540	2.60	91	**2KJ4604 - ■■■■■ - ■■ K1**
17.88	157	355	6.5*	90	78	450	4.10	90	50	520	3.00	91	**2KJ4604 - ■■■■■ - ■■ J1**
15.88	176	365	7.3*	92	88	365	3.70	92	57	365	2.40	92	**2KJ4604 - ■■■■■ - ■■ H1**
14.06	199	360	8.2*	92	100	360	4.10	92	64	360	2.60	92	**2KJ4604 - ■■■■■ - ■■ G1**
11.70	239	345	9.5*	92	120	365	5.00	92	77	365	3.20	92	**2KJ4604 - ■■■■■ - ■■ F1**
11.01	254	325	9.5*	92	127	365	5.40	92	82	365	3.50	92	**2KJ4604 - ■■■■■ - ■■ E1**
9.87	284	290	9.5*	92	142	365	6.0*	92	91	365	3.80	92	**2KJ4604 - ■■■■■ - ■■ D1**
8.40	333	250	9.6*	91	167	370	7.1*	92	107	370	4.50	92	**2KJ4604 - ■■■■■ - ■■ C1**
7.20	389	210	9.6*	91	194	365	8.2*	92	125	365	5.30	92	**2KJ4604 - ■■■■■ - ■■ B1**
6.20	452	184	9.6*	91	226	365	9.4*	92	145	365	6.1*	92	**2KJ4604 - ■■■■■ - ■■ A1**

* $P_{mot\ max}$ = 5.5 kW

Selection and ordering data (continued)

	n_{mot} = 700 rpm				n_{mot} = 500 rpm				n_{mot} = 100 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.69													
360.00	1.9	610	0.20	60	1.4	570	0.15	55	0.28	460	<0.06	45	**2KJ4604 - ■■■■■ - ■■ M2**
319.80	2.2	620	0.23	61	1.6	575	0.17	57	0.31	460	<0.06	45	**2KJ4604 - ■■■■■ - ■■ L2**
280.80	2.5	625	0.26	63	1.8	580	0.19	58	0.36	455	<0.06	45	**2KJ4604 - ■■■■■ - ■■ K2**
255.27	2.7	635	0.28	64	2.0	590	0.21	59	0.39	455	<0.06	45	**2KJ4604 - ■■■■■ - ■■ J2**
218.40	3.2	645	0.33	66	2.3	605	0.24	62	0.46	460	<0.06	46	**2KJ4604 - ■■■■■ - ■■ H2**
198.55	3.5	650	0.35	68	2.5	610	0.25	63	0.50	455	<0.06	47	**2KJ4604 - ■■■■■ - ■■ G2**
175.50	4.0	665	0.40	69	2.8	625	0.28	65	0.57	460	0.06	48	**2KJ4604 - ■■■■■ - ■■ F2**
159.55	4.4	670	0.44	70	3.1	635	0.31	66	0.63	465	0.06	48	**2KJ4604 - ■■■■■ - ■■ E2**
139.75	5.0	670	0.49	72	3.6	650	0.36	68	0.72	475	0.07	49	**2KJ4604 - ■■■■■ - ■■ D2**
129.00	5.4	655	0.51	72	3.9	660	0.39	69	0.78	480	0.08	50	**2KJ4604 - ■■■■■ - ■■ C2**
114.21	6.1	630	0.55	73	4.4	670	0.44	71	0.88	490	0.09	51	**2KJ4604 - ■■■■■ - ■■ B2**
102.50	6.8	610	0.54	81	4.9	585	0.39	78	0.98	500	0.08	67	**2KJ4604 - ■■■■■ - ■■ A2**
90.00	7.8	635	0.63	82	5.6	610	0.45	79	1.1	515	0.09	67	**2KJ4604 - ■■■■■ - ■■ X1**
81.82	8.6	800	0.87	84	6.1	775	0.62	80	1.2	650	0.12	68	**2KJ4604 - ■■■■■ - ■■ W1**
70.00	10.0	665	0.83	84	7.1	645	0.59	82	1.4	540	0.12	68	**2KJ4604 - ■■■■■ - ■■ V1**
63.64	11.0	775	1.00	85	7.9	830	0.83	83	1.6	695	0.17	69	**2KJ4604 - ■■■■■ - ■■ U1**
56.25	12.4	750	1.10	86	8.9	810	0.90	84	1.8	675	0.18	70	**2KJ4604 - ■■■■■ - ■■ T1**
51.14	13.7	715	1.20	86	9.8	785	0.95	85	2.0	750	0.22	71	**2KJ4604 - ■■■■■ - ■■ S1**
44.79	15.6	680	1.30	87	11.2	750	1.00	86	2.2	760	0.24	72	**2KJ4604 - ■■■■■ - ■■ R1**
41.35	16.9	660	1.30	87	12.1	730	1.10	86	2.4	765	0.27	72	**2KJ4604 - ■■■■■ - ■■ Q1**
36.61	19.1	630	1.50	87	13.7	700	1.20	87	2.7	770	0.30	73	**2KJ4604 - ■■■■■ - ■■ P1**
30.00	23	560	1.50	90	16.7	555	1.10	89	3.3	480	0.22	77	**2KJ4604 - ■■■■■ - ■■ N1**
26.28	27	550	1.70	90	19	545	1.20	90	3.8	480	0.24	78	**2KJ4604 - ■■■■■ - ■■ M1**
24.26	29	545	1.80	90	21	540	1.30	90	4.1	475	0.26	79	**2KJ4604 - ■■■■■ - ■■ L1**
21.48	33	540	2.10	91	23	540	1.40	90	4.7	475	0.30	80	**2KJ4604 - ■■■■■ - ■■ K1**
17.88	39	545	2.50	91	28	545	1.80	91	5.6	490	0.35	82	**2KJ4604 - ■■■■■ - ■■ J1**
15.88	44	365	1.80	92	31	360	1.30	91	6.3	330	0.26	83	**2KJ4604 - ■■■■■ - ■■ H1**
14.06	50	360	2.10	92	36	355	1.50	92	7.1	330	0.29	84	**2KJ4604 - ■■■■■ - ■■ G1**
11.70	60	365	2.50	92	43	365	1.80	92	8.5	340	0.36	85	**2KJ4604 - ■■■■■ - ■■ F1**
11.01	64	365	2.70	92	45	365	1.90	92	9.1	340	0.38	86	**2KJ4604 - ■■■■■ - ■■ E1**
9.87	71	365	3.00	92	51	365	2.10	92	10.1	345	0.43	86	**2KJ4604 - ■■■■■ - ■■ D1**
8.40	83	370	3.50	92	60	370	2.50	92	11.9	350	0.50	87	**2KJ4604 - ■■■■■ - ■■ C1**
7.20	97	365	4.10	92	69	365	2.90	92	13.9	350	0.59	88	**2KJ4604 - ■■■■■ - ■■ B1**
6.20	113	365	4.70	92	81	365	3.40	92	16.1	355	0.67	89	**2KJ4604 - ■■■■■ - ■■ A1**

Selection and ordering data (continued)

	n_{mot} = 2 800 rpm				n_{mot} = 1 400 rpm				n_{mot} = 900 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.89													
363.00	7.7	1 180	1.30	73	3.9	1 460	0.83	72	2.5	1 430	0.55	68	**2KJ4605 - ■■■■■ - ■■ N2**
329.73	8.5	1 180	1.40	73	4.2	1 460	0.89	72	2.7	1 440	0.59	69	**2KJ4605 - ■■■■■ - ■■ M2**
295.75	9.5	1 170	1.60	73	4.7	1 460	0.99	73	3.0	1 460	0.66	70	**2KJ4605 - ■■■■■ - ■■ L2**
265.91	10.5	1 170	1.80	73	5.3	1 460	1.10	73	3.4	1 470	0.74	71	**2KJ4605 - ■■■■■ - ■■ K2**
240.50	11.6	1 160	1.90	73	5.8	1 450	1.20	73	3.7	1 480	0.80	72	**2KJ4605 - ■■■■■ - ■■ J2**
222.00	12.6	1 120	2.00	73	6.3	1 410	1.30	73	4.1	1 490	0.89	72	**2KJ4605 - ■■■■■ - ■■ H2**
203.36	13.8	1 090	2.20	73	6.9	1 370	1.40	73	4.4	1 500	0.95	73	**2KJ4605 - ■■■■■ - ■■ G2**
170.62	16.4	1 030	2.40	73	8.2	1 300	1.50	73	5.3	1 490	1.10	73	**2KJ4605 - ■■■■■ - ■■ F2**
160.59	17.4	1 010	2.50	73	8.7	1 270	1.60	73	5.6	1 460	1.20	74	**2KJ4605 - ■■■■■ - ■■ E2**
147.33	19	980	2.70	73	9.5	1 230	1.70	74	6.1	1 430	1.20	74	**2KJ4605 - ■■■■■ - ■■ D2**
128.70	22	915	2.90	73	10.9	1 150	1.80	73	7.0	1 340	1.30	74	**2KJ4605 - ■■■■■ - ■■ C2**
115.23	24	875	3.00	73	12.1	1 100	1.90	74	7.8	1 280	1.40	74	**2KJ4605 - ■■■■■ - ■■ B2**
100.75	28	830	3.30	73	13.9	1 040	2.10	74	8.9	1 210	1.50	74	**2KJ4605 - ■■■■■ - ■■ A2**
86.48	32	780	3.60	73	16.2	980	2.30	73	10.4	1 140	1.70	74	**2KJ4605 - ■■■■■ - ■■ X1**
76.44	37	740	4.00	73	18.3	935	2.40	73	11.8	1 080	1.80	74	**2KJ4605 - ■■■■■ - ■■ W1**
65.00	43	695	4.30	73	22	875	2.80	73	13.8	1 010	2.00	74	**2KJ4605 - ■■■■■ - ■■ V1**
55.61	50	1 150	6.70	90	25	1 450	4.20	91	16.2	1 550	2.90	90	**2KJ4605 - ■■■■■ - ■■ U1**
50.00	56	1 130	7.40	90	28	1 430	4.60	90	18.0	1 560	3.30	90	**2KJ4605 - ■■■■■ - ■■ T1**
45.22	62	1 100	7.90	90	31	1 380	5.00	91	19.9	1 560	3.60	90	**2KJ4605 - ■■■■■ - ■■ S1**
41.74	67	1 070	8.30	90	34	1 350	5.30	91	22	1 560	4.00	91	**2KJ4605 - ■■■■■ - ■■ R1**
38.24	73	1 040	8.80	90	37	1 310	5.60	91	24	1 520	4.20	91	**2KJ4605 - ■■■■■ - ■■ Q1**
32.08	87	985	10*	90	44	1 240	6.30	91	28	1 440	4.70	91	**2KJ4605 - ■■■■■ - ■■ P1**
30.20	93	950	10.3*	90	46	1 200	6.40	91	30	1 390	4.80	91	**2KJ4605 - ■■■■■ - ■■ N1**
27.70	101	920	10.8*	90	51	1 160	6.90	91	32	1 340	5.00	91	**2KJ4605 - ■■■■■ - ■■ M1**
25.03	112	1 080	13.7*	93	56	1 090	6.90	93	36	1 090	4.50	93	**2KJ4605 - ■■■■■ - ■■ L1**
21.00	133	1 000	15.1*	93	67	1 080	8.20	93	43	1 070	5.20	93	**2KJ4605 - ■■■■■ - ■■ K1**
19.76	142	980	15.8*	93	71	1 120	9.00	93	46	1 120	5.80	93	**2KJ4605 - ■■■■■ - ■■ J1**
18.13	154	950	16.6*	93	77	1 120	9.7*	93	50	1 120	6.30	93	**2KJ4605 - ■■■■■ - ■■ H1**
15.84	177	865	17.3*	93	88	1 140	11.3*	93	57	1 140	7.30	93	**2KJ4605 - ■■■■■ - ■■ G1**
14.18	197	770	17.3*	92	99	1 090	12.2*	93	63	1 150	8.20	93	**2KJ4605 - ■■■■■ - ■■ F1**
12.40	226	675	17.3*	93	113	1 040	13.3*	93	73	1 140	9.5*	93	**2KJ4605 - ■■■■■ - ■■ E1**
10.64	263	580	17.3*	92	132	985	14.7*	93	85	1 140	10.9*	93	**2KJ4605 - ■■■■■ - ■■ D1**
9.41	298	510	17.4*	92	149	940	15.9*	93	96	1 090	11.8*	93	**2KJ4605 - ■■■■■ - ■■ C1**
8.00	350	435	17.4*	92	175	870	17.3*	93	112	1 030	13.1*	93	**2KJ4605 - ■■■■■ - ■■ B1**
6.86	408	370	17.4*	92	204	745	17.3*	93	131	980	14.5*	93	**2KJ4605 - ■■■■■ - ■■ A1**

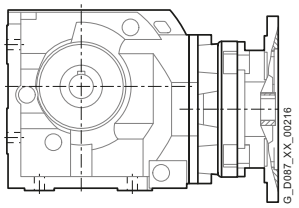
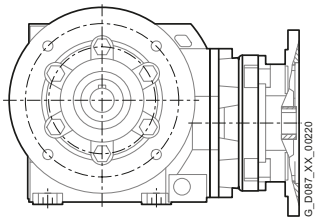
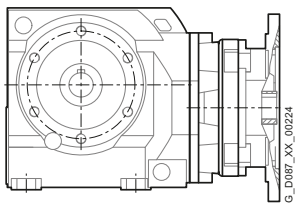
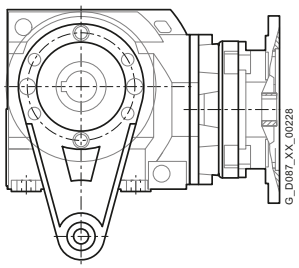
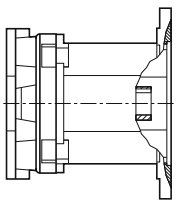
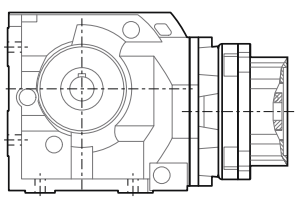
Selection and ordering data (continued)

	n_{mot} = 700 rpm				n_{mot} = 500 rpm				n_{mot} = 100 rpm				
i	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	n_2	T_{2N}	P_{mot}	η	**Article No.**
-	rpm	Nm	kW	%	rpm	Nm	kW	%	rpm	Nm	kW	%	
C.89													
363.00	1.9	1 360	0.42	64	1.4	1 260	0.31	60	0.28	955	0.06	45	**2KJ4605 - ■■■■■ - ■■ N2**
329.73	2.1	1 380	0.46	66	1.5	1 280	0.33	61	0.30	960	0.07	45	**2KJ4605 - ■■■■■ - ■■ M2**
295.75	2.4	1 400	0.53	67	1.7	1 310	0.37	62	0.34	965	0.08	45	**2KJ4605 - ■■■■■ - ■■ L2**
265.91	2.6	1 420	0.57	68	1.9	1 330	0.42	64	0.38	975	0.08	46	**2KJ4605 - ■■■■■ - ■■ K2**
240.50	2.9	1 440	0.63	70	2.1	1 360	0.46	66	0.42	985	0.09	47	**2KJ4605 - ■■■■■ - ■■ J2**
222.00	3.2	1 450	0.69	70	2.3	1 380	0.50	67	0.45	995	0.10	47	**2KJ4605 - ■■■■■ - ■■ H2**
203.36	3.4	1 470	0.74	71	2.5	1 400	0.54	68	0.49	1 000	0.11	48	**2KJ4605 - ■■■■■ - ■■ G2**
170.62	4.1	1 490	0.89	72	2.9	1 440	0.63	70	0.59	1 030	0.13	50	**2KJ4605 - ■■■■■ - ■■ F2**
160.59	4.4	1 490	0.95	73	3.1	1 450	0.67	71	0.62	1 040	0.14	50	**2KJ4605 - ■■■■■ - ■■ E2**
147.33	4.8	1 500	1.00	73	3.4	1 460	0.73	71	0.68	1 060	0.15	51	**2KJ4605 - ■■■■■ - ■■ D2**
128.70	5.4	1 450	1.10	74	3.9	1 480	0.84	72	0.78	1 090	0.17	53	**2KJ4605 - ■■■■■ - ■■ C2**
115.23	6.1	1 390	1.20	74	4.3	1 490	0.92	73	0.87	1 110	0.19	54	**2KJ4605 - ■■■■■ - ■■ B2**
100.75	6.9	1 310	1.30	74	5.0	1 460	1.00	74	0.99	1 150	0.21	56	**2KJ4605 - ■■■■■ - ■■ A2**
86.48	8.1	1 230	1.40	74	5.8	1 380	1.10	74	1.2	1 190	0.26	58	**2KJ4605 - ■■■■■ - ■■ X1**
76.44	9.2	1 170	1.50	74	6.5	1 310	1.20	74	1.3	1 220	0.28	60	**2KJ4605 - ■■■■■ - ■■ W1**
65.00	10.8	1 100	1.70	74	7.7	1 230	1.30	74	1.5	1 270	0.32	62	**2KJ4605 - ■■■■■ - ■■ V1**
55.61	12.6	1 540	2.30	90	9.0	1 510	1.60	88	1.8	1 290	0.33	75	**2KJ4605 - ■■■■■ - ■■ U1**
50.00	14.0	1 540	2.50	90	10.0	1 530	1.80	88	2.0	1 430	0.40	75	**2KJ4605 - ■■■■■ - ■■ T1**
45.22	15.5	1 550	2.80	90	11.1	1 530	2.00	89	2.2	1 430	0.43	76	**2KJ4605 - ■■■■■ - ■■ S1**
41.74	16.8	1 550	3.00	90	12.0	1 540	2.20	89	2.4	1 450	0.48	77	**2KJ4605 - ■■■■■ - ■■ R1**
38.24	18.3	1 560	3.30	90	13.1	1 540	2.40	90	2.6	1 450	0.51	77	**2KJ4605 - ■■■■■ - ■■ Q1**
32.08	22	1 560	4.00	91	15.6	1 550	2.80	90	3.1	1 390	0.57	79	**2KJ4605 - ■■■■■ - ■■ P1**
30.20	23	1 510	4.00	91	16.6	1 550	3.00	90	3.3	1 460	0.64	79	**2KJ4605 - ■■■■■ - ■■ N1**
27.70	25	1 460	4.20	91	18.1	1 560	3.30	91	3.6	1 470	0.69	80	**2KJ4605 - ■■■■■ - ■■ M1**
25.03	28	1 090	3.50	93	20	1 080	2.50	92	4.0	990	0.50	84	**2KJ4605 - ■■■■■ - ■■ L1**
21.00	33	1 070	4.00	93	24	1 070	2.90	92	4.8	985	0.59	85	**2KJ4605 - ■■■■■ - ■■ K1**
19.76	35	1 120	4.50	93	25	1 120	3.20	92	5.1	1 030	0.65	85	**2KJ4605 - ■■■■■ - ■■ J1**
18.13	39	1 110	4.90	93	28	1 110	3.50	92	5.5	1 030	0.70	85	**2KJ4605 - ■■■■■ - ■■ H1**
15.84	44	1 140	5.70	93	32	1 130	4.10	93	6.3	1 050	0.81	86	**2KJ4605 - ■■■■■ - ■■ G1**
14.18	49	1 150	6.40	93	35	1 140	4.50	93	7.1	1 070	0.92	87	**2KJ4605 - ■■■■■ - ■■ F1**
12.40	56	1 140	7.30	93	40	1 140	5.20	93	8.1	1 080	1.00	88	**2KJ4605 - ■■■■■ - ■■ E1**
10.64	66	1 150	8.50	93	47	1 140	6.10	93	9.4	1 090	1.20	88	**2KJ4605 - ■■■■■ - ■■ D1**
9.41	74	1 120	9.4*	93	53	1 120	6.70	93	10.6	1 070	1.30	89	**2KJ4605 - ■■■■■ - ■■ C1**
8.00	88	1 120	11.2*	93	62	1 130	7.90	93	12.5	1 090	1.60	90	**2KJ4605 - ■■■■■ - ■■ B1**
6.86	102	1 060	12.3*	93	73	1 110	9.20	93	14.6	1 090	1.80	91	**2KJ4605 - ■■■■■ - ■■ A1**

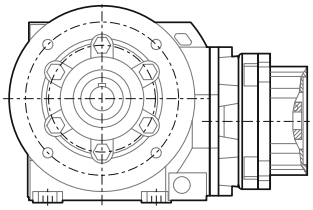
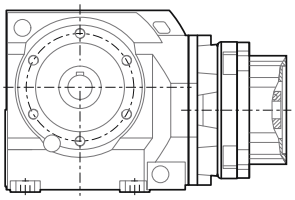
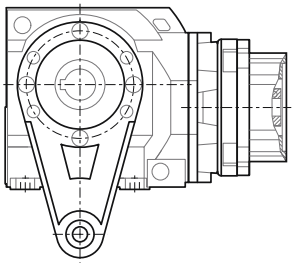
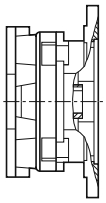
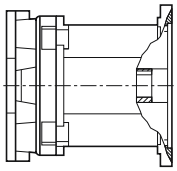
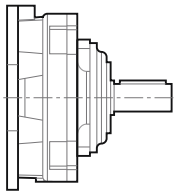
* $P_{mot\ max}$ = 9.2 kW

Dimensional drawing overview

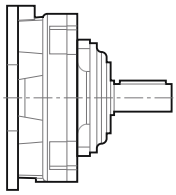
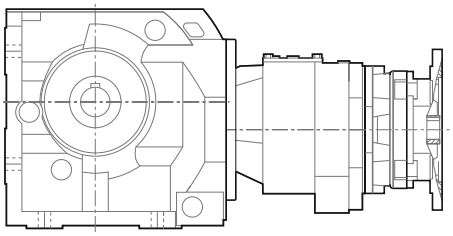
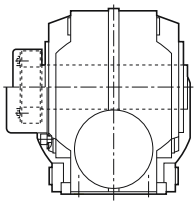
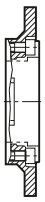
Information about dimensional drawings can be found in chapter "Introduction" on page 1/19.

Design	Size	Dimensional drawing on page
Helical worm gearbox with adapter K4		
Foot-mounted design		
	C..29	6/29
	C..39	6/33
	C..49	6/37
	C..69	6/41
	C..89	6/45
Flange-mounted design		
	C.F.29	6/30
	C.F.39	6/34
	C.F.49	6/38
	C.F.69	6/42
	C.F.89	6/46
Housing flange design		
	C.Z.29	6/31
	C.Z.39	6/35
	C.Z.49	6/39
	C.Z.69	6/43
	C.Z.89	6/47
Shaft-mounted design		
	CAD.29	6/32
	CAD.39	6/36
	CAD.49	6/40
	CAD.69	6/44
	CAD.89	6/48
Helical worm gearbox with adapter K2		
	C..29 … C..89	6/49
Helical worm gearbox with KS adapter		
Foot-mounted design		
	C..29	6/50
	C..39	6/54
	C..49	6/58
	C..69	6/62
	C..89	6/66

Dimensional drawing overview (continued)

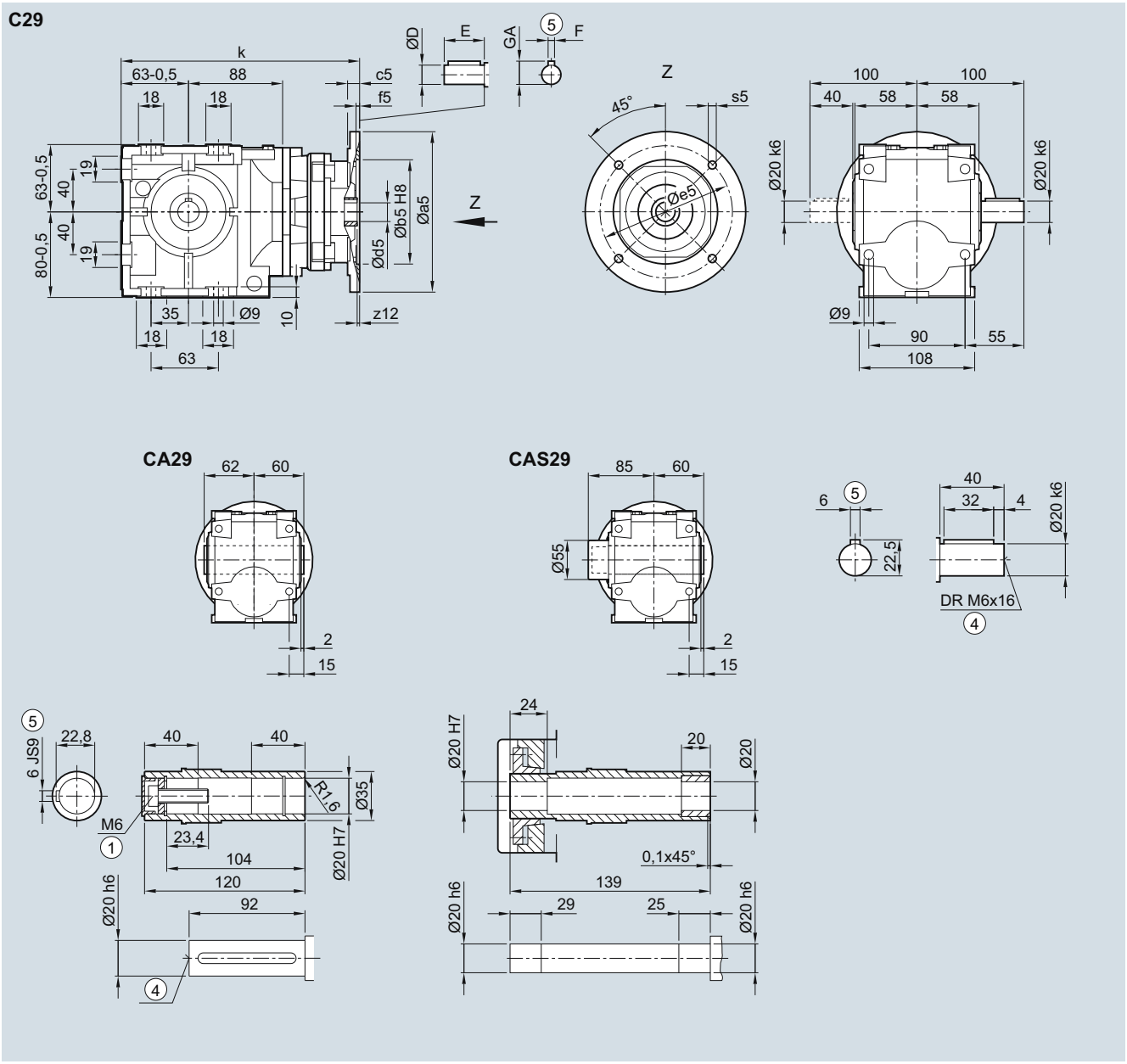
Design	Size	Dimensional drawing on page
Helical worm gearbox with KS adapter		
Flange-mounted design		
	C.F.29	6/51
	C.F.39	6/55
	C.F.49	6/59
	C.F.69	6/63
	C.F.89	6/67
Housing flange design		
	C.Z.29	6/52
	C.Z.39	6/56
	C.Z.49	6/60
	C.Z.69	6/64
	C.Z.89	6/68
Shaft-mounted design		
	CAD.29	6/53
	CAD.39	6/57
	CAD.49	6/61
	CAD.69	6/65
	CAD.89	6/69
Helical worm gearbox with adapter K5		
	C..29 … C..89	6/70
Helical worm gearbox with adapter K3		
	C..29 … C..89	6/71
Helical worm gearbox with adapter A		
	C..29 … C..89	6/72

Dimensional drawing overview (continued)

Design		Size	Dimensional drawing on page
Helical worm gearbox with adapter AZ			
		C..29 ... C..89	6/73
Helical worm tandem gearbox	**with adapter**		
	**- K4**	C.89-D/Z39	6/74
	- K2	C.89-D/Z39	6/74
	- KS	C.29-D/Z19 ... C.89-D/Z39	6/75
	- K5	C.89-D/Z39	6/76
	- K3	C.89-D/Z39	6/76
	- A	C.89-D/Z39	6/77
	- AZ	C.89-D/Z39	6/77
Additional versions and options			
Protective covers			
		CA.259 ... CA.89	6/78
Inner contour of the flange design			
		C.F.29 ... C.F.89	6/79

C..29 gearbox in a foot-mounted design

C030K4, CA030K4, CAS030K4



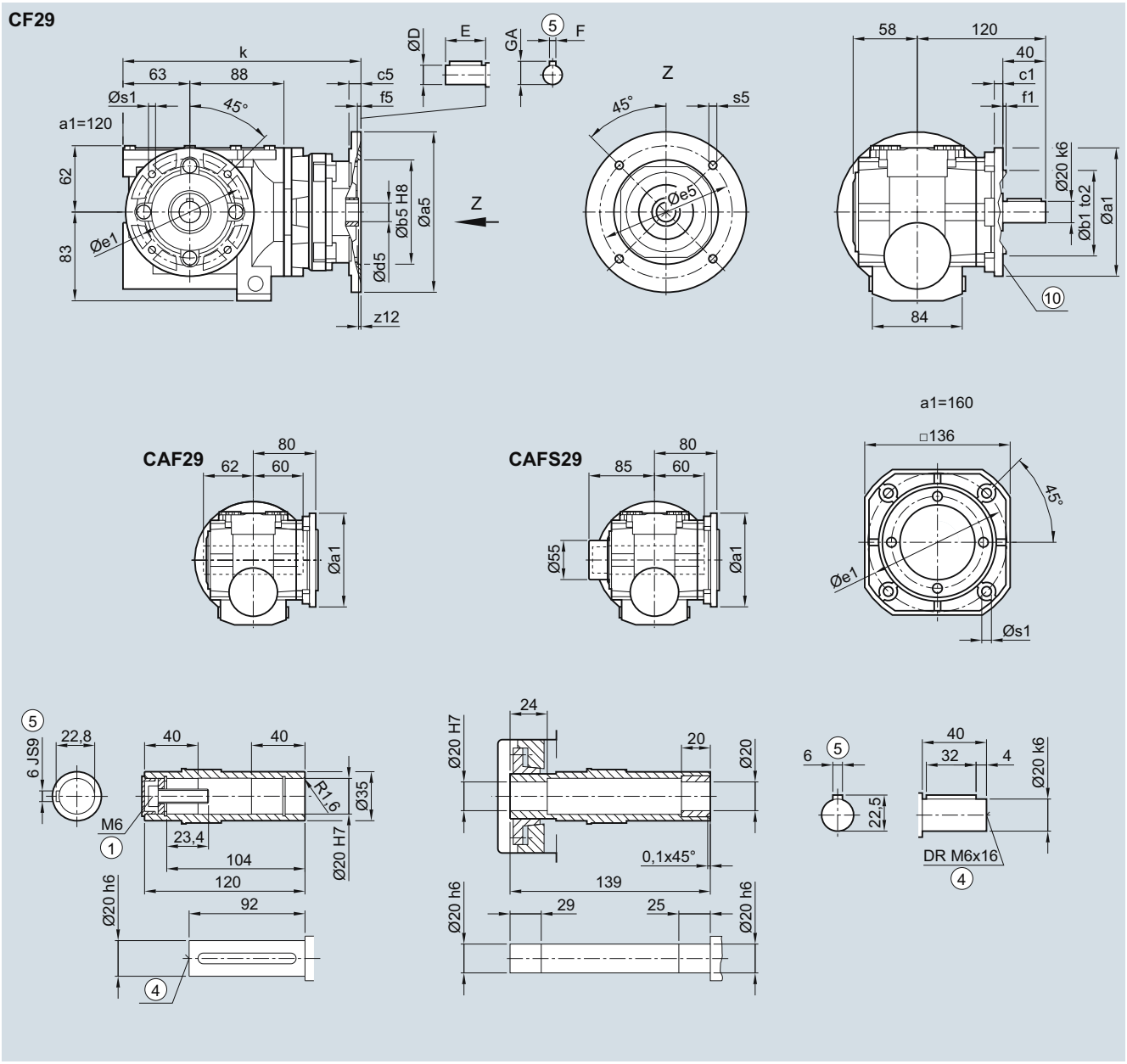
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	228.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	228.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	256.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	256.5

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

C.F.29 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



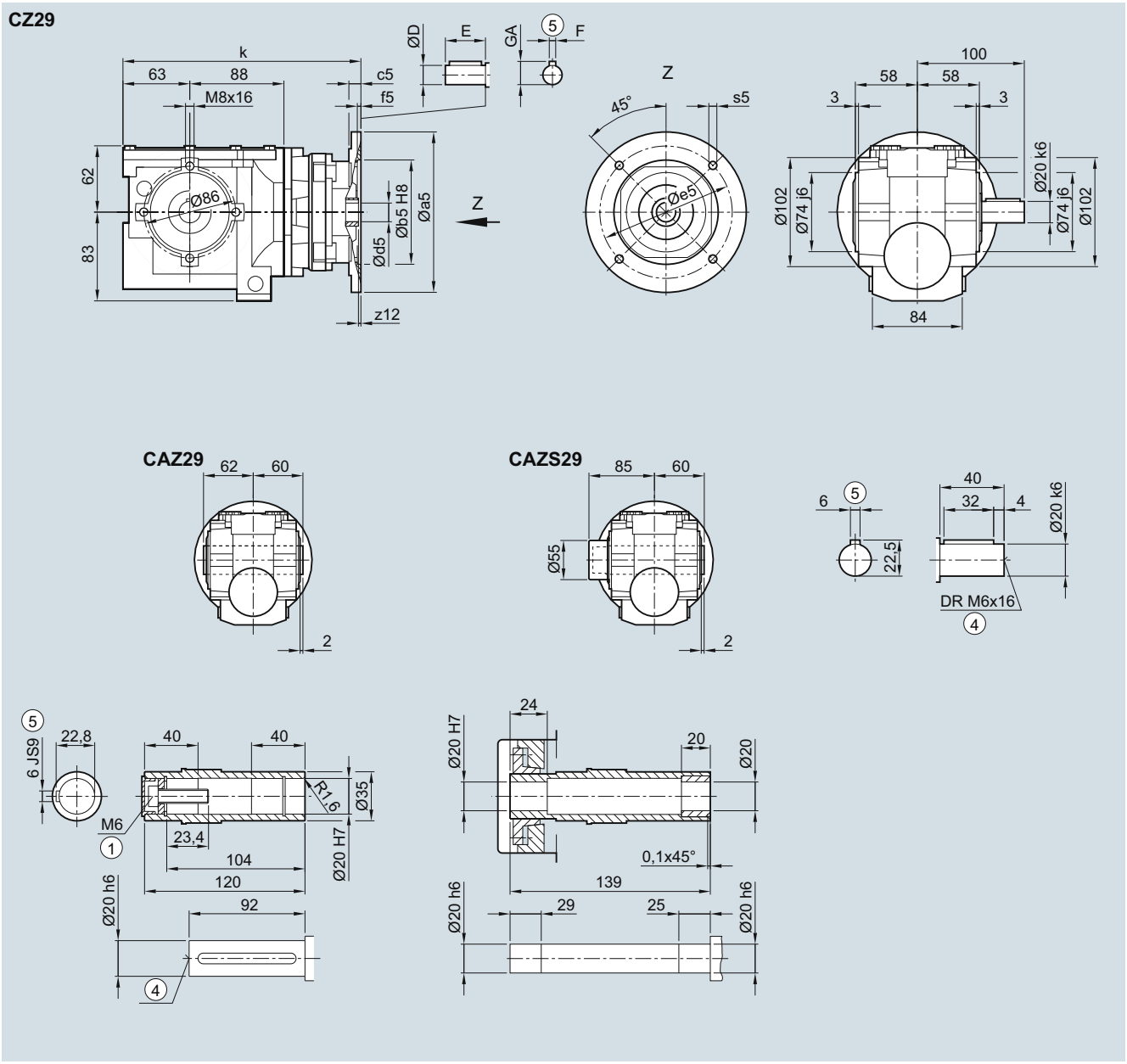
Flange	a1	b1	to2	c1	e1	f1	s1
	120	80	j6	8	100	3.0	6.6
	160	110	j6	9	130	3.5	9.0

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 6/79

C.Z.29 gearbox in a housing flange design

CZ030K4, CAZ030K4, CAZS030K4



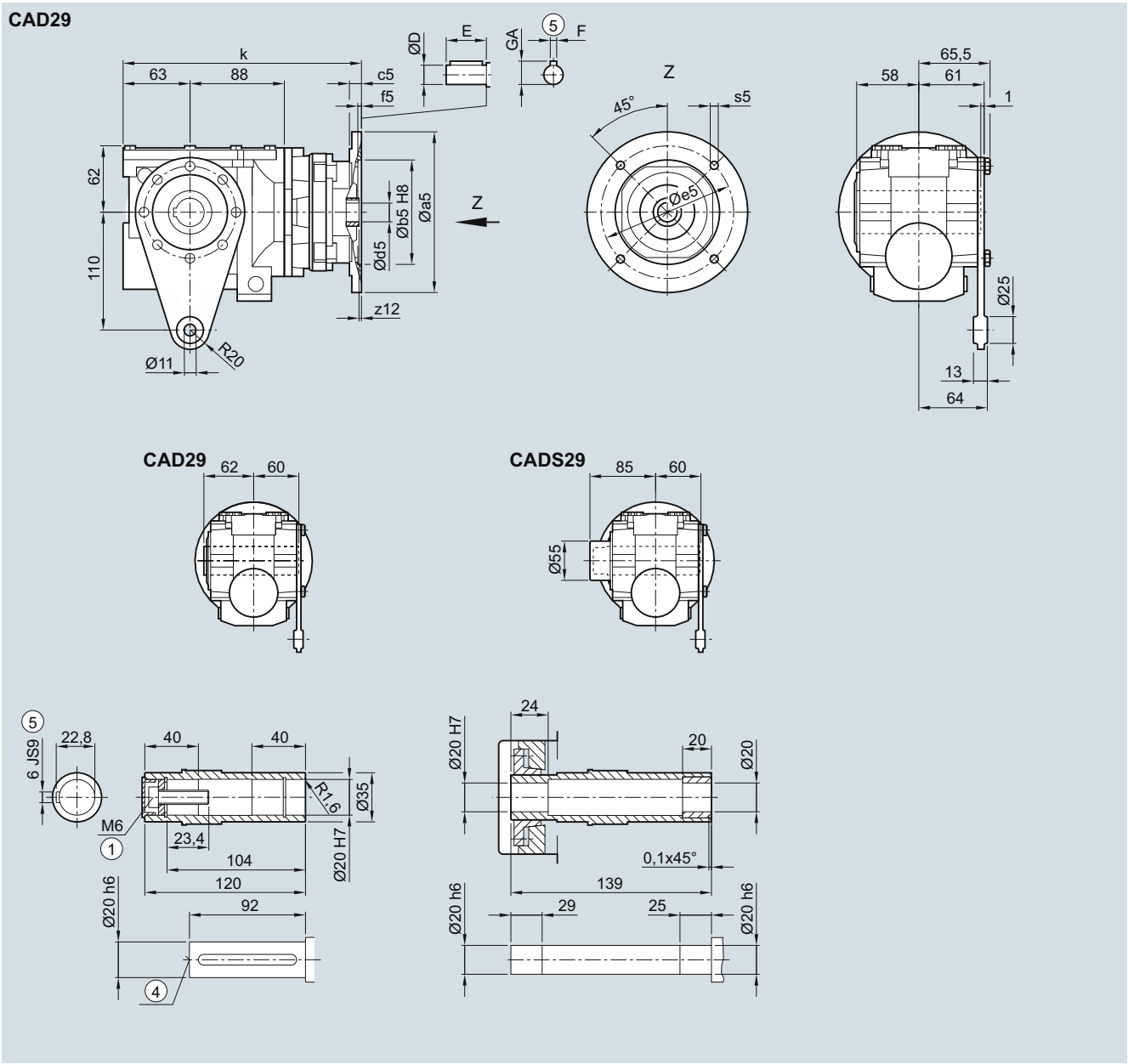
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	228.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	228.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	256.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	256.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

CAD.29 gearbox in a shaft-mounted design

CAD030K4, CADS030K4

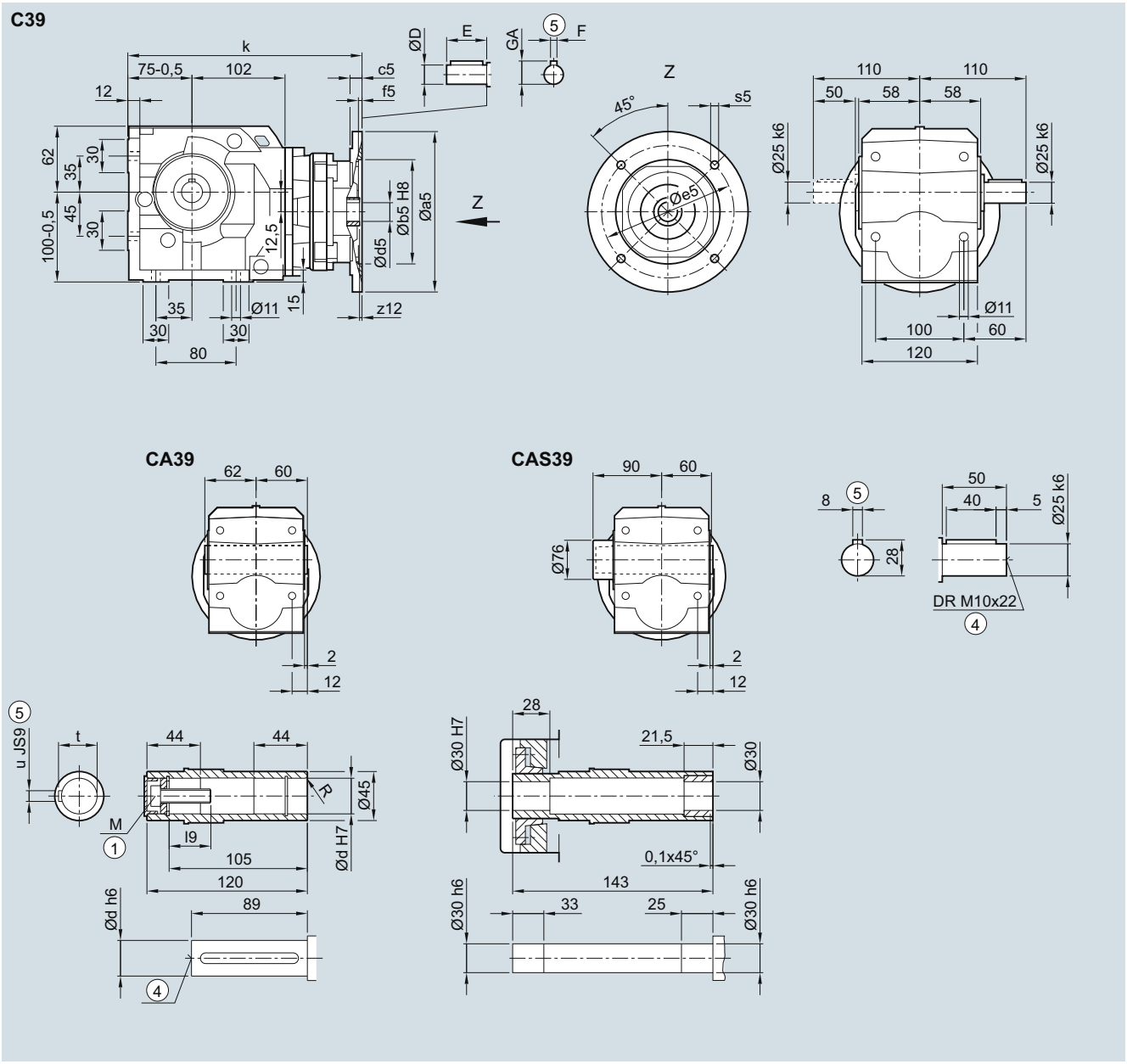


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	228.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	228.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	256.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	256.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885

C..39 gearbox in a foot-mounted design

C030K4, CA030K4, CAS030K4



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

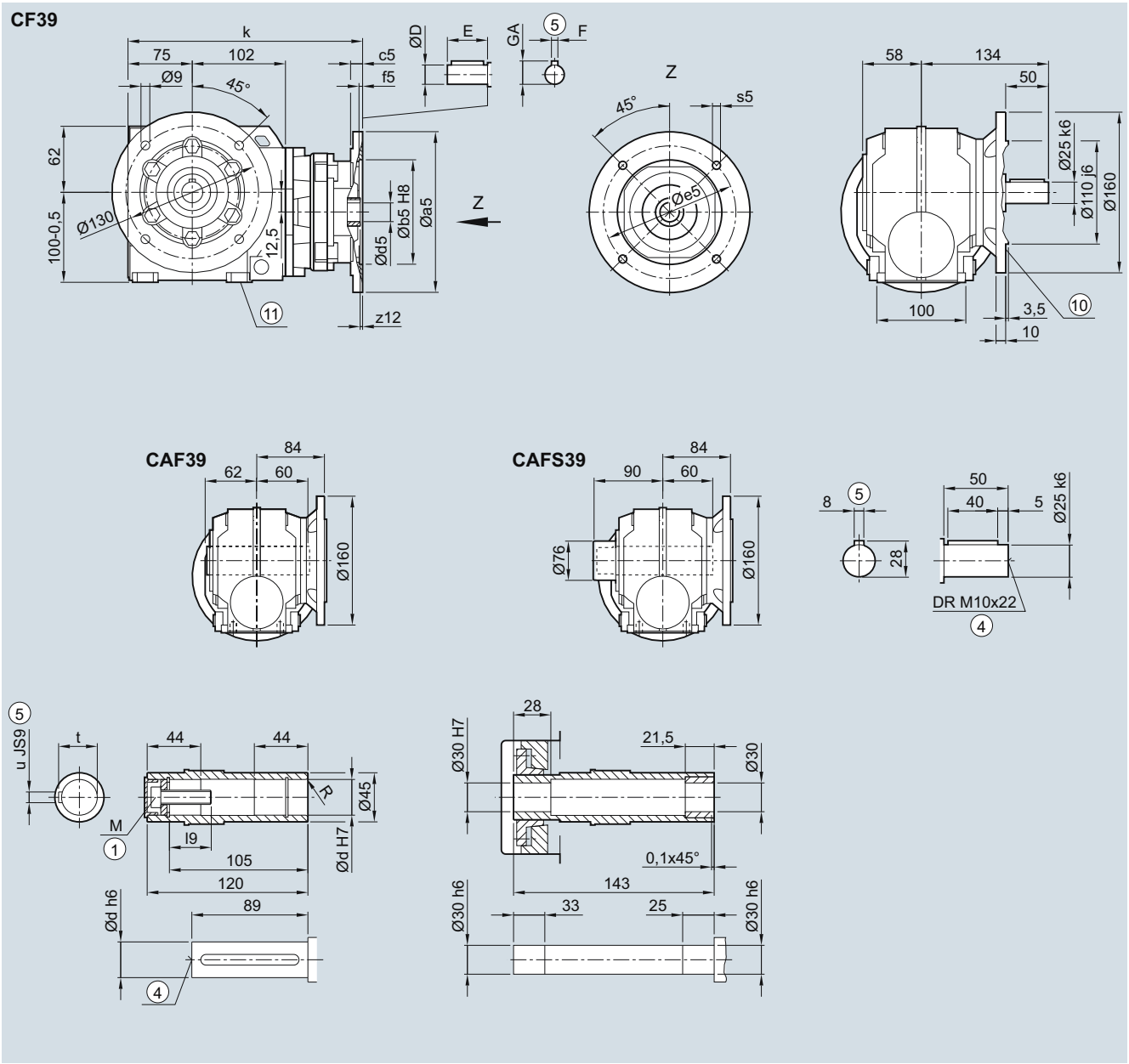
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	254.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	254.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	282.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	282.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	337.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

C.F.39 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



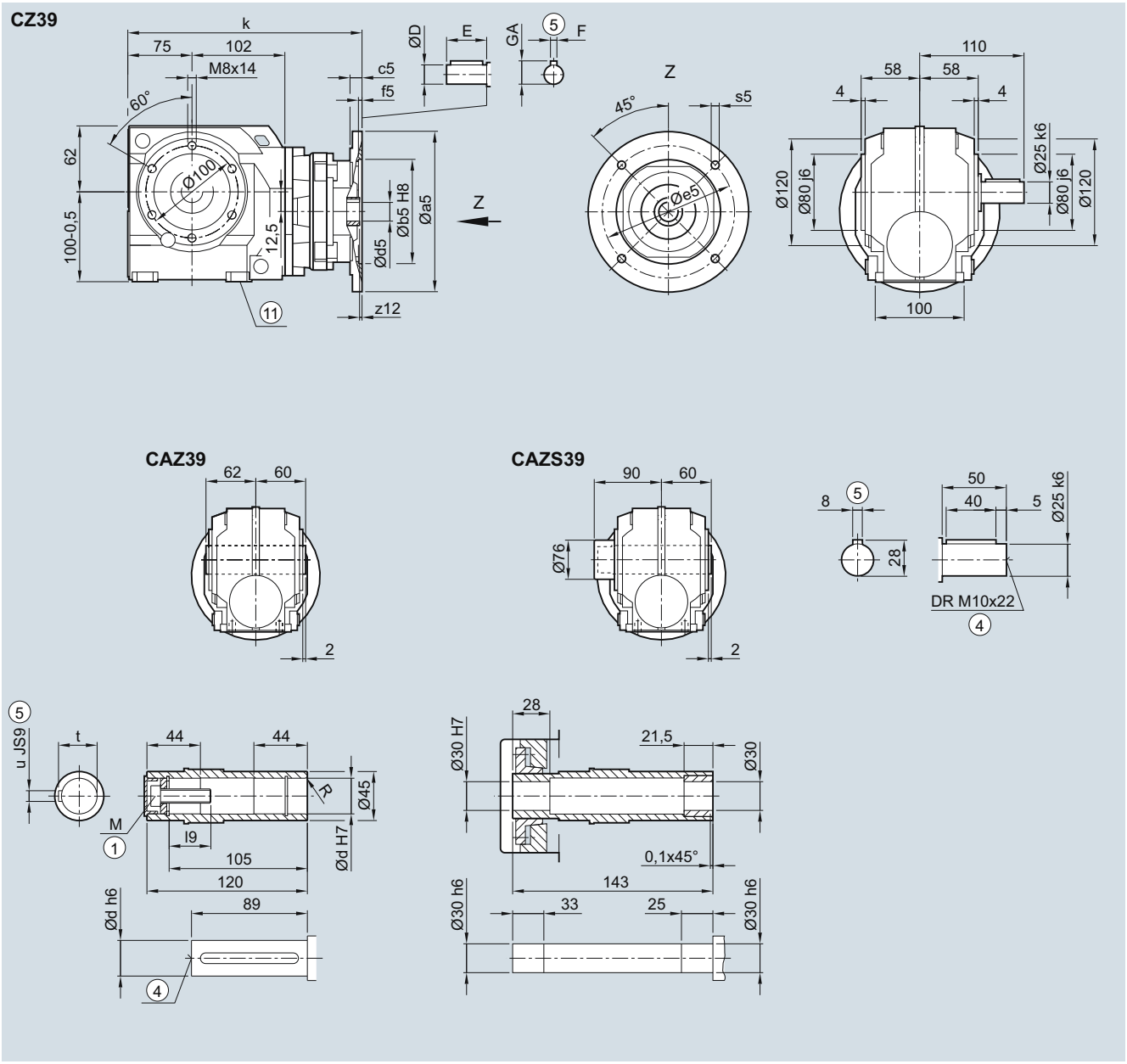
Shaft	d	l9	M	R	t	u
	25	32.6	M10	1.6	28.3	8
	30	32.6	M10	3.0	33.3	8

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 For inner contour, see page 6/79 ⑪ Use bores only for foot-mounted design

C.Z.39 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

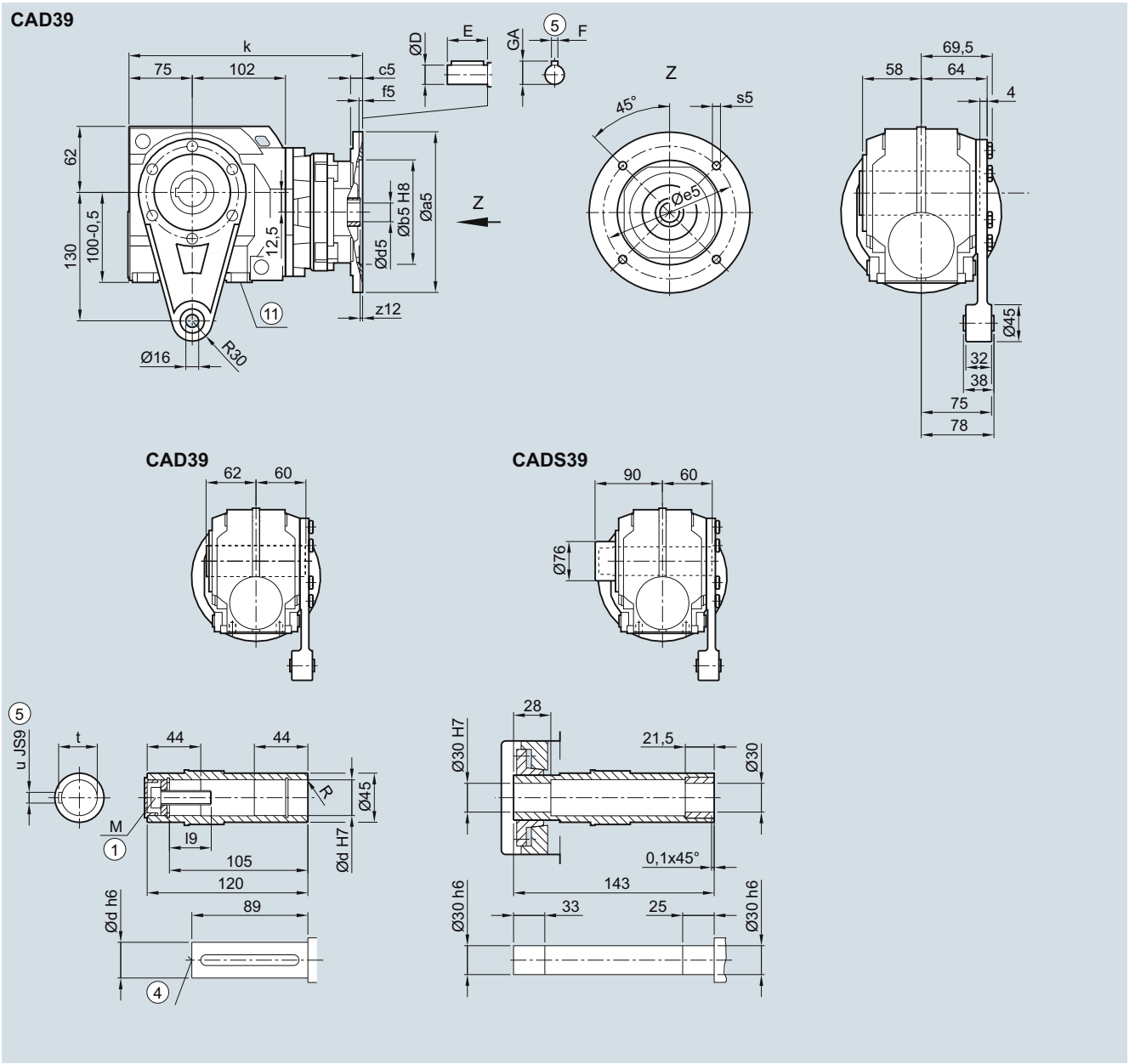
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	254.5
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	254.5
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	282.5
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	282.5
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	337.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

