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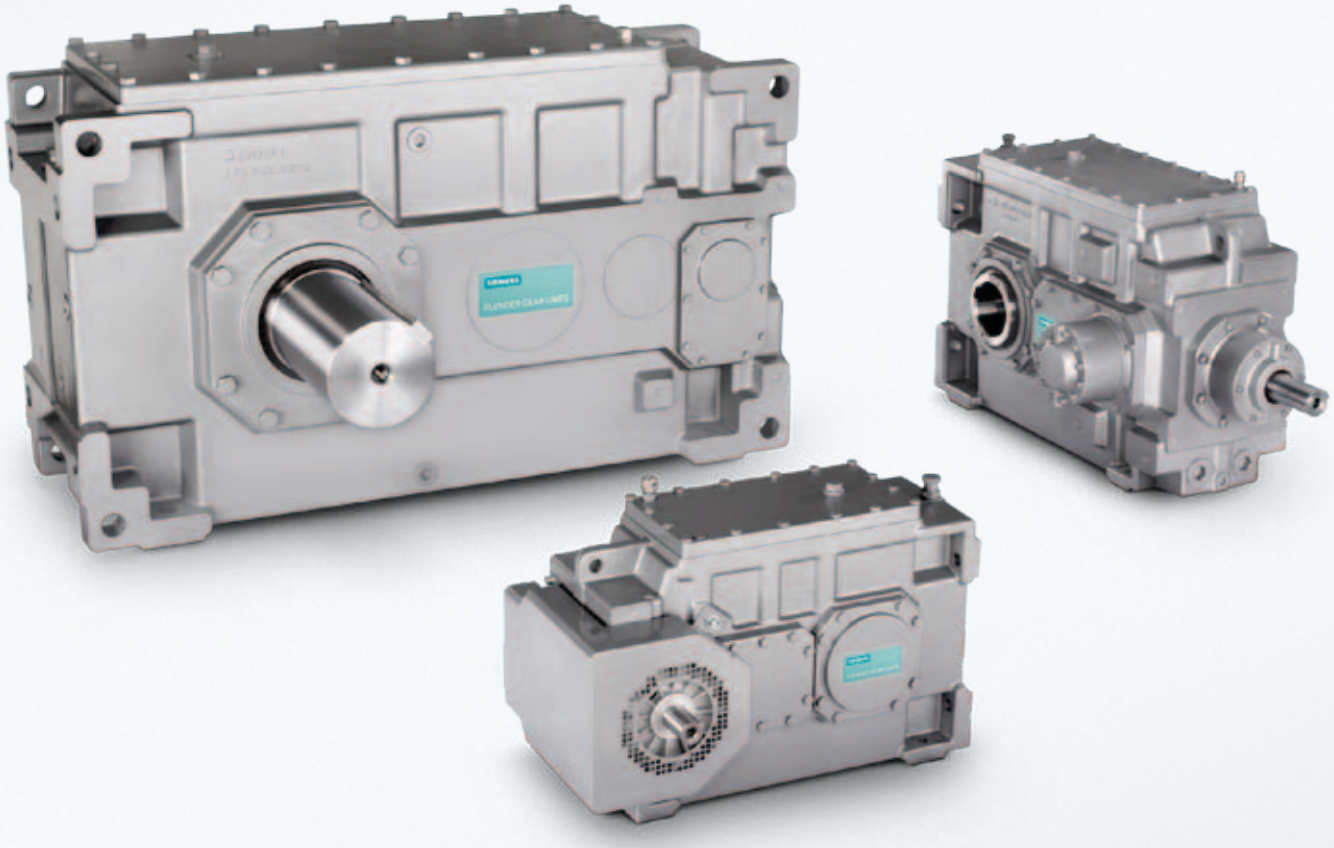

FLENDER SIG

Standard industrial gear units

FLENDER gear units

Catalog MD 30.1

Edition 2014

Answers for industry.

Related catalogs

FLENDER SIP MD 31.1
Standard Industrial Planetary Gear Units
E86060-K5731-A111-A3-7600

FLENDER couplings MD 10.1
Standard Couplings
E86060-K5710-A111-A4-7600

ARPEX MD 10.2
High Performance Couplings
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FLENDER SIG
Standard industrial gear units

Catalog MD 30.1 · 2014

Dear customer,

We are happy to present the new Catalog MD 30.1 to you. This catalog contains the current product range of FLENDER standard industrial gear units (FLENDER SIG).

In addition to the horizontal mounting position for FLENDER SIG gear units, we are now able to offer you a vertical mounting position with dip lubrication for a number of sizes.
We have also added new output shaft designs to our extensive product spectrum:
Hollow shaft with involute splines and solid shaft without keyway for flange coupling with backlash free cone-clamping-connection.

A further mounting position is available as of October 2014: the mounting position "L" stands for the upright installation at the housing side next to the horizontal low speed shaft (low speed shaft ***L***ower than the high speed shaft).
For the single-stage helical gear units H1 the forced lubrication via a flange mounted pump is available now. With this option the use of labyrinth seals can be incorporated into gear units at much lower speeds.

The modular gear unit system from Siemens thus supports a huge variety of possible variants, so that FLENDER SIG is available in 1-stage to 4-stage helical and 2-stage to 4-stage bevel-helical gear units in many different sizes and designs - both for mounting on foundations and as shaft-mounted gear units.

With the FLENDER SIG series Siemens provides highly-developed universal solutions for the drive tasks of the future. These gear units are extremely compact and, by comparison with the series predecessor, offer an even greater torque rating in a similar size. By a harmonized torque rating you will always be able to find the right gear unit in this series. Numerous options have already been standardized.

When implementing drive ideas you can look forward to take advantage of our experience in the industry, application know-how, solution expertise, first-class engineering, the latest technology and a highly-functional drive-train concept.
FLENDER SIG was developed on the basis of long-term empirical values from our customers and the latest technical insights.
The new series is our contribution to your long-term success.

Please test the new technology now.

We hope that you will enjoy using Catalog MD 30.1 as a reference for placing new orders and look forward to receiving your questions about our products.
Any ideas and suggestions for improvement will be gratefully received.

Up-to-date information about FLENDER SIG is available in the Internet at:
www.siemens.com/sig

With kind regards,

Uwe Krämer
FLENDER SIG Product Management
Siemens PD MD AP PRL PRM

Siemens Industriegetriebe GmbH

Answers for industry.

FLENDER gear units
FLENDER SIG
Standard industrial gear units

Catalog MD 30.1 · 2014

The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with DIN EN ISO 9001 (Certified Registration No. 01 100 000708). The certificate is recognized by all IQNet countries.

Supersedes:
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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.

Introduction

1/2 Notes

1/2 Summary of basic types/ Gear unit designations

1/3 Orientation in space

1/4 Characteristic features

1/4 Notes on selection and operation

1

Summary of basic types/Gear unit designations

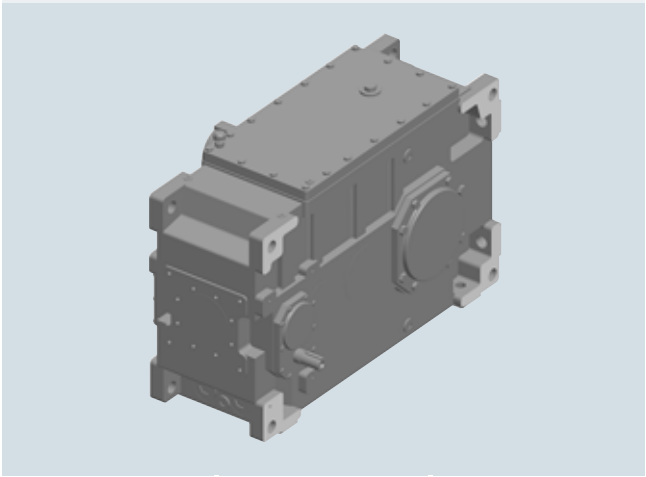
Overview

Types

Helical gear units

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

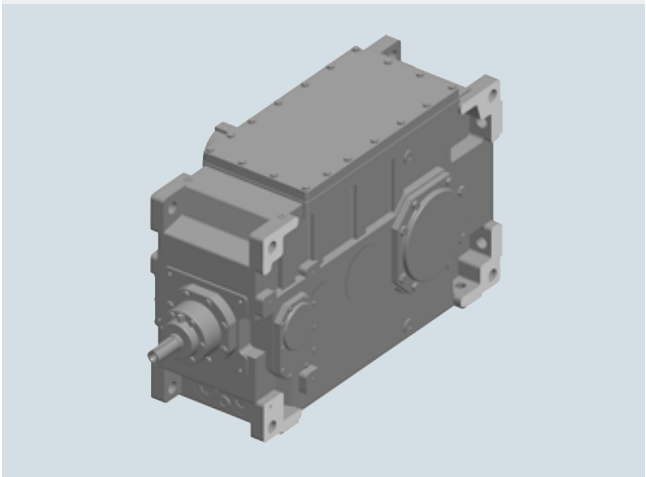
1- ... 4-stage, i_N = 1.12 – 400



Bevel-helical gear units

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

2- ... 4-stage, i_N = 5 – 355



Structure of gear unit designation

Type		B	3	S	H	5	1	1
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**				
	Hollow shaft with spline in accordance with DIN 5480			**K**				
	Solid shaft without keyway			**C**				
Mounting position	Horizontal				**H**			
	Vertical				**V**			
	Upright, output at bottom				**L**			
	Upright, output at top				**U**			
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

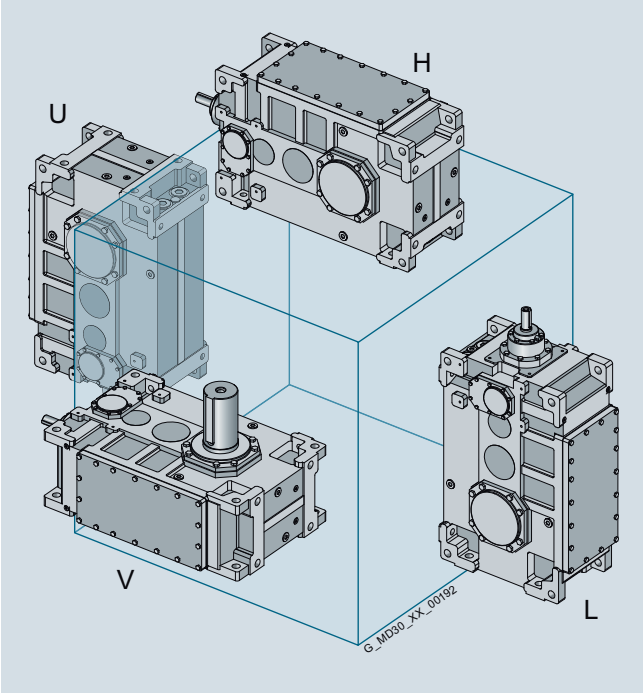
- Bevel-helical gear unit, 3-stage
- Solid output shaft design
- Horizontal mounting position
- Size 511
- Design A
- *i* = 16

Overview

Mounting positions

FLENDER SIG gear units are available for mounting in the horizontal (H), vertical (V) and upright position with output end (L) at the bottom.

Versions for mounting in the upright position with output end at the top (U) or for inclined or pivoted mounting positions can also be supplied subject to consultation with the supplier.

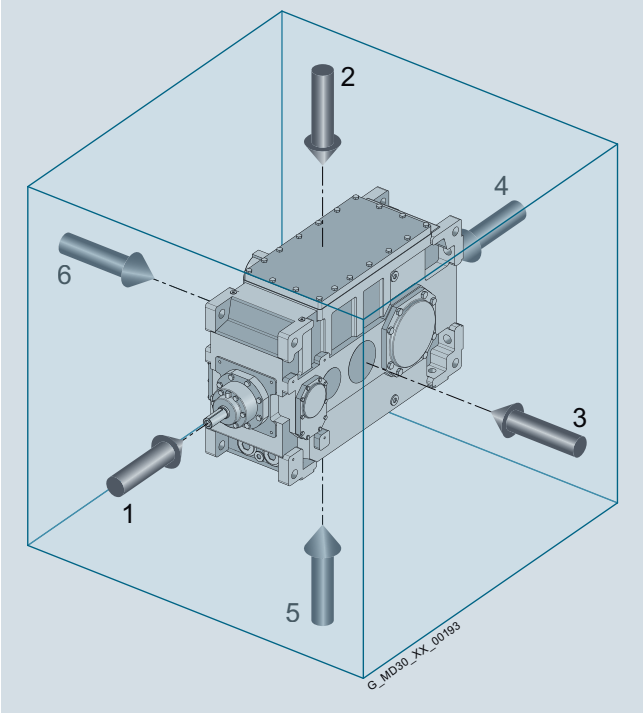


Designation of gear unit faces

Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1. Face 2 is at the top.

Assembly cover at top (2), view directed at drive end face (1):

- Face 3 = Right
- Face 6 = Left



Standard mounting surfaces

Mounting position	Surface
Mounting position H	Gear unit face 5
Mounting position L	Gear unit face 4
Mounting position V	Gear unit face 3
Mounting position U	–

Alternative mounting surfaces to those specified above, depending on the mounting position, are available on request.

Notes

Characteristic features
Notes on selection and operation

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 a variety of solid shaft or 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

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 11.
- 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 EN 20273 – "coarse" series. The gear housings are protected against corrosion and lacquered in the color RAL 5015.

Guards and protection devices are coated in "Signal Yellow" paint (RAL 1003).

Certified acc. to EN ISO 9001.

Technical information

2

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

Preservation, selection of oil, shaft misalignment, maintenance

Overview

Preservation

The internal preservation of Siemens industrial gear units is dependent on the oil used and the shaft seals provided.

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

Seal type of gear unit	Maximum preservation life		
	Mineral oil	PAO oil	PG oil
Standard preservation			
Without restriction	Up to 6 months	Up to 6 months	Up to 6 months
Long-term preservation			
Labyrinth seal in combination with V-ring seal	Up to 12 months	Up to 12 months	Up to 12 months
Shaft seal or taconite seal [1]	Up to 24 months	Up to 24 months	Up to 36 months

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 limits in °C		
	Mineral oil	PAO oil	PG oil
Dip lubrication			
VG 220	-10	-30	-25
VG 320	-10	-30	-25
VG 460	-6	-25	-25
Oil circulation lubrication			
VG 220	10	0	10
VG 320	15	10	10

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.

Oil circulation lubrication:

With an oil circulation lubrication system, all bearings that are not immersed in oil are supplied with oil by a flange-mounted pump.

Selection criteria see page 11/4.

When an oil circulation lubrication system is used, the operating viscosity must not exceed 1800 cSt.

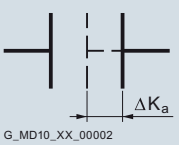
At temperature limits below those listed in the table, a dip lubrication or gear unit heating system must be provided.

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:



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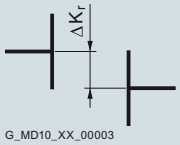
Axial misalignment



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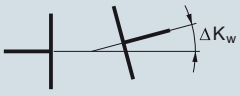
Radial misalignment



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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.

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.

[1] When storing outside, the maximum storage time can be reduced to 12 months depending on the package type. Please observe the operating instructions.

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 Types H1, H2, H3, H4
Moments of inertia J_1
3/62 Types B2, B3, B4
Moments of inertia J_1
3/64 Types H1, H2, H3, H4
Actual ratio
3/66 Types B2, B3, B4
Actual ratio

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 3/64 to 3/66 is acceptable.

2. Determination of oil supply:

Horizontal mounting position (H)

- Dip lubrication
  (all parts to be lubricated are immersed in the oil or are splash lubricated)
- Oil circulation lubrication by means of flange-mounted pump (type H1 only)

Vertical mounting position (V)

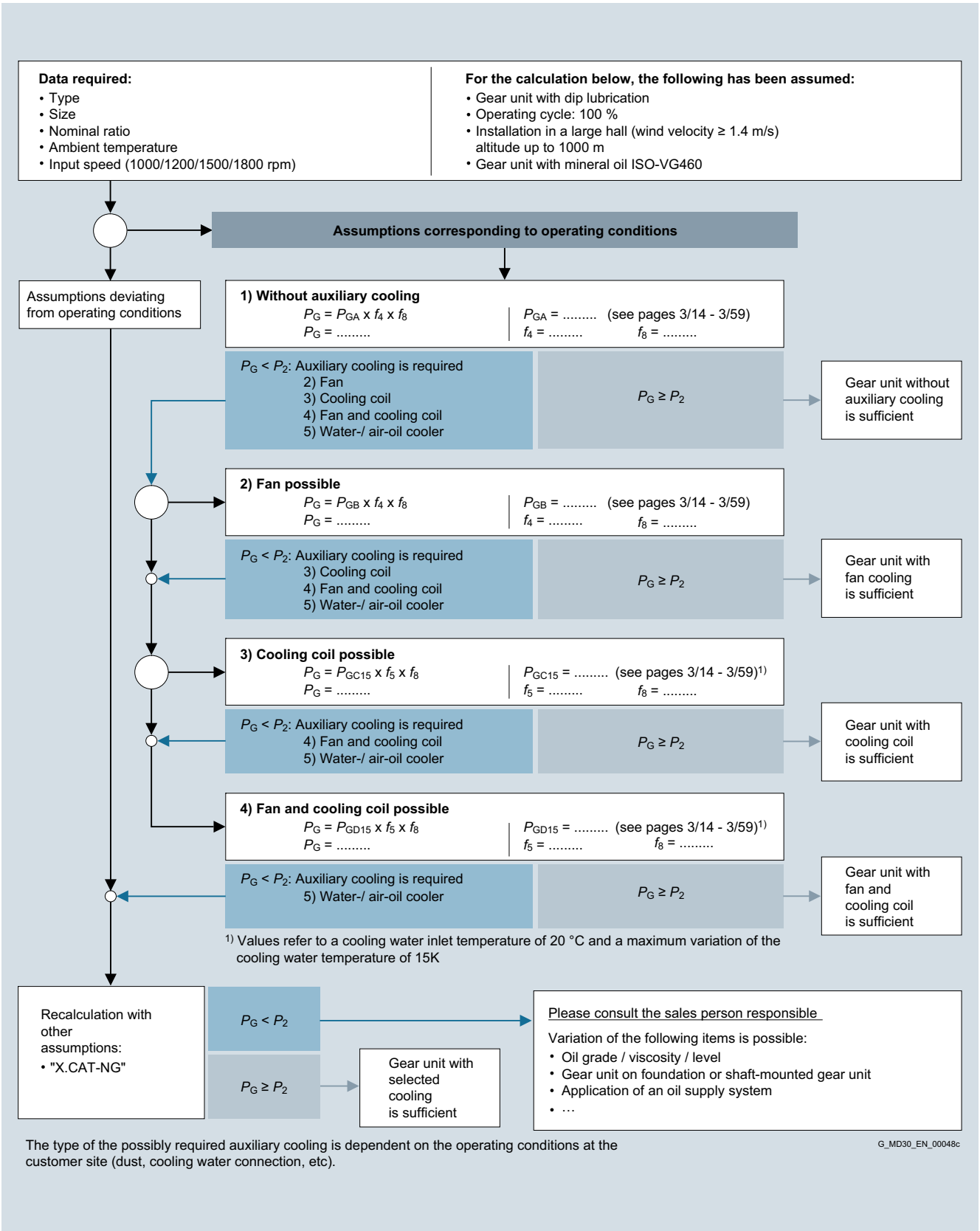
- Dip lubrication with oil expansion unit
- Forced lubrication on request

Upright mounting positions (L, U)

- Dip lubrication with oil expansion unit
- Forced lubrication on request

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 %.

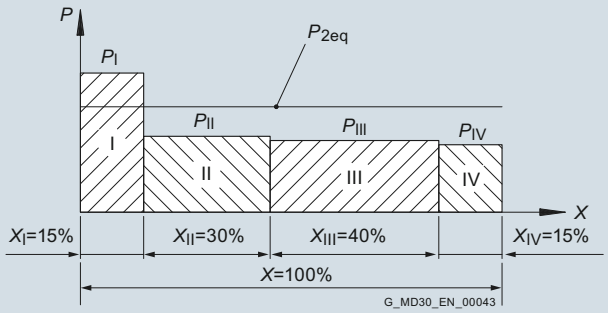
If any one of the three requirements is not met, P_{2eq} must be recalculated.

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



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	3/64, 3/66
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_{GC15}	Thermal capacity for gear units with built-in cooling coil, limitation of cooling water temperature difference to 15 K	
P_{GD}	Thermal capacity for gear units with built-in cooling coil and fan	
P_{GD15}	Thermal capacity for gear units with built-in cooling coil and fan, limitation of cooling water temperature difference to 15 K	
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_{2max}	Max. permissible 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_{GC15} (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 limitation of cooling water temperature difference to 15 K.

P_{GD15} (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 limitation of cooling water temperature difference to 15 K.

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

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 = 62.8 kW
P_{GA} = 71.4 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 = 131 kW
P_{GB} = 149 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
$P_G = P_{GC15} \times f_5 \times f_8$
P_G = 142 kW
P_{GC15} = 153 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
$P_G = P_{GD15} \times f_5 \times f_8$
P_G = 208 kW
P_{GD15} = 224 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 and a maximum variation of cooling water temperature of 15K

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_00049b

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 converter, electromechanical	–	1.8	2.0
Reciprocating compressors	–	1.8	1.9
Cranes [2]			
• Slewing gears [1]	1.0	1.4	1.8
• Luffing gears	On request		
• Traveling gears	On request		
• Hoisting gears	On request		
• Derricking jib cranes	On request		
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

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

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.

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	Type	Oil supply factor f_8			
		Without auxiliary cooling	With fan	With cooling coil	With fan and cooling coil
Dip lubrication [1]	H..H, B..H	1	1	1	1
	H..V, B..V	0.95	0.95	0.95	0.95
	H..L, B..L	0.95	0.95	0.95	0.95

[1] In combination with shaft seals or taconite.
Values of >1 are possible and available on request with oil circulation lubrication or dip lubrication combined with labyrinth seals.

Overview tables

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

Technical specifications

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	–

Technical specifications (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

Overview tables

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

Technical specifications (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

Technical specifications (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

Type H1 – Thermal capacities
n_1 = 1000 rpm

Technical specifications (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}	139	156	102	–	*	–	*	–
	P_{GB}	359	471	592	–	764	–	1046	–
	P_{GC15}	414	735	743	–	626	–	1314	–
	P_{GD15}	610	1003	1160	–	1271	–	2138	–
1.25	P_{GA}	143	174	130	–	54.9	–	*	–
	P_{GB}	356	478	567	–	806	–	1112	–
	P_{GC15}	404	732	702	–	675	–	1361	–
	P_{GD15}	596	992	1077	–	1288	–	2141	–
1.32	P_{GA}	–	–	–	–	–	131	–	*
	P_{GB}	–	–	–	–	–	1062	–	1184
	P_{GC15}	–	–	–	–	–	870	–	1424
	P_{GD15}	–	–	–	–	–	1619	–	2288
1.4	P_{GA}	145	182	169	193	122	–	99.9	–
	P_{GB}	349	474	618	749	823	–	1140	–
	P_{GC15}	389	722	757	883	697	–	1378	–
	P_{GD15}	572	974	1149	1365	1285	–	2132	–
1.5	P_{GA}	–	–	–	–	–	213	–	57.7
	P_{GB}	–	–	–	–	–	1060	–	1224
	P_{GC15}	–	–	–	–	–	883	–	1445
	P_{GD15}	–	–	–	–	–	1585	–	2256
1.6	P_{GA}	145	185	192	201	189	–	221	–
	P_{GB}	339	461	617	695	890	–	1148	–
	P_{GC15}	368	679	748	815	761	–	1371	–
	P_{GD15}	545	918	1120	1247	1357	–	2075	–
1.7	P_{GA}	–	–	–	–	–	252	–	165
	P_{GB}	–	–	–	–	–	1044	–	1234
	P_{GC15}	–	–	–	–	–	879	–	1451
	P_{GD15}	–	–	–	–	–	1543	–	2230
1.8	P_{GA}	142	186	185	231	239	–	280	–
	P_{GB}	326	449	554	732	890	–	1142	–
	P_{GC15}	349	647	670	857	772	–	1354	–
	P_{GD15}	513	878	993	1298	1332	–	2019	–
1.9	P_{GA}	–	–	–	–	–	298	–	269
	P_{GB}	–	–	–	–	–	1048	–	1226
	P_{GC15}	–	–	–	–	–	893	–	1431
	P_{GD15}	–	–	–	–	–	1532	–	2155
2	P_{GA}	138	182	189	242	257	–	325	–
	P_{GB}	312	428	537	707	865	–	1123	–
	P_{GC15}	328	605	651	828	757	–	1328	–
	P_{GD15}	486	822	959	1241	1283	–	1953	–
2.12	P_{GA}	–	–	–	–	–	341	–	320
	P_{GB}	–	–	–	–	–	1066	–	1204
	P_{GC15}	–	–	–	–	–	919	–	1401
	P_{GD15}	–	–	–	–	–	1540	–	2081
2.24	P_{GA}	142	164	202	226	268	–	350	–
	P_{GB}	314	374	548	628	835	–	1086	–
	P_{GC15}	325	517	664	736	738	–	1282	–
	P_{GD15}	483	701	969	1092	1230	–	1865	–
2.36	P_{GA}	–	–	–	–	–	345	–	358
	P_{GB}	–	–	–	–	–	1016	–	1172
	P_{GC15}	–	–	–	–	–	883	–	1363
	P_{GD15}	–	–	–	–	–	1461	–	1999
2.5	P_{GA}	134	185	196	224	272	–	363	–
	P_{GB}	294	418	514	602	799	–	1035	–
	P_{GC15}	300	568	625	709	712	–	1224	–
	P_{GD15}	447	774	909	1046	1171	–	1761	–

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

Technical specifications (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}	–	–	–	–	–	324	–	379
	P_{GB}	–	–	–	–	–	909	–	1127
	P_{GC15}	–	–	–	–	–	797	–	1310
	P_{GD15}	–	–	–	–	–	1304	–	1902
2.8	P_{GA}	127	164	187	231	268	–	361	–
	P_{GB}	277	364	479	601	752	–	973	–
	P_{GC15}	280	485	586	709	676	–	1152	–
	P_{GD15}	417	661	844	1036	1097	–	1644	–
3	P_{GA}	–	–	–	–	–	318	–	385
	P_{GB}	–	–	–	–	–	858	–	1069
	P_{GC15}	–	–	–	–	–	757	–	1247
	P_{GD15}	–	–	–	–	–	1227	–	1790
3.15	P_{GA}	113	162	195	220	287	–	406	–
	P_{GB}	240	350	479	559	759	–	1014	–
	P_{GC15}	243	453	589	663	689	–	1202	–
	P_{GD15}	359	620	844	965	1108	–	1696	–
3.35	P_{GA}	–	–	–	–	–	304	–	380
	P_{GB}	–	–	–	–	–	795	–	997
	P_{GC15}	–	–	–	–	–	709	–	1166
	P_{GD15}	–	–	–	–	–	1135	–	1661
3.55	P_{GA}	104	162	170	208	272	–	397	–
	P_{GB}	219	335	407	517	704	–	952	–
	P_{GC15}	219	428	504	616	646	–	1135	–
	P_{GD15}	324	584	715	890	1042	–	1595	–
3.75	P_{GA}	–	–	–	–	–	299	–	423
	P_{GB}	–	–	–	–	–	768	–	1029
	P_{GC15}	–	–	–	–	–	689	–	1206
	P_{GD15}	–	–	–	–	–	1104	–	1706
4	P_{GA}	104	149	172	216	259	–	368	–
	P_{GB}	215	304	404	519	656	–	853	–
	P_{GC15}	212	382	493	624	608	–	1025	–
	P_{GD15}	315	520	701	894	975	–	1431	–
4.25	P_{GA}	–	–	–	–	–	281	–	409
	P_{GB}	–	–	–	–	–	723	–	961
	P_{GC15}	–	–	–	–	–	653	–	1134
	P_{GD15}	–	–	–	–	–	1059	–	1595
4.5	P_{GA}	101	135	168	188	250	–	383	–
	P_{GB}	203	277	379	443	644	–	840	–
	P_{GC15}	199	340	456	534	599	–	1013	–
	P_{GD15}	293	469	645	762	960	–	1400	–
4.75	P_{GA}	–	–	–	–	–	266	–	377
	P_{GB}	–	–	–	–	–	670	–	860
	P_{GC15}	–	–	–	–	–	610	–	1013
	P_{GD15}	–	–	–	–	–	979	–	1422
5	P_{GA}	94.7	120	157	187	227	–	345	–
	P_{GB}	192	245	357	433	575	–	756	–
	P_{GC15}	185	298	420	526	542	–	913	–
	P_{GD15}	274	410	600	745	862	–	1254	–
5.3	P_{GA}	–	–	–	–	–	260	–	394
	P_{GB}	–	–	–	–	–	660	–	858
	P_{GC15}	–	–	–	–	–	606	–	994
	P_{GD15}	–	–	–	–	–	975	–	1390
5.6	P_{GA}	89.6	119	144	177	204	–	327	–
	P_{GB}	180	239	323	395	509	–	703	–
	P_{GC15}	171	284	375	481	484	–	858	–
	P_{GD15}	256	393	537	675	763	–	1169	–
6	P_{GA}	–	–	–	–	–	236	–	357
	P_{GB}	–	–	–	–	–	589	–	772
	P_{GC15}	–	–	–	–	–	547	–	882
	P_{GD15}	–	–	–	–	–	870	–	1232

Type H1 – Thermal capacities
n_1 = 1200 rpm

Technical specifications (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}	119	96.9	*	–	*	–	*	–
	P_{GB}	391	492	602	–	756	–	994	–
	P_{GC15}	440	719	687	–	495	–	1138	–
	P_{GD15}	680	1050	1199	–	1295	–	2177	–
1.25	P_{GA}	127	130	25.2	–	*	–	*	–
	P_{GB}	391	507	582	–	830	–	1108	–
	P_{GC15}	433	727	659	–	583	–	1245	–
	P_{GD15}	667	1048	1121	–	1338	–	2217	–
1.32	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1106	–	1140
	P_{GC15}	–	–	–	–	–	771	–	1249
	P_{GD15}	–	–	–	–	–	1702	–	2342
1.4	P_{GA}	134	146	84.8	91.8	*	–	*	–
	P_{GB}	385	510	647	785	858	–	1166	–
	P_{GC15}	418	721	723	839	622	–	1291	–
	P_{GD15}	642	1032	1203	1432	1346	–	2227	–
1.5	P_{GA}	–	–	–	–	–	16.8	–	*
	P_{GB}	–	–	–	–	–	1128	–	1234
	P_{GC15}	–	–	–	–	–	816	–	1332
	P_{GD15}	–	–	–	–	–	1683	–	2349
1.6	P_{GA}	138	160	133	121	28.2	–	*	–
	P_{GB}	377	500	657	734	931	–	1207	–
	P_{GC15}	398	699	729	783	691	–	1320	–
	P_{GD15}	613	991	1184	1314	1426	–	2190	–
1.7	P_{GA}	–	–	–	–	–	98.8	–	*
	P_{GB}	–	–	–	–	–	1117	–	1268
	P_{GC15}	–	–	–	–	–	824	–	1367
	P_{GD15}	–	–	–	–	–	1644	–	2336
1.8	P_{GA}	136	166	144	164	115	–	73.9	–
	P_{GB}	364	490	597	779	934	–	1207	–
	P_{GC15}	379	681	660	833	715	–	1317	–
	P_{GD15}	582	961	1055	1371	1404	–	2141	–
1.9	P_{GA}	–	–	–	–	–	175	–	*
	P_{GB}	–	–	–	–	–	1122	–	1291
	P_{GC15}	–	–	–	–	–	847	–	1383
	P_{GD15}	–	–	–	–	–	1632	–	2276
2	P_{GA}	134	166	159	193	165	–	160	–
	P_{GB}	352	470	585	765	922	–	1187	–
	P_{GC15}	361	653	649	818	718	–	1294	–
	P_{GD15}	558	916	1024	1320	1364	–	2069	–
2.12	P_{GA}	–	–	–	–	–	233	–	120
	P_{GB}	–	–	–	–	–	1143	–	1274
	P_{GC15}	–	–	–	–	–	880	–	1367
	P_{GD15}	–	–	–	–	–	1644	–	2209
2.24	P_{GA}	141	152	176	190	198	–	213	–
	P_{GB}	352	412	599	683	900	–	1149	–
	P_{GC15}	354	561	667	733	713	–	1256	–
	P_{GD15}	547	789	1041	1168	1316	–	1976	–
2.36	P_{GA}	–	–	–	–	–	263	–	199
	P_{GB}	–	–	–	–	–	1100	–	1243
	P_{GC15}	–	–	–	–	–	860	–	1335
	P_{GD15}	–	–	–	–	–	1568	–	2121
2.5	P_{GA}	134	175	177	196	219	–	263	–
	P_{GB}	330	461	566	660	867	–	1110	–
	P_{GC15}	328	616	631	711	699	–	1215	–
	P_{GD15}	506	868	977	1123	1260	–	1879	–

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

Technical specifications (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}	–	–	–	–	–	267	–	246
	P_{GB}	–	–	–	–	–	993	–	1197
	P_{GC15}	–	–	–	–	–	786	–	1291
	P_{GD15}	–	–	–	–	–	1407	–	2020
2.8	P_{GA}	128	157	173	209	229	–	290	–
	P_{GB}	311	402	529	660	823	–	1053	–
	P_{GC15}	306	526	594	717	671	–	1159	–
	P_{GD15}	473	743	911	1118	1185	–	1763	–
3	P_{GA}	–	–	–	–	–	275	–	289
	P_{GB}	–	–	–	–	–	940	–	1147
	P_{GC15}	–	–	–	–	–	757	–	1241
	P_{GD15}	–	–	–	–	–	1330	–	1910
3.15	P_{GA}	115	159	185	204	263	–	366	–
	P_{GB}	271	388	532	618	839	–	1116	–
	P_{GC15}	267	494	602	673	694	–	1231	–
	P_{GD15}	409	699	911	1041	1206	–	1843	–
3.35	P_{GA}	–	–	–	–	–	273	–	311
	P_{GB}	–	–	–	–	–	877	–	1082
	P_{GC15}	–	–	–	–	–	713	–	1174
	P_{GD15}	–	–	–	–	–	1236	–	1782
3.55	P_{GA}	106	163	164	196	258	–	369	–
	P_{GB}	247	376	455	573	783	–	1059	–
	P_{GC15}	239	472	517	627	654	–	1172	–
	P_{GD15}	369	660	775	964	1134	–	1733	–
3.75	P_{GA}	–	–	–	–	–	278	–	384
	P_{GB}	–	–	–	–	–	851	–	1140
	P_{GC15}	–	–	–	–	–	697	–	1240
	P_{GD15}	–	–	–	–	–	1207	–	1854
4	P_{GA}	106	151	168	209	250	–	350	–
	P_{GB}	243	342	451	578	731	–	950	–
	P_{GC15}	233	419	518	638	618	–	1062	–
	P_{GD15}	358	589	770	967	1063	–	1557	–
4.25	P_{GA}	–	–	–	–	–	270	–	382
	P_{GB}	–	–	–	–	–	804	–	1068
	P_{GC15}	–	–	–	–	–	662	–	1168
	P_{GD15}	–	–	–	–	–	1152	–	1734
4.5	P_{GA}	106	135	168	183	239	–	382	–
	P_{GB}	231	310	425	493	713	–	942	–
	P_{GC15}	219	375	491	549	608	–	1058	–
	P_{GD15}	335	530	720	827	1044	–	1531	–
4.75	P_{GA}	–	–	–	–	–	258	–	362
	P_{GB}	–	–	–	–	–	745	–	958
	P_{GC15}	–	–	–	–	–	621	–	1058
	P_{GD15}	–	–	–	–	–	1069	–	1557
5	P_{GA}	97.8	121	156	185	219	–	344	–
	P_{GB}	217	274	400	484	640	–	847	–
	P_{GC15}	203	326	461	542	551	–	954	–
	P_{GD15}	312	463	678	811	935	–	1370	–
5.3	P_{GA}	–	–	–	–	–	249	–	396
	P_{GB}	–	–	–	–	–	733	–	961
	P_{GC15}	–	–	–	–	–	615	–	1067
	P_{GD15}	–	–	–	–	–	1059	–	1547
5.6	P_{GA}	92.8	121	144	179	198	–	329	–
	P_{GB}	204	269	364	444	567	–	791	–
	P_{GC15}	188	312	411	500	493	–	898	–
	P_{GD15}	291	446	608	738	832	–	1281	–
6	P_{GA}	–	–	–	–	–	228	–	356
	P_{GB}	–	–	–	–	–	655	–	866
	P_{GC15}	–	–	–	–	–	556	–	963
	P_{GD15}	–	–	–	–	–	949	–	1384

Type H1 – Thermal capacities
n_1 = 1500 rpm

Technical specifications (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}	71	*	*	–	*	–	*	–
	P_{GB}	423	507	598	–	665	–	741	–
	P_{GC15}	464	676	579	–	171	–	671	–
	P_{GD15}	770	1103	1234	–	1257	–	2087	–
1.25	P_{GA}	87.4	30.3	*	–	*	–	*	–
	P_{GB}	428	531	596	–	803	–	987	–
	P_{GC15}	462	693	581	–	367	–	924	–
	P_{GD15}	759	1104	1170	–	1353	–	2218	–
1.32	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1088	–	906
	P_{GC15}	–	–	–	–	–	511	–	778
	P_{GD15}	–	–	–	–	–	1737	–	2270
1.4	P_{GA}	106	58.9	*	*	*	–	*	–
	P_{GB}	429	538	672	817	859	–	1105	–
	P_{GC15}	450	693	655	755	450	–	1043	–
	P_{GD15}	735	1092	1265	1506	1384	–	2274	–
1.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1157	–	1119
	P_{GC15}	–	–	–	–	–	633	–	1005
	P_{GD15}	–	–	–	–	–	1758	–	2356
1.6	P_{GA}	117	98.6	*	*	*	–	*	–
	P_{GB}	424	539	689	778	961	–	1211	–
	P_{GC15}	432	684	673	722	549	–	1153	–
	P_{GD15}	705	1060	1253	1395	1492	–	2282	–
1.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1171	–	1217
	P_{GC15}	–	–	–	–	–	684	–	1114
	P_{GD15}	–	–	–	–	–	1742	–	2389
1.8	P_{GA}	119	116	41.3	32.2	*	–	*	–
	P_{GB}	412	534	632	835	991	–	1243	–
	P_{GC15}	415	674	620	779	611	–	1190	–
	P_{GD15}	673	1034	1121	1462	1488	–	2254	–
1.9	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1200	–	1299
	P_{GC15}	–	–	–	–	–	740	–	1215
	P_{GD15}	–	–	–	–	–	1750	–	2380
2	P_{GA}	121	126	73	84.5	*	–	*	–
	P_{GB}	399	517	627	821	981	–	1246	–
	P_{GC15}	397	651	618	774	630	–	1204	–
	P_{GD15}	645	988	1096	1412	1452	–	2199	–
2.12	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1240	–	1316
	P_{GC15}	–	–	–	–	–	800	–	1242
	P_{GD15}	–	–	–	–	–	1777	–	2329
2.24	P_{GA}	131	124	115	106	19.4	–	*	–
	P_{GB}	403	458	655	737	961	–	1227	–
	P_{GC15}	391	577	648	702	638	–	1195	–
	P_{GD15}	634	864	1121	1254	1407	–	2118	–
2.36	P_{GA}	–	–	–	–	–	74.1	–	*
	P_{GB}	–	–	–	–	–	1193	–	1303
	P_{GC15}	–	–	–	–	–	791	–	1246
	P_{GD15}	–	–	–	–	–	1697	–	2258
2.5	P_{GA}	128	148	129	127	70.7	–	16.1	–
	P_{GB}	379	515	624	720	932	–	1188	–
	P_{GC15}	363	651	622	689	636	–	1167	–
	P_{GD15}	588	970	1059	1210	1350	–	2017	–

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

Technical specifications (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}	–	–	–	–	–	124	–	*
	P_{GB}	–	–	–	–	–	1080	–	1277
	P_{GC15}	–	–	–	–	–	734	–	1230
	P_{GD15}	–	–	–	–	–	1526	–	2165
2.8	P_{GA}	124	137	136	156	123	–	96.6	–
	P_{GB}	358	453	588	729	895	–	1129	–
	P_{GC15}	338	574	591	703	629	–	1119	–
	P_{GD15}	549	848	991	1211	1282	–	1890	–
3	P_{GA}	–	–	–	–	–	157	–	45.7
	P_{GB}	–	–	–	–	–	1026	–	1230
	P_{GC15}	–	–	–	–	–	711	–	1195
	P_{GD15}	–	–	–	–	–	1443	–	2050
3.15	P_{GA}	114	146	158	163	196	–	251	–
	P_{GB}	313	438	598	686	929	–	1220	–
	P_{GC15}	297	546	606	668	675	–	1219	–
	P_{GD15}	477	804	997	1133	1320	–	2016	–
3.35	P_{GA}	–	–	–	–	–	186	–	124
	P_{GB}	–	–	–	–	–	967	–	1162
	P_{GC15}	–	–	–	–	–	686	–	1139
	P_{GD15}	–	–	–	–	–	1349	–	1919
3.55	P_{GA}	106	159	145	164	208	–	285	–
	P_{GB}	286	429	513	640	878	–	1175	–
	P_{GC15}	266	526	524	628	650	–	1183	–
	P_{GD15}	430	766	851	1051	1249	–	1908	–
3.75	P_{GA}	–	–	–	–	–	220	–	272
	P_{GB}	–	–	–	–	–	947	–	1249
	P_{GC15}	–	–	–	–	–	682	–	1233
	P_{GD15}	–	–	–	–	–	1325	–	2027
4	P_{GA}	107	149	154	184	218	–	294	–
	P_{GB}	281	391	511	651	823	–	1072	–
	P_{GC15}	259	469	528	645	618	–	1090	–
	P_{GD15}	418	687	848	1063	1170	–	1717	–
4.25	P_{GA}	–	–	–	–	–	230	–	301
	P_{GB}	–	–	–	–	–	900	–	1192
	P_{GC15}	–	–	–	–	–	658	–	1186
	P_{GD15}	–	–	–	–	–	1269	–	1904
4.5	P_{GA}	110	132	162	167	209	–	358	–
	P_{GB}	270	354	488	560	802	–	1076	–
	P_{GC15}	248	416	507	559	603	–	1104	–
	P_{GD15}	393	616	798	908	1149	–	1700	–
4.75	P_{GA}	–	–	–	–	–	231	–	307
	P_{GB}	–	–	–	–	–	839	–	1079
	P_{GC15}	–	–	–	–	–	620	–	1086
	P_{GD15}	–	–	–	–	–	1180	–	1717
5	P_{GA}	101	119	149	173	195	–	320	–
	P_{GB}	252	314	456	551	719	–	962	–
	P_{GC15}	227	364	479	554	550	–	990	–
	P_{GD15}	366	538	754	894	1032	–	1522	–
5.3	P_{GA}	–	–	–	–	–	220	–	374
	P_{GB}	–	–	–	–	–	822	–	1095
	P_{GC15}	–	–	–	–	–	611	–	1111
	P_{GD15}	–	–	–	–	–	1166	–	1717
5.6	P_{GA}	95.6	119	139	175	178	–	315	–
	P_{GB}	238	309	416	510	639	–	901	–
	P_{GC15}	211	349	441	518	495	–	940	–
	P_{GD15}	342	518	689	818	917	–	1424	–
6	P_{GA}	–	–	–	–	–	203	–	335
	P_{GB}	–	–	–	–	–	737	–	984
	P_{GC15}	–	–	–	–	–	556	–	1004
	P_{GD15}	–	–	–	–	–	1046	–	1538

Type H1 – Thermal capacities
n_1 = 1800 rpm

Technical specifications (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}	4.1	*	*	–	*	–	*	–
	P_{GB}	446	506	548	–	449	–	113	–
	P_{GC15}	477	612	422	–	449	–	113	–
	P_{GD15}	844	1132	1220	–	1111	–	1790	–
1.25	P_{GA}	27.2	*	*	–	*	–	*	–
	P_{GB}	452	546	575	–	685	–	653	–
	P_{GC15}	477	646	465	–	588	–	310	–
	P_{GD15}	835	1149	1182	–	1283	–	2062	–
1.32	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	954	–	282
	P_{GC15}	–	–	–	–	–	714	–	281
	P_{GD15}	–	–	–	–	–	1665	–	1979
1.4	P_{GA}	58.1	*	*	*	*	–	*	–
	P_{GB}	458	559	670	806	790	–	891	–
	P_{GC15}	468	656	556	622	162	–	595	–
	P_{GD15}	811	1141	1291	1532	1355	–	2185	–
1.5	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1098	–	794
	P_{GC15}	–	–	–	–	–	302	–	372
	P_{GD15}	–	–	–	–	–	1751	–	2207
1.6	P_{GA}	83.8	12.3	*	*	*	–	*	–
	P_{GB}	458	564	710	788	926	–	1105	–
	P_{GC15}	456	653	601	623	329	–	859	–
	P_{GD15}	783	1109	1299	1433	1494	–	2275	–
1.7	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1147	–	1001
	P_{GC15}	–	–	–	–	–	442	–	654
	P_{GD15}	–	–	–	–	–	1760	–	2304
1.8	P_{GA}	90.7	38.7	*	*	*	–	*	–
	P_{GB}	448	560	663	858	993	–	1189	–
	P_{GC15}	438	647	570	696	453	–	967	–
	P_{GD15}	752	1084	1176	1518	1527	–	2285	–
1.9	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1207	–	1196
	P_{GC15}	–	–	–	–	–	556	–	913
	P_{GD15}	–	–	–	–	–	1799	–	2374
2	P_{GA}	98.1	61.9	*	*	*	–	*	–
	P_{GB}	437	546	661	860	1000	–	1231	–
	P_{GC15}	420	630	573	713	503	–	1032	–
	P_{GD15}	715	1041	1150	1476	1502	–	2256	–
2.12	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1278	–	1262
	P_{GC15}	–	–	–	–	–	658	–	1011
	P_{GD15}	–	–	–	–	–	1850	–	2363
2.24	P_{GA}	112	78.8	19.4	*	*	–	*	–
	P_{GB}	447	489	687	783	995	–	1241	–
	P_{GC15}	422	566	606	660	535	–	1066	–
	P_{GD15}	713	916	1175	1322	1464	–	2196	–
2.36	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1244	–	1293
	P_{GC15}	–	–	–	–	–	678	–	1071
	P_{GD15}	–	–	–	–	–	1778	–	2317
2.5	P_{GA}	112	106	50.8	34.5	*	–	*	–
	P_{GB}	420	555	658	765	977	–	1220	–
	P_{GC15}	390	643	589	652	556	–	1070	–
	P_{GD15}	662	1031	1115	1277	1420	–	2104	–

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

Technical specifications (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}	–	–	–	–	–	1136	–	1291
	P_{GC15}	–	–	–	–	–	652	–	1099
	P_{GD15}	–	–	–	–	–	1609	–	2245
2.8	P_{GA}	112	106	77.1	73.4	*	–	*	–
	P_{GB}	398	490	628	773	938	–	1178	–
	P_{GC15}	365	571	569	669	558	–	1050	–
	P_{GD15}	619	903	1050	1278	1349	–	1990	–
3	P_{GA}	–	–	–	–	–	*	–	*
	P_{GB}	–	–	–	–	–	1092	–	1267
	P_{GC15}	–	–	–	–	–	650	–	1098
	P_{GD15}	–	–	–	–	–	1534	–	2147
3.15	P_{GA}	110	123	116	96.2	76.9	–	80.6	–
	P_{GB}	350	479	645	733	984	–	1298	–
	P_{GC15}	322	561	593	642	621	–	1179	–
	P_{GD15}	539	873	1062	1200	1396	–	2139	–
3.35	P_{GA}	–	–	–	–	–	35.8	–	*
	P_{GB}	–	–	–	–	–	1028	–	1209
	P_{GC15}	–	–	–	–	–	630	–	1070
	P_{GD15}	–	–	–	–	–	1434	–	2018
3.55	P_{GA}	103	148	115	113	128	–	145	–
	P_{GB}	320	474	557	689	947	–	1248	–
	P_{GC15}	289	555	519	611	617	–	1149	–
	P_{GD15}	486	843	912	1120	1336	–	2038	–
3.75	P_{GA}	–	–	–	–	–	118	–	103
	P_{GB}	–	–	–	–	–	1009	–	1326
	P_{GC15}	–	–	–	–	–	637	–	1194
	P_{GD15}	–	–	–	–	–	1409	–	2160
4	P_{GA}	105	141	130	146	157	–	191	–
	P_{GB}	316	434	560	706	893	–	1149	–
	P_{GC15}	281	512	527	635	601	–	1070	–
	P_{GD15}	473	771	910	1137	1256	–	1841	–
4.25	P_{GA}	–	–	–	–	–	156	–	168
	P_{GB}	–	–	–	–	–	970	–	1268
	P_{GC15}	–	–	–	–	–	631	–	1156
	P_{GD15}	–	–	–	–	–	1355	–	2034
4.5	P_{GA}	112	123	149	139	147	–	306	–
	P_{GB}	306	393	540	610	865	–	1181	–
	P_{GC15}	272	453	514	555	582	–	1119	–
	P_{GD15}	448	691	864	975	1228	–	1841	–
4.75	P_{GA}	–	–	–	–	–	180	–	207
	P_{GB}	–	–	–	–	–	908	–	1164
	P_{GC15}	–	–	–	–	–	604	–	1075
	P_{GD15}	–	–	–	–	–	1262	–	1839
5	P_{GA}	101	111	134	151	152	–	273	–
	P_{GB}	284	348	503	605	780	–	1049	–
	P_{GC15}	247	396	484	556	534	–	1001	–
	P_{GD15}	416	605	815	962	1105	–	1641	–
5.3	P_{GA}	–	–	–	–	–	169	–	322
	P_{GB}	–	–	–	–	–	888	–	1202
	P_{GC15}	–	–	–	–	–	590	–	1131
	P_{GD15}	–	–	–	–	–	1246	–	1855
5.6	P_{GA}	96	113	127	164	146	–	280	–
	P_{GB}	268	344	460	564	695	–	990	–
	P_{GC15}	229	380	447	528	484	–	957	–
	P_{GD15}	387	585	744	888	986	–	1545	–
6	P_{GA}	–	–	–	–	–	166	–	287
	P_{GB}	–	–	–	–	–	799	–	1074
	P_{GC15}	–	–	–	–	–	540	–	1015
	P_{GD15}	–	–	–	–	–	1122	–	1661

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

Technical specifications

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	–	–	–	–	–	–	–	–

Technical specifications (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

Type H2 – Thermal capacities
n_1 = 1000 rpm

Technical specifications (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}	71	86.6	–	125	–	154	–	190	–	236	–
	P_{GB}	148	177	–	289	–	357	–	556	–	801	–
	P_{GC15}	133	250	–	327	–	364	–	648	–	715	–
	P_{GD15}	205	329	–	476	–	549	–	958	–	1218	–
7.1	P_{GA}	69.9	84.2	–	122	–	154	–	198	–	258	–
	P_{GB}	144	171	–	280	–	349	–	544	–	796	–
	P_{GC15}	129	237	–	318	–	357	–	631	–	714	–
	P_{GD15}	198	314	–	459	–	534	–	928	–	1194	–
8	P_{GA}	67.7	83.1	–	116	138	157	168	203	216	273	263
	P_{GB}	139	166	–	259	311	344	379	527	600	781	840
	P_{GC15}	123	227	–	296	346	354	559	614	679	708	750
	P_{GD15}	190	301	–	425	502	526	743	896	1009	1163	1264
9	P_{GA}	65.4	80.1	97.8	119	135	153	168	205	223	280	284
	P_{GB}	133	159	193	264	301	330	370	508	588	758	832
	P_{GC15}	117	214	254	303	335	341	535	594	663	693	749
	P_{GD15}	180	284	338	433	484	504	712	863	975	1120	1239
10	P_{GA}	61.3	77.2	95	112	127	148	171	203	227	281	296
	P_{GB}	124	152	185	245	278	315	365	484	569	729	815
	P_{GC15}	107	202	241	283	311	327	514	570	643	672	739
	P_{GD15}	166	268	322	402	448	479	687	823	942	1065	1204
11.2	P_{GA}	61.9	72.8	93.3	110	131	149	167	197	228	294	302
	P_{GB}	125	141	181	235	283	309	350	458	547	715	790
	P_{GC15}	107	185	231	272	319	322	483	542	622	666	722
	P_{GD15}	166	246	309	385	456	469	647	775	906	1043	1159
12.5	P_{GA}	58.1	68.9	89.6	109	123	138	161	201	225	289	302
	P_{GB}	115	132	173	226	262	282	334	447	522	683	757
	P_{GC15}	99.3	171	217	265	297	297	453	531	596	644	699
	P_{GD15}	153	228	292	370	423	429	606	751	862	997	1101
14	P_{GA}	55.2	67.4	86.1	104	120	137	161	195	219	277	313
	P_{GB}	109	128	165	213	252	275	327	427	492	636	742
	P_{GC15}	92.8	163	205	250	286	292	442	512	565	606	693
	P_{GD15}	143	218	276	348	405	419	592	719	812	930	1078
16	P_{GA}	52.8	66.2	81	96.7	119	134	149	189	221	280	306
	P_{GB}	103	123	153	199	243	263	299	415	479	618	710
	P_{GC15}	87.2	154	188	236	277	281	394	500	553	593	669
	P_{GD15}	134	205	252	328	389	400	529	703	786	900	1030
18	P_{GA}	50.5	62.6	76.6	90.7	113	127	148	178	214	267	293
	P_{GB}	97.1	117	143	185	228	250	291	385	458	589	661
	P_{GC15}	82.3	144	174	221	254	269	379	469	533	568	627
	P_{GD15}	126	193	234	306	359	382	508	656	752	860	957
20	P_{GA}	48.6	–	74.6	–	105	–	144	–	207	–	295
	P_{GB}	92.7	–	138	–	213	–	279	–	445	–	641
	P_{GC15}	77.8	–	166	–	235	–	358	–	521	–	614
	P_{GD15}	120	–	223	–	332	–	479	–	736	–	926
22.4	P_{GA}	–	–	73.1	–	98.8	–	137	–	195	–	281
	P_{GB}	–	–	133	–	198	–	265	–	412	–	610
	P_{GC15}	–	–	157	–	216	–	333	–	488	–	587
	P_{GD15}	–	–	211	–	307	–	448	–	685	–	884
25	P_{GA}	–	–	69.1	–	–	–	–	–	–	–	–
	P_{GB}	–	–	126	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	147	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	198	–	–	–	–	–	–	–	–

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

Technical specifications (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}	72.4	86.4	–	118	–	139	–	134	–	156	–
	P_{GB}	167	197	–	319	–	388	–	585	–	849	–
	P_{GC15}	145	276	–	334	–	361	–	629	–	678	–
	P_{GD15}	232	372	–	515	–	588	–	1018	–	1287	–
7.1	P_{GA}	71.6	84.7	–	118	–	143	–	155	–	191	–
	P_{GB}	163	191	–	310	–	381	–	582	–	846	–
	P_{GC15}	140	263	–	324	–	357	–	626	–	684	–
	P_{GD15}	225	356	–	498	–	575	–	992	–	1265	–
8	P_{GA}	69.7	83.9	–	113	133	149	154	170	163	214	185
	P_{GB}	157	186	–	288	344	379	411	575	633	832	889
	P_{GC15}	134	250	–	303	352	358	575	617	658	684	715
	P_{GD15}	216	340	–	461	544	567	799	960	1073	1233	1338
9	P_{GA}	67.5	81.2	99	118	132	148	158	180	183	237	218
	P_{GB}	151	178	215	294	334	365	405	556	630	816	885
	P_{GC15}	128	235	280	311	342	347	564	601	656	680	720
	P_{GD15}	205	322	382	470	525	545	780	925	1046	1198	1313
10	P_{GA}	63.3	78.6	96.2	111	126	145	164	184	196	251	239
	P_{GB}	140	171	208	274	310	349	403	533	619	792	869
	P_{GC15}	117	222	266	291	319	334	560	579	648	669	716
	P_{GD15}	189	304	365	437	486	521	769	884	1011	1154	1278
11.2	P_{GA}	64	74.9	95.1	110	130	148	162	190	204	278	261
	P_{GB}	141	159	202	262	317	343	387	506	600	786	852
	P_{GC15}	117	204	254	282	328	331	528	553	631	674	713
	P_{GD15}	189	279	350	420	496	511	727	837	973	1133	1241
12.5	P_{GA}	60.4	71.2	91.7	112	123	138	159	199	208	279	273
	P_{GB}	131	149	194	255	294	314	370	496	574	757	824
	P_{GC15}	109	189	239	275	306	306	494	546	607	657	698
	P_{GD15}	174	259	330	405	461	468	682	814	929	1086	1192
14	P_{GA}	57.5	69.8	88.3	106	122	138	161	195	213	272	298
	P_{GB}	123	144	185	239	282	308	364	475	544	708	817
	P_{GC15}	101	180	226	260	297	302	485	527	579	624	702
	P_{GD15}	163	247	313	381	442	458	665	781	878	1013	1173
16	P_{GA}	55.3	69.4	83.7	99.2	123	137	150	187	220	282	299
	P_{GB}	117	139	172	223	273	296	333	461	532	691	786
	P_{GC15}	95.8	171	208	246	289	292	434	516	571	617	683
	P_{GD15}	153	234	286	358	427	438	596	761	854	986	1120
18	P_{GA}	53.3	65.3	79.2	93.3	117	130	150	178	214	269	290
	P_{GB}	110	132	161	209	257	280	326	429	510	657	735
	P_{GC15}	90.2	160	192	231	273	280	418	484	551	590	649
	P_{GD15}	144	220	266	335	401	418	576	710	818	942	1046
20	P_{GA}	51.4	–	77.6	–	109	–	148	–	207	–	299
	P_{GB}	106	–	156	–	239	–	312	–	494	–	716
	P_{GC15}	85.6	–	183	–	258	–	395	–	537	–	640
	P_{GD15}	137	–	254	–	377	–	542	–	797	–	1016
22.4	P_{GA}	–	–	76.7	–	102	–	140	–	195	–	284
	P_{GB}	–	–	150	–	223	–	297	–	459	–	681
	P_{GC15}	–	–	174	–	237	–	367	–	504	–	610
	P_{GD15}	–	–	241	–	348	–	508	–	743	–	968
25	P_{GA}	–	–	72.4	–	–	–	–	–	–	–	–
	P_{GB}	–	–	142	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	163	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	226	–	–	–	–	–	–	–	–

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

Type H2 – Thermal capacities
n_1 = 1500 rpm

Technical specifications (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}	70.4	81.3	–	100	–	99.5	–	29.5	–	*	–
	P_{GB}	192	224	–	356	–	418	–	615	–	877	–
	P_{GC15}	160	287	–	332	–	343	–	586	–	584	–
	P_{GD15}	271	410	–	562	–	631	–	1081	–	1344	–
7.1	P_{GA}	71.5	81.8	–	104	–	112	–	66	–	46.1	–
	P_{GB}	189	217	–	347	–	416	–	617	–	889	–
	P_{GC15}	155	278	–	326	–	344	–	591	–	615	–
	P_{GD15}	263	397	–	545	–	621	–	1062	–	1336	–
8	P_{GA}	70.5	82.5	–	103	115	127	116	94.7	62.5	103	*
	P_{GB}	182	213	–	325	384	419	446	612	670	890	922
	P_{GC15}	148	274	–	307	351	352	571	591	617	634	623
	P_{GD15}	252	389	–	507	594	619	858	1032	1137	1316	1399
9	P_{GA}	68.7	80.6	94.4	110	118	132	127	116	97.8	146	76.5
	P_{GB}	175	204	245	332	375	407	443	603	668	877	933
	P_{GC15}	142	264	303	317	344	345	564	585	621	640	652
	P_{GD15}	241	373	434	519	576	597	839	997	1117	1283	1388
10	P_{GA}	64.7	78.2	94.3	106	116	133	142	136	124	175	133
	P_{GB}	163	195	238	310	349	391	446	587	661	854	931
	P_{GC15}	130	250	293	298	324	336	567	577	620	637	668
	P_{GD15}	222	354	419	483	536	572	832	959	1092	1238	1366
11.2	P_{GA}	65.8	75.7	95	108	123	140	146	157	144	228	172
	P_{GB}	164	183	231	300	358	388	432	561	650	861	915
	P_{GC15}	129	230	286	291	334	336	550	556	615	661	673
	P_{GD15}	221	325	407	464	548	563	801	910	1055	1231	1330
12.5	P_{GA}	62.7	72.4	92.1	113	118	134	147	184	161	244	199
	P_{GB}	153	173	222	293	333	356	416	558	635	838	889
	P_{GC15}	121	213	269	287	314	313	530	558	606	654	668
	P_{GD15}	205	302	385	451	510	518	766	892	1011	1192	1282
14	P_{GA}	59.9	71.7	89	108	119	135	154	187	180	249	252
	P_{GB}	144	167	213	276	322	350	411	536	606	794	896
	P_{GC15}	113	203	254	272	306	310	526	542	584	630	691
	P_{GD15}	192	289	364	425	490	508	752	858	956	1120	1274
16	P_{GA}	57.9	72.8	85.7	99.9	124	138	146	178	207	275	266
	P_{GB}	137	162	198	257	314	339	378	519	599	784	871
	P_{GC15}	107	195	233	257	302	303	483	528	584	635	683
	P_{GD15}	180	274	334	400	475	489	688	836	937	1093	1231
18	P_{GA}	56.4	68.1	81.5	94.2	119	130	148	171	209	260	269
	P_{GB}	129	153	186	240	295	321	371	484	575	744	823
	P_{GC15}	101	181	216	241	286	290	468	497	567	608	655
	P_{GD15}	170	257	310	374	447	466	665	781	901	1043	1155
20	P_{GA}	54.5	–	80.4	–	110	–	149	–	199	–	293
	P_{GB}	124	–	181	–	275	–	358	–	557	–	810
	P_{GC15}	95.8	–	206	–	269	–	446	–	552	–	660
	P_{GD15}	161	–	297	–	420	–	628	–	877	–	1129
22.4	P_{GA}	–	–	80.8	–	104	–	141	–	190	–	277
	P_{GB}	–	–	175	–	256	–	340	–	519	–	771
	P_{GC15}	–	–	198	–	253	–	413	–	520	–	631
	P_{GD15}	–	–	281	–	392	–	591	–	818	–	1074
25	P_{GA}	–	–	75.7	–	–	–	–	–	–	–	–
	P_{GB}	–	–	165	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	183	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	265	–	–	–	–	–	–	–	–

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

Technical specifications (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}	65.2	69.9	–	71.9	–	50.7	–	*	–	*	–
	P_{GB}	215	247	–	381	–	442	–	611	–	846	–
	P_{GC15}	172	292	–	321	–	318	–	510	–	430	–
	P_{GD15}	306	442	–	597	–	665	–	1102	–	1342	–
7.1	P_{GA}	68.1	72.9	–	80.5	–	70.7	–	*	–	*	–
	P_{GB}	212	240	–	374	–	441	–	624	–	885	–
	P_{GC15}	167	284	–	318	–	323	–	532	–	498	–
	P_{GD15}	297	428	–	581	–	656	–	1095	–	1359	–
8	P_{GA}	68.1	77.1	–	85.8	88.2	92.3	67.5	*	*	*	*
	P_{GB}	205	236	–	352	413	446	472	631	669	903	891
	P_{GC15}	160	281	–	303	341	334	559	547	542	544	469
	P_{GD15}	286	419	–	544	633	654	902	1081	1163	1354	1398
9	P_{GA}	67.6	77.1	84.5	95.1	95.8	103	87.3	34.8	*	*	*
	P_{GB}	197	227	272	363	403	435	471	628	681	905	928
	P_{GC15}	153	271	309	315	337	332	556	552	563	573	535
	P_{GD15}	273	403	468	557	615	635	885	1051	1154	1335	1413
10	P_{GA}	64.6	75.5	86.6	94.4	99.3	112	108	64	28.2	71.4	*
	P_{GB}	184	218	263	340	380	423	474	616	685	895	948
	P_{GC15}	140	261	301	298	321	328	561	550	577	589	581
	P_{GD15}	251	387	453	520	575	612	879	1011	1138	1299	1408
11.2	P_{GA}	66	75.1	89.9	101	109	125	119	99.9	64.8	164	41.1
	P_{GB}	185	205	258	330	391	422	463	598	680	915	948
	P_{GC15}	140	246	296	294	333	333	548	544	581	631	609
	P_{GD15}	250	360	443	503	589	606	849	962	1112	1304	1384
12.5	P_{GA}	63.6	71.9	89.3	110	107	123	126	150	94	188	98.9
	P_{GB}	172	193	248	326	365	390	449	603	666	893	931
	P_{GC15}	131	234	286	294	315	312	533	558	577	631	621
	P_{GD15}	232	341	425	491	550	559	815	953	1070	1264	1345
14	P_{GA}	60.9	71.8	87.5	106	113	128	139	164	127	207	189
	P_{GB}	163	188	237	307	355	385	448	584	649	851	952
	P_{GC15}	123	224	275	280	310	312	532	545	576	616	664
	P_{GD15}	218	327	408	463	530	550	805	919	1017	1199	1349
16	P_{GA}	59.5	75	85.8	97.7	122	134	136	156	175	253	212
	P_{GB}	155	183	221	286	350	375	414	564	651	853	928
	P_{GC15}	116	215	258	263	310	309	494	530	587	638	662
	P_{GD15}	205	312	378	434	517	532	740	893	1003	1184	1307
18	P_{GA}	58.7	69.3	81.7	92.6	118	127	140	156	187	237	227
	P_{GB}	147	173	209	268	329	356	408	528	628	812	882
	P_{GC15}	111	200	237	248	294	295	490	502	572	610	644
	P_{GD15}	194	292	351	407	487	507	727	838	966	1128	1236
20	P_{GA}	56.7	–	81.4	–	108	–	146	–	179	–	273
	P_{GB}	141	–	203	–	307	–	397	–	607	–	882
	P_{GC15}	105	–	226	–	276	–	478	–	555	–	664
	P_{GD15}	184	–	335	–	457	–	699	–	939	–	1220
22.4	P_{GA}	–	–	83.8	–	102	–	138	–	177	–	256
	P_{GB}	–	–	197	–	286	–	376	–	567	–	840
	P_{GC15}	–	–	218	–	260	–	452	–	526	–	634
	P_{GD15}	–	–	320	–	428	–	663	–	879	–	1163
25	P_{GA}	–	–	77.6	–	–	–	–	–	–	–	–
	P_{GB}	–	–	186	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	203	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	300	–	–	–	–	–	–	–	–

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

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

Technical specifications

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

			Gear unit sizes									
i_N	n_1	n_2	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	–	–	–	–	–	–	–	–

Technical specifications (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

Type H3 – Thermal capacities
n_1 = 1000 rpm

Technical specifications (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}	53.4	–	84	–	112	–	160	–	222	–
	P_{GB}	83.3	–	137	–	180	–	270	–	395	–
	P_{GC15}	127	–	199	–	234	–	411	–	467	–
	P_{GD15}	154	–	245	–	296	–	507	–	620	–
22.4	P_{GA}	51.2	–	80.6	–	105	–	156	–	216	–
	P_{GB}	79.8	–	131	–	168	–	261	–	382	–
	P_{GC15}	122	–	190		218	–	397	–	452	–
	P_{GD15}	147	–	235	–	276	–	490	–	599	–
25	P_{GA}	50	–	77.2	91	103	121	151	172	205	237
	P_{GB}	78.1	–	125	146	165	191	252	285	363	413
	P_{GC15}	119	–	182	204	215	303	383	424	429	484
	P_{GD15}	144	–	225	253	271	365	472	525	568	641
28	P_{GA}	48.4	58.9	75.7	87.3	99.1	113	145	167	208	229
	P_{GB}	75.1	90.2	122	140	158	178	238	276	361	400
	P_{GC15}	111	129	179	195	206	282	362	409	428	467
	P_{GD15}	135	157	220	243	259	340	445	507	563	618
31.5	P_{GA}	47.3	56.2	72.5	83.5	97.8	111	140	162	197	218
	P_{GB}	73.3	86.3	117	134	155	176	230	267	342	379
	P_{GC15}	108	123	170	186	203	278	350	395	406	443
	P_{GD15}	131	150	210	232	255	335	430	488	533	585
35.5	P_{GA}	44.7	55	71.2	82.1	92.4	107	138	155	193	221
	P_{GB}	69	84.3	114	131	145	167	225	251	330	376
	P_{GC15}	101	121	166	178	192	256	343	374	395	443
	P_{GD15}	122	147	204	221	240	310	419	460	516	582
40	P_{GA}	43.7	53.2	68.1	78.4	91	105	133	150	183	209
	P_{GB}	67.5	81.1	109	125	143	164	217	243	313	356
	P_{GC15}	98.4	112	158	170	189	252	331	361	374	418
	P_{GD15}	120	138	195	211	236	305	405	444	488	549
45	P_{GA}	40	51.9	64.1	77.1	83.3	99.2	128	147	177	204
	P_{GB}	61.1	79.2	101	122	130	154	205	237	297	345
	P_{GC15}	87	110	146	161	172	232	316	354	359	408
	P_{GD15}	106	134	179	201	214	281	384	433	466	532
50	P_{GA}	39.2	49.1	61.3	73.6	82	97.8	124	142	168	194
	P_{GB}	59.8	74.5	96.8	116	128	152	198	229	281	326
	P_{GC15}	85.1	102	139	154	169	228	306	342	341	386
	P_{GD15}	103	125	171	192	211	277	372	418	440	503
56	P_{GA}	38.3	48	58.6	69.2	79.7	89.4	119	137	164	187
	P_{GB}	58	72.9	92	108	123	137	189	216	272	309
	P_{GC15}	81.9	100	131	142	164	202	292	326	332	370
	P_{GD15}	99.6	122	160	177	203	245	354	397	428	479
63	P_{GA}	35.7	43.9	56.4	66.2	75.8	88	114	132	162	177
	P_{GB}	53.5	65.9	87.4	104	116	135	179	209	264	293
	P_{GC15}	74	88.4	121	135	156	199	279	315	326	351
	P_{GD15}	89.8	108	149	169	191	241	335	384	417	453
71	P_{GA}	34.9	43	54	63.3	74.6	85.4	111	127	154	173
	P_{GB}	52.3	64.4	83.6	98.3	114	131	173	199	251	284
	P_{GC15}	72.3	86.3	116	127	153	189	270	301	308	341
	P_{GD15}	87.9	106	143	159	189	229	325	365	394	440
80	P_{GA}	–	41.9	–	60.8	–	81.1	–	121	–	170
	P_{GB}	–	62.5	–	93.3	–	122	–	188	–	276
	P_{GC15}	–	83.2	–	118	–	173	–	287	–	335
	P_{GD15}	–	102	–	147	–	210	–	346	–	429
90	P_{GA}	–	39	–	58.3	–	80	–	118	–	162
	P_{GB}	–	57.6	–	89.3	–	121	–	182	–	261
	P_{GC15}	–	75.1	–	113	–	171	–	278	–	317
	P_{GD15}	–	91.9	–	141	–	207	–	335	–	406
100	P_{GA}	–	38.2	–	–	–	–	–	–	–	–
	P_{GB}	–	56.4	–	–	–	–	–	–	–	–
	P_{GC15}	–	73.4	–	–	–	–	–	–	–	–
	P_{GD15}	–	89.8	–	–	–	–	–	–	–	–

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

Technical specifications (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}	55.7	–	87.4	–	115	–	161	–	221	–
	P_{GB}	93.3	–	153	–	199	–	296	–	433	–
	P_{GC15}	142	–	209	–	244	–	425	–	483	–
	P_{GD15}	174	–	267	–	321	–	545	–	670	–
22.4	P_{GA}	53.5	–	84	–	108	–	156	–	215	–
	P_{GB}	89.3	–	146	–	186	–	286	–	419	–
	P_{GC15}	135	–	200	–	228	–	411	–	467	–
	P_{GD15}	167	–	256	–	299	–	526	–	648	–
25	P_{GA}	52.3	–	80.3	94.8	107	124	152	174	205	237
	P_{GB}	87.1	–	140	164	184	211	277	313	398	453
	P_{GC15}	132	–	191	218	225	335	397	439	444	501
	P_{GD15}	163	–	244	279	295	412	508	563	613	693
28	P_{GA}	50.8	61.5	79.1	91	103	116	148	168	211	230
	P_{GB}	84	101	137	157	175	198	263	303	398	439
	P_{GC15}	123	143	187	209	215	313	378	425	445	484
	P_{GD15}	153	178	239	268	281	384	479	544	611	669
31.5	P_{GA}	49.6	58.9	75.8	87.1	101	115	143	163	201	220
	P_{GB}	82.1	96.3	131	150	173	194	255	293	377	417
	P_{GC15}	121	137	179	199	212	308	365	411	423	459
	P_{GD15}	149	170	228	255	277	378	464	525	579	634
35.5	P_{GA}	47.1	57.7	74.7	85.7	96.1	111	142	159	199	225
	P_{GB}	77.4	94.2	128	146	162	186	249	278	366	416
	P_{GC15}	112	133	176	196	201	283	359	390	413	462
	P_{GD15}	139	166	224	250	261	350	453	496	561	631
40	P_{GA}	46	55.8	71.5	82.1	94.6	109	137	153	189	214
	P_{GB}	75.6	90.7	122	140	160	183	241	268	347	395
	P_{GC15}	110	125	169	187	198	279	347	377	391	437
	P_{GD15}	136	156	214	238	256	344	438	479	532	597
45	P_{GA}	42.3	54.6	67.6	81	87.3	103	133	152	184	211
	P_{GB}	68.6	88.6	114	137	145	172	228	262	331	381
	P_{GC15}	96.7	122	159	178	181	257	332	370	377	427
	P_{GD15}	120	152	200	228	233	318	416	468	507	579
50	P_{GA}	41.5	51.8	64.7	77.3	86	102	129	147	175	200
	P_{GB}	67.1	83.5	109	130	143	169	221	254	314	362
	P_{GC15}	94.8	113	152	170	178	253	321	358	358	404
	P_{GD15}	117	142	192	218	229	313	402	452	481	548
56	P_{GA}	40.5	50.5	61.8	73.2	84	93.8	124	142	172	195
	P_{GB}	65.2	81.6	104	122	138	153	211	240	304	344
	P_{GC15}	91.2	111	145	156	173	224	307	342	349	389
	P_{GD15}	113	139	182	200	222	277	384	430	466	522
63	P_{GA}	38	46.3	59.7	70	80.5	92.4	120	138	171	185
	P_{GB}	60.2	73.8	98.5	116	130	151	200	232	296	326
	P_{GC15}	82.1	98.1	134	149	165	221	294	331	344	369
	P_{GD15}	102	123	169	192	209	273	364	415	456	496
71	P_{GA}	37.2	45.4	57.3	66.8	79.2	90	117	133	162	181
	P_{GB}	59	72.4	94.4	111	128	146	194	222	281	317
	P_{GC15}	80.4	96	129	141	162	210	284	317	326	360
	P_{GD15}	100	120	162	180	206	260	353	396	431	480
80	P_{GA}	–	44.4	–	64.5	–	86.3	–	128	–	180
	P_{GB}	–	70.2	–	105	–	137	–	211	–	309
	P_{GC15}	–	92.6	–	131	–	193	–	303	–	354
	P_{GD15}	–	116	–	167	–	239	–	376	–	469
90	P_{GA}	–	41.6	–	61.9	–	84.7	–	124	–	171
	P_{GB}	–	64.8	–	101	–	135	–	204	–	292
	P_{GC15}	–	83.5	–	125	–	189	–	293	–	335
	P_{GD15}	–	105	–	160	–	235	–	363	–	444
100	P_{GA}	–	40.6	–	–	–	–	–	–	–	–
	P_{GB}	–	63.5	–	–	–	–	–	–	–	–
	P_{GC15}	–	81.8	–	–	–	–	–	–	–	–
	P_{GD15}	–	102	–	–	–	–	–	–	–	–

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

Type H3 – Thermal capacities
n_1 = 1500 rpm

Technical specifications (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}	58	–	90.4	–	116	–	155	–	208	–
	P_{GB}	107	–	174	–	225	–	327	–	476	–
	P_{GC15}	160	–	220	–	255	–	438	–	493	–
	P_{GD15}	204	–	296	–	353	–	591	–	728	–
22.4	P_{GA}	55.7	–	87.1	–	109	–	152	–	204	–
	P_{GB}	102	–	168	–	210	–	318	–	462	–
	P_{GC15}	153	–	211	–	239	–	425	–	478	–
	P_{GD15}	194	–	283	–	330	–	572	–	704	–
25	P_{GA}	54.5	–	83.6	98.5	108	126	148	169	196	226
	P_{GB}	99.7	–	161	187	208	239	307	346	439	500
	P_{GC15}	150	–	202	230	235	381	410	454	456	513
	P_{GD15}	190	–	270	310	325	478	552	612	670	754
28	P_{GA}	53.1	64.4	82.8	94.9	106	118	147	165	209	221
	P_{GB}	96.3	115	157	180	199	223	295	336	444	484
	P_{GC15}	140	162	198	220	226	355	393	440	462	497
	P_{GD15}	178	207	265	297	311	445	524	592	670	730
31.5	P_{GA}	52.1	61.6	79.2	90.9	105	117	143	160	200	212
	P_{GB}	94.3	110	150	172	196	220	286	325	422	461
	P_{GC15}	137	155	190	211	223	348	381	425	439	473
	P_{GD15}	174	198	253	283	306	438	507	571	636	693
35.5	P_{GA}	49.6	60.3	78.3	89.9	99.9	115	145	159	201	224
	P_{GB}	89	108	147	168	185	211	281	312	411	465
	P_{GC15}	127	152	187	207	212	320	376	407	432	479
	P_{GD15}	162	194	248	277	289	405	497	542	618	693
40	P_{GA}	48.6	58.8	75.1	86	98.5	113	140	154	191	214
	P_{GB}	87	104	140	161	182	208	271	301	390	441
	P_{GC15}	124	141	179	198	208	316	364	394	410	455
	P_{GD15}	159	182	237	265	284	399	480	525	586	657
45	P_{GA}	44.9	57.5	71.6	85.1	91.5	108	138	156	191	214
	P_{GB}	79.1	102	131	157	166	196	260	296	374	430
	P_{GC15}	111	138	170	196	191	292	350	388	398	447
	P_{GD15}	141	178	223	260	259	369	458	514	562	638
50	P_{GA}	44	54.7	68.6	81.6	90.2	106	134	151	181	204
	P_{GB}	77.4	96	126	150	163	193	250	286	356	406
	P_{GC15}	108	129	162	187	188	287	338	376	378	424
	P_{GD15}	138	166	213	248	255	363	442	497	533	605
56	P_{GA}	43.1	53.5	65.9	77.6	88.7	98.5	130	148	180	202
	P_{GB}	75.4	93.7	120	140	158	176	240	273	347	391
	P_{GC15}	104	126	155	177	184	255	325	361	369	411
	P_{GD15}	133	162	203	233	247	322	423	473	518	580
63	P_{GA}	40.8	49.4	64.1	74.2	86	97	127	143	181	192
	P_{GB}	70	85.2	114	134	150	172	229	264	338	371
	P_{GC15}	94.1	111	150	169	176	252	312	349	366	390
	P_{GD15}	120	143	195	223	234	319	403	457	507	549
71	P_{GA}	39.9	48.2	61.3	71.3	84.7	95.2	123	139	172	190
	P_{GB}	68.4	83.3	110	128	147	167	222	252	321	360
	P_{GC15}	92	109	144	159	173	238	302	335	347	382
	P_{GD15}	117	140	187	210	230	303	390	437	480	533
80	P_{GA}	–	47.3	–	69.2	–	92.1	–	135	–	191
	P_{GB}	–	81	–	122	–	158	–	241	–	352
	P_{GC15}	–	105	–	148	–	220	–	322	–	377
	P_{GD15}	–	136	–	196	–	278	–	416	–	523
90	P_{GA}	–	44.7	–	66.2	–	90.8	–	131	–	181
	P_{GB}	–	75.2	–	117	–	156	–	233	–	334
	P_{GC15}	–	95.3	–	142	–	216	–	311	–	358
	P_{GD15}	–	123	–	187	–	275	–	403	–	494
100	P_{GA}	–	43.8	–	–	–	–	–	–	–	–
	P_{GB}	–	73.5	–	–	–	–	–	–	–	–
	P_{GC15}	–	93	–	–	–	–	–	–	–	–
	P_{GD15}	–	120	–	–	–	–	–	–	–	–

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

Technical specifications (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}	59	–	90.4	–	111	–	141	–	188	–
	P_{GB}	119	–	194	–	246	–	350	–	508	–
	P_{GC15}	177	–	228	–	261	–	443	–	495	–
	P_{GD15}	230	–	321	–	381	–	626	–	775	–
22.4	P_{GA}	56.8	–	87.3	–	106	–	140	–	187	–
	P_{GB}	114	–	186	–	231	–	341	–	495	–
	P_{GC15}	170	–	219	–	245	–	430	–	482	–
	P_{GD15}	220	–	308	–	357	–	607	–	751	–
25	P_{GA}	55.6	–	84.2	99	105	122	138	157	182	208
	P_{GB}	111	–	179	208	228	261	330	372	472	535
	P_{GC15}	166	–	210	239	242	401	417	460	459	517
	P_{GD15}	215	–	294	336	351	519	587	650	714	804
28	P_{GA}	54.7	65.9	84.7	95.8	107	116	142	154	198	206
	P_{GB}	108	129	176	199	220	246	320	361	478	520
	P_{GC15}	155	179	207	229	234	375	402	447	469	502
	P_{GD15}	202	234	288	322	337	485	560	630	716	778
31.5	P_{GA}	53.6	63.1	81.4	92	106	115	138	151	190	199
	P_{GB}	105	123	168	191	217	242	310	349	454	495
	P_{GC15}	153	171	198	219	230	370	390	432	447	479
	P_{GD15}	198	224	275	308	331	478	542	609	680	739
35.5	P_{GA}	51.2	61.9	81	92.3	101	116	143	154	196	215
	P_{GB}	99.7	120	164	187	205	233	307	338	446	501
	P_{GC15}	141	167	196	216	219	355	388	417	442	489
	P_{GD15}	184	219	270	302	314	456	534	580	664	742
40	P_{GA}	50.2	60.6	77.4	88.5	100	115	138	150	187	206
	P_{GB}	97.6	117	157	180	202	229	297	327	423	475
	P_{GC15}	138	156	187	207	216	349	375	403	420	464
	P_{GD15}	180	206	258	288	309	449	516	561	630	703
45	P_{GA}	46.8	59.3	74.3	88.1	94.3	110	139	154	192	210
	P_{GB}	89	114	147	176	184	216	285	324	410	466
	P_{GC15}	122	153	178	204	200	322	363	401	412	459
	P_{GD15}	160	201	243	283	282	416	493	552	606	686
50	P_{GA}	45.9	56.7	71.3	84.2	92.8	108	135	150	183	201
	P_{GB}	87	108	141	168	181	214	276	313	389	442
	P_{GC15}	120	143	170	195	197	319	351	388	392	436
	P_{GD15}	156	188	233	271	277	410	476	534	575	650
56	P_{GA}	45.2	55.5	68.9	80.7	91.9	102	133	150	183	204
	P_{GB}	84.8	105	135	158	176	195	266	301	381	427
	P_{GC15}	116	139	163	186	192	283	339	375	385	426
	P_{GD15}	151	183	222	255	269	365	457	510	561	626
63	P_{GA}	43	51.6	67.5	77.4	90.1	100	132	145	188	195
	P_{GB}	78.9	95.7	129	151	168	192	255	291	375	406
	P_{GC15}	105	123	158	177	185	278	328	363	384	405
	P_{GD15}	137	163	213	243	256	359	437	493	552	592
71	P_{GA}	42.1	50.5	64.7	74.6	88.9	98.8	128	142	178	195
	P_{GB}	77.2	93.6	123	143	165	186	246	279	355	397
	P_{GC15}	102	121	151	170	182	265	317	349	364	398
	P_{GD15}	133	160	204	232	252	342	423	473	522	579
80	P_{GA}	–	49.6	–	73	–	96.8	–	141	–	199
	P_{GB}	–	91.4	–	137	–	177	–	268	–	390
	P_{GC15}	–	117	–	164	–	244	–	338	–	396
	P_{GD15}	–	154	–	222	–	316	–	451	–	568
90	P_{GA}	–	47.1	–	70	–	95.4	–	136	–	189
	P_{GB}	–	84.8	–	132	–	175	–	259	–	370
	P_{GC15}	–	106	–	157	–	240	–	327	–	376
	P_{GD15}	–	140	–	213	–	311	–	437	–	538
100	P_{GA}	–	46.2	–	–	–	–	–	–	–	–
	P_{GB}	–	83	–	–	–	–	–	–	–	–
	P_{GC15}	–	104	–	–	–	–	–	–	–	–
	P_{GD15}	–	137	–	–	–	–	–	–	–	–

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

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

Technical specifications

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

			Gear unit sizes							
i_N	n_1	n_2	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

Technical specifications (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	
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

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

Technical specifications (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}	49.7	–	68.3	–	104	–	139	–
90	P_{GA}	47.7	–	65.8	–	99.9	–	132	–
100	P_{GA}	46.6	53.6	64	72.7	96	110	129	147
112	P_{GA}	44.8	51.5	61.7	70	93.7	106	123	138
125	P_{GA}	43.2	50.3	60	68.1	89.9	102	120	135
140	P_{GA}	41.4	48.4	57.2	65.7	87.4	99.1	114	129
160	P_{GA}	40	46.6	55.5	63.9	83.9	95.2	112	126
180	P_{GA}	38.5	44.7	52	60.8	78.8	92.4	105	120
200	P_{GA}	36.8	43.2	50.6	59.2	75.7	88.7	102	117
224	P_{GA}	34.8	41.5	48.9	55.3	72.4	83.3	97.8	109
250	P_{GA}	33.4	39.7	45.9	53.8	69.5	80	91.1	107
280	P_{GA}	31.9	37.6	44.6	52	66.7	76.5	89.1	103
315	P_{GA}	–	36	42.7	48.9	64.4	73.6	85.5	95.7
355	P_{GA}	–	34.5	–	47.6	–	70.6	–	93.6
400	P_{GA}	–	–	–	45.6	–	68.3	–	89.7

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}	52.5	–	72.3	–	110	–	146	–
90	P_{GA}	50.5	–	69.5	–	106	–	138	–
100	P_{GA}	49.4	56.7	67.7	76.9	101	116	135	154
112	P_{GA}	47.4	54.5	65.5	74.2	99.1	112	130	146
125	P_{GA}	45.7	53.3	63.7	72.1	95.1	107	127	143
140	P_{GA}	43.9	51.2	60.7	69.6	92.6	105	121	136
160	P_{GA}	42.6	49.4	59	67.7	88.9	101	118	133
180	P_{GA}	41	47.5	55.5	64.6	83.6	98	111	127
200	P_{GA}	39.3	46	54	62.8	80.2	94	108	124
224	P_{GA}	37	44.2	52.1	59	77.1	88.4	104	116
250	P_{GA}	35.6	42.4	48.5	57.4	73.8	84.9	97	114
280	P_{GA}	34.1	39.9	47.2	55.4	70.9	81.4	94.8	109
315	P_{GA}	–	38.4	45.2	51.6	68.6	77.9	91.1	102
355	P_{GA}	–	36.7	–	50.2	–	74.9	–	99.6
400	P_{GA}	–	–	–	48.1	–	72.5	–	95.5

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

Technical specifications (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}	55.9	–	77.1	–	116	–	153	–
90	P_{GA}	53.6	–	74.3	–	112	–	145	–
100	P_{GA}	52.6	60.3	72	82.2	108	123	143	162
112	P_{GA}	50.6	58	69.8	79.1	105	119	138	154
125	P_{GA}	48.9	56.9	68	76.7	101	114	135	151
140	P_{GA}	46.9	54.7	65	74.4	98.6	112	129	145
160	P_{GA}	45.9	52.7	63.3	72.4	94.8	107	126	142
180	P_{GA}	44.1	50.7	59.8	69.2	89.5	105	119	135
200	P_{GA}	42.4	49.6	58.1	67.3	86	100	116	132
224	P_{GA}	40	47.6	56.3	63.6	82.8	94.8	112	125
250	P_{GA}	38.5	45.7	52.5	61.9	79.6	91	104	122
280	P_{GA}	36.8	43.2	51.1	59.8	76.6	87.6	102	117
315	P_{GA}	–	41.5	48.9	55.9	74.1	84.2	98	110
355	P_{GA}	–	39.6	–	54.2	–	80.9	–	107
400	P_{GA}	–	–	–	52	–	78.3	–	103

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}	58.3	–	80.8	–	120	–	158	–
90	P_{GA}	56	–	77.8	–	116	–	150	–
100	P_{GA}	55	63.1	75.7	86.1	112	128	147	167
112	P_{GA}	52.9	60.6	73.5	82.9	110	123	143	159
125	P_{GA}	51.3	59.7	71.4	80.8	106	119	140	156
140	P_{GA}	49.4	57.3	68.3	78.2	104	117	135	151
160	P_{GA}	48.6	55.5	66.5	76	99.7	112	132	148
180	P_{GA}	46.7	53.4	63.4	72.7	94.3	110	125	142
200	P_{GA}	44.9	52.5	61.7	70.9	90.5	106	122	139
224	P_{GA}	42.5	50.4	59.7	67.4	87.6	99.5	118	132
250	P_{GA}	40.8	48.5	55.8	65.6	84.5	95.9	110	129
280	P_{GA}	39.1	45.8	54.3	63.4	81.2	92.6	108	124
315	P_{GA}	–	44.1	52.1	59.3	78.6	89.4	104	116
355	P_{GA}	–	42.1	–	57.8	–	85.9	–	114
400	P_{GA}	–	–	–	55.4	–	83.2	–	109

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

Overview tables

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

Technical specifications

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

Technical specifications (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	–	–	–	–

Overview tables

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

Technical specifications (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	–	–	–	–	–	
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	–	–	–	–	–	**B2**
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

Technical specifications (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	–	B3
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	
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	B4
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	
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 **B3**, see page 3/51
Type **B4**, see page 3/57

