

Automation systems

Drive solutions

Controls

Inverter

Motors

Gearboxes



Engineering Tools

Motors: IE3 three-phase AC motors m550-P, IE1 MD three-phase AC motors

Gearboxes: g500-H helical gearboxes, g500-S shaft-mounted helical gearbox, g500-B bevel gearbox

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 Selected portfolio
 Additional portfolio

Lenze makes many things easy for you.

With our motivated and committed approach, we work together with you to create the best possible solution and set your ideas in motion - whether you are looking to optimise an existing machine or develop a new one. We always strive to make things easy and seek perfection therein. This is anchored in our thinking, in our services and in every detail of our products. It's as easy as that!

1

Developing ideas

Are you looking to build the best machine possible and already have some initial ideas? Then get these down on paper together with us, starting with small innovative details and stretching all the way to completely new machines. Working together, we will develop an intelligent and sustainable concept that is perfectly aligned with your specific requirements.

2

Drafting concepts

We see welcome challenges in your machine tasks, supporting you with our comprehensive expertise and providing valuable impetus for your innovations. We take a holistic view of the individual motion and control functions here and draw up consistent, end-to-end drive and automation solutions for you - keeping everything as easy as possible and as extensive as necessary.

3

Implementing solutions

Our easy formula for satisfied customers is to establish an active partnership with fast decision making processes and an individually tailored offer. We have been using this principle to meet the ever more specialised customer requirements in the field of machine engineering for many years.

4

Manufacturing machines

Functional diversity in perfect harmony: as one of the few full-range providers in the market, we can provide you with precisely those products that you actually need for any machine task – no more and no less. Our L-force product portfolio, a consistent platform for implementing drive and automation tasks, is invaluable in this regard.

5

Ensuring productivity

Productivity, reliability and new performance peaks on a daily basis – these are our key success factors for your machine. After delivery, we offer you cleverly devised service concepts to ensure continued safe operation. The primary focus here is on technical support, based on the excellent application expertise of our highly-skilled and knowledgeable after-sales team.

A matter of principle: the right products for every application.

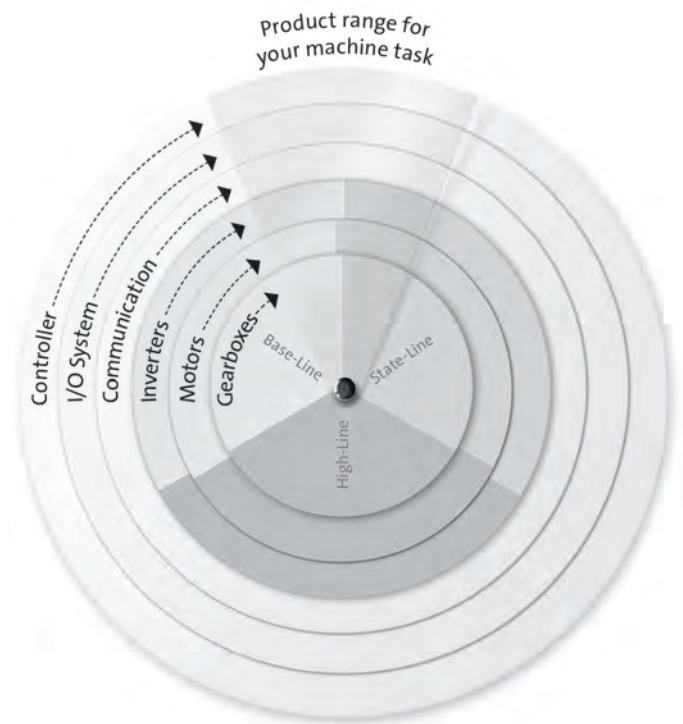
Lenze's extensive L-force product portfolio follows a very simple principle. The functions of our finely scaled products are assigned to the three lines Base-Line, State-Line or High-Line.

But what does this mean for you? It allows you to quickly recognise which products represent the best solution for your own specific requirements.

Powerful products with a major impact:

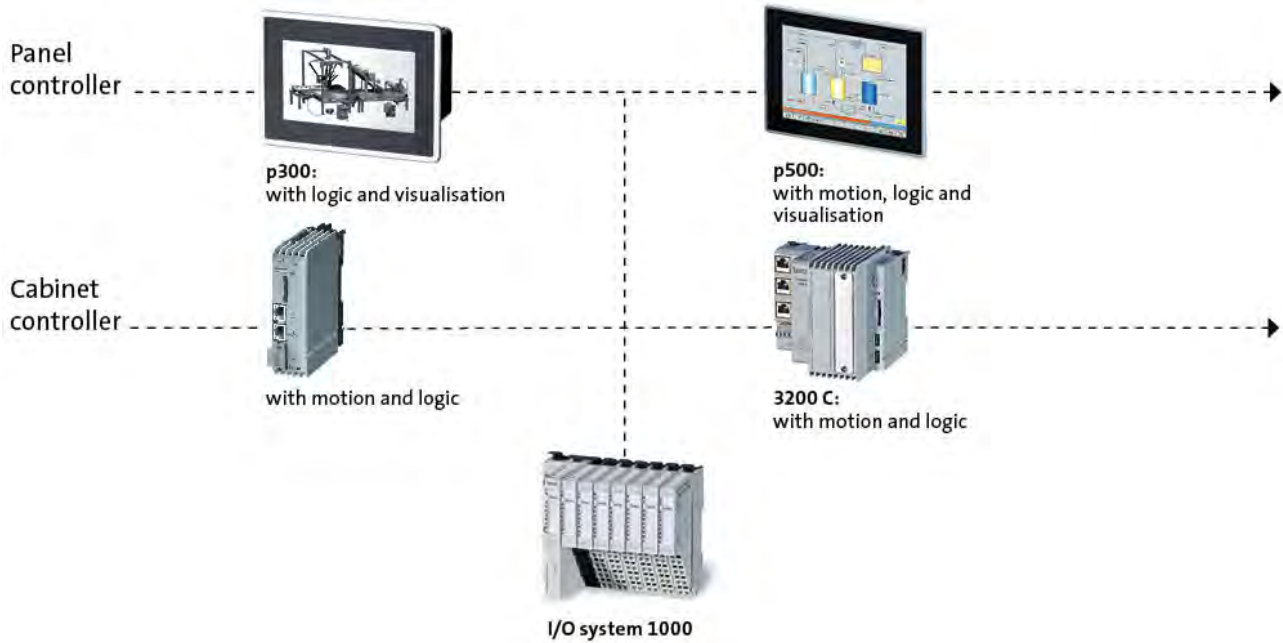
- Easy handling
- High quality and durability
- Reliable technologies in tune with the latest developments

Lenze products undergo the most stringent testing in our own laboratory. This allows us to ensure that you will receive consistently high quality and a long service life. In addition to this, five logistics centres ensure that the Lenze products you select are available for quick delivery anywhere across the globe. It's as easy as that!

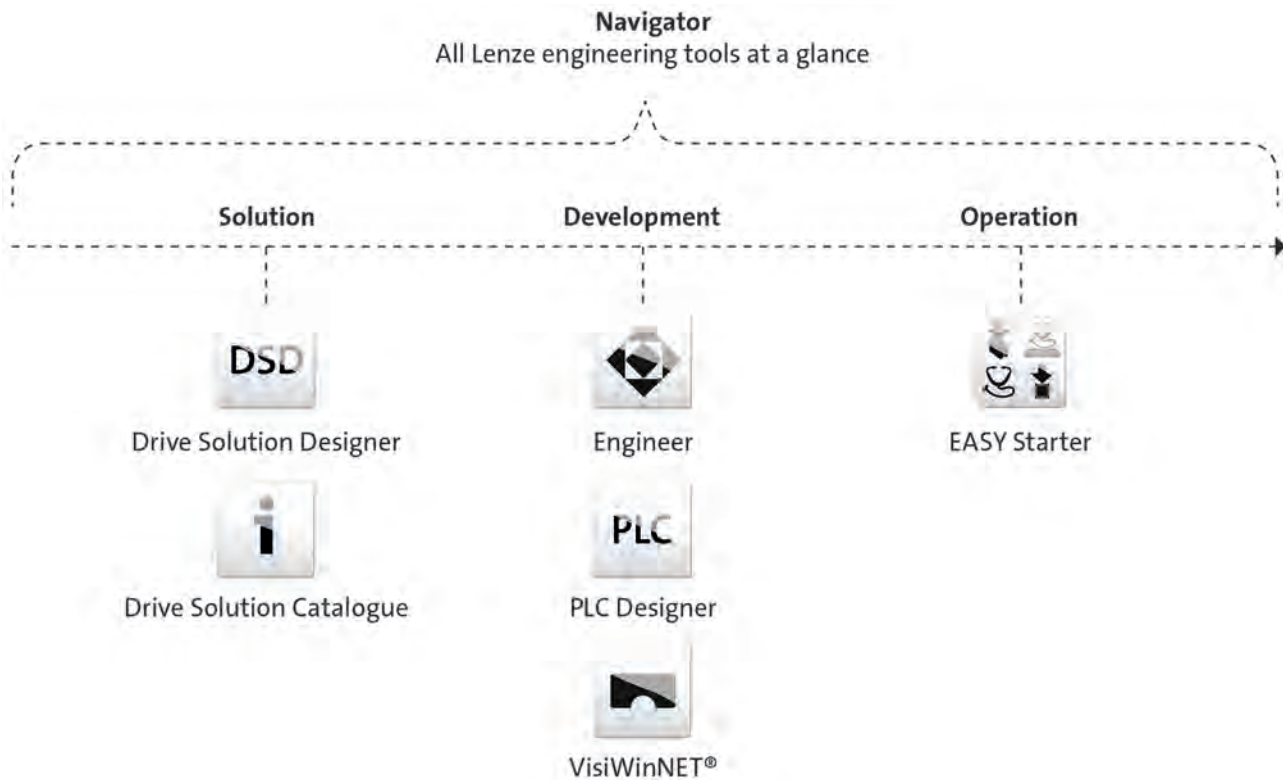


L-force product portfolio

Controls

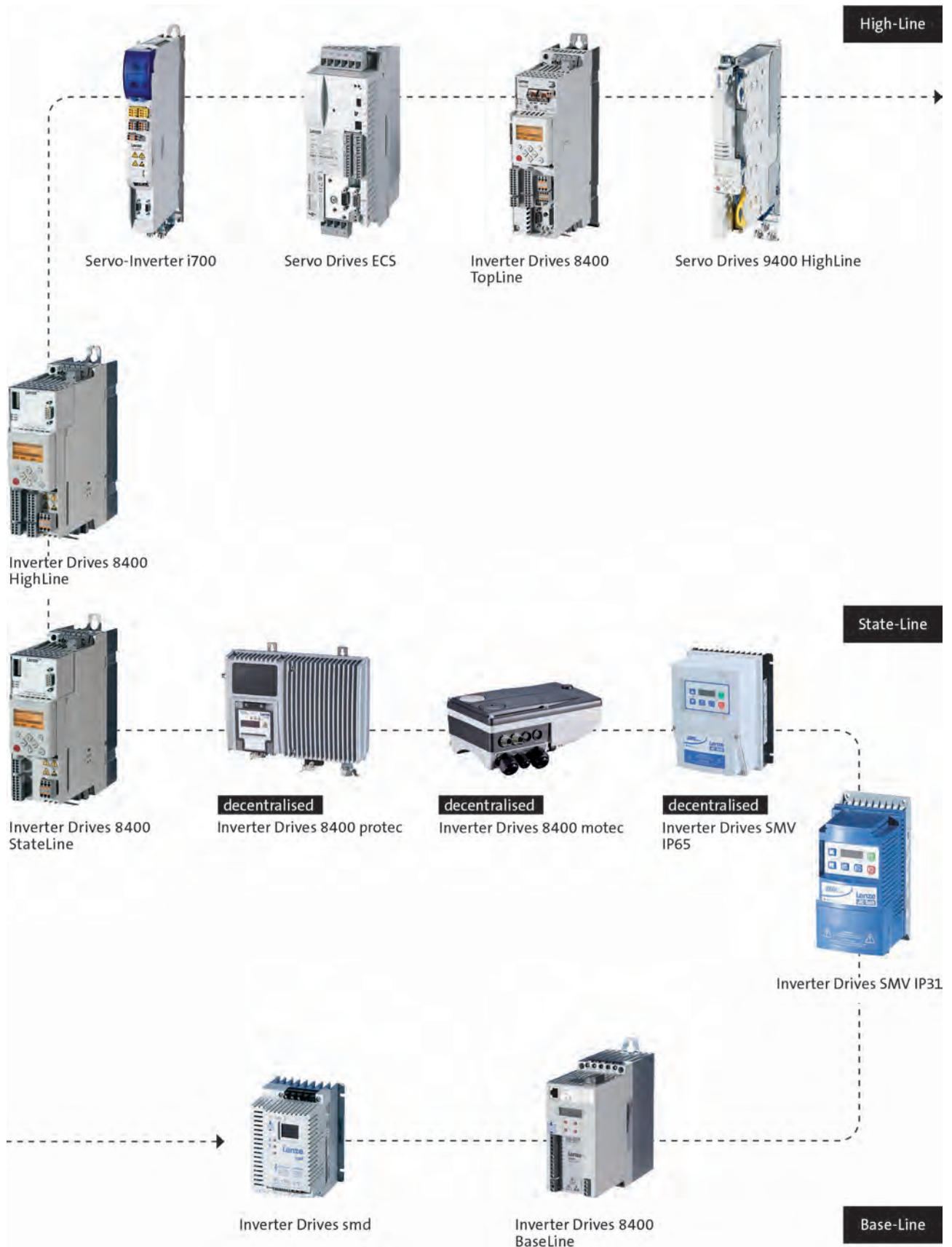


Engineering Tools



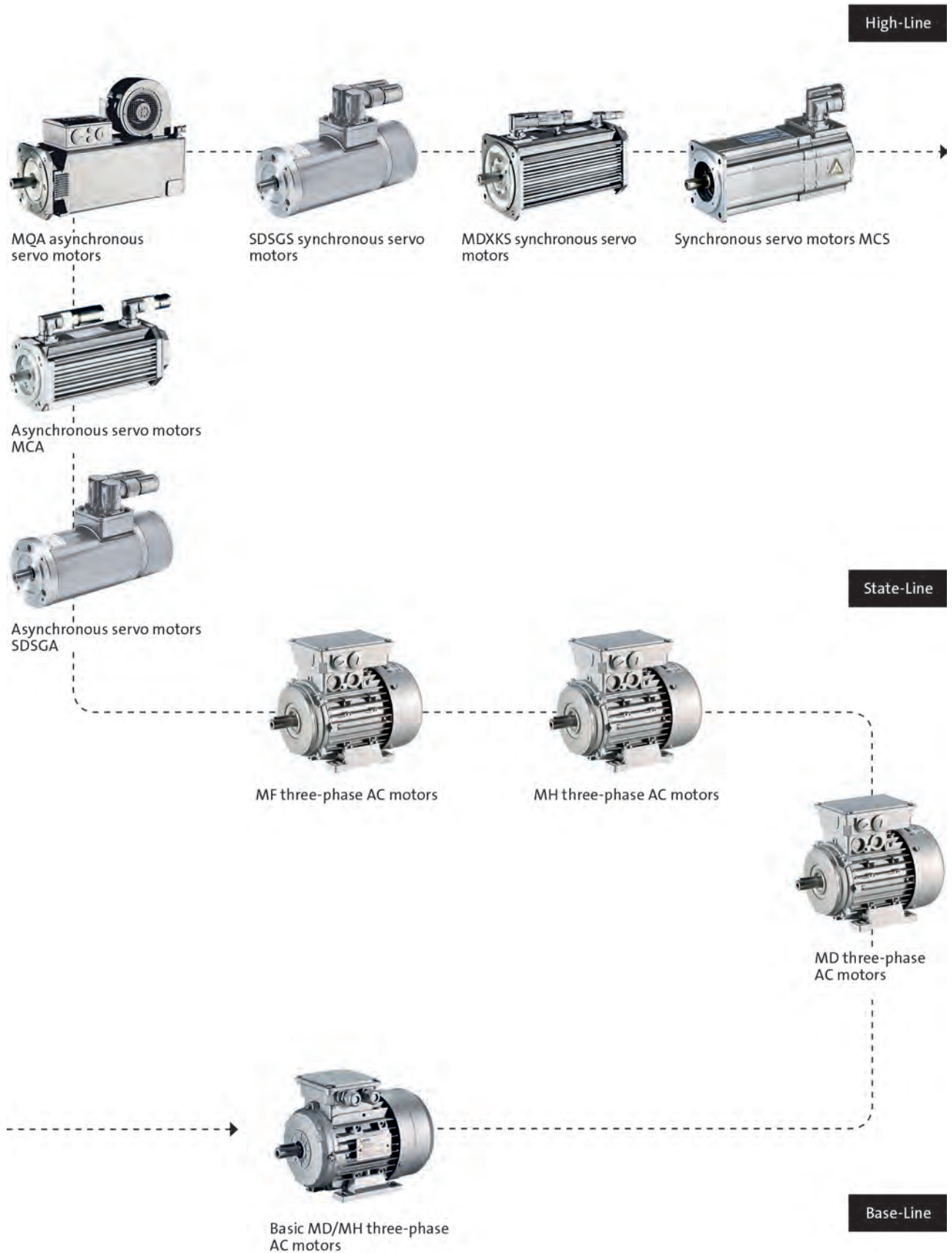
L-force product portfolio

Inverter



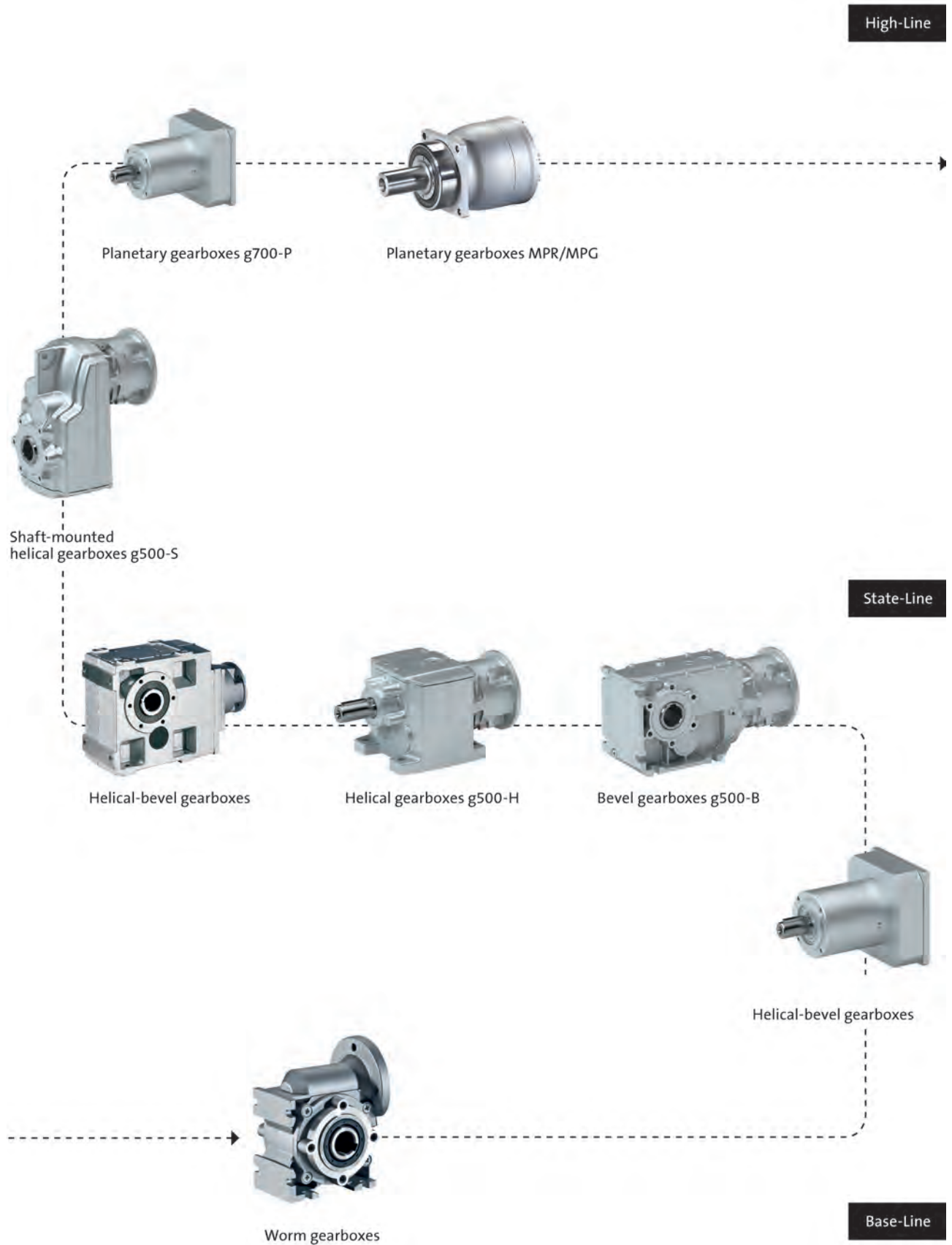
L-force product portfolio

Motors



L-force product portfolio

Gearboxes



Gearboxes

g500-H helical geared motors

Inverter operation

0.06 ... 0.55 kW (efficiency class IE1)

0.75 ... 7.5 kW (efficiency class IE3)



g500-H helical geared motors



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List of abbreviations

| | | |
|------------------------|-----------------------|---------------------------------------|
| α | [rad/s ²] | Max. permissible angular acceleration |
| $\eta_{50\%}$ | [%] | Efficiency |
| $\eta_{75\%}$ | [%] | Efficiency |
| $\eta_{100\%}$ | [%] | Efficiency |
| η_a | | Efficiency |
| $\eta_{c=1}$ | | Efficiency |
| c | | Load capacity |
| $\cos \phi$ | | Power factor |
| du/dt | [kV/ μ s] | Insulation resistance |
| $F_{ax,-}$ | [N] | Min. axial force |
| $F_{ax,+}$ | [N] | Max. axial force |
| $F_{ax,max}$ | [N] | Max. axial force |
| $f_{in,max}$ | [Hz] | Max. input frequency |
| f_{max} | [kHz] | Limit frequency |
| f_{max} | [kHz] | Max. switching frequency |
| f_N | [Hz] | Rated frequency |
| $F_{rad,max}$ | [N] | Max. radial force |
| f_z | | Additional radial force factor |
| H_{max} | [m] | Site altitude |
| I_0 | [A] | Standstill current |
| i | | Ratio |
| $I_{in,max}$ | [A] | Max. input current |
| I_{max} | [A] | Max. current consumption |
| I_{max} | [A] | Max. current |
| I_{max} | [A] | Max. current consumption |
| I_{max} | [A] | Max. current |
| I_{max} | [A] | Max. short-time DC-bus current |
| I_{max} | [A] | Max. DC-bus current |
| I_N | [A] | Rated current |
| $I_{N,\Delta}$ | [A] | Rated current |
| $I_{N,Y}$ | [A] | Rated current |
| J | [kgcm ²] | Moment of inertia |
| J_{MB} | [kgcm ²] | Moment of inertia |
| $KE_{LL\ 150^\circ C}$ | [V/(1000 r/min)] | Voltage constant |
| $Kt_{0\ 150^\circ C}$ | [Nm/A] | Torque constant |
| L_{10} | [h] | Bearing service life |
| L | [mH] | Mutual inductance |
| $L_{1\sigma}$ | [mH] | Stator leakage inductance |
| $L_{2\sigma}$ | [mH] | Rotor leakage inductance |
| L_N | [mH] | Rated inductance |
| m | [kg] | Mass |
| M_2 | [Nm] | Output torque |
| M_{22} | [Nm] | Output torque |
| M_0 | [Nm] | Stall torque |
| $M_{0,max}$ | [Nm] | Max. standstill torque |
| $M_{2,GM}$ | [Nm] | Output torque |
| $M_{2,max}$ | [Nm] | Max. output torque |
| $M_{2,not}$ | [Nm] | Emergency off-torque |

| | | |
|-----------------------|----------------|--|
| M_a | [Nm] | Starting torque |
| $M_{a,1}$ | [Nm] | Starting torque |
| $M_{a,2}$ | [Nm] | Starting torque |
| M_{av} | [Nm] | Average dynamic torque |
| M_b | [Nm] | Stalling torque |
| M_B | [Nm] | Braking torque |
| M_k | [Nm] | Rated torque |
| M_{max} | [Nm] | Max. torque |
| M_N | [Nm] | Rated torque |
| n_2 | [r/min] | Output speed |
| n_{21} | [r/min] | Output speed |
| n_{22} | [r/min] | Output speed |
| $n_{1,max}$ | [r/min] | Max. gearbox input speed |
| $n_{1,max\ 50\%}$ | [r/min] | Max. gearbox input speed |
| n_{eto} | [r/min] | Transition speed |
| n_k | [r/min] | Speed |
| n_{max} | [r/min] | Max. speed |
| n_N | [r/min] | Rated speed |
| P_{max} | [kW] | Max. power input |
| Q_{BW} | [MJ] | Friction energy |
| Q_E | [J] | Maximum switching energy |
| Q_E | [kJ] | Maximum switching energy |
| R_1 | [Ω] | Stator impedance |
| R_2 | [Ω] | Rotor impedance |
| R | [Ω] | Insulation resistance |
| R | [Ω] | Min. insulation resistance |
| $R_{UV\ 150^\circ C}$ | [Ω] | Stator impedance |
| $R_{UV\ 20^\circ C}$ | [Ω] | Stator impedance |
| $S_{h\ddot{u}}$ | [1/h] | Transition operating frequency |
| t_1 | [ms] | Engagement time |
| t_2 | [ms] | Disengagement time |
| t_{11} | [ms] | Delay time |
| t_{12} | [ms] | Rise time |
| T | [$^\circ C$] | Max. surface temperature |
| T | [$^\circ C$] | Min. ambient temperature for transport |
| T | [$^\circ C$] | Max. ambient temperature for transport |
| T | [$^\circ C$] | Max. ambient temperature of bearing |
| T | [$^\circ C$] | Min. ambient storage temperature |
| T | [$^\circ C$] | Ambient temperature |
| T | [$^\circ C$] | Operating temperature |
| T | [$^\circ C$] | Rated temperature |
| t | [h] | Service life |
| T_{opr} | | Ambient operating temperature |
| $T_{opr,max}$ | [$^\circ C$] | Max. ambient operating temperature |
| $T_{opr,min}$ | [$^\circ C$] | Min. ambient operating temperature |
| t_{re} | [s] | Recovery time |
| $t_{\ddot{u}}$ | [ms] | Overexcitation time |
| U_{Δ} | [V] | Voltage range |
| U_{AC} | [V] | Mains voltage range |

g500-H helical geared motors

General information



List of abbreviations

| | | |
|----------------|--------------|--------------------|
| U_{AC} | [V] | Mains voltage |
| $U_{in,max}$ | [V] | Max. input voltage |
| $U_{in,min}$ | [V] | Min. input voltage |
| U_{max} | [V] | Max. input voltage |
| U_{max} | [V] | Max. mains voltage |
| U_{min} | [V] | Min. mains voltage |
| $U_{N,\Delta}$ | [V] | Rated voltage |
| $U_{N,AC}$ | [V] | Rated voltage |
| $U_{N,DC}$ | [V] | Rated voltage |
| $U_{N,Y}$ | [V] | Rated voltage |
| Z_g | | Number of teeth |
| Z_{ro} | [Ω] | Rotor impedance |
| Z_{rs} | [Ω] | Impedance |
| Z_{so} | [Ω] | Stator impedance |
| Z_t | | Number of teeth |

| | |
|----------|---|
| CCC | China Compulsory Certificate |
| CE | Communauté Européenne |
| CEL | China Energy Label |
| CSA | Canadian Standards Association |
| CSAULE | Energy Verified Certificate |
| cURus | Combined certification marks of UL for the USA and Canada |
| DIN | Deutsches Institut für Normung e.V. |
| EAC | Customs union Russia / Belarus / Kazakhstan certificate |
| EMC | Electromagnetic compatibility |
| EN | European standard |
| IM | International Mounting Code |
| IP | International Protection Code |
| NEMA | National Electrical Manufacturers Association |
| UkrSEPRO | Certificate for Ukraine |
| UL | Underwriters Laboratory Listed Product |
| UR | Underwriters Laboratory Recognized Product |
| VDE | Verband deutscher Elektrotechniker (Association of German Electrical Engineers) |

g500-H helical geared motors



General information

Product information

In combination with three-phase AC motors, our helical gearboxes form a compact and powerful drive unit. Numerous options at the input and output end provide for the drive to be exactly adapted to your application.

The robust helical gearboxes feature high permissible radial forces, closely stepped ratios and a low backlash. They are available in 2-pole and 3-pole design with a output torque up to 450 Nm and a ratio of up to $i = 370$.

Three-phase AC motors as a basis for geared motors

In a power range of 0.06 to 7.5 kW, Lenze offers inverter-operated three-phase AC motors for comprehensive tasks. They come in different efficiency classes and can be used for the versions required for open-loop or closed-loop inverter operation.

- IE1 motors up to a power of 0.55 kW
- IE3 motors from 0.75 kW to 7.5 kW

Versions

- Fine-scaling of size / torque - provides for an optimum machine adaptation
- Standardised shaft and flange dimensions for an easy machine integration
- High efficiency

Customer benefit:

- Different efficiency classes for the greatest economic benefit
- Space-saving thanks to compact direct attachment to Lenze gearboxes
- Can be used universally for a wide range of machine tasks due to the market-oriented modular system
- Conventional connectors ensure quick connection, also during servicing

The product name

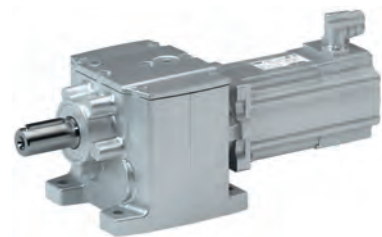
| Gearbox type | Product range | | Design | Rated torque [Nm] | Product |
|-----------------|---------------|---|--------|-------------------|-----------|
| Helical gearbox | g500 | - | H | 45 | g500-H45 |
| | | | | 100 | g500-H100 |
| | | | | 140 | g500-H140 |
| | | | | 210 | g500-H210 |
| | | | | 320 | g500-H320 |
| | | | | 450 | g500-H450 |



g500-H helical gearbox with three-phase AC motor



g500-H helical gearbox with three-phase AC motor and motec



g500-H helical gearbox with servo motor

g500-H helical geared motors

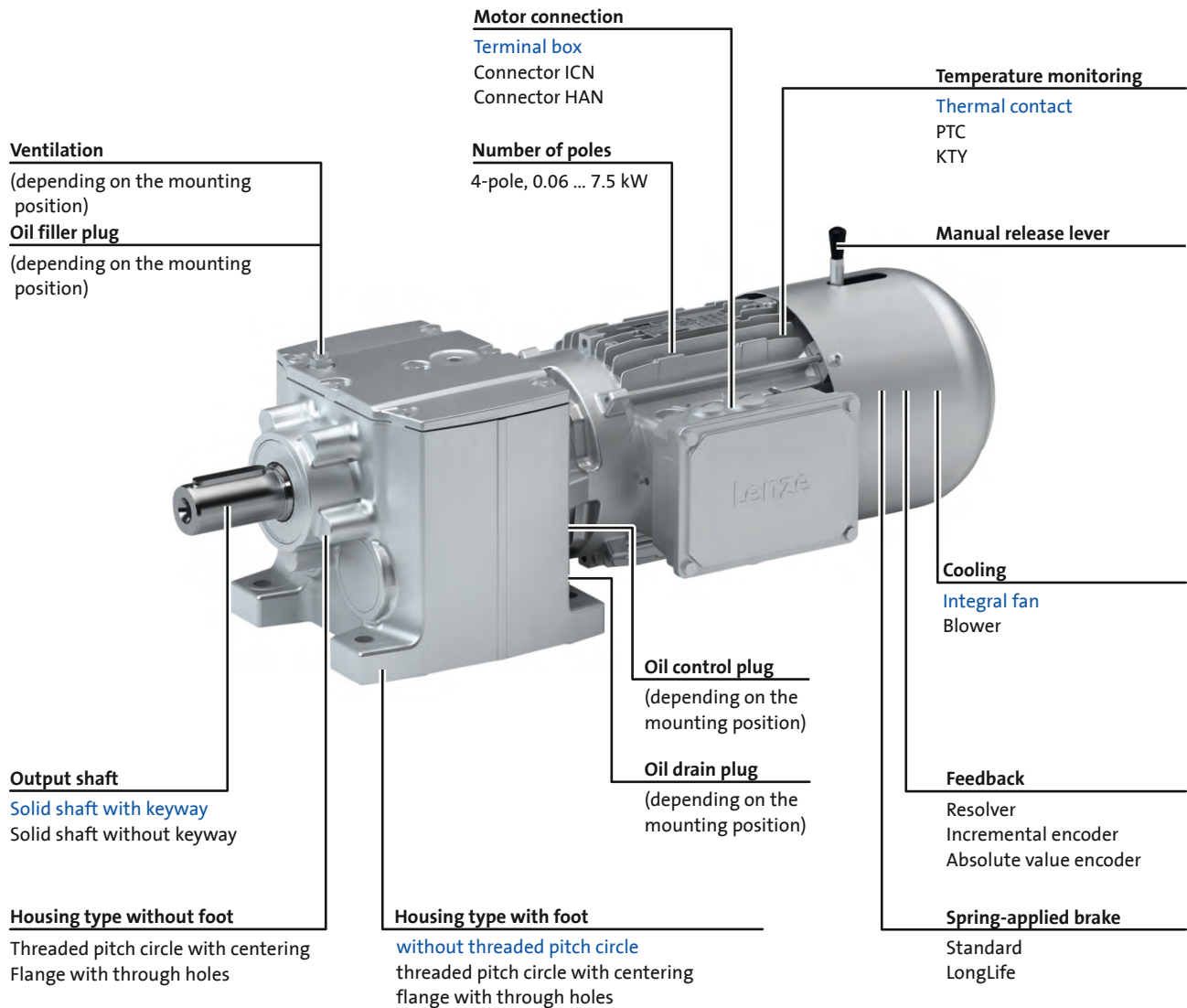
General information



Equipment

Overview

The equipment includes all the options available as standard and all the built-on accessories of the product.



Standard design



10 - Detailed information on housing type.

g500-H helical geared motors

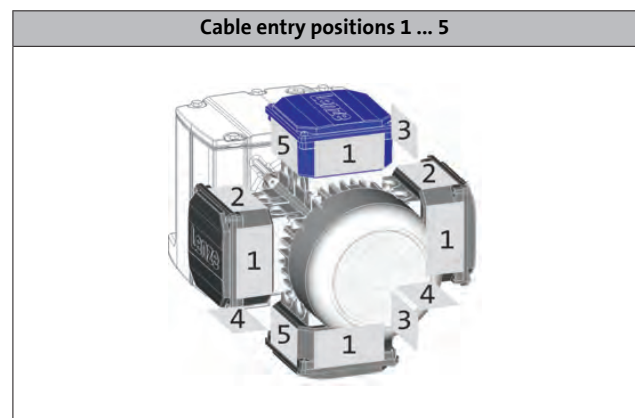
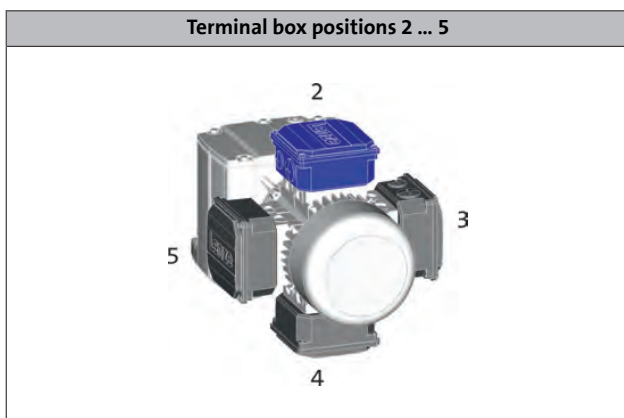
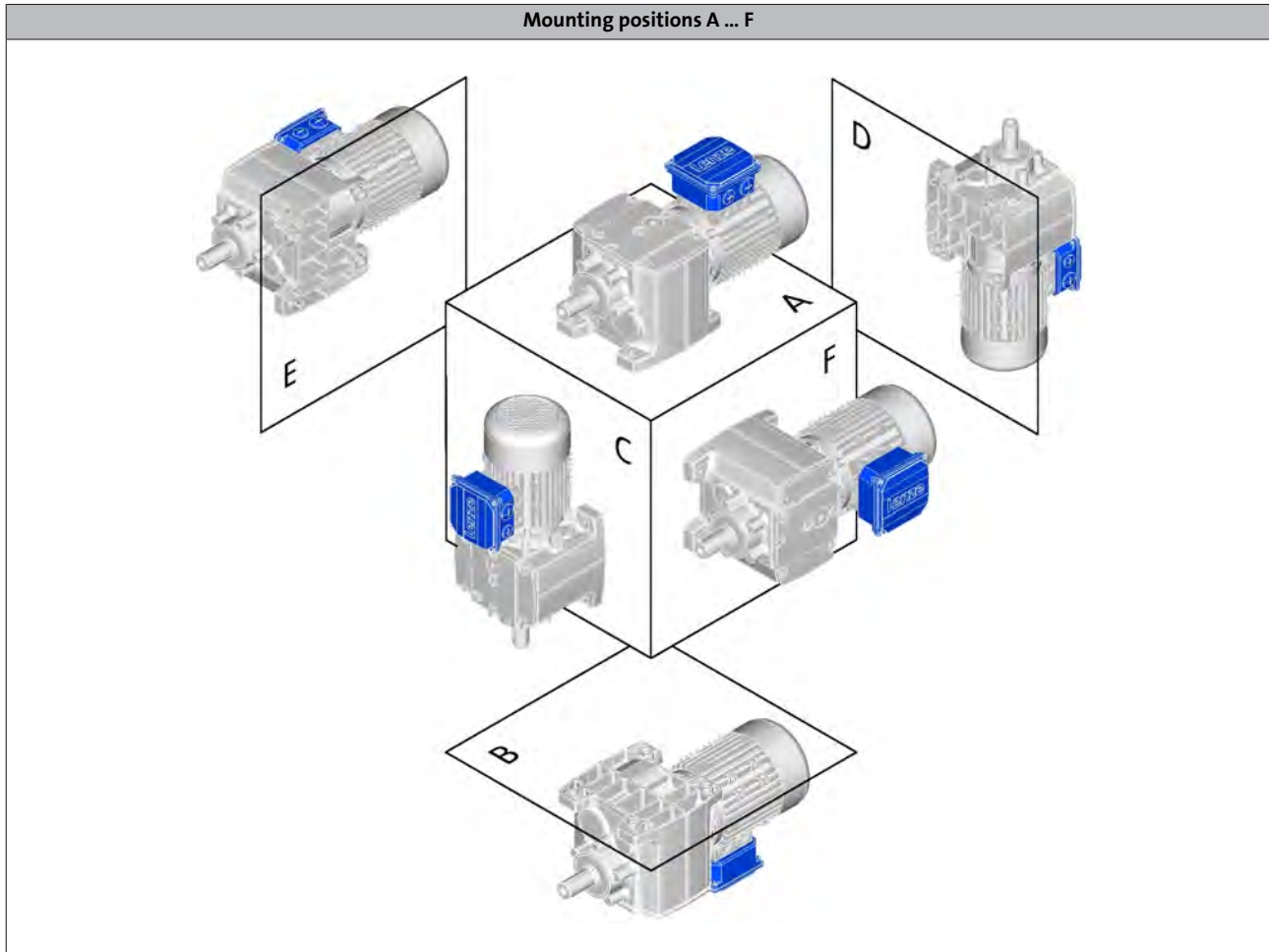
General information



Equipment

Mounting position, position of system components

- ▶ In the following graphics, the terminal box in position 2 is colour-coded. If the mounting position (A ... F) changes, the terminal box positions 2 ... 5 are rotated accordingly.
- ▶ To reduce the number of different versions, the gearboxes can also be ordered with combined mounting positions:
 - g500-H45 in mounting position ABCDEF
 - g500-H100 ... H450 in mounting position AEF



- ▶ For details regarding the cable entry see motor chapter/product extensions.

g500-H helical geared motors

General information



The geared motor kit

| Product | g500-H45 | g500-H100 | g500-H140 | g500-H210 | g500-H320 | g500-H450 |
|-----------------------------|--------------------|-------------|-------------|-----------------|-------------|--------------------|
| Gearbox | g500-H45 | g500-H100 | g500-H140 | g500-H210 | g500-H320 | g500-H450 |
| Motor assignment min. | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 |
| Motor assignment max. | MD□MA□□-071 | m550-P90 | m550-P90 | m550-P100 | m550-P112 | m550-P132 |
| Technical data | | | | | | |
| Output torque max. | 45 Nm | 100 Nm | 140 Nm | 210 Nm | 320 Nm | 450 Nm |
| Drive power min. | 0.06 kW | 0.12 kW | 0.12 kW | 0.12 kW | 0.12 kW | 0.12 kW |
| Drive power max. | 0.55 kW | 1.5 kW | 1.5 kW | 3.0 kW | 4.0 kW | 7.5 kW |
| Dimensions [mm] | | | | | | |
| Solid shaft with featherkey | 14 x 28 20 x 40 | 20 x 40 | 25 x 50 | 25 x 50 | 30 x 60 | 30 x 60 35 x 70 |
| Solid shaft without keyway | 20 x 40 | 20 x 40 | 25 x 50 | 25 x 50 | 30 x 60 | 35 x 70 |
| Output flange | 120/140/160 | 120/140/160 | 120/140/160 | 120/140/160/200 | 160/200 | 160/200/250 |

- Values printed in bold are standard versions.
Values not printed in bold are possible extensions, some for an additional charge.

| Design | |
|----------------------------------|--|
| Conformity | CE EAC |
| Approval | Without CCC/cURus |
| Degree of protection | IP55 IP65/IP66 |
| Surface and corrosion protection | Without Different types of OKS |
| Colour | Not coated Primed/RAL colours |
| Solid shaft | With keyway Without keyway |
| Shaft material | Steel stainless steel |
| Shaft sealing ring material | NBR FKM or FPM (Viton) |
| Shaft bearings | Normal Reinforced |
| Paste for shaft mounting | Without Enclosed |
| Gearbox type | With foot (VBR) With centering (VCR) With foot and centering (VAR) With foot and flange (VAK) With output flange (VCK) With output flange (VCP) |
| Lubricant | Mineral oil Synthetic oil Food-compatible oil |

| Design | |
|-------------------------------|---|
| Mounting position | A/B/C/D/E/F Combined |
| Backlash | 48063 |
| Power connection | Terminal box Plug connectors |
| Spring-applied brake | Without Brake design: Standard/Longlife Brake version: Standard/Overexcited/Cold Brake |
| Feedback | Without Resolver Absolute value encoder Incremental encoder |
| Cooling | Integral fan Blower |
| Temperature monitoring | TKO thermal contact PTC thermistor KTY thermal detector |
| Built-on accessories fan side | 48071 |

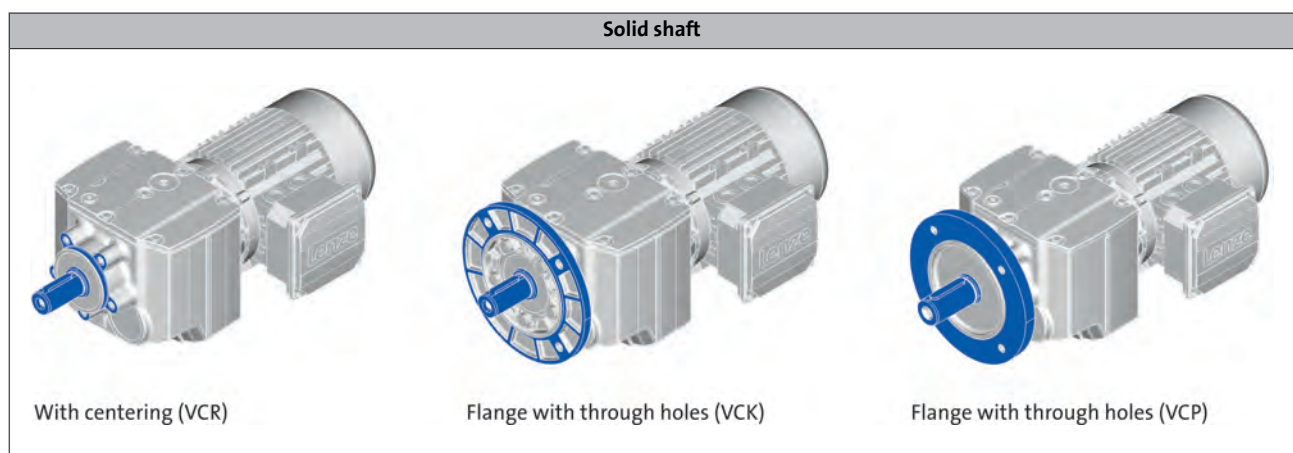
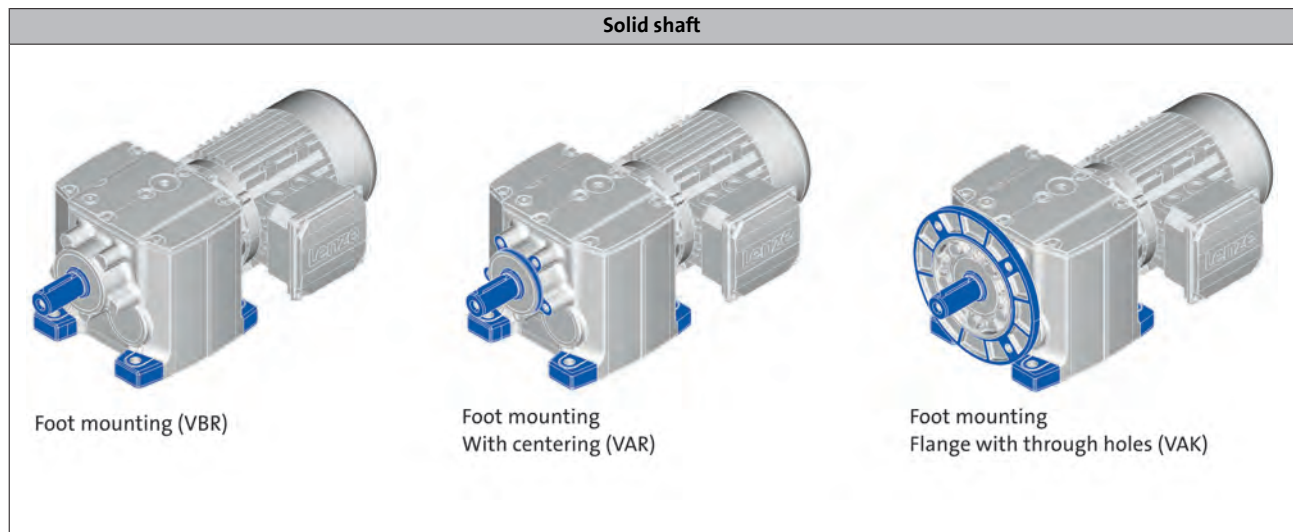
g500-H helical geared motors

General information



The geared motor kit

Gearbox details



- ▶ VCP (reinforced flange) for transmitting particularly high radial and axial forces.



General information about the data provided in this catalogue

The powers, torques and speeds specified in this catalogue are rounded values and are valid under the following conditions:

- Operating time/day = 8 h (100% OT)
- Duty class I for up to 10 switching operations/h
- Mounting positions and designs in this catalogue
- Standard lubricant
- $T_{amb} = 30\text{ °C}$ for gearboxes,
 $T_{amb} = 40\text{ °C}$ for motors (in accordance with EN 60034)
- Site altitude $\leq 1000\text{ m amsl}$
- The selection tables provide the permissible mechanical powers and torques. For notes on the thermal power limit, see chapter drive dimensioning.
- The rated power specified for motors and geared motors applies to operating mode S1 (in accordance with EN 60034).

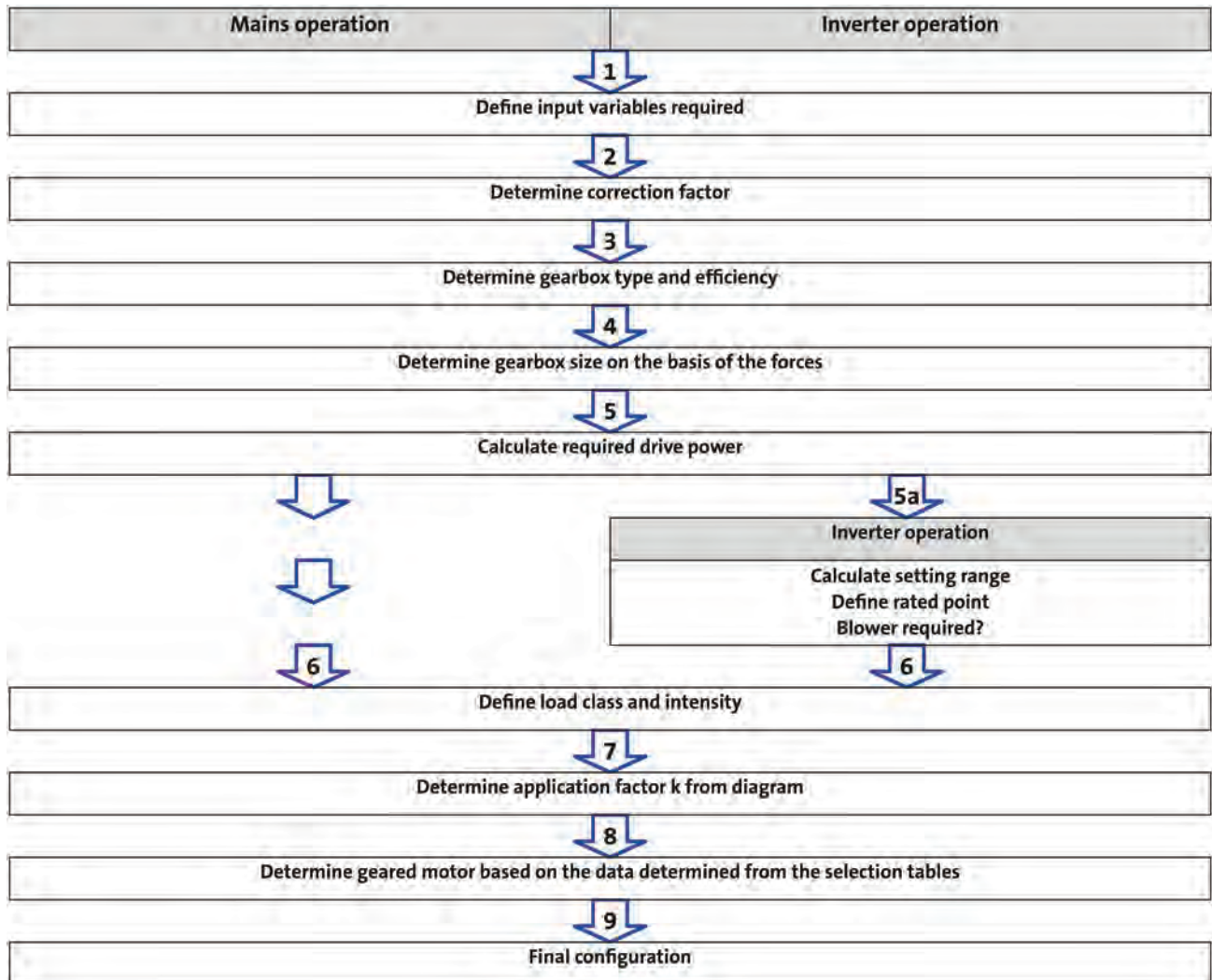
Under different operating conditions, the values obtained may vary from those listed here.

In the case of extreme operating conditions, please consult your Lenze sales office.



Procedure of a configuration process

Workflow



You can use the Drive Solution Designer for precise drive dimensioning.

The Drive Solution Designer helps you to carry out a fast and high-quality drive dimensioning. The software includes well-founded and proven knowledge on drive applications and electro-mechanical drive components.

Please contact your Lenze sales office.



Procedure of a configuration process

1 required input variables

| | | | |
|-----------------------------|-----------------------|---------------|----------------------|
| Load torque | | $M_{L,max} =$ | [Nm] |
| | In inverter operation | $M_{L,min} =$ | [Nm] |
| Load speed | | $n_{L,max} =$ | [r/min] |
| | In inverter operation | $n_{L,min} =$ | [r/min] |
| External moments of inertia | | $J_{ext} =$ | [kgcm ²] |
| Operating time / day | | BD = | [h] |
| Switching operations per h | | $S_h =$ | [1/h] |
| Runtime for $M_{L,max}$ | In inverter operation | | [%] |

2 determine correction factor

| Operating modes and operating time | | | | | | |
|------------------------------------|------------|------|-----------|------------|------------|------------|
| S1 | ED | [%] | 100 | | | |
| | $k_L =$ | | 1.0 | | | |
| S2 | ED | [%] | 10 | 30 | 60 | 90 |
| | $k_L =$ | | 1.4 - 1.5 | 1.15 - 1.2 | 1.07 - 1.1 | 1.0 - 1.05 |
| S3 | ED | [%] | 15 | 25 | 40 | 60 |
| | $k_L =$ | | 1.4 - 1.5 | 1.3 - 1.4 | 1.15 - 1.2 | 1.05 - 1.1 |
| S6 | ED | [%] | 15 | 25 | 40 | 60 |
| | $k_L =$ | | 1.5 - 1.6 | 1.4 - 1.5 | 1.3 - 1.4 | 1.15 - 1.2 |
| Site altitude | | | | | | |
| | H | [m] | ≤ 1000 | ≤ 2000 | ≤ 3000 | ≤ 4000 |
| | $k_H =$ | | 1 | 0.95 | 0.9 | 0.8 |
| Ambient temperature | | | | | | |
| | $T_U =$ | [°C] | ≤ 40 | ≤ 45 | ≤ 50 | ≤ 55 |
| | $k_{TU} =$ | | 1 | 0.95 | 0.9 | 0.8 |

21 - Operating modes



Procedure of a configuration process


3 determine gearbox type and efficiency

| Gearbox type | | | Axial gearboxes | | Right-angle gearboxes |
|--------------------|-------------------|----------|-----------------|---------------|-----------------------|
| | | | Helical gearbox | Shaft-mounted | Bevel gearbox |
| Product | | | g500-H | g500-S | g500-B |
| Gearbox efficiency | 2-stage gearboxes | η_G | 0.96 | 0.96 | 0.96 |
| | 3-stage gearboxes | η_G | 0.95 | 0.95 | 0.95 |

4 determine gearbox size based on the forces on the output

| Transmission element | | Gear wheels | Sprockets | Toothed belt pulleys (depending on the initial stress) | Narrow V-belt (depending on the initial stress) |
|--------------------------------|---------|--|--|---|--|
| Additional radial force factor | $f_z =$ | ≥ 17 teeth = 1.0 < 17 teeth = 1.15 | ≥ 20 teeth = 1.0 < 20 teeth = 1.25 < 13 teeth = 1.4 | With belt tightener = 2.0 - 2.5 Without belt tightener = 2.5 - 3.0 | 1.5 - 2.0 |
| | | Calculation | | Check | |
| Radial force | [N] | $F_{rad} = 2000 \times \frac{M_{L,max} \times f_z}{d_w}$ | | $F_{rad} \leq f_w \times F_{rad,max}$ | |
| Axial force | [N] | | | $F_{ax} \leq F_{rad,max} \times 0.5$ | |

d_w = effective diameter - transmission element

 44 - Permissible radial and axial forces at output

5 calculate drive power

| | | Calculation |
|----------------------|------|--|
| Drive power required | [kW] | $P_1 = \frac{M_{L,max} \times \eta_{L,max}}{9549 \times k_L \times k_H \times k_{Tu} \times \eta_g}$ |

k_L = Correction factor - operational factor
 k_H = correction factor - installation height
 k_{Tu} = correction factor - ambient temperature



Procedure of a configuration process - mains operation

6 calculate intensity and determine duty class

| Load class | Load type | Intensity |
|------------|--|---------------------|
| I | Smooth operation, small or light jolts | $F_I \leq 1.25$ |
| II | Uneven operation, average jolts | $1.25 < F_I \leq 4$ |
| III | Uneven operation, severe jolts and/or alternating load | $F_I > 4$ |

22 - Duty classes

| | Calculation | |
|-----------|---|--|
| Intensity | $F_I = \frac{\frac{J_L + J_M + J_B + J_Z}{i^2}}{J_M + J_B + J_Z}$ | |

i = gearbox ratio

J_L = moment of inertia of the load

J_M = moment of inertia of the motor

J_B = moment of inertia of the brake

J_Z = additional moment of inertia (handwheel, 2nd shaft end ...)

7 determine application factor k from diagram

25 - Load capacity and application factor



Procedure of a configuration process - mains operation

8 determine geared motor based on the data determined from the selection tables

| Selection table | | Check |
|---------------------|---------|-------------------------|
| Drive power P_N | [kW] | $P_1 \leq P_N$ |
| Output speed n_2 | [r/min] | $n_{L,max} \approx n_2$ |
| Output torque M_2 | [Nm] | $M_{L,max} \leq M_2$ |
| Load factor c | | $k \leq c$ |
| Order information | | Example |
| Number of stages | | 2 |
| Ratio i | | 4.000 |
| Product gearbox | | g500-H100 |
| Product motor | | m240-P80/M2 |

25 - Load capacity and application factor

Example: structure of a selection table

50 Hz: $P_N = 0.75$ kW ← Rated power P_N

2-stage gearboxes ← Number of the gear stage

| Mains operation 400 V, 50 Hz | | | i | Product | | |
|---------------------------------|---------------|-----|-------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | | g500 | m240 | |
| 627 | 11 | 5.2 | 4.600 | -H100 | -P80/M2 | |
| 558 | 12 | 4.9 | 5.167 | -H100 | -P80/M2 | |

↑
Output speed n_2

↑
Output torque M_2

↑
Load capacity c

↑
Ratio i

↑
Product
Gearbox

↑
Product
Motor



Procedure of a configuration process - inverter operation

5a calculate range of adjustment and determine rated point

| | | Calculation | |
|----------------|-------------------------|-----------------------------------|----------------------------|
| Setting range | | $V = \frac{n_{L,max}}{n_{L,min}}$ | |
| Setting range | Motor with integral fan | ≤ 2.5 (20 ... 50 Hz) | ≤ 4.35 (20 ... 87 Hz) |
| | Motor with blower | ≤ 10 (5 ... 50 Hz) | ≤ 17.4 (5 ... 87 Hz) |
| Rated point at | | 50 Hz | 87 Hz |

6 calculate intensity and determine duty class

| | | Calculation | |
|------------|--|-------------------------------------|--|
| Intensity | | $M_I = \frac{M_{L,max}}{M_{L,min}}$ | For alternating load, select load class III! |
| Load class | Load type | Intensity | |
| I | Smooth operation, small or light jolts | $M_I \leq 1.5$ | |
| II | Uneven operation, average jolts | $1.5 < M_I \leq 2$ | |
| III | Uneven operation, severe jolts and/or alternating load | $2 < M_I \leq 2.5$ | |

22 - Duty classes

7 determine application factor k from diagram

25 - Load capacity and application factor



Procedure of a configuration process - inverter operation

8 determine geared motor based on the data determined from the selection tables

| Selection table | | | Check | |
|----------------------------|--|---------|----------------------------|--|
| Drive power P_N | | [kW] | $P_1 \leq P_N$ | |
| Max. output speed n_2 | | [r/min] | $n_{L,max} \approx n_2$ | |
| Min. output speed n_{21} | Self-ventilated | [r/min] | $n_{L,min} \approx n_{21}$ | Setting range 2.5 (50 Hz) Setting range ≤ 4.35 (87 Hz) |
| Min. output speed n_{22} | Forced-ventilated | [r/min] | $n_{L,min} \approx n_{22}$ | Setting range ≤ 10 (50 Hz) Setting range ≤ 17.4 (87 Hz) |
| | Self-ventilated (Reduced output torque) | [r/min] | $n_{L,min} \approx n_{22}$ | |
| Output torque M_2 | | [Nm] | $M_{L,max} \leq M_2$ | |
| Load factor c | | | $k \leq c$ | |
| Order information | | | Example | |
| Number of stages | | | 2 | |
| Ratio i | | | 3.267 | |
| Product gearbox | | | g500-H140 | |
| Product motor | | | m550-P80/M4 | |

25 - Load capacity and application factor

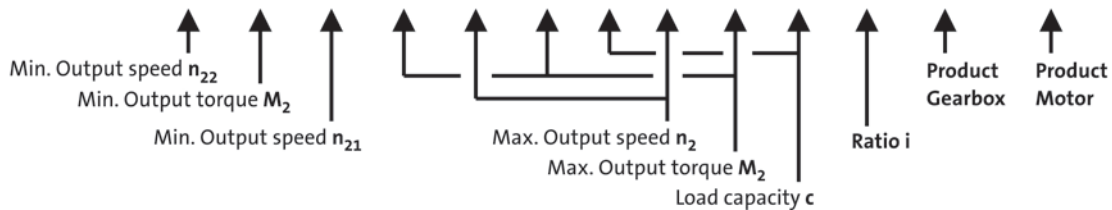
27 - Torque derating at low motor frequencies

Example: structure of a selection table

50 Hz: $P_N = 0.75$ kW
87 Hz: $P_N = 1.35$ kW ← Rated power P_N

2-stage gearboxes ← Number of the gear stage

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|-------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m550 | |
| | | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 444 | 16 | 4.3 | 44 | 12 | 184 | 16 | 444 | 16 | 4.3 | 784 | 16 | 3.5 | 3.267 | -H140 | -P80/M4 | |
| 432 | 16 | 3.9 | 43 | 12 | 179 | 16 | 432 | 16 | 3.9 | 763 | 16 | 3.2 | 3.354 | -H100 | -P80/M4 | |





Procedure of a configuration process

9 Final configuration

| More information regarding the final configuration can be found under: | |
|---|---|
| <ul style="list-style-type: none"> - The modular geared motor system - Product extensions for gearboxes, motors | |
| Check operating conditions | <ul style="list-style-type: none"> - Operating temperature (observe lubricant, material of shaft sealing ring) - Degree of protection - Supply voltage - Surface protection required - Approvals - Conformity |
| Check and define connection dimensions | <ul style="list-style-type: none"> - Driven shaft - Foot, output flange, centering with threaded pitch circle |
| Determine mounting position and position of the system blocks | <ul style="list-style-type: none"> - Mounting position A/B/C/D/E/F or combined - Terminal box position, shaft position, flange position |
| Select product extensions at the gearbox (differing depending on the gearbox type) | <ul style="list-style-type: none"> - Torque plate at the base, threaded pitch circle, rubber buffer - Hollow shaft cover, shrink disc cover |
| Select product extensions at the motor | <ul style="list-style-type: none"> - Connection type (terminal box, connector) - Brake - Blower (inverter operation) - Feedback - Temperature monitoring |

g500-H helical geared motors

Project planning



Standards

Approvals

| | |
|--------|--|
| CCC | China Compulsory Certification documents the compliance with the legal product safety requirements of the PR of China - GB standards. |
| cCSAus | CSA certificate, tested according to US and Canada standards |
| CE | Communauté Européenne documents the declaration of the manufacturer that EC Directives are complied with. |
| CEL | China Energy Label documents the compliance with the legal energy efficiency requirements for motors, tested according to PR of China standards |
| CSA | Canadian Standards Association CSA - certificate, tested according to Canada standards |
| CSAULE | Energy Verified Certificate Determining the energy efficiency according to CSA C390 for products within the scope of energy efficiency requirements in the USA and Canada |
| cULus | UL certificate for products, tested according to US and Canada standards |
| cURus | UL certificate for components, tested according to US and Canada standards |
| EAC | Certificate of Russia-Belarus-Kazakhstan Customs Union documents the declaration of the manufacturer that the specifications for the Eurasian conformity (EAC) required for placing electronic and electromechanical products on the market of the entire territory of the Customs Union (Russia, Belarus, Kazakhstan) are complied with. |
| UL | Underwriters Laboratory Listed Product |
| UR | Underwriters Laboratory Recognized Product UL certificate for components, tested according to US standards |



Standards

Operating modes

Operating modes S1 ... S10 as specified by EN 60034-1 describe the basic stress of an electrical machine.

In continuous operation a motor reaches its permissible temperature limit if it outputs the rated power dimensioned for continuous operation. However, if the motor is only subjected to load for a short time, the power output by the motor may be greater without the motor reaching its permissible temperature limit. This behaviour is referred to as overload capacity.

Depending on the duration of the load and the resulting temperature rise, the required motor can be selected reduced by the overload capacity.

The most important operating modes

| Continuous operation S1 | Short-time operation S2 |
|---|--|
| | |
| <p>Operation with a constant load until the motor reaches the thermal steady state. The motor may be actuated continuously with its rated power.</p> | <p>Operation with constant load; however, the motor does not reach the thermal steady state. During the following standstill, the motor winding cools down to the ambient temperature again. The increase in power depends on the load duration.</p> |
| Intermittent operation S3 | Non-intermittent periodic operation S6 |
| | |
| <p>Sequence of identical duty cycles comprising operation with a constant load and subsequent standstill. Start-up and braking processes do not have an impact on the winding temperature. The steady-state is not reached. The guide values apply to a cycle duration of 10 minutes. The power increase depends on the cycle duration and on the load period/downtime ratio.</p> | <p>Sequence of identical duty cycles comprising operation with a constant load and subsequent no-load operation. The motor cools down during the no-load phase. Start-up and braking processes do not have an impact on the winding temperature. The steady-state is not reached. The guide values apply to a cycle duration of 10 minutes. The power increase depends on the cycle duration and on the load period/idle time ratio.</p> |

g500-H helical geared motors

Project planning



Standards

Duty classes

Depending on the load type, the duty classes or impacts are divided as follows:

| Duty class | Load type |
|------------|--|
| I | Smooth operation, small or light jolts |
| II | Uneven operation, average jolts |
| III | Uneven operation, severe jolts and/or alternating load |

In order to support you in classifying your driven machine regarding the right duty class, the following shows sample applications with the corresponding duty class. Depending on, for instance, the operating frequency, driven machines can also have a higher impact. In case of uncertainties, please contact your Lenze sales office.

| Drive | Duty class |
|-----------------------|------------|
| Construction machines | II |
| Chemical industry | II |
| Conveyors | II |
| Fans | II |
| Plastics industry | II |
| Wood working | III |
| Hoists | III |
| Metal working | III |
| Food | II |
| Paper industry | III |
| Stones | III |
| Textile industry | II |



Standards

Degrees of protection

The degree of protection indicates the suitability of a motor for specific ambient conditions with regard to humidity as well as the protection against contact and the ingress of foreign particles. The degrees of protection are classified by EN 60529.

The first code number after the code letters IP indicates the protection against the ingress of foreign particles and dust.
The second code number refers to the protection against the ingress of humidity.

| Code number | Degree of protection | Code number | Degree of protection |
|-------------|---|-------------|---|
| 0 | No protection | 0 | No protection |
| 1 | Protection against the ingress of foreign particles $d > 50$ mm. No protection in the case of deliberate access | 1 | Protection against vertically dripping water (dripping water). |
| 2 | Protection against medium-sized foreign particles, $d > 12$ mm, keeping away fingers or similar | 2 | Protection against diagonally falling water (dripping water), 15° compared to normal service position. |
| 3 | Protection against small foreign particles $d > 2.5$ mm. Keeping away tools, wires and the like | 3 | Protection against spraying water, up to 60° to the vertical |
| 4 | Protection against granular foreign particles, $d > 1$ mm, keeping away tools, wires and the like | 4 | Protection against spraying water from all directions. |
| 5 | Protection against dust deposits (dust-protected), complete protection against contact. | 5 | Protection against water jets from all directions. |
| 6 | Protection against the ingress of dust (dust-proof), complete protection against contact. | 6 | Protection against choppy seas or heavy water jets (flood protection). |

g500-H helical geared motors



Project planning

Thermal power limit

The thermal power limit, defined by the heat balance, limits the permissible gearbox continuous power. It may be less than the mechanical power ratings listed in the selection tables.

The thermal power limit is affected by:

- the churning losses in the lubricant. These are determined by the mounting position and the circumferential speed of the gears;
- the load and the speed
- the ambient conditions: temperature, air circulation, input or dissipation via shafts and the foundation

If the following input speeds n_1 are exceeded, please contact Lenze:

| Motor frame size | Mounting position A, B, E, F | Mounting position C, D |
|------------------|------------------------------|------------------------|
| 063 ... 100 | 4000 r/min | 3000 r/min |
| 112 ... 132 | 3000 r/min | 1500 r/min |

- ▶ For a short period of time up to 5 min, 30 % higher speeds are permissible

Possible ways of extending the application area

- synthetic lubricant (option)
- shaft sealing rings made from FP material/Viton (option)
- reduction in lubricant quantity
- cooling of the geared motor by means of air convection on the machine/system



Load capacity and application factor

Load capacity c of gearboxes

Rated value for the load capacity of Lenze geared motors.

- c is the ratio of the permissible rated torque of the gearbox to the rated torque supplied by the drive component (e.g. the built-in Lenze motor).
- The value of c must always be greater than the value of the application factor k calculated for the application.

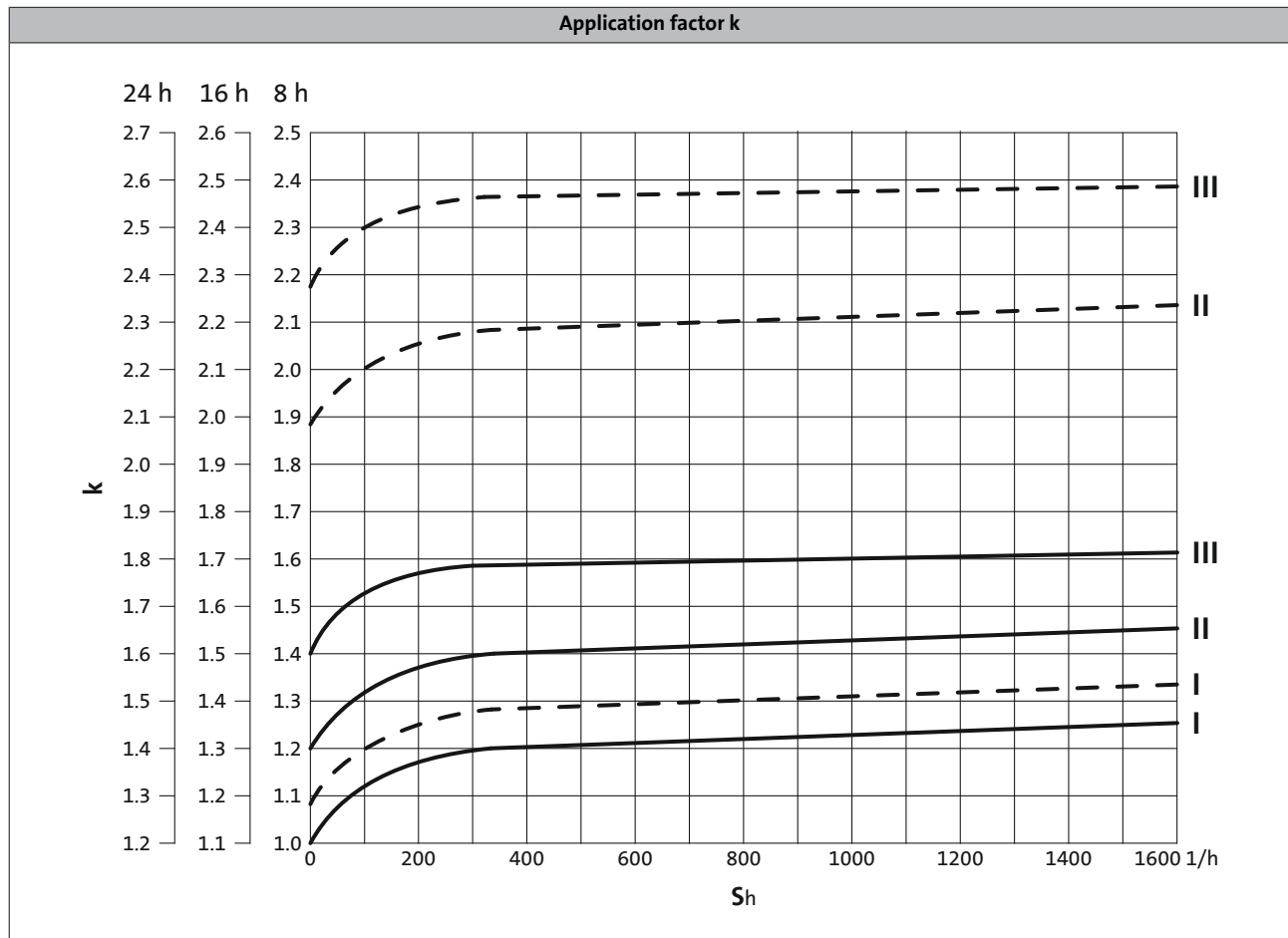
Required: $c \geq k$

Application factor k (according to DIN 3990)

Takes into account the influence of temporally variable loads which are actually present during the anticipated operating time of gearboxes and geared motors.

k is determined by:

- the type of load
- the load intensity
- temporal influences



- ▶ S_h = switchings/h
- ▶ — Three-phase AC motors MD□MA
- ▶ - - - Three-phase AC motors m240/m550



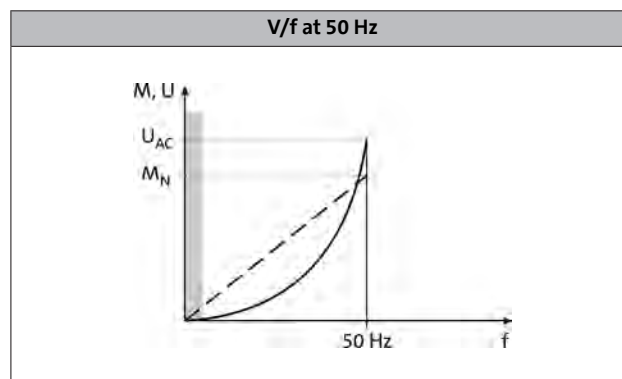
Operational performance of three-phase AC geared motors

Operation on the inverter

An inverter enables energy-efficient operation of a system in virtually all application cases. The various operating modes, which can be created by making just a few simple settings, facilitate this. The following characteristics and corresponding specifications listed on the following pages can be used to calculate the optimum operating mode during the project planning phase.

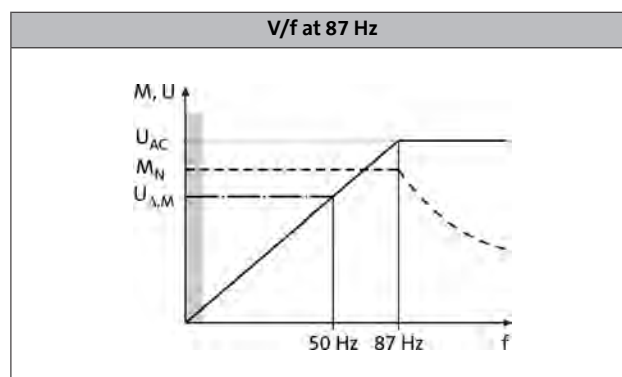
Standard setting

In its initial state when delivered, the inverter is set up for basic operation with a three-phase AC motor with vector control. When operated in this mode, the rated torque of the motor is available in a setting range up to 50 Hz.



Extended setting range up to 87 Hz

If the V/f reference point on the inverter is set to 87 Hz, the rated torque can be used across an extended setting range. Here, a 230/400V motor is for example used and operated in a delta layout with a 400V inverter. The setting range is then increased by 40 %. The inverter must be dimensioned for a rated motor current of 230 V.

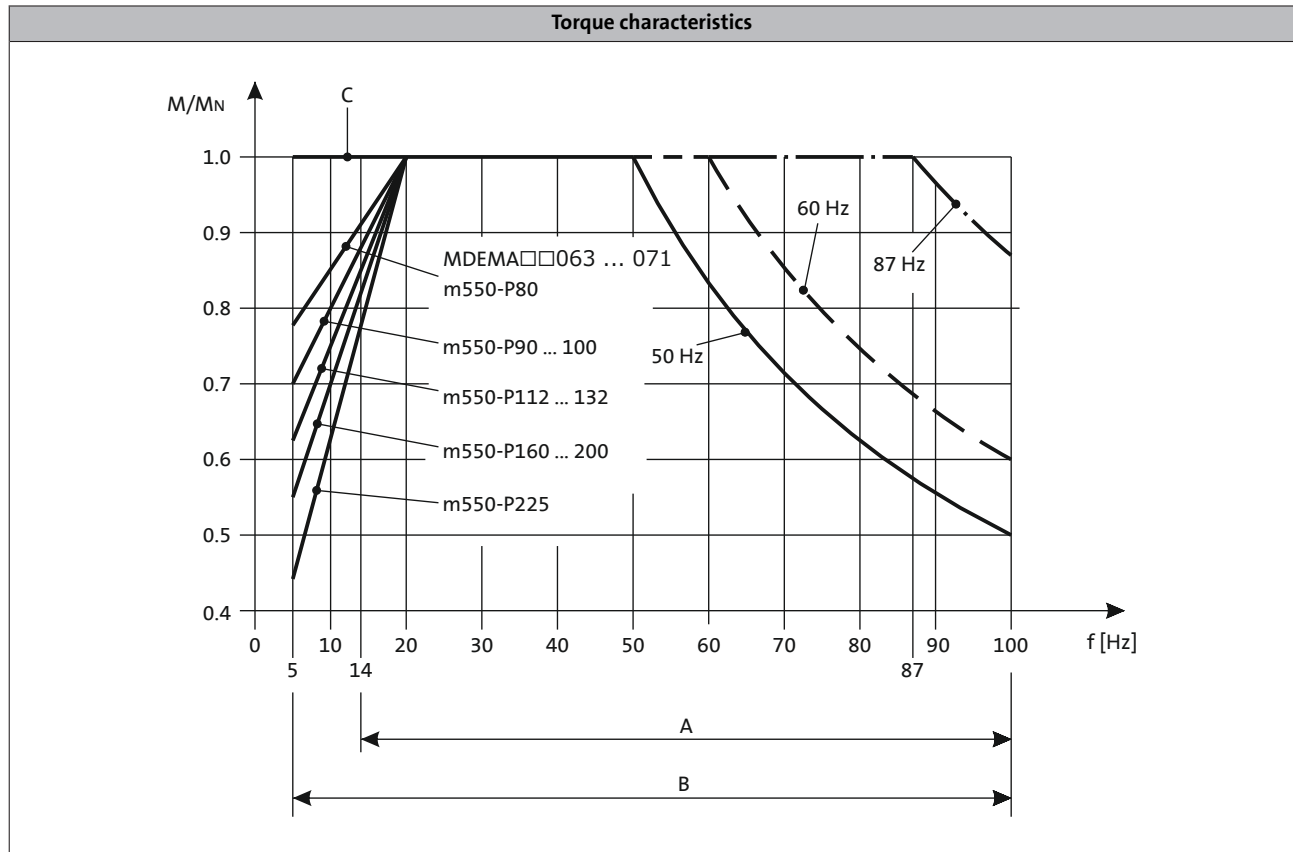




Operational performance of three-phase AC geared motors

Torque derating at low motor frequencies

The diagram shows the motor frame size-dependent torque reduction for self-ventilated motors, taking the thermal behaviour during actuation of the inverter into consideration.



A = Operation with integral fan and brake
 B = Operation with integral fan and brake control "Holding current reduction"

C = operation with blower

g500-H helical geared motors



Project planning

Combinatorics of geared motors

The following tables contain the most important data of the gearbox with the motors that can be attached for an approximate dimensioning process of a geared motor. Detailed information can be found in the following chapters.

The data given in the tables apply to

- input speed $n_1 = 1400$ r/min
- application factor $c = 1.0$

In order to calculate the exact ratio, the number of teeth z_g (driven) can be divided by the number of teeth z_t (driving). These are cancelled values.

The data for the max. radial force refer to

- foot mounting (VBR)
- normal storage
- application factor $c = 1.3$

For further designs see the "Technical data" chapter.

- The rated torque can be gathered from the last digits of the product name e.g. g500-H45 (45 Nm).

g500-H45, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad, max}}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 541 | 18 | 1.05 | 2.597 | 896 | 345 | 470 | 41 | 0.18 | 0.55 |
| 412 | 19 | 0.84 | 3.413 | 256 | 75 | 620 | 39 | 0.18 | 0.55 |
| 322 | 21 | 0.73 | 4.368 | 1376 | 315 | 670 | 39 | 0.18 | 0.55 |
| 265 | 27 | 0.77 | 5.312 | 1344 | 253 | 700 | 29 | 0.18 | 0.55 |
| 236 | 29 | 0.74 | 5.965 | 686 | 115 | 720 | 28 | 0.18 | 0.55 |
| 201 | 30 | 0.65 | 6.982 | 384 | 55 | 760 | 28 | 0.12 | 0.55 |
| 179 | 32 | 0.62 | 7.840 | 196 | 25 | 780 | 27 | 0.12 | 0.55 |
| 157 | 33 | 0.56 | 8.935 | 688 | 77 | 810 | 27 | 0.12 | 0.55 |
| 140 | 35 | 0.53 | 10.033 | 301 | 30 | 840 | 27 | 0.09 | 0.55 |
| 123 | 35 | 0.46 | 11.429 | 80 | 7 | 870 | 27 | 0.09 | 0.55 |
| 110 | 38 | 0.45 | 12.833 | 77 | 6 | 900 | 26 | 0.09 | 0.55 |
| 95.0 | 39 | 0.40 | 14.836 | 816 | 55 | 950 | 26 | 0.09 | 0.37 |
| 84.6 | 41 | 0.37 | 16.660 | 833 | 50 | 1000 | 26 | 0.09 | 0.37 |
| 74.2 | 42 | 0.34 | 19.013 | 1464 | 77 | 1050 | 26 | 0.06 | 0.37 |
| 66.0 | 44 | 0.31 | 21.350 | 427 | 20 | 1090 | 26 | 0.06 | 0.37 |
| 55.7 | 45 | 0.27 | 24.595 | 2976 | 121 | 1170 | 26 | 0.06 | 0.25 |
| 49.6 | 45 | 0.24 | 27.618 | 1519 | 55 | 1250 | 25 | 0.06 | 0.25 |
| 42.8 | 45 | 0.21 | 32.000 | 32 | 1 | 1340 | 26 | 0.06 | 0.25 |
| 38.0 | 45 | 0.18 | 35.933 | 539 | 15 | 1400 | 25 | 0.06 | 0.18 |
| 32.9 | 45 | 0.16 | 41.455 | 456 | 11 | 1450 | 26 | 0.06 | 0.18 |
| 30.6 | 45 | 0.15 | 46.550 | 931 | 20 | 1470 | 25 | 0.06 | 0.12 |
| 26.9 | 45 | 0.13 | 52.909 | 582 | 11 | 1500 | 26 | 0.06 | 0.12 |
| 24.0 | 45 | 0.12 | 59.413 | 4753 | 80 | 1500 | 25 | 0.06 | 0.12 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H100, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | z_g | z_t | $F_{\text{rad, max}}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 430 | 62 | 2.88 | 3.354 | 161 | 48 | 1180 | 29 | 0.25 | 1.50 |
| 314 | 72 | 2.44 | 4.600 | 23 | 5 | 1360 | 28 | 0.25 | 1.50 |
| 279 | 75 | 2.26 | 5.167 | 31 | 6 | 1410 | 25 | 0.25 | 1.50 |
| 245 | 81 | 2.14 | 5.887 | 989 | 168 | 1490 | 27 | 0.25 | 1.50 |
| 224 | 83 | 2.01 | 6.440 | 161 | 25 | 1560 | 27 | 0.18 | 1.50 |
| 204 | 86 | 1.89 | 7.086 | 248 | 35 | 1620 | 24 | 0.25 | 1.50 |
| 176 | 92 | 1.74 | 8.214 | 115 | 14 | 1720 | 27 | 0.18 | 1.50 |
| 159 | 96 | 1.65 | 9.068 | 1333 | 147 | 1780 | 24 | 0.25 | 1.50 |
| 143 | 99 | 1.53 | 10.063 | 161 | 16 | 1880 | 27 | 0.25 | 1.50 |
| 127 | 100 | 1.37 | 11.360 | 284 | 25 | 1980 | 22 | 0.18 | 1.50 |
| 114 | 100 | 1.23 | 12.653 | 620 | 49 | 2050 | 24 | 0.18 | 1.50 |
| 99.7 | 100 | 1.08 | 14.490 | 710 | 49 | 2160 | 22 | 0.18 | 1.10 |
| 93.2 | 100 | 1.01 | 15.500 | 31 | 2 | 2240 | 23 | 0.25 | 1.10 |
| 81.7 | 100 | 0.88 | 17.750 | 71 | 4 | 2370 | 22 | 0.25 | 0.75 |
| 74.4 | 100 | 0.80 | 19.486 | 682 | 35 | 2460 | 23 | 0.12 | 0.75 |
| 65.0 | 100 | 0.70 | 22.314 | 781 | 35 | 2560 | 22 | 0.12 | 0.75 |
| 57.8 | 100 | 0.62 | 25.095 | 527 | 21 | 2590 | 23 | 0.12 | 0.75 |
| 48.9 | 100 | 0.53 | 28.738 | 1207 | 42 | 2620 | 22 | 0.12 | 0.55 |
| 44.3 | 100 | 0.48 | 31.805 | 2449 | 77 | 2640 | 22 | 0.12 | 0.37 |
| 38.7 | 100 | 0.42 | 36.422 | 5609 | 154 | 2650 | 21 | 0.12 | 0.37 |
| 35.4 | 100 | 0.38 | 39.857 | 279 | 7 | 2650 | 22 | 0.12 | 0.37 |
| 30.9 | 100 | 0.33 | 45.643 | 639 | 14 | 2650 | 21 | 0.12 | 0.37 |
| 26.0 | 70 | 0.20 | 52.510 | 2573 | 49 | 2650 | 22 | 0.12 | 0.18 |
| 22.7 | 80 | 0.20 | 60.133 | 5893 | 98 | 2650 | 21 | 0.12 | 0.18 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H140, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 441 | 82 | 3.91 | 3.267 | 49 | 15 | 1750 | 25 | 0.25 | 1.50 |
| 322 | 94 | 3.27 | 4.480 | 112 | 25 | 2000 | 24 | 0.25 | 1.50 |
| 252 | 103 | 2.80 | 5.733 | 86 | 15 | 2180 | 24 | 0.25 | 1.50 |
| 230 | 105 | 2.61 | 6.272 | 784 | 125 | 2260 | 23 | 0.18 | 1.50 |
| 198 | 106 | 2.27 | 7.269 | 189 | 26 | 2370 | 18 | 0.25 | 1.50 |
| 180 | 117 | 2.28 | 8.000 | 8 | 1 | 2430 | 24 | 0.18 | 1.50 |
| 160 | 117 | 2.02 | 9.029 | 316 | 35 | 2540 | 19 | 0.25 | 1.50 |
| 147 | 125 | 1.98 | 9.800 | 49 | 5 | 2630 | 23 | 0.25 | 1.50 |
| 125 | 128 | 1.72 | 11.554 | 3397 | 294 | 2800 | 18 | 0.25 | 1.50 |
| 114 | 132 | 1.63 | 12.640 | 316 | 25 | 2880 | 18 | 0.18 | 1.50 |
| 103 | 136 | 1.52 | 13.957 | 4536 | 325 | 2950 | 17 | 0.18 | 1.50 |
| 89.4 | 140 | 1.35 | 16.122 | 790 | 49 | 3050 | 18 | 0.18 | 1.50 |
| 81.0 | 140 | 1.22 | 17.802 | 1620 | 91 | 3150 | 18 | 0.18 | 1.50 |
| 73.1 | 140 | 1.10 | 19.750 | 79 | 4 | 3210 | 18 | 0.25 | 1.10 |
| 66.2 | 140 | 1.00 | 21.808 | 567 | 26 | 3300 | 17 | 0.25 | 1.10 |
| 58.4 | 140 | 0.88 | 24.829 | 869 | 35 | 3400 | 18 | 0.12 | 0.75 |
| 52.9 | 140 | 0.80 | 27.415 | 1782 | 65 | 3520 | 17 | 0.12 | 0.75 |
| 45.3 | 140 | 0.68 | 31.976 | 1343 | 42 | 3630 | 18 | 0.12 | 0.75 |
| 41.1 | 140 | 0.62 | 35.308 | 459 | 13 | 3730 | 17 | 0.12 | 0.75 |
| 34.8 | 140 | 0.53 | 40.526 | 6241 | 154 | 3850 | 17 | 0.12 | 0.37 |
| 31.5 | 140 | 0.48 | 44.748 | 6399 | 143 | 3920 | 17 | 0.12 | 0.37 |
| 27.8 | 129 | 0.39 | 50.786 | 711 | 14 | 4000 | 17 | 0.12 | 0.37 |
| 25.1 | 140 | 0.38 | 56.077 | 729 | 13 | 4050 | 17 | 0.12 | 0.37 |
| 20.4 | 89 | 0.20 | 66.908 | 6557 | 98 | 4100 | 17 | 0.12 | 0.18 |
| 18.5 | 98 | 0.20 | 73.879 | 6723 | 91 | 4150 | 17 | 0.12 | 0.18 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H210, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad, max}}$ | Standard | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 428 | 126 | 5.82 | 3.389 | 61 | 18 | 1980 | 23 | 0.55 | 3.00 |
| 312 | 143 | 4.81 | 4.648 | 488 | 105 | 2250 | 23 | 1.10 | 3.00 |
| 260 | 159 | 4.45 | 5.583 | 67 | 12 | 2400 | 19 | 0.55 | 3.00 |
| 232 | 158 | 3.95 | 6.250 | 25 | 4 | 2500 | 18 | 0.55 | 3.00 |
| 189 | 172 | 3.51 | 7.657 | 268 | 35 | 2680 | 19 | 1.10 | 3.00 |
| 169 | 171 | 3.12 | 8.571 | 60 | 7 | 2780 | 18 | 1.10 | 3.00 |
| 148 | 182 | 2.91 | 9.799 | 2881 | 294 | 2960 | 18 | 0.55 | 3.00 |
| 135 | 189 | 2.76 | 10.720 | 268 | 25 | 3030 | 18 | 0.25 | 3.00 |
| 121 | 186 | 2.43 | 12.000 | 12 | 1 | 3200 | 17 | 0.25 | 3.00 |
| 106 | 201 | 2.30 | 13.673 | 670 | 49 | 3350 | 18 | 0.25 | 2.20 |
| 94.9 | 200 | 2.05 | 15.306 | 750 | 49 | 3470 | 17 | 0.25 | 2.20 |
| 86.7 | 210 | 1.97 | 16.750 | 67 | 4 | 3590 | 18 | 0.55 | 2.20 |
| 76.9 | 210 | 1.74 | 18.750 | 75 | 4 | 3720 | 17 | 0.55 | 1.50 |
| 66.1 | 210 | 1.50 | 21.802 | 2747 | 126 | 3870 | 18 | 0.25 | 1.50 |
| 59.1 | 210 | 1.34 | 24.405 | 1025 | 42 | 3900 | 17 | 0.25 | 1.50 |
| 53.2 | 210 | 1.21 | 27.119 | 1139 | 42 | 3900 | 17 | 0.25 | 1.50 |
| 47.6 | 210 | 1.08 | 30.357 | 425 | 14 | 3900 | 17 | 0.25 | 1.10 |
| 41.3 | 210 | 0.94 | 35.095 | 737 | 21 | 3900 | 17 | 0.12 | 0.75 |
| 36.9 | 210 | 0.84 | 39.286 | 275 | 7 | 4020 | 16 | 0.12 | 0.75 |
| 33.0 | 183 | 0.65 | 42.593 | 5963 | 140 | 4100 | 17 | 0.12 | 0.55 |
| 29.5 | 206 | 0.66 | 47.679 | 1335 | 28 | 4220 | 16 | 0.12 | 0.55 |
| 25.9 | 137 | 0.38 | 54.438 | 871 | 16 | 4350 | 17 | 0.12 | 0.37 |
| 23.1 | 155 | 0.39 | 60.938 | 975 | 16 | 4450 | 16 | 0.12 | 0.37 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H210, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 33.4 | 210 | 0.77 | 43.390 | 4556 | 105 | 4120 | 17 | 0.18 | 0.75 |
| 29.9 | 210 | 0.69 | 48.571 | 340 | 7 | 4240 | 16 | 0.12 | 0.75 |
| 26.1 | 210 | 0.60 | 55.529 | 48977 | 882 | 4350 | 17 | 0.12 | 0.75 |
| 22.6 | 210 | 0.52 | 62.160 | 18275 | 294 | 4470 | 16 | 0.12 | 0.55 |
| 19.8 | 210 | 0.46 | 71.026 | 62645 | 882 | 4620 | 17 | 0.12 | 0.55 |
| 17.7 | 210 | 0.41 | 79.507 | 23375 | 294 | 4740 | 16 | 0.12 | 0.37 |
| 15.3 | 210 | 0.35 | 92.205 | 19363 | 210 | 4800 | 17 | 0.12 | 0.37 |
| 13.7 | 210 | 0.32 | 103.214 | 1445 | 14 | 4800 | 16 | 0.12 | 0.37 |
| 11.6 | 210 | 0.27 | 118.162 | 69479 | 588 | 4800 | 17 | 0.12 | 0.25 |
| 10.4 | 210 | 0.24 | 132.270 | 25925 | 196 | 4800 | 16 | 0.12 | 0.25 |
| 9.00 | 210 | 0.21 | 152.853 | 35309 | 231 | 4800 | 17 | 0.12 | 0.25 |
| 8.00 | 210 | 0.18 | 171.104 | 13175 | 77 | 4800 | 16 | 0.12 | 0.18 |
| 6.90 | 210 | 0.16 | 198.873 | 12529 | 63 | 4800 | 17 | 0.12 | 0.18 |
| 6.40 | 210 | 0.15 | 222.619 | 4675 | 21 | 4800 | 16 | 0.12 | 0.12 |
| 5.50 | 210 | 0.13 | 257.631 | 21641 | 84 | 4800 | 17 | 0.12 | 0.12 |
| 4.90 | 210 | 0.11 | 288.393 | 8075 | 28 | 4800 | 16 | 0.12 | 0.12 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H320, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | z_g | z_t | $F_{\text{rad, max}}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 429 | 165 | 7.65 | 3.389 | 61 | 18 | 2180 | 20 | 0.55 | 4.00 |
| 313 | 189 | 6.38 | 4.648 | 488 | 105 | 2460 | 20 | 1.10 | 4.00 |
| 239 | 227 | 5.86 | 6.083 | 73 | 12 | 2670 | 16 | 0.55 | 4.00 |
| 210 | 218 | 4.95 | 6.910 | 539 | 78 | 2800 | 15 | 0.55 | 4.00 |
| 174 | 249 | 4.69 | 8.343 | 292 | 35 | 2950 | 16 | 1.10 | 4.00 |
| 153 | 238 | 3.94 | 9.477 | 616 | 65 | 3100 | 15 | 1.10 | 4.00 |
| 136 | 265 | 3.89 | 10.677 | 3139 | 294 | 3250 | 16 | 0.55 | 4.00 |
| 124 | 271 | 3.64 | 11.680 | 292 | 25 | 3330 | 16 | 0.25 | 4.00 |
| 120 | 254 | 3.28 | 12.128 | 473 | 39 | 3360 | 15 | 0.55 | 4.00 |
| 109 | 262 | 3.09 | 13.268 | 4312 | 325 | 3440 | 15 | 0.25 | 3.00 |
| 97.3 | 294 | 3.08 | 14.898 | 730 | 49 | 3600 | 15 | 0.25 | 3.00 |
| 85.6 | 281 | 2.60 | 16.923 | 220 | 13 | 3760 | 15 | 0.25 | 3.00 |
| 79.4 | 313 | 2.68 | 18.250 | 73 | 4 | 3870 | 15 | 0.55 | 3.00 |
| 70.0 | 299 | 2.26 | 20.731 | 539 | 26 | 4020 | 15 | 0.55 | 2.20 |
| 60.7 | 320 | 2.10 | 23.754 | 2993 | 126 | 4210 | 15 | 0.25 | 1.50 |
| 53.4 | 320 | 1.84 | 26.983 | 3157 | 117 | 4420 | 15 | 0.25 | 1.50 |
| 48.8 | 320 | 1.69 | 29.548 | 1241 | 42 | 4540 | 15 | 0.25 | 1.50 |
| 43.0 | 320 | 1.49 | 33.564 | 1309 | 39 | 4750 | 15 | 0.25 | 1.50 |
| 37.9 | 251 | 1.03 | 38.238 | 803 | 21 | 4970 | 15 | 0.12 | 0.75 |
| 33.4 | 285 | 1.03 | 43.436 | 1694 | 39 | 5190 | 14 | 0.12 | 0.75 |
| 30.3 | 218 | 0.71 | 46.407 | 6497 | 140 | 5310 | 15 | 0.12 | 0.55 |
| 26.7 | 248 | 0.71 | 52.715 | 6853 | 130 | 5550 | 14 | 0.12 | 0.55 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H320, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad, max}}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 30.7 | 320 | 1.08 | 47.276 | 4964 | 105 | 5350 | 15 | 0.18 | 0.75 |
| 27.0 | 320 | 0.95 | 53.703 | 10472 | 195 | 5570 | 15 | 0.18 | 0.75 |
| 24.0 | 320 | 0.84 | 60.502 | 53363 | 882 | 5600 | 15 | 0.18 | 0.75 |
| 21.1 | 320 | 0.74 | 68.726 | 8041 | 117 | 5670 | 15 | 0.18 | 0.75 |
| 18.7 | 320 | 0.66 | 77.387 | 68255 | 882 | 5680 | 15 | 0.12 | 0.75 |
| 16.0 | 320 | 0.56 | 87.906 | 10285 | 117 | 5700 | 15 | 0.12 | 0.55 |
| 14.0 | 320 | 0.49 | 100.462 | 21097 | 210 | 5700 | 15 | 0.12 | 0.55 |
| 12.4 | 320 | 0.43 | 114.118 | 22253 | 195 | 5700 | 15 | 0.12 | 0.37 |
| 11.0 | 320 | 0.39 | 128.743 | 75701 | 588 | 5700 | 15 | 0.12 | 0.37 |
| 9.60 | 320 | 0.34 | 146.244 | 11407 | 78 | 5700 | 15 | 0.12 | 0.37 |
| 8.50 | 320 | 0.30 | 166.541 | 38471 | 231 | 5700 | 15 | 0.12 | 0.37 |
| 6.30 | 315 | 0.22 | 216.683 | 13651 | 63 | 5700 | 15 | 0.12 | 0.25 |
| 5.50 | 320 | 0.19 | 246.137 | 28798 | 117 | 5700 | 14 | 0.12 | 0.18 |
| 5.10 | 269 | 0.15 | 280.702 | 23579 | 84 | 5700 | 15 | 0.12 | 0.12 |
| 4.50 | 305 | 0.15 | 318.859 | 24871 | 78 | 5700 | 14 | 0.12 | 0.12 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H450, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | z_g | z_t | $F_{\text{rad, max}}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 429 | 256 | 11.8 | 3.444 | 31 | 9 | 2550 | 19 | 2.20 | 7.50 |
| 313 | 293 | 9.89 | 4.724 | 496 | 105 | 2850 | 18 | 2.20 | 7.50 |
| 260 | 315 | 8.85 | 5.678 | 511 | 90 | 3010 | 15 | 2.20 | 7.50 |
| 244 | 323 | 8.52 | 6.045 | 2666 | 441 | 3070 | 17 | 1.10 | 7.50 |
| 223 | 334 | 8.05 | 6.613 | 496 | 75 | 3160 | 17 | 1.10 | 7.50 |
| 190 | 354 | 7.25 | 7.787 | 584 | 75 | 3350 | 14 | 2.20 | 7.50 |
| 168 | 370 | 6.69 | 8.800 | 44 | 5 | 3470 | 14 | 2.20 | 7.50 |
| 148 | 385 | 6.15 | 9.965 | 3139 | 315 | 3650 | 14 | 1.10 | 7.50 |
| 130 | 400 | 5.59 | 11.262 | 473 | 42 | 3800 | 14 | 1.10 | 5.50 |
| 119 | 411 | 5.26 | 12.320 | 308 | 25 | 3900 | 13 | 1.10 | 5.50 |
| 105 | 426 | 4.83 | 13.905 | 292 | 21 | 4030 | 14 | 0.55 | 5.50 |
| 92.9 | 441 | 4.42 | 15.714 | 110 | 7 | 4240 | 13 | 0.55 | 5.50 |
| 85.3 | 450 | 4.14 | 17.033 | 511 | 30 | 4360 | 14 | 1.10 | 4.00 |
| 75.5 | 448 | 3.65 | 19.250 | 77 | 4 | 4520 | 13 | 1.10 | 4.00 |
| 65.4 | 450 | 3.18 | 22.170 | 2993 | 135 | 4700 | 14 | 0.55 | 3.00 |
| 57.8 | 450 | 2.81 | 25.056 | 451 | 18 | 4920 | 13 | 0.55 | 3.00 |
| 52.5 | 450 | 2.55 | 27.578 | 1241 | 45 | 5090 | 13 | 0.55 | 3.00 |
| 46.6 | 450 | 2.26 | 31.167 | 187 | 6 | 5280 | 13 | 0.55 | 2.20 |
| 40.4 | 450 | 1.96 | 35.689 | 1606 | 45 | 5490 | 13 | 0.25 | 1.50 |
| 35.8 | 450 | 1.74 | 40.333 | 121 | 3 | 5880 | 13 | 0.25 | 1.50 |
| 33.3 | 322 | 1.16 | 43.313 | 6497 | 150 | 6000 | 13 | 0.25 | 1.10 |
| 29.5 | 366 | 1.16 | 48.950 | 979 | 20 | 6300 | 13 | 0.25 | 1.10 |
| 25.7 | 270 | 0.75 | 54.750 | 219 | 4 | 6500 | 13 | 0.25 | 0.55 |
| 22.7 | 305 | 0.75 | 61.875 | 495 | 8 | 6700 | 13 | 0.25 | 0.55 |

g500-H helical geared motors

Project planning



Combinatorics of geared motors

g500-H450, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | z_g | z_t | $F_{\text{rad, max}}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 32.7 | 450 | 1.61 | 44.124 | 9928 | 225 | 6050 | 14 | 0.25 | 1.50 |
| 28.9 | 450 | 1.43 | 49.867 | 748 | 15 | 6320 | 13 | 0.25 | 1.50 |
| 25.5 | 450 | 1.26 | 56.469 | 53363 | 945 | 6550 | 14 | 0.25 | 1.50 |
| 23.4 | 450 | 1.15 | 61.774 | 69496 | 1125 | 6700 | 14 | 0.18 | 1.10 |
| 20.7 | 450 | 1.02 | 69.813 | 5236 | 75 | 6860 | 13 | 0.18 | 1.10 |
| 18.3 | 450 | 0.90 | 78.794 | 4964 | 63 | 7000 | 14 | 0.18 | 1.10 |
| 16.3 | 450 | 0.80 | 89.048 | 1870 | 21 | 7100 | 13 | 0.18 | 0.75 |
| 15.0 | 450 | 0.74 | 96.522 | 8687 | 90 | 7100 | 14 | 0.25 | 0.75 |
| 13.3 | 450 | 0.66 | 109.083 | 1309 | 12 | 7100 | 13 | 0.25 | 0.75 |
| 11.6 | 450 | 0.57 | 121.342 | 27302 | 225 | 7100 | 14 | 0.12 | 0.55 |
| 10.2 | 450 | 0.50 | 137.133 | 2057 | 15 | 7100 | 13 | 0.12 | 0.55 |
| 9.00 | 450 | 0.44 | 156.274 | 21097 | 135 | 7100 | 14 | 0.12 | 0.55 |
| 8.00 | 450 | 0.39 | 176.611 | 3179 | 18 | 7100 | 13 | 0.12 | 0.37 |
| 7.10 | 450 | 0.35 | 198.059 | 98039 | 495 | 7100 | 14 | 0.12 | 0.37 |
| 6.30 | 450 | 0.31 | 223.833 | 1343 | 6 | 7100 | 13 | 0.12 | 0.37 |
| 5.50 | 450 | 0.27 | 248.200 | 1241 | 5 | 7100 | 14 | 0.12 | 0.25 |
| 4.90 | 450 | 0.24 | 280.500 | 561 | 2 | 7100 | 13 | 0.12 | 0.25 |
| 4.20 | 428 | 0.20 | 326.994 | 103003 | 315 | 7100 | 14 | 0.12 | 0.18 |
| 3.70 | 450 | 0.18 | 369.548 | 15521 | 42 | 7100 | 13 | 0.12 | 0.18 |



Surface and corrosion protection

For optimum protection of geared motors against ambient conditions, the surface and corrosion protection system (OKS) offers tailor-made solutions.

Various surface coatings combined with other protective measures ensure that the geared motors operate reliably even at high air humidity, in outdoor installations or in the presence of atmospheric impurities. Any colour from the RAL Classic collection can be chosen for the top coat. The geared motors are also available unpainted (no surface and corrosion protection).

| Surface and corrosion protection | Applications | Measures |
|------------------------------------|---|---|
| Without OKS(uncoated) | <ul style="list-style-type: none"> Interior installation, no special corrosion protection required Paint provided by the customer | <ul style="list-style-type: none"> Aluminium parts uncoated Fan covers zinc-coated or primed in grey Grey cast iron parts primed in grey <p>Note: Slight colour deviation of the components is possible</p> <p>Standard version in case of:</p> <ul style="list-style-type: none"> g500-H45 ... H450 g500-S130 ... 660 g500-B45 ... 450 |
| OKS-G (primed) | <ul style="list-style-type: none"> Dependent on subsequent top coat applied | <ul style="list-style-type: none"> 2K PUR priming coat (grey) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel nameplate |
| OKS-S (small) | <ul style="list-style-type: none"> Standard applications Internal installation in heated buildings Air humidity up to 90% | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C1 (subject to EN 12944-2) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel nameplate |
| OKS-M (medium) | <ul style="list-style-type: none"> Internal installation in non-heated buildings Covered, protected external installation Air humidity up to 95% | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C2 (subject to EN 12944-2) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request) |
| OKS-L (large) | <ul style="list-style-type: none"> External installation Air humidity above 95% Chemical industry plants Food industry | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C3 (subject to EN 12944-2) Blower cover and B end shield additionally primed Cable glands with gaskets Corrosion-resistant brake with cover ring, stainless friction plate, and chrome-plated armature plate (on request) All screws/screw plugs zinc-coated Stainless breather elements Threaded holes that are not used are closed by means of plastic plugs <p>Optional measures</p> <ul style="list-style-type: none"> Sealed recesses on motor (on request) Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request) Additional priming coat on cast iron fan Oil expansion tank and torque plates painted separately and supplied loose |
| OKS-XL (extra Large) ¹⁾ | <ul style="list-style-type: none"> External installation Air humidity above 95 % Chemical industry plants Food industry Coastal areas with moderate salinity | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C4 (subject to EN 12944-2) <p>Additional measures for surface and corrosion protection system L:</p> <ul style="list-style-type: none"> Rotor package and stator in the inner area primed with finishing varnish Feedback in protection class IP65 |

¹⁾ On request



Surface and corrosion protection

Structure of surface coating

| Surface and corrosion protection | Corrosivity category | Surface coating | Colour | Coating thickness |
|------------------------------------|----------------------|--|---|-------------------|
| | DIN EN ISO 12944-2 | Structure | | |
| Without OKS(uncoated) | | <ul style="list-style-type: none"> Dipping primer of the grey iron parts | | 30 ... 50 µm |
| OKS-G (primed) | | <ul style="list-style-type: none"> Dipping primer of the grey iron parts 2K PUR priming coat | | 60 ... 90 µm |
| OKS-S (small) | Comparable to C1 | <ul style="list-style-type: none"> Dipping primer of the grey iron parts 2K-PUR top coat | <ul style="list-style-type: none"> Standard: RAL 7012 Optional: RAL Classic | 80 ... 120 µm |
| OKS-M (medium) | Comparable to C2 | <ul style="list-style-type: none"> Dipping primer of the grey iron parts | | 110 ... 160 µm |
| OKS-L (large) | Comparable to C3 | <ul style="list-style-type: none"> 2K PUR priming coat 2K-PUR top coat | | 140 ... 200 µm |
| OKS-XL (extra Large) ¹⁾ | Comparable to C4 | <ul style="list-style-type: none"> Dipping primer of the grey iron parts 2K-EP priming coat (two times) 2K-PUR top coat | | 160 ... 240 µm |

¹⁾ On request

g500-H helical geared motors



Project planning

Lubricants

Gearboxes and geared motors of Lenze come supplied with a lubricant specifically adapted to the drive and design. When placing the order, the mounting position and design are decisive for the lubricant amount.

The lubricant amount and type contained in the gearbox are indicated on the nameplate.

The following gearboxes are lubricated for life:

- Helical gearbox g500-H45 ... 140
- Shaft-mounted helical gearbox g500-S130
- Bevel gearbox g500-B45 ... 240

The lubricants listed in the lubricant table are approved for Lenze drives.

Lubricant table

| Mode | CLP 460 | CLP HC 320 | CLP HC 220 USDA H1 |
|--------------------------|--|--|--|
| Ambient temperature [°C] | 0 ... +40 | -25 ... +50 | -20 ... +40 |
| Specification | Mineral based oil with additives | Synthetic-based oil (synthetic hydrocarbon / poly-alpha-olefin oil) | |
| Changing interval | 16000 operating hours not later than after three years (oil temperature 70 to 80 °C) | 25000 operating hours not later than after three years (oil temperature 70 to 80 °C) | 16000 operating hours not later than after three years (oil temperature 70 to 80 °C) |
| Fuchs | Fuchs Renolin CLP 460 | Fuchs Renolin Unisyn CLP 320 | |
| Klüber | Klüberoil GEM1-460 N | Klübersynth GEM4-320 N | Klüberoil 4 UH1-220 N |
| Shell | Shell Omala S2 G 460 | Shell Omala S4 GX HD 320 | |
| bremer & leguil | | | Cassida Fluid GL 220 |

- ▶ Please contact your Lenze sales office if you are operating at ambient temperatures in areas up to < -20 °C bzw. > or up to +40°C.

Shaft sealing rings

By default, the gearboxes come with NBR shaft sealing rings at the output end. At high speed and unfavourable ambient conditions as high temperature, reduced circulation of air etc., Lenze recommends the use of Viton shaft sealing rings.

Please consider this in your order.

g500-H helical geared motors

Project planning



Ventilation

Non-ventilated gearboxes

No ventilation is required for gearboxes g500-H45 to H210.

Ventilated gearboxes

The g500-H320 H450 gearbox is supplied with a breather element as standard.

Gearbox in combined mounting position

For reducing the number of versions, the gearboxes can also be ordered in a combined mounting position:

- g500-H45 in mounting position ABCDEF
- g500-H100 ... H450 in mounting position AEF

In these gearboxes, the lubricant amount has been optimised for the use in different mounting positions. The breather elements are loosely enclosed and have to be mounted before commissioning depending on the mounting position.

A gearbox can be used for several mounting positions.

g500-H helical geared motors

Project planning



Ventilation

Position of ventilation, sealing elements and oil level check

► A ... F mounting position

| | |
|--------------------|-----------------|
| <p>A</p> | <p>B</p> |
| <p>C</p> | <p>D</p> |
| <p>E</p> | <p>F</p> |
| <p>Filling</p> | <p>Drain</p> |
| <p>Ventilation</p> | <p>Check</p> |

6.3

g500-H helical geared motors

Project planning



g500-H helical geared motors

Technical data



Standards and operating conditions

Geared motor data

| Product | | | MD□MA□□ | m550 |
|---|---------------|------|---|---|
| Motor | | | | |
| Degree of protection | | | | |
| EN 60529 | | | IP55 ¹⁾ IP65 ¹⁾ IP66 ¹⁾ | IP55 ¹⁾ |
| Energy efficiency class | | | | |
| IEC 60034-30 | | | IE1 | IE3 |
| IEC 60034-2-1 | | | Methodology for measuring efficiency | |
| 10 CFR Part 431 (U.S. Integral hp Rule) | | | | Table 5 (Premium Efficiency), CC127B |
| GB18613-2012 (China Energy Label optional) | | | | Grade 2 |
| Conformity | | | Low-Voltage Directive | |
| CE | | | 2006/95/EC | 2014/35/EU |
| EAC | | | TP TC 004/2011 (TR CU 004/2011) | |
| Approval | | | GB Standard 12350-2009 | |
| CCC | | | CSA 22.2 No. 100 | |
| CSA | | | UL 1004-1 UL 1004-8 Power Conversion Equipment (File-No. E210321) | |
| cURus | | | | |
| Temperature class | | | | |
| IEC/EN 60034-1; utilisation | | | B | |
| IEC/EN 60034-1; insulation system (enamel-insulated wire) | | | F | |
| Min. ambient operating temperature | | | | |
| | $T_{opr,min}$ | [°C] | -20 | |
| Max. ambient operating temperature | | | | |
| | $T_{opr,max}$ | [°C] | 40 | |
| With power reduction | | | $T_{opr,max}$ [°C] 60 | |
| Site altitude | | | | |
| Amsl | H_{max} | [m] | 4000 | |

¹⁾ Designs with different degrees of protection:
 IP55 with brake (IP54 with manual release lever).
 IP54 with resolver RS1.
 IP54 with HTL incremental encoder IG128-24V-H.

- In the European Union, the ErP Directive stipulates minimum efficiency levels for three-phase AC motors. Geared three-phase AC motors that do not conform with this Directive do not meet CE requirements and must not be marketed in the European Economic Area. For further information about the ErP Directive, the efficiency regulations in other countries and the Lenze products concerned, please refer to the brochure "International efficiency directives for three-phase AC motors".



Permissible radial and axial forces at output

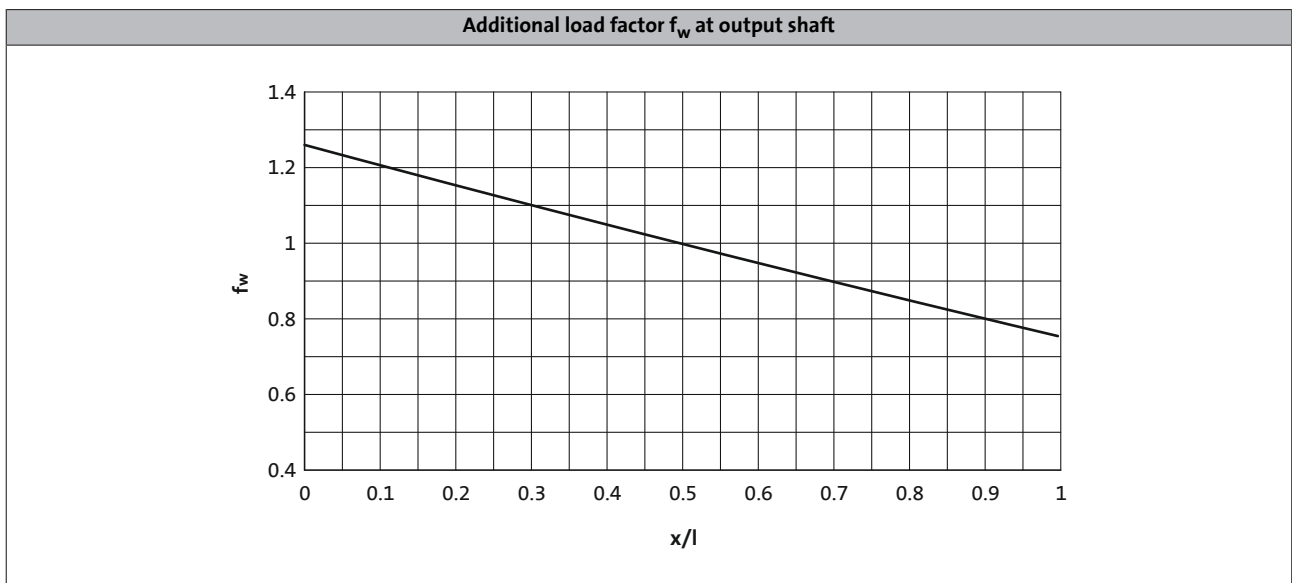
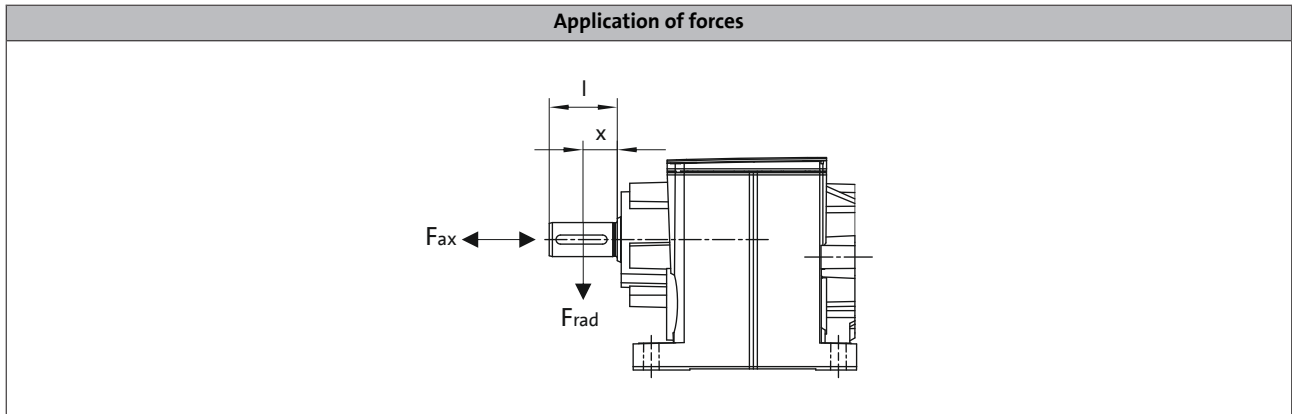
Permissible radial force

$$F_{rad,perm} = f_w \times F_{rad,max}$$

► If F_{rad} and $F_{ax} \neq 0$, please contact Lenze.

Permissible axial force

If there is no radial force, the maximum permissible axial force is 50 % of the table value $F_{rad,max}$



g500-H helical geared motors



Technical data

Permissible radial and axial forces at output

The values given in the table refer to the center shaft end force application point and are minimum values calculated according to the most unfavourable conditions (force application angle, mounting position, direction of rotation). The values were calculated for the motor/gearbox combination with a load capacity of $c= 1.3$ and an input speed of 1400 rpm.

In case of different operating conditions, considerably higher forces can be transmitted. Please contact Lenze.

Gearbox with foot with threaded pitch circle (VBR)

| Product | n_2 [r/min] | | | | | | | | | | |
|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 1000 | 630 | 400 | 250 | 160 | 100 | 63 | 40 | 25 | ≤16 | |
| | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] |
| g500-H45 | 300 | 400 | 600 | 700 | 800 | 900 | 1100 | 1400 | 1500 | 1500 | |
| g500-H100 | 800 | 1000 | 1200 | 1500 | 1800 | 2100 | 2600 | 2700 | 2700 | 2700 | |
| g500-H140 | 1000 | 1400 | 1800 | 2200 | 2500 | 3000 | 3300 | 3700 | 4100 | 4200 | |
| g500-H210 | 1200 | 1600 | 2000 | 2400 | 2800 | 3400 | 3900 | 3900 | 4400 | 4800 | |
| g500-H320 | 1500 | 1900 | 2200 | 2600 | 3000 | 3500 | 4100 | 4800 | 5600 | 5700 | |
| g500-H450 | 1900 | 2200 | 2600 | 3000 | 3500 | 4100 | 4700 | 5500 | 6600 | 7100 | |

Reinforced bearings

| | | | | | | | | | | |
|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] |
| g500-H100 | 1000 | 1300 | 1500 | 1800 | 2200 | 2700 | 3200 | 3300 | 3300 | 3300 |
| g500-H140 | 1300 | 1800 | 2300 | 2700 | 3100 | 3700 | 4100 | 4600 | 5100 | 5300 |
| g500-H210 | 1400 | 2000 | 2500 | 3000 | 3500 | 4200 | 4900 | 4900 | 5500 | 6000 |
| g500-H320 | 1900 | 2400 | 2800 | 3300 | 3800 | 4400 | 5100 | 6000 | 7000 | 7100 |
| g500-H450 | 2400 | 2800 | 3200 | 3800 | 4300 | 5100 | 5900 | 6900 | 8300 | 8900 |

Gearbox with/without foot with threaded pitch circle (VAR/VCR) Gearbox with/without foot with flange (VAK/VCK)

| Product | n_2 [r/min] | | | | | | | | | |
|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 1000 | 630 | 400 | 250 | 160 | 100 | 63 | 40 | 25 | ≤16 |
| | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] |
| g500-H45 | 300 | 400 | 600 | 700 | 800 | 900 | 1100 | 1400 | 1500 | 1500 |
| g500-H100 | 800 | 1000 | 1200 | 1500 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 |
| g500-H140 | 1000 | 1400 | 1800 | 2200 | 2500 | 2600 | 2600 | 2600 | 2600 | 2600 |
| g500-H210 | 1200 | 1600 | 2000 | 2400 | 2800 | 3000 | 3000 | 3000 | 3000 | 3000 |
| g500-H320 | 1500 | 1900 | 2200 | 2600 | 3000 | 3500 | 3600 | 3600 | 3600 | 3600 |
| g500-H450 | 1900 | 2200 | 2600 | 3000 | 3500 | 4100 | 4400 | 4400 | 4400 | 4400 |

Reinforced bearings

| | | | | | | | | | | |
|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] |
| g500-H100 | 1000 | 1300 | 1500 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 |
| g500-H140 | 1300 | 1800 | 2300 | 2600 | 2600 | 2600 | 2600 | 2600 | 2600 | 2600 |
| g500-H210 | 1400 | 2000 | 2500 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 |
| g500-H320 | 1900 | 2400 | 2800 | 3300 | 3600 | 3600 | 3600 | 3600 | 3600 | 3600 |
| g500-H450 | 2400 | 2800 | 3200 | 3800 | 4300 | 4400 | 4400 | 4400 | 4400 | 4400 |

g500-H helical geared motors

Technical data



Permissible radial and axial forces at output

Gearbox without foot with reinforced flange (VCP)

For transmitting particularly high radial and axial forces

| Product | n_2 [r/min] | | | | | | | | | |
|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 1000 | 630 | 400 | 250 | 160 | 100 | 63 | 40 | 25 | ≤16 |
| | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] | $F_{rad,max}$ [N] |
| g500-H100 | 1900 | 2470 | 2920 | 3330 | 3650 | 3890 | 4060 | 4160 | 4240 | 4280 |
| g500-H140 | 3290 | 4140 | 4880 | 5510 | 5950 | 6270 | 6480 | 6620 | 6710 | 6770 |
| g500-H210 | 3830 | 4850 | 5530 | 6170 | 6670 | 7060 | 7330 | 7500 | 7620 | 7700 |
| g500-H320 | 4340 | 5460 | 6240 | 7040 | 7690 | 8210 | 8570 | 8810 | 8970 | 9080 |
| g500-H450 | 5120 | 6180 | 6940 | 7810 | 8550 | 9160 | 9590 | 9880 | 10100 | 10200 |

g500-H helical geared motors



Technical data

Selection tables, notes

Notes on the selection tables with 4-pole motors

The selection tables show the available combinations of gearbox type, number of stages, ratio and motor. They are used only to provide basic orientation.

The following legend indicates the structure of the selection tables.

Rated power P_{rated} of the drive motor depending on the rated frequency

50 Hz: $P_N = 0.75$ kW
87 Hz: $P_N = 1.35$ kW

2-stufige Getriebe ← Number of the gear stage of the gearbox

Torque diagram

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|----|----------------------------|-------------------------|----------------------------|------------------------|----|----------------------------|-------------------------|----------------------------|------------------------|---|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m550 | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | c | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | c |
| 444 | 16 | 4.3 | 44 | 12 | 184 | 16 | 444 | 16 | 4.3 | 784 | 16 | 3.5 | 3.267 | -H140 | -P80/M4 | |
| 432 | 16 | 3.9 | 43 | 12 | 179 | 16 | 432 | 16 | 3.9 | 763 | 16 | 3.2 | 3.354 | -H100 | -P80/M4 | |

Load capacity c of the gearbox
c is the ratio between the permissible rated torque of the gearbox and the rated torque of the three-phase AC motor (converted to the driven shaft).
c must be always higher than the service factor k determined for the application k.

$$c = \frac{M_{2,zul}}{M_{1N} \cdot i \cdot \eta_{Getr}} > k$$

Mains operation
Output speed n₂
Output torque M₂

Inverter operation
The speed and torque data are valid for self-ventilated and forced ventilated drives. Forced ventilated drives can always output the torque M₂ in the entire setting ranges. In the case of self-ventilated drives, a reduction to M₂₂ is required in the lower speed range.

The following applies to self-ventilated geared motors:
n₂₂ is the minimum speed where the torque M₂₂ is permissible, from n₂₁ to n₂, the maximum torque is M₂

The following applies to forced ventilated geared motors:
From the minimum speed n₂₂ to n₂, the maximum torque is M₂

Ratio i

Product Gearbox

Product Motor

Page number for dimensions

Motor voltages

The power values and torques indicated in the selection tables refer to the following motor voltages:

- 50 Hz : Δ 230 V / Y 400 V
- 87 Hz : 400 V

Operation at 87 Hz

In 87 Hz operation, the three-phase AC motor (which is designed for a voltage of Δ 230 V / Y 400 V at 50 Hz) is operated on an inverter with 400 V rated voltage in a delta connection. It is important to note here that the inverter must be configured for 87Hz output.

This offers the following advantages over 50 Hz operation:

- the setting range of the motor is increased by a factor of 1.73.
- the motor can then provide around 1.73 times greater output, which in turn allows a smaller and more affordable motor to be selected for the application.
- the efficiency of the motor is also improved.

g500-H helical geared motors

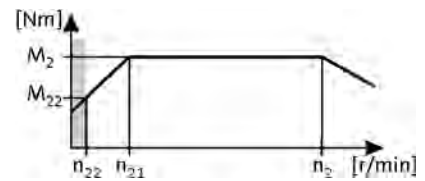
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 0.06$ kW
 87 Hz: $P_N = 0.11$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| | | | 9.8 | 6.0 | 40 | 6.0 | | | | 171 | 6.0 | 5.5 | 14.836 | -H45 | 063-02 | |
| | | | 8.7 | 6.7 | 36 | 7.0 | | | | 152 | 7.0 | 5.8 | 16.660 | -H45 | 063-02 | |
| 75 | 7.0 | 5.7 | 7.6 | 7.4 | 32 | 7.0 | 75 | 7.0 | 5.7 | 133 | 8.0 | 5.2 | 19.013 | -H45 | 063-02 | |
| 67 | 8.0 | 5.3 | 6.8 | 8.3 | 28 | 8.0 | 67 | 8.0 | 5.3 | 119 | 9.0 | 4.9 | 21.350 | -H45 | 063-02 | |
| 58 | 10 | 4.7 | 5.9 | 9.6 | 24 | 10 | 58 | 10 | 4.7 | 103 | 10 | 4.3 | 24.595 | -H45 | 063-02 | |
| 52 | 11 | 4.2 | 5.3 | 11 | 22 | 11 | 52 | 11 | 4.2 | 92 | 11 | 3.9 | 27.618 | -H45 | 063-02 | |
| 45 | 12 | 3.6 | 4.5 | 13 | 19 | 12 | 45 | 12 | 3.6 | 79 | 13 | 3.3 | 32.000 | -H45 | 063-02 | |
| 40 | 14 | 3.2 | 4.0 | 14 | 17 | 14 | 40 | 14 | 3.2 | 71 | 14 | 3.0 | 35.933 | -H45 | 063-02 | |
| 34 | 16 | 2.8 | 3.5 | 16 | 15 | 16 | 34 | 16 | 2.8 | 61 | 17 | 2.6 | 41.455 | -H45 | 063-02 | |
| 31 | 18 | 2.5 | 3.1 | 18 | 13 | 18 | 31 | 18 | 2.5 | 55 | 19 | 2.4 | 46.550 | -H45 | 063-02 | |
| 27 | 21 | 2.2 | 2.7 | 21 | 11 | 21 | 27 | 21 | 2.2 | 48 | 21 | 2.1 | 52.909 | -H45 | 063-02 | |
| 24 | 23 | 1.9 | 2.4 | 23 | 10 | 23 | 24 | 23 | 1.9 | 43 | 24 | 1.9 | 59.413 | -H45 | 063-02 | |

g500-H helical geared motors

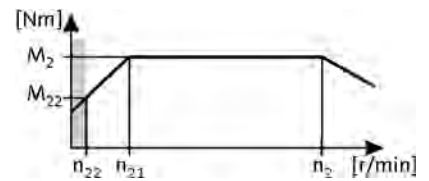


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.09$ kW
 87 Hz: $P_N = 0.16$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 137 | 6.0 | 5.8 | 15 | 6.0 | 60 | 6.0 | 137 | 6.0 | 5.8 | 248 | 6.0 | 4.9 | 10.033 | -H45 | 063-22 | |
| 120 | 7.0 | 5.1 | 13 | 6.8 | 53 | 7.0 | 120 | 7.0 | 5.1 | 217 | 7.0 | 4.3 | 11.429 | -H45 | 063-22 | |
| 107 | 8.0 | 4.9 | 11 | 7.7 | 47 | 8.0 | 107 | 8.0 | 4.9 | 194 | 8.0 | 4.2 | 12.833 | -H45 | 063-22 | |
| 93 | 9.0 | 4.3 | 9.8 | 8.9 | 40 | 9.0 | 93 | 9.0 | 4.3 | 168 | 9.0 | 3.7 | 14.836 | -H45 | 063-22 | |
| 83 | 10 | 4.1 | 8.7 | 10 | 36 | 10 | 83 | 10 | 4.1 | 149 | 10 | 4.0 | 16.660 | -H45 | 063-22 | |
| 72 | 12 | 3.6 | 7.6 | 11 | 32 | 11 | 72 | 12 | 3.6 | 131 | 11 | 3.6 | 19.013 | -H45 | 063-22 | |
| 64 | 13 | 3.4 | 6.8 | 13 | 28 | 13 | 64 | 13 | 3.4 | 116 | 13 | 3.3 | 21.350 | -H45 | 063-22 | |
| 56 | 15 | 3.0 | 5.9 | 15 | 24 | 15 | 56 | 15 | 3.0 | 101 | 15 | 3.0 | 24.595 | -H45 | 063-22 | |
| 50 | 17 | 2.7 | 5.3 | 17 | 22 | 16 | 50 | 17 | 2.7 | 90 | 16 | 2.6 | 27.618 | -H45 | 063-22 | |
| 43 | 19 | 2.3 | 4.5 | 19 | 19 | 19 | 43 | 19 | 2.3 | 78 | 19 | 2.3 | 32.000 | -H45 | 063-22 | |
| 38 | 22 | 2.1 | 4.0 | 21 | 17 | 21 | 38 | 22 | 2.1 | 69 | 21 | 2.0 | 35.933 | -H45 | 063-22 | |
| 33 | 25 | 1.8 | 3.5 | 25 | 15 | 25 | 33 | 25 | 1.8 | 60 | 25 | 1.8 | 41.455 | -H45 | 063-22 | |
| 30 | 28 | 1.6 | 3.1 | 28 | 13 | 28 | 30 | 28 | 1.6 | 53 | 28 | 1.6 | 46.550 | -H45 | 063-22 | |
| 26 | 32 | 1.4 | 2.7 | 32 | 11 | 32 | 26 | 32 | 1.4 | 47 | 32 | 1.4 | 52.909 | -H45 | 063-22 | |
| 23 | 36 | 1.3 | 2.4 | 35 | 10 | 35 | 23 | 36 | 1.3 | 42 | 35 | 1.3 | 59.413 | -H45 | 063-22 | |

g500-H helical geared motors

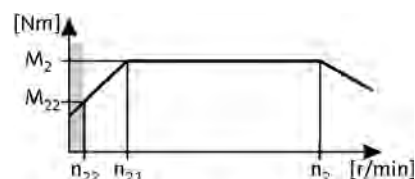


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.12$ kW
 87 Hz: $P_N = 0.21$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 204 | 5.0 | 5.5 | 21 | 4.2 | 86 | 5.0 | 204 | 5.0 | 5.5 | 363 | 5.0 | 4.7 | 6.982 | -H45 | 063-12 | |
| 182 | 6.0 | 5.2 | 19 | 4.7 | 77 | 6.0 | 182 | 6.0 | 5.2 | 323 | 6.0 | 4.5 | 7.840 | -H45 | 063-12 | |
| 160 | 7.0 | 4.7 | 16 | 5.4 | 67 | 7.0 | 160 | 7.0 | 4.7 | 284 | 7.0 | 4.0 | 8.935 | -H45 | 063-12 | |
| 142 | 8.0 | 4.5 | 15 | 6.0 | 60 | 8.0 | 142 | 8.0 | 4.5 | 253 | 8.0 | 3.8 | 10.033 | -H45 | 063-12 | |
| 125 | 9.0 | 3.9 | 13 | 6.9 | 53 | 9.0 | 125 | 9.0 | 3.9 | 222 | 9.0 | 3.4 | 11.429 | -H45 | 063-12 | |
| 111 | 10 | 3.8 | 11 | 7.7 | 47 | 10 | 111 | 10 | 3.8 | 198 | 10 | 3.2 | 12.833 | -H45 | 063-12 | |
| 96 | 12 | 3.4 | 9.8 | 8.9 | 40 | 11 | 96 | 12 | 3.4 | 171 | 11 | 2.9 | 14.836 | -H45 | 063-12 | |
| 86 | 13 | 3.2 | 8.7 | 10 | 36 | 13 | 86 | 13 | 3.2 | 152 | 13 | 3.1 | 16.660 | -H45 | 063-12 | |
| 75 | 15 | 2.8 | 7.6 | 11 | 32 | 15 | 75 | 15 | 2.8 | 133 | 15 | 2.8 | 19.013 | -H45 | 063-12 | |
| 73 | 15 | 5.5 | 7.4 | 12 | 31 | 15 | 73 | 15 | 5.5 | 130 | 15 | 4.7 | 19.486 | -H100 | 063-12 | |
| 67 | 17 | 2.6 | 6.8 | 13 | 28 | 16 | 67 | 17 | 2.6 | 119 | 16 | 2.6 | 21.350 | -H45 | 063-12 | |
| 64 | 17 | 5.5 | 6.5 | 13 | 27 | 17 | 64 | 17 | 5.5 | 114 | 17 | 4.7 | 22.314 | -H100 | 063-12 | |
| 58 | 19 | 2.4 | 5.9 | 15 | 24 | 19 | 58 | 19 | 2.4 | 103 | 19 | 2.3 | 24.595 | -H45 | 063-12 | |
| 57 | 20 | 4.6 | 5.8 | 15 | 24 | 19 | 57 | 20 | 4.6 | 101 | 19 | 3.9 | 25.095 | -H100 | 063-12 | |
| 52 | 22 | 2.1 | 5.3 | 17 | 22 | 21 | 52 | 22 | 2.1 | 92 | 21 | 2.0 | 27.618 | -H45 | 063-12 | |
| 50 | 22 | 4.5 | 5.0 | 17 | 21 | 22 | 50 | 22 | 4.5 | 88 | 22 | 4.3 | 28.738 | -H100 | 063-12 | |
| 45 | 25 | 4.0 | 4.6 | 19 | 19 | 24 | 45 | 25 | 4.0 | 80 | 24 | 3.9 | 31.805 | -H100 | 063-12 | |
| 45 | 25 | 1.8 | 4.5 | 19 | 19 | 25 | 45 | 25 | 1.8 | 79 | 25 | 1.8 | 32.000 | -H45 | 063-12 | |
| 40 | 28 | 1.6 | 4.0 | 22 | 17 | 28 | 40 | 28 | 1.6 | 71 | 28 | 1.6 | 35.933 | -H45 | 063-12 | |
| 39 | 28 | 3.5 | 4.0 | 22 | 17 | 28 | 39 | 28 | 3.5 | 70 | 28 | 3.4 | 36.422 | -H100 | 063-12 | |
| 36 | 31 | 3.2 | 3.6 | 24 | 15 | 31 | 36 | 31 | 3.2 | 64 | 31 | 3.1 | 39.857 | -H100 | 063-12 | |
| 34 | 32 | 1.4 | 3.5 | 25 | 15 | 32 | 34 | 32 | 1.4 | 61 | 32 | 1.4 | 41.455 | -H45 | 063-12 | |
| 31 | 36 | 2.8 | 3.2 | 27 | 13 | 35 | 31 | 36 | 2.8 | 56 | 35 | 2.9 | 45.643 | -H100 | 063-12 | |
| 31 | 36 | 1.2 | 3.1 | 28 | 13 | 36 | 31 | 36 | 1.2 | 55 | 36 | 1.3 | 46.550 | -H45 | 063-12 | |
| 27 | 41 | 1.7 | 2.8 | 32 | 11 | 40 | 27 | 41 | 1.7 | 48 | 40 | 1.7 | 52.510 | -H100 | 063-12 | |
| 27 | 41 | 1.1 | 2.7 | 32 | 11 | 41 | 27 | 41 | 1.1 | 48 | 41 | 1.1 | 52.909 | -H45 | 063-12 | |
| 26 | 42 | 3.1 | 2.7 | 33 | 11 | 42 | 26 | 42 | 3.1 | 47 | 42 | 3.2 | 54.438 | -H210 | 063-12 | |
| 25 | 44 | 3.2 | 2.6 | 34 | 11 | 43 | 25 | 44 | 3.2 | 45 | 43 | 3.3 | 56.077 | -H140 | 063-12 | |
| 24 | 46 | 1.0 | 2.4 | 36 | 10 | 46 | 24 | 46 | 1.0 | 43 | 46 | 1.0 | 59.413 | -H45 | 063-12 | |
| 24 | 47 | 1.7 | 2.4 | 36 | 10 | 46 | 24 | 47 | 1.7 | 42 | 46 | 1.7 | 60.133 | -H100 | 063-12 | |
| 23 | 48 | 3.1 | 2.4 | 37 | 9.8 | 47 | 23 | 48 | 3.1 | 42 | 47 | 3.2 | 60.938 | -H210 | 063-12 | |
| 21 | 52 | 1.7 | 2.2 | 40 | 9.0 | 51 | 21 | 52 | 1.7 | 38 | 51 | 1.7 | 66.908 | -H140 | 063-12 | |
| 19 | 58 | 1.7 | 2.0 | 44 | 8.1 | 57 | 19 | 58 | 1.7 | 34 | 57 | 1.7 | 73.879 | -H140 | 063-12 | |