CAD.39 gearbox in a shaft-mounted design

CAD030K4, CADS030K4



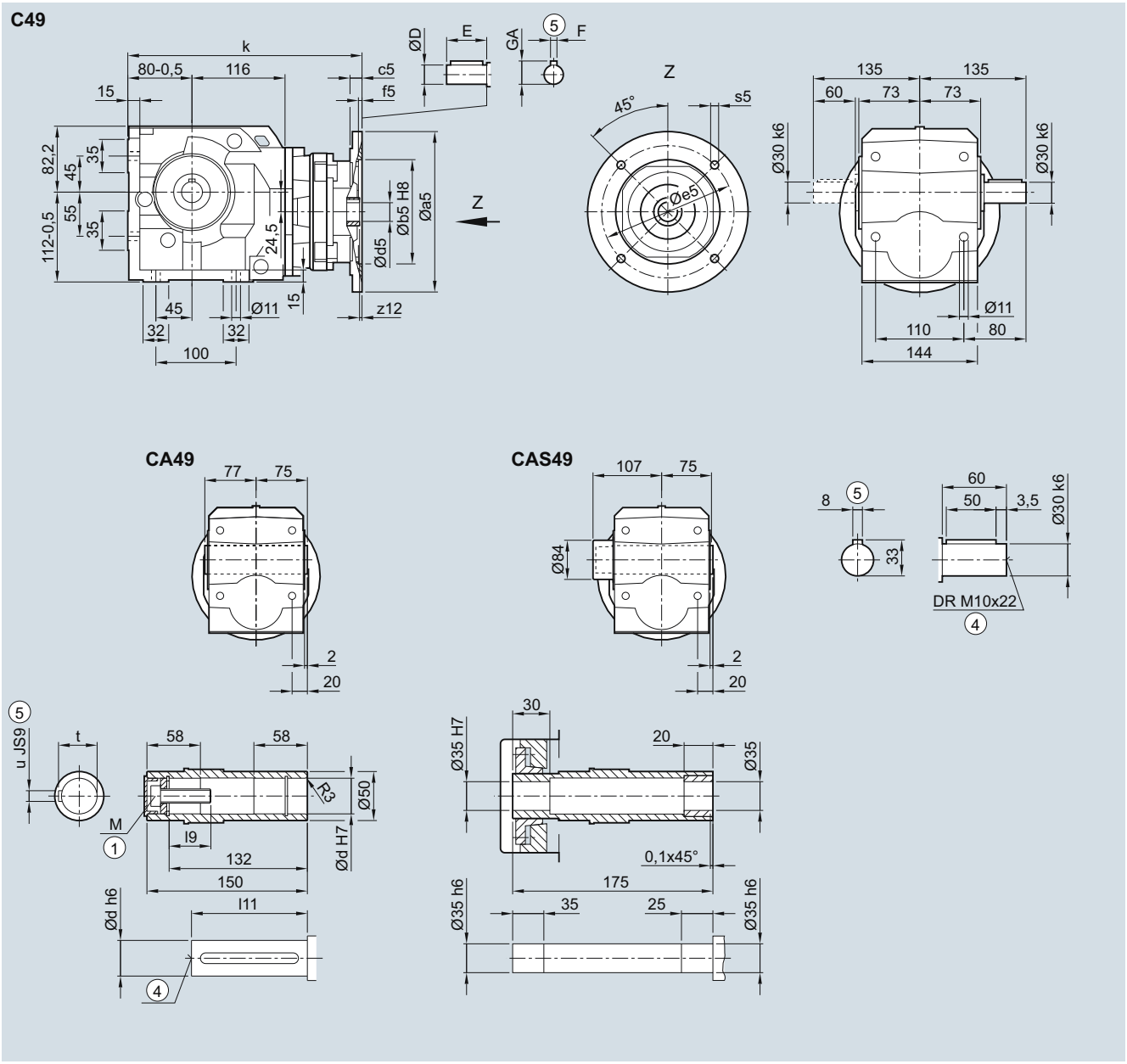
Shaft	d	l9	M	R	t	u
	25	32.6	M10	1.6	28.3	8
	30	32.6	M10	3.0	33.3	8

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 ⑪ 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

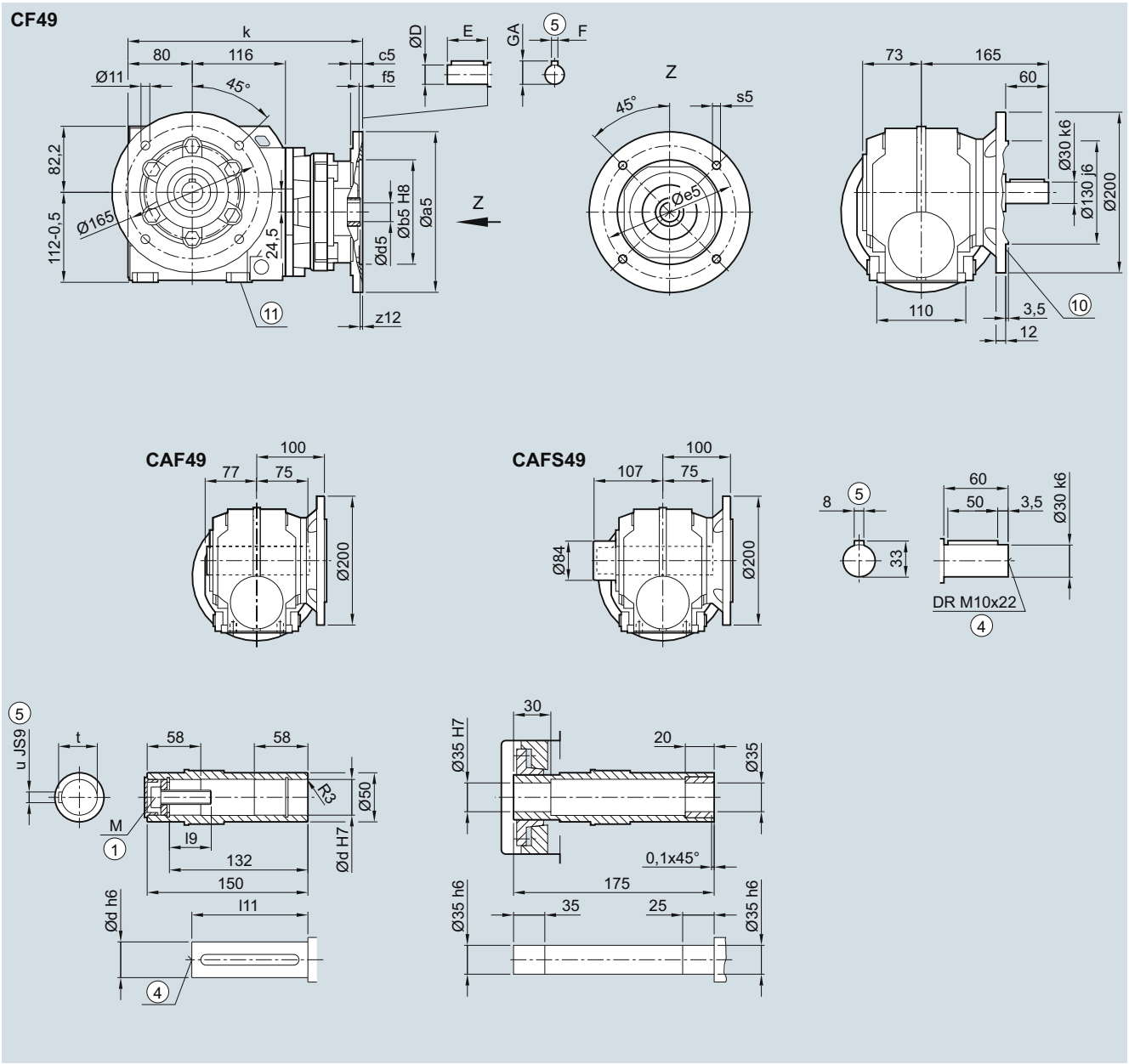
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	264.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	264.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	292.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	292.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5
112	250	180	16	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

Dimensions

C.F.49 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



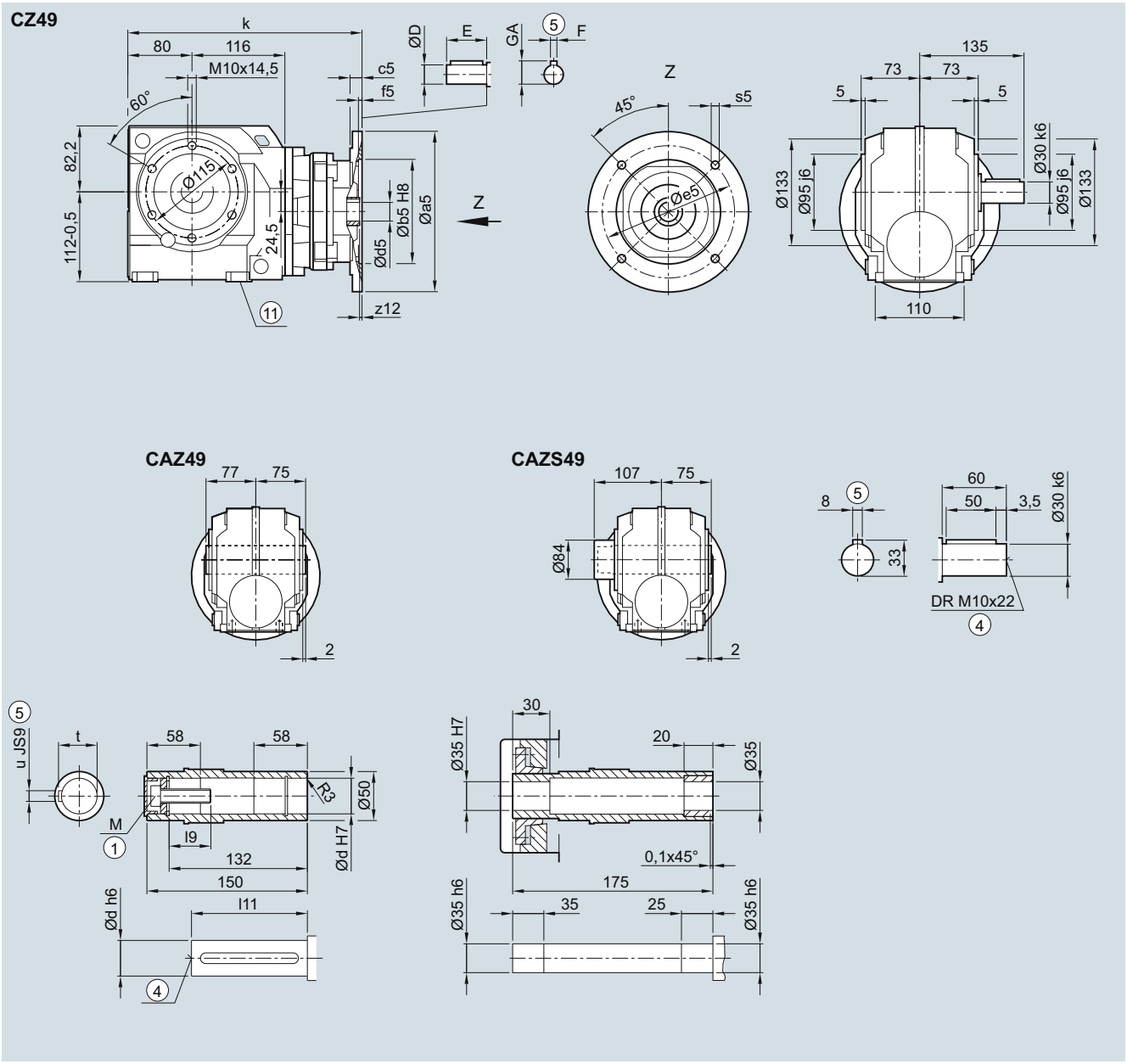
Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

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 6/79 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

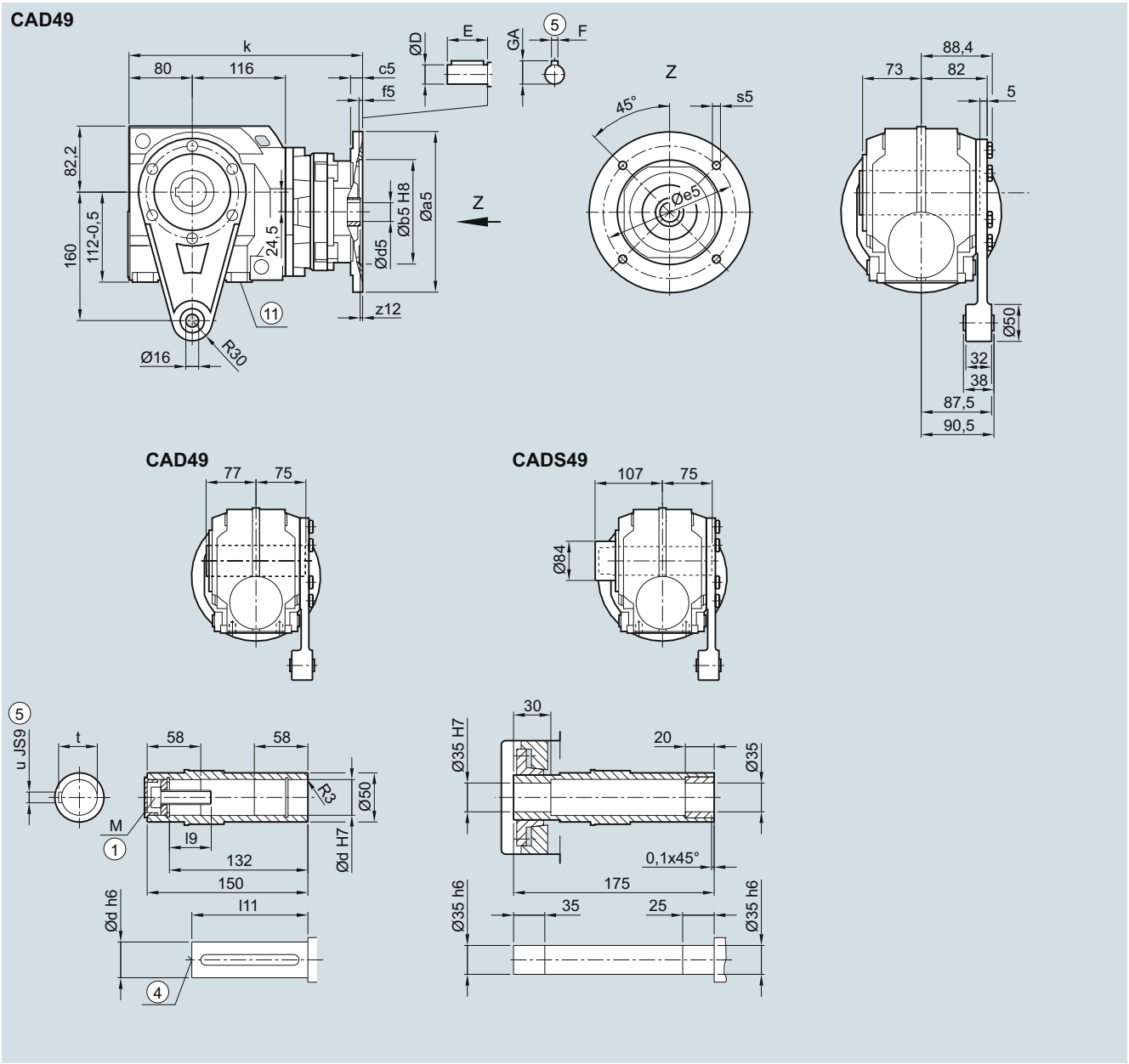
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	264.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	264.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	292.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	292.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	346.5
112	250	180	16	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 ⑪ Use bores only for foot-mounted design

Dimensions

CAD.49 gearbox in a shaft-mounted design

CAD030K4, CADS030K4



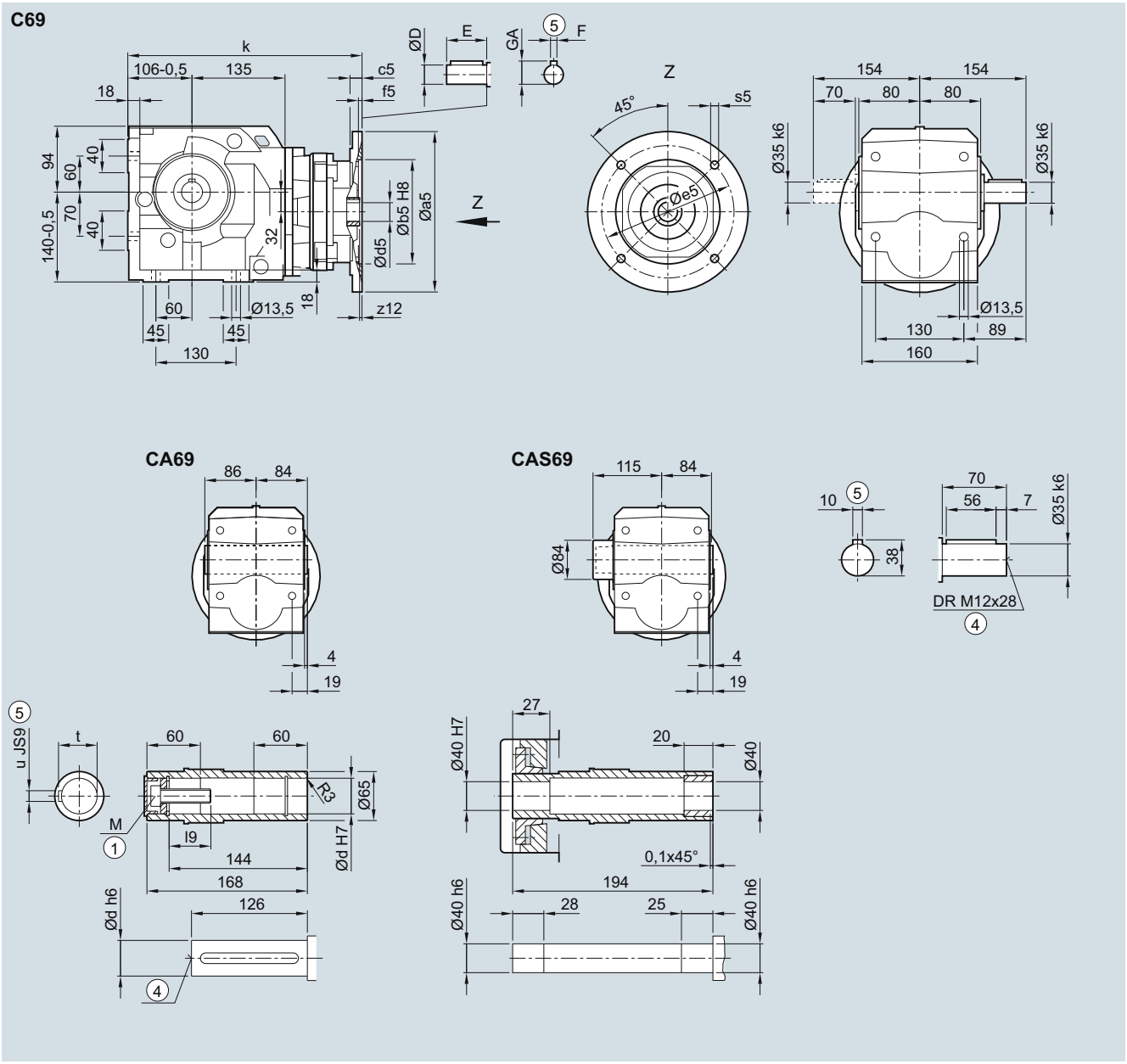
Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

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 ⑪ 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

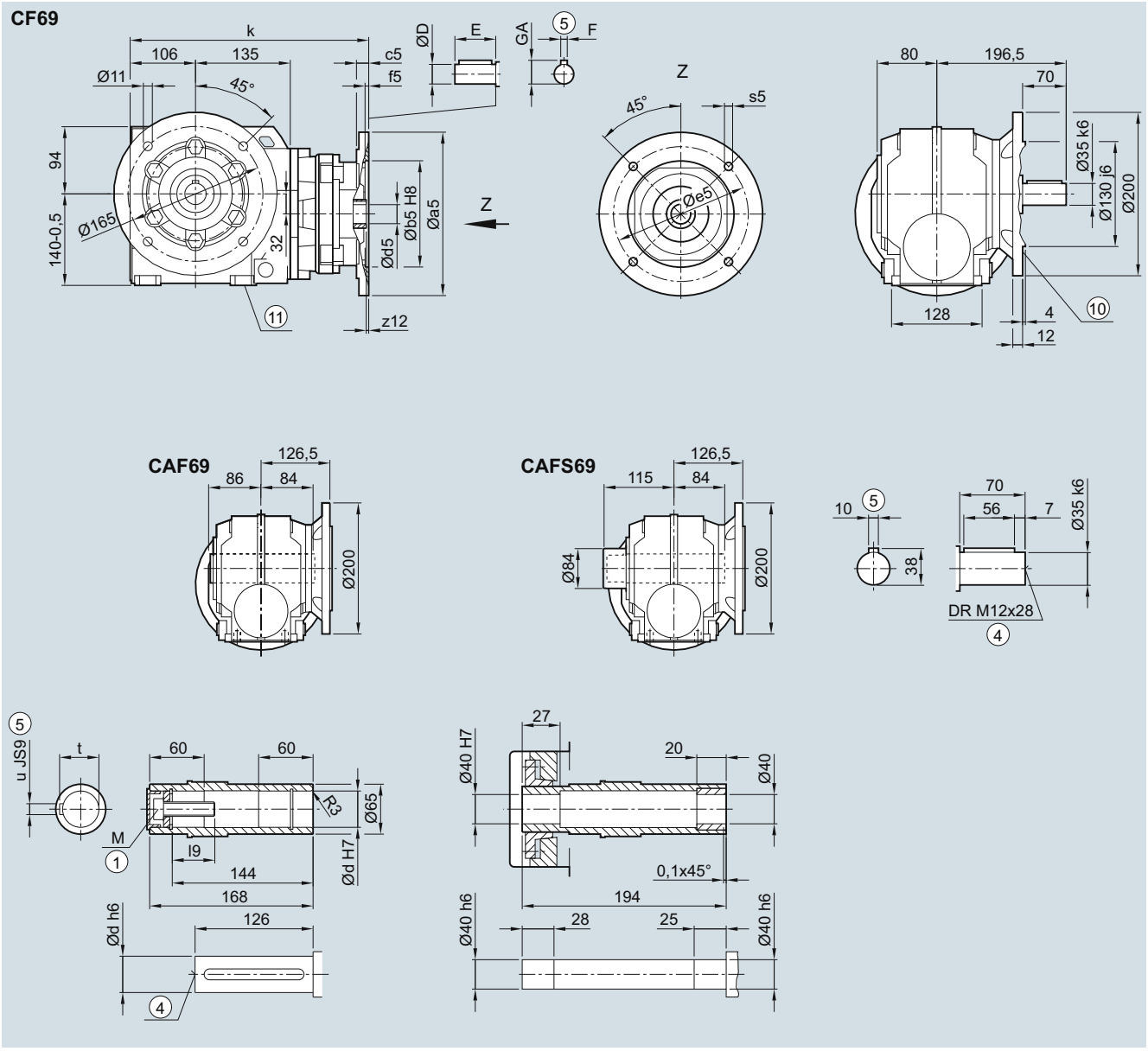
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	309.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	309.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	337.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	337.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	409.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

C.F.69 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



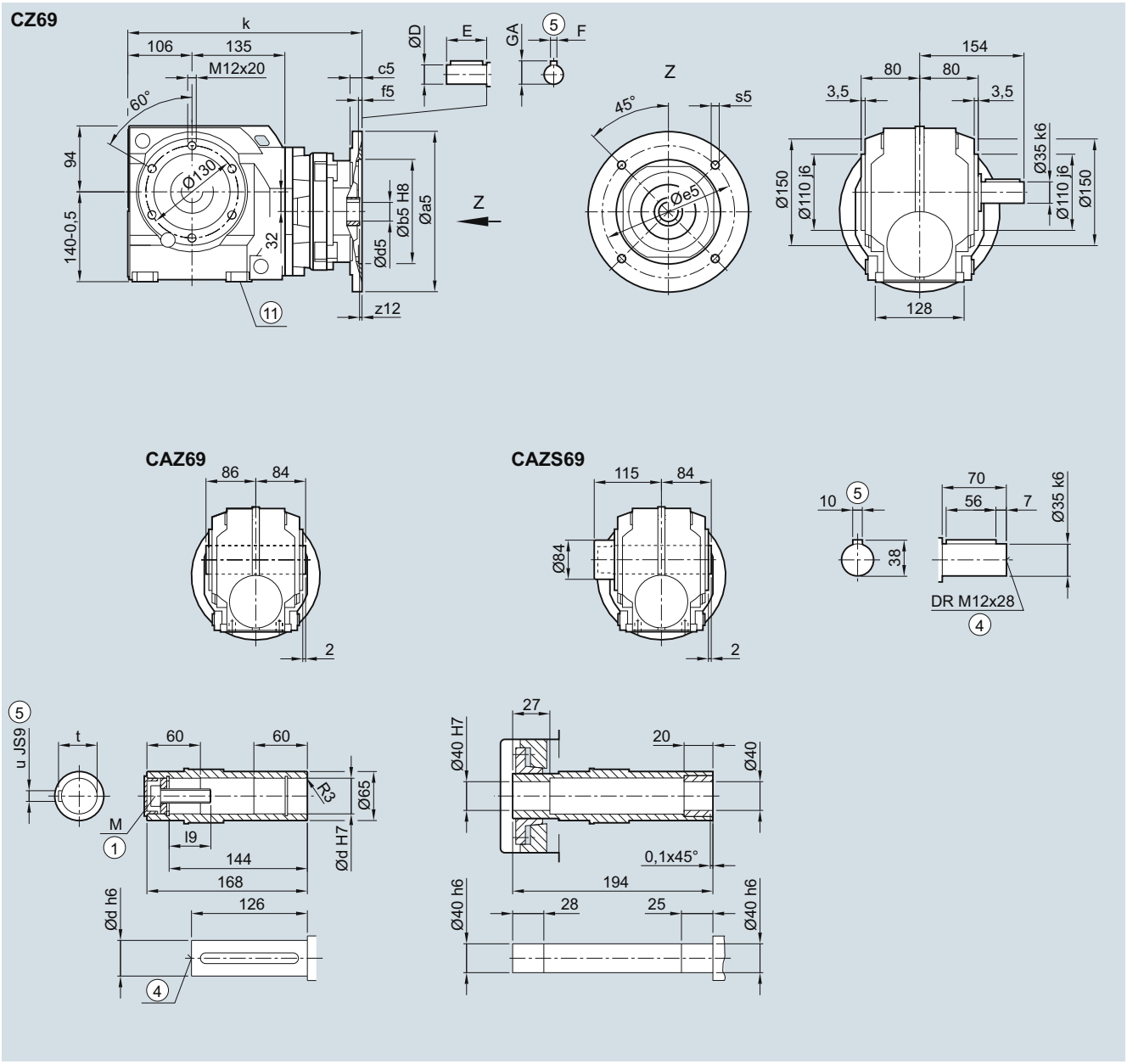
Shaft	d	l9	M	t	u
	40	47.75	M16	43.3	12
	45	48.75	M16	48.3	14

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
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	409.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 6/79 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

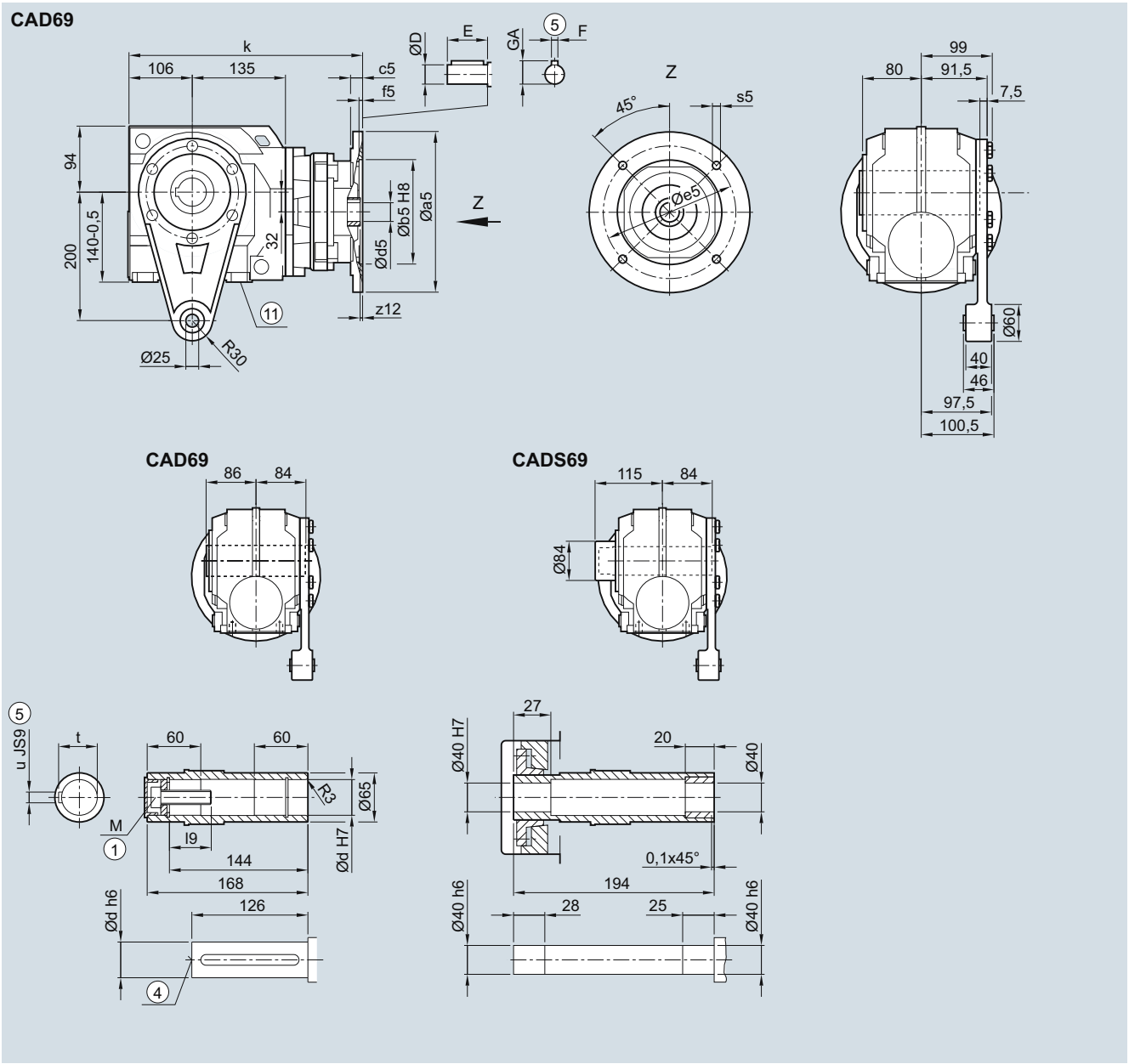
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
63	140	95	12	4.5	115	M8	2.5	11	23	4	12.5	309.0
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	309.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	337.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	337.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	391.5
1132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	409.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

CAD.69 gearbox in a shaft-mounted design

CAD030K4, CADS030K4



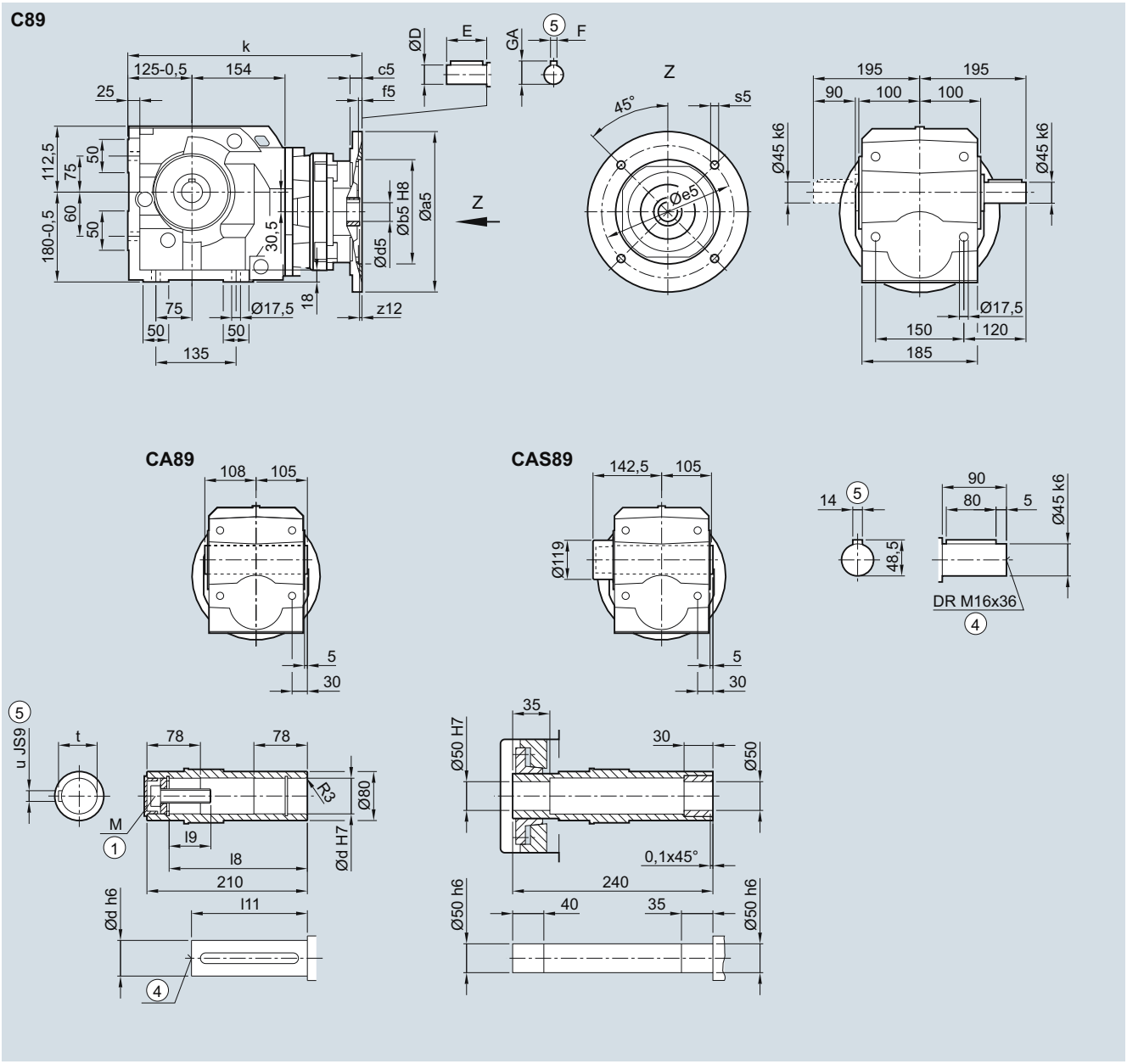
Shaft	d	l9	M	t	u
	40	47.75	M16	43.3	12
	45	48.75	M16	48.3	14

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
132	300	230	12	6.0	265	M12x20	3.0	38	80	10	41.0	409.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

C..89 gearbox in a foot-mounted design

C030K4, CA030K4, CAS030K4



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

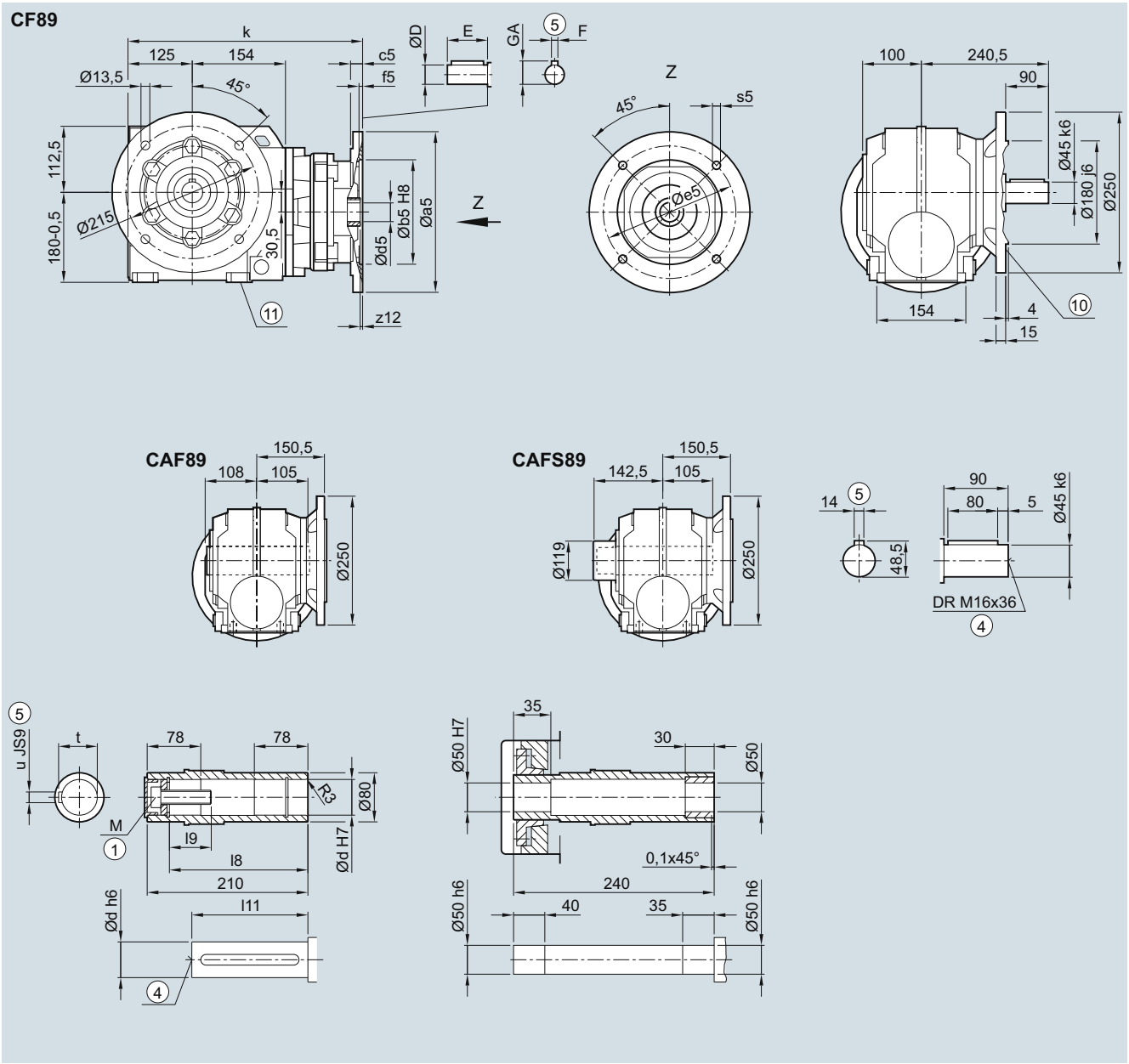
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	345.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	345.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	369.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
132	300	230	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

Dimensions

C.F.89 gearbox in a flange-mounted design

CF030K4, CAF030K4, CAFS030K4



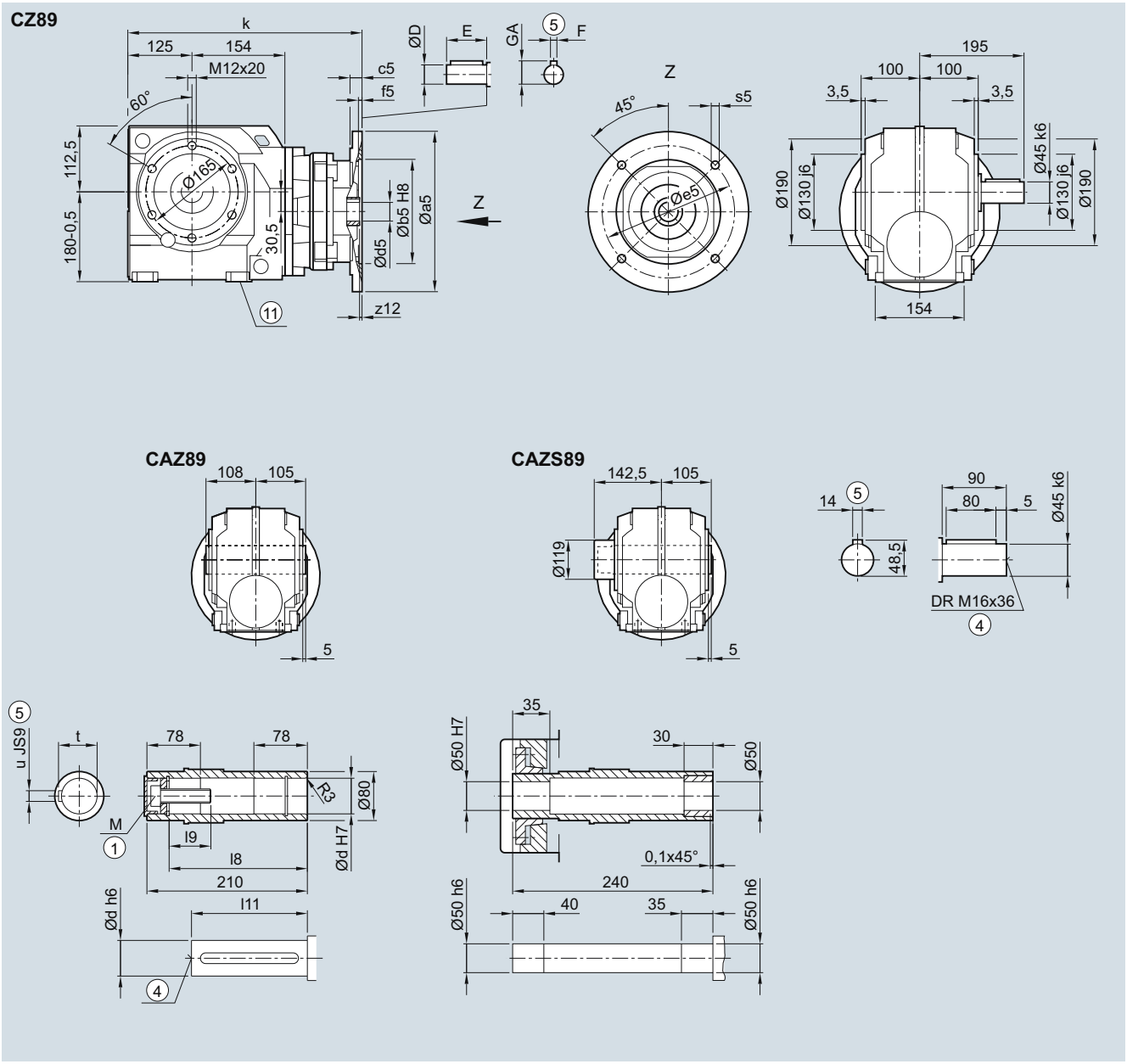
Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

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 6/79 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

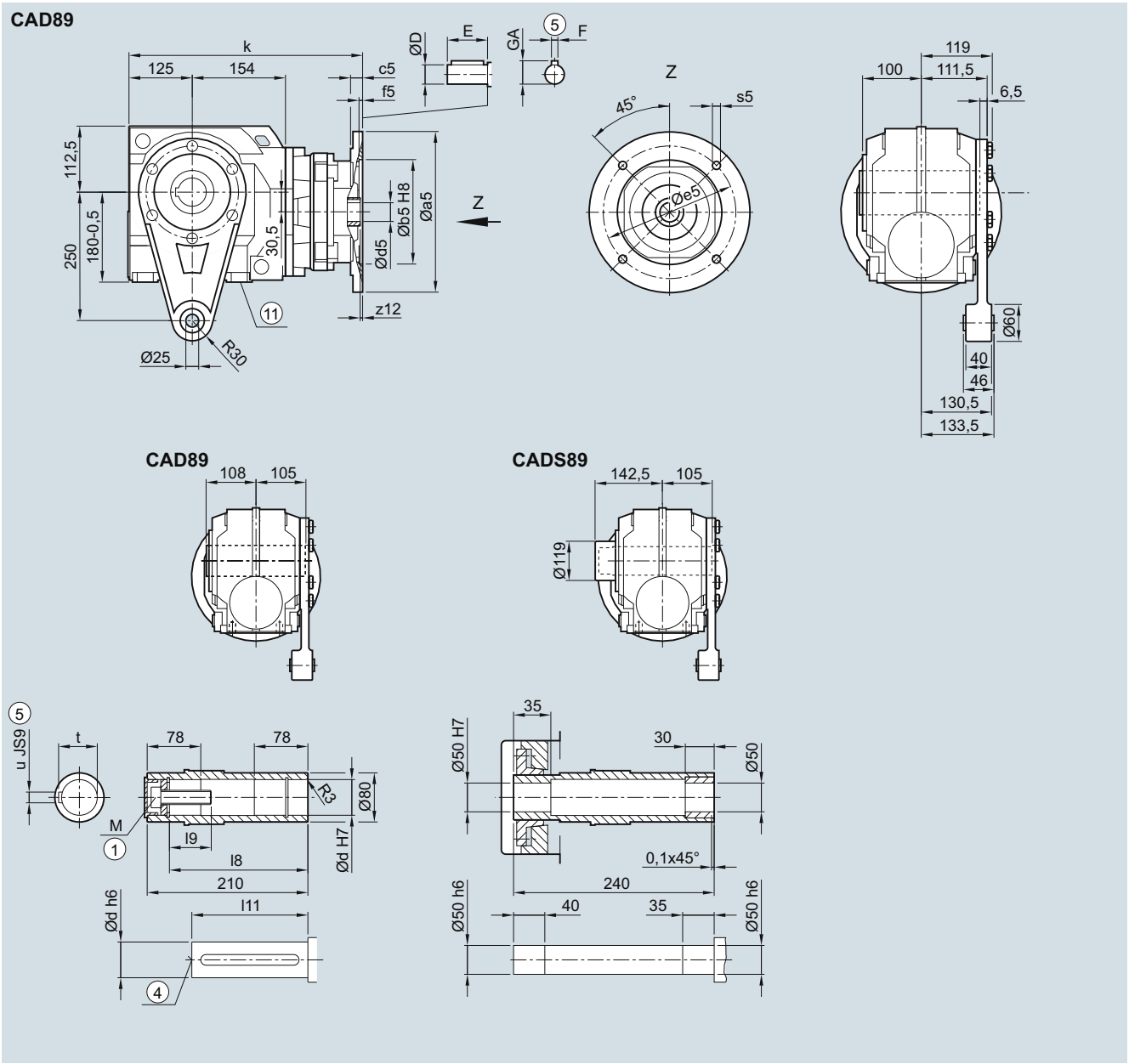
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	k
71	160	110	12	4.5	130	M8	2.5	14	30	5	16.0	345.0
80	200	130	15	4.5	165	M10	4.0	19	40	6	12.5	369.0
90	200	130	15	4.5	165	M10	4.0	24	50	8	27.0	369.0
100	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
112	250	180	16	5.0	215	M12	7.5	28	60	8	31.0	423.5
132	300	230	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 ⑪ Use bores only for foot-mounted design

Dimensions

CAD.89 gearbox in a shaft-mounted design

CAD030K4, CADS030K4



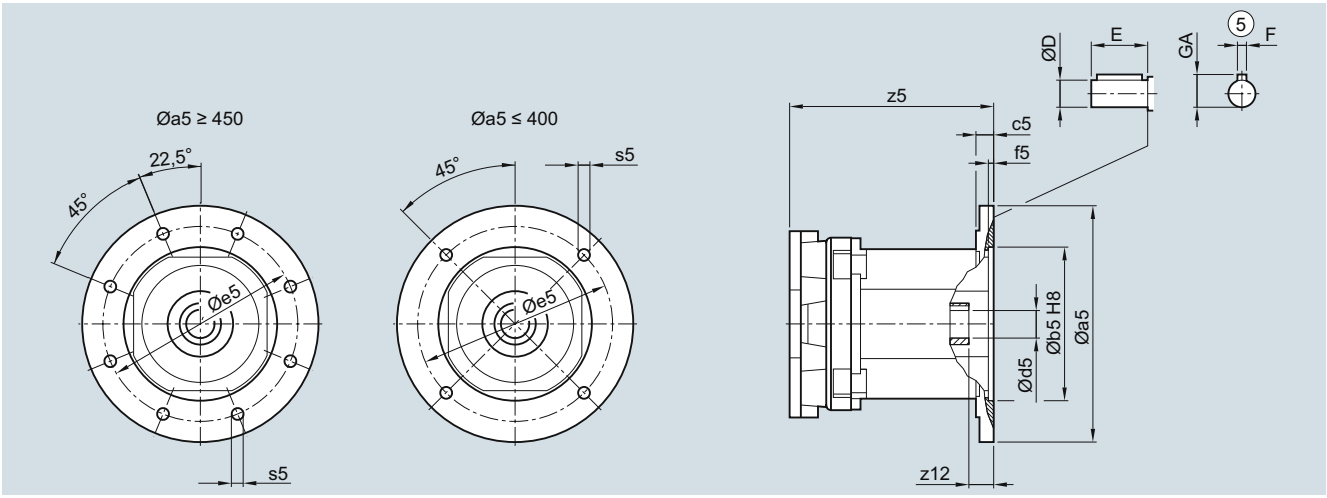
Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

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 ⑪ Use bores only for foot-mounted design

C...29 to C...89 gearboxes

C..030K2, C.F.030K2, C.Z.030K2, C.D.030K2



Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
C...29												
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
C...39												
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
C...49												
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
C...69												
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
C...89												
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

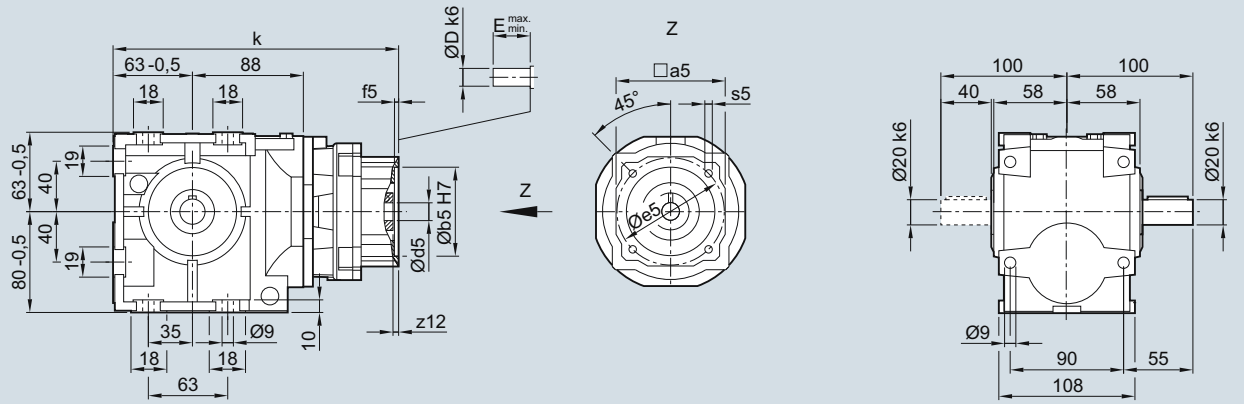
⑤ Feather key/keyway DIN 6885

Dimensions

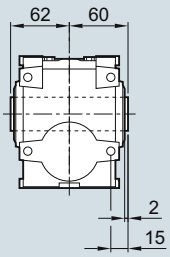
C..29 gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

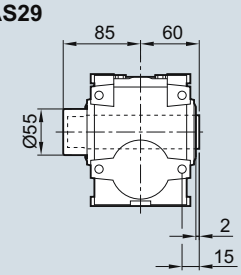
C29

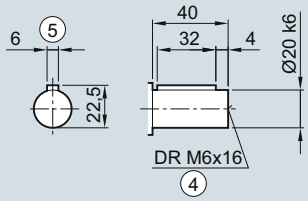


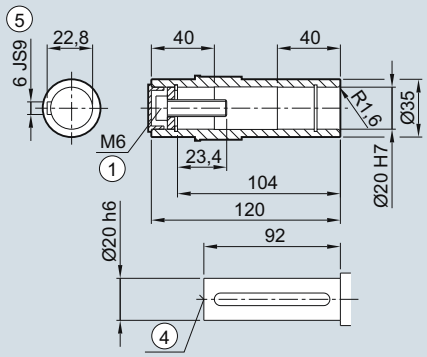
CA29

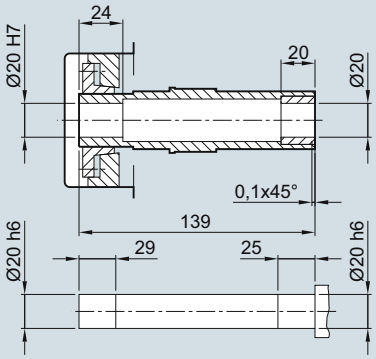


CAS29







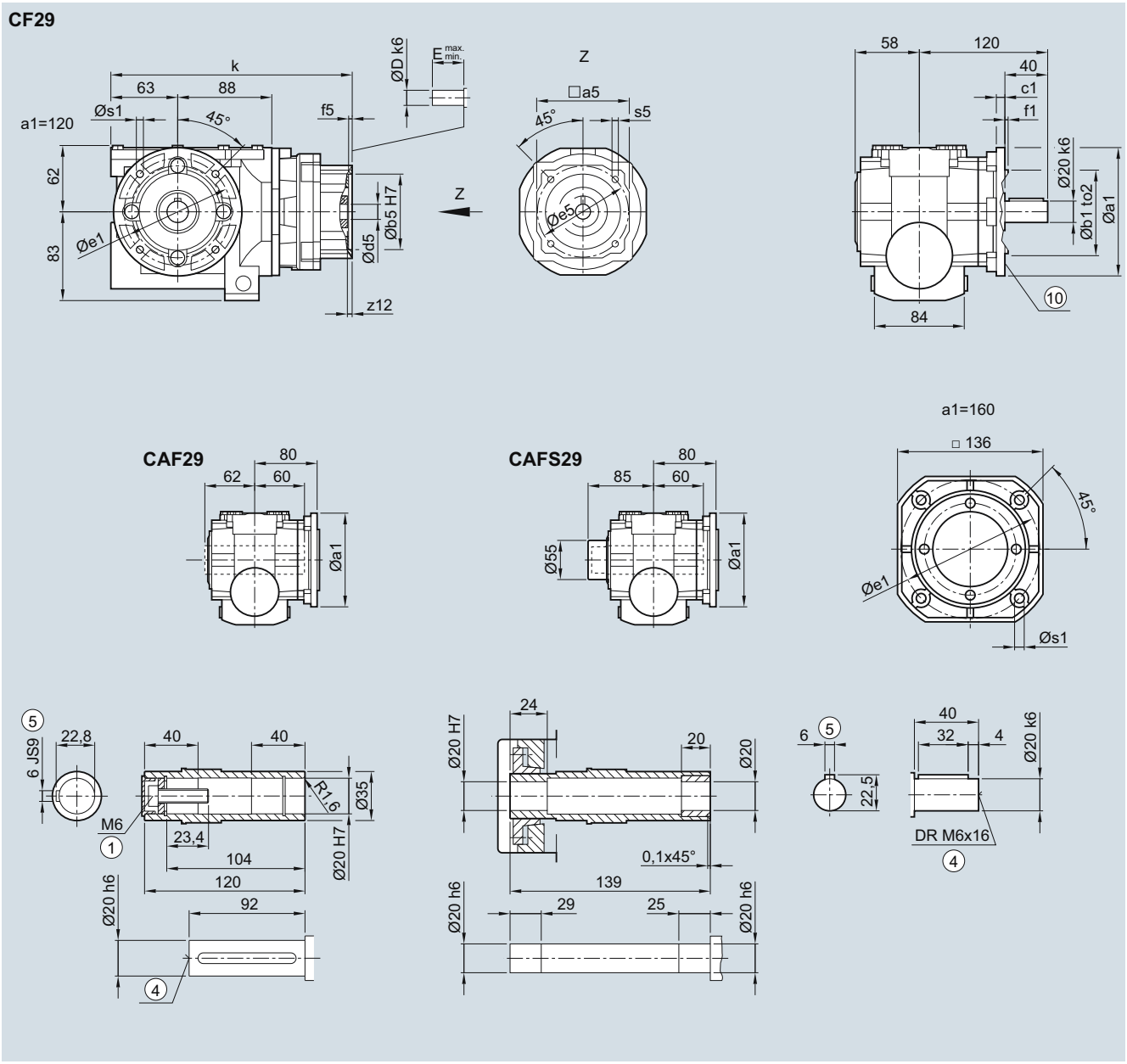


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	233
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	233
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	245.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	245.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	261.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	261.5
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	261.5