Type B2 – Thermal capacities
n_1 = 1000 rpm

Technical specifications (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	57.2	87.4	91.8	–	133	–	155	–
	P_{GB}	119	184	254	–	358	–	493	–
	P_{GC15}	142	277	281	–	340	–	568	–
	P_{GD15}	198	362	426	–	547	–	868	–
5.6	P_{GA}	56.9	84	92.3	–	131	–	150	–
	P_{GB}	118	176	254	–	350	–	470	–
	P_{GC15}	141	264	281	–	332	–	540	–
	P_{GD15}	196	345	425	–	533	–	823	–
6	P_{GA}	–	–	–	–	–	139	–	159
	P_{GB}	–	–	–	–	–	366	–	497
	P_{GC15}	–	–	–	–	–	345	–	570
	P_{GD15}	–	–	–	–	–	553	–	868
6.3	P_{GA}	51.2	76.8	82.9	99.6	124	–	150	–
	P_{GB}	103	157	219	268	313	–	431	–
	P_{GC15}	118	224	249	293	304	–	507	–
	P_{GD15}	165	296	371	445	477	–	758	–
6.7	P_{GA}	–	–	–	–	–	136	–	154
	P_{GB}	–	–	–	–	–	356	–	473
	P_{GC15}	–	–	–	–	–	336	–	542
	P_{GD15}	–	–	–	–	–	537	–	824
7.1	P_{GA}	50.8	73.9	83	99	122	–	144	–
	P_{GB}	103	151	218	266	305	–	411	–
	P_{GC15}	117	215	249	290	298	–	483	–
	P_{GD15}	164	282	370	441	467	–	721	–
7.5	P_{GA}	–	–	–	–	–	129	–	154
	P_{GB}	–	–	–	–	–	319	–	436
	P_{GC15}	–	–	–	–	–	309	–	510
	P_{GD15}	–	–	–	–	–	483	–	760
8	P_{GA}	46.7	69.4	73.3	89.2	112	–	141	–
	P_{GB}	92.5	139	186	230	271	–	385	–
	P_{GC15}	103	191	218	258	270	–	462	–
	P_{GD15}	145	254	319	385	416	–	679	–
8.5	P_{GA}	–	–	–	–	–	127	–	148
	P_{GB}	–	–	–	–	–	310	–	414
	P_{GC15}	–	–	–	–	–	300	–	486
	P_{GD15}	–	–	–	–	–	470	–	722
9	P_{GA}	46.3	66.9	73.3	88.9	110	–	135	–
	P_{GB}	91.9	134	186	228	265	–	368	–
	P_{GC15}	103	183	218	256	264	–	442	–
	P_{GD15}	144	243	318	381	407	–	648	–
9.5	P_{GA}	–	–	–	–	–	117	–	146
	P_{GB}	–	–	–	–	–	276	–	389
	P_{GC15}	–	–	–	–	–	274	–	465
	P_{GD15}	–	–	–	–	–	421	–	681
10	P_{GA}	39.2	58.6	64.2	78.5	98.1	–	121	–
	P_{GB}	76.1	116	159	196	231	–	319	–
	P_{GC15}	81.5	153	187	226	235	–	392	–
	P_{GD15}	116	203	272	331	357	–	568	–
10.6	P_{GA}	–	–	–	–	–	114	–	140
	P_{GB}	–	–	–	–	–	269	–	371
	P_{GC15}	–	–	–	–	–	267	–	443
	P_{GD15}	–	–	–	–	–	409	–	649
11.2	P_{GA}	39	56.7	64.1	78.1	96.6	–	117	–
	P_{GB}	75.7	111	159	194	226	–	307	–
	P_{GC15}	80.8	147	187	224	231	–	376	–
	P_{GD15}	115	196	272	328	350	–	545	–

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

Technical specifications (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}	–	–	–	–	–	102	–	125
	P_{GB}	–	–	–	–	–	236	–	323
	P_{GC15}	–	–	–	–	–	238	–	391
	P_{GD15}	–	–	–	–	–	361	–	567
12.5	P_{GA}	33	49.2	54.4	68.6	83.5	–	130	–
	P_{GB}	62.5	94.7	130	167	191	–	305	–
	P_{GC15}	64.5	119	147	197	200	–	378	–
	P_{GD15}	92	161	216	285	298	–	530	–
13.2	P_{GA}	–	–	–	–	–	99.9	–	121
	P_{GB}	–	–	–	–	–	230	–	310
	P_{GC15}	–	–	–	–	–	233	–	373
	P_{GD15}	–	–	–	–	–	352	–	541
14	P_{GA}	32.7	47.6	54.4	68.2	82.1	–	125	–
	P_{GB}	62.2	91.5	130	165	187	–	291	–
	P_{GC15}	64	115	147	196	196	–	362	–
	P_{GD15}	91.6	155	216	283	293	–	506	–
15	P_{GA}	–	–	–	–	–	86.9	–	134
	P_{GB}	–	–	–	–	–	195	–	308
	P_{GC15}	–	–	–	–	–	203	–	356
	P_{GD15}	–	–	–	–	–	302	–	509
16	P_{GA}	31.1	47.7	56.8	58	86.8	–	119	–
	P_{GB}	58.3	89.2	128	137	188	–	272	–
	P_{GC15}	59.8	112	145	167	198	–	345	–
	P_{GD15}	85.1	150	210	237	291	–	478	–
17	P_{GA}	–	–	–	–	–	85.2	–	128
	P_{GB}	–	–	–	–	–	190	–	294
	P_{GC15}	–	–	–	–	–	198	–	339
	P_{GD15}	–	–	–	–	–	295	–	486
18	P_{GA}	–	–	–	57.6	–	–	–	–
	P_{GB}	–	–	–	136	–	–	–	–
	P_{GC15}	–	–	–	166	–	–	–	–
	P_{GD15}	–	–	–	236	–	–	–	–
19	P_{GA}	–	–	–	–	–	89.7	–	122
	P_{GB}	–	–	–	–	–	191	–	276
	P_{GC15}	–	–	–	–	–	201	–	313
	P_{GD15}	–	–	–	–	–	293	–	449
20	P_{GA}	–	–	–	60	–	–	–	–
	P_{GB}	–	–	–	134	–	–	–	–
	P_{GC15}	–	–	–	165	–	–	–	–
	P_{GD15}	–	–	–	231	–	–	–	–

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

Type B2 – Thermal capacities
n_1 = 1200 rpm

Technical specifications (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	57.6	87.1	87.1	–	119	–	124	–
	P_{GB}	133	206	282	–	391	–	530	–
	P_{GC15}	156	286	287	–	338	–	563	–
	P_{GD15}	224	391	461	–	588	–	922	–
5.6	P_{GA}	57.3	83.8	87.9	–	118	–	122	–
	P_{GB}	132	197	282	–	383	–	507	–
	P_{GC15}	155	274	286	–	330	–	537	–
	P_{GD15}	222	374	461	–	574	–	877	–
6	P_{GA}	–	–	–	–	–	126	–	128
	P_{GB}	–	–	–	–	–	399	–	535
	P_{GC15}	–	–	–	–	–	342	–	565
	P_{GD15}	–	–	–	–	–	595	–	922
6.3	P_{GA}	52.3	77.5	80.3	95.2	117	–	130	–
	P_{GB}	116	176	244	298	344	–	468	–
	P_{GC15}	129	246	255	298	306	–	508	–
	P_{GD15}	188	334	402	482	516	–	809	–
6.7	P_{GA}	–	–	–	–	–	124	–	126
	P_{GB}	–	–	–	–	–	388	–	510
	P_{GC15}	–	–	–	–	–	334	–	539
	P_{GD15}	–	–	–	–	–	578	–	877
7.1	P_{GA}	51.9	74.7	80.6	95.4	115	–	126	–
	P_{GB}	115	169	244	296	337	–	447	–
	P_{GC15}	129	236	254	296	300	–	485	–
	P_{GD15}	186	321	401	478	504	–	770	–
7.5	P_{GA}	–	–	–	–	–	122	–	134
	P_{GB}	–	–	–	–	–	351	–	473
	P_{GC15}	–	–	–	–	–	311	–	511
	P_{GD15}	–	–	–	–	–	523	–	811
8	P_{GA}	47.9	70.6	72.1	87.1	108	–	128	–
	P_{GB}	104	156	208	257	300	–	421	–
	P_{GC15}	114	210	224	265	274	–	466	–
	P_{GD15}	165	287	346	418	451	–	727	–
8.5	P_{GA}	–	–	–	–	–	120	–	130
	P_{GB}	–	–	–	–	–	342	–	451
	P_{GC15}	–	–	–	–	–	303	–	487
	P_{GD15}	–	–	–	–	–	508	–	772
9	P_{GA}	47.6	68.1	72.2	86.8	106	–	123	–
	P_{GB}	104	150	208	254	294	–	403	–
	P_{GC15}	112	202	224	263	268	–	446	–
	P_{GD15}	164	275	346	414	440	–	694	–
9.5	P_{GA}	–	–	–	–	–	113	–	132
	P_{GB}	–	–	–	–	–	306	–	425
	P_{GC15}	–	–	–	–	–	278	–	469
	P_{GD15}	–	–	–	–	–	456	–	730
10	P_{GA}	40.5	59.8	63.7	77.4	95.7	–	112	–
	P_{GB}	85.9	130	178	219	256	–	350	–
	P_{GC15}	89.5	168	197	232	240	–	398	–
	P_{GD15}	131	231	299	360	387	–	609	–
10.6	P_{GA}	–	–	–	–	–	111	–	128
	P_{GB}	–	–	–	–	–	298	–	406
	P_{GC15}	–	–	–	–	–	271	–	448
	P_{GD15}	–	–	–	–	–	444	–	695
11.2	P_{GA}	40.2	57.9	63.7	77.3	93.9	–	109	–
	P_{GB}	85.5	125	178	217	251	–	337	–
	P_{GC15}	88.6	162	196	231	235	–	382	–
	P_{GD15}	131	222	299	356	379	–	584	–

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

Technical specifications (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}	–	–	–	–	–	99.9	–	116
	P_{GB}	–	–	–	–	–	261	–	354
	P_{GC15}	–	–	–	–	–	243	–	400
	P_{GD15}	–	–	–	–	–	391	–	611
12.5	P_{GA}	34.2	50.5	54.4	68.3	82.1	–	129	–
	P_{GB}	70.6	107	146	187	212	–	339	–
	P_{GC15}	70.8	132	162	203	205	–	392	–
	P_{GD15}	105	182	245	310	324	–	576	–
13.2	P_{GA}	–	–	–	–	–	98	–	113
	P_{GB}	–	–	–	–	–	256	–	339
	P_{GC15}	–	–	–	–	–	238	–	384
	P_{GD15}	–	–	–	–	–	382	–	585
14	P_{GA}	34	49	54.4	68	80.8	–	124	–
	P_{GB}	70.4	103	146	185	208	–	324	–
	P_{GC15}	70.4	128	161	202	201	–	375	–
	P_{GD15}	104	176	244	308	318	–	549	–
15	P_{GA}	–	–	–	–	–	85.8	–	133
	P_{GB}	–	–	–	–	–	216	–	343
	P_{GC15}	–	–	–	–	–	208	–	390
	P_{GD15}	–	–	–	–	–	327	–	573
16	P_{GA}	32.5	49.7	58.5	58.2	88.4	–	118	–
	P_{GB}	66.1	101	145	153	211	–	304	–
	P_{GC15}	65.8	124	159	173	206	–	357	–
	P_{GD15}	96.9	170	238	258	318	–	519	–
17	P_{GA}	–	–	–	–	–	83.9	–	127
	P_{GB}	–	–	–	–	–	212	–	328
	P_{GC15}	–	–	–	–	–	203	–	374
	P_{GD15}	–	–	–	–	–	320	–	548
18	P_{GA}	–	–	–	57.8	–	–	–	–
	P_{GB}	–	–	–	152	–	–	–	–
	P_{GC15}	–	–	–	172	–	–	–	–
	P_{GD15}	–	–	–	256	–	–	–	–
19	P_{GA}	–	–	–	–	–	91.6	–	121
	P_{GB}	–	–	–	–	–	214	–	307
	P_{GC15}	–	–	–	–	–	208	–	344
	P_{GD15}	–	–	–	–	–	321	–	507
20	P_{GA}	–	–	–	61.9	–	–	–	–
	P_{GB}	–	–	–	151	–	–	–	–
	P_{GC15}	–	–	–	172	–	–	–	–
	P_{GD15}	–	–	–	252	–	–	–	–

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

Type B2 – Thermal capacities
n_1 = 1500 rpm

Technical specifications (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	56.4	82.9	74	–	89.9	–	53.2	–
	P_{GB}	152	234	317	–	430	–	565	–
	P_{GC15}	174	295	287	–	325	–	536	–
	P_{GD15}	260	428	505	–	636	–	978	–
5.6	P_{GA}	56.1	80.4	74.6	–	91.1	–	57.6	–
	P_{GB}	152	224	317	–	422	–	542	–
	P_{GC15}	173	283	288	–	320	–	515	–
	P_{GD15}	258	410	505	–	622	–	933	–
6	P_{GA}	–	–	–	–	–	96.9	–	55.3
	P_{GB}	–	–	–	–	–	437	–	568
	P_{GC15}	–	–	–	–	–	331	–	538
	P_{GD15}	–	–	–	–	–	644	–	978
6.3	P_{GA}	52.3	76	72.7	82.2	97.8	–	86.9	–
	P_{GB}	134	201	275	335	382	–	505	–
	P_{GC15}	144	260	258	300	301	–	495	–
	P_{GD15}	219	371	441	528	562	–	865	–
6.7	P_{GA}	–	–	–	–	–	97.6	–	60.9
	P_{GB}	–	–	–	–	–	427	–	545
	P_{GC15}	–	–	–	–	–	324	–	515
	P_{GD15}	–	–	–	–	–	626	–	932
7.1	P_{GA}	52	73.6	73.5	82	97.4	–	86.3	–
	P_{GB}	133	193	275	333	374	–	485	–
	P_{GC15}	144	250	259	299	296	–	474	–
	P_{GD15}	217	355	441	524	550	–	826	–
7.5	P_{GA}	–	–	–	–	–	104	–	90.9
	P_{GB}	–	–	–	–	–	389	–	510
	P_{GC15}	–	–	–	–	–	306	–	497
	P_{GD15}	–	–	–	–	–	569	–	867
8	P_{GA}	48.6	70.2	67.2	80	96.2	–	96.5	–
	P_{GB}	121	179	236	290	335	–	460	–
	P_{GC15}	127	236	229	269	273	–	461	–
	P_{GD15}	193	332	382	460	493	–	782	–
8.5	P_{GA}	–	–	–	–	–	103	–	90.5
	P_{GB}	–	–	–	–	–	380	–	488
	P_{GC15}	–	–	–	–	–	299	–	476
	P_{GD15}	–	–	–	–	–	554	–	826
9	P_{GA}	48.3	67.9	67.5	80.1	95	–	94.3	–
	P_{GB}	120	172	236	288	329	–	440	–
	P_{GC15}	126	226	229	267	268	–	441	–
	P_{GD15}	191	319	381	456	483	–	748	–
9.5	P_{GA}	–	–	–	–	–	101	–	101
	P_{GB}	–	–	–	–	–	342	–	464
	P_{GC15}	–	–	–	–	–	278	–	463
	P_{GD15}	–	–	–	–	–	499	–	785
10	P_{GA}	41.3	60.2	60.3	73.1	87.5	–	90.5	–
	P_{GB}	99.6	149	202	248	288	–	384	–
	P_{GC15}	99.8	188	201	238	241	–	396	–
	P_{GD15}	153	268	329	396	425	–	658	–
10.6	P_{GA}	–	–	–	–	–	100	–	98.4
	P_{GB}	–	–	–	–	–	334	–	444
	P_{GC15}	–	–	–	–	–	271	–	444
	P_{GD15}	–	–	–	–	–	487	–	748
11.2	P_{GA}	41.1	58.4	60.2	72.8	86.3	–	88	–
	P_{GB}	98.7	144	202	246	282	–	370	–
	P_{GC15}	99.5	182	201	236	237	–	381	–
	P_{GD15}	152	259	329	393	417	–	631	–

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

Technical specifications (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}	–	–	–	–	–	91.9	–	94.4
	P_{GB}	–	–	–	–	–	293	–	388
	P_{GC15}	–	–	–	–	–	245	–	398
	P_{GD15}	–	–	–	–	–	431	–	659
12.5	P_{GA}	35.1	51.2	52.1	65.2	76.4	–	121	–
	P_{GB}	82	122	167	212	239	–	382	–
	P_{GC15}	79	148	173	209	207	–	403	–
	P_{GD15}	122	212	275	341	356	–	631	–
13.2	P_{GA}	–	–	–	–	–	90.6	–	92.2
	P_{GB}	–	–	–	–	–	287	–	374
	P_{GC15}	–	–	–	–	–	240	–	383
	P_{GD15}	–	–	–	–	–	420	–	633
14	P_{GA}	35	49.8	52.3	65	75.5	–	116	–
	P_{GB}	81.4	119	167	211	234	–	365	–
	P_{GC15}	78.8	143	172	207	204	–	386	–
	P_{GD15}	122	206	275	339	350	–	604	–
15	P_{GA}	–	–	–	–	–	80.3	–	125
	P_{GB}	–	–	–	–	–	244	–	386
	P_{GC15}	–	–	–	–	–	210	–	407
	P_{GD15}	–	–	–	–	–	360	–	634
16	P_{GA}	33.8	51.5	59.5	56.2	88	–	111	–
	P_{GB}	76.7	117	167	174	240	–	343	–
	P_{GC15}	73.7	140	175	178	213	–	368	–
	P_{GD15}	113	199	273	285	353	–	571	–
17	P_{GA}	–	–	–	–	–	79.1	–	120
	P_{GB}	–	–	–	–	–	239	–	369
	P_{GC15}	–	–	–	–	–	206	–	388
	P_{GD15}	–	–	–	–	–	353	–	605
18	P_{GA}	–	–	–	55.8	–	–	–	–
	P_{GB}	–	–	–	174	–	–	–	–
	P_{GC15}	–	–	–	177	–	–	–	–
	P_{GD15}	–	–	–	283	–	–	–	–
19	P_{GA}	–	–	–	–	–	91.3	–	115
	P_{GB}	–	–	–	–	–	244	–	347
	P_{GC15}	–	–	–	–	–	215	–	371
	P_{GD15}	–	–	–	–	–	356	–	573
20	P_{GA}	–	–	–	63.1	–	–	–	–
	P_{GB}	–	–	–	174	–	–	–	–
	P_{GC15}	–	–	–	180	–	–	–	–
	P_{GD15}	–	–	–	280	–	–	–	–

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

Type B2 – Thermal capacities
n_1 = 1800 rpm

Technical specifications (continued)

Thermal capacities P_G (kW) type B2

i_N		Gear unit sizes 503	504	505	506	507	508	509	510
5	P_{GA}	52.9	75.4	51.8	–	45	–	*	–
	P_{GB}	169	257	342	–	453	–	574	–
	P_{GC15}	189	300	282	–	301	–	488	–
	P_{GD15}	293	461	539	–	669	–	1008	–
5.6	P_{GA}	52.9	72.7	53.8	–	49.5	–	*	–
	P_{GB}	168	248	344	–	447	–	554	–
	P_{GC15}	188	287	283	–	298	–	471	–
	P_{GD15}	291	441	540	–	656	–	963	–
6	P_{GA}	–	–	–	–	–	51.7	–	*
	P_{GB}	–	–	–	–	–	462	–	577
	P_{GC15}	–	–	–	–	–	306	–	488
	P_{GD15}	–	–	–	–	–	675	–	1006
6.3	P_{GA}	50.9	71.6	60.6	61	71.8	–	23.9	–
	P_{GB}	150	223	300	363	408	–	525	–
	P_{GC15}	158	265	257	296	288	–	468	–
	P_{GD15}	247	399	473	563	596	–	901	–
6.7	P_{GA}	–	–	–	–	–	56.4	–	*
	P_{GB}	–	–	–	–	–	453	–	556
	P_{GC15}	–	–	–	–	–	303	–	472
	P_{GD15}	–	–	–	–	–	661	–	962
7.1	P_{GA}	50.7	69.9	62	62	73	–	28.6	–
	P_{GB}	149	214	300	361	401	–	507	–
	P_{GC15}	157	255	257	296	284	–	451	–
	P_{GD15}	245	383	472	560	584	–	864	–
7.5	P_{GA}	–	–	–	–	–	78.3	–	26.9
	P_{GB}	–	–	–	–	–	415	–	530
	P_{GC15}	–	–	–	–	–	293	–	470
	P_{GD15}	–	–	–	–	–	604	–	902
8	P_{GA}	47.9	67.5	59	68.5	77.9	–	50.4	–
	P_{GB}	135	199	258	316	360	–	482	–
	P_{GC15}	139	242	230	268	266	–	443	–
	P_{GD15}	218	358	410	493	526	–	820	–
8.5	P_{GA}	–	–	–	–	–	79.1	–	31.7
	P_{GB}	–	–	–	–	–	407	–	509
	P_{GC15}	–	–	–	–	–	288	–	452
	P_{GD15}	–	–	–	–	–	589	–	862
9	P_{GA}	47.6	65.7	59.6	69.2	77.6	–	51.6	–
	P_{GB}	134	191	258	314	354	–	464	–
	P_{GC15}	138	233	230	267	261	–	424	–
	P_{GD15}	216	344	409	489	515	–	784	–
9.5	P_{GA}	–	–	–	–	–	83.6	–	54.5
	P_{GB}	–	–	–	–	–	368	–	487
	P_{GC15}	–	–	–	–	–	270	–	445
	P_{GD15}	–	–	–	–	–	532	–	822
10	P_{GA}	41.2	58.8	54.1	65.3	74	–	57.7	–
	P_{GB}	112	166	222	271	311	–	404	–
	P_{GC15}	109	206	203	239	237	–	384	–
	P_{GD15}	174	301	354	425	454	–	690	–
10.6	P_{GA}	–	–	–	–	–	82.9	–	55.9
	P_{GB}	–	–	–	–	–	359	–	467
	P_{GC15}	–	–	–	–	–	265	–	428
	P_{GD15}	–	–	–	–	–	520	–	786
11.2	P_{GA}	41	57.1	54.6	65.3	73.5	–	57.3	–
	P_{GB}	111	160	222	270	306	–	392	–
	P_{GC15}	109	199	203	237	233	–	370	–
	P_{GD15}	172	291	354	422	446	–	665	–

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

Technical specifications (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}	–	–	–	–	–	79.1	–	62
	P_{GB}	–	–	–	–	–	318	–	410
	P_{GC15}	–	–	–	–	–	241	–	386
	P_{GD15}	–	–	–	–	–	460	–	693
12.5	P_{GA}	35.3	50.4	47.9	59.4	66.8	–	106	–
	P_{GB}	92.3	137	183	233	259	–	416	–
	P_{GC15}	86.3	162	175	210	205	–	407	–
	P_{GD15}	139	239	297	367	382	–	677	–
13.2	P_{GA}	–	–	–	–	–	78	–	61.6
	P_{GB}	–	–	–	–	–	311	–	393
	P_{GC15}	–	–	–	–	–	236	–	372
	P_{GD15}	–	–	–	–	–	450	–	665
14	P_{GA}	35.2	49.1	48.1	59.4	66.2	–	102	–
	P_{GB}	91.6	133	183	231	255	–	398	–
	P_{GC15}	86	157	174	209	202	–	390	–
	P_{GD15}	138	232	296	365	374	–	646	–
15	P_{GA}	–	–	–	–	–	71.2	–	111
	P_{GB}	–	–	–	–	–	264	–	420
	P_{GC15}	–	–	–	–	–	209	–	411
	P_{GD15}	–	–	–	–	–	387	–	680
16	P_{GA}	34.4	52.4	59.1	52	84.9	–	98.9	–
	P_{GB}	86.3	132	186	192	265	–	374	–
	P_{GC15}	80.6	154	181	181	216	–	373	–
	P_{GD15}	129	225	296	307	382	–	612	–
17	P_{GA}	–	–	–	–	–	70.2	–	107
	P_{GB}	–	–	–	–	–	259	–	401
	P_{GC15}	–	–	–	–	–	205	–	393
	P_{GD15}	–	–	–	–	–	379	–	650
18	P_{GA}	–	–	–	52	–	–	–	–
	P_{GB}	–	–	–	191	–	–	–	–
	P_{GC15}	–	–	–	180	–	–	–	–
	P_{GD15}	–	–	–	305	–	–	–	–
19	P_{GA}	–	–	–	–	–	88.7	–	103
	P_{GB}	–	–	–	–	–	269	–	377
	P_{GC15}	–	–	–	–	–	219	–	375
	P_{GD15}	–	–	–	–	–	385	–	613
20	P_{GA}	–	–	–	62.8	–	–	–	–
	P_{GB}	–	–	–	194	–	–	–	–
	P_{GC15}	–	–	–	186	–	–	–	–
	P_{GD15}	–	–	–	305	–	–	–	–

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

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

Technical specifications

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	–	–	–	–	–	–	–	–

Technical specifications (continued)

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

	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		–		–	–	–	–	
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	B3
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	
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

Type B3 – Thermal capacities
n_1 = 1000 rpm

Technical specifications (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}	–	56.4	–	85.6	–	111	–	150	–	194	–
	P_{GB}	–	105	–	159	–	218	–	325	–	462	–
	P_{GC15}	–	165	–	210	–	243	–	414	–	468	–
	P_{GD15}	–	208	–	275	–	341	–	570	–	710	–
16	P_{GA}	41.5	53.4	–	84.1	–	110	–	147	–	191	–
	P_{GB}	72.8	99.1	–	155	–	216	–	316	–	447	–
	P_{GC15}	79.7	156	–	205	–	240	–	401	–	453	–
	P_{GD15}	109	196	–	268	–	336	–	551	–	684	–
18	P_{GA}	39.7	51.5	–	81.1	93.2	104	120	144	164	188	206
	P_{GB}	69.6	95.3	–	150	168	202	230	306	344	435	474
	P_{GC15}	76	150	–	197	219	225	370	389	429	443	483
	P_{GD15}	104	188	–	258	286	315	465	534	591	667	726
20	P_{GA}	38.5	50.6	62	77.9	91.4	103	119	142	161	180	202
	P_{GB}	67.4	93.5	112	143	164	200	226	300	333	418	458
	P_{GC15}	73.6	147	165	189	214	222	364	380	415	424	467
	P_{GD15}	100	184	210	248	279	311	458	522	571	637	700
22.4	P_{GA}	37.1	46.6	58.7	73	88	94.4	112	132	158	175	199
	P_{GB}	64.7	84.5	105	131	158	179	212	272	324	387	447
	P_{GC15}	70.7	126	156	177	206	203	341	352	403	401	456
	P_{GD15}	96.4	160	197	229	269	280	428	477	553	593	681
25	P_{GA}	33.9	45.7	56.6	70.2	84.5	93.5	111	130	155	168	191
	P_{GB}	58.4	82.9	101	126	152	177	209	266	317	371	428
	P_{GC15}	61.1	123	150	170	198	200	337	344	394	384	436
	P_{GD15}	83.8	156	190	220	258	276	423	466	540	568	651
28	P_{GA}	32.7	42.7	55.6	66.6	78.9	84.7	102	120	144	163	184
	P_{GB}	56.2	76.7	99.4	118	139	157	188	240	288	351	397
	P_{GC15}	58.7	111	147	161	184	182	298	316	364	369	412
	P_{GD15}	80.7	141	186	208	238	247	373	424	494	540	606
31.5	P_{GA}	30.9	41.9	51	64.2	76	83.6	101	118	142	157	177
	P_{GB}	52.7	75.1	89.8	114	133	155	186	235	282	336	380
	P_{GC15}	53.8	109	126	155	177	179	294	309	356	353	395
	P_{GD15}	74.1	138	161	199	228	245	369	414	481	517	579
35.5	P_{GA}	29.8	37.1	50.1	58.2	72.1	75.5	90.8	107	130	143	171
	P_{GB}	50.7	65.5	88.1	102	125	138	165	211	254	303	359
	P_{GC15}	51.9	90.6	124	142	168	162	247	283	327	325	379
	P_{GD15}	71.3	116	158	181	215	219	313	376	438	469	550
40	P_{GA}	27.5	36.5	46.8	56.3	69.5	74.7	90	106	128	138	164
	P_{GB}	46.3	64.2	81.4	98.3	120	137	163	207	249	290	344
	P_{GC15}	46.7	88.9	112	137	162	160	244	277	319	312	363
	P_{GD15}	64.4	114	143	174	207	217	308	367	427	450	527
45	P_{GA}	26.5	32	45.9	50.4	63	65.3	81	93.4	116	143	150
	P_{GB}	44.7	55.4	79.7	86.6	107	118	145	180	224	282	309
	P_{GC15}	45.1	73.3	110	121	143	141	209	248	292	308	333
	P_{GD15}	62.1	94.5	140	154	184	189	266	325	388	434	477
50	P_{GA}	22.8	31.4	40.6	48.7	60.8	64.7	80.1	91.8	114	137	145
	P_{GB}	37.8	54.6	69.5	83.6	104	116	143	177	219	271	297
	P_{GC15}	36.5	72.2	91.2	117	139	140	208	242	286	295	319
	P_{GD15}	50.7	92.7	117	148	177	186	263	318	380	417	458
56	P_{GA}	22.1	30.1	39.8	48.1	54.2	65.4	70	93.7	101	130	149
	P_{GB}	36.7	51.7	68.2	81.2	91.3	114	123	175	191	254	288
	P_{GC15}	35.3	67.6	89.3	113	117	138	170	241	255	281	315
	P_{GD15}	49	87.3	115	143	150	182	218	313	335	394	442
63	P_{GA}	22.7	–	34.9	–	52.5	–	69.4	–	99	–	143
	P_{GB}	37.2	–	59	–	88.3	–	122	–	187	–	277
	P_{GC15}	35.7	–	74	–	113	–	168	–	250	–	302
	P_{GD15}	49.4	–	95.9	–	145	–	215	–	328	–	424
71	P_{GA}	–	–	34.3	–	51.7	–	69.8	–	101	–	136
	P_{GB}	–	–	58	–	85.6	–	120	–	185	–	260
	P_{GC15}	–	–	72.9	–	109	–	163	–	248	–	288
	P_{GD15}	–	–	94.1	–	140	–	208	–	323	–	401
80	P_{GA}	–	–	33	–	–	–	–	–	–	–	–
	P_{GB}	–	–	55.4	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	68.6	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	88.9	–	–	–	–	–	–	–	–

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

Technical specifications (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}	–	57.8	–	86.5	–	109	–	143	–	177	–
	P_{GB}	–	118	–	177	–	242	–	356	–	500	–
	P_{GC15}	–	176	–	218	–	249	–	422	–	468	–
	P_{GD15}	–	229	–	298	–	370	–	612	–	760	–
16	P_{GA}	42.9	55	–	85.2	–	109	–	142	–	177	–
	P_{GB}	81.7	112	–	173	–	239	–	347	–	486	–
	P_{GC15}	87.4	167	–	213	–	246	–	410	–	455	–
	P_{GD15}	123	216	–	292	–	364	–	593	–	735	–
18	P_{GA}	41.2	53.2	–	82.4	94.4	103	119	141	159	175	190
	P_{GB}	78.2	107	–	167	187	224	254	338	378	475	513
	P_{GC15}	83.4	160	–	205	227	231	383	399	438	445	484
	P_{GD15}	118	207	–	281	310	342	500	576	634	715	777
20	P_{GA}	39.9	52.3	63.9	79.4	93	102	118	138	157	169	189
	P_{GB}	75.7	105	126	160	183	222	250	332	367	456	498
	P_{GC15}	80.8	157	183	197	222	228	377	391	425	428	470
	P_{GD15}	114	203	236	269	304	337	492	563	615	685	751
22.4	P_{GA}	38.5	48.3	60.7	75.1	89.8	95.3	112	132	155	169	187
	P_{GB}	72.9	95.5	119	147	176	200	235	301	358	425	487
	P_{GC15}	77.8	140	172	185	214	210	353	363	414	408	460
	P_{GD15}	109	181	223	249	292	305	461	515	597	640	731
25	P_{GA}	35.4	47.4	58.6	72.3	86.5	94.6	111	130	152	163	180
	P_{GB}	65.8	93.4	114	141	170	197	233	295	351	408	468
	P_{GC15}	66.9	137	166	177	205	207	349	355	405	391	442
	P_{GD15}	95.1	177	215	240	280	301	455	503	582	613	700
28	P_{GA}	34.1	44.4	57.5	69	81.5	86.3	103	121	144	160	178
	P_{GB}	63.3	86.4	112	133	155	176	209	267	319	387	435
	P_{GC15}	64.5	124	162	169	192	188	319	327	375	377	420
	P_{GD15}	91.6	161	210	226	259	270	411	459	533	584	654
31.5	P_{GA}	32.3	43.7	53.1	66.4	78.4	85.5	102	119	142	154	173
	P_{GB}	59.3	84.8	101	128	149	174	207	261	312	370	417
	P_{GC15}	58.9	121	140	163	185	186	315	320	368	362	403
	P_{GD15}	84.1	157	183	218	249	267	406	448	521	559	625
35.5	P_{GA}	31.2	38.7	52.1	60.6	74.7	77.4	93	109	131	142	168
	P_{GB}	57.3	74	99.3	115	140	155	184	235	283	333	395
	P_{GC15}	56.8	101	137	149	176	169	273	294	339	332	388
	P_{GD15}	81	132	179	197	235	239	353	407	475	507	595
40	P_{GA}	28.7	38.1	48.8	58.4	72	76.6	92.1	107	129	137	162
	P_{GB}	52.3	72.5	91.9	110	135	153	182	231	276	320	379
	P_{GC15}	51.1	98.7	124	143	169	167	270	287	331	320	372
	P_{GD15}	73.1	130	162	190	226	236	350	398	463	487	569
45	P_{GA}	27.7	33.5	47.9	52.5	65.5	67.3	83.2	95.2	118	147	149
	P_{GB}	50.4	62.7	90	97.3	121	131	162	201	249	314	341
	P_{GC15}	49.4	81.3	121	129	154	147	232	257	303	321	342
	P_{GD15}	70.6	108	159	170	204	206	302	352	421	473	516
50	P_{GA}	23.7	33	42.5	50.8	63.2	66.6	82.4	93.4	116	141	143
	P_{GB}	42.4	61.6	78.6	94.4	117	131	160	197	244	302	328
	P_{GC15}	39.7	80.2	101	125	149	146	229	252	297	308	328
	P_{GD15}	57.1	106	134	164	197	203	298	344	411	455	496
56	P_{GA}	23.1	31.6	41.7	50.6	56.7	68.3	72.3	97.2	103	134	153
	P_{GB}	41	58.4	77	91.9	103	129	138	197	213	284	321
	P_{GC15}	38.5	75.2	99.2	123	129	145	187	252	265	294	329
	P_{GD15}	55.5	99.3	131	159	170	200	246	341	364	430	482
63	P_{GA}	23.8	–	36.7	–	54.9	–	71.6	–	101	–	148
	P_{GB}	41.6	–	66.7	–	99.5	–	137	–	208	–	309
	P_{GC15}	39	–	81.8	–	125	–	186	–	260	–	315
	P_{GD15}	55.8	–	109	–	165	–	244	–	356	–	462
71	P_{GA}	–	–	36	–	54.5	–	73.1	–	105	–	140
	P_{GB}	–	–	65.5	–	96.8	–	135	–	208	–	290
	P_{GC15}	–	–	80.5	–	121	–	181	–	260	–	300
	P_{GD15}	–	–	107	–	159	–	236	–	352	–	438
80	P_{GA}	–	–	34.5	–	–	–	–	–	–	–	–
	P_{GB}	–	–	62.1	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	75.9	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	101	–	–	–	–	–	–	–	–

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

Type B3 – Thermal capacities
n_1 = 1500 rpm

Technical specifications (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}	–	58.1	–	84.7	–	102	–	124	–	131	–
	P_{GB}	–	136	–	201	–	270	–	391	–	533	–
	P_{GC15}	–	185	–	225	–	252	–	424	–	449	–
	P_{GD15}	–	252	–	329	–	406	–	662	–	809	–
16	P_{GA}	43.9	55.7	–	83.8	–	102	–	127	–	139	–
	P_{GB}	94.1	128	–	197	–	267	–	383	–	523	–
	P_{GC15}	97.5	175	–	221	–	249	–	413	–	441	–
	P_{GD15}	144	238	–	322	–	401	–	641	–	787	–
18	P_{GA}	42.2	54.1	–	81.4	93.3	97.5	112	127	140	141	146
	P_{GB}	90	124	–	190	212	252	285	374	414	516	549
	P_{GC15}	93.4	168	–	213	235	235	395	405	441	437	466
	P_{GD15}	137	229	–	310	343	376	545	626	687	771	827
20	P_{GA}	41.1	53.4	65	78.6	92.2	97.2	112	126	142	138	152
	P_{GB}	87.2	122	144	182	208	249	281	369	406	497	539
	P_{GC15}	90.2	165	191	205	230	233	389	398	429	421	459
	P_{GD15}	133	225	261	298	335	372	537	613	666	741	806
22.4	P_{GA}	39.7	49.8	62.1	76.1	89.4	93.4	107	125	143	150	155
	P_{GB}	84.2	110	137	169	201	226	265	337	397	467	530
	P_{GC15}	87	153	181	193	222	216	366	371	420	407	452
	P_{GD15}	128	206	246	276	323	337	502	562	649	695	788
25	P_{GA}	36.6	49	60.1	73.5	86.3	92.7	107	124	141	146	151
	P_{GB}	76.1	108	132	162	193	224	262	331	390	449	510
	P_{GC15}	74.7	150	174	186	214	213	362	364	413	392	436
	P_{GD15}	111	202	237	266	310	333	497	550	636	666	756
28	P_{GA}	35.4	46.2	59.1	70.8	83	86.1	102	117	138	147	160
	P_{GB}	73.3	100	129	153	178	200	237	300	356	428	477
	P_{GC15}	72	140	171	177	201	195	333	337	385	381	420
	P_{GD15}	107	188	232	251	287	299	451	502	582	636	708
31.5	P_{GA}	33.7	45.3	55	68.3	80.1	85.3	101	116	137	143	156
	P_{GB}	68.8	98.5	117	147	171	197	235	294	350	411	460
	P_{GC15}	65.7	138	158	171	193	193	328	331	378	366	405
	P_{GD15}	98.2	184	213	242	276	296	445	491	570	610	680
35.5	P_{GA}	32.6	40.4	54	62.5	77	77.6	93.2	107	129	133	156
	P_{GB}	66.2	85.7	115	132	161	176	210	266	318	370	437
	P_{GC15}	63.5	114	155	156	185	175	299	304	350	338	392
	P_{GD15}	94.9	155	208	219	261	266	400	446	520	554	648
40	P_{GA}	30.1	39.7	50.9	60.4	74.3	77.1	92.3	105	127	129	151
	P_{GB}	60.5	84.3	106	128	155	175	207	260	312	357	419
	P_{GC15}	57	112	140	151	178	173	295	298	343	325	377
	P_{GD15}	85.6	152	190	211	251	263	396	437	508	533	622
45	P_{GA}	29.1	35.1	49.9	54.4	67.7	68.3	84.1	94.3	117	148	141
	P_{GB}	58.5	73	105	113	139	151	185	227	281	356	378
	P_{GC15}	55.1	92.6	138	136	163	153	261	267	314	334	347
	P_{GD15}	82.5	126	186	188	227	229	349	386	462	524	564
50	P_{GA}	24.9	34.6	44.3	52.7	65.5	67.7	83.4	92.9	115	143	137
	P_{GB}	49.1	71.5	91	109	134	149	183	223	275	343	364
	P_{GC15}	44.2	90.7	114	132	157	152	259	262	308	321	334
	P_{GD15}	66.9	124	156	182	219	226	345	378	453	504	542
56	P_{GA}	24.2	33.4	43.6	53.4	59	71.4	73.7	100	103	136	156
	P_{GB}	47.6	67.9	89.3	107	119	149	158	224	240	322	364
	P_{GC15}	42.8	85.5	112	130	142	153	212	264	276	307	343
	P_{GD15}	64.7	117	153	178	196	224	286	376	400	477	533
63	P_{GA}	25.4	–	38.5	–	57.1	–	73.1	–	101	–	150
	P_{GB}	48.4	–	77.3	–	115	–	156	–	236	–	350
	P_{GC15}	43.7	–	93.1	–	137	–	210	–	270	–	329
	P_{GD15}	65.6	–	128	–	189	–	283	–	392	–	512
71	P_{GA}	–	–	38	–	57.6	–	76.5	–	109	–	143
	P_{GB}	–	–	76	–	112	–	156	–	237	–	329
	P_{GC15}	–	–	91.2	–	135	–	205	–	273	–	314
	P_{GD15}	–	–	126	–	184	–	275	–	389	–	484
80	P_{GA}	–	–	36.5	–	–	–	–	–	–	–	–
	P_{GB}	–	–	72	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	85.5	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	118	–	–	–	–	–	–	–	–

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

Technical specifications (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}	–	57.1	–	80	–	89.7	–	91.3	–	59.8	–
	P_{GB}	–	151	–	221	–	293	–	411	–	546	–
	P_{GC15}	–	190	–	229	–	249	–	413	–	411	–
	P_{GD15}	–	273	–	355	–	435	–	695	–	837	–
16	P_{GA}	43.7	54.9	–	79.8	–	91.4	–	99.7	–	80.1	–
	P_{GB}	105	143	–	217	–	290	–	405	–	542	–
	P_{GC15}	106	181	–	224	–	248	–	407	–	411	–
	P_{GD15}	163	258	–	348	–	430	–	677	–	819	–
18	P_{GA}	42.3	53.7	–	77.9	89.3	88.4	101	104	110	87.2	75.6
	P_{GB}	101	139	–	209	234	275	309	400	437	536	562
	P_{GC15}	101	174	–	217	240	234	400	401	430	411	429
	P_{GD15}	155	249	–	335	370	404	581	662	722	803	855
20	P_{GA}	41.3	52.8	64.3	75.5	88.7	88.6	103	105	117	91.6	93.9
	P_{GB}	97.7	136	161	202	230	272	305	394	431	520	555
	P_{GC15}	98.5	171	198	209	235	233	396	396	424	399	429
	P_{GD15}	150	244	283	322	363	400	573	650	705	776	836
22.4	P_{GA}	39.9	50.1	61.7	74.9	86.4	87.7	98.6	113	122	118	104
	P_{GB}	94.2	124	152	187	221	248	288	364	425	495	551
	P_{GC15}	95.2	159	187	198	227	217	373	374	418	395	428
	P_{GD15}	145	223	268	300	349	364	538	598	688	733	823
25	P_{GA}	37.1	49.4	60	72.4	83.9	87.5	98.8	113	122	117	106
	P_{GB}	85.2	121	147	180	213	245	286	358	418	478	534
	P_{GC15}	81.4	156	181	191	218	215	369	368	413	383	416
	P_{GD15}	126	219	258	288	335	359	532	587	675	706	793
28	P_{GA}	36	46.9	59.4	70.7	82.3	83	96.6	110	127	126	130
	P_{GB}	82.4	113	144	170	198	220	260	326	386	455	506
	P_{GC15}	78.6	146	177	183	207	198	341	342	388	374	409
	P_{GD15}	121	204	253	273	312	324	483	537	622	675	748
31.5	P_{GA}	34.4	46.2	55.7	68.6	79.5	82.4	96.1	109	127	123	128
	P_{GB}	77.5	111	132	164	190	218	257	320	379	440	487
	P_{GC15}	71.7	144	164	177	200	196	337	336	382	361	395
	P_{GD15}	111	200	231	262	300	320	478	525	609	648	719
35.5	P_{GA}	33.3	41.2	54.9	63.1	77.4	75.8	90.6	101	122	118	135
	P_{GB}	74.7	96.6	129	148	180	195	231	289	345	398	467
	P_{GC15}	69.1	126	161	162	191	179	308	309	355	334	386
	P_{GD15}	108	175	227	238	284	288	431	478	556	589	687
40	P_{GA}	30.8	40.6	51.8	61	74.7	75.4	89.9	100	120	115	132
	P_{GB}	68.1	94.9	120	142	173	193	228	284	339	384	449
	P_{GC15}	62.1	124	152	156	184	177	304	303	348	323	373
	P_{GD15}	97	172	211	230	273	285	426	468	544	567	660
45	P_{GA}	29.8	36	50.9	55.3	68.6	67.4	82.5	90.6	112	146	126
	P_{GB}	65.9	82.1	117	126	155	166	204	248	306	390	406
	P_{GC15}	60.2	102	149	142	168	157	276	273	320	342	345
	P_{GD15}	93.8	143	207	205	247	248	383	414	495	566	600
50	P_{GA}	25.6	35.5	45.5	53.6	66.4	66.9	81.8	89.2	111	142	123
	P_{GB}	55.3	80.8	102	122	150	165	202	244	300	376	391
	P_{GC15}	47.9	101	126	137	163	156	273	268	314	330	333
	P_{GD15}	75.7	141	177	199	239	246	379	406	485	544	577
56	P_{GA}	24.9	34.5	44.7	55.2	60.1	73.2	72.9	101	99.8	135	153
	P_{GB}	53.7	76.7	101	120	133	166	175	249	262	354	398
	P_{GC15}	46.5	94.5	124	136	147	159	232	274	282	315	351
	P_{GD15}	73.5	133	174	194	213	245	322	407	429	515	576
63	P_{GA}	26.5	–	39.7	–	58.2	–	72.5	–	98.3	–	148
	P_{GB}	55	–	87.1	–	128	–	173	–	258	–	383
	P_{GC15}	47.9	–	103	–	143	–	230	–	277	–	338
	P_{GD15}	74.5	–	145	–	206	–	319	–	420	–	553
71	P_{GA}	–	–	39.1	–	59.7	–	78.8	–	110	–	142
	P_{GB}	–	–	85.5	–	126	–	174	–	262	–	360
	P_{GC15}	–	–	101	–	141	–	228	–	283	–	323
	P_{GD15}	–	–	143	–	201	–	312	–	421	–	524
80	P_{GA}	–	–	37.9	–	–	–	–	–	–	–	–
	P_{GB}	–	–	81.2	–	–	–	–	–	–	–	–
	P_{GC15}	–	–	94.7	–	–	–	–	–	–	–	–
	P_{GD15}	–	–	134	–	–	–	–	–	–	–	–

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

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

Technical specifications

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

			Gear unit sizes									
i_N	n_1	n_2	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

Technical specifications (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		–		–	–	–	–	
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	B4
180	–	–		11.6		16.2		21.5		28.3		37		48.5		63.5	81	101.5	125	
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 **B3**, see page 3/51

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

Technical specifications (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}	33.2	–	50.4	–	70.2	–	105	–	139	–
71	P_{GA}	31.9	–	48.9	–	67.6	–	102	–	132	–
80	P_{GA}	31.4	–	47.1	54.5	65.8	74.8	97.9	112	130	147
90	P_{GA}	29	35.8	43.6	52.8	61.2	72	91.3	108	120	140
100	P_{GA}	28.5	34.4	42.1	51	59.7	70.1	88	104	118	137
112	P_{GA}	26.9	33.9	40	47.1	56.2	65.2	83.8	96.8	108	126
125	P_{GA}	26.4	31.3	38.5	45.4	54.8	63.6	80.8	93.6	106	124
140	P_{GA}	23.8	30.8	35.9	43.1	49.7	59.9	74.6	88.7	97.3	113
160	P_{GA}	23.4	28.9	34.7	41.6	48.4	58.3	72	85.6	95.7	112
180	P_{GA}	21	28.5	31.3	38.8	44.3	52.9	66.2	78.9	86.5	102
200	P_{GA}	20.6	25.7	30.3	37.5	43.3	51.6	64	76.3	85	101
224	P_{GA}	20.3	25.4	30.5	33.8	41.6	47.2	62.9	70.2	84.4	90.9
250	P_{GA}	19.5	22.6	29.7	32.8	40.6	46.2	59.6	67.8	79.1	89.4
280	P_{GA}	18.8	22.3	28.6	32.9	39.1	44.3	57.8	66.6	76.4	88.7
315	P_{GA}	–	21.9	–	32	–	43.3	–	63.1	–	83.1
355	P_{GA}	–	21	–	30.9	–	41.7	–	61.2	–	80.3

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}	34.9	–	52.9	–	73.6	–	109	–	144	–
71	P_{GA}	33.6	–	51.3	–	70.9	–	106	–	137	–
80	P_{GA}	33.1	–	49.5	57.2	69.1	78.4	102	116	135	152
90	P_{GA}	30.6	37.7	45.9	55.5	64.4	75.7	95.8	113	125	145
100	P_{GA}	30.1	36.4	44.3	53.5	62.7	73.7	92.6	109	122	142
112	P_{GA}	28.4	35.8	42.2	49.7	59.2	68.7	87.9	102	113	131
125	P_{GA}	28	33	40.8	47.9	57.8	66.9	84.8	98.1	111	129
140	P_{GA}	25.1	32.5	38	45.6	52.5	63.2	78.4	93.2	102	119
160	P_{GA}	24.7	30.7	36.7	44	51.3	61.6	75.9	89.9	100	117
180	P_{GA}	21.9	30.2	32.7	41	46.2	55.9	69.1	83.3	90.1	107
200	P_{GA}	21.5	27.1	31.6	39.7	45.1	54.6	66.9	80.4	88.5	105
224	P_{GA}	21.3	26.7	31.9	35.3	43.4	49.3	65.6	73.2	88.2	94.8
250	P_{GA}	20.4	23.6	31.1	34.2	42.5	48.1	62.2	70.9	82.5	93.1
280	P_{GA}	19.7	23.3	30	34.5	40.9	46.4	60.3	69.6	79.8	92.5
315	P_{GA}	–	23	–	33.6	–	45.3	–	66	–	86.7
355	P_{GA}	–	22	–	32.4	–	43.7	–	64	–	83.7

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

Technical specifications (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}	36.9	–	55.7	–	76.9	–	114	–	147	–
71	P_{GA}	35.5	–	54.1	–	74.4	–	110	–	141	–
80	P_{GA}	35	–	52.2	60.4	72.6	82.2	107	121	139	156
90	P_{GA}	32.5	39.9	48.6	58.6	68.1	79.5	101	117	129	149
100	P_{GA}	32	38.5	46.9	56.4	66.5	77.5	97.4	114	127	147
112	P_{GA}	30.3	37.9	44.8	52.6	62.9	72.7	92.8	107	118	136
125	P_{GA}	29.8	35.2	43.3	50.8	61.2	70.9	89.8	103	116	134
140	P_{GA}	26.8	34.6	40.5	48.5	55.7	67.1	83.2	98.6	107	124
160	P_{GA}	26.4	32.7	39.2	46.9	54.5	65.5	80.1	95.2	105	122
180	P_{GA}	23	32.2	34.5	43.8	49.1	59.4	73.3	88.1	94.8	113
200	P_{GA}	22.7	29	33.4	42.3	48	58.1	71	85.1	93.4	111
224	P_{GA}	22.6	28.6	33.9	37.2	46.1	52.3	70.2	77.6	93.9	99.9
250	P_{GA}	21.6	24.8	32.9	36	44.7	51.2	65.8	75.3	87.1	97.9
280	P_{GA}	20.8	24.5	31.7	36.5	43.1	49.2	63.8	74.3	84.2	98.5
315	P_{GA}	–	24.4	–	35.6	–	47.8	–	69.6	–	91.5
355	P_{GA}	–	23.3	–	34.3	–	46	–	67.5	–	88.4

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}	38.3	–	57.5	–	79.1	–	116	–	146	–
71	P_{GA}	37	–	55.9	–	76.4	–	113	–	141	–
80	P_{GA}	36.4	–	54	62.5	74.7	84.7	109	124	139	156
90	P_{GA}	33.8	41.6	50.6	60.7	70.7	81.9	104	120	131	150
100	P_{GA}	33.4	40.2	48.9	58.6	69	80	100	117	129	148
112	P_{GA}	31.7	39.6	46.7	54.9	65.5	75.5	96.1	110	120	139
125	P_{GA}	31.2	36.7	45.2	53.1	64	73.7	92.9	107	118	137
140	P_{GA}	28.1	36.2	42.3	50.6	58.4	69.9	86.4	102	110	127
160	P_{GA}	27.7	34.3	41	48.9	56.9	68.3	83.5	99	108	125
180	P_{GA}	24.2	33.7	36.1	45.8	51.4	62.3	76.5	91.6	97.8	116
200	P_{GA}	23.8	30.4	35	44.3	50.3	60.7	74	88.7	96.3	114
224	P_{GA}	24	30	35.8	39	48.5	54.8	73.6	81.2	98.5	103
250	P_{GA}	22.7	26.1	34.8	37.9	47.2	53.7	69.2	78.4	91.3	101
280	P_{GA}	22	25.7	33.6	38.6	45.4	51.7	67.1	78.1	88.2	103
315	P_{GA}	–	25.8	–	37.6	–	50.2	–	73.2	–	95.8
355	P_{GA}	–	24.5	–	36.2	–	48.3	–	71.1	–	92.6

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

Types H1, H2, H3, H4
Moments of inertia J_1

Technical specifications

Moments of inertia J_1 (kgm^2) without fan

The moments of inertia J_1 in kgm^2 are referred to the input shaft of the gear units and apply to gear units without a fan. J_{L1} must be added to J_1 for gear units with a fan.

The moment of inertia J_2 in kgm^2 referred to the output shaft of the gear unit is calculated according to the following formula: $J_2 = i_N^2 \times J_1$

Moments of inertia J_1 in kgm^2 referred to the input shaft

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
1.12	0.03320	0.09331	0.19985	–	0.55790	–	1.15512	–	–	–	–	–	
1.25	0.03012	0.08009	0.17598	–	0.47525	–	0.98841	–	–	–	–	–	
1.32	–	–	–	–	–	0.69638	–	1.41265	–	–	–	–	
1.4	0.02612	0.07247	0.15616	0.28321	0.42781	–	0.89201	–	–	–	–	–	
1.5	–	–	–	–	–	0.59994	–	1.21925	–	–	–	–	
1.6	0.02270	0.06249	0.13502	0.25139	0.38416	–	0.76512	–	–	–	–	–	
1.7	–	–	–	–	–	0.54274	–	1.10454	–	–	–	–	
1.8	0.02118	0.05538	0.11797	0.22222	0.31917	–	0.66780	–	–	–	–	–	
1.9	–	–	–	–	–	0.47639	–	0.95000	–	–	–	–	
2	0.01944	0.05039	0.10730	0.19158	0.29054	–	0.60305	–	–	–	–	–	
2.12	–	–	–	–	–	0.41019	–	0.83447	–	–	–	–	
2.24	0.01699	0.04512	0.09435	0.16800	0.26550	–	0.54335	–	–	–	–	–	
2.36	–	–	–	–	–	0.37242	–	0.75177	–	–	–	–	
2.5	0.01533	0.04015	0.08484	0.15171	0.23841	–	0.48790	–	–	–	–	–	
2.65	–	–	–	–	–	0.32983	–	0.67465	–	–	–	–	H1
2.8	0.01382	0.03570	0.07523	0.13132	0.21150	–	0.43124		–	–	–	–	
3	–	–	–	–	–	0.29502	–	0.60234	–	–	–	–	
3.15	0.00978	0.02560	0.05558	0.11689	0.16858	–	0.32533	–	–	–	–	–	
3.35	–	–	–	–	–	0.26063	–	0.52956	–	–	–	–	
3.55	0.00833	0.02080	0.04790	0.10267	0.13472	–	0.28649	–	–	–	–	–	
3.75	–	–	–	–	–	0.21054	–	0.40835	–	–	–	–	
4	0.00694	0.01794	0.04155	0.07893	0.11805	–	0.24482	–	–	–	–	–	
4.25	–	–	–	–	–	0.17090	–	0.35656	–	–	–	–	
4.5	0.00520	0.01525	0.03354	0.06750	0.09900	–	0.19081	–	–	–	–	–	
4.75	–	–	–	–	–	0.14846	–	0.30267	–	–	–	–	
5	0.00447	0.01357	0.02829	0.05811	0.08363	–	0.17361	–	–	–	–	–	
5.3	–	–	–	–	–	0.12489	–	0.23975	–	–	–	–	
5.6	0.00392	0.01179	0.02455	0.04715	0.07328	–	0.14460	–	–	–	–	–	
6	–	–	–	–	–	0.10497	–	0.21761	–	–	–	–	
J_{L1}	0.013	0.013	0.032	0.032	0.070	0.070	0.070	0.070	–	–	–	–	

Technical specifications (continued)

Moments of inertia J_1 (kgm^2) without fan

The moments of inertia J_1 in kgm^2 are referred to the input shaft of the gear units and apply to gear units without a fan. J_{L1} must be added to J_1 for gear units with a fan.

The moment of inertia J_2 in kgm^2 referred to the output shaft of the gear unit is calculated according to the following formula:
$J_2 = i_N^2 \times J_1$

Moments of inertia J_1 in kgm^2 referred to the input shaft (continued)

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
6.3	–	0.01360	0.03005	–	0.10900	–	0.17891	–	0.47624	–	1.02034	–	
7.1	–	0.01157	0.02672	–	0.09409	–	0.15729	–	0.41868	–	0.88860	–	
8	–	0.01026	0.02247	–	0.07930	0.09825	0.13223	0.21556	0.36929	0.55622	0.77288	1.21839	
9	–	0.00909	0.01983	0.03750	0.06753	0.08532	0.11529	0.18736	0.32175	0.48392	0.67066	1.04902	
10	–	0.00783	0.01749	0.03282	0.05758	0.07245	0.09944	0.15501	0.27770	0.42214	0.57506	0.90183	
11.2	–	0.00686	0.01266	0.02707	0.04200	0.06204	0.07436	0.13360	0.22047	0.36418	0.43687	0.77333	
12.5	–	0.00492	0.01063	0.02361	0.03389	0.05319	0.06252	0.11400	0.17386	0.31141	0.37463	0.65585	
14	–	0.00421	0.00870	0.02057	0.02823	0.03871	0.05334	0.08566	0.14926	0.24690	0.31240	0.49954	H2
16	–	0.00356	0.00659	0.01508	0.02340	0.03126	0.04309	0.07131	0.12488	0.19378	0.24326	0.42414	
18	–	0.00273	0.00557	0.01256	0.02062	0.02616	0.03586	0.06042	0.10369	0.16515	0.21929	0.35037	
20	–	0.00231	–	0.01018	–	0.02177	–	0.04883	–	0.13806	–	0.27273	
22.4	–	–	–	0.00776	–	0.01920	–	0.04041	–	0.11390	–	0.24496	
25	–	–	–	0.00650	–	–	–	–	–	–	–	–	
J_{L1}		0.010	0.013	0.013	0.032	0.032	0.032	0.032	0.070	0.070	0.170	0.170	
20	–	–	0.00593	–	0.01833	–	0.03867	–	0.10587	–	0.23087	–	
22.4	–	–	0.00548	–	0.01642	–	0.03504	–	0.09431	–	0.21049	–	
25	–	–	0.00498	–	0.01476	0.01734	0.03261	0.04223	0.08707	0.11426	0.19141	0.25062	
28	–	–	0.00410	0.00665	0.01232	0.01563	0.02545	0.03781	0.06859	0.10064	0.15085	0.22610	
31.5	–	–	0.00378	0.00605	0.01119	0.01414	0.02395	0.03485	0.06397	0.09212	0.13899	0.20337	
35.5	–	–	0.00307	0.00542	0.00899	0.01178	0.01912	0.02716	0.05089	0.07262	0.11130	0.16055	
40	–	–	0.00285	0.00448	0.00826	0.01077	0.01812	0.02533	0.04794	0.06719	0.10372	0.14643	
45	–	–	0.00193	0.00406	0.00553	0.00864	0.01203	0.02027	0.03092	0.05347	0.06925	0.11750	
50	–	–	0.00179	0.00332	0.00510	0.00799	0.01140	0.01904	0.02915	0.04999	0.06467	0.10847	H3
56	–	–	0.00145	0.00304	0.00421	0.00533	0.00930	0.01275	0.02434	0.03246	0.05479	0.07299	
63	–	–	0.00100	0.00209	0.00297	0.00494	0.00617	0.01198	0.01847	0.03038	0.03849	0.06754	
71	–	–	0.00093	0.00191	0.00275	0.00408	0.00587	0.00974	0.01752	0.02531	0.03612	0.05711	
80	–	–	–	0.00154	–	0.00287	–	0.00652	–	0.01930	–	0.04042	
90	–	–	–	0.00107	–	0.00267	–	0.00615	–	0.01818	–	0.03760	
100	–	–	–	0.00099	–	–	–	–	–	–	–	–	
J_{L1}	–	–	0.005	0.005	0.010	0.010	0.017	0.017	0.032	0.032	0.070	0.070	
80	–	–	–	–	0.00400	–	0.00615	–	0.01707	–	0.04129	–	
90	–	–	–	–	0.00370	–	0.00562	–	0.01550	–	0.03735	–	
100	–	–	–	–	0.00299	0.00394	0.00505	0.00637	0.01413	0.01754	0.03472	0.04245	
112	–	–	–	–	0.00279	0.00365	0.00414	0.00579	0.01176	0.01588	0.02698	0.03826	
125	–	–	–	–	0.00223	0.00295	0.00377	0.00518	0.01083	0.01443	0.02536	0.03545	
140	–	–	–	–	0.00210	0.00276	0.00306	0.00425	0.00858	0.01202	0.02051	0.02754	
160	–	–	–	–	0.00140	0.00221	0.00281	0.00386	0.00798	0.01103	0.01942	0.02581	
180	–	–	–	–	0.00132	0.00208	0.00192	0.00313	0.00524	0.00874	0.01252	0.02088	
200	–	–	–	–	0.00108	0.00138	0.00176	0.00287	0.00488	0.00811	0.01184	0.01972	H4
224	–	–	–	–	0.00083	0.00130	0.00144	0.00196	0.00410	0.00533	0.00963	0.01275	
250	–	–	–	–	0.00079	0.00107	0.00111	0.00180	0.00282	0.00496	0.00648	0.01203	
280	–	–	–	–	0.00075	0.00082	0.00103	0.00147	0.00265	0.00416	0.00615	0.00977	
315	–	–	–	–	–	0.00078	0.00098	0.00113	0.00250	0.00287	0.00585	0.00659	
355	–	–	–	–	–	0.00075	–	0.00105	–	0.00268	–	0.00624	
400	–	–	–	–	–	–	–	0.00099	–	0.00253	–	0.00593	
J_{L1}	–	–	–	–	–	–	–	–	–	–	–	–	

Types B2, B3, B4
Moments of inertia J_1

Technical specifications

Moments of inertia J_1 (kgm^2) without fan

The moments of inertia J_1 in kgm^2 are referred to the input shaft of the gear units and apply to gear units without a fan. J_{L1} must be added to J_1 for gear units with a fan.

The moment of inertia J_2 in kgm^2 referred to the output shaft of the gear unit is calculated according to the following formula: $J_2 = i_N^2 \times J_1$

Moments of inertia J_1 in kgm^2 referred to the input shaft

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
5	0.01022	0.03029	0.06480	–	0.16531	–	0.38092	–	–	–	–	–	B2
5.6	0.00965	0.02894	0.06229	–	0.15761	–	0.36023	–	–	–	–	–	
6	–	–	–	–	–	0.18416	–	0.41712	–	–	–	–	
6.3	0.00632	0.01723	0.04143	0.07291	0.10565	–	0.24918	–	–	–	–	–	
6.7	–	–	–	–	–	0.17345	–	0.39012	–	–	–	–	
7.1	0.00597	0.01639	0.03991	0.06922	0.10100	–	0.23667	–	–	–	–	–	
7.5	–	–	–	–	–	0.11705	–	0.27106	–	–	–	–	
8	0.00501	0.01218	0.02707	0.04633	0.07279	–	0.18087	–	–	–	–	–	
8.5	–	–	–	–	–	0.11057	–	0.25474	–	–	–	–	
9	0.00478	0.01164	0.02611	0.04410	0.07000	–	0.17285	–	–	–	–	–	
9.5	–	–	–	–	–	0.07961	–	0.19489	–	–	–	–	
10	0.00348	0.00938	0.02167	0.03017	0.05466	–	0.13448	–	–	–	–	–	
10.6	–	–	–	–	–	0.07574	–	0.18443	–	–	–	–	
11.2	0.00333	0.00903	0.02104	0.02876	0.05272	–	0.12926	–	–	–	–	–	
11.8	–	–	–	–	–	0.05942	–	0.14362	–	–	–	–	
12.5	0.00232	0.00622	0.01496	0.02372	0.04019	–	0.07643	–	–	–	–	–	
13.2	–	–	–	–	–	0.05671	–	0.13680	–	–	–	–	
14	0.00224	0.00603	0.01461	0.02278	0.03910	–	0.07324	–	–	–	–	–	
15	–	–	–	–	–	0.04309	–	0.08200	–	–	–	–	
16	0.00169	0.00424	0.00974	0.01621	0.02663	–	0.06338	–	–	–	–	–	
17	–	–	–	–	–	0.04154	–	0.07785	–	–	–	–	
18	–	–	–	0.01568	–	–	–	–	–	–	–	–	
19	–	–	–	–	–	0.02863	–	0.06716	–	–	–	–	
20	–	–	–	0.01062	–	–	–	–	–	–	–	–	
J_{L1}	0.010	0.017	0.060	0.060	0.070	0.070	0.170	0.170	–	–	–	–	

Technical specifications (continued)

Moments of inertia J_1 (kgm^2) without fan

The moments of inertia J_1 in kgm^2 are referred to the input shaft of the gear units and apply to gear units without a fan. J_{L1} must be added to J_1 for gear units with a fan.

The moment of inertia J_2 in kgm^2 referred to the output shaft of the gear unit is calculated according to the following formula:
$J_2 = i_N^2 \times J_1$

Moments of inertia J_1 in kgm^2 referred to the input shaft (continued)

	Gear unit sizes												
i_N	503	504	505	506	507	508	509	510	511	512	513	514	Type
14	–	–	0.01329	–	0.04499	–	0.08544	–	0.22304	–	0.50306	–	
16	–	0.00566	0.01214	–	0.04005	–	0.07831	–	0.20426	–	0.45976	–	
18	–	0.00512	0.01137	–	0.03687	0.04278	0.07235	0.09296	0.18547	0.24045	0.42637	0.54481	
20	–	0.00478	0.01053	0.01484	0.03411	0.03839	0.06838	0.08415	0.17369	0.21791	0.39508	0.49213	
22.4	–	0.00448	0.00704	0.01336	0.02131	0.03554	0.04599	0.07690	0.11784	0.19577	0.27665	0.45195	
25	–	0.00284	0.00651	0.01234	0.01960	0.03307	0.04359	0.07204	0.11072	0.18190	0.25774	0.41470	
28	–	0.00265	0.00547	0.01127	0.01479	0.02049	0.02996	0.04874	0.08009	0.12406	0.19848	0.29212	
31.5	–	0.00204	0.00513	0.00764	0.01369	0.01896	0.02844	0.04581	0.07582	0.11568	0.18636	0.26960	
35.5	–	0.00192	0.00378	0.00698	0.01109	0.01426	0.02358	0.03170	0.05975	0.08381	0.14595	0.20839	B3
40	–	0.00170	0.00356	0.00585	0.01037	0.01328	0.02257	0.02984	0.05677	0.07880	0.13805	0.19396	
45	–	0.00162	0.00250	0.00543	0.00728	0.01074	0.01616	0.02472	0.04339	0.06235	0.08343	0.15241	
50	–	0.00109	0.00238	0.00403	0.00685	0.01010	0.01555	0.02350	0.04158	0.05885	0.07861	0.14300	
56	–	0.00104	0.00180	0.00375	0.00491	0.00707	0.01051	0.01686	0.02866	0.04498	0.06779	0.08737	
63	–	0.00083	–	0.00265	–	0.00668	–	0.01611	–	0.04284	–	0.08163	
71	–	–	–	0.00249	–	0.00478	–	0.01098	–	0.02970	–	0.07028	
80	–	–	–	0.00190	–	–	–	–	–	–	–	–	
J_{L1}	–	0.005	0.010	0.010	0.017	0.017	0.032	0.032	0.070	0.070	0.170	0.170	
63	–	–	0.00193	–	0.00571	–	0.01276	–	0.03724	–	0.08055	–	
71	–	–	0.00178	–	0.00525	–	0.01186	–	0.03463	–	0.07410	–	
80	–	–	0.00163	–	0.00486	0.00560	0.01091	0.01313	0.03235	0.03802	0.06979	0.08246	
90	–	–	0.00122	0.00201	0.00313	0.00517	0.00734	0.01216	0.01992	0.03525	0.04705	0.07558	
100	–	–	0.00113	0.00184	0.00289	0.00479	0.00675	0.01113	0.01851	0.03284	0.04444	0.07098	
112	–	–	0.00098	0.00168	0.00223	0.00308	0.00566	0.00753	0.01390	0.02031	0.03063	0.04795	
125	–	–	0.00092	0.00126	0.00207	0.00285	0.00528	0.00689	0.01299	0.01881	0.02898	0.04517	
140	–	–	0.00071	0.00116	0.00182	0.00220	0.00390	0.00578	0.01051	0.01415	0.02402	0.03119	
160	–	–	0.00067	0.00100	0.00172	0.00205	0.00366	0.00537	0.00992	0.01319	0.02293	0.02943	B4
180	–	–	0.00047	0.00094	0.00117	0.00180	0.00258	0.00398	0.00691	0.01067	0.01639	0.02439	
200	–	–	0.00045	0.00073	0.00110	0.00170	0.00244	0.00371	0.00657	0.01004	0.01576	0.02323	
224	–	–	0.00028	0.00068	0.00088	0.00115	0.00185	0.00263	0.00468	0.00700	0.01069	0.01662	
250	–	–	0.00026	0.00048	0.00067	0.00109	0.00157	0.00247	0.00368	0.00664	0.00833	0.01595	
280	–	–	0.00025	0.00045	0.00063	0.00087	0.00149	0.00188	0.00348	0.00475	0.00794	0.01084	
315	–	–	–	0.00029	–	0.00066	–	0.00159	–	0.00373	–	0.00844	
355	–	–	–	0.00026	–	0.00063	–	0.00151	–	0.00352	–	0.00803	
J_{L1}	–	–	–	–	–	–	–	–	–	–	–	–	

Overview tables

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

Technical specifications

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	1.119	1.098	1.095	–	1.079	–	1.100	–	–	–	–	–	
1.25	1.225	1.263	1.225	–	1.257	–	1.270	–	–	–	–	–	
1.32	–	–	–	–	–	1.342	–	1.350	–	–	–	–	
1.4	1.405	1.389	1.378	1.452	1.394	–	1.400	–	–	–	–	–	
1.5	–	–	–	–	–	1.543	–	1.541	–	–	–	–	
1.6	1.618	1.606	1.588	1.600	1.559	–	1.625	–	–	–	–	–	
1.7	–	–	–	–	–	1.697	–	1.686	–	–	–	–	
1.8	1.781	1.774	1.781	1.784	1.806	–	1.800	–	–	–	–	–	
1.9	–	–	–	–	–	1.912	–	1.938	–	–	–	–	
2	1.967	1.966	1.967	2.029	2.000	–	2.000	–	–	–	–	–	
2.12	–	–	–	–	–	2.161	–	2.133	–	–	–	–	
2.24	2.267	2.222	2.259	2.250	2.222	–	2.231	–	–	–	–	–	
2.36	–	–	–	–	–	2.379	–	2.357	–	–	–	–	
2.5	2.500	2.483	2.520	2.467	2.480	–	2.500	–	–	–	–	–	
2.65	–	–	–	–	–	2.667	–	2.615	–	–	–	–	H1
2.8	2.769	2.778	2.826	2.815	2.783	–	2.818	–	–	–	–	–	
3	–	–	–	–	–	2.960	–	2.917	–	–	–	–	
3.15	3.125	3.208	3.208	3.120	3.143	–	3.200	–	–	–	–	–	
3.35	–	–	–	–	–	3.304	–	3.273	–	–	–	–	
3.55	3.500	3.591	3.636	3.478	3.619	–	3.600	–	–	–	–	–	
3.75	–	–	–	–	–	3.714	–	3.700	–	–	–	–	
4	4.000	4.050	4.050	3.917	4.053	–	4.111	–	–	–	–	–	
4.25	–	–	–	–	–	4.238	–	4.150	–	–	–	–	
4.5	4.500	4.550	4.500	4.409	4.450	–	4.667	–	–	–	–	–	
4.75	–	–	–	–	–	4.737	–	4.722	–	–	–	–	
5	5.056	4.895	5.056	4.900	5.056	–	5.000	–	–	–	–	–	
5.3	–	–	–	–	–	5.200	–	5.333	–	–	–	–	
5.6	5.526	5.529	5.611	5.450	5.556	–	5.706	–	–	–	–	–	
6	–	–	–	–	–	5.889	–	5.706	–	–	–	–	

Technical specifications (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	H2
12.5	–	12.63	12.53	12.37	12.66	12.43	13.13	12.87	12.95	12.30	12.60	12.54	
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	H3
50	–	–	50.11	47.95	50.92	49.83	51.19	51.09	52.08	49.77	52.32	51.70	
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	

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

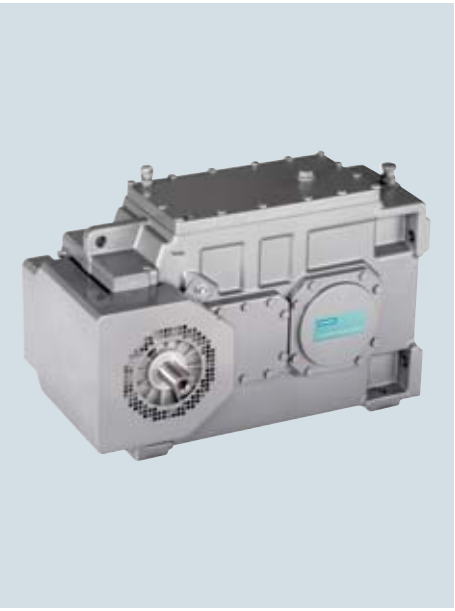
Technical specifications

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		6.82		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	

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 512
4/10 Two-stage, gear unit sizes 513 and 514

4/12 **Type H3**
Gear unit dimensions
4/12 Three-stage, gear unit sizes 505 to 508
4/14 Three-stage, gear unit sizes 509 to 512
4/16 Three-stage, gear unit sizes 513 and 514

4/18 **Type H4**
Gear unit dimensions
4/18 Four-stage, gear unit sizes 507 and 508
4/20 Four-stage, gear unit sizes 509 to 514

4/22 **Types H1, H2, H3 and H4**
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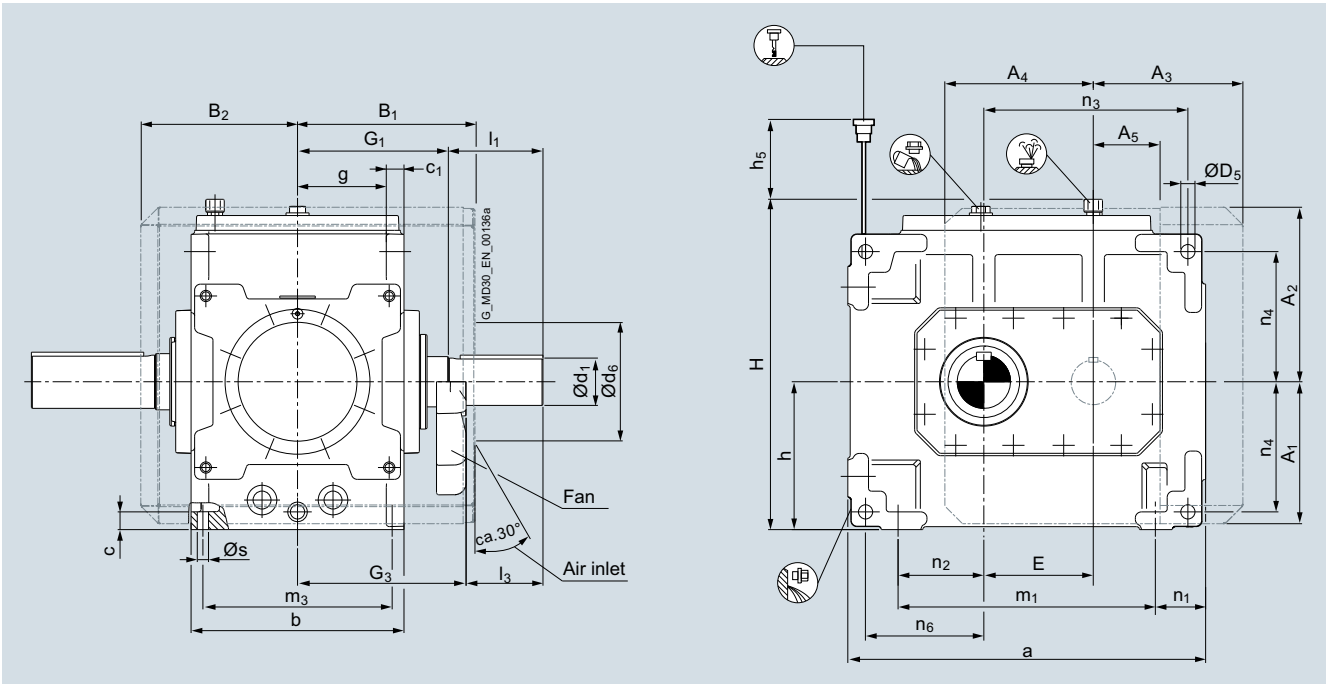
Helical gear units horizontal mounting position

Type H1

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

Selection and ordering data



Gear unit sizes		Dimensions in mm																		
		Input										**Fan** [1]								
		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	250	200	185	100	250	185	175
	i_N =	1.12 – 2.8			3.15 – 5.6															
504		70 m6	135	105	50 m6	110	80				220	250	215	275	230	220	135	275	215	175
	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	305	260	245	160	315	235	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	235	305	260	245	160	315	235	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	305	370	315	300	165	360	285	225
	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	305	370	315	300	165	360	285	225

Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	g	H	h [2]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
503	448	260	25	25	19	128	105	460	200	90	290	220	78	110	230	175	165	15
504	544	325	30	30	24	159	132.5	510	225	220	360	280	96.5	137.5	290	195	195	19
505	605	360	30	30	24	185	150	560	250	155	435	320	85	145	345	220	200	19
506	656	360	30	30	24	216	150	560	250	155	486	320	85	165	376	220	220	19
507	713	465	35	40	28	228	192.5	700	315	155	480	410	118	145	415	280	225	24
508	773	465	35	40	28	258	192.5	700	315	155	540	410	118	175	445	280	255	24

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

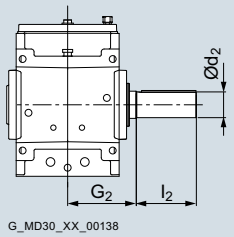
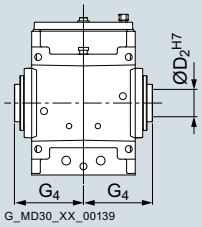
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26	
Article 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	300	**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	686	**6 A**	
	508	120 n6	250	295	48	710	**7 A**	
Type	Size	D_2		G_4	l	kg		**Hollow shaft with keyway**
H1HH [3]	**503**	–		–	–	–		
	504	80 H7		220	17	300	**3 D**	
	505	95 H7		240	23	350	**4 D**	
	506	105 H7		240	25	395	**5 D**	
	507	115 H7		295	44	686	**6 D**	
	508	125 H7		295	48	710	**7 D**	

[1] Approximate values for radial shaft seals; exact data acc. to order-related documentation.

[2] Without oil filling.

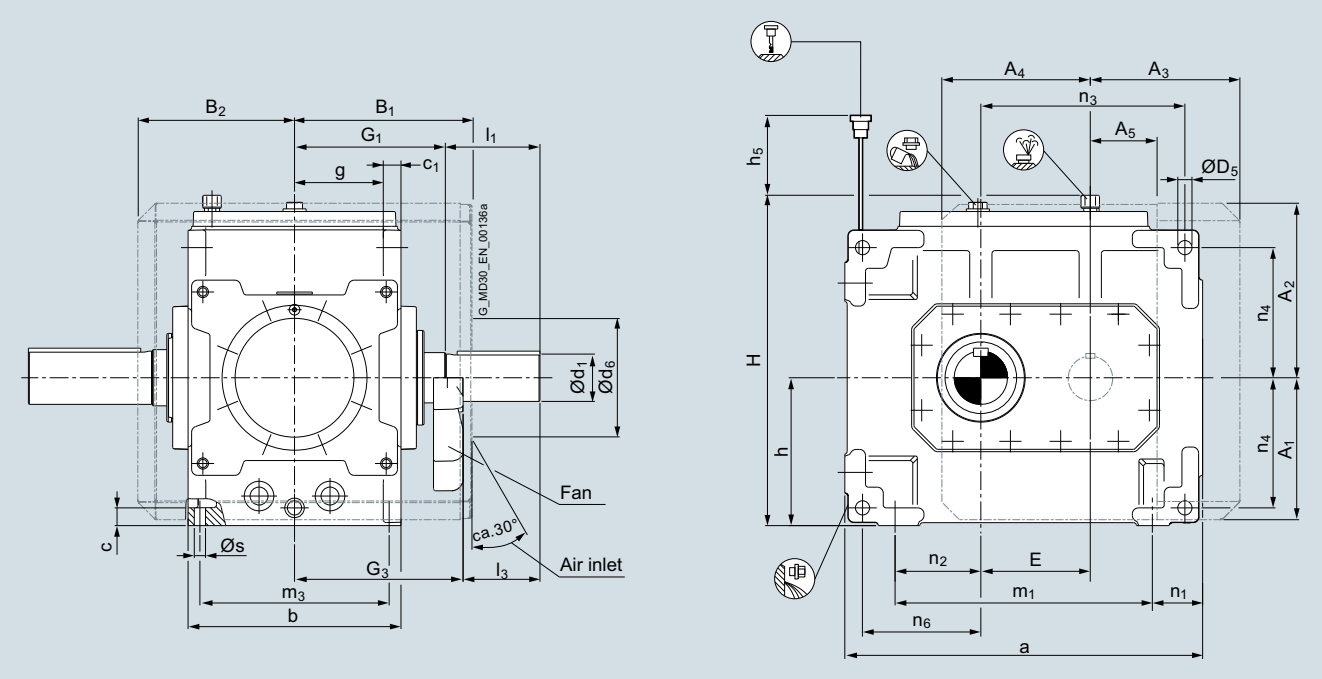
[3] Not possible in conjunction with fan.

Helical gear units horizontal mounting position

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** [1]								
	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	345	410	355	340	215	405	330	260
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	345	410	355	340	215	405	330	260

Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	g	H	h [2]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
509	860	550	40	55	35	265	220	780	355	160	575	480	145	190	480	307.5	282.5	28
510	916	550	40	55	35	296	220	780	355	160	631	480	145	215	511	307.5	307.5	28

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

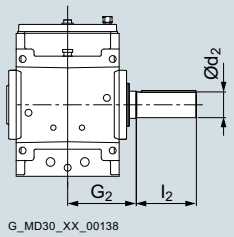
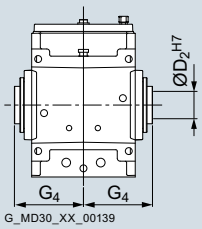
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]			7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26
Article 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	1150	**0**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H1HH [3]	**509**	135 H7		335	70	970	**8**	**D**	
	510	145 H7		335	74	1150	**0**	**E**	

[1] Approximate values for radial shaft seals; exact data acc. to order-related documentation.

[2] Without oil filling.

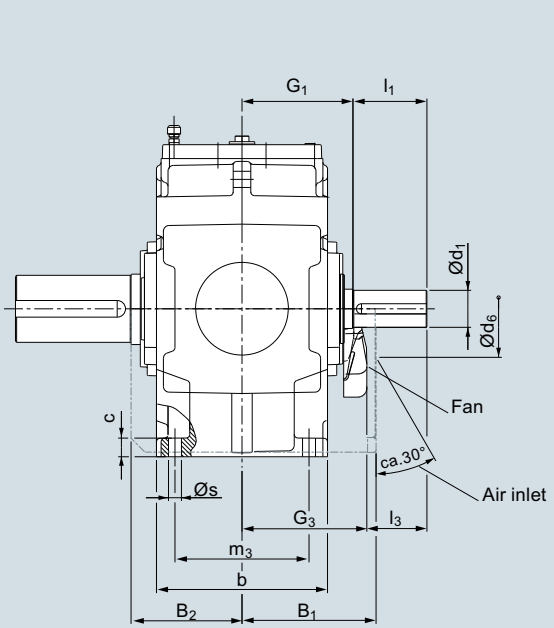
[3] Not possible in conjunction with fan.