6.3

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 18 | 61 | 3.4 | 1.8 | 47 | 7.5 | 60 | 18 | 61 | 3.4 | 32 | 60 | 3.3 | 79.507 | -H210 | 063-12 | |
| 16 | 71 | 3.0 | 1.6 | 55 | 6.5 | 70 | 16 | 71 | 3.0 | 28 | 70 | 3.0 | 92.205 | -H210 | 063-12 | |

g500-H helical geared motors

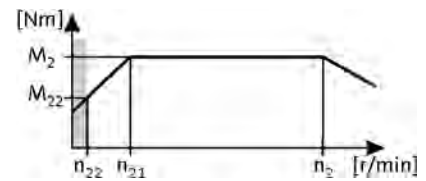


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.12$ kW
 87 Hz: $P_N = 0.21$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|---------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 14 | 79 | 2.7 | 1.4 | 61 | 5.8 | 78 | 14 | 79 | 2.7 | 25 | 78 | 2.7 | 103.214 | -H210 | 063-12 | |
| 12 | 91 | 2.3 | 1.2 | 70 | 5.1 | 89 | 12 | 91 | 2.3 | 22 | 89 | 2.4 | 118.162 | -H210 | 063-12 | |
| 11 | 99 | 3.2 | 1.1 | 76 | 4.7 | 97 | 11 | 99 | 3.2 | 20 | 97 | 3.3 | 128.743 | -H320 | 063-12 | |
| 11 | 102 | 2.1 | 1.1 | 78 | 4.5 | 100 | 11 | 102 | 2.1 | 19 | 100 | 2.1 | 132.270 | -H210 | 063-12 | |
| 9.7 | 112 | 2.9 | 1.0 | 87 | 4.1 | 111 | 9.7 | 112 | 2.9 | 17 | 111 | 2.9 | 146.244 | -H320 | 063-12 | |
| 9.3 | 117 | 1.8 | 0.9 | 91 | 3.9 | 116 | 9.3 | 117 | 1.8 | 17 | 116 | 1.8 | 152.853 | -H210 | 063-12 | |
| 8.6 | 128 | 2.5 | 0.9 | 99 | 3.6 | 126 | 8.6 | 128 | 2.5 | 15 | 126 | 2.5 | 166.541 | -H320 | 063-12 | |
| 8.3 | 131 | 1.6 | 0.8 | 101 | 3.5 | 129 | 8.3 | 131 | 1.6 | 15 | 129 | 1.6 | 171.104 | -H210 | 063-12 | |
| 7.5 | 145 | 2.2 | 0.8 | 112 | 3.2 | 143 | 7.5 | 145 | 2.2 | 13 | 143 | 2.2 | 189.179 | -H320 | 063-12 | |
| 7.2 | 152 | 3.0 | 0.7 | 117 | 3.0 | 150 | 7.2 | 152 | 3.0 | 13 | 150 | 3.0 | 198.059 | -H450 | 063-12 | |
| 7.2 | 153 | 1.4 | 0.7 | 118 | 3.0 | 150 | 7.2 | 153 | 1.4 | 13 | 150 | 1.4 | 198.873 | -H210 | 063-12 | |
| 6.6 | 167 | 1.9 | 0.7 | 128 | 2.8 | 164 | 6.6 | 167 | 1.9 | 12 | 164 | 1.9 | 216.683 | -H320 | 063-12 | |
| 6.4 | 171 | 1.2 | 0.7 | 132 | 2.7 | 168 | 6.4 | 171 | 1.2 | 11 | 168 | 1.3 | 222.619 | -H210 | 063-12 | |
| 6.4 | 172 | 2.6 | 0.6 | 133 | 2.7 | 169 | 6.4 | 172 | 2.6 | 11 | 169 | 2.7 | 223.833 | -H450 | 063-12 | |
| 5.8 | 189 | 1.7 | 0.6 | 146 | 2.4 | 186 | 5.8 | 189 | 1.7 | 10 | 186 | 1.7 | 246.137 | -H320 | 063-12 | |
| 5.7 | 191 | 2.4 | 0.6 | 147 | 2.4 | 188 | 5.7 | 191 | 2.4 | 10 | 188 | 2.4 | 248.200 | -H450 | 063-12 | |
| 5.5 | 198 | 1.1 | 0.6 | 153 | 2.3 | 195 | 5.5 | 198 | 1.1 | 9.8 | 195 | 1.1 | 257.631 | -H210 | 063-12 | |
| 5.1 | 216 | 2.1 | 0.5 | 166 | 2.1 | 212 | 5.1 | 216 | 2.1 | 9.0 | 212 | 2.1 | 280.500 | -H450 | 063-12 | |
| 5.1 | 216 | 1.3 | 0.5 | 166 | 2.1 | 212 | 5.1 | 216 | 1.3 | 9.0 | 212 | 1.3 | 280.702 | -H320 | 063-12 | |
| 4.9 | 222 | 1.0 | 0.5 | 171 | 2.1 | 218 | 4.9 | 222 | 1.0 | 8.8 | 218 | 1.0 | 288.393 | -H210 | 063-12 | |
| 4.5 | 245 | 1.3 | 0.5 | 189 | 1.9 | 241 | 4.5 | 245 | 1.3 | 8.0 | 241 | 1.3 | 318.859 | -H320 | 063-12 | |
| 4.4 | 251 | 1.7 | 0.4 | 194 | 1.8 | 247 | 4.4 | 251 | 1.7 | 7.8 | 247 | 1.7 | 326.994 | -H450 | 063-12 | |
| 3.9 | 284 | 1.6 | 0.4 | 219 | 1.6 | 279 | 3.9 | 284 | 1.6 | 6.9 | 279 | 1.6 | 369.548 | -H450 | 063-12 | |

g500-H helical geared motors

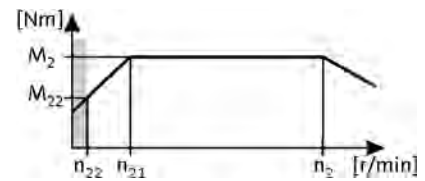


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.18$ kW
 87 Hz: $P_N = 0.33$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 526 | 3.0 | 4.7 | 56 | 2.4 | 231 | 3.0 | 526 | 3.0 | 4.7 | 953 | 3.0 | 3.9 | 2.597 | -H45 | 063-32 | |
| 400 | 4.0 | 4.5 | 43 | 3.2 | 176 | 4.0 | 400 | 4.0 | 4.5 | 725 | 4.0 | 3.7 | 3.413 | -H45 | 063-32 | |
| 313 | 5.0 | 3.9 | 33 | 4.1 | 137 | 5.0 | 313 | 5.0 | 3.9 | 567 | 5.0 | 3.3 | 4.368 | -H45 | 063-32 | |
| 257 | 6.0 | 4.2 | 27 | 5.0 | 113 | 6.0 | 257 | 6.0 | 4.2 | 466 | 7.0 | 3.5 | 5.312 | -H45 | 063-32 | |
| 229 | 7.0 | 4.0 | 24 | 5.6 | 101 | 7.0 | 229 | 7.0 | 4.0 | 415 | 7.0 | 3.3 | 5.965 | -H45 | 063-32 | |
| 212 | 8.0 | 4.5 | 23 | 6.1 | 93 | 8.0 | 212 | 8.0 | 4.5 | 384 | 8.0 | 3.7 | 6.440 | -H100 | 063-32 | |
| 196 | 9.0 | 3.5 | 21 | 6.6 | 86 | 9.0 | 196 | 9.0 | 3.5 | 355 | 9.0 | 2.9 | 6.982 | -H45 | 063-32 | |
| 174 | 10 | 3.3 | 19 | 7.4 | 77 | 10 | 174 | 10 | 3.3 | 316 | 10 | 2.8 | 7.840 | -H45 | 063-32 | |
| 166 | 10 | 4.1 | 18 | 7.7 | 73 | 10 | 166 | 10 | 4.1 | 301 | 10 | 3.5 | 8.214 | -H100 | 063-32 | |
| 153 | 11 | 3.0 | 16 | 8.4 | 67 | 11 | 153 | 11 | 3.0 | 277 | 11 | 2.5 | 8.935 | -H45 | 063-32 | |
| 136 | 12 | 2.9 | 15 | 9.4 | 60 | 12 | 136 | 12 | 2.9 | 247 | 12 | 2.4 | 10.033 | -H45 | 063-32 | |
| 120 | 14 | 4.5 | 13 | 11 | 53 | 14 | 120 | 14 | 4.5 | 218 | 14 | 3.7 | 11.360 | -H100 | 063-32 | |
| 119 | 14 | 2.5 | 13 | 11 | 53 | 14 | 119 | 14 | 2.5 | 217 | 14 | 2.1 | 11.429 | -H45 | 063-32 | |
| 108 | 15 | 4.1 | 12 | 12 | 47 | 15 | 108 | 15 | 4.1 | 196 | 16 | 3.5 | 12.653 | -H100 | 063-32 | |
| 106 | 16 | 2.4 | 11 | 12 | 47 | 16 | 106 | 16 | 2.4 | 193 | 16 | 2.0 | 12.833 | -H45 | 063-32 | |
| 94 | 18 | 4.1 | 10 | 14 | 41 | 18 | 94 | 18 | 4.1 | 171 | 18 | 3.5 | 14.490 | -H100 | 063-32 | |
| 92 | 18 | 2.2 | 9.8 | 14 | 40 | 18 | 92 | 18 | 2.2 | 167 | 18 | 1.8 | 14.836 | -H45 | 063-32 | |
| 85 | 20 | 4.1 | 9.0 | 15 | 37 | 20 | 85 | 20 | 4.1 | 154 | 20 | 3.5 | 16.122 | -H140 | 063-32 | |
| 82 | 20 | 2.0 | 8.7 | 16 | 36 | 20 | 82 | 20 | 2.0 | 149 | 21 | 1.9 | 16.660 | -H45 | 063-32 | |
| 77 | 22 | 4.1 | 8.1 | 17 | 34 | 22 | 77 | 22 | 4.1 | 139 | 22 | 3.5 | 17.802 | -H140 | 063-32 | |
| 72 | 23 | 1.8 | 7.6 | 18 | 32 | 23 | 72 | 23 | 1.8 | 130 | 23 | 1.7 | 19.013 | -H45 | 063-32 | |
| 70 | 24 | 3.5 | 7.4 | 18 | 31 | 24 | 70 | 24 | 3.5 | 127 | 24 | 2.9 | 19.486 | -H100 | 063-32 | |
| 64 | 26 | 1.7 | 6.8 | 20 | 28 | 26 | 64 | 26 | 1.7 | 116 | 26 | 1.6 | 21.350 | -H45 | 063-32 | |
| 61 | 27 | 3.5 | 6.5 | 21 | 27 | 27 | 61 | 27 | 3.5 | 111 | 28 | 2.9 | 22.314 | -H100 | 063-32 | |
| 56 | 30 | 1.5 | 5.9 | 23 | 24 | 30 | 56 | 30 | 1.5 | 101 | 30 | 1.4 | 24.595 | -H45 | 063-32 | |
| 54 | 31 | 2.9 | 5.8 | 24 | 24 | 31 | 54 | 31 | 2.9 | 99 | 31 | 2.5 | 25.095 | -H100 | 063-32 | |
| 49 | 34 | 1.3 | 5.3 | 26 | 22 | 34 | 49 | 34 | 1.3 | 90 | 34 | 1.3 | 27.618 | -H45 | 063-32 | |
| 48 | 35 | 2.9 | 5.0 | 27 | 21 | 35 | 48 | 35 | 2.9 | 86 | 36 | 2.7 | 28.738 | -H100 | 063-32 | |
| 43 | 39 | 2.6 | 4.6 | 30 | 19 | 39 | 43 | 39 | 2.6 | 78 | 39 | 2.4 | 31.805 | -H100 | 063-32 | |
| 43 | 39 | 2.9 | 4.5 | 30 | 19 | 39 | 43 | 39 | 2.9 | 77 | 40 | 2.8 | 31.976 | -H140 | 063-32 | |
| 43 | 39 | 1.2 | 4.5 | 30 | 19 | 39 | 43 | 39 | 1.2 | 77 | 40 | 1.1 | 32.000 | -H45 | 063-32 | |
| 39 | 43 | 2.9 | 4.1 | 33 | 17 | 43 | 39 | 43 | 2.9 | 71 | 43 | 2.8 | 35.095 | -H210 | 063-32 | |
| 39 | 43 | 2.9 | 4.1 | 33 | 17 | 43 | 39 | 43 | 2.9 | 70 | 44 | 2.8 | 35.308 | -H140 | 063-32 | |
| 38 | 44 | 1.0 | 4.0 | 34 | 17 | 44 | 38 | 44 | 1.0 | 69 | 44 | 1.0 | 35.933 | -H45 | 063-32 | |
| 38 | 44 | 2.3 | 4.0 | 34 | 17 | 44 | 38 | 44 | 2.3 | 68 | 45 | 2.1 | 36.422 | -H100 | 063-32 | |

g500-H helical geared motors

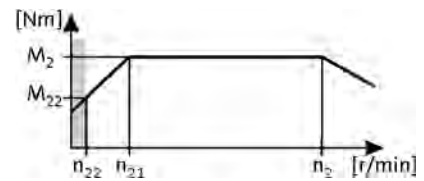


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.18$ kW
 87 Hz: $P_N = 0.33$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 36 | 47 | 2.9 | 3.8 | 36 | 16 | 47 | 36 | 47 | 2.9 | 65 | 47 | 2.8 | 38.238 | -H320 | 063-32 | |
| 35 | 48 | 2.9 | 3.7 | 37 | 15 | 48 | 35 | 48 | 2.9 | 63 | 49 | 2.8 | 39.286 | -H210 | 063-32 | |
| 34 | 49 | 2.1 | 3.6 | 38 | 15 | 49 | 34 | 49 | 2.1 | 62 | 49 | 2.0 | 39.857 | -H100 | 063-32 | |
| 34 | 50 | 2.6 | 3.6 | 38 | 15 | 50 | 34 | 50 | 2.6 | 61 | 50 | 2.5 | 40.526 | -H140 | 063-32 | |
| 33 | 51 | 0.9 | 3.5 | 39 | 15 | 51 | 33 | 51 | 0.9 | 60 | 51 | 0.8 | 41.455 | -H45 | 063-32 | |
| 32 | 52 | 2.6 | 3.4 | 40 | 14 | 52 | 32 | 52 | 2.6 | 58 | 53 | 2.5 | 42.593 | -H210 | 063-32 | |
| 31 | 53 | 2.9 | 3.3 | 41 | 14 | 53 | 31 | 53 | 2.9 | 57 | 54 | 2.9 | 43.436 | -H320 | 063-32 | |
| 31 | 55 | 2.6 | 3.2 | 42 | 13 | 55 | 31 | 55 | 2.6 | 55 | 55 | 2.5 | 44.748 | -H140 | 063-32 | |
| 30 | 56 | 1.8 | 3.2 | 43 | 13 | 56 | 30 | 56 | 1.8 | 54 | 56 | 1.8 | 45.643 | -H100 | 063-32 | |
| 29 | 57 | 2.6 | 3.1 | 44 | 13 | 57 | 29 | 57 | 2.6 | 53 | 57 | 2.5 | 46.407 | -H320 | 063-32 | |
| 29 | 58 | 2.6 | 3.0 | 45 | 13 | 58 | 29 | 58 | 2.6 | 52 | 59 | 2.5 | 47.679 | -H210 | 063-32 | |
| 27 | 62 | 2.1 | 2.9 | 48 | 12 | 62 | 27 | 62 | 2.1 | 49 | 63 | 2.1 | 50.786 | -H140 | 063-32 | |
| 26 | 64 | 1.1 | 2.8 | 49 | 11 | 64 | 26 | 64 | 1.1 | 47 | 65 | 1.1 | 52.510 | -H100 | 063-32 | |
| 26 | 64 | 2.6 | 2.8 | 50 | 11 | 64 | 26 | 64 | 2.6 | 47 | 65 | 2.5 | 52.715 | -H320 | 063-32 | |
| 25 | 67 | 2.0 | 2.7 | 51 | 11 | 67 | 25 | 67 | 2.0 | 46 | 67 | 2.0 | 54.438 | -H210 | 063-32 | |
| 24 | 69 | 2.0 | 2.6 | 53 | 11 | 69 | 24 | 69 | 2.0 | 44 | 69 | 2.0 | 56.077 | -H140 | 063-32 | |
| 23 | 73 | 1.1 | 2.4 | 57 | 10 | 73 | 23 | 73 | 1.1 | 41 | 74 | 1.1 | 60.133 | -H100 | 063-32 | |
| 22 | 74 | 2.0 | 2.4 | 57 | 9.8 | 74 | 22 | 74 | 2.0 | 41 | 75 | 2.0 | 60.938 | -H210 | 063-32 | |
| 20 | 82 | 1.1 | 2.2 | 63 | 9.0 | 82 | 20 | 82 | 1.1 | 37 | 83 | 1.1 | 66.908 | -H140 | 063-32 | |
| 19 | 90 | 1.1 | 2.0 | 70 | 8.1 | 90 | 19 | 90 | 1.1 | 34 | 91 | 1.1 | 73.879 | -H140 | 063-32 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 25 | 67 | 3.1 | 2.6 | 52 | 11 | 67 | 25 | 67 | 3.1 | 45 | 68 | 3.0 | 55.529 | -H210 | 063-32 | |
| 22 | 75 | 2.8 | 2.3 | 58 | 9.7 | 75 | 22 | 75 | 2.8 | 40 | 76 | 2.7 | 62.160 | -H210 | 063-32 | |
| 19 | 85 | 2.5 | 2.0 | 66 | 8.4 | 85 | 19 | 85 | 2.5 | 35 | 86 | 2.3 | 71.026 | -H210 | 063-32 | |
| 17 | 96 | 2.2 | 1.8 | 74 | 7.5 | 96 | 17 | 96 | 2.2 | 31 | 97 | 2.1 | 79.507 | -H210 | 063-32 | |
| 16 | 106 | 3.0 | 1.6 | 82 | 6.8 | 106 | 16 | 106 | 3.0 | 28 | 107 | 3.0 | 87.906 | -H320 | 063-32 | |
| 15 | 111 | 1.9 | 1.6 | 85 | 6.5 | 111 | 15 | 111 | 1.9 | 27 | 112 | 1.9 | 92.205 | -H210 | 063-32 | |
| 14 | 121 | 2.7 | 1.4 | 93 | 6.0 | 121 | 14 | 121 | 2.7 | 25 | 122 | 2.6 | 100.462 | -H320 | 063-32 | |
| 13 | 124 | 1.7 | 1.4 | 96 | 5.8 | 124 | 13 | 124 | 1.7 | 24 | 126 | 1.7 | 103.214 | -H210 | 063-32 | |
| 12 | 137 | 2.3 | 1.3 | 106 | 5.3 | 137 | 12 | 137 | 2.3 | 22 | 139 | 2.3 | 114.118 | -H320 | 063-32 | |
| 12 | 142 | 1.5 | 1.2 | 110 | 5.1 | 142 | 12 | 142 | 1.5 | 21 | 144 | 1.5 | 118.162 | -H210 | 063-32 | |
| 11 | 146 | 3.1 | 1.2 | 112 | 4.9 | 146 | 11 | 146 | 3.1 | 20 | 148 | 3.1 | 121.342 | -H450 | 063-32 | |
| 11 | 155 | 2.1 | 1.1 | 119 | 4.7 | 155 | 11 | 155 | 2.1 | 19 | 157 | 2.0 | 128.743 | -H320 | 063-32 | |
| 10 | 159 | 1.3 | 1.1 | 123 | 4.5 | 159 | 10 | 159 | 1.3 | 19 | 161 | 1.3 | 132.270 | -H210 | 063-32 | |
| 10 | 165 | 2.7 | 1.1 | 127 | 4.4 | 165 | 10 | 165 | 2.7 | 18 | 167 | 2.7 | 137.133 | -H450 | 063-32 | |
| 9.3 | 176 | 1.8 | 1.0 | 136 | 4.1 | 176 | 9.3 | 176 | 1.8 | 17 | 178 | 1.8 | 146.244 | -H320 | 063-32 | |

g500-H helical geared motors

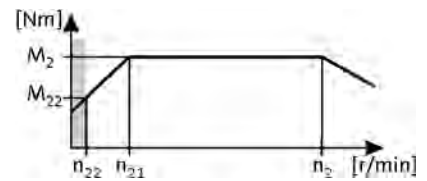


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.18$ kW
 87 Hz: $P_N = 0.33$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|---------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 8.9 | 184 | 1.1 | 0.9 | 142 | 3.9 | 184 | 8.9 | 184 | 1.1 | 16 | 186 | 1.1 | 152.853 | -H210 | 063-32 | |
| 8.7 | 188 | 2.4 | 0.9 | 145 | 3.8 | 188 | 8.7 | 188 | 2.4 | 16 | 190 | 2.4 | 156.274 | -H450 | 063-32 | |
| 8.2 | 200 | 1.6 | 0.9 | 154 | 3.6 | 200 | 8.2 | 200 | 1.6 | 15 | 203 | 1.6 | 166.541 | -H320 | 063-32 | |
| 8.0 | 206 | 1.0 | 0.8 | 159 | 3.5 | 206 | 8.0 | 206 | 1.0 | 15 | 208 | 1.0 | 171.104 | -H210 | 063-32 | |
| 7.7 | 213 | 2.1 | 0.8 | 164 | 3.4 | 213 | 7.7 | 213 | 2.1 | 14 | 215 | 2.1 | 176.611 | -H450 | 063-32 | |
| 7.2 | 228 | 1.4 | 0.8 | 175 | 3.2 | 228 | 7.2 | 228 | 1.4 | 13 | 230 | 1.4 | 189.179 | -H320 | 063-32 | |
| 6.9 | 238 | 1.9 | 0.7 | 184 | 3.0 | 238 | 6.9 | 238 | 1.9 | 13 | 241 | 1.9 | 198.059 | -H450 | 063-32 | |
| 6.9 | 239 | 0.9 | 0.7 | 184 | 3.0 | 239 | 6.9 | 239 | 0.9 | 12 | 242 | 0.9 | 198.873 | -H210 | 063-32 | |
| 6.3 | 261 | 1.2 | 0.7 | 201 | 2.8 | 261 | 6.3 | 261 | 1.2 | 11 | 264 | 1.2 | 216.683 | -H320 | 063-32 | |
| 6.1 | 269 | 1.7 | 0.6 | 207 | 2.7 | 269 | 6.1 | 269 | 1.7 | 11 | 272 | 1.7 | 223.833 | -H450 | 063-32 | |
| 5.5 | 296 | 1.1 | 0.6 | 228 | 2.4 | 296 | 5.5 | 296 | 1.1 | 10 | 299 | 1.1 | 246.137 | -H320 | 063-32 | |
| 5.5 | 299 | 1.5 | 0.6 | 230 | 2.4 | 299 | 5.5 | 299 | 1.5 | 10 | 302 | 1.5 | 248.200 | -H450 | 063-32 | |
| 4.9 | 338 | 1.3 | 0.5 | 260 | 2.1 | 338 | 4.9 | 338 | 1.3 | 8.8 | 341 | 1.3 | 280.500 | -H450 | 063-32 | |
| 4.2 | 394 | 1.1 | 0.4 | 303 | 1.8 | 394 | 4.2 | 394 | 1.1 | 7.6 | 398 | 1.1 | 326.994 | -H450 | 063-32 | |
| 3.7 | 445 | 1.0 | 0.4 | 342 | 1.6 | 445 | 3.7 | 445 | 1.0 | 6.7 | 450 | 1.0 | 369.548 | -H450 | 063-32 | |

g500-H helical geared motors

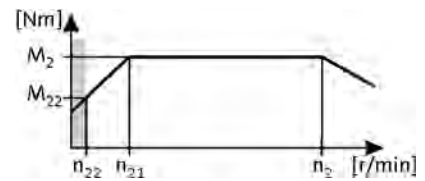


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.25$ kW
 87 Hz: $P_N = 0.45$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 528 | 4.0 | 4.1 | 56 | 3.4 | 231 | 4.0 | 528 | 4.0 | 4.1 | 955 | 4.0 | 3.5 | 2.597 | -H45 | 063-42 | |
| 419 | 6.0 | 5.6 | 44 | 4.3 | 184 | 5.0 | 419 | 6.0 | 5.6 | 759 | 5.0 | 4.8 | 3.267 | -H140 | 063-42 | |
| 408 | 6.0 | 5.6 | 43 | 4.4 | 179 | 6.0 | 408 | 6.0 | 5.6 | 739 | 6.0 | 4.8 | 3.354 | -H100 | 063-42 | |
| 401 | 6.0 | 3.3 | 43 | 4.4 | 176 | 6.0 | 401 | 6.0 | 3.3 | 727 | 6.0 | 2.8 | 3.413 | -H45 | 063-42 | |
| 314 | 7.0 | 2.8 | 33 | 5.7 | 137 | 7.0 | 314 | 7.0 | 2.8 | 568 | 7.0 | 2.4 | 4.368 | -H45 | 063-42 | |
| 298 | 8.0 | 5.6 | 32 | 6.0 | 130 | 8.0 | 298 | 8.0 | 5.6 | 539 | 8.0 | 4.8 | 4.600 | -H100 | 063-42 | |
| 265 | 9.0 | 5.6 | 28 | 6.7 | 116 | 9.0 | 265 | 9.0 | 5.6 | 480 | 9.0 | 4.8 | 5.167 | -H100 | 063-42 | |
| 258 | 9.0 | 3.0 | 27 | 6.9 | 113 | 9.0 | 258 | 9.0 | 3.0 | 467 | 9.0 | 2.6 | 5.312 | -H45 | 063-42 | |
| 233 | 10 | 5.2 | 25 | 7.7 | 102 | 10 | 233 | 10 | 5.2 | 421 | 10 | 4.4 | 5.887 | -H100 | 063-42 | |
| 230 | 10 | 2.9 | 24 | 7.8 | 101 | 10 | 230 | 10 | 2.9 | 416 | 10 | 2.5 | 5.965 | -H45 | 063-42 | |
| 213 | 11 | 5.2 | 23 | 8.4 | 93 | 11 | 213 | 11 | 5.2 | 385 | 11 | 4.4 | 6.440 | -H100 | 063-42 | |
| 196 | 12 | 2.5 | 21 | 9.1 | 86 | 12 | 196 | 12 | 2.5 | 355 | 12 | 2.2 | 6.982 | -H45 | 063-42 | |
| 193 | 12 | 5.6 | 21 | 9.2 | 85 | 12 | 193 | 12 | 5.6 | 350 | 12 | 4.8 | 7.086 | -H100 | 063-42 | |
| 175 | 13 | 2.4 | 19 | 10 | 77 | 13 | 175 | 13 | 2.4 | 316 | 13 | 2.1 | 7.840 | -H45 | 063-42 | |
| 167 | 14 | 4.8 | 18 | 11 | 73 | 14 | 167 | 14 | 4.8 | 302 | 14 | 4.1 | 8.214 | -H100 | 063-42 | |
| 153 | 15 | 2.2 | 16 | 12 | 67 | 15 | 153 | 15 | 2.2 | 278 | 15 | 1.9 | 8.935 | -H45 | 063-42 | |
| 151 | 15 | 5.2 | 16 | 12 | 66 | 15 | 151 | 15 | 5.2 | 274 | 15 | 4.4 | 9.068 | -H100 | 063-42 | |
| 137 | 17 | 2.1 | 15 | 13 | 60 | 17 | 137 | 17 | 2.1 | 247 | 17 | 1.8 | 10.033 | -H45 | 063-42 | |
| 136 | 17 | 4.3 | 14 | 13 | 60 | 17 | 136 | 17 | 4.3 | 247 | 17 | 3.7 | 10.063 | -H100 | 063-42 | |
| 121 | 19 | 5.2 | 13 | 15 | 53 | 19 | 121 | 19 | 5.2 | 218 | 19 | 4.4 | 11.360 | -H100 | 063-42 | |
| 120 | 19 | 1.8 | 13 | 15 | 53 | 19 | 120 | 19 | 1.8 | 217 | 19 | 1.5 | 11.429 | -H45 | 063-42 | |
| 108 | 21 | 4.7 | 12 | 17 | 47 | 21 | 108 | 21 | 4.7 | 196 | 21 | 4.0 | 12.653 | -H100 | 063-42 | |
| 107 | 22 | 1.8 | 11 | 17 | 47 | 22 | 107 | 22 | 1.8 | 193 | 22 | 1.5 | 12.833 | -H45 | 063-42 | |
| 95 | 24 | 4.1 | 10 | 19 | 41 | 24 | 95 | 24 | 4.1 | 171 | 24 | 3.5 | 14.490 | -H100 | 063-42 | |
| 92 | 25 | 1.6 | 9.8 | 19 | 40 | 25 | 92 | 25 | 1.6 | 167 | 25 | 1.3 | 14.836 | -H45 | 063-42 | |
| 88 | 26 | 3.8 | 9.4 | 20 | 39 | 26 | 88 | 26 | 3.8 | 160 | 26 | 3.3 | 15.500 | -H100 | 063-42 | |
| 82 | 28 | 1.5 | 8.7 | 22 | 36 | 28 | 82 | 28 | 1.5 | 149 | 28 | 1.4 | 16.660 | -H45 | 063-42 | |
| 77 | 30 | 3.3 | 8.2 | 23 | 34 | 30 | 77 | 30 | 3.3 | 140 | 30 | 2.8 | 17.750 | -H100 | 063-42 | |
| 72 | 32 | 1.3 | 7.6 | 25 | 32 | 32 | 72 | 32 | 1.3 | 130 | 32 | 1.3 | 19.013 | -H45 | 063-42 | |
| 70 | 33 | 3.0 | 7.4 | 25 | 31 | 33 | 70 | 33 | 3.0 | 127 | 33 | 2.6 | 19.486 | -H100 | 063-42 | |
| 64 | 36 | 1.2 | 6.8 | 28 | 28 | 36 | 64 | 36 | 1.2 | 116 | 36 | 1.2 | 21.350 | -H45 | 063-42 | |
| | | | 6.6 | 28 | 28 | 37 | | | | 114 | 37 | 3.2 | 21.808 | -H140 | 063-42 | |
| 61 | 38 | 2.7 | 6.5 | 29 | 27 | 38 | 61 | 38 | 2.7 | 111 | 38 | 2.3 | 22.314 | -H100 | 063-42 | |
| 56 | 42 | 1.1 | 5.9 | 32 | 24 | 41 | 56 | 42 | 1.1 | 101 | 41 | 1.1 | 24.595 | -H45 | 063-42 | |
| | | | 5.8 | 32 | 24 | 42 | | | | 100 | 42 | 2.8 | 24.829 | -H140 | 063-42 | |

g500-H helical geared motors

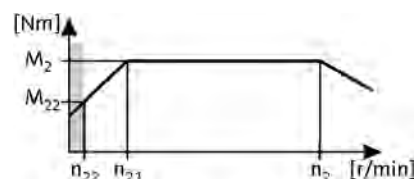


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.25$ kW
 87 Hz: $P_N = 0.45$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|-------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|------------------------|---------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | |
| 55 | 42 | 2.4 | 5.8 | 33 | 24 | 42 | 55 | 42 | 2.4 | 99 | 42 | 2.0 | 25.095 | -H100 | 063-42 | | |
| 50 | 46 | 3.0 | 5.3 | 36 | 22 | 46 | 50 | 46 | 3.0 | 91 | 46 | 2.9 | 27.415 | -H140 | 063-42 | | |
| 50 | 47 | 1.0 | 5.3 | 36 | 22 | 46 | 50 | 47 | 1.0 | 90 | 46 | 0.9 | 27.618 | -H45 | 063-42 | | |
| 48 | 49 | 2.1 | 5.0 | 37 | 21 | 48 | 48 | 49 | 2.1 | 86 | 48 | 2.0 | 28.738 | -H100 | 063-42 | | |
| 43 | 54 | 1.9 | 4.6 | 41 | 19 | 53 | 43 | 54 | 1.9 | 78 | 53 | 1.8 | 31.805 | -H100 | 063-42 | | |
| 43 | 54 | 2.6 | 4.5 | 42 | 19 | 54 | 43 | 54 | 2.6 | 78 | 54 | 2.5 | 31.976 | -H140 | 063-42 | | |
| 43 | 54 | 0.8 | 4.5 | 42 | 19 | 54 | 43 | 54 | 0.8 | 78 | 54 | 0.8 | 32.000 | -H45 | 063-42 | | |
| | | | 4.1 | 46 | 17 | 59 | | | | 71 | 59 | 3.2 | 35.095 | -H210 | 063-42 | | |
| 39 | 60 | 2.4 | 4.1 | 46 | 17 | 59 | 39 | 60 | 2.4 | 70 | 59 | 2.3 | 35.308 | -H140 | 063-42 | | |
| 38 | 62 | 1.6 | 4.0 | 47 | 17 | 61 | 38 | 62 | 1.6 | 68 | 61 | 1.6 | 36.422 | -H100 | 063-42 | | |
| | | | 3.8 | 50 | 16 | 64 | | | | 65 | 64 | 3.2 | 38.238 | -H320 | 063-42 | | |
| 35 | 66 | 3.2 | 3.7 | 51 | 15 | 66 | 35 | 66 | 3.2 | 63 | 66 | 3.1 | 39.286 | -H210 | 063-42 | | |
| 34 | 67 | 1.2 | 3.6 | 52 | 15 | 67 | 34 | 67 | 1.2 | 62 | 67 | 1.2 | 39.857 | -H100 | 063-42 | | |
| 34 | 69 | 2.0 | 3.6 | 53 | 15 | 68 | 34 | 69 | 2.0 | 61 | 68 | 2.1 | 40.526 | -H140 | 063-42 | | |
| 32 | 72 | 2.5 | 3.4 | 55 | 14 | 72 | 32 | 72 | 2.5 | 58 | 72 | 2.6 | 42.593 | -H210 | 063-42 | | |
| 32 | 73 | 3.2 | 3.3 | 56 | 14 | 73 | 32 | 73 | 3.2 | 57 | 73 | 3.2 | 43.313 | -H450 | 063-42 | | |
| 31 | 76 | 1.9 | 3.2 | 58 | 13 | 75 | 31 | 76 | 1.9 | 55 | 75 | 1.9 | 44.748 | -H140 | 063-42 | | |
| 30 | 77 | 1.2 | 3.2 | 59 | 13 | 77 | 30 | 77 | 1.2 | 54 | 77 | 1.2 | 45.643 | -H100 | 063-42 | | |
| 30 | 78 | 2.8 | 3.1 | 60 | 13 | 78 | 30 | 78 | 2.8 | 53 | 78 | 2.8 | 46.407 | -H320 | 063-42 | | |
| 29 | 81 | 2.6 | 3.0 | 62 | 13 | 80 | 29 | 81 | 2.6 | 52 | 80 | 2.6 | 47.679 | -H210 | 063-42 | | |
| 28 | 83 | 3.2 | 3.0 | 64 | 12 | 82 | 28 | 83 | 3.2 | 51 | 82 | 3.2 | 48.950 | -H450 | 063-42 | | |
| 27 | 86 | 1.2 | 2.9 | 66 | 12 | 85 | 27 | 86 | 1.2 | 49 | 85 | 1.2 | 50.786 | -H140 | 063-42 | | |
| 26 | 89 | 2.8 | 2.8 | 69 | 11 | 89 | 26 | 89 | 2.8 | 47 | 89 | 2.8 | 52.715 | -H320 | 063-42 | | |
| 25 | 92 | 1.4 | 2.7 | 71 | 11 | 92 | 25 | 92 | 1.4 | 46 | 92 | 1.4 | 54.438 | -H210 | 063-42 | | |
| 25 | 93 | 2.6 | 2.6 | 71 | 11 | 92 | 25 | 93 | 2.6 | 45 | 92 | 2.6 | 54.750 | -H450 | 063-42 | | |
| 24 | 95 | 1.2 | 2.6 | 73 | 11 | 94 | 24 | 95 | 1.2 | 44 | 94 | 1.2 | 56.077 | -H140 | 063-42 | | |
| 23 | 103 | 1.4 | 2.4 | 79 | 9.8 | 102 | 23 | 103 | 1.4 | 41 | 102 | 1.4 | 60.938 | -H210 | 063-42 | | |
| 22 | 105 | 2.6 | 2.3 | 81 | 9.7 | 104 | 22 | 105 | 2.6 | 40 | 104 | 2.6 | 61.875 | -H450 | 063-42 | | |

6.3

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|-------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|------------------------|---------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | |
| 32 | 72 | 2.9 | 3.3 | 56 | 14 | 72 | 32 | 72 | 2.9 | 57 | 72 | 2.5 | 43.390 | -H210 | 063-42 | | |
| 28 | 81 | 2.6 | 3.0 | 62 | 12 | 80 | 28 | 81 | 2.6 | 51 | 80 | 2.5 | 48.571 | -H210 | 063-42 | | |
| 25 | 92 | 2.3 | 2.6 | 71 | 11 | 92 | 25 | 92 | 2.3 | 45 | 92 | 2.2 | 55.529 | -H210 | 063-42 | | |
| 23 | 101 | 3.2 | 2.4 | 78 | 9.9 | 100 | 23 | 101 | 3.2 | 41 | 100 | 3.1 | 60.502 | -H320 | 063-42 | | |
| 22 | 104 | 2.0 | 2.3 | 80 | 9.7 | 103 | 22 | 104 | 2.0 | 40 | 103 | 2.0 | 62.160 | -H210 | 063-42 | | |
| 20 | 114 | 2.8 | 2.1 | 88 | 8.7 | 114 | 20 | 114 | 2.8 | 36 | 114 | 2.7 | 68.726 | -H320 | 063-42 | | |
| 19 | 118 | 1.8 | 2.0 | 91 | 8.4 | 118 | 19 | 118 | 1.8 | 35 | 118 | 1.7 | 71.026 | -H210 | 063-42 | | |

g500-H helical geared motors

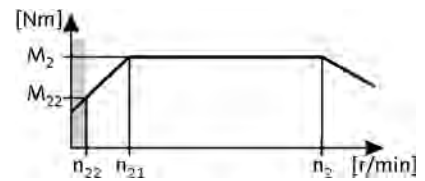


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.25$ kW
 87 Hz: $P_N = 0.45$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|---------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 18 | 129 | 2.5 | 1.9 | 99 | 7.8 | 128 | 18 | 129 | 2.5 | 32 | 128 | 2.4 | 77.387 | -H320 | 063-42 | |
| 17 | 132 | 1.6 | 1.8 | 102 | 7.5 | 132 | 17 | 132 | 1.6 | 31 | 132 | 1.5 | 79.507 | -H210 | 063-42 | |
| 16 | 146 | 2.2 | 1.6 | 113 | 6.8 | 146 | 16 | 146 | 2.2 | 28 | 146 | 2.2 | 87.906 | -H320 | 063-42 | |
| 15 | 148 | 3.0 | 1.6 | 114 | 6.7 | 147 | 15 | 148 | 3.0 | 28 | 147 | 3.1 | 89.048 | -H450 | 063-42 | |
| 15 | 154 | 1.4 | 1.6 | 118 | 6.5 | 153 | 15 | 154 | 1.4 | 27 | 153 | 1.4 | 92.205 | -H210 | 063-42 | |
| 14 | 161 | 2.8 | 1.5 | 124 | 6.2 | 160 | 14 | 161 | 2.8 | 26 | 160 | 2.8 | 96.522 | -H450 | 063-42 | |
| 14 | 167 | 1.9 | 1.4 | 129 | 6.0 | 166 | 14 | 167 | 1.9 | 25 | 166 | 1.9 | 100.462 | -H320 | 063-42 | |
| 13 | 172 | 1.2 | 1.4 | 132 | 5.8 | 171 | 13 | 172 | 1.2 | 24 | 171 | 1.2 | 103.214 | -H210 | 063-42 | |
| 13 | 182 | 2.5 | 1.3 | 140 | 5.5 | 181 | 13 | 182 | 2.5 | 23 | 181 | 2.5 | 109.083 | -H450 | 063-42 | |
| 12 | 190 | 1.7 | 1.3 | 146 | 5.3 | 189 | 12 | 190 | 1.7 | 22 | 189 | 1.7 | 114.118 | -H320 | 063-42 | |
| 12 | 197 | 1.1 | 1.2 | 152 | 5.1 | 196 | 12 | 197 | 1.1 | 21 | 196 | 1.1 | 118.162 | -H210 | 063-42 | |
| 11 | 202 | 2.2 | 1.2 | 156 | 4.9 | 201 | 11 | 202 | 2.2 | 20 | 201 | 2.2 | 121.342 | -H450 | 063-42 | |
| 11 | 214 | 1.5 | 1.1 | 165 | 4.7 | 213 | 11 | 214 | 1.5 | 19 | 213 | 1.5 | 128.743 | -H320 | 063-42 | |
| 10 | 220 | 1.0 | 1.1 | 170 | 4.5 | 219 | 10 | 220 | 1.0 | 19 | 219 | 1.0 | 132.270 | -H210 | 063-42 | |
| 10 | 228 | 2.0 | 1.1 | 176 | 4.4 | 227 | 10 | 228 | 2.0 | 18 | 227 | 2.0 | 137.133 | -H450 | 063-42 | |
| 9.4 | 244 | 1.3 | 1.0 | 188 | 4.1 | 242 | 9.4 | 244 | 1.3 | 17 | 242 | 1.3 | 146.244 | -H320 | 063-42 | |
| 9.0 | 255 | 0.8 | 0.9 | 196 | 3.9 | 253 | 9.0 | 255 | 0.8 | 16 | 253 | 0.8 | 152.853 | -H210 | 063-42 | |
| 8.8 | 260 | 1.7 | 0.9 | 200 | 3.8 | 259 | 8.8 | 260 | 1.7 | 16 | 259 | 1.7 | 156.274 | -H450 | 063-42 | |
| 8.2 | 277 | 1.2 | 0.9 | 214 | 3.6 | 276 | 8.2 | 277 | 1.2 | 15 | 276 | 1.2 | 166.541 | -H320 | 063-42 | |
| 7.8 | 294 | 1.5 | 0.8 | 227 | 3.4 | 292 | 7.8 | 294 | 1.5 | 14 | 292 | 1.5 | 176.611 | -H450 | 063-42 | |
| 7.2 | 315 | 1.0 | 0.8 | 243 | 3.2 | 313 | 7.2 | 315 | 1.0 | 13 | 313 | 1.0 | 189.179 | -H320 | 063-42 | |
| 6.9 | 330 | 1.4 | 0.7 | 254 | 3.0 | 328 | 6.9 | 330 | 1.4 | 13 | 328 | 1.4 | 198.059 | -H450 | 063-42 | |
| 6.3 | 361 | 0.9 | 0.7 | 278 | 2.8 | 359 | 6.3 | 361 | 0.9 | 11 | 359 | 0.9 | 216.683 | -H320 | 063-42 | |
| 6.1 | 373 | 1.2 | 0.6 | 287 | 2.7 | 371 | 6.1 | 373 | 1.2 | 11 | 371 | 1.2 | 223.833 | -H450 | 063-42 | |
| 5.5 | 413 | 1.1 | 0.6 | 318 | 2.4 | 411 | 5.5 | 413 | 1.1 | 10 | 411 | 1.1 | 248.200 | -H450 | 063-42 | |
| 4.9 | 467 | 1.0 | 0.5 | 360 | 2.1 | 464 | 4.9 | 467 | 1.0 | 8.8 | 464 | 1.0 | 280.500 | -H450 | 063-42 | |

g500-H helical geared motors

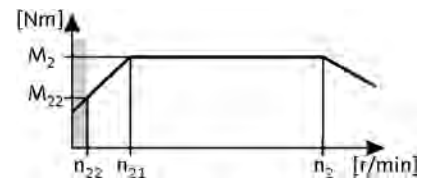


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 543 | 6.0 | 2.9 | 56 | 4.9 | 231 | 6.0 | 543 | 6.0 | 2.9 | 970 | 6.0 | 2.4 | 2.597 | -H45 | 071-32 | |
| 432 | 8.0 | 4.9 | 44 | 6.1 | 184 | 8.0 | 432 | 8.0 | 4.9 | 771 | 8.0 | 4.1 | 3.267 | -H140 | 071-32 | |
| 420 | 8.0 | 4.9 | 43 | 6.3 | 179 | 8.0 | 420 | 8.0 | 4.9 | 751 | 8.0 | 4.1 | 3.354 | -H100 | 071-32 | |
| 413 | 8.0 | 2.3 | 43 | 6.4 | 176 | 8.0 | 413 | 8.0 | 2.3 | 738 | 8.0 | 1.9 | 3.413 | -H45 | 071-32 | |
| 323 | 11 | 2.0 | 33 | 8.2 | 137 | 11 | 323 | 11 | 2.0 | 577 | 11 | 1.7 | 4.368 | -H45 | 071-32 | |
| 307 | 11 | 4.9 | 32 | 8.6 | 130 | 11 | 307 | 11 | 4.9 | 548 | 11 | 4.1 | 4.600 | -H100 | 071-32 | |
| 273 | 13 | 4.9 | 28 | 9.7 | 116 | 13 | 273 | 13 | 4.9 | 488 | 13 | 4.1 | 5.167 | -H100 | 071-32 | |
| 265 | 13 | 2.1 | 27 | 9.9 | 113 | 13 | 265 | 13 | 2.1 | 474 | 13 | 1.8 | 5.312 | -H45 | 071-32 | |
| 240 | 14 | 4.5 | 25 | 11 | 102 | 14 | 240 | 14 | 4.5 | 428 | 14 | 3.8 | 5.887 | -H100 | 071-32 | |
| 236 | 15 | 2.0 | 24 | 11 | 101 | 14 | 236 | 15 | 2.0 | 422 | 14 | 1.7 | 5.965 | -H45 | 071-32 | |
| 219 | 16 | 4.5 | 23 | 12 | 93 | 16 | 219 | 16 | 4.5 | 391 | 16 | 3.8 | 6.440 | -H100 | 071-32 | |
| 202 | 17 | 1.8 | 21 | 13 | 86 | 17 | 202 | 17 | 1.8 | 361 | 17 | 1.5 | 6.982 | -H45 | 071-32 | |
| 199 | 17 | 4.9 | 21 | 13 | 85 | 17 | 199 | 17 | 4.9 | 356 | 17 | 4.1 | 7.086 | -H100 | 071-32 | |
| 180 | 19 | 1.7 | 19 | 15 | 77 | 19 | 180 | 19 | 1.7 | 321 | 19 | 1.4 | 7.840 | -H45 | 071-32 | |
| 172 | 20 | 4.2 | 18 | 15 | 73 | 20 | 172 | 20 | 4.2 | 307 | 20 | 3.5 | 8.214 | -H100 | 071-32 | |
| 158 | 22 | 1.5 | 16 | 17 | 67 | 22 | 158 | 22 | 1.5 | 282 | 22 | 1.3 | 8.935 | -H45 | 071-32 | |
| 156 | 22 | 4.4 | 16 | 17 | 66 | 22 | 156 | 22 | 4.4 | 278 | 22 | 3.7 | 9.068 | -H100 | 071-32 | |
| | | | 15 | 18 | 61 | 24 | | | | 257 | 24 | 3.2 | 9.800 | -H140 | 071-32 | |
| 141 | 24 | 1.4 | 15 | 19 | 60 | 24 | 141 | 24 | 1.4 | 251 | 24 | 1.2 | 10.033 | -H45 | 071-32 | |
| 140 | 24 | 3.7 | 14 | 19 | 60 | 24 | 140 | 24 | 3.7 | 250 | 24 | 3.2 | 10.063 | -H100 | 071-32 | |
| 124 | 28 | 3.6 | 13 | 21 | 53 | 28 | 124 | 28 | 3.6 | 222 | 28 | 3.1 | 11.360 | -H100 | 071-32 | |
| 123 | 28 | 1.3 | 13 | 21 | 53 | 28 | 123 | 28 | 1.3 | 221 | 28 | 1.1 | 11.429 | -H45 | 071-32 | |
| 111 | 31 | 3.3 | 12 | 24 | 47 | 31 | 111 | 31 | 3.3 | 199 | 31 | 2.7 | 12.653 | -H100 | 071-32 | |
| 110 | 31 | 1.2 | 11 | 24 | 47 | 31 | 110 | 31 | 1.2 | 196 | 31 | 1.0 | 12.833 | -H45 | 071-32 | |
| 97 | 35 | 2.8 | 10 | 27 | 41 | 35 | 97 | 35 | 2.8 | 174 | 35 | 2.4 | 14.490 | -H100 | 071-32 | |
| 95 | 36 | 1.1 | 9.8 | 28 | 40 | 36 | 95 | 36 | 1.1 | 170 | 36 | 0.9 | 14.836 | -H45 | 071-32 | |
| 91 | 38 | 2.7 | 9.4 | 29 | 39 | 38 | 91 | 38 | 2.7 | 163 | 38 | 2.2 | 15.500 | -H100 | 071-32 | |
| | | | 9.0 | 30 | 37 | 39 | | | | 156 | 39 | 3.0 | 16.122 | -H140 | 071-32 | |
| 85 | 41 | 1.0 | 8.7 | 31 | 36 | 40 | 85 | 41 | 1.0 | 151 | 40 | 1.0 | 16.660 | -H45 | 071-32 | |
| 79 | 43 | 2.3 | 8.2 | 33 | 34 | 43 | 79 | 43 | 2.3 | 142 | 43 | 2.0 | 17.750 | -H100 | 071-32 | |
| 79 | 43 | 3.2 | 8.1 | 33 | 34 | 43 | 79 | 43 | 3.2 | 142 | 43 | 2.7 | 17.802 | -H140 | 071-32 | |
| 74 | 46 | 0.9 | 7.6 | 36 | 32 | 46 | 74 | 46 | 0.9 | 133 | 46 | 0.9 | 19.013 | -H45 | 071-32 | |
| 72 | 47 | 2.1 | 7.4 | 37 | 31 | 47 | 72 | 47 | 2.1 | 129 | 47 | 1.8 | 19.486 | -H100 | 071-32 | |
| 71 | 48 | 2.9 | 7.3 | 37 | 30 | 48 | 71 | 48 | 2.9 | 128 | 48 | 2.5 | 19.750 | -H140 | 071-32 | |
| 66 | 52 | 0.9 | 6.8 | 40 | 28 | 52 | 66 | 52 | 0.9 | 118 | 52 | 0.8 | 21.350 | -H45 | 071-32 | |

g500-H helical geared motors

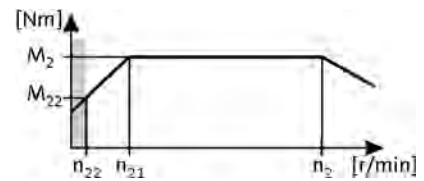


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| | | | 6.7 | 41 | 28 | 53 | | | | 116 | 53 | 3.2 | 21.802 | -H210 | 071-32 | |
| 65 | 53 | 2.6 | 6.6 | 41 | 28 | 53 | 65 | 53 | 2.6 | 116 | 53 | 2.2 | 21.808 | -H140 | 071-32 | |
| 63 | 54 | 1.8 | 6.5 | 42 | 27 | 54 | 63 | 54 | 1.8 | 113 | 54 | 1.6 | 22.314 | -H100 | 071-32 | |
| | | | 6.1 | 45 | 25 | 58 | | | | 106 | 58 | 3.2 | 23.754 | -H320 | 071-32 | |
| | | | 5.9 | 46 | 25 | 59 | | | | 103 | 59 | 3.0 | 24.405 | -H210 | 071-32 | |
| 57 | 60 | 2.3 | 5.8 | 47 | 24 | 60 | 57 | 60 | 2.3 | 102 | 60 | 2.0 | 24.829 | -H140 | 071-32 | |
| 56 | 61 | 1.6 | 5.8 | 47 | 24 | 61 | 56 | 61 | 1.6 | 100 | 61 | 1.4 | 25.095 | -H100 | 071-32 | |
| 52 | 66 | 3.2 | 5.3 | 51 | 22 | 66 | 52 | 66 | 3.2 | 93 | 66 | 3.0 | 27.119 | -H210 | 071-32 | |
| 51 | 67 | 2.1 | 5.3 | 51 | 22 | 67 | 51 | 67 | 2.1 | 92 | 67 | 2.0 | 27.415 | -H140 | 071-32 | |
| 49 | 70 | 1.4 | 5.0 | 54 | 21 | 70 | 49 | 70 | 1.4 | 88 | 70 | 1.4 | 28.738 | -H100 | 071-32 | |
| 48 | 72 | 3.2 | 4.9 | 55 | 20 | 72 | 48 | 72 | 3.2 | 85 | 72 | 3.0 | 29.548 | -H320 | 071-32 | |
| 46 | 74 | 2.9 | 4.8 | 57 | 20 | 74 | 46 | 74 | 2.9 | 83 | 74 | 2.7 | 30.357 | -H210 | 071-32 | |
| 44 | 77 | 1.3 | 4.6 | 60 | 19 | 77 | 44 | 77 | 1.3 | 79 | 77 | 1.2 | 31.805 | -H100 | 071-32 | |
| 44 | 78 | 1.8 | 4.5 | 60 | 19 | 78 | 44 | 78 | 1.8 | 79 | 78 | 1.7 | 31.976 | -H140 | 071-32 | |
| 42 | 82 | 3.2 | 4.3 | 63 | 18 | 81 | 42 | 82 | 3.2 | 75 | 81 | 3.0 | 33.564 | -H320 | 071-32 | |
| 40 | 85 | 2.5 | 4.1 | 66 | 17 | 85 | 40 | 85 | 2.5 | 72 | 85 | 2.4 | 35.095 | -H210 | 071-32 | |
| 40 | 86 | 1.6 | 4.1 | 66 | 17 | 86 | 40 | 86 | 1.6 | 71 | 86 | 1.6 | 35.308 | -H140 | 071-32 | |
| 40 | 87 | 3.2 | 4.1 | 67 | 17 | 87 | 40 | 87 | 3.2 | | | | 35.689 | -H450 | 071-32 | |
| 39 | 89 | 1.1 | 4.0 | 68 | 17 | 88 | 39 | 89 | 1.1 | 69 | 88 | 1.1 | 36.422 | -H100 | 071-32 | |
| 37 | 93 | 2.7 | 3.8 | 72 | 16 | 93 | 37 | 93 | 2.7 | 66 | 93 | 2.6 | 38.238 | -H320 | 071-32 | |
| 36 | 96 | 2.2 | 3.7 | 74 | 15 | 95 | 36 | 96 | 2.2 | 64 | 95 | 2.1 | 39.286 | -H210 | 071-32 | |
| 35 | 97 | 1.0 | 3.6 | 75 | 15 | 97 | 35 | 97 | 1.0 | 63 | 97 | 1.0 | 39.857 | -H100 | 071-32 | |
| 35 | 98 | 3.2 | 3.6 | 76 | 15 | 98 | 35 | 98 | 3.2 | | | | 40.333 | -H450 | 071-32 | |
| 35 | 99 | 1.4 | 3.6 | 76 | 15 | 98 | 35 | 99 | 1.4 | 62 | 98 | 1.4 | 40.526 | -H140 | 071-32 | |
| 33 | 104 | 1.8 | 3.4 | 80 | 14 | 103 | 33 | 104 | 1.8 | 59 | 103 | 1.8 | 42.593 | -H210 | 071-32 | |
| 33 | 105 | 2.8 | 3.3 | 81 | 14 | 105 | 33 | 105 | 2.8 | 58 | 105 | 2.8 | 43.313 | -H450 | 071-32 | |
| 33 | 106 | 2.7 | 3.3 | 81 | 14 | 105 | 33 | 106 | 2.7 | 58 | 105 | 2.7 | 43.436 | -H320 | 071-32 | |
| 32 | 109 | 1.3 | 3.2 | 84 | 13 | 109 | 32 | 109 | 1.3 | 56 | 109 | 1.3 | 44.748 | -H140 | 071-32 | |
| 31 | 111 | 0.9 | 3.2 | 85 | 13 | 111 | 31 | 111 | 0.9 | 55 | 111 | 0.9 | 45.643 | -H100 | 071-32 | |
| 30 | 113 | 1.9 | 3.1 | 87 | 13 | 113 | 30 | 113 | 1.9 | 54 | 113 | 1.9 | 46.407 | -H320 | 071-32 | |
| 30 | 116 | 1.8 | 3.0 | 89 | 13 | 116 | 30 | 116 | 1.8 | 53 | 116 | 1.8 | 47.679 | -H210 | 071-32 | |
| 29 | 119 | 2.8 | 3.0 | 92 | 12 | 119 | 29 | 119 | 2.8 | 52 | 119 | 2.8 | 48.950 | -H450 | 071-32 | |
| 28 | 123 | 1.1 | 2.9 | 95 | 12 | 123 | 28 | 123 | 1.1 | 50 | 123 | 1.1 | 50.786 | -H140 | 071-32 | |
| 27 | 128 | 1.9 | 2.8 | 99 | 11 | 128 | 27 | 128 | 1.9 | 48 | 128 | 1.9 | 52.715 | -H320 | 071-32 | |
| 26 | 132 | 1.0 | 2.7 | 102 | 11 | 132 | 26 | 132 | 1.0 | 46 | 132 | 1.0 | 54.438 | -H210 | 071-32 | |

g500-H helical geared motors

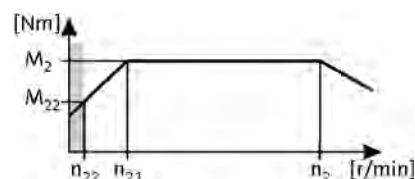


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 26 | 133 | 2.1 | 2.6 | 103 | 11 | 133 | 26 | 133 | 2.1 | 46 | 133 | 2.1 | 54.750 | -H450 | 071-32 | |
| 25 | 136 | 1.0 | 2.6 | 105 | 11 | 136 | 25 | 136 | 1.0 | 45 | 136 | 1.0 | 56.077 | -H140 | 071-32 | |
| 23 | 148 | 1.1 | 2.4 | 114 | 9.8 | 148 | 23 | 148 | 1.1 | 41 | 148 | 1.1 | 60.938 | -H210 | 071-32 | |
| 23 | 150 | 2.0 | 2.3 | 116 | 9.7 | 150 | 23 | 150 | 2.0 | 41 | 150 | 2.0 | 61.875 | -H450 | 071-32 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 33 | 104 | 2.0 | 3.3 | 80 | 14 | 104 | 33 | 104 | 2.0 | 58 | 104 | 1.7 | 43.390 | -H210 | 071-32 | |
| 30 | 113 | 2.8 | 3.1 | 87 | 13 | 113 | 30 | 113 | 2.8 | 53 | 113 | 2.7 | 47.276 | -H320 | 071-32 | |
| 29 | 116 | 1.8 | 3.0 | 90 | 12 | 116 | 29 | 116 | 1.8 | 52 | 116 | 1.7 | 48.571 | -H210 | 071-32 | |
| 26 | 129 | 2.5 | 2.7 | 99 | 11 | 128 | 26 | 129 | 2.5 | 47 | 128 | 2.4 | 53.703 | -H320 | 071-32 | |
| 25 | 133 | 1.6 | 2.6 | 102 | 11 | 133 | 25 | 133 | 1.6 | 45 | 133 | 1.5 | 55.529 | -H210 | 071-32 | |
| | | | 2.6 | 104 | 11 | 135 | | | | 45 | 135 | 3.2 | 56.469 | -H450 | 071-32 | |
| 23 | 145 | 2.2 | 2.4 | 112 | 9.9 | 145 | 23 | 145 | 2.2 | 42 | 145 | 2.1 | 60.502 | -H320 | 071-32 | |
| 23 | 148 | 3.0 | 2.3 | 114 | 9.7 | 148 | 23 | 148 | 3.0 | 41 | 148 | 2.9 | 61.774 | -H450 | 071-32 | |
| 23 | 149 | 1.4 | 2.3 | 115 | 9.7 | 149 | 23 | 149 | 1.4 | 41 | 149 | 1.4 | 62.160 | -H210 | 071-32 | |
| 21 | 165 | 1.9 | 2.1 | 127 | 8.7 | 164 | 21 | 165 | 1.9 | 37 | 164 | 1.9 | 68.726 | -H320 | 071-32 | |
| 20 | 167 | 2.7 | 2.1 | 129 | 8.6 | 167 | 20 | 167 | 2.7 | 36 | 167 | 2.6 | 69.813 | -H450 | 071-32 | |
| 20 | 170 | 1.2 | 2.0 | 131 | 8.4 | 170 | 20 | 170 | 1.2 | 36 | 170 | 1.2 | 71.026 | -H210 | 071-32 | |
| 18 | 185 | 1.7 | 1.9 | 143 | 7.8 | 185 | 18 | 185 | 1.7 | 33 | 185 | 1.7 | 77.387 | -H320 | 071-32 | |
| 18 | 189 | 2.4 | 1.8 | 145 | 7.6 | 188 | 18 | 189 | 2.4 | 32 | 188 | 2.3 | 78.794 | -H450 | 071-32 | |
| 18 | 190 | 1.1 | 1.8 | 147 | 7.5 | 190 | 18 | 190 | 1.1 | 32 | 190 | 1.1 | 79.507 | -H210 | 071-32 | |
| 16 | 211 | 1.5 | 1.6 | 162 | 6.8 | 210 | 16 | 211 | 1.5 | 29 | 210 | 1.5 | 87.906 | -H320 | 071-32 | |
| 16 | 213 | 2.1 | 1.6 | 164 | 6.7 | 213 | 16 | 213 | 2.1 | 28 | 213 | 2.1 | 89.048 | -H450 | 071-32 | |
| 15 | 221 | 1.0 | 1.6 | 170 | 6.5 | 220 | 15 | 221 | 1.0 | 27 | 220 | 1.0 | 92.205 | -H210 | 071-32 | |
| 15 | 231 | 2.0 | 1.5 | 178 | 6.2 | 231 | 15 | 231 | 2.0 | 26 | 231 | 2.0 | 96.522 | -H450 | 071-32 | |
| 14 | 241 | 1.3 | 1.4 | 185 | 6.0 | 240 | 14 | 241 | 1.3 | 25 | 240 | 1.3 | 100.462 | -H320 | 071-32 | |
| 14 | 247 | 0.9 | 1.4 | 190 | 5.8 | 247 | 14 | 247 | 0.9 | 24 | 247 | 0.9 | 103.214 | -H210 | 071-32 | |
| 13 | 261 | 1.7 | 1.3 | 201 | 5.5 | 261 | 13 | 261 | 1.7 | 23 | 261 | 1.7 | 109.083 | -H450 | 071-32 | |
| 12 | 273 | 1.2 | 1.3 | 210 | 5.3 | 273 | 12 | 273 | 1.2 | 22 | 273 | 1.2 | 114.118 | -H320 | 071-32 | |
| 12 | 291 | 1.6 | 1.2 | 224 | 4.9 | 290 | 12 | 291 | 1.6 | 21 | 290 | 1.6 | 121.342 | -H450 | 071-32 | |
| 11 | 308 | 1.0 | 1.1 | 237 | 4.7 | 308 | 11 | 308 | 1.0 | 20 | 308 | 1.0 | 128.743 | -H320 | 071-32 | |
| 10 | 328 | 1.4 | 1.1 | 253 | 4.4 | 328 | 10 | 328 | 1.4 | 18 | 328 | 1.4 | 137.133 | -H450 | 071-32 | |
| 9.6 | 350 | 0.9 | 1.0 | 270 | 4.1 | 350 | 9.6 | 350 | 0.9 | 17 | 350 | 0.9 | 146.244 | -H320 | 071-32 | |
| 9.0 | 374 | 1.2 | 0.9 | 288 | 3.8 | 374 | 9.0 | 374 | 1.2 | 16 | 374 | 1.2 | 156.274 | -H450 | 071-32 | |
| 8.0 | 423 | 1.1 | 0.8 | 326 | 3.4 | 422 | 8.0 | 423 | 1.1 | 14 | 422 | 1.1 | 176.611 | -H450 | 071-32 | |
| 7.1 | 474 | 1.0 | 0.7 | 365 | 3.0 | 473 | 7.1 | 474 | 1.0 | 13 | 473 | 1.0 | 198.059 | -H450 | 071-32 | |
| 6.3 | 536 | 0.8 | 0.6 | 413 | 2.7 | 535 | 6.3 | 536 | 0.8 | 11 | 535 | 0.8 | 223.833 | -H450 | 071-32 | |

g500-H helical geared motors

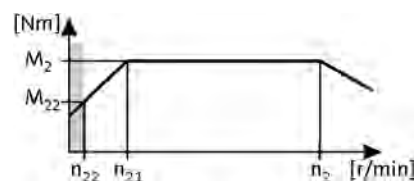


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.55 \text{ kW}$
 87 Hz: $P_N = 1.0 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|-------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 541 | 9.0 | 1.9 | 56 | 7.3 | 231 | 10 | 541 | 9.0 | 1.9 | 968 | 10 | 1.6 | 2.597 | -H45 | 071-42 | |
| 430 | 12 | 4.5 | 44 | 9.1 | 184 | 12 | 430 | 12 | 4.5 | 770 | 12 | 3.8 | 3.267 | -H140 | 071-42 | |
| 419 | 12 | 4.5 | 43 | 9.4 | 179 | 12 | 419 | 12 | 4.5 | 750 | 12 | 3.8 | 3.354 | -H100 | 071-42 | |
| 412 | 12 | 1.5 | 43 | 9.5 | 176 | 12 | 412 | 12 | 1.5 | 737 | 13 | 1.3 | 3.413 | -H45 | 071-42 | |
| 322 | 16 | 1.3 | 33 | 12 | 137 | 16 | 322 | 16 | 1.3 | 576 | 16 | 1.1 | 4.368 | -H45 | 071-42 | |
| 305 | 17 | 4.3 | 32 | 13 | 130 | 17 | 305 | 17 | 4.3 | 547 | 17 | 3.6 | 4.600 | -H100 | 071-42 | |
| 272 | 19 | 4.0 | 28 | 14 | 116 | 19 | 272 | 19 | 4.0 | 487 | 19 | 3.3 | 5.167 | -H100 | 071-42 | |
| 265 | 19 | 1.4 | 27 | 15 | 113 | 19 | 265 | 19 | 1.4 | 473 | 20 | 1.2 | 5.312 | -H45 | 071-42 | |
| 239 | 21 | 3.8 | 25 | 16 | 102 | 21 | 239 | 21 | 3.8 | 427 | 22 | 3.1 | 5.887 | -H100 | 071-42 | |
| 236 | 22 | 1.3 | 24 | 17 | 101 | 22 | 236 | 22 | 1.3 | 422 | 22 | 1.1 | 5.965 | -H45 | 071-42 | |
| 218 | 23 | 3.6 | 23 | 18 | 93 | 23 | 218 | 23 | 3.6 | 391 | 24 | 2.9 | 6.440 | -H100 | 071-42 | |
| 201 | 25 | 1.2 | 21 | 20 | 86 | 25 | 201 | 25 | 1.2 | 360 | 26 | 1.0 | 6.982 | -H45 | 071-42 | |
| 198 | 26 | 3.4 | 21 | 20 | 85 | 26 | 198 | 26 | 3.4 | 355 | 26 | 2.8 | 7.086 | -H100 | 071-42 | |
| 179 | 28 | 1.1 | 19 | 22 | 77 | 28 | 179 | 28 | 1.1 | 321 | 29 | 0.9 | 7.840 | -H45 | 071-42 | |
| | | | 18 | 22 | 75 | 29 | | | | 314 | 29 | 3.2 | 8.000 | -H140 | 071-42 | |
| 171 | 30 | 3.1 | 18 | 23 | 73 | 30 | 171 | 30 | 3.1 | 306 | 30 | 2.6 | 8.214 | -H100 | 071-42 | |
| 157 | 32 | 1.0 | 16 | 25 | 67 | 32 | 157 | 32 | 1.0 | 282 | 33 | 0.8 | 8.935 | -H45 | 071-42 | |
| | | | 16 | 25 | 67 | 33 | | | | 279 | 33 | 3.0 | 9.029 | -H140 | 071-42 | |
| 155 | 33 | 2.9 | 16 | 25 | 66 | 33 | 155 | 33 | 2.9 | 277 | 33 | 2.4 | 9.068 | -H100 | 071-42 | |
| | | | 15 | 27 | 61 | 36 | | | | 257 | 36 | 2.8 | 9.800 | -H140 | 071-42 | |
| 140 | 36 | 1.0 | 15 | 28 | 60 | 36 | 140 | 36 | 1.0 | | | | 10.033 | -H45 | 071-42 | |
| 140 | 36 | 2.7 | 14 | 28 | 60 | 36 | 140 | 36 | 2.7 | 250 | 37 | 2.3 | 10.063 | -H100 | 071-42 | |
| 124 | 41 | 2.4 | 13 | 32 | 53 | 41 | 124 | 41 | 2.4 | 221 | 42 | 2.0 | 11.360 | -H100 | 071-42 | |
| 123 | 41 | 0.8 | 13 | 32 | 53 | 41 | 123 | 41 | 0.8 | | | | 11.429 | -H45 | 071-42 | |
| 122 | 42 | 3.1 | 13 | 32 | 52 | 42 | 122 | 42 | 3.1 | 218 | 43 | 2.5 | 11.554 | -H140 | 071-42 | |
| 111 | 46 | 2.9 | 12 | 35 | 48 | 46 | 111 | 46 | 2.9 | 199 | 47 | 2.4 | 12.640 | -H140 | 071-42 | |
| 111 | 46 | 2.2 | 12 | 35 | 47 | 46 | 111 | 46 | 2.2 | 199 | 47 | 1.8 | 12.653 | -H100 | 071-42 | |
| 110 | 47 | 0.8 | 11 | 36 | 47 | 47 | 110 | 47 | 0.8 | | | | 12.833 | -H45 | 071-42 | |
| 101 | 51 | 2.7 | 10 | 39 | 43 | 51 | 101 | 51 | 2.7 | 180 | 51 | 2.2 | 13.957 | -H140 | 071-42 | |
| 97 | 53 | 1.9 | 10 | 41 | 41 | 53 | 97 | 53 | 1.9 | 174 | 53 | 1.6 | 14.490 | -H100 | 071-42 | |
| | | | 9.5 | 43 | 39 | 56 | | | | 164 | 56 | 3.0 | 15.306 | -H210 | 071-42 | |
| 91 | 56 | 1.8 | 9.4 | 43 | 39 | 56 | 91 | 56 | 1.8 | 162 | 57 | 1.5 | 15.500 | -H100 | 071-42 | |
| 87 | 58 | 2.4 | 9.0 | 45 | 37 | 58 | 87 | 58 | 2.4 | 156 | 59 | 2.0 | 16.122 | -H140 | 071-42 | |
| | | | 8.7 | 47 | 36 | 62 | | | | 150 | 62 | 2.9 | 16.750 | -H210 | 071-42 | |
| 79 | 64 | 1.6 | 8.2 | 50 | 34 | 64 | 79 | 64 | 1.6 | 142 | 65 | 1.3 | 17.750 | -H100 | 071-42 | |

g500-H helical geared motors

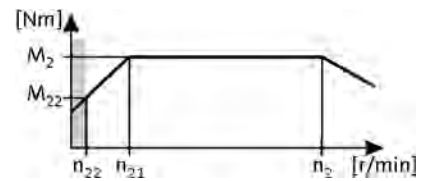


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.55 \text{ kW}$
 87 Hz: $P_N = 1.0 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|-------|---------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | | MD□MA□□ | | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | | |
| 79 | 65 | 2.2 | 8.1 | 50 | 34 | 65 | 79 | 65 | 2.2 | 141 | 66 | 1.8 | 17.802 | -H140 | 071-42 | | |
| | | | 7.9 | 51 | 33 | 67 | | | | 138 | 67 | 3.1 | 18.250 | -H320 | 071-42 | | |
| 75 | 68 | 3.1 | 7.7 | 52 | 32 | 68 | 75 | 68 | 3.1 | 134 | 69 | 2.6 | 18.750 | -H210 | 071-42 | | |
| 72 | 71 | 1.4 | 7.4 | 54 | 31 | 71 | 72 | 71 | 1.4 | 129 | 72 | 1.2 | 19.486 | -H100 | 071-42 | | |
| 71 | 72 | 2.0 | 7.3 | 55 | 30 | 72 | 71 | 72 | 2.0 | 127 | 73 | 1.6 | 19.750 | -H140 | 071-42 | | |
| | | | 7.0 | 58 | 29 | 76 | | | | 121 | 76 | 3.1 | 20.731 | -H320 | 071-42 | | |
| 64 | 79 | 2.7 | 6.7 | 61 | 28 | 79 | 64 | 79 | 2.7 | 115 | 80 | 2.2 | 21.802 | -H210 | 071-42 | | |
| 64 | 79 | 1.8 | 6.6 | 61 | 28 | 79 | 64 | 79 | 1.8 | 115 | 80 | 1.5 | 21.808 | -H140 | 071-42 | | |
| 63 | 81 | 1.2 | 6.5 | 62 | 27 | 81 | 63 | 81 | 1.2 | 113 | 82 | 1.0 | 22.314 | -H100 | 071-42 | | |
| | | | 6.1 | 66 | 25 | 88 | | | | 106 | 88 | 2.8 | 23.754 | -H320 | 071-42 | | |
| 58 | 89 | 2.4 | 5.9 | 68 | 25 | 89 | 58 | 89 | 2.4 | 103 | 90 | 2.0 | 24.405 | -H210 | 071-42 | | |
| 57 | 90 | 1.6 | 5.8 | 69 | 24 | 90 | 57 | 90 | 1.6 | 101 | 91 | 1.3 | 24.829 | -H140 | 071-42 | | |
| 56 | 91 | 1.1 | 5.8 | 70 | 24 | 91 | 56 | 91 | 1.1 | 100 | 92 | 0.9 | 25.095 | -H100 | 071-42 | | |
| | | | 5.4 | 75 | 22 | 99 | | | | 93 | 99 | 3.1 | 26.983 | -H320 | 071-42 | | |
| 52 | 98 | 2.1 | 5.3 | 76 | 22 | 100 | 52 | 98 | 2.1 | 93 | 100 | 2.0 | 27.119 | -H210 | 071-42 | | |
| 51 | 99 | 1.4 | 5.3 | 77 | 22 | 101 | 51 | 99 | 1.4 | 92 | 101 | 1.3 | 27.415 | -H140 | 071-42 | | |
| 51 | 100 | 3.2 | 5.3 | 77 | 22 | 100 | 51 | 100 | 3.2 | 91 | 102 | 3.0 | 27.578 | -H450 | 071-42 | | |
| 49 | 104 | 1.0 | 5.0 | 80 | 21 | 104 | 49 | 104 | 1.0 | 88 | 106 | 0.9 | 28.738 | -H100 | 071-42 | | |
| 48 | 107 | 2.9 | 4.9 | 83 | 20 | 107 | 48 | 107 | 2.9 | 85 | 109 | 2.7 | 29.548 | -H320 | 071-42 | | |
| 46 | 110 | 1.9 | 4.8 | 85 | 20 | 110 | 46 | 110 | 1.9 | 83 | 112 | 1.8 | 30.357 | -H210 | 071-42 | | |
| 45 | 113 | 3.2 | 4.7 | 87 | 19 | 113 | 45 | 113 | 3.2 | 81 | 115 | 3.0 | 31.167 | -H450 | 071-42 | | |
| 44 | 116 | 1.2 | 4.5 | 89 | 19 | 116 | 44 | 116 | 1.2 | 79 | 118 | 1.1 | 31.976 | -H140 | 071-42 | | |
| 42 | 122 | 2.6 | 4.3 | 94 | 18 | 122 | 42 | 122 | 2.6 | 75 | 124 | 2.5 | 33.564 | -H320 | 071-42 | | |
| 40 | 127 | 1.7 | 4.1 | 98 | 17 | 127 | 40 | 127 | 1.7 | 72 | 129 | 1.6 | 35.095 | -H210 | 071-42 | | |
| 40 | 128 | 1.1 | 4.1 | 99 | 17 | 128 | 40 | 128 | 1.1 | 71 | 130 | 1.0 | 35.308 | -H140 | 071-42 | | |
| 39 | 129 | 2.9 | 4.1 | 100 | 17 | 129 | 39 | 129 | 2.9 | 71 | 131 | 2.7 | 35.689 | -H450 | 071-42 | | |
| 37 | 139 | 1.8 | 3.8 | 107 | 16 | 139 | 37 | 139 | 1.8 | 66 | 141 | 1.7 | 38.238 | -H320 | 071-42 | | |
| 36 | 142 | 1.5 | 3.7 | 110 | 15 | 142 | 36 | 142 | 1.5 | 64 | 145 | 1.4 | 39.286 | -H210 | 071-42 | | |
| 35 | 146 | 2.9 | 3.6 | 113 | 15 | 146 | 35 | 146 | 2.9 | 62 | 149 | 2.8 | 40.333 | -H450 | 071-42 | | |
| 33 | 154 | 1.2 | 3.4 | 119 | 14 | 154 | 33 | 154 | 1.2 | 59 | 157 | 1.2 | 42.593 | -H210 | 071-42 | | |
| 32 | 157 | 2.1 | 3.3 | 121 | 14 | 157 | 32 | 157 | 2.1 | 58 | 160 | 2.0 | 43.313 | -H450 | 071-42 | | |
| 32 | 158 | 1.8 | 3.3 | 121 | 14 | 158 | 32 | 158 | 1.8 | 58 | 160 | 1.8 | 43.436 | -H320 | 071-42 | | |
| 30 | 168 | 1.3 | 3.1 | 130 | 13 | 168 | 30 | 168 | 1.3 | 54 | 171 | 1.3 | 46.407 | -H320 | 071-42 | | |
| 30 | 173 | 1.2 | 3.0 | 133 | 13 | 173 | 30 | 173 | 1.2 | 53 | 176 | 1.2 | 47.679 | -H210 | 071-42 | | |
| 29 | 178 | 2.1 | 3.0 | 137 | 12 | 178 | 29 | 178 | 2.1 | 51 | 180 | 2.0 | 48.950 | -H450 | 071-42 | | |

g500-H helical geared motors

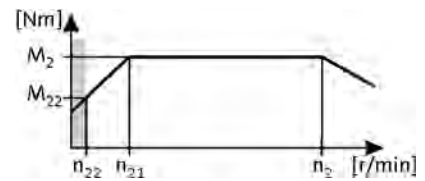


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.55 \text{ kW}$
 87 Hz: $P_N = 1.0 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 27 | 191 | 1.3 | 2.8 | 147 | 11 | 191 | 27 | 191 | 1.3 | 48 | 194 | 1.3 | 52.715 | -H320 | 071-42 | |
| 26 | 199 | 1.4 | 2.6 | 153 | 11 | 199 | 26 | 199 | 1.4 | 46 | 202 | 1.3 | 54.750 | -H450 | 071-42 | |
| 23 | 224 | 1.4 | 2.3 | 173 | 9.7 | 224 | 23 | 224 | 1.4 | 41 | 228 | 1.3 | 61.875 | -H450 | 071-42 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 32 | 155 | 1.4 | 3.3 | 119 | 14 | 155 | 32 | 155 | 1.4 | 58 | 157 | 1.1 | 43.390 | -H210 | 071-42 | |
| 32 | 158 | 2.9 | 3.3 | 121 | 14 | 158 | 32 | 158 | 2.9 | 57 | 160 | 2.4 | 44.124 | -H450 | 071-42 | |
| 30 | 169 | 1.9 | 3.1 | 130 | 13 | 169 | 30 | 169 | 1.9 | 53 | 172 | 1.8 | 47.276 | -H320 | 071-42 | |
| 29 | 174 | 1.2 | 3.0 | 134 | 12 | 174 | 29 | 174 | 1.2 | 52 | 176 | 1.1 | 48.571 | -H210 | 071-42 | |
| 28 | 178 | 2.5 | 2.9 | 137 | 12 | 178 | 28 | 178 | 2.5 | 50 | 181 | 2.4 | 49.867 | -H450 | 071-42 | |
| 26 | 192 | 1.7 | 2.7 | 148 | 11 | 192 | 26 | 192 | 1.7 | 47 | 195 | 1.6 | 53.703 | -H320 | 071-42 | |
| 25 | 198 | 1.1 | 2.6 | 153 | 11 | 198 | 25 | 198 | 1.1 | 45 | 201 | 1.0 | 55.529 | -H210 | 071-42 | |
| 25 | 202 | 2.2 | 2.6 | 155 | 11 | 202 | 25 | 202 | 2.2 | 45 | 205 | 2.1 | 56.469 | -H450 | 071-42 | |
| 23 | 216 | 1.5 | 2.4 | 166 | 9.9 | 216 | 23 | 216 | 1.5 | 42 | 220 | 1.4 | 60.502 | -H320 | 071-42 | |
| 23 | 221 | 2.0 | 2.3 | 170 | 9.7 | 221 | 23 | 221 | 2.0 | 41 | 224 | 1.9 | 61.774 | -H450 | 071-42 | |
| 23 | 222 | 1.0 | 2.3 | 171 | 9.7 | 222 | 23 | 222 | 1.0 | 41 | 226 | 0.9 | 62.160 | -H210 | 071-42 | |
| 20 | 246 | 1.3 | 2.1 | 189 | 8.7 | 246 | 20 | 246 | 1.3 | 37 | 249 | 1.2 | 68.726 | -H320 | 071-42 | |
| 20 | 249 | 1.8 | 2.1 | 192 | 8.6 | 249 | 20 | 249 | 1.8 | 36 | 253 | 1.7 | 69.813 | -H450 | 071-42 | |
| 20 | 254 | 0.8 | 2.0 | 195 | 8.4 | 254 | 20 | 254 | 0.8 | | | | 71.026 | -H210 | 071-42 | |
| 18 | 276 | 1.2 | 1.9 | 213 | 7.8 | 276 | 18 | 276 | 1.2 | 33 | 281 | 1.1 | 77.387 | -H320 | 071-42 | |
| 18 | 281 | 1.6 | 1.8 | 217 | 7.6 | 281 | 18 | 281 | 1.6 | 32 | 286 | 1.5 | 78.794 | -H450 | 071-42 | |
| 16 | 314 | 1.0 | 1.6 | 242 | 6.8 | 314 | 16 | 314 | 1.0 | 29 | 319 | 1.0 | 87.906 | -H320 | 071-42 | |
| 16 | 318 | 1.4 | 1.6 | 245 | 6.7 | 318 | 16 | 318 | 1.4 | 28 | 323 | 1.4 | 89.048 | -H450 | 071-42 | |
| 15 | 345 | 1.3 | 1.5 | 266 | 6.2 | 345 | 15 | 345 | 1.3 | 26 | 350 | 1.3 | 96.522 | -H450 | 071-42 | |
| 14 | 359 | 0.9 | 1.4 | 276 | 6.0 | 359 | 14 | 359 | 0.9 | 25 | 365 | 0.9 | 100.462 | -H320 | 071-42 | |
| 13 | 390 | 1.2 | 1.3 | 300 | 5.5 | 390 | 13 | 390 | 1.2 | 23 | 396 | 1.1 | 109.083 | -H450 | 071-42 | |
| 12 | 433 | 1.0 | 1.2 | 334 | 4.9 | 433 | 12 | 433 | 1.0 | 21 | 440 | 1.0 | 121.342 | -H450 | 071-42 | |
| 10 | 490 | 0.9 | 1.1 | 377 | 4.4 | 490 | 10 | 490 | 0.9 | 18 | 498 | 0.9 | 137.133 | -H450 | 071-42 | |
| 9.0 | 558 | 0.8 | 0.9 | 430 | 3.8 | 558 | 9.0 | 558 | 0.8 | | | | 156.274 | -H450 | 071-42 | |

g500-H helical geared motors

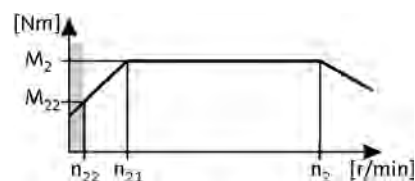


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 444 | 16 | 4.3 | 44 | 12 | 184 | 16 | 444 | 16 | 4.3 | 784 | 16 | 3.5 | 3.267 | -H140 | 50-P80/M4 | |
| 432 | 16 | 3.9 | 43 | 12 | 179 | 16 | 432 | 16 | 3.9 | 763 | 16 | 3.2 | 3.354 | -H100 | 50-P80/M4 | |
| 315 | 22 | 3.3 | 32 | 17 | 130 | 22 | 315 | 22 | 3.3 | 557 | 22 | 2.7 | 4.600 | -H100 | 50-P80/M4 | |
| 281 | 25 | 3.0 | 28 | 19 | 116 | 25 | 281 | 25 | 3.0 | 496 | 25 | 2.5 | 5.167 | -H100 | 50-P80/M4 | |
| | | | 25 | 21 | 105 | 28 | | | | 447 | 28 | 3.1 | 5.733 | -H140 | 50-P80/M4 | |
| 246 | 28 | 2.9 | 25 | 22 | 102 | 28 | 246 | 28 | 2.9 | 435 | 29 | 2.4 | 5.887 | -H100 | 50-P80/M4 | |
| | | | 23 | 23 | 96 | 31 | | | | 408 | 31 | 2.9 | 6.272 | -H140 | 50-P80/M4 | |
| 225 | 31 | 2.7 | 23 | 24 | 93 | 31 | 225 | 31 | 2.7 | 398 | 31 | 2.2 | 6.440 | -H100 | 50-P80/M4 | |
| 205 | 34 | 2.5 | 21 | 26 | 85 | 34 | 205 | 34 | 2.5 | 361 | 35 | 2.1 | 7.086 | -H100 | 50-P80/M4 | |
| 200 | 35 | 3.0 | 20 | 27 | 83 | 35 | 200 | 35 | 3.0 | 352 | 36 | 2.5 | 7.269 | -H140 | 50-P80/M4 | |
| 181 | 38 | 3.1 | 18 | 30 | 75 | 38 | 181 | 38 | 3.1 | 320 | 39 | 2.5 | 8.000 | -H140 | 50-P80/M4 | |
| 177 | 39 | 2.3 | 18 | 30 | 73 | 39 | 177 | 39 | 2.3 | 312 | 40 | 1.9 | 8.214 | -H100 | 50-P80/M4 | |
| 161 | 43 | 2.7 | 16 | 33 | 67 | 43 | 161 | 43 | 2.7 | 284 | 44 | 2.2 | 9.029 | -H140 | 50-P80/M4 | |
| 160 | 43 | 2.2 | 16 | 33 | 66 | 43 | 160 | 43 | 2.2 | 282 | 44 | 1.8 | 9.068 | -H100 | 50-P80/M4 | |
| | | | 15 | 36 | 61 | 48 | | | | 261 | 48 | 3.2 | 9.799 | -H210 | 50-P80/M4 | |
| 148 | 47 | 2.7 | 15 | 36 | 61 | 47 | 148 | 47 | 2.7 | 261 | 48 | 2.2 | 9.800 | -H140 | 50-P80/M4 | |
| 144 | 48 | 2.1 | 14 | 37 | 60 | 48 | 144 | 48 | 2.1 | 254 | 49 | 1.7 | 10.063 | -H100 | 50-P80/M4 | |
| | | | 14 | 40 | 56 | 52 | | | | 239 | 52 | 3.0 | 10.720 | -H210 | 50-P80/M4 | |
| 128 | 54 | 1.8 | 13 | 42 | 53 | 54 | 128 | 54 | 1.8 | 225 | 56 | 1.5 | 11.360 | -H100 | 50-P80/M4 | |
| 126 | 55 | 2.3 | 13 | 43 | 52 | 55 | 126 | 55 | 2.3 | 222 | 56 | 1.9 | 11.554 | -H140 | 50-P80/M4 | |
| 121 | 58 | 3.2 | 12 | 44 | 50 | 58 | 121 | 58 | 3.2 | 213 | 59 | 2.7 | 12.000 | -H210 | 50-P80/M4 | |
| 115 | 61 | 2.2 | 12 | 47 | 48 | 61 | 115 | 61 | 2.2 | 203 | 62 | 1.8 | 12.640 | -H140 | 50-P80/M4 | |
| 115 | 61 | 1.7 | 12 | 47 | 47 | 61 | 115 | 61 | 1.7 | 202 | 62 | 1.4 | 12.653 | -H100 | 50-P80/M4 | |
| 106 | 66 | 3.1 | 11 | 50 | 44 | 66 | 106 | 66 | 3.1 | 187 | 67 | 2.5 | 13.673 | -H210 | 50-P80/M4 | |
| 104 | 67 | 2.0 | 10 | 52 | 43 | 67 | 104 | 67 | 2.0 | 183 | 68 | 1.7 | 13.957 | -H140 | 50-P80/M4 | |
| 100 | 69 | 1.4 | 10 | 53 | 41 | 69 | 100 | 69 | 1.4 | 177 | 71 | 1.2 | 14.490 | -H100 | 50-P80/M4 | |
| 95 | 73 | 2.7 | 9.5 | 56 | 39 | 73 | 95 | 73 | 2.7 | 167 | 75 | 2.2 | 15.306 | -H210 | 50-P80/M4 | |
| 94 | 74 | 1.4 | 9.4 | 57 | 39 | 74 | 94 | 74 | 1.4 | 165 | 76 | 1.1 | 15.500 | -H100 | 50-P80/M4 | |
| 90 | 77 | 1.8 | 9.0 | 59 | 37 | 77 | 90 | 77 | 1.8 | 159 | 79 | 1.5 | 16.122 | -H140 | 50-P80/M4 | |
| 87 | 80 | 2.6 | 8.7 | 62 | 36 | 80 | 87 | 80 | 2.6 | 153 | 82 | 2.2 | 16.750 | -H210 | 50-P80/M4 | |
| | | | 8.6 | 62 | 36 | 83 | | | | 151 | 83 | 2.9 | 16.923 | -H320 | 50-P80/M4 | |
| 82 | 85 | 1.2 | 8.2 | 65 | 34 | 85 | 82 | 85 | 1.2 | 144 | 87 | 1.0 | 17.750 | -H100 | 50-P80/M4 | |
| 82 | 85 | 1.6 | 8.1 | 66 | 34 | 85 | 82 | 85 | 1.6 | 144 | 87 | 1.4 | 17.802 | -H140 | 50-P80/M4 | |
| | | | 7.9 | 67 | 33 | 89 | | | | 140 | 89 | 2.9 | 18.250 | -H320 | 50-P80/M4 | |
| 77 | 90 | 2.3 | 7.7 | 69 | 32 | 90 | 77 | 90 | 2.3 | 137 | 92 | 1.9 | 18.750 | -H210 | 50-P80/M4 | |

g500-H helical geared motors

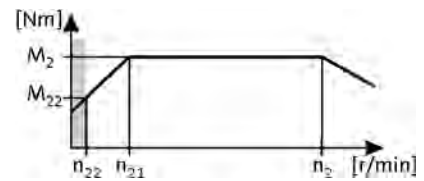


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 74 | 93 | 1.1 | 7.4 | 72 | 31 | 93 | 74 | 93 | 1.1 | 131 | 95 | 0.9 | 19.486 | -H100 | 50-P80/M4 | |
| 73 | 95 | 1.5 | 7.3 | 73 | 30 | 95 | 73 | 95 | 1.5 | 130 | 96 | 1.2 | 19.750 | -H140 | 50-P80/M4 | |
| 70 | 99 | 3.0 | 7.0 | 76 | 29 | 101 | 70 | 99 | 3.0 | 124 | 101 | 2.5 | 20.731 | -H320 | 50-P80/M4 | |
| 67 | 104 | 2.0 | 6.7 | 80 | 28 | 104 | 67 | 104 | 2.0 | 117 | 107 | 1.7 | 21.802 | -H210 | 50-P80/M4 | |
| 67 | 105 | 1.3 | 6.6 | 80 | 28 | 105 | 67 | 105 | 1.3 | 117 | 107 | 1.1 | 21.808 | -H140 | 50-P80/M4 | |
| | | | 6.5 | 82 | 27 | 108 | | | | 116 | 108 | 2.9 | 22.170 | -H450 | 50-P80/M4 | |
| 65 | 107 | 0.9 | 6.5 | 82 | 27 | 107 | 65 | 107 | 0.9 | | | | 22.314 | -H100 | 50-P80/M4 | |
| 61 | 114 | 2.8 | 6.1 | 88 | 25 | 114 | 61 | 114 | 2.8 | 108 | 116 | 2.3 | 23.754 | -H320 | 50-P80/M4 | |
| 59 | 117 | 1.8 | 5.9 | 90 | 25 | 117 | 59 | 117 | 1.8 | 105 | 119 | 1.5 | 24.405 | -H210 | 50-P80/M4 | |
| 58 | 119 | 1.2 | 5.8 | 92 | 24 | 119 | 58 | 119 | 1.2 | 103 | 121 | 1.0 | 24.829 | -H140 | 50-P80/M4 | |
| | | | 5.8 | 92 | 24 | 122 | | | | 102 | 122 | 2.9 | 25.056 | -H450 | 50-P80/M4 | |
| 58 | 120 | 0.8 | 5.8 | 93 | 24 | 120 | 58 | 120 | 0.8 | | | | 25.095 | -H100 | 50-P80/M4 | |
| 54 | 129 | 2.5 | 5.4 | 100 | 22 | 129 | 54 | 129 | 2.5 | 95 | 132 | 2.3 | 26.983 | -H320 | 50-P80/M4 | |
| 54 | 130 | 1.6 | 5.3 | 100 | 22 | 130 | 54 | 130 | 1.6 | 94 | 132 | 1.5 | 27.119 | -H210 | 50-P80/M4 | |
| 53 | 131 | 1.1 | 5.3 | 101 | 22 | 131 | 53 | 131 | 1.1 | 93 | 134 | 1.0 | 27.415 | -H140 | 50-P80/M4 | |
| 53 | 132 | 3.0 | 5.3 | 102 | 22 | 132 | 53 | 132 | 3.0 | 93 | 135 | 2.8 | 27.578 | -H450 | 50-P80/M4 | |
| 49 | 142 | 2.3 | 4.9 | 109 | 20 | 142 | 49 | 142 | 2.3 | 87 | 144 | 2.1 | 29.548 | -H320 | 50-P80/M4 | |
| 48 | 145 | 1.4 | 4.8 | 112 | 20 | 145 | 48 | 145 | 1.4 | 84 | 148 | 1.4 | 30.357 | -H210 | 50-P80/M4 | |
| 47 | 149 | 3.0 | 4.7 | 115 | 19 | 149 | 47 | 149 | 3.0 | 82 | 152 | 2.8 | 31.167 | -H450 | 50-P80/M4 | |
| 45 | 153 | 0.9 | 4.5 | 118 | 19 | 153 | 45 | 153 | 0.9 | 80 | 156 | 0.9 | 31.976 | -H140 | 50-P80/M4 | |
| 43 | 161 | 2.0 | 4.3 | 124 | 18 | 161 | 43 | 161 | 2.0 | 76 | 164 | 1.9 | 33.564 | -H320 | 50-P80/M4 | |
| 41 | 168 | 1.3 | 4.1 | 129 | 17 | 168 | 41 | 168 | 1.3 | 73 | 171 | 1.2 | 35.095 | -H210 | 50-P80/M4 | |
| 41 | 169 | 0.8 | 4.1 | 130 | 17 | 169 | 41 | 169 | 0.8 | | | | 35.308 | -H140 | 50-P80/M4 | |
| 41 | 171 | 2.6 | 4.1 | 132 | 17 | 171 | 41 | 171 | 2.6 | 72 | 174 | 2.5 | 35.689 | -H450 | 50-P80/M4 | |
| 38 | 183 | 1.4 | 3.8 | 141 | 16 | 183 | 38 | 183 | 1.4 | 67 | 187 | 1.3 | 38.238 | -H320 | 50-P80/M4 | |
| 37 | 188 | 1.1 | 3.7 | 145 | 15 | 188 | 37 | 188 | 1.1 | 65 | 192 | 1.0 | 39.286 | -H210 | 50-P80/M4 | |
| 36 | 193 | 2.3 | 3.6 | 149 | 15 | 193 | 36 | 193 | 2.3 | 64 | 197 | 2.3 | 40.333 | -H450 | 50-P80/M4 | |
| | | | 3.4 | 157 | 14 | 208 | | | | 60 | 208 | 0.9 | 42.593 | -H210 | 50-P80/M4 | |
| 34 | 208 | 1.6 | 3.3 | 160 | 14 | 208 | 34 | 208 | 1.6 | 59 | 212 | 1.5 | 43.313 | -H450 | 50-P80/M4 | |
| 33 | 208 | 1.4 | 3.3 | 160 | 14 | 208 | 33 | 208 | 1.4 | 59 | 212 | 1.3 | 43.436 | -H320 | 50-P80/M4 | |
| | | | 3.1 | 171 | 13 | 227 | | | | 55 | 227 | 1.0 | 46.407 | -H320 | 50-P80/M4 | |
| | | | 3.0 | 176 | 13 | 233 | | | | 54 | 233 | 0.9 | 47.679 | -H210 | 50-P80/M4 | |
| 30 | 235 | 1.6 | 3.0 | 181 | 12 | 235 | 30 | 235 | 1.6 | 52 | 239 | 1.5 | 48.950 | -H450 | 50-P80/M4 | |
| | | | 2.8 | 194 | 11 | 258 | | | | 49 | 258 | 1.0 | 52.715 | -H320 | 50-P80/M4 | |
| | | | 2.6 | 202 | 11 | 267 | | | | 47 | 267 | 1.0 | 54.750 | -H450 | 50-P80/M4 | |

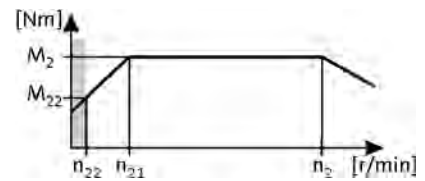
g500-H helical geared motors



Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW



2-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|---|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|---|---------------------------|------------------------|-----|--------|---------|-----------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| | | | 2.3 | 228 | 9.7 | 302 | | | | 41 | 302 | 1.0 | 61.875 | -H450 | 50-P80/M4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|-----------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 33 | 205 | 1.0 | 3.3 | 158 | 14 | 205 | 33 | 205 | 1.0 | 59 | 209 | 0.8 | 43.390 | -H210 | 50-P80/M4 | |
| 33 | 208 | 2.2 | 3.3 | 160 | 14 | 208 | 33 | 208 | 2.2 | 58 | 212 | 1.8 | 44.124 | -H450 | 50-P80/M4 | |
| 31 | 223 | 1.4 | 3.1 | 172 | 13 | 223 | 31 | 223 | 1.4 | 54 | 228 | 1.3 | 47.276 | -H320 | 50-P80/M4 | |
| 30 | 229 | 0.9 | 3.0 | 176 | 12 | 229 | 30 | 229 | 0.9 | 53 | 234 | 0.9 | 48.571 | -H210 | 50-P80/M4 | |
| 29 | 235 | 1.9 | 2.9 | 181 | 12 | 235 | 29 | 235 | 1.9 | 51 | 240 | 1.8 | 49.867 | -H450 | 50-P80/M4 | |
| 27 | 253 | 1.3 | 2.7 | 195 | 11 | 253 | 27 | 253 | 1.3 | 48 | 258 | 1.2 | 53.703 | -H320 | 50-P80/M4 | |
| 26 | 267 | 1.7 | 2.6 | 205 | 11 | 267 | 26 | 267 | 1.7 | 45 | 272 | 1.6 | 56.469 | -H450 | 50-P80/M4 | |
| 24 | 286 | 1.1 | 2.4 | 220 | 9.9 | 286 | 24 | 286 | 1.1 | 42 | 291 | 1.0 | 60.502 | -H320 | 50-P80/M4 | |
| 24 | 292 | 1.5 | 2.3 | 224 | 9.7 | 292 | 24 | 292 | 1.5 | 41 | 297 | 1.4 | 61.774 | -H450 | 50-P80/M4 | |
| 21 | 324 | 1.0 | 2.1 | 250 | 8.7 | 324 | 21 | 324 | 1.0 | 37 | 331 | 0.9 | 68.726 | -H320 | 50-P80/M4 | |
| 21 | 330 | 1.4 | 2.1 | 254 | 8.6 | 330 | 21 | 330 | 1.4 | 37 | 336 | 1.3 | 69.813 | -H450 | 50-P80/M4 | |
| 19 | 365 | 0.9 | 1.9 | 281 | 7.8 | 365 | 19 | 365 | 0.9 | 33 | 372 | 0.8 | 77.387 | -H320 | 50-P80/M4 | |
| 18 | 372 | 1.2 | 1.8 | 286 | 7.6 | 372 | 18 | 372 | 1.2 | 33 | 379 | 1.1 | 78.794 | -H450 | 50-P80/M4 | |
| 16 | 420 | 1.1 | 1.6 | 323 | 6.7 | 420 | 16 | 420 | 1.1 | 29 | 429 | 1.1 | 89.048 | -H450 | 50-P80/M4 | |
| 15 | 456 | 1.0 | 1.5 | 351 | 6.2 | 456 | 15 | 456 | 1.0 | 27 | 465 | 1.0 | 96.522 | -H450 | 50-P80/M4 | |
| 13 | 515 | 0.9 | 1.3 | 396 | 5.5 | 515 | 13 | 515 | 0.9 | 24 | 525 | 0.9 | 109.083 | -H450 | 50-P80/M4 | |

g500-H helical geared motors

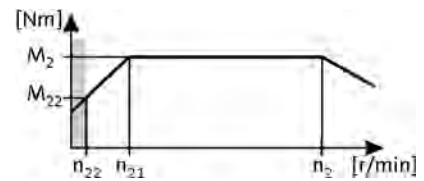


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.1 \text{ kW}$
 87 Hz: $P_N = 1.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 442 | 23 | 3.6 | 44 | 16 | 184 | 23 | 442 | 23 | 3.6 | 781 | 23 | 3.1 | 3.267 | -H140 | 50-P90/M4 | |
| 431 | 24 | 2.6 | 43 | 17 | 179 | 23 | 431 | 24 | 2.6 | 760 | 23 | 2.2 | 3.354 | -H100 | 50-P90/M4 | |
| 322 | 32 | 3.0 | 32 | 22 | 134 | 31 | 322 | 32 | 3.0 | 569 | 31 | 2.6 | 4.480 | -H140 | 50-P90/M4 | |
| 314 | 32 | 2.2 | 32 | 23 | 130 | 32 | 314 | 32 | 2.2 | 554 | 32 | 1.9 | 4.600 | -H100 | 50-P90/M4 | |
| 280 | 36 | 2.1 | 28 | 26 | 116 | 36 | 280 | 36 | 2.1 | 494 | 36 | 1.8 | 5.167 | -H100 | 50-P90/M4 | |
| 252 | 40 | 2.6 | 25 | 28 | 105 | 40 | 252 | 40 | 2.6 | 445 | 40 | 2.2 | 5.733 | -H140 | 50-P90/M4 | |
| 245 | 42 | 2.0 | 25 | 29 | 102 | 41 | 245 | 42 | 2.0 | 433 | 41 | 1.7 | 5.887 | -H100 | 50-P90/M4 | |
| | | | 23 | 31 | 96 | 43 | | | | 408 | 43 | 3.1 | 6.250 | -H210 | 50-P90/M4 | |
| 230 | 44 | 2.4 | 23 | 31 | 96 | 43 | 230 | 44 | 2.4 | 407 | 43 | 2.0 | 6.272 | -H140 | 50-P90/M4 | |
| 224 | 45 | 1.8 | 23 | 32 | 93 | 44 | 224 | 45 | 1.8 | 396 | 44 | 1.6 | 6.440 | -H100 | 50-P90/M4 | |
| 204 | 50 | 1.7 | 21 | 35 | 85 | 49 | 204 | 50 | 1.7 | 360 | 49 | 1.5 | 7.086 | -H100 | 50-P90/M4 | |
| 199 | 51 | 2.1 | 20 | 36 | 83 | 50 | 199 | 51 | 2.1 | 351 | 50 | 1.8 | 7.269 | -H140 | 50-P90/M4 | |
| 189 | 54 | 3.2 | 19 | 38 | 78 | 53 | 189 | 54 | 3.2 | 333 | 53 | 2.7 | 7.657 | -H210 | 50-P90/M4 | |
| 181 | 56 | 2.1 | 18 | 40 | 75 | 55 | 181 | 56 | 2.1 | 319 | 55 | 1.8 | 8.000 | -H140 | 50-P90/M4 | |
| 176 | 58 | 1.6 | 18 | 41 | 73 | 57 | 176 | 58 | 1.6 | 310 | 57 | 1.4 | 8.214 | -H100 | 50-P90/M4 | |
| 169 | 60 | 2.8 | 17 | 42 | 70 | 59 | 169 | 60 | 2.8 | 298 | 59 | 2.4 | 8.571 | -H210 | 50-P90/M4 | |
| 160 | 64 | 1.8 | 16 | 45 | 67 | 62 | 160 | 64 | 1.8 | 282 | 62 | 1.6 | 9.029 | -H140 | 50-P90/M4 | |
| 159 | 64 | 1.5 | 16 | 45 | 66 | 63 | 159 | 64 | 1.5 | 281 | 63 | 1.3 | 9.068 | -H100 | 50-P90/M4 | |
| | | | 15 | 47 | 63 | 65 | | | | 269 | 65 | 3.1 | 9.477 | -H320 | 50-P90/M4 | |
| 147 | 69 | 2.6 | 15 | 49 | 61 | 68 | 147 | 69 | 2.6 | 260 | 68 | 2.3 | 9.799 | -H210 | 50-P90/M4 | |
| 147 | 69 | 1.8 | 15 | 49 | 61 | 68 | 147 | 69 | 1.8 | 260 | 68 | 1.6 | 9.800 | -H140 | 50-P90/M4 | |
| 144 | 71 | 1.4 | 14 | 50 | 60 | 69 | 144 | 71 | 1.4 | 253 | 69 | 1.2 | 10.063 | -H100 | 50-P90/M4 | |
| | | | 14 | 53 | 56 | 74 | | | | 239 | 74 | 3.0 | 10.677 | -H320 | 50-P90/M4 | |
| 135 | 76 | 2.5 | 14 | 53 | 56 | 74 | 135 | 76 | 2.5 | 238 | 74 | 2.1 | 10.720 | -H210 | 50-P90/M4 | |
| 127 | 80 | 1.3 | 13 | 56 | 53 | 78 | 127 | 80 | 1.3 | 225 | 78 | 1.1 | 11.360 | -H100 | 50-P90/M4 | |
| 125 | 82 | 1.6 | 13 | 57 | 52 | 80 | 125 | 82 | 1.6 | 221 | 80 | 1.3 | 11.554 | -H140 | 50-P90/M4 | |
| | | | 12 | 58 | 51 | 81 | | | | 218 | 81 | 2.8 | 11.680 | -H320 | 50-P90/M4 | |
| 120 | 85 | 2.2 | 12 | 59 | 50 | 83 | 120 | 85 | 2.2 | 213 | 83 | 1.9 | 12.000 | -H210 | 50-P90/M4 | |
| 119 | 86 | 3.0 | 12 | 60 | 50 | 84 | 119 | 86 | 3.0 | 210 | 84 | 2.5 | 12.128 | -H320 | 50-P90/M4 | |
| 114 | 89 | 1.5 | 12 | 63 | 48 | 87 | 114 | 89 | 1.5 | 202 | 87 | 1.3 | 12.640 | -H140 | 50-P90/M4 | |
| 114 | 89 | 1.1 | 12 | 63 | 47 | 87 | 114 | 89 | 1.1 | 202 | 87 | 1.0 | 12.653 | -H100 | 50-P90/M4 | |
| 109 | 94 | 2.8 | 11 | 66 | 45 | 92 | 109 | 94 | 2.8 | 192 | 92 | 2.4 | 13.268 | -H320 | 50-P90/M4 | |
| 106 | 97 | 2.1 | 11 | 68 | 44 | 94 | 106 | 97 | 2.1 | 187 | 94 | 1.8 | 13.673 | -H210 | 50-P90/M4 | |
| 104 | 99 | 1.4 | 10 | 69 | 43 | 96 | 104 | 99 | 1.4 | 183 | 96 | 1.2 | 13.957 | -H140 | 50-P90/M4 | |
| 100 | 102 | 1.0 | 10 | 72 | 41 | 100 | 100 | 102 | 1.0 | 176 | 100 | 0.8 | 14.490 | -H100 | 50-P90/M4 | |

g500-H helical geared motors

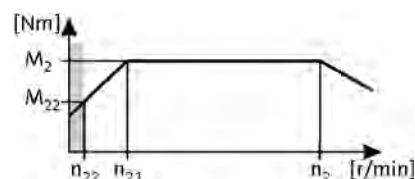


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.1 \text{ kW}$
 87 Hz: $P_N = 1.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 97 | 105 | 2.8 | 9.7 | 74 | 40 | 103 | 97 | 105 | 2.8 | 171 | 103 | 2.4 | 14.898 | -H320 | 50-P90/M4 | |
| 94 | 108 | 1.9 | 9.5 | 76 | 39 | 106 | 94 | 108 | 1.9 | 167 | 106 | 1.6 | 15.306 | -H210 | 50-P90/M4 | |
| 93 | 109 | 0.9 | 9.4 | 77 | 39 | 109 | 93 | 109 | 0.9 | | | | 15.500 | -H100 | 50-P90/M4 | |
| 90 | 114 | 1.2 | 9.0 | 80 | 37 | 111 | 90 | 114 | 1.2 | 158 | 111 | 1.1 | 16.122 | -H140 | 50-P90/M4 | |
| 86 | 118 | 1.8 | 8.7 | 83 | 36 | 116 | 86 | 118 | 1.8 | 152 | 116 | 1.5 | 16.750 | -H210 | 50-P90/M4 | |
| 85 | 119 | 2.4 | 8.6 | 84 | 36 | 117 | 85 | 119 | 2.4 | 151 | 117 | 2.0 | 16.923 | -H320 | 50-P90/M4 | |
| | | | 8.5 | 84 | 35 | 118 | | | | 150 | 118 | 3.2 | 17.033 | -H450 | 50-P90/M4 | |
| 81 | 126 | 1.1 | 8.1 | 88 | 34 | 123 | 81 | 126 | 1.1 | 143 | 123 | 1.0 | 17.802 | -H140 | 50-P90/M4 | |
| 79 | 129 | 2.4 | 7.9 | 90 | 33 | 126 | 79 | 129 | 2.4 | 140 | 126 | 2.1 | 18.250 | -H320 | 50-P90/M4 | |
| 77 | 132 | 1.6 | 7.7 | 93 | 32 | 129 | 77 | 132 | 1.6 | 136 | 129 | 1.4 | 18.750 | -H210 | 50-P90/M4 | |
| | | | 7.5 | 95 | 31 | 133 | | | | 133 | 133 | 2.8 | 19.250 | -H450 | 50-P90/M4 | |
| 73 | 139 | 1.0 | 7.3 | 98 | 30 | 136 | 73 | 139 | 1.0 | 129 | 136 | 0.9 | 19.750 | -H140 | 50-P90/M4 | |
| 70 | 146 | 2.0 | 7.0 | 103 | 29 | 143 | 70 | 146 | 2.0 | 123 | 143 | 1.8 | 20.731 | -H320 | 50-P90/M4 | |
| 66 | 154 | 1.4 | 6.7 | 108 | 28 | 151 | 66 | 154 | 1.4 | 117 | 151 | 1.2 | 21.802 | -H210 | 50-P90/M4 | |
| 66 | 154 | 0.9 | 6.6 | 108 | 28 | 154 | 66 | 154 | 0.9 | | | | 21.808 | -H140 | 50-P90/M4 | |
| 65 | 156 | 2.9 | 6.5 | 110 | 27 | 153 | 65 | 156 | 2.9 | 115 | 153 | 2.5 | 22.170 | -H450 | 50-P90/M4 | |
| 61 | 168 | 1.9 | 6.1 | 118 | 25 | 164 | 61 | 168 | 1.9 | 107 | 164 | 1.6 | 23.754 | -H320 | 50-P90/M4 | |
| 59 | 172 | 1.2 | 5.9 | 121 | 25 | 168 | 59 | 172 | 1.2 | 105 | 168 | 1.0 | 24.405 | -H210 | 50-P90/M4 | |
| 58 | 177 | 2.5 | 5.8 | 124 | 24 | 173 | 58 | 177 | 2.5 | 102 | 173 | 2.2 | 25.056 | -H450 | 50-P90/M4 | |
| 54 | 190 | 1.7 | 5.4 | 134 | 22 | 186 | 54 | 190 | 1.7 | 95 | 186 | 1.6 | 26.983 | -H320 | 50-P90/M4 | |
| 53 | 191 | 1.1 | 5.3 | 134 | 22 | 187 | 53 | 191 | 1.1 | 94 | 187 | 1.1 | 27.119 | -H210 | 50-P90/M4 | |
| 52 | 195 | 2.3 | 5.3 | 137 | 22 | 190 | 52 | 195 | 2.3 | 93 | 190 | 2.3 | 27.578 | -H450 | 50-P90/M4 | |
| 49 | 209 | 1.5 | 4.9 | 146 | 20 | 204 | 49 | 209 | 1.5 | 86 | 204 | 1.5 | 29.548 | -H320 | 50-P90/M4 | |
| 48 | 214 | 1.0 | 4.8 | 150 | 20 | 210 | 48 | 214 | 1.0 | 84 | 210 | 1.0 | 30.357 | -H210 | 50-P90/M4 | |
| 46 | 220 | 2.1 | 4.7 | 154 | 19 | 215 | 46 | 220 | 2.1 | 82 | 215 | 2.0 | 31.167 | -H450 | 50-P90/M4 | |
| 43 | 237 | 1.4 | 4.3 | 166 | 18 | 232 | 43 | 237 | 1.4 | 76 | 232 | 1.3 | 33.564 | -H320 | 50-P90/M4 | |
| 41 | 252 | 1.8 | 4.1 | 177 | 17 | 246 | 41 | 252 | 1.8 | 72 | 246 | 1.7 | 35.689 | -H450 | 50-P90/M4 | |
| 36 | 285 | 1.6 | 3.6 | 200 | 15 | 278 | 36 | 285 | 1.6 | 63 | 278 | 1.6 | 40.333 | -H450 | 50-P90/M4 | |
| 33 | 306 | 1.1 | 3.3 | 214 | 14 | 299 | 33 | 306 | 1.1 | 59 | 299 | 1.1 | 43.313 | -H450 | 50-P90/M4 | |
| 30 | 345 | 1.1 | 3.0 | 242 | 12 | 338 | 30 | 345 | 1.1 | 52 | 338 | 1.1 | 48.950 | -H450 | 50-P90/M4 | |

6.3

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 33 | 307 | 1.5 | 3.3 | 215 | 14 | 300 | 33 | 307 | 1.5 | 58 | 300 | 1.3 | 44.124 | -H450 | 50-P90/M4 | |
| 29 | 347 | 1.3 | 2.9 | 243 | 12 | 339 | 29 | 347 | 1.3 | 51 | 339 | 1.3 | 49.867 | -H450 | 50-P90/M4 | |
| 26 | 393 | 1.2 | 2.6 | 275 | 11 | 384 | 26 | 393 | 1.2 | 45 | 384 | 1.1 | 56.469 | -H450 | 50-P90/M4 | |
| 23 | 429 | 1.1 | 2.3 | 301 | 9.7 | 420 | 23 | 429 | 1.1 | 41 | 420 | 1.0 | 61.774 | -H450 | 50-P90/M4 | |
| 21 | 485 | 0.9 | 2.1 | 340 | 8.6 | 475 | 21 | 485 | 0.9 | 37 | 475 | 0.9 | 69.813 | -H450 | 50-P90/M4 | |

g500-H helical geared motors

Technical data

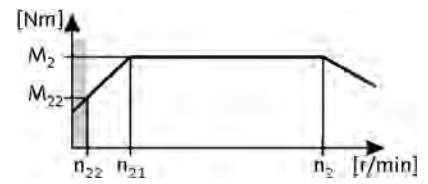


Selection tables, 4-pole motors

50 Hz: $P_N = 1.1 \text{ kW}$

87 Hz: $P_N = 1.9 \text{ kW}$

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 18 | 548 | 0.8 | 1.8 | 384 | 7.6 | 548 | 18 | 548 | 0.8 | | | | 78.794 | -H450 | 50-P90/M4 | |

g500-H helical geared motors

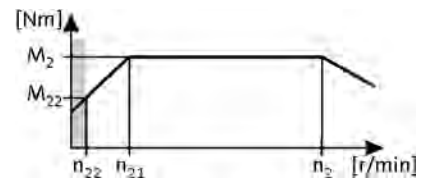


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.5$ kW
 87 Hz: $P_N = 2.6$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 441 | 31 | 2.6 | 44 | 22 | 184 | 31 | 441 | 31 | 2.6 | 781 | 31 | 2.2 | 3.267 | -H140 | 50-P90/L4 | |
| 430 | 32 | 1.9 | 43 | 23 | 179 | 32 | 430 | 32 | 1.9 | 761 | 32 | 1.6 | 3.354 | -H100 | 50-P90/L4 | |
| 322 | 43 | 2.2 | 32 | 30 | 134 | 42 | 322 | 43 | 2.2 | 570 | 42 | 1.9 | 4.480 | -H140 | 50-P90/L4 | |
| 314 | 44 | 1.6 | 32 | 31 | 130 | 43 | 314 | 44 | 1.6 | 555 | 43 | 1.4 | 4.600 | -H100 | 50-P90/L4 | |
| 310 | 45 | 3.2 | 31 | 32 | 129 | 44 | 310 | 45 | 3.2 | 549 | 44 | 2.7 | 4.648 | -H210 | 50-P90/L4 | |
| 279 | 50 | 1.5 | 28 | 35 | 116 | 50 | 279 | 50 | 1.5 | | | | 5.167 | -H100 | 50-P90/L4 | |
| 258 | 54 | 3.0 | 26 | 38 | 108 | 53 | 258 | 54 | 3.0 | 457 | 53 | 2.5 | 5.583 | -H210 | 50-P90/L4 | |
| 252 | 55 | 1.9 | 25 | 39 | 105 | 54 | 252 | 55 | 1.9 | 445 | 54 | 1.6 | 5.733 | -H140 | 50-P90/L4 | |
| 245 | 57 | 1.4 | 25 | 40 | 102 | 56 | 245 | 57 | 1.4 | 434 | 56 | 1.2 | 5.887 | -H100 | 50-P90/L4 | |
| 231 | 60 | 2.6 | 23 | 42 | 96 | 59 | 231 | 60 | 2.6 | 408 | 59 | 2.2 | 6.250 | -H210 | 50-P90/L4 | |
| 230 | 60 | 1.7 | 23 | 43 | 96 | 59 | 230 | 60 | 1.7 | 407 | 59 | 1.5 | 6.272 | -H140 | 50-P90/L4 | |
| 224 | 62 | 1.3 | 23 | 44 | 93 | 61 | 224 | 62 | 1.3 | 396 | 61 | 1.1 | 6.440 | -H100 | 50-P90/L4 | |
| | | | 21 | 47 | 87 | 65 | | | | 369 | 65 | 2.8 | 6.910 | -H320 | 50-P90/L4 | |
| 204 | 68 | 1.3 | 21 | 48 | 85 | 67 | 204 | 68 | 1.3 | 360 | 67 | 1.1 | 7.086 | -H100 | 50-P90/L4 | |
| 198 | 70 | 1.5 | 20 | 49 | 83 | 70 | 198 | 70 | 1.5 | | | | 7.269 | -H140 | 50-P90/L4 | |
| 188 | 74 | 2.3 | 19 | 52 | 78 | 72 | 188 | 74 | 2.3 | 333 | 72 | 2.0 | 7.657 | -H210 | 50-P90/L4 | |
| 180 | 77 | 1.5 | 18 | 54 | 75 | 76 | 180 | 77 | 1.5 | 319 | 76 | 1.3 | 8.000 | -H140 | 50-P90/L4 | |
| 176 | 79 | 1.2 | 18 | 56 | 73 | 78 | 176 | 79 | 1.2 | 311 | 78 | 1.0 | 8.214 | -H100 | 50-P90/L4 | |
| 173 | 80 | 3.1 | 17 | 57 | 72 | 79 | 173 | 80 | 3.1 | 306 | 79 | 2.7 | 8.343 | -H320 | 50-P90/L4 | |
| 168 | 83 | 2.1 | 17 | 58 | 70 | 81 | 168 | 83 | 2.1 | 298 | 81 | 1.8 | 8.571 | -H210 | 50-P90/L4 | |
| 160 | 87 | 1.3 | 16 | 61 | 67 | 85 | 160 | 87 | 1.3 | 283 | 85 | 1.2 | 9.029 | -H140 | 50-P90/L4 | |
| 159 | 87 | 1.1 | 16 | 62 | 66 | 86 | 159 | 87 | 1.1 | 281 | 86 | 0.9 | 9.068 | -H100 | 50-P90/L4 | |
| 152 | 91 | 2.6 | 15 | 64 | 63 | 89 | 152 | 91 | 2.6 | 269 | 89 | 2.2 | 9.477 | -H320 | 50-P90/L4 | |
| 147 | 94 | 1.9 | 15 | 67 | 61 | 92 | 147 | 94 | 1.9 | 260 | 92 | 1.7 | 9.799 | -H210 | 50-P90/L4 | |
| 147 | 94 | 1.3 | 15 | 67 | 61 | 93 | 147 | 94 | 1.3 | 260 | 93 | 1.1 | 9.800 | -H140 | 50-P90/L4 | |
| 143 | 97 | 1.0 | 14 | 68 | 60 | 95 | 143 | 97 | 1.0 | 254 | 95 | 0.9 | 10.063 | -H100 | 50-P90/L4 | |
| 135 | 103 | 2.6 | 14 | 73 | 56 | 101 | 135 | 103 | 2.6 | 239 | 101 | 2.2 | 10.677 | -H320 | 50-P90/L4 | |
| 135 | 103 | 1.8 | 14 | 73 | 56 | 101 | 135 | 103 | 1.8 | 238 | 101 | 1.6 | 10.720 | -H210 | 50-P90/L4 | |
| | | | 13 | 77 | 53 | 106 | | | | 227 | 106 | 3.2 | 11.262 | -H450 | 50-P90/L4 | |
| 127 | 109 | 0.9 | 13 | 77 | 53 | 109 | 127 | 109 | 0.9 | | | | 11.360 | -H100 | 50-P90/L4 | |
| 125 | 111 | 1.2 | 13 | 79 | 52 | 109 | 125 | 111 | 1.2 | 221 | 109 | 1.0 | 11.554 | -H140 | 50-P90/L4 | |
| 124 | 113 | 2.4 | 12 | 79 | 51 | 110 | 124 | 113 | 2.4 | 219 | 110 | 2.1 | 11.680 | -H320 | 50-P90/L4 | |
| 120 | 116 | 1.6 | 12 | 82 | 50 | 113 | 120 | 116 | 1.6 | 213 | 113 | 1.4 | 12.000 | -H210 | 50-P90/L4 | |
| 119 | 117 | 2.2 | 12 | 82 | 50 | 114 | 119 | 117 | 2.2 | 210 | 114 | 1.9 | 12.128 | -H320 | 50-P90/L4 | |
| | | | 12 | 84 | 49 | 116 | | | | 207 | 116 | 3.0 | 12.320 | -H450 | 50-P90/L4 | |

g500-H helical geared motors

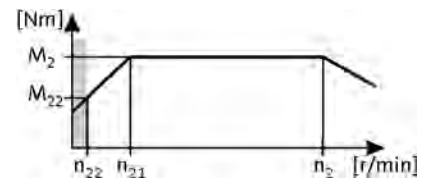


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.5 \text{ kW}$
 87 Hz: $P_N = 2.6 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|-----------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 114 | 122 | 1.1 | 12 | 86 | 48 | 119 | 114 | 122 | 1.1 | 202 | 119 | 0.9 | 12.640 | -H140 | 50-P90/L4 | |
| 114 | 122 | 0.8 | 12 | 86 | 47 | 122 | 114 | 122 | 0.8 | | | | 12.653 | -H100 | 50-P90/L4 | |
| 109 | 128 | 2.1 | 11 | 90 | 45 | 125 | 109 | 128 | 2.1 | 192 | 125 | 1.8 | 13.268 | -H320 | 50-P90/L4 | |
| 106 | 132 | 1.5 | 11 | 93 | 44 | 129 | 106 | 132 | 1.5 | 187 | 129 | 1.3 | 13.673 | -H210 | 50-P90/L4 | |
| 104 | 134 | 3.2 | 10 | 94 | 43 | 131 | 104 | 134 | 3.2 | 184 | 131 | 2.7 | 13.905 | -H450 | 50-P90/L4 | |
| 103 | 135 | 1.0 | 10 | 95 | 43 | 132 | 103 | 135 | 1.0 | 183 | 132 | 0.9 | 13.957 | -H140 | 50-P90/L4 | |
| 97 | 144 | 2.0 | 9.7 | 101 | 40 | 141 | 97 | 144 | 2.0 | 171 | 141 | 1.8 | 14.898 | -H320 | 50-P90/L4 | |
| 94 | 148 | 1.4 | 9.5 | 104 | 39 | 144 | 94 | 148 | 1.4 | 167 | 144 | 1.2 | 15.306 | -H210 | 50-P90/L4 | |
| 92 | 151 | 2.9 | 9.2 | 107 | 38 | 148 | 92 | 151 | 2.9 | 162 | 148 | 2.5 | 15.714 | -H450 | 50-P90/L4 | |
| 89 | 155 | 0.9 | 9.0 | 110 | 37 | 155 | 89 | 155 | 0.9 | | | | 16.122 | -H140 | 50-P90/L4 | |
| 86 | 161 | 1.3 | 8.7 | 114 | 36 | 158 | 86 | 161 | 1.3 | 152 | 158 | 1.1 | 16.750 | -H210 | 50-P90/L4 | |
| 85 | 163 | 1.7 | 8.6 | 115 | 36 | 160 | 85 | 163 | 1.7 | 151 | 160 | 1.5 | 16.923 | -H320 | 50-P90/L4 | |
| 85 | 164 | 2.7 | 8.5 | 116 | 35 | 161 | 85 | 164 | 2.7 | 150 | 161 | 2.3 | 17.033 | -H450 | 50-P90/L4 | |
| 81 | 172 | 0.8 | 8.1 | 121 | 34 | 172 | 81 | 172 | 0.8 | | | | 17.802 | -H140 | 50-P90/L4 | |
| 79 | 176 | 1.8 | 7.9 | 124 | 33 | 172 | 79 | 176 | 1.8 | 140 | 172 | 1.5 | 18.250 | -H320 | 50-P90/L4 | |
| 77 | 181 | 1.2 | 7.7 | 127 | 32 | 177 | 77 | 181 | 1.2 | 136 | 177 | 1.0 | 18.750 | -H210 | 50-P90/L4 | |
| 75 | 186 | 2.4 | 7.5 | 131 | 31 | 182 | 75 | 186 | 2.4 | 133 | 182 | 2.1 | 19.250 | -H450 | 50-P90/L4 | |
| 70 | 200 | 1.5 | 7.0 | 141 | 29 | 196 | 70 | 200 | 1.5 | 123 | 196 | 1.3 | 20.731 | -H320 | 50-P90/L4 | |
| 66 | 210 | 1.0 | 6.7 | 148 | 28 | 206 | 66 | 210 | 1.0 | 117 | 206 | 0.9 | 21.802 | -H210 | 50-P90/L4 | |
| 65 | 214 | 2.1 | 6.5 | 151 | 27 | 209 | 65 | 214 | 2.1 | 115 | 209 | 1.8 | 22.170 | -H450 | 50-P90/L4 | |
| 61 | 229 | 1.4 | 6.1 | 161 | 25 | 224 | 61 | 229 | 1.4 | 107 | 224 | 1.2 | 23.754 | -H320 | 50-P90/L4 | |
| 59 | 235 | 0.9 | 5.9 | 166 | 25 | 235 | 59 | 235 | 0.9 | | | | 24.405 | -H210 | 50-P90/L4 | |
| 58 | 241 | 1.9 | 5.8 | 170 | 24 | 237 | 58 | 241 | 1.9 | 102 | 237 | 1.6 | 25.056 | -H450 | 50-P90/L4 | |
| 53 | 260 | 1.2 | 5.4 | 183 | 22 | 255 | 53 | 260 | 1.2 | 95 | 255 | 1.2 | 26.983 | -H320 | 50-P90/L4 | |
| 52 | 266 | 1.7 | 5.3 | 187 | 22 | 260 | 52 | 266 | 1.7 | 93 | 260 | 1.7 | 27.578 | -H450 | 50-P90/L4 | |
| 49 | 285 | 1.1 | 4.9 | 201 | 20 | 279 | 49 | 285 | 1.1 | 86 | 279 | 1.1 | 29.548 | -H320 | 50-P90/L4 | |
| 46 | 300 | 1.5 | 4.7 | 212 | 19 | 294 | 46 | 300 | 1.5 | 82 | 294 | 1.5 | 31.167 | -H450 | 50-P90/L4 | |
| 43 | 323 | 1.0 | 4.3 | 228 | 18 | 317 | 43 | 323 | 1.0 | 76 | 317 | 1.0 | 33.564 | -H320 | 50-P90/L4 | |
| 40 | 344 | 1.3 | 4.1 | 242 | 17 | 337 | 40 | 344 | 1.3 | 72 | 337 | 1.3 | 35.689 | -H450 | 50-P90/L4 | |
| 36 | 389 | 1.2 | 3.6 | 274 | 15 | 381 | 36 | 389 | 1.2 | 63 | 381 | 1.2 | 40.333 | -H450 | 50-P90/L4 | |

6.3

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|-----------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 33 | 419 | 1.1 | 3.3 | 295 | 14 | 410 | 33 | 419 | 1.1 | 58 | 410 | 0.9 | 44.124 | -H450 | 50-P90/L4 | |
| 29 | 473 | 1.0 | 2.9 | 334 | 12 | 464 | 29 | 473 | 1.0 | 51 | 464 | 0.9 | 49.867 | -H450 | 50-P90/L4 | |
| 26 | 536 | 0.8 | 2.6 | 378 | 11 | 525 | 26 | 536 | 0.8 | 45 | 525 | 0.8 | 56.469 | -H450 | 50-P90/L4 | |

g500-H helical geared motors

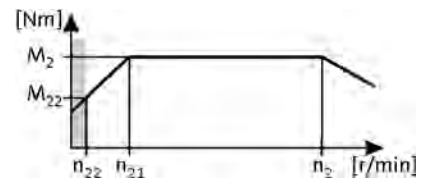


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 2.2 \text{ kW}$
 87 Hz: $P_N = 3.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 429 | 48 | 2.7 | 43 | 33 | 177 | 48 | 429 | 48 | 2.7 | | | | 3.389 | -H210 | 50-P100/M4 | |
| | | | 43 | 33 | 177 | 48 | | | | 756 | 48 | 2.9 | 3.389 | -H320 | 50-P100/M4 | |
| 312 | 65 | 2.2 | 31 | 46 | 129 | 65 | 312 | 65 | 2.2 | 551 | 66 | 1.8 | 4.648 | -H210 | 50-P100/M4 | |
| 312 | 65 | 2.9 | 31 | 46 | 129 | 65 | 312 | 65 | 2.9 | 551 | 66 | 2.4 | 4.648 | -H320 | 50-P100/M4 | |
| 260 | 78 | 2.0 | 26 | 55 | 108 | 78 | 260 | 78 | 2.0 | | | | 5.583 | -H210 | 50-P100/M4 | |
| | | | 24 | 59 | 99 | 85 | | | | 424 | 85 | 3.2 | 6.045 | -H450 | 50-P100/M4 | |
| 239 | 85 | 2.7 | 24 | 60 | 99 | 85 | 239 | 85 | 2.7 | | | | 6.083 | -H320 | 50-P100/M4 | |
| 232 | 88 | 1.8 | 23 | 61 | 96 | 88 | 232 | 88 | 1.8 | | | | 6.250 | -H210 | 50-P100/M4 | |
| | | | 22 | 65 | 91 | 93 | | | | 387 | 93 | 3.0 | 6.613 | -H450 | 50-P100/M4 | |
| 210 | 97 | 2.3 | 21 | 68 | 87 | 97 | 210 | 97 | 2.3 | | | | 6.910 | -H320 | 50-P100/M4 | |
| 190 | 107 | 1.6 | 19 | 75 | 78 | 107 | 190 | 107 | 1.6 | | | | 7.657 | -H210 | 50-P100/M4 | |
| 187 | 109 | 3.2 | 19 | 76 | 77 | 109 | 187 | 109 | 3.2 | 329 | 110 | 2.7 | 7.787 | -H450 | 50-P100/M4 | |
| 174 | 117 | 2.1 | 17 | 82 | 72 | 117 | 174 | 117 | 2.1 | 307 | 118 | 1.8 | 8.343 | -H320 | 50-P100/M4 | |
| 169 | 120 | 1.4 | 17 | 84 | 70 | 120 | 169 | 120 | 1.4 | | | | 8.571 | -H210 | 50-P100/M4 | |
| 165 | 124 | 3.0 | 17 | 86 | 68 | 124 | 165 | 124 | 3.0 | 291 | 124 | 2.5 | 8.800 | -H450 | 50-P100/M4 | |
| 153 | 133 | 1.8 | 15 | 93 | 63 | 133 | 153 | 133 | 1.8 | | | | 9.477 | -H320 | 50-P100/M4 | |
| 148 | 138 | 1.3 | 15 | 96 | 61 | 138 | 148 | 138 | 1.3 | | | | 9.799 | -H210 | 50-P100/M4 | |
| 146 | 140 | 2.8 | 15 | 98 | 60 | 140 | 146 | 140 | 2.8 | 257 | 141 | 2.3 | 9.965 | -H450 | 50-P100/M4 | |
| 136 | 150 | 1.8 | 14 | 105 | 56 | 150 | 136 | 150 | 1.8 | 240 | 151 | 1.5 | 10.677 | -H320 | 50-P100/M4 | |
| 135 | 150 | 1.3 | 14 | 105 | 56 | 150 | 135 | 150 | 1.3 | 239 | 151 | 1.1 | 10.720 | -H210 | 50-P100/M4 | |
| 129 | 158 | 2.5 | 13 | 110 | 53 | 158 | 129 | 158 | 2.5 | 228 | 159 | 2.1 | 11.262 | -H450 | 50-P100/M4 | |
| 124 | 164 | 1.7 | 12 | 115 | 51 | 164 | 124 | 164 | 1.7 | 219 | 165 | 1.4 | 11.680 | -H320 | 50-P100/M4 | |
| 121 | 168 | 1.1 | 12 | 118 | 50 | 168 | 121 | 168 | 1.1 | | | | 12.000 | -H210 | 50-P100/M4 | |
| 120 | 170 | 1.5 | 12 | 119 | 50 | 170 | 120 | 170 | 1.5 | 211 | 171 | 1.2 | 12.128 | -H320 | 50-P100/M4 | |
| 118 | 173 | 2.4 | 12 | 121 | 49 | 173 | 118 | 173 | 2.4 | 208 | 174 | 2.0 | 12.320 | -H450 | 50-P100/M4 | |
| 109 | 186 | 1.4 | 11 | 130 | 45 | 186 | 109 | 186 | 1.4 | 193 | 187 | 1.2 | 13.268 | -H320 | 50-P100/M4 | |
| 106 | 192 | 1.1 | 11 | 134 | 44 | 192 | 106 | 192 | 1.1 | 187 | 193 | 0.9 | 13.673 | -H210 | 50-P100/M4 | |
| 104 | 195 | 2.2 | 10 | 136 | 43 | 195 | 104 | 195 | 2.2 | 184 | 196 | 1.8 | 13.905 | -H450 | 50-P100/M4 | |
| 98 | 209 | 1.4 | 9.7 | 146 | 40 | 209 | 98 | 209 | 1.4 | 172 | 210 | 1.2 | 14.898 | -H320 | 50-P100/M4 | |
| 95 | 215 | 0.9 | 9.5 | 150 | 39 | 215 | 95 | 215 | 0.9 | | | | 15.306 | -H210 | 50-P100/M4 | |
| 92 | 221 | 2.0 | 9.2 | 154 | 38 | 221 | 92 | 221 | 2.0 | 163 | 222 | 1.7 | 15.714 | -H450 | 50-P100/M4 | |
| 87 | 235 | 0.9 | 8.7 | 164 | 36 | 235 | 87 | 235 | 0.9 | | | | 16.750 | -H210 | 50-P100/M4 | |
| 86 | 238 | 1.2 | 8.6 | 166 | 36 | 238 | 86 | 238 | 1.2 | 151 | 239 | 1.0 | 16.923 | -H320 | 50-P100/M4 | |
| 85 | 239 | 1.9 | 8.5 | 167 | 35 | 239 | 85 | 239 | 1.9 | 150 | 240 | 1.6 | 17.033 | -H450 | 50-P100/M4 | |
| 80 | 256 | 1.2 | 7.9 | 179 | 33 | 256 | 80 | 256 | 1.2 | 140 | 257 | 1.0 | 18.250 | -H320 | 50-P100/M4 | |

g500-H helical geared motors

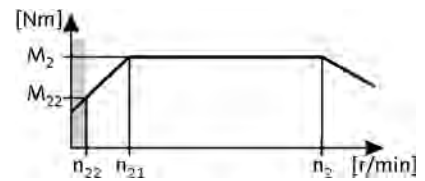
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 2.2 \text{ kW}$
 87 Hz: $P_N = 3.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 75 | 270 | 1.7 | 7.5 | 189 | 31 | 270 | 75 | 270 | 1.7 | 133 | 271 | 1.4 | 19.250 | -H450 | 50-P100/M4 | |
| 70 | 291 | 1.0 | 7.0 | 203 | 29 | 291 | 70 | 291 | 1.0 | 124 | 292 | 0.9 | 20.731 | -H320 | 50-P100/M4 | |
| 66 | 311 | 1.5 | 6.5 | 217 | 27 | 311 | 66 | 311 | 1.5 | 116 | 313 | 1.2 | 22.170 | -H450 | 50-P100/M4 | |
| 58 | 352 | 1.3 | 5.8 | 246 | 24 | 352 | 58 | 352 | 1.3 | 102 | 353 | 1.1 | 25.056 | -H450 | 50-P100/M4 | |
| 53 | 387 | 1.2 | 5.3 | 270 | 22 | 387 | 53 | 387 | 1.2 | 93 | 389 | 1.1 | 27.578 | -H450 | 50-P100/M4 | |
| 47 | 438 | 1.0 | 4.7 | 305 | 19 | 438 | 47 | 438 | 1.0 | 82 | 440 | 1.0 | 31.167 | -H450 | 50-P100/M4 | |

g500-H helical geared motors

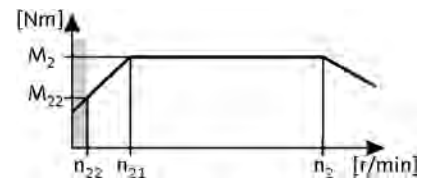


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 3.0$ kW
 87 Hz: $P_N = 5.2$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|-------|------------|--|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | | m5□□ | | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | | |
| 428 | 65 | 1.9 | 43 | 45 | 177 | 65 | 428 | 65 | 1.9 | | | | 3.389 | -H210 | 50-P100/L4 | | |
| 428 | 65 | 2.5 | 43 | 45 | 177 | 65 | 428 | 65 | 2.5 | | | | 3.389 | -H320 | 50-P100/L4 | | |
| 312 | 89 | 1.6 | 31 | 62 | 129 | 89 | 312 | 89 | 1.6 | | | | 4.648 | -H210 | 50-P100/L4 | | |
| 312 | 89 | 2.1 | 31 | 62 | 129 | 87 | 312 | 89 | 2.1 | 551 | 87 | 1.8 | 4.648 | -H320 | 50-P100/L4 | | |
| 307 | 91 | 3.2 | 31 | 63 | 127 | 89 | 307 | 91 | 3.2 | 542 | 89 | 2.8 | 4.724 | -H450 | 50-P100/L4 | | |
| 260 | 107 | 1.5 | 26 | 75 | 108 | 107 | 260 | 107 | 1.5 | | | | 5.583 | -H210 | 50-P100/L4 | | |
| 255 | 109 | 2.9 | 26 | 76 | 106 | 109 | 255 | 109 | 2.9 | | | | 5.678 | -H450 | 50-P100/L4 | | |
| 240 | 116 | 2.8 | 24 | 81 | 99 | 114 | 240 | 116 | 2.8 | 423 | 114 | 2.4 | 6.045 | -H450 | 50-P100/L4 | | |
| 238 | 117 | 2.0 | 24 | 82 | 99 | 117 | 238 | 117 | 2.0 | | | | 6.083 | -H320 | 50-P100/L4 | | |
| 232 | 120 | 1.3 | 23 | 84 | 96 | 120 | 232 | 120 | 1.3 | | | | 6.250 | -H210 | 50-P100/L4 | | |
| 219 | 127 | 2.6 | 22 | 89 | 91 | 125 | 219 | 127 | 2.6 | 387 | 125 | 2.3 | 6.613 | -H450 | 50-P100/L4 | | |
| 210 | 133 | 1.6 | 21 | 93 | 87 | 133 | 210 | 133 | 1.6 | | | | 6.910 | -H320 | 50-P100/L4 | | |
| 189 | 147 | 1.2 | 19 | 103 | 78 | 147 | 189 | 147 | 1.2 | | | | 7.657 | -H210 | 50-P100/L4 | | |
| 186 | 149 | 2.4 | 19 | 104 | 77 | 149 | 186 | 149 | 2.4 | | | | 7.787 | -H450 | 50-P100/L4 | | |
| 174 | 160 | 1.6 | 17 | 112 | 72 | 160 | 174 | 160 | 1.6 | | | | 8.343 | -H320 | 50-P100/L4 | | |
| 169 | 164 | 1.0 | 17 | 115 | 70 | 164 | 169 | 164 | 1.0 | | | | 8.571 | -H210 | 50-P100/L4 | | |
| 165 | 169 | 2.2 | 17 | 118 | 68 | 169 | 165 | 169 | 2.2 | | | | 8.800 | -H450 | 50-P100/L4 | | |
| 153 | 182 | 1.3 | 15 | 127 | 63 | 182 | 153 | 182 | 1.3 | | | | 9.477 | -H320 | 50-P100/L4 | | |
| 148 | 188 | 1.0 | 15 | 131 | 61 | 188 | 148 | 188 | 1.0 | | | | 9.799 | -H210 | 50-P100/L4 | | |
| 145 | 191 | 2.0 | 15 | 133 | 60 | 188 | 145 | 191 | 2.0 | 257 | 188 | 1.7 | 9.965 | -H450 | 50-P100/L4 | | |
| 136 | 205 | 1.3 | 14 | 143 | 56 | 205 | 136 | 205 | 1.3 | | | | 10.677 | -H320 | 50-P100/L4 | | |
| 135 | 206 | 0.9 | 14 | 144 | 56 | 206 | 135 | 206 | 0.9 | | | | 10.720 | -H210 | 50-P100/L4 | | |
| 129 | 216 | 1.9 | 13 | 151 | 53 | 216 | 129 | 216 | 1.9 | | | | 11.262 | -H450 | 50-P100/L4 | | |
| 124 | 224 | 1.2 | 12 | 156 | 51 | 224 | 124 | 224 | 1.2 | | | | 11.680 | -H320 | 50-P100/L4 | | |
| 121 | 230 | 0.8 | 12 | 161 | 50 | 230 | 121 | 230 | 0.8 | | | | 12.000 | -H210 | 50-P100/L4 | | |
| 120 | 233 | 1.1 | 12 | 162 | 50 | 233 | 120 | 233 | 1.1 | | | | 12.128 | -H320 | 50-P100/L4 | | |
| 118 | 236 | 1.7 | 12 | 165 | 49 | 236 | 118 | 236 | 1.7 | | | | 12.320 | -H450 | 50-P100/L4 | | |
| 109 | 255 | 1.0 | 11 | 178 | 45 | 255 | 109 | 255 | 1.0 | | | | 13.268 | -H320 | 50-P100/L4 | | |
| 104 | 267 | 1.6 | 10 | 186 | 43 | 262 | 104 | 267 | 1.6 | 184 | 262 | 1.4 | 13.905 | -H450 | 50-P100/L4 | | |
| 97 | 286 | 1.0 | 9.7 | 200 | 40 | 280 | 97 | 286 | 1.0 | 172 | 280 | 0.9 | 14.898 | -H320 | 50-P100/L4 | | |
| 92 | 301 | 1.5 | 9.2 | 210 | 38 | 296 | 92 | 301 | 1.5 | 163 | 296 | 1.3 | 15.714 | -H450 | 50-P100/L4 | | |
| 86 | 325 | 0.9 | 8.6 | 227 | 36 | 325 | 86 | 325 | 0.9 | | | | 16.923 | -H320 | 50-P100/L4 | | |
| 85 | 327 | 1.4 | 8.5 | 228 | 35 | 321 | 85 | 327 | 1.4 | 150 | 321 | 1.2 | 17.033 | -H450 | 50-P100/L4 | | |
| 79 | 350 | 0.9 | 7.9 | 244 | 33 | 350 | 79 | 350 | 0.9 | | | | 18.250 | -H320 | 50-P100/L4 | | |
| 75 | 369 | 1.2 | 7.5 | 258 | 31 | 362 | 75 | 369 | 1.2 | 133 | 362 | 1.0 | 19.250 | -H450 | 50-P100/L4 | | |

g500-H helical geared motors

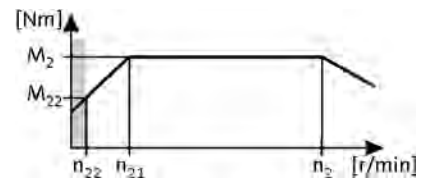
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 3.0$ kW
 87 Hz: $P_N = 5.2$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|------------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 65 | 425 | 1.1 | 6.5 | 297 | 27 | 417 | 65 | 425 | 1.1 | 115 | 417 | 0.9 | 22.170 | -H450 | 50-P100/L4 | |
| 58 | 481 | 0.9 | 5.8 | 336 | 24 | 481 | 58 | 481 | 0.9 | | | | 25.056 | -H450 | 50-P100/L4 | |
| 53 | 529 | 0.9 | 5.3 | 369 | 22 | 519 | 53 | 529 | 0.9 | 93 | 519 | 0.8 | 27.578 | -H450 | 50-P100/L4 | |

g500-H helical geared motors

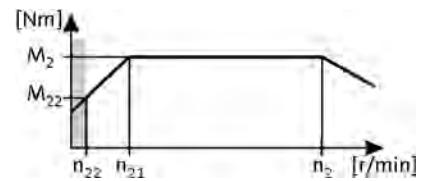


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 4.0$ kW
 87 Hz: $P_N = 7.35$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|-------|------------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | | m5□□ | | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | | |
| 429 | 86 | 1.9 | 43 | 54 | 177 | 86 | 429 | 86 | 1.9 | | | | 3.389 | -H320 | 50-P112/M4 | | |
| 422 | 88 | 2.9 | 42 | 55 | 174 | 88 | 422 | 88 | 2.9 | | | | 3.444 | -H450 | 50-P112/M4 | | |
| 313 | 119 | 1.6 | 31 | 74 | 129 | 119 | 313 | 119 | 1.6 | | | | 4.648 | -H320 | 50-P112/M4 | | |
| 308 | 120 | 2.4 | 31 | 75 | 127 | 120 | 308 | 120 | 2.4 | | | | 4.724 | -H450 | 50-P112/M4 | | |
| 256 | 145 | 2.2 | 26 | 90 | 106 | 145 | 256 | 145 | 2.2 | | | | 5.678 | -H450 | 50-P112/M4 | | |
| 240 | 154 | 2.1 | 24 | 96 | 99 | 154 | 240 | 154 | 2.1 | 424 | 160 | 1.7 | 6.045 | -H450 | 50-P112/M4 | | |
| 239 | 155 | 1.5 | 24 | 97 | 99 | 155 | 239 | 155 | 1.5 | | | | 6.083 | -H320 | 50-P112/M4 | | |
| 220 | 169 | 2.0 | 22 | 105 | 91 | 169 | 220 | 169 | 2.0 | 388 | 176 | 1.6 | 6.613 | -H450 | 50-P112/M4 | | |
| 210 | 176 | 1.2 | 21 | 110 | 87 | 176 | 210 | 176 | 1.2 | | | | 6.910 | -H320 | 50-P112/M4 | | |
| 187 | 199 | 1.8 | 19 | 124 | 77 | 199 | 187 | 199 | 1.8 | | | | 7.787 | -H450 | 50-P112/M4 | | |
| 174 | 213 | 1.2 | 17 | 133 | 72 | 213 | 174 | 213 | 1.2 | | | | 8.343 | -H320 | 50-P112/M4 | | |
| 165 | 224 | 1.7 | 17 | 140 | 68 | 224 | 165 | 224 | 1.7 | | | | 8.800 | -H450 | 50-P112/M4 | | |
| 153 | 242 | 1.0 | 15 | 151 | 63 | 242 | 153 | 242 | 1.0 | | | | 9.477 | -H320 | 50-P112/M4 | | |
| 146 | 254 | 1.5 | 15 | 159 | 60 | 254 | 146 | 254 | 1.5 | | | | 9.965 | -H450 | 50-P112/M4 | | |
| 136 | 272 | 1.0 | 14 | 170 | 56 | 272 | 136 | 272 | 1.0 | | | | 10.677 | -H320 | 50-P112/M4 | | |
| 129 | 287 | 1.4 | 13 | 179 | 53 | 287 | 129 | 287 | 1.4 | | | | 11.262 | -H450 | 50-P112/M4 | | |
| 124 | 298 | 0.9 | 12 | 186 | 51 | 298 | 124 | 298 | 0.9 | | | | 11.680 | -H320 | 50-P112/M4 | | |
| 120 | 309 | 0.8 | 12 | 193 | 50 | 309 | 120 | 309 | 0.8 | | | | 12.128 | -H320 | 50-P112/M4 | | |
| 118 | 314 | 1.3 | 12 | 196 | 49 | 314 | 118 | 314 | 1.3 | | | | 12.320 | -H450 | 50-P112/M4 | | |
| 105 | 355 | 1.2 | 10 | 221 | 43 | 355 | 105 | 355 | 1.2 | | | | 13.905 | -H450 | 50-P112/M4 | | |
| 93 | 401 | 1.1 | 9.2 | 250 | 38 | 401 | 93 | 401 | 1.1 | | | | 15.714 | -H450 | 50-P112/M4 | | |
| 85 | 434 | 1.0 | 8.5 | 271 | 35 | 434 | 85 | 434 | 1.0 | | | | 17.033 | -H450 | 50-P112/M4 | | |
| 76 | 491 | 0.9 | 7.5 | 306 | 31 | 491 | 76 | 491 | 0.9 | | | | 19.250 | -H450 | 50-P112/M4 | | |

g500-H helical geared motors

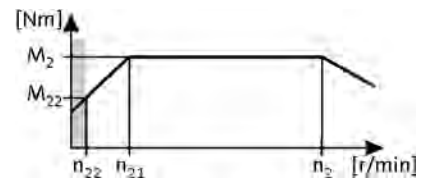


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 5.5$ kW
 87 Hz: $P_N = 9.6$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 424 | 120 | 2.1 | 42 | 75 | 174 | 120 | 424 | 120 | 2.1 | | | | 3.444 | -H450 | 50-P132/M4 | |
| 309 | 165 | 1.8 | 31 | 102 | 127 | 165 | 309 | 165 | 1.8 | | | | 4.724 | -H450 | 50-P132/M4 | |
| 257 | 198 | 1.6 | 26 | 123 | 106 | 198 | 257 | 198 | 1.6 | | | | 5.678 | -H450 | 50-P132/M4 | |
| 242 | 211 | 1.5 | 24 | 131 | 99 | 211 | 242 | 211 | 1.5 | | | | 6.045 | -H450 | 50-P132/M4 | |
| 221 | 231 | 1.5 | 22 | 143 | 91 | 231 | 221 | 231 | 1.5 | | | | 6.613 | -H450 | 50-P132/M4 | |
| 188 | 272 | 1.3 | 19 | 169 | 77 | 272 | 188 | 272 | 1.3 | | | | 7.787 | -H450 | 50-P132/M4 | |
| 166 | 307 | 1.2 | 17 | 191 | 68 | 307 | 166 | 307 | 1.2 | | | | 8.800 | -H450 | 50-P132/M4 | |
| 147 | 348 | 1.1 | 15 | 216 | 60 | 348 | 147 | 348 | 1.1 | | | | 9.965 | -H450 | 50-P132/M4 | |
| 130 | 393 | 1.0 | 13 | 244 | 53 | 393 | 130 | 393 | 1.0 | | | | 11.262 | -H450 | 50-P132/M4 | |
| 119 | 430 | 1.0 | 12 | 267 | 49 | 430 | 119 | 430 | 1.0 | | | | 12.320 | -H450 | 50-P132/M4 | |
| 105 | 485 | 0.9 | 10 | 301 | 43 | 485 | 105 | 485 | 0.9 | | | | 13.905 | -H450 | 50-P132/M4 | |

g500-H helical geared motors

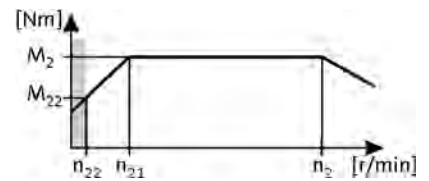


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 13.1$ kW
 87 Hz: $P_N = 7.5$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|-------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 429 | 162 | 1.6 | 42 | 103 | 174 | 162 | 429 | 162 | 1.6 | | | | 3.444 | -H450 | 50-P132/L4 | |
| 313 | 222 | 1.3 | 31 | 141 | 127 | 222 | 313 | 222 | 1.3 | | | | 4.724 | -H450 | 50-P132/L4 | |
| 260 | 267 | 1.2 | 26 | 169 | 106 | 267 | 260 | 267 | 1.2 | | | | 5.678 | -H450 | 50-P132/L4 | |
| 244 | 284 | 1.1 | 24 | 180 | 99 | 284 | 244 | 284 | 1.1 | | | | 6.045 | -H450 | 50-P132/L4 | |
| 223 | 311 | 1.1 | 22 | 197 | 91 | 311 | 223 | 311 | 1.1 | | | | 6.613 | -H450 | 50-P132/L4 | |
| 190 | 366 | 1.0 | 19 | 232 | 77 | 366 | 190 | 366 | 1.0 | | | | 7.787 | -H450 | 50-P132/L4 | |
| 168 | 414 | 0.9 | 17 | 262 | 68 | 414 | 168 | 414 | 0.9 | | | | 8.800 | -H450 | 50-P132/L4 | |
| 148 | 469 | 0.8 | 15 | 297 | 60 | 469 | 148 | 469 | 0.8 | | | | 9.965 | -H450 | 50-P132/L4 | |

g500-H helical geared motors

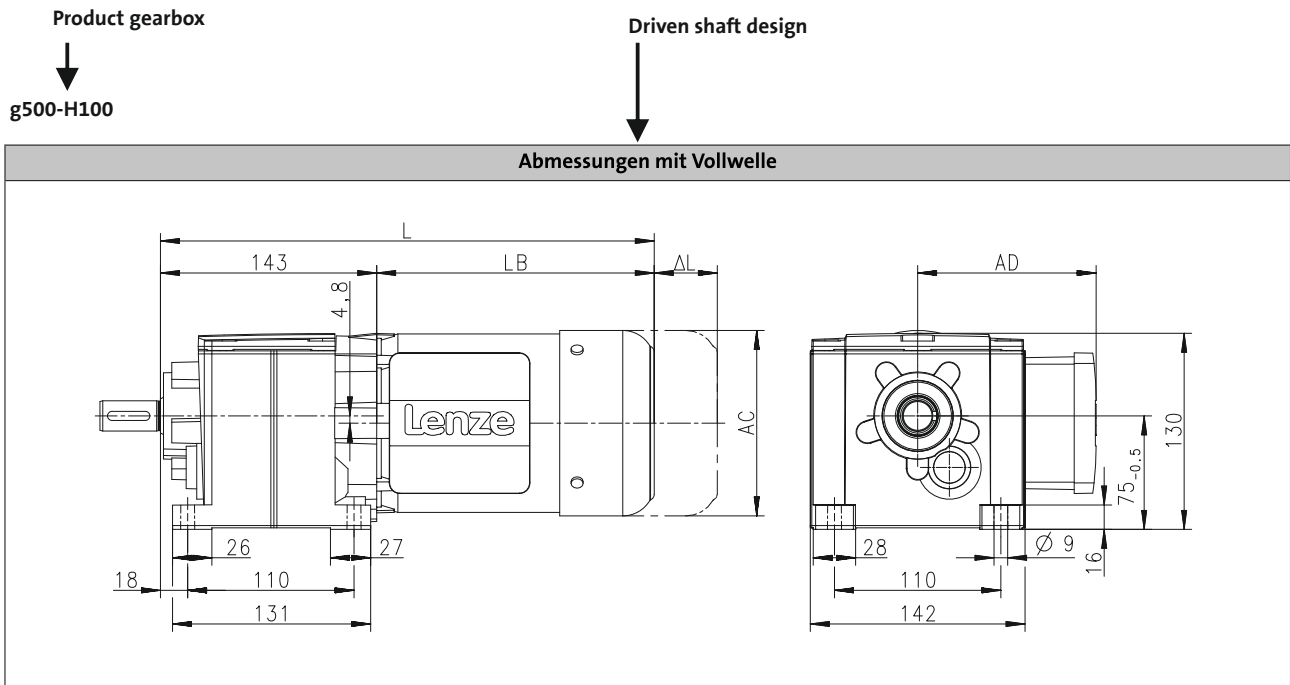
Technical data



Dimensions, notes

Notes on the dimensions

The following legend shows the layout of the dimension sheets.



Product Motor

| | | | MD□MA□□ | | | | |
|-------------------------|----|------|---------|--------|--------|--------|--------|
| | | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Gesamtlänge | L | [mm] | ← | 326 | | | 346 |
| Länge Motor | LB | [mm] | ← | 183 | | | 203 |
| Länge Motoranbauten | ΔL | [mm] | ← | 170 | | | 165 |
| Motordurchmesser | AC | [mm] | ← | 123 | | | 139 |
| Abstand Motor/Anschluss | AD | [mm] | ← | 100 | | | 109 |

Distance of motor centre to the end of terminal box

Motor diameter

Additional length of the built-on accessories (longest version)

Total length of the drive without built-on accessories

Motor length without built-on accessories

- If the mounting area (foot support) towards the motor is longer than the gearbox foot, some motors collide with the mounting area!

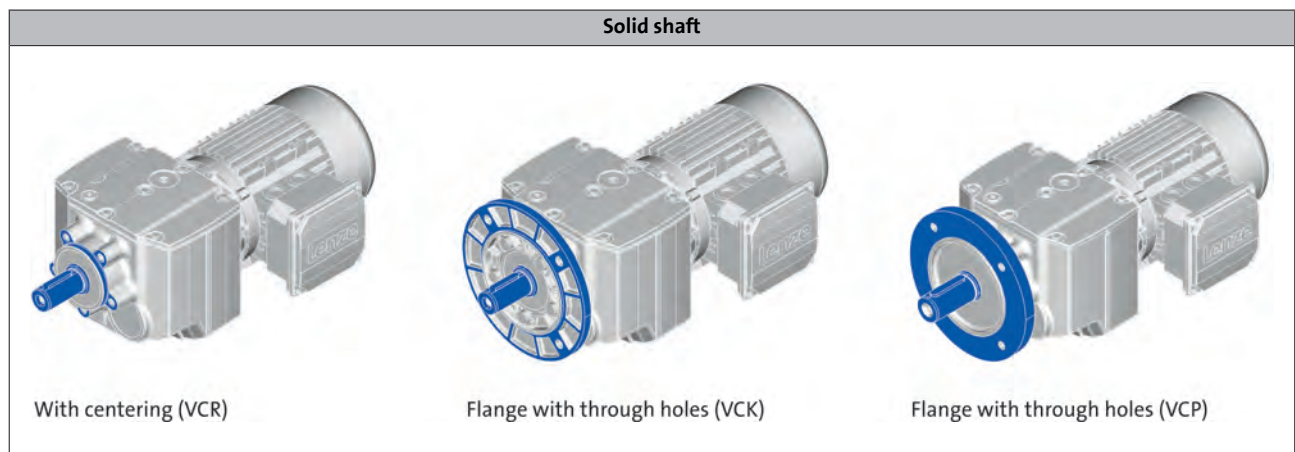
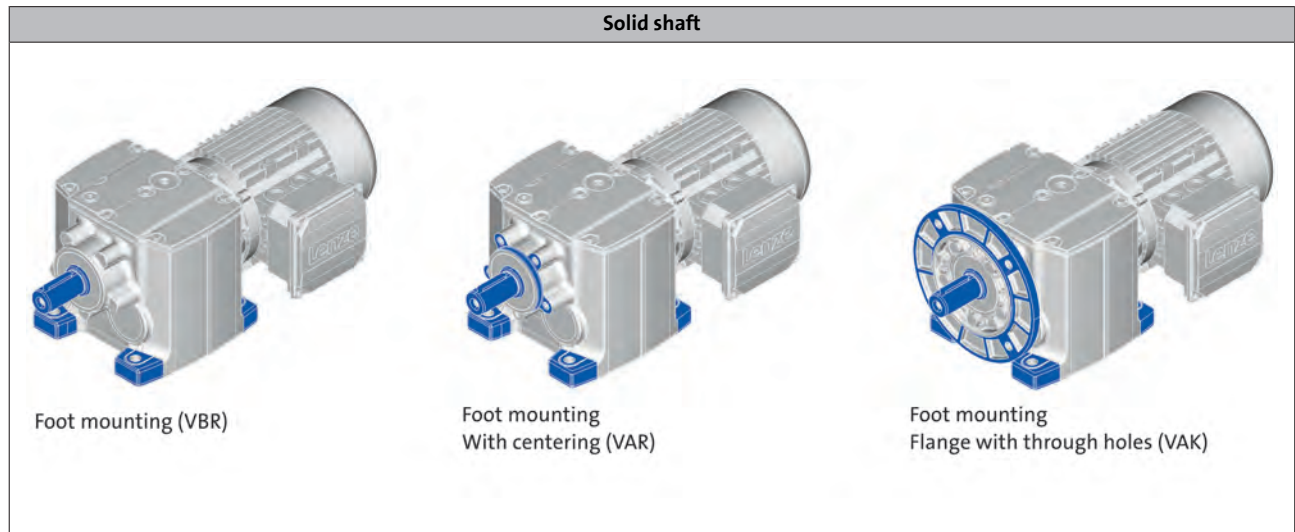
g500-H helical geared motors

Technical data



Dimensions, notes

Gearbox designs



- ▶ VCP (reinforced flange) for transmitting particularly high radial and axial forces.