① ISO 4014 ④ DIN 332 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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	261

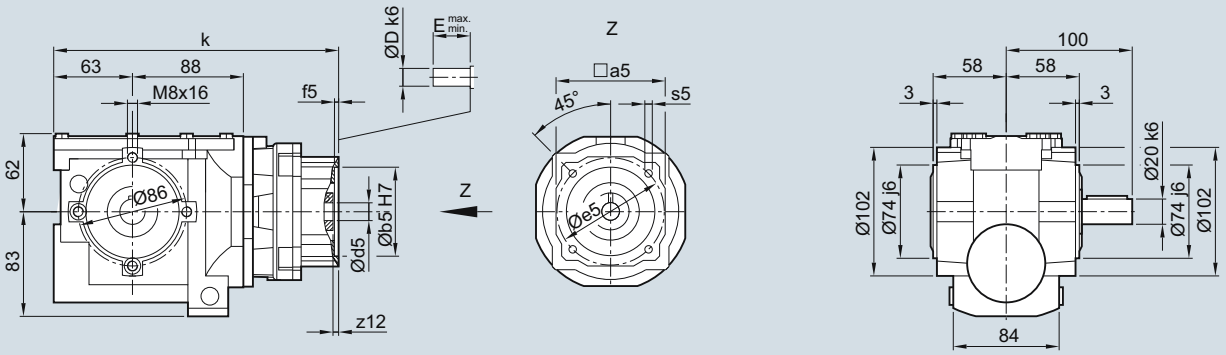
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ For inner contour, see page 6/79

Dimensions

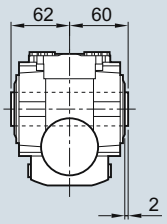
C.Z.29 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

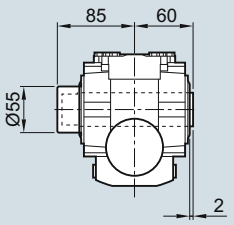
CZ29

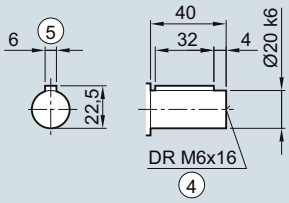


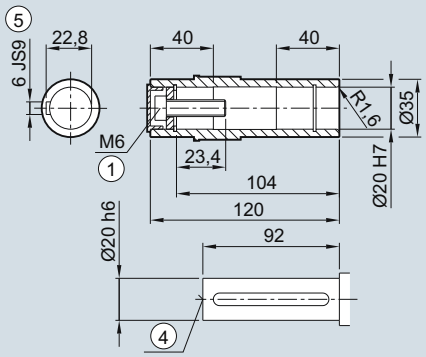
CAZ29

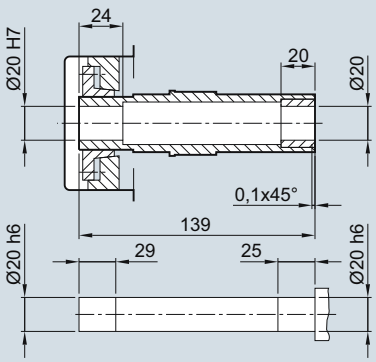


CAZS29







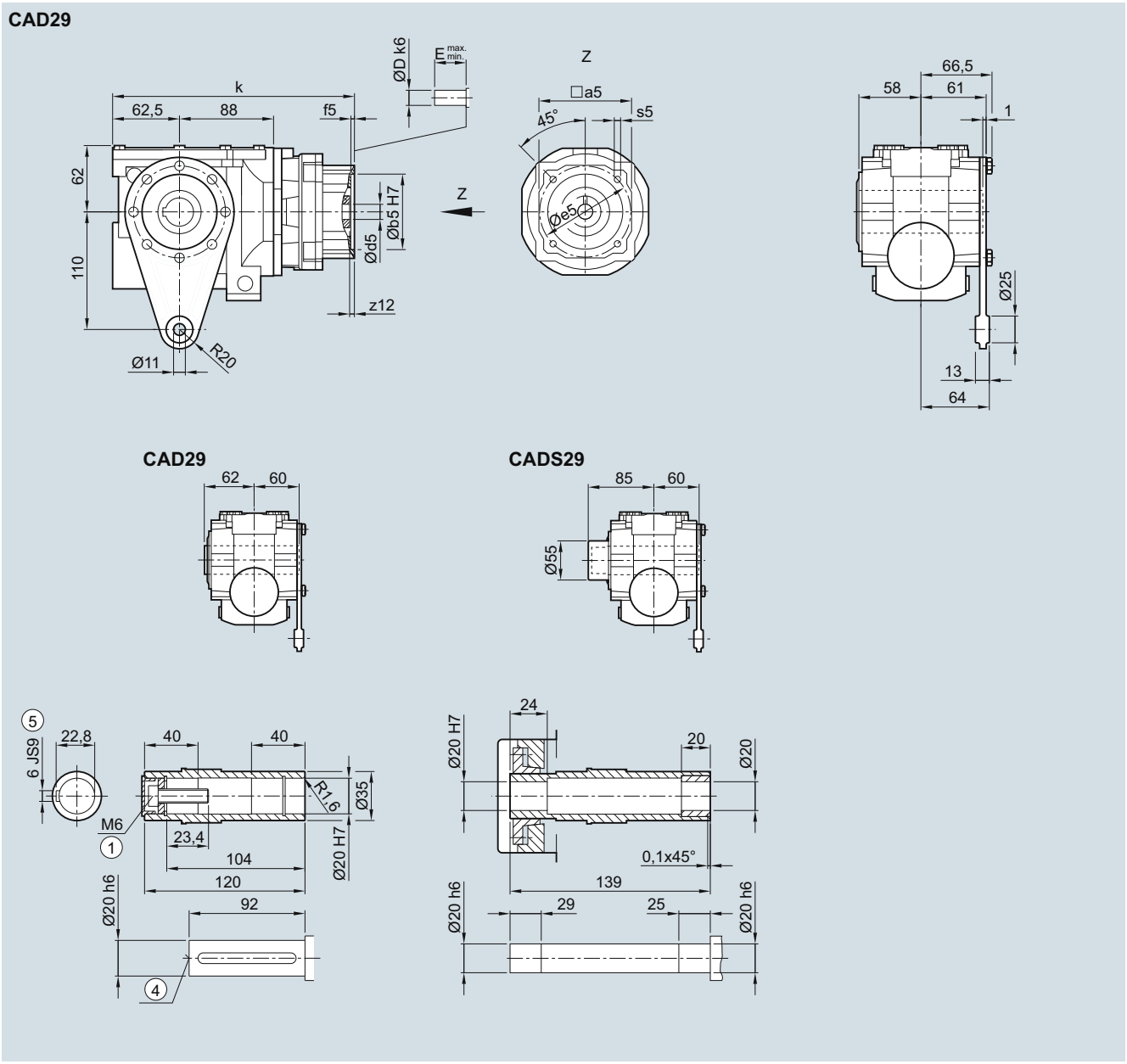


Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	232.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	232.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	245
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	245
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	261
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	261
KS5.3	117	95	4.5	115	M6x11	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



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	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
KS5.3	117	95	4.5	115	M6x11	5	19	35	45	261

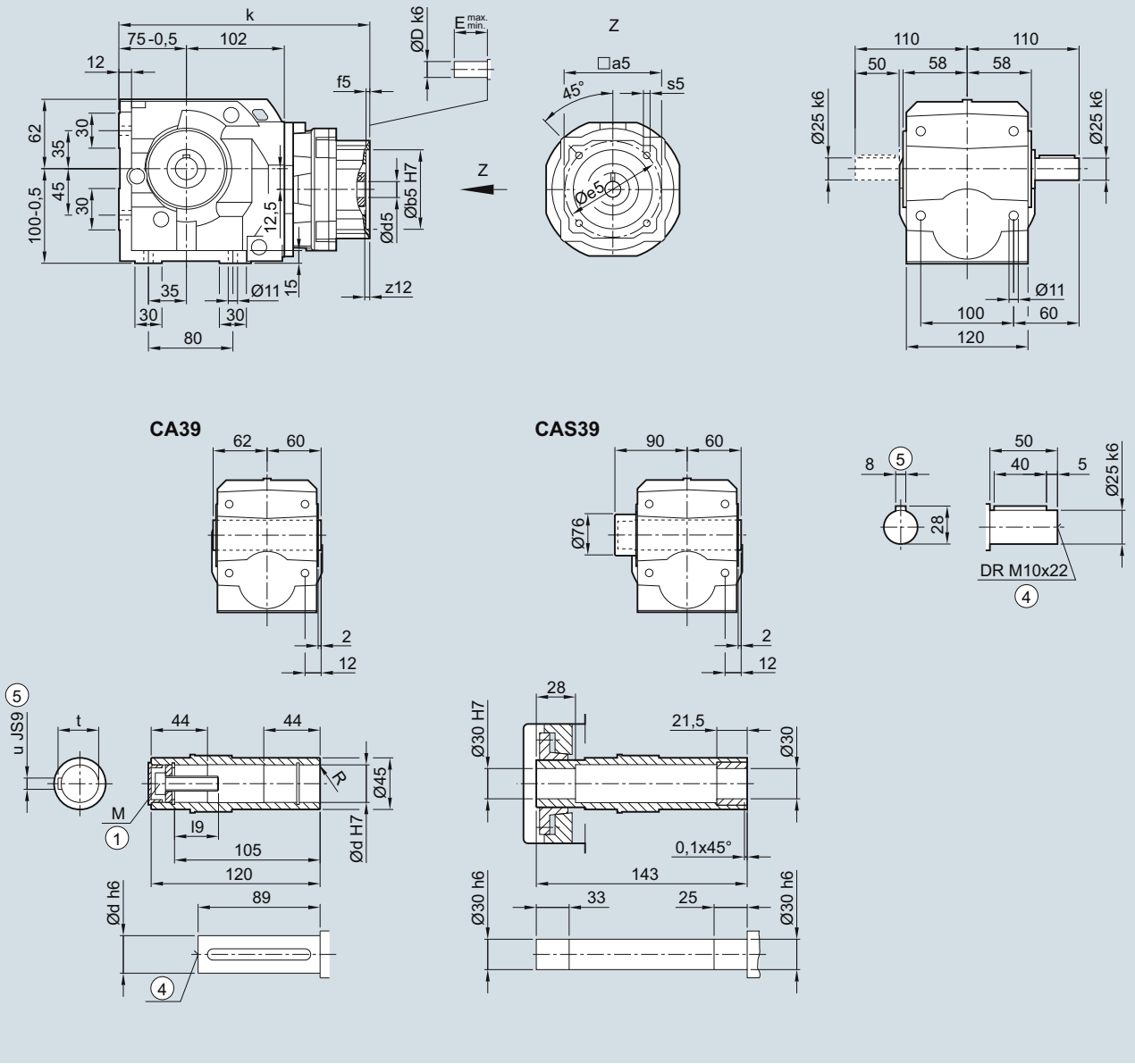
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885

Dimensions

C..39 gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

C39



CA39

CAS39

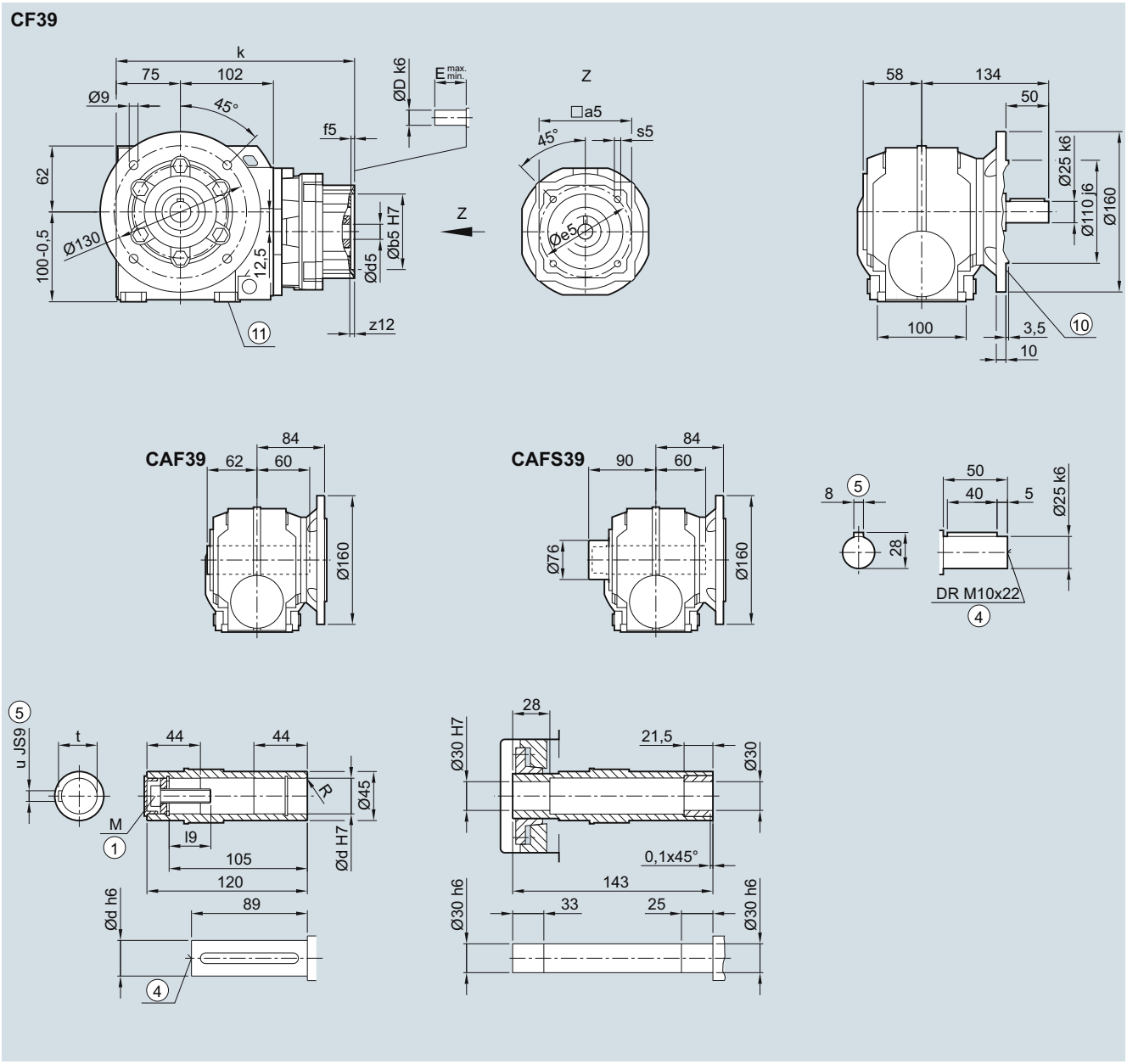
Shaft	d	l9	M	R	t	u
	25	32.6	M10	1.6	28.3	8
	30	32.6	M10	3.0	33.3	8

Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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.39 gearbox in a flange-mounted design

CF030KS, CAF030KS, CAFS030KS



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	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

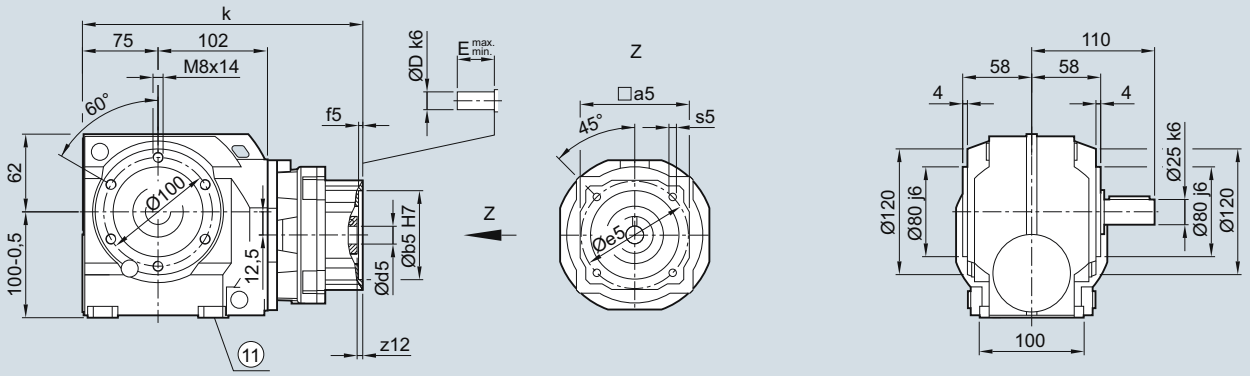
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 6/79 ⑪ Use bores only for foot-mounted design

Dimensions

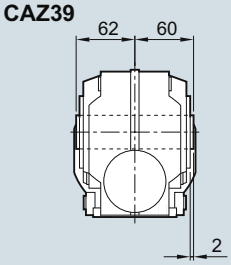
C.Z.39 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

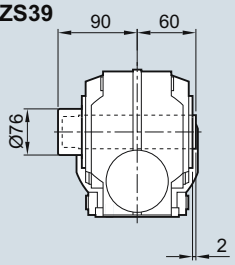
CZ39

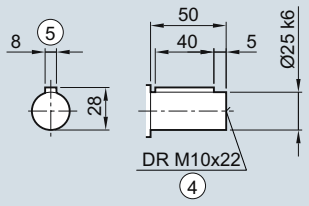


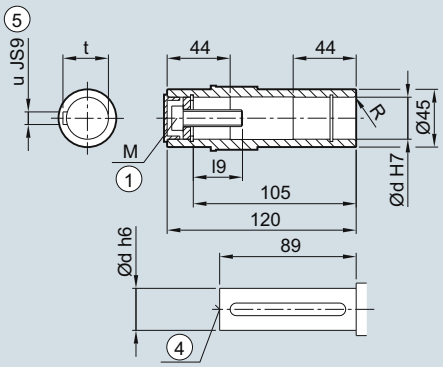
CAZ39

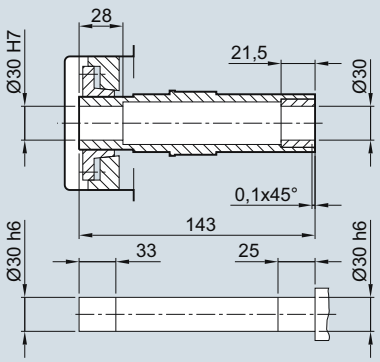


CAZS39









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

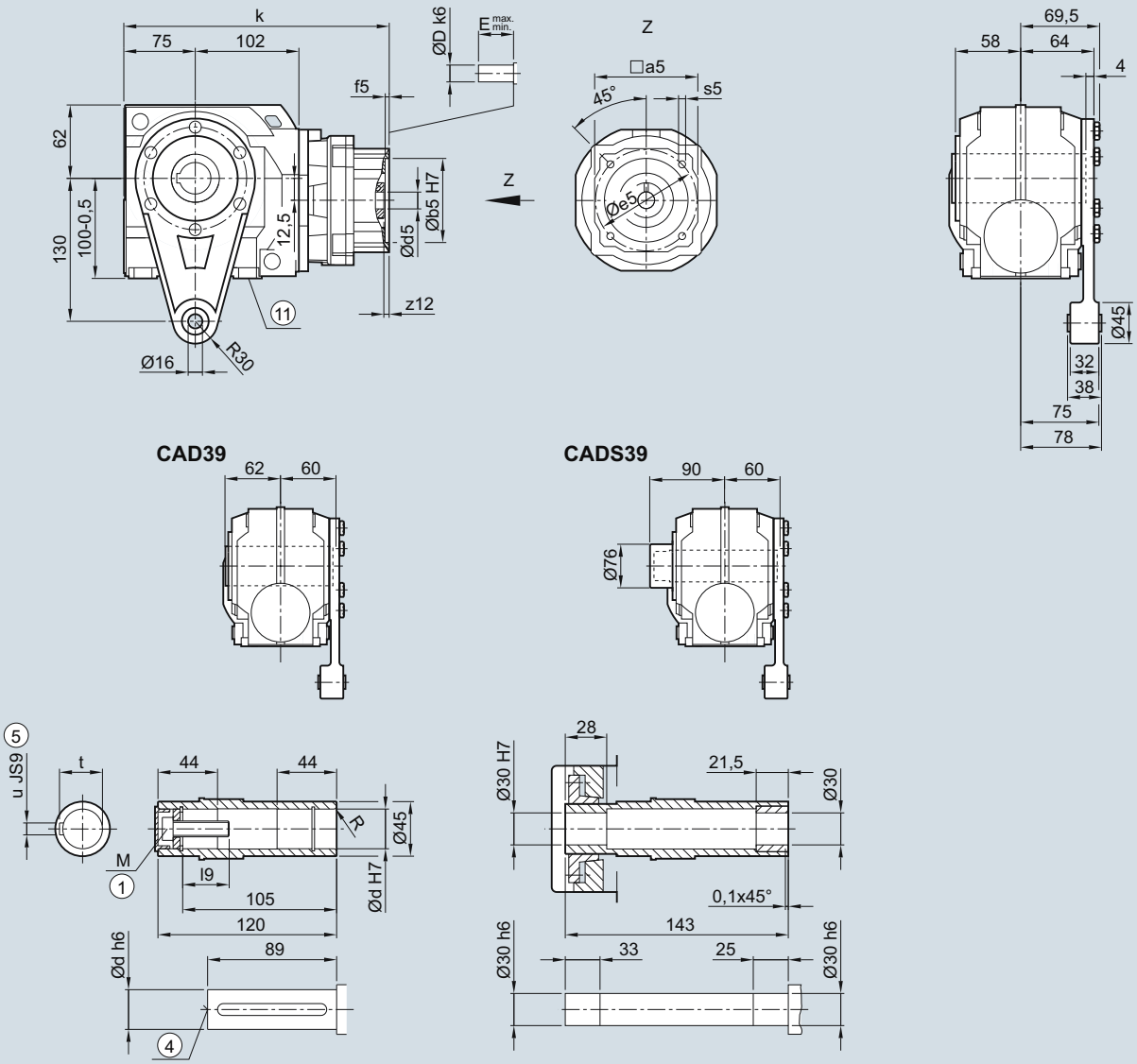
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	259
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	259
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	271.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	271.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	287.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	287.5
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

CAD.39 gearbox in a shaft-mounted design

CAD030KS, CADS030KS

CAD39



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

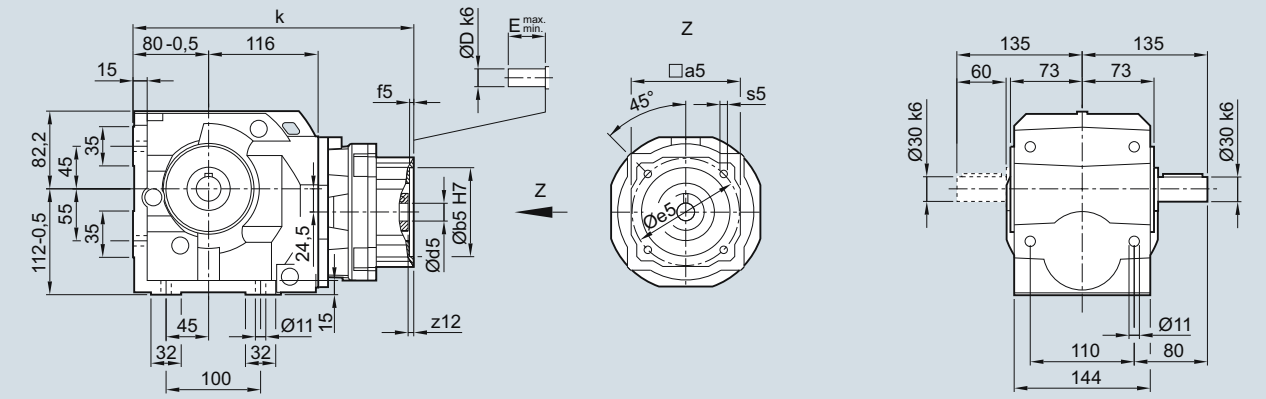
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	259
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	259
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	271.5
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	271.5
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	287.5
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	287.5
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

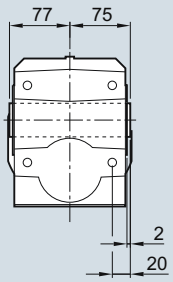
C..49 gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

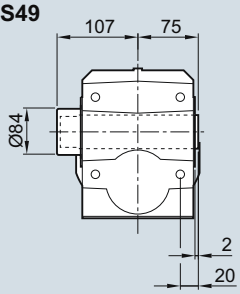
C49

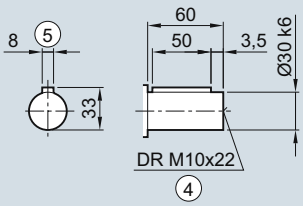


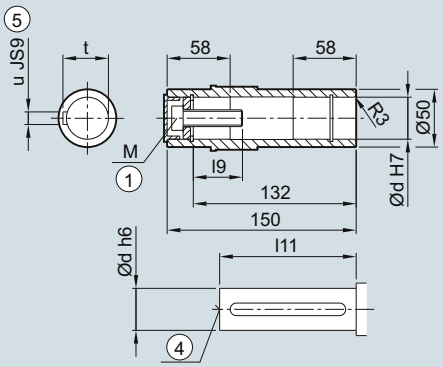
CA49

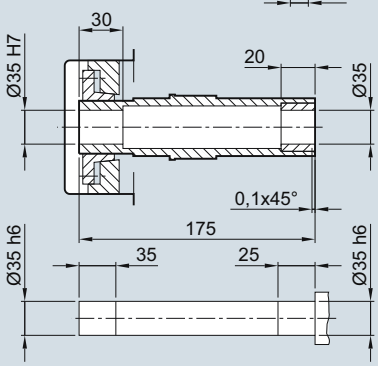


CAS49









Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

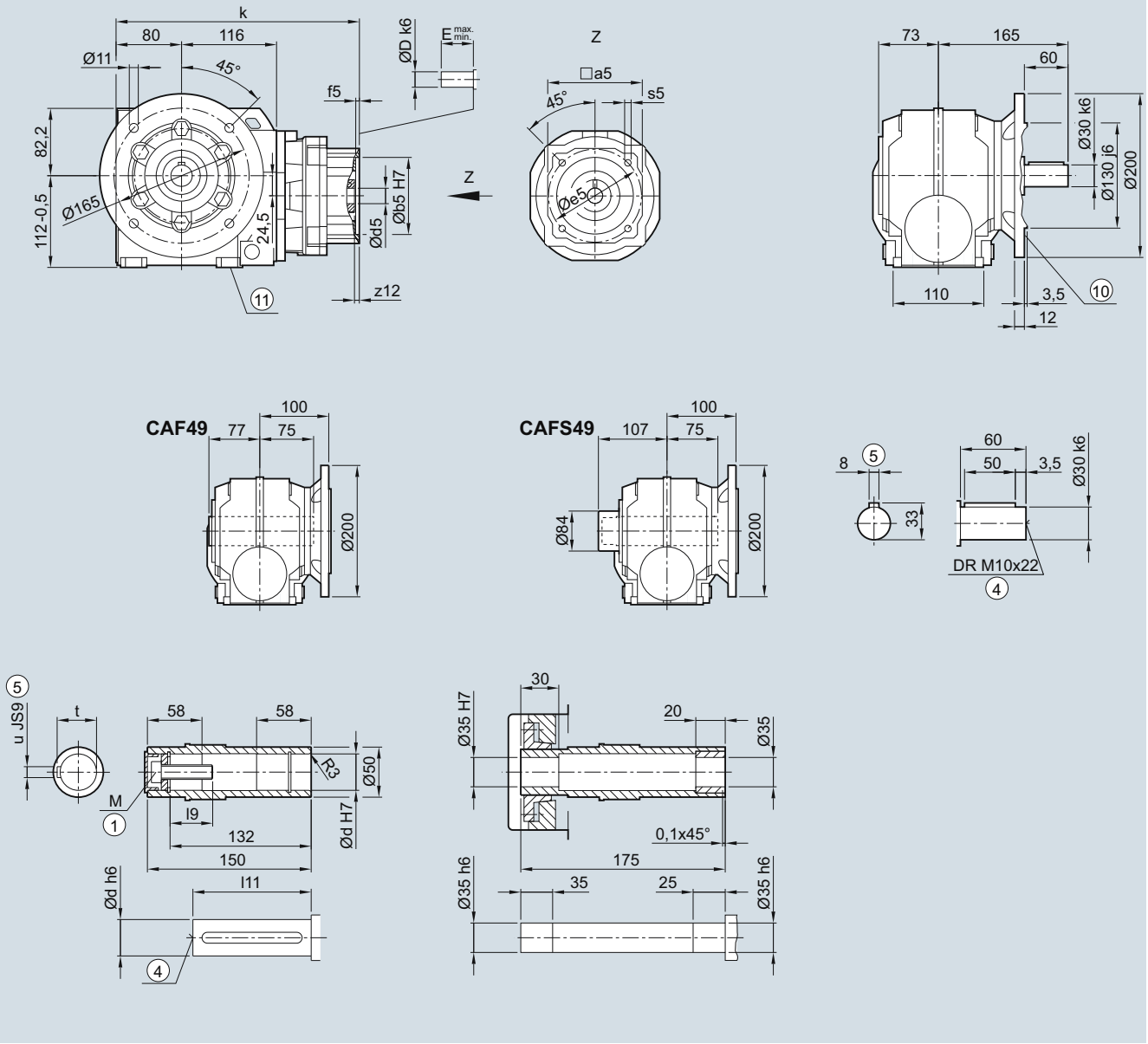
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	268.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	268.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	281
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	281
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	297
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	297
KS5.3	117	95	4.5	115	M6x11	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

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885

C.F.49 gearbox in a flange-mounted design

CF030KS, CAF030KS, CAFS030KS

CF49



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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

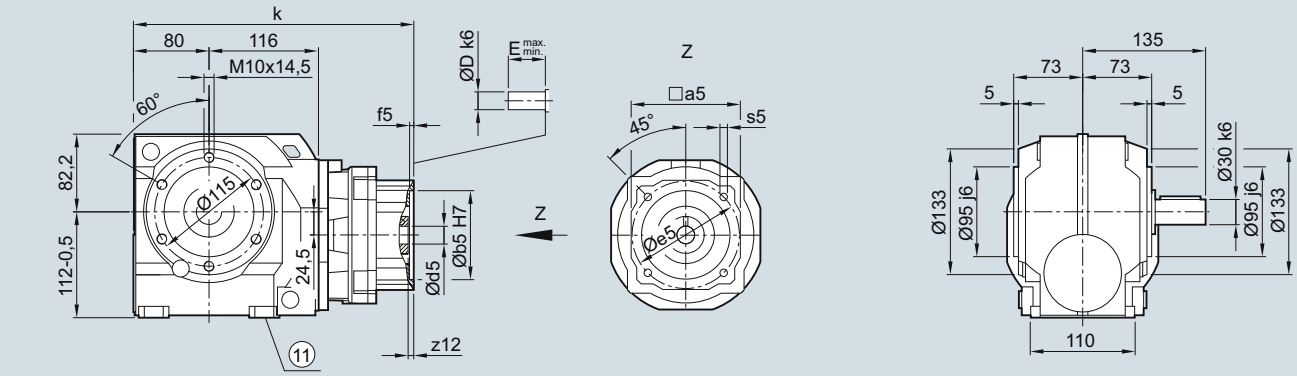
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 6/79 ⑪ Use bores only for foot-mounted design

Dimensions

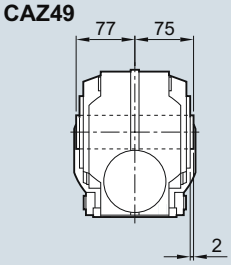
C.Z.49 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

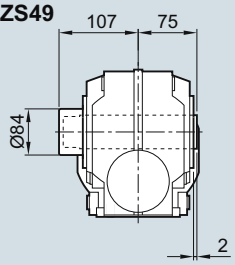
CZ49

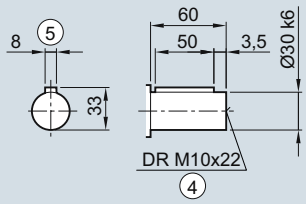


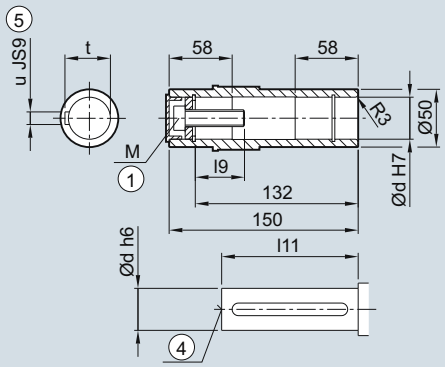
CAZ49

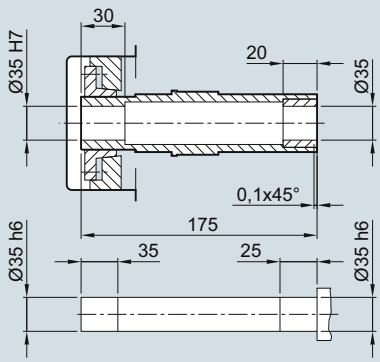


CAZS49









Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

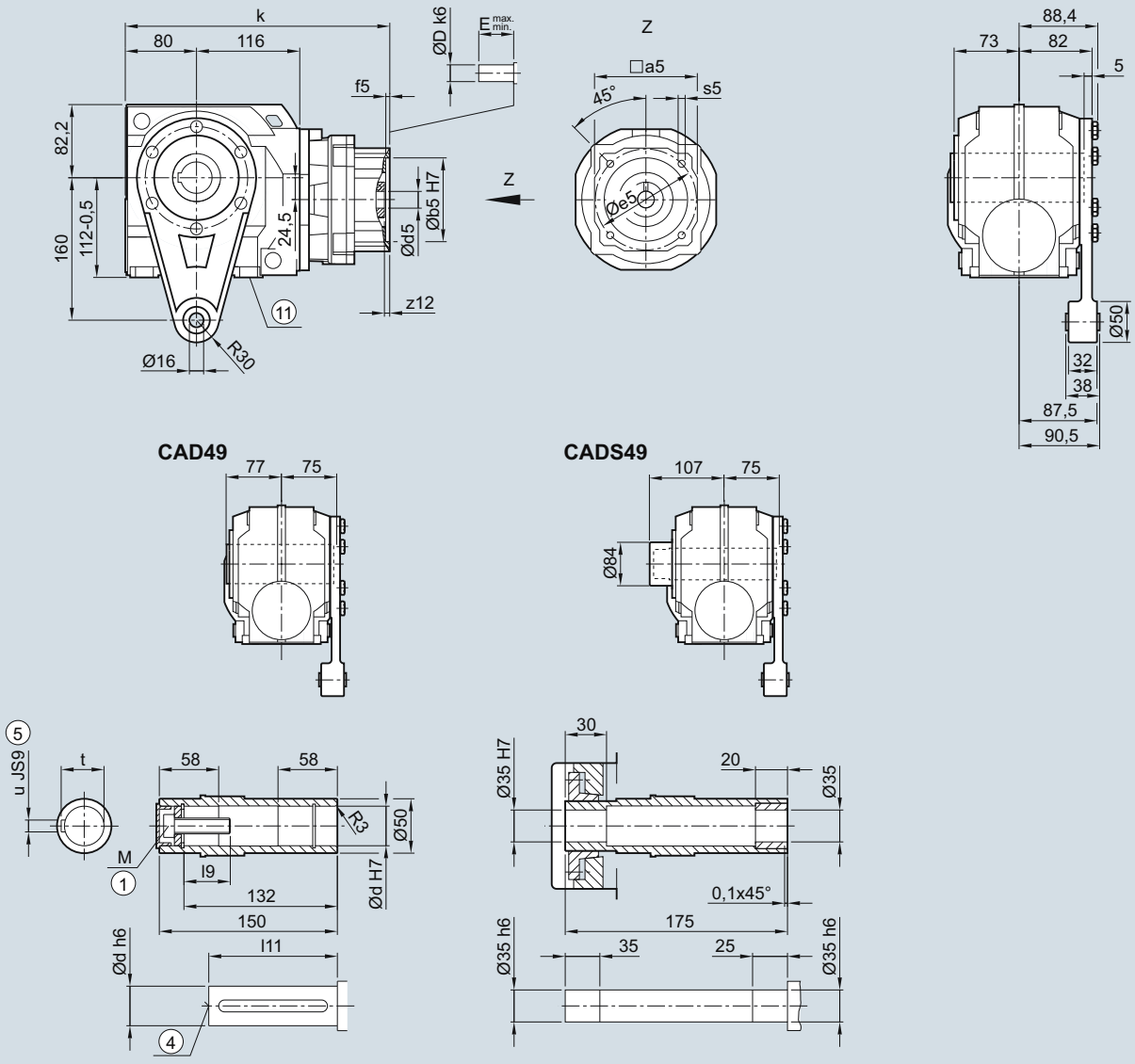
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	268.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	268.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	281
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	281
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	297
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	297
KS5.3	117	95	4.5	115	M6x11	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

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

CAD.49 gearbox in a shaft-mounted design

CAD030KS, CADS030KS

CAD49



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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

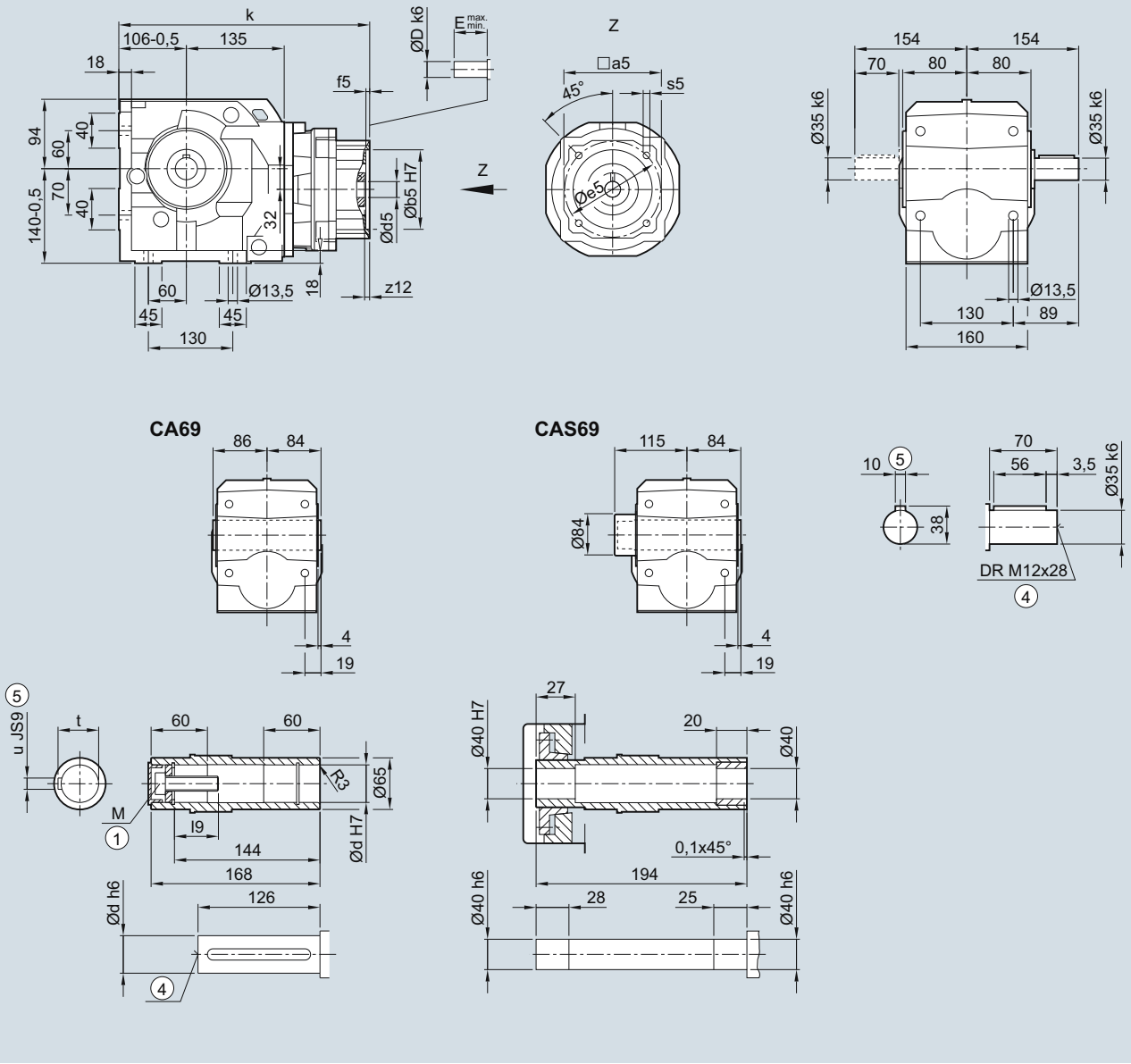
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

C..69 gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

C69



CA69

CAS69

Shaft	d	l9	M	t	u
	40	47.75	M16	43.3	12
	45	48.75	M16	48.3	14

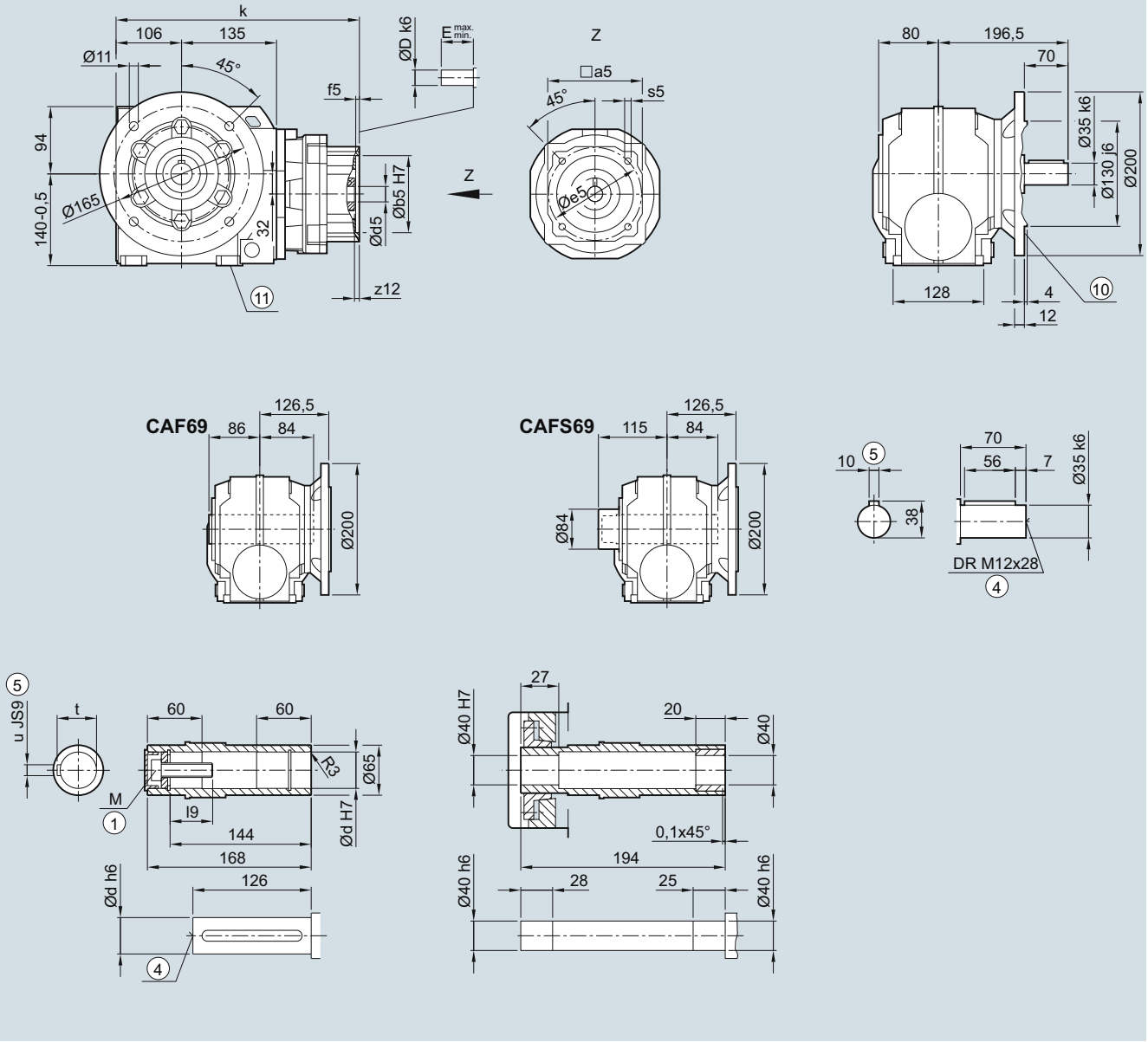
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	313.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	313.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	326
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	326
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	342
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	342
KS5.3	117	95	4.5	115	M6x11	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

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	l9	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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

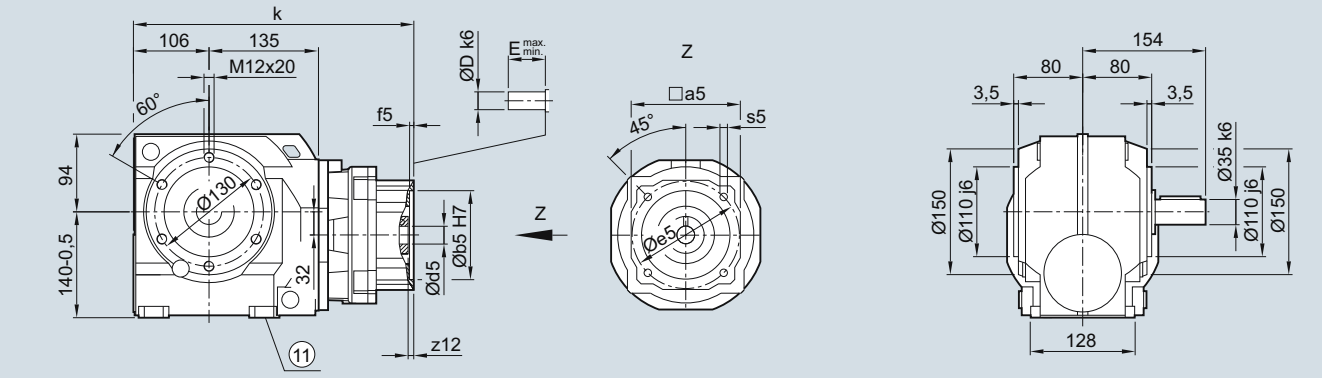
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑩ For inner contour, see page 6/79 ⑪ Use bores only for foot-mounted design

Dimensions

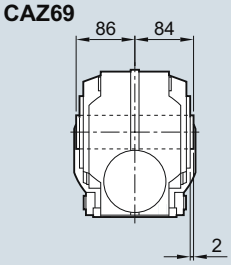
C.Z.69 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

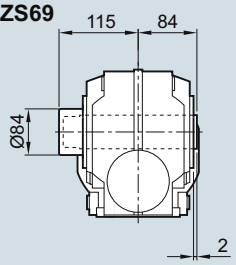
CZ69

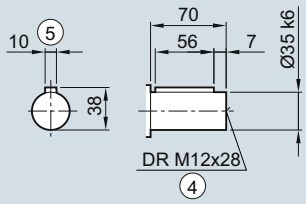


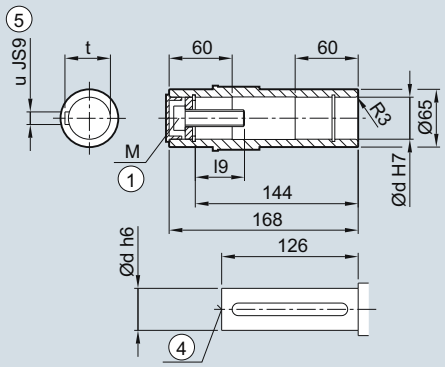
CAZ69

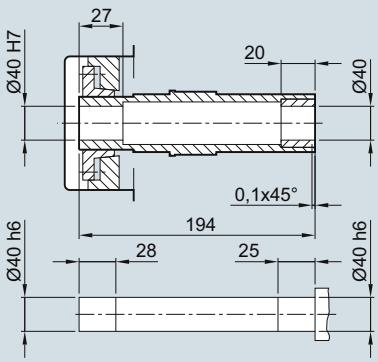


CAZS69









Shaft	d	l9	M	t	u
	40	47.75	M16	43.3	12
	45	48.75	M16	48.3	14

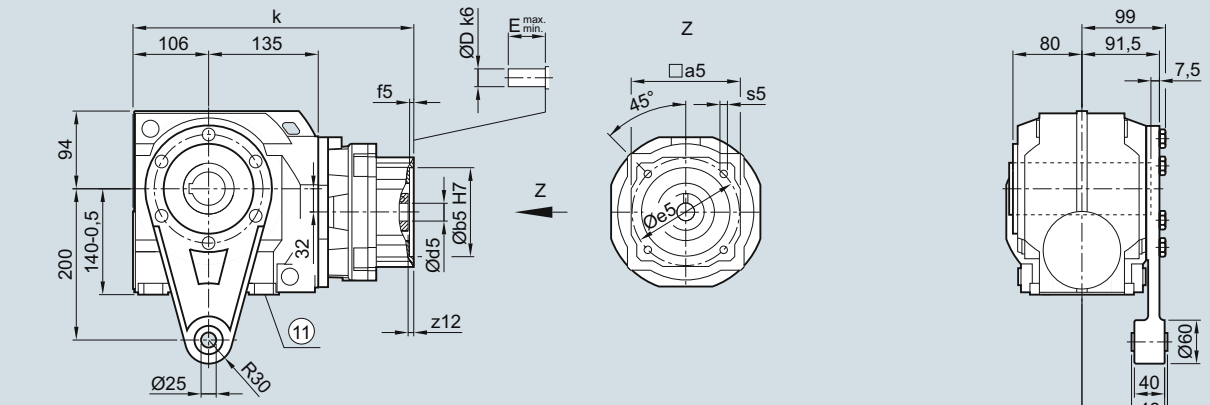
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	313.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	313.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	326
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	326
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	342
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	342
KS5.3	117	95	4.5	115	M6x11	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

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

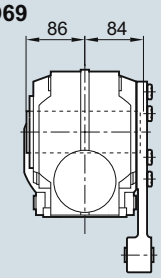
CAD.69 gearbox in a shaft-mounted design

CAD030KS, CADS030KS

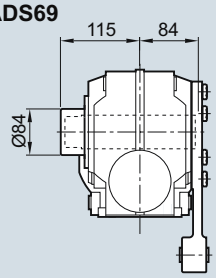
CAD69

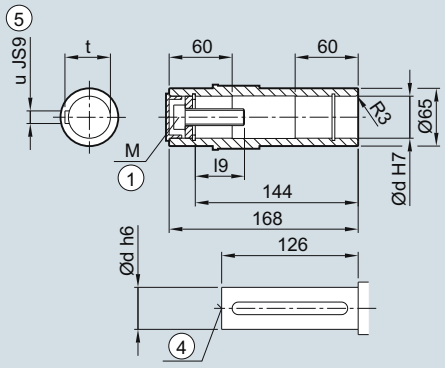


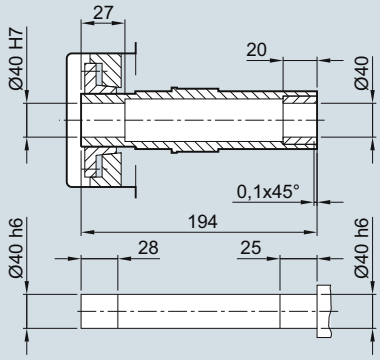
CAD69



CADS69







Shaft	d	l9	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	$E_{min.}$	$E_{max.}$	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
KS5.3	117	95	4.5	115	M6x11	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