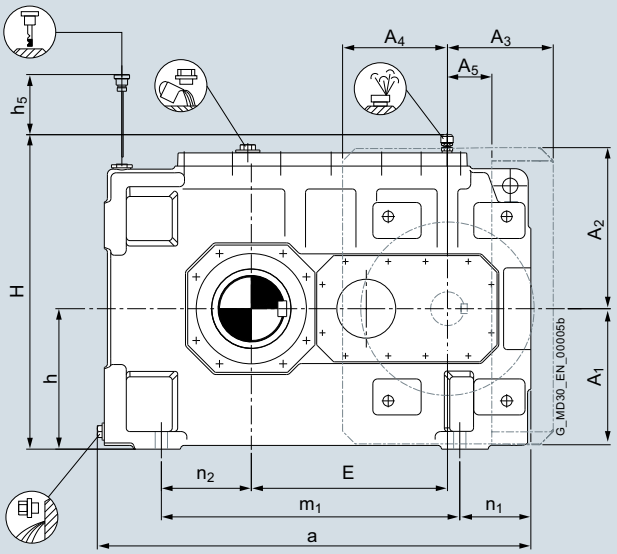
Helical gear units horizontal mounting position

Type H2

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

Selection and ordering data





Dimensions in mm

Gear unit sizes		**Drive** **Designs G, H, I** on request for all ratios								**Fan** [1]							
		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	200	245	185	145	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	230	280	195	180	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	230	280	195	180	85	255	180	160
	i_N =	6.3 – 10			11.2 – 18															
507		70 m6	135	105	50 m6	110	80				215	245	280	335	235	215	100	290	205	190
	i_N =	8 – 12.5			14 – 22.4															
508		70 m6	135	105	50 m6	110	80				215	245	280	335	235	215	100	290	205	190

Dimensions in mm

Gear unit sizes	a	b	c	E	H	h [2]	h_5	m_1	m_3	n_1	n_2	s
504	604	210	28	269.5	465	200	220	415	170	95	130	19
505	684	250	30	310	530	230	355	490	200	95	145	19
506	807	250	30	363	530	230	355	613	200	95	215	19
507	855	295	35	384	635	280	300	595	230	129	180	24
508	962	295	35	431	635	280	300	702	230	129	240	24

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

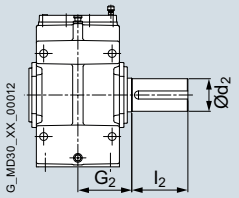
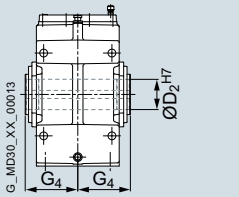
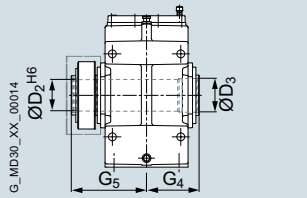
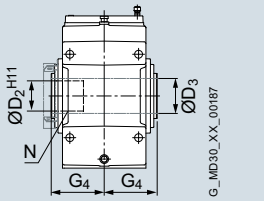
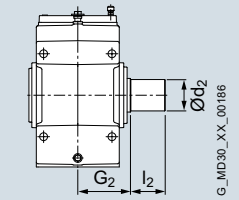
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

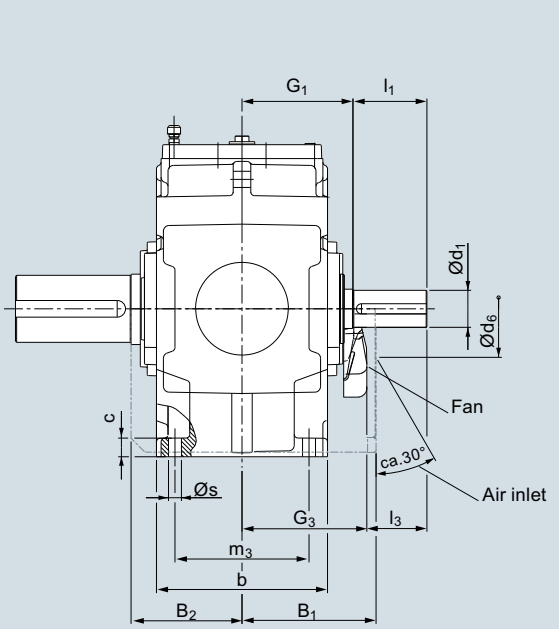
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26	
Article No.:						2LP202.-■■L..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H2SH	**504**	80 m6	170	140	12	190	**3 A**	
	505	100 m6	210	165	18	295	**4 A**	
	506	110 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	295	**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	295	**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**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H2KH	**504**	N80×3×25×9H	74	80	140	12	190	**3 N** 
	505	N95×3×30×9H	89	100	165	18	295	**4 N**
	506	N95×3×30×9H	89	110	165	19	360	**5 N**
	507	N120×3×38×9H	114	120	195	30	515	**6 N**
	508	N120×3×38×9H	114	130	195	35	620	**7 N**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H2CH	**504**	85 g6	100	140	12	190	**3 U**	
	505	110 g6	115	165	18	295	**4 U**	
	506	120 g6	115	165	19	360	**5 U**	
	507	130 g6	115	195	30	515	**6 U**	
	508	130 g6	115	195	35	620	**7 U**	

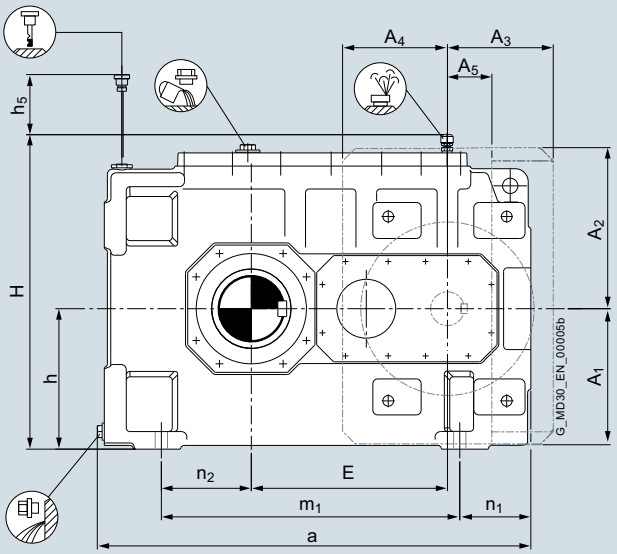
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Type H2

Gear unit dimensions
Two-stage, gear unit sizes 509 to 512

Selection and ordering data





Dimensions in mm

Gear unit sizes		**Drive** **Designs G, H, I** on request for all ratios										**Fan** [1]							
		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	320	375	265	245	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	320	375	265	245	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	380	440	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	380	440	320	295	155	360	285	240

Dimensions in mm

Gear unit sizes	a	b	c	E	H	h [2]	h_5	m_1	m_3	n_1	n_2	s
509	988	370	40	447	715	320	360	680	290	162	205	28
510	1106	370	40	500	715	320	360	798	290	162	270	28
511	1204	430	50	547	830	380	430	825	340	202	255	35
512	1332	430	50	605	830	380	430	953	340	202	325	35

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

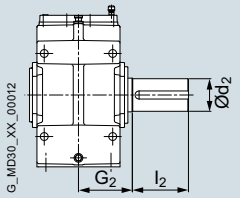
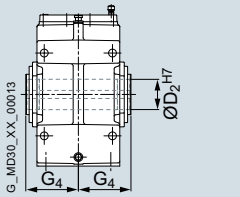
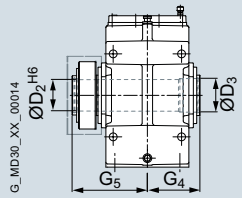
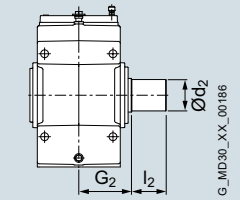
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

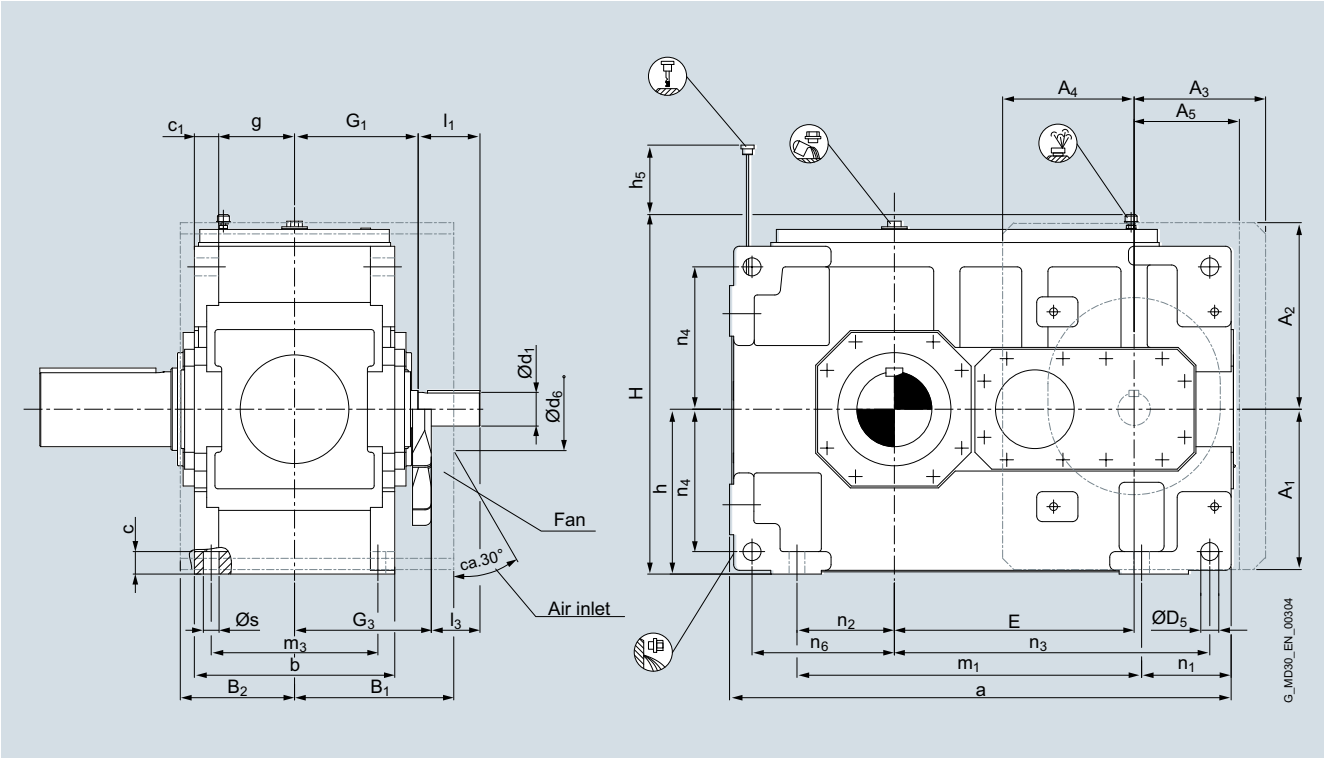
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26	
Article No.:						2LP202.-■■L..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H2SH	**509**	145 n6	250	240	52	830	**8 A**	
	510	160 n6	300	240	55	945	**0 B**	
	511	175 n6	300	270	84	1250	**1 B**	
	512	185 n6	350	270	89	1570	**2 B**	
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**	
Type	Size	D_2	D_3	G_4	l	kg		Hollow shaft for shrink disk
H2DH	**509**	140 H6	145	235	52	830	**8 G**	
	510	150 H6	155	235	55	945	**0 H**	
	511	165 H6	170	270	84	1250	**1 H**	
	512	180 H6	185	270	89	1570	**2 H**	
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H2KH	**509**	N 140×3×45×9H	134	145	235	52	830	**8 N**
	510	N 140×3×45×9H	134	155	235	55	945	**0 P**
	511	N 170×5×32×9H	160	170	270	84	1250	**1 P**
	512	N 170×5×32×9H	160	185	270	89	1570	**2 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H2CH	**509**	150 g6	140	240	52	830	**8 U**	
	510	170 g6	140	240	55	945	**0 V**	
	511	180 g6	145	270	84	1250	**1 V**	
	512	190 g6	145	270	89	1570	**2 V**	

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

Type H2

Gear unit dimensions
Two-stage, gear unit sizes 513 and 514

Selection and ordering data



Gear unit sizes		Dimensions in mm **Drive** **Designs G, H, I** on request for all ratios										**Fan** [1]							
		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												
513		110 n6	200	165	90 m6	165	130	75 m6	140	105	330	365	440	505	380	350	200	430	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	440	505	380	350	200	430	335	225

Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	g	H	h [2]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
513	1345	535	60	65	48	640	202.5	950	440	195	920	445	245	260	842	380	380	42
514	1463	535	60	65	48	718	202.5	950	440	195	1038	445	245	300	920	380	420	42

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

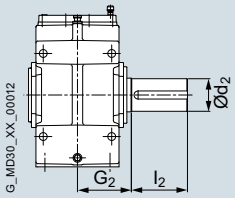
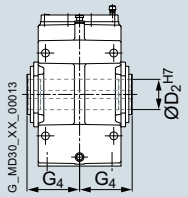
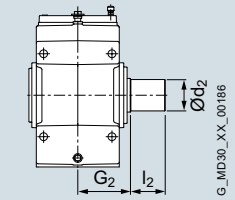
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

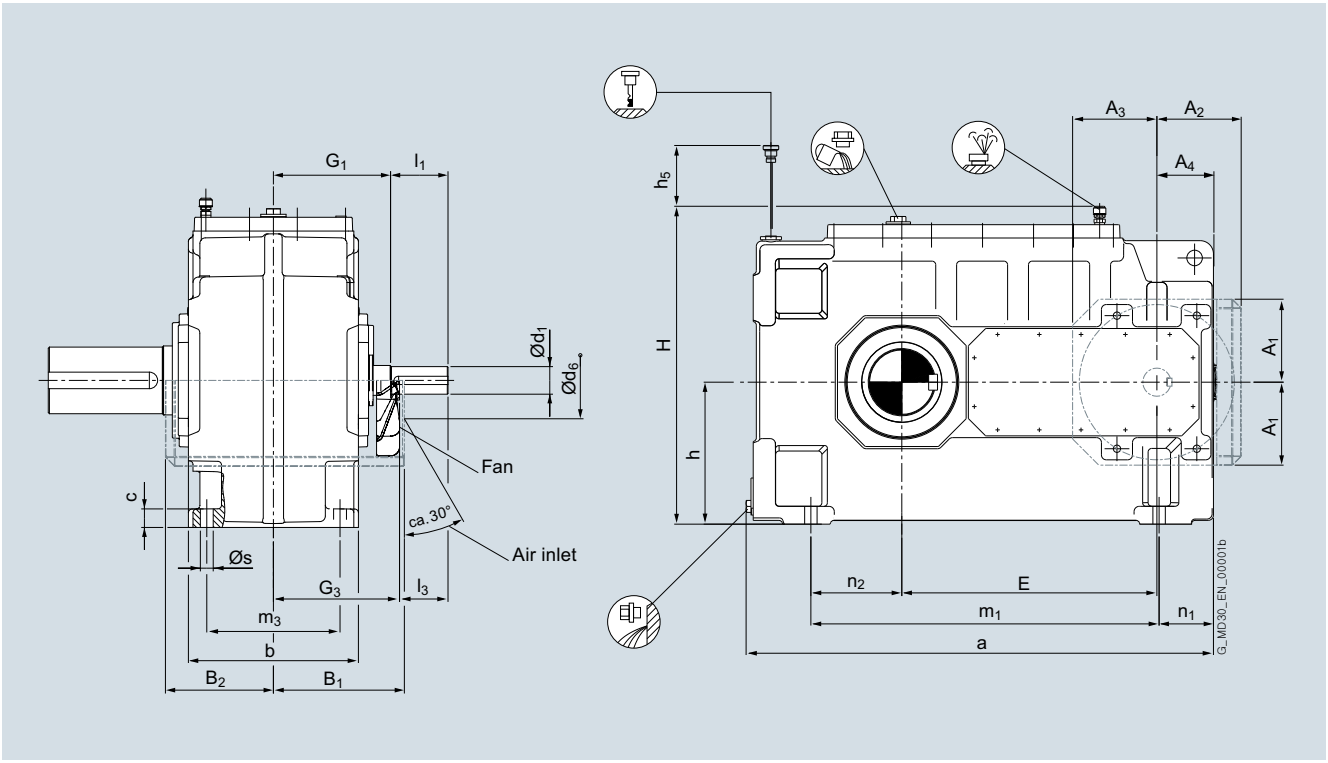
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26	
Article No.:						2LP202.-■■L..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H2SH	**513**	200 n6	350	330	150	2600	**3 B**	
	514	210 n6	350	330	155	2965	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H2HH	**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	**513**	190 H6	195	330	495	150	2600	**3 H**
	514	210 H6	215	330	495	155	2965	**4 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H2KH	**513**	N 190×5×36×9H	180	195	330	150	2600	**3 P**
	514	N 190×5×36×9H	180	215	330	155	2965	**4 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H2CH	**513**	220 g6	165	330	150	2600	**3 V**	
	514	220 g6	165	330	155	2965	**4 V**	

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

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** [1]						
		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	175	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	175	185	190	115	245	205	150

Gear unit sizes	Dimensions in mm											
	a	b	c	E	H	h [2]	h_5	m_1	m_3	n_1	n_2	s
505	727	250	30	400	530	230	350	530	200	97.5	145	19
506	850	250	30	453	530	230	350	653	200	97.5	215	19
507	912	295	35	493.5	635	280	295	680	230	101	180	24
508	1019	295	35	540.5	635	280	295	787	230	101	240	24

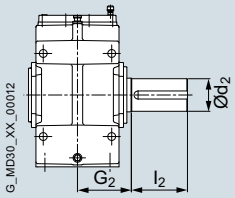
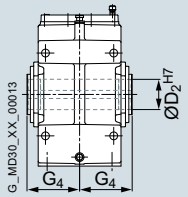
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

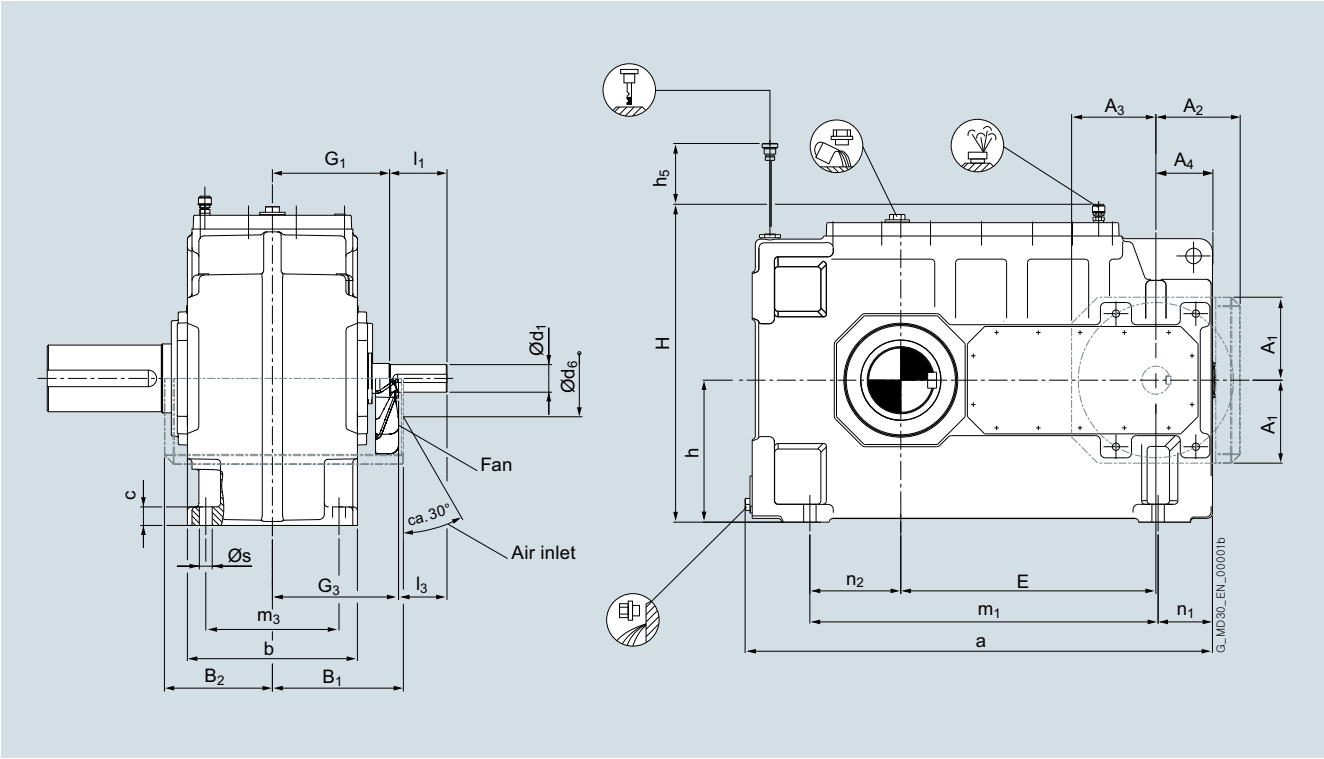
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26	
Article No.:						2LP202.-■■M..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H3SH	**505**	100 m6	210	165	20	310	**4 A**	
	506	110 n6	210	165	21	380	**5 A**	
	507	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**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H3KH	**505**	N95×3×30×9H	89	100	165	20	310	**4 N**
	506	N95×3×30×9H	89	110	165	21	380	**5 N**
	507	N120×3×38×9H	114	120	195	35	550	**6 N**
	508	N120×3×38×9H	114	130	195	37	650	**7 N**
Type	Size	d_2	l_2	G_2		l	kg	Solid shaft without keyway
H3CH	**505**	110 g6	115	165		20	310	**4 U**
	506	120 g6	115	165		21	380	**5 U**
	507	130 g6	115	195		35	550	**6 U**
	508	130 g6	115	195		37	650	**7 U**

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

Type H3

Gear unit dimensions
Three-stage, gear unit sizes 509 to 512

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**										**Fan** [1]						
		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

Gear unit sizes	Dimensions in mm											
	a	b	c	E	H	h [2]	h_5	m_1	m_3	n_1	n_2	s
509	1054	370	40	575	715	320	350	785	290	122.5	205	28
510	1172	370	40	628	715	320	350	903	290	122.5	270	28
511	1296	430	50	706	830	380	420	960	340	158.5	255	35
512	1424	430	50	764	830	380	420	1088	340	158.5	325	35

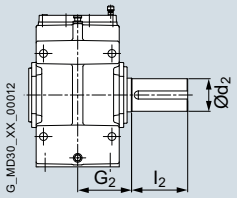
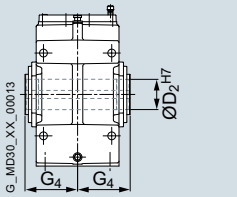
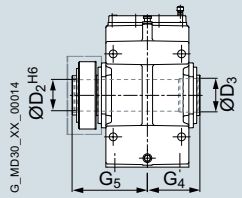
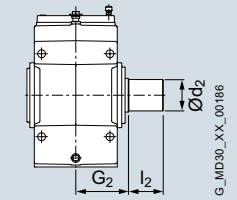
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

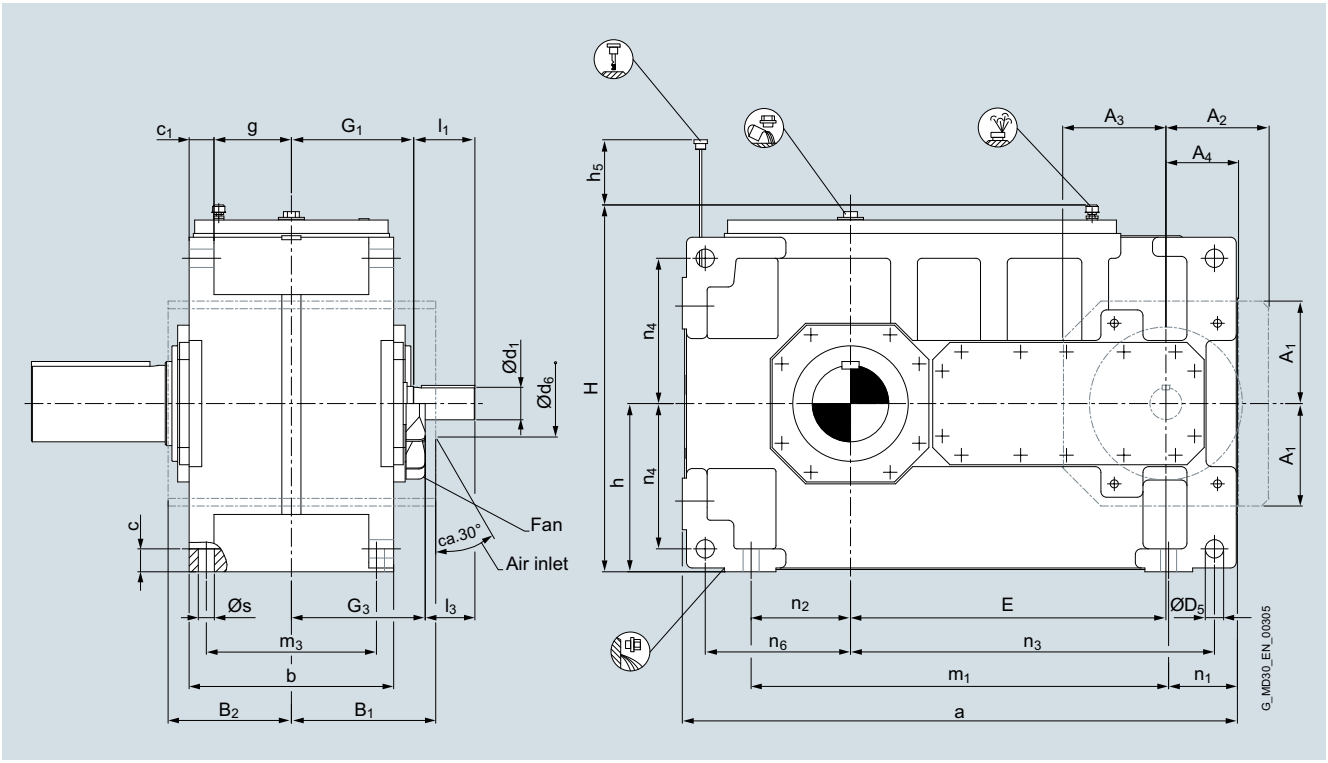
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26	
Article No.:						2LP202.-■■M..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H3SH	**509**	145 n6	250	240	56	885	**8 A**	
	510	160 n6	300	240	60	1035	**0 B**	
	511	175 n6	300	270	91	1470	**1 B**	
	512	185 n6	350	270	105	1695	**2 B**	
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**	
Type	Size	D_2	D_3	G_4	l	kg		Hollow shaft for shrink disk
H3DH	**509**	140 H6	145	235	56	885	**8 G**	
	510	150 H6	155	235	60	1035	**0 H**	
	511	165 H6	170	270	91	1470	**1 H**	
	512	180 H6	185	270	105	1695	**2 H**	
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H3KH	**509**	N 140×3×45×9H	134	145	235	56	885	**8 N**
	510	N 140×3×45×9H	134	155	235	60	1035	**0 P**
	511	N 170×5×32×9H	160	170	270	91	1470	**1 P**
	512	N 170×5×32×9H	160	185	270	105	1695	**2 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H3CH	**509**	150 g6	140	240	56	885	**8 U**	
	510	170 g6	140	240	60	1035	**0 V**	
	511	180 g6	145	270	91	1470	**1 V**	
	512	190 g6	145	270	105	1695	**2 V**	

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

Type H3

Gear unit dimensions
Three-stage, gear unit sizes 513 and 514

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**										**Fan** [1]						
		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											
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

Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	g	H	h [2]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
513	1452	535	60	65	48	825	202.5	950	440	180	1092	445	180	260	952	380	380	42
514	1570	535	60	65	48	903	202.5	950	440	180	1210	445	180	300	1030	380	420	42

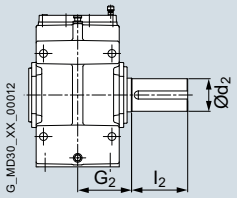
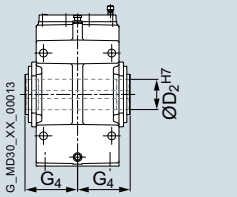
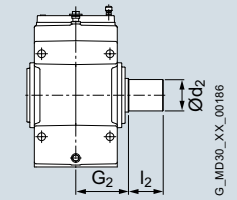
Note:
For shaft details, see pages 10/2 to 10/7.

[1] Max. dimensions including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

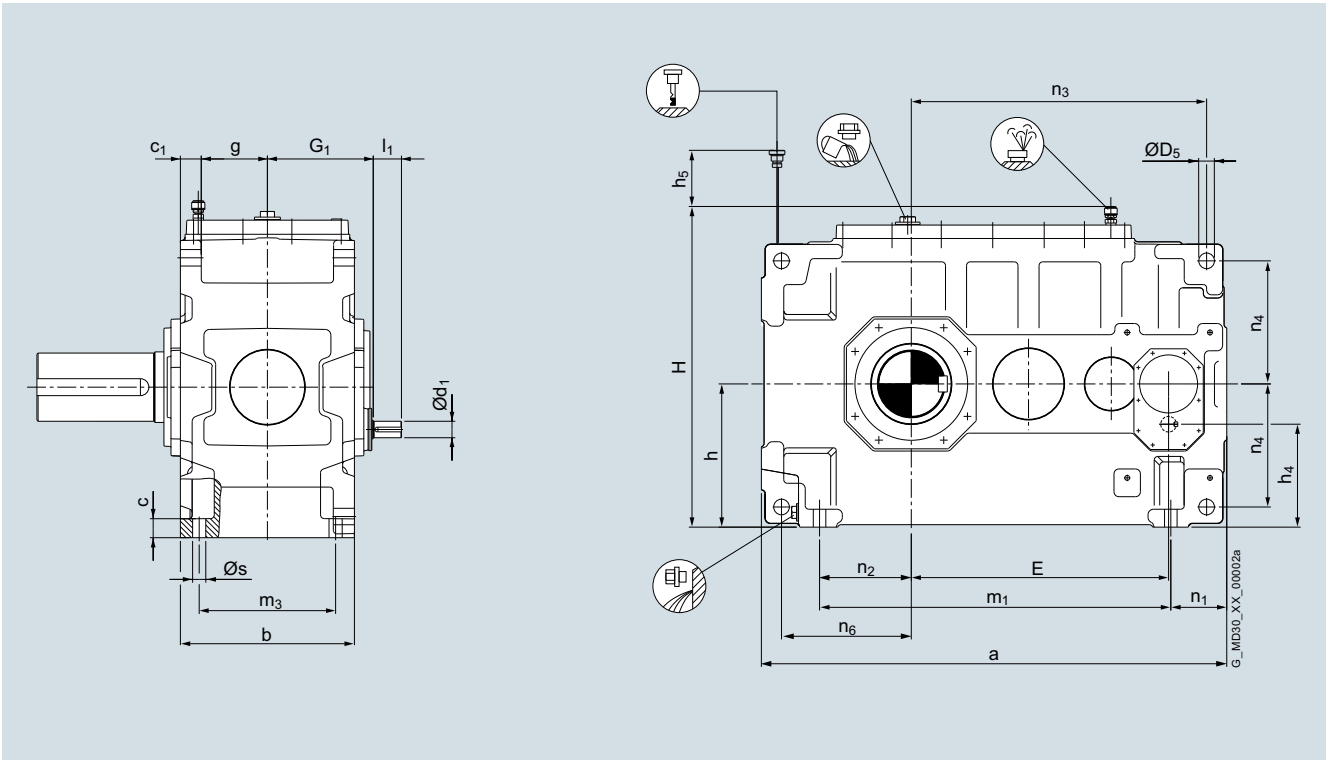
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26		
Article No.:							2LP202.-■■M..-....		
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft
H3SH	**513**	200 n6	350	330	150	2420	**3**	**B**	
	514	210 n6	350	330	155	2720	**4**	**B**	
Type	Size	D_2		G_4	l	kg			Hollow shaft with keyway
H3HH	**513**	190 H7		330	150	2420	**3**	**E**	
	514	210 H7		330	155	2720	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		Hollow shaft for shrink disk
H3DH	**513**	190 H6	195	330	495	150	2420	**3**	**H**
	514	210 H6	215	330	495	155	2720	**4**	**H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		Hollow shaft with spline in accordance with DIN 5480
H3KH	**513**	N 190×5×36×9H	180	195	330	150	2420	**3**	**P**
	514	N 190×5×36×9H	180	215	330	155	2720	**4**	**P**
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft without keyway
H3CH	**513**	220 g6	165	330	150	2420	**3**	**V**	
	514	220 g6	165	330	155	2720	**4**	**V**	

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

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		

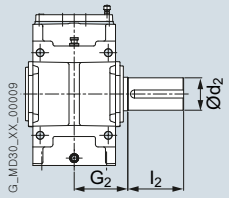
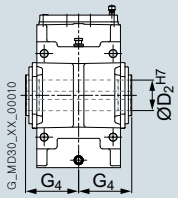
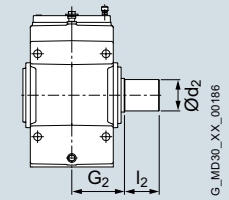
Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	g	H	h [1]	h_4	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
507	899	295	35	35	28	493.5	112.5	635	280	198	115	680	230	104	180	567.5	242.5	257.5	24
508	1006	295	35	35	28	540.5	112.5	635	280	198	115	787	230	104	240	614.5	242.5	317.5	24

[1] Permissible tolerance: -1 mm.

Note:
For shaft details, see pages 10/2 to 10/7.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26		
Article 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	36	640	**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	36	640	**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	36	640	**7**	**G**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		Hollow shaft with spline in accordance with DIN 5480
H4KH	**507**	N120×3×38×9H	114	120	195	30	520	**6**	**N**
	508	N120×3×38×9H	114	130	195	36	640	**7**	**N**
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft without keyway
H4CH	**507**	130 g6	115	195	30	520	**6**	**U**	
	508	130 g6	115	195	36	640	**7**	**U**	

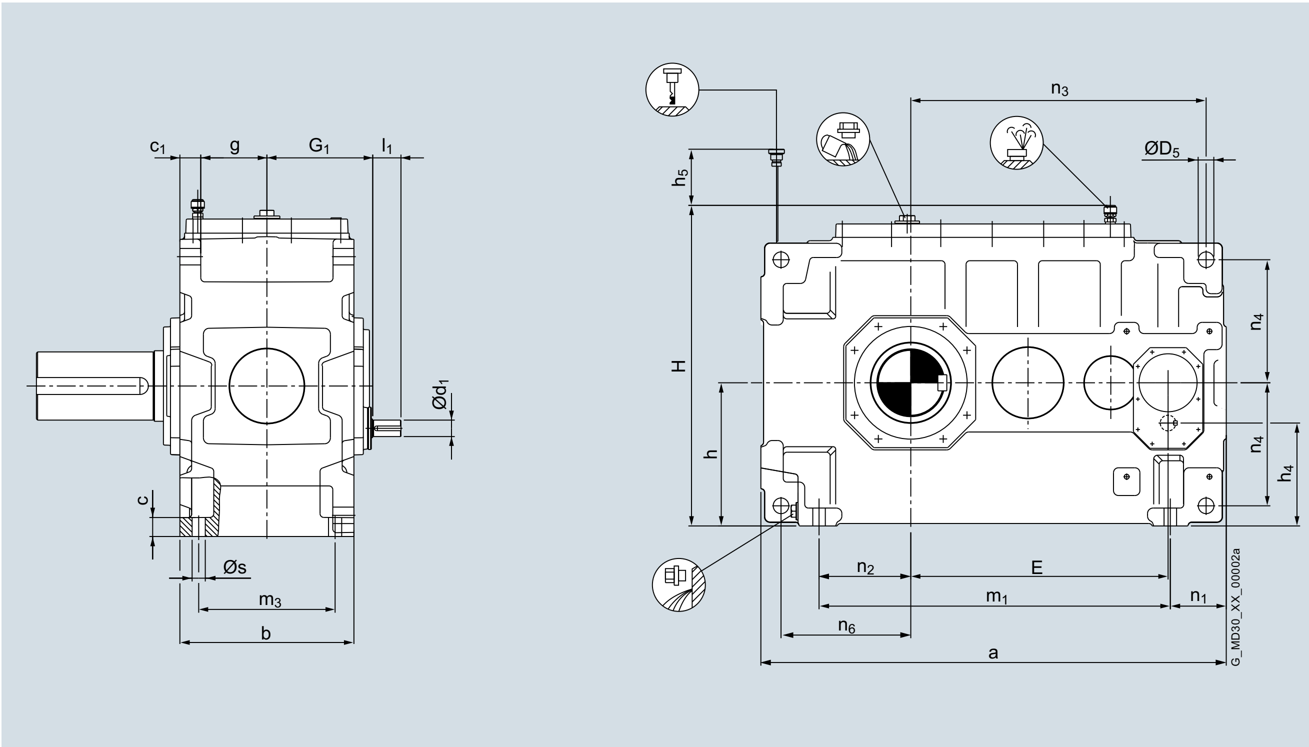
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

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	

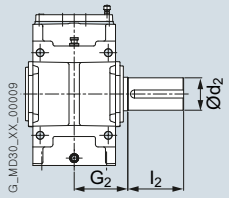
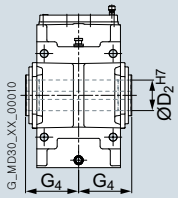
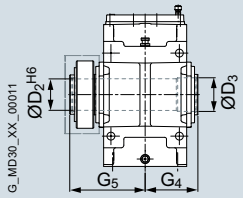
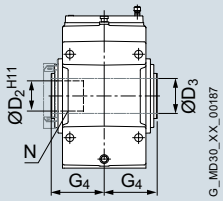
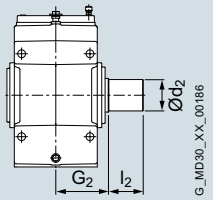
Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	g	H	h [1)]	h_4	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
509	1040	370	40	45	35	575	140	715	320	230	135	785	290	125	205	458	275	290	28
510	1158	370	40	45	35	628	140	715	320	230	135	903	290	125	270	713	275	355	28
511	1281	430	50	60	40	706	155	830	380	270.5	145	960	340	161	255	812.5	330	362.5	35
512	1409	430	50	60	40	764	155	830	380	270.5	145	1088	340	161	325	870.5	330	432.5	35
513	1455	535	60	65	48	825	202.5	950	440	312	165	1092	445	183	260	952	380	380	42
514	1573	535	60	65	48	903	202.5	950	440	312	165	1210	445	183	300	1030	380	420	42

Note:
For shaft details, see pages 10/2 to 10/7.

1) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 4/22 to 4/26	
Article No.:							2LP202.-■■N..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H4SH	**509**	145 n6	250	240	58	790	**8 A**	
	510	160 n6	300	240	60	985	**0 B**	
	511	175 n6	300	270	90	1450	**1 B**	
	512	185 n6	350	270	100	1600	**2 B**	
	513	200 n6	350	330	145	2375	**3 B**	
	514	210 n6	350	330	150	2690	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H4HH	**509**	135 H7		235	58	790	**8 D**	
	510	150 H7		235	60	985	**0 E**	
	511	165 H7		270	90	1450	**1 E**	
	512	180 H7		270	100	1600	**2 E**	
	513	190 H7		330	145	2375	**3 E**	
	514	210 H7		330	150	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	790	**8 G**	
	510	150 H6	155	235	370	60	985	**0 H**	
	511	165 H6	170	270	420	90	1450	**1 H**	
	512	180 H6	185	270	425	100	1600	**2 H**	
	513	190 H6	195	330	495	145	2375	**3 H**	
	514	210 H6	215	330	495	150	2690	**4 H**	
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H4KH	**509**	N 140×3×45×9H	134	145	235	58	790	**8 N**	
	510	N 140×3×45×9H	134	155	235	60	985	**0 P**	
	511	N 170×5×32×9H	160	170	270	90	1450	**1 P**	
	512	N 170×5×32×9H	160	185	270	100	1600	**2 P**	
	513	N 190×5×36×9H	180	195	330	145	2375	**3 P**	
	514	N 190×5×36×9H	180	215	330	150	2690	**4 P**	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H4CH	**509**	150 g6	140	240	58	790	**8 U**	
	510	170 g6	140	240	60	985	**0 V**	
	511	180 g6	145	270	90	1450	**1 V**	
	512	190 g6	145	270	100	1600	**2 V**	
	513	220 g6	165	330	145	2375	**3 V**	
	514	220 g6	165	330	150	2690	**4 V**	

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

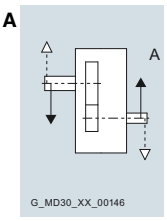
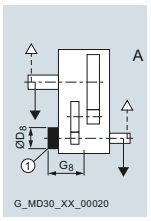
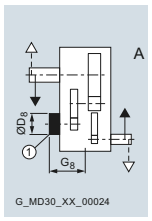
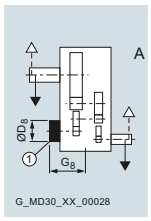
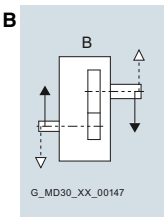
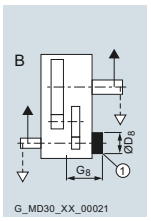
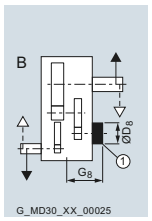
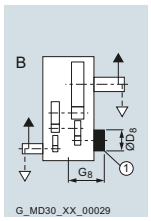
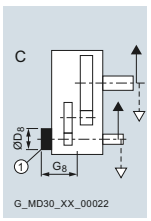
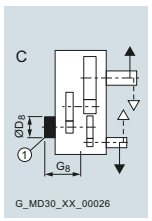
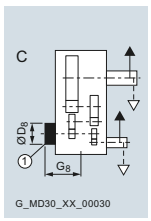
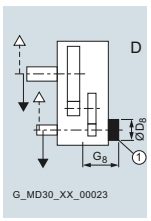
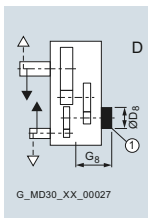
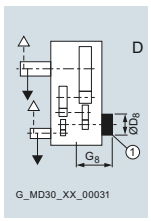
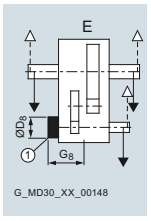
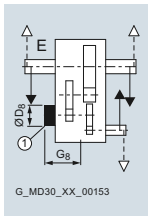
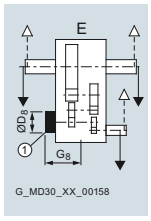
Article No. overview

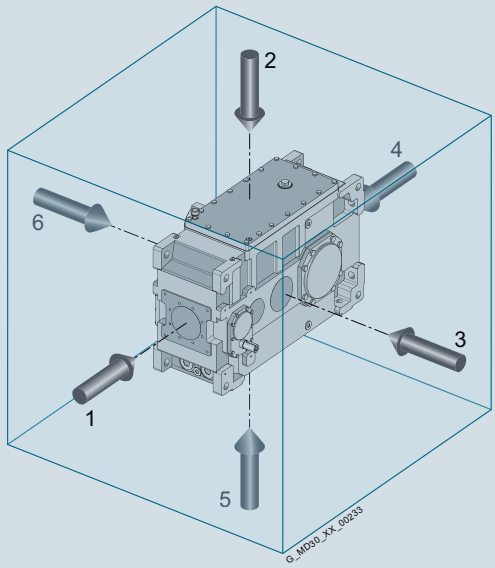
Selection and ordering data

7th position of the Article No.

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	**"-Z" and order code**
	Article No.	**2LP202**	■	-	.	.	.	.	.	-	.	.	.	.	**-Z** . . .

Design variant (view directed at face 2, face 1 at bottom)

	Type H1..	H2..	H3..	H4..	
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**



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

- Face 3 = right
- Face 6 = left

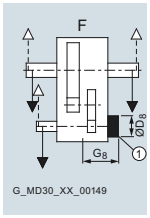
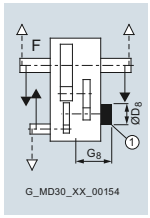
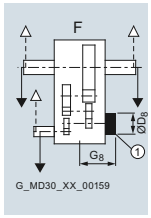
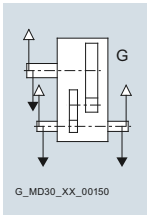
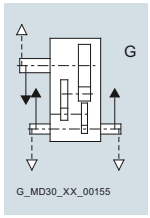
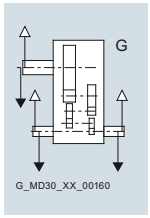
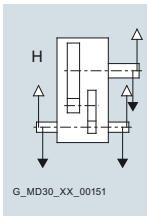
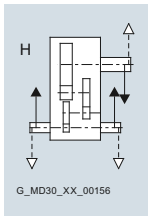
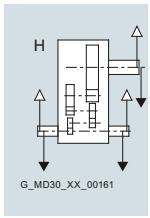
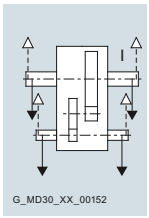
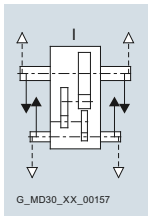
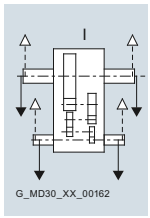
① Backstop

Selection and ordering data (continued)

7th position of the Article No. *(continued)*

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Article No.	**2LP202**	■	-	.	.	.	.	.	-	.	.	.	.	-Z . . .

Design variant (view directed at face 2, face 1 at bottom)

	Type H1..	H2.. [1]	H3..	H4..	
F --				**5**
G --				**6**
H --				**7**
I --				**8**

① Backstop

[1] Designs G, H, I on request.

Article No. overview

Selection and ordering data (continued)

8th to 10th position of the Article No.

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**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**								

Selection and ordering data (continued)

8th to 10th position of the Article No. *(continued)*

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**2LP202**	.	-	■	■	■	.	.	-	.	.	.	.	-Z	.	.	.
Output shaft, gear unit size																			
Output shaft	**Gear unit size**																		
Hollow shaft with spline in accordance with DIN 5480 (K)																			
	504				**3**	**N**													
	505				**4**	**N**													
	506				**5**	**N**													
	507				**6**	**N**													
	508				**7**	**N**													
	509				**8**	**N**													
	510				**0**	**P**													
	511				**1**	**P**													
	512				**2**	**P**													
	513				**3**	**P**													
	514				**4**	**P**													
Solid shaft without keyway (C)																			
	504				**3**	**U**													
	505				**4**	**U**													
	506				**5**	**U**													
	507				**6**	**U**													
	508				**7**	**U**													
	509				**8**	**U**													
	510				**0**	**V**													
	511				**1**	**V**													
	512				**2**	**V**													
	513				**3**	**V**													
	514				**4**	**V**													
Gear unit type, number of stages, mounting position																			
H1.H							**K**												
H2.H							**L**												
H3.H							**M**												
H4.H							**N**												

Article No. overview

Selection and ordering data (continued)

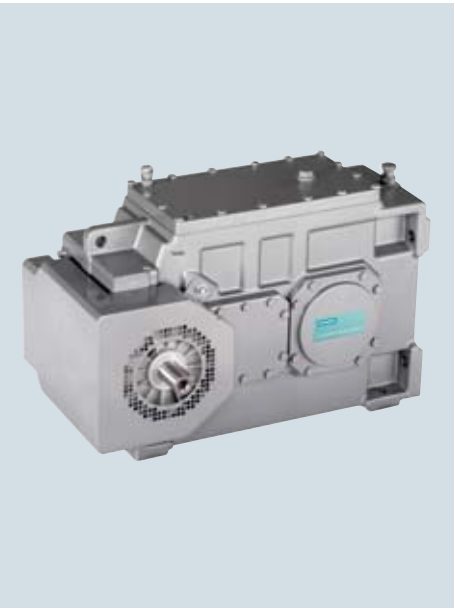
Article No. supplement, 11th to 16th position

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code		
	Article No.	**2LP202**	**.**	**-**	**.**	**.**	■	■	**-**	■	■	■	■	**-Z**	■	■	■
Seal for shaft 1 [1]																	
Shaft d_1 at one end with 1 × shaft seal							**0**										
Shaft d_1 at both ends with 1 × shaft seal at both ends							**1**										
Shaft d_1 with labyrinth seal							**2**										
Shaft d_1 at one end with taconite E							**4**										
Shaft d_1 at both ends with taconite E at both ends							**5**										
Seal for shaft 2 [1]																	
Shaft d_2 at one end with 1 × shaft seal								**0**									
Shaft d_2 at both ends with 1 × shaft seal at both ends								**1**									
Shaft d_2 with labyrinth seal								**2**									
Shaft d_2 at one end with taconite F								**4**									
Shaft d_2 at both ends with taconite F at both ends								**5**									
Shaft d_2 with taconite F-F								**6**									
Shaft d_2 with taconite F-H								**7**									
Shaft d_2 with taconite F-K								**8**									
Shaft variants																	
Standard shaft d_1 and standard shaft d_2									**0**								
Gear ratio																	
	Type/gear unit size H1.H 503, 504, 505, 507, 509	H1.H 506	H1.H 508, 510	H2.H 504 ... 514	H3.H 504 ... 514	H4.H 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 by cooling coil, connections to gear unit face 4 (end face d_2)												**2**					
Auxiliary cooling by fan and cooling coil, connections to gear unit face 4 (end face d_2)												**3**					
Auxiliary cooling by cooling coil, connections to gear unit face 1 (end face d_1)												**4**					
Auxiliary cooling by fan and cooling coil, connections to gear unit face 1 (end face d_1)												**5**					

[1] Additional details see page 11/2.

Helical gear units
vertical mounting position

5



5/2 **Type H1**
Gear unit dimensions
5/2 Single-stage, gear unit sizes 503 to 508
5/4 Single-stage, gear unit sizes 509 and 510

5/6 **Type H2**
Gear unit dimensions
5/6 Two-stage, gear unit sizes 513 and 514

5/8 **Type H3**
Gear unit dimensions
5/8 Three-stage, gear unit sizes 513 and 514

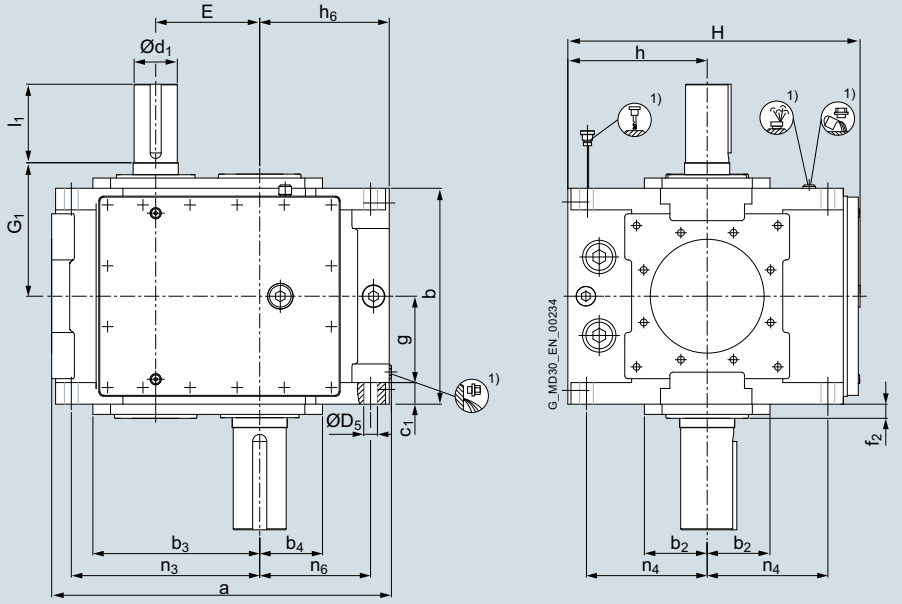
5/10 **Type H4**
Gear unit dimensions
5/10 Four-stage, gear unit sizes 507 and 508
5/12 Four-stage, gear unit sizes 509 to 514

5/14 **Types H1, H2, H3 and H4**
5/14 Dimensions of oil expansion unit
5/15 Article No. overview

Type H1

Gear unit dimensions
Single-stage, gear unit sizes 503 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 =	1.12 – 2.8	3.15 – 4	4.5 – 5.6	
503		60 m6 125	45 m6 100	32 m6 80	205
	i_N =	1.12 – 2.8	3.15 – 5.6		
504		70 m6 135	50 m6 110		220
	i_N =	1.12 – 2.8	3.15 – 4	4.5 – 5.6	
505		80 m6 160	60 m6 140	50 m6 110	255
	i_N =	1.4 – 3.55	4 – 5	5.6	
506		80 m6 160	60 m6 140	50 m6 110	255
	i_N =	1.12 – 2.8	3.15 – 4	4.5 – 5.6	
507		100 m6 180	80 m6 165	70 m6 140	290
	i_N =	1.32 – 3.35	3.75 – 4.75	5.3 – 6	
508		100 m6 180	80 m6 165	70 m6 140	290

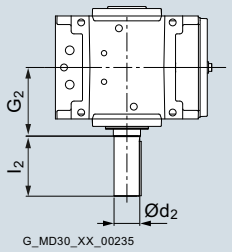
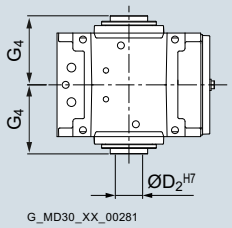
Gear unit sizes	Dimensions in mm															
	a	b	b_2 2)	b_3 2)	b_4 2)	c_1	D_5	E	f_2 2)	g	H	h 3)	h_6 3)	n_3	n_4	n_6
503	455	260	93	202	74	25	19	128	55	105	440	200	190	230	175	165
504	555	325	105	256	97	30	24	159	58	132.5	490	225	225	290	195	195
505	620	360	121	298	113	30	24	185	60	150	540	250	230	345	220	200
506	670	360	126	340	124	30	24	216	60	150	540	250	250	376	220	220
507	730	465	149	367	139	40	28	228	63	192.5	670	315	260	415	280	225
508	790	465	154	397	139	40	28	258	63	192.5	670	315	290	445	280	255

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 5/14.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 5/15 to 5/19	
Article No.:						2LP202.-■■W..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H1SV	**503**	65 m6	140	185	21	150	**2 A**	
	504	80 m6	170	220	34	300	**3 A**	
	505	90 m6	210	240	46	350	**4 A**	
	506	100 m6	210	240	50	395	**5 A**	
	507	105 n6	235	295	88	686	**6 A**	
	508	120 n6	250	295	96	710	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H1HV	**503**	–		–	–	–		
	504	80 H7		220	34	300	**3 D**	
	505	95 H7		240	46	350	**4 D**	
	506	105 H7		240	50	395	**5 D**	
	507	115 H7		295	88	686	**6 D**	
	508	125 H7		295	96	710	**7 D**	

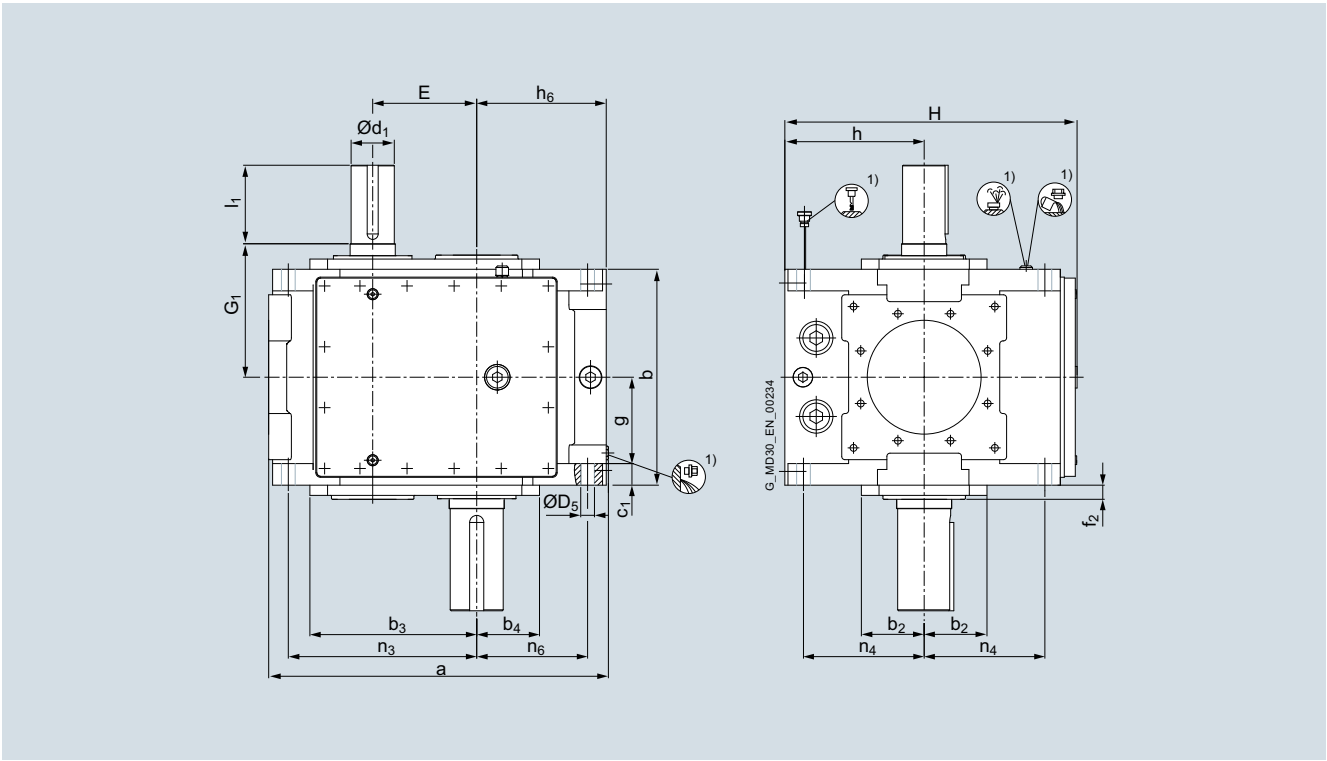
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Helical gear units vertical mounting position

Type H1

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

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 =	1.12 – 2.8	3.15 – 4	4.5 – 5.6	
509		110 n6 200	90 m6 165	75 m6 140	340
	i_N =	1.32 – 3.35	3.75 – 4.75	5.3 – 6	
510		110 n6 200	90 m6 165	75 m6 140	340

Gear unit sizes	Dimensions in mm															
	a	b	b_2 2)	b_3 2)	b_4 2)	c_1	D_5	E	g	f_2 2)	H	h 3)	h_6 3)	n_3	n_4	n_6
509	875	550	160	425	160	55	35	265	220	60	755	355	330	480	307.5	282.5
510	935	550	170	466	170	55	35	296	220	60	755	355	355	511	307.5	307.5

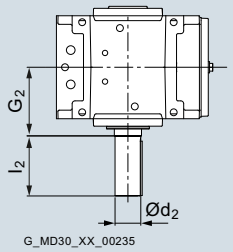
Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 5/14.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

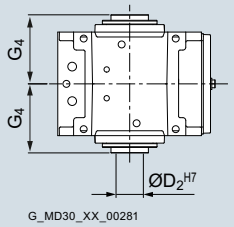
Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 5/15 to 5/19	
Article No.:						2LP202.-■■W..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H1SV	**509**	135 n6	260	335	140	970	**8**	**A**
	510	150 n6	280	335	148	1150	**0**	**B**
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H1HV	**509**	135 H7		335	140	970	**8**	**D**
	510	145 H7		335	148	1150	**0**	**E**



G_MD30_XX_00235



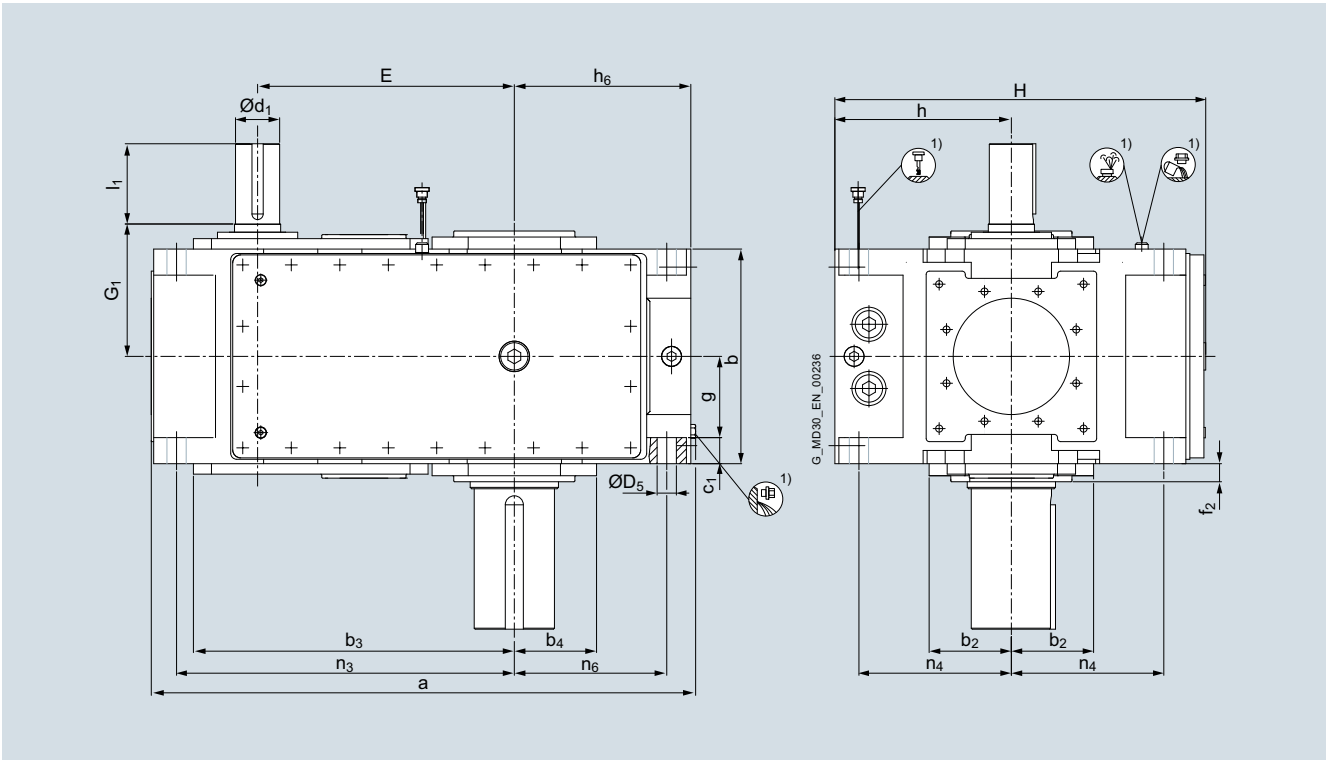
G_MD30_XX_00281

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

Type H2

Gear unit dimensions
Two-stage, gear unit sizes 513 and 514

Selection and ordering data



Gear unit sizes		Dimensions in mm **Drive** **Designs G, H, I** on request for all ratios			
		d_1 l_1	d_1 l_1	d_1 l_1	G_1
	i_N =	6.3 – 10	11.2 – 14	16 – 18	
513		110 n6 200	90 m6 165	75 m6 140	330
	i_N =	8 – 12.5	14 – 18	20 – 22.4	
514		110 n6 200	90 m6 165	75 m6 140	330

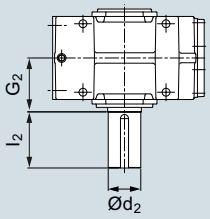
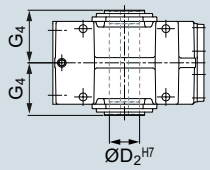
Gear unit sizes	Dimensions in mm															
	a	b	b_2 2)	b_3 2)	b_4 2)	c_1	D_5	E	g	f_2 2)	H	h 3)	h_6 3)	n_3	n_4	n_6
513	1360	535	205	800	205	65	48	640	202.5	63	935	440	440	842	380	380
514	1475	535	220	878	220	65	48	718	202.5	63	935	440	480	920	380	420

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 5/14.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

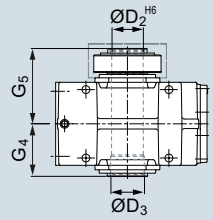
Selection and ordering data (continued)

Output

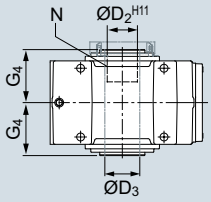
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 5/15 to 5/19	
Article No.:							2LP202.-■■S..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H2SV	**513**	200 n6	350	330	300	2600	**3 B**	
	514	210 n6	350	330	310	2965	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H2HV	**513**	190 H7		330	300	2600	**3 E**	
	514	210 H7		330	310	2965	**4 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H2DV [3]	**513**	190 H6	195	330	495	300	2600	**3 H**
	514	210 H6	215	330	495	310	2965	**4 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H2KV	**513**	N 190×5×36×9H	180	195	330	300	2600	**3 P**
	514	N 190×5×36×9H	180	215	330	310	2965	**4 P**
Type	Size	d_2	l_2	G_2		l	kg	Solid shaft without keyway
H2CV [3]	**513**	220 g6	165	330		300	2600	**3 V**
	514	220 g6	165	330		310	2965	**4 V**

G_MD30_XX_00237

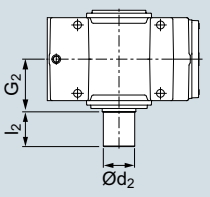
G_MD30_XX_00241



G_MD30_XX_00242



G_MD30_XX_00243



G_MD30_XX_00244

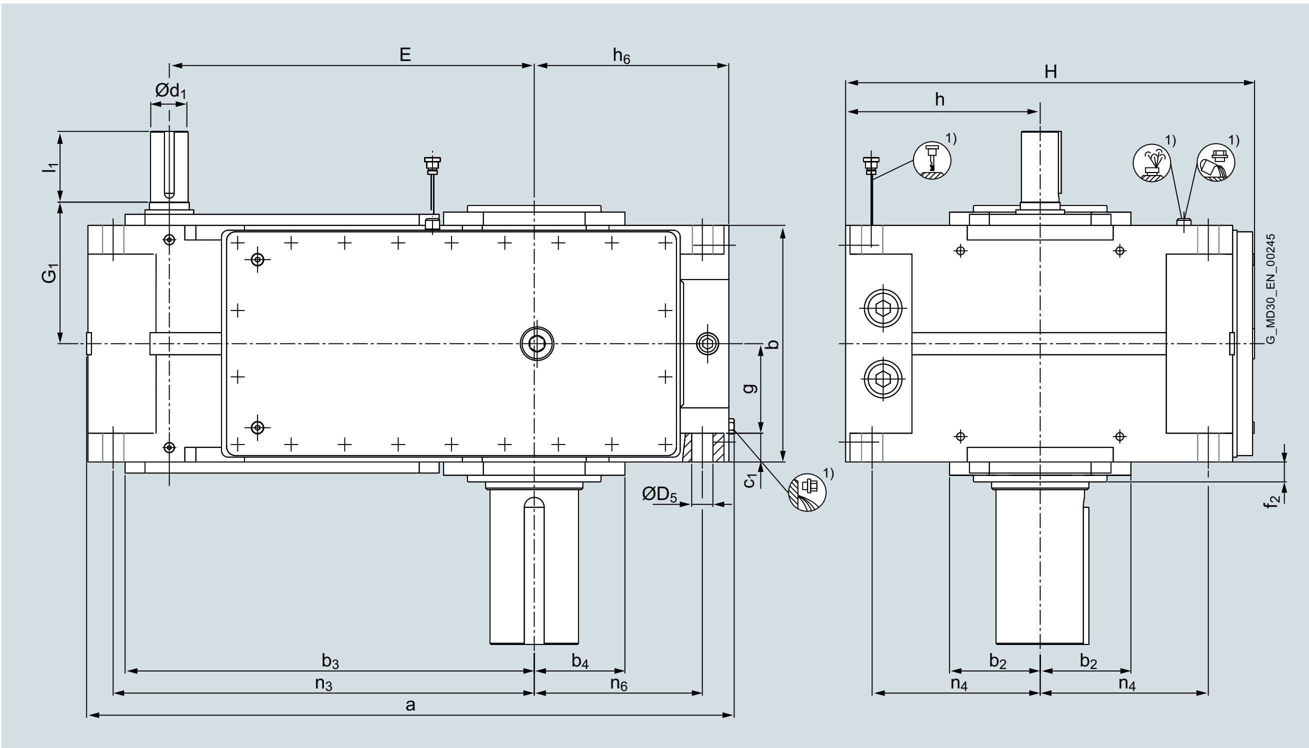
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

Helical gear units vertical mounting position

Type H3

Gear unit dimensions
Three-stage, gear unit sizes 513 and 514

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 =	20 – 40		45 – 56		63 – 71		
513	85 m6	160	65 m6	140	50 m6	110	320
i_N =	25 – 50		56 – 71		80 – 90		
514	85 m6	160	65 m6	140	50 m6	110	320

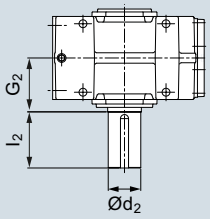
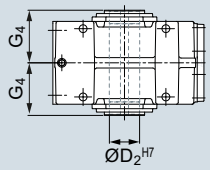
Gear unit sizes	Dimensions in mm														
	a	b	b_2 [2]	b_3 [2]	b_4 [2]	c_1	D_5	E	g	f_2 [2]	H	h [3]	h_6 [3]	n_3	n_4	n_6
513	1460	535	205	925	205	65	48	825	202.5	63	935	440	440	952	380	380
514	1580	535	220	1003	220	65	48	903	202.5	63	935	440	480	1030	380	420

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 5/14.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

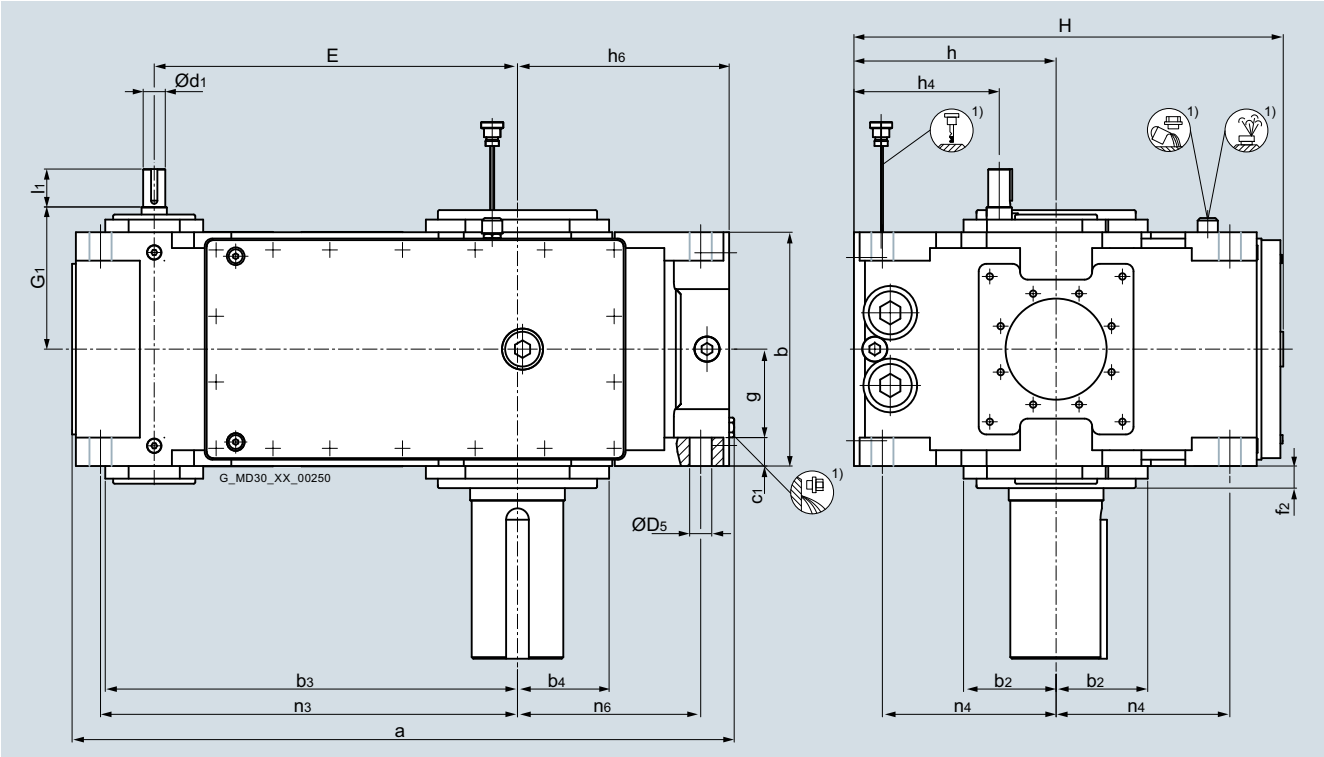
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 5/15 to 5/19	
Article No.:							2LP202.-■■T..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H3SV	**513**	200 n6	350	330	300	2420	**3 B**	
	514	210 n6	350	330	310	2720	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H3HV	**513**	190 H7		330	300	2420	**3 E**	
	514	210 H7		330	310	2720	**4 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H3DV [3]	**513**	190 H6	195	330	495	300	2420	**3 H**
	514	210 H6	215	330	495	310	2720	**4 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H3KV	**513**	N190×5×36×9H	180	195	330	300	2420	**3 P**
	514	N190×5×36×9H	180	215	330	310	2720	**4 P**
Type	Size	d_2	l_2	G_2		l	kg	Solid shaft without keyway
H3CV [3]	**513**	220 g6	165	330		300	2420	**3 V**
	514	220 g6	165	330		310	2720	**4 V**

[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

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	

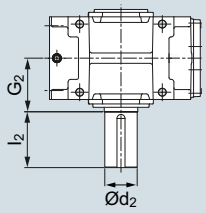
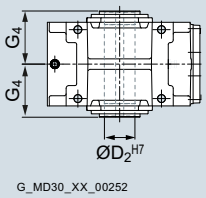
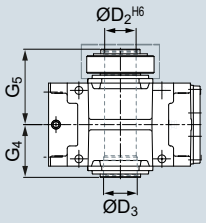
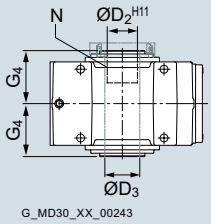
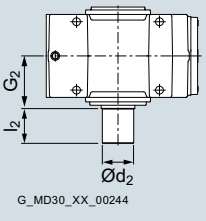
Gear unit sizes	Dimensions in mm																
	a	b	b_2 2)	b_3 2)	b_4 2)	c_1	D_5	E	g	f_2 2)	H	h 3)	h_4	h_6 3)	n_3	n_4	n_6
507	915	295	140	556	125	35	28	493.5	112.5	48	605	280	198	295	567.5	242.5	257.5
508	1020	295	140	603	142	35	28	540.5	112.5	48	605	280	198	355	614.5	242.5	317.5

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 5/14.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

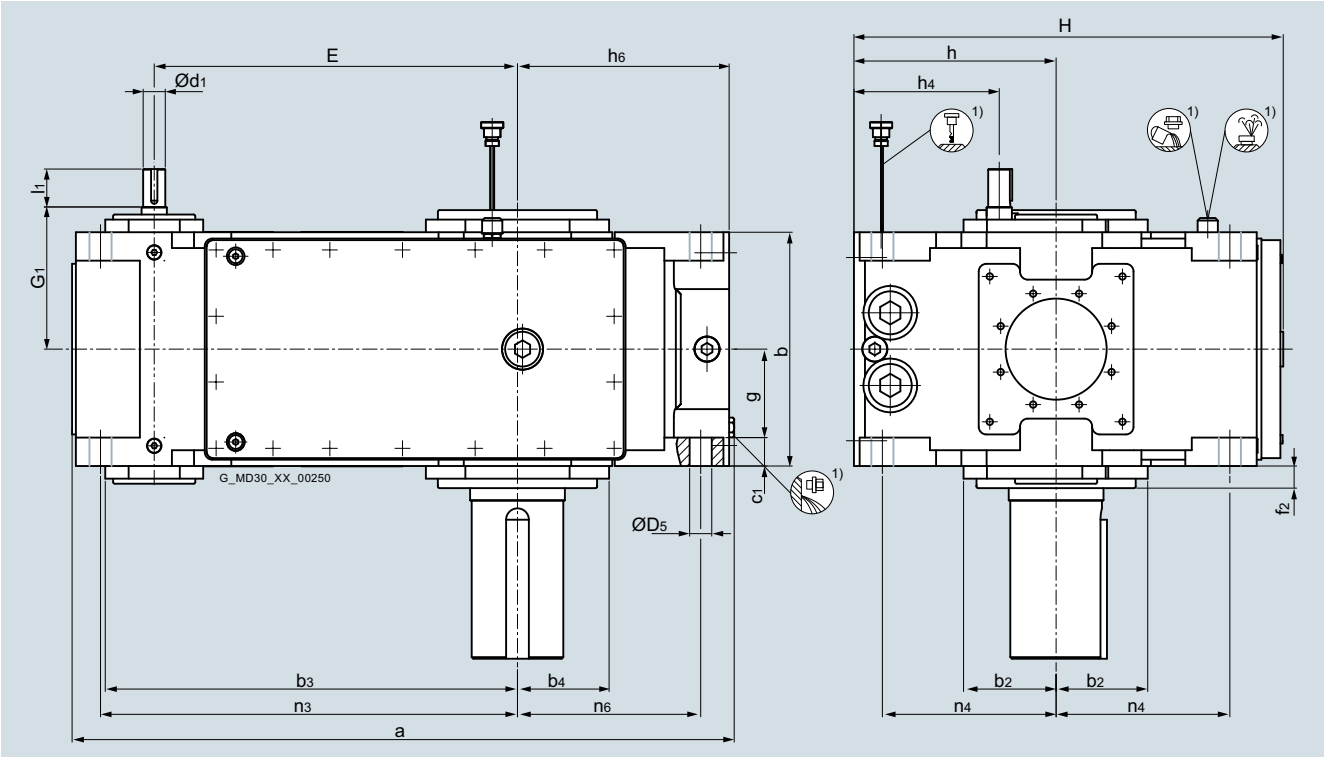
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 5/15 to 5/19		
Article No.:							2LP202.-■■U..-....		
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft
H4SV	**507**	120 n6	210	195	60	520	**6**	**A**	
	508	130 n6	250	195	72	640	**7**	**A**	
Type	Size	D_2		G_4	l	kg			Hollow shaft with keyway
H4HV	**507**	115 H7		195	60	520	**6**	**D**	
	508	125 H7		195	72	640	**7**	**D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		Hollow shaft for shrink disk
H4DV [3]	**507**	120 H6	120	195	290	60	520	**6**	**G**	
	508	130 H6	130	195	305	72	640	**7**	**G**	
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		Hollow shaft with spline in accordance with DIN 5480
H4KV	**507**	N120×3×38×9H	114	120	195	60	520	**6**	**N**	
	508	N120×3×38×9H	114	130	195	72	640	**7**	**N**	
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft without keyway
H4CV [3]	**507**	130 g6	115	195	60	520	**6**	**U**	
	508	130 g6	115	195	72	640	**7**	**U**	

[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

Type H4

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

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**				**Dimensions 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	

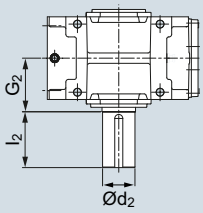
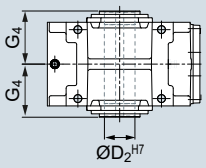
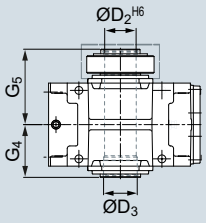
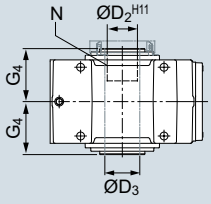
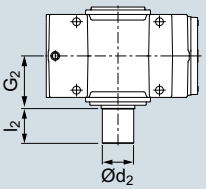
Gear unit sizes	Dimensions in mm																
	a	b	b_2 2)	b_3 2)	b_4 2)	c_1	D_5	E	g	f_2 2)	H	h 3)	h_4	h_6 3)	n_3	n_4	n_6
509	1055	370	147	653	145	45	35	575	140	55	685	320	230	335	660	275	290
510	1170	370	165	706	165	45	35	628	140	55	685	320	230	400	713	275	355
511	1295	430	177	786	176	60	40	706	155	55	810	380	270.5	415	812.5	330	362.5
512	1425	430	186	844	186	60	40	764	155	55	810	380	270.5	485	870.5	330	432.5
513	1470	535	211	930	205	65	48	825	202.5	63	935	440	312	440	952	380	380
514	1585	535	220	1008	220	65	48	903	202.5	63	935	440	312	480	1030	380	420

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 5/14.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

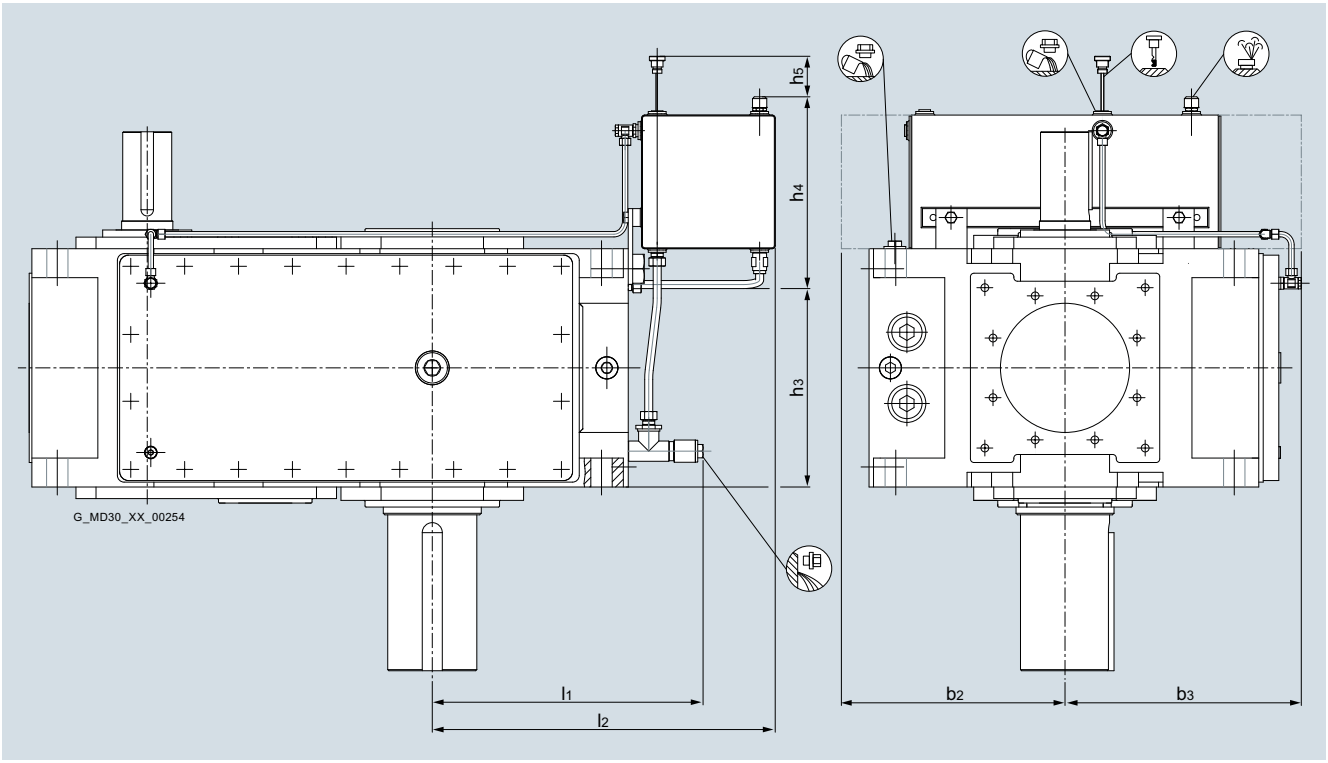
Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 5/15 to 5/19	
Article No.:							2LP202.-■■U..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H4SV	**509**	145 n6	250	240	116	790	**8 A**	
	510	160 n6	300	240	120	985	**0 B**	
	511	175 n6	300	270	180	1450	**1 B**	
	512	185 n6	350	270	200	1600	**2 B**	
	513	200 n6	350	330	290	2375	**3 B**	
	514	210 n6	350	330	300	2690	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H4HV	**509**	135 H7		235	116	790	**8 D**	
	510	150 H7		235	120	985	**0 E**	
	511	165 H7		270	180	1450	**1 E**	
	512	180 H7		270	200	1600	**2 E**	
	513	190 H7		330	290	2375	**3 E**	
	514	210 H7		330	300	2690	**4 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H4DV [3]	**509**	140 H6	145	235	350	116	790	**8 G**	
	510	150 H6	155	235	370	120	985	**0 H**	
	511	165 H6	170	270	420	180	1450	**1 H**	
	512	180 H6	185	270	425	200	1600	**2 H**	
	513	190 H6	195	330	495	290	2375	**3 H**	
	514	210 H6	215	330	495	300	2690	**4 H**	
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		Hollow shaft with spline in accordance with DIN 5480
H4KV	**509**	N 140×3×45×9H	134	145	235	116	790	**8 N**	
	510	N 140×3×45×9H	134	155	235	120	985	**0 P**	
	511	N 170×5×32×9H	160	170	270	180	1450	**1 P**	
	512	N 170×5×32×9H	160	185	270	200	1600	**2 P**	
	513	N 190×5×36×9H	180	195	330	290	2375	**3 P**	
	514	N 190×5×36×9H	180	215	330	300	2690	**4 P**	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H4CV [3]	**509**	150 g6	140	240	116	790	**8 U**	
	510	170 g6	140	240	120	985	**0 V**	
	511	180 g6	145	270	180	1450	**1 V**	
	512	190 g6	145	270	200	1600	**2 V**	
	513	220 g6	165	330	290	2375	**3 V**	
	514	220 g6	165	330	300	2690	**4 V**	

[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

Dimensions of oil expansion unit

Dimensional drawings



Dimensions in mm (Article No. supplement for 15th position see page 5/19)

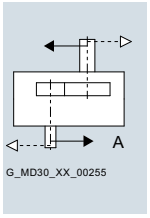
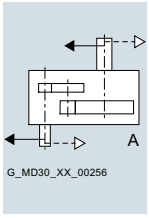
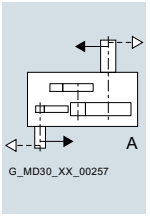
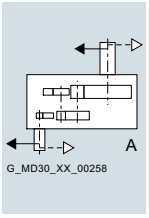
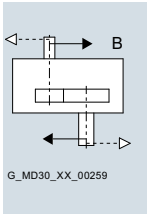
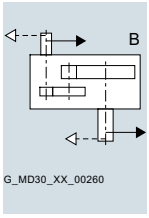
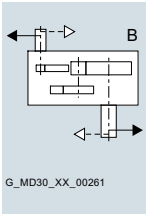
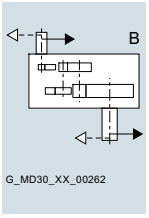
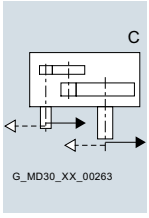
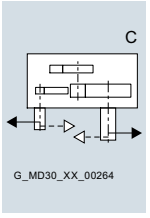
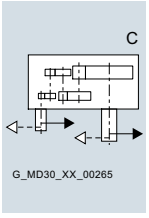
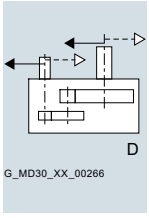
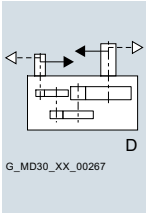
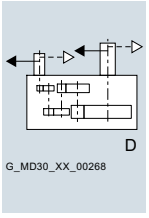
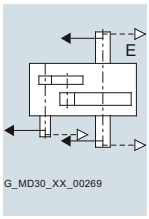
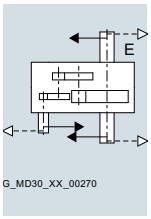
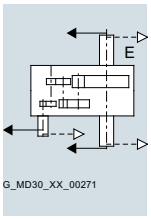
Gear unit sizes	H1.V							H2.V							H3.V							H4.V						
	b_2	b_3	l_1	l_2	h_3	h_4	h_5	b_2	b_3	l_1	l_2	h_3	h_4	h_5	b_2	b_3	l_1	l_2	h_3	h_4	h_5	b_2	b_3	l_1	l_2	h_3	h_4	h_5
503	175	270	260	320	205	205	125	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
504	235	295	305	400	270	245	180	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
505	235	320	305	405	305	250	180	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
506	235	320	325	425	305	280	180	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
507	320	395	345	510	390	330	250	–	–	–	–	–	–	–	–	–	–	–	–	–	–	235	365	375	470	235	250	175
508	320	395	375	540	390	330	250	–	–	–	–	–	–	–	–	–	–	–	–	–	–	235	365	435	530	235	250	175
509	320	435	435	580	455	350	250	–	–	–	–	–	–	–	–	–	–	–	–	–	–	340	405	415	585	295	330	250
510	320	435	460	605	455	350	250	–	–	–	–	–	–	–	–	–	–	–	–	–	–	340	405	480	650	295	330	250
511	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	320	465	520	665	350	335	250
512	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	320	465	590	735	350	335	250
513	–	–	–	–	–	–	–	360	535	545	770	440	440	330	360	535	545	770	440	440	330	360	535	545	770	440	440	330
514	–	–	–	–	–	–	–	360	535	585	810	440	440	330	360	535	585	810	440	440	330	360	535	585	810	440	440	330

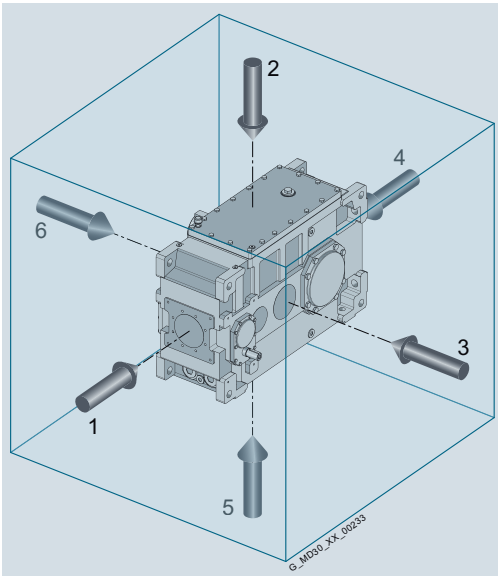
Selection and ordering data

7th position of the Article No.

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Article No.	**2LP202**	■	-	.	.	.	.	.	-	.	.	.	.	**-Z** . . .

Design variant (view directed at face 2, face 1 on left)

	Type H1..	Type H2..	Type H3..	Type H4..	
A	 G_MD30_XX_00255	 G_MD30_XX_00256	 G_MD30_XX_00257	 G_MD30_XX_00258	**0**
B	 G_MD30_XX_00259	 G_MD30_XX_00260	 G_MD30_XX_00261	 G_MD30_XX_00262	**1**
C --		 G_MD30_XX_00263	 G_MD30_XX_00264	 G_MD30_XX_00265	**2**
D --		 G_MD30_XX_00266	 G_MD30_XX_00267	 G_MD30_XX_00268	**3**
E --		 G_MD30_XX_00269	 G_MD30_XX_00270	 G_MD30_XX_00271	**4**



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

- Face 3 = right
- Face 6 = left

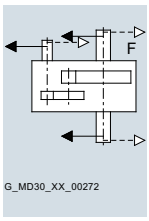
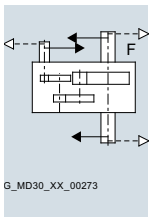
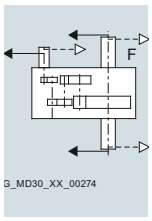
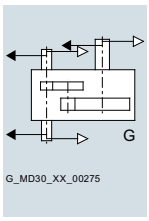
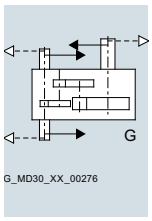
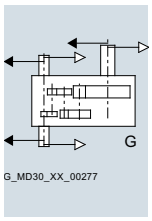
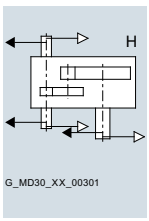
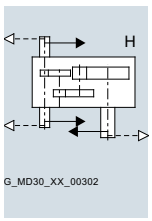
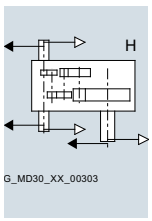
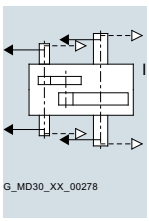
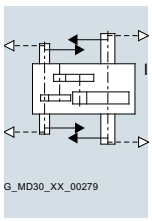
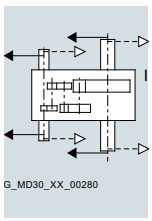
Article No. overview

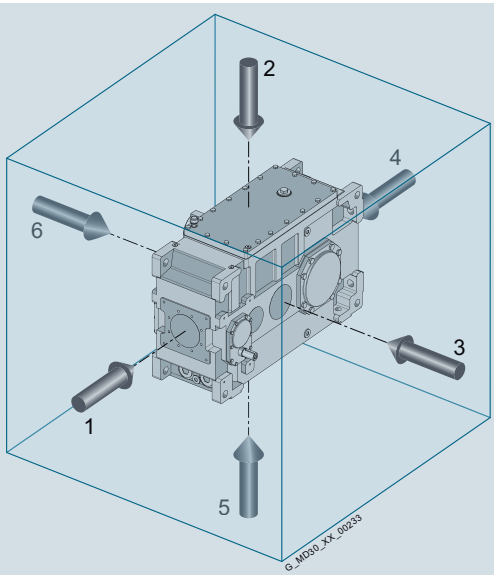
Selection and ordering data (continued)

7th position of the Article No. *(continued)*

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Article No.	**2LP202**	■	-	.	.	.	.	.	-	.	.	.	.	**-Z** . . .

Design variant (view directed at face 2, face 1 on left)

	Type H1..	Type H2.. [1]	Type H3..	Type H4..	
F --		 G_MD30_XX_00272	 G_MD30_XX_00273	 G_MD30_XX_00274	**5**
G --		 G_MD30_XX_00275	 G_MD30_XX_00276	 G_MD30_XX_00277	**6**
H --		 G_MD30_XX_00301	 G_MD30_XX_00302	 G_MD30_XX_00303	**7**
I --		 G_MD30_XX_00278	 G_MD30_XX_00279	 G_MD30_XX_00280	**8**



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

- Face 3 = right
- Face 6 = left

[1] Designs G, H, I on request.

Selection and ordering data (continued)

8th to 10th position of the Article No.

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**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)														
	507				**6**	**G**								
	508				**7**	**G**								
	509				**8**	**G**								
	510				**0**	**H**								
	511				**1**	**H**								
	512				**2**	**H**								
	513				**3**	**H**								
	514				**4**	**H**								

Article No. overview

Selection and ordering data (continued)

8th to 10th position of the Article No. *(continued)*

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**2LP202**	.	-	■	■	■	.	.	-	.	.	.	.	-Z	.	.	.
Output shaft, gear unit size																			
Output shaft	**Gear unit size**																		
Hollow shaft with spline in accordance with DIN 5480 (K)																			
	507				**6**	**N**													
	508				**7**	**N**													
	509				**8**	**N**													
	510				**0**	**P**													
	511				**1**	**P**													
	512				**2**	**P**													
	513				**3**	**P**													
	514				**4**	**P**													
Solid shaft without keyway (C)																			
	507				**6**	**U**													
	508				**7**	**U**													
	509				**8**	**U**													
	510				**0**	**V**													
	511				**1**	**V**													
	512				**2**	**V**													
	513				**3**	**V**													
	514				**4**	**V**													
Gear unit type, number of stages, mounting position																			
H1.V							**W**												
H2.V							**S**												
H3.V							**T**												
H4.V							**U**												

Selection and ordering data (continued)

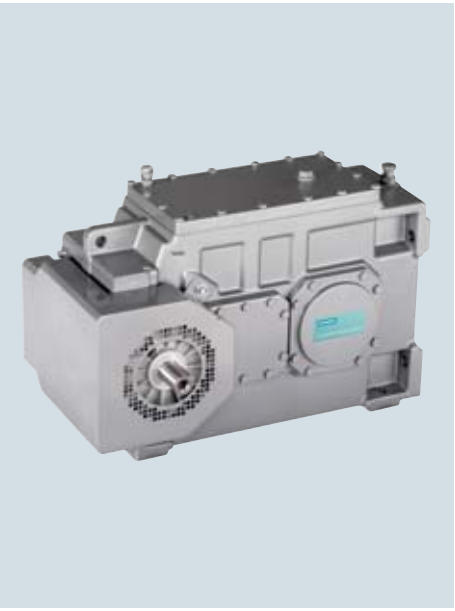
Article No. supplement, 11th to 16th position

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Article No.	**2LP202**	**.**	**-**	**.**	**.**	■	■	**-**	■	■	■	■ **-Z** ■ ■ ■
Seal for shaft 1 [1]													
Shaft d_1 at one end with 1 × shaft seal							**0**						
Shaft d_1 at both ends with 1 × shaft seal at both ends							**1**						
Shaft d_1 at one end with taconite E							**4**						
Shaft d_1 at both ends with taconite E at both ends							**5**						
Seal for shaft 2 [1]													
Shaft d_2 at one end with 1 × shaft seal								**0**					
Shaft d_2 at both ends with 1 × shaft seal at both ends								**1**					
Shaft d_2 at one end with taconite F								**4**					
Shaft d_2 at both ends with taconite F at both ends								**5**					
Shaft d_2 with taconite F-F								**6**					
Shaft d_2 with taconite F-H								**7**					
Shaft d_2 with taconite F-K								**8**					
Shaft variants													
Standard shaft d_1 and standard shaft d_2									**0**				
Gear ratio													
	Type/gear unit size												
	H1..			H2..	H3..	H4..							
	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 with oil expansion unit											**B**		
Other oil supply											**Z**		**Q 0 Y**
Auxiliary cooling													
Without auxiliary cooling												**0**	
Auxiliary cooling by cooling coil, connections to gear unit face 4 (end face d_2)												**2**	
Auxiliary cooling by cooling coil, connections to gear unit face 1 (end face d_1)												**4**	

[1] Additional details see page 11/3.