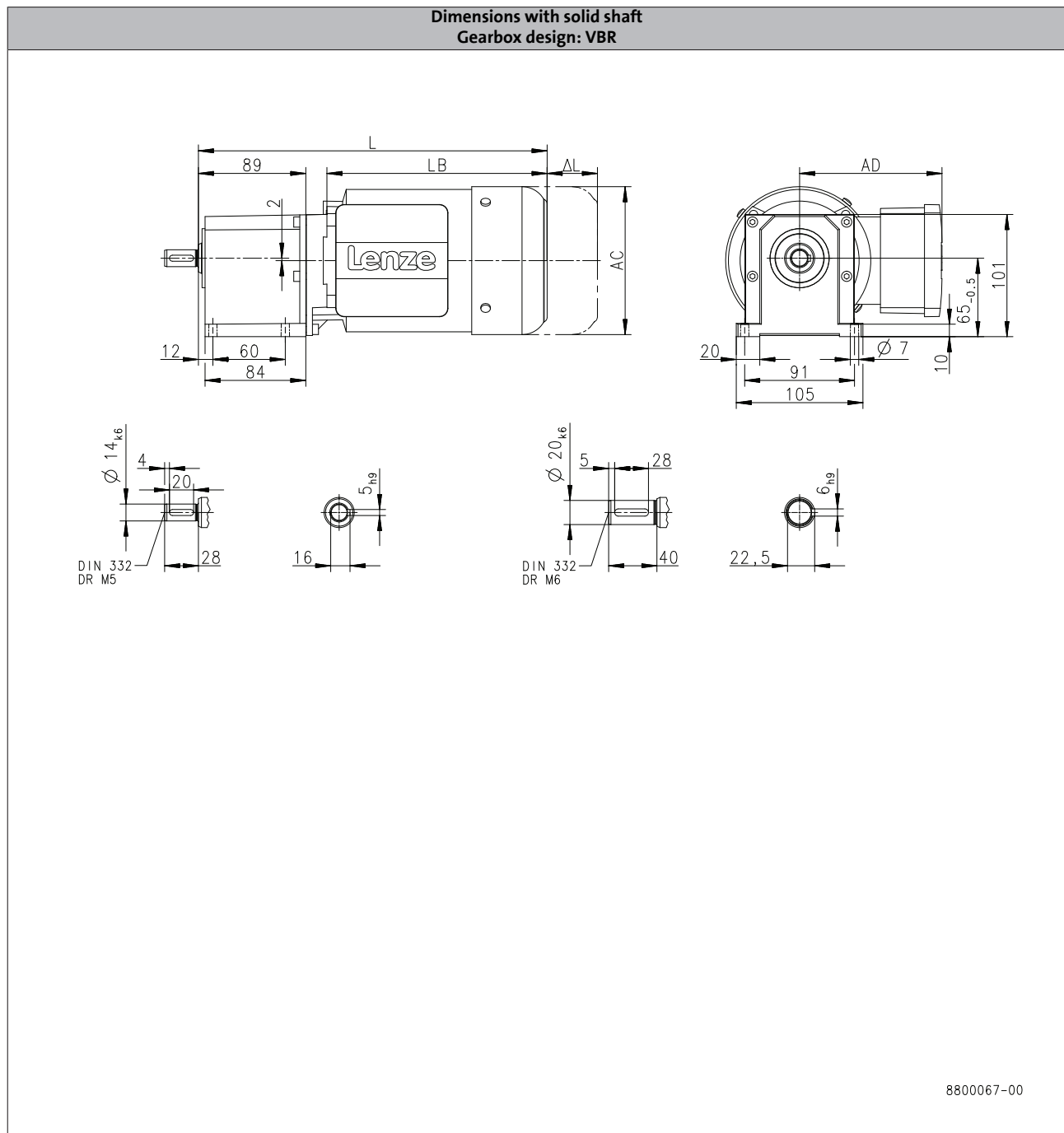
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H45



6.3

| | | | MD□MA□□ | | | | | | |
|---------------------------|-----|------|---------|--------|--------|--------|--------|--------|--------|
| | | | 063-02 | 063-12 | 063-22 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L | [mm] | 261 | 288 | 261 | 288 | | 308 | |
| Motor length | LB | [mm] | 156 | 183 | 156 | 183 | | 203 | |
| Length of motor options | Δ L | [mm] | 135 | 170 | 135 | 170 | | 165 | |
| Motor diameter | AC | [mm] | | | | 123 | | | 139 |
| Distance motor/connection | AD | [mm] | | | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

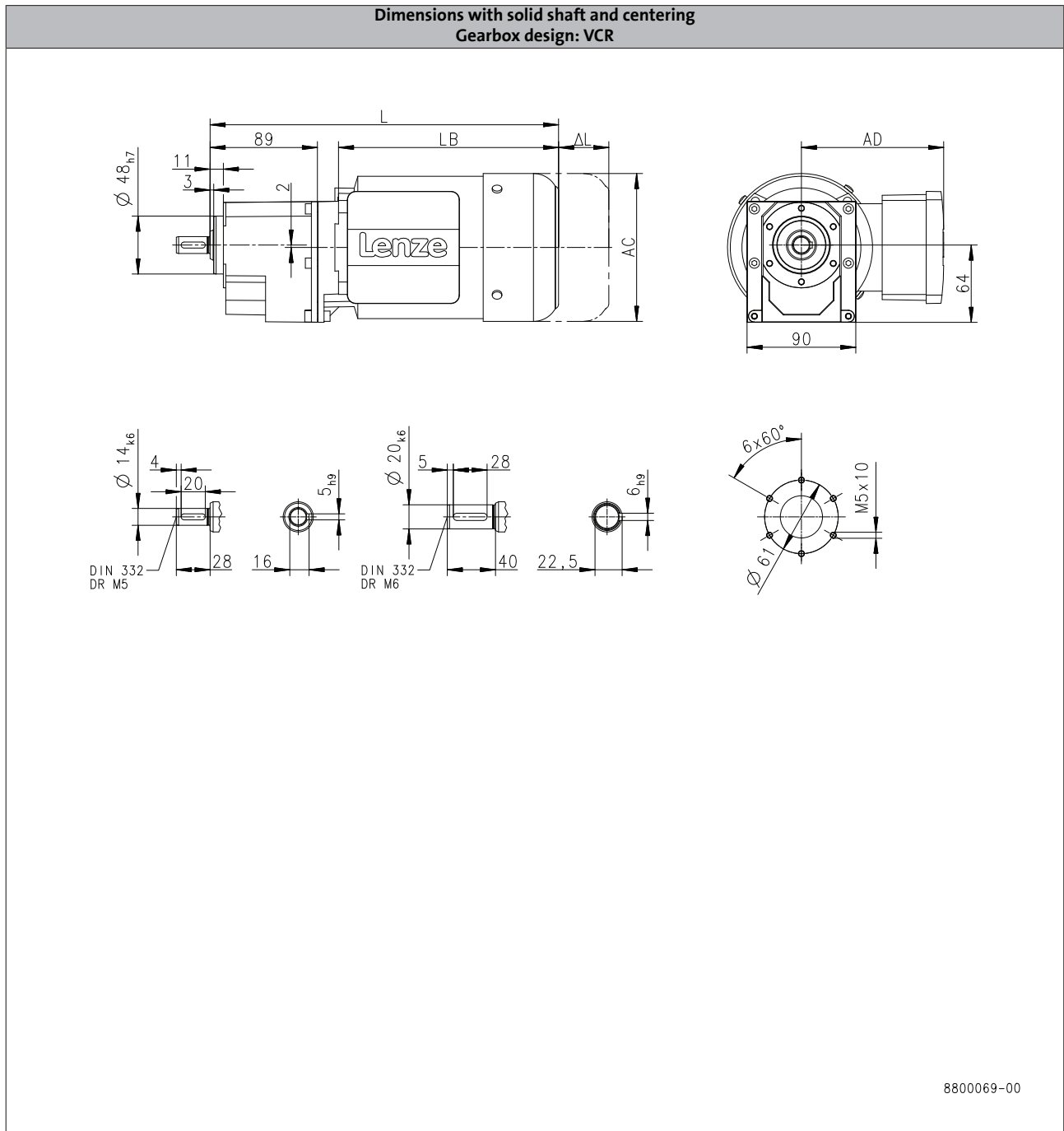
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H45



6.3

| | | | MD□MA□□ | | | | | | |
|---------------------------|-----|------|---------|--------|--------|--------|--------|--------|--------|
| | | | 063-02 | 063-12 | 063-22 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L | [mm] | 261 | 288 | 261 | 288 | | 308 | |
| Motor length | LB | [mm] | 156 | 183 | 156 | 183 | | 203 | |
| Length of motor options | Δ L | [mm] | 135 | 170 | 135 | 170 | | 165 | |
| Motor diameter | AC | [mm] | 123 | | | | | | 139 |
| Distance motor/connection | AD | [mm] | 100 | | | | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

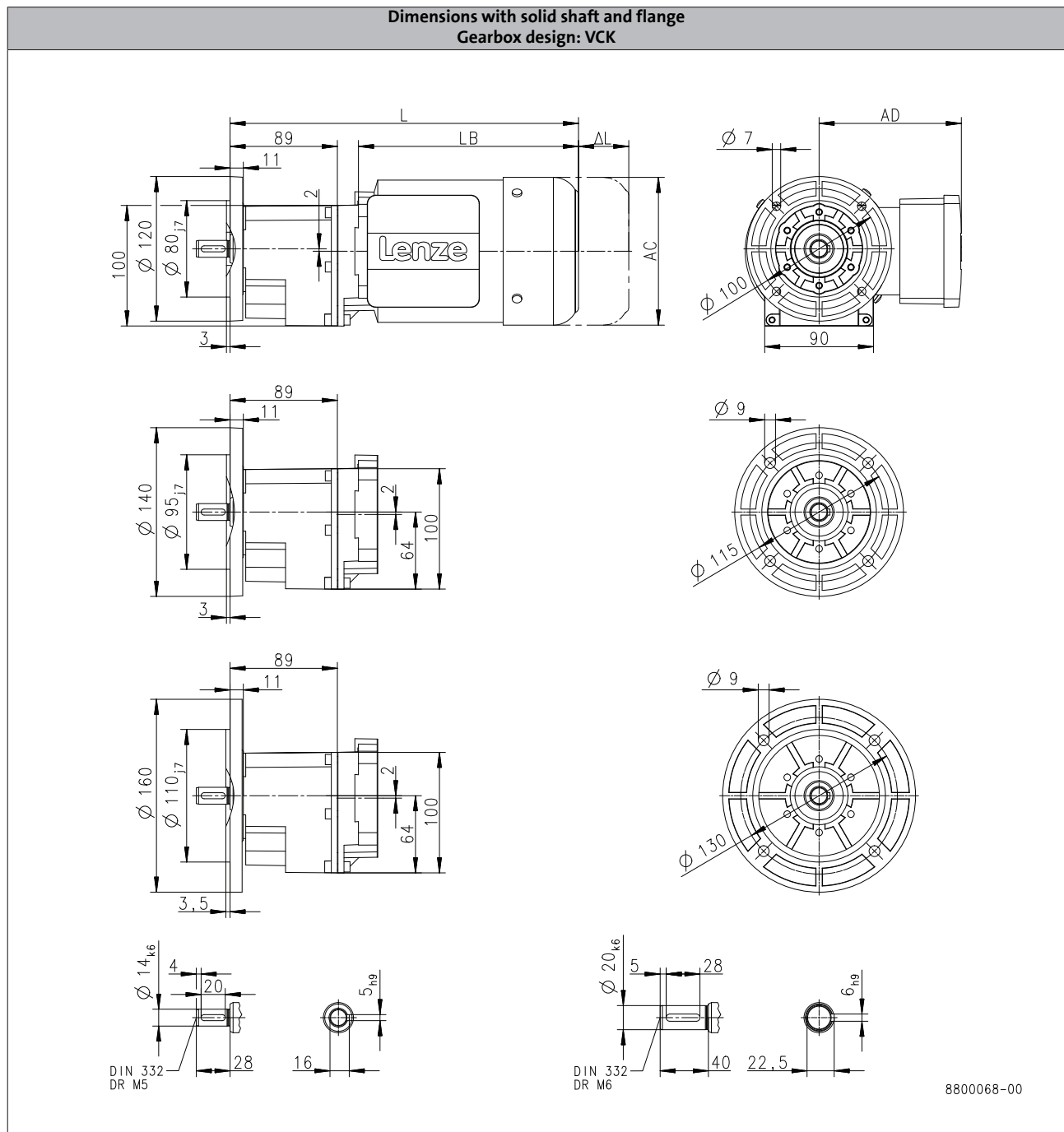
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H45



| | | MD□MA□□ | | | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|--------|--------|
| | | 063-02 | 063-12 | 063-22 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | 261 | 288 | 261 | 288 | | 308 | |
| Motor length | LB [mm] | 156 | 183 | 156 | 183 | | 203 | |
| Length of motor options | Δ L [mm] | 135 | 170 | 135 | 170 | | 165 | |
| Motor diameter | AC [mm] | | | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

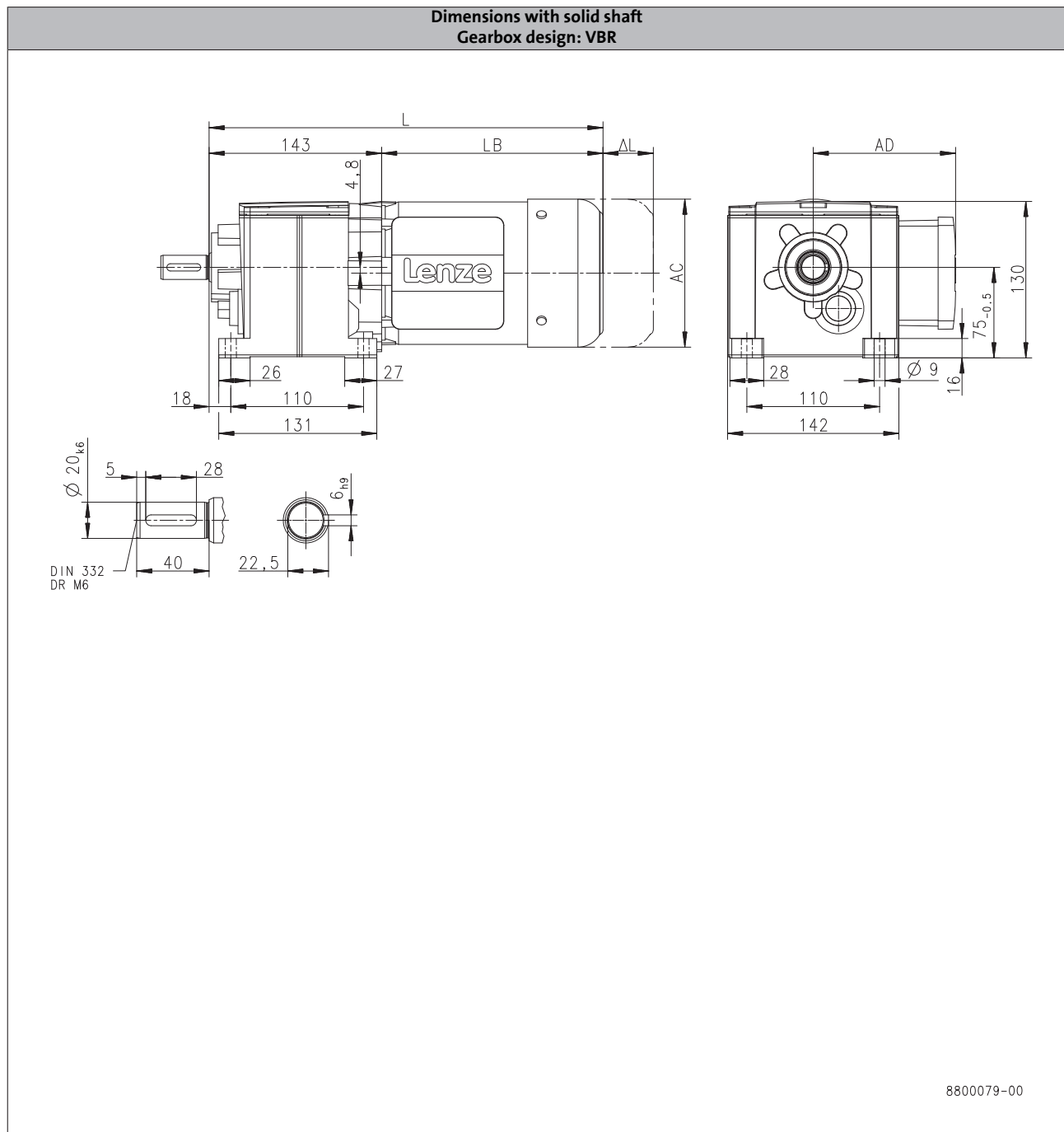
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 326 | | | 346 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

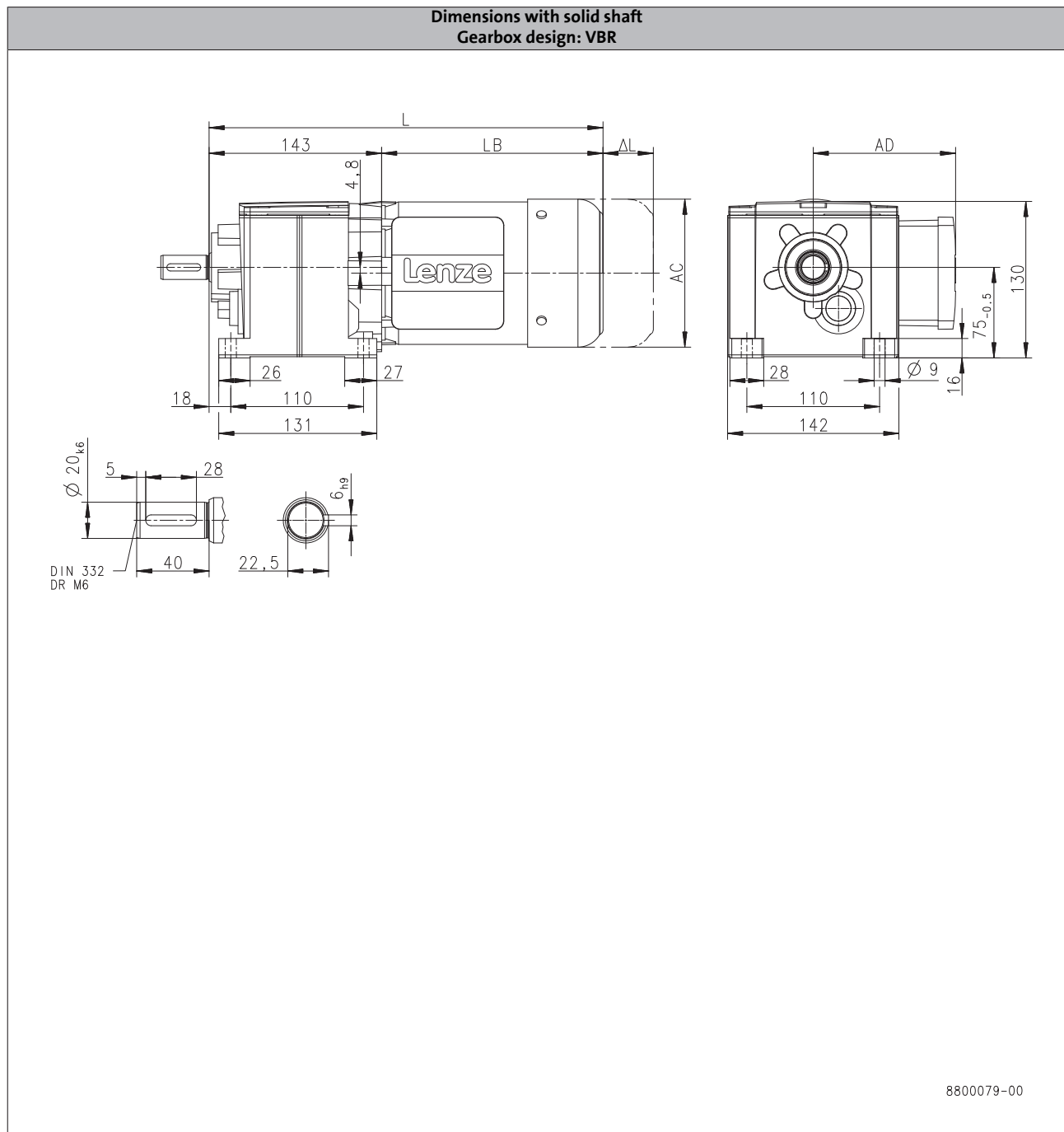
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



6.3

| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 403 | 467 | |
| Motor length | LB | [mm] | 260 | 324 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | |
| Motor diameter | AC | [mm] | 157 | 177 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

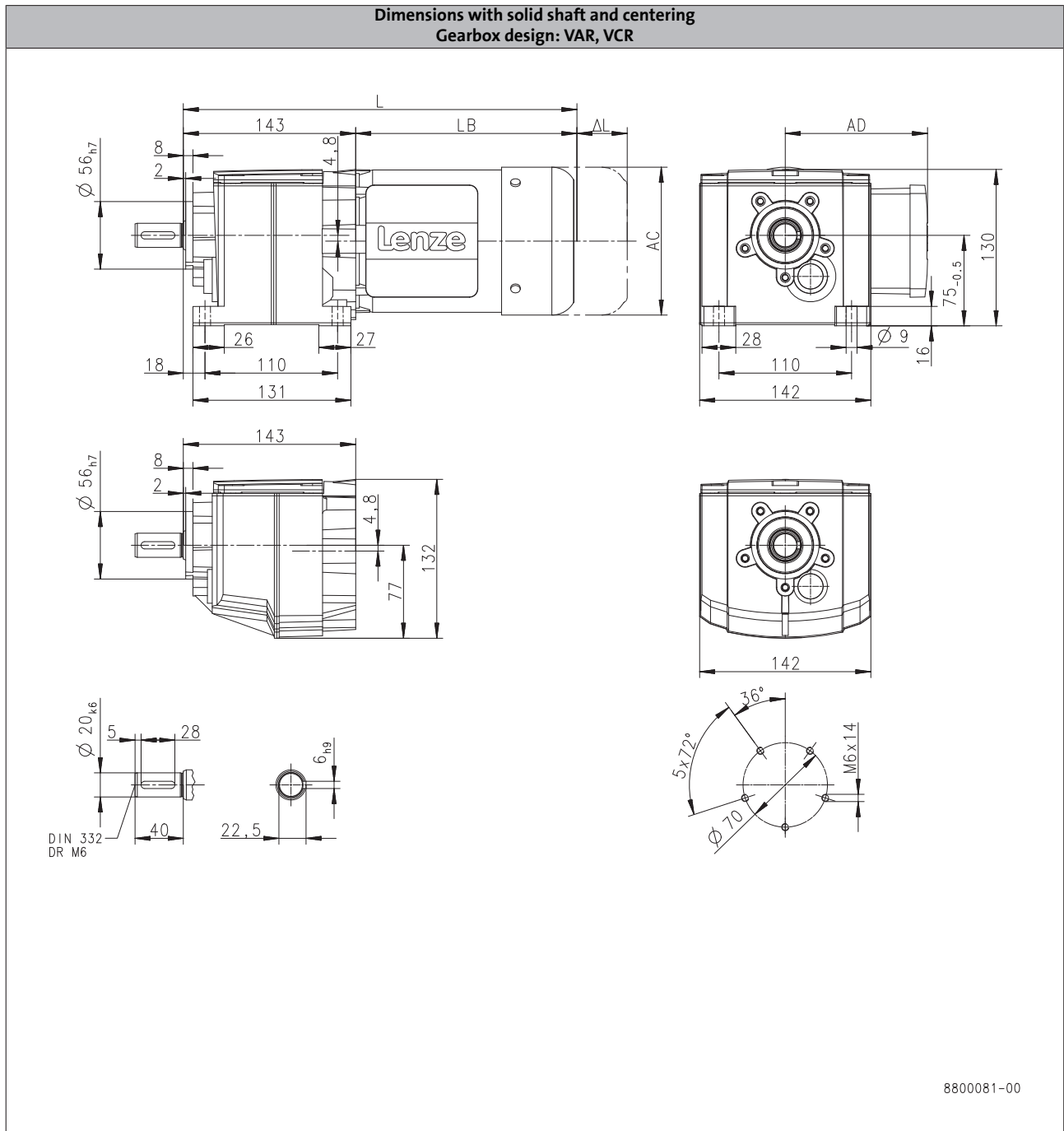
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 326 | | | 346 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

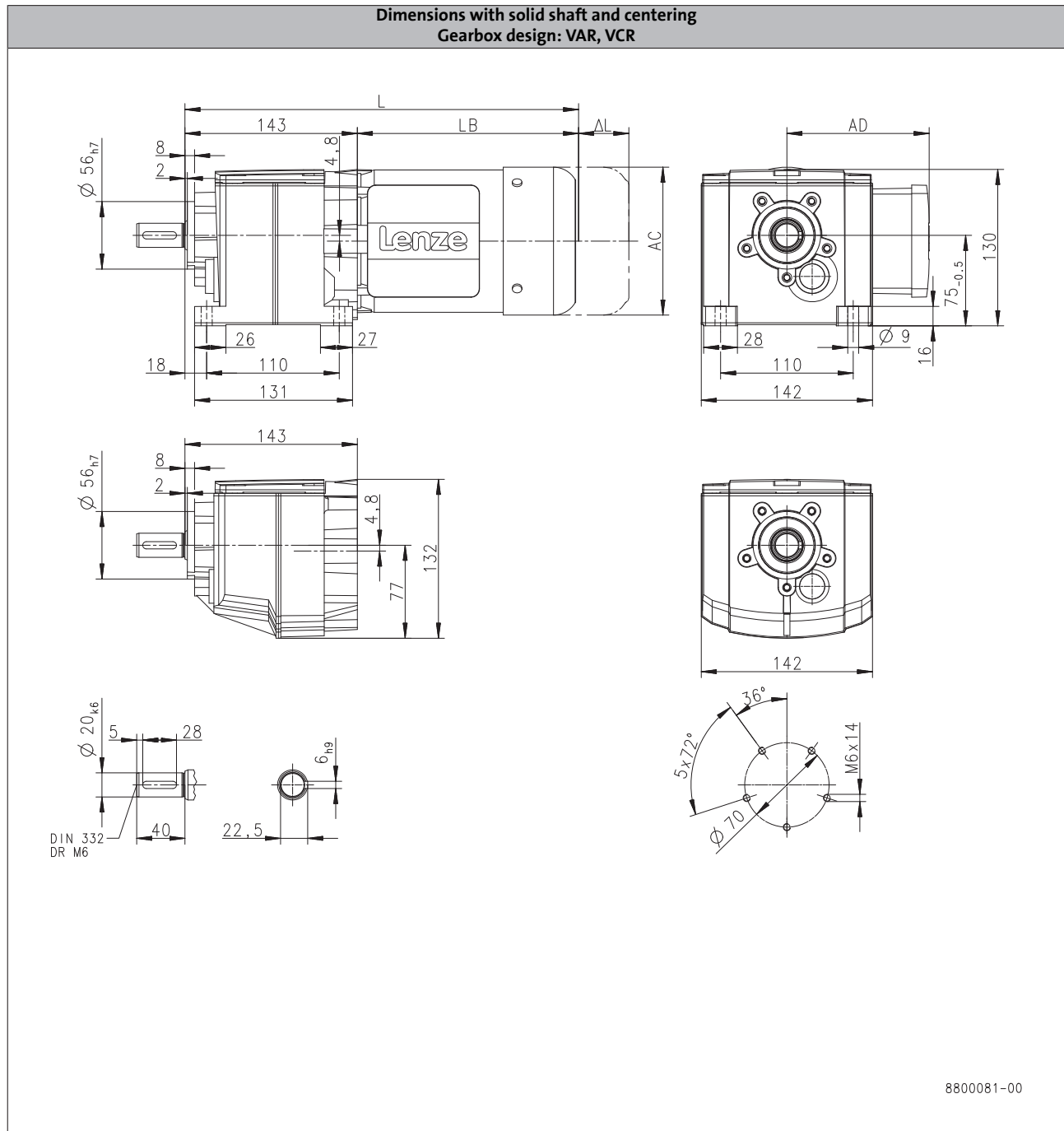
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



6.3

| | | | m550 | | |
|---------------------------|------------|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 403 | | 467 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | ΔL | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

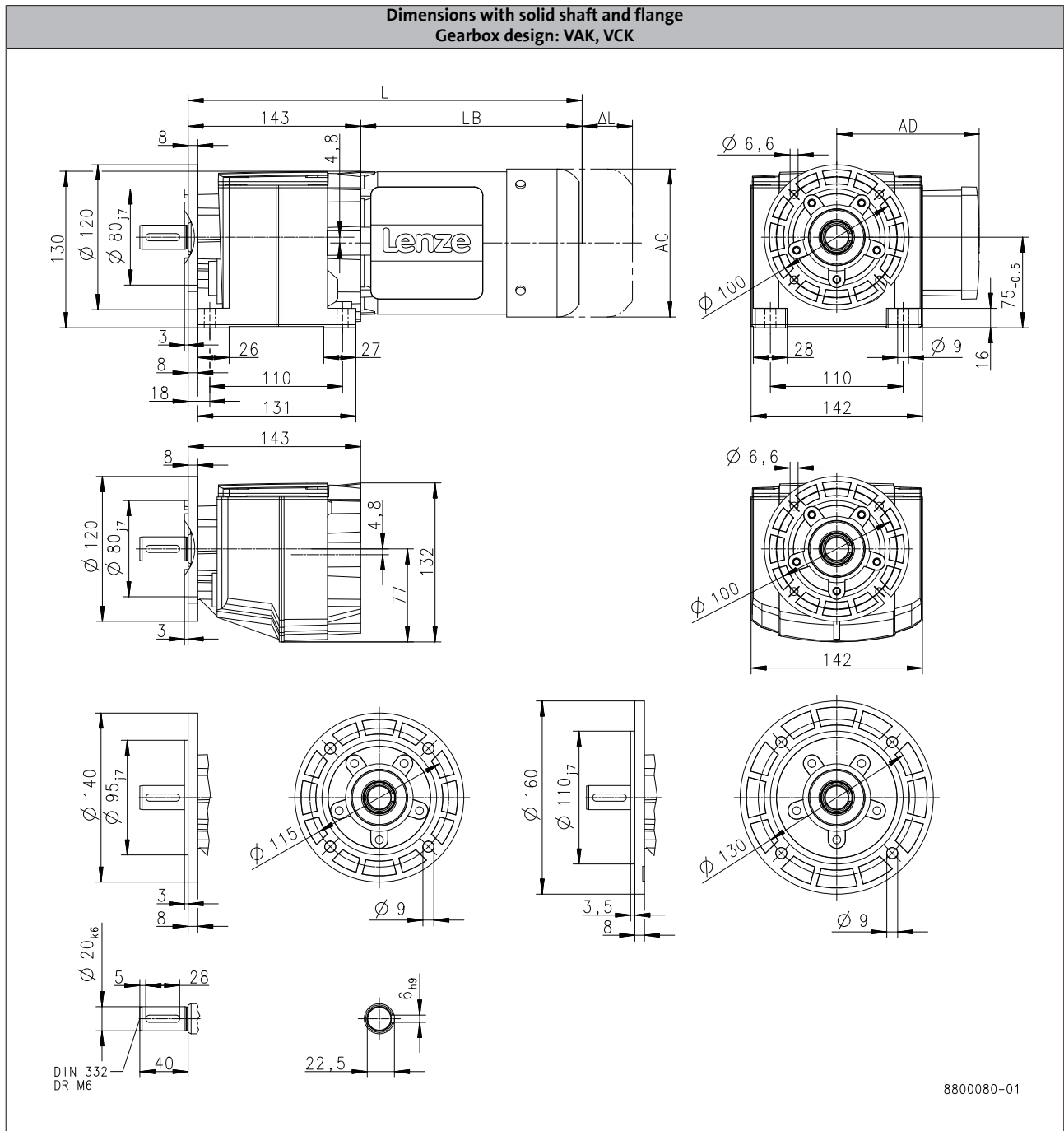
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 326 | | | 346 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

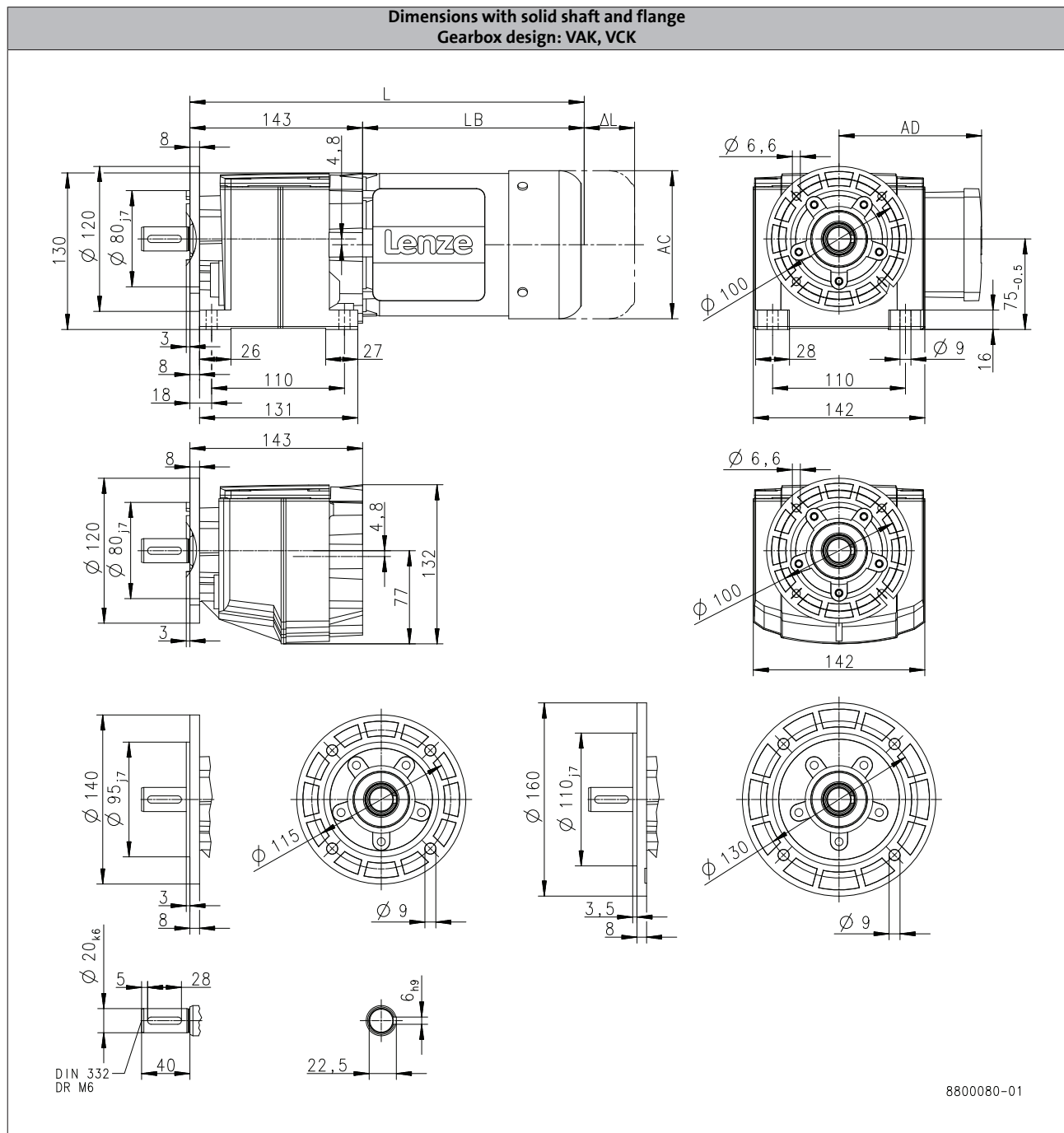
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



6.3

| | | | m550 | |
|---------------------------|-----|------|---------|---------|
| | | | -P80/M4 | -P90/L4 |
| | | | | -P90/M4 |
| Total length | L | [mm] | 403 | 467 |
| Motor length | LB | [mm] | 260 | 324 |
| Length of motor options | Δ L | [mm] | 183 | 175 |
| Motor diameter | AC | [mm] | 157 | 177 |
| Distance motor/connection | AD | [mm] | 148 | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

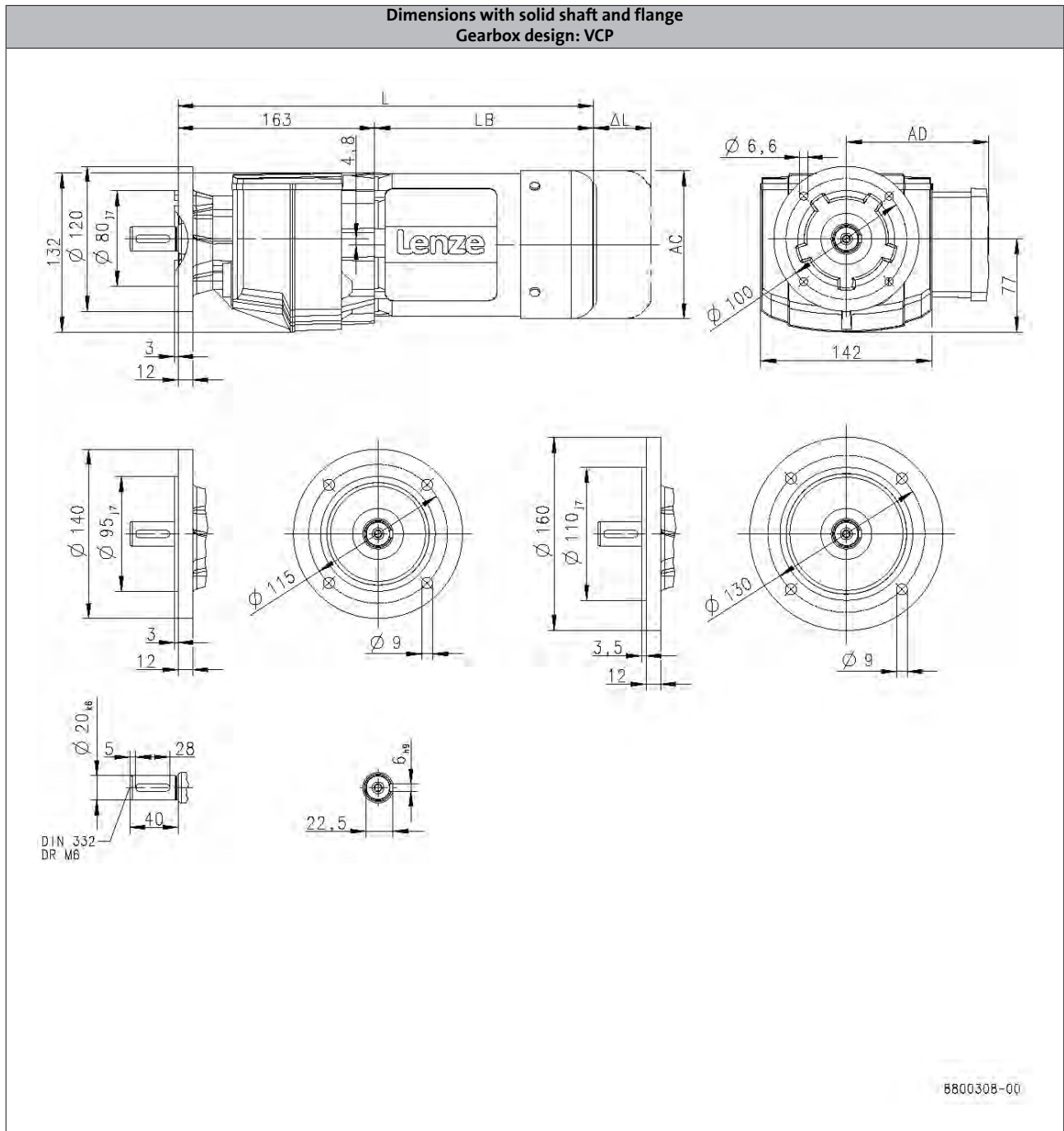
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 346 | | | 366 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

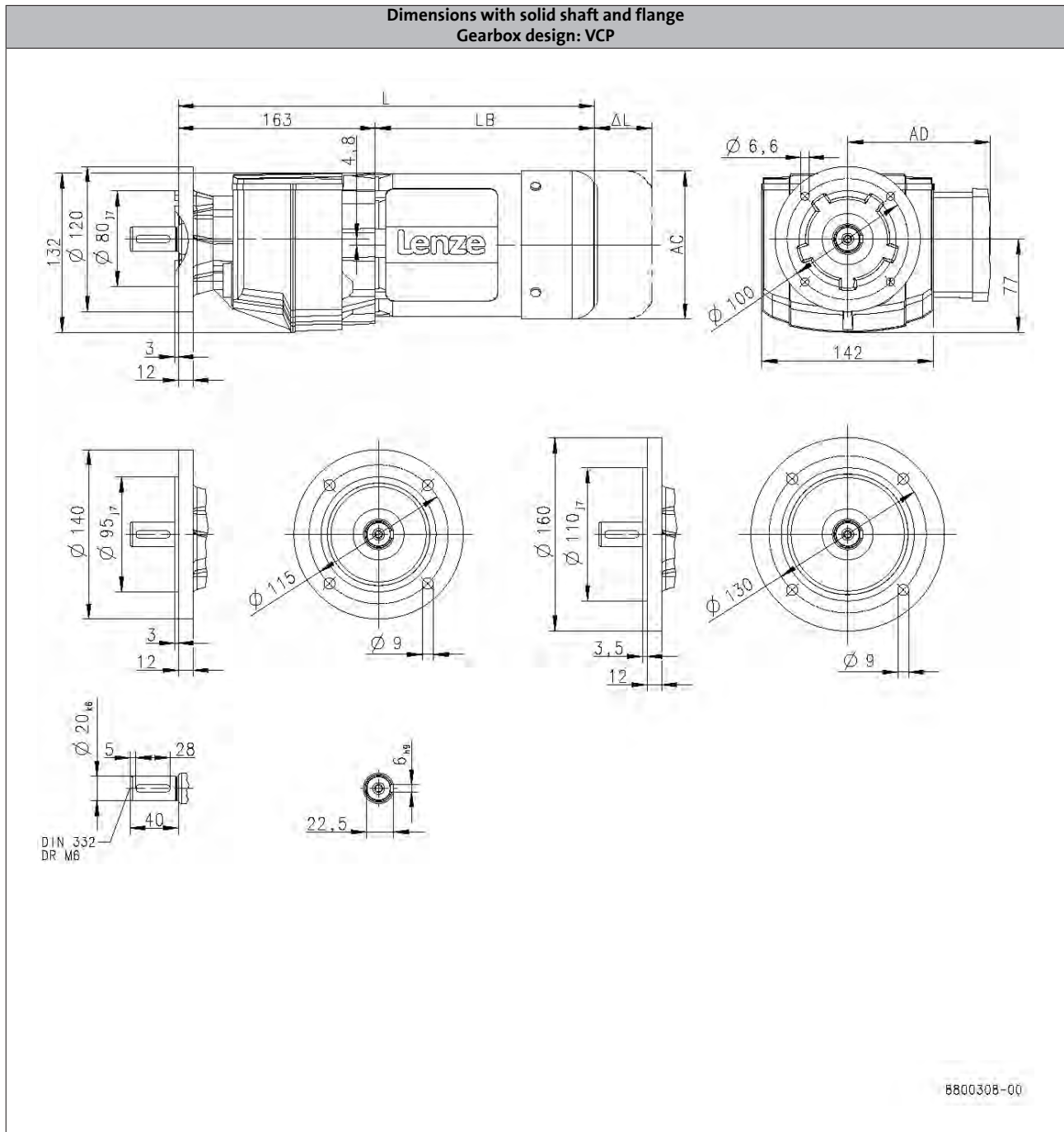
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H100



6.3

| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 423 | | 487 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | Δ L | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

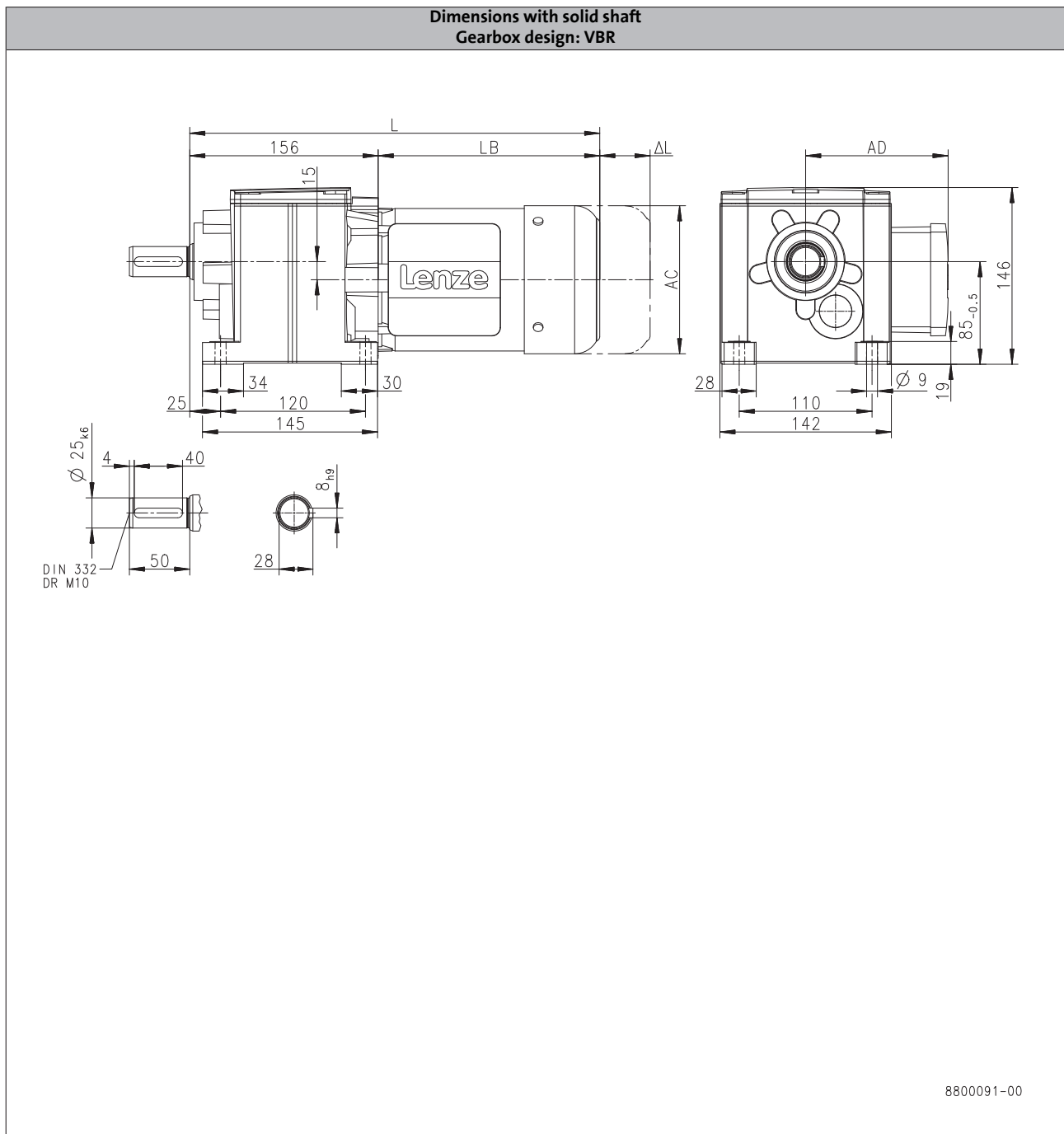
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 339 | | | 359 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

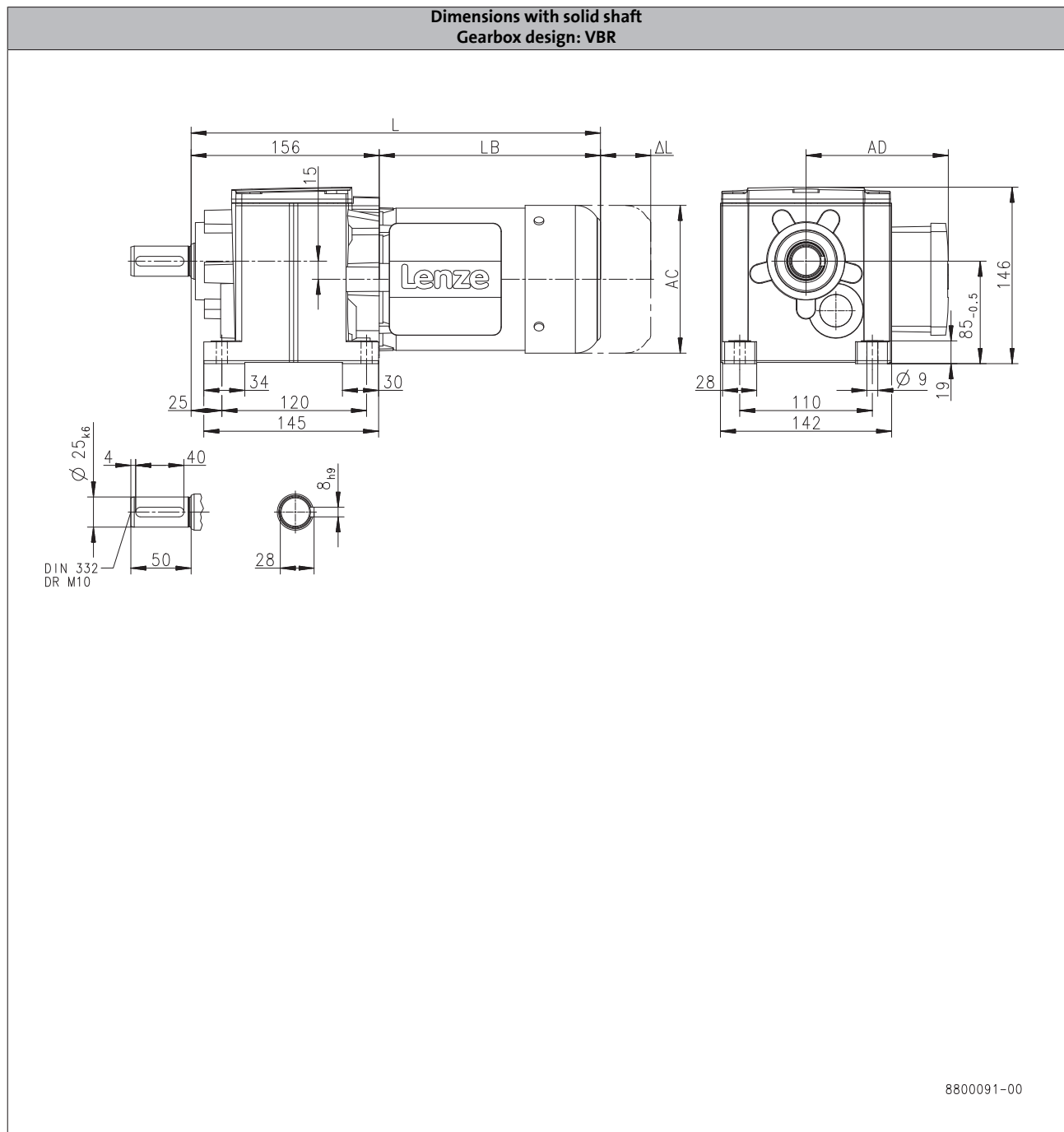
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 416 | 480 | |
| Motor length | LB | [mm] | 260 | 324 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | |
| Motor diameter | AC | [mm] | 157 | 177 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

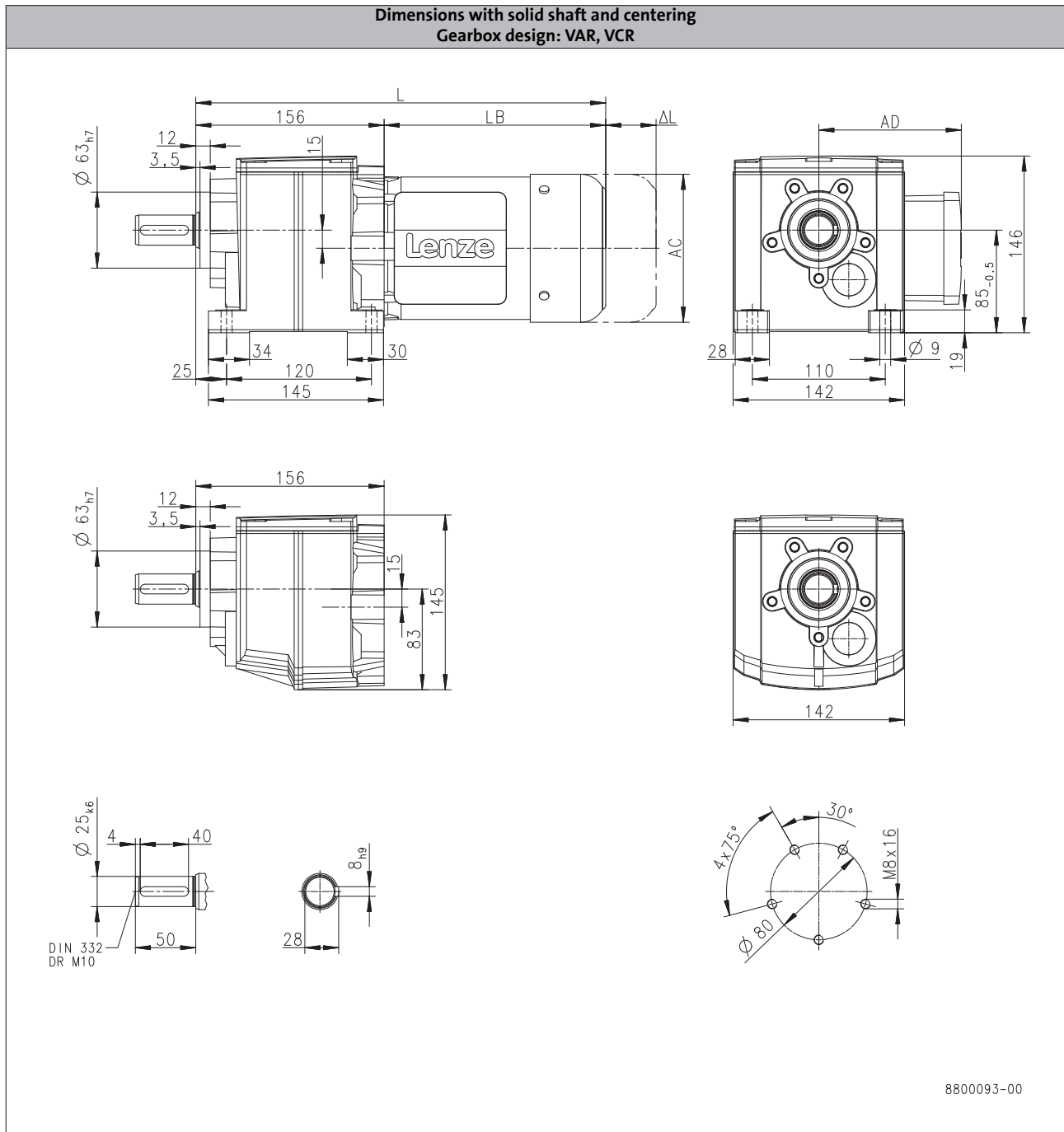
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 339 | | | 359 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

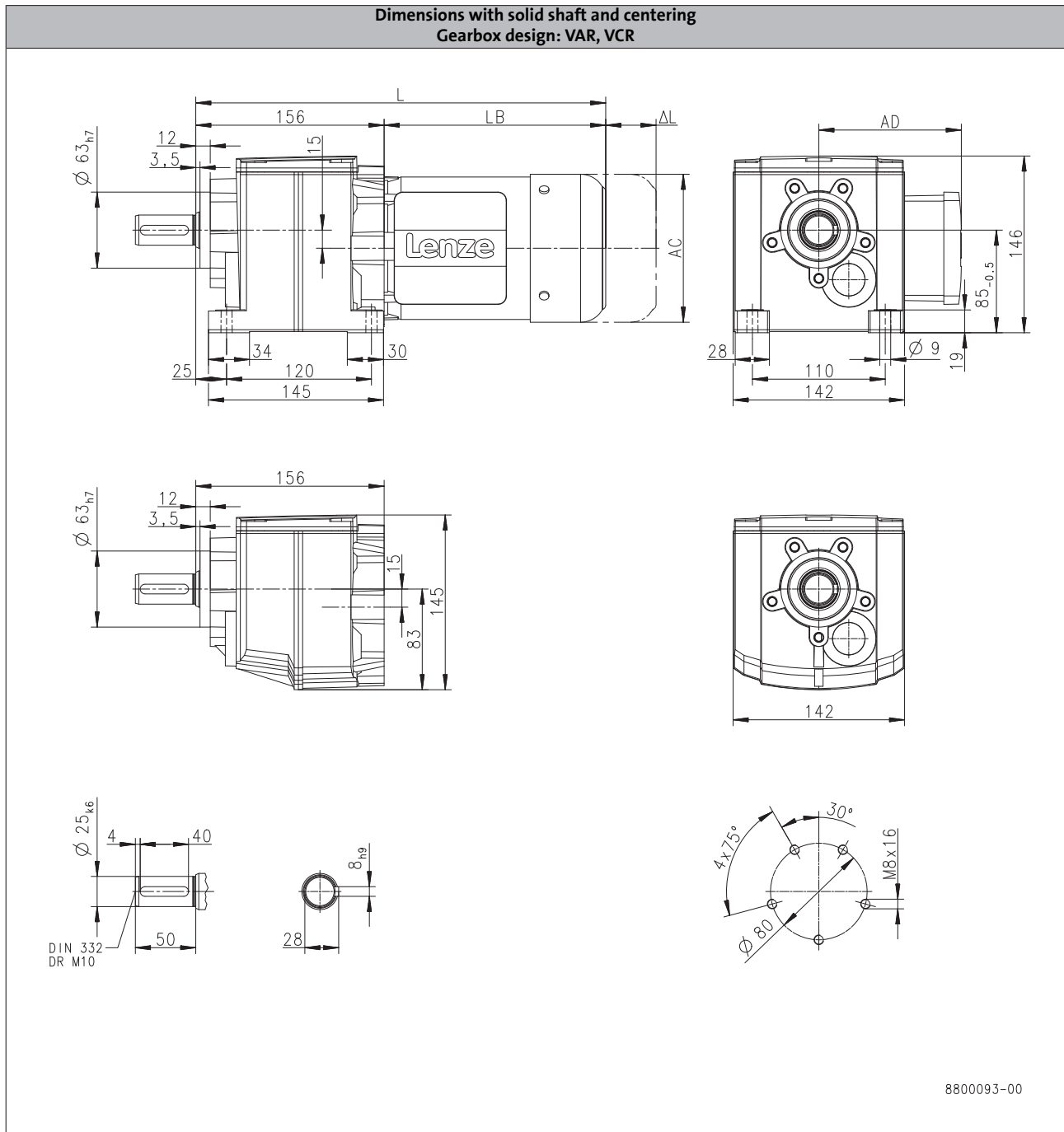
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



6.3

| | | | m550 | | |
|---------------------------|------------|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 416 | 480 | |
| Motor length | LB | [mm] | 260 | 324 | |
| Length of motor options | ΔL | [mm] | 183 | 175 | |
| Motor diameter | AC | [mm] | 157 | 177 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

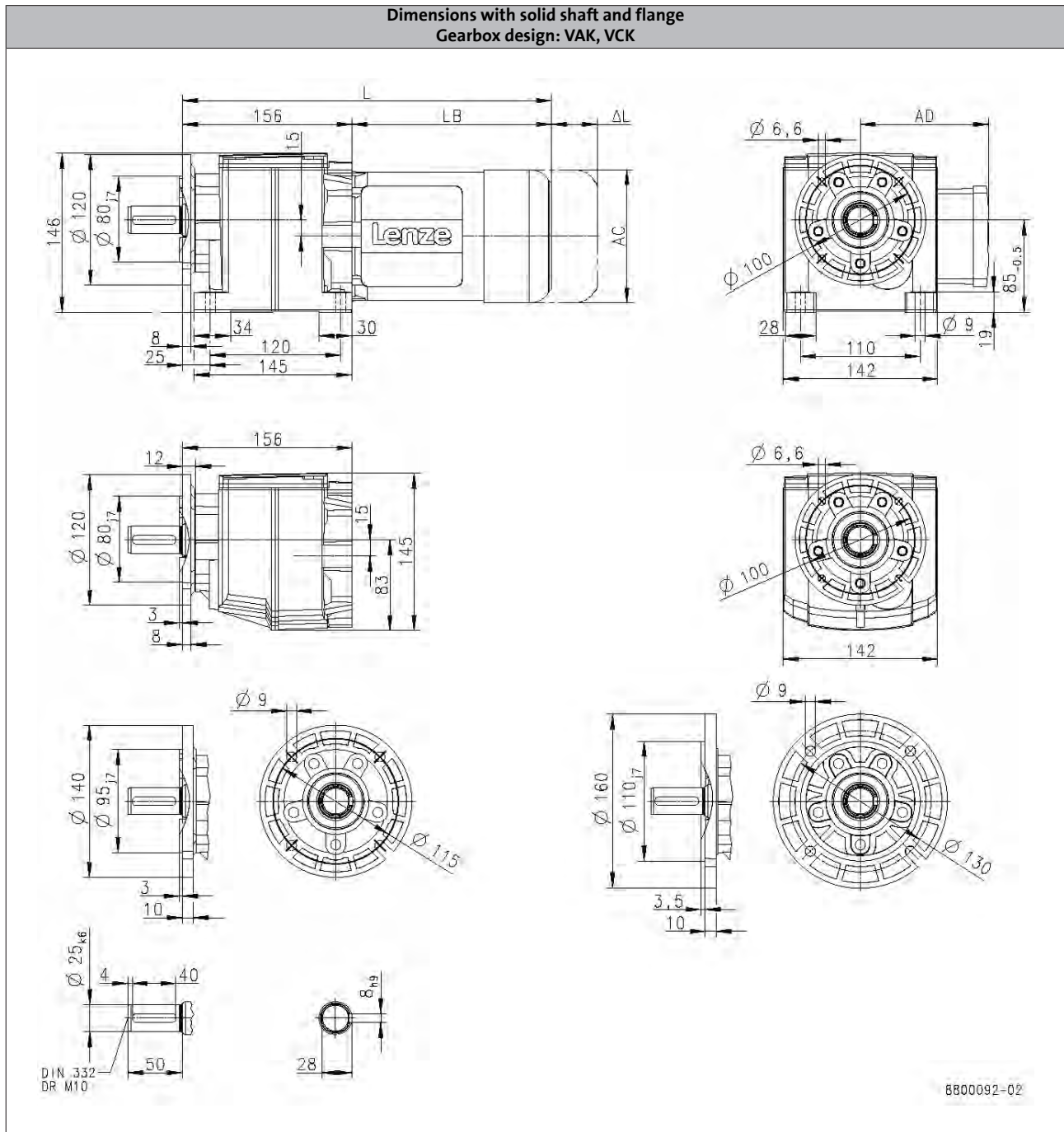
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



6.3

| | | | MD□MA□□ | | | | |
|---------------------------|-----|------|---------|--------|--------|--------|--------|
| | | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L | [mm] | | 339 | | | 359 |
| Motor length | LB | [mm] | | 183 | | | 203 |
| Length of motor options | Δ L | [mm] | | 170 | | | 165 |
| Motor diameter | AC | [mm] | | 123 | | | 139 |
| Distance motor/connection | AD | [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

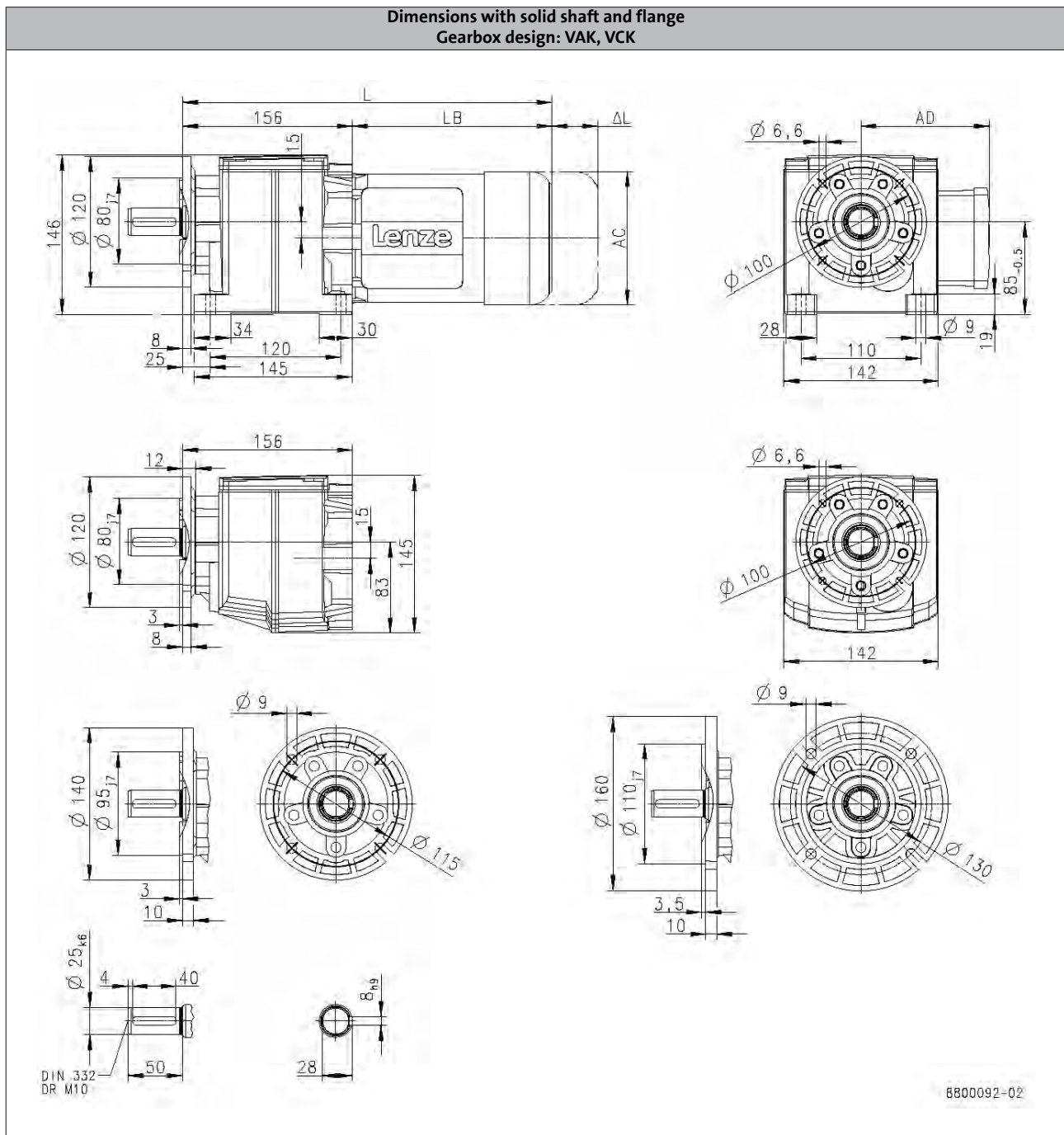
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 416 | 480 | |
| Motor length | LB | [mm] | 260 | 324 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | |
| Motor diameter | AC | [mm] | 157 | 177 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

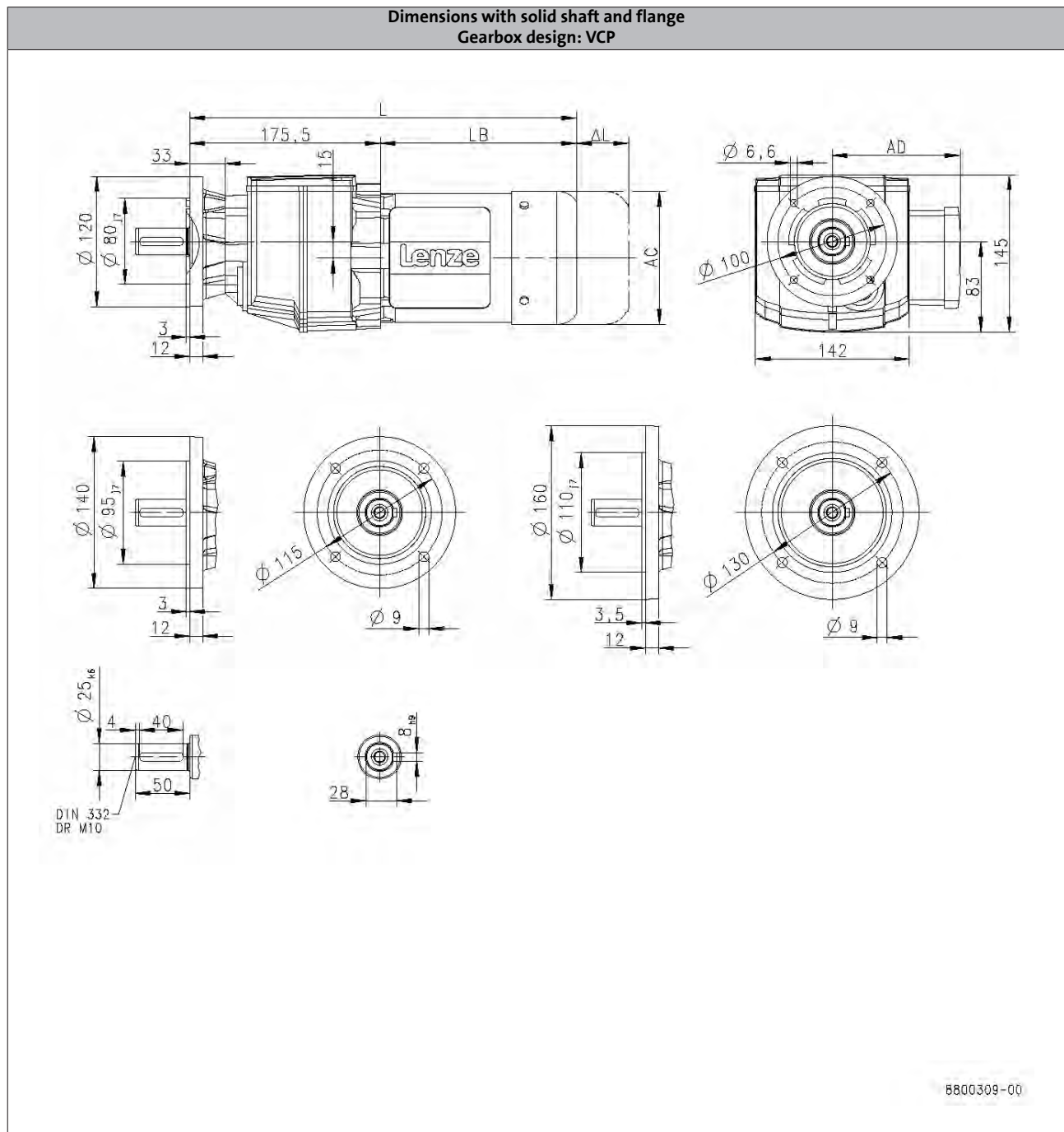
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 359 | | | 379 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

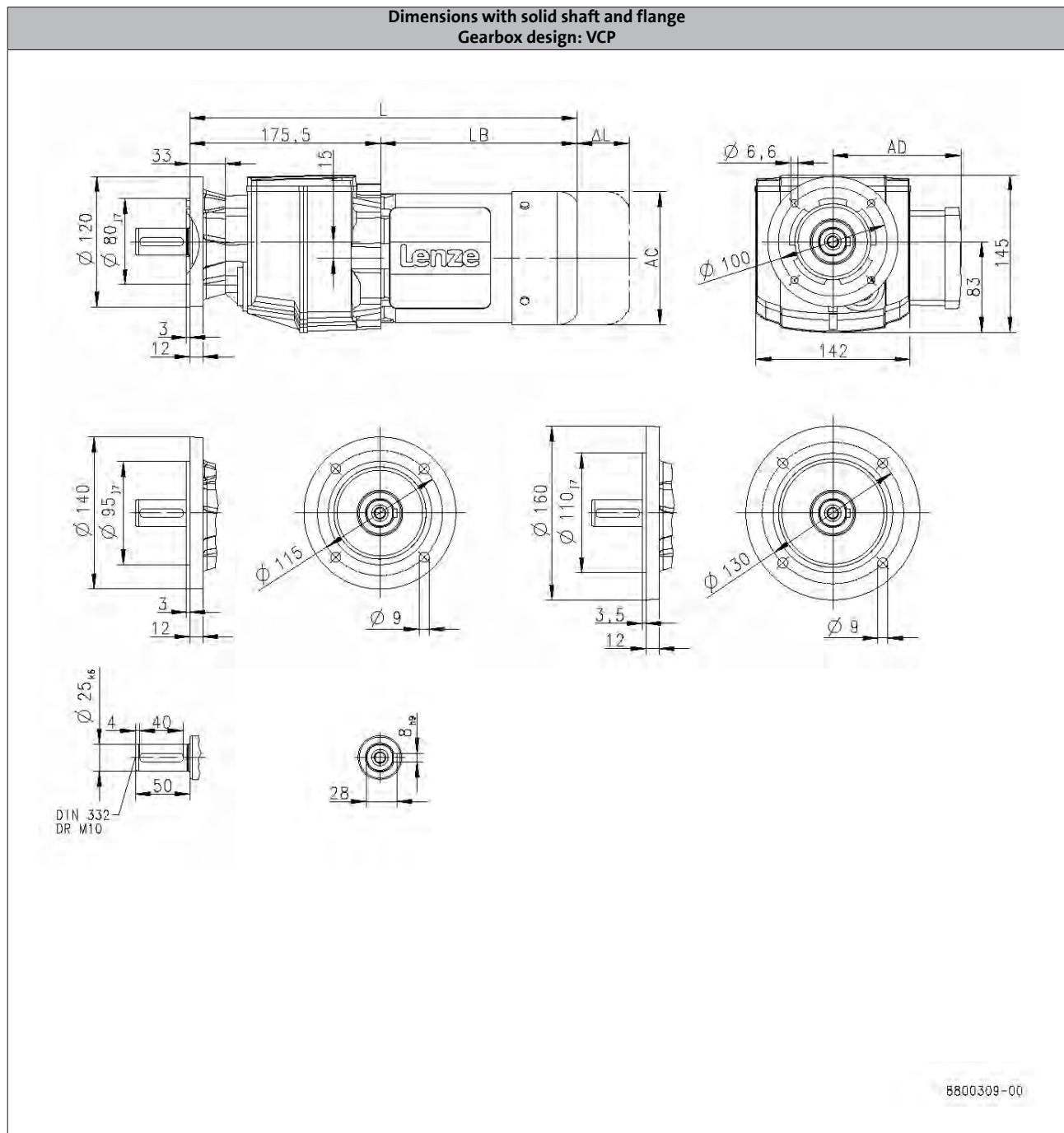
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H140



6.3

| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 436 | 500 | |
| Motor length | LB | [mm] | 260 | 324 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | |
| Motor diameter | AC | [mm] | 157 | 177 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

g500-H helical geared motors

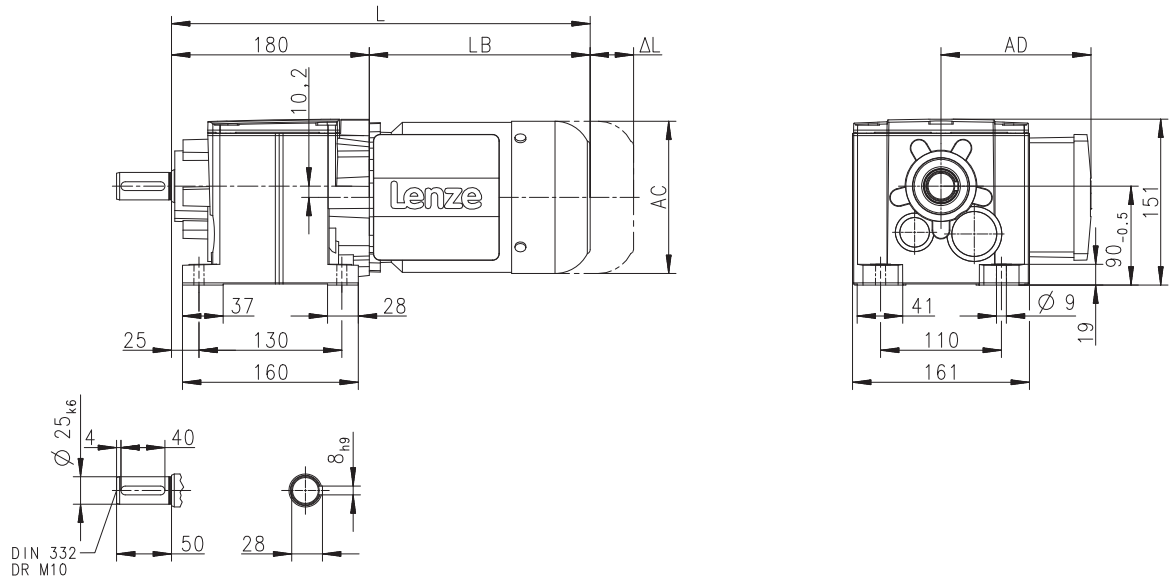
Technical data



Dimensions, 4-pole motors

g500-H210

Dimensions with solid shaft
Gearbox design: VBR



8800103-00

6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 363 | | | 383 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

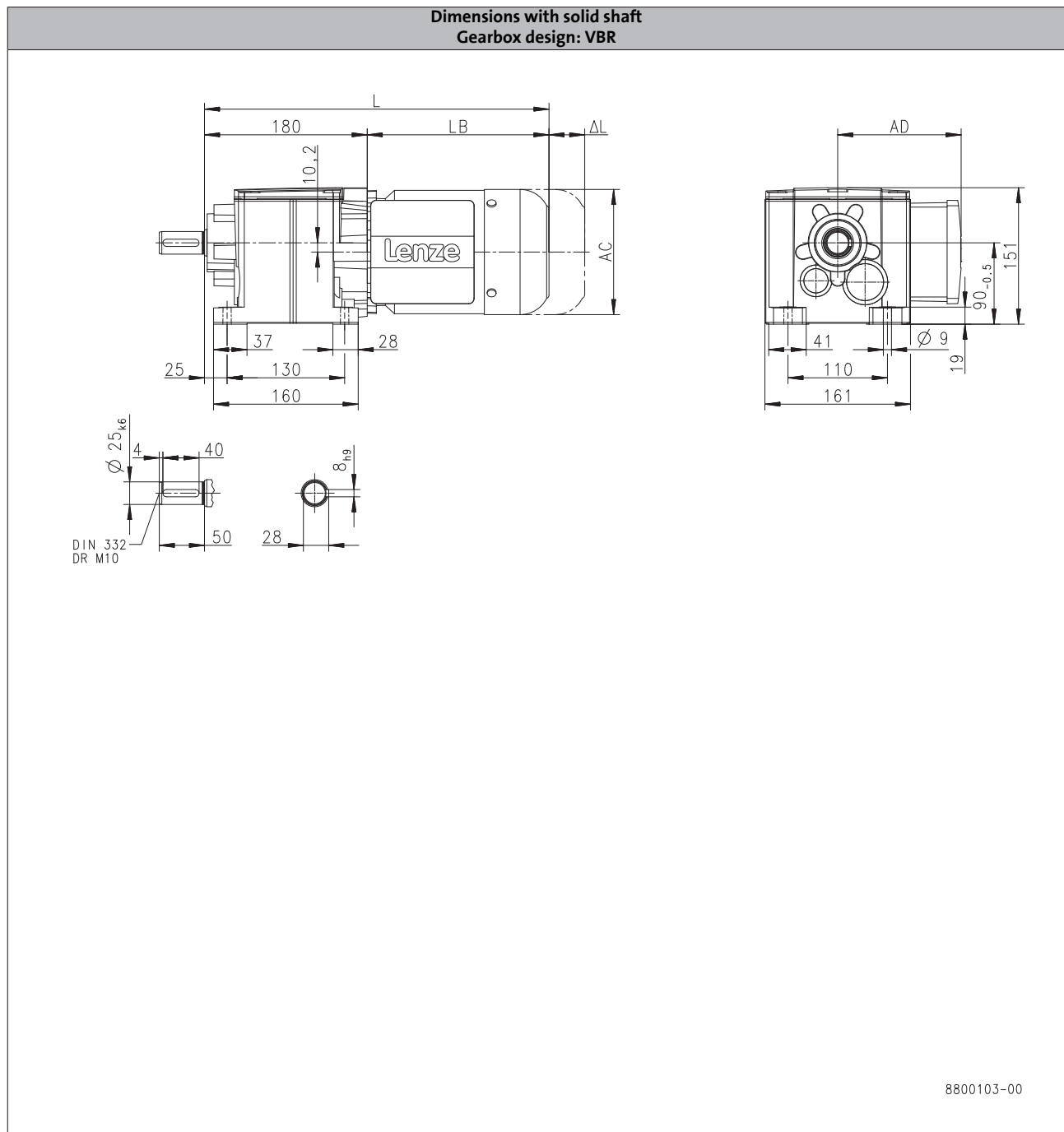
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H210



6.3

| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 440 | 504 | | 564 | |
| Motor length | LB | [mm] | 260 | 324 | | 384 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

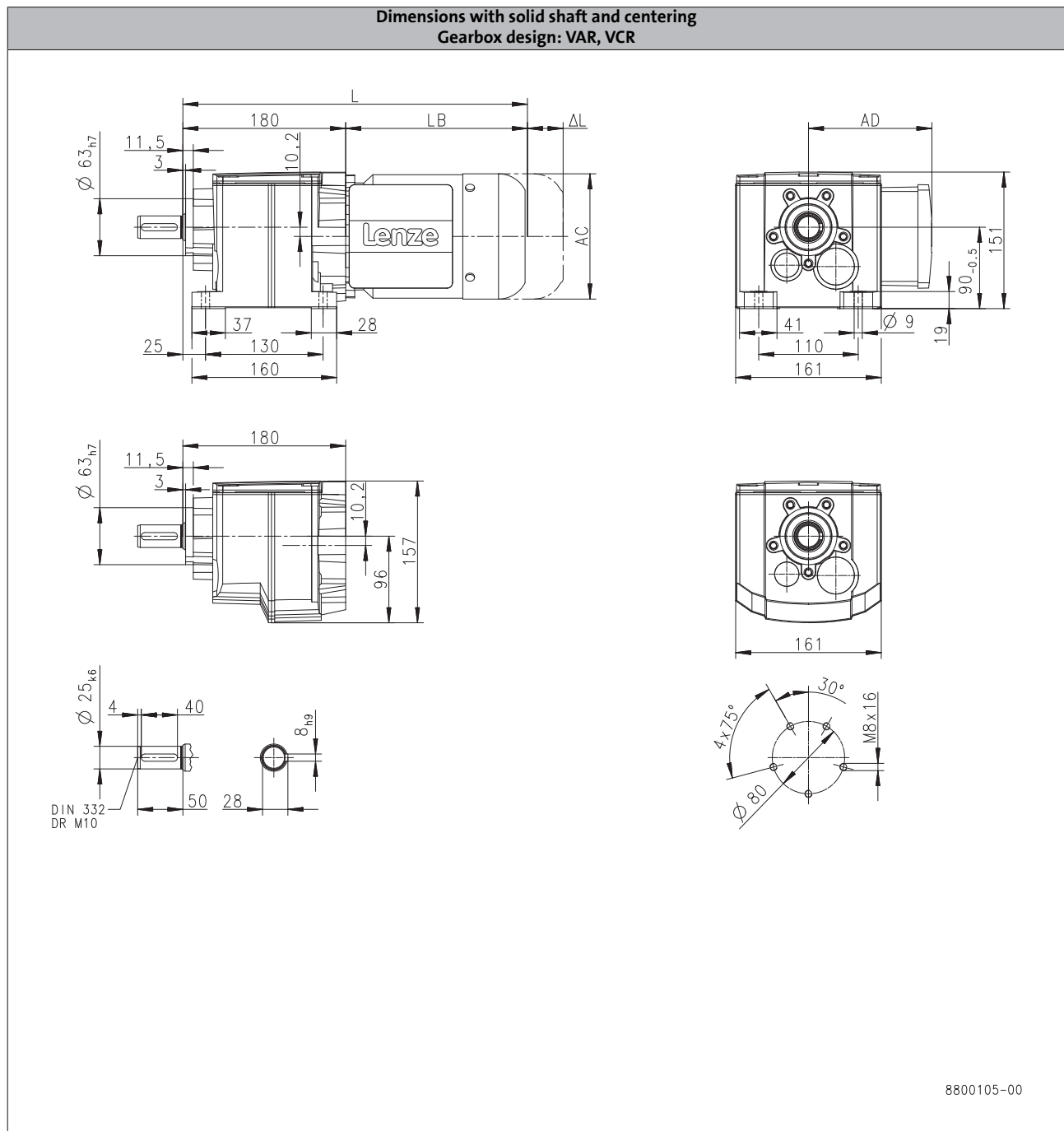
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H210



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 363 | | | 383 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

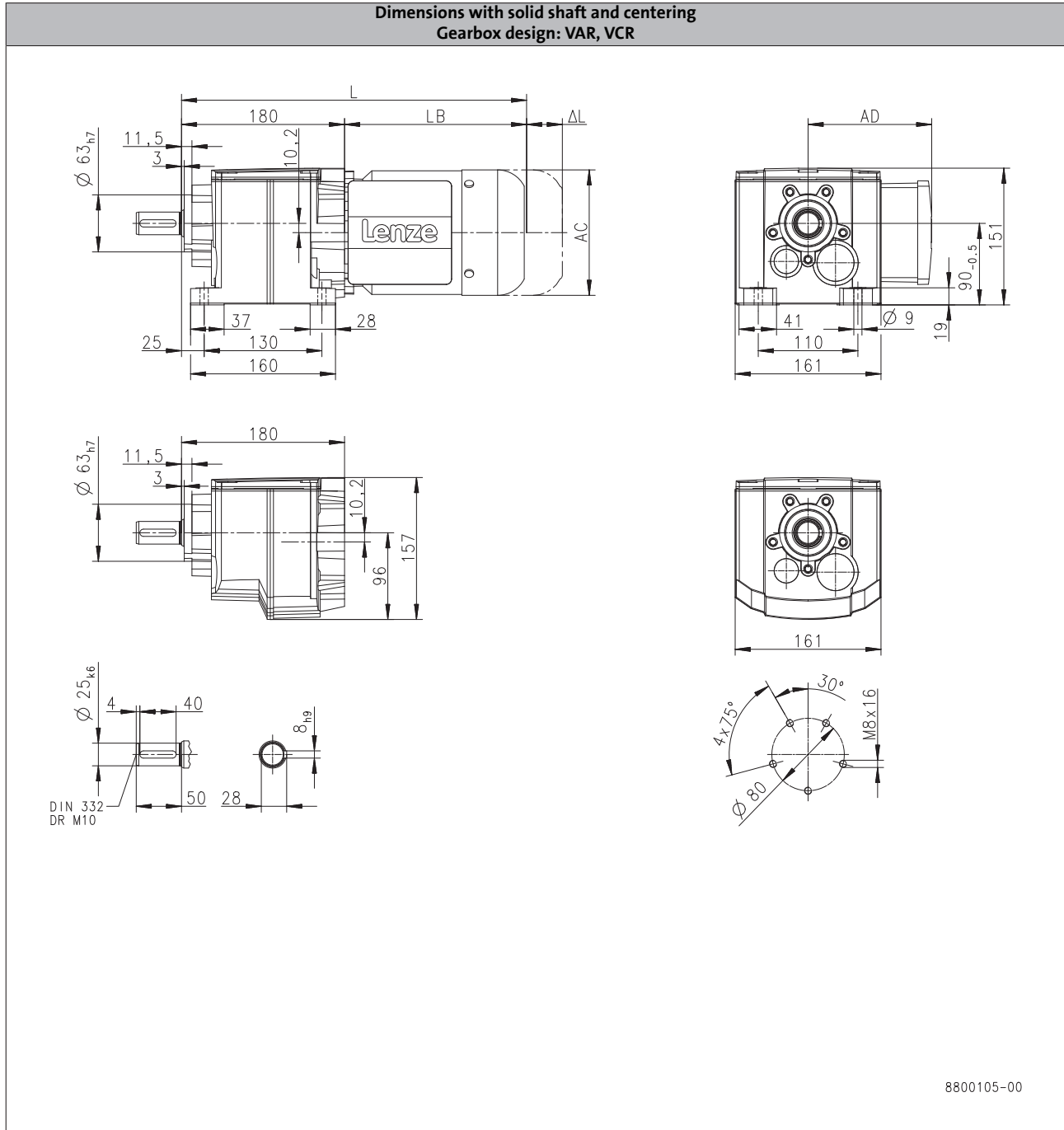
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H210



6.3

| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 440 | | 504 | | 564 |
| Motor length | LB | [mm] | 260 | | 324 | | 384 |
| Length of motor options | Δ L | [mm] | 183 | | 175 | | 170 |
| Motor diameter | AC | [mm] | 157 | | 177 | | 195 |
| Distance motor/connection | AD | [mm] | 148 | | 154 | | 164 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

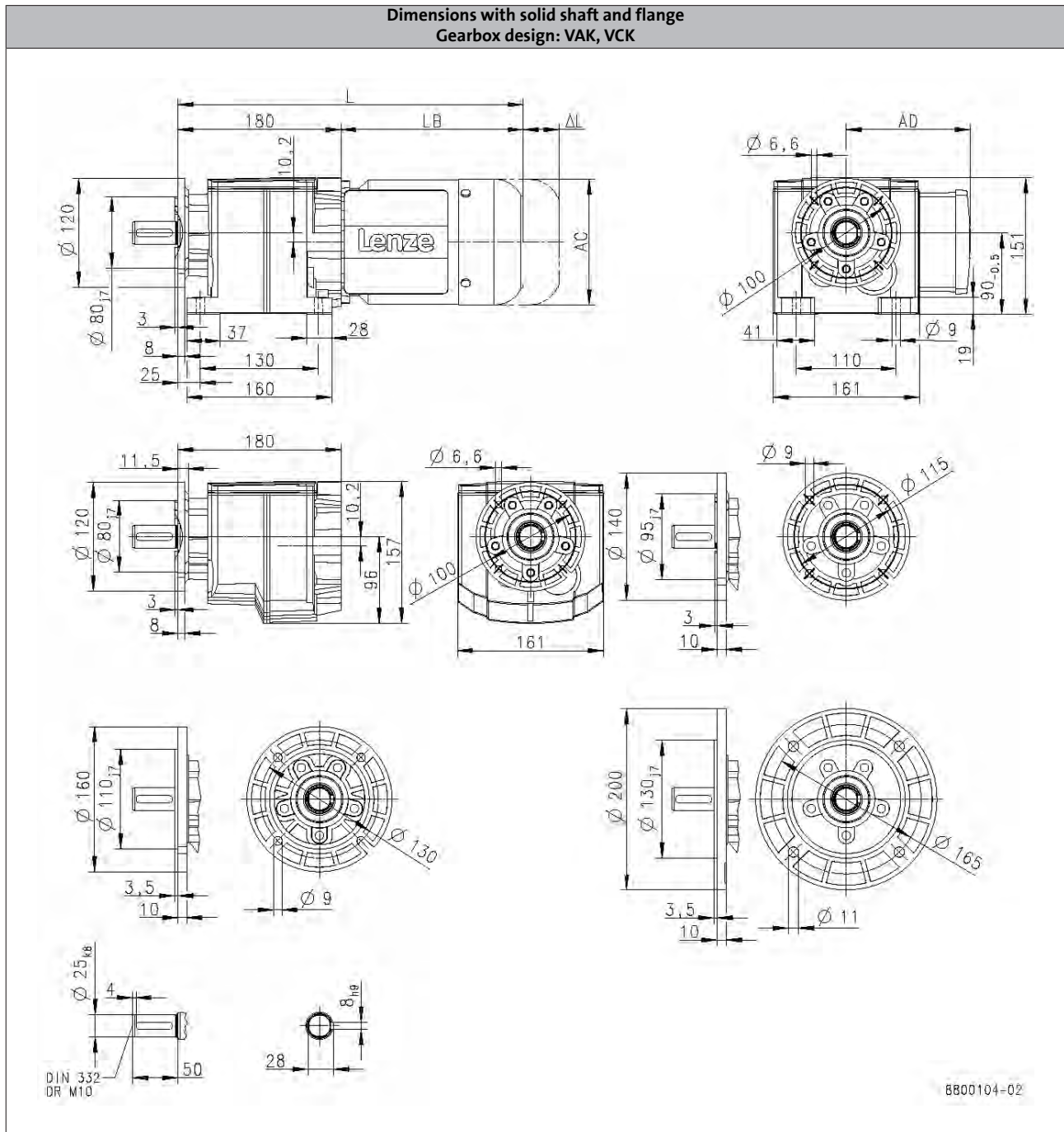
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H210



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 363 | | | 383 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

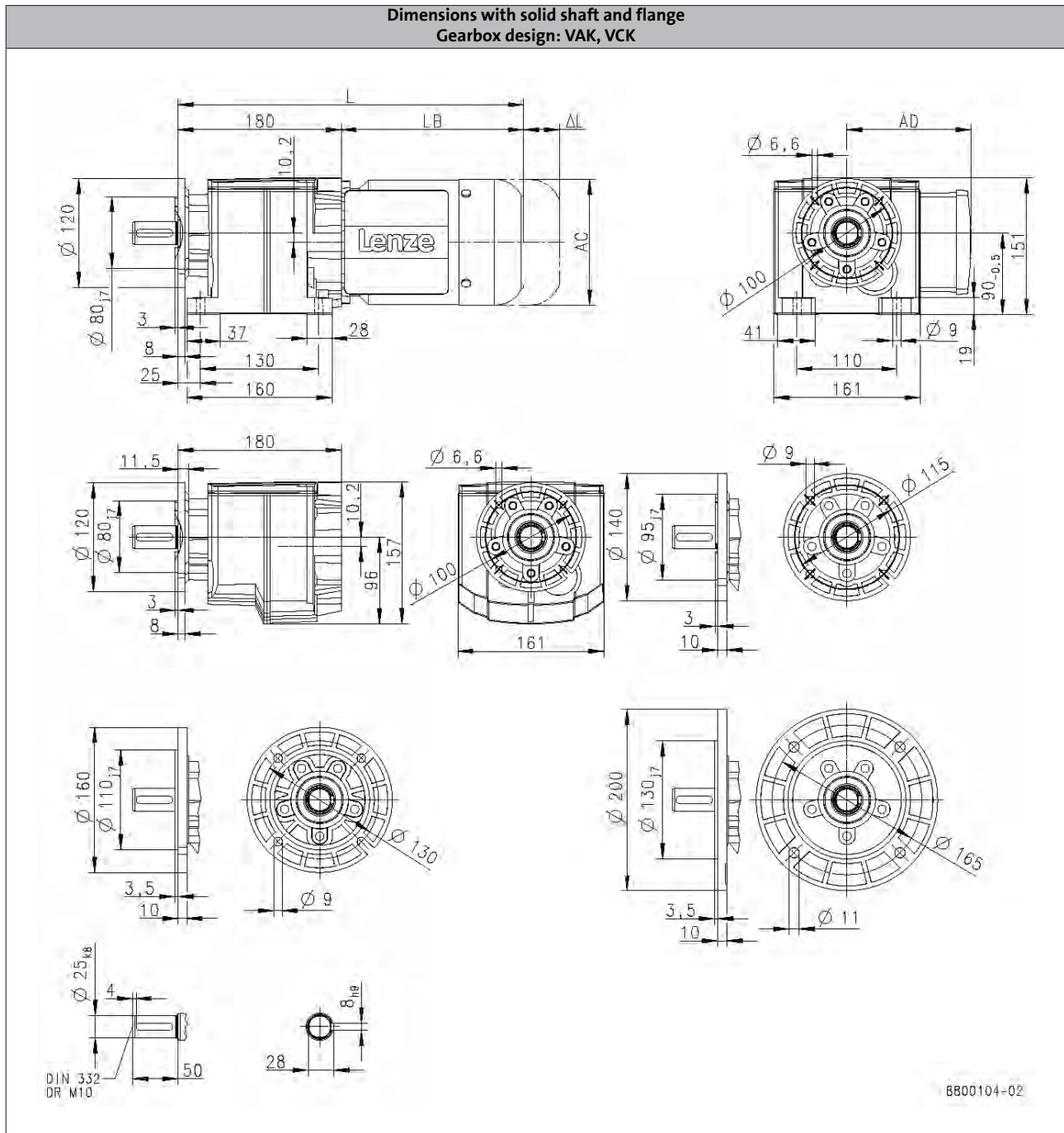
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H210



6.3

| | | m550 | | | | |
|---------------------------|----------|---------|---------|---------|----------|----------|
| | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L [mm] | 440 | 504 | | 564 | |
| Motor length | LB [mm] | 260 | 324 | | 384 | |
| Length of motor options | Δ L [mm] | 183 | 175 | | 170 | |
| Motor diameter | AC [mm] | 157 | 177 | | 195 | |
| Distance motor/connection | AD [mm] | 148 | 154 | | 164 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

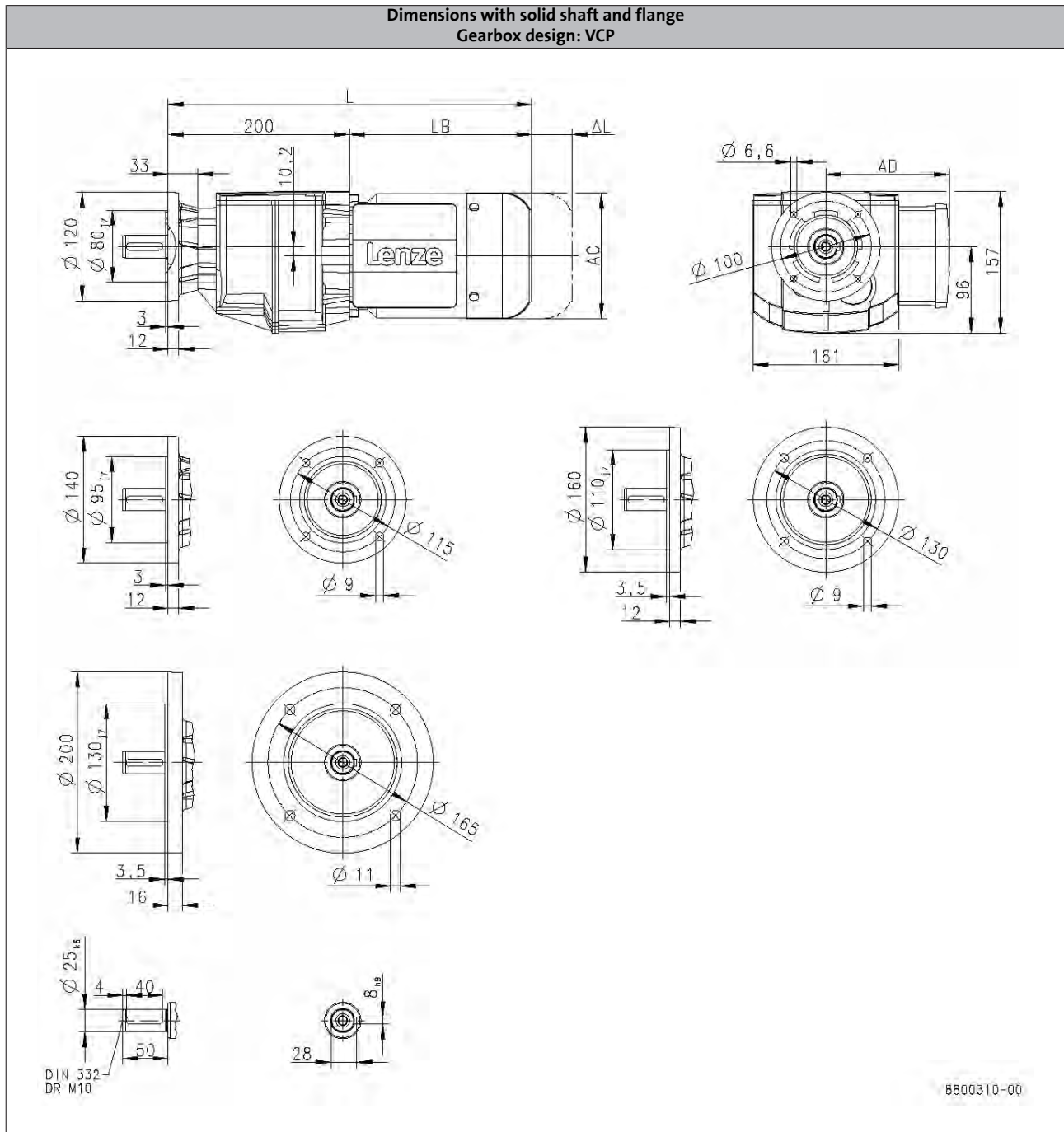
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H210



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 383 | | | 403 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

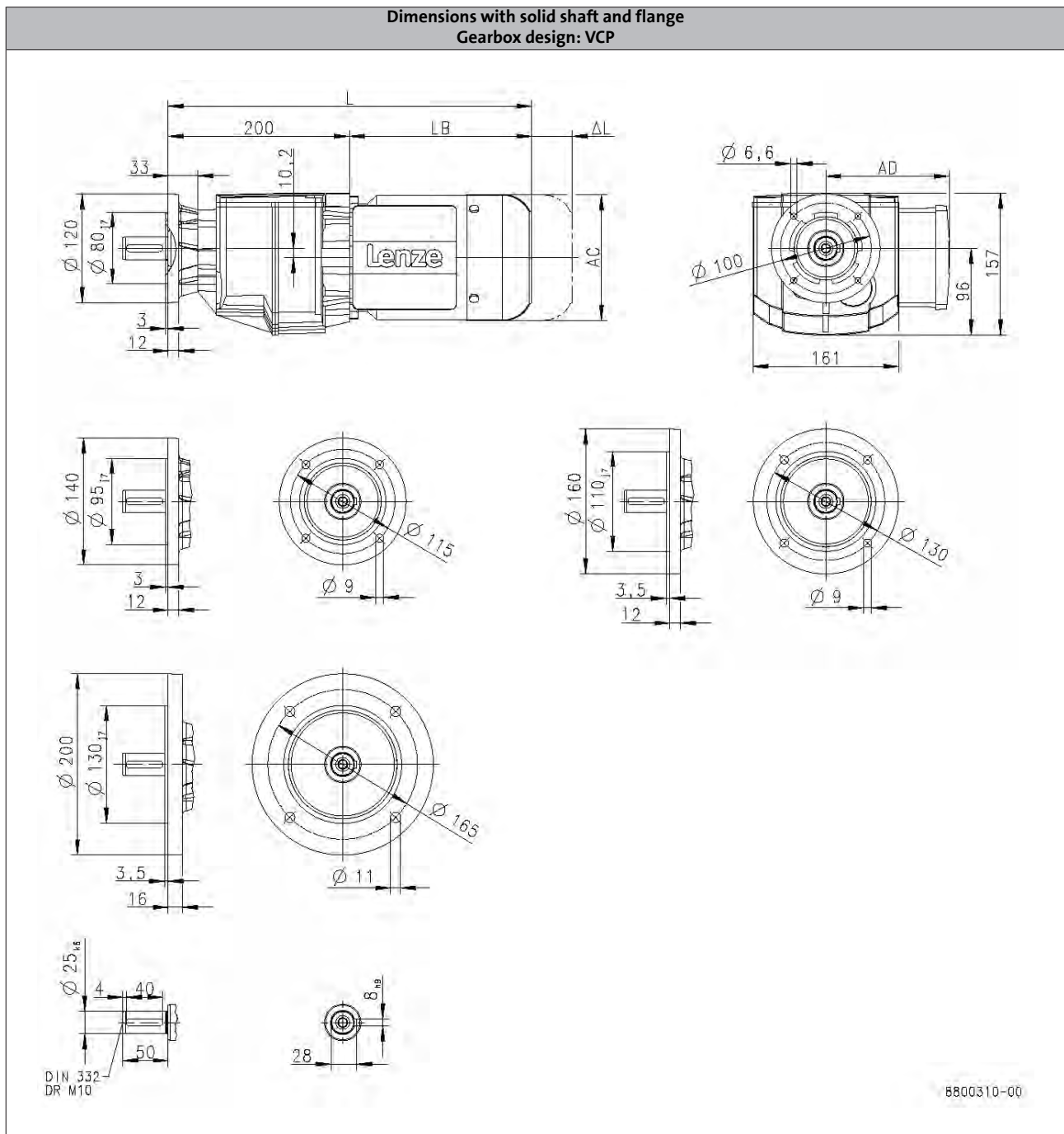
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H210



6.3

| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 460 | 524 | | 584 | |
| Motor length | LB | [mm] | 260 | 324 | | 384 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

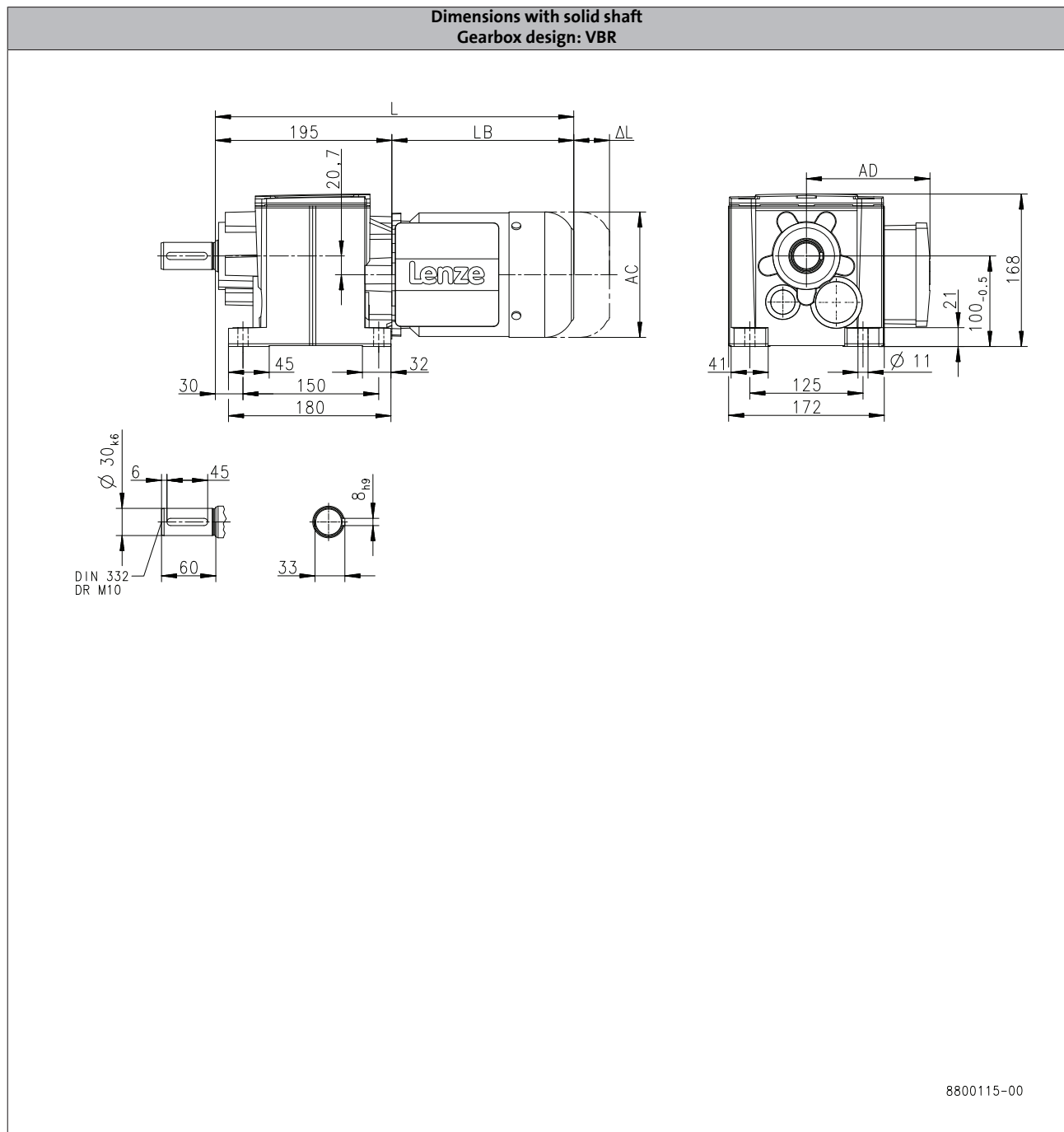
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H320



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 378 | | | 398 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

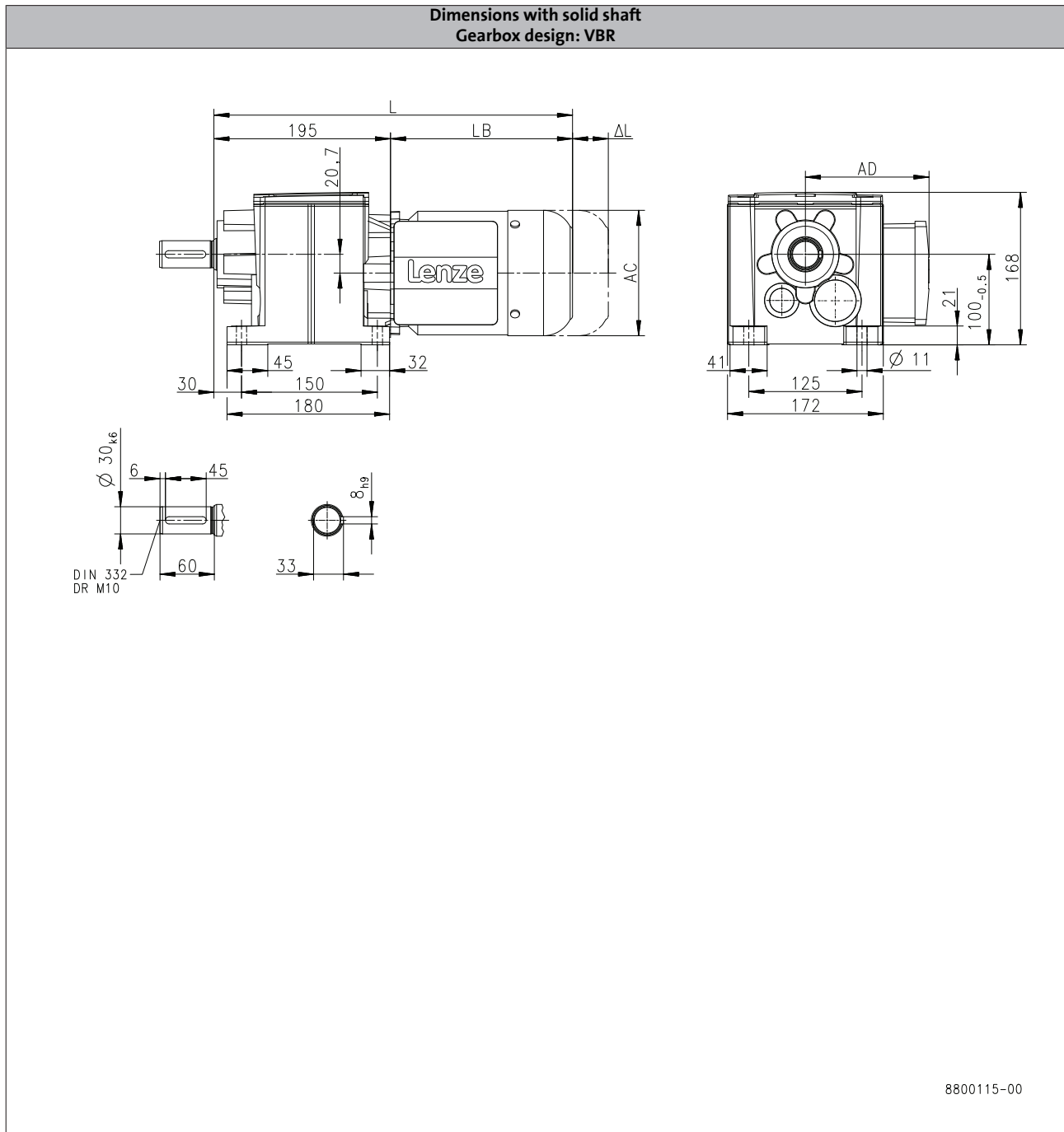
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H320



6.3

| | | | m550 | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 |
| Total length | L | [mm] | 455 | 519 | | 579 | | 586 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

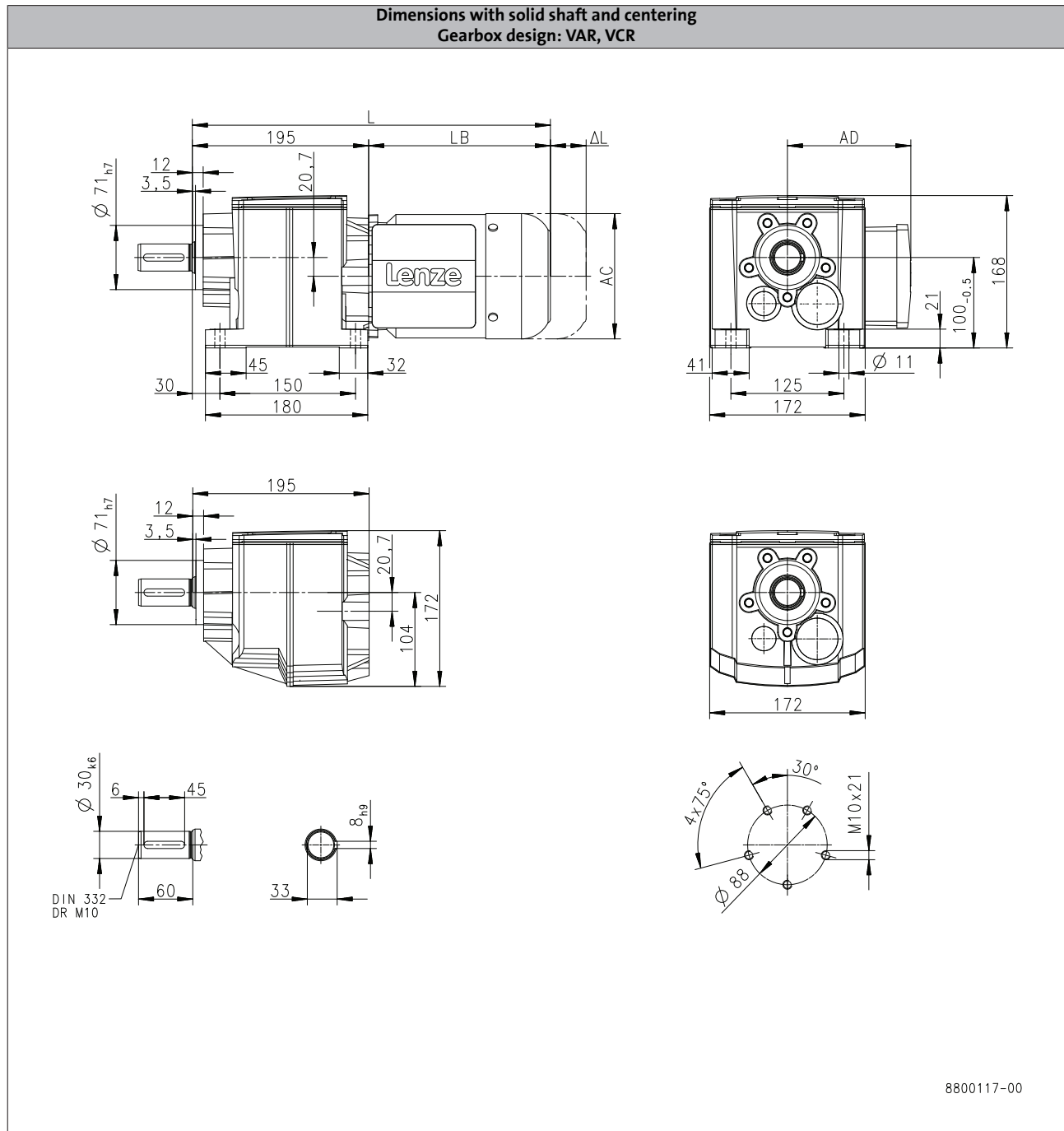
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H320



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 378 | | | 398 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

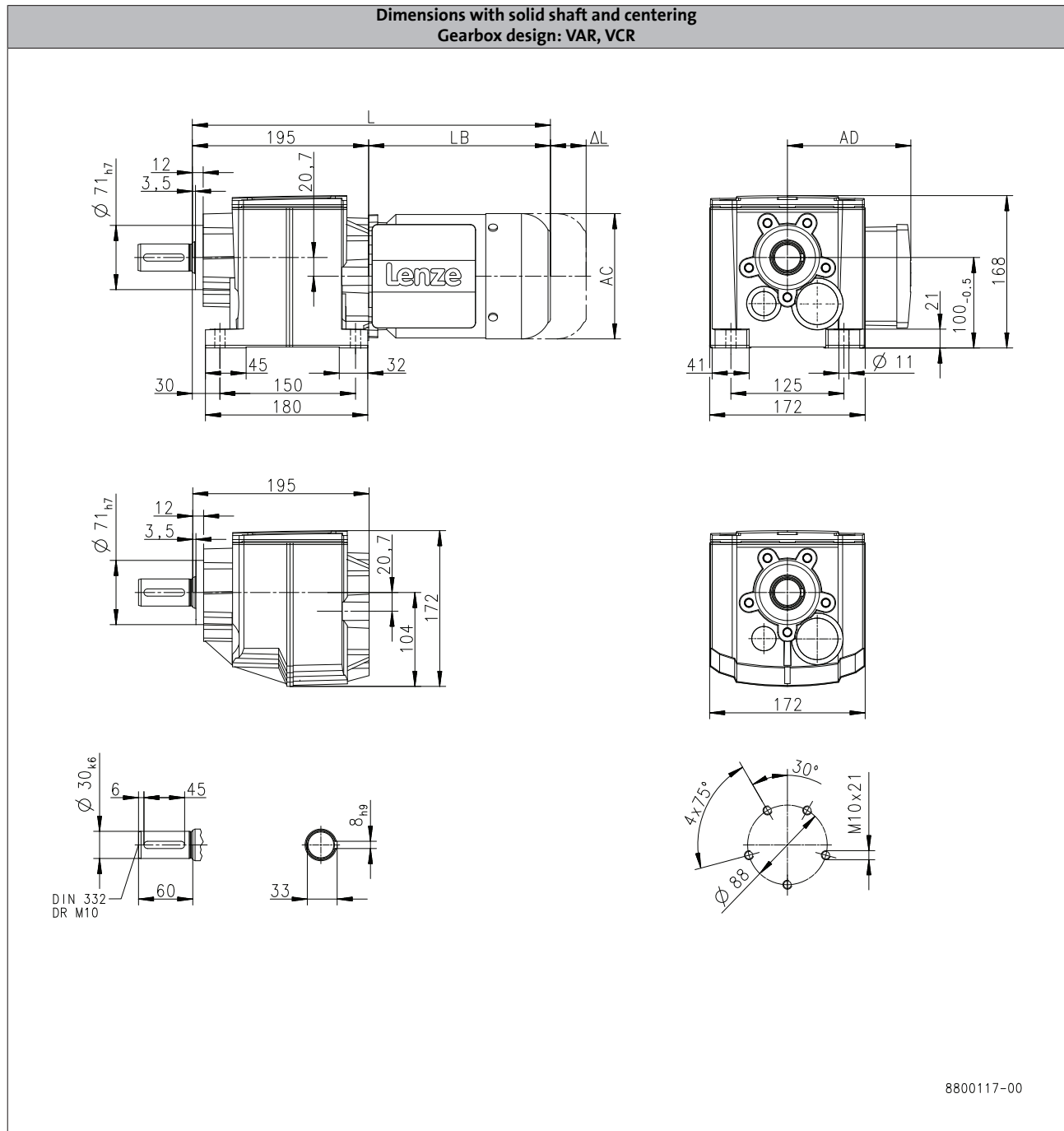
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H320



6.3

| | | m550 | | | | | |
|---------------------------|----------|---------|---------|---------|----------|----------|----------|
| | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 |
| Total length | L [mm] | 455 | 519 | | 579 | | 586 |
| Motor length | LB [mm] | 260 | 324 | | 384 | | 391 |
| Length of motor options | Δ L [mm] | 183 | 175 | | 170 | | 183 |
| Motor diameter | AC [mm] | 157 | 177 | | 195 | | 219 |
| Distance motor/connection | AD [mm] | 148 | 154 | | 164 | | 171 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

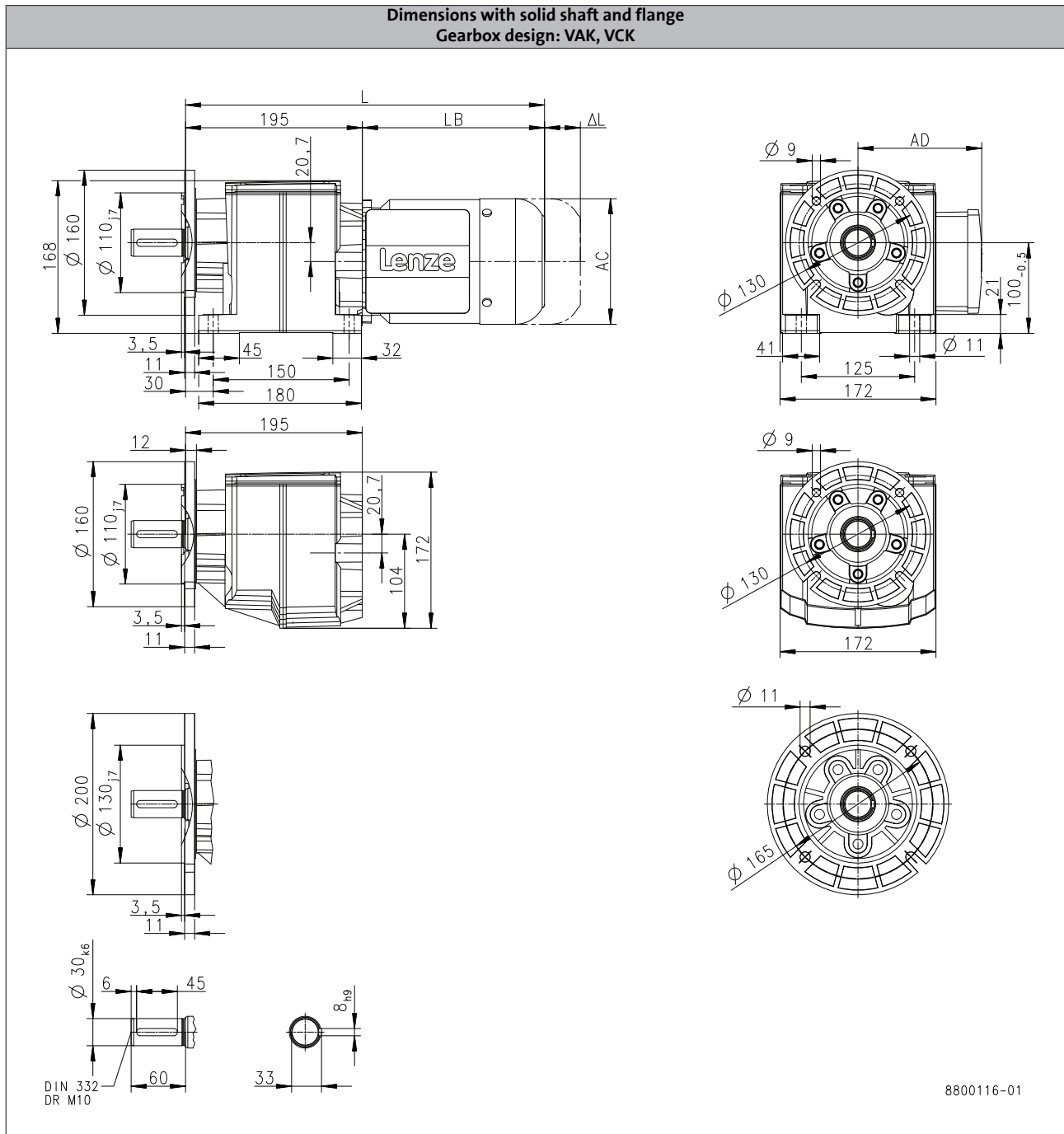
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H320



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 378 | | | 398 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

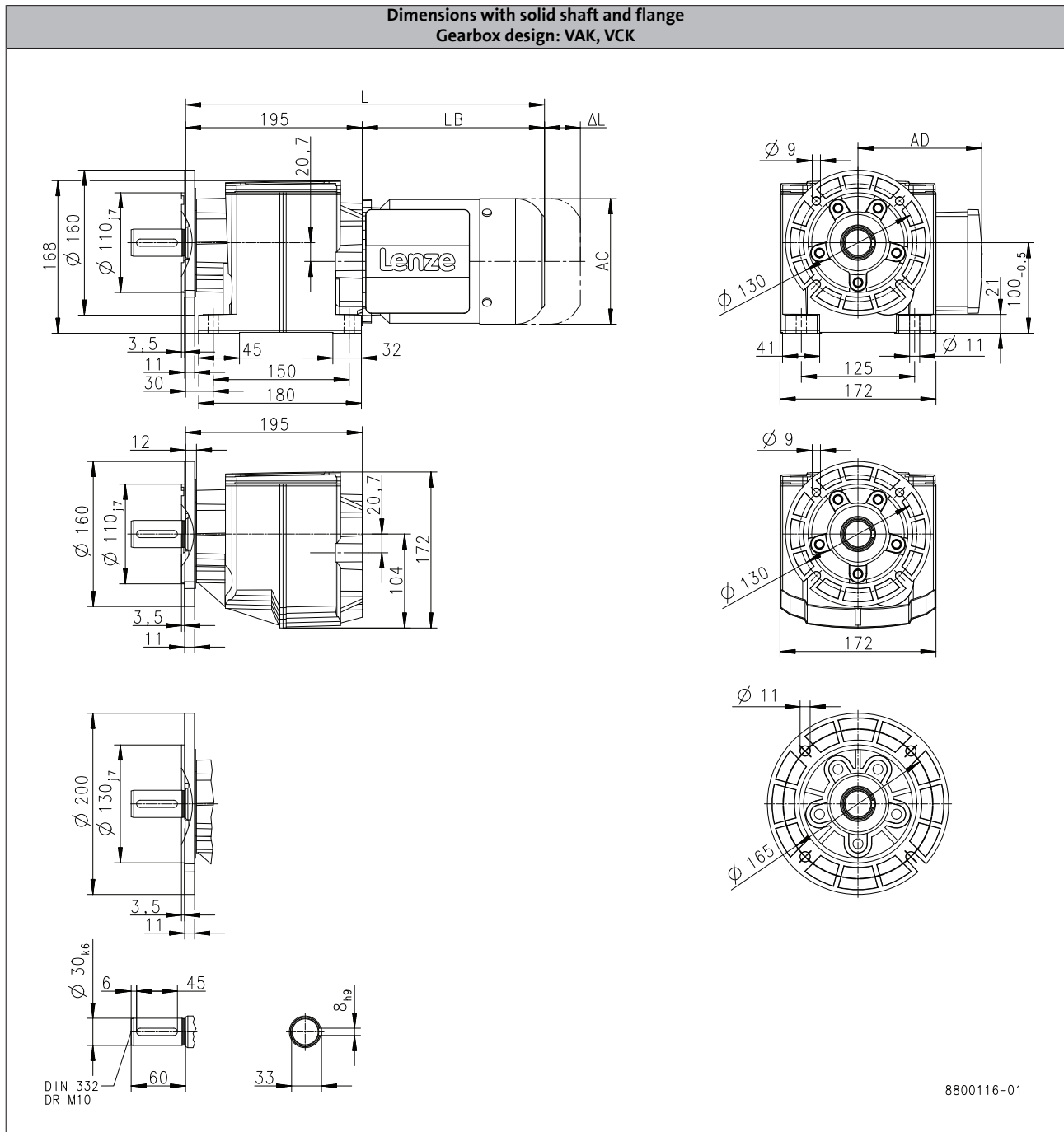
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H320



6.3

| | | | m550 | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 |
| Total length | L | [mm] | 455 | 519 | | 579 | | 586 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

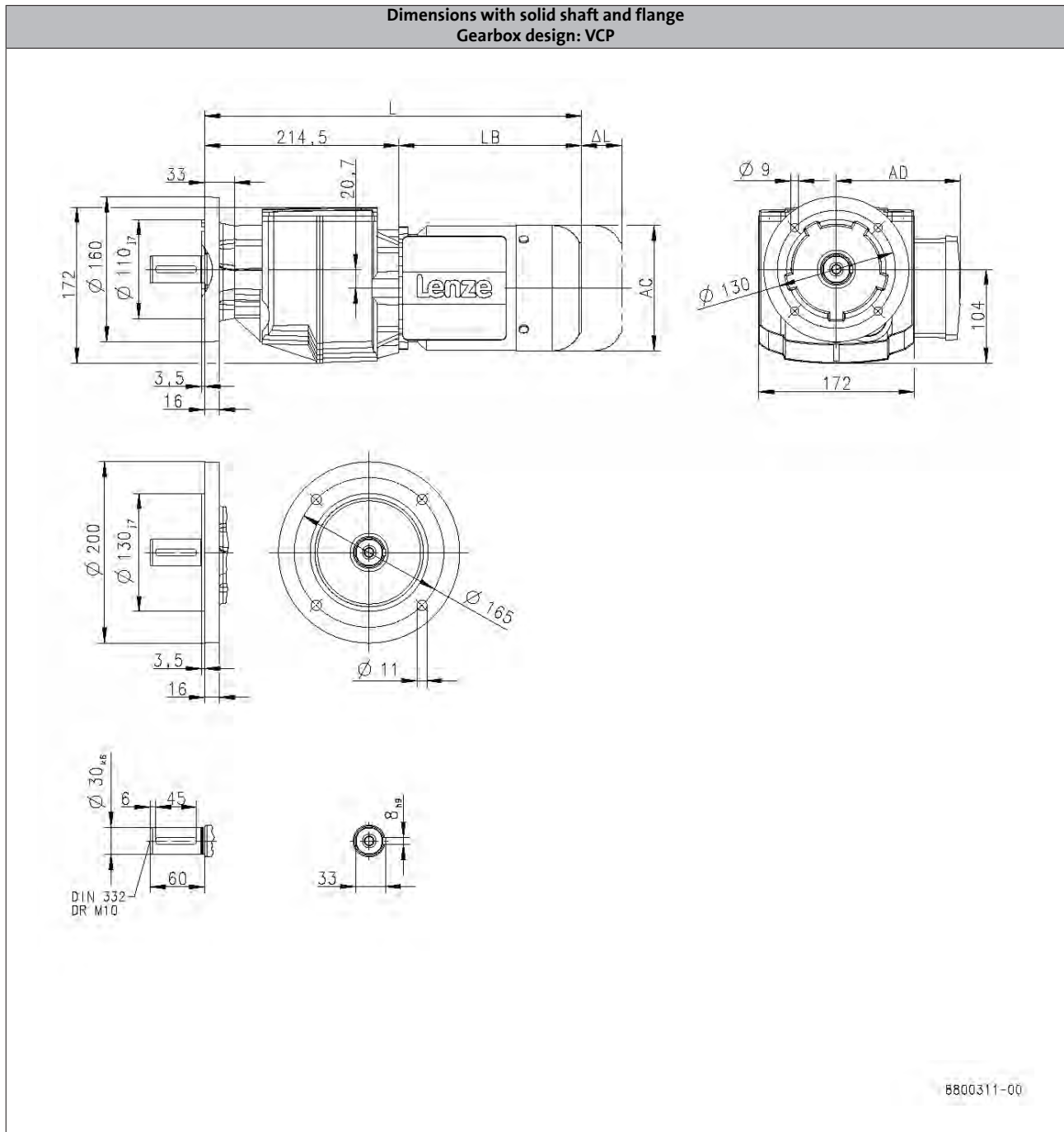
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H320



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 398 | | | 418 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

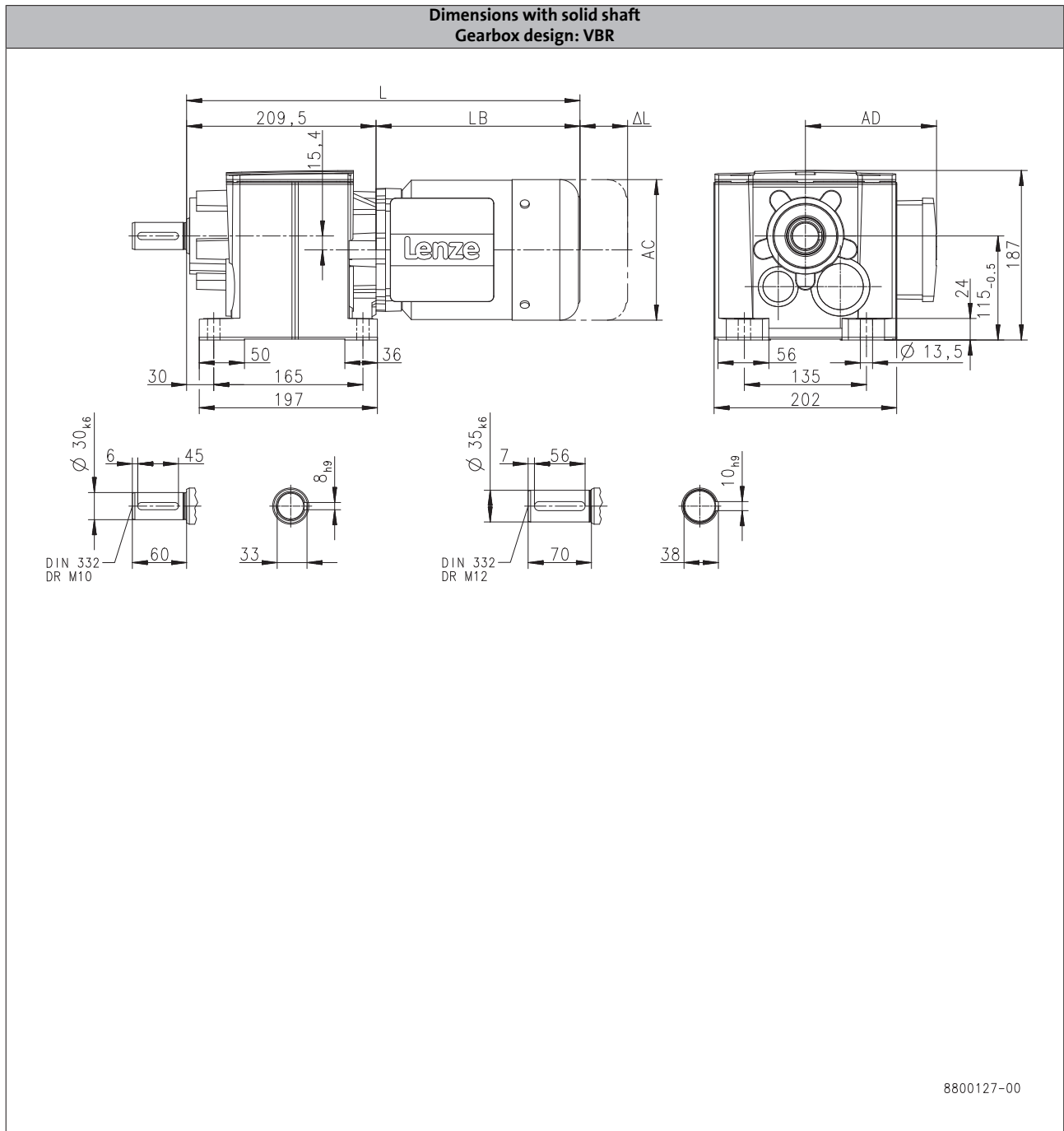
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 393 | | | 413 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

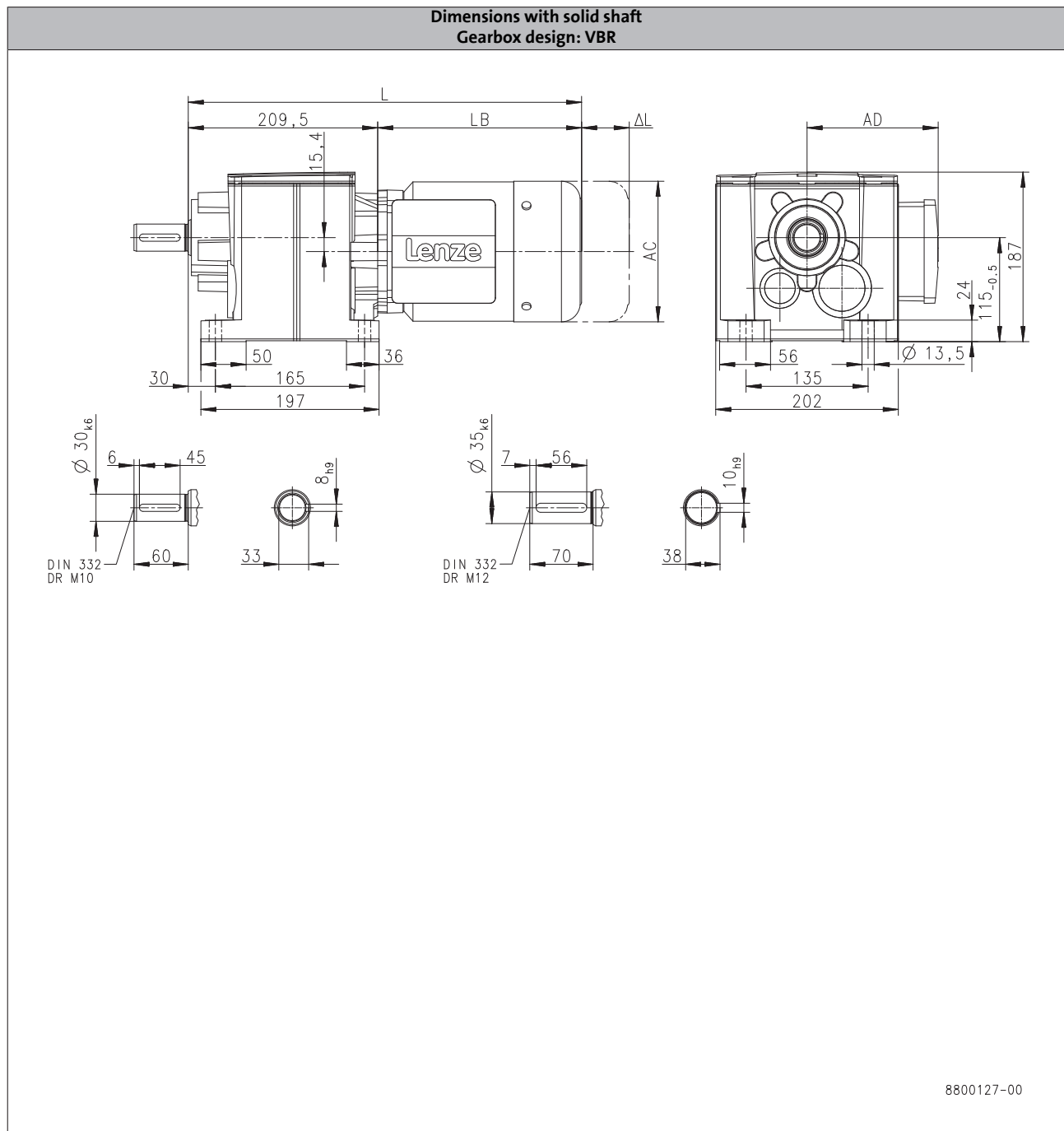
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



6.3

| | | m550 | | | | | | | |
|---------------------------|----------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L [mm] | 470 | 534 | | 594 | | 601 | 668 | |
| Motor length | LB [mm] | 260 | 324 | | 384 | | 391 | 458 | |
| Length of motor options | Δ L [mm] | 183 | 175 | | 170 | | 183 | 201 | |
| Motor diameter | AC [mm] | 157 | 177 | | 195 | | 219 | 261 | |
| Distance motor/connection | AD [mm] | 148 | 154 | | 164 | | 171 | 182 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

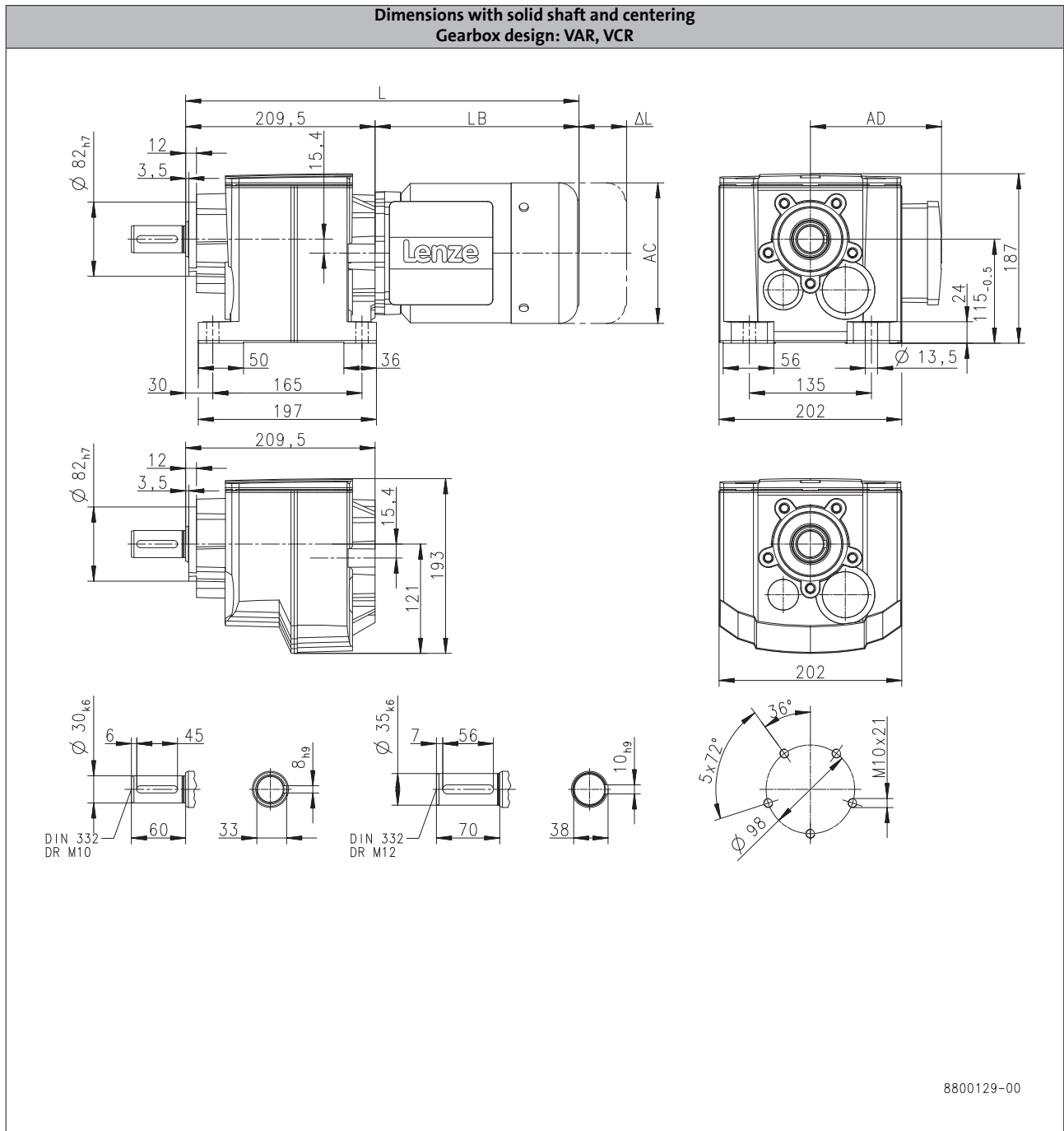
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 393 | | | 413 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

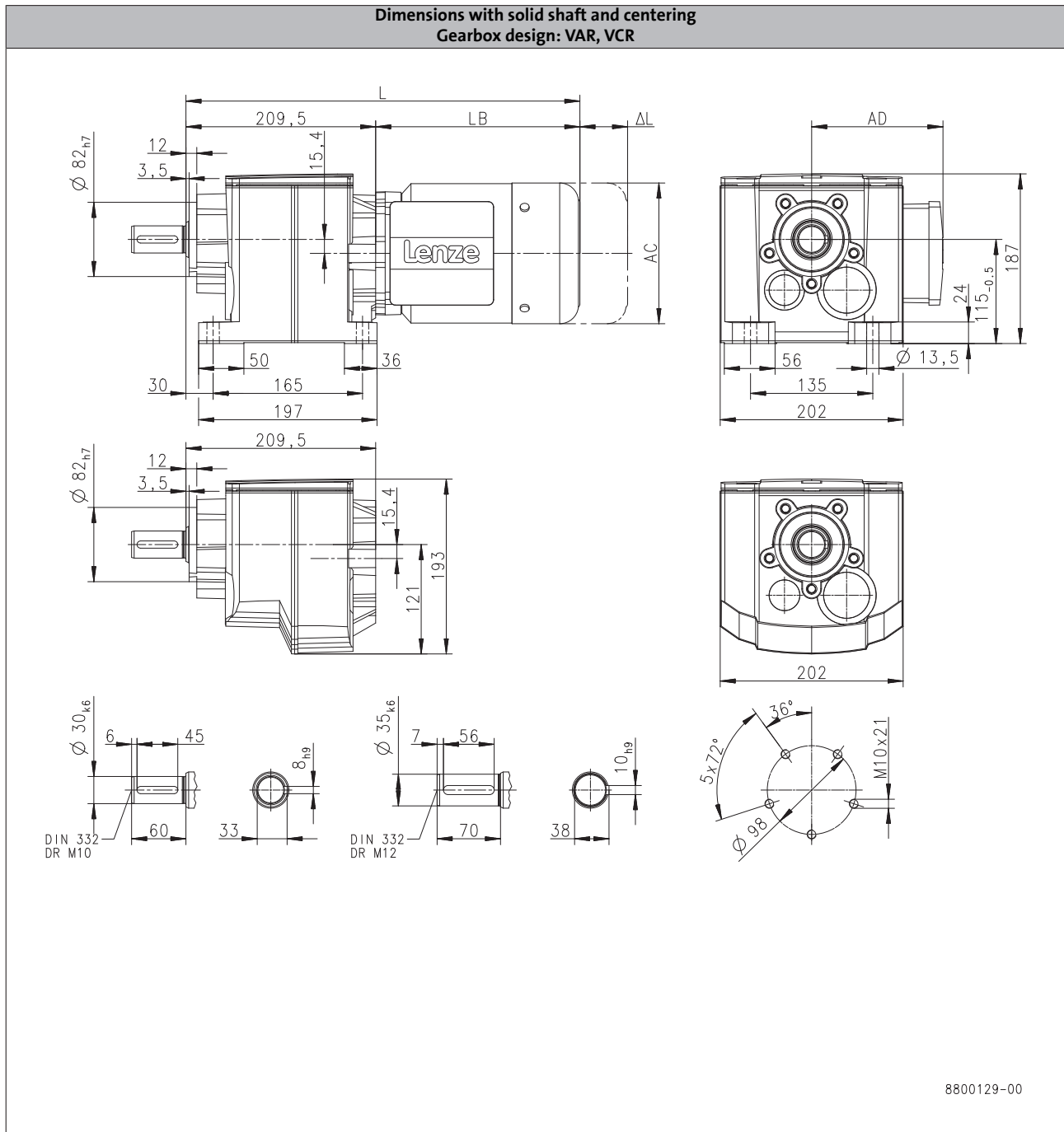
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



6.3

| | | | m550 | | | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L | [mm] | 470 | 534 | | 594 | | 601 | | 668 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

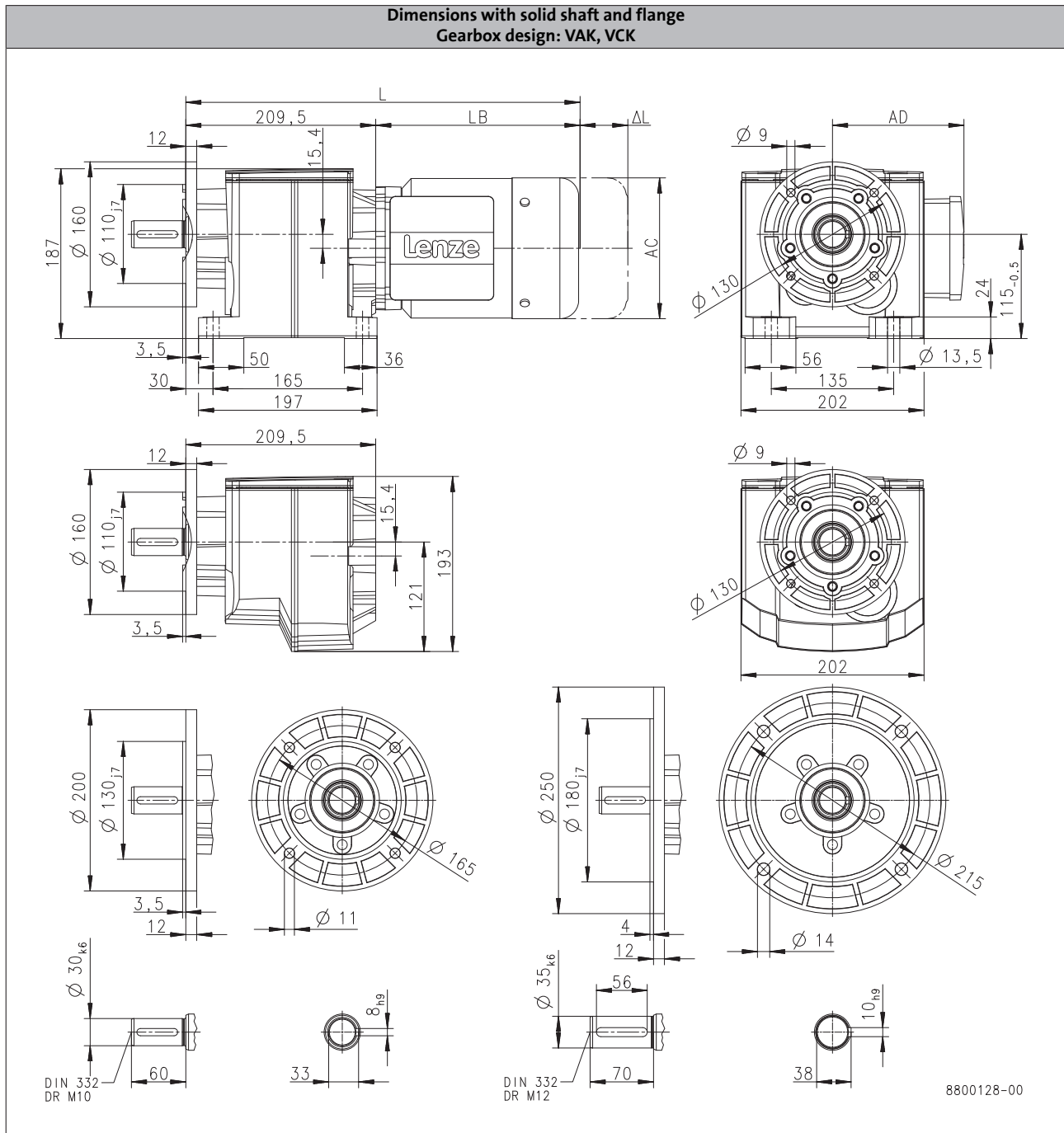
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 393 | | | 413 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

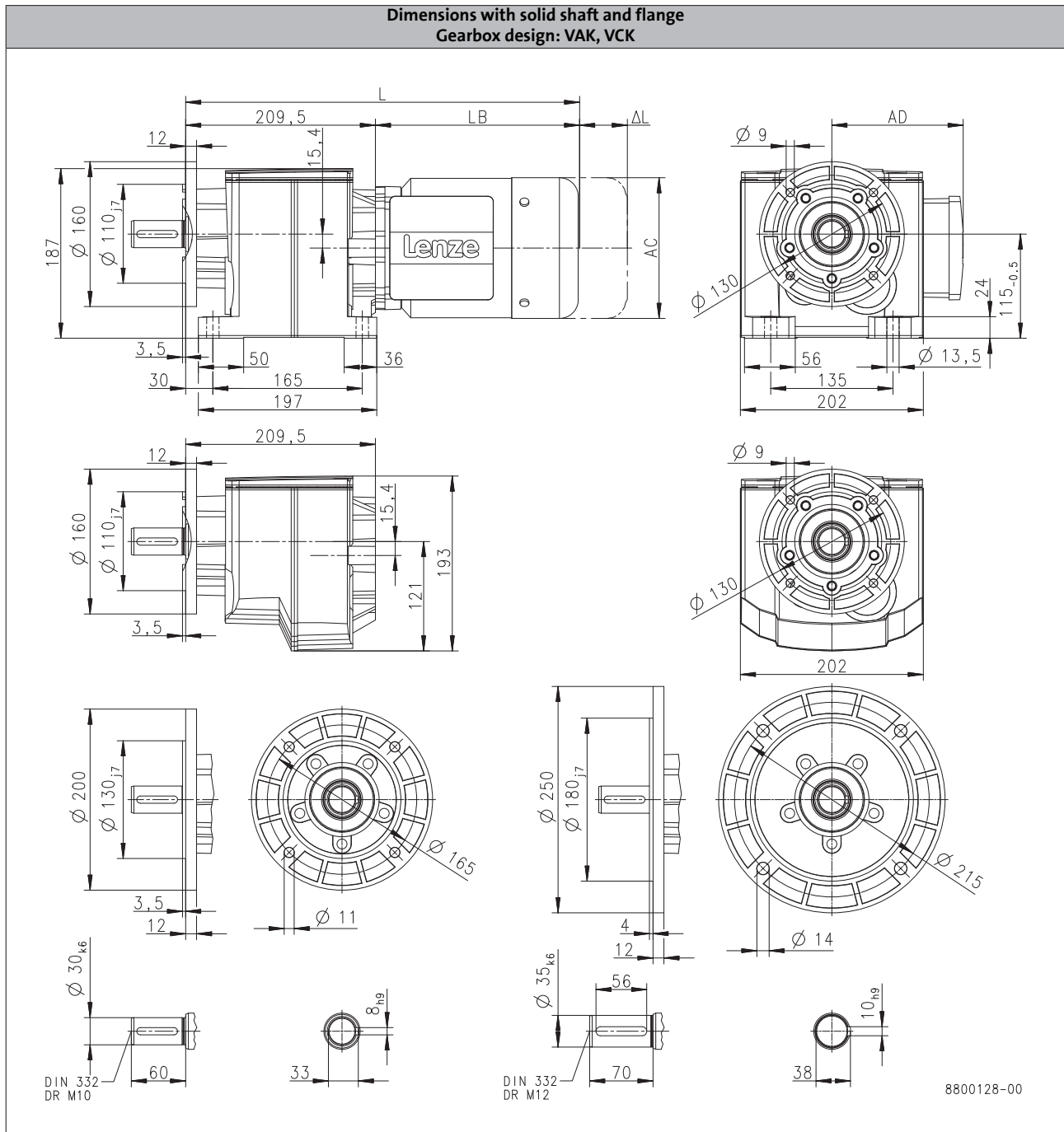
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



| | | | m550 | | | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L | [mm] | 470 | 534 | | 594 | | 601 | | 668 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