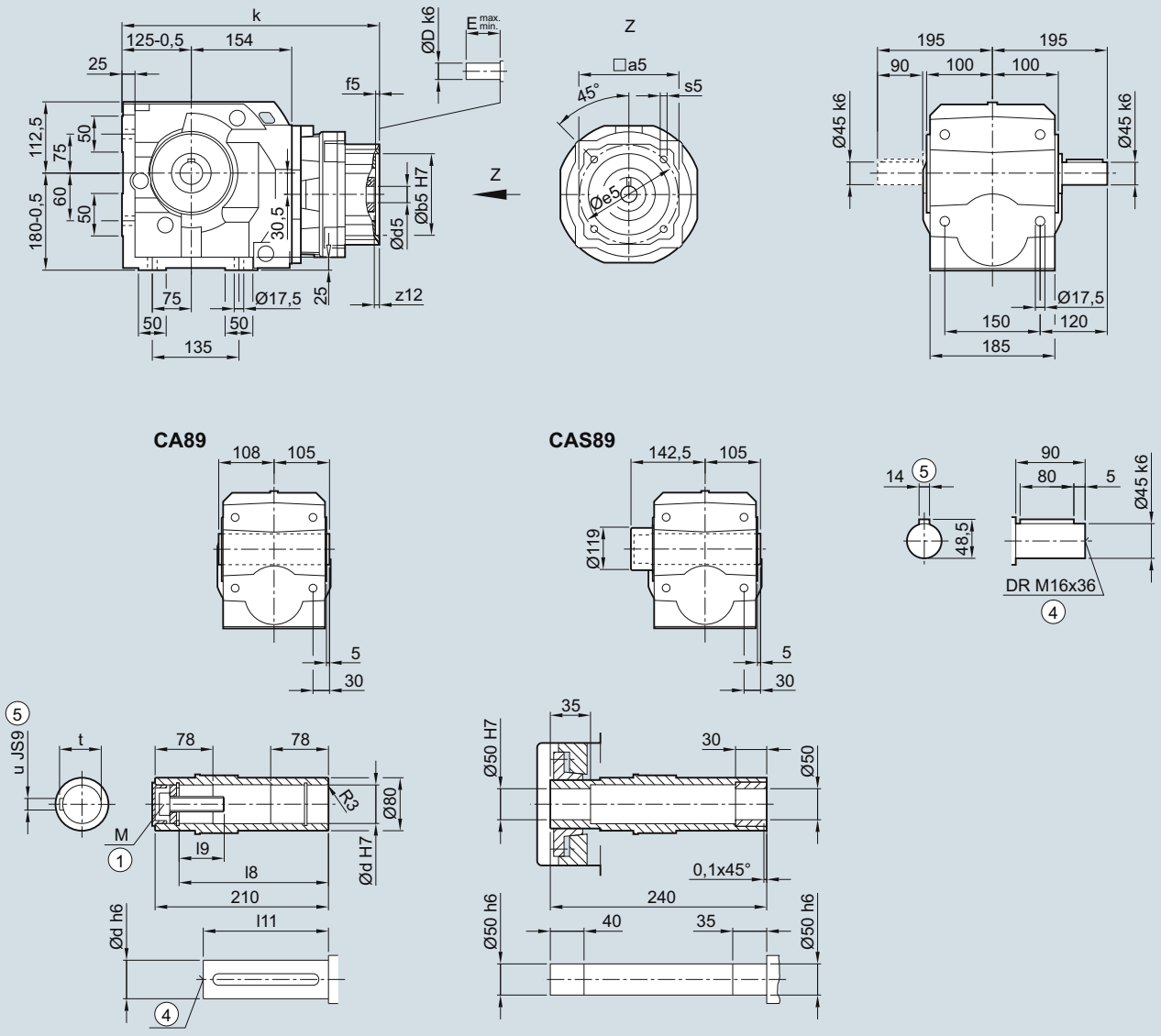
① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885 ⑪ Use bores only for foot-mounted design

Dimensions

C..89 gearbox in a foot-mounted design

CF030KS, CAF030KS, CAFS030KS

C89



CA89

CAS89

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

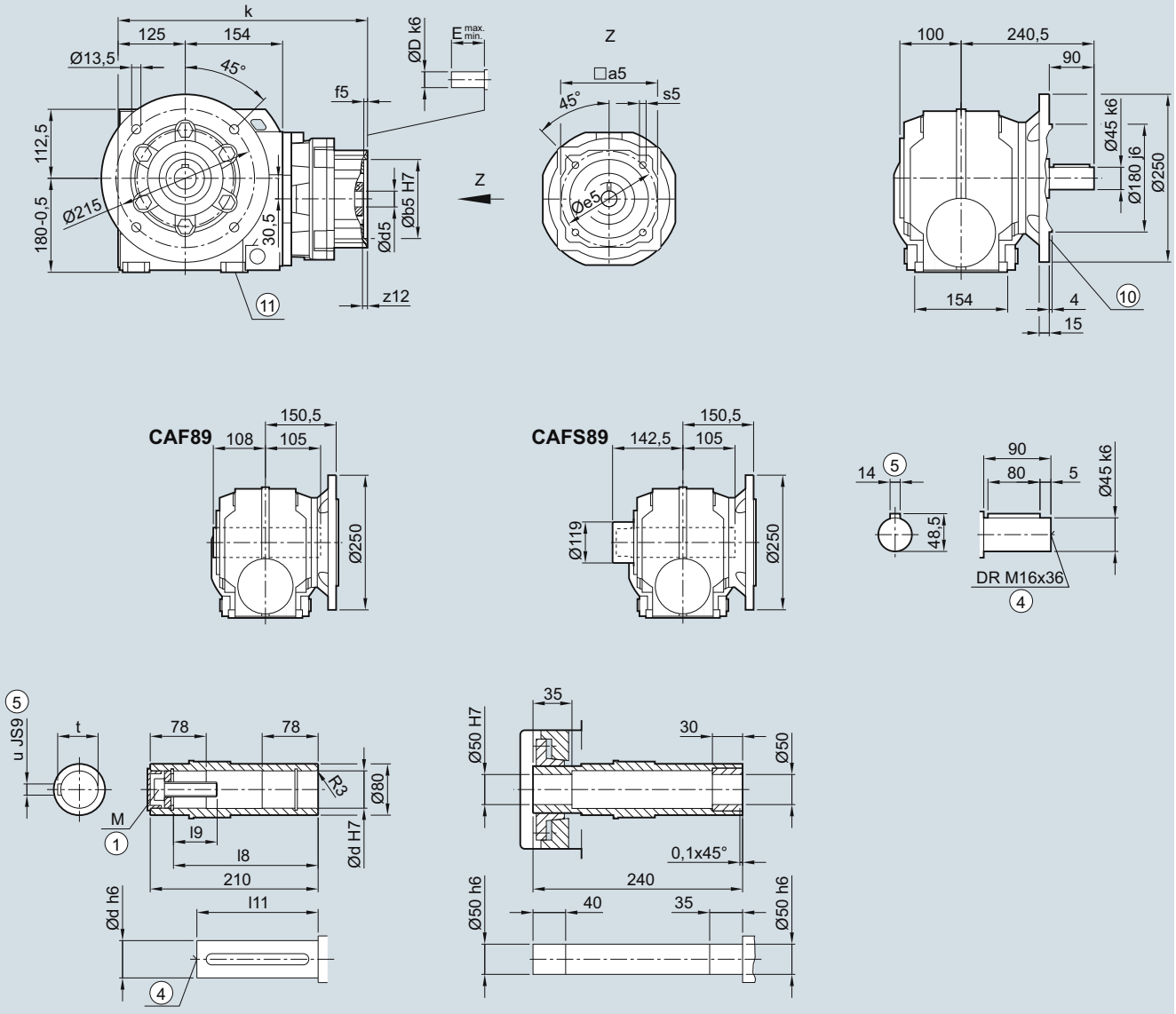
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS5.3	117	95	4.5	115	M6x11	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

CF89



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

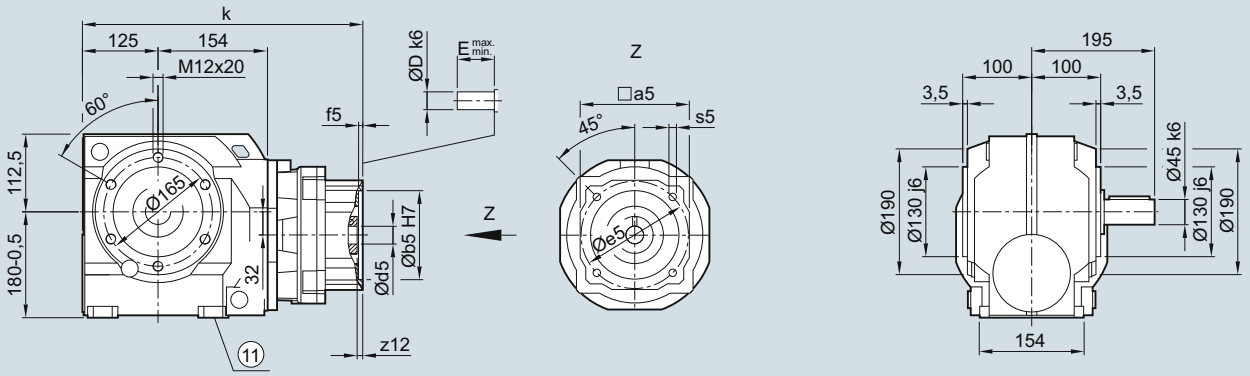
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS5.3	117	95	4.5	115	M6x11	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 6/79 ⑪ Use bores only for foot-mounted design

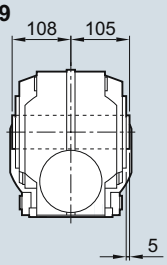
C.Z.89 gearbox in a housing flange design

CZ030KS, CAZ030KS, CAZS030KS

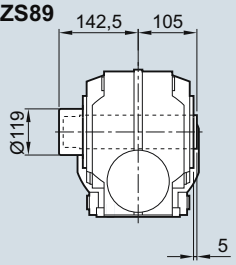
CZ89

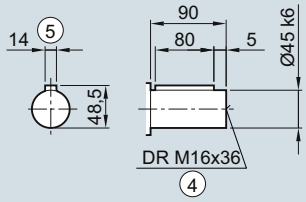


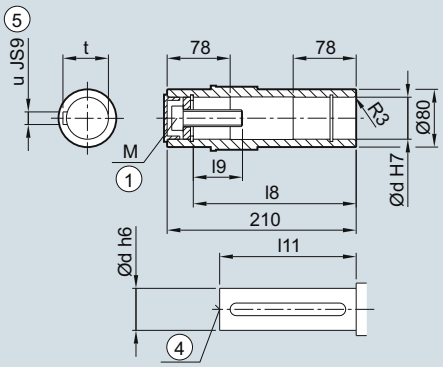
CAZ89

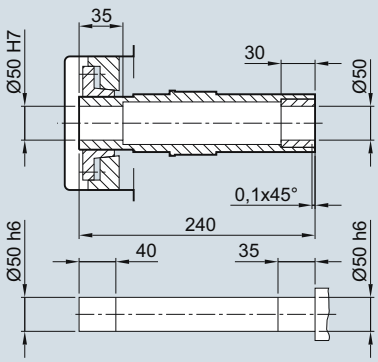


CAZS89









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

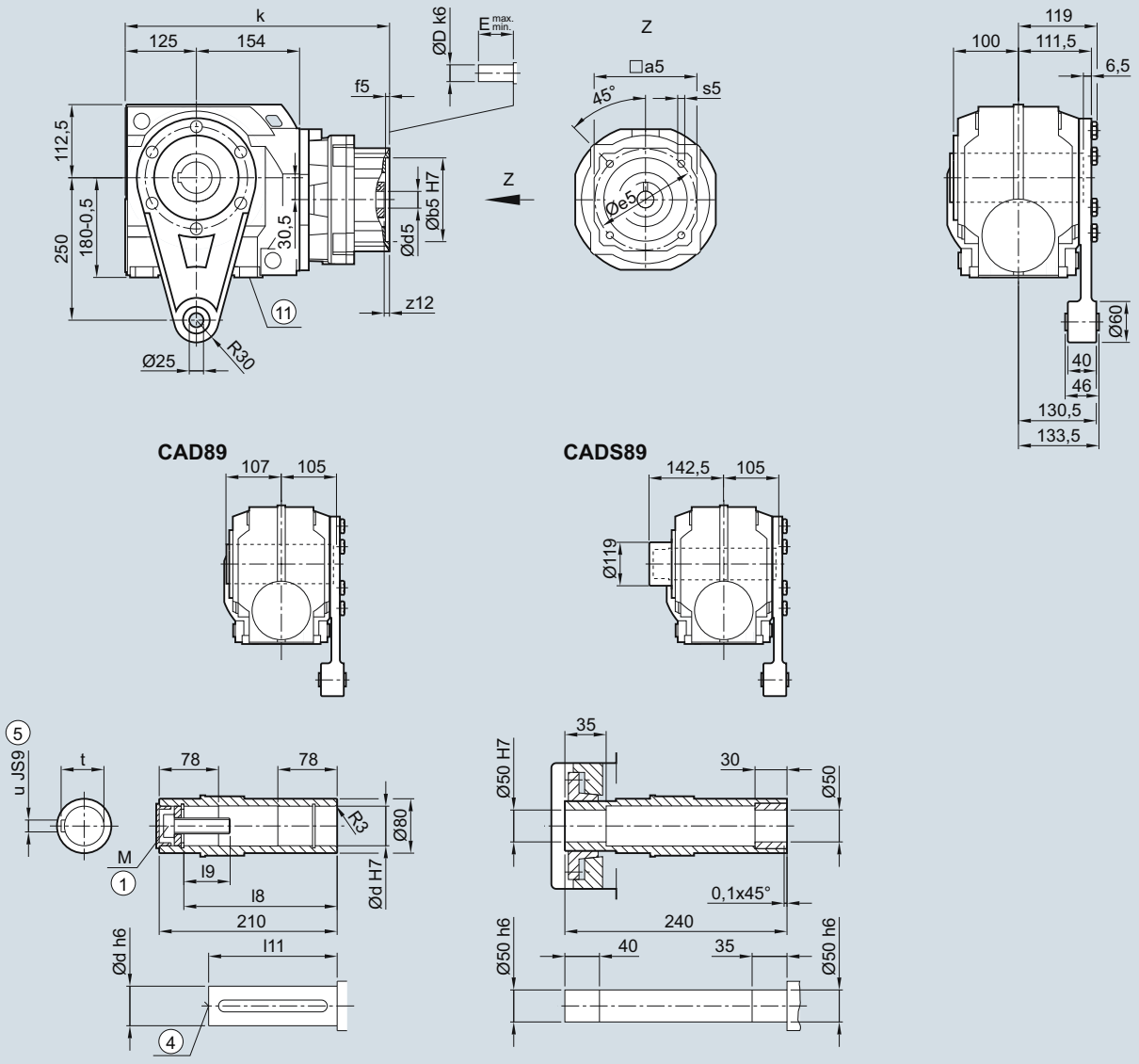
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

CAD.89 gearbox in a shaft-mounted design

CAD030KS, CADS030KS

CAD89



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

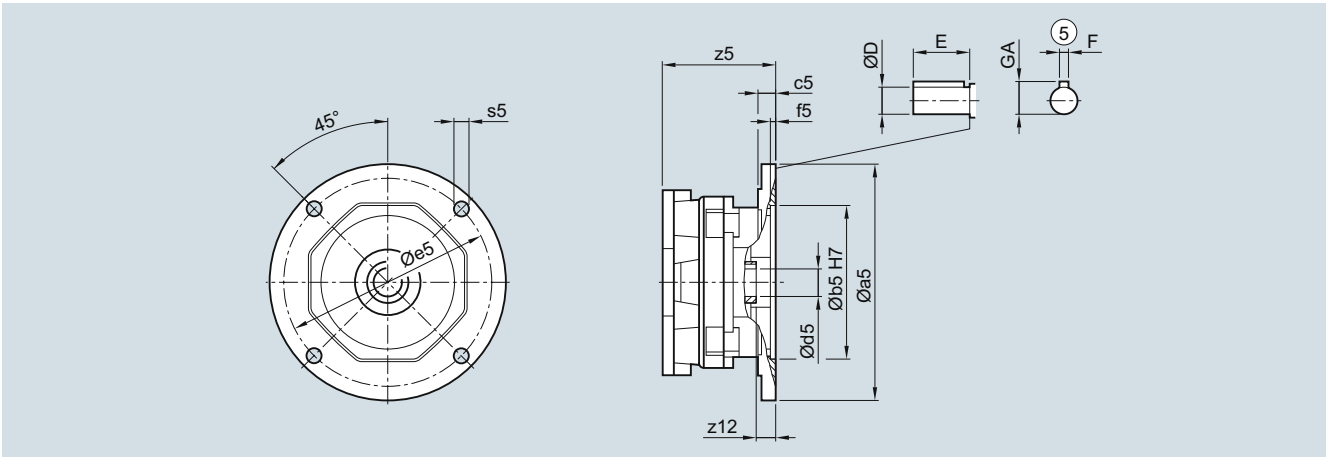
Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	k
KS3.1	73	50	4.5	70	M5x9.5	5	14	25	31	349.5
KS3.2	73	60	4.5	75	M6x11	5	14	25	31	349.5
KS4.1	85	70	5.5	90	M6x13	5	19	35	40	362.0
KS4.2	85	80	5.5	100	M6x13	5	19	35	40	362.0
KS5.1	117	80	4.5	100	M6x11	5	19	35	45	374.0
KS5.2	117	95	4.5	115	M8x14	5	19	35	45	374.0
KS5.3	117	95	4.5	115	M6x11	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 ⑪ Use bores only for foot-mounted design

Dimensions

C...29 to C...89 gearboxes

C..030K5, C.F.030K5, C.Z.030K5, CAD.030K5

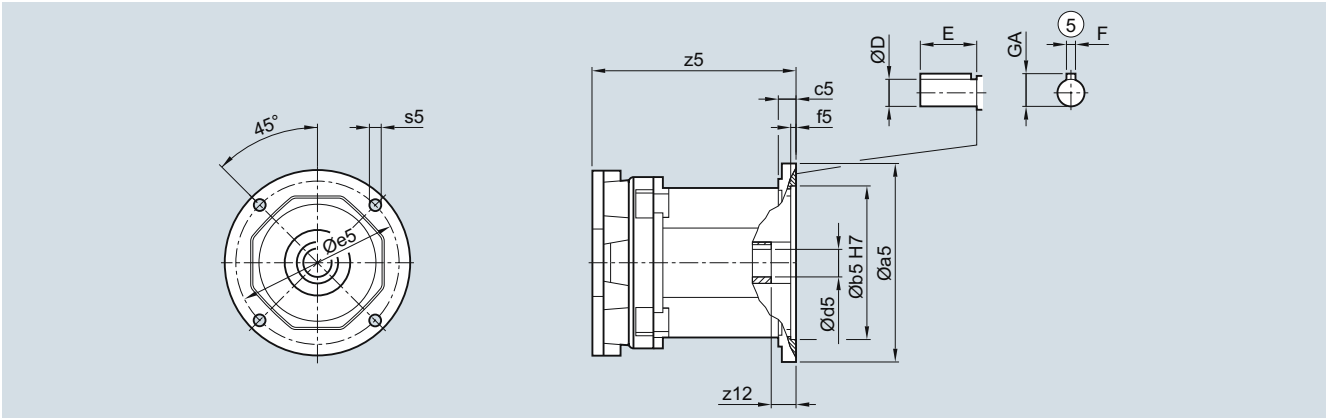


Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	F	GA	z5
C...29												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	5.0	149.2	11.0	16	22.225	57.150	4.763	24.346	118.5
C...39												
56	168	114.3	15	5.0	149.2	11.0	16	15.875	47.752	4.763	17.895	118.5
140	168	114.3	15	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
C...49												
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
C...69												
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
C...89												
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

C...29 to C...89 gearboxes

C..030K3, C.F.030K3, C.Z.030K3, CAD.030K3



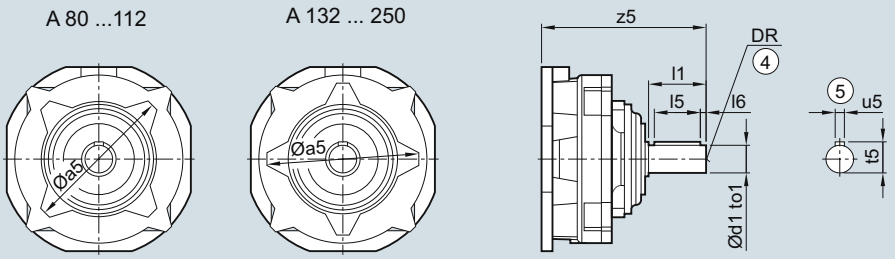
Adapter	a5	b5	c5	f5	e5	s5	z12	d5/D	E	GA	F	z5
C...29												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	15	5.0	149.2	11.0	28.0	22.225	57.150	4.763	24.346	201.0
C...39												
56	168	114.3	15	5.0	149.2	11.0	27.5	15.875	47.752	4.763	17.895	201.0
140	168	114.3	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
C...49												
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
C...69												
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
C...89												
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

Dimensions

C...29 to C...89 gearboxes

C..030A, C.F.030A, C.Z.030A, CAD.030A

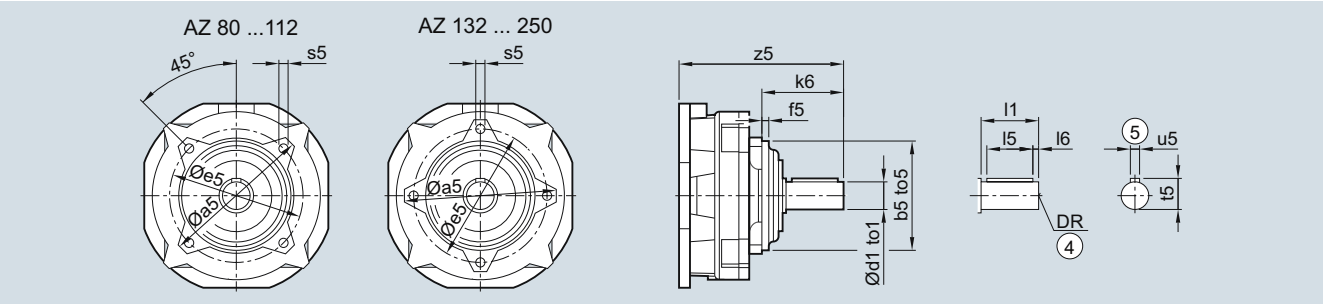


Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
C...29										
AZ-80	132	19	k6	40	32	4	6	21.5	M6	143.5
AZ-90	132	24	k6	50	40	5	8	27.0	M8	153.5
C...39										
AZ-80	132	19	k6	40	32	4	6	21.5	M6	143.5
AZ-90	132	24	k6	50	40	5	8	27.0	M8	153.5
AZ-100	170	28	k6	60	50	5	8	31.0	M10	220.5
C...49										
AZ-80	132	19	k6	40	32	4	6	21.5	M6	134.0
AZ-90	132	24	k6	50	40	5	8	27.0	M8	144.0
AZ-100	170	28	k6	60	50	5	8	31.0	M10	211.0
AZ-112	170	28	k6	60	50	5	8	31.0	M10	211.0
C...69										
AZ-80	132	19	k6	40	32	4	6	21.5	M6	134.0
AZ-90	132	24	k6	50	40	5	8	27.0	M8	144.0
AZ-100	170	28	k6	60	50	5	8	31.0	M10	211.0
AZ-112	170	28	k6	60	50	5	8	31.0	M10	211.0
AZ-132	215	38	k6	80	70	5	10	41.0	M12	261.0
C...89										
AZ-80	132	19	k6	40	32	4	6	21.5	M6	128.0
AZ-90	132	24	k6	50	40	5	8	27.0	M8	138.0
AZ-100	170	28	k6	60	50	5	8	31.0	M10	205.0
AZ-112	170	28	k6	60	50	5	8	31.0	M10	205.0
AZ-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

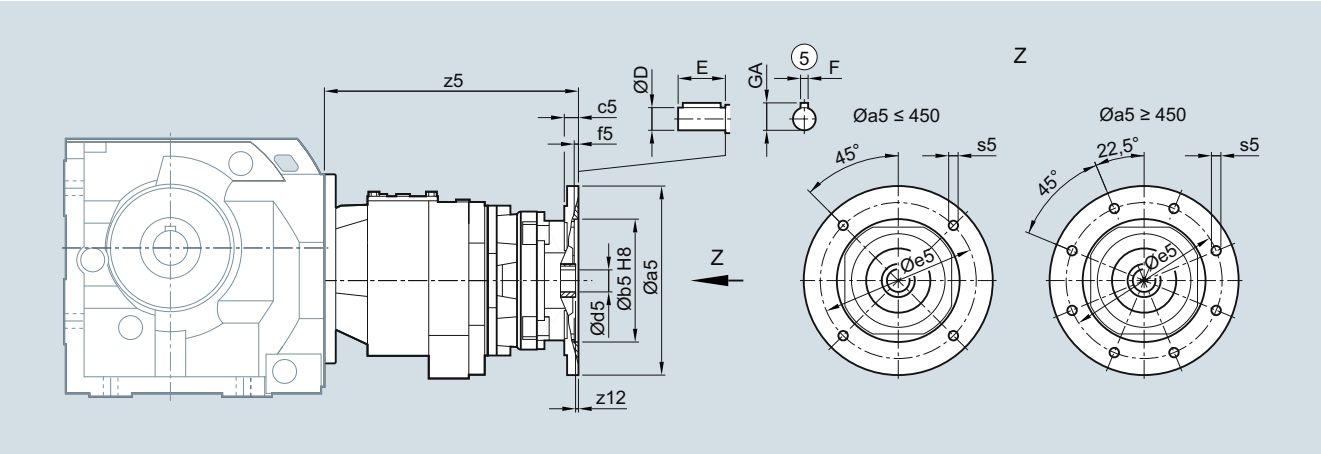


Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
C...29																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	143.5
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	153.5
C...39																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	143.5
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	153.5
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	220.5
C...49																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	134.0
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	144.0
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
C...69																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	134.0
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	144.0
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	211.0
AZ-132	215	160	j6	184	6	M16x22	38	k6	80	70	5	10	41.0	M12	98.5	261.0
C...89																
AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6	61.0	128.0
AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8	71.0	138.0
AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	205.0
AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10	70.5	205.0
AZ-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

Dimensions

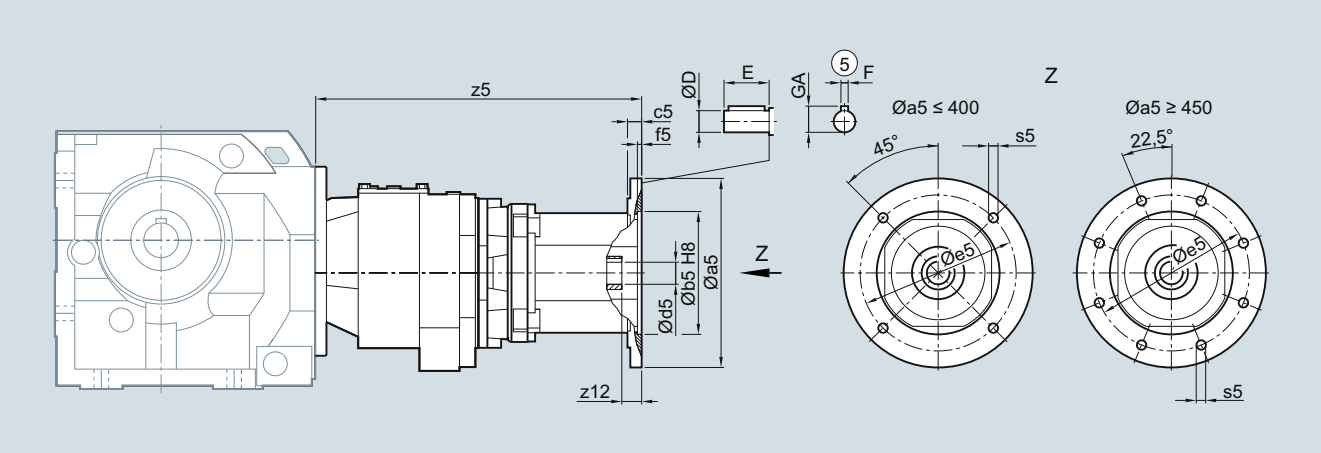
Helical worm tandem gearbox with adapter K4



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
	K4-(112)	250	180	16	5	215	M12	7.5	28	60	8	31.0	339.5

⑤ Feather key/keyway DIN 6885

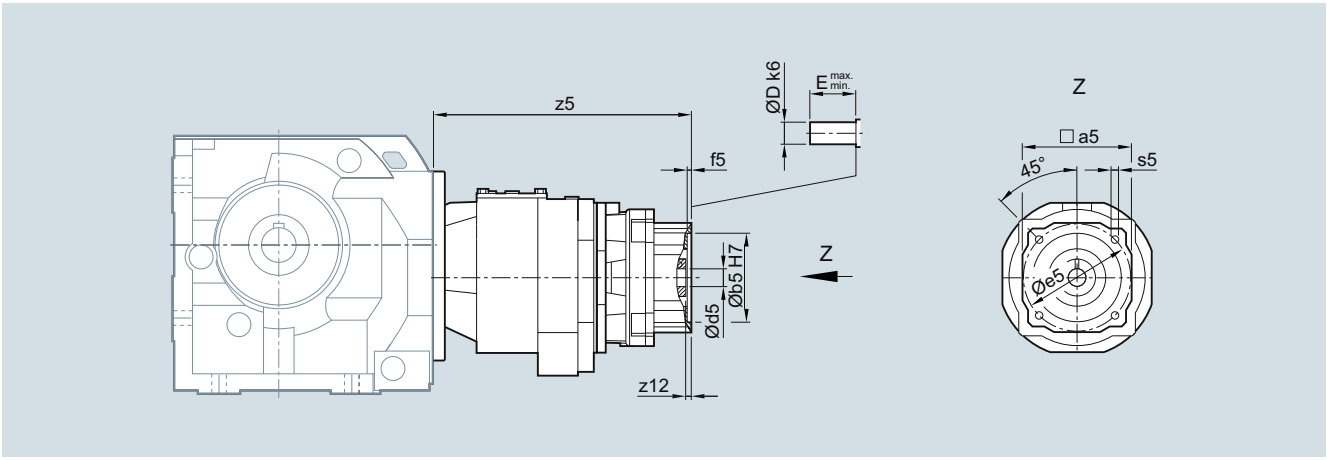
Helical worm tandem gearbox with adapter K2



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

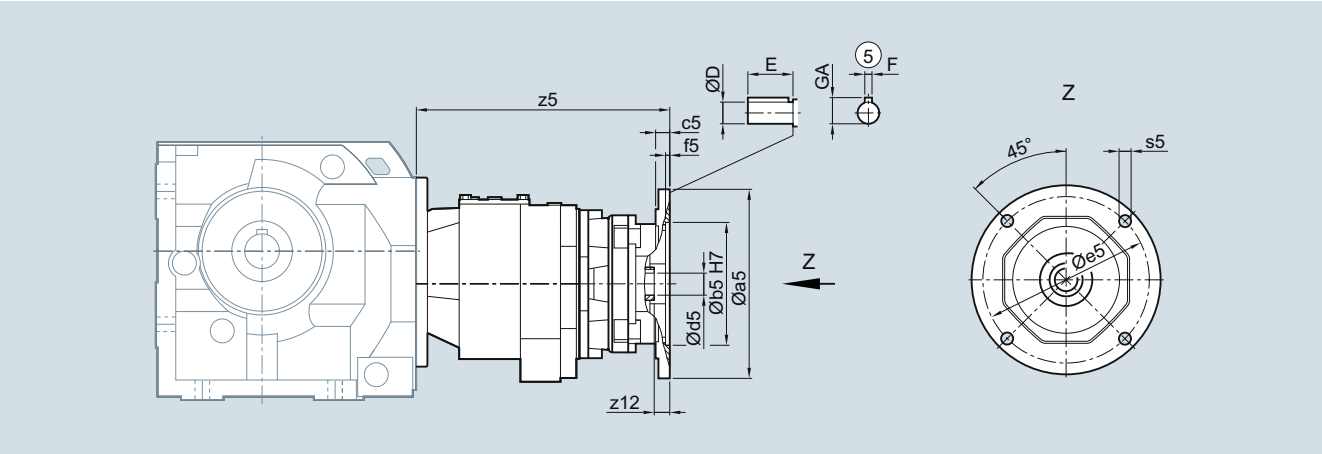
Helical worm tandem gearbox with KS adapter



Gearbox	Adapter	a5	b5	f5	e5	s5	z12	d5/D	$E_{min.}$	$E_{max.}$	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.39-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
	KS5.3	117	95	4.5	115	M6x11	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

Dimensions

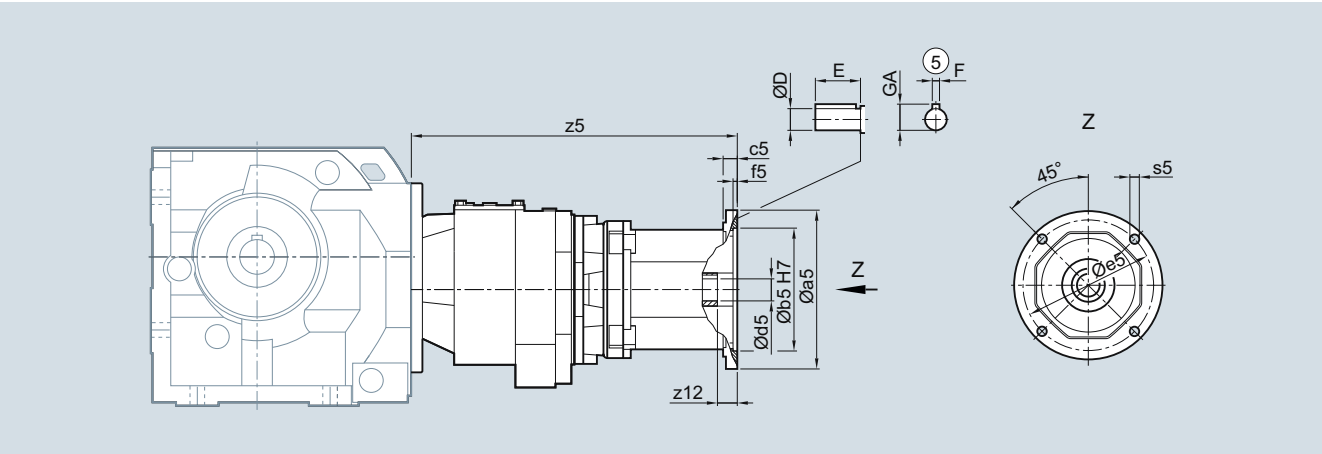
Helical worm tandem gearbox with adapter K5



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

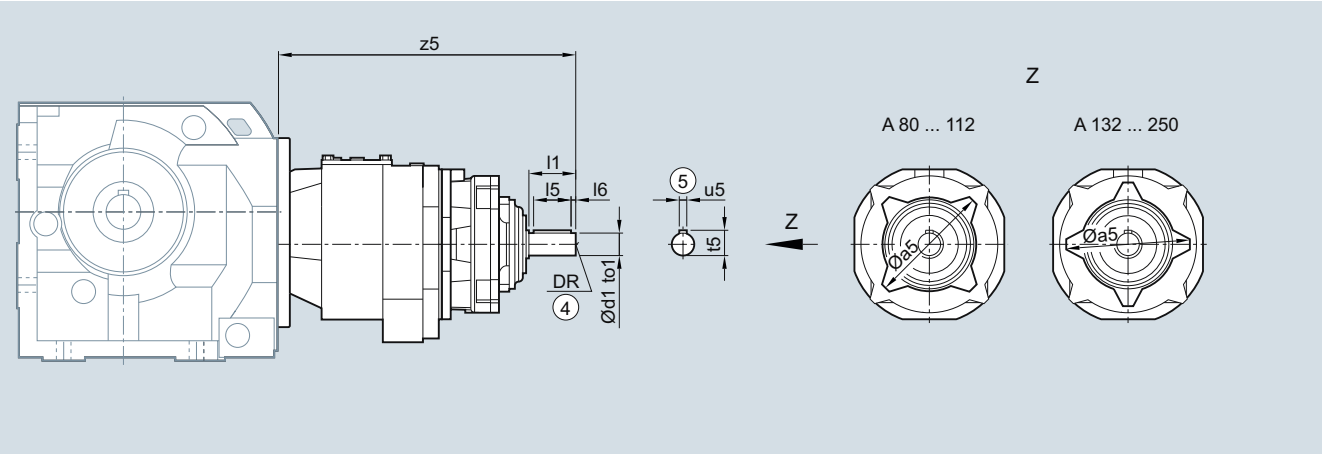
Helical worm tandem gearbox with adapter K3



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

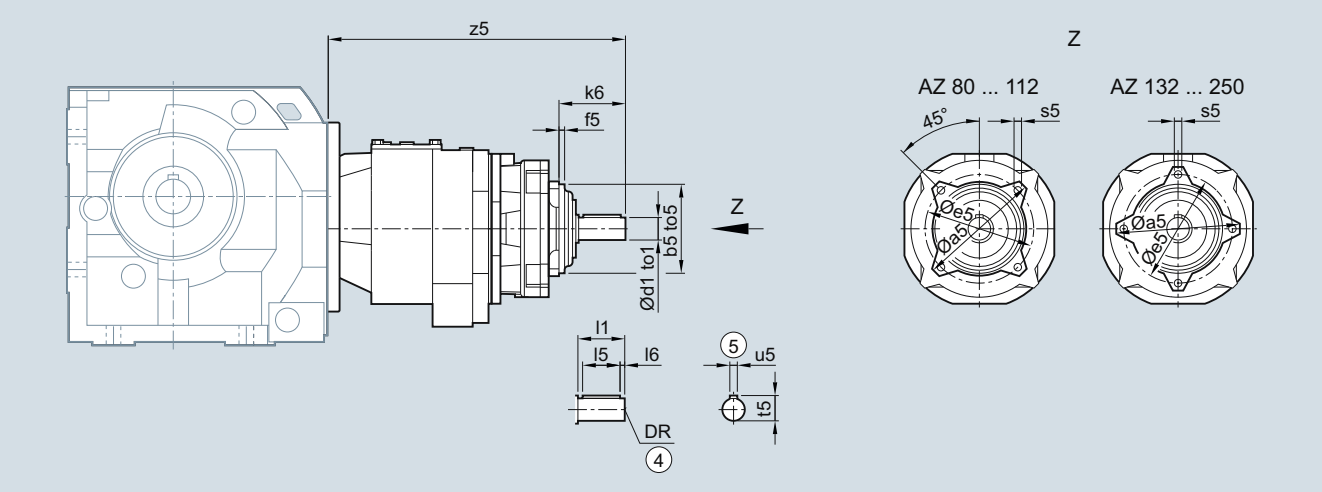
Helical worm tandem gearbox with adapter A



Gearbox	Adapter	a5	d1	to1	l1	l5	l6	u5	t5	DR	z5
C.89-D/Z39	AZ-80	132	19	k6	40	32	4	6	21.5	M6x16	323
	AZ-90	132	24	k6	50	40	5	8	27.0	M8x19	333
	AZ-100	170	28	k6	60	50	5	8	31.0	M10x22	400
	AZ-112	170	28	k6	60	50	5	8	31.0	M10x22	400

④ DIN 332 ⑤ Feather key/keyway DIN 6885

Helical worm tandem gearbox with adapter AZ



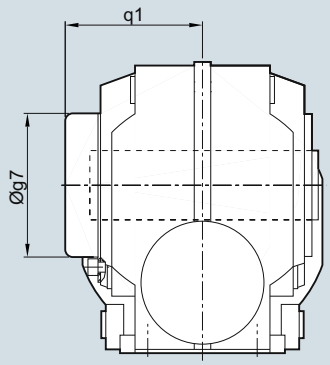
Gearbox	Adapter	a5	b5	to5	e5	f5	s5	d1	to1	l1	l5	l6	u5	t5	DR	k6	z5
C.89-D/Z39	AZ-80	132	95	j6	116	6	M8x12	19	k6	40	32	4	6	21.5	M6x16	61.0	323
	AZ-90	132	95	j6	116	6	M8x12	24	k6	50	40	5	8	27.0	M8x19	71.0	333
	AZ-100	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10x22	70.5	400
	AZ-112	170	120	j6	145	6	M10x17	28	k6	60	50	5	8	31.0	M10x22	70.5	400

④ DIN 332 ⑤ Feather key/keyway DIN 6885

Protective covers

Protective cover for hollow shaft

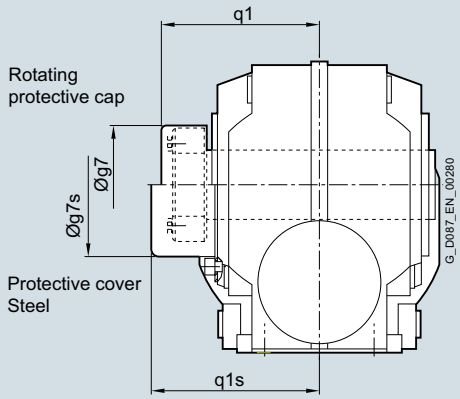
CAF, CAZ, CAD



Gearbox type	CA.29	CA.39	CA.49	CA.69	CA.89
Protective cover					
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

CAS, CAFS, CAZS, CADS

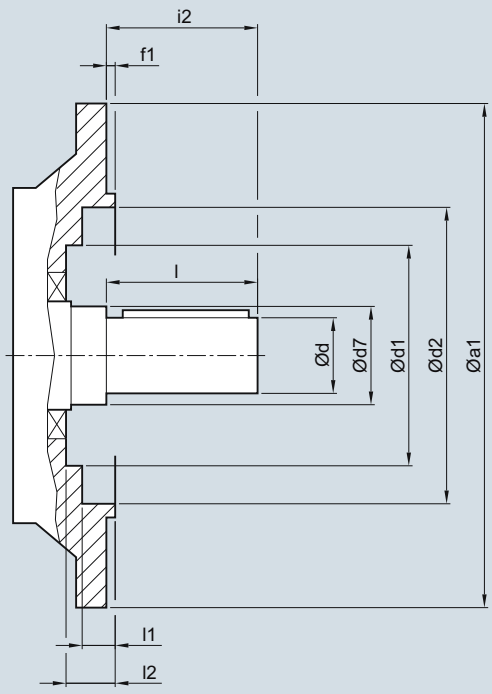


Gearbox type	CA.S29	CA.S39	CA.S49	CA.S69	CA.S89
Rotating protective cap with shrink disk version					
g7	55.0	76.0	84.0	84.0	94.0
q1	85.0	89.5	107.0	115.0	125.5
Protective cover					
g7s	58.0	82.5	86.0	99.0	137.0
q1s	91.0	109.0	122.0	126.5	176.5

Inner contour of the flange design

Notes regarding the design of the customer's interface for the solid shaft design

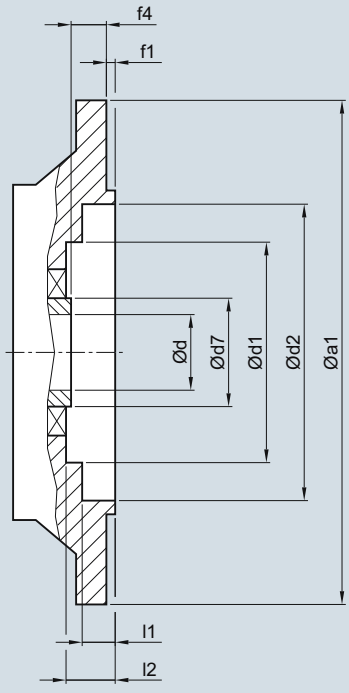
CF



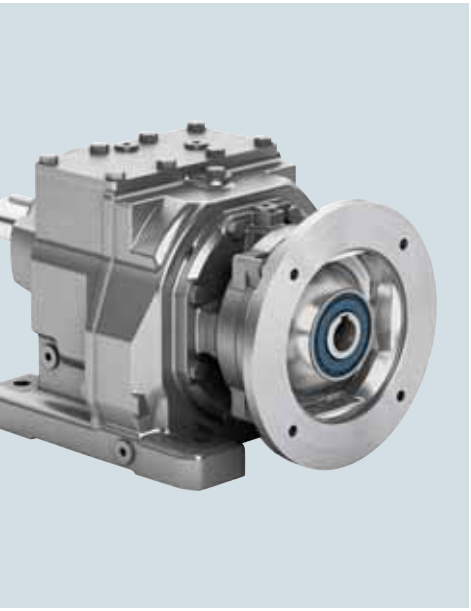
Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
CF29	120	20	40	-	70	3.0	40	40	24.0	-
	160			70	101	3.5			8.5	24.5
CF39	160	25	30	-	100	3.5	50	50	5.0	-
CF49	200	30	35	-	118	3.5	60	60	5.5	-
CF69	200	35	45	105	120	4.0	70	70	4.5	48.0
CF89	250	45	70	134	165	4.0	90	90	6.5	53.0

Notes regarding the design of the customer's interface for the hollow shaft design

CAF.



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



7/2 **Orientation**
7/2 Overview
7/2 Adapters for mounting an IEC motor
7/3 Adapters for mounting defined SIEMENS servo motors
7/4 Adapters for mounting a NEMA motor

7/5 **General technical specifications**
7/5 Maximum permissible torques for the adapters on SIMOGEAR gearboxes
7/5 Adapters for mounting an IEC motor
7/3 Adapters for mounting a servo motor
7/6 Adapters for mounting a NEMA motor
7/6 Adapters A/AZ with free output shaft

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 D 50.1 and D41 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.

Article No. in the 12th data position	
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.

Article No. in the 12th data position	
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.

Order code	
Shaft for 2-pole motor	**P20**

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 the Industry Mall.

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) and
- 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.

Article No. in the 12th data position

KS coupling adapter	**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.

Article No. in the 12th data position

Coupling adapter K8	**8**

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**	**a5**	**b5**	**e5**	**min.**	**max**					
		mm	mm	mm	mm	mm		1FK2	1FK7	1FT7	1PH8	1FL6
KS3.1		Ø91	Ø73	50	70	14x25	14x31	1FK2103 1FK2203				1FL603LI
KS3.2		Ø91	Ø73	60	75	14x25	14x31		1FK703	1FT703		
KS4.1		Ø110	Ø85	70	90	19x35	19x40	1FK2104 1FK2204				1FL604LI
KS4.2		Ø110	Ø85	80	100	19x35	19x40		1FK704	1FT704		1FL604HI
KS5.1		Ø142	Ø117	80	100	19x35	19x45	1FK2205	1FK704			
KS5.2		Ø142	Ø117	95	115	19x35	19x45					1FL605LI
KS5.3		Ø142	Ø117	95	115	19x35	19x45	1FK2105				
KS6.1		Ø166	Ø130	110	130	24x40	24x58	1FK2106 1FK2206	1FK706	1FT706		
KS6.2		Ø166	Ø130	110	145	22x40	22x58					1FL606HI
KS8.1		Ø202	Ø155	130	165	32x40	32x80	1FK2208	1FK708	1FT708	1PH808	
KS10.1		Ø250	Ø196	180	215	38x50	38x80	1FK2210	1FK710	1FT710	1PH810	
KS10.2		Ø250	Ø196	114.3	200	35x50	35x80					1FL609HI
	813	Ø340	Ø260	250	300	48x110	-				1PH813.	
	816	Ø392	Ø314	300	350	55x110	-				1PH816	
	818	Ø550	Ø550	450	465	65x140	-				1PH818	

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.:
SIMOTICS S-1FK2	
Plain shaft (without shaft sealing ring) [1]	**1FK2■■■-■■■■0-0■■■**
SIMOTICS S-1FK7	
Plain shaft	**1FK7■■■-■■■■■-■■G■**
	1FK7■■■-■■■■■-■■H■
SIMOTICS S-1FT7	
Flange: Classic (compatible with 1FT6/1FK7)	**1FT7■■■-■■■■1-■■■■**
	1FT7■■■-■■■■4-■■■■
Plain shaft	**1FT7■■■-■■■■■-■■G■**
	1FT7■■■-■■■■■-■■H■
	1FT7■■■-■■■■■-■■K■
	1FT7■■■-■■■■■-■■L■

[1] 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.

Permissible servo motors for KS adapters	Article No.:
SIMOTICS M-1PH8	
Plain shaft	**1PH8■■■-■■■■■-0■■■**
SIMOTICS S-1FL6	
Plain shaft	**1FL6■■■-■■■■■-■■G■**
	1FL6■■■-■■■■■-■■H■

For further selection options and information about the servo motors, please refer to Catalogs D 21.4, D 32 and the Industry Mall.

7

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.

Article No. in the 12th data position	
Short adapter K5	**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.

Article No. in the 12th data position	
Coupling adapter K3	**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**			
			Inch	Inch
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	320	320TC (324TC, 326TC)	13.386"	2.125"
360	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 the Industry Mall.

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} kgm²
Adapter K4		
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
Adapter K2		
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	1 530	703
315	1 700	2 267

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} kgm²	Maximum permissible speed n_{max} rpm
KS adapter			
KS3.1	5.1	0.30	4 500
KS3.2	5.1	0.30	4 500
KS4.1	5.1	0.59	4 500
KS4.2	5.1	0.59	4 500
KS5.1	16.8	1.9	4 500
KS5.2	16.8	1.9	4 500
KS5.3	16.8	1.9	4 500
KS6.1	28.6	4.5	4 500
KS6.2	25.8	4.5	4 500
KS8.1	47.0	10	4 500
KS10.1	131	29	4 500
KS10.2	121	29	4 500
Adapter K8			
813	245	73	4 500
816	355	134	4 500
818	1 530	703	4 500

Maximum permissible torques for the adapters on SIMOGEAR gearboxes (continued)

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} kgm²
Adapter K5		
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
Adapter K3		
56	5	2.9
140	13	3
180	47	9
210	127	36
250	153	43
280	330	75
320	415	179
360	545	293

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} kgm²
Adapters A/AZ		
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



8/2 Mounting position
8/2 Overview
Helical gearboxes Z and D
8/4 Foot-mounted design
8/6 Foot/flange-mounted design
8/8 Flange-mounted design or with housing flange
Helical gearboxes E
8/11 Foot-mounted design
8/12 Flange-mounted design or with housing flange
Parallel shaft gearboxes
8/13 Shaft-mounted design
8/15 Flange-mounted design or with housing flange
8/17 Foot-mounted design
Bevel gearboxes B
8/19 Foot-mounted design
8/21 Housing flange design and flange-mounted design
8/23 Shaft-mounted design
Bevel gearboxes K
8/25 Foot-mounted design
8/26 Housing flange design and flange-mounted design
8/27 Shaft-mounted design
Helical worm gearboxes
8/27 Shaft-mounted design
8/30 Housing flange design and flange-mounted design
8/32 Foot-mounted design
8/34 Tandem gearboxes
8/35 Special mounting positions

8/36 Mounting
Mounting types
8/36 Overview
8/37 Flange-mounted designs
8/38 • Water drain holes at the output flange
8/39 • Output flange sealing
8/40 Parallel shaft gearboxes F.AD in a shaft-mounted design
8/40 Bevel gearboxes KAD in a shaft-mounted design
8/40 Bevel gearboxes BAD in a shaft-mounted design
8/41 Helical worm gearboxes CAD in a shaft-mounted design
Shaft designs
8/42 Selection and ordering data
8/46 Hollow shaft cover

8/46 Output shaft bearings
8/46 Reinforced output shaft bearings

8/47 Output side accessories
Accessories for VLplus reinforced bearing system
8/47 Drywell
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8/48 Lubrication and sealing
Overview
8/48 • Lubrication
8/48 • Oil quantities
8/48 • Sealing
8/48 Sealing system
8/49 Rolling bearing greases for gearboxes and motors
8/49 Selection

8/50 Venting and oil level control
Venting
8/50 Overview
8/52 Pressure breather valve
8/53 Oil expansion unit
Oil level control
8/55 Oil level checking screw
8/55 Oil drain
8/56 Pt100 electrical oil temperature monitoring
8/57 Electrical oil level monitoring system

8/58 Special version
8/58 Reduced-backlash version

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.

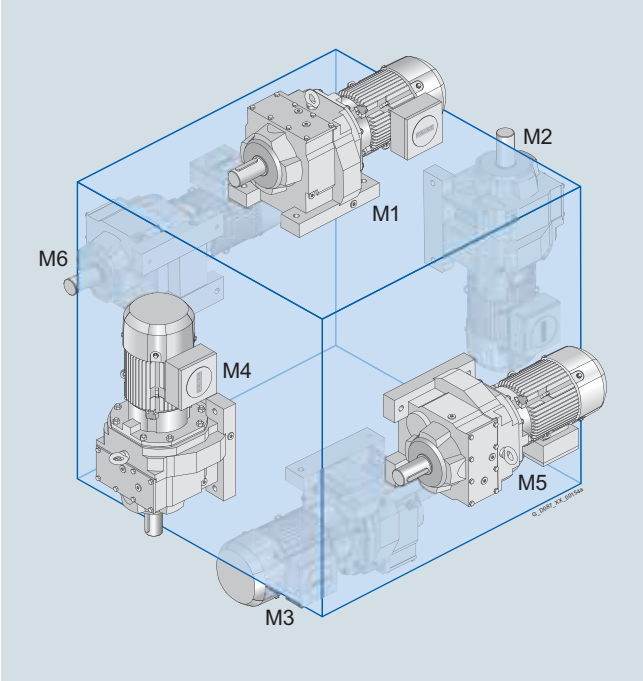


Fig. 8/1 Helical geared motors

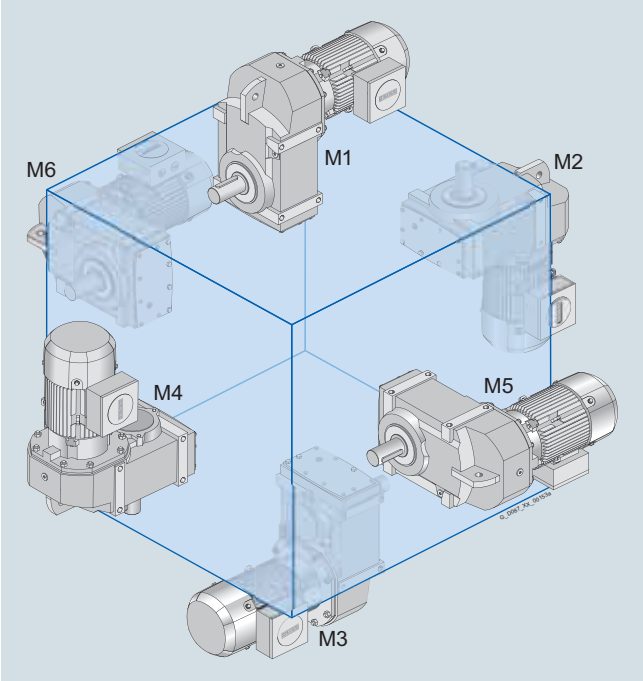


Fig. 8/2 Parallel shaft geared motors

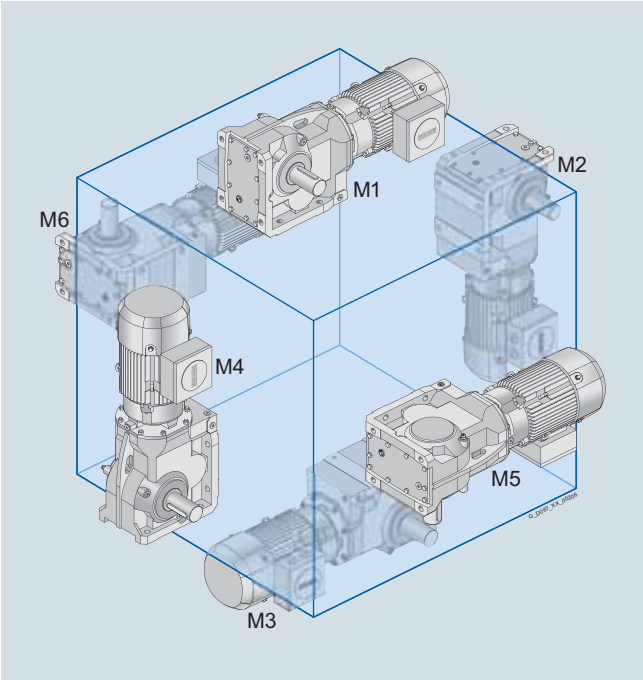


Fig. 8/3 Bevel geared motors

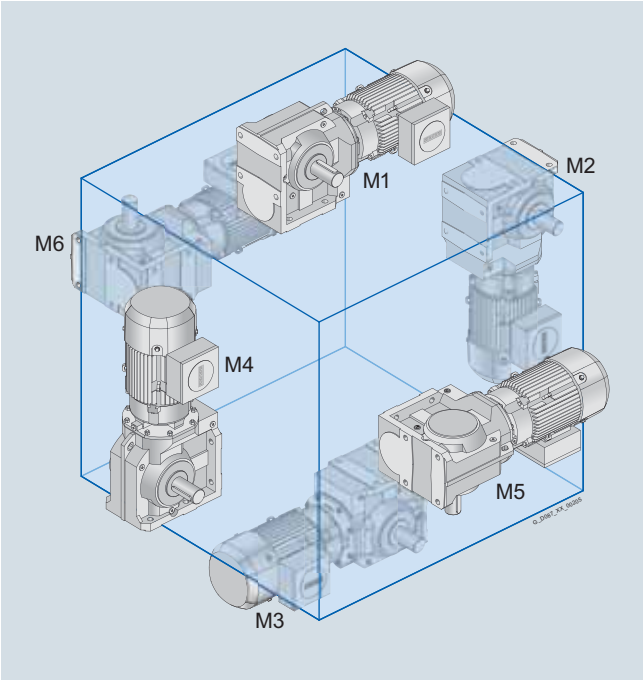


Fig. 8/4 Helical worm geared motors

Overview (continued)

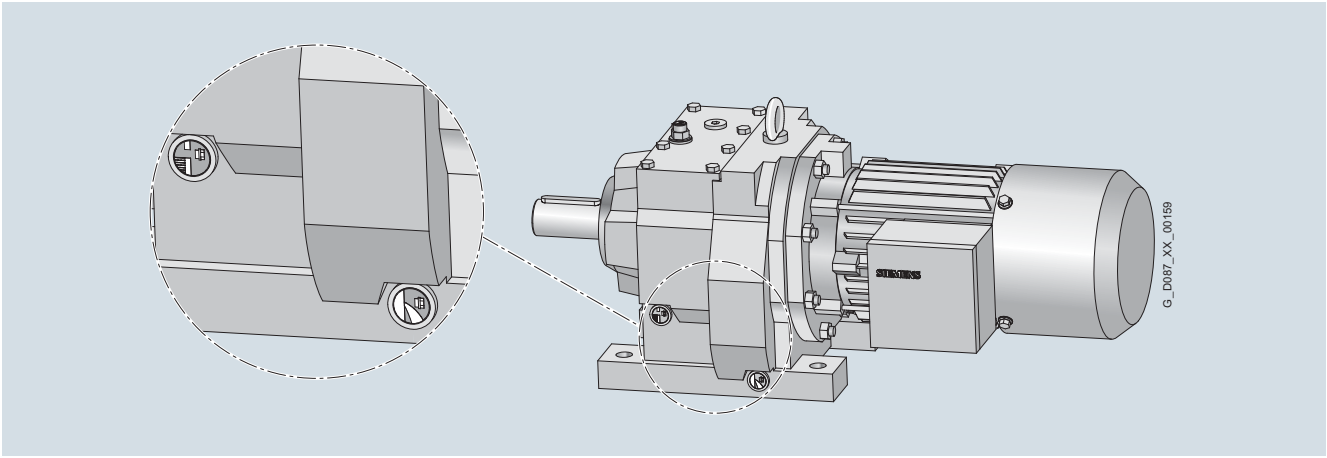


Fig. 8/5 Dimensional drawing from DT Configurator with details

An explanation of the symbols used to represent mounting positions on the following pages

Symbol	
Oil valves	
	Venting
	Oil drain
	Oil level checking screw
	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
(1) ... (4)	Terminal box position

Note:

The DT Configurator can be used to configure SIMOGEAR geared motors.

