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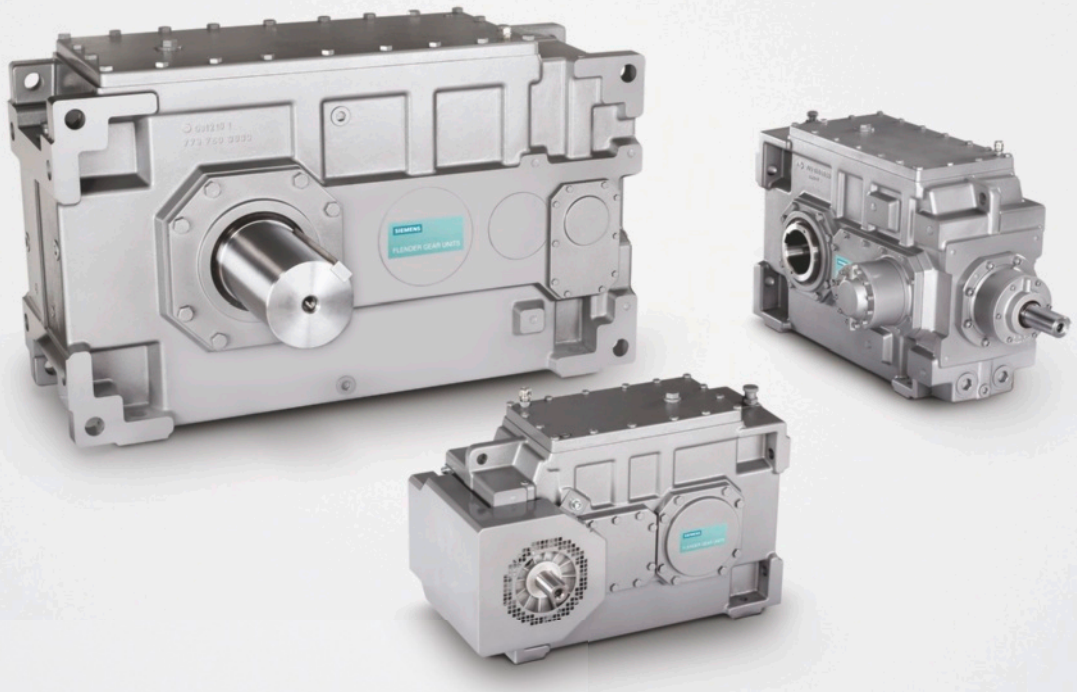
FLENDER SIG
Standard industrial gear unit

Catalog MD 30.1 · 2012

Revised edition December 2013



FLENDER gear units

Answers for industry.

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FLENDER gear units
FLENDER SIG
Standard industrial gear unit

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Supersedes:
Catalog MD 30.1 · 2011

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Answers for industry.

The central task in drive engineering is to optimize interoperation of the controller, frequency converter, motor, coupling and gear unit. Through many years of system expertise, well-proven, standardized and reliable solutions have been available from Siemens over the long term. During the development of the new FLENDER SIG series of industrial gear units the main focus of the design engineers was also on the drive train.

FLENDER SIG offers a number of innovative features: Up to 15 % more torque than the highly developed Flender gear units is really impressive. The new series is extremely versatile, and suitable for use in numerous applications. It offers a high degree of flexibility in system planning and many advantages in daily operation. Further benefits are the extended standards for externally mounted parts and peripherals as well as an additional mounting surface.

Various different cooling solutions are also available as options for FLENDER SIG. The harmonized torque stages mean that you will be closer to your desired torque across the entire spectrum, with positive effects on costs and logistics.

The FLENDER SIG product range is extensive even now. This catalog will provide you with an overview.

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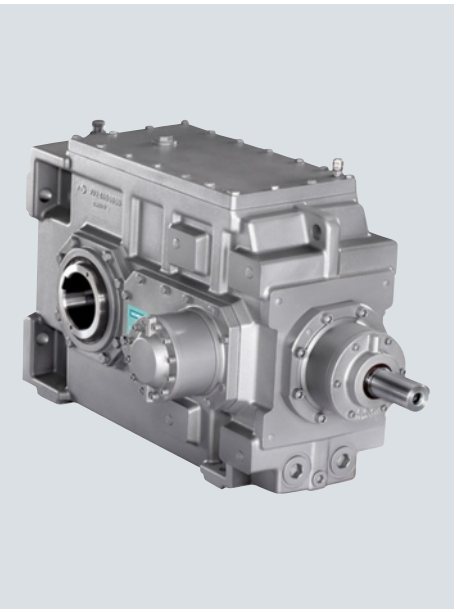
Introduction



1/2 **Notes**
1/2 Summary of basic types
1/3 Characteristic features
1/3 Notes on selection and operation

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1

Summary of basic types

Overview

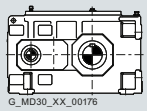
Horizontal mounting position

Helical gear units

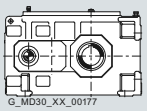
Types H1.., H2.., H3.., H4..

1- ... 4-stage, i_N = 1.12 – 400

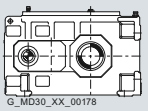
H.SH



H.HH



H.DH

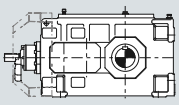


Bevel-helical gear units

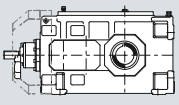
Types B2.., B3.., B4..

2- ... 4-stage, i_N = 5 – 355

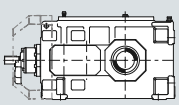
B.SH



B.HH



B.DH



Structure of types

Type		B	3	S	H
Type	Helical gear unit	**H**			
	Bevel-helical gear unit	**B**			
No. of stages	1		**1**		
	2		**2**		
	3		**3**		
	4		**4**		
Output shaft design	Solid shaft			**S**	
	Hollow shaft with keyway to DIN 6885/1			**H**	
	Hollow shaft for shrink disk			**D**	
Mounting position	Horizontal				**H**

Structure of gear unit size

Gear unit size		5	1	1
Gear unit size	• 503	**5**	**0**	**3**
	• 504	**5**	**0**	**4**
	• 505	**5**	**0**	**5**
	• 506	**5**	**0**	**6**
	• 507	**5**	**0**	**7**
	• 508	**5**	**0**	**8**
	• 509	**5**	**0**	**9**
	• 510	**5**	**1**	**0**
	• 511	**5**	**1**	**1**
	• 512	**5**	**1**	**2**
	• 513	**5**	**1**	**3**
	• 514	**5**	**1**	**4**

Further details required in orders

- Transmission ratio *i*
- Designs A, B, C, D, etc.

Example B3SH 511A16

- Bevel-helical gear unit, 3-stage
- Solid output shaft design
- Horizontal mounting position
- Size 511
- Design A
- *i* = 16

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Overview

Characteristic features

Design

FLENDER SIG gear units are a completely new design. Advantages are:

- Even more torque for the same size
- Even greater flexibility through additional mounting positions
- Even greater plant availability thanks to longer rolling bearing service life
- Even closer to the customer's desired torque thanks to considerably harmonized torque stages
- Wide range of variants from 7 types with solid shaft or different hollow shaft designs
- Available, if required, with dust-tight taconite seals
- Internal cooling or standardized fan mounting, as required
- Fast availability worldwide
- Attractive price/performance ratio
- Higher operational reliability combined with increased power density

Mounting position

- FLENDER SIG gear units are available for horizontal installation.
- Other arrangements are also possible on request. The basic gear unit can be optimally adapted to customer requirements by fitting different externally mounted parts like motor bell housings, gear unit swing bases or backstops.

Noise behavior

New concepts were applied to clearly improve the noise emission of the FLENDER SIG gear units by

- Grinding the bevel gears
- Optimizing the wheel set
- Developing a compact monoblock housing
- Achieving exceptionally large contact ratios.

Thermal conduction

FLENDER SIG gear units not only have a high efficiency but also a favorable thermal conduction

- Through enlarged housing surface areas
- Because large fans incorporating a new type of air conduction fan cowl are being used.

The selection of gear units is based on a lower maximum oil temperature. By that, the operational reliability will be increased and the cost of maintenance reduced due to longer oil change intervals.

Storing

FLENDER SIG gear units have been designed according to a new unit construction principle. Through this, the variety of parts could be reduced. The parts are mainly on stock enabling the Siemens manufacturing plants worldwide to deliver at short term.

Overview

Notes on selection and operation

- Illustrations are examples only and are not strictly binding. Dimensions are subject to change.
- The weights are mean values and not strictly binding.
- To prevent accidents, all rotating parts should be guarded according to local and national safety regulations.
- Prior to commissioning, the operating instructions must be observed. The gear units are delivered ready for operation but without oil filling.
- Oil quantities given are guide values only.
  The exact quantity of oil depends on the marks on the oil dipstick.
- The oil viscosity has to correspond to the data given on the name plate.
- Approved lubricants may be used only. You will find current operating instructions and lubricant selection tables on the Internet at:
  http://support.automation.siemens.com/WW/view/en/44231658
- The gear units are supplied with radial shaft seals. For other sealing variants see Chapter 7.
- Directions of rotation refer to the output shaft d_2.
- In case of outdoor installation, insolation is to be avoided. The customer has to provide adequate protection.

Explanation of symbols used in the dimensional drawings:

Symbol	Explanation
	Oil dipstick
	Breather
	Oil drain
	Oil filler

Foundation bolts of min. property class 8.8. Tolerance of the clearance holes in the housing acc. to DIN EN 20273 – "coarse" series. The gear housings are protected against corrosion and lacquered in the color RAL 5015.

Certified acc. to DIN EN ISO 9001

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Notes

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Technical information

2

2/2 Preservation
2/2 Selection of oil
2/2 Maintenance
2/2 Shaft misalignment

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Preservation, selection of oil, maintenance, shaft misalignment

Overview

Preservation

The internal preservation of Siemens gear units is dependent on the oil used.

For gear units with corrosion prevention, the following storage times are possible:

Standard preservation	Long-term preservation [1]
Up to 6 months	Up to 24 months [2] Up to 36 months [3]

If the storage periods mentioned are exceeded, the anti-corrosive agent in the gear unit is to be renewed.

Selection of oil

Siemens industrial gear units may be filled with oils from producers authorized by Siemens AG, the oil producer or supplier being responsible for the quality of the product. For the selection of oil grade and viscosity, the limits of application given in the table are to be taken into consideration.

A minimum operating viscosity of 25 cSt must be ensured.

Viscosity ISO-VG at 40 °C in mm^2/s (cSt)	Minimum temperature limit in °C for dip lubrication	
	Mineral oil	Synthetic oil
VG 220	-15	-25
VG 320	-12	-25
VG 460	-10	-25

Dip lubrication:

In case of dip lubrication, all parts to be lubricated are lying in the oil.

If the temperatures are below the values as listed in the table, the oil must be heated.

In case of dip lubrication, the oil temperature must not drop below the pour point of the selected oil.

Maintenance

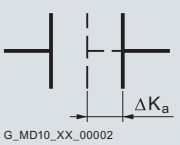
Compliance with the conditions for operation and installation is essential. To prevent damage to the gear unit or failure of the drive, regular inspection and maintenance must be performed as specified in the operating instructions.

Shaft misalignment

Shaft misalignment is the result of displacement during assembly and operation and, where machines constructed with two radial bearings each are rigidly coupled, will cause high loads being placed on the bearings. Elastic deformation of base frame, foundation and machine housing will lead to shaft misalignment which cannot be prevented, even by precise alignment. Furthermore, because individual components of the drive train heat up differently during operation, heat expansion of the machine housings causes shaft misalignment.

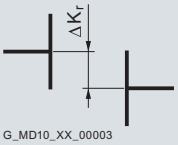
Poorly aligned drives are often the cause of seal or rolling bearing failure. Alignment should be carried out by specialist personnel in accordance with the Siemens operating instructions.

Depending on the direction of the effective shaft misalignment a distinction is made between:



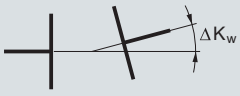
G_MD10_XX_00002

Axial misalignment



G_MD10_XX_00003

Radial misalignment



G_MD10_XX_00004

Angular misalignment

The shaft misalignment expected must be taken into account on selecting the connection between the components and the input shaft or output shaft. Guidelines and limits for compensation of shaft misalignment can be obtained from the manufacturer.

[1] Not for gear units with labyrinth seals or diaphragm glands.

[2] Only if mineral oil or synthetic oil on PAO basis is used.

[3] Only if synthetic oil on PG basis is used.

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Design of the gear units

3

Guidelines for selection

3/2 Constant mechanical power rating
3/4 Variable power rating
3/5 Key to symbols
3/6 Calculation example
3/8 Service factors

Overview tables

3/10 Type H1
3/22 Type H2
3/28 Type H3
3/34 Type H4
3/38 Type B2
3/50 Type B3
3/56 Type B4
3/60 Actual ratio H1, H2, H3, H4
3/62 Actual ratio B2, B3, B4

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Constant mechanical power rating

Overview

1. Determination of gear unit type and size

1.1 Find the transmission ratio

$$i_s = \frac{n_1}{n_2}$$

1.2 Determine the nominal power rating of the gear unit

$$P_{2N} \geq P_2 \times f_1 \times f_2$$

It is not necessary to consult us, if:

$$3.33 \times P_2 \geq P_{2N}$$

1.3 Check for maximum torque
e.g.: peak operating, starting or braking torque

$$P_{2N} \geq \frac{T_A \times n_1}{9550} \times f_3$$

Gear unit sizes and number of reduction stages are given in rating tables depending on i_N and P_{2N}.

1.4 Check whether additional forces on the output shaft are permissible; it is essential to consult Siemens!

1.5 Check whether the actual ratio i as per tables on pages 3/60 to 3/62 is acceptable.

2. Determination of oil supply: Horizontal mounting position

All parts to be lubricated are lying in the oil or are splash lubricated. Forced lubrication on request.

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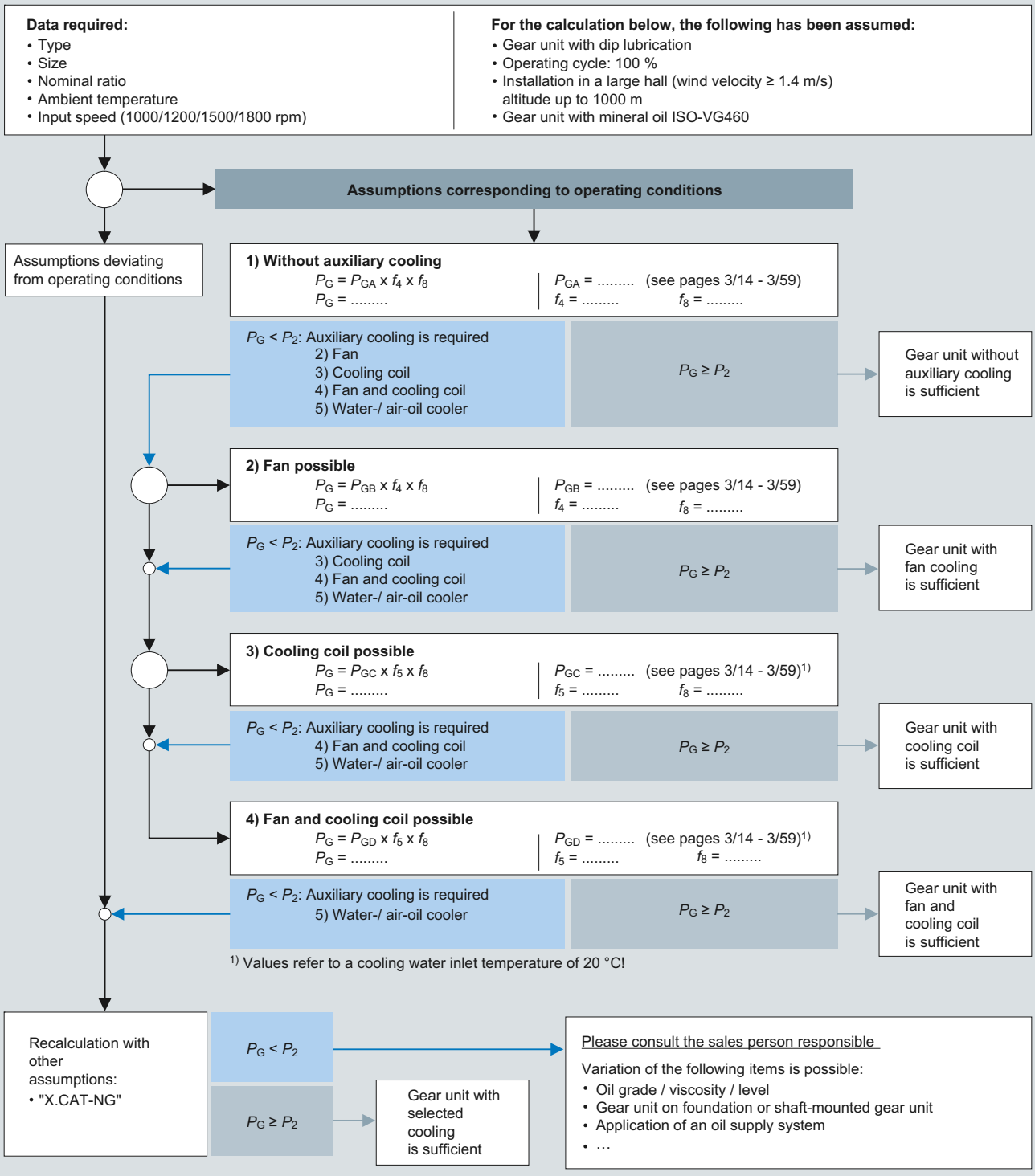
Overview (continued)

3. Determination of required thermal capacity P_G



The type of the possibly required auxiliary cooling is dependent on the operating conditions at the customer site (dust, cooling water connection, etc).

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Variable power rating

Overview

For driven machines with constant speeds and variable power ratings the gear unit can be designed according to the equivalent power rating. For this a working cycle where phases I, II...n require power P_I, P_{II} ... P_n and the respective power ratings operate for time fractions X_I, X_{II}...X_n is taken as a basis. The equivalent power rating can be calculated from these specifications with the following formula:

$$P_{2eq} = \sqrt[6.6]{P_I^{6.6} \times \frac{X_I}{100} + P_{II}^{6.6} \times \frac{X_{II}}{100} + \ldots P_n^{6.6} \times \frac{X_n}{100}}$$

The size of the gear unit can then be determined analogously to points 1.1 ... 1.5 and 3.

The following applies:

$$P_{2N} \geq P_{2eq} \times f_1 \times f_2$$

Then, when P_{2N} has been determined, the power and time fractions must be checked by applying the following requirements:

- The individual power fractions P_I, P_{II}... P_n must be greater than 0.4 x P_{2N}.
- The individual power fractions P_I, P_{II} ... P_n must not exceed 1.4 x P_{2N}.
- If power fractions P_I, P_{II} ... P_n are greater than P_{2N}, the sum of time fractions X_I, X_{II} ... X_n must not exceed 10 %.

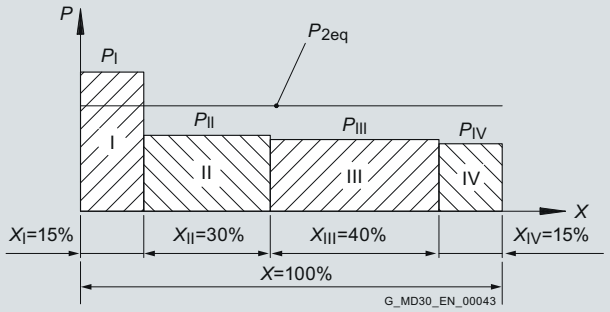
If any one of the three requirements is not met, P_{2eq} must be recalculated.

It must be borne in mind that a brief peak power rating not included in the calculation of P_{2eq} must not be greater than P_{max} = 2 x P_{2N}.

In applications where the torque is variable but the speed constant, the gear unit can be designed on the basis of the so-called equivalent torque.

A gear unit design which is finite-life fatigue-resistant can be sufficient for certain applications, for example, sporadic operation (lockgate drives) or low output speeds (n_2 < 4 rpm).

Example: Service classification



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Overview

Key to symbols

Symbol	Explanation	Chapter/Page
E_D	Operating cycle per hour in % (e.g. ED = 80 % per hour)	
f_1	Factor for driven machine	3/8
f_2	Factor for prime mover	3/9
f_3	Peak torque factor	3/9
f_4	Thermal factors	3/9
f_5	Thermal factors	3/9
f_8	Oil supply factor	3/9
i	Actual ratio	3/60, 3/62
i_N	Nominal ratio	
i_s	Required ratio	
n_1	Input speed (rpm)	
n_2	Output speed (rpm)	
P_G	Required thermal capacity	3/3
P_{GA}	Thermal capacity for gear units without auxiliary cooling	
P_{GB}	Thermal capacity for gear units with fan cooling	
P_{GC}	Thermal capacity for gear units with built-in cooling coil	
P_{GD}	Thermal capacity for gear units with built-in cooling coil and fan	
P_{2N}	Nominal power rating of gear unit (kW), see rating tables	
P_2	Power rating of driven machine (kW)	
t	Ambient temperature (°C)	
T_A	Max. torque occurring on input shaft, e.g.: peak operating, starting, or braking torque (Nm)	
T_{2N}	Nominal output torque (kNm)	
T_M	Nominal motor torque (Nm)	
T_{MA}	Motor starting torque (Nm)	
T_{MK}	Pull-out motor torque (Nm)	
P_{2eq}	Equivalent power rating (kW)	
P_I, P_{II}, P_n	Fractions of power rating (kW) obtained from service classification	
X_I, X_{II}, X_n	Fractions of time (%) obtained from service classification	

Notes and legend for tables of thermal capacities

* On request

P_{GA} (kW):
Gear units without auxiliary cooling;
Values refer to:
Operating cycle 100 %,
Installation in a large hall,
Altitude up to 1000 m

P_{GB} (kW):
Gear units with fan;
Values refer to:
Operating cycle 100 %,
Installation in a large hall,
Altitude up to 1000 m

P_{GC} (kW):
Gear units with built-in cooling coil;
Values refer to:
Operating cycle 100 %,
Installation in a large hall,
Altitude up to 1000 m,
Cooling water inlet temperature of 20 °C with unlimited cooling water outlet temperature.
A recalculation with a limited cooling water outlet temperature is possible on request.

P_{GD} (kW):
Gear units with fan and built-in cooling coil;
Values refer to:
Operating cycle 100 %,
Installation in a large hall,
Altitude up to 1000 m,
Cooling water inlet temperature of 20 °C with unlimited cooling water outlet temperature.
A recalculation with a limited cooling water outlet temperature is possible on request.

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Calculation example

Overview

Known criteria for the calculation example

Prime mover

- Electric motor: P_1 = 75 kW
- Motor speed: n_1 = 1500 rpm
- Max. starting torque: T_a = 720 Nm

Driven machine

- Belt conveyor: P_2 = 66 kW
- Speed: n_2 = 26 rpm
- Duty: 12 h/day
- Starts per hour: 7
- Operating cycle per hour: E_D = 100 %
- Ambient temperature: 30 °C
- Installation in a large hall: Wind velocity ≥ 1.4 m/s
- Altitude: Sea level

Gear unit design

- Bevel-helical gear unit
- Mounting position: Horizontal
- Output shaft d_2: On right-hand side, design C, solid shaft
- Direction of rotation of output shaft d_2: ccw

Required:

- Type of gear unit
- Gear unit size

1. Determination of gear unit type and size

1.1 Find the transmission ratio

$$i_s = \frac{n_1}{n_2} = \frac{1500}{26} = 57.7 \qquad i_N = 56$$

1.2 Determine the nominal power rating of the gear unit

$$P_{2N} \geq P_2 \times f_1 \times f_2 = 66 \times 1.3 \times 1 = 85.8 \text{ kW}$$

Selected from power rating table: type B3SH, gear unit size 509 with P_{2N} = 102 kW.

$$3.33 \times P_2 \geq P_{2N} \qquad 3.33 \times 66 = 219.8 \text{ kW} > P_{2N}$$

It is not necessary to consult us

1.3 Check the starting torque

$$P_{2N} \geq \frac{T_A \times n_1}{9550} \times f_3 = \frac{720 \times 1500}{9550} \times 0.65 = 73.5 \text{ kW}$$

$$P_{2N} = 102 \text{ kW} > 73.5 \text{ kW}$$

2. Determination of oil supply

Gear unit with dip lubrication

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Overview (continued)

3. Determination of required thermal capacity P_G

Data required:
- Type: B3SH
- Size: 509
- Nominal ratio: i_N = 56
- Ambient temperature: t = 30 °C
- Input speed n_1 = 1500 rpm

For the calculation below, the following has been assumed:
- Gear unit with dip lubrication
- Operating cycle: 100 %
- Installation in a large hall (wind velocity ≥ 1.4 m/s) altitude up to 1000 m
- Gear unit with mineral oil ISO-VG460

Assumptions corresponding to operating conditions

Assumptions deviating from operating conditions

1) Without auxiliary cooling
$P_G = P_{GA} \times f_4 \times f_8$
P_G = 52.0 kW
P_{GA} = 59.1 kW (see page 3/54)
f_4 = 0.88 f_8 = 1.0

$P_G < P_2$: Auxiliary cooling is required
2) Fan
3) Cooling coil
4) Fan and cooling coil
5) Water-/ air-oil cooler

→ Gear unit with auxiliary cooling required

2) Fan possible
$P_G = P_{GB} \times f_4 \times f_8$
P_G = 120.7 kW
P_{GB} = 137.2 kW (see page 3/54)
f_4 = 0.88 f_8 = 1.0

$P_G < P_2$: Auxiliary cooling is required
3) Cooling coil
4) Fan and cooling coil
5) Water-/ air-oil cooler

$P_G \geq P_2$ → Gear unit with fan cooling is sufficient

3) Cooling coil possible
$P_G = P_{GC} \times f_5 \times f_8$
P_G = 183.1 kW
P_{GC} = 196.9 kW (see page 3/54)[1)]
f_5 = 0.93 f_8 = 1.0

$P_G < P_2$: Auxiliary cooling is required
4) Fan and cooling coil
5) Water-/ air-oil cooler

$P_G \geq P_2$ → Gear unit with cooling coil is sufficient

4) Fan and cooling coil possible
$P_G = P_{GD} \times f_5 \times f_8$
P_G = 247.1 kW
P_{GD} = 265.8 kW (see page 3/54)[1)]
f_5 = 0.93 f_8 = 1.0

$P_G < P_2$: Auxiliary cooling is required
5) Water-/ air-oil cooler

$P_G \geq P_2$ → Gear unit with fan and cooling coil is sufficient

[1)] Values refer to a cooling water inlet temperature of 20 °C!

Recalculation with other assumptions:
- "X.CAT-NG"

$P_G < P_2$ → Please consult the sales person responsible

Variation of the following items is possible:
- Oil grade / viscosity / level
- Gear unit on foundation or shaft-mounted gear unit
- Application of an oil supply system
- …

$P_G \geq P_2$ → Gear unit with selected cooling is sufficient

The selected gear unit B3SH509 with i_N = 56 must be equipped with suitable auxiliary cooling.
Depending on the operating conditions at the customer site, a fan or cooling coil must be fitted.

G_MD30_EN_00049a

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Service factors

Overview

Factor for driven machines f_1

Driven machines	Effective operating period under load in hours		
	≤ 0.5	> 0.5 – 10	> 10
Waste water treatment			
• Thickeners (central drive)	–	–	1.2
• Filter presses	1.0	1.3	1.5
• Flocculation apparatus	0.8	1.0	1.3
• Aerators	–	1.8	2.0
• Raking equipment	1.0	1.2	1.3
• Combined longitudinal and rotary rakes	1.0	1.3	1.5
• Pre-thickeners	–	1.1	1.3
• Screw pumps	–	1.3	1.5
• Water turbines	–	–	2.0
Pumps			
• Centrifugal pumps	1.0	1.2	1.3
• Positive-displacement pumps			
- 1 piston	1.3	1.4	1.8
- > 1 piston	1.2	1.4	1.5
Dredgers			
• Bucket conveyors	–	1.6	1.6
• Dumping devices	–	1.3	1.5
• Caterpillar traveling gears	1.2	1.6	1.8
Bucket wheel excavators			
- as pick-up	–	1.7	1.7
- for primitive material	–	2.2	2.2
• Cutter heads	–	2.2	2.2
• Slewing gears [1]	–	1.4	1.8
Plate bending machines [1]	–	1.0	1.0
Chemical Industry			
• Extruders	–	–	1.6
• Dough mills	–	1.8	1.8
• Rubber calenders	–	1.5	1.5
• Cooling drums	–	1.3	1.4
Mixers for			
- uniform media	1.0	1.3	1.4
- non-uniform media	1.4	1.6	1.7
Agitators for/media with			
- uniform density	1.0	1.3	1.5
- non-uniform density	1.2	1.4	1.6
- non-uniform gas absorption	1.4	1.6	1.8
• Toasters	1.0	1.3	1.5
• Centrifuges	1.0	1.2	1.3
Metal working mills			
• Plate tilters	1.0	1.0	1.2
• Ingot pushers	1.0	1.2	1.2
• Winding machines	–	1.6	1.6
• Cooling bed transfer frames	–	1.5	1.5
• Roller straighteners	–	1.6	1.6
Roller tables			
- continuous	–	1.5	1.5
- intermittent	–	2.0	2.0
• Reversing tube mills	–	1.8	1.8
Shears			
- continuous [1]	–	1.5	1.5
- crank type [1]	1.0	1.0	1.0
• Continuous casting drivers [1]	–	1.4	1.4
Rolls			
- Reversing blooming mills	–	2.5	2.5
- Reversing slabbing mills	–	2.5	2.5
- Reversing wire mills	–	1.8	1.8
- Reversing sheet mills	–	2.0	2.0
- Reversing plate mills	–	1.8	1.8
• Roll adjustment drives	0.9	1.0	–
Conveyors			
• Bucket conveyors	–	1.4	1.5
• Hauling winches	1.4	1.6	1.6
• Hoists	–	1.5	1.8
• Belt conveyors ≤ 150 kW	1.0	1.2	1.3
• Belt conveyors ≥ 150 kW	1.1	1.3	1.4
• Goods lifts [1]	–	1.2	1.5
• Passenger lifts [1]	–	1.5	1.8
• Apron conveyors	–	1.2	1.5
• Escalators	1.0	1.2	1.4
• Railway vehicles	–	1.5	–
Frequency converters	–	1.8	2.0
Reciprocating compressors	–	1.8	1.9
Cranes [2]			
• Slewing gears [1]	1.0	1.4	1.8
• Luffing gears	1.0	1.1	1.4
• Traveling gears	1.1	1.6	2.0
• Hoisting gears	1.0	1.1	1.4
• Derricking jib cranes	1.0	1.2	1.6
Cooling towers			
• Cooling tower fans	–	–	2.0
• Blowers (axial and radial)	–	1.4	1.5
Food industry			
Cane sugar production			
• Cane knives [1]	–	–	1.7
• Cane mills	–	–	1.7
Beet sugar production			
• Beet cossettes macerators	–	–	1.2
• Extraction plants, mechanical refrigerators, juice boilers	–	–	1.4
• Sugar beet washing machines, sugar beet cutters	–	–	1.5
Paper machines			
• of all kinds [3]	–	1.8	2.0
• Pulper drives (on request)			
Centrifugal compressors	–	1.4	1.5
Cableways			
• Material ropeways	–	1.3	1.4
• To-and-fro system aerial ropeways	–	1.6	1.8
• T-bar lifts	–	1.3	1.4
• Continuous ropeways	–	1.4	1.6
Cement industry			
• Concrete mixers	–	1.5	1.5
• Breakers [1]	–	1.2	1.4
• Rotary kilns	–	–	2.0
• Tube mills	–	–	2.0
• Separators	–	1.6	1.6
• Roll crushers	–	–	2.0

Note: The listed load parameters are empirical values. Prerequisite for their application is that the machinery and equipment mentioned correspond to generally accepted design and load specifications. In case of deviations from standard conditions, please contact us. For driven machines which are not listed in this table, please refer to us.

Design for power rating of driven machine P_2

[1] Designed power corresponding to max. torque

[2] Load can be exactly classified, for instance, according to FEM 1001

[3] A check for thermal capacity is absolutely essential

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Overview (continued)

Factor for prime mover f_2

	Factor for prime mover f_2
Electric motors, hydraulic motors, turbines	1.0
Piston engines 4 – 6 cylinders, cyclic variation 1 : 100 to 1 : 200	1.25
Piston engines 1 – 3 cylinders, cyclic variation 1 : 100	1.5

Peak torque factor f_3

	Peak torque factor f_3			
	Load peaks per hour			
	1 – 5	6 – 30	31 – 100	> 100
Steady direction of load	0.5	0.65	0.7	0.85
Alternating direction of load	0.7	0.95	1.10	1.25

Thermal factor f_4

(Gear units without auxiliary cooling or with fan)

	Ambient temperature								
	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	45 °C	50 °C
Thermal factor f_4	1.11	1.06	1.00	0.94	0.88	0.82	0.75	0.69	0.63

Thermal factor f_5

(For cooling with cooling coil, or with fan and cooling coil)

	Ambient temperature								
	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	45 °C	50 °C
Thermal factor f_5	1.05	1.03	1.00	0.97	0.93	0.90	0.87	0.84	0.81

Oil supply factor f_8

	Oil supply factor f_8				
Type of gear unit	Oil supply	Without auxiliary cooling	With fan	With cooling coil	With fan and cooling coil
• H..H • B..H	Dip lubrication	1	1	1	1

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Overview tables

Type H1
Nominal power ratings, gear unit sizes 503 to 510

Technical data

Nominal power ratings P_{2N} (kW) type H1

			Gear unit sizes							
i_N	n_1	n_2	503	504	505	506	507	508	509	510
1.12	1800	1607	496	909	1380	–	2474	–	3870	–
	1500	1339	414	757	1150	–	2061	–	3225	–
	1200	1071	331	606	920	–	1649	–	2579	–
	1000	893	276	505	767	–	1375	–	2151	–
1.25	1800	1440	467	859	1297	–	2413	–	3770	–
	1500	1200	390	716	1081	–	2010	–	3141	–
	1200	960	312	573	865	–	1608	–	2513	–
	1000	800	260	477	720	–	1340	–	2094	–
1.32	1800	1364	–	–	–	–	–	2614	–	3999
	1500	1136	–	–	–	–	–	2177	–	3331
	1200	909	–	–	–	–	–	1742	–	2665
	1000	758	–	–	–	–	–	1453	–	2222
1.4	1800	1286	438	794	1225	1481	2249	–	3501	–
	1500	1071	364	662	1021	1234	1873	–	2916	–
	1200	857	292	529	817	987	1499	–	2333	–
	1000	714	243	441	680	822	1249	–	1944	–
1.5	1800	1200	–	–	–	–	–	2463	–	3770
	1500	1000	–	–	–	–	–	2052	–	3141
	1200	800	–	–	–	–	–	1642	–	2513
	1000	667	–	–	–	–	–	1369	–	2095
1.6	1800	1125	401	730	1131	1366	2085	–	3298	–
	1500	938	334	609	943	1139	1738	–	2750	–
	1200	750	267	487	754	911	1390	–	2199	–
	1000	625	223	406	628	759	1158	–	1832	–
1.7	1800	1059	–	–	–	–	–	2251	–	3438
	1500	882	–	–	–	–	–	1875	–	2863
	1200	706	–	–	–	–	–	1501	–	2292
	1000	588	–	–	–	–	–	1250	–	1909
1.8	1800	1000	356	649	1026	1267	2010	–	3351	–
	1500	833	297	541	855	1055	1675	–	2791	–
	1200	667	237	433	684	845	1341	–	2235	–
	1000	556	198	361	571	704	1118	–	1863	–
1.9	1800	947	–	–	–	–	–	2162	–	3272
	1500	789	–	–	–	–	–	1801	–	2726
	1200	632	–	–	–	–	–	1443	–	2184
	1000	526	–	–	–	–	–	1201	–	1818
2	1800	900	320	584	924	1197	1809	–	3025	–
	1500	750	267	487	770	997	1508	–	2521	–
	1200	600	214	390	616	798	1206	–	2017	–
	1000	500	178	325	513	665	1005	–	1681	–
2.12	1800	849	–	–	–	–	–	2134	–	3556
	1500	708	–	–	–	–	–	1779	–	2965
	1200	566	–	–	–	–	–	1422	–	2371
	1000	472	–	–	–	–	–	1186	–	1977
2.24	1800	804	286	522	825	1120	1616	–	2702	–
	1500	670	239	435	688	933	1347	–	2252	–
	1200	536	191	348	550	746	1078	–	1802	–
	1000	446	159	290	458	621	897	–	1499	–
2.36	1800	763	–	–	–	–	–	1997	–	3236
	1500	636	–	–	–	–	–	1665	–	2697
	1200	508	–	–	–	–	–	1330	–	2154
	1000	424	–	–	–	–	–	1110	–	1798
2.5	1800	720	256	467	739	1003	1448	–	2428	–
	1500	600	214	390	616	836	1206	–	2023	–
	1200	480	171	312	493	668	965	–	1618	–
	1000	400	142	260	410	557	804	–	1349	–

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Technical data (continued)

Nominal power ratings P_{2N} (kW) type H1 (continued)

			Gear unit sizes							
i_N	n_1	n_2	503	504	505	506	507	508	509	510
2.65	1800	679	–	–	–	–	–	1777	–	2958
	1500	566	–	–	–	–	–	1482	–	2466
	1200	453	–	–	–	–	–	1186	–	1973
	1000	377	–	–	–	–	–	987	–	1642
2.8	1800	643	229	417	660	895	1293	–	2175	–
	1500	536	191	348	550	746	1078	–	1813	–
	1200	429	153	279	440	597	862	–	1451	–
	1000	357	127	232	366	497	718	–	1207	–
3	1800	600	–	–	–	–	–	1571	–	2614
	1500	500	–	–	–	–	–	1309	–	2178
	1200	400	–	–	–	–	–	1047	–	1742
	1000	333	–	–	–	–	–	872	–	1451
3.15	1800	571	203	371	586	795	1148	–	1931	–
	1500	476	169	309	488	663	957	–	1610	–
	1200	381	136	247	391	531	766	–	1289	–
	1000	317	113	206	325	441	637	–	1072	–
3.35	1800	537	–	–	–	–	–	1406	–	2339
	1500	448	–	–	–	–	–	1173	–	1951
	1200	358	–	–	–	–	–	937	–	1559
	1000	299	–	–	–	–	–	783	–	1302
3.55	1800	507	181	329	520	706	1019	–	1715	–
	1500	423	151	275	434	589	850	–	1431	–
	1200	338	120	219	347	471	680	–	1143	–
	1000	282	100	183	289	393	567	–	954	–
3.75	1800	480	–	–	–	–	–	1257	–	2091
	1500	400	–	–	–	–	–	1047	–	1742
	1200	320	–	–	–	–	–	838	–	1394
	1000	267	–	–	–	–	–	699	–	1163
4	1800	450	160	292	462	627	905	–	1522	–
	1500	375	134	243	385	522	754	–	1268	–
	1200	300	107	195	308	418	603	–	1015	–
	1000	250	89	162	257	348	503	–	846	–
4.25	1800	424	–	–	–	–	–	1110	–	1847
	1500	353	–	–	–	–	–	924	–	1538
	1200	282	–	–	–	–	–	738	–	1228
	1000	235	–	–	–	–	–	615	–	1024
4.5	1800	400	134	260	410	557	775	–	1173	–
	1500	333	112	216	342	464	645	–	976	–
	1200	267	89	173	274	372	517	–	783	–
	1000	222	74	144	228	309	430	–	651	–
4.75	1800	379	–	–	–	–	–	937	–	1627
	1500	316	–	–	–	–	–	781	–	1357
	1200	253	–	–	–	–	–	625	–	1086
	1000	211	–	–	–	–	–	521	–	906
5	1800	360	113	234	358	501	660	–	905	–
	1500	300	94	195	298	418	550	–	754	–
	1200	240	75	156	239	334	440	–	603	–
	1000	200	63	130	199	279	366	–	503	–
5.3	1800	340	–	–	–	–	–	801	–	1139
	1500	283	–	–	–	–	–	667	–	948
	1200	226	–	–	–	–	–	532	–	757
	1000	189	–	–	–	–	–	445	–	633
5.6	1800	321	94	205	306	417	571	–	689	–
	1500	268	79	171	255	348	477	–	575	–
	1200	214	63	137	204	278	381	–	459	–
	1000	179	52	114	171	232	319	–	384	–
6	1800	300	–	–	–	–	–	660	–	927
	1500	250	–	–	–	–	–	550	–	772
	1200	200	–	–	–	–	–	440	–	618
	1000	167	–	–	–	–	–	367	–	516

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Overview tables

Type H1 – Nominal output torques
Gear unit sizes 503 to 510

Technical data (continued)

Nominal output torques T_{2N} (kNm) type H1

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
1.12	2.95	5.4	8.2	–	14.7	–	23	–	–	–	–	–	
1.25	3.1	5.7	8.6	–	16	–	25	–	–	–	–	–	
1.32	–	–	–	–	–	18.3	–	28	–	–	–	–	
1.4	3.25	5.9	9.1	11	16.7	–	26	–	–	–	–	–	
1.5	–	–	–	–	–	19.6	–	30	–	–	–	–	
1.6	3.4	6.2	9.6	11.6	17.7	–	28	–	–	–	–	–	
1.7	–	–	–	–	–	20.3	–	31	–	–	–	–	
1.8	3.4	6.2	9.8	12.1	19.2	–	32	–	–	–	–	–	
1.9	–	–	–	–	–	21.8	–	33	–	–	–	–	
2	3.4	6.2	9.8	12.7	19.2	–	32.1	–	–	–	–	–	
2.12	–	–	–	–	–	24	–	40	–	–	–	–	
2.24	3.4	6.2	9.8	13.3	19.2	–	32.1	–	–	–	–	–	
2.36	–	–	–	–	–	25	–	40.5	–	–	–	–	
2.5	3.4	6.2	9.8	13.3	19.2	–	32.2	–	–	–	–	–	
2.65	–	–	–	–	–	25	–	41.6	–	–	–	–	H1
2.8	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
3	–	–	–	–	–	25	–	41.6	–	–	–	–	
3.15	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
3.35	–	–	–	–	–	25	–	41.6	–	–	–	–	
3.55	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
3.75	–	–	–	–	–	25	–	41.6	–	–	–	–	
4	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
4.25	–	–	–	–	–	25	–	41.6	–	–	–	–	
4.5	3.2	6.2	9.8	13.3	18.5	–	28	–	–	–	–	–	
4.75	–	–	–	–	–	23.6	–	41	–	–	–	–	
5	3	6.2	9.5	13.3	17.5	–	24	–	–	–	–	–	
5.3	–	–	–	–	–	22.5	–	32	–	–	–	–	
5.6	2.8	6.1	9.1	12.4	17	–	20.5	–	–	–	–	–	
6	–	–	–	–	–	21	–	29.5	–	–	–	–	
6.3	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
7.1	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
8	–	7	11.6	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
9	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
10	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
11.2	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
12.5	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	H2
14	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
16	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
18	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
20	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
22.4	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
25	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
28	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
31.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
35.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
40	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
45	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
50	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	H3
56	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
63	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
71	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
80	–	–	–	16.2	–	28.3	–	48.5	–	81	–	125	
90	–	–	–	16.2	–	28.3	–	48.5	–	81	–	125	
100	–	–	–	16.2	–	–	–	–	–	–	–	–	

Type **H2**, see page 3/23
Type **H3**, see page 3/29
Type **H4**, see page 3/35

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Technical data (continued)

Nominal output torques T_{2N} (kNm) type H1

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
80	–	–	–	–	21.5	–	37	–	63.5	–	101.5	–	
90	–	–	–	–	21.5	–	37	–	63.5	–	101.5	–	
100	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
112	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
125	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
140	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
160	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
180	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	**H4**
200	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
224	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
250	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
280	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
315	–	–	–	–	–	28.3	37	48.5	63.5	81	101.5	125	
355	–	–	–	–	–	28.3	–	48.5	–	81	–	125	
400	–	–	–	–	–	–	–	48.5	–	81	–	125	

Type **H2**, see page 3/23
Type **H3**, see page 3/29
Type **H4**, see page 3/35

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Type H1 – Thermal capacities
n_1 = 1000 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H1

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
1.12	P_{GA}	104	103	*	–	*	–	*	–
	P_{GB}	287	362	467	–	575	–	789	–
	P_{GC}	384	714	922	–	1250	–	2118	–
	P_{GD}	541	926	1261	–	1730	–	2749	–
1.25	P_{GA}	109	123	*	–	*	–	*	–
	P_{GB}	286	371	453	–	626	–	873	–
	P_{GC}	375	693	849	–	1237	–	2083	–
	P_{GD}	531	901	1153	–	1699	–	2675	–
1.32	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	856	–	930
	P_{GC}	–	–	–	–	–	1560	–	1847
	P_{GD}	–	–	–	–	–	2116	–	2534
1.4	P_{GA}	113	132	*	*	*	–	*	–
	P_{GB}	281	372	501	607	654	–	912	–
	P_{GC}	360	673	890	1090	1217	–	2027	–
	P_{GD}	509	875	1213	1487	1662	–	2618	–
1.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	867	–	990
	P_{GC}	–	–	–	–	–	1492	–	1794
	P_{GD}	–	–	–	–	–	2022	–	2450
1.6	P_{GA}	115	139	142	146	*	–	*	–
	P_{GB}	276	363	505	571	719	–	938	–
	P_{GC}	343	631	858	981	1274	–	1933	–
	P_{GD}	485	821	1161	1334	1724	–	2485	–
1.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	864	–	1012
	P_{GC}	–	–	–	–	–	1438	–	1747
	P_{GD}	–	–	–	–	–	1941	–	2386
1.8	P_{GA}	112	140	143	176	*	–	*	–
	P_{GB}	266	353	457	605	730	–	943	–
	P_{GC}	325	598	746	1012	1219	–	1852	–
	P_{GD}	462	780	1013	1369	1648	–	2385	–
1.9	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	874	–	1021
	P_{GC}	–	–	–	–	–	1399	–	1655
	P_{GD}	–	–	–	–	–	1892	–	2261
2	P_{GA}	110	139	148	190	*	–	*	–
	P_{GB}	257	338	448	589	714	–	938	–
	P_{GC}	309	558	710	949	1153	–	1771	–
	P_{GD}	439	731	967	1284	1563	–	2266	–
2.12	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	899	–	1014
	P_{GC}	–	–	–	–	–	1384	–	1587
	P_{GD}	–	–	–	–	–	1867	–	2156
2.24	P_{GA}	115	126	162	180	204	–	259	–
	P_{GB}	262	297	457	525	695	–	915	–
	P_{GC}	309	477	704	823	1095	–	1666	–
	P_{GD}	440	624	959	1114	1474	–	2125	–
2.36	P_{GA}	–	–	–	–	–	273	–	*
	P_{GB}	–	–	–	–	–	861	–	995
	P_{GC}	–	–	–	–	–	1298	–	1510
	P_{GD}	–	–	–	–	–	1749	–	2044
2.5	P_{GA}	110	143	158	182	213	–	279	–
	P_{GB}	247	331	430	507	667	–	877	–
	P_{GC}	285	519	649	773	1027	–	1535	–
	P_{GD}	409	683	884	1050	1386	–	1971	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H1 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
2.65	P_{GA}	–	–	–	–	–	262	–	289
	P_{GB}	–	–	–	–	–	772	–	963
	P_{GC}	–	–	–	–	–	1140	–	1413
	P_{GD}	–	–	–	–	–	1533	–	1914
2.8	P_{GA}	105	128	153	190	214	–	287	–
	P_{GB}	233	289	402	506	630	–	828	–
	P_{GC}	266	444	592	749	947	–	1403	–
	P_{GD}	381	584	809	1023	1276	–	1808	–
3	P_{GA}	–	–	–	–	–	259	–	305
	P_{GB}	–	–	–	–	–	731	–	919
	P_{GC}	–	–	–	–	–	1052	–	1303
	P_{GD}	–	–	–	–	–	1422	–	1771
3.15	P_{GA}	95.8	131	162	182	235	–	334	–
	P_{GB}	204	286	404	472	637	–	861	–
	P_{GC}	232	425	593	684	933	–	1457	–
	P_{GD}	330	560	803	937	1266	–	1876	–
3.35	P_{GA}	–	–	–	–	–	251	–	308
	P_{GB}	–	–	–	–	–	677	–	860
	P_{GC}	–	–	–	–	–	962	–	1193
	P_{GD}	–	–	–	–	–	1295	–	1613
3.55	P_{GA}	88.7	134	142	173	226	–	330	–
	P_{GB}	187	277	344	437	610	–	819	–
	P_{GC}	209	403	492	617	893	–	1349	–
	P_{GD}	298	529	666	849	1224	–	1732	–
3.75	P_{GA}	–	–	–	–	–	249	–	353
	P_{GB}	–	–	–	–	–	652	–	891
	P_{GC}	–	–	–	–	–	912	–	1223
	P_{GD}	–	–	–	–	–	1244	–	1662
4	P_{GA}	89.6	123	144	182	221	–	307	–
	P_{GB}	185	252	341	441	576	–	740	–
	P_{GC}	204	358	477	619	830	–	1181	–
	P_{GD}	291	472	650	847	1136	–	1528	–
4.25	P_{GA}	–	–	–	–	–	244	–	344
	P_{GB}	–	–	–	–	–	638	–	839
	P_{GC}	–	–	–	–	–	885	–	1123
	P_{GD}	–	–	–	–	–	1223	–	1530
4.5	P_{GA}	86.9	111	142	158	217	–	326	–
	P_{GB}	172	228	321	376	569	–	731	–
	P_{GC}	188	320	441	514	811	–	1132	–
	P_{GD}	266	423	599	706	1116	–	1465	–
4.75	P_{GA}	–	–	–	–	–	234	–	320
	P_{GB}	–	–	–	–	–	594	–	756
	P_{GC}	–	–	–	–	–	814	–	984
	P_{GD}	–	–	–	–	–	1126	–	1344
5	P_{GA}	81.2	99.4	132	158	199	–	313	–
	P_{GB}	163	202	302	368	512	–	704	–
	P_{GC}	175	278	407	495	709	–	1080	–
	P_{GD}	249	368	556	680	982	–	1405	–
5.3	P_{GA}	–	–	–	–	–	231	–	342
	P_{GB}	–	–	–	–	–	593	–	758
	P_{GC}	–	–	–	–	–	798	–	963
	P_{GD}	–	–	–	–	–	1113	–	1313
5.6	P_{GA}	77.2	91.6	122	151	180	–	300	–
	P_{GB}	153	185	274	337	454	–	659	–
	P_{GC}	163	248	363	441	619	–	987	–
	P_{GD}	233	333	496	606	856	–	1284	–
6	P_{GA}	–	–	–	–	–	212	–	329
	P_{GB}	–	–	–	–	–	532	–	731
	P_{GC}	–	–	–	–	–	699	–	917
	P_{GD}	–	–	–	–	–	979	–	1256

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Overview tables

Type H1 – Thermal capacities
n_1 = 1200 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H1

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
1.12	P_{GA}	*	*	*	–	*	–	*	–
	P_{GB}	307	365	454	–	536	–	679	–
	P_{GC}	410	751	961	–	1264	–	2201	–
	P_{GD}	604	1013	1367	–	1850	–	2969	–
1.25	P_{GA}	90.1	*	*	–	*	–	*	–
	P_{GB}	309	385	451	–	623	–	828	–
	P_{GC}	402	738	891	–	1277	–	2206	–
	P_{GD}	592	994	1258	–	1844	–	2933	–
1.32	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	866	–	833
	P_{GC}	–	–	–	–	–	1634	–	1867
	P_{GD}	–	–	–	–	–	2310	–	2729
1.4	P_{GA}	99.6	*	*	*	*	–	*	–
	P_{GB}	308	391	510	620	657	–	901	–
	P_{GC}	389	725	939	1148	1272	–	2168	–
	P_{GD}	570	969	1325	1623	1809	–	2878	–
1.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	904	–	954
	P_{GC}	–	–	–	–	–	1576	–	1854
	P_{GD}	–	–	–	–	–	2221	–	2665
1.6	P_{GA}	105	*	*	*	*	–	*	–
	P_{GB}	303	387	528	586	731	–	955	–
	P_{GC}	371	681	913	1040	1332	–	2086	–
	P_{GD}	544	913	1280	1465	1878	–	2756	–
1.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	905	–	1008
	P_{GC}	–	–	–	–	–	1518	–	1830
	P_{GD}	–	–	–	–	–	2134	–	2607
1.8	P_{GA}	104	117	*	*	*	–	*	–
	P_{GB}	294	380	485	633	749	–	973	–
	P_{GC}	353	647	804	1074	1278	–	1994	–
	P_{GD}	520	869	1123	1509	1798	–	2642	–
1.9	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	919	–	1050
	P_{GC}	–	–	–	–	–	1481	–	1768
	P_{GD}	–	–	–	–	–	2081	–	2489
2	P_{GA}	104	120	*	*	*	–	*	–
	P_{GB}	284	366	479	627	748	–	969	–
	P_{GC}	334	608	765	1011	1230	–	1900	–
	P_{GD}	494	818	1075	1422	1716	–	2500	–
2.12	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	948	–	1049
	P_{GC}	–	–	–	–	–	1477	–	1693
	P_{GD}	–	–	–	–	–	2059	–	2380
2.24	P_{GA}	111	112	133	141	*	–	*	–
	P_{GB}	292	324	494	565	737	–	948	–
	P_{GC}	336	520	762	883	1168	–	1784	–
	P_{GD}	497	699	1068	1238	1630	–	2348	–
2.36	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	917	–	1035
	P_{GC}	–	–	–	–	–	1383	–	1599
	P_{GD}	–	–	–	–	–	1930	–	2253
2.5	P_{GA}	107	130	136	149	*	–	*	–
	P_{GB}	275	361	469	548	716	–	925	–
	P_{GC}	311	566	705	832	1104	–	1665	–
	P_{GD}	462	766	990	1173	1534	–	2187	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H1 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
2.65	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	832	–	1005
	P_{GC}	–	–	–	–	–	1223	–	1501
	P_{GD}	–	–	–	–	–	1705	–	2108
2.8	P_{GA}	103	118	136	165	*	–	*	–
	P_{GB}	261	318	440	551	683	–	886	–
	P_{GC}	290	483	641	813	1016	–	1530	–
	P_{GD}	432	656	905	1144	1419	–	2012	–
3	P_{GA}	–	–	–	–	–	209	–	*
	P_{GB}	–	–	–	–	–	793	–	971
	P_{GC}	–	–	–	–	–	1135	–	1403
	P_{GD}	–	–	–	–	–	1582	–	1963
3.15	P_{GA}	95.7	126	150	163	205	–	284	–
	P_{GB}	229	316	446	517	698	–	940	–
	P_{GC}	255	465	646	744	1013	–	1590	–
	P_{GD}	375	632	902	1049	1415	–	2104	–
3.35	P_{GA}	–	–	–	–	–	214	–	*
	P_{GB}	–	–	–	–	–	742	–	921
	P_{GC}	–	–	–	–	–	1043	–	1283
	P_{GD}	–	–	–	–	–	1448	–	1795
3.55	P_{GA}	89.3	133	134	159	205	–	294	–
	P_{GB}	210	309	381	480	671	–	895	–
	P_{GC}	229	446	536	673	971	–	1469	–
	P_{GD}	338	598	751	950	1366	–	1949	–
3.75	P_{GA}	–	–	–	–	–	224	–	307
	P_{GB}	–	–	–	–	–	718	–	972
	P_{GC}	–	–	–	–	–	987	–	1333
	P_{GD}	–	–	–	–	–	1391	–	1860
4	P_{GA}	90.9	123	138	172	205	–	284	–
	P_{GB}	208	281	379	487	635	–	814	–
	P_{GC}	225	397	524	677	904	–	1298	–
	P_{GD}	331	534	736	952	1273	–	1720	–
4.25	P_{GA}	–	–	–	–	–	223	–	311
	P_{GB}	–	–	–	–	–	702	–	922
	P_{GC}	–	–	–	–	–	958	–	1228
	P_{GD}	–	–	–	–	–	1371	–	1717
4.5	P_{GA}	90.1	110	141	152	199	–	321	–
	P_{GB}	196	254	360	417	627	–	817	–
	P_{GC}	208	351	486	564	878	–	1254	–
	P_{GD}	304	478	678	794	1246	–	1660	–
4.75	P_{GA}	–	–	–	–	–	220	–	298
	P_{GB}	–	–	–	–	–	657	–	834
	P_{GC}	–	–	–	–	–	882	–	1079
	P_{GD}	–	–	–	–	–	1263	–	1515
5	P_{GA}	83.4	98.9	130	154	185	–	308	–
	P_{GB}	184	225	337	410	564	–	787	–
	P_{GC}	193	307	446	540	773	–	1195	–
	P_{GD}	284	418	628	766	1099	–	1589	–
5.3	P_{GA}	–	–	–	–	–	216	–	336
	P_{GB}	–	–	–	–	–	655	–	844
	P_{GC}	–	–	–	–	–	869	–	1063
	P_{GD}	–	–	–	–	–	1244	–	1484
5.6	P_{GA}	79.6	91.3	121	151	169	–	297	–
	P_{GB}	174	206	306	378	503	–	740	–
	P_{GC}	180	274	399	487	678	–	1101	–
	P_{GD}	266	376	562	687	961	–	1456	–
6	P_{GA}	–	–	–	–	–	200	–	323
	P_{GB}	–	–	–	–	–	587	–	815
	P_{GC}	–	–	–	–	–	759	–	1011
	P_{GD}	–	–	–	–	–	1095	–	1425

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Overview tables

Type H1 – Thermal capacities
n_1 = 1500 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H1

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
1.12	P_{GA}	*	*	*	–	*	–	*	–
	P_{GB}	323	357	420	–	387	–	*	–
	P_{GC}	430	796	990	–	1224	–	2175	–
	P_{GD}	676	1127	1501	–	1957	–	3161	–
1.25	P_{GA}	*	*	*	–	*	–	*	–
	P_{GB}	330	386	441	–	545	–	*	–
	P_{GC}	430	788	932	–	1285	–	2256	–
	P_{GD}	669	1108	1396	–	1988	–	3170	–
1.32	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	789	–	*
	P_{GC}	–	–	–	–	–	1640	–	1765
	P_{GD}	–	–	–	–	–	2502	–	2863
1.4	P_{GA}	*	*	*	*	*	–	*	–
	P_{GB}	336	396	511	625	618	–	758	–
	P_{GC}	420	770	990	1207	1297	–	2257	–
	P_{GD}	650	1085	1471	1804	1971	–	3151	–
1.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	884	–	*
	P_{GC}	–	–	–	–	–	1636	–	1843
	P_{GD}	–	–	–	–	–	2435	–	2870
1.6	P_{GA}	*	*	*	*	*	–	*	–
	P_{GB}	335	405	538	606	718	–	901	–
	P_{GC}	402	738	962	1105	1374	–	2223	–
	P_{GD}	622	1031	1429	1640	2063	–	3056	–
1.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	914	–	*
	P_{GC}	–	–	–	–	–	1604	–	1852
	P_{GD}	–	–	–	–	–	2366	–	2843
1.8	P_{GA}	84	*	*	*	*	–	*	–
	P_{GB}	327	404	501	658	766	–	955	–
	P_{GC}	386	705	852	1141	1348	–	2140	–
	P_{GD}	597	984	1254	1686	1991	–	2944	–
1.9	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	954	–	1003
	P_{GC}	–	–	–	–	–	1574	–	1829
	P_{GD}	–	–	–	–	–	2318	–	2750
2	P_{GA}	87.9	*	*	*	*	–	*	–
	P_{GB}	319	394	503	657	770	–	982	–
	P_{GC}	368	664	819	1082	1300	–	2052	–
	P_{GD}	568	929	1204	1594	1908	–	2815	–
2.12	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1001	–	1039
	P_{GC}	–	–	–	–	–	1578	–	1772
	P_{GD}	–	–	–	–	–	2307	–	2636
2.24	P_{GA}	97.7	*	*	*	*	–	*	–
	P_{GB}	329	353	529	596	764	–	983	–
	P_{GC}	369	573	826	949	1243	–	1948	–
	P_{GD}	572	799	1210	1392	1813	–	2645	–
2.36	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	972	–	1052
	P_{GC}	–	–	–	–	–	1490	–	1703
	P_{GD}	–	–	–	–	–	2167	–	2516
2.5	P_{GA}	96.8	*	*	*	*	–	*	–
	P_{GB}	312	395	508	585	747	–	962	–
	P_{GC}	345	622	767	900	1169	–	1819	–
	P_{GD}	535	874	1120	1323	1707	–	2466	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H1 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
2.65	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	886	–	1043
	P_{GC}	–	–	–	–	–	1317	–	1605
	P_{GD}	–	–	–	–	–	1912	–	2368
2.8	P_{GA}	95.1	*	*	*	*	–	*	–
	P_{GB}	296	350	481	598	726	–	924	–
	P_{GC}	321	534	705	883	1091	–	1672	–
	P_{GD}	499	751	1029	1297	1590	–	2266	–
3	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	848	–	1015
	P_{GC}	–	–	–	–	–	1224	–	1500
	P_{GD}	–	–	–	–	–	1779	–	2205
3.15	P_{GA}	91.5	110	*	*	*	–	*	–
	P_{GB}	262	353	495	567	761	–	1009	–
	P_{GC}	284	515	716	812	1098	–	1763	–
	P_{GD}	435	723	1034	1193	1600	–	2380	–
3.35	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	804	–	968
	P_{GC}	–	–	–	–	–	1129	–	1374
	P_{GD}	–	–	–	–	–	1634	–	2021
3.55	P_{GA}	86.4	126	*	*	*	–	*	–
	P_{GB}	241	349	426	532	736	–	977	–
	P_{GC}	256	500	597	739	1058	–	1634	–
	P_{GD}	394	693	864	1088	1550	–	2221	–
3.75	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	788	–	1047
	P_{GC}	–	–	–	–	–	1076	–	1448
	P_{GD}	–	–	–	–	–	1584	–	2107
4	P_{GA}	89.7	118	121	144	162	–	*	–
	P_{GB}	240	319	425	544	703	–	899	–
	P_{GC}	251	445	581	748	988	–	1444	–
	P_{GD}	386	619	844	1089	1447	–	1971	–
4.25	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	774	–	1006
	P_{GC}	–	–	–	–	–	1052	–	1340
	P_{GD}	–	–	–	–	–	1560	–	1956
4.5	P_{GA}	92.7	104	132	133	154	–	289	–
	P_{GB}	228	288	410	469	694	–	918	–
	P_{GC}	235	392	546	623	961	–	1418	–
	P_{GD}	357	552	785	912	1420	–	1913	–
4.75	P_{GA}	–	–	–	–	–	182	–	*
	P_{GB}	–	–	–	–	–	732	–	922
	P_{GC}	–	–	–	–	–	971	–	1183
	P_{GD}	–	–	–	–	–	1441	–	1734
5	P_{GA}	84.3	94	121	139	151	–	278	–
	P_{GB}	213	255	382	462	629	–	886	–
	P_{GC}	216	343	498	601	846	–	1352	–
	P_{GD}	333	484	725	882	1258	–	1834	–
5.3	P_{GA}	–	–	–	–	–	174	–	306
	P_{GB}	–	–	–	–	–	726	–	950
	P_{GC}	–	–	–	–	–	950	–	1185
	P_{GD}	–	–	–	–	–	1420	–	1713
5.6	P_{GA}	80.7	87.2	113	145	142	–	277	–
	P_{GB}	201	234	349	431	562	–	838	–
	P_{GC}	201	306	444	545	745	–	1241	–
	P_{GD}	310	434	649	796	1101	–	1689	–
6	P_{GA}	–	–	–	–	–	167	–	294
	P_{GB}	–	–	–	–	–	655	–	916
	P_{GC}	–	–	–	–	–	836	–	1131
	P_{GD}	–	–	–	–	–	1254	–	1641