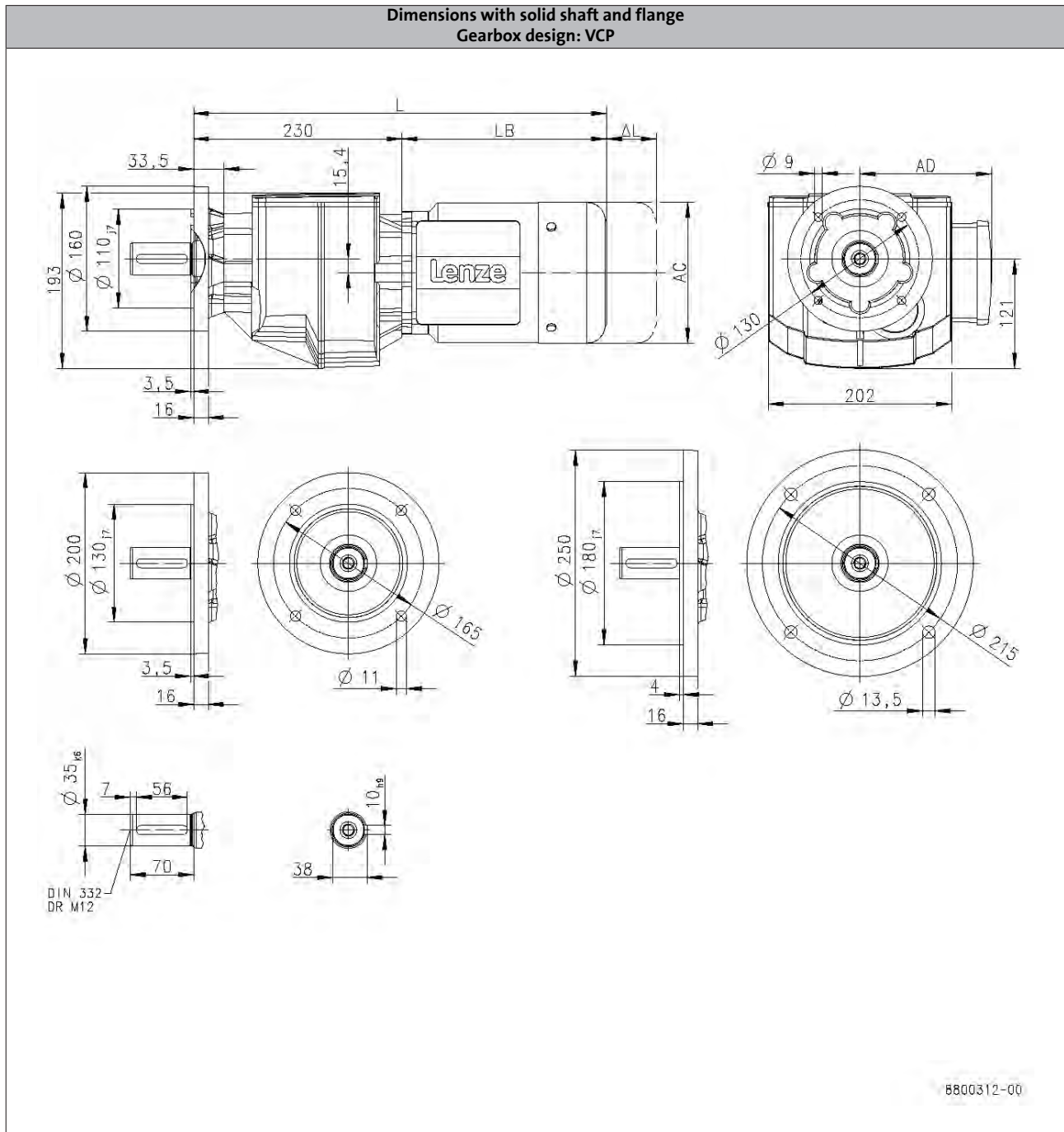
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



6.3

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 393 | | | 413 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

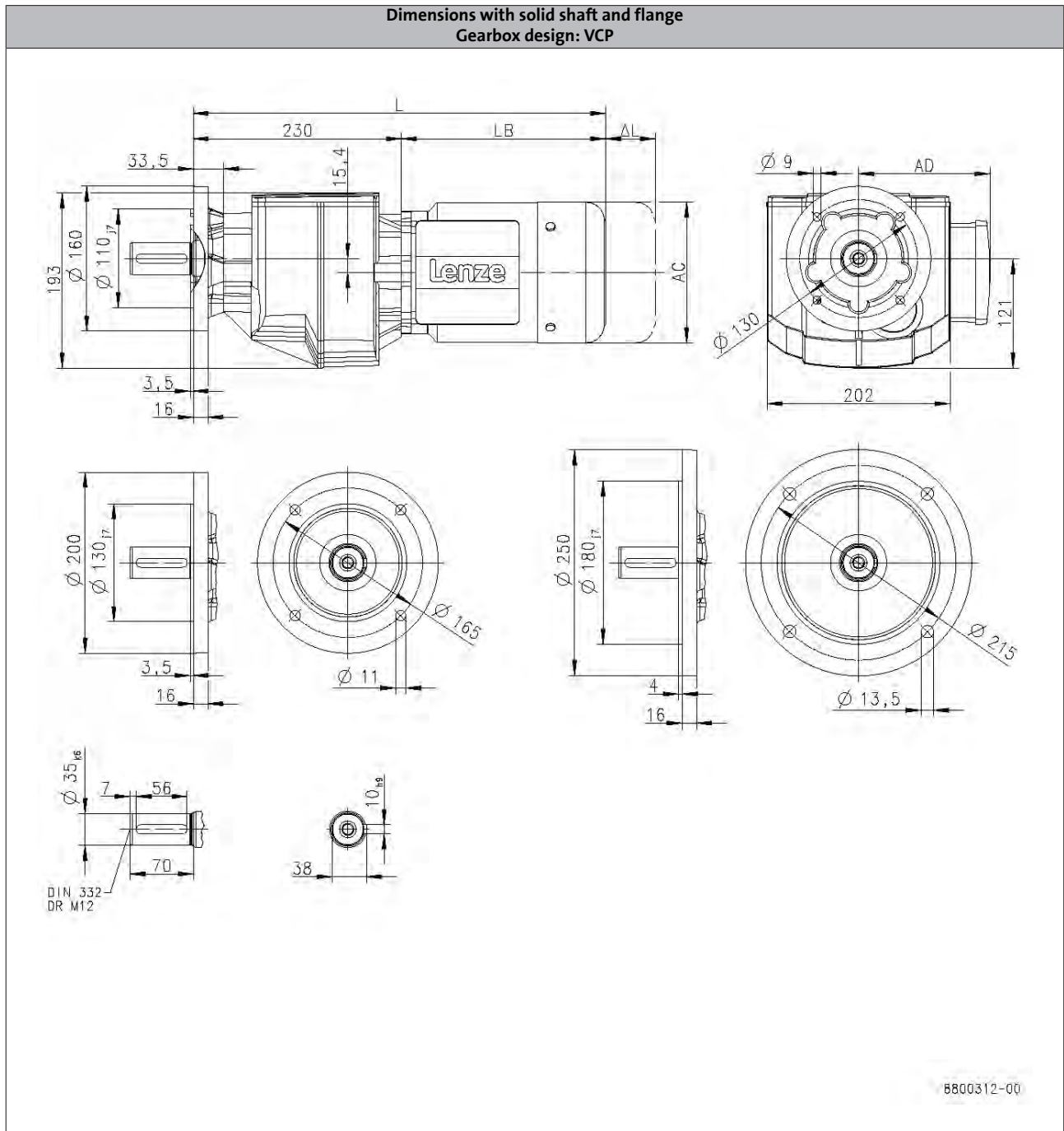
g500-H helical geared motors

Technical data



Dimensions, 4-pole motors

g500-H450



| | | m550 | | | | | | | |
|---------------------------|----------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L [mm] | 490 | 554 | | 614 | | 621 | | 688 |
| Motor length | LB [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

g500-H helical geared motors

Technical data



Additional length of the built-on accessories

Dimensions, self-ventilated (4-pole)

| Product | | | MD□MA□□ | | | m550 | | | | |
|------------------|-----|------|------------------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|
| | | | 063-02 063-22 | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 |
| Brake | | | | | | | | | | |
| | Δ L | [mm] | 71.0 | 40.0 | 52.0 | 73.0 | 62.0 | 76.0 | 90.0 | 79.0 |
| Feedback | | | | | | | | | | |
| | Δ L | [mm] | 71.0 | 56.0 | 52.0 | 97.0 | 82.0 | 81.0 | 80.0 | 102 |
| Brake + Feedback | | | | | | | | | | |
| | Δ L | [mm] | 135 | 103 | 96.0 | 110 | 99.0 | 101 | 120 | 124 |

Dimensions, forced ventilated (4-pole)

| Product | | | MD□MA□□ | | m550 | | | | | |
|------------------|-----|------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|--|
| | | | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 | |
| Blower | | | | | | | | | | |
| | Δ L | [mm] | 128 | | 127 | 122 | 109 | 103 | 121 | |
| Brake | | | | | | | | | | |
| | Δ L | [mm] | 170 | 165 | 183 | 175 | 170 | 183 | 201 | |
| Feedback | | | | | | | | | | |
| | Δ L | [mm] | 128 | | 127 | 122 | 109 | 183 | 201 | |
| Brake + Feedback | | | | | | | | | | |
| | Δ L | [mm] | 170 | 165 | 183 | 175 | 170 | 183 | 201 | |

g500-H helical geared motors

Technical data



Weights, 4-pole motors

2-stage gearboxes

| Product | | Mass |
|-------------|---------------|------|
| | | m |
| | | [kg] |
| g500-H45 | MD□MA□□063-02 | 5.20 |
| | MD□MA□□063-12 | 5.50 |
| | MD□MA□□063-22 | 5.20 |
| | MD□MA□□063-32 | 5.50 |
| | MD□MA□□063-42 | 5.80 |
| | MD□MA□□071-32 | 7.20 |
| | MD□MA□□071-42 | 7.80 |
| g500-H100 | MD□MA□□063-12 | 7.30 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 7.60 |
| | MD□MA□□071-32 | 9.00 |
| | MD□MA□□071-42 | 9.60 |
| | m550-P80/M4 | 18.1 |
| | m550-P90/L4 | 24.1 |
| m550-P90/M4 | 23.1 | |
| g500-H140 | MD□MA□□063-12 | 8.40 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 8.70 |
| | MD□MA□□071-32 | 10.1 |
| | MD□MA□□071-42 | 10.7 |
| | m550-P80/M4 | 19.2 |
| | m550-P90/L4 | 25.2 |
| | m550-P90/M4 | 24.2 |
| g500-H210 | MD□MA□□063-12 | 9.70 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 10.0 |
| | MD□MA□□071-32 | 11.4 |
| | MD□MA□□071-42 | 12.0 |
| | m550-P80/M4 | 20.5 |
| | m550-P90/L4 | 26.5 |
| | m550-P90/M4 | 25.5 |
| | m550-P100/L4 | 38.5 |
| | m550-P100/M4 | 36.5 |

| Product | | Mass |
|--------------|---------------|------|
| | | m |
| | | [kg] |
| g500-H320 | MD□MA□□063-32 | 11.6 |
| | MD□MA□□063-42 | 11.9 |
| | MD□MA□□071-32 | 13.3 |
| | MD□MA□□071-42 | 13.9 |
| | m550-P80/M4 | 22.4 |
| | m550-P90/L4 | 28.4 |
| | m550-P90/M4 | 27.4 |
| | m550-P100/L4 | 40.4 |
| | m550-P100/M4 | 38.4 |
| | m550-P112/M4 | 43.4 |
| g500-H450 | MD□MA□□063-42 | 15.0 |
| | MD□MA□□071-32 | 16.4 |
| | MD□MA□□071-42 | 17.0 |
| | m550-P80/M4 | 25.5 |
| | m550-P90/L4 | 31.5 |
| | m550-P90/M4 | 30.5 |
| | m550-P100/L4 | 43.5 |
| | m550-P100/M4 | 41.5 |
| | m550-P112/M4 | 46.5 |
| | m550-P132/L4 | 79.5 |
| m550-P132/M4 | 67.5 | |

g500-H helical geared motors

Technical data



Weights, 4-pole motors

3-stage gearboxes

| Product | | Mass |
|-----------|---------------|------|
| | | m |
| | | [kg] |
| g500-H210 | MD□MA□□063-12 | 9.90 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 10.2 |
| | MD□MA□□071-32 | 11.6 |
| | MD□MA□□071-42 | 12.2 |
| | m550-P80/M4 | 20.7 |
| g500-H320 | MD□MA□□063-12 | 11.8 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 12.1 |
| | MD□MA□□071-32 | 13.5 |
| | MD□MA□□071-42 | 14.1 |
| | m550-P80/M4 | 22.6 |
| g500-H450 | MD□MA□□063-12 | 15.1 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 15.4 |
| | MD□MA□□071-32 | 16.8 |
| | MD□MA□□071-42 | 17.4 |
| | m550-P80/M4 | 25.9 |
| | m550-P90/L4 | 31.9 |
| | m550-P90/M4 | 30.9 |

g500-H helical geared motors

Technical data



Additional weights for gearboxes

| Product | | | g500-H45 | g500-H100 | g500-H140 | g500-H210 | g500-H320 | g500-H450 |
|---------|---|------|----------|-----------|-----------|-----------|-----------|-----------|
| Foot | m | [kg] | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| Flange | m | [kg] | 0.3 | 0.4 | 0.6 | 0.6 | 0.8 | 0.9 |

Additional weights for motors

4-pole motors

| Product | | | MD□MA□□ | | | m550 | | | | |
|---------|---|------|------------------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|
| | | | 063-02 063-22 | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 |
| Brake | | | 06 | 06 | 08 | 08 | 10 | 12 | 12 | 14 |
| | m | [kg] | 0.9 | 0.9 | 1.5 | 1.5 | 2.6 | 2.6 | 4.2 | 5.8 |
| Blower | | | | | | | | | | |
| | m | [kg] | | 2.0 | 2.1 | 2.3 | 2.7 | 3.0 | 3.1 | 5.0 |

g500-H helical geared motors

Technical data



g500-H helical geared motors

Appendix



Gearbox code

| Example | G | 50 | A | H | 045 | M | V | B | R | 2 | C |
|------------------|---------|----|---|---|-----|---|---|---|---|---|---|
| Meaning | Variant | | | | | | | | | | |
| Product family | G | 50 | | | | | | | | | |
| Generation | | | A | | | | | | | | |
| | | | B | | | | | | | | |
| Gearbox type | | | | H | | | | | | | |
| Output torque | | | | | 045 | | | | | | |
| | | | | | 110 | | | | | | |
| | | | | | 114 | | | | | | |
| | | | | | 121 | | | | | | |
| | | | | | 132 | | | | | | |
| | | | | | 145 | | | | | | |
| Mounting | | | | | | M | | | | | |
| Shaft type | | | | | | | V | | | | |
| | | | | | | | G | | | | |
| Housing type | | | | | | | | A | | | |
| | | | | | | | | B | | | |
| | | | | | | | | C | | | |
| Flange mounting | | | | | | | | | R | | |
| | | | | | | | | | k | | |
| | | | | | | | | | P | | |
| Number of stages | | | | | | | | | | 2 | |
| | | | | | | | | | | 3 | |
| Motor mounting | | | | | | | | | | | C |
| | | | | | | | | | | | N |

g500-H helical geared motors

Appendix



Motor code

| Example | M | D | E | MA | XX | 063 | - | 4 | 2 | C1 | C |
|----------------------|---------------------------------------|------------|---|----|----|-----|---|---|---|----|---|
| Meaning | Variant | Motor code | | | | | | | | | |
| Product family | | M | | | | | | | | | |
| Efficiency class | IE1 | | D | | | | | | | | |
| Cooling | Natural ventilation | | | S | | | | | | | |
| | Integral fan | | | E | | | | | | | |
| | Blower | | | F | | | | | | | |
| Internal key | | | | MA | | | | | | | |
| Built-on accessories | Without built-on accessories | | | | XX | | | | | | |
| | Brake | | | | BR | | | | | | |
| | Brake + resolver | | | | BS | | | | | | |
| | Brake + incremental encoder | | | | BI | | | | | | |
| | Brake + SinCos absolute value encoder | | | | BA | | | | | | |
| | Resolver | | | | RS | | | | | | |
| | Incremental encoder | | | | IG | | | | | | |
| | SinCos absolute value encoder | | | | AG | | | | | | |
| Size | | | | | | 063 | | | | | |
| | | | | | | 071 | | | | | |
| Overall length | | | | | | | | 0 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 4 | | | |
| Number of pole pairs | 4-pole motors | | | | | | | | 2 | | |
| | 2-pole motors | | | | | | | | 1 | | |
| Internal key | | | | | | | | | | C1 | |
| Approval | CE | | | | | | | | | | C |
| | cURus | | | | | | | | | | U |
| | CCC | | | | | | | | | | 3 |

g500-H helical geared motors

Appendix



Motor code

| Meaning | Variant | Motor code | | | | | | | | | |
|----------------------|------------------------|----------------|--------|---|----|---|---|---|---|---|---|
| Example | M55A | P | 080 | M | 04 | 5 | E | 0 | 0 | W | T |
| Efficiency class | Premium - IE3 | P | | | | | | | | | |
| Size | | | 080 | | | | | | | | |
| | | | 090 | | | | | | | | |
| | | | 100 | | | | | | | | |
| | | | 112 | | | | | | | | |
| | | | 132 | | | | | | | | |
| | | | 160 | | | | | | | | |
| | | | 180 | | | | | | | | |
| | | | 200 | | | | | | | | |
| | | | 225 | | | | | | | | |
| | | Overall length | Medium | | | M | | | | | |
| Long | | | | L | | | | | | | |
| Very long | | | | V | | | | | | | |
| Number of poles | 4-pole | | | | 04 | | | | | | |
| Degree of protection | IP55 | | | | | 5 | | | | | |
| Cooling | Integral fan | | | | | | E | | | | |
| | Blower | | | | | | F | | | | |
| Brake attachment | Without brake | | | | | | | 0 | | | |
| | Spring-applied brake | | | | | | | F | | | |
| Actual value encoder | Without encoder | | | | | | | | 0 | | |
| | Resolver | | | | | | | | R | | |
| | Absolute value encoder | | | | | | | | A | | |
| | Incremental encoder | | | | | | | | E | | |
| Approval | CE UL | | | | | | | | | R | |
| | CE UL-CSA | | | | | | | | | U | |
| | CE CSA | | | | | | | | | S | |
| | CE | | | | | | | | | C | |
| | CE CCC | | | | | | | | | 3 | |
| | none | | | | | | | | | N | |
| | UL-CSA | | | | | | | | | V | |
| | CCC | | | | | | | | | 4 | |
| | CE UL-CSA CCC | | | | | | | | | W | |
| | UL-CSA CCC | | | | | | | | | Y | |
| Design type | Internal key | | | | | | | | | | T |

g500-H helical geared motors

Appendix



g500-S shaft-mounted helic- al geared motors

Inverter operation

0.12 ... 0.55 kW (efficiency class IE1)

0.75 ... 7.5 kW (efficiency class IE3)



g500-S shaft-mounted helical geared motors



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g500-S shaft-mounted helical geared motors

General information



List of abbreviations

| | | |
|------------------------|-----------------------|---------------------------------------|
| α | [rad/s ²] | Max. permissible angular acceleration |
| $\eta_{50\%}$ | [%] | Efficiency |
| $\eta_{75\%}$ | [%] | Efficiency |
| $\eta_{100\%}$ | [%] | Efficiency |
| η_a | | Efficiency |
| $\eta_{c=1}$ | | Efficiency |
| c | | Load capacity |
| $\cos \phi$ | | Power factor |
| du/dt | [kV/ μ s] | Insulation resistance |
| $F_{ax,-}$ | [N] | Min. axial force |
| $F_{ax,+}$ | [N] | Max. axial force |
| $F_{ax,max}$ | [N] | Max. axial force |
| $f_{in,max}$ | [Hz] | Max. input frequency |
| f_{max} | [kHz] | Limit frequency |
| f_{max} | [kHz] | Max. switching frequency |
| f_N | [Hz] | Rated frequency |
| $F_{rad,max}$ | [N] | Max. radial force |
| f_z | | Additional radial force factor |
| H_{max} | [m] | Site altitude |
| I_0 | [A] | Standstill current |
| i | | Ratio |
| $I_{in,max}$ | [A] | Max. input current |
| I_{max} | [A] | Max. current consumption |
| I_{max} | [A] | Max. current |
| I_{max} | [A] | Max. current consumption |
| I_{max} | [A] | Max. current |
| I_{max} | [A] | Max. short-time DC-bus current |
| I_{max} | [A] | Max. DC-bus current |
| I_N | [A] | Rated current |
| $I_{N,\Delta}$ | [A] | Rated current |
| $I_{N,Y}$ | [A] | Rated current |
| J | [kgcm ²] | Moment of inertia |
| J_{MB} | [kgcm ²] | Moment of inertia |
| $KE_{LL\ 150^\circ C}$ | [V/(1000 r/min)] | Voltage constant |
| $Kt_{0\ 150^\circ C}$ | [Nm/A] | Torque constant |
| L_{10} | [h] | Bearing service life |
| L | [mH] | Mutual inductance |
| $L_{1\sigma}$ | [mH] | Stator leakage inductance |
| $L_{2\sigma}$ | [mH] | Rotor leakage inductance |
| L_N | [mH] | Rated inductance |
| m | [kg] | Mass |
| M_2 | [Nm] | Output torque |
| M_{22} | [Nm] | Output torque |
| M_0 | [Nm] | Stall torque |
| $M_{0,max}$ | [Nm] | Max. standstill torque |
| $M_{2,GM}$ | [Nm] | Output torque |
| $M_{2,max}$ | [Nm] | Max. output torque |
| $M_{2,not}$ | [Nm] | Emergency off-torque |

| | | |
|-----------------------|----------------|--|
| M_a | [Nm] | Starting torque |
| $M_{a,1}$ | [Nm] | Starting torque |
| $M_{a,2}$ | [Nm] | Starting torque |
| M_{av} | [Nm] | Average dynamic torque |
| M_b | [Nm] | Stalling torque |
| M_B | [Nm] | Braking torque |
| M_k | [Nm] | Rated torque |
| M_{max} | [Nm] | Max. torque |
| M_N | [Nm] | Rated torque |
| n_2 | [r/min] | Output speed |
| n_{21} | [r/min] | Output speed |
| n_{22} | [r/min] | Output speed |
| $n_{1,max}$ | [r/min] | Max. gearbox input speed |
| $n_{1,max\ 50\%}$ | [r/min] | Max. gearbox input speed |
| n_{eto} | [r/min] | Transition speed |
| n_k | [r/min] | Speed |
| n_{max} | [r/min] | Max. speed |
| n_N | [r/min] | Rated speed |
| P_{max} | [kW] | Max. power input |
| Q_{BW} | [MJ] | Friction energy |
| Q_E | [J] | Maximum switching energy |
| Q_E | [kJ] | Maximum switching energy |
| R_1 | [Ω] | Stator impedance |
| R_2 | [Ω] | Rotor impedance |
| R | [Ω] | Insulation resistance |
| R | [Ω] | Min. insulation resistance |
| $R_{UV\ 150^\circ C}$ | [Ω] | Stator impedance |
| $R_{UV\ 20^\circ C}$ | [Ω] | Stator impedance |
| $S_{h\ddot{u}}$ | [1/h] | Transition operating frequency |
| t_1 | [ms] | Engagement time |
| t_2 | [ms] | Disengagement time |
| t_{11} | [ms] | Delay time |
| t_{12} | [ms] | Rise time |
| T | [$^\circ C$] | Max. surface temperature |
| T | [$^\circ C$] | Min. ambient temperature for transport |
| T | [$^\circ C$] | Max. ambient temperature for transport |
| T | [$^\circ C$] | Max. ambient temperature of bearing |
| T | [$^\circ C$] | Min. ambient storage temperature |
| T | [$^\circ C$] | Ambient temperature |
| T | [$^\circ C$] | Operating temperature |
| T | [$^\circ C$] | Rated temperature |
| t | [h] | Service life |
| T_{opr} | | Ambient operating temperature |
| $T_{opr,max}$ | [$^\circ C$] | Max. ambient operating temperature |
| $T_{opr,min}$ | [$^\circ C$] | Min. ambient operating temperature |
| t_{re} | [s] | Recovery time |
| $t_{\ddot{u}}$ | [ms] | Overexcitation time |
| U_{Δ} | [V] | Voltage range |
| U_{AC} | [V] | Mains voltage range |

g500-S shaft-mounted helical geared motors

General information



List of abbreviations

| | | |
|----------------|--------------|--------------------|
| U_{AC} | [V] | Mains voltage |
| $U_{in,max}$ | [V] | Max. input voltage |
| $U_{in,min}$ | [V] | Min. input voltage |
| U_{max} | [V] | Max. input voltage |
| U_{max} | [V] | Max. mains voltage |
| U_{min} | [V] | Min. mains voltage |
| $U_{N,\Delta}$ | [V] | Rated voltage |
| $U_{N,AC}$ | [V] | Rated voltage |
| $U_{N,DC}$ | [V] | Rated voltage |
| $U_{N,Y}$ | [V] | Rated voltage |
| Z_g | | Number of teeth |
| Z_{ro} | [Ω] | Rotor impedance |
| Z_{rs} | [Ω] | Impedance |
| Z_{so} | [Ω] | Stator impedance |
| Z_t | | Number of teeth |

| | |
|----------|---|
| CCC | China Compulsory Certificate |
| CE | Communauté Européenne |
| CEL | China Energy Label |
| CSA | Canadian Standards Association |
| CSAULE | Energy Verified Certificate |
| cURus | Combined certification marks of UL for the USA and Canada |
| DIN | Deutsches Institut für Normung e.V. |
| EAC | Customs union Russia / Belarus / Kazakhstan certificate |
| EMC | Electromagnetic compatibility |
| EN | European standard |
| IM | International Mounting Code |
| IP | International Protection Code |
| NEMA | National Electrical Manufacturers Association |
| UkrSEPRO | Certificate for Ukraine |
| UL | Underwriters Laboratory Listed Product |
| UR | Underwriters Laboratory Recognized Product |
| VDE | Verband deutscher Elektrotechniker (Association of German Electrical Engineers) |

g500-S shaft-mounted helical geared motors



General information

Product information

In combination with three-phase AC motors, our shaft-mounted helical gearboxes form a compact and powerful drive unit. Numerous options at the input and output end provide for the drive to be exactly adapted to your application.

The slim shaft-mounted helical gearboxes feature high reliable radial forces, closely stepped gear reductions and a low backlash. They are available in 2-pole and 3-pole design with a torque up to 660 Nm and a ratio of up to $i= 495$.

Three-phase AC motors as a basis for geared motors

In a power range of 0.06 to 7.5 kW, Lenze offers inverter-operated three-phase AC motors for comprehensive tasks. They come in different efficiency classes and can be used for the versions required for open-loop or closed-loop inverter operation.

- IE1 motors up to a power of 0.55 kW
- IE3 motors from 0.75 kW to 7.5 kW

Versions

- Slimline design saves installation space of the machine
- Solid shaft, hollow shaft and shrink disc for direct integration into the machine
- High accuracy with axial output provide for the highest efficiency

Customer benefit:

- Different efficiency classes for the greatest economic benefit
- Space-saving thanks to compact direct attachment to Lenze gearboxes
- Can be used universally for a wide range of machine tasks due to the market-oriented modular system
- Conventional connectors ensure quick connection, also during servicing

The product name

| Gearbox type | Product range | | Design | Rated torque [Nm] | Product |
|-------------------------------|---------------|---|--------|-------------------|-----------|
| Shaft-mounted helical gearbox | g500 | - | S | 130 | g500-S130 |
| | | | | 220 | g500-S220 |
| | | | | 400 | g500-S400 |
| | | | | 660 | g500-S660 |



g500-S shaft-mounted helical gearbox with three-phase AC motor



g500-S shaft-mounted helical gearbox with three-phase AC motor and motec



g500-S shaft-mounted helical gearbox with servo motor

g500-S shaft-mounted helical geared motors

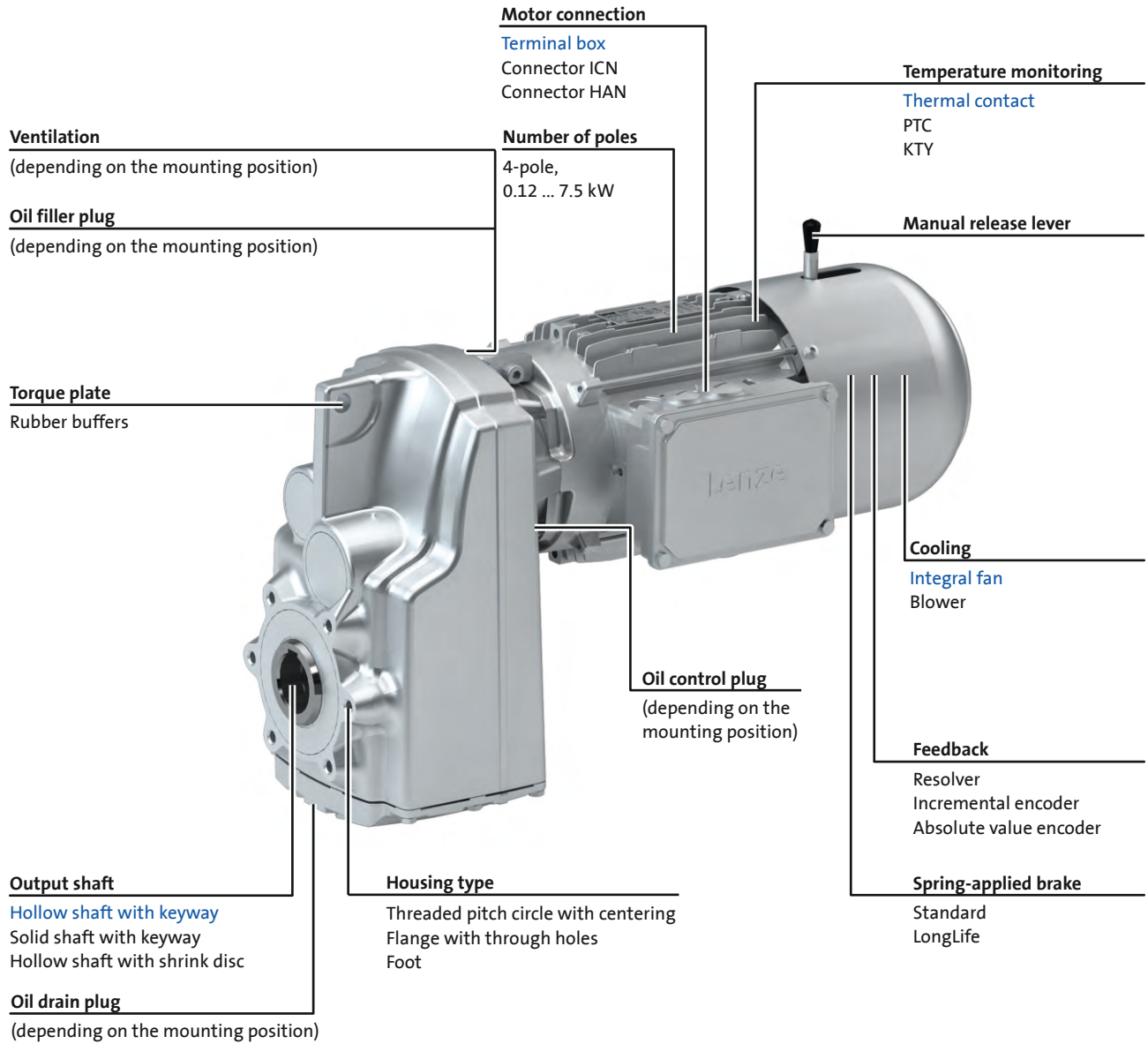
General information



Equipment

Overview

The equipment includes all the options available as standard and all the built-on accessories of the product.



Standard design



11 - Detailed information on housing type.

g500-S shaft-mounted helical geared motors

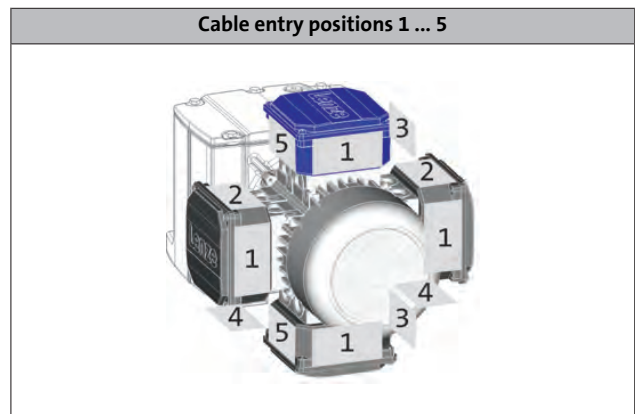
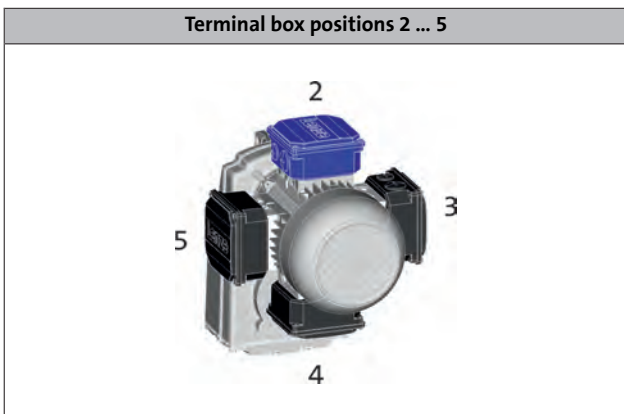
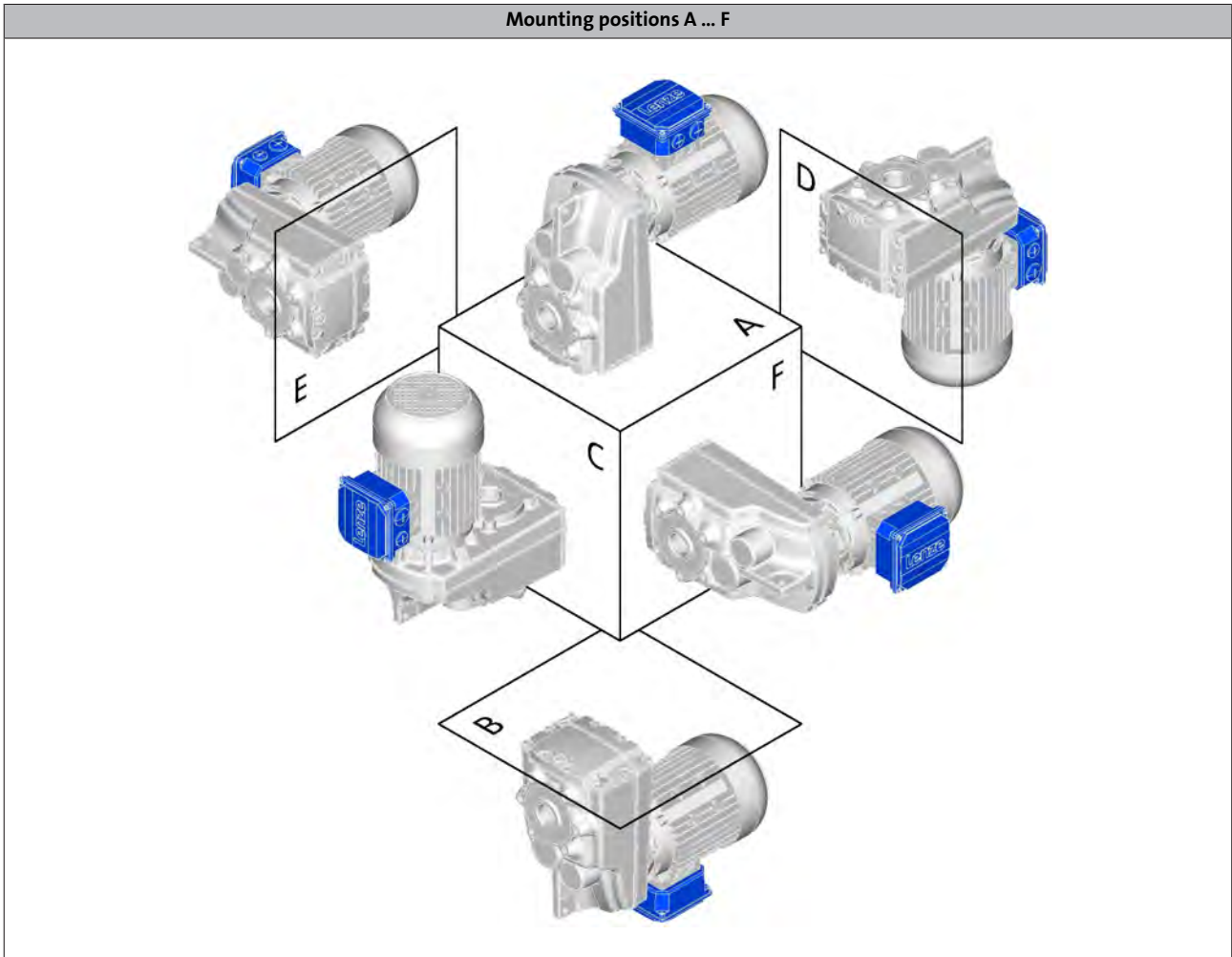
General information



Equipment

Mounting position, position of system components

- ▶ In the following graphics, the terminal box in position 2 is colour-coded. If the mounting position (A ... F) changes, the terminal box positions 2 ... 5 are rotated accordingly.
- ▶ To reduce the number of different versions, the gearboxes can also be ordered with combined mounting positions:
- g500-S130 ... S660 in mounting position AEF



- ▶ For details regarding the cable entry see motor chapter/product extensions.

g500-S shaft-mounted helical geared motors

General information



Equipment

Mounting position, position of system components

Shrink disc position 1 or 6



- ▶ Solid shaft and flange are only possible in position 6.

g500-S shaft-mounted helical geared motors

General information



The geared motor kit

| Product | g500-S130 | g500-S220 | g500-S400 | g500-S660 |
|-------------------------------|-------------|-------------|-------------|--------------------|
| Gearbox | g500-S130 | g500-S220 | g500-S400 | g500-S660 |
| Motor assignment min. | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 |
| Motor assignment max. | m550-P90 | m550-P100 | m550-P112 | m550-P132 |
| Technical data | | | | |
| Output torque max. | 130 Nm | 220 Nm | 400 Nm | 660 Nm |
| Drive power min. | 0.12 kW | 0.12 kW | 0.12 kW | 0.12 kW |
| Drive power max. | 1.5 kW | 3.0 kW | 4.0 kW | 7.5 kW |
| Dimensions [mm] | | | | |
| Solid shaft with featherkey | 25 x 50 | 25 x 50 | 30 x 60 | 35 x 70 40 x 80 |
| Hollow shaft with keyway | 25 | 25/30 | 30/35 | 40/45 |
| Hollow shaft with shrink disc | 25 | 25/30 | 35 | 40 |
| Output flange | 160 | 160 | 200 | 200/250 |

- Values printed in bold are standard versions.
Values not printed in bold are possible extensions, some for an additional charge.

| Design | |
|----------------------------------|---|
| Conformity | CE EAC |
| Approval | Without CCC/cURus |
| Degree of protection | IP55 IP65/IP66 |
| Surface and corrosion protection | Without Different types of OKS |
| Colour | Not coated Primed/RAL colours |
| Hollow shaft | 80614 |
| Hollow shaft with shrink disc | - Without keyway |
| Solid shaft | - With keyway |
| Shaft material | 48054 |
| Shaft sealing ring material | NBR FKM or FPM (Viton) |
| Shaft bearings | 48056 |
| Paste for shaft mounting | Without Enclosed |
| Gearbox type | Housing (□DR) With foot (VBR) With centering (□CR) With output flange (□CK) |
| Lubricant | Mineral oil Synthetic oil Food-compatible oil |

| Design | |
|-------------------------------|---|
| Mounting position | A/B/C/D/E/F Combined |
| Backlash | 48063 |
| Power connection | Terminal box Plug connectors |
| Spring-applied brake | Without Brake design: Standard/Longlife Brake version: Standard/Overexcited/Cold Brake |
| Feedback | Without Resolver Absolute value encoder Incremental encoder |
| Cooling | Integral fan Blower |
| Temperature monitoring | TKO thermal contact PTC thermistor KTY thermal detector |
| Built-on accessories fan side | 48071 |

g500-S shaft-mounted helical geared motors

General information



The gearbox kit

Gearbox details

Solid shaft



Without centring (VDR)



With centering (VCR)



Flange with through holes (VCK)

Hollow shaft



Without centring (HDR)



With centering (HCR)



Flange with through holes (HCK)

g500-S shaft-mounted helical geared motors

General information



The gearbox kit

Gearbox details

Hollow shaft with shrink disc



Without centring (SDR)

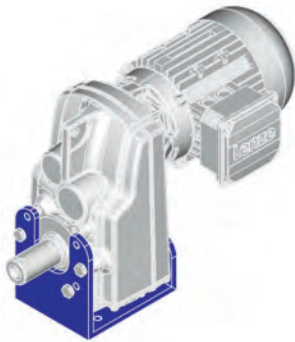


With centring (SCR)



Flange with through holes (SCK)

Accessories



Foot mounting (VBR)



With rubber buffer



Shrink disc cover



General information about the data provided in this catalogue

The powers, torques and speeds specified in this catalogue are rounded values and are valid under the following conditions:

- Operating time/day = 8 h (100% OT)
- Duty class I for up to 10 switching operations/h
- Mounting positions and designs in this catalogue
- Standard lubricant
- $T_{amb} = 30\text{ °C}$ for gearboxes,
 $T_{amb} = 40\text{ °C}$ for motors (in accordance with EN 60034)
- Site altitude $\leq 1000\text{ m amsl}$
- The selection tables provide the permissible mechanical powers and torques. For notes on the thermal power limit, see chapter drive dimensioning.
- The rated power specified for motors and geared motors applies to operating mode S1 (in accordance with EN 60034).

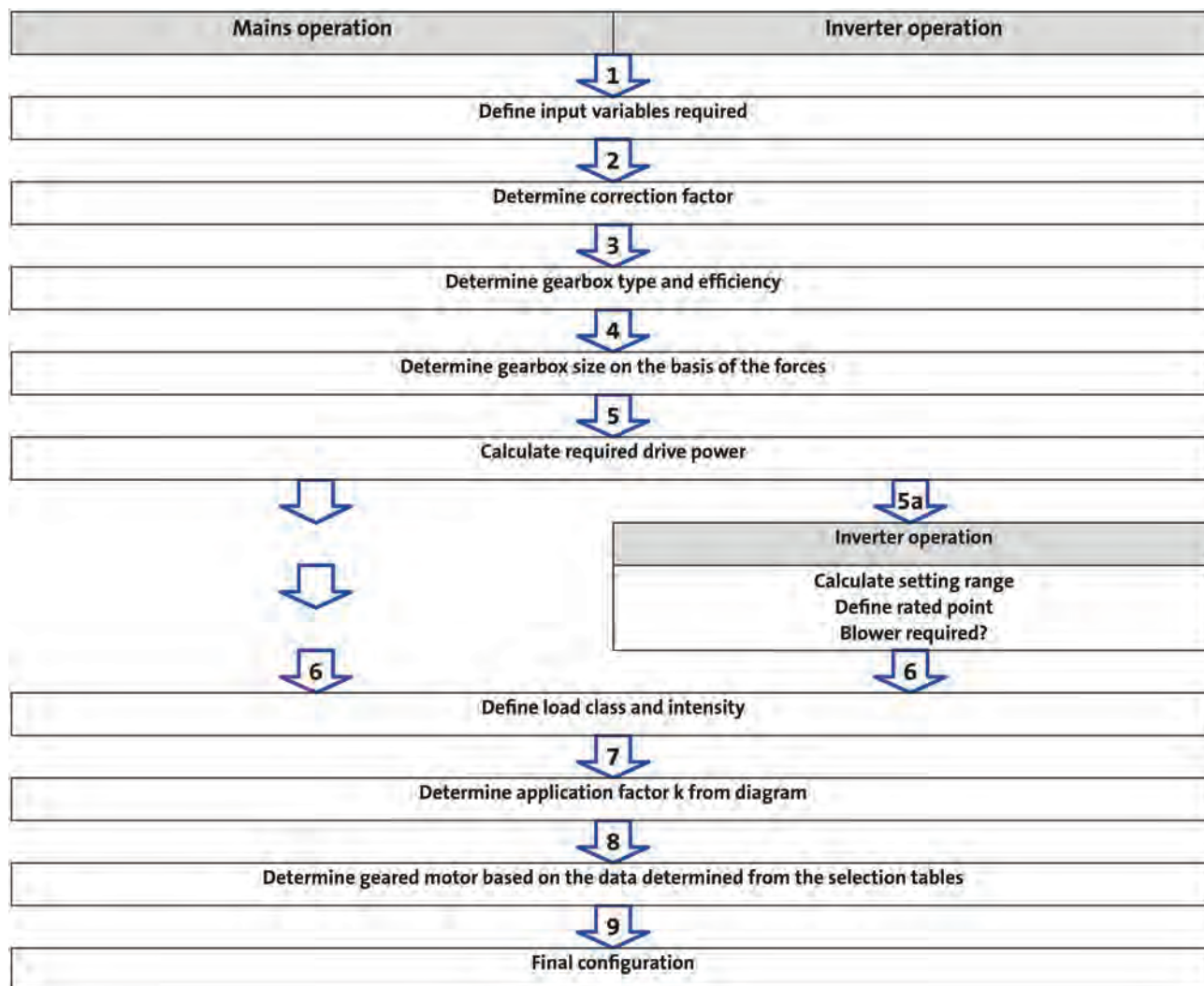
Under different operating conditions, the values obtained may vary from those listed here.

In the case of extreme operating conditions, please consult your Lenze sales office.



Procedure of a configuration process

Workflow



You can use the Drive Solution Designer for precise drive dimensioning.

The Drive Solution Designer helps you to carry out a fast and high-quality drive dimensioning.

The software includes well-founded and proven knowledge on drive applications and electro-mechanical drive components.

Please contact your Lenze sales office.



Procedure of a configuration process

1 required input variables

| | | | |
|-----------------------------|-----------------------|---------------|----------------------|
| Load torque | | $M_{L,max} =$ | [Nm] |
| | In inverter operation | $M_{L,min} =$ | [Nm] |
| Load speed | | $n_{L,max} =$ | [r/min] |
| | In inverter operation | $n_{L,min} =$ | [r/min] |
| External moments of inertia | | $J_{ext} =$ | [kgcm ²] |
| Operating time / day | | BD = | [h] |
| Switching operations per h | | $S_h =$ | [1/h] |
| Runtime for $M_{L,max}$ | In inverter operation | | [%] |

2 determine correction factor

| Operating modes and operating time | | | | | | |
|------------------------------------|------------|------|-----------|------------|------------|------------|
| S1 | ED | [%] | 100 | | | |
| | $k_L =$ | | 1.0 | | | |
| S2 | ED | [%] | 10 | 30 | 60 | 90 |
| | $k_L =$ | | 1.4 - 1.5 | 1.15 - 1.2 | 1.07 - 1.1 | 1.0 - 1.05 |
| S3 | ED | [%] | 15 | 25 | 40 | 60 |
| | $k_L =$ | | 1.4 - 1.5 | 1.3 - 1.4 | 1.15 - 1.2 | 1.05 - 1.1 |
| S6 | ED | [%] | 15 | 25 | 40 | 60 |
| | $k_L =$ | | 1.5 - 1.6 | 1.4 - 1.5 | 1.3 - 1.4 | 1.15 - 1.2 |
| Site altitude | | | | | | |
| | H | [m] | ≤ 1000 | ≤ 2000 | ≤ 3000 | ≤ 4000 |
| | $k_H =$ | | 1 | 0.95 | 0.9 | 0.8 |
| Ambient temperature | | | | | | |
| | $T_U =$ | [°C] | ≤ 40 | ≤ 45 | ≤ 50 | ≤ 55 |
| | $k_{TU} =$ | | 1 | 0.95 | 0.9 | 0.8 |

23 - Operating modes

g500-S shaft-mounted helical geared motors

Project planning



Procedure of a configuration process



3 determine gearbox type and efficiency

| Gearbox type | | | Axial gearboxes | | Right-angle gearboxes |
|--------------------|-------------------|----------|-----------------|---------------|-----------------------|
| | | | Helical gearbox | Shaft-mounted | Bevel gearbox |
| Product | | | g500-H | g500-S | g500-B |
| Gearbox efficiency | 2-stage gearboxes | η_G | 0.96 | 0.96 | 0.96 |
| | 3-stage gearboxes | η_G | 0.95 | 0.95 | 0.95 |

4 determine gearbox size based on the forces on the output

| Transmission element | | Gear wheels | Sprockets | Toothed belt pulleys (depending on the initial stress) | Narrow V-belt (depending on the initial stress) |
|--------------------------------|---------|--|--|---|--|
| Additional radial force factor | $f_z =$ | ≥ 17 teeth = 1.0 < 17 teeth = 1.15 | ≥ 20 teeth = 1.0 < 20 teeth = 1.25 < 13 teeth = 1.4 | With belt tightener = 2.0 - 2.5 Without belt tightener = 2.5 - 3.0 | 1.5 - 2.0 |
| | | Calculation | | Check | |
| Radial force | [N] | $F_{rad} = 2000 \times \frac{M_{L,max} \times f_z}{d_w}$ | | $F_{rad} \leq f_w \times F_{rad,max}$ | |
| Axial force | [N] | | | $F_{ax} \leq F_{rad,max} \times 0.5$ | |

d_w = effective diameter - transmission element

  1 - Permissible radial and axial forces at output

5 calculate drive power

| | | Calculation |
|----------------------|------|--|
| Drive power required | [kW] | $P_1 = \frac{M_{L,max} \times \eta_{L,max}}{9549 \times k_L \times k_H \times k_{Tu} \times \eta_g}$ |

k_L = Correction factor - operational factor

k_H = correction factor - installation height

k_{Tu} = correction factor - ambient temperature



Procedure of a configuration process - mains operation

6 calculate intensity and determine duty class

| Load class | Load type | Intensity |
|------------|--|---------------------|
| I | Smooth operation, small or light jolts | $F_I \leq 1.25$ |
| II | Uneven operation, average jolts | $1.25 < F_I \leq 4$ |
| III | Uneven operation, severe jolts and/or alternating load | $F_I > 4$ |

24 - Duty classes

| | Calculation | |
|-----------|---|--|
| Intensity | $F_I = \frac{\frac{J_L + J_M + J_B + J_Z}{i^2}}{J_M + J_B + J_Z}$ | |

i = gearbox ratio

J_L = moment of inertia of the load

J_M = moment of inertia of the motor

J_B = moment of inertia of the brake

J_Z = additional moment of inertia (handwheel, 2nd shaft end ...)

7 determine application factor k from diagram

27 - Load capacity and application factor



Procedure of a configuration process - mains operation

8 determine geared motor based on the data determined from the selection tables

| Selection table | | Check |
|---------------------|---------|-------------------------|
| Drive power P_N | [kW] | $P_1 \leq P_N$ |
| Output speed n_2 | [r/min] | $n_{L,max} \approx n_2$ |
| Output torque M_2 | [Nm] | $M_{L,max} \leq M_2$ |
| Load factor c | | $k \leq c$ |
| Order information | | Example |
| Number of stages | | 2 |
| Ratio i | | 4.000 |
| Product gearbox | | g500-H100 |
| Product motor | | m240-P80/M2 |

27 - Load capacity and application factor

Example: structure of a selection table

50 Hz: $P_N = 0.75$ kW ← Rated power P_N

2-stage gearboxes ← Number of the gear stage

| Mains operation 400 V, 50 Hz | | | i | Product | | |
|---------------------------------|---------------|-----|-------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | | g500 | m240 | |
| 627 | 11 | 5.2 | 4.600 | -H100 | -P80/M2 | |
| 558 | 12 | 4.9 | 5.167 | -H100 | -P80/M2 | |

↑
Output speed n_2

↑
Output torque M_2

↑
Load capacity c

↑
Ratio i

↑
Product Gearbox

↑
Product Motor



Procedure of a configuration process - inverter operation

5a calculate range of adjustment and determine rated point

| | | Calculation | |
|----------------|-------------------------|-----------------------------------|----------------------------|
| Setting range | | $V = \frac{n_{L,max}}{n_{L,min}}$ | |
| Setting range | Motor with integral fan | ≤ 2.5 (20 ... 50 Hz) | ≤ 4.35 (20 ... 87 Hz) |
| | Motor with blower | ≤ 10 (5 ... 50 Hz) | ≤ 17.4 (5 ... 87 Hz) |
| Rated point at | | 50 Hz | 87 Hz |

6 calculate intensity and determine duty class

| | | Calculation | |
|------------|--|-------------------------------------|--|
| Intensity | | $M_I = \frac{M_{L,max}}{M_{L,min}}$ | For alternating load, select load class III! |
| Load class | Load type | Intensity | |
| I | Smooth operation, small or light jolts | $M_I \leq 1.5$ | |
| II | Uneven operation, average jolts | $1.5 < M_I \leq 2$ | |
| III | Uneven operation, severe jolts and/or alternating load | $2 < M_I \leq 2.5$ | |

24 - Duty classes

7 determine application factor k from diagram

27 - Load capacity and application factor

g500-S shaft-mounted helical geared motors

Project planning



Procedure of a configuration process - inverter operation

8 determine geared motor based on the data determined from the selection tables

| Selection table | | | Check | |
|----------------------------|--|---------|----------------------------|--|
| Drive power P_N | | [kW] | $P_1 \leq P_N$ | |
| Max. output speed n_2 | | [r/min] | $n_{L,max} \approx n_2$ | |
| Min. output speed n_{21} | Self-ventilated | [r/min] | $n_{L,min} \approx n_{21}$ | Setting range 2.5 (50 Hz) Setting range ≤ 4.35 (87 Hz) |
| Min. output speed n_{22} | Forced-ventilated | [r/min] | $n_{L,min} \approx n_{22}$ | Setting range ≤ 10 (50 Hz) Setting range ≤ 17.4 (87 Hz) |
| | Self-ventilated (Reduced output torque) | [r/min] | $n_{L,min} \approx n_{22}$ | |
| Output torque M_2 | | [Nm] | $M_{L,max} \leq M_2$ | |
| Load factor c | | | $k \leq c$ | |
| Order information | | | Example | |
| Number of stages | | | 2 | |
| Ratio i | | | 3.267 | |
| Product gearbox | | | g500-H140 | |
| Product motor | | | m550-P80/M4 | |

27 - Load capacity and application factor

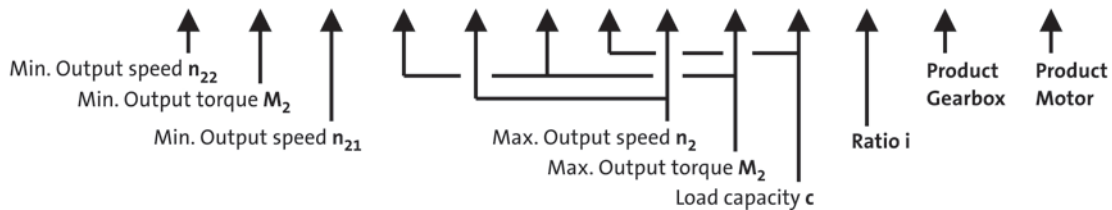
30 - Torque derating at low motor frequencies

Example: structure of a selection table

50 Hz: $P_N = 0.75$ kW
87 Hz: $P_N = 1.35$ kW ← Rated power P_N

2-stage gearboxes ← Number of the gear stage

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|-------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m550 | |
| | | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 444 | 16 | 4.3 | 44 | 12 | 184 | 16 | 444 | 16 | 4.3 | 784 | 16 | 3.5 | 3.267 | -H140 | -P80/M4 | |
| 432 | 16 | 3.9 | 43 | 12 | 179 | 16 | 432 | 16 | 3.9 | 763 | 16 | 3.2 | 3.354 | -H100 | -P80/M4 | |



6.4



Procedure of a configuration process

9 Final configuration

| More information regarding the final configuration can be found under: | |
|---|---|
| <ul style="list-style-type: none"> - The modular geared motor system - Product extensions for gearboxes, motors | |
| Check operating conditions | <ul style="list-style-type: none"> - Operating temperature (observe lubricant, material of shaft sealing ring) - Degree of protection - Supply voltage - Surface protection required - Approvals - Conformity |
| Check and define connection dimensions | <ul style="list-style-type: none"> - Driven shaft - Foot, output flange, centering with threaded pitch circle |
| Determine mounting position and position of the system blocks | <ul style="list-style-type: none"> - Mounting position A/B/C/D/E/F or combined - Terminal box position, shaft position, flange position |
| Select product extensions at the gearbox (differing depending on the gearbox type) | <ul style="list-style-type: none"> - Torque plate at the base, threaded pitch circle, rubber buffer - Hollow shaft cover, shrink disc cover |
| Select product extensions at the motor | <ul style="list-style-type: none"> - Connection type (terminal box, connector) - Brake - Blower (inverter operation) - Feedback - Temperature monitoring |

g500-S shaft-mounted helical geared motors

Project planning



Standards

Approvals

| | |
|--------|--|
| CCC | China Compulsory Certification documents the compliance with the legal product safety requirements of the PR of China - GB standards. |
| cCSAus | CSA certificate, tested according to US and Canada standards |
| CE | Communauté Européenne documents the declaration of the manufacturer that EC Directives are complied with. |
| CEL | China Energy Label documents the compliance with the legal energy efficiency requirements for motors, tested according to PR of China standards |
| CSA | Canadian Standards Association CSA - certificate, tested according to Canada standards |
| CSAULE | Energy Verified Certificate Determining the energy efficiency according to CSA C390 for products within the scope of energy efficiency requirements in the USA and Canada |
| cULus | UL certificate for products, tested according to US and Canada standards |
| cURus | UL certificate for components, tested according to US and Canada standards |
| EAC | Certificate of Russia-Belarus-Kazakhstan Customs Union documents the declaration of the manufacturer that the specifications for the Eurasian conformity (EAC) required for placing electronic and electromechanical products on the market of the entire territory of the Customs Union (Russia, Belarus, Kazakhstan) are complied with. |
| UL | Underwriters Laboratory Listed Product |
| UR | Underwriters Laboratory Recognized Product UL certificate for components, tested according to US standards |



Standards

Operating modes

Operating modes S1 ... S10 as specified by EN 60034-1 describe the basic stress of an electrical machine.

In continuous operation a motor reaches its permissible temperature limit if it outputs the rated power dimensioned for continuous operation. However, if the motor is only subjected to load for a short time, the power output by the motor may be greater without the motor reaching its permissible temperature limit. This behaviour is referred to as overload capacity.

Depending on the duration of the load and the resulting temperature rise, the required motor can be selected reduced by the overload capacity.

The most important operating modes

| Continuous operation S1 | Short-time operation S2 |
|---|--|
| | |
| <p>Operation with a constant load until the motor reaches the thermal steady state. The motor may be actuated continuously with its rated power.</p> | <p>Operation with constant load; however, the motor does not reach the thermal steady state. During the following standstill, the motor winding cools down to the ambient temperature again. The increase in power depends on the load duration.</p> |
| Intermittent operation S3 | Non-intermittent periodic operation S6 |
| | |
| <p>Sequence of identical duty cycles comprising operation with a constant load and subsequent standstill. Start-up and braking processes do not have an impact on the winding temperature. The steady-state is not reached. The guide values apply to a cycle duration of 10 minutes. The power increase depends on the cycle duration and on the load period/downtime ratio.</p> | <p>Sequence of identical duty cycles comprising operation with a constant load and subsequent no-load operation. The motor cools down during the no-load phase. Start-up and braking processes do not have an impact on the winding temperature. The steady-state is not reached. The guide values apply to a cycle duration of 10 minutes. The power increase depends on the cycle duration and on the load period/idle time ratio.</p> |

g500-S shaft-mounted helical geared motors

Project planning



Standards

Duty classes

Depending on the load type, the duty classes or impacts are divided as follows:

| Duty class | Load type |
|------------|--|
| I | Smooth operation, small or light jolts |
| II | Uneven operation, average jolts |
| III | Uneven operation, severe jolts and/or alternating load |

In order to support you in classifying your driven machine regarding the right duty class, the following shows sample applications with the corresponding duty class. Depending on, for instance, the operating frequency, driven machines can also have a higher impact. In case of uncertainties, please contact your Lenze sales office.

| Drive | Duty class |
|-----------------------|------------|
| Construction machines | II |
| Chemical industry | II |
| Conveyors | II |
| Fans | II |
| Plastics industry | II |
| Wood working | III |
| Hoists | III |
| Metal working | III |
| Food | II |
| Paper industry | III |
| Stones | III |
| Textile industry | II |

g500-S shaft-mounted helical geared motors



Project planning

Standards

Degrees of protection

The degree of protection indicates the suitability of a motor for specific ambient conditions with regard to humidity as well as the protection against contact and the ingress of foreign particles. The degrees of protection are classified by EN 60529.

The first code number after the code letters IP indicates the protection against the ingress of foreign particles and dust.

The second code number refers to the protection against the ingress of humidity.

| Code number | Degree of protection | Code number | Degree of protection |
|-------------|---|-------------|---|
| 0 | No protection | 0 | No protection |
| 1 | Protection against the ingress of foreign particles $d > 50$ mm. No protection in the case of deliberate access | 1 | Protection against vertically dripping water (dripping water). |
| 2 | Protection against medium-sized foreign particles, $d > 12$ mm, keeping away fingers or similar | 2 | Protection against diagonally falling water (dripping water), 15° compared to normal service position. |
| 3 | Protection against small foreign particles $d > 2.5$ mm. Keeping away tools, wires and the like | 3 | Protection against spraying water, up to 60° to the vertical |
| 4 | Protection against granular foreign particles, $d > 1$ mm, keeping away tools, wires and the like | 4 | Protection against spraying water from all directions. |
| 5 | Protection against dust deposits (dust-protected), complete protection against contact. | 5 | Protection against water jets from all directions. |
| 6 | Protection against the ingress of dust (dust-proof), complete protection against contact. | 6 | Protection against choppy seas or heavy water jets (flood protection). |

g500-S shaft-mounted helical geared motors

Project planning



Thermal power limit

The thermal power limit, defined by the heat balance, limits the permissible gearbox continuous power. It may be less than the mechanical power ratings listed in the selection tables.

The thermal power limit is affected by:

- the churning losses in the lubricant. These are determined by the mounting position and the circumferential speed of the gears;
- the load and the speed
- the ambient conditions: temperature, air circulation, input or dissipation via shafts and the foundation

If the following input speeds n_1 are exceeded, please contact Lenze:

| Motor frame size | Mounting position A, B, E, F | Mounting position C, D |
|------------------|------------------------------|------------------------|
| 063 ... 100 | 4000 r/min | 3000 r/min |
| 112 ... 132 | 3000 r/min | 1500 r/min |

- ▶ For a short period of time up to 5 min, 30 % higher speeds are permissible

Possible ways of extending the application area

- synthetic lubricant (option)
- shaft sealing rings made from FP material/Viton (option)
- reduction in lubricant quantity
- cooling of the geared motor by means of air convection on the machine/system

g500-S shaft-mounted helical geared motors

Project planning



Load capacity and application factor

Load capacity c of gearboxes

Rated value for the load capacity of Lenze geared motors.

- c is the ratio of the permissible rated torque of the gearbox to the rated torque supplied by the drive component (e.g. the built-in Lenze motor).
- The value of c must always be greater than the value of the application factor k calculated for the application.

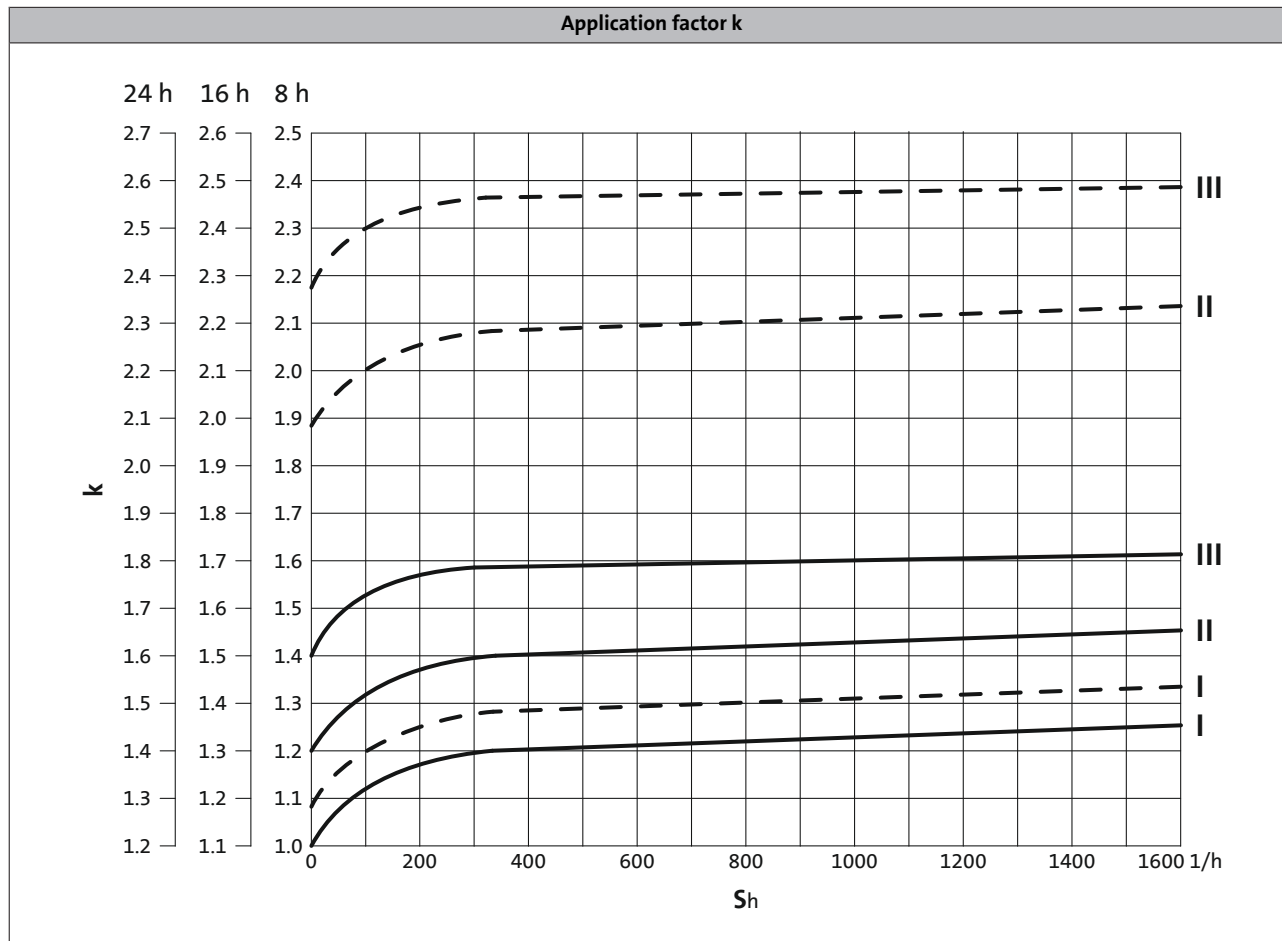
Required: $c \geq k$

Application factor k (according to DIN 3990)

Takes into account the influence of temporally variable loads which are actually present during the anticipated operating time of gearboxes and geared motors.

k is determined by:

- the type of load
- the load intensity
- temporal influences



- ▶ S_h = switchings/h
- ▶ — Three-phase AC motors MD□MA
- ▶ - - - Three-phase AC motors m240/m550

g500-S shaft-mounted helical geared motors

Project planning

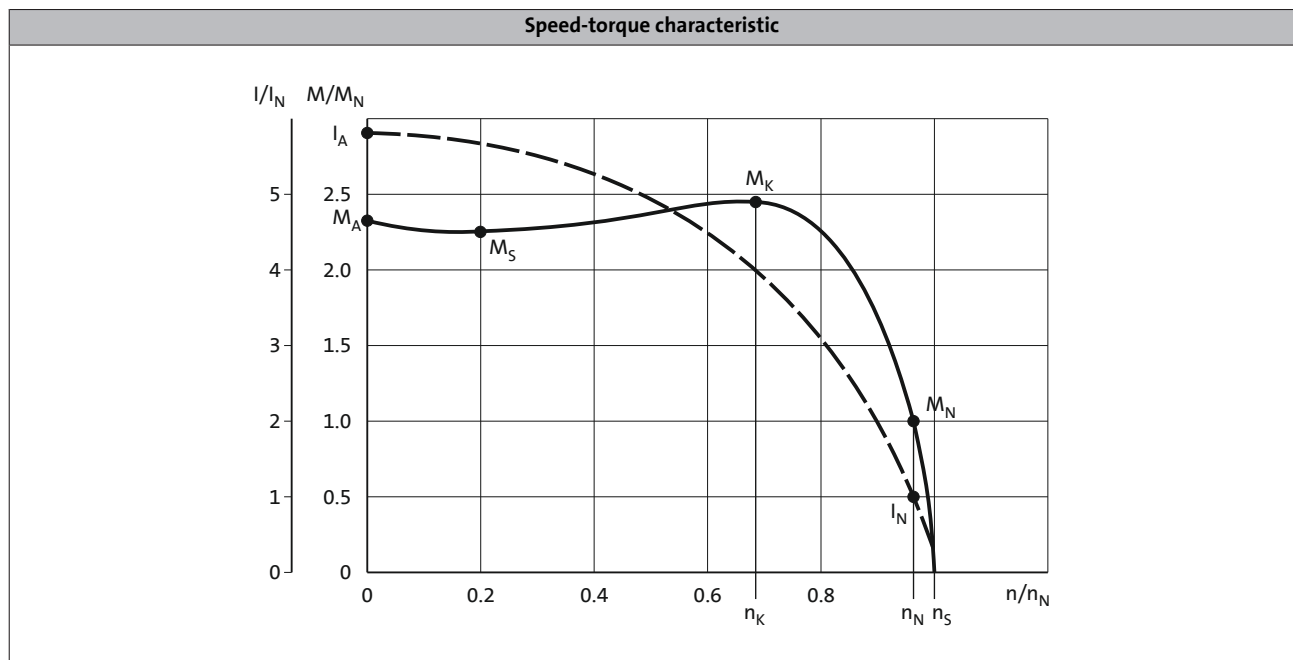


Operational performance of three-phase AC geared motors

The g500 geared motors can be actuated directly on the mains or via an inverter. When actuated in mains operation, the motor runs at a fixed speed, for inverter operation the speed is variable. Thanks to their high degree of protection, the robust three-phase drives can be basically used in a variety of applications.

Mains operation

During mains operation, when switched on, the three-phase AC motor starts up according to the speed-torque characteristic. It passes through this characteristic until it reaches its stable operating point. This operating point has been reached if the load torque or rated torque (M_N) is lower than the starting torque (M_A) and the pull-up torque (M_S). 2-, 4- and 6-pole motors are used. The rated speed (n_{rated}) of the drive is always lower than the calculated synchronous speed (n_s). The difference between rated speed and synchronous speed relating to the synchronous speed is referred to as the "slip".





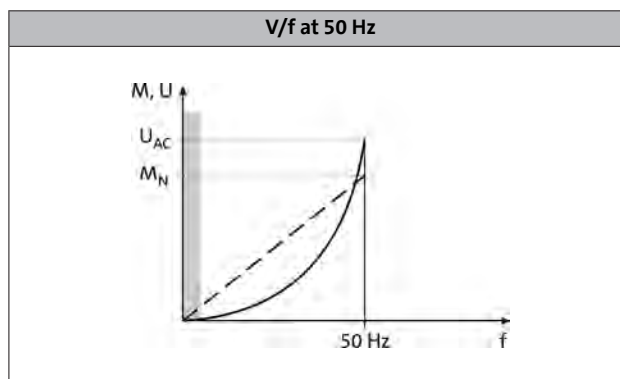
Operational performance of three-phase AC geared motors

Operation on the inverter

An inverter enables energy-efficient operation of a system in virtually all application cases. The various operating modes, which can be created by making just a few simple settings, facilitate this. The following characteristics and corresponding specifications listed on the following pages can be used to calculate the optimum operating mode during the project planning phase.

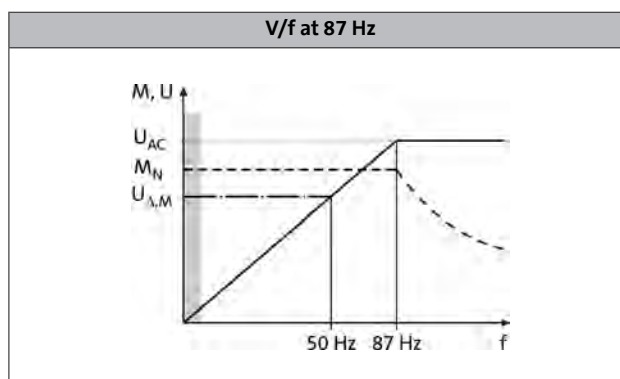
Standard setting

In its initial state when delivered, the inverter is set up for basic operation with a three-phase AC motor with vector control. When operated in this mode, the rated torque of the motor is available in a setting range up to 50 Hz.



Extended setting range up to 87 Hz

If the V/f reference point on the inverter is set to 87 Hz, the rated torque can be used across an extended setting range. Here, a 230/400V motor is for example used and operated in a delta layout with a 400V inverter. The setting range is then increased by 40 %. The inverter must be dimensioned for a rated motor current of 230 V.

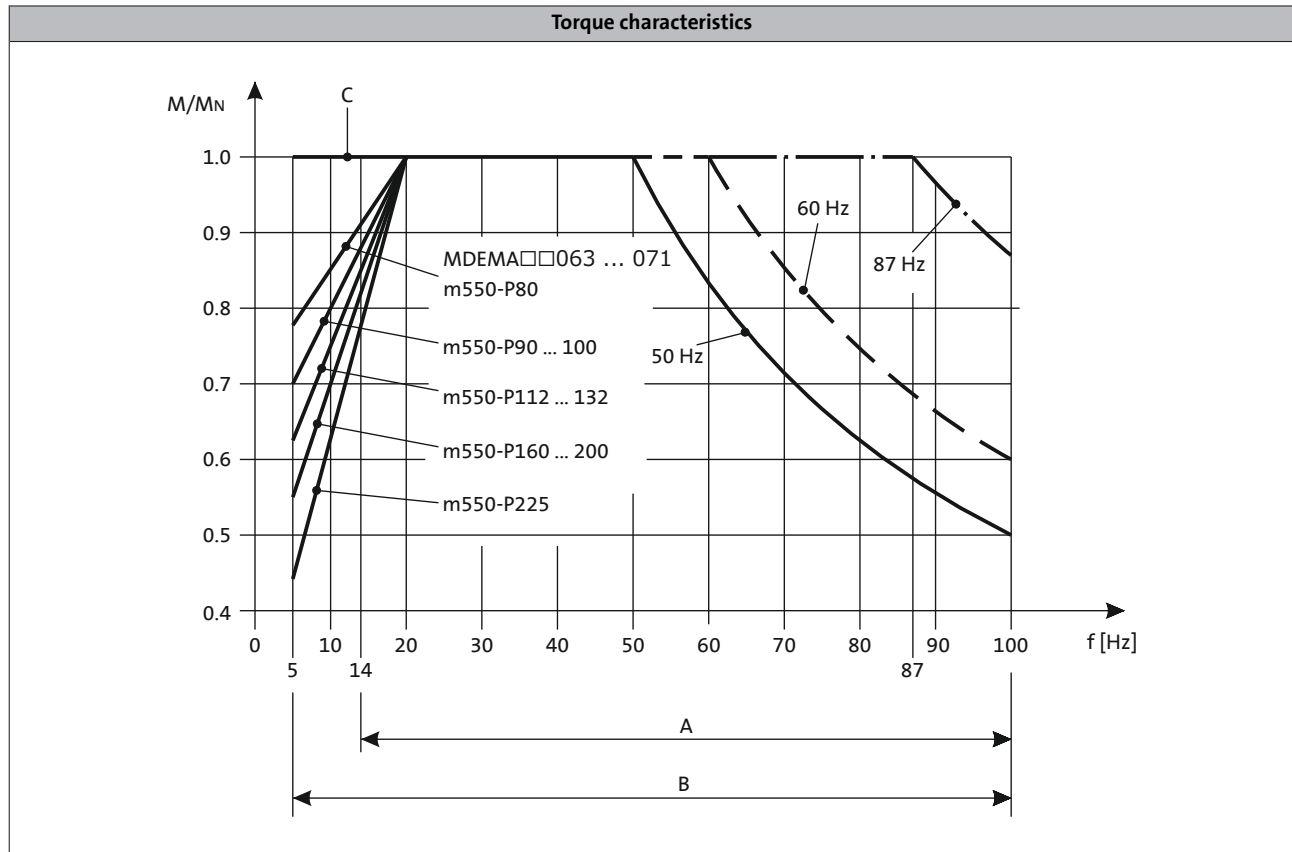




Operational performance of three-phase AC geared motors

Torque derating at low motor frequencies

The diagram shows the motor frame size-dependent torque reduction for self-ventilated motors, taking the thermal behaviour during actuation of the inverter into consideration.



A = Operation with integral fan and brake

B = Operation with integral fan and brake control "Holding current reduction"

C = operation with blower

g500-S shaft-mounted helical geared motors



Project planning

Combinatorics of geared motors

The following tables contain the most important data of the gearbox with the motors that can be attached for an approximate dimensioning process of a geared motor. Detailed information can be found in the following chapters.

The data given in the tables apply to

- input speed $n_1 = 1400$ r/min
- application factor $c = 1.0$

In order to calculate the exact ratio, the number of teeth z_g (driven) can be divided by the number of teeth z_t (driving). These are cancelled values.

The data for the max. radial force refer to

- solid shaft without flange
- normal storage
- application factor $c = 1.3$

For further designs see the "Technical data" chapter.

- The rated torque can be gathered from the last digits of the product name e.g. g500-S130 (130 Nm).

g500-S130, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | $\pm 20\%$ | [kW] | [kW] |
| 394 | 63 | 2.68 | 3.661 | 637 | 174 | 1350 | 20 | 0.25 | 1.50 |
| 287 | 76 | 2.36 | 5.021 | 728 | 145 | 1420 | 19 | 0.25 | 1.50 |
| 205 | 92 | 2.04 | 7.029 | 5096 | 725 | 1530 | 18 | 0.18 | 1.50 |
| 173 | 116 | 2.17 | 8.322 | 749 | 90 | 1600 | 13 | 0.25 | 1.50 |
| 153 | 125 | 2.07 | 9.411 | 847 | 90 | 1660 | 13 | 0.25 | 1.50 |
| 224 | 87 | 2.11 | 6.425 | 559 | 87 | 1500 | 18 | 0.25 | 1.50 |
| 126 | 130 | 1.77 | 11.413 | 856 | 75 | 1990 | 13 | 0.25 | 1.50 |
| 112 | 130 | 1.57 | 12.907 | 968 | 75 | 2100 | 12 | 0.25 | 1.50 |
| 98.7 | 130 | 1.38 | 14.606 | 4601 | 315 | 2220 | 13 | 0.25 | 1.50 |
| 90.2 | 130 | 1.27 | 15.979 | 5992 | 375 | 2320 | 13 | 0.18 | 1.50 |
| 79.9 | 130 | 1.12 | 18.069 | 6776 | 375 | 2460 | 12 | 0.18 | 1.10 |
| 70.9 | 130 | 0.99 | 20.381 | 428 | 21 | 2610 | 13 | 0.18 | 1.10 |
| 62.9 | 130 | 0.88 | 23.048 | 484 | 21 | 2780 | 12 | 0.18 | 0.75 |
| 58.1 | 130 | 0.82 | 24.967 | 749 | 30 | 2890 | 13 | 0.25 | 0.75 |
| 51.4 | 130 | 0.72 | 28.233 | 847 | 30 | 3070 | 12 | 0.25 | 0.75 |
| 46.2 | 130 | 0.65 | 31.387 | 2354 | 75 | 3240 | 13 | 0.12 | 0.75 |
| 39.6 | 130 | 0.56 | 35.493 | 2662 | 75 | 3440 | 12 | 0.12 | 0.55 |
| 34.8 | 130 | 0.49 | 40.422 | 1819 | 45 | 3660 | 13 | 0.12 | 0.55 |
| 30.8 | 130 | 0.43 | 45.711 | 2057 | 45 | 3860 | 12 | 0.12 | 0.37 |
| 27.5 | 130 | 0.39 | 51.230 | 8453 | 165 | 4040 | 12 | 0.12 | 0.37 |
| 24.3 | 130 | 0.34 | 57.933 | 869 | 15 | 4230 | 12 | 0.12 | 0.37 |
| 22.0 | 130 | 0.31 | 64.200 | 321 | 5 | 4360 | 12 | 0.12 | 0.37 |
| 18.9 | 130 | 0.27 | 72.600 | 363 | 5 | 4500 | 12 | 0.12 | 0.25 |
| 16.1 | 102 | 0.18 | 84.581 | 8881 | 105 | 4500 | 12 | 0.12 | 0.18 |

g500-S shaft-mounted helical geared motors

Project planning



Combinatorics of geared motors

g500-S220, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 377 | 178 | 7.25 | 3.840 | 553 | 144 | 2360 | 16 | 0.55 | 3.00 |
| 275 | 181 | 5.37 | 5.267 | 79 | 15 | 2650 | 16 | 1.10 | 3.00 |
| 214 | 220 | 5.08 | 6.767 | 203 | 30 | 2900 | 13 | 0.55 | 3.00 |
| 189 | 217 | 4.43 | 7.667 | 23 | 3 | 3050 | 12 | 0.55 | 3.00 |
| 156 | 220 | 3.71 | 9.280 | 232 | 25 | 3250 | 13 | 1.10 | 3.00 |
| 138 | 220 | 3.27 | 10.514 | 368 | 35 | 3400 | 12 | 1.10 | 3.00 |
| 122 | 220 | 2.90 | 11.876 | 1247 | 105 | 3500 | 13 | 0.55 | 3.00 |
| 112 | 220 | 2.65 | 12.992 | 1624 | 125 | 3550 | 13 | 0.25 | 3.00 |
| 108 | 220 | 2.56 | 13.456 | 1978 | 147 | 3600 | 12 | 0.55 | 3.00 |
| 98.6 | 220 | 2.34 | 14.720 | 368 | 25 | 3600 | 12 | 0.25 | 2.20 |
| 87.6 | 220 | 2.08 | 16.571 | 116 | 7 | 3600 | 12 | 0.25 | 2.20 |
| 77.3 | 220 | 1.84 | 18.776 | 920 | 49 | 3600 | 12 | 0.25 | 2.20 |
| 71.0 | 220 | 1.69 | 20.300 | 203 | 10 | 3600 | 12 | 0.55 | 1.50 |
| 62.7 | 220 | 1.49 | 23.000 | 23 | 1 | 3600 | 12 | 0.55 | 1.50 |
| 54.6 | 220 | 1.30 | 26.422 | 1189 | 45 | 3600 | 12 | 0.25 | 1.50 |
| 48.2 | 220 | 1.14 | 29.937 | 1886 | 63 | 3600 | 12 | 0.25 | 1.10 |
| 43.9 | 220 | 1.04 | 32.867 | 493 | 15 | 3600 | 12 | 0.25 | 1.10 |
| 38.8 | 220 | 0.92 | 37.238 | 782 | 21 | 3600 | 12 | 0.25 | 1.10 |
| 34.1 | 220 | 0.81 | 42.533 | 638 | 15 | 3600 | 12 | 0.12 | 0.75 |
| 30.1 | 220 | 0.71 | 48.190 | 1012 | 21 | 3600 | 12 | 0.12 | 0.75 |
| 27.2 | 220 | 0.65 | 51.620 | 2581 | 50 | 3600 | 12 | 0.12 | 0.55 |
| 24.0 | 220 | 0.57 | 58.486 | 2047 | 35 | 3600 | 11 | 0.12 | 0.55 |
| 21.4 | 171 | 0.39 | 65.975 | 2639 | 40 | 3600 | 12 | 0.12 | 0.37 |
| 18.9 | 194 | 0.40 | 74.750 | 299 | 4 | 3600 | 11 | 0.12 | 0.37 |

g500-S shaft-mounted helical geared motors

Project planning



Combinatorics of geared motors

g500-S220, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | Standard | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 35.2 | 220 | 0.85 | 40.012 | 13804 | 345 | 3600 | 13 | 0.18 | 0.37 |
| 31.1 | 220 | 0.75 | 45.333 | 136 | 3 | 3600 | 12 | 0.18 | 0.37 |
| 27.6 | 220 | 0.67 | 52.587 | 3944 | 75 | 3600 | 13 | 0.12 | 0.75 |
| 23.6 | 220 | 0.57 | 59.581 | 6256 | 105 | 3600 | 12 | 0.12 | 0.55 |
| 20.9 | 220 | 0.50 | 67.298 | 21199 | 315 | 3600 | 13 | 0.12 | 0.55 |
| 18.4 | 220 | 0.44 | 76.249 | 33626 | 441 | 3600 | 12 | 0.12 | 0.55 |
| 16.4 | 220 | 0.40 | 86.079 | 5423 | 63 | 3600 | 13 | 0.12 | 0.37 |
| 14.5 | 220 | 0.35 | 97.528 | 43010 | 441 | 3600 | 12 | 0.12 | 0.37 |
| 12.6 | 220 | 0.30 | 111.747 | 8381 | 75 | 3600 | 13 | 0.12 | 0.37 |
| 10.8 | 220 | 0.26 | 126.610 | 13294 | 105 | 3600 | 12 | 0.12 | 0.25 |
| 9.60 | 220 | 0.23 | 143.205 | 30073 | 210 | 3600 | 13 | 0.12 | 0.25 |
| 8.40 | 220 | 0.20 | 162.252 | 23851 | 147 | 3600 | 12 | 0.12 | 0.25 |
| 5.90 | 220 | 0.14 | 241.022 | 10846 | 45 | 3600 | 13 | 0.12 | 0.12 |
| 5.20 | 220 | 0.13 | 273.079 | 17204 | 63 | 3600 | 12 | 0.12 | 0.12 |
| 4.60 | 220 | 0.11 | 312.233 | 9367 | 30 | 3600 | 13 | 0.12 | 0.12 |
| 4.00 | 220 | 0.10 | 353.762 | 7429 | 21 | 3600 | 12 | 0.12 | 0.12 |

g500-S shaft-mounted helical geared motors

Project planning



Combinatorics of geared motors

g500-S400, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | z_g | z_t | $F_{\text{rad}, \max}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 435 | 203 | 9.54 | 3.339 | 581 | 174 | 2360 | 16 | 0.55 | 4.00 |
| 317 | 243 | 8.33 | 4.579 | 664 | 145 | 2560 | 16 | 1.10 | 4.00 |
| 248 | 258 | 6.89 | 5.860 | 3569 | 609 | 2750 | 13 | 0.55 | 4.00 |
| 227 | 261 | 6.39 | 6.411 | 4648 | 725 | 2820 | 12 | 0.25 | 4.00 |
| 195 | 365 | 7.66 | 7.467 | 112 | 15 | 2980 | 13 | 0.55 | 4.00 |
| 172 | 380 | 7.06 | 8.436 | 329 | 39 | 3150 | 12 | 0.55 | 4.00 |
| 142 | 400 | 6.13 | 10.240 | 256 | 25 | 3450 | 13 | 1.10 | 4.00 |
| 126 | 400 | 5.42 | 11.569 | 752 | 65 | 3650 | 13 | 1.10 | 4.00 |
| 111 | 400 | 4.79 | 13.105 | 1376 | 105 | 3900 | 12 | 0.55 | 4.00 |
| 101 | 400 | 4.38 | 14.336 | 1792 | 125 | 4000 | 12 | 0.25 | 4.00 |
| 98.1 | 400 | 4.24 | 14.806 | 4042 | 273 | 4100 | 12 | 0.55 | 4.00 |
| 89.7 | 400 | 3.87 | 16.197 | 5264 | 325 | 4200 | 12 | 0.25 | 4.00 |
| 79.5 | 400 | 3.43 | 18.286 | 128 | 7 | 4400 | 12 | 0.25 | 4.00 |
| 70.1 | 400 | 3.03 | 20.659 | 1880 | 91 | 4650 | 12 | 0.25 | 3.00 |
| 64.7 | 400 | 2.79 | 22.400 | 112 | 5 | 4800 | 12 | 0.55 | 3.00 |
| 57.3 | 400 | 2.47 | 25.308 | 329 | 13 | 5100 | 12 | 0.55 | 3.00 |
| 49.5 | 400 | 2.14 | 29.156 | 1312 | 45 | 5500 | 12 | 0.25 | 1.50 |
| 43.8 | 400 | 1.89 | 32.940 | 3854 | 117 | 5750 | 12 | 0.25 | 1.50 |
| 39.8 | 400 | 1.72 | 36.267 | 544 | 15 | 5850 | 12 | 0.25 | 1.50 |
| 35.2 | 400 | 1.52 | 40.974 | 1598 | 39 | 5980 | 12 | 0.25 | 1.50 |
| 30.9 | 314 | 1.05 | 46.933 | 704 | 15 | 6100 | 12 | 0.12 | 0.75 |
| 27.3 | 348 | 1.03 | 53.026 | 2068 | 39 | 6200 | 11 | 0.12 | 0.75 |
| 24.7 | 268 | 0.71 | 56.960 | 1424 | 25 | 6200 | 12 | 0.12 | 0.55 |
| 21.8 | 303 | 0.71 | 64.354 | 4183 | 65 | 6200 | 11 | 0.12 | 0.55 |

g500-S shaft-mounted helical geared motors

Project planning



Combinatorics of geared motors

g500-S400, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | z_g | z_t | $F_{\text{rad, max}}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 25.0 | 400 | 1.09 | 58.027 | 4352 | 75 | 6200 | 11 | 0.18 | 0.75 |
| 22.1 | 400 | 0.97 | 65.559 | 12784 | 195 | 6200 | 11 | 0.18 | 0.75 |
| 19.5 | 400 | 0.85 | 74.260 | 23392 | 315 | 6200 | 11 | 0.18 | 0.75 |
| 17.3 | 400 | 0.76 | 83.900 | 68714 | 819 | 6200 | 11 | 0.18 | 0.75 |
| 15.3 | 400 | 0.67 | 94.984 | 5984 | 63 | 6200 | 11 | 0.12 | 0.75 |
| 13.1 | 399 | 0.57 | 107.314 | 87890 | 819 | 6200 | 11 | 0.12 | 0.55 |
| 11.4 | 400 | 0.50 | 123.307 | 9248 | 75 | 6200 | 11 | 0.12 | 0.55 |
| 10.1 | 399 | 0.44 | 139.313 | 27166 | 195 | 6200 | 11 | 0.12 | 0.55 |
| 8.90 | 400 | 0.39 | 158.019 | 16592 | 105 | 6200 | 11 | 0.12 | 0.37 |
| 7.90 | 400 | 0.35 | 178.531 | 48739 | 273 | 6200 | 11 | 0.12 | 0.37 |
| 6.90 | 400 | 0.30 | 204.412 | 33728 | 165 | 6200 | 11 | 0.12 | 0.37 |
| 5.90 | 396 | 0.26 | 230.946 | 99076 | 429 | 6200 | 11 | 0.12 | 0.25 |
| 5.20 | 388 | 0.22 | 265.956 | 11968 | 45 | 6200 | 11 | 0.12 | 0.25 |
| 4.50 | 400 | 0.20 | 300.479 | 35156 | 117 | 6200 | 11 | 0.12 | 0.18 |
| 4.10 | 330 | 0.15 | 344.533 | 5168 | 15 | 6200 | 11 | 0.12 | 0.12 |
| 3.70 | 373 | 0.15 | 389.256 | 15181 | 39 | 6200 | 11 | 0.12 | 0.12 |

g500-S shaft-mounted helical geared motors

Project planning



Combinatorics of geared motors

g500-S660, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 377 | 419 | 17.0 | 3.920 | 98 | 25 | 3320 | 14 | 2.20 | 7.50 |
| 275 | 492 | 14.6 | 5.376 | 672 | 125 | 3580 | 13 | 2.20 | 7.50 |
| 230 | 601 | 14.9 | 6.417 | 77 | 12 | 3660 | 11 | 2.20 | 7.50 |
| 215 | 496 | 11.5 | 6.880 | 172 | 25 | 3690 | 13 | 1.10 | 7.50 |
| 202 | 593 | 12.9 | 7.311 | 329 | 45 | 3720 | 11 | 2.20 | 7.50 |
| 168 | 638 | 11.6 | 8.800 | 44 | 5 | 3900 | 11 | 2.20 | 7.50 |
| 147 | 625 | 9.94 | 10.027 | 752 | 75 | 4200 | 10 | 2.20 | 7.50 |
| 131 | 660 | 9.35 | 11.262 | 473 | 42 | 4500 | 11 | 1.10 | 7.50 |
| 120 | 660 | 8.54 | 12.320 | 308 | 25 | 4750 | 10 | 1.10 | 7.50 |
| 115 | 660 | 8.20 | 12.832 | 4042 | 315 | 4850 | 10 | 1.10 | 7.50 |
| 105 | 660 | 7.49 | 14.037 | 5264 | 375 | 5100 | 10 | 1.10 | 7.50 |
| 94.0 | 660 | 6.70 | 15.714 | 110 | 7 | 5450 | 10 | 0.55 | 7.50 |
| 81.5 | 660 | 5.81 | 17.905 | 376 | 21 | 5800 | 10 | 0.55 | 5.50 |
| 75.8 | 660 | 5.40 | 19.250 | 77 | 4 | 6000 | 10 | 1.10 | 5.50 |
| 66.6 | 660 | 4.74 | 21.933 | 329 | 15 | 6450 | 10 | 1.10 | 5.50 |
| 58.0 | 578 | 3.62 | 25.056 | 451 | 18 | 7050 | 10 | 0.55 | 4.00 |
| 50.9 | 660 | 3.63 | 28.548 | 3854 | 135 | 7700 | 10 | 0.55 | 4.00 |
| 46.5 | 660 | 3.31 | 31.167 | 187 | 6 | 8100 | 10 | 0.55 | 3.00 |
| 40.8 | 660 | 2.91 | 35.511 | 1598 | 45 | 8500 | 10 | 0.55 | 3.00 |
| 35.8 | 545 | 2.11 | 40.333 | 121 | 3 | 8750 | 10 | 0.25 | 1.50 |
| 31.4 | 620 | 2.10 | 45.956 | 2068 | 45 | 8850 | 10 | 0.25 | 1.50 |
| 29.5 | 446 | 1.42 | 48.950 | 979 | 20 | 8900 | 10 | 0.25 | 1.10 |
| 25.9 | 508 | 1.42 | 55.773 | 4183 | 75 | 9000 | 10 | 0.25 | 1.10 |

g500-S shaft-mounted helical geared motors

Project planning



Combinatorics of geared motors

g500-S660, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | z_g | z_t | $F_{\text{rad, max}}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 28.9 | 625 | 1.98 | 49.867 | 748 | 15 | 9000 | 11 | 0.25 | 1.50 |
| 25.4 | 650 | 1.81 | 56.818 | 12784 | 225 | 9000 | 10 | 0.25 | 1.50 |
| 22.6 | 660 | 1.63 | 63.817 | 8041 | 126 | 9000 | 11 | 0.25 | 1.50 |
| 20.7 | 660 | 1.50 | 69.813 | 5236 | 75 | 9000 | 11 | 0.18 | 1.50 |
| 19.8 | 660 | 1.43 | 72.713 | 68714 | 945 | 9000 | 10 | 0.25 | 1.50 |
| 18.1 | 660 | 1.31 | 79.545 | 89488 | 1125 | 9000 | 10 | 0.18 | 1.50 |
| 16.2 | 660 | 1.17 | 89.048 | 1870 | 21 | 9000 | 11 | 0.18 | 1.10 |
| 14.2 | 660 | 1.03 | 101.460 | 6392 | 63 | 9000 | 10 | 0.18 | 1.10 |
| 13.2 | 660 | 0.95 | 109.083 | 1309 | 12 | 9000 | 11 | 0.25 | 1.10 |
| 11.7 | 660 | 0.85 | 124.289 | 5593 | 45 | 9000 | 10 | 0.25 | 0.75 |
| 10.6 | 660 | 0.77 | 137.133 | 2057 | 15 | 9000 | 11 | 0.12 | 0.75 |
| 9.30 | 660 | 0.67 | 156.249 | 35156 | 225 | 9000 | 10 | 0.12 | 0.75 |
| 8.00 | 660 | 0.58 | 176.611 | 3179 | 18 | 9000 | 11 | 0.12 | 0.55 |
| 7.00 | 660 | 0.51 | 201.230 | 27166 | 135 | 9000 | 10 | 0.12 | 0.55 |
| 6.30 | 660 | 0.46 | 223.833 | 1343 | 6 | 9000 | 11 | 0.12 | 0.37 |
| 5.50 | 660 | 0.40 | 255.034 | 126242 | 495 | 9000 | 10 | 0.12 | 0.37 |
| 5.00 | 603 | 0.33 | 280.500 | 561 | 2 | 9000 | 11 | 0.12 | 0.37 |
| 4.40 | 660 | 0.32 | 319.600 | 1598 | 5 | 9000 | 10 | 0.12 | 0.37 |
| 3.70 | 447 | 0.18 | 369.548 | 15521 | 42 | 9000 | 11 | 0.12 | 0.18 |
| 3.20 | 511 | 0.18 | 421.060 | 132634 | 315 | 9000 | 10 | 0.12 | 0.18 |

g500-S shaft-mounted helical geared motors

Project planning



Surface and corrosion protection

For optimum protection of geared motors against ambient conditions, the surface and corrosion protection system (OKS) offers tailor-made solutions.

Various surface coatings combined with other protective measures ensure that the geared motors operate reliably even at high air humidity, in outdoor installations or in the presence of atmospheric impurities. Any colour from the RAL Classic collection can be chosen for the top coat. The geared motors are also available unpainted (no surface and corrosion protection).

| Surface and corrosion protection | Applications | Measures |
|------------------------------------|---|---|
| Without OKS(uncoated) | <ul style="list-style-type: none"> Interior installation, no special corrosion protection required Paint provided by the customer | <ul style="list-style-type: none"> Aluminium parts uncoated Fan covers zinc-coated or primed in grey Grey cast iron parts primed in grey <p>Note: Slight colour deviation of the components is possible</p> <p>Standard version in case of:</p> <ul style="list-style-type: none"> g500-H45 ... H450 g500-S130 ... 660 g500-B45 ... 450 |
| OKS-G (primed) | <ul style="list-style-type: none"> Dependent on subsequent top coat applied | <ul style="list-style-type: none"> 2K PUR priming coat (grey) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel nameplate |
| OKS-S (small) | <ul style="list-style-type: none"> Standard applications Internal installation in heated buildings Air humidity up to 90% | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C1 (subject to EN 12944-2) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel nameplate |
| OKS-M (medium) | <ul style="list-style-type: none"> Internal installation in non-heated buildings Covered, protected external installation Air humidity up to 95% | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C2 (subject to EN 12944-2) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request) |
| OKS-L (large) | <ul style="list-style-type: none"> External installation Air humidity above 95% Chemical industry plants Food industry | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C3 (subject to EN 12944-2) Blower cover and B end shield additionally primed Cable glands with gaskets Corrosion-resistant brake with cover ring, stainless friction plate, and chrome-plated armature plate (on request) All screws/screw plugs zinc-coated Stainless breather elements Threaded holes that are not used are closed by means of plastic plugs <p>Optional measures</p> <ul style="list-style-type: none"> Sealed recesses on motor (on request) Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request) Additional priming coat on cast iron fan Oil expansion tank and torque plates painted separately and supplied loose |
| OKS-XL (extra Large) ¹⁾ | <ul style="list-style-type: none"> External installation Air humidity above 95 % Chemical industry plants Food industry Coastal areas with moderate salinity | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C4 (subject to EN 12944-2) <p>Additional measures for surface and corrosion protection system L:</p> <ul style="list-style-type: none"> Rotor package and stator in the inner area primed with finishing varnish Feedback in protection class IP65 |

¹⁾ On request

g500-S shaft-mounted helical geared motors

Project planning



Surface and corrosion protection

Structure of surface coating

| Surface and corrosion protection | Corrosivity category | Surface coating | Colour | Coating thickness |
|------------------------------------|----------------------|--|---|-------------------|
| | DIN EN ISO 12944-2 | Structure | | |
| Without OKS(uncoated) | | <ul style="list-style-type: none"> • Dipping primer of the grey iron parts | | 30 ... 50 µm |
| OKS-G (primed) | | <ul style="list-style-type: none"> • Dipping primer of the grey iron parts • 2K PUR priming coat | | 60 ... 90 µm |
| OKS-S (small) | Comparable to C1 | <ul style="list-style-type: none"> • Dipping primer of the grey iron parts • 2K-PUR top coat | <ul style="list-style-type: none"> • Standard: RAL 7012 • Optional: RAL Classic | 80 ... 120 µm |
| OKS-M (medium) | Comparable to C2 | <ul style="list-style-type: none"> • Dipping primer of the grey iron parts | | 110 ... 160 µm |
| OKS-L (large) | Comparable to C3 | <ul style="list-style-type: none"> • 2K PUR priming coat • 2K-PUR top coat | | 140 ... 200 µm |
| OKS-XL (extra Large) ¹⁾ | Comparable to C4 | <ul style="list-style-type: none"> • Dipping primer of the grey iron parts • 2K-EP priming coat (two times) • 2K-PUR top coat | | 160 ... 240 µm |

¹⁾ On request

g500-S shaft-mounted helical geared motors



Project planning

Lubricants

Gearboxes and geared motors of Lenze come supplied with a lubricant specifically adapted to the drive and design. When placing the order, the mounting position and design are decisive for the lubricant amount.

The lubricant amount and type contained in the gearbox are indicated on the nameplate.

The following gearboxes are lubricated for life:

- Helical gearbox g500-H45 ... 140
- Shaft-mounted helical gearbox g500-S130
- Bevel gearbox g500-B45 ... 240

The lubricants listed in the lubricant table are approved for Lenze drives.

Lubricant table

| Mode | CLP 460 | CLP HC 320 | CLP HC 220 USDA H1 |
|--------------------------|--|--|--|
| Ambient temperature [°C] | 0 ... +40 | -25 ... +50 | -20 ... +40 |
| Specification | Mineral based oil with additives | Synthetic-based oil (synthetic hydrocarbon / poly-alpha-olefin oil) | |
| Changing interval | 16000 operating hours not later than after three years (oil temperature 70 to 80 °C) | 25000 operating hours not later than after three years (oil temperature 70 to 80 °C) | 16000 operating hours not later than after three years (oil temperature 70 to 80 °C) |
| Fuchs | Fuchs Renolin CLP 460 | Fuchs Renolin Unisyn CLP 320 | |
| Klüber | Klüberoil GEM1-460 N | Klübersynth GEM4-320 N | Klüberoil 4 UH1-220 N |
| Shell | Shell Omala S2 G 460 | Shell Omala S4 GX HD 320 | |
| bremer & leguil | | | Cassida Fluid GL 220 |

- ▶ Please contact your Lenze sales office if you are operating at ambient temperatures in areas up to < -20 °C bzw. > or up to +40°C.

Shaft sealing rings

By default, the gearboxes come with NBR shaft sealing rings at the output end. At high speed and unfavourable ambient conditions as high temperature, reduced circulation of air etc., Lenze recommends the use of Viton shaft sealing rings.

Please consider this in your order.

g500-S shaft-mounted helical geared motors

Project planning



Ventilation

Non-ventilated gearboxes

No ventilation is required for gearboxes g500-S130 to S220.

Ventilated gearboxes

The g500-S400 S660 gearbox is supplied with a breather element as standard.

Gearbox in combined mounting position

For reducing the number of versions, the gearboxes can also be ordered in a combined mounting position:

- g500-S130 ... S660 in mounting position AEF

In these gearboxes, the lubricant amount has been optimised for the use in different mounting positions. -H45 in mounting position ABCDEfg500-H100 ... H450 in mounting position AEF In these gearboxes, the lubricant amount has been optimised for the use in different mounting positions. The breather elements are loosely enclosed and have to be mounted before commissioning depending on the mounting position.

A gearbox can be used for several mounting positions.

g500-S shaft-mounted helical geared motors

Project planning



Ventilation

Position of ventilation, sealing elements and oil level check

► A ... F mounting position

| | |
|--------------------|-----------------|
| <p>A</p> | <p>B</p> |
| <p>C</p> | <p>D</p> |
| <p>E</p> | <p>F</p> |
| <p>Filling</p> | <p>Drain</p> |
| <p>Ventilation</p> | <p>Check</p> |

6.4

g500-S shaft-mounted helical geared motors

Technical data



Standards and operating conditions

Geared motor data

| Product | | | MD□MA□□ | m550 |
|---|---------------|------|---|---|
| Motor | | | | |
| Degree of protection | | | | |
| EN 60529 | | | IP55 ¹⁾ IP65 ¹⁾ IP66 ¹⁾ | IP55 ¹⁾ |
| Energy efficiency class | | | | |
| IEC 60034-30 | | | IE1 | IE3 |
| IEC 60034-2-1 | | | Methodology for measuring efficiency | |
| 10 CFR Part 431 (U.S. Integral hp Rule) | | | | Table 5 (Premium Efficiency), CC127B |
| GB18613-2012 (China Energy Label optional) | | | | Grade 2 |
| Conformity | | | Low-Voltage Directive | |
| CE | | | 2006/95/EC | 2014/35/EU |
| EAC | | | TP TC 004/2011 (TR CU 004/2011) | |
| Approval | | | GB Standard 12350-2009 | |
| CCC | | | CSA 22.2 No. 100 | |
| CSA | | | UL 1004-1 UL 1004-8 Power Conversion Equipment (File-No. E210321) | |
| cURus | | | | |
| Temperature class | | | | |
| IEC/EN 60034-1; utilisation | | | B | |
| IEC/EN 60034-1; insulation system (enamel-insulated wire) | | | F | |
| Min. ambient operating temperature | | | | |
| | $T_{opr,min}$ | [°C] | -20 | |
| Max. ambient operating temperature | | | | |
| | $T_{opr,max}$ | [°C] | 40 | |
| With power reduction | $T_{opr,max}$ | [°C] | 60 | |
| Site altitude | | | | |
| Amsl | H_{max} | [m] | 4000 | |

¹⁾ Designs with different degrees of protection:
 IP55 with brake (IP54 with manual release lever).
 IP54 with resolver RS1.
 IP54 with HTL incremental encoder IG128-24V-H.

- In the European Union, the ErP Directive stipulates minimum efficiency levels for three-phase AC motors. Geared three-phase AC motors that do not conform with this Directive do not meet CE requirements and must not be marketed in the European Economic Area. For further information about the ErP Directive, the efficiency regulations in other countries and the Lenze products concerned, please refer to the brochure "International efficiency directives for three-phase AC motors".

g500-S shaft-mounted helical geared motors

Technical data



Permissible radial and axial forces at output

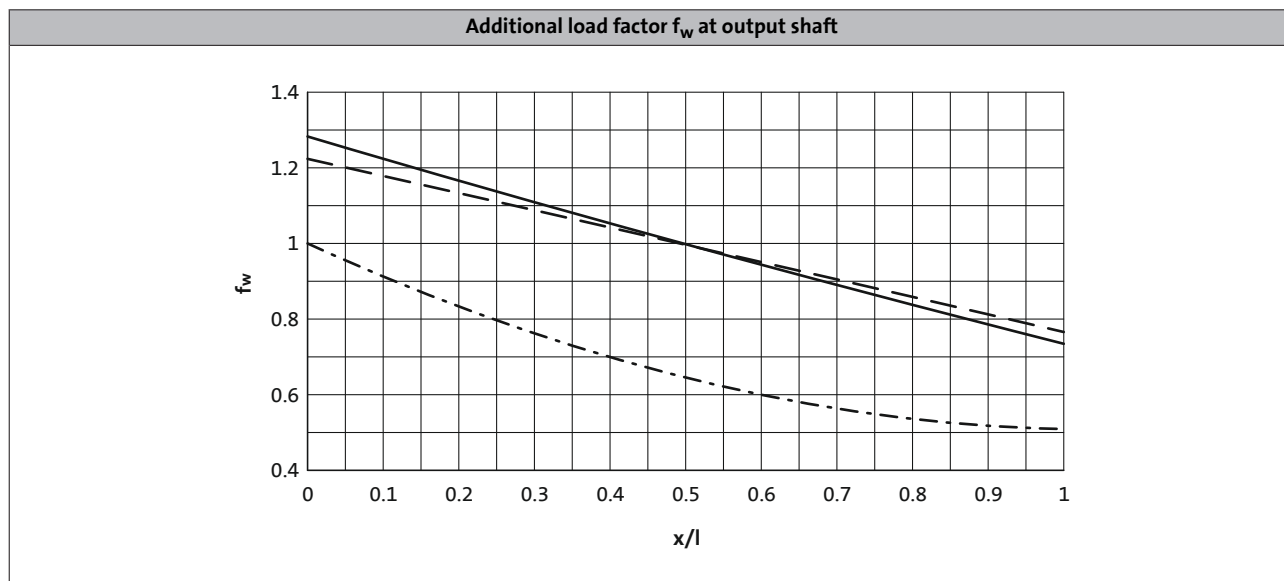
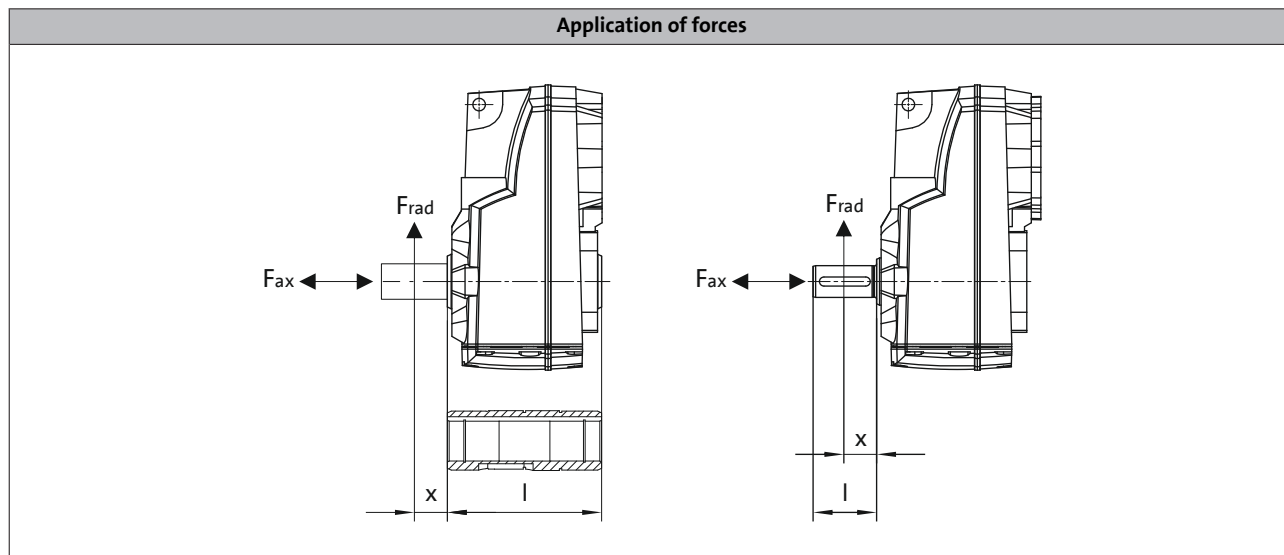
Permissible radial force

$$F_{rad,perm} = f_w \times F_{rad,max}$$

► If F_{rad} and $F_{ax} \neq 0$, please contact Lenze.

Permissible axial force

If there is no radial force, the maximum permissible axial force is 50 % of the table value $F_{rad,max}$



- Solid shaft
- - - Solid shaft with flange
- · - Hollow shaft

g500-S shaft-mounted helical geared motors

Technical data



Permissible radial and axial forces at output

The values given in the table refer to the center shaft end force application point and are minimum values calculated according to the most unfavourable conditions (force application angle, mounting position, direction of rotation). The values were calculated for the motor/gear-box combination with a load capacity of $c= 1.3$ and an input speed of 1400 rpm.

In case of different operating conditions, considerably higher forces can be transmitted. Please contact Lenze.

- Neither radial nor axial forces are permissible for the hollow shaft with shrink disc.

| Product | n_2 [r/min] | | | | | | | | | |
|---------|---------------|-----|-----|-----|-----|-----|----|----|----|-----|
| | 1000 | 630 | 400 | 250 | 160 | 100 | 63 | 40 | 25 | ≤16 |

| Max. radial force, Hollow shaft | | | | | | | | | | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ |
| | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] |
| g500-S130 | 1000 | 1150 | 1350 | 1500 | 1650 | 2200 | 2750 | 3450 | 4200 | 4500 |
| g500-S220 | 2100 | 2700 | 2800 | 3200 | 3800 | 4600 | 5500 | 6300 | 7000 | 7000 |
| g500-S400 | 1800 | 2400 | 3000 | 3400 | 4100 | 5000 | 6000 | 7100 | 8000 | 8000 |
| g500-S660 | 2400 | 3300 | 4300 | 4700 | 5000 | 6600 | 8500 | 10800 | 12000 | 12000 |

| Max. radial force, Solid shaft without flange | | | | | | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ |
| | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] |
| g500-S130 | 1000 | 1150 | 1350 | 1500 | 1650 | 2200 | 2750 | 3450 | 4200 | 4500 |
| g500-S220 | 1650 | 2100 | 2300 | 2700 | 3200 | 3600 | 3600 | 3600 | 3600 | 3600 |
| g500-S400 | 1400 | 1900 | 2400 | 2700 | 3200 | 4000 | 4800 | 5800 | 6200 | 6200 |
| g500-S660 | 1850 | 2500 | 3200 | 3600 | 3900 | 5100 | 6500 | 8400 | 9000 | 9000 |

| Max. radial force, Solid shaft with flange | | | | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ |
| | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] |
| g500-S130 | 1000 | 1150 | 1350 | 1500 | 1650 | 2200 | 2750 | 3450 | 4200 | 4500 |
| g500-S220 | 2300 | 2800 | 3200 | 3700 | 4400 | 4600 | 4600 | 4600 | 4600 | 4600 |
| g500-S400 | 2900 | 3700 | 4300 | 5100 | 5900 | 6800 | 7000 | 7000 | 7000 | 7000 |
| g500-S660 | 4000 | 5000 | 6100 | 7000 | 7800 | 9600 | 10000 | 10000 | 10000 | 10000 |

g500-S shaft-mounted helical geared motors

Technical data



Selection tables, notes

Notes on the selection tables with 4-pole motors

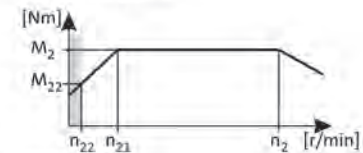
The selection tables show the available combinations of gearbox type, number of stages, ratio and motor. They are used only to provide basic orientation.

The following legend indicates the structure of the selection tables.

Rated power P_{rated} of the drive motor depending on the rated frequency

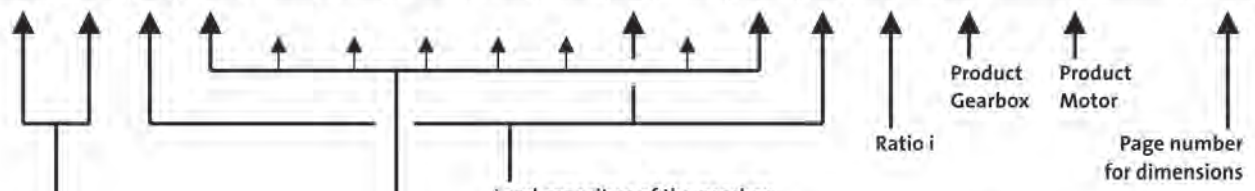
50 Hz: $P_N = 0.75 \text{ kW}$
87 Hz: $P_N = 1.35 \text{ kW}$

Torque diagram



2-stufige Getriebe ← Number of the gear stage of the gearbox

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | i | Product | | | |
|---------------------------------|-------------------------|----------------------------|------------------------|----|----------------------------|-------------------------|----------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|-------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | m550 | | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | c | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | c | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | c | | |
| 396 | 18 | 3.6 | 40 | 14 | 164 | 18 | 396 | 18 | 3.6 | 699 | 18 | 3.0 | 3.661 | -S130 | -P80/M4 | |
| 289 | 24 | 3.2 | 29 | 19 | 120 | 24 | 289 | 24 | 3.2 | 510 | 25 | 2.6 | 5.021 | -S130 | -P80/M4 | |



Load capacity c of the gearbox
 c is the ratio between the permissible rated torque of the gearbox and the rated torque of the three-phase AC motor (converted to the driven shaft).
 c must be always higher than the service factor k determined for the application k .

$$c = \frac{M_{2,zul}}{M_{1N} \cdot i \cdot \eta_{\text{Gedr}}} > k$$

Mains operation
 Output speed n_2
 Output torque M_2

Inverter operation
 The speed and torque data are valid for self-ventilated and forced ventilated drives. Forced ventilated drives can always output the torque M_2 in the entire setting ranges. In the case of self-ventilated drives, a reduction to M_{22} is required in the lower speed range.

The following applies to self-ventilated geared motors:
 n_{22} is the minimum speed where the torque M_{22} is permissible, from n_{21} to n_2 , the maximum torque is M_2
 The following applies to forced ventilated geared motors:
 From the minimum speed n_{22} to n_2 , the maximum torque is M_2

6.4

Motor voltages

The power values and torques indicated in the selection tables refer to the following motor voltages:

- 50 Hz : $\Delta 230 \text{ V} / Y 400 \text{ V}$
- 87 Hz : 400 V

Operation at 87 Hz

In 87 Hz operation, the three-phase AC motor (which is designed for a voltage of $\Delta 230 \text{ V} / Y 400 \text{ V}$ at 50 Hz) is operated on an inverter with 400 V rated voltage in a delta connection. It is important to note here that the inverter must be configured for 87Hz output. This offers the following advantages over 50 Hz operation:

- the setting range of the motor is increased by a factor of 1.73.
- the motor can then provide around 1.73 times greater output, which in turn allows a smaller and more affordable motor to be selected for the application.
- the efficiency of the motor is also improved.

g500-S shaft-mounted helical geared motors

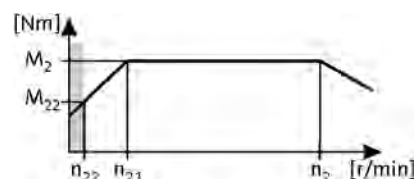


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.12$ kW
 87 Hz: $P_N = 0.21$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 45 | 24 | 5.3 | 4.6 | 19 | 19 | 24 | 45 | 24 | 5.3 | 81 | 24 | 5.4 | 31.387 | -S130 | 063-12 | |
| 40 | 28 | 4.7 | 4.1 | 21 | 17 | 27 | 40 | 28 | 4.7 | 71 | 27 | 4.8 | 35.493 | -S130 | 063-12 | |
| 35 | 32 | 4.1 | 3.6 | 24 | 15 | 31 | 35 | 32 | 4.1 | 63 | 31 | 4.2 | 40.422 | -S130 | 063-12 | |
| 31 | 36 | 3.7 | 3.2 | 28 | 13 | 35 | 31 | 36 | 3.7 | 56 | 35 | 3.7 | 45.711 | -S130 | 063-12 | |
| 28 | 40 | 3.3 | 2.8 | 31 | 12 | 39 | 28 | 40 | 3.3 | 50 | 39 | 3.3 | 51.230 | -S130 | 063-12 | |
| 25 | 45 | 2.9 | 2.5 | 35 | 10 | 44 | 25 | 45 | 2.9 | 44 | 44 | 2.9 | 57.933 | -S130 | 063-12 | |
| 22 | 50 | 2.6 | 2.3 | 39 | 9.3 | 49 | 22 | 50 | 2.6 | 40 | 49 | 2.6 | 64.200 | -S130 | 063-12 | |
| 22 | 51 | 3.1 | 2.2 | 40 | 9.1 | 51 | 22 | 51 | 3.1 | 38 | 51 | 3.2 | 65.975 | -S220 | 063-12 | |
| 20 | 57 | 2.3 | 2.0 | 44 | 8.3 | 56 | 20 | 57 | 2.3 | 35 | 56 | 2.3 | 72.600 | -S130 | 063-12 | |
| 19 | 58 | 3.1 | 1.9 | 45 | 8.0 | 57 | 19 | 58 | 3.1 | 34 | 57 | 3.2 | 74.750 | -S220 | 063-12 | |
| 17 | 66 | 1.6 | 1.7 | 51 | 7.1 | 65 | 17 | 66 | 1.6 | 30 | 65 | 1.6 | 84.581 | -S130 | 063-12 | |
| 15 | 75 | 1.5 | 1.5 | 58 | 6.3 | 73 | 15 | 75 | 1.5 | 27 | 73 | 1.6 | 95.648 | -S130 | 063-12 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 15 | 75 | 2.9 | 1.5 | 58 | 6.2 | 74 | 15 | 75 | 2.9 | 26 | 74 | 3.0 | 97.528 | -S220 | 063-12 | |
| 13 | 86 | 2.6 | 1.3 | 66 | 5.4 | 84 | 13 | 86 | 2.6 | 23 | 84 | 2.6 | 111.747 | -S220 | 063-12 | |
| 11 | 97 | 2.3 | 1.1 | 75 | 4.7 | 96 | 11 | 97 | 2.3 | 20 | 96 | 2.3 | 126.610 | -S220 | 063-12 | |
| 10 | 110 | 2.0 | 1.0 | 85 | 4.2 | 108 | 10 | 110 | 2.0 | 18 | 108 | 2.0 | 143.205 | -S220 | 063-12 | |
| 8.8 | 125 | 1.8 | 0.9 | 96 | 3.7 | 123 | 8.8 | 125 | 1.8 | 16 | 123 | 1.8 | 162.252 | -S220 | 063-12 | |
| 8.0 | 137 | 2.9 | 0.8 | 106 | 3.4 | 135 | 8.0 | 137 | 2.9 | 14 | 135 | 3.0 | 178.531 | -S400 | 063-12 | |
| 7.7 | 142 | 1.6 | 0.8 | 110 | 3.2 | 140 | 7.7 | 142 | 1.6 | 14 | 140 | 1.6 | 185.248 | -S220 | 063-12 | |
| 7.0 | 157 | 2.6 | 0.7 | 121 | 2.9 | 155 | 7.0 | 157 | 2.6 | 12 | 155 | 2.6 | 204.412 | -S400 | 063-12 | |
| 6.8 | 161 | 1.4 | 0.7 | 124 | 2.9 | 159 | 6.8 | 161 | 1.4 | 12 | 159 | 1.4 | 209.887 | -S220 | 063-12 | |
| 6.2 | 177 | 2.2 | 0.6 | 137 | 2.6 | 175 | 6.2 | 177 | 2.2 | 11 | 175 | 2.3 | 230.946 | -S400 | 063-12 | |
| 5.9 | 185 | 1.2 | 0.6 | 143 | 2.5 | 182 | 5.9 | 185 | 1.2 | 11 | 182 | 1.2 | 241.022 | -S220 | 063-12 | |
| 5.4 | 204 | 1.9 | 0.5 | 157 | 2.3 | 201 | 5.4 | 204 | 1.9 | 9.5 | 201 | 1.9 | 265.956 | -S400 | 063-12 | |
| 5.2 | 210 | 1.1 | 0.5 | 162 | 2.2 | 206 | 5.2 | 210 | 1.1 | 9.3 | 206 | 1.1 | 273.079 | -S220 | 063-12 | |
| 5.1 | 216 | 2.8 | 0.5 | 166 | 2.1 | 212 | 5.1 | 216 | 2.8 | 9.0 | 212 | 2.8 | 280.500 | -S660 | 063-12 | |
| 4.7 | 231 | 1.7 | 0.5 | 178 | 2.0 | 227 | 4.7 | 231 | 1.7 | 8.4 | 227 | 1.8 | 300.479 | -S400 | 063-12 | |
| 4.6 | 240 | 0.9 | 0.5 | 185 | 1.9 | 236 | 4.6 | 240 | 0.9 | 8.1 | 236 | 0.9 | 312.233 | -S220 | 063-12 | |
| 4.5 | 246 | 2.7 | 0.5 | 189 | 1.9 | 242 | 4.5 | 246 | 2.7 | 7.9 | 242 | 2.7 | 319.600 | -S660 | 063-12 | |
| 4.1 | 265 | 1.3 | 0.4 | 204 | 1.7 | 260 | 4.1 | 265 | 1.3 | 7.4 | 260 | 1.3 | 344.533 | -S400 | 063-12 | |
| 4.0 | 272 | 0.8 | 0.4 | 209 | 1.7 | 267 | 4.0 | 272 | 0.8 | 7.2 | 267 | 0.8 | 353.762 | -S220 | 063-12 | |
| 3.9 | 284 | 1.6 | 0.4 | 219 | 1.6 | 279 | 3.9 | 284 | 1.6 | 6.9 | 279 | 1.6 | 369.548 | -S660 | 063-12 | |
| 3.7 | 299 | 1.3 | 0.4 | 230 | 1.5 | 294 | 3.7 | 299 | 1.3 | 6.5 | 294 | 1.3 | 389.256 | -S400 | 063-12 | |
| 3.4 | 324 | 1.6 | 0.3 | 249 | 1.4 | 318 | 3.4 | 324 | 1.6 | 6.0 | 318 | 1.6 | 421.060 | -S660 | 063-12 | |

g500-S shaft-mounted helical geared motors

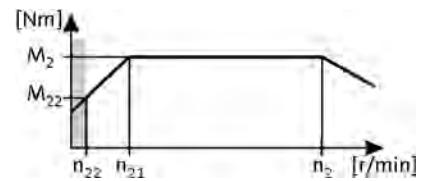


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.18$ kW
 87 Hz: $P_N = 0.33$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 194 | 9.0 | 4.5 | 21 | 6.6 | 85 | 9.0 | 194 | 9.0 | 4.5 | 352 | 9.0 | 3.7 | 7.029 | -S130 | 063-32 | |
| 85 | 20 | 4.5 | 9.1 | 15 | 38 | 20 | 85 | 20 | 4.5 | 155 | 20 | 3.7 | 15.979 | -S130 | 063-32 | |
| 76 | 22 | 4.5 | 8.0 | 17 | 33 | 22 | 76 | 22 | 4.5 | 137 | 22 | 4.2 | 18.069 | -S130 | 063-32 | |
| 67 | 25 | 4.1 | 7.1 | 19 | 29 | 25 | 67 | 25 | 4.1 | 121 | 25 | 3.9 | 20.381 | -S130 | 063-32 | |
| 59 | 28 | 4.1 | 6.3 | 22 | 26 | 28 | 59 | 28 | 4.1 | 107 | 28 | 3.9 | 23.048 | -S130 | 063-32 | |
| 44 | 38 | 3.4 | 4.6 | 30 | 19 | 38 | 44 | 38 | 3.4 | 79 | 39 | 3.4 | 31.387 | -S130 | 063-32 | |
| 39 | 43 | 3.0 | 4.1 | 33 | 17 | 43 | 39 | 43 | 3.0 | 70 | 44 | 3.0 | 35.493 | -S130 | 063-32 | |
| 34 | 49 | 2.6 | 3.6 | 38 | 15 | 49 | 34 | 49 | 2.6 | 61 | 50 | 2.6 | 40.422 | -S130 | 063-32 | |
| 32 | 52 | 2.9 | 3.4 | 40 | 14 | 52 | 32 | 52 | 2.9 | 58 | 53 | 2.9 | 42.533 | -S220 | 063-32 | |
| 30 | 56 | 2.3 | 3.2 | 43 | 13 | 56 | 30 | 56 | 2.3 | 54 | 56 | 2.3 | 45.711 | -S130 | 063-32 | |
| 29 | 57 | 2.9 | 3.1 | 44 | 13 | 57 | 29 | 57 | 2.9 | 53 | 58 | 2.9 | 46.933 | -S400 | 063-32 | |
| 28 | 59 | 2.9 | 3.0 | 45 | 13 | 59 | 28 | 59 | 2.9 | 51 | 60 | 2.9 | 48.190 | -S220 | 063-32 | |
| 27 | 63 | 2.1 | 2.8 | 48 | 12 | 63 | 27 | 63 | 2.1 | 48 | 63 | 2.1 | 51.230 | -S130 | 063-32 | |
| 26 | 63 | 2.6 | 2.8 | 49 | 12 | 63 | 26 | 63 | 2.6 | 48 | 64 | 2.5 | 51.620 | -S220 | 063-32 | |
| 26 | 65 | 2.9 | 2.7 | 50 | 11 | 65 | 26 | 65 | 2.9 | 47 | 66 | 2.9 | 53.026 | -S400 | 063-32 | |
| 24 | 70 | 2.6 | 2.5 | 54 | 11 | 70 | 24 | 70 | 2.6 | 44 | 70 | 2.5 | 56.960 | -S400 | 063-32 | |
| 24 | 71 | 1.8 | 2.5 | 55 | 10 | 71 | 24 | 71 | 1.8 | 43 | 72 | 1.8 | 57.933 | -S130 | 063-32 | |
| 23 | 71 | 2.6 | 2.5 | 55 | 10 | 71 | 23 | 71 | 2.6 | 42 | 72 | 2.5 | 58.486 | -S220 | 063-32 | |
| 21 | 78 | 1.7 | 2.3 | 60 | 9.3 | 78 | 21 | 78 | 1.7 | 39 | 79 | 1.6 | 64.200 | -S130 | 063-32 | |
| 21 | 79 | 2.6 | 2.3 | 61 | 9.3 | 79 | 21 | 79 | 2.6 | 39 | 79 | 2.5 | 64.354 | -S400 | 063-32 | |
| 21 | 81 | 2.0 | 2.2 | 62 | 9.1 | 81 | 21 | 81 | 2.0 | 38 | 82 | 2.0 | 65.975 | -S220 | 063-32 | |
| 19 | 89 | 1.5 | 2.0 | 68 | 8.3 | 89 | 19 | 89 | 1.5 | 34 | 90 | 1.5 | 72.600 | -S130 | 063-32 | |
| 18 | 91 | 2.0 | 1.9 | 70 | 8.0 | 91 | 18 | 91 | 2.0 | 33 | 92 | 2.0 | 74.750 | -S220 | 063-32 | |
| 16 | 103 | 1.0 | 1.7 | 80 | 7.1 | 103 | 16 | 103 | 1.0 | 29 | 104 | 1.0 | 84.581 | -S130 | 063-32 | |
| 14 | 117 | 1.0 | 1.5 | 90 | 6.3 | 117 | 14 | 117 | 1.0 | 26 | 118 | 1.0 | 95.648 | -S130 | 063-32 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 23 | 72 | 3.1 | 2.4 | 55 | 10 | 72 | 23 | 72 | 3.1 | 42 | 72 | 2.9 | 59.581 | -S220 | 063-32 | |
| 20 | 81 | 2.7 | 2.2 | 62 | 8.9 | 81 | 20 | 81 | 2.7 | 37 | 82 | 2.6 | 67.298 | -S220 | 063-32 | |
| 18 | 92 | 2.4 | 1.9 | 71 | 7.9 | 92 | 18 | 92 | 2.4 | 33 | 93 | 2.4 | 76.249 | -S220 | 063-32 | |
| 16 | 104 | 2.1 | 1.7 | 80 | 7.0 | 104 | 16 | 104 | 2.1 | 29 | 105 | 2.1 | 86.079 | -S220 | 063-32 | |
| 14 | 117 | 1.9 | 1.5 | 90 | 6.2 | 117 | 14 | 117 | 1.9 | 25 | 119 | 1.9 | 97.528 | -S220 | 063-32 | |
| 13 | 129 | 3.1 | 1.4 | 99 | 5.6 | 129 | 13 | 129 | 3.1 | 23 | 131 | 3.1 | 107.314 | -S400 | 063-32 | |
| 12 | 134 | 1.6 | 1.3 | 104 | 5.4 | 134 | 12 | 134 | 1.6 | 22 | 136 | 1.6 | 111.747 | -S220 | 063-32 | |
| 11 | 148 | 2.7 | 1.2 | 114 | 4.9 | 148 | 11 | 148 | 2.7 | 20 | 150 | 2.7 | 123.307 | -S400 | 063-32 | |
| 11 | 152 | 1.4 | 1.1 | 117 | 4.7 | 152 | 11 | 152 | 1.4 | 20 | 154 | 1.4 | 126.610 | -S220 | 063-32 | |
| 9.8 | 168 | 2.4 | 1.0 | 129 | 4.3 | 168 | 9.8 | 168 | 2.4 | 18 | 170 | 2.4 | 139.313 | -S400 | 063-32 | |

g500-S shaft-mounted helical geared motors

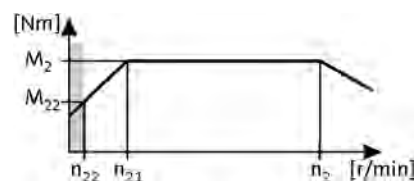
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 0.18$ kW
87 Hz: $P_N = 0.33$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|---------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 9.5 | 172 | 1.3 | 1.0 | 133 | 4.2 | 172 | 9.5 | 172 | 1.3 | 17 | 174 | 1.3 | 143.205 | -S220 | 063-32 | |
| 8.6 | 190 | 2.1 | 0.9 | 146 | 3.8 | 190 | 8.6 | 190 | 2.1 | 16 | 192 | 2.1 | 158.019 | -S400 | 063-32 | |
| 8.4 | 195 | 1.1 | 0.9 | 150 | 3.7 | 195 | 8.4 | 195 | 1.1 | 15 | 197 | 1.1 | 162.252 | -S220 | 063-32 | |
| 7.7 | 213 | 2.9 | 0.8 | 164 | 3.4 | 213 | 7.7 | 213 | 2.9 | 14 | 215 | 2.9 | 176.611 | -S660 | 063-32 | |
| 7.6 | 215 | 1.9 | 0.8 | 165 | 3.4 | 215 | 7.6 | 215 | 1.9 | 14 | 217 | 1.8 | 178.531 | -S400 | 063-32 | |
| 7.4 | 223 | 1.0 | 0.8 | 172 | 3.2 | 223 | 7.4 | 223 | 1.0 | 13 | 225 | 1.0 | 185.248 | -S220 | 063-32 | |
| 6.8 | 242 | 2.7 | 0.7 | 187 | 3.0 | 242 | 6.8 | 242 | 2.7 | 12 | 245 | 2.7 | 201.230 | -S660 | 063-32 | |
| 6.7 | 246 | 1.6 | 0.7 | 189 | 2.9 | 246 | 6.7 | 246 | 1.6 | 12 | 249 | 1.6 | 204.412 | -S400 | 063-32 | |
| 6.5 | 253 | 0.9 | 0.7 | 195 | 2.9 | 253 | 6.5 | 253 | 0.9 | 12 | 255 | 0.9 | 209.887 | -S220 | 063-32 | |
| 6.1 | 269 | 2.5 | 0.6 | 207 | 2.7 | 269 | 6.1 | 269 | 2.5 | 11 | 272 | 2.4 | 223.833 | -S660 | 063-32 | |
| 5.9 | 278 | 1.4 | 0.6 | 214 | 2.6 | 278 | 5.9 | 278 | 1.4 | 11 | 281 | 1.4 | 230.946 | -S400 | 063-32 | |
| 5.4 | 307 | 2.2 | 0.6 | 236 | 2.4 | 307 | 5.4 | 307 | 2.2 | 9.7 | 310 | 2.1 | 255.034 | -S660 | 063-32 | |
| 5.1 | 320 | 1.2 | 0.5 | 246 | 2.3 | 320 | 5.1 | 320 | 1.2 | 9.3 | 324 | 1.2 | 265.956 | -S400 | 063-32 | |
| 4.9 | 338 | 1.8 | 0.5 | 260 | 2.1 | 338 | 4.9 | 338 | 1.8 | 8.8 | 341 | 1.8 | 280.500 | -S660 | 063-32 | |
| 4.5 | 362 | 1.1 | 0.5 | 278 | 2.0 | 362 | 4.5 | 362 | 1.1 | 8.2 | 366 | 1.1 | 300.479 | -S400 | 063-32 | |
| 4.3 | 385 | 1.7 | 0.5 | 296 | 1.9 | 385 | 4.3 | 385 | 1.7 | 7.7 | 389 | 1.7 | 319.600 | -S660 | 063-32 | |
| 3.7 | 445 | 1.0 | 0.4 | 342 | 1.6 | 445 | 3.7 | 445 | 1.0 | 6.7 | 450 | 1.0 | 369.548 | -S660 | 063-32 | |
| 3.2 | 507 | 1.0 | 0.3 | 390 | 1.4 | 507 | 3.2 | 507 | 1.0 | 5.9 | 512 | 1.0 | 421.060 | -S660 | 063-32 | |

g500-S shaft-mounted helical geared motors

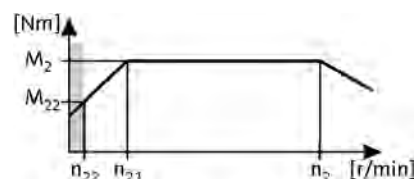


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.25$ kW
 87 Hz: $P_N = 0.45$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|-------|---------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | | MD□MA□□ | | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | | |
| 374 | 6.0 | 5.6 | 40 | 4.8 | 164 | 6.0 | 374 | 6.0 | 5.6 | 677 | 6.0 | 4.8 | 3.661 | -S130 | 063-42 | | |
| 273 | 8.0 | 5.6 | 29 | 6.5 | 120 | 8.0 | 273 | 8.0 | 5.6 | 494 | 8.0 | 4.8 | 5.021 | -S130 | 063-42 | | |
| 213 | 11 | 5.2 | 23 | 8.4 | 93 | 11 | 213 | 11 | 5.2 | 386 | 11 | 4.4 | 6.425 | -S130 | 063-42 | | |
| 195 | 12 | 5.2 | 21 | 9.2 | 85 | 12 | 195 | 12 | 5.2 | 353 | 12 | 4.4 | 7.029 | -S130 | 063-42 | | |
| 165 | 14 | 5.6 | 17 | 11 | 72 | 14 | 165 | 14 | 5.6 | 298 | 14 | 4.8 | 8.322 | -S130 | 063-42 | | |
| 146 | 16 | 5.6 | 15 | 12 | 64 | 16 | 146 | 16 | 5.6 | 264 | 16 | 4.8 | 9.411 | -S130 | 063-42 | | |
| 120 | 19 | 5.6 | 13 | 15 | 53 | 19 | 120 | 19 | 5.6 | 217 | 19 | 4.8 | 11.413 | -S130 | 063-42 | | |
| 106 | 22 | 5.6 | 11 | 17 | 47 | 22 | 106 | 22 | 5.6 | 192 | 22 | 4.8 | 12.907 | -S130 | 063-42 | | |
| 94 | 25 | 5.2 | 9.9 | 19 | 41 | 25 | 94 | 25 | 5.2 | 170 | 25 | 4.4 | 14.606 | -S130 | 063-42 | | |
| 86 | 27 | 4.8 | 9.1 | 21 | 38 | 27 | 86 | 27 | 4.8 | 155 | 27 | 4.1 | 15.979 | -S130 | 063-42 | | |
| 76 | 31 | 4.3 | 8.0 | 24 | 33 | 30 | 76 | 31 | 4.3 | 137 | 30 | 4.1 | 18.069 | -S130 | 063-42 | | |
| 67 | 34 | 3.8 | 7.1 | 27 | 29 | 34 | 67 | 34 | 3.8 | 122 | 34 | 3.7 | 20.381 | -S130 | 063-42 | | |
| 59 | 39 | 3.3 | 6.3 | 30 | 26 | 39 | 59 | 39 | 3.3 | 108 | 39 | 3.2 | 23.048 | -S130 | 063-42 | | |
| 55 | 42 | 3.1 | 5.8 | 33 | 24 | 42 | 55 | 42 | 3.1 | 99 | 42 | 3.0 | 24.967 | -S130 | 063-42 | | |
| 49 | 48 | 2.7 | 5.1 | 37 | 21 | 47 | 49 | 48 | 2.7 | 88 | 47 | 2.6 | 28.233 | -S130 | 063-42 | | |
| 44 | 53 | 2.5 | 4.6 | 41 | 19 | 53 | 44 | 53 | 2.5 | 79 | 53 | 2.5 | 31.387 | -S130 | 063-42 | | |
| 39 | 60 | 2.2 | 4.1 | 46 | 17 | 60 | 39 | 60 | 2.2 | 70 | 60 | 2.2 | 35.493 | -S130 | 063-42 | | |
| 34 | 68 | 1.9 | 3.6 | 53 | 15 | 68 | 34 | 68 | 1.9 | 61 | 68 | 1.9 | 40.422 | -S130 | 063-42 | | |
| 32 | 72 | 3.1 | 3.4 | 55 | 14 | 72 | 32 | 72 | 3.1 | 58 | 72 | 3.1 | 42.533 | -S220 | 063-42 | | |
| 30 | 77 | 1.7 | 3.2 | 60 | 13 | 77 | 30 | 77 | 1.7 | 54 | 77 | 1.7 | 45.711 | -S130 | 063-42 | | |
| 28 | 81 | 2.7 | 3.0 | 63 | 13 | 81 | 28 | 81 | 2.7 | 52 | 81 | 2.7 | 48.190 | -S220 | 063-42 | | |
| 28 | 83 | 3.2 | 3.0 | 64 | 12 | 82 | 28 | 83 | 3.2 | 51 | 82 | 3.2 | 48.950 | -S660 | 063-42 | | |
| 27 | 87 | 1.5 | 2.8 | 67 | 12 | 86 | 27 | 87 | 1.5 | 48 | 86 | 1.5 | 51.230 | -S130 | 063-42 | | |
| 27 | 87 | 2.5 | 2.8 | 67 | 12 | 87 | 27 | 87 | 2.5 | 48 | 87 | 2.5 | 51.620 | -S220 | 063-42 | | |
| 25 | 94 | 3.2 | 2.6 | 73 | 11 | 94 | 25 | 94 | 3.2 | 45 | 94 | 3.2 | 55.773 | -S660 | 063-42 | | |
| 24 | 96 | 2.8 | 2.5 | 74 | 11 | 96 | 24 | 96 | 2.8 | 44 | 96 | 2.8 | 56.960 | -S400 | 063-42 | | |
| 24 | 98 | 1.3 | 2.5 | 75 | 10 | 97 | 24 | 98 | 1.3 | 43 | 97 | 1.3 | 57.933 | -S130 | 063-42 | | |
| 23 | 99 | 2.2 | 2.5 | 76 | 10 | 98 | 23 | 99 | 2.2 | 42 | 98 | 2.2 | 58.486 | -S220 | 063-42 | | |
| 21 | 109 | 1.2 | 2.3 | 84 | 9.3 | 108 | 21 | 109 | 1.2 | 39 | 108 | 1.2 | 64.200 | -S130 | 063-42 | | |
| 21 | 109 | 2.8 | 2.3 | 84 | 9.3 | 108 | 21 | 109 | 2.8 | 39 | 108 | 2.8 | 64.354 | -S400 | 063-42 | | |
| 21 | 112 | 1.4 | 2.2 | 86 | 9.1 | 111 | 21 | 112 | 1.4 | 38 | 111 | 1.4 | 65.975 | -S220 | 063-42 | | |
| 19 | 123 | 1.1 | 2.0 | 95 | 8.3 | 122 | 19 | 123 | 1.1 | 34 | 122 | 1.1 | 72.600 | -S130 | 063-42 | | |
| 18 | 126 | 1.4 | 1.9 | 97 | 8.0 | 126 | 18 | 126 | 1.4 | 33 | 126 | 1.4 | 74.750 | -S220 | 063-42 | | |

6.4

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|-------|---------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | | MD□MA□□ | | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | | |
| 30 | 75 | 2.9 | 3.2 | 58 | 13 | 75 | 30 | 75 | 2.9 | 55 | 75 | 2.5 | 45.333 | -S220 | 063-42 | | |
| 26 | 88 | 2.5 | 2.8 | 67 | 11 | 87 | 26 | 88 | 2.5 | 47 | 87 | 2.4 | 52.587 | -S220 | 063-42 | | |

g500-S shaft-mounted helical geared motors

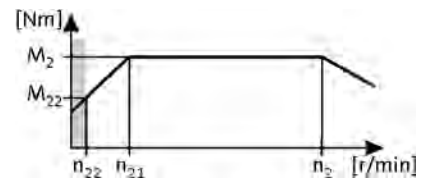


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.25$ kW
 87 Hz: $P_N = 0.45$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|------------------|---------------|---------|--|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | |
| 23 | 99 | 2.2 | 2.4 | 76 | 10 | 99 | 23 | 99 | 2.2 | 42 | 99 | 2.1 | 59.581 | -S220 | 063-42 | | |
| 20 | 112 | 2.0 | 2.2 | 86 | 8.9 | 111 | 20 | 112 | 2.0 | 37 | 111 | 1.9 | 67.298 | -S220 | 063-42 | | |
| 18 | 124 | 3.2 | 2.0 | 95 | 8.1 | 123 | 18 | 124 | 3.2 | 33 | 123 | 3.3 | 74.260 | -S400 | 063-42 | | |
| 18 | 127 | 1.7 | 1.9 | 98 | 7.9 | 126 | 18 | 127 | 1.7 | 33 | 126 | 1.7 | 76.249 | -S220 | 063-42 | | |
| 16 | 140 | 2.9 | 1.7 | 108 | 7.2 | 139 | 16 | 140 | 2.9 | 30 | 139 | 2.9 | 83.900 | -S400 | 063-42 | | |
| 16 | 143 | 1.5 | 1.7 | 110 | 7.0 | 143 | 16 | 143 | 1.5 | 29 | 143 | 1.5 | 86.079 | -S220 | 063-42 | | |
| 14 | 158 | 2.5 | 1.5 | 122 | 6.3 | 157 | 14 | 158 | 2.5 | 26 | 157 | 2.5 | 94.984 | -S400 | 063-42 | | |
| 14 | 162 | 1.4 | 1.5 | 125 | 6.2 | 161 | 14 | 162 | 1.4 | 25 | 161 | 1.4 | 97.528 | -S220 | 063-42 | | |
| 13 | 179 | 2.2 | 1.4 | 138 | 5.6 | 178 | 13 | 179 | 2.2 | 23 | 178 | 2.3 | 107.314 | -S400 | 063-42 | | |
| 12 | 186 | 1.2 | 1.3 | 143 | 5.4 | 185 | 12 | 186 | 1.2 | 22 | 185 | 1.2 | 111.747 | -S220 | 063-42 | | |
| 11 | 205 | 2.0 | 1.2 | 158 | 4.9 | 204 | 11 | 205 | 2.0 | 20 | 204 | 2.0 | 123.307 | -S400 | 063-42 | | |
| 11 | 207 | 3.2 | 1.2 | 159 | 4.8 | 206 | 11 | 207 | 3.2 | 20 | 206 | 3.2 | 124.289 | -S660 | 063-42 | | |
| 11 | 211 | 1.0 | 1.1 | 162 | 4.7 | 210 | 11 | 211 | 1.0 | 20 | 210 | 1.1 | 126.610 | -S220 | 063-42 | | |
| 10 | 228 | 2.9 | 1.1 | 176 | 4.4 | 227 | 10 | 228 | 2.9 | 18 | 227 | 2.9 | 137.133 | -S660 | 063-42 | | |
| 9.8 | 232 | 1.7 | 1.0 | 179 | 4.3 | 231 | 9.8 | 232 | 1.7 | 18 | 231 | 1.7 | 139.313 | -S400 | 063-42 | | |
| 9.6 | 238 | 0.9 | 1.0 | 184 | 4.2 | 237 | 9.6 | 238 | 0.9 | 17 | 237 | 0.9 | 143.205 | -S220 | 063-42 | | |
| 8.8 | 260 | 2.5 | 0.9 | 200 | 3.8 | 259 | 8.8 | 260 | 2.5 | 16 | 259 | 2.6 | 156.249 | -S660 | 063-42 | | |
| 8.7 | 263 | 1.5 | 0.9 | 203 | 3.8 | 262 | 8.7 | 263 | 1.5 | 16 | 262 | 1.5 | 158.019 | -S400 | 063-42 | | |
| 8.4 | 270 | 0.8 | 0.9 | 208 | 3.7 | 269 | 8.4 | 270 | 0.8 | 15 | 269 | 0.8 | 162.252 | -S220 | 063-42 | | |
| 7.8 | 294 | 2.2 | 0.8 | 227 | 3.4 | 292 | 7.8 | 294 | 2.2 | 14 | 292 | 2.3 | 176.611 | -S660 | 063-42 | | |
| 7.7 | 297 | 1.3 | 0.8 | 229 | 3.4 | 296 | 7.7 | 297 | 1.3 | 14 | 296 | 1.4 | 178.531 | -S400 | 063-42 | | |
| 6.8 | 335 | 2.0 | 0.7 | 258 | 3.0 | 333 | 6.8 | 335 | 2.0 | 12 | 333 | 2.0 | 201.230 | -S660 | 063-42 | | |
| 6.7 | 340 | 1.2 | 0.7 | 262 | 2.9 | 338 | 6.7 | 340 | 1.2 | 12 | 338 | 1.2 | 204.412 | -S400 | 063-42 | | |
| 6.1 | 373 | 1.8 | 0.6 | 287 | 2.7 | 371 | 6.1 | 373 | 1.8 | 11 | 371 | 1.8 | 223.833 | -S660 | 063-42 | | |
| 5.9 | 385 | 1.0 | 0.6 | 296 | 2.6 | 382 | 5.9 | 385 | 1.0 | 11 | 382 | 1.0 | 230.946 | -S400 | 063-42 | | |
| 5.4 | 425 | 1.6 | 0.6 | 327 | 2.4 | 422 | 5.4 | 425 | 1.6 | 9.7 | 422 | 1.6 | 255.034 | -S660 | 063-42 | | |
| 5.2 | 443 | 0.9 | 0.5 | 341 | 2.3 | 440 | 5.2 | 443 | 0.9 | 9.3 | 440 | 0.9 | 265.956 | -S400 | 063-42 | | |
| 4.9 | 467 | 1.2 | 0.5 | 360 | 2.1 | 464 | 4.9 | 467 | 1.2 | 8.8 | 464 | 1.2 | 280.500 | -S660 | 063-42 | | |
| | | | 0.5 | 385 | 2.0 | 498 | | | | 8.3 | 498 | 0.8 | 300.479 | -S400 | 063-42 | | |
| 4.3 | 532 | 1.2 | 0.5 | 410 | 1.9 | 529 | 4.3 | 532 | 1.2 | 7.8 | 529 | 1.2 | 319.600 | -S660 | 063-42 | | |

g500-S shaft-mounted helical geared motors

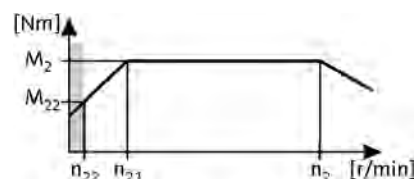


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|-------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|------------------------|---------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | |
| 385 | 9.0 | 4.9 | 40 | 6.9 | 164 | 9.0 | 385 | 9.0 | 4.9 | 688 | 9.0 | 4.1 | 3.661 | -S130 | 071-32 | | |
| 281 | 12 | 4.9 | 29 | 9.4 | 120 | 12 | 281 | 12 | 4.9 | 502 | 12 | 4.1 | 5.021 | -S130 | 071-32 | | |
| 219 | 16 | 4.5 | 23 | 12 | 93 | 16 | 219 | 16 | 4.5 | 392 | 16 | 3.8 | 6.425 | -S130 | 071-32 | | |
| 201 | 17 | 4.5 | 21 | 13 | 85 | 17 | 201 | 17 | 4.5 | 359 | 17 | 3.8 | 7.029 | -S130 | 071-32 | | |
| 169 | 20 | 4.9 | 17 | 16 | 72 | 20 | 169 | 20 | 4.9 | 303 | 20 | 4.1 | 8.322 | -S130 | 071-32 | | |
| 150 | 23 | 4.9 | 15 | 18 | 64 | 23 | 150 | 23 | 4.9 | 268 | 23 | 4.1 | 9.411 | -S130 | 071-32 | | |
| 124 | 28 | 4.7 | 13 | 21 | 53 | 28 | 124 | 28 | 4.7 | 221 | 28 | 4.0 | 11.413 | -S130 | 071-32 | | |
| 109 | 31 | 4.1 | 11 | 24 | 47 | 31 | 109 | 31 | 4.1 | 195 | 31 | 3.5 | 12.907 | -S130 | 071-32 | | |
| 97 | 36 | 3.7 | 9.9 | 27 | 41 | 35 | 97 | 36 | 3.7 | 173 | 35 | 3.1 | 14.606 | -S130 | 071-32 | | |
| 88 | 39 | 3.4 | 9.1 | 30 | 38 | 39 | 88 | 39 | 3.4 | 158 | 39 | 2.8 | 15.979 | -S130 | 071-32 | | |
| 78 | 44 | 3.0 | 8.0 | 34 | 33 | 44 | 78 | 44 | 3.0 | 140 | 44 | 2.8 | 18.069 | -S130 | 071-32 | | |
| 69 | 50 | 2.6 | 7.1 | 38 | 29 | 49 | 69 | 50 | 2.6 | 124 | 49 | 2.5 | 20.381 | -S130 | 071-32 | | |
| 61 | 56 | 2.3 | 6.3 | 43 | 26 | 56 | 61 | 56 | 2.3 | 109 | 56 | 2.2 | 23.048 | -S130 | 071-32 | | |
| 57 | 61 | 2.1 | 5.8 | 47 | 24 | 61 | 57 | 61 | 2.1 | 101 | 61 | 2.1 | 24.967 | -S130 | 071-32 | | |
| 50 | 69 | 1.9 | 5.1 | 53 | 21 | 69 | 50 | 69 | 1.9 | 89 | 69 | 1.8 | 28.233 | -S130 | 071-32 | | |
| 47 | 73 | 3.0 | 4.8 | 56 | 20 | 73 | 47 | 73 | 3.0 | 84 | 73 | 2.9 | 29.937 | -S220 | 071-32 | | |
| 45 | 76 | 1.7 | 4.6 | 59 | 19 | 76 | 45 | 76 | 1.7 | 80 | 76 | 1.7 | 31.387 | -S130 | 071-32 | | |
| 43 | 80 | 2.8 | 4.4 | 62 | 18 | 80 | 43 | 80 | 2.8 | 77 | 80 | 2.8 | 32.867 | -S220 | 071-32 | | |
| 40 | 86 | 1.5 | 4.1 | 66 | 17 | 86 | 40 | 86 | 1.5 | 71 | 86 | 1.5 | 35.493 | -S130 | 071-32 | | |
| 39 | 88 | 3.2 | 4.0 | 68 | 17 | 88 | 39 | 88 | 3.2 | | | | 36.267 | -S400 | 071-32 | | |
| 38 | 91 | 2.4 | 3.9 | 70 | 16 | 90 | 38 | 91 | 2.4 | 68 | 90 | 2.4 | 37.238 | -S220 | 071-32 | | |
| 35 | 98 | 3.2 | 3.6 | 76 | 15 | 98 | 35 | 98 | 3.2 | 63 | 98 | 3.2 | 40.333 | -S660 | 071-32 | | |
| 35 | 98 | 1.3 | 3.6 | 76 | 15 | 98 | 35 | 98 | 1.3 | 62 | 98 | 1.3 | 40.422 | -S130 | 071-32 | | |
| 34 | 100 | 3.2 | 3.5 | 77 | 15 | 100 | 34 | 100 | 3.2 | | | | 40.974 | -S400 | 071-32 | | |
| 33 | 103 | 2.1 | 3.4 | 80 | 14 | 103 | 33 | 103 | 2.1 | 59 | 103 | 2.1 | 42.533 | -S220 | 071-32 | | |
| 31 | 111 | 1.2 | 3.2 | 86 | 13 | 111 | 31 | 111 | 1.2 | 55 | 111 | 1.2 | 45.711 | -S130 | 071-32 | | |
| 31 | 112 | 3.2 | 3.2 | 86 | 13 | 112 | 31 | 112 | 3.2 | 55 | 112 | 3.2 | 45.956 | -S660 | 071-32 | | |
| 30 | 114 | 2.8 | 3.1 | 88 | 13 | 114 | 30 | 114 | 2.8 | 54 | 114 | 2.8 | 46.933 | -S400 | 071-32 | | |
| 29 | 117 | 1.9 | 3.0 | 90 | 13 | 117 | 29 | 117 | 1.9 | 52 | 117 | 1.9 | 48.190 | -S220 | 071-32 | | |
| 29 | 119 | 2.8 | 3.0 | 92 | 12 | 119 | 29 | 119 | 2.8 | 52 | 119 | 2.8 | 48.950 | -S660 | 071-32 | | |
| 28 | 125 | 1.0 | 2.8 | 96 | 12 | 124 | 28 | 125 | 1.0 | 49 | 124 | 1.1 | 51.230 | -S130 | 071-32 | | |
| 27 | 126 | 1.8 | 2.8 | 97 | 12 | 125 | 27 | 126 | 1.8 | 49 | 125 | 1.8 | 51.620 | -S220 | 071-32 | | |
| 27 | 129 | 2.7 | 2.7 | 99 | 11 | 129 | 27 | 129 | 2.7 | 48 | 129 | 2.7 | 53.026 | -S400 | 071-32 | | |
| 25 | 136 | 2.8 | 2.6 | 104 | 11 | 135 | 25 | 136 | 2.8 | 45 | 135 | 2.8 | 55.773 | -S660 | 071-32 | | |
| 25 | 138 | 1.9 | 2.5 | 107 | 11 | 138 | 25 | 138 | 1.9 | 44 | 138 | 1.9 | 56.960 | -S400 | 071-32 | | |