The DT Configurator is available in conjunction with the electronic catalog CA 01. In addition, the DT Configurator can be used on the Internet without requiring any installation.

The DT Configurator can be found in the Siemens Mall at the following address:
www.siemens.com/dt-configurator

For the selected mounting position, the 3D images show the exact position of the oil valves.

Foot-mounted design

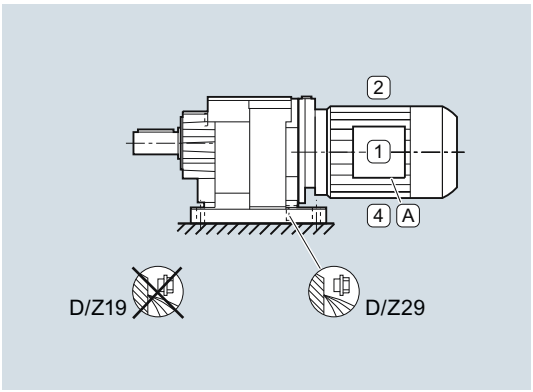
Helical gearboxes Z and D, sizes 19 and 29

Oil valves

Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see page 8/3.

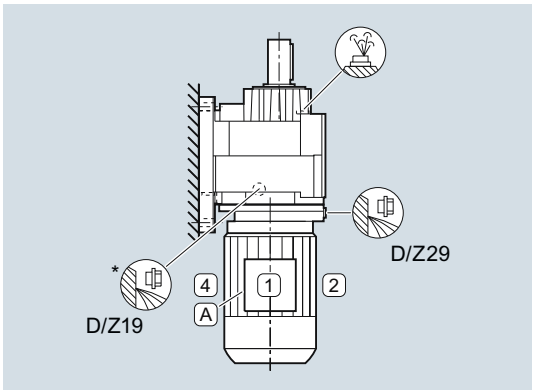
M1



Order code:

M1	**D01**

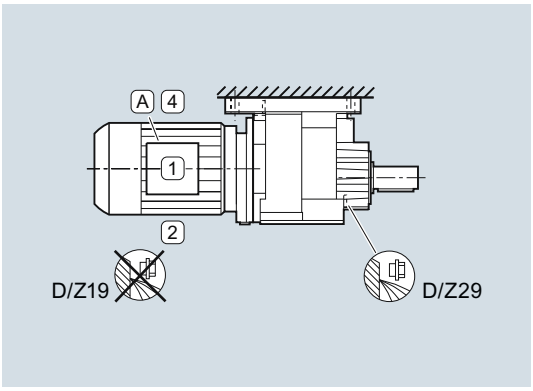
M2



Order code:

M2	**D02**

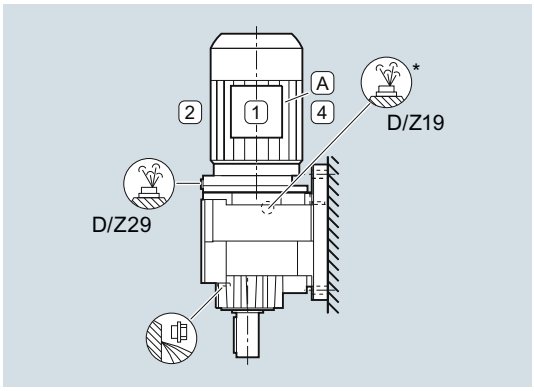
M3



Order code:

M3	**D03**

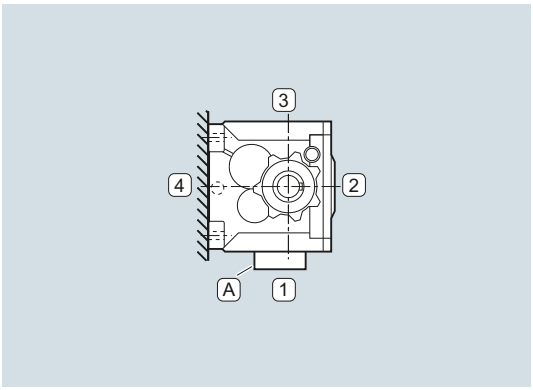
M4



Order code:

M4	**D04**

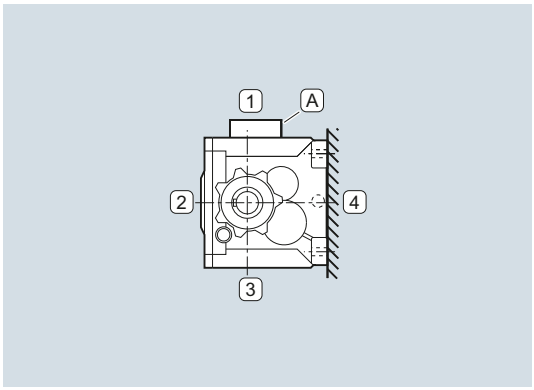
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

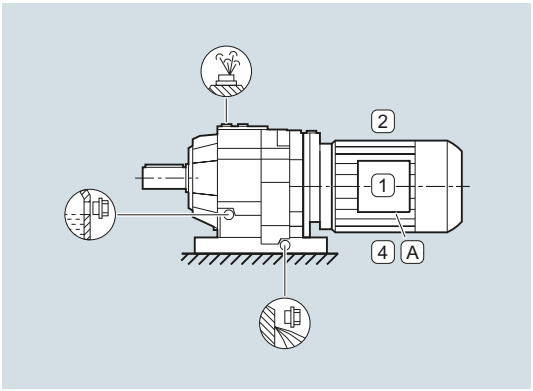
Foot-mounted design (continued)

Helical gearboxes Z and D, sizes 39 to 189

Oil valves

For an explanation of the symbols, see page 8/3.

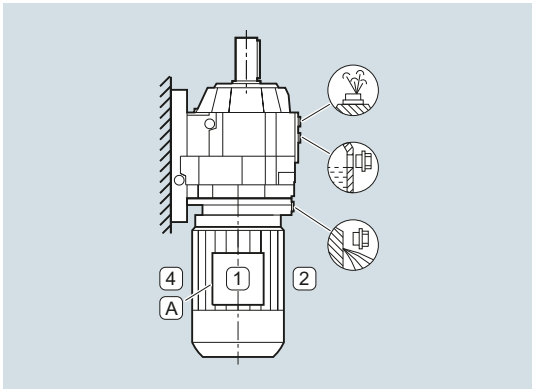
M1



Order code:

M1	**D01**

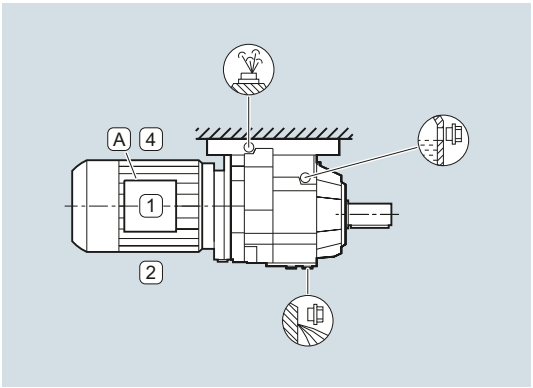
M2



Order code:

M2	**D02**

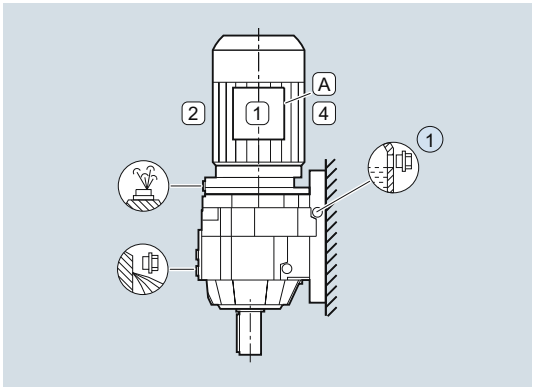
M3



Order code:

M3	**D03**

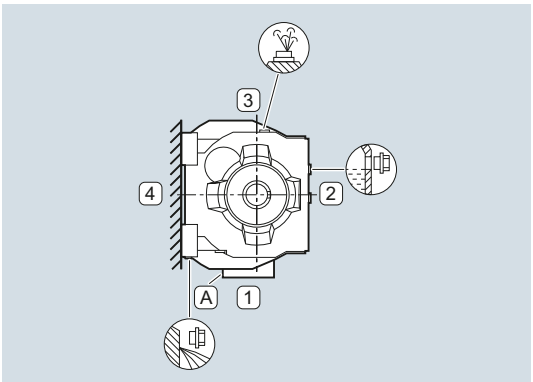
M4



Order code:

M4	**D04**

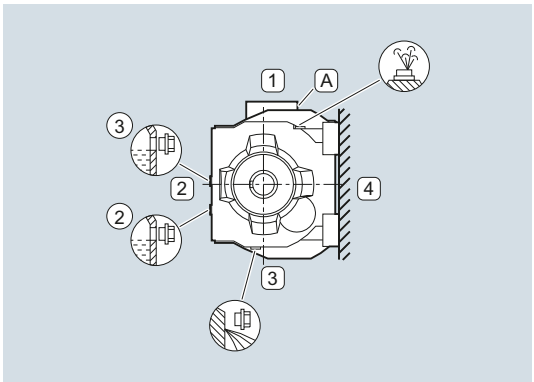
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

Foot/flange-mounted design

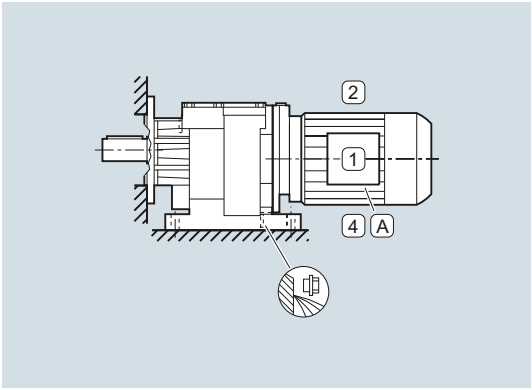
Helical gearboxes ZB and DB, size 29

Oil valves

Size 29 is lubricated for life.

For an explanation of the symbols, see page 8/3.

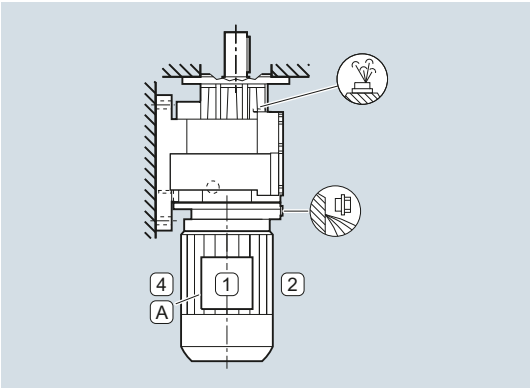
M1



Order code:

M1 **D01**

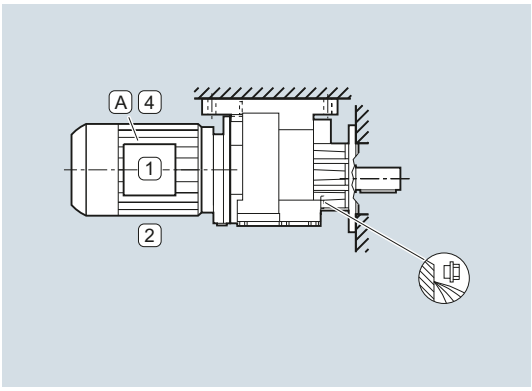
M2



Order code:

M2 **D02**

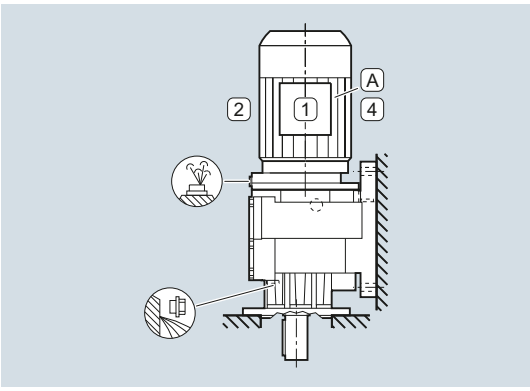
M3



Order code:

M3 **D03**

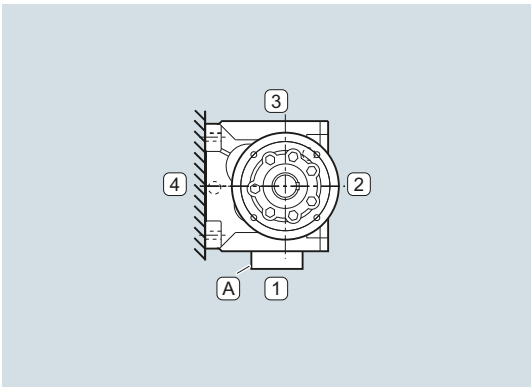
M4



Order code:

M4 **D04**

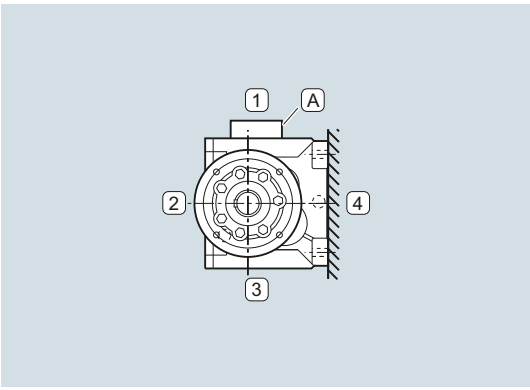
M5



Order code:

M5 **D05**

M6



Order code:

M6 **D06**

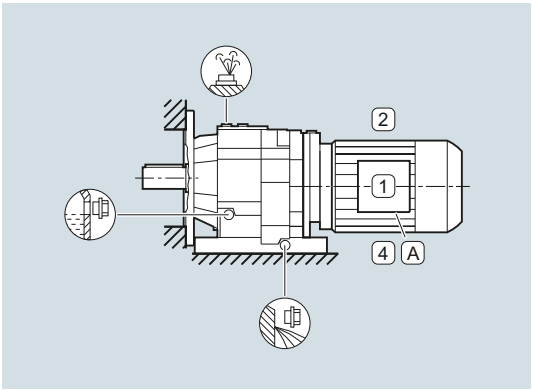
Foot/flange-mounted design (continued)

Helical gearboxes ZB and DB, sizes 39 to 89

Oil valves

For an explanation of the symbols, see page 8/3.

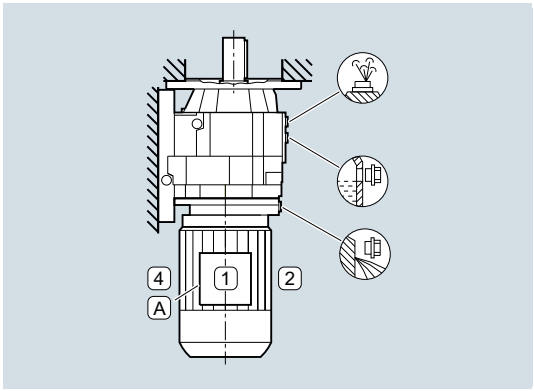
M1



Order code:

M1	**D01**

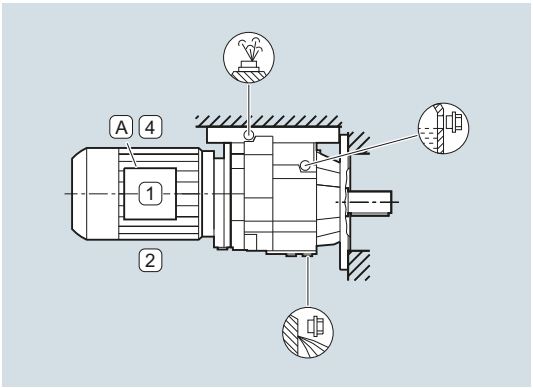
M2



Order code:

M2	**D02**

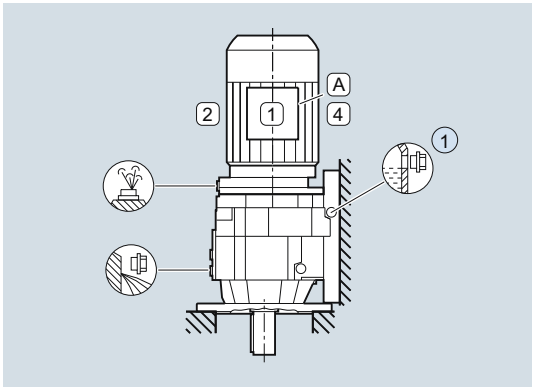
M3



Order code:

M3	**D03**

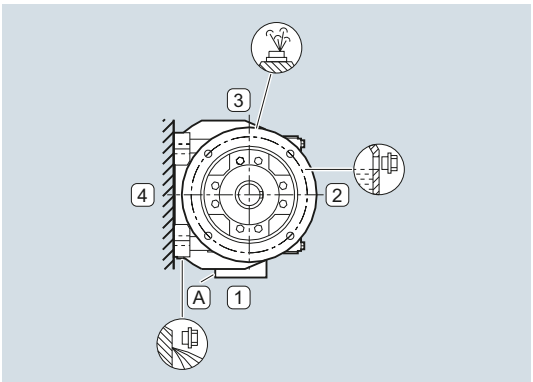
M4



Order code:

M4	**D04**

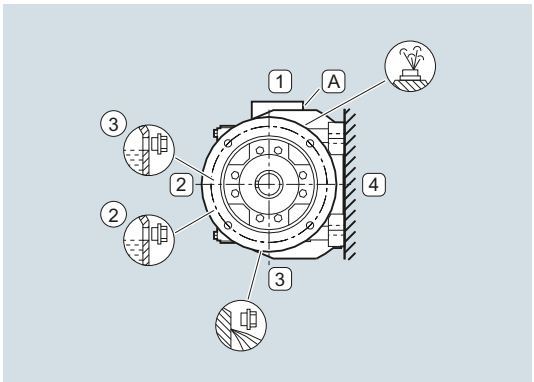
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

Flange-mounted design or with housing flange

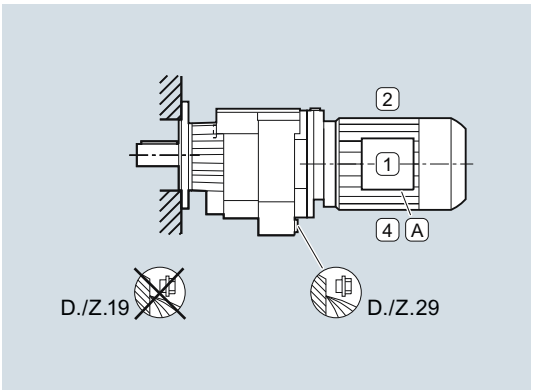
Helical gearboxes ZF and DF or ZZ and DZ, sizes 19 and 29

Oil valves

Sizes 19 and 29 are lubricated for life.

For an explanation of the symbols, see page 8/3.

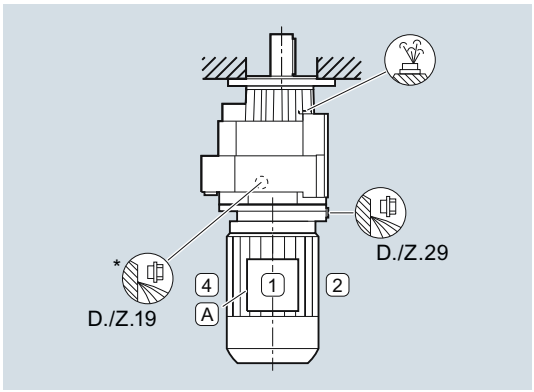
M1



Order code:

M1	**D01**

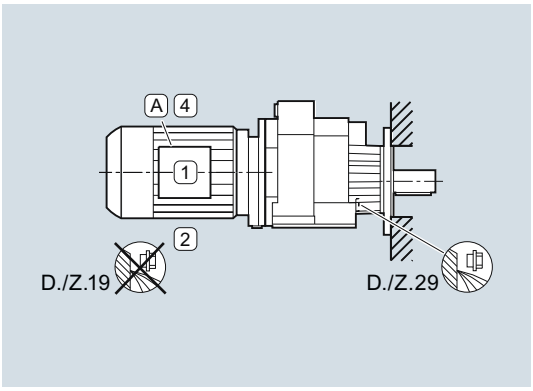
M2



Order code:

M2	**D02**

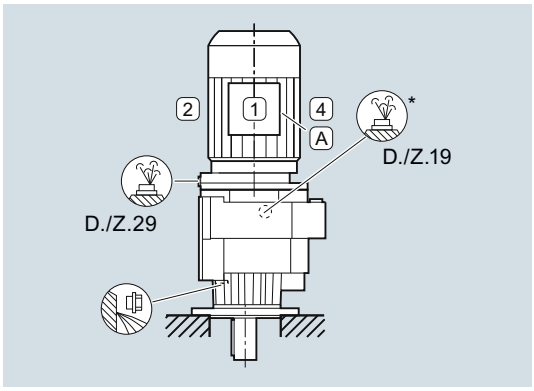
M3



Order code:

M3	**D03**

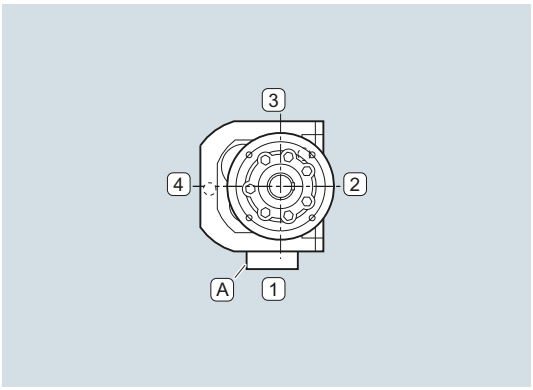
M4



Order code:

M4	**D04**

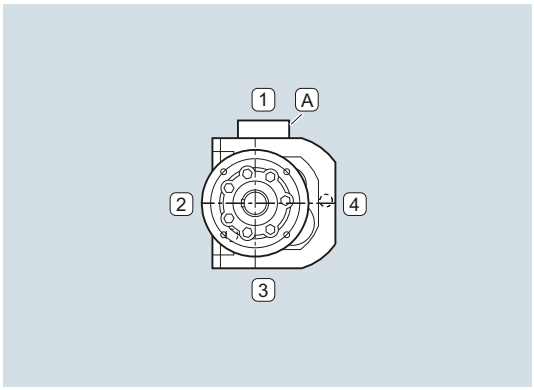
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

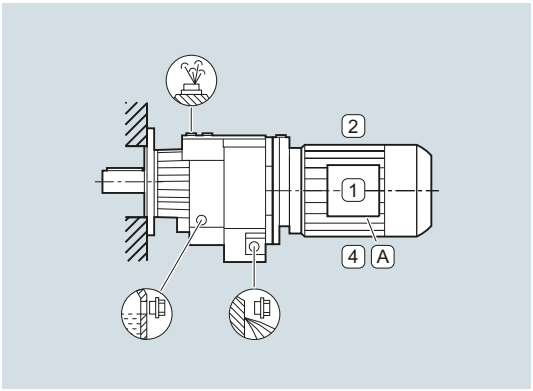
Flange-mounted design or with housing flange (continued)

Helical gearboxes ZF and DF or ZZ and DZ, size 39

Oil valves

For an explanation of the symbols, see page 8/3.

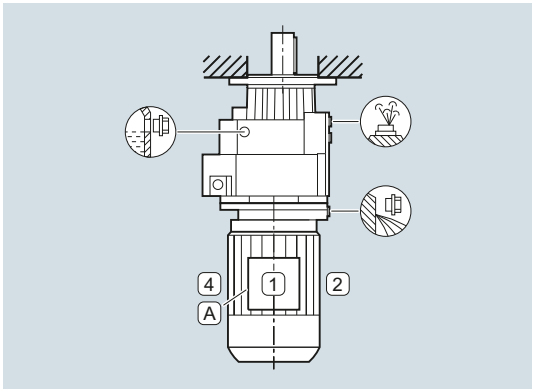
M1



Order code:

M1	**D01**

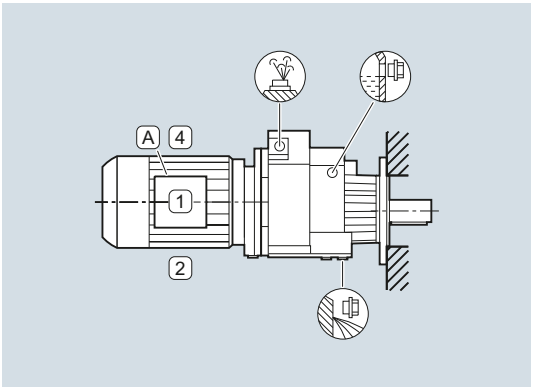
M2



Order code:

M2	**D02**

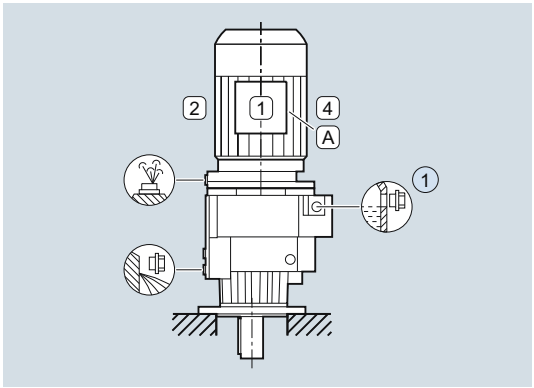
M3



Order code:

M3	**D03**

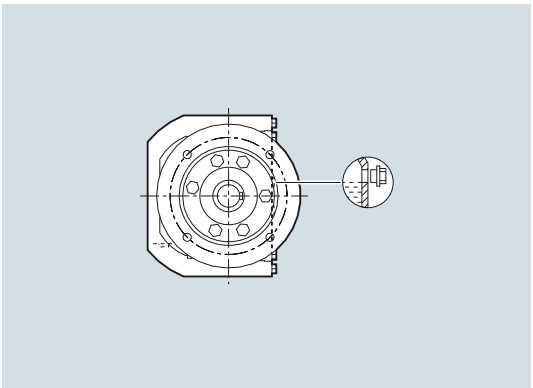
M4



Order code:

M4	**D04**

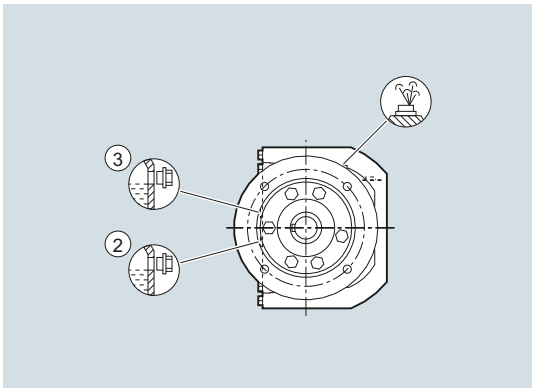
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

Flange-mounted design or with housing flange (continued)

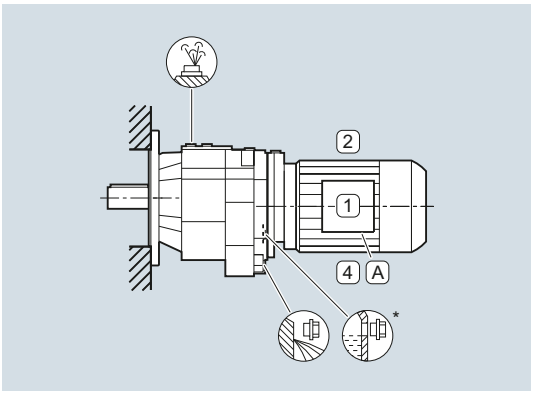
Helical gearboxes ZF and DF, sizes 49 to 189, or ZZ and DZ, sizes 49 to 129
Helical gearboxes ZF and DF with VLplus/XLplus reinforced bearing systems, sizes 89 to 169

Oil valves

For an explanation of the symbols, see page 8/3.

G48

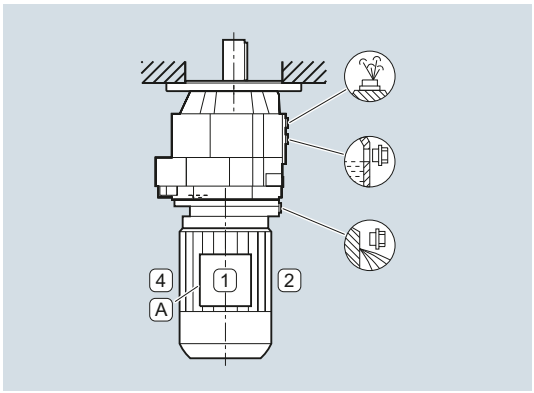
M1



Order code:

M1 **D01**

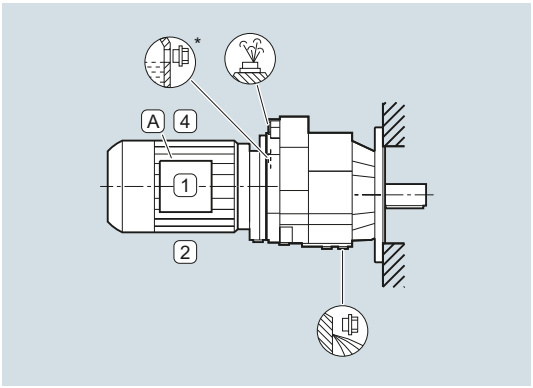
M2



Order code:

M2 **D02**

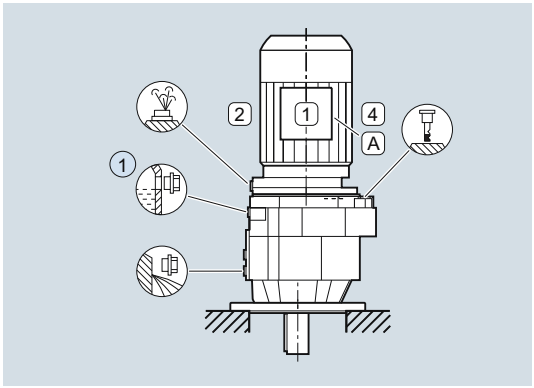
M3



Order code:

M3 **D03**

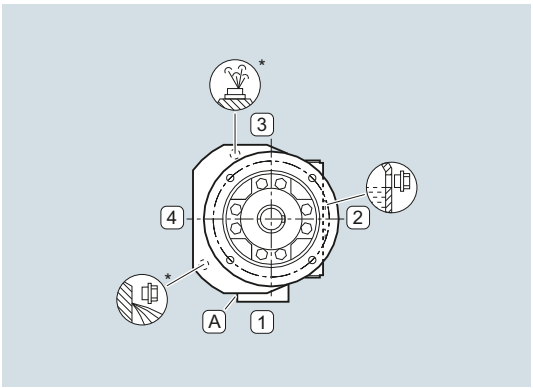
M4



Order code:

M4 **D04**

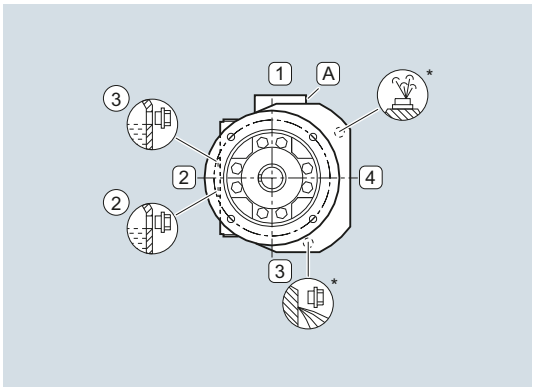
M5



Order code:

M5 **D05**

M6



Order code:

M6 **D06**

8

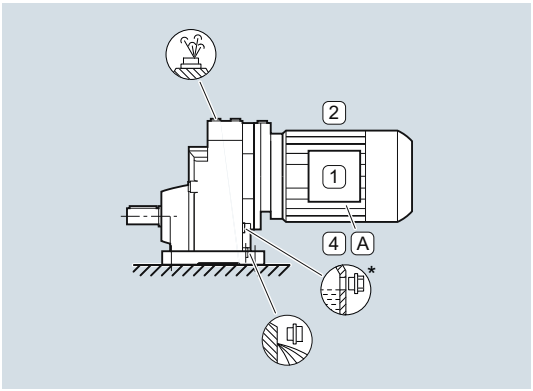
Foot-mounted design

Helical gearboxes E, sizes 39 to 149

Oil valves

For an explanation of the symbols, see page 8/3.

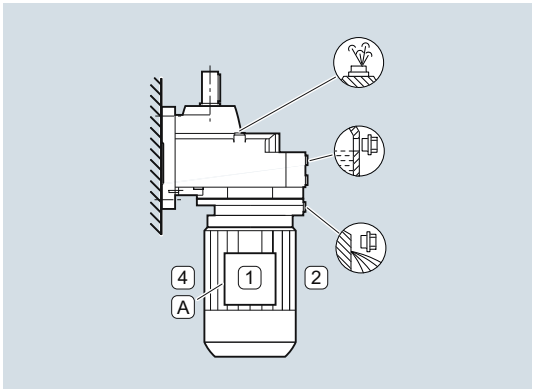
M1



Order code:

M1	**D01**

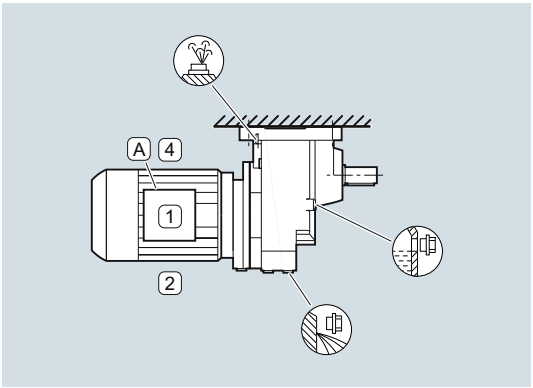
M2



Order code:

M2	**D02**

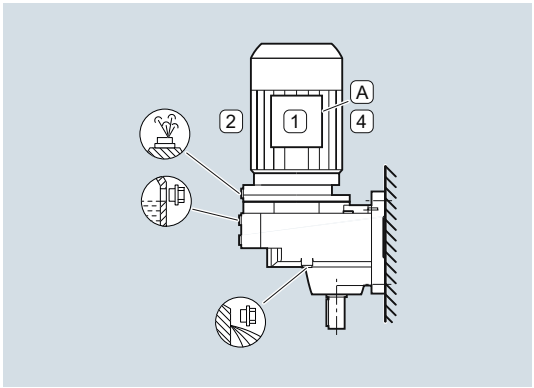
M3



Order code:

M3	**D03**

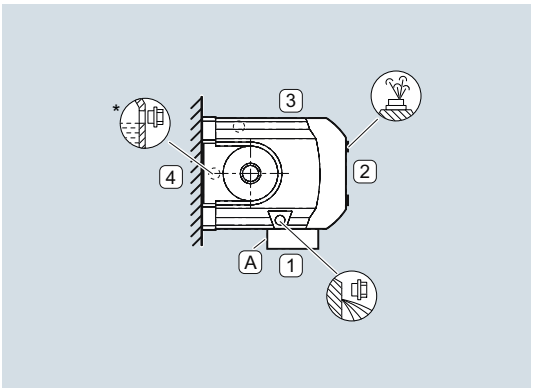
M4



Order code:

M4	**D04**

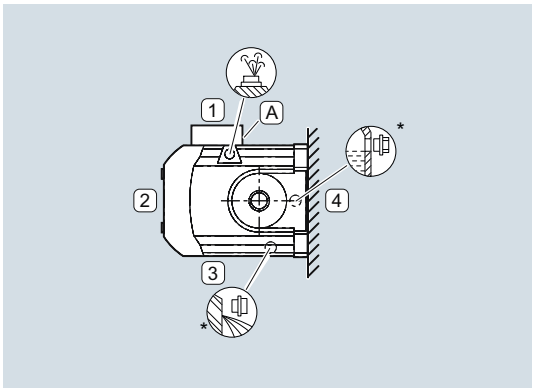
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

Flange-mounted design or with housing flange

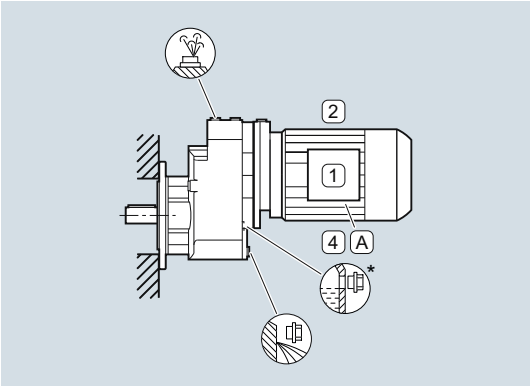
Helical gearboxes EF, sizes 39 to 149

Oil valves

For an explanation of the symbols, see page 8/3.

	G48

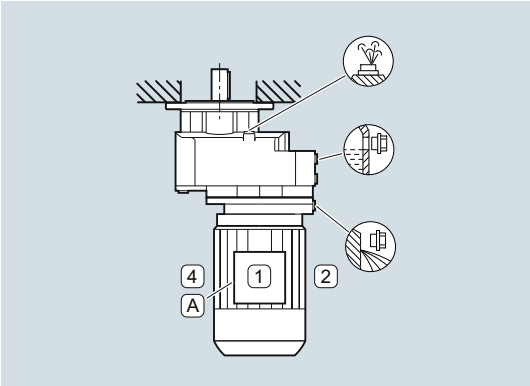
M1



Order code:

M1	D01

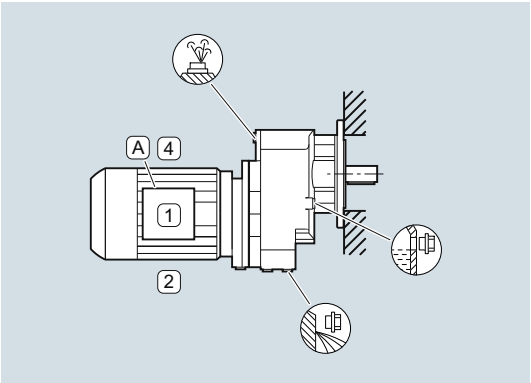
M2



Order code:

M2	D02

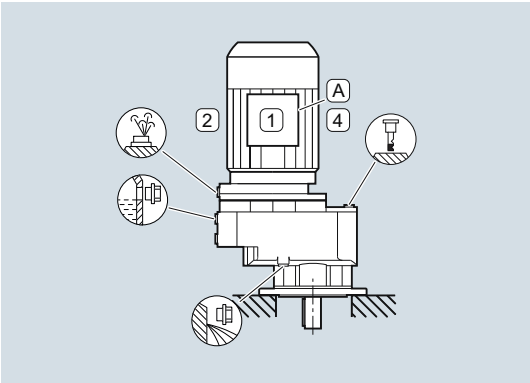
M3



Order code:

M3	D03

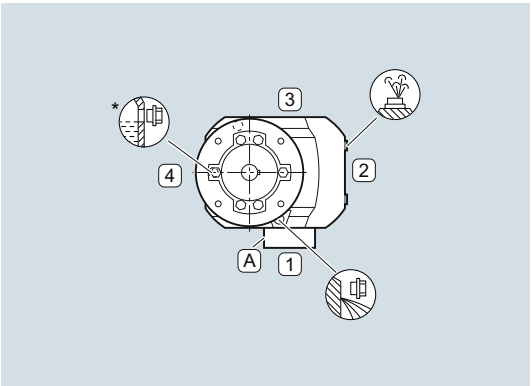
M4



Order code:

M4	D04

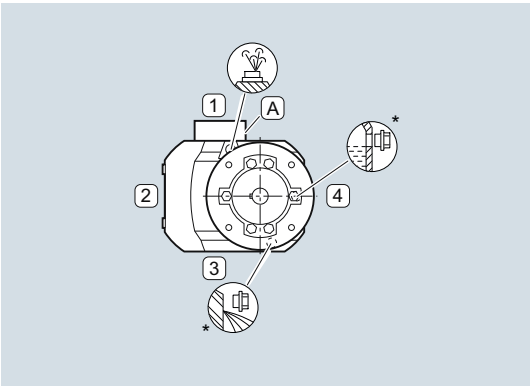
M5



Order code:

M5	D05

M6



Order code:

M6	D06

Shaft-mounted design

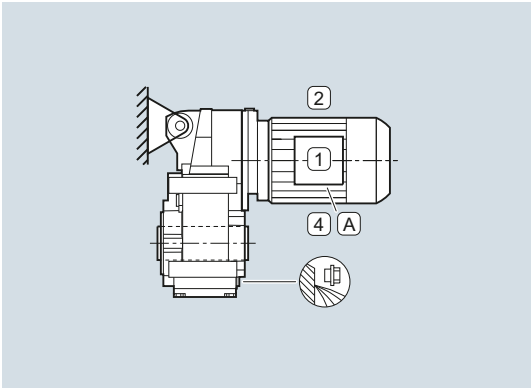
Parallel shaft gearboxes F.AD, size 29

Oil valves

Size 29 is lubricated for life.

For an explanation of the symbols, see page 8/3.

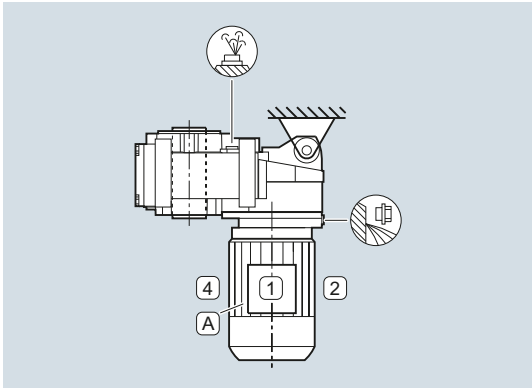
M1



Order code:

M1 **D01**

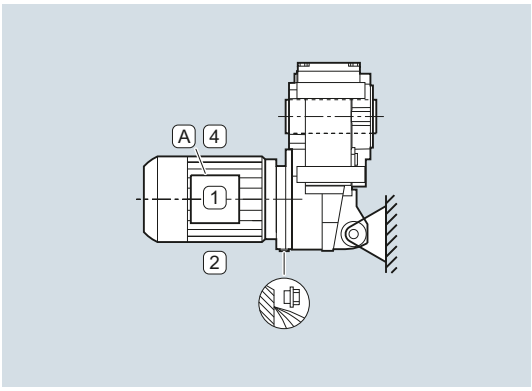
M2



Order code:

M2 **D02**

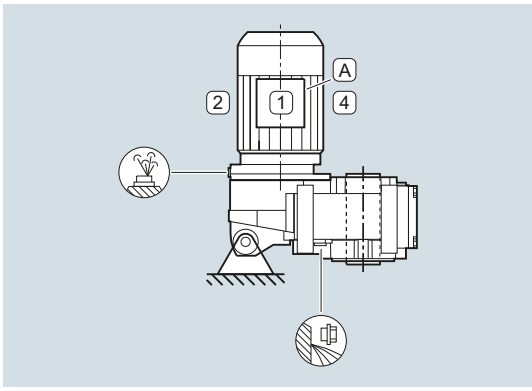
M3



Order code:

M3 **D03**

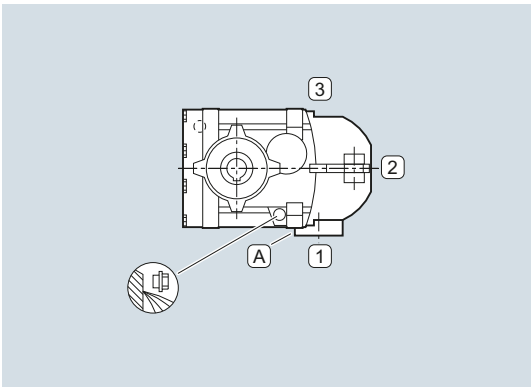
M4



Order code:

M4 **D04**

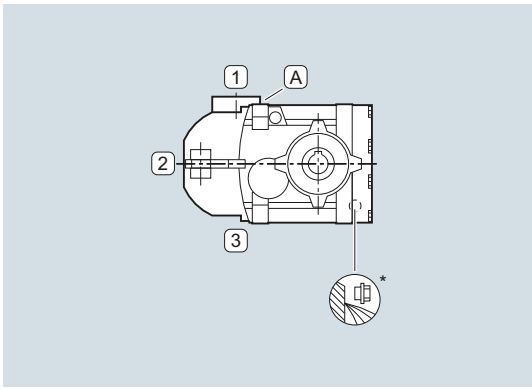
M5



Order code:

M5 **D05**

M6



Order code:

M6 **D06**

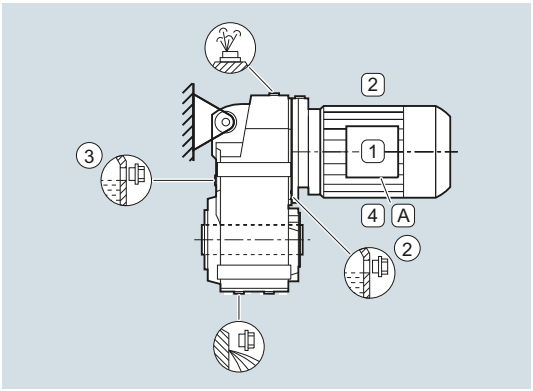
Shaft-mounted design (continued)

Parallel shaft gearboxes F.AD, sizes 39 to 189

Oil valves

For an explanation of the symbols, see page 8/3.

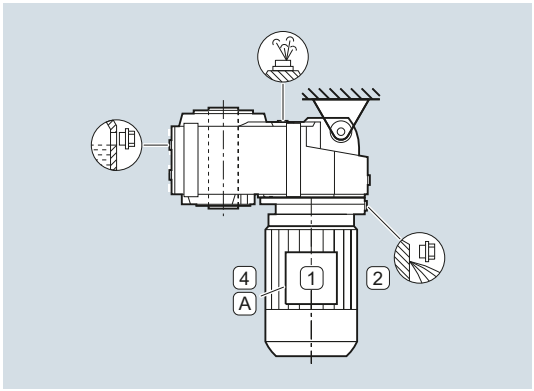
M1



Order code:

M1	**D01**

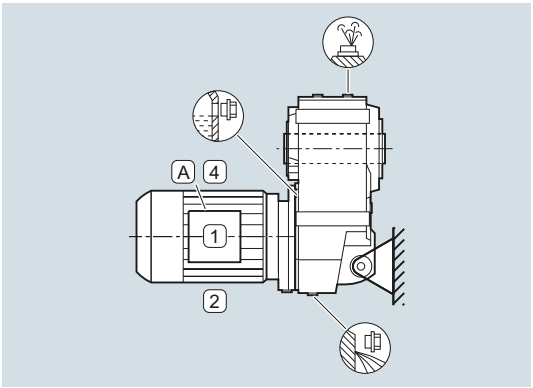
M2



Order code:

M2	**D02**

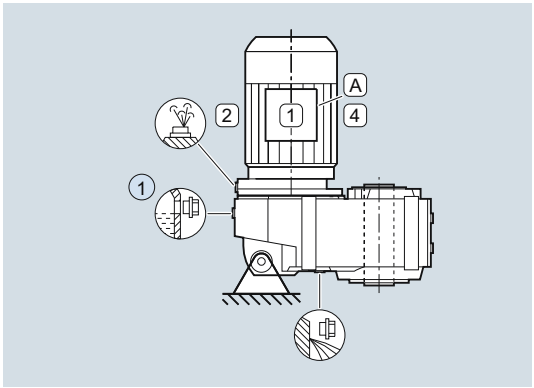
M3



Order code:

M3	**D03**

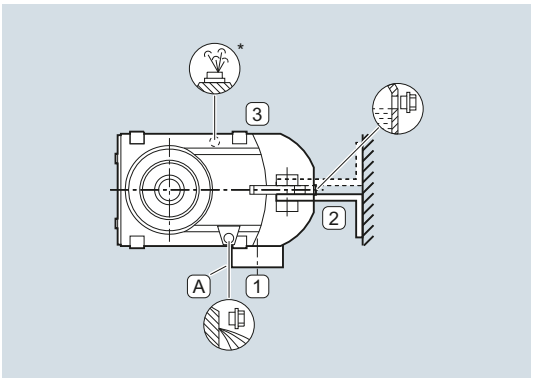
M4



Order code:

M4	**D04**

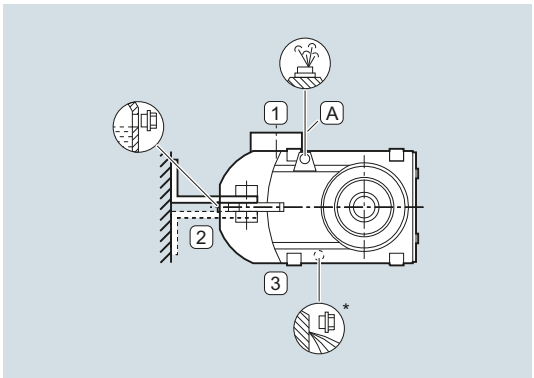
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

Flange-mounted design or with housing flange

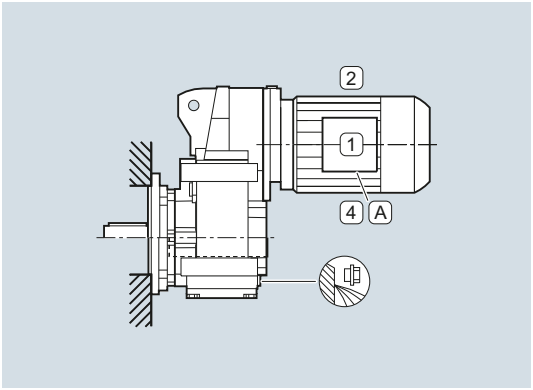
Parallel shaft gearboxes F..F or F..Z, size 29

Oil valves

Size 29 is lubricated for life.

For an explanation of the symbols, see page 8/3.