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Overview tables

Type H1 – Thermal capacities
n_1 = 1800 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H1

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
1.12	P_{GA}	*	*	*	–	*	–	*	–
	P_{GB}	329	332	337	–	*	–	*	–
	P_{GC}	442	823	960	–	1054	–	1963	–
	P_{GD}	739	1220	1582	–	1958	–	3161	–
1.25	P_{GA}	*	*	*	–	*	–	*	–
	P_{GB}	339	378	390	–	*	–	*	–
	P_{GC}	442	818	924	–	1203	–	2135	–
	P_{GD}	732	1207	1488	–	2046	–	3269	–
1.32	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	*	–	*
	P_{GC}	–	–	–	–	–	1540	–	1430
	P_{GD}	–	–	–	–	–	2585	–	2811
1.4	P_{GA}	*	*	*	*	*	–	*	–
	P_{GB}	350	397	483	580	500	–	*	–
	P_{GC}	435	804	1016	1216	1250	–	2233	–
	P_{GD}	713	1186	1590	1932	2060	–	3304	–
1.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	766	–	*
	P_{GC}	–	–	–	–	–	1602	–	1643
	P_{GD}	–	–	–	–	–	2572	–	2919
1.6	P_{GA}	*	*	*	*	*	–	*	–
	P_{GB}	356	411	532	586	637	–	718	–
	P_{GC}	424	772	1001	1129	1354	–	2245	–
	P_{GD}	690	1127	1548	1770	2177	–	3243	–
1.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	840	–	*
	P_{GC}	–	–	–	–	–	1597	–	1715
	P_{GD}	–	–	–	–	–	2517	–	2940
1.8	P_{GA}	*	*	*	*	*	–	*	–
	P_{GB}	350	411	509	655	729	–	839	–
	P_{GC}	406	736	895	1181	1364	–	2200	–
	P_{GD}	662	1077	1373	1830	2134	–	3162	–
1.9	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	919	–	*
	P_{GC}	–	–	–	–	–	1603	–	1801
	P_{GD}	–	–	–	–	–	2488	–	2903
2	P_{GA}	*	*	*	*	*	–	*	–
	P_{GB}	344	405	514	671	753	–	912	–
	P_{GC}	391	702	861	1134	1325	–	2154	–
	P_{GD}	633	1019	1318	1743	2049	–	3042	–
2.12	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1000	–	*
	P_{GC}	–	–	–	–	–	1636	–	1775
	P_{GD}	–	–	–	–	–	2492	–	2817
2.24	P_{GA}	*	*	*	*	*	–	*	–
	P_{GB}	358	369	541	620	764	–	948	–
	P_{GC}	395	610	859	1001	1281	–	2035	–
	P_{GD}	638	882	1317	1528	1958	–	2880	–
2.36	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	989	–	987
	P_{GC}	–	–	–	–	–	1546	–	1719
	P_{GD}	–	–	–	–	–	2352	–	2706
2.5	P_{GA}	78.8	*	*	*	*	–	*	–
	P_{GB}	340	418	526	608	763	–	956	–
	P_{GC}	369	663	804	952	1214	–	1917	–
	P_{GD}	598	964	1227	1453	1856	–	2693	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H1 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
2.65	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	915	–	1013
	P_{GC}	–	–	–	–	–	1376	–	1648
	P_{GD}	–	–	–	–	–	2088	–	2562
2.8	P_{GA}	80.3	*	*	*	*	–	*	–
	P_{GB}	325	373	506	622	741	–	937	–
	P_{GC}	345	571	746	927	1144	–	1778	–
	P_{GD}	559	833	1133	1421	1726	–	2484	–
3	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	885	–	1010
	P_{GC}	–	–	–	–	–	1286	–	1558
	P_{GD}	–	–	–	–	–	1949	–	2395
3.15	P_{GA}	82.8	*	*	*	*	–	*	–
	P_{GB}	290	380	526	594	790	–	1050	–
	P_{GC}	308	554	762	857	1155	–	1889	–
	P_{GD}	491	807	1140	1311	1746	–	2635	–
3.35	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	838	–	983
	P_{GC}	–	–	–	–	–	1180	–	1437
	P_{GD}	–	–	–	–	–	1792	–	2204
3.55	P_{GA}	79.6	113	*	*	*	–	*	–
	P_{GB}	268	384	458	562	772	–	1019	–
	P_{GC}	278	546	639	788	1113	–	1750	–
	P_{GD}	444	778	957	1200	1699	–	2451	–
3.75	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	824	–	1094
	P_{GC}	–	–	–	–	–	1133	–	1544
	P_{GD}	–	–	–	–	–	1729	–	2321
4	P_{GA}	85.1	108	*	*	*	–	*	–
	P_{GB}	268	353	461	584	747	–	946	–
	P_{GC}	274	486	628	798	1052	–	1556	–
	P_{GD}	437	696	939	1208	1594	–	2177	–
4.25	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	817	–	1052
	P_{GC}	–	–	–	–	–	1105	–	1424
	P_{GD}	–	–	–	–	–	1708	–	2151
4.5	P_{GA}	92.9	93	116	*	*	–	*	–
	P_{GB}	257	316	450	507	735	–	989	–
	P_{GC}	260	426	597	670	1025	–	1548	–
	P_{GD}	407	619	881	1016	1562	–	2137	–
4.75	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	781	–	973
	P_{GC}	–	–	–	–	–	1029	–	1269
	P_{GD}	–	–	–	–	–	1583	–	1915
5	P_{GA}	82.8	85	104	114	*	–	*	–
	P_{GB}	239	281	418	502	670	–	959	–
	P_{GC}	238	374	544	650	903	–	1480	–
	P_{GD}	378	544	813	985	1386	–	2047	–
5.3	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	772	–	1029
	P_{GC}	–	–	–	–	–	1007	–	1285
	P_{GD}	–	–	–	–	–	1562	–	1909
5.6	P_{GA}	79.6	79.6	99.8	132	*	–	*	–
	P_{GB}	226	258	383	475	601	–	912	–
	P_{GC}	220	333	483	593	790	–	1358	–
	P_{GD}	353	489	729	891	1214	–	1889	–
6	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	701	–	995
	P_{GC}	–	–	–	–	–	887	–	1225
	P_{GD}	–	–	–	–	–	1381	–	1832

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Overview tables

Type H2
Nominal power ratings, gear unit sizes 504 to 514

Technical data

Nominal power ratings P_{2N} (kW) type H2

			Gear unit sizes										
i_N	n_1	n_2	504	505	506	507	508	509	510	511	512	513	514
6.3	1800	286	208	343	–	648	–	1084	–	1851	–	3037	–
	1500	238	173	286	–	540	–	903	–	1543	–	2531	–
	1200	190	138	229	–	432	–	723	–	1234	–	2024	–
	1000	159	115	191	–	360	–	602	–	1028	–	1687	–
7.1	1800	254	184	311	–	585	–	982	–	1672	–	2733	–
	1500	211	153	259	–	487	–	818	–	1393	–	2277	–
	1200	169	123	207	–	390	–	655	–	1115	–	1822	–
	1000	141	102	173	–	325	–	546	–	929	–	1518	–
8	1800	225	167	270	–	517	672	855	1127	1505	1912	2450	2941
	1500	188	139	225	–	431	560	712	939	1254	1593	2042	2451
	1200	150	111	180	–	345	448	570	751	1003	1274	1634	1961
	1000	125	93	150	–	287	373	475	626	836	1062	1361	1634
9	1800	200	152	244	346	463	607	766	1020	1348	1727	2186	2647
	1500	167	126	204	289	386	505	639	850	1124	1439	1822	2206
	1200	133	101	163	231	309	404	511	680	899	1151	1458	1765
	1000	111	84	136	192	257	337	426	567	749	959	1215	1471
10	1800	180	135	221	314	414	537	683	888	1202	1554	1939	2373
	1500	150	112	184	262	345	447	570	740	1001	1295	1616	1978
	1200	120	90	147	209	276	358	456	592	801	1036	1293	1582
	1000	100	75	123	174	230	298	380	493	668	863	1077	1319
11.2	1800	161	122	195	272	358	480	602	796	1064	1393	1708	2118
	1500	134	101	163	227	298	400	502	664	887	1160	1424	1765
	1200	107	81	130	182	239	320	401	531	709	928	1139	1412
	1000	89	68	109	151	199	267	334	442	591	774	949	1177
12.5	1800	144	104	175	247	320	429	531	710	924	1241	1518	1879
	1500	120	87	145	206	267	358	443	592	770	1034	1265	1565
	1200	96	70	116	165	213	286	354	473	616	827	1012	1252
	1000	80	58	97	137	178	238	295	394	513	689	844	1044
14	1800	129	94	153	223	284	372	477	625	825	1099	1330	1654
	1500	107	78	127	186	236	310	397	521	688	916	1108	1379
	1200	86	62	102	149	189	248	318	417	550	733	886	1103
	1000	71	52	85	124	158	206	265	347	458	610	739	919
16	1800	113	83	136	198	253	332	429	552	751	954	1171	1471
	1500	94	70	113	165	210	277	358	460	626	795	976	1226
	1200	75	56	90	132	168	221	286	368	501	636	781	980
	1000	63	46	75	110	140	185	238	307	417	530	651	817
18	1800	100	74	121	176	235	294	382	496	662	852	1093	1288
	1500	83	62	101	147	196	245	318	413	551	710	911	1073
	1200	67	49	81	118	157	196	255	330	441	568	729	859
	1000	56	41	67	98	130	164	212	275	368	473	607	715
20	1800	90	66	–	154	–	262	–	446	–	776	–	1134
	1500	75	55	–	129	–	218	–	372	–	647	–	945
	1200	60	44	–	103	–	175	–	297	–	517	–	756
	1000	50	37	–	86	–	146	–	248	–	431	–	630
22.4	1800	80	–	–	137	–	244	–	397	–	683	–	1059
	1500	67	–	–	114	–	203	–	331	–	569	–	882
	1200	54	–	–	91	–	162	–	265	–	455	–	706
	1000	45	–	–	76	–	135	–	221	–	379	–	588
25	1800	72	–	–	122	–	–	–	–	–	–	–	–
	1500	60	–	–	102	–	–	–	–	–	–	–	–
	1200	48	–	–	81	–	–	–	–	–	–	–	–
	1000	40	–	–	68	–	–	–	–	–	–	–	–

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Technical data (continued)

Nominal output torques T_{2N} (kNm) type H2

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
1.12	2.95	5.4	8.2	–	14.7	–	23	–	–	–	–	–	
1.25	3.1	5.7	8.6	–	16	–	25	–	–	–	–	–	
1.32	–	–	–	–	–	18.3	–	28	–	–	–	–	
1.4	3.25	5.9	9.1	11	16.7	–	26	–	–	–	–	–	
1.5	–	–	–	–	–	19.6	–	30	–	–	–	–	
1.6	3.4	6.2	9.6	11.6	17.7	–	28	–	–	–	–	–	
1.7	–	–	–	–	–	20.3	–	31	–	–	–	–	
1.8	3.4	6.2	9.8	12.1	19.2	–	32	–	–	–	–	–	
1.9	–	–	–	–	–	21.8	–	33	–	–	–	–	
2	3.4	6.2	9.8	12.7	19.2	–	32.1	–	–	–	–	–	
2.12	–	–	–	–	–	24	–	40	–	–	–	–	
2.24	3.4	6.2	9.8	13.3	19.2	–	32.1	–	–	–	–	–	
2.36	–	–	–	–	–	25	–	40.5	–	–	–	–	
2.5	3.4	6.2	9.8	13.3	19.2	–	32.2	–	–	–	–	–	
2.65	–	–	–	–	–	25	–	41.6	–	–	–	–	H1
2.8	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
3	–	–	–	–	–	25	–	41.6	–	–	–	–	
3.15	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
3.35	–	–	–	–	–	25	–	41.6	–	–	–	–	
3.55	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
3.75	–	–	–	–	–	25	–	41.6	–	–	–	–	
4	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
4.25	–	–	–	–	–	25	–	41.6	–	–	–	–	
4.5	3.2	6.2	9.8	13.3	18.5	–	28	–	–	–	–	–	
4.75	–	–	–	–	–	23.6	–	41	–	–	–	–	
5	3	6.2	9.5	13.3	17.5	–	24	–	–	–	–	–	
5.3	–	–	–	–	–	22.5	–	32	–	–	–	–	
5.6	2.8	6.1	9.1	12.4	17	–	20.5	–	–	–	–	–	
6	–	–	–	–	–	21	–	29.5	–	–	–	–	
6.3	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
7.1	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
8	–	7	11.6	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
9	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
10	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
11.2	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
12.5	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	**H2**
14	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
16	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
18	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
20	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
22.4	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
25	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
28	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
31.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
35.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
40	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
45	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
50	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	**H3**
56	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
63	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
71	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
80	–	–	–	16.2	–	28.3	–	48.5	–	81	–	125	
90	–	–	–	16.2	–	28.3	–	48.5	–	81	–	125	
100	–	–	–	16.2	–	–	–	–	–	–	–	–	

Type **H1**, see page 3/12
Type **H3**, see page 3/29
Type **H4**, see page 3/35

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Overview tables

Type H2 – Thermal capacities
n_1 = 1000 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H2

		Gear unit sizes										
i_N		504	505	506	507	508	509	510	511	512	513	514
6.3	P_{GA}	56.7	70.8	–	97.5	–	122	–	140	–	155	–
	P_{GB}	120	148	–	232	–	293	–	472	–	559	–
	P_{GC}	122	248	–	296	–	537	–	634	–	1038	–
	P_{GD}	181	315	–	417	–	682	–	919	–	1361	–
7.1	P_{GA}	56.5	69.7	–	96.7	–	124	–	150	–	182	–
	P_{GB}	119	144	–	225	–	289	–	466	–	563	–
	P_{GC}	118	236	–	284	–	515	–	608	–	1005	–
	P_{GD}	175	300	–	398	–	655	–	883	–	1315	–
8	P_{GA}	55.2	69.3	–	91.9	110	128	137	158	162	201	189
	P_{GB}	115	141	–	209	255	286	316	457	511	561	612
	P_{GC}	113	226	–	258	315	497	430	587	799	964	1083
	P_{GD}	168	288	–	363	444	633	589	847	1096	1259	1426
9	P_{GA}	53.6	67.3	81.7	94.9	109	126	138	162	172	211	214
	P_{GB}	110	136	165	213	247	275	310	445	503	551	615
	P_{GC}	107	212	192	259	299	468	415	559	766	916	1050
	P_{GD}	160	272	268	364	423	597	567	806	1048	1194	1378
10	P_{GA}	50.3	65.2	80.1	89.7	103	123	141	163	178	218	231
	P_{GB}	102	130	160	198	229	263	308	429	493	534	609
	P_{GC}	99	200	183	235	272	436	400	525	733	863	1002
	P_{GD}	147	257	256	333	386	559	549	761	1003	1124	1315
11.2	P_{GA}	51.2	62.2	79.4	89.8	106	124	139	165	181	234	240
	P_{GB}	103	121	157	192	233	259	295	413	479	531	595
	P_{GC}	98.8	184	177	224	274	427	379	495	693	841	957
	P_{GD}	146	235	247	316	387	545	518	715	952	1095	1250
12.5	P_{GA}	48.7	59.1	76.9	90.2	100	115	135	172	181	233	244
	P_{GB}	96.7	114	150	186	216	236	282	406	461	513	576
	P_{GC}	92.1	169	167	217	249	382	355	477	651	789	895
	P_{GD}	136	217	234	304	355	487	488	684	893	1031	1172
14	P_{GA}	46.4	57.9	74.3	85.5	100	114	136	170	182	225	258
	P_{GB}	91.5	110	144	175	210	231	278	391	444	481	571
	P_{GC}	86.1	162	158	199	237	367	348	451	612	725	876
	P_{GD}	127	207	222	281	337	471	475	649	838	942	1143
16	P_{GA}	44.4	57	70.4	79.9	100	113	126	164	189	230	255
	P_{GB}	86.3	105	134	164	204	222	254	377	434	473	550
	P_{GC}	81.1	151	146	183	228	346	311	429	585	692	823
	P_{GD}	119	195	204	260	323	442	426	621	801	902	1076
18	P_{GA}	42.4	53.7	66.8	74.9	94.8	107	125	155	185	219	245
	P_{GB}	81	100	126	153	191	211	248	352	418	450	516
	P_{GC}	75.4	140	135	169	210	323	302	393	553	654	752
	P_{GD}	111	182	189	239	298	414	412	568	759	854	984
20	P_{GA}	40.9	–	65.4	–	88.6	–	123	–	179	–	250
	P_{GB}	77.7	–	121	–	178	–	238	–	404	–	504
	P_{GC}	71.4	–	129	–	193	–	285	–	527	–	721
	P_{GD}	105	–	181	–	276	–	388	–	726	–	938
22.4	P_{GA}	–	–	63.8	–	83	–	117	–	169	–	238
	P_{GB}	–	–	116	–	166	–	226	–	376	–	481
	P_{GC}	–	–	122	–	178	–	266	–	479	–	680
	P_{GD}	–	–	170	–	254	–	365	–	662	–	889
25	P_{GA}	–	–	60.1	–	–	–	–	–	–	–	–
	P_{GB}	–	–	110	–	–	–	–	–	–	–	–
	P_{GC}	–	–	114	–	–	–	–	–	–	–	–
	P_{GD}	–	–	160	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H2

i_N		Gear unit sizes 504	505	506	507	508	509	510	511	512	513	514
6.3	P_{GA}	56.1	68.2	–	89.1	–	104	–	75.4	–	56.2	–
	P_{GB}	135	165	–	254	–	315	–	490	–	564	–
	P_{GC}	133	275	–	321	–	579	–	660	–	1089	–
	P_{GD}	205	357	–	466	–	755	–	1007	–	1478	–
7.1	P_{GA}	56.6	67.9	–	90.3	–	110	–	102	–	99.3	–
	P_{GB}	133	160	–	247	–	313	–	491	–	573	–
	P_{GC}	129	262	–	306	–	558	–	643	–	1061	–
	P_{GD}	198	341	–	446	–	728	–	973	–	1432	–
8	P_{GA}	55.5	68.6	–	87.5	102	118	119	121	101	131	96.4
	P_{GB}	129	158	–	231	279	312	340	488	533	573	624
	P_{GC}	123	249	–	280	340	540	458	622	844	1017	1151
	P_{GD}	190	326	–	408	496	705	651	936	1202	1374	1555
9	P_{GA}	54.3	67	80.2	91.5	103	119	125	133	126	161	137
	P_{GB}	124	151	184	236	272	302	336	480	533	574	631
	P_{GC}	117	236	209	281	323	509	444	595	819	981	1109
	P_{GD}	182	308	302	410	474	665	629	895	1159	1309	1505
10	P_{GA}	51.3	65.3	79.1	87.4	99.4	118	132	141	142	180	166
	P_{GB}	115	145	178	220	253	289	336	465	528	565	628
	P_{GC}	108	221	201	256	295	478	430	564	788	922	1063
	P_{GD}	167	291	290	375	433	625	610	845	1112	1239	1439
11.2	P_{GA}	52.5	63.1	79.4	89.1	104	121	132	150	154	212	192
	P_{GB}	117	136	175	214	259	285	325	453	517	570	624
	P_{GC}	108	203	193	244	297	469	408	533	748	910	1016
	P_{GD}	167	267	279	357	436	611	579	799	1058	1213	1374
12.5	P_{GA}	50.3	60.4	77.2	91.7	98.7	114	131	165	160	218	208
	P_{GB}	109	128	168	209	240	263	311	448	501	554	611
	P_{GC}	101	188	183	238	271	418	384	516	708	860	961
	P_{GD}	155	247	264	344	399	548	545	768	998	1146	1294
14	P_{GA}	48.1	59.6	75.1	87.4	100	114	134	166	169	216	239
	P_{GB}	103	124	161	197	234	258	307	434	486	526	616
	P_{GC}	94.6	179	173	219	258	403	378	493	661	790	951
	P_{GD}	145	236	251	318	381	530	532	731	939	1053	1269
16	P_{GA}	46.3	59.3	72	81.2	101	114	125	159	182	230	243
	P_{GB}	98	120	150	184	229	248	281	418	481	519	597
	P_{GC}	88.9	169	159	201	250	382	339	469	641	761	896
	P_{GD}	136	222	231	294	366	498	479	698	899	1009	1198
18	P_{GA}	44.4	55.6	68.6	76.4	97.1	108	126	152	182	217	239
	P_{GB}	92.1	113	142	171	214	235	277	391	464	495	564
	P_{GC}	83.3	157	148	185	231	356	328	426	608	720	824
	P_{GD}	127	207	215	272	338	468	464	641	855	958	1099
20	P_{GA}	43.1	–	67.6	–	90.1	–	125	–	175	–	251
	P_{GB}	88.4	–	137	–	200	–	266	–	448	–	555
	P_{GC}	78.8	–	141	–	211	–	311	–	578	–	791
	P_{GD}	121	–	206	–	312	–	438	–	818	–	1054
22.4	P_{GA}	–	–	66.8	–	84.8	–	118	–	168	–	238
	P_{GB}	–	–	131	–	186	–	252	–	418	–	529
	P_{GC}	–	–	134	–	195	–	291	–	527	–	747
	P_{GD}	–	–	194	–	289	–	412	–	747	–	998
25	P_{GA}	–	–	62.6	–	–	–	–	–	–	–	–
	P_{GB}	–	–	124	–	–	–	–	–	–	–	–
	P_{GC}	–	–	125	–	–	–	–	–	–	–	–
	P_{GD}	–	–	182	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Overview tables

Type H2 – Thermal capacities
n_1 = 1500 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H2

		Gear unit sizes										
i_N		504	505	506	507	508	509	510	511	512	513	514
6.3	P_{GA}	52.7	59.9	–	67.7	–	59.2	–	*	–	*	–
	P_{GB}	154	184	–	278	–	334	–	504	–	530	–
	P_{GC}	146	306	–	347	–	621	–	687	–	1135	–
	P_{GD}	238	411	–	530	–	842	–	1116	–	1607	–
7.1	P_{GA}	54.3	61.4	–	73.5	–	74.7	–	*	–	*	–
	P_{GB}	152	180	–	272	–	334	–	510	–	562	–
	P_{GC}	142	294	–	334	–	603	–	670	–	1116	–
	P_{GD}	231	393	–	509	–	816	–	1083	–	1573	–
8	P_{GA}	54.1	64	–	75.2	82.4	92.8	75.8	33.7	*	*	*
	P_{GB}	148	179	–	257	308	339	362	510	553	579	598
	P_{GC}	136	282	–	307	366	586	482	651	901	1087	1190
	P_{GD}	222	379	–	466	564	794	727	1043	1342	1519	1698
9	P_{GA}	53.5	63.6	73.6	81.2	87.3	99.2	90.3	58.9	27.8	50.8	*
	P_{GB}	143	172	207	263	301	332	362	506	557	584	626
	P_{GC}	130	266	230	308	353	558	470	625	876	1050	1179
	P_{GD}	212	359	349	469	541	755	708	999	1296	1454	1651
10	P_{GA}	51.1	62.8	74.3	79.4	87.6	103	108	84.1	58.7	89.9	39
	P_{GB}	133	166	202	247	282	321	367	498	555	580	640
	P_{GC}	120	251	221	281	323	524	463	599	837	998	1144
	P_{GD}	195	339	334	431	496	710	692	952	1245	1375	1594
11.2	P_{GA}	52.5	62.5	76.1	84.5	94	111	113	111	84	155	87.2
	P_{GB}	135	156	199	243	290	319	357	493	550	602	643
	P_{GC}	119	231	213	271	324	516	443	575	802	987	1092
	P_{GD}	195	312	323	412	500	695	658	904	1188	1359	1523
12.5	P_{GA}	51.3	60.3	74.9	90.6	91.3	107	116	142	106	176	123
	P_{GB}	127	148	191	239	270	295	346	498	540	595	634
	P_{GC}	113	214	201	265	297	463	417	568	766	941	1033
	P_{GD}	182	288	307	399	457	628	621	879	1128	1291	1440
14	P_{GA}	49.3	60.3	73.6	87.1	95.9	110	124	148	131	186	184
	P_{GB}	120	144	184	226	266	291	344	484	531	569	655
	P_{GC}	105	203	192	244	285	451	415	541	727	873	1032
	P_{GD}	171	276	291	369	439	608	609	838	1064	1189	1421
16	P_{GA}	48	61.8	72.2	80.4	101	113	119	142	161	216	203
	P_{GB}	114	139	173	210	261	283	316	467	535	574	643
	P_{GC}	99.8	193	177	223	280	427	372	511	705	847	980
	P_{GD}	161	261	268	341	424	576	549	801	1030	1150	1348
18	P_{GA}	46.7	57.3	69.3	76	97.5	107	122	140	166	203	212
	P_{GB}	107	131	163	197	246	268	313	439	520	547	614
	P_{GC}	93.7	179	165	207	258	397	363	468	672	801	907
	P_{GD}	149	243	250	315	392	538	534	735	980	1090	1242
20	P_{GA}	45.4	–	69.1	–	90.2	–	125	–	159	–	240
	P_{GB}	103	–	159	–	229	–	304	–	501	–	616
	P_{GC}	88.8	–	158	–	236	–	347	–	642	–	882
	P_{GD}	142	–	240	–	362	–	507	–	936	–	1199
22.4	P_{GA}	–	–	70	–	85	–	118	–	156	–	226
	P_{GB}	–	–	153	–	214	–	288	–	469	–	586
	P_{GC}	–	–	152	–	218	–	323	–	586	–	828
	P_{GD}	–	–	227	–	334	–	475	–	858	–	1135
25	P_{GA}	–	–	65	–	–	–	–	–	–	–	–
	P_{GB}	–	–	144	–	–	–	–	–	–	–	–
	P_{GC}	–	–	140	–	–	–	–	–	–	–	–
	P_{GD}	–	–	213	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H2

i_N		Gear unit sizes 504	505	506	507	508	509	510	511	512	513	514
6.3	P_{GA}	45.7	45.4	–	34	–	*	–	*	–	*	–
	P_{GB}	170	199	–	293	–	345	–	482	–	433	–
	P_{GC}	156	332	–	362	–	654	–	685	–	1132	–
	P_{GD}	267	459	–	581	–	918	–	1188	–	1680	–
7.1	P_{GA}	49.3	50	–	44.9	–	28.1	–	*	–	*	–
	P_{GB}	169	196	–	289	–	349	–	503	–	499	–
	P_{GC}	153	320	–	351	–	638	–	681	–	1131	–
	P_{GD}	261	441	–	559	–	892	–	1164	–	1657	–
8	P_{GA}	50.2	55.5	–	53.9	49.9	51.9	22.6	*	*	*	*
	P_{GB}	165	196	–	275	325	356	375	514	536	542	510
	P_{GC}	147	308	–	325	384	623	502	668	921	1115	1186
	P_{GD}	250	425	–	515	617	870	792	1129	1441	1616	1769
9	P_{GA}	50.5	56.7	61.4	63.7	60.6	66.4	44.1	*	*	*	*
	P_{GB}	159	189	225	284	320	350	379	516	554	566	570
	P_{GC}	141	291	245	328	371	594	493	649	903	1090	1186
	P_{GD}	239	402	389	520	594	827	771	1087	1401	1558	1745
10	P_{GA}	49	57.4	64.9	65.8	67.7	78	68.8	*	*	*	*
	P_{GB}	149	183	221	267	303	342	386	513	565	577	610
	P_{GC}	130	276	236	301	341	562	484	618	874	1042	1168
	P_{GD}	221	383	374	478	548	782	755	1036	1354	1486	1701
11.2	P_{GA}	51.1	59.5	69	75.4	77.6	93.7	82.5	45.4	*	75.6	*
	P_{GB}	151	174	219	265	313	345	378	512	566	617	631
	P_{GC}	130	256	229	291	345	557	464	594	850	1056	1142
	P_{GD}	220	353	362	460	552	770	720	986	1302	1478	1636
12.5	P_{GA}	50.8	58.1	69.3	86.3	78.4	94.2	93.1	102	29.4	109	*
	P_{GB}	142	165	211	265	294	320	368	529	558	612	638
	P_{GC}	123	236	218	288	317	503	442	598	807	1000	1091
	P_{GD}	207	327	344	447	508	695	681	964	1234	1405	1556
14	P_{GA}	49.2	59.2	69.1	84.2	87.5	100	107	120	68.6	135	111
	P_{GB}	135	161	204	250	291	318	371	521	555	592	674
	P_{GC}	115	226	207	266	307	489	441	577	767	930	1094
	P_{GD}	194	313	327	415	489	677	672	925	1169	1300	1549
16	P_{GA}	48.7	62.9	70.1	76.7	98.2	108	107	114	124	189	139
	P_{GB}	129	157	192	233	289	312	344	501	570	609	666
	P_{GC}	109	215	193	242	303	468	400	545	760	915	1048
	P_{GD}	183	296	303	383	475	642	609	884	1139	1271	1468
18	P_{GA}	48.2	57.5	67.9	73.2	95.4	102	113	117	139	176	164
	P_{GB}	122	147	182	218	273	295	342	473	559	579	642
	P_{GC}	103	198	180	225	280	435	391	501	729	861	966
	P_{GD}	171	276	283	354	441	603	594	814	1087	1201	1363
20	P_{GA}	47	–	68.6	–	87	–	120	–	132	–	215
	P_{GB}	117	–	177	–	253	–	333	–	539	–	658
	P_{GC}	97.6	–	173	–	256	–	374	–	689	–	952
	P_{GD}	162	–	272	–	406	–	567	–	1039	–	1323
22.4	P_{GA}	–	–	71.7	–	82.6	–	113	–	134	–	200
	P_{GB}	–	–	173	–	237	–	317	–	509	–	625
	P_{GC}	–	–	167	–	236	–	348	–	634	–	894
	P_{GD}	–	–	259	–	375	–	531	–	954	–	1253
25	P_{GA}	–	–	65.9	–	–	–	–	–	–	–	–
	P_{GB}	–	–	162	–	–	–	–	–	–	–	–
	P_{GC}	–	–	153	–	–	–	–	–	–	–	–
	P_{GD}	–	–	241	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Type H3
Nominal power ratings, gear unit sizes 505 to 514

Technical data

Nominal power ratings P_{2N} (kW) type H3

			Gear unit sizes										
i_N	n_1	n_2	504	505	506	507	508	509	510	511	512	513	514
20	1800	90	–	107	–	197	–	338	–	600	–	959	–
	1500	75	–	89	–	164	–	282	–	500	–	799	–
	1200	60	–	71	–	131	–	225	–	400	–	639	–
	1000	50	–	59	–	109	–	188	–	333	–	533	–
22.4	1800	80	–	95	–	176	–	298	–	521	–	852	–
	1500	67	–	79	–	147	–	248	–	434	–	710	–
	1200	54	–	63	–	117	–	199	–	347	–	568	–
	1000	45	–	53	–	98	–	166	–	289	–	474	–
25	1800	72	–	83	–	156	204	268	351	465	619	746	929
	1500	60	–	69	–	130	170	223	293	388	516	622	774
	1200	48	–	56	–	104	136	178	234	310	413	498	619
	1000	40	–	46	–	87	114	149	195	258	344	415	516
28	1800	64	–	77	108	145	183	234	310	416	538	672	826
	1500	54	–	64	90	121	152	195	258	346	448	560	688
	1200	43	–	51	72	97	122	156	207	277	358	448	550
	1000	36	–	43	60	81	101	130	172	231	299	373	459
31.5	1800	57	–	67	96	129	162	210	278	371	480	588	723
	1500	48	–	56	80	107	135	175	232	309	400	490	603
	1200	38	–	45	64	86	108	140	185	248	320	392	482
	1000	32	–	37	53	71	90	117	155	206	267	327	402
35.5	1800	51	–	63	84	116	150	192	244	333	429	537	651
	1500	42	–	52	70	97	125	160	203	277	358	448	543
	1200	34	–	42	56	78	100	128	162	222	286	358	434
	1000	28	–	35	47	65	84	107	135	185	239	298	362
40	1800	45	–	55	78	103	133	172	219	297	383	470	570
	1500	38	–	46	65	86	111	144	182	248	319	392	475
	1200	30	–	37	52	69	89	115	146	198	256	314	380
	1000	25	–	31	43	57	74	96	121	165	213	261	317
45	1800	40	–	50	68	90	121	152	199	257	343	417	520
	1500	33	–	42	57	75	101	126	166	214	286	348	434
	1200	27	–	33	45	60	81	101	133	172	229	278	347
	1000	22	–	28	38	50	67	84	111	143	191	232	289
50	1800	36	–	44	64	80	107	136	179	230	307	366	456
	1500	30	–	36	53	66	89	114	149	191	256	305	380
	1200	24	–	29	42	53	71	91	119	153	205	244	304
	1000	20	–	24	35	44	59	76	99	128	170	203	253
56	1800	32	–	38	56	71	93	119	158	204	266	328	404
	1500	27	–	32	46	59	78	99	131	170	221	274	337
	1200	21	–	26	37	47	62	80	105	136	177	219	270
	1000	18	–	21	31	39	52	66	88	113	148	182	225
63	1800	29	–	34	50	63	83	105	142	189	237	300	354
	1500	24	–	29	42	53	69	87	118	157	198	250	295
	1200	19	–	23	34	42	55	70	94	126	158	200	236
	1000	16	–	19	28	35	46	58	79	105	132	167	197
71	1800	25	–	30	44	56	74	94	124	169	210	263	318
	1500	21	–	25	37	47	61	79	103	140	175	219	265
	1200	17	–	20	29	37	49	63	83	112	140	175	212
	1000	14	–	17	25	31	41	52	69	94	117	146	177
80	1800	23	–	–	39	–	66	–	109	–	195	–	291
	1500	19	–	–	32	–	55	–	91	–	162	–	242
	1200	15	–	–	26	–	44	–	73	–	130	–	194
	1000	13	–	–	21	–	37	–	61	–	108	–	162
90	1800	20	–	–	35	–	58	–	98	–	174	–	255
	1500	17	–	–	29	–	49	–	82	–	145	–	212
	1200	13	–	–	23	–	39	–	65	–	116	–	170
	1000	11	–	–	19	–	32	–	54	–	97	–	142
100	1800	18	–	–	31	–	–	–	–	–	–	–	–
	1500	15	–	–	25	–	–	–	–	–	–	–	–
	1200	12	–	–	20	–	–	–	–	–	–	–	–
	1000	10	–	–	17	–	–	–	–	–	–	–	–

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Technical data (continued)

Nominal output torques T_{2N} (kNm) type H3

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
6.3	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
7.1	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
8	–	7	11.6	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
9	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
10	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
11.2	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
12.5	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	H2
14	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
16	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
18	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
20	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
22.4	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
25	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
28	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
31.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
35.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
40	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
45	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
50	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	**H3**
56	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
63	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
71	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
80	–	–	–	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
90	–	–	–	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
100	–	–	–	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
112	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
125	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
140	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
160	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
180	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
200	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	H4
224	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
250	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
280	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
315	–	–	–	–	–	28.3	37	48.5	63.5	81	101.5	125	
355	–	–	–	–	–	28.3	–	48.5	–	81	–	125	
400	–	–	–	–	–	–	–	48.5	–	81	–	125	

Type **H1**, see page 3/12
Type **H2**, see page 3/23
Type **H4**, see page 3/35

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Overview tables

Type H3 – Thermal capacities
n_1 = 1000 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H3

i_N		Gear unit sizes 505	506	507	508	509	510	511	512	513	514
20	P_{GA}	46.3	–	74.2	–	101	–	141	–	189	–
	P_{GB}	72.9	–	121	–	165	–	241	–	278	–
	P_{GC}	123	–	166	–	304	–	357	–	569	–
	P_{GD}	145	–	208	–	359	–	445	–	641	–
22.4	P_{GA}	44.2	–	71.1	–	94.7	–	137	–	184	–
	P_{GB}	69.6	–	116	–	154	–	234	–	269	–
	P_{GC}	117	–	159	–	283	–	345	–	551	–
	P_{GD}	139	–	200	–	335	–	430	–	618	–
25	P_{GA}	43.4	–	68.2	81.1	93.7	109	133	153	175	204
	P_{GB}	68.2	–	111	131	152	176	225	257	256	296
	P_{GC}	115	–	152	174	279	249	333	436	521	586
	P_{GD}	136	–	191	219	331	310	416	525	586	662
28	P_{GA}	42.1	51.7	67.3	78	90.7	102	128	149	179	198
	P_{GB}	65.7	79.9	109	126	146	165	213	248	258	286
	P_{GC}	107	98.8	144	166	258	233	305	419	499	567
	P_{GD}	127	124	182	210	306	288	382	508	565	638
31.5	P_{GA}	41.1	49.5	64.3	74.7	98.4	101	124	144	170	188
	P_{GB}	64.2	76.4	104	120	144	163	206	240	245	272
	P_{GC}	104	94.4	138	159	254	230	294	406	474	537
	P_{GD}	124	119	174	201	301	284	368	490	535	605
35.5	P_{GA}	38.9	48.4	63.5	73.6	84.8	98.1	123	138	166	192
	P_{GB}	60.4	74.8	102	117	135	156	201	227	237	273
	P_{GC}	97.2	92.4	131	152	234	212	277	370	445	516
	P_{GD}	115	116	166	192	277	264	349	448	506	584
40	P_{GA}	38.1	46.8	60.8	70.4	83.6	96.7	118	134	158	182
	P_{GB}	59	72	97.5	112	133	153	195	220	225	258
	P_{GC}	94.8	86.5	126	145	231	210	268	357	421	488
	P_{GD}	113	109	158	184	274	261	337	432	478	552
45	P_{GA}	34.9	45.7	57.4	69.4	76.7	91.6	114	132	153	178
	P_{GB}	53.5	70.3	90.9	110	120	144	184	214	216	251
	P_{GC}	83.7	84.5	116	138	204	194	249	336	393	460
	P_{GD}	100	107	146	175	242	241	313	407	445	520
50	P_{GA}	34.2	43.3	55	66.3	75.8	90.3	110	128	146	169
	P_{GB}	52.4	66.1	87.1	105	118	142	178	207	205	238
	P_{GC}	81.8	78.9	110	132	201	191	241	324	372	435
	P_{GD}	97.9	99.8	139	167	239	238	303	394	421	493
56	P_{GA}	33.4	42.4	52.8	62.5	74.2	82.7	106	123	143	164
	P_{GB}	51	64.6	82.9	97.9	115	128	170	196	200	227
	P_{GC}	79	77.2	104	121	192	169	228	301	357	404
	P_{GD}	94.6	97.7	132	153	229	211	286	366	404	458
63	P_{GA}	31.2	38.8	50.6	59.8	70.4	81.7	102	118	141	155
	P_{GB}	47	58.5	78.5	93.8	107	127	161	189	195	216
	P_{GC}	70.8	68.6	96.7	116	174	167	210	291	336	383
	P_{GD}	84.7	86.8	122	147	208	208	263	353	383	435
71	P_{GA}	30.5	38	48.5	57.5	69.4	80	99.3	114	134	152
	P_{GB}	45.9	57.3	75.4	89.5	106	122	156	180	184	210
	P_{GC}	69.3	67	92.6	109	172	160	203	275	318	367
	P_{GD}	82.8	84.9	117	139	205	199	255	333	361	417
80	P_{GA}	–	37.2	–	55.1	–	75.6	–	109	–	150
	P_{GB}	–	55.6	–	84.6	–	114	–	170	–	205
	P_{GC}	–	65.1	–	101	–	146	–	251	–	346
	P_{GD}	–	81.9	–	128	–	182	–	306	–	393
90	P_{GA}	–	34.6	–	52.8	–	74.5	–	106	–	142
	P_{GB}	–	51.2	–	81.1	–	113	–	165	–	194
	P_{GC}	–	58.7	–	97.3	–	144	–	244	–	328
	P_{GD}	–	73.9	–	123	–	179	–	297	–	372
100	P_{GA}	–	33.9	–	–	–	–	–	–	–	–
	P_{GB}	–	50.2	–	–	–	–	–	–	–	–
	P_{GC}	–	57.3	–	–	–	–	–	–	–	–
	P_{GD}	–	72.5	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H3

i_N		Gear unit sizes 505	506	507	508	509	510	511	512	513	514
20	P_{GA}	48.1	–	76.4	–	102	–	141	–	185	–
	P_{GB}	81.2	–	135	–	182	–	264	–	295	–
	P_{GC}	136	–	183	–	335	–	391	–	624	–
	P_{GD}	165	–	235	–	404	–	499	–	712	–
22.4	P_{GA}	46.1	–	73.6	–	96.4	–	137	–	181	–
	P_{GB}	77.9	–	130	–	171	–	255	–	287	–
	P_{GC}	131	–	176	–	313	–	379	–	603	–
	P_{GD}	158	–	225	–	378	–	482	–	687	–
25	P_{GA}	45.1	–	70.6	83.9	95.2	111	133	153	173	202
	P_{GB}	76	–	124	146	168	195	247	281	273	314
	P_{GC}	128	–	168	192	308	273	366	480	570	644
	P_{GD}	154	–	216	248	372	348	466	590	654	734
28	P_{GA}	43.8	54	69.8	80.5	93.4	105	130	149	180	196
	P_{GB}	73.3	89.2	122	140	162	182	235	272	277	305
	P_{GC}	119	108	160	183	285	256	335	463	551	622
	P_{GD}	144	141	206	237	344	325	428	570	630	709
31.5	P_{GA}	42.9	51.7	67	77.3	92.2	103	126	144	172	188
	P_{GB}	71.8	85.2	116	134	160	180	227	263	263	291
	P_{GC}	116	104	153	176	280	252	324	447	521	591
	P_{GD}	141	134	198	227	340	320	414	549	598	674
35.5	P_{GA}	40.8	50.4	66.3	76.6	87.8	101	126	141	171	194
	P_{GB}	67.7	83.4	114	131	150	173	223	251	258	294
	P_{GC}	108	101	145	168	260	233	306	409	493	567
	P_{GD}	132	181	188	217	313	297	392	505	563	649
40	P_{GA}	39.9	49	63.5	73.4	86.6	99.8	121	136	162	185
	P_{GB}	66.1	80.5	109	125	148	170	215	242	244	279
	P_{GC}	105	95.6	139	161	256	231	296	394	468	537
	P_{GD}	128	124	180	208	309	293	379	487	534	614
45	P_{GA}	36.8	47.9	60.4	72.6	80.1	94.9	118	136	159	183
	P_{GB}	60.1	78.5	102	122	135	160	205	237	235	273
	P_{GC}	93.6	93.4	128	153	227	213	276	372	434	507
	P_{GD}	113	121	165	198	274	272	353	459	500	582
50	P_{GA}	36	45.5	57.8	69.5	79.1	93.8	114	131	151	174
	P_{GB}	58.7	74	97.7	117	132	158	198	229	223	258
	P_{GC}	91.2	87.1	122	146	224	211	266	359	413	480
	P_{GD}	111	113	158	190	270	286	341	444	472	549
56	P_{GA}	35.4	44.4	55.8	65.9	77.9	86.5	111	127	149	170
	P_{GB}	57.3	72.4	93.4	110	129	143	189	218	219	248
	P_{GC}	88.3	85.3	115	134	214	187	252	333	395	449
	P_{GD}	107	110	150	174	259	238	323	413	453	514
63	P_{GA}	33.2	40.8	53.7	63.1	74.4	85.5	107	123	148	161
	P_{GB}	52.9	65.6	88.4	105	121	141	180	210	214	235
	P_{GC}	79.2	75.6	107	128	195	185	233	323	375	424
	P_{GD}	96.6	98.2	138	167	235	234	298	398	430	486
71	P_{GA}	32.5	40.1	51.4	60.8	73.5	84.1	104	119	141	159
	P_{GB}	51.8	64.2	84.9	100	119	137	175	201	203	230
	P_{GC}	77.4	74.1	102	121	192	176	225	305	355	406
	P_{GD}	94.3	96.2	132	158	232	225	288	377	407	467
80	P_{GA}	–	39.3	–	58.4	–	80.2	–	115	–	158
	P_{GB}	–	62.6	–	95.3	–	128	–	191	–	226
	P_{GC}	–	71.7	–	112	–	162	–	281	–	385
	P_{GD}	–	93.1	–	146	–	206	–	348	–	443
90	P_{GA}	–	36.8	–	56	–	79	–	112	–	150
	P_{GB}	–	57.7	–	91.4	–	127	–	185	–	214
	P_{GC}	–	64.8	–	107	–	160	–	270	–	364
	P_{GD}	–	84.2	–	140	–	203	–	337	–	420
100	P_{GA}	–	36	–	–	–	–	–	–	–	–
	P_{GB}	–	56.4	–	–	–	–	–	–	–	–
	P_{GC}	–	63.4	–	–	–	–	–	–	–	–
	P_{GD}	–	82.4	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Overview tables

Type H3 – Thermal capacities
n_1 = 1500 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H3

i_N		Gear unit sizes 505	506	507	508	509	510	511	512	513	514
20	P_{GA}	49.7	–	77.8	–	101	–	132	–	168	–
	P_{GB}	92.8	–	154	–	204	–	289	–	310	–
	P_{GC}	156	–	206	–	377	–	432	–	692	–
	P_{GD}	192	–	273	–	464	–	570	–	805	–
22.4	P_{GA}	47.7	–	75.1	–	95.8	–	130	–	166	–
	P_{GB}	88.9	–	148	–	192	–	282	–	302	–
	P_{GC}	149	–	197	–	351	–	419	–	669	–
	P_{GD}	184	–	262	–	432	–	551	–	779	–
25	P_{GA}	46.7	–	72.2	85.9	94.7	111	127	146	160	186
	P_{GB}	86.9	–	141	166	189	218	272	310	290	332
	P_{GC}	145	–	189	215	346	305	406	536	635	715
	P_{GD}	180	–	251	287	427	399	532	675	738	831
28	P_{GA}	45.8	56	72.2	82.7	94.7	104	128	143	174	183
	P_{GB}	84	101	139	159	183	205	263	301	298	324
	P_{GC}	136	122	181	207	321	285	375	519	616	692
	P_{GD}	169	163	240	275	397	373	492	653	718	800
31.5	P_{GA}	44.8	53.8	69.3	79.3	93.4	104	125	139	167	176
	P_{GB}	82.1	97.6	133	153	180	202	254	291	284	308
	P_{GC}	133	117	173	197	317	281	362	500	583	654
	P_{GD}	165	156	230	263	390	368	476	630	680	763
35.5	P_{GA}	42.7	52.7	69.2	79.4	90	103	127	140	170	190
	P_{GB}	77.5	95.2	130	150	171	195	250	279	281	318
	P_{GC}	123	114	164	189	293	261	343	460	556	634
	P_{GD}	154	153	219	252	362	343	452	580	642	740
40	P_{GA}	41.9	51.4	66.4	76.2	89.1	102	123	135	162	181
	P_{GB}	75.9	92	125	143	168	193	242	271	268	302
	P_{GC}	121	107	157	181	289	259	330	445	523	602
	P_{GD}	150	144	210	241	356	339	437	561	609	699
45	P_{GA}	38.9	50.3	63.6	75.9	83.6	98	122	137	163	184
	P_{GB}	69.2	90.1	117	141	153	182	232	267	260	298
	P_{GC}	107	105	145	172	257	239	310	417	490	569
	P_{GD}	133	141	193	230	318	314	409	530	573	663
50	P_{GA}	38.1	47.9	60.9	72.8	82.6	96.8	118	133	155	175
	P_{GB}	67.7	85.1	112	135	152	179	225	258	247	283
	P_{GC}	104	98	139	165	253	235	299	403	465	540
	P_{GD}	130	131	185	221	313	310	395	513	542	628
56	P_{GA}	37.6	46.9	59.1	69.6	81.9	90.3	115	131	154	175
	P_{GB}	66.1	83.1	107	126	148	163	215	246	243	275
	P_{GC}	101	95.9	131	151	243	210	284	377	447	507
	P_{GD}	126	128	175	203	300	276	374	478	522	590
63	P_{GA}	35.6	43.4	57.4	66.7	79.4	89.4	113	127	157	166
	P_{GB}	61.3	75.7	102	121	139	161	206	239	241	261
	P_{GC}	90.7	85.2	122	145	222	207	264	364	426	479
	P_{GD}	113	114	162	194	274	272	347	462	495	557
71	P_{GA}	34.8	42.4	55.1	64.4	78.4	88.6	110	124	149	166
	P_{GB}	59.9	73.9	98.2	116	137	157	199	228	229	256
	P_{GC}	88.9	83.5	116	137	219	200	255	346	403	462
	P_{GD}	110	112	155	184	270	261	336	438	470	537
80	P_{GA}	–	41.8	–	62.5	–	85.6	–	121	–	167
	P_{GB}	–	72.1	–	110	–	148	–	219	–	253
	P_{GC}	–	80.8	–	128	–	184	–	318	–	438
	P_{GD}	–	108	–	171	–	240	–	405	–	511
90	P_{GA}	–	39.5	–	60	–	84.5	–	118	–	159
	P_{GB}	–	66.7	–	105	–	146	–	211	–	240
	P_{GC}	–	73.4	–	122	–	181	–	309	–	415
	P_{GD}	–	98.3	–	164	–	237	–	391	–	484
100	P_{GA}	–	38.7	–	–	–	–	–	–	–	–
	P_{GB}	–	65.4	–	–	–	–	–	–	–	–
	P_{GC}	–	71.8	–	–	–	–	–	–	–	–
	P_{GD}	–	96.4	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H3

i_N		Gear unit sizes 505	506	507	508	509	510	511	512	513	514
20	P_{GA}	50	–	76.8	–	96.1	–	117	–	143	–
	P_{GB}	103	–	169	–	222	–	308	–	318	–
	P_{GC}	172	–	225	–	412	–	467	–	748	–
	P_{GD}	218	–	307	–	516	–	630	–	883	–
22.4	P_{GA}	48.2	–	74.2	–	91.3	–	117	–	144	–
	P_{GB}	98.9	–	163	–	208	–	300	–	312	–
	P_{GC}	166	–	217	–	385	–	453	–	728	–
	P_{GD}	209	–	295	–	483	–	610	–	855	–
25	P_{GA}	47.3	–	71.7	85.5	90.8	106	115	132	141	165
	P_{GB}	96.8	–	157	184	206	237	291	329	300	344
	P_{GC}	161	–	208	235	379	329	440	580	694	774
	P_{GD}	204	–	282	322	476	444	591	748	814	915
28	P_{GA}	46.7	57	72.8	82.6	93.2	101	121	131	160	164
	P_{GB}	93.8	113	155	177	201	222	283	321	312	336
	P_{GC}	151	134	198	227	352	310	406	566	670	751
	P_{GD}	191	184	271	310	443	416	547	725	791	886
31.5	P_{GA}	45.8	54.7	70	79.5	92.3	100	118	129	154	159
	P_{GB}	91.7	108	148	169	198	220	275	311	297	321
	P_{GC}	148	128	190	217	346	304	393	545	638	715
	P_{GD}	187	176	259	297	437	411	530	700	751	839
35.5	P_{GA}	43.9	53.7	70.6	80.4	90.1	102	124	134	163	177
	P_{GB}	86.8	106	146	167	188	214	273	302	298	332
	P_{GC}	138	126	181	207	321	285	374	503	603	692
	P_{GD}	174	173	248	284	407	385	505	646	715	815
40	P_{GA}	42.9	52.8	67.7	77.2	89.2	101	120	130	156	170
	P_{GB}	84.7	102	140	160	186	211	264	292	283	317
	P_{GC}	134	118	173	198	318	282	362	485	575	655
	P_{GD}	170	163	237	273	401	379	488	624	677	773
45	P_{GA}	40.2	51.7	65.7	77.7	85	98.4	122	135	161	178
	P_{GB}	77.5	100	131	157	171	201	255	290	280	317
	P_{GC}	119	115	160	189	283	261	341	459	541	624
	P_{GD}	151	159	219	260	357	352	458	594	634	736
50	P_{GA}	39.5	49.4	63	74.4	84.3	97.5	118	131	154	170
	P_{GB}	76	95	126	150	168	198	247	281	266	301
	P_{GC}	116	107	153	181	280	258	328	445	511	590
	P_{GD}	148	148	209	249	352	348	442	574	604	696
56	P_{GA}	39.2	48.4	61.5	72	84.7	92.3	117	132	157	175
	P_{GB}	74.1	92.9	121	141	165	181	238	271	263	295
	P_{GC}	112	105	145	167	269	231	314	414	495	556
	P_{GD}	143	145	198	230	339	310	421	536	581	653
63	P_{GA}	37.5	45.1	60.1	69.2	82.9	91.4	117	128	162	167
	P_{GB}	69.1	84.7	115	135	156	179	229	262	263	281
	P_{GC}	101	94.1	134	160	247	228	292	401	472	528
	P_{GD}	129	129	184	220	311	306	390	518	555	620
71	P_{GA}	36.7	44.2	57.9	67.3	81.9	91.6	113	127	154	168
	P_{GB}	67.6	82.9	111	130	154	175	222	252	250	278
	P_{GC}	99.4	91.9	129	152	243	220	282	382	446	508
	P_{GD}	126	127	177	209	306	295	379	491	525	598
80	P_{GA}	–	43.8	–	65.7	–	89.6	–	126	–	173
	P_{GB}	–	81.2	–	124	–	166	–	243	–	276
	P_{GC}	–	89.3	–	140	–	203	–	353	–	484
	P_{GD}	–	123	–	194	–	271	–	456	–	572
90	P_{GA}	–	41.6	–	63	–	88.5	–	122	–	164
	P_{GB}	–	75.2	–	119	–	164	–	234	–	262
	P_{GC}	–	81.1	–	135	–	200	–	342	–	459
	P_{GD}	–	111	–	186	–	268	–	440	–	541
100	P_{GA}	–	40.7	–	–	–	–	–	–	–	–
	P_{GB}	–	73.7	–	–	–	–	–	–	–	–
	P_{GC}	–	79.4	–	–	–	–	–	–	–	–
	P_{GD}	–	109	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Overview tables

Type H4
Nominal power ratings, gear unit sizes 507 to 514

Technical data

Nominal power ratings P_{2N} (kW) type H4

			Gear unit sizes										
i_N	n_1	n_2	504	505	506	507	508	509	510	511	512	513	514
80	1800	23	–	–	–	50	–	83	–	142	–	233	–
	1500	19	–	–	–	41	–	69	–	118	–	194	–
	1200	15	–	–	–	33	–	56	–	94	–	155	–
	1000	13	–	–	–	28	–	46	–	79	–	129	–
90	1800	20	–	–	–	44	–	74	–	126	–	205	–
	1500	17	–	–	–	37	–	62	–	105	–	171	–
	1200	13	–	–	–	30	–	50	–	84	–	137	–
	1000	11	–	–	–	25	–	41	–	70	–	114	–
100	1800	18	–	–	–	40	52	65	87	112	146	184	225
	1500	15	–	–	–	33	43	54	72	93	122	154	188
	1200	12	–	–	–	27	34	43	58	75	97	123	150
	1000	10	–	–	–	22	29	36	48	62	81	102	125
112	1800	16	–	–	–	35	46	60	77	104	130	161	199
	1500	13	–	–	–	30	38	50	64	87	109	134	166
	1200	11	–	–	–	24	31	40	52	69	87	108	133
	1000	9	–	–	–	20	26	33	43	58	72	90	110
125	1800	14	–	–	–	32	41	53	68	92	116	145	178
	1500	12	–	–	–	27	34	44	56	77	96	121	149
	1200	10	–	–	–	22	28	35	45	62	77	97	119
	1000	8	–	–	–	18	23	29	38	51	64	80	99
140	1800	13	–	–	–	29	37	49	62	83	108	132	156
	1500	11	–	–	–	24	31	41	52	70	90	110	130
	1200	9	–	–	–	19	25	33	42	56	72	88	104
	1000	7	–	–	–	16	20	27	35	46	60	73	87
160	1800	11	–	–	–	26	34	43	55	74	95	119	140
	1500	9	–	–	–	22	28	36	46	62	79	99	117
	1200	8	–	–	–	17	22	29	36	49	64	79	93
	1000	6	–	–	–	14	19	24	30	41	53	66	78
180	1800	10	–	–	–	23	30	39	51	64	86	104	128
	1500	8	–	–	–	19	25	33	43	54	72	87	107
	1200	7	–	–	–	15	20	26	34	43	58	70	85
	1000	6	–	–	–	13	17	22	28	36	48	58	71
200	1800	9	–	–	–	20	27	34	45	57	77	94	115
	1500	8	–	–	–	17	22	28	37	48	64	78	96
	1200	6	–	–	–	13	18	23	30	38	51	63	77
	1000	5	–	–	–	11	15	19	25	32	43	52	64
224	1800	8	–	–	–	18	24	30	41	51	67	82	101
	1500	7	–	–	–	15	20	25	34	42	55	68	84
	1200	5	–	–	–	12	16	20	27	34	44	55	67
	1000	4	–	–	–	9.7	13	17	23	28	37	46	56
250	1800	7	–	–	–	16	21	27	35	45	59	72	91
	1500	6	–	–	–	13	17	22	30	38	49	60	76
	1200	5	–	–	–	10	14	18	24	30	39	48	61
	1000	4	–	–	–	8.7	12	15	20	25	33	40	50
280	1800	6	–	–	–	14	18	24	31	40	53	65	80
	1500	5	–	–	–	11	15	20	26	34	44	54	66
	1200	4	–	–	–	9.2	12	16	21	27	35	43	53
	1000	4	–	–	–	7.6	10	13	17	22	29	36	44
315	1800	6	–	–	–	–	16	21	28	36	47	58	70
	1500	5	–	–	–	–	14	17	23	30	39	49	58
	1200	4	–	–	–	–	11	14	19	24	31	39	47
	1000	3	–	–	–	–	9.0	12	16	20	26	32	39
355	1800	5	–	–	–	–	14	–	25	–	42	–	63
	1500	4	–	–	–	–	12	–	20	–	35	–	52
	1200	3	–	–	–	–	9.5	–	16	–	28	–	42
	1000	3	–	–	–	–	8.0	–	14	–	23	–	35
400	1800	5	–	–	–	–	–	–	22	–	37	–	57
	1500	4	–	–	–	–	–	–	18	–	31	–	47
	1200	3	–	–	–	–	–	–	15	–	25	–	38
	1000	3	–	–	–	–	–	–	12	–	21	–	31

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Technical data (continued)

Nominal output torques T_{2N} (kNm) type H4

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
6.3	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
7.1	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
8	–	7	11.6	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
9	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
10	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
11.2	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
12.5	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	H2
14	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
16	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
18	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
20	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
22.4	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
25	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
28	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
31.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
35.5	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
40	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
45	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
50	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	H3
56	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
63	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
71	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
80	–	–	–	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
90	–	–	–	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
100	–	–	–	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
112	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
125	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
140	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
160	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
180	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
200	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	H4
224	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
250	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
280	–	–	–	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
315	–	–	–	–	–	28.3	37	48.5	63.5	81	101.5	125	
355	–	–	–	–	–	28.3	–	48.5	–	81	–	125	
400	–	–	–	–	–	–	–	48.5	–	81	–	125	

Type **H1**, see page 3/12
Type **H2**, see page 3/23
Type **H3**, see page 3/29

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Type H4 – Thermal capacities
n_1 = 1000 rpm, n_1 = 1200 rpm

Technical data (continued)

Thermal capacities P_G (kW) type H4
n_1 = 1000 rpm

		Gear unit sizes							
i_N		507	508	509	510	511	512	513	514
80	P_{GA}	42.4	–	59.8	–	90.5	–	122	–
90	P_{GA}	40.8	–	57.5	–	87.3	–	115	–
100	P_{GA}	39.8	46	55.9	64.2	83.9	96.8	113	129
112	P_{GA}	38.2	44.2	54	61.7	81.8	93.2	108	122
125	P_{GA}	36.8	43.2	52.5	60	78.7	89.6	106	120
140	P_{GA}	35.4	41.5	49.9	58	76.5	87.5	100	114
160	P_{GA}	34.3	39.9	48.6	56.3	73.5	84	98.8	112
180	P_{GA}	32.9	38.4	45.6	53.6	69.3	81.8	91.9	106
200	P_{GA}	31.6	37.1	44.3	52.1	66.6	78.6	90.1	104
224	P_{GA}	29.6	35.7	42.8	48.8	63.8	74	86	97.3
250	P_{GA}	28.5	34.2	40	47.5	61	71.1	80.9	95.3
280	P_{GA}	27.2	32.1	38.9	45.9	58.7	68.1	79.2	91.1
315	P_{GA}	–	30.9	37.2	43	56.7	65.3	76	85.6
355	P_{GA}	–	29.5	–	41.8	–	62.8	–	83.7
400	P_{GA}	–	–	–	39.9	–	60.6	–	80.4

Thermal capacities P_G (kW) type H4
n_1 = 1200 rpm

		Gear unit sizes							
i_N		507	508	509	510	511	512	513	514
80	P_{GA}	44.7	–	63.2	–	95.3	–	128	–
90	P_{GA}	43	–	60.7	–	91.8	–	121	–
100	P_{GA}	42.1	48.6	59.1	67.9	88.3	101	119	136
112	P_{GA}	40.4	46.7	57.1	65.2	86.4	98.3	114	129
125	P_{GA}	39	45.6	55.5	63.5	83.1	94.6	111	126
140	P_{GA}	37.4	43.9	52.9	61.4	81	92.4	106	121
160	P_{GA}	36.5	42.3	51.5	59.7	77.8	88.8	104	118
180	P_{GA}	35	40.7	48.5	56.9	73.5	86.5	97.6	113
200	P_{GA}	33.6	39.5	47.2	55.3	70.6	83.2	95.6	110
224	P_{GA}	31.5	38	45.6	52	67.9	78.5	91.4	103
250	P_{GA}	30.3	36.4	42.2	50.7	64.9	75.5	86.1	101
280	P_{GA}	29	34.1	41.1	48.9	62.4	72.4	84.4	96.7
315	P_{GA}	–	32.8	39.3	45.3	60.3	69.3	81	91.1
355	P_{GA}	–	31.4	–	44.1	–	66.6	–	89.2
400	P_{GA}	–	–	–	42.2	–	64.3	–	85.6