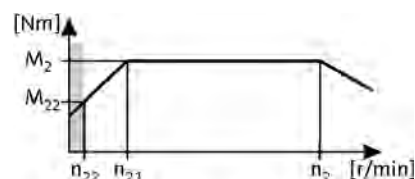
g500-S shaft-mounted helical geared motors



Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW



2-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 24 | 141 | 0.9 | 2.5 | 109 | 10 | 141 | 24 | 141 | 0.9 | 44 | 141 | 0.9 | 57.933 | -S130 | 071-32 | |
| 24 | 142 | 1.6 | 2.5 | 110 | 10 | 142 | 24 | 142 | 1.6 | 43 | 142 | 1.6 | 58.486 | -S220 | 071-32 | |
| 22 | 156 | 0.8 | 2.3 | 120 | 9.3 | 156 | 22 | 156 | 0.8 | 39 | 156 | 0.8 | 64.200 | -S130 | 071-32 | |
| 22 | 156 | 1.9 | 2.3 | 121 | 9.3 | 156 | 22 | 156 | 1.9 | 39 | 156 | 1.9 | 64.354 | -S400 | 071-32 | |
| 21 | 160 | 1.1 | 2.2 | 124 | 9.1 | 160 | 21 | 160 | 1.1 | 38 | 160 | 1.1 | 65.975 | -S220 | 071-32 | |
| 19 | 182 | 1.1 | 1.9 | 140 | 8.0 | 181 | 19 | 182 | 1.1 | 34 | 181 | 1.1 | 74.750 | -S220 | 071-32 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 35 | 96 | 2.3 | 3.6 | 74 | 15 | 96 | 35 | 96 | 2.3 | 63 | 96 | 1.9 | 40.012 | -S220 | 071-32 | |
| 31 | 109 | 2.0 | 3.2 | 84 | 13 | 108 | 31 | 109 | 2.0 | 56 | 108 | 1.7 | 45.333 | -S220 | 071-32 | |
| 27 | 126 | 1.8 | 2.8 | 97 | 11 | 126 | 27 | 126 | 1.8 | 48 | 126 | 1.7 | 52.587 | -S220 | 071-32 | |
| 24 | 139 | 2.9 | 2.5 | 107 | 10 | 139 | 24 | 139 | 2.9 | 43 | 139 | 2.8 | 58.027 | -S400 | 071-32 | |
| 24 | 143 | 1.5 | 2.4 | 110 | 10 | 142 | 24 | 143 | 1.5 | 42 | 142 | 1.5 | 59.581 | -S220 | 071-32 | |
| 22 | 157 | 2.6 | 2.2 | 121 | 9.2 | 157 | 22 | 157 | 2.6 | 38 | 157 | 2.4 | 65.559 | -S400 | 071-32 | |
| 21 | 161 | 1.4 | 2.2 | 124 | 8.9 | 161 | 21 | 161 | 1.4 | 37 | 161 | 1.3 | 67.298 | -S220 | 071-32 | |
| 19 | 178 | 2.3 | 2.0 | 137 | 8.1 | 177 | 19 | 178 | 2.3 | 34 | 177 | 2.3 | 74.260 | -S400 | 071-32 | |
| 19 | 183 | 1.2 | 1.9 | 141 | 7.9 | 182 | 19 | 183 | 1.2 | 33 | 182 | 1.2 | 76.249 | -S220 | 071-32 | |
| 17 | 201 | 2.0 | 1.7 | 155 | 7.2 | 201 | 17 | 201 | 2.0 | 30 | 201 | 2.0 | 83.900 | -S400 | 071-32 | |
| 16 | 206 | 1.1 | 1.7 | 159 | 7.0 | 206 | 16 | 206 | 1.1 | 29 | 206 | 1.1 | 86.079 | -S220 | 071-32 | |
| 16 | 213 | 3.1 | 1.6 | 164 | 6.7 | 213 | 16 | 213 | 3.1 | 28 | 213 | 3.1 | 89.048 | -S660 | 071-32 | |
| 15 | 227 | 1.8 | 1.5 | 175 | 6.3 | 227 | 15 | 227 | 1.8 | 27 | 227 | 1.8 | 94.984 | -S400 | 071-32 | |
| 15 | 234 | 0.9 | 1.5 | 180 | 6.2 | 233 | 15 | 234 | 0.9 | 26 | 233 | 0.9 | 97.528 | -S220 | 071-32 | |
| 14 | 243 | 2.7 | 1.4 | 187 | 5.9 | 243 | 14 | 243 | 2.7 | 25 | 243 | 2.7 | 101.460 | -S660 | 071-32 | |
| 13 | 257 | 1.6 | 1.4 | 198 | 5.6 | 256 | 13 | 257 | 1.6 | 24 | 256 | 1.6 | 107.314 | -S400 | 071-32 | |
| 13 | 261 | 2.5 | 1.3 | 201 | 5.5 | 261 | 13 | 261 | 2.5 | 23 | 261 | 2.5 | 109.083 | -S660 | 071-32 | |
| 13 | 268 | 0.8 | 1.3 | 206 | 5.4 | 267 | 13 | 268 | 0.8 | 23 | 267 | 0.8 | 111.747 | -S220 | 071-32 | |
| 11 | 295 | 1.4 | 1.2 | 227 | 4.9 | 295 | 11 | 295 | 1.4 | 20 | 295 | 1.4 | 123.307 | -S400 | 071-32 | |
| 11 | 298 | 2.2 | 1.2 | 229 | 4.8 | 297 | 11 | 298 | 2.2 | 20 | 297 | 2.2 | 124.289 | -S660 | 071-32 | |
| 10 | 328 | 2.0 | 1.1 | 253 | 4.4 | 328 | 10 | 328 | 2.0 | 18 | 328 | 2.0 | 137.133 | -S660 | 071-32 | |
| 10 | 334 | 1.2 | 1.0 | 257 | 4.3 | 333 | 10 | 334 | 1.2 | 18 | 333 | 1.2 | 139.313 | -S400 | 071-32 | |
| 9.0 | 374 | 1.8 | 0.9 | 288 | 3.8 | 373 | 9.0 | 374 | 1.8 | 16 | 373 | 1.8 | 156.249 | -S660 | 071-32 | |
| 8.9 | 378 | 1.1 | 0.9 | 291 | 3.8 | 378 | 8.9 | 378 | 1.1 | 16 | 378 | 1.1 | 158.019 | -S400 | 071-32 | |
| 8.0 | 423 | 1.6 | 0.8 | 326 | 3.4 | 422 | 8.0 | 423 | 1.6 | 14 | 422 | 1.6 | 176.611 | -S660 | 071-32 | |
| 7.9 | 428 | 0.9 | 0.8 | 329 | 3.4 | 427 | 7.9 | 428 | 0.9 | 14 | 427 | 0.9 | 178.531 | -S400 | 071-32 | |
| 7.0 | 482 | 1.4 | 0.7 | 371 | 3.0 | 481 | 7.0 | 482 | 1.4 | 13 | 481 | 1.4 | 201.230 | -S660 | 071-32 | |
| 6.9 | 490 | 0.8 | 0.7 | 377 | 2.9 | 489 | 6.9 | 490 | 0.8 | 12 | 489 | 0.8 | 204.412 | -S400 | 071-32 | |
| 6.3 | 536 | 1.2 | 0.6 | 413 | 2.7 | 535 | 6.3 | 536 | 1.2 | 11 | 535 | 1.2 | 223.833 | -S660 | 071-32 | |

g500-S shaft-mounted helical geared motors

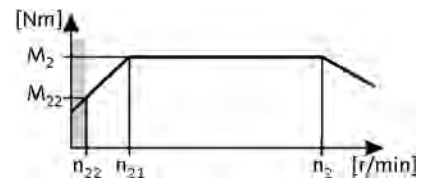
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|---------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 5.5 | 611 | 1.1 | 0.6 | 470 | 2.4 | 610 | 5.5 | 611 | 1.1 | 9.9 | 610 | 1.1 | 255.034 | -S660 | 071-32 | |
| 5.0 | 672 | 0.9 | 0.5 | 517 | 2.1 | 670 | 5.0 | 672 | 0.9 | 9.0 | 670 | 0.9 | 280.500 | -S660 | 071-32 | |
| 4.4 | 765 | 0.9 | 0.5 | 589 | 1.9 | 764 | 4.4 | 765 | 0.9 | 7.9 | 764 | 0.9 | 319.600 | -S660 | 071-32 | |

g500-S shaft-mounted helical geared motors

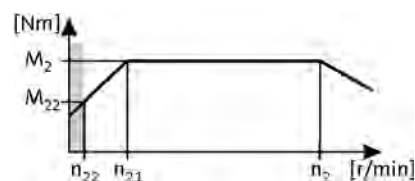


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.55 \text{ kW}$
 87 Hz: $P_N = 1.0 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 384 | 13 | 4.5 | 40 | 10 | 164 | 13 | 384 | 13 | 4.5 | 687 | 13 | 3.8 | 3.661 | -S130 | 071-42 | |
| 280 | 18 | 4.2 | 29 | 14 | 120 | 18 | 280 | 18 | 4.2 | 501 | 18 | 3.5 | 5.021 | -S130 | 071-42 | |
| 240 | 21 | 4.5 | 25 | 16 | 102 | 21 | 240 | 21 | 4.5 | | | | 5.860 | -S400 | 071-42 | |
| 219 | 23 | 3.7 | 23 | 18 | 93 | 23 | 219 | 23 | 3.7 | 391 | 24 | 3.1 | 6.425 | -S130 | 071-42 | |
| 200 | 25 | 3.6 | 21 | 20 | 85 | 25 | 200 | 25 | 3.6 | 358 | 26 | 3.0 | 7.029 | -S130 | 071-42 | |
| 169 | 30 | 3.8 | 17 | 23 | 72 | 30 | 169 | 30 | 3.8 | 302 | 31 | 3.2 | 8.322 | -S130 | 071-42 | |
| 149 | 34 | 3.7 | 15 | 26 | 64 | 34 | 149 | 34 | 3.7 | 267 | 35 | 3.0 | 9.411 | -S130 | 071-42 | |
| 123 | 41 | 3.1 | 13 | 32 | 53 | 41 | 123 | 41 | 3.1 | 220 | 42 | 2.6 | 11.413 | -S130 | 071-42 | |
| 109 | 47 | 2.8 | 11 | 36 | 47 | 47 | 109 | 47 | 2.8 | 195 | 48 | 2.3 | 12.907 | -S130 | 071-42 | |
| 96 | 53 | 2.5 | 9.9 | 41 | 41 | 53 | 96 | 53 | 2.5 | 172 | 54 | 2.0 | 14.606 | -S130 | 071-42 | |
| 95 | 54 | 4.5 | 9.8 | 41 | 41 | 54 | 95 | 54 | 4.5 | | | | 14.806 | -S400 | 071-42 | |
| 88 | 58 | 2.2 | 9.1 | 45 | 38 | 58 | 88 | 58 | 2.2 | 157 | 59 | 1.9 | 15.979 | -S130 | 071-42 | |
| 78 | 66 | 2.0 | 8.0 | 51 | 33 | 66 | 78 | 66 | 2.0 | 139 | 67 | 1.9 | 18.069 | -S130 | 071-42 | |
| 75 | 68 | 3.2 | 7.7 | 52 | 32 | 68 | 75 | 68 | 3.2 | 134 | 69 | 3.0 | 18.776 | -S220 | 071-42 | |
| 69 | 74 | 3.0 | 7.1 | 57 | 30 | 74 | 69 | 74 | 3.0 | 124 | 75 | 2.8 | 20.300 | -S220 | 071-42 | |
| 69 | 74 | 1.8 | 7.1 | 57 | 29 | 74 | 69 | 74 | 1.8 | 123 | 75 | 1.7 | 20.381 | -S130 | 071-42 | |
| 61 | 83 | 2.6 | 6.3 | 64 | 26 | 83 | 61 | 83 | 2.6 | 109 | 85 | 2.5 | 23.000 | -S220 | 071-42 | |
| 61 | 84 | 1.6 | 6.3 | 64 | 26 | 84 | 61 | 84 | 1.6 | 109 | 85 | 1.5 | 23.048 | -S130 | 071-42 | |
| 56 | 91 | 1.4 | 5.8 | 70 | 24 | 91 | 56 | 91 | 1.4 | 101 | 92 | 1.4 | 24.967 | -S130 | 071-42 | |
| 53 | 96 | 2.3 | 5.5 | 74 | 23 | 96 | 53 | 96 | 2.3 | 95 | 97 | 2.2 | 26.422 | -S220 | 071-42 | |
| 50 | 102 | 1.3 | 5.1 | 79 | 21 | 102 | 50 | 102 | 1.3 | 89 | 104 | 1.2 | 28.233 | -S130 | 071-42 | |
| 47 | 109 | 2.0 | 4.8 | 84 | 20 | 109 | 47 | 109 | 2.0 | 84 | 110 | 1.9 | 29.937 | -S220 | 071-42 | |
| 45 | 113 | 3.2 | 4.7 | 87 | 19 | 113 | 45 | 113 | 3.2 | 81 | 115 | 3.1 | 31.167 | -S660 | 071-42 | |
| 45 | 114 | 1.1 | 4.6 | 88 | 19 | 114 | 45 | 114 | 1.1 | 80 | 116 | 1.1 | 31.387 | -S130 | 071-42 | |
| 43 | 119 | 1.9 | 4.4 | 92 | 18 | 119 | 43 | 119 | 1.9 | 77 | 121 | 1.8 | 32.867 | -S220 | 071-42 | |
| 40 | 129 | 1.0 | 4.1 | 99 | 17 | 129 | 40 | 129 | 1.0 | 71 | 131 | 1.0 | 35.493 | -S130 | 071-42 | |
| 40 | 129 | 3.2 | 4.1 | 99 | 17 | 129 | 40 | 129 | 3.2 | 71 | 131 | 3.1 | 35.511 | -S660 | 071-42 | |
| 39 | 132 | 2.9 | 4.0 | 101 | 17 | 132 | 39 | 132 | 2.9 | 69 | 134 | 2.8 | 36.267 | -S400 | 071-42 | |
| 38 | 135 | 1.6 | 3.9 | 104 | 16 | 135 | 38 | 135 | 1.6 | 68 | 137 | 1.6 | 37.238 | -S220 | 071-42 | |
| 35 | 146 | 2.9 | 3.6 | 113 | 15 | 146 | 35 | 146 | 2.9 | 62 | 149 | 2.8 | 40.333 | -S660 | 071-42 | |
| 35 | 147 | 0.9 | 3.6 | 113 | 15 | 147 | 35 | 147 | 0.9 | 62 | 149 | 0.9 | 40.422 | -S130 | 071-42 | |
| 34 | 149 | 2.7 | 3.5 | 114 | 15 | 149 | 34 | 149 | 2.7 | 61 | 151 | 2.7 | 40.974 | -S400 | 071-42 | |
| 33 | 154 | 1.4 | 3.4 | 119 | 14 | 154 | 33 | 154 | 1.4 | 59 | 157 | 1.4 | 42.533 | -S220 | 071-42 | |
| 31 | 167 | 2.9 | 3.2 | 128 | 13 | 167 | 31 | 167 | 2.9 | 55 | 169 | 2.8 | 45.956 | -S660 | 071-42 | |
| 30 | 170 | 1.9 | 3.1 | 131 | 13 | 170 | 30 | 170 | 1.9 | 54 | 173 | 1.8 | 46.933 | -S400 | 071-42 | |

g500-S shaft-mounted helical geared motors

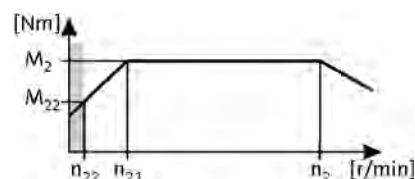


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.55 \text{ kW}$
 87 Hz: $P_N = 1.0 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 29 | 175 | 1.3 | 3.0 | 135 | 13 | 175 | 29 | 175 | 1.3 | 52 | 178 | 1.2 | 48.190 | -S220 | 071-42 | |
| 29 | 178 | 2.4 | 3.0 | 137 | 12 | 178 | 29 | 178 | 2.4 | 51 | 180 | 2.4 | 48.950 | -S660 | 071-42 | |
| 27 | 187 | 1.2 | 2.8 | 144 | 12 | 187 | 27 | 187 | 1.2 | 49 | 190 | 1.2 | 51.620 | -S220 | 071-42 | |
| 27 | 192 | 1.8 | 2.7 | 148 | 11 | 192 | 27 | 192 | 1.8 | 47 | 195 | 1.8 | 53.026 | -S400 | 071-42 | |
| 25 | 202 | 2.4 | 2.6 | 156 | 11 | 202 | 25 | 202 | 2.4 | 45 | 205 | 2.4 | 55.773 | -S660 | 071-42 | |
| 25 | 207 | 1.3 | 2.5 | 159 | 11 | 207 | 25 | 207 | 1.3 | 44 | 210 | 1.3 | 56.960 | -S400 | 071-42 | |
| 24 | 212 | 1.0 | 2.5 | 163 | 10 | 212 | 24 | 212 | 1.0 | 43 | 215 | 1.0 | 58.486 | -S220 | 071-42 | |
| 22 | 233 | 1.3 | 2.3 | 180 | 9.3 | 233 | 22 | 233 | 1.3 | 39 | 237 | 1.3 | 64.354 | -S400 | 071-42 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 25 | 203 | 3.2 | 2.6 | 156 | 11 | 203 | 25 | 203 | 3.2 | 44 | 206 | 3.0 | 56.818 | -S660 | 071-42 | |
| 24 | 207 | 1.9 | 2.5 | 160 | 10 | 207 | 24 | 207 | 1.9 | 43 | 211 | 1.8 | 58.027 | -S400 | 071-42 | |
| 22 | 228 | 2.9 | 2.3 | 176 | 9.4 | 228 | 22 | 228 | 2.9 | 39 | 232 | 2.7 | 63.817 | -S660 | 071-42 | |
| 21 | 234 | 1.7 | 2.2 | 180 | 9.2 | 234 | 21 | 234 | 1.7 | 38 | 238 | 1.6 | 65.559 | -S400 | 071-42 | |
| 20 | 249 | 2.7 | 2.1 | 192 | 8.6 | 249 | 20 | 249 | 2.7 | 36 | 253 | 2.5 | 69.813 | -S660 | 071-42 | |
| 19 | 260 | 2.5 | 2.0 | 200 | 8.3 | 260 | 19 | 260 | 2.5 | 35 | 264 | 2.5 | 72.713 | -S660 | 071-42 | |
| 19 | 265 | 1.5 | 2.0 | 204 | 8.1 | 265 | 19 | 265 | 1.5 | 34 | 269 | 1.5 | 74.260 | -S400 | 071-42 | |
| 18 | 284 | 2.3 | 1.8 | 219 | 7.5 | 284 | 18 | 284 | 2.3 | 32 | 289 | 2.3 | 79.545 | -S660 | 071-42 | |
| 17 | 300 | 1.3 | 1.7 | 231 | 7.2 | 300 | 17 | 300 | 1.3 | 30 | 304 | 1.3 | 83.900 | -S400 | 071-42 | |
| 16 | 318 | 2.1 | 1.6 | 245 | 6.7 | 318 | 16 | 318 | 2.1 | 28 | 323 | 2.0 | 89.048 | -S660 | 071-42 | |
| 15 | 339 | 1.2 | 1.5 | 261 | 6.3 | 339 | 15 | 339 | 1.2 | 27 | 345 | 1.2 | 94.984 | -S400 | 071-42 | |
| 14 | 362 | 1.8 | 1.4 | 279 | 5.9 | 362 | 14 | 362 | 1.8 | 25 | 368 | 1.8 | 101.460 | -S660 | 071-42 | |
| 13 | 383 | 1.0 | 1.4 | 295 | 5.6 | 383 | 13 | 383 | 1.0 | 23 | 389 | 1.0 | 107.314 | -S400 | 071-42 | |
| 13 | 390 | 1.7 | 1.3 | 300 | 5.5 | 390 | 13 | 390 | 1.7 | 23 | 396 | 1.7 | 109.083 | -S660 | 071-42 | |
| 11 | 441 | 0.9 | 1.2 | 339 | 4.9 | 441 | 11 | 441 | 0.9 | 20 | 447 | 0.9 | 123.307 | -S400 | 071-42 | |
| 11 | 444 | 1.5 | 1.2 | 342 | 4.8 | 444 | 11 | 444 | 1.5 | 20 | 451 | 1.5 | 124.289 | -S660 | 071-42 | |
| 10 | 490 | 1.4 | 1.1 | 377 | 4.4 | 490 | 10 | 490 | 1.4 | 18 | 498 | 1.3 | 137.133 | -S660 | 071-42 | |
| 9.0 | 558 | 1.2 | 0.9 | 430 | 3.8 | 558 | 9.0 | 558 | 1.2 | 16 | 567 | 1.2 | 156.249 | -S660 | 071-42 | |
| 8.0 | 631 | 1.1 | 0.8 | 486 | 3.4 | 631 | 8.0 | 631 | 1.1 | 14 | 641 | 1.0 | 176.611 | -S660 | 071-42 | |
| 7.0 | 719 | 0.9 | 0.7 | 554 | 3.0 | 719 | 7.0 | 719 | 0.9 | 13 | 730 | 0.9 | 201.230 | -S660 | 071-42 | |

g500-S shaft-mounted helical geared motors

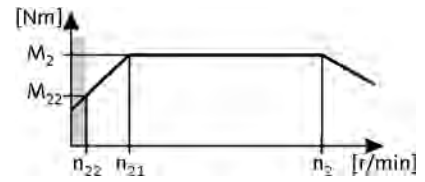


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|------------------|---------------|-----------|--|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | |
| 396 | 18 | 3.6 | 40 | 14 | 164 | 18 | 396 | 18 | 3.6 | 699 | 18 | 3.0 | 3.661 | -S130 | 50-P80/M4 | | |
| 289 | 24 | 3.2 | 29 | 19 | 120 | 24 | 289 | 24 | 3.2 | 510 | 25 | 2.6 | 5.021 | -S130 | 50-P80/M4 | | |
| 247 | 28 | 4.3 | 25 | 22 | 102 | 28 | 247 | 28 | 4.3 | 437 | 29 | 3.5 | 5.860 | -S400 | 50-P80/M4 | | |
| 226 | 31 | 2.8 | 23 | 24 | 93 | 31 | 226 | 31 | 2.8 | 398 | 31 | 2.3 | 6.425 | -S130 | 50-P80/M4 | | |
| 206 | 34 | 2.7 | 21 | 26 | 85 | 34 | 206 | 34 | 2.7 | 364 | 34 | 2.2 | 7.029 | -S130 | 50-P80/M4 | | |
| 174 | 40 | 2.9 | 17 | 31 | 72 | 40 | 174 | 40 | 2.9 | 308 | 41 | 2.4 | 8.322 | -S130 | 50-P80/M4 | | |
| 154 | 45 | 2.8 | 15 | 35 | 64 | 45 | 154 | 45 | 2.8 | 272 | 46 | 2.3 | 9.411 | -S130 | 50-P80/M4 | | |
| 127 | 55 | 2.4 | 13 | 42 | 53 | 55 | 127 | 55 | 2.4 | 224 | 56 | 2.0 | 11.413 | -S130 | 50-P80/M4 | | |
| | | | 12 | 44 | 51 | 58 | | | | 216 | 58 | 3.2 | 11.876 | -S220 | 50-P80/M4 | | |
| 112 | 62 | 2.1 | 11 | 48 | 47 | 62 | 112 | 62 | 2.1 | 198 | 63 | 1.7 | 12.907 | -S130 | 50-P80/M4 | | |
| | | | 11 | 48 | 46 | 63 | | | | 197 | 63 | 2.9 | 12.992 | -S220 | 50-P80/M4 | | |
| | | | 11 | 50 | 45 | 66 | | | | 190 | 66 | 2.8 | 13.456 | -S220 | 50-P80/M4 | | |
| 99 | 70 | 1.9 | 9.9 | 54 | 41 | 70 | 99 | 70 | 1.9 | 175 | 71 | 1.5 | 14.606 | -S130 | 50-P80/M4 | | |
| 99 | 71 | 3.1 | 9.9 | 54 | 41 | 71 | 99 | 71 | 3.1 | 174 | 72 | 2.6 | 14.720 | -S220 | 50-P80/M4 | | |
| 98 | 71 | 4.3 | 9.8 | 55 | 41 | 71 | 98 | 71 | 4.3 | 173 | 72 | 3.5 | 14.806 | -S400 | 50-P80/M4 | | |
| 91 | 77 | 1.7 | 9.1 | 59 | 38 | 77 | 91 | 77 | 1.7 | 160 | 78 | 1.4 | 15.979 | -S130 | 50-P80/M4 | | |
| 88 | 79 | 2.8 | 8.8 | 61 | 36 | 79 | 88 | 79 | 2.8 | 155 | 81 | 2.3 | 16.571 | -S220 | 50-P80/M4 | | |
| 80 | 87 | 1.5 | 8.0 | 67 | 33 | 87 | 80 | 87 | 1.5 | 142 | 88 | 1.4 | 18.069 | -S130 | 50-P80/M4 | | |
| 77 | 90 | 2.5 | 7.7 | 69 | 32 | 90 | 77 | 90 | 2.5 | 136 | 92 | 2.3 | 18.776 | -S220 | 50-P80/M4 | | |
| 71 | 97 | 2.3 | 7.1 | 75 | 30 | 97 | 71 | 97 | 2.3 | 126 | 99 | 2.1 | 20.300 | -S220 | 50-P80/M4 | | |
| 71 | 98 | 1.3 | 7.1 | 75 | 29 | 100 | 71 | 98 | 1.3 | 126 | 100 | 1.2 | 20.381 | -S130 | 50-P80/M4 | | |
| 63 | 110 | 2.0 | 6.3 | 85 | 26 | 110 | 63 | 110 | 2.0 | 111 | 112 | 1.9 | 23.000 | -S220 | 50-P80/M4 | | |
| 63 | 110 | 1.2 | 6.3 | 85 | 26 | 110 | 63 | 110 | 1.2 | 111 | 113 | 1.1 | 23.048 | -S130 | 50-P80/M4 | | |
| 58 | 120 | 1.1 | 5.8 | 92 | 24 | 120 | 58 | 120 | 1.1 | 103 | 122 | 1.0 | 24.967 | -S130 | 50-P80/M4 | | |
| | | | 5.7 | 93 | 24 | 124 | | | | 101 | 124 | 3.1 | 25.308 | -S400 | 50-P80/M4 | | |
| 55 | 127 | 1.7 | 5.5 | 97 | 23 | 127 | 55 | 127 | 1.7 | 97 | 129 | 1.6 | 26.422 | -S220 | 50-P80/M4 | | |
| 51 | 135 | 1.0 | 5.1 | 104 | 21 | 135 | 51 | 135 | 1.0 | 91 | 138 | 0.9 | 28.233 | -S130 | 50-P80/M4 | | |
| 50 | 140 | 2.9 | 5.0 | 108 | 21 | 140 | 50 | 140 | 2.9 | 88 | 142 | 2.7 | 29.156 | -S400 | 50-P80/M4 | | |
| 48 | 143 | 1.5 | 4.8 | 110 | 20 | 143 | 48 | 143 | 1.5 | 86 | 146 | 1.4 | 29.937 | -S220 | 50-P80/M4 | | |
| 47 | 149 | 3.0 | 4.7 | 115 | 19 | 149 | 47 | 149 | 3.0 | 82 | 152 | 2.9 | 31.167 | -S660 | 50-P80/M4 | | |
| 46 | 150 | 0.9 | 4.6 | 116 | 19 | 150 | 46 | 150 | 0.9 | 82 | 153 | 0.9 | 31.387 | -S130 | 50-P80/M4 | | |
| 44 | 158 | 1.4 | 4.4 | 121 | 18 | 158 | 44 | 158 | 1.4 | 78 | 161 | 1.4 | 32.867 | -S220 | 50-P80/M4 | | |
| 44 | 158 | 2.5 | 4.4 | 121 | 18 | 158 | 44 | 158 | 2.5 | 78 | 161 | 2.5 | 32.940 | -S400 | 50-P80/M4 | | |
| 41 | 170 | 3.0 | 4.1 | 131 | 17 | 170 | 41 | 170 | 3.0 | 72 | 174 | 2.9 | 35.511 | -S660 | 50-P80/M4 | | |
| 40 | 174 | 2.3 | 4.0 | 134 | 17 | 174 | 40 | 174 | 2.3 | 71 | 177 | 2.3 | 36.267 | -S400 | 50-P80/M4 | | |

g500-S shaft-mounted helical geared motors

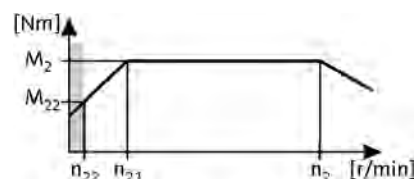


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 39 | 178 | 1.2 | 3.9 | 137 | 16 | 178 | 39 | 178 | 1.2 | 69 | 182 | 1.2 | 37.238 | -S220 | 50-P80/M4 | |
| 36 | 193 | 2.7 | 3.6 | 149 | 15 | 193 | 36 | 193 | 2.7 | 64 | 197 | 2.7 | 40.333 | -S660 | 50-P80/M4 | |
| 35 | 196 | 2.0 | 3.5 | 151 | 15 | 196 | 35 | 196 | 2.0 | 63 | 200 | 2.0 | 40.974 | -S400 | 50-P80/M4 | |
| 34 | 204 | 1.1 | 3.4 | 157 | 14 | 204 | 34 | 204 | 1.1 | 60 | 208 | 1.1 | 42.533 | -S220 | 50-P80/M4 | |
| 32 | 220 | 2.7 | 3.2 | 169 | 13 | 220 | 32 | 220 | 2.7 | 56 | 225 | 2.7 | 45.956 | -S660 | 50-P80/M4 | |
| 31 | 225 | 1.4 | 3.1 | 173 | 13 | 225 | 31 | 225 | 1.4 | 55 | 229 | 1.4 | 46.933 | -S400 | 50-P80/M4 | |
| 30 | 231 | 1.0 | 3.0 | 178 | 13 | 231 | 30 | 231 | 1.0 | 53 | 235 | 0.9 | 48.190 | -S220 | 50-P80/M4 | |
| 30 | 235 | 1.9 | 3.0 | 181 | 12 | 235 | 30 | 235 | 1.9 | 52 | 239 | 1.9 | 48.950 | -S660 | 50-P80/M4 | |
| | | | 2.8 | 190 | 12 | 252 | | | | 50 | 252 | 0.9 | 51.620 | -S220 | 50-P80/M4 | |
| 27 | 254 | 1.4 | 2.7 | 196 | 11 | 254 | 27 | 254 | 1.4 | 48 | 259 | 1.3 | 53.026 | -S400 | 50-P80/M4 | |
| 26 | 267 | 1.9 | 2.6 | 206 | 11 | 267 | 26 | 267 | 1.9 | 46 | 272 | 1.9 | 55.773 | -S660 | 50-P80/M4 | |
| | | | 2.5 | 210 | 11 | 278 | | | | 45 | 278 | 1.0 | 56.960 | -S400 | 50-P80/M4 | |
| | | | 2.3 | 237 | 9.3 | 314 | | | | 40 | 314 | 1.0 | 64.354 | -S400 | 50-P80/M4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 29 | 235 | 2.7 | 2.9 | 181 | 12 | 235 | 29 | 235 | 2.7 | 51 | 240 | 2.5 | 49.867 | -S660 | 50-P80/M4 | |
| 28 | 248 | 0.9 | 2.8 | 191 | 11 | 248 | 28 | 248 | 0.9 | 49 | 253 | 0.8 | 52.587 | -S220 | 50-P80/M4 | |
| 26 | 268 | 2.4 | 2.6 | 206 | 11 | 268 | 26 | 268 | 2.4 | 45 | 273 | 2.3 | 56.818 | -S660 | 50-P80/M4 | |
| 25 | 274 | 1.5 | 2.5 | 211 | 10 | 274 | 25 | 274 | 1.5 | 44 | 279 | 1.4 | 58.027 | -S400 | 50-P80/M4 | |
| 23 | 301 | 2.2 | 2.3 | 232 | 9.4 | 301 | 23 | 301 | 2.2 | 40 | 307 | 2.0 | 63.817 | -S660 | 50-P80/M4 | |
| 22 | 309 | 1.3 | 2.2 | 238 | 9.2 | 309 | 22 | 309 | 1.3 | 39 | 316 | 1.2 | 65.559 | -S400 | 50-P80/M4 | |
| 21 | 330 | 2.0 | 2.1 | 254 | 8.6 | 330 | 21 | 330 | 2.0 | 37 | 336 | 1.9 | 69.813 | -S660 | 50-P80/M4 | |
| 20 | 343 | 1.9 | 2.0 | 264 | 8.3 | 343 | 20 | 343 | 1.9 | 35 | 350 | 1.9 | 72.713 | -S660 | 50-P80/M4 | |
| 20 | 351 | 1.1 | 2.0 | 270 | 8.1 | 351 | 20 | 351 | 1.1 | 35 | 357 | 1.1 | 74.260 | -S400 | 50-P80/M4 | |
| 18 | 375 | 1.8 | 1.8 | 289 | 7.5 | 375 | 18 | 375 | 1.8 | 32 | 383 | 1.7 | 79.545 | -S660 | 50-P80/M4 | |
| 17 | 396 | 1.0 | 1.7 | 305 | 7.2 | 396 | 17 | 396 | 1.0 | 31 | 404 | 1.0 | 83.900 | -S400 | 50-P80/M4 | |
| 16 | 420 | 1.6 | 1.6 | 323 | 6.7 | 420 | 16 | 420 | 1.6 | 29 | 429 | 1.5 | 89.048 | -S660 | 50-P80/M4 | |
| 15 | 448 | 0.9 | 1.5 | 345 | 6.3 | 448 | 15 | 448 | 0.9 | 27 | 457 | 0.9 | 94.984 | -S400 | 50-P80/M4 | |
| 14 | 479 | 1.4 | 1.4 | 369 | 5.9 | 479 | 14 | 479 | 1.4 | 25 | 488 | 1.4 | 101.460 | -S660 | 50-P80/M4 | |
| 13 | 515 | 1.3 | 1.3 | 396 | 5.5 | 515 | 13 | 515 | 1.3 | 24 | 525 | 1.3 | 109.083 | -S660 | 50-P80/M4 | |
| 12 | 587 | 1.1 | 1.2 | 451 | 4.8 | 587 | 12 | 587 | 1.1 | 21 | 598 | 1.1 | 124.289 | -S660 | 50-P80/M4 | |
| 11 | 647 | 1.0 | 1.1 | 498 | 4.4 | 647 | 11 | 647 | 1.0 | 19 | 660 | 1.0 | 137.133 | -S660 | 50-P80/M4 | |
| 9.3 | 738 | 0.9 | 0.9 | 567 | 3.8 | 738 | 9.3 | 738 | 0.9 | 16 | 752 | 0.9 | 156.249 | -S660 | 50-P80/M4 | |

g500-S shaft-mounted helical geared motors

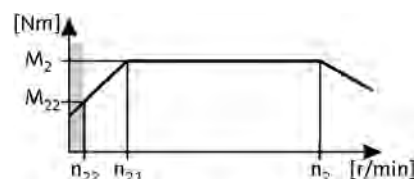


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.1 \text{ kW}$
 87 Hz: $P_N = 1.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|------------------|---------------|-----------|--|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | |
| 394 | 26 | 2.4 | 40 | 18 | 164 | 25 | 394 | 26 | 2.4 | 697 | 25 | 2.1 | 3.661 | -S130 | 50-P90/M4 | | |
| 315 | 32 | 5.9 | 32 | 23 | 131 | 32 | 315 | 32 | 5.9 | 557 | 32 | 5.0 | 4.579 | -S400 | 50-P90/M4 | | |
| 288 | 35 | 2.1 | 29 | 25 | 120 | 35 | 288 | 35 | 2.1 | 508 | 35 | 1.8 | 5.021 | -S130 | 50-P90/M4 | | |
| 246 | 41 | 5.5 | 25 | 29 | 102 | 40 | 246 | 41 | 5.5 | 435 | 40 | 4.7 | 5.860 | -S400 | 50-P90/M4 | | |
| 225 | 45 | 1.9 | 23 | 32 | 93 | 44 | 225 | 45 | 1.9 | 397 | 44 | 1.6 | 6.425 | -S130 | 50-P90/M4 | | |
| 205 | 50 | 1.9 | 21 | 35 | 85 | 49 | 205 | 50 | 1.9 | 363 | 49 | 1.6 | 7.029 | -S130 | 50-P90/M4 | | |
| 174 | 59 | 2.0 | 17 | 41 | 72 | 57 | 174 | 59 | 2.0 | 306 | 57 | 1.7 | 8.322 | -S130 | 50-P90/M4 | | |
| | | | 16 | 46 | 65 | 64 | | | | 275 | 64 | 2.9 | 9.280 | -S220 | 50-P90/M4 | | |
| 153 | 66 | 1.9 | 15 | 47 | 64 | 65 | 153 | 66 | 1.9 | 271 | 65 | 1.6 | 9.411 | -S130 | 50-P90/M4 | | |
| 137 | 74 | 3.0 | 14 | 52 | 57 | 73 | 137 | 74 | 3.0 | 243 | 73 | 2.5 | 10.514 | -S220 | 50-P90/M4 | | |
| 127 | 81 | 1.6 | 13 | 57 | 53 | 79 | 127 | 81 | 1.6 | 223 | 79 | 1.4 | 11.413 | -S130 | 50-P90/M4 | | |
| 122 | 84 | 2.6 | 12 | 59 | 51 | 82 | 122 | 84 | 2.6 | 215 | 82 | 2.3 | 11.876 | -S220 | 50-P90/M4 | | |
| 112 | 91 | 1.4 | 11 | 64 | 47 | 89 | 112 | 91 | 1.4 | 198 | 89 | 1.2 | 12.907 | -S130 | 50-P90/M4 | | |
| 111 | 92 | 2.4 | 11 | 64 | 46 | 90 | 111 | 92 | 2.4 | 196 | 90 | 2.1 | 12.992 | -S220 | 50-P90/M4 | | |
| 107 | 95 | 2.3 | 11 | 67 | 45 | 93 | 107 | 95 | 2.3 | 190 | 93 | 2.0 | 13.456 | -S220 | 50-P90/M4 | | |
| 99 | 103 | 1.3 | 9.9 | 72 | 41 | 101 | 99 | 103 | 1.3 | 175 | 101 | 1.1 | 14.606 | -S130 | 50-P90/M4 | | |
| 98 | 104 | 2.1 | 9.9 | 73 | 41 | 102 | 98 | 104 | 2.1 | 173 | 102 | 1.8 | 14.720 | -S220 | 50-P90/M4 | | |
| 98 | 104 | 3.8 | 9.8 | 73 | 41 | 102 | 98 | 104 | 3.8 | 172 | 102 | 3.3 | 14.806 | -S400 | 50-P90/M4 | | |
| 90 | 113 | 1.2 | 9.1 | 79 | 38 | 110 | 90 | 113 | 1.2 | 160 | 110 | 1.0 | 15.979 | -S130 | 50-P90/M4 | | |
| | | | 9.0 | 80 | 37 | 112 | | | | 157 | 112 | 3.0 | 16.197 | -S400 | 50-P90/M4 | | |
| 87 | 117 | 1.9 | 8.8 | 82 | 36 | 114 | 87 | 117 | 1.9 | 154 | 114 | 1.6 | 16.571 | -S220 | 50-P90/M4 | | |
| 80 | 128 | 1.0 | 8.0 | 89 | 33 | 125 | 80 | 128 | 1.0 | 141 | 125 | 1.0 | 18.069 | -S130 | 50-P90/M4 | | |
| 79 | 129 | 3.1 | 7.9 | 91 | 33 | 126 | 79 | 129 | 3.1 | 140 | 126 | 3.0 | 18.286 | -S400 | 50-P90/M4 | | |
| 77 | 133 | 1.7 | 7.7 | 93 | 32 | 130 | 77 | 133 | 1.7 | 136 | 130 | 1.6 | 18.776 | -S220 | 50-P90/M4 | | |
| 71 | 143 | 1.5 | 7.1 | 100 | 30 | 140 | 71 | 143 | 1.5 | 126 | 140 | 1.5 | 20.300 | -S220 | 50-P90/M4 | | |
| 71 | 144 | 0.9 | 7.1 | 101 | 29 | 141 | 71 | 144 | 0.9 | 125 | 141 | 0.9 | 20.381 | -S130 | 50-P90/M4 | | |
| 70 | 146 | 2.7 | 7.0 | 102 | 29 | 143 | 70 | 146 | 2.7 | 123 | 143 | 2.7 | 20.659 | -S400 | 50-P90/M4 | | |
| 65 | 158 | 2.5 | 6.5 | 111 | 27 | 155 | 65 | 158 | 2.5 | 114 | 155 | 2.5 | 22.400 | -S400 | 50-P90/M4 | | |
| 63 | 162 | 1.4 | 6.3 | 114 | 26 | 159 | 63 | 162 | 1.4 | 111 | 159 | 1.3 | 23.000 | -S220 | 50-P90/M4 | | |
| | | | 5.8 | 124 | 24 | 173 | | | | 102 | 173 | 3.2 | 25.056 | -S660 | 50-P90/M4 | | |
| 57 | 179 | 2.2 | 5.7 | 125 | 24 | 175 | 57 | 179 | 2.2 | 101 | 175 | 2.2 | 25.308 | -S400 | 50-P90/M4 | | |
| 55 | 186 | 1.2 | 5.5 | 131 | 23 | 182 | 55 | 186 | 1.2 | 97 | 182 | 1.2 | 26.422 | -S220 | 50-P90/M4 | | |
| | | | 5.1 | 141 | 21 | 197 | | | | 89 | 197 | 3.2 | 28.548 | -S660 | 50-P90/M4 | | |
| 50 | 206 | 1.9 | 5.0 | 144 | 21 | 201 | 50 | 206 | 1.9 | 88 | 201 | 1.9 | 29.156 | -S400 | 50-P90/M4 | | |
| 48 | 211 | 1.0 | 4.8 | 148 | 20 | 207 | 48 | 211 | 1.0 | 85 | 207 | 1.0 | 29.937 | -S220 | 50-P90/M4 | | |

g500-S shaft-mounted helical geared motors

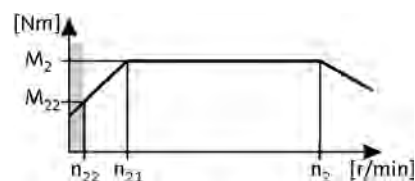


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.1 \text{ kW}$
87 Hz: $P_N = 1.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 46 | 220 | 3.0 | 4.7 | 154 | 19 | 215 | 46 | 220 | 3.0 | 82 | 215 | 3.1 | 31.167 | -S660 | 50-P90/M4 | |
| 44 | 232 | 1.0 | 4.4 | 163 | 18 | 227 | 44 | 232 | 1.0 | 78 | 227 | 1.0 | 32.867 | -S220 | 50-P90/M4 | |
| 44 | 232 | 1.7 | 4.4 | 163 | 18 | 227 | 44 | 232 | 1.7 | 77 | 227 | 1.8 | 32.940 | -S400 | 50-P90/M4 | |
| 41 | 251 | 2.6 | 4.1 | 176 | 17 | 245 | 41 | 251 | 2.6 | 72 | 245 | 2.7 | 35.511 | -S660 | 50-P90/M4 | |
| 40 | 256 | 1.6 | 4.0 | 180 | 17 | 250 | 40 | 256 | 1.6 | 70 | 250 | 1.6 | 36.267 | -S400 | 50-P90/M4 | |
| 39 | 263 | 0.8 | 3.9 | 184 | 16 | 257 | 39 | 263 | 0.8 | 69 | 257 | 0.9 | 37.238 | -S220 | 50-P90/M4 | |
| 36 | 285 | 1.9 | 3.6 | 200 | 15 | 278 | 36 | 285 | 1.9 | 63 | 278 | 2.0 | 40.333 | -S660 | 50-P90/M4 | |
| 35 | 289 | 1.4 | 3.5 | 203 | 15 | 283 | 35 | 289 | 1.4 | 62 | 283 | 1.4 | 40.974 | -S400 | 50-P90/M4 | |
| 31 | 324 | 1.9 | 3.2 | 227 | 13 | 317 | 31 | 324 | 1.9 | 56 | 317 | 2.0 | 45.956 | -S660 | 50-P90/M4 | |
| 30 | 345 | 1.3 | 3.0 | 242 | 12 | 338 | 30 | 345 | 1.3 | 52 | 338 | 1.3 | 48.950 | -S660 | 50-P90/M4 | |
| 26 | 394 | 1.3 | 2.6 | 276 | 11 | 385 | 26 | 394 | 1.3 | 46 | 385 | 1.3 | 55.773 | -S660 | 50-P90/M4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 29 | 347 | 1.8 | 2.9 | 243 | 12 | 339 | 29 | 347 | 1.8 | 51 | 339 | 1.8 | 49.867 | -S660 | 50-P90/M4 | |
| 25 | 395 | 1.7 | 2.6 | 277 | 11 | 386 | 25 | 395 | 1.7 | 45 | 386 | 1.6 | 56.818 | -S660 | 50-P90/M4 | |
| 23 | 444 | 1.5 | 2.3 | 311 | 9.4 | 434 | 23 | 444 | 1.5 | 40 | 434 | 1.5 | 63.817 | -S660 | 50-P90/M4 | |
| 21 | 485 | 1.4 | 2.1 | 340 | 8.6 | 475 | 21 | 485 | 1.4 | 37 | 475 | 1.3 | 69.813 | -S660 | 50-P90/M4 | |
| 20 | 505 | 1.3 | 2.0 | 354 | 8.3 | 494 | 20 | 505 | 1.3 | 35 | 494 | 1.3 | 72.713 | -S660 | 50-P90/M4 | |
| 18 | 553 | 1.2 | 1.8 | 388 | 7.5 | 541 | 18 | 553 | 1.2 | 32 | 541 | 1.2 | 79.545 | -S660 | 50-P90/M4 | |
| 16 | 619 | 1.1 | 1.6 | 434 | 6.7 | 606 | 16 | 619 | 1.1 | 29 | 606 | 1.1 | 89.048 | -S660 | 50-P90/M4 | |
| 14 | 705 | 0.9 | 1.4 | 495 | 5.9 | 690 | 14 | 705 | 0.9 | 25 | 690 | 1.0 | 101.460 | -S660 | 50-P90/M4 | |
| 13 | 758 | 0.9 | 1.3 | 532 | 5.5 | 742 | 13 | 758 | 0.9 | 23 | 742 | 0.9 | 109.083 | -S660 | 50-P90/M4 | |

g500-S shaft-mounted helical geared motors

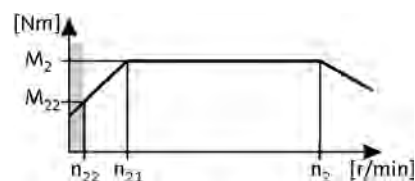


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.5 \text{ kW}$
 87 Hz: $P_N = 2.6 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 394 | 35 | 1.8 | 40 | 25 | 164 | 35 | 394 | 35 | 1.8 | 697 | 35 | 1.5 | 3.661 | -S130 | 50-P90/L4 | |
| 315 | 44 | 4.3 | 32 | 31 | 131 | 43 | 315 | 44 | 4.3 | 557 | 43 | 3.7 | 4.579 | -S400 | 50-P90/L4 | |
| 287 | 48 | 1.6 | 29 | 34 | 120 | 47 | 287 | 48 | 1.6 | 508 | 47 | 1.3 | 5.021 | -S130 | 50-P90/L4 | |
| | | | 28 | 36 | 114 | 50 | | | | 485 | 50 | 3.1 | 5.267 | -S220 | 50-P90/L4 | |
| 246 | 56 | 4.0 | 25 | 40 | 102 | 55 | 246 | 56 | 4.0 | 436 | 55 | 3.4 | 5.860 | -S400 | 50-P90/L4 | |
| 224 | 62 | 1.4 | 23 | 44 | 93 | 61 | 224 | 62 | 1.4 | 397 | 61 | 1.2 | 6.425 | -S130 | 50-P90/L4 | |
| | | | 21 | 46 | 89 | 64 | | | | 377 | 64 | 2.9 | 6.767 | -S220 | 50-P90/L4 | |
| 205 | 68 | 1.4 | 21 | 48 | 85 | 66 | 205 | 68 | 1.4 | 363 | 66 | 1.2 | 7.029 | -S130 | 50-P90/L4 | |
| 188 | 74 | 2.9 | 19 | 52 | 78 | 72 | 188 | 74 | 2.9 | 333 | 72 | 2.5 | 7.667 | -S220 | 50-P90/L4 | |
| 173 | 80 | 1.5 | 17 | 57 | 72 | 80 | 173 | 80 | 1.5 | | | | 8.322 | -S130 | 50-P90/L4 | |
| 155 | 89 | 2.5 | 16 | 63 | 65 | 88 | 155 | 89 | 2.5 | 275 | 88 | 2.1 | 9.280 | -S220 | 50-P90/L4 | |
| 153 | 91 | 1.4 | 15 | 64 | 64 | 91 | 153 | 91 | 1.4 | | | | 9.411 | -S130 | 50-P90/L4 | |
| 137 | 101 | 2.2 | 14 | 71 | 57 | 101 | 137 | 101 | 2.2 | 243 | 99 | 1.9 | 10.514 | -S220 | 50-P90/L4 | |
| 126 | 110 | 1.2 | 13 | 78 | 53 | 110 | 126 | 110 | 1.2 | | | | 11.413 | -S130 | 50-P90/L4 | |
| | | | 13 | 79 | 52 | 109 | | | | 221 | 109 | 3.1 | 11.569 | -S400 | 50-P90/L4 | |
| 121 | 114 | 1.9 | 12 | 81 | 51 | 112 | 121 | 114 | 1.9 | 215 | 112 | 1.6 | 11.876 | -S220 | 50-P90/L4 | |
| 112 | 124 | 1.1 | 11 | 88 | 47 | 124 | 112 | 124 | 1.1 | | | | 12.907 | -S130 | 50-P90/L4 | |
| 111 | 125 | 1.8 | 11 | 88 | 46 | 123 | 111 | 125 | 1.8 | 196 | 123 | 1.5 | 12.992 | -S220 | 50-P90/L4 | |
| 110 | 126 | 3.2 | 11 | 89 | 46 | 124 | 110 | 126 | 3.2 | 195 | 124 | 2.7 | 13.105 | -S400 | 50-P90/L4 | |
| 107 | 130 | 1.7 | 11 | 91 | 45 | 127 | 107 | 130 | 1.7 | 190 | 127 | 1.5 | 13.456 | -S220 | 50-P90/L4 | |
| 101 | 138 | 2.9 | 10 | 97 | 42 | 135 | 101 | 138 | 2.9 | 178 | 135 | 2.5 | 14.336 | -S400 | 50-P90/L4 | |
| 99 | 141 | 0.9 | 9.9 | 99 | 41 | 141 | 99 | 141 | 0.9 | | | | 14.606 | -S130 | 50-P90/L4 | |
| 98 | 142 | 1.6 | 9.9 | 100 | 41 | 139 | 98 | 142 | 1.6 | 173 | 139 | 1.3 | 14.720 | -S220 | 50-P90/L4 | |
| 97 | 143 | 2.8 | 9.8 | 101 | 41 | 140 | 97 | 143 | 2.8 | 172 | 140 | 2.4 | 14.806 | -S400 | 50-P90/L4 | |
| 90 | 154 | 0.8 | 9.1 | 109 | 38 | 154 | 90 | 154 | 0.8 | | | | 15.979 | -S130 | 50-P90/L4 | |
| 89 | 156 | 2.6 | 9.0 | 110 | 37 | 153 | 89 | 156 | 2.6 | 158 | 153 | 2.2 | 16.197 | -S400 | 50-P90/L4 | |
| 87 | 160 | 1.4 | 8.8 | 113 | 36 | 156 | 87 | 160 | 1.4 | 154 | 156 | 1.2 | 16.571 | -S220 | 50-P90/L4 | |
| 79 | 176 | 2.3 | 7.9 | 124 | 33 | 173 | 79 | 176 | 2.3 | 140 | 173 | 2.2 | 18.286 | -S400 | 50-P90/L4 | |
| 77 | 181 | 1.2 | 7.7 | 128 | 32 | 177 | 77 | 181 | 1.2 | 136 | 177 | 1.2 | 18.776 | -S220 | 50-P90/L4 | |
| 71 | 196 | 1.1 | 7.1 | 138 | 30 | 192 | 71 | 196 | 1.1 | 126 | 192 | 1.1 | 20.300 | -S220 | 50-P90/L4 | |
| 70 | 199 | 2.0 | 7.0 | 140 | 29 | 195 | 70 | 199 | 2.0 | 124 | 195 | 2.0 | 20.659 | -S400 | 50-P90/L4 | |
| 66 | 211 | 3.1 | 6.6 | 149 | 27 | 207 | 66 | 211 | 3.1 | 116 | 207 | 3.0 | 21.933 | -S660 | 50-P90/L4 | |
| 64 | 216 | 1.9 | 6.5 | 152 | 27 | 211 | 64 | 216 | 1.9 | 114 | 211 | 1.8 | 22.400 | -S400 | 50-P90/L4 | |
| 63 | 222 | 1.0 | 6.3 | 156 | 26 | 217 | 63 | 222 | 1.0 | 111 | 217 | 1.0 | 23.000 | -S220 | 50-P90/L4 | |
| 58 | 241 | 2.4 | 5.8 | 170 | 24 | 237 | 58 | 241 | 2.4 | 102 | 237 | 2.3 | 25.056 | -S660 | 50-P90/L4 | |

g500-S shaft-mounted helical geared motors

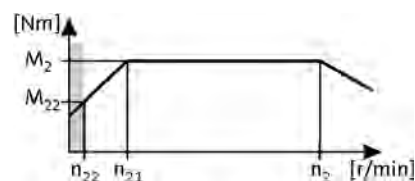


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.5 \text{ kW}$
87 Hz: $P_N = 2.6 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 57 | 244 | 1.6 | 5.7 | 172 | 24 | 239 | 57 | 244 | 1.6 | 101 | 239 | 1.6 | 25.308 | -S400 | 50-P90/L4 | |
| 55 | 255 | 0.9 | 5.5 | 179 | 23 | 249 | 55 | 255 | 0.9 | 97 | 249 | 0.8 | 26.422 | -S220 | 50-P90/L4 | |
| 51 | 275 | 2.4 | 5.1 | 194 | 21 | 269 | 51 | 275 | 2.4 | 89 | 269 | 2.3 | 28.548 | -S660 | 50-P90/L4 | |
| 50 | 281 | 1.4 | 5.0 | 198 | 21 | 275 | 50 | 281 | 1.4 | 88 | 275 | 1.4 | 29.156 | -S400 | 50-P90/L4 | |
| 46 | 300 | 2.2 | 4.7 | 212 | 19 | 294 | 46 | 300 | 2.2 | 82 | 294 | 2.2 | 31.167 | -S660 | 50-P90/L4 | |
| 44 | 317 | 1.3 | 4.4 | 224 | 18 | 311 | 44 | 317 | 1.3 | 78 | 311 | 1.3 | 32.940 | -S400 | 50-P90/L4 | |
| 41 | 342 | 1.9 | 4.1 | 241 | 17 | 335 | 41 | 342 | 1.9 | 72 | 335 | 2.0 | 35.511 | -S660 | 50-P90/L4 | |
| 40 | 350 | 1.1 | 4.0 | 246 | 17 | 342 | 40 | 350 | 1.1 | 70 | 342 | 1.2 | 36.267 | -S400 | 50-P90/L4 | |
| 36 | 389 | 1.4 | 3.6 | 274 | 15 | 381 | 36 | 389 | 1.4 | 63 | 381 | 1.4 | 40.333 | -S660 | 50-P90/L4 | |
| 35 | 395 | 1.0 | 3.5 | 278 | 15 | 387 | 35 | 395 | 1.0 | 62 | 387 | 1.0 | 40.974 | -S400 | 50-P90/L4 | |
| 31 | 443 | 1.4 | 3.2 | 312 | 13 | 434 | 31 | 443 | 1.4 | 56 | 434 | 1.4 | 45.956 | -S660 | 50-P90/L4 | |
| | | | 3.0 | 332 | 12 | 462 | | | | 52 | 462 | 1.0 | 48.950 | -S660 | 50-P90/L4 | |
| | | | 2.6 | 379 | 11 | 526 | | | | 46 | 526 | 1.0 | 55.773 | -S660 | 50-P90/L4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 29 | 473 | 1.3 | 2.9 | 334 | 12 | 464 | 29 | 473 | 1.3 | 51 | 464 | 1.3 | 49.867 | -S660 | 50-P90/L4 | |
| 25 | 539 | 1.2 | 2.6 | 380 | 11 | 528 | 25 | 539 | 1.2 | 45 | 528 | 1.2 | 56.818 | -S660 | 50-P90/L4 | |
| 23 | 606 | 1.1 | 2.3 | 427 | 9.4 | 593 | 23 | 606 | 1.1 | 40 | 593 | 1.1 | 63.817 | -S660 | 50-P90/L4 | |
| 21 | 663 | 1.0 | 2.1 | 467 | 8.6 | 649 | 21 | 663 | 1.0 | 37 | 649 | 1.0 | 69.813 | -S660 | 50-P90/L4 | |
| 20 | 690 | 1.0 | 2.0 | 486 | 8.3 | 676 | 20 | 690 | 1.0 | 35 | 676 | 1.0 | 72.713 | -S660 | 50-P90/L4 | |
| 18 | 755 | 0.9 | 1.8 | 532 | 7.5 | 740 | 18 | 755 | 0.9 | 32 | 740 | 0.9 | 79.545 | -S660 | 50-P90/L4 | |

g500-S shaft-mounted helical geared motors

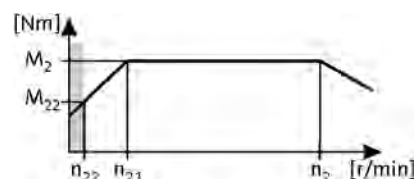


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 2.2 \text{ kW}$
 87 Hz: $P_N = 3.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 378 | 54 | 3.3 | 38 | 38 | 156 | 54 | 378 | 54 | 3.3 | 667 | 54 | 2.8 | 3.840 | -S220 | 50-P100/M4 | |
| 370 | 55 | 5.6 | 37 | 38 | 153 | 55 | 370 | 55 | 5.6 | | | | 3.920 | -S660 | 50-P100/M4 | |
| 317 | 64 | 3.8 | 32 | 45 | 131 | 64 | 317 | 64 | 3.8 | 560 | 65 | 3.2 | 4.579 | -S400 | 50-P100/M4 | |
| 276 | 74 | 2.5 | 28 | 52 | 114 | 74 | 276 | 74 | 2.5 | 487 | 74 | 2.0 | 5.267 | -S220 | 50-P100/M4 | |
| 248 | 82 | 3.1 | 25 | 57 | 102 | 82 | 248 | 82 | 3.1 | 437 | 83 | 2.6 | 5.860 | -S400 | 50-P100/M4 | |
| 227 | 90 | 2.9 | 23 | 63 | 94 | 90 | 227 | 90 | 2.9 | 400 | 90 | 2.4 | 6.411 | -S400 | 50-P100/M4 | |
| 215 | 95 | 2.3 | 21 | 66 | 89 | 95 | 215 | 95 | 2.3 | | | | 6.767 | -S220 | 50-P100/M4 | |
| 195 | 105 | 3.5 | 19 | 73 | 80 | 105 | 195 | 105 | 3.5 | 343 | 105 | 2.9 | 7.467 | -S400 | 50-P100/M4 | |
| 189 | 108 | 2.0 | 19 | 75 | 78 | 108 | 189 | 108 | 2.0 | | | | 7.667 | -S220 | 50-P100/M4 | |
| 172 | 118 | 3.2 | 17 | 83 | 71 | 118 | 172 | 118 | 3.2 | 304 | 119 | 2.7 | 8.436 | -S400 | 50-P100/M4 | |
| 157 | 130 | 1.7 | 16 | 91 | 65 | 130 | 157 | 130 | 1.7 | | | | 9.280 | -S220 | 50-P100/M4 | |
| 142 | 144 | 2.8 | 14 | 100 | 59 | 144 | 142 | 144 | 2.8 | 250 | 144 | 2.3 | 10.240 | -S400 | 50-P100/M4 | |
| 138 | 148 | 1.5 | 14 | 103 | 57 | 148 | 138 | 148 | 1.5 | | | | 10.514 | -S220 | 50-P100/M4 | |
| 126 | 162 | 2.5 | 13 | 113 | 52 | 162 | 126 | 162 | 2.5 | 221 | 163 | 2.1 | 11.569 | -S400 | 50-P100/M4 | |
| 122 | 167 | 1.3 | 12 | 116 | 51 | 167 | 122 | 167 | 1.3 | | | | 11.876 | -S220 | 50-P100/M4 | |
| | | | 12 | 121 | 49 | 174 | | | | 208 | 174 | 3.2 | 12.320 | -S660 | 50-P100/M4 | |
| | | | 11 | 126 | 47 | 181 | | | | 200 | 181 | 3.1 | 12.832 | -S660 | 50-P100/M4 | |
| 112 | 182 | 1.2 | 11 | 127 | 46 | 182 | 112 | 182 | 1.2 | | | | 12.992 | -S220 | 50-P100/M4 | |
| 111 | 184 | 2.2 | 11 | 128 | 46 | 184 | 111 | 184 | 2.2 | 196 | 185 | 1.8 | 13.105 | -S400 | 50-P100/M4 | |
| 108 | 189 | 1.2 | 11 | 132 | 45 | 189 | 108 | 189 | 1.2 | | | | 13.456 | -S220 | 50-P100/M4 | |
| | | | 10 | 138 | 43 | 198 | | | | 183 | 198 | 2.8 | 14.037 | -S660 | 50-P100/M4 | |
| 101 | 201 | 2.0 | 10 | 141 | 42 | 201 | 101 | 201 | 2.0 | 179 | 202 | 1.7 | 14.336 | -S400 | 50-P100/M4 | |
| 99 | 207 | 1.1 | 9.9 | 144 | 41 | 207 | 99 | 207 | 1.1 | | | | 14.720 | -S220 | 50-P100/M4 | |
| 98 | 208 | 1.9 | 9.8 | 145 | 41 | 208 | 98 | 208 | 1.9 | 173 | 209 | 1.6 | 14.806 | -S400 | 50-P100/M4 | |
| 92 | 221 | 3.0 | 9.2 | 154 | 38 | 221 | 92 | 221 | 3.0 | 163 | 222 | 2.5 | 15.714 | -S660 | 50-P100/M4 | |
| 90 | 227 | 1.8 | 9.0 | 159 | 37 | 227 | 90 | 227 | 1.8 | 158 | 228 | 1.5 | 16.197 | -S400 | 50-P100/M4 | |
| 88 | 233 | 1.0 | 8.8 | 162 | 36 | 233 | 88 | 233 | 1.0 | | | | 16.571 | -S220 | 50-P100/M4 | |
| 81 | 251 | 2.6 | 8.1 | 176 | 34 | 251 | 81 | 251 | 2.6 | 143 | 253 | 2.2 | 17.905 | -S660 | 50-P100/M4 | |
| 79 | 257 | 1.6 | 7.9 | 179 | 33 | 257 | 79 | 257 | 1.6 | 140 | 258 | 1.5 | 18.286 | -S400 | 50-P100/M4 | |
| 77 | 264 | 0.8 | 7.7 | 184 | 32 | 264 | 77 | 264 | 0.8 | | | | 18.776 | -S220 | 50-P100/M4 | |
| 75 | 270 | 2.4 | 7.5 | 189 | 31 | 270 | 75 | 270 | 2.4 | 133 | 271 | 2.3 | 19.250 | -S660 | 50-P100/M4 | |
| 70 | 290 | 1.4 | 7.0 | 202 | 29 | 290 | 70 | 290 | 1.4 | 124 | 291 | 1.3 | 20.659 | -S400 | 50-P100/M4 | |
| 66 | 308 | 2.1 | 6.6 | 215 | 27 | 308 | 66 | 308 | 2.1 | 117 | 309 | 2.0 | 21.933 | -S660 | 50-P100/M4 | |
| 65 | 314 | 1.3 | 6.5 | 220 | 27 | 314 | 65 | 314 | 1.3 | 114 | 316 | 1.2 | 22.400 | -S400 | 50-P100/M4 | |
| 58 | 352 | 1.6 | 5.8 | 246 | 24 | 352 | 58 | 352 | 1.6 | 102 | 353 | 1.6 | 25.056 | -S660 | 50-P100/M4 | |

g500-S shaft-mounted helical geared motors

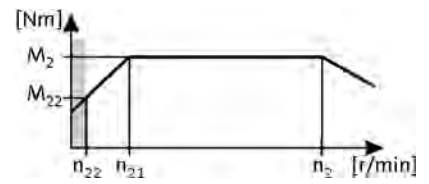
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 2.2 \text{ kW}$
 87 Hz: $P_N = 3.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 57 | 355 | 1.1 | 5.7 | 248 | 24 | 355 | 57 | 355 | 1.1 | 101 | 357 | 1.1 | 25.308 | -S400 | 50-P100/M4 | |
| 51 | 401 | 1.7 | 5.1 | 280 | 21 | 401 | 51 | 401 | 1.7 | 90 | 403 | 1.6 | 28.548 | -S660 | 50-P100/M4 | |
| 47 | 438 | 1.5 | 4.7 | 305 | 19 | 438 | 47 | 438 | 1.5 | 82 | 440 | 1.5 | 31.167 | -S660 | 50-P100/M4 | |
| 41 | 498 | 1.3 | 4.1 | 348 | 17 | 498 | 41 | 498 | 1.3 | 72 | 501 | 1.3 | 35.511 | -S660 | 50-P100/M4 | |

g500-S shaft-mounted helical geared motors

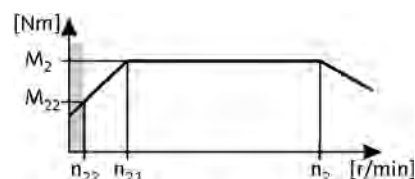


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 3.0 \text{ kW}$
 87 Hz: $P_N = 5.2 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 434 | 64 | 3.2 | 43 | 45 | 180 | 63 | 434 | 64 | 3.2 | 766 | 63 | 2.7 | 3.339 | -S400 | 50-P100/L4 | |
| 377 | 74 | 2.4 | 38 | 51 | 156 | 74 | 377 | 74 | 2.4 | | | | 3.840 | -S220 | 50-P100/L4 | |
| 370 | 75 | 4.1 | 37 | 53 | 153 | 75 | 370 | 75 | 4.1 | | | | 3.920 | -S660 | 50-P100/L4 | |
| 316 | 88 | 2.8 | 32 | 61 | 131 | 86 | 316 | 88 | 2.8 | 559 | 86 | 2.4 | 4.579 | -S400 | 50-P100/L4 | |
| 275 | 101 | 1.8 | 28 | 71 | 114 | 101 | 275 | 101 | 1.8 | | | | 5.267 | -S220 | 50-P100/L4 | |
| 247 | 112 | 2.3 | 25 | 79 | 102 | 110 | 247 | 112 | 2.3 | 437 | 110 | 2.0 | 5.860 | -S400 | 50-P100/L4 | |
| 226 | 123 | 2.1 | 23 | 86 | 94 | 121 | 226 | 123 | 2.1 | 399 | 121 | 1.8 | 6.411 | -S400 | 50-P100/L4 | |
| 214 | 130 | 1.7 | 21 | 91 | 89 | 130 | 214 | 130 | 1.7 | | | | 6.767 | -S220 | 50-P100/L4 | |
| | | | 21 | 92 | 87 | 130 | | | | 372 | 130 | 3.0 | 6.880 | -S660 | 50-P100/L4 | |
| 194 | 143 | 2.6 | 19 | 100 | 80 | 143 | 194 | 143 | 2.6 | | | | 7.467 | -S400 | 50-P100/L4 | |
| 189 | 147 | 1.5 | 19 | 103 | 78 | 147 | 189 | 147 | 1.5 | | | | 7.667 | -S220 | 50-P100/L4 | |
| 172 | 162 | 2.4 | 17 | 113 | 71 | 162 | 172 | 162 | 2.4 | | | | 8.436 | -S400 | 50-P100/L4 | |
| | | | 17 | 118 | 68 | 166 | | | | 291 | 166 | 3.2 | 8.800 | -S660 | 50-P100/L4 | |
| 156 | 178 | 1.2 | 16 | 124 | 65 | 178 | 156 | 178 | 1.2 | | | | 9.280 | -S220 | 50-P100/L4 | |
| 145 | 192 | 3.3 | 15 | 134 | 60 | 189 | 145 | 192 | 3.3 | 255 | 189 | 2.8 | 10.027 | -S660 | 50-P100/L4 | |
| 142 | 196 | 2.0 | 14 | 137 | 59 | 193 | 142 | 196 | 2.0 | 250 | 193 | 1.7 | 10.240 | -S400 | 50-P100/L4 | |
| 138 | 202 | 1.1 | 14 | 141 | 57 | 202 | 138 | 202 | 1.1 | | | | 10.514 | -S220 | 50-P100/L4 | |
| 129 | 216 | 3.1 | 13 | 151 | 53 | 212 | 129 | 216 | 3.1 | 227 | 212 | 2.6 | 11.262 | -S660 | 50-P100/L4 | |
| 125 | 222 | 1.8 | 13 | 155 | 52 | 222 | 125 | 222 | 1.8 | | | | 11.569 | -S400 | 50-P100/L4 | |
| 122 | 228 | 1.0 | 12 | 159 | 51 | 228 | 122 | 228 | 1.0 | | | | 11.876 | -S220 | 50-P100/L4 | |
| 118 | 236 | 2.8 | 12 | 165 | 49 | 232 | 118 | 236 | 2.8 | 208 | 232 | 2.4 | 12.320 | -S660 | 50-P100/L4 | |
| 113 | 246 | 2.7 | 11 | 172 | 47 | 242 | 113 | 246 | 2.7 | 199 | 242 | 2.3 | 12.832 | -S660 | 50-P100/L4 | |
| 112 | 249 | 0.9 | 11 | 174 | 46 | 249 | 112 | 249 | 0.9 | | | | 12.992 | -S220 | 50-P100/L4 | |
| 111 | 251 | 1.6 | 11 | 176 | 46 | 247 | 111 | 251 | 1.6 | 195 | 247 | 1.4 | 13.105 | -S400 | 50-P100/L4 | |
| 108 | 258 | 0.9 | 11 | 180 | 45 | 258 | 108 | 258 | 0.9 | | | | 13.456 | -S220 | 50-P100/L4 | |
| 103 | 269 | 2.5 | 10 | 188 | 43 | 264 | 103 | 269 | 2.5 | 182 | 264 | 2.1 | 14.037 | -S660 | 50-P100/L4 | |
| 101 | 275 | 1.5 | 10 | 192 | 42 | 270 | 101 | 275 | 1.5 | 179 | 270 | 1.2 | 14.336 | -S400 | 50-P100/L4 | |
| 98 | 284 | 1.4 | 9.8 | 198 | 41 | 279 | 98 | 284 | 1.4 | 173 | 279 | 1.2 | 14.806 | -S400 | 50-P100/L4 | |
| 92 | 301 | 2.2 | 9.2 | 210 | 38 | 296 | 92 | 301 | 2.2 | 163 | 296 | 1.9 | 15.714 | -S660 | 50-P100/L4 | |
| 90 | 311 | 1.3 | 9.0 | 217 | 37 | 305 | 90 | 311 | 1.3 | 158 | 305 | 1.1 | 16.197 | -S400 | 50-P100/L4 | |
| 81 | 343 | 1.9 | 8.1 | 240 | 34 | 337 | 81 | 343 | 1.9 | 143 | 337 | 1.6 | 17.905 | -S660 | 50-P100/L4 | |
| 79 | 351 | 1.1 | 7.9 | 245 | 33 | 344 | 79 | 351 | 1.1 | 140 | 344 | 1.1 | 18.286 | -S400 | 50-P100/L4 | |
| 75 | 369 | 1.8 | 7.5 | 258 | 31 | 362 | 75 | 369 | 1.8 | 133 | 362 | 1.7 | 19.250 | -S660 | 50-P100/L4 | |
| 70 | 396 | 1.0 | 7.0 | 277 | 29 | 389 | 70 | 396 | 1.0 | 124 | 389 | 1.0 | 20.659 | -S400 | 50-P100/L4 | |
| 66 | 421 | 1.6 | 6.6 | 294 | 27 | 413 | 66 | 421 | 1.6 | 117 | 413 | 1.5 | 21.933 | -S660 | 50-P100/L4 | |

g500-S shaft-mounted helical geared motors

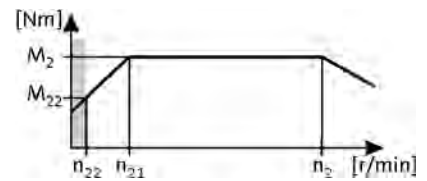
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 3.0$ kW
87 Hz: $P_N = 5.2$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 65 | 430 | 0.9 | 6.5 | 300 | 27 | 422 | 65 | 430 | 0.9 | 114 | 422 | 0.9 | 22.400 | -S400 | 50-P100/L4 | |
| 58 | 481 | 1.2 | 5.8 | 336 | 24 | 472 | 58 | 481 | 1.2 | 102 | 472 | 1.2 | 25.056 | -S660 | 50-P100/L4 | |
| 57 | 485 | 0.8 | 5.7 | 339 | 24 | 485 | 57 | 485 | 0.8 | | | | 25.308 | -S400 | 50-P100/L4 | |
| 51 | 548 | 1.2 | 5.1 | 382 | 21 | 537 | 51 | 548 | 1.2 | 90 | 537 | 1.2 | 28.548 | -S660 | 50-P100/L4 | |
| 47 | 598 | 1.1 | 4.7 | 417 | 19 | 587 | 47 | 598 | 1.1 | 82 | 587 | 1.1 | 31.167 | -S660 | 50-P100/L4 | |
| 41 | 681 | 1.0 | 4.1 | 476 | 17 | 669 | 41 | 681 | 1.0 | 72 | 669 | 1.0 | 35.511 | -S660 | 50-P100/L4 | |

g500-S shaft-mounted helical geared motors

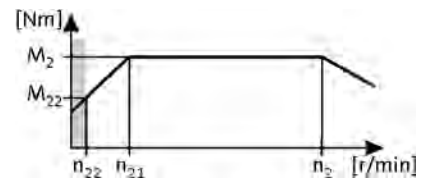


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 4.0 \text{ kW}$
 87 Hz: $P_N = 7.35 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|------------------|---------------|------------|--|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | | m5□□ | | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | |
| 435 | 85 | 2.4 | 43 | 53 | 180 | 85 | 435 | 85 | 2.4 | | | | 3.339 | -S400 | 50-P112/M4 | | |
| 371 | 100 | 3.4 | 37 | 62 | 153 | 100 | 371 | 100 | 3.4 | | | | 3.920 | -S660 | 50-P112/M4 | | |
| 317 | 117 | 2.1 | 32 | 73 | 131 | 117 | 317 | 117 | 2.1 | 560 | 122 | 1.7 | 4.579 | -S400 | 50-P112/M4 | | |
| | | | 27 | 86 | 112 | 143 | | | | 477 | 143 | 2.8 | 5.376 | -S660 | 50-P112/M4 | | |
| 248 | 149 | 1.7 | 25 | 93 | 102 | 149 | 248 | 149 | 1.7 | 438 | 156 | 1.4 | 5.860 | -S400 | 50-P112/M4 | | |
| 227 | 164 | 1.6 | 23 | 102 | 94 | 164 | 227 | 164 | 1.6 | 400 | 170 | 1.3 | 6.411 | -S400 | 50-P112/M4 | | |
| 211 | 175 | 2.8 | 21 | 110 | 87 | 175 | 211 | 175 | 2.8 | 373 | 183 | 2.3 | 6.880 | -S660 | 50-P112/M4 | | |
| 199 | 186 | 3.2 | 20 | 116 | 82 | 186 | 199 | 186 | 3.2 | | | | 7.311 | -S660 | 50-P112/M4 | | |
| 195 | 190 | 1.9 | 19 | 119 | 80 | 190 | 195 | 190 | 1.9 | | | | 7.467 | -S400 | 50-P112/M4 | | |
| 172 | 215 | 1.8 | 17 | 134 | 71 | 215 | 172 | 215 | 1.8 | | | | 8.436 | -S400 | 50-P112/M4 | | |
| 165 | 224 | 2.8 | 17 | 140 | 68 | 224 | 165 | 224 | 2.8 | | | | 8.800 | -S660 | 50-P112/M4 | | |
| 145 | 256 | 2.4 | 15 | 160 | 60 | 256 | 145 | 256 | 2.4 | | | | 10.027 | -S660 | 50-P112/M4 | | |
| 142 | 261 | 1.5 | 14 | 163 | 59 | 261 | 142 | 261 | 1.5 | | | | 10.240 | -S400 | 50-P112/M4 | | |
| 129 | 287 | 2.3 | 13 | 179 | 53 | 287 | 129 | 287 | 2.3 | 228 | 299 | 1.9 | 11.262 | -S660 | 50-P112/M4 | | |
| 126 | 295 | 1.4 | 13 | 184 | 52 | 295 | 126 | 295 | 1.4 | | | | 11.569 | -S400 | 50-P112/M4 | | |
| 118 | 314 | 2.1 | 12 | 196 | 49 | 314 | 118 | 314 | 2.1 | 208 | 327 | 1.7 | 12.320 | -S660 | 50-P112/M4 | | |
| 113 | 327 | 2.0 | 11 | 204 | 47 | 327 | 113 | 327 | 2.0 | | | | 12.832 | -S660 | 50-P112/M4 | | |
| 111 | 334 | 1.2 | 11 | 209 | 46 | 334 | 111 | 334 | 1.2 | | | | 13.105 | -S400 | 50-P112/M4 | | |
| 104 | 358 | 1.8 | 10 | 223 | 43 | 358 | 104 | 358 | 1.8 | | | | 14.037 | -S660 | 50-P112/M4 | | |
| 101 | 366 | 1.1 | 10 | 228 | 42 | 366 | 101 | 366 | 1.1 | | | | 14.336 | -S400 | 50-P112/M4 | | |
| 98 | 378 | 1.1 | 9.8 | 236 | 41 | 378 | 98 | 378 | 1.1 | | | | 14.806 | -S400 | 50-P112/M4 | | |
| 93 | 401 | 1.7 | 9.2 | 250 | 38 | 401 | 93 | 401 | 1.7 | 163 | 417 | 1.3 | 15.714 | -S660 | 50-P112/M4 | | |
| 90 | 413 | 1.0 | 9.0 | 258 | 37 | 413 | 90 | 413 | 1.0 | | | | 16.197 | -S400 | 50-P112/M4 | | |
| 81 | 457 | 1.5 | 8.1 | 285 | 34 | 457 | 81 | 457 | 1.5 | 143 | 475 | 1.2 | 17.905 | -S660 | 50-P112/M4 | | |
| 80 | 466 | 0.9 | 7.9 | 291 | 33 | 466 | 80 | 466 | 0.9 | | | | 18.286 | -S400 | 50-P112/M4 | | |
| 76 | 491 | 1.3 | 7.5 | 306 | 31 | 491 | 76 | 491 | 1.3 | 133 | 511 | 1.2 | 19.250 | -S660 | 50-P112/M4 | | |
| 66 | 559 | 1.2 | 6.6 | 349 | 27 | 559 | 66 | 559 | 1.2 | 117 | 582 | 1.1 | 21.933 | -S660 | 50-P112/M4 | | |
| 58 | 639 | 0.9 | 5.8 | 399 | 24 | 639 | 58 | 639 | 0.9 | 102 | 665 | 0.8 | 25.056 | -S660 | 50-P112/M4 | | |
| 51 | 728 | 0.9 | 5.1 | 454 | 21 | 728 | 51 | 728 | 0.9 | 90 | 758 | 0.8 | 28.548 | -S660 | 50-P112/M4 | | |

g500-S shaft-mounted helical geared motors

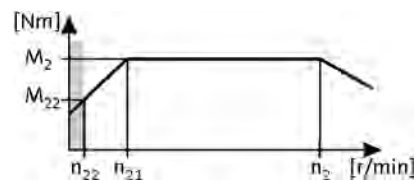
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 5.5$ kW
87 Hz: $P_N = 9.6$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 372 | 137 | 3.1 | 37 | 85 | 153 | 137 | 372 | 137 | 3.1 | | | | 3.920 | -S660 | 50-P132/M4 | |
| 272 | 188 | 2.6 | 27 | 116 | 112 | 188 | 272 | 188 | 2.6 | | | | 5.376 | -S660 | 50-P132/M4 | |
| 228 | 224 | 2.7 | 23 | 139 | 94 | 224 | 228 | 224 | 2.7 | | | | 6.417 | -S660 | 50-P132/M4 | |
| 212 | 240 | 2.1 | 21 | 149 | 87 | 240 | 212 | 240 | 2.1 | | | | 6.880 | -S660 | 50-P132/M4 | |
| 200 | 255 | 2.3 | 20 | 158 | 82 | 255 | 200 | 255 | 2.3 | | | | 7.311 | -S660 | 50-P132/M4 | |
| 166 | 307 | 2.1 | 17 | 191 | 68 | 307 | 166 | 307 | 2.1 | | | | 8.800 | -S660 | 50-P132/M4 | |
| 146 | 350 | 1.8 | 15 | 217 | 60 | 350 | 146 | 350 | 1.8 | | | | 10.027 | -S660 | 50-P132/M4 | |
| 130 | 393 | 1.7 | 13 | 244 | 53 | 393 | 130 | 393 | 1.7 | | | | 11.262 | -S660 | 50-P132/M4 | |
| 119 | 430 | 1.5 | 12 | 267 | 49 | 430 | 119 | 430 | 1.5 | | | | 12.320 | -S660 | 50-P132/M4 | |
| 114 | 448 | 1.5 | 11 | 278 | 47 | 448 | 114 | 448 | 1.5 | | | | 12.832 | -S660 | 50-P132/M4 | |
| 104 | 490 | 1.4 | 10 | 304 | 43 | 490 | 104 | 490 | 1.4 | | | | 14.037 | -S660 | 50-P132/M4 | |
| 93 | 548 | 1.2 | 9.2 | 340 | 38 | 548 | 93 | 548 | 1.2 | | | | 15.714 | -S660 | 50-P132/M4 | |
| 82 | 625 | 1.1 | 8.1 | 388 | 34 | 625 | 82 | 625 | 1.1 | | | | 17.905 | -S660 | 50-P132/M4 | |
| 76 | 672 | 1.0 | 7.5 | 417 | 31 | 672 | 76 | 672 | 1.0 | | | | 19.250 | -S660 | 50-P132/M4 | |
| 67 | 766 | 0.9 | 6.6 | 475 | 27 | 766 | 67 | 766 | 0.9 | | | | 21.933 | -S660 | 50-P132/M4 | |

g500-S shaft-mounted helical geared motors

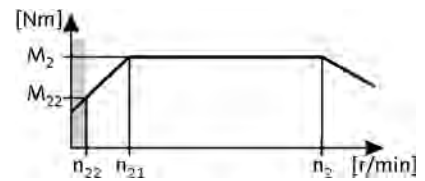


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 13.1$ kW
 87 Hz: $P_N = 7.5$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 377 | 184 | 2.3 | 37 | 117 | 153 | 184 | 377 | 184 | 2.3 | | | | 3.920 | -S660 | 50-P132/L4 | |
| 275 | 253 | 2.0 | 27 | 160 | 112 | 253 | 275 | 253 | 2.0 | | | | 5.376 | -S660 | 50-P132/L4 | |
| 230 | 302 | 2.0 | 23 | 191 | 94 | 302 | 230 | 302 | 2.0 | | | | 6.417 | -S660 | 50-P132/L4 | |
| 215 | 324 | 1.5 | 21 | 205 | 87 | 324 | 215 | 324 | 1.5 | | | | 6.880 | -S660 | 50-P132/L4 | |
| 202 | 344 | 1.7 | 20 | 218 | 82 | 344 | 202 | 344 | 1.7 | | | | 7.311 | -S660 | 50-P132/L4 | |
| 168 | 414 | 1.5 | 17 | 262 | 68 | 414 | 168 | 414 | 1.5 | | | | 8.800 | -S660 | 50-P132/L4 | |
| 147 | 472 | 1.3 | 15 | 299 | 60 | 472 | 147 | 472 | 1.3 | | | | 10.027 | -S660 | 50-P132/L4 | |
| 131 | 530 | 1.3 | 13 | 335 | 53 | 530 | 131 | 530 | 1.3 | | | | 11.262 | -S660 | 50-P132/L4 | |
| 120 | 580 | 1.1 | 12 | 367 | 49 | 580 | 120 | 580 | 1.1 | | | | 12.320 | -S660 | 50-P132/L4 | |
| 115 | 604 | 1.1 | 11 | 382 | 47 | 604 | 115 | 604 | 1.1 | | | | 12.832 | -S660 | 50-P132/L4 | |
| 105 | 660 | 1.0 | 10 | 418 | 43 | 660 | 105 | 660 | 1.0 | | | | 14.037 | -S660 | 50-P132/L4 | |
| 94 | 739 | 0.9 | 9.2 | 468 | 38 | 739 | 94 | 739 | 0.9 | | | | 15.714 | -S660 | 50-P132/L4 | |

g500-S shaft-mounted helical geared motors

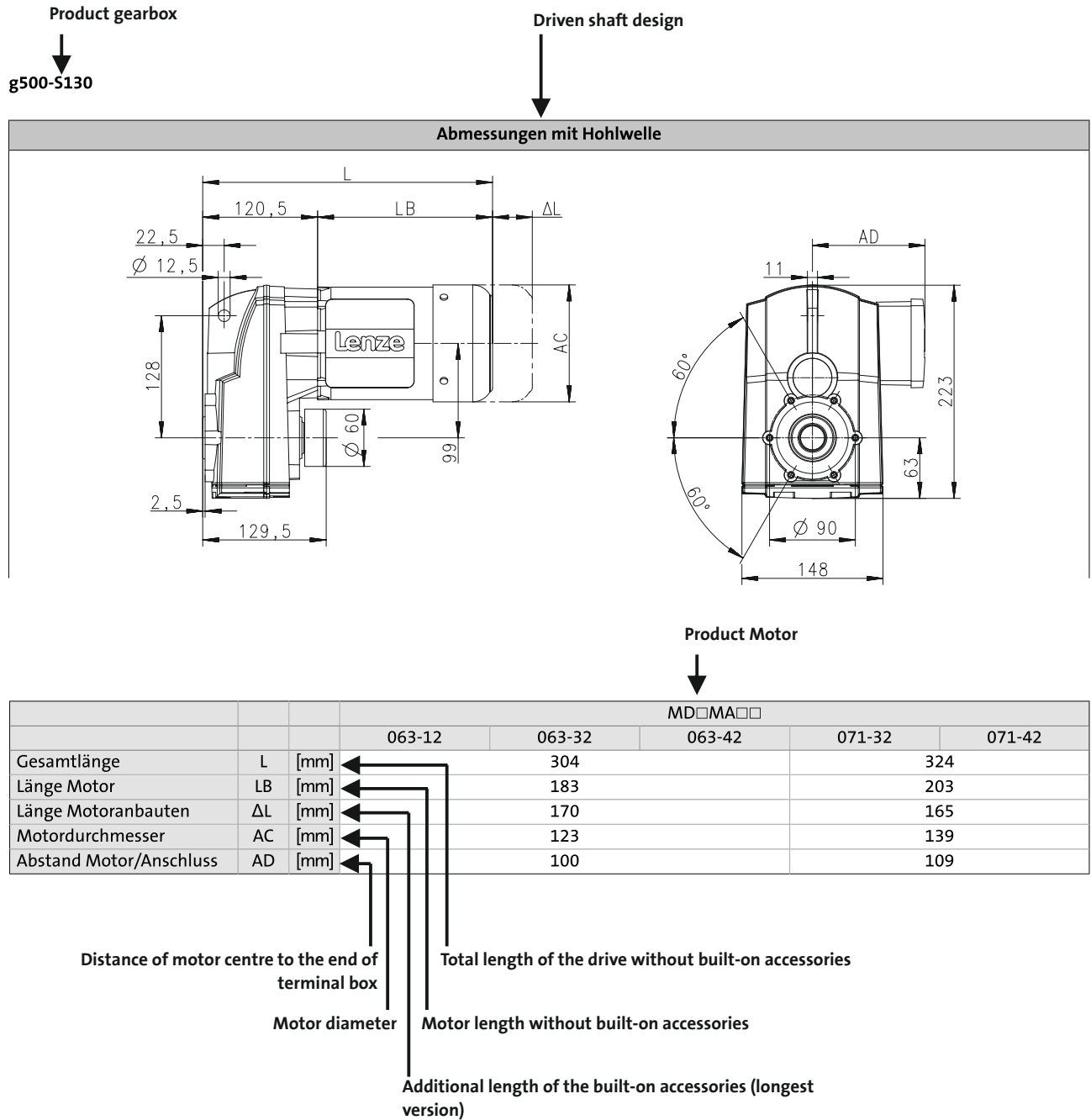
Technical data



Dimensions, notes

Notes on the dimensions

The following legend shows the layout of the dimension sheets.



g500-S shaft-mounted helical geared motors

Technical data



Dimensions, notes

Gearbox designs

Hollow shaft



Without centring (HDR)



With centering (HCR)



Flange with through holes (HCK)

Hollow shaft with shrink disc



Without centring (SDR)



With centering (SCR)



Flange with through holes (SCK)

g500-S shaft-mounted helical geared motors

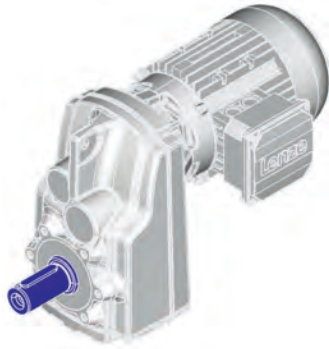
Technical data



Dimensions, notes

Gearbox designs

Solid shaft



Without centring (VDR)

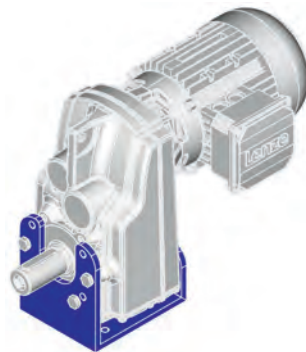


With centering (VCR)



Flange with through holes (VCK)

Solid shaft



Foot mounting (VBR)

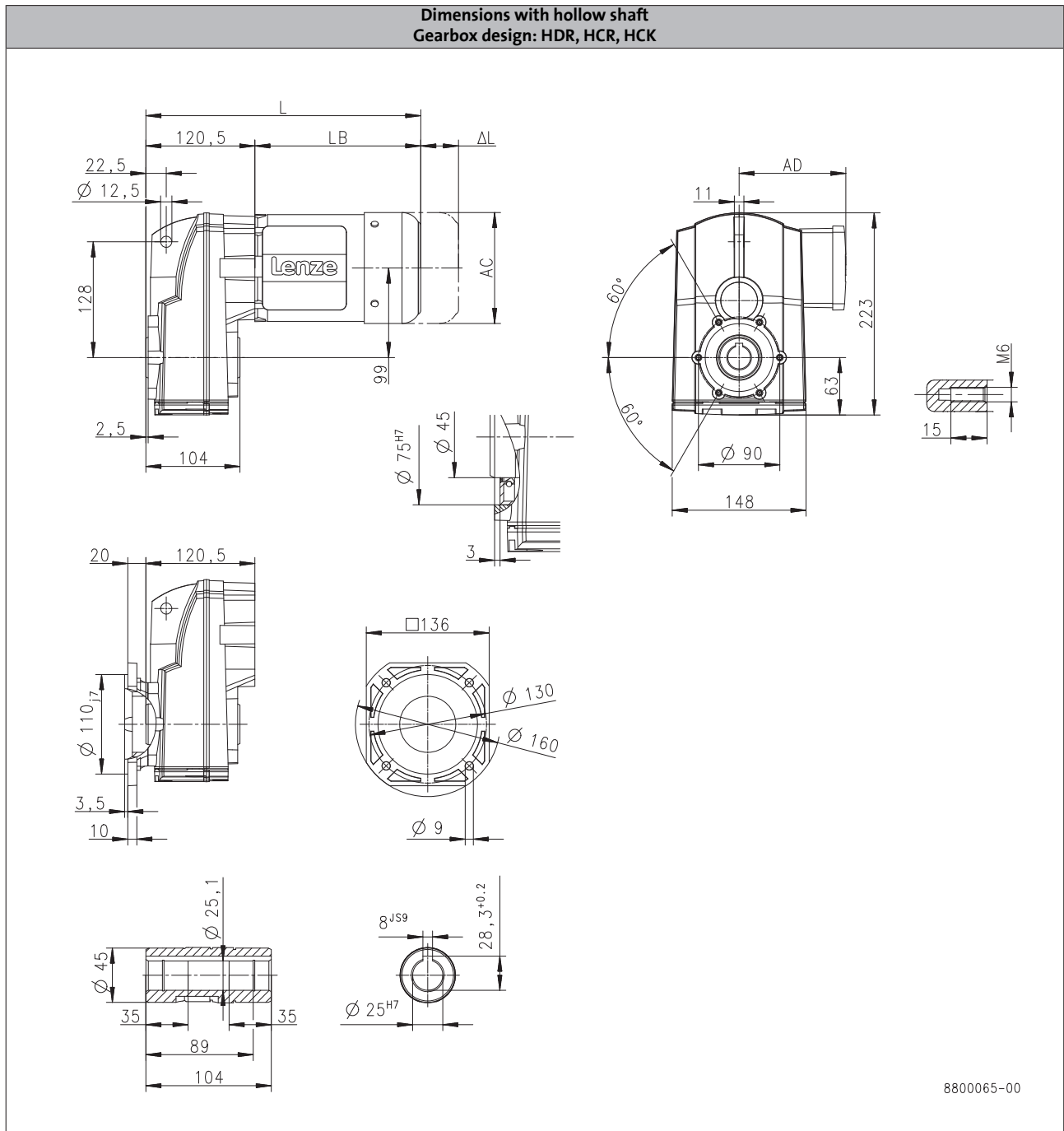
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 304 | | | 324 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

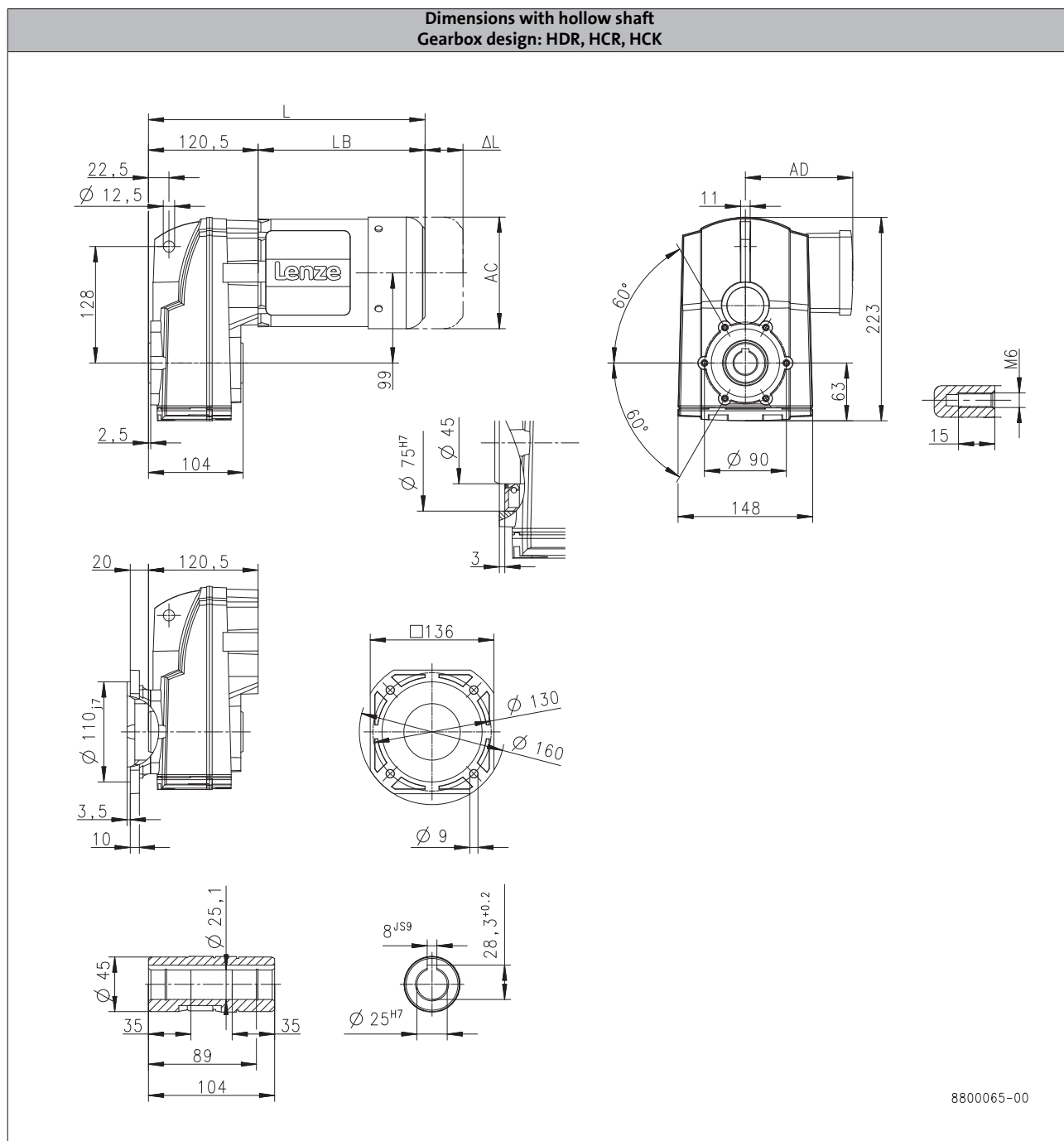
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



6.4

| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 381 | | 445 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | Δ L | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

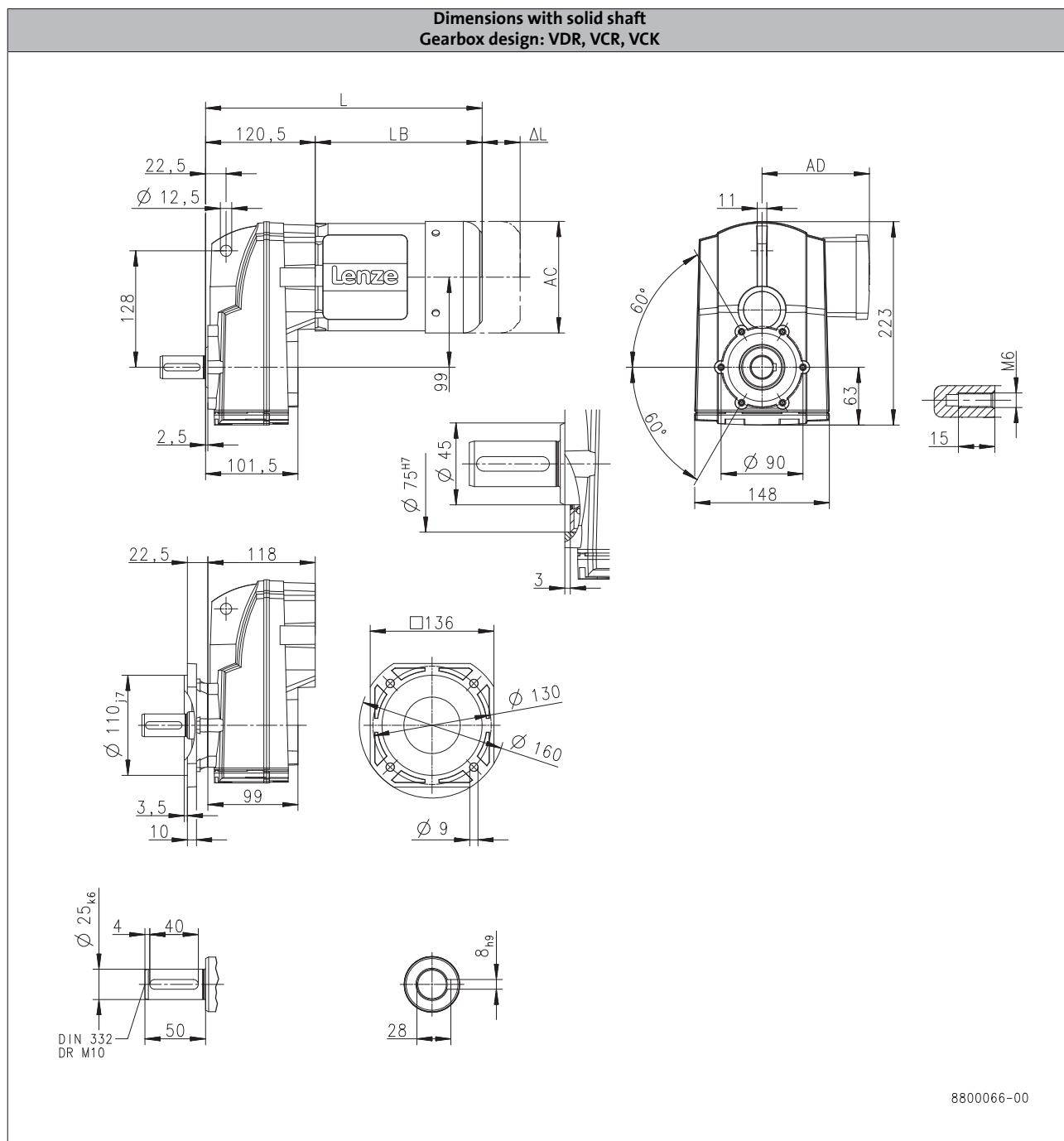
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 304 | | | 324 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

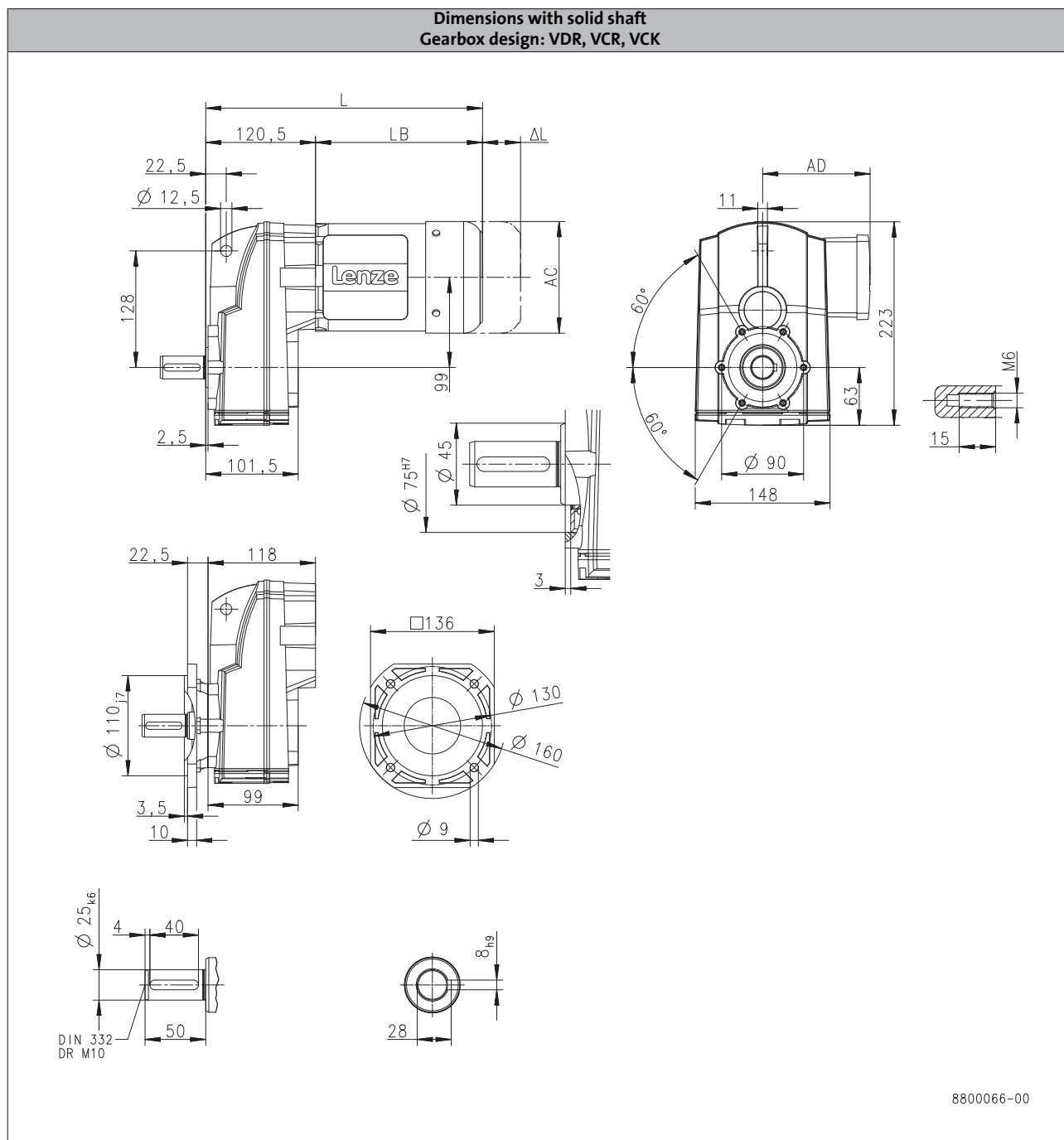
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 381 | 445 | |
| Motor length | LB | [mm] | 260 | 324 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | |
| Motor diameter | AC | [mm] | 157 | 177 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

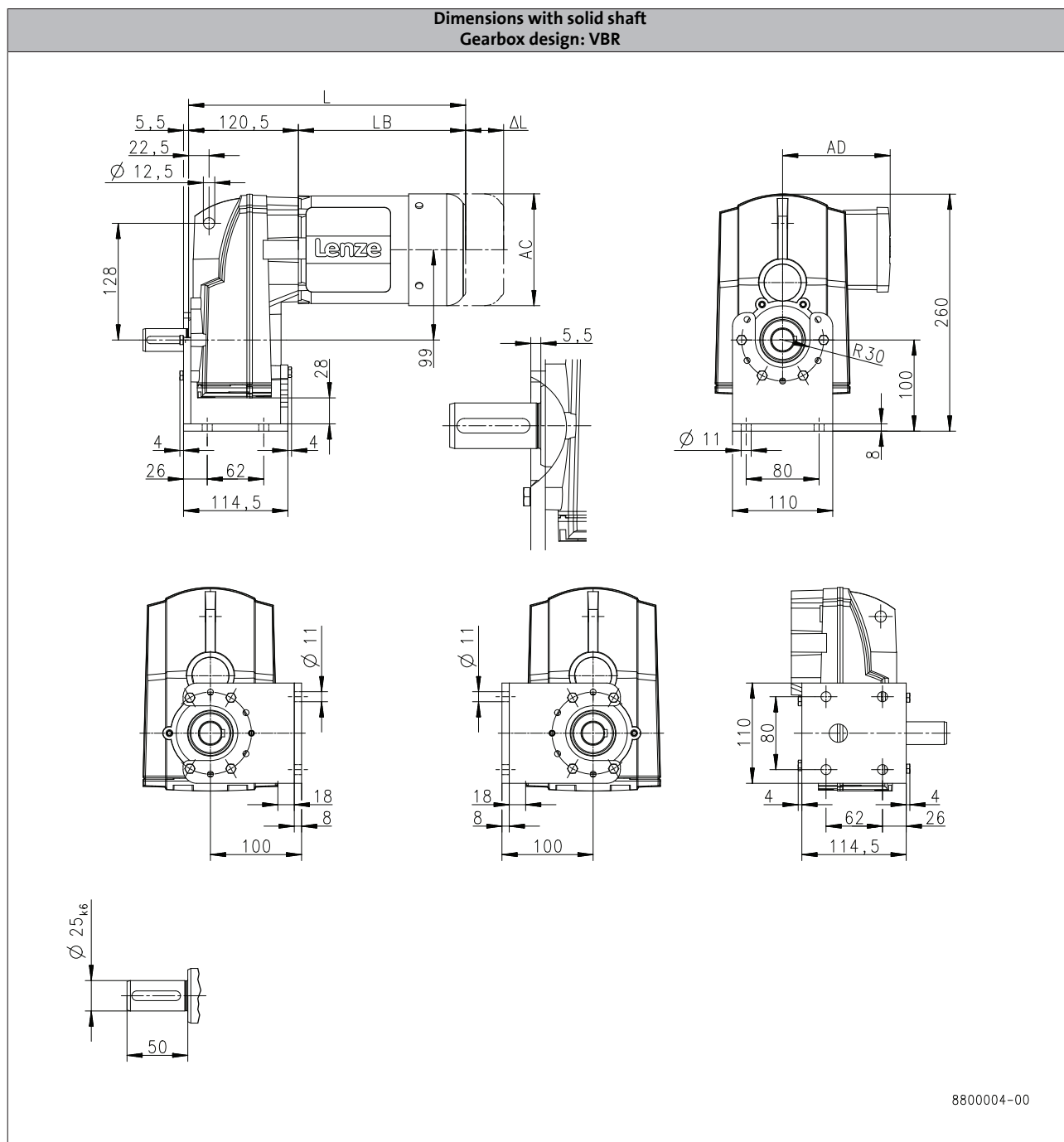
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



6.4

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 304 | | | 324 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

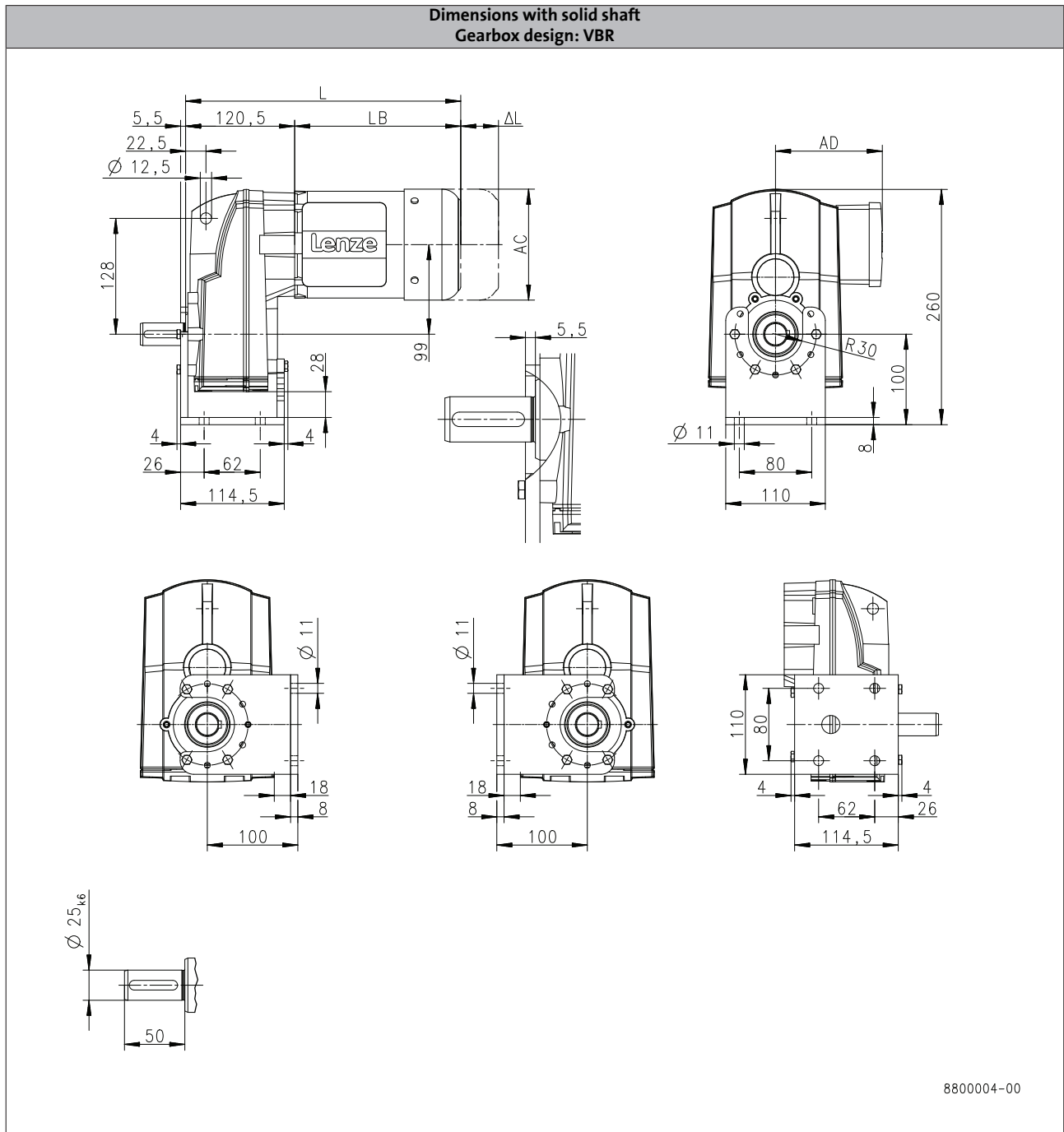
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 381 | | 445 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | Δ L | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

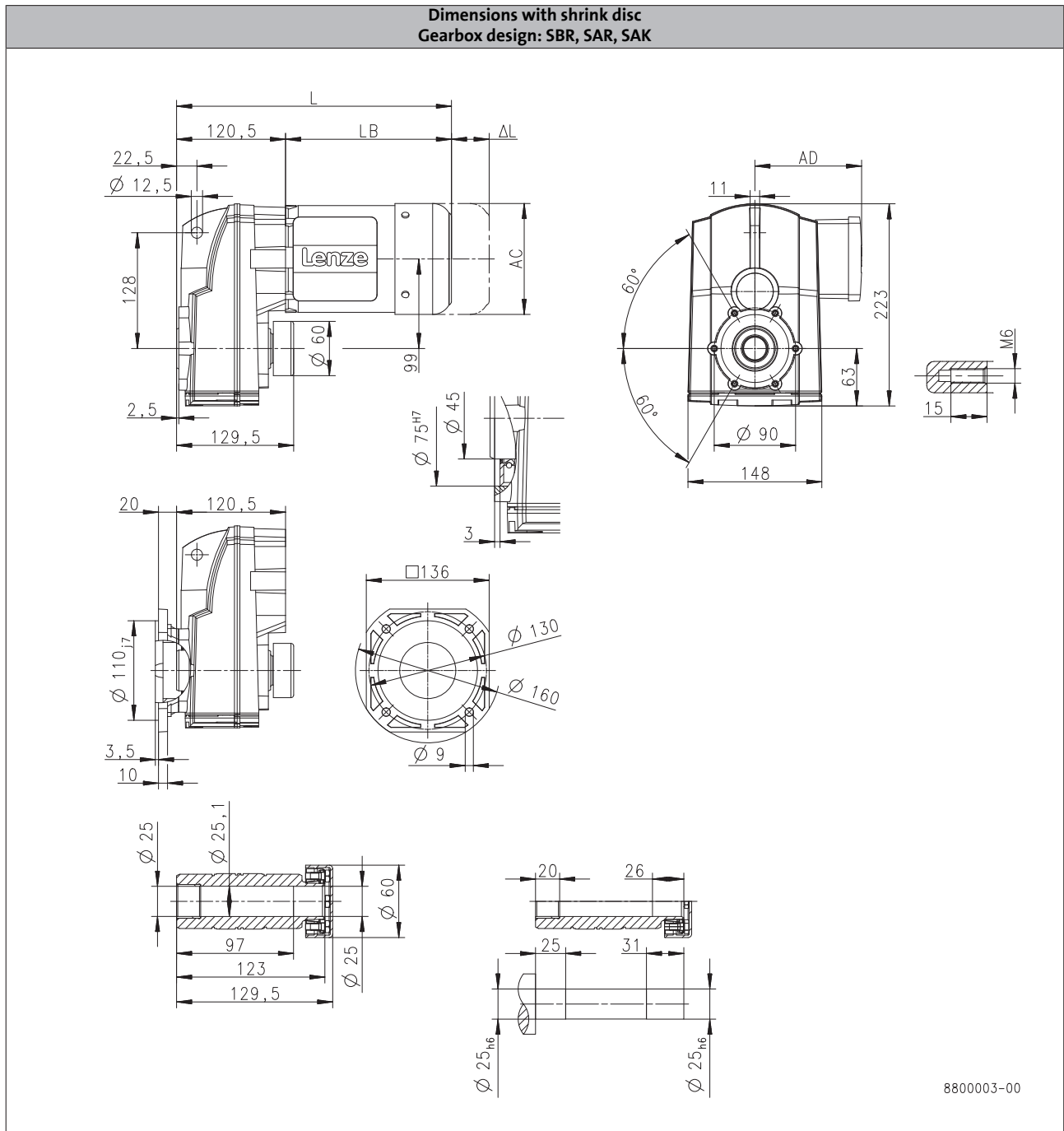
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 304 | | | 324 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

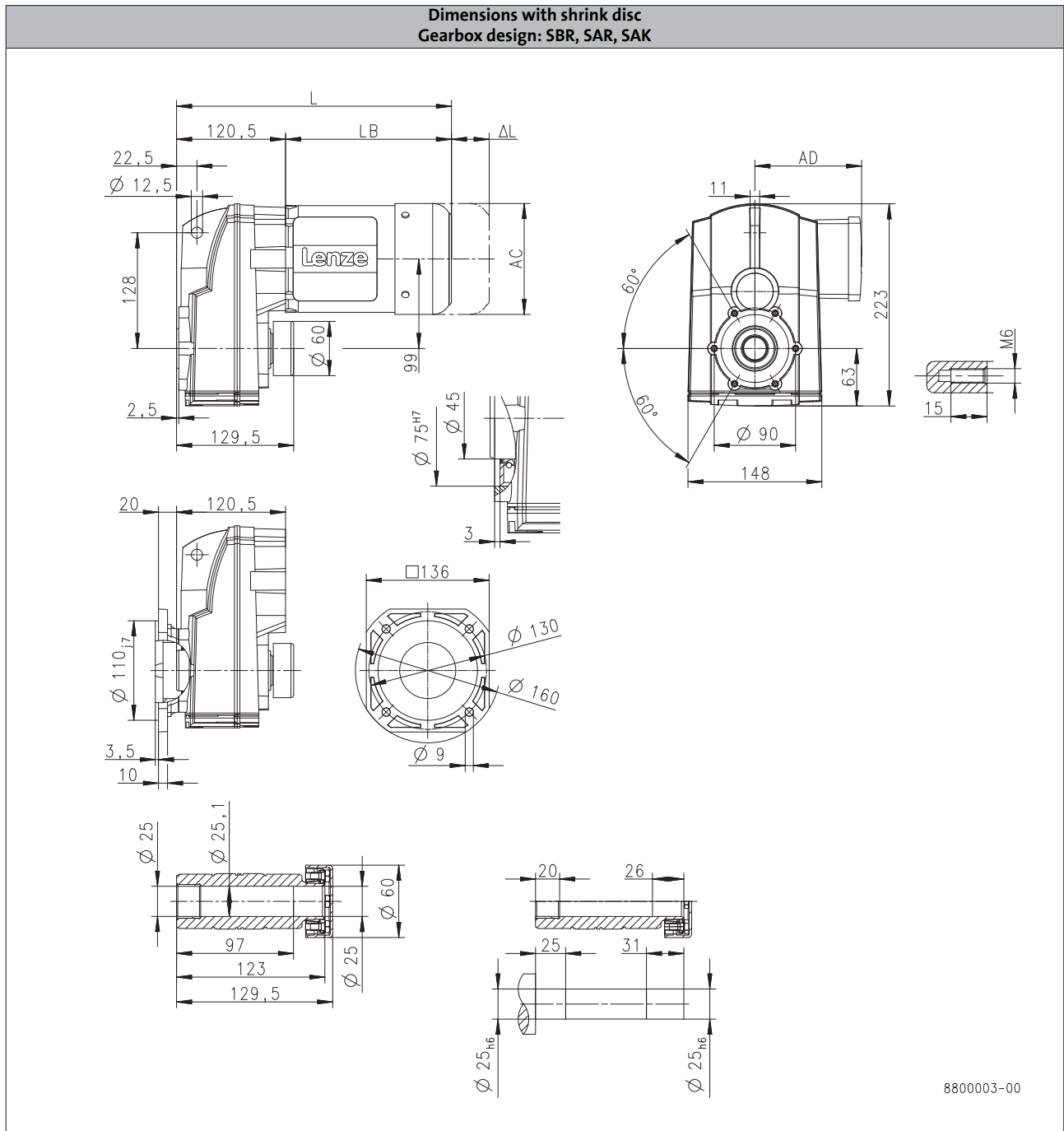
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S130



6.4

| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 381 | | 445 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | Δ L | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

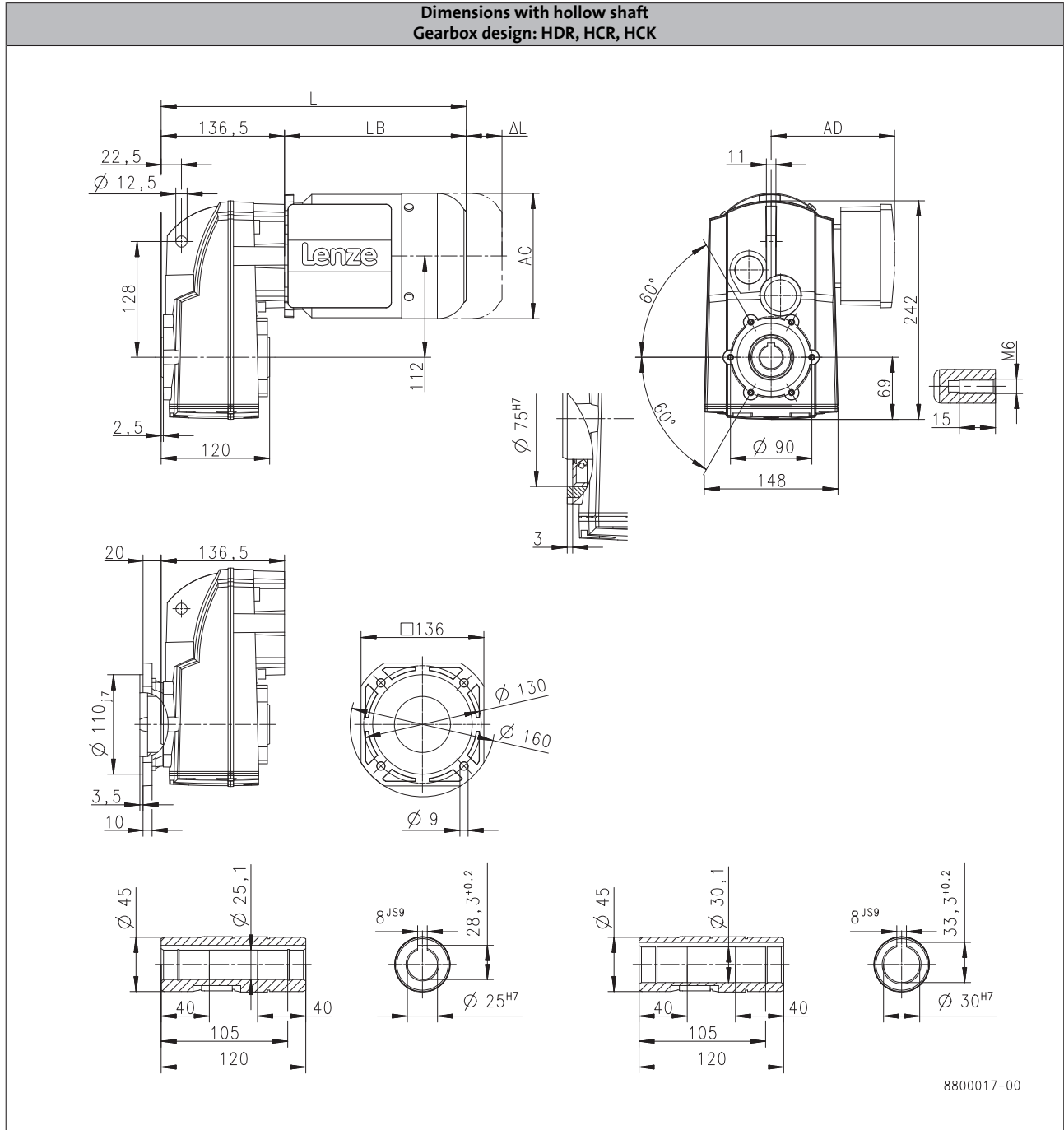
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 320 | | | 340 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

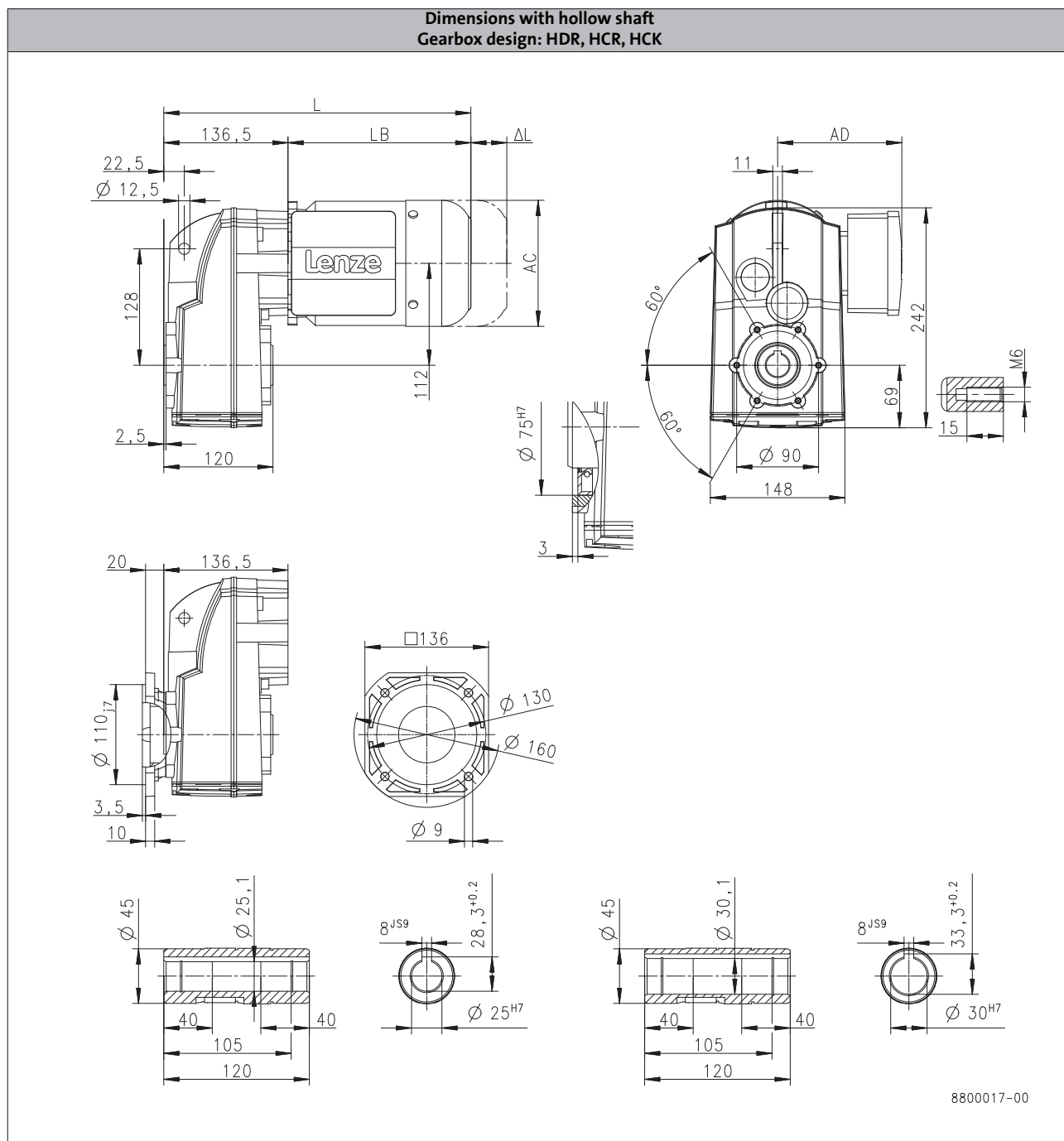
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 397 | | 461 | | 521 |
| Motor length | LB | [mm] | 260 | | 324 | | 384 |
| Length of motor options | Δ L | [mm] | 183 | | 175 | | 170 |
| Motor diameter | AC | [mm] | 157 | | 177 | | 195 |
| Distance motor/connection | AD | [mm] | 148 | | 154 | | 164 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

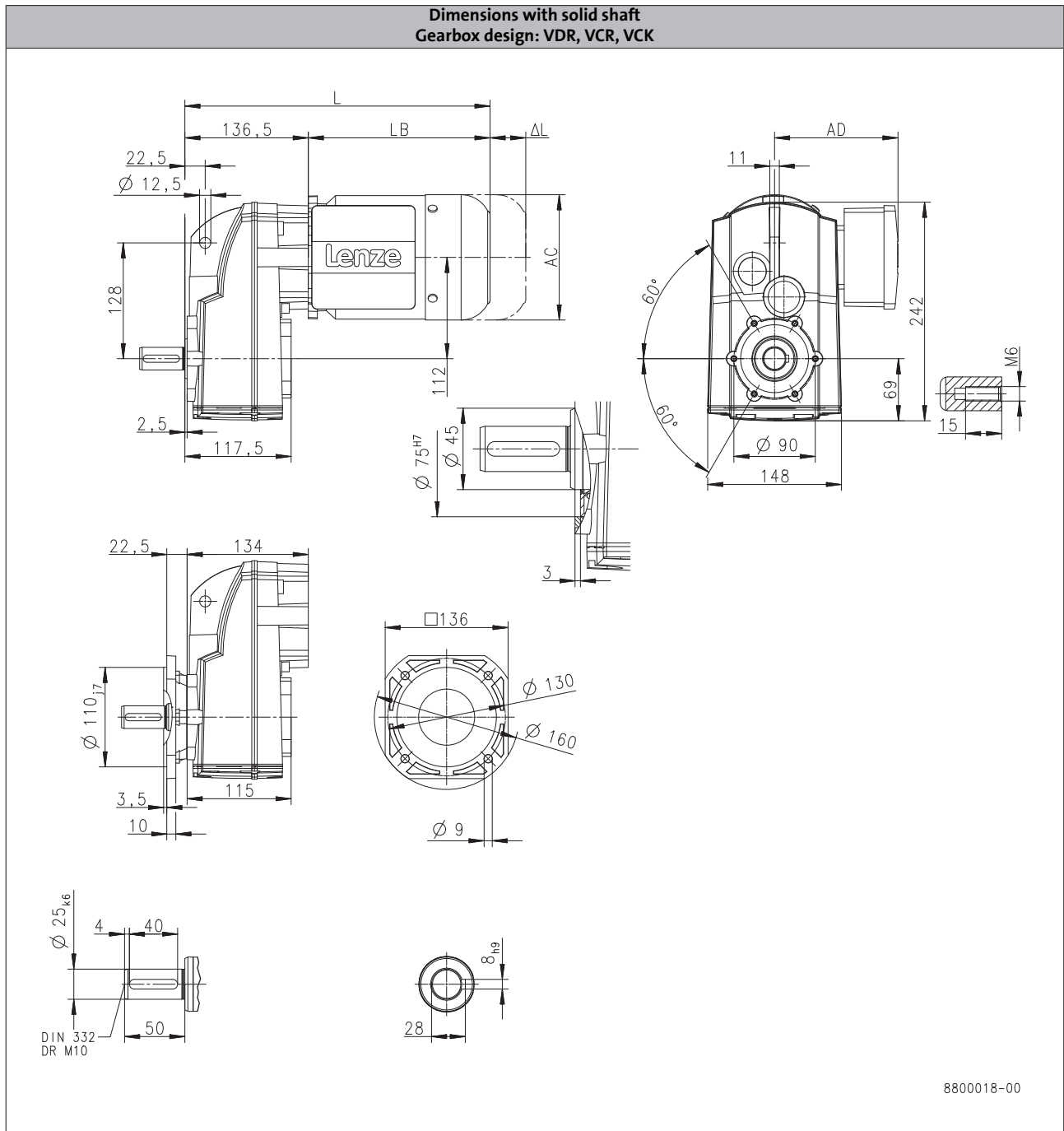
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



6.4

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 320 | | | 340 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

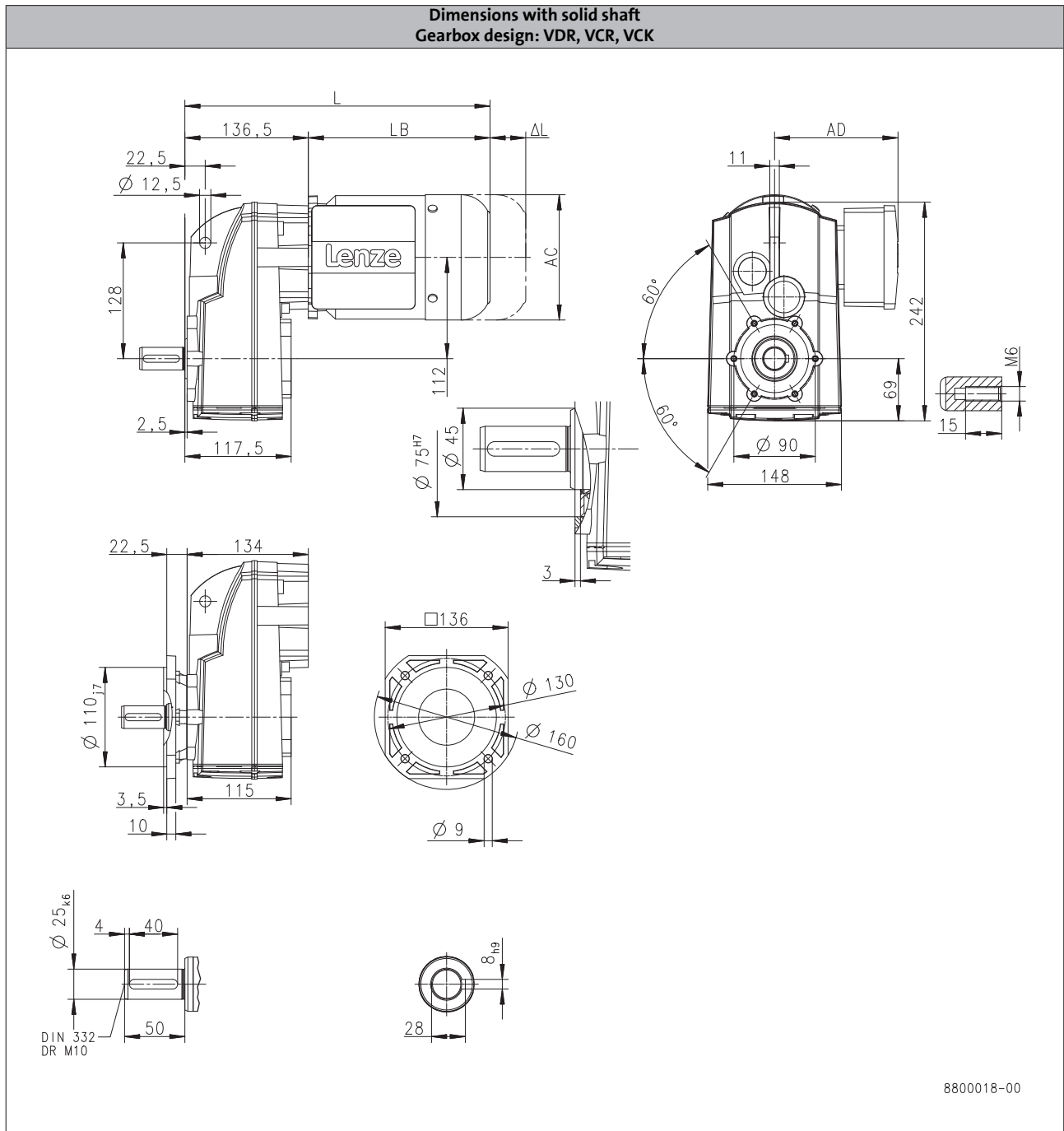
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 397 | 461 | 521 | | |
| Motor length | LB | [mm] | 260 | 324 | 384 | | |
| Length of motor options | Δ L | [mm] | 183 | 175 | 170 | | |
| Motor diameter | AC | [mm] | 157 | 177 | 195 | | |
| Distance motor/connection | AD | [mm] | 148 | 154 | 164 | | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

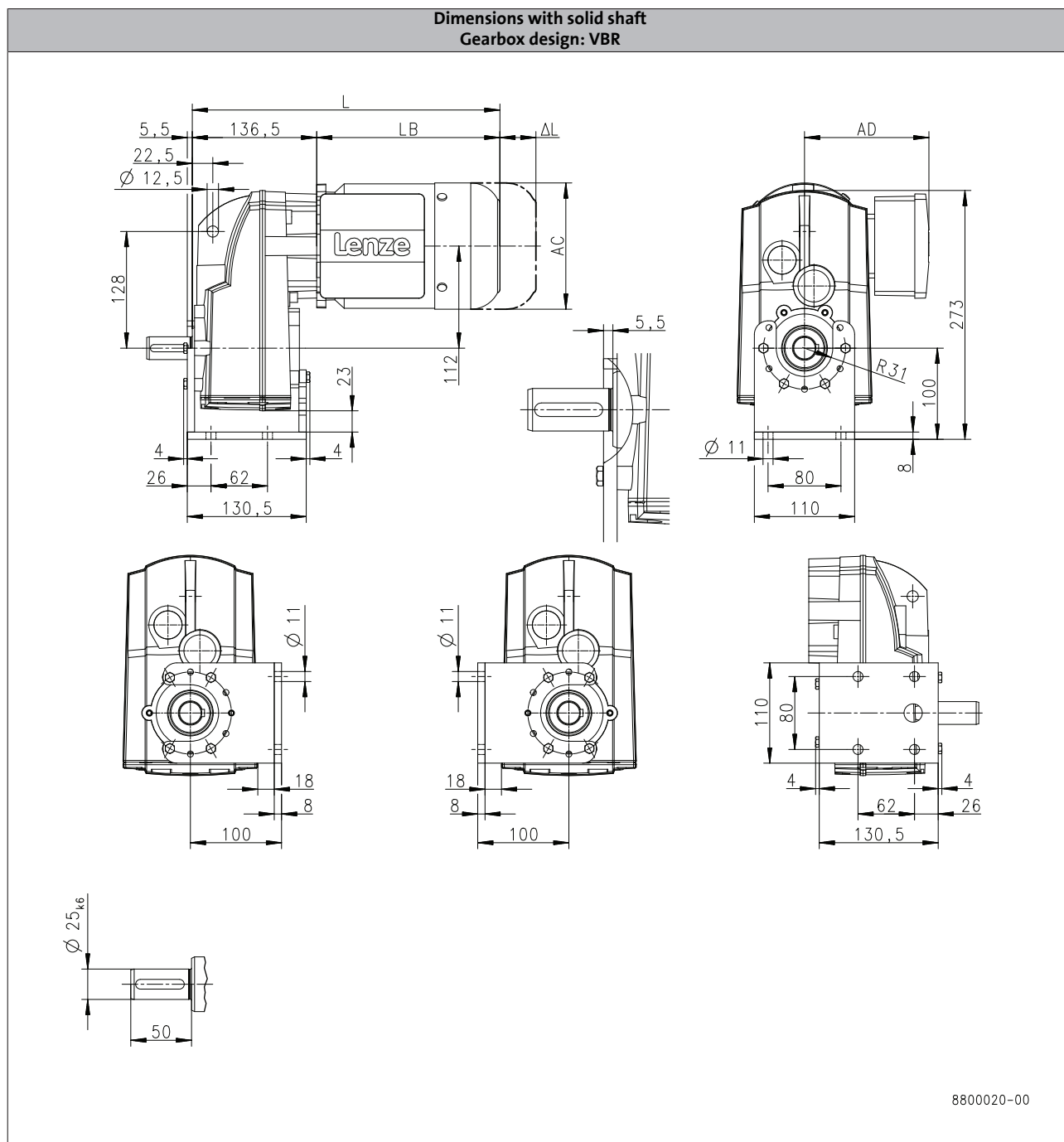
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 320 | | | 340 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

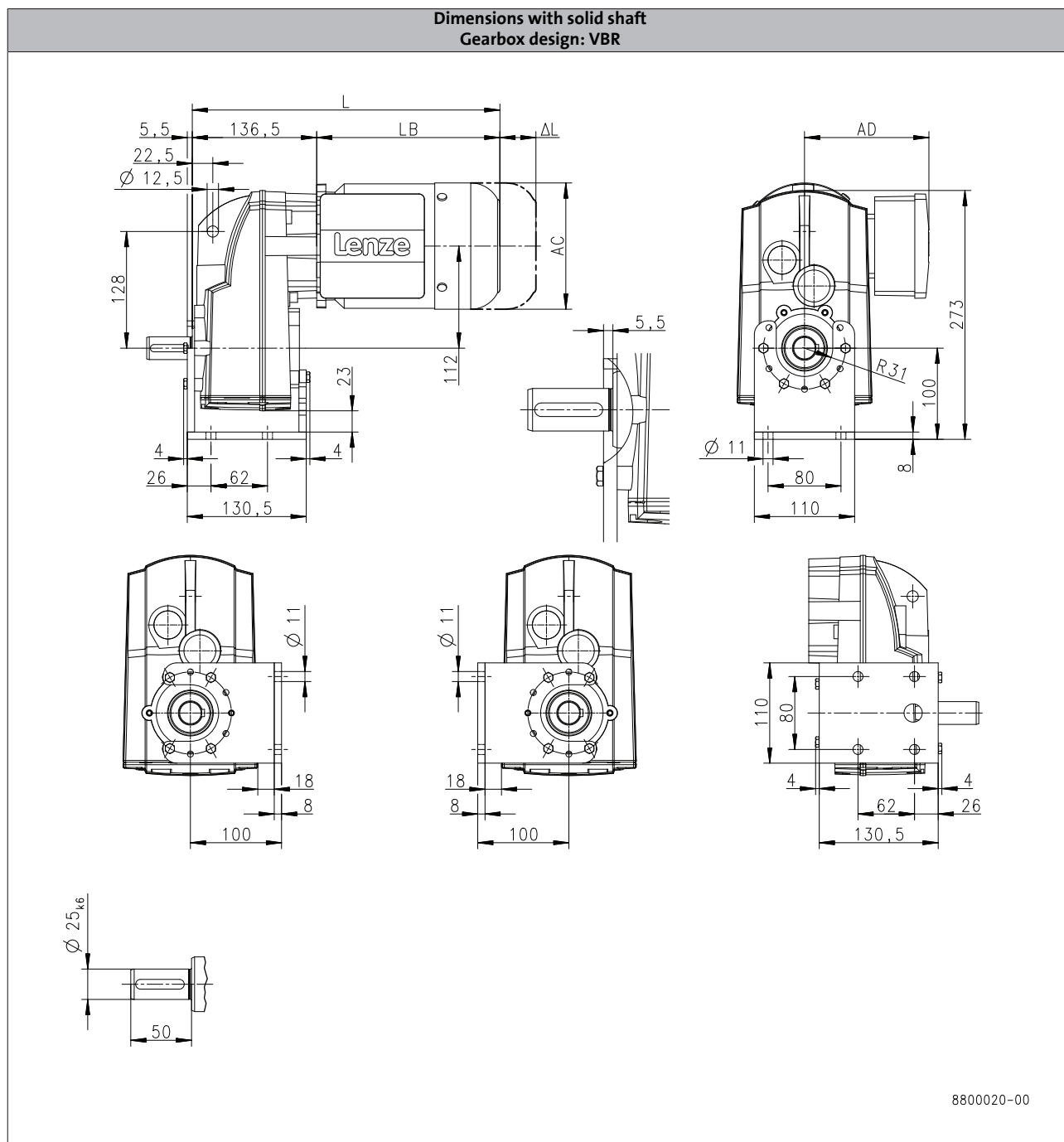
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



6.4

| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 397 | 461 | | 521 | |
| Motor length | LB | [mm] | 260 | 324 | | 384 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

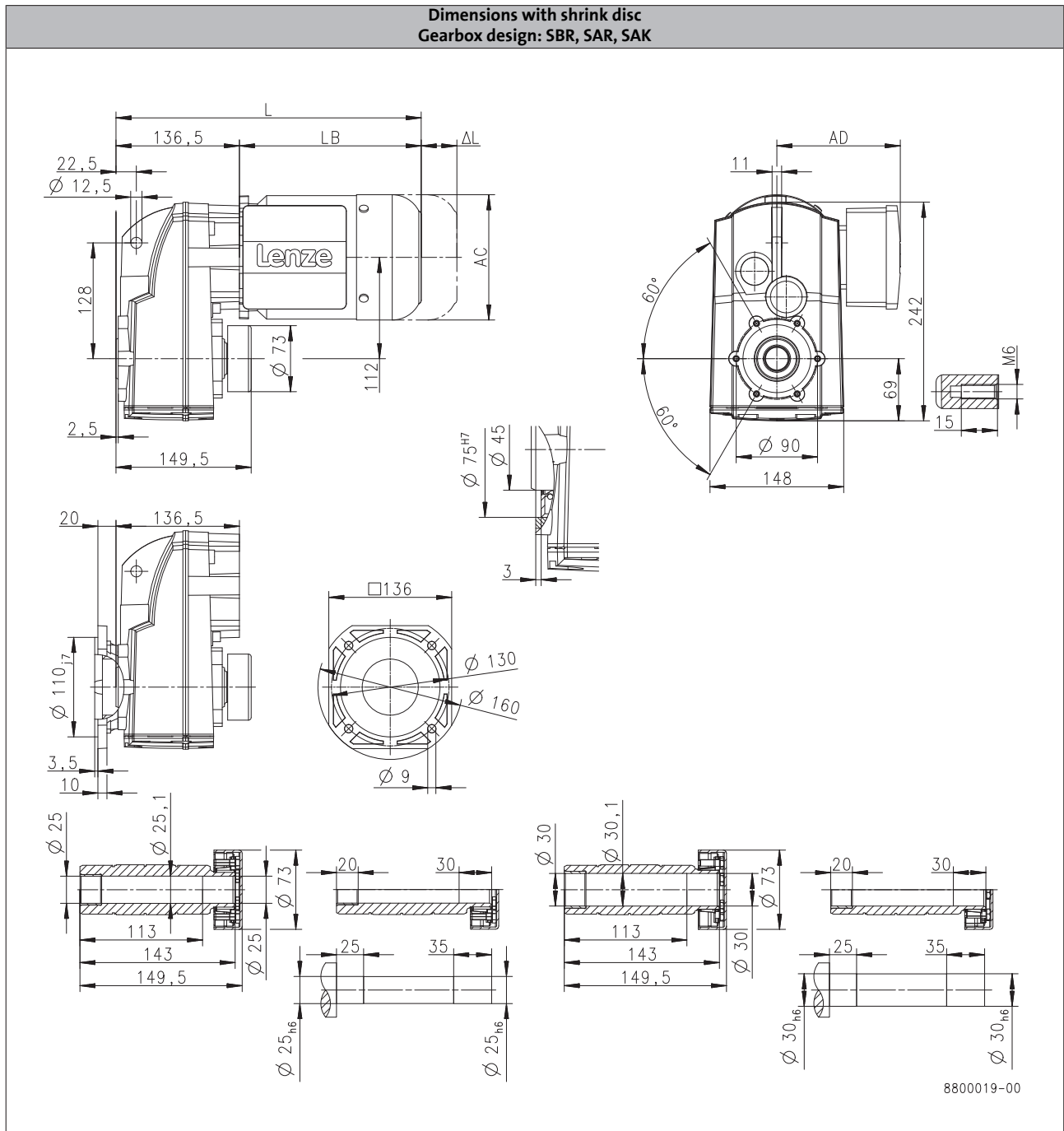
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 320 | | | 340 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