Notes

Helical gear units upright mounting position, output at bottom



6/2 **Type H1**
Gear unit dimensions
6/2 Single-stage, gear unit sizes 503 to 508
6/4 Single-stage, gear unit sizes 509 and 510

6/6 **Type H2**
Gear unit dimensions
6/6 Two-stage, gear unit sizes 504 to 508
6/8 Two-stage, gear unit sizes 509 to 512
6/10 Two-stage, gear unit sizes 513 and 514

6/12 **Type H3**
Gear unit dimensions
6/12 Three-stage, gear unit sizes 505 to 508
6/14 Three-stage, gear unit sizes 509 to 512
6/16 Three-stage, gear unit sizes 513 and 514

6/18 **Type H4**
Gear unit dimensions
6/18 Four-stage, gear unit sizes 507 and 508
6/20 Four-stage, gear unit sizes 509 to 514

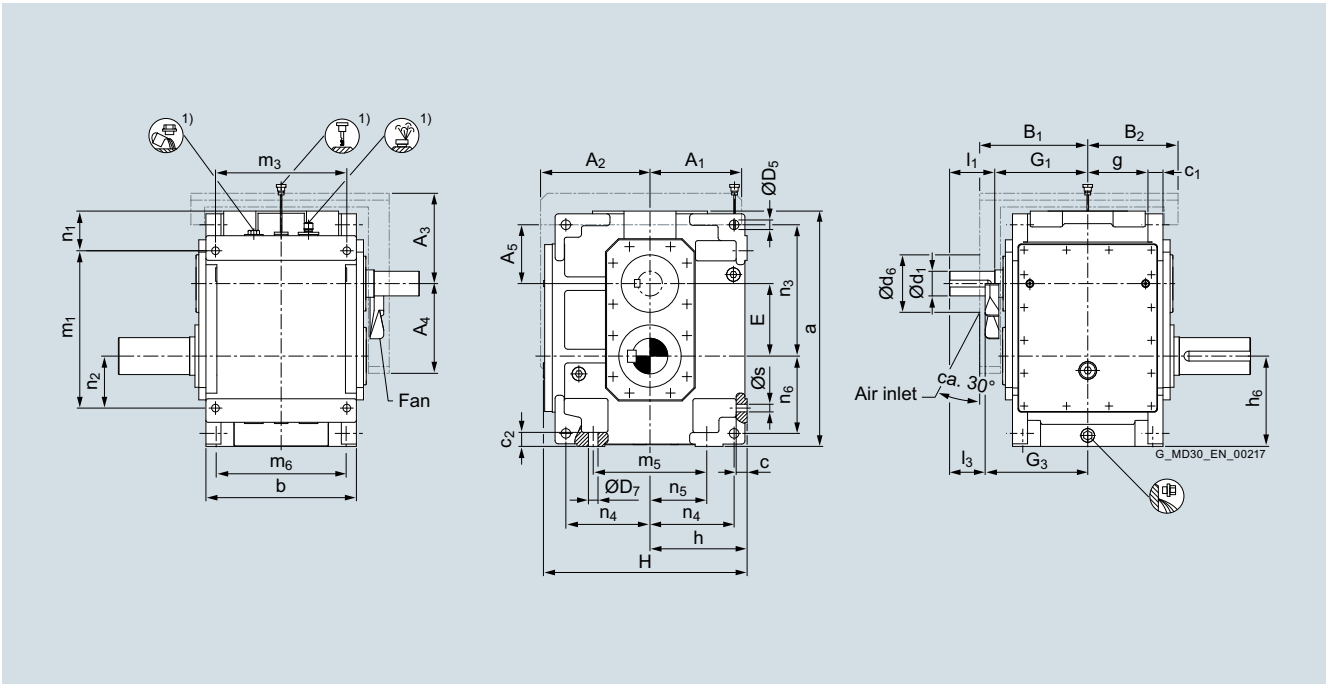
6/22 **Types H1, H2, H3 and H4**
6/22 Dimensions of oil expansion unit
6/23 Article No. overview

Helical gear units upright mounting position, output at bottom

Type H1

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

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**									**Fan** [2]								
		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	250	200	185	100	250	185	175
	i_N =	1.12 – 2.8			3.15 – 5.6															
504		70 m6	135	105	50 m6	110	80				220	250	215	275	230	220	135	275	215	175
	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	305	260	245	160	315	235	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	235	305	260	245	160	315	235	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	305	370	315	300	165	360	285	225
	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	305	370	315	300	165	360	285	225

Gear unit sizes	Dimensions in mm																					
	a	b	c	c_1	c_2	D_5	D_7	E	g	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
503	448	260	25	25	30	19	19	128	105	440	200	190	290	220	240	220	78	110	230	175	120	165	15
504	544	325	30	30	30	24	24	159	132.5	490	225	225	360	280	265	280	96.5	137.5	290	195	132.5	195	19
505	605	360	30	30	35	24	24	185	150	540	250	230	435	320	320	315	85	145	345	220	160	200	19
506	656	360	30	30	35	24	24	216	150	540	250	250	486	320	320	315	85	165	376	220	160	220	19
507	713	465	35	40	40	28	28	228	192.5	670	315	260	480	410	390	410	118	145	415	280	195	225	24
508	773	465	35	40	40	28	28	258	192.5	670	315	290	540	410	390	410	118	175	445	280	195	255	24

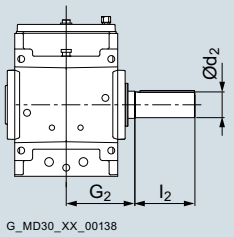
Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

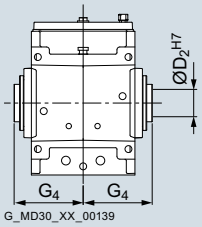
[1] Position dependent on other options.
[2] Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
[3] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27	
	Article No.						2LP202.-■■V. .-. . . .	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H1SL	**503**	65 m6	140	185	21	150	**2 A**	
	504	80 m6	170	220	34	300	**3 A**	
	505	90 m6	210	240	46	350	**4 A**	
	506	100 m6	210	240	50	395	**5 A**	
	507	105 n6	235	295	88	686	**6 A**	
	508	120 n6	250	295	96	710	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H1HL [3]	**503**	–		–	–	–		
	504	80 H7		220	34	300	**3 D**	
	505	95 H7		240	46	350	**4 D**	
	506	105 H7		240	50	395	**5 D**	
	507	115 H7		295	88	686	**6 D**	
	508	125 H7		295	96	710	**7 D**	





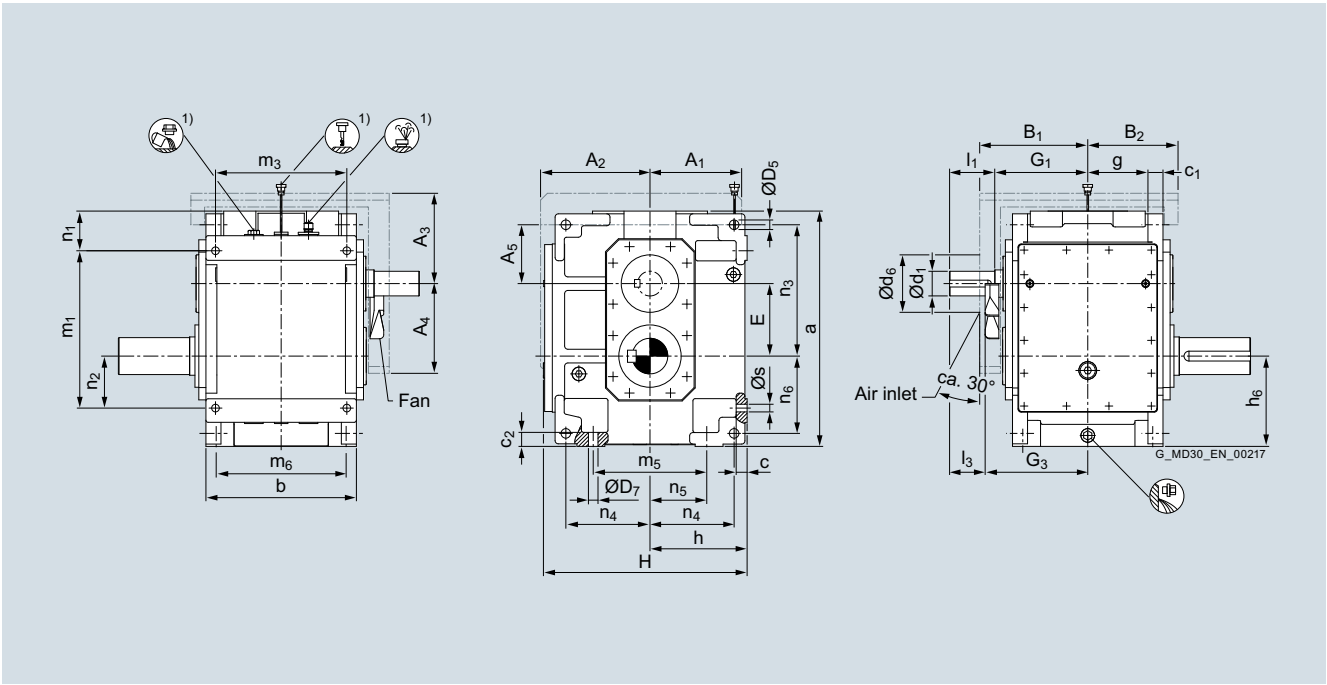
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Not possible in conjunction with fan.

Helical gear units upright mounting position, output at bottom

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** [2]								
		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	345	410	355	340	215	405	330	260
	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	345	410	355	340	215	405	330	260

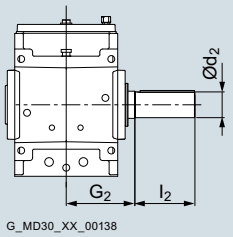
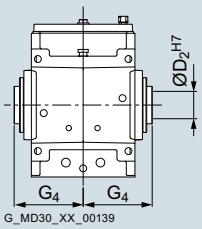
Gear unit sizes	Dimensions in mm																						
	a	b	c	c_1	c_2	D_5	D_7	E	g	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
509	860	550	40	55	50	35	35	265	220	755	355	330	575	480	415	475	145	190	480	307.5	207.5	282.5	28
510	916	550	40	55	50	35	35	296	220	755	355	355	631	480	415	475	145	215	511	307.5	207.5	307.5	28

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on other options.
[2] Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
[3] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]			7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27
Article No.							2LP202 . - ■ ■ V . . -		
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
H1SL	**509**	135 n6	260	335	140	970	**8**	**A**	
	510	150 n6	280	335	148	1150	**0**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H1HL [3]	**509**	135 H7		335	140	970	**8**	**D**	
	510	145 H7		335	148	1150	**0**	**E**	

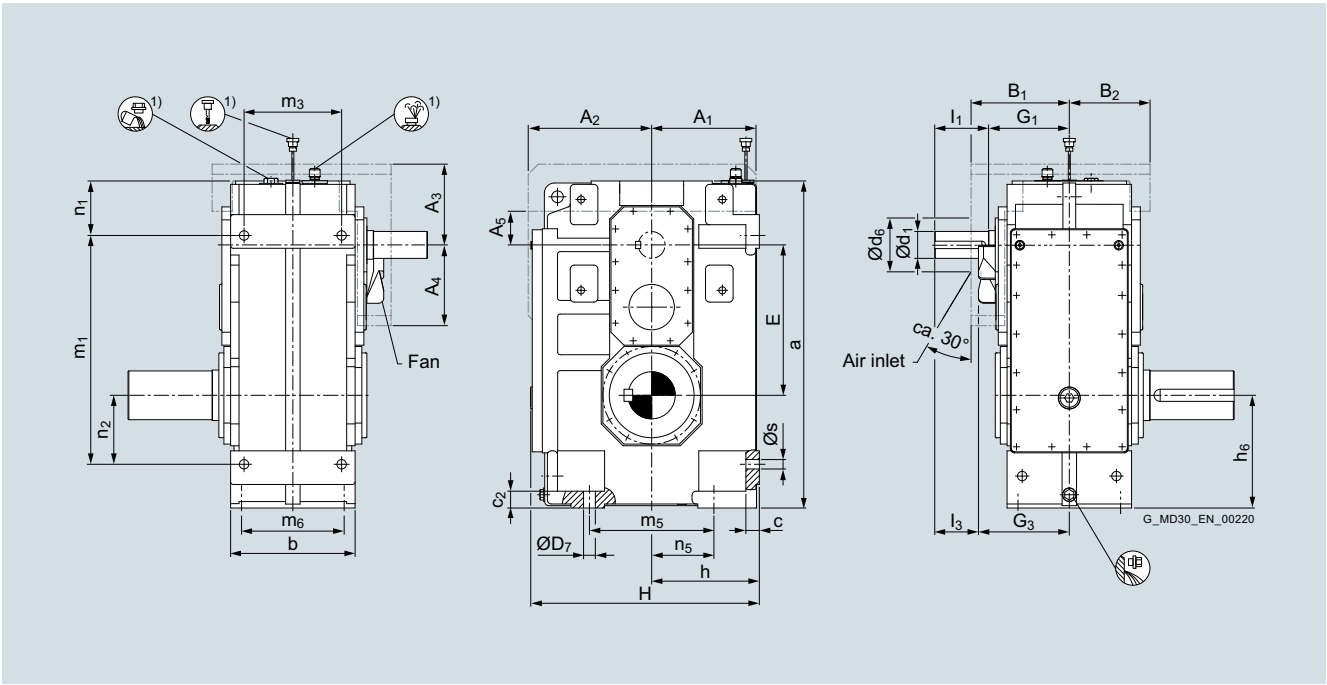
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Not possible in conjunction with fan.

Helical gear units upright mounting position, output at bottom

Type H2

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

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input** **Designs G, H, I** on request for all ratios.										**Fan** 2)							
		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	200	245	185	145	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	230	280	195	180	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	230	280	195	180	85	255	180	160
	i_N =	6.3 – 10			11.2 – 18															
507		70 m6	135	105	50 m6	110	80				215	245	280	335	235	215	100	290	205	190
	i_N =	8 – 12.5			14 – 22.4															
508		70 m6	135	105	50 m6	110	80				215	245	280	335	235	215	100	290	205	190

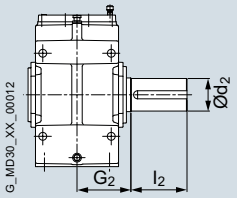
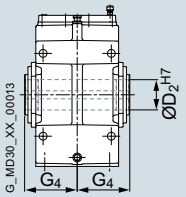
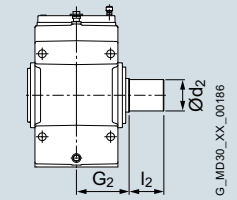
Gear unit sizes	Dimensions in mm																
	a	b	c	c_2	D_7	E	H	h 3)	h_6 3)	m_1	m_3	m_5	m_6	n_1	n_2	n_5	s
504	590	210	28	28	19	269.5	430	200	210	415	170	280	170	95	130	140	19
505	670	250	30	35	24	310	500	230	230	490	200	280	205	95	145	140	19
506	793	250	30	35	24	363	500	230	300	613	200	280	205	95	215	140	19
507	839	295	35	40	28	384	605	280	295	595	230	320	240	129	180	160	24
508	946	295	35	40	28	431	605	280	355	702	230	320	240	129	240	160	24

Note:
"Dip lubrication" is provided as the standard oil supply.
"Dip lubrication with oil expansion unit" is required when heating elements or a cooling coil are installed.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27	
Article No.							2LP202 . - ■ ■ P . . -	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H2SL	**504**	80 m6	170	140	24	190	**3 A**	
	505	100 m6	210	165	36	295	**4 A**	
	506	110 n6	210	165	38	360	**5 A**	
	507	120 n6	210	195	60	515	**6 A**	
	508	130 n6	250	195	70	620	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H2HL	**504**	80 H7		140	24	190	**3 D**	
	505	95 H7		165	36	295	**4 D**	
	506	105 H7		165	38	360	**5 D**	
	507	115 H7		195	60	515	**6 D**	
	508	125 H7		195	70	620	**7 D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H2DL	**504**	85 H6	85	140	215	24	190	**3 G**
	505	100 H6	100	165	255	36	295	**4 G**
	506	110 H6	110	165	260	38	360	**5 G**
	507	120 H6	120	195	290	60	515	**6 G**
	508	130 H6	130	195	305	70	620	**7 G**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H2KL	**504**	N80×3×25×9H	74	80	140	24	190	**3 N**
	505	N95×3×30×9H	89	100	165	36	295	**4 N**
	506	N95×3×30×9H	89	110	165	38	360	**5 N**
	507	N120×3×38×9H	114	120	195	60	515	**6 N**
	508	N120×3×38×9H	114	130	195	70	620	**7 N**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H2CL	**504**	85 g6	100	140	24	190	**3 U**	
	505	110 g6	115	165	36	295	**4 U**	
	506	120 g6	115	165	38	360	**5 U**	
	507	130 g6	115	195	60	515	**6 U**	
	508	130 g6	115	195	70	620	**7 U**	

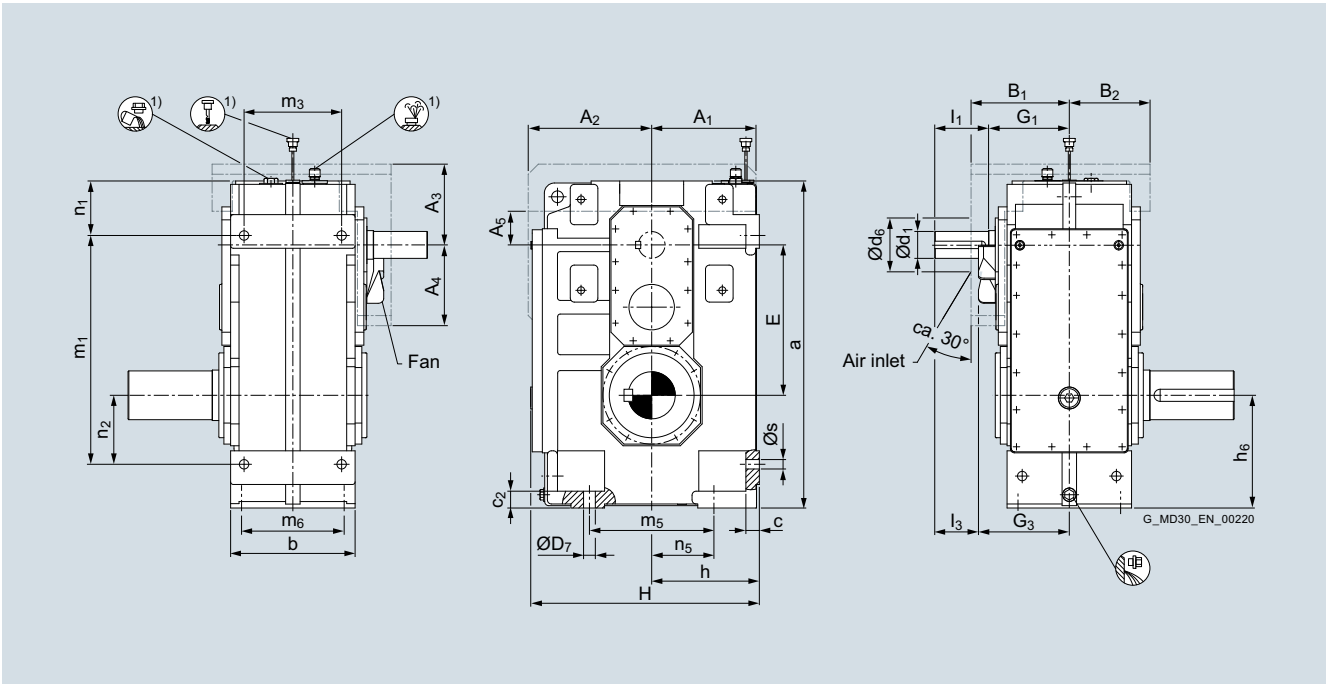
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Helical gear units upright mounting position, output at bottom

Type H2

Gear unit dimensions
Two-stage, gear unit sizes 509 to 512

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input** **Designs G, H, I** on request for all ratios.										**Fan** 2)							
		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	320	375	265	245	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	320	375	265	245	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	380	440	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	380	440	320	295	155	360	285	240

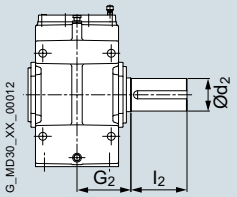
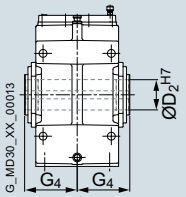
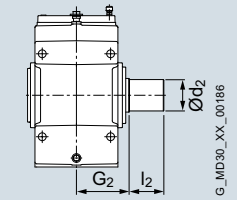
Gear unit sizes	Dimensions in mm															
	a	b	c	c_2	D_7	E	H	h 3)	h_6 3)	m_1	m_3	m_5	m_6	n_1	n_2	n_5	s
509	972	370	40	50	35	447	685	320	335	680	290	370	305	162	205	185	28
510	1090	370	40	50	35	500	685	320	400	798	290	370	305	162	270	185	28
511	1187	430	50	60	40	547	810	380	415	825	340	430	350	202	255	215	35
512	1315	430	50	60	40	605	810	380	485	953	340	430	350	202	325	215	35

Note:
"Dip lubrication" is provided as the standard oil supply.
"Dip lubrication with oil expansion unit" is required when heating elements or a cooling coil are installed.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

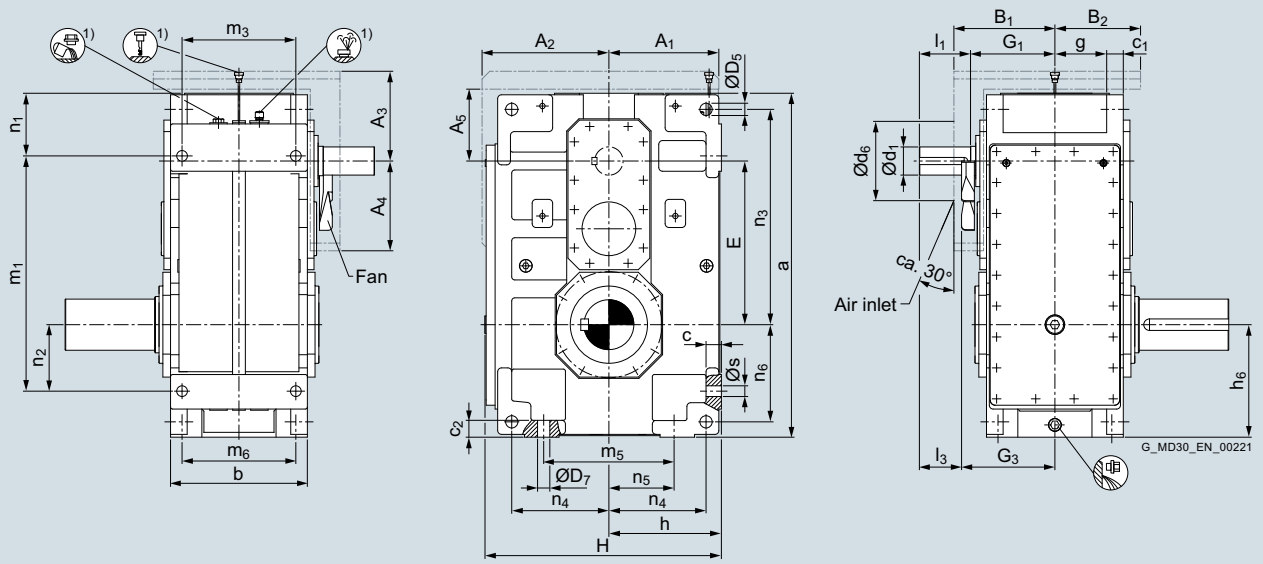
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27	
Article No.							2LP202 . - ■ ■ P . . -	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H2SL	**509**	145 n6	250	240	104	830	**8 A**	
	510	160 n6	300	240	110	945	**0 B**	
	511	175 n6	300	270	168	1250	**1 B**	
	512	185 n6	350	270	178	1570	**2 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H2HL	**509**	135 H7		235	104	830	**8 D**	
	510	150 H7		235	110	945	**0 E**	
	511	165 H7		270	168	1250	**1 E**	
	512	180 H7		270	178	1570	**2 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H2DL	**509**	140 H6	145	235	350	104	830	**8 G**
	510	150 H6	155	235	370	110	945	**0 H**
	511	165 H6	170	270	420	168	1250	**1 H**
	512	180 H6	185	270	425	178	1570	**2 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H2KL	**509**	N140×3×45×9H	134	145	235	104	830	**8 N**
	510	N140×3×45×9H	134	155	235	110	945	**0 P**
	511	N170×5×32×9H	160	170	270	168	1250	**1 P**
	512	N170×5×32×9H	160	185	270	178	1570	**2 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H2CL	**509**	150 g6	140	240	104	830	**8 U**	
	510	170 g6	140	240	110	945	**0 V**	
	511	180 g6	145	270	168	1250	**1 V**	
	512	190 g6	145	270	178	1570	**2 V**	

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

Type H2

Gear unit dimensions
Two-stage, gear unit sizes 513 and 514

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input** **Designs G, H, I** on request for all ratios.											**Fan** [2]							
		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												
513		110 n6	200	165	90 m6	165	130	75 m6	140	105	330	365	440	505	380	350	200	430	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	440	505	380	350	200	430	335	225

Gear unit sizes	Dimensions in mm																					
	a	b	c	c_1	c_2	D_5	D_7	E	g	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
513	1345	535	60	65	65	48	48	640	202.5	935	440	440	920	445	510	445	245	260	842	380	255	380	42
514	1463	535	60	65	65	48	48	718	202.5	935	440	480	1038	445	510	445	245	300	920	380	255	420	42

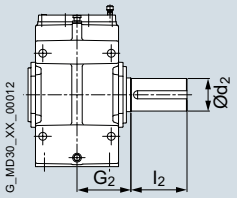
Note:
"Dip lubrication" is provided as the standard oil supply.
"Dip lubrication with oil expansion unit" is required when heating elements or a cooling coil are installed.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

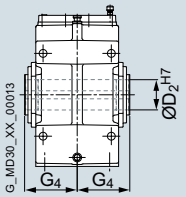
[1] Position dependent on other options.
[2] Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
[3] Permissible tolerance: -1 mm.

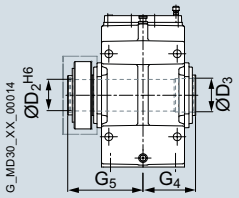
Selection and ordering data (continued)

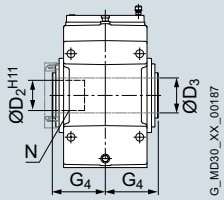
Output

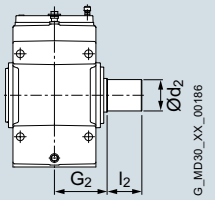
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27		
Article No.							2LP202 . - ■ ■ P . . -		
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft
H2SL	**513**	200 n6	350	330	300	2600	**3**	**B**	
	514	210 n6	350	330	310	2965	**4**	**B**	
Type	Size	D_2		G_4	l	kg			Hollow shaft with keyway
H2HL	**513**	190 H7		330	300	2600	**3**	**E**	
	514	210 H7		330	310	2965	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		Hollow shaft for shrink disk
H2DL	**513**	190 H6	195	330	495	300	2600	**3**	**H**
	514	210 H6	215	330	495	310	2965	**4**	**H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		Hollow shaft with spline in accordance with DIN 5480
H2KL	**513**	N 190×5×36×9H	180	195	330	300	2600	**3**	**P**
	514	N 190×5×36×9H	180	215	330	310	2965	**4**	**P**
Type	Size	d_2	l_2	G_2		l	kg		Solid shaft without keyway
H2CL	**513**	220 g6	165	330		300	2600	**3**	**V**
	514	220 g6	165	330		310	2965	**4**	**V**











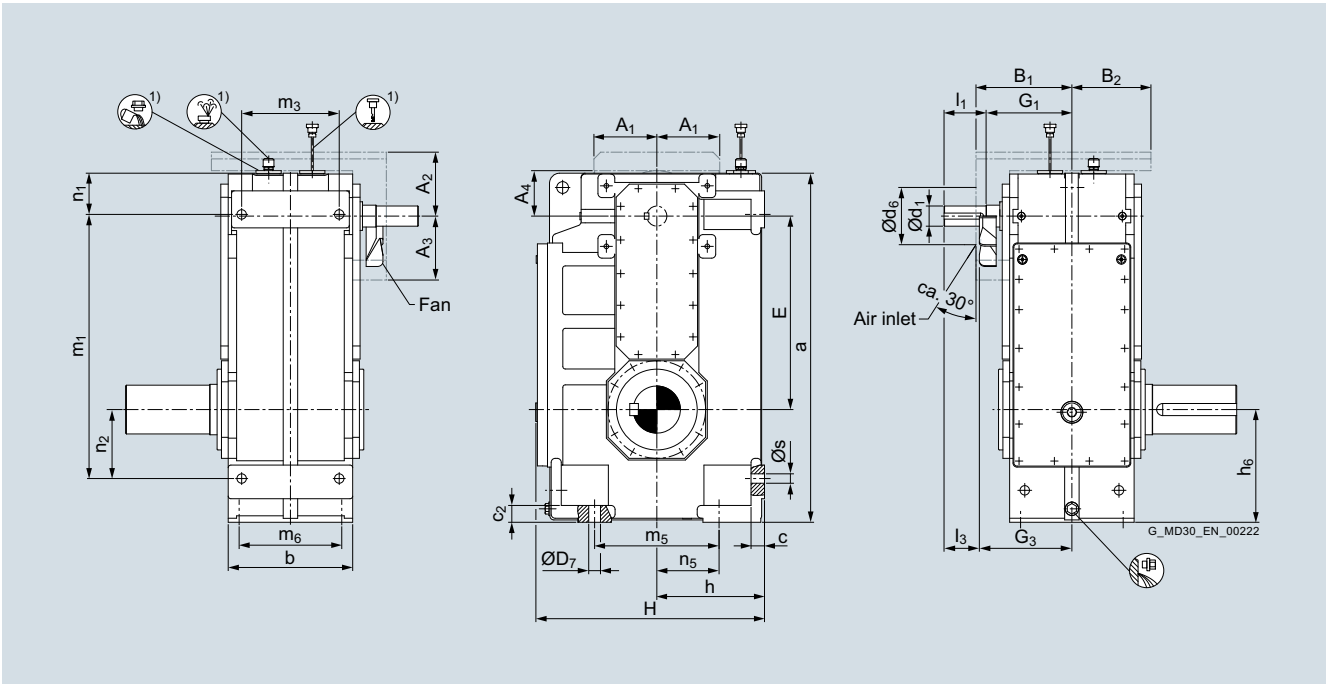
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Helical gear units upright mounting position, output at bottom

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** [2]						
		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	175	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	175	185	190	115	245	205	150

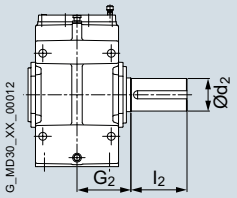
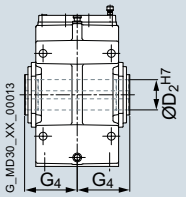
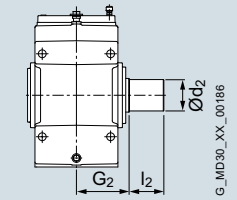
Gear unit sizes	Dimensions in mm															
	a	b	c	c_2	D_7	E	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_5	s
505	713	250	30	35	24	400	500	230	230	530	200	280	205	97.5	145	140	19
506	836	250	30	35	24	453	500	230	300	653	200	280	205	97.5	215	140	19
507	897	295	35	40	28	493.5	605	280	295	680	230	320	240	101	180	160	24
508	1004	295	35	40	28	540.5	605	280	355	787	230	320	240	101	240	160	24

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27	
Article No.							2LP202 . - ■ ■ Q . . -	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H3SL	**505**	100 m6	210	165	40	310	**4 A**	
	506	110 n6	210	165	42	380	**5 A**	
	507	120 n6	210	195	70	550	**6 A**	
	508	130 n6	250	195	74	650	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H3HL	**505**	95 H7		165	40	310	**4 D**	
	506	105 H7		165	42	380	**5 D**	
	507	115 H7		195	70	550	**6 D**	
	508	125 H7		195	74	650	**7 D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H3DL	**505**	100 H6	100	165	255	40	310	**4 G**
	506	110 H6	110	165	260	42	380	**5 G**
	507	120 H6	120	195	290	70	550	**6 G**
	508	130 H6	130	195	305	74	650	**7 G**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H3KL	**505**	N95×3×30×9H	89	100	165	40	310	**4 N**
	506	N95×3×30×9H	89	110	165	42	380	**5 N**
	507	N120×3×38×9H	114	120	195	70	550	**6 N**
	508	N120×3×38×9H	114	130	195	74	650	**7 N**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H3CL	**505**	110 g6	115	165	40	310	**4 U**	
	506	120 g6	115	165	42	380	**5 U**	
	507	130 g6	115	195	70	550	**6 U**	
	508	130 g6	115	195	74	650	**7 U**	

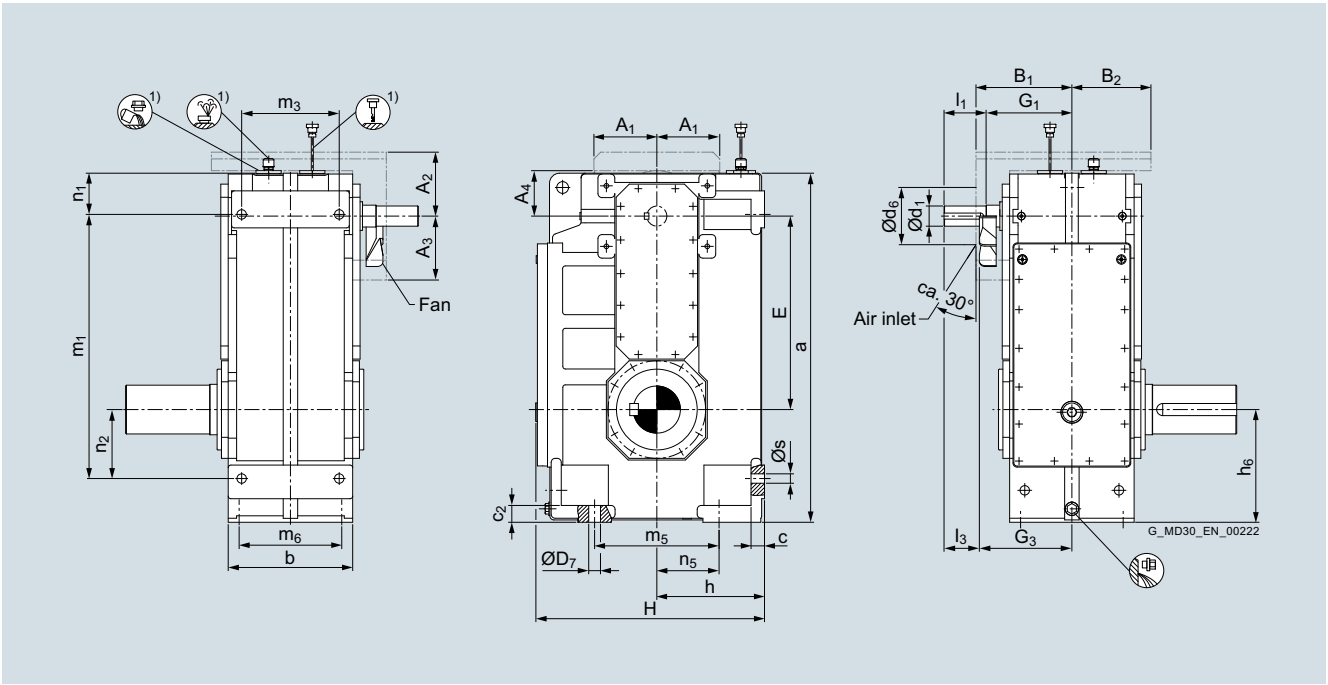
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Helical gear units upright mounting position, output at bottom

Type H3

Gear unit dimensions
Three-stage, gear unit sizes 509 to 512

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**									**Fan** [2]							
		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

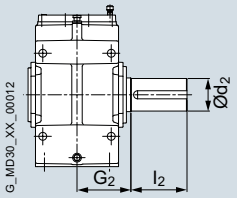
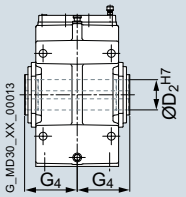
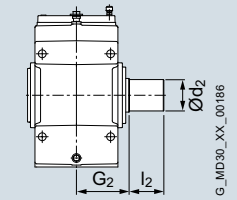
Gear unit sizes	Dimensions in mm																
	a	b	c	c_2	D_7	E	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_5	s
509	1038	370	40	50	35	575	685	320	335	785	290	370	305	122.5	205	185	28
510	1156	370	40	50	35	628	685	320	400	903	290	370	305	122.5	270	185	28
511	1279	430	50	60	40	706	810	380	415	960	340	430	350	158.5	255	215	35
512	1407	430	50	60	40	764	810	380	485	1088	340	430	350	158.5	325	215	35

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

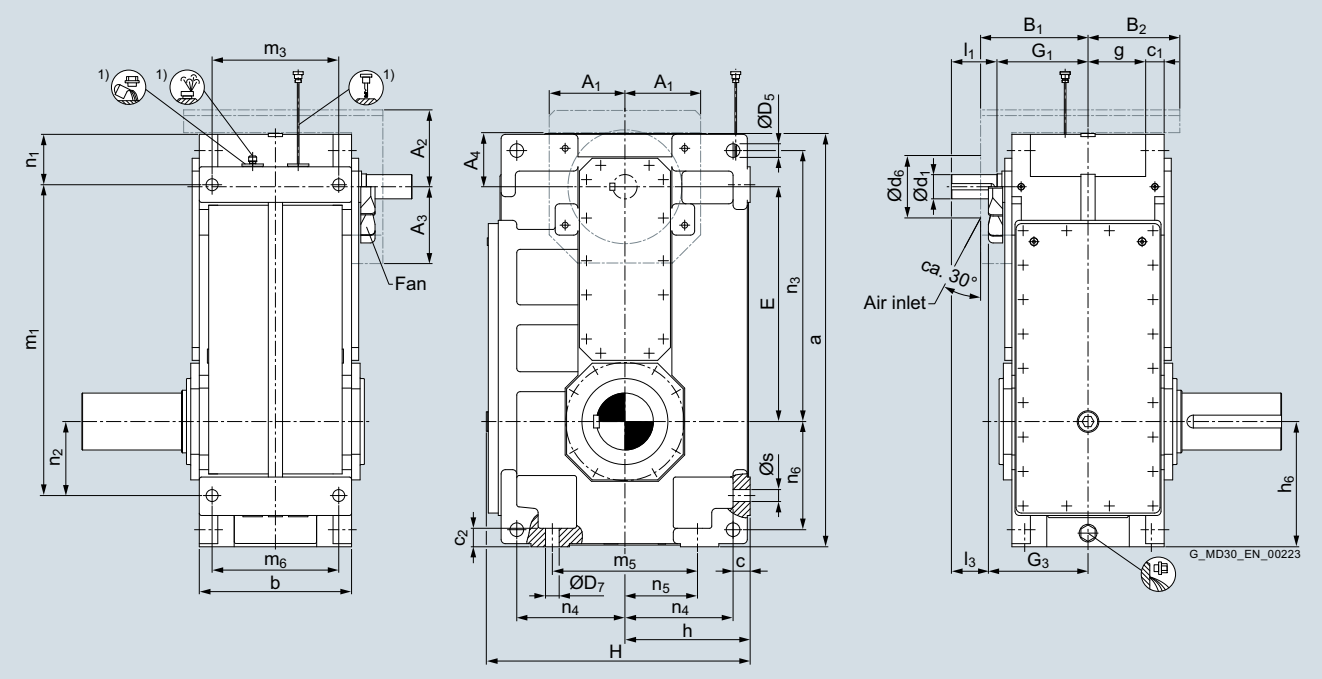
Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27	
Article No.							2LP202 . - ■ ■ Q . . -	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H3SL	**509**	145 n6	250	240	112	885	**8 A**	
	510	160 n6	300	240	120	1035	**0 B**	
	511	175 n6	300	270	182	1470	**1 B**	
	512	185 n6	350	270	210	1695	**2 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H3HL	**509**	135 H7		235	112	885	**8 D**	
	510	150 H7		235	120	1035	**0 E**	
	511	165 H7		270	182	1470	**1 E**	
	512	180 H7		270	210	1695	**2 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H3DL	**509**	140 H6	145	235	350	112	885	**8 G**
	510	150 H6	155	235	370	120	1035	**0 H**
	511	165 H6	170	270	420	182	1470	**1 H**
	512	180 H6	185	270	425	210	1695	**2 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H3KL	**509**	N140×3×45×9H	134	145	235	112	885	**8 N**
	510	N140×3×45×9H	134	155	235	120	1035	**0 P**
	511	N170×5×32×9H	160	170	270	182	1470	**1 P**
	512	N170×5×32×9H	160	185	270	210	1695	**2 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H3CL	**509**	150 g6	140	240	112	885	**8 U**	
	510	170 g6	140	240	120	1035	**0 V**	
	511	180 g6	145	270	182	1470	**1 V**	
	512	190 g6	145	270	210	1695	**2 V**	

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

Gear unit dimensions
Three-stage, gear unit sizes 513 and 514

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**										**Fan** [2]						
		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											
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

Gear unit sizes	Dimensions in mm																					
	a	b	c	c_1	c_2	D_5	D_7	E	g	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
513	1452	535	60	65	65	48	48	825	202.5	935	440	440	1092	445	510	445	180	260	952	380	255	380	42
514	1570	535	60	65	65	48	48	903	202.5	935	440	480	1210	445	510	445	180	300	1030	380	255	420	42

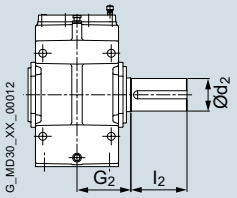
Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

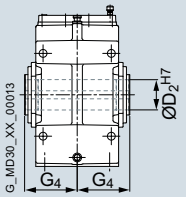
[1] Position dependent on other options.
[2] Maximum dimensions incl. bolted connection and coupling devices. Exact data according to order-related documentation.
[3] Permissible tolerance: -1 mm.

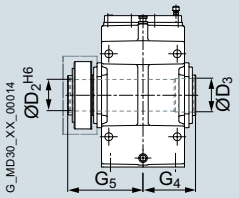
Selection and ordering data (continued)

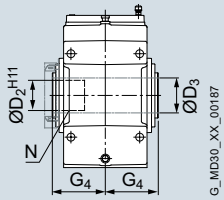
Output

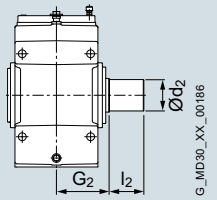
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27		
Article No.							2LP202 . - ■ ■ Q . . -		
Type	Size	d_2	l_2	G_2	l	kg			**Solid shaft**
H3SL	**513**	200 n6	350	330	300	2420	**3**	**B**	
	514	210 n6	350	330	310	2720	**4**	**B**	
Type	Size	D_2		G_4	l	kg			**Hollow shaft with keyway**
H3HL	**513**	190 H7		330	300	2420	**3**	**E**	
	514	210 H7		330	310	2720	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		**Hollow shaft for shrink disk**
H3DL	**513**	190 H6	195	330	495	300	2420	**3**	**H**
	514	210 H6	215	330	495	310	2720	**4**	**H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		**Hollow shaft with spline in accordance with DIN 5480**
H3KL	**513**	N 190×5×36×9H	180	195	330	300	2420	**3**	**P**
	514	N 190×5×36×9H	180	215	330	310	2720	**4**	**P**
Type	Size	d_2	l_2	G_2		l	kg		**Solid shaft without keyway**
H3CL	**513**	220 g6	165	330		300	2420	**3**	**V**
	514	220 g6	165	330		310	2720	**4**	**V**











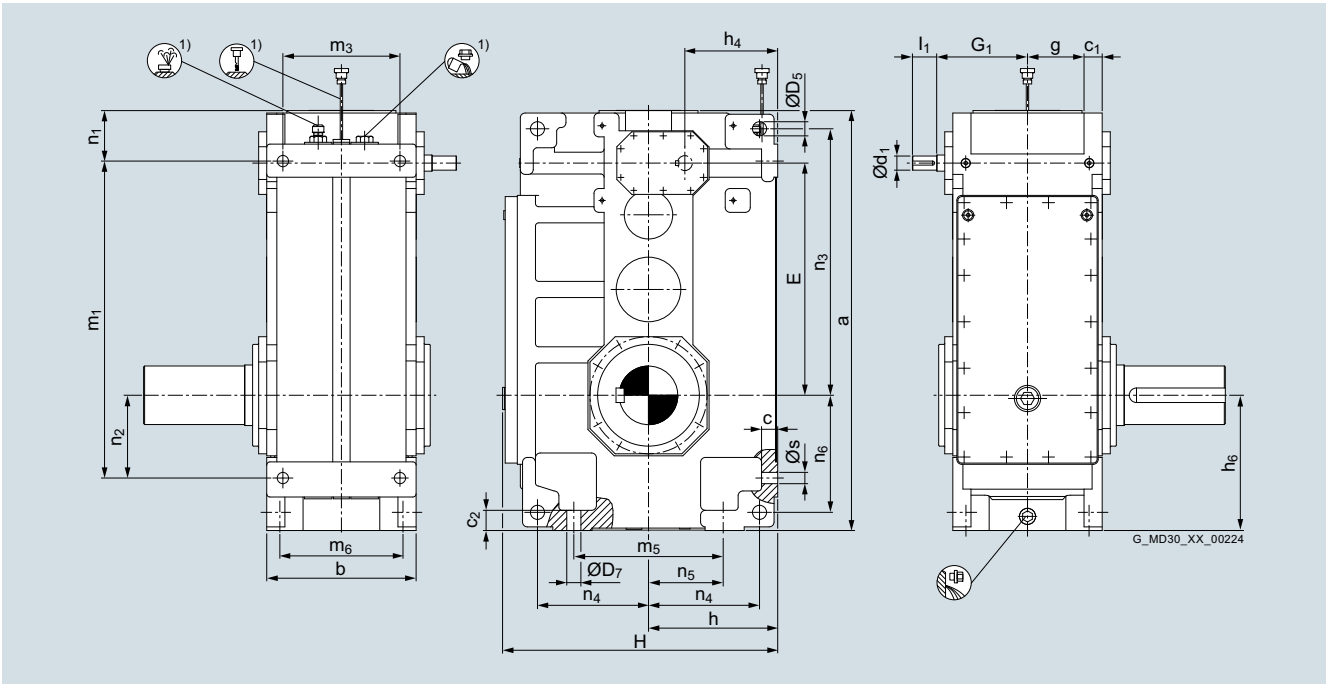
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Helical gear units upright mounting position, output at bottom

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	

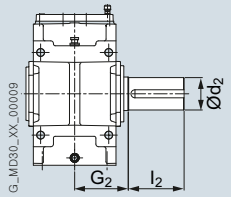
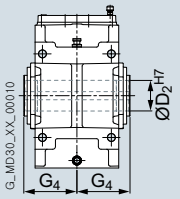
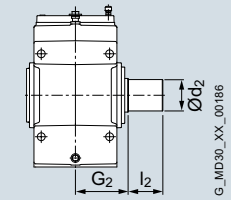
Gear unit sizes	Dimensions in mm																						
	a	b	c	c_1	c_2	D_5	D_7	E	g	H	h [2]	h_4	h_6 [2]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
507	899	295	35	35	40	28	28	493.5	112.5	605	280	198	295	680	230	320	240	104	180	567.5	242.5	160	257.5	24
508	1006	295	35	35	40	28	28	540.5	112.5	605	280	198	355	787	230	320	240	104	240	614.5	242.5	160	317.5	24

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on other options.
[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27	
Article No.							2LP202 . - ■ ■ R . . -	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
H4SL	**507**	120 n6	210	195	60	520	**6 A**	
	508	130 n6	250	195	72	640	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
H4HL	**507**	115 H7		195	60	520	**6 D**	
	508	125 H7		195	72	640	**7 D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
H4DL	**507**	120 H6	120	195	290	60	520	**6 G**
	508	130 H6	130	195	305	72	640	**7 G**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
H4KL	**507**	N120×3×38×9H	114	120	195	60	520	**6 N**
	508	N120×3×38×9H	114	130	195	72	640	**7 N**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
H4CL	**507**	130 g6	115	195	60	520	**6 U**	
	508	130 g6	115	195	72	640	**7 U**	

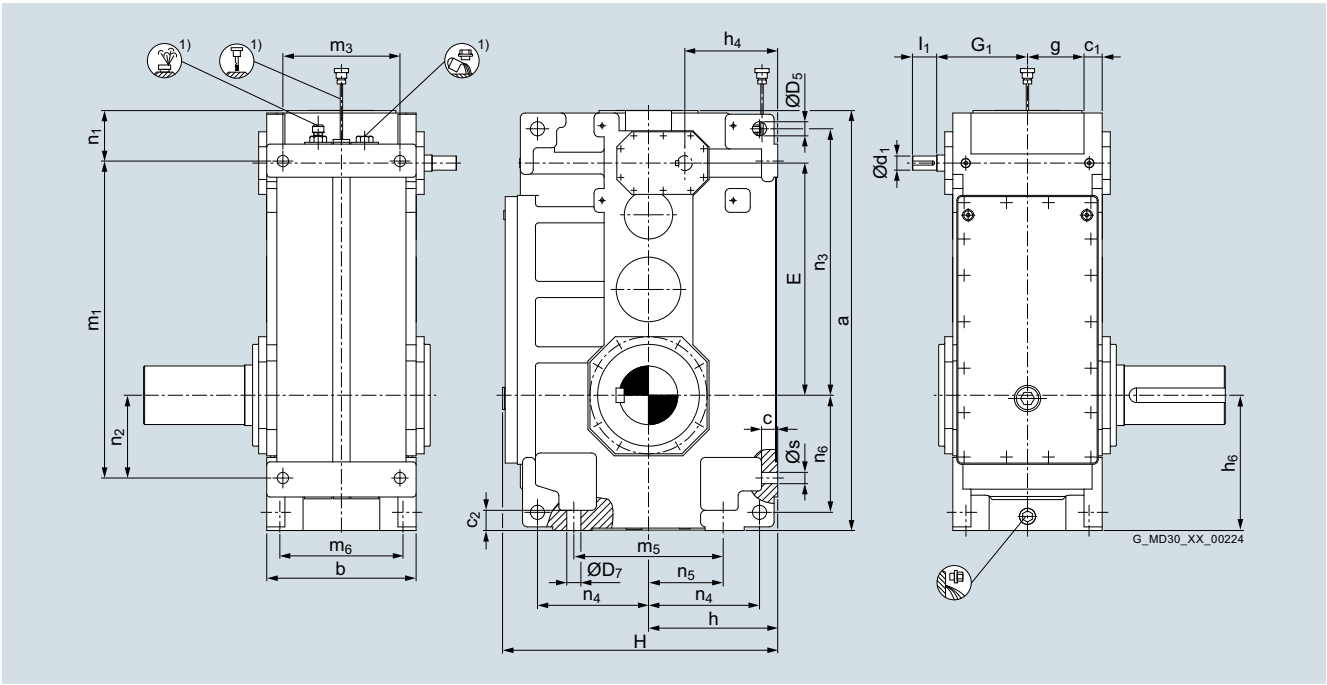
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Helical gear units upright mounting position, output at bottom

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	

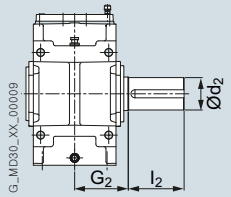
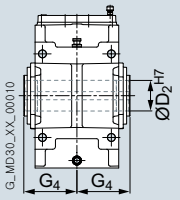
Gear unit sizes	Dimensions in mm																							
	a	b	c	c_1	c_2	D_5	D_7	E	g	H	h [2]	h_4	h_6 [2]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
509	1040	370	40	45	50	35	35	575	140	685	320	230	335	785	290	370	305	125	205	660	275	185	290	28
510	1158	370	40	45	50	35	35	628	140	685	320	230	400	903	290	370	305	125	270	713	275	185	355	28
511	1281	430	50	60	60	40	40	706	155	810	380	270.5	415	960	340	430	350	161	255	812.5	330	215	362.5	35
512	1409	430	50	60	60	40	40	764	155	810	380	270.5	485	1088	340	430	350	161	325	870.5	330	215	432.5	35
513	1455	535	60	65	65	48	48	825	202.5	935	440	312	440	1092	445	510	445	183	260	952	380	255	380	42
514	1573	535	60	65	65	48	48	903	202.5	935	440	312	480	1210	445	510	445	183	300	1030	380	255	420	42

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 6/22.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on other options.
[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

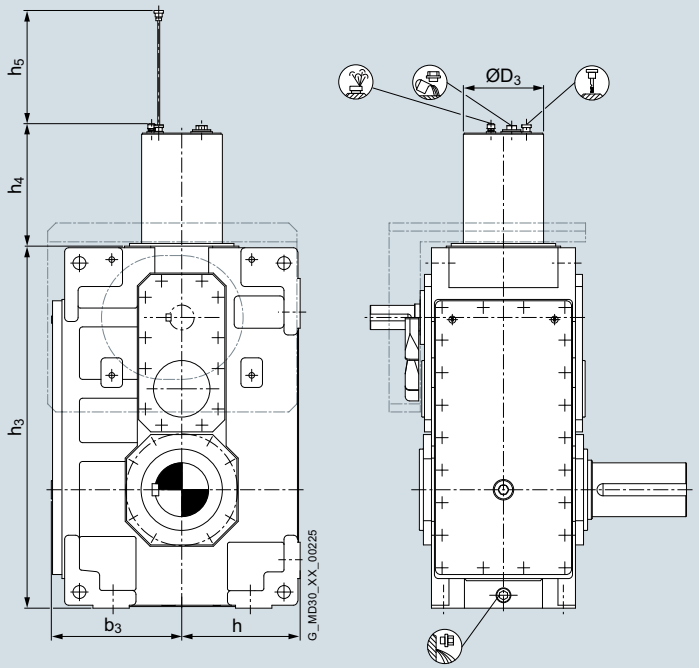
Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 6/23 to 6/27	
Article No.							2LP202 . - ■ ■ R . . -	
Type	Size	d_2	l_2	G_2	l	kg		**Solid shaft**
H4SL	**509**	145 n6	250	240	116	790	**8 A**	
	510	160 n6	300	240	120	985	**0 B**	
	511	175 n6	300	270	180	1450	**1 B**	
	512	185 n6	350	270	200	1600	**2 B**	
	513	200 n6	350	330	290	2375	**3 B**	
	514	210 n6	350	330	300	2690	**4 B**	
Type	Size	D_2		G_4	l	kg		**Hollow shaft with keyway**
H4HL	**509**	135 H7		235	116	790	**8 D**	
	510	150 H7		235	120	985	**0 E**	
	511	165 H7		270	180	1450	**1 E**	
	512	180 H7		270	200	1600	**2 E**	
	513	190 H7		330	290	2375	**3 E**	
	514	210 H7		330	300	2690	**4 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	**Hollow shaft for shrink disk**
H4DL	**509**	140 H6	145	235	350	116	790	**8 G**
	510	150 H6	155	235	370	120	985	**0 H**
	511	165 H6	170	270	420	180	1450	**1 H**
	512	180 H6	185	270	425	200	1600	**2 H**
	513	190 H6	195	330	495	290	2375	**3 H**
	514	210 H6	215	330	495	300	2690	**4 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	**Hollow shaft with spline in accordance with DIN 5480**
H4KL	**509**	N 140×3×45×9H	134	145	235	116	790	**8 N**
	510	N 140×3×45×9H	134	155	235	120	985	**0 P**
	511	N 170×5×32×9H	160	170	270	180	1450	**1 P**
	512	N 170×5×32×9H	160	185	270	200	1600	**2 P**
	513	N 190×5×36×9H	180	195	330	290	2375	**3 P**
	514	N 190×5×36×9H	180	215	330	300	2690	**4 P**
Type	Size	d_2	l_2	G_2		l	kg	**Solid shaft without keyway**
H4CL	**509**	150 g6	140	240		116	790	**8 U**
	510	170 g6	140	240		120	985	**0 V**
	511	180 g6	145	270		180	1450	**1 V**
	512	190 g6	145	270		200	1600	**2 V**
	513	220 g6	165	330		290	2375	**3 V**
	514	220 g6	165	330		300	2690	**4 V**

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

Dimensions of oil expansion unit

Overview



Dimensions in mm (Article No. supplement for 15th position see page 6/27)

Gear unit sizes	H1.L						H2.L						H3.L						H4.L					
	h [1]	b_3	d_3	h_3	h_4	h_5	h [1]	b_3	D_3	h_3	h_4	h_5	h [1]	b_3	D_3	h_3	h_4	h_5	h [1]	b_3	D_3	h_3	h_4	h_5
503	200	240	168	448	220	395	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
504	225	265	188	544	265	485	200	230	148	590	195	340	–	–	–	–	–	–	–	–	–	–	–	–
505	250	290	208	605	335	590	230	270	168	670	220	395	230	270	168	713	215	325	–	–	–	–	–	–
506	250	290	208	656	335	590	230	270	168	793	220	395	230	270	168	836	215	325	–	–	–	–	–	–
507	315	355	248	713	385	700	280	325	188	839	265	485	280	325	188	897	260	400	280	325	148	899	195	330
508	315	355	248	773	385	700	280	325	188	946	265	485	280	325	188	1004	260	400	280	325	148	1006	195	330
509	355	400	298	860	455	815	320	365	208	972	335	590	320	365	208	1038	330	500	320	365	168	1040	220	380
510	355	400	298	916	455	815	320	365	208	1090	335	590	320	365	208	1156	330	500	320	365	168	1158	220	380
511	–	–	–	–	–	–	380	430	248	1187	385	700	380	430	248	1279	380	590	380	430	188	1281	265	465
512	–	–	–	–	–	–	380	430	248	1315	385	700	380	430	248	1407	380	590	380	430	188	1409	265	465
513	–	–	–	–	–	–	440	495	298	1345	455	815	440	495	298	1452	450	700	440	495	208	1455	335	565
514	–	–	–	–	–	–	440	495	298	1463	455	815	440	495	298	1570	450	700	440	495	208	1573	335	565

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply for helical gear units H1.L, H3.L, H4.L.
"Dip lubrication with oil expansion unit" is required for H2.L gear units only when heating elements or a cooling coil are installed.

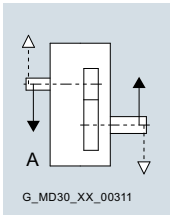
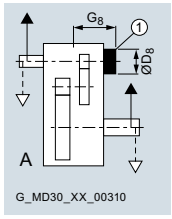
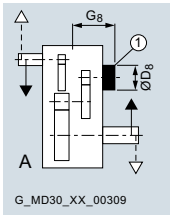
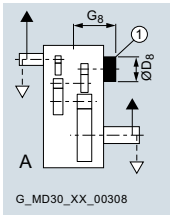
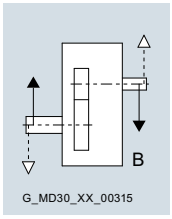
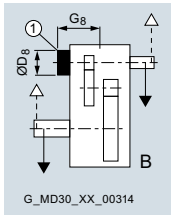
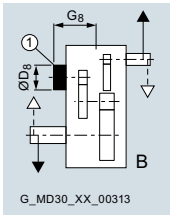
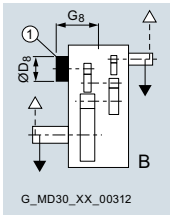
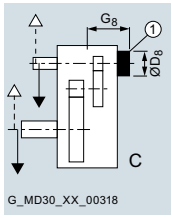
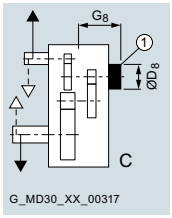
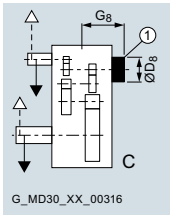
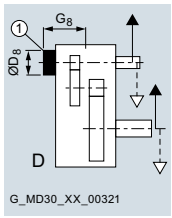
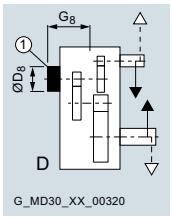
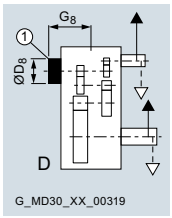
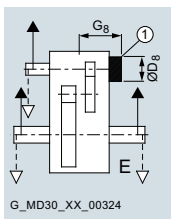
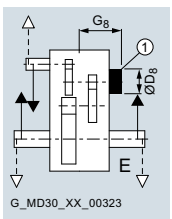
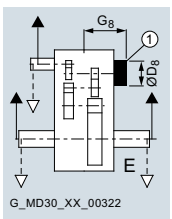
[1] Permissible tolerance: -1 mm.

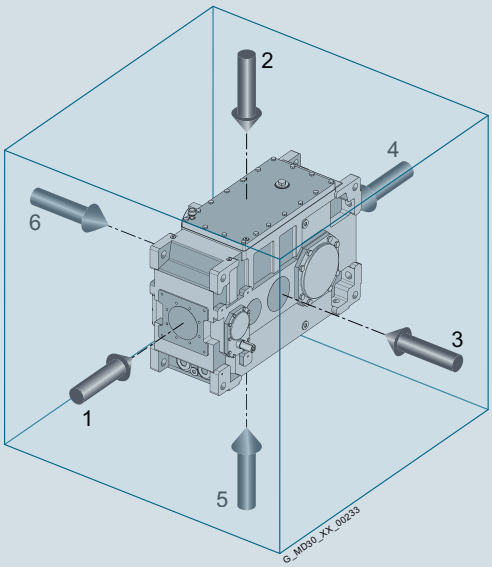
Selection and ordering data

7th position of the Article No.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	**"-Z" and order code**
Article No.	**2LP202** ■	**-**	.	.	.	.	.	**-**	.	.	.	**-Z** . . .

Design variant (view directed at face 2, face 4 at bottom)

	Type H1..	Type H2..	Type H3..	Type H4..	
A	 G_MD30_XX_00311	 G_MD30_XX_00310	 G_MD30_XX_00309	 G_MD30_XX_00308	0
B	 G_MD30_XX_00315	 G_MD30_XX_00314	 G_MD30_XX_00313	 G_MD30_XX_00312	1
C –		 G_MD30_XX_00318	 G_MD30_XX_00317	 G_MD30_XX_00316	2
D –		 G_MD30_XX_00321	 G_MD30_XX_00320	 G_MD30_XX_00319	3
E –		 G_MD30_XX_00324	 G_MD30_XX_00323	 G_MD30_XX_00322	4



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

Face 3 = right
Face 6 = left

① Backstop

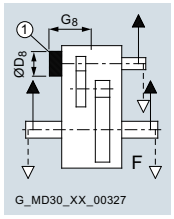
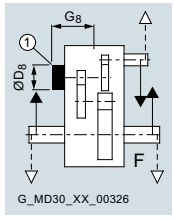
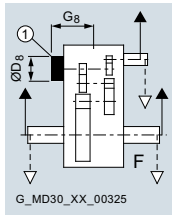
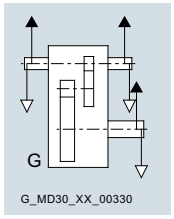
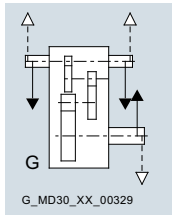
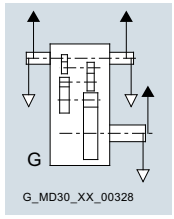
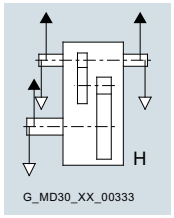
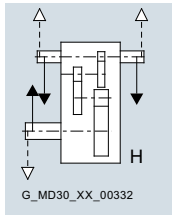
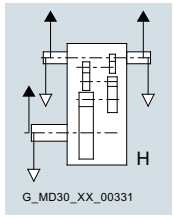
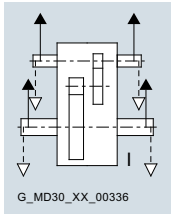
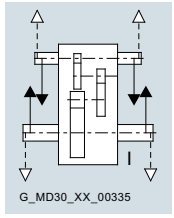
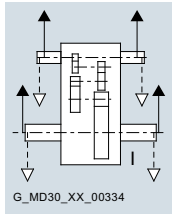
Article No. overview

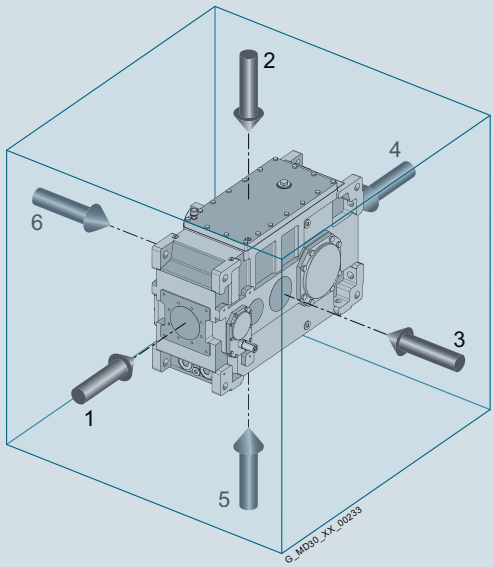
Selection and ordering data (continued)

7th position of the Article No. *(continued)*

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	**"-Z" and order code**
Article No.	**2LP202** ■	-	.	.	.	.	.	-	.	.	.	**-Z** . . .

Design variant (view directed at face 2, face 4 at bottom)

	Type H1..	H2.. [1]	H3..	H4..	
F	–	 G_MD30_XX_00327	 G_MD30_XX_00326	 G_MD30_XX_00325	**5**
G	–	 G_MD30_XX_00330	 G_MD30_XX_00329	 G_MD30_XX_00328	**6**
H	–	 G_MD30_XX_00333	 G_MD30_XX_00332	 G_MD30_XX_00331	**7**
I	–	 G_MD30_XX_00336	 G_MD30_XX_00335	 G_MD30_XX_00334	**8**



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

Face 3 = right
Face 6 = left

① Backstop

[1] **Designs G, H, I** on request.

Selection and ordering data (continued)

8th to 10th position of the Article No.

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**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**								

Article No. overview

Selection and ordering data (continued)

8th to 10th position of the Article No. *(continued)*

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**2LP202**	.	-	■	■	■	.	.	.	-	.	.	.	.	**-Z**	.	.	.
Output shaft, gear unit size																				
Output shaft	**Gear unit size**																			
Hollow shaft with spline in accordance with DIN 5480 (K)																				
	504				**3**	**N**														
	505				**4**	**N**														
	506				**5**	**N**														
	507				**6**	**N**														
	508				**7**	**N**														
	509				**8**	**N**														
	510				**0**	**P**														
	511				**1**	**P**														
	512				**2**	**P**														
	513				**3**	**P**														
	514				**4**	**P**														
Solid shaft without keyway (C)																				
	504				**3**	**U**														
	505				**4**	**U**														
	506				**5**	**U**														
	507				**6**	**U**														
	508				**7**	**U**														
	509				**8**	**U**														
	510				**0**	**V**														
	511				**1**	**V**														
	512				**2**	**V**														
	513				**3**	**V**														
	514				**4**	**V**														
Gear unit type, number of stages, mounting position																				
H1.L							**V**													
H2.L							**P**													
H3.L							**Q**													
H4.L							**R**													

Selection and ordering data (continued)

Article No. supplement, 11th to 16th position

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code		
	Article No.	2LP202	.	-	.	.	■	■	-	■	■	■	-Z	■	■	■
Seal for shaft 1 [1]															
Shaft d_1 at one end with 1 × shaft seal							0								
Shaft d_1 at both ends with 1 × shaft seal at both ends							1								
Shaft d_1 at one end with taconite E							4								
Shaft d_1 at both ends with taconite E at both ends							5								
Seal for shaft 2 [1]															
Shaft d_2 at one end with 1 × shaft seal								0							
Shaft d_2 at both ends with 1 × shaft seal at both ends								1							
Shaft d_2 at one end with taconite F								4							
Shaft d_2 at both ends with taconite F at both ends								5							
Shaft d_2 with taconite F-F								6							
Shaft d_2 with taconite F-H								7							
Shaft d_2 with taconite F-K								8							
Shaft variants															
Standard shaft d_1 and standard shaft d_2									0						
Gear ratio															
	Type/gear unit size														
	H1..			H2..	H3..	H4..									
	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 [2]											A				
Dip lubrication with oil expansion unit											B				
Other oil supply											Z		Q	0	Y
Auxiliary cooling															
Without auxiliary cooling												0			
Auxiliary cooling with fan												1			
Auxiliary cooling by cooling coil; connections to gear unit face 4 (end face d_2)												2			
Auxiliary cooling by fan and cooling coil; connections to gear unit face 4 (end face d_2)												3			
Auxiliary cooling by cooling coil; connections to gear unit face 1 (end face d_1)												4			
Auxiliary cooling by fan and cooling coil; connections to gear unit face 1 (end face d_1)												5			

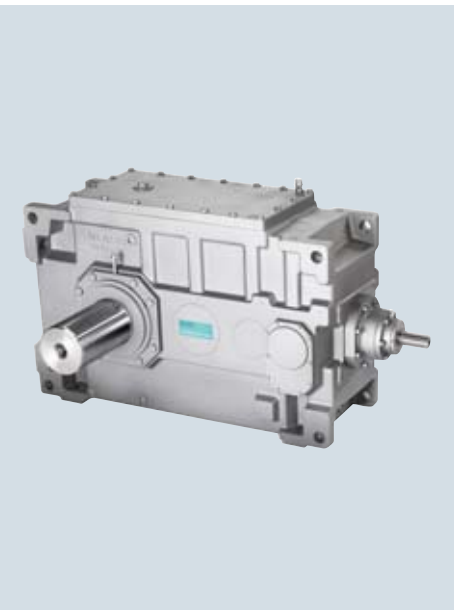
[1] Additional details see page 11/2.

[2] Only for H2.L without heating elements or cooling coil.

Notes

Bevel-helical gear units horizontal mounting position

7



7/2 **Type B2**
Gear unit dimensions
7/2 Two-stage, gear unit sizes 503 to 508
7/4 Two-stage, gear unit sizes 509 and 510

7/6 **Type B3**
Gear unit dimensions
7/6 Three-stage, gear unit sizes 504 to 508
7/8 Three-stage, gear unit sizes 509 to 512
7/10 Three-stage, gear unit sizes 513 and 514

7/12 **Type B4**
Gear unit dimensions
7/12 Four-stage, gear unit sizes 505 to 508
7/14 Four-stage, gear unit sizes 509 to 514

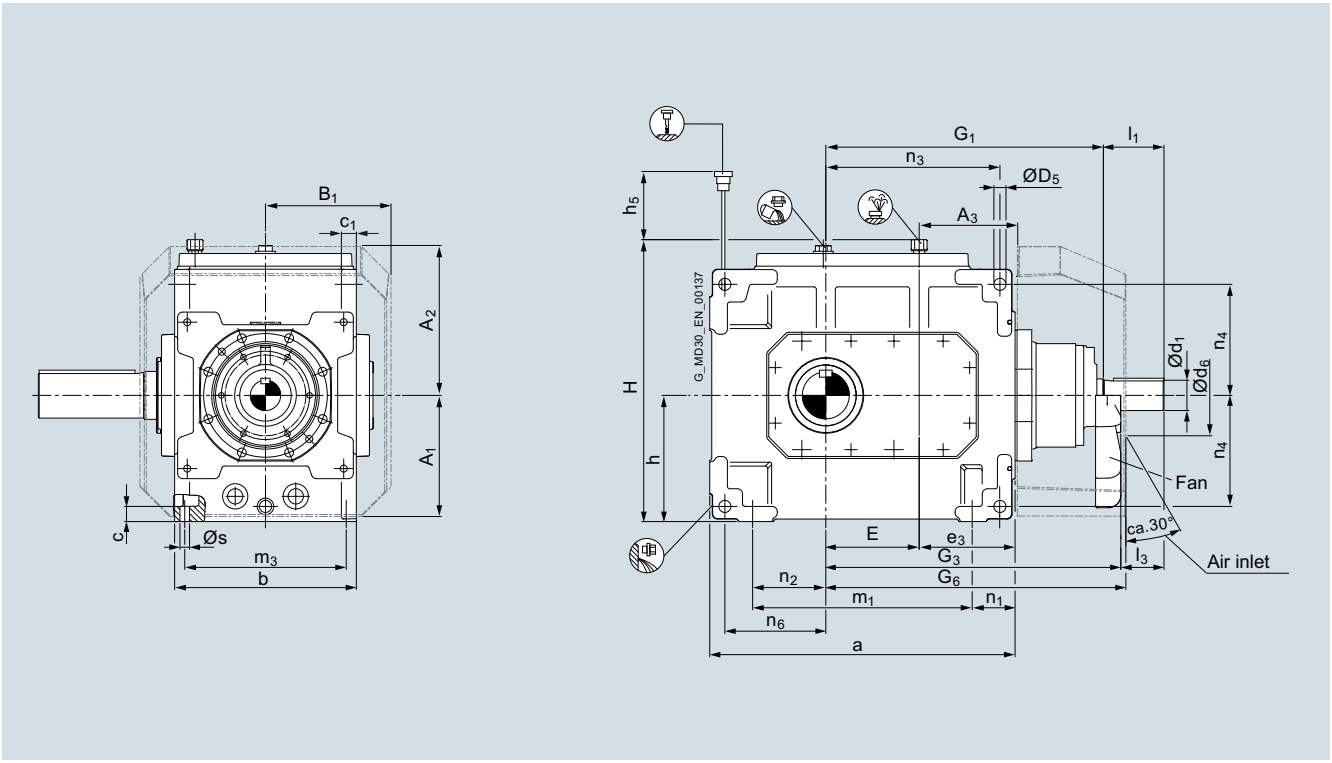
7/16 **Types B2, B3 and B4**
7/16 Article No. overview

Bevel-helical gear units horizontal mounting position

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** [1]					
		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 =	5 – 14			16										
503		40 m6	90	70	35 m6	80	60	393	413	190	255	130	195	135	433
	i_N =	5 – 14			16										
504		50 m6	110	90	40 m6	90	70	465	485	215	280	160	230	150	504
	i_N =	5 – 14			16										
505		60 m6	120	90	50 m6	110	80	550	580	240	305	190	260	175	600
	i_N =	6.3 – 18			20										
506		60 m6	120	90	50 m6	110	80	581	611	240	305	190	260	175	631
	i_N =	5 – 14			16										
507		75 m6	135	100	60 m6	135	100	656	691	300	370	225	320	210	718
	i_N =	6 – 17			19										
508		75 m6	135	100	60 m6	135	100	686	721	300	370	225	320	210	748

Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	e_3	H	h [2]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
503	448	260	25	25	19	128	130	460	200	85	290	220	78	110	230	175	165	15
504	544	325	30	30	24	159	160	510	225	205	360	280	96.5	137.5	290	195	195	19
505	605	360	30	30	24	185	190	560	250	145	435	320	85	145	345	220	200	19
506	656	360	30	30	24	216	190	560	250	145	486	320	85	165	376	220	220	19
507	713	465	35	40	28	228	225	700	315	145	480	410	118	145	415	280	225	24
508	773	465	35	40	28	258	225	700	315	145	540	410	118	175	445	280	255	24

Note:

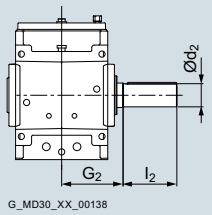
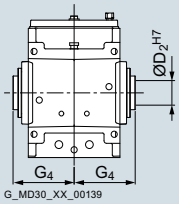
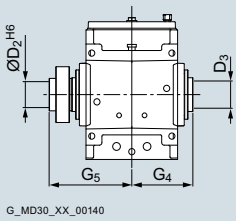
For shaft details, see pages 10/2 to 10/7.

[1] Maximum dimension including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 7/16 to 7/19	
Article 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	428	**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	428	**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	428	**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**

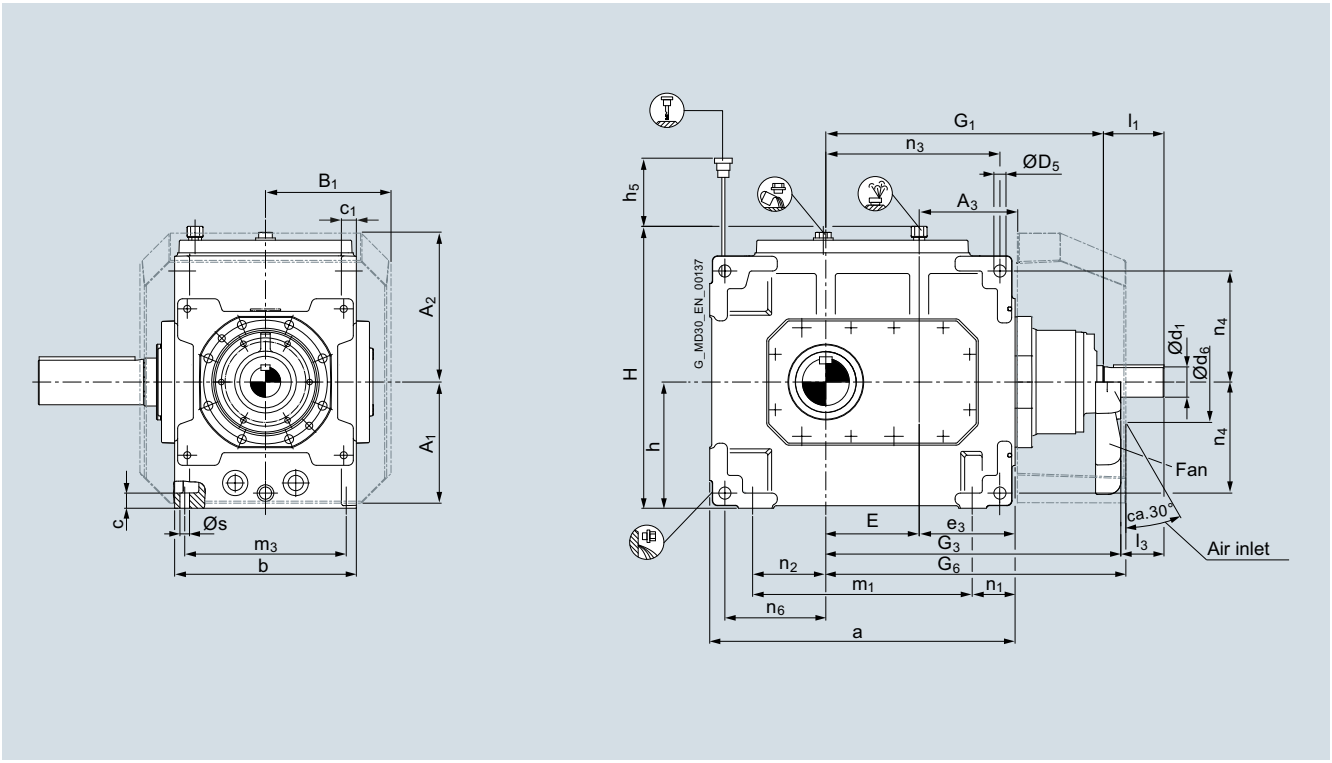
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units horizontal mounting position

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** [1]						
		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 =	5 – 11.2			12.5 –16										
509		80 m6	165	130	70 m6	140	105	792	827	340	410	265	360	240	850
	i_N =	6 – 13.2			15 – 19										
510		80 m6	165	130	70 m6	140	105	823	858	340	410	265	360	240	881

Gear unit sizes	Dimensions in mm																	
	a	b	c	c_1	D_5	E	e_3	H	h [2]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
509	860	550	40	55	35	265	265	780	355	150	575	480	145	190	480	307.5	282.5	28
510	916	550	40	55	35	296	265	780	355	150	631	480	145	215	511	307.5	307.5	28

Note:

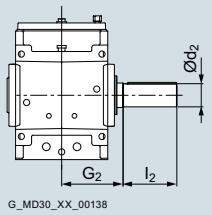
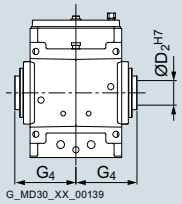
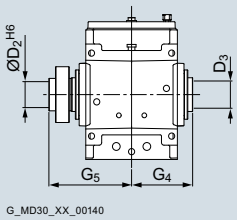
For shaft details, see pages 10/2 to 10/7.

[1] Maximum dimension including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]			7th position of Article No. and Article No. supplement for 11th to 16th position see pages 7/16 to 7/19
Article 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**	

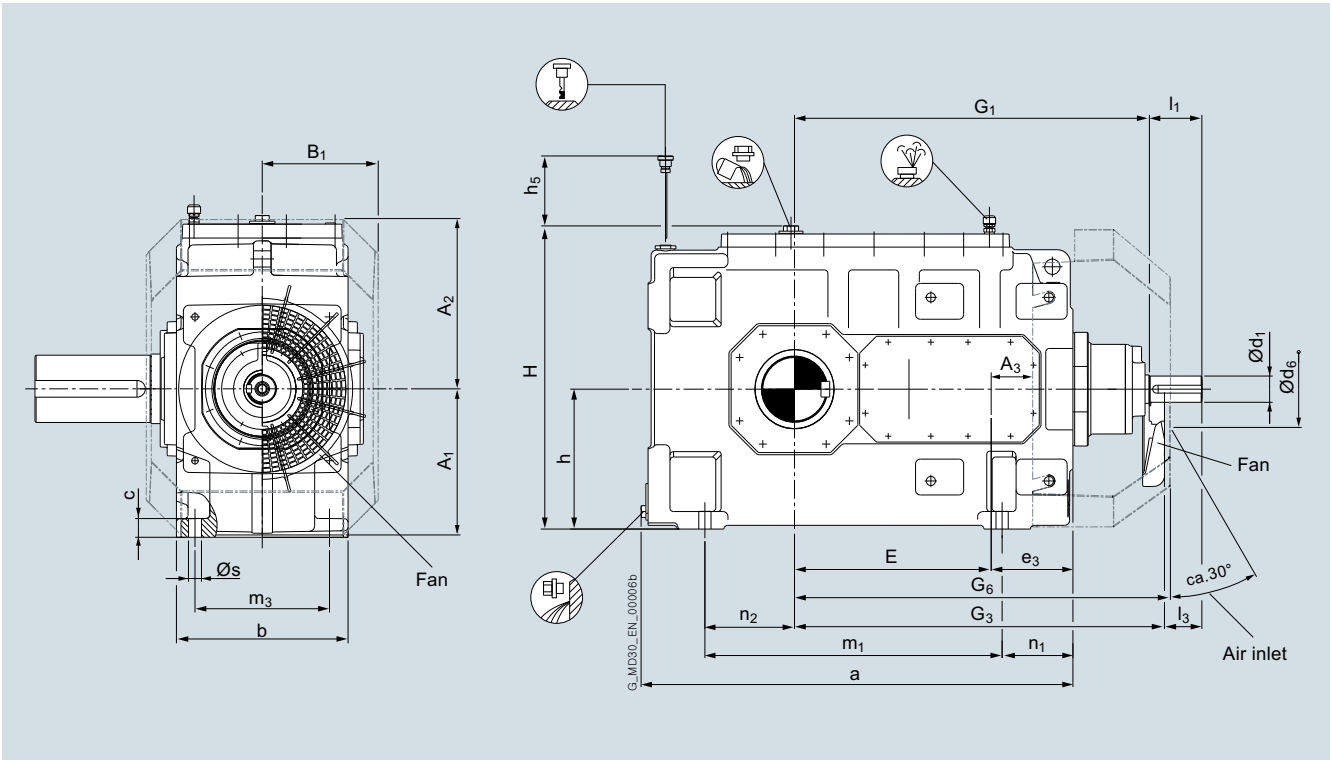
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

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** [1]					
		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	535
	i_N =	14 – 50			56										
505		40 m6	90	70	35 m6	80	60	575	595	225	280	50	195	135	610
	i_N =	20 – 71			80										
506		40 m6	90	70	35 m6	80	60	628	648	225	280	50	195	135	663
	i_N =	14 – 50			56										
507		50 m6	110	90	40 m6	90	70	690	710	275	335	65	220	160	725
	i_N =	18 – 63			71										
508		50 m6	110	90	40 m6	90	70	737	757	275	335	65	220	160	772

Gear unit sizes	Dimensions in mm												
	a	b	c	E	e_3	H	h [2]	h_5	m_1	m_3	n_1	n_2	s
504	604	210	28	269.5	110.5	465	200	215	415	170	95	130	19
505	684	250	30	310	130	530	230	350	490	200	95	145	19
506	807	250	30	363	130	530	230	350	613	200	95	215	19
507	855	295	35	384	160	635	280	305	595	230	129	180	24
508	962	295	35	431	160	635	280	305	702	230	129	240	24

Note:

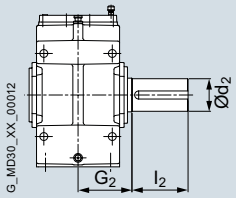
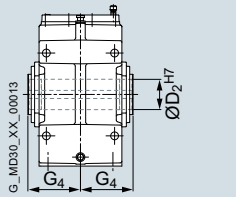
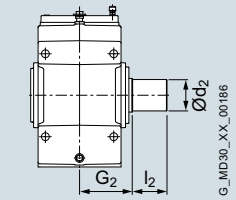
For shaft details, see pages 10/2 to 10/7.

[1] Maximum dimension including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 7/16 to 7/19	
Article 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	340	**4 A**	
	506	110 n6	210	165	20	395	**5 A**	
	507	120 n6	210	195	32	580	**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	340	**4 D**	
	506	105 H7		165	20	395	**5 D**	
	507	115 H7		195	32	580	**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	340	**4 G**
	506	110 H6	110	165	260	20	395	**5 G**
	507	120 H6	120	195	290	32	580	**6 G**
	508	130 H6	130	195	305	35	630	**7 G**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
B3KH	**504**	N80×3×25×9H	74	80	140	10	195	**3 N**
	505	N95×3×30×9H	89	100	165	18	340	**4 N**
	506	N95×3×30×9H	89	110	165	20	395	**5 N**
	507	N120×3×38×9H	114	120	195	32	580	**6 N**
	508	N120×3×38×9H	114	130	195	35	630	**7 N**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B3CH	**504**	85 g6	100	140	10	195	**3 U**	
	505	110 g6	115	165	18	340	**4 U**	
	506	120 g6	115	165	20	395	**5 U**	
	507	130 g6	115	195	32	580	**6 U**	
	508	130 g6	115	195	35	630	**7 U**	

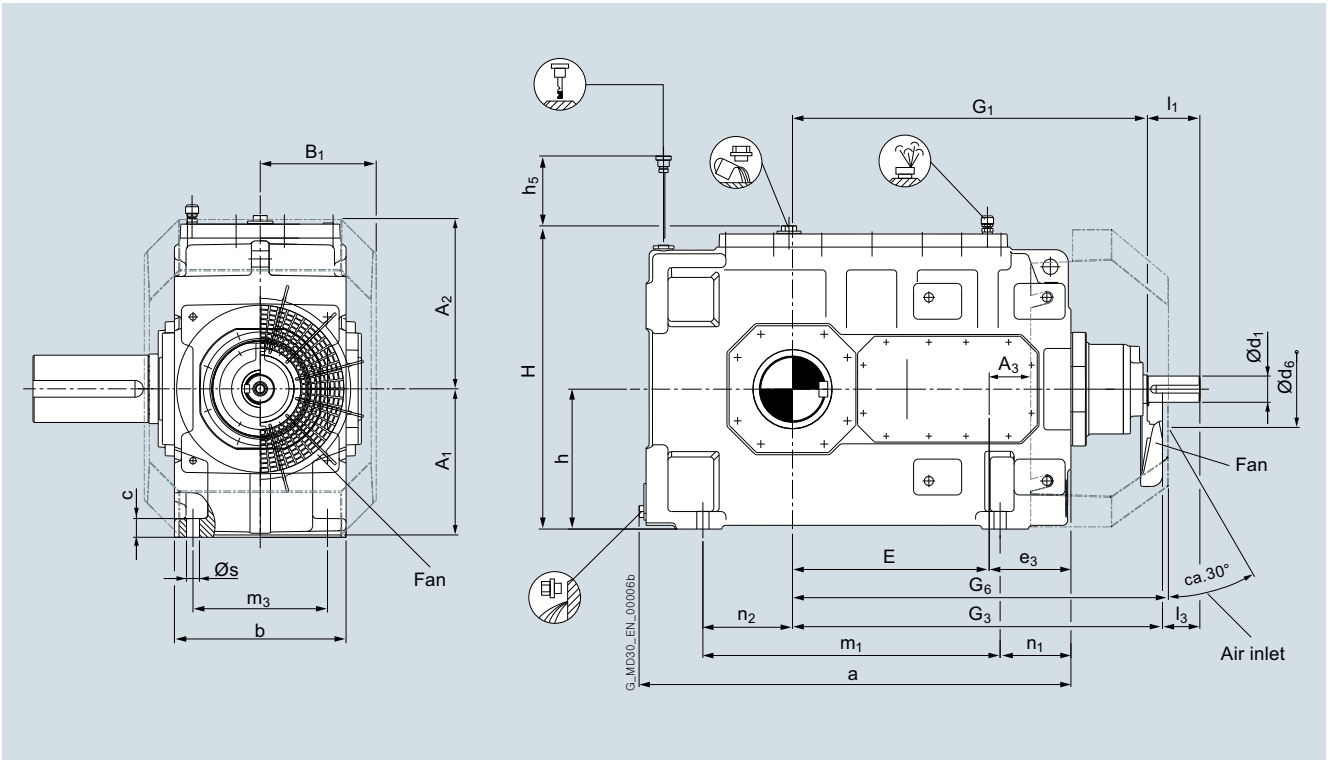
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units horizontal mounting position

Type B3

Gear unit dimensions
Three-stage, gear unit sizes 509 to 512

Selection and ordering data



Gear unit sizes		Dimensions in mm													
		Input								**Fan** [1]					
		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	862
	i_N =	18 – 63			71										
510		60 m6	120	90	50 m6	110	80	865	895	315	375	95	270	175	915
	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

Gear unit sizes	Dimensions in mm												
	a	b	c	E	e_3	H	h [2]	h_5	m_1	m_3	n_1	n_2	s
509	988	370	40	447	190	715	320	350	680	290	162	205	28
510	1106	370	40	500	190	715	320	350	798	290	162	270	28
511	1204	430	50	547	225	830	380	425	825	340	202	255	35
512	1332	430	50	605	225	830	380	425	953	340	202	325	35

Note:

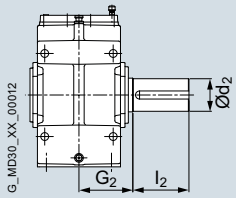
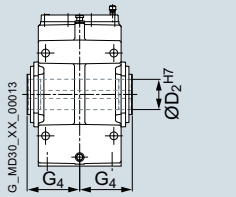
For shaft details, see pages 10/2 to 10/7.

[1] Maximum dimension including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]			7th position of Article No. and Article No. supplement for 11th to 16th position see pages 7/16 to 7/19
Article 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	100	1570	**2**	**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	100	1570	**2**	**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	100	1570	**2**	**H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		**Hollow shaft with spline in accordance with DIN 5480**
B3KH	**509**	N 140×3×45×9H	134	145	235	53	905	**8**	**N**
	510	N 140×3×45×9H	134	155	235	51	960	**0**	**P**
	511	N 170×5×32×9H	160	170	270	84	1455	**1**	**P**
	512	N 170×5×32×9H	160	185	270	100	1570	**2**	**P**
Type	Size	d_2	l_2	G_2		l	kg		**Solid shaft without keyway**
B3CH	**509**	150 g6	140	240		53	905	**8**	**U**
	510	170 g6	140	240		51	960	**0**	**V**
	511	180 g6	145	270		84	1455	**1**	**V**
	512	190 g6	145	270		100	1570	**2**	**V**

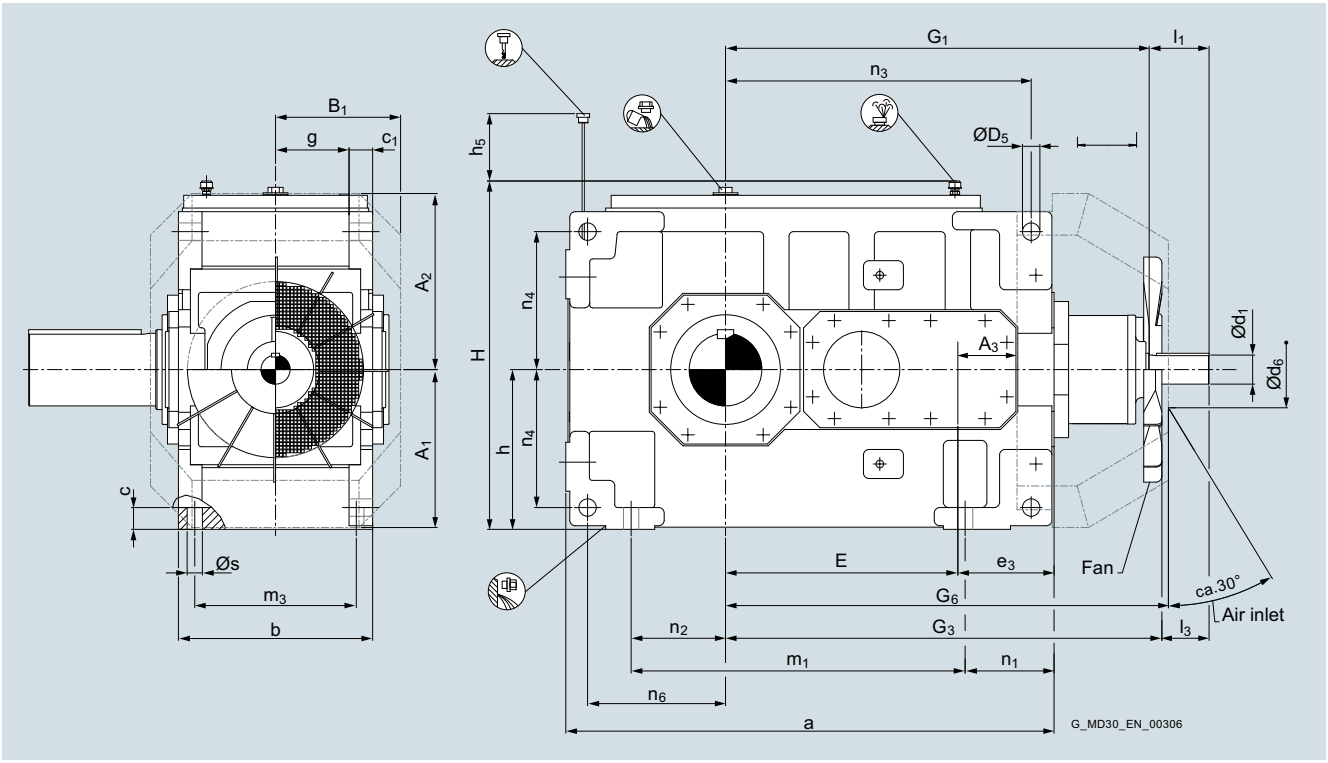
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units horizontal mounting position

Type B3

Gear unit dimensions
Three-stage, gear unit sizes 513 and 514

Selection and ordering data



Gear unit sizes		Dimensions in mm													
		Input								**Fan** [1]					
		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 – 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																	
	a	b	c	c_1	D_5	E	e_3	g	H	h [2]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
513	1345	535	60	65	48	640	265	202.5	950	440	185	920	445	245	260	842	380	380	42
514	1463	535	60	65	48	718	265	202.5	950	440	185	1038	445	245	300	920	380	420	42

Note:

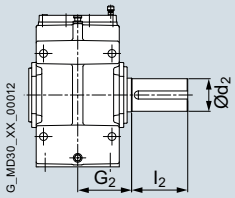
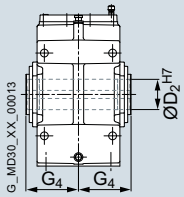
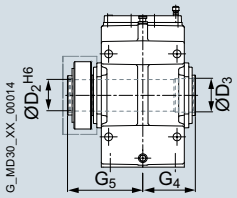
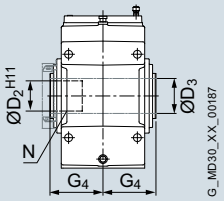
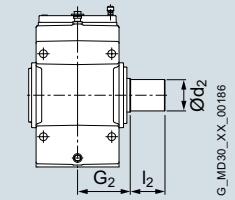
For shaft details, see pages 10/2 to 10/7.