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type H4
n_1 = 1500 rpm

		Gear unit sizes							
i_N		507	508	509	510	511	512	513	514
80	P_{GA}	47.5	–	67.1	–	100	–	134	–
90	P_{GA}	45.6	–	64.6	–	97.2	–	127	–
100	P_{GA}	44.7	51.7	62.9	72.2	93.7	107	125	143
112	P_{GA}	43	49.6	60.9	69.5	91.7	104	120	135
125	P_{GA}	41.6	48.6	59.3	67.6	88.4	100	118	133
140	P_{GA}	39.9	46.7	56.6	65.5	86.3	98.2	113	128
160	P_{GA}	39.2	45.2	55.1	63.7	82.9	94.6	110	125
180	P_{GA}	37.7	43.3	52.2	60.9	78.6	92.3	104	120
200	P_{GA}	36.2	42.5	50.9	59.2	75.5	88.8	102	117
224	P_{GA}	34	40.8	49.1	56.1	72.9	84	97.8	110
250	P_{GA}	32.7	39.2	45.6	54.6	70	80.8	92.6	108
280	P_{GA}	31.3	36.8	44.4	52.7	67.3	77.9	90.7	103
315	P_{GA}	–	35.4	42.4	49	65	74.7	87.1	98
355	P_{GA}	–	33.9	–	47.6	–	71.9	–	95.9
400	P_{GA}	–	–	–	45.6	–	69.4	–	92.1

Thermal capacities P_G (kW) type H4
n_1 = 1800 rpm

		Gear unit sizes							
i_N		507	508	509	510	511	512	513	514
80	P_{GA}	49.5	–	70.1	–	104	–	138	–
90	P_{GA}	47.6	–	67.5	–	101	–	131	–
100	P_{GA}	46.7	54	65.7	75.5	97.4	112	129	148
112	P_{GA}	44.9	51.8	63.8	72.8	95.7	108	125	140
125	P_{GA}	43.5	50.9	62.2	70.8	92.4	104	123	138
140	P_{GA}	41.8	48.9	59.5	68.7	90.3	102	118	133
160	P_{GA}	41.4	47.3	57.9	66.9	86.9	98.9	115	131
180	P_{GA}	39.8	45.5	55.3	64	82.5	96.8	109	125
200	P_{GA}	38.3	44.9	53.9	62.3	79.4	93.2	107	123
224	P_{GA}	36	43.2	52.1	59.4	76.8	88.3	103	116
250	P_{GA}	34.6	41.5	48.4	57.8	74.2	85	97.8	114
280	P_{GA}	33.1	39.1	47.1	56	71.4	82.2	95.8	109
315	P_{GA}	–	37.5	45.1	52	69	79.2	92	103
355	P_{GA}	–	35.9	–	50.6	–	76.3	–	101
400	P_{GA}	–	–	–	48.4	–	73.6	–	97.5

For notes and legend for tables, see page 3/5

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Overview tables

Type B2
Nominal power ratings, gear unit sizes 503 to 510

Technical data

Nominal power ratings P_{2N} (kW) type B2

			Gear unit sizes							
i_N	n_1	n_2	503	504	505	506	507	508	509	510
5	1800	360	128	234	369	–	724	–	1218	–
	1500	300	107	195	308	–	603	–	1015	–
	1200	240	85	156	246	–	483	–	812	–
	1000	200	71	130	205	–	402	–	676	–
5.6	1800	321	104	208	329	–	645	–	1086	–
	1500	268	87	174	275	–	539	–	906	–
	1200	214	69	139	220	–	430	–	724	–
	1000	179	58	116	184	–	360	–	605	–
6	1800	300	–	–	–	–	–	785	–	1307
	1500	250	–	–	–	–	–	654	–	1089
	1200	200	–	–	–	–	–	524	–	871
	1000	167	–	–	–	–	–	437	–	727
6.3	1800	286	102	186	293	419	575	–	967	–
	1500	238	85	155	244	349	478	–	805	–
	1200	190	68	123	195	279	382	–	643	–
	1000	159	57	103	163	233	320	–	538	–
6.7	1800	269	–	–	–	–	–	710	–	1172
	1500	224	–	–	–	–	–	591	–	976
	1200	179	–	–	–	–	–	472	–	780
	1000	149	–	–	–	–	–	393	–	649
7.1	1800	254	85	165	261	372	511	–	859	–
	1500	211	71	137	217	309	424	–	714	–
	1200	169	57	110	173	248	340	–	572	–
	1000	141	47	92	145	207	283	–	477	–
7.5	1800	240	–	–	–	–	–	628	–	963
	1500	200	–	–	–	–	–	524	–	802
	1200	160	–	–	–	–	–	419	–	642
	1000	133	–	–	–	–	–	348	–	533
8	1800	225	80	146	231	330	452	–	761	–
	1500	188	67	122	193	276	378	–	636	–
	1200	150	53	97	154	220	302	–	507	–
	1000	125	45	81	128	183	251	–	423	–
8.5	1800	212	–	–	–	–	–	555	–	912
	1500	176	–	–	–	–	–	461	–	757
	1200	141	–	–	–	–	–	369	–	607
	1000	118	–	–	–	–	–	309	–	508
9	1800	200	65	130	205	293	402	–	676	–
	1500	167	54	108	171	245	336	–	565	–
	1200	133	43	86	136	195	267	–	450	–
	1000	111	36	72	114	163	223	–	375	–
9.5	1800	189	–	–	–	–	–	495	–	748
	1500	158	–	–	–	–	–	414	–	625
	1200	126	–	–	–	–	–	330	–	499
	1000	105	–	–	–	–	–	275	–	416
10	1800	180	64	117	185	251	362	–	609	–
	1500	150	53	97	154	209	302	–	507	–
	1200	120	43	78	123	167	241	–	406	–
	1000	100	36	65	103	139	201	–	338	–
10.6	1800	170	–	–	–	–	–	445	–	723
	1500	142	–	–	–	–	–	372	–	604
	1200	113	–	–	–	–	–	296	–	480
	1000	94	–	–	–	–	–	246	–	400
11.2	1800	161	56	105	165	236	324	–	545	–
	1500	134	46	87	138	196	269	–	453	–
	1200	107	37	69	110	157	215	–	362	–
	1000	89	31	58	91	130	179	–	301	–
11.8	1800	153	–	–	–	–	–	401	–	567
	1500	127	–	–	–	–	–	332	–	471
	1200	102	–	–	–	–	–	267	–	378
	1000	85	–	–	–	–	–	223	–	315

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Technical data (continued)

Nominal power ratings P_{2N} (kW) type B2 (continued)

			Gear unit sizes							
i_N	n_1	n_2	503	504	505	506	507	508	509	510
12.5	1800	144	51	93	148	188	290	–	487	–
	1500	120	43	78	123	157	241	–	406	–
	1200	96	34	62	99	126	193	–	325	–
	1000	80	28	52	82	105	161	–	271	–
13.2	1800	136	–	–	–	–	–	363	–	592
	1500	114	–	–	–	–	–	304	–	497
	1200	91	–	–	–	–	–	243	–	396
	1000	76	–	–	–	–	–	203	–	331
14	1800	129	46	84	132	189	259	–	436	–
	1500	107	38	69	110	157	215	–	362	–
	1200	86	31	56	88	126	173	–	291	–
	1000	71	25	46	73	104	143	–	240	–
15	1800	120	–	–	–	–	–	302	–	513
	1500	100	–	–	–	–	–	251	–	427
	1200	80	–	–	–	–	–	201	–	342
	1000	67	–	–	–	–	–	168	–	286
16	1800	113	40	73	116	166	227	–	382	–
	1500	94	33	61	96	138	189	–	318	–
	1200	75	27	49	77	110	151	–	254	–
	1000	63	22	41	65	92	127	–	213	–
17	1800	106	–	–	–	–	–	277	–	453
	1500	88	–	–	–	–	–	230	–	376
	1200	71	–	–	–	–	–	186	–	303
	1000	59	–	–	–	–	–	154	–	252
18	1800	100	–	–	–	147	–	–	–	–
	1500	83	–	–	–	122	–	–	–	–
	1200	67	–	–	–	98	–	–	–	–
	1000	56	–	–	–	82	–	–	–	–
19	1800	95	–	–	–	–	–	239	–	394
	1500	79	–	–	–	–	–	199	–	328
	1200	63	–	–	–	–	–	158	–	261
	1000	53	–	–	–	–	–	133	–	220
20	1800	90	–	–	–	132	–	–	–	–
	1500	75	–	–	–	110	–	–	–	–
	1200	60	–	–	–	88	–	–	–	–
	1000	50	–	–	–	73	–	–	–	–

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Overview tables

Type B2 – Nominal output torques Gear unit sizes 503 to 510

Technical data (continued)

Nominal output torques T_{2N} (kNm) type B2

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
5	3.4	6.2	9.8	–	19.2	–	32.3	–	–	–	–	–	B2
5.6	3.1	6.2	9.8	–	19.2	–	32.3	–	–	–	–	–	
6	–	–	–	–	–	25	–	41.6	–	–	–	–	
6.3	3.4	6.2	9.8	14	19.2	–	32.3	–	–	–	–	–	
6.7	–	–	–	–	–	25.2	–	41.6	–	–	–	–	
7.1	3.2	6.2	9.8	14	19.2	–	32.3	–	–	–	–	–	
7.5	–	–	–	–	–	25	–	38.3	–	–	–	–	
8	3.4	6.2	9.8	14	19.2	–	32.3	–	–	–	–	–	
8.5	–	–	–	–	–	25	–	41.1	–	–	–	–	
9	3.1	6.2	9.8	14	19.2	–	32.3	–	–	–	–	–	
9.5	–	–	–	–	–	25	–	37.8	–	–	–	–	
10	3.4	6.2	9.8	13.3	19.2	–	32.3	–	–	–	–	–	
10.6	–	–	–	–	–	25	–	40.6	–	–	–	–	
11.2	3.3	6.2	9.8	14	19.2	–	32.3	–	–	–	–	–	
11.8	–	–	–	–	–	25	–	35.4	–	–	–	–	
12.5	3.4	6.2	9.8	12.5	19.2	–	32.3	–	–	–	–	–	
13.2	–	–	–	–	–	25.5	–	41.6	–	–	–	–	
14	3.4	6.2	9.8	14	19.2	–	32.3	–	–	–	–	–	
15	–	–	–	–	–	24	–	40.8	–	–	–	–	
16	3.4	6.2	9.8	14	19.2	–	32.3	–	–	–	–	–	
17	–	–	–	–	–	25	–	40.8	–	–	–	–	
18	–	–	–	14	–	–	–	–	–	–	–	–	
19	–	–	–	–	–	24	–	39.6	–	–	–	–	
20	–	–	–	14	–	–	–	–	–	–	–	–	

Type **B3**, see page 3/51
Type **B4**, see page 3/57

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Technical data (continued)

Nominal output torques T_{2N} (kNm) type B2 (continued)

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
14	–	–	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
16	–	7	11.6	–	21.5	–	37	–	63.5	–	101.5	–	
18	–	7	11.6	–	21.5	28.3	37	48.5	63.5	81	101.5	125	
20	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
22.4	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
25	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
28	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
31.5	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	B3
35.5	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
40	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
45	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
50	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
56	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
63	–	7	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
71	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
80	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
90	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
100	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
112	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
125	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
140	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
160	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
180	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	B4
200	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
224	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
250	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
280	–	–	11.6	16.2	21.5	28.3	37	48.5	63.5	81	101.5	125	
315	–	–	–	16.2	–	28.3	–	48.5	–	81	–	125	
355	–	–	–	16.2	–	28.3	–	48.5	–	81	–	125	

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Type **B4**, see page 3/57

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Type B2 – Thermal capacities
n_1 = 1000 rpm

Technical data (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	48	75.7	81.4	–	110	–	119	–
	P_{GB}	99.7	161	198	–	307	–	409	–
	P_{GC}	136	283	357	–	555	–	818	–
	P_{GD}	181	356	455	–	723	–	1058	–
5.6	P_{GA}	47.7	72.3	81.3	–	109	–	115	–
	P_{GB}	99.1	153	197	–	300	–	390	–
	P_{GC}	134	270	355	–	542	–	768	–
	P_{GD}	180	338	451	–	705	–	1001	–
6	P_{GA}	–	–	–	–	–	117	–	125
	P_{GB}	–	–	–	–	–	317	–	417
	P_{GC}	–	–	–	–	–	539	–	655
	P_{GD}	–	–	–	–	–	710	–	906
6.3	P_{GA}	43.1	68.5	75.9	88.7	105	–	119	–
	P_{GB}	86.9	140	174	210	268	–	360	–
	P_{GC}	111	227	294	359	460	–	666	–
	P_{GD}	150	289	379	461	599	–	870	–
6.7	P_{GA}	–	–	–	–	–	116	–	121
	P_{GB}	–	–	–	–	–	308	–	398
	P_{GC}	–	–	–	–	–	526	–	623
	P_{GD}	–	–	–	–	–	691	–	859
7.1	P_{GA}	42.9	65.4	75.7	87.8	103	–	115	–
	P_{GB}	86.3	133	174	207	262	–	343	–
	P_{GC}	111	215	293	354	449	–	635	–
	P_{GD}	150	274	377	456	587	–	830	–
7.5	P_{GA}	–	–	–	–	–	111	–	125
	P_{GB}	–	–	–	–	–	276	–	368
	P_{GC}	–	–	–	–	–	447	–	541
	P_{GD}	–	–	–	–	–	591	–	752
8	P_{GA}	39.3	62.6	67.9	82.2	95.1	–	114	–
	P_{GB}	77.7	125	150	185	233	–	323	–
	P_{GC}	97.5	193	239	295	379	–	571	–
	P_{GD}	132	248	310	385	497	–	748	–
8.5	P_{GA}	–	–	–	–	–	109	–	121
	P_{GB}	–	–	–	–	–	269	–	351
	P_{GC}	–	–	–	–	–	436	–	517
	P_{GD}	–	–	–	–	–	574	–	715
9	P_{GA}	39.2	59.8	67.7	81.3	93.9	–	110	–
	P_{GB}	77.4	119	149	182	228	–	308	–
	P_{GC}	96.8	184	237	292	372	–	541	–
	P_{GD}	131	236	309	380	487	–	713	–
9.5	P_{GA}	–	–	–	–	–	100	–	120
	P_{GB}	–	–	–	–	–	239	–	331
	P_{GC}	–	–	–	–	–	369	–	463
	P_{GD}	–	–	–	–	–	491	–	648
10	P_{GA}	33.1	53.4	59.9	73.3	83.6	–	99.5	–
	P_{GB}	63.9	104	129	158	197	–	269	–
	P_{GC}	76.5	155	197	240	310	–	453	–
	P_{GD}	104	199	258	314	409	–	596	–
10.6	P_{GA}	–	–	–	–	–	98.7	–	115
	P_{GB}	–	–	–	–	–	234	–	315
	P_{GC}	–	–	–	–	–	360	–	444
	P_{GD}	–	–	–	–	–	478	–	617
11.2	P_{GA}	32.9	51.2	59.7	72.5	82.5	–	96.2	–
	P_{GB}	63.5	100	129	157	194	–	258	–
	P_{GC}	76.3	148	197	237	303	–	433	–
	P_{GD}	103	191	257	310	402	–	571	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type B2 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
11.8	P_{GA}	–	–	–	–	–	88.4	–	104
	P_{GB}	–	–	–	–	–	204	–	274
	P_{GC}	–	–	–	–	–	302	–	370
	P_{GD}	–	–	–	–	–	404	–	519
12.5	P_{GA}	27.8	45	51.1	64.5	71.3	–	112	–
	P_{GB}	52.5	86.1	107	136	163	–	263	–
	P_{GC}	60.3	121	155	198	244	–	410	–
	P_{GD}	82.8	157	204	262	326	–	538	–
13.2	P_{GA}	–	–	–	–	–	86.6	–	100
	P_{GB}	–	–	–	–	–	199	–	263
	P_{GC}	–	–	–	–	–	294	–	355
	P_{GD}	–	–	–	–	–	395	–	498
14	P_{GA}	27.6	43.3	50.9	63.8	70.2	–	108	–
	P_{GB}	52.2	82.9	106	135	160	–	252	–
	P_{GC}	60	116	154	197	241	–	393	–
	P_{GD}	82.4	151	204	259	320	–	514	–
15	P_{GA}	–	–	–	–	–	75.1	–	117
	P_{GB}	–	–	–	–	–	168	–	268
	P_{GC}	–	–	–	–	–	239	–	342
	P_{GD}	–	–	–	–	–	322	–	472
16	P_{GA}	26.3	43.4	53.4	54.7	75.6	–	102	–
	P_{GB}	48.9	80.4	105	112	162	–	235	–
	P_{GC}	55.7	112	151	156	239	–	360	–
	P_{GD}	76.4	145	197	207	314	–	473	–
17	P_{GA}	–	–	–	–	–	73.7	–	112
	P_{GB}	–	–	–	–	–	165	–	258
	P_{GC}	–	–	–	–	–	234	–	328
	P_{GD}	–	–	–	–	–	315	–	453
18	P_{GA}	–	–	–	54.3	–	–	–	–
	P_{GB}	–	–	–	111	–	–	–	–
	P_{GC}	–	–	–	154	–	–	–	–
	P_{GD}	–	–	–	205	–	–	–	–
19	P_{GA}	–	–	–	–	–	78.8	–	106
	P_{GB}	–	–	–	–	–	166	–	241
	P_{GC}	–	–	–	–	–	231	–	299
	P_{GD}	–	–	–	–	–	309	–	416
20	P_{GA}	–	–	–	56.8	–	–	–	–
	P_{GB}	–	–	–	110	–	–	–	–
	P_{GC}	–	–	–	151	–	–	–	–
	P_{GD}	–	–	–	199	–	–	–	–

For notes and legend for tables, see page 3/5

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Type B2 – Thermal capacities
n_1 = 1200 rpm

Technical data (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	47.7	73.6	73.9	–	94.4	–	*	–
	P_{GB}	111	179	217	–	332	–	435	–
	P_{GC}	149	312	393	–	598	–	885	–
	P_{GD}	205	403	512	–	801	–	1171	–
5.6	P_{GA}	47.7	70.3	74	–	94.4	–	*	–
	P_{GB}	110	170	216	–	326	–	416	–
	P_{GC}	149	297	389	–	586	–	838	–
	P_{GD}	204	382	508	–	781	–	1109	–
6	P_{GA}	–	–	–	–	–	101	–	*
	P_{GB}	–	–	–	–	–	343	–	445
	P_{GC}	–	–	–	–	–	586	–	709
	P_{GD}	–	–	–	–	–	788	–	1002
6.3	P_{GA}	43.6	68.2	72.1	81.5	96	–	97.5	–
	P_{GB}	97.5	156	193	230	294	–	388	–
	P_{GC}	123	250	324	393	498	–	730	–
	P_{GD}	171	326	426	519	669	–	968	–
6.7	P_{GA}	–	–	–	–	–	101	–	89.2
	P_{GB}	–	–	–	–	–	335	–	425
	P_{GC}	–	–	–	–	–	572	–	673
	P_{GD}	–	–	–	–	–	768	–	952
7.1	P_{GA}	43.5	65.3	72	81	94.8	–	94.8	–
	P_{GB}	96.9	149	192	227	288	–	371	–
	P_{GC}	122	240	323	388	487	–	695	–
	P_{GD}	170	311	425	512	652	–	923	–
7.5	P_{GA}	–	–	–	–	–	102	–	102
	P_{GB}	–	–	–	–	–	303	–	394
	P_{GC}	–	–	–	–	–	486	–	586
	P_{GD}	–	–	–	–	–	658	–	835
8	P_{GA}	40.1	63.1	65.9	78.6	90.1	–	99	–
	P_{GB}	87.5	140	167	204	256	–	351	–
	P_{GC}	107	215	264	324	412	–	624	–
	P_{GD}	150	281	349	433	555	–	835	–
8.5	P_{GA}	–	–	–	–	–	101	–	100
	P_{GB}	–	–	–	–	–	296	–	378
	P_{GC}	–	–	–	–	–	472	–	560
	P_{GD}	–	–	–	–	–	640	–	795
9	P_{GA}	39.9	60.4	65.7	77.9	88.7	–	96.1	–
	P_{GB}	86.9	133	166	201	251	–	335	–
	P_{GC}	107	204	262	321	405	–	590	–
	P_{GD}	149	268	349	428	545	–	796	–
9.5	P_{GA}	–	–	–	–	–	95.4	–	104
	P_{GB}	–	–	–	–	–	264	–	358
	P_{GC}	–	–	–	–	–	401	–	501
	P_{GD}	–	–	–	–	–	548	–	721
10	P_{GA}	33.9	54.2	58.8	71.4	80.1	–	88.4	–
	P_{GB}	72	116	144	176	219	–	293	–
	P_{GC}	84.4	171	218	264	339	–	493	–
	P_{GD}	118	226	291	355	458	–	667	–
10.6	P_{GA}	–	–	–	–	–	94.1	–	101
	P_{GB}	–	–	–	–	–	258	–	343
	P_{GC}	–	–	–	–	–	393	–	480
	P_{GD}	–	–	–	–	–	535	–	688
11.2	P_{GA}	33.7	52.1	58.6	70.8	79	–	86	–
	P_{GB}	71.5	112	143	174	215	–	281	–
	P_{GC}	83.9	164	217	261	332	–	472	–
	P_{GD}	118	217	290	351	450	–	640	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type B2 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
11.8	P_{GA}	–	–	–	–	–	85	–	93.7
	P_{GB}	–	–	–	–	–	225	–	299
	P_{GC}	–	–	–	–	–	330	–	402
	P_{GD}	–	–	–	–	–	452	–	579
12.5	P_{GA}	28.6	46.1	50.6	63.3	69	–	109	–
	P_{GB}	59.1	96.8	119	151	180	–	292	–
	P_{GC}	66.2	134	171	219	267	–	454	–
	P_{GD}	94	179	231	296	365	–	605	–
13.2	P_{GA}	–	–	–	–	–	83.6	–	90.8
	P_{GB}	–	–	–	–	–	221	–	287
	P_{GC}	–	–	–	–	–	321	–	384
	P_{GD}	–	–	–	–	–	441	–	555
14	P_{GA}	28.5	44.5	50.4	62.8	67.9	–	105	–
	P_{GB}	58.9	93.3	119	150	177	–	280	–
	P_{GC}	66.1	129	171	216	264	–	436	–
	P_{GD}	93.7	172	230	292	359	–	582	–
15	P_{GA}	–	–	–	–	–	73.2	–	114
	P_{GB}	–	–	–	–	–	186	–	297
	P_{GC}	–	–	–	–	–	262	–	375
	P_{GD}	–	–	–	–	–	361	–	533
16	P_{GA}	27.4	45.2	54.9	54.4	76.3	–	100	–
	P_{GB}	55.2	91.2	119	126	181	–	261	–
	P_{GC}	61.7	125	168	171	263	–	399	–
	P_{GD}	87.1	165	224	234	354	–	533	–
17	P_{GA}	–	–	–	–	–	71.9	–	109
	P_{GB}	–	–	–	–	–	183	–	286
	P_{GC}	–	–	–	–	–	255	–	359
	P_{GD}	–	–	–	–	–	354	–	510
18	P_{GA}	–	–	–	54	–	–	–	–
	P_{GB}	–	–	–	124	–	–	–	–
	P_{GC}	–	–	–	170	–	–	–	–
	P_{GD}	–	–	–	232	–	–	–	–
19	P_{GA}	–	–	–	–	–	80	–	104
	P_{GB}	–	–	–	–	–	185	–	267
	P_{GC}	–	–	–	–	–	255	–	331
	P_{GD}	–	–	–	–	–	348	–	470
20	P_{GA}	–	–	–	58.4	–	–	–	–
	P_{GB}	–	–	–	124	–	–	–	–
	P_{GC}	–	–	–	167	–	–	–	–
	P_{GD}	–	–	–	225	–	–	–	–

For notes and legend for tables, see page 3/5

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Type B2 – Thermal capacities
n_1 = 1500 rpm

Technical data (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	45.5	66.2	*	–	*	–	*	–
	P_{GB}	126	201	238	–	360	–	454	–
	P_{GC}	167	352	431	–	652	–	952	–
	P_{GD}	238	465	584	–	900	–	1309	–
5.6	P_{GA}	45.5	63.7	*	–	*	–	*	–
	P_{GB}	126	191	238	–	354	–	437	–
	P_{GC}	166	335	431	–	641	–	907	–
	P_{GD}	237	441	581	–	882	–	1242	–
6	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	372	–	463
	P_{GC}	–	–	–	–	–	637	–	760
	P_{GD}	–	–	–	–	–	887	–	1120
6.3	P_{GA}	42.9	65.1	*	*	*	–	*	–
	P_{GB}	111	178	215	254	322	–	412	–
	P_{GC}	138	283	361	436	542	–	796	–
	P_{GD}	198	379	490	594	755	–	1089	–
6.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	365	–	445
	P_{GC}	–	–	–	–	–	618	–	726
	P_{GD}	–	–	–	–	–	863	–	1066
7.1	P_{GA}	42.8	62.3	61.7	64.1	74.5	–	*	–
	P_{GB}	111	169	214	250	316	–	396	–
	P_{GC}	137	270	361	429	532	–	761	–
	P_{GD}	198	361	489	585	740	–	1040	–
7.5	P_{GA}	–	–	–	–	–	81.4	–	*
	P_{GB}	–	–	–	–	–	332	–	421
	P_{GC}	–	–	–	–	–	530	–	634
	P_{GD}	–	–	–	–	–	742	–	937
8	P_{GA}	40.1	61.5	59.4	68.4	76.2	–	*	–
	P_{GB}	100	159	188	228	284	–	377	–
	P_{GC}	121	242	294	362	454	–	683	–
	P_{GD}	175	326	403	497	631	–	941	–
8.5	P_{GA}	–	–	–	–	–	81.2	–	*
	P_{GB}	–	–	–	–	–	325	–	404
	P_{GC}	–	–	–	–	–	514	–	604
	P_{GD}	–	–	–	–	–	724	–	894
9	P_{GA}	39.9	59	59.3	68	75.6	–	*	–
	P_{GB}	100	152	187	225	278	–	362	–
	P_{GC}	120	231	293	358	446	–	656	–
	P_{GD}	174	311	402	492	619	–	898	–
9.5	P_{GA}	–	–	–	–	–	82.3	–	*
	P_{GB}	–	–	–	–	–	293	–	385
	P_{GC}	–	–	–	–	–	442	–	545
	P_{GD}	–	–	–	–	–	624	–	814
10	P_{GA}	34.2	53.5	54.1	65.2	70.1	–	*	–
	P_{GB}	83	134	163	198	244	–	317	–
	P_{GC}	94.7	194	244	296	372	–	544	–
	P_{GD}	138	263	337	410	521	–	756	–
10.6	P_{GA}	–	–	–	–	–	81.4	–	*
	P_{GB}	–	–	–	–	–	286	–	369
	P_{GC}	–	–	–	–	–	430	–	521
	P_{GD}	–	–	–	–	–	609	–	776
11.2	P_{GA}	34.1	51.7	54.1	64.7	69.5	–	*	–
	P_{GB}	82.4	128	162	196	239	–	305	–
	P_{GC}	94.1	187	244	291	367	–	523	–
	P_{GD}	137	253	336	404	513	–	725	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type B2 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
11.8	P_{GA}	–	–	–	–	–	75.5	–	*
	P_{GB}	–	–	–	–	–	251	–	324
	P_{GC}	–	–	–	–	–	363	–	434
	P_{GD}	–	–	–	–	–	515	–	655
12.5	P_{GA}	29.1	46.2	47.6	59.1	61.8	–	98.6	–
	P_{GB}	68.3	111	135	171	202	–	326	–
	P_{GC}	74.4	152	192	245	295	–	508	–
	P_{GD}	109	209	268	342	417	–	698	–
13.2	P_{GA}	–	–	–	–	–	74.5	–	*
	P_{GB}	–	–	–	–	–	246	–	312
	P_{GC}	–	–	–	–	–	355	–	420
	P_{GD}	–	–	–	–	–	504	–	628
14	P_{GA}	29	44.6	47.4	58.7	61.3	–	95.3	–
	P_{GB}	67.9	107	135	169	199	–	314	–
	P_{GC}	74	146	192	241	291	–	491	–
	P_{GD}	109	201	267	338	410	–	668	–
15	P_{GA}	–	–	–	–	–	66.4	–	103
	P_{GB}	–	–	–	–	–	209	–	333
	P_{GC}	–	–	–	–	–	288	–	417
	P_{GD}	–	–	–	–	–	413	–	612
16	P_{GA}	28.2	46.8	55.5	51.7	74.7	–	91.4	–
	P_{GB}	64	105	137	143	206	–	294	–
	P_{GC}	69.2	142	190	192	294	–	450	–
	P_{GD}	101	194	261	272	409	–	615	–
17	P_{GA}	–	–	–	–	–	65.6	–	100
	P_{GB}	–	–	–	–	–	204	–	320
	P_{GC}	–	–	–	–	–	282	–	402
	P_{GD}	–	–	–	–	–	404	–	587
18	P_{GA}	–	–	–	51.3	–	–	–	–
	P_{GB}	–	–	–	141	–	–	–	–
	P_{GC}	–	–	–	190	–	–	–	–
	P_{GD}	–	–	–	269	–	–	–	–
19	P_{GA}	–	–	–	–	–	78.9	–	95.9
	P_{GB}	–	–	–	–	–	212	–	299
	P_{GC}	–	–	–	–	–	284	–	367
	P_{GD}	–	–	–	–	–	402	–	540
20	P_{GA}	–	–	–	59.2	–	–	–	–
	P_{GB}	–	–	–	143	–	–	–	–
	P_{GC}	–	–	–	189	–	–	–	–
	P_{GD}	–	–	–	263	–	–	–	–

For notes and legend for tables, see page 3/5

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Type B2 – Thermal capacities
n_1 = 1800 rpm

Technical data (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	41.1	54.7	*	–	*	–	*	–
	P_{GB}	139	219	254	–	374	–	449	–
	P_{GC}	182	385	466	–	693	–	1014	–
	P_{GD}	268	520	647	–	980	–	1413	–
5.6	P_{GA}	41.4	53.3	*	–	*	–	*	–
	P_{GB}	139	209	254	–	368	–	434	–
	P_{GC}	181	364	464	–	675	–	964	–
	P_{GD}	266	493	644	–	959	–	1347	–
6	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	387	–	456
	P_{GC}	–	–	–	–	–	669	–	790
	P_{GD}	–	–	–	–	–	965	–	1208
6.3	P_{GA}	40.7	58.6	*	*	*	–	*	–
	P_{GB}	124	195	231	270	340	–	420	–
	P_{GC}	151	310	391	468	579	–	845	–
	P_{GD}	225	425	546	657	825	–	1189	–
6.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	381	–	442
	P_{GC}	–	–	–	–	–	657	–	758
	P_{GD}	–	–	–	–	–	943	–	1152
7.1	P_{GA}	40.7	56.7	*	*	*	–	*	–
	P_{GB}	123	186	230	268	335	–	405	–
	P_{GC}	150	295	388	466	570	–	805	–
	P_{GD}	223	405	542	650	811	–	1136	–
7.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	352	–	429
	P_{GC}	–	–	–	–	–	564	–	663
	P_{GD}	–	–	–	–	–	815	–	1019
8	P_{GA}	38.8	57.7	*	*	*	–	*	–
	P_{GB}	112	176	204	245	302	–	389	–
	P_{GC}	132	267	320	393	486	–	732	–
	P_{GD}	198	368	450	554	695	–	1032	–
8.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	345	–	414
	P_{GC}	–	–	–	–	–	548	–	638
	P_{GD}	–	–	–	–	–	796	–	974
9	P_{GA}	38.7	55.5	49	52.7	55.5	–	*	–
	P_{GB}	111	169	203	242	297	–	374	–
	P_{GC}	131	254	320	387	477	–	700	–
	P_{GD}	196	351	448	546	680	–	987	–
9.5	P_{GA}	–	–	–	–	–	61.8	–	*
	P_{GB}	–	–	–	–	–	312	–	398
	P_{GC}	–	–	–	–	–	473	–	578
	P_{GD}	–	–	–	–	–	685	–	886
10	P_{GA}	33.5	51.2	46.2	54.8	54.7	–	*	–
	P_{GB}	92.6	149	177	216	261	–	329	–
	P_{GC}	103	212	267	320	402	–	583	–
	P_{GD}	156	298	378	457	577	–	830	–
10.6	P_{GA}	–	–	–	–	–	62.2	–	*
	P_{GB}	–	–	–	–	–	306	–	383
	P_{GC}	–	–	–	–	–	464	–	552
	P_{GD}	–	–	–	–	–	669	–	848
11.2	P_{GA}	33.5	49.3	46.4	54.8	54.8	–	*	–
	P_{GB}	92.4	142	177	213	257	–	318	–
	P_{GC}	103	205	265	317	394	–	562	–
	P_{GD}	156	285	376	452	565	–	797	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type B2 (continued)

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
11.8	P_{GA}	–	–	–	–	–	60.5	–	*
	P_{GB}	–	–	–	–	–	270	–	337
	P_{GC}	–	–	–	–	–	388	–	458
	P_{GD}	–	–	–	–	–	568	–	714
12.5	P_{GA}	28.8	44.7	42	51.5	*	–	*	–
	P_{GB}	76.4	123	148	187	217	–	352	–
	P_{GC}	81.3	167	209	265	318	–	557	–
	P_{GD}	124	236	300	382	462	–	776	–
13.2	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	264	–	325
	P_{GC}	–	–	–	–	–	383	–	442
	P_{GD}	–	–	–	–	–	557	–	688
14	P_{GA}	28.8	43.2	42	51.3	*	–	*	–
	P_{GB}	76.2	119	148	185	214	–	339	–
	P_{GC}	81	161	208	263	315	–	537	–
	P_{GD}	123	226	300	377	454	–	747	–
15	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	225	–	360
	P_{GC}	–	–	–	–	–	310	–	452
	P_{GD}	–	–	–	–	–	455	–	680
16	P_{GA}	28.5	47.3	54.5	46.4	70.8	–	76.1	–
	P_{GB}	72	118	153	156	226	–	317	–
	P_{GC}	76	158	209	208	321	–	488	–
	P_{GD}	115	220	295	304	456	–	685	–
17	P_{GA}	–	–	–	–	–	*	–	83.1
	P_{GB}	–	–	–	–	–	221	–	346
	P_{GC}	–	–	–	–	–	303	–	433
	P_{GD}	–	–	–	–	–	447	–	652
18	P_{GA}	–	–	–	46.1	–	–	–	–
	P_{GB}	–	–	–	155	–	–	–	–
	P_{GC}	–	–	–	208	–	–	–	–
	P_{GD}	–	–	–	301	–	–	–	–
19	P_{GA}	–	–	–	–	–	75.1	–	81.2
	P_{GB}	–	–	–	–	–	232	–	324
	P_{GC}	–	–	–	–	–	309	–	398
	P_{GD}	–	–	–	–	–	448	–	600
20	P_{GA}	–	–	–	58.4	–	–	–	–
	P_{GB}	–	–	–	160	–	–	–	–
	P_{GC}	–	–	–	208	–	–	–	–
	P_{GD}	–	–	–	297	–	–	–	–

For notes and legend for tables, see page 3/5

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Overview tables

Type B3
Nominal power ratings, gear unit sizes 504 to 514

Technical data

Nominal power ratings P_{2N} (kW) type B3

			Gear unit sizes										
i_N	n_1	n_2	504	505	506	507	508	509	510	511	512	513	514
14	1800	129	–	157	–	294	–	491	–	864	–	1394	–
	1500	107	–	131	–	245	–	409	–	720	–	1162	–
	1200	86	–	104	–	196	–	327	–	576	–	929	–
	1000	71	–	87	–	163	–	273	–	480	–	774	–
16	1800	113	86	139	–	254	–	433	–	765	–	1228	–
	1500	94	72	116	–	212	–	360	–	637	–	1023	–
	1200	75	58	92	–	170	–	288	–	510	–	819	–
	1000	63	48	77	–	141	–	240	–	425	–	682	–
18	1800	100	74	124	–	227	305	382	510	664	892	1091	1350
	1500	83	62	103	–	189	254	318	425	554	743	909	1125
	1200	67	49	83	–	151	203	254	340	443	595	728	900
	1000	56	41	69	–	126	169	212	284	369	495	606	750
20	1800	90	67	108	158	201	264	343	450	593	790	956	1189
	1500	75	55	90	132	168	220	286	375	494	658	796	991
	1200	60	44	72	105	134	176	228	300	395	526	637	793
	1000	50	37	60	88	112	146	190	250	330	439	531	661
22.4	1800	80	59	97	140	179	236	297	397	516	686	849	1057
	1500	67	49	81	117	149	196	247	330	430	572	707	881
	1200	54	40	65	93	119	157	198	264	344	457	566	705
	1000	45	33	54	78	99	131	165	220	287	381	471	587
25	1800	72	52	85	125	159	209	267	356	461	612	743	926
	1500	60	44	71	104	132	174	222	297	384	510	619	771
	1200	48	35	57	83	106	139	178	237	307	408	495	617
	1000	40	29	47	70	88	116	148	198	256	340	413	514
28	1800	64	47	78	110	143	185	236	308	400	533	679	822
	1500	54	39	65	91	119	155	197	257	333	444	566	685
	1200	43	31	52	73	95	124	157	206	266	355	453	548
	1000	36	26	43	61	80	103	131	171	222	296	377	457
31.5	1800	57	42	68	99	127	165	212	277	357	476	595	720
	1500	48	35	57	82	106	137	177	231	297	397	496	600
	1200	38	28	46	66	85	110	141	185	238	317	397	480
	1000	32	23	38	55	70	91	118	154	198	265	330	400
35.5	1800	51	37	63	86	116	149	192	245	334	413	548	658
	1500	42	31	52	72	96	124	160	204	278	344	457	548
	1200	34	25	42	57	77	99	128	163	222	275	366	439
	1000	28	21	35	48	64	83	107	136	185	229	305	366
40	1800	45	34	55	79	103	132	172	220	298	368	480	576
	1500	38	28	46	66	85	110	144	183	248	307	400	480
	1200	30	23	37	53	68	88	115	147	199	246	320	384
	1000	25	19	31	44	57	73	96	122	166	205	267	320
45	1800	40	30	49	69	90	120	150	199	261	345	428	531
	1500	33	25	41	57	75	100	125	166	217	287	357	443
	1200	27	20	33	46	60	80	100	133	174	230	285	354
	1000	22	17	27	38	50	67	83	111	145	191	238	295
50	1800	36	26	43	64	80	106	135	179	233	308	375	465
	1500	30	22	36	53	67	89	112	149	194	256	313	387
	1200	24	18	29	42	53	71	90	119	155	205	250	310
	1000	20	15	24	35	45	59	75	99	129	171	208	258
56	1800	32	24	39	56	73	94	122	156	211	269	340	415
	1500	27	20	33	46	60	78	102	130	176	224	284	346
	1200	21	16	26	37	48	62	81	104	141	179	227	277
	1000	18	13	22	31	40	52	68	86	117	150	189	230
63	1800	29	21	–	50	–	83	–	140	–	240	–	363
	1500	24	18	–	41	–	69	–	116	–	200	–	303
	1200	19	14	–	33	–	55	–	93	–	160	–	242
	1000	16	12	–	28	–	46	–	78	–	134	–	202
71	1800	25	–	–	44	–	75	–	127	–	218	–	329
	1500	21	–	–	36	–	63	–	106	–	182	–	275
	1200	17	–	–	29	–	50	–	84	–	145	–	220
	1000	14	–	–	24	–	42	–	70	–	121	–	183
80	1800	23	–	–	39	–	–	–	–	–	–	–	–
	1500	19	–	–	33	–	–	–	–	–	–	–	–
	1200	15	–	–	26	–	–	–	–	–	–	–	–
	1000	13	–	–	22	–	–	–	–	–	–	–	–

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Technical data (continued)

Nominal output torques T_{2N} (kNm) type B3

i_N	Gear unit sizes 503	504		505		506		507		508		509		510		511	512	513	514	Type
5	3.4	6.2		9.8		–		19.2		–		32.3		–		–	–	–	–	
5.6	3.1	6.2		9.8		–		19.2		–		32.3		–		–	–	–	–	
6	–	–		–		–		–		25		–		41.6		–	–	–	–	
6.3	3.4	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	
6.7	–	–		–		–		–		25.2		–		41.6		–	–	–	–	
7.1	3.2	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	
7.5	–	–		–		–		–		25		–		38.3		–	–	–	–	
8	3.4	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	
8.5	–	–		–		–		–		25		–		41.1		–	–	–	–	
9	3.1	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	
9.5	–	–		–		–		–		25		–		37.8		–	–	–	–	B2
10	3.4	6.2		9.8		13.3		19.2		–		32.3		–		–	–	–	–	
10.6	–	–		–		–		–		25		–		40.6		–	–	–	–	
11.2	3.3	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	
11.8	–	–		–		–		–		25		–		35.4		–	–	–	–	
12.5	3.4	6.2		9.8		12.5		19.2		–		32.3		–		–	–	–	–	
13.2	–	–		–		–		–		25.5		–		41.6		–	–	–	–	
14	3.4	6.2		9.8	11.6	14		19.2	21.5	–		32.3	37	–		63.5	–	101.5	–	
15	–	–		–	–	–		–	–	24		–	–	40.8		–	–	–	–	
16	3.4	6.2	7	9.8	11.6	14		19.2	21.5	–		32.3	37	–		63.5	–	101.5	–	
17	–	–	–	–	–	–		–	–	25		–	–	40.8		–	–	–	–	
18	–	–	7	–	11.6	14		–	21.5	–	28.3	–	37	–	48.5	63.5	81	101.5	125	
19	–	–	–	–	–	–		–	–	24	–	–	–	39.6	–	–	–	–	–	
20	–	–	7	–	11.6	14	16.2	–	21.5	–	28.3	–	37	–	48.5	63.5	81	101.5	125	
22.4	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
25	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
28	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
31.5	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
35.5	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
40	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
45	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
50	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
56	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
63	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
71	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
80	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
90	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
100	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
112	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
125	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
140	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
160	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
180	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
200	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
224	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
250	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
280	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
315	–	–		–		16.2		–		28.3		–		48.5		–	81	–	125	
355	–	–		–		16.2		–		28.3		–		48.5		–	81	–	125	

Type **B2**, see page 3/40
Type **B4**, see page 3/57

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Overview tables

Type B3 – Thermal capacities n_1 = 1000 rpm

Technical data (continued)

Thermal capacities P_G (kW) type B3

i_N		Gear unit sizes 504	505	506	507	508	509	510	511	512	513	514
14	P_{GA}	–	47.3	–	68.5	–	89.9	–	123	–	153	–
	P_{GB}	–	87.4	–	126	–	205	–	286	–	384	–
	P_{GC}	–	163	–	199	–	365	–	419	–	700	–
	P_{GD}	–	197	–	249	–	462	–	563	–	891	–
16	P_{GA}	34.1	44.7	–	67.3	–	88.9	–	120	–	150	–
	P_{GB}	65	82.3	–	123	–	202	–	276	–	371	–
	P_{GC}	74.1	153	–	194	–	358	–	404	–	672	–
	P_{GD}	102	185	–	243	–	455	–	541	–	853	–
18	P_{GA}	32.5	43	–	64.9	75.6	84.1	98.6	117	135	147	171
	P_{GB}	61.9	78.8	–	118	135	190	218	268	304	360	408
	P_{GC}	70.5	147	–	187	207	334	293	392	521	649	720
	P_{GD}	97.1	178	–	234	260	425	399	523	665	825	922
20	P_{GA}	31.4	42.1	53.7	62.5	74.2	83.2	97.6	114	132	141	166
	P_{GB}	60	76.8	94.7	114	133	185	212	259	293	342	393
	P_{GC}	67.9	144	126	179	202	331	289	380	501	617	689
	P_{GD}	93.9	173	163	225	255	417	390	507	637	784	881
22.4	P_{GA}	30.2	39.3	50.6	58.8	71.5	77.3	92.2	111	128	141	162
	P_{GB}	52.3	70.1	89.2	105	128	166	199	241	284	325	381
	P_{GC}	65.2	124	119	153	195	282	271	332	482	551	667
	P_{GD}	85.3	150	153	195	245	360	365	448	617	706	850
25	P_{GA}	28.1	38.4	48.6	56.7	68.8	76.4	91.2	108	125	136	155
	P_{GB}	47.9	68.7	85.7	101	123	164	196	234	276	310	362
	P_{GC}	56.6	121	114	147	186	279	267	322	466	525	634
	P_{GD}	74.5	146	147	187	235	353	360	435	598	670	807
28	P_{GA}	27	36.2	47.5	54.1	64.8	69.7	84.3	102	121	134	154
	P_{GB}	46	63.8	83.8	95.3	113	145	176	215	256	296	343
	P_{GC}	54.3	109	111	134	161	236	227	283	407	480	567
	P_{GD}	71.6	132	144	170	204	302	310	383	526	618	727
31.5	P_{GA}	25.7	35.4	44.1	52	62.3	68.9	83.2	99.5	117	128	148
	P_{GB}	43.2	62.4	76.3	91.7	108	144	174	209	248	282	326
	P_{GC}	49.7	106	96.9	128	154	233	226	274	396	458	540
	P_{GD}	65.8	130	125	164	195	298	306	372	510	589	691
35.5	P_{GA}	24.8	31.8	43.2	47.5	59.4	62.4	76	92.7	110	120	145
	P_{GB}	41.7	55.1	74.7	82.5	102	128	154	190	227	258	312
	P_{GC}	47.7	89.3	94.4	111	139	201	191	241	345	402	494
	P_{GD}	63.2	109	122	143	178	259	262	328	448	521	638
40	P_{GA}	23	31.2	40.6	45.7	57.2	61.6	75.1	90.3	107	115	139
	P_{GB}	38.3	53.8	69.4	79.7	98.3	126	152	185	221	246	297
	P_{GC}	43.1	87.4	85.6	107	135	198	188	234	336	385	470
	P_{GD}	57.2	107	111	137	171	255	259	319	435	497	606
45	P_{GA}	22.2	27.5	39.8	41.1	51.9	54.3	67.9	81.7	100	123	129
	P_{GB}	36.9	46.9	67.8	70.4	88.3	109	136	164	202	243	271
	P_{GC}	41.6	72.4	83.8	90.9	116	163	163	199	293	359	413
	P_{GD}	55.1	89.2	109	117	149	212	224	273	383	465	537
50	P_{GA}	19.3	27.1	35.6	39.8	50.1	53.7	67.1	79.5	97.8	117	124
	P_{GB}	31.6	46.1	59.7	68	85.1	107	134	159	196	233	259
	P_{GC}	33.8	71.1	70.6	87.6	112	161	161	193	285	343	396
	P_{GD}	45.2	87.7	92.7	113	144	209	221	266	372	443	512
56	P_{GA}	18.7	25.8	34.8	39.5	45	54.8	59.1	81.9	88.5	112	132
	P_{GB}	30.5	43.4	58.7	66.2	75.2	106	115	158	173	220	255
	P_{GC}	32.7	66.2	69.4	85.1	95.3	157	133	189	242	319	370
	P_{GD}	43.7	81.7	91.1	109	122	202	184	258	317	414	478
63	P_{GA}	19.1	–	30.8	–	43.6	–	58.4	–	86.4	–	126
	P_{GB}	30.9	–	51	–	72.7	–	114	–	169	–	244
	P_{GC}	32.8	–	58	–	91.8	–	131	–	234	–	354
	P_{GD}	43.8	–	76.5	–	118	–	183	–	308	–	457
71	P_{GA}	–	–	30.2	–	43.1	–	59.2	–	88.4	–	120
	P_{GB}	–	–	50.1	–	70.9	–	112	–	167	–	231
	P_{GC}	–	–	57.1	–	89.1	–	129	–	229	–	328
	P_{GD}	–	–	75.1	–	114	–	176	–	299	–	425
80	P_{GA}	–	–	28.8	–	–	–	–	–	–	–	–
	P_{GB}	–	–	47.5	–	–	–	–	–	–	–	–
	P_{GC}	–	–	53.5	–	–	–	–	–	–	–	–
	P_{GD}	–	–	70.5	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type B3

i_N		Gear unit sizes 504	505	506	507	508	509	510	511	512	513	514
14	P_{GA}	–	47.9	–	68.2	–	86.8	–	113	–	132	–
	P_{GB}	–	97.5	–	139	–	227	–	312	–	413	–
	P_{GC}	–	183	–	218	–	399	–	457	–	755	–
	P_{GD}	–	224	–	281	–	517	–	630	–	987	–
16	P_{GA}	34.8	45.5	–	67.2	–	86.4	–	111	–	131	–
	P_{GB}	73.1	92.1	–	136	–	224	–	302	–	399	–
	P_{GC}	81.5	171	–	214	–	393	–	441	–	725	–
	P_{GD}	116	210	–	274	–	508	–	607	–	947	–
18	P_{GA}	33.3	43.8	–	65.1	75.9	82.1	96.1	109	127	130	151
	P_{GB}	69.6	88.5	–	131	150	210	241	293	332	388	440
	P_{GC}	77.6	165	–	206	228	367	319	427	567	703	779
	P_{GD}	110	202	–	263	294	477	448	586	742	914	1020
20	P_{GA}	32.2	42.9	54.9	62.8	74.6	81.5	95.4	108	124	126	149
	P_{GB}	67.6	85.9	106	127	147	205	235	285	321	370	424
	P_{GC}	74.8	161	140	197	223	363	314	414	546	665	747
	P_{GD}	106	197	185	253	287	467	438	568	715	870	977
22.4	P_{GA}	31	40.4	51.8	59.9	72	77.1	90.6	108	122	131	147
	P_{GB}	58.6	78.6	100	117	142	185	221	266	312	353	411
	P_{GC}	71.9	138	131	169	214	310	295	364	529	600	724
	P_{GD}	96.7	170	174	221	275	404	410	503	691	785	943
25	P_{GA}	29	39.6	49.8	57.8	69.4	76.1	89.9	105	119	127	142
	P_{GB}	53.7	77	95.8	113	136	182	217	259	303	336	392
	P_{GC}	62.1	135	126	163	205	307	291	353	510	571	691
	P_{GD}	84.5	166	166	211	264	398	404	489	669	746	897
28	P_{GA}	28	37.5	48.8	55.4	66.2	70.3	84.5	101	118	127	145
	P_{GB}	51.6	71.8	93.8	106	126	163	196	239	283	324	373
	P_{GC}	59.7	122	123	147	176	260	250	309	448	526	618
	P_{GD}	81.2	151	163	193	230	340	349	432	592	691	808
31.5	P_{GA}	26.8	36.7	45.7	53.4	63.7	69.6	83.5	98.8	115	122	139
	P_{GB}	48.7	70.3	85.7	102	121	160	193	232	274	309	355
	P_{GC}	54.7	119	106	142	170	256	247	301	434	500	588
	P_{GD}	74.7	147	142	185	221	336	344	419	572	658	771
35.5	P_{GA}	25.8	33	44.7	49	61.1	63.3	76.6	92.8	110	116	140
	P_{GB}	46.9	62	83.9	92.5	114	143	172	212	252	282	341
	P_{GC}	52.6	99.4	104	123	154	221	209	263	381	438	541
	P_{GD}	71.9	124	139	161	202	291	295	370	504	583	713
40	P_{GA}	24	32.4	42.2	47.3	58.8	62.6	76	90.3	107	111	134
	P_{GB}	43.1	60.8	78	89	109	141	170	206	245	270	325
	P_{GC}	47.6	97.5	94.8	118	148	219	207	256	370	420	513
	P_{GD}	65.1	121	127	156	194	288	291	360	490	556	678
45	P_{GA}	23.1	28.8	41.3	42.7	53.8	55.4	69.1	82.4	101	125	126
	P_{GB}	41.5	53	76.4	78.8	98.8	121	151	183	224	271	297
	P_{GC}	45.7	80.8	92.6	100	128	180	179	217	323	398	454
	P_{GD}	62.6	101	124	132	169	239	253	308	433	524	600
50	P_{GA}	20.1	28.3	37.2	41.3	51.9	54.7	68.4	80.4	98.2	120.4	121.5
	P_{GB}	35.4	51.9	67.4	76.3	95.4	121	150	179	219	259	285
	P_{GC}	37	79.2	78.2	96.6	124	178	177	213	316	380	432
	P_{GD}	51.1	99.8	106	128	163	236	250	301	421	501	573
56	P_{GA}	19.4	27	36.4	41.4	46.7	57.1	60.4	84.6	89.4	115	135
	P_{GB}	34.2	48.9	66	74.7	84.3	120	130	178	194	246	285
	P_{GC}	35.7	73.7	76.6	94	105	174	146	209	266	354	410
	P_{GD}	49.3	92.8	103	124	140	229	209	293	358	466	541
63	P_{GA}	20	–	32.3	–	45.2	–	59.8	–	87.3	–	129
	P_{GB}	34.5	–	57.5	–	81.6	–	128	–	189	–	272
	P_{GC}	36.1	–	64	–	101	–	145	–	260	–	392
	P_{GD}	49.5	–	86.9	–	134	–	206	–	350	–	516
71	P_{GA}	–	–	31.7	–	45.3	–	61.7	–	91.5	–	124
	P_{GB}	–	–	56.5	–	79.8	–	126	–	188	–	258
	P_{GC}	–	–	62.9	–	98.4	–	142	–	255	–	364
	P_{GD}	–	–	85.4	–	130	–	201	–	340	–	481
80	P_{GA}	–	–	30.1	–	–	–	–	–	–	–	–
	P_{GB}	–	–	53.1	–	–	–	–	–	–	–	–
	P_{GC}	–	–	58.6	–	–	–	–	–	–	–	–
	P_{GD}	–	–	79.8	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Type B3 – Thermal capacities
n_1 = 1500 rpm

Technical data (continued)

Thermal capacities P_G (kW) type B3

		Gear unit sizes										
i_N		504	505	506	507	508	509	510	511	512	513	514
14	P_{GA}	–	47.3	–	64.8	–	76.9	–	91.9	–	79.2	–
	P_{GB}	–	111	–	156	–	252	–	342	–	436	–
	P_{GC}	–	208	–	245	–	440	–	501	–	818	–
	P_{GD}	–	260	–	323	–	587	–	714	–	1104	–
16	P_{GA}	34.8	45	–	64.2	–	77.7	–	92.8	–	85.5	–
	P_{GB}	83.9	105	–	153	–	249	–	332	–	424	–
	P_{GC}	91.1	195	–	239	–	433	–	487	–	793	–
	P_{GD}	135	245	–	316	–	578	–	690	–	1060	–
18	P_{GA}	33.4	43.5	–	62.7	73.3	74.7	87.3	93.5	107	89.1	103
	P_{GB}	80	101	–	148	168	235	269	323	365	414	467
	P_{GC}	86.8	187	–	231	254	408	353	473	628	770	851
	P_{GD}	128	235	–	305	337	541	511	669	847	1028	1142
20	P_{GA}	32.5	42.8	54.8	60.8	72.5	74.6	87.7	93	107	90.4	107
	P_{GB}	77.8	98.4	120	143	166	229	263	315	354	397	453
	P_{GC}	84	182	157	221	250	402	345	457	608	734	815
	P_{GD}	124	229	215	292	331	532	499	648	816	978	1096
22.4	P_{GA}	31.3	41	51.9	59.7	70.4	73.4	84	98.1	107	107	109
	P_{GB}	67.2	90.5	114	133	160	208	246	297	344	383	441
	P_{GC}	80.4	157	147	190	239	346	326	402	587	660	792
	P_{GD}	112	199	202	255	317	461	469	576	788	887	1062
25	P_{GA}	29.7	40.3	50.1	57.7	68	73	83.7	96.3	106	104	107
	P_{GB}	61.8	88.7	109	128	154	206	244	288	335	366	421
	P_{GC}	69.6	153	142	183	230	342	320	391	571	627	754
	P_{GD}	98.5	194	194	245	305	454	462	559	765	844	1006
28	P_{GA}	28.7	38.4	49.2	56.1	66.4	68.6	81.3	95.9	109	110	122
	P_{GB}	59.4	82.6	107	121	143	184	221	268	315	354	405
	P_{GC}	66.9	139	138	166	198	291	277	344	501	578	682
	P_{GD}	94.7	176	190	224	266	391	400	496	677	783	913
31.5	P_{GA}	27.6	37.7	46.8	54.1	64	68	81	93.7	107	106	119
	P_{GB}	56.2	81	98.6	117	138	182	218	261	306	338	387
	P_{GC}	61.2	136	120	159	190	286	273	335	485	553	646
	P_{GD}	87.2	172	166	215	256	386	395	481	658	745	872
35.5	P_{GA}	26.6	34.2	45.7	49.9	62.1	62.5	75.7	88.9	105	103	123
	P_{GB}	54.1	71.7	96.3	105	130	162	195	239	284	311	374
	P_{GC}	58.8	113	117	138	173	249	233	293	425	487	597
	P_{GD}	83.8	145	162	187	233	335	340	426	581	662	807
40	P_{GA}	24.8	33.5	43.5	48.3	59.9	62	74.9	86.9	103	100	119
	P_{GB}	49.7	70.3	89.8	102	125	160	193	233	275	298	357
	P_{GC}	53.1	111	106	133	167	245	229	285	415	466	570
	P_{GD}	75.9	142	148	181	225	331	335	414	563	633	769
45	P_{GA}	24	30	42.7	43.8	54.9	55.4	68.6	80.1	98.1	125	115
	P_{GB}	47.9	61.4	88.1	90.5	113	138	172	207	253	306	328
	P_{GC}	51.4	92	104	112	144	202	199	243	362	446	502
	P_{GD}	73.1	119	145	154	196	275	292	355	498	604	681
50	P_{GA}	20.9	29.5	38.6	42.5	53.2	54.8	68.1	78.5	95.8	120	111
	P_{GB}	40.9	60.2	77.8	87.4	109	137	170	202	246	293	313
	P_{GC}	41.3	90.5	88	108	138	200	197	237	353	428	477
	P_{GD}	59.7	117	123	149	189	272	288	346	484	576	651
56	P_{GA}	20.3	28.4	37.9	43.5	48.2	59.1	60.7	86.2	88	115	135
	P_{GB}	39.5	56.7	76.3	86.3	96.7	137	147	203	219	277	321
	P_{GC}	40	84.2	86.3	106	117	196	163	235	298	398	459
	P_{GD}	57.7	108	121	145	161	265	240	340	413	538	620
63	P_{GA}	21.3	–	33.8	–	46.6	–	60	–	86	–	129
	P_{GB}	40.2	–	66.6	–	93.6	–	145	–	213	–	307
	P_{GC}	40.6	–	72.2	–	113	–	161	–	291	–	441
	P_{GD}	58.1	–	102	–	155	–	238	–	403	–	592
71	P_{GA}	–	–	33.2	–	47.5	–	64.2	–	93.6	–	124
	P_{GB}	–	–	65.4	–	92.1	–	144	–	214	–	291
	P_{GC}	–	–	70.6	–	111	–	159	–	286	–	408
	P_{GD}	–	–	100	–	151	–	232	–	394	–	552
80	P_{GA}	–	–	31.8	–	–	–	–	–	–	–	–
	P_{GB}	–	–	61.6	–	–	–	–	–	–	–	–
	P_{GC}	–	–	66.2	–	–	–	–	–	–	–	–
	P_{GD}	–	–	93.5	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type B3

i_N		Gear unit sizes 504	505	506	507	508	509	510	511	512	513	514
14	P_{GA}	–	44.7	–	58.6	–	62.4	–	56.4	–	*	–
	P_{GB}	–	123	–	170	–	271	–	358	–	437	–
	P_{GC}	–	229	–	265	–	475	–	536	–	865	–
	P_{GD}	–	295	–	362	–	647	–	785	–	1194	–
16	P_{GA}	33.7	42.8	–	58.9	–	65	–	62.4	–	17.6	–
	P_{GB}	93.3	116	–	167	–	268	–	350	–	429	–
	P_{GC}	99.2	215	–	259	–	467	–	518	–	840	–
	P_{GD}	152	277	–	352	–	636	–	759	–	1149	–
18	P_{GA}	32.6	41.7	–	57.7	67.8	63.8	74.3	67.2	75	27.7	30.3
	P_{GB}	89.2	112	–	161	184	253	289	343	385	422	473
	P_{GC}	94.5	208	–	251	278	438	376	507	679	812	896
	P_{GD}	145	266	–	339	377	599	562	736	933	1113	1238
20	P_{GA}	31.8	41.1	53	56.3	67.6	64.5	76	69.2	79.1	35.7	42.5
	P_{GB}	86.8	109	134	157	181	248	283	335	374	406	461
	P_{GC}	91.6	203	172	240	271	433	373	494	656	772	861
	P_{GD}	141	259	242	327	370	587	552	716	901	1063	1187
22.4	P_{GA}	30.7	40.5	50.4	57.5	66.1	66.4	73.9	82.9	83	68.4	50.5
	P_{GB}	74.7	100	126	147	175	226	267	319	366	399	452
	P_{GC}	87.8	174	161	209	260	375	351	437	635	708	845
	P_{GD}	126	225	228	286	356	509	518	638	871	971	1154
25	P_{GA}	29.7	39.8	48.7	55.8	64.2	66.3	74.3	82.5	84.1	69.8	55.8
	P_{GB}	69.1	98.8	121	142	169	224	264	311	357	383	434
	P_{GC}	76.3	170	155	200	250	369	348	424	615	672	799
	P_{GD}	111	220	219	275	341	503	510	621	846	926	1096
28	P_{GA}	28.7	38.4	48.1	55.1	64.5	64.5	75.1	85.2	95.4	83.2	87
	P_{GB}	66.5	92.6	119	135	157	201	240	290	339	373	424
	P_{GC}	73.3	154	152	181	216	317	300	373	543	623	729
	P_{GD}	107	200	214	252	298	435	444	551	753	861	1001
31.5	P_{GA}	27.9	37.7	46.7	53.3	62.5	64.1	74.8	83.6	94.6	81.9	87
	P_{GB}	63	90.5	110	130	152	199	237	282	330	357	406
	P_{GC}	66.9	151	132	175	208	313	294	363	531	592	697
	P_{GD}	98.7	196	188	243	287	428	438	536	730	820	952
35.5	P_{GA}	26.9	34.5	45.8	49.5	61.5	59.7	72	81.5	96	83.9	98.9
	P_{GB}	60.5	80.3	107	117	144	178	214	260	307	330	395
	P_{GC}	64.5	126	129	152	190	271	252	317	465	523	643
	P_{GD}	95	165	184	211	263	373	377	475	646	729	887
40	P_{GA}	25.2	33.9	44	47.9	59.4	59.2	71.5	79.8	94.3	81.8	96
	P_{GB}	55.9	78.8	100	113	139	176	211	253	299	316	377
	P_{GC}	58.3	124	117	146	182	268	249	310	451	503	611
	P_{GD}	86.3	161	168	204	253	368	373	462	627	695	844
45	P_{GA}	24.3	30.5	43.1	43.9	55	53.6	66.2	74.7	91.1	120	96.5
	P_{GB}	53.8	69	98.4	100	125	152	189	225	275	334	348
	P_{GC}	56.3	102	115	123	157	222	216	262	395	489	537
	P_{GD}	83.2	135	164	174	221	307	325	397	555	672	751
50	P_{GA}	21.3	30	39.3	42.6	53.3	53.1	65.7	73.4	89	115	93.8
	P_{GB}	45.9	67.7	87.2	97.5	121	151	186	220	268	320	333
	P_{GC}	45.2	100	96.9	119	152	219	214	256	385	469	518
	P_{GD}	67.8	132	140	168	213	304	322	386	540	644	717
56	P_{GA}	20.7	29.2	38.5	44.6	48.6	60	59.2	85.7	83.4	112	131
	P_{GB}	44.4	64	85.5	96.7	107	152	161	225	239	303	350
	P_{GC}	43.8	93.8	94.7	117	128	216	176	257	325	436	504
	P_{GD}	65.5	123	137	164	182	298	269	381	462	599	692
63	P_{GA}	22.2	–	34.6	–	47	–	58.6	–	81.7	–	126
	P_{GB}	45.5	–	74.8	–	104	–	160	–	233	–	335
	P_{GC}	44.7	–	79.1	–	124	–	175	–	318	–	482
	P_{GD}	66.2	–	115	–	176	–	266	–	450	–	661
71	P_{GA}	–	–	34	–	48.9	–	65.4	–	93.5	–	121
	P_{GB}	–	–	73.5	–	103	–	161	–	237	–	318
	P_{GC}	–	–	77.8	–	122	–	174	–	315	–	446
	P_{GD}	–	–	113	–	171	–	261	–	443	–	616
80	P_{GA}	–	–	32.9	–	–	–	–	–	–	–	–
	P_{GB}	–	–	69.4	–	–	–	–	–	–	–	–
	P_{GC}	–	–	72.9	–	–	–	–	–	–	–	–
	P_{GD}	–	–	106	–	–	–	–	–	–	–	–