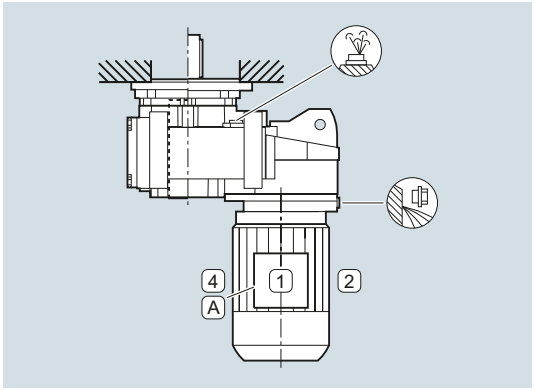
M1



Order code:

M1 **D01**

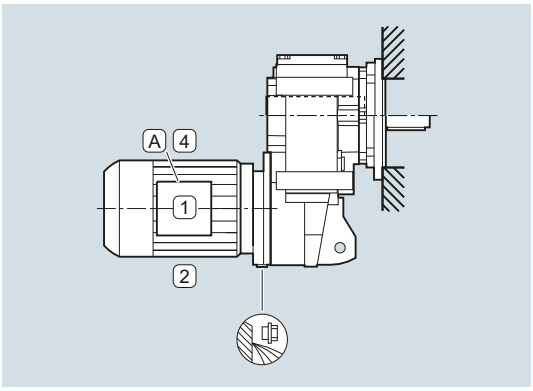
M2



Order code:

M2 **D02**

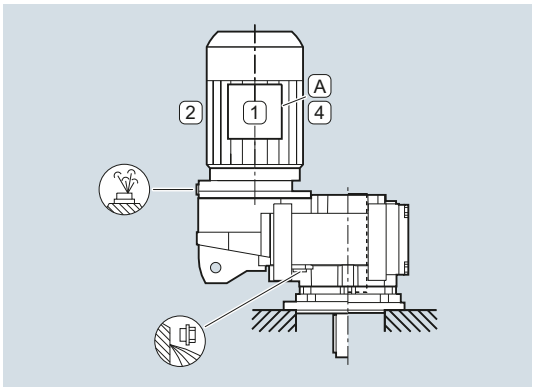
M3



Order code:

M3 **D03**

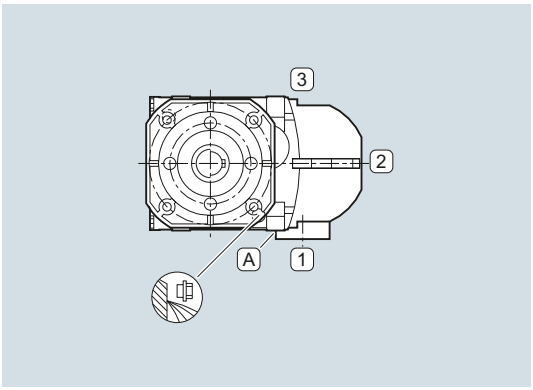
M4



Order code:

M4 **D04**

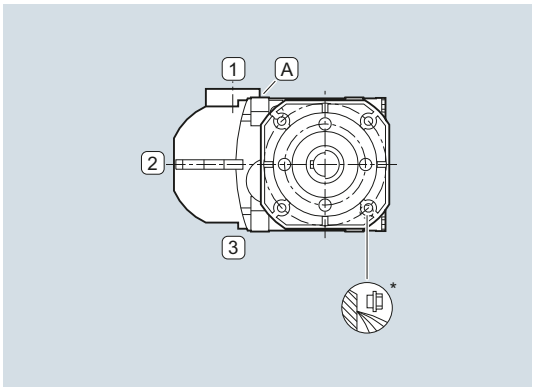
M5



Order code:

M5 **D05**

M6



Order code:

M6 **D06**

8

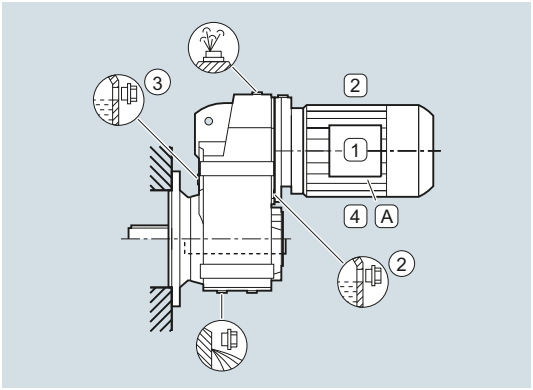
Flange-mounted design or with housing flange (continued)

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 8/3.

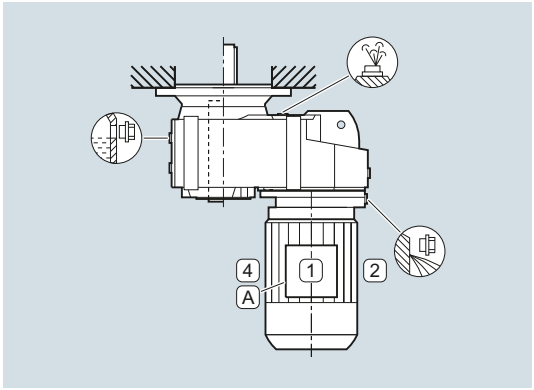
M1



Order code:

M1	**D01**

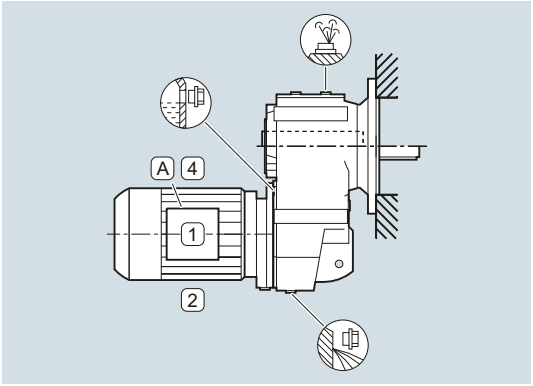
M2



Order code:

M2	**D02**

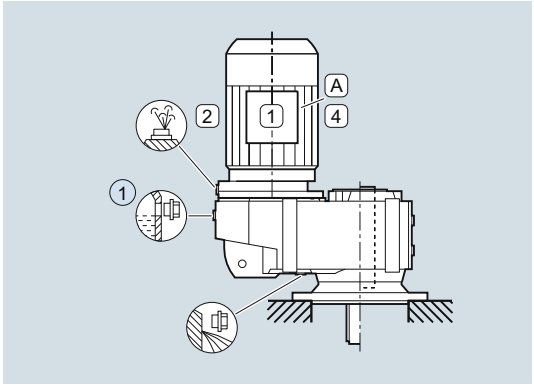
M3



Order code:

M3	**D03**

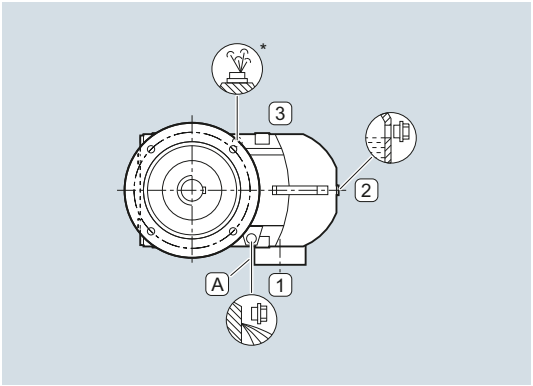
M4



Order code:

M4	**D04**

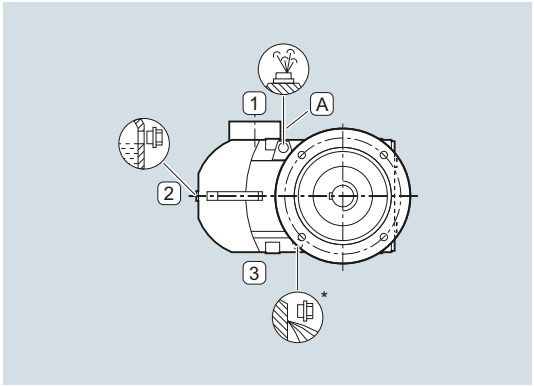
M5



Order code:

M5	**D05**

M6



Order code:

M6	**D06**

* 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.

Foot-mounted design

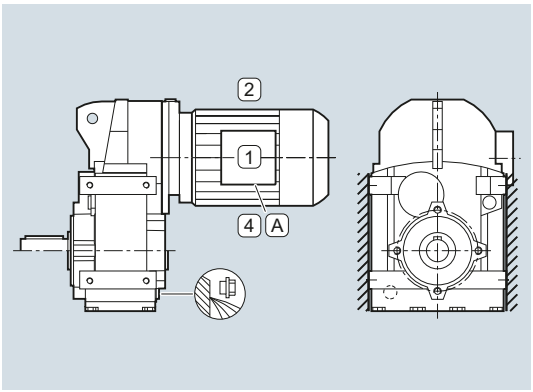
Parallel shaft gearboxes F, size 29

Oil valves

Size 29 is lubricated for life.

For an explanation of the symbols, see page 8/3.

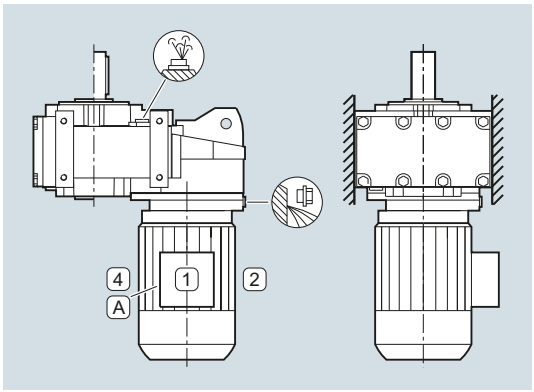
M1



Order code:

M1 **D01**

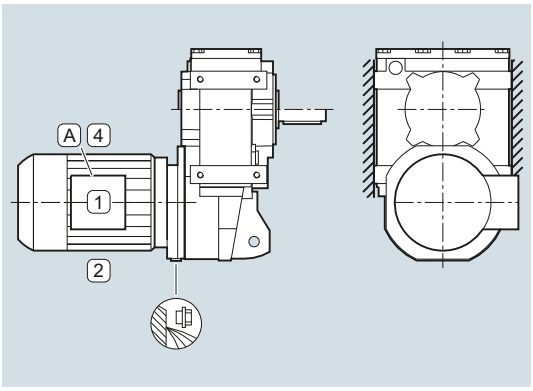
M2



Order code:

M2 **D02**

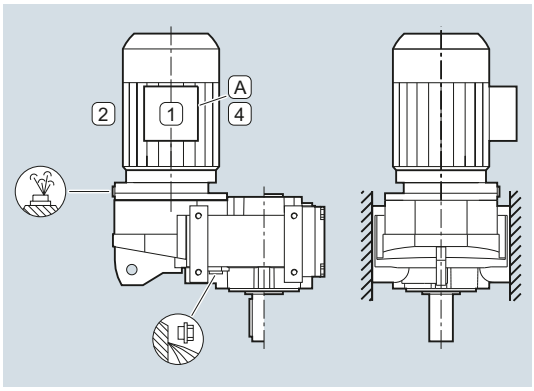
M3



Order code:

M3 **D03**

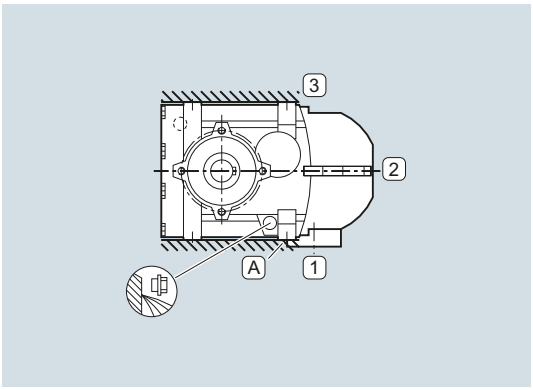
M4



Order code:

M4 **D04**

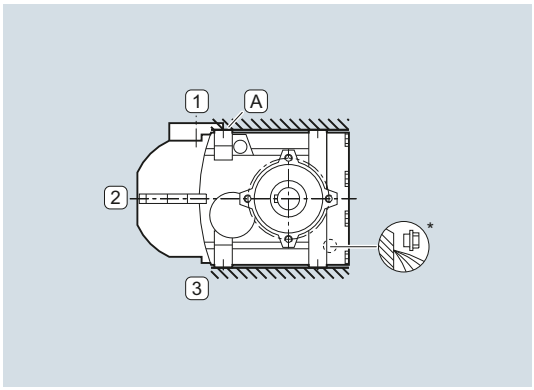
M5



Order code:

M5 **D05**

M6



Order code:

M6 **D06**

8

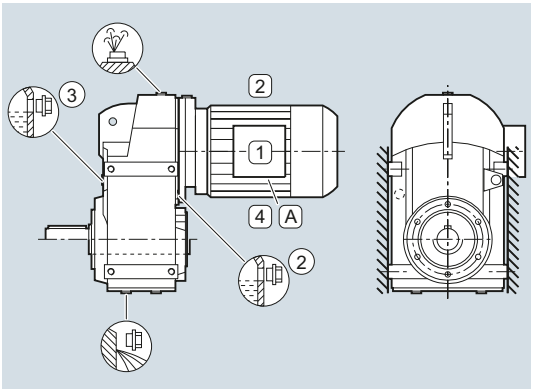
Foot-mounted design (continued)

Parallel shaft gearboxes F, sizes 39 to 189

Oil valves

For an explanation of the symbols, see page 8/3.

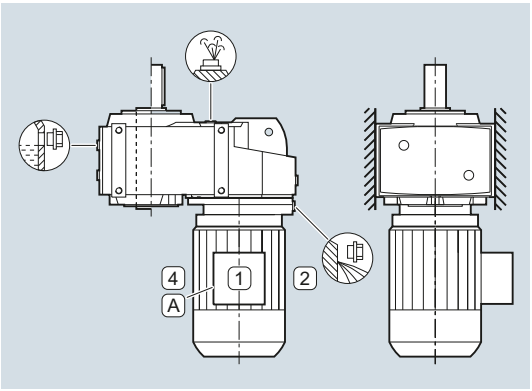
M1



Order code:

M1 **D01**

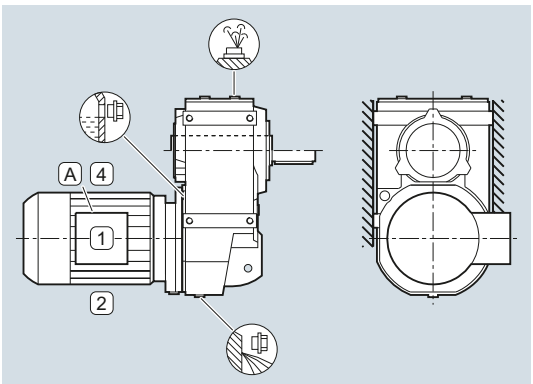
M2



Order code:

M2 **D02**

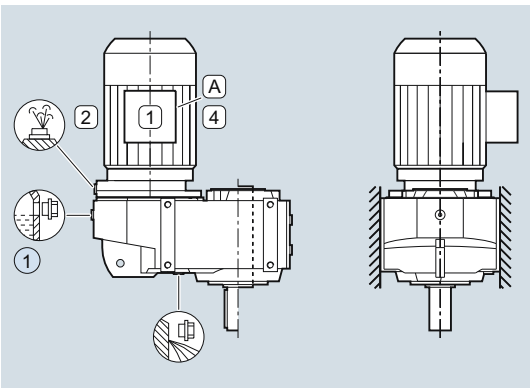
M3



Order code:

M3 **D03**

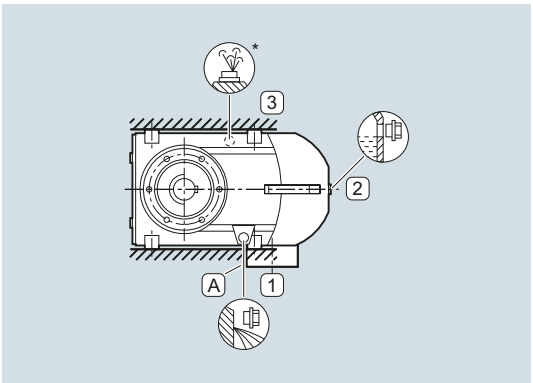
M4



Order code:

M4 **D04**

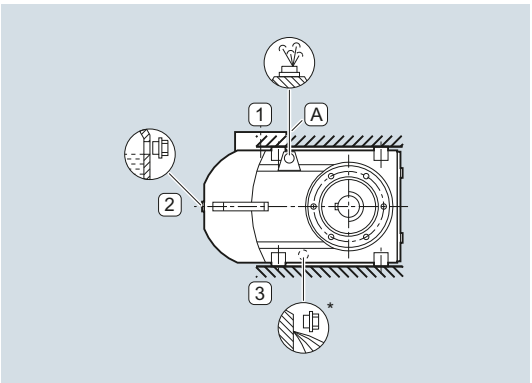
M5



Order code:

M5 **D05**

M6



Order code:

M6 **D06**

8

Foot-mounted design

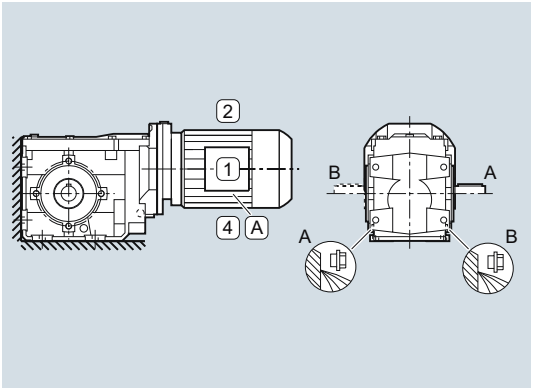
Bevel gearboxes B, size 19 and 29

Oil valves

Sizes 19 and 29 are lubricated for life.

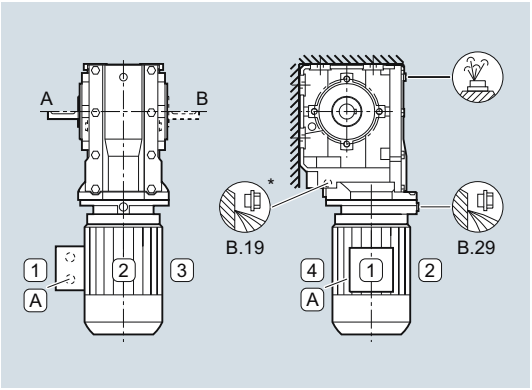
For an explanation of the symbols, see page 8/3.

M1



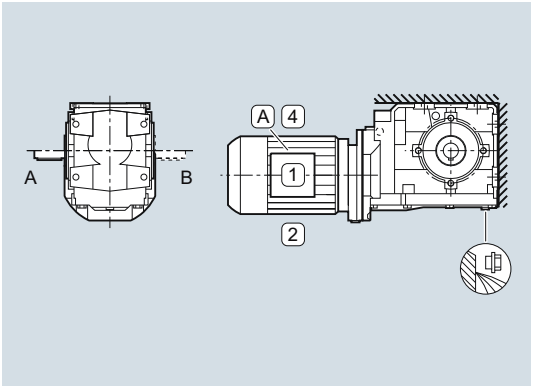
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



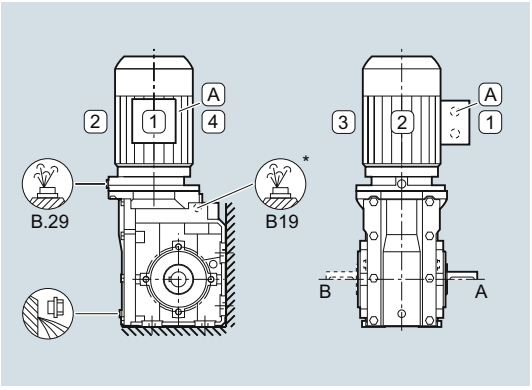
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



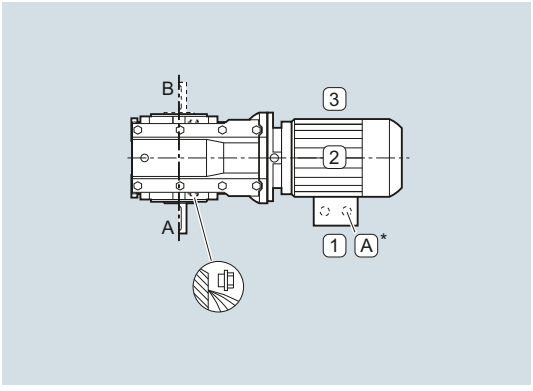
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



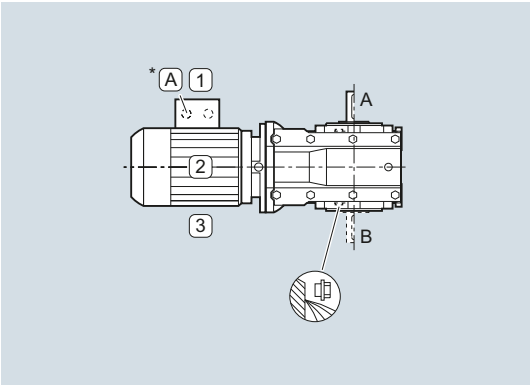
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

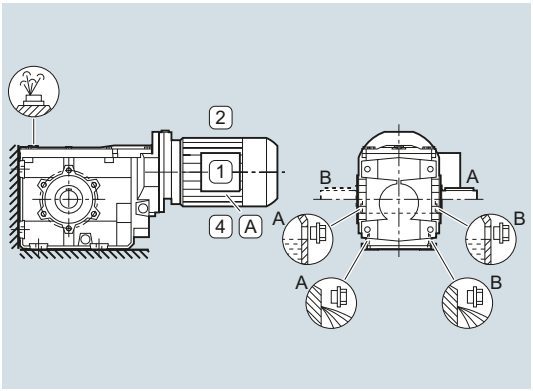
Foot-mounted design (continued)

Bevel gearboxes B, sizes 39 and 49

Oil valves

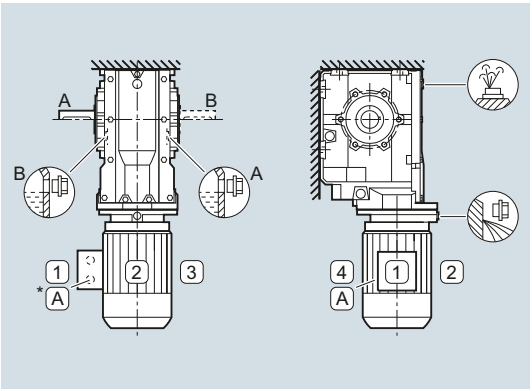
For an explanation of the symbols, see page 8/3.

M1



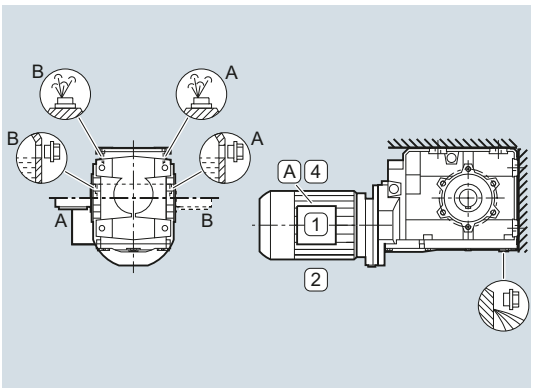
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



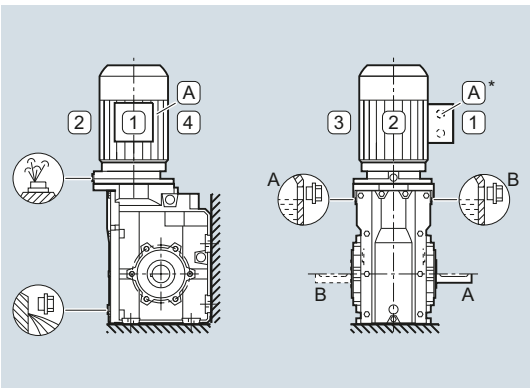
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



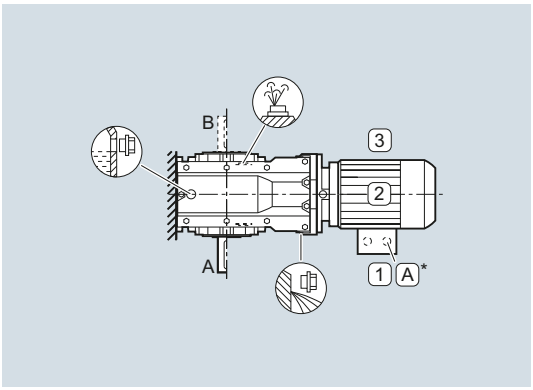
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



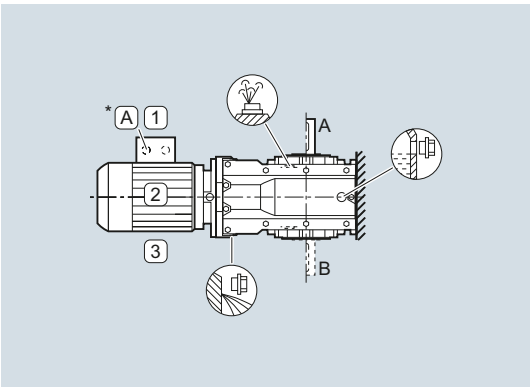
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

Housing flange design and flange-mounted design

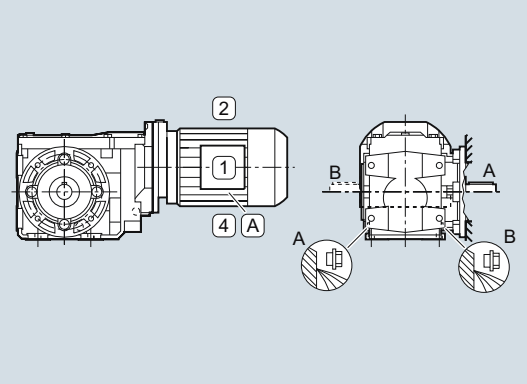
Bevel gearboxes B.Z and B.F, sizes 19 and 29

Oil valves

Sizes 19 and 29 are lubricated for life.

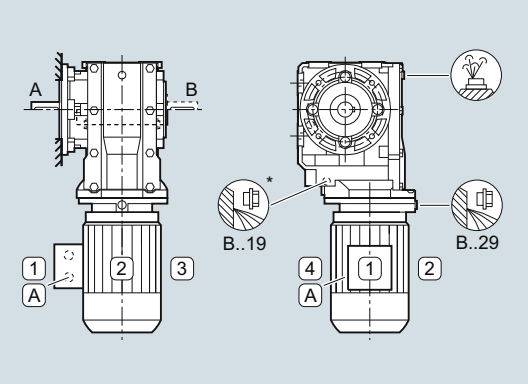
For an explanation of the symbols, see page 8/3.

M1



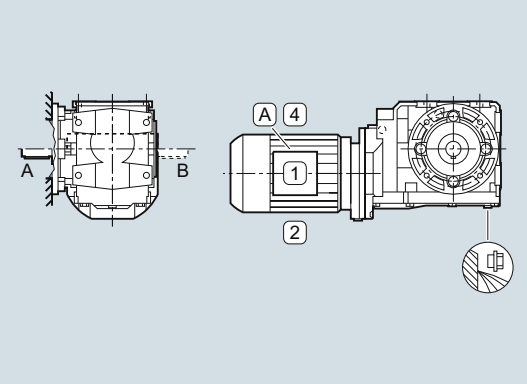
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



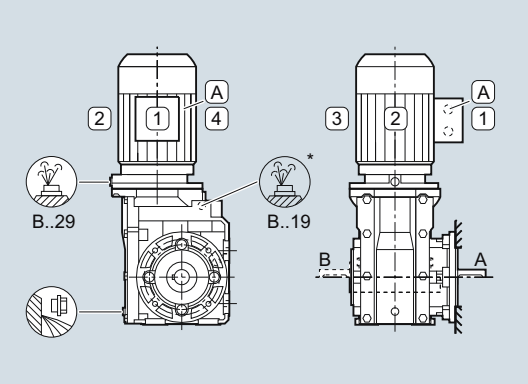
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



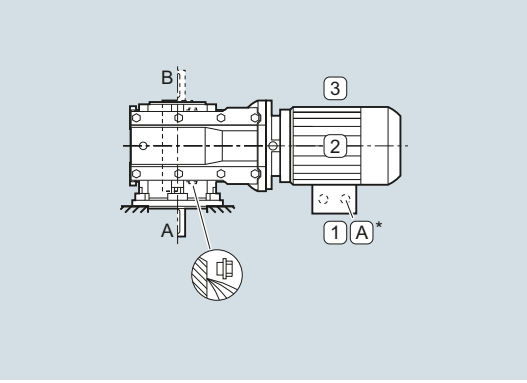
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



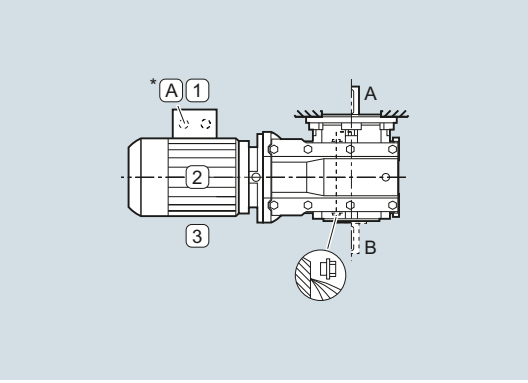
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

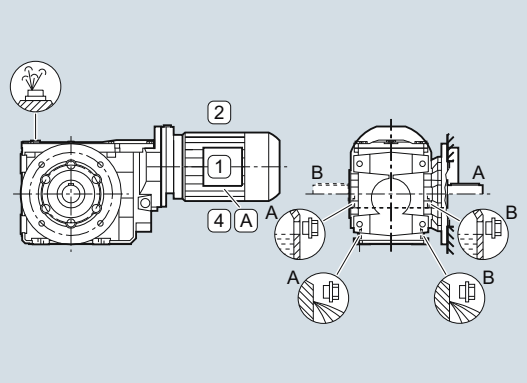
Housing flange design and flange-mounted design (continued)

Bevel gearboxes B.Z and B.F, sizes 39 and 49

Oil valves

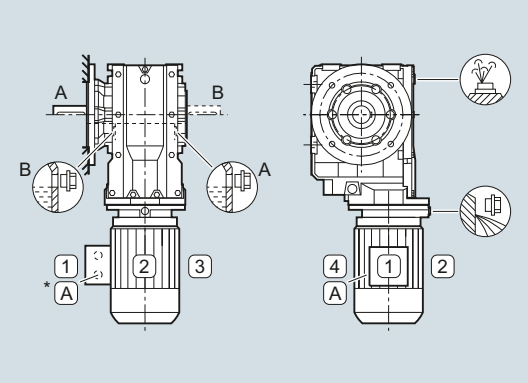
For an explanation of the symbols, see page 8/3.

M1



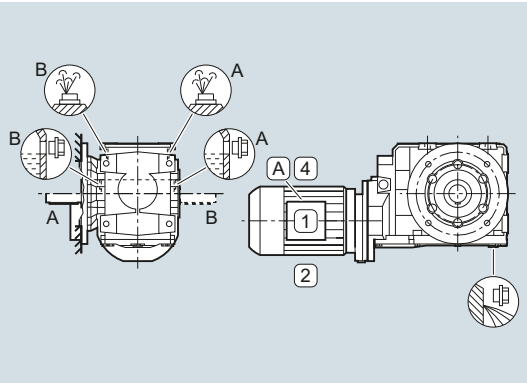
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



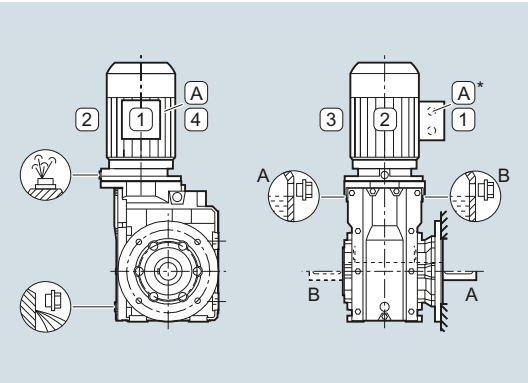
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



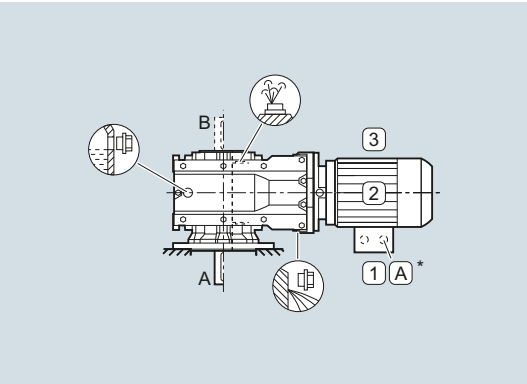
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



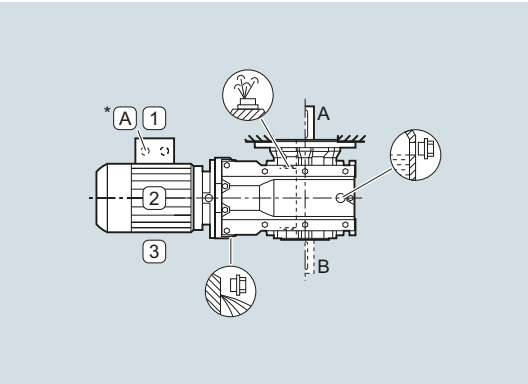
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

Shaft-mounted design

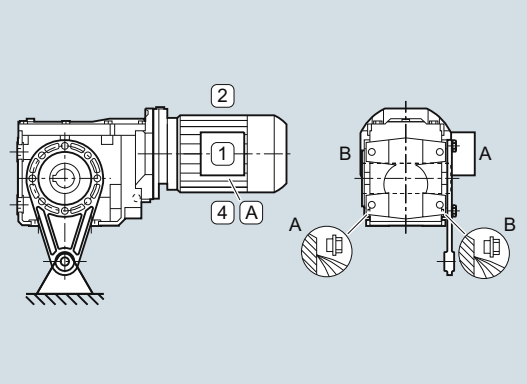
Bevel gearboxes BAD, sizes 19 and 29

Oil valves

Sizes 19 and 29 are lubricated for life.

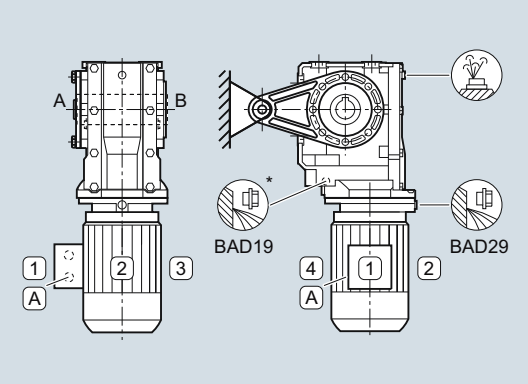
For an explanation of the symbols, see page 8/3.

M1



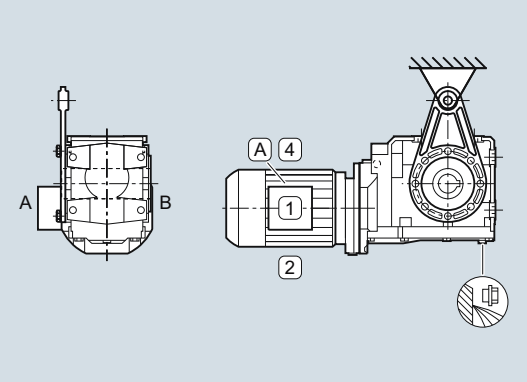
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



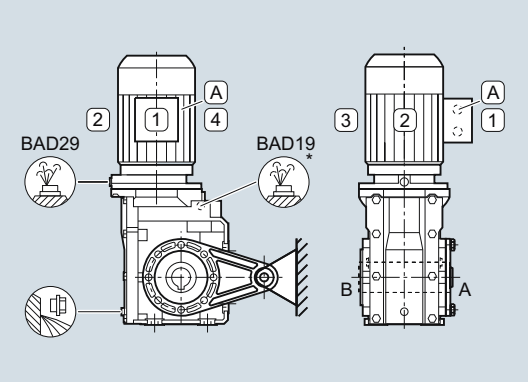
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



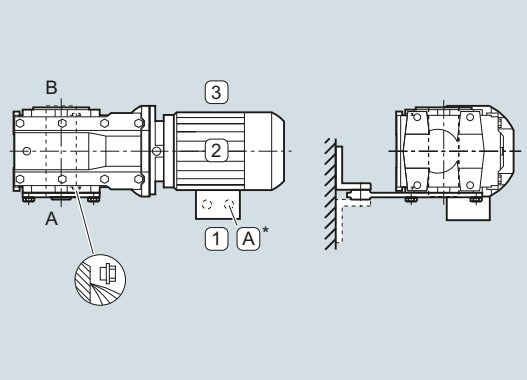
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



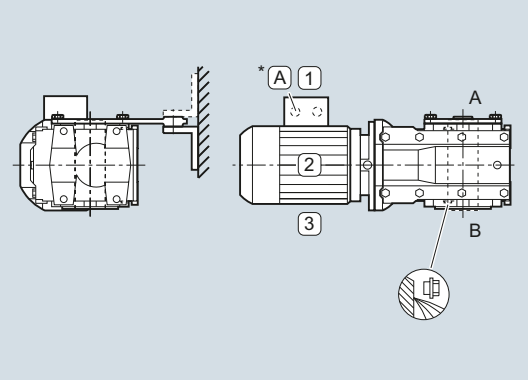
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

8

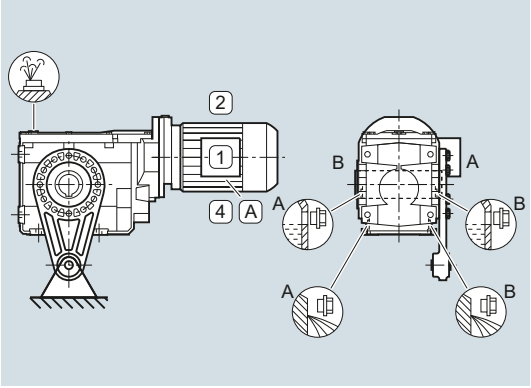
Shaft-mounted design (continued)

Bevel gearboxes BAD, sizes 39 and 49

Oil valves

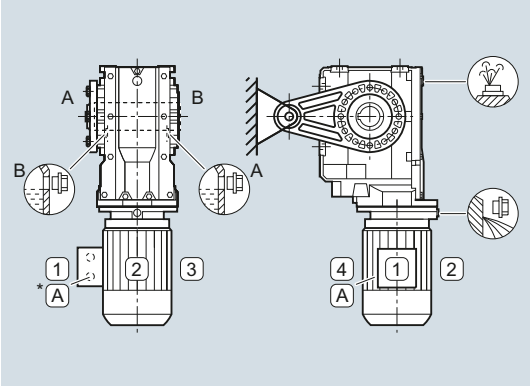
For an explanation of the symbols, see page 8/3.

M1



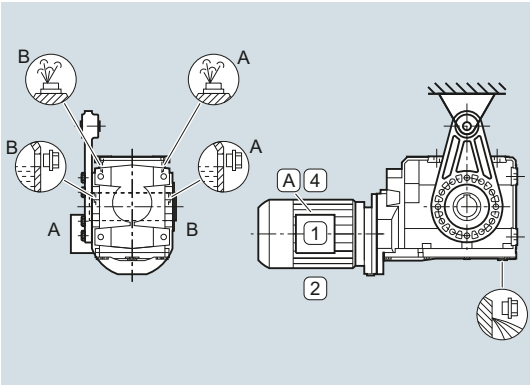
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



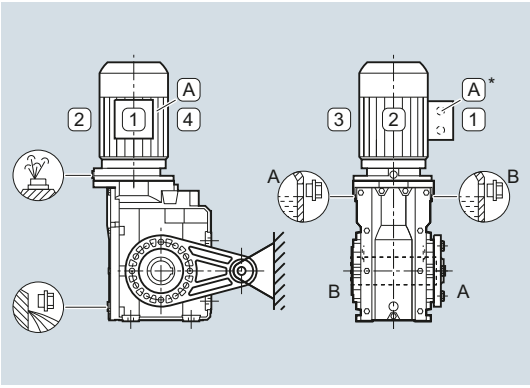
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



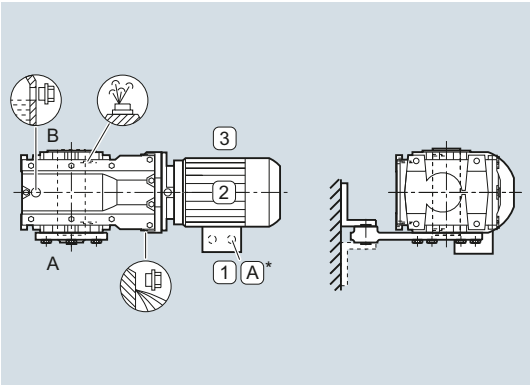
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



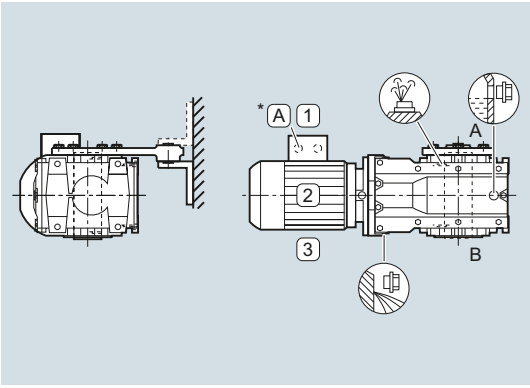
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

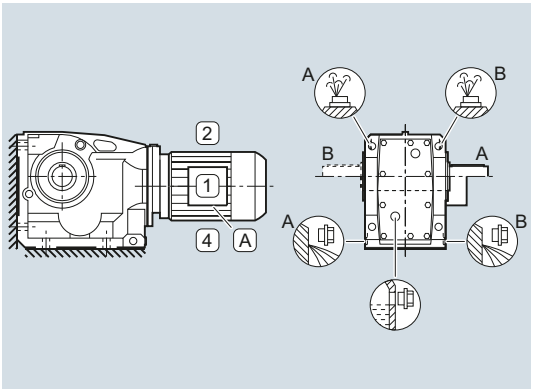
Foot-mounted design

Bevel gearboxes K, sizes 39 to 189

Oil valves

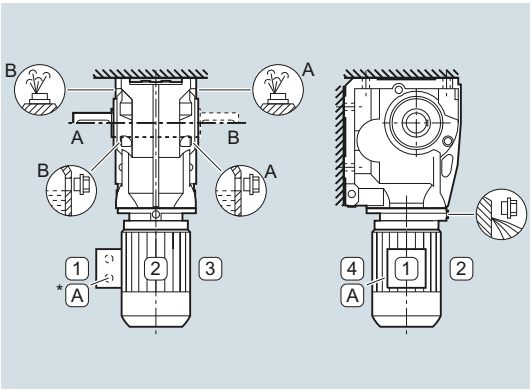
For an explanation of the symbols, see page 8/3.

M1



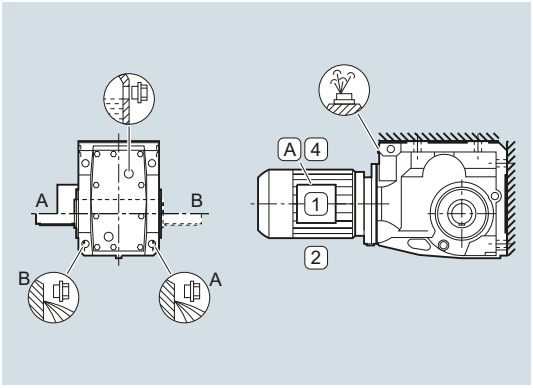
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



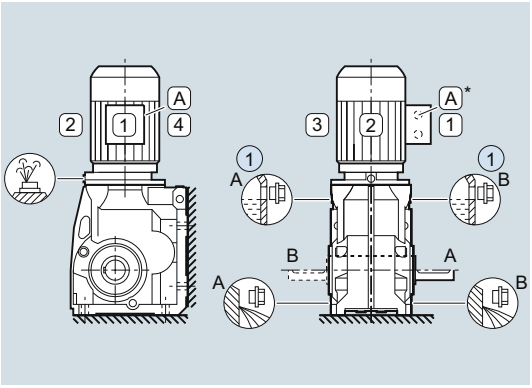
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



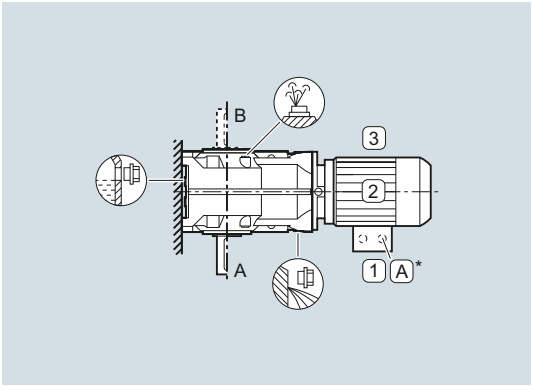
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



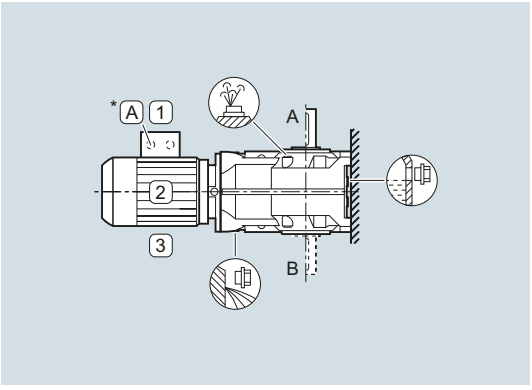
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

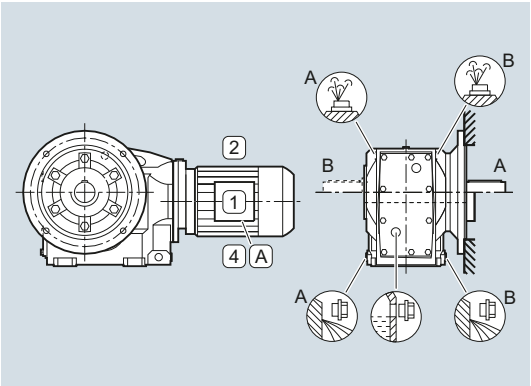
Housing flange design and flange-mounted design

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

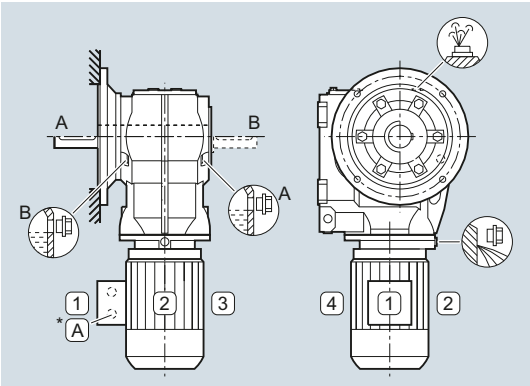
For an explanation of the symbols, see page 8/3.

M1



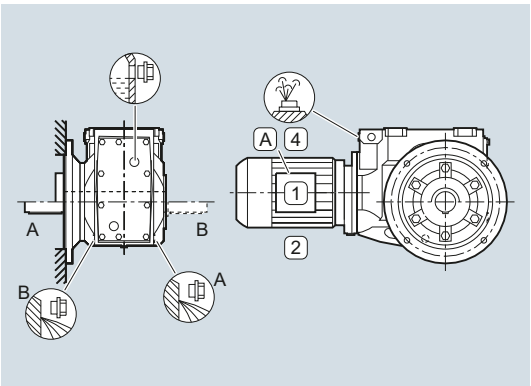
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



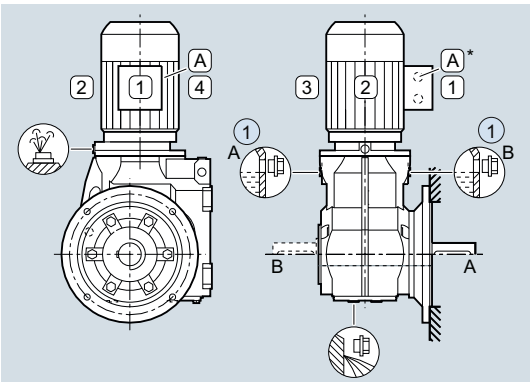
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



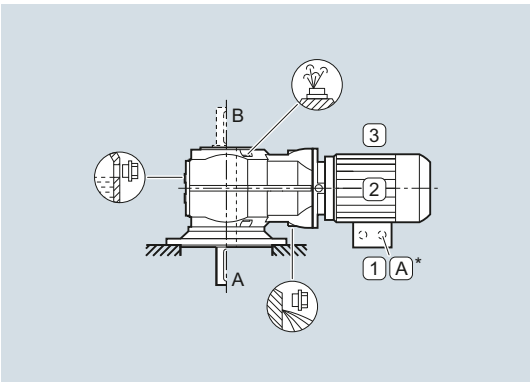
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



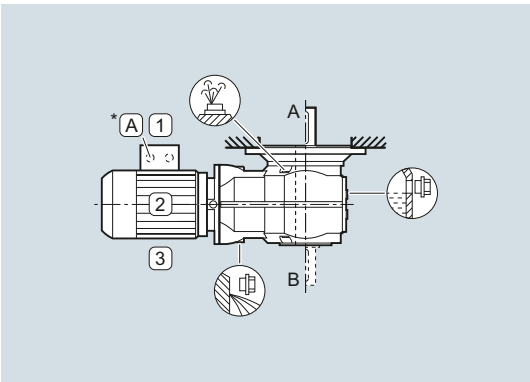
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

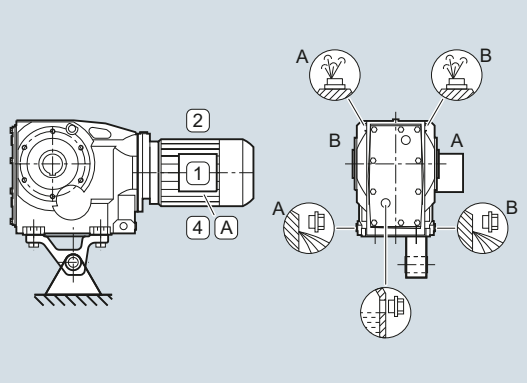
Shaft-mounted design

Bevel gearboxes KAD, sizes 39 to 189

Oil valves

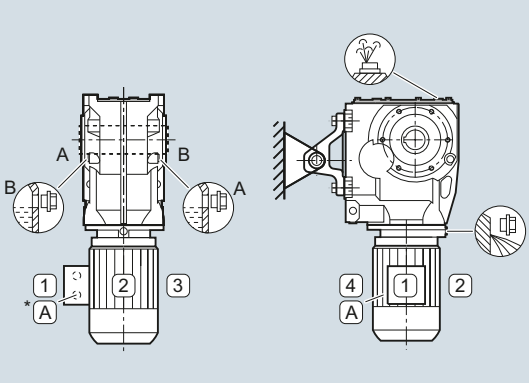
For an explanation of the symbols, see page 8/3.

M1



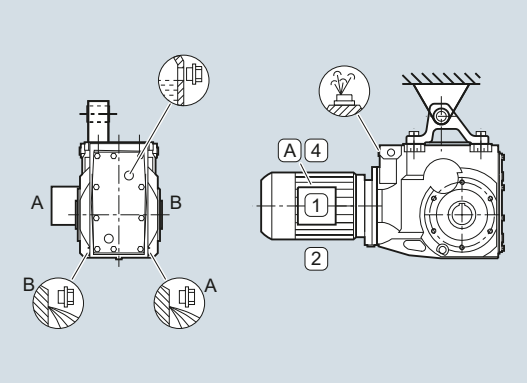
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



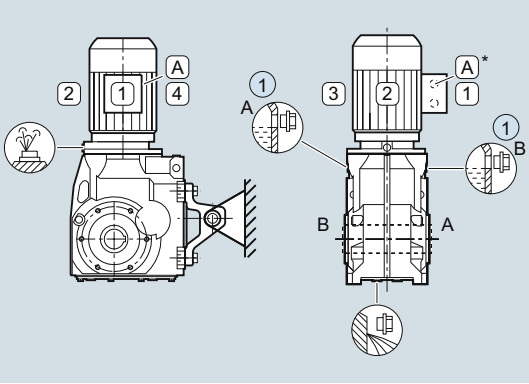
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



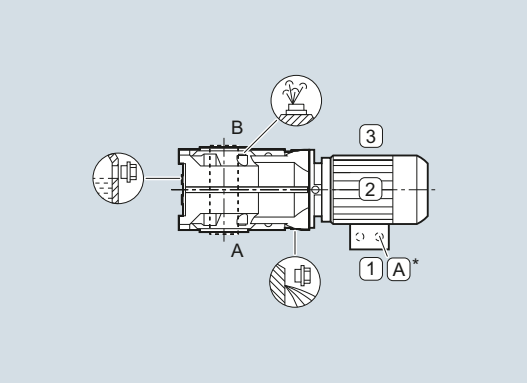
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



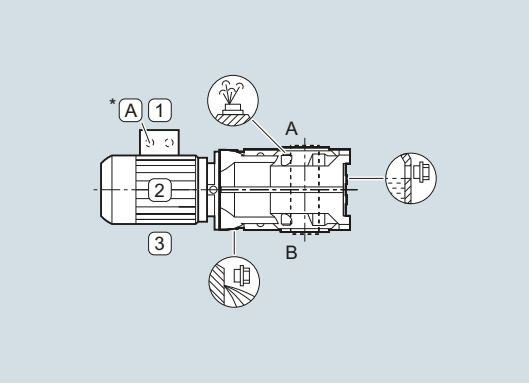
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

Shaft-mounted design

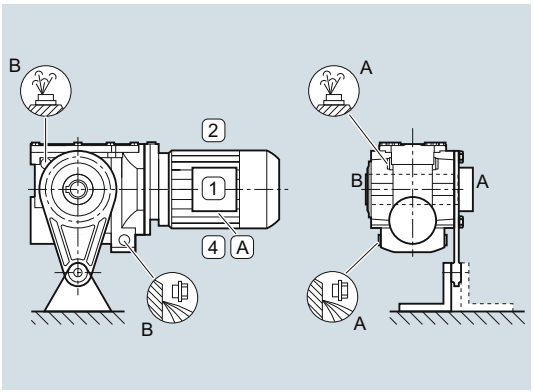
Helical worm gearboxes CAD, size 29

Oil valves

Size 29 is lubricated for life.

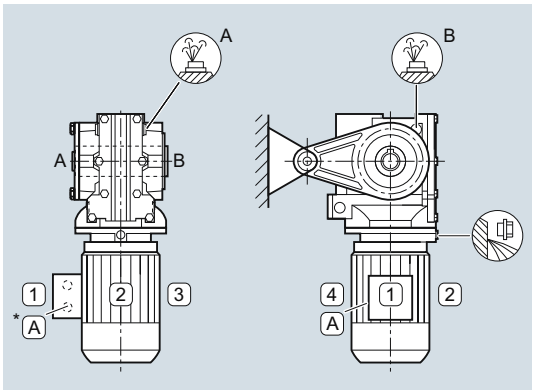
For an explanation of the symbols, see page 8/3.