[1] Maximum dimension including bolted connection. See order-related documentation for exact data.

[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 7/16 to 7/19	
Article No.:						2LP202.-■■B..-....		
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B3SH	**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	**513**	190 H7		330	145	2500	**3 E**	
	514	210 H7		330	155	2850	**4 E**	
Type	Size	D_2	D_3	G_4	l	kg		Hollow shaft for shrink disk
B3DH	**513**	190 H6	195	330	145	2500	**3 H**	
	514	210 H6	215	330	155	2850	**4 H**	
Type	Size	N/DIN 5480	D_2	D_3	l	kg		Hollow shaft with spline in accordance with DIN 5480
B3KH	**513**	N 190×5×36×9H	180	195	145	2500	**3 P**	
	514	N 190×5×36×9H	180	215	155	2850	**4 P**	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B3CH	**513**	220 g6	165	330	145	2500	**3 V**	
	514	220 g6	165	330	155	2850	**4 V**	

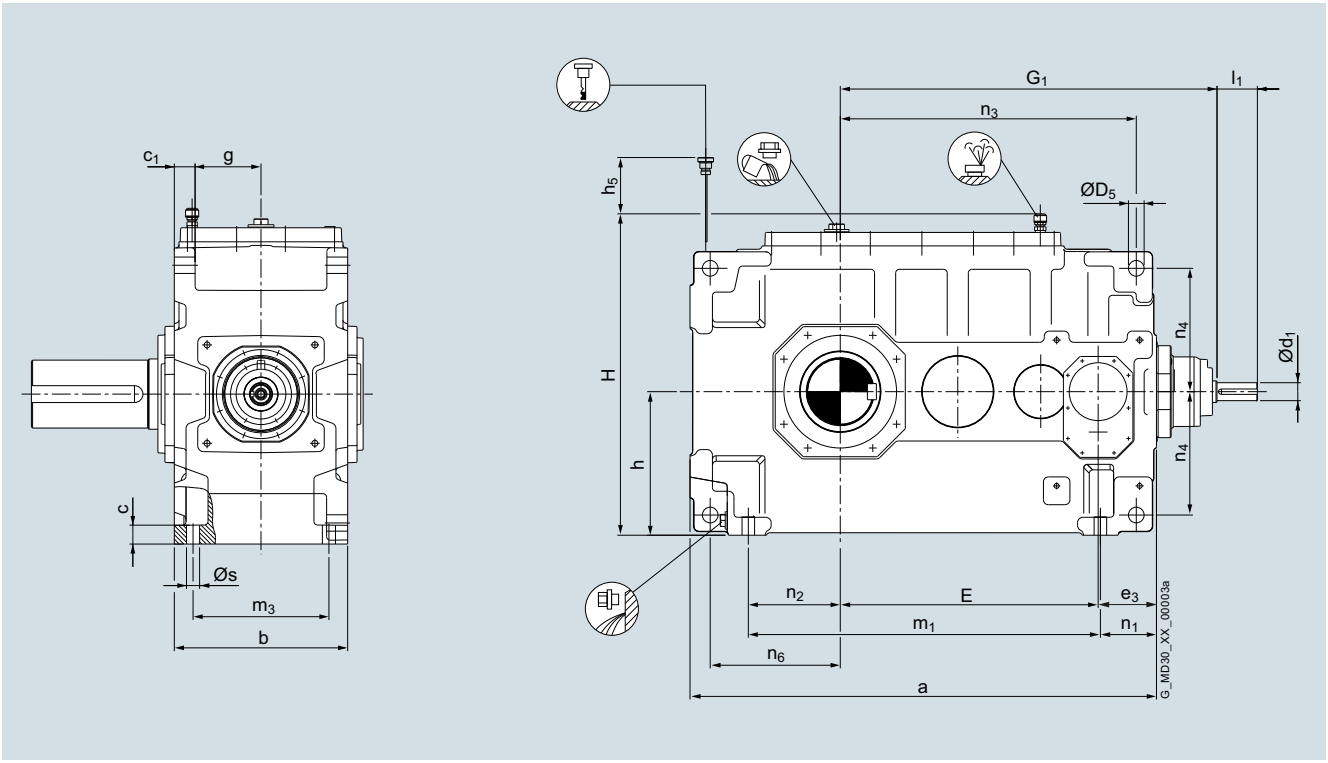
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units horizontal mounting position

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																		
	a	b	c	c_1	D_5	E	e_3	g	H	h [1]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
505	720	250	30	30	24	400	90	95	530	230	105	530	200	105	145	457.5	202.5	202.5	19
506	843	250	30	30	24	453	90	95	530	230	105	653	200	105	215	510.5	202.5	272.5	19
507	899	295	35	35	28	493.5	110.5	112.5	635	280	115	680	230	104	180	567.5	242.5	257.5	24
508	1006	295	35	35	28	540.5	110.5	112.5	635	280	115	787	230	104	240	614.5	242.5	317.5	24

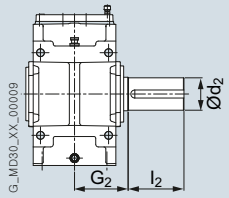
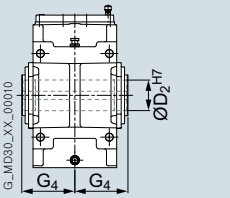
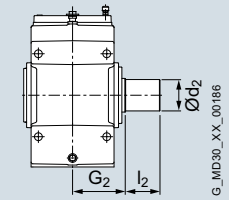
Note:

For shaft details, see pages 10/2 to 10/7.

[1] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 7/16 to 7/19	
Article 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**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
B4KH	**505**	N95×3×30×9H	89	100	165	19	330	**4 N**
	506	N95×3×30×9H	89	110	165	21	375	**5 N**
	507	N120×3×38×9H	114	120	195	35	530	**6 N**
	508	N120×3×38×9H	114	130	195	38	625	**7 N**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B4CH	**505**	110 g6	115	165	19	330	**4 U**	
	506	120 g6	115	165	21	375	**5 U**	
	507	130 g6	115	195	35	530	**6 U**	
	508	130 g6	115	195	38	625	**7 U**	

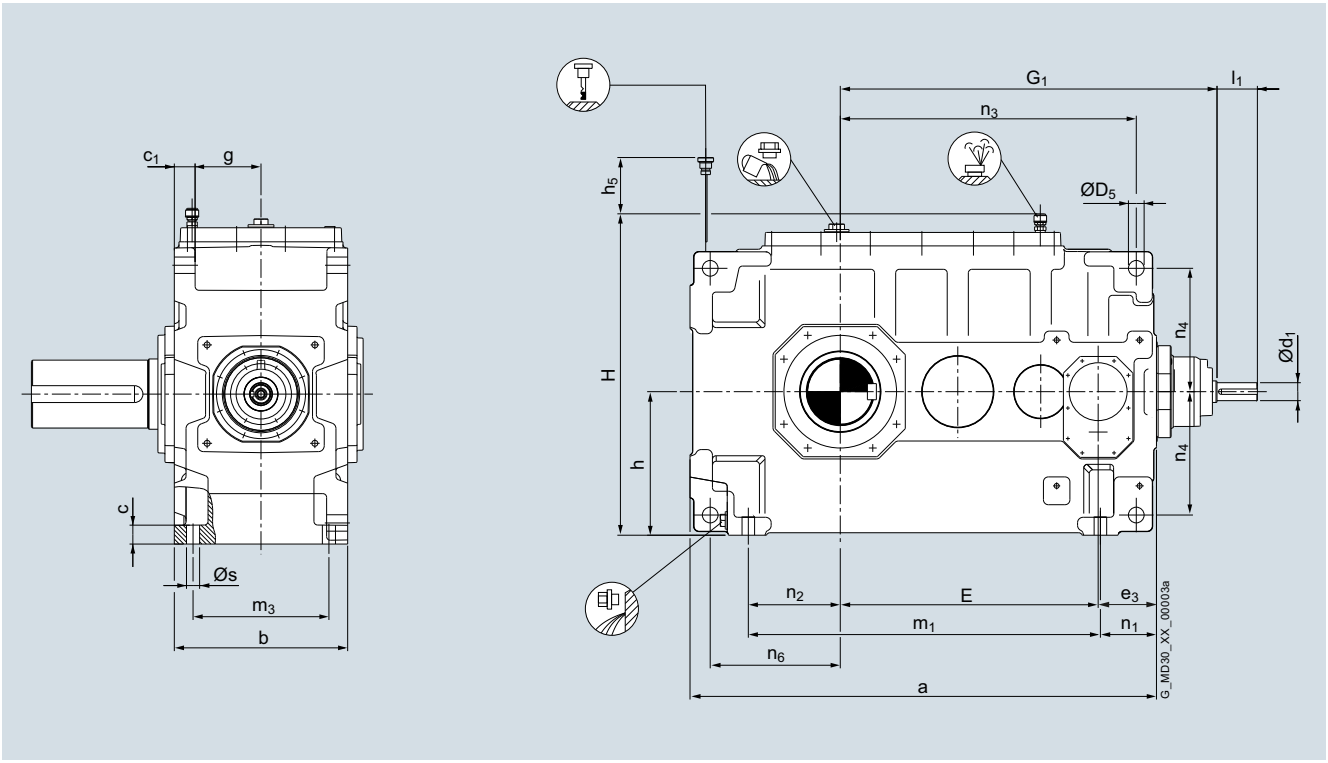
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units horizontal mounting position

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																		
	a	b	c	c_1	D_5	E	e_3	g	H	h [1]	h_5	m_1	m_3	n_1	n_2	n_3	n_4	n_6	s
509	1040	370	40	45	35	575	130	140	715	320	135	785	290	125	205	660	275	290	28
510	1158	370	40	45	35	628	130	140	715	320	135	903	290	125	270	713	275	355	28
511	1281	430	50	60	40	706	160	155	830	380	150	960	340	161	255	812.5	330	362.5	35
512	1409	430	50	60	40	764	160	155	830	380	150	1088	340	161	325	870.5	330	432.5	35
513	1455	535	60	65	48	825	190	202.5	950	440	170	1092	445	183	260	952	380	380	42
514	1573	535	60	65	48	903	190	202.5	950	440	170	1210	445	183	300	1030	380	420	42

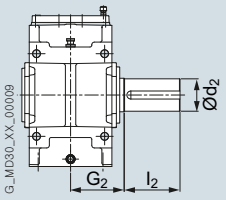
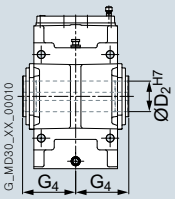
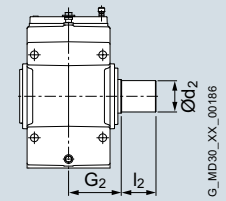
[1] Permissible tolerance: -1 mm.

Note:

For shaft details, see pages 10/2 to 10/7.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 7/16 to 7/19	
Article 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	1495	**1 B**	
	512	185 n6	350	270	97	1565	**2 B**	
	513	200 n6	350	330	160	2400	**3 B**	
	514	210 n6	350	330	165	2700	**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	1495	**1 E**	
	512	180 H7		270	97	1565	**2 E**	
	513	190 H7		330	160	2400	**3 E**	
	514	210 H7		330	165	2700	**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	1495	**1 H**
	512	180 H6	185	270	425	97	1565	**2 H**
	513	190 H6	195	330	495	160	2400	**3 H**
	514	210 H6	215	330	495	165	2700	**4 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
B4KH	**509**	N 140×3×45×9H	134	140	235	60	800	**8 N**
	510	N 140×3×45×9H	134	155	235	60	995	**0 P**
	511	N 170×5×32×9H	160	170	270	93	1495	**1 P**
	512	N 170×5×32×9H	160	185	270	97	1565	**2 P**
	513	N 190×5×36×9H	180	195	330	160	2400	**3 P**
	514	N 190×5×36×9H	180	215	330	165	2700	**4 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B4CH	**509**	150 g6	140	240	60	800	**8 U**	
	510	170 g6	140	240	60	995	**0 V**	
	511	180 g6	145	270	93	1495	**1 V**	
	512	190 g6	145	270	97	1565	**2 V**	
	513	220 g6	165	330	160	2400	**3 V**	
	514	220 g6	165	330	165	2700	**4 V**	

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

Bevel-helical gear units horizontal mounting position

Types B2, B3 and B4

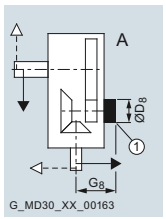
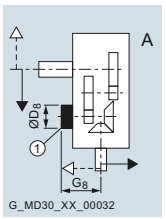
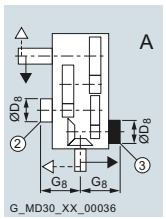
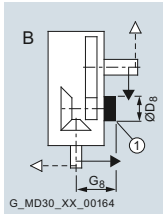
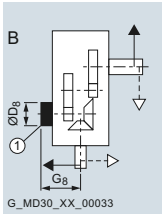
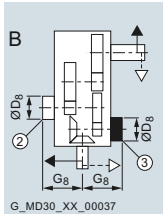
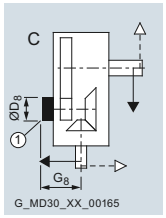
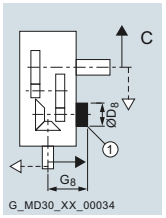
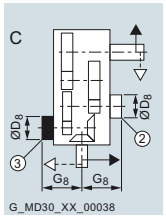
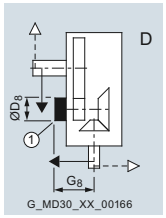
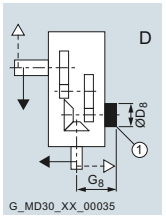
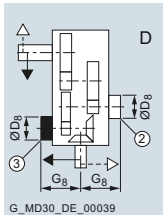
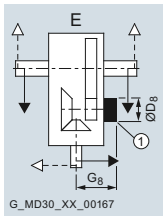
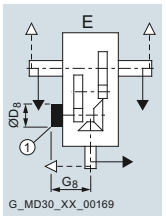
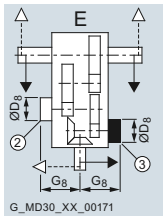
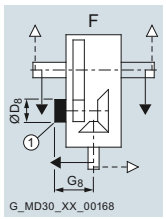
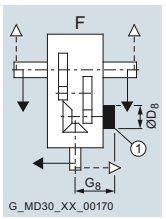
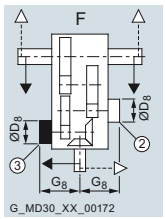
Article No. overview

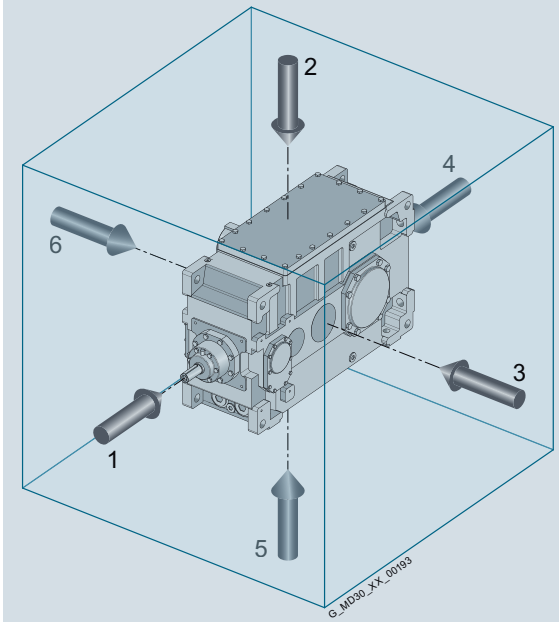
Selection and ordering data

7th position of the Article No.

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	**"-Z" and order code**
	Article No.	**2LP202**	■	-	.	.	.	.	.	-	.	.	.	.	**-Z** . . .

Design variant (view directed at face 2, face 1 at bottom)

	Type B2 to	Type B3 to	Type B4 to	
A	 G_MD30_XX_00163	 G_MD30_XX_00032	 G_MD30_XX_00036	0
B	 G_MD30_XX_00164	 G_MD30_XX_00033	 G_MD30_XX_00037	1
C	 G_MD30_XX_00165	 G_MD30_XX_00034	 G_MD30_XX_00038	2
D	 G_MD30_XX_00166	 G_MD30_XX_00035	 G_MD30_DE_00039	3
E	 G_MD30_XX_00167	 G_MD30_XX_00169	 G_MD30_XX_00171	4
F	 G_MD30_XX_00168	 G_MD30_XX_00170	 G_MD30_XX_00172	5



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

- Face 3 = right
- Face 6 = left

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 and 506

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

Selection and ordering data (continued)

8th to 10th position of the Article No.

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**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**										

Article No. overview

Selection and ordering data (continued)

8th to 10th position of the Article No. *(continued)*

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**2LP202**	.	-	■	■	■	.	.	-	.	.	.	.	**-Z** . . .
Output shaft, gear unit size														
Output shaft	**Gear unit size**													
Hollow shaft with spline in accordance with DIN 5480 (K)														
	504				**3**	**N**								
	505				**4**	**N**								
	506				**5**	**N**								
	507				**6**	**N**								
	508				**7**	**N**								
	509				**8**	**N**								
	510				**0**	**P**								
	511				**1**	**P**								
	512				**2**	**P**								
	513				**3**	**P**								
	514				**4**	**P**								
Solid shaft without keyway (C)														
	504				**3**	**U**								
	505				**4**	**U**								
	506				**5**	**U**								
	507				**6**	**U**								
	508				**7**	**U**								
	509				**8**	**U**								
	510				**0**	**V**								
	511				**1**	**V**								
	512				**2**	**V**								
	513				**3**	**V**								
	514				**4**	**V**								
Gear unit type, number of stages, mounting position														
B2.H							**A**							
B3.H							**B**							
B4.H							**C**							

7

Selection and ordering data (continued)

Article No. supplement, 11th to 16th position

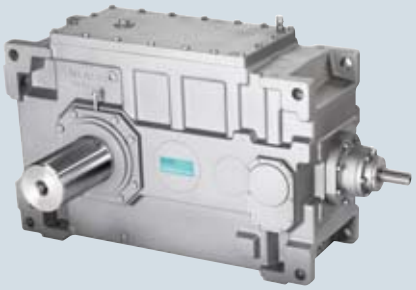
	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
	Article No.	**2LP202**	**.**	**-**	**.**	**.**	■	■	**-**	■	■	■	**-Z** ■ ■ ■
Seal for shaft 1 [1]													
Shaft d_1 at one end with 1 × shaft seal							**0**						
Shaft d_1 at one end with taconite E							**4**						
Seal for shaft 2 [1]													
Shaft d_2 at one end with 1 × shaft seal								**0**					
Shaft d_2 at both ends with 1 × shaft seal at both ends								**1**					
Shaft d_2 at one end with taconite F								**4**					
Shaft d_2 at both ends with taconite F at both ends								**5**					
Shaft d_2 taconite F-F								**6**					
Shaft d_2 taconite F-H								**7**					
Shaft d_2 taconite F-K								**8**					
Shaft variants													
Standard shaft d_1 and standard shaft d_2									**0**				
Gear ratio													
	Type/gear unit size B2.H: 503, 504, 505, 507, 509	B2.H: 506	B2.H: 508, 510	B3.H: 504 ... 514	B4.H: 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 by cooling coil, connections to gear unit face 4 (end face d_2)												**2**	
Auxiliary cooling by fan and cooling coil, connections to gear unit face 4 (end face d_2)												**3**	
Auxiliary cooling by cooling coil, connections to gear unit face 1 (end face d_1)												**4**	

[1] Additional details see page 11/2.

Notes

Bevel-helical gear units vertical mounting position

8



8/2 **Type B2**
Gear unit dimensions
8/2 Two-stage, gear unit sizes 503 to 508
8/4 Two-stage, gear unit sizes 509 and 510

8/6 **Type B3**
Gear unit dimensions
8/6 Three-stage, gear unit sizes 513 and 514

8/8 **Type B4**
Gear unit dimensions
8/8 Four-stage, gear unit sizes 505 to 508
8/10 Four-stage, gear unit sizes 509 to 514

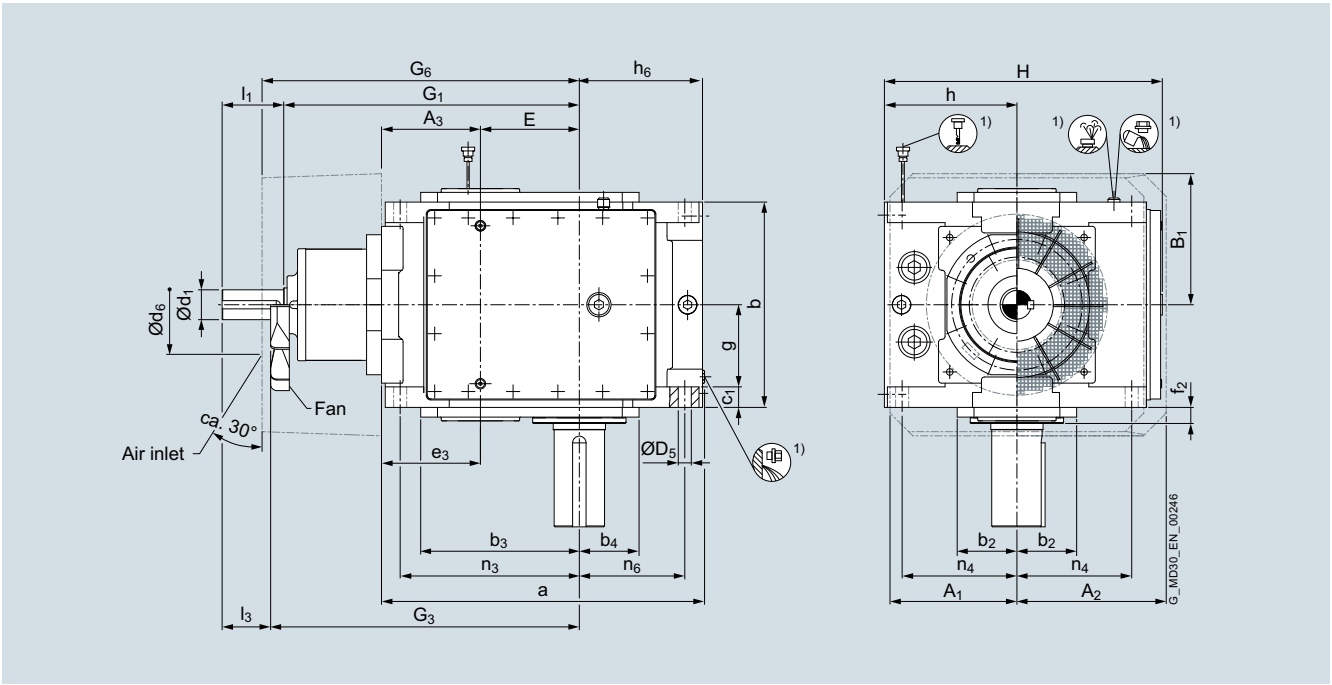
8/12 **Types B2, B3 and B4**
8/12 Dimensions of oil expansion unit
8/13 Article No. overview

Bevel-helical gear units vertical mounting position

Type B2

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

Selection and ordering data



8

Gear unit sizes		Dimensions in mm **Input**								**Fan** [2]					
		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 =	5 – 14			16										
503		40 m6	90	70	35 m6	80	60	393	413	190	255	130	195	135	433
	i_N =	5 – 14			16										
504		50 m6	110	90	40 m6	90	70	465	485	215	280	160	230	150	504
	i_N =	5 – 14			16										
505		60 m6	120	90	50 m6	110	80	550	580	240	305	190	260	175	600
	i_N =	6.3 – 18			20										
506		60 m6	120	90	50 m6	110	80	581	611	240	305	190	260	175	631
	i_N =	5 – 14			16										
507		75 m6	135	100	60 m6	135	100	656	691	300	370	225	320	210	718
	i_N =	6 – 17			19										
508		75 m6	135	100	60 m6	135	100	686	721	300	370	225	320	210	748

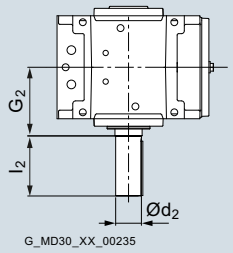
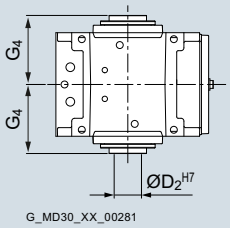
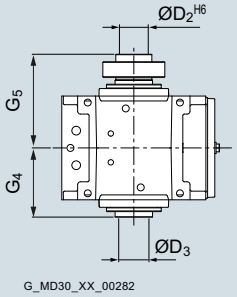
Gear unit sizes	Dimensions in mm															
	a	b	b_2 [3]	b_3 [3]	b_4 [3]	c_1	D_5	E	e_3	f_2 [3]	g	H	h [4]	h_6 [4]	n_3	n_4	n_6
503	455	260	93	202	74	25	19	128	130	55	105	440	200	190	230	175	165
504	555	325	105	256	97	30	24	159	160	58	132.5	490	225	225	290	195	195
505	620	360	121	298	113	30	24	185	190	60	150	540	250	230	345	220	200
506	670	360	126	340	124	30	24	216	190	60	150	540	250	250	376	220	220
507	730	465	149	367	139	40	28	228	225	63	192.5	670	315	260	415	280	225
508	790	465	154	397	139	40	28	258	225	63	192.5	670	315	290	445	280	255

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 8/12.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on other options.
[2] Maximum dimensions including bolted connection. See order-related documentation for exact data.
[3] Minimum dimensions, space requirements dependent on other options.
[4] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

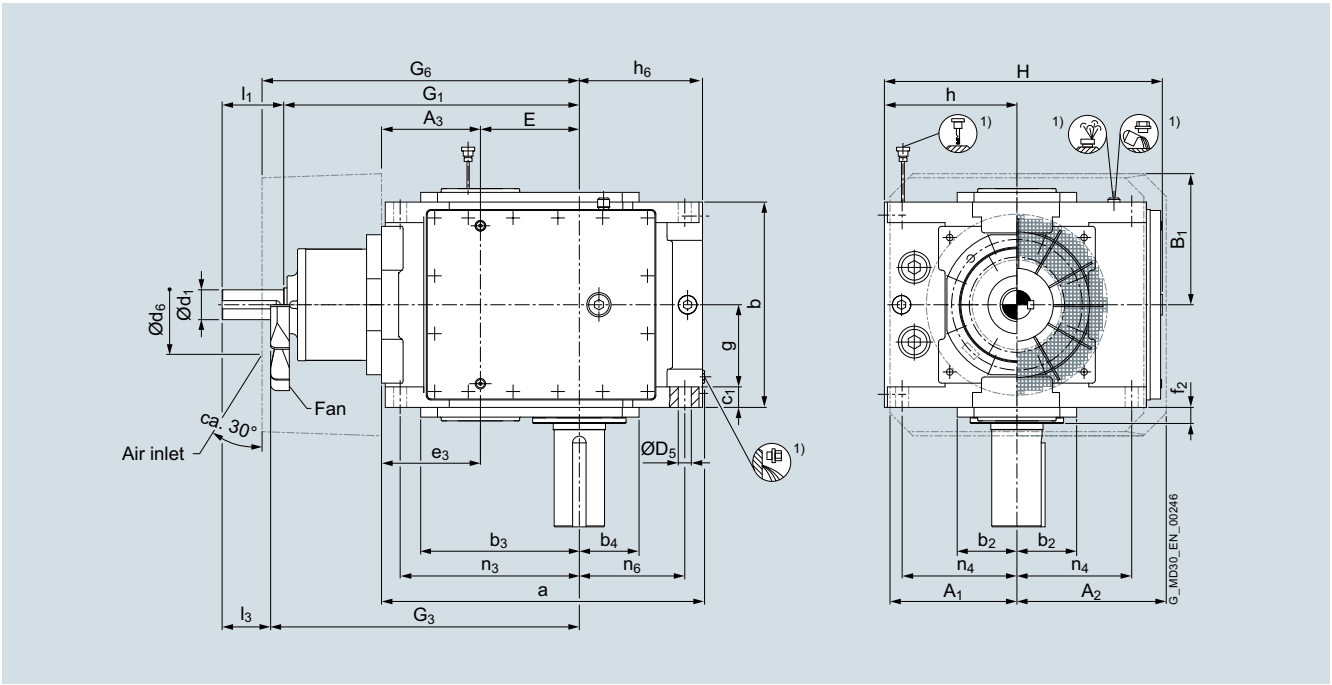
					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 8/13 to 8/16	
Article No.							2LP202.-■■G..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B2SV	**503**	65 m6	140	185	20	175	**2 A**	
	504	80 m6	170	220	32	280	**3 A**	
	505	90 m6	210	240	44	428	**4 A**	
	506	100 m6	210	240	48	450	**5 A**	
	507	105 n6	235	295	84	725	**6 A**	
	508	120 n6	250	295	90	790	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B2HV	**503**	–		–	–	–		
	504	80 H7		220	32	280	**3 D**	
	505	95 H7		240	44	428	**4 D**	
	506	105 H7		240	48	450	**5 D**	
	507	115 H7		295	84	725	**6 D**	
	508	125 H7		295	90	790	**7 D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
B2DV [3]	**503**	–	–	–	–	–	–	
	504	85 H6	85	220	295	32	280	**3 G**
	505	100 H6	100	240	325	44	428	**4 G**
	506	110 H6	110	240	330	48	450	**5 G**
	507	120 H6	120	295	390	84	725	**6 G**
	508	130 H6	130	295	400	90	790	**7 G**

[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

Type B2

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

Selection and ordering data



8

Gear unit sizes		Dimensions in mm													
		Input								**Fan** [2]					
		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 =	5 – 11.2			12.5 –16										
509		80 m6	165	130	70 m6	140	105	792	827	340	410	265	360	240	850
	i_N =	6 – 13.2			15 – 19										
510		80 m6	165	130	70 m6	140	105	823	858	340	410	265	360	240	881

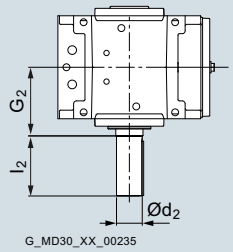
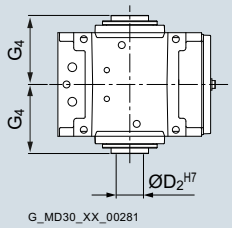
Gear unit sizes	Dimensions in mm															
	a	b	b_2 [3]	b_3 [3]	b_4 [3]	c_1	D_5	E	e_3	f_2 [3]	g	H	h [4]	h_6 [4]	n_3	n_4	n_6
509	875	550	160	425	160	55	35	265	265	60	220	755	355	330	480	307.5	282.5
510	935	550	170	466	170	55	35	296	265	60	220	755	355	355	511	307.5	307.5

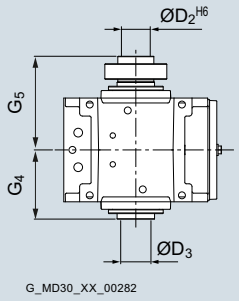
Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 8/12.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on other options.
[2] Maximum dimensions including bolted connection. See order-related documentation for exact data.
[3] Minimum dimensions, space requirements dependent on other options.
[4] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 8/13 to 8/16	
Article No.							**2LP202.-■■G..-....**	
Type	Size	d_2	l_2	G_2	l	kg		**Solid shaft**
B2SV	**509**	135 n6	260	335	132	1140	**8 A**	
	510	150 n6	280	335	142	1254	**0 B**	
Type	Size	D_2		G_4	l	kg		**Hollow shaft with keyway**
B2HV	**509**	135 H7		335	132	1140	**8 D**	
	510	145 H7		335	142	1254	**0 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	**Hollow shaft for shrink disk**
B2DV [3]	**509**	140 H6	145	335	450	132	1140	**8 G**
	510	145 H6	150	335	470	142	1254	**0 H**



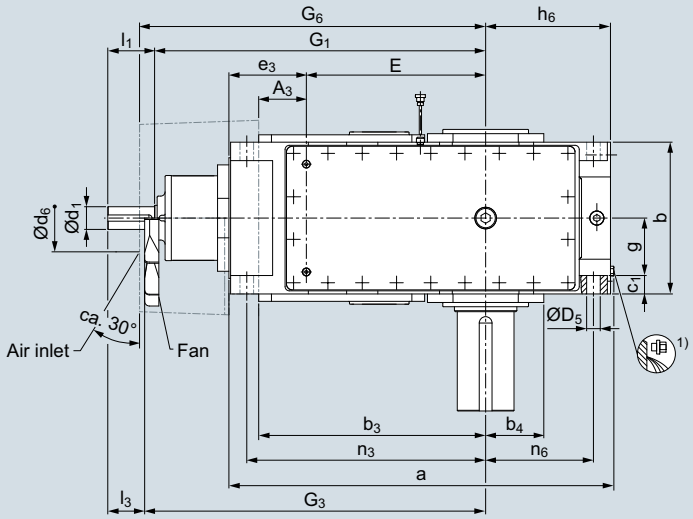
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

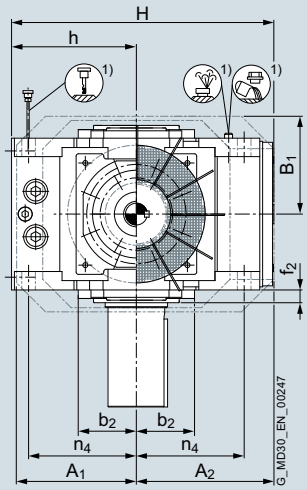
Bevel-helical gear units vertical mounting position

Type B3

Gear unit dimensions
Three-stage, gear unit sizes 513 and 514

Selection and ordering data





8

Gear unit sizes		Dimensions in mm														
		Input								**Fan** [2]						
		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 – 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	

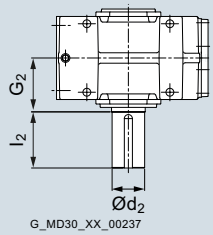
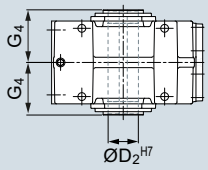
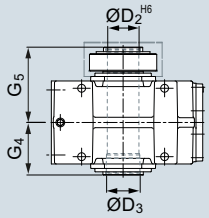
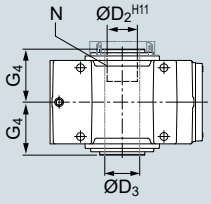
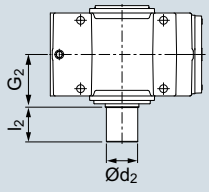
Gear unit sizes	Dimensions in mm															
	a	b	b_2 [3]	b_3 [3]	b_4 [3]	c_1	D_5	E	e_3	f_2 [3]	g	H	h [4]	h_6 [4]	n_3	n_4	n_6
513	1360	535	205	800	205	65	48	640	265	202.5	63	935	440	440	842	380	380
514	1475	535	220	878	220	65	48	718	265	202.5	63	935	440	480	920	380	420

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 8/12.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on other options.
[2] Maximum dimensions including bolted connection. See order-related documentation for exact data.
[3] Minimum dimensions, space requirements dependent on other options.
[4] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

						Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 8/13 to 8/16		
Article No.								2LP202.-■■H..-....		
Type	Size	d_2	l_2	G_2		l	kg			Solid shaft
B3SV	**513**	200 n6	350	330		290	2500	**3**	**B**	
	514	210 n6	350	330		310	2850	**4**	**B**	
Type	Size	D_2		G_4		l	kg			Hollow shaft with keyway
B3HV	**513**	190 H7		330		290	2500	**3**	**E**	
	514	210 H7		330		310	2850	**4**	**E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg			Hollow shaft for shrink disk
B3DV [3]	**513**	190 H6	195	330	495	290	2500	**3**	**H**	
	514	210 H6	215	330	495	310	2850	**4**	**H**	
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg			Hollow shaft with spline in accordance with DIN 5480
B3KV	**513**	N 190×5×36×9H	180	195	330	290	2500	**3**	**P**	
	514	N 190×5×36×9H	180	215	330	310	2850	**4**	**P**	
Type	Size	d_2	l_2	G_2		l	kg			Solid shaft without keyway
B3CV [3]	**513**	220 g6	165	330		290	2500	**3**	**V**	
	514	220 g6	165	330		310	2850	**4**	**V**	

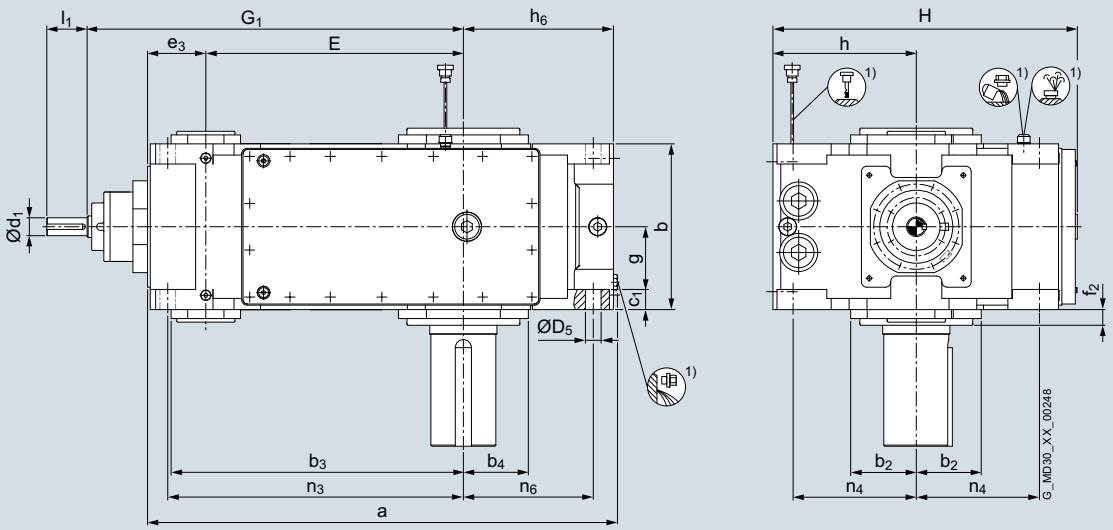
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

Bevel-helical gear units vertical mounting position

Type B4

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

Selection and ordering data



8

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

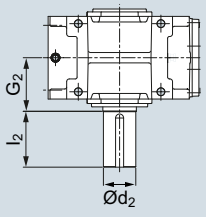
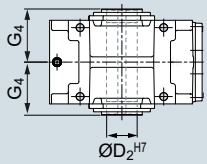
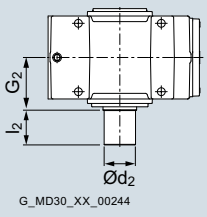
Gear unit sizes	Dimensions in mm																
	a	b	b_2 2)	b_3 2)	b_4 2)	c_1	D_5	E	e_3	f_2 2)	g	H	h 3)	h_6 3)	n_3	n_4	n_6
505	735	250	106	491	106	30	24	400	90	40	95	500	230	230	457.5	202.5	202.5
506	855	250	115	513	115	30	24	453	90	40	95	500	230	300	510.5	202.5	272.5
507	915	295	140	556	125	35	28	493.5	110.5	48	112.5	605	280	295	567.5	242.5	257.5
508	1020	295	140	603	142	35	28	540.5	110.5	48	112.5	605	280	355	614.5	242.5	317.5

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 8/12.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 8/13 to 8/16	
Article No.							2LP202.-■■J..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B4SV	**505**	100 m6	210	165	38	330	4 A	
	506	110 n6	210	165	42	375	5 A	
	507	120 n6	210	195	70	530	6 A	
	508	130 n6	250	195	76	625	7 A	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B4HV	**505**	95 H7		165	38	330	4 D	
	506	105 H7		165	42	375	5 D	
	507	115 H7		195	70	530	6 D	
	508	125 H7		195	76	625	7 D	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
B4DV [3]	**505**	100 H6	100	165	255	38	330	4 G
	506	110 H6	110	165	260	42	375	5 G
	507	120 H6	120	195	290	70	530	6 G
	508	130 H6	130	195	305	76	625	7 G
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
B4KV	**505**	N95×3×30×9H	89	100	165	38	330	4 N
	506	N95×3×30×9H	89	110	165	42	375	5 N
	507	N120×3×38×9H	114	120	195	70	530	6 N
	508	N120×3×38×9H	114	130	195	76	625	7 N
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B4CV [3]	**505**	110 g6	115	165	38	330	4 U	
	506	120 g6	115	165	42	375	5 U	
	507	130 g6	115	195	70	530	6 U	
	508	130 g6	115	195	76	625	7 U	

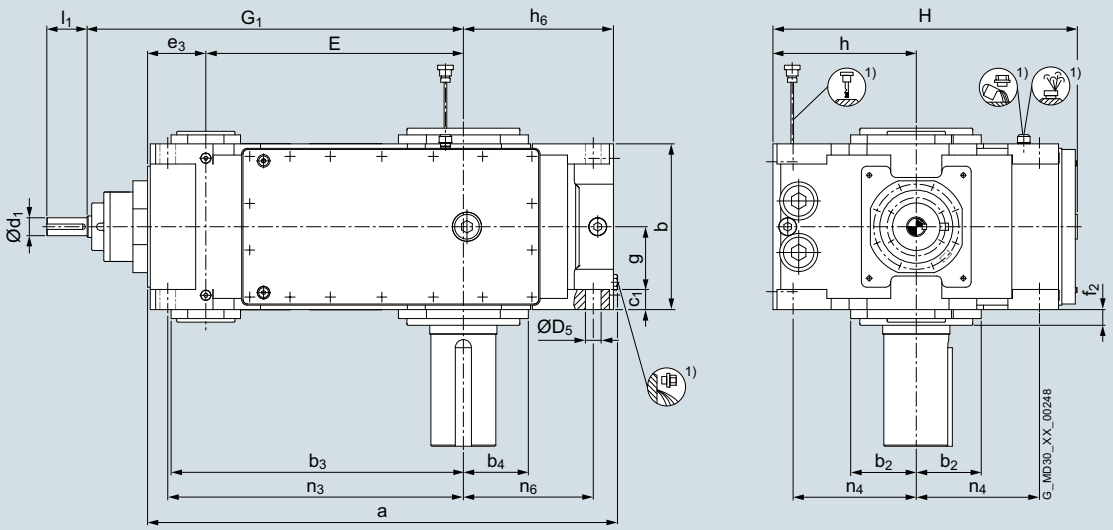
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

Bevel-helical gear units vertical mounting position

Type B4

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

Selection and ordering data



8

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

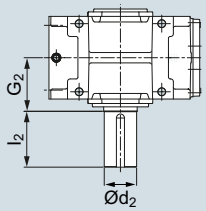
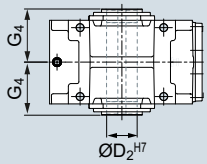
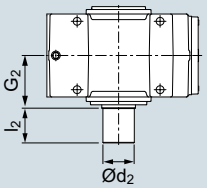
Gear unit sizes	Dimensions in mm																
	a	b	b_2 2)	b_3 2)	b_4 2)	c_1	D_5	E	e_3	f_2 2)	g	H	h 3)	h_6 3)	n_3	n_4	n_6
509	1055	370	147	653	145	45	35	575	130	55	140	685	320	335	660	275	290
510	1170	370	165	706	165	45	35	628	130	55	140	685	320	400	713	275	355
511	1295	430	177	786	176	60	40	706	160	55	155	810	380	415	812.5	330	362.5
512	1425	430	186	844	186	60	40	764	160	55	155	810	380	485	870.5	330	432.5
513	1470	535	211	930	205	65	48	825	190	63	202.5	935	440	440	952	380	380
514	1585	535	220	1008	220	65	48	903	190	63	202.5	935	440	480	1030	380	420

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 8/12.
For shaft details, see pages 10/2 to 10/7.

1) Position dependent on other options.
2) Minimum dimensions, space requirements dependent on other options.
3) Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 8/13 to 8/16	
Article No.							2LP202.-■■J..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B4SV	**509**	145 n6	250	240	120	800	**8 A**	
	510	160 n6	300	240	120	995	**0 B**	
	511	175 n6	300	270	186	1495	**1 B**	
	512	185 n6	350	270	194	1565	**2 B**	
	513	200 n6	350	330	320	2400	**3 B**	
	514	210 n6	350	330	330	2700	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B4HV	**509**	135 H7		235	120	800	**8 D**	
	510	150 H7		235	120	995	**0 E**	
	511	165 H7		270	186	1495	**1 E**	
	512	180 H7		270	194	1565	**2 E**	
	513	190 H7		330	320	2400	**3 E**	
	514	210 H7		330	330	2700	**4 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
B4DV [3]	**509**	140 H6	145	235	350	120	800	**8 G**
	510	150 H6	155	235	370	120	995	**0 H**
	511	165 H6	170	270	420	186	1495	**1 H**
	512	180 H6	185	270	425	194	1565	**2 H**
	513	190 H6	195	330	495	320	2400	**3 H**
	514	210 H6	215	330	495	330	2700	**4 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
B4KV	**509**	N 140×3×45×9H	134	145	235	120	800	**8 N**
	510	N 140×3×45×9H	134	155	235	120	995	**0 P**
	511	N 170×5×32×9H	160	170	270	186	1495	**1 P**
	512	N 170×5×32×9H	160	185	270	194	1565	**2 P**
	513	N 190×5×36×9H	180	195	330	320	2400	**3 P**
	514	N 190×5×36×9H	180	215	330	330	2700	**4 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B4CV [3]	**509**	150 g6	140	240	120	800	**8 U**	
	510	170 g6	140	240	120	995	**0 V**	
	511	180 g6	145	270	186	1495	**1 V**	
	512	190 g6	145	270	194	1565	**2 V**	
	513	220 g6	165	330	320	2400	**3 V**	
	514	220 g6	165	330	330	2700	**4 V**	

G_MD30_XX_00251

G_MD30_XX_00252

G_MD30_XX_00253

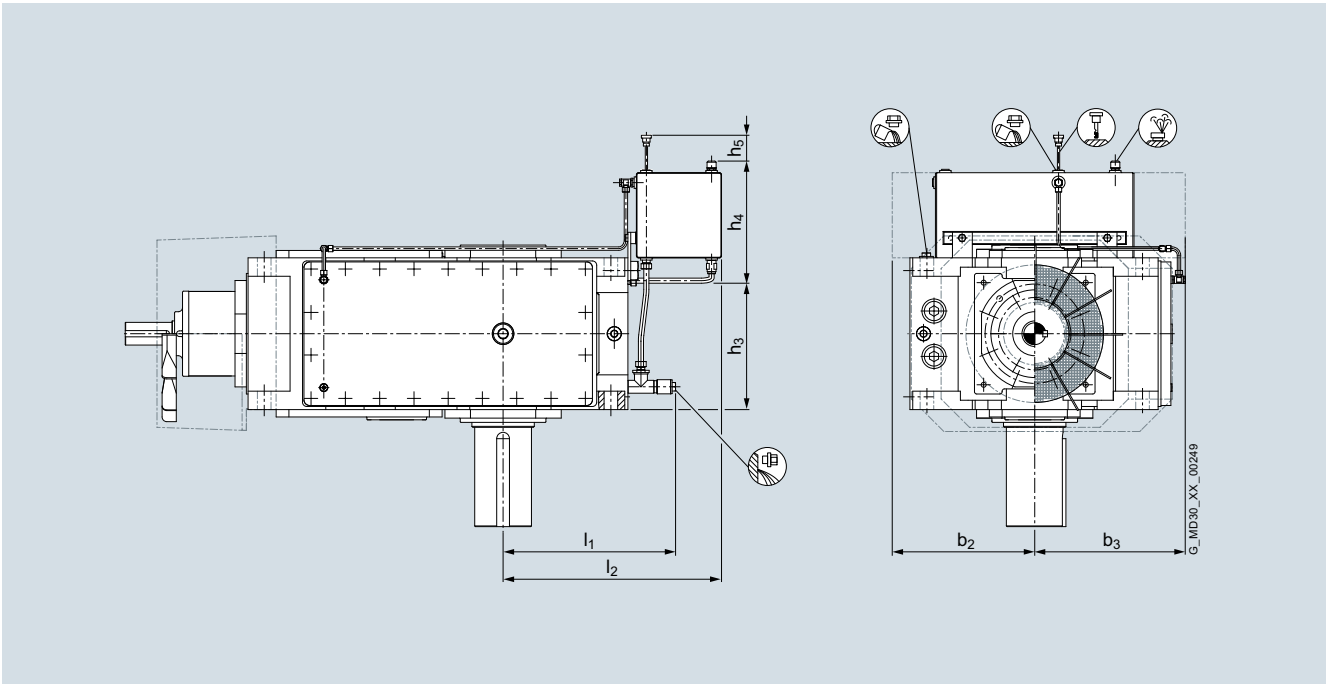
G_MD30_XX_00243

G_MD30_XX_00244

[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.
[3] Shaft variant designed to withstand axial forces (including those caused by weight of gear unit) on request.

Dimensions of oil expansion unit

Selection and ordering data



Dimensions in mm (Article No. supplement for 15th position see page 8/16)

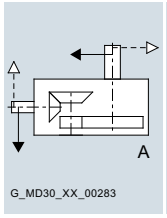
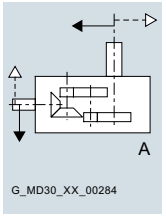
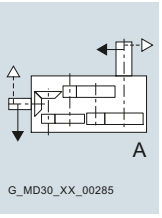
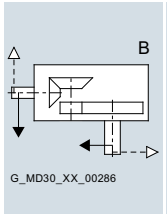
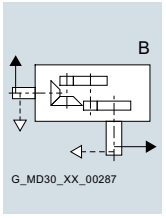
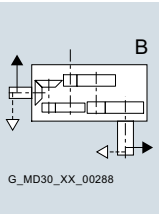
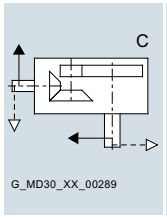
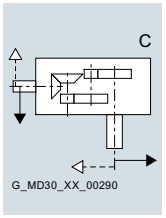
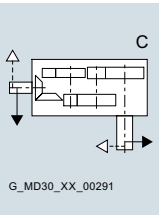
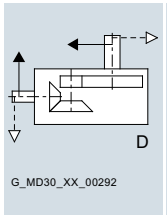
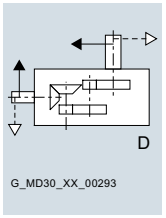
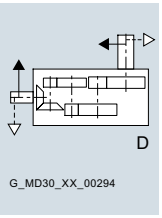
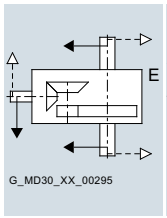
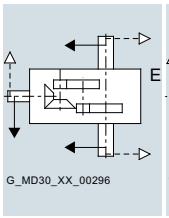
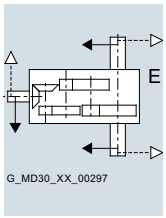
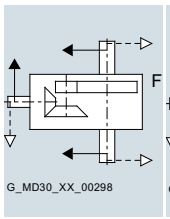
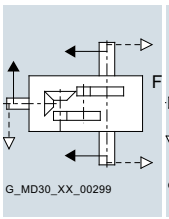
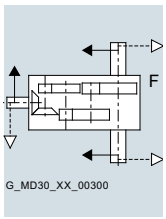
Gear unit sizes	B2.V							B3.V							B4.V						
	b_2	b_3	l_1	l_2	h_3	h_4	h_5	b_2	b_3	l_1	l_2	h_3	h_4	h_5	b_2	b_3	l_1	l_2	h_3	h_4	h_5
503	175	270	260	320	205	205	125	–	–	–	–	–	–	–	–	–	–	–	–	–	–
504	235	295	305	400	270	245	180	–	–	–	–	–	–	–	–	–	–	–	–	–	–
505	235	320	305	405	305	250	180	–	–	–	–	–	–	–	235	310	305	405	200	240	175
506	235	320	325	425	305	280	180	–	–	–	–	–	–	–	235	310	375	475	200	240	175
507	320	395	345	510	390	330	250	–	–	–	–	–	–	–	235	365	375	470	235	250	175
508	320	395	375	540	390	330	250	–	–	–	–	–	–	–	235	365	435	530	235	250	175
509	320	435	435	580	455	350	250	–	–	–	–	–	–	–	340	405	415	585	295	330	250
510	320	435	460	605	455	350	250	–	–	–	–	–	–	–	340	405	480	650	295	330	250
511	–	–	–	–	–	–	–	–	–	–	–	–	–	–	320	465	520	665	350	335	250
512	–	–	–	–	–	–	–	–	–	–	–	–	–	–	320	465	590	735	350	335	250
513	–	–	–	–	–	–	–	360	535	545	770	440	440	330	360	535	545	770	440	440	330
514	–	–	–	–	–	–	–	360	535	585	810	440	440	330	360	535	585	810	440	440	330

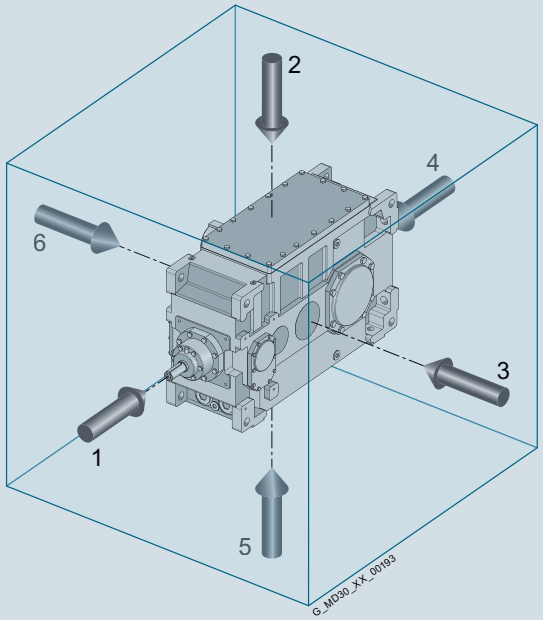
Selection and ordering data

7th position of the Article No.

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	**"-Z" and order code**
	Article No.	**2LP202**	■	-	.	.	.	.	.	-	.	.	.	.	**-Z**	.	.	.

Design variant (view directed at face 2, face 1 on left)

	Type B2 to	Type B3 to	Type B4 to	
A	 G_MD30_XX_00283	 G_MD30_XX_00284	 G_MD30_XX_00285	0
B	 G_MD30_XX_00286	 G_MD30_XX_00287	 G_MD30_XX_00288	1
C	 G_MD30_XX_00289	 G_MD30_XX_00290	 G_MD30_XX_00291	2
D	 G_MD30_XX_00292	 G_MD30_XX_00293	 G_MD30_XX_00294	3
E	 G_MD30_XX_00295	 G_MD30_XX_00296	 G_MD30_XX_00297	4
F	 G_MD30_XX_00298	 G_MD30_XX_00299	 G_MD30_XX_00300	5



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

- Face 3 = right
- Face 6 = left

8

Article No. overview

Selection and ordering data (continued)

8th to 10th position of the Article No.

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**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**								

Selection and ordering data (continued)

8th to 10th position of the Article No. *(continued)*

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**2LP202**	.	-	■	■	■	.	.	-	.	.	.	.	**-Z** . . .
Output shaft, gear unit size																
Output shaft	**Gear unit size**															
Hollow shaft with spline in accordance with DIN 5480 (K)																
	505				**4**	**N**										
	506				**5**	**N**										
	507				**6**	**N**										
	508				**7**	**N**										
	509				**8**	**N**										
	510				**0**	**P**										
	511				**1**	**P**										
	512				**2**	**P**										
	513				**3**	**P**										
	514				**4**	**P**										
Solid shaft without keyway (C)																
	505				**4**	**U**										
	506				**5**	**U**										
	507				**6**	**U**										
	508				**7**	**U**										
	509				**8**	**U**										
	510				**0**	**V**										
	511				**1**	**V**										
	512				**2**	**V**										
	513				**3**	**V**										
	514				**4**	**V**										
Gear unit type, number of stages, mounting position																
B2.V							**G**									
B3.V							**H**									
B4.V							**J**									

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Article No. overview

Selection and ordering data (continued)

Article No. supplement, 11th to 16th position

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code		
	Article No.	**2LP202**	**.**	**-**	**.**	**.**	■	■	**-**	■	■	■	■	**-Z**	■	■	■
Seal for shaft 1 [1]																	
Shaft d_1 at one end with 1 × shaft seal							**0**										
Shaft d_1 at one end with taconite E							**4**										
Seal for shaft 2 [1]																	
Shaft d_2 at one end with 1 × shaft seal								**0**									
Shaft d_2 at both ends with 1 × shaft seal at both ends								**1**									
Shaft d_2 at one end with taconite F								**4**									
Shaft d_2 at both ends with taconite F at both ends								**5**									
Shaft d_2 taconite F-F								**6**									
Shaft d_2 taconite F-H								**7**									
Shaft d_2 taconite F-K								**8**									
Shaft variants																	
Standard shaft d_1 and standard shaft d_2									**0**								
Gear ratio																	
	Type/gear unit size B2 to 503, 504, 505, 507, 509	B2 to 506	B2 to 508, 510	B3 to 504 ... 514	B4 to 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 with oil expansion unit											**B**						
Other oil supply											**Z**			**Q**	**0**	**Y**	
Auxiliary cooling																	
Without auxiliary cooling												**0**					
Auxiliary cooling with fan												**1**					
Auxiliary cooling by cooling coil connections to gear unit face 4 (end face d_2)												**2**					
Auxiliary cooling by fan and cooling coil connections to gear unit face 4 (end face d_2)												**3**					
Auxiliary cooling by cooling coil connections to gear unit face 1 (end face d_1)												**4**					
Auxiliary cooling by fan and cooling coil connections to gear unit face 1 (end face d_1)												**5**					

[1] Additional details see page 11/2.

Bevel-helical gear units upright mounting position, output at bottom

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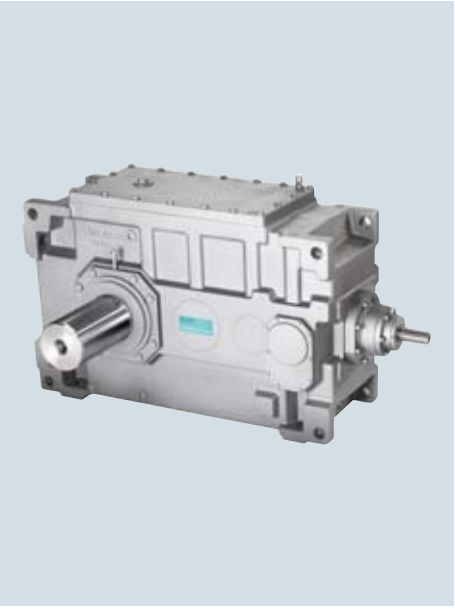


9/2 **Type B2**
Gear unit dimensions
9/2 Two-stage, gear unit sizes 503 to 508
9/4 Two-stage, gear unit sizes 509 and 510

9/6 **Type B3**
Gear unit dimensions
9/6 Three-stage, gear unit sizes 504 to 508
9/8 Three-stage, gear unit sizes 509 to 512
9/10 Three-stage, gear unit sizes 513 and 514

9/12 **Type B4**
Gear unit dimensions
9/12 Four-stage, gear unit sizes 505 to 508
9/14 Four-stage, gear unit sizes 509 to 514

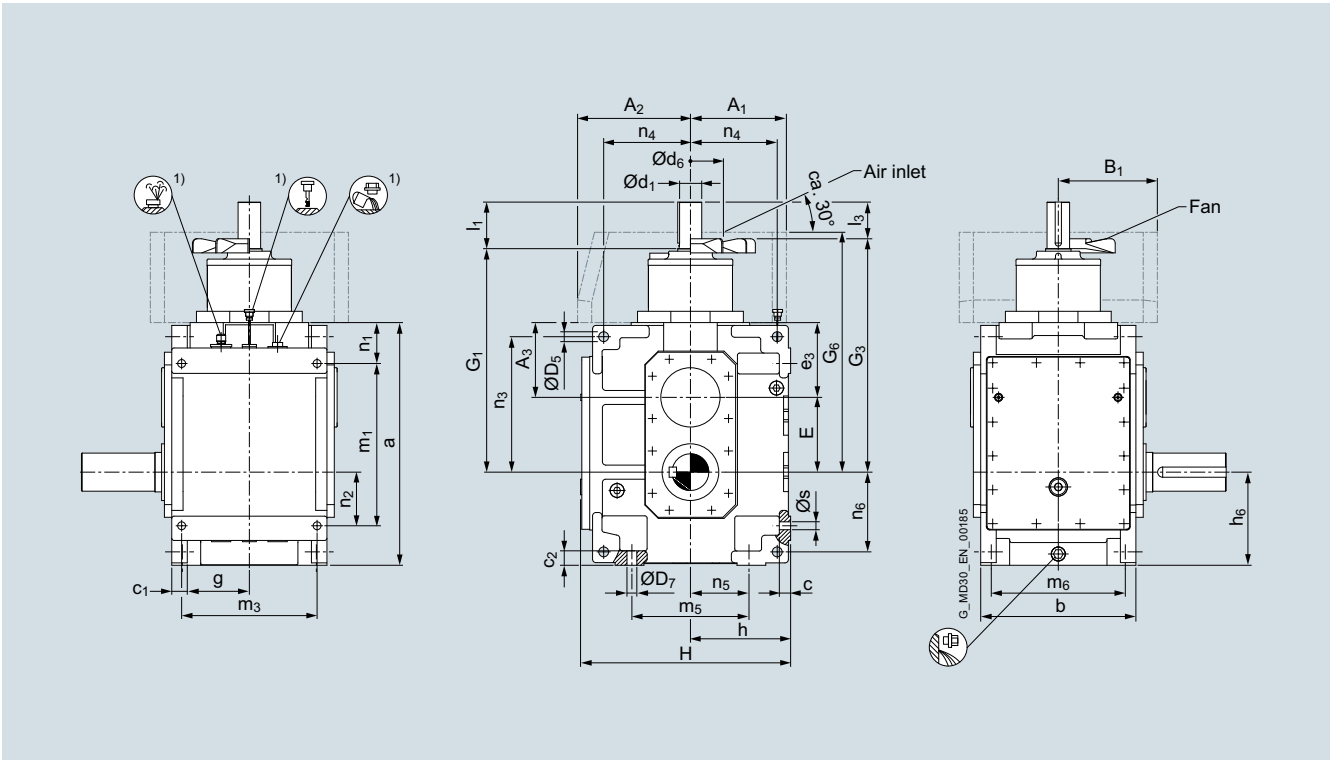
9/16 **Types B2, B3 and B4**
9/16 Dimensions of oil expansion unit with standard motor bell housing
9/17 Article No. overview

Bevel-helical gear units upright mounting position, output at bottom

Type B2

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

Selection and ordering data



Dimensions in mm

Gear unit sizes	Input								Fan [2]					
	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 =	5 – 14			16										
503	40 m6	90	70	35 m6	80	60	393	413	190	255	130	195	135	433
i_N =	5 – 14			16										
504	50 m6	110	90	40 m6	90	70	465	485	215	280	160	230	150	504
i_N =	5 – 14			16										
505	60 m6	120	90	50 m6	110	80	550	580	240	305	190	260	175	600
i_N =	6.3 – 18			20										
506	60 m6	120	90	50 m6	110	80	581	611	240	305	190	260	175	631
i_N =	5 – 14			16										
507	75 m6	135	100	60 m6	135	100	656	691	300	370	225	320	210	718
i_N =	6 – 17			19										
508	75 m6	135	100	60 m6	135	100	686	721	300	370	225	320	210	748

Dimensions in mm

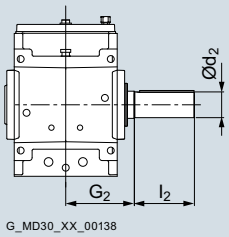
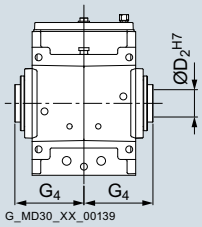
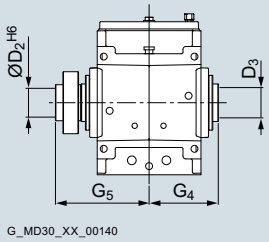
Gear unit sizes	a	b	c	c_1	c_2	D_5	D_7	E	e_3	g	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
503	448	260	25	25	30	19	19	128	130	105	440	200	190	290	220	240	220	78	110	230	175	120	165	15
504	544	325	30	30	30	24	24	159	160	132.5	490	225	225	360	280	265	280	96.5	137.5	290	195	132.5	195	19
505	605	360	30	30	35	24	24	185	190	150	540	250	230	435	320	320	315	85	145	345	220	160	200	19
506	656	360	30	30	35	24	24	216	190	150	540	250	250	486	320	320	315	85	165	376	220	160	220	19
507	713	465	35	40	40	28	28	228	225	192.5	670	315	260	480	410	390	410	118	145	415	280	195	225	24
508	773	465	35	40	40	28	28	258	225	192.5	670	315	290	540	410	390	410	118	175	445	280	195	255	24

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 9/16.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on combination of selected options.
[2] Max. dimensions including bolted connection. See order-related documentation for exact data.
[3] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 9/17 to 9/20	
Article No.							2LP202.-■■D..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B2SL	**503**	65 m6	140	185	20	175	**2 A**	
	504	80 m6	170	220	32	280	**3 A**	
	505	90 m6	210	240	44	428	**4 A**	
	506	100 m6	210	240	48	450	**5 A**	
	507	105 n6	235	295	84	725	**6 A**	
	508	120 n6	250	295	90	790	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B2HL	**503**	–		–	–	–		
	504	80 H7		220	32	280	**3 D**	
	505	95 H7		240	44	428	**4 D**	
	506	105 H7		240	48	450	**5 D**	
	507	115 H7		295	84	725	**6 D**	
	508	125 H7		295	90	790	**7 D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
B2DL	**503**	–	–	–	–	–	–	
	504	85 H6	85	220	295	32	280	**3 G**
	505	100 H6	100	240	325	44	428	**4 G**
	506	110 H6	110	240	330	48	450	**5 G**
	507	120 H6	120	295	390	84	725	**6 G**
	508	130 H6	130	295	400	90	790	**7 G**

G_MD30_XX_00140

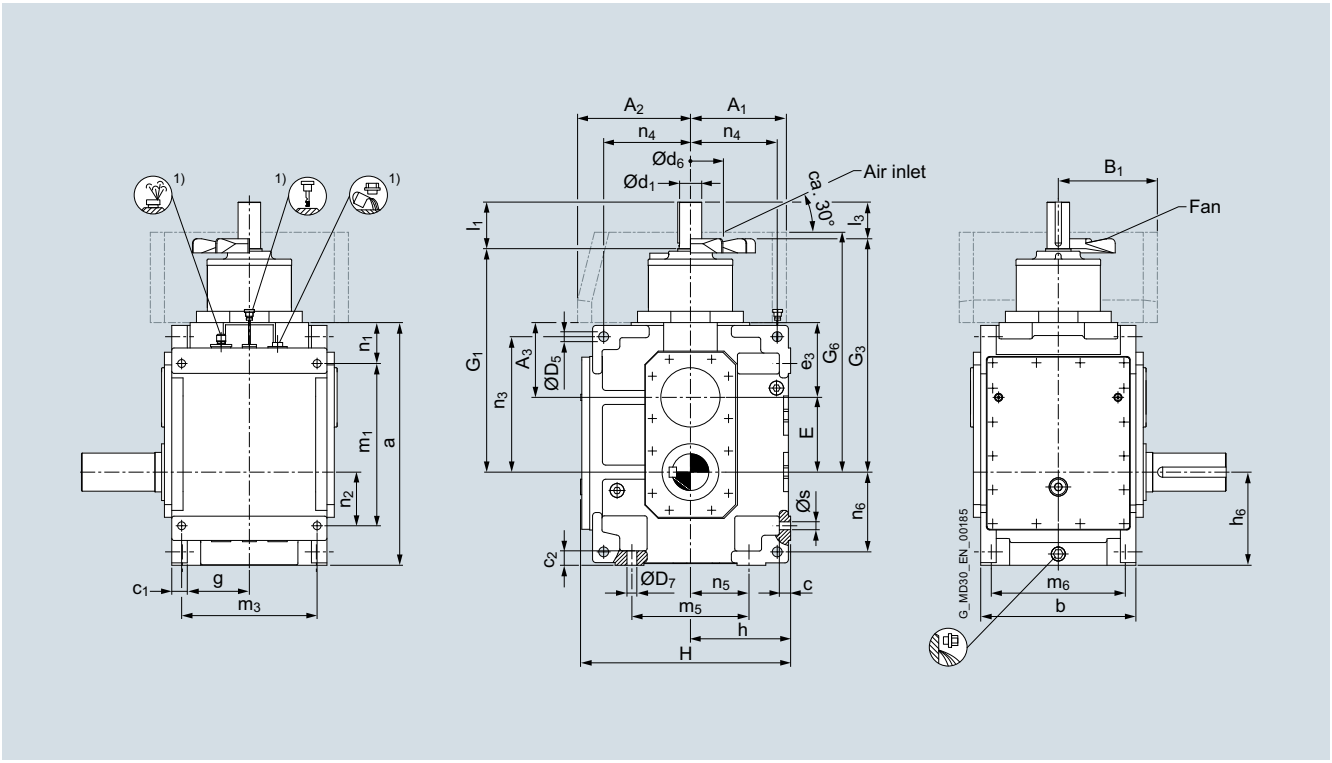
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units upright mounting position, output at bottom

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** [2]					
		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 =	5 – 11.2			12.5 –16										
509		80 m6	165	130	70 m6	140	105	792	827	340	410	265	360	240	850
	i_N =	6 – 13.2			15 – 19										
510		80 m6	165	130	70 m6	140	105	823	858	340	410	265	360	240	881

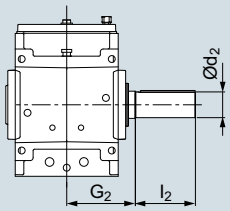
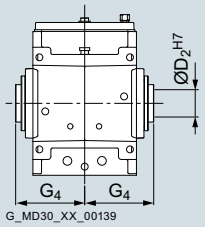
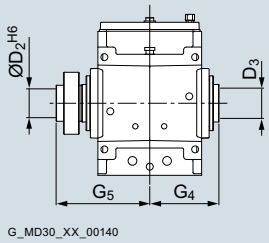
Gear unit sizes	Dimensions in mm																							
	a	b	c	c_1	c_2	D_5	D_7	E	e_3	g	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
509	860	550	40	55	50	35	35	265	265	220	755	355	330	575	480	415	475	145	190	480	307.5	207.5	282.5	28
510	916	550	40	55	50	35	35	296	265	220	755	355	355	631	480	415	475	145	215	511	307.5	207.5	307.5	28

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 9/16.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on combination of selected options.
[2] Max. dimensions including bolted connection. See order-related documentation for exact data.
[3] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

						Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 9/17 to 9/20	
Article No.								2LP202.-■■D..-....	
Type	Size	d_2	l_2	G_2		l	kg		Solid shaft
B2SL	**509**	135 n6	260	335		132	1140	**8 A**	
	510	150 n6	280	335		142	1254	**0 B**	
Type	Size	D_2		G_4		l	kg		Hollow shaft with keyway
B2HL	**509**	135 H7		335		132	1140	**8 D**	
	510	145 H7		335		142	1254	**0 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		Hollow shaft for shrink disk
B2DL	**509**	140 H6	145	335	450	132	1140	**8 G**	
	510	145 H6	150	335	470	142	1254	**0 H**	

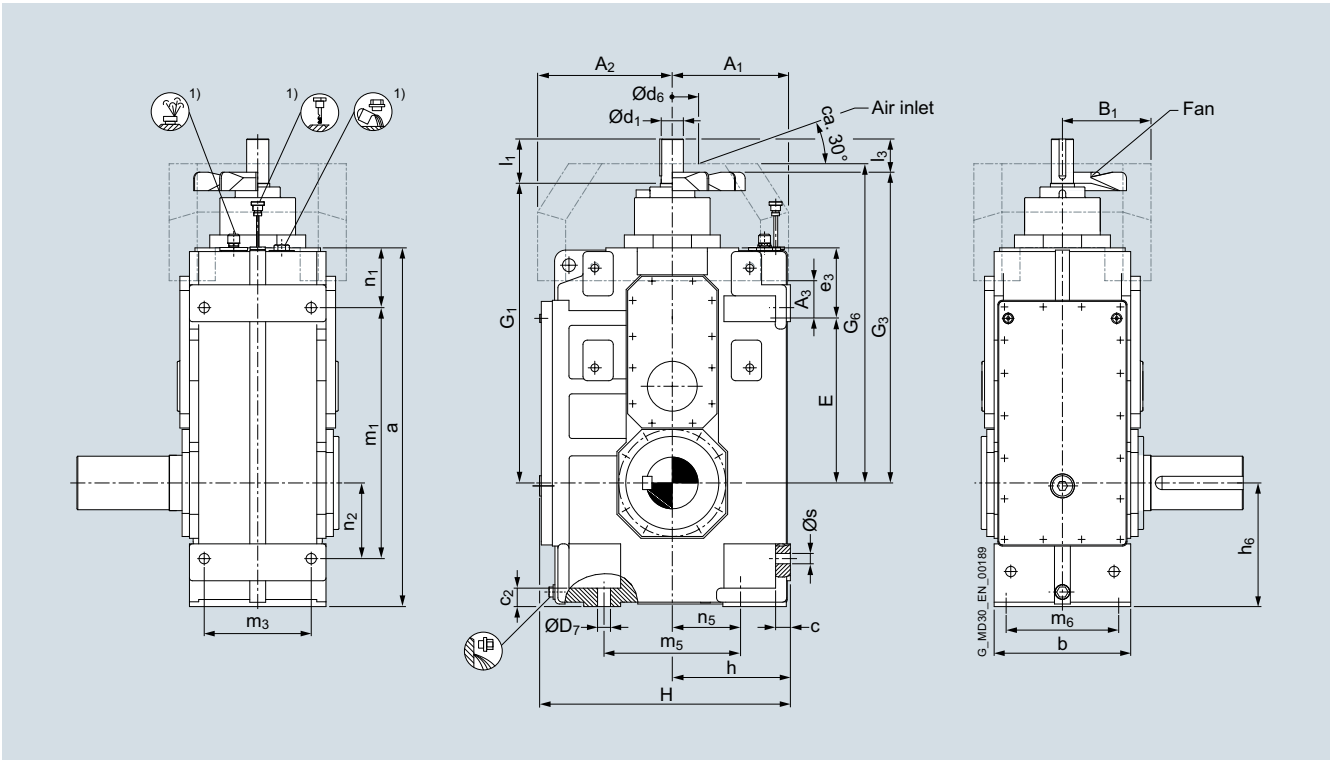
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units upright mounting position, output at bottom

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** [2]						
		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	535
	i_N =	14 – 50			56										
505		40 m6	90	70	35 m6	80	60	575	595	225	280	50	195	135	610
	i_N =	20 – 71			80										
506		40 m6	90	70	35 m6	80	60	628	648	225	280	50	195	135	663
	i_N =	14 – 50			56										
507		50 m6	110	90	40 m6	90	70	690	710	275	335	65	220	160	725
	i_N =	18 – 63			71										
508		50 m6	110	90	40 m6	90	70	737	757	275	335	65	220	160	772

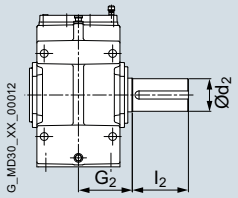
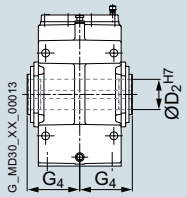
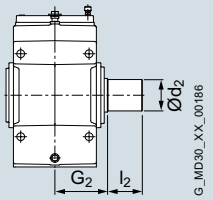
Gear unit sizes	Dimensions in mm																
	a	b	c	c_2	D_7	E	e_3	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_5	s
504	590	210	28	28	19	269.5	110.5	430	200	210	415	170	280	170	95	130	140	19
505	670	250	30	35	24	310	130	500	230	230	490	200	280	205	95	145	140	19
506	793	250	30	35	24	363	130	500	230	300	613	200	280	205	95	215	140	19
507	839	295	35	40	28	384	160	605	280	295	595	230	320	240	129	180	160	24
508	946	295	35	40	28	431	160	605	280	355	702	230	320	240	129	240	160	24

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 9/16.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on combination of selected options.
[2] Max. dimensions including bolted connection. See order-related documentation for exact data.
[3] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 9/17 to 9/20	
Article No.							2LP202.-■■E..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B3SL	**504**	80 m6	170	140	20	195	**3 A**	
	505	100 m6	210	165	36	340	**4 A**	
	506	110 n6	210	165	40	395	**5 A**	
	507	120 n6	210	195	64	580	**6 A**	
	508	130 n6	250	195	70	630	**7 A**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B3HL	**504**	80 H7		140	20	195	**3 D**	
	505	95 H7		165	36	340	**4 D**	
	506	105 H7		165	40	395	**5 D**	
	507	115 H7		195	64	580	**6 D**	
	508	125 H7		195	70	630	**7 D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
B3DL	**504**	85 H6	85	140	215	20	195	**3 G**
	505	100 H6	100	165	255	36	340	**4 G**
	506	110 H6	110	165	260	40	395	**5 G**
	507	120 H6	120	195	290	64	580	**6 G**
	508	130 H6	130	195	305	70	630	**7 G**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
B3KL	**504**	N80×3×25×9H	74	80	140	20	195	**3 N**
	505	N95×3×30×9H	89	100	165	36	340	**4 N**
	506	N95×3×30×9H	89	110	165	40	395	**5 N**
	507	N120×3×38×9H	114	120	195	64	580	**6 N**
	508	N120×3×38×9H	114	130	195	70	630	**7 N**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B3CL	**504**	85 g6	100	140	20	195	**3 U**	
	505	110 g6	115	165	36	340	**4 U**	
	506	120 g6	115	165	40	395	**5 U**	
	507	130 g6	115	195	64	580	**6 U**	
	508	130 g6	115	195	70	630	**7 U**	

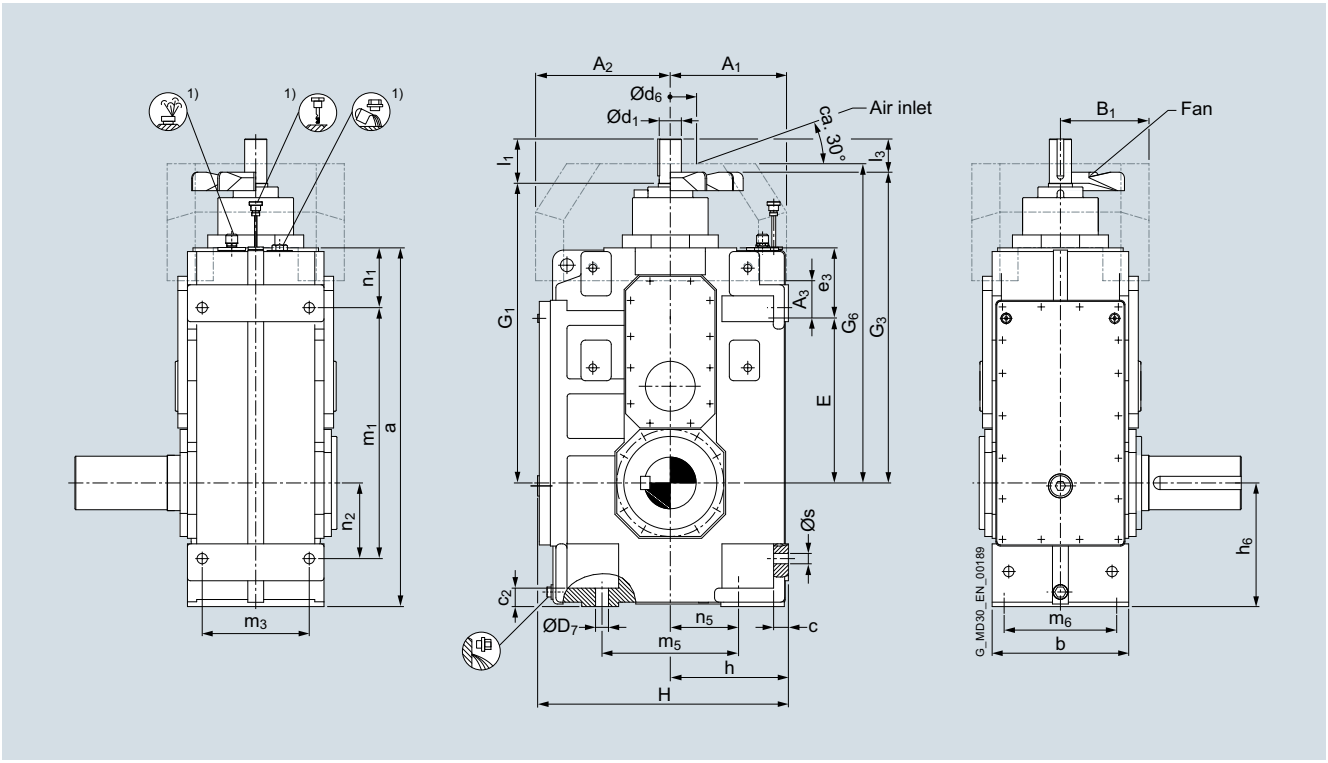
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units upright mounting position, output at bottom

Type B3

Gear unit dimensions
Three-stage, gear unit sizes 509 to 512

Selection and ordering data



Gear unit sizes		Dimensions in mm **Input**								**Fan** [2]					
		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	862
	i_N =	18 – 63			71										
510		60 m6	120	90	50 m6	110	80	865	895	315	375	95	270	175	915
	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

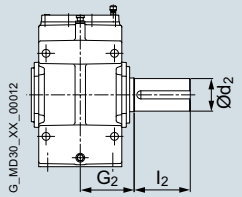
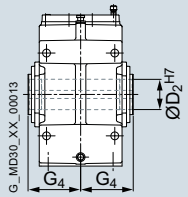
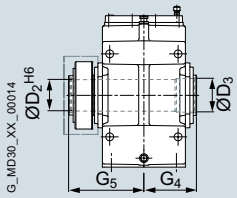
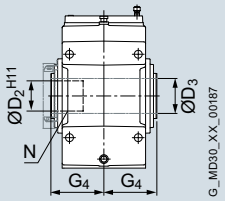
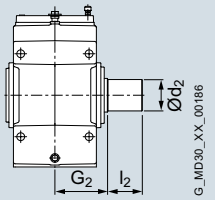
Gear unit sizes	Dimensions in mm																
	a	b	c	c_2	D_7	E	e_3	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_5	s
509	972	370	40	50	35	447	190	685	320	335	680	290	370	305	162	205	185	28
510	1090	370	40	50	35	500	190	685	320	400	798	290	370	305	162	270	185	28
511	1187	430	50	60	40	547	225	810	380	415	825	340	430	350	202	255	215	35
512	1315	430	50	60	40	605	225	810	380	485	953	340	430	350	202	325	215	35

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 9/16.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on combination of selected options.
[2] Max. dimensions including bolted connection. See order-related documentation for exact data.
[3] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 9/17 to 9/20	
Article No.							2LP202.-■■E..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B3SL	**509**	145 n6	250	240	106	905	**8 A**	
	510	160 n6	300	240	102	960	**0 B**	
	511	175 n6	300	270	168	1455	**1 B**	
	512	185 n6	350	270	200	1570	**2 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B3HL	**509**	135 H7		235	106	905	**8 D**	
	510	150 H7		235	102	960	**0 E**	
	511	165 H7		270	168	1455	**1 E**	
	512	180 H7		270	200	1570	**2 E**	
Type	Size	D_2	D_3	G_4	G_5 l	kg		Hollow shaft for shrink disk
B3DL	**509**	140 H6	145	235	350 106	905	**8 G**	
	510	150 H6	155	235	370 102	960	**0 H**	
	511	165 H6	170	270	420 168	1455	**1 H**	
	512	180 H6	185	270	425 200	1570	**2 H**	
Type	Size	N/DIN 5480	D_2	D_3	G_4 l	kg		Hollow shaft with spline in accordance with DIN 5480
B3KL	**509**	N 140×3×45×9H	134	145	235 106	905	**8 N**	
	510	N 140×3×45×9H	134	155	235 102	960	**0 P**	
	511	N 170×5×32×9H	160	170	270 168	1455	**1 P**	
	512	N 170×5×32×9H	160	185	270 200	1570	**2 P**	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B3CL	**509**	150 g6	140	240	106	905	**8 U**	
	510	170 g6	140	240	102	960	**0 V**	
	511	180 g6	145	270	168	1455	**1 V**	
	512	190 g6	145	270	200	1570	**2 V**	

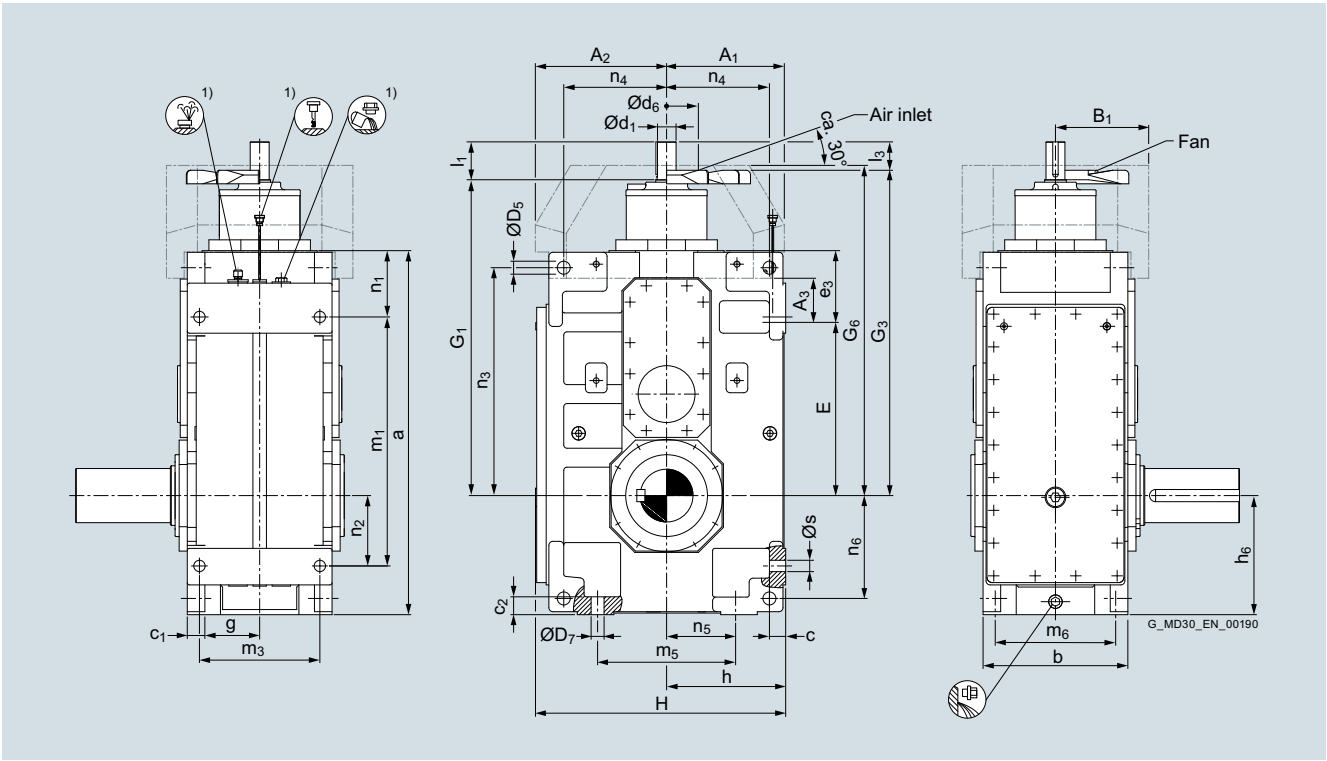
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units upright mounting position, output at bottom

Type B3

Gear unit dimensions
Three-stage, gear unit sizes 513 and 514

Selection and ordering data



Dimensions in mm

Gear unit sizes		Input								Fan [2]					
		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 – 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

Dimensions in mm

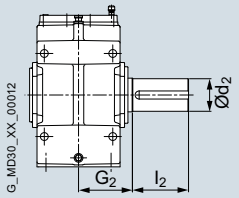
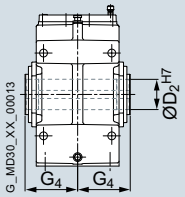
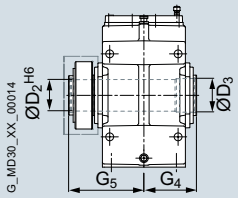
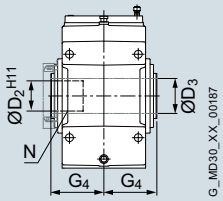
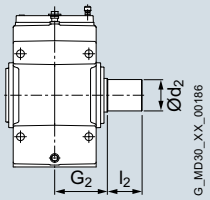
Gear unit sizes	a	b	c	c_1	c_2	D_5	D_7	E	e_3	g	H	h [3]	h_6 [3]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
513	1345	535	60	65	65	48	48	640	265	202.5	935	440	440	920	445	510	445	245	260	842	380	255	380	42
514	1463	535	60	65	65	48	48	718	265	202.5	935	440	480	1038	445	510	445	245	300	920	380	255	420	42

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 9/16.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on combination of selected options.
[2] Max. dimensions including bolted connection. See order-related documentation for exact data.
[3] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 9/17 to 9/20	
Article No.							2LP202.-■■E..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B3SL	**513**	200 n6	350	330	290	2500	**3 B**	
	514	160 n6	350	330	310	2850	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B3HL	**513**	190 H7		330	290	2500	**3 E**	
	514	210 H7		330	310	2850	**4 E**	
Type	Size	D_2	D_3	G_4	l	kg		Hollow shaft for shrink disk
B3DL	**513**	190 H6	195	330	290	2500	**3 H**	
	514	210 H6	215	330	310	2850	**4 H**	
Type	Size	N/DIN 5480	D_2	D_3	l	kg		Hollow shaft with spline in accordance with DIN 5480
B3KL	**513**	N 190×5×36×9H	180	195	290	2500	**3 P**	
	514	N 190×5×36×9H	180	215	310	2850	**4 P**	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B3CL	**513**	220 g6	165	330	290	2500	**3 V**	
	514	220 g6	165	330	310	2850	**4 V**	

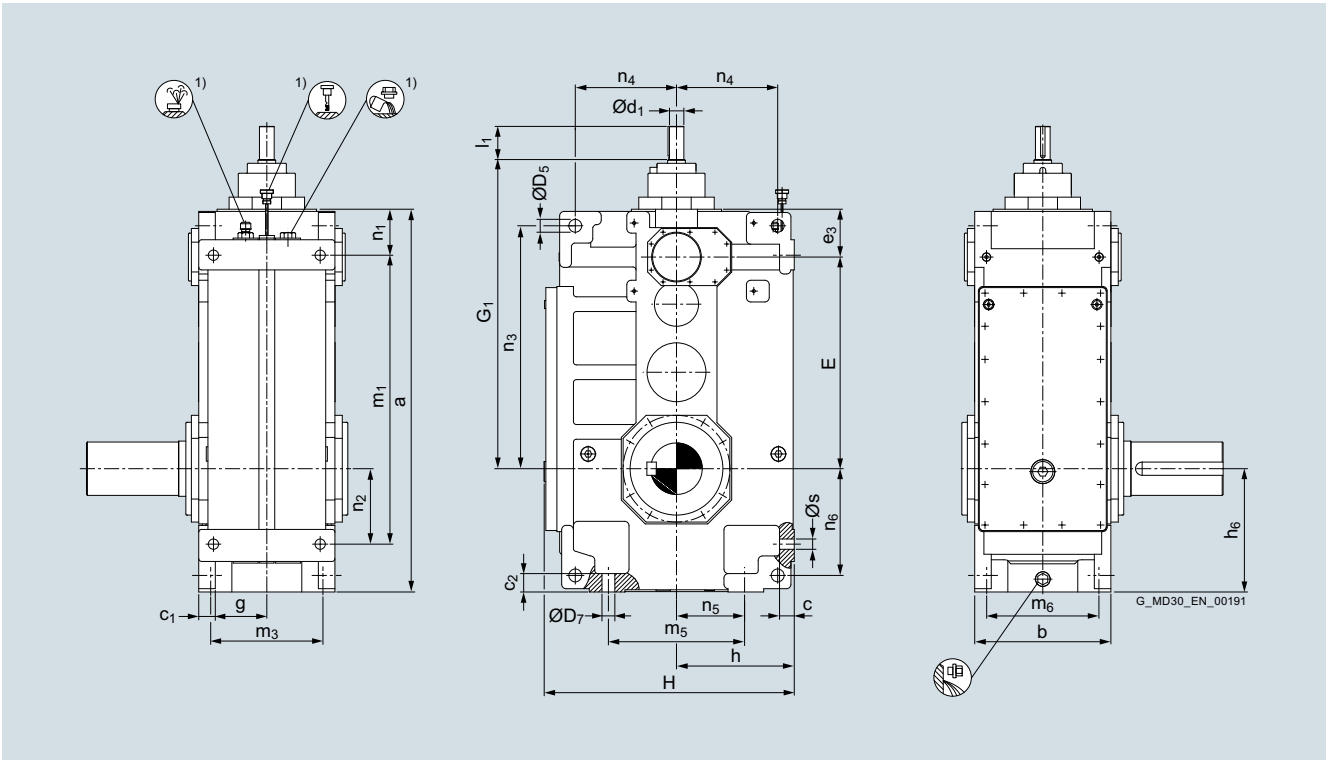
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units upright mounting position, output at bottom

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

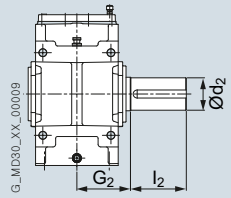
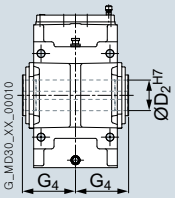
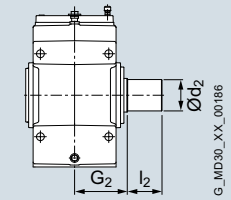
Gear unit sizes	Dimensions in mm																							
	a	b	c	c_1	c_2	D_5	D_7	E	e_3	g	H	h [2]	h_6 [2]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
505	720	250	30	30	35	24	24	400	90	95	500	230	230	530	200	280	205	105	145	457.5	202.5	140	202.5	19
506	843	250	30	30	35	24	24	453	90	95	500	230	300	653	200	280	205	105	215	510.5	202.5	140	272.5	19
507	899	295	35	35	40	28	28	493.5	110.5	112.5	605	280	295	680	230	320	240	104	180	567.5	242.5	160	257.5	24
508	1006	295	35	35	40	28	28	540.5	110.5	112.5	605	280	355	787	230	320	240	104	240	614.5	242.5	160	317.5	24

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 9/16.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on combination of selected options.
[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 9/17 to 9/20		
Article No.							2LP202.-■■F..-....		
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft
B4SL	**505**	100 m6	210	165	38	330	**4**	**A**	
	506	110 n6	210	165	42	375	**5**	**A**	
	507	120 n6	210	195	70	530	**6**	**A**	
	508	130 n6	250	195	76	625	**7**	**A**	
Type	Size	D_2		G_4	l	kg			Hollow shaft with keyway
B4HL	**505**	95 H7		165	38	330	**4**	**D**	
	506	105 H7		165	42	375	**5**	**D**	
	507	115 H7		195	70	530	**6**	**D**	
	508	125 H7		195	76	625	**7**	**D**	
Type	Size	D_2	D_3	G_4	G_5	l	kg		Hollow shaft for shrink disk
B4DL	**505**	100 H6	100	165	255	38	330	**4**	**G**
	506	110 H6	110	165	260	42	375	**5**	**G**
	507	120 H6	120	195	290	70	530	**6**	**G**
	508	130 H6	130	195	305	76	625	**7**	**G**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg		Hollow shaft with spline in accordance with DIN 5480
B4KL	**505**	N95×3×30×9H	89	100	165	38	330	**4**	**N**
	506	N95×3×30×9H	89	110	165	42	375	**5**	**N**
	507	N120×3×38×9H	114	120	195	70	530	**6**	**N**
	508	N120×3×38×9H	114	130	195	76	625	**7**	**N**
Type	Size	d_2	l_2	G_2	l	kg			Solid shaft without keyway
B4CL	**505**	110 g6	115	165	38	330	**4**	**U**	
	506	120 g6	115	165	42	375	**5**	**U**	
	507	130 g6	115	195	70	530	**6**	**U**	
	508	130 g6	115	195	76	625	**7**	**U**	

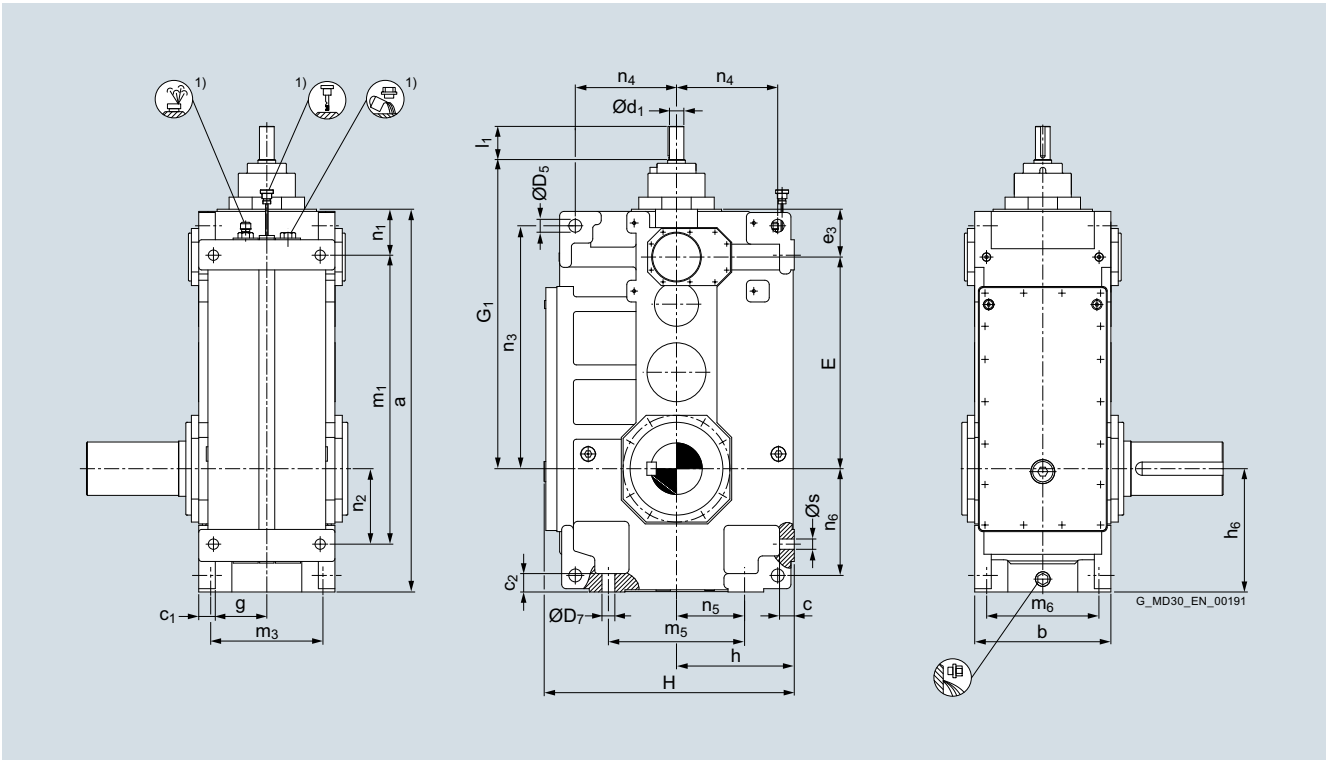
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units upright mounting position, output at bottom

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

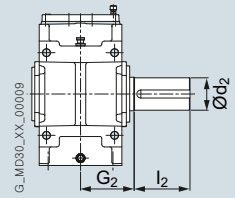
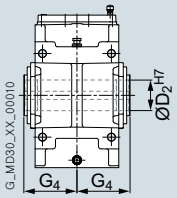
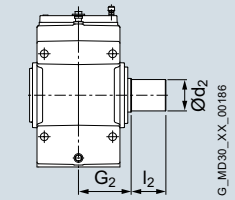
Gear unit sizes	Dimensions in mm																							
	a	b	c	c_1	c_2	D_5	D_7	E	e_3	g	H	h [2]	h_6 [2]	m_1	m_3	m_5	m_6	n_1	n_2	n_3	n_4	n_5	n_6	s
509	1040	370	40	45	50	35	35	575	130	140	685	320	335	785	290	370	305	125	205	660	275	185	290	28
510	1158	370	40	45	50	35	35	628	130	140	685	320	400	903	290	370	305	125	270	713	275	185	355	28
511	1281	430	50	60	60	40	40	706	160	155	810	380	415	960	340	430	350	161	255	8125	330	215	362.5	35
512	1409	430	50	60	60	40	40	764	160	155	810	380	485	1088	340	430	350	161	325	870.5	330	215	432.5	35
513	1455	535	60	65	65	48	48	825	190	202.5	935	440	440	1092	445	510	445	183	260	952	380	255	380	42
514	1573	535	60	65	65	48	48	903	190	202.5	935	440	480	1210	445	510	445	183	300	1030	380	255	420	42

Note:
"Dip lubrication with oil expansion unit" is provided as the standard oil supply.
Dimensions of oil expansion unit see page 9/16.
For shaft details, see pages 10/2 to 10/7.