For notes and legend for tables, see page 3/5

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Overview tables

Type B4
Nominal power ratings, gear unit sizes 505 to 514

Technical data

Nominal power ratings P_{2N} (kW) type B4

			Gear unit sizes										
i_N	n_1	n_2	504	505	506	507	508	509	510	511	512	513	514
63	1800	29	–	35	–	63	–	108	–	182	–	298	–
	1500	24	–	29	–	52	–	90	–	152	–	248	–
	1200	19	–	23	–	42	–	72	–	122	–	199	–
	1000	16	–	19	–	35	–	60	–	101	–	165	–
71	1800	25	–	31	–	57	–	97	–	163	–	263	–
	1500	21	–	26	–	47	–	81	–	136	–	219	–
	1200	17	–	21	–	38	–	64	–	109	–	175	–
	1000	14	–	17	–	31	–	54	–	91	–	146	–
80	1800	23	–	27	–	50	65	85	113	145	188	236	289
	1500	19	–	23	–	42	54	71	94	120	157	197	240
	1200	15	–	18	–	34	43	56	75	96	126	157	192
	1000	13	–	15	–	28	36	47	63	80	105	131	160
90	1800	20	–	24	35	44	59	76	100	128	168	204	255
	1500	17	–	20	29	37	49	63	84	107	140	170	212
	1200	13	–	16	23	30	39	51	67	86	112	136	170
	1000	11	–	14	19	25	33	42	56	71	94	114	141
100	1800	18	–	21	31	40	52	67	88	114	149	183	229
	1500	15	–	18	26	33	44	55	73	95	124	153	191
	1200	12	–	14	21	26	35	44	59	76	100	122	152
	1000	10	–	12	17	22	29	37	49	63	83	102	127
112	1800	16	–	20	27	36	46	61	79	103	133	162	198
	1500	13	–	16	23	30	38	51	66	86	111	135	165
	1200	11	–	13	18	24	31	41	53	68	88	108	132
	1000	8.9	–	11	15	20	26	34	44	57	74	90	110
125	1800	14	–	17	25	32	41	53	69	91	118	146	178
	1500	12	–	14	21	26	34	44	58	76	98	122	148
	1200	10	–	11	16	21	27	36	46	61	78	97	118
	1000	8.0	–	9.5	14	18	23	30	38	51	65	81	99
140	1800	13	–	16	21	29	37	49	63	83	106	132	157
	1500	11	–	13	18	24	31	41	53	69	88	110	131
	1200	8.6	–	11	14	19	25	33	42	55	71	88	105
	1000	7.1	–	8.8	12	16	21	27	35	46	59	73	87
160	1800	11	–	14	20	26	33	43	55	74	94	119	141
	1500	9.4	–	11	16	21	27	36	46	61	78	99	118
	1200	7.5	–	9.2	13	17	22	29	37	49	63	79	94
	1000	6.3	–	7.6	11	14	18	24	31	41	52	66	79
180	1800	10	–	12	17	22	30	38	51	65	86	103	128
	1500	8.3	–	10	14	19	25	32	43	54	71	86	107
	1200	6.7	–	8.2	12	15	20	26	34	43	57	69	85
	1000	5.6	–	6.8	9.6	12	17	21	28	36	48	57	71
200	1800	9.0	–	11	16	20	27	34	45	57	76	93	115
	1500	7.5	–	9.0	13	17	22	28	37	48	63	77	96
	1200	6.0	–	7.2	11	13	18	22	30	38	51	62	77
	1000	5.0	–	6.0	8.8	11	15	19	25	32	42	51	64
224	1800	8.0	–	9.8	14	18	23	31	40	52	67	84	100
	1500	6.7	–	8.2	12	15	19	25	33	44	56	70	83
	1200	5.4	–	6.5	9.3	12	16	20	27	35	45	56	67
	1000	4.5	–	5.4	7.7	10	13	17	22	29	37	47	55
250	1800	7.2	–	8.5	12	16	21	27	35	46	59	74	90
	1500	6.0	–	7.1	10	13	17	22	29	38	49	61	75
	1200	4.8	–	5.7	8.3	11	14	18	23	31	40	49	60
	1000	4.0	–	4.7	6.9	8.8	12	15	19	25	33	41	50
280	1800	6.4	–	7.7	11	14	19	24	32	41	54	66	81
	1500	5.4	–	6.4	9.1	12	16	20	26	34	45	55	68
	1200	4.3	–	5.2	7.3	9.4	13	16	21	27	36	44	54
	1000	3.6	–	4.3	6.1	7.9	10	13	18	23	30	37	45
315	1800	5.7	–	–	9.8	–	17	–	28	–	47	–	71
	1500	4.8	–	–	8.2	–	14	–	23	–	39	–	60
	1200	3.8	–	–	6.5	–	11	–	19	–	32	–	48
	1000	3.2	–	–	5.4	–	9.2	–	15	–	26	–	40
355	1800	5.1	–	–	8.7	–	15	–	25	–	42	–	64
	1500	4.2	–	–	7.2	–	12	–	21	–	35	–	54
	1200	3.4	–	–	5.8	–	9.7	–	16	–	28	–	43
	1000	2.8	–	–	4.8	–	8.1	–	14	–	23	–	36

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Technical data (continued)

Nominal output torques T_{2N} (kNm) type B4

i_N	Gear unit sizes																			
	503	504		505		506		507		508		509		510		511	512	513	514	Type
5	3.4	6.2		9.8		–		19.2		–		32.3		–		–	–	–	–	B2
5.6	3.1	6.2		9.8		–		19.2		–		32.3		–		–	–	–	–	B2
6	–	–		–		–		–		25		–		41.6		–	–	–	–	B2
6.3	3.4	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	B2
6.7	–	–		–		–		–		25.2		–		41.6		–	–	–	–	B2
7.1	3.2	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	B2
7.5	–	–		–		–		–		25		–		38.3		–	–	–	–	B2
8	3.4	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	B2
8.5	–	–		–		–		–		25		–		41.1		–	–	–	–	B2
9	3.1	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	B2
9.5	–	–		–		–		–		25		–		37.8		–	–	–	–	B2
10	3.4	6.2		9.8		13.3		19.2		–		32.3		–		–	–	–	–	B2
10.6	–	–		–		–		–		25		–		40.6		–	–	–	–	B2
11.2	3.3	6.2		9.8		14		19.2		–		32.3		–		–	–	–	–	B2
11.8	–	–		–		–		–		25		–		35.4		–	–	–	–	B2
12.5	3.4	6.2		9.8		12.5		19.2		–		32.3		–		–	–	–	–	B2
13.2	–	–		–		–		–		25.5		–		41.6		–	–	–	–	B2
14	3.4	6.2		9.8	11.6	14		19.2	21.5	–		32.3	37	–		63.5	–	101.5	–	B2
15	–	–		–	–	–		–	–	24		–	–	40.8		–	–	–	–	B2
16	3.4	6.2	7	9.8	11.6	14		19.2	21.5	–		32.3	37	–		63.5	–	101.5	–	B2
17	–	–	–	–	–	–		–	–	25		–	–	40.8		–	–	–	–	B2
18	–	–	7	–	11.6	14		–	21.5	–	28.3	–	37	–	48.5	63.5	81	101.5	125	B3
19	–	–	–	–	–	–		–	–	24	–	–	–	39.6	–	–	–	–	–	B3
20	–	–	7	–	11.6	14	16.2	–	21.5	–	28.3	–	37	–	48.5	63.5	81	101.5	125	B3
22.4	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
25	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
28	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
31.5	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
35.5	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
40	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
45	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
50	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
56	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
63	–	7		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
71	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B3
80	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
90	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
100	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
112	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
125	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
140	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
160	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
180	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
200	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
224	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
250	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
280	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	B4
315	–	–		–		16.2		–		28.3		–		48.5		–	81	–	125	B4
355	–	–		–		16.2		–		28.3		–		48.5		–	81	–	125	B4

Type **B2**, see page 3/40
Type **B3**, see page 3/51

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Type B4 – Thermal capacities
n_1 = 1000 rpm, n_1 = 1200 rpm

Technical data (continued)

Thermal capacities P_G (kW) type B4
n_1 = 1000 rpm

		Gear unit sizes									
i_N		505	506	507	508	509	510	511	512	513	514
63	P_{GA}	28.1	–	42.7	–	60.9	–	93.9	–	124	–
71	P_{GA}	27	–	41.5	–	58.7	–	90.5	–	117	–
80	P_{GA}	26.5	–	40	46.5	57.2	65.6	87.1	100	114	132
90	P_{GA}	24.6	31	37.1	45.1	53.2	63.2	82.2	96.6	107	125
100	P_{GA}	24.2	29.8	35.8	43.4	51.9	61.7	78.8	93	105	122
112	P_{GA}	22.8	29.4	34	40.2	49	57.3	75.4	87.9	97.4	114
125	P_{GA}	22.4	27.2	32.8	38.8	47.7	55.9	72.6	84.6	95.3	111
140	P_{GA}	20.3	26.8	30.6	36.9	43.3	52.6	67.5	80.7	88.4	103
160	P_{GA}	20	25.2	29.6	35.6	42.3	51.2	65.1	77.6	86.6	101
180	P_{GA}	17.3	24.7	26.7	33.2	38.6	46.5	60.1	72.1	78.6	93.7
200	P_{GA}	17	22.5	25.8	32.1	37.7	45.4	58	69.4	77	91.9
224	P_{GA}	17.2	22.1	26	29	36.3	41.6	56.9	64.3	76.5	83.3
250	P_{GA}	16.6	19.2	25.3	28.1	35.5	40.6	54.2	62	71.9	81.7
280	P_{GA}	16	18.8	24.4	28.2	34.2	39.1	52.5	60.8	69.4	81
315	P_{GA}	–	19.1	–	27.5	–	38.2	–	57.8	–	76.1
355	P_{GA}	–	18.3	–	26.5	–	36.8	–	56	–	73.4

Thermal capacities P_G (kW) type B4
n_1 = 1200 rpm

		Gear unit sizes									
i_N		505	506	507	508	509	510	511	512	513	514
63	P_{GA}	29.4	–	44.8	–	63.6	–	97.5	–	127	–
71	P_{GA}	28.4	–	43.4	–	61.5	–	94	–	120	–
80	P_{GA}	27.9	–	41.9	48.8	59.9	68.4	90.5	104	118	135
90	P_{GA}	25.9	32.7	38.9	47.3	55.9	66.1	85.9	100	111	128
100	P_{GA}	25.5	31.4	37.6	45.6	54.5	64.5	82.8	96.9	109	126
112	P_{GA}	24.1	30.8	35.8	42.4	51.5	60.2	79.3	91.8	101	118
125	P_{GA}	23.7	28.7	34.6	40.8	50.2	58.8	76.1	88.5	99.5	116
140	P_{GA}	21.4	28.2	32.3	38.9	45.6	55.5	71.1	84.8	92.5	107
160	P_{GA}	21	26.7	31.2	37.6	44.6	54.1	68.4	81.5	90.5	105
180	P_{GA}	18	26.2	27.7	35	40.2	49.2	62.9	76	81.9	98.1
200	P_{GA}	17.8	23.7	26.9	33.9	39.3	47.9	60.6	73.2	80.3	96.1
224	P_{GA}	18.1	23.3	27.1	30.1	37.9	43.3	59.5	67.1	80	86.9
250	P_{GA}	17.4	20	26.5	29.2	37	42.3	56.6	64.8	75.1	85.2
280	P_{GA}	16.8	19.7	25.5	29.6	35.7	40.8	54.9	63.6	72.4	84.7
315	P_{GA}	–	20	–	28.8	–	39.9	–	60.5	–	79.5
355	P_{GA}	–	19.2	–	27.7	–	38.5	–	58.6	–	76.7

For notes and legend for tables, see page 3/5

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Technical data (continued)

Thermal capacities P_G (kW) type B4
n_1 = 1500 rpm

		Gear unit sizes									
i_N		505	506	507	508	509	510	511	512	513	514
63	P_{GA}	31	–	46.9	–	66.1	–	100	–	128	–
71	P_{GA}	29.8	–	45.5	–	64.1	–	96.9	–	122	–
80	P_{GA}	29.3	–	43.9	51	62.6	71.6	93.2	107	120	137
90	P_{GA}	27.5	34.4	41.1	49.6	58.9	69.1	89.8	104	114	130
100	P_{GA}	27	33.1	39.7	47.9	57.5	67.4	86.5	100	112	128
112	P_{GA}	25.6	32.6	37.9	44.8	54.4	63.4	83.4	96.4	105	122
125	P_{GA}	25.1	30.4	36.7	43.2	53.1	62	80.3	92.7	103	119
140	P_{GA}	22.8	29.9	34.2	41.3	48.4	58.7	75.1	89	96.2	112
160	P_{GA}	22.4	28.3	33.1	39.9	47.3	57.3	72.2	85.8	94.4	110
180	P_{GA}	18.9	27.9	29.2	37.3	42.7	52.2	66.5	80.3	86	102
200	P_{GA}	18.6	25.3	28.3	36	41.7	50.9	64.4	77.4	84.2	100
224	P_{GA}	19.2	24.9	28.8	31.7	40.2	45.9	63.6	71.3	85.2	91.3
250	P_{GA}	18.4	20.9	28	30.7	38.9	44.8	59.9	68.7	79.3	89.6
280	P_{GA}	17.7	20.6	26.9	31.3	37.5	43.1	58	67.9	76.5	90.2
315	P_{GA}	–	21.2	–	30.4	–	42	–	63.8	–	83.9
355	P_{GA}	–	20.3	–	29.3	–	40.5	–	61.9	–	81

Thermal capacities P_G (kW) type B4
n_1 = 1800 rpm

		Gear unit sizes									
i_N		505	506	507	508	509	510	511	512	513	514
63	P_{GA}	31.8	–	48.1	–	67.6	–	100	–	126	–
71	P_{GA}	30.7	–	46.7	–	65.4	–	97.6	–	120	–
80	P_{GA}	30.2	–	45.2	52.6	63.9	73.3	94.3	108	118	136
90	P_{GA}	28.4	35.6	42.5	51	60.7	70.9	91.9	105	114	130
100	P_{GA}	28	34.3	41.1	49.3	59.4	69.3	88.5	101	112	128
112	P_{GA}	26.6	33.7	39.4	46.3	56.5	65.6	85.8	98.8	106	122
125	P_{GA}	26.2	31.7	38.1	44.8	55.2	64.1	82.8	95.2	104	120
140	P_{GA}	23.8	31.1	35.6	43	50.4	60.9	77.6	92.2	98.2	114
160	P_{GA}	23.5	29.6	34.5	41.5	49.3	59.5	74.9	88.6	96.3	112
180	P_{GA}	19.8	29	30.5	38.9	44.6	54.3	69.3	83	88.2	104
200	P_{GA}	19.4	26.4	29.6	37.5	43.5	53.1	66.9	80.4	86.4	102
224	P_{GA}	20.3	26	30.4	33.1	42.1	48	66.8	74	89	93.8
250	P_{GA}	19.3	21.9	29.6	32.1	40.9	46.9	62.9	71.6	82.9	92
280	P_{GA}	18.7	21.6	28.5	33	39.5	45.4	61.1	71.4	80.1	94.5
315	P_{GA}	–	22.4	–	32	–	43.9	–	67.2	–	87.9
355	P_{GA}	–	21.3	–	30.9	–	42.4	–	65.2	–	85

For notes and legend for tables, see page 3/5

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Overview tables

Types H1, H2, H3, H4
Actual ratio, gear unit sizes 503 to 514

Technical data

Actual ratio for types H1, H2, H3, H4

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
1.12	1.12	1.10	1.10	–	1.08	–	1.10	–	–	–	–	–	
1.25	1.23	1.26	1.23	–	1.26	–	1.27	–	–	–	–	–	
1.32	–	–	–	–	–	1.34	–	1.35	–	–	–	–	
1.4	1.41	1.39	1.38	1.45	1.39	–	1.40	–	–	–	–	–	
1.5	–	–	–	–	–	1.54	–	1.54	–	–	–	–	
1.6	1.62	1.61	1.59	1.60	1.56	–	1.63	–	–	–	–	–	
1.7	–	–	–	–	–	1.70	–	1.69	–	–	–	–	
1.8	1.78	1.77	1.78	1.78	1.81	–	1.80	–	–	–	–	–	
1.9	–	–	–	–	–	1.91	–	1.94	–	–	–	–	
2	1.97	1.97	1.97	2.03	2.00	–	2.00	–	–	–	–	–	
2.12	–	–	–	–	–	2.16	–	2.13	–	–	–	–	
2.24	2.27	2.22	2.26	2.25	2.22	–	2.23	–	–	–	–	–	
2.36	–	–	–	–	–	2.38	–	2.36	–	–	–	–	
2.5	2.50	2.48	2.52	2.47	2.48	–	2.50	–	–	–	–	–	
2.65	–	–	–	–	–	2.67	–	2.62	–	–	–	–	H1
2.8	2.77	2.78	2.83	2.81	2.78	–	2.82	–	–	–	–	–	
3	–	–	–	–	–	2.96	–	2.92	–	–	–	–	
3.15	3.13	3.21	3.21	3.12	3.14	–	3.20	–	–	–	–	–	
3.35	–	–	–	–	–	3.30	–	3.27	–	–	–	–	
3.55	3.50	3.59	3.64	3.48	3.62	–	3.60	–	–	–	–	–	
3.75	–	–	–	–	–	3.71	–	3.70	–	–	–	–	
4	4.00	4.05	4.05	3.92	4.05	–	4.11	–	–	–	–	–	
4.25	–	–	–	–	–	4.24	–	4.15	–	–	–	–	
4.5	4.50	4.55	4.50	4.41	4.45	–	4.67	–	–	–	–	–	
4.75	–	–	–	–	–	4.74	–	4.72	–	–	–	–	
5	5.06	4.89	5.06	4.90	5.06	–	5.00	–	–	–	–	–	
5.3	–	–	–	–	–	5.20	–	5.33	–	–	–	–	
5.6	5.53	5.53	5.61	5.45	5.56	–	5.71	–	–	–	–	–	
6	–	–	–	–	–	5.89	–	5.71	–	–	–	–	

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Technical data (continued)

Actual ratio for types H1, H2, H3, H4 (continued)

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
6.3	–	6.36	6.38	–	6.26	–	6.43	–	6.47	–	6.30	–	
7.1	–	7.18	7.04	–	6.93	–	7.10	–	7.16	–	7.00	–	
8	–	7.89	8.11	–	7.84	7.94	8.16	8.11	7.95	7.99	7.81	8.01	
9	–	8.71	8.95	8.81	8.75	8.79	9.10	8.96	8.88	8.84	8.75	8.90	
10	–	9.80	9.91	9.73	9.80	9.94	10.21	10.29	9.96	9.82	9.86	9.93	
11.2	–	10.86	11.18	11.21	11.31	11.11	11.59	11.48	11.25	10.96	11.20	11.13	
12.5	–	12.63	12.53	12.37	12.66	12.43	13.13	12.87	12.95	12.30	12.60	12.54	H2
14	–	14.07	14.32	13.70	14.28	14.35	14.63	14.62	14.50	13.89	14.39	14.24	
16	–	15.79	16.11	15.46	16.04	16.06	16.25	16.57	15.93	16.00	16.33	16.02	
18	–	17.87	18.09	17.32	17.26	18.12	18.26	18.45	18.09	17.92	17.50	18.29	
20	–	19.93	20.50	19.79	20.57	20.36	20.64	20.50	19.96	19.67	19.95	20.77	
22.4	–	–	22.96	22.26	23.02	21.90	23.39	23.03	22.98	22.35	22.44	22.25	
25	–	–	26.25	25.01	25.97	26.10	26.05	26.03	25.73	24.65	25.63	25.37	
28	–	–	28.39	28.34	27.95	29.21	29.76	29.51	28.78	28.39	28.47	28.54	
31.5	–	–	32.45	31.75	31.52	32.94	33.15	32.86	32.23	31.79	32.51	32.59	
35.5	–	–	34.69	36.28	34.82	35.45	36.36	37.55	35.98	35.56	35.61	36.19	
40	–	–	39.64	39.25	39.27	39.99	40.50	41.82	40.29	39.82	40.66	41.33	
45	–	–	43.84	44.86	45.15	44.18	45.96	45.87	46.51	44.44	45.82	45.27	
50	–	–	50.11	47.95	50.92	49.83	51.19	51.09	52.08	49.77	52.32	51.70	H3
56	–	–	57.26	54.80	57.13	57.27	58.50	57.98	58.74	57.45	58.28	58.25	
63	–	–	63.29	60.61	63.95	64.60	66.39	64.58	63.40	64.34	63.70	66.53	
71	–	–	72.33	69.26	72.12	72.47	73.94	73.80	70.99	72.56	72.74	74.09	
80	–	–	–	79.16	81.47	81.13	83.79	83.75	84.61	78.32	82.23	80.99	
90	–	–	–	87.49	91.40	91.50	93.84	93.28	94.70	87.70	93.20	92.49	
100	–	–	–	99.99	101.83	103.35	107.25	105.70	106.80	104.52	103.8	104.55	
112	–	–	–	–	114.25	115.96	116.03	118.39	114.94	116.98	118.6	118.50	
125	–	–	–	–	125.33	129.19	132.60	135.30	129.64	131.93	132.09	131.98	
140	–	–	–	–	140.62	144.95	141.75	146.37	143.23	141.99	144.90	150.79	
160	–	–	–	–	157.38	159.01	162.00	167.28	161.54	160.14	161.38	167.94	
180	–	–	–	–	176.57	178.40	179.16	178.82	185.69	176.93	183.13	184.22	
200	–	–	–	–	203.67	199.66	204.75	204.37	209.43	199.55	203.96	205.18	H4
224	–	–	–	–	230.47	224.01	234.00	226.01	234.97	229.38	233.10	232.84	
250	–	–	–	–	258.57	258.38	258.63	258.30	263.02	258.70	264.52	259.32	
280	–	–	–	–	292.59	292.38	295.58	295.20	296.65	290.25	294.61	296.37	
315	–	–	–	–	–	328.04	332.53	326.27	333.27	324.91	327.35	336.32	
355	–	–	–	–	–	371.20	–	372.88	–	366.45	–	374.58	
400	–	–	–	–	–	–	–	419.49	–	411.69	–	416.20	

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Overview tables

Types B2, B3, B4
Actual ratio, gear unit sizes 503 to 514

Technical data

Actual ratio for types B2, B3, B4

	Gear unit sizes																	
i_N	503	504		505		506		507		508		509		510		511	512	513	514	Type
5	4.93	5.06		5.06		–		5.04		–		5.01		–		–	–	–	–	
5.6	5.64	5.71		5.63		–		5.64		–		5.72		–		–	–	–	–	
6	–	–		–		–		–		5.90		–		5.77		–	–	–	–	
6.3	6.26	6.43		6.51		6.13		6.48		–		6.44		–		–	–	–	–	
6.7	–	–		–		–		–		6.59		–		6.57		–	–	–	–	
7.1	7.16	7.25		7.25		5.63		7.25		–		7.36		–		–	–	–	–	
7.5	–	–		–		–		–		7.58		–		7.43		–	–	–	–	
8	7.82	8.03		8.18		7.89		8.37		–		8.05		–		–	–	–	–	
8.5	–	–		–		–		–		8.48		–		8.45		–	–	–	–	
9	8.94	9.05		9.11		8.77		9.37		–		9.19		–		–	–	–	–	
9.5	–	–		–		–		–		9.80		–		9.28		–	–	–	–	B2
10	9.69	9.94		10.07		9.92		10.02		–		9.97		–		–	–	–	–	
10.6	–	–		–		–		–		10.95		–		10.56		–	–	–	–	
11.2	11.08	11.22		11.22		11.03		11.22		–		11.38		–		–	–	–	–	
11.8	–	–		–		–		–		11.74		–		11.49		–	–	–	–	
12.5	12.41	12.73		12.89		12.21		12.83		–		12.76		–		–	–	–	–	
13.2	–	–		–		–		–		13.12		–		13.08		–	–	–	–	
14	14.18	14.36		14.36	13.97	13.57		14.37	13.80	–		14.58	14.20	–		13.86	–	13.72	–	
15	–	–		–	–	–		–	–	15.03		–	–	14.71		–	–	–	–	
16	15.64	15.83	15.30	15.83	15.76	15.63		15.84	15.94	–		16.07	16.12	–		15.65	–	15.58	–	
17	–	–	–	–	–	–		–	–	16.79		–	–	16.74		–	–	–	–	
18	–	–	17.80	–	17.65	17.37		–	17.84	–	17.51	–	18.27	–	17.91	18.02	17.12	17.53	17.45	
19	–	–	–	–	–	–		–	–	18.52	–	–	–	18.46	–	–	–	–	–	
20	–	–	19.83	–	20.17	19.15	19.31	–	20.12	–	20.22	–	20.35	–	20.33	20.18	19.33	20.02	19.81	
22.4	–	22.25		22.42		21.79		22.66		22.64		23.50		23.05		23.18	22.26	22.55	22.29	
25	–	25.18		25.62		24.40		25.56		25.53		26.17		25.67		25.95	24.93	25.75	25.45	
28	–	28.25		28.00		27.89		28.30		28.75		29.55		29.64		29.95	28.63	28.16	28.67	
31.5	–	31.46		32.00		30.99		31.92		32.42		32.91		33.02		33.54	32.06	32.16	32.74	B3
35.5	–	35.29		34.69		35.41		35.07		35.91		36.36		37.27		35.87	37.00	34.89	35.81	
40	–	38.97		39.64		38.71		39.55		40.50		40.50		41.51		40.17	41.43	39.85	40.89	
45	–	43.72		44.41		44.24		44.89		44.49		46.56		45.87		45.92	44.31	44.67	44.36	
50	–	49.90		50.76		47.95		50.63		50.17		51.85		51.09		51.42	49.62	51.02	50.66	
56	–	55.98		55.96		54.80		55.83		56.96		57.17		58.73		56.70	56.73	56.25	56.80	
63	–	61.72		63.04		61.39		64.40		64.24		64.40		65.41		65.57	63.52	64.23	64.86	
71	–	–		70.60		70.16		71.75		70.83		72.13		72.12		73.39	70.04	72.80	71.51	
80	–	–		80.69		77.36		80.50		81.70		82.43		81.24		82.77	81.00	81.08	81.66	
90	–	–		89.66		87.14		91.11		91.02		91.60		90.99		93.20	90.66	93.63	92.56	
100	–	–		102.47		97.60		102.23		102.12		104.68		103.99		105.12	102.25	104.28	103.09	
112	–	–		112.00		111.54		113.81		115.59		114.42		115.56		116.42	115.13	117.73	119.05	
125	–	–		128.00		123.94		127.69		129.69		130.76		132.06		131.31	129.85	131.12	132.59	
140	–	–		138.75		141.65		141.00		144.39		141.75		144.34		144.23	143.81	144.90	149.68	
160	–	–		158.57		154.82		158.20		162.00		162.00		164.96		162.67	162.20	161.38	166.71	B4
180	–	–		177.65		176.94		180.52		178.88		181.48		178.82		184.66	178.17	185.51	184.22	
200	–	–		203.02		191.81		202.54		200.70		207.41		204.37		208.27	200.94	206.61	205.18	
224	–	–		223.85		219.21		223.31		229.02		228.68		228.95		229.63	228.11	227.80	235.86	
250	–	–		255.08		245.57		254.47		256.95		260.59		261.65		261.67	257.27	259.59	262.69	
280	–	–		285.45		280.65		287.95		283.31		293.16		288.49		293.97	283.66	288.43	289.63	
315	–	–		–		309.44		–		322.84		–		328.75		–	323.24	–	330.05	
355	–	–		–		352.61		–		365.32		–		369.84		–	363.14	–	366.72	

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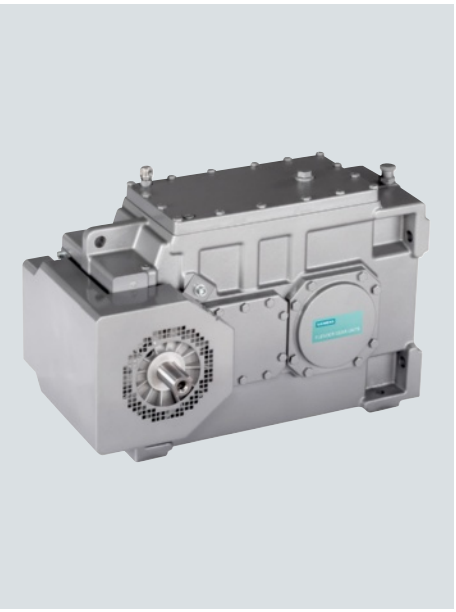
Helical gear units
horizontal mounting position

4



4/2 **Type H1**
Gear unit dimensions
4/2 Single-stage, gear unit sizes 503 to 508
4/4 Single-stage, gear unit sizes 509 and 510

4/6 **Type H2**
Gear unit dimensions
4/6 Two-stage, gear unit sizes 504 to 508
4/8 Two-stage, gear unit sizes 509 to 514

4/10 **Type H3**
Gear unit dimensions
4/10 Three-stage, gear unit sizes 505 to 508
4/12 Three-stage, gear unit sizes 509 to 514

4/14 **Type H4**
Gear unit dimensions
4/14 Four-stage, gear unit sizes 507 and 508
4/16 Four-stage, gear unit sizes 509 to 514

Types H1, H2, H3 and H4
4/18 Order number overview

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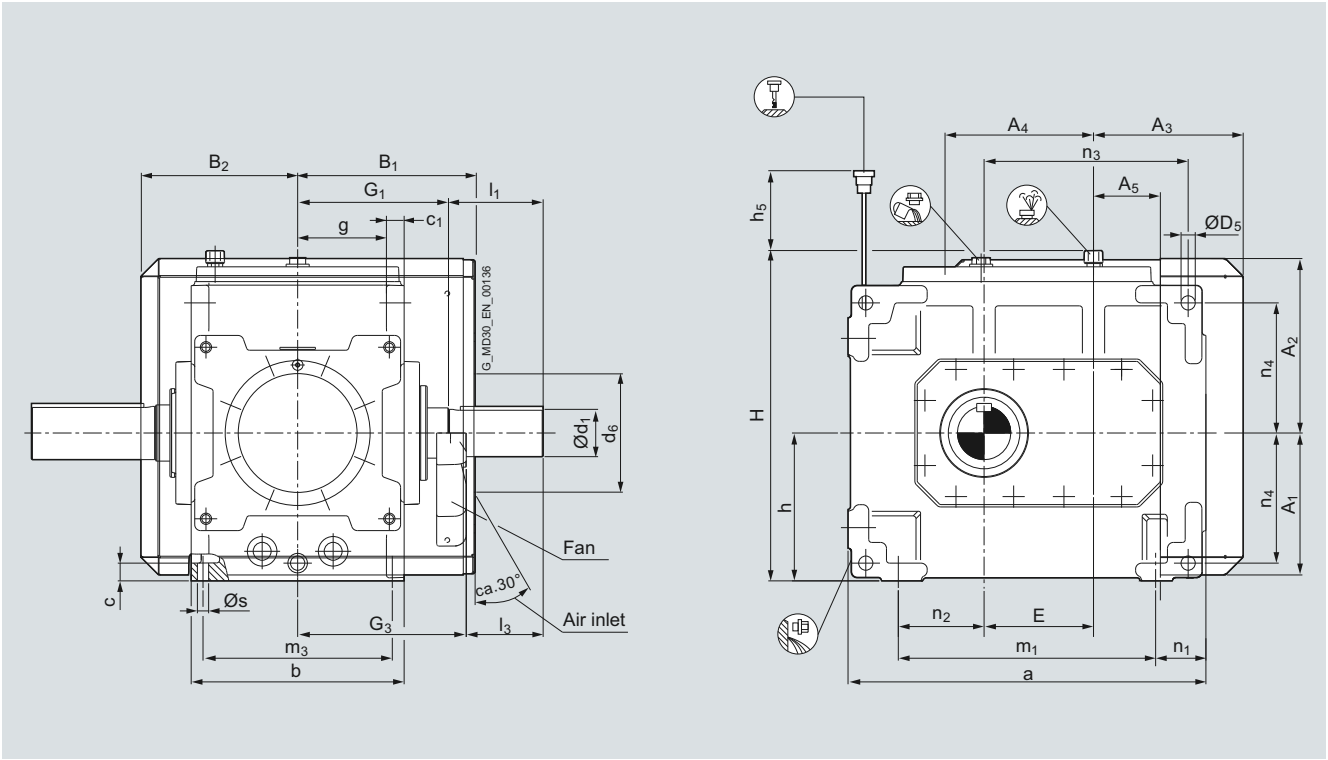
Type H1

Gear unit dimensions
Single-stage, gear unit sizes 503 to 508

Selection and ordering data



Dimensions in mm

Gear unit sizes		Input									Fan								
		d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	A_4	A_5	B_1	B_2	d_6
	i_N =	1.12 – 2.8			3.15 – 4			4.5 – 5.6												
503		60 m6	125	105	45 m6	100	80	32 m6	80	60	205	225	185	235	200	200	135	250	170	130
	i_N =	1.12 – 2.8			3.15 – 5.6															
504		70 m6	135	105	50 m6	110	80				220	250	210	260	230	200	165	270	205	130
	i_N =	1.12 – 2.8			3.15 – 4			4.5 – 5.6												
505		80 m6	160	130	60 m6	140	110	50 m6	110	80	255	285	230	280	260	235	160	310	225	190
	i_N =	1.4 – 3.55			4 – 5			5.6												
506		80 m6	160	130	60 m6	140	110	50 m6	110	80	255	285	230	280	260	235	160	310	225	190
	i_N =	1.12 – 2.8			3.15 – 4			4.5 – 5.6												
507		100 m6	180	145	80 m6	165	130	70 m6	140	105	290	325	295	345	295	290	165	350	285	245
	i_N =	1.32 – 3.35			3.75 – 4.75			5.3 – 6												
508		100 m6	180	145	80 m6	165	130	70 m6	140	105	290	325	295	345	295	290	165	350	285	245

Dimensions in mm

Gear unit sizes	Gear units															
	a	b	c	c_1	D_5	E	g	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s
503	448	260	25	25	19	128	105	460	200	90	290	220	78	110	230	175	15
504	544	325	30	30	24	159	132.5	510	225	220	360	280	96.5	137.5	290	195	19
505	605	360	30	30	24	185	150	560	250	155	435	320	85	145	345	220	19
506	656	360	30	30	24	216	150	560	250	155	486	320	85	165	376	220	19
507	713	465	35	40	28	228	192.5	700	315	155	480	410	118	145	415	280	24
508	773	465	35	40	28	258	192.5	700	315	155	540	410	118	175	445	280	24

Note:
Remove air guide cover before fitting the foundation bolts.

Note:
For shaft details, see pages 6/2 to 6/5.

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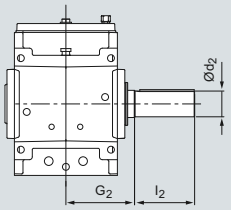
Selection and ordering data (continued)

Output

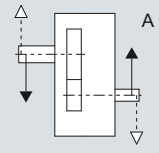
					Oil quantity [1]	Weight [1] [2]	For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21		
Order No.:					2LP202■-■■K■■-■■■■				
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft
H1SH	**503**	65 m6	140	185	10.5	150	**2**	**A**	
	504	80 m6	170	220	17	245	**3**	**A**	
	505	90 m6	210	240	23	350	**4**	**A**	
	506	100 m6	210	240	25	395	**5**	**A**	
	507	105 n6	235	295	44	620	**6**	**A**	
	508	120 n6	250	295	48	710	**7**	**A**	

G_MD30_XX_00138

Design

A

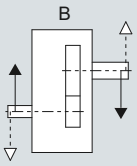
2LP202■-■■K■■-■■■■

0	

G_MD30_XX_00146

B

2LP202■-■■K■■-■■■■

1	

G_MD30_XX_00147

[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

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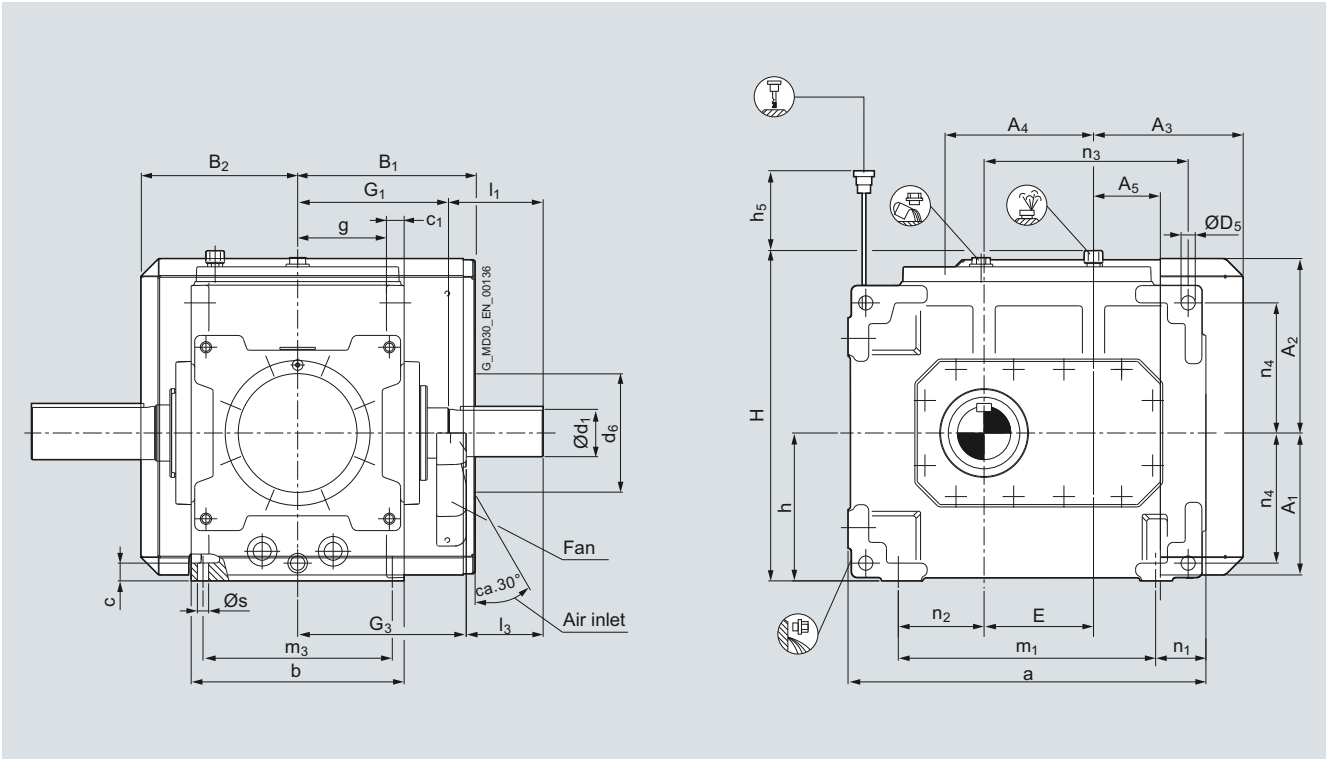
Type H1

Gear unit dimensions
Single-stage, gear unit sizes 509 and 510

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**											**Fan**							
		d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	A_4	A_5	B_1	B_2	d_6
	i_N =	1.12 – 2.8			3.15 – 4			4.5 – 5.6												
509		110 n6	200	165	90 m6	165	130	75 m6	140	105	340	375	335	385	335	290	105	395	325	290
	i_N =	1.32 – 3.35			3.75 – 4.75			5.3 – 6												
510		110 n6	200	165	90 m6	165	130	75 m6	140	105	340	375	335	385	335	290	105	395	325	290

Gear unit sizes	Dimensions in mm **Gear units**															
	a	b	c	c_1	D_5	E	g	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s
509	860	550	40	55	35	265	220	780	355	160	575	480	145	190	480	307.5	28
510	916	550	40	55	35	296	220	780	355	160	631	480	145	215	511	307.5	28

Note:
Remove air guide cover before fitting the foundation bolts.

Note:
For shaft details, see pages 6/2 to 6/5.

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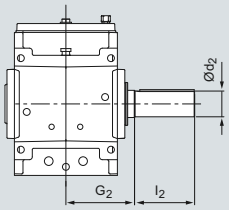
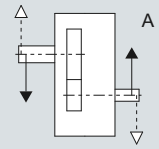
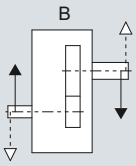
Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]			For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21
Order No.:						2LP202■-■■K■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft
H1SH	**509**	135 n6	260	335	70	970	**8**	**A**	
	510	150 n6	280	335	74	1100	**0**	**B**	

G_MD30_XX_00138

Design

A	B
2LP202■-■■K■■-■■■■	2LP202■-■■K■■-■■■■
0	**1**
	
G_MD30_XX_00146	G_MD30_XX_00147

[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

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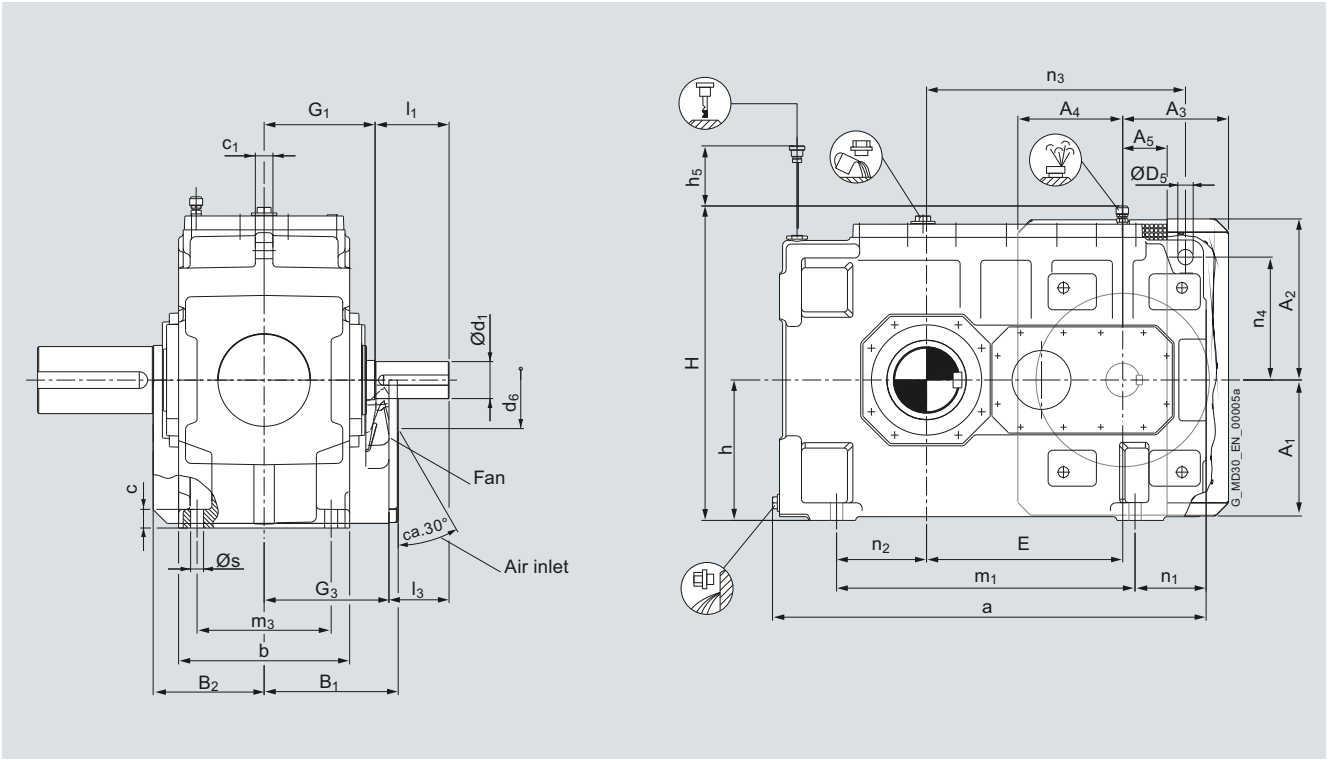
Type H2

Gear unit dimensions
Two-stage, gear unit sizes 504 to 508

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**										**Fan**							
		d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	A_4	A_5	B_1	B_2	d_6
	i_N =	6.3 – 11.2			12.5 – 16			18 – 20												
504		45 m6	100	80	35 m6	80	60	28 m6	70	50	170	190	195	240	180	160	70	240	175	150
	i_N =	6.3 – 10			11.2 – 14			16 – 18												
505		60 m6	125	105	45 m6	100	80	32 m6	80	60	195	215	225	280	195	175	85	255	180	160
	i_N =	9 – 14			16 – 20			22.4 – 25												
506		60 m6	125	105	45 m6	100	80	32 m6	80	60	195	215	225	280	195	175	85	255	180	160
	i_N =	6.3 – 10			11.2 – 18															
507		70 m6	135	105	50 m6	110	80				215	245	275	330	235	210	100	290	205	190
	i_N =	8 – 12.5			14 – 22.4															
508		70 m6	135	105	50 m6	110	80				215	245	275	330	235	210	100	290	205	190

Gear unit sizes	Dimensions in mm **Gear units**															**Backstop** [1]	
	a	b	c	c_1	D_5	E	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
504	604	210	28	18	19	269.5	465	200	220	415	170	95	130	355	175	19	145	210
505	684	250	30	27	24	310	530	230	355	490	200	95	145	405	202	19	180	254
506	807	250	30	27	24	363	530	230	355	613	200	95	215	458	202	19	180	254
507	855	295	35	30	28	384	635	280	300	595	230	129	180	505	250	24	195	320
508	962	295	35	30	28	431	635	280	300	702	230	129	240	552	250	24	195	320

Note:
Remove air guide cover before fitting the foundation bolts.

Note:
For shaft details, see pages 6/2 to 6/5.

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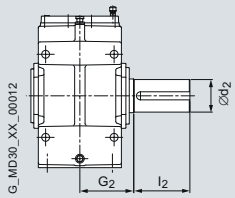
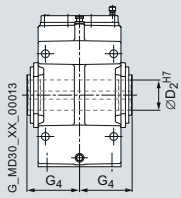
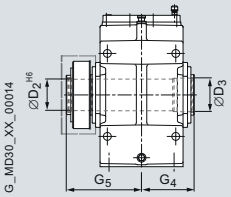
Selection and ordering data (continued)

Output

					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21
	Order No.:					2LP202■-■■L■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
H2SH	**504**	80 m6	170	140	12	190	**3**	**A**	
	505	100 m6	210	165	18	285	**4**	**A**	
	506	110 n6	210	165	19	360	**5**	**A**	
	507	120 n6	210	195	30	515	**6**	**A**	
	508	130 n6	250	195	35	620	**7**	**A**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H2HH	**504**	80 H7		140	12	190	**3**	**D**	
	505	95 H7		165	18	285	**4**	**D**	
	506	105 H7		165	19	360	**5**	**D**	
	507	115 H7		195	30	515	**6**	**D**	
	508	125 H7		195	35	620	**7**	**D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
H2DH	**504**	85 H6	85	140	215	12	190	**3**	**G**
	505	100 H6	100	165	255	18	285	**4**	**G**
	506	110 H6	110	165	260	19	360	**5**	**G**
	507	120 H6	120	195	290	30	515	**6**	**G**
	508	130 H6	130	195	305	35	620	**7**	**G**

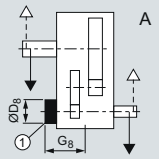




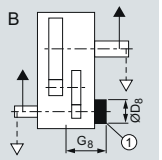


Design

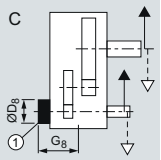
A — **2LP202■-■■L■■-■■■■** — **0**



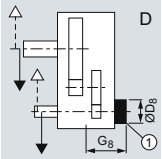
B — **2LP202■-■■L■■-■■■■** — **1**



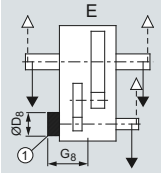
C — **2LP202■-■■L■■-■■■■** — **2**



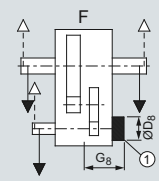
D — **2LP202■-■■L■■-■■■■** — **3**



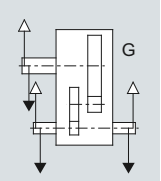
E — **2LP202■-■■L■■-■■■■** — **4**



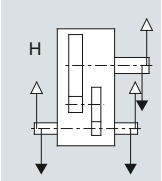
F — **2LP202■-■■L■■-■■■■** — **5**



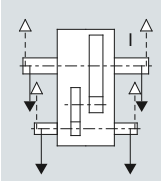
G — **2LP202■-■■L■■-■■■■** — **6**



H — **2LP202■-■■L■■-■■■■** — **7**



I — **2LP202■-■■L■■-■■■■** — **8**



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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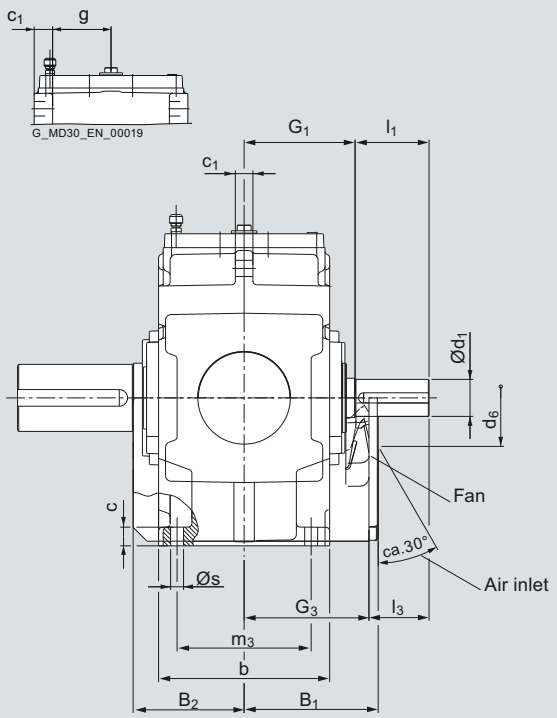
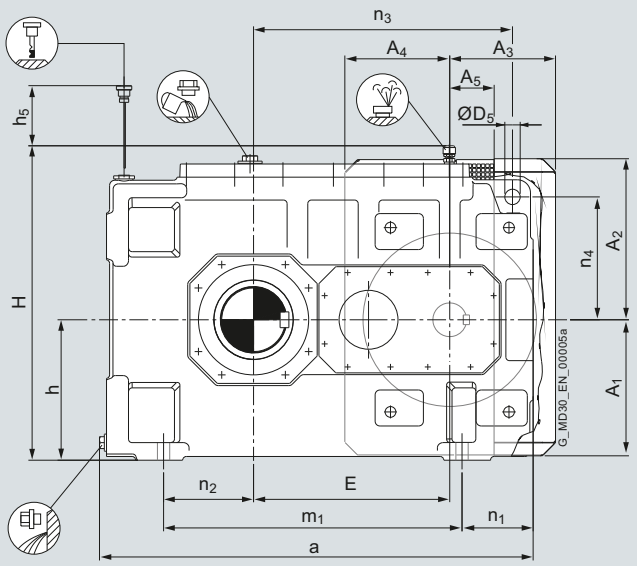
Type H2

Gear unit dimensions
Two-stage, gear unit sizes 509 to 514

Selection and ordering data

Gear unit sizes 513 + 514





Dimensions in mm

Gear unit sizes		Input									Fan								
		d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	A_4	A_5	B_1	B_2	d_6
	i_N =	6.3 – 10			11.2 – 14			16 – 18												
509		80 m6	160	130	60 m6	140	110	50 m6	110	80	240	270	315	375	265	240	100	320	245	175
	i_N =	8 – 12.5			14 – 18			20 – 22.4												
510		80 m6	160	130	60 m6	140	110	50 m6	110	80	240	270	315	375	265	240	100	320	245	175
	i_N =	6.3 – 10			11.2 – 14			16 – 18												
511		100 m6	180	145	80 m6	165	130	70 m6	140	105	275	310	375	435	320	295	155	360	285	240
	i_N =	8 – 12.5			14 – 18			20 – 22.4												
512		100 m6	180	145	80 m6	165	130	70 m6	140	105	275	310	375	435	320	295	155	360	285	240
	i_N =	6.3 – 10			11.2 – 14			16 – 18												
513		110 n6	200	165	90 m6	165	130	75 m6	140	105	330	365	435	500	375	350	200	425	335	225
	i_N =	8 – 12.5			14 – 18			20 – 22.4												
514		110 n6	200	165	90 m6	165	130	75 m6	140	105	330	365	435	500	375	350	200	425	335	225

Dimensions in mm

Gear unit sizes	Gear units																	Backstop [1]	
	a	b	c	c_1	D_5	E	g	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
509	988	370	40	38	35	447	–	715	320	360	680	290	162	205	590	280	28	235	355
510	1106	370	40	38	35	500	–	715	320	360	798	290	162	270	643	280	28	235	355
511	1204	430	50	43	40	547	–	830	380	430	825	340	202	255	713	328	35	255	389
512	1332	430	50	43	40	605	–	830	380	430	953	340	202	325	771	328	35	255	389
513	1345	535	60	65	48	640	202.5	950	440	195	920	445	245	260	842	380	42	300	455
514	1463	535	60	65	48	718	202.5	950	440	195	1038	445	245	300	920	380	42	300	455

Note:
Remove air guide cover before fitting the foundation bolts.

Note:
For shaft details, see pages 6/2 to 6/5.

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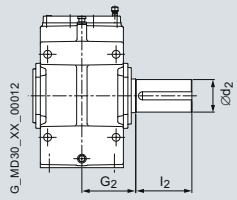
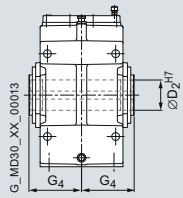
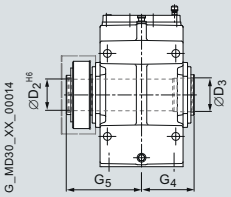
Selection and ordering data (continued)

Output

					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21
	Order No.:					2LP202■-■■L■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
H2SH	**509**	145 n6	250	240	52	830	**8**	**A**	
	510	160 n6	300	240	55	945	**0**	**B**	
	511	175 n6	300	270	84	1250	**1**	**B**	
	512	185 n6	350	270	89	1570	**2**	**B**	
	513	200 n6	350	330	150	2600	**3**	**B**	
	514	210 n6	350	330	155	2965	**4**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H2HH	**509**	135 H7		235	52	830	**8**	**D**	
	510	150 H7		235	55	945	**0**	**E**	
	511	165 H7		270	84	1250	**1**	**E**	
	512	180 H7		270	89	1570	**2**	**E**	
	513	190 H7		330	150	2600	**3**	**E**	
	514	210 H7		330	155	2965	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
H2DH	**509**	140 H6	145	235	350	52	830	**8**	**G**
	510	150 H6	155	235	370	55	945	**0**	**H**
	511	165 H6	170	270	420	84	1250	**1**	**H**
	512	180 H6	185	270	425	89	1570	**2**	**H**
	513	190 H6	195	330	495	150	2600	**3**	**H**
	514	210 H6	215	330	495	155	2965	**4**	**H**

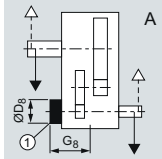




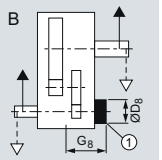


Design

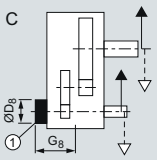
A
2LP202■-■■L■■-■■■■



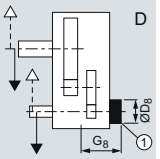
B
2LP202■-■■L■■-■■■■



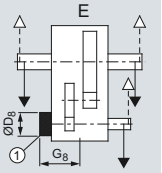
C
2LP202■-■■L■■-■■■■



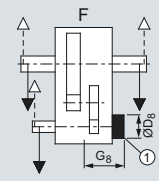
D
2LP202■-■■L■■-■■■■



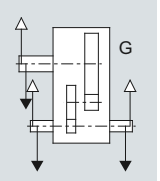
E
2LP202■-■■L■■-■■■■



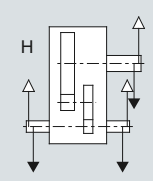
F
2LP202■-■■L■■-■■■■



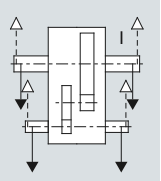
G
2LP202■-■■L■■-■■■■



H
2LP202■-■■L■■-■■■■



I
2LP202■-■■L■■-■■■■



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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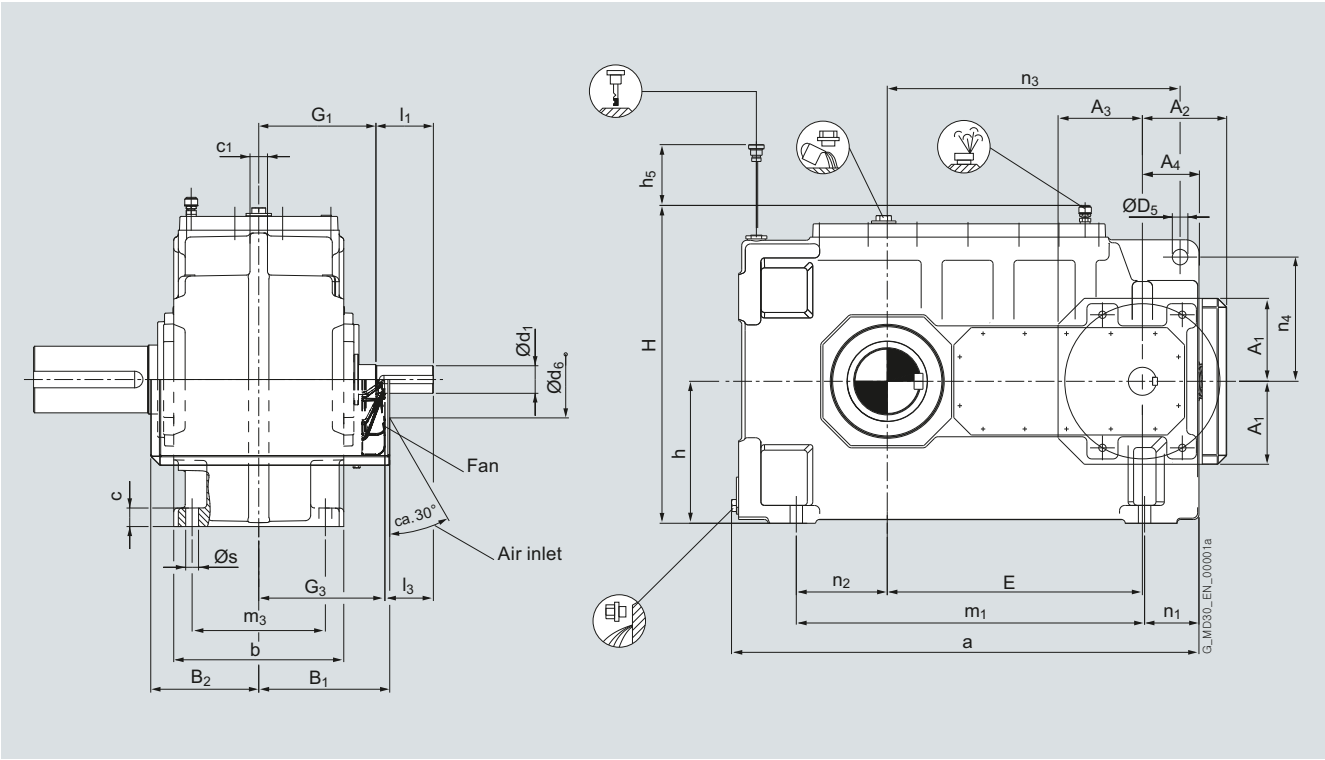
Type H3

Gear unit dimensions
Three-stage, gear unit sizes 505 to 508

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**										**Fan**						
		d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	A_4	B_1	B_2	d_6
	i_N =	20 – 40			45 – 56			63 – 71											
505		40 m6	90	70	30 m6	70	50	24 k6	60	40	180	200	145	150	140	85	215	175	135
	i_N =	28 – 56			63 – 80			90 – 100											
506		40 m6	90	70	30 m6	70	50	24 k6	60	40	180	200	145	150	140	85	215	175	135
	i_N =	20 – 40			45 – 56			63 – 71											
507		45 m6	100	80	35 m6	80	60	28 m6	70	50	210	230	165	185	190	115	245	205	150
	i_N =	25 – 50			56 – 71			80 – 90											
508		45 m6	100	80	35 m6	80	60	28 m6	70	50	210	230	165	185	190	115	245	205	150

Gear unit sizes	Dimensions in mm **Gear units**																**Backstop** [1]	
	a	b	c	c_1	D_5	E	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
505	727	250	30	27	24	400	530	230	350	530	200	97.5	145	455	202	19	155	225
506	850	250	30	27	24	453	530	230	350	653	200	97.5	215	508	202	19	155	225
507	912	295	35	30	28	493.5	635	280	295	680	230	101	180	570	250	24	180	290
508	1019	295	35	30	28	540.5	635	280	295	787	230	101	240	617	250	24	180	290

Note:
For shaft details, see pages 6/2 to 6/5.