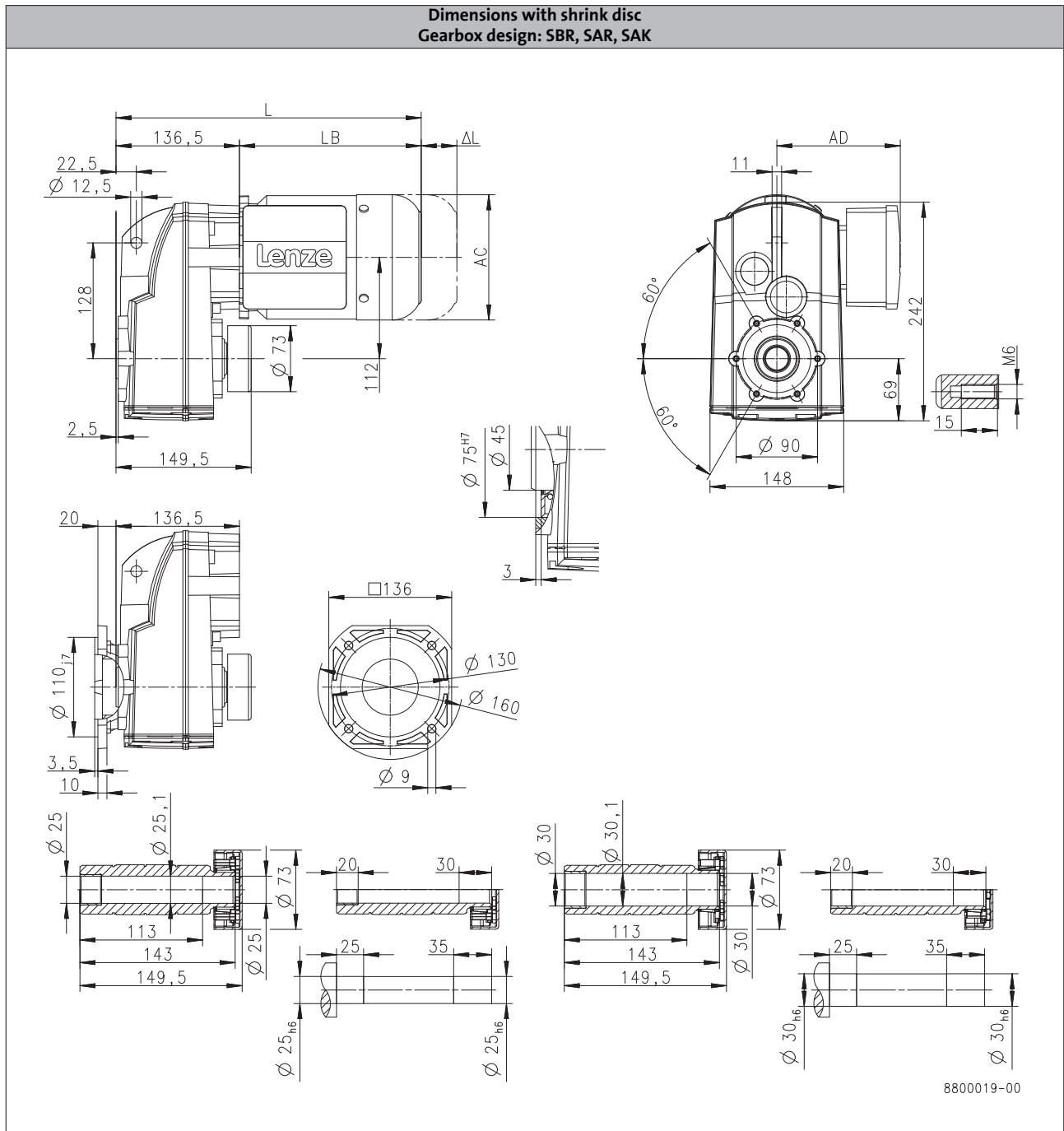
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S220



| | | m550 | | | | |
|---------------------------|----------|---------|---------|---------|----------|----------|
| | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L [mm] | 397 | 461 | 521 | | |
| Motor length | LB [mm] | 260 | 324 | 384 | | |
| Length of motor options | Δ L [mm] | 183 | 175 | 170 | | |
| Motor diameter | AC [mm] | 157 | 177 | 195 | | |
| Distance motor/connection | AD [mm] | 148 | 154 | 164 | | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (with brake)

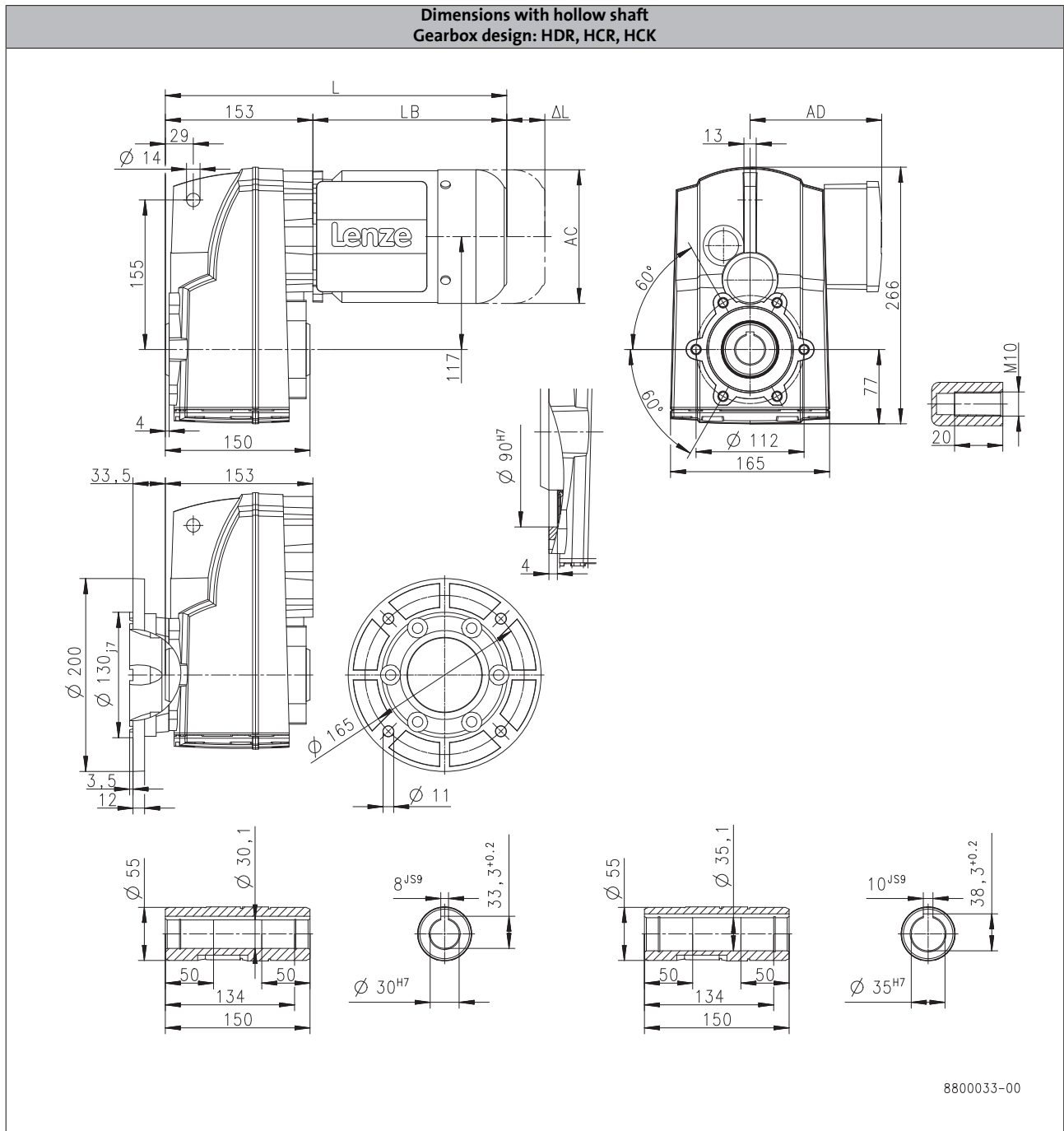
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 336 | | | 356 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

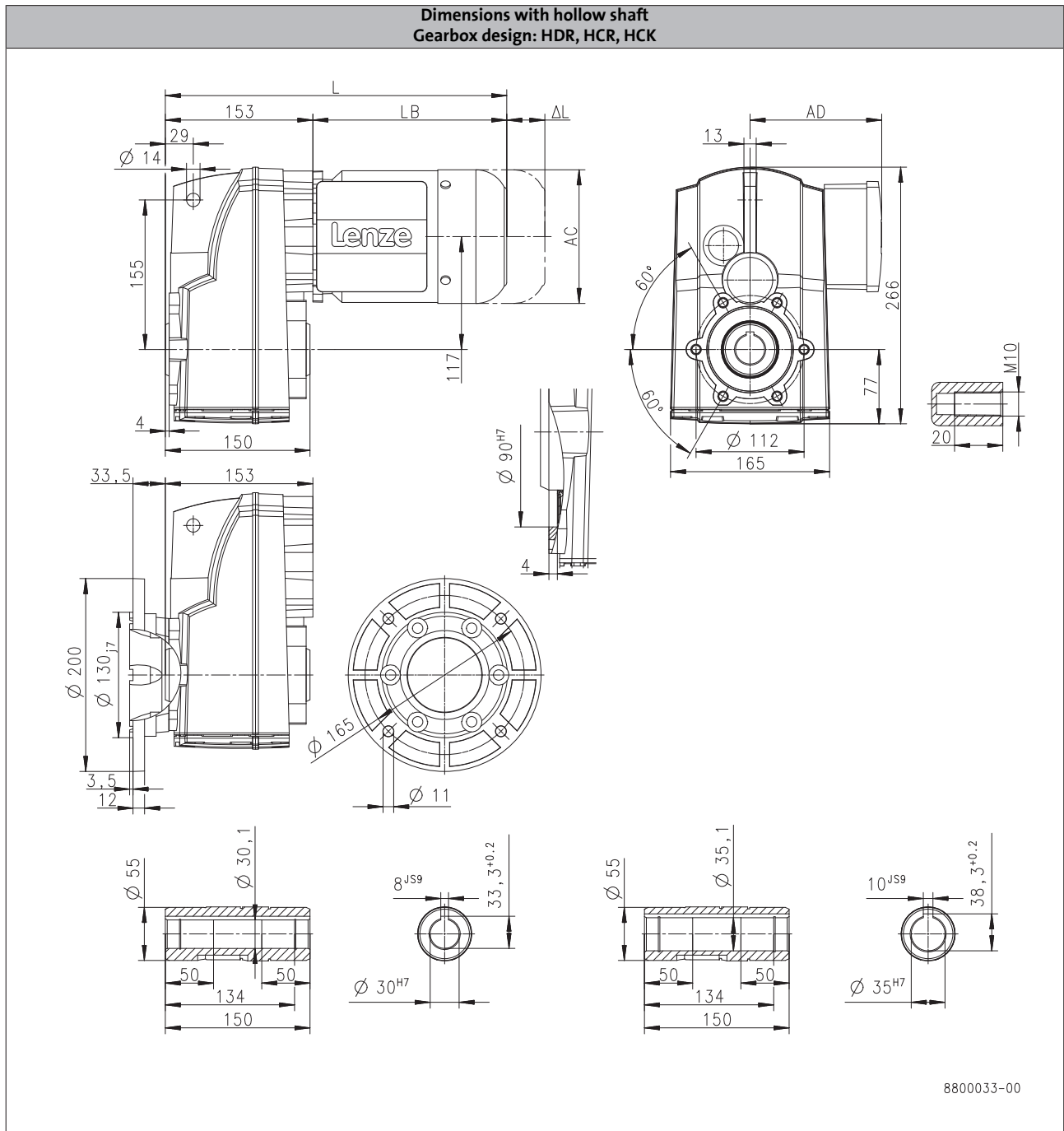
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



| | | | m550 | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 |
| Total length | L | [mm] | 413 | 477 | | 537 | | 544 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

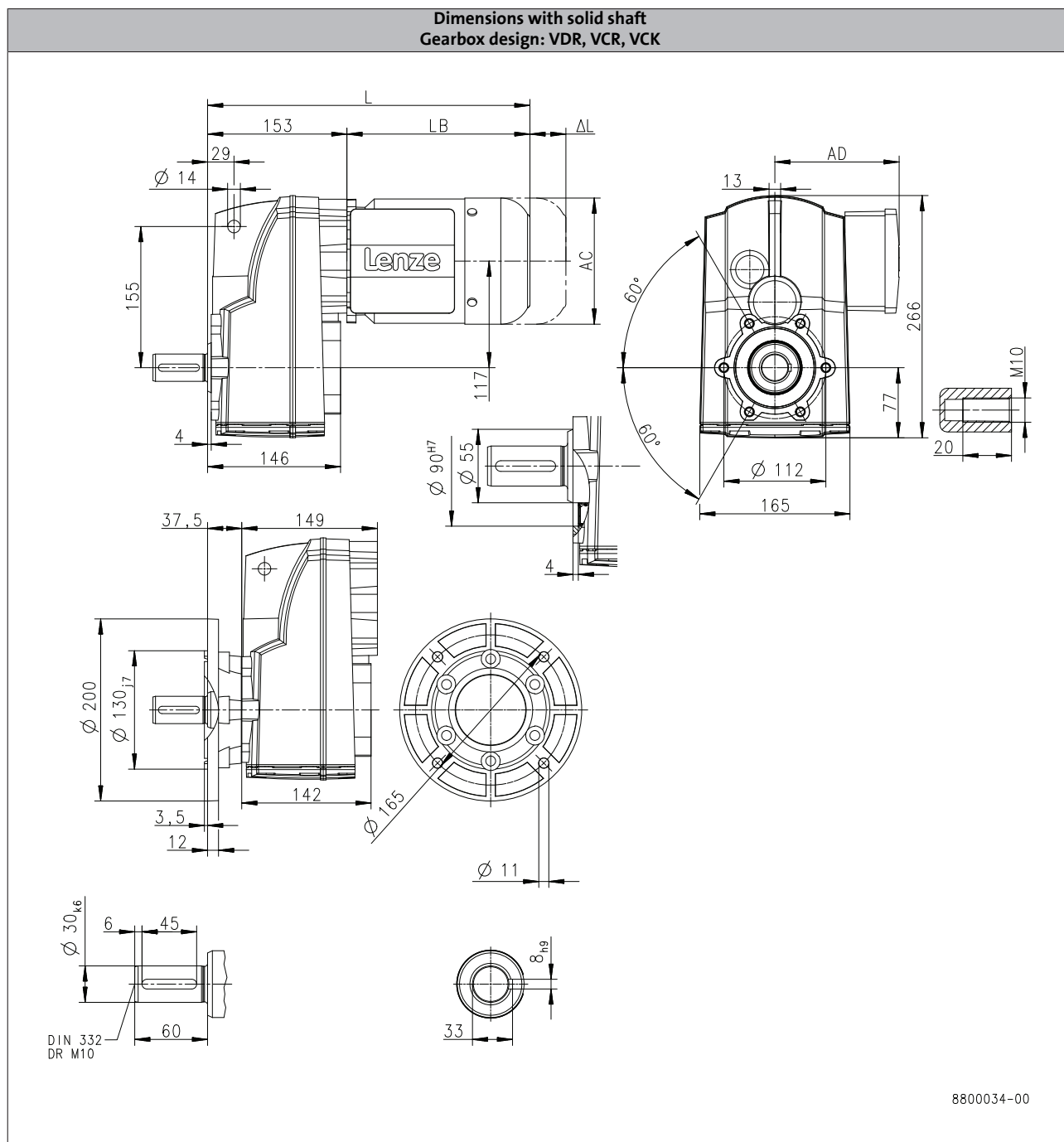
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



6.4

| | | MD□MA□□ | | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|--------|
| | | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | | 336 | | | 356 |
| Motor length | LB [mm] | | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | | 170 | | | 165 |
| Motor diameter | AC [mm] | | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

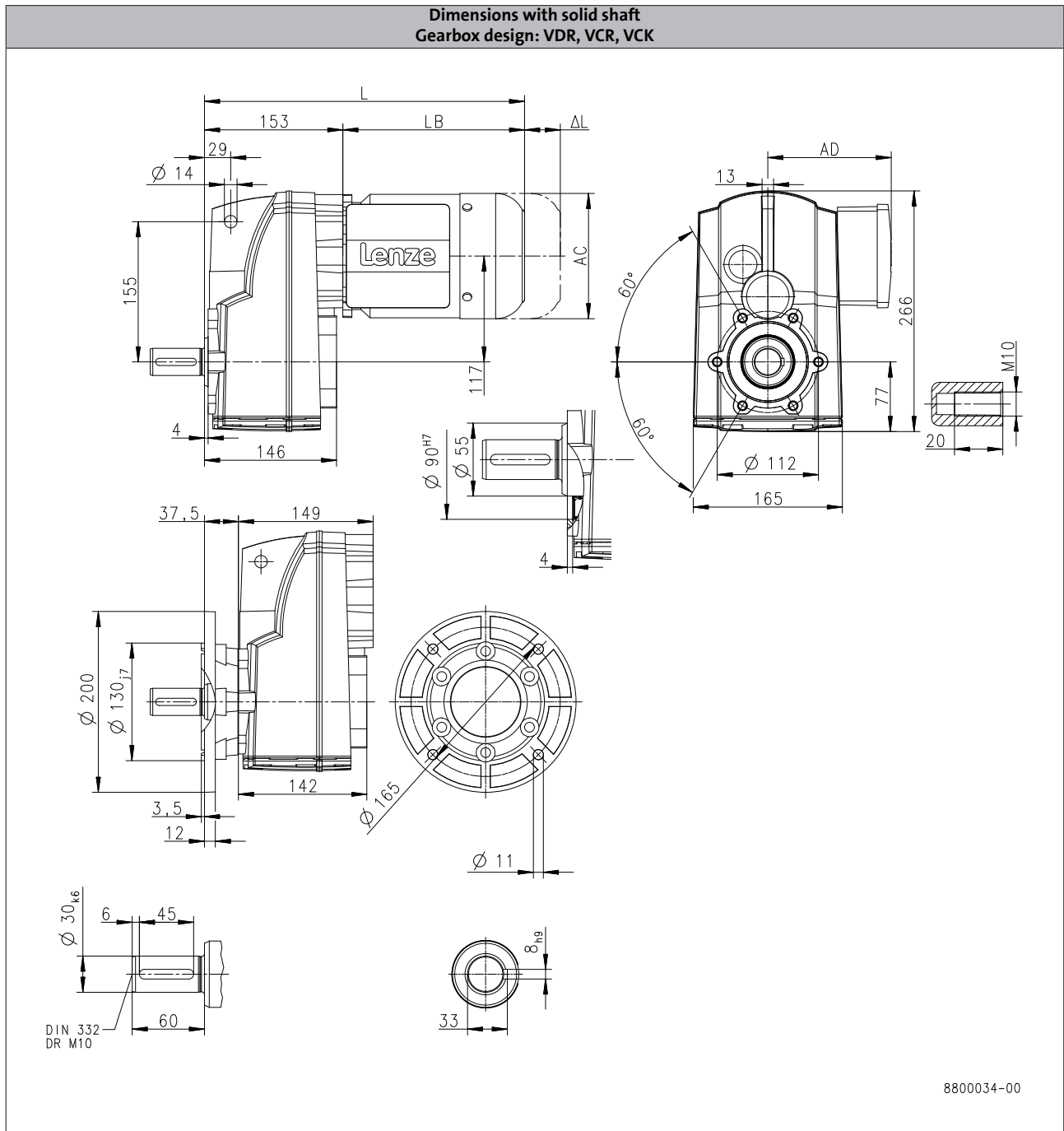
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



6.4

| | | m550 | | | | | | |
|---------------------------|----------|------|---------|---------|---------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 |
| Total length | L [mm] | | 413 | 477 | | 537 | | 544 |
| Motor length | LB [mm] | | 260 | 324 | | 384 | | 391 |
| Length of motor options | Δ L [mm] | | 183 | 175 | | 170 | | 183 |
| Motor diameter | AC [mm] | | 157 | 177 | | 195 | | 219 |
| Distance motor/connection | AD [mm] | | 148 | 154 | | 164 | | 171 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

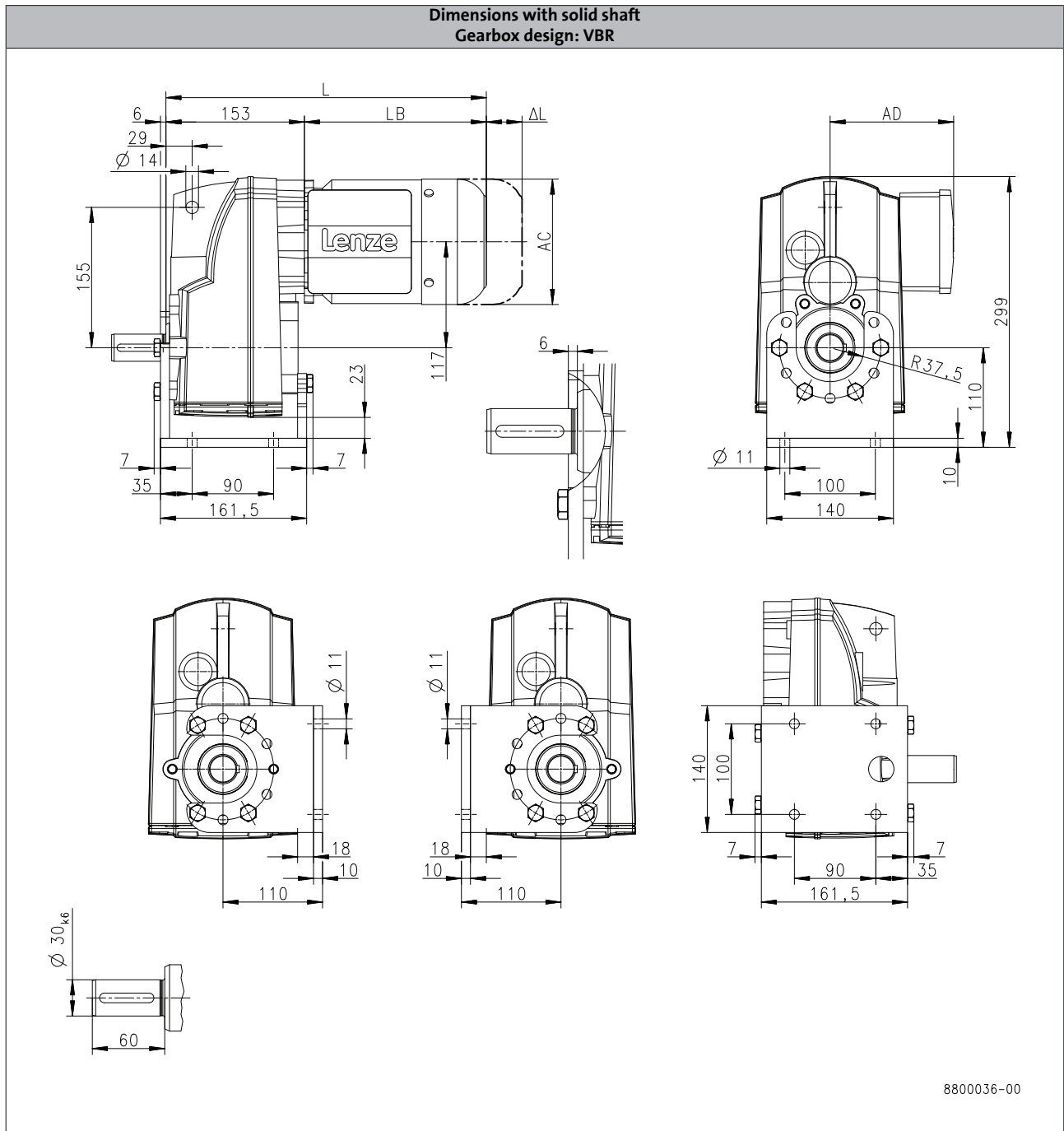
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 336 | | | 356 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

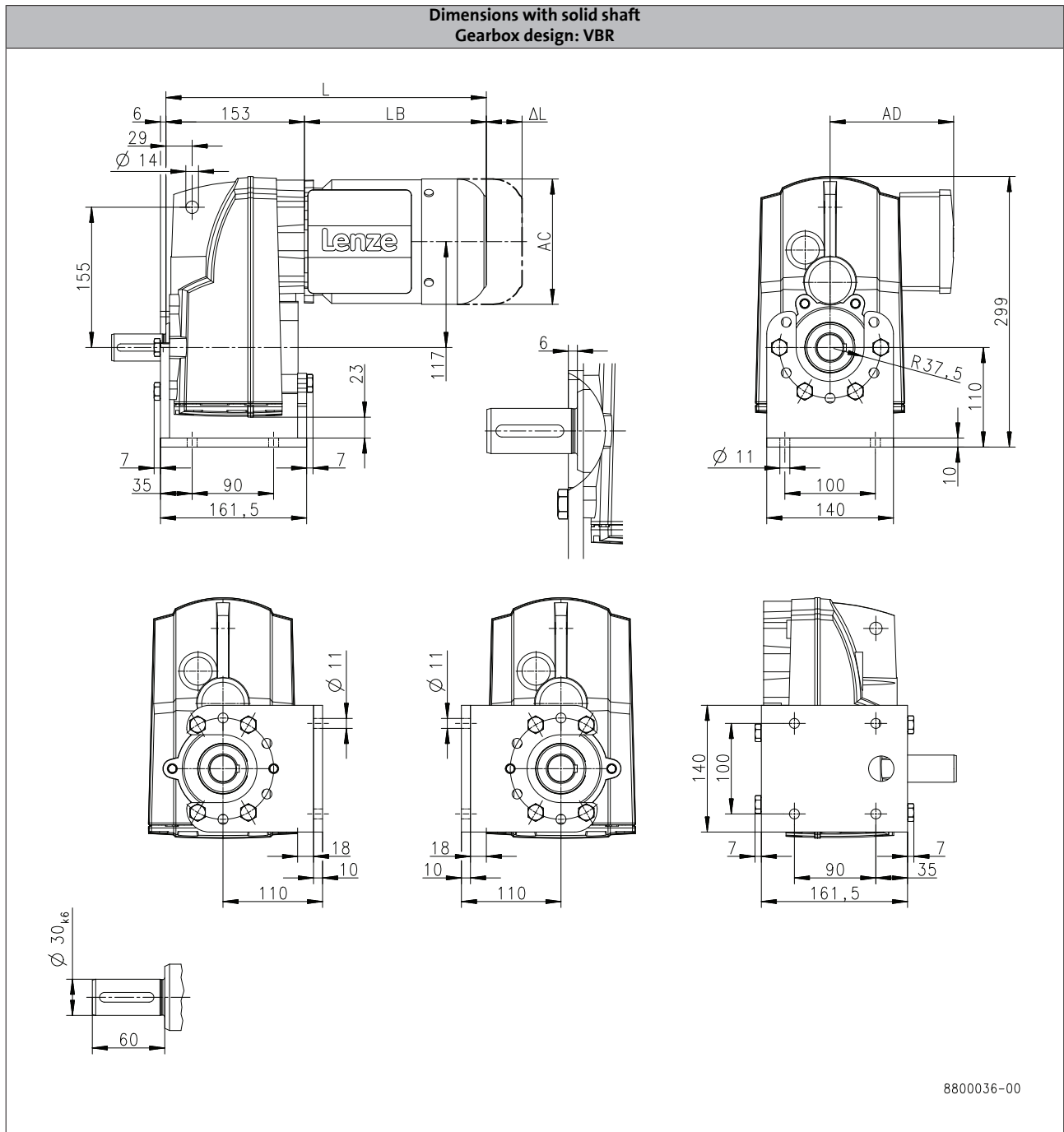
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



6.4

| | | m550 | | | | | | |
|---------------------------|----------|------|---------|---------|---------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 |
| Total length | L [mm] | | 413 | 477 | | 537 | | 544 |
| Motor length | LB [mm] | | 260 | 324 | | 384 | | 391 |
| Length of motor options | Δ L [mm] | | 183 | 175 | | 170 | | 183 |
| Motor diameter | AC [mm] | | 157 | 177 | | 195 | | 219 |
| Distance motor/connection | AD [mm] | | 148 | 154 | | 164 | | 171 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

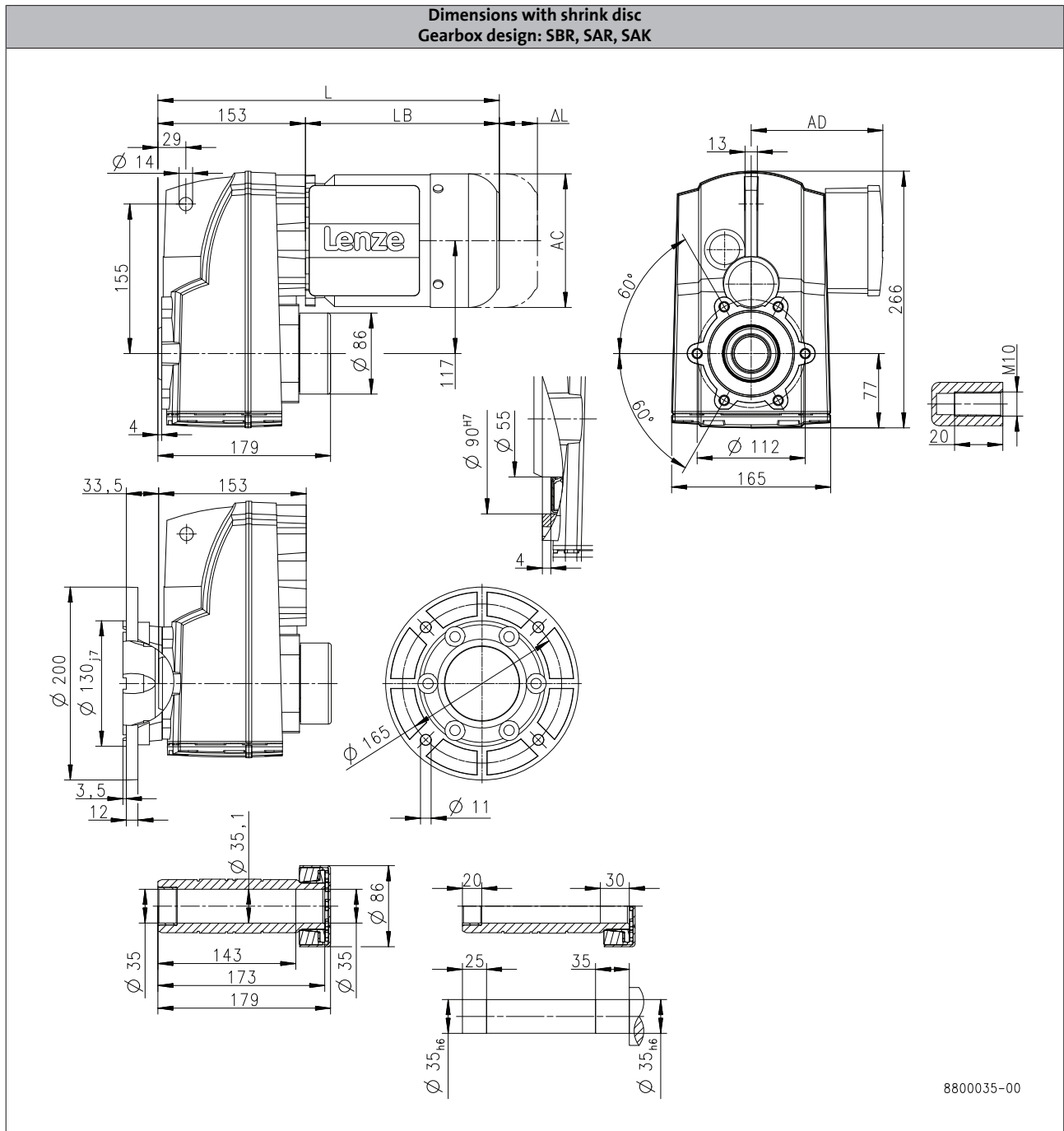
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 336 | | | 356 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

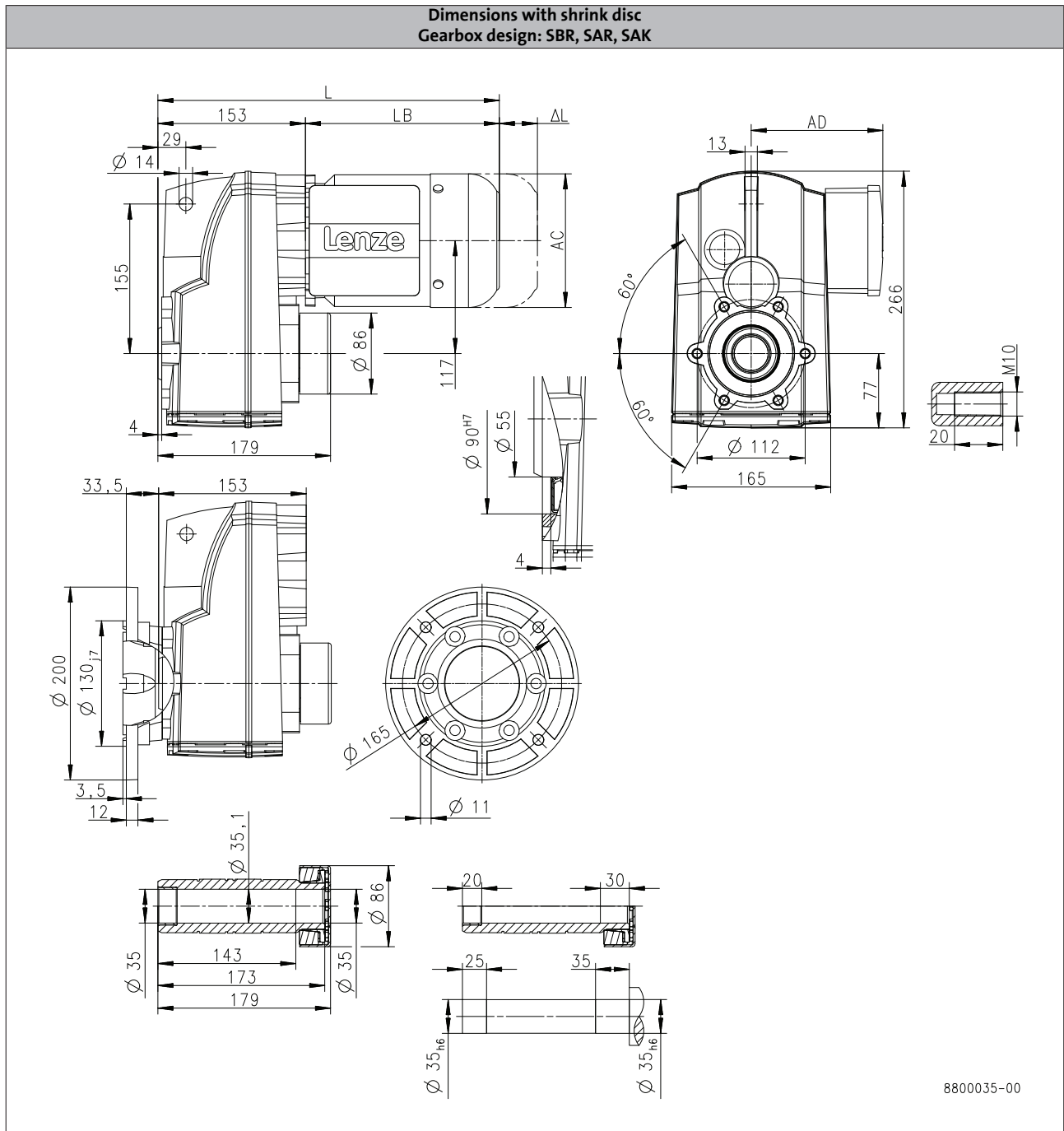
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S400



6.4

| | | | m550 | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 |
| Total length | L | [mm] | 413 | 477 | | 537 | | 544 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

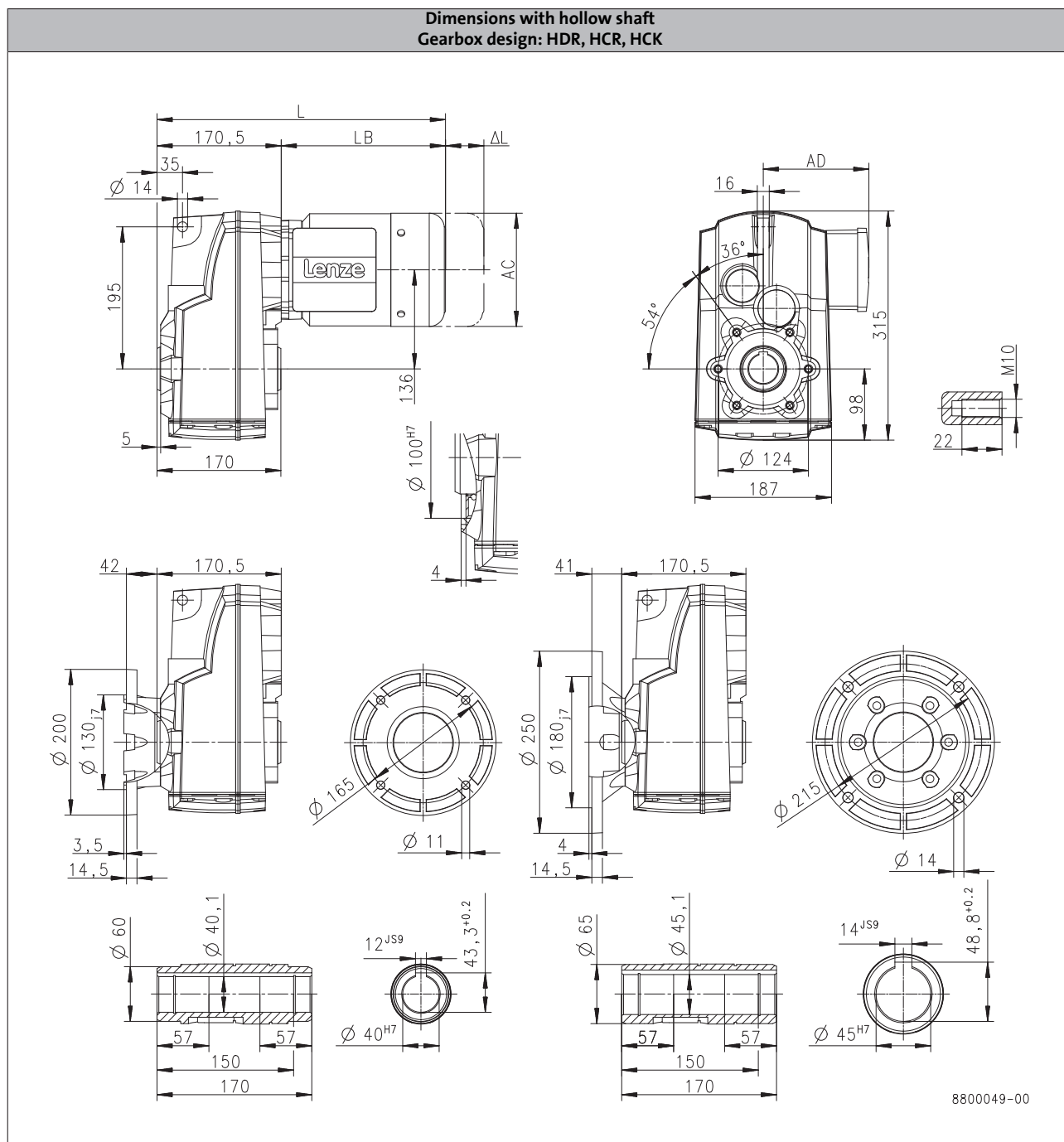
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



6.4

| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 354 | | | 374 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

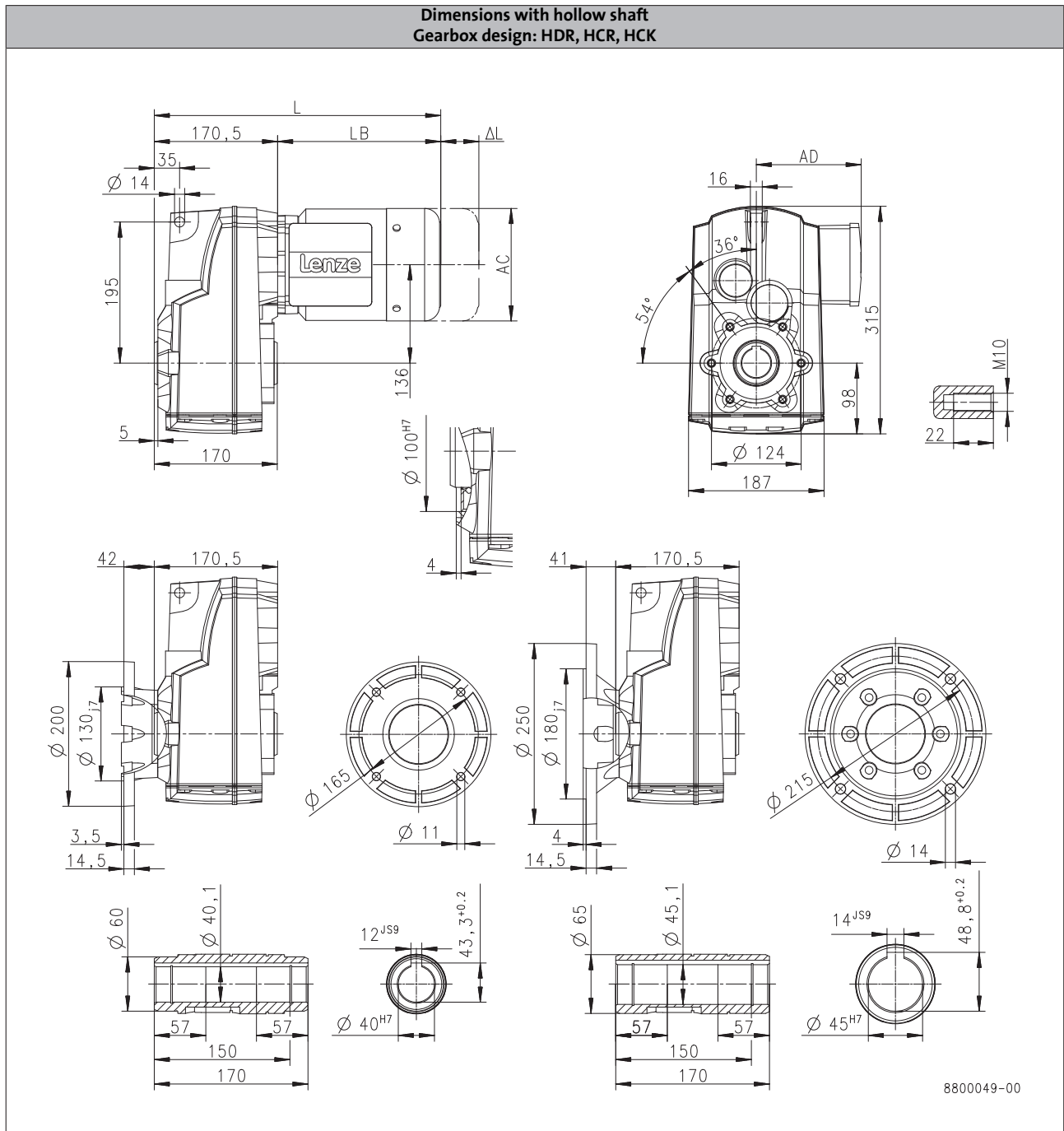
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



| | | m550 | | | | | | | | |
|---------------------------|----------|------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L [mm] | | 431 | 495 | | 555 | | 562 | | 629 |
| Motor length | LB [mm] | | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L [mm] | | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC [mm] | | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD [mm] | | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

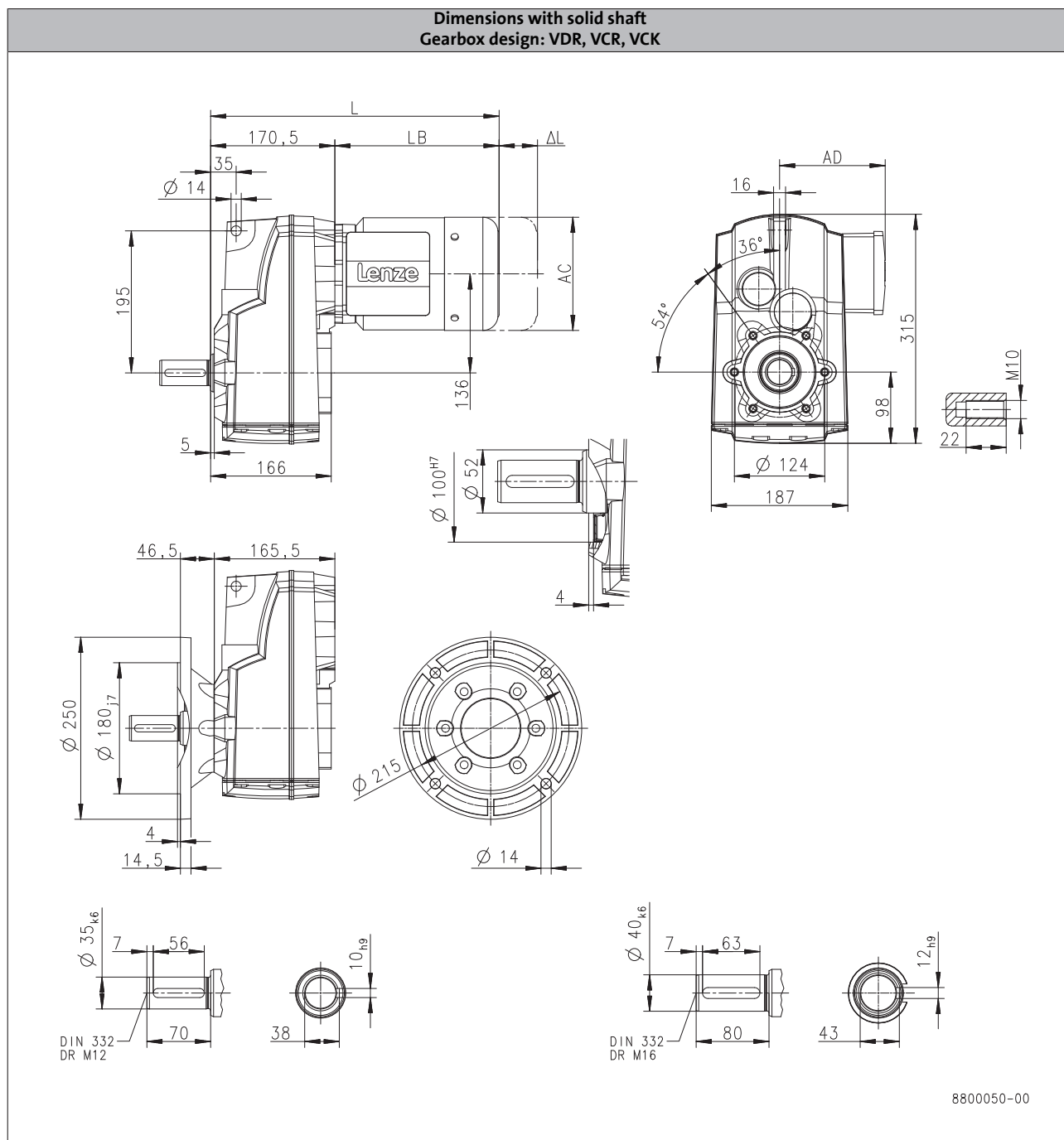
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 354 | | | 374 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

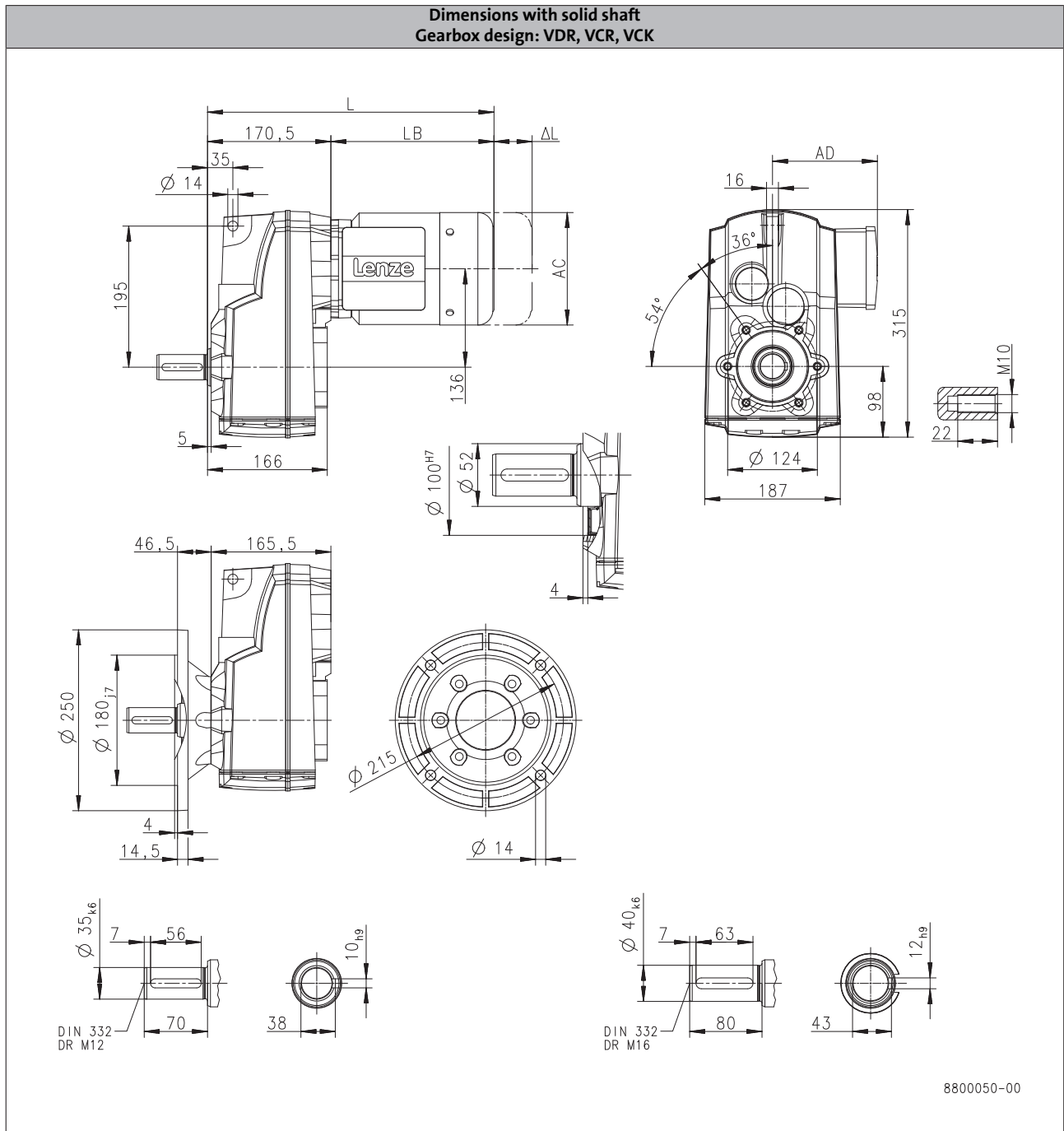
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



| | | m550 | | | | | | | |
|---------------------------|----------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L [mm] | 431 | 495 | | 555 | | 562 | | 629 |
| Motor length | LB [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

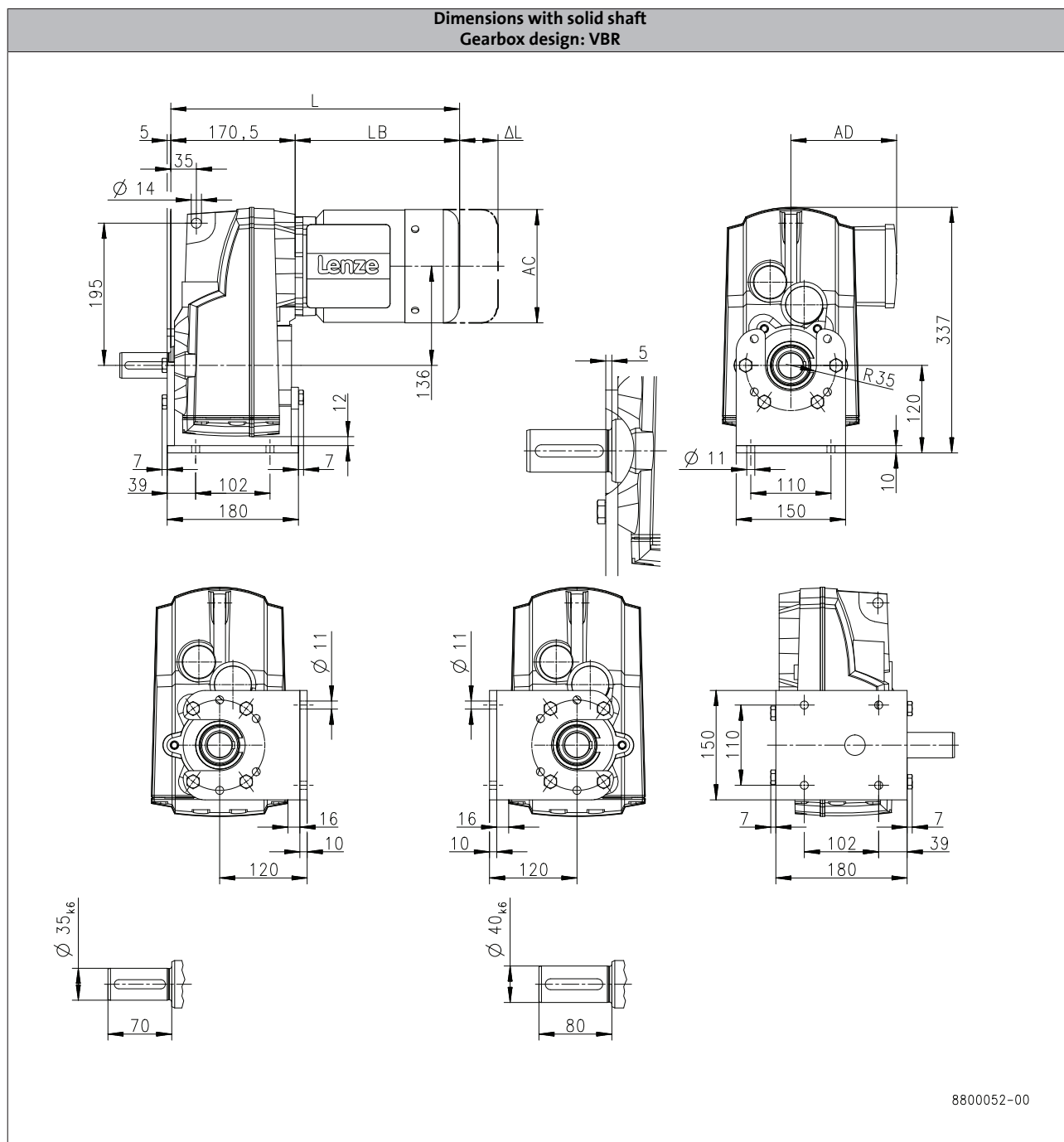
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 354 | | | 374 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

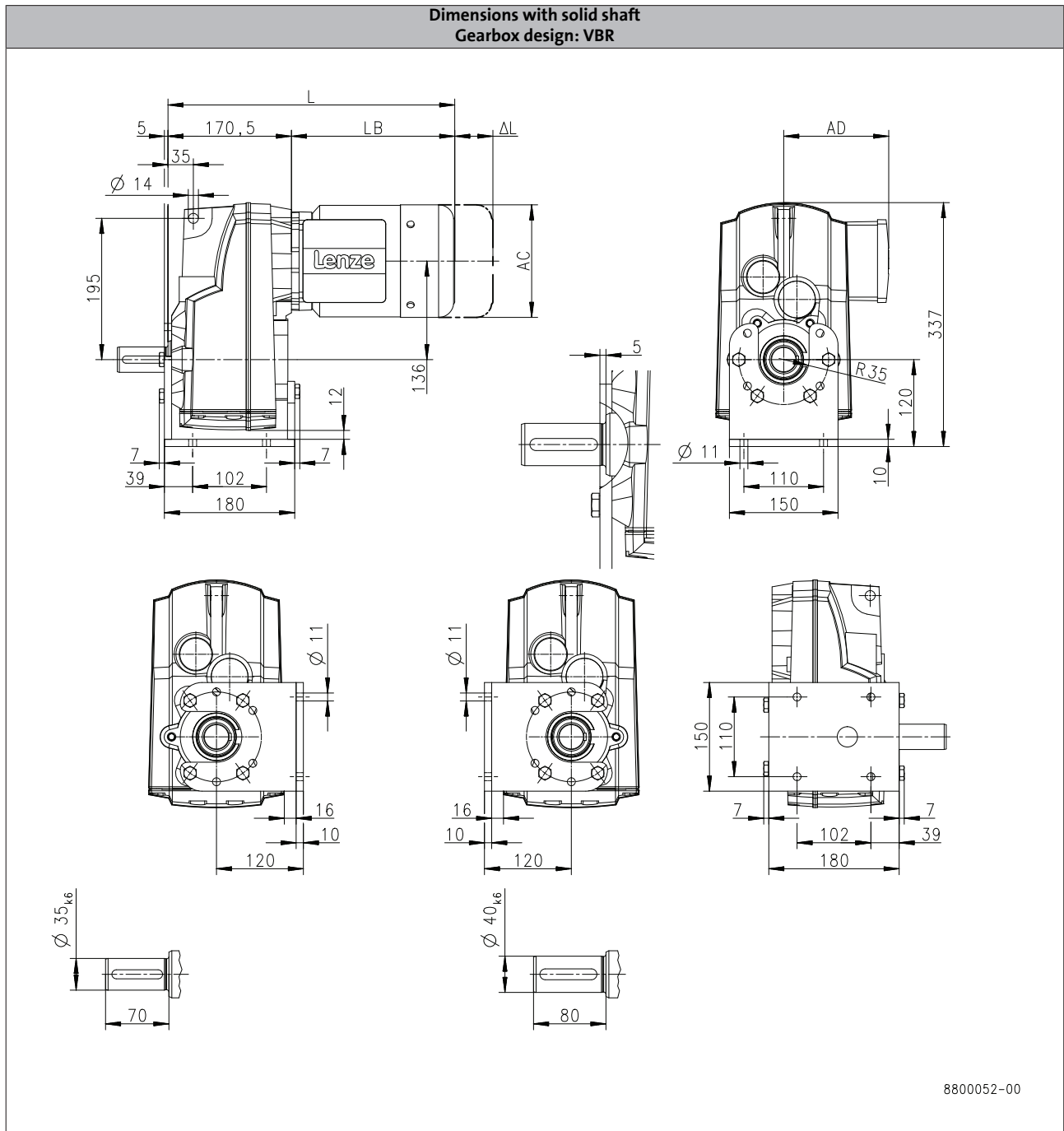
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



6.4

| | | m550 | | | | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L | [mm] | 431 | 495 | | 555 | | 562 | | 629 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

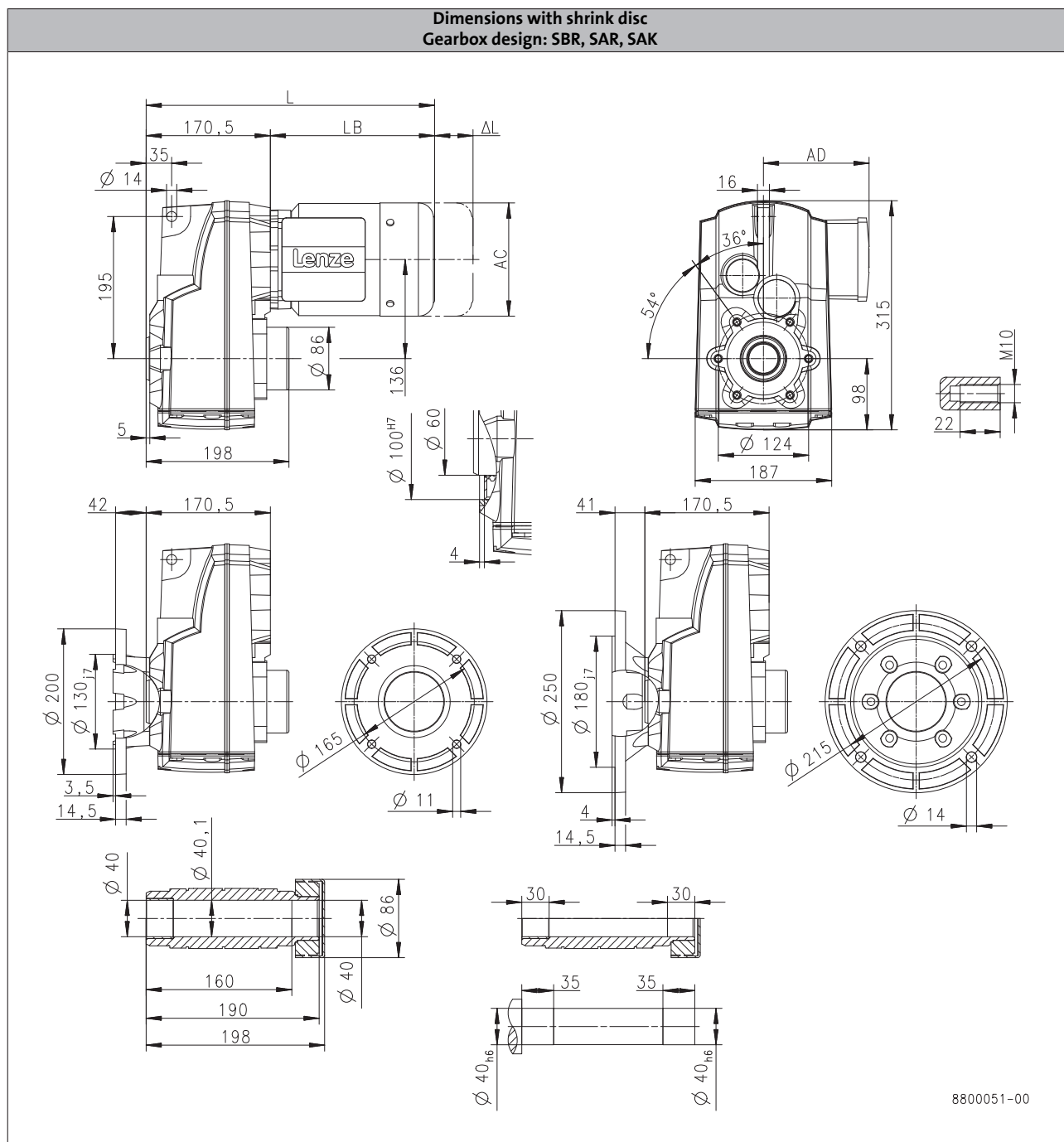
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 354 | | | 374 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

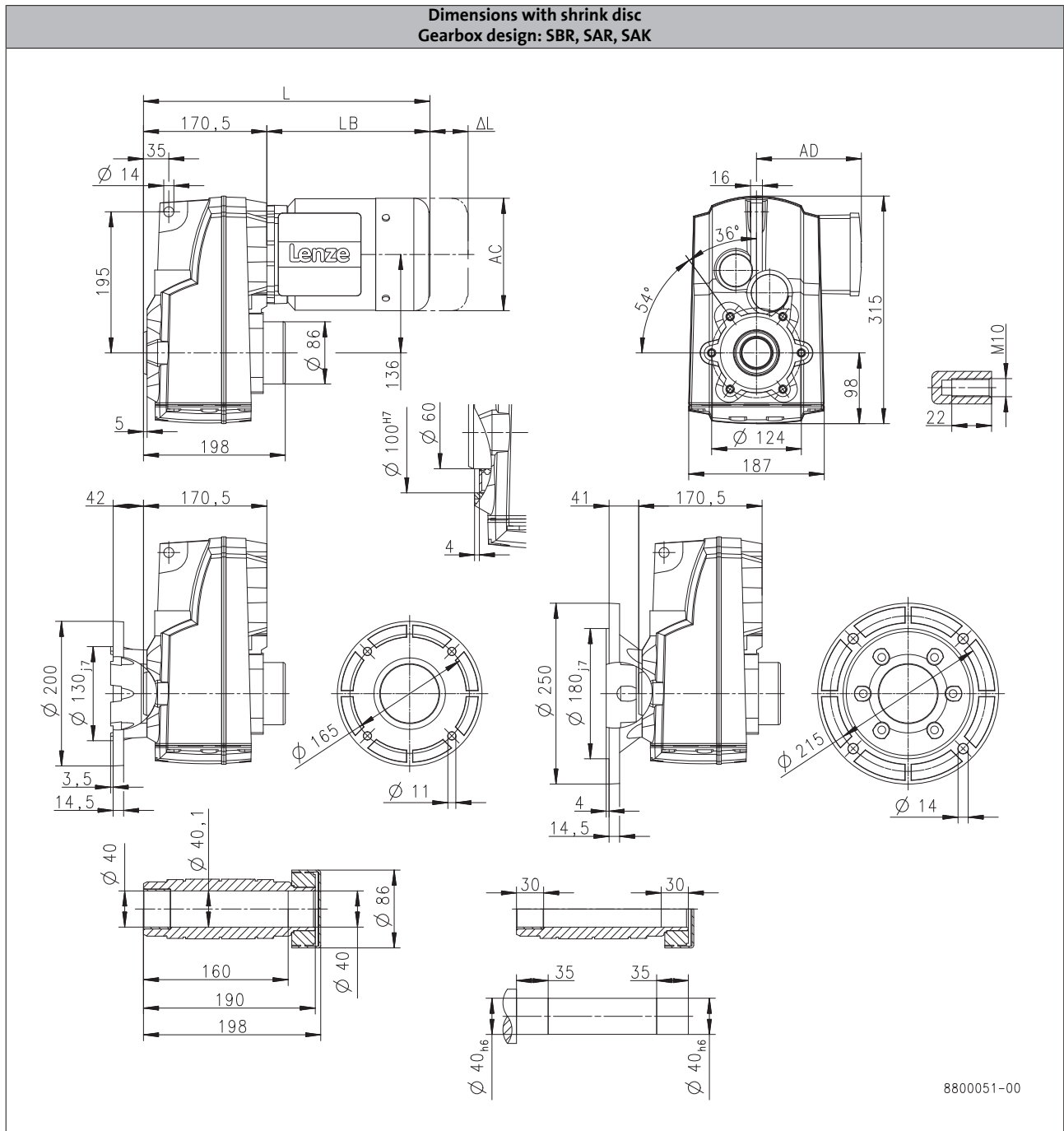
g500-S shaft-mounted helical geared motors

Technical data



Dimensions, 4-pole motors

g500-S660



6.4

| | | | m550 | | | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L | [mm] | 431 | 495 | | 555 | | 562 | | 629 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

g500-S shaft-mounted helical geared motors

Technical data



Additional length of the built-on accessories

Dimensions, self-ventilated (4-pole)

| Product | | | MD□MA□□ | | | m550 | | | | |
|------------------|-----|------|------------------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|
| | | | 063-02 063-22 | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 |
| Brake | | | 71.0 | 40.0 | 52.0 | 73.0 | 62.0 | 76.0 | 90.0 | 79.0 |
| Feedback | Δ L | [mm] | 71.0 | 56.0 | 52.0 | 97.0 | 82.0 | 81.0 | 80.0 | 102 |
| Brake + Feedback | | | 135 | 103 | 96.0 | 110 | 99.0 | 101 | 120 | 124 |
| | Δ L | [mm] | 135 | 103 | 96.0 | 110 | 99.0 | 101 | 120 | 124 |

Dimensions, forced ventilated (4-pole)

| Product | | | MD□MA□□ | | | m550 | | | | |
|------------------|-----|------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|--|
| | | | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 | |
| Blower | | | 128 | 127 | 122 | 109 | 103 | 121 | | |
| Brake | | | 170 | 165 | 183 | 175 | 170 | 183 | 201 | |
| Feedback | | | 128 | 127 | 122 | 109 | 183 | 201 | | |
| Brake + Feedback | | | 170 | 165 | 183 | 175 | 170 | 183 | 201 | |
| | Δ L | [mm] | 170 | 165 | 183 | 175 | 170 | 183 | 201 | |

g500-S shaft-mounted helical geared motors

Technical data



Weights, 4-pole motors

2-stage gearboxes

| Product | | Mass |
|-----------|---------------|------|
| | | m |
| | | [kg] |
| g500-S130 | MD□MA□□063-12 | 9.20 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 9.50 |
| | MD□MA□□071-32 | 10.9 |
| | MD□MA□□071-42 | 11.5 |
| | m550-P80/M4 | 20.0 |
| | m550-P90/L4 | 26.0 |
| | m550-P90/M4 | 25.0 |
| g500-S220 | MD□MA□□063-12 | 10.6 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 10.9 |
| | MD□MA□□071-32 | 12.3 |
| | MD□MA□□071-42 | 12.9 |
| | m550-P80/M4 | 21.4 |
| | m550-P90/L4 | 27.4 |
| | m550-P90/M4 | 26.4 |
| | m550-P100/L4 | 39.4 |
| | m550-P100/M4 | 37.4 |
| g500-S400 | MD□MA□□063-32 | 13.7 |
| | MD□MA□□063-42 | 14.0 |
| | MD□MA□□071-32 | 15.4 |
| | MD□MA□□071-42 | 16.0 |
| | m550-P80/M4 | 24.5 |
| | m550-P90/L4 | 30.5 |
| | m550-P90/M4 | 29.5 |
| | m550-P100/L4 | 42.5 |
| | m550-P100/M4 | 40.5 |
| | m550-P112/M4 | 45.5 |

| Product | | Mass |
|-----------|---------------|------|
| | | m |
| | | [kg] |
| g500-S660 | MD□MA□□063-42 | 18.4 |
| | MD□MA□□071-32 | 19.8 |
| | MD□MA□□071-42 | 20.4 |
| | m550-P80/M4 | 28.9 |
| | m550-P90/L4 | 34.9 |
| | m550-P90/M4 | 33.9 |
| | m550-P100/L4 | 46.9 |
| | m550-P100/M4 | 44.9 |
| | m550-P112/M4 | 49.9 |
| | m550-P132/L4 | 82.9 |
| | m550-P132/M4 | 70.9 |

g500-S shaft-mounted helical geared motors

Technical data



Weights, 4-pole motors

3-stage gearboxes

| Product | | Mass |
|-----------|---------------|------|
| | | m |
| | | [kg] |
| g500-S220 | MD□MA□□063-12 | 10.8 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 11.1 |
| | MD□MA□□071-32 | 12.5 |
| | MD□MA□□071-42 | 13.1 |
| | m550-P80/M4 | 21.6 |
| g500-S400 | MD□MA□□063-12 | 13.9 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 14.2 |
| | MD□MA□□071-32 | 15.6 |
| | MD□MA□□071-42 | 16.2 |
| | m550-P80/M4 | 24.7 |
| g500-S660 | MD□MA□□063-12 | 18.5 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 18.8 |
| | MD□MA□□071-32 | 20.2 |
| | MD□MA□□071-42 | 20.8 |
| | m550-P80/M4 | 29.3 |
| | m550-P90/L4 | 35.3 |
| | m550-P90/M4 | 34.3 |

g500-S shaft-mounted helical geared motors

Technical data



Additional weights for gearboxes

| Product | | | g500-S130 | g500-S220 | g500-S400 | g500-S660 |
|-------------|---|------|-----------|-----------|-----------|-----------|
| Mass | | | | | | |
| Solid shaft | m | [kg] | 0.5 | 0.5 | 1.7 | 2.5 |
| Shrink disc | m | [kg] | 0.2 | 0.4 | 0.6 | 0.6 |
| Foot | m | [kg] | 1.7 | 1.8 | 3.3 | 4.3 |
| Flange | m | [kg] | 0.4 | 0.4 | 0.9 | 1.7 |

Additional weights for motors

4-pole motors

| Product | | | MD□MA□□ | | | m550 | | | | |
|---------|---|------|------------------|----------------------------|------------------|------------|--------------------|----------------------|------------|----------------------|
| | | | 063-02 063-22 | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 |
| Brake | | | 06 | | 06 08 | 08 10 | | 10 12 | 12 14 | 14 16 |
| | m | [kg] | 0.9 | | 0.9 1.5 | 1.5 2.6 | | 2.6 4.2 | 4.2 5.8 | 5.8 8.7 |
| Blower | | | | | | | | | | |
| | m | [kg] | | 2.0 | 2.1 | 2.3 | 2.7 | 3.0 | 3.1 | 5.0 |

g500-S shaft-mounted helical gearbox

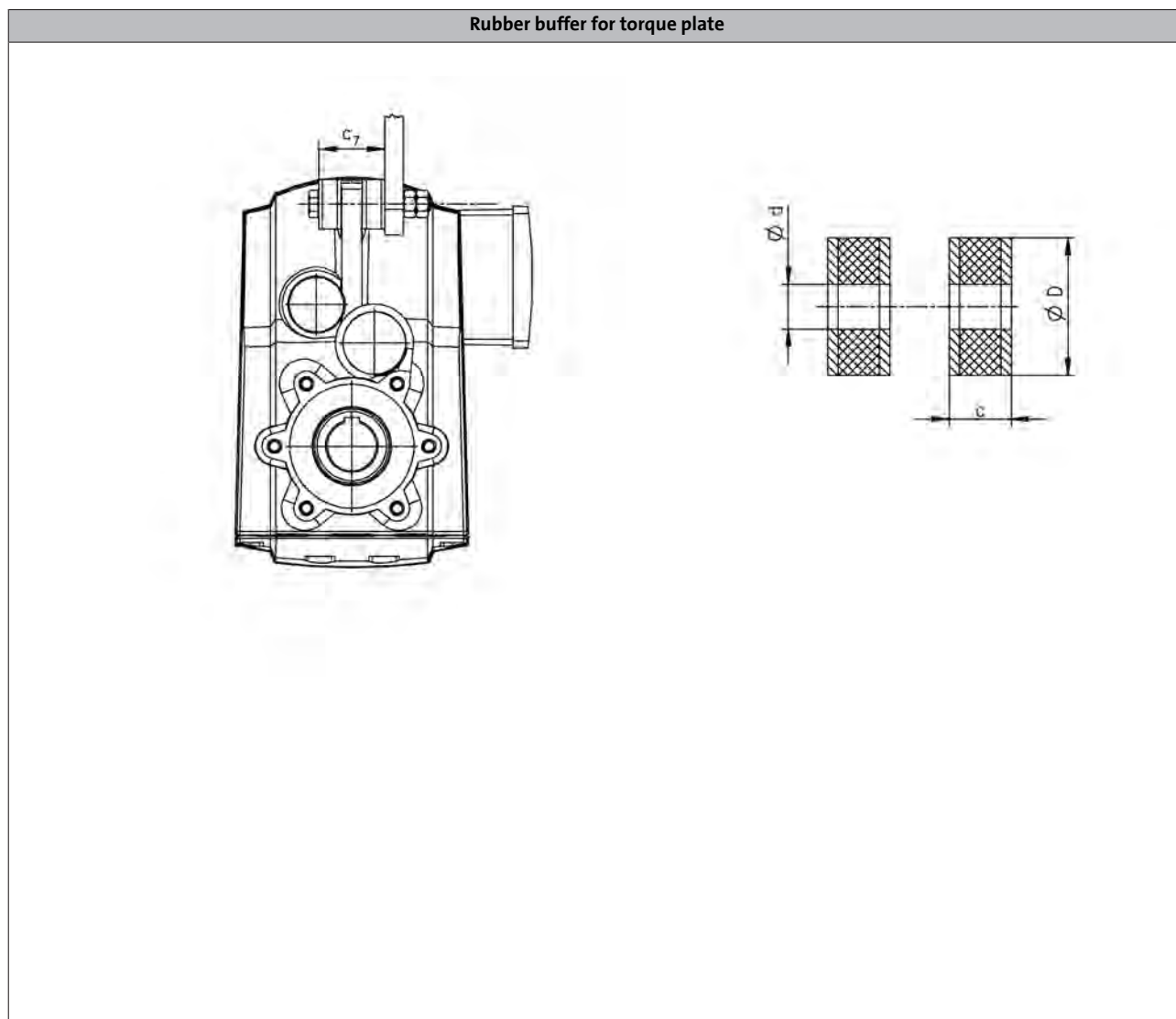
Product extensions



Torque plate

The torque is usually supported via the foot or the flange. Another simple option is the integrated torque plate at the housing. Here, the torque is supported only via one point and is, among other things, suitable for shaft-mounted gearboxes. Moreover, the suitable rubber buffers provide for a low-tension installation and absorb slight shocks.

The rubber buffers can be ordered optionally.



6.4

| Product | Dimensions | | | | Mass m |
|-----------|------------|-----------|-----------|------------------------|-----------|
| | d [mm] | D [mm] | c [mm] | c ₇ [mm] | |
| g500-S130 | 11.0 | 30.0 | 17.0 | 45.0 | 0.1 |
| g500-S220 | 11.0 | 30.0 | 17.0 | 45.0 | 0.1 |
| g500-S400 | 13.0 | 40.0 | 18.0 | 49.0 | 0.1 |
| g500-S660 | 13.0 | 40.0 | 18.0 | 52.0 | 0.1 |

g500-S shaft-mounted helical gearbox

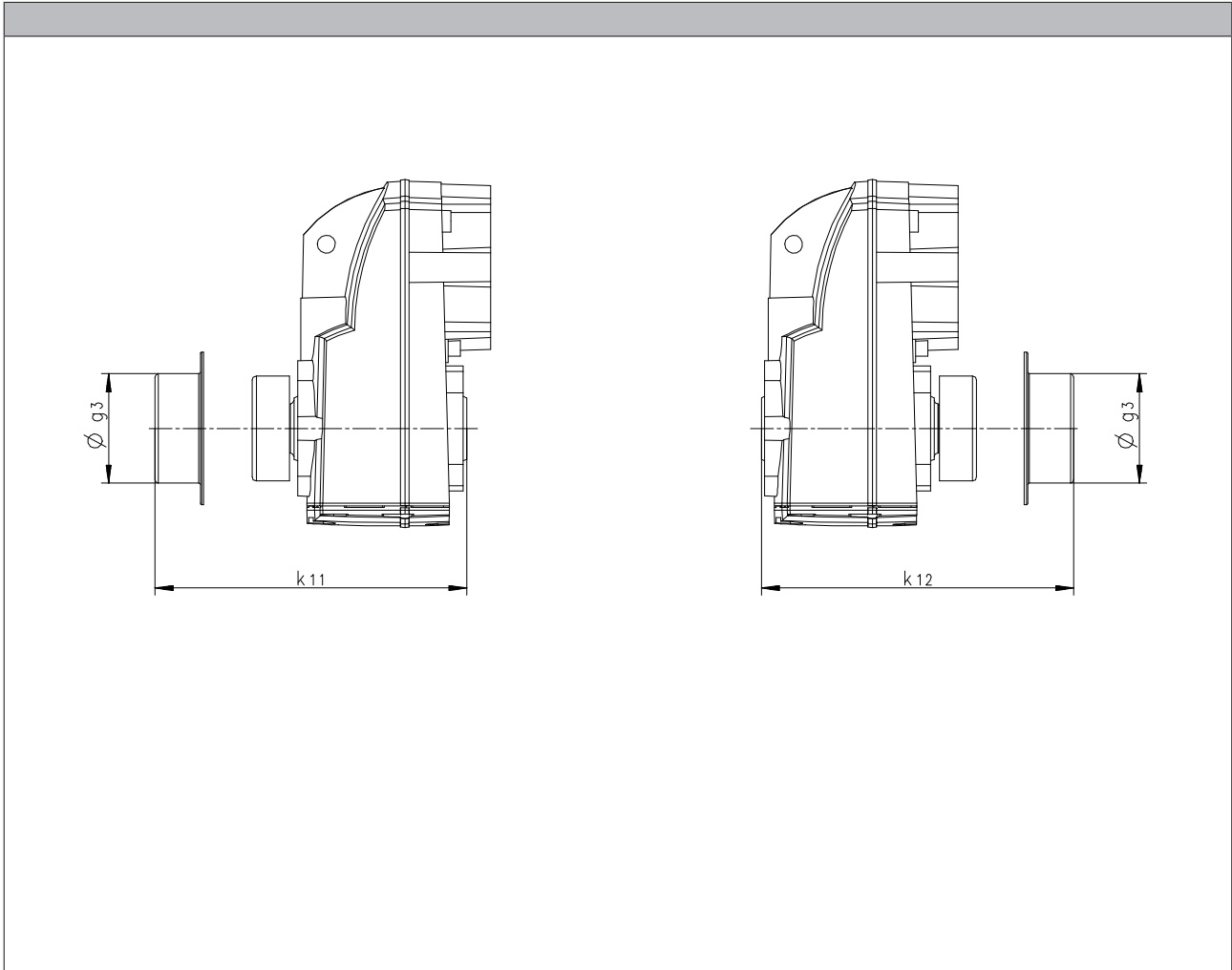
Product extensions



Shaft cover

Shrink disc cover

The cover is provided for the shrink disc to be protected from contact.



| Product | Dimensions | | | Mass |
|-----------|---------------|------------------|------------------|-----------|
| | g_3 [mm] | k_{11} [mm] | k_{12} [mm] | m [kg] |
| g500-S130 | 63.0 | 132 | 132 | 0.1 |
| g500-S220 | 76.0 | 152 | 152 | 0.1 |
| g500-S400 | 90.0 | 182 | 182 | 0.1 |
| g500-S660 | 90.0 | 200 | 202 | 0.1 |

g500-S shaft-mounted helical geared motors

Appendix



Gearbox code

| Example | | G | 50 | B | S | 113 | M | H | D | R | 2 | C |
|------------------|-------------------------------|---|----|---|---|-----|---|---|---|---|---|---|
| Meaning | Variant | | | | | | | | | | | |
| Product family | | G | 50 | | | | | | | | | |
| Generation | | | | B | | | | | | | | |
| Gearbox type | Shaft-mounted helical gearbox | | | | S | | | | | | | |
| Output torque | 130 Nm | | | | | 113 | | | | | | |
| | 220 Nm | | | | | 122 | | | | | | |
| | 400 Nm | | | | | 140 | | | | | | |
| | 660 Nm | | | | | 166 | | | | | | |
| Mounting | Motor | | | | | | M | | | | | |
| Shaft type | Solid shaft with feather key | | | | | | | V | | | | |
| | Hollow shaft with keyway | | | | | | | H | | | | |
| | Hollow shaft with shrink disc | | | | | | | S | | | | |
| Housing type | Foot mounting + centering | | | | | | | | A | | | |
| | Foot mounting | | | | | | | | B | | | |
| | Centering | | | | | | | | C | | | |
| | Threaded pitch circle | | | | | | | | D | | | |
| Flange mounting | Without flange | | | | | | | | | R | | |
| | Flange with through holes | | | | | | | | | k | | |
| Number of stages | 2-stage | | | | | | | | | | 2 | |
| | 3-stage | | | | | | | | | | 3 | |
| Motor mounting | Integrated | | | | | | | | | | | C |
| | IEC motor | | | | | | | | | | | N |

g500-S shaft-mounted helical geared motors

Appendix



Motor code

| Example | M | D | E | MA | XX | 063 | - | 4 | 2 | C1 | C |
|----------------------|---------|---|------------|----|----|-----|---|---|---|----|---|
| Meaning | Variant | | Motor code | | | | | | | | |
| Product family | M | | | | | | | | | | |
| Efficiency class | | D | | | | | | | | | |
| Cooling | | | S | | | | | | | | |
| | | | E | | | | | | | | |
| | | | F | | | | | | | | |
| Internal key | | | | MA | | | | | | | |
| Built-on accessories | | | | | XX | | | | | | |
| | | | | | BR | | | | | | |
| | | | | | BS | | | | | | |
| | | | | | BI | | | | | | |
| | | | | | BA | | | | | | |
| | | | | | RS | | | | | | |
| | | | | | IG | | | | | | |
| | | | | | AG | | | | | | |
| Size | | | | | | 063 | | | | | |
| | | | | | | 071 | | | | | |
| Overall length | | | | | | | | 0 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 4 | | | |
| Number of pole pairs | | | | | | | | | 2 | | |
| | | | | | | | | | 1 | | |
| Internal key | | | | | | | | | | C1 | |
| Approval | | | | | | | | | | | C |
| | | | | | | | | | | | U |
| | | | | | | | | | | | 3 |

g500-S shaft-mounted helical geared motors

Appendix



Motor code

| Meaning | Variant | Motor code | | | | | | | | | |
|----------------------|------------------------|----------------|--------|----|----|---|---|---|---|---|---|
| Example | M55A | P | 080 | M | 04 | 5 | E | 0 | 0 | W | T |
| Efficiency class | Premium - IE3 | P | | | | | | | | | |
| Size | | 080 | | | | | | | | | |
| | | 090 | | | | | | | | | |
| | | 100 | | | | | | | | | |
| | | 112 | | | | | | | | | |
| | | 132 | | | | | | | | | |
| | | 160 | | | | | | | | | |
| | | 180 | | | | | | | | | |
| | | 200 | | | | | | | | | |
| | | 225 | | | | | | | | | |
| | | Overall length | Medium | | M | | | | | | |
| Long | | | L | | | | | | | | |
| Very long | | | V | | | | | | | | |
| Number of poles | 4-pole | | | 04 | | | | | | | |
| Degree of protection | IP55 | | | | 5 | | | | | | |
| Cooling | Integral fan | | | | | E | | | | | |
| | Blower | | | | | F | | | | | |
| Brake attachment | Without brake | | | | | | 0 | | | | |
| | Spring-applied brake | | | | | | F | | | | |
| Actual value encoder | Without encoder | | | | | | | 0 | | | |
| | Resolver | | | | | | | R | | | |
| | Absolute value encoder | | | | | | | A | | | |
| | Incremental encoder | | | | | | | E | | | |
| Approval | CE UL | | | | | | | | | R | |
| | CE UL-CSA | | | | | | | | | U | |
| | CE CSA | | | | | | | | | S | |
| | CE | | | | | | | | | C | |
| | CE CCC | | | | | | | | | 3 | |
| | none | | | | | | | | | N | |
| | UL-CSA | | | | | | | | | V | |
| | CCC | | | | | | | | | 4 | |
| | CE UL-CSA CCC | | | | | | | | | W | |
| | UL-CSA CCC | | | | | | | | | Y | |
| Design type | Internal key | | | | | | | | | | T |

g500-S shaft-mounted helical geared motors

Appendix



g500-S shaft-mounted helical geared motors

Appendix



g500-S shaft-mounted helical geared motors

Appendix



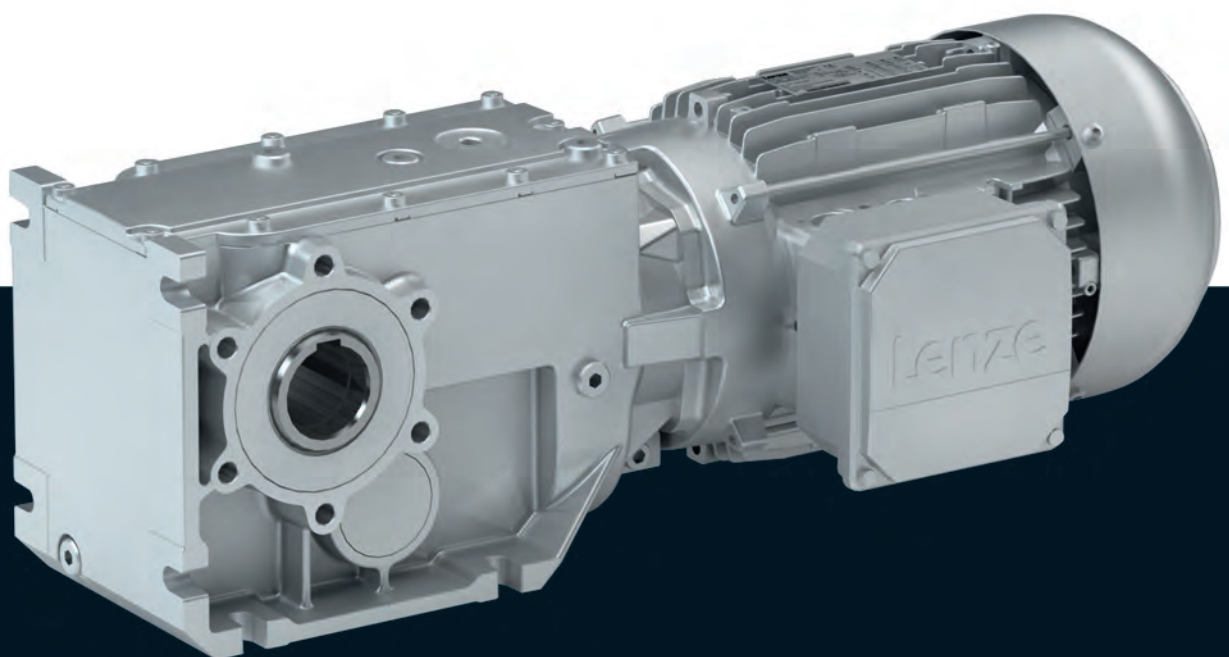
Gearboxes

g500-B bevel geared motors

Inverter operation

0.06 ... 0.55 kW (efficiency class IE1)

0.75 ... 7.5 kW (efficiency class IE3)



g500-B bevel geared motors



Contents

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g500-B bevel geared motors

General information



List of abbreviations

| | | |
|------------------------|-----------------------|---------------------------------------|
| α | [rad/s ²] | Max. permissible angular acceleration |
| $\eta_{50\%}$ | [%] | Efficiency |
| $\eta_{75\%}$ | [%] | Efficiency |
| $\eta_{100\%}$ | [%] | Efficiency |
| η_a | | Efficiency |
| $\eta_{c=1}$ | | Efficiency |
| c | | Load capacity |
| $\cos \phi$ | | Power factor |
| du/dt | [kV/ μ s] | Insulation resistance |
| $F_{ax,-}$ | [N] | Min. axial force |
| $F_{ax,+}$ | [N] | Max. axial force |
| $F_{ax,max}$ | [N] | Max. axial force |
| $f_{in,max}$ | [Hz] | Max. input frequency |
| f_{max} | [kHz] | Limit frequency |
| f_{max} | [kHz] | Max. switching frequency |
| f_N | [Hz] | Rated frequency |
| $F_{rad,max}$ | [N] | Max. radial force |
| f_z | | Additional radial force factor |
| H_{max} | [m] | Site altitude |
| I_0 | [A] | Standstill current |
| i | | Ratio |
| $I_{in,max}$ | [A] | Max. input current |
| I_{max} | [A] | Max. current consumption |
| I_{max} | [A] | Max. current |
| I_{max} | [A] | Max. current consumption |
| I_{max} | [A] | Max. current |
| I_{max} | [A] | Max. short-time DC-bus current |
| I_{max} | [A] | Max. DC-bus current |
| I_N | [A] | Rated current |
| $I_{N,\Delta}$ | [A] | Rated current |
| $I_{N,Y}$ | [A] | Rated current |
| J | [kgcm ²] | Moment of inertia |
| J_{MB} | [kgcm ²] | Moment of inertia |
| $KE_{LL\ 150^\circ C}$ | [V/(1000 r/min)] | Voltage constant |
| $Kt_{0\ 150^\circ C}$ | [Nm/A] | Torque constant |
| L_{10} | [h] | Bearing service life |
| L | [mH] | Mutual inductance |
| $L_{1\sigma}$ | [mH] | Stator leakage inductance |
| $L_{2\sigma}$ | [mH] | Rotor leakage inductance |
| L_N | [mH] | Rated inductance |
| m | [kg] | Mass |
| M_2 | [Nm] | Output torque |
| M_{22} | [Nm] | Output torque |
| M_0 | [Nm] | Stall torque |
| $M_{0,max}$ | [Nm] | Max. standstill torque |
| $M_{2,GM}$ | [Nm] | Output torque |
| $M_{2,max}$ | [Nm] | Max. output torque |
| $M_{2,not}$ | [Nm] | Emergency off-torque |

| | | |
|-----------------------|----------------|--|
| M_a | [Nm] | Starting torque |
| $M_{a,1}$ | [Nm] | Starting torque |
| $M_{a,2}$ | [Nm] | Starting torque |
| M_{av} | [Nm] | Average dynamic torque |
| M_b | [Nm] | Stalling torque |
| M_B | [Nm] | Braking torque |
| M_k | [Nm] | Rated torque |
| M_{max} | [Nm] | Max. torque |
| M_N | [Nm] | Rated torque |
| n_2 | [r/min] | Output speed |
| n_{21} | [r/min] | Output speed |
| n_{22} | [r/min] | Output speed |
| $n_{1,max}$ | [r/min] | Max. gearbox input speed |
| $n_{1,max\ 50\%}$ | [r/min] | Max. gearbox input speed |
| n_{eto} | [r/min] | Transition speed |
| n_k | [r/min] | Speed |
| n_{max} | [r/min] | Max. speed |
| n_N | [r/min] | Rated speed |
| P_{max} | [kW] | Max. power input |
| Q_{BW} | [MJ] | Friction energy |
| Q_E | [J] | Maximum switching energy |
| Q_E | [kJ] | Maximum switching energy |
| R_1 | [Ω] | Stator impedance |
| R_2 | [Ω] | Rotor impedance |
| R | [Ω] | Insulation resistance |
| R | [Ω] | Min. insulation resistance |
| $R_{UV\ 150^\circ C}$ | [Ω] | Stator impedance |
| $R_{UV\ 20^\circ C}$ | [Ω] | Stator impedance |
| $S_{h\ddot{u}}$ | [1/h] | Transition operating frequency |
| t_1 | [ms] | Engagement time |
| t_2 | [ms] | Disengagement time |
| t_{11} | [ms] | Delay time |
| t_{12} | [ms] | Rise time |
| T | [$^\circ C$] | Max. surface temperature |
| T | [$^\circ C$] | Min. ambient temperature for transport |
| T | [$^\circ C$] | Max. ambient temperature for transport |
| T | [$^\circ C$] | Max. ambient temperature of bearing |
| T | [$^\circ C$] | Min. ambient storage temperature |
| T | [$^\circ C$] | Ambient temperature |
| T | [$^\circ C$] | Operating temperature |
| T | [$^\circ C$] | Rated temperature |
| t | [h] | Service life |
| T_{opr} | | Ambient operating temperature |
| $T_{opr,max}$ | [$^\circ C$] | Max. ambient operating temperature |
| $T_{opr,min}$ | [$^\circ C$] | Min. ambient operating temperature |
| t_{re} | [s] | Recovery time |
| $t_{\ddot{u}}$ | [ms] | Overexcitation time |
| U_{Δ} | [V] | Voltage range |
| U_{AC} | [V] | Mains voltage range |

g500-B bevel geared motors

General information



List of abbreviations

| | | |
|----------------|--------------|--------------------|
| U_{AC} | [V] | Mains voltage |
| $U_{in,max}$ | [V] | Max. input voltage |
| $U_{in,min}$ | [V] | Min. input voltage |
| U_{max} | [V] | Max. input voltage |
| U_{max} | [V] | Max. mains voltage |
| U_{min} | [V] | Min. mains voltage |
| $U_{N,\Delta}$ | [V] | Rated voltage |
| $U_{N,AC}$ | [V] | Rated voltage |
| $U_{N,DC}$ | [V] | Rated voltage |
| $U_{N,Y}$ | [V] | Rated voltage |
| Z_g | | Number of teeth |
| Z_{ro} | [Ω] | Rotor impedance |
| Z_{rs} | [Ω] | Impedance |
| Z_{so} | [Ω] | Stator impedance |
| Z_t | | Number of teeth |

| | |
|----------|---|
| CCC | China Compulsory Certificate |
| CE | Communauté Européenne |
| CEL | China Energy Label |
| CSA | Canadian Standards Association |
| CSAULE | Energy Verified Certificate |
| cURus | Combined certification marks of UL for the USA and Canada |
| DIN | Deutsches Institut für Normung e.V. |
| EAC | Customs union Russia / Belarus / Kazakhstan certificate |
| EMC | Electromagnetic compatibility |
| EN | European standard |
| IM | International Mounting Code |
| IP | International Protection Code |
| NEMA | National Electrical Manufacturers Association |
| UkrSEPRO | Certificate for Ukraine |
| UL | Underwriters Laboratory Listed Product |
| UR | Underwriters Laboratory Recognized Product |
| VDE | Verband deutscher Elektrotechniker (Association of German Electrical Engineers) |

g500-B bevel geared motors



General information

Product information

In combination with three-phase AC motors, our bevel gearboxes form a compact and powerful drive unit. Numerous options at the input and output end provide for the drive to be exactly adapted to your application.

The efficient bevel gearboxes feature high reliable radial forces, closely stepped gear reductions and a low backlash. They are available in 2-pole and 3-pole design with a torque up to 450 Nm and a ratio of up to $i=360$.

Three-phase AC motors as a basis for geared motors

In a power range of 0.06 to 7.5 kW, Lenze offers inverter-operated three-phase AC motors for comprehensive tasks.

They come in different efficiency classes and can be used for the versions required for open-loop or closed-loop inverter operation.

- IE1 motors up to a power of 0.55 kW
- IE3 motors from 0.75 kW to 7.5 kW

Versions

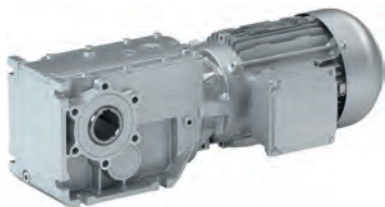
- High-efficient right-angle gearbox in a compact design for space-saving installation
- Standardised shaft and flange dimensions for an easy machine integration
- Low backlash and high torsional stiffness provide for exact results in positioning applications

Customer benefit:

- Different efficiency classes for the greatest economic benefit
- Space-saving thanks to compact direct attachment to Lenze gearboxes
- Can be used universally for a wide range of machine tasks due to the market-oriented modular system
- Conventional connectors ensure quick connection, also during servicing

The product name

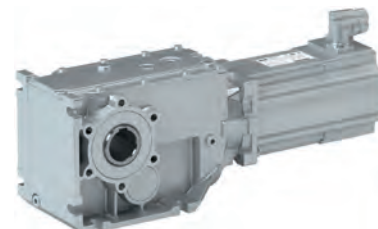
| Gearbox type | Product range | | Design | Rated torque [Nm] | Product |
|---------------|---------------|---|--------|-------------------|-----------|
| Bevel gearbox | g500 | - | B | 45 | g500-B45 |
| | | | | 110 | g500-B110 |
| | | | | 240 | g500-B240 |
| | | | | 450 | g500-B450 |



g500-B bevel gearbox with three-phase AC motor



g500-B bevel gearbox with three-phase AC motor and motec



g500-B bevel gearbox with servo motor

g500-B bevel geared motors

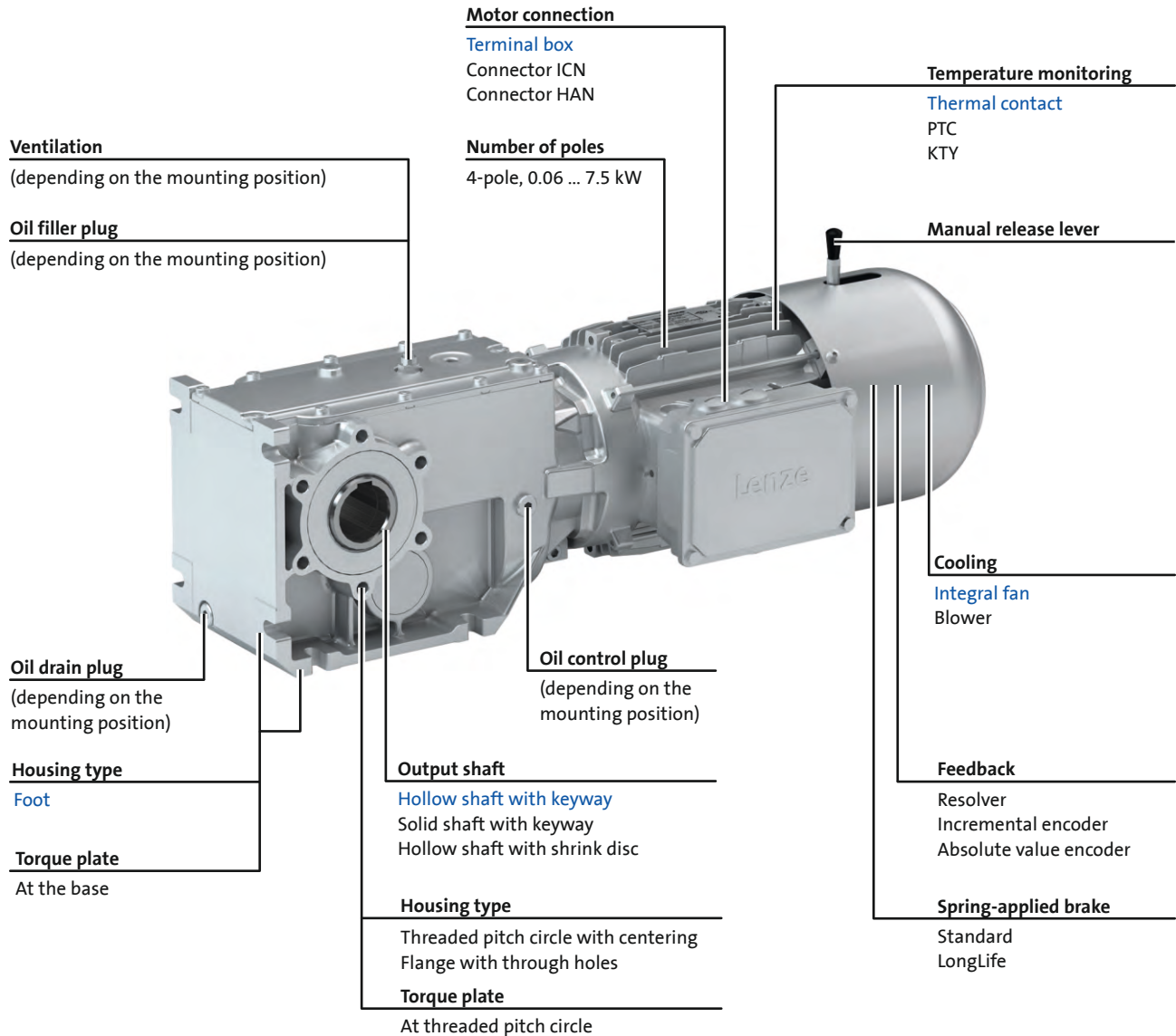
General information





Equipment

Overview

The equipment includes all the options available as standard and all the built-on accessories of the product.



Standard design

  11 - Detailed information on housing type.

g500-B bevel geared motors

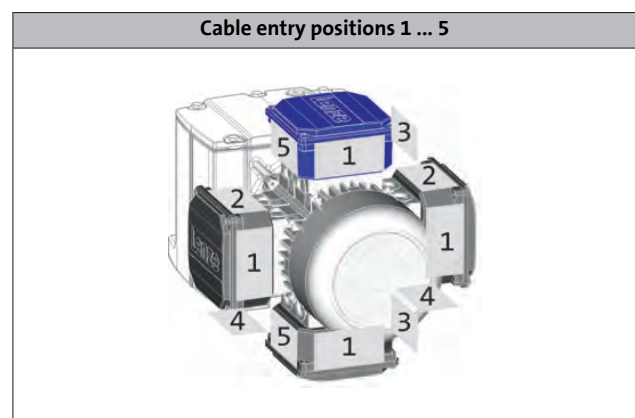
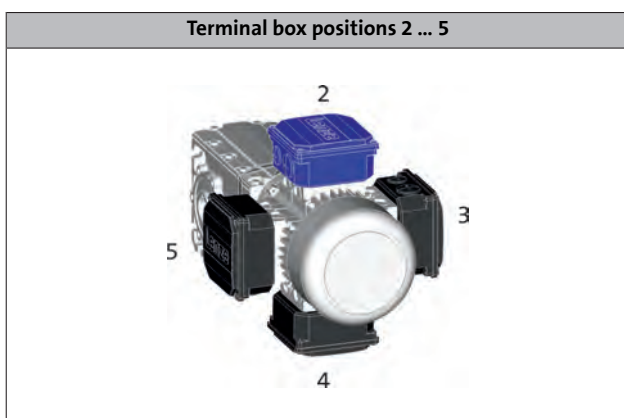
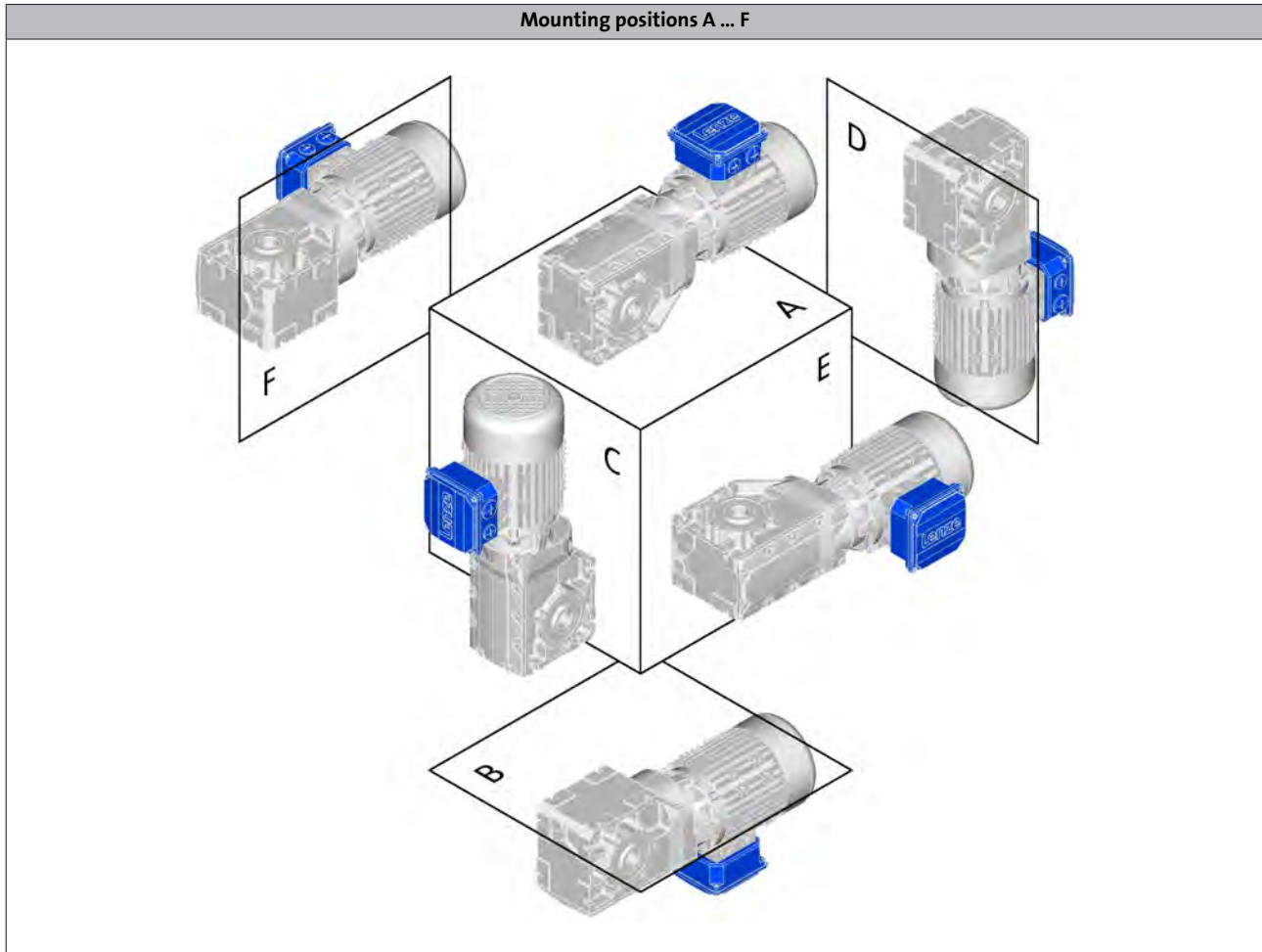
General information



Equipment

Mounting position, position of system components

- ▶ In the following graphics, the terminal box in position 2 is colour-coded. If the mounting position (A ... F) changes, the terminal box positions 2 ... 5 are rotated accordingly.
- ▶ To reduce the number of different versions, the gearboxes can also be ordered with combined mounting positions:
 - g500-B45 in mounting position ABCDEF
 - g500-B110 ... B450 in mounting position AEF



- ▶ For details regarding the cable entry see motor chapter/product extensions.

g500-B bevel geared motors

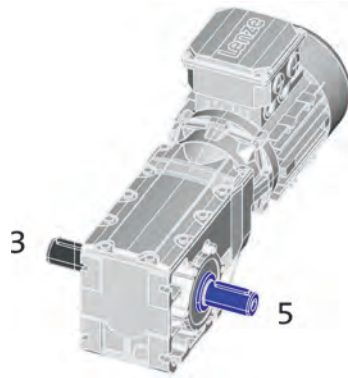
General information



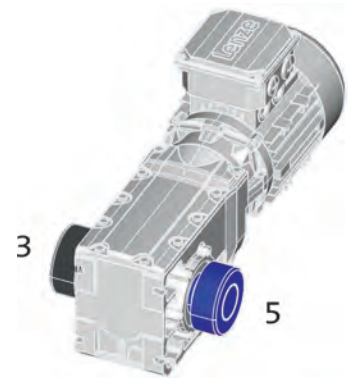
Equipment

Mounting position, position of system components

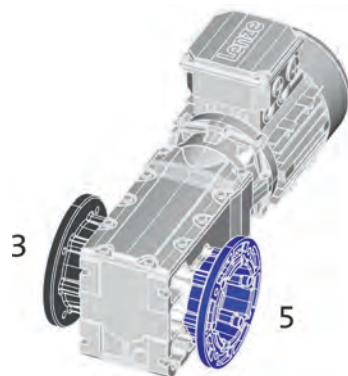
Solid shaft position 3 or 5



Shrink disc position 3 or 5



Flange position 3 or 5



g500-B bevel geared motors

General information



The geared motor kit

| Product | g500-B45 | g500-B110 | g500-B240 | g500-B450 |
|-------------------------------|-------------|-------------|-------------|-------------|
| Gearbox | | | | |
| Motor assignment min. | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 | MD□MA□□-063 |
| Motor assignment max. | MD□MA□□-071 | m550-P90 | m550-P100 | m550-P132 |
| Technical data | | | | |
| Output torque max. | 45 Nm | 110 Nm | 240 Nm | 450 Nm |
| Drive power min. | 0.06 kW | 0.12 kW | 0.12 kW | 0.12 kW |
| Drive power max. | 0.55 kW | 1.5 kW | 3.0 kW | 7.5 kW |
| Dimensions [mm] | | | | |
| Solid shaft with featherkey | 20 x 40 | 20 x 40 | 30 x 60 | 30 x 60 |
| Hollow shaft with keyway | 18/20 | 20/25 | 30/35 | 35/40 |
| Hollow shaft with shrink disc | 20 | 20 | 30/35 | 35 |
| Output flange | 110/120 | 120/160 | 160/200 | 200 |

- Values printed in bold are standard versions.
Values not printed in bold are possible extensions, some for an additional charge.

| Design | |
|----------------------------------|--|
| Conformity | CE EAC |
| Approval | Without CCC/cURus |
| Degree of protection | IP55 IP65/IP66 |
| Surface and corrosion protection | Without Different types of OKS |
| Colour | Not coated Primed/RAL colours |
| Hollow shaft | 80614 |
| Hollow shaft with shrink disc | - Without keyway |
| Solid shaft | - With keyway |
| Shaft material | Steel stainless steel |
| Shaft sealing ring material | NBR FKM or FPM (Viton) |
| Shaft bearings | 48056 |
| Paste for shaft mounting | Without Enclosed |
| Gearbox type | With foot (□BR) With centering (□AR) With output flange (□AK) |
| Lubricant | Mineral oil Synthetic oil Food-compatible oil |

| Design | |
|-------------------------------|---|
| Mounting position | A/B/C/D/E/F Combined |
| Backlash | 48063 |
| Power connection | Terminal box Plug connectors |
| Spring-applied brake | Without Brake design: Standard/Longlife Brake version: Standard/Overexcited/Cold Brake |
| Feedback | Without Resolver Absolute value encoder Incremental encoder |
| Cooling | Integral fan Blower |
| Temperature monitoring | TKO thermal contact PTC thermistor KTY thermal detector |
| Built-on accessories fan side | 48071 |

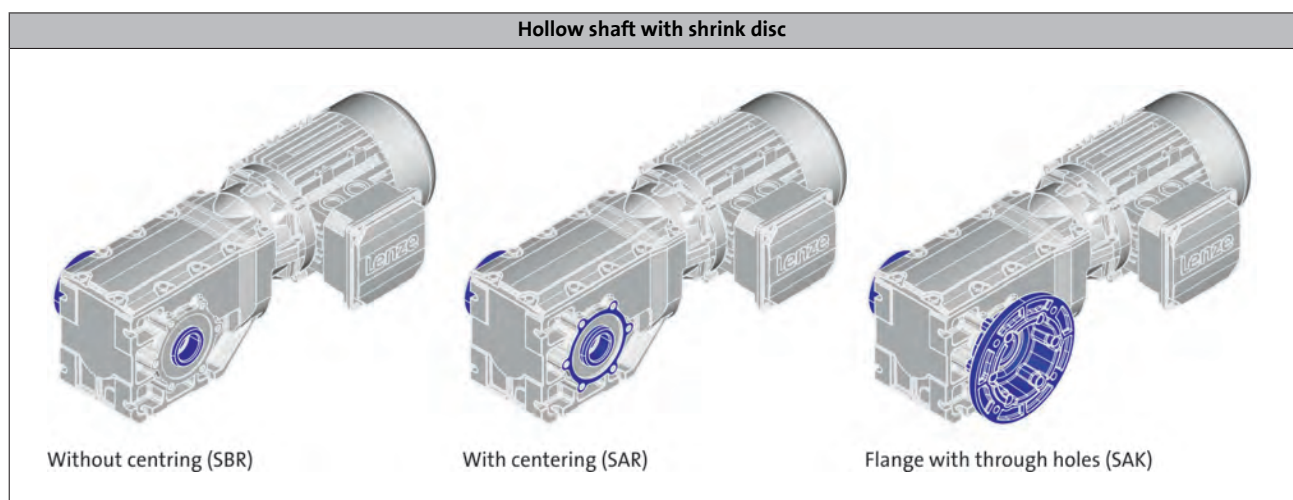
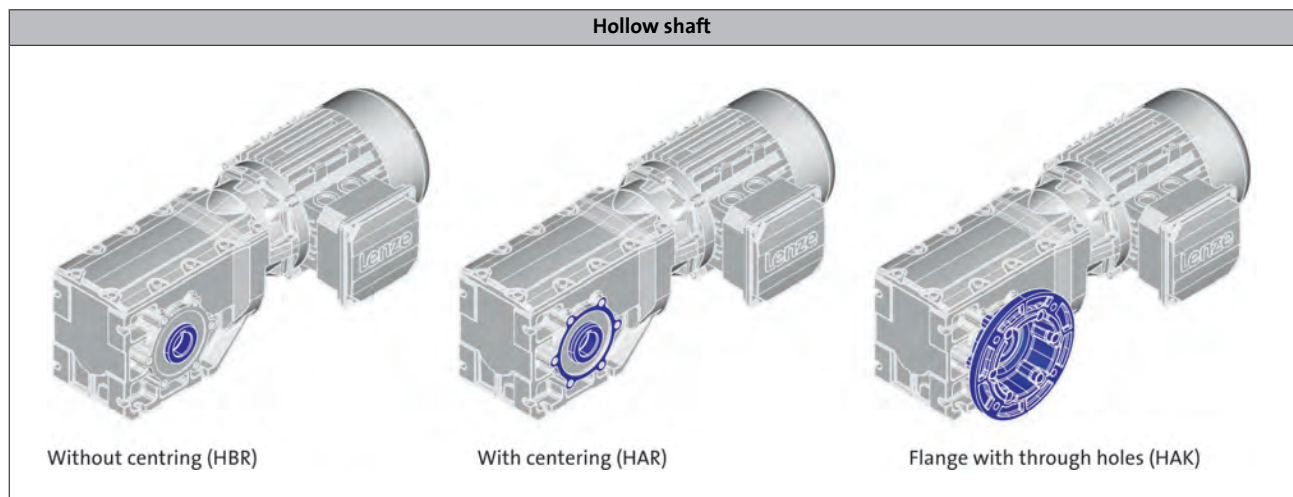
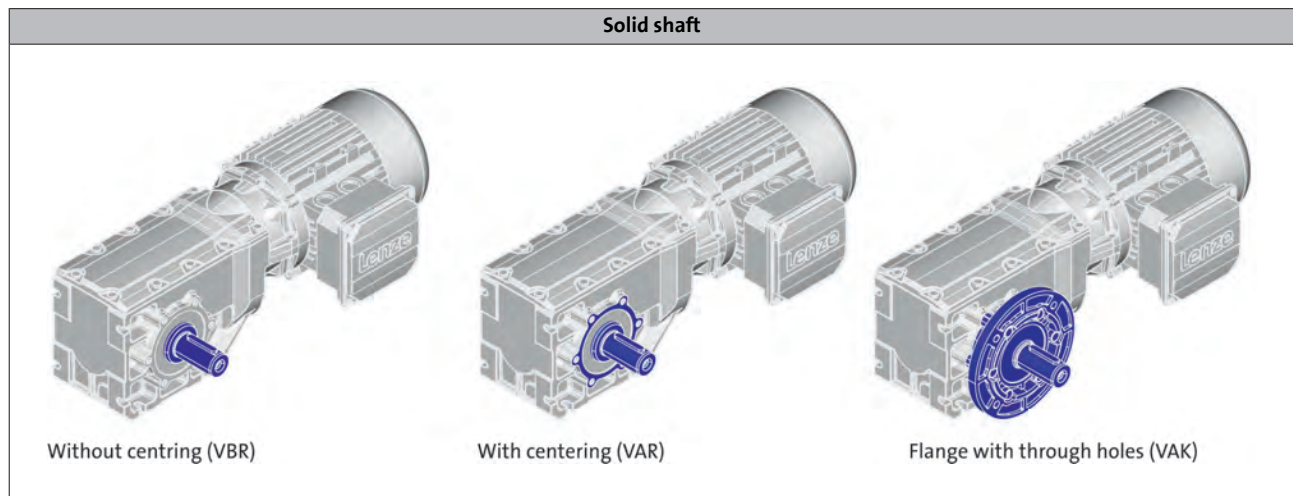
g500-B bevel geared motors

General information



The geared motor kit

Gearbox details



g500-B bevel geared motors

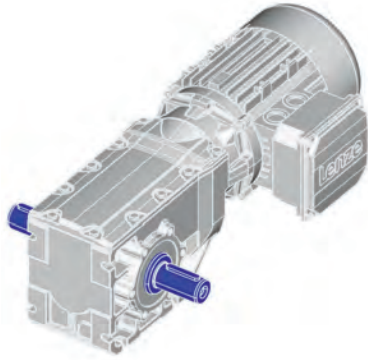
General information



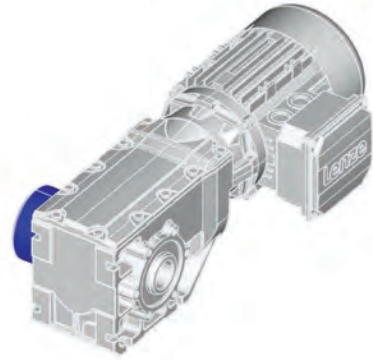
The geared motor kit

Gearbox details

Accessories

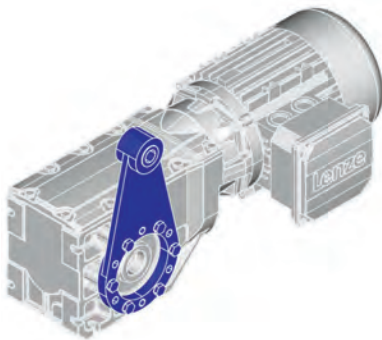


2nd output shaft end

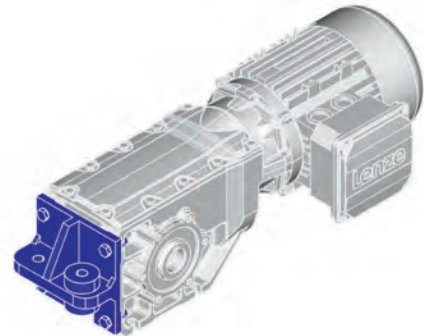


Cover
Hollow shaft/shrink disc

Accessories



Torque plate
at threaded pitch circle



Torque plate
at foot



General information about the data provided in this catalogue

The powers, torques and speeds specified in this catalogue are rounded values and are valid under the following conditions:

- Operating time/day = 8 h (100% OT)
- Duty class I for up to 10 switching operations/h
- Mounting positions and designs in this catalogue
- Standard lubricant
- $T_{amb} = 30\text{ °C}$ for gearboxes,
 $T_{amb} = 40\text{ °C}$ for motors (in accordance with EN 60034)
- Site altitude $\leq 1000\text{ m amsl}$
- The selection tables provide the permissible mechanical powers and torques. For notes on the thermal power limit, see chapter drive dimensioning.
- The rated power specified for motors and geared motors applies to operating mode S1 (in accordance with EN 60034).

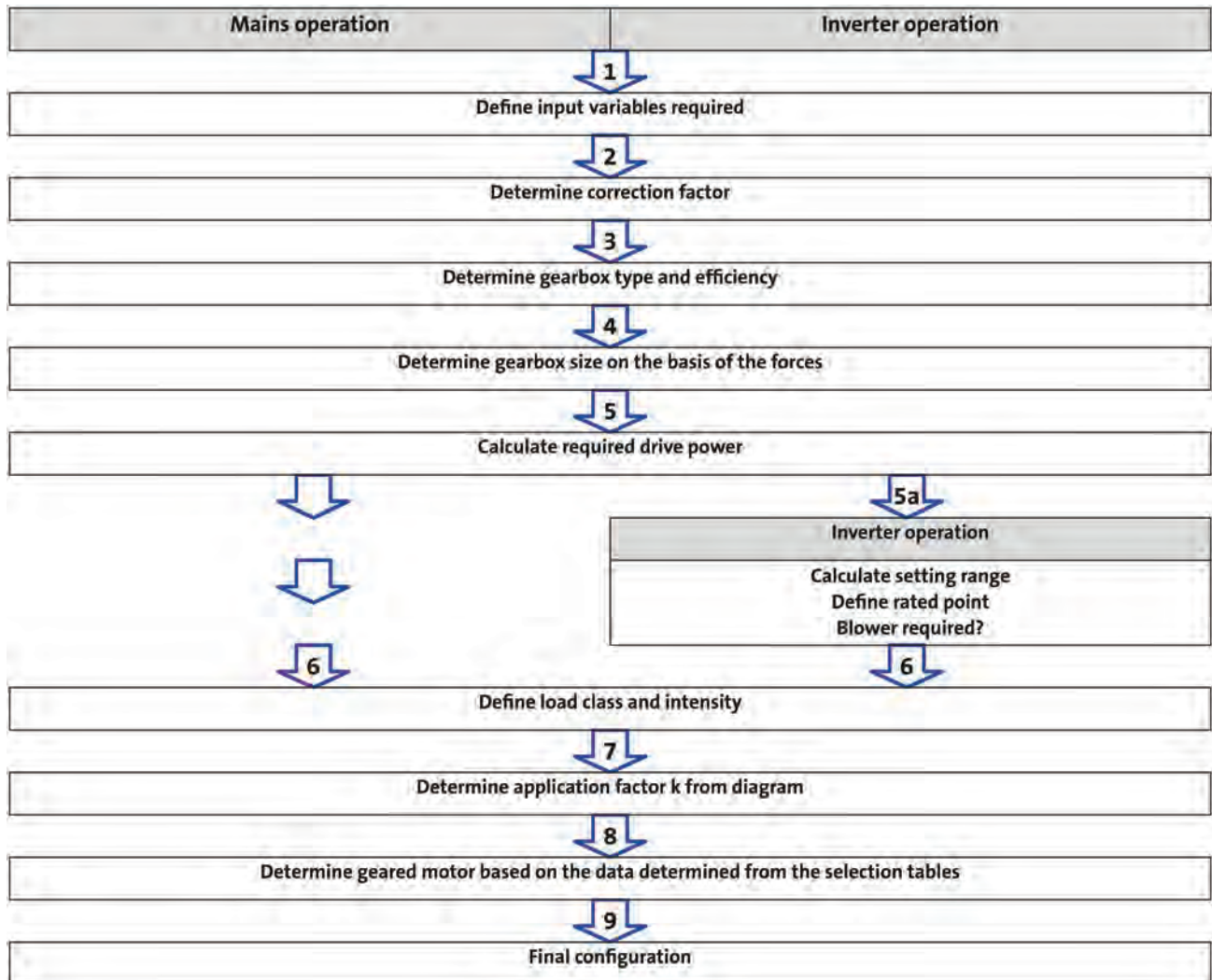
Under different operating conditions, the values obtained may vary from those listed here.

In the case of extreme operating conditions, please consult your Lenze sales office.



Procedure of a configuration process

Workflow



You can use the Drive Solution Designer for precise drive dimensioning.

The Drive Solution Designer helps you to carry out a fast and high-quality drive dimensioning. The software includes well-founded and proven knowledge on drive applications and electro-mechanical drive components.

6.5

Please contact your Lenze sales office.



Procedure of a configuration process

1 required input variables

| | | | |
|-----------------------------|-----------------------|---------------|----------------------|
| Load torque | | $M_{L,max} =$ | [Nm] |
| | In inverter operation | $M_{L,min} =$ | [Nm] |
| Load speed | | $n_{L,max} =$ | [r/min] |
| | In inverter operation | $n_{L,min} =$ | [r/min] |
| External moments of inertia | | $J_{ext} =$ | [kgcm ²] |
| Operating time / day | | BD = | [h] |
| Switching operations per h | | $S_h =$ | [1/h] |
| Runtime for $M_{L,max}$ | In inverter operation | | [%] |

2 determine correction factor

| Operating modes and operating time | | | | | | |
|------------------------------------|------------|------|-----------|------------|------------|------------|
| S1 | ED | [%] | 100 | | | |
| | $k_L =$ | | 1.0 | | | |
| S2 | ED | [%] | 10 | 30 | 60 | 90 |
| | $k_L =$ | | 1.4 - 1.5 | 1.15 - 1.2 | 1.07 - 1.1 | 1.0 - 1.05 |
| S3 | ED | [%] | 15 | 25 | 40 | 60 |
| | $k_L =$ | | 1.4 - 1.5 | 1.3 - 1.4 | 1.15 - 1.2 | 1.05 - 1.1 |
| S6 | ED | [%] | 15 | 25 | 40 | 60 |
| | $k_L =$ | | 1.5 - 1.6 | 1.4 - 1.5 | 1.3 - 1.4 | 1.15 - 1.2 |
| Site altitude | | | | | | |
| | H | [m] | ≤ 1000 | ≤ 2000 | ≤ 3000 | ≤ 4000 |
| | $k_H =$ | | 1 | 0.95 | 0.9 | 0.8 |
| Ambient temperature | | | | | | |
| | $T_U =$ | [°C] | ≤ 40 | ≤ 45 | ≤ 50 | ≤ 55 |
| | $k_{TU} =$ | | 1 | 0.95 | 0.9 | 0.8 |

23 - Operating modes



Procedure of a configuration process



3 determine gearbox type and efficiency

| Gearbox type | | | Axial gearboxes | | Right-angle gearboxes |
|--------------------|-------------------|----------|-----------------|---------------|-----------------------|
| | | | Helical gearbox | Shaft-mounted | Bevel gearbox |
| Product | | | g500-H | g500-S | g500-B |
| Gearbox efficiency | 2-stage gearboxes | η_G | 0.96 | 0.96 | 0.96 |
| | 3-stage gearboxes | η_G | 0.95 | 0.95 | 0.95 |

4 determine gearbox size based on the forces on the output

| Transmission element | | Gear wheels | Sprockets | Toothed belt pulleys (depending on the initial stress) | Narrow V-belt (depending on the initial stress) |
|--------------------------------|---------|--|--|---|--|
| Additional radial force factor | $f_z =$ | ≥ 17 teeth = 1.0 < 17 teeth = 1.15 | ≥ 20 teeth = 1.0 < 20 teeth = 1.25 < 13 teeth = 1.4 | With belt tightener = 2.0 - 2.5 Without belt tightener = 2.5 - 3.0 | 1.5 - 2.0 |
| | | Calculation | | Check | |
| Radial force | [N] | $F_{rad} = 2000 \times \frac{M_{L,max} \times f_z}{d_w}$ | | $F_{rad} \leq f_w \times F_{rad,max}$ | |
| Axial force | [N] | | | $F_{ax} \leq F_{rad,max} \times 0.5$ | |

d_w = effective diameter - transmission element

  1 - Permissible radial and axial forces at output

5 calculate drive power

| | | Calculation |
|----------------------|------|--|
| Drive power required | [kW] | $P_1 = \frac{M_{L,max} \times \eta_{L,max}}{9549 \times k_L \times k_H \times k_{Tu} \times \eta_g}$ |

k_L = Correction factor - operational factor

k_H = correction factor - installation height

k_{Tu} = correction factor - ambient temperature



Procedure of a configuration process - mains operation

6 calculate intensity and determine duty class

| Load class | Load type | Intensity |
|------------|--|---------------------|
| I | Smooth operation, small or light jolts | $F_I \leq 1.25$ |
| II | Uneven operation, average jolts | $1.25 < F_I \leq 4$ |
| III | Uneven operation, severe jolts and/or alternating load | $F_I > 4$ |

24 - Duty classes

| | Calculation | |
|-----------|---|--|
| Intensity | $F_I = \frac{\frac{J_L + J_M + J_B + J_Z}{i^2}}{J_M + J_B + J_Z}$ | |

i = gearbox ratio

J_L = moment of inertia of the load

J_M = moment of inertia of the motor

J_B = moment of inertia of the brake

J_Z = additional moment of inertia (handwheel, 2nd shaft end ...)

7 determine application factor k from diagram

27 - Load capacity and application factor



Procedure of a configuration process - mains operation

8 determine geared motor based on the data determined from the selection tables

| Selection table | | Check |
|---------------------|---------|-------------------------|
| Drive power P_N | [kW] | $P_1 \leq P_N$ |
| Output speed n_2 | [r/min] | $n_{L,max} \approx n_2$ |
| Output torque M_2 | [Nm] | $M_{L,max} \leq M_2$ |
| Load factor c | | $k \leq c$ |
| Order information | | Example |
| Number of stages | | 2 |
| Ratio i | | 4.000 |
| Product gearbox | | g500-H100 |
| Product motor | | m240-P80/M2 |

27 - Load capacity and application factor

Example: structure of a selection table

50 Hz: $P_N = 0.75$ kW ← Rated power P_N

2-stage gearboxes ← Number of the gear stage

| Mains operation 400 V, 50 Hz | | | i | Product | | |
|---------------------------------|---------------|-----|-------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | | g500 | m240 | |
| 627 | 11 | 5.2 | 4.600 | -H100 | -P80/M2 | |
| 558 | 12 | 4.9 | 5.167 | -H100 | -P80/M2 | |

↑
Output speed n_2

↑
Output torque M_2

↑
Load capacity c

↑
Ratio i

↑
Product
Gearbox

↑
Product
Motor



Procedure of a configuration process - inverter operation

5a calculate range of adjustment and determine rated point

| | | Calculation | |
|----------------|-------------------------|-----------------------------------|----------------------------|
| Setting range | | $V = \frac{n_{L,max}}{n_{L,min}}$ | |
| Setting range | Motor with integral fan | ≤ 2.5 (20 ... 50 Hz) | ≤ 4.35 (20 ... 87 Hz) |
| | Motor with blower | ≤ 10 (5 ... 50 Hz) | ≤ 17.4 (5 ... 87 Hz) |
| Rated point at | | 50 Hz | 87 Hz |

6 calculate intensity and determine duty class

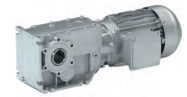
| | | Calculation | |
|------------|--|-------------------------------------|--|
| Intensity | | $M_I = \frac{M_{L,max}}{M_{L,min}}$ | For alternating load, select load class III! |
| Load class | Load type | Intensity | |
| I | Smooth operation, small or light jolts | $M_I \leq 1.5$ | |
| II | Uneven operation, average jolts | $1.5 < M_I \leq 2$ | |
| III | Uneven operation, severe jolts and/or alternating load | $2 < M_I \leq 2.5$ | |

24 - Duty classes

7 determine application factor k from diagram

27 - Load capacity and application factor

g500-B bevel geared motors



Project planning

Procedure of a configuration process - inverter operation

8 determine geared motor based on the data determined from the selection tables

| Selection table | | | Check | |
|----------------------------|--|---------|----------------------------|--|
| Drive power P_N | | [kW] | $P_1 \leq P_N$ | |
| Max. output speed n_2 | | [r/min] | $n_{L,max} \approx n_2$ | |
| Min. output speed n_{21} | Self-ventilated | [r/min] | $n_{L,min} \approx n_{21}$ | Setting range 2.5 (50 Hz) Setting range ≤ 4.35 (87 Hz) |
| Min. output speed n_{22} | Forced-ventilated | [r/min] | $n_{L,min} \approx n_{22}$ | Setting range ≤ 10 (50 Hz) Setting range ≤ 17.4 (87 Hz) |
| | Self-ventilated (Reduced output torque) | [r/min] | $n_{L,min} \approx n_{22}$ | |
| Output torque M_2 | | [Nm] | $M_{L,max} \leq M_2$ | |
| Load factor c | | | $k \leq c$ | |
| Order information | | | Example | |
| Number of stages | | | 2 | |
| Ratio i | | | 3.267 | |
| Product gearbox | | | g500-H140 | |
| Product motor | | | m550-P80/M4 | |

27 - Load capacity and application factor

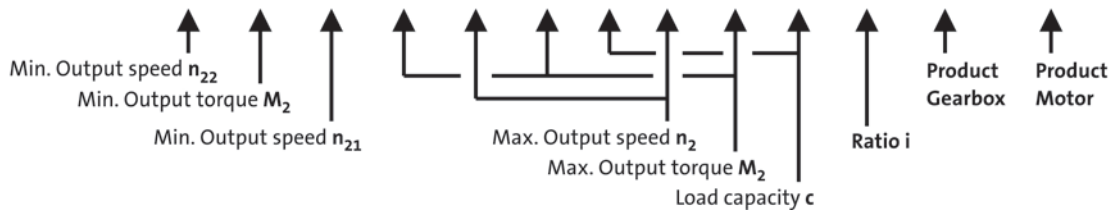
30 - Torque derating at low motor frequencies

Example: structure of a selection table

50 Hz: $P_N = 0.75$ kW
87 Hz: $P_N = 1.35$ kW ← Rated power P_N

2-stage gearboxes ← Number of the gear stage

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|-------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m550 | |
| | | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 444 | 16 | 4.3 | 44 | 12 | 184 | 16 | 444 | 16 | 4.3 | 784 | 16 | 3.5 | 3.267 | -H140 | -P80/M4 | |
| 432 | 16 | 3.9 | 43 | 12 | 179 | 16 | 432 | 16 | 3.9 | 763 | 16 | 3.2 | 3.354 | -H100 | -P80/M4 | |



6.5



Procedure of a configuration process

9 Final configuration

| More information regarding the final configuration can be found under: | |
|---|---|
| <ul style="list-style-type: none"> - The modular geared motor system - Product extensions for gearboxes, motors | |
| Check operating conditions | <ul style="list-style-type: none"> - Operating temperature (observe lubricant, material of shaft sealing ring) - Degree of protection - Supply voltage - Surface protection required - Approvals - Conformity |
| Check and define connection dimensions | <ul style="list-style-type: none"> - Driven shaft - Foot, output flange, centering with threaded pitch circle |
| Determine mounting position and position of the system blocks | <ul style="list-style-type: none"> - Mounting position A/B/C/D/E/F or combined - Terminal box position, shaft position, flange position |
| Select product extensions at the gearbox (differing depending on the gearbox type) | <ul style="list-style-type: none"> - Torque plate at the base, threaded pitch circle, rubber buffer - Hollow shaft cover, shrink disc cover |
| Select product extensions at the motor | <ul style="list-style-type: none"> - Connection type (terminal box, connector) - Brake - Blower (inverter operation) - Feedback - Temperature monitoring |

g500-B bevel geared motors

Project planning



Standards

Approvals

| | |
|--------|--|
| CCC | China Compulsory Certification documents the compliance with the legal product safety requirements of the PR of China - GB standards. |
| cCSAus | CSA certificate, tested according to US and Canada standards |
| CE | Communauté Européenne documents the declaration of the manufacturer that EC Directives are complied with. |
| CEL | China Energy Label documents the compliance with the legal energy efficiency requirements for motors, tested according to PR of China standards |
| CSA | Canadian Standards Association CSA - certificate, tested according to Canada standards |
| CSAULE | Energy Verified Certificate Determining the energy efficiency according to CSA C390 for products within the scope of energy efficiency requirements in the USA and Canada |
| cULus | UL certificate for products, tested according to US and Canada standards |
| cURus | UL certificate for components, tested according to US and Canada standards |
| EAC | Certificate of Russia-Belarus-Kazakhstan Customs Union documents the declaration of the manufacturer that the specifications for the Eurasian conformity (EAC) required for placing electronic and electromechanical products on the market of the entire territory of the Customs Union (Russia, Belarus, Kazakhstan) are complied with. |
| UL | Underwriters Laboratory Listed Product |
| UR | Underwriters Laboratory Recognized Product UL certificate for components, tested according to US standards |



Standards

Operating modes

Operating modes S1 ... S10 as specified by EN 60034-1 describe the basic stress of an electrical machine.

In continuous operation a motor reaches its permissible temperature limit if it outputs the rated power dimensioned for continuous operation. However, if the motor is only subjected to load for a short time, the power output by the motor may be greater without the motor reaching its permissible temperature limit. This behaviour is referred to as overload capacity.

Depending on the duration of the load and the resulting temperature rise, the required motor can be selected reduced by the overload capacity.

The most important operating modes

| Continuous operation S1 | Short-time operation S2 |
|---|--|
| | |
| <p>Operation with a constant load until the motor reaches the thermal steady state. The motor may be actuated continuously with its rated power.</p> | <p>Operation with constant load; however, the motor does not reach the thermal steady state. During the following standstill, the motor winding cools down to the ambient temperature again. The increase in power depends on the load duration.</p> |
| Intermittent operation S3 | Non-intermittent periodic operation S6 |
| | |
| <p>Sequence of identical duty cycles comprising operation with a constant load and subsequent standstill. Start-up and braking processes do not have an impact on the winding temperature. The steady-state is not reached. The guide values apply to a cycle duration of 10 minutes. The power increase depends on the cycle duration and on the load period/downtime ratio.</p> | <p>Sequence of identical duty cycles comprising operation with a constant load and subsequent no-load operation. The motor cools down during the no-load phase. Start-up and braking processes do not have an impact on the winding temperature. The steady-state is not reached. The guide values apply to a cycle duration of 10 minutes. The power increase depends on the cycle duration and on the load period/idle time ratio.</p> |

g500-B bevel geared motors

Project planning



Standards

Duty classes

Depending on the load type, the duty classes or impacts are divided as follows:

| Duty class | Load type |
|------------|--|
| I | Smooth operation, small or light jolts |
| II | Uneven operation, average jolts |
| III | Uneven operation, severe jolts and/or alternating load |

In order to support you in classifying your driven machine regarding the right duty class, the following shows sample applications with the corresponding duty class. Depending on, for instance, the operating frequency, driven machines can also have a higher impact. In case of uncertainties, please contact your Lenze sales office.

| Drive | Duty class |
|-----------------------|------------|
| Construction machines | II |
| Chemical industry | II |
| Conveyors | II |
| Fans | II |
| Plastics industry | II |
| Wood working | III |
| Hoists | III |
| Metal working | III |
| Food | II |
| Paper industry | III |
| Stones | III |
| Textile industry | II |



Standards

Degrees of protection

The degree of protection indicates the suitability of a motor for specific ambient conditions with regard to humidity as well as the protection against contact and the ingress of foreign particles. The degrees of protection are classified by EN 60529.

The first code number after the code letters IP indicates the protection against the ingress of foreign particles and dust.
The second code number refers to the protection against the ingress of humidity.

| Code number | Degree of protection | Code number | Degree of protection |
|-------------|---|-------------|---|
| 0 | No protection | 0 | No protection |
| 1 | Protection against the ingress of foreign particles $d > 50$ mm. No protection in the case of deliberate access | 1 | Protection against vertically dripping water (dripping water). |
| 2 | Protection against medium-sized foreign particles, $d > 12$ mm, keeping away fingers or similar | 2 | Protection against diagonally falling water (dripping water), 15° compared to normal service position. |
| 3 | Protection against small foreign particles $d > 2.5$ mm. Keeping away tools, wires and the like | 3 | Protection against spraying water, up to 60° to the vertical |
| 4 | Protection against granular foreign particles, $d > 1$ mm, keeping away tools, wires and the like | 4 | Protection against spraying water from all directions. |
| 5 | Protection against dust deposits (dust-protected), complete protection against contact. | 5 | Protection against water jets from all directions. |
| 6 | Protection against the ingress of dust (dust-proof), complete protection against contact. | 6 | Protection against choppy seas or heavy water jets (flood protection). |

g500-B bevel geared motors



Project planning

Thermal power limit

The thermal power limit, defined by the heat balance, limits the permissible gearbox continuous power. It may be less than the mechanical power ratings listed in the selection tables.

The thermal power limit is affected by:

- the churning losses in the lubricant. These are determined by the mounting position and the circumferential speed of the gears;
- the load and the speed
- the ambient conditions: temperature, air circulation, input or dissipation via shafts and the foundation

If the following input speeds n_1 are exceeded, please contact Lenze:

| Motor frame size | Mounting position A, B, E, F | Mounting position C, D |
|------------------|------------------------------|------------------------|
| 063 ... 100 | 4000 r/min | 3000 r/min |
| 112 ... 132 | 3000 r/min | 1500 r/min |

- ▶ For a short period of time up to 5 min, 30 % higher speeds are permissible

Possible ways of extending the application area

- synthetic lubricant (option)
- shaft sealing rings made from FP material/Viton (option)
- reduction in lubricant quantity
- cooling of the geared motor by means of air convection on the machine/system



Load capacity and application factor

Load capacity c of gearboxes

Rated value for the load capacity of Lenze geared motors.

- c is the ratio of the permissible rated torque of the gearbox to the rated torque supplied by the drive component (e.g. the built-in Lenze motor).
- The value of c must always be greater than the value of the application factor k calculated for the application.

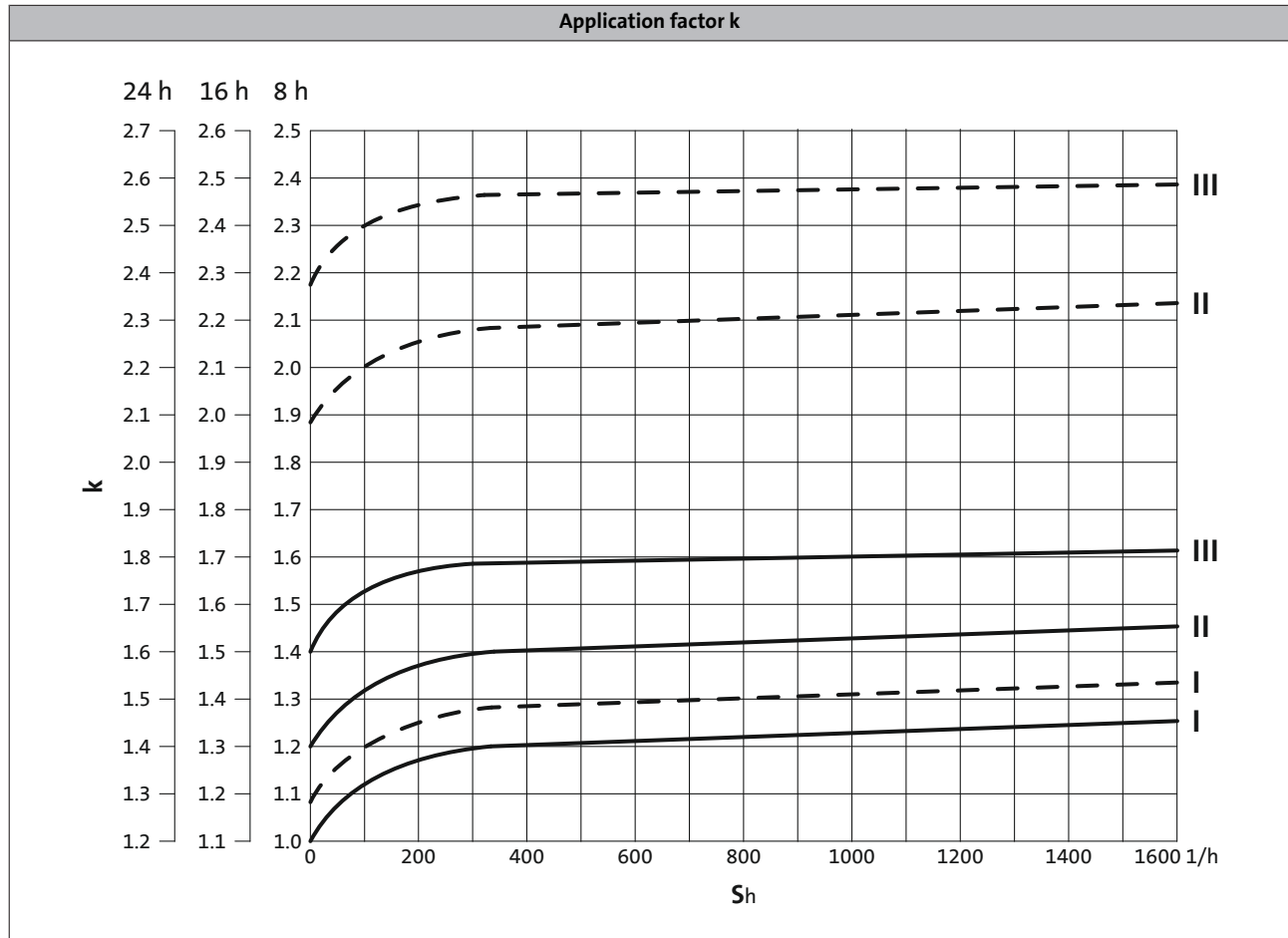
Required: $c \geq k$

Application factor k (according to DIN 3990)

Takes into account the influence of temporally variable loads which are actually present during the anticipated operating time of gearboxes and geared motors.

k is determined by:

- the type of load
- the load intensity
- temporal influences



- ▶ S_h = switchings/h
- ▶ — Three-phase AC motors MD□MA
- ▶ - - - Three-phase AC motors m240/m550

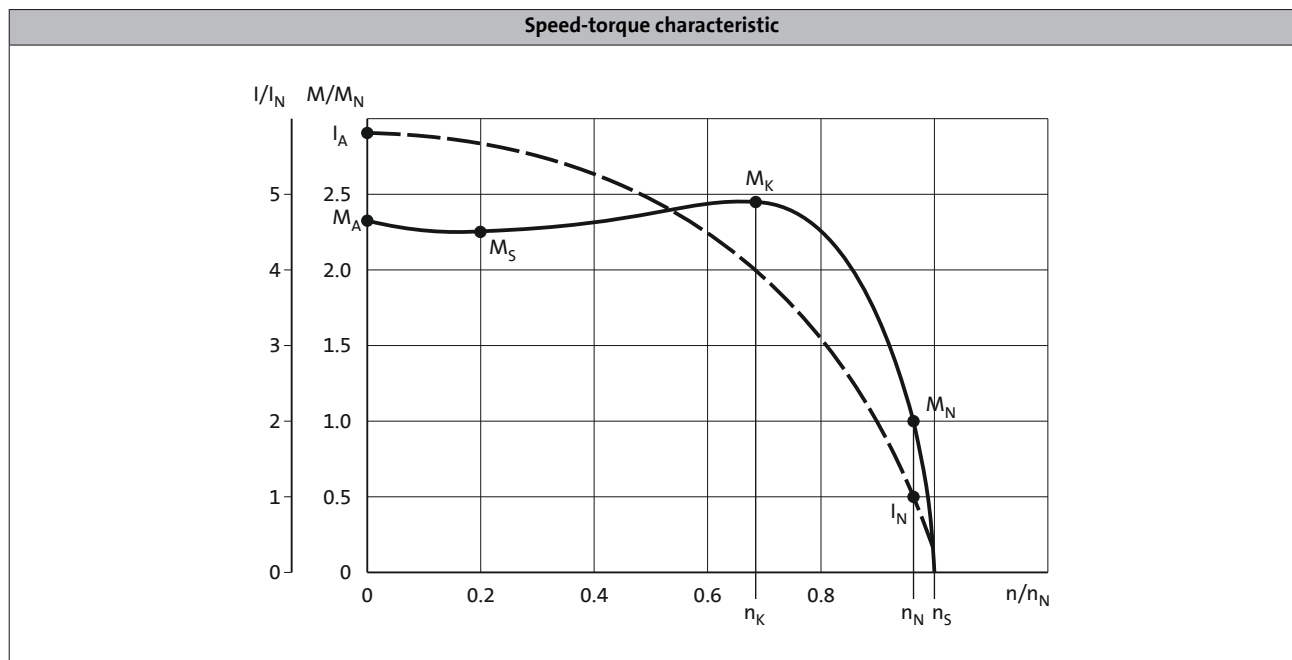


Operational performance of three-phase AC geared motors

The g500 geared motors can be actuated directly on the mains or via an inverter. When actuated in mains operation, the motor runs at a fixed speed, for inverter operation the speed is variable. Thanks to their high degree of protection, the robust three-phase drives can be basically used in a variety of applications.

Mains operation

During mains operation, when switched on, the three-phase AC motor starts up according to the speed-torque characteristic. It passes through this characteristic until it reaches its stable operating point. This operating point has been reached if the load torque or rated torque (M_N) is lower than the starting torque (M_A) and the pull-up torque (M_S). 2-, 4- and 6-pole motors are used. The rated speed (n_{rated}) of the drive is always lower than the calculated synchronous speed (n_s). The difference between rated speed and synchronous speed relating to the synchronous speed is referred to as the "slip".





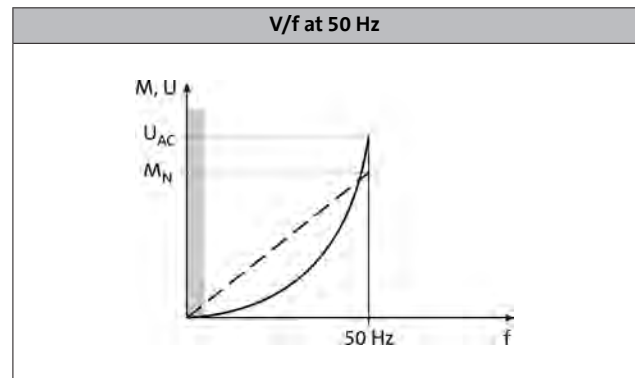
Operational performance of three-phase AC geared motors

Operation on the inverter

An inverter enables energy-efficient operation of a system in virtually all application cases. The various operating modes, which can be created by making just a few simple settings, facilitate this. The following characteristics and corresponding specifications listed on the following pages can be used to calculate the optimum operating mode during the project planning phase.

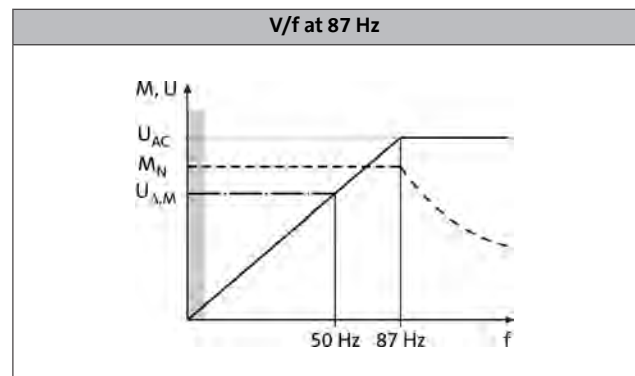
Standard setting

In its initial state when delivered, the inverter is set up for basic operation with a three-phase AC motor with vector control. When operated in this mode, the rated torque of the motor is available in a setting range up to 50 Hz.



Extended setting range up to 87 Hz

If the V/f reference point on the inverter is set to 87 Hz, the rated torque can be used across an extended setting range. Here, a 230/400V motor is for example used and operated in a delta layout with a 400V inverter. The setting range is then increased by 40 %. The inverter must be dimensioned for a rated motor current of 230 V.