[1] Position dependent on combination of selected options.
[2] Permissible tolerance: -1 mm.

Selection and ordering data (continued)

Output

					Oil quantity [1]	Weight [1] [2]	7th position of Article No. and Article No. supplement for 11th to 16th position see pages 9/17 to 9/20	
Article No.							2LP202.-■■F..-....	
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft
B4SL	**509**	145 n6	250	240	120	800	**8 A**	
	510	160 n6	300	240	120	995	**0 B**	
	511	175 n6	300	270	186	1495	**1 B**	
	512	185 n6	350	270	194	1565	**2 B**	
	513	200 n6	350	330	320	2400	**3 B**	
	514	210 n6	350	330	330	2700	**4 B**	
Type	Size	D_2		G_4	l	kg		Hollow shaft with keyway
B4HL	**509**	135 H7		235	120	800	**8 D**	
	510	150 H7		235	120	995	**0 E**	
	511	165 H7		270	186	1495	**1 E**	
	512	180 H7		270	194	1565	**2 E**	
	513	190 H7		330	320	2400	**3 E**	
	514	210 H7		330	330	2700	**4 E**	
Type	Size	D_2	D_3	G_4	G_5	l	kg	Hollow shaft for shrink disk
B4DL	**509**	140 H6	145	235	350	120	800	**8 G**
	510	150 H6	155	235	370	120	995	**0 H**
	511	165 H6	170	270	420	186	1495	**1 H**
	512	180 H6	185	270	425	194	1565	**2 H**
	513	190 H6	195	330	495	320	2400	**3 H**
	514	210 H6	215	330	495	330	2700	**4 H**
Type	Size	N/DIN 5480	D_2	D_3	G_4	l	kg	Hollow shaft with spline in accordance with DIN 5480
B4KL	**509**	N 140×3×45×9H	134	145	235	120	800	**8 N**
	510	N 140×3×45×9H	134	155	235	120	995	**0 P**
	511	N 170×5×32×9H	160	170	270	186	1495	**1 P**
	512	N 170×5×32×9H	160	185	270	194	1565	**2 P**
	513	N 190×5×36×9H	180	195	330	320	2400	**3 P**
	514	N 190×5×36×9H	180	215	330	330	2700	**4 P**
Type	Size	d_2	l_2	G_2	l	kg		Solid shaft without keyway
B4CL	**509**	150 g6	140	240	120	800	**8 U**	
	510	170 g6	140	240	120	995	**0 V**	
	511	180 g6	145	270	186	1495	**1 V**	
	512	190 g6	145	270	194	1565	**2 V**	
	513	220 g6	165	330	320	2400	**3 V**	
	514	220 g6	165	330	330	2700	**4 V**	

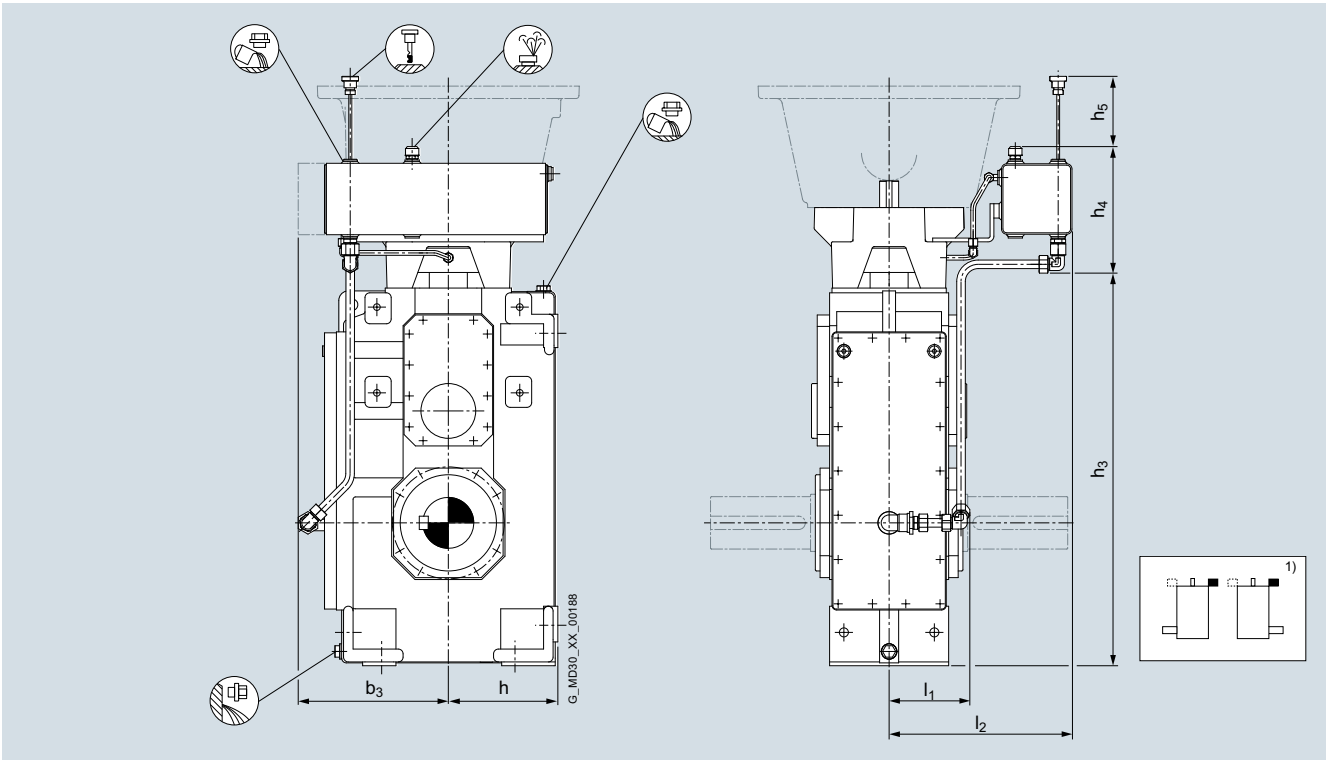
[1] Approximate values; exact data acc. to order-related documentation.
[2] Without oil filling.

Bevel-helical gear units upright mounting position, output at bottom

Types B2, B3 and B4

Dimensions of oil expansion unit with standard motor bell housing

Selection and ordering data



Dimensions in mm (Article No. supplement for 15th position see page 9/20)

Gear unit sizes	B2.L							B3.L							B4.L						
	h [2]	b_3	l_1	l_2	h_3	h_4	h_5	h [2]	b_3	l_1	l_2	h_3	h_4	h_5	h [2]	b_3	l_1	l_2	h_3	h_4	h_5
503	200	240	190	315	470	230	150	–	–	–	–	–	–	–	–	–	–	–	–	–	–
504	225	265	235	400	580	270	200	200	290	165	315	600	230	150	–	–	–	–	–	–	–
505	250	290	255	445	665	270	200	230	330	190	390	700	270	200	230	270	200	360	720	270	200
506	250	290	255	445	715	270	200	230	330	190	390	820	270	200	230	270	200	360	845	270	200
507	315	355	290	540	800	335	265	280	385	220	405	875	270	200	280	325	215	365	905	270	200
508	315	355	290	540	860	335	265	280	385	220	405	985	270	200	280	325	215	365	1015	270	200
509	355	400	325	550	1005	335	265	320	425	255	540	1030	335	265	320	365	250	475	1065	335	265
510	355	400	325	550	1060	335	265	320	425	255	540	1150	335	265	320	365	250	475	1185	335	265
511	–	–	–	–	–	–	–	380	490	280	545	1270	335	265	380	430	280	490	1320	335	265
512	–	–	–	–	–	–	–	380	490	280	545	1400	335	265	380	430	280	490	1450	335	265
513	–	–	–	–	–	–	–	440	495	325	650	1450	420	315	440	495	325	640	1465	420	315
514	–	–	–	–	–	–	–	440	495	325	650	1570	420	315	440	495	325	640	1580	420	315

Note:
Oil expansion unit without standard motor bell housing on request.

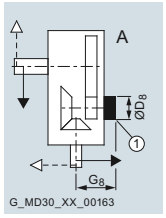
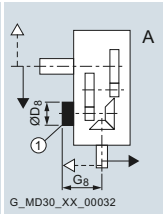
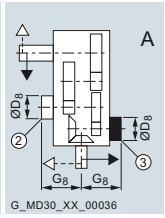
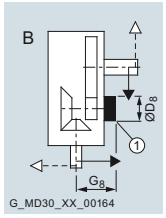
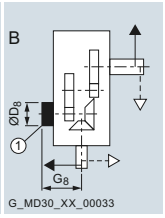
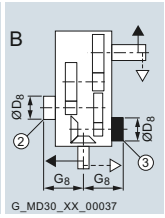
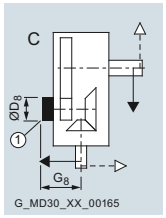
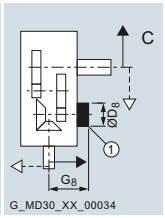
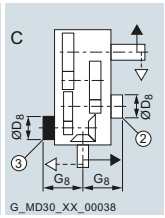
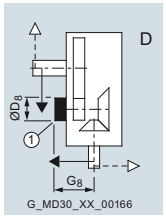
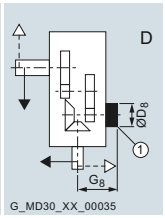
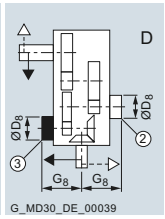
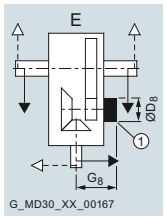
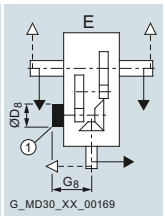
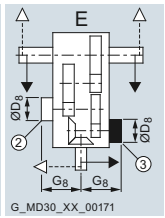
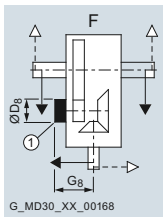
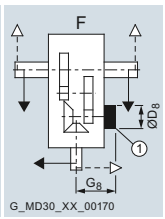
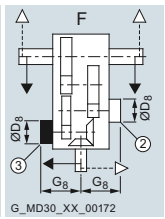
[1] Mounting end for expansion unit as depicted in diagram can be selected.
[2] Permissible tolerance: -1 mm.

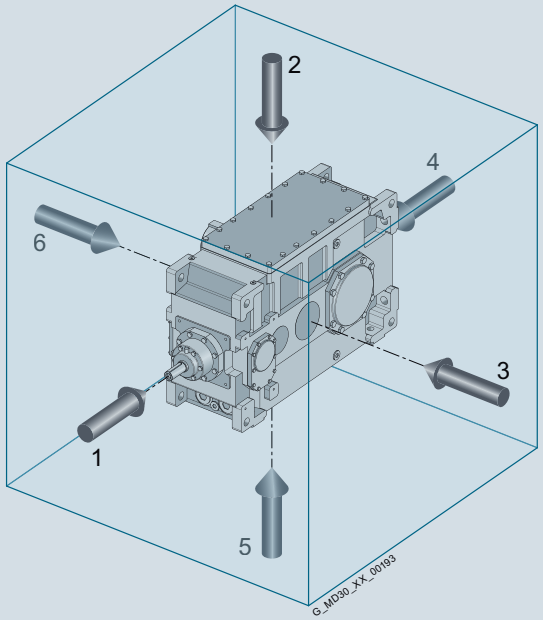
Selection and ordering data

7th position of the Article No.

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	**"-Z" and order code**
	Article No.	**2LP202**	■	-	.	.	.	.	-	.	.	.	**-Z**	.	.	.

Design variant (view directed at face 2, face 1 at bottom)

	Type B2 to	Type B3 to	Type B4 to	
A	 G_MD30_XX_00163	 G_MD30_XX_00032	 G_MD30_XX_00036	0
B	 G_MD30_XX_00164	 G_MD30_XX_00033	 G_MD30_XX_00037	1
C	 G_MD30_XX_00165	 G_MD30_XX_00034	 G_MD30_XX_00038	2
D	 G_MD30_XX_00166	 G_MD30_XX_00035	 G_MD30_DE_00039	3
E	 G_MD30_XX_00167	 G_MD30_XX_00169	 G_MD30_XX_00171	4
F	 G_MD30_XX_00168	 G_MD30_XX_00170	 G_MD30_XX_00172	5



Irrespective of the spatial position of the gear unit, the face designations "right" and "left" always refer to the horizontal mounting position with the view directed at face 1.
Face 2 is at the top.

Assembly cover at top (2),
view directed at drive end face (1):

- Face 3 = right
- Face 6 = left

① Backstop for types B2 and B3.
Backstop **not** possible for:
Type B2SL, designs B, D, E, F and type B2DL, 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

Article No. overview

Selection and ordering data (continued)

8th to 10th position of the Article No.

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**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**													

Selection and ordering data (continued)

8th to 10th position of the Article No. *(continued)*

		Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code
		Article No.	**2LP202**	.	-	■	■	■	.	.	-	.	.	.	.	**-Z** . . .
Output shaft, gear unit size														
Output shaft	**Gear unit size**													
Hollow shaft with spline in accordance with DIN 5480 (K)														
	504				**3**	**N**								
	505				**4**	**N**								
	506				**5**	**N**								
	507				**6**	**N**								
	508				**7**	**N**								
	509				**8**	**N**								
	510				**0**	**P**								
	511				**1**	**P**								
	512				**2**	**P**								
	513				**3**	**P**								
	514				**4**	**P**								
Solid shaft without keyway (C)														
	504				**3**	**U**								
	505				**4**	**U**								
	506				**5**	**U**								
	507				**6**	**U**								
	508				**7**	**U**								
	509				**8**	**U**								
	510				**0**	**V**								
	511				**1**	**V**								
	512				**2**	**V**								
	513				**3**	**V**								
	514				**4**	**V**								
Gear unit type, number of stages, mounting position														
B2.L							**D**							
B3.L							**E**							
B4.L							**F**							

Article No. overview

Selection and ordering data (continued)

Article No. supplement, 11th to 16th position

	Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	"-Z" and order code			
	Article No.	**2LP202**	**.**	**-**	**.**	**.**	■	■	**-**	■	■	■	■	**-Z**	■	■	■
Seal for shaft 1																
Shaft d_1 at one end with 1 × shaft seal							**0**									
Shaft d_1 at one end with taconite E							**4**									
Seal for shaft 2																
Shaft d_2 at one end with 1 × shaft seal								**0**								
Shaft d_2 at both ends with 1 × shaft seal at both ends								**1**								
Shaft d_2 at one end with taconite F								**4**								
Shaft d_2 at both ends with taconite F at both ends								**5**								
Shaft d_2 taconite F-F								**6**								
Shaft d_2 taconite F-H								**7**								
Shaft d_2 taconite F-K								**8**								
Shaft variants																
Standard shaft d_1 and standard shaft d_2									**0**							
Gear ratio																
	Type/gear unit size B2 to 503, 504, 505, 507, 509	B2 to 506	B2 to 508, 510	B3 to 504 ... 514	B4 to 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 with oil expansion unit					Mounted on gear unit face 6 (left)						**B**					
Dip lubrication with oil expansion unit					Mounted on gear unit face 3 (right)						**C**					
Other oil supply											**Z**			**Q**	**0**	**Y**
Auxiliary cooling																
Without auxiliary cooling												**0**				
Auxiliary cooling with fan												**1**				
Auxiliary cooling by cooling coil, connections to gear unit face 4 (end face d_2)												**2**				
Auxiliary cooling by fan and cooling coil, connections to gear unit face 4 (end face d_2)												**3**				
Auxiliary cooling by cooling coil, connections to gear unit face 1 (end face d_1)												**4**				

Connection dimensions

10

10/2 **Cylindrical shaft ends**
10/2 Central holes, DS form in shaft ends DIN 332/1
10/3 Selection of fit

10/4 **Cover cap second shaft end for solid shafts at both ends**

10/5 **Parallel keys, parallel keyways and hollow shafts with keyway**

10/6 **Hollow shafts for shrink disk**

10/7 **Hollow shafts with keyway according to DIN 6885/1**

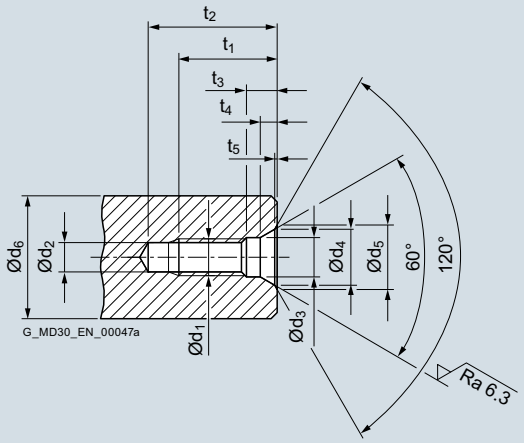
10/8 **Hollow shafts with spline according to DIN 5480**

Cylindrical shaft ends

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

Dimensional drawings

DS form with thread, straight running surface and protective counterbore



Recommended diameter ranges d_6 [1]		DS form											
		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

Overview

Selection of fit for solid shaft studs with keyway

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).

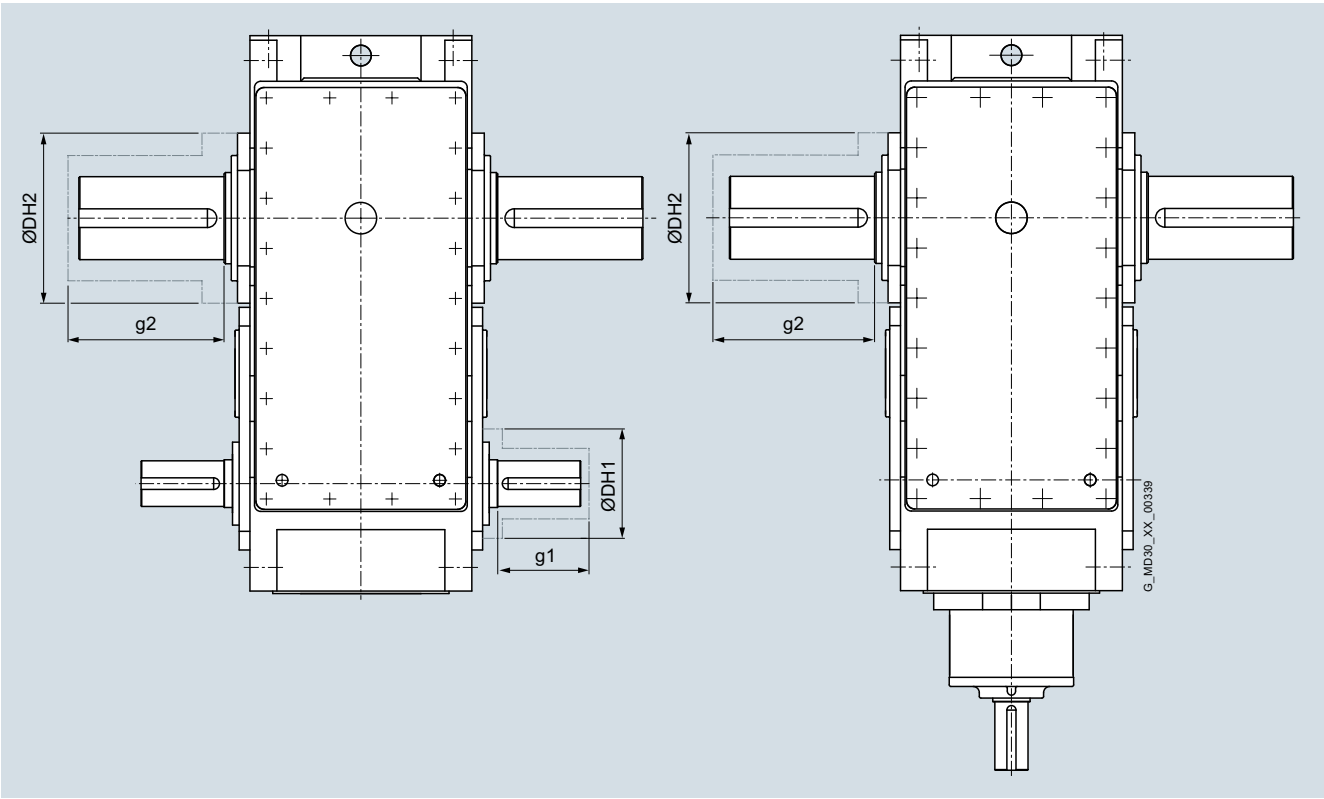
In this case, the customer should give the relevant information.

Solid shaft studs without keyway are manufactured with shaft tolerance g6 irrespective of the shaft diameter and are designed for the use of flange couplings with zero-backlash conical clamping connection (on request).

Cover cap second shaft end for solid shafts at both ends

Dimensional drawings

H2S., H3S., H4S., B2S., B3S., B4S., H2C., H3C., H4C., B3C., B4C.



Gear unit sizes	Dimensions in mm											
	Input shaft						Output shaft					
	H2..		H3..		H4..		H2S., H3S., H4S., H2C.		B3S., B4S., B3C., B4C.		B2S.	
	DH_1	g_1	DH_1	g_1	DH_1	g_1	DH_2	g_2	DH_2	g_2	DH_2	g_2
503	–	–	–	–	–	–	–	–	–	–	190	155
504	120	110	–	–	–	–	245	180	245	180	225	185
505	135	135	110	100	–	–	250	225	250	225	255	225
506	135	135	110	100	–	–	260	225	260	225	270	225
507	145	145	120	110	105	70	335	225	335	225	305	250
508	145	145	120	110	105	70	310	265	310	265	325	265
509	165	170	135	135	105	70	315	265	315	265	340	275
510	165	170	135	135	105	70	350	315	350	315	350	295
511	205	190	145	145	120	110	385	315	385	315	–	–
512	205	190	145	145	120	110	400	365	400	365	–	–
513	215	210	165	170	145	135	445	365	445	365	–	–
514	215	210	165	170	145	135	475	365	475	365	–	–

Selection and ordering data

Ordering information

When ordering a cover cap at the second shaft end, the letter **-Z** and the following order codes must be added to the Article No.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■
Cover cap at second shaft end for solid shafts at both ends															
Cover cap at shaft d_1, mounted on gear unit face 6 (left)													**G**	**1**	**0**
Cover cap at shaft d_1, mounted on gear unit face 3 (right)													**G**	**1**	**1**
Cover cap at shaft d_2, mounted on gear unit face 6 (left)													**G**	**2**	**0**
Cover cap at shaft d_2, mounted on gear unit face 3 (right)													**G**	**2**	**1**

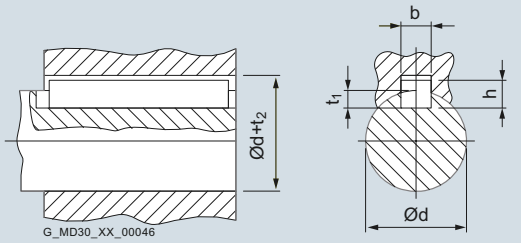
Dimensional drawings

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	Shaft keyway depth t_1	Hub keyway depth $d + t_2$ 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.

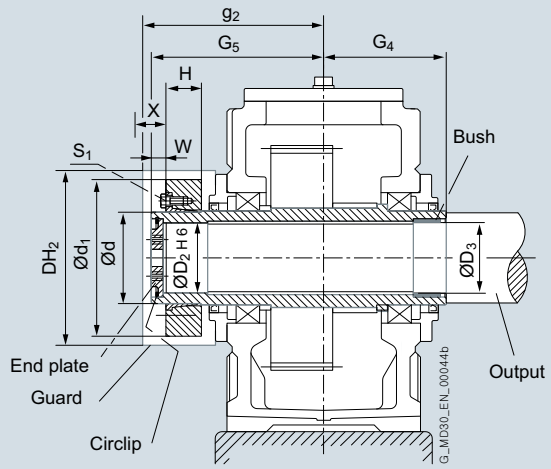
[1] The tolerance zone for the hub keyway width b is ISO JS9, or ISO P9 for heavy-duty operating conditions (P9 special design).

Hollow shafts for shrink disk

Dimensional drawings

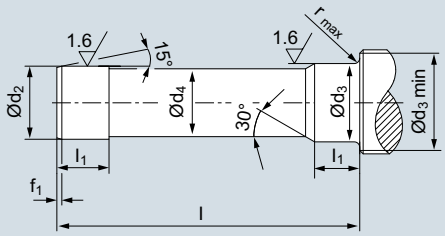
Types H2D., H3D., H4D., B2D., B3D., B4D.

X = Space required for torque wrench

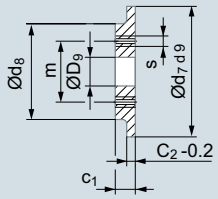


Driven machine shaft for shrink disk connection. Driven machine shaft must be free of oil or grease.

Input shaft with center holes



End plate



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

Gear unit sizes	Dimensions in mm Driven machine shaft [2]								End plate								Circlip	Hollow shaft				Shrink disk [3]				Screw	Cover cap	
	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	Ø DH_2	g_2
504	85 g6	85 h6	84.5	95	4	336	53	2	17	7	90	70	22	50	M8	2	90x3	85	85	140	215	110	185	54	22	M12	245	235
505	100 g6	100 h6	99.5	114	5	398	59	2	20	8	105	80	26	55	M10	2	105x4	100	100	165	255	125	215	60	26	M12	285	275
506	110 g6	110 h6	109.5	124	5	403	64	3	20	8	115	85	26	60	M10	2	115x4	110	110	165	260	140	240	67	26	M14	300	280
507	120 g6	120 h6	119.5	134	5	463	68	3	20	8	125	90	26	65	M12	2	125x4	120	120	195	290	150	263	71	26	M14	335	310
508	130 g6	130 h6	129.5	145	6	478	81	3	20	8	135	100	26	70	M12	2	135x4	130	130	195	305	165	290	81	27	M16	360	320
509	140 g6	145 m6	139.5	160	6	559	85	4	23	10	150	110	33	80	M12	2	150x4	140	145	235	350	175	300	86	31	M16	365	375
510	150 g6	155 m6	149.5	170	6	579	101	4	23	10	160	120	33	90	M12	2	160x4	150	155	235	370	185	320	101	31	M16	400	395
511	165 f6	170 m6	164.5	185	7	664	119	4	23	10	175	130	33	90	M12	2	175x4	165	170	270	420	200	340	118	32	M16	445	445
512	180 f6	185 m6	179.5	200	7	669	125	4	23	10	190	140	33	100	M16	2	190x4	180	185	270	425	220	370	125	32	M20	460	450
513	190 f6	195 m6	189.5	213	7	799	130	5	23	10	200	150	33	110	M16	2	200x4	190	195	330	495	240	405	131	32	M20	515	520
514	210 f6	215 m6	209.5	233	8	794	124	5	28	14	220	170	33	130	M16	2	220x5	210	215	330	495	260	430	126	38	M20	540	520

Type B2D.

Gear unit sizes	Dimensions in mm Driven machine shaft [2]								End plate								Circlip	Hollow shaft				Shrink disk [3]				Screw	Cover cap	
	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	□ DH_2	g_2
504	85 g6	85 h6	84.5	95	4	496	53	2	17	7	90	70	22	50	M8	2	90x3	85	85	220	295	110	185	54	22	M12	250	315
505	100 g6	100 h6	99.5	114	5	543	59	2	20	8	105	80	26	55	M10	2	105x4	100	100	240	325	125	215	60	26	M12	280	345
506	110 g6	110 h6	109.5	124	5	548	64	3	20	8	115	85	26	60	M10	2	115x4	110	110	240	330	140	240	67	26	M14	290	350
507	120 g6	120 h6	119.5	134	5	663	68	3	20	8	125	90	26	65	M12	2	125x4	120	120	295	390	150	263	71	26	M14	335	410
508	130 g6	130 h6	129.5	145	6	673	81	3	20	8	135	100	26	70	M12	2	135x4	130	130	295	400	165	290	81	27	M16	345	415
509	140 g6	145 m6	139.5	160	6	759	85	4	23	10	150	110	33	80	M12	2	150x4	140	145	335	450	175	300	86	31	M16	360	475
510	145 g6	150 m6	144.5	165	6	779	101	4	23	10	160	120	33	90	M12	2	160x4	145	150	335	470	185	320	101	31	M16	380	495

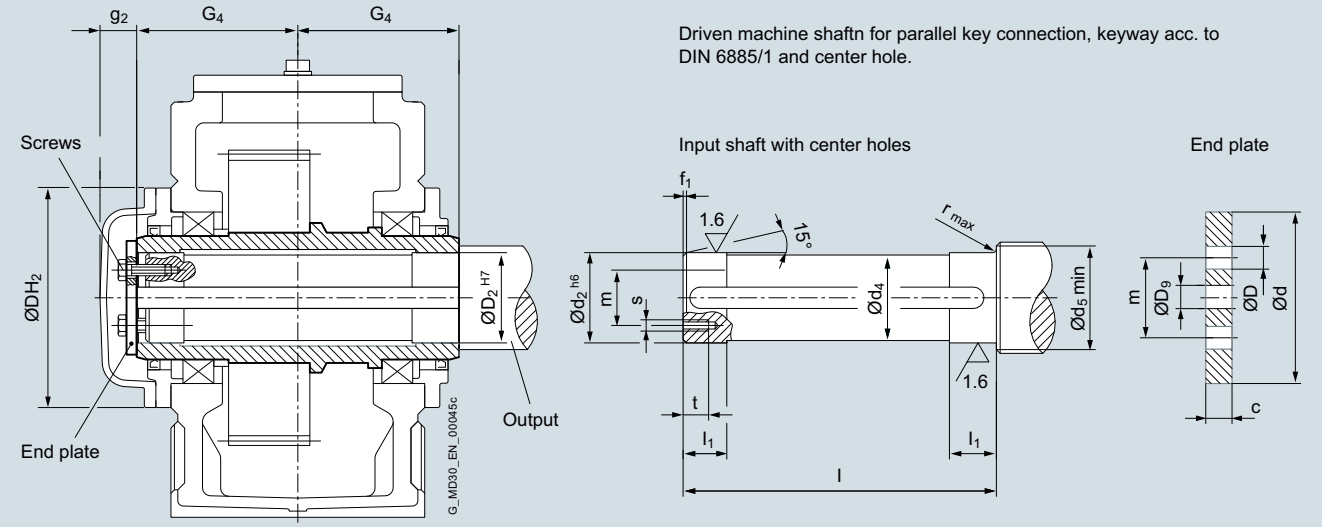
[1] Assignment of central holes as specified on page 10/2.

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

[3] Shrink disk and cover cap are included in the scope of supply. The shrink disk is supplied loose.

Dimensional drawings

Types H1H., H2H., H3H., H4H., B2H., B3H., B4H.



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

Gear unit sizes	Dimensions in mm Driven machine shaft [2]									End plate					Screw		Hollow shaft		Cover cap	
	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	$ØDH_2$	g_2
504	80	79.5	88	4	278	35	1.2	M10	18	10	100	11	22	60	M10 x 25	2	80	140	245	30
505	95	94.5	105	5	328	40	1.6	M10	18	10	120	11	26	70	M10 x 25	2	95	165	250	45
506	105	104.5	116	5	328	45	1.6	M10	18	10	120	11	26	70	M10 x 25	2	105	165	260	40
507	115	114.5	126	5	388	50	1.6	M12	20	12	140	13.5	26	80	M12 x 30	2	115	195	335	50
508	125	124.5	136	6	388	55	2.5	M12	20	12	150	13.5	26	85	M12 x 30	2	125	195	310	40
509	135	134.5	147	6	467	60	2.5	M12	20	12	160	13.5	33	90	M12 x 30	2	135	235	315	45
510	150	149.5	162	6	467	65	2.5	M12	20	12	185	13.5	33	110	M12 x 30	2	150	235	350	40
511	165	164.5	177	7	537	70	2.5	M16	28	15	195	17.5	33	120	M16 x 40	2	165	270	385	45
512	180	179.5	192	7	537	75	2.5	M16	28	15	220	17.5	33	130	M16 x 40	2	180	270	400	45
513	190	189.5	206	7	657	80	3	M16	28	18	230	17.5	33	140	M16 x 40	2	190	330	445	50
514	210	209.5	226	8	657	85	3	M16	28	18	250	17.5	33	160	M16 x 40	2	210	330	475	65

Types H1H., B2H.

Gear unit sizes	Dimensions in mm Driven machine shaft [2]									End plate					Screw		Hollow shaft		Cover cap	
	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	$ØDH_2$	g_2
504	80	79.5	88	4	438	35	1.2	M10	18	10	100	11	22	60	M10 x 25	2	80	220	225	35
505	95	94.5	105	5	478	40	1.6	M10	18	10	120	11	26	70	M10 x 25	2	95	240	255	40
506	105	104.5	116	5	478	45	1.6	M10	18	10	120	11	26	70	M10 x 25	2	105	240	270	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	305	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	325	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	340	50
510	145	144.5	157	6	667	65	2.5	M12	20	12	185	13.5	33	110	M12 x 30	2	145	335	350	50

Note:

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

[1] Assignment of central holes as specified on page 10/2.

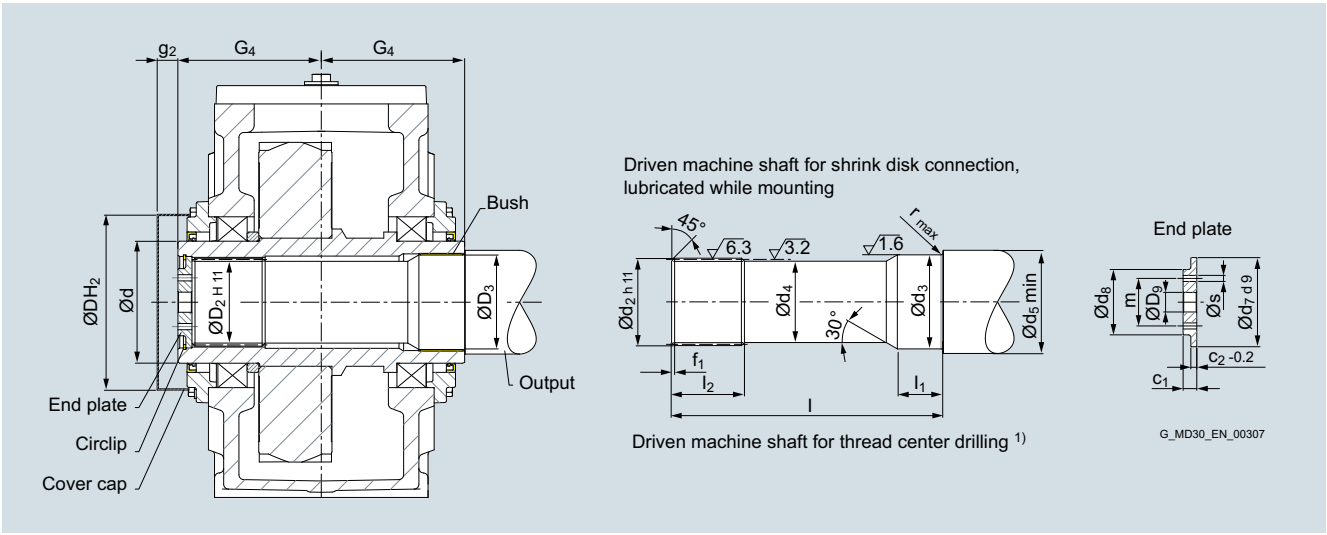
[2] Material of driven machine shaft C60N or higher strength.

Connection dimensions

Hollow shafts with spline in accordance with DIN 5480

Dimensional drawings

Types H2K., H3K., H4K., B3K., B4K.



Types H2K., H3K., H4K., B3K., B4K.

Gear unit sizes	Dimensions in mm Driven machine shaft 2)										End plate					Jacking thread			Cir-clip	Hollow shaft			Cover cap		Bolts for threaded central hole 1)
	External spline	d_2	d_3	d_4	d_5	f_1	l	l_1	l_2	r	c_1	c_2	d_7	d_8	D_9	m	s	Qty.	DIN 472	D_2	D_3	G_4	Ø DH_2	g_2	
504	W80×3×25×8f	79.4	80h6	78	95	3	238	43	75	2	27	27	90	90	22	55	M8	2	90×3	74	80	140	245	30	M20
505	W95×3×30×8f	94.4	100h6	93	114	3	308	53	90	2	20	8	105	80	26	55	M10	2	105×4	89	100	165	250	45	M24
506	W95×3×30×8f	94.4	110h6	93	124	3	308	58	90	3	20	8	105	80	26	55	M10	2	105×4	89	110	165	260	40	M24
507	W120×3×38×8f	119.4	120h6	118	134	3	368	68	105	3	20	8	125	90	26	65	M12	2	125×4	114	120	195	335	50	M24
508	W120×3×38×8f	119.4	130h6	118	145	3	368	73	105	3	20	8	125	90	26	65	M12	2	125×4	114	130	195	310	40	M24
509	W140×3×45×8f	139.4	145m6	138	160	3	444	82	125	4	23	10	150	110	33	80	M12	2	150×4	134	145	235	315	45	M30
510	W140×3×45×8f	139.4	155m6	138	170	3	444	92	125	4	23	10	150	110	33	80	M12	2	150×4	134	155	235	350	40	M30
511	W170×5×32×8f	169	170m6	168	185	5	514	112	150	4	23	10	175	130	33	90	M12	2	175×4	160	170	270	385	45	M30
512	W170×5×32×8f	169	185m6	168	200	5	514	122	150	4	23	10	175	130	33	90	M12	2	175×4	160	185	270	400	45	M30
513	W190×5×36×8f	189	195m6	188	213	5	634	137	180	5	23	10	200	150	33	110	M16	2	200×4	180	195	330	445	50	M30
514	W190×5×36×8f	189	215m6	188	233	5	634	147	180	5	23	10	200	150	33	110	M16	2	200×4	180	215	330	475	65	M30

10

1) Assignment of central holes as specified on page 10/2.

2) Material of driven machine shaft C60N or higher strength.

Options for operation

11

11/2 **Shaft seals**
11/2 Radial shaft seal
11/2 Taconite
11/4 Labyrinth seal

11/5 **Oil circulation lubrication**
11/5 Flange-mounted pump, type H1, horizontal mounting position
11/5 Monitoring devices

11/6 **Cooling**
11/6 Fan
11/6 Cooling coil

11/7 **Heating**
11/7 Heating elements
11/8 Heating elements, types H1 and B2
11/9 Heating elements, types H2 and B3
11/10 Heating elements, type H3
11/11 Heating elements, types H4 and B4

11/12 **Backstop**

11/14 **Oil level indicator, housing material, oil drain valve, breather**

11/15 **Auxiliary drive**
11/15 Maintenance drive and load drive for type B3
11/24 Speed monitoring for type B3

11/26 **Explosion protection as per ATEX 95**

11/28 **Corrosivity category, climatic stress**

11/29 **Application**

11/30 **Coating system**

11/31 **Color selection**

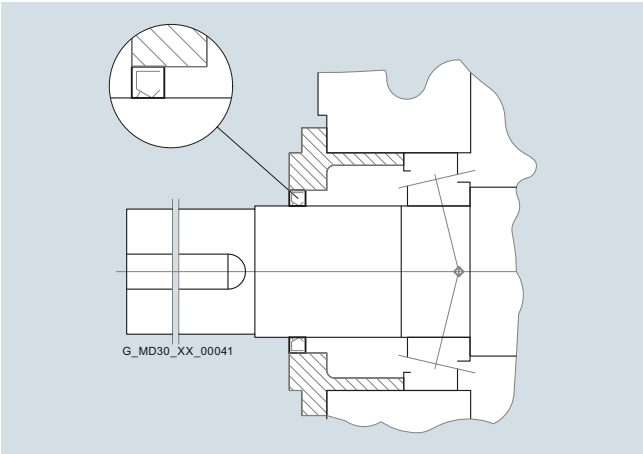
11/32 **Information about oil, information about installation**

11/33 **Factory certificates, further information**

Radial shaft seal Taconite

Overview

Radial shaft seal



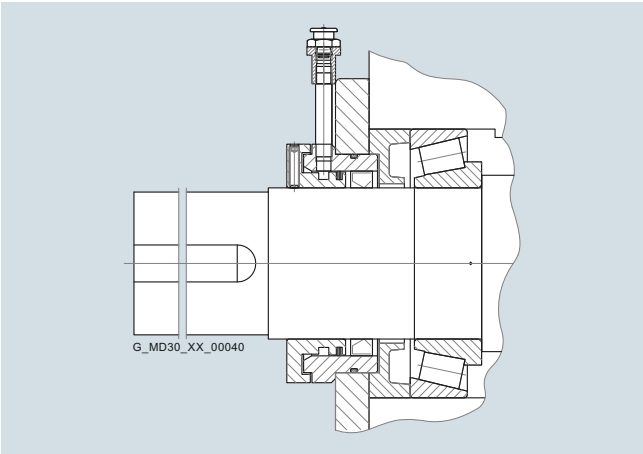
Radial shaft seals are suitable for low to average operating speeds. They can be used for all types and sizes.

A second, redundant radial shaft seal [1] can be fitted at sealing points which are particularly vulnerable or difficult to access.

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

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.

[1] Not for types B2, B3, B4 in conjunction with motor bell housing.

Ordering information:

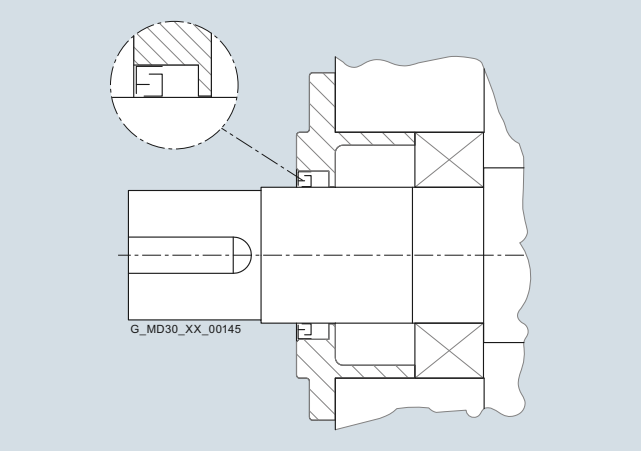
Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	**.**	**-**	**.**	**.**	**.**	■	■	**-**	**A**	**.**	**0**	**.**	**-Z**	■	■	■
Shaft designs																	
Shaft d_1 at one end with 1 × shaft seal							**0**										
Shaft d_1 at one end with twin shaft seal [1]							**9**								**L**	**0**	**L**
Shaft d_1 at one end with taconite E							**4**										
Shaft d_1 at both ends with 1 × shaft seal at both ends							**1**										
Shaft d_1 at both ends with twin shaft seal at both ends							**9**								**L**	**0**	**M**
Shaft d_1 at both ends with taconite E at both ends							**5**										
Shaft d_1 at both ends with 1 × shaft seal at gear unit face 3 (right) and twin shaft seal at gear unit face 6 (left)							**9**								**L**	**0**	**N**
Shaft d_1 at both ends with twin shaft seal at gear unit face 3 (right) and 1 × shaft seal at gear unit face 6 (left)							**9**								**L**	**0**	**P**
Shaft d_1 at both ends with 1 × shaft seal at gear unit face 3 (right) and taconite E at gear unit face 6 (left)							**9**								**L**	**0**	**A**
Shaft d_1 at both ends with taconite E at gear unit face 3 (right) and 1 × shaft seal at gear unit face 6 (left)							**9**								**L**	**0**	**B**
Shaft d_1 at both ends with twin shaft seal at gear unit face 3 (right) and taconite E at gear unit face 6 (left)							**9**								**L**	**0**	**Q**
Shaft d_1 at both ends with taconite E at gear unit face 3 (right) and twin shaft seal at gear unit face 6 (left)							**9**								**L**	**0**	**R**
Shaft d_2 at one end with 1 × shaft seal								**0**									
Shaft d_2 at one end with twin shaft seal								**9**							**M**	**0**	**L**
Shaft d_2 at one end with taconite F								**4**									
Shaft d_2 at both ends with 1 × shaft seal at both ends								**1**									
Shaft d_2 at both ends with twin shaft seal at both ends								**9**							**M**	**0**	**M**
Shaft d_2 at both ends with taconite F at both ends								**5**									
Shaft d_2 at both ends with 1 × shaft seal at gear unit face 3 (right) and twin shaft seal at gear unit face 6 (left)								**9**							**M**	**0**	**N**
Shaft d_2 at both ends with twin shaft seal at gear unit face 3 (right) and 1 × shaft seal at gear unit face 6 (left)								**9**							**M**	**0**	**P**
Shaft d_2 at both ends with 1 × shaft seal at gear unit face 3 (right) and taconite F at gear unit face 6 (left)								**9**							**M**	**0**	**A**
Shaft d_2 at both ends with taconite F at gear unit face 3 (right) and 1 × shaft seal at gear unit face 6 (left)								**9**							**M**	**0**	**B**
Shaft d_2 at both ends with twin shaft seal at gear unit face 3 (right) and taconite F at gear unit face 6 (left)								**9**							**M**	**0**	**Q**
Shaft d_2 at both ends with taconite F at gear unit face 3 (right) and twin shaft seal at gear unit face 6 (left)								**9**							**M**	**0**	**R**
Shaft d_2 with taconite F-F — For gear units with hollow shaft with keyway (..H.) or hollow shaft for shrink disk (..D.), design: taconite seal at both ends and cover cap at one end as protection against accidental contact								**6**									
Shaft d_2 with taconite F-H — For gear units with hollow shaft with keyway (..H.), design: taconite seal at driven machine end and dustproof cover cap at opposite end								**7**									
Shaft d_2 with taconite F-K — For gear units with hollow shaft for shrink disk (..D.), design: taconite seal at driven machine end and dustproof cover cap at opposite end								**8**									

[1] Not for types B2, B3, B4 in conjunction with motor bell housing.

Labyrinth seal

Overview

Labyrinth seal



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

For special protection when the gear unit is at a standstill, the labyrinth seal can be combined with a V-ring seal that is attached to the outer surface of the labyrinth.

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 or oil circulation 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
- Refer to table for minimum input speed n_1 required for dip lubrication. If the input speed is lower than the minimum input speed n_1, it may be possible to use the labyrinth seal in combination with oil circulation lubrication. Radial shaft seals must otherwise be provided.
- To achieve a preservation life in excess of 6 months, the combination of labyrinth seal with additional V-ring seal must be used.
- Use of the combination of labyrinth seal with additional V-ring seal is recommended for applications with frequent down-times.

Minimum input speed n_1 for labyrinth seals, H1SH type

	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 can be used only in combination with oil circulation lubrication.

Ordering information:

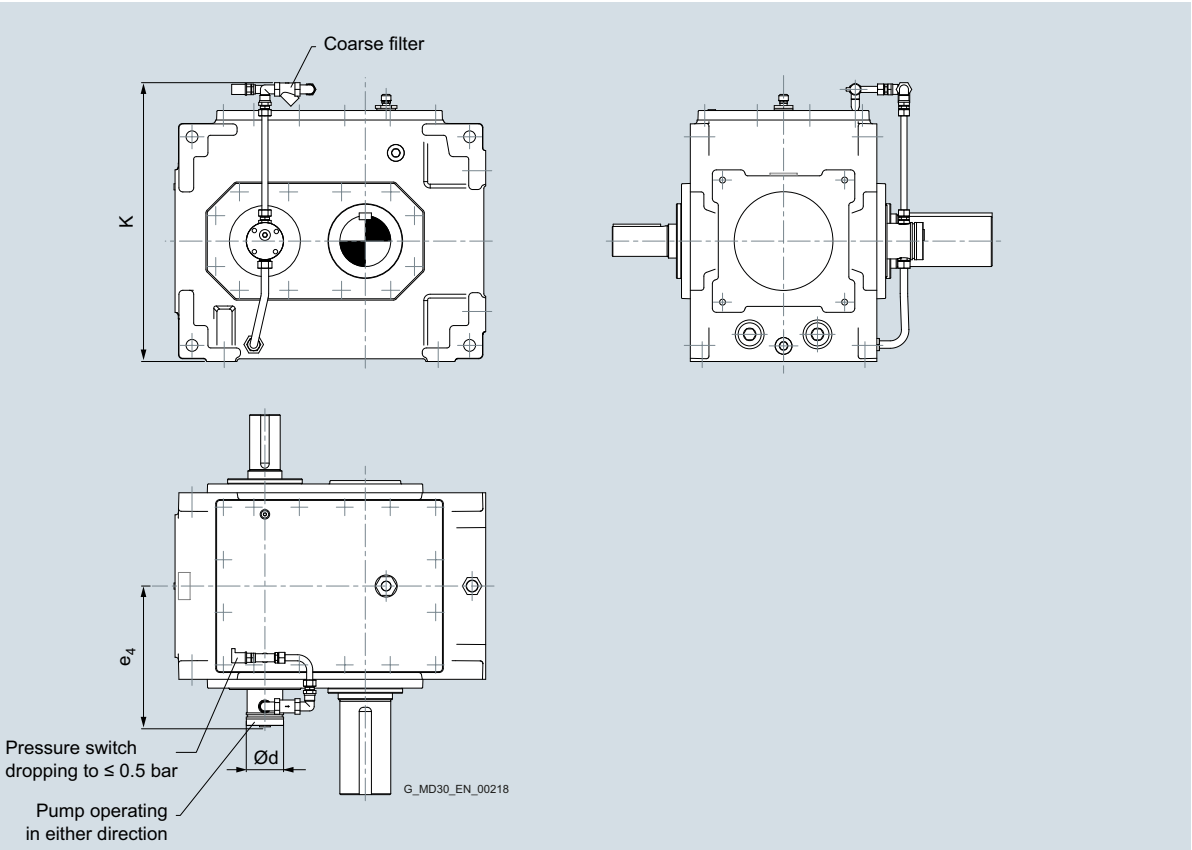
									"-Z" and order code		
Article No.:	**2LP202**	**.**	**-**	**.**	**.**	**K**	■	■	**-0 . A . -Z**	■	■	■
Shaft d_1 with labyrinth seal							**2**					
Shaft d_1 with labyrinth seal and V-ring seal							**9**			**L**	**0**	**J**
Shaft d_2 with labyrinth seal								**2**				
Shaft d_2 with labyrinth seal and V-ring seal								**9**		**M**	**0**	**J**

Overview

Flange-mounted pump

An oil circulation lubrication system must be used for single-stage helical gear units with labyrinth seal when the input speed is lower than the minimum required input speed or for units with low ratio range. A flange-mounted pump which can operate in either direction of rotation is installed to secure the oil supply to the rolling bearings with reduced oil level.

The size of flange-mounted pump varies according to the input speed. Other speeds and inclined mounting position available on request.



Ordering information:

Gear unit size [1]	Input speed rpm	Pump size	Dimensions in mm			Oil quantity l	Data position of Article No. 1 to 6	7	8	9	10	11	12	13	14	15	16
			d	e_4	K		Article No.:	**2LP202**	.	-	.	.	.	.	-	.	.	.	■
505/506	≥ 500 – 1200	3	110	320	613	19											**D**
	≥ 1200 – 1800	2	90	311													**E**
507/508	≥ 500 – 1200	3	110	380	743	26											**D**
	≥ 1200 – 1800	2	90	371													**E**
509/510	≥ 500 – 1800	3	110	415	822	39											**D**

Monitoring devices

Pressure switch

When operated in conjunction with an alarm system, the pressure switch can output a visual or acoustic alarm to indicate that the oil pressure has dropped to ≤ 0.5 bar or can initiate a system trip.

Max. switching capacities:

- 2 A/250 V, AC, 250 VA (AC voltage)
- 4 A/200 V, DC, 20 W (DC voltage)

Degree of protection IP65

Coarse filter

The coarse filter protects units connected downstream by capturing and collecting dirt particles.

[1] Sizes 503 and 504 on request.

Overview

Fan and cooling coil

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

Fan:

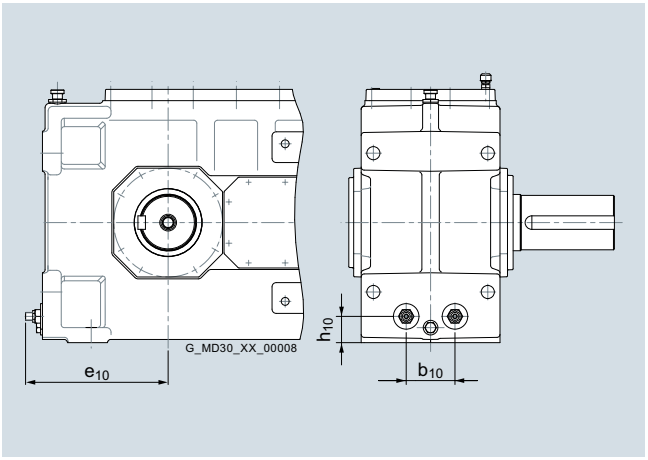
- The standard fan is a radial fan that is mounted on the shaft d_1 (= fast-rotating shaft). On designs with shaft studs at both ends (designs **G**, **H**, **I**), the fan is mounted either at gear unit face 3 (right) or gear unit face 6 (left).
- An adapted air guide cover ensures optimized air flow 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:

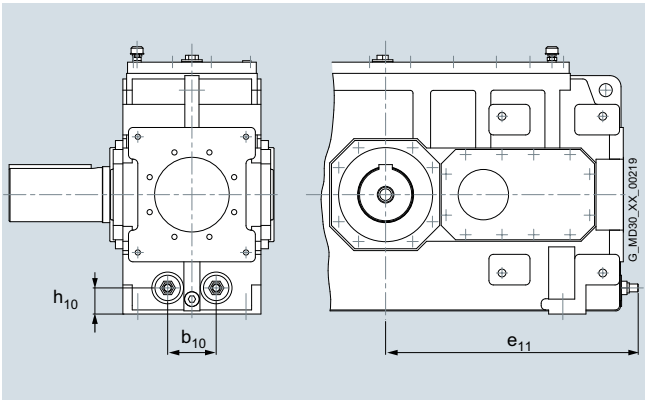
- The cooling coil is connected either at
  - gear unit face 4 (end face d_2) or
  - gear unit face 1 (end face d_1).
- The cooling coil is suitable for freshwater, seawater and brackish water
- See table for connection dimensions
- Water connection: G ½ "

Parameters for attainment of the specified thermal capacities:

- See right-hand column of tables for volumetric flow rate of cooling water in l/min. The flow rate can exceed the specified values, but this might result in elevated noise levels.
- Max. permissible cooling water pressure: 8 bar



Connection to gear unit face 4 (end face d_2)



Connection to gear unit face 1 (end face d_1)

H1, B2 types

Gear unit sizes	Cooling coil Dimensions in mm				l/min
	b_{10}	e_{10}	e_{11}	h_{10}	H1/B2
503	80	185	255	42	4
504	120	215	310	50	4
505	120	220	365	50	4
506	120	240	395	50	4
507	180	235	430	65	4
508	180	265	460	65	4
509	200	290	490	80	8
510	200	315	520	80	8

H2, H3, B3 types

Gear unit sizes	Cooling coil Dimensions in mm					l/min
	b_{10}	e_{10}	H2/B3 e_{11}	H3 e_{11}	h_{10}	H2/H3/B3
504	80	250	415	–	40	4
505	95	275	475	525	45	4
506	95	345	525	575	45	4
507	100	340	580	640	60	4
508	100	400	630	690	60	4
509	130	385	675	745	70	4
510	130	450	730	795	70	8
511	150	465	805	905	80	8
512	150	535	865	960	80	8
513	160	380	835	945	85	8
514	160	420	910	1020	85	8

Ordering information:

		Order code
Article No.:	**2LP202.-.....-0.A ■ -Z ■ ■ ■**	
Auxiliary cooling		
Auxiliary cooling with:		
• Fan (with shaft d_1 at one end)	**1**	
• Fan at gear unit face 3 (with shaft d_1 at both ends)	**9**	**R 1 A**
• Fan at gear unit face 6 (with shaft d_1 at both ends)	**9**	**R 1 F**
• Cooling coil, connections at gear unit face 4	**2**	
• Cooling coil, connections at gear unit face 1	**4**	
• Fan (with shaft d_1 at one end) and cooling coil, connections at gear unit face 4	**3**	
• Fan (with shaft d_1 at one end) and cooling coil, connections at gear unit face 1	**5**	
• Fan at gear unit face 3 (with shaft d_1 at both ends) and cooling coil, connections at gear unit face 4	**9**	**R 1 B**
• Fan at gear unit face 3 (with shaft d_1 at both ends) and cooling coil, connections at gear unit face 1	**9**	**R 1 C**
• Fan at gear unit face 6 (with shaft d_1 at both ends) and cooling coil, connections at gear unit face 4	**9**	**R 1 G**
• Fan at gear unit face 6 (with shaft d_1 at both ends) and cooling coil, connections at gear unit face 1	**9**	**R 1 H**
Without auxiliary cooling	**0**	

Overview

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

		Viscosity ISO-VG at 40°C in mm²/s (cSt)	Ambient temperatures												
			Below -40 °C	Up to -40 °C	Up to -35 °C	Up to -30 °C	Up to -25 °C	Up to -20 °C	Up to -15 °C	Up to -10 °C	Up to -5 °C	Up to 0 °C	Up to 5 °C	Up to 10 °C	Up to 15 °C
Dip lubrication	Mineral oil	VG 460	–	–	–	–	2	2	1	1	x	x	x	x	x
		VG 320	–	–	–	2	2	1	1	x	x	x	x	x	x
		VG 220	–	–	–	2	2	1	1	x	x	x	x	x	x
	PAO oil	VG 460	•	2	1	1	x	x	x	x	x	x	x	x	x
		VG 320	•	1	1	x	x	x	x	x	x	x	x	x	x
		VG 220	•	1	1	x	x	x	x	x	x	x	x	x	x
	PG oil	VG 460	•	2	1	1	x	x	x	x	x	x	x	x	x
		VG 320	•	2	1	1	x	x	x	x	x	x	x	x	x
		VG 220	•	2	1	1	x	x	x	x	x	x	x	x	x
Oil circulation/ forced lubrication	Mineral oil	VG 320	–	–	–	–	–	–	–	–	2	2	1	1	x
		VG 220	–	–	–	–	–	–	–	2	2	1	1	x	x
	PAO oil	VG 320	–	–	–	–	–	–	–	2	2	1	1	x	x
		VG 220	–	–	–	–	–	2	2	1	1	x	x	x	x
	PG oil	VG 320	–	–	–	–	–	–	–	2	2	1	1	x	x
		VG 220	–	–	–	–	–	–	–	2	2	1	1	x	x

x	No heating element required
1	One heating element required
2	Two heating elements required
–	Not available as standard
•	On request

Heating elements are only permitted in combination with oil temperature monitoring.
An electrical oil level monitoring system (available on request) is additionally required for heating elements of ATEX design.

A maximum of two heating elements can be installed per gear unit. A total of two heating elements can be mounted on gear unit face 1 (end face d_1), and one or two heating elements (depending on the gear unit size) on gear unit face 4 (end face d_2). Heating elements cannot be mounted on gear unit face 4 if the unit is in mounting position L in which gear unit face 4 is the standard mounting surface.

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 must be added to the Article No.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■
Screw-in heater (standard version)															
One heating element at gear unit face 4 (end face d_2)													**J**	**0**	**0**
Two heating elements at gear unit face 4 (end face d_2) [1)2)]													**J**	**0**	**1**
One heating element at gear unit face 1 (end face d_1)													**J**	**0**	**2**
Two heating elements at gear unit face 1 (end face d_1) [1)]													**J**	**0**	**3**
One heating element at gear unit face 1 and gear unit face 4													**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 at gear unit face 4 (end face d_2) [3)]													**J**	**0**	**5**
Two heating elements at gear unit face 4 (end face d_2) [1)2)3)]													**J**	**0**	**6**
One heating element at gear unit face 1 (end face d_1) [3)]													**J**	**0**	**7**
Two heating elements at gear unit face 1 (end face d_1) [1)3)]													**J**	**0**	**8**
One heating element at gear unit face 1 and gear unit face 4 [3)]													**J**	**0**	**9**
Oil temperature indicator (ATEX design, category 2 + 3)															
Pt100 resistance thermometer													**H**	**4**	**4**

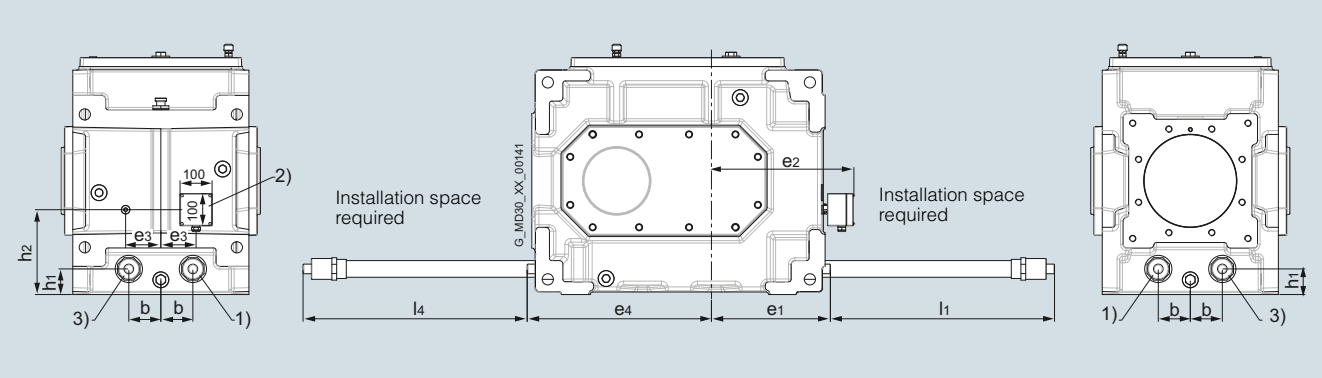
1) Version not available for: H1 type, gear unit size 506 with i_N = 5.6 and higher, H1 type, gear unit size 510 with i_N = 4.7 and higher.

2) Version not available for: H2, H3, H4, B3, B4 types, Gear unit sizes 506, 508, 510, 512, 514.

3) Restrictions might apply depending on the installation space required. Availability and dimensions available on request.

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

Dimensional drawings



Gear unit size	Connected load in W		Dimensions in mm								
	Heating elements		**Heating elements**				**Installation space**		**Temperature monitors**		
	1 heating element	2 heating elements	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
503	189	378	225	290	40	42	300	300	290	40	130
504	189	378	250	345	60	50	300	300	325	50	155
505	281	562	255	400	60	50	450	450	330	50	170
506 [3]	312	624	275	430	60	50	500	500	350	50	170
507	472	944	300	495	90	65	500	500	360	100	235
508	472	944	330	525	90	65	500	500	390	100	235
509	701	1402	350	550	100	80	600	600	430	110	265
510 [3]	815	1630	375	585	100	80	700	700	455	110	265

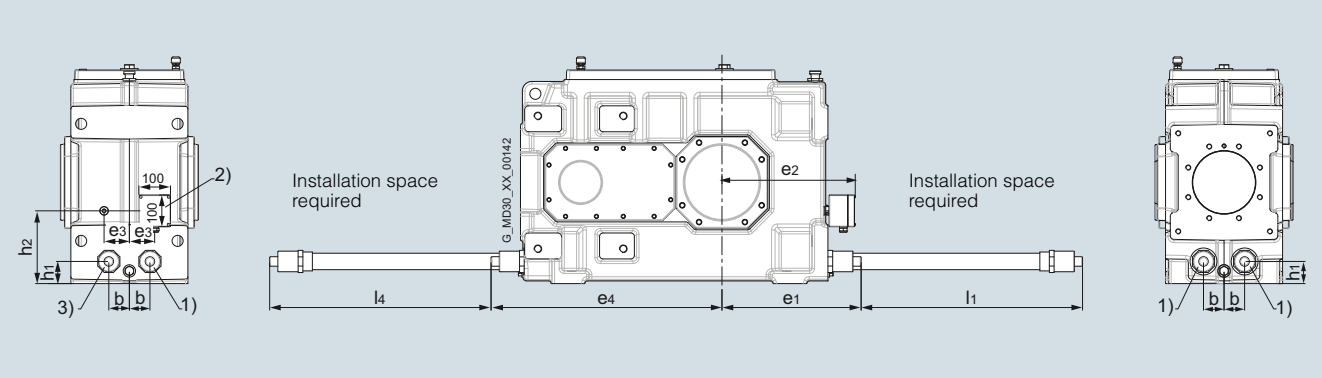
Depending on the version, screw-in heaters and temperature monitors/resistance thermometers can be arranged in a mirror image. The cable entry point of the screw-in heater is arranged axially on the connection head in the direction of installation.

[1] Screw-in heater:
Technical data and notes: Degree of protection IP 65, 230 V, 50 Hz.

[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 IP 54 degree of protection, 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] It is not possible to install 2 heating elements on H1 type size 506 with i_N = 5.6 or higher!
It is not possible to install 2 heating elements on H1 type size 510 with i_N = 4.7 or higher!

Overview



Gear unit size	Connected load in W		Dimensions in mm								
	Heating elements		**Heating elements**				**Installation space**		**Temperature monitors**		
	1 heating element	2 heating elements	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
504	200	400	275	445	40	40	500	500	310	40	140
505	312	624	310	520	47.5	45	500	500	330	50	150
506 [3]	435	624	380	575	47.5	45	700	700	400	50	150
507	497	994	375	625	50	60	800	800	395	60	190
508 [3]	558	839	435	675	50	60	900	900	455	60	190
509	815	1630	445	750	65	70	700	700	435	80	230
510 [3]	1044	1631	510	800	65	70	900	900	500	80	230
511	1158	2316	525	885	75	80	1000	1000	515	80	280
512 [3]	1273	1974	595	940	75	80	1100	1100	585	80	280
513	1158	2316	440	900	80	85	1000	1000	540	100	310
514 [3]	1273	1974	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. The cable entry point of the screw-in heater is arranged axially on the connection head in the direction of installation.

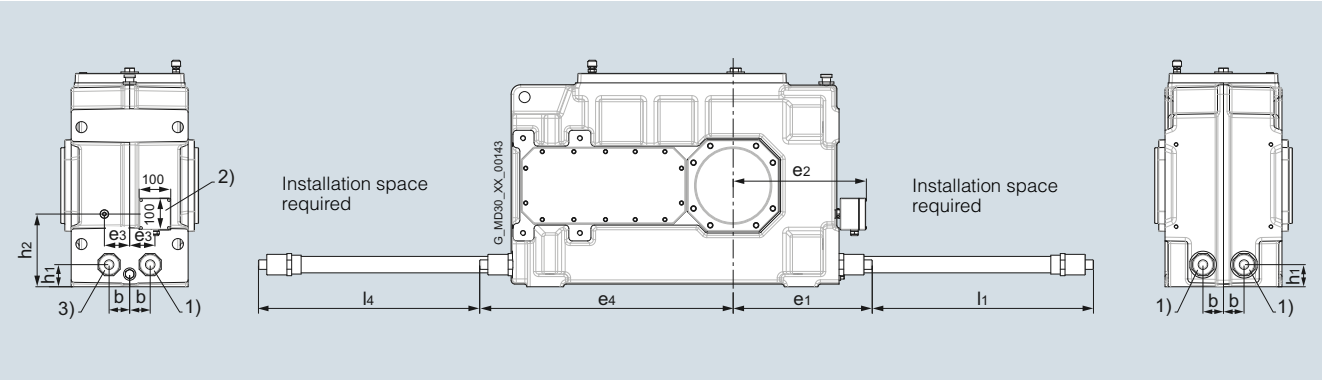
[1] Screw-in heater:
Technical data and notes: Degree of protection IP 65, 230 V, 50 Hz.

[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 IP 54 degree of protection,
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 gear unit face 4 (end-face output)!

Heating elements
Type H3, gear unit sizes 505 to 514

Overview



Gear unit size	Connected load in W		Dimensions in mm								
	Heating elements		**Heating elements**				**Installation space**		**Temperature monitors**		
	1 heating element	2 heating elements	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
505	312	624	310	560	47.5	45	500	500	330	50	150
506 [3]	435	624	380	615	47.5	45	700	700	400	50	150
507	497	994	375	680	50	60	800	800	395	60	190
508 [3]	558	870	435	730	50	60	900	900	455	60	190
509	815	1630	445	810	65	70	700	700	435	80	230
510 [3]	1044	1631	510	865	65	70	900	900	500	80	230
511	1158	2316	525	975	75	80	1000	1000	515	80	280
512 [3]	1273	2088	595	1030	75	80	1100	1100	585	80	280
513	1273	2546	440	1010	80	85	1100	1100	540	100	310
514 [3]	1501	2316	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. The cable entry point of the screw-in heater is arranged axially on the connection head in the direction of installation.

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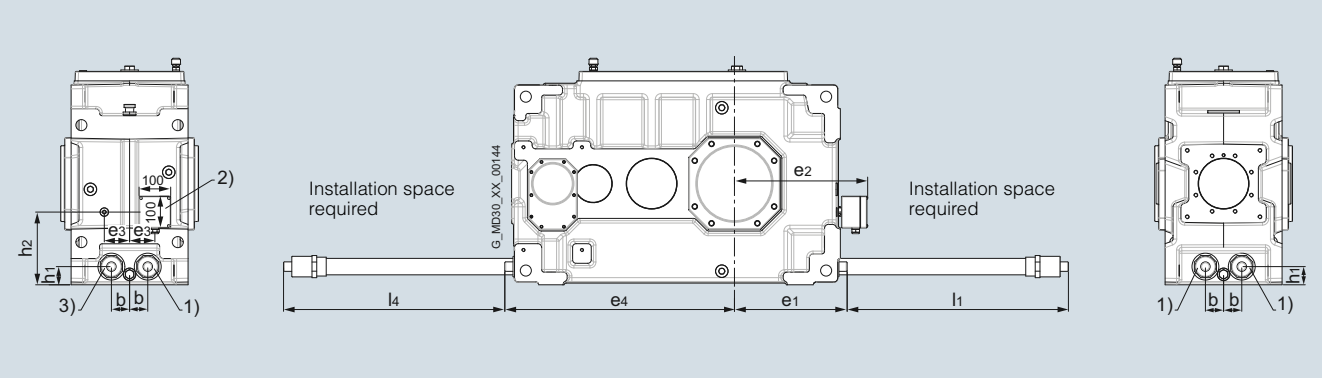
[1] Screw-in heater:
Technical data and notes: IP 65 degree of protection, 230 V, 50 Hz.

[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 IP 54 degree of protection,
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 gear unit face 4 (end-face output)!

Overview



Gear unit size	Connected load in W		Dimensions in mm								
	Heating elements		**Heating elements**				**Installation space**		**Temperature monitors**		
	1 heating element	2 heating elements	e_1	e_4	b	h_1	l_1	l_4	e_2	e_3	h_2
505	312	624	255	510	42.5	37	500	500	330	50	150
506 [3]	435	624	325	565	42.5	37	700	700	400	50	150
507	435	870	305	615	50	50	700	700	395	60	190
508 [3]	497	778	365	665	50	50	800	800	455	60	190
509	815	1630	365	735	57.5	57.5	700	700	435	80	230
510 [3]	1044	1631	430	790	57.5	57.5	900	900	500	80	230
511	1158	2316	425	880	75	65	1000	1000	515	80	280
512 [3]	1273	1974	495	935	75	65	1100	1100	585	80	280
513	1273	2546	440	1010	80	85	1100	1100	540	100	310
514 [3]	1501	2316	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. The cable entry point of the screw-in heater is arranged axially on the connection head in the direction of installation.

[1] Screw-in heater:
Technical data and notes: IP 65 degree of protection, 230 V, 50 Hz.

[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 IP 54 degree of protection,
PG 9, two-wire circuit
Connection with three or four-wire circuit also possible by the customer.
Connection to an evaluation unit is necessary.

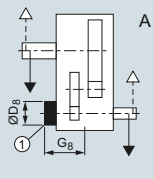
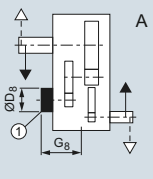
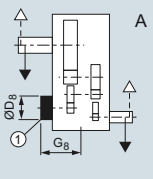
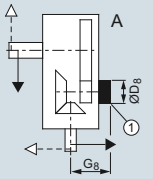
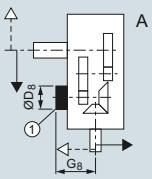
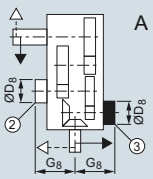
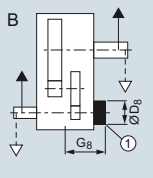
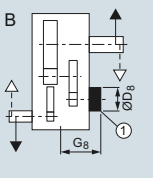
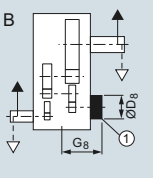
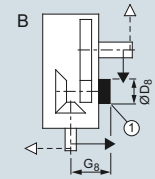
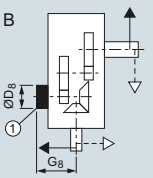
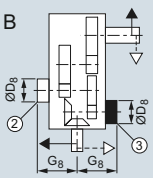
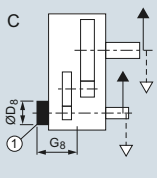
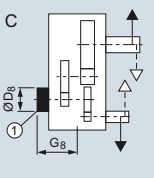
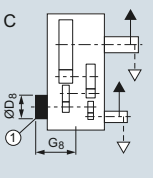
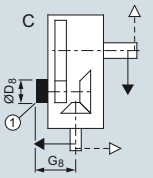
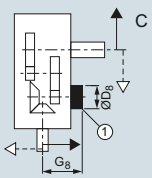
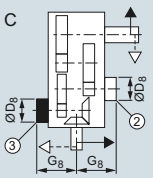
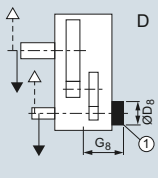
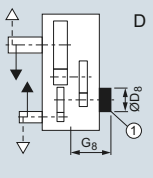
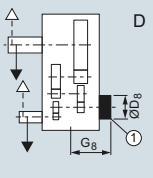
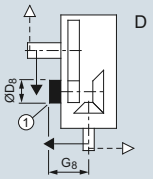
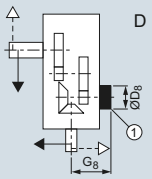
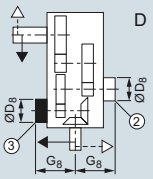
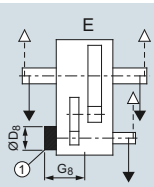
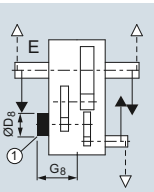
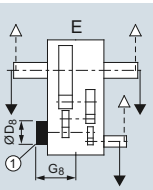
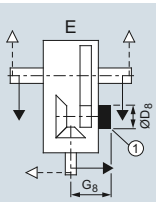
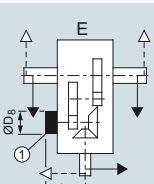
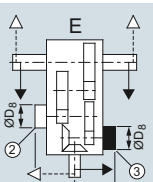
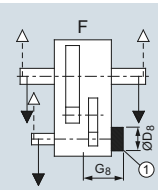
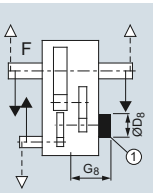
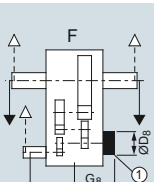
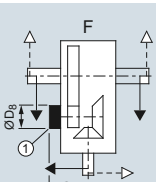
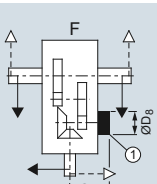
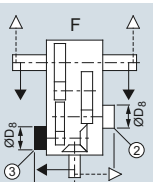
[3] With sizes 506, 508, 510, 512 and 514 it is not possible to mount 2 heating elements on gear unit face 4 (end-face output)!

Overview

Backstop

For certain requirements, FLENDER SIG gear units can be ordered with a mechanical backstop. In this case, the direction of rotation of shaft d_2 must be specified. For gear units with a d_2 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 d_2.

For determining the direction of rotation for gear units without a backstop, see page 11/33.

Design	Helical gear unit – type H2	H3	H4	Bevel-helical gear unit – type B2	B3	B4
A	 G_MD30_XX_00020	 G_MD30_XX_00024	 G_MD30_XX_00028	 G_MD30_XX_00163	 G_MD30_XX_00032	 G_MD30_XX_00036
B	 G_MD30_XX_00021	 G_MD30_XX_00025	 G_MD30_XX_00029	 G_MD30_XX_00164	 G_MD30_XX_00033	 G_MD30_XX_00037
C	 G_MD30_XX_00022	 G_MD30_XX_00026	 G_MD30_XX_00030	 G_MD30_XX_00165	 G_MD30_XX_00034	 G_MD30_XX_00038
D	 G_MD30_XX_00023	 G_MD30_XX_00027	 G_MD30_XX_00031	 G_MD30_XX_00166	 G_MD30_XX_00035	 G_MD30_DE_00039
E	 G_MD30_XX_00148	 G_MD30_XX_00153	 G_MD30_XX_00158	 G_MD30_XX_00167	 G_MD30_XX_00169	 G_MD30_XX_00171
F	 G_MD30_XX_00149	 G_MD30_XX_00154	 G_MD30_XX_00159	 G_MD30_XX_00168	 G_MD30_XX_00170	 G_MD30_XX_00172

① Backstop, vertical mounting position only for H2, H3, H4 designs B, D, F or B2 designs A, B, E or B3 designs C, D, F.
② Backstop for type B4, gear unit sizes 505 and 506, vertical mounting position only for designs C, D, F.
③ Backstop for type B4, gear unit sizes 507 to 514, vertical mounting position only for designs A, B, E.

Overview

Dimensions:

Gear unit size	Dimensions in mm **Backstop** H2 [1]		H3		H4		B2 [2]		B3		B4	
	D_8	G_8	D_8	G_8	D_8	G_8	D_8	G_8	D_8	G_8	D_8	G_8
503	–	–	–	–	–	–	155	235	–	–	–	–
504	145	210	–	–	–	–	200	310	130	205	–	–
505	180	254	155	225	–	–	200	350	155	230	155	225
506	180	254	155	225	–	–	200	350	155	230	155	225
507	195	320	180	290	105	245	235	385	180	295	105	245
508	195	320	180	290	105	245	235	385	180	295	105	245
509	235	355	200	335	130	285	255	445	195	355	130	285
510	235	355	200	335	130	285	255	445	195	355	130	285
511	255	389	240	370	155	335	–	–	235	370	155	335
512	255	389	240	370	155	335	–	–	235	370	155	335
513	300	455	260	445	180	405	–	–	255	445	180	405
514	300	455	260	445	180	405	–	–	255	445	180	405

Ordering information:

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z** ■ ■ ■
Backstop/direction of rotation												
Mounting of standard backstop, shaft d_2 clockwise												**L 0 0**
Mounting of standard backstop, shaft d_2 counter-clockwise												**L 0 1**
Preparation of gear unit for mounting a standard backstop												**L 0 2**
Direction of rotation of shaft d_2 with view on right stud [3]												**L 9 4**
Direction of rotation of shaft d_2 with view on left stud [3]												**L 9 5**
Direction of rotation of shaft d_2 with view on lower stud (vertical mounting position) [3]												**L 9 6**
Direction of rotation of shaft d_2 with view on upper stud (vertical mounting position) [3]												**L 9 7**

[1] Max. dimensions; details acc. to order-related documentation.

[2] Backstop not possible for: Type B2S., designs B, D, E, F and type B2D., designs A and C.

[3] This option applies to gear units with shaft d_2 at both ends.

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

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.

Oil level indicator type FSA 127 cannot be installed in conjunction with labyrinth seal.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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 Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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. As an alternative, oil drain valves can be ordered in various designs.