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Selection and ordering data (continued)

Output

Order No.: 2LP202■-■■M■■-■■■■

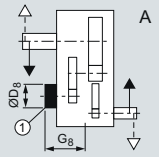
Type	Size	d_2	l_2	G_2	l	kg			Oil quantity [2]	Weight [2) 3)]	For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21
H3SH	**505**	100 m6	210	165	20	310	4	A			**Solid shaft**
	506	110 n6	210	165	21	380	5	A			
	507	120 n6	210	195	35	550	6	A			
	508	130 n6	250	195	37	650	7	A			

Type	Size	D_2	G_4	l	kg			Hollow shaft with keyway
H3HH	**505**	95 H7	165	20	310	4	D	
	506	105 H7	165	21	380	5	D	
	507	115 H7	195	35	550	6	D	
	508	125 H7	195	37	650	7	D	

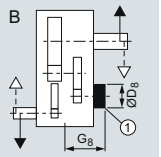
Type	Size	D_2	D_3	G_4	G_5	l	kg			Hollow shaft for shrink disk
H3DH	**505**	100 H6	100	165	255	20	310	4	G	
	506	110 H6	110	165	260	21	380	5	G	
	507	120 H6	120	195	290	35	550	6	G	
	508	130 H6	130	195	305	37	650	7	G	

Design

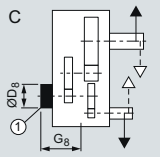
A 2LP202■-■■M■■-■■■■ — 0



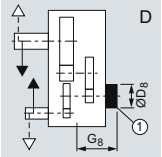
B 2LP202■-■■M■■-■■■■ — 1



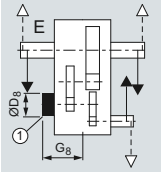
C 2LP202■-■■M■■-■■■■ — 2



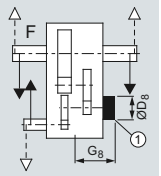
D 2LP202■-■■M■■-■■■■ — 3



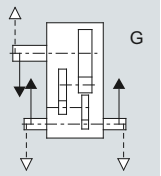
E 2LP202■-■■M■■-■■■■ — 4



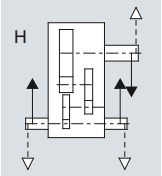
F 2LP202■-■■M■■-■■■■ — 5



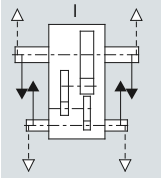
G 2LP202■-■■M■■-■■■■ — 6



H 2LP202■-■■M■■-■■■■ — 7



I 2LP202■-■■M■■-■■■■ — 8



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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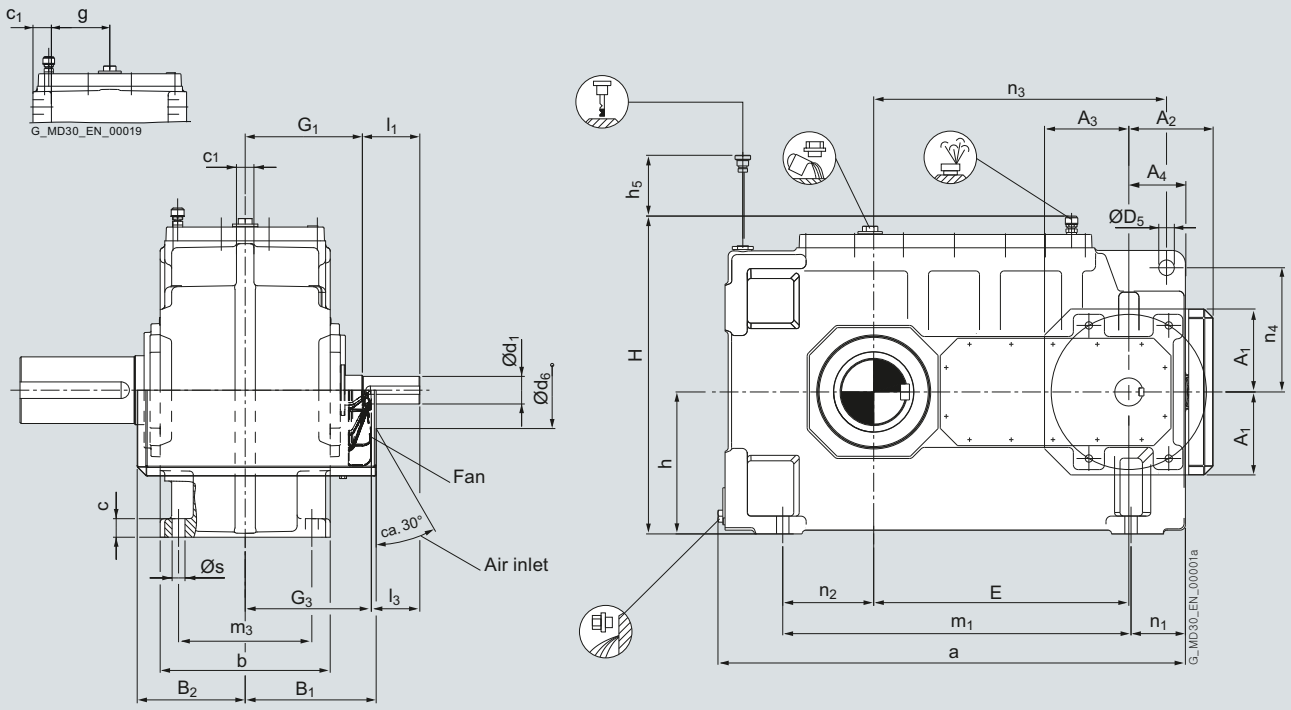
Type H3

Gear unit dimensions
Three-stage, gear unit sizes 509 to 514

Selection and ordering data

Gear unit sizes 513 + 514



Dimensions in mm

Gear unit sizes		Input									Fan							
		d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	A_4	B_1	B_2	d_6
	i_N =	20 – 40			45 – 56			63 – 71											
509		60 m6	125	105	45 m6	100	80	32 m6	80	60	255	275	195	205	190	135	285	235	160
	i_N =	25 – 50			56 – 71			80 – 90											
510		60 m6	125	105	45 m6	100	80	32 m6	80	60	255	275	195	205	190	135	285	235	160
	i_N =	20 – 40			45 – 56			63 – 71											
511		70 m6	135	105	50 m6	110	80	48 m6	110	80	275	305	225	245	240	165	325	270	190
	i_N =	25 – 50			56 – 71			80 – 90											
512		70 m6	135	105	50 m6	110	80	48 m6	110	80	275	305	225	245	240	165	325	270	190
	i_N =	20 – 40			45 – 56			63 – 71											
513		85 m6	160	130	65 m6	140	110	50 m6	110	80	320	350	275	295	270	190	380	325	175
	i_N =	25 – 50			56 – 71			80 – 90											
514		85 m6	160	130	65 m6	140	110	50 m6	110	80	320	350	275	295	270	190	380	325	175

Dimensions in mm

Gear unit sizes	Gear units																	Backstop [1]	
	a	b	c	c_1	D_5	E	g	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
509	1054	370	40	38	35	575	–	715	320	350	785	290	122.5	205	660	280	28	200	335
510	1172	370	40	38	35	628	–	715	320	350	903	290	122.5	270	713	280	28	200	335
511	1296	430	50	43	40	706	–	830	380	420	960	340	158.5	255	805	320	35	240	370
512	1424	430	50	43	40	764	–	830	380	420	1088	340	158.5	325	863	320	35	240	370
513	1452	535	60	65	48	825	202.5	950	440	180	1092	445	180	260	952	380	42	260	445
514	1570	535	60	65	48	903	202.5	950	440	180	1210	445	180	300	1030	380	42	260	445

Note:
For shaft details, see pages 6/2 to 6/5.

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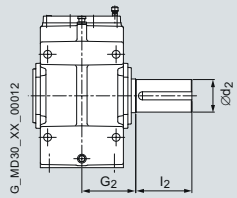
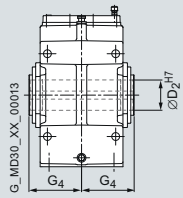
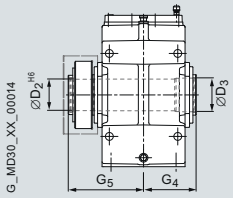
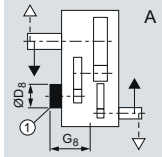
Selection and ordering data (continued)

Output

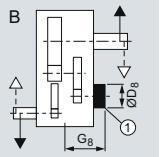
					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21
	Order No.:					2LP202■-■■M■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
H3SH	**509**	145 n6	250	240	56	885	**8**	**A**	
	510	160 n6	300	240	60	1035	**0**	**B**	
	511	175 n6	300	270	91	1470	**1**	**B**	
	512	185 n6	350	270	105	1695	**2**	**B**	
	513	200 n6	350	330	175	2420	**3**	**B**	
	514	210 n6	350	330	180	2860	**4**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H3HH	**509**	135 H7		235	56	885	**8**	**D**	
	510	150 H7		235	60	1035	**0**	**E**	
	511	165 H7		270	91	1470	**1**	**E**	
	512	180 H7		270	105	1695	**2**	**E**	
	513	190 H7		330	175	2420	**3**	**E**	
	514	210 H7		330	180	2860	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
H3DH	**509**	140 H6	145	235	350	56	885	**8**	**G**	
	510	150 H6	155	235	370	60	1035	**0**	**H**	
	511	165 H6	170	270	420	91	1470	**1**	**H**	
	512	180 H6	185	270	425	105	1695	**2**	**H**	
	513	190 H6	195	330	495	175	2420	**3**	**H**	
	514	210 H6	215	330	495	180	2860	**4**	**H**	

Design

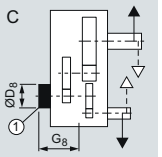
A — 2LP202■-■■M■■-■■■■ — **0**



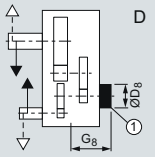
B — 2LP202■-■■M■■-■■■■ — **1**



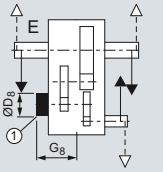
C — 2LP202■-■■M■■-■■■■ — **2**



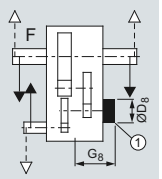
D — 2LP202■-■■M■■-■■■■ — **3**



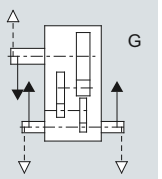
E — 2LP202■-■■M■■-■■■■ — **4**



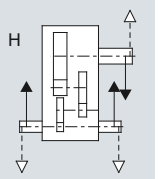
F — 2LP202■-■■M■■-■■■■ — **5**



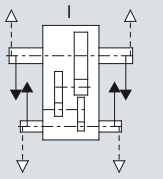
G — 2LP202■-■■M■■-■■■■ — **6**



H — 2LP202■-■■M■■-■■■■ — **7**



I — 2LP202■-■■M■■-■■■■ — **8**



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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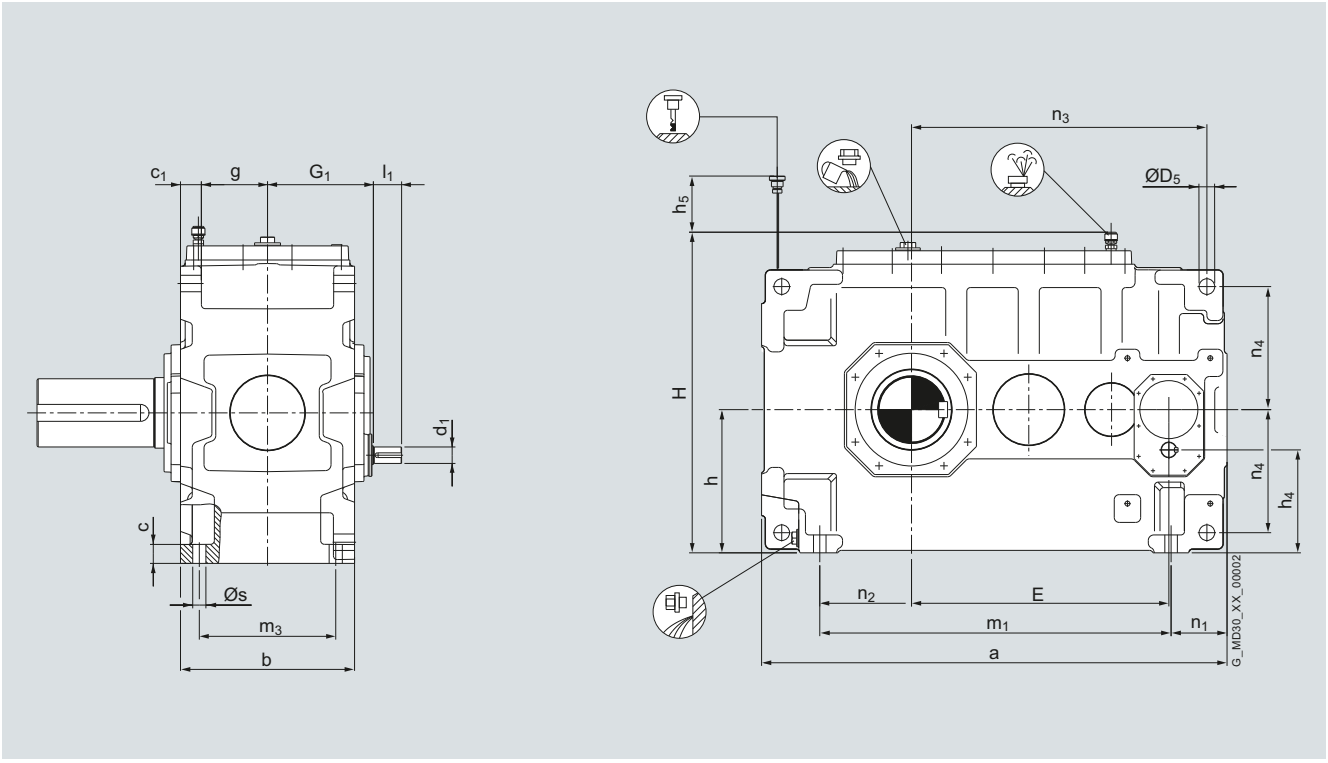
Type H4

Gear unit dimensions
Four-stage, gear unit sizes 507 and 508

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**				
						Designs G, H, I on request for
		d_1 l_1	d_1 l_1	G_1		
	i_N =	80 – 140	160 – 280		224 – 280	
507		35 m6 60	28 m6 50	215		
	i_N =	100 – 180	200 – 355		280 – 355	
508		35 m6 60	28 m6 50	215		

Gear unit sizes	Dimensions in mm **Gear units**																		**Backstop** [1]	
	a	b	c	c_1	D_5	E	g	H	h	h_4	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
507	899	295	35	35	28	493.5	112.5	635	280	198	115	680	230	104	180	567.5	242.5	24	105	245
508	1006	295	35	35	28	540.5	112.5	635	280	198	115	787	230	104	240	614.5	242.5	24	105	245

Note:
For shaft details, see pages 6/2 to 6/5.

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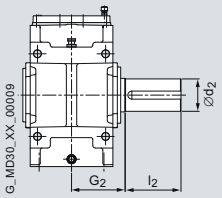
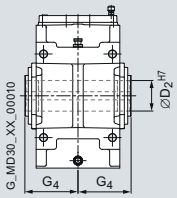
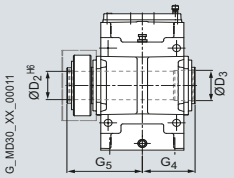
Selection and ordering data (continued)

Output

					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21
	Order No.:					2LP202■-■■N■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
H4SH	**507**	120 n6	210	195	30	520	**6**	**A**	
	508	130 n6	250	195	32	615	**7**	**A**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H4HH	**507**	115 H7		195	30	520	**6**	**D**	
	508	125 H7		195	32	615	**7**	**D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
H4DH	**507**	120 H6	120	195	290	30	520	**6**	**G**
	508	130 H6	130	195	305	32	615	**7**	**G**

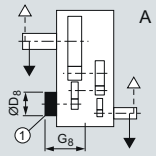




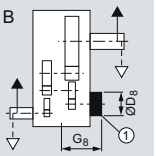


Design

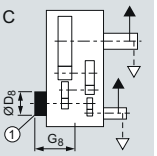
A — **2LP202■-■■N■■-■■■■** — **0**



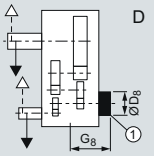
B — **2LP202■-■■N■■-■■■■** — **1**



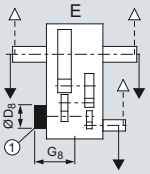
C — **2LP202■-■■N■■-■■■■** — **2**



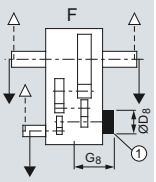
D — **2LP202■-■■N■■-■■■■** — **3**



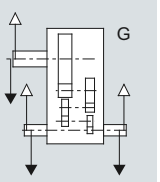
E — **2LP202■-■■N■■-■■■■** — **4**



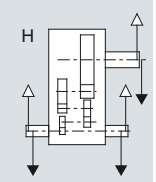
F — **2LP202■-■■N■■-■■■■** — **5**



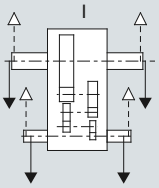
G — **2LP202■-■■N■■-■■■■** — **6**



H — **2LP202■-■■N■■-■■■■** — **7**



I — **2LP202■-■■N■■-■■■■** — **8**



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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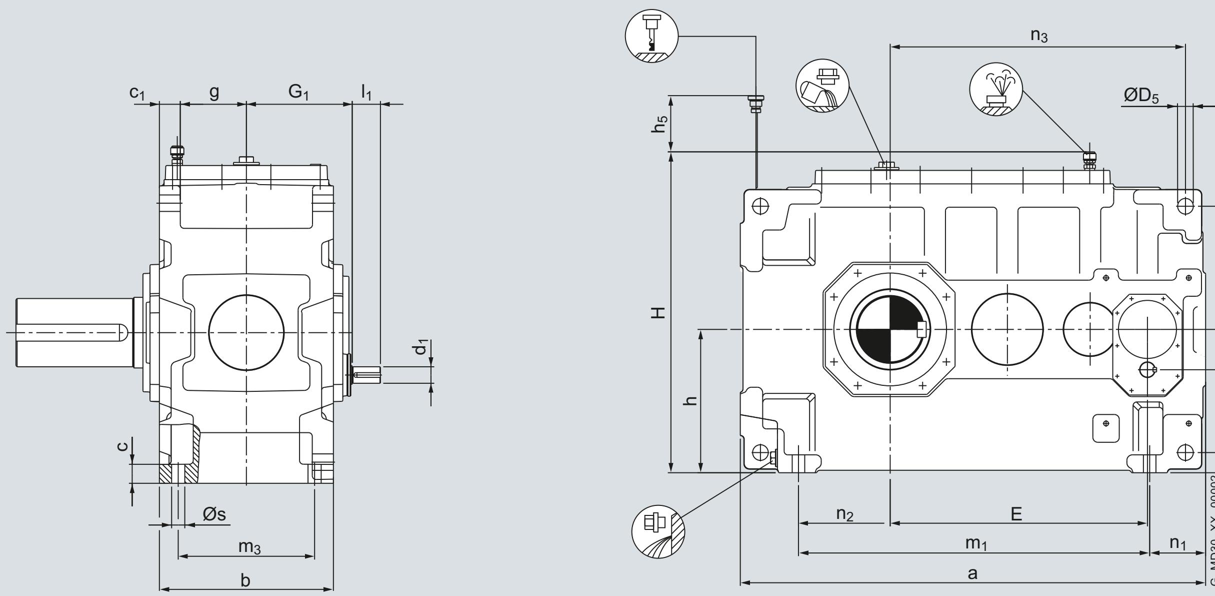
Helical gear units horizontal mounting position

Type H4

Gear unit dimensions
Four-stage, gear unit sizes 509 to 514

Selection and ordering data



Gear unit sizes		Dimensions in mm Input							Designs G, H, I on request for
		d_1	l_1	d_1	l_1	d_1	l_1	G_1	
	i_N =	80 – 160		180 – 315					250 – 315
509		35 m6	60	28 m6	50			225	
	i_N =	100 – 200		224 – 400					315 – 400
510		35 m6	60	28 m6	50			225	
	i_N =	80 – 160		180 – 224		250 – 315			250 – 315
511		45 m6	100	35 m6	80	28 m6	70	255	
	i_N =	100 – 200		224 – 280		315 – 400			315 – 400
512		45 m6	100	35 m6	80	28 m6	70	255	
	i_N =	80 – 160		180 – 224		250 – 315			250 – 315
513		60 m6	125	45 m6	100	32 m6	80	305	
	i_N =	100 – 200		224 – 280		315 – 400			315 – 400
514		60 m6	125	45 m6	100	32 m6	80	305	

Gear unit sizes	Dimensions in mm Gear units																		Backstop [1]	
	a	b	c	c_1	D_5	E	g	H	h	h_4	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
509	1040	370	40	45	35	575	140	715	320	230	135	785	290	125	205	458	275	28	130	285
510	1158	370	40	45	35	628	140	715	320	230	135	903	290	125	270	713	275	28	130	285
511	1281	430	50	60	40	706	155	830	380	270.5	145	960	340	161	255	812.5	330	35	155	335
512	1409	430	50	60	40	764	155	830	380	270.5	145	1088	340	161	325	870.5	330	35	155	335
513	1455	535	60	65	48	825	202.5	950	440	312	165	1092	445	183	260	952	380	42	180	405
514	1573	535	60	65	48	903	202.5	950	440	312	165	1210	445	183	300	1030	380	42	180	405

Note:
For shaft details, see pages 6/2 to 6/5.

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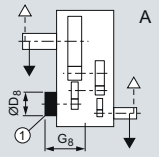
Selection and ordering data (continued)

Output

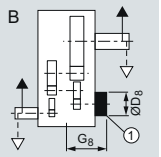
					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 4/18 to 4/21
	Order No.:					2LP202■-■■N■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
H4SH	**509**	145 n6	250	240	58	820	**8**	**A**	
	510	160 n6	300	240	60	980	**0**	**B**	
	511	175 n6	300	270	90	1450	**1**	**B**	
	512	185 n6	350	270	100	1620	**2**	**B**	
	513	200 n6	350	330	145	2375	**3**	**B**	
	514	210 n6	350	330	155	2690	**4**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H4HH	**509**	135 H7		235	58	820	**8**	**D**	
	510	150 H7		235	60	980	**0**	**E**	
	511	165 H7		270	90	1450	**1**	**E**	
	512	180 H7		270	100	1620	**2**	**E**	
	513	190 H7		330	145	2375	**3**	**E**	
	514	210 H7		330	155	2690	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
H4DH	**509**	140 H6	145	235	350	58	820	**8**	**G**
	510	150 H6	155	235	370	60	980	**0**	**H**
	511	165 H6	170	270	420	90	1450	**1**	**H**
	512	180 H6	185	270	425	100	1620	**2**	**H**
	513	190 H6	195	330	495	145	2375	**3**	**H**
	514	210 H6	215	330	495	155	2690	**4**	**H**

Design

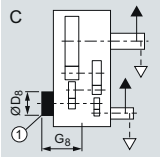
A — 2LP202■-■■N■■-■■■■ — **0**



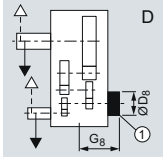
B — 2LP202■-■■N■■-■■■■ — **1**



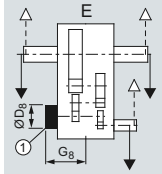
C — 2LP202■-■■N■■-■■■■ — **2**



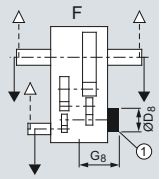
D — 2LP202■-■■N■■-■■■■ — **3**



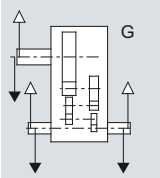
E — 2LP202■-■■N■■-■■■■ — **4**



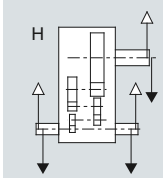
F — 2LP202■-■■N■■-■■■■ — **5**



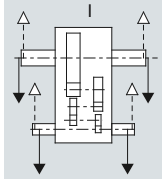
G — 2LP202■-■■N■■-■■■■ — **6**



H — 2LP202■-■■N■■-■■■■ — **7**



I — 2LP202■-■■N■■-■■■■ — **8**



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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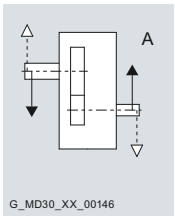
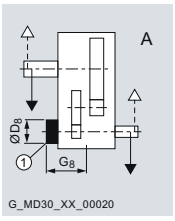
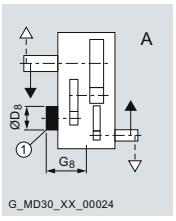
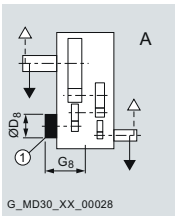
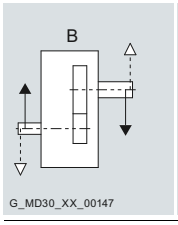
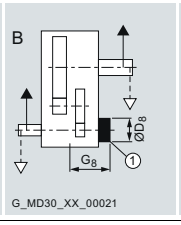
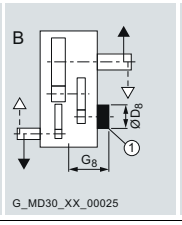
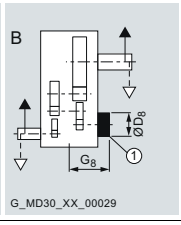
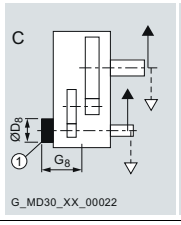
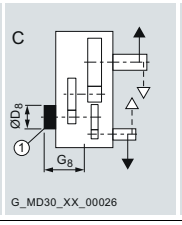
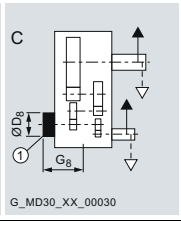
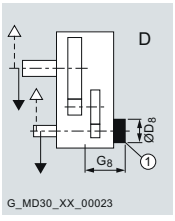
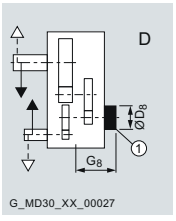
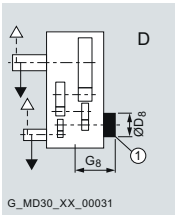
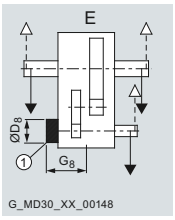
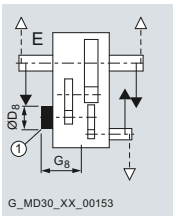
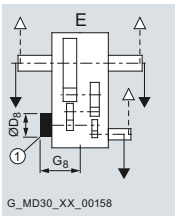
Order number overview

Selection and ordering data

Order no. supplement 7th position

	Position	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Order number	**2LP202**	■	-	.	.	.	.	-	.	.	.	**-Z** . . .

Design

	Type H1.H	H2.H	H3.H	H4.H	
A	 G_MD30_XX_00146	 G_MD30_XX_00020	 G_MD30_XX_00024	 G_MD30_XX_00028	**0**
B	 G_MD30_XX_00147	 G_MD30_XX_00021	 G_MD30_XX_00025	 G_MD30_XX_00029	**1**
C --		 G_MD30_XX_00022	 G_MD30_XX_00026	 G_MD30_XX_00030	**2**
D --		 G_MD30_XX_00023	 G_MD30_XX_00027	 G_MD30_XX_00031	**3**
E --		 G_MD30_XX_00148	 G_MD30_XX_00153	 G_MD30_XX_00158	**4**

① Backstop

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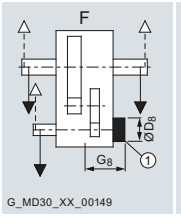
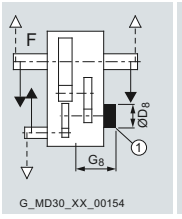
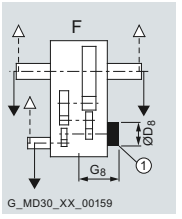
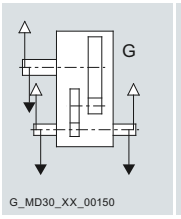
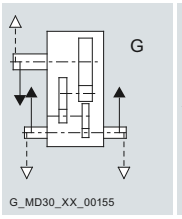
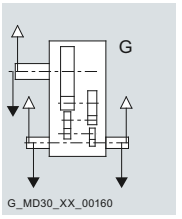
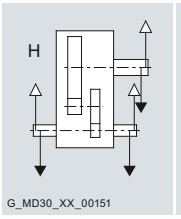
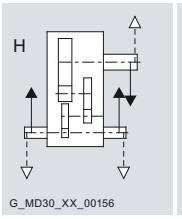
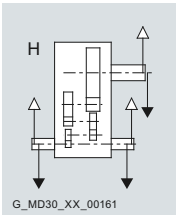
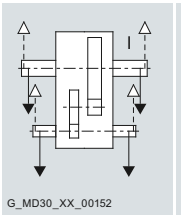
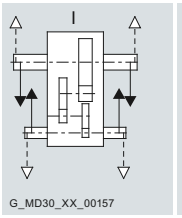
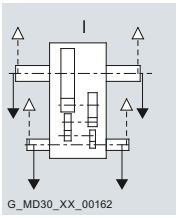
Selection and ordering data (continued)

Order no. supplement 7th position (continued)

	Position	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Order number	**2LP202**	■	-	.	.	.	.	-	.	.	.	**-Z** . . .

Design

	Type H1.H	H2.H	H3.H	H4.H	
F	--				**5**
G	--				**6**
H	--				**7**
I	--				**8**

① Backstop

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Order number overview

Selection and ordering data (continued)

Order no. supplement 8th to 10th position

		Position	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Order number	**2LP202**	.	-	■	■	■	.	.	-	.	.	.	.	-Z	.	.	.
Output shaft, gear unit size																			
Output shaft	**Gear unit size**																		
Solid shaft (S)																			
	503				**2**	**A**													
	504				**3**	**A**													
	505				**4**	**A**													
	506				**5**	**A**													
	507				**6**	**A**													
	508				**7**	**A**													
	509				**8**	**A**													
	510				**0**	**B**													
	511				**1**	**B**													
	512				**2**	**B**													
	513				**3**	**B**													
	514				**4**	**B**													
Hollow shaft with keyway (H)																			
	504				**3**	**D**													
	505				**4**	**D**													
	506				**5**	**D**													
	507				**6**	**D**													
	508				**7**	**D**													
	509				**8**	**D**													
	510				**0**	**E**													
	511				**1**	**E**													
	512				**2**	**E**													
	513				**3**	**E**													
	514				**4**	**E**													
Hollow shaft for shrink disk (D)																			
	504				**3**	**G**													
	505				**4**	**G**													
	506				**5**	**G**													
	507				**6**	**G**													
	508				**7**	**G**													
	509				**8**	**G**													
	510				**0**	**H**													
	511				**1**	**H**													
	512				**2**	**H**													
	513				**3**	**H**													
	514				**4**	**H**													
Gear unit type, number of stages, mounting position																			
H1.H							**K**												
H2.H							**L**												
H3.H							**M**												
H4.H							**N**												

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Selection and ordering data (continued)

Order no. supplement 11th to 16th position

							Position	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
							Order number	**2LP202**	.	-	.	.	■	■	-	■	■	■	■	-Z ■ ■ ■
Seal for shaft 1																			
Shaft d1 with WDR													0						
Shaft d1 with labyrinth seal													2						
Shaft d1 with taconite E													4						
Seal for shaft 2																			
Shaft d2 with WDR														0					
Shaft d2 with labyrinth seal														2					
Shaft d2 with taconite F														4					
Shaft d2 with taconite F-F														6					
Shaft d2 with taconite F-H														7					
Shaft d2 with taconite F-K														8					
Shaft variants																			
Standard shaft d1 and standard shaft d2															0				
Gear ratio																			
	Type/gear unit size																		
	H1.H				H2.H	H3.H	H4.H												
	503, 504, 505, 507, 509	506	508, 510		504 ... 514	504 ... 514	507 ... 514												
i_N	1.12	–	–		6.3	20	80									A			
i_N	1.25	–	–		7.1	22.4	90									B			
i_N	1.4	1.4	1.32		8	25	100									C			
i_N	1.6	1.6	1.5		9	28	112									D			
i_N	1.8	1.8	1.7		10	31.5	125									E			
i_N	2	2	1.9		11.2	35.5	140									F			
i_N	2.24	2.24	2.12		12.5	40	160									G			
i_N	2.5	2.5	2.36		14	45	180									H			
i_N	2.8	2.8	2.65		16	50	200									J			
i_N	3.15	3.15	3		18	56	224									K			
i_N	3.55	3.55	3.35		20	63	250									L			
i_N	4	4	3.75		22.4	71	280									M			
i_N	4.5	4.5	4.25		25	80	315									N			
i_N	5	5	4.75		–	90	355									P			
i_N	5.6	5.6	5.3		–	100	400									Q			
i_N	–	–	6		–	–	–									R			
Oil supply																			
Dip lubrication																	A		
Other oil supply																	Z		Q 0 Y
Auxiliary cooling																			
Without auxiliary cooling																		0	
Auxiliary cooling with fan																		1	
Auxiliary cooling with cooling coil (mounted on end face d2)																		2	
Auxiliary cooling with fan and cooling coil (mounted on end face d2)																		3	
Auxiliary cooling with cooling coil (mounted on end face d1)																		4	
Auxiliary cooling with fan and cooling coil (mounted on end face d1)																		5	

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Notes

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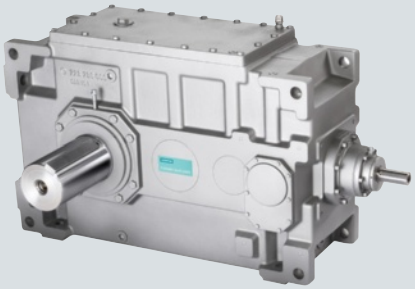
Bevel-helical gear units horizontal mounting position

5



5/2 **Type B2**
Gear unit dimensions
5/2 Two-stage, gear unit sizes 503 to 508
5/4 Two-stage, gear unit sizes 509 and 510

5/6 **Type B3**
Gear unit dimensions
5/6 Three-stage, gear unit sizes 504 to 508
5/8 Three-stage, gear unit sizes 509 to 514

5/10 **Type B4**
Gear unit dimensions
5/10 Four-stage, gear unit sizes 505 to 508
5/12 Four-stage, gear unit sizes 509 to 514

Types B2, B3 and B4
5/14 Order number overview

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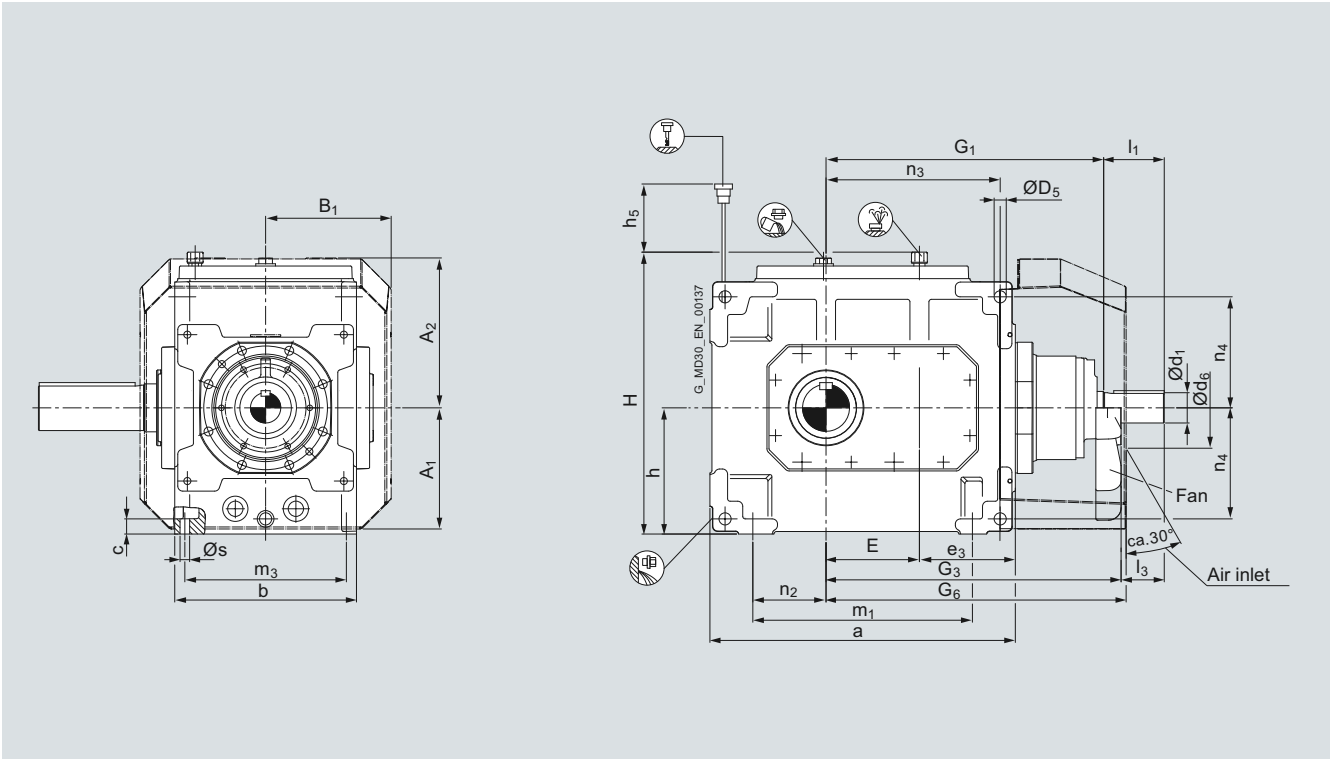
Type B2

Gear unit dimensions
Two-stage, gear unit sizes 503 to 508

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**								**Fan**				
		d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	B_1	d_6	G_6
	i_N =	5 – 14			16									
503		40 m6	90	70	35 m6	80	60	393	413	190	255	195	135	435
	i_N =	5 – 14			16									
504		50 m6	110	90	40 m6	90	70	465	485	215	280	230	150	505
	i_N =	5 – 14			16									
505		60 m6	120	90	50 m6	110	80	550	580	240	305	260	175	600
	i_N =	6.3 – 18			20									
506		60 m6	120	90	50 m6	110	80	581	611	240	305	260	175	635
	i_N =	5 – 14			16									
507		75 m6	135	100	60 m6	135	100	656	691	300	370	320	210	720
	i_N =	6 – 17			19									
508		75 m6	135	100	60 m6	135	100	686	721	300	370	320	210	750

Gear unit sizes	Dimensions in mm **Gear units**																	**Backstop** [1]	
	a	b	c	c_1	D_5	E	e_3	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
503	448	260	25	25	19	128	130	460	200	85	290	220	78	110	230	175	15	155	235
504	544	325	30	30	24	159	160	510	225	205	360	280	96.5	137.5	290	195	19	200	310
505	605	360	30	30	24	185	190	560	250	145	435	320	85	145	345	220	19	200	350
506	656	360	30	30	24	216	190	560	250	145	486	320	85	165	376	220	19	200	350
507	713	465	35	40	28	228	225	700	315	145	480	410	118	145	415	280	24	235	385
508	773	465	35	40	28	258	225	700	315	145	540	410	118	175	445	280	24	235	385

Note:

For shaft details, see pages 6/2 to 6/5.

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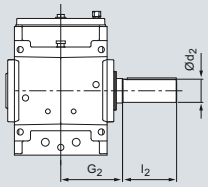
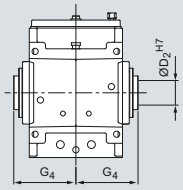
Selection and ordering data (continued)

Output

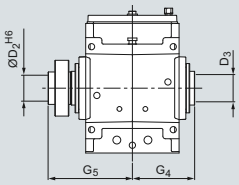
					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 5/14 to 5/16
	Order No.:					2LP202■-■■A■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
B2SH	**503**	65 m6	140	185	10	175	**2**	**A**	
	504	80 m6	170	220	16	280	**3**	**A**	
	505	90 m6	210	240	22	400	**4**	**A**	
	506	100 m6	210	240	24	450	**5**	**A**	
	507	105 n6	235	295	42	725	**6**	**A**	
	508	120 n6	250	295	45	790	**7**	**A**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
B2HH	**503**	–		–	–	–			
	504	80 H7		220	16	280	**3**	**D**	
	505	95 H7		240	22	400	**4**	**D**	
	506	105 H7		240	24	450	**5**	**D**	
	507	115 H7		295	42	725	**6**	**D**	
	508	125 H7		295	45	790	**7**	**D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
B2DH	**503**	–	–	–	–	–	–		
	504	85 H6	85	220	295	16	280	**3**	**G**
	505	100 H6	100	240	325	22	400	**4**	**G**
	506	110 H6	110	240	330	24	450	**5**	**G**
	507	120 H6	120	295	390	42	725	**6**	**G**
	508	130 H6	130	295	400	45	790	**7**	**G**



G_MD30_XX_00138



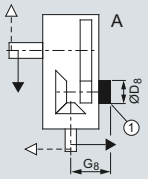
G_MD30_XX_00139



G_MD30_XX_00140

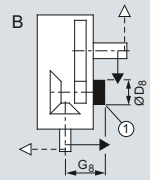
Design

A **2LP202■-■■A■■-■■■■** — **0**



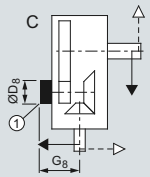
G_MD30_XX_00163

B **2LP202■-■■A■■-■■■■** — **1**



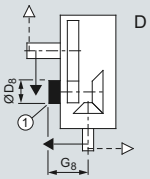
G_MD30_XX_00164

C **2LP202■-■■A■■-■■■■** — **2**



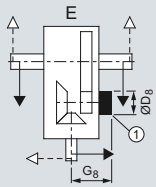
G_MD30_XX_00165

D **2LP202■-■■A■■-■■■■** — **3**



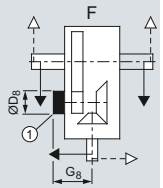
G_MD30_XX_00166

E **2LP202■-■■A■■-■■■■** — **4**



G_MD30_XX_00167

F **2LP202■-■■A■■-■■■■** — **5**



G_MD30_XX_00168

① Backstop.
Backstop **not** possible for:
Type B2SH, designs B, D, E, F and
Type B2DH, designs A and C.

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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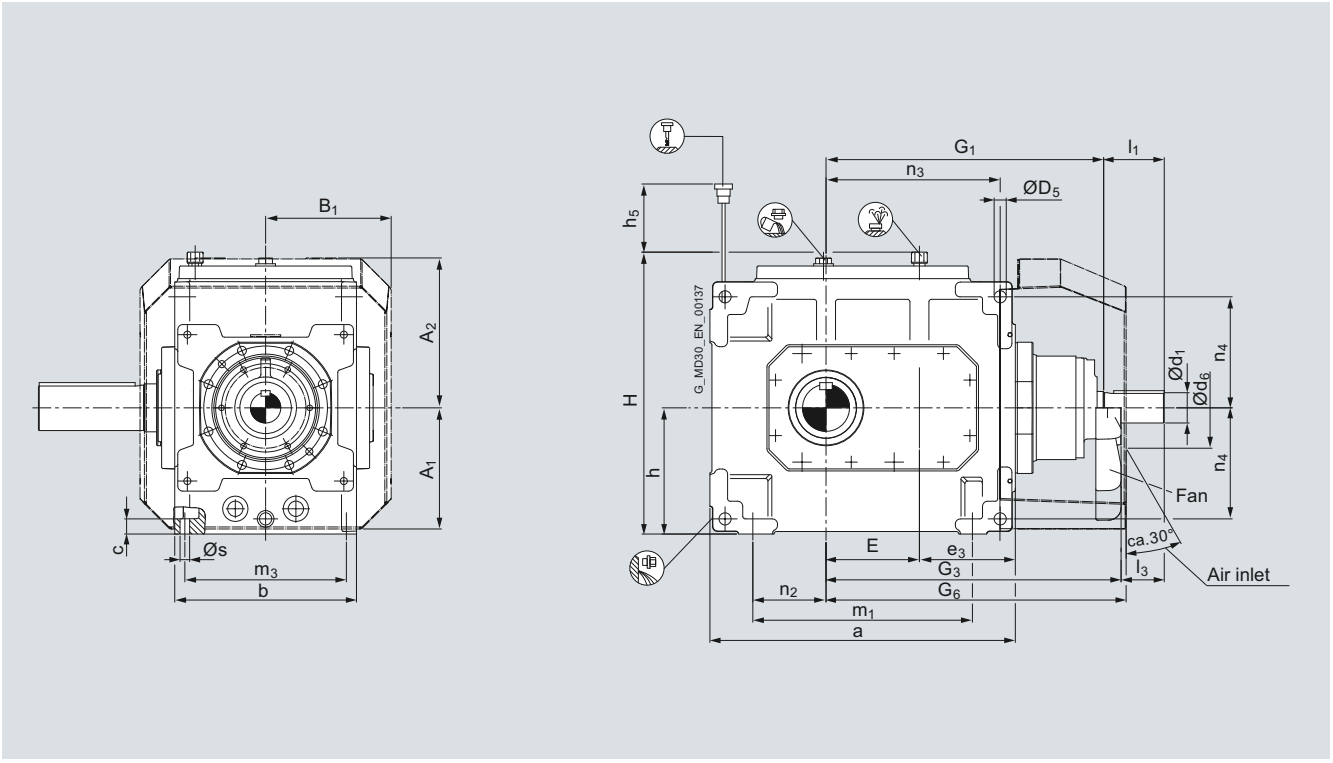
Type B2

Gear unit dimensions
Two-stage, gear unit sizes 509 and 510

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**								**Fan**				
		d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	B_1	d_6	G_6
	i_N =	5 – 11.2			12.5 –16									
509		80 m6	165	130	70 m6	140	105	792	827	340	410	360	240	850
	i_N =	6 – 13.2			15 – 19									
510		80 m6	165	130	70 m6	140	105	823	858	340	410	360	240	881

Gear unit sizes	Dimensions in mm **Gear units**																	**Backstop** [1]	
	a	b	c	c_1	D_5	E	e_3	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
509	860	550	40	55	35	265	265	780	355	150	575	480	145	190	480	307.5	28	255	445
510	916	550	40	55	35	296	265	780	355	150	631	480	145	215	511	307.5	28	255	445

Note:

For shaft details, see pages 6/2 to 6/5.

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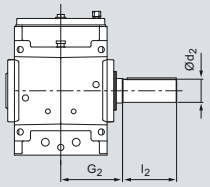
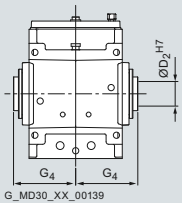
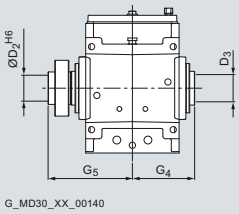
Selection and ordering data (continued)

Output

					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 5/14 to 5/16
	Order No.:					2LP202■-■■A■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
B2SH	**509**	135 n6	260	335	66	1140	**8**	**A**	
	510	150 n6	280	335	71	1254	**0**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
B2HH	**509**	135 H7		335	66	1140	**8**	**D**	
	510	145 H7		335	71	1254	**0**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
B2DH	**509**	140 H6	145	335	450	66	1140	**8**	**G**
	510	145 H6	150	335	470	71	1254	**0**	**H**

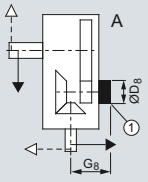




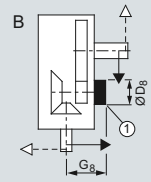


Design

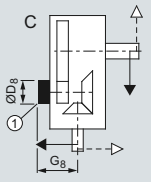
A — **2LP202■-■■A■■-■■■■** — **0**



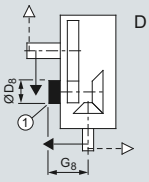
B — **2LP202■-■■A■■-■■■■** — **1**



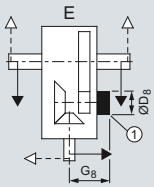
C — **2LP202■-■■A■■-■■■■** — **2**



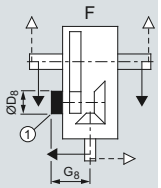
D — **2LP202■-■■A■■-■■■■** — **3**



E — **2LP202■-■■A■■-■■■■** — **4**



F — **2LP202■-■■A■■-■■■■** — **5**



① Backstop
Backstop **not** possible for:
Type B2SH, designs B, D, E, F and
Type B2DH, designs A and C.

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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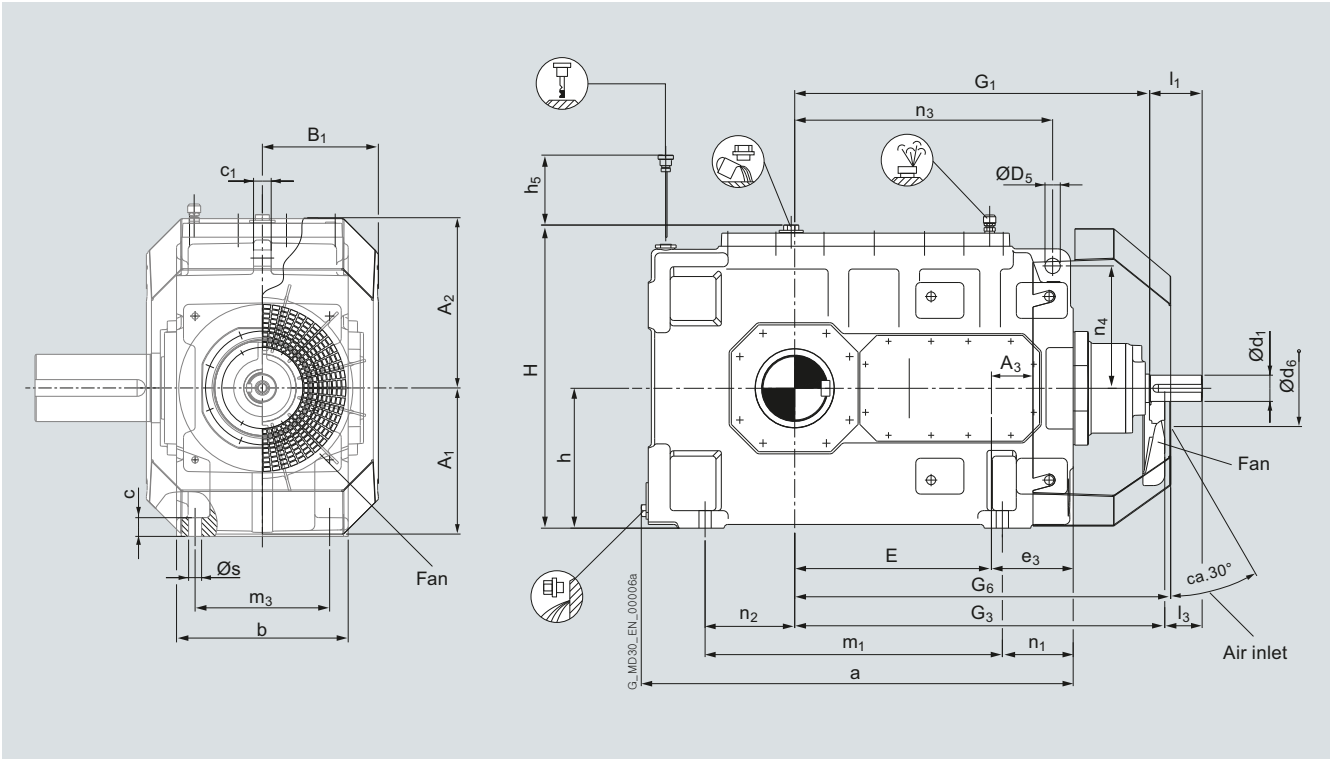
Bevel-helical gear units horizontal mounting position

Type B3

Gear unit dimensions
Three-stage, gear unit sizes 504 to 508

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**								**Fan**					
		d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	B_1	d_6	G_6
	i_N =	16 – 56			63										
504		35 m6	80	60	32 m6	70	50	500	520	195	245	50	175	115	540
	i_N =	14 – 50			56										
505		40 m6	90	70	35 m6	80	60	575	595	225	280	50	195	135	615
	i_N =	20 – 71			80										
506		40 m6	90	70	35 m6	80	60	628	648	225	280	50	195	135	668
	i_N =	14 – 50			56										
507		50 m6	110	90	40 m6	90	70	690	710	275	335	65	220	160	730
	i_N =	18 – 63			71										
508		50 m6	110	90	40 m6	90	70	737	757	275	335	65	220	160	777

Gear unit sizes	Dimensions in mm **Gear units**																	**Backstop** [1]	
	a	b	c	c_1	D_5	E	e_3	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
504	604	210	28	18	19	269.5	110.5	465	200	215	415	170	95	130	355	175	19	130	205
505	684	250	30	27	24	310	130	530	230	350	490	200	95	145	405	202	19	155	230
506	807	250	30	27	24	363	130	530	230	350	613	200	95	215	458	202	19	155	230
507	855	295	35	30	28	384	160	635	280	305	595	230	129	180	505	250	24	180	295
508	962	295	35	30	28	431	160	635	280	305	702	230	129	240	552	250	24	180	295

Note:

For shaft details, see pages 6/2 to 6/5.

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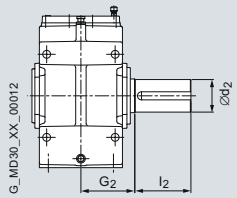
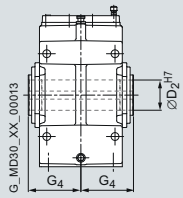
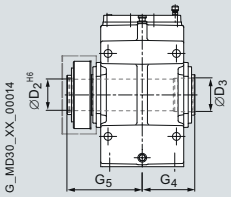
Selection and ordering data (continued)

Output

					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 5/14 to 5/16
	Order No.:					2LP202■-■■B■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
B3SH	**504**	80 m6	170	140	10	195	**3**	**A**	
	505	100 m6	210	165	18	320	**4**	**A**	
	506	110 n6	210	165	19	380	**5**	**A**	
	507	120 n6	210	195	32	540	**6**	**A**	
	508	130 n6	250	195	35	630	**7**	**A**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
B3HH	**504**	80 H7		140	10	195	**3**	**D**	
	505	95 H7		165	18	320	**4**	**D**	
	506	105 H7		165	19	380	**5**	**D**	
	507	115 H7		195	32	540	**6**	**D**	
	508	125 H7		195	35	630	**7**	**D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
B3DH	**504**	85 H6	85	140	215	10	195	**3**	**G**
	505	100 H6	100	165	255	18	320	**4**	**G**
	506	110 H6	110	165	260	19	380	**5**	**G**
	507	120 H6	120	195	290	32	540	**6**	**G**
	508	130 H6	130	195	305	35	630	**7**	**G**

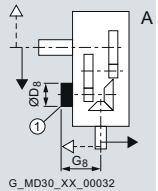




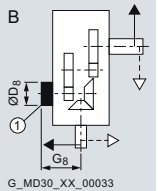


Design

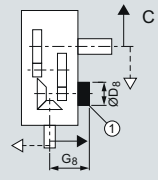
A — **2LP202■-■■B■■-■■■■** — **0**



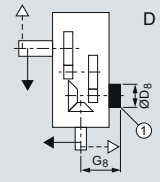
B — **2LP202■-■■B■■-■■■■** — **1**



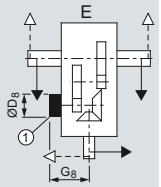
C — **2LP202■-■■B■■-■■■■** — **2**



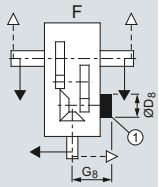
D — **2LP202■-■■B■■-■■■■** — **3**



E — **2LP202■-■■B■■-■■■■** — **4**



F — **2LP202■-■■B■■-■■■■** — **5**



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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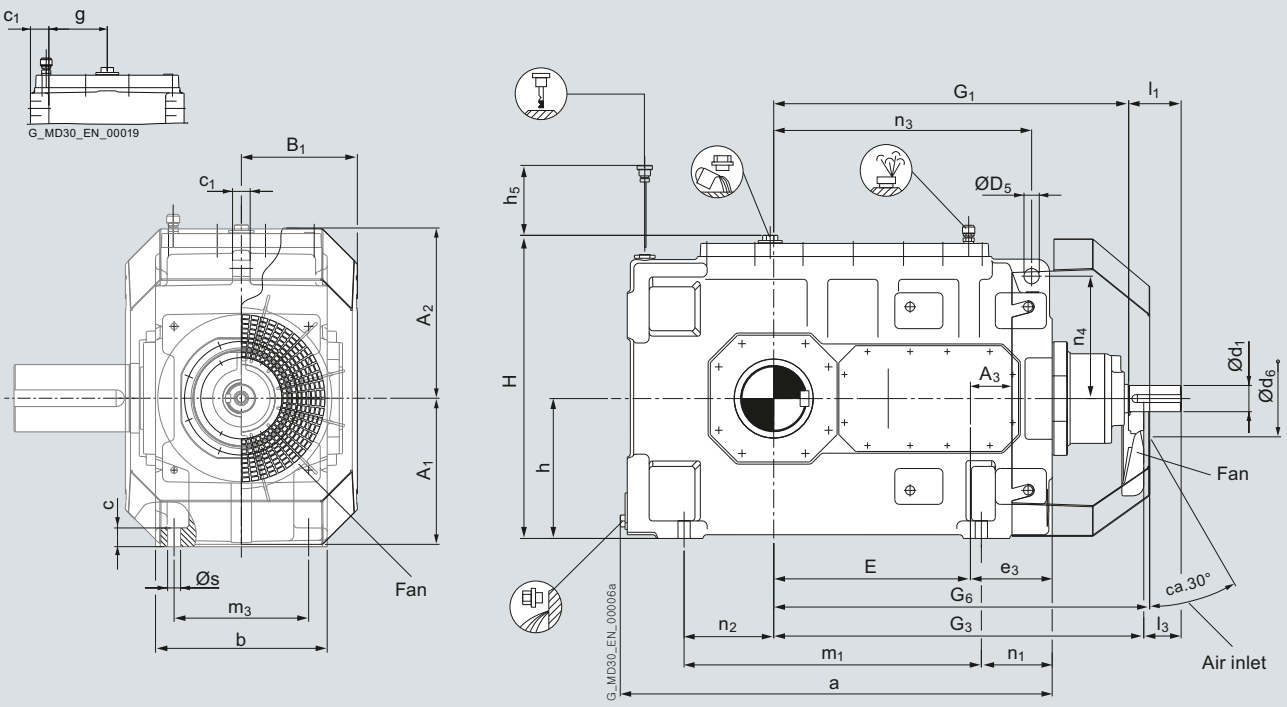
Type B3

Gear unit dimensions
Three-stage, gear unit sizes 509 to 514

Selection and ordering data

Gear unit sizes 513 + 514



Gear unit sizes		Dimensions in mm **Input**								**Fan**					
		d_1	l_1	l_3	d_1	l_1	l_3	G_1	G_3	A_1	A_2	A_3	B_1	d_6	G_6
	i_N =	14 – 50			56										
509		60 m6	120	90	50 m6	110	80	812	842	315	375	95	270	175	865
	i_N =	18 – 63			71										
510		60 m6	120	90	50 m6	110	80	865	895	315	375	95	270	175	918
	i_N =	14 – 50			56										
511		75 m6	135	100	60 m6	135	100	975	1010	370	440	125	315	175	1030
	i_N =	18 – 63			71										
512		75 m6	135	100	60 m6	135	100	1033	1068	370	440	125	315	175	1088
	i_N =	14 – 40			45 – 56										
513		80 m6	165	130	70 m6	140	105	1167	1202	435	495	160	375	210	1220
	i_N =	18 – 50			56 – 71										
514		80 m6	165	130	70 m6	140	105	1245	1280	435	495	160	375	210	1298

Gear unit sizes	Dimensions in mm **Gear units**																		**Backstop** [1]	
	a	b	c	c_1	D_5	E	e_3	g	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
509	988	370	40	38	35	447	190	–	715	320	350	680	290	162	205	590	280	28	195	355
510	1106	370	40	38	35	500	190	–	715	320	350	798	290	162	270	643	280	28	195	355
511	1204	430	50	43	40	547	225	–	830	380	425	825	340	202	255	713	328	35	235	370
512	1332	430	50	43	40	605	225	–	830	380	425	953	340	202	325	771	328	35	235	370
513	1345	535	60	65	48	640	265	202.5	950	440	185	920	445	245	260	842	380	42	255	445
514	1463	535	60	65	48	718	265	202.5	950	440	185	1038	445	245	300	920	380	42	255	445

Note:

For shaft details, see pages 6/2 to 6/5.