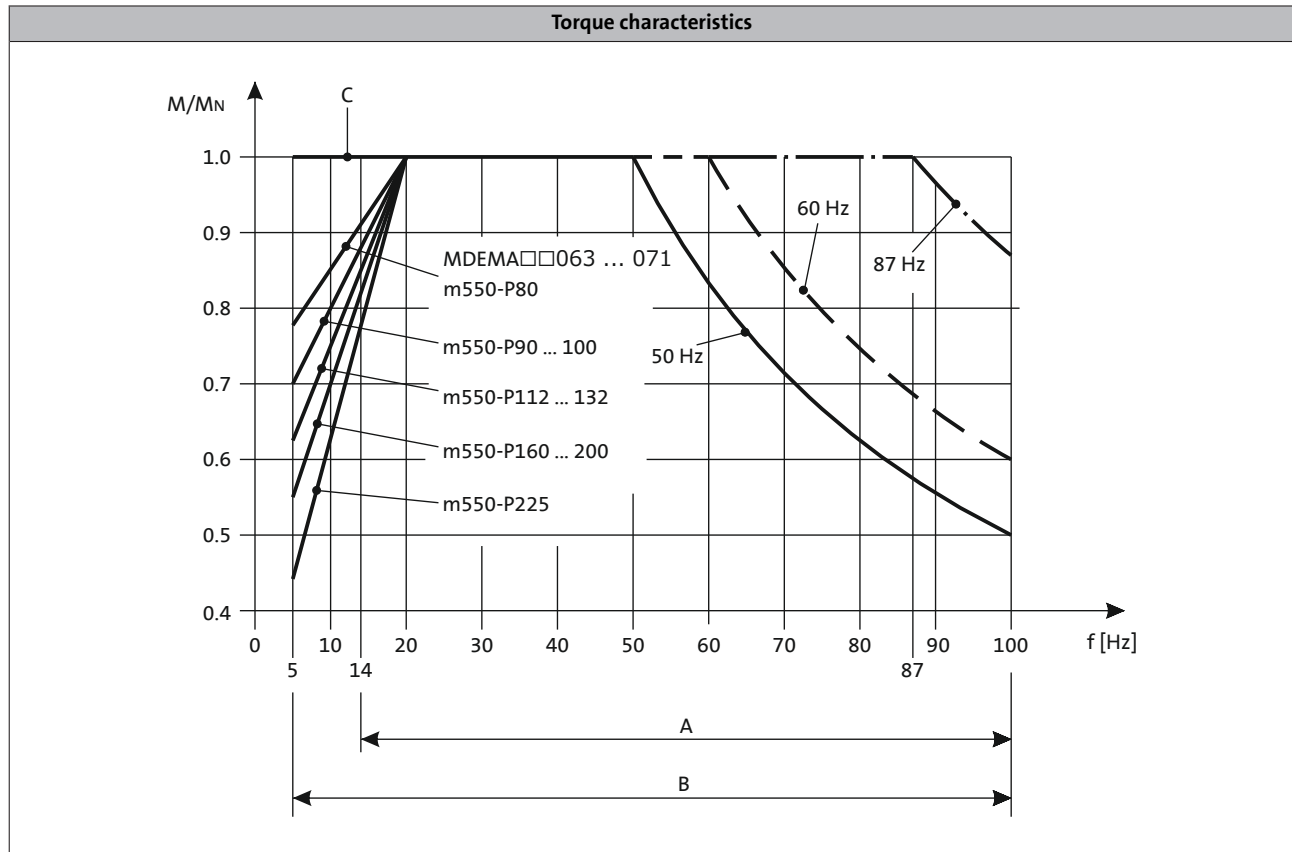




Operational performance of three-phase AC geared motors

Torque derating at low motor frequencies

The diagram shows the motor frame size-dependent torque reduction for self-ventilated motors, taking the thermal behaviour during actuation of the inverter into consideration.



A = Operation with integral fan and brake

B = Operation with integral fan and brake control "Holding current reduction"

C = operation with blower

g500-B bevel geared motors



Project planning

Combinatorics of geared motors

The following tables contain the most important data of the gearbox with the motors that can be attached for an approximate dimensioning process of a geared motor. Detailed information can be found in the following chapters.

The data given in the tables apply to

- input speed $n_1 = 1400$ r/min
- application factor $c = 1.0$

In order to calculate the exact ratio, the number of teeth z_g (driven) can be divided by the number of teeth z_t (driving). These are cancelled values.

The data for the max. radial force refer to

- solid shaft without flange
- normal storage
- application factor $c = 1.3$

For further designs see the "Technical data" chapter.

- The rated torque can be gathered from the last digits of the product name e.g. g500-B45 (45 Nm).

g500-B45, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 260 | 39 | 1.12 | 5.411 | 1120 | 207 | 2080 | 27 | 0.18 | 0.55 |
| 226 | 41 | 1.01 | 6.222 | 56 | 9 | 2180 | 26 | 0.18 | 0.55 |
| 198 | 43 | 0.94 | 7.111 | 64 | 9 | 2280 | 26 | 0.18 | 0.55 |
| 172 | 44 | 0.83 | 8.178 | 368 | 45 | 2360 | 25 | 0.18 | 0.55 |
| 154 | 45 | 0.77 | 9.101 | 1720 | 189 | 2440 | 25 | 0.18 | 0.55 |
| 134 | 45 | 0.67 | 10.466 | 1978 | 189 | 2580 | 24 | 0.12 | 0.55 |
| 121 | 45 | 0.60 | 11.640 | 2200 | 189 | 2660 | 24 | 0.12 | 0.55 |
| 105 | 45 | 0.52 | 13.386 | 2530 | 189 | 2770 | 23 | 0.09 | 0.55 |
| 93.0 | 45 | 0.46 | 15.111 | 136 | 9 | 2840 | 24 | 0.09 | 0.55 |
| 81.1 | 45 | 0.40 | 17.378 | 782 | 45 | 2900 | 23 | 0.09 | 0.37 |
| 72.8 | 45 | 0.36 | 19.365 | 1220 | 63 | 2950 | 24 | 0.09 | 0.37 |
| 63.3 | 45 | 0.31 | 22.270 | 1403 | 63 | 3000 | 23 | 0.06 | 0.37 |
| 54.7 | 45 | 0.27 | 25.051 | 2480 | 99 | 3000 | 23 | 0.06 | 0.25 |
| 47.6 | 45 | 0.24 | 28.808 | 2852 | 99 | 3000 | 22 | 0.06 | 0.25 |
| 42.0 | 45 | 0.21 | 32.593 | 880 | 27 | 3000 | 23 | 0.06 | 0.25 |
| 36.4 | 45 | 0.18 | 37.481 | 1012 | 27 | 3000 | 23 | 0.06 | 0.18 |
| 32.3 | 45 | 0.16 | 42.222 | 380 | 9 | 3000 | 23 | 0.06 | 0.18 |
| 29.3 | 45 | 0.15 | 48.556 | 437 | 9 | 3000 | 22 | 0.06 | 0.12 |
| 26.4 | 45 | 0.13 | 53.889 | 485 | 9 | 3000 | 23 | 0.06 | 0.12 |
| 23.0 | 45 | 0.11 | 61.972 | 2231 | 36 | 3000 | 22 | 0.06 | 0.12 |

g500-B bevel geared motors

Project planning



Combinatorics of geared motors

g500-B110, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|-----------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Standard | Motor |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad, max}}$ | | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 278 | 69 | 2.12 | 5.185 | 140 | 27 | 2450 | 21 | 0.25 | 1.50 |
| 242 | 72 | 1.92 | 5.963 | 161 | 27 | 2530 | 21 | 0.25 | 1.50 |
| 203 | 77 | 1.72 | 7.111 | 64 | 9 | 2620 | 20 | 0.25 | 1.50 |
| 176 | 81 | 1.57 | 8.178 | 368 | 45 | 2670 | 20 | 0.25 | 1.50 |
| 159 | 84 | 1.47 | 9.101 | 1720 | 189 | 2730 | 20 | 0.25 | 1.50 |
| 138 | 89 | 1.35 | 10.466 | 1978 | 189 | 2830 | 20 | 0.25 | 1.50 |
| 126 | 90 | 1.25 | 11.449 | 2576 | 225 | 2890 | 20 | 0.18 | 1.50 |
| 114 | 90 | 1.13 | 12.698 | 800 | 63 | 2950 | 20 | 0.18 | 1.10 |
| 98.9 | 90 | 0.98 | 14.603 | 920 | 63 | 3000 | 20 | 0.18 | 1.10 |
| 92.8 | 92 | 0.94 | 15.556 | 140 | 9 | 3000 | 20 | 0.25 | 1.10 |
| 81.1 | 96 | 0.86 | 17.889 | 161 | 9 | 3000 | 20 | 0.25 | 0.75 |
| 74.1 | 100 | 0.82 | 19.556 | 176 | 9 | 3000 | 20 | 0.12 | 0.75 |
| 64.5 | 104 | 0.74 | 22.489 | 1012 | 45 | 3000 | 19 | 0.12 | 0.75 |
| 57.6 | 108 | 0.69 | 25.185 | 680 | 27 | 3000 | 20 | 0.12 | 0.75 |
| 50.1 | 110 | 0.61 | 28.963 | 782 | 27 | 3000 | 19 | 0.12 | 0.75 |
| 44.2 | 108 | 0.53 | 31.919 | 3160 | 99 | 3000 | 19 | 0.12 | 0.37 |
| 38.4 | 110 | 0.47 | 36.707 | 3634 | 99 | 3000 | 19 | 0.12 | 0.37 |
| 37.7 | 106 | 0.44 | 37.400 | 187 | 5 | 3000 | 19 | 0.12 | 0.37 |
| 35.3 | 100 | 0.39 | 40.000 | 40 | 1 | 3000 | 19 | 0.12 | 0.37 |
| 30.7 | 110 | 0.37 | 46.000 | 46 | 1 | 3000 | 19 | 0.12 | 0.37 |
| 29.3 | 110 | 0.36 | 48.167 | 289 | 6 | 3000 | 18 | 0.12 | 0.37 |
| 25.9 | 69 | 0.20 | 52.698 | 3320 | 63 | 3000 | 19 | 0.12 | 0.18 |
| 22.5 | 79 | 0.20 | 60.603 | 3818 | 63 | 3000 | 18 | 0.12 | 0.18 |
| 22.4 | 110 | 0.27 | 61.045 | 1343 | 22 | 3000 | 18 | 0.12 | 0.25 |
| 17.9 | 110 | 0.22 | 76.500 | 153 | 2 | 3000 | 18 | 0.12 | 0.25 |
| 13.5 | 110 | 0.16 | 100.786 | 1411 | 14 | 3000 | 18 | 0.12 | 0.18 |

g500-B bevel geared motors

Project planning



Combinatorics of geared motors

g500-B240, 2-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|--------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 407 | 138 | 6.18 | 3.565 | 385 | 108 | 3030 | 16 | 0.55 | 3.00 |
| 296 | 147 | 4.80 | 4.889 | 44 | 9 | 3450 | 16 | 1.10 | 3.00 |
| 232 | 156 | 3.98 | 6.257 | 2365 | 378 | 3860 | 16 | 0.55 | 3.00 |
| 211 | 179 | 4.15 | 6.883 | 413 | 60 | 4070 | 12 | 0.55 | 3.00 |
| 185 | 187 | 3.82 | 7.817 | 469 | 60 | 4300 | 12 | 0.55 | 3.00 |
| 154 | 191 | 3.23 | 9.440 | 236 | 25 | 4600 | 12 | 1.10 | 3.00 |
| 135 | 204 | 3.04 | 10.720 | 268 | 25 | 4740 | 12 | 1.10 | 3.00 |
| 120 | 208 | 2.75 | 12.081 | 2537 | 210 | 4860 | 12 | 0.55 | 3.00 |
| 106 | 217 | 2.53 | 13.719 | 2881 | 210 | 4980 | 12 | 0.55 | 3.00 |
| 96.7 | 223 | 2.38 | 15.008 | 1876 | 125 | 5180 | 11 | 0.25 | 2.20 |
| 86.1 | 240 | 2.28 | 16.857 | 118 | 7 | 5440 | 12 | 0.25 | 2.20 |
| 75.9 | 240 | 2.01 | 19.143 | 134 | 7 | 5710 | 11 | 0.25 | 2.20 |
| 70.3 | 240 | 1.86 | 20.650 | 413 | 20 | 5860 | 12 | 0.55 | 2.20 |
| 61.5 | 240 | 1.63 | 23.450 | 469 | 20 | 6070 | 11 | 0.55 | 1.50 |
| 53.7 | 240 | 1.42 | 26.878 | 2419 | 90 | 6230 | 12 | 0.25 | 1.50 |
| 47.2 | 240 | 1.25 | 30.522 | 2747 | 90 | 6370 | 11 | 0.25 | 1.50 |
| 43.2 | 240 | 1.14 | 33.433 | 1003 | 30 | 6500 | 11 | 0.25 | 1.10 |
| 38.0 | 240 | 1.01 | 37.967 | 1139 | 30 | 6500 | 11 | 0.25 | 1.10 |
| 33.5 | 240 | 0.89 | 43.267 | 649 | 15 | 6500 | 11 | 0.12 | 0.75 |
| 29.5 | 240 | 0.78 | 49.133 | 737 | 15 | 6500 | 11 | 0.12 | 0.75 |
| 26.8 | 233 | 0.69 | 52.510 | 5251 | 100 | 6500 | 11 | 0.12 | 0.55 |
| 23.6 | 240 | 0.62 | 59.630 | 5963 | 100 | 6500 | 11 | 0.12 | 0.55 |
| 21.0 | 178 | 0.41 | 67.113 | 5369 | 80 | 6500 | 11 | 0.12 | 0.37 |
| 18.5 | 202 | 0.41 | 76.213 | 6097 | 80 | 6500 | 11 | 0.12 | 0.37 |

g500-B bevel geared motors

Project planning



Combinatorics of geared motors

g500-B240, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | Standard | $P_{N, \min}$ | $P_{N, \max}$ |
| | | | | | | | $\pm 20\%$ | | |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 20.5 | 240 | 0.56 | 68.459 | 43129 | 630 | 6500 | 13 | 0.12 | 0.55 |
| 18.1 | 240 | 0.49 | 77.741 | 48977 | 630 | 6500 | 13 | 0.12 | 0.55 |
| 16.1 | 240 | 0.44 | 87.563 | 11033 | 126 | 6500 | 13 | 0.12 | 0.37 |
| 14.2 | 240 | 0.39 | 99.437 | 12529 | 126 | 6500 | 13 | 0.12 | 0.37 |
| 12.4 | 240 | 0.34 | 113.673 | 17051 | 150 | 6500 | 13 | 0.12 | 0.37 |
| 10.9 | 240 | 0.30 | 129.087 | 19363 | 150 | 6500 | 13 | 0.12 | 0.37 |
| 9.40 | 240 | 0.26 | 145.674 | 61183 | 420 | 6500 | 13 | 0.12 | 0.25 |
| 8.30 | 240 | 0.23 | 165.426 | 69479 | 420 | 6500 | 13 | 0.12 | 0.25 |
| 7.20 | 240 | 0.20 | 188.442 | 31093 | 165 | 6500 | 13 | 0.12 | 0.18 |
| 6.40 | 240 | 0.17 | 213.994 | 35309 | 165 | 6500 | 13 | 0.12 | 0.18 |
| 5.60 | 240 | 0.15 | 245.178 | 11033 | 45 | 6500 | 13 | 0.12 | 0.18 |
| 5.10 | 240 | 0.14 | 278.422 | 12529 | 45 | 6500 | 13 | 0.12 | 0.12 |
| 4.50 | 240 | 0.12 | 317.617 | 19057 | 60 | 6500 | 13 | 0.12 | 0.12 |
| 4.00 | 240 | 0.11 | 360.683 | 21641 | 60 | 6500 | 13 | 0.12 | 0.12 |

g500-B bevel geared motors

Project planning



Combinatorics of geared motors

g500-B450, 3-stage gearboxes

| Output speed | Max. output torque | Max. drive power | Ratio | Number of teeth | | Max. radial force | Backlash | Rated power | |
|--------------|--------------------|------------------|---------|-----------------|-------|------------------------|------------|---------------|---------------|
| | | | | z_g | z_t | | Standard | Motor | |
| n_2 | $M_{2, \max}$ | $P_{1, \max}$ | i | | | $F_{\text{rad}, \max}$ | $\pm 20\%$ | $P_{N, \min}$ | $P_{N, \max}$ |
| [r/min] | [Nm] | [kW] | | | | [N] | [arcmin] | [kW] | [kW] |
| 295 | 280 | 9.12 | 5.002 | 2401 | 480 | 3760 | 21 | 0.55 | 7.50 |
| 215 | 308 | 7.31 | 6.860 | 343 | 50 | 4030 | 21 | 1.10 | 7.50 |
| 159 | 368 | 6.43 | 9.315 | 3577 | 384 | 4370 | 15 | 0.55 | 7.50 |
| 143 | 384 | 6.05 | 10.328 | 2107 | 204 | 4500 | 14 | 0.55 | 7.50 |
| 114 | 404 | 5.09 | 12.775 | 511 | 40 | 4830 | 15 | 1.10 | 5.50 |
| 103 | 422 | 4.80 | 14.165 | 1204 | 85 | 5010 | 14 | 1.10 | 5.50 |
| 88.9 | 434 | 4.25 | 16.349 | 3139 | 192 | 5280 | 15 | 0.55 | 4.00 |
| 81.2 | 446 | 3.99 | 17.885 | 3577 | 200 | 5470 | 15 | 0.25 | 4.00 |
| 73.3 | 450 | 3.64 | 19.831 | 8428 | 425 | 5710 | 14 | 0.25 | 4.00 |
| 63.5 | 450 | 3.15 | 22.813 | 365 | 16 | 6060 | 15 | 0.25 | 3.00 |
| 57.3 | 450 | 2.84 | 25.294 | 430 | 17 | 6340 | 14 | 0.25 | 3.00 |
| 51.9 | 450 | 2.57 | 27.945 | 3577 | 128 | 6640 | 15 | 0.55 | 3.00 |
| 46.9 | 450 | 2.33 | 30.985 | 2107 | 68 | 6960 | 14 | 0.55 | 2.20 |
| 39.6 | 450 | 1.96 | 36.373 | 20951 | 576 | 7520 | 14 | 0.25 | 1.50 |
| 35.8 | 450 | 1.78 | 40.330 | 12341 | 306 | 7800 | 14 | 0.25 | 1.50 |
| 31.9 | 450 | 1.58 | 45.245 | 8687 | 192 | 7800 | 14 | 0.25 | 1.50 |
| 28.7 | 450 | 1.42 | 50.167 | 301 | 6 | 7800 | 14 | 0.25 | 1.50 |
| 25.7 | 450 | 1.28 | 56.154 | 730 | 13 | 7800 | 13 | 0.25 | 1.50 |
| 23.2 | 450 | 1.15 | 62.262 | 13760 | 221 | 7800 | 12 | 0.25 | 1.10 |
| 21.0 | 450 | 1.04 | 68.788 | 3577 | 52 | 7800 | 13 | 0.55 | 1.10 |
| 18.9 | 450 | 0.94 | 76.271 | 16856 | 221 | 7800 | 12 | 0.55 | 1.10 |
| 16.2 | 450 | 0.80 | 89.534 | 20951 | 234 | 7800 | 13 | 0.25 | 0.75 |
| 14.6 | 450 | 0.72 | 99.274 | 197456 | 1989 | 7800 | 12 | 0.25 | 0.75 |
| 13.0 | 450 | 0.64 | 111.372 | 8687 | 78 | 7800 | 13 | 0.25 | 0.75 |
| 11.4 | 450 | 0.57 | 123.487 | 4816 | 39 | 7800 | 12 | 0.25 | 0.55 |
| 9.70 | 450 | 0.48 | 144.128 | 5621 | 39 | 7800 | 13 | 0.12 | 0.55 |
| 8.80 | 450 | 0.44 | 159.807 | 105952 | 663 | 7800 | 12 | 0.12 | 0.37 |
| 8.10 | 450 | 0.40 | 174.919 | 45479 | 260 | 7800 | 13 | 0.12 | 0.37 |
| 7.30 | 450 | 0.36 | 193.948 | 214312 | 1105 | 7800 | 12 | 0.12 | 0.37 |
| 6.30 | 450 | 0.31 | 223.563 | 3577 | 16 | 7800 | 13 | 0.12 | 0.37 |
| 5.50 | 450 | 0.27 | 247.882 | 4214 | 17 | 7800 | 12 | 0.12 | 0.25 |



Surface and corrosion protection

For optimum protection of geared motors against ambient conditions, the surface and corrosion protection system (OKS) offers tailor-made solutions.

Various surface coatings combined with other protective measures ensure that the geared motors operate reliably even at high air humidity, in outdoor installations or in the presence of atmospheric impurities. Any colour from the RAL Classic collection can be chosen for the top coat. The geared motors are also available unpainted (no surface and corrosion protection).

| Surface and corrosion protection | Applications | Measures |
|------------------------------------|---|---|
| Without OKS(uncoated) | <ul style="list-style-type: none"> Interior installation, no special corrosion protection required Paint provided by the customer | <ul style="list-style-type: none"> Aluminium parts uncoated Fan covers zinc-coated or primed in grey Grey cast iron parts primed in grey <p>Note: Slight colour deviation of the components is possible</p> <p>Standard version in case of:</p> <ul style="list-style-type: none"> g500-H45 ... H450 g500-S130 ... 660 g500-B45 ... 450 |
| OKS-G (primed) | <ul style="list-style-type: none"> Dependent on subsequent top coat applied | <ul style="list-style-type: none"> 2K PUR priming coat (grey) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel nameplate |
| OKS-S (small) | <ul style="list-style-type: none"> Standard applications Internal installation in heated buildings Air humidity up to 90% | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C1 (subject to EN 12944-2) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel nameplate |
| OKS-M (medium) | <ul style="list-style-type: none"> Internal installation in non-heated buildings Covered, protected external installation Air humidity up to 95% | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C2 (subject to EN 12944-2) Zinc-coated screws Rust-free breather elements <p>Optional measures</p> <ul style="list-style-type: none"> Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request) |
| OKS-L (large) | <ul style="list-style-type: none"> External installation Air humidity above 95% Chemical industry plants Food industry | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C3 (subject to EN 12944-2) Blower cover and B end shield additionally primed Cable glands with gaskets Corrosion-resistant brake with cover ring, stainless friction plate, and chrome-plated armature plate (on request) All screws/screw plugs zinc-coated Stainless breather elements Threaded holes that are not used are closed by means of plastic plugs <p>Optional measures</p> <ul style="list-style-type: none"> Sealed recesses on motor (on request) Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request) Additional priming coat on cast iron fan Oil expansion tank and torque plates painted separately and supplied loose |
| OKS-XL (extra Large) ¹⁾ | <ul style="list-style-type: none"> External installation Air humidity above 95 % Chemical industry plants Food industry Coastal areas with moderate salinity | <ul style="list-style-type: none"> Surface coating corresponding to corrosivity category C4 (subject to EN 12944-2) <p>Additional measures for surface and corrosion protection system L:</p> <ul style="list-style-type: none"> Rotor package and stator in the inner area primed with finishing varnish Feedback in protection class IP65 |

¹⁾ On request



Surface and corrosion protection

Structure of surface coating

| Surface and corrosion protection | Corrosivity category | Surface coating | Colour | Coating thickness |
|------------------------------------|----------------------|--|---|-------------------|
| | DIN EN ISO 12944-2 | Structure | | |
| Without OKS(uncoated) | | <ul style="list-style-type: none"> Dipping primer of the grey iron parts | | 30 ... 50 µm |
| OKS-G (primed) | | <ul style="list-style-type: none"> Dipping primer of the grey iron parts 2K PUR priming coat | | 60 ... 90 µm |
| OKS-S (small) | Comparable to C1 | <ul style="list-style-type: none"> Dipping primer of the grey iron parts 2K-PUR top coat | <ul style="list-style-type: none"> Standard: RAL 7012 Optional: RAL Classic | 80 ... 120 µm |
| OKS-M (medium) | Comparable to C2 | <ul style="list-style-type: none"> Dipping primer of the grey iron parts | | 110 ... 160 µm |
| OKS-L (large) | Comparable to C3 | <ul style="list-style-type: none"> 2K PUR priming coat 2K-PUR top coat | | 140 ... 200 µm |
| OKS-XL (extra Large) ¹⁾ | Comparable to C4 | <ul style="list-style-type: none"> Dipping primer of the grey iron parts 2K-EP priming coat (two times) 2K-PUR top coat | | 160 ... 240 µm |

¹⁾ On request

g500-B bevel geared motors



Project planning

Lubricants

Gearboxes and geared motors of Lenze come supplied with a lubricant specifically adapted to the drive and design. When placing the order, the mounting position and design are decisive for the lubricant amount.

The lubricant amount and type contained in the gearbox are indicated on the nameplate.

The following gearboxes are lubricated for life:

- Helical gearbox g500-H45 ... 140
- Shaft-mounted helical gearbox g500-S130
- Bevel gearbox g500-B45 ... 240

The lubricants listed in the lubricant table are approved for Lenze drives.

Lubricant table

| Mode | CLP 460 | CLP HC 320 | CLP HC 220 USDA H1 |
|--------------------------|--|--|--|
| Ambient temperature [°C] | 0 ... +40 | -25 ... +50 | -20 ... +40 |
| Specification | Mineral based oil with additives | Synthetic-based oil (synthetic hydrocarbon / poly-alpha-olefin oil) | |
| Changing interval | 16000 operating hours not later than after three years (oil temperature 70 to 80 °C) | 25000 operating hours not later than after three years (oil temperature 70 to 80 °C) | 16000 operating hours not later than after three years (oil temperature 70 to 80 °C) |
| Fuchs | Fuchs Renolin CLP 460 | Fuchs Renolin Unisyn CLP 320 | |
| Klüber | Klüberoil GEM1-460 N | Klübersynth GEM4-320 N | Klüberoil 4 UH1-220 N |
| Shell | Shell Omala S2 G 460 | Shell Omala S4 GX HD 320 | |
| bremer & leguil | | | Cassida Fluid GL 220 |

- ▶ Please contact your Lenze sales office if you are operating at ambient temperatures in areas up to < -20 °C bzw. > or up to +40°C.

Shaft sealing rings

By default, the gearboxes come with NBR shaft sealing rings at the output end. At high speed and unfavourable ambient conditions as high temperature, reduced circulation of air etc., Lenze recommends the use of Viton shaft sealing rings.

Please consider this in your order.



Ventilation

Gearboxes without ventilation

The g500-B45 ... B240 gearboxes do not require any ventilation measures.

Gearboxes with ventilation

The g500-B240 gearbox can be optionally ordered with ventilation units.

The g500-B450 gearbox is generally delivered with ventilation units.

Gearbox in combined mounting position

For reducing the number of versions, the gearboxes can also be ordered in a combined mounting position:

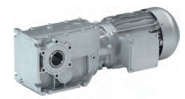
- g500-B45 in mounting position ABCDEF
- g500-B110 ... B450 in mounting position AEF

In these gearboxes, the lubricant amount has been optimised for the use in different mounting positions. The breather elements are loosely enclosed and have to be mounted before commissioning depending on the mounting position.

A gearbox can be used for several mounting positions.

g500-B bevel geared motors

Project planning



Ventilation

g500-B240

► A ... F mounting position

| | |
|-------------------------|-----------------|
| <p>A</p> | <p>B</p> |
| <p>C</p> | <p>D</p> |
| <p>E</p> | <p>F</p> |
| <p>Filler</p> | <p>Drain</p> |
| <p>Breather element</p> | <p>Check</p> |

6.5

g500-B bevel geared motors

Project planning



Ventilation

g500-B450

► A ... F mounting position

| | |
|-------------------------|-----------------|
| <p>A</p> | <p>B</p> |
| <p>C</p> | <p>D</p> |
| <p>E</p> | <p>F</p> |
| <p>Filler</p> | <p>Drain</p> |
| <p>Breather element</p> | <p>Check</p> |

g500-B bevel geared motors

Project planning



g500-B bevel geared motors

Technical data



Standards and operating conditions

Geared motor data

| Product | | | MD□MA□□ | m550 |
|---|---------------|------|---|---|
| Motor | | | | |
| Degree of protection | | | | |
| EN 60529 | | | IP55 ¹⁾ IP65 ¹⁾ IP66 ¹⁾ | IP55 ¹⁾ |
| Energy efficiency class | | | | |
| IEC 60034-30 | | | IE1 | IE3 |
| IEC 60034-2-1 | | | Methodology for measuring efficiency | |
| 10 CFR Part 431 (U.S. Integral hp Rule) | | | | Table 5 (Premium Efficiency), CC127B |
| GB18613-2012 (China Energy Label optional) | | | | Grade 2 |
| Conformity | | | | |
| CE | | | Low-Voltage Directive | |
| | | | 2006/95/EC | 2014/35/EU |
| EAC | | | TP TC 004/2011 (TR CU 004/2011) | |
| Approval | | | | |
| CCC | | | GB Standard 12350-2009 | |
| CSA | | | CSA 22.2 No. 100 | |
| cURus | | | UL 1004-1 UL 1004-8 Power Conversion Equipment (File-No. E210321) | |
| Temperature class | | | | |
| IEC/EN 60034-1; utilisation | | | | B |
| IEC/EN 60034-1; insulation system (enamel-insulated wire) | | | | F |
| Min. ambient operating temperature | | | | |
| | $T_{opr,min}$ | [°C] | | -20 |
| Max. ambient operating temperature | | | | |
| | $T_{opr,max}$ | [°C] | | 40 |
| With power reduction | $T_{opr,max}$ | [°C] | | 60 |
| Site altitude | | | | |
| Amsl | H_{max} | [m] | | 4000 |

¹⁾ Designs with different degrees of protection:
 IP55 with brake (IP54 with manual release lever).
 IP54 with resolver RS1.
 IP54 with HTL incremental encoder IG128-24V-H.

- In the European Union, the ErP Directive stipulates minimum efficiency levels for three-phase AC motors. Geared three-phase AC motors that do not conform with this Directive do not meet CE requirements and must not be marketed in the European Economic Area. For further information about the ErP Directive, the efficiency regulations in other countries and the Lenze products concerned, please refer to the brochure "International efficiency directives for three-phase AC motors".

g500-B bevel geared motors

Technical data



Permissible radial and axial forces at output

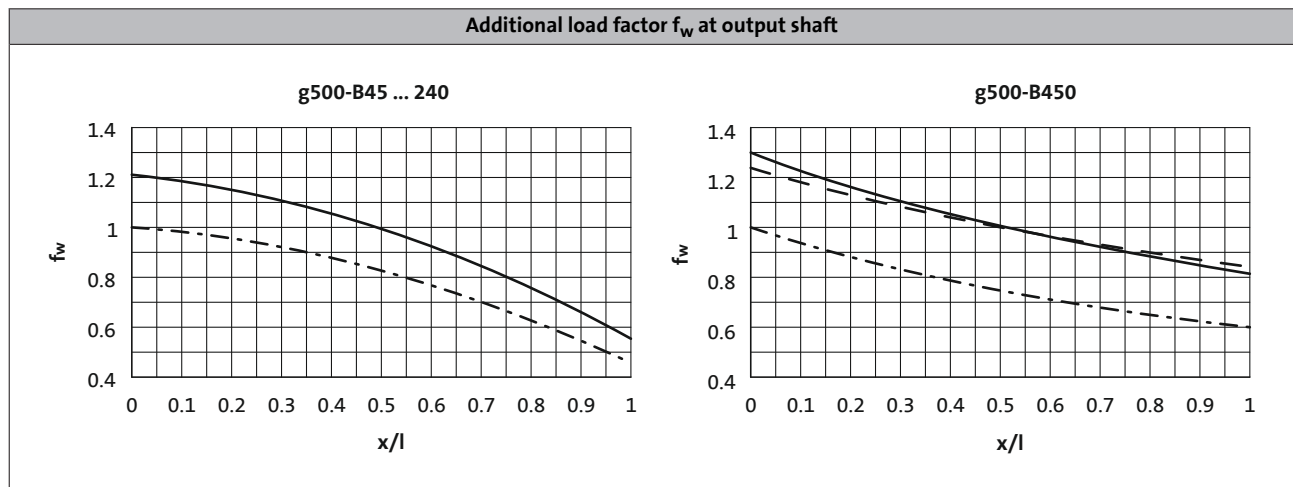
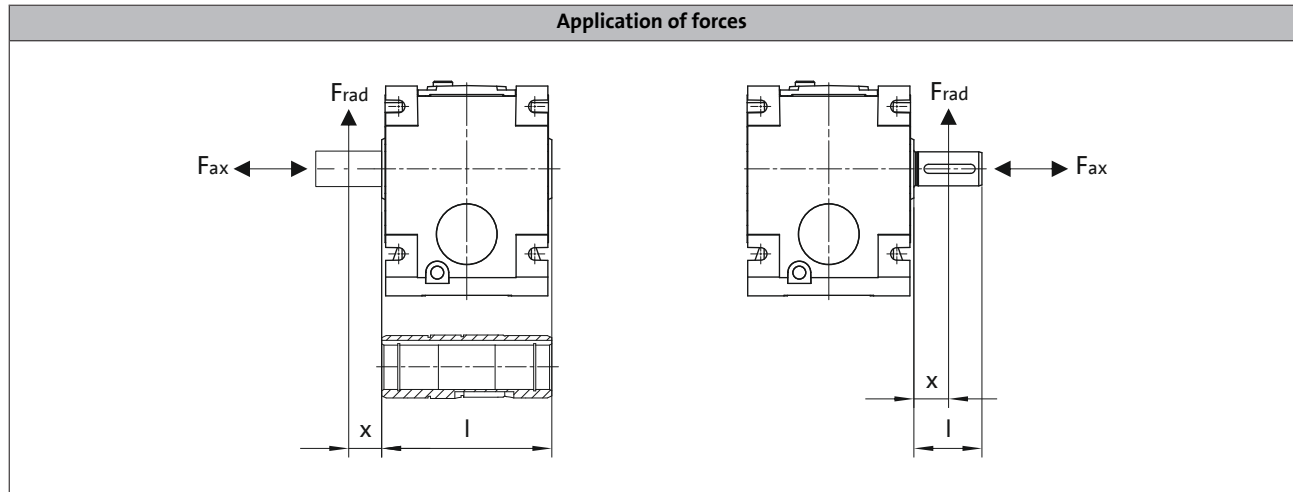
Permissible radial force

$$F_{rad,perm} = f_w \times F_{rad,max}$$

► If F_{rad} and $F_{ax} \neq 0$, please contact Lenze.

Permissible axial force

If there is no radial force, the maximum permissible axial force is 50 % of the table value $F_{rad,max}$



- Solid shaft
- - - Solid shaft with flange
- · - Hollow shaft

g500-B bevel geared motors



Technical data

Permissible radial and axial forces at output

The values given in the table refer to the center shaft end force application point and are minimum values calculated according to the most unfavourable conditions (force application angle, mounting position, direction of rotation). The values were calculated for the motor/gear-box combination with a load capacity of $c= 1.3$ and an input speed of 1400 rpm.

In case of different operating conditions, considerably higher forces can be transmitted. Please contact Lenze.

- Neither radial nor axial forces are permissible for the hollow shaft with shrink disc.

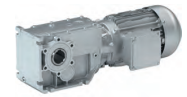
| Product | n_2 [r/min] | | | | | | | | | |
|---------|---------------|-----|-----|-----|-----|-----|----|----|----|-----|
| | 1000 | 630 | 400 | 250 | 160 | 100 | 63 | 40 | 25 | ≤16 |

| Max. radial force, Hollow shaft | | | | | | | | | | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ |
| | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] |
| g500-B45 | 900 | 1200 | 2200 | 2500 | 2800 | 3000 | 3000 | 3000 | 3000 | 3000 |
| g500-B110 | 1000 | 2200 | 2550 | 3000 | 3300 | 3600 | 3600 | 3600 | 3600 | 3600 |
| g500-B240 | 1500 | 2250 | 3800 | 4500 | 5100 | 6200 | 7400 | 7800 | 7800 | 7800 |
| g500-B450 | 3000 | 3800 | 5000 | 5200 | 5200 | 5500 | 7000 | 9000 | 9000 | 9000 |

| Max. radial force, Solid shaft without flange | | | | | | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ |
| | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] |
| g500-B45 | 900 | 1200 | 1800 | 2100 | 2400 | 2800 | 3000 | 3000 | 3000 | 3000 |
| g500-B110 | 1000 | 1800 | 2100 | 2500 | 2700 | 3000 | 3000 | 3000 | 3000 | 3000 |
| g500-B240 | 1500 | 2350 | 3000 | 3600 | 4500 | 5000 | 6000 | 6500 | 6500 | 6500 |
| g500-B450 | 1800 | 2800 | 3600 | 3900 | 4300 | 5000 | 6000 | 7600 | 7800 | 7800 |

| Max. radial force, Solid shaft with flange | | | | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ | $F_{rad,max}$ |
| | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] | [N] |
| g500-B45 | 900 | 1200 | 1800 | 2100 | 2400 | 2800 | 3000 | 3000 | 3000 | 3000 |
| g500-B110 | 1000 | 1800 | 2100 | 2500 | 2700 | 3000 | 3000 | 3000 | 3000 | 3000 |
| g500-B240 | 2400 | 3600 | 5200 | 6000 | 6500 | 6500 | 6500 | 6500 | 6500 | 6500 |
| g500-B450 | 3000 | 4000 | 4700 | 5100 | 5600 | 6400 | 7700 | 7800 | 7800 | 7800 |

g500-B bevel geared motors



Technical data

Selection tables, notes

Notes on the selection tables with 4-pole motors

The selection tables show the available combinations of gearbox type, number of stages, ratio and motor. They are used only to provide basic orientation.

The following legend indicates the structure of the selection tables.

Rated power P_{rated} of the drive motor depending on the rated frequency

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW

2-stufige Getriebe ← Number of the gear stage of the gearbox

Torque diagram

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | i | Product | | | |
|---------------------------------|-------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|-------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | m550 | | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 407 | 17 | 4.9 | 41 | 13 | 168 | 17 | 407 | 17 | 4.9 | 718 | 17 | 4.0 | 3.565 | -B240 | -P80/M4 | |
| 280 | 24 | 2.8 | 28 | 19 | 116 | 24 | 280 | 24 | 2.8 | 494 | 25 | 2.3 | 5.185 | -B110 | -P80/M4 | |

Load capacity c of the gearbox
 c is the ratio between the permissible rated torque of the gearbox and the rated torque of the three-phase AC motor (converted to the driven shaft).
 c must be always higher than the service factor k determined for the application k .

$$c = \frac{M_{2,zul}}{M_{1N} \cdot i \cdot \eta_{Getr}} > k$$

Mains operation
 Output speed n_2
 Output torque M_2

Inverter operation
 The speed and torque data are valid for self-ventilated and forced ventilated drives. Forced ventilated drives can always output the torque M_2 in the entire setting ranges. In the case of self-ventilated drives, a reduction to M_{22} is required in the lower speed range.

The following applies to self-ventilated geared motors:
 n_{22} is the minimum speed where the torque M_{22} is permissible, from n_{21} to n_2 , the maximum torque is M_2

The following applies to forced ventilated geared motors:
 From the minimum speed n_{22} to n_2 , the maximum torque is M_2

Ratio i

Product Gearbox

Product Motor

Page number for dimensions

Motor voltages

The power values and torques indicated in the selection tables refer to the following motor voltages:

- 50 Hz : Δ 230 V / Y 400 V
- 87 Hz : 400 V

Operation at 87 Hz

In 87 Hz operation, the three-phase AC motor (which is designed for a voltage of Δ 230 V / Y 400 V at 50 Hz) is operated on an inverter with 400 V rated voltage in a delta connection. It is important to note here that the inverter must be configured for 87Hz output.

This offers the following advantages over 50 Hz operation:

- the setting range of the motor is increased by a factor of 1.73.
- the motor can then provide around 1.73 times greater output, which in turn allows a smaller and more affordable motor to be selected for the application.
- the efficiency of the motor is also improved.

g500-B bevel geared motors

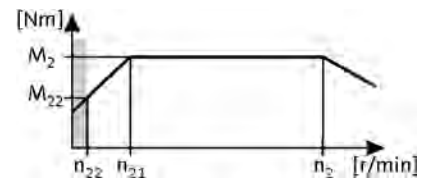


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.06$ kW
 87 Hz: $P_N = 0.11$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| | | | 8.3 | 6.8 | 35 | 7.0 | | | | 146 | 7.0 | 5.5 | 17.378 | -B45 | 063-02 | |
| | | | 7.5 | 7.6 | 31 | 8.0 | | | | 131 | 8.0 | 5.0 | 19.365 | -B45 | 063-02 | |
| 64 | 9.0 | 5.3 | 6.5 | 8.5 | 27 | 9.0 | 64 | 9.0 | 5.3 | 114 | 9.0 | 4.3 | 22.270 | -B45 | 063-02 | |
| 57 | 10 | 4.7 | 5.8 | 9.6 | 24 | 10 | 57 | 10 | 4.7 | 101 | 10 | 4.4 | 25.051 | -B45 | 063-02 | |
| 50 | 11 | 4.1 | 5.0 | 11 | 21 | 11 | 50 | 11 | 4.1 | 88 | 11 | 3.8 | 28.808 | -B45 | 063-02 | |
| 44 | 12 | 3.6 | 4.4 | 12 | 18 | 12 | 44 | 12 | 3.6 | 78 | 13 | 3.4 | 32.593 | -B45 | 063-02 | |
| 38 | 14 | 3.1 | 3.9 | 14 | 16 | 14 | 38 | 14 | 3.1 | 68 | 15 | 2.9 | 37.481 | -B45 | 063-02 | |
| 34 | 16 | 2.8 | 3.4 | 16 | 14 | 16 | 34 | 16 | 2.8 | 60 | 17 | 2.7 | 42.222 | -B45 | 063-02 | |
| 29 | 19 | 2.4 | 3.0 | 19 | 12 | 19 | 29 | 19 | 2.4 | 52 | 19 | 2.4 | 48.556 | -B45 | 063-02 | |
| 26 | 21 | 2.2 | 2.7 | 21 | 11 | 21 | 26 | 21 | 2.2 | 47 | 21 | 2.1 | 53.889 | -B45 | 063-02 | |
| 23 | 24 | 1.9 | 2.3 | 24 | 9.7 | 24 | 23 | 24 | 1.9 | 41 | 24 | 1.8 | 61.972 | -B45 | 063-02 | |

g500-B bevel geared motors

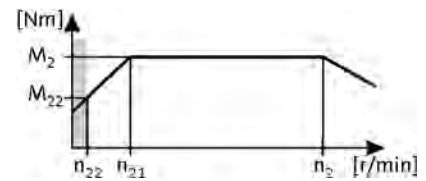


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.09$ kW
 87 Hz: $P_N = 0.16$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| | | | 13 | 6.8 | 52 | 7.0 | | | | 214 | 7.0 | 5.6 | 11.640 | -B45 | 063-22 | |
| 103 | 8.0 | 5.7 | 11 | 7.8 | 45 | 8.0 | 103 | 8.0 | 5.7 | 186 | 8.0 | 4.9 | 13.386 | -B45 | 063-22 | |
| 91 | 9.0 | 5.0 | 9.6 | 8.8 | 40 | 9.0 | 91 | 9.0 | 5.0 | 164 | 9.0 | 4.3 | 15.111 | -B45 | 063-22 | |
| 79 | 10 | 4.4 | 8.3 | 10 | 35 | 10 | 79 | 10 | 4.4 | 143 | 10 | 3.8 | 17.378 | -B45 | 063-22 | |
| 71 | 11 | 3.9 | 7.5 | 11 | 31 | 11 | 71 | 11 | 3.9 | 128 | 11 | 3.4 | 19.365 | -B45 | 063-22 | |
| 62 | 13 | 3.4 | 6.5 | 13 | 27 | 13 | 62 | 13 | 3.4 | 112 | 13 | 2.9 | 22.270 | -B45 | 063-22 | |
| 55 | 15 | 3.0 | 5.8 | 15 | 24 | 15 | 55 | 15 | 3.0 | 99 | 15 | 3.0 | 25.051 | -B45 | 063-22 | |
| 48 | 17 | 2.6 | 5.0 | 17 | 21 | 17 | 48 | 17 | 2.6 | 86 | 17 | 2.6 | 28.808 | -B45 | 063-22 | |
| 42 | 19 | 2.3 | 4.4 | 19 | 18 | 19 | 42 | 19 | 2.3 | 76 | 19 | 2.3 | 32.593 | -B45 | 063-22 | |
| 37 | 22 | 2.0 | 3.9 | 22 | 16 | 22 | 37 | 22 | 2.0 | 66 | 22 | 2.0 | 37.481 | -B45 | 063-22 | |
| 33 | 25 | 1.8 | 3.4 | 25 | 14 | 25 | 33 | 25 | 1.8 | 59 | 25 | 1.8 | 42.222 | -B45 | 063-22 | |
| 28 | 29 | 1.6 | 3.0 | 28 | 12 | 28 | 28 | 29 | 1.6 | 51 | 28 | 1.6 | 48.556 | -B45 | 063-22 | |
| 26 | 32 | 1.4 | 2.7 | 32 | 11 | 31 | 26 | 32 | 1.4 | 46 | 31 | 1.4 | 53.889 | -B45 | 063-22 | |
| 22 | 37 | 1.2 | 2.3 | 36 | 9.7 | 36 | 22 | 37 | 1.2 | 40 | 36 | 1.2 | 61.972 | -B45 | 063-22 | |

g500-B bevel geared motors

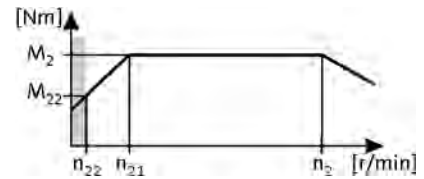


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.12$ kW
 87 Hz: $P_N = 0.21$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| | | | 20 | 4.2 | 84 | 5.0 | | | | 357 | 5.0 | 6.0 | 7.111 | -B45 | 063-12 | |
| | | | 18 | 4.8 | 73 | 6.0 | | | | 310 | 6.0 | 6.0 | 8.178 | -B45 | 063-12 | |
| | | | 16 | 5.4 | 66 | 7.0 | | | | 279 | 7.0 | 5.5 | 9.101 | -B45 | 063-12 | |
| 136 | 8.0 | 5.6 | 14 | 6.2 | 57 | 8.0 | 136 | 8.0 | 5.6 | 242 | 8.0 | 4.8 | 10.466 | -B45 | 063-12 | |
| | | | 13 | 6.7 | 52 | 9.0 | | | | 221 | 9.0 | 6.0 | 11.449 | -B110 | 063-12 | |
| 122 | 9.0 | 5.1 | 13 | 6.8 | 52 | 9.0 | 122 | 9.0 | 5.1 | 218 | 9.0 | 4.3 | 11.640 | -B45 | 063-12 | |
| | | | 11 | 7.5 | 47 | 10 | | | | 200 | 10 | 5.5 | 12.698 | -B110 | 063-12 | |
| 107 | 10 | 4.4 | 11 | 7.9 | 45 | 10 | 107 | 10 | 4.4 | 189 | 10 | 3.8 | 13.386 | -B45 | 063-12 | |
| | | | 9.9 | 8.6 | 41 | 11 | | | | 174 | 11 | 5.5 | 14.603 | -B110 | 063-12 | |
| 94 | 12 | 3.9 | 9.6 | 8.9 | 40 | 11 | 94 | 12 | 3.9 | 168 | 11 | 3.3 | 15.111 | -B45 | 063-12 | |
| 82 | 13 | 3.4 | 8.3 | 10 | 35 | 13 | 82 | 13 | 3.4 | 146 | 13 | 2.9 | 17.378 | -B45 | 063-12 | |
| 74 | 15 | 3.0 | 7.5 | 11 | 31 | 15 | 74 | 15 | 3.0 | 131 | 15 | 2.6 | 19.365 | -B45 | 063-12 | |
| 73 | 15 | 5.5 | 7.4 | 12 | 31 | 15 | 73 | 15 | 5.5 | 130 | 15 | 4.7 | 19.556 | -B110 | 063-12 | |
| 64 | 17 | 2.6 | 6.5 | 13 | 27 | 17 | 64 | 17 | 2.6 | 114 | 17 | 2.3 | 22.270 | -B45 | 063-12 | |
| 63 | 17 | 5.5 | 6.4 | 13 | 27 | 17 | 63 | 17 | 5.5 | 113 | 17 | 4.7 | 22.489 | -B110 | 063-12 | |
| 57 | 19 | 2.4 | 5.8 | 15 | 24 | 19 | 57 | 19 | 2.4 | 101 | 19 | 2.3 | 25.051 | -B45 | 063-12 | |
| 57 | 19 | 4.6 | 5.8 | 15 | 24 | 19 | 57 | 19 | 4.6 | 101 | 19 | 3.9 | 25.185 | -B110 | 063-12 | |
| 50 | 22 | 2.0 | 5.0 | 17 | 21 | 22 | 50 | 22 | 2.0 | 88 | 22 | 2.0 | 28.808 | -B45 | 063-12 | |
| 49 | 22 | 4.6 | 5.0 | 17 | 21 | 22 | 49 | 22 | 4.6 | 88 | 22 | 3.9 | 28.963 | -B110 | 063-12 | |
| 45 | 24 | 4.0 | 4.5 | 19 | 19 | 24 | 45 | 24 | 4.0 | 79 | 24 | 3.4 | 31.919 | -B110 | 063-12 | |
| 44 | 25 | 1.8 | 4.4 | 19 | 18 | 24 | 44 | 25 | 1.8 | 78 | 24 | 1.8 | 32.593 | -B45 | 063-12 | |
| 38 | 29 | 3.7 | 3.9 | 22 | 16 | 28 | 38 | 29 | 3.7 | 68 | 28 | 3.2 | 37.400 | -B110 | 063-12 | |
| 38 | 29 | 1.6 | 3.9 | 22 | 16 | 28 | 38 | 29 | 1.6 | 68 | 28 | 1.5 | 37.481 | -B45 | 063-12 | |
| 36 | 31 | 3.3 | 3.6 | 24 | 15 | 30 | 36 | 31 | 3.3 | 63 | 30 | 3.2 | 40.000 | -B110 | 063-12 | |
| 34 | 32 | 1.4 | 3.4 | 25 | 14 | 32 | 34 | 32 | 1.4 | 60 | 32 | 1.4 | 42.222 | -B45 | 063-12 | |
| 31 | 35 | 3.1 | 3.2 | 27 | 13 | 35 | 31 | 35 | 3.1 | 55 | 35 | 3.0 | 46.000 | -B110 | 063-12 | |
| 30 | 37 | 3.0 | 3.0 | 28 | 13 | 36 | 30 | 37 | 3.0 | 53 | 36 | 2.9 | 48.167 | -B110 | 063-12 | |
| 29 | 37 | 1.2 | 3.0 | 29 | 12 | 36 | 29 | 37 | 1.2 | 52 | 36 | 1.2 | 48.556 | -B45 | 063-12 | |
| 27 | 40 | 1.7 | 2.8 | 31 | 11 | 40 | 27 | 40 | 1.7 | 48 | 40 | 1.7 | 52.698 | -B110 | 063-12 | |
| 26 | 41 | 1.1 | 2.7 | 32 | 11 | 40 | 26 | 41 | 1.1 | 47 | 40 | 1.1 | 53.889 | -B45 | 063-12 | |
| 24 | 46 | 1.7 | 2.4 | 36 | 9.9 | 46 | 24 | 46 | 1.7 | 42 | 46 | 1.7 | 60.603 | -B110 | 063-12 | |
| 23 | 47 | 2.4 | 2.4 | 36 | 9.8 | 46 | 23 | 47 | 2.4 | 42 | 46 | 2.4 | 61.045 | -B110 | 063-12 | |
| 23 | 47 | 1.0 | 2.3 | 37 | 9.7 | 47 | 23 | 47 | 1.0 | 41 | 47 | 1.0 | 61.972 | -B45 | 063-12 | |
| 21 | 51 | 3.1 | 2.2 | 40 | 8.9 | 50 | 21 | 51 | 3.1 | 38 | 50 | 3.2 | 67.113 | -B240 | 063-12 | |
| 19 | 58 | 3.1 | 1.9 | 45 | 7.9 | 57 | 19 | 58 | 3.1 | 33 | 57 | 3.2 | 76.213 | -B240 | 063-12 | |

g500-B bevel geared motors

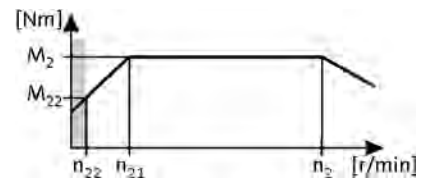


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.12$ kW
 87 Hz: $P_N = 0.21$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 19 | 58 | 1.9 | 1.9 | 45 | 7.8 | 57 | 19 | 58 | 1.9 | 33 | 57 | 1.9 | 76.500 | -B110 | 063-12 | |
| 14 | 77 | 1.4 | 1.4 | 59 | 6.0 | 76 | 14 | 77 | 1.4 | 25 | 76 | 1.5 | 100.786 | -B110 | 063-12 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 21 | 51 | 4.7 | 2.1 | 39 | 8.8 | 50 | 21 | 51 | 4.7 | 37 | 50 | 4.6 | 68.459 | -B240 | 063-12 | |
| 16 | 65 | 3.7 | 1.7 | 50 | 6.9 | 64 | 16 | 65 | 3.7 | 29 | 64 | 3.6 | 87.563 | -B240 | 063-12 | |
| 14 | 74 | 3.2 | 1.5 | 57 | 6.0 | 73 | 14 | 74 | 3.2 | 26 | 73 | 3.1 | 99.437 | -B240 | 063-12 | |
| 13 | 85 | 2.8 | 1.3 | 65 | 5.3 | 83 | 13 | 85 | 2.8 | 22 | 83 | 2.9 | 113.673 | -B240 | 063-12 | |
| 11 | 96 | 2.5 | 1.1 | 74 | 4.6 | 95 | 11 | 96 | 2.5 | 20 | 95 | 2.5 | 129.087 | -B240 | 063-12 | |
| 9.8 | 108 | 2.2 | 1.0 | 84 | 4.1 | 107 | 9.8 | 108 | 2.2 | 17 | 107 | 2.3 | 145.674 | -B240 | 063-12 | |
| 8.6 | 123 | 2.0 | 0.9 | 95 | 3.6 | 121 | 8.6 | 123 | 2.0 | 15 | 121 | 2.0 | 165.426 | -B240 | 063-12 | |
| 7.6 | 140 | 1.7 | 0.8 | 108 | 3.2 | 138 | 7.6 | 140 | 1.7 | 14 | 138 | 1.7 | 188.442 | -B240 | 063-12 | |
| 7.3 | 148 | 3.0 | 0.7 | 114 | 3.1 | 146 | 7.3 | 148 | 3.0 | 13 | 146 | 3.1 | 193.948 | -B450 | 063-12 | |
| 6.7 | 159 | 1.5 | 0.7 | 123 | 2.8 | 157 | 6.7 | 159 | 1.5 | 12 | 157 | 1.5 | 213.994 | -B240 | 063-12 | |
| 6.4 | 171 | 2.6 | 0.6 | 132 | 2.7 | 168 | 6.4 | 171 | 2.6 | 11 | 168 | 2.7 | 223.563 | -B450 | 063-12 | |
| 5.8 | 183 | 1.3 | 0.6 | 141 | 2.4 | 180 | 5.8 | 183 | 1.3 | 10 | 180 | 1.3 | 245.178 | -B240 | 063-12 | |
| 5.7 | 189 | 2.4 | 0.6 | 146 | 2.4 | 186 | 5.7 | 189 | 2.4 | 10 | 186 | 2.4 | 247.882 | -B450 | 063-12 | |
| 5.1 | 207 | 1.2 | 0.5 | 160 | 2.2 | 204 | 5.1 | 207 | 1.2 | 9.1 | 204 | 1.2 | 278.422 | -B240 | 063-12 | |
| 4.5 | 237 | 1.0 | 0.5 | 182 | 1.9 | 233 | 4.5 | 237 | 1.0 | 8.0 | 233 | 1.0 | 317.617 | -B240 | 063-12 | |
| 4.0 | 269 | 0.9 | 0.4 | 207 | 1.7 | 264 | 4.0 | 269 | 0.9 | 7.0 | 264 | 0.9 | 360.683 | -B240 | 063-12 | |

g500-B bevel geared motors

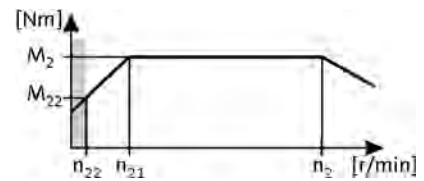


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.18$ kW
 87 Hz: $P_N = 0.33$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|-------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|------------------------|---------|--|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | | |
| n ₂₂ [r/min] | M ₂₂ [Nm] | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | |
| 252 | 6.0 | 4.7 | 27 | 5.0 | 111 | 6.0 | 252 | 6.0 | 4.7 | 457 | 7.0 | 3.9 | 5.411 | -B45 | 063-32 | | |
| 219 | 7.0 | 4.7 | 23 | 5.7 | 96 | 7.0 | 219 | 7.0 | 4.7 | 398 | 8.0 | 3.9 | 6.222 | -B45 | 063-32 | | |
| 192 | 9.0 | 4.5 | 20 | 6.6 | 84 | 9.0 | 192 | 9.0 | 4.5 | 348 | 9.0 | 3.7 | 7.111 | -B45 | 063-32 | | |
| 167 | 10 | 4.5 | 18 | 7.5 | 73 | 10 | 167 | 10 | 4.5 | 303 | 10 | 3.7 | 8.178 | -B45 | 063-32 | | |
| 150 | 11 | 4.1 | 16 | 8.4 | 66 | 11 | 150 | 11 | 4.1 | 272 | 11 | 3.5 | 9.101 | -B45 | 063-32 | | |
| 130 | 13 | 3.6 | 14 | 9.6 | 57 | 13 | 130 | 13 | 3.6 | 237 | 13 | 3.0 | 10.466 | -B45 | 063-32 | | |
| 119 | 14 | 4.5 | 13 | 11 | 52 | 14 | 119 | 14 | 4.5 | 216 | 14 | 3.7 | 11.449 | -B110 | 063-32 | | |
| 117 | 14 | 3.2 | 13 | 11 | 52 | 14 | 117 | 14 | 3.2 | 213 | 14 | 2.7 | 11.640 | -B45 | 063-32 | | |
| 108 | 15 | 4.1 | 11 | 12 | 47 | 15 | 108 | 15 | 4.1 | 195 | 15 | 3.5 | 12.698 | -B110 | 063-32 | | |
| 102 | 16 | 2.8 | 11 | 12 | 45 | 16 | 102 | 16 | 2.8 | 185 | 16 | 2.4 | 13.386 | -B45 | 063-32 | | |
| 94 | 17 | 4.1 | 9.9 | 14 | 41 | 17 | 94 | 17 | 4.1 | 170 | 18 | 3.5 | 14.603 | -B110 | 063-32 | | |
| 90 | 18 | 2.5 | 9.6 | 14 | 40 | 18 | 90 | 18 | 2.5 | 164 | 18 | 2.1 | 15.111 | -B45 | 063-32 | | |
| 79 | 21 | 2.2 | 8.3 | 16 | 35 | 21 | 79 | 21 | 2.2 | 142 | 21 | 1.8 | 17.378 | -B45 | 063-32 | | |
| 71 | 23 | 1.9 | 7.5 | 18 | 31 | 23 | 71 | 23 | 1.9 | 128 | 23 | 1.6 | 19.365 | -B45 | 063-32 | | |
| 70 | 23 | 3.5 | 7.4 | 18 | 31 | 23 | 70 | 23 | 3.5 | 127 | 24 | 2.9 | 19.556 | -B110 | 063-32 | | |
| 61 | 27 | 1.7 | 6.5 | 21 | 27 | 27 | 61 | 27 | 1.7 | 111 | 27 | 1.4 | 22.270 | -B45 | 063-32 | | |
| 61 | 27 | 3.5 | 6.4 | 21 | 27 | 27 | 61 | 27 | 3.5 | 110 | 27 | 2.9 | 22.489 | -B110 | 063-32 | | |
| 55 | 30 | 1.5 | 5.8 | 23 | 24 | 30 | 55 | 30 | 1.5 | 99 | 30 | 1.4 | 25.051 | -B45 | 063-32 | | |
| 54 | 30 | 2.9 | 5.8 | 23 | 24 | 30 | 54 | 30 | 2.9 | 98 | 30 | 2.5 | 25.185 | -B110 | 063-32 | | |
| 47 | 34 | 1.3 | 5.0 | 27 | 21 | 34 | 47 | 34 | 1.3 | 86 | 35 | 1.2 | 28.808 | -B45 | 063-32 | | |
| 47 | 35 | 2.9 | 5.0 | 27 | 21 | 35 | 47 | 35 | 2.9 | 86 | 35 | 2.5 | 28.963 | -B110 | 063-32 | | |
| 43 | 38 | 2.6 | 4.5 | 29 | 19 | 38 | 43 | 38 | 2.6 | 78 | 39 | 2.2 | 31.919 | -B110 | 063-32 | | |
| 42 | 39 | 1.2 | 4.4 | 30 | 18 | 39 | 42 | 39 | 1.2 | 76 | 39 | 1.1 | 32.593 | -B45 | 063-32 | | |
| 37 | 44 | 2.5 | 4.0 | 34 | 16 | 44 | 37 | 44 | 2.5 | 67 | 44 | 2.1 | 36.707 | -B110 | 063-32 | | |
| 37 | 45 | 2.4 | 3.9 | 35 | 16 | 45 | 37 | 45 | 2.4 | 66 | 45 | 2.0 | 37.400 | -B110 | 063-32 | | |
| 36 | 45 | 1.0 | 3.9 | 35 | 16 | 45 | 36 | 45 | 1.0 | 66 | 45 | 1.0 | 37.481 | -B45 | 063-32 | | |
| 34 | 48 | 2.1 | 3.6 | 37 | 15 | 48 | 34 | 48 | 2.1 | 62 | 48 | 2.0 | 40.000 | -B110 | 063-32 | | |
| 32 | 51 | 0.9 | 3.4 | 39 | 14 | 51 | 32 | 51 | 0.9 | 59 | 51 | 0.9 | 42.222 | -B45 | 063-32 | | |
| 32 | 52 | 2.9 | 3.4 | 40 | 14 | 52 | 32 | 52 | 2.9 | 57 | 52 | 2.8 | 43.267 | -B240 | 063-32 | | |
| 30 | 55 | 2.0 | 3.2 | 42 | 13 | 55 | 30 | 55 | 2.0 | 54 | 56 | 1.9 | 46.000 | -B110 | 063-32 | | |
| 28 | 58 | 1.9 | 3.0 | 44 | 13 | 58 | 28 | 58 | 1.9 | 51 | 58 | 1.8 | 48.167 | -B110 | 063-32 | | |
| 28 | 59 | 2.9 | 3.0 | 45 | 12 | 59 | 28 | 59 | 2.9 | 50 | 59 | 2.8 | 49.133 | -B240 | 063-32 | | |
| 26 | 63 | 2.6 | 2.8 | 48 | 11 | 63 | 26 | 63 | 2.6 | 47 | 64 | 2.4 | 52.510 | -B240 | 063-32 | | |
| 26 | 63 | 1.1 | 2.8 | 49 | 11 | 63 | 26 | 63 | 1.1 | 47 | 64 | 1.0 | 52.698 | -B110 | 063-32 | | |
| 23 | 71 | 2.6 | 2.4 | 55 | 10 | 71 | 23 | 71 | 2.6 | 42 | 72 | 2.4 | 59.630 | -B240 | 063-32 | | |

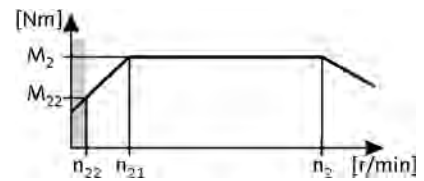
g500-B bevel geared motors



Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.18$ kW
 87 Hz: $P_N = 0.33$ kW



2-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 23 | 73 | 1.1 | 2.4 | 56 | 9.9 | 73 | 23 | 73 | 1.1 | 41 | 73 | 1.1 | 60.603 | -B110 | 063-32 | |
| 22 | 73 | 1.5 | 2.4 | 56 | 9.8 | 73 | 22 | 73 | 1.5 | 41 | 74 | 1.5 | 61.045 | -B110 | 063-32 | |
| 20 | 80 | 2.0 | 2.2 | 62 | 8.9 | 80 | 20 | 80 | 2.0 | 37 | 81 | 2.0 | 67.113 | -B240 | 063-32 | |
| 18 | 91 | 2.0 | 1.9 | 70 | 7.9 | 91 | 18 | 91 | 2.0 | 33 | 92 | 2.0 | 76.213 | -B240 | 063-32 | |
| 18 | 92 | 1.2 | 1.9 | 71 | 7.8 | 92 | 18 | 92 | 1.2 | 32 | 93 | 1.2 | 76.500 | -B110 | 063-32 | |
| 14 | 121 | 0.9 | 1.4 | 93 | 6.0 | 121 | 14 | 121 | 0.9 | 25 | 122 | 0.9 | 100.786 | -B110 | 063-32 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 20 | 80 | 3.0 | 2.1 | 62 | 8.8 | 80 | 20 | 80 | 3.0 | 36 | 81 | 2.9 | 68.459 | -B240 | 063-32 | |
| 18 | 91 | 2.7 | 1.9 | 70 | 7.7 | 91 | 18 | 91 | 2.7 | 32 | 92 | 2.5 | 77.741 | -B240 | 063-32 | |
| 16 | 102 | 2.4 | 1.7 | 79 | 6.9 | 102 | 16 | 102 | 2.4 | 28 | 103 | 2.2 | 87.563 | -B240 | 063-32 | |
| 14 | 116 | 2.1 | 1.5 | 89 | 6.0 | 116 | 14 | 116 | 2.1 | 25 | 117 | 2.0 | 99.437 | -B240 | 063-32 | |
| 12 | 133 | 1.8 | 1.3 | 102 | 5.3 | 133 | 12 | 133 | 1.8 | 22 | 134 | 1.8 | 113.673 | -B240 | 063-32 | |
| 11 | 151 | 1.6 | 1.1 | 116 | 4.6 | 151 | 11 | 151 | 1.6 | 19 | 152 | 1.6 | 129.087 | -B240 | 063-32 | |
| 9.5 | 172 | 2.6 | 1.0 | 133 | 4.2 | 172 | 9.5 | 172 | 2.6 | 17 | 174 | 2.6 | 144.128 | -B450 | 063-32 | |
| 9.4 | 170 | 1.4 | 1.0 | 131 | 4.1 | 170 | 9.4 | 170 | 1.4 | 17 | 172 | 1.4 | 145.674 | -B240 | 063-32 | |
| 8.5 | 191 | 2.4 | 0.9 | 147 | 3.8 | 191 | 8.5 | 191 | 2.4 | 16 | 193 | 2.3 | 159.807 | -B450 | 063-32 | |
| 8.3 | 193 | 1.2 | 0.9 | 149 | 3.6 | 193 | 8.3 | 193 | 1.2 | 15 | 195 | 1.2 | 165.426 | -B240 | 063-32 | |
| 7.8 | 209 | 2.2 | 0.8 | 161 | 3.4 | 209 | 7.8 | 209 | 2.2 | 14 | 212 | 2.1 | 174.919 | -B450 | 063-32 | |
| 7.2 | 220 | 1.1 | 0.8 | 169 | 3.2 | 220 | 7.2 | 220 | 1.1 | 13 | 222 | 1.1 | 188.442 | -B240 | 063-32 | |
| 7.0 | 232 | 1.9 | 0.7 | 179 | 3.1 | 232 | 7.0 | 232 | 1.9 | 13 | 235 | 1.9 | 193.948 | -B450 | 063-32 | |
| 6.4 | 250 | 1.0 | 0.7 | 192 | 2.8 | 250 | 6.4 | 250 | 1.0 | 12 | 252 | 1.0 | 213.994 | -B240 | 063-32 | |
| 6.1 | 267 | 1.7 | 0.6 | 206 | 2.7 | 267 | 6.1 | 267 | 1.7 | 11 | 270 | 1.7 | 223.563 | -B450 | 063-32 | |
| 5.6 | 286 | 0.8 | 0.6 | 220 | 2.4 | 286 | 5.6 | 286 | 0.8 | 10 | 289 | 0.8 | 245.178 | -B240 | 063-32 | |
| 5.5 | 296 | 1.5 | 0.6 | 228 | 2.4 | 296 | 5.5 | 296 | 1.5 | 10 | 300 | 1.5 | 247.882 | -B450 | 063-32 | |

g500-B bevel geared motors

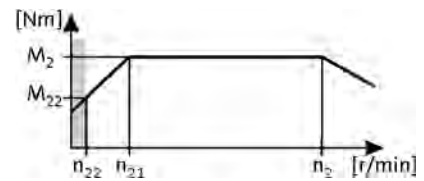


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.25$ kW
 87 Hz: $P_N = 0.45$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|------------------|---------------|---------|--|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | | MD□MA□□ | | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | |
| 264 | 9.0 | 5.6 | 28 | 6.6 | 116 | 9.0 | 264 | 9.0 | 5.6 | 478 | 9.0 | 4.8 | 5.185 | -B110 | 063-42 | | |
| 253 | 9.0 | 4.4 | 27 | 6.9 | 111 | 9.0 | 253 | 9.0 | 4.4 | 458 | 9.0 | 3.7 | 5.411 | -B45 | 063-42 | | |
| 230 | 10 | 5.6 | 24 | 7.6 | 101 | 10 | 230 | 10 | 5.6 | 416 | 10 | 4.8 | 5.963 | -B110 | 063-42 | | |
| 220 | 10 | 3.9 | 23 | 7.9 | 96 | 10 | 220 | 10 | 3.9 | 399 | 10 | 3.3 | 6.222 | -B45 | 063-42 | | |
| 193 | 12 | 3.7 | 20 | 9.1 | 84 | 12 | 193 | 12 | 3.7 | 349 | 12 | 3.1 | 7.111 | -B45 | 063-42 | | |
| 193 | 12 | 5.6 | 20 | 9.1 | 84 | 12 | 193 | 12 | 5.6 | 349 | 12 | 4.8 | 7.111 | -B110 | 063-42 | | |
| 168 | 14 | 3.3 | 18 | 10 | 73 | 13 | 168 | 14 | 3.3 | 303 | 13 | 2.8 | 8.178 | -B45 | 063-42 | | |
| 168 | 14 | 5.6 | 18 | 10 | 73 | 13 | 168 | 14 | 5.6 | 303 | 13 | 4.8 | 8.178 | -B110 | 063-42 | | |
| 151 | 15 | 3.0 | 16 | 12 | 66 | 15 | 151 | 15 | 3.0 | 273 | 15 | 2.5 | 9.101 | -B45 | 063-42 | | |
| 151 | 15 | 5.2 | 16 | 12 | 66 | 15 | 151 | 15 | 5.2 | 273 | 15 | 4.4 | 9.101 | -B110 | 063-42 | | |
| 131 | 17 | 2.6 | 14 | 13 | 57 | 17 | 131 | 17 | 2.6 | 237 | 17 | 2.2 | 10.466 | -B45 | 063-42 | | |
| 131 | 17 | 5.1 | 14 | 13 | 57 | 17 | 131 | 17 | 5.1 | 237 | 17 | 4.4 | 10.466 | -B110 | 063-42 | | |
| 120 | 19 | 4.8 | 13 | 15 | 52 | 19 | 120 | 19 | 4.8 | 217 | 19 | 4.0 | 11.449 | -B110 | 063-42 | | |
| 118 | 19 | 2.3 | 13 | 15 | 52 | 19 | 118 | 19 | 2.3 | 213 | 19 | 2.0 | 11.640 | -B45 | 063-42 | | |
| 108 | 21 | 4.3 | 11 | 16 | 47 | 21 | 108 | 21 | 4.3 | 195 | 21 | 3.6 | 12.698 | -B110 | 063-42 | | |
| 102 | 22 | 2.0 | 11 | 17 | 45 | 22 | 102 | 22 | 2.0 | 185 | 22 | 1.7 | 13.386 | -B45 | 063-42 | | |
| 94 | 24 | 3.7 | 9.9 | 19 | 41 | 24 | 94 | 24 | 3.7 | 170 | 24 | 3.2 | 14.603 | -B110 | 063-42 | | |
| 91 | 25 | 1.8 | 9.6 | 19 | 40 | 25 | 91 | 25 | 1.8 | 164 | 25 | 1.5 | 15.111 | -B45 | 063-42 | | |
| 88 | 26 | 3.6 | 9.3 | 20 | 39 | 26 | 88 | 26 | 3.6 | 159 | 26 | 3.0 | 15.556 | -B110 | 063-42 | | |
| 79 | 29 | 1.6 | 8.3 | 22 | 35 | 29 | 79 | 29 | 1.6 | 143 | 29 | 1.3 | 17.378 | -B45 | 063-42 | | |
| 77 | 30 | 3.2 | 8.1 | 23 | 34 | 29 | 77 | 30 | 3.2 | 139 | 29 | 2.8 | 17.889 | -B110 | 063-42 | | |
| 71 | 32 | 1.4 | 7.5 | 25 | 31 | 32 | 71 | 32 | 1.4 | 128 | 32 | 1.2 | 19.365 | -B45 | 063-42 | | |
| 70 | 32 | 3.1 | 7.4 | 25 | 31 | 32 | 70 | 32 | 3.1 | 127 | 32 | 2.6 | 19.556 | -B110 | 063-42 | | |
| 62 | 37 | 1.2 | 6.5 | 28 | 27 | 37 | 62 | 37 | 1.2 | 111 | 37 | 1.0 | 22.270 | -B45 | 063-42 | | |
| 61 | 37 | 2.8 | 6.4 | 29 | 27 | 37 | 61 | 37 | 2.8 | 110 | 37 | 2.4 | 22.489 | -B110 | 063-42 | | |
| 55 | 41 | 1.1 | 5.8 | 32 | 24 | 41 | 55 | 41 | 1.1 | 99 | 41 | 1.1 | 25.051 | -B45 | 063-42 | | |
| 54 | 42 | 2.6 | 5.8 | 32 | 24 | 41 | 54 | 42 | 2.6 | 99 | 41 | 2.2 | 25.185 | -B110 | 063-42 | | |
| 48 | 48 | 0.9 | 5.0 | 37 | 21 | 47 | 48 | 48 | 0.9 | 86 | 47 | 0.9 | 28.808 | -B45 | 063-42 | | |
| 47 | 48 | 2.3 | 5.0 | 37 | 21 | 48 | 47 | 48 | 2.3 | 86 | 48 | 2.0 | 28.963 | -B110 | 063-42 | | |
| 43 | 53 | 2.0 | 4.5 | 41 | 19 | 53 | 43 | 53 | 2.0 | 78 | 53 | 1.7 | 31.919 | -B110 | 063-42 | | |
| 42 | 54 | 0.8 | 4.4 | 42 | 18 | 54 | 42 | 54 | 0.8 | 76 | 54 | 0.8 | 32.593 | -B45 | 063-42 | | |
| | | | 4.3 | 43 | 18 | 55 | | | | 74 | 55 | 3.1 | 33.433 | -B240 | 063-42 | | |
| 37 | 61 | 1.8 | 4.0 | 47 | 16 | 60 | 37 | 61 | 1.8 | 68 | 60 | 1.5 | 36.707 | -B110 | 063-42 | | |
| 37 | 62 | 1.7 | 3.9 | 48 | 16 | 62 | 37 | 62 | 1.7 | 66 | 62 | 1.5 | 37.400 | -B110 | 063-42 | | |
| | | | 3.8 | 48 | 16 | 62 | | | | 65 | 62 | 3.1 | 37.967 | -B240 | 063-42 | | |

g500-B bevel geared motors

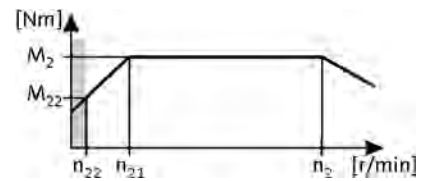


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.25$ kW
 87 Hz: $P_N = 0.45$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 34 | 66 | 1.2 | 3.6 | 51 | 15 | 66 | 34 | 66 | 1.2 | 62 | 66 | 1.2 | 40.000 | -B110 | 063-42 | |
| | | | 3.4 | 55 | 14 | 71 | | | | 57 | 71 | 3.2 | 43.267 | -B240 | 063-42 | |
| 30 | 76 | 1.2 | 3.2 | 59 | 13 | 76 | 30 | 76 | 1.2 | 54 | 76 | 1.2 | 46.000 | -B110 | 063-42 | |
| 28 | 80 | 1.4 | 3.0 | 61 | 13 | 79 | 28 | 80 | 1.4 | 52 | 79 | 1.3 | 48.167 | -B110 | 063-42 | |
| 28 | 81 | 3.0 | 3.0 | 63 | 12 | 81 | 28 | 81 | 3.0 | 51 | 81 | 2.9 | 49.133 | -B240 | 063-42 | |
| 26 | 87 | 2.7 | 2.8 | 67 | 11 | 86 | 26 | 87 | 2.7 | 47 | 86 | 2.6 | 52.510 | -B240 | 063-42 | |
| 23 | 99 | 2.4 | 2.4 | 76 | 10 | 98 | 23 | 99 | 2.4 | 42 | 98 | 2.4 | 59.630 | -B240 | 063-42 | |
| 22 | 101 | 1.1 | 2.4 | 78 | 9.8 | 100 | 22 | 101 | 1.1 | 41 | 100 | 1.1 | 61.045 | -B110 | 063-42 | |
| 20 | 111 | 1.4 | 2.2 | 86 | 8.9 | 110 | 20 | 111 | 1.4 | 37 | 110 | 1.4 | 67.113 | -B240 | 063-42 | |
| 18 | 126 | 1.4 | 1.9 | 97 | 7.9 | 125 | 18 | 126 | 1.4 | 33 | 125 | 1.4 | 76.213 | -B240 | 063-42 | |
| 18 | 127 | 0.9 | 1.9 | 98 | 7.8 | 126 | 18 | 127 | 0.9 | 32 | 126 | 0.9 | 76.500 | -B110 | 063-42 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|---------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 20 | 110 | 2.2 | 2.1 | 85 | 8.8 | 110 | 20 | 110 | 2.2 | 36 | 110 | 2.1 | 68.459 | -B240 | 063-42 | |
| 18 | 125 | 1.9 | 1.9 | 97 | 7.7 | 125 | 18 | 125 | 1.9 | 32 | 125 | 1.9 | 77.741 | -B240 | 063-42 | |
| 16 | 141 | 1.7 | 1.7 | 109 | 6.9 | 140 | 16 | 141 | 1.7 | 28 | 140 | 1.6 | 87.563 | -B240 | 063-42 | |
| 15 | 148 | 3.0 | 1.6 | 114 | 6.7 | 147 | 15 | 148 | 3.0 | 28 | 147 | 2.9 | 89.534 | -B450 | 063-42 | |
| 14 | 164 | 2.7 | 1.5 | 127 | 6.0 | 163 | 14 | 164 | 2.7 | 25 | 163 | 2.7 | 99.274 | -B450 | 063-42 | |
| 14 | 160 | 1.5 | 1.5 | 124 | 6.0 | 160 | 14 | 160 | 1.5 | 25 | 160 | 1.5 | 99.437 | -B240 | 063-42 | |
| 12 | 184 | 2.4 | 1.3 | 142 | 5.4 | 183 | 12 | 184 | 2.4 | 22 | 183 | 2.5 | 111.372 | -B450 | 063-42 | |
| 12 | 183 | 1.3 | 1.3 | 141 | 5.3 | 182 | 12 | 183 | 1.3 | 22 | 182 | 1.3 | 113.673 | -B240 | 063-42 | |
| 11 | 204 | 2.2 | 1.2 | 157 | 4.9 | 203 | 11 | 204 | 2.2 | 20 | 203 | 2.2 | 123.487 | -B450 | 063-42 | |
| 11 | 208 | 1.2 | 1.1 | 160 | 4.6 | 207 | 11 | 208 | 1.2 | 19 | 207 | 1.2 | 129.087 | -B240 | 063-42 | |
| 9.5 | 239 | 1.9 | 1.0 | 184 | 4.2 | 237 | 9.5 | 239 | 1.9 | 17 | 237 | 1.9 | 144.128 | -B450 | 063-42 | |
| 9.4 | 235 | 1.0 | 1.0 | 181 | 4.1 | 234 | 9.4 | 235 | 1.0 | 17 | 234 | 1.0 | 145.674 | -B240 | 063-42 | |
| 8.6 | 265 | 1.7 | 0.9 | 204 | 3.8 | 263 | 8.6 | 265 | 1.7 | 16 | 263 | 1.7 | 159.807 | -B450 | 063-42 | |
| 8.3 | 267 | 0.9 | 0.9 | 206 | 3.6 | 265 | 8.3 | 267 | 0.9 | 15 | 265 | 0.9 | 165.426 | -B240 | 063-42 | |
| 7.8 | 290 | 1.6 | 0.8 | 223 | 3.4 | 288 | 7.8 | 290 | 1.6 | 14 | 288 | 1.6 | 174.919 | -B450 | 063-42 | |
| 7.1 | 321 | 1.4 | 0.7 | 247 | 3.1 | 319 | 7.1 | 321 | 1.4 | 13 | 319 | 1.4 | 193.948 | -B450 | 063-42 | |
| 6.1 | 370 | 1.2 | 0.6 | 285 | 2.7 | 368 | 6.1 | 370 | 1.2 | 11 | 368 | 1.2 | 223.563 | -B450 | 063-42 | |
| 5.5 | 410 | 1.1 | 0.6 | 316 | 2.4 | 408 | 5.5 | 410 | 1.1 | 10 | 408 | 1.1 | 247.882 | -B450 | 063-42 | |

g500-B bevel geared motors

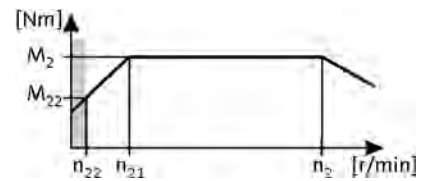


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 272 | 12 | 4.9 | 28 | 9.5 | 116 | 12 | 272 | 12 | 4.9 | | | | 5.185 | -B110 | 071-32 | |
| 261 | 13 | 3.0 | 27 | 9.9 | 111 | 13 | 261 | 13 | 3.0 | 466 | 13 | 2.6 | 5.411 | -B45 | 071-32 | |
| 237 | 14 | 4.9 | 24 | 11 | 101 | 14 | 237 | 14 | 4.9 | | | | 5.963 | -B110 | 071-32 | |
| 227 | 15 | 2.7 | 23 | 11 | 96 | 15 | 227 | 15 | 2.7 | 405 | 15 | 2.3 | 6.222 | -B45 | 071-32 | |
| 198 | 17 | 2.5 | 20 | 13 | 84 | 17 | 198 | 17 | 2.5 | 354 | 17 | 2.1 | 7.111 | -B45 | 071-32 | |
| 198 | 17 | 4.6 | 20 | 13 | 84 | 17 | 198 | 17 | 4.6 | | | | 7.111 | -B110 | 071-32 | |
| 172 | 19 | 2.3 | 18 | 15 | 73 | 19 | 172 | 19 | 2.3 | 308 | 19 | 1.9 | 8.178 | -B45 | 071-32 | |
| 172 | 19 | 4.2 | 18 | 15 | 73 | 19 | 172 | 19 | 4.2 | | | | 8.178 | -B110 | 071-32 | |
| 155 | 22 | 2.1 | 16 | 17 | 66 | 22 | 155 | 22 | 2.1 | 277 | 22 | 1.8 | 9.101 | -B45 | 071-32 | |
| 155 | 22 | 3.9 | 16 | 17 | 66 | 22 | 155 | 22 | 3.9 | | | | 9.101 | -B110 | 071-32 | |
| 135 | 25 | 1.8 | 14 | 19 | 57 | 25 | 135 | 25 | 1.8 | 241 | 25 | 1.5 | 10.466 | -B45 | 071-32 | |
| 135 | 25 | 3.6 | 14 | 19 | 57 | 25 | 135 | 25 | 3.6 | | | | 10.466 | -B110 | 071-32 | |
| 123 | 27 | 3.3 | 13 | 21 | 52 | 27 | 123 | 27 | 3.3 | | | | 11.449 | -B110 | 071-32 | |
| 121 | 28 | 1.6 | 13 | 21 | 52 | 28 | 121 | 28 | 1.6 | 217 | 28 | 1.4 | 11.640 | -B45 | 071-32 | |
| 111 | 30 | 3.0 | 11 | 23 | 47 | 30 | 111 | 30 | 3.0 | 198 | 30 | 2.5 | 12.698 | -B110 | 071-32 | |
| 105 | 32 | 1.4 | 11 | 25 | 45 | 32 | 105 | 32 | 1.4 | 188 | 32 | 1.2 | 13.386 | -B45 | 071-32 | |
| 97 | 35 | 2.6 | 9.9 | 27 | 41 | 35 | 97 | 35 | 2.6 | 173 | 35 | 2.2 | 14.603 | -B110 | 071-32 | |
| 93 | 36 | 1.3 | 9.6 | 28 | 40 | 36 | 93 | 36 | 1.3 | 167 | 36 | 1.1 | 15.111 | -B45 | 071-32 | |
| 91 | 37 | 2.5 | 9.3 | 29 | 39 | 37 | 91 | 37 | 2.5 | 162 | 37 | 2.1 | 15.556 | -B110 | 071-32 | |
| 81 | 41 | 1.1 | 8.3 | 32 | 35 | 41 | 81 | 41 | 1.1 | 145 | 41 | 0.9 | 17.378 | -B45 | 071-32 | |
| 79 | 43 | 2.3 | 8.1 | 33 | 34 | 43 | 79 | 43 | 2.3 | 141 | 43 | 1.9 | 17.889 | -B110 | 071-32 | |
| 73 | 46 | 1.0 | 7.5 | 36 | 31 | 46 | 73 | 46 | 1.0 | 130 | 46 | 0.8 | 19.365 | -B45 | 071-32 | |
| 72 | 47 | 2.2 | 7.4 | 36 | 31 | 46 | 72 | 47 | 2.2 | 129 | 46 | 1.8 | 19.556 | -B110 | 071-32 | |
| 63 | 53 | 0.9 | 6.5 | 41 | 27 | 53 | 63 | 53 | 0.9 | | | | 22.270 | -B45 | 071-32 | |
| 63 | 54 | 1.9 | 6.4 | 41 | 27 | 53 | 63 | 54 | 1.9 | 112 | 53 | 1.6 | 22.489 | -B110 | 071-32 | |
| 56 | 60 | 1.8 | 5.8 | 46 | 24 | 60 | 56 | 60 | 1.8 | 100 | 60 | 1.5 | 25.185 | -B110 | 071-32 | |
| | | | 5.4 | 49 | 22 | 64 | | | | 94 | 64 | 3.2 | 26.878 | -B240 | 071-32 | |
| 49 | 69 | 1.6 | 5.0 | 53 | 21 | 69 | 49 | 69 | 1.6 | 87 | 69 | 1.3 | 28.963 | -B110 | 071-32 | |
| | | | 4.8 | 56 | 20 | 73 | | | | 83 | 73 | 2.8 | 30.522 | -B240 | 071-32 | |
| 44 | 76 | 1.4 | 4.5 | 59 | 19 | 76 | 44 | 76 | 1.4 | 79 | 76 | 1.2 | 31.919 | -B110 | 071-32 | |
| 42 | 80 | 3.0 | 4.3 | 61 | 18 | 79 | 42 | 80 | 3.0 | 75 | 79 | 2.5 | 33.433 | -B240 | 071-32 | |
| 38 | 87 | 1.3 | 4.0 | 67 | 16 | 87 | 38 | 87 | 1.3 | 69 | 87 | 1.1 | 36.707 | -B110 | 071-32 | |
| 38 | 89 | 1.2 | 3.9 | 69 | 16 | 89 | 38 | 89 | 1.2 | 67 | 89 | 1.0 | 37.400 | -B110 | 071-32 | |
| 37 | 90 | 2.7 | 3.8 | 70 | 16 | 90 | 37 | 90 | 2.7 | 66 | 90 | 2.2 | 37.967 | -B240 | 071-32 | |
| 35 | 95 | 1.1 | 3.6 | 73 | 15 | 95 | 35 | 95 | 1.1 | 63 | 95 | 1.0 | 40.000 | -B110 | 071-32 | |

g500-B bevel geared motors

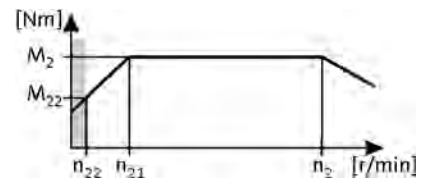


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.37$ kW
 87 Hz: $P_N = 0.66$ kW

2-stage gearboxes

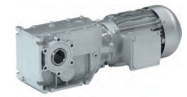


| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 33 | 103 | 2.3 | 3.4 | 79 | 14 | 103 | 33 | 103 | 2.3 | 58 | 103 | 2.2 | 43.267 | -B240 | 071-32 | |
| 31 | 110 | 1.0 | 3.2 | 84 | 13 | 109 | 31 | 110 | 1.0 | 55 | 109 | 1.0 | 46.000 | -B110 | 071-32 | |
| 29 | 115 | 1.0 | 3.0 | 88 | 13 | 114 | 29 | 115 | 1.0 | 52 | 114 | 0.9 | 48.167 | -B110 | 071-32 | |
| 29 | 117 | 2.1 | 3.0 | 90 | 12 | 117 | 29 | 117 | 2.1 | 51 | 117 | 2.0 | 49.133 | -B240 | 071-32 | |
| 27 | 125 | 1.9 | 2.8 | 96 | 11 | 125 | 27 | 125 | 1.9 | 48 | 125 | 1.8 | 52.510 | -B240 | 071-32 | |
| 24 | 142 | 1.7 | 2.4 | 109 | 10 | 142 | 24 | 142 | 1.7 | 42 | 142 | 1.6 | 59.630 | -B240 | 071-32 | |
| 21 | 160 | 1.1 | 2.2 | 123 | 8.9 | 159 | 21 | 160 | 1.1 | 38 | 159 | 1.1 | 67.113 | -B240 | 071-32 | |
| 19 | 181 | 1.1 | 1.9 | 140 | 7.9 | 181 | 19 | 181 | 1.1 | 33 | 181 | 1.1 | 76.213 | -B240 | 071-32 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | | |
| | | | 4.0 | 67 | 17 | 86 | | | | | 69 | 86 | 3.2 | 36.373 | -B450 | 071-32 | |
| 31 | 108 | 3.2 | 3.2 | 83 | 13 | 107 | 31 | 108 | 3.2 | 56 | 107 | 3.0 | 45.245 | -B450 | 071-32 | | |
| 28 | 119 | 3.2 | 2.9 | 92 | 12 | 119 | 28 | 119 | 3.2 | 50 | 119 | 3.0 | 50.167 | -B450 | 071-32 | | |
| | | | 2.6 | 103 | 11 | 133 | | | | | 45 | 133 | 3.2 | 56.154 | -B450 | 071-32 | |
| 23 | 148 | 3.0 | 2.3 | 114 | 9.6 | 148 | 23 | 148 | 3.0 | 41 | 148 | 2.9 | 62.262 | -B450 | 071-32 | | |
| 21 | 159 | 1.5 | 2.1 | 122 | 8.8 | 159 | 21 | 159 | 1.5 | 37 | 159 | 1.5 | 68.459 | -B240 | 071-32 | | |
| 18 | 180 | 1.3 | 1.9 | 139 | 7.7 | 180 | 18 | 180 | 1.3 | 32 | 180 | 1.3 | 77.741 | -B240 | 071-32 | | |
| 16 | 203 | 1.2 | 1.7 | 157 | 6.9 | 203 | 16 | 203 | 1.2 | 29 | 203 | 1.1 | 87.563 | -B240 | 071-32 | | |
| 16 | 213 | 2.1 | 1.6 | 164 | 6.7 | 213 | 16 | 213 | 2.1 | 28 | 213 | 2.0 | 89.534 | -B450 | 071-32 | | |
| 14 | 236 | 1.9 | 1.5 | 182 | 6.0 | 236 | 14 | 236 | 1.9 | 25 | 236 | 1.8 | 99.274 | -B450 | 071-32 | | |
| 14 | 231 | 1.0 | 1.5 | 178 | 6.0 | 230 | 14 | 231 | 1.0 | 25 | 230 | 1.0 | 99.437 | -B240 | 071-32 | | |
| 13 | 265 | 1.7 | 1.3 | 204 | 5.4 | 265 | 13 | 265 | 1.7 | 23 | 265 | 1.7 | 111.372 | -B450 | 071-32 | | |
| 12 | 264 | 0.9 | 1.3 | 203 | 5.3 | 263 | 12 | 264 | 0.9 | 22 | 263 | 0.9 | 113.673 | -B240 | 071-32 | | |
| 11 | 294 | 1.5 | 1.2 | 226 | 4.9 | 293 | 11 | 294 | 1.5 | 20 | 293 | 1.5 | 123.487 | -B450 | 071-32 | | |
| 9.8 | 343 | 1.3 | 1.0 | 264 | 4.2 | 342 | 9.8 | 343 | 1.3 | 18 | 342 | 1.3 | 144.128 | -B450 | 071-32 | | |
| 8.8 | 380 | 1.2 | 0.9 | 293 | 3.8 | 380 | 8.8 | 380 | 1.2 | 16 | 380 | 1.2 | 159.807 | -B450 | 071-32 | | |
| 8.1 | 416 | 1.1 | 0.8 | 321 | 3.4 | 416 | 8.1 | 416 | 1.1 | 14 | 416 | 1.1 | 174.919 | -B450 | 071-32 | | |
| 7.3 | 462 | 1.0 | 0.7 | 356 | 3.1 | 461 | 7.3 | 462 | 1.0 | 13 | 461 | 1.0 | 193.948 | -B450 | 071-32 | | |
| 6.3 | 532 | 0.9 | 0.6 | 410 | 2.7 | 531 | 6.3 | 532 | 0.9 | 11 | 531 | 0.9 | 223.563 | -B450 | 071-32 | | |

g500-B bevel geared motors

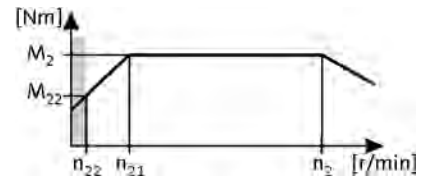


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.55 \text{ kW}$
 87 Hz: $P_N = 1.0 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|---------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| n_{22} [r/min] | M_{22} [Nm] | | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 394 | 13 | 5.1 | 41 | 9.7 | 168 | 13 | 394 | 13 | 5.1 | 706 | 13 | 4.3 | 3.565 | -B240 | 071-42 | |
| 271 | 18 | 3.8 | 28 | 14 | 116 | 18 | 271 | 18 | 3.8 | | | | 5.185 | -B110 | 071-42 | |
| 260 | 19 | 2.0 | 27 | 15 | 111 | 19 | 260 | 19 | 2.0 | 465 | 20 | 1.7 | 5.411 | -B45 | 071-42 | |
| 236 | 21 | 3.4 | 24 | 16 | 101 | 21 | 236 | 21 | 3.4 | | | | 5.963 | -B110 | 071-42 | |
| 226 | 22 | 1.8 | 23 | 17 | 96 | 22 | 226 | 22 | 1.8 | 404 | 22 | 1.5 | 6.222 | -B45 | 071-42 | |
| 225 | 22 | 4.5 | 23 | 17 | 96 | 22 | 225 | 22 | 4.5 | 402 | 23 | 3.7 | 6.257 | -B240 | 071-42 | |
| 198 | 25 | 1.7 | 20 | 19 | 84 | 25 | 198 | 25 | 1.7 | 354 | 26 | 1.4 | 7.111 | -B45 | 071-42 | |
| 198 | 25 | 3.1 | 20 | 19 | 84 | 25 | 198 | 25 | 3.1 | 354 | 26 | 2.5 | 7.111 | -B110 | 071-42 | |
| 172 | 29 | 1.5 | 18 | 22 | 73 | 29 | 172 | 29 | 1.5 | 308 | 29 | 1.3 | 8.178 | -B45 | 071-42 | |
| 172 | 29 | 2.8 | 18 | 22 | 73 | 29 | 172 | 29 | 2.8 | 308 | 29 | 2.3 | 8.178 | -B110 | 071-42 | |
| 154 | 32 | 1.4 | 16 | 25 | 66 | 32 | 154 | 32 | 1.4 | 276 | 33 | 1.2 | 9.101 | -B45 | 071-42 | |
| 154 | 32 | 2.6 | 16 | 25 | 66 | 32 | 154 | 32 | 2.6 | 276 | 33 | 2.2 | 9.101 | -B110 | 071-42 | |
| 134 | 37 | 1.2 | 14 | 29 | 57 | 37 | 134 | 37 | 1.2 | 240 | 38 | 1.0 | 10.466 | -B45 | 071-42 | |
| 134 | 37 | 2.4 | 14 | 29 | 57 | 37 | 134 | 37 | 2.4 | 240 | 38 | 2.0 | 10.466 | -B110 | 071-42 | |
| 123 | 41 | 2.2 | 13 | 31 | 52 | 41 | 123 | 41 | 2.2 | 220 | 41 | 1.8 | 11.449 | -B110 | 071-42 | |
| 121 | 41 | 1.1 | 13 | 32 | 52 | 41 | 121 | 41 | 1.1 | 216 | 42 | 0.9 | 11.640 | -B45 | 071-42 | |
| 111 | 45 | 2.0 | 11 | 35 | 47 | 45 | 111 | 45 | 2.0 | 198 | 46 | 1.7 | 12.698 | -B110 | 071-42 | |
| 105 | 48 | 1.0 | 11 | 37 | 45 | 48 | 105 | 48 | 1.0 | | | | 13.386 | -B45 | 071-42 | |
| 96 | 52 | 1.7 | 9.9 | 40 | 41 | 52 | 96 | 52 | 1.7 | 172 | 53 | 1.4 | 14.603 | -B110 | 071-42 | |
| 93 | 54 | 0.8 | 9.6 | 41 | 40 | 54 | 93 | 54 | 0.8 | | | | 15.111 | -B45 | 071-42 | |
| 90 | 55 | 1.7 | 9.3 | 43 | 39 | 55 | 90 | 55 | 1.7 | 162 | 56 | 1.4 | 15.556 | -B110 | 071-42 | |
| 79 | 64 | 1.5 | 8.1 | 49 | 34 | 64 | 79 | 64 | 1.5 | 141 | 65 | 1.3 | 17.889 | -B110 | 071-42 | |
| | | | 7.6 | 52 | 31 | 69 | | | | 131 | 69 | 2.9 | 19.143 | -B240 | 071-42 | |
| 72 | 69 | 1.4 | 7.4 | 54 | 31 | 69 | 72 | 69 | 1.4 | 129 | 71 | 1.2 | 19.556 | -B110 | 071-42 | |
| | | | 7.0 | 57 | 29 | 74 | | | | 122 | 74 | 2.7 | 20.650 | -B240 | 071-42 | |
| 63 | 80 | 1.3 | 6.4 | 62 | 27 | 80 | 63 | 80 | 1.3 | 112 | 81 | 1.1 | 22.489 | -B110 | 071-42 | |
| 60 | 83 | 2.9 | 6.2 | 64 | 26 | 83 | 60 | 83 | 2.9 | 107 | 85 | 2.4 | 23.450 | -B240 | 071-42 | |
| 56 | 89 | 1.2 | 5.8 | 69 | 24 | 89 | 56 | 89 | 1.2 | 100 | 91 | 1.0 | 25.185 | -B110 | 071-42 | |
| 52 | 95 | 2.5 | 5.4 | 74 | 22 | 95 | 52 | 95 | 2.5 | 94 | 97 | 2.1 | 26.878 | -B240 | 071-42 | |
| 49 | 103 | 1.1 | 5.0 | 79 | 21 | 103 | 49 | 103 | 1.1 | 87 | 104 | 0.9 | 28.963 | -B110 | 071-42 | |
| 46 | 108 | 2.2 | 4.8 | 84 | 20 | 108 | 46 | 108 | 2.2 | 82 | 110 | 1.8 | 30.522 | -B240 | 071-42 | |
| 42 | 119 | 2.0 | 4.3 | 91 | 18 | 119 | 42 | 119 | 2.0 | 75 | 121 | 1.7 | 33.433 | -B240 | 071-42 | |
| 37 | 135 | 1.8 | 3.8 | 104 | 16 | 135 | 37 | 135 | 1.8 | 66 | 137 | 1.5 | 37.967 | -B240 | 071-42 | |
| 33 | 154 | 1.6 | 3.4 | 118 | 14 | 154 | 33 | 154 | 1.6 | 58 | 156 | 1.5 | 43.267 | -B240 | 071-42 | |
| 29 | 174 | 1.4 | 3.0 | 134 | 12 | 174 | 29 | 174 | 1.4 | 51 | 177 | 1.3 | 49.133 | -B240 | 071-42 | |

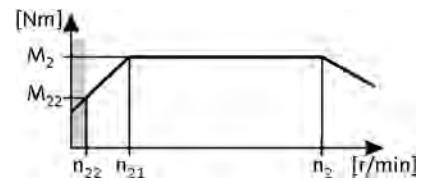
g500-B bevel geared motors



Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.55$ kW
 87 Hz: $P_N = 1.0$ kW



2-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 27 | 186 | 1.3 | 2.8 | 144 | 11 | 186 | 27 | 186 | 1.3 | 48 | 189 | 1.2 | 52.510 | -B240 | 071-42 | |
| 24 | 212 | 1.1 | 2.4 | 163 | 10 | 212 | 24 | 212 | 1.1 | 42 | 215 | 1.1 | 59.630 | -B240 | 071-42 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------|---------|---------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | MD□MA□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| | | | 5.2 | 76 | 22 | 101 | | | | 90 | 101 | 3.1 | 27.945 | -B450 | 071-42 | |
| | | | 4.7 | 85 | 19 | 112 | | | | 81 | 112 | 3.1 | 30.985 | -B450 | 071-42 | |
| | | | 4.0 | 99 | 17 | 131 | | | | 69 | 131 | 2.8 | 36.373 | -B450 | 071-42 | |
| 35 | 143 | 3.1 | 3.6 | 110 | 15 | 143 | 35 | 143 | 3.1 | 62 | 145 | 3.0 | 40.330 | -B450 | 071-42 | |
| 31 | 161 | 2.8 | 3.2 | 124 | 13 | 161 | 31 | 161 | 2.8 | 56 | 163 | 2.6 | 45.245 | -B450 | 071-42 | |
| 28 | 178 | 2.5 | 2.9 | 137 | 12 | 178 | 28 | 178 | 2.5 | 50 | 181 | 2.4 | 50.167 | -B450 | 071-42 | |
| 25 | 199 | 2.3 | 2.6 | 154 | 11 | 199 | 25 | 199 | 2.3 | 45 | 203 | 2.1 | 56.154 | -B450 | 071-42 | |
| 23 | 221 | 2.0 | 2.3 | 170 | 9.6 | 221 | 23 | 221 | 2.0 | 40 | 225 | 1.9 | 62.262 | -B450 | 071-42 | |
| 21 | 237 | 1.0 | 2.1 | 183 | 8.8 | 237 | 21 | 237 | 1.0 | | | | 68.459 | -B240 | 071-42 | |
| 20 | 244 | 1.8 | 2.1 | 188 | 8.7 | 244 | 20 | 244 | 1.8 | 37 | 248 | 1.7 | 68.788 | -B450 | 071-42 | |
| 18 | 271 | 1.7 | 1.9 | 209 | 7.9 | 271 | 18 | 271 | 1.7 | 33 | 275 | 1.6 | 76.271 | -B450 | 071-42 | |
| 18 | 269 | 0.9 | 1.9 | 207 | 7.7 | 269 | 18 | 269 | 0.9 | | | | 77.741 | -B240 | 071-42 | |
| 16 | 318 | 1.4 | 1.6 | 245 | 6.7 | 318 | 16 | 318 | 1.4 | 28 | 323 | 1.3 | 89.534 | -B450 | 071-42 | |
| 14 | 352 | 1.3 | 1.5 | 271 | 6.0 | 352 | 14 | 352 | 1.3 | 25 | 358 | 1.2 | 99.274 | -B450 | 071-42 | |
| 13 | 395 | 1.1 | 1.3 | 305 | 5.4 | 395 | 13 | 395 | 1.1 | 23 | 402 | 1.1 | 111.372 | -B450 | 071-42 | |
| 11 | 438 | 1.0 | 1.2 | 338 | 4.9 | 438 | 11 | 438 | 1.0 | 20 | 445 | 1.0 | 123.487 | -B450 | 071-42 | |
| 9.7 | 512 | 0.9 | 1.0 | 394 | 4.2 | 512 | 9.7 | 512 | 0.9 | 17 | 520 | 0.9 | 144.128 | -B450 | 071-42 | |

g500-B bevel geared motors

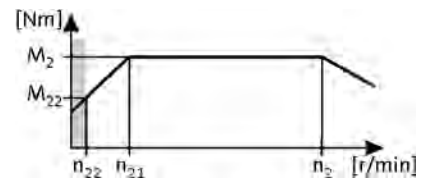


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| 407 | 17 | 4.9 | 41 | 13 | 168 | 17 | 407 | 17 | 4.9 | 718 | 17 | 4.0 | 3.565 | -B240 | 50-P80/M4 | |
| 280 | 24 | 2.8 | 28 | 19 | 116 | 24 | 280 | 24 | 2.8 | 494 | 25 | 2.3 | 5.185 | -B110 | 50-P80/M4 | |
| 243 | 28 | 2.6 | 24 | 22 | 101 | 28 | 243 | 28 | 2.6 | 429 | 29 | 2.1 | 5.963 | -B110 | 50-P80/M4 | |
| 232 | 29 | 4.3 | 23 | 23 | 96 | 29 | 232 | 29 | 4.3 | 409 | 30 | 3.5 | 6.257 | -B240 | 50-P80/M4 | |
| 204 | 33 | 2.3 | 20 | 26 | 84 | 33 | 204 | 33 | 2.3 | 360 | 34 | 1.9 | 7.111 | -B110 | 50-P80/M4 | |
| 177 | 38 | 2.1 | 18 | 30 | 73 | 38 | 177 | 38 | 2.1 | 313 | 39 | 1.7 | 8.178 | -B110 | 50-P80/M4 | |
| 159 | 43 | 2.0 | 16 | 33 | 66 | 43 | 159 | 43 | 2.0 | 281 | 44 | 1.6 | 9.101 | -B110 | 50-P80/M4 | |
| 139 | 49 | 1.8 | 14 | 38 | 57 | 49 | 139 | 49 | 1.8 | 245 | 50 | 1.5 | 10.466 | -B110 | 50-P80/M4 | |
| 127 | 54 | 1.7 | 13 | 41 | 52 | 54 | 127 | 54 | 1.7 | 224 | 55 | 1.4 | 11.449 | -B110 | 50-P80/M4 | |
| | | | 12 | 44 | 50 | 58 | | | | 212 | 58 | 3.0 | 12.081 | -B240 | 50-P80/M4 | |
| 114 | 60 | 1.5 | 11 | 46 | 47 | 60 | 114 | 60 | 1.5 | 202 | 61 | 1.2 | 12.698 | -B110 | 50-P80/M4 | |
| | | | 11 | 50 | 44 | 66 | | | | 187 | 66 | 2.8 | 13.719 | -B240 | 50-P80/M4 | |
| 99 | 69 | 1.3 | 9.9 | 53 | 41 | 69 | 99 | 69 | 1.3 | 175 | 70 | 1.1 | 14.603 | -B110 | 50-P80/M4 | |
| 97 | 70 | 3.2 | 9.7 | 54 | 40 | 70 | 97 | 70 | 3.2 | 171 | 72 | 2.6 | 15.008 | -B240 | 50-P80/M4 | |
| 93 | 73 | 1.3 | 9.3 | 56 | 39 | 73 | 93 | 73 | 1.3 | 165 | 74 | 1.0 | 15.556 | -B110 | 50-P80/M4 | |
| 86 | 79 | 3.0 | 8.6 | 61 | 36 | 79 | 86 | 79 | 3.0 | 152 | 81 | 2.5 | 16.857 | -B240 | 50-P80/M4 | |
| 81 | 84 | 1.1 | 8.1 | 65 | 34 | 84 | 81 | 84 | 1.1 | 143 | 86 | 0.9 | 17.889 | -B110 | 50-P80/M4 | |
| 76 | 90 | 2.7 | 7.6 | 69 | 31 | 90 | 76 | 90 | 2.7 | 134 | 92 | 2.2 | 19.143 | -B240 | 50-P80/M4 | |
| 74 | 92 | 1.1 | 7.4 | 71 | 31 | 92 | 74 | 92 | 1.1 | 131 | 94 | 0.9 | 19.556 | -B110 | 50-P80/M4 | |
| 70 | 97 | 2.5 | 7.0 | 75 | 29 | 97 | 70 | 97 | 2.5 | 124 | 99 | 2.0 | 20.650 | -B240 | 50-P80/M4 | |
| 65 | 106 | 1.0 | 6.4 | 81 | 27 | 106 | 65 | 106 | 1.0 | 114 | 108 | 0.8 | 22.489 | -B110 | 50-P80/M4 | |
| 62 | 110 | 2.2 | 6.2 | 85 | 26 | 110 | 62 | 110 | 2.2 | 109 | 112 | 1.8 | 23.450 | -B240 | 50-P80/M4 | |
| 58 | 118 | 0.9 | 5.8 | 91 | 24 | 118 | 58 | 118 | 0.9 | | | | 25.185 | -B110 | 50-P80/M4 | |
| 54 | 126 | 1.9 | 5.4 | 97 | 22 | 126 | 54 | 126 | 1.9 | 95 | 129 | 1.6 | 26.878 | -B240 | 50-P80/M4 | |
| 50 | 136 | 0.8 | 5.0 | 105 | 21 | 136 | 50 | 136 | 0.8 | | | | 28.963 | -B110 | 50-P80/M4 | |
| 48 | 143 | 1.7 | 4.8 | 110 | 20 | 143 | 48 | 143 | 1.7 | 84 | 146 | 1.4 | 30.522 | -B240 | 50-P80/M4 | |
| 43 | 157 | 1.5 | 4.3 | 121 | 18 | 157 | 43 | 157 | 1.5 | 77 | 160 | 1.3 | 33.433 | -B240 | 50-P80/M4 | |
| 38 | 178 | 1.4 | 3.8 | 137 | 16 | 178 | 38 | 178 | 1.4 | 67 | 182 | 1.1 | 37.967 | -B240 | 50-P80/M4 | |
| 34 | 203 | 1.2 | 3.4 | 156 | 14 | 203 | 34 | 203 | 1.2 | 59 | 207 | 1.1 | 43.267 | -B240 | 50-P80/M4 | |
| 30 | 231 | 1.0 | 3.0 | 177 | 12 | 231 | 30 | 231 | 1.0 | 52 | 235 | 1.0 | 49.133 | -B240 | 50-P80/M4 | |
| | | | 2.8 | 190 | 11 | 251 | | | | 49 | 251 | 0.9 | 52.510 | -B240 | 50-P80/M4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|---------------------------|---------|-----------|------------------------|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | | | M ₂ [Nm] |
| | | | 5.7 | 91 | 24 | 121 | | | | 101 | 121 | 3.1 | 25.294 | -B450 | 50-P80/M4 | |
| | | | 5.2 | 101 | 22 | 134 | | | | 92 | 134 | 2.8 | 27.945 | -B450 | 50-P80/M4 | |
| 47 | 145 | 3.1 | 4.7 | 112 | 19 | 145 | 47 | 145 | 3.1 | 83 | 148 | 2.5 | 30.985 | -B450 | 50-P80/M4 | |
| 40 | 171 | 2.6 | 4.0 | 131 | 17 | 171 | 40 | 171 | 2.6 | 70 | 174 | 2.2 | 36.373 | -B450 | 50-P80/M4 | |

g500-B bevel geared motors

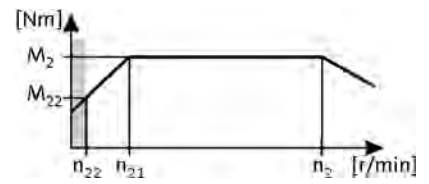
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 0.75$ kW
 87 Hz: $P_N = 1.35$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|---------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 36 | 189 | 2.4 | 3.6 | 146 | 15 | 189 | 36 | 189 | 2.4 | 64 | 193 | 2.2 | 40.330 | -B450 | 50-P80/M4 | |
| 32 | 212 | 2.1 | 3.2 | 163 | 13 | 212 | 32 | 212 | 2.1 | 57 | 216 | 2.0 | 45.245 | -B450 | 50-P80/M4 | |
| 29 | 235 | 1.9 | 2.9 | 181 | 12 | 235 | 29 | 235 | 1.9 | 51 | 240 | 1.8 | 50.167 | -B450 | 50-P80/M4 | |
| 26 | 263 | 1.7 | 2.6 | 203 | 11 | 263 | 26 | 263 | 1.7 | 46 | 269 | 1.6 | 56.154 | -B450 | 50-P80/M4 | |
| 23 | 292 | 1.5 | 2.3 | 225 | 9.6 | 292 | 23 | 292 | 1.5 | 41 | 298 | 1.4 | 62.262 | -B450 | 50-P80/M4 | |
| 21 | 323 | 1.4 | 2.1 | 248 | 8.7 | 323 | 21 | 323 | 1.4 | 37 | 329 | 1.3 | 68.788 | -B450 | 50-P80/M4 | |
| 19 | 358 | 1.3 | 1.9 | 275 | 7.9 | 358 | 19 | 358 | 1.3 | 34 | 365 | 1.2 | 76.271 | -B450 | 50-P80/M4 | |
| 16 | 420 | 1.1 | 1.6 | 323 | 6.7 | 420 | 16 | 420 | 1.1 | 29 | 428 | 1.0 | 89.534 | -B450 | 50-P80/M4 | |
| 15 | 466 | 1.0 | 1.5 | 358 | 6.0 | 466 | 15 | 466 | 1.0 | 26 | 475 | 0.9 | 99.274 | -B450 | 50-P80/M4 | |
| 13 | 523 | 0.9 | 1.3 | 402 | 5.4 | 523 | 13 | 523 | 0.9 | 23 | 533 | 0.8 | 111.372 | -B450 | 50-P80/M4 | |

g500-B bevel geared motors

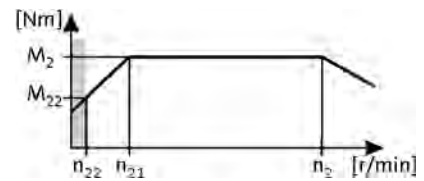


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.1 \text{ kW}$
 87 Hz: $P_N = 1.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|-----------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 405 | 25 | 5.6 | 41 | 17 | 168 | 24 | 405 | 25 | 5.6 | 715 | 24 | 4.8 | 3.565 | -B240 | 50-P90/M4 | |
| 279 | 36 | 1.9 | 28 | 25 | 116 | 35 | 279 | 36 | 1.9 | 492 | 35 | 1.7 | 5.185 | -B110 | 50-P90/M4 | |
| 242 | 41 | 1.8 | 24 | 29 | 101 | 40 | 242 | 41 | 1.8 | 428 | 40 | 1.5 | 5.963 | -B110 | 50-P90/M4 | |
| 231 | 43 | 3.6 | 23 | 30 | 96 | 42 | 231 | 43 | 3.6 | 408 | 42 | 3.1 | 6.257 | -B240 | 50-P90/M4 | |
| | | | 21 | 33 | 87 | 47 | | | | 371 | 47 | 3.2 | 6.883 | -B240 | 50-P90/M4 | |
| 203 | 49 | 1.6 | 20 | 35 | 84 | 48 | 203 | 49 | 1.6 | 359 | 48 | 1.3 | 7.111 | -B110 | 50-P90/M4 | |
| | | | 19 | 38 | 77 | 53 | | | | 326 | 53 | 3.0 | 7.817 | -B240 | 50-P90/M4 | |
| 177 | 57 | 1.4 | 18 | 40 | 73 | 55 | 177 | 57 | 1.4 | 312 | 55 | 1.2 | 8.178 | -B110 | 50-P90/M4 | |
| 159 | 63 | 1.3 | 16 | 44 | 66 | 62 | 159 | 63 | 1.3 | 280 | 62 | 1.1 | 9.101 | -B110 | 50-P90/M4 | |
| 153 | 65 | 2.9 | 15 | 46 | 64 | 64 | 153 | 65 | 2.9 | 270 | 64 | 2.5 | 9.440 | -B240 | 50-P90/M4 | |
| 138 | 72 | 1.2 | 14 | 51 | 57 | 71 | 138 | 72 | 1.2 | 244 | 71 | 1.1 | 10.466 | -B110 | 50-P90/M4 | |
| 135 | 74 | 2.8 | 14 | 52 | 56 | 72 | 135 | 74 | 2.8 | 238 | 72 | 2.4 | 10.720 | -B240 | 50-P90/M4 | |
| 126 | 79 | 1.1 | 13 | 56 | 52 | 77 | 126 | 79 | 1.1 | 223 | 77 | 1.0 | 11.449 | -B110 | 50-P90/M4 | |
| 120 | 83 | 2.5 | 12 | 59 | 50 | 82 | 120 | 83 | 2.5 | 211 | 82 | 2.1 | 12.081 | -B240 | 50-P90/M4 | |
| 114 | 88 | 1.0 | 11 | 62 | 47 | 86 | 114 | 88 | 1.0 | 201 | 86 | 0.9 | 12.698 | -B110 | 50-P90/M4 | |
| 105 | 95 | 2.3 | 11 | 67 | 44 | 93 | 105 | 95 | 2.3 | 186 | 93 | 2.0 | 13.719 | -B240 | 50-P90/M4 | |
| 99 | 101 | 0.9 | 9.9 | 71 | 41 | 101 | 99 | 101 | 0.9 | | | | 14.603 | -B110 | 50-P90/M4 | |
| 96 | 104 | 2.2 | 9.7 | 73 | 40 | 101 | 96 | 104 | 2.2 | 170 | 101 | 1.8 | 15.008 | -B240 | 50-P90/M4 | |
| 93 | 108 | 0.9 | 9.3 | 75 | 39 | 108 | 93 | 108 | 0.9 | | | | 15.556 | -B110 | 50-P90/M4 | |
| 86 | 116 | 2.1 | 8.6 | 82 | 36 | 114 | 86 | 116 | 2.1 | 151 | 114 | 1.8 | 16.857 | -B240 | 50-P90/M4 | |
| 75 | 132 | 1.8 | 7.6 | 93 | 31 | 129 | 75 | 132 | 1.8 | 133 | 129 | 1.6 | 19.143 | -B240 | 50-P90/M4 | |
| 70 | 143 | 1.7 | 7.0 | 100 | 29 | 140 | 70 | 143 | 1.7 | 124 | 140 | 1.4 | 20.650 | -B240 | 50-P90/M4 | |
| 62 | 162 | 1.5 | 6.2 | 114 | 26 | 159 | 62 | 162 | 1.5 | 109 | 159 | 1.3 | 23.450 | -B240 | 50-P90/M4 | |
| 54 | 186 | 1.3 | 5.4 | 130 | 22 | 182 | 54 | 186 | 1.3 | 95 | 182 | 1.1 | 26.878 | -B240 | 50-P90/M4 | |
| 47 | 211 | 1.1 | 4.8 | 148 | 20 | 206 | 47 | 211 | 1.1 | 84 | 206 | 1.0 | 30.522 | -B240 | 50-P90/M4 | |
| 43 | 231 | 1.0 | 4.3 | 162 | 18 | 226 | 43 | 231 | 1.0 | 76 | 226 | 0.9 | 33.433 | -B240 | 50-P90/M4 | |
| 38 | 262 | 0.9 | 3.8 | 184 | 16 | 262 | 38 | 262 | 0.9 | | | | 37.967 | -B240 | 50-P90/M4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|-----------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| | | | 8.1 | 87 | 34 | 121 | | | | 143 | 121 | 3.1 | 17.885 | -B450 | 50-P90/M4 | |
| | | | 7.3 | 96 | 30 | 134 | | | | 129 | 134 | 2.8 | 19.831 | -B450 | 50-P90/M4 | |
| 63 | 158 | 2.9 | 6.4 | 111 | 26 | 154 | 63 | 158 | 2.9 | 112 | 154 | 2.5 | 22.813 | -B450 | 50-P90/M4 | |
| 57 | 175 | 2.6 | 5.7 | 123 | 24 | 171 | 57 | 175 | 2.6 | 101 | 171 | 2.2 | 25.294 | -B450 | 50-P90/M4 | |
| 52 | 193 | 2.3 | 5.2 | 135 | 22 | 189 | 52 | 193 | 2.3 | 91 | 189 | 2.0 | 27.945 | -B450 | 50-P90/M4 | |
| 47 | 214 | 2.1 | 4.7 | 150 | 19 | 209 | 47 | 214 | 2.1 | 82 | 209 | 1.8 | 30.985 | -B450 | 50-P90/M4 | |
| 40 | 251 | 1.8 | 4.0 | 176 | 17 | 246 | 40 | 251 | 1.8 | 70 | 246 | 1.5 | 36.373 | -B450 | 50-P90/M4 | |
| 36 | 279 | 1.6 | 3.6 | 195 | 15 | 273 | 36 | 279 | 1.6 | 63 | 273 | 1.6 | 40.330 | -B450 | 50-P90/M4 | |

g500-B bevel geared motors

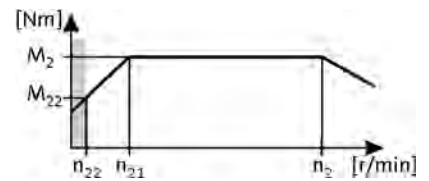
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 1.1$ kW
 87 Hz: $P_N = 1.9$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 32 | 313 | 1.4 | 3.2 | 219 | 13 | 306 | 32 | 313 | 1.4 | 56 | 306 | 1.4 | 45.245 | -B450 | 50-P90/M4 | |
| 29 | 347 | 1.3 | 2.9 | 243 | 12 | 339 | 29 | 347 | 1.3 | 51 | 339 | 1.3 | 50.167 | -B450 | 50-P90/M4 | |
| 26 | 388 | 1.2 | 2.6 | 272 | 11 | 380 | 26 | 388 | 1.2 | 45 | 380 | 1.1 | 56.154 | -B450 | 50-P90/M4 | |
| 23 | 430 | 1.1 | 2.3 | 302 | 9.6 | 421 | 23 | 430 | 1.1 | 41 | 421 | 1.0 | 62.262 | -B450 | 50-P90/M4 | |
| 21 | 475 | 1.0 | 2.1 | 333 | 8.7 | 465 | 21 | 475 | 1.0 | 37 | 465 | 0.9 | 68.788 | -B450 | 50-P90/M4 | |
| 19 | 527 | 0.9 | 1.9 | 370 | 7.9 | 515 | 19 | 527 | 0.9 | 33 | 515 | 0.8 | 76.271 | -B450 | 50-P90/M4 | |

g500-B bevel geared motors

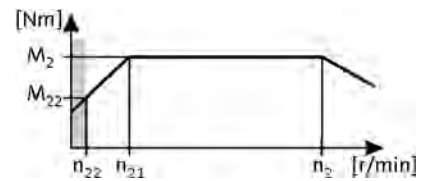


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 1.5 \text{ kW}$
 87 Hz: $P_N = 2.6 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|--------------------|----------|----------|-------|----------------|-------|-----|------------------|-------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 | M_2 | c | n_{22} | M_{22} | n_{21} | M_2 | n_2 | M_2 | c | n_2 | M_2 | c | | | | |
| 405 | 34 | 4.1 | 41 | 24 | 168 | 33 | 405 | 34 | 4.1 | 716 | 33 | 3.5 | 3.565 | -B240 | 50-P90/L4 | |
| 295 | 46 | 3.2 | 30 | 33 | 123 | 45 | 295 | 46 | 3.2 | 522 | 45 | 2.7 | 4.889 | -B240 | 50-P90/L4 | |
| 278 | 49 | 1.4 | 28 | 35 | 116 | 49 | 278 | 49 | 1.4 | | | | 5.185 | -B110 | 50-P90/L4 | |
| 242 | 56 | 1.3 | 24 | 40 | 101 | 56 | 242 | 56 | 1.3 | | | | 5.963 | -B110 | 50-P90/L4 | |
| 231 | 59 | 2.6 | 23 | 42 | 96 | 58 | 231 | 59 | 2.6 | 408 | 58 | 2.3 | 6.257 | -B240 | 50-P90/L4 | |
| 210 | 65 | 2.8 | 21 | 46 | 87 | 64 | 210 | 65 | 2.8 | 371 | 64 | 2.4 | 6.883 | -B240 | 50-P90/L4 | |
| 203 | 67 | 1.2 | 20 | 47 | 84 | 67 | 203 | 67 | 1.2 | | | | 7.111 | -B110 | 50-P90/L4 | |
| 185 | 74 | 2.5 | 19 | 52 | 77 | 74 | 185 | 74 | 2.5 | | | | 7.817 | -B240 | 50-P90/L4 | |
| 176 | 77 | 1.1 | 18 | 54 | 73 | 77 | 176 | 77 | 1.1 | | | | 8.178 | -B110 | 50-P90/L4 | |
| 159 | 86 | 1.0 | 16 | 61 | 66 | 86 | 159 | 86 | 1.0 | | | | 9.101 | -B110 | 50-P90/L4 | |
| 153 | 89 | 2.1 | 15 | 63 | 64 | 87 | 153 | 89 | 2.1 | 270 | 87 | 1.8 | 9.440 | -B240 | 50-P90/L4 | |
| 138 | 99 | 0.9 | 14 | 70 | 57 | 99 | 138 | 99 | 0.9 | | | | 10.466 | -B110 | 50-P90/L4 | |
| 135 | 101 | 2.0 | 14 | 71 | 56 | 101 | 135 | 101 | 2.0 | 238 | 99 | 1.7 | 10.720 | -B240 | 50-P90/L4 | |
| 126 | 108 | 0.8 | 13 | 76 | 52 | 108 | 126 | 108 | 0.8 | | | | 11.449 | -B110 | 50-P90/L4 | |
| 119 | 114 | 1.8 | 12 | 80 | 50 | 112 | 119 | 114 | 1.8 | 211 | 112 | 1.6 | 12.081 | -B240 | 50-P90/L4 | |
| 105 | 129 | 1.7 | 11 | 91 | 44 | 127 | 105 | 129 | 1.7 | 186 | 127 | 1.4 | 13.719 | -B240 | 50-P90/L4 | |
| 96 | 142 | 1.6 | 9.7 | 100 | 40 | 139 | 96 | 142 | 1.6 | 170 | 139 | 1.4 | 15.008 | -B240 | 50-P90/L4 | |
| 86 | 159 | 1.5 | 8.6 | 112 | 36 | 156 | 86 | 159 | 1.5 | 151 | 156 | 1.3 | 16.857 | -B240 | 50-P90/L4 | |
| 75 | 181 | 1.3 | 7.6 | 127 | 31 | 177 | 75 | 181 | 1.3 | 133 | 177 | 1.1 | 19.143 | -B240 | 50-P90/L4 | |
| 70 | 195 | 1.2 | 7.0 | 137 | 29 | 191 | 70 | 195 | 1.2 | 124 | 191 | 1.1 | 20.650 | -B240 | 50-P90/L4 | |
| 62 | 221 | 1.1 | 6.2 | 156 | 26 | 217 | 62 | 221 | 1.1 | 109 | 217 | 0.9 | 23.450 | -B240 | 50-P90/L4 | |
| 54 | 254 | 1.0 | 5.4 | 179 | 22 | 248 | 54 | 254 | 1.0 | 95 | 248 | 0.8 | 26.878 | -B240 | 50-P90/L4 | |
| 47 | 288 | 0.8 | 4.8 | 203 | 20 | 288 | 47 | 288 | 0.8 | | | | 30.522 | -B240 | 50-P90/L4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|--------------------|----------|----------|-------|----------------|-------|-----|------------------|-------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 | M_2 | c | n_{22} | M_{22} | n_{21} | M_2 | n_2 | M_2 | c | n_2 | M_2 | c | | | | |
| | | | 11 | 85 | 47 | 118 | | | | 200 | 118 | 2.9 | 12.775 | -B450 | 50-P90/L4 | |
| 102 | 134 | 3.2 | 10 | 94 | 42 | 131 | 102 | 134 | 3.2 | 180 | 131 | 2.7 | 14.165 | -B450 | 50-P90/L4 | |
| 88 | 154 | 2.8 | 8.9 | 109 | 37 | 151 | 88 | 154 | 2.8 | 156 | 151 | 2.4 | 16.349 | -B450 | 50-P90/L4 | |
| 81 | 169 | 2.6 | 8.1 | 119 | 34 | 165 | 81 | 169 | 2.6 | 143 | 165 | 2.3 | 17.885 | -B450 | 50-P90/L4 | |
| 73 | 187 | 2.4 | 7.3 | 132 | 30 | 183 | 73 | 187 | 2.4 | 129 | 183 | 2.1 | 19.831 | -B450 | 50-P90/L4 | |
| 63 | 215 | 2.1 | 6.4 | 152 | 26 | 211 | 63 | 215 | 2.1 | 112 | 211 | 1.8 | 22.813 | -B450 | 50-P90/L4 | |
| 57 | 239 | 1.9 | 5.7 | 168 | 24 | 234 | 57 | 239 | 1.9 | 101 | 234 | 1.6 | 25.294 | -B450 | 50-P90/L4 | |
| 52 | 264 | 1.7 | 5.2 | 186 | 22 | 258 | 52 | 264 | 1.7 | 91 | 258 | 1.5 | 27.945 | -B450 | 50-P90/L4 | |
| 47 | 292 | 1.5 | 4.7 | 206 | 19 | 286 | 47 | 292 | 1.5 | 82 | 286 | 1.3 | 30.985 | -B450 | 50-P90/L4 | |
| 40 | 343 | 1.3 | 4.0 | 242 | 17 | 336 | 40 | 343 | 1.3 | 70 | 336 | 1.1 | 36.373 | -B450 | 50-P90/L4 | |
| 36 | 381 | 1.2 | 3.6 | 268 | 15 | 373 | 36 | 381 | 1.2 | 63 | 373 | 1.2 | 40.330 | -B450 | 50-P90/L4 | |
| 32 | 427 | 1.1 | 3.2 | 301 | 13 | 418 | 32 | 427 | 1.1 | 56 | 418 | 1.0 | 45.245 | -B450 | 50-P90/L4 | |

g500-B bevel geared motors

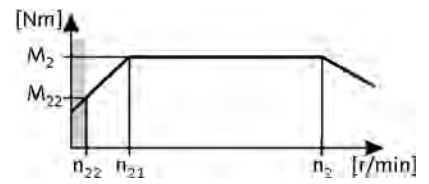
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 1.5 \text{ kW}$
 87 Hz: $P_N = 2.6 \text{ kW}$

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|-----|--------|---------|-----------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 29 | 473 | 1.0 | 2.9 | 334 | 12 | 464 | 29 | 473 | 1.0 | 51 | 464 | 0.9 | 50.167 | -B450 | 50-P90/L4 | |
| 26 | 530 | 0.9 | 2.6 | 373 | 11 | 530 | 26 | 530 | 0.9 | | | | 56.154 | -B450 | 50-P90/L4 | |

g500-B bevel geared motors

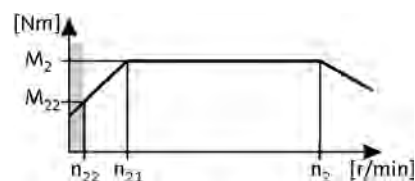


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 2.2 \text{ kW}$
 87 Hz: $P_N = 3.9 \text{ kW}$

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|------------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 407 | 49 | 2.8 | 41 | 34 | 168 | 49 | 407 | 49 | 2.8 | 719 | 49 | 2.4 | 3.565 | -B240 | 50-P100/M4 | |
| 297 | 67 | 2.2 | 30 | 47 | 123 | 67 | 297 | 67 | 2.2 | 524 | 68 | 1.8 | 4.889 | -B240 | 50-P100/M4 | |
| 232 | 86 | 1.8 | 23 | 60 | 96 | 86 | 232 | 86 | 1.8 | 410 | 86 | 1.5 | 6.257 | -B240 | 50-P100/M4 | |
| 211 | 95 | 1.9 | 21 | 66 | 87 | 95 | 211 | 95 | 1.9 | | | | 6.883 | -B240 | 50-P100/M4 | |
| 186 | 107 | 1.7 | 19 | 75 | 77 | 107 | 186 | 107 | 1.7 | | | | 7.817 | -B240 | 50-P100/M4 | |
| 154 | 130 | 1.5 | 15 | 91 | 64 | 130 | 154 | 130 | 1.5 | | | | 9.440 | -B240 | 50-P100/M4 | |
| 135 | 147 | 1.4 | 14 | 103 | 56 | 147 | 135 | 147 | 1.4 | | | | 10.720 | -B240 | 50-P100/M4 | |
| 120 | 166 | 1.3 | 12 | 116 | 50 | 166 | 120 | 166 | 1.3 | | | | 12.081 | -B240 | 50-P100/M4 | |
| 106 | 189 | 1.2 | 11 | 132 | 44 | 189 | 106 | 189 | 1.2 | | | | 13.719 | -B240 | 50-P100/M4 | |
| 97 | 206 | 1.1 | 9.7 | 144 | 40 | 206 | 97 | 206 | 1.1 | | | | 15.008 | -B240 | 50-P100/M4 | |
| 86 | 232 | 1.0 | 8.6 | 162 | 36 | 232 | 86 | 232 | 1.0 | | | | 16.857 | -B240 | 50-P100/M4 | |
| 76 | 263 | 0.9 | 7.6 | 184 | 31 | 263 | 76 | 263 | 0.9 | | | | 19.143 | -B240 | 50-P100/M4 | |
| 70 | 284 | 0.9 | 7.0 | 198 | 29 | 284 | 70 | 284 | 0.9 | | | | 20.650 | -B240 | 50-P100/M4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|------------|------------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | | |
| | | | 21 | 66 | 88 | 95 | | | | | 374 | 95 | 2.7 | 6.860 | -B450 | 50-P100/M4 | |
| 156 | 128 | 2.9 | 16 | 89 | 64 | 128 | 156 | 128 | 2.9 | 275 | 129 | 2.4 | 9.315 | -B450 | 50-P100/M4 | | |
| 141 | 142 | 2.7 | 14 | 99 | 58 | 142 | 141 | 142 | 2.7 | 248 | 143 | 2.3 | 10.328 | -B450 | 50-P100/M4 | | |
| 114 | 176 | 2.3 | 11 | 123 | 47 | 176 | 114 | 176 | 2.3 | 201 | 176 | 1.9 | 12.775 | -B450 | 50-P100/M4 | | |
| 103 | 195 | 2.2 | 10 | 136 | 42 | 195 | 103 | 195 | 2.2 | 181 | 196 | 1.8 | 14.165 | -B450 | 50-P100/M4 | | |
| 89 | 225 | 1.9 | 8.9 | 157 | 37 | 225 | 89 | 225 | 1.9 | 157 | 226 | 1.6 | 16.349 | -B450 | 50-P100/M4 | | |
| 81 | 246 | 1.8 | 8.1 | 172 | 34 | 246 | 81 | 246 | 1.8 | 143 | 247 | 1.5 | 17.885 | -B450 | 50-P100/M4 | | |
| 73 | 273 | 1.7 | 7.3 | 190 | 30 | 273 | 73 | 273 | 1.7 | 129 | 274 | 1.4 | 19.831 | -B450 | 50-P100/M4 | | |
| 64 | 314 | 1.4 | 6.4 | 219 | 26 | 314 | 64 | 314 | 1.4 | 112 | 315 | 1.2 | 22.813 | -B450 | 50-P100/M4 | | |
| 57 | 348 | 1.3 | 5.7 | 243 | 24 | 348 | 57 | 348 | 1.3 | 101 | 349 | 1.1 | 25.294 | -B450 | 50-P100/M4 | | |
| 52 | 384 | 1.2 | 5.2 | 268 | 22 | 384 | 52 | 384 | 1.2 | 92 | 386 | 1.0 | 27.945 | -B450 | 50-P100/M4 | | |
| 47 | 426 | 1.1 | 4.7 | 297 | 19 | 426 | 47 | 426 | 1.1 | 83 | 428 | 0.9 | 30.985 | -B450 | 50-P100/M4 | | |

g500-B bevel geared motors

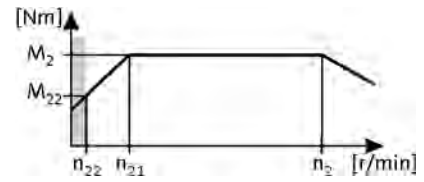


Technical data

Selection tables, 4-pole motors

50 Hz: $P_N = 3.0$ kW
 87 Hz: $P_N = 5.2$ kW

2-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|---|--------|---------|------------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 407 | 67 | 2.1 | 41 | 47 | 168 | 67 | 407 | 67 | 2.1 | | | | 3.565 | -B240 | 50-P100/L4 | |
| 296 | 92 | 1.6 | 30 | 64 | 123 | 92 | 296 | 92 | 1.6 | | | | 4.889 | -B240 | 50-P100/L4 | |
| 232 | 118 | 1.3 | 23 | 82 | 96 | 118 | 232 | 118 | 1.3 | | | | 6.257 | -B240 | 50-P100/L4 | |
| 211 | 129 | 1.4 | 21 | 90 | 87 | 129 | 211 | 129 | 1.4 | | | | 6.883 | -B240 | 50-P100/L4 | |
| 185 | 147 | 1.3 | 19 | 103 | 77 | 147 | 185 | 147 | 1.3 | | | | 7.817 | -B240 | 50-P100/L4 | |
| 154 | 177 | 1.1 | 15 | 124 | 64 | 177 | 154 | 177 | 1.1 | | | | 9.440 | -B240 | 50-P100/L4 | |
| 135 | 201 | 1.0 | 14 | 141 | 56 | 201 | 135 | 201 | 1.0 | | | | 10.720 | -B240 | 50-P100/L4 | |
| 120 | 227 | 0.9 | 12 | 158 | 50 | 227 | 120 | 227 | 0.9 | | | | 12.081 | -B240 | 50-P100/L4 | |
| 106 | 258 | 0.8 | 11 | 180 | 44 | 258 | 106 | 258 | 0.8 | | | | 13.719 | -B240 | 50-P100/L4 | |

3-stage gearboxes

| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|------------------------|-----|----------------------------|-------------------------|----------------------------|------------------------|---------------------------|------------------------|-----|---------------------------|------------------------|-----|--------|---------|------------|--|
| n ₂ [r/min] | M ₂ [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| | | | n ₂₂ [r/min] | M ₂₂ [Nm] | n ₂₁ [r/min] | M ₂ [Nm] | n ₂ [r/min] | M ₂ [Nm] | c | n ₂ [r/min] | M ₂ [Nm] | c | | | | |
| 290 | 94 | 3.0 | 29 | 66 | 120 | 92 | 290 | 94 | 3.0 | 512 | 92 | 2.5 | 5.002 | -B450 | 50-P100/L4 | |
| 211 | 129 | 2.4 | 21 | 90 | 88 | 126 | 211 | 129 | 2.4 | 373 | 126 | 2.0 | 6.860 | -B450 | 50-P100/L4 | |
| 156 | 175 | 2.1 | 16 | 122 | 64 | 175 | 156 | 175 | 2.1 | | | | 9.315 | -B450 | 50-P100/L4 | |
| 140 | 194 | 2.0 | 14 | 135 | 58 | 194 | 140 | 194 | 2.0 | | | | 10.328 | -B450 | 50-P100/L4 | |
| 113 | 240 | 1.7 | 11 | 168 | 47 | 240 | 113 | 240 | 1.7 | | | | 12.775 | -B450 | 50-P100/L4 | |
| 102 | 266 | 1.6 | 10 | 186 | 42 | 266 | 102 | 266 | 1.6 | | | | 14.165 | -B450 | 50-P100/L4 | |
| 89 | 307 | 1.4 | 8.9 | 214 | 37 | 301 | 89 | 307 | 1.4 | 157 | 301 | 1.2 | 16.349 | -B450 | 50-P100/L4 | |
| 81 | 336 | 1.3 | 8.1 | 234 | 34 | 330 | 81 | 336 | 1.3 | 143 | 330 | 1.1 | 17.885 | -B450 | 50-P100/L4 | |
| 73 | 372 | 1.2 | 7.3 | 260 | 30 | 372 | 73 | 372 | 1.2 | | | | 19.831 | -B450 | 50-P100/L4 | |
| 64 | 428 | 1.1 | 6.4 | 299 | 26 | 420 | 64 | 428 | 1.1 | 112 | 420 | 0.9 | 22.813 | -B450 | 50-P100/L4 | |
| 57 | 475 | 1.0 | 5.7 | 332 | 24 | 475 | 57 | 475 | 1.0 | | | | 25.294 | -B450 | 50-P100/L4 | |
| 52 | 525 | 0.9 | 5.2 | 366 | 22 | 525 | 52 | 525 | 0.9 | | | | 27.945 | -B450 | 50-P100/L4 | |

g500-B bevel geared motors

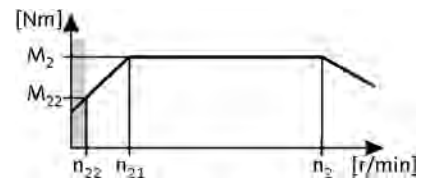
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 4.0$ kW
 87 Hz: $P_N = 7.35$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|---------|-------|------------|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | |
| 291 | 125 | 2.2 | 29 | 78 | 120 | 125 | 291 | 125 | 2.2 | | | | 5.002 | -B450 | 50-P112/M4 |
| 212 | 171 | 1.8 | 21 | 107 | 88 | 171 | 212 | 171 | 1.8 | | | | 6.860 | -B450 | 50-P112/M4 |
| 156 | 233 | 1.6 | 16 | 145 | 64 | 233 | 156 | 233 | 1.6 | | | | 9.315 | -B450 | 50-P112/M4 |
| 141 | 258 | 1.5 | 14 | 161 | 58 | 258 | 141 | 258 | 1.5 | | | | 10.328 | -B450 | 50-P112/M4 |
| 114 | 319 | 1.3 | 11 | 199 | 47 | 319 | 114 | 319 | 1.3 | | | | 12.775 | -B450 | 50-P112/M4 |
| 103 | 354 | 1.2 | 10 | 221 | 42 | 354 | 103 | 354 | 1.2 | | | | 14.165 | -B450 | 50-P112/M4 |
| 89 | 408 | 1.1 | 8.9 | 255 | 37 | 408 | 89 | 408 | 1.1 | | | | 16.349 | -B450 | 50-P112/M4 |
| 81 | 447 | 1.0 | 8.1 | 279 | 34 | 447 | 81 | 447 | 1.0 | | | | 17.885 | -B450 | 50-P112/M4 |
| 73 | 495 | 0.9 | 7.3 | 309 | 30 | 495 | 73 | 495 | 0.9 | | | | 19.831 | -B450 | 50-P112/M4 |

g500-B bevel geared motors

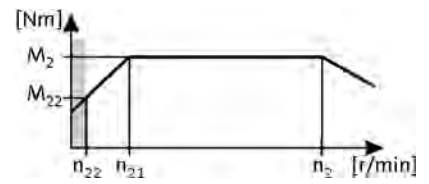
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 5.5 \text{ kW}$
 87 Hz: $P_N = 9.6 \text{ kW}$

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|--------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 292 | 171 | 1.6 | 29 | 106 | 120 | 171 | 292 | 171 | 1.6 | | | | 5.002 | -B450 | 50-P132/M4 | |
| 213 | 234 | 1.3 | 21 | 145 | 88 | 234 | 213 | 234 | 1.3 | | | | 6.860 | -B450 | 50-P132/M4 | |
| 157 | 318 | 1.2 | 16 | 197 | 64 | 318 | 157 | 318 | 1.2 | | | | 9.315 | -B450 | 50-P132/M4 | |
| 141 | 353 | 1.1 | 14 | 219 | 58 | 353 | 141 | 353 | 1.1 | | | | 10.328 | -B450 | 50-P132/M4 | |
| 114 | 437 | 0.9 | 11 | 271 | 47 | 437 | 114 | 437 | 0.9 | | | | 12.775 | -B450 | 50-P132/M4 | |
| 103 | 484 | 0.9 | 10 | 300 | 42 | 484 | 103 | 484 | 0.9 | | | | 14.165 | -B450 | 50-P132/M4 | |

g500-B bevel geared motors

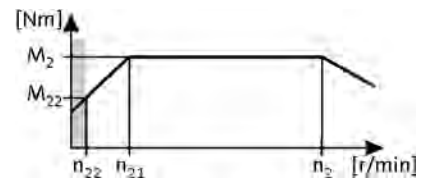
Technical data



Selection tables, 4-pole motors

50 Hz: $P_N = 13.1$ kW
 87 Hz: $P_N = 7.5$ kW

3-stage gearboxes



| Mains operation 400 V, 50 Hz | | | Inverter operation | | | | | | | | | | i | Product | | |
|---------------------------------|---------------|-----|---------------------|------------------|---------------------|---------------|------------------|---------------|-----|------------------|---------------|---|-------|---------|------------|--|
| n_2 [r/min] | M_2 [Nm] | c | 5 Hz - | | - 20 Hz | | - 50 Hz (1:10) | | | - 87 Hz (1:17.4) | | | | g500 | m5□□ | |
| n_2 [r/min] | M_2 [Nm] | c | n_{22} [r/min] | M_{22} [Nm] | n_{21} [r/min] | M_2 [Nm] | n_2 [r/min] | M_2 [Nm] | c | n_2 [r/min] | M_2 [Nm] | c | | | | |
| 295 | 230 | 1.2 | 29 | 146 | 120 | 230 | 295 | 230 | 1.2 | | | | 5.002 | -B450 | 50-P132/L4 | |
| 215 | 316 | 1.0 | 21 | 200 | 88 | 316 | 215 | 316 | 1.0 | | | | 6.860 | -B450 | 50-P132/L4 | |
| 159 | 429 | 0.9 | 16 | 272 | 64 | 429 | 159 | 429 | 0.9 | | | | 9.315 | -B450 | 50-P132/L4 | |

g500-B bevel geared motors

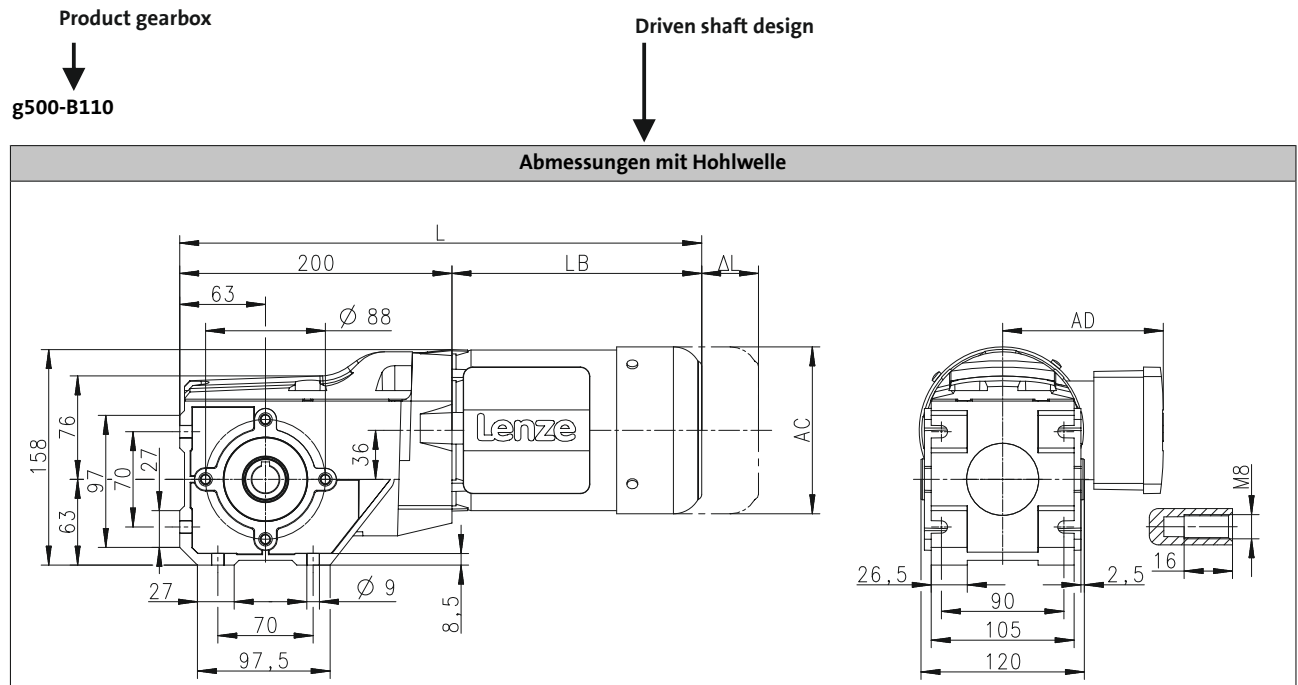
Technical data



Dimensions, notes

Notes on the dimensions

The following legend shows the layout of the dimension sheets.