For gear units with an oil drain valve, it is possible to order an additional screw plug with permanent magnet in the oil sump depending on the selection of other options, selection via X.CAT NG.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■
Oil drain																
Gear unit in mounting position "H": Oil drain valve on gear unit face 4, straight design Gear unit in mounting position "V": Oil drain valve on gear unit face 4, straight design Gear unit in mounting position "L": Oil drain valve on gear unit face 2, straight design															**K**	**3**	**0**
Gear unit in mounting position "H": Oil drain valve on gear unit face 4, angled relative to face 6 Gear unit in mounting position "V": Oil drain valve on gear unit face 4, angled relative to face 5 Gear unit in mounting position "L": Oil drain valve on gear unit face 2, angled relative to face 6															**K**	**3**	**2**
Gear unit in mounting position "H": Oil drain valve on gear unit face 4, angled relative to face 3 Gear unit in mounting position "V": Oil drain valve on gear unit face 4, angled relative to face 2 Gear unit in mounting position "L": Oil drain valve on gear unit face 2, angled relative to face 3															**K**	**3**	**3**
Gear unit in mounting position "H": Oil drain valve on gear unit face 1, straight design															**K**	**3**	**4**
Gear unit in mounting position "H": Oil drain valve on gear unit face 1, angled relative to face 6															**K**	**3**	**5**
Gear unit in mounting position "H": Oil drain valve on gear unit face 1, angled relative to face 3															**K**	**3**	**6**
Screw plug with permanent magnet in addition to oil drain valve															**K**	**3**	**7**

Gear unit ventilation

In order to equalize pressure differences between the gear unit interior and the ambient atmosphere, FLENDER SIG are equipped as standard with an air filter suitable for use in environments where dust and water spray are present. Air filters for other kinds of ambient conditions can also be ordered.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■

Gear unit ventilation	Filter mesh width	Description			
MANN air filter	40 µm	• For gear units with special dust protection requirements • With filling sieve, oil filter mesh width: 530 µm	**K**	**7**	**1**
MANN air filter, encapsulated design	40 µm	• For gear units with special dust protection requirements • When risk exists of unit becoming completely covered	**K**	**7**	**2**
Wet air filter	3 µm	• For gear units that are used intermittently • For use in extremely humid environments	**K**	**7**	**3**
HYDAC breather filter	10 µm	• For use in oil and tank installations	**K**	**7**	**4**

Overview

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

When an auxiliary drive is installed, oil of viscosity grade VG 220 or VG 320 must be used for the main gear unit.

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 11/25.

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

Motors with IE1 efficiency are recommended for use in auxiliary drives intended for intermittent periodic duty (S3). However, IE2 motors (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	
504	KZ39-LE80MH4E	0.75	2.2	1.79	36.21	KZ49-LE90SG4E-I	1.1	2.3	2.5	32.57
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	
504	–	–	–	–	–	–	–	–	–	–
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.

IE2

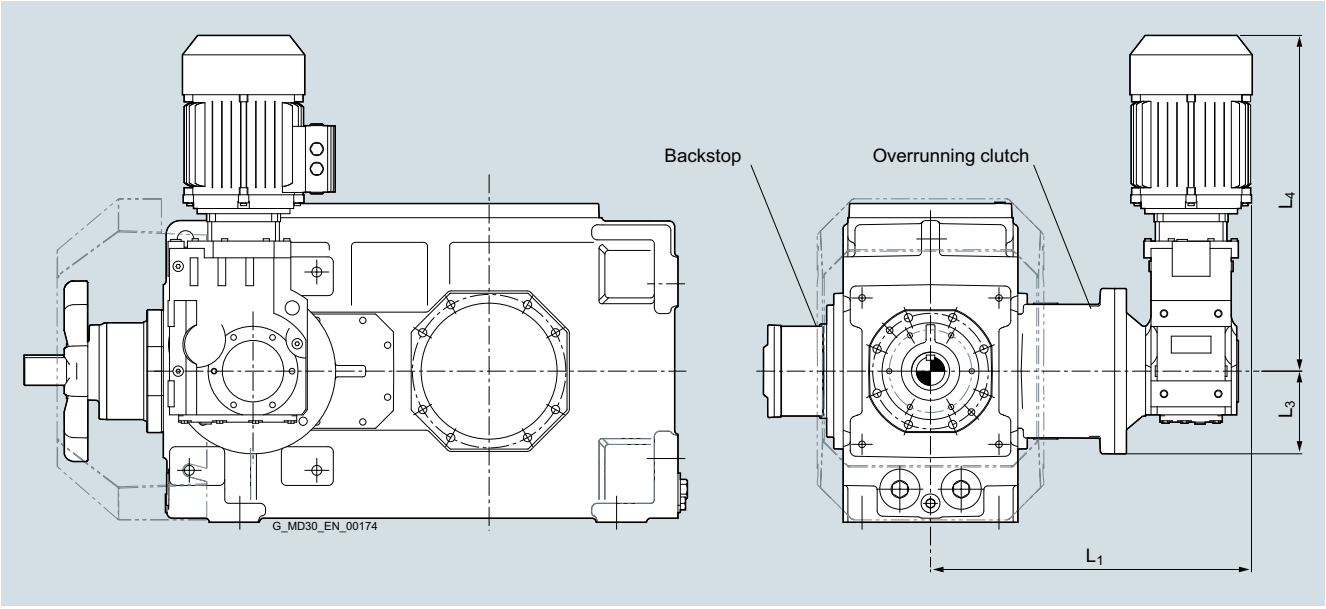
Technical specifications

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes										
		504	**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.		On req.	
	T_3	On req.	On req.		On req.		On req.		On req.		On req.	
18	n_3	On req.	2.55		2.89	On req.	3.05	On req.	2.71	On req.	2.96	On req.
	T_3	On req.	4.3		7.2	On req.	9.4	On req.	14.1	On req.	17.8	On req.
20	n_3	2.82	2.23	On req.	2.56	On req.	2.74	On req.	2.42	On req.	2.59	On req.
	T_3	2.55	4.9	On req.	8.2	On req.	10.4	On req.	15.8	On req.	20.3	On req.
22.4	n_3	2.52	2.55	On req.	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	2.86	4.3	On req.	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
25	n_3	2.82	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	2.55	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
28	n_3	2.52	2.55	2.23	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	2.86	4.3	6.4	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
31.5	n_3	2.82	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	2.55	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
35.5	n_3	2.52	2.55	2.23	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	2.86	4.3	6.4	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
40	n_3	2.82	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	2.55	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
45	n_3	2.52	2.55	2.23	2.89	2.28	3.05	2.42	2.71	2.2	2.96	2.33
	T_3	2.86	4.3	6.4	7.2	9.2	9.4	11.9	14.1	17.4	17.8	22.6
50	n_3	2.82	2.23	2.54	2.56	2.02	2.74	2.17	2.42	1.96	2.59	2.04
	T_3	2.55	4.9	5.6	8.2	10.3	10.4	13.2	15.8	19.5	20.3	25.8
56	n_3	2.52	2.23	2.23	2.56	2.28	2.74	2.42	2.42	2.2	2.59	2.33
	T_3	2.86	4.9	6.4	8.2	9.2	10.4	11.9	15.8	17.4	20.3	22.6
63	n_3	2.52		2.54		2.02		2.17		1.96		2.04
	T_3	2.86		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								

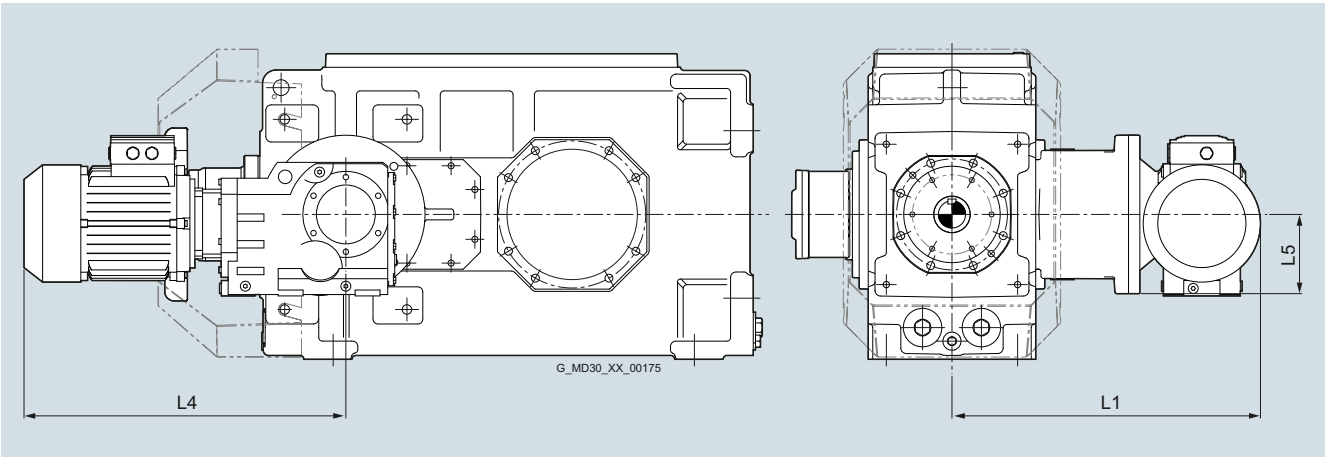
Dimensional drawings

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



Main gear unit	Auxiliary gear unit	Dimensions in mm Maintenance drive			
Size	Type/size/motor	L_1	L_3	L_4 [1]	L_5
504	KZ39-LE80MH4E	420	140	425	140
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 cover cap is used.

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

[1] For operation with a cover cap, the following applies for
Motor frame size 80: L_4 + 26 mm,
Motor frame size 90: L_4 + 16 mm,
Motor frame size 100/112: L_4 + 40 mm,
Motor frame size 132: L_4 + 60 mm.

IE1

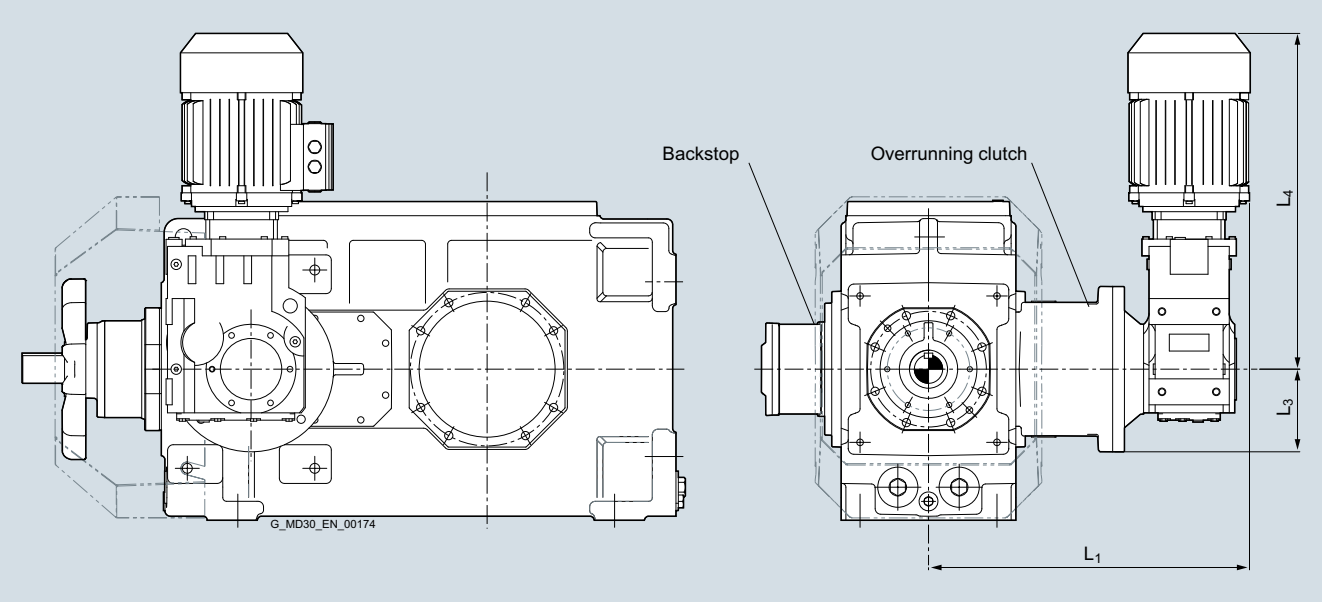
Technical specifications

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes										
		504	**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			–								

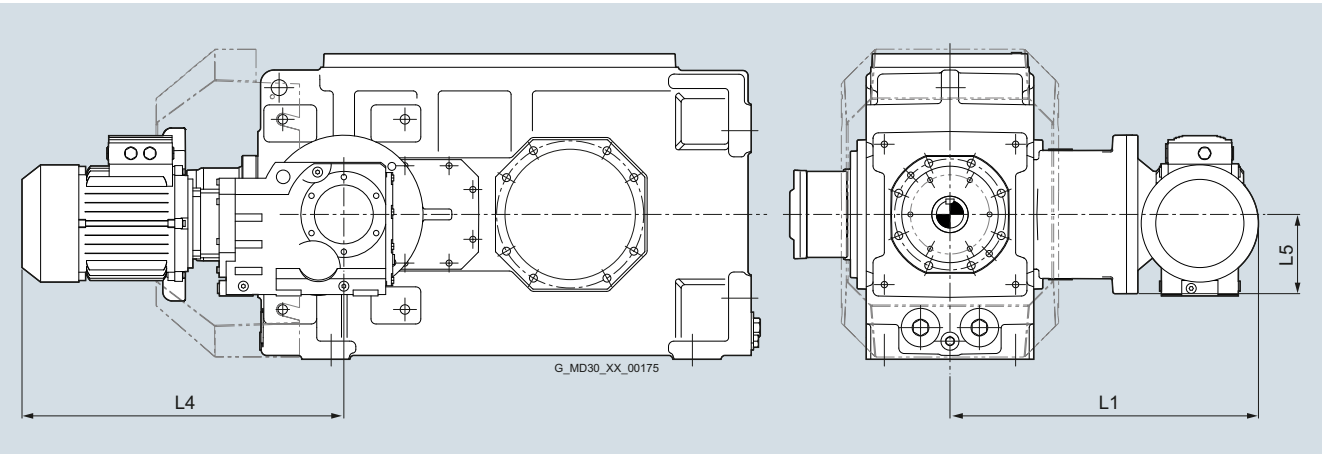
Dimensional drawings

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



Main gear unit	Auxiliary gear unit	Dimensions in mm Maintenance drive			
Size	Type/size/motor	L_1	L_3	L_4 [1]	L_5
504	–	–	–	–	–
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 cover cap is used.

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

[1] For operation with a cover cap, the following applies for
Motor frame size 90: L_4 + 16 mm,
Motor frame size 100/112: L_4 + 40 mm,
Motor frame size 132: L_4 + 60 mm.

IE2

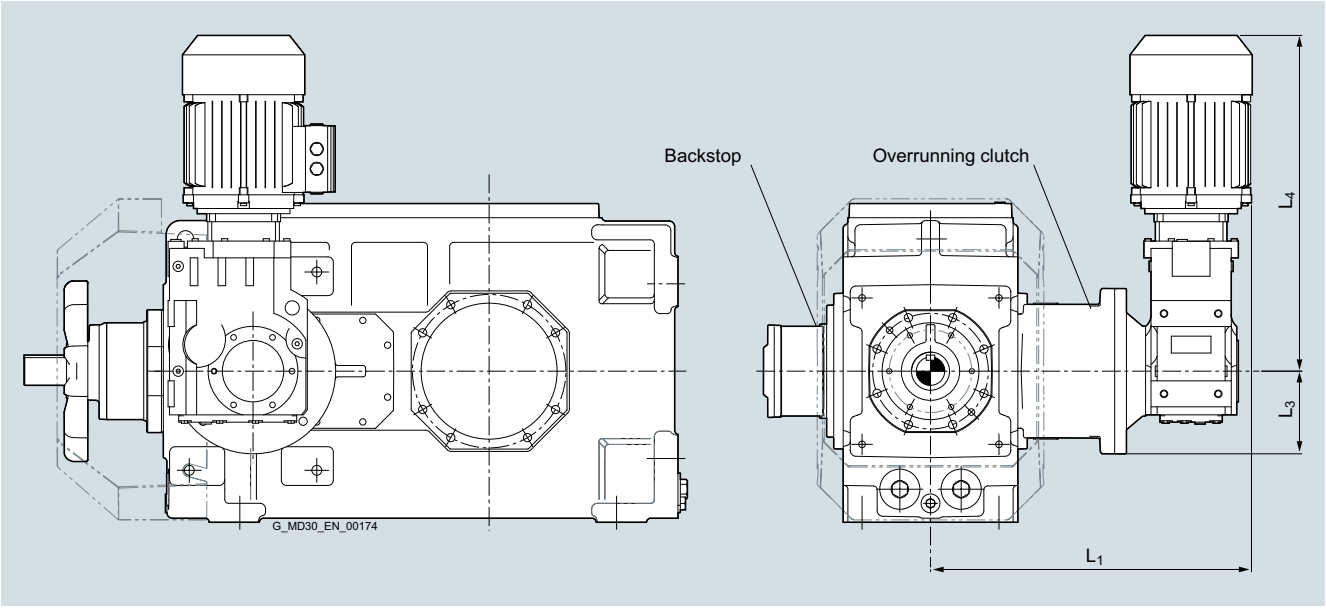
Technical specifications

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes										
		504	**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.		On req.	
	T_3	On req.	On req.		On req.		On req.		On req.		On req.	
18	n_3	On req.	2.54		3.5	On req.	2.84	On req.	3.32	On req.	3.05	On req.
	T_3	On req.	5.6		10.9	On req.	18.5	On req.	31.6	On req.	46.9	On req.
20	n_3	3.1	2.22	On req.	3.1	On req.	2.55	On req.	2.97	On req.	2.67	On req.
	T_3	3.55	6.5	On req.	12.3	On req.	20.6	On req.	35.4	On req.	53.6	On req.
22.4	n_3	2.77	2.54	On req.	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	3.98	5.6	On req.	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
25	n_3	3.1	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	3.55	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
28	n_3	2.77	2.54	2.52	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	3.98	5.6	8.3	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
31.5	n_3	3.1	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	3.55	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
35.5	n_3	2.77	2.54	2.52	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	3.98	5.6	8.3	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
40	n_3	3.1	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	3.55	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
45	n_3	2.77	2.54	2.52	3.5	2.76	2.84	2.25	3.32	2.69	3.05	2.4
	T_3	3.98	5.6	8.3	10.9	13.9	18.5	23.4	31.6	39	46.9	59.7
50	n_3	3.1	2.22	2.88	3.1	2.45	2.55	2.02	2.97	2.4	2.67	2.1
	T_3	3.55	6.5	7.3	12.3	15.6	20.6	26	35.4	43.7	53.6	68.1
56	n_3	2.77	2.22	2.52	3.1	2.76	2.55	2.25	2.97	2.69	2.67	2.4
	T_3	3.98	6.5	8.3	12.3	13.9	20.6	23.4	35.4	39	53.6	59.7
63	n_3	2.77		2.88		2.45		2.02		2.4		2.1
	T_3	3.98		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								

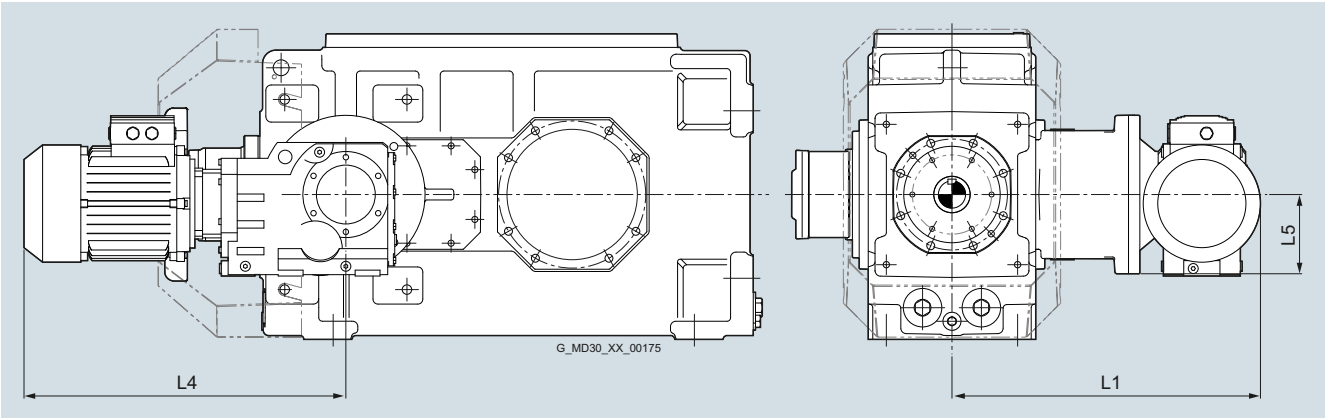
Dimensional drawings

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



Main gear unit	Auxiliary gear unit	Dimensions in mm Load drive			
Size	Type/size/motor	L_1	L_3	L_4 [1]	L_5
504	KZ49-LE90SG4E-I	450	140	500	140
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 cover cap 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 cover cap, the following applies for Motor frame size 90: L_4 + 16 mm,
Motor frame size 100/112: L_4 + 40 mm, Motor frame size 132: L_4 + 60 mm, Motor frame size 160: L_4 + 60 mm.

IE1

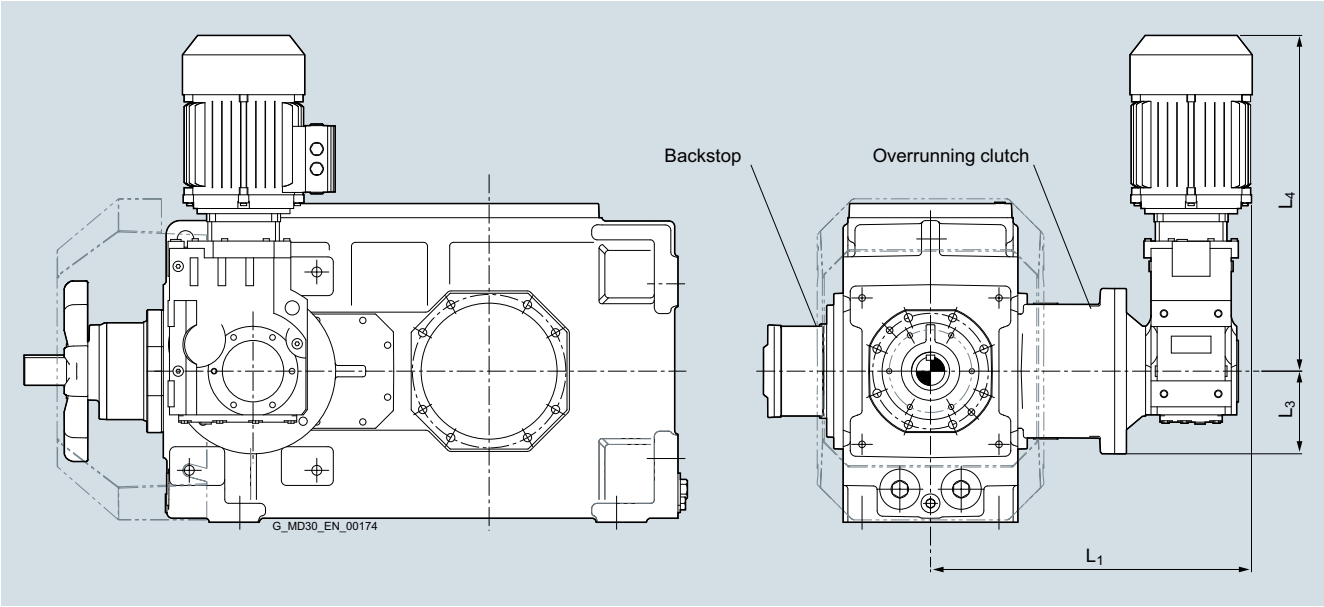
Technical specifications

Power data

i	Output speed n_3 (rpm) Output torque T_3 (kNm)	Gear unit sizes										
		504	**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								

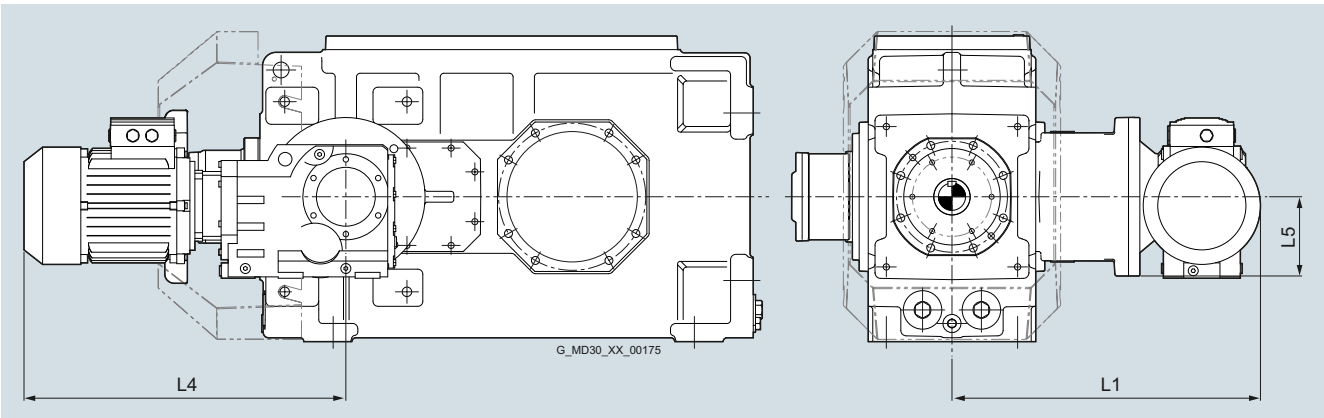
Dimensional drawings

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



Main gear unit	Auxiliary gear unit	Dimensions in mm Load drive			
Size	Type/size/motor	L_1	L_3	L_4 [1]	L_5
504	–	–	–	–	–
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 cover cap 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 cover cap, the following applies for Motor frame size 90: L_4 + 16 mm,
Motor frame size 100/112: L_4 + 40 mm, Motor frame size 132: L_4 + 60 mm, Motor frame size 160: L_4 + 60 mm.

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.

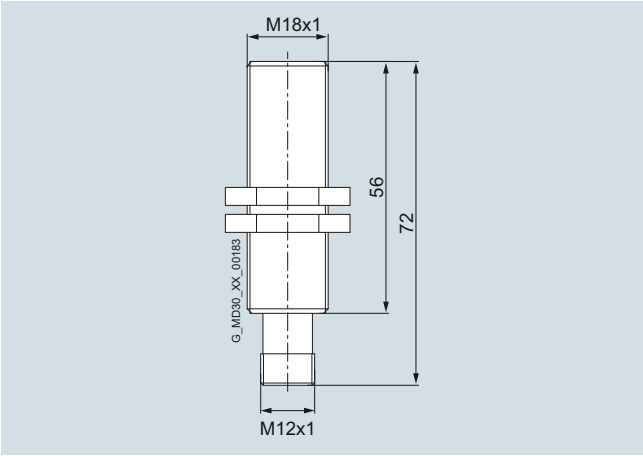
To prevent overspeed of the geared motors in the case of malfunctioning of the overrunning clutch, the drive combination must be equipped with a speed monitor for safety reasons. A malfunction would be, for example, if a signal is output by the pulse generator when drive takes place via the main motor.

The pulse generator is a NAMUR sensor in accordance with EN 60947-5-6. 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.

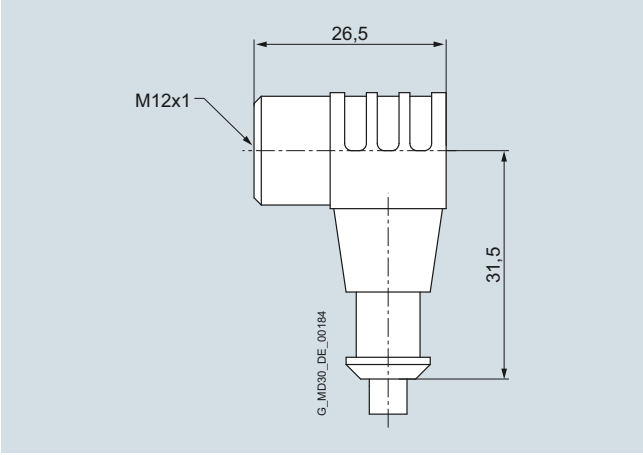
Technical specifications

Pulse generator	
Rated switching distance	5 mm
Fitting condition	Flush
Housing material	CuZn, chromed
Thread	M18 × 1 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 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.

Selection and ordering data

Ordering information:

When ordering the auxiliary drive, **-Z** and the following order codes must be added to the Article No.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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 Article No. must be used.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16
Article 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											
504					**B**	**B**					
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.

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		

Ordering information and ATEX codes

Explosion protection									Data position of Article No.	1 ... 6	7	8	9	10	11	12	13	14	15	16	Order code	Further necessary options		
									Article No.:	2LP202	.	-	.	.	.	.	.	-	.	.	.	.	-Z	Taconite	Pt100 (ATEX)	Coating system acc. to IIC condition
																					■	■	■			
Zone	Minimum ignition energy	ATEX code 1	2	3	4	5	6 [1]	7 [2]																		
21	> 3 mJ	CE Ex II	2D			D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	3	4	x	x	
	≤ 3 mJ	CE Ex II	2D			D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	3	5	x	x	x
22	> 3 mJ	CE Ex II	3D			D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	3	6	x		
	≤ 3 mJ	CE Ex II	3D			D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	3	7	x		x
1	–	CE Ex II	2G	IIA	T1		bck	-20 °C ≤ T_a ≤ 40 °C													X	3	8		x	
		CE Ex II	2G	IIA	T2		bck	-20 °C ≤ T_a ≤ 40 °C													X	3	9		x	
		CE Ex II	2G	IIA	T3		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	0		x	
		CE Ex II	2G	IIA	T4		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	1		x	
		CE Ex II	2G	IIB	T1		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	2		x	
		CE Ex II	2G	IIB	T2		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	3		x	
		CE Ex II	2G	IIB	T3		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	4		x	
		CE Ex II	2G	IIB	T4		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	5		x	
		CE Ex II	2G	IIC	T1		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	6		x	x
		CE Ex II	2G	IIC	T2		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	7		x	x
		CE Ex II	2G	IIC	T3		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	8		x	x
		CE Ex II	2G	IIC	T4		bck	-20 °C ≤ T_a ≤ 40 °C													X	4	9		x	x
2	–	CE Ex II	3G	IIA	T1		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	0			
		CE Ex II	3G	IIA	T2		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	1			
		CE Ex II	3G	IIA	T3		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	2			
		CE Ex II	3G	IIA	T4		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	3			
		CE Ex II	3G	IIB	T1		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	4			
		CE Ex II	3G	IIB	T2		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	5			
		CE Ex II	3G	IIB	T3		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	6			
		CE Ex II	3G	IIB	T4		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	7			
		CE Ex II	3G	IIC	T1		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	8			x
		CE Ex II	3G	IIC	T2		ck	-20 °C ≤ T_a ≤ 40 °C													X	5	9			x
		CE Ex II	3G	IIC	T3		ck	-20 °C ≤ T_a ≤ 40 °C													X	6	0			x
		CE Ex II	3G	IIC	T4		ck	-20 °C ≤ T_a ≤ 40 °C													X	6	1			x
21/1	> 3 mJ	CE Ex II	2G	IIA	T1	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	2	x	x	
		CE Ex II	2G	IIA	T2	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	3	x	x	
		CE Ex II	2G	IIA	T3	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	4	x	x	
		CE Ex II	2G	IIA	T4	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	5	x	x	
		CE Ex II	2G	IIB	T1	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	6	x	x	
		CE Ex II	2G	IIB	T2	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	7	x	x	
		CE Ex II	2G	IIB	T3	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	8	x	x	
		CE Ex II	2G	IIB	T4	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	3	0	x	x	
	≤ 3 mJ	CE Ex II	2G	IIC	T1	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	6	9	x	x	x
		CE Ex II	2G	IIC	T2	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	7	0	x	x	x
		CE Ex II	2G	IIC	T3	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	7	1	x	x	x
		CE Ex II	2G	IIC	T4	D 120 °C	bck	-20 °C ≤ T_a ≤ 40 °C													X	3	2	x	x	x
22/2	> 3 mJ	CE Ex II	3G	IIA	T1	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	2	x		
		CE Ex II	3G	IIA	T2	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	3	x		
		CE Ex II	3G	IIA	T3	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	4	x		
		CE Ex II	3G	IIA	T4	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	5	x		
		CE Ex II	3G	IIB	T1	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	6	x		
		CE Ex II	3G	IIB	T2	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	7	x		
		CE Ex II	3G	IIB	T3	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	8	x		
		CE Ex II	3G	IIB	T4	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	3	1	x		
	≤ 3 mJ	CE Ex II	3G	IIC	T1	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	7	9	x		x
		CE Ex II	3G	IIC	T2	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	8	0	x		x
		CE Ex II	3G	IIC	T3	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	8	1	x		x
		CE Ex II	3G	IIC	T4	D 120 °C	ck	-20 °C ≤ T_a ≤ 40 °C													X	3	3	x		x

[1] Type of protection b must be provided additionally when electrical equipment such as Pt100, heating element, etc. is optionally installed.
[2] The product designation is based on the ambient temperature range stated for a specific order (order codes Y01 and Y02).

Overview

Corrosivity category

The atmospheric ambient conditions have been divided into five corrosivity categories based on ISO 12944-2. These are described below.

Corrosivity category	Description
C1 Normal environmental pollution	• Indoor installation • Heated buildings with a neutral atmosphere
C2 Low environmental pollution	• Indoor and outdoor installation • Unheated buildings with condensation, production areas with low humidity, e.g. warehouses • Atmospheres with little pollution, rural areas
C3 Average environmental pollution	• Indoor and outdoor installation • Production areas with high levels of humidity and some air pollution • Urban and industrial atmospheres with moderate sulfur dioxide loads • Coastal areas with low salinity
C4 High environmental pollution	• Indoor and outdoor installation • Environments with high humidity and occasionally high levels of atmospheric and chemical pollution • Occasional acidic or caustic wet cleaning • Industrial areas and coastal areas with moderate salinity
C5 Very high environmental pollution	• Indoor and outdoor installation • Buildings/areas with almost constant condensation and severe pollution • Industrial areas with high humidity and aggressive atmosphere • Regular acidic or caustic wet cleaning, including cleaning with chemical agents • Coastal and offshore areas with high salinity

Climatic stress

In order to determine the applicable climatic stress, the climatic conditions at the site of installation, on the intended transport routes and in intermediate storage areas (where relevant) must be taken into account.

The assigned corrosivity category is required for selecting the correct coating system.

Ordering information:

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code			Assigned corrosivity category
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■	
Climatic stress																	
Moderate climate zone (e.g. Central European conditions)															**B**	**0**	**1**	C2
Maritime coastal areas, marine climate, maritime transport, tropical, subtropical															**B**	**0**	**2**	C4
Corrosive, chemical atmosphere, aggressive environmental conditions															**B**	**0**	**3**	C5

Overview

Application

The level of corrosion protection required is determined according to the intended application. The assigned corrosivity category reflects the typical, atmospheric environmental conditions for the application and is needed to select the correct coating system.

If the environmental conditions might become more aggressive than typical in individual cases, a higher corrosivity category must be selected according to the description on page 11/28 .

Ordering information:

The application is set as standard to: General mechanical engineering

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code			Assigned corrosivity category
Article No.:	**2LP202**	.	-	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■	
Application															
Wastewater treatment, sewage treatment plant													**A**	**0**	**0**	C5
Excavators and bucket wheel excavators [1]													**A**	**0**	**1**	C4
Chemical industry [1]													**A**	**0**	**2**	C3
Metal working mills													**A**	**0**	**3**	C2
Conveyors													**A**	**0**	**4**	C2
Cranes, general, standard													**A**	**0**	**6**	C2
Cranes, harbor cranes, standard [1]													**A**	**0**	**7**	C5
Cooling tower drive, standard													**A**	**0**	**9**	C4
Sugar production													**A**	**1**	**0**	C4
Paper production, printing presses [1]													**A**	**1**	**1**	C4
Paper production, drying drum drives													**A**	**1**	**2**	C4
Cableways													**A**	**1**	**3**	C4
Building materials production, general													**A**	**1**	**4**	C2
Building materials production, cement industry													**A**	**1**	**5**	C4
Building materials production, brickworks													**A**	**1**	**6**	C4
Transport of persons, elevators, escalators													**A**	**1**	**7**	C2
Mining machinery													**A**	**1**	**8**	C2
Woodworking machines													**A**	**1**	**9**	C2
General mechanical engineering													**A**	**2**	**0**	C2
Food processing industry, general													**A**	**2**	**1**	C2
Food processing industry, mixer drives													**A**	**2**	**2**	C2
Food processing industry, drum dryer drives													**A**	**2**	**3**	C2
Food processing industry, cooking appliance drives													**A**	**2**	**4**	C2
Food processing industry, toaster drives													**A**	**2**	**5**	C2
Shipbuilding and offshore machinery													**A**	**2**	**6**	C5
Prime movers, general													**A**	**2**	**7**	C4
Prime movers, water turbines													**A**	**2**	**8**	C2
Casting machines													**A**	**3**	**1**	C2
Artificial fertilizer and potash works													**A**	**3**	**2**	C2
Lauter tub drive, standard													**A**	**3**	**3**	C4
Agitator drives, standard [1]													**A**	**3**	**4**	C2
Oil pump drives													**A**	**4**	**5**	C4
Compressor drives													**A**	**4**	**6**	C2
Palm oil presses													**A**	**4**	**7**	C4
Preheater drives													**A**	**4**	**8**	C2
Centrifuge drives													**A**	**4**	**9**	C2
Cooling drum drives													**A**	**5**	**0**	C4
Calander drives													**A**	**5**	**1**	C4
Kneader drives													**A**	**5**	**2**	C2
Mill drives, standard [1]													**A**	**5**	**3**	C2

[1] Further options available for specific applications, selection via X.CAT NG.

Overview

Coating system

The coating system is selected according to the intended application, the prevailing climatic stress and, where appropriate, requirements for explosion protection in accordance with ATEX 95.

The coating system is selected according to the highest corrosivity category that is deemed applicable on the basis of climatic stress and application or information provided by the customer.

If explosion protection in accordance with ATEX 95 is required for areas of explosion subgroup IIC or with minimum ignition energy ≤ 3 mJ, it is absolutely essential to select the electrostatically conductive coating (order codes B85, B86, B87) of the relevant corrosivity category, or alternatively, a coating system with a coating thickness of maximum 0.2 mm (order codes B73, B75).

Ordering information:

Highest calculated corrosivity category	Standard coating with top coat	Explosion protection ATEX 95 with explosion subgroup IIC or minimum ignition energy ≤ 3mJ	
		Electrostatically conductive coating	Max. coating thickness 0.2 mm
C1 - C3	B41	B85	B73
C4	B43	B86	B75
C5	B44	B87	B75

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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**
Electrostatically conductive coating with top coat, corrosivity category C3 (design with explosion protection to ATEX 95 with explosion subgroup IIC or minimum ignition energy ≤ 3 mJ)													**B**	**8**	**5**
Electrostatically conductive coating with top coat, corrosivity category C4 (design with explosion protection to ATEX 95 with explosion subgroup IIC or minimum ignition energy ≤ 3 mJ)													**B**	**8**	**6**
Electrostatically conductive coating with top coat, corrosivity category C5 (design with explosion protection to ATEX 95 with explosion subgroup IIC or minimum ignition energy ≤ 3 mJ)													**B**	**8**	**7**
Standard coating **without** top coat, all climate zones [1]													**B**	**4**	**2**

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[1] Not suitable for areas and applications with corrosivity category C5 or explosion protection according to ATEX 95 with explosion subgroup IIC or minimum ignition energy ≤ 3 mJ.

Overview

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.

Shaft cover caps and fan guards at the gear unit end are painted as standard in the warning color RAL 1003 ("signal yellow") to warn of the hazard of rotating parts. Cover caps/fan guards are also optionally available in the same color as the gear unit.

Ordering information:

When ordering gear units in a different color, **-Z** must be added to the Article No.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■
Color selection																	
RAL 5009 azure blue															**C**	**0**	**1**
RAL 5010 gentian blue															**C**	**0**	**2**
RAL 5015 sky blue															**C**	**0**	**0**
RAL 6011 reseda green															**C**	**0**	**6**
RAL 7011 steel gray															**C**	**1**	**3**
RAL 7016 anthracite gray															**C**	**1**	**2**
RAL 7030 stone gray															**C**	**1**	**1**
RAL 7031 blue gray															**C**	**0**	**7**
RAL 7035 light gray															**C**	**0**	**8**
RAL 9005 jet black															**C**	**1**	**0**
Cover caps/fan guards in same color as gear unit															**K**	**2**	**4**

Other colors are available on request (see also page 11/33 Further information).

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 Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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 Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**	■	■	■
Oil viscosity																
ISO VG 460 [1)]													**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 Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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 Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	**.**	**-**	**.**	**.**	**.**	**.**	**.**	**-**	**.**	**.**	**.**	**-Z**	■	■	■
Installation location																
Small, closed rooms													**G**	**3**	**5**
Large rooms, halls													**G**	**3**	**6**
Outdoors													**G**	**3**	**7**

[1)] Not available for gear units in mounting positions L and V, gear units with forced lubrication and gear units with mounted auxiliary drive.

Overview

Factory certificates

The declaration of compliance with the order in accordance with 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 EN 10204-2.2, **-Z** must be added to the Article No.

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

Direction of rotation

For gear units without a backstop, the direction of rotation of shaft d_2 can be specified using the following order codes. For gear units with a d_2 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 d_2.

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 11/12.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■
Direction of rotation																	
Shaft d_2 clockwise															**L**	**9**	**0**
Shaft d_2 counter-clockwise															**L**	**9**	**3**
Direction of rotation of shaft d_2 with view on right stud [1]															**L**	**9**	**4**
Direction of rotation of shaft d_2 with view on left stud [1]															**L**	**9**	**5**
Direction of rotation of shaft d_2 with view on lower stud (vertical mounting position) [1]															**L**	**9**	**6**
Direction of rotation of shaft d_2 with view on upper stud (vertical mounting position) [1]															**L**	**9**	**7**

Further information

Ordering information:

The following further information can be provided in the Article No. using the order code **-Z**.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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 d_2 at both ends.
[2] Further colors, other than those offered in the catalog.
[3] Specify P_2 or T_2

Overview (continued)

Type plate

FLENDER SIG units are supplied as standard with a type plate that is glued to the gear unit and then sealed with varnish and, where appropriate, with other labels made of weather-resistant, temperature-resistant foil. A set of labels made of stainless steel that are attached by stainless-steel button head pins can be ordered as an alternative.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article No.:	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**	■	■	■
Type plate, general labels														
Stainless-steel set of labels													**K**	**2**	**7**
Additional text for type plate (max. 30 characters)													**Y**	**2**	**5**

Options for externally mounted parts

12

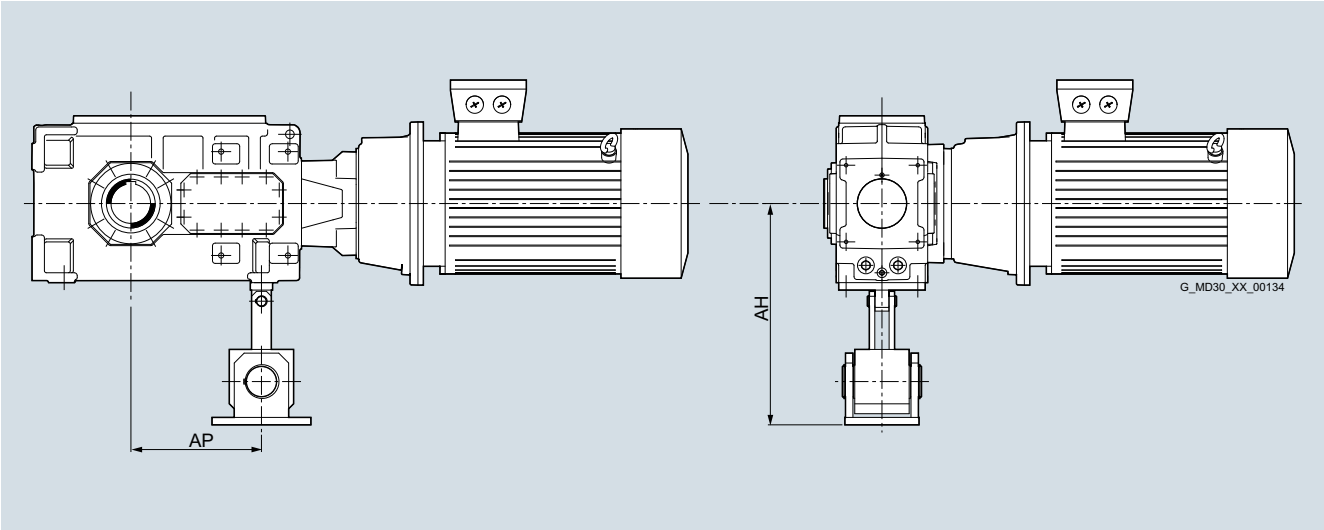
12/2 **Vibration reducing torque reaction arm**
12/2 Types H2, H3, H4, B2, B3 and B4

Motor bell housing for IEC motors
12/4 Type H2, gear unit sizes 504 to 506 with N-EUPEX coupling
12/6 Type H2, gear unit sizes 507 to 512 with N-EUPEX coupling
12/8 Type H3, gear unit sizes 505 to 508 with N-EUPEX coupling
12/10 Type H3, gear unit sizes 509 to 514 with N-EUPEX coupling
12/12 Type H4, gear unit sizes 507 to 512 with N-EUPEX coupling
12/14 Type H4, gear unit sizes 513 to 514 with N-EUPEX coupling
12/16 Type B2, gear unit sizes 503 to 506 with N-EUPEX coupling
12/18 Type B2, gear unit sizes 507 to 510 with N-EUPEX coupling
12/20 Type B3, gear unit sizes 504 to 508 with N-EUPEX coupling
12/22 Type B3, gear unit sizes 509 to 514 with N-EUPEX coupling
12/24 Type B4, gear unit sizes 505 to 508 with N-EUPEX coupling
12/26 Type B4, gear unit sizes 509 to 514 with N-EUPEX coupling
12/28 Fitting dimensions for IEC motors

Vibration reducing torque reaction arm

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

Dimensional drawings



Gear unit sizes	Dimensions in mm **Types**									
	H1/B2 [1]		H2/B3 [1]		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

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

Only for gear units in horizontal mounting position with hollow or solid shaft without parallel key and with mounted flange coupling.

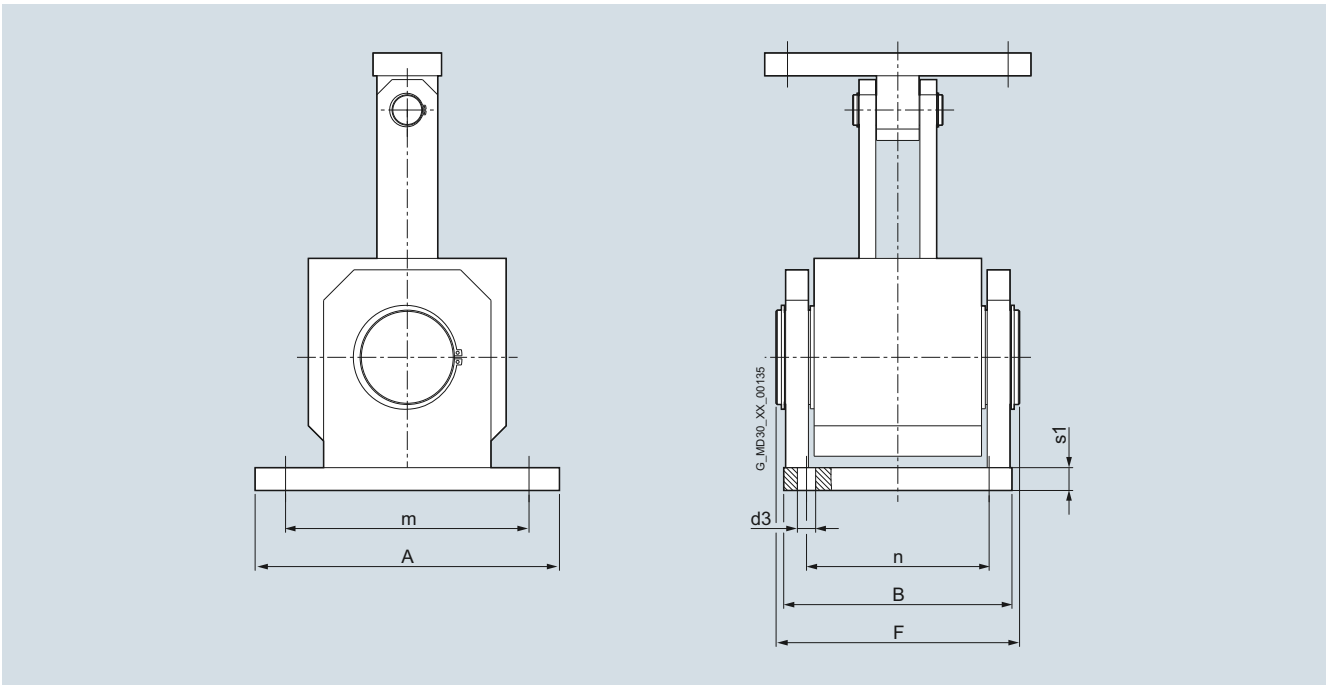
When the housing torque arm is used in conjunction with the solid shaft without parallel key, the maximum permissible input torque is limited to:
$T_{2max} = 1.5 \times T_{2N}$

This limitation ceases to apply if the clearance dimension of the torque arm AP is at least doubled.

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

Dimensional drawings (continued)

Connection dimensions



Type B2..

Gear unit size	Dimensions in mm **Torque arm**								Weight in kg
	A	B	Ø d_3	F	m	n	s_1	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	s_1	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

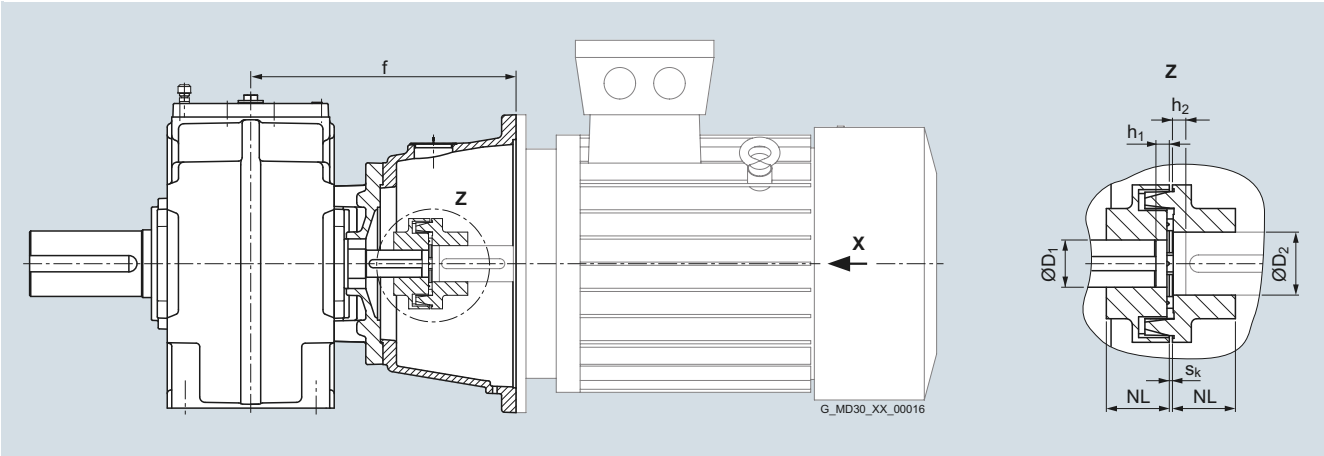
When ordering the torque arm, **-Z** and the following order code must be added to the Article No.

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

Motor bell housing for IEC motors

Type H2, gear unit sizes 504 to 506 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 EN 50347 (View X), see page 12/28.
- Helical gear unit in design C, D, G, H and I 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 11/2).

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	B095	3	35	42					35	0	0	363	28	5	5	363
		B110	3	40	42					35	0	0	363	28	5	5	363
		B125	3	50	42					35	0	0	363	28	5	5	363
		B140	3	55	42					35	0	0	363	28	5	5	363
	160L	B110	3	40	42					35	0	0	363	28	5	5	363
		B125	3	50	42					35	0	0	363	28	5	5	363
		B140	3	55	42					35	0	0	363	28	5	5	363
	180M	B110	3	40	48					35	0	0	363	28	5	5	363
		B125	3	50	48					35	0	0	363	28	5	5	363
		B140	3	55	48					35	0	0	363	28	5	5	363
	180L	B125	3	50	48					35	0	0	363	28	5	5	363
		B140	3	55	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
		B160	4	60	55	45	0	0	383	35	7	12	383				
	225S 2)	B140	3	55	60	45	7	11	431	35	7	7	407	28	0	2	385
		B160	4	60	60	45	7	10	431	35	7	6	407	28	0	0	385
		B180	4	70	60	45	7	10	431	35	7	6	407				
		B200	4	80	60	45	7	10	431	35	12	0	407				
		B225	4	90	60	45	10	7	431								
	225M 2)	B160	4	60	60	45	7	10	431	35	7	6	407	28	0	0	385
		B180	4	70	60	45	7	10	431	35	7	6	407				
		B200	4	80	60	45	7	10	431	35	12	0	407				
		B225	4	90	60	45	10	7	431								
	250M 2)	B160	4	60	65	45	2	3	419	35	10	15	419				
		B180	4	70	65	45	2	3	419	35	12	13	419				
		B200	4	80	65	45	2	3	419	35	12	13	419				

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
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
		B160	4	60	60					45	0	0	440	32	0	0	418
		B180	4	70	60					45	0	0	440				
	225M	B160	4	60	60					45	0	0	440	32	0	0	418
		B180	4	70	60					45	0	0	440				
	250M [2]	B160	4	60	65	60	8	10	482	45	6	7	452	32	12	21	452
		B180	4	70	65	60	8	10	482	45	6	7	452	32	15	18	452
		B200	4	80	65	60	8	10	482	45	10	3	452				
		B225	4	90	65	60	8	10	482								
	280S [2]	B180	4	70	75	60	8	10	482	45	6	7	452				
		B200	4	80	75	60	8	10	482	45	10	3	452				
		B225	4	90	75	60	8	10	482								
	280M [2]	B180	4	70	75	60	8	10	482	45	6	7	452				
		B200	4	80	75	60	8	10	482	45	10	3	452				
		B225	4	90	75	60	8	10	482								
	315S [2]	B200	4	80	80	60	12	22	528	45	7	7	483				
		B225	4	90	80	60	15	19	528	45	15	0	483				
		B250	6	100	80	60	15	17	528								
	315M [2]	B200	4	80	80	60	12	22	528	45	7	7	483				
		B225	4	90	80	60	15	19	528	45	15	0	483				
		B250	6	100	80	60	15	17	528								
	315L [2] [3]	B200	4	80	80	60	12	22	528								
		B225	4	90	80	60	15	19	528								
		B250	6	100	80	60	15	17	528								
	315L [2] [4]	B225	4	90	80	60	15	19	528								
		B250	6	100	80	60	15	17	528								

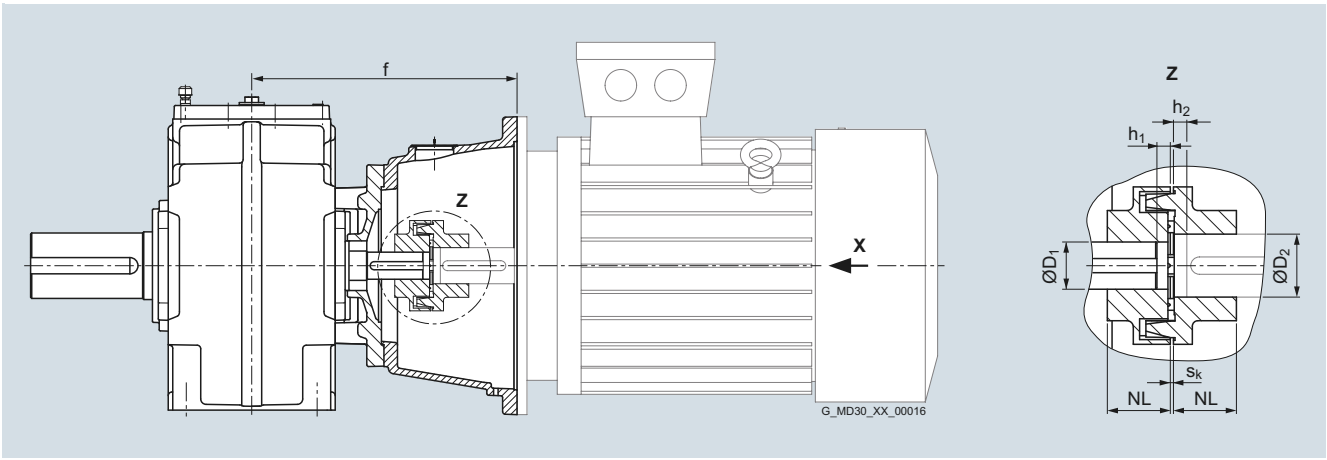
[1] Other motor sizes on request.
[2] Notice: Motor flange radius ØP/2 is greater than gear unit shaft height h!
[3] Standard motor 315L with P_N < 160 kW (motor designation not included in EN 50347).
[4] Standard motor 315L with P_N < 200 kW (motor designation not included in EN 50347).

Options for externally mounted parts

Motor bell housing for IEC motors

Type H2, gear unit sizes 507 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 EN 50347 (View X), see page 12/28.
- Helical gear unit in design C, D, G, H and I 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 11/2).

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 = 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	469.5				
		B160	4	60	60					50	0	0	469.5				
		B180	4	70	60	70	0	0	493.5	50	0	0	469.5				
		B200	4	80	60	70	0	0	493.5	50	0	0	469.5				
		B225	4	90	60	70	0	0	493.5								
	225M	B160	4	60	60					50	0	0	469.5				
		B180	4	70	60	70	0	0	493.5	50	0	0	469.5				
		B200	4	80	60	70	0	0	493.5	50	0	0	469.5				
		B225	4	90	60	70	0	0	493.5								
	250M	B160	4	60	65					50	6	6	481.5				
		B180	4	70	65	70	8	9	511.5	50	6	6	481.5				
		B200	4	80	65	70	8	9	511.5	50	6	6	481.5				
		B225	4	90	65	70	8	9	511.5	50	12	0	481.5				
	280S	B180	4	70	75	70	8	9	511.5	50	6	6	481.5				
		B200	4	80	75	70	8	9	511.5	50	6	6	481.5				
		B225	4	90	75	70	8	9	511.5	50	12	0	481.5				
	280M	B180	4	70	75	70	8	9	511.5	50	6	6	481.5				
		B200	4	80	75	70	8	9	511.5	50	6	6	481.5				
		B225	4	90	75	70	8	9	511.5	50	12	0	481.5				
	315S [2]	B200	4	80	80	70	12	21	557.5	50	12	0	512.5				
		B225	4	90	80	70	15	18	557.5	50	12	0	512.5				
		B250	6	100	80	70	15	16	557.5								
	315M [2]	B200	4	80	80	70	12	21	557.5	50	12	0	512.5				
		B225	4	90	80	70	15	18	557.5	50	12	0	512.5				
		B250	6	100	80	70	15	16	557.5								
	315L [2] [3]	B200	4	80	80	70	12	21	557.5								
		B225	4	90	80	70	15	18	557.5								
		B250	6	100	80	70	15	16	557.5								
	315L [2] [4]	B225	4	90	80	70	15	18	557.5								
		B250	6	100	80	70	15	16	557.5								

Design (continued)

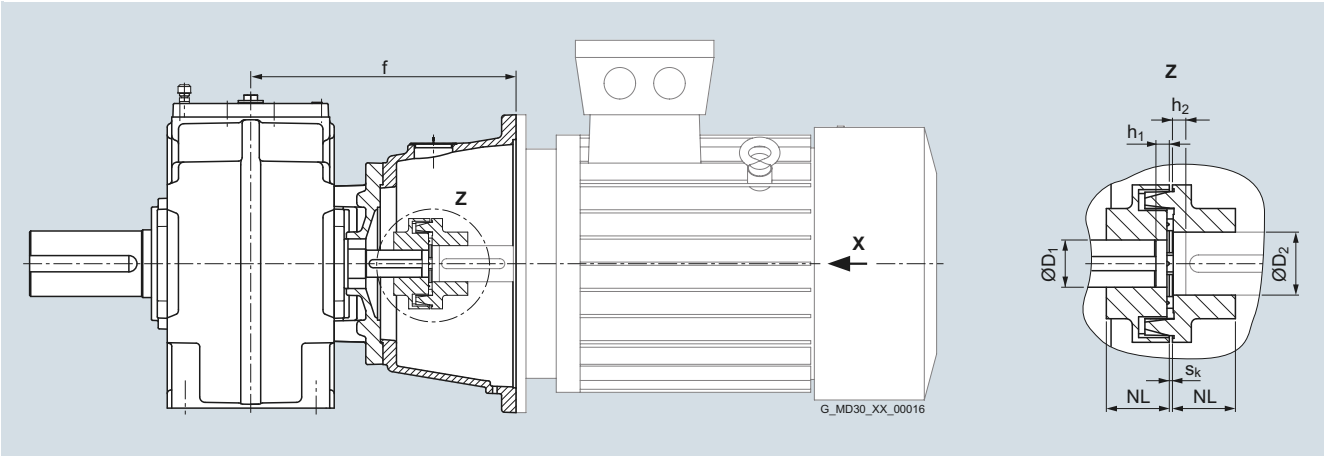
Gear unit sizes	Dimensions in mm Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
509						i_N = 6.3 - 10				i_N = 11.2 - 14				i_N = 16 - 18			
510						i_N = 8 - 12.5				i_N = 14 - 18				i_N = 20 - 22.4			
	280M	B180	4	70	75									50	3	3	500
		B200	4	80	75									50	3	3	500
		B225	4	90	75									50	6	0	500
	315S [2]	B200	4	80	80					60	10	12	576	50	0	7	531
		B225	4	90	80					60	10	12	576	50	7	0	531
		B250	6	100	80					60	10	10	576				
	315M [2]	B200	4	80	80					60	10	12	576	50	0	7	531
		B225	4	90	80					60	10	12	576	50	7	0	531
		B250	6	100	80					60	10	10	576				
	315L [2] [3]	B200	4	80	80					60	10	12	576	50	0	7	531
		B225	4	90	80					60	10	12	576	50	7	0	531
		B250	6	100	80					60	10	10	576				
	315L [2] [4]	B225	4	90	80					60	10	12	576				
		B250	6	100	80					60	10	10	576				
	315L [2] [5]	B225	4	90	85	80	0	0	575	60	0	19	575				
		B250	6	100	85	80	0	0	575	60	0	19	575				
	315L [2] [6]	B250	6	100	85	80	0	0	575								
511										i_N = 11.2 - 14				i_N = 16 - 18			
512										i_N = 14 - 18				i_N = 20 - 22.4			
	315L [2] [5]	B225	4	90	85					80	On request			70	On request		
		B250	6	100	85					80	On request			70	On request		
	315L [2] [6]	B250	6	100	85					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 EN 50347).
[4] Standard motor 315L with P_N < 200 kW (motor designation not included in EN 50347).
[5] Standard motor 315L with P_N < 250 kW (motor designation not included in EN 50347).
[6] Standard motor 315L with P_N < 315 kW (motor designation not included in EN 50347).

Motor bell housing for IEC motors

Type H3, gear unit sizes 505 to 508 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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
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	336.5	24	6	7	336.5
		B095	3	35	38	40	3	4	360	30	0	3	336.5	24	6	7	336.5
		B110	3	40	38	40	3	4	360	30	0	3	336.5	24	6	7	336.5
		B125	3	50	38	40	3	4	360	30	3	0	336.5				
		B140	3	55	38	40	3	4	360								
	132M	B095	3	35	38	40	3	4	360	30	0	3	336.5	24	6	7	336.5
		B110	3	40	38	40	3	4	360	30	0	3	336.5	24	6	7	336.5
		B125	3	50	38	40	3	4	360	30	3	0	336.5				
		B140	3	55	38	40	3	4	360								
	160M	B095	3	35	42	40	3	4	390	30	0	0	363	24	5	5	363
		B110	3	40	42	40	3	4	390	30	0	0	363	24	5	5	363
		B125	3	50	42	40	3	4	390	30	0	0	363				
		B140	3	55	42	40	3	4	390								
	160L	B110	3	40	42	40	3	4	390	30	0	0	363	24	5	5	363
		B125	3	50	42	40	3	4	390	30	0	0	363				
		B140	3	55	42	40	3	4	390								
	180M	B110	3	40	48	40	3	4	390	30	0	0	363	24	5	5	363
		B125	3	50	48	40	3	4	390	30	0	0	363	30	10	0	363
		B140	3	55	48	40	3	4	390								
	180L	B125	3	50	48	40	3	4	390	30	0	0	363	24	10	0	363
		B140	3	55	48	40	3	4	390								
	200L	B125	3	50	55									24	12	15	380
		B140	3	55	55	40	10	17	410	30	10	7	380	24	18	9	380
		B160	4	60	55	40	10	16	410								
	225S	B140	3	55	60	40	0	0	413								
		B160	4	60	60	40	0	0	413								
	225M	B160	4	60	60	40	0	0	413								
	250M 2)	B160	4	60	65	40	10	23	447								
		B180	4	70	65	40	12	21	447								

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	B095	3	35	42									28	5	7	405.5
		B110	3	40	42									28	5	7	405.5
		B125	3	50	42									28	5	7	405.5
		B140	3	55	42									28	5	7	405.5
	160L	B110	3	40	42									28	5	7	405.5
		B125	3	50	42									28	5	7	405.5
		B140	3	55	42									28	5	7	405.5
	180M	B110	3	40	48					35	0	2	405.5	28	5	7	405.5
		B125	3	50	48					35	0	2	405.5	28	5	7	405.5
		B140	3	55	48					35	0	2	405.5	28	5	7	405.5
	180L	B125	3	50	48					35	0	2	405.5	28	5	7	405.5
		B140	3	55	48					35	0	2	405.5	28	5	7	405.5
	200L	B140	3	55	55	45	0	2	425.5	35	10	12	425.5	28	0	2	395.5
		B160	4	60	55	45	0	2	425.5	35	10	11	425.5				
	225S	B140	3	55	60	45	10	10	473.5	35	7	9	449.5	28	0	4	427.5
		B160	4	60	60	45	10	9	473.5	35	7	8	449.5	28	0	3	427.5
		B180	4	70	60	45	10	9	473.5	35	7	8	449.5				
		B200	4	80	60	45	10	9	473.5	35	12	3	449.5				
		B225	4	90	60	45	10	9	473.5								
	225M	B140	3	55	60									28	0	4	427.5
		B160	4	60	60	45	10	9	473.5	35	7	8	449.5	28	0	3	427.5
		B180	4	70	60	45	10	9	473.5	35	7	8	449.5				
		B200	4	80	60	45	10	9	473.5	35	12	3	449.5				
		B225	4	90	60	45	10	9	473.5								
	250M	B160	4	60	65	45	2	5	461.5	35	10	17	461.5				
		B180	4	70	65	45	2	5	461.5	35	12	15	461.5				
		B200	4	80	65	45	2	5	461.5	35	12	15	461.5				
	280S	B180	4	70	75	45	2	5	461.5								
		B200	4	80	75	45	2	5	461.5								
	280M	B180	4	70	75	45	2	5	461.5								
		B200	4	80	75	45	2	5	461.5								

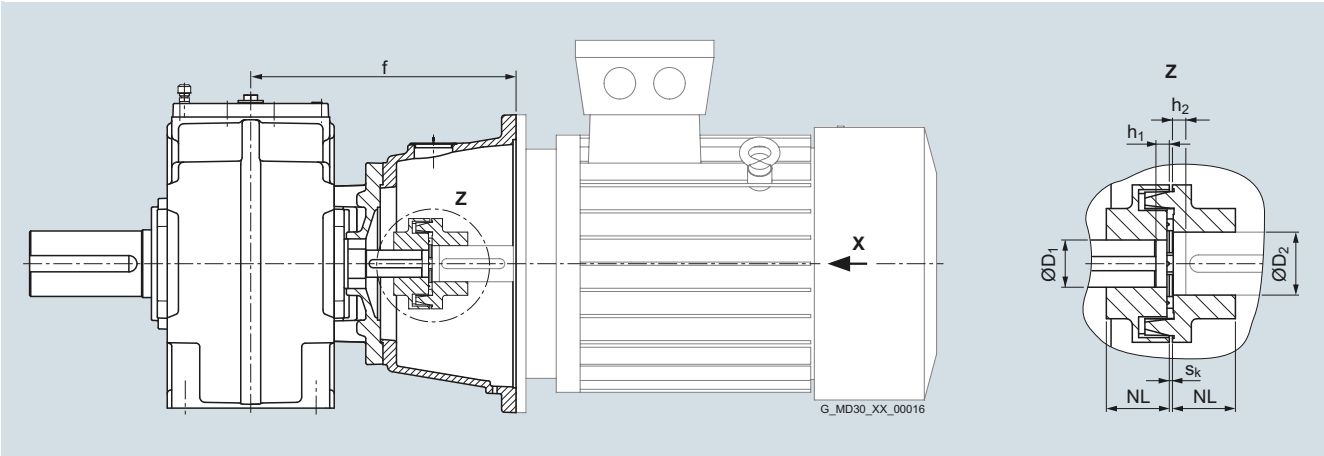
[1] Other motor sizes on request.

[2] Notice: Motor flange radius ØP/2 is greater than gear unit shaft height h!

Motor bell housing for IEC motors

Type H3, gear unit sizes 509 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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
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
		B160	4	60	60	60	0	0	524	45	0	0	500	32	0	0	478
		B180	4	70	60	60	0	0	524	45	0	0	500				
		B200	4	80	60	60	0	0	524								
		B225	4	90	60	60	0	0	524								
	225M	B160	4	60	60	60	0	0	524	45	0	0	500	32	0	0	478
		B180	4	70	60	60	0	0	524	45	0	0	500				
		B200	4	80	60	60	0	0	524								
		B225	4	90	60	60	0	0	524								
	250M	B160	4	60	65	60	8	10	542	45	6	7	512	32	12	21	512
		B180	4	70	65	60	8	10	542	45	6	7	512	32	15	18	512
		B200	4	80	65	60	8	10	542	45	10	3	512				
		B225	4	90	65	60	8	10	542								
	280S	B180	4	70	75	60	8	10	542	45	6	7	512				
		B200	4	80	75	60	8	10	542	45	10	3	512				
		B225	4	90	75	60	8	10	542								
	280M	B180	4	70	75	60	8	10	542	45	6	7	512				
		B200	4	80	75	60	8	10	542	45	10	3	512				
		B225	4	90	75	60	8	10	542								
	315S 2)	B200	4	80	80	60	12	22	588								
		B225	4	90	80	60	15	19	588								
		B250	6	100	80	60	15	17	588								
	315M 2)	B200	4	80	80	60	12	22	588								
		B225	4	90	80	60	15	19	588								
		B250	6	100	80	60	15	17	588								
	315L 2) 3)	B200	4	80	80	60	12	22	588								
		B225	4	90	80	60	15	19	588								
		B250	6	100	80	60	15	17	588								
	315L 2) 4)	B225	4	90	80	60	15	19	588								
		B250	6	100	80	60	15	17	588								

Design (continued)

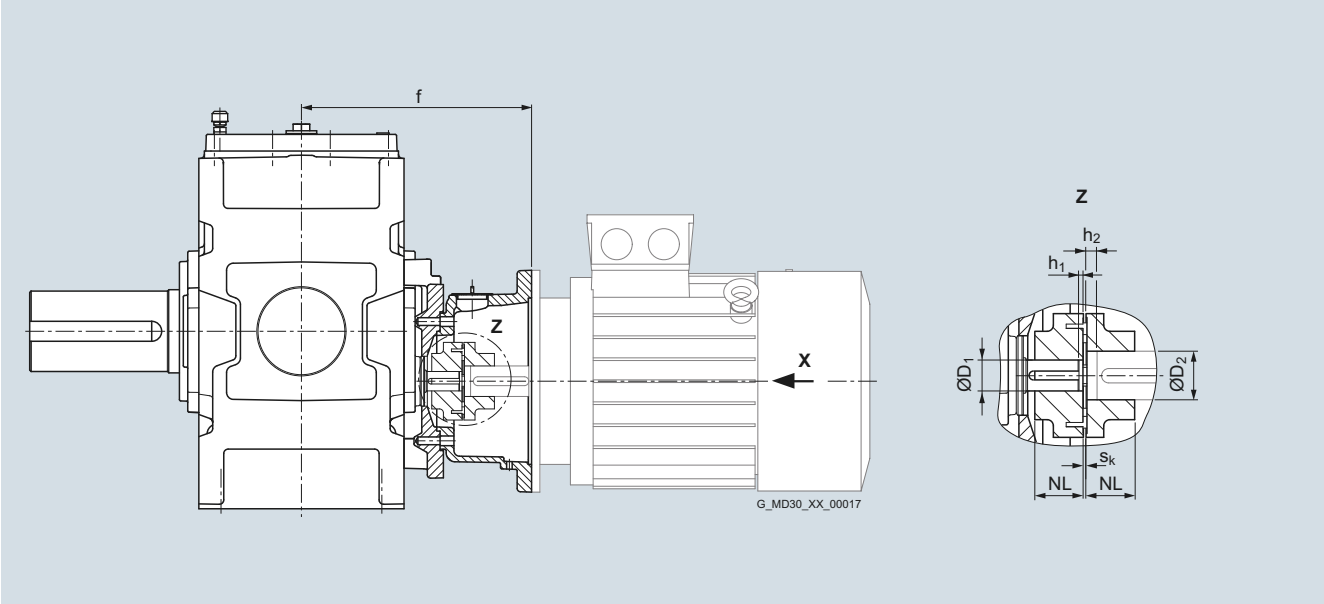
Gear unit sizes	Dimensions in mm Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
511						i_N = 20 - 40				i_N = 45 - 56				i_N = 63 - 71			
512						i_N = 25 - 50				i_N = 56 - 71				i_N = 80 - 90			
	225S	B140	3	55	60									48	4	5	537
		B160	4	60	60									48	4	4	537
		B180	4	70	60									48	4	4	537
		B200	4	80	60									48	8	0	537
	225M	B160	4	60	60									48	4	4	537
		B180	4	70	60									48	4	4	537
		B200	4	80	60									48	8	0	537
	250M	B160	4	60	65					50	8	12	549	48	8	12	549
		B180	4	70	65					50	8	12	549	48	8	12	549
		B200	4	80	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
		B200	4	80	75	70	10	15	579	50	8	12	549	48	8	12	549
		B225	4	90	75	70	10	15	579								
	280M	B180	4	70	75	70	10	15	579	50	8	12	549	48	8	12	549
		B200	4	80	75	70	10	15	579	50	8	12	549	48	8	12	549
		B225	4	90	75	70	10	15	579								
	315S	B200	4	80	80	70	15	26	625	50	10	11	580	48	10	11	580
		B225	4	90	80	70	18	23	625	50	15	6	580	48	15	6	580
		B250	6	100	80	70	18	21	625								
	315M	B200	4	80	80	70	15	26	625	50	10	11	580	48	10	11	580
		B225	4	90	80	70	18	23	625	50	15	6	580	48	15	6	580
		B250	6	100	80	70	18	21	625								
	315L [3]	B200	4	80	80	70	15	26	625								
		B225	4	90	80	70	18	23	625								
		B250	6	100	80	70	18	21	625								
	315L [4]	B225	4	90	80	70	18	23	625								
		B250	6	100	80	70	18	21	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	582.5
		B200	4	80	75									50	4	4	582.5
		B225	4	90	75									50	8	0	582.5
	315S	B200	4	80	80	85	2	2	658.5	65	10	14	658.5	50	0	9	613.5
		B225	4	90	80	85	2	2	658.5	65	10	14	658.5	50	0	9	613.5
		B250	6	100	80	85	2	0	658.5	65	10	12	658.5				
	315M	B200	4	80	80	85	2	2	658.5	65	10	14	658.5	50	0	9	613.5
		B225	4	90	80	85	2	2	658.5	65	10	14	658.5	50	0	9	613.5
		B250	6	100	80	85	2	0	658.5	65	10	12	658.5				
	315L [3]	B200	4	80	80	85	2	2	658.5	65	10	14	658.5				
		B225	4	90	80	85	2	2	658.5	65	10	14	658.5				
		B250	6	100	80	85	2	0	658.5	65	10	12	658.5				
	315L [4]	B225	4	90	80	85	2	2	658.5	65	10	14	658.5				
		B250	6	100	80	85	2	0	658.5	65	10	12	658.5				
	315L [2] [5]	B225	4	90	85	85	0	3	657.5								
		B250	6	100	85	85	0	3	657.5								
	315L [2] [6]	B250	6	100	85	85	0	3	657.5								

[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 EN 50347).
[4] Standard motor 315L with P_N < 200 kW (motor designation not included in EN 50347).
[5] Standard motor 315L with P_N < 250 kW (motor designation not included in EN 50347).
[6] Standard motor 315L with P_N < 315 kW (motor designation not included in EN 50347).

Motor bell housing for IEC motors

Type H4, gear unit sizes 507 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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				
		B095	3	35	28					28	0	0	328				
		B110	3	40	28					28	0	0	328				
	132S	B095	3	35	38	35	0	0	358	28	4	6	358				
		B110	3	40	38	35	0	0	358	28	2	8	358				
		B125	3	50	38	35	0	0	358	28	5	5	358				
		B140	3	55	38	35	0	0	358	28	10	0	358				
	132M	B095	3	35	38	35	0	0	358	28	4	6	358				
		B110	3	40	38	35	0	0	358	28	2	8	358				
		B125	3	50	38	35	0	0	358	28	5	5	358				
		B140	3	55	38	35	0	0	358	28	10	0	358				
	160M	B095	3	35	42	35	0	0	388	28	4	6	388				
		B110	3	40	42	35	0	0	388	28	2	8	388				
		B125	3	50	42	35	0	0	388	28	5	5	388				
		B140	3	55	42	35	0	0	388	28	10	0	388				
	160L	B110	3	40	42	35	0	0	388	28	2	8	388				
		B125	3	50	42	35	0	0	388	28	5	5	388				
		B140	3	55	42	35	0	0	388	28	10	0	388				
	180M	B110	3	40	48	35	0	0	388	28	2	8	388				
		B125	3	50	48	35	0	0	388	28	5	5	388				
		B140	3	55	48	35	0	0	388	28	10	0	388				
	180L	B110	3	40	48					28	2	8	388				
		B125	3	50	48	35	0	0	388	28	5	5	388				
		B140	3	55	48	35	0	0	388	28	10	0	388				
	200L	B140	3	55	55	35	7	13	408								
		B160	4	60	55	35	7	12	408								

Design (continued)

Dimensions in mm

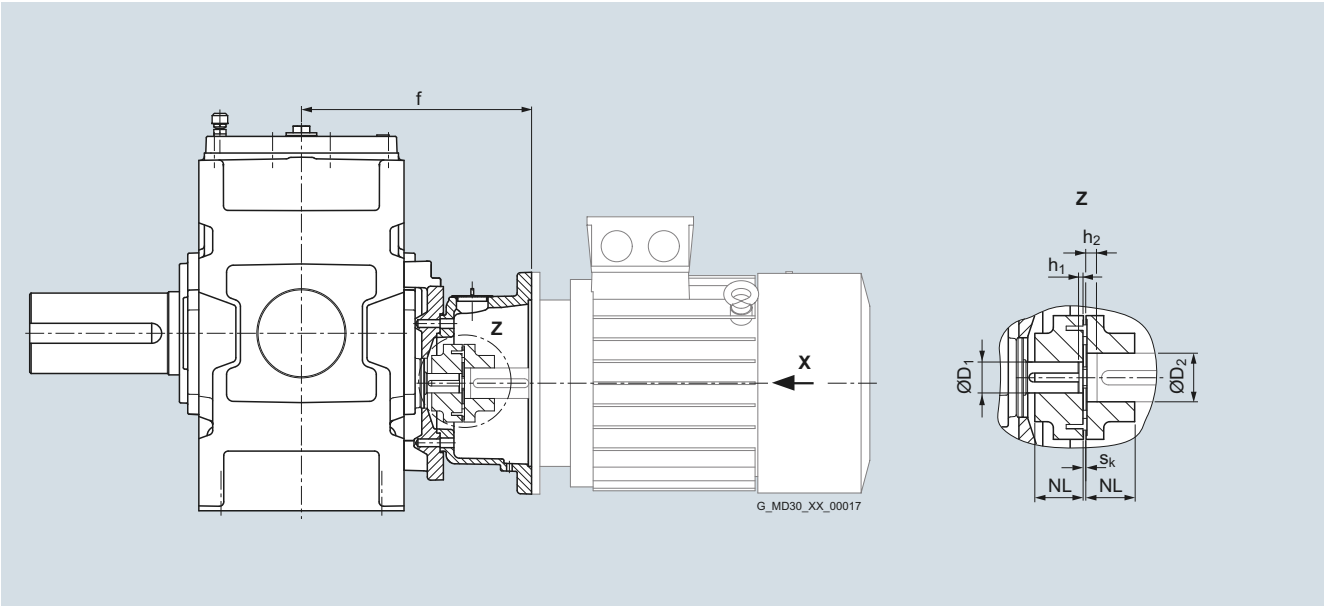
Gear unit sizes	Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
509						i_N = 80 - 160				i_N = 180 - 315							
510						i_N = 100 - 200				i_N = 224 - 400							
	160M	B095	3	35	42	35	0	0	398	28	4	6	398				
		B110	3	40	42	35	0	0	398	28	2	8	398				
		B125	3	50	42	35	0	0	398								
	160L	B110	3	40	42	35	0	0	398	28	2	8	398				
		B125	3	50	42	35	0	0	398								
	180M	B110	3	40	48	35	0	0	398	28	2	8	398				
		B125	3	50	48	35	0	0	398								
	180L	B125	3	50	48	35	0	0	398	28	10	0	398				
	200L	B125	3	50	55					28	10	2	415				
		B140	3	55	55	35	7	10	415	28	15	12	415				
	225S	B140	3	55	60	35	7	12	447								
		B160	4	60	60	35	12	6	447								
	225M	B160	4	60	60	35	12	6	447								
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	B095	3	35	42					35	5	5	458				
		B110	3	40	42					35	4	6	458				
		B125	3	50	42					35	5	5	458	28	6	14	458
		B140	3	55	42					35	5	5	458	28	10	10	458
	160L	B110	3	40	42					35	4	6	458				
		B125	3	50	42					35	5	5	458	28	6	14	458
		B140	3	55	42					35	5	5	458	28	10	10	458
	180M	B110	3	40	48					35	4	6	458	28	8	12	458
		B125	3	50	48					35	5	5	458	28	10	10	458
		B140	3	55	48					35	5	5	458				
	180L	B125	3	50	48					35	5	5	458	28	10	10	458
		B140	3	55	48					35	5	5	458				
	200L	B140	3	55	55	45	5	5	478	35	0	0	448	28	5	5	448
		B160	4	60	55	45	5	0	478								
	225S	B140	3	55	60	45	2	2	502	35	0	2	480	28	5	7	480
		B160	4	60	60	45	2	0	502	35	0	0	480	28	8	3	480
		B180	4	70	60	45	2	0	502								
		B200	4	80	60	45	2	0	502								
	225M	B140	3	55	60					35	0	2	480	28	5	7	480
		B160	4	60	60	45	2	0	502	35	0	0	480	28	8	3	480
		B180	4	70	60	45	2	0	502								
		B200	4	80	60	45	2	0	502								
	250M	B160	4	60	65	45	7	8	514								
		B180	4	70	65	45	7	8	514								
		B200	4	80	65	45	7	8	514								
	280S	B180	4	70	75	45	7	8	514								
		B200	4	80	75	45	7	8	514								
	280M	B180	4	70	75	45	7	8	514								
		B200	4	80	75	45	7	8	514								

[1] Other motor sizes on request.

Motor bell housing for IEC motors

Type H4, gear unit sizes 513 and 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

Design (continued)

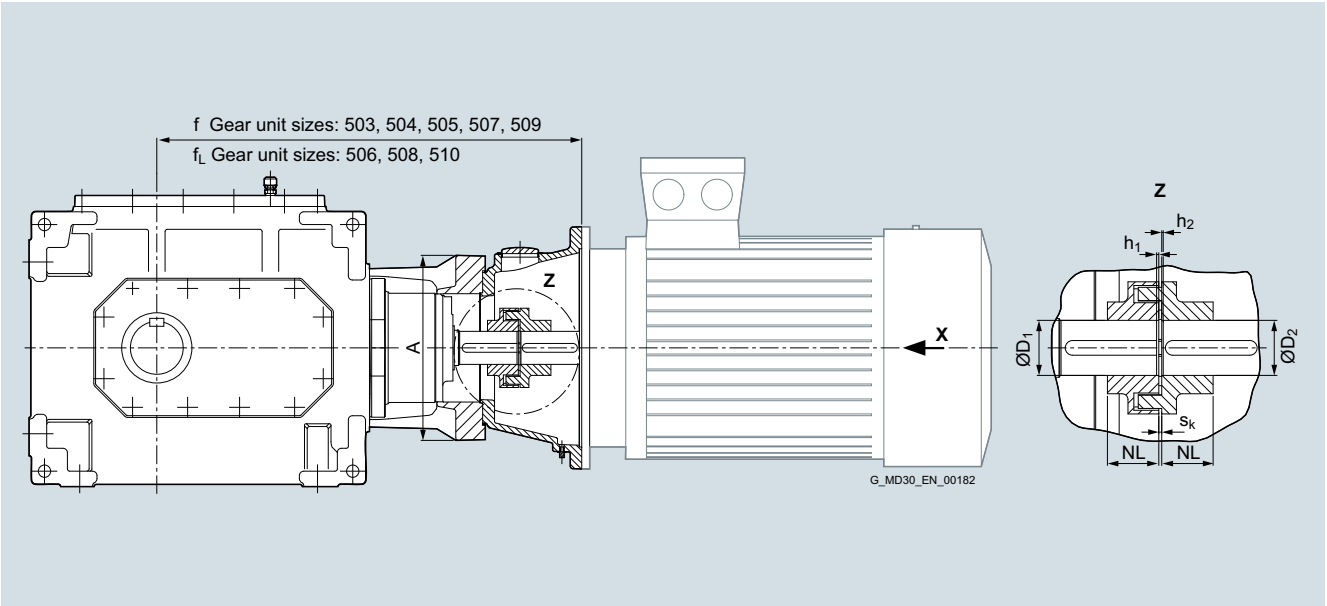
Gear unit sizes	Dimensions in mm Basic dimensions					Ratio range 1				Ratio range 2				Ratio range 3			
	IEC motor 1)	N-EUPEX	S_K	NL	D_2	D_1	h_1	h_2	f	D_1	h_1	h_2	f	D_1	h_1	h_2	f
513						i_N = 80 - 160				i_N = 180 - 224				i_N = 250 - 315			
514						i_N = 100 - 200				i_N = 224 - 280				i_N = 315 - 400			
	225S	B140	3	55	60					45	7	15	570.5	32	7	11	546.5
		B160	4	60	60					45	8	13	570.5	32	8	9	546.5
		B180	4	70	60					45	10	11	570.5				
		B200	4	80	60					45	12	9	570.5				
	225M	B160	4	60	60					45	8	13	570.5	32	8	9	546.5
		B180	4	70	60					45	10	11	570.5				
		B200	4	80	60					45	12	9	570.5				
	250M	B160	4	60	65	60	7	7	588.5	45	4	5	558.5	32	10	19	558.5
		B180	4	70	65	60	7	7	588.5	45	4	5	558.5				
		B200	4	80	65	60	7	7	588.5	45	10	0	558.5				
		B225	4	90	65	60	7	7	588.5								
	280S	B180	4	70	75	60	7	7	588.5	45	4	5	558.5				
		B200	4	80	75	60	7	7	588.5	45	10	0	558.5				
		B225	4	90	75	60	7	7	588.5								
	280M	B180	4	70	75	60	7	7	588.5	45	4	5	558.5				
		B200	4	80	75	60	7	7	588.5	45	10	0	558.5				
		B225	4	90	75	60	7	7	588.5								
	315S	B200	4	80	80	60	12	18	634.5								
		B225	4	90	80	60	12	18	634.5								
		B250	6	100	80	60	12	16	634.5								
	315M	B200	4	80	80	60	12	18	634.5								
		B225	4	90	80	60	12	18	634.5								
		B250	6	100	80	60	12	16	634.5								

1) Other motor sizes on request.

Motor bell housing for IEC motors

Type B2, gear unit sizes 503 to 506 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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	5	5	596	–
		B110	3	40	42	□ 315						35	5	5	596	–
		B125	3	50	42	□ 315						35	5	5	596	–
		B140	3	55	42	□ 315						35	5	5	596	–
	160L	B110	3	40	42	□ 315						35	5	5	596	–
		B125	3	50	42	□ 315						35	5	5	596	–
		B140	3	55	42	□ 315						35	5	5	596	–
	180M	B110	3	40	48	□ 315	40	0	0	596	–	35	5	5	596	–
		B125	3	50	48	□ 315	40	0	0	596	–	35	5	5	596	–
		B140	3	55	48	□ 315	40	0	0	596	–	35	5	5	596	–
	180L	B125	3	50	48	□ 315	40	0	0	596	–	35	5	5	596	–
		B140	3	55	48	□ 315	40	0	0	596	–	35	5	5	596	–
	200L	B140	3	55	55	□ 315	40	7	13	616	–					
		B160	4	60	55	□ 315	40	7	12	616	–					
	225S [2]	B140	3	55	60	□ 315	40	7	7	640	–					
		B160	4	60	60	□ 315	40	7	6	640	–					
		B180	4	70	60	□ 315	40	7	6	640	–					
		B200	4	80	60	□ 315	40	7	6	640	–					
	225M [2]	B160	4	60	60	□ 315	40	7	6	640	–					
		B180	4	70	60	□ 315	40	7	6	640	–					
		B200	4	80	60	□ 315	40	7	6	640	–					
	250M [2]	B160	4	60	65	□ 315	40	8	17	652	–					
		B180	4	70	65	□ 315	40	12	13	652	–					
		B200	4	80	65	□ 315	40	12	13	652	–					

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
504										i_N = 5 - 14					i_N = 16	
	180M	B125	3	50	48	□ 315	50	0	0	688	–	40	6	14	688	–
		B140	3	55	48	□ 315	50	0	0	688	–	40	10	10	688	–
		B160	4	60	48	□ 315	50	0	0	688	–					
	180L	B125	3	50	48	□ 315	50	0	0	688	–	40	6	14	688	–
		B140	3	55	48	□ 315	50	0	0	688	–	40	10	10	688	–
		B160	4	60	48	□ 315	50	0	0	688	–					
	200L	B140	3	55	55	□ 315	50	7	13	708	–	40	5	5	678	–
		B160	4	60	55	□ 315	50	7	12	708	–					
	225S	B140	3	55	60	□ 315	50	7	7	732	–	40	6	6	710	–
		B160	4	60	60	□ 315	50	7	6	732	–	40	6	5	710	–
		B180	4	70	60	□ 315	50	7	6	732	–					
		B200	4	80	60	□ 315	50	7	6	732	–					
	225M	B160	4	60	60	□ 315	50	7	6	732	–	40	6	5	710	–
		B180	4	70	60	□ 315	50	7	6	732	–					
		B200	4	80	60	□ 315	50	7	6	732	–					
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
		B160	4	60	60	□ 420						50	0	0	803	834
		B180	4	70	60	□ 420						50	0	0	803	834
		B200	4	80	60	□ 420						50	0	0	803	834
	225M	B160	4	60	60	□ 420						50	0	0	803	834
		B180	4	70	60	□ 420						50	0	0	803	834
		B200	4	80	60	□ 420						50	0	0	803	834
	250M [2]	B160	4	60	65	□ 420	60	0	0	815	846	50	5	6	815	846
		B180	4	70	65	□ 420	60	0	0	815	846	50	5	6	815	846
		B200	4	80	65	□ 420	60	0	0	815	846	50	5	6	815	846
		B225	4	90	65	□ 420	60	0	0	815	846					
	280S [2]	B180	4	70	75	□ 420	60	0	0	815	846	50	5	6	815	846
		B200	4	80	75	□ 420	60	0	0	815	846	50	5	6	815	846
		B225	4	90	75	□ 420	60	0	0	815	846					
	280M [2]	B180	4	70	75	□ 420	60	0	0	815	846	50	5	6	815	846
		B200	4	80	75	□ 420	60	0	0	815	846	50	5	6	815	846
		B225	4	90	75	□ 420	60	0	0	815	846					

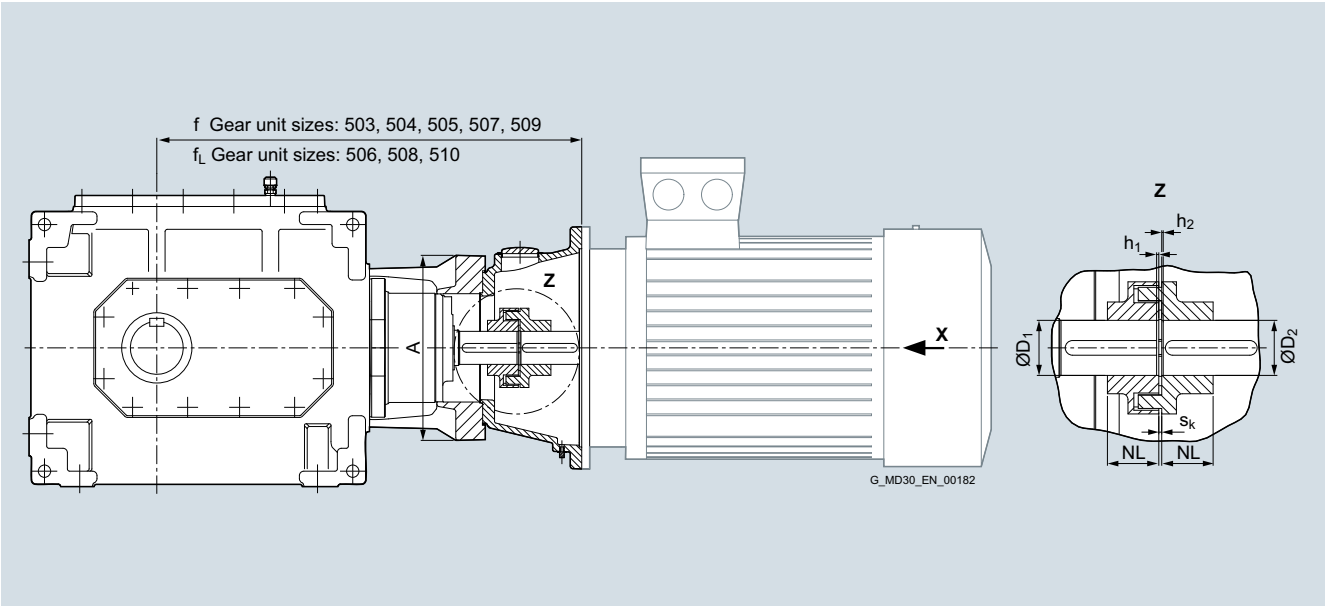
[1] Other motor sizes on request.