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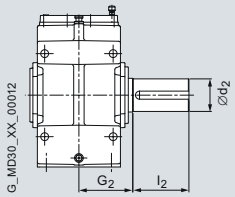
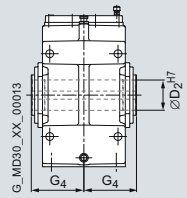
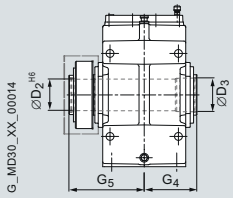
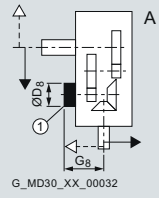
Selection and ordering data (continued)

Output

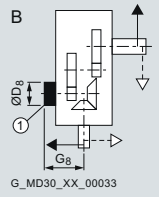
					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 5/14 to 5/16
	Order No.:					2LP202■-■■B■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
B3SH	**509**	145 n6	250	240	53	905	**8**	**A**	
	510	160 n6	300	240	51	960	**0**	**B**	
	511	175 n6	300	270	84	1455	**1**	**B**	
	512	185 n6	350	270	89	1665	**2**	**B**	
	513	200 n6	350	330	145	2500	**3**	**B**	
	514	210 n6	350	330	155	2850	**4**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
B3HH	**509**	135 H7		235	53	905	**8**	**D**	
	510	150 H7		235	51	960	**0**	**E**	
	511	165 H7		270	84	1455	**1**	**E**	
	512	180 H7		270	89	1665	**2**	**E**	
	513	190 H7		330	145	2500	**3**	**E**	
	514	210 H7		330	155	2850	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
B3DH	**509**	140 H6	145	235	350	53	905	**8**	**G**	
	510	150 H6	155	235	370	51	960	**0**	**H**
	511	165 H6	170	270	420	84	1455	**1**	**H**
	512	180 H6	185	270	425	89	1665	**2**	**H**
	513	190 H6	195	330	495	145	2500	**3**	**H**
	514	210 H6	215	330	495	155	2850	**4**	**H**

Design

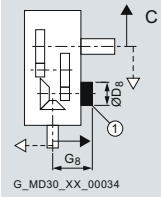
A **2LP202■-■■B■■-■■■■** **0**



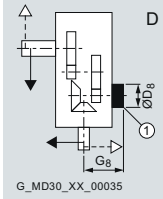
B **2LP202■-■■B■■-■■■■** **1**



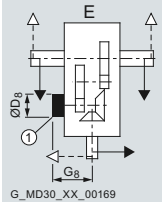
C **2LP202■-■■B■■-■■■■** **2**



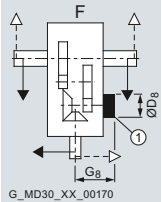
D **2LP202■-■■B■■-■■■■** **3**



E **2LP202■-■■B■■-■■■■** **4**



F **2LP202■-■■B■■-■■■■** **5**



① Backstop

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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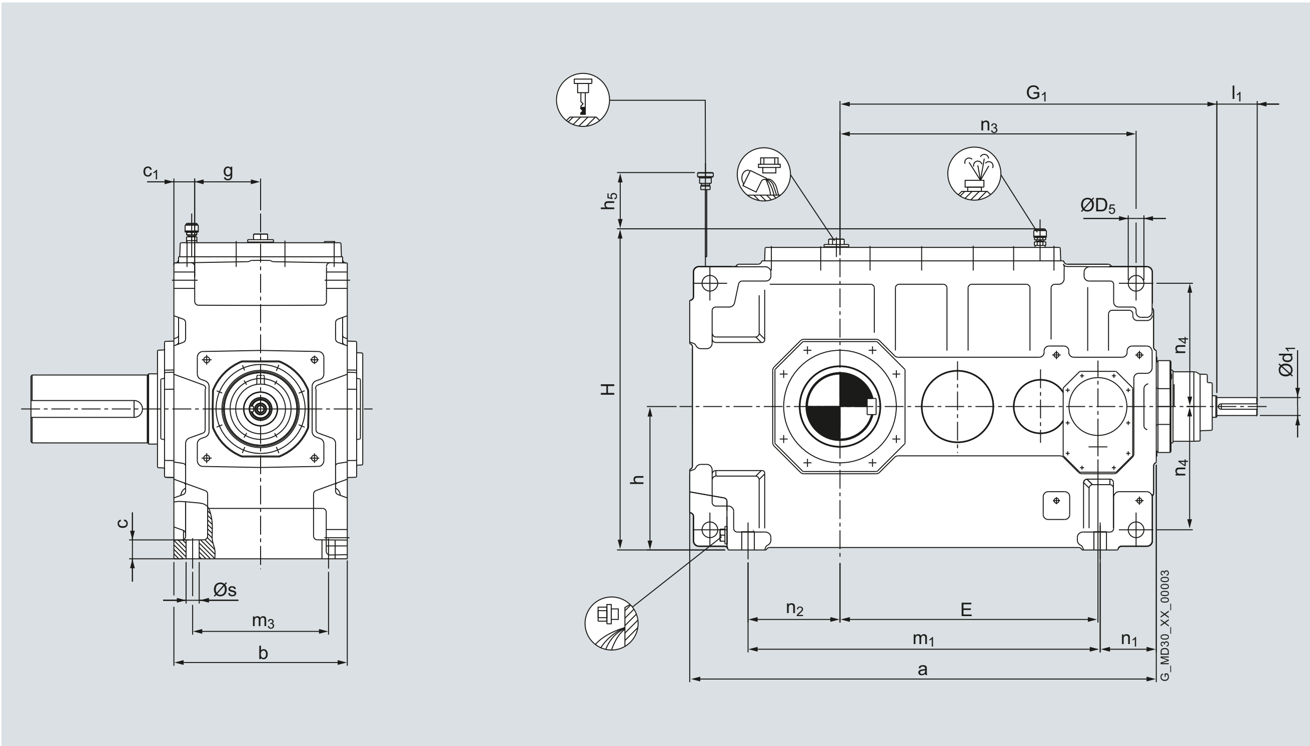
Type B4

Gear unit dimensions
Four-stage, gear unit sizes 505 to 508

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**						
		d_1	l_1	d_1	l_1	d_1	l_1	G_1
	i_N =	63 – 200		224 – 280				
505		28 m6	55	20 k6	50			610
	i_N =	90 – 280		315 – 355				
506		28 m6	55	20 k6	50			663
	i_N =	63 – 200		224		250 – 280		
507		35 m6	80	32 m6	70	25 k6	60	724
	i_N =	80 – 250		280		315 – 355		
508		35 m6	80	32 m6	70	25 k6	60	771

Gear unit sizes	Dimensions in mm **Gear units**																		**Backstop** 1)	
	a	b	c	c_1	D_5	E	e_3	g	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
505	720	250	30	30	24	400	90	95	530	230	105	530	200	105	145	457.5	202.5	19	155	225
506	843	250	30	30	24	453	90	95	530	230	105	653	200	105	215	510.5	202.5	19	155	225
507	899	295	35	35	28 H9	493.5	110.5	112.5	635	280	115	680	230	104	180	567.5	242.5	24	105	245
508	1006	295	35	35	28 H9	540.5	110.5	112.5	635	280	115	787	230	104	240	614.5	242.5	24	105	245

Note:

For shaft details, see pages 6/2 to 6/5.

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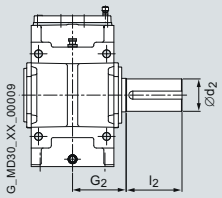
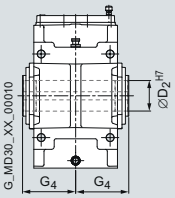
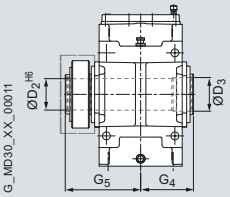
Selection and ordering data (continued)

Output

					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 5/14 to 5/16
	Order No.:					2LP202■-■■C■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
B4SH	**505**	100 m6	210	165	19	330	**4**	**A**	
	506	110 n6	210	165	21	375	**5**	**A**	
	507	120 n6	210	195	35	530	**6**	**A**	
	508	130 n6	250	195	38	625	**7**	**A**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
B4HH	**505**	95 H7		165	19	330	**4**	**D**	
	506	105 H7		165	21	375	**5**	**D**	
	507	115 H7		195	35	530	**6**	**D**	
	508	125 H7		195	38	625	**7**	**D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
B4DH	**505**	100 H6	100	165	255	19	330	**4**	**G**
	506	110 H6	110	165	260	21	375	**5**	**G**
	507	120 H6	120	195	290	35	530	**6**	**G**
	508	130 H6	130	195	305	38	625	**7**	**G**



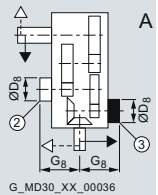




Design

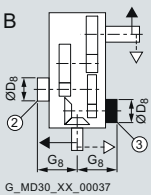
A
2LP202■-■■C■■-■■■■

0



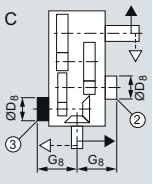
B
2LP202■-■■C■■-■■■■

1



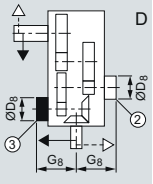
C
2LP202■-■■C■■-■■■■

2



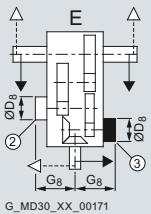
D
2LP202■-■■C■■-■■■■

3



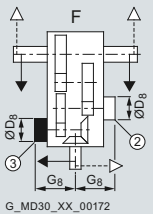
E
2LP202■-■■C■■-■■■■

4



F
2LP202■-■■C■■-■■■■

5



② Backstop for type B4, gear unit sizes 505 to 506
③ Backstop for type B4, gear unit sizes 507 to 514

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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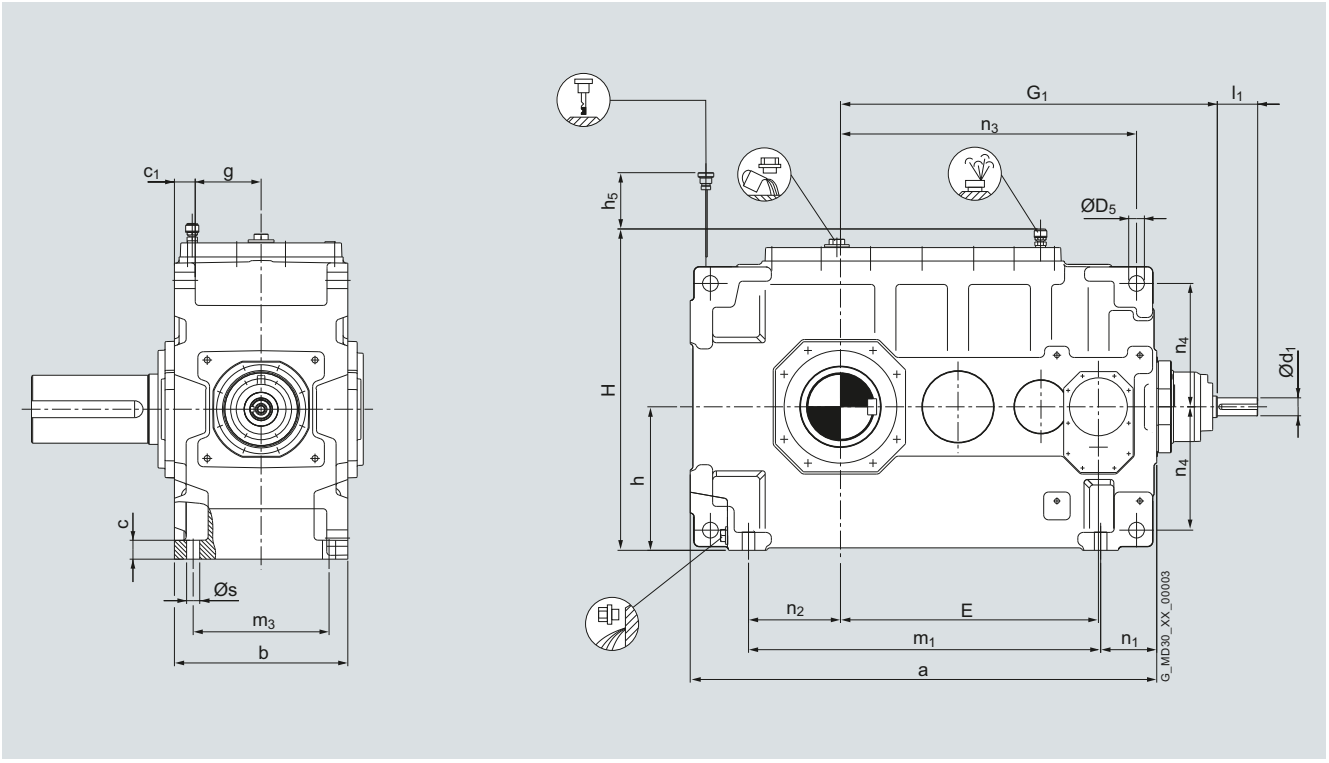
Type B4

Gear unit dimensions
Four-stage, gear unit sizes 509 to 514

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**		
		d_1 l_1	d_1 l_1	G_1
	i_N =	63 – 200	224 – 280	
509		40 m6 90	35 m6 80	840
	i_N =	80 – 250	280 – 355	
510		40 m6 90	35 m6 80	893
	i_N =	63 – 200	224 – 280	
511		50 m6 110	40 m6 90	1012
	i_N =	80 – 250	280 – 355	
512		50 m6 110	40 m6 90	1070
	i_N =	63 – 200	224 – 280	
513		60 m6 120	50 m6 110	1190
	i_N =	80 – 250	280 – 355	
514		60 m6 120	50 m6 110	1268

Gear unit sizes	Dimensions in mm **Gear units**																		**Backstop** [1]	
	a	b	c	c_1	D_5	E	e_3	g	H	h	h_5	m_1	m_3	n_1	n_2	n_3	n_4	s	D_8	G_8
509	1040	370	40	45	35	575	130	140	715	320	135	785	290	125	205	660	275	28	130	285
510	1158	370	40	45	35	628	130	140	715	320	135	903	290	125	270	713	275	28	130	285
511	1281	430	50	60	40	706	160	155	830	380	150	960	340	161	255	812.5	330	35	155	335
512	1409	430	50	60	40	764	160	155	830	380	150	1088	340	161	325	870.5	330	35	155	335
513	1455	535	60	65	48	825	190	202.5	950	440	170	1092	445	183	260	952	380	42	180	405
514	1573	535	60	65	48	903	190	202.5	950	440	170	1210	445	183	300	1030	380	42	180	405

Note:

For shaft details, see pages 6/2 to 6/5.

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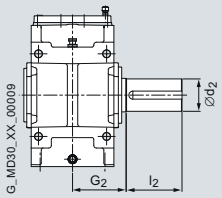
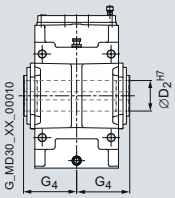
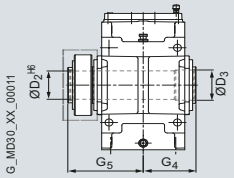
Selection and ordering data (continued)

Output

					Oil quantity [2]	Weight [2] [3]			For order no. supplement for 7th and 11th to 16th position, see pages 5/14 to 5/16
	Order No.:					2LP202■-■■C■■-■■■■			
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
B4SH	**509**	145 n6	250	240	60	800	**8**	**A**	
	510	160 n6	300	240	60	995	**0**	**B**	
	511	175 n6	300	270	93	1425	**1**	**B**	
	512	185 n6	350	270	97	1495	**2**	**B**	
	513	200 n6	350	330	160	2400	**3**	**B**	
	514	210 n6	350	330	165	2695	**4**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
B4HH	**509**	135 H7		235	60	800	**8**	**D**	
	510	150 H7		235	60	995	**0**	**E**	
	511	165 H7		270	93	1425	**1**	**E**	
	512	180 H7		270	97	1495	**2**	**E**	
	513	190 H7		330	160	2400	**3**	**E**	
	514	210 H7		330	165	2695	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
B4DH	**509**	140 H6	145	235	350	60	800	**8**	**G**
	510	150 H6	155	235	370	60	995	**0**	**H**
	511	165 H6	170	270	420	93	1425	**1**	**H**
	512	180 H6	185	270	425	97	1495	**2**	**H**
	513	190 H6	195	330	495	160	2400	**3**	**H**
	514	210 H6	215	330	495	165	2695	**4**	**H**

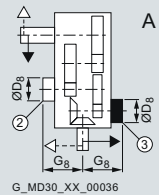




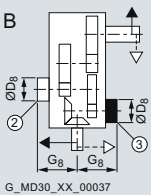


Design

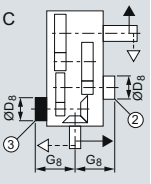
A **2LP202■-■■C■■-■■■■** — **0**



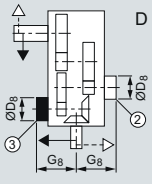
B **2LP202■-■■C■■-■■■■** — **1**



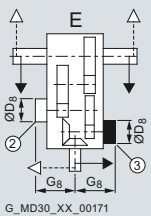
C **2LP202■-■■C■■-■■■■** — **2**



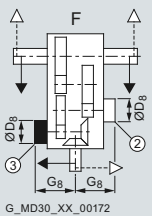
D **2LP202■-■■C■■-■■■■** — **3**



E **2LP202■-■■C■■-■■■■** — **4**



F **2LP202■-■■C■■-■■■■** — **5**



② Backstop for type B4, gear unit sizes 505 to 506
③ Backstop for type B4, gear unit sizes 507 to 514

[1] Max. dimensions; details acc. to order-related documentation.
[2] Approximate values; exact data acc. to order-related documentation.
[3] Without oil filling.

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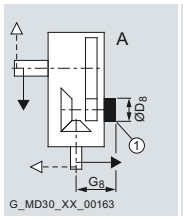
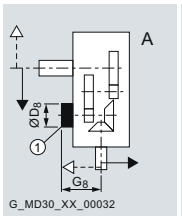
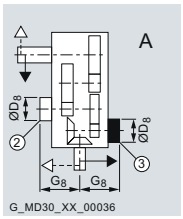
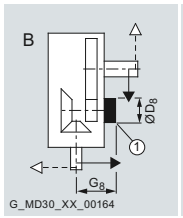
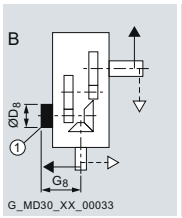
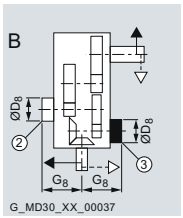
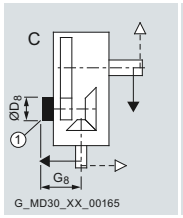
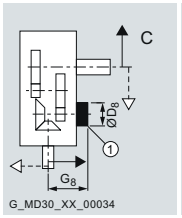
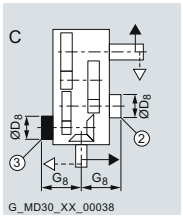
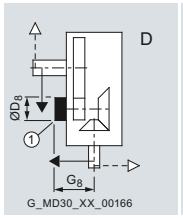
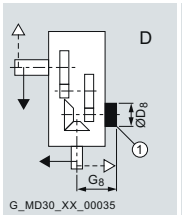
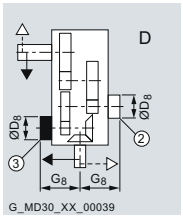
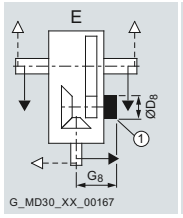
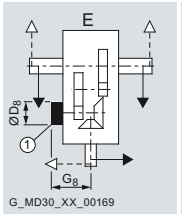
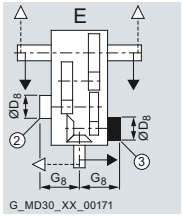
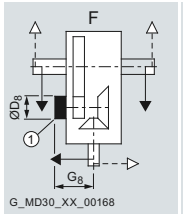
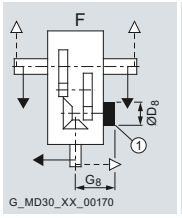
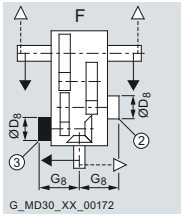
Order number overview

Selection and ordering data

Order no. supplement 7th position

	Position	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Order number	**2LP202**	■	-	.	.	.	.	.	-	.	.	.	.	-Z . . .
Design													
Type	B2.H	B3.H	B4.H										
A				**0**									
B				**1**									
C				**2**									
D				**3**									
E				**4**									
F				**5**									

① Backstop for types B2 and B3.
Backstop **not** possible for:
Type B2SH, designs B, D, E, F and
Type B2DH, designs A and C.

② Backstop for type B4, gear unit sizes 505 to 506

③ Backstop for type B4, gear unit sizes 507 to 514

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Selection and ordering data (continued)

Order no. supplement 8th to 10th position

		Position	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Order number	**2LP202**	.	-	■	■	■	.	.	-	.	.	.	.	**-Z** . . .
Output shaft, gear unit size														
Output shaft	**Gear unit size**													
Solid shaft (S)														
	503				**2**	**A**								
	504				**3**	**A**								
	505				**4**	**A**								
	506				**5**	**A**								
	507				**6**	**A**								
	508				**7**	**A**								
	509				**8**	**A**								
	510				**0**	**B**								
	511				**1**	**B**								
	512				**2**	**B**								
	513				**3**	**B**								
	514				**4**	**B**								
Hollow shaft with keyway (H)														
	504				**3**	**D**								
	505				**4**	**D**								
	506				**5**	**D**								
	507				**6**	**D**								
	508				**7**	**D**								
	509				**8**	**D**								
	510				**0**	**E**								
	511				**1**	**E**								
	512				**2**	**E**								
	513				**3**	**E**								
	514				**4**	**E**								
Hollow shaft for shrink disk (D)														
	504				**3**	**G**								
	505				**4**	**G**								
	506				**5**	**G**								
	507				**6**	**G**								
	508				**7**	**G**								
	509				**8**	**G**								
	510				**0**	**H**								
	511				**1**	**H**								
	512				**2**	**H**								
	513				**3**	**H**								
	514				**4**	**H**								
Gear unit type, number of stages, mounting position														
B2.H							**A**							
B3.H							**B**							
B4.H							**C**							

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Order number overview

Selection and ordering data (continued)

Order no. supplement 11th to 16th position

						Position	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
						Order number	**2LP202**	.	-	.	.	.	■	■	-	■	■	■	■	-Z ■ ■ ■
Seal for shaft 1																		
Shaft d1 with WDR													**0**					
Shaft d1 with taconite E													**4**					
Seal for shaft 2																		
Shaft d2 with WDR														**0**				
Shaft d2 taconite F														**4**				
Shaft d2 taconite F-F														**6**				
Shaft d2 taconite F-H														**7**				
Shaft d2 taconite F-K														**8**				
Shaft variants																		
Standard shaft d1 and standard shaft d2															**0**			
Gear ratio																		
	Type/gear unit size																	
	B2.H			B3.H	B4.H													
	503, 504, 505, 507, 509	506	508, 510	504 ... 514	505 ... 514													
i_N	5	–	–	14	63										**A**			
i_N	5.6	–	6	16	71										**B**			
i_N	6.3	6.3	6.7	18	80										**C**			
i_N	7.1	7.1	7.5	20	90										**D**			
i_N	8	8	8.5	22.4	100										**E**			
i_N	9	9	9.5	25	112										**F**			
i_N	10	10	10.6	28	125										**G**			
i_N	11.2	11.2	11.8	31.5	140										**H**			
i_N	12.5	12.5	13.2	35.5	160										**J**			
i_N	14	14	15	40	180										**K**			
i_N	16	16	17	45	200										**L**			
i_N	–	18	19	50	224										**M**			
i_N	–	20	–	56	250										**N**			
i_N	–	–	–	63	280										**P**			
i_N	–	–	–	71	315										**Q**			
i_N	–	–	–	80	355										**R**			
Oil supply																		
Dip lubrication																**A**		
Other oil supply																**Z**		**Q 0 Y**
Auxiliary cooling																		
Without auxiliary cooling																	**0**	
Auxiliary cooling with fan																	**1**	
Auxiliary cooling with cooling coil (mounted on end face d2)																	**2**	
Auxiliary cooling with fan and cooling coil (mounted on end face d2)																	**3**	

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Connection dimensions

6

6/2 **Cylindrical shaft ends**

6/2 Central holes, form DS in shaft ends DIN 332/1

6/3 Selection of fit

6/4 **Parallel keys, parallel keyways and hollow shafts with keyway**

6/5 **Hollow shafts for shrink disk**

6/6 **Hollow shafts with keyway according to DIN 6885/1**

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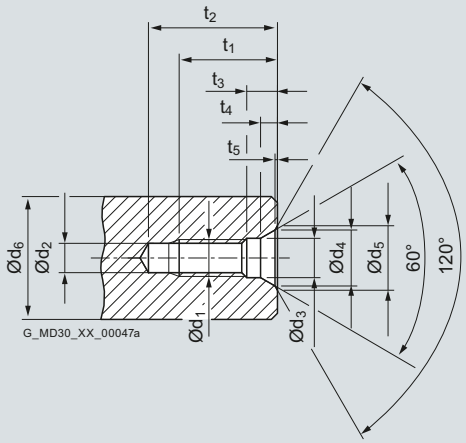
Cylindrical shaft ends

Central holes, form DS in shaft ends DIN 332/1

Dimensional drawings

Form DS with thread, straight running surface and protective counterbore



Recommended diameter ranges d_6 [1]		Form DS											
		DS centering	d_1	d_2 [2]	d_3	d_4	d_5	t_1	t_2		t_3	t_4	t_5
above	to							+2	min.	max.			
mm	mm		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
16	**21**	DS 6	M 6	5.0	6.4	9.6	10.5	16.0	21	23	5.0	2.8	0.4
21	**24**	DS 8	M 8	6.8	8.4	12.2	13.2	19.0	25	28	6.0	3.3	0.4
24	**30**	DS 10	M10	8.5	10.5	14.9	16.3	22.0	30	34	7.5	3.8	0.6
30	**38**	DS 12	M 12	10.2	13.0	18.1	19.8	28.0	37	42	9.5	4.4	0.7
38	**50**	DS 16	M 16	14.0	17.0	23.0	25.3	36.0	45	50	12.0	5.2	1.0
50	**85**	DS 20	M 20	17.5	21.0	28.4	31.3	42.0	53	59	15.0	6.4	1.3
85	**130**	DS 24	M 24	21.0	25.0	34.2	38.0	50.0	63	68	18.0	8.0	1.6
130	**225**	DS 30 [3]	M 30	26.5	31.0	40.2	44.6	60.0	77	83	17.0	8.0	1.9
225	**320**	DS 36 [3]	M 36	32.0	37.0	49.7	55.0	74.0	93	99	22.0	11.0	2.3
320	**500**	DS 42 [3]	M 42	37.5	43.0	60.3	66.6	84.0	105	111	26.0	15.0	2.7

[1] Diameter refers to the finished workpiece
[2] Tap hole drill diameter acc. to DIN 336 Part 1
[3] Dimensions not acc. to DIN 332

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Overview

Selection of fit

Selection of fit	Shaft d		Shaft tolerance	Bore tolerance
	above	to		
	mm	mm		
Shaft tolerance acc. to Flender standard		25	k6	H7
	25	100	m6	
	100		n6	

For heavy-duty operating conditions, e.g. reversing under load, it is recommended that a tighter fit and for the hub keyway width the ISO tolerance P9 is selected (special design).

In this case, the customer should give the relevant information.

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Parallel keys, parallel keyways and hollow shafts with keyway

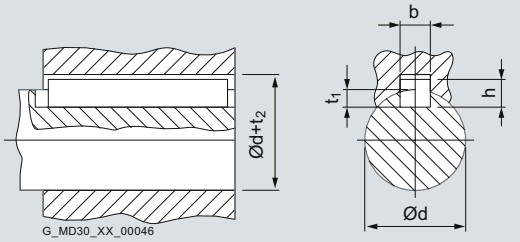
Overview (continued)

Parallel keys and parallel keyways

Drive type fastening without taper action

Parallel key and keyway to DIN 6885/1

Parallel key form B



Diameter d above	to	Width b [1]	Height h	Depth of keyway in shaft t_1	Depth of keyway in hub $d + t_2$ DIN 6885/1
mm	mm	mm	mm	mm	mm
17	22	6	6	3.5	d + 2.8
22	30	8	7	4	d + 3.3
30	38	10	8	5	d + 3.3
38	44	12	8	5	d + 3.3
44	50	14	9	5.5	d + 3.8
50	58	16	10	6	d + 4.3
58	65	18	11	7	d + 4.4
65	75	20	12	7.5	d + 4.9
75	85	22	14	9	d + 5.4
85	95	25	14	9	d + 5.4
95	110	28	16	10	d + 6.4
110	130	32	18	11	d + 7.4
130	150	36	20	12	d + 8.4
150	170	40	22	13	d + 9.4
170	200	45	25	15	d + 10.4
200	230	50	28	17	d + 11.4
230	260	56	32	20	d + 12.4
260	290	63	32	20	d + 12.4
290	330	70	36	22	d + 14.4
330	390	80	40	25	d + 15.4
390	440	90	45	28	d + 17.4

For heavy-duty operating conditions, e.g. reversing under load, it is recommended that a tighter fit and for the hub keyway width the ISO tolerance P9 is selected (special design).
In this case, the customer should give the relevant information.

[1] The tolerance zone for the hub keyway width b is ISO JS9, or ISO P9 for heavy-duty operating conditions (P9 special design).

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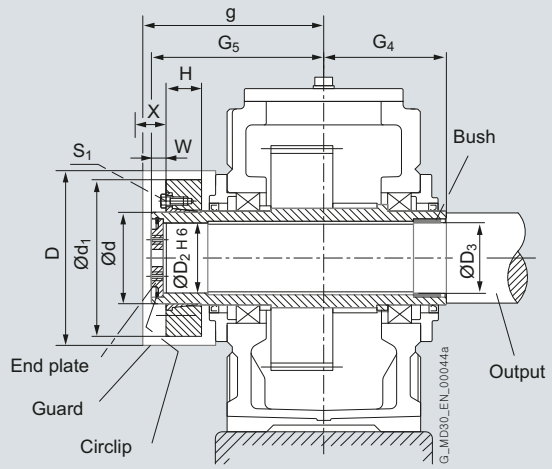
Dimensional drawings

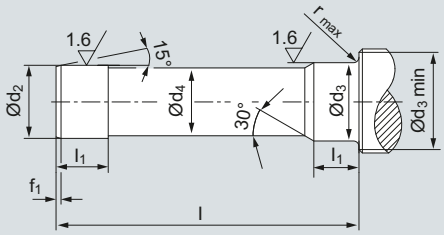
Types H2D., H3D., H4D., B2D., B3D., B4D.

X = Space required for torque wrench

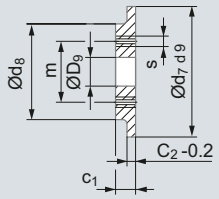


Driven machine shaft for shrink disk connection. Driven machine shaft must be free of oil or grease.

Input shaft with center holes



End plate



Types H2D., H3D., H4D., B3D., B4D.

Gear unit sizes	Dimensions in mm Driven machine shaft [1]								End plate								Circlip	Hollow shaft				Shrink disk [2]				Screw	Guard	
	d_2	d_3	d_4	d_5	f_1	l	l_1	r	c_1	c_2	d_7	d_8	D_9	m	s	Qty.	DIN 472	D_2	D_3	G_4	G_5	d	d_1	H	W	s_1	ØD	g
504	85 g6	85 h6	84.5	95	4	336	53	2	17	7	90	70	22	50	M8	2	90 x 3	85	85	140	215	110	185	54	22	M12	250	235
505	100 g6	100 h6	99.5	114	5	398	59	2	20	8	105	80	26	55	M10	2	105 x 4	100	100	165	255	125	215	60	26	M12	290	275
506	110 g6	110 h6	109.5	124	5	403	64	3	20	8	115	85	26	60	M10	2	115 x 4	110	110	165	260	140	240	67	26	M14	320	280
507	120 g6	120 h6	119.5	134	5	463	68	3	20	8	125	90	26	65	M12	2	125 x 4	120	120	195	290	150	263	71	26	M14	350	310
508	130 g6	130 h6	129.5	145	6	478	81	3	20	8	135	100	26	70	M12	2	135 x 4	130	130	195	305	165	290	81	27	M16	380	320
509	140 g6	145 m6	139.5	160	6	559	85	4	23	10	150	110	33	80	M12	2	150 x 4	140	145	235	350	175	300	86	31	M16	380	375
510	150 g6	155 m6	149.5	170	6	579	101	4	23	10	160	120	33	90	M12	2	160 x 4	150	155	235	370	185	320	101	31	M16	410	395
511	165 f6	170 m6	164.5	185	7	664	119	4	23	10	175	130	33	90	M12	2	175 x 4	165	170	270	420	200	340	118	32	M16	460	445
512	180 f6	185 m6	179.5	200	7	669	125	4	23	10	190	140	33	100	M16	2	190 x 4	180	185	270	425	220	370	125	32	M20	480	450
513	190 f6	195 m6	189.5	213	7	799	130	5	23	10	200	150	33	110	M16	2	200 x 4	190	195	330	495	240	405	131	32	M20	530	520
514	210 f6	215 m6	209.5	233	8	794	124	5	28	14	220	170	33	130	M16	2	220 x 5	210	215	330	495	260	430	126	38	M20	550	520

Type B2D.

Gear unit sizes	Dimensions in mm Driven machine shaft [1]								End plate								Circlip	Hollow shaft				Shrink disk [2]				Screw	Guard	
	d_2	d_3	d_4	d_5	f_1	l	l_1	r	c_1	c_2	d_7	d_8	D_9	m	s	Qty.	DIN 472	D_2	D_3	G_4	G_5	d	d_1	H	W	s_1	ØD	g
504	85 g6	85 h6	84.5	95	4	496	53	2	17	7	90	70	22	50	M8	2	90 x 3	85	85	220	295	110	185	54	22	M12	235	315
505	100 g6	100 h6	99.5	114	5	543	59	2	20	8	105	80	26	55	M10	2	105 x 4	110	110	240	325	125	215	60	26	M12	265	345
506	110 g6	110 h6	109.5	124	5	548	64	3	20	8	115	85	26	60	M10	2	115 x 4	110	110	240	330	140	240	67	26	M14	275	350
507	120 g6	120 h6	119.5	134	5	663	68	3	20	8	125	90	26	65	M12	2	125 x 4	120	120	295	390	150	263	71	26	M14	320	410
508	130 g6	130 h6	129.5	145	6	673	81	3	20	8	135	100	26	70	M12	2	135 x 4	130	130	295	400	165	290	81	27	M16	330	415
509	140 g6	145 m6	139.5	160	6	759	85	4	23	10	150	110	33	80	M12	2	150 x 4	140	145	335	450	175	300	86	31	M16	345	475
510	145 g6	150 m6	144.5	165	6	779	101	4	23	10	160	120	33	90	M12	2	160 x 4	145	150	335	470	185	320	101	31	M16	365	495

[1] Material of driven machine shaft C60N or higher strength.

[2] Shrink disk and guard are included in the scope of supply. The shrink disk is supplied loose.

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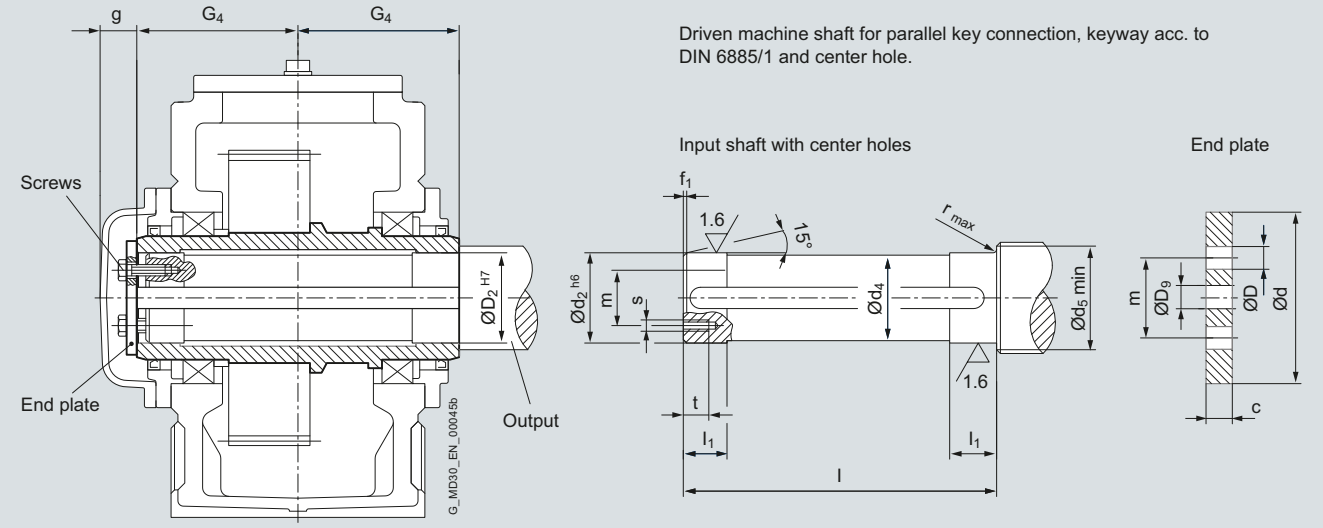
Connection dimensions

Hollow shafts with keyway according to DIN 6885/1

Dimensional drawings

Types H2H., H3H., H4H., B2H., B3H., B4H.



Types H2H., H3H., H4H., B3H., B4H.

Gear unit sizes	Dimensions in mm Driven machine shaft [1]									End plate					Screw		Hollow shaft		
	d_2	d_4	d_5	f_1	l	l_1	r	s	t	c	d	D	D_9	m	Size	Qty.	D_2	G_4	g
504	80	79.5	88	4	278	35	1.2	M 10	18	10	100	11	22	60	M 10 x 25	2	80	140	35
505	95	94.5	105	5	328	40	1.6	M 10	18	10	120	11	26	70	M 10 x 25	2	95	165	40
506	105	104.5	116	5	328	45	1.6	M 10	18	10	120	11	26	70	M 10 x 25	2	105	165	40
507	115	114.5	126	5	388	50	1.6	M 12	20	12	140	13.5	26	80	M 12 x 30	2	115	195	40
508	125	124.5	136	6	388	55	2.5	M 12	20	12	150	13.5	26	85	M 12 x 30	2	125	195	40
509	135	134.5	147	6	467	60	2.5	M 12	20	12	160	13.5	33	90	M 12 x 30	2	135	235	45
510	150	149.5	162	6	467	65	2.5	M 12	20	12	185	13.5	33	110	M 12 x 30	2	150	235	45
511	165	164.5	177	7	537	70	2.5	M 16	28	15	195	17.5	33	120	M 16 x 40	2	165	270	45
512	180	179.5	192	7	537	75	2.5	M 16	28	15	220	17.5	33	130	M 16 x 40	2	180	270	45
513	190	189.5	206	7	657	80	3	M 16	28	18	230	17.5	33	140	M 16 x 40	2	190	330	45
514	210	209.5	226	8	657	85	3	M 16	28	18	250	17.5	33	160	M 16 x 40	2	210	330	45

Type B2H.

Gear unit sizes	Dimensions in mm Driven machine shaft [1]									End plate					Screw		Hollow shaft		
	d_2	d_4	d_5	f_1	l	l_1	r	s	t	c	d	D	D_9	m	Size	Qty.	D_2	G_4	g
504	80	79.5	88	4	438	35	1.2	M10	18	10	100	11	22	60	M10 x 25	2	80	220	35
505	95	94.5	105	5	478	40	1.6	M10	18	10	120	11	26	70	M10 x 25	2	95	240	40
506	105	104.5	116	5	478	45	1.6	M10	18	10	120	11	26	70	M10 x 25	2	105	240	40
507	115	114.5	126	5	588	50	1.6	M12	20	12	140	13.5	26	80	M12 x 30	2	115	295	40
508	125	124.5	136	6	588	55	2.5	M12	20	12	150	13.5	26	85	M12 x 30	2	125	295	40
509	135	134.5	147	6	667	60	2.5	M12	20	12	160	13.5	33	90	M12 x 30	2	135	335	45
510	145	144.5	157	6	667	65	2.5	M12	20	12	185	13.5	33	110	M12 x 30	2	145	335	45

Note:

Parallel key is not included in our scope of supply. Please order separately, if required.

[1] Material of driven machine shaft C60N or higher strength.

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Options for operation

7/2 **Shaft seals**
7/2 Radial shaft seal
7/2 Taconite
7/3 Labyrinth seal

7/4 **Cooling**
7/4 Fan
7/4 Cooling coil

7/5 **Heating**
7/5 Heating elements

7/10 **Oil level indicator, housing material, oil drain valve, backstop**

7/11 **Auxiliary drive**
7/11 Maintenance drive and load drive for type B3
7/20 Speed monitoring for type B3

7/22 **Explosion protection as per ATEX 95**

7/23 **Application, climatic stress/ coating system, color selection**

7/24 **Information about oil, information about installation**

7/25 **Factory certificates, further information**

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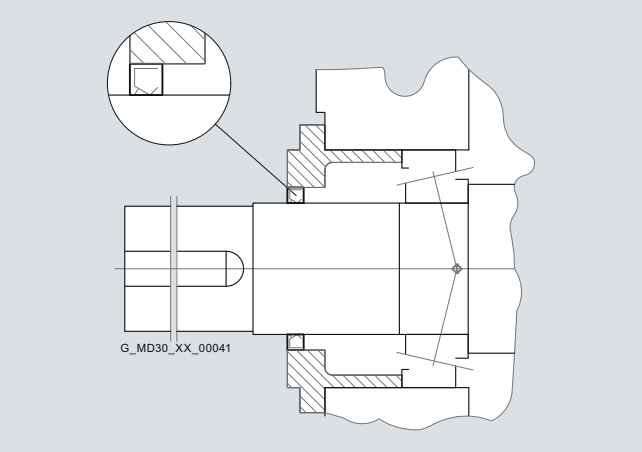
Shaft seals

Radial shaft seal Taconite

Overview

Radial shaft seal



Radial shaft seals are suitable for low to average operating speeds. They can be used for all types and sizes.

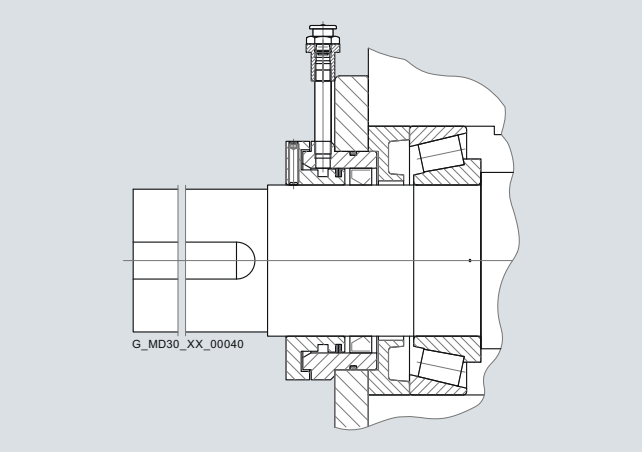
Other features are:

- Wearing seal, however, easy to maintain
- Local heat development on sealing lip; therefore, adequate lubrication (cooling) required
- Commercial product
- Design with low oil level on request

Ordering information

Order No.:	2LP202 . - . . . ■■-0 . A .
Shaft d1 with WDR	0
Shaft d2 with WDR	0

Taconite



Taconite seals are grease-filled, refillable labyrinth seal combinations.

With this seal a high degree of operational reliability is achieved for the gear unit in dusty environments. This seal is a combination of three sealing elements which protect the gear unit from the ingress of dust-like particles.

When motor bell housings are used in accordance with the section on motor connection, taconite E seals are not required because the coupling enclosure is sealed dust-tight.

Ordering information

Order No.:	2LP202 . - . . . ■■-0 . A .	
Shaft d1 with taconite E		4
Shaft d2 with taconite F	For gear unit with solid shaft (..S.)	4
Shaft d2 with taconite F-F	For gear units with hollow shaft with keyway (..H.) or hollow shaft for shrink disk (..D.): • Taconite seals on both sides • Guard as protection against accidental contact	6
Shaft d2 with taconite F-H	For gear units with hollow shaft with keyway (..H.): • Taconite seal on driven machine shaft • Dustproof guard on opposite side	7
Shaft d2 with taconite F-K	For gear units with hollow shaft for shrink disk (..D.): • Taconite seal on driven machine shaft • Dustproof guard on opposite side	8

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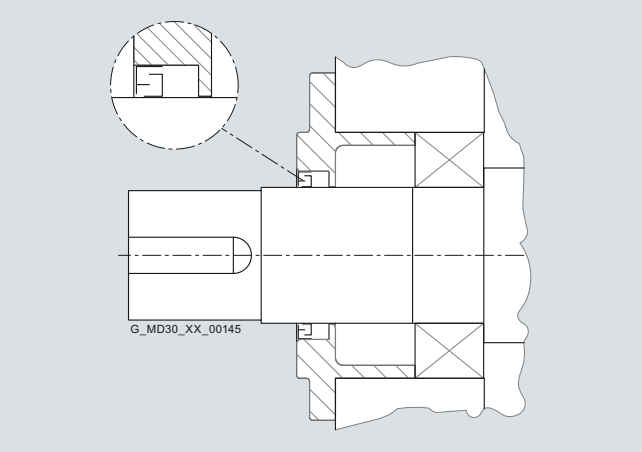
Overview

Labyrinth seal



Labyrinth seals are especially suitable for higher operating speeds. They can only be used with gear units of type H1SH.

Other features are:

- Contact-free and therefore wear-free
- No heat generated locally, so maintenance-free
- Minimal installation space

The following criteria must be taken into account when selecting labyrinth seals:

- For use with stationary drives only (e.g. not for traveling gears)
- With dip lubrication only (other lubrication variants available on request)
- Extremely dusty installation locations or those subject to polluted water hazards must be avoided
- Shaft planes must be horizontal
- See table for minimum required input speed n_1
- For extended periods of operation at minimum speed (e.g. creep mode in paper machines), special measures (oil retention plates) are necessary.

Minimum input speed n_1 for labyrinth seals, type H1SH

	Gear unit sizes							
i_N	503	504	505	506	507	508	509	510
1.12	x	x	x	–	x	–	x	–
1.25	x	x	x	–	x	–	x	–
1.32	–	–	–	–	–	x	–	x
1.4	x	x	x	x	x	–	x	–
1.5	–	–	–	–	–	x	–	x
1.6	515	410	350	305	280	–	250	–
1.7	–	–	–	–	–	265	–	230
1.8	545	440	380	325	310	–	265	–
1.9	–	–	–	–	–	280	–	250
2	585	470	405	350	330	–	285	–
2.12	–	–	–	–	–	310	–	265
2.24	645	510	445	380	355	–	310	–
2.36	–	–	–	–	–	330	–	285
2.5	690	555	480	405	385	–	335	–
2.65	–	–	–	–	–	355	–	310
2.8	745	600	525	445	420	–	365	–
3	–	–	–	–	–	385	–	335
3.15	820	670	580	480	460	–	405	–
3.35	–	–	–	–	–	420	–	365
3.55	890	735	635	525	515	–	445	–
3.75	–	–	–	–	–	460	–	405
4	990	805	695	580	565	–	490	–
4.25	–	–	–	–	–	515	–	445
4.5	1095	890	760	635	610	–	545	–
4.75	–	–	–	–	–	565	–	490
5	1200	945	835	695	675	–	580	–
5.3	–	–	–	–	–	610	–	545
5.6	1300	1045	910	760	735	–	650	–
6	–	–	–	–	–	675	–	580

– Variant cannot be constructed.

x Labyrinth seal possible in combination with forced lubrication on request.

If the minimum input speed n_1 will be undershot, radial shaft seals must be implemented.

Ordering information

Order No.:	2LP202 . - . . K■■- 0 . A .
Shaft d1 with labyrinth seal	2
Shaft d2 with labyrinth seal	2

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Cooling

Fan
Cooling coil

Overview

Fan and cooling coil

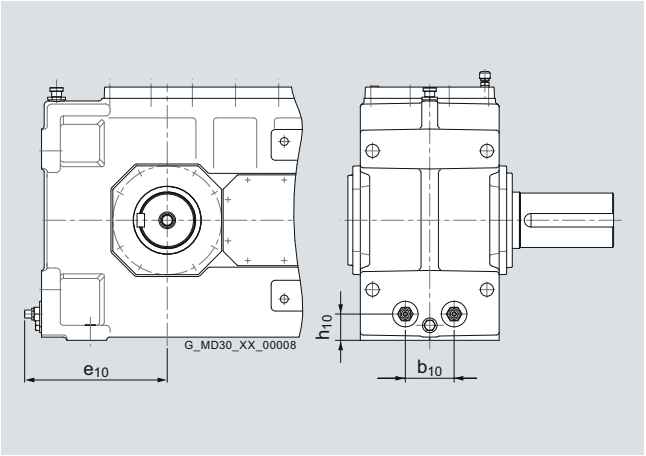
Fans and/or cooling coils can be used for auxiliary cooling.

Fan:

- The fan is mounted on the input shaft (= fast rotating shaft)
- An adapted air guide cover ensures optimized air flow on the gear unit and therefore high-performance cooling
- A fan can be retrofitted
- The connection dimensions at the input shaft are changed if a fan is mounted

Cooling coil:

- The cooling coil is mounted on end face d2
- It can be mounted on end face d1 on request
- The cooling coil is suitable for freshwater, seawater and brackish water
- See table for connection dimensions
- Water connection: G ½ "



Types H1, B2

Gear unit sizes	Cooling coil			
	Dimensions in mm			l/min [1]
	b_{10}	e_{10}	h_{10}	H1/B2
503	80	185	42	4
504	120	215	50	4
505	120	220	50	4
506	120	240	50	4
507	180	235	65	4
508	180	265	65	4
509	200	290	80	8
510	200	315	80	8

Types H2, H3, B3

Gear unit sizes	Cooling coil				
	Dimensions in mm			l/min [1]	
	b_{10}	e_{10}	h_{10}	H2/B3	H3
504	80	250	40	4	4
505	95	275	45	4	4
506	95	345	45	4	4
507	100	340	60	4	4
508	100	400	60	4	4
509	130	385	70	4	4
510	130	450	70	8	8
511	150	465	80	8	8
512	150	535	80	8	8
513	160	380	85	8	8
514	160	420	85	8	8

Ordering information

Order No.:		**2LP202 . - . . . . . -0 . A** ■
Without auxiliary cooling		**0**
Auxiliary cooling with:	• Fan	**1**
	• Cooling coil (mounted on end face d2)	**2**
	• Fan and cooling coil (mounted on end face d2)	**3**
	• Cooling coil (mounted on end face d1)	**4**
	• Fan and cooling coil (mounted on end face d1)	**5**

[1] Necessary cooling water flow, max. cooling water pressure: 8 bar

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Overview

Heating elements must be used when the temperature limit for dip lubrication is undershot.

Gear oil for dip lubrication	Ambient temperatures				
	below -40 °C	up to -40 °C	up to -30 °C	up to -20 °C	up to -10 °C
Mineral oil	--	--	2	1	x
Synthetic oil	--	2	1	x	x

x	No heating elements required
1	One heating element required
2	Two heating elements required
--	Not available as standard

Heating elements are only permitted in combination with oil temperature monitoring.

Depending on gear unit size, one or two heating elements can be mounted on end face d2 or d1.

Labyrinth seals are not permitted to be used with heating elements.

Selection and ordering data

Ordering information

When ordering heating elements and temperature monitoring, **-Z** and the following order codes should be added to the order number.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**		
Screw-in heater (standard version)														
One heating element mounted on end face d2												**J**	**0**	**0**
Two heating elements mounted on end face d2 [1]												**J**	**0**	**1**
One heating element mounted on end face d1												**J**	**0**	**2**
Two heating elements mounted on end face d1 [1]												**J**	**0**	**3**
One heating element mounted on end face d2 and on end face d1												**J**	**0**	**4**
Oil temperature monitoring (standard version)														
ATH-SW22												**H**	**4**	**3**
Oil temperature indicator (standard version)														
Pt100 resistance thermometer												**H**	**4**	**0**
Pt100 resistance thermometer with transmitter												**H**	**4**	**2**
Screw-in heater (ATEX design, category 2 + 3)														
One heating element mounted on end face d2												**J**	**0**	**5**
Two heating elements mounted on end face d2 [1]												**J**	**0**	**6**
One heating element mounted on end face d1												**J**	**0**	**7**
Two heating elements mounted on end face d1 [1]												**J**	**0**	**8**
One heating element mounted on end face d2 and on end face d1												**J**	**0**	**9**
Oil temperature indicator (ATEX design, category 2 + 3)														
Pt100 resistance thermometer												**H**	**4**	**4**

[1] Version not available for:
Type H1, gear unit size 506 from i_N = 5.6,
Type H1, gear unit size 510 from i_N = 4.7,
Types H2, H3, H4, B3, B4, gear unit sizes 506, 508, 510, 512, 514.

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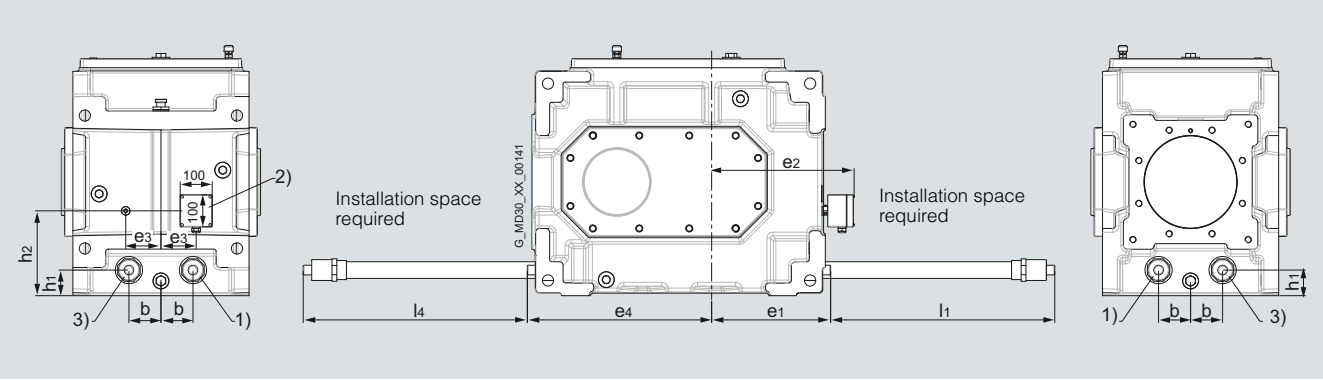
Heating elements
Types H1 and B2, gear unit sizes 503 to 510

Dimensional drawings



Gear unit size	Dimensions in mm **Heating elements**				**Installation space**		**Temperature monitors**		
	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
503	225	290	40	42	300	300	290	40	130
504	250	345	60	50	300	300	325	50	155
505	255	400	60	50	450	450	330	50	170
506 [3]	275	430	60	50	500	500	350	50	170
507	300	495	90	65	500	500	360	100	235
508	330	525	90	65	500	500	390	100	235
509	350	550	100	80	600	600	430	110	265
510 [3]	375	585	100	80	700	700	455	110	265

Depending on the version, screw-in heaters and temperature monitors/resistance thermometers can be arranged in a mirror image.

7

[1] Screw-in heater:
Technical data and notes: IP 65 degree of protection, 230 V, 50 Hz, output according to dimensioning (please contact us).

[2] Temperature monitor ATH-SW22:
Technical data and notes: IP 65 degree of protection, two change-over contacts (adjustable).
Max. contact rating: 2 A/230 V AC/460 VA cos φ = 0.6 (alternating voltage); 0.25 A / 230 V DC/58 W (direct voltage)
Or alternatively:
Pt100 resistance thermometer:
Technical data and notes: Connection head degree of protection IP 54, PG 9, two-wire circuit
Connection with three or four-wire circuit also possible by the customer.
Connection to an evaluation unit is necessary.

[3] With type H1 size 506 from i = 5.6 it is not possible to mount 2 heating elements on end face d2 or end face d1.
With type H1 size 510 from i = 4.7 it is not possible to mount 2 heating elements on end face d2 or end face d1.

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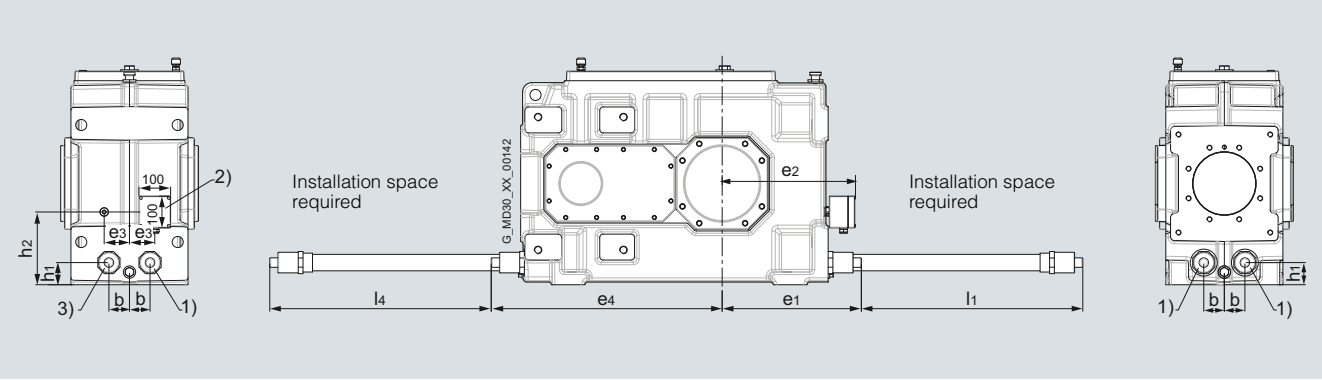
Overview



Gear unit size	Dimensions in mm								
	Heating elements				**Installation space**		**Temperature monitors**		
	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
504	275	445	40	40	500	500	310	40	140
505	310	520	47.5	45	500	500	330	50	150
506 [3]	380	575	47.5	45	700	700	400	50	150
507	375	625	50	60	800	800	395	60	190
508 [3]	435	675	50	60	900	900	455	60	190
509	445	750	65	70	700	700	435	80	230
510 [3]	510	800	65	70	900	900	500	80	230
511	525	885	75	80	1000	1000	515	80	280
512 [3]	595	940	75	80	1100	1100	585	80	280
513	440	900	80	85	1000	1000	540	100	310
514 [3]	480	980	80	85	1100	1100	580	100	310

Depending on the version, screw-in heaters and temperature monitors/resistance thermometers can be arranged in a mirror image.

[1] Screw-in heater:
Technical data and notes: IP 65 degree of protection, 230 V, 50 Hz, output according to dimensioning (please contact us).

[2] Temperature monitor ATH-SW22:
Technical data and notes: IP 65 degree of protection, two change-over contacts (adjustable).
Max. contact rating: 2 A/230 V AC/460 VA cos φ = 0.6 (alternating voltage); 0.25 A / 230 V DC/58 W (direct voltage)
Or alternatively:
Pt100 resistance thermometer:
Technical data and notes: Connection head degree of protection IP 54, PG 9, two-wire circuit
Connection with three or four-wire circuit also possible by the customer.
Connection to an evaluation unit is necessary.

[3] With sizes 506, 508, 510, 512 and 514 it is not possible to mount 2 heating elements on end face d2 or end face d1.

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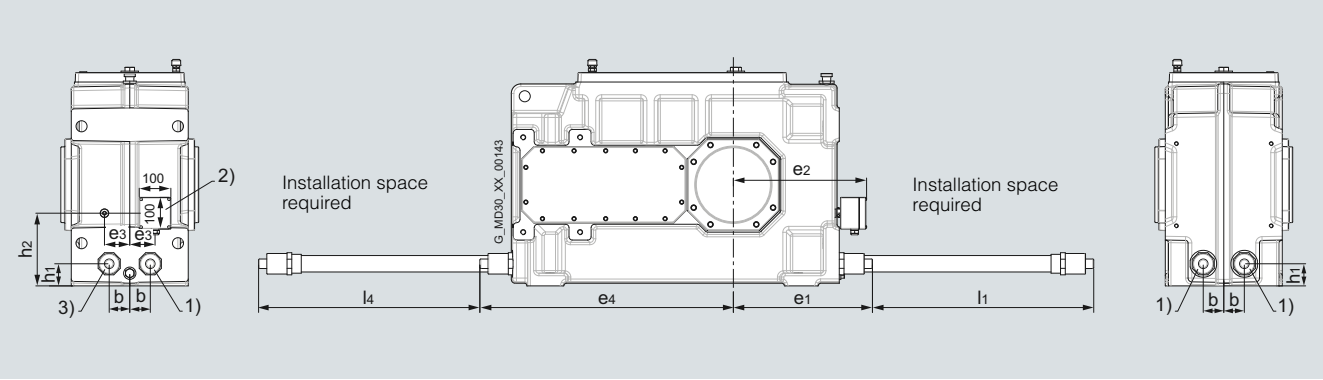
Heating elements
Type H3, gear unit sizes 505 to 514

Overview



Gear unit size	Dimensions in mm								
	Heating elements				**Installation space**		**Temperature monitors**		
	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
505	310	560	47.5	45	500	500	330	50	150
506 [3]	380	615	47.5	45	700	700	400	50	150
507	375	680	50	60	800	800	395	60	190
508 [3]	435	730	50	60	900	900	455	60	190
509	445	810	65	70	700	700	435	80	230
510 [3]	510	865	65	70	900	900	500	80	230
511	525	975	75	80	1000	1000	515	80	280
512 [3]	595	1030	75	80	1100	1100	585	80	280
513	440	1010	80	85	1100	1100	540	100	310
514 [3]	480	1090	80	85	1300	1300	580	100	310

Depending on the version, screw-in heaters and temperature monitors/resistance thermometers can be arranged in a mirror image.

7

[1] Screw-in heater:
Technical data and notes: IP 65 degree of protection, 230 V, 50 Hz, output according to dimensioning (please contact us).

[2] Temperature monitor ATH-SW22:
Technical data and notes: IP 65 degree of protection, two change-over contacts (adjustable).
Max. contact rating: 2 A/230 V AC/460 VA cos φ = 0.6 (alternating voltage); 0.25 A / 230 V DC/58 W (direct voltage)
Or alternatively:
Pt100 resistance thermometer:
Technical data and notes: Connection head degree of protection IP 54, PG 9, two-wire circuit
Connection with three or four-wire circuit also possible by the customer.
Connection to an evaluation unit is necessary.

[3] With sizes 506, 508, 510, 512 and 514 it is not possible to mount 2 heating elements on end face d2 or end face d1.

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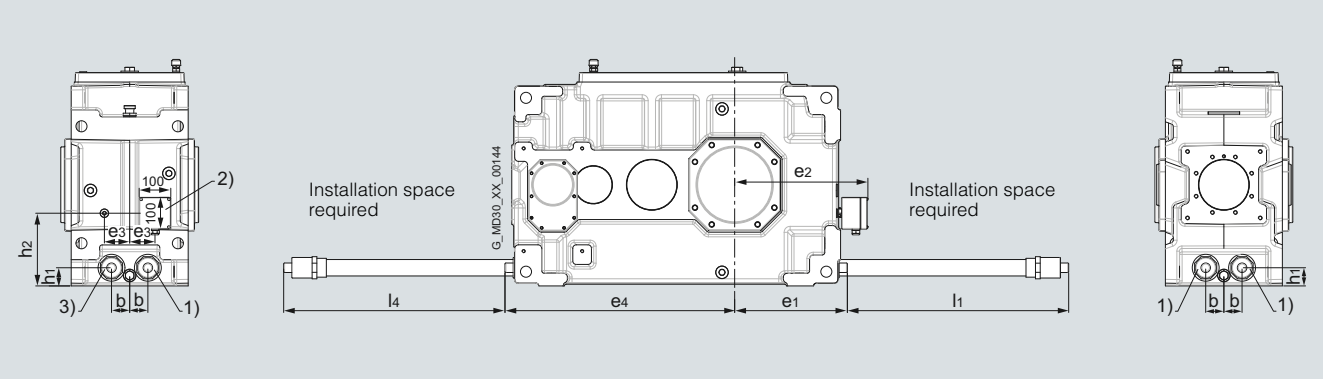
Overview



Gear unit size	Dimensions in mm								
	Heating elements				**Installation space**		**Temperature monitors**		
	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
505	255	510	42.5	37	500	500	330	50	150
506 [3]	325	565	42.5	37	700	700	400	50	150
507	305	615	50	50	700	700	395	60	190
508 [3]	365	665	50	50	800	800	455	60	190
509	365	735	57.5	57.5	700	700	435	80	230
510 [3]	430	790	57.5	57.5	900	900	500	80	230
511	425	880	75	65	1000	1000	515	80	280
512 [3]	495	935	75	65	1100	1100	585	80	280
513	440	1010	80	85	1100	1100	540	100	310
514 [3]	480	1090	80	85	1300	1300	580	100	310

Depending on the version, screw-in heaters and temperature monitors/resistance thermometers can be arranged in a mirror image.

[1] Screw-in heater:
Technical data and notes: IP 65 degree of protection, 230 V, 50 Hz, output according to dimensioning (please contact us).

[2] Temperature monitor ATH-SW22:
Technical data and notes: IP 65 degree of protection, two change-over contacts (adjustable).
Max. contact rating: 2 A/230 V AC/460 VA cos φ = 0.6 (alternating voltage); 0.25 A / 230 V DC/58 W (direct voltage)
Or alternatively:
Pt100 resistance thermometer:
Technical data and notes: Connection head degree of protection IP 54, PG 9, two-wire circuit
Connection with three or four-wire circuit also possible by the customer.
Connection to an evaluation unit is necessary.

[3] With sizes 506, 508, 510, 512 and 514 it is not possible to mount 2 heating elements on end face d2 or end face d1.