M1



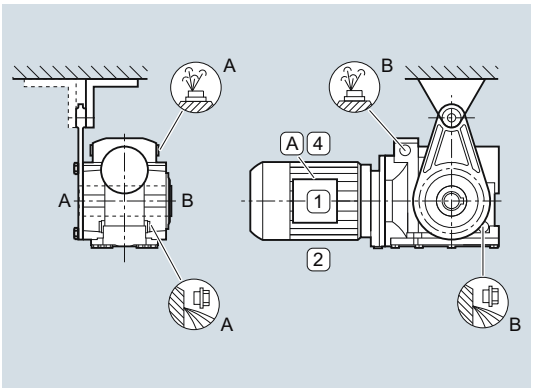
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



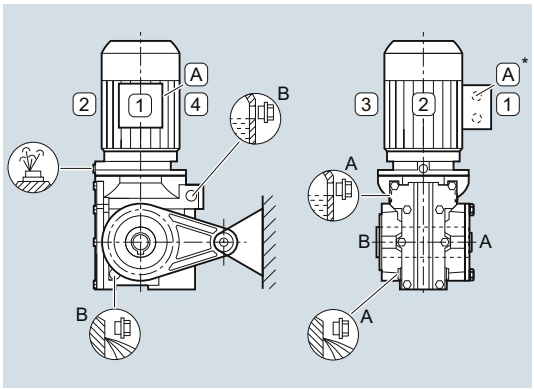
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



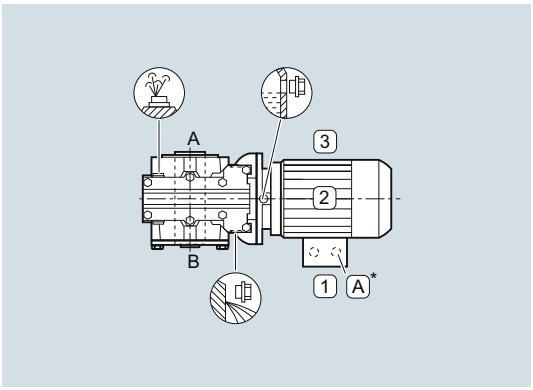
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



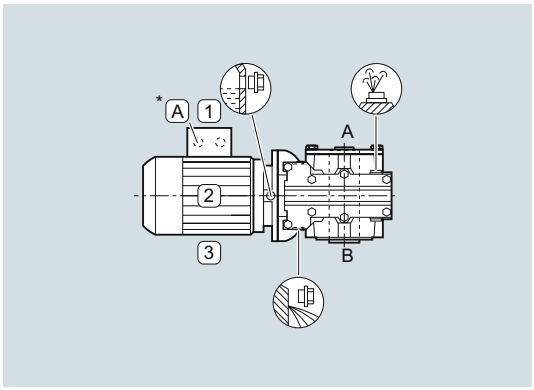
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

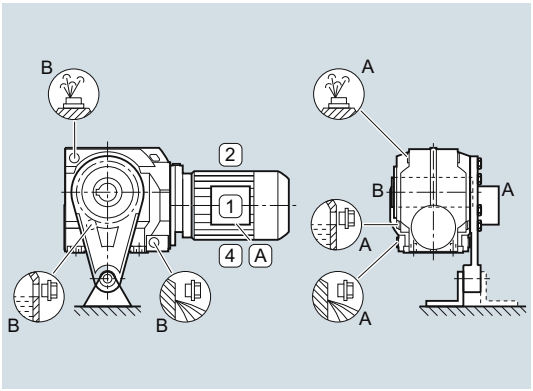
Shaft-mounted design (continued)

Helical worm gearboxes CAD, sizes 39 to 89

Oil valves

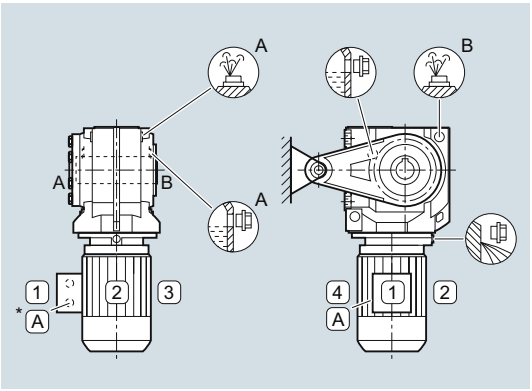
For an explanation of the symbols, see page 8/3.

M1



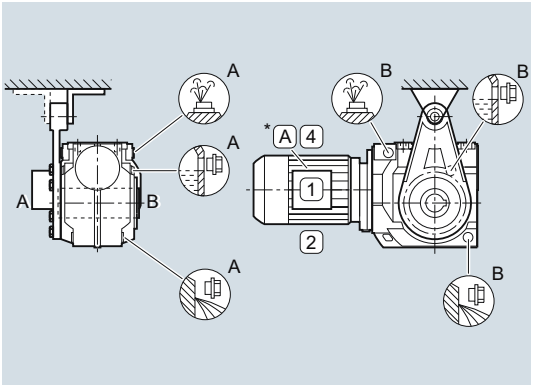
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



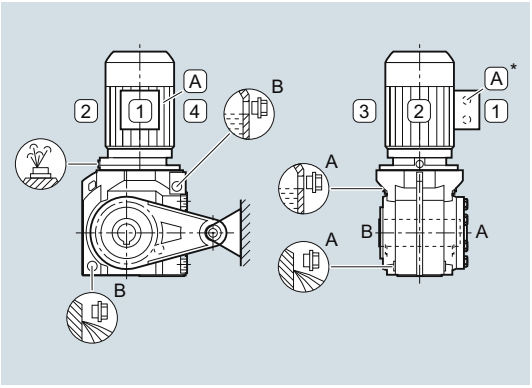
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



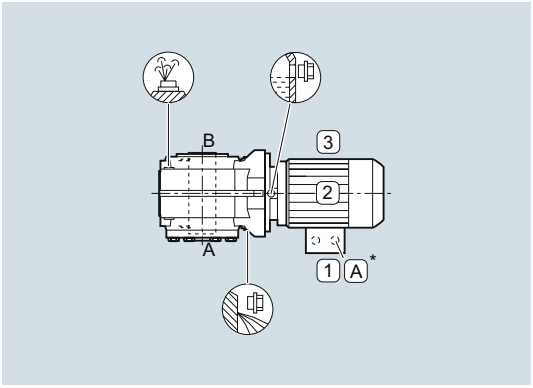
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



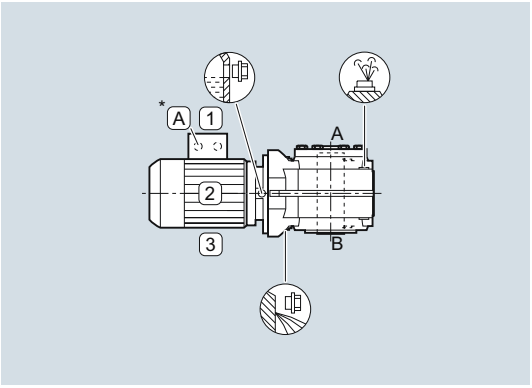
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

Housing flange design and flange-mounted design

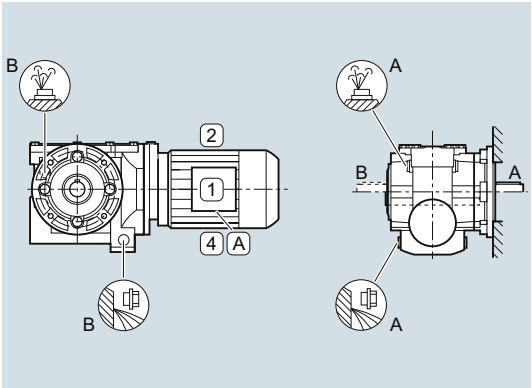
Helical worm gearboxes CAZ and C.F, size 29

Oil valves

Size 29 is lubricated for life.

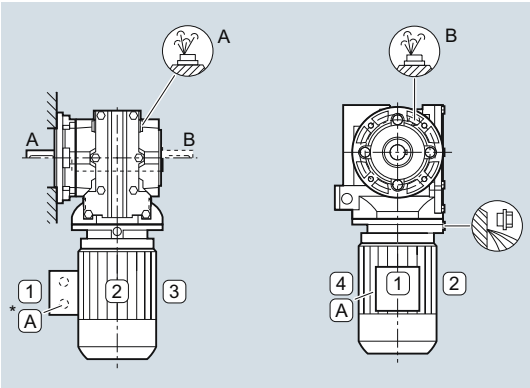
For an explanation of the symbols, see page 8/3.

M1



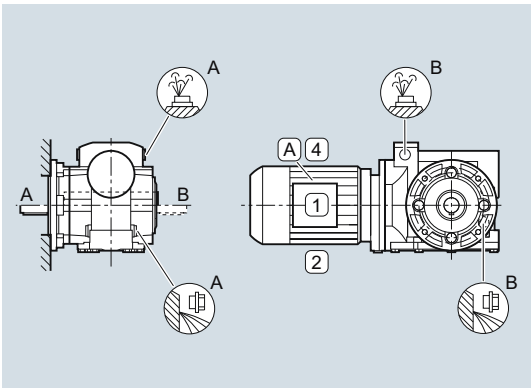
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



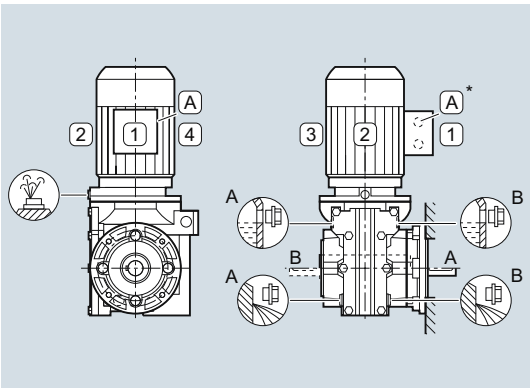
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



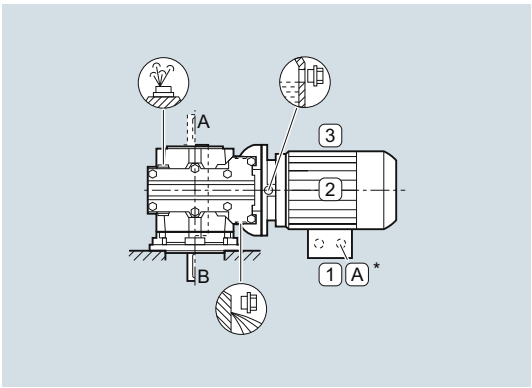
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



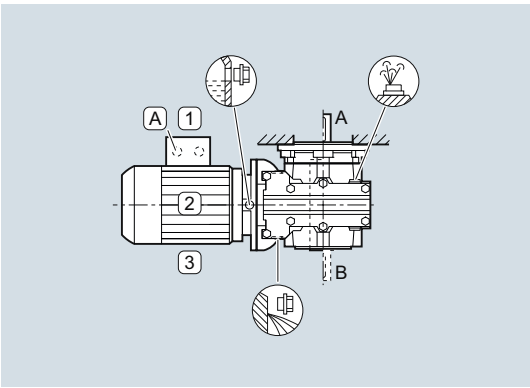
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

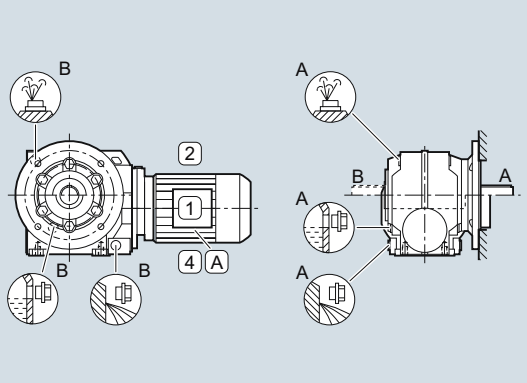
Housing flange design and flange-mounted design (continued)

Helical worm gearboxes CAZ and C.F, sizes 39 to 89

Oil valves

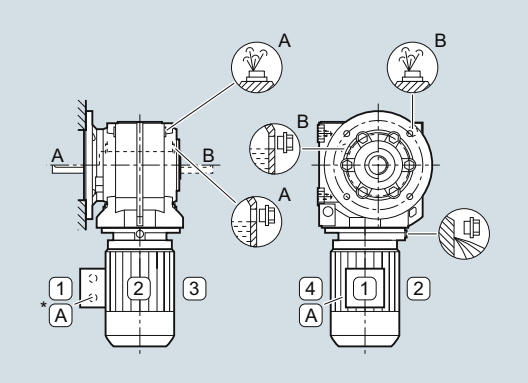
For an explanation of the symbols, see page 8/3.

M1



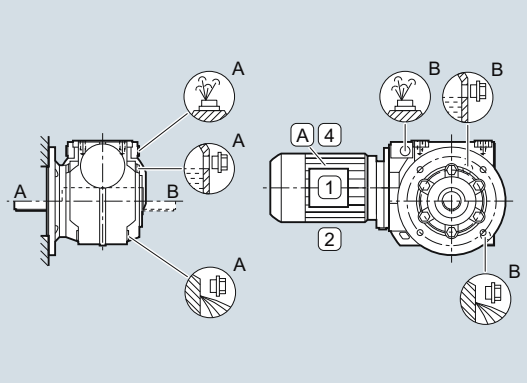
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



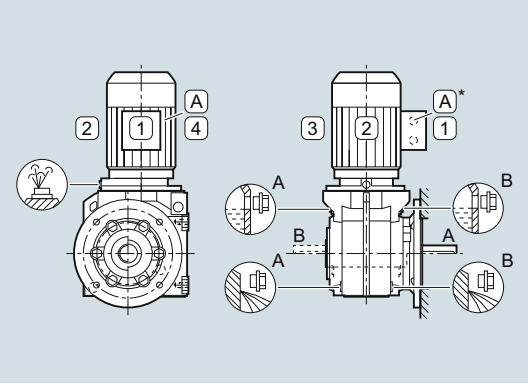
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



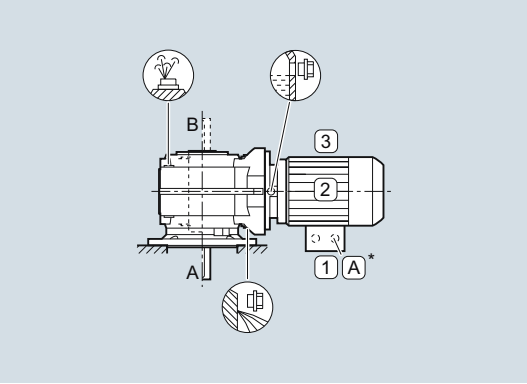
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



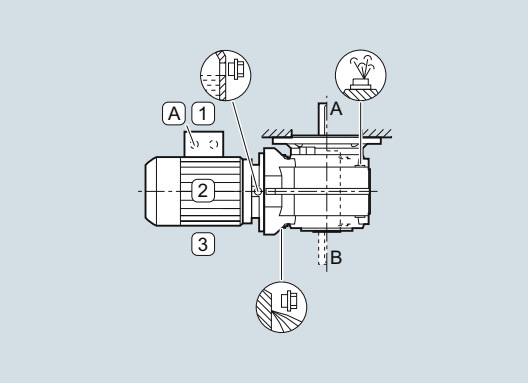
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

Foot-mounted design

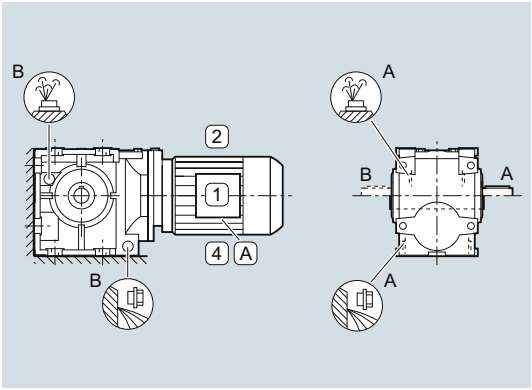
Helical worm gearboxes C, size 29

Oil valves

Size 29 is lubricated for life.

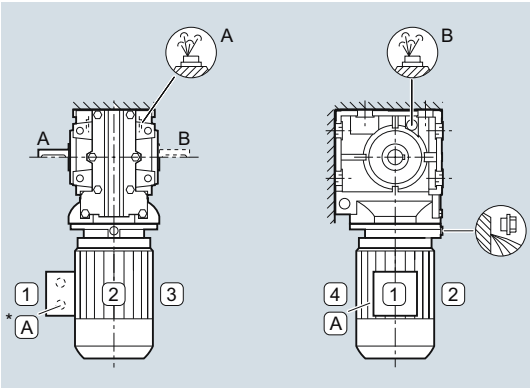
For an explanation of the symbols, see page 8/3.

M1



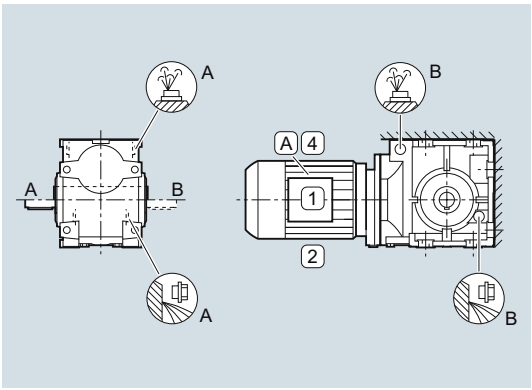
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



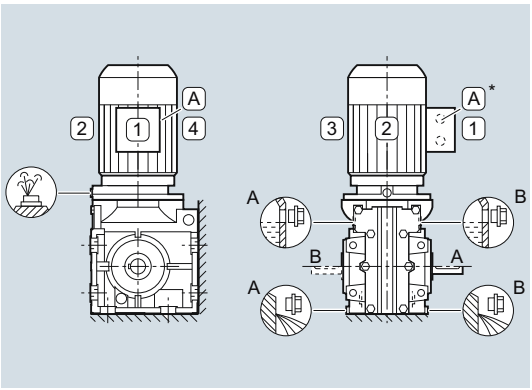
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



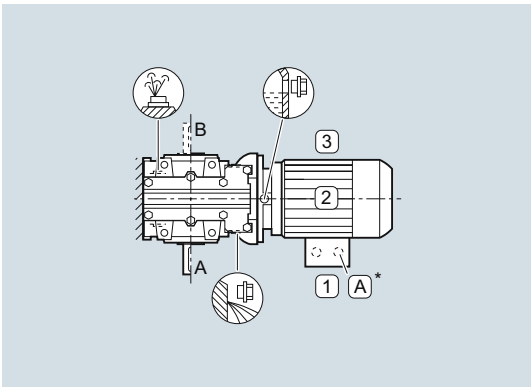
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



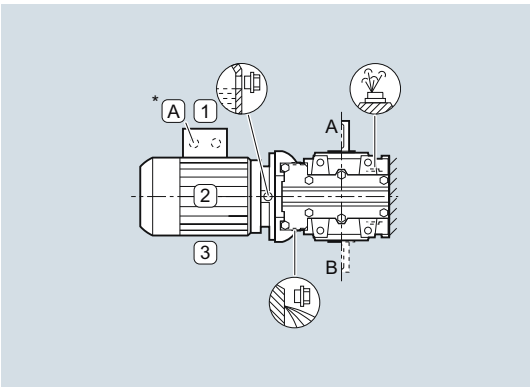
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

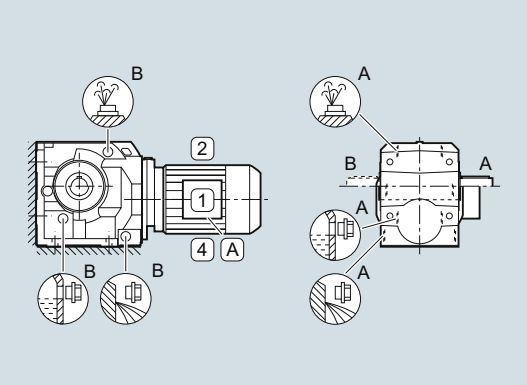
Foot-mounted design (continued)

Helical worm gearboxes C, sizes 39 to 89

Oil valves

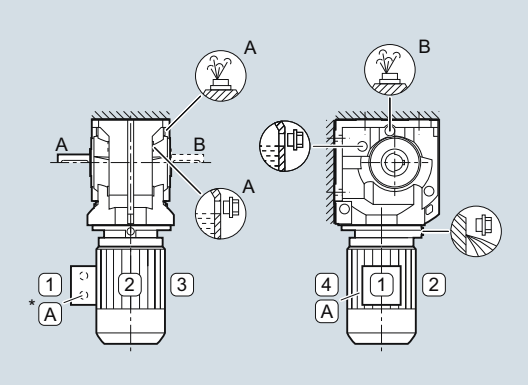
For an explanation of the symbols, see page 8/3.

M1



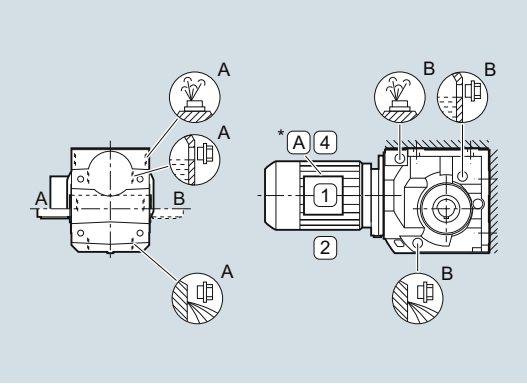
Order code:	
M1 output side A	**D11**
M1 output side B	**D21**

M2



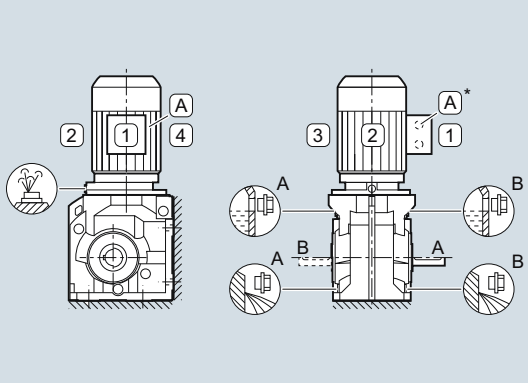
Order code:	
M2 output side A	**D12**
M2 output side B	**D22**

M3



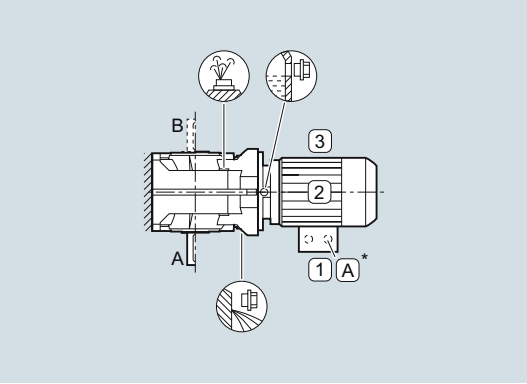
Order code:	
M3 output side A	**D13**
M3 output side B	**D23**

M4



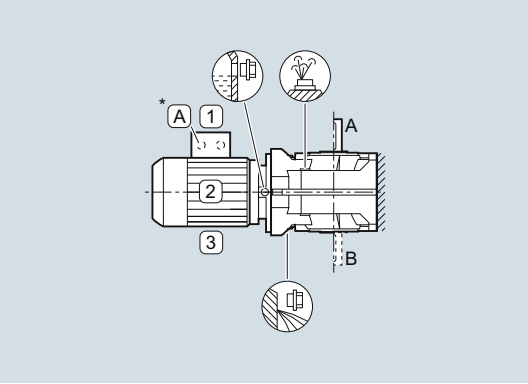
Order code:	
M4 output side A	**D14**
M4 output side B	**D24**

M5



Order code:	
M5 output side A	**D15**
M5 output side B	**D25**

M6



Order code:	
M6 output side A	**D16**
M6 output side B	**D26**

Tandem gearboxes

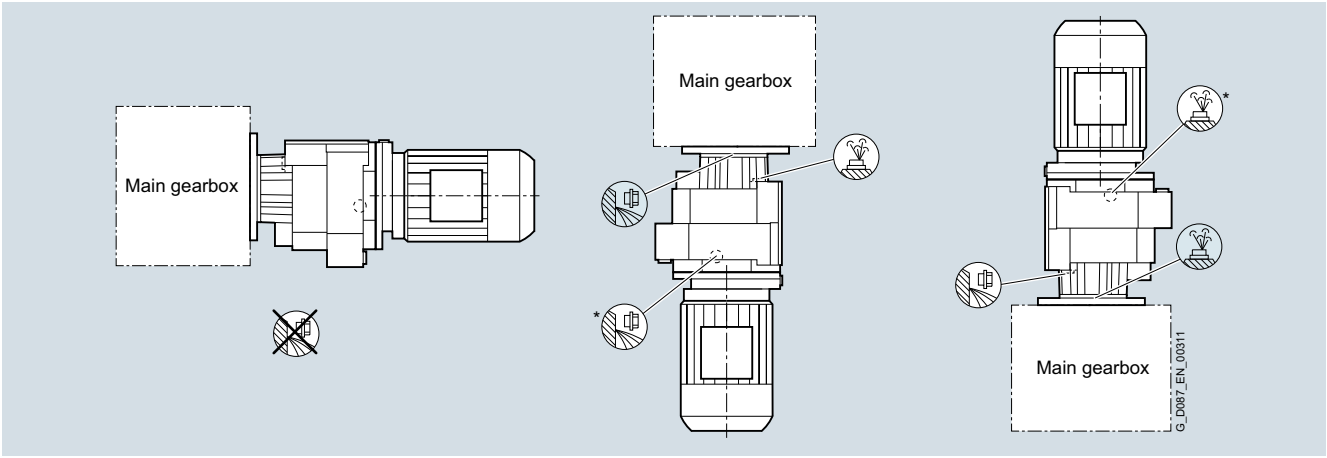
Overview

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.

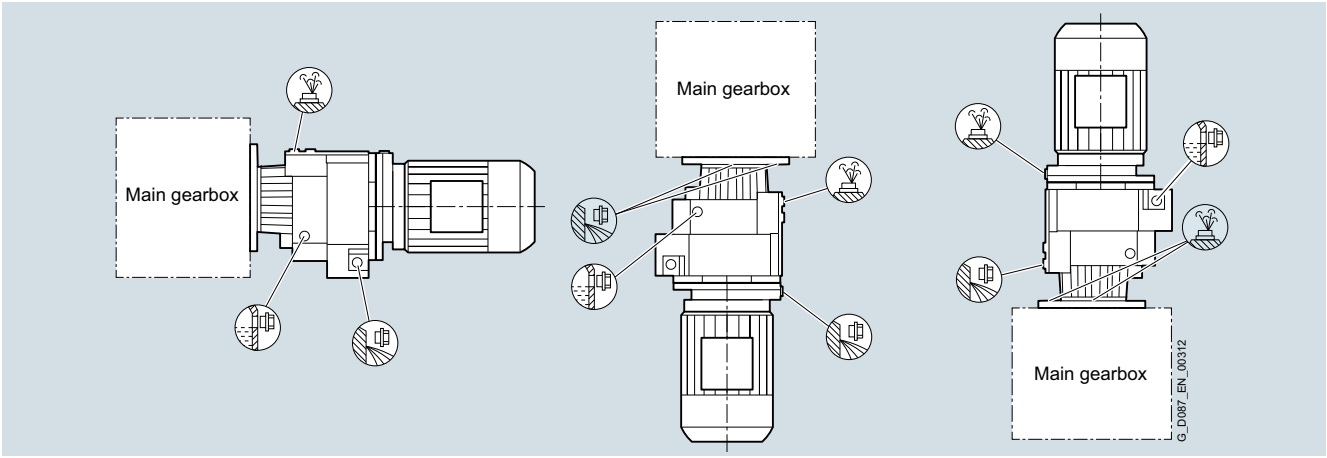
Note:

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 8/3.

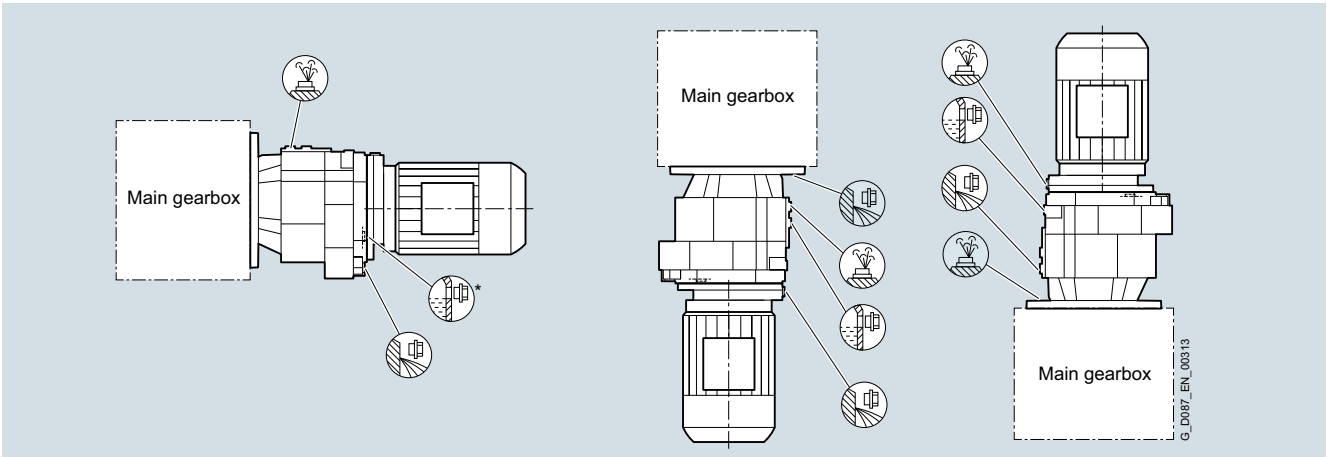
Tandem gearboxes: 2nd gearbox size 19



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.

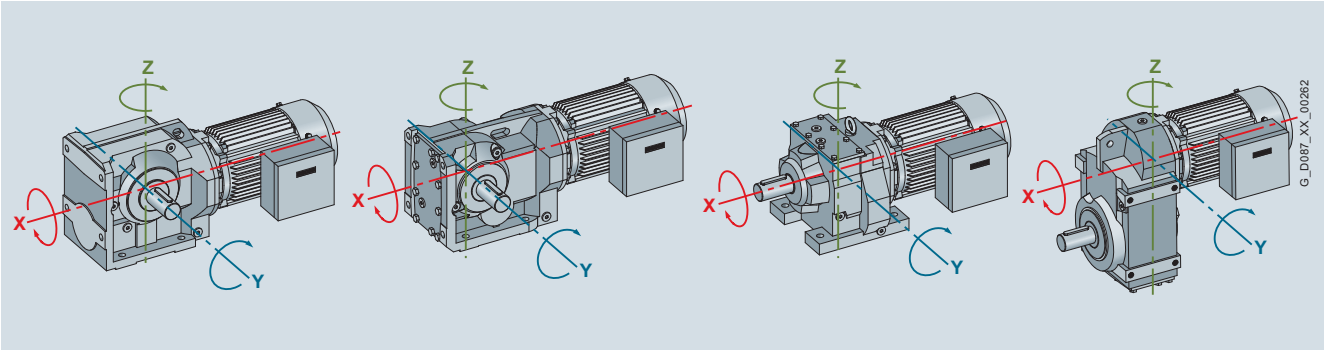


Fig. 8/6 Axes of rotation of the geared motors

Order code:

Y axis		X axis		Z axis	
Rotation angle 5 °	**E01**	Rotation angle 5 °	**E21**	Rotation angle 5 °	**E41**
Rotation angle 10 °	**E02**	Rotation angle 10 °	**E22**	Rotation angle 10 °	**E42**
Rotation angle 15 °	**E03**	Rotation angle 15 °	**E23**	Rotation angle 15 °	**E43**
Rotation angle 20 °	**E04**	Rotation angle 20 °	**E24**	Rotation angle 20 °	**E44**
Rotation angle 25 °	**E05**	Rotation angle 25 °	**E25**	Rotation angle 25 °	**E45**
Rotation angle 30 °	**E06**	Rotation angle 30 °	**E26**	Rotation angle 30 °	**E46**
Rotation angle 35 °	**E07**	Rotation angle 35 °	**E27**	Rotation angle 35 °	**E47**
Rotation angle 40 °	**E08**	Rotation angle 40 °	**E28**	Rotation angle 40 °	**E48**
Rotation angle 45 °	**E09**	Rotation angle 45 °	**E29**	Rotation angle 45 °	**E49**
Rotation angle 50 °	**E10**	Rotation angle 50 °	**E30**	Rotation angle 50 °	**E50**
Rotation angle 55 °	**E11**	Rotation angle 55 °	**E31**	Rotation angle 55 °	**E51**
Rotation angle 60 °	**E12**	Rotation angle 60 °	**E32**	Rotation angle 60 °	**E52**
Rotation angle 65 °	**E13**	Rotation angle 65 °	**E33**	Rotation angle 65 °	**E53**
Rotation angle 70 °	**E14**	Rotation angle 70 °	**E34**	Rotation angle 70 °	**E54**
Rotation angle 75 °	**E15**	Rotation angle 75 °	**E35**	Rotation angle 75 °	**E55**
Rotation angle 80 °	**E16**	Rotation angle 80 °	**E36**	Rotation angle 80 °	**E56**
Rotation angle 85 °	**E17**	Rotation angle 85 °	**E37**	Rotation angle 85 °	**E57**

Use the functions of the DT Configurator to precisely design the special mounting position you require.

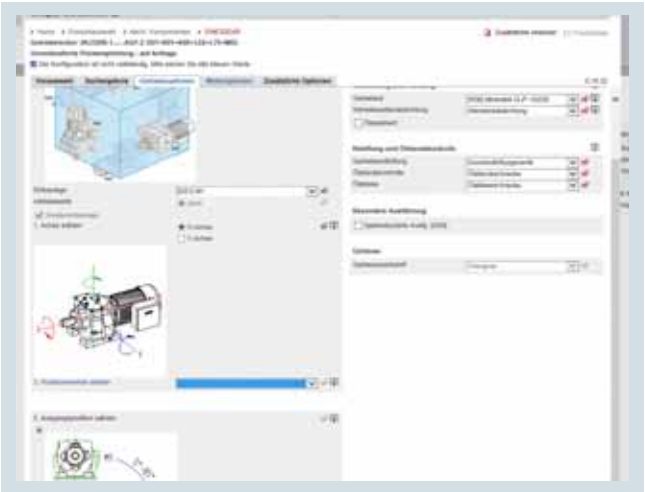
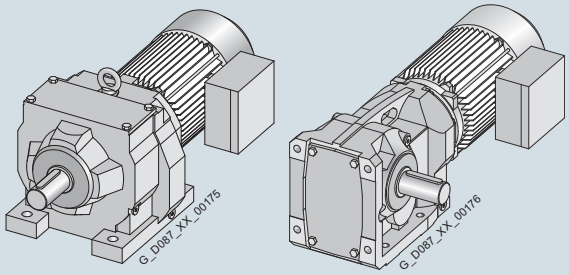
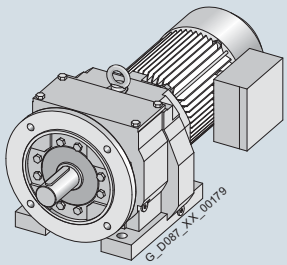
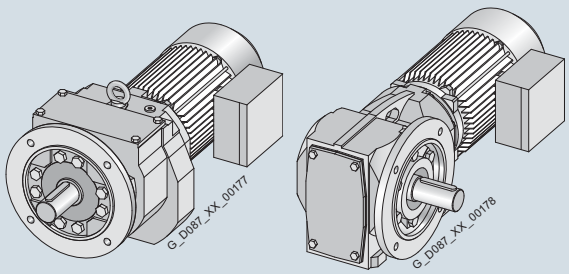
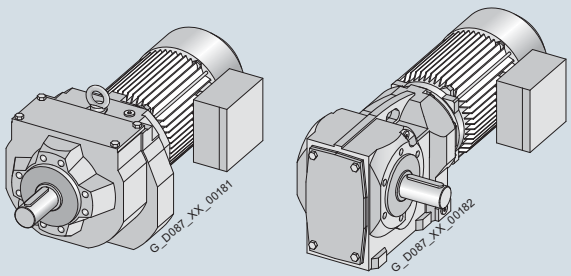
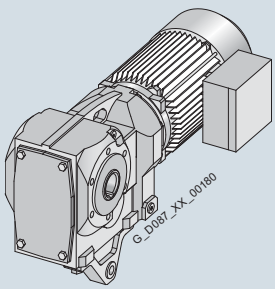


Fig. 8/7 DT Configurator

Mounting types

Overview

Mounting type	Type designation 2nd data position	Possible for D, Z	E	F	B	K	C	Example	Article No. 14th data position:
Foot-mounted design	-	✓	✓	✓	✓	✓	✓		**A**
Foot/flange-mounted design	B	✓[1)]		-	-	-	-		**B**
Flange-mounted design (A type)	F	✓	✓	✓	✓	✓	✓		**F**
Housing flange (C type)	Z	✓	✓	✓	✓	✓	✓		**H**
Shaft-mounted design (torque arm)	D	-	-	✓	✓	-	✓		**D**
		-	-	-	-	✓	-		**C**

[1)] Only for sizes 29 to 89

Flange-mounted designs

The flange-mounted designs are available with different diameters.

Gearbox type	Flange diameter mm													Order code
Helical gearboxes DF and ZF														
Gearbox size	**19**	**29**	**39**	**49**	**59**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**	
	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**
Helical gearboxes VLplus								300						**H07**
								350	350	350				**H08**
								450	450	450		450		**H09**
										550	550	550		**H10**
												660		**H11**
Helical gearboxes XLplus								450	450					**H09**
										550	550			**H10**
												660		**H11**
Helical gearboxes DB and ZB														
Gearbox size	**29**		**39**		**49**		**59**		**69**		**79**		**89**	
	120		120											**H02**
					140									**H03**
					160		160							**H04**
									200					**H05**
											250			**H06**
													300	**H07**
Helical gearboxes EF														
Gearbox size	**39**		**49**		**69**		**89**		**109**		**129**		**149**	
	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**
Parallel shaft gearboxes F..F														
Gearbox size	**29**	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**			
	120													**H02**
	160	160												**H04**
			200											**H05**
				250	250									**H06**
						300								**H07**
							350							**H08**
								450	450					**H09**
										550				**H10**
											660			**H11**
Parallel shaft gearboxes VLplus						300								**H07**
							350							**H08**
								450	450					**H09**
										550				**H10**

Mounting types

Flange-mounted designs (continued)

Gearbox type	Flange diameter mm										Order code
Bevel gearboxes B.F											
Gearbox size	**19**		**29**		**39**		**49**				
	120		120								**H02**
			160		160						**H04**
					200		200				**H05**
Bevel gearboxes K.F											
Gearbox size	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**	
	160										**H04**
		200									**H05**
			250	250							**H06**
					300						**H07**
						350					**H08**
							450	450			**H09**
									550		**H10**
										660	**H11**
Bevel gearboxes VLplus					300						**H07**
						350					**H08**
							450	450			**H09**
									550		**H10**
Helical worm gearboxes C.F											
Gearbox size	**29**		**39**		**49**		**69**		**89**		
	120										**H02**
	160		160								**H04**
					200		200				**H05**
									250		**H06**

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.

Order code:	
Water drain holes at the output flange	**G77**

Flange diameter mm	Possible for												
Helical gearboxes Z and D													
Gearbox size	**19**	**29**	**39**	**49**	**59**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**
120													
140				✓									
160				✓	✓[1]								
200				✓	✓	✓[2]							
250					✓	✓	✓[1]						
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

Flange-mounted designs (continued)

Water drain holes at the output flange

Flange diameter mm	Possible for										
Helical gearboxes E											
Gearbox size	**39**	**49**	**69**	**89**	**109**	**129**	**149**				
120	✓										
140	✓										
160	✓	✓									
200	✓	✓	✓								
250		✓	✓	✓							
300				✓	✓						
350					✓	✓	✓				
450						✓	✓				
Parallel shaft gearboxes F											
Gearbox size	**29**	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**
120											
140											
160		✓									
200			✓								
250				✓	✓						
300						✓					
350							✓				
450								✓	✓		
550										✓	
660											✓
Bevel gearboxes K											
Gearbox size	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**	
160	✓										
200		✓									
250			✓	✓							
300					✓						
350						✓					
450							✓	✓			
550									✓		
660										✓	

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.

Order code:	
Output flange sealing	**G78**

8

Mounting types

Parallel shaft gearboxes F.AD in a shaft-mounted design

The rubber buffers (supplied loose) are used to flexibly support the gearbox on the housing plate provided.

When mounting, the rubber buffers must be pretensioned to the dimension specified in the dimensional drawing.

The elastomer used for support is manufactured out of natural rubber 70° ± 5 Shore A. The rubber buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +60 °C.

Article No. in the 14th data position

Shaft-mounted design	**D**

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° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +60 °C.

Article No. in the 14th data position

Shaft-mounted design	**C**

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.

Article No. in the 14th data position

Shaft-mounted design	**D**

When ordered, the torque arm is supplied loose.

Shaft-mounted design for sizes 19 and 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.

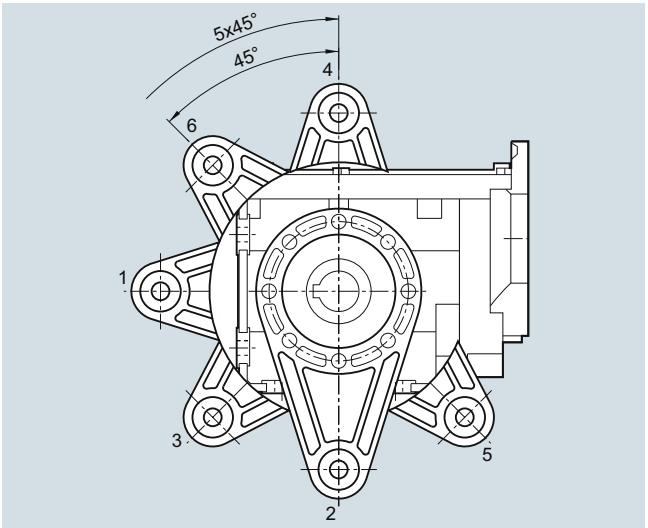


Fig. 8/8 Bevel gearboxes BAD., sizes 19 and 29

Shaft-mounted design for sizes 39 and 49

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.

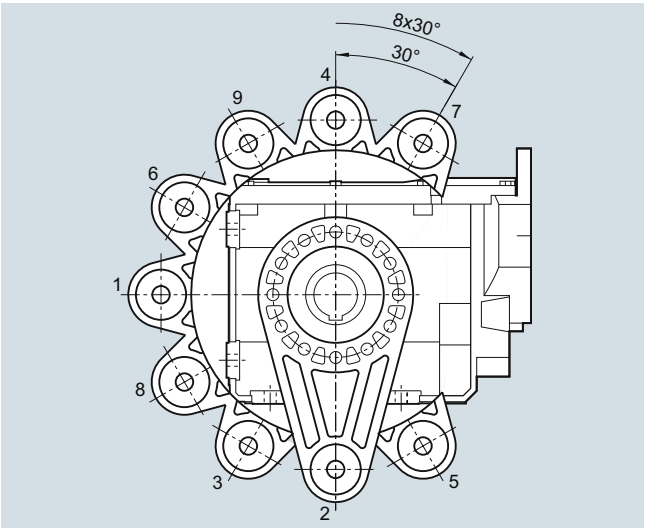


Fig. 8/9 Bevel gearboxes BAD., sizes 39 and 49

Helical worm gearboxes CAD. in a shaft-mounted design

The torque arm can be screwed to the gearbox housing at various positions.

Article No. in the 14th data position

Shaft-mounted design	**D**

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.

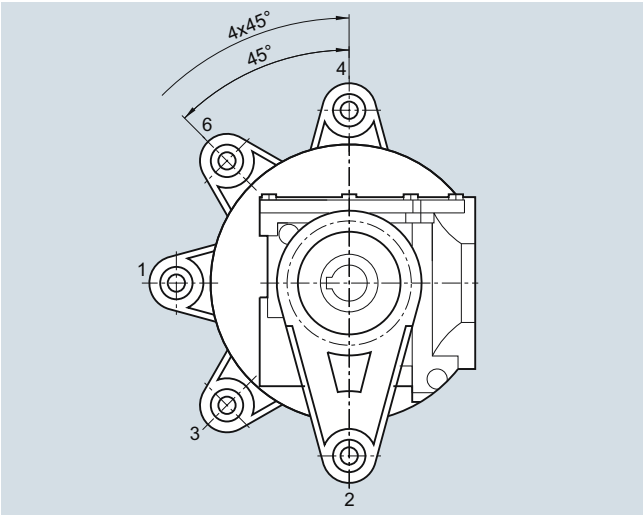


Fig. 8/10 Helical worm gearboxes CAD., size 29

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.

Order code:

Figure 1	**G09**
Figure 2	**G10**

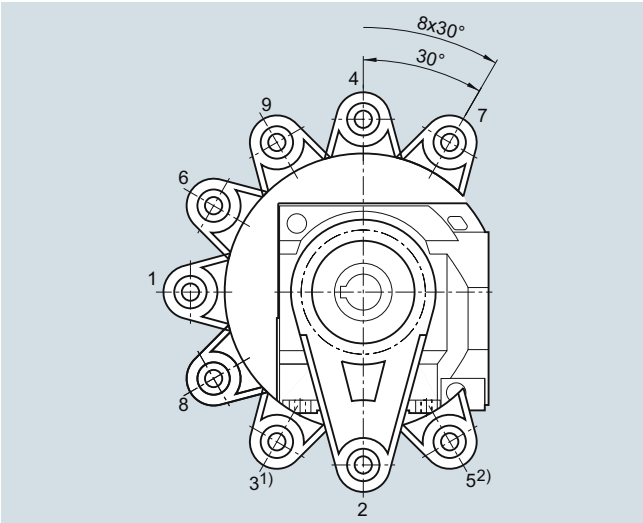


Fig. 8/11 Helical worm gearboxes CAD., Figure 1, sizes 39 to 89

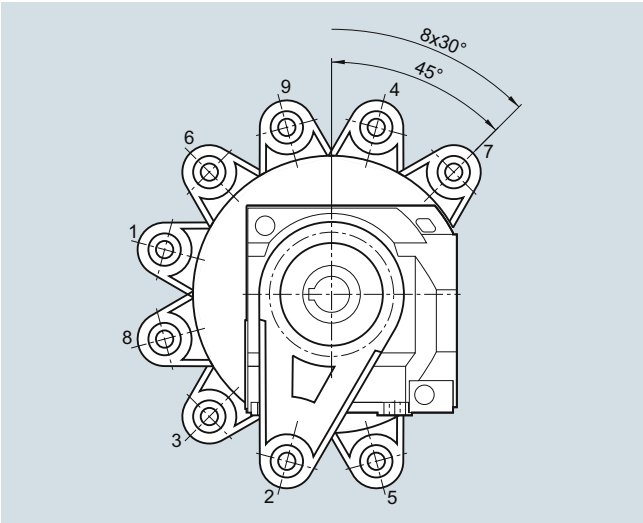


Fig. 8/12 Helical worm gearboxes CAD., Figure 2, sizes 39 to 89

1) Position not possible for sizes CAD.39 and CAD.69

2) Position not possible for size CAD.39

Shaft designs

Selection and ordering data

Shaft design	Dimensions mm						Ambient temperature range	Article No. 8th data position	Article No. supplement
Helical gearboxes Z and D									
Gearbox size	**19**	**29**	**39**	**49**	**59**	**69**			
Solid shaft	V20 x 40	V25 x 50	V25 x 50	V30 x 60	V35 x 70	V35 x 70	-40 ... +60 °C	**1**	
	V16 x 28				V30 x 60			**2**	
	V16 x 40		V30 x 60		V40 x 80			**3**	
Solid shaft without feather key [1]	VG20 x 40	VG25 x 50	VG25 x 50	VG30 x 60	VG35 x 70	VG35 x 70		**9**	**H1G**
Solid shaft, inches	V0.75" x 1.57"	V1" x 1.97"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.375" x 2.76"		**9**	**H6A**
Gearbox size	**79**	**89**	**109**	**129**	**149**	**169**			
Solid shaft	V40 x 80	V50 x 100	V60 x 120	V70 x 140	V90 x 170	V110 x 210	-40 ... +60 °C	**1**	
	V35 x 70					V100 x 210		**2**	
	V50 x 100	V60 x 120						**3**	
Solid shaft without feather key [1]	VG40 x 80	VG50 x 100	VG60 x 120	VG70 x 140	VG90 x 170			**9**	**H1G**
Solid shaft, inches	V1.625" x 3.15"	V2.125" x 3.94"	V2.375" x 4.72"	V2.875" x 5.51"	V3.625" x 6.69"	V4.375"x8.27"		**9**	**H6A**
Solid shaft VLplus		VM60 x 120	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210		**9**	**H1C**
Solid shaft XLplus		VM60 x 120	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210		**9**	**H1C**
Gearbox size	**189**								
Solid shaft	V120 x 210						-40 ... +60 °C	**1**	
Solid shaft, inches	V4.75" x 8.27"							**9**	**H6A**

Helical gearboxes E									
Gearbox size	**39**	**49**	**69**	**89**	**109**	**129**	**149**			
Solid shaft	V20 x 40	V25 x 50	V30 x 60	V40 x 80	V50 x 100	V60 x 120	V70 x 140	-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"	V2.375" x 4.725"	V2.875" x 5.51"		**9**	**H6A**

[1] Can only be selected in conjunction with foot-mounted or housing flange design.

Selection and ordering data (continued)

Shaft design	Dimensions mm						Ambient temperature range	Article No. 8th data position	Article No. supplement
Parallel shaft gearboxes F									
Gearbox size	**29**	**39**	**49**	**69**	**79**	**89**			
Solid shaft	V25 x 50	V25 x 50	V30 x 60	V35 x 70	V40 x 80	V50 x 100	-40 ... +60 °C	**1**	
		V30 x 70	V40 x 80		V50 x 100			**3**	
Solid shaft without feather key [1]	VG25 x 50	VG25 x 50	VG30 x 60	VG35 x 70	VG40 x 80	VG50 x 100		**9**	**H1G**
Solid shaft, both ends [1] [3]		VD25 x 50	VD30 x 60	VD35 x 70	VD40 x 80	VD50 x 100		**9**	**H5A**
Solid shaft, both ends without feather key [1] [3]			VDG30 x 60	VDG35 x 70	VDG40 x 80	VDG50 x 100		**9**	**H5B**
Solid shaft, inches	V1" x 1.97"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.625" x 3.15"	V2" x 3.94"		**9**	**H6A**
Solid shaft VLplus						VM60 x 120		**9**	**H1C**
Hollow shaft	H25	H30	H35	H40	H40	H50		**5**	
		H25	H30					**6**	
Hollow shaft, inches	H1"	H1.25"	H1.375"	H1.5"	H1.5"	H2"		**9**	**H7A**
Hollow shaft VLplus						HM50		**9**	**H2F**
Hollow shaft with shrink disk	HS25	HS30	HS35	HS40	HS40	HS50	-20 ... +60 °C	**9**	**H3A**
Splined hollow shaft		N30	N35	N35	N45	N50	-40 ... +60 °C	**9**	**H4A**
Gearbox size	**109**	**129**	**149**	**169**	**189**				
Solid shaft	V60 x 120	V70 x 140	V90 x 170	V110 x120	V120 x 210		-40 ... +60 °C	**1**	
	V80 x 170	V90 x 170	V100 x 210	V120 x 210	V140 x 250			**3**	
Solid shaft without feather key [1]	VG60 x 120							**9**	**H1G**
Solid shaft, both ends [1] [3]	VD60 x 170	VD70 x 140	VD90 x 170	VD110 x 120	VD120 x 210			**9**	**H5A**
Solid shaft, both ends without feather key [1] [3]	VDG60 x 170							**9**	**H5B**
Solid shaft, inches	V2.375" x 4.72	V2.875 x 5.51	V3.625" x 6.69"	V4.375"x8.27"	V4.75"x8.27"			**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**	
	H70		H80	H110				**6**	
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		-20 ... +60 °C	**9**	**H3A**
			HS90					**9**	**H3B**
	HS70							**9**	**H3C**
Splined hollow shaft	N65	N70	N85	N90	N110		-40 ... +60 °C	**9**	**H4A**
Bevel gearboxes B									
Gearbox size	**19**	**29**	**39**	**49**					
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 [2]	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	HS35	HS40			-20 ... +60 °C	**9**	**H3A**

[1] Can only be selected in conjunction with foot-mounted or housing flange design.
[2] Can only be selected in conjunction with foot-mounted design
[3] Restricted adapter sizes in conjunction with shaft extensions at both ends; for precise dimensioning, use the functionality of the DT Configurator.

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Selection and ordering data (continued)

Shaft design	Dimensions mm					Ambient temperature range	Article No. 8th data position	Article No. supplement
Bevel gearboxes K								
Gearbox size	**39**	**49**	**69**	**79**	**89**			
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 [1]	VD25 x 50	VD30 x 60	VD35 x 70	VD40 x 80	VD50 x 100		**9**	**H5A**
Solid shaft, both ends without feather key[1]		VDG30 x 60	VDG35 x 70	VDG40 x 80	VDG50 x 100		**9**	**H5B**
Solid shaft, inches	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.625" x 3.15"	V2" x 3.94"		**9**	**H6A**
Solid shaft VLplus					VM60 x 120		**9**	**H1C**
Hollow shaft	H30	H35	H40	H40	H50		**5**	
	H25	H30					**6**	
Hollow shaft, inches	H1.25"	H1.375"	H1.5"	H1.5"	H2"		**9**	**H7A**
Hollow shaft VLplus					HM50		**9**	**H2F**
Hollow shaft with shrink disk	HS30	HS35	HS40	HS40	HS50	-20 ... +60 °C	**9**	**H3A**
Splined hollow shaft	N30	N35	N35	N45	N50	-40 ... +60 °C	**9**	**H4A**
Gearbox size	**109**	**129**	**149**	**169**	**189**			
Solid shaft	V60 x 120	V70 x 140	V90 x 170	V110 x 210	V120 x 210	-40 ... +60 °C	**1**	
	V80 x 170	V90 x 170	V100 x 210	V120 x 210	V140 x 250		**3**	
Solid shaft without feather key	VG60 x 120						**9**	**H1G**
Solid shaft, both ends [1]	VD60 x 120	VD70 x 140	VD90 x 170	VD110 x 210	VD120 x 210		**9**	**H5A**
Solid shaft, both ends without feather key[1]	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**	
	H70			H110			**7**	
Hollow shaft, inches	H2.375"	H2.75"	H3.625"	H4"	H4.5"		**9**	**H7A**
Hollow shaft VLplus	HM60	HM70	HM90	HM100			**9**	**H2F**
Hollow shaft with shrink disk	HS65	HS75	HS95	HS105	HS125	-20 ... +60 °C	**9**	**H3A**
			HS90				**9**	**H3B**
	HS70						**9**	**H3C**
Splined hollow shaft	N65	N70	N85	N90	N110	-40 ... +60 °C	**9**	**H4A**

[1] Can only be selected in conjunction with foot-mounted or housing flange design.

Selection and ordering data (continued)

Shaft design	Dimensions mm					Ambient temperature range	Article No. 8th data position	Article No. supplement
Helical worm gearboxes C								
Gearbox size	**29**	**39**	**49**	**69**	**89**			
Solid shaft	V20 x 40	V25 x 50	V30 x 60	V35 x 70	V45 x 90	-40 ... +60 °C	**1**	
				V40 x 80	V50 x 100		**2**	
		V35 x 70	V40 x 80	V50 x 100	V70 x 140		**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, 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**
Solid shaft, both ends [1]	VD20 x 40	VD25 x 50	VD30 x 60	VD35 x 70	VD45 x 90		**9**	**H5A**
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	-20 ... +60 °C	**9**	**H3A**
				HS50	HS60		**9**	**H3C**

Shaft designs

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.

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.

Order code:

Protective cover [1]	**G60**

[1] The protective cover can be selected for the bevel gearbox in the foot-mounted design for sizes 169 and 189 only.

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												Order code
Helical gearboxes Z and D													
Gearbox size	**19**	**29**	**39**	**49**	**59**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**	
Radially reinforced output shaft bearings						✓	✓	✓	✓	✓	✓			**G20**
VLplus reinforced bearing system [2]								✓	✓	✓	✓	✓		**G30**
XLplus reinforced bearing system [2]								✓	✓	✓	✓	✓		**G31**
Parallel shaft gearboxes F													
Gearbox size	**29**	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**			
Radially reinforced output shaft bearings			✓[1]	✓	✓	✓	✓	✓	✓	✓	✓			**G20**
VLplus reinforced bearing system [2]						✓	✓	✓	✓	✓				**G30**
Bevel gearboxes K													
Gearbox size	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**				
Radially reinforced output shaft bearings		✓[1]	✓	✓	✓	✓	✓	✓	✓	✓				**G20**
VLplus reinforced bearing system [2]					✓	✓	✓	✓	✓					**G30**

[1] Not possible for flange-mounted design with solid shaft (gearbox type FZF, FDF, KF)
[2] VLplus and XLplus reinforced bearing systems can only be selected with flange-mounted design.