[2] Notice: Motor flange radius ØP/2 is greater than gear unit shaft height h!

Motor bell housing for IEC motors

Type B2, gear unit sizes 507 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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
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
		B200	4	80	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
		B200	4	80	75	□ 420	75	0	0	935	965	60	0	0	935	965
	315S [2]	B200	4	80	80	□ 420	75	0	0	966	996	60	0	0	966	996
		B225	4	90	80	□ 420	75	0	0	966	996	60	0	0	966	996
		B250	6	100	80	□ 420	75	0	0	966	996	60	0	0	966	996
	315M [2]	B200	4	80	80	□ 420	75	0	0	966	996	60	0	0	966	996
		B225	4	90	80	□ 420	75	0	0	966	996	60	0	0	966	996
		B250	6	100	80	□ 420	75	0	0	966	996	60	0	0	966	996

Design (continued)

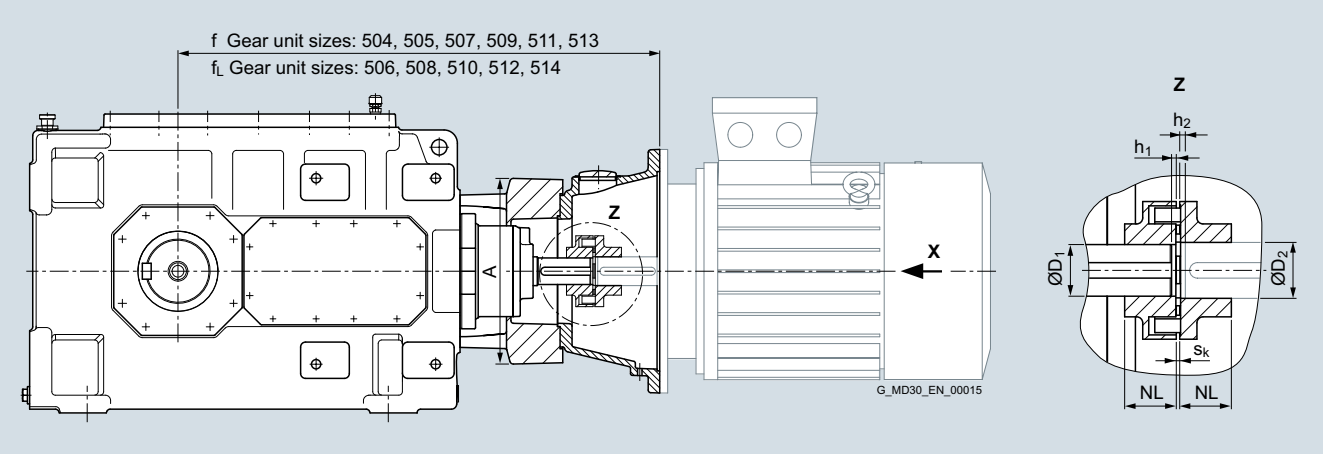
Gear unit sizes	Dimensions in mm																
	Basic dimensions						Ratio range 1					Ratio range 2					
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L	
509										i_N = 5 - 11.2					i_N = 12.5 - 16		
510											i_N = 6 - 13.2						i_N = 15 - 19
	315S	B200	4	80	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137	
		B225	4	90	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137	
		B250	6	100	80	□ 420	80	9	9	1151	1182	70	0	0	1106	1137	
	315M	B200	4	80	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137	
		B225	4	90	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137	
		B250	6	100	80	□ 420	80	9	9	1151	1182	70	0	0	1106	1137	
	315L [3]	B200	4	80	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137	
		B225	4	90	80	□ 420	80	10	10	1151	1182	70	0	0	1106	1137	
		B250	6	100	80	□ 420	80	9	9	1151	1182	70	0	0	1106	1137	

[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 EN 50347).

Motor bell housing for IEC motors

Type B3, gear unit sizes 504 to 508 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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	Ø250	35	0	0	663	–	32	5	5	663	–
		B110	3	40	38	Ø250	35	0	0	663	–	32	5	5	663	–
		B125	3	50	38	Ø250	35	0	0	663	–	32	5	5	663	–
		B140	3	55	38	Ø250	35	0	0	663	–	32	5	5	663	–
	132M	B095	3	35	38	Ø250	35	0	0	663	–	32	5	5	663	–
		B110	3	40	38	Ø250	35	0	0	663	–	32	5	5	663	–
		B125	3	50	38	Ø250	35	0	0	663	–	32	5	5	663	–
		B140	3	55	38	Ø250	35	0	0	663	–	32	5	5	663	–
	160M	B095	3	35	42	Ø250	35	0	0	693	–	32	5	5	693	–
		B110	3	40	42	Ø250	35	0	0	693	–	32	5	5	693	–
		B125	3	50	42	Ø250	35	0	0	693	–	32	5	5	693	–
		B140	3	55	42	Ø250	35	0	0	693	–	32	5	5	693	–
	160L	B095	3	35	42	Ø250					–	32	5	5	693	–
		B110	3	40	42	Ø250	35	0	0	693	–	32	5	5	693	–
		B125	3	50	42	Ø250	35	0	0	693	–	32	5	5	693	–
		B140	3	55	42	Ø250	35	0	0	693	–	32	5	5	693	–
	180M	B110	3	40	48	Ø250	35	0	0	693	–					
		B125	3	50	48	Ø250	35	0	0	693	–					
		B140	3	55	48	Ø250	35	0	0	693	–					
	180L	B125	3	50	48	Ø250	35	0	0	693	–					
		B140	3	55	48	Ø250	35	0	0	693	–					
	200L	B140	3	55	55	Ø250	35	7	13	713	–					
		B160	4	60	55	Ø250	35	7	12	713	–					

Design (continued)

Dimensions in mm

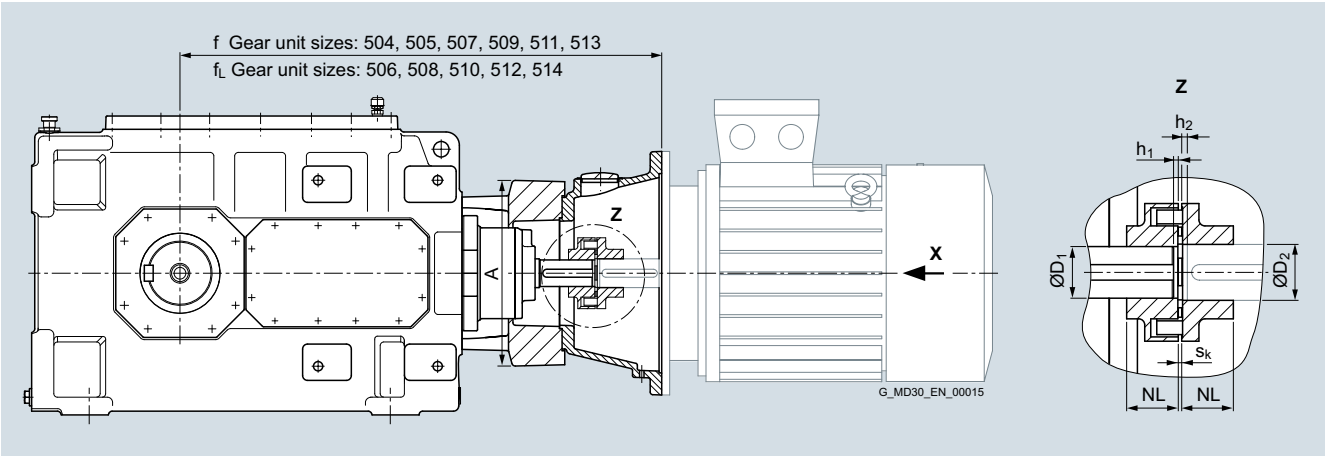
Gear unit sizes	Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
505										i_N = 14 - 50					i_N = 56	
506											i_N = 20 - 71					i_N = 80
	160M	B095	3	35	42	□ 315	40	0	0	778	831	35	5	5	778	831
		B110	3	40	42	□ 315	40	0	0	778	831	35	5	5	778	831
		B125	3	50	42	□ 315	40	0	0	778	831	35	5	5	778	831
		B140	3	55	42	□ 315	40	0	0	778	831	35	5	5	778	831
	160L	B110	3	40	42	□ 315	40	0	0	778	831	35	5	5	778	831
		B125	3	50	42	□ 315	40	0	0	778	831	35	5	5	778	831
		B140	3	55	42	□ 315	40	0	0	778	831	35	5	5	778	831
	180M	B110	3	40	48	□ 315	40	0	0	778	831	35	5	5	778	831
		B125	3	50	48	□ 315	40	0	0	778	831	35	5	5	778	831
		B140	3	55	48	□ 315	40	0	0	778	831	35	5	5	778	831
	180L	B125	3	50	48	□ 315	40	0	0	778	831	35	5	5	778	831
		B140	3	55	48	□ 315	40	0	0	778	831	35	5	5	778	831
	200L	B125	3	50	55	□ 315						35	0	0	768	821
		B140	3	55	55	□ 315	40	7	13	798	851	35	0	0	768	821
		B160	4	60	55	□ 315	40	7	12	798	851	35	0	0	768	821
	225S	B140	3	55	60	□ 315	40	7	7	822	875					
		B160	4	60	60	□ 315	40	7	6	822	875					
		B180	4	70	60	□ 315	40	7	6	822	875					
		B200	4	80	60	□ 315	40	7	6	822	875					
	225M	B160	4	60	60	□ 315	40	7	6	822	875					
		B180	4	70	60	□ 315	40	7	6	822	875					
		B200	4	80	60	□ 315	40	7	6	822	875					
	250M [2]	B180	4	70	65	□ 315	40	12	13	834	887					
		B200	4	80	65	□ 315	40	12	13	834	887					
	280S [2]	B180	4	70	75	□ 315	40	12	13	834	887					
		B200	4	80	75	□ 315	40	10	15	834	887					
	280M [2]	B200	4	80	75	□ 315	40	10	15	834	887					
507										i_N = 14 - 50					i_N = 56	
508											i_N = 18 - 63					i_N = 71
	160M	B125	3	50	42	□ 315						40	6	14	913	960
		B140	3	55	42	□ 315						40	10	10	913	960
	160L	B125	3	50	42	□ 315						40	6	14	913	960
		B140	3	55	42	□ 315						40	10	10	913	960
	180M	B125	3	50	48	□ 315						40	6	14	913	960
		B140	3	55	48	□ 315						40	10	10	913	960
	180L	B125	3	50	48	□ 315						40	6	14	913	960
		B140	3	55	48	□ 315						40	10	10	913	960
	200L	B140	3	55	55	□ 315	50	7	13	933	980	40	5	5	903	950
		B160	4	60	55	□ 315	50	7	12	933	980					
	225S	B140	3	55	60	□ 315	50	7	7	957	1004	40	6	6	935	982
		B160	4	60	60	□ 315	50	7	6	957	1004	40	6	5	935	982
		B180	4	70	60	□ 315	50	7	6	957	1004					
		B200	4	80	60	□ 315	50	7	6	957	1004					
	225M	B160	4	60	60	□ 315	50	7	6	957	1004	40	6	5	935	982
		B180	4	70	60	□ 315	50	7	6	957	1004					
		B200	4	80	60	□ 315	50	7	6	957	1004					
	250M	B160	4	60	65	□ 315	50	10	15	969	1016					
		B180	4	70	65	□ 315	50	12	13	969	1016					
		B200	4	80	65	□ 315	50	12	13	969	1016					
	280S	B180	4	70	75	□ 315	50	12	13	969	1016					
		B200	4	80	75	□ 315	50	12	13	969	1016					
	280M	B180	4	70	75	□ 315	50	12	13	969	1016					
		B200	4	80	75	□ 315	50	12	13	969	1016					

[1] Other motor sizes on request.
[2] Notice: Motor flange radius ØP/2 is greater than gear unit shaft height h!

Motor bell housing for IEC motors

Type B3, gear unit sizes 509 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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
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
		B160	4	60	60	□ 420	60	7	6	1089	1142	50	0	0	1065	1118
		B180	4	70	60	□ 420	60	7	6	1089	1142	50	0	0	1065	1118
		B200	4	80	60	□ 420	60	7	6	1089	1142	50	0	0	1065	1118
		B225	4	90	60	□ 420	60	7	6	1089	1142					
	225M	B160	4	60	60	□ 420	60	7	6	1089	1142	50	0	0	1065	1118
		B180	4	70	60	□ 420	60	7	6	1089	1142	50	0	0	1065	1118
		B200	4	80	60	□ 420	60	7	6	1089	1142	50	0	0	1065	1118
		B225	4	90	60	□ 420	60	7	6	1089	1142					
	250M	B160	4	60	65	□ 420	60	0	0	1077	1130	50	5	6	1077	1130
		B180	4	70	65	□ 420	60	0	0	1077	1130	50	5	6	1077	1130
		B200	4	80	65	□ 420	60	0	0	1077	1130	50	5	6	1077	1130
		B225	4	90	65	□ 420	60	0	0	1077	1130					
	280S	B180	4	70	75	□ 420	60	0	0	1077	1130	50	5	6	1077	1130
		B200	4	80	75	□ 420	60	0	0	1077	1130	50	5	6	1077	1130
		B225	4	90	75	□ 420	60	0	0	1077	1130					
	280M	B180	4	70	75	□ 420	60	0	0	1077	1130	50	5	6	1077	1130
		B200	4	80	75	□ 420	60	0	0	1077	1130	50	5	6	1077	1130
		B225	4	90	75	□ 420	60	0	0	1077	1130					
	315S [2]	B200	4	80	80	□ 420	60	0	2	1108	1161					
		B225	4	90	80	□ 420	60	0	2	1108	1161					
		B250	6	100	80	□ 420	60	0	0	1108	1161					
	315M [2]	B200	4	80	80	□ 420	60	0	2	1108	1161					
		B225	4	90	80	□ 420	60	0	2	1108	1161					
		B250	6	100	80	□ 420	60	0	0	1108	1161					

Design (continued)

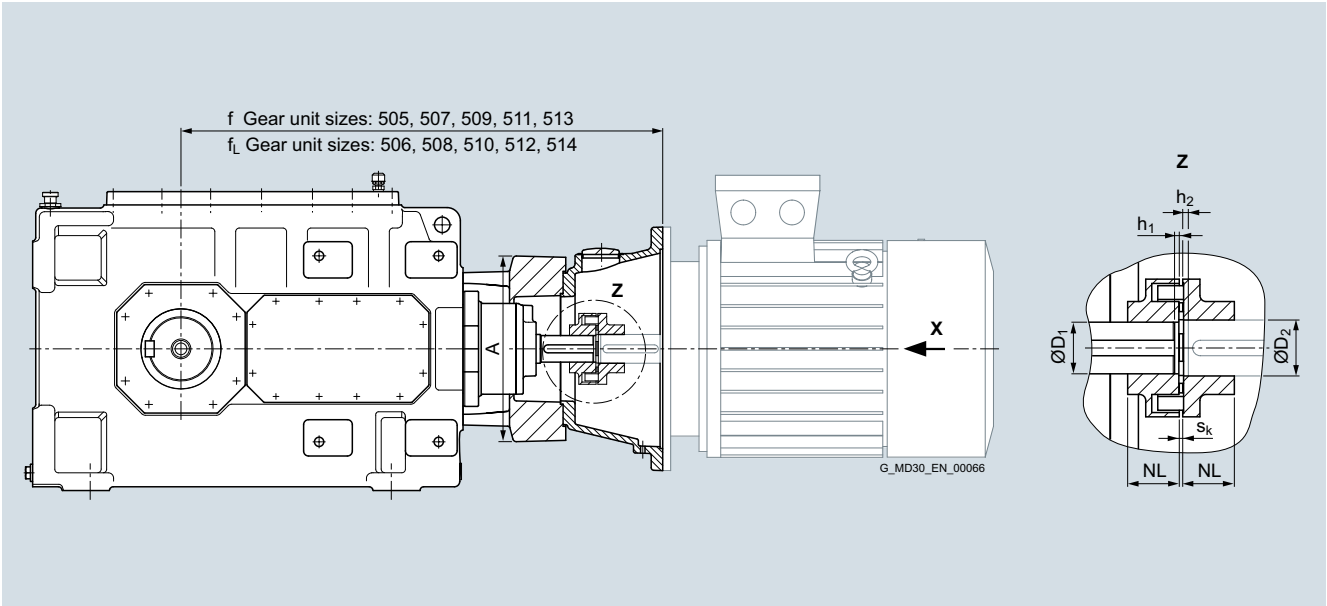
Gear unit sizes	Dimensions in mm Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_K	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
511										i_N = 14 - 50					i_N = 56	
512											i_N = 18 - 63					i_N = 71
	225S	B140	3	55	60	□ 420						60	6	7	1266	1324
		B160	4	60	60	□ 420						60	6	6	1266	1324
		B180	4	70	60	□ 420						60	6	6	1266	1324
		B200	4	80	60	□ 420						60	6	6	1266	1324
		B225	4	90	60	□ 420						60	6	6	1266	1324
	225M	B160	4	60	60	□ 420						60	6	6	1266	1324
		B180	4	70	60	□ 420						60	6	6	1266	1324
		B200	4	80	60	□ 420						60	6	6	1266	1324
		B225	4	90	60	□ 420						60	6	6	1266	1324
	250M	B160	4	60	65	□ 420						60	0	0	1254	1312
		B180	4	70	65	□ 420						60	0	0	1254	1312
		B200	4	80	65	□ 420						60	0	0	1254	1312
	280S	B180	4	70	75	□ 420	75	0	0	1254	1312	60	0	0	1254	1312
		B200	4	80	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
		B200	4	80	75	□ 420	75	0	0	1254	1312	60	0	0	1254	1312
	315S	B200	4	80	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
		B225	4	90	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
		B250	6	100	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
	315M	B200	4	80	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
		B225	4	90	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
		B250	6	100	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
	315L [3]	B200	4	80	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
		B225	4	90	80	□ 420	75	0	0	1285	1343	60	0	0	1285	1343
		B250	6	100	80	□ 420	75	0	0	1285	1343	60	0	0	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	1481	1559
		B225	4	90	80	□ 420	80	10	10	1526	1604	70	0	0	1481	1559
		B250	6	100	80	□ 420	80	9	9	1526	1604	70	0	0	1481	1559
	315M	B200	4	80	80	□ 420	80	10	10	1526	1604	70	0	0	1481	1559
		B225	4	90	80	□ 420	80	10	10	1526	1604	70	0	0	1481	1559
		B250	6	100	80	□ 420	80	9	9	1526	1604	70	0	0	1481	1559
	315L [3]	B200	4	80	80	□ 420	80	10	10	1526	1604	70	0	0	1481	1559
		B225	4	90	80	□ 420	80	10	10	1526	1604	70	0	0	1481	1559
		B250	6	100	80	□ 420	80	9	9	1526	1604	70	0	0	1481	1559
	315L [4]	B225	4	90	80	□ 420	80	10	10	1526	1604	70	0	0	1481	1559
		B250	6	100	80	□ 420	80	9	9	1526	1604	70	0	0	1481	1559

[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 EN 50347).
[4] Standard motor 315L with P_N < 200 kW (motor designation not included in EN 50347).

Motor bell housing for IEC motors

Type B4, gear unit sizes 505 to 508 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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	B068	3	20	28	Ø 250						20	2	3	728	781
		B080	3	30	28	Ø 250						20	2	3	728	781
		B095	3	35	28	Ø 250						20	2	3	728	781
		B110	3	40	28	Ø 250						20	2	3	728	781
	112M	B080	3	30	28	Ø 250	28	0	0	728	781	20	2	3	728	781
		B095	3	35	28	Ø 250	28	0	0	728	781	20	2	3	728	781
		B110	3	40	28	Ø 250	28	0	0	728	781	20	2	3	728	781
	132S	B080	3	30	38	Ø 250	28	0	3	751	804	20	4	4	751	804
		B095	3	35	38	Ø 250	28	0	3	751	804	20	4	4	751	804
		B110	3	40	38	Ø 250	28	0	3	751	804	20	4	4	751	804
		B125	3	50	38	Ø 250	28	3	0	751	804	20	6	2	751	804
	132M	B080	3	30	38	Ø 250						20	4	4	751	804
		B095	3	35	38	Ø 250	28	0	3	751	804	20	4	4	751	804
		B110	3	40	38	Ø 250	28	0	3	751	804	20	4	4	751	804
		B125	3	50	38	Ø 250	28	3	0	751	804	20	6	2	751	804
	160M	B095	3	35	42	Ø 250	28	0	3	781	834	20	4	4	781	834
		B110	3	40	42	Ø 250	28	0	3	781	834	20	4	4	781	834
		B125	3	50	42	Ø 250	28	3	0	781	834	20	6	2	781	834
	160L	B095	3	35	42	Ø 250						20	4	4	781	834
		B110	3	40	42	Ø 250	28	0	3	781	834	20	4	4	781	834
		B125	3	50	42	Ø 250	28	3	0	781	834	20	6	2	781	834
	180M	B110	3	40	48	Ø 250	28	0	3	781	834					
		B125	3	50	48	Ø 250	28	3	0	781	834					
	180L	B125	3	50	48	Ø 250	28	3	0	781	834					

Design (continued)

Dimensions in mm

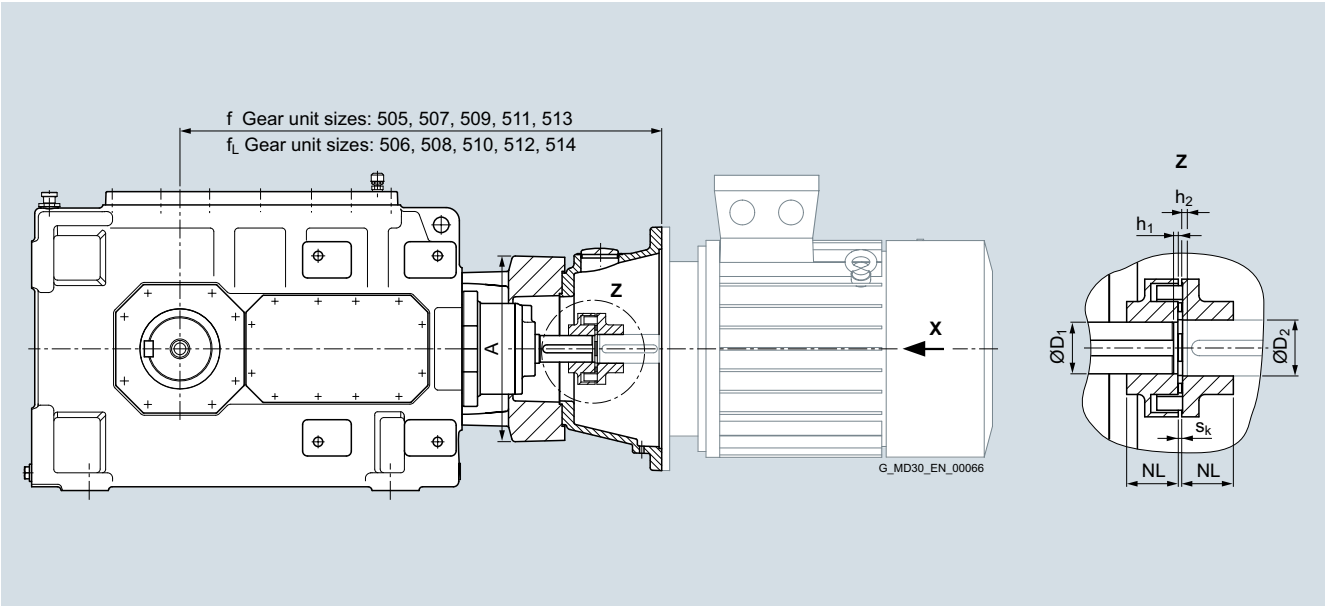
Gear unit sizes	Basic dimensions						Ratio range 1					Ratio range 2				
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
507										i_N = 63 - 200					i_N = 224	
508											i_N = 80 - 250					i_N = 280
	132S	B095	3	35	38	Ø 250	35	0	0	887	934	32	5	5	887	934
		B110	3	40	38	Ø 250	35	0	0	887	934	32	5	5	887	934
		B125	3	50	38	Ø 250	35	0	0	887	934	32	5	5	887	934
		B140	3	55	38	Ø 250	35	0	0	887	934	32	5	5	887	934
	132M	B095	3	35	38	Ø 250	35	0	0	887	934	32	5	5	887	934
		B110	3	40	38	Ø 250	35	0	0	887	934	32	5	5	887	934
		B125	3	50	38	Ø 250	35	0	0	887	934	32	5	5	887	934
		B140	3	55	38	Ø 250	35	0	0	887	934	32	5	5	887	934
	160M	B095	3	35	42	Ø 250	35	0	0	917	964	32	5	5	917	964
		B110	3	40	42	Ø 250	35	0	0	917	964	32	5	5	917	964
		B125	3	50	42	Ø 250	35	0	0	917	964	32	5	5	917	964
		B140	3	55	42	Ø 250	35	0	0	917	964	32	5	5	917	964
	160L	B095	3	35	42	Ø 250						32	5	5	917	964
		B110	3	40	42	Ø 250	35	0	0	917	964	32	5	5	917	964
		B125	3	50	42	Ø 250	35	0	0	917	964	32	5	5	917	964
		B140	3	55	42	Ø 250	35	0	0	917	964	32	5	5	917	964
	180M	B110	3	40	48	Ø 250	35	0	0	917	964					
		B125	3	50	48	Ø 250	35	0	0	917	964					
		B140	3	55	48	Ø 250	35	0	0	917	964					
	180L	B125	3	50	48	Ø 250	35	0	0	917	964					
		B140	3	55	48	Ø 250	35	0	0	917	964					
	200L	B140	3	55	55	Ø 250	35	7	13	937	984					
		B160	4	60	55	Ø 250	35	7	12	937	984					
												Ratio range 3				
507															i_N = 250 - 280	
508																i_N = 315 - 355
	132S	B110	3	40	38	Ø 250						25	10	10	887	934
		B125	3	50	38	Ø 250						25	10	10	887	934
		B140	3	55	38	Ø 250						25	10	10	887	934
	132M	B110	3	40	38	Ø 250						25	10	10	887	934
		B125	3	50	38	Ø 250						25	10	10	887	934
		B140	3	55	38	Ø 250						25	10	10	887	934
	160M	B125	3	50	42	Ø 250						25	10	10	917	964
		B140	3	55	42	Ø 250						25	10	10	917	964
	160L	B125	3	50	42	Ø 250						25	10	10	917	964
		B140	3	55	42	Ø 250						25	10	10	917	964

[1] Other motor sizes on request.

Motor bell housing for IEC motors

Type B4, gear unit sizes 509 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 EN 50347 (View X), see page 12/28.
- Not in connection with taconite E on input shaft (see note on page 11/2).

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
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	5	5	1043	1096
		B110	3	40	42	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
		B125	3	50	42	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
		B140	3	55	42	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
	160L	B110	3	40	42	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
		B125	3	50	42	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
		B140	3	55	42	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
	180M	B110	3	40	48	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
		B125	3	50	48	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
		B140	3	55	48	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
	180L	B125	3	50	48	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
		B140	3	55	48	□ 315	40	0	0	1043	1096	35	5	5	1043	1096
	200L	B140	3	55	55	□ 315	40	7	13	1063	1116					
		B160	4	60	55	□ 315	40	7	12	1063	1116					
	225S	B140	3	55	60	□ 315	40	7	7	1087	1140					
		B160	4	60	60	□ 315	40	7	6	1087	1140					
		B180	4	70	60	□ 315	40	7	6	1087	1140					
		B200	4	80	60	□ 315	40	7	6	1087	1140					
	225M	B160	4	60	60	□ 315	40	7	6	1087	1140					
		B180	4	70	60	□ 315	40	7	6	1087	1140					
		B200	4	80	60	□ 315	40	7	6	1087	1140					
	250M	B160	4	60	65	□ 315	40	8	17	1099	1152					
		B180	4	70	65	□ 315	40	12	13	1099	1152					
		B200	4	80	65	□ 315	40	12	13	1099	1152					

Design (continued)

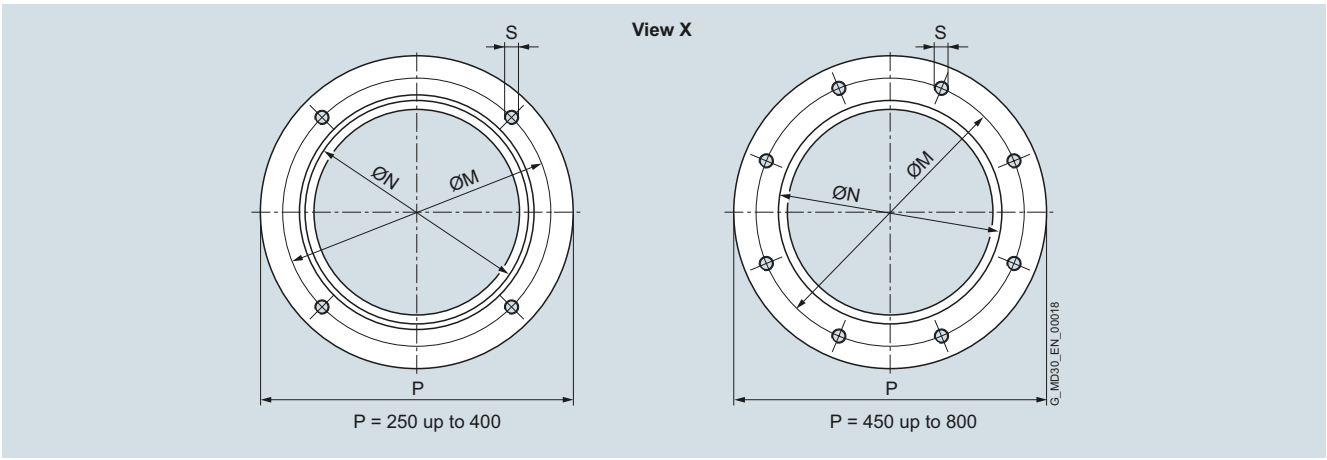
Gear unit sizes	Dimensions in mm																
	Basic dimensions						Ratio range 1					Ratio range 2					
	IEC motor [1]	N-EUPEX	S_k	NL	D_2	A	D_1	h_1	h_2	f	f_L	D_1	h_1	h_2	f	f_L
511										i_N = 63 - 200					i_N = 224 - 280	
512											i_N = 80 - 250					i_N = 280 - 355
	160M	B125	3	50	42	□ 315						40	6	14	1235	1293
		B140	3	55	42	□ 315						40	10	10	1235	1293
	160L	B125	3	50	42	□ 315						40	6	14	1235	1293
		B140	3	55	42	□ 315						40	10	10	1235	1293
	180M	B125	3	50	48	□ 315	50	0	0	1235	1293	40	6	14	1235	1293
		B140	3	55	48	□ 315	50	0	0	1235	1293	40	10	10	1235	1293
		B160	4	60	48	□ 315	50	0	0	1235	1293					
	180L	B125	3	50	48	□ 315	50	0	0	1235	1293	40	6	14	1235	1293
		B140	3	55	48	□ 315	50	0	0	1235	1293	40	10	10	1235	1293
		B160	4	60	48	□ 315	50	0	0	1235	1293					
	200L	B140	3	55	55	□ 315	50	7	13	1255	1313	40	5	5	1225	1283
		B160	4	60	55	□ 315	50	7	12	1255	1313					
	225S	B140	3	55	60	□ 315	50	7	7	1279	1337	40	6	6	1257	1315
		B160	4	60	60	□ 315	50	7	6	1279	1337	40	6	5	1257	1315
		B180	4	70	60	□ 315	50	7	6	1279	1337					
		B200	4	80	60	□ 315	50	7	6	1279	1337					
	225M	B160	4	60	60	□ 315	50	7	6	1279	1337	40	6	5	1257	1315
		B180	4	70	60	□ 315	50	7	6	1279	1337					
		B200	4	80	60	□ 315	50	7	6	1279	1337					
	250M	B160	4	60	65	□ 315	50	10	15	1291	1349					
		B180	4	70	65	□ 315	50	12	13	1291	1349					
		B200	4	80	65	□ 315	50	12	13	1291	1349					
	280S	B180	4	70	75	□ 315	50	12	13	1291	1349					
		B200	4	80	75	□ 315	50	12	13	1291	1349					
	280M	B180	4	70	75	□ 315	50	12	13	1291	1349					
		B200	4	80	75	□ 315	50	12	13	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
		B160	4	60	60	□ 420	60	7	6	1467	1545	50	0	0	1443	1521
		B180	4	70	60	□ 420	60	7	6	1467	1545	50	0	0	1443	1521
		B200	4	80	60	□ 420	60	7	6	1467	1545	50	0	0	1443	1521
		B225	4	90	60	□ 420	60	7	6	1467	1545					
	225M	B160	4	60	60	□ 420	60	7	6	1467	1545	50	0	0	1443	1521
		B180	4	70	60	□ 420	60	7	6	1467	1545	50	0	0	1443	1521
		B200	4	80	60	□ 420	60	7	6	1467	1545	50	0	0	1443	1521
		B225	4	90	60	□ 420	60	7	6	1467	1545					
	250M	B160	4	60	65	□ 420	60	0	0	1455	1533	50	5	6	1455	1533
		B180	4	70	65	□ 420	60	0	0	1455	1533	50	5	6	1455	1533
		B200	4	80	65	□ 420	60	0	0	1455	1533	50	5	6	1455	1533
		B225	4	90	65	□ 420	60	0	0	1455	1533					
	280S	B180	4	70	75	□ 420	60	0	0	1455	1533	50	5	6	1455	1533
		B200	4	80	75	□ 420	60	0	0	1455	1533	50	5	6	1455	1533
		B225	4	90	75	□ 420	60	0	0	1455	1533					
	280M	B180	4	70	75	□ 420	60	0	0	1455	1533	50	5	6	1455	1533
		B200	4	80	75	□ 420	60	0	0	1455	1533	50	5	6	1455	1533
		B225	4	90	75	□ 420	60	0	0	1455	1533					
	315S	B200	4	80	80	□ 420	60	0	2	1486	1564					
		B225	4	90	80	□ 420	60	0	2	1486	1564					
		B250	6	100	80	□ 420	60	0	0	1486	1564					
	315M	B200	4	80	80	□ 420	60	0	2	1486	1564					
		B225	4	90	80	□ 420	60	0	2	1486	1564					
		B250	6	100	80	□ 420	60	0	0	1486	1564					
	315L [2]	B200	4	80	80	□ 420	60	0	2	1486	1564					
		B225	4	90	80	□ 420	60	0	2	1486	1564					
		B250	6	100	80	□ 420	60	0	0	1486	1564					

[1] Other motor sizes on request.

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

Fitting dimensions for IEC motors

Dimensional drawings



Flange dimensions

For three-phase motors with squirrel-cage rotor acc. to 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		

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

Selection and ordering data

Ordering information
When ordering the motor bell housing, **-Z** and the following order code must be added to the Article No.

Data position of Article No.		1 to 6	7	8	9	10	11	12	13	14	15	16	Order code		
Article 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 B068												**P**	**2**	**6**
IEC motor 100L	for N-EUPEX coupling B080												**P**	**0**	**0**
IEC motor 100L	for N-EUPEX coupling B095												**P**	**2**	**7**
IEC motor 100L	for N-EUPEX coupling B110												**P**	**2**	**8**
IEC motor 112M	for N-EUPEX coupling B080												**P**	**0**	**1**
IEC motor 112M	for N-EUPEX coupling B095												**P**	**2**	**9**
IEC motor 112M	for N-EUPEX coupling B110												**P**	**3**	**0**
IEC motor 132S	for N-EUPEX coupling B080												**P**	**0**	**2**
IEC motor 132S	for N-EUPEX coupling B095												**P**	**0**	**3**
IEC motor 132S	for N-EUPEX coupling B110												**P**	**3**	**2**
IEC motor 132S	for N-EUPEX coupling B125												**P**	**3**	**3**
IEC motor 132S	for N-EUPEX coupling B140												**P**	**3**	**4**
IEC motor 132M	for N-EUPEX coupling B080												**P**	**3**	**1**
IEC motor 132M	for N-EUPEX coupling B095												**P**	**0**	**4**
IEC motor 132M	for N-EUPEX coupling B110												**P**	**3**	**5**
IEC motor 132M	for N-EUPEX coupling B125												**P**	**3**	**6**
IEC motor 132M	for N-EUPEX coupling B140												**P**	**3**	**7**
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 160M	for N-EUPEX coupling B140												**P**	**3**	**8**
IEC motor 160L	for N-EUPEX coupling B095												**P**	**3**	**9**
IEC motor 160L	for N-EUPEX coupling B110												**P**	**0**	**8**
IEC motor 160L	for N-EUPEX coupling B125												**P**	**0**	**9**
IEC motor 160L	for N-EUPEX coupling B140												**P**	**4**	**0**
IEC motor 180M	for N-EUPEX coupling B110												**P**	**1**	**0**
IEC motor 180M	for N-EUPEX coupling B125												**P**	**1**	**1**
IEC motor 180M	for N-EUPEX coupling B140												**P**	**4**	**1**
IEC motor 180M	for N-EUPEX coupling B160												**P**	**4**	**2**
IEC motor 180L	for N-EUPEX coupling B110												**P**	**6**	**6**
IEC motor 180L	for N-EUPEX coupling B125												**P**	**1**	**2**
IEC motor 180L	for N-EUPEX coupling B140												**P**	**4**	**3**
IEC motor 180L	for N-EUPEX coupling B160												**P**	**4**	**4**
IEC motor 200L	for N-EUPEX coupling B125												**P**	**4**	**5**
IEC motor 200L	for N-EUPEX coupling B140												**P**	**1**	**3**
IEC motor 200L	for N-EUPEX coupling B160												**P**	**4**	**6**
IEC motor 225S	for N-EUPEX coupling B140												**P**	**1**	**4**
IEC motor 225S	for N-EUPEX coupling B160												**P**	**4**	**7**
IEC motor 225S	for N-EUPEX coupling B180												**P**	**1**	**5**
IEC motor 225S	for N-EUPEX coupling B200												**P**	**4**	**8**
IEC motor 225S	for N-EUPEX coupling B225												**P**	**4**	**9**
IEC motor 225M	for N-EUPEX coupling B140												**P**	**1**	**6**
IEC motor 225M	for N-EUPEX coupling B160												**P**	**5**	**0**
IEC motor 225M	for N-EUPEX coupling B180												**P**	**1**	**7**
IEC motor 225M	for N-EUPEX coupling B200												**P**	**5**	**1**
IEC motor 225M	for N-EUPEX coupling B225												**P**	**5**	**2**
IEC motor 250M	for N-EUPEX coupling B160												**P**	**1**	**8**
IEC motor 250M	for N-EUPEX coupling B180												**P**	**1**	**9**
IEC motor 250M	for N-EUPEX coupling B200												**P**	**5**	**3**
IEC motor 250M	for N-EUPEX coupling B225												**P**	**5**	**4**
IEC motor 280S	for N-EUPEX coupling B180												**P**	**2**	**0**
IEC motor 280S	for N-EUPEX coupling B200												**P**	**5**	**5**
IEC motor 280S	for N-EUPEX coupling B225												**P**	**5**	**6**
IEC motor 280M	for N-EUPEX coupling B180												**P**	**2**	**1**
IEC motor 280M	for N-EUPEX coupling B200												**P**	**5**	**7**
IEC motor 280M	for N-EUPEX coupling B225												**P**	**5**	**8**
IEC motor 315S	for N-EUPEX coupling B200												**P**	**2**	**2**
IEC motor 315S	for N-EUPEX coupling B225												**P**	**5**	**9**
IEC motor 315S	for N-EUPEX coupling B250												**P**	**6**	**0**
IEC motor 315M	for N-EUPEX coupling B200												**P**	**2**	**3**
IEC motor 315M	for N-EUPEX coupling B225												**P**	**6**	**1**
IEC motor 315M	for N-EUPEX coupling B250												**P**	**6**	**2**

Selection and ordering data (continued)

Ordering information
When ordering the motor bell housing, **-Z** and the following order code must be added to the Article No.

Data position of Article No.	1 to 6	7	8	9	10	11	12	13	14	15	16	Order code
Article No.	**2LP202**	.	-	.	.	.	.	.	-	.	.	.	.	**-Z**
Motor bell housing in catalog design for one 4-pole or 6-pole IEC motor for standard coupling												
IEC motor 315L (max. 160 kW/50 Hz) for N-EUPEX coupling B200												**P 2 4**
IEC motor 315L (max. 160 kW/50 Hz) for N-EUPEX coupling B225												**P 6 3**
IEC motor 315L (max. 160 kW/50 Hz) for N-EUPEX coupling B250												**P 6 4**
IEC motor 315L (max. 200 kW/50 Hz) for N-EUPEX coupling B225												**P 2 5**
IEC motor 315L (max. 200 kW/50 Hz) for N-EUPEX coupling B250												**P 6 5**
IEC motor 315L (max. 250 kW/50 Hz) for N-EUPEX coupling B225												**P 6 7**
IEC motor 315L (max. 250 kW/50 Hz) for N-EUPEX coupling B250												**P 6 8**
IEC motor 315L (max. 315 kW/50 Hz) for N-EUPEX coupling B250												**P 6 9**
Mounting of motor bell housing												
Mounting flexible coupling piece												**P 8 0**
Mounting flexible coupling and IEC 100 motor												**P 8 1**
Mounting flexible coupling and IEC 112 motor												**P 8 2**
Mounting flexible coupling and IEC 132 motor												**P 8 3**
Mounting flexible coupling and IEC 160 motor												**P 8 4**
Mounting flexible coupling and IEC 180 motor												**P 8 5**
Mounting flexible coupling and IEC 200 motor												**P 8 6**
Mounting flexible coupling and IEC 225 motor												**P 8 7**
Mounting flexible coupling and IEC 250 motor												**P 8 8**
Mounting flexible coupling and IEC 280 motor												**P 8 9**
Mounting flexible coupling and IEC 315 motor												**P 9 0**
End for mounting motor bell housing for gear units with shaft d_1 at both ends												
Mounting of motor bell housing at gear unit face 3												**P 9 6**
Mounting of motor bell housing at gear unit face 6												**P 9 5**

Appendix

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13/2 **Partner at Industry**

13/3 **Online Services**
13/3 Information and Ordering in the Internet and on DVD
13/4 Information and Download Center, Social Media, Mobile Media

13/5 **Industry Services**
13/5 Your machines and plant can do more – with Industry Services.
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13/17 **Configuring guide**

13/18 **Conditions of sale and delivery**

At Siemens Industry we are resolutely pursuing the same goal: long-term improvement of your competitive ability.
We are committed to this goal. Thanks to our commitment, we continue to set new standards in automation and drive technology. In all industries – worldwide.

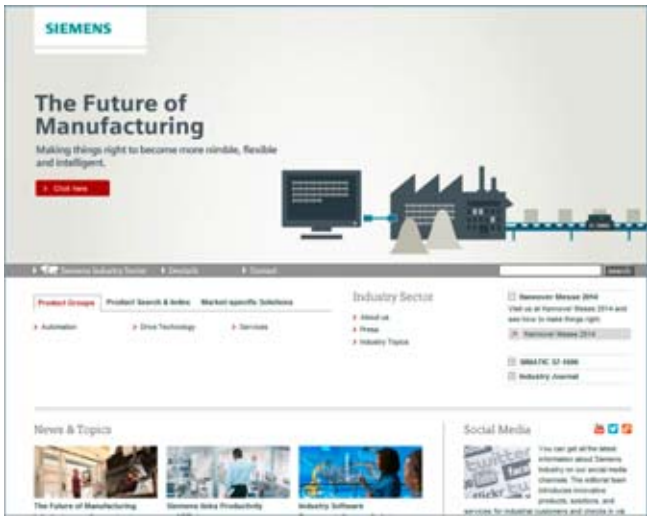
At your service locally, around the globe for consulting, sales, training, service, support, spare parts ... on the entire Industry Automation and Drive Technologies range.

Your personal contact can be found in our Contacts Database at:
www.siemens.com/automation/partner

You start by selecting a

- Product group,
- Country,
- City,
- Service.

Siemens Industry Automation and Drive Technologies in the WWW



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.

Siemens Industry Automation and Drive Technologies has therefore built up a comprehensive range of information in the World Wide Web, which offers quick and easy access to all data required.

Under the address

www.siemens.com/industry

you will find everything you need to know about products, systems and services.

Product Selection Using the Interactive Catalog CA 01 of Industry

Detailed information together with convenient interactive functions:
The interactive catalog CA 01 covers more than 80 000 products and thus provides a full summary of the Siemens Industry Automation and Drive Technologies product base.

Here you will find everything that you need to solve tasks in the fields of automation, switchgear, installation and drives.
All information is linked into a user interface which is easy to work with and intuitive.

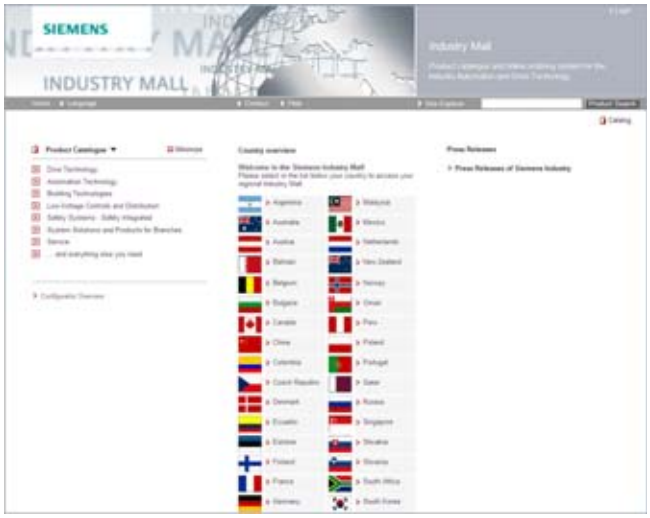
After selecting the product of your choice you can order at the press of a button, by fax or by online link.

Information on the interactive catalog CA 01 can be found in the Internet under

www.siemens.com/automation/ca01

or on DVD.

Easy Shopping with the Industry Mall



The Industry Mall is the electronic ordering platform of Siemens AG on the Internet. Here you have online access to a huge range of products presented in an informative and attractive way.

Data transfer via EDIFACT allows the whole procedure from selection through ordering to tracking and tracing of the order to be carried out. Availability checks, customer-specific discounts and preparation of quotes are also possible.

Numerous additional functions are available to support you.

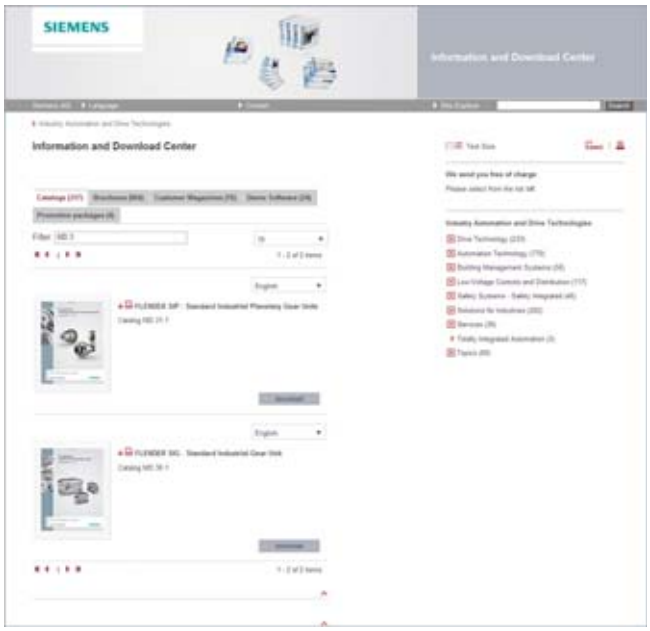
For example, powerful search functions make it easy to select the required products. Configurators enable you to configure complex product and system components quickly and easily. CAx data types are also provided here.

Please visit the Industry Mall on the Internet under:

www.siemens.com/industrymall

Information and Download Center
Social Media, Mobile Media

Downloading Catalogs



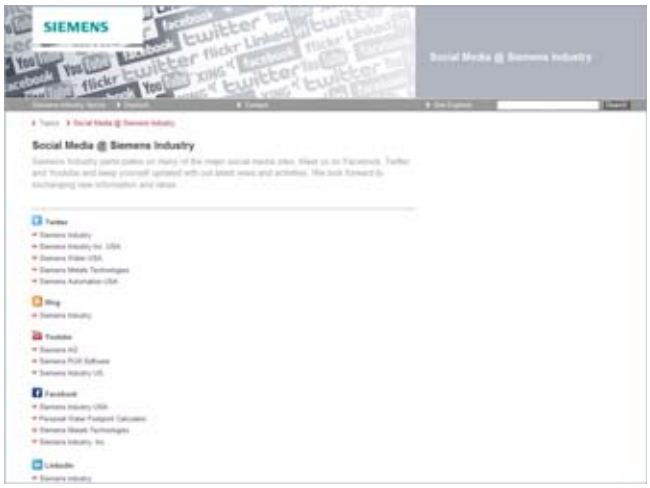
In addition to numerous other useful documents, you can also find the catalogs listed on the back inside cover of this catalog in the Information and Download Center. Without having to register, you can download these catalogs in PDF format or increasingly as digital page-turning e-books.

The filter dialog box above the first catalog displayed makes it possible to carry out targeted searches. If you enter “MD 3” for example, you will find both the MD 30.1 and MD 31.1 catalogs. If you enter “ST 70” both the ST 70 catalog and the associated news or add-ons are displayed.

Visit us on the web at:

www.siemens.com/industry/infocenter

Social Media



Connect with Siemens through social media: visit our social networking sites for a wealth of useful information, demos on products and services, the opportunity to provide feedback, to exchange information and ideas with customers and other Siemens employees, and much, much more. Stay in the know and follow us on the ever-expanding global network of social media.

Connect with Siemens Industry at our central access point:

www.siemens.com/industry/socialmedia

Or via our product pages at:

www.siemens.com/automation

or

www.siemens.com/drives

To find out more about Siemens' current social media activities visit us at:

www.siemens.com/socialmedia

Mobile Media

Discover the world of Siemens.

We are also constantly expanding our offering of cross-platform apps for smartphones and tablets. You will find the current Siemens apps at the app store (iOS) or at Google Play (Android).

The Siemens app, for example, tells you all about the history, latest developments and future plans of the company – with informative pictures, fascinating reports and the most recent press releases.

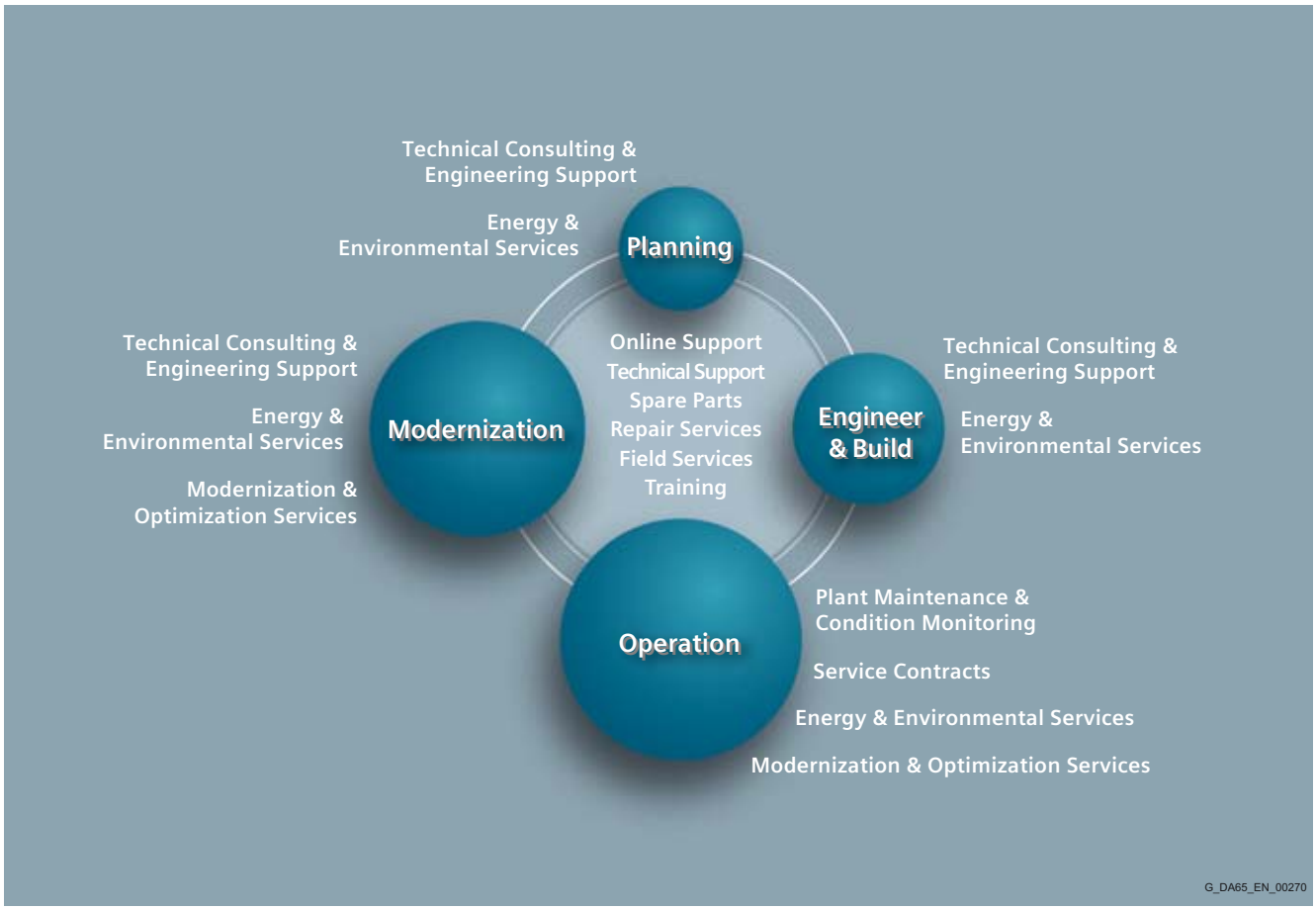
Your machines and plants can do more – with Industry Services.

Whether it is production or process industry - in view of rising cost pressure, growing energy costs, and increasingly stringent environmental regulations, services for industry are a crucial competitive factor in manufacturing as well as in process industries.

All over the world Siemens supports its customers with product, system, and application-related services throughout the entire life cycle of a plant. Right from the earliest stages of planning, engineering, and building, all the way to operation and modernization. These services enable customers to benefit from the Siemens experts' unique technological and product knowledge and industry expertise.

Thus downtimes are reduced and the utilization of resources is optimized. The bottom line: increased plant productivity, flexibility, and efficiency, plus reduced overall costs.

Discover all advantages of our service portfolio:
www.siemens.com/industry-services



Siemens supports its clients with technology based Services across a plants entire life cycle.

Industry Services for the entire life cycle

Online Support

Online support is a comprehensive information system for all questions relating to products, systems, and solutions that Siemens has developed for industry over time. With more than 300,000 documents, examples and tools, it offers users of automation and drive technology a way to quickly find up-to-date information. The 24-hour service enables direct, central access to detailed product information as well as numerous solution examples for programming, configuration and application.

The content, in six languages, is increasingly multimediabased – and now also available as a mobile app. Online support's "Technical Forum" offers users the opportunity to share information with each other. The "Support Request" option can be used to contact Siemens' technical support experts. The latest content, software updates, and news via newsletters and Twitter ensure that industry users are always up to date.

www.siemens.com/industry/onlinesupport

Online Support App

Using the Online Support app, you can access over 300,000 documents covering all Siemens industrial products - anywhere, any time. Regardless of whether you need help implementing your project, fault-finding, expanding your system or are planning a new machine.

You have access to FAQs, manuals, certificates, characteristics curves, application examples, product notices (e.g. announcements of new products) and information on successor products in the event that a product is discontinued.

Just scan the product code printed on the product directly using the camera of your mobile device to immediately see all technical information available on this product at a glance. The graphical CAx information (3D model, circuit diagrams or EPLAN macros) is also displayed. You can forward this information to your workplace using the e-mail function.

The search function retrieves product information and articles and supports you with a personalized suggestion list. You can find your favorite pages – articles you need frequently – under "mySupport". You also receive selected news on new functions, important articles or events in the News section.

Scan the QR code for information on our Online Support app.

The app is available free of charge from the Apple App Store (iOS) or from Google Play (Android).

www.siemens.com/industry/onlinesupportapp

Technical Support

The ability to quickly analyze system and error messages and take appropriate action are key factors in ensuring that plants run safely and efficiently. Questions can arise at any time and in any industry, whether it's an individual product or a complete automation solution. Siemens technical support offers individual technical assistance in matters related to functionality, how to operate, applications, and fault clearance in industrial products and systems – at any time and globally, over the phone, by e-mail, or via remote access. Experienced experts from Siemens answer incoming questions promptly. Depending on the requirements, they first consult specialists in the areas of development, on-site services, and sales. Technical support is also available for discontinued products that are no longer available. Using the support request number, any inquiry can be clearly identified and systematically tracked.

Spare Parts

Drive and automation systems must be available at all times. Even a single missing spare part can bring the entire plant to a standstill – and result in substantial financial losses for the operator. The spare parts services from Siemens protects against such losses – with the aid of quickly available, original spare parts that ensure smooth interaction with all other system components. Spare parts are kept on hand for up to ten years; defective parts can be returned. For many products and solutions, individual spare parts packages ensure a preventive stock of spare parts on-site. The spare parts services is available around the world and around the clock. Optimum supply chain logistics ensure that replacement components reach their destination as quickly as possible. Siemens' logistics experts take care of planning and management as well as procurement, transportation, customs handling, warehousing, and complete order management for spare parts.

Repair Services

Reliable electrical and electronic equipment is crucial for operating continuous processes. That is why it is essential that motors and converters always undergo highly specialized repair and maintenance. Siemens offers complete customer and repair services – on site and in repair centers – as well as technical emergency services worldwide. The repair services include all measures necessary to quickly restore the functionality of defective units. In addition, services such as spare parts logistics, spare parts storage and rapid manufacturing are available to plant operators in all verticals. With a global network of certified repair shops operated by Siemens as well as third parties, Siemens handles the maintenance and overhaul of motors, converters, and other devices as an authorized service partner.

Field Services

It's a top priority in all industries: the availability of plants and equipment. Siemens offers specialized maintenance services such as inspection and upkeep as well as rapid fault clearance in industrial plants – worldwide, continuously, and even with emergency services as needed. The services include startup as well as maintenance and fault clearance during operation. The startup service includes checking the installation, function tests, parameterization, integration tests for machines and plants, trial operation, final acceptance, and employee training. All services, including remote maintenance of drives, are also available as elements of customized service contracts.

Industry Services for the entire life cycle

Training

Increasingly, up-to-date knowledge is becoming a determining factor in success. One of the key resources of any company is well-trained staff that can make the right decision at the right moment and take full advantage of the potential. With SITRAIN – Training for Industry, Siemens offers comprehensive advanced training programs. The technical training courses convey expertise and practical knowledge directly from the manufacturer. SITRAIN covers Siemens' entire product and system portfolio in the field of automation and drives. Together with the customer, Siemens determines the company's individual training needs and then develops an advanced training program tailored to the desired requirements. Additional services guarantee that the knowledge of all Siemens partners and their employees is always up-to-date.

Technical Consulting & Engineering Support

The efficiency of plants and processes leads to sustainable - economic success. Individual services from Siemens help save substantial time and money while also guaranteeing maximum safety. Technical consulting covers the selection of products and systems for efficient industrial plants. The services include planning, consulting, and conceptual design as well as product training, application support, and configuration verification – in all phases of a plant's lifecycle and in all questions related to product safety. Engineering support offers competent assistance throughout the entire project, from developing a precise structure for startup to product-specific preparation for implementation as well as support services in areas such as prototype development, testing and acceptance.

Energy & Environmental Services

Efficient energy use and resource conservation – these top sustainability concerns pay off – both for the environment and for companies. Siemens offers integrated solutions that unlock all technical and organizational potential for successful environmental management. Customized consulting services are aimed at sustainably lowering the cost of energy and environmental protection and thus increasing plant efficiency and availability. The experts provide support in the conceptual design and implementation of systematic solutions in energy and environmental management, enabling maximum energy efficiency and optimized water consumption throughout the entire company. Improved data transparency makes it possible to identify savings potential, reduce emissions, optimize production processes, and thereby noticeably cut costs.

Modernization & Optimization Services

High machine availability, expanded functionality and selective energy savings – in all industries, these are decisive factors for increasing productivity and lowering costs. Whether a company wants to modernize individual machines, optimize drive systems, or upgrade entire plants, Siemens' experts support the projects from planning to commissioning.

Expert consulting and project management with solution responsibility lead to security and make it possible to specifically identify savings potential in production. This secures investments over the long term and increases economic efficiency in operation.

Plant Maintenance & Condition Monitoring

Modern industrial plants are complex and highly automated. They must operate efficiently in order to ensure the company's competitive strength. In addition, the steadily increasing networking of machines and plants require consistent security concepts. Maintenance and status monitoring as well as the implementation of integrated security concepts by Siemens' experts support optimum plant use and avoid downtime. The services include maintenance management as well as consulting on maintenance concepts, including the complete handling and execution of the necessary measures. Complete solutions also cover remote services, including analysis, remote diagnosis, and remote monitoring. These are based on the Siemens Remote Services platform with certified IT security.

Service Contracts

Making maintenance costs calculable, reducing interfaces, speeding up response times, and unburdening the company's resources – the reduced downtimes that these measures achieve increase the productivity of a plant. Service contracts from Siemens make maintenance and repairs more cost-effective and efficient. The service packages include local and remote maintenance for a system or product group in automation and drive technology. Whether you need extended service periods, defined response times, or special maintenance intervals, the services are compiled individually and according to need. They can be adjusted flexibly at any time and used independently of each other. The expertise of Siemens' specialists and the capabilities of remote maintenance thus ensure reliable and fast maintenance processes throughout a plant's entire lifecycle.

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Overview of order codes

Overview

Order code	
Preservation	
A00	Preservation application: Wastewater treatment, sewage treatment plant
A01	Preservation application: Excavators and bucket wheel excavators
A02	Preservation application: Chemical industry
A03	Preservation application: Metal working mills
A04	Preservation application: Conveyors
A06	Preservation application: Cranes, general
A07	Preservation application: Cranes, harbor cranes, standard
A09	Preservation application: Cooling tower drive, standard
A10	Preservation application: Sugar production
A11	Preservation application: Paper production, printing presses
A12	Preservation application: Paper production, drying drum drives
A13	Preservation application: Cableways
A14	Preservation application: Building materials production, general
A15	Preservation application: Building materials production, cement industry
A16	Preservation application: Building materials production, brickworks
A17	Preservation application: Transport of persons, elevators, escalators
A18	Preservation application: Mining machinery
A19	Preservation application: Woodworking machines
A20	Preservation application: General mechanical engineering
A21	Preservation application: Food processing industry, general
A22	Preservation application: Food processing industry, mixer drives
A23	Preservation application: Food processing industry, drum dryer drives
A24	Preservation application: Food processing industry, cooking appliance drives
A25	Preservation application: Food processing industry, toaster drives
A26	Preservation application: Shipbuilding and offshore machinery
A27	Preservation application: Prime movers, general
A28	Preservation application: Prime movers, water turbines
A31	Preservation application: Casting machines
A32	Preservation application: Artificial fertilizer and potash works
A33	Preservation application: Lauter tub drives, standard
A34	Preservation application: Agitator drives, standard
A45	Preservation application: Oil pump drives
A46	Preservation application: Compressor drives
A47	Preservation application: Palm oil presses
A48	Preservation application: Preheater drives
A49	Preservation application: Centrifuge drives
A50	Preservation application: Cooling drum drives
A51	Preservation application: Calander drives
A52	Preservation application: Kneader drives
A53	Preservation application: Mill drives, standard
B01	Climatic stress: Moderate climate zones, Central European conditions
B02	Climatic stress: Marine climate, maritime coastal areas, maritime transport, subtropical, tropical
B03	Climatic stress: Corrosive, chemical atmosphere, aggressive environmental conditions

Order code	
B41	Coating system: Standard, with top coat
B42	Coating system: Standard, without top coat
B43	Coating system: Standard, with top coat
B44	Coating system: Standard, with top coat, high resistance to chemicals
B73	Coating system: Standard, with top coat, for "ATEX IIC" conditions
B75	Coating system: Standard, with top coat, high resistance to chemicals, for "ATEX IIC" conditions
B85	Coating system: Electrostatically conductive, with top coat, for "ATEX IIC" conditions (fulfills corrosivity category C3 in accordance with EN ISO 12944-2)
B86	Coating system: Electrostatically conductive, with top coat, for "ATEX IIC" conditions (fulfills corrosivity category C4 in accordance with EN ISO 12944-2)
B87	Coating system: Electrostatically conductive, with top coat, high resistance to chemicals, for "ATEX IIC" conditions (fulfills corrosivity category C5 in accordance with EN ISO 12944-2)
C00	RAL 5015 sky blue
C01	RAL 5009 azure blue
C02	RAL 5010 gentian blue
C06	RAL 6011 reseda green
C07	RAL 7031 blue gray
C08	RAL 7035 light gray
C10	RAL 9005 jet black
C11	RAL 7030 stone gray
C12	RAL 7016 anthracite gray
C13	RAL 7011 steel gray
Acceptance	
D97	Additional test report to EN 10204-2.2
Installation conditions	
G10	Cover cap at shaft d_1, mounted on gear unit face 6 (left)
G11	Cover cap at shaft d_1, mounted on gear unit face 3 (right)
G20	Cover cap at shaft d_2, mounted on gear unit face 6 (left)
G21	Cover cap at shaft d_2, mounted on gear unit face 3 (right)
G30	Installation: Altitude up to 1,000 m
G31	Installation: Altitude 1,001 m to 2,000 m
G32	Installation: Altitude 2,001 m to 3,000 m
G33	Installation: Altitude 3,001 m to 4,000 m
G34	Installation: Altitude 4,001 m to 5,000 m
G35	Installation location: Small, enclosed rooms
G36	Installation location: Large rooms, halls
G37	Installation location: Outdoors
Information about oil	
H00	Intended for mineral oil (oil not included in scope of supply)
H01	Intended for polyglycol-based synthetic oil (PG oil, oil not included in scope of supply)
H02	Intended for poly-alpha-olefin-based synthetic oil (PAO oil, oil not included in scope of supply)
H03	Intended for poly-alpha-olefin-based synthetic oil, suitable for ambient temperatures in excess of -35 degrees (PAO oil, oil not included in scope of supply)
H10	Oil viscosity ISO VG 460
H11	Oil viscosity ISO VG 320
H12	Oil viscosity ISO VG 220

Order code	
Oil monitoring	
H40	Oil temperature measurement by Pt100 resistance thermometer
H42	Oil temperature measurement by Pt100 resistance thermometer with transmitter
H43	Oil temperature monitoring with ATH-SW22
H44	Oil temperature measurement by Pt100 resistance thermometer in ATEX design (Categories 2+3)
H51	Oil sight glass
H52	Oil level indicator FSA127
Heating element	
J00	1 screw-in heater (standard design) IP65, 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 4
J01	2 screw-in heaters (standard design) IP65, 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 4
J02	1 screw-in heater (standard design) IP65, 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 1
J03	2 screw-in heaters (standard design) IP65, 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 1
J04	1 screw-in heater in each case on gear unit faces 1 and 4 (standard design) IP65, 230V, 50Hz, cable entry point as selected by supplier
J05	1 screw-in heater (ATEX design, Categories 2 +3) 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 4
J06	2 screw-in heater (ATEX design, Categories 2 +3) 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 4
J07	1 screw-in heater (ATEX design, Categories 2 +3) 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 1
J08	2 screw-in heaters (ATEX design, Categories 2 +3) 230V, 50Hz, cable entry point as selected by supplier, mounted on gear unit face 1
J09	1 screw-in heater in each case on gear unit faces 1 and 4 (ATEX design, Categories 2+3) 230V, 50Hz, cable entry point as selected by supplier
Mechanical externally mounted parts / gear unit design	
K00	Vibration reducing torque reaction arm for gear unit housing
K22	Gear unit housing made of steel, welded
K24	Cover caps / fan guards in same color as gear unit
K27	Stainless-steel set of labels
K30	"Gear unit in mounting position "H": Oil drain valve on gear unit face 4, straight design
	Gear unit in mounting position "V": Oil drain valve on gear unit face 4, straight design
	Gear unit in mounting position "L": Oil drain valve on gear unit face 2, straight design
K32	"Gear unit in mounting position "H": Oil drain valve on gear unit face 4, angled relative to face 6
	Gear unit in mounting position "V": Oil drain valve on gear unit face 4, angled relative to face 5
	Gear unit in mounting position "L": Oil drain valve on gear unit face 2, angled relative to face 6
K33	"Gear unit in mounting position "H": Oil drain valve on gear unit face 4, angled relative to face 3
	Gear unit in mounting position "V": Oil drain valve on gear unit face 4, angled relative to face 2
	Gear unit in mounting position "L": Oil drain valve on gear unit face 2, angled relative to face 3

Order code	
K34	Gear unit in mounting position "H": Oil drain valve on gear unit face 1, straight design
K35	Gear unit in mounting position "H": Oil drain valve on gear unit face 1, angled relative to face 6
K36	Gear unit in mounting position "H": Oil drain valve on gear unit face 1, angled relative to face 3
K37	Screw plug with permanent magnet in addition to oil drain valve
K71	MANN air filter (with filling sieve)
K72	MANN air filter in encapsulated design (for dust-laden environments and risk of unit become completely covered)
K73	Wet air filter
K74	Breather filter (HYDAC)
L00	Standard backstop, clockwise
L01	Standard backstop, counter-clockwise
L02	Standard backstop, prepared for mounting
L90	Shaft D_2 clockwise
L93	Shaft D_2 counter-clockwise
L94	Direction of rotation of shaft d_2 with view on right stud (d_2 shaft at both ends)
L95	Direction of rotation of shaft d_2 with view on left stud (d_2 shaft at both ends)
L96	Direction of rotation of shaft d_2 with view on lower stud (d_2 shaft at both ends, vertical mounting position)
L97	Direction of rotation of shaft d_2 with view on upper stud (d_2 shaft at both ends, vertical mounting position)
Specifications for mounting an auxiliary drive	
M00	Auxiliary drive mounted as load drive
M01	Auxiliary drive mounted as maintenance drive
M02	Auxiliary drive prepared for mounting as load drive
M03	Auxiliary drive prepared for mounting as maintenance drive
M60	Auxiliary drive mounting: Single drive (standard)
M70	Auxiliary drive mounting: Mounting position: M4 (vertical, standard)
M71	Auxiliary drive mounting: Mounting position: M1 (horizontal)
M80	Auxiliary drive mounting: Speed monitoring device: Pulse generator
M81	Auxiliary drive mounting: Speed monitoring device: EWD
M82	Auxiliary drive mounting: Speed monitoring device: by customer, M18x1
M83	Auxiliary drive mounting: Provided by the customer with connection thread M18 x 1
M84	Auxiliary drive mounting: Provided by the customer with other connection thread
Specifications for mounting a motor bell housing	
P00	Mounting of motor bell housing for IEC motor 100L 4-pole/6-pole, coupling N-EUPEX B080
P01	Mounting of motor bell housing for IEC motor 112M 4-pole/6-pole, coupling N-EUPEX B080
P02	Mounting of motor bell housing for IEC motor 132S 4-pole/6-pole, coupling N-EUPEX B080
P03	Mounting of motor bell housing for IEC motor 132S 4-pole/6-pole, coupling N-EUPEX B095
P04	Mounting of motor bell housing for IEC motor 132M 4-pole/6-pole, coupling N-EUPEX B095
P05	Mounting of motor bell housing for IEC motor 160M 4-pole/6-pole, coupling N-EUPEX B095
P06	Mounting of motor bell housing for IEC motor 160M 4-pole/6-pole, coupling N-EUPEX B110
P07	Mounting of motor bell housing for IEC motor 160M 4-pole/6-pole, coupling N-EUPEX B125

Overview of order codes

Order code	
P08	Mounting of motor bell housing for IEC 160L motor 4-pole/6-pole, coupling N-EUPEX B110
P09	Mounting of motor bell housing for IEC motor 160L 4-pole/6-pole, coupling N-EUPEX B125
P10	Mounting of motor bell housing for IEC motor 180M 4-pole/6-pole, coupling N-EUPEX B110
P11	Mounting of motor bell housing for IEC motor 180M 4-pole/6-pole, coupling N-EUPEX B125
P12	Mounting of motor bell housing for IEC motor 180L 4-pole/6-pole, coupling N-EUPEX B125
P13	Mounting of motor bell housing for IEC motor 200L 4-pole/6-pole, coupling N-EUPEX B140
P14	Mounting of motor bell housing for IEC motor 225S 4-pole/6-pole, coupling N-EUPEX B140
P15	Mounting of motor bell housing for IEC motor 225S 4-pole/6-pole, coupling N-EUPEX B180
P16	Mounting of motor bell housing for IEC motor 225M 4-pole/6-pole, coupling N-EUPEX B140
P17	Mounting of motor bell housing for IEC motor 225M 4-pole/6-pole, coupling N-EUPEX B180
P18	Mounting of motor bell housing for IEC motor 250M 4-pole/6-pole, coupling N-EUPEX B160
P19	Mounting of motor bell housing for IEC motor 250M 4-pole/6-pole, coupling N-EUPEX B180
P20	Mounting of motor bell housing for IEC motor 280S 4-pole/6-pole, coupling N-EUPEX B180
P21	Mounting of motor bell housing for IEC motor 280M 4-pole/6-pole, coupling N-EUPEX B180
P22	Mounting of motor bell housing for IEC motor 315S 4-pole/6-pole, coupling N-EUPEX B200
P23	Mounting of motor bell housing for IEC motor 315M 4-pole/6-pole, coupling N-EUPEX B200
P24	Mounting of motor bell housing for IEC motor 315L-160 4-pole/6-pole, coupling N-EUPEX B200
P25	Mounting of motor bell housing for IEC motor 315L-200 4-pole/6-pole, coupling N-EUPEX B225
P26	Mounting of motor bell housing for IEC motor 100L 4-pole/6-pole, coupling N-Eupex B68
P27	Mounting of motor bell housing for IEC motor 100L 4-pole/6-pole, coupling N-Eupex B95
P28	Mounting of motor bell housing for IEC motor 100L 4-pole/6-pole, coupling N-Eupex B110
P29	Mounting of motor bell housing for IEC motor 112M 4-pole/6-pole, coupling N-Eupex B95
P30	Mounting of motor bell housing for IEC motor 112M 4-pole/6-pole, coupling N-Eupex B110
P31	Mounting of motor bell housing for IEC motor 132M 4-pole/6-pole, coupling N-Eupex B80
P32	Mounting of motor bell housing for IEC motor 132S 4-pole/6-pole, coupling N-Eupex B110
P33	Mounting of motor bell housing for IEC motor 132S 4-pole/6-pole, coupling N-Eupex B125
P34	Mounting of motor bell housing for IEC motor 132S 4-pole/6-pole, coupling N-Eupex B140
P35	Mounting of motor bell housing for IEC motor 132M 4-pole/6-pole, coupling N-Eupex B110
P36	Mounting of motor bell housing for IEC motor 132M 4-pole/6-pole, coupling N-Eupex B125
P37	Mounting of motor bell housing for IEC motor 132M 4-pole/6-pole, coupling N-Eupex B140
P38	Mounting of motor bell housing for IEC motor 160M 4-pole/6-pole, couplingN-Eupex B140
P39	Mounting of motor bell housing for IEC motor 160L 4-pole/6-pole, coupling N-Eupex B95
P40	Mounting of motor bell housing for IEC motor 160L 4-pole/6-pole, coupling N-Eupex B140
P41	Mounting of motor bell housing for IEC motor 180M 4-pole/6-pole, coupling N-Eupex B140
P42	Mounting of motor bell housing for IEC motor 180M 4-pole/6-pole, coupling N-Eupex B160
P43	Mounting of motor bell housing for IEC motor 180L 4-pole/6-pole, coupling N-Eupex B140
P44	Mounting of motor bell housing for IEC motor 180L 4-pole/6-pole, coupling N-Eupex B160
P45	Mounting of motor bell housing for IEC motor 200L 4-pole/6-pole, coupling N-Eupex B125
P46	Mounting of motor bell housing for IEC motor 200L 4-pole/6-pole, coupling N-Eupex B160
P47	Mounting of motor bell housing for IEC motor 225S 4-pole/6-pole, coupling N-Eupex B160
P48	Mounting of motor bell housing for IEC motor 225S 4-pole/6-pole, coupling N-Eupex B200
P49	Mounting of motor bell housing for IEC motor 225S 4-pole/6-pole, coupling N-Eupex B225
P50	Mounting of motor bell housing for IEC motor 225M 4-pole/6-pole, coupling N-Eupex B160
P51	Mounting of motor bell housing for IEC motor 225M 4-pole/6-pole, coupling N-Eupex B200
P52	Mounting of motor bell housing for IEC motor 225M 4-pole/6-pole, coupling N-Eupex B225
P53	Mounting of motor bell housing for IEC motor 250M 4-pole/6-pole, coupling N-Eupex B200
P54	Mounting of motor bell housing for IEC motor 250M 4-pole/6-pole, coupling N-Eupex B225
P55	Mounting of motor bell housing for IEC motor 280S 4-pole/6-pole, coupling N-Eupex B200
P56	Mounting of motor bell housing for IEC motor 280S 4-pole/6-pole, coupling N-Eupex B225
P57	Mounting of motor bell housing for IEC motor 280M 4-pole/6-pole, coupling N-Eupex B200
P58	Mounting of motor bell housing for IEC motor 280M 4-pole/6-pole, coupling N-Eupex B225
P59	Mounting of motor bell housing for IEC motor 315S 4-pole/6-pole, coupling N-Eupex B225
P60	Mounting of motor bell housing for IEC motor 315S 4-pole/6-pole, coupling N-Eupex B250
P61	Mounting of motor bell housing for IEC motor 315M 4-pole/6-pole, coupling N-Eupex B225
P62	Mounting of motor bell housing for IEC motor 315M 4-pole/6-pole, coupling N-Eupex B250
P63	Mounting of motor bell housing for IEC motor 315L_160 4-pole/6-pole, coupling N-EUPEX B225
P64	Mounting of motor bell housing for IEC motor 315L_160 4-pole/6-pole, coupling N-EUPEX B250
P65	Mounting of motor bell housing for IEC motor 315L_200 4-pole/6-pole, coupling N-EUPEX B250
P66	Mounting of motor bell housing for IEC motor 180L 4-pole/6-pole, coupling N-Eupex B110
P67	Mounting of motor bell housing for IEC motor 315L_250 4-pole/6-pole, coupling N-EUPEX B225
P68	Mounting of motor bell housing for IEC motor 315L_250 4-pole/6-pole, coupling N-EUPEX B250
P69	Mounting of motor bell housing for IEC motor 315L_315 4-pole/6-pole, coupling N-EUPEX B250
P80	Mounting of motor bell housing: Mounting flexible coupling piece
P81	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 100

Order code	
P82	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 112
P83	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 132
P84	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 160
P85	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 180
P86	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 200
P87	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 225
P88	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 250
P89	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 280
P90	Mounting of motor bell housing: Mounting flexible coupling and IEC motor 315
P95	Mounting of motor bell housing at gear unit face 6
P96	Mounting of motor bell housing at gear unit face 3
Gear units in ATEX design	
X30	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T4, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection bck
X31	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T4, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection ck
X32	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T4, explosion subgroup IIC, minimum ignition energy ≤ 3mJ, type of protection bck
X33	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T4, explosion subgroup IIC, minimum ignition energy ≤3mJ, type of protection ck
X34	Gear unit in ATEX design, suitable for above-ground applications, Zone 21 (category 2 (high protection), explosive atmosphere dust), minimum ignition energy >3mJ, type of protection bck
X35	Gear unit in ATEX design, suitable for above-ground applications, Zone 21 (category 2 (high protection), explosive atmosphere dust), minimum ignition energy ≤3mJ, type of protection bck
X36	Gear unit in ATEX design, suitable for above-ground applications, Zone 22 (category 3 (normal protection), explosive atmosphere dust), minimum ignition energy >3mJ, type of protection ck
X37	Gear unit in ATEX design, suitable for above-ground applications, Zone 22 (category 3 (normal protection), explosive atmosphere dust), minimum ignition energy ≤3mJ, type of protection ck
X38	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T1, explosion subgroup IIA, type of protection bck
X39	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T2, explosion subgroup IIA, type of protection bck
X40	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T3, explosion subgroup IIA, type of protection bck

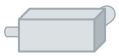
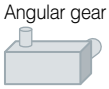
Order code	
X41	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T4, explosion subgroup IIA, type of protection bck
X42	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T1, explosion subgroup IIB, type of protection bck
X43	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T2, explosion subgroup IIB, type of protection bck
X44	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T3, explosion subgroup IIB, type of protection bck
X45	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T4, explosion subgroup IIB, type of protection bck
X46	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T1, explosion subgroup IIC, type of protection bck
X47	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T2, explosion subgroup IIC, type of protection bck
X48	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T3, explosion subgroup IIC, type of protection bck
X49	Gear unit in ATEX design, suitable for above-ground applications, Zone 1 (category 2 (high protection), explosive atmosphere gas/mist/vapor), temperature class T4, explosion subgroup IIC, type of protection bck
X50	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T1, explosion subgroup IIA, type of protection ck
X51	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T2, explosion subgroup IIA, type of protection ck
X52	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T3, explosion subgroup IIA, type of protection ck
X53	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T4, explosion subgroup IIA, type of protection ck
X54	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T1, explosion subgroup IIB, type of protection ck
X55	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T2, explosion subgroup IIB, type of protection ck
X56	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T3, explosion subgroup IIB, type of protection ck
X57	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T4, explosion subgroup IIB, type of protection ck
X58	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T1, explosion subgroup IIC, type of protection ck

Overview of order codes

Order code	
X59	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T2, explosion subgroup IIC, type of protection ck
X60	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T3, explosion subgroup IIC, type of protection ck
X61	Gear unit in ATEX design, suitable for above-ground applications, Zone 2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor), temperature class T4, explosion subgroup IIC, type of protection ck
X62	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T1, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection bck
X63	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T2, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection bck
X64	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T3, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection bck
X65	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T4, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection bck
X66	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T1, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection bck
X67	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T2, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection bck
X68	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T3, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection bck
X69	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T1, explosion subgroup IIC, minimum ignition energy ≤ 3mJ, type of protection bck
X70	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T2, explosion subgroup IIC, minimum ignition energy ≤ 3mJ, type of protection bck
X71	Gear unit in ATEX design, suitable for above-ground applications, Zone 21/1 (category 2 (high protection), explosive atmosphere gas/mist/vapor and dust), temperature class T3, explosion subgroup IIC, minimum ignition energy ≤ 3mJ, type of protection bck
X72	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T1, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection ck
X73	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T2, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection ck
X74	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T3, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection ck
X75	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T4, explosion subgroup IIA, minimum ignition energy >3mJ, type of protection ck
X76	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T1, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection ck
X77	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T2, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection ck
X78	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T3, explosion subgroup IIB, minimum ignition energy >3mJ, type of protection ck
X79	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T1, explosion subgroup IIC, minimum ignition energy ≤3mJ, type of protection ck
X80	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T2, explosion subgroup IIC, minimum ignition energy ≤3mJ, type of protection ck
X81	Gear unit in ATEX design, suitable for above-ground applications, Zone 22/2 (category 3 (normal protection), explosive atmosphere gas/mist/vapor and dust), temperature class T3, explosion subgroup IIC, minimum ignition energy ≤3mJ, type of protection ck
Order codes with required plain text	
Y00	RAL color of top coat
Y01	Minimum ambient temperature
Y02	Maximum ambient temperature
Y20	Speed n1
Y21	Power rating of driven machine P2 [kW]
Y22	Torque of driven machine T2 [kNm]
Y23	Motor power PM [kW]
Y25	Additional text for type plate
Y99	Additional text available

General information

Basic version and load data

Gearbox type: ☐ Helical gearbox H  ☐ Bevel helical gearbox B  ☐ Angular gear gearbox W; V  ☐ Gearbox with creep drive

Quantity: _____ pieces

Output torque: _____ Nm
Max. output torque: _____ Nm

Motor power rating: _____ kW
Motor speed: _____ rpm
Absorbed power: _____ kW
Output speed: _____ rpm
Service factor: _____
Starting operations, load peaks/hour: _____ s/h ☐ Alternating load direction

Allowable ratio tolerance: _____ %
Requested bearing life time $L_{10\,mh}$: _____ hours
Max. allowed oil temperature: _____ °C

Line frequency: ☐ 50 Hz ☐ 60 Hz ☐ For inverter operation ☐ Min/max frequency _____ Hz

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

Environmental conditions

Installation altitude: _____ m
Air humidity: _____ %
Temperature: From _____ to _____ °C

☐ Outdoor operation
☐ Operation in large hall
☐ Operation in small room

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

Climatic conditions

☐ Temperate climate zones, central European conditions
☐ Maritime coastal or maritime climate areas, overseas transport, tropics, subtropics
☐ Chemically corrosive climate, aggressive environment
☐ Regular installation conditions
☐ Demanding installation conditions
☐ Rough and dirty installation conditions

Gearbox

Mounting and mounting position

Mounting position:
☐ Horizontal H__H 
☐ Vertical H__V 
☐ B__H 
☐ B__V 
High speed shaft above low speed shaft ☐  H_L ☐  B_L
Low speed shaft above high speed shaft *) ☐  H_U ☐  B_U

*) Only shaft mounted

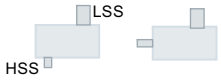
Mounting type:
☐ Foot-mounting design
☐ With IEC motor lantern
☐ With HSS coupling
☐ With LSS coupling
☐ Shaft mounted design
☐ Hydraulic type
☐ ☐ Elastic type coupling
☐ ☐ Rigid type
☐ Wall mounted design
☐ Housing flange, short spacer
☐ Housing flange, long spacer
☐ At housing side _____
☐ With swing base
☐ With base frame
☐ With torque reaction arm
☐ With pedestal

Motor type: _____

Shafts

Designs for low speed shafts:
☐ Solid shaft with key S
☐ Flange shaft F
☐ Hollow shaft with key way H
☐ Solid shaft C for flange coupling **) with backlash free cone-clamping connection (without keyway)
☐ **) Cone-clamping flange coupling included
☐ Hollow shaft with shrink disk D
☐ Hollow shaft with involute splines K

Special HS shaft dimensions: ($d_1 \times l_1$) _____ × _____ mm Tol. _____ Shaft shoulder dimension: (G_1) _____ mm
Special LS shaft dimensions: ($d_2 \times l_2$) _____ × _____ mm Tol. _____ Shaft shoulder dimension: ($G_2/G_4/G_5$) _____ mm

Shaft arrangements:
☐ Double extended HS shaft
☐ Double extended LS shaft
Example: 

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

General options

Surface treatment

Surface protection: ☐ C2 ☐ C3 ☐ C4 ☐ C5 ☐ Basic painting ☐ RAL 5015 ☐ RAL _____

Other options

Additional cooling: ☐ Fan ☐ Cooling coil; cooling water input temperature _____ °C ☐ Cooler unit ☐ Oil/air ☐ Oil/water ☐ Heater, with temperature control U = _____ V, _____ Hz, IP ___

Single rotation direction of the LS shaft: ☐ Right ☐ Left ☐ Backstop

ATEX

Zone	1	2	21	22
Category				
Gas	Dust	Group		
G	D	IIA	IIB	IIC
Temperature class				

ATEX-checklist customer ☐

Conditions of sale and delivery

1. General Provisions

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For customers with a seat or registered office in Germany, the following applies subordinate to the T&C:

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- for software products, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or Registered Office in Germany"[1] and,
- for other supplies and services, the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"[1].

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For customers with a seat or registered office outside Germany, the following applies subordinate to the T&C:

- the "General Terms of Payment"[1] and,
- for software products, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or Registered Office outside of Germany"[1] and
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To compensate for variations in the price of raw materials (e.g. silver, copper, aluminum, lead, gold, dysprosium and neodym), surcharges are calculated on a daily basis using the so-called metal factor for products containing these raw materials. A surcharge for the respective raw material is calculated as a supplement to the price of a product if the basic official price of the raw material in question is exceeded.

The metal factor of a product indicates the basic official price (for those raw materials concerned) as of which the surcharges on the price of the product are applied, and with what method of calculation.

An exact explanation of the metal factor can be downloaded at:

www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

To calculate the surcharge (except in the cases of dysprosium and neodym), the official price from the day prior to that on which the order was received or the release order was effected is used.

To calculate the surcharge applicable to dysprosium and neodym ("rare earths"), the corresponding three-month basic average price in the quarter prior to that in which the order was received or the release order was effected is used with a one-month buffer (details on the calculation can be found in the explanation of the metal factor).

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The dimensions are in mm. In Germany, according to the German law on units in measuring technology, data in inches apply only to devices for export.

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Errors excepted and subject to change without prior notice.

[1] The text of the Terms and Conditions of Siemens AG can be downloaded at www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

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