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Oil level indicator, housing material, oil drain valve, backstop

Overview

Oil level indicator

For checking the oil level, FLENDER SIG gear units are equipped with a dipstick. An oil sight glass or oil level indicator of type FSA 127 can also be ordered.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**		
Oil level indicator														
Oil sight glass												**H**	**5**	**1**
Oil level indicator of type FSA 127												**H**	**5**	**2**

Housing material

Cast iron is the housing material used as standard.
As an alternative, welded housings can be ordered.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**		
Housing material														
Steel (welded)												**K**	**2**	**2**

Oil drain valve

FLENDER SIG gear units are supplied with an oil drain screw with a permanent magnet on end face d2. As an alternative, oil drain valves can be ordered in various designs.

For gear units with an oil drain valve, the permanent magnet is located in a screw plug immediately adjacent to the oil drain valve.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**		
Oil drain														
Oil drain valve on end face d2, straight design												**K**	**3**	**0**
Oil drain valve on end face d2, angled to the left [1]												**K**	**3**	**2**
Oil drain valve on end face d2, angled to the right [1]												**K**	**3**	**3**
Oil drain valve on end face d1, straight design [2]												**K**	**3**	**4**
Oil drain valve on end face d1, angled to the left [1] [2]												**K**	**3**	**5**
Oil drain valve on end face d1, angled to the right [1] [2]												**K**	**3**	**6**

Backstop

For certain requirements, FLENDER SIG gear units can be ordered with a mechanical backstop. In this case, the direction of rotation of shaft d2 must be specified. For gear units with a d2 shaft at both ends, the direction of rotation must be specified for the relevant shaft stud. The direction of rotation is determined by the view of the end face of shaft d2. For dimensions and backstop position, see Chapter 4 or Chapter 5.

For determining the direction of rotation for gear units without a backstop, see page 7/25.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**		
Backstop														
Mounting of standard backstop, shaft d2 clockwise												**L**	**0**	**0**
Mounting of standard backstop, shaft d2 counter-clockwise												**L**	**0**	**1**
Preparation of gear unit for mounting a standard backstop												**L**	**0**	**2**
Direction of rotation of shaft d2 with view on right stud [3]												**L**	**9**	**4**
Direction of rotation of shaft d2 with view on left stud [3]												**L**	**9**	**5**

[1] View on end face d1

[2] These options are not available for gear units of type H3.

[3] This option applies to gear units with shaft d2 at both ends. "Right stud" or "left stud" is defined with view on end face d1.

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Overview

An auxiliary drive can be mounted for gear units of type B3 in designs A or C.

Two auxiliary drives with different ratings are available for each gear unit size to suit the application case.

Maintenance drive

The motor of the auxiliary drive is dimensioned such that the bucket conveyor can be operated with empty buckets at low speed in the same direction of rotation.

Load drive

The motor of the auxiliary drive is dimensioned such that the bucket conveyor can be operated with full buckets at low speed in the same direction of rotation.

The auxiliary drive is not dimensioned for the rated output torque of the main drive, please observe T_3.

Design of the auxiliary drive

The auxiliary drive is flange-mounted onto the main gear unit via an adapter flange. The auxiliary drive is a bevel-helical geared motor of type KZ that is coupled to the main gear unit through an overrunning clutch. The overrunning clutch is installed in the adapter flange and is supplied with oil from the main gear unit. The bevel-helical geared motor has a separate oil filling and is supplied filled with oil. To prevent overspeed in the case of malfunctioning of the overrunning clutch, the drive combination must be equipped with speed monitoring for safety reasons, see page 7/21.

The auxiliary drives as load drives for main gear units of sizes 505 to 510 are fitted with a high inertia fan to support soft start-up.

Motors

The use of motors with efficiency class IE1 is recommended for intermittent service (S3) of the auxiliary drive. Nevertheless, motors with efficiency class IE2 (high efficiency) are also available.

Main gear unit	**Maintenance drive IE2**					**Load drive IE2**				
	Geared motor [1]	P_M	T_{MA}/T_M	I [2]	i	Geared motor [1]	P_M	T_{MA}/T_M	I [2]	i
Size	Type	kW		A		Type	kW		A	
505	KZ49-LE90SG4E	1.1	2.3	2.5	44.63	KZ69-LE90LH4E-I	1.5	2.6	3.3	45.14
506	KZ49-LE90LH4E	1.5	2.6	3.3	32.57	KZ69-LE100LE4E-I	2.2	2.1	4.65	29.18
507	KZ69-LE100LE4E	2.2	2.1	4.65	39.69	KZ89-LE112ME4E-I	4	2.5	8.2	32.96
508	KZ69-LE100LE4E	2.2	2.1	4.65	39.69	KZ89-LE112ME4E-I	4	2.5	8.2	32.96
509	KZ79-LE100LK4E	3	2.0	6.2	36.26	KZ89-LE132SF4E-I	5.5	2.3	11.3	39.29
510	KZ79-LE100LK4E	3	2.0	6.2	36.26	KZ89-LE132SF4E-I	5.5	2.3	11.3	39.29
511	KZ89-LE112ME4E	4	2.5	8.2	41.54	KZ109-LE160MF4E	11	2.1	21	34.15
512	KZ89-LE112ME4E	4	2.5	8.2	41.54	KZ109-LE160MF4E	11	2.1	21	34.15
513	KZ89-LE132SF4E	5.5	2.3	11.3	39.29	KZ129-LE160LD4E	15	2.3	28	38.37
514	KZ89-LE132SF4E	5.5	2.3	11.3	39.29	KZ129-LE160LD4E	15	2.3	28	38.37

Main gear unit	**Maintenance drive IE1**					**Load drive IE1**				
	Geared motor [1]	P_M	T_{MA}/T_M	I [2]	i	Geared motor [1]	P_M	T_{MA}/T_M	I [2]	i
Size	Type	kW		A		Type	kW		A	
505	–	–	–	–	–	–	–	–	–	–
506	–	–	–	–	–	KZ69-LE100LB4I	2.2	2.2	4.9	29.18
507	KZ69-LE100LB4	2.2	2.2	4.9	39.69	KZ89-LE112ME4I	4	2.2	8.2	32.96
508	KZ69-LE100LB4	2.2	2.2	4.9	39.69	KZ89-LE112ME4I	4	2.2	8.2	32.96
509	KZ79-LE100LH4	3	2.4	6.3	36.26	KZ89-LE132SF4I	5.5	2.3	11	39.29
510	KZ79-LE100LH4	3	2.4	6.3	36.26	KZ89-LE132SF4I	5.5	2.3	11	39.29
511	KZ89-LE112ME4	4	2.2	8.2	41.54	KZ109-LE160MD4	11	2.3	22	36.44
512	KZ89-LE112ME4	4	2.2	8.2	41.54	KZ109-LE160MD4	11	2.3	22	36.44
513	KZ89-LE132SF4	5.5	2.3	11	39.29	KZ129-LE160LA4	15	2.5	30	39.19
514	KZ89-LE132SF4	5.5	2.3	11	39.29	KZ129-LE160LA4	15	2.5	30	39.19

[1] SIMOGEAR bevel-helical geared motor.

[2] Rated current at 400 V.

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IE2

Technical data

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes									
		505	**506**	**507**	**508**	**509**	**510**	**511**	**512**	**513**	**514**
14	n_3	On req.		On req.		On req.		On req.		On req.	
	T_3	On req.		On req.		On req.		On req.		On req.	
16	n_3	On req.		On req.		On req.		On req.		On req.	
	T_3	On req.		On req.		On req.		On req.		On req.	
18	n_3	2.55		2.89	On req.	3.05	On req.	2.71	On req.	2.96	On req.
	T_3	4.3		7.2	On req.	9.4	On req.	14.1	On req.	17.8	On req.
20	n_3	2.23	On req.	2.56	On req.	2.74	On req.	2.42	On req.	2.59	On req.
	T_3	4.9	On req.	8.2	On req.	10.4	On req.	15.8	On req.	20.3	On req.
22.4	n_3	2.55	On req.	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	4.3	On req.	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
25	n_3	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
28	n_3	2.55	2.23	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	4.3	6.4	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
31.5	n_3	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
35.5	n_3	2.55	2.23	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	4.3	6.4	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
40	n_3	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
45	n_3	2.55	2.23	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	4.3	6.4	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
50	n_3	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
56	n_3	2.23	2.23	2.56	2.28	2.74	2.42	2.42	2.2	2.59	2.33
	T_3	4.9	6.4	8.2	9.2	10.4	11.9	15.8	17.4	20.3	22.6
63	n_3		2.54		2.02		2.17		1.96		2.04
	T_3		5.6		10.3		13.2		19.5		25.8
71	n_3		2.23		2.02		2.17		1.96		2.04
	T_3		6.4		10.3		13.2		19.5		25.8
80	n_3		2.23								
	T_3		6.4								

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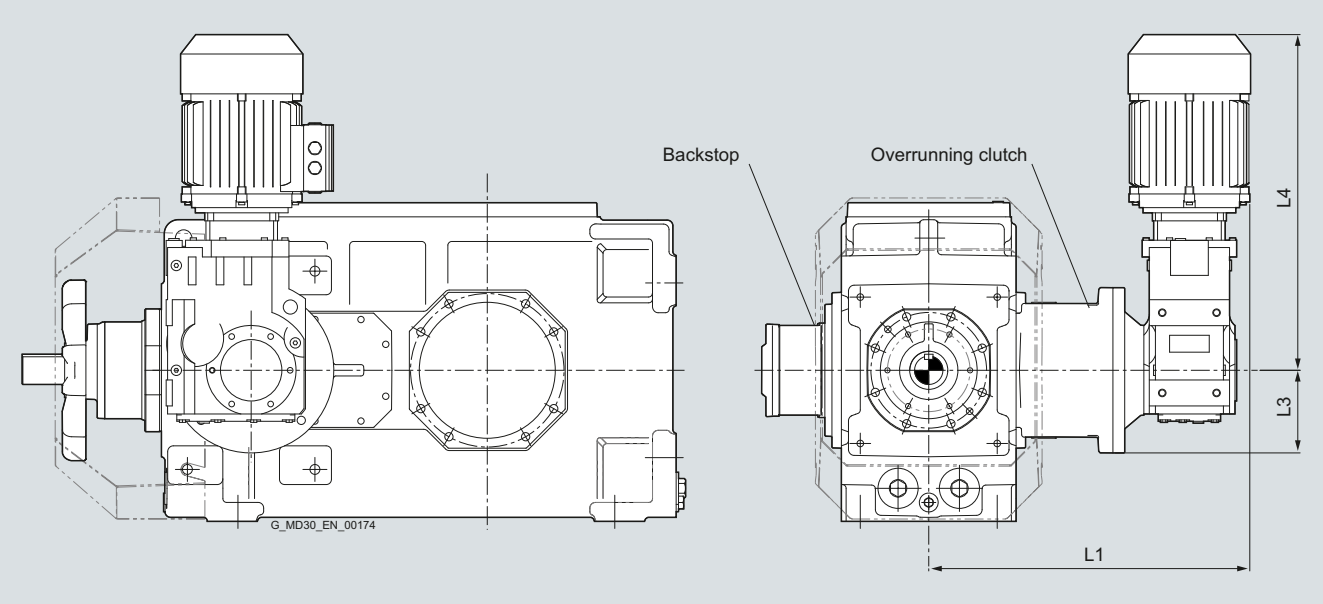
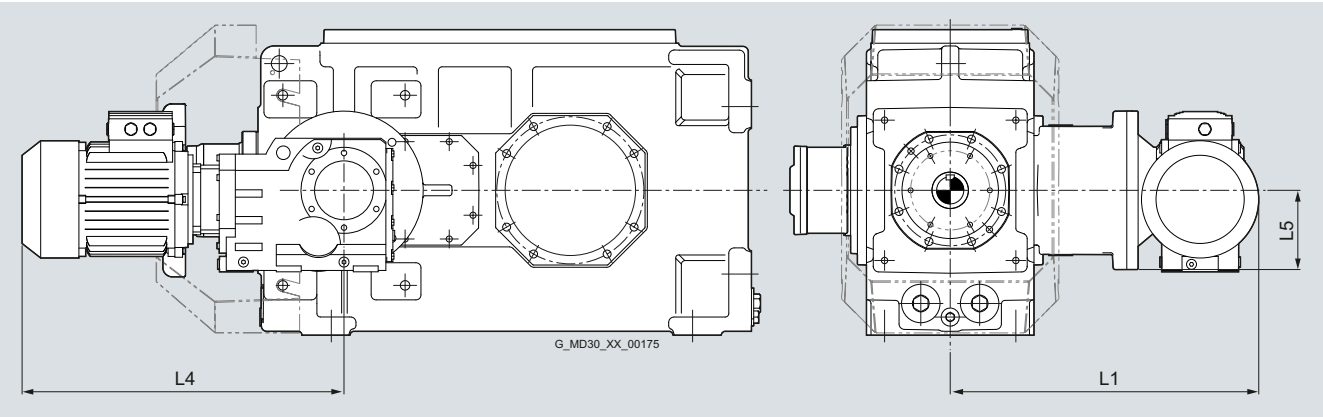
Dimensional drawings

Mounting position of auxiliary drive: M4 (vertical, preferred)



Main gear unit	Auxiliary gear unit	Dimensions in mm Maintenance drive			
Size	Type/size/motor	L1	L3	L4 [1]	L5
505	KZ49-LE90SG4E	470	125	500	125
506	KZ49-LE90LH4E	470	125	500	125
507	KZ69-LE100LE4E	570	150	575	150
508	KZ69-LE100LE4E	570	150	575	150
509	KZ79-LE100LK4E	620	175	580	175
510	KZ79-LE100LK4E	620	175	580	175
511	KZ89-LE112ME4E	765	225	620	180
512	KZ89-LE112ME4E	765	225	620	180
513	KZ89-LE132SF4E	860	225	775	180
514	KZ89-LE132SF4E	860	225	775	180

Mounting position of auxiliary drive: M1 (horizontal)



Note

For mounting position M4, it is recommended that a geared motor with a guard is used.

The canopy is indicated in the designation of the auxiliary drive by the suffix "-W".

[1] For operation with a guard, the following applies for
Motor frame size 90: L4 + 16 mm
Motor frame size 100/112: L4 + 40 mm
Motor frame size 132: L4 + 60 mm.

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Maintenance drive for type B3

IE1

Technical data

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes									
		505	**506**	**507**	**508**	**509**	**510**	**511**	**512**	**513**	**514**
14	n_3	–		On req.		On req.		On req.		On req.	
	T_3	–		On req.		On req.		On req.		On req.	
16	n_3	–		On req.		On req.		On req.		On req.	
	T_3	–		On req.		On req.		On req.		On req.	
18	n_3	–		2.83	On req.	2.99	On req.	2.67	On req.	2.93	On req.
	T_3	–		7.7	On req.	10.0	On req.	14.9	On req.	18.7	On req.
20	n_3	–	–	2.51	On req.	2.69	On req.	2.38	On req.	2.57	On req.
	T_3	–	–	8.7	On req.	11.1	On req.	16.7	On req.	21.3	On req.
22.4	n_3	–	–	2.83	2.24	2.99	2.37	2.67	2.16	2.93	2.30
	T_3	–	–	7.7	9.8	10.0	12.6	14.9	18.4	18.7	23.8
25	n_3	–	–	2.51	1.98	2.69	2.13	2.38	1.93	2.57	2.02
	T_3	–	–	8.7	11.0	11.1	14.0	16.7	20.6	21.3	27.1
28	n_3	–	–	2.83	2.24	2.99	2.37	2.67	2.16	2.93	2.30
	T_3	–	–	7.7	9.8	10.0	12.6	14.9	18.4	18.7	23.8
31.5	n_3	–	–	2.51	1.98	2.69	2.13	2.38	1.93	2.57	2.02
	T_3	–	–	8.7	11.0	11.1	14.0	16.7	20.6	21.3	27.1
35.5	n_3	–	–	2.83	2.24	2.99	2.37	2.67	2.16	2.93	2.30
	T_3	–	–	7.7	9.8	10.0	12.6	14.9	18.4	18.7	23.8
40	n_3	–	–	2.51	1.98	2.69	2.13	2.38	1.93	2.57	2.02
	T_3	–	–	8.7	11.0	11.1	14.0	16.7	20.6	21.3	27.1
45	n_3	–	–	2.83	2.24	2.99	2.37	2.67	2.16	2.93	2.30
	T_3	–	–	7.7	9.8	10.0	12.6	14.9	18.4	18.7	23.8
50	n_3	–	–	2.51	1.98	2.69	2.13	2.38	1.93	2.57	2.02
	T_3	–	–	8.7	11.0	11.1	14.0	16.7	20.6	21.3	27.1
56	n_3	–	–	2.51	2.24	2.69	2.37	2.38	2.16	2.57	2.30
	T_3	–	–	8.7	9.8	11.1	12.6	16.7	18.4	21.3	23.8
63	n_3		–		1.98		2.13		1.93		2.02
	T_3		–		11.0		14.0		20.6		27.1
71	n_3		–		1.98		2.13		1.93		2.02
	T_3		–		11.0		14.0		20.6		27.1
80	n_3		–								
	T_3		–								

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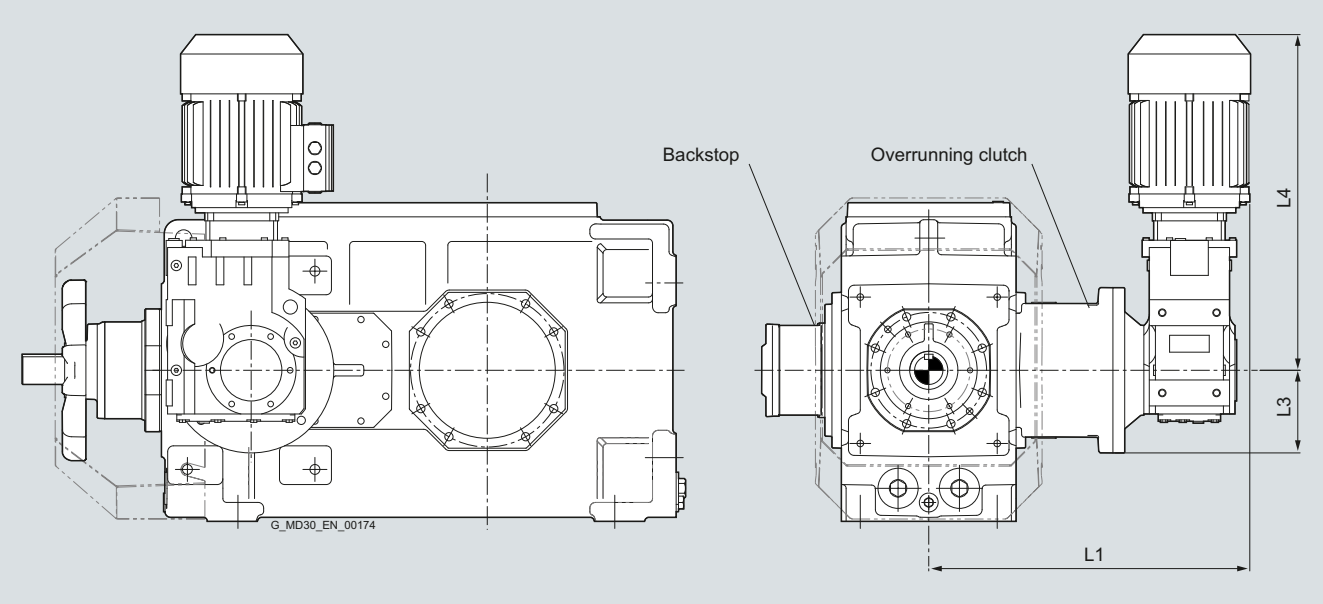
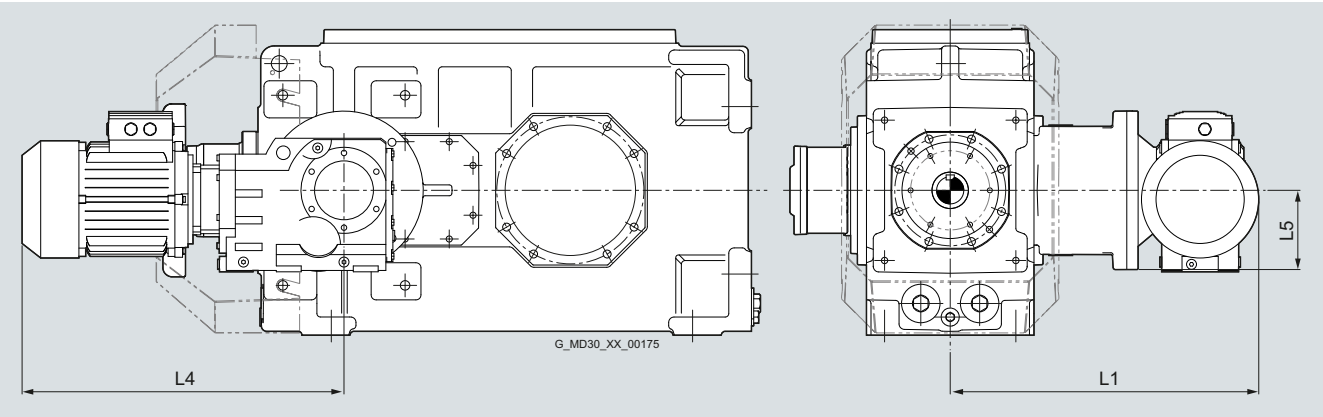
Dimensional drawings

Mounting position of auxiliary drive: M4 (vertical, preferred)



Main gear unit	Auxiliary gear unit	Dimensions in mm Maintenance drive			
Size	Type/size/motor	L1	L3	L4 [1]	L5
505	–	–	–	–	–
506	–	–	–	–	–
507	KZ69-LE100LB4	570	150	572	132
508	KZ69-LE100LB4	570	150	572	132
509	KZ79-LE100LH4	616	175	580	140
510	KZ79-LE100LH4	616	175	580	140
511	KZ89-LE112ME4	763	225	618	180
512	KZ89-LE112ME4	763	225	618	180
513	KZ89-LE132SF4	857	225	671	180
514	KZ89-LE132SF4	857	225	671	180

Mounting position of auxiliary drive: M1 (horizontal)



Note

For mounting position M4, it is recommended that a geared motor with a guard is used.

The canopy is indicated in the designation of the auxiliary drive by the suffix "-W".

[1] For operation with a guard, the following applies for
Motor frame size 90: L4 + 16 mm
Motor frame size 100/112: L4 + 40 mm
Motor frame size 132: L4 + 60 mm.

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IE2

Technical data

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes									
		505	**506**	**507**	**508**	**509**	**510**	**511**	**512**	**513**	**514**
14	n_3	On req.		On req.		On req.		On req.		On req.	
	T_3	On req.		On req.		On req.		On req.		On req.	
16	n_3	On req.		On req.		On req.		On req.		On req.	
	T_3	On req.		On req.		On req.		On req.		On req.	
18	n_3	2.54		3.5	On req.	2.84	On req.	3.32	On req.	3.05	On req.
	T_3	5.6		10.9	On req.	18.5	On req.	31.6	On req.	46.9	On req.
20	n_3	2.22	On req.	3.1	On req.	2.55	On req.	2.97	On req.	2.67	On req.
	T_3	6.5	On req.	12.3	On req.	20.6	On req.	35.4	On req.	53.6	On req.
22.4	n_3	2.54	On req.	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	5.6	On req.	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
25	n_3	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
28	n_3	2.54	2.52	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	5.6	8.3	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
31.5	n_3	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
35.5	n_3	2.54	2.52	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	5.6	8.3	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
40	n_3	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
45	n_3	2.54	2.52	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	5.6	8.3	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
50	n_3	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
56	n_3	2.22	2.52	3.1	2.76	2.55	2.25	2.97	2.69	2.67	2.4
	T_3	6.5	8.3	12.3	13.9	20.6	23.4	35.4	39	53.6	59.7
63	n_3		2.88		2.45		2.02		2.4		2.1
	T_3		7.3		15.6		26		43.7		68.1
71	n_3		2.52		2.45		2.02		2.4		2.1
	T_3		8.3		15.6		26		43.7		68.1
80	n_3		2.52								
	T_3		8.3								

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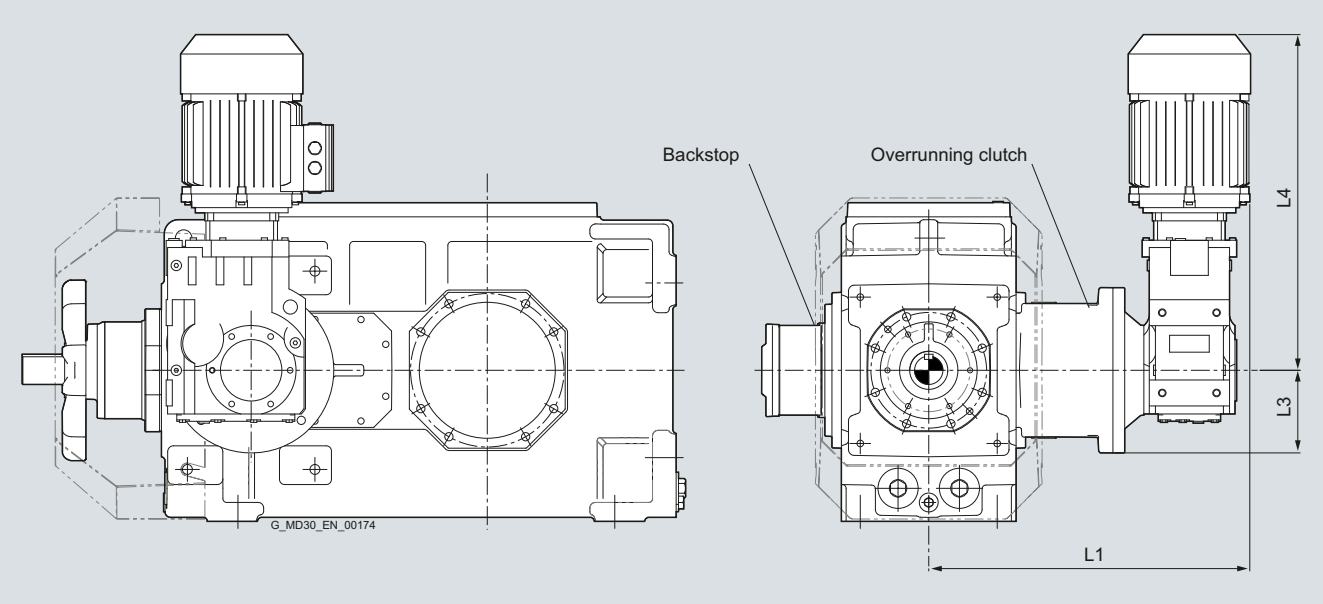
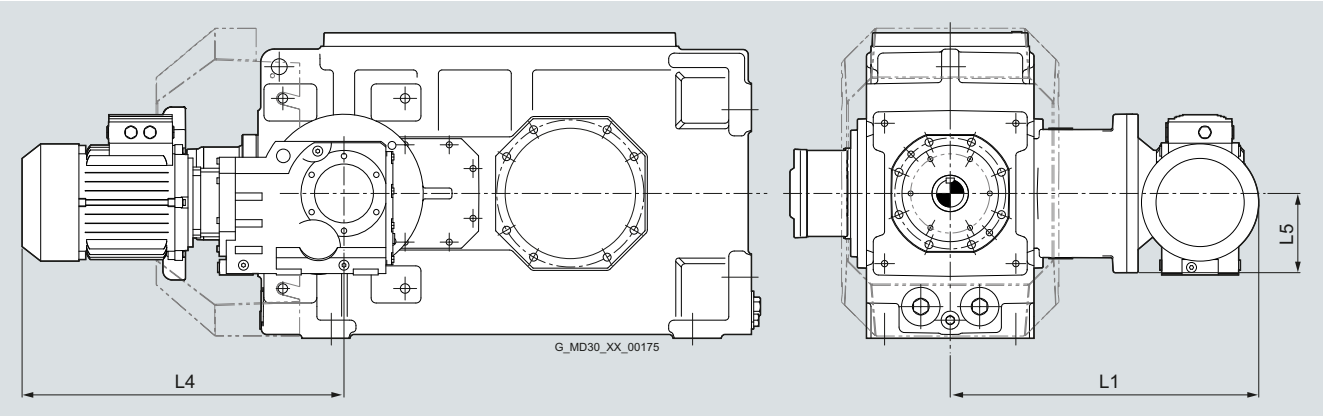
Dimensional drawings

Mounting position of auxiliary drive: M4 (vertical, preferred)



Main gear unit	Auxiliary gear unit	Dimensions in mm Load drive			
Size	Type/size/motor	L1	L3	L4 [1]	L5
505	KZ69-LE90LH4E-I	480	125	520	132
506	KZ69-LE100LE4E-I	490	125	575	132
507	KZ89-LE112ME4E-I	585	150	620	180
508	KZ89-LE112ME4E-I	585	150	620	180
509	KZ89-LE132SF4E-I	685	175	675	180
510	KZ89-LE132SF4E-I	685	175	675	180
511	KZ109-LE160MF4E	826	225	772	212
512	KZ109-LE160MF4E	826	225	772	212
513	KZ129-LE160LD4E	918	225	802	265
514	KZ129-LE160LD4E	918	225	802	265

Mounting position of auxiliary drive: M1 (horizontal)



Note

For mounting position M4, it is recommended that a geared motor with a guard is used.
The output torque of the main drive that can be achieved via the auxiliary drive may be less than its rated output torque.
It is recommended that a high inertia fan is used on the auxiliary drive.
The canopy is indicated in the designation of the auxiliary drive by the suffix "-W".

[1] For operation with a guard, the following applies for motor frame size 90: L4 + 16 mm,
motor frame size 100/112: L4 + 40 mm, motor frame size 132: L4 + 60 mm, motor frame size 160: L4 + 60 mm.

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Load drive for type B3

IE1

Technical data

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes									
		505	**506**	**507**	**508**	**509**	**510**	**511**	**512**	**513**	**514**
14	n_3	–		On req.		On req.		On req.		On req.	
	T_3	–		On req.		On req.		On req.		On req.	
16	n_3	–		On req.		On req.		On req.		On req.	
	T_3	–		On req.		On req.		On req.		On req.	
18	n_3	–		3.44	On req.	2.81	On req.	3.3	On req.	3.02	On req.
	T_3	–		11.6	On req.	19.5	On req.	33.2	On req.	49.4	On req.
20	n_3	–	On req.	3.05	On req.	2.52	On req.	2.95	On req.	2.67	On req.
	T_3	–	On req.	13.1	On req.	21.7	On req.	37.1	On req.	56.4	On req.
22.4	n_3	–	On req.	3.44	2.71	2.81	2.22	3.3	2.67	3.02	2.38
	T_3	–	On req.	11.6	14.7	19.5	24.6	33.2	41	49.4	62.8
25	n_3	–	2.82	3.05	2.4	2.52	2.00	2.95	2.39	2.67	2.08
	T_3	–	7.8	13.1	16.6	21.7	27.4	37.1	45.8	56.4	71.7
28	n_3	–	2.47	3.44	2.71	2.81	2.22	3.3	2.67	3.02	2.38
	T_3	–	8.9	11.6	14.7	19.5	24.6	33.2	41	49.4	62.8
31.5	n_3	–	2.82	3.05	2.4	2.52	2.00	2.95	2.39	2.67	2.08
	T_3	–	7.8	13.1	16.6	21.7	27.4	37.1	45.8	56.4	71.7
35.5	n_3	–	2.47	3.44	2.71	2.81	2.22	3.3	2.67	3.02	2.38
	T_3	–	8.9	11.6	14.7	19.5	24.6	33.2	41	49.4	62.8
40	n_3	–	2.82	3.05	2.4	2.52	2.00	2.95	2.39	2.67	2.08
	T_3	–	7.8	13.1	16.6	21.7	27.4	37.1	45.8	56.4	71.7
45	n_3	–	2.47	3.44	2.71	2.81	2.22	3.3	2.67	3.02	2.38
	T_3	–	8.9	11.6	14.7	19.5	24.6	33.2	41	49.4	62.8
50	n_3	–	2.82	3.05	2.4	2.52	2.00	2.95	2.39	2.67	2.08
	T_3	–	7.8	13.1	16.6	21.7	27.4	37.1	45.8	56.4	71.7
56	n_3	–	2.47	3.05	2.71	2.52	2.22	2.95	2.67	2.67	2.38
	T_3	–	8.9	13.1	14.7	21.7	24.6	37.1	41	56.4	62.8
63	n_3		2.82		2.4		2.00		2.39		2.08
	T_3		7.8		16.6		27.4		45.8		71.7
71	n_3		2.47		2.4		2.00		2.39		2.08
	T_3		8.9		16.6		27.4		45.8		71.7
80	n_3		2.47								
	T_3		8.9								

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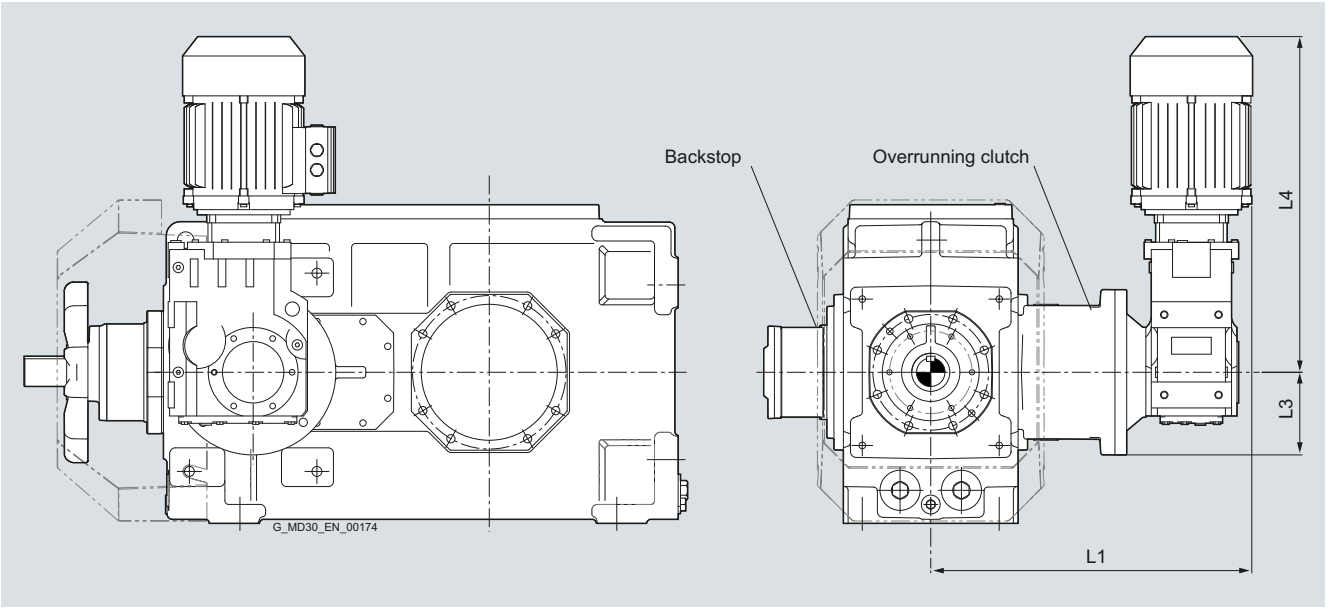
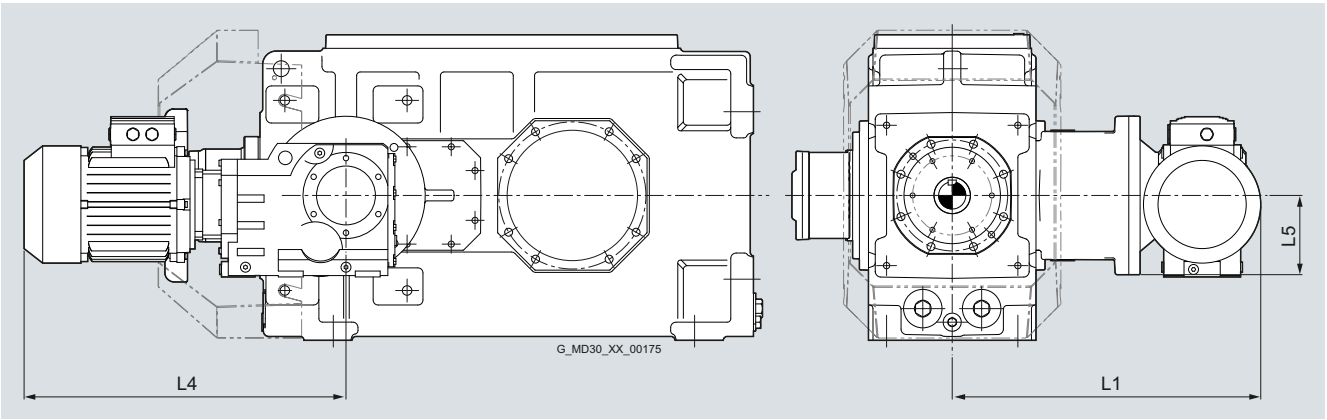
Dimensional drawings

Mounting position of auxiliary drive: M4 (vertical, preferred)



Main gear unit	Auxiliary gear unit	Dimensions in mm Load drive			
Size	Type/size/motor	L1	L3	L4 [1]	L5
505	–	–	–	–	–
506	KZ69-LE100LB4I	490	125	572	132
507	KZ89-LE112ME4I	600	150	618	180
508	KZ89-LE112ME4I	600	150	618	180
509	KZ89-LE132SF4I	684	175	671	180
510	KZ89-LE132SF4I	684	175	671	180
511	KZ109-LE160MD4	826	225	772	212
512	KZ109-LE160MD4	826	225	772	212
513	KZ129-LE160LD4	918	225	802	265
514	KZ129-LE160LA4	918	225	802	265

Mounting position of auxiliary drive: M1 (horizontal)



Note

For mounting position M4, it is recommended that a geared motor with a guard is used.
The output torque of the main drive that can be achieved via the auxiliary drive may be less than its rated output torque.
It is recommended that a high inertia fan is used on the auxiliary drive.
The canopy is indicated in the designation of the auxiliary drive by the suffix "-W".

[1] For operation with a guard, the following applies for motor frame size 90: L4 + 16 mm,
motor frame size 100/112: L4 + 40 mm, motor frame size 132: L4 + 60 mm, motor frame size 160: L4 + 60 mm.

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Speed monitoring for type B3

Overview

The EWD electrical speed monitor can be used wherever a permanently set speed is not permitted to be undershot or overshot. This universally implementable speed monitoring feature comprises the EWD speed monitor, a contactless pulse generator and a trip cam made of ferrous metal.

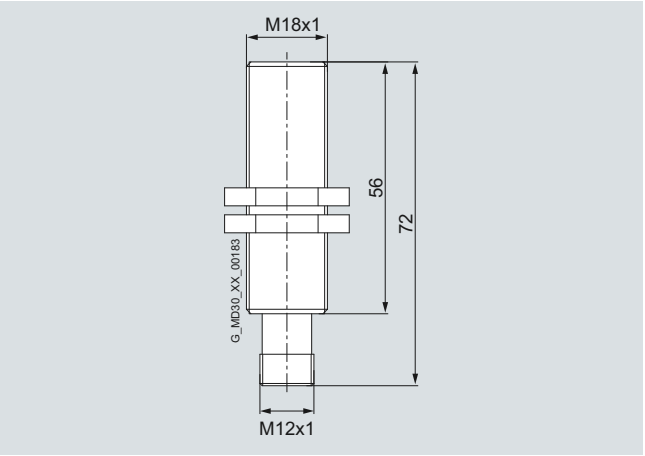
To prevent overspeed of the geared motors in the case of malfunctioning of the overrunning clutch, the drive combination must be equipped with a speed monitor for safety reasons. A malfunction would be, for example, if a signal is output by the pulse generator when drive takes place via the main motor.

The pulse generator is a NAMUR sensor in accordance with EN 50227. These can also be used in hazardous areas with the appropriate isolation amplifiers. The trip cam is located in the adapter flange on the overrunning clutch.

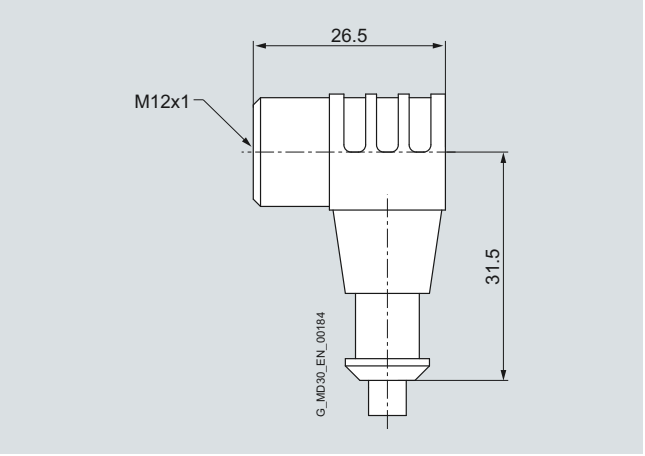
Technical data

Pulse generator	
Rated switching distance	5 mm
Fitting condition	Flush
Housing material	CuZn, chromed
Thread	M18 x1 mm
Connection	Plug-in connector, M12 × 1
Material • Surface • End cap	 PA12-GF30 Trogamid
Operating temperature	-25 °C ... +70 °C
Degree of protection	IP 67
Tightening torque	25 Nm
Output signal	According to DIN EN 60947-5-6 (NAMUR)
Output current • Operated • Not operated	 ≤1.2 mA ≥ 2.1 mA
Output voltage	Nominal 8.2 V DC
Time delay before availability	≤ 1 ms
Switching frequency	≤ 1 kHz
Switching hysteresis	1 ... 10 %
Temperature drift	≤ 10 %
Reproducibility	≤ 2 %
Round connector	
Plug-in connector	Coupling, M12 × 1, angled
Number of poles	2-pole
Contacts	Metal, CuZn, gold-plated
Contact carrier	Plastic, TPU, black
Grip	Plastic, TPU, blue
Seal	Plastic, FPM/FKM
Degree of protection	IP 67, only in screwed-in state
Mechanical endurance	Min. 100 plug-in operations
Degree of pollution	3
Cable	P00, LiYY
Cable diameter	Ø 5.2 mm
Cable length	2 m
Cable sheath	PVC, blue
Core insulation material	PVC
Core insulation colors	BN, BU
Core cross-section	2 × 0.5 mm^2
Strands	16 × 0.2 mm^2
Bending radius (in motion)	Min. 10 × cable diameter
Rated voltage	Max. 250 V
Insulation resistance	≥ 10^5 Ω
Current-carrying capacity	4 A
Volume resistance	≤ 5 mΩ
Ambient temperature • Plug-in connector • Cable	 -30 °C ... +90 °C -40 °C ... +80 °C

Dimensional drawings



Pulse generator BI5-M18E-Y1X-H1141



Round connector WWAK4.21-2/P00

Speed monitor (EWD) on request.

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Selection and ordering data

Ordering information

When ordering the auxiliary drive, **-Z** and the following order codes should be added to the order number.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	.	-	.	.	.	.	-	.	.	.	.	**-Z**
SIG gear unit												
With load drive mounted [1]												**M 0 0**
With maintenance drive mounted [1]												**M 0 1**
Prepared for mounting a load drive at later date [2]												**M 0 2**
Prepared for mounting a maintenance drive at later date [2]												**M 0 3**
Type of drive												
Single drive												**M 6 0**
Auxiliary drive in mounting position												
M4 (vertical, standard)												**M 7 0**
M1 (horizontal)												**M 7 1**
Speed monitoring												
Supplied pulse generator BI5-M18E-Y1X-H1141 and round connector WWAK4.21/P00												**M 8 0**
With electrical speed monitor (EWD) supplied incl. pulse generator and round connector WWAK4.21/P00												**M 8 1**
Prepared for customer installation of speed monitoring, connection thread M18 × 1, including trip cams												**M 8 2**
Provided by the customer with connection thread M18 × 1												**M 8 3**
Provided by the customer with other connection thread												**M 8 4**

The standard auxiliary drive can be implemented as a single drive.
Please consult us regarding intended use as twin or multi-drive.

When ordering the **mounting kit for mounting the auxiliary drive at a later date**, the following order number must be used.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16
Order No.	**2LP046**	.	-	.	.	.	**0**	**0**	-	**0**	**A**	**A**	**0**
Mounting kit											
For SIG with load drive		**7**	**0**								
For SIG with maintenance drive		**7**	**1**								
For gear units of type B3 of size											
505				**B**	**C**						
506				**B**	**D**						
507				**B**	**E**						
508				**B**	**F**						
509				**B**	**G**						
510				**B**	**H**						
511				**B**	**J**						
512				**B**	**K**						
513				**B**	**L**						
514				**B**	**M**						

[1] The auxiliary drive is not included in the scope of supply of the gear unit. It must be ordered separately and is supplied mounted on the gear unit.

[2] This design does not include the overrunning clutch and the flange coupling for connecting the auxiliary drive to the SIG gear unit. The components required later for mounting can be purchased separately in the form of a mounting kit.

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Explosion protection as per ATEX 95

Overview

Explosion protection as per ATEX 95

FLENDER SIG gear units are certified in accordance with Directive 94/9/EU and are permitted to be used in hazardous environments.

Position in code	Designation	Variance	SIG standard	Note
1	Equipment group	CE EX II	Equipment group II	
		CE EX I	Equipment group I	
2	Zone	2G (gases, vapors and mist)	Zone 1	Combination possible
		2D (dust)	Zone 21	
		3G (gases, vapors and mist)	Zone 2	Combination possible
		3D (dust)	Zone 22	
3	Explosion subgroup	II B	II B (includes II A)	Omitted for dust
		II C		
4	Temperature class	T4	T4 (includes T3, T2, T1)	Combination possible
5		D 120 °C	120 °C or higher	
6	Type of protection	b Ignition source monitoring c Constructional enclosure k Liquid enclosure	ck Standard Category 3 bck Standard Category 2	
7	Ambient temperature range	-20 °C ≤ T_a ≤ 40 °C		

The following ATEX codes as well as the necessary supplementary options result from the overview.

Category	ATEX code							Necessary option
	1	2	3	4	5	6	7	
2	CE EX II	2G	IIB	T4	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C	Taconite, Pt100 (ATEX)
3	CE EX II	3G	IIB	T4	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C	Taconite
2	CE EX II	2G	IIC	T4	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C	Taconite, Pt100 (ATEX), max. paint layer thickness 0.2 mm
3	CE EX II	3G	IIC	T4	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C	Taconite, max. paint layer thickness 0.2 mm

Ordering information

When ordering a gear unit to ATEX 95, **-Z** should be added to the order number.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**
Explosion protection												
Category 2, explosion subgroup II B or minimum ignition energy > 3 mJ												**X 3 0**
Category 3, explosion subgroup II B or minimum ignition energy > 3 mJ												**X 3 1**
Category 2, explosion subgroup II C or minimum ignition energy ≤ 3 mJ												**X 3 2**
Category 3, explosion subgroup II C or minimum ignition energy ≤ 3 mJ												**X 3 3**

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Overview

Application

Ordering information

The application is set as standard to: General mechanical engineering

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Application												
General mechanical engineering												**A 2 0**

Climatic stress/coating system

The coating system results from the prevailing climatic stress and is generated automatically.
For gear unit designs with explosion protection according to ATEX 95 and explosion subgroup II C or minimum ignition energy ≤ 3 mJ, it is essential to select coating system B73 or B75. (Order code **B41**, **B43**, **B44**, **B73**, **B75**)

Ordering information

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Climatic stress												
Moderate climate zone (e.g. Central European conditions)												**B01+B41/B73**
Maritime coastal areas, marine climate, maritime transport, tropical, subtropical												**B02+B43/B73**
Corrosive, chemical atmosphere, aggressive environmental conditions												**B03+B44/B75**

Ordering information

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Coating system												
Standard coating with top coat, moderate climate zones												**B 4 1**
Standard coating with top coat, all climate zones												**B 4 3**
Standard coating with top coat, all climate zones, high resistance to chemicals												**B 4 4**
Standard coating with top coat for all climate zones and design with explosion protection according to ATEX 95 with explosion subgroup II C or minimum ignition energy ≤ 3 mJ												**B 7 3**
Standard coating with top coat, high resistance to chemicals and design with explosion protection according to ATEX 95 with explosion subgroup II C or minimum ignition energy ≤ 3 mJ												**B 7 5**

Color selection

The top coat for Flender SIG gear units is applied as standard in the color RAL 5015 (sky blue). The gear units can also be supplied in other colors, if required.

Ordering information

When ordering a gear unit in a different color, **-Z** should be added to the order number.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Color selection												
RAL 5015 sky blue												**C 0 0**
RAL 5009 azure blue												**C 0 1**
RAL 5010 gentian blue												**C 0 2**
RAL 1003 signal yellow												**C 0 3**
RAL 1021 rape yellow												**C 0 4**
RAL 1028 melon yellow												**C 0 5**
RAL 6011 reseda green												**C 0 6**
RAL 7031 blue gray												**C 0 7**
RAL 7035 light gray												**C 0 8**
RAL 7021 dark gray												**C 0 9**
RAL 9005 jet black												**C 1 0**
RAL 7030 stone gray												**C 1 1**
RAL 7016 anthracite gray												**C 1 2**

Other colors are available on request (see Page 7/25 Further information).

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Information about oil, information about installation

Overview

Information about oil

FLENDER SIG gear units are supplied without oil as standard.

Ordering information

The following options can be selected by ordering the gear units with the order code **-Z**:

- Permissible types of oil

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Permissible types of oil												
Provided for mineral oil												**H 0 0**
Provided for synthetic oil on a polyglycolic basis (PG oil)												**H 0 1**
Provided for synthetic oil on a polyalphaolefin basis (PAO oil)												**H 0 2**
Provided for synthetic low temperature oil on a polyalphaolefin basis (PAO-T oil)												**H 0 3**

- Permissible oil viscosities

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Oil viscosity												
ISO VG 460												**H 1 0**
ISO VG 320												**H 1 1**
ISO VG 220												**H 1 2**

Note:

See page 2/2 Dip lubrication

Information about installation

Ordering information

The following options regarding altitude and installation location are selected using the order code **-Z**:

- Altitude

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Altitude												
Up to 1000 m												**G 3 0**
1001 to 2000 m												**G 3 1**
2001 to 3000 m												**G 3 2**
3001 to 4000 m												**G 3 3**
4001 to 5000 m												**G 3 4**

- Installation location

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**
Installation location												
Small, closed rooms												**G 3 5**
Large rooms, halls												**G 3 6**
Outdoors												**G 3 7**

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Overview

Factory certificates

The declaration of compliance with the order in accordance with DIN EN 10204-2.1 is part of the standard scope of supply.

- Declaration of compliance with the order 2.1
  Certificate in which the manufacturer confirms that the supplied products comply with the requirements of the order without details of test results.
- Test report 2.2
  Certificate in which the manufacturer confirms that the supplied products comply with the requirements of the order complete with the results of non-specific tests.

Ordering information

When ordering with additional test report in accordance with DIN EN 10204-2.2, **-Z** should be added to the order number.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**
Factory certificates												
Additionally with test report to DIN EN 10204-2.2												**D 9 7**

Direction of rotation

For gear units without a backstop, the direction of rotation of shaft d2 can be specified using the following order codes. For gear units with a d2 shaft at both ends, the direction of rotation must be specified for the relevant shaft stud. The direction of rotation is determined by the view of the end face of shaft d2. For gear units with direction of rotation identical "at both ends", no order code is required.

For determining the direction of rotation for gear units with a backstop, see page 7/10.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**
Direction of rotation												
Shaft d2 clockwise												**L 9 0**
Shaft d2 counter-clockwise												**L 9 3**
Direction of rotation of shaft d2 with view on right stud [1]												**L 9 4**
Direction of rotation of shaft d2 with view on left stud [1]												**L 9 5**

Further information

Ordering information

The following further information can be provided in the order number using the order code **-Z**.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**
Further information												
RAL color for top coat [2]												**Y 0 0**
Minimum ambient temperature (°C)												**Y 0 1**
Maximum ambient temperature (°C)												**Y 0 2**
Input speed n_1 FLENDER SIG (rpm)												**Y 2 0**
Power rating of driven machine P_2 (kW) [3]												**Y 2 1**
Torque of the driven machine T_2 (Nm) [3]												**Y 2 2**
Input power P_1 FLENDER SIG (kW)												**Y 2 3**
Additional text available for product description												**Y 9 9**

[1] This option applies to gear units with shaft d2 at both ends. "Right stud" or "left stud" is defined with view on end face d1.

[2] Further colors, other than those offered in the catalog.

[3] Specify P_2 or T_2

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Notes

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Options for installation and externally mounted parts

8

8/2 Connection dimensions end-face output

8/2 Types H1, H4, B2, B4 Types H2, H3, B3 of sizes 513 and 514

8/3 Types H2, H3, B3 of sizes 505 to 512

8/4 Vibration reducing torque reaction arm

8/4 Types H2, H3, H4, B2, B3 and B4

Motor bell housing for IEC motors

8/6 Type H2, gear unit sizes 504 to 512 with N-EUPEX coupling

8/8 Type H3, gear unit sizes 505 to 514 with N-EUPEX coupling

8/10 Type H4, gear unit sizes 507 to 514 with N-EUPEX coupling

8/12 Type B2, gear unit sizes 503 to 510 with N-EUPEX coupling

8/14 Type B3, gear unit sizes 504 to 514 with N-EUPEX coupling

8/16 Type B4, gear unit sizes 505 to 514 with N-EUPEX coupling

8/18 Fitting dimensions for IEC motors

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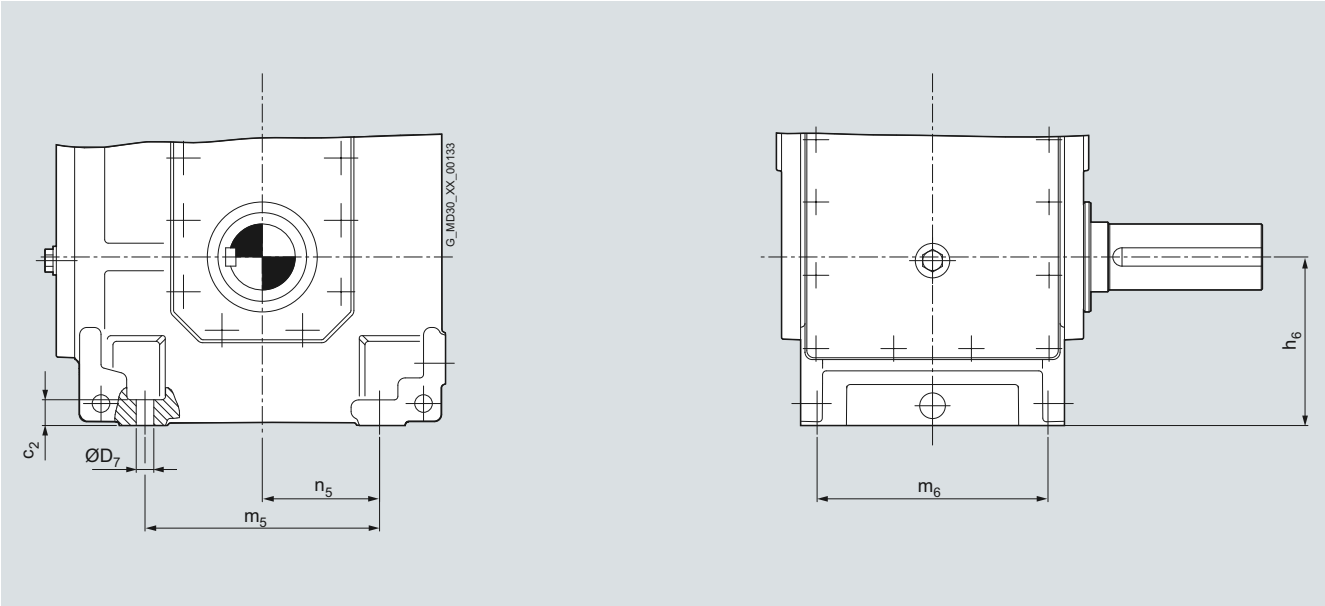
Connection dimensions end-face output

Types H1, H4, B2, B4
Types H2, H3, B3 of sizes 513 and 514

Dimensional drawings



Types H1, B2

Gear unit sizes	Dimensions in mm					
	m_5	m_6	n_5	h_6	Ø D_7	c_2
503	240	220	120	190	19	30
504	265	280	132.5	225	24	30
505	320	315	160	230	24	35
506	320	315	160	250	24	35
507	390	410	195	260	28	40
508	390	410	195	290	28	40
509	415	475	207.5	330	35	50
510	415	475	207.5	355	35	50

Types H2, H3, B3 of sizes 513 and 514

Gear unit sizes	Dimensions in mm					
	m_5	m_6	n_5	h_6	Ø D_7	c_2
513	510	445	255	440	48	65
514	510	445	255	480	48	65

Types H4, B4

Gear unit sizes	Dimensions in mm					
	m_5	m_6	n_5	h_6	Ø D_7	c_2
505	280	205	140	230	24	35
506	280	205	140	300	24	35
507	320	240	160	295	28	40
508	320	240	160	355	28	40
509	370	305	185	335	35	50
510	370	305	185	400	35	50
511	430	350	215	415	40	60
512	430	350	215	485	40	60
513	510	445	255	440	48	65
514	510	445	255	480	48	65

Note

When using the end-face connection dimensions of the output end as the mounting surface, additional constraints may apply with regard to the permissible rated and maximum torques, additional forces on the shafts and the oil supply. In this case, it is necessary to consult Siemens.

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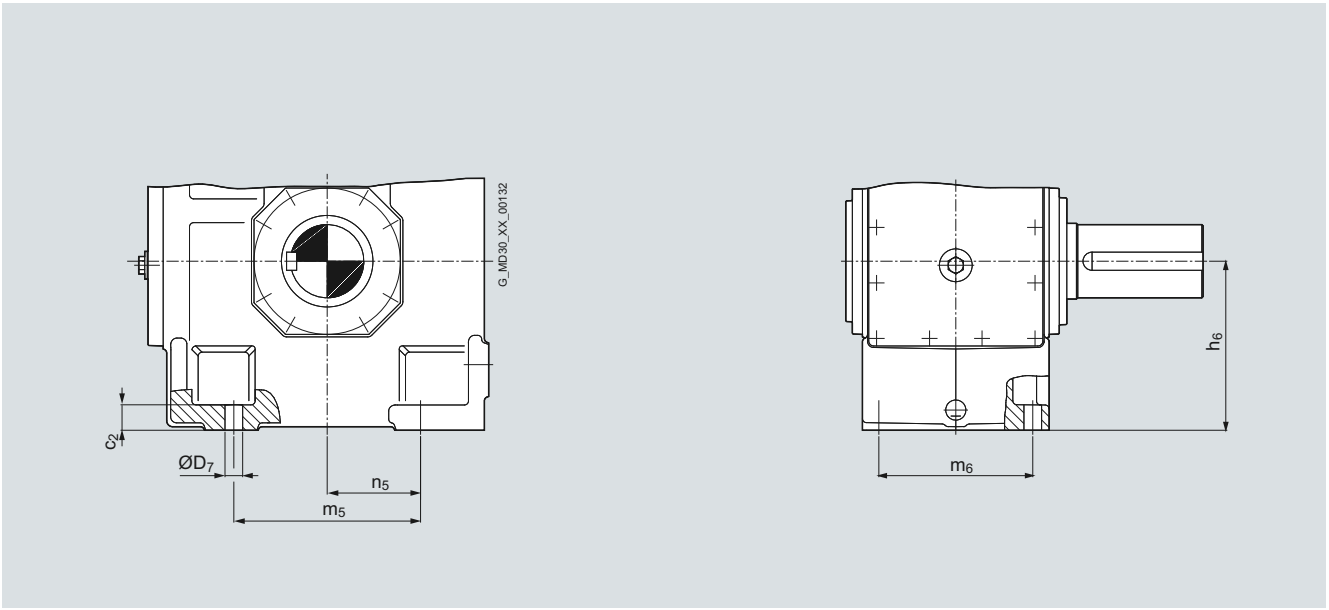
Dimensional drawings



Gear unit sizes	Dimensions in mm					
	m_5	m_6	n_5	h_6	Ø D_7	c_2
505	280	205	140	230	24	35
506	280	205	140	300	24	35
507	320	240	160	295	28	40
508	320	240	160	355	28	40
509	370	305	185	335	35	50
510	370	305	185	400	35	50
511	430	350	215	415	40	60
512	430	350	215	485	40	60

Note

When using the end-face connection dimensions of the output end as the mounting surface, additional constraints may apply with regard to the permissible rated and maximum torques, additional forces on the shafts and the oil supply. In this case, it is necessary to consult Siemens.

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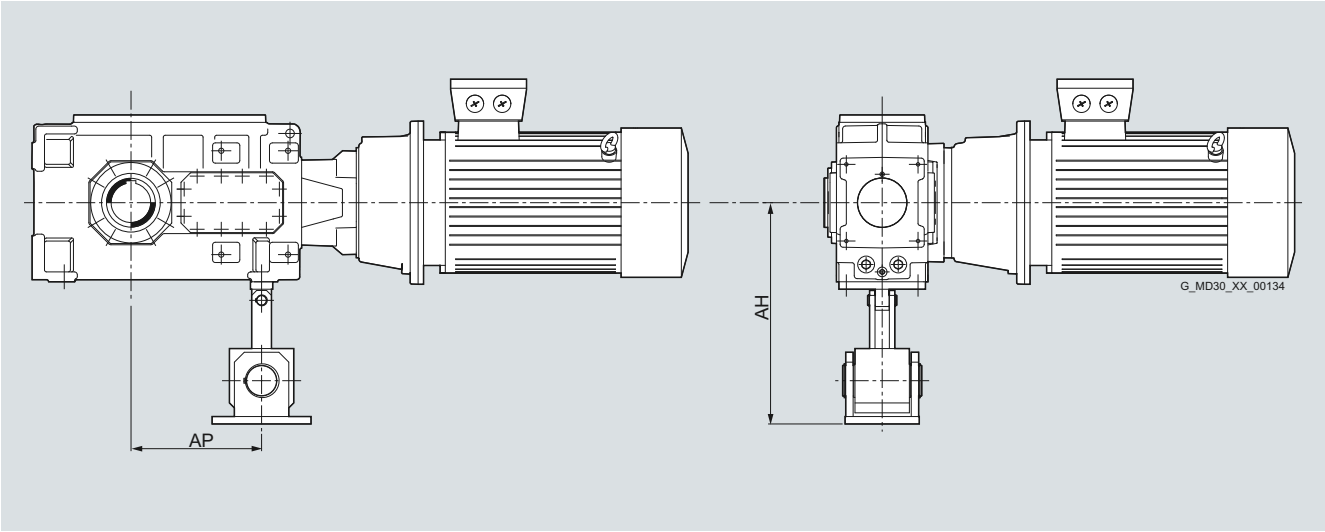
Vibration reducing torque reaction arm

Types H2, H3, H4, B2, B3 and B4

Dimensional drawings



Gear unit sizes	Dimensions in mm **Type**									
	B2		H2/B3		H3		B4		H4/B4	
	AH	AP	AH	AP	AH	AP	AH	AP	AH	AP
503	510	180	–	–	–	–	–	–	–	–
504	535	222.5	510	285	–	–	–	–	–	–
505	725	290	690	345	690	385	690	385	–	–
506	725	321	690	398	690	438	690	438	–	–
507	890	335	855	415	855	500	–	–	855	500
508	890	365	855	462	855	547	–	–	855	547
509	930	385	895	475	895	580	–	–	895	580
510	930	416	895	528	895	633	–	–	895	633
511	–	–	970	570	970	705	–	–	970	705
512	–	–	970	628	970	763	–	–	970	763
513	–	–	1030	660	1030	832	–	–	1030	832
514	–	–	1030	738	1030	910	–	–	1030	910

Note

The maximum transmissible torque is limited by the torque arm.