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.

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 +40 °C

For different ambient temperatures, please contact Siemens.

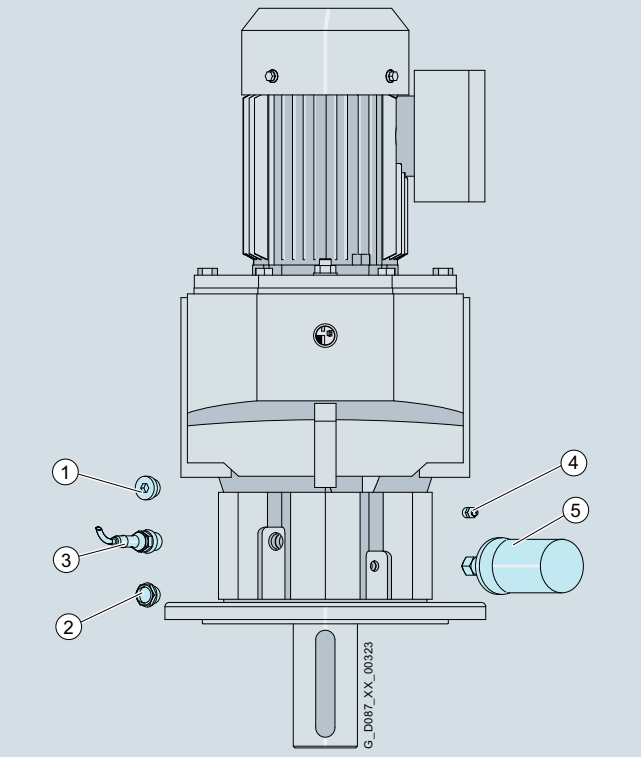


Fig. 8/13 VLplus version with Drywell / grease cartridge

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

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

Order code:

Drywell with oil sight glass	**G89**
Drywell with oil sensor	**G90**
24 V Drywell disconnector	**G88**

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.

Order code:

Grease cartridge	**G93**

Overview

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 T 7300:

https://support.automation.siemens.com/WW/view/en/44231658

Note:

For ambient conditions with a high air humidity and salt-laden air, we recommend that only mineral or PAO oils are used.

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.

Sealing system

Overview

Output shaft sealing	Description	Ambient condition	Order code
Normal environmental stress			
Standard seal	High-quality NBR radial shaft sealing ring with dust protection lip.	Environment with low dust and pollution levels with low moisture.	**-**
Longer service life			
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.	**G23**
Longer service life and increased environmental stress			
Seal for increased environmental stress	This seal is equipped with an additional fiber disk. In addition to the longer service life, it also provides increased protection against higher environmental stress as a result of dust and dirt deposits. As a consequence, the sealing system has a high degree of reliability. For additional environmental stress, e.g. water jets or significant levels of pollution as a result of production materials, please contact your local Siemens office.	Environments with increased pollution and dust levels as well as low moisture. Typical applications: Production areas with increased pollution and dust, such as wood chips, dusts or granulate as well as occasional spray water.	**G24**
High temperature-resistant			
Seal for high temperatures	High-quality FKM radial shaft sealing ring with dust protection lip.	Environment with low dust and pollution levels with low moisture.	**G25**

Selection of seal

Seal	Perm. oil sump temperature in operation		Ambient temperature				
	°C	Order code	-	K95	K96	K97	K98
Helical gearboxes Z, D and E, parallel shaft gearboxes F and bevel gearboxes K			**-15 …+40**	**-20 …+40**	**-25 …+40**	**-30 …+40**	**-40 …+40**
Standard seal	-40 … +80	**-**	✓	✓	✓	✓	✓
Seal for a longer service life	-40 …+100	**G23**	✓	✓	✓	✓	✓
Seal for increased environmental stress	-20 … +80	**G24** [1]	✓	✓	-	-	-
Seal, high temperature-resistant	-25 …+110	**G25**	✓	✓	✓	-	-
Bevel gearboxes B and helical worm gearboxes C			**-20 …+40**	**-**	**-25 …+40**	**-30 …+40**	**-40 …+40**
Standard	-40 … +80	**-**	✓		✓	✓	✓
Seal for a longer service life	-40 …+100	**G23** [2]	✓		✓	✓	✓
Seal for increased environmental stress	-20 … +80	**G24** [1] [2]	✓		-	-	-
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

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 T 7300.

Selection

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**).

For gearboxes of sizes 169 and 189 with a service factor f_B <1.2, we recommend use of CLP ISO PG oils.

Selection of lubricant

Application	Oil type	Perm. oil sump temperature in operation		Ambient temperature				
	Designation acc. to DIN 51502	°C	Order code	-	K95	K96	K97	K98
Helical gearboxes Z, D and E, parallel shaft gearboxes F and bevel gearboxes K				**-15 …+40**	**-20 …+40**	**-25 …+40**	**-30 …+40**	**-40 …+40**
Standard	CLP ISO VG220	-15 … +80	**K06**	✓	-	-	-	-
	CLP ISO PAO VG220	-30 …+100	**K12**	✓	✓	✓	✓	✓[1)]
	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**	✓	✓	✓	✓	-
Biodegradable oil	CLP ISO E VG220	-20 …+100	**K10**	✓	✓	-	-	-
Bevel gearboxes B and helical worm gearboxes C				**-20 …+40**	**-**	**-25 …+40**	**-30 …+40**	**-40 …+40**
Standard	CLP ISO PG VG220	-25 …+110	**K07**	✓		✓	-	-
	CLP ISO PAO VG220	-30 …+100	**K12**	✓		✓	✓	✓[1)]
	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**	✓		✓	-	-

[1)] 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)

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													Order code	Technical information ➞ page
Helical gearboxes Z and D															
Size	**19**	**29**	**39**	**49**	**59**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**		
Lubricated for life	✓	✓													
Pressure breather valve			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G45**	page 8/52
Pressure breather valve stainless steel			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G49**	page 8/52
Oil expansion unit			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G47**	page 8/53
Oil sight glass with reflector				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G34**	page 8/55
Magnetic oil drain screw			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G53**	page 8/55
Oil drain valve, straight			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G54**	page 8/55
Oil drain valve, angled			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G55**	page 8/55
Oil level sensor								✓	✓	✓	✓	✓	✓	**G37**	page 8/57
Pt100 electrical temperature monitoring				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G69**	page 8/56
Helical gearboxes E															
Size	**39**		**49**		**69**		**89**		**109**		**129**		**149**		
Pressure breather valve	✓		✓		✓		✓		✓		✓		✓	**G45**	page 8/52
Pressure breather valve stainless steel	✓		✓		✓		✓		✓		✓		✓	**G49**	page 8/52
Oil expansion unit	✓		✓		✓		✓		✓		✓		✓	**G47**	page 8/53
Oil sight glass with reflector	✓		✓		✓		✓		✓		✓		✓	**G34**	page 8/55
Magnetic oil drain screw	✓		✓		✓		✓		✓		✓		✓	**G53**	page 8/55
Oil drain valve, straight	✓		✓		✓		✓		✓		✓		✓	**G54**	page 8/55
Oil drain valve, angled	✓		✓		✓		✓		✓		✓		✓	**G55**	page 8/55
Oil level sensor							✓		✓		✓		✓	**G37**	page 8/57
Pt100 electrical temperature monitoring			✓		✓		✓		✓		✓		✓	**G69**	page 8/56
Parallel shaft gearboxes F															
Size	**29**	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**				
Lubricated for life	✓														
Pressure breather valve		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G45**	page 8/52		
Pressure breather valve stainless steel		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G49**	page 8/52		
Oil expansion unit		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G47**	page 8/53		
Oil sight glass with reflector			✓	✓	✓	✓	✓	✓	✓	✓	✓	**G34**	page 8/55		
Magnetic oil drain screw		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G53**	page 8/55		
Oil drain valve, straight		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G54**	page 8/55		
Oil drain valve, angled		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G55**	page 8/55		
Oil level sensor						✓	✓	✓	✓	✓	✓	**G37**	page 8/57		
Pt100 electrical temperature monitoring			✓	✓	✓	✓	✓	✓	✓	✓	✓	**G69**	page 8/56		

Overview (continued)

Possible venting and oil level control options

Design	Possible for										Order code	Technical information ➞ page
Bevel gearboxes B												
Size	**19**		**29**		**39**		**49**					
Lubricated for life	✓		✓									
Pressure breather valve	✓		✓		✓		✓				**G45**	page 8/52
Pressure breather valve stainless steel	✓		✓		✓		✓				**G49**	page 8/52
Oil expansion unit			✓		✓		✓				**G47**	page 8/53
Oil sight glass with reflector					✓		✓				**G34**	page 8/55
Magnetic oil drain screw					✓		✓				**G53**	page 8/55
Oil drain valve, straight					✓		✓				**G54**	page 8/55
Oil drain valve, angled					✓		✓				**G55**	page 8/55
Pt100 electrical temperature monitoring							✓				**G69**	page 8/56
Bevel gearboxes K												
Size	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**		
Pressure breather valve	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G45**	page 8/52
Pressure breather valve stainless steel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G49**	page 8/52
Oil expansion unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G47**	page 8/53
Oil sight glass with reflector		✓	✓	✓	✓	✓	✓	✓	✓	✓	**G34**	page 8/55
Magnetic oil drain screw	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G53**	page 8/55
Oil drain valve, straight	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G54**	page 8/55
Oil drain valve, angled	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**G55**	page 8/55
Oil level sensor					✓	✓	✓	✓	✓	✓	**G37**	page 8/57
Pt100 electrical temperature monitoring		✓	✓	✓	✓	✓	✓	✓	✓	✓	**G69**	page 8/56
Helical worm gearboxes C												
Size	**29**		**39**		**49**		**69**		**89**			
Lubricated for life	✓[1)]											
Pressure breather valve	✓		✓		✓		✓		✓		**G45**	page 8/52
Pressure breather valve stainless steel	✓		✓		✓		✓		✓		**G49**	page 8/52
Oil expansion unit			✓		✓		✓		✓		**G47**	page 8/55
Oil sight glass with reflector					✓		✓		✓		**G34**	page 8/55
Oil sight glass, both ends					✓		✓		✓		**G34**	page 8/55
Magnetic oil drain screw			✓		✓		✓		✓		**G53**	page 8/55
Oil drain valve, straight			✓		✓		✓		✓		**G54**	page 8/55
Oil drain valve, angled			✓		✓		✓		✓		**G55**	page 8/55
Pt100 electrical temperature monitoring					✓		✓		✓		**G69**	page 8/56

[1)] Helical worm gearboxes for all mounting positions are equipped with a pressure breather valve.

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.

Order code:

Pressure breather valve	**G45**
Pressure breather valve stainless steel	**G49**

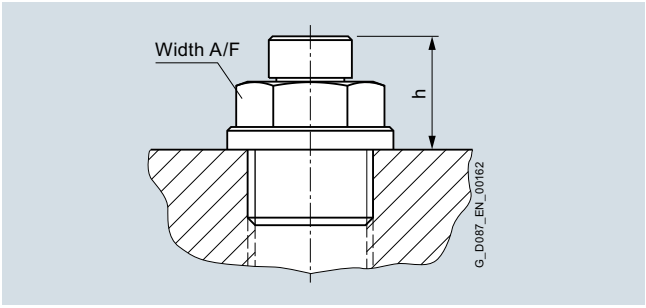


Fig. 8/14 Pressure breather valve

Technical specifications

Size	Width across flats	Thread	Dimension h
	Width A/F		mm
Helical gearboxes Z and D			
19, 29	12	G 1/8 A	15
39	12	G 1/8 A	15
49 … 79	13	G 1/4 A	15
89 ... 129	17	G 3/8 A	15
149 ... 189	24	G 3/4 A	18
Helical gearboxes E			
39	12	G 1/8 A	15
49 … 69	13	G 1/4 A	15
89 ... 129	17	G 3/8 A	15
149	24	G 3/4 A	18
Parallel shaft gearboxes F			
29	12	G 1/8 A	15
39	12	G 1/8 A	15
49 … 79	13	G 1/4 A	15
89 ... 129	17	G 3/8 A	15
149 ... 189	24	G 3/4 A	18
Bevel gearboxes B			
19, 29	12	G 1/8 A	15
39	12	G 1/8 A	15
49	13	G 1/4 A	15
Bevel gearboxes K			
39	12	G 1/8 A	15
49 … 89	13	G 1/4 A	15
109 ... 129	17	G 3/8 A	15
149 ... 189	24	G 3/4 A	18
Helical worm gearboxes C			
29	12	G 1/8 A	15
39	12	G 1/8 A	15
49 … 89	13	G 1/4 A	15

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 +60 °C
- Oil expansion unit type 2 -25 to +60 °C

For different ambient temperatures, please contact Siemens.

Order code:

Oil expansion unit	**G47**

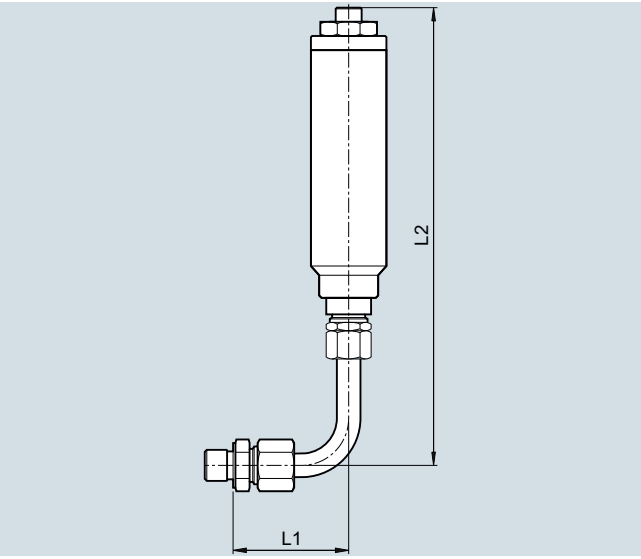


Fig. 8/15 Oil expansion unit type 1

Technical specifications

Size	Motor size	Width across flats	Thread	Dimension L1	Dimension L2
		Width A/F		mm	mm
Helical gearboxes Z and D					
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
Helical gearboxes E					
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	Thread	Dimension L1	Dimension L2
		Width A/F		mm	mm
Helical gearboxes E					
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
Parallel shaft gearboxes F					
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
Bevel gearboxes 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
Bevel gearboxes K					
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
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
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
Helical worm gearboxes C					
39	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

8

Oil expansion unit (continued)

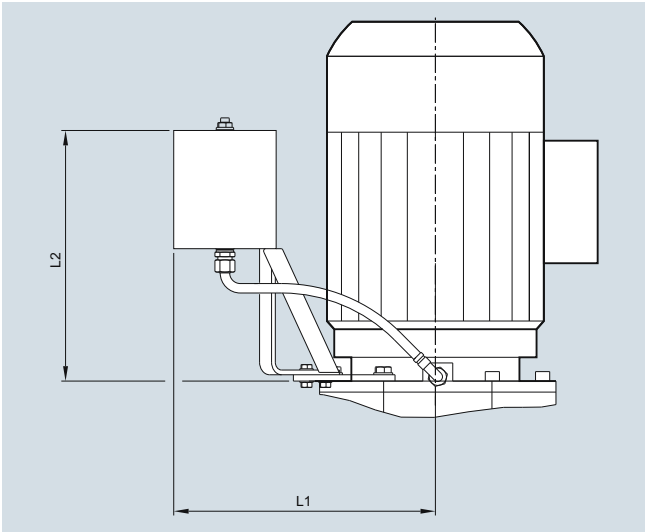


Fig. 8/16 Oil expansion unit type 2

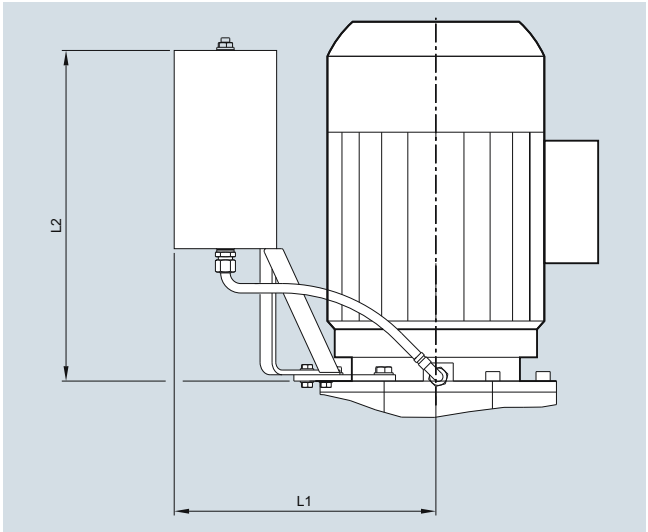


Fig. 8/17 Oil expansion unit type 3

Technical specifications

Size	Motor size	Type	Thread	Dimension L1	Dimension L2
				mm	mm
Helical gearboxes Z and D					
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
Helical gearboxes E					
109	90 ... 225	2	G3/8A	406	334
129	90 ... 250	2	G3/8A	442	334
149	100 ... 250	3	G3/4A	465	505
Parallel shaft gearboxes F					
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
Bevel gearboxes K					
129	90 ... 225	2	G3/8A	442	334
149	90 ... 250	2	G3/4A (G3/8A)	465	334
169	100 ... 250	3	G3/4A	493	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.

Order code:

Oil sight glass with reflector	**G34**

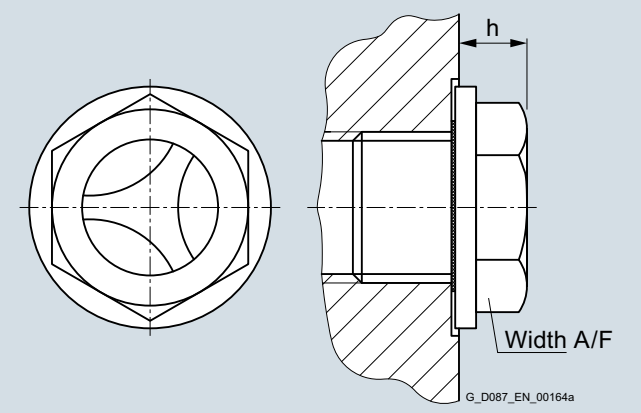


Fig. 8/18 Oil sight glass with reflector

Technical specifications

Size	Width across flats	Thread	Dimension h
	Width A/F		mm
Helical gearboxes Z and D			
49 ... 79	16	G 1/4 A	10
89 ... 129	19	G 3/8 A	9
149 ... 189	24	G 3/4 A	10
Helical gearboxes E			
49 ... 69	16	G 1/4 A	10
89 129	19	G 3/8 A	9
149	24	G 3/4 A	10
Parallel shaft gearboxes F			
49 ... 79	16	G 1/4 A	10
89 ... 129	19	G 3/8 A	9
149 ... 189	24	G 3/4 A	10
Bevel gearboxes B			
49	16	G 1/4 A	10
Bevel gearboxes K			
49 ... 89	16	G 1/4 A	10
109 ... 129	19	G 3/8 A	9
149 ... 189	24	G 3/4 A	10
Helical worm gearboxes C			
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.

Order code:

Magnetic oil drain screw	**G53**

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.

Order code:

Oil drain valve, straight	**G54**
Oil drain valve, angled	**G55**

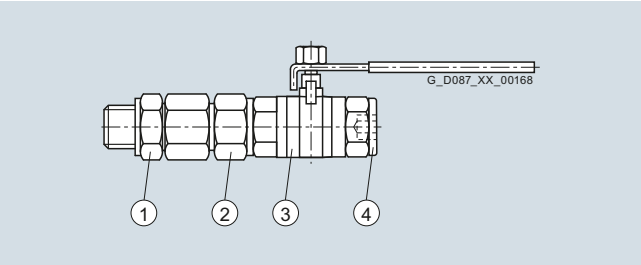


Fig. 8/19 Oil drain valve, straight

① Oil drain valve, straight
② Screw gland
③ Screw gland
④ Screw plug

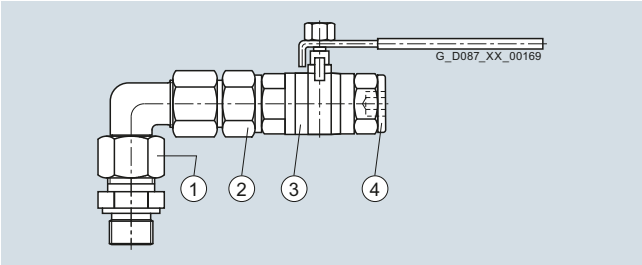


Fig. 8/20 Oil drain valve, angled

① Oil drain valve, angled
② Screw gland
③ Screw gland
④ Screw plug

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 disconnector (temperature transmitter).

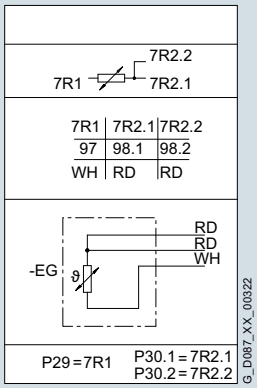


Fig. 8/21 Sensor circuit diagram for Pt100 electrical oil temperature monitoring

Technical specifications

Pt100 electrical temperature monitoring	
Measuring circuit	1Pt100 in 3-wire circuit
Tolerance	Class B ±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 mm²]
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
Order code	**G69**

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).

The oil level sensor can be used at the following ambient temperatures:

- Oil level sensor -25 to +40 °C

For different ambient temperatures, please contact Siemens.

Order code:

Oil level sensor	**G37**

The electrical oil level monitoring system is available for the following gearboxes

Size	Mounting position					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**
Helical gearboxes Z						
89... 169	✓	✓	✓	✓	✓	✓
189		✓			✓	✓
Helical gearboxes D						
89	✓	✓	✓	✓	✓	
109 ... 169	✓	✓	✓	✓	✓	✓
189		✓			✓	✓
Helical gearboxes E						
89	✓	✓	✓	✓		
109	✓	✓		✓		
129 149	✓	✓	✓	✓	✓	✓
Parallel shaft gearboxes F						
89 ... 189	✓	✓	✓	✓	✓	✓
Bevel gearboxes K						
109 ... 189	✓	✓	✓	✓	✓	✓

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.

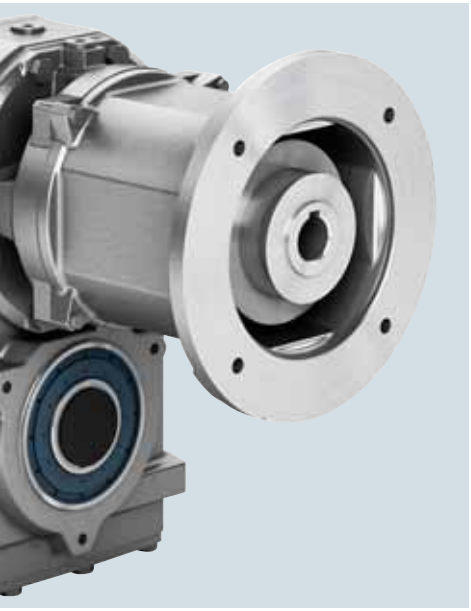
The dimensions of the reduced-backlash gearboxes are identical to those of the standard versions.

Order code:

Reduced-backlash version	**G99**

Reduced-backlash versions of the following gearboxes are available

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													



9/2 **Mounted components**

Power transmission

9/2 Backstop

9/3 Slip clutch with proximity switch

9/4 **Designs for special environmental conditions**

9/4 Condensation drain hole

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.

Order code:

Backstop (X)	**A15**

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 1/21.

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 8/2.

Minimum disengage speed of the backstop

Adapter K2											
IEC size		**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	12.3	25	49	66	151	247	362	494	741	906

Adapter K3									
NEMA size		**56**	**140**	**180**	**210**	**250**	**280**	**320**	**360**
Disengage speed	rpm	820	820	750	670	670	670	610	610
Maximum torque of the backstop	Nm	12.3	25	49	151	247	362	741	906

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 (± 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.

Order code:

Slip clutch with proximity switch	**A17**
Slip torque setting	**Y00**
Plain text:	**Y00*RKD@...***

Example:	Required slip torque 125 Nm
Plain text specification:	Y00*RKD@125*

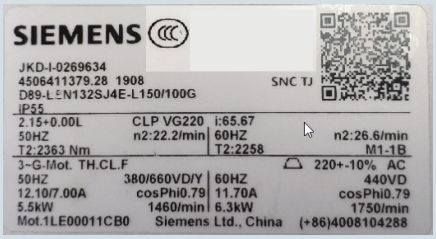
Slip torque setting

Adapter size	Settable slip torque	
	min.	max.
Adapter K2		
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
Adapter K3		
56	0.5	4.6
140	3.6	18.2
180	8.5	48
210	19	95
250	40	180
280	100	260
320	180	530
360	225	650

Condensation drain hole

The adapters K2 and K3 can be supplied with a condensation drain hole for gearboxes in mounting position M4.
The condensation drain hole drains condensation (which can form in extreme ambient temperatures) out of the gearbox.

Order code:	
Condensation drain hole	**A26**



10/2 **Environmental conditions**
10/2 Ambient temperatures of the gearboxes

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Ambient temperatures of the gearboxes

For the SIMOGEAR gearboxes, different ambient temperature ranges are available.

Ambient temperature	Order code	Gearbox type				
		Z/D/E	FZ/FD	K	B	C
Standard ambient temperature range						
-15 °C to +40 °C	-	✓	✓	✓	-	-
-20 °C to +40 °C	K95[1)]	✓	✓	✓	-	-
-20 °C to +40 °C	-	-	-	-	✓	✓

[1)] For the helical, parallel shaft and bevel gearboxes, an additional standard temperature range is available after selection of a synthetic oil.

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:

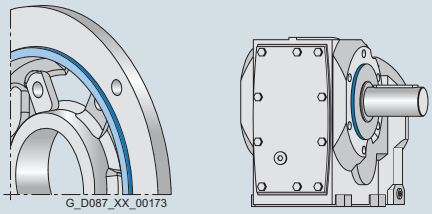
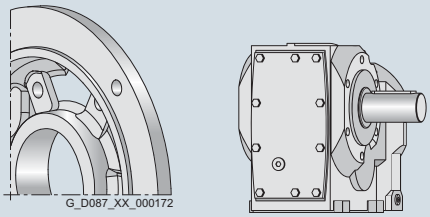
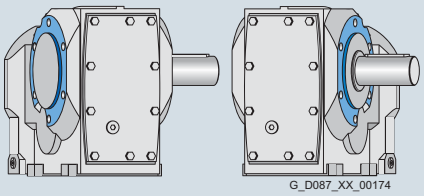
Corrosivity category C1 is not suitable for ambient temperatures

Corrosivity category	Paint system			Description	Order code
	Base coat	Intermediate coat	Top coat		
Surface protection					
Aluminum gearbox housing[1]					
Unpainted (standard)	-	-	-	• Indoor installation • Heated buildings with neutral atmospheres	**L00**
C1 Normal environmental stress	-	-	1-component hydro paint	• Resistant to greases, conditionally resistant to mineral oils, aliphatic solvents • Standard paint	**L02**
Cast iron gearbox housing[2]					
C1 Normal environmental stress	-	-	1-component hydro paint	• Indoor installation • Heated buildings with neutral atmospheres • Resistant to greases, conditionally resistant to mineral oils, aliphatic solvents • Standard paint	**L02**
All geared motors					
C2 Low environmental stress	2-component epoxy zinc phosphate	-	2-component polyurethane	• Indoor and outdoor installation • Unheated buildings with condensation, production areas with low humidity, e.g. warehouses and sports facilities • Atmospheres with little pollution, rural areas • Resistant to greases, mineral oils and sulfuric acid (10 %), caustic soda (10 %) and conditionally resistant to aliphatic solvents	**L03**
C3 Average environmental stress	2-component epoxy zinc phosphate	-	2-component polyurethane	• Indoor and outdoor installation • Production areas with high humidity and some air pollution, e.g. food production areas, dairies, laundries and breweries • Urban and industrial atmospheres, moderate contamination from sulfur dioxide, coastal areas with low salt levels • Resistant to greases, mineral oils, aliphatic solvents, sulfuric acid (10 %), caustic soda (10 %)	**L04**
C4 High environmental stress	2-component epoxy zinc phosphate	-	2-component polyurethane	• Indoor and outdoor installation • Chemical plants, swimming pools, wastewater treatment plants, electroplating shops, and boathouses above seawater • Industrial areas and coastal areas with moderate salt levels • Resistant to greases, mineral oils, aliphatic solvents, sulfuric acid (10 %), caustic soda (10 %)	**L20**
C5 Very high environmental stress	2-component epoxy zinc phosphate	2-component epoxy zinc phosphate	2-component polyurethane	• Indoor and outdoor installation • Buildings/areas with almost constant condensation and high degrees of pollution, e.g. malt factories and aseptic areas • Industrial areas with high humidity and aggressive atmosphere, coastal areas and offshore environments with high salt levels • Resistant to greases, mineral oils, aliphatic solvents, sulfuric acid (10 %), caustic soda (20 %)	**L05**
Primer				Ability to be painted	
C2 G	2-component polyurethane			• 2-component polyurethane paint, 2-component epoxy paint and acid-hardening paint, 2-component acrylic paint	**L01**
Unpainted				• Plastic paint, synthetic resin paint, oil paint, 2-component polyurethane paint, 2-component epoxy paint	**L00**

[1] Helical gearboxes D/Z19 to D/Z39, parallel shaft gearboxes F29 and bevel gearboxes B29 and B39
[2] The bevel gearbox B49 is supplied painted

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	Figure Surfaces marked blue are not painted	Possible for	Order code
Centering not painted		• Flange-mounted design • Housing flange design	**L11**
Flange completely painted		• Flange-mounted design • Housing flange design	**L12**
Centering flange not painted on both sides		• Housing flange design for bevel gearbox and helical worm gearbox	**L27**

Surface treatment (continued)

Colors

In addition to anthracite gray (RAL 7016), you can select from other standard colors.

RAL color	Designation	Color, example	Order code
RAL 7016	Anthracite gray (standard)		**L75**
RAL 5015	Sky blue		**L50**
RAL 7030	Stone gray		**L55**
RAL 7031	Blue gray		**L53**

You can find additional colors in the DT 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.

Order code:

Long-term preservation up to 36 months	**K17**

For information about storage and commissioning please refer to the operating instructions.
When ordering a replacement/spare part, always specify the serial No.

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

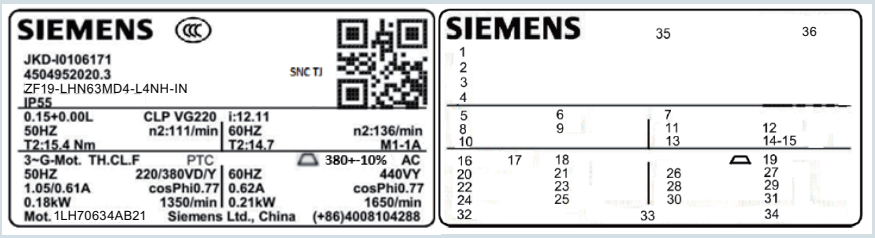


Fig. 10/1 Example, rating plate on helical geared motor

General data	
1	Serial No.
2	Purchase order No.
3	Type designation
4	Protection grade
5	Oil quantity
6	Oil type
7	Total transmission ratio
8	Rated frequency(Hz)
9	Gearbox output speed n2 [rpm]
10	Geared motor output torque T2 [Nm]
11	Rated frequency(Hz)
12	Gearbox output speed n2 [rpm]
13	Geared motor output torque T2 [Nm]
14	Mounting position of geared motors
15	Mounting position of junction boxes
16	Number of motor phases and current type
17	Insulation class
18	Insulation class protection
19	Brake type and voltage
20	Rated frequency(Hz)

General data	
21	Rated voltage
22	Rated current
23	Power factor
24	Rated power
25	Rated speed
26	Rated frequency(Hz)
27	Rated voltage
28	Rated current
29	Power factor
30	Rated power
31	Rated speed
32	Motor series
33	Manufacturer
34	Hotline
35	CCC authentication marking
36	Data matrix code

Second rating plate

Second rating plate, supplied loose

For the gearboxes and geared motors, an additional rating plate can be supplied loose.

Order code:

Second rating plate, supplied loose	**K41**

Safety instruction sheet and operating instructions

The geared motors are shipped with a multi-language safety instruction sheet for each delivery batch.

One set of operating instructions is enclosed for each geared motor using the following ordering option.

Enclosed documentation	Language	Order code
1 set of operating instructions for each geared motor	Chinese	**W23**
	English	**W22**

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:	Order code
Declaration of compliance with the order EN 10204-2.1 and factory test report EN 10204-2.2, geared motor	-	**On request**
Factory test report EN 10204-2.2 for material	-	**On request**
Acceptance test certificate EN 10204-3.1 for the motor	• 3 no-load currents of the 3 phases • Power loss for no-load operation • No-load speed	**W10**
Acceptance test certificate EN 10204-3.1 for gearboxes	• Output shaft bearings • Concentricity of the output shaft • Concentricity of the input shaft (for gearboxes with input unit A only) • Input shaft diameter (for gearboxes with input unit A only) • Noise (subjective evaluation)	**W11**
Acceptance test certificate EN 10204-3.1 for paint finish	-	**W12**

Overview

For a faster delivery of our SIMOGEAR gearboxes outside the standard delivery times we offer a fast track option.

In lead time category A, the SIMOGEAR gearboxes can be shipped painted within 5 working days.

The maximum order quantity is 10 units/order. The order must reach your Siemens sales region by 12:00 p.m.(Chinese local time).

The following product range is available for the fast track option:

- SIMOGEAR gearbox sizes 19 to 89
- SIMOGEAR motor sizes 63 to 180
- Paint finish in corrosivity category C1 to C3

Order code:

Fast lane	**W50**



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11/4 List of variables to dimension the drive
11/7 Subject index
11/9 List of abbreviations

11/12 **Training**
11/12 SITRAIN – Digital Industry Academy
11/12 Time for learning

11/13 **Partner**
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11/18 **Conversion tables**

11/20 **Conditions of sale and delivery**

List of order codes

Order code	Special design Designation	Detailed data Chapter/Page
Adapter power transmission		
A15	Adapter backstop	9/2
A17	Slip clutch with proximity switch	9/3
Designs for special environmental conditions		
A26	Condensation drain hole	9/4
Mounting positions		
D01 ... D06	Mounting positions of the geared motors (helical and parallel shaft gearboxes)	8/4 … 8/18
D11 ... D16 and D21 ... D26	Mounting position of the geared motors (bevel, helical worm gearboxes)	8/19
Special mounting positions		
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E21 ... E37	X axis of rotation	8/35
E41 ... E57	Z axis of rotation	8/35
Shaft-mounted version helical worm gearbox		
G09	Figure 1	8/41
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G23	Seal with longer service life	8/48
G24	Seal for increased environmental stress	8/48
G25	Seal for high temperatures	8/48
Oil level control		
G34	Oil sight glass with reflector	8/55
Electrical oil level monitoring system		
G37	Oil level sensor	8/57
Gearbox venting		
G45	Pressure breather valve	8/52
G49	Pressure breather valve stainless steel	8/52
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Oil drain		
G53	Magnetic oil drain screw	8/55
G54	Oil drain valve, straight	8/55
G55	Oil drain valve, angled	8/55
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G60	Protective cover	8/46
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G69	Pt100 electrical oil temperature monitoring	8/56
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Output flange sealing		
G78	Output flange sealing	8/39
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G90	Drywell with oil sensor	8/47
G93	Grease cartridge	8/47
Reduced-backlash version		
G99	Reduced-backlash version	8/58
Flange diameter		
H02 ... H11	Flange diameter	8/37

Order code	Special design Designation	Detailed data Chapter/Page
Lubricants		
K06	CLP ISO VG220	8/49
K07	CLP ISO PG VG220	8/49
K08	CLP ISO PG VG460	8/49
K10	CLP ISO E VG220	8/49
K11	CLP ISO H1 VG460	8/49
K12	CLP ISO PAO VG220	8/49
K13	CLP ISO PAO VG68	8/49
K14	CLP ISO H1 VG100	8/49
K16	CLP ISO PAO VG460	8/49
Long-term preservation		
K17	Long-term preservation up to 36 months	10/5
Direction of rotation of the output shaft (required with backstop)		
K18	Clockwise	1/21
K19	Counterclockwise	1/21
Rating plate and additional plates		
K41	Second rating plate, supplied loose	10/6
Ambient temperature		
K95	Ambient temperature -20 °C to +40 °C	10/2
Surface treatment		
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L02	Surface protection for normal environmental stress C1	10/3
L03	Surface protection for low environmental stress C2	10/3
L04	Surface protection for average environmental stress C3	10/3
L05	Surface protection for very high environmental stress C5	10/3
L11	Centering not painted	10/4
L12	Flange completely painted	10/4
L19	Special pretreatment	10/3
L20	Surface protection for high environmental stress C4	10/3
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RAL colors		
L50	RAL 5015 sky blue	10/5
L53	RAL 7031 blue gray	10/5
L55	RAL 7030 stone gray	10/5
L75	RAL 7016 anthracite gray	10/5
	Other colors on request	10/5
Speed monitoring		
Y00	Slip torque setting	9/3
Documentation		
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W12	Acceptance test certificate EN 10204-3.1 for paint finish	10/7
W23	1 set of operating instructions in Chinese	10/7
W22	1 set of operating instructions in English	10/7

List of variables to dimension drives

Overview of data to dimension drives

Code	Description	Unit
a	Gearbox constants for calculating the radial force	kNmm
α	Force application angle	°
b, d, l, y, z	Gearbox constants	mm
C	Additional factor to calculate the radial force	-
d	Diameter of the input element	mm
d_0	Average diameter of the mounted transmission element	mm
η	Efficiency	%
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"	-
F_{ax}	Permissible axial force	N
F_M	Maximum permissible operating force from mounted motor	N
F_{Mred}	Reduced maximum permissible operating force from mounted motor	N
F_{mot}	Motor weight force	N
F_{R2}	Permissible radial force at the center of shaft extension (l/2)	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
i	Transmission ratio	-
J_2	Moment of inertia of the load referred to the output speed of the gearbox	kgm²
J_{AD}	Moment of inertia of the adapter referred to the input speed	kgm²
J_B	Moment of inertia of the brake	kgm²
J_G	Moment of inertia of the gearbox referred to the input speed	kgm²
J_{mot}	Moment of inertia of the motor	kgm²
J_x	Moment of inertia of the load referred to the input speed	kgm^2
J_Z	Additional moment of inertia of a high inertia fan	kgm^2
J_{Bstp}	Moment of inertia of cage and inner ring	kgm^2

Code	Description	Unit
k_1	Motor length	mm
$k_{1/2}$	Half motor length	mm
L_{h10}	Nominal bearing service life	h
L_{na}	Modified bearing service life	h
L_{pfA}	Measuring surface sound pressure level	dB (A)
L_{WA}	Sound power level	dB (A)
m	Drive weight without any oil	kg
m_{BF}	Mass acceleration factor	-
$M_{b\ avail}$	Existing bending torque	Nm
$M_{b\ perm}$	Permissible bending torque	Nm
n_1	Input speed of the gearbox	rpm
n_2	Output speed of the gearbox	rpm
n_{dis}	Disengage speed	rpm
n_{max}	Maximum speed	rpm
n_N	Rated speed	rpm
P_{req}	Required input power	kW
P_{mot}	Motor power	kW
r	Radius of the output element	m
R_{ex}	Exact number of teeth ratio	-
T	Additional factor for ambient temperature	-
T_{1max}	Short-time maximum permissible input torque of the adapter	Nm
T_{1mot}	Continuous torque of the motor	Nm
T_{1perm}	Permissible input torque of the adapter	Nm
T_2	Required input torque of the driven machine	Nm
T_{2N}	Maximum output torque of the gearbox	Nm
x	Distance from the shaft shoulder up to the point where force is applied	mm
X	Distance from center of gravity	mm
z_5	Length of the adapter	mm
ϑ_{amb}	Ambient temperature	°C

Important drive technology variables

SI unit Size	Symbol		Unit symbol		Designation or conversion factor*
	SI	Previously	SI	Previously	
Length (distance)	l	L, s	m	m	1 km = 1 000 m
Area	A	F	m^2	m^2	1 m^2 = 100 dm^2
Volume	V	V	m^3	m^3	1 m^3 = 1 000 dm^3 1 dm^3 = 1 l
Plane angle	α, β, γ	α, β, γ	rad	Degrees °	1 rad = 1 m/m 1 L = π/2 rad 1° = π/180 rad
Rotation angle	ϕ	φ		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	Rotations per minute
Velocity	v	v	m/s	m/s	1 km/h = $\frac{1}{3.6}$ m/s
Acceleration Acceleration due to gravity	a g	b g	m/s^2	m/s^2	g = 9.81 m/s^2
Angular velocity	ω	Ω	rad/s	1/s	
Angular acceleration	α	ζ	rad/s^2	$1/s^2$	
Mass	m	m	kg	kg	1
Density		d	kg/dm^3	kg/dm^3	10^3
Force Force due to weight	F G	P, K G	N	kp	9.81 1 N = 1 kg · 1 m/s^2
Pressure Mechanical tension	p σ	p σ	Pa N/m^2 N/mm^2	 kp/cm^2 kp/mm^2	1 Pa = 1 N/m^2 9.81 · 10^4 9.81
Work Energy Quantity of heat	W W Q	A E Q	 J	kpm kcal	9.81 4187 1 J = 1 Nm = 1 Ws
Torque of a force Torque Bending torque	 T 	M_t M_d M_b	 Nm	 kpm	9.81 1 Nm = 1 J
Power	P	N	W	PS	735.5 1 W = 1 J/s = 1 Nm/s = $\frac{kgm^2}{s^3}$
Mass moment of inertia	J	θ	kgm^2	kpm^2	9.81

Conversion from kW to hp:

1 kW = 1.34102 hp

1 hp = 0.745700 kW

1 hp = 1.01387 PS

hp = horse power (US)

PS = Pferdestärke (horsepower in German)

* 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.

Important drive technology variables (continued)

SI unit Size	Symbol		Unit symbol		Designation or conversion factor*
	SI	Previously	SI	Previously	
Dynamic viscosity	η	η	Pa · s	P	10^{-1}
Kinematic viscosity	υ	υ	m^2/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^2
Magnetic field strength	H	H	A/m	A/m	
Magnetic flux	ϕ	ϕ	Wb	M	10^8 1 Wb = 1 V · s
Temperature	T(ϑ)	t	K(°C)	°C	0 K = -273.15 °C

* 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.

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Abbreviation	Meaning
AC	Alternating Current, three-phase
AH	Installation altitude
CAD	Computer-Aided Design
CCC	China Compulsory Certification
CEL	China Energy Label
CEMEP	Comité Européen de Constructeurs de Machines Électriques et d'Électronique de Puissance (European sector committee of manufacturers of electrical machines)
CONT	Continuous operation
CQC	China Quality Certification Center
CSA	Canadian Standards Association
DE	Drive end
DC	Direct Current
DIN	German Institute for Standardization (DIN)
EBPG	Energy-related products directive
ED	Duty cycle
EFF	Efficiency
EG	European Community
EGE	Europäische Größeneinheit
EISA	Energy Independence and Security Act
EMV	Electromagnetic compatibility
EN	European standard
EPAct	Energy Policy Act
EU	European Union
EuP	Energy Using Products
FVA	Forschungsvereinigung Antriebstechnik e. V. (Research Association for Drive Technology)
GOST-R	Gossudarstwenny Standart (certification for the Russian Federation)
HF	High frequency
HTL	High Transistor Logic
IEC	International Electrotechnical Commission
IP	International Protection
ISO	International Organization for Standardization
KT	Coolant temperature
MODULOG	Modular logistically optimized design (motor)

Abbreviation	Meaning
NDE	Non-drive end
NN	Sea level
NAT	Rated response temperature
NEE	NEMA Energy Efficient
NEMA	National Electrical Manufacturers Association
NPT	National Pipe Thread
PAO	Polyalphaolefine
PE	Protective Earth, grounding
PG	Polyglycol
PTC	Positive Temperature Coefficient
SSI	Simple Sensor Interface
SW	Width across flats
TIA	Totally Integrated Automation
TIP	Totally Integrated Power
TTL	Transistor Transistor Logic
UL-R	Underwriters Laboratories Inc. - Recognition Mark
VDE	Association of Electrical Engineering, Electronics and Information Technology (Germany)
VDI	Association of German Engineers
WGK	Class, signifying risk of water pollution

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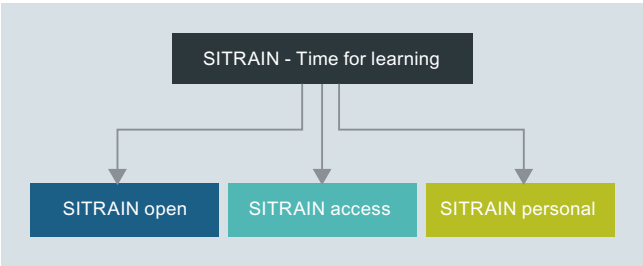
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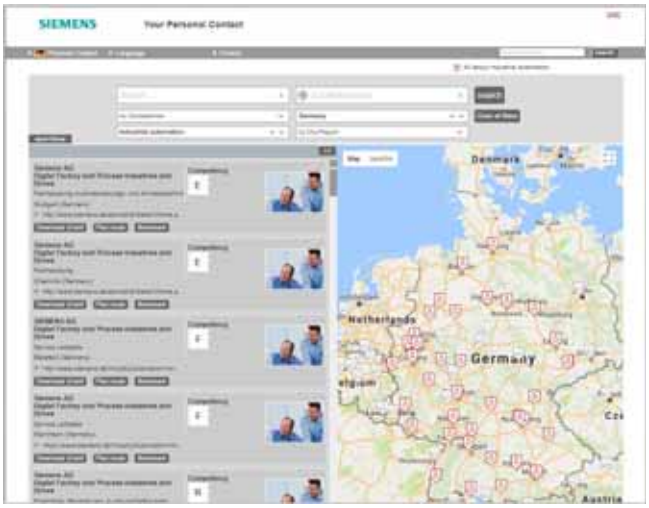
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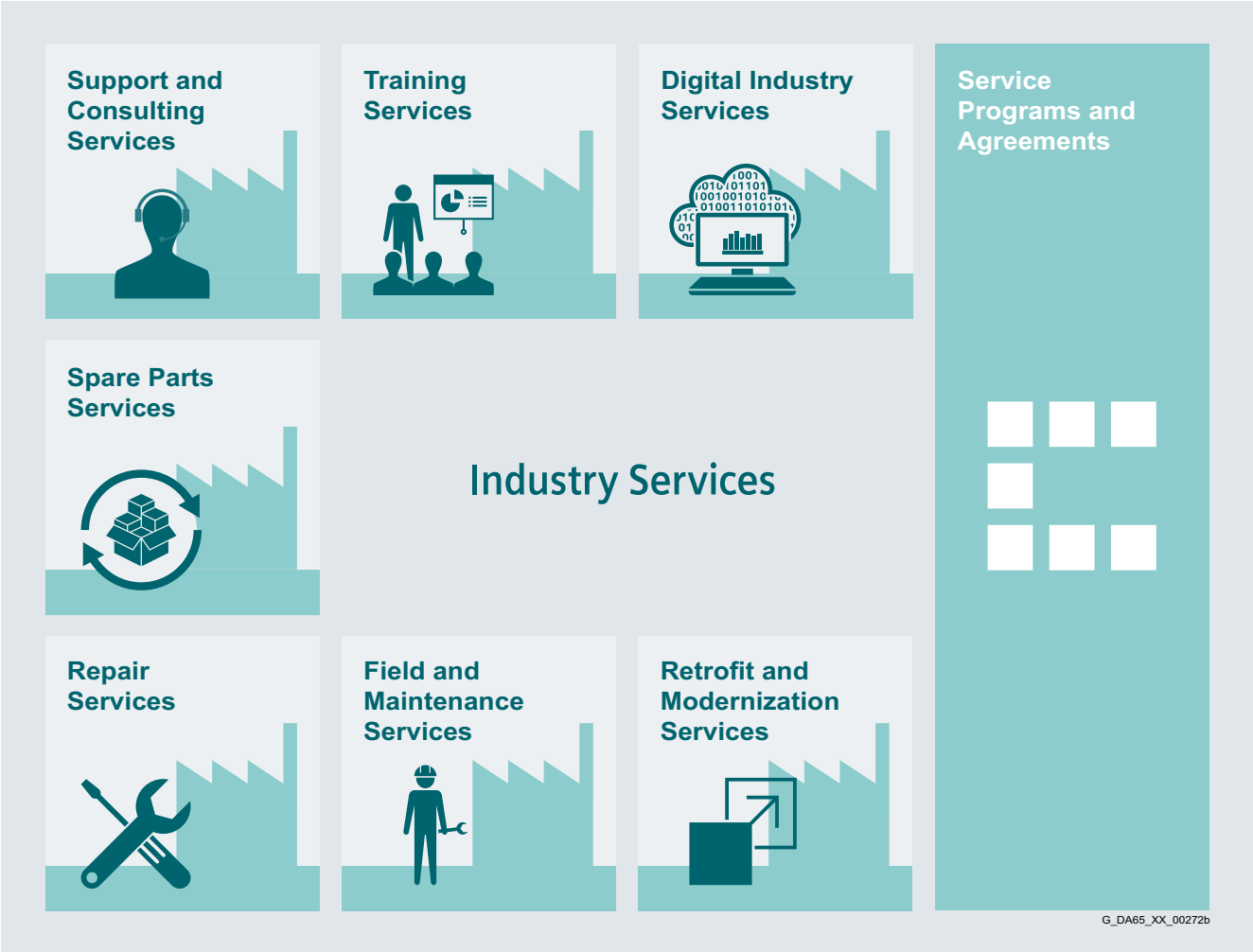
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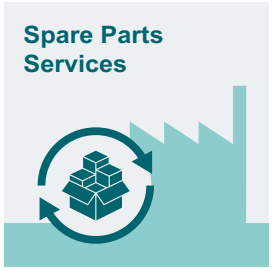
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Rotary inertia (to convert from A to B, multiply by entry in table)

A \ B	lb-in^2	lb-ft^2	lb-in-s^2	lb-ft-s^2 slug-ft^2	kg-cm^2	kg-cm-s^2	gm-cm^2	gm-cm-s^2	oz-in^2	oz-in-s^2
lb-in^2	1	6.94×10^{-3}	2.59×10^{-3}	2.15×10^{-4}	2.926	2.98×10^{-3}	2.92×10^{3}	2.984	16	4.14×10^{-2}
lb-ft^2	144	1	0.3729	3.10×10^{-2}	421.40	0.4297	4.21×10^{5}	429.71	2304	5.967
lb-in-s^2	386.08	2.681	1	8.33×10^{-2}	1.129×10^{3}	1.152	1.129×10^{6}	1.152×10^{3}	6.177×10^{3}	16
lb-ft-s^2 slug-ft^2	4.63×10^{3}	32.17	12	1	1.35×10^{4}	13.825	1.355×10^{7}	1.38×10^{4}	7.41×10^{4}	192
kg-cm^2	0.3417	2.37×10^{-3}	8.85×10^{-4}	7.37×10^{-5}	1	1.019×10^{-3}	1000	1.019	5.46	1.41×10^{-2}
kg-cm-s^2	335.1	2.327	0.8679	7.23×10^{-2}	980.66	1	9.8×10^{5}	1000	5.36×10^{3}	13.887
gm-cm^2	3.417×10^{-4}	2.37×10^{-6}	8.85×10^{-7}	7.37×10^{-8}	1×10^{-3}	1.01×10^{-6}	1	1.01×10^{-3}	5.46×10^{-3}	1.41×10^{-5}
gm-cm-s^2	0.335	2.32×10^{-3}	8.67×10^{-4}	7.23×10^{-5}	0.9806	1×10^{-3}	980.6	1	5.36	1.38×10^{-2}
oz-in^2	0.0625	4.34×10^{-4}	1.61×10^{-4}	1.34×10^{-5}	0.182	1.86×10^{-4}	182.9	0.186	1	2.59×10^{-3}
oz-in-s^2	24.13	0.1675	6.25×10^{-2}	5.20×10^{-3}	70.615	7.20×10^{-2}	7.09×10^{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	8.333×10^{-2}	16	0.113	1.152	1.152×10^{-2}	1.152×10^{3}	1.129×10^{6}
lb-ft	12	1	192	1.355	13.825	0.138	1.382×10^{4}	1.355×10^{7}
oz-in	6.25×10^{-2}	5.208×10^{-3}	1	7.061×10^{-3}	7.200×10^{-2}	7.200×10^{-4}	72.007	7.061×10^{4}
N-m	8.850	0.737	141.612	1	10.197	0.102	1.019×10^{4}	1×10^{7}
kg-cm	0.8679	7.233×10^{-2}	13.877	9.806×10^{-2}	1	10^{-2}	1000	9.806×10^{5}
kg-m	86.796	7.233	1.388×10^{3}	9.806	100	1	1×10^{5}	9.806×10^{7}
gm-cm	8.679×10^{-4}	7.233×10^{-5}	1.388×10^{-2}	9.806×10^{-5}	1×10^{-3}	1×10^{-5}	1	980.665
dyne-cm	8.850×10^{-7}	7.375×10^{-8}	1.416×10^{-5}	10^{-7}	1.0197×10^{-6}	1.019×10^{-8}	1.019×10^{-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	1.09×10^{-2}	10	0.01
yd	36	3	91.44	1	914.4	0.914
mm	0.03937	0.00328	0.1	1.09×10^{-3}	1	0.001
m	39.37	3.281	100	1.09	1000	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)	2.645×10^{-6}	1.972×10^{-3}
(lb-in) (rpm)	1.587×10^{-5}	1.183×10^{-2}
(lb-ft) (deg./s)	3.173×10^{-5}	2.366×10^{-2}
(lb-ft) (rpm)	1.904×10^{-4}	0.1420
Watts	1.341×10^{-3}	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	4.448×10^{5}	4.4482
oz	0.0625	1	28.35	2.780×10^{4}	0.27801
gm	2.205×10^{-3}	0.03527	1	1.02×10^{-3}	N.A.
dyne	2.248×10^{-6}	3.59×10^{-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	6.25×10^{-2}	1	28.35	0.02835	1.93×10^{-3}
gm	2.205×10^{-3}	3.527×10^{-2}	1	10^{-3}	6.852×10^{-5}
kg	2.205	35.27	10^{3}	1	6.852×10^{-2}
slug	32.17	514.8	1.459×10^{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	1.745×10^{-2}	1

Temperature Conversion

°F	°C	°C	°F
0	–17.8	–10	14
32	0	0	32
50	10	10	50
70	21.1	20	68
90	32.2	30	86
98.4	37	37	98.4
212	100	100	212
subtract 32 and multiply by $^5/_9$		multiply by $^9/_5$ 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	μ
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	μ
Ball bushings	<0.001
Linear bearings	<0.001
Dove-tail slides	~0.2++
Gibb ways	~0.5++

Material Densities

Material	lb-in^3	gm-cm^3
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[1)]

Cross-section mm^2	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

1) The table shows approximate SWG/AWG sizes nearest to standard metric sizes; the cross-sections do not match exactly.

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www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

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