The following applies: $T_{max} = 2 \times T_{2,N}$

For gear units without motor bell housings, couplings that do not transmit any lateral forces must be used.

Torque arms in combination with fans are available on request only.

Only for gear units in horizontal mounting position with hollow shaft.

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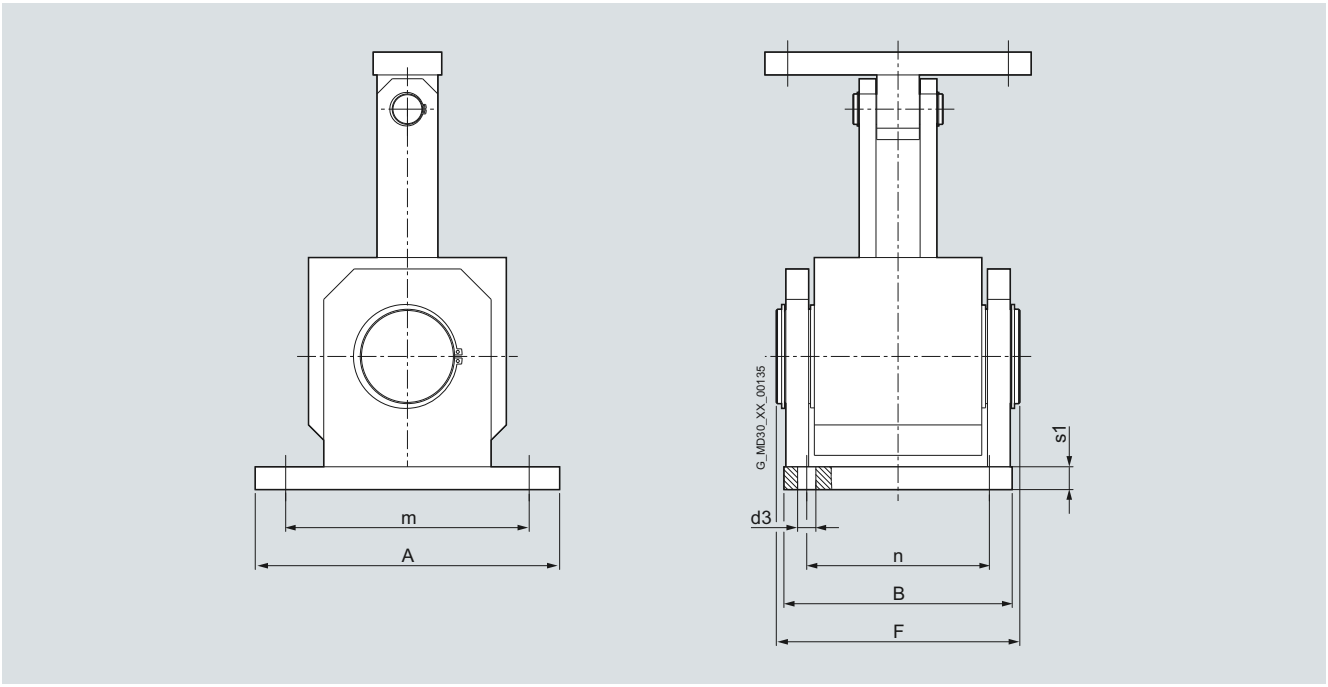
Dimensional drawings (continued)

Connection dimensions



Types B2..

Gear unit size	Dimensions in mm **Torque arm**								Weight in kg
	A	B	Ø d_3	F	m	n	S1	Metalastic socket	
503	200	160	19	170	160	120	20	095	23
504	200	160	19	170	160	120	20	095	24
505 / 506	320	200	19	195	260	130	25	772	62
507 / 508	400	300	24	320	320	240	30	805	174
509 / 510	400	300	24	320	320	240	30	805	176

Types H2.., H3.., H4.., B3.., B4..

Gear unit size	Dimensions in mm **Torque arm**								Weight in kg
	A	B	Ø d_3	F	m	n	S1	Metalastic socket	
504	200	160	19	170	160	120	20	095	23
505 / 506	320	200	19	195	260	130	25	772	58
507 / 508	400	300	24	320	320	240	30	805	170
509 / 510	400	300	24	320	320	240	30	805	172
511 / 512	400	300	24	320	320	240	30	805	174
513 / 514	400	300	24	320	320	240	30	805	179

Ordering information

When ordering the torque arm, **-Z** and the following order code should be added to the order number.

Data position of the Order No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Order No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**
Vibration reducing torque reaction arm												
Vibration reducing torque reaction arm for gear unit housing												**K 0 0**

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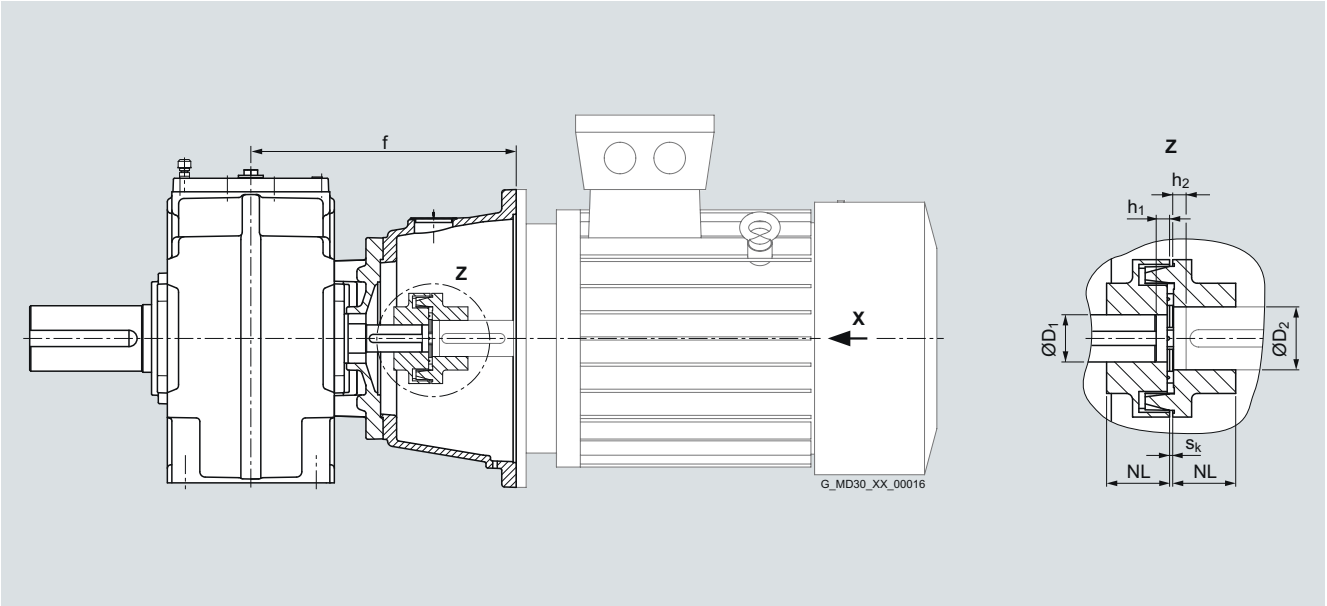
Motor bell housing for IEC motors

Type H2, gear unit sizes 504 to 512 with N-EUPEX coupling

Design



- For plants with special design requirements (high switching frequency, alternating direction of load; e.g. hoisting gears, traveling gears, etc.) the coupling design is to be checked in accordance with the respective valid coupling brochure. For other couplings, please consult us.
- For fitting dimensions for IEC standard motors DIN EN 50347 (View X), see page 8/18.
- Helical gear unit in C and D design, on request only.
- For type H2D. design A and B, on request only.
- Not in connection with taconite E on input shaft (see note on page 7/2).

Dimensions in mm

Gear unit sizes	Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
504						i_N = 6.3 – 11.2				i_N = 12.5 – 16				i_N = 18 – 20			
	160M	B110	3	40	42					35	0	0	363	28	2	8	363
	160L	B110	3	40	42					35	0	0	363	28	2	8	363
	180M	B110	3	40	48					35	0	0	363	28	2	8	363
	180L	B125	3	50	48					35	0	0	363	28	5	5	363
	200L	B140	3	55	55	45	0	0	383	35	7	13	383	28	0	0	353
	225S [2]	B140	3	55	60	45	7	11	431	35	7	7	407	28	0	2	385
	225M [2]	B140	3	55	60	45	7	11	431	35	7	7	407	28	0	2	385
	250M [2]	B160	4	60	65	45	2	3	419	35	8	17	419				
505						i_N = 6.3 – 10				i_N = 11.2 – 14				i_N = 16 – 18			
506						i_N = 9 – 14				i_N = 16 – 20				i_N = 22.4 – 25			
	225S	B140	3	55	60					45	0	2	440	32	0	0	418
	225M	B140	3	55	60					45	0	2	440	32	0	0	418
	250M [2]	B160	4	60	65	60	8	10	482	45	6	7	452				
		B180	4	70	65									32	12	21	452
	280S [2]	B180	4	70	75	60	8	10	482	45	6	7	452				
	280M [2]	B180	4	70	75	60	8	10	482	45	6	7	452				
	315S [2]	B200	4	80	80	60	12	22	528	45	5	9	483				
	315M [2]	B200	4	80	80	60	12	22	528	45	5	9	483				
	315L [2] [3]	B200	4	80	80	60	12	22	528								
	315L [2] [4]	B225	4	90	80	60	15	19	528								

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Design (continued)

Gear unit sizes	Dimensions in mm Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
507						i_N = 6.3 – 10				i_N = 11.2 – 18							
508						i_N = 8 – 12.5				i_N = 14 – 22.4							
	225S	B140	3	55	60					50	0	1.5	469.5				
		B180	4	70	60	70	-0.5	0	493.5								
	225M	B140	3	55	60					50	0	1.5	469.5				
		B180	4	70	60	70	-0.5	0	493.5								
	250M	B160	4	60	65					50	6	6.5	481.5				
		B180	4	70	65	70	8	9.5	511.5								
	280S	B180	4	70	75	70	8	9.5	511.5	50	6	6.5	481.5				
	280M	B180	4	70	75	70	8	9.5	511.5	50	6	6.5	481.5				
	315S [2]	B200	4	80	80	70	12	21.5	557.5	50	0	13.5	512.5				
	315M [2]	B200	4	80	80	70	12	21.5	557.5	50	0	13.5	512.5				
	315L [2] [3]	B200	4	80	80	70	12	21.5	557.5								
	315L [2] [4]	B225	4	90	80	70	15	18.5	557.5								
509						i_N = 6.3 – 10				i_N = 11.2 – 14				i_N = 16 – 20			
510						i_N = 8 – 12.5				i_N = 14 – 18				i_N = 20 – 22.4			
	280M	B180	4	70	75									50	3	3	500
	315S [2]	B200	4	80	80					60	10	12	576	50	0	7	531
	315M [2]	B200	4	80	80					60	10	12	576	50	0	7	531
	315L [2] [3]	B200	4	80	80					60	10	12	576	50	0	7	531
	315L [2] [4]	B225	4	90	80					60	10	12	576				
	315L [2] [5]	On request				80	On request			60	On request						
511										i_N = 11.2 – 14				i_N = 16 – 20			
512										i_N = 14 – 18				i_N = 20 – 22.4			
	315L [2] [5]	On request								80	On request			70	On request		

[1] Other motor sizes on request.
[2] Notice: Motor flange radius ØP/2 is greater than gear unit shaft height h.
[3] Standard motor 315L with P_N < 160 kW (motor designation not included in DIN EN 50347).
[4] Standard motor 315L with P_N < 200 kW (motor designation not included in DIN EN 50347).
[5] Standard motor 315L with P_N < 315 kW (motor designation not included in DIN EN 50347).

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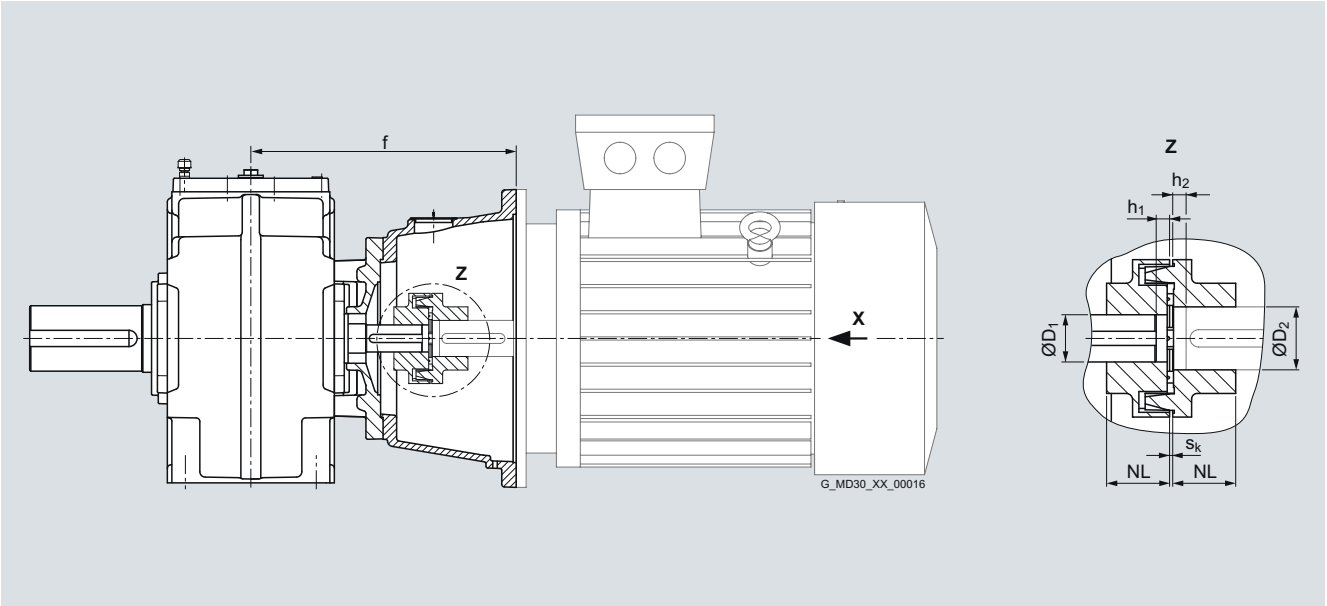
Motor bell housing for IEC motors

Type H3, gear unit sizes 505 to 514 with N-EUPEX coupling

Design



- For plants with special design requirements (high switching frequency, alternating direction of load; e.g. hoisting gears, traveling gears, etc.) the coupling design is to be checked in accordance with the respective valid coupling brochure. For other couplings, please consult us.
- For fitting dimensions for IEC standard motors DIN EN 50347 (View X), see page 8/18.
- Not in connection with taconite E on input shaft (see note on page 7/2).

Gear unit sizes	Dimensions in mm Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
505						i_N = 20 – 40				i_N = 45 – 56				i_N = 63 – 71			
506						i_N = 28 – 56				i_N = 63 – 80				i_N = 90 – 100			
	132S	B080	3	30	38					30	0	3.5	336.5				
		B095	3	35	38	40	0	7	360					24	4	9.5	336.5
	132M	B095	3	35	38	40	0	7	360	30	0	3.5	336.5	24	4	9.5	336.5
	160M	B095	3	35	42	40	0	7	390	30	0	0	363	24	4	6	363
	160L	B110	3	40	42	40	2	5	390	30	0	0	363	24	2	8	363
	180M	B110	3	40	48	40	2	5	390	30	0	0	363	24	2	8	363
	180L	B125	3	50	48	40	3	4	390	30	0	0	363	24	10	0	363
	200L	B140	3	55	55	40	7	20	410	30	7	10	380	24	15	12	380
	225S	B140	3	55	60	40	0	0	413								
	225M	B140	3	55	60	40	0	0	413								
	250M [2]	B160	4	60	65	40	10	23	447								

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Design (continued)

Gear unit sizes	Dimensions in mm Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
507						i_N = 20 – 40				i_N = 45 – 56				i_N = 63 – 71			
508						i_N = 25 – 50				i_N = 56 – 71				i_N = 80 – 90			
	160M	B110	3	40	42									28	5	7.5	405.5
	160L	B110	3	40	42									28	5	7.5	405.5
	180M	B110	3	40	48					35	0	2.5	405.5	28	2	10.5	405.5
	180L	B125	3	50	48					35	0	2.5	405.5	28	6	6.5	405.5
	200L	B140	3	55	55	45	0	2.5	425.5	35	7	15.5	425.5	28	0	2.5	395.5
	225S	B140	3	55	60	45	7	13.5	473.5	35	7	9.5	449.5	28	0	4.5	427.5
	225M	B140	3	55	60	45	7	13.5	473.5	35	7	9.5	449.5	28	0	4.5	427.5
	250M	B160	4	60	65	45	3	4.5	461.5	35	8	19.5	461.5				
	280S	B180	4	70	75	45	3	4.5	461.5								
	280M	B180	4	70	75	45	3	4.5	461.5								
509						i_N = 20 – 40				i_N = 45 – 56				i_N = 63 – 71			
510						i_N = 25 – 50				i_N = 56 – 71				i_N = 80 – 90			
	225S	B140	3	55	60	60	0	1	524	45	0	2	500	32	0	0	478
	225M	B140	3	55	60	60	0	1	524	45	0	2	500	32	0	0	478
	250M	B160	4	60	65	60	8	10	542	45	6	7	512				
		B180	4	70	65									32	12	21	512
	280S	B180	4	70	75	60	8	10	542	45	6	7	512				
	280M	B180	4	70	75	60	8	10	542	45	6	7	512				
	315S [2]	B200	4	80	80	60	12	22	588								
	315M [2]	B200	4	80	80	60	12	22	588								
	315L [2] [3]	B200	4	80	80	60	12	22	588								
	315L [2] [4]	B225	4	90	80	60	15	19	588								
511						i_N = 20 – 40				i_N = 45 – 56				i_N = 63 – 71			
512						i_N = 25 – 50				i_N = 56 – 71				i_N = 80 – 90			
	225S	B140	3	55	60									48	4	5	537
	225M	B140	3	55	60									48	4	5	537
	250M	B160	4	60	65					50	8	12	549	48	8	12	549
	280S	B180	4	70	75	70	10	15	579	50	8	12	549	48	8	12	549
	280M	B180	4	70	75	70	10	15	579	50	8	12	549	48	8	12	549
	315S	B200	4	80	80	70	15	26	625	50	0	21	580	48	0	21	580
	315M	B200	4	80	80	70	15	26	625	50	0	21	580	48	0	21	580
	315L [3]	B200	4	80	80	70	15	26	625								
	315L [4]	B225	4	90	80	70	18	23	625								
513						i_N = 20 – 40				i_N = 45 – 56				i_N = 63 – 71			
514						i_N = 25 – 50				i_N = 56 – 71				i_N = 80 – 90			
	280M	B180	4	70	75									50	4	4.5	582.5
	315S	B200	4	80	80	85	2	2.5	658.5	65	10	14.5	658.5	50	0	9.5	613.5
	315M	B200	4	80	80	85	2	2.5	658.5	65	10	14.5	658.5	50	0	9.5	613.5
	315L [3]	B200	4	80	80	85	2	2.5	658.5	65	10	14.5	658.5				
	315L [4]	B225	4	90	80	85	2	2.5	658.5	65	10	14.5	658.5				
	315L [2] [5]	On request				85	On request										

[1] Other motor sizes on request.
[2] Notice: Motor flange radius ØP/2 is greater than gear unit shaft height h.
[3] Standard motor 315L with P_N < 160 kW (motor designation not included in DIN EN 50347).
[4] Standard motor 315L with P_N < 200 kW (motor designation not included in DIN EN 50347).
[5] Standard motor 315L with P_N < 315 kW (motor designation not included in DIN EN 50347).

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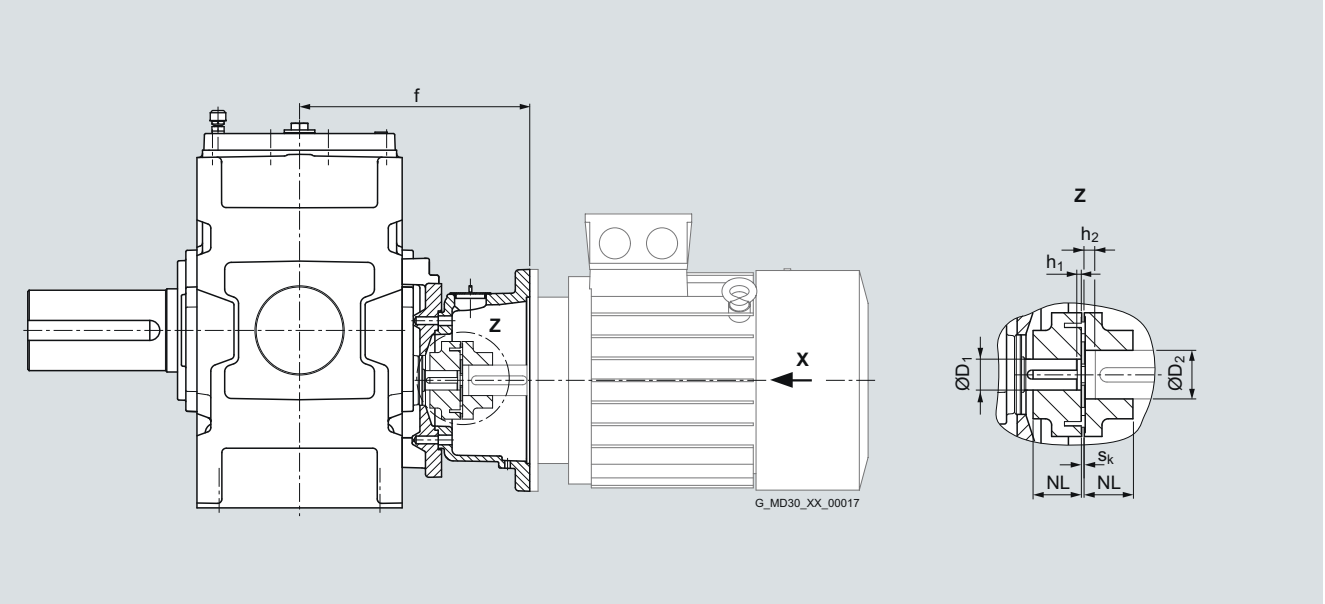
Motor bell housing for IEC motors

Type H4, gear unit sizes 507 to 514 with N-EUPEX coupling

Design



- For plants with special design requirements (high switching frequency, alternating direction of load; e.g. hoisting gears, traveling gears, etc.) the coupling design is to be checked in accordance with the respective valid coupling brochure. For other couplings, please consult us.
- For fitting dimensions for IEC standard motors DIN EN 50347 (View X), see page 8/18.
- Not in connection with taconite E on input shaft (see note on page 7/2).

Dimensions in mm

Gear unit sizes	Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
507						i_N = 80 – 140				i_N = 160 – 280							
508						i_N = 100 – 180				i_N = 200 – 355							
	112M	B080	3	30	28					28	0	0	328				
	132S	B095	3	35	38	35	0	0	358	28	0	10	358				
	132M	B095	3	35	38	35	0	0	358	28	0	10	358				
	160M	B095	3	35	42	35	0	0	388	28	4	6	388				
	160L	B110	3	40	42	35	0	0	388	28	2	8	388				
	180M	B110	3	40	48	35	0	0	388	28	2	8	388				
	180L	B125	3	50	48	35	0	0	388	28	5	5	388				
	200L	B140	3	55	55	35	7	13	408								
509						i_N = 80 – 160				i_N = 180 – 315							
510						i_N = 100 – 200				i_N = 224 – 400							
	160M	B095	3	35	42	35	0	0	398	28	4	6	398				
	160L	B110	3	40	42	35	0	0	398	28	2	8	398				
	180M	B110	3	40	48	35	0	0	398	28	2	8	398				
	180L	B125	3	50	48	35	0	0	398	28	10	0	398				
	200L	B140	3	55	55	35	7	10	415	28	15	12	415				
	225S	B140	3	55	60	35	7	12	447								
	225M	B140	3	55	60	35	7	12	447								

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Design (continued)

Dimensions in mm

Gear unit sizes	Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
511						i_N = 80 – 160				i_N = 180 – 224				i_N = 250 – 315			
512						i_N = 100 – 200				i_N = 224 – 280				i_N = 315 – 400			
	160M	B110	3	40	42					35	2	8	458				
		B125	3	50	42									28	6	14	458
	160L	B110	3	40	42					35	2	8	458				
		B125	3	50	42									28	6	14	458
	180M	B110	3	40	48					35	2	8	458	28	8	12	458
	180L	B125	3	50	48					35	5	5	458	28	6	14	458
	200L	B140	3	55	55	45	5	5	478	35	0	0	448	28	5	5	448
	225S	B140	3	55	60	45	2	2	502	35	0	2	480	28	0	12	480
	225M	B140	3	55	60	45	2	2	502	35	0	2	480	28	0	12	480
	250M	B160	4	60	65	45	7	8	514								
	280S	B180	4	70	75	45	7	8	514								
	280M	B180	4	70	75	45	7	8	514								
513						i_N = 80 – 160				i_N = 180 – 224				i_N = 250 – 315			
514						i_N = 100 – 200				i_N = 224 – 280				i_N = 315 – 400			
	225S	B140	3	55	60					45	7	15.5	570.5	32	7	11.5	546.5
	225M	B140	3	55	60					45	7	15.5	570.5	32	7	11.5	546.5
	250M	B160	4	60	65	60	7	7.5	588.5	45	4	5.5	558.5	32	6.5	23	558.5
	280S	B180	4	70	75	60	7	7.5	588.5	45	4	5.5	558.5				
	280M	B180	4	70	75	60	7	7.5	588.5	45	4	5.5	558.5				
	315S	B200	4	80	80	60	12	18.5	634.5								
	315M	B200	4	80	80	60	12	18.5	634.5								

[1] Other motor sizes on request.

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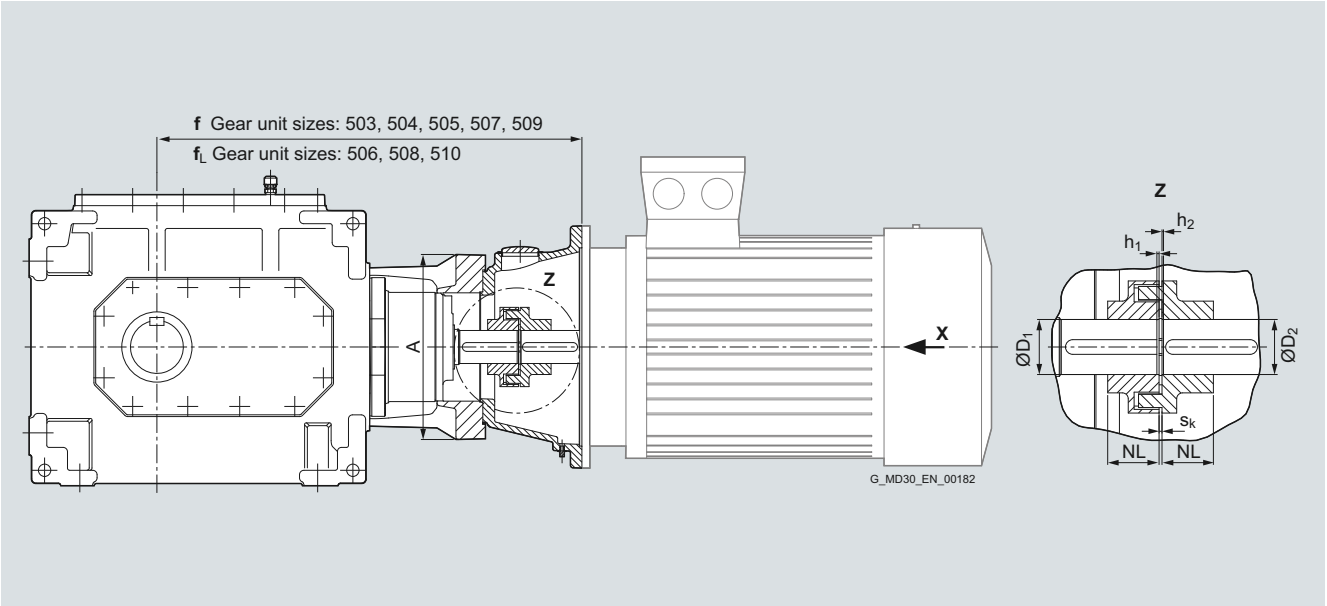
Motor bell housing for IEC motors

Type B2, gear unit sizes 503 to 510 with N-EUPEX coupling

Design



- For plants with special design requirements (high switching frequency, alternating direction of load; e.g. hoisting gears, traveling gears, etc.) the coupling design is to be checked in accordance with the respective valid coupling brochure. For other couplings, please consult us.
- For fitting dimensions for IEC standard motors DIN EN 50347 (View X), see page 8/18.
- Not in connection with taconite E on input shaft (see note on page 7/2).

Gear unit sizes	Dimensions in mm Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
503										i_N = 5 – 14					i_N = 16	
	160M	B095	3	35	42	□ 315						35	4	6	596	–
	160L	B110	3	40	42	□ 315						35	3	7	596	–
	180M	B110	3	40	48	□ 315	40	0	0	596	–	35	2	8	596	–
	180L	B125	3	50	48	□ 315	40	0	0	596	–	35	5	5	596	–
	200L	B140	3	55	55	□ 315	40	7	13	616	–					
	225S [2]	B140	3	55	60	□ 315	40	7	7	640	–					
	225M [2]	B140	3	55	60	□ 315	40	7	7	640	–					
	250M [2]	B160	4	60	65	□ 315	40	8	17	652	–					
504										i_N = 5 – 14					i_N = 16	
	180M	B110	3	40	48	□ 315						40	8	12	688	–
		B125	3	50	48	□ 315	50	0	0	688	–					
	180L	B125	3	50	48	□ 315	50	0	0	688	–	40	6	14	688	–
	200L	B140	3	55	55	□ 315	50	7	13	708	–	40	5	5	678	–
	225S	B140	3	55	60	□ 315	50	7	7	732	–	40	6	6	710	–
	225M	B140	3	55	60	□ 315	50	7	7	732	–	40	6	6	710	–

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Design (continued)

Gear unit sizes	Dimensions in mm															
	Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
505										i_N = 5 – 14					i_N = 16	
506											i_N = 6.3 – 18					i_N = 20
	225S	B140	3	55	60	□ 420						50	0	0	803	834
	225M	B140	3	55	60	□ 420						50	0	0	803	834
	250M [2]	B160	4	60	65	□ 420	60	0	1	815	846	50	5	6	815	846
	280S [2]	B180	4	70	75	□ 420	60	0	1	815	846	50	5	6	815	846
	280M [2]	B180	4	70	75	□ 420	60	0	1	815	846	50	5	6	815	846
507										i_N = 5 – 14					i_N = 16	
508											i_N = 6 – 17					i_N = 19
	280S	B180	4	70	75	□ 420	75	0	0	935	965	60	0	0	935	965
	280M	B180	4	70	75	□ 420	75	0	0	935	965	60	0	0	935	965
	315S [2]	B200	4	80	80	□ 420	75	0	1	966	996	60	0	1	966	996
	315M [2]	B200	4	80	80	□ 420	75	0	1	966	996	60	0	1	966	996
509										i_N = 5 – 11.2					i_N = 12.5 – 16	
510											i_N = 6 – 13.2					i_N = 15 – 19
	315S	B200	4	80	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137
	315M	B200	4	80	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137
	315L [3]	B200	4	80	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137

[1] Other motor sizes on request.
[2] Notice: Motor flange radius ∅P/2 is greater than gear unit shaft height h.
[3] Standard motor 315L with P_N < 160 kW (motor designation not included in DIN EN 50347).

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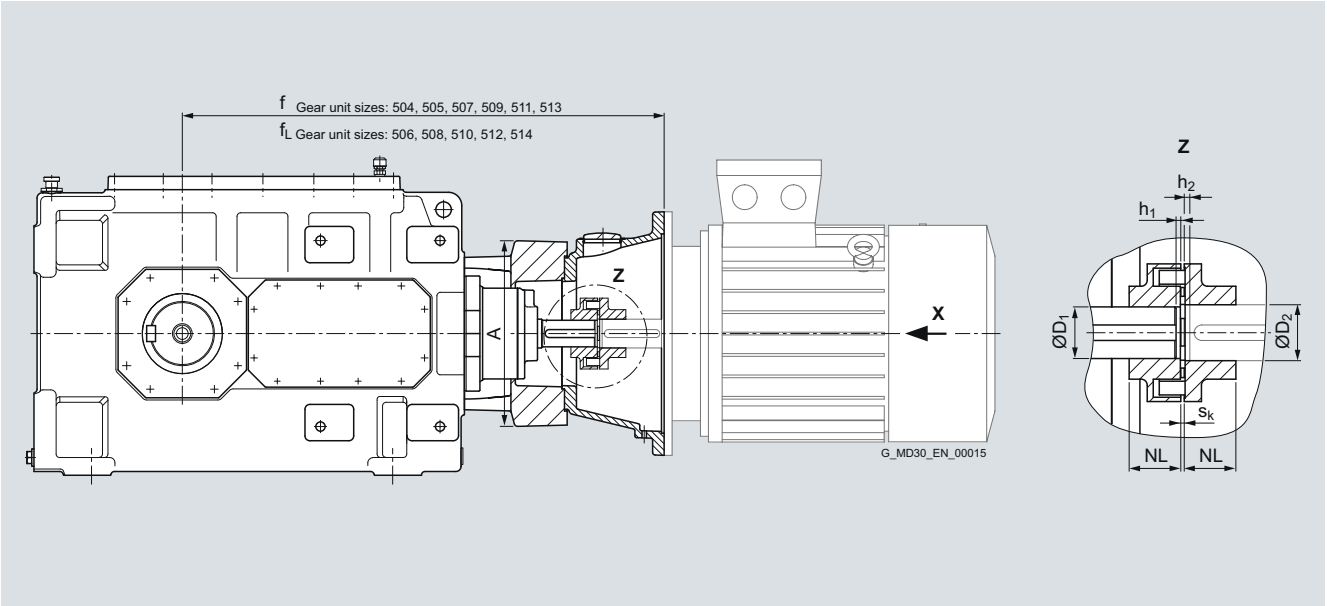
Motor bell housing for IEC motors

Type B3, gear unit sizes 504 to 514 with N-EUPEX coupling

Design



- For plants with special design requirements (high switching frequency, alternating direction of load; e.g. hoisting gears, traveling gears, etc.) the coupling design is to be checked in accordance with the respective valid coupling brochure. For other couplings, please consult us.
- For fitting dimensions for IEC standard motors DIN EN 50347 (View X), see page 8/18.
- Not in connection with taconite E on input shaft (see note on page 7/2).

Dimensions in mm

Gear unit sizes	Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
504										i_N = 16 – 56					i_N = 63	
	132S	B095	3	35	38	∅ 250	35	0	0	663	–	32	0	10	663	–
	132M	B095	3	35	38	∅ 250	35	0	0	663	–	32	0	10	663	–
	160M	B095	3	35	42	∅ 250	35	0	0	693	–					
		B110	3	40	42	∅ 250						32	2	8	693	–
	160L	B110	3	40	42	∅ 250	35	0	0	693	–	32	2	8	693	–
	180M	B110	3	40	48	∅ 250	35	0	0	693	–					
	180L	B125	3	50	48	∅ 250	35	0	0	693	–					
	200L	B140	3	55	55	∅ 250	35	7	13	713	–					
505										i_N = 14 – 50					i_N = 56	
506											i_N = 20 – 71					i_N = 80
	160M	B095	3	35	42	□ 315	40	0	0	778	831	35	4	6	778	831
	160L	B110	3	40	42	□ 315	40	0	0	778	831	35	3	7	778	831
	180M	B110	3	40	48	□ 315	40	0	0	778	831	35	2	8	778	831
	180L	B125	3	50	48	□ 315	40	0	0	778	831	35	5	5	778	831
	200L	B140	3	55	55	□ 315	40	7	13	798	851	35	0	0	768	821
	225S	B140	3	55	60	□ 315	40	7	7	822	875					
	225M	B140	3	55	60	□ 315	40	7	7	822	875					
	250M [2]	B160	4	60	65	□ 315	40	8	17	834	887					
	280S [2]	B180	4	70	75	□ 315	40	10	15	834	887					
	280M [2]	B180	4	70	75	□ 315	40	10	15	834	887					

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Design (continued)

Dimensions in mm

Gear unit sizes	Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
507										i_N = 14 – 50					i_N = 56	
508											i_N = 18 – 63					i_N = 71
	160M	B110	3	40	42	□ 315						40	12	8	913	960
	160L	B110	3	40	42	□ 315						40	12	8	913	960
	180M	B110	3	40	48	□ 315						40	8	12	913	960
	180L	B125	3	50	48	□ 315						40	6	14	913	960
	200L	B140	3	55	55	□ 315	50	7	13	933	980	40	5	5	903	950
	225S	B140	3	55	60	□ 315	50	7	7	957	1004	40	6	6	935	982
	225M	B140	3	55	60	□ 315	50	7	7	957	1004	40	6	6	935	982
	250M	B160	4	60	65	□ 315	50	8	17	969	1016					
	280S	B180	4	70	75	□ 315	50	10	15	969	1016					
	280M	B180	4	70	75	□ 315	50	10	15	969	1016					
509										i_N = 14 – 50					i_N = 56	
510											i_N = 18 – 63					i_N = 71
	225S	B140	3	55	60	□ 420	60	7	7	1089	1142	50	0	0	1065	1118
	225M	B140	3	55	60	□ 420	60	7	7	1089	1142	50	0	0	1065	1118
	250M	B160	4	60	65	□ 420	60	0	1	1077	1130	50	5	6	1077	1130
	280S	B180	4	70	75	□ 420	60	0	1	1077	1130	50	5	6	1077	1130
	280M	B180	4	70	75	□ 420	60	0	1	1077	1130	50	5	6	1077	1130
	315S [2]	B200	4	80	80	□ 420	60	0	2	1108	1161					
	315M [2]	B200	4	80	80	□ 420	60	0	2	1108	1161					
511										i_N = 14 – 50					i_N = 56	
512											i_N = 18 – 63					i_N = 71
	225S	B140	3	55	60	□ 420						60	6	7	1266	1324
	225M	B140	3	55	60	□ 420						60	6	7	1266	1324
	250M	B160	4	60	65	□ 420						60	0	0	1254	1312
	280S	B180	4	70	75	□ 420	75	0	0	1254	1312	60	0	0	1254	1312
	280M	B180	4	70	75	□ 420	75	0	0	1254	1312	60	0	0	1254	1312
	315S	B200	4	80	80	□ 420	75	0	1	1285	1343	60	0	1	1285	1343
	315M	B200	4	80	80	□ 420	75	0	1	1285	1343	60	0	1	1285	1343
	315L [3]	B200	4	80	80	□ 420	75	0	1	1285	1343	60	0	1	1285	1343
513										i_N = 14 – 40					i_N = 45 – 56	
514											i_N = 18 – 50					i_N = 56 – 71
	315S	B200	4	80	80	□ 420	80	10	10	1526	1604	70	0	0	1486	1564
	315M	B200	4	80	80	□ 420	80	10	10	1526	1604	70	0	0	1486	1564
	315L [3]	B200	4	80	80	□ 420	80	10	10	1526	1604	70	0	0	1486	1564
	315L [4]	B225	4	90	80	□ 420	80	10	10	1526	1604	70	0	0	1486	1564

[1] Other motor sizes on request.
[2] Notice: Motor flange radius ∅P/2 is greater than gear unit shaft height h.
[3] Standard motor 315L with P_N < 160 kW (motor designation not included in DIN EN 50347).
[4] Standard motor 315L with P_N < 200 kW (motor designation not included in DIN EN 50347).

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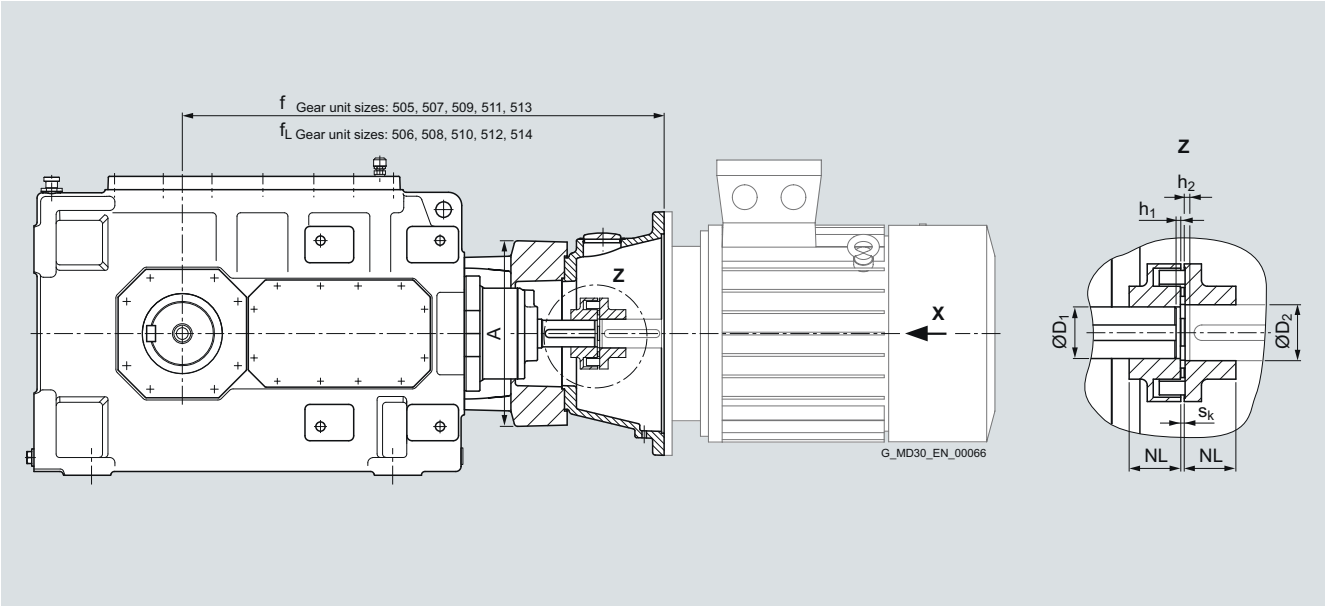
Motor bell housing for IEC motors

Type B4, gear unit sizes 505 to 514 with N-EUPEX coupling

Design



- For plants with special design requirements (high switching frequency, alternating direction of load; e.g. hoisting gears, traveling gears, etc.) the coupling design is to be checked in accordance with the respective valid coupling brochure. For other couplings, please consult us.
- For fitting dimensions for IEC standard motors DIN EN 50347 (View X), see page 8/18.
- Not in connection with taconite E on input shaft (see note on page 7/2).

Dimensions in mm

Gear unit sizes	Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
505										i_N = 63 – 200					i_N = 224 – 280	
506											i_N = 90 – 280					i_N = 315 – 355
	100L	B080	3	30	28	∅ 250						20	2	3	728	781
	112M	B080	3	30	28	∅ 250	28	0	0	728	781	20	2	3	728	781
	132S	B080	3	30	38	∅ 250	28	0	3	751	804	20	0	8	751	804
	132M	B095	3	35	38	∅ 250	28	0	3	751	804	20	0	8	751	804
	160M	B095	3	35	42	∅ 250	28	0	3	781	834	20	2	6	781	834
	160L	B110	3	40	42	∅ 250	28	0	3	781	834	20	2	6	781	834
	180M	B110	3	40	48	∅ 250	28	0	3	781	834					
	180L	B125	3	50	48	∅ 250	28	0	3	781	834					

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Design (continued)

Dimensions in mm

Gear unit sizes	Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
507										i_N = 63 – 200					i_N = 224	
508											i_N = 80 – 250					i_N = 280
	132S	B095	3	35	38	∅ 250	35	0	0	887	934	32	0	10	887	934
	132M	B095	3	35	38	∅ 250	35	0	0	887	934	32	0	10	887	934
	160M	B095	3	35	42	∅ 250	35	0	0	917	964					
		B110	3	40	42	∅ 250						32	2	8	917	964
	160L	B110	3	40	42	∅ 250	35	0	0	917	964	32	2	8	917	964
	180M	B110	3	40	48	∅ 250	35	0	0	917	964					
	180L	B125	3	50	48	∅ 250	35	0	0	917	964					
	200L	B140	3	55	55	∅ 250	35	7	13	937	984					
507															i_N = 250 – 280	
508																i_N = 315 – 355
	132S	B095	3	35	38	∅ 250						25	9	11	887	934
	132M	B095	3	35	38	∅ 250						25	9	11	887	934
	160M	B110	3	40	42	∅ 250						25	12	8	917	964
	160L	B125	3	50	42	∅ 250						25	6	14	917	964
509										i_N = 63 – 200					i_N = 224 – 280	
510											i_N = 80 – 250					i_N = 280 – 355
	160M	B095	3	35	42	□ 315	40	0	0	1043	1096	35	4	6	1043	1096
	160L	B110	3	40	42	□ 315	40	0	0	1043	1096	35	3	7	1043	1096
	180M	B110	3	40	48	□ 315	40	0	0	1043	1096	35	2	8	1043	1096
	180L	B125	3	50	48	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
	200L	B140	3	55	55	□ 315	40	7	13	1063	1116					
	225S	B140	3	55	60	□ 315	40	7	7	1087	1140					
	225M	B140	3	55	60	□ 315	40	7	7	1087	1140					
	250M	B160	4	60	65	□ 315	40	8	17	1099	1152					
511										i_N = 63 – 200					i_N = 224 – 280	
512											i_N = 80 – 250					i_N = 280 – 355
	160M	B110	3	40	42	□ 315						40	12	8	1235	1293
	160L	B110	3	40	42	□ 315						40	12	8	1235	1293
	180M	B110	3	40	48	□ 315						40	8	12	1235	1293
		B125	3	50	48	□ 315	50	0	0	1235	1293					
	180L	B125	3	50	48	□ 315	50	0	0	1235	1293	40	6	14	1235	1293
	200L	B140	3	55	55	□ 315	50	7	13	1255	1313	40	5	5	1225	1283
	225S	B140	3	55	60	□ 315	50	7	7	1279	1337	40	6	6	1257	1315
	225M	B140	3	55	60	□ 315	50	7	7	1279	1337	40	6	6	1257	1315
	250M	B160	4	60	65	□ 315	50	8	17	1291	1349					
	280S	B180	4	70	75	□ 315	50	10	15	1291	1349					
	280M	B180	4	70	75	□ 315	50	10	15	1291	1349					
513										i_N = 63 – 200					i_N = 224 – 280	
514											i_N = 80 – 250					i_N = 280 – 355
	225S	B140	3	55	60	□ 420	60	7	7	1467	1545	50	0	0	1443	1521
	225M	B140	3	55	60	□ 420	60	7	7	1467	1545	50	0	0	1443	1521
	250M	B160	4	60	65	□ 420	60	0	1	1455	1533	50	5	6	1455	1533
	280S	B180	4	70	75	□ 420	60	0	1	1455	1533	50	5	6	1455	1533
	280M	B180	4	70	75	□ 420	60	0	1	1455	1533	50	5	6	1455	1533
	315S	B200	4	80	80	□ 420	60	0	2	1486	1564					
	315M	B200	4	80	80	□ 420	60	0	2	1486	1564					
	315L [2]	B200	4	80	80	□ 420	60	0	2	1486	1564					

[1] Other motor sizes on request.

[2] Standard motor 315L with P_N < 160 kW (motor designation not included in DIN EN 50347).

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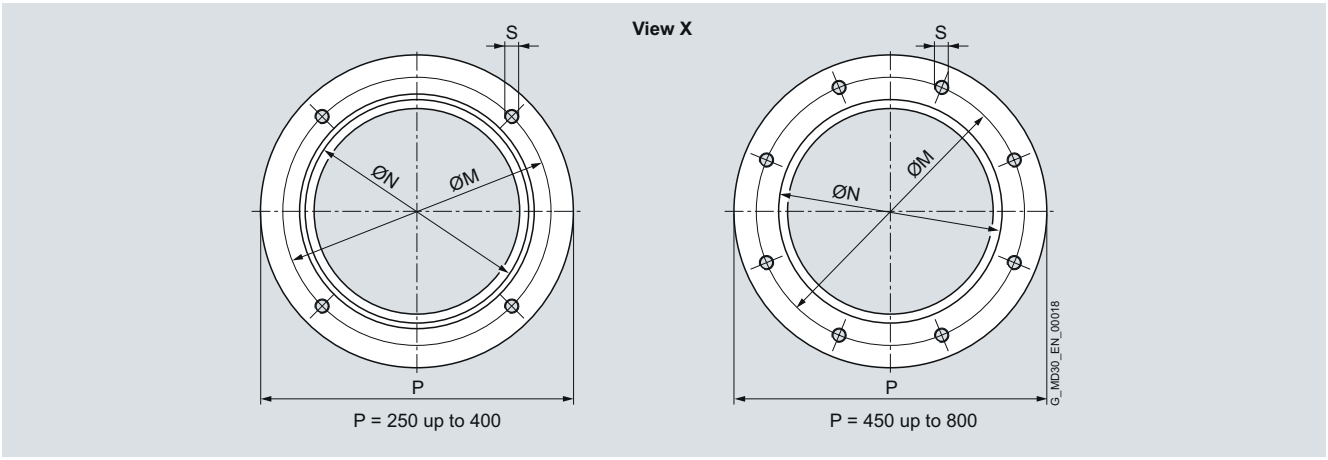
Fitting dimensions for IEC motors

Design



Flange dimensions
For three-phase motors with squirrel-cage rotor acc. to DIN EN 50347

		Motor frame sizes											
		100L	**112M**	**132S 132M**	**160M 160L**	**180M 180L**	**200L**	**225S 225M**	**250M**	**280S 280M**	**315S 315M**	**315L** [1]	
Max. power rating P_N at 50 Hz	kW	**3**	**4**	**7.5**	**15**	**22**	**30**	**45**	**55**	**90**	**132**	**200**	**315**
ØP	mm	250	250	300	350	350	400	450	550	550	660	660	800
ØN (H7)	mm	180	180	230	250	250	300	350	450	450	550	550	680
ØM	mm	215	215	265	300	300	350	400	500	500	600	600	740
S		4 x M12			4 x M16			8 x M16			8 x M20		

Ordering information
When ordering the motor bell housing, **-Z** and the following order code should be added to the order number.

Data position of the Order No.		1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Order No.		**2LP202**	.	-	.	.	.	.	-	.	.	.	.	**-Z**		
Motor bell housing in catalog design for one 4-pole or 6-pole IEC motor for standard coupling															
IEC motor 100L	for N-EUPEX coupling B080												**P**	**0**	**0**
IEC motor 112M	for N-EUPEX coupling B080												**P**	**0**	**1**
IEC motor 132S	for N-EUPEX coupling B080												**P**	**0**	**2**
IEC motor 132S	for N-EUPEX coupling B095												**P**	**0**	**3**
IEC motor 132M	for N-EUPEX coupling B095												**P**	**0**	**4**
IEC motor 160M	for N-EUPEX coupling B095												**P**	**0**	**5**
IEC motor 160M	for N-EUPEX coupling B110												**P**	**0**	**6**
IEC motor 160M	for N-EUPEX coupling B125												**P**	**0**	**7**
IEC motor 160L	for N-EUPEX coupling B110												**P**	**0**	**8**
IEC motor 160L	for N-EUPEX coupling B125												**P**	**0**	**9**
IEC motor 180M	for N-EUPEX coupling B110												**P**	**1**	**0**
IEC motor 180M	for N-EUPEX coupling B125												**P**	**1**	**1**
IEC motor 180L	for N-EUPEX coupling B125												**P**	**1**	**2**
IEC motor 200L	for N-EUPEX coupling B140												**P**	**1**	**3**
IEC motor 225S	for N-EUPEX coupling B140												**P**	**1**	**4**
IEC motor 225S	for N-EUPEX coupling B180												**P**	**1**	**5**
IEC motor 225M	for N-EUPEX coupling B140												**P**	**1**	**6**
IEC motor 225M	for N-EUPEX coupling B180												**P**	**1**	**7**
IEC motor 250M	for N-EUPEX coupling B160												**P**	**1**	**8**
IEC motor 250M	for N-EUPEX coupling B180												**P**	**1**	**9**
IEC motor 280S	for N-EUPEX coupling B180												**P**	**2**	**0**
IEC motor 280M	for N-EUPEX coupling B180												**P**	**2**	**1**
IEC motor 315S	for N-EUPEX coupling B200												**P**	**2**	**2**
IEC motor 315M	for N-EUPEX coupling B200												**P**	**2**	**3**
IEC motor 315L (max. 160 kW/50 Hz)	for N-EUPEX coupling B200												**P**	**2**	**4**
IEC motor 315L (max. 200 kW/50 Hz)	for N-EUPEX coupling B225												**P**	**2**	**5**
End for fitting motor bell housing for gear units with shaft d1 at each end															
Fitted on left (view on end face d1)													**P**	**9**	**5**
Fitted on right (view on end face d1)													**P**	**9**	**6**

[1] Motor designation (not included in DIN EN 50347).

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Appendix

9/2 **Partners at Industry Automation and Drive Technologies**

9/3 **Online Services**
9/3 Information and Ordering in the Internet and on DVD

9/4 **Industry Services**
9/4 Your plant can do more – with services from Siemens
9/5 Industry Services for the entire life cycle
9/8 Industry Online Support

9/9 **Index**
9/9 Subject index

9/10 **Conditions of sale and delivery**

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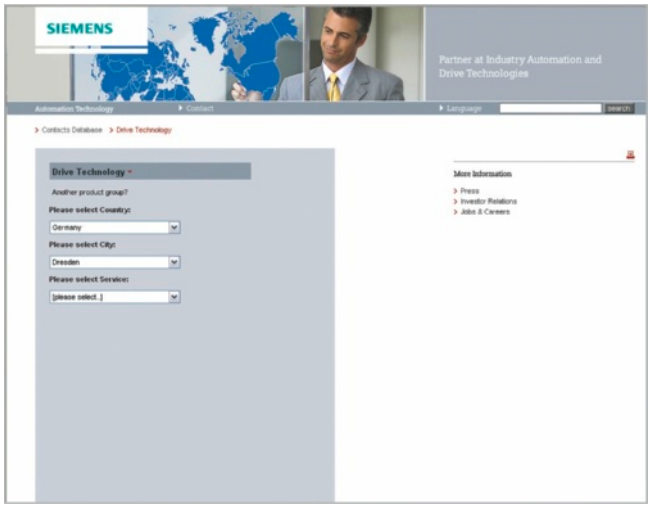
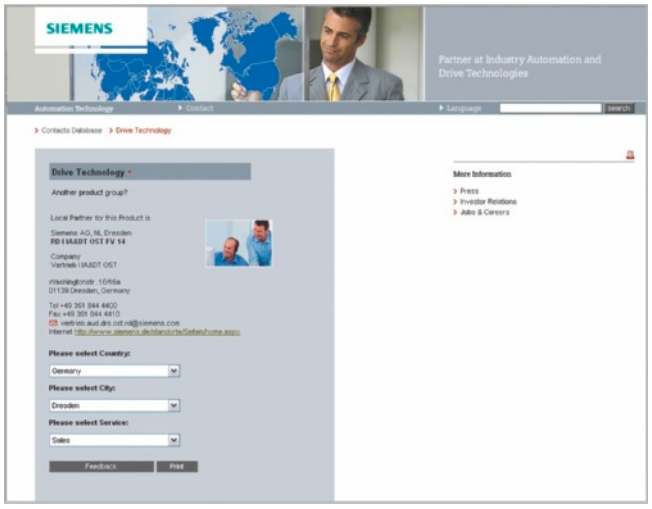
Partners at Industry Automation and Drive Technologies





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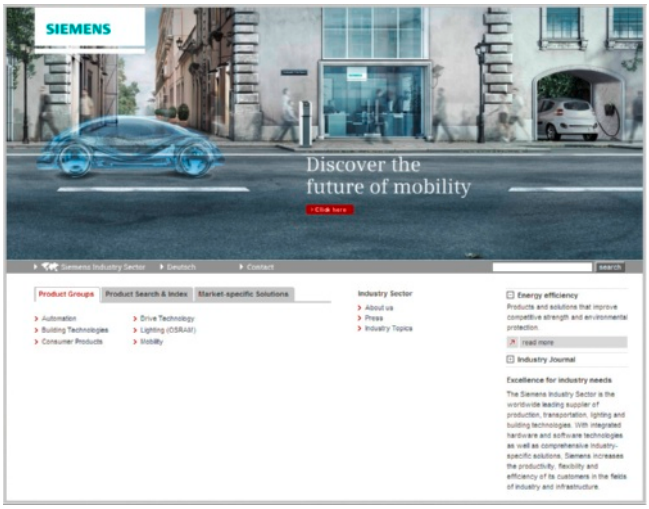

A detailed knowledge of the range of products and services available is essential when planning and configuring automation systems. It goes without saying that this information must always be fully up-to-date.

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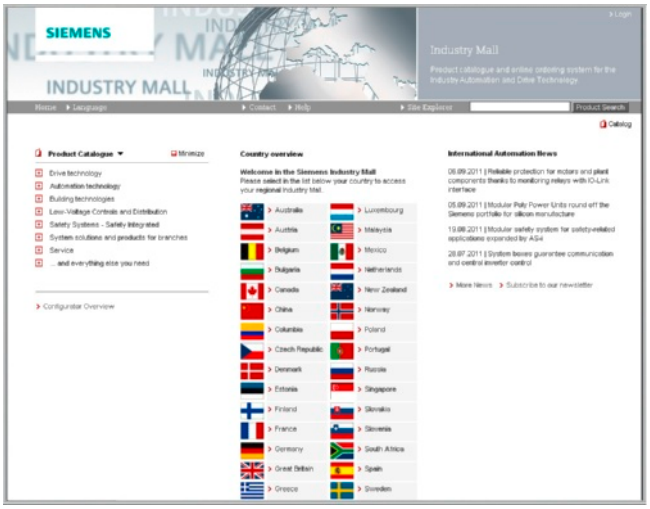

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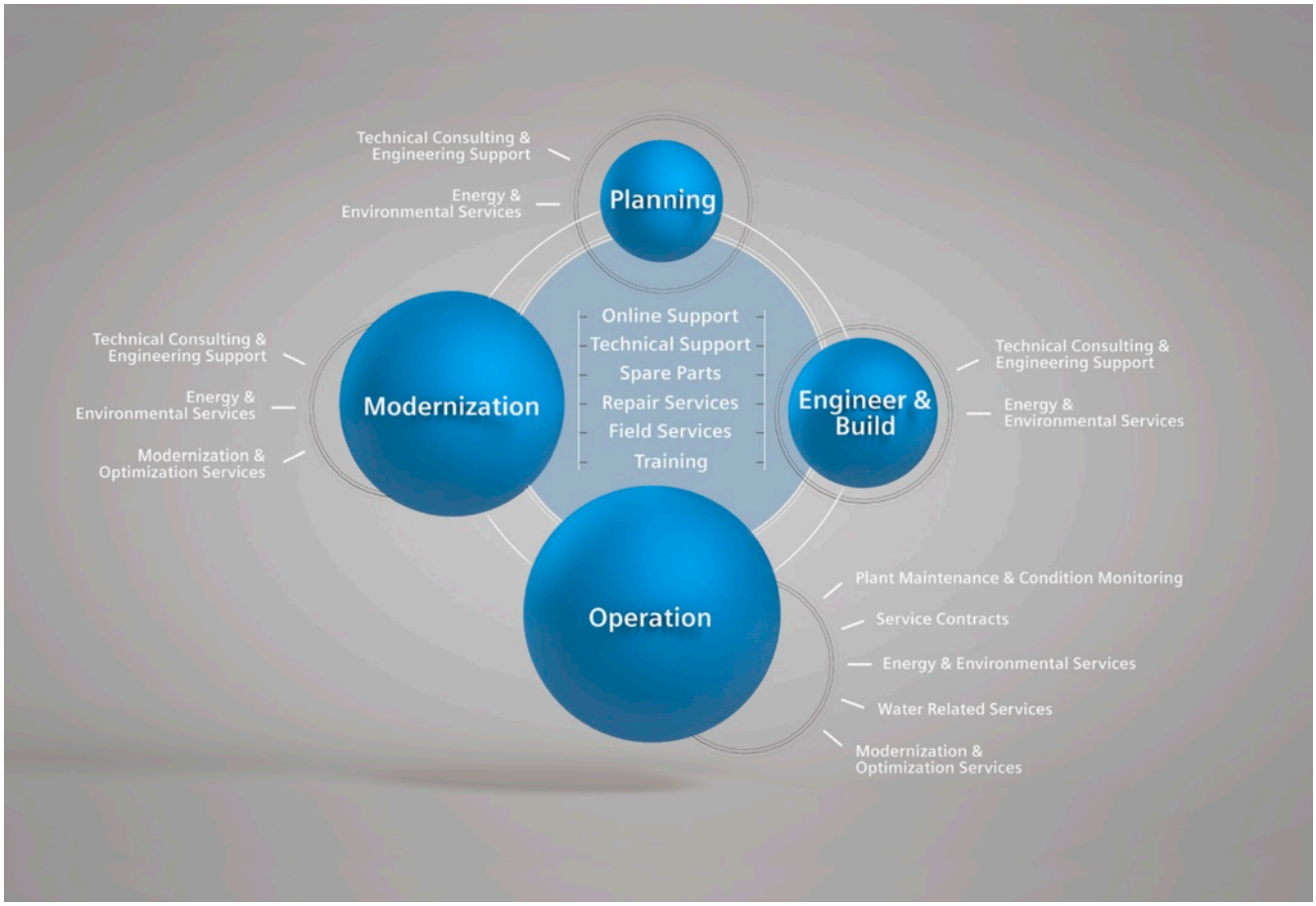

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Industry Services for the entire life cycle

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Functions of Version V2.0

The following new functions have been integrated:

- Scanning of product codes with direct call of Product View.
- New optimized Product View – all product information at a glance incl. graphical data
- (CAx data).
- Sending of entries and Product Views by e-mail.
- Sending of Support Requests incl. camera function for optional transmission of additional information in picture form.
- Set "Products" as favorite incl. Note function.
- Offline cache function – call entries and products in "mySupport" also without network reception.
- Transfer of PDF documents to iBooks.

You can get the app for free at the Apple App Store and at Android Market with the search terms: "Siemens Industry Online Support".

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KG 0313 1.0 AUM 164 En
Nd. 1213 1.0 AUM 168 En / E.9115.E1.SGT
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