Product Motor

| | | | MD□MA□□ | | | | |
|-------------------------|----|------|---------|--------|--------|--------|--------|
| | | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Gesamtlänge | L | [mm] | ← | 383 | | | 403 |
| Länge Motor | LB | [mm] | ← | 183 | | | 203 |
| Länge Motoranbauten | ΔL | [mm] | ← | 170 | | | 165 |
| Motordurchmesser | AC | [mm] | ← | 123 | | | 139 |
| Abstand Motor/Anschluss | AD | [mm] | ← | 100 | | | 109 |

Distance of motor centre to the end of terminal box

Motor diameter

Total length of the drive without built-on accessories

Motor length without built-on accessories

Additional length of the built-on accessories (longest version)

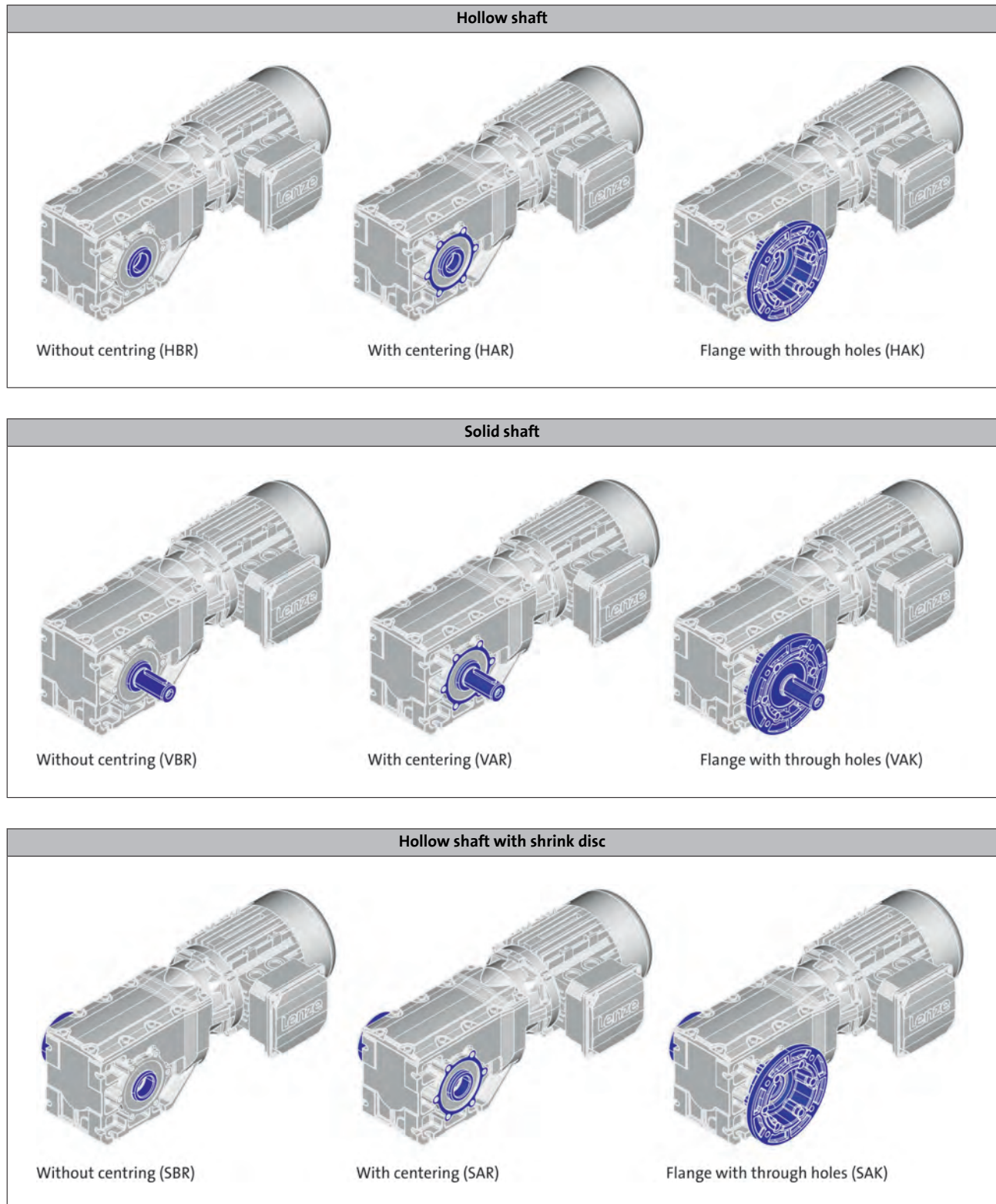
g500-B bevel geared motors

Technical data



Dimensions, notes

Gearbox designs



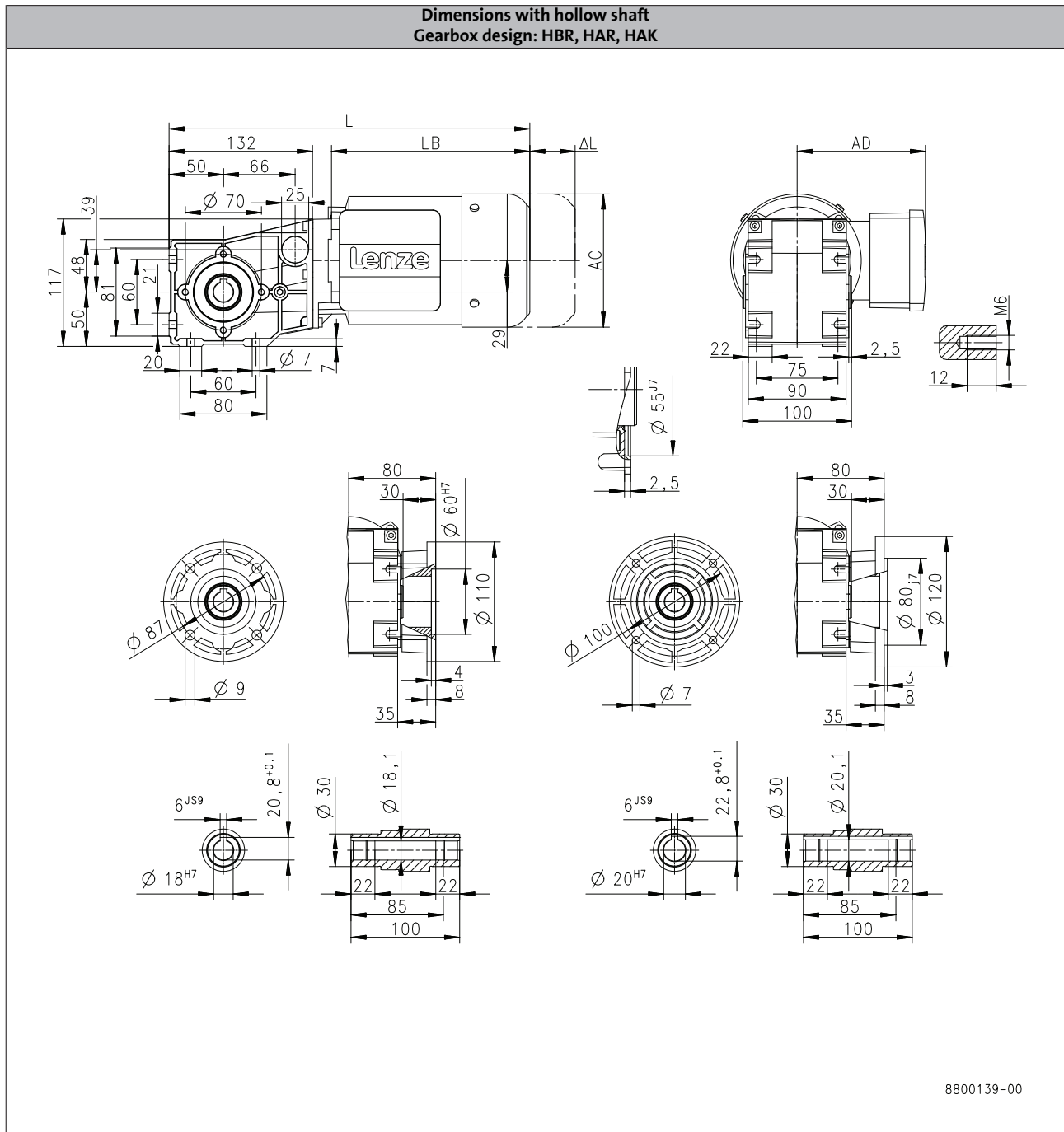
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B45



6.5

8800139-00

| | | MD□MA□□ | | | | | | | | |
|---------------------------|-----|---------|--------|--------|--------|--------|--------|--------|--------|--|
| | | | 063-02 | 063-12 | 063-22 | 063-32 | 063-42 | 071-32 | 071-42 | |
| Total length | L | [mm] | 305 | 332 | 305 | 332 | | 352 | | |
| Motor length | LB | [mm] | 156 | 183 | 156 | 183 | | 203 | | |
| Length of motor options | Δ L | [mm] | 135 | 170 | 135 | 170 | | 165 | | |
| Motor diameter | AC | [mm] | 123 | | | | | | 139 | |
| Distance motor/connection | AD | [mm] | 100 | | | | | | 109 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

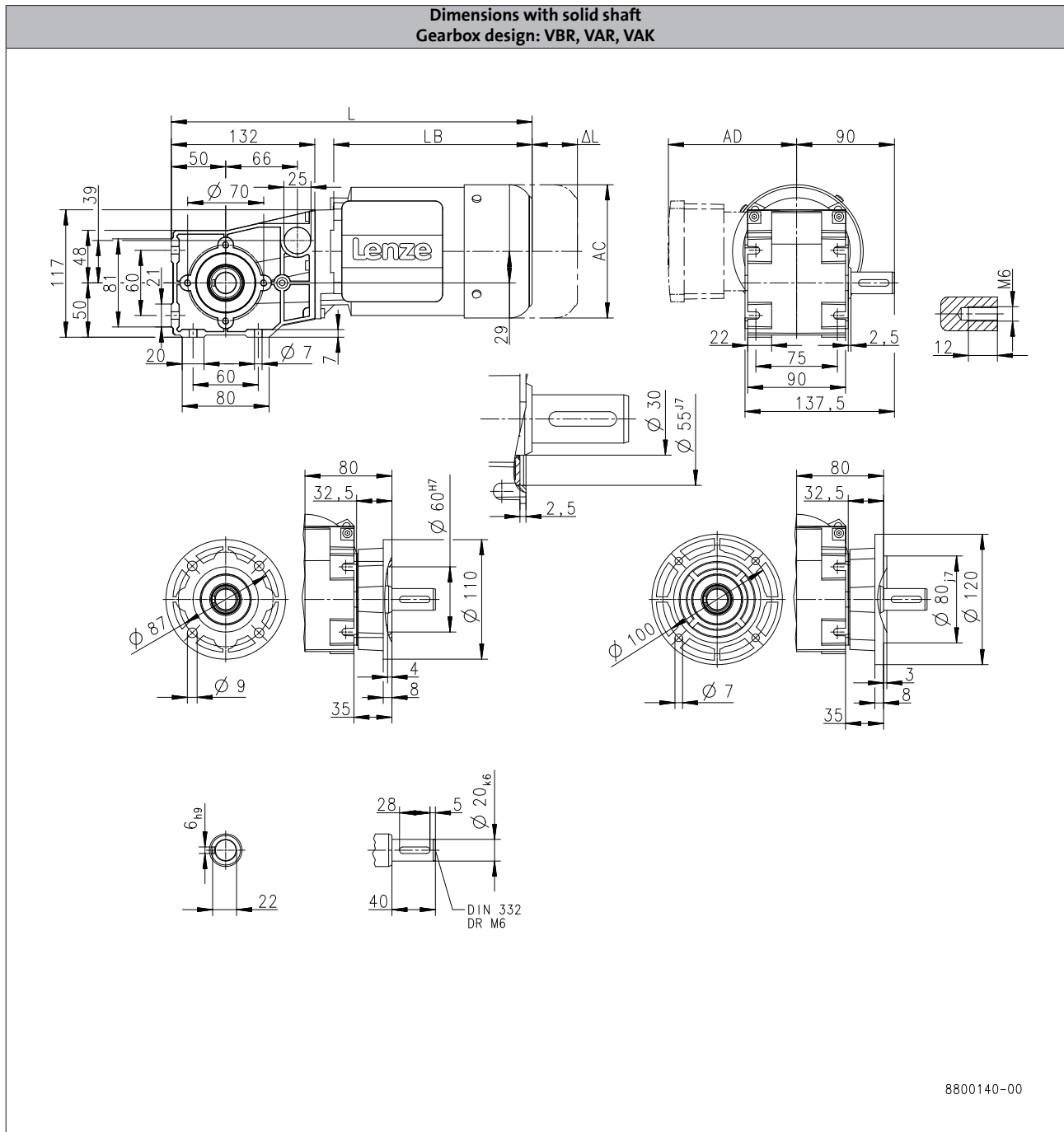
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B45



| | | MD□MA□□ | | | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|--------|--------|
| | | 063-02 | 063-12 | 063-22 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | 305 | 332 | 305 | 332 | | 352 | |
| Motor length | LB [mm] | 156 | 183 | 156 | 183 | | 203 | |
| Length of motor options | Δ L [mm] | 135 | 170 | 135 | 170 | | 165 | |
| Motor diameter | AC [mm] | | | | 123 | | 139 | |
| Distance motor/connection | AD [mm] | | | | 100 | | 109 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

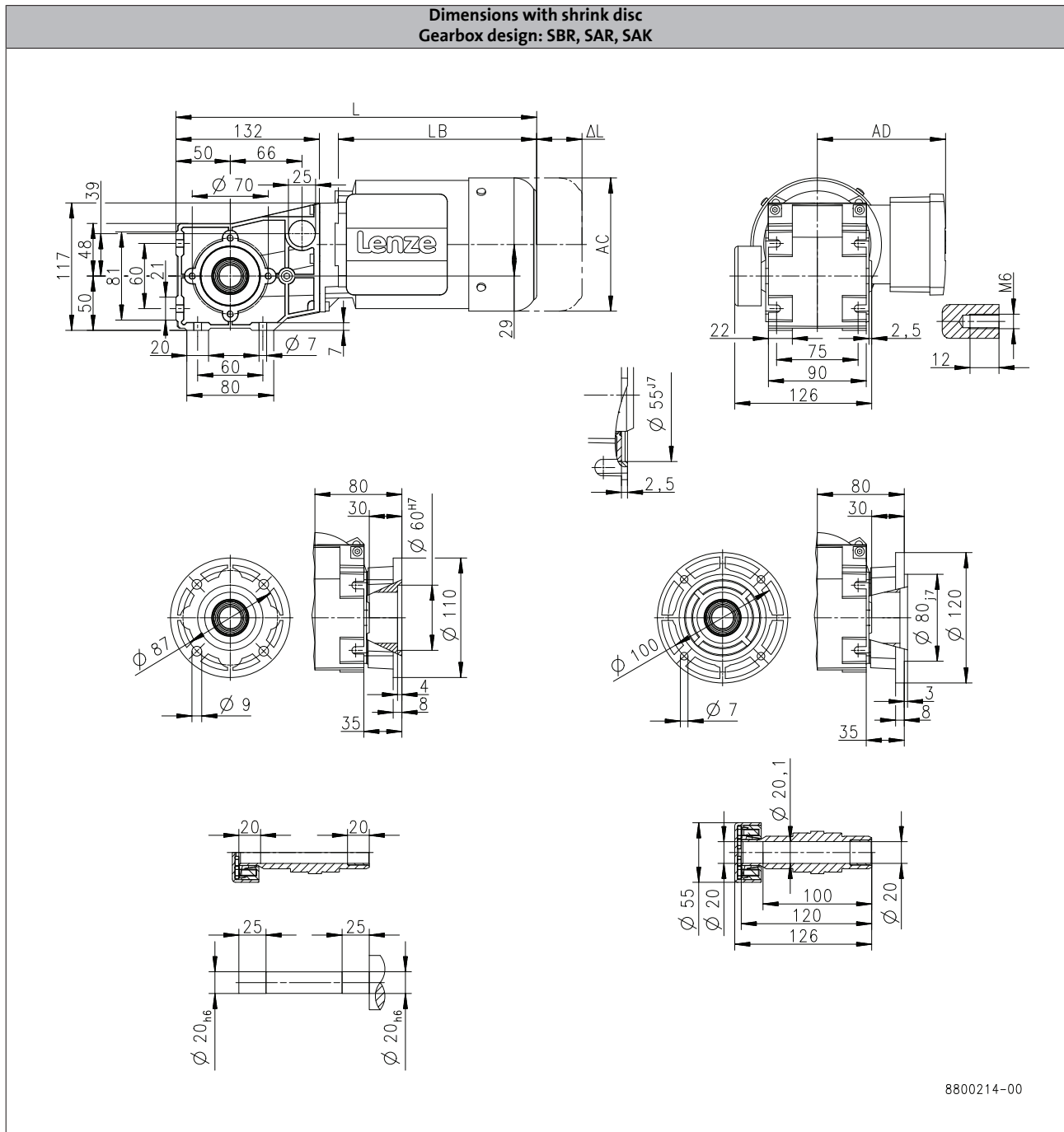
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B45



6.5

| | | | MD□MA□□ | | | | | | |
|---------------------------|-----|------|---------|--------|--------|--------|--------|--------|--------|
| | | | 063-02 | 063-12 | 063-22 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L | [mm] | 305 | 332 | 305 | 332 | | 352 | |
| Motor length | LB | [mm] | 156 | 183 | 156 | 183 | | 203 | |
| Length of motor options | Δ L | [mm] | 135 | 170 | 135 | 170 | | 165 | |
| Motor diameter | AC | [mm] | 123 | | | | | 139 | |
| Distance motor/connection | AD | [mm] | 100 | | | | | 109 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

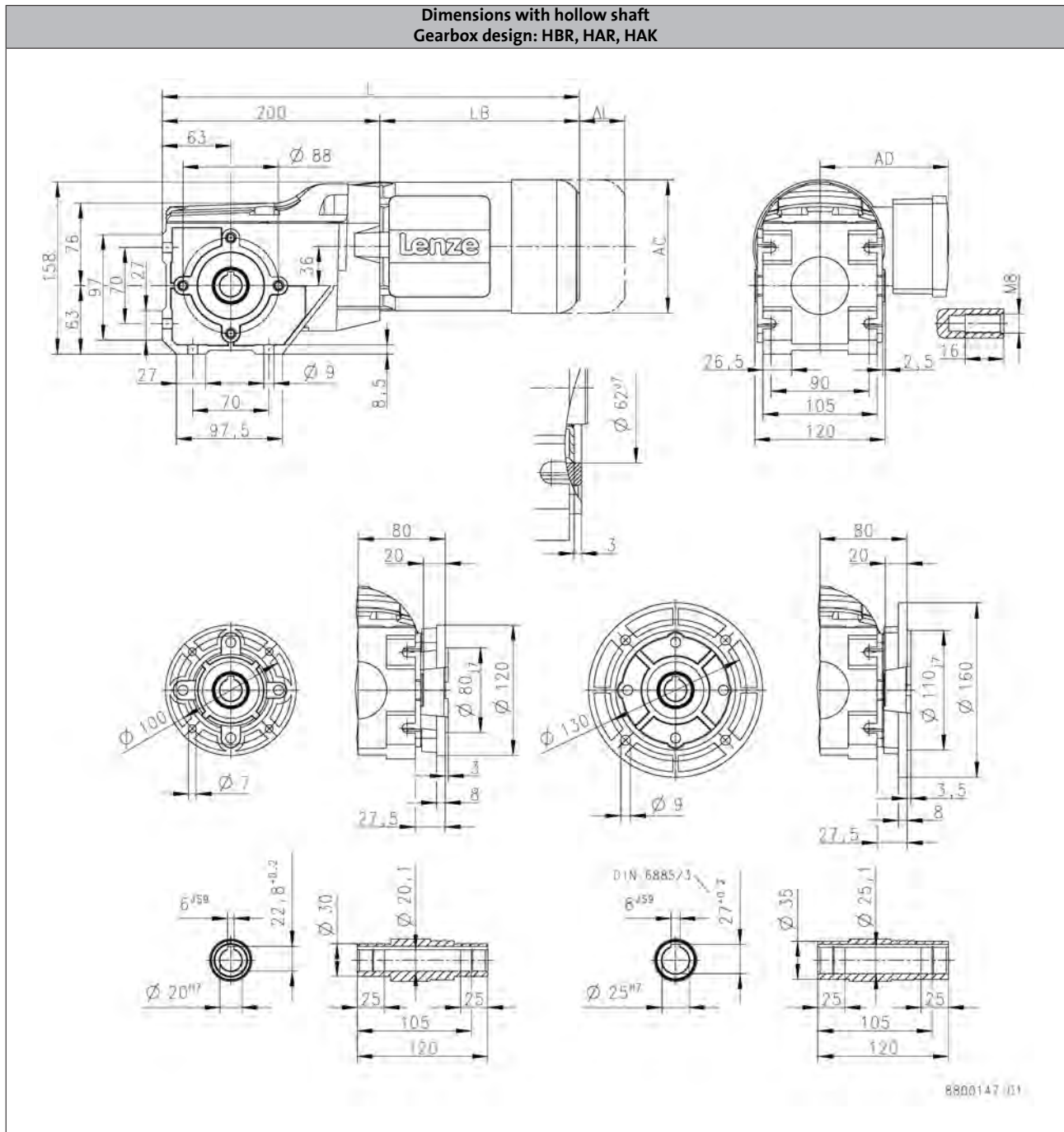
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B110



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 383 | | | 403 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

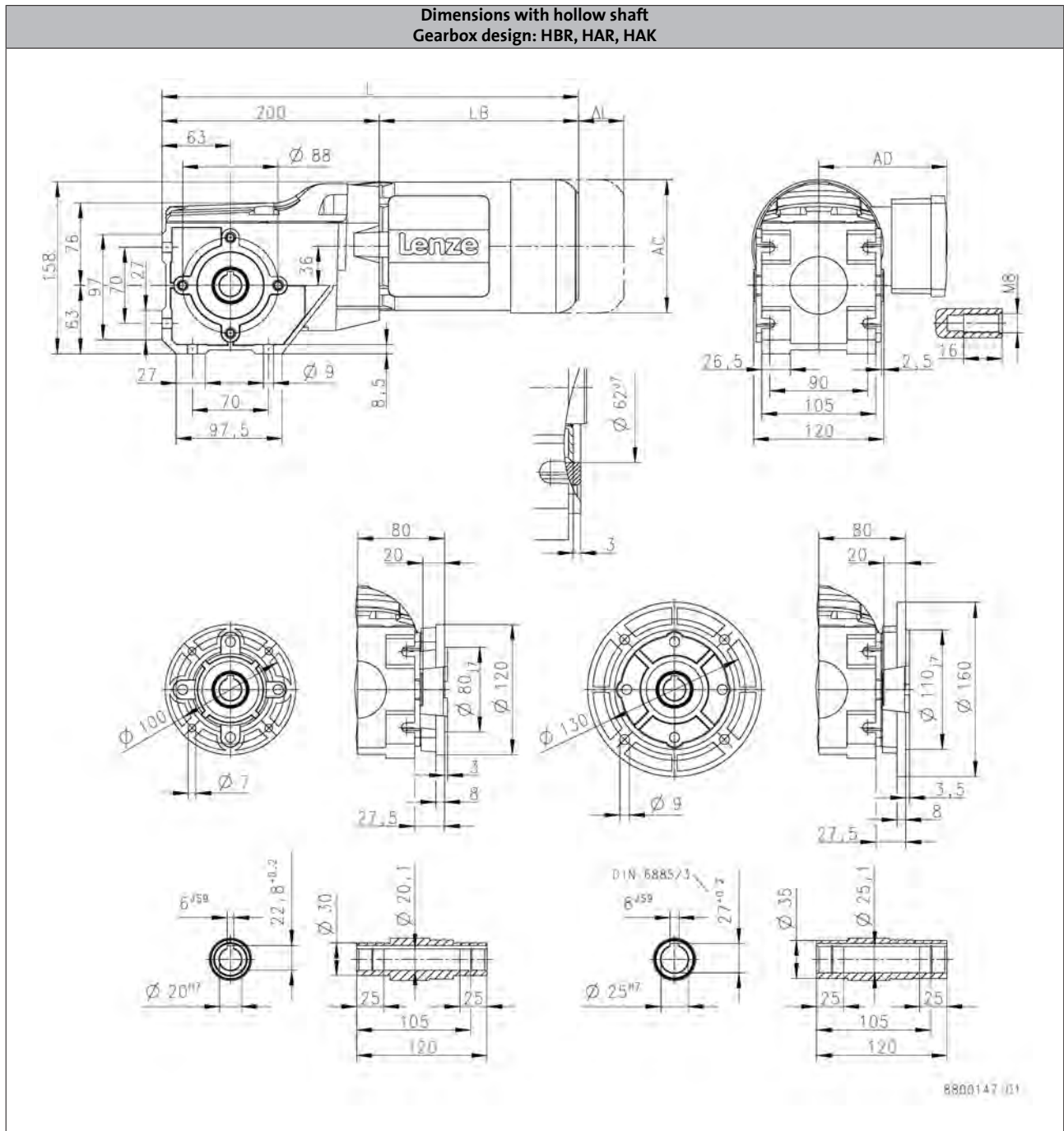
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B110



6.5

| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 460 | | 524 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | Δ L | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

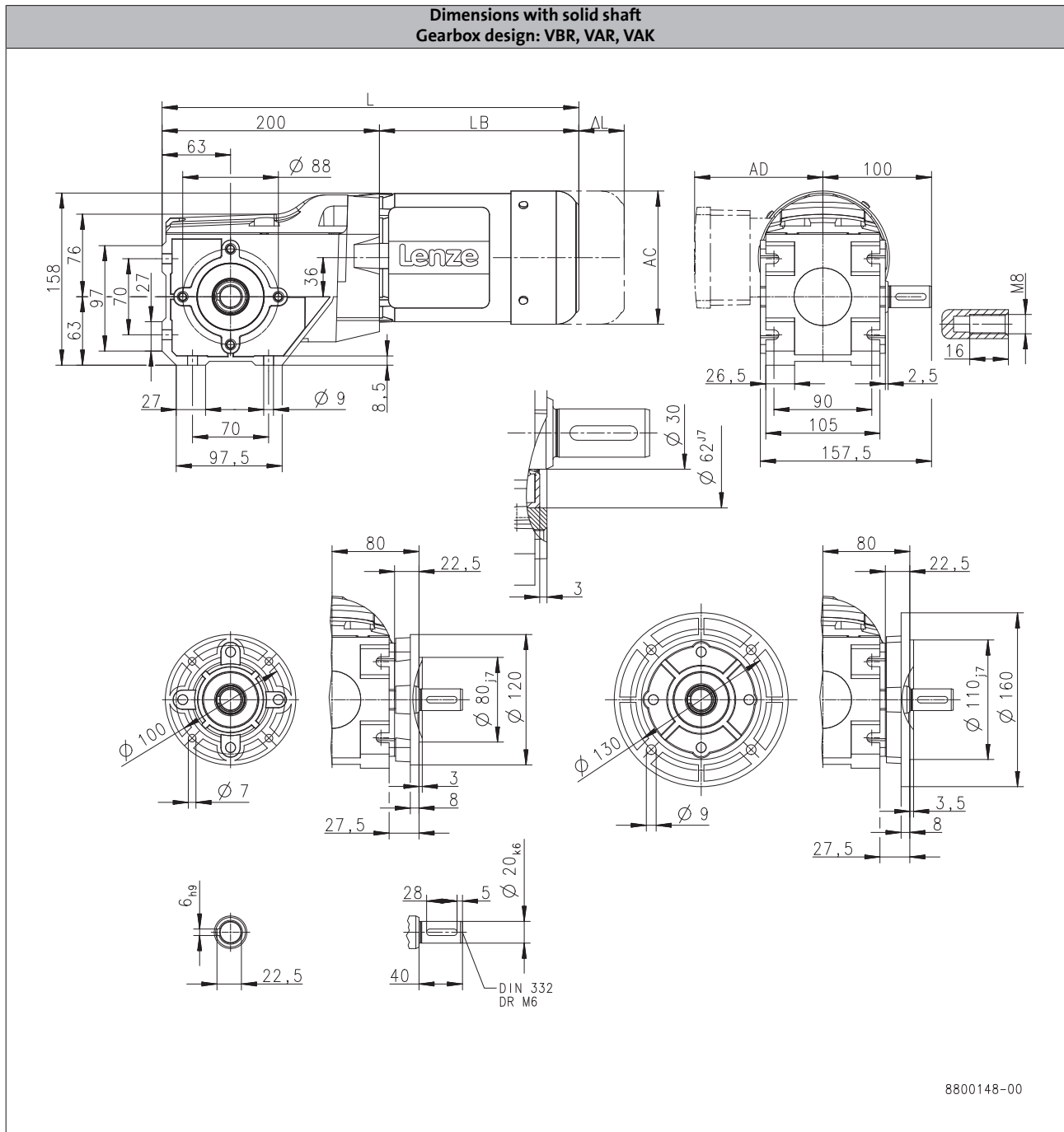
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B110



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 383 | | | 403 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

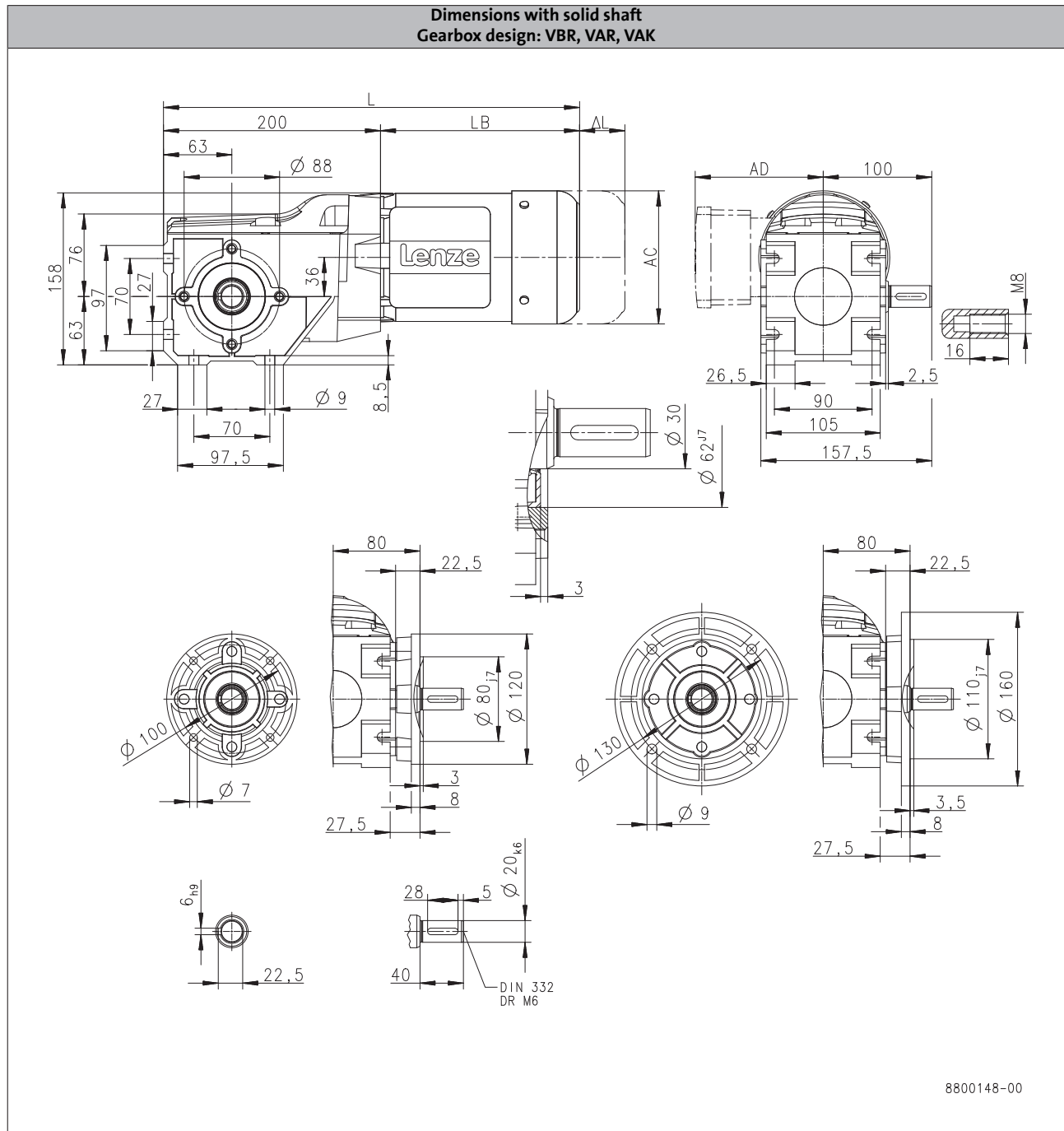
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B110



6.5

| | | | m550 | | |
|---------------------------|------------|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 460 | | 524 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | ΔL | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

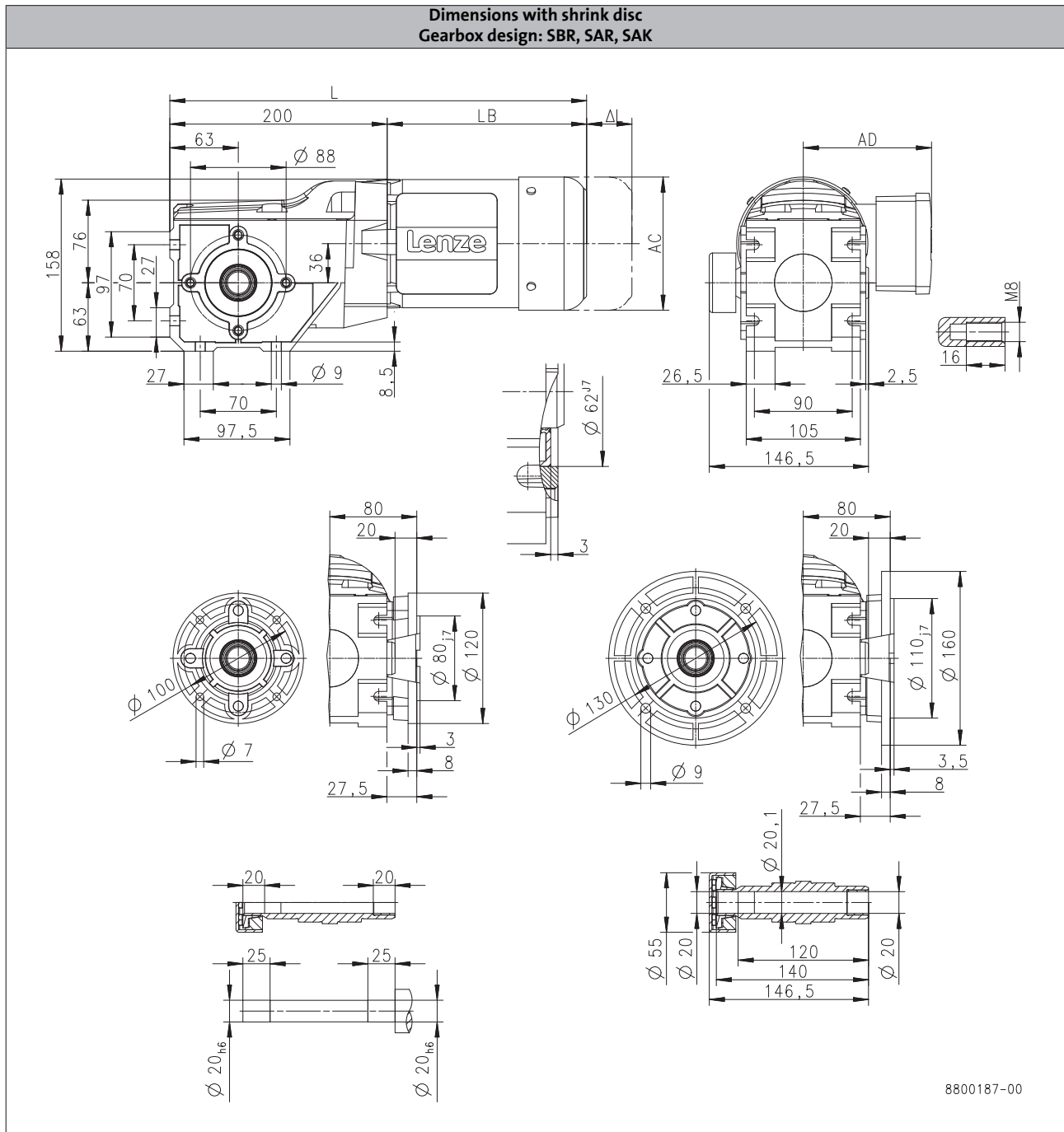
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B110



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 383 | | | 403 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

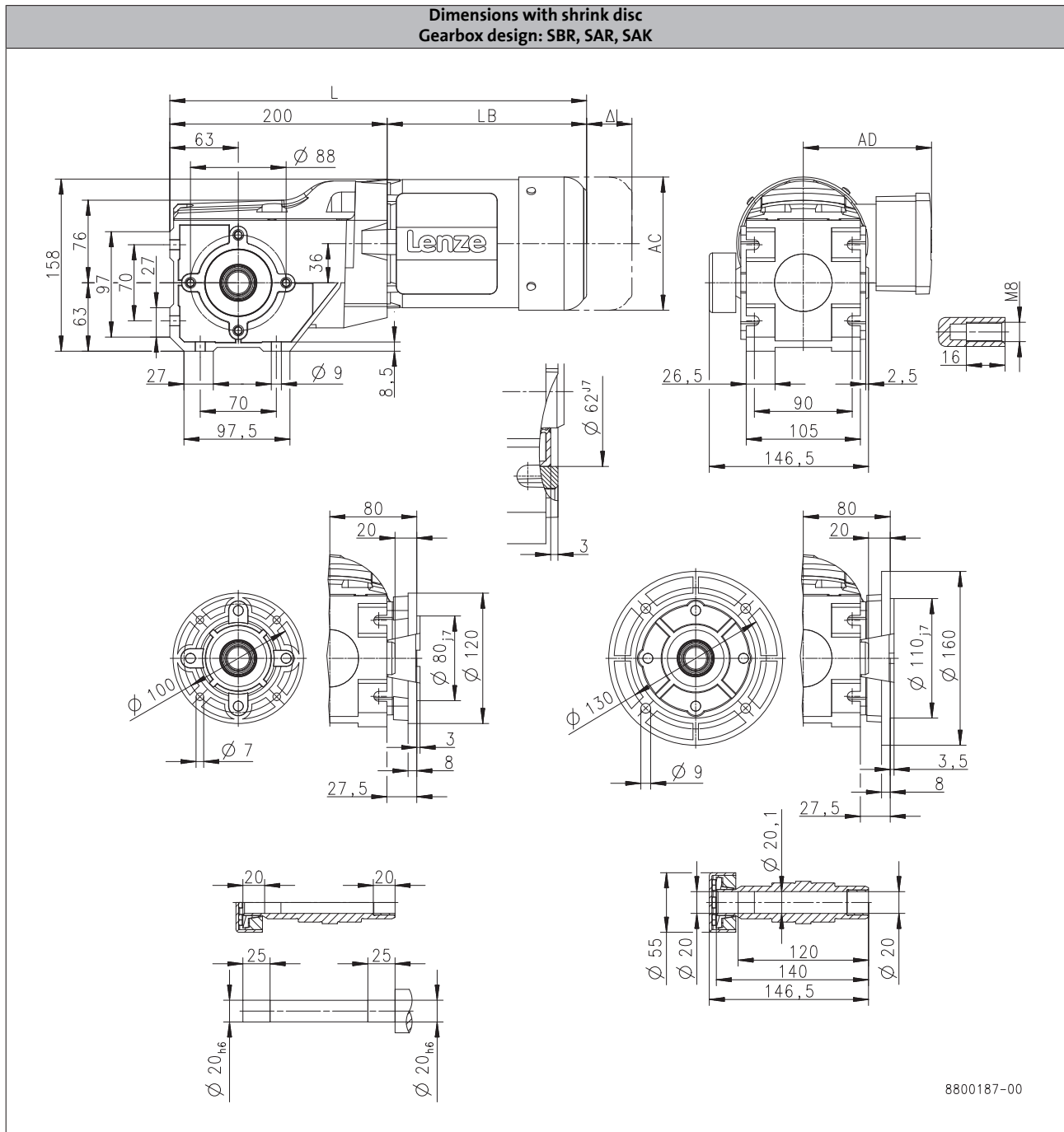
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B110



| | | | m550 | | |
|---------------------------|-----|------|---------|---------|---------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 |
| Total length | L | [mm] | 460 | | 524 |
| Motor length | LB | [mm] | 260 | | 324 |
| Length of motor options | Δ L | [mm] | 183 | | 175 |
| Motor diameter | AC | [mm] | 157 | | 177 |
| Distance motor/connection | AD | [mm] | 148 | | 154 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

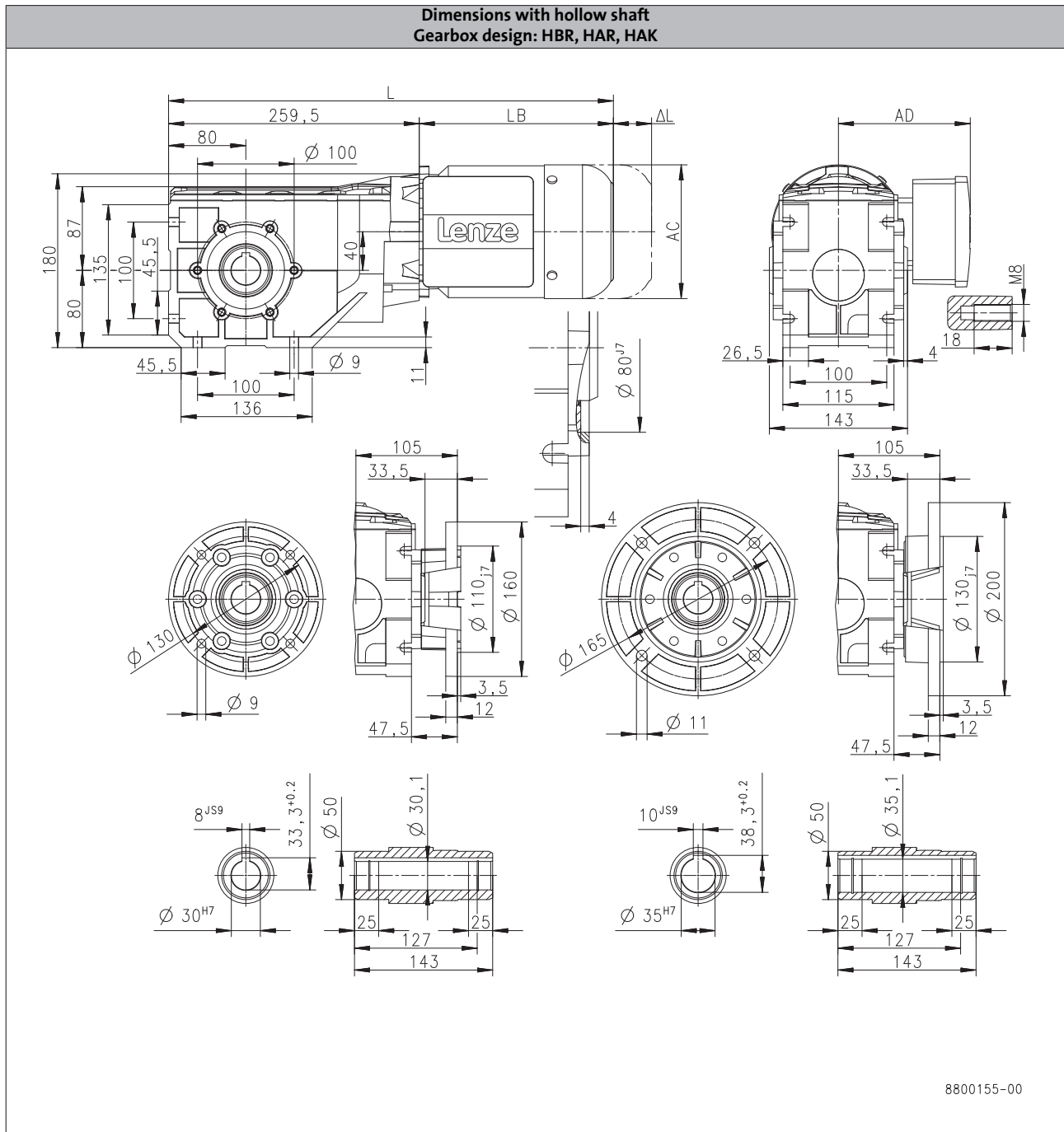
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B240



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 443 | | | 463 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

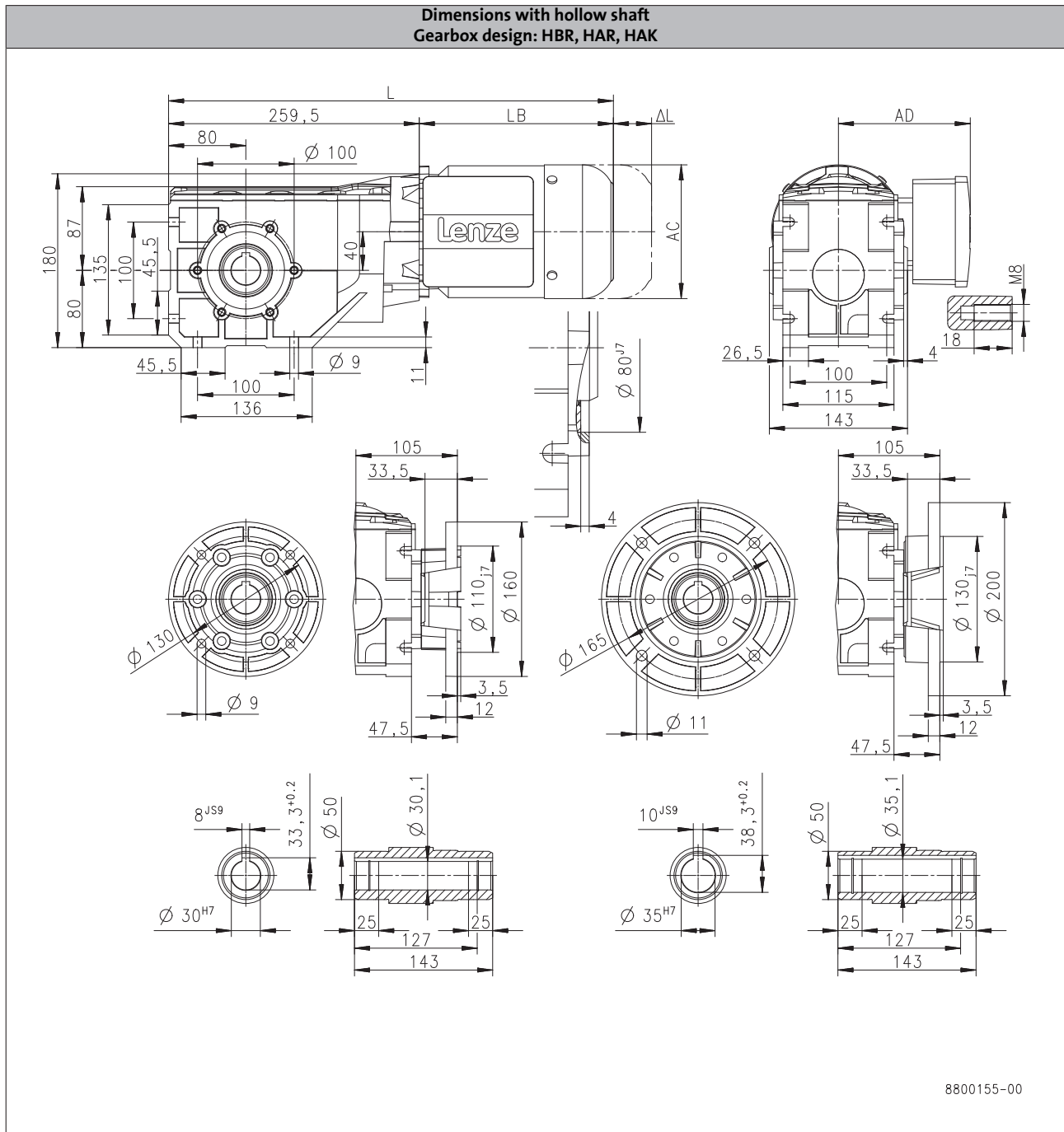
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B240



6.5

| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 520 | | 584 | | 644 |
| Motor length | LB | [mm] | 260 | | 324 | | 384 |
| Length of motor options | Δ L | [mm] | 183 | | 175 | | 170 |
| Motor diameter | AC | [mm] | 157 | | 177 | | 195 |
| Distance motor/connection | AD | [mm] | 148 | | 154 | | 164 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

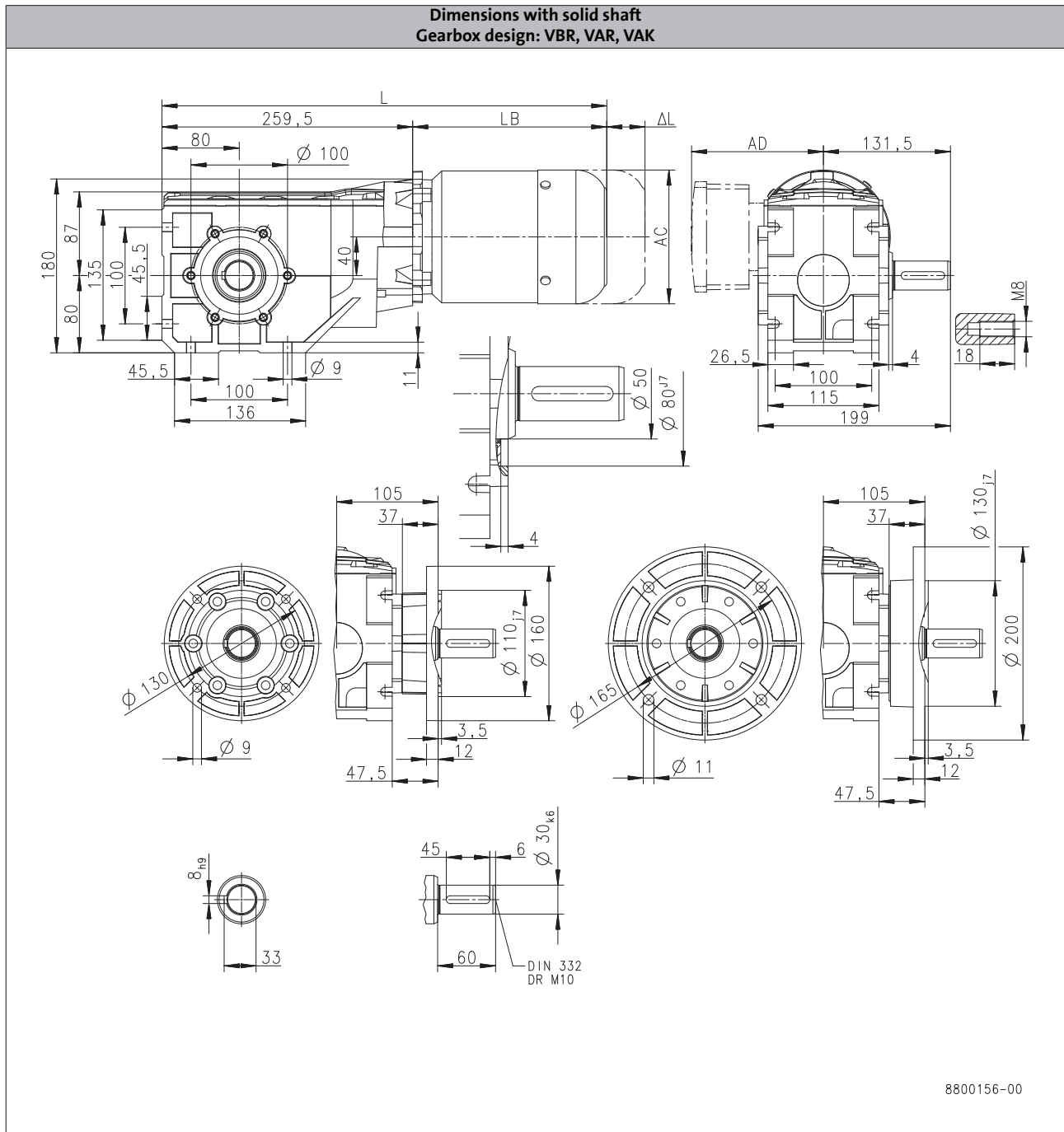
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B240



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 443 | | | 463 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

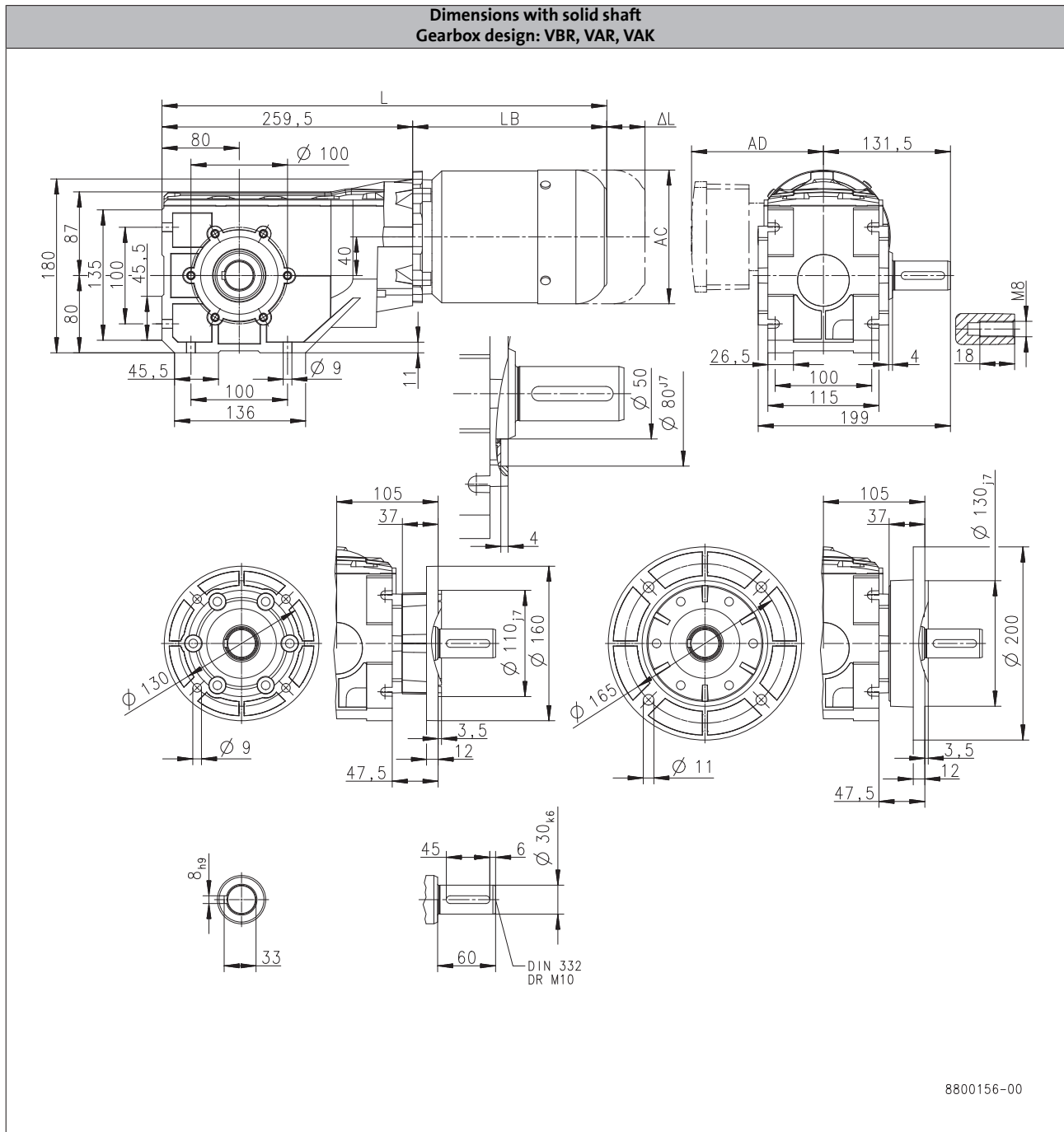
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B240



6.5

| | | | m550 | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 520 | 584 | 644 | | |
| Motor length | LB | [mm] | 260 | 324 | 384 | | |
| Length of motor options | Δ L | [mm] | 183 | 175 | 170 | | |
| Motor diameter | AC | [mm] | 157 | 177 | 195 | | |
| Distance motor/connection | AD | [mm] | 148 | 154 | 164 | | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

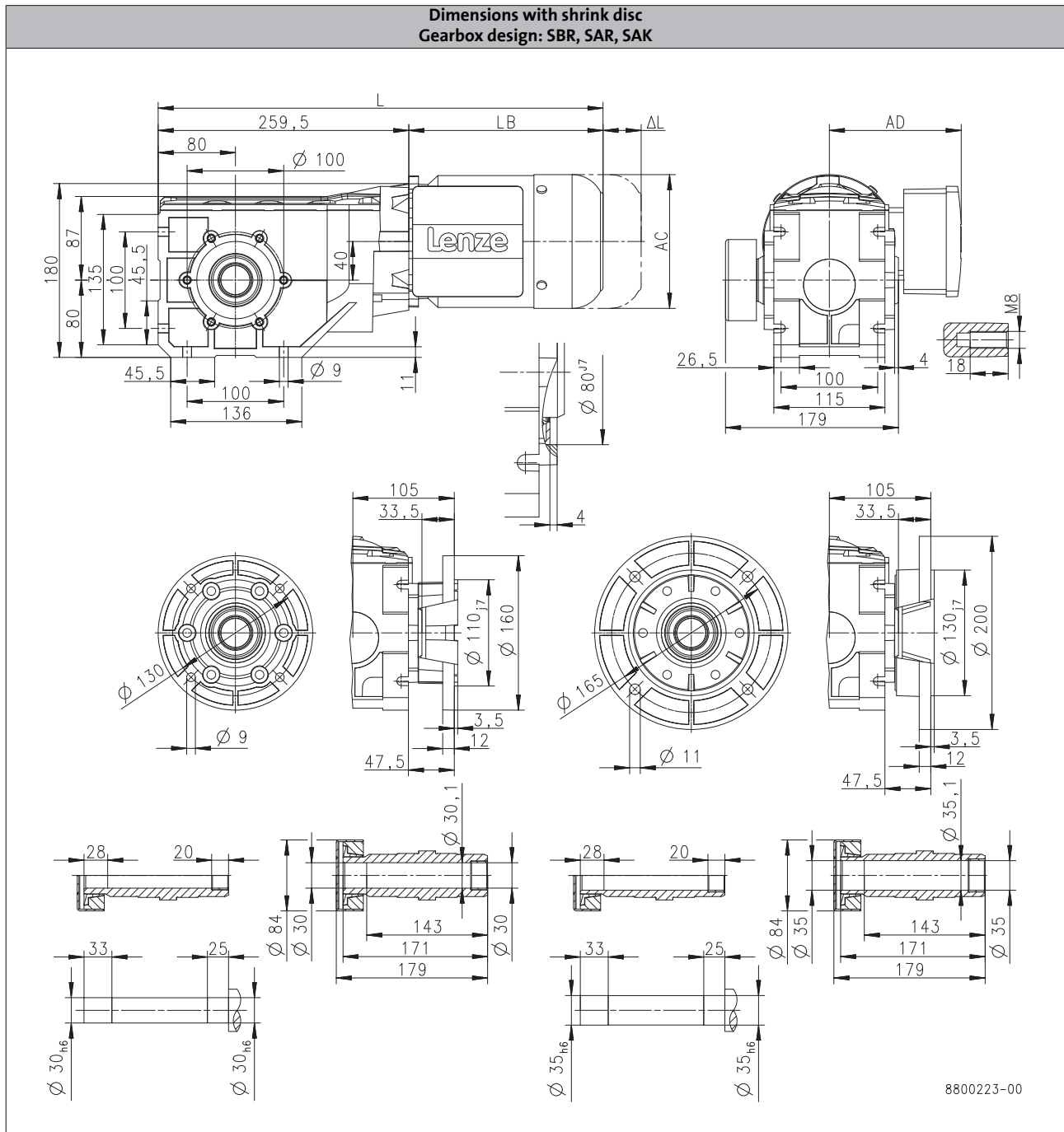
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B240



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 443 | | | 463 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

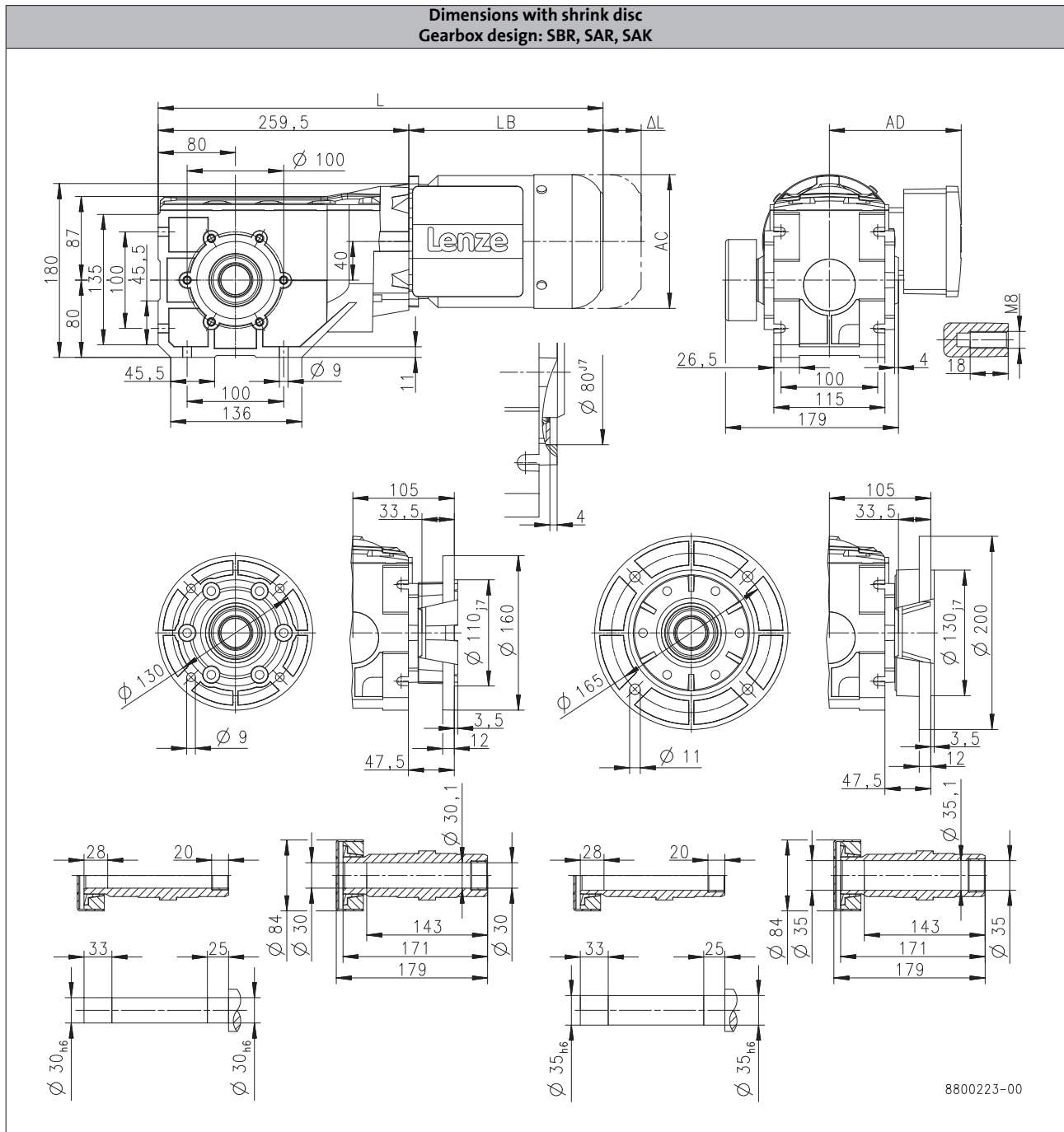
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B240



| | | m550 | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 |
| Total length | L | [mm] | 520 | 584 | | 644 | |
| Motor length | LB | [mm] | 260 | 324 | | 384 | |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

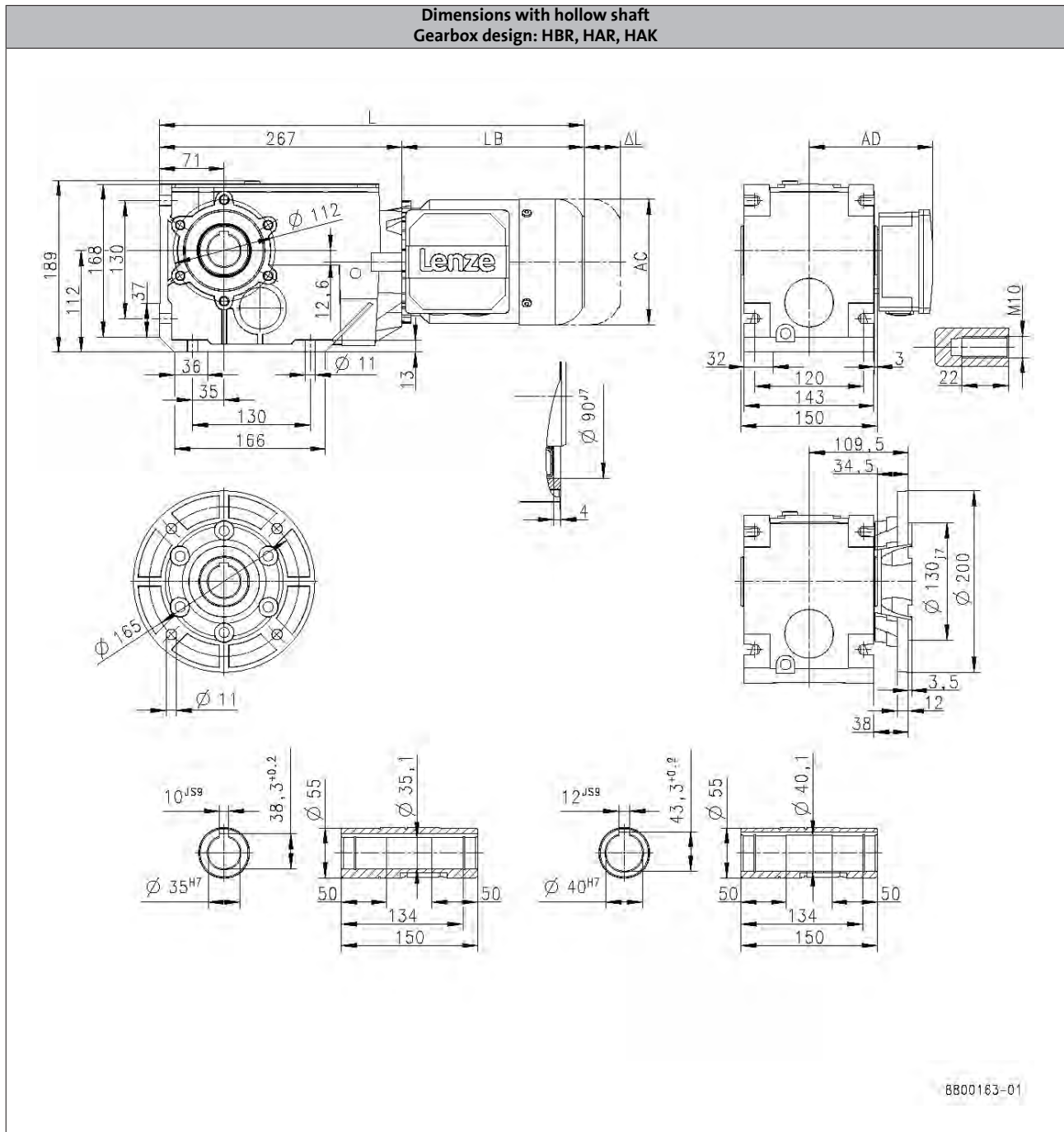
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B450



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 450 | | | 470 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

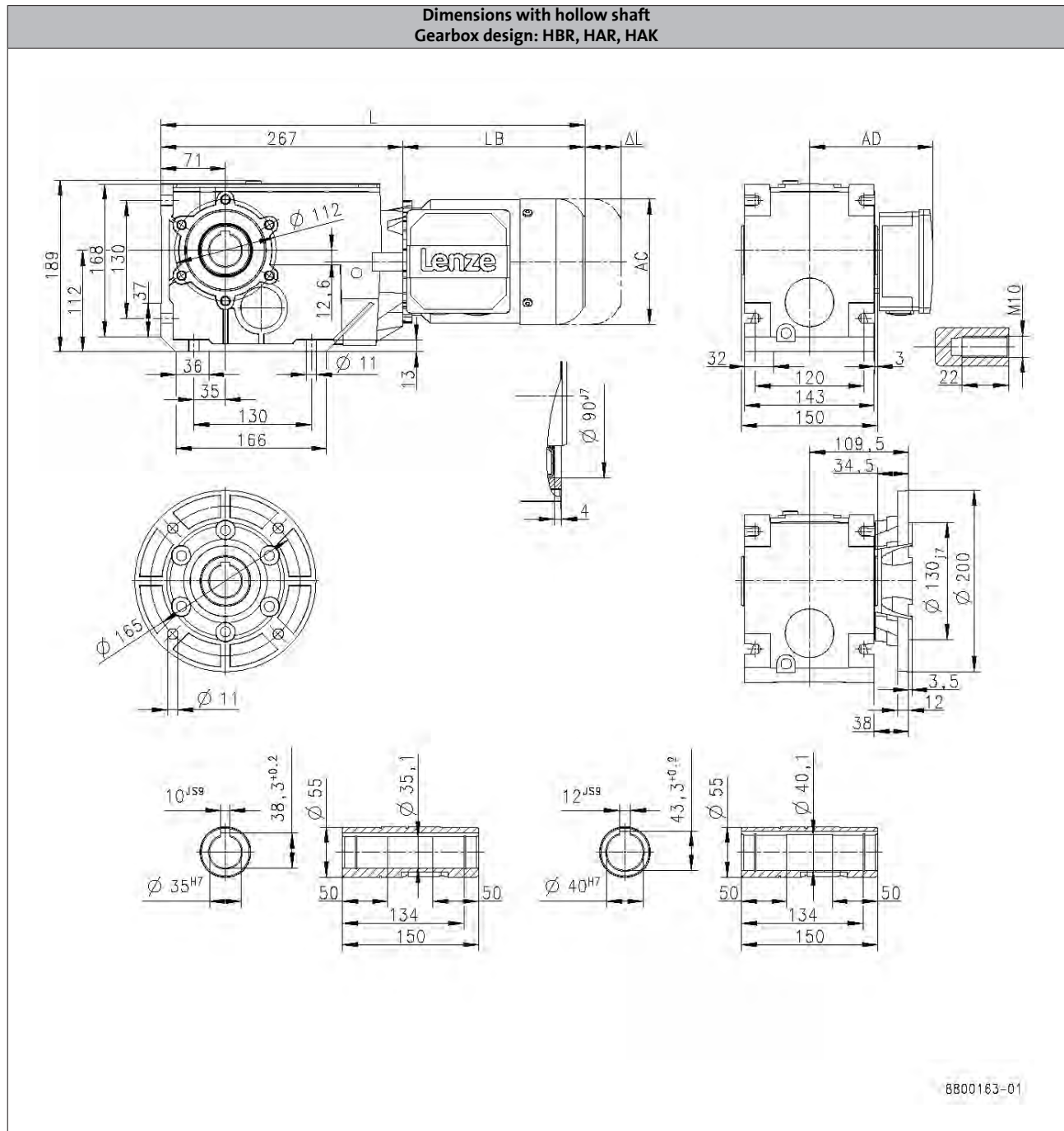
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B450



6.5

| | | | m550 | | | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L | [mm] | 527 | 591 | | 651 | | 658 | | 725 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

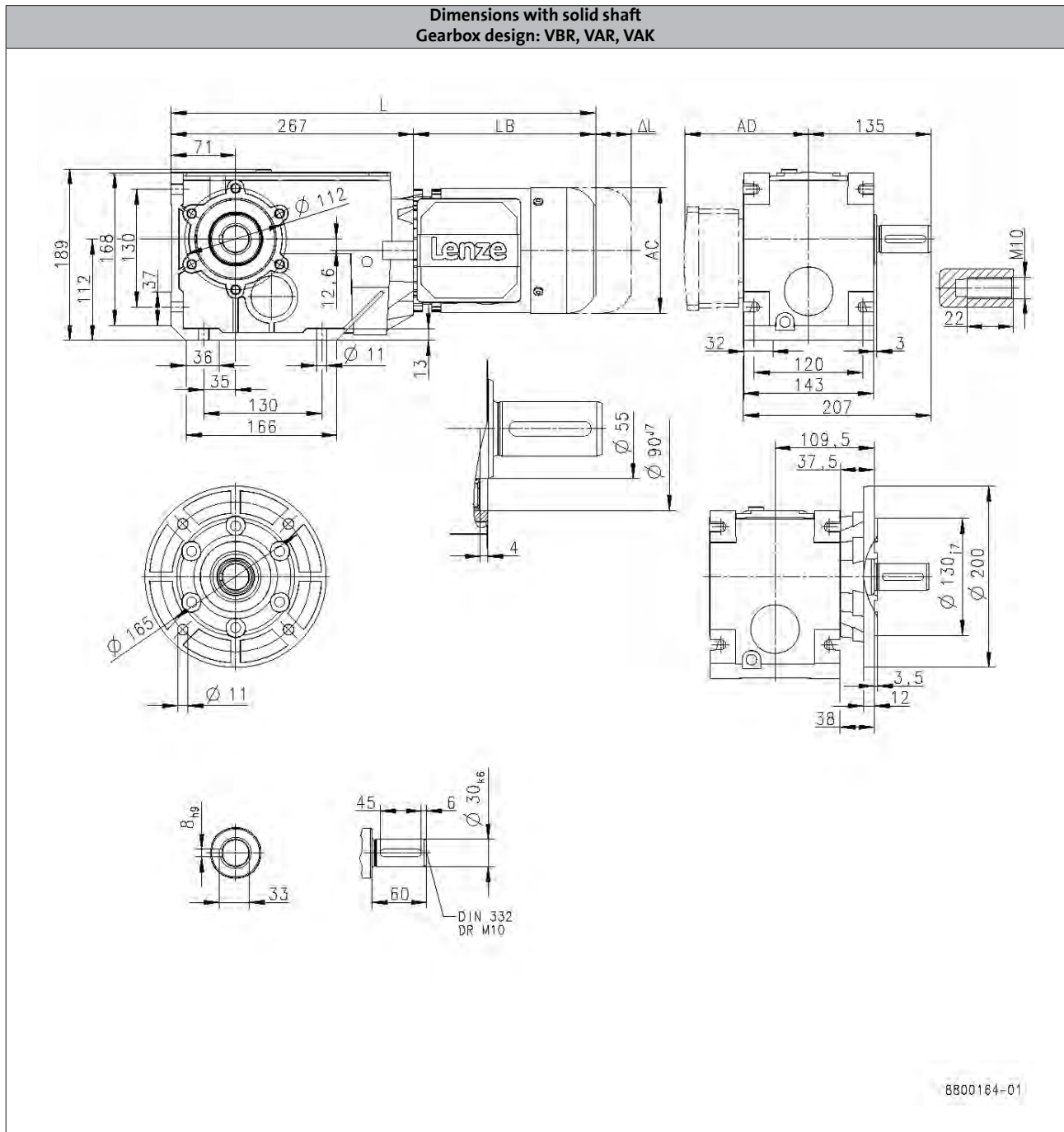
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B450



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 450 | | | 470 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

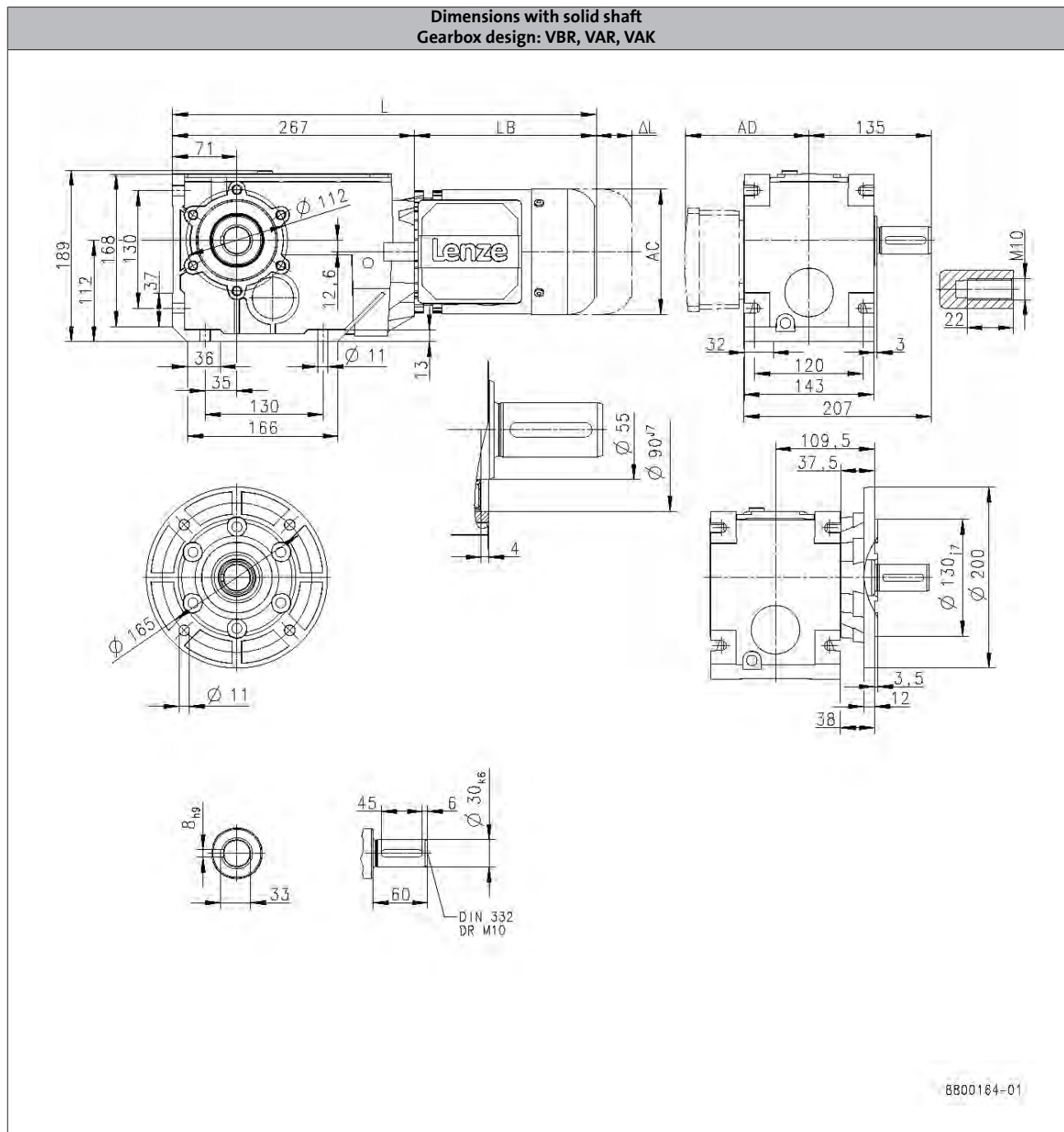
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B450



6.5

| | | m550 | | | | | | | |
|---------------------------|----------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L [mm] | 527 | 591 | | 651 | | 658 | | 725 |
| Motor length | LB [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

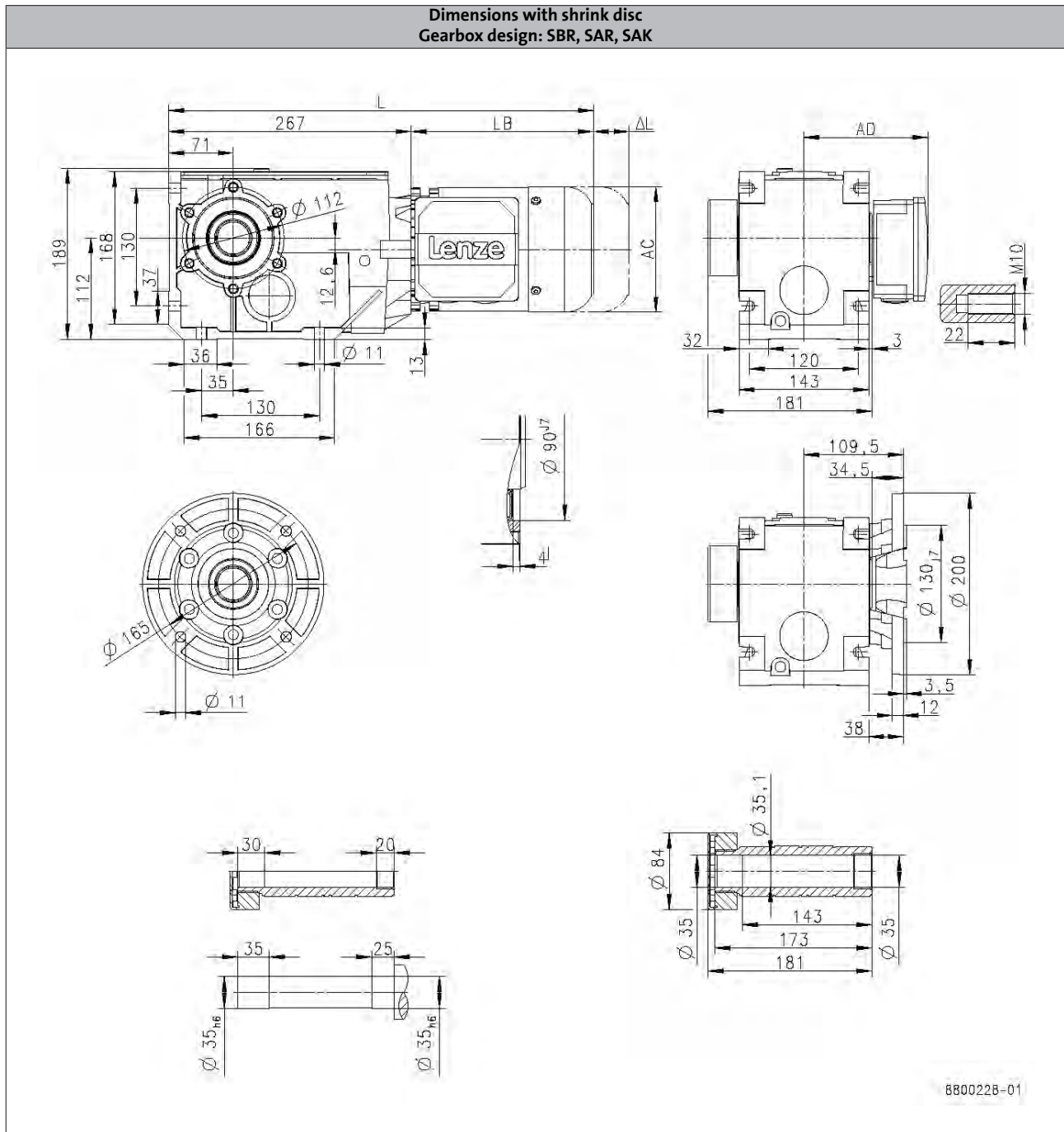
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B450



| | | MD□MA□□ | | | | |
|---------------------------|----------|---------|--------|--------|--------|--------|
| | | 063-12 | 063-32 | 063-42 | 071-32 | 071-42 |
| Total length | L [mm] | | 450 | | | 470 |
| Motor length | LB [mm] | | 183 | | | 203 |
| Length of motor options | Δ L [mm] | | 170 | | | 165 |
| Motor diameter | AC [mm] | | 123 | | | 139 |
| Distance motor/connection | AD [mm] | | 100 | | | 109 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

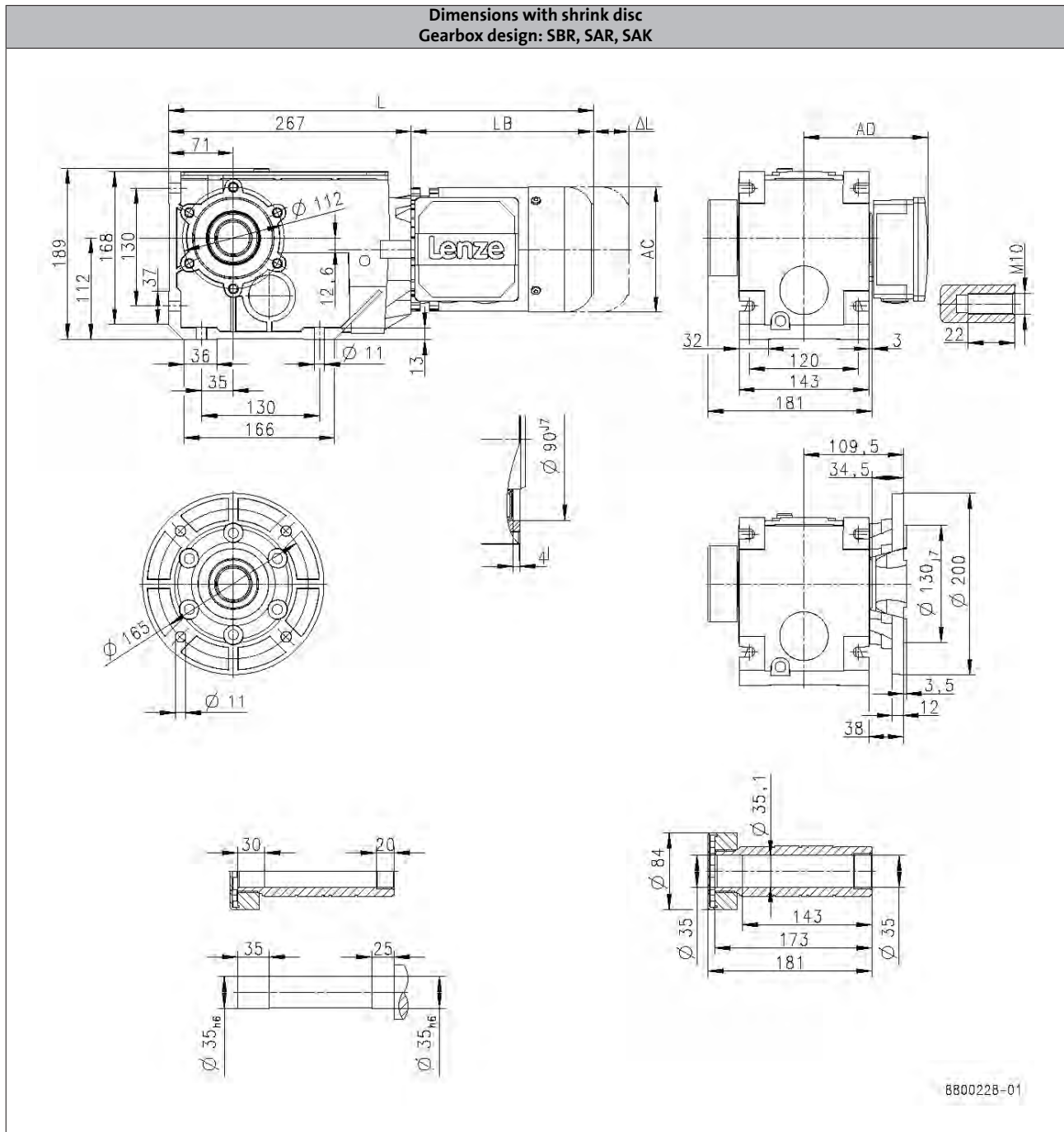
g500-B bevel geared motors

Technical data



Dimensions, 4-pole motors

g500-B450



| | | | m550 | | | | | | | |
|---------------------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|
| | | | -P80/M4 | -P90/L4 | -P90/M4 | -P100/L4 | -P100/M4 | -P112/M4 | -P132/L4 | -P132/M4 |
| Total length | L | [mm] | 527 | 591 | | 651 | | 658 | | 725 |
| Motor length | LB | [mm] | 260 | 324 | | 384 | | 391 | | 458 |
| Length of motor options | Δ L | [mm] | 183 | 175 | | 170 | | 183 | | 201 |
| Motor diameter | AC | [mm] | 157 | 177 | | 195 | | 219 | | 261 |
| Distance motor/connection | AD | [mm] | 148 | 154 | | 164 | | 171 | | 182 |

L = length of the motor without built-on accessories
 ΔL = additional length of the built-on accessories (longest type)

g500-B bevel geared motors

Technical data



Additional length of the built-on accessories

Dimensions, self-ventilated (4-pole)

| Product | | | MD□MA□□ | | | m550 | | | | |
|------------------|-----|------|------------------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|
| | | | 063-02 063-22 | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 |
| Brake | | | 71.0 | 40.0 | 52.0 | 73.0 | 62.0 | 76.0 | 90.0 | 79.0 |
| Feedback | Δ L | [mm] | 71.0 | 56.0 | 52.0 | 97.0 | 82.0 | 81.0 | 80.0 | 102 |
| Brake + Feedback | | | 135 | 103 | 96.0 | 110 | 99.0 | 101 | 120 | 124 |
| | Δ L | [mm] | 135 | 103 | 96.0 | 110 | 99.0 | 101 | 120 | 124 |

Dimensions, forced ventilated (4-pole)

| Product | | | MD□MA□□ | | m550 | | | | | |
|------------------|-----|------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|-----|
| | | | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 | |
| Blower | | | 128 | | 127 | 122 | 109 | 103 | 121 | |
| Brake | | | 170 | | 165 | 183 | 175 | 170 | 183 | 201 |
| Feedback | Δ L | [mm] | 170 | | 165 | 183 | 175 | 170 | 183 | 201 |
| Brake + Feedback | | | 128 | | 127 | 122 | 109 | 183 | 201 | |
| | Δ L | [mm] | 170 | | 165 | 183 | 175 | 170 | 183 | 201 |

g500-B bevel geared motors

Technical data



Weights, 4-pole motors

2-stage gearboxes

| Product | | Mass |
|-----------|---------------|------|
| | | m |
| | | [kg] |
| g500-B45 | MD□MA□□063-02 | 6.70 |
| | MD□MA□□063-12 | 7.00 |
| | MD□MA□□063-22 | 6.70 |
| | MD□MA□□063-32 | 7.00 |
| | MD□MA□□063-42 | 7.30 |
| | MD□MA□□071-32 | 8.70 |
| | MD□MA□□071-42 | 9.30 |
| g500-B110 | MD□MA□□063-12 | 8.60 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 8.90 |
| | MD□MA□□071-32 | 10.3 |
| | MD□MA□□071-42 | 10.9 |
| | m550-P80/M4 | 19.4 |
| | m550-P90/L4 | 25.4 |
| | m550-P90/M4 | 24.4 |
| g500-B240 | MD□MA□□063-12 | 12.4 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 12.7 |
| | MD□MA□□071-32 | 14.1 |
| | MD□MA□□071-42 | 14.7 |
| | m550-P80/M4 | 23.2 |
| | m550-P90/L4 | 29.2 |
| | m550-P90/M4 | 28.2 |
| | m550-P100/L4 | 41.2 |
| | m550-P100/M4 | 39.2 |

g500-B bevel geared motors

Technical data



3-stage gearboxes

| Product | | Mass |
|-----------|---------------|------|
| | | m |
| | | [kg] |
| g500-B240 | MD□MA□□063-12 | 12.6 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 12.9 |
| | MD□MA□□071-32 | 14.3 |
| | MD□MA□□071-42 | 14.9 |
| | m550-P80/M4 | 23.4 |
| g500-B450 | MD□MA□□063-12 | 15.6 |
| | MD□MA□□063-32 | |
| | MD□MA□□063-42 | 15.9 |
| | MD□MA□□071-32 | 17.3 |
| | MD□MA□□071-42 | 17.9 |
| | m550-P80/M4 | 26.4 |
| | m550-P90/L4 | 32.4 |
| | m550-P90/M4 | 31.4 |
| | m550-P100/L4 | 44.4 |
| | m550-P100/M4 | 42.4 |
| | m550-P112/M4 | 47.4 |
| | m550-P132/L4 | 80.4 |
| | m550-P132/M4 | 68.4 |

g500-B bevel geared motors

Technical data



Additional weights for gearboxes

| Product | | | g500-B45 | g500-B110 | g500-B240 | g500-B450 |
|-------------|---|------|----------|-----------|-----------|-----------|
| Mass | | | | | | |
| Solid shaft | m | [kg] | 0.4 | 0.5 | 1.4 | 1.3 |
| Shrink disc | m | [kg] | 0.2 | 0.2 | 0.7 | 0.6 |
| Flange | m | [kg] | 0.3 | 0.4 | 0.7 | 0.9 |

Additional weights for motors

4-pole motors

| Product | | | MD□MA□□ | | | m550 | | | | |
|---------|---|------|------------------|----------------------------|------------------|---------|--------------------|----------------------|----------|----------------------|
| | | | 063-02 063-22 | 063-12 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 |
| Brake | | | 06 | 06 | 08 | 10 | 12 | 14 | 16 | |
| | m | [kg] | 0.9 | 0.9 | 1.5 | 2.6 | 4.2 | 5.8 | 8.7 | |
| Blower | | | | | | | | | | |
| | m | [kg] | | 2.0 | 2.1 | 2.3 | 2.7 | 3.0 | 3.1 | 5.0 |



Torque plate

Torque support is usually effected by means of the foot or flange. Another simple possibility is provided by the attachable torque plates. Here, torque support is implemented solely via one point, which, among other things, is suitable for shaft-mounted gearboxes. Supplied rubber buffers provide for mounting with minimum stress and absorb light shocks.

The torque plates are available in two designs, for mounting on the available threaded pitch circle, or for the gearbox foot.

In addition, torque support for the g500-B45 gearbox can be effected via the holding fixture of the housing, which is integrated on both sides, by means of a rubber buffer.

The rubber buffers can be ordered optionally.

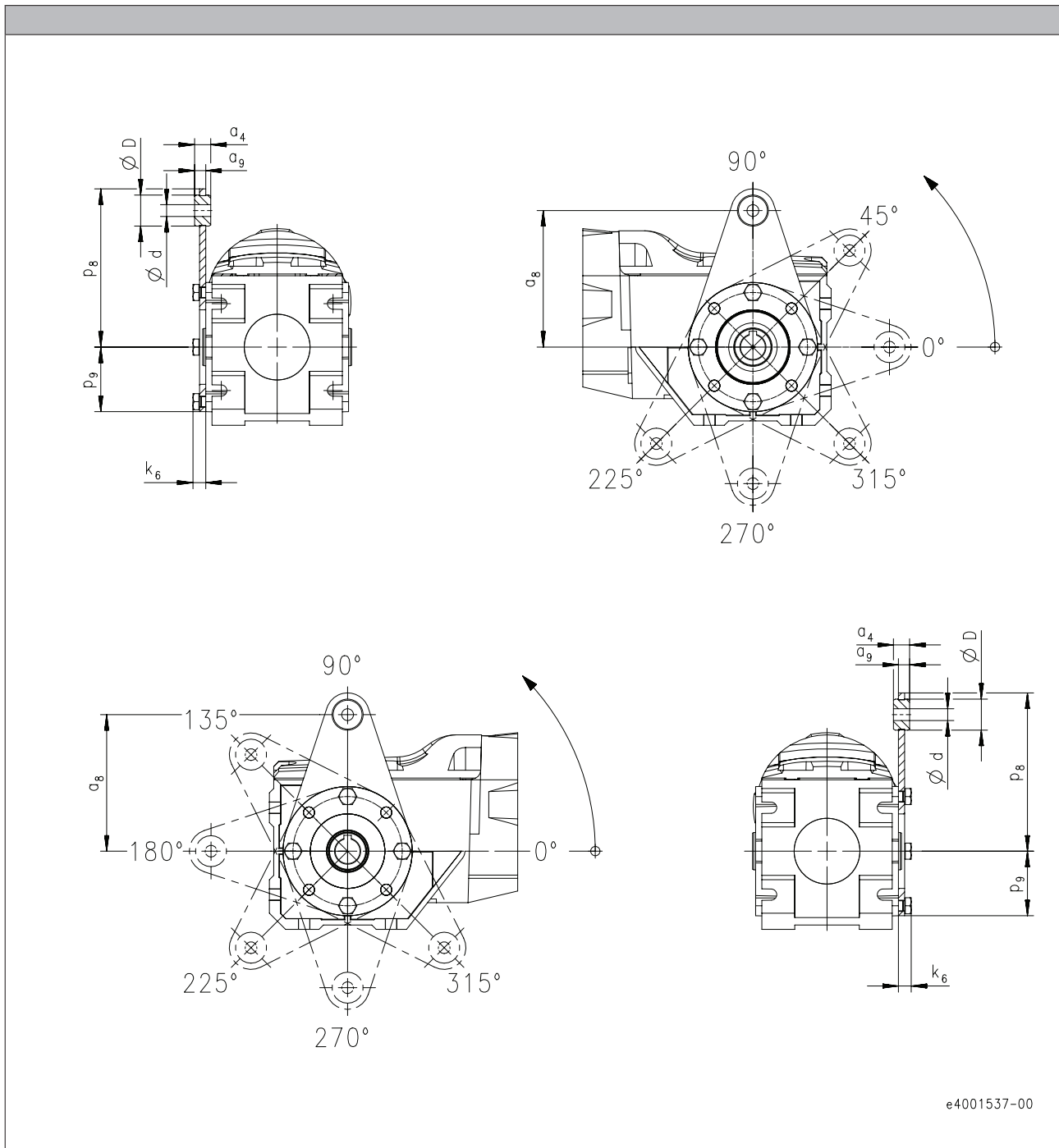
g500-B bevel gearbox

Product extensions



Torque plate

Torque plate on threaded pitch circle



6.5

| Product | Dimensions | | | | | | | | Mass |
|-----------|------------------------|------------------------|------------------------|-----------|-----------|------------------------|------------------------|------------------------|-----------|
| | a ₄ [mm] | a ₈ [mm] | a ₉ [mm] | d [mm] | D [mm] | p ₈ [mm] | p ₉ [mm] | k ₆ [mm] | m [kg] |
| g500-B45 | 12.0 | 100 | 8.0 | 8.0 | 20.0 | 115 | 42.0 | 9.0 | 0.3 |
| g500-B110 | 13.0 | 110 | 9.0 | 10.0 | 25.0 | 128 | 54.0 | 11.0 | 0.5 |

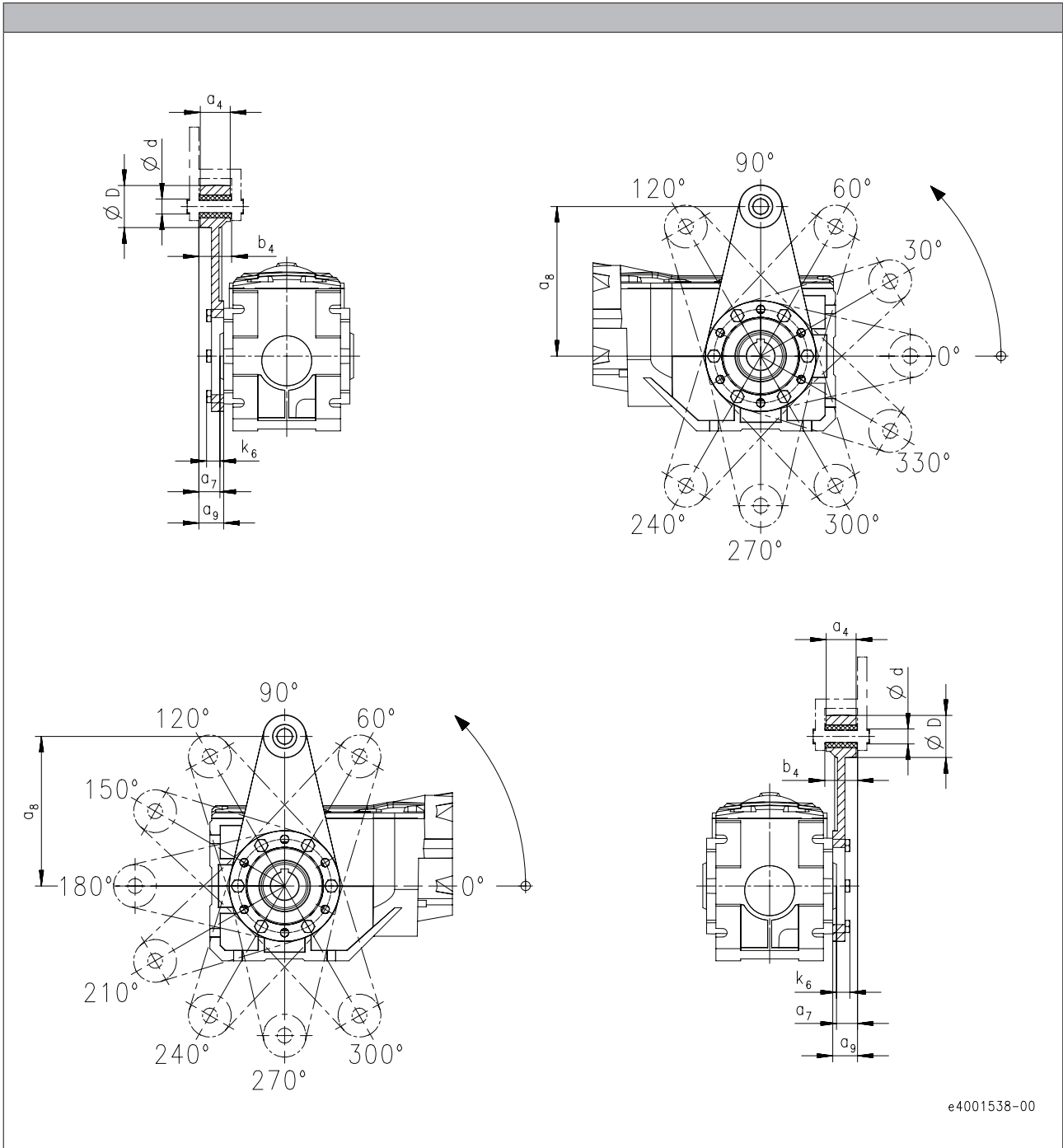
g500-B bevel gearbox

Product extensions



Torque plate

Torque plate on threaded pitch circle



| Product | Dimensions | | | | | | | | Mass |
|-----------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------|-----------|------------------------|-----------|
| | a ₄ [mm] | a ₇ [mm] | a ₈ [mm] | a ₉ [mm] | b ₄ [mm] | d [mm] | D [mm] | k ₆ [mm] | m [kg] |
| g500-B240 | 34.0 | 23.5 | 160 | 27.5 | 38.5 | 16.0 | 45.0 | 15.0 | 1.3 |
| g500-B450 | 40.0 | 29.0 | 200 | 32.0 | 44.5 | 20.0 | 50.0 | 18.0 | 2.5 |

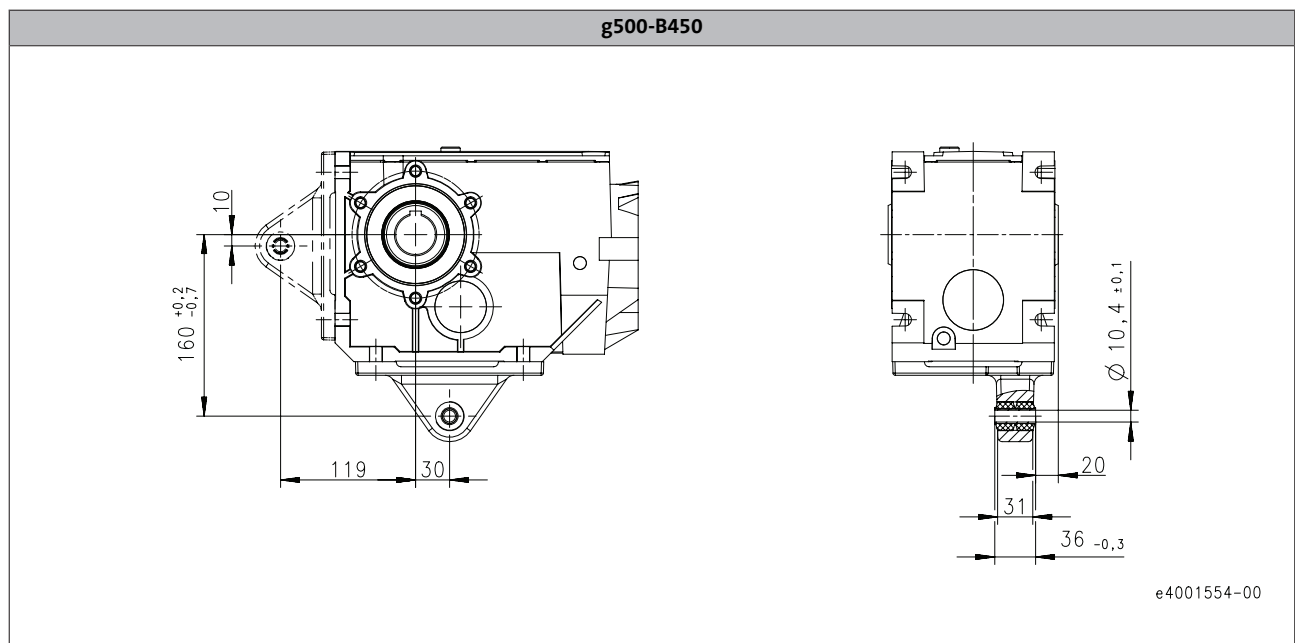
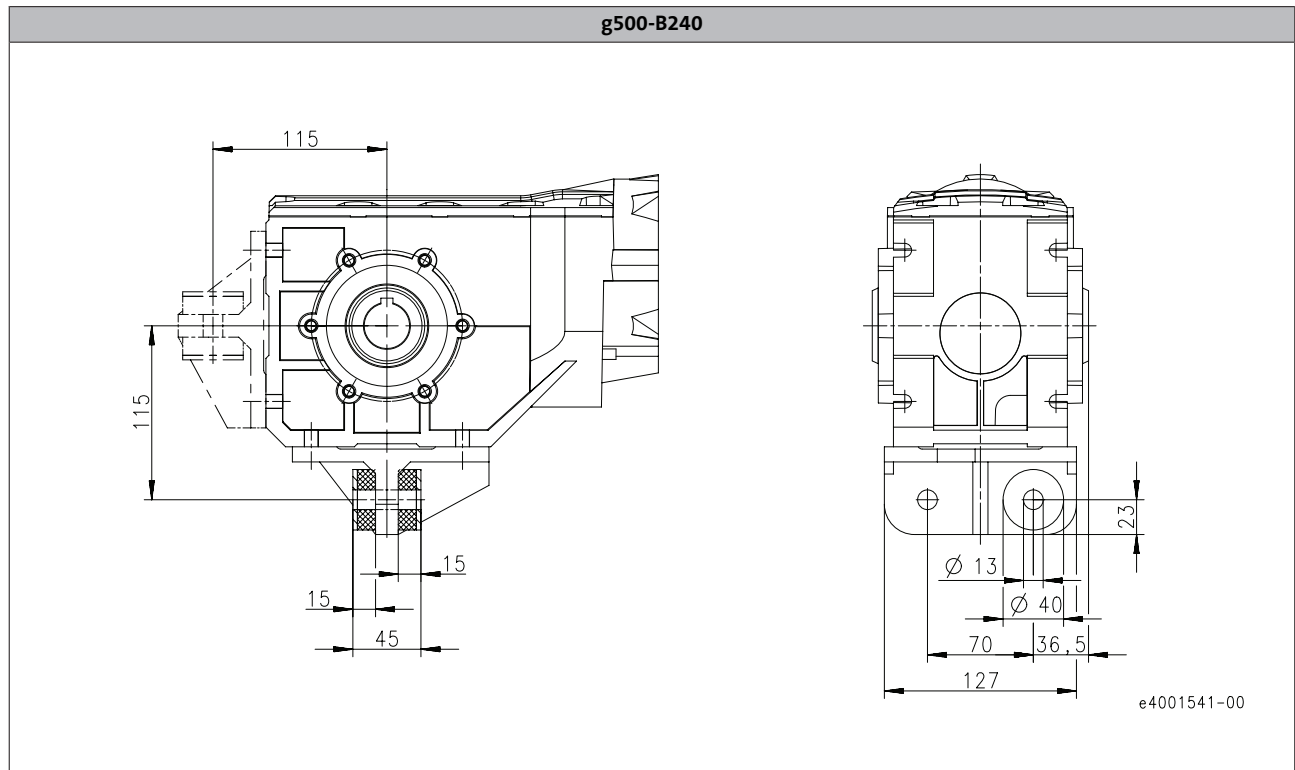
g500-B bevel gearbox

Product extensions



Torque plate

Torque plate at housing foot



6.5

| Product | Mass |
|-----------|------|
| | m |
| | [kg] |
| g500-B240 | 2.4 |
| g500-B450 | 1.1 |

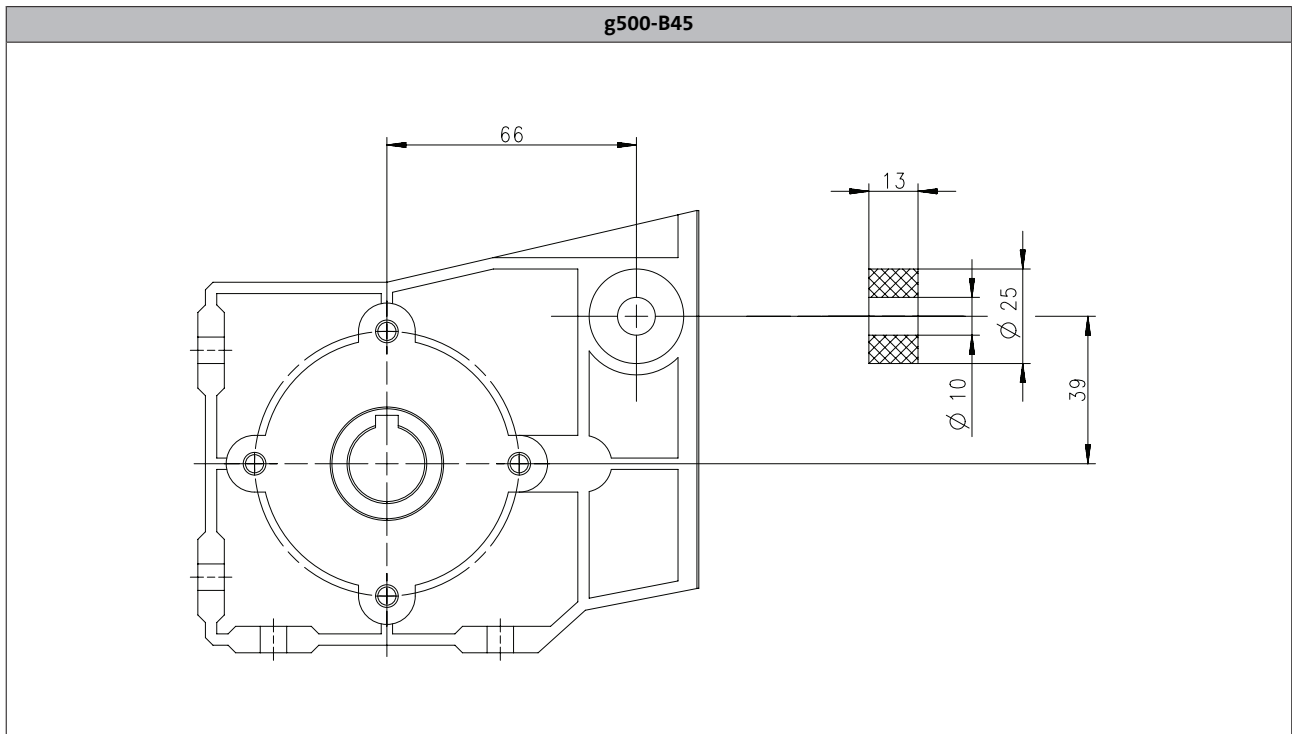
g500-B bevel gearbox

Product extensions



Torque plate

Rubber buffer for torque plate



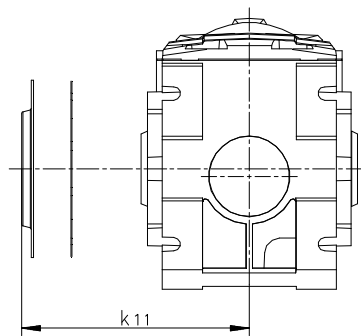


Shaft cover

Hoseproof hollow shaft cover

The cover protects the hollow shaft from objects falling in. It is sealed by a flat gasket between cover and housing. Thus, the hollow shaft is protected from dust and water jets.

The cover is loosely enclosed and can be mounted on both sides of the hollow shaft bore.



| Product | Dimensions | Mass |
|-----------|------------|------|
| | k_{11} | m |
| | [mm] | [kg] |
| g500-B45 | 55.0 | 0.1 |
| g500-B110 | 65.0 | 0.1 |
| g500-B240 | 75.0 | 0.1 |
| g500-B450 | 79.5 | 0.2 |

g500-B bevel gearbox

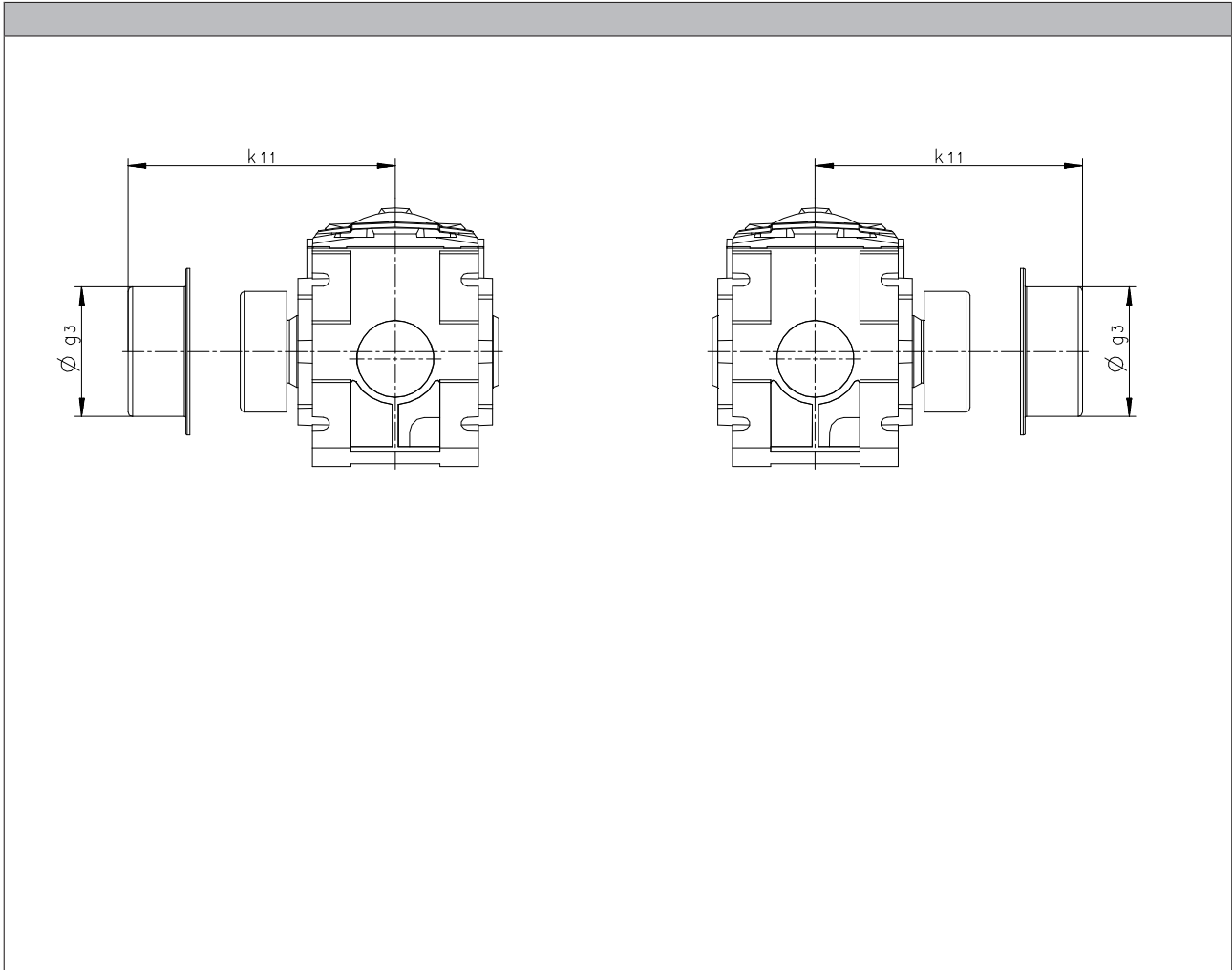
Product extensions



Shaft cover

Shrink disc cover

The cover is provided for the shrink disc to be protected from contact.



| Product | Dimensions | | Mass |
|-----------|---------------|------------------|-----------|
| | g_3 [mm] | k_{11} [mm] | m [kg] |
| g500-B45 | 65.0 | 87.5 | 0.1 |
| g500-B110 | 79.0 | 97.5 | 0.1 |
| g500-B240 | 90.0 | 111 | 0.1 |
| g500-B450 | 90.0 | 108 | 0.1 |

g500-B bevel gearbox

Product extensions



g500-B bevel geared motors

Appendix



Gearbox code

| Example | G | 50 | A | B | 045 | M | H | B | R | 2 | C |
|------------------|---------|----|---|---|-----|---|---|---|---|---|---|
| Meaning | Variant | | | | | | | | | | |
| Product family | G | 50 | | | | | | | | | |
| Generation | | | A | | | | | | | | |
| | | | B | | | | | | | | |
| Gearbox type | | | | B | | | | | | | |
| Output torque | | | | | 045 | | | | | | |
| | | | | | 111 | | | | | | |
| | | | | | 124 | | | | | | |
| | | | | | 145 | | | | | | |
| Mounting | | | | | | M | | | | | |
| Shaft type | | | | | | | V | | | | |
| | | | | | | | H | | | | |
| | | | | | | | S | | | | |
| Housing type | | | | | | | | A | | | |
| | | | | | | | | B | | | |
| | | | | | | | | C | | | |
| Flange mounting | | | | | | | | | R | | |
| | | | | | | | | | k | | |
| Number of stages | | | | | | | | | | 2 | |
| | | | | | | | | | | 3 | |
| Motor mounting | | | | | | | | | | | C |
| | | | | | | | | | | | N |

g500-B bevel geared motors

Appendix



Motor code

| Example | M | D | E | MA | XX | 063 | - | 4 | 2 | C1 | C |
|----------------------|---------|---------------------------------------|------------|----|----|-----|---|---|---|----|---|
| Meaning | Variant | | Motor code | | | | | | | | |
| Product family | M | | | | | | | | | | |
| Efficiency class | | D | | | | | | | | | |
| Cooling | | | S | | | | | | | | |
| | | | E | | | | | | | | |
| | | | F | | | | | | | | |
| Internal key | | | | MA | | | | | | | |
| Built-on accessories | | Without built-on accessories | | | XX | | | | | | |
| | | Brake | | | BR | | | | | | |
| | | Brake + resolver | | | BS | | | | | | |
| | | Brake + incremental encoder | | | BI | | | | | | |
| | | Brake + SinCos absolute value encoder | | | BA | | | | | | |
| | | Resolver | | | RS | | | | | | |
| | | Incremental encoder | | | IG | | | | | | |
| | | SinCos absolute value encoder | | | AG | | | | | | |
| Size | | | | | | 063 | | | | | |
| | | | | | | 071 | | | | | |
| Overall length | | | | | | | | 0 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 4 | | | |
| Number of pole pairs | | 4-pole motors | | | | | | | 2 | | |
| | | 2-pole motors | | | | | | | 1 | | |
| Internal key | | | | | | | | | | C1 | |
| Approval | | CE | | | | | | | | | C |
| | | cURus | | | | | | | | | U |
| | | CCC | | | | | | | | | 3 |

g500-B bevel geared motors

Appendix



Motor code

| Meaning | Variant | Motor code | | | | | | | | | |
|----------------------|------------------------|----------------|--------|----|----|---|---|---|---|---|---|
| Example | M55A | P | 080 | M | 04 | 5 | E | 0 | 0 | W | T |
| Efficiency class | Premium - IE3 | P | | | | | | | | | |
| Size | | 080 | | | | | | | | | |
| | | 090 | | | | | | | | | |
| | | 100 | | | | | | | | | |
| | | 112 | | | | | | | | | |
| | | 132 | | | | | | | | | |
| | | 160 | | | | | | | | | |
| | | 180 | | | | | | | | | |
| | | 200 | | | | | | | | | |
| | | 225 | | | | | | | | | |
| | | Overall length | Medium | | M | | | | | | |
| Long | | | L | | | | | | | | |
| Very long | | | V | | | | | | | | |
| Number of poles | 4-pole | | | 04 | | | | | | | |
| Degree of protection | IP55 | | | | 5 | | | | | | |
| Cooling | Integral fan | | | | | | E | | | | |
| | Blower | | | | | | F | | | | |
| Brake attachment | Without brake | | | | | | | 0 | | | |
| | Spring-applied brake | | | | | | | F | | | |
| Actual value encoder | Without encoder | | | | | | | | 0 | | |
| | Resolver | | | | | | | | R | | |
| | Absolute value encoder | | | | | | | | A | | |
| | Incremental encoder | | | | | | | | E | | |
| Approval | CE UL | | | | | | | | | R | |
| | CE UL-CSA | | | | | | | | | U | |
| | CE CSA | | | | | | | | | S | |
| | CE | | | | | | | | | C | |
| | CE CCC | | | | | | | | | 3 | |
| | none | | | | | | | | | N | |
| | UL-CSA | | | | | | | | | V | |
| | CCC | | | | | | | | | 4 | |
| | CE UL-CSA CCC | | | | | | | | | W | |
| | UL-CSA CCC | | | | | | | | | Y | |
| Design type | Internal key | | | | | | | | | | T |

g500-B bevel gearbox

Appendix



Motor data



Motor data

Contents



| | | |
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Motor data

Technical data



Rated data for 50 Hz

4-pole motors

| Product | P_N | n_N | n_{max} | $U_{N,\Delta}$ | $I_{N,\Delta}$ | $U_{N,Y}$ | $I_{N,Y}$ | I_a/I_N |
|---------------|-------|---------|-----------|----------------|----------------|------------|-----------|-----------|
| | | | | $\pm 10\%$ | | $\pm 10\%$ | | |
| | [kW] | [r/min] | [r/min] | [V] | [A] | [V] | [A] | |
| MD□MA□□063-02 | 0.060 | 1425 | 4500 | 230 | 0.42 | 400 | 0.24 | 3.5 |
| MD□MA□□063-22 | 0.090 | 1375 | 4500 | 230 | 0.48 | 400 | 0.28 | 2.9 |
| MD□MA□□063-12 | 0.12 | 1425 | 4500 | 230 | 0.85 | 400 | 0.49 | 3.1 |
| MD□MA□□063-32 | 0.18 | 1365 | 4500 | 230 | 1.00 | 400 | 0.58 | 2.7 |
| MD□MA□□063-42 | 0.25 | 1370 | 4500 | 230 | 1.40 | 400 | 0.82 | 2.9 |
| MD□MA□□071-32 | 0.37 | 1410 | 4500 | 230 | 1.60 | 400 | 0.95 | 3.3 |
| MD□MA□□071-42 | 0.55 | 1405 | 4500 | 230 | 2.40 | 400 | 1.40 | 3.5 |

| Product | M_N | M_a | M_b | $\cos \phi$ | $\eta_{75\%}$ | $\eta_{100\%}$ | $J^{1)}$ | $m^{1)}$ |
|---------------|-------|-------|-------|-------------|---------------|----------------|----------------------|----------|
| | [Nm] | [Nm] | [Nm] | | [%] | [%] | [kgcm ²] | [kg] |
| MD□MA□□063-02 | 0.40 | 1.30 | 1.36 | 0.57 | 59.0 | 63.0 | 3.30 | 3.90 |
| MD□MA□□063-22 | 0.63 | 1.30 | 1.39 | 0.71 | 63.0 | 65.0 | 3.30 | 3.90 |
| MD□MA□□063-12 | 0.80 | 2.50 | 2.64 | 0.56 | 58.0 | 63.0 | 3.30 | 4.10 |
| MD□MA□□063-32 | 1.26 | 2.50 | 2.61 | 0.70 | 63.0 | 64.0 | 3.30 | 4.10 |
| MD□MA□□063-42 | 1.74 | 3.80 | 4.10 | 0.67 | 65.0 | 66.0 | 3.70 | 4.40 |
| MD□MA□□071-32 | 2.51 | 4.76 | 5.81 | 0.77 | 73.0 | 73.0 | 10.7 | 5.80 |
| MD□MA□□071-42 | 3.74 | 7.85 | 9.12 | 0.77 | 74.0 | 74.0 | 12.8 | 6.40 |

¹⁾ Without accessories

Motor data

Technical data



Rated data for 50 Hz

4-pole motors

| Product | P_N | n_N | n_{max} | $U_{N,\Delta}$ | $I_{N,\Delta}$ | $U_{N,Y}$ | $I_{N,Y}$ | I_a/I_N |
|--------------|-------|---------|-----------|----------------|----------------|-----------|-----------|-----------|
| | [kW] | [r/min] | [r/min] | [V] | [A] | [V] | [A] | |
| m550-P80/M4 | 0.75 | 1450 | 4500 | 230 | 2.80 | 400 | 1.60 | 7.8 |
| m550-P90/M4 | 1.10 | 1444 | 4500 | 230 | 4.10 | 400 | 2.40 | 7.2 |
| m550-P90/L4 | 1.50 | 1442 | 4500 | 230 | 5.70 | 400 | 3.30 | 8.0 |
| m550-P100/M4 | 2.20 | 1452 | 4500 | 230 | 7.20 | 400 | 4.20 | 7.3 |
| m550-P100/L4 | 3.00 | 1449 | 4500 | 230 | 9.70 | 400 | 5.60 | 7.0 |
| m550-P112/M4 | 4.00 | 1453 | 4500 | 230 | 13.5 | 400 | 7.80 | 9.0 |
| m550-P132/M4 | 5.50 | 1460 | 4500 | 230 | 18.4 | 400 | 10.6 | 8.5 |
| m550-P132/L4 | 7.50 | 1477 | 4500 | 230 | 25.5 | 400 | 14.7 | 7.3 |

| Product | M_N | M_a | M_b | $\cos \phi$ | $\eta_{50\%}$ | $\eta_{75\%}$ | $\eta_{100\%}$ | $J^{1)}$ | $m^{1)}$ |
|--------------|-------|-------|-------|-------------|---------------|---------------|----------------|----------------------|----------|
| | [Nm] | [Nm] | [Nm] | | [%] | [%] | [%] | [kgcm ²] | [kg] |
| m550-P80/M4 | 4.90 | 16.0 | 17.6 | 0.80 | 81.7 | 83.9 | 82.5 | 26.8 | 15.0 |
| m550-P90/M4 | 7.27 | 21.8 | 26.9 | 0.80 | 81.5 | 84.1 | 85.0 | 48.1 | 20.0 |
| m550-P90/L4 | 9.93 | 31.8 | 39.7 | 0.79 | 82.4 | 84.9 | 85.0 | 51.8 | 21.0 |
| m550-P100/M4 | 14.5 | 36.3 | 56.6 | 0.88 | 86.0 | 87.3 | 87.0 | 99.4 | 31.0 |
| m550-P100/L4 | 19.8 | 47.5 | 69.3 | 0.88 | 85.8 | 87.2 | 88.0 | 111 | 33.0 |
| m550-P112/M4 | 26.3 | 65.1 | 96.0 | 0.84 | 87.3 | 88.3 | 88.6 | 112 | 36.0 |
| m550-P132/M4 | 36.0 | 119 | 137 | 0.84 | 88.6 | 90.3 | 89.6 | 300 | 57.0 |
| m550-P132/L4 | 48.5 | 155 | 213 | 0.83 | 89.7 | 90.5 | 90.4 | 340 | 69.0 |

¹⁾ Without accessories

Motor data

Technical data



Rated data for 87 Hz

4-pole motors

| Product | P_N | n_N | n_{max} | M_N | M_{max} | $U_{N,\Delta}$ | $I_{N,\Delta}$ |
|---------------|-------|---------|-----------|-------|-----------|----------------|----------------|
| | | | | | | $\pm 10\%$ | |
| | [kW] | [r/min] | [r/min] | [Nm] | [Nm] | [V] | [A] |
| MD□MA□□063-02 | 0.11 | 2535 | 4500 | 0.40 | 1.60 | 400 | 0.42 |
| MD□MA□□063-22 | 0.16 | 2485 | 4500 | 0.63 | 2.50 | 400 | 0.48 |
| MD□MA□□063-12 | 0.21 | 2535 | 4500 | 0.80 | 3.20 | 400 | 0.85 |
| MD□MA□□063-32 | 0.33 | 2475 | 4500 | 1.26 | 5.00 | 400 | 1.00 |
| MD□MA□□063-42 | 0.45 | 2480 | 4500 | 1.74 | 7.00 | 400 | 1.40 |
| MD□MA□□071-32 | 0.66 | 2520 | 4500 | 2.51 | 10.0 | 400 | 1.60 |
| MD□MA□□071-42 | 1.00 | 2515 | 4500 | 3.74 | 15.0 | 400 | 2.40 |

| Product | $\cos \phi$ | $\eta_{75\%}$ | $\eta_{100\%}$ | $J^{1)}$ | $m^{1)}$ |
|---------------|-------------|---------------|----------------|----------------------|----------|
| | | [%] | [%] | [kgcm ²] | [kg] |
| MD□MA□□063-02 | 0.55 | 62.0 | 67.0 | 3.30 | 3.90 |
| MD□MA□□063-22 | 0.67 | 66.0 | 70.0 | 3.30 | 3.90 |
| MD□MA□□063-12 | 0.52 | 61.0 | 66.0 | 3.30 | 4.10 |
| MD□MA□□063-32 | 0.65 | 68.0 | 71.0 | 3.30 | 4.10 |
| MD□MA□□063-42 | 0.63 | 66.0 | 73.0 | 3.70 | 4.40 |
| MD□MA□□071-32 | 0.72 | 76.0 | 78.0 | 10.7 | 5.80 |
| MD□MA□□071-42 | 0.74 | 79.0 | 80.0 | 12.8 | 6.40 |

¹⁾ Without accessories

Motor data

Technical data



Rated data for 87 Hz

4-pole motors

| Product | P_N | n_N | n_{max} | M_N | M_{max} | $U_{N, \Delta}$ | $I_{N, \Delta}$ |
|--------------|-------|---------|-----------|-------|-----------|-----------------|-----------------|
| | [kW] | [r/min] | [r/min] | [Nm] | [Nm] | [V] | [A] |
| m550-P80/M4 | 1.35 | 2560 | 4500 | 5.10 | 20.0 | 400 | 3.00 |
| m550-P90/M4 | 1.90 | 2550 | 4500 | 7.20 | 29.0 | 400 | 4.20 |
| m550-P90/L4 | 2.60 | 2552 | 4500 | 9.90 | 40.0 | 400 | 5.70 |
| m550-P100/M4 | 3.90 | 2562 | 4500 | 14.5 | 58.0 | 400 | 7.20 |
| m550-P100/L4 | 5.20 | 2559 | 4500 | 19.6 | 78.0 | 400 | 9.70 |
| m550-P112/M4 | 7.35 | 2565 | 4500 | 27.2 | 109 | 400 | 14.0 |
| m550-P132/M4 | 9.60 | 2570 | 4500 | 36.0 | 144 | 400 | 19.9 |
| m550-P132/L4 | 13.1 | 2587 | 4500 | 48.5 | 194 | 400 | 25.5 |

| Product | $\cos \phi$ | $\eta_{50\%}$ | $\eta_{75\%}$ | $\eta_{100\%}$ | $J^{1)}$ | $m^{1)}$ |
|--------------|-------------|---------------|---------------|----------------|----------------------|----------|
| | | [%] | [%] | [%] | [kgcm ²] | [kg] |
| m550-P80/M4 | 0.77 | 81.3 | 84.9 | 86.1 | 26.8 | 15.0 |
| m550-P90/M4 | 0.75 | 85.6 | 87.0 | 87.4 | 48.1 | 20.0 |
| m550-P90/L4 | 0.79 | 86.3 | 88.1 | 88.5 | 51.8 | 21.0 |
| m550-P100/M4 | 0.88 | 87.3 | 89.9 | 90.4 | 99.4 | 31.0 |
| m550-P100/L4 | 0.88 | 87.1 | 89.6 | 90.5 | 111 | 33.0 |
| m550-P112/M4 | 0.84 | 87.5 | 89.5 | 90.6 | 112 | 36.0 |
| m550-P132/M4 | 0.78 | 88.0 | 90.0 | 89.6 | 300 | 57.0 |
| m550-P132/L4 | 0.82 | 88.4 | 90.4 | 90.4 | 340 | 69.0 |

¹⁾ Without accessories

Motor data

Technical data



Motor – inverter assignment

Rated frequency 50/60 Hz

- ▶ Decentralised inverter 8400 motec (E84DVB)
- ▶ Inverter Drives 8400 (E84AV)

| Rated power | Product | Product key | |
|-------------|---------------|-------------------|-----------------|
| | | Inverter | |
| P_N | | | |
| [kW] | | | |
| 0.12 | MD□MA□□063-12 | | E84AV□□□2512□□0 |
| 0.18 | MD□MA□□063-32 | | |
| 0.25 | MD□MA□□063-42 | | |
| 0.37 | MD□MA□□071-32 | E84DVB□3714S□□□2□ | E84AV□□□3714□□0 |
| 0.55 | MD□MA□□071-42 | E84DVB□5514S□□□2□ | E84AV□□□5514□□0 |
| 0.75 | m550-P80/M4 | E84DVB□7514S□□□2□ | E84AV□□□7514□□0 |
| 1.10 | m550-P90/M4 | E84DVB□1124S□□□2□ | E84AV□□□1124□□0 |
| 1.50 | m550-P90/L4 | E84DVB□1524S□□□2□ | E84AV□□□1524□□0 |
| 2.20 | m550-P100/M4 | E84DVB□2224S□□□2□ | E84AV□□□2224□□0 |
| 3.00 | m550-P100/L4 | E84DVB□3024S□□□2□ | E84AV□□□3024□□0 |
| 4.00 | m550-P112/M4 | E84DVB□4024S□□□2□ | E84AV□□□4024□□0 |
| 5.50 | m550-P132/M4 | E84DVB□5524S□□□2□ | E84AV□□□5524□□0 |
| 7.50 | m550-P132/L4 | E84DVB□7524S□□□2□ | E84AV□□□7524□□0 |

Motor data

Technical data



Motor – inverter assignment

Rated frequency 87 Hz

- ▶ Decentralised inverter 8400 motec (E84DVB)
- ▶ Inverter Drives 8400 (E84AV)

| Rated power | Product | Product key | |
|-------------|---------------|-------------------|-----------------|
| | | Inverter | |
| P_N | | | |
| [kW] | | | |
| 0.21 | MD□MA□□063-12 | E84DVB□5514S□□□2□ | E84AV□□□5514□□0 |
| 0.33 | MD□MA□□063-32 | | |
| 0.45 | MD□MA□□063-42 | | |
| 0.66 | MD□MA□□071-32 | E84DVB□7514S□□□2□ | E84AV□□□7514□□0 |
| 1.00 | MD□MA□□071-42 | E84DVB□1124S□□□2□ | E84AV□□□1124□□0 |
| 1.35 | m550-P80/M4 | E84DVB□1524S□□□2□ | E84AV□□□1524□□0 |
| 1.90 | m550-P90/M4 | E84DVB□2224S□□□2□ | E84AV□□□2224□□0 |
| 2.60 | m550-P90/L4 | E84DVB□3024S□□□2□ | E84AV□□□3024□□0 |
| 3.90 | m550-P100/M4 | E84DVB□4024S□□□2□ | E84AV□□□4024□□0 |
| 5.20 | m550-P100/L4 | E84DVB□5524S□□□2□ | E84AV□□□5524□□0 |
| 7.35 | m550-P112/M4 | E84DVB□7524S□□□2□ | E84AV□□□7524□□0 |
| 9.60 | m550-P132/M4 | | E84AV□□□1134□□0 |
| 13.1 | m550-P132/L4 | | E84AV□□□1534□□0 |

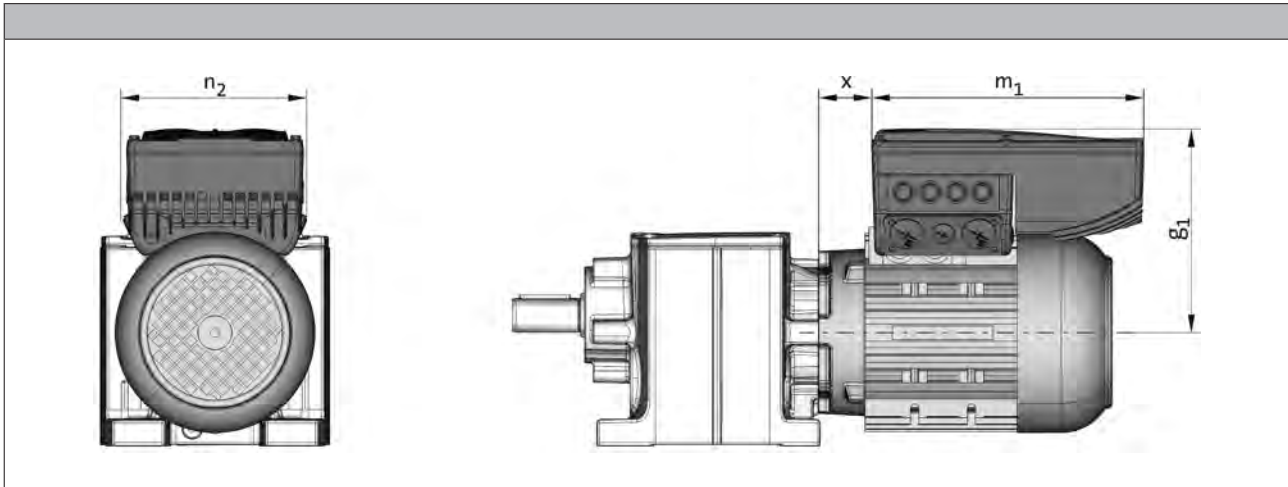
Motor data

Technical data



Dimensions, 8400 motec inverter

Rated frequency 50/60 Hz



| Product | Product key Inverter | Dimensions | | | |
|---------------|-------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------------|
| | | g ₁ , 50Hz [mm] | m ₁ , 50Hz [mm] | n ₂ , 50Hz [mm] | x _{50Hz} [mm] |
| MD□MA□□071-32 | E84DVB□3714S□□□2□ | 163 | 241 | 161 | 17.0 |
| MD□MA□□071-42 | E84DVB□5514S□□□2□ | | | | 29.0 |
| m550-P80/M4 | E84DVB□7514S□□□2□ | 49.0 | | | |
| m550-P90/M4 | E84DVB□1124S□□□2□ | 57.0 | | | |
| m550-P90/L4 | E84DVB□1524S□□□2□ | 236 | 260 | 176 | 40.0 |
| m550-P100/M4 | E84DVB□2224S□□□2□ | | | | 52.0 |
| m550-P100/L4 | E84DVB□3024S□□□2□ | 297 | 325 | 195 | |
| m550-P112/M4 | E84DVB□4024S□□□2□ | | | | |
| m550-P132/M4 | E84DVB□5524S□□□2□ | | | | |
| m550-P132/L4 | E84DVB□7524S□□□2□ | | | | |

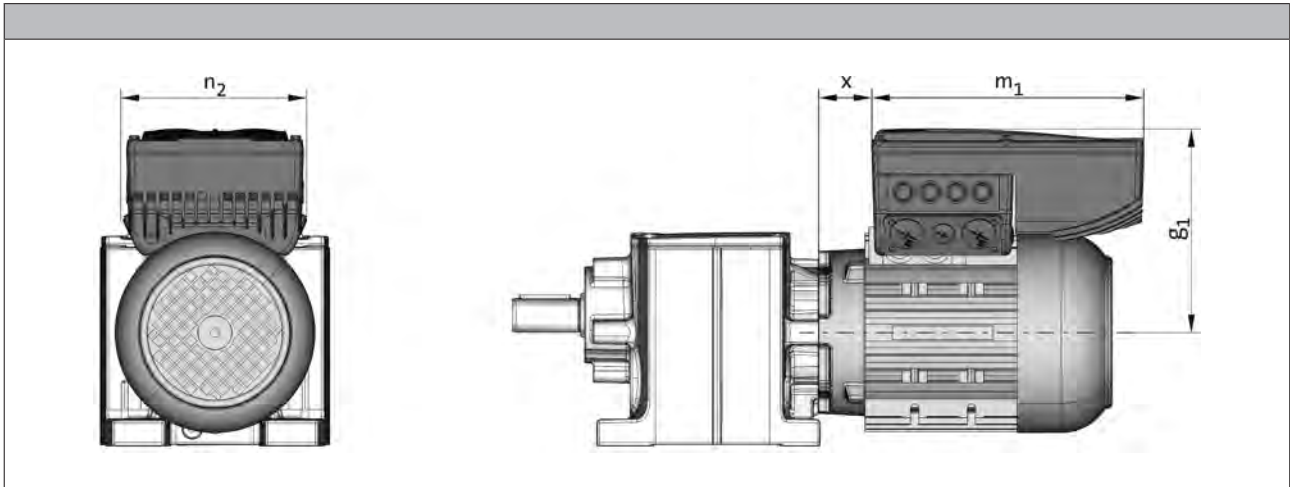
Motor data

Technical data



Dimensions, 8400 motec inverter

Rated frequency 87 Hz



| Product | Product key Inverter | Dimensions | | | |
|---------------|-------------------------|------------------------------|------------------------------|------------------------------|---------------------------|
| | | g _{1, 87Hz} [mm] | m _{1, 87Hz} [mm] | n _{2, 87Hz} [mm] | x _{87Hz} [mm] |
| MD□MA□□063-32 | E84DVB□3714S□□□2□ | 154 | 241 | 161 | 14.8 |
| MD□MA□□063-42 | E84DVB□5514S□□□2□ | | | | 17.0 |
| MD□MA□□071-32 | E84DVB□7514S□□□2□ | 163 | | | 29.0 |
| MD□MA□□071-42 | E84DVB□1124S□□□2□ | 190 | 260 | 176 | 47.0 |
| m550-P80/M4 | E84DVB□1524S□□□2□ | 227 | | | 44.0 |
| m550-P90/M4 | E84DVB□2224S□□□2□ | 279 | 325 | 195 | 40.0 |
| m550-P90/L4 | E84DVB□3024S□□□2□ | | | | |
| m550-P100/M4 | E84DVB□4024S□□□2□ | | | | |
| m550-P100/L4 | E84DVB□5524S□□□2□ | | | | |
| m550-P112/M4 | E84DVB□7524S□□□2□ | | | | |

Motor data

Technical data



Motor data

Product extensions



Motor connection

The IE3 three-phase AC motors m550 are intended for inverter operation; mains operation, however, is also possible.

For 50 Hz operation, the motors are to be actuated in Δ connection with 230 V or in star/delta connection with 400 V.

For 60 Hz operation, the motors are to be actuated in star/delta connection with 460 V.

For inverter operation at 87 Hz, a rated voltage of 400 V in Δ connection has been defined.

The standard connection is implemented via a terminal box. Furthermore ICN and HAN connectors are provided to quickly carry out commissioning or maintenance operations.

Overview of the connection options

| Product | MD□MA□□063-02 MD□MA□□063-22 MD□MA□□063-12 MD□MA□□063-32 MD□MA□□063-42 | MD□MA□□071-32 MD□MA□□071-42 |
|--|---|--------------------------------|
| Power connection/brake connection | | |
| Terminal box | ● | ● |
| ICN connector | ● | ● |
| HAN-10E connector | ● | ● |
| HAN modular connector | ● | ● |
| Feedback connection | | |
| Terminal box | ● | ● |
| ICN connector | ● | ● |
| Connector M12 ¹⁾ | ● | ● |
| Blower connection | | |
| Terminal box | ● | ● |
| ICN connector | ● | ● |
| Temperature sensor connection | | |
| Terminal box | ● | ● |
| ICN connector ²⁾ | ● | ● |
| HAN-10E connector | ● | ● |
| HAN modular connector | ● | ● |

¹⁾ Connection for IG128-24V-H incremental encoder

²⁾ TCO or PTC connected in the power connection and KTY connected in the feedback connection.

Motor data

Product extensions



Motor connection

Overview of the connection options

| Product | m550-P80/M4 | m550-P90/M4 m550-P90/L4 | m550-P100/M4 m550-P100/L4 | m550-P112/M4 | m550-P132/M4 m550-P132/L4 |
|--|-------------|----------------------------|------------------------------|--------------|------------------------------|
| Power connection/brake connection | | | | | |
| Terminal box | ● | ● | ● | ● | ● |
| ICN connector | ● | ● | ● | ● | ● |
| HAN-10E connector | ● | ● | ● | ● | |
| HAN modular connector | ● | ● | ● | ● | ● |
| Feedback connection | | | | | |
| Terminal box | ● | ● | ● | ● | ● |
| ICN connector | ● | ● | ● | ● | ● |
| Connector M12 ¹⁾ | ● | ● | ● | ● | ● |
| Blower connection | | | | | |
| Terminal box | ● | ● | ● | ● | ● |
| ICN connector | ● | ● | ● | ● | ● |
| Temperature sensor connection | | | | | |
| Terminal box | ● | ● | ● | ● | ● |
| ICN connector ²⁾ | ● | ● | ● | ● | ● |
| HAN-10E connector | ● | ● | ● | ● | |
| HAN modular connector | ● | ● | ● | ● | ● |

¹⁾ Connection for IG128-24V-H incremental encoder

²⁾ TCO or PTC connected in the power connection and KTY connected in the feedback connection.

Motor data

Product extensions



Motor connection

Overview of the connection options

| Product | m550-P160/M4 m550-P160/L4 | m550-P180/M4 m550-P180/L4 m550-P180/V4 | m550-P200/M4 | m550-P225/M4 m550-P225/L4 |
|--|------------------------------|--|--------------|------------------------------|
| Power connection/brake connection | | | | |
| Terminal box | ● | ● | ● | ● |
| ICN connector | | | | |
| HAN-10E connector | | | | |
| HAN modular connector | ● | | | |
| Feedback connection | | | | |
| Terminal box | ● | ● | ● | ● |
| ICN connector | | | | |
| Connector M12 ¹⁾ | ● | ● | ● | ● |
| Blower connection | | | | |
| Terminal box | ● | ● | ● | ● |
| ICN connector | ● | ● | ● | ● |
| Temperature sensor connection | | | | |
| Terminal box | ● | ● | ● | ● |
| ICN connector ²⁾ | | | | |
| HAN-10E connector | | | | |
| HAN modular connector | ● | | | |

¹⁾ Connection for IG128-24V-H incremental encoder

²⁾ TCO or PTC connected in the power connection and KTY connected in the feedback connection.

Motor data

Product extensions



Motor connection

Assignment: motor terminal box - built-on accessories

- Depending on the motor version, terminal boxes of different sizes (KK1 ... KK3) are used.

| Product | MD□MA□□063-02 MD□MA□□063-22 MD□MA□□063-12 MD□MA□□063-32 MD□MA□□063-42 | MD□MA□□071-32 MD□MA□□071-42 |
|--|---|--|
| Built-on accessories with 1 thermal sensor | | |
| Without | KK1 KK1 + ICN HAN-10E HAN modular | KK1 KK1 + ICN HAN-10E HAN modular |
| Feedback | KK2 KK2 + ICN | KK2 KK2 + ICN |
| Brake | KK2 KK2 + ICN HAN-10E HAN modular | KK2 KK2 + ICN HAN-10E HAN modular |
| Brake + Feedback | KK3 KK2 + ICN | KK3 KK2 + ICN |
| Built-on accessories with 2 thermal sensors | | |
| Without | KK2 | KK2 |
| Feedback | KK2 | KK2 |
| Brake (2-pole terminal) | KK2 | KK2 |
| Brake (rectifier) | KK3 | KK3 |
| Brake + Feedback | KK3 | KK3 |

Motor data

Product extensions



Motor connection

Assignment: motor terminal box - built-on accessories

- Depending on the motor version, terminal boxes of different sizes (KK1 ... KK4) are used.

| Product | m550-P80/M4 | m550-P90/M4 m550-P90/L4 | m550-P100/M4 m550-P100/L4 | m550-P112/M4 | m550-P132/M4 m550-P132/L4 |
|--|--|--|--|--|---------------------------------|
| Built-on accessories with 1 thermal sensor | | | | | |
| Without | KK1 KK1 + ICN HAN-10E HAN modular | KK1 KK1 + ICN HAN-10E HAN modular | KK1 KK1 + ICN HAN-10E HAN modular | KK1 KK1 + ICN HAN-10E HAN modular | KK3 KK3 + ICN HAN modular |
| Feedback | KK2 KK2 + ICN | KK2 KK2 + ICN | KK2 KK2 + ICN | KK2 KK2 + ICN | KK3 KK3 + ICN |
| Brake | KK2 KK2 + ICN HAN-10E HAN modular | KK2 KK2 + ICN HAN-10E HAN modular | KK2 KK2 + ICN HAN-10E HAN modular | KK2 KK2 + ICN HAN-10E HAN modular | KK3 KK3 + ICN HAN modular |
| Brake + Feedback | KK3 KK2 + ICN | KK3 KK2 + ICN | KK3 KK2 + ICN | KK3 KK2 + ICN | KK3 KK3 + ICN |
| Built-on accessories with 2 thermal sensors | | | | | |
| Without | KK2 | KK2 | KK2 | KK2 | KK3 |
| Feedback | KK2 | KK2 | KK2 | KK2 | KK3 |
| Brake (2-pole terminal) | KK2 | KK2 | KK2 | KK2 | KK3 |
| Brake (rectifier) | KK3 | KK3 | KK3 | KK3 | KK3 |
| Brake + Feedback | KK3 | KK3 | KK3 | KK3 | KK3 |
| Product | m550-P160/M4 m550-P160/L4 | m550-P180/M4 m550-P180/L4 m550-P180/V4 | m550-P200/M4 | m550-P225/M4 m550-P225/L4 | |
| Built-on accessories with 1 thermal sensor | | | | | |
| Without | KK4 HAN modular | KK4 | KK4 | KK4 | |
| Feedback | KK4 | KK4 | KK4 | KK4 | |
| Brake | KK4 HAN modular | KK4 | KK4 | KK4 | |
| Brake + Feedback | KK4 | KK4 | KK4 | KK4 | |
| Built-on accessories with 2 thermal sensors | | | | | |
| Without | KK4 | KK4 | KK4 | KK4 | |
| Feedback | KK4 | KK4 | KK4 | KK4 | |
| Brake (2-pole terminal) | KK4 | KK4 | KK4 | KK4 | |
| Brake (rectifier) | KK4 | KK4 | KK4 | KK4 | |
| Brake + Feedback | KK4 | KK4 | KK4 | KK4 | |

Motor data

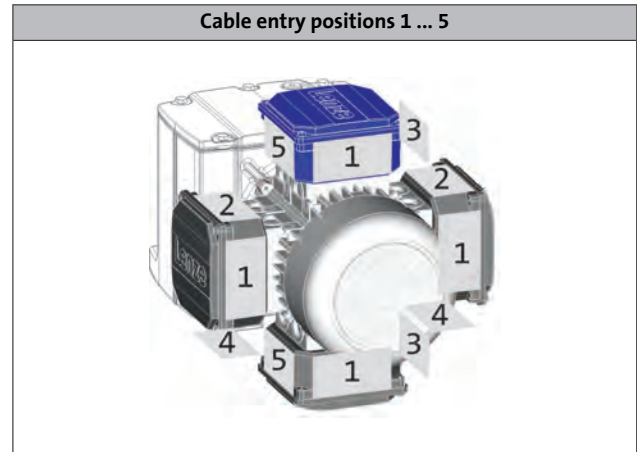
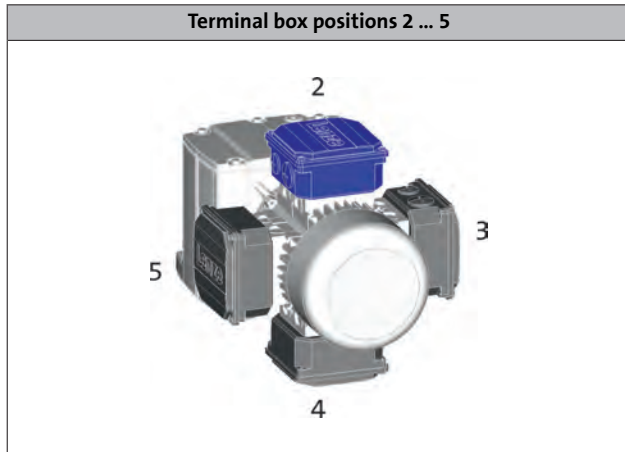
Product extensions



Motor connection

Position of cable entry/connector

For geared motors, the position of the cable entry must be selected as a function of the terminal box position.



| Terminal box position | 2 | 3 | 4 | 5 |
|-----------------------|-----------------------|--------|--------|--------|
| | Cable entry positions | | | |
| KK1 | 1/3/5* | 1/2*/4 | 1/3*/5 | 1/2/4* |
| KK2 | 3+5 | 2+4 | 3+5 | 2+4 |
| KK3 | 3+5 | 2+4 | 3+5 | 2+4 |
| HAN | 1/3/5 | 1/2/4 | 1/3/5 | 1/2/4 |
| | Connector position | | | |
| KK1 + ICN | 1/3/5* | 1/2*/4 | 1/3*/5 | 1/2/4* |
| KK2 + ICN | 3/5* | 2*/4 | 3/5* | 2/4* |

- ▶ If preferred positions are not specified in the order, the cable entry will be positioned as indicated by * on the diagram below.
- ▶ If preferred positions are not specified in the order, the connector will be positioned as indicated by * on the diagram below.

Motor data

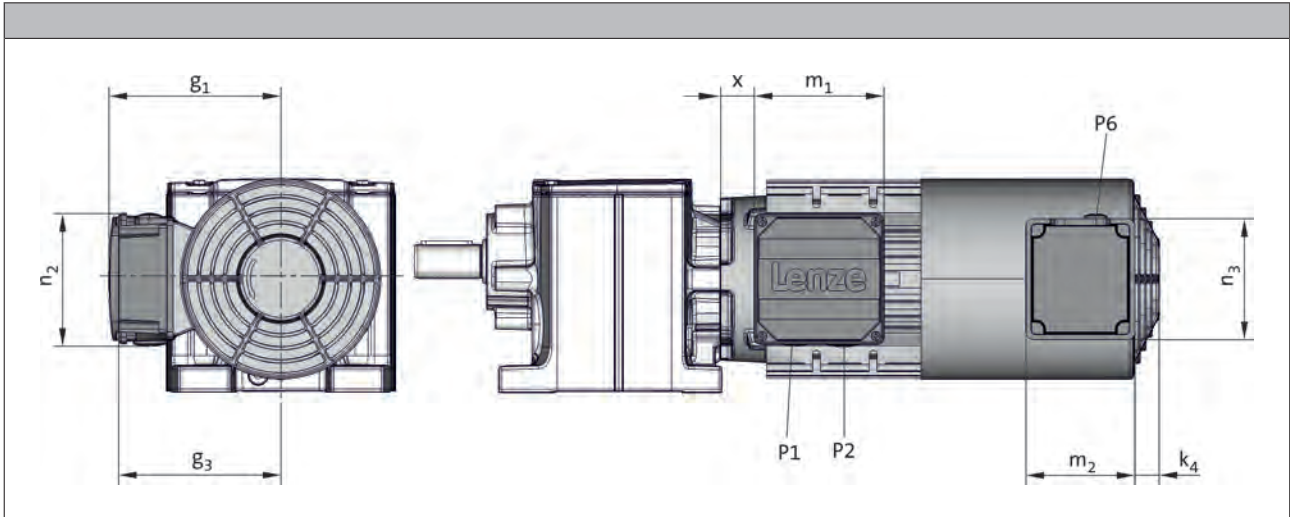
Product extensions



Connection via terminal box

Dimensions of KK1

The connection in the terminal box is implemented by means of conventional cable glands.



| Product | | | MD□MA□□ | | m550 | | | |
|------------|-------|------|------------|--------|---------|---------|----------|----------|
| | | | 063-02 | 071-42 | -P80/M4 | -P90/L4 | -P100/L4 | -P112/M4 |
| | | | 063-12 | 071-32 | | -P90/M4 | -P100/M4 | |
| | | | 063-22 | | | | | |
| | | | 063-32 | | | | | |
| | | | 063-42 | | | | | |
| Dimensions | | | | | | | | |
| | x | [mm] | 17.0 | 20.0 | 17.0 | 38.0 | 48.0 | 44.0 |
| | g_1 | [mm] | 100 | 109 | 149 | 156 | 165 | 173 |
| | m_1 | [mm] | 75.0 | | 115 | | | |
| | n_2 | [mm] | 75.0 | | 115 | | | |
| | P_1 | [mm] | M16x1.5 | | M20x1.5 | | | |
| | P_2 | [mm] | M20x1.5 | | M25x1.5 | | | |
| | k_4 | [mm] | 12 | | 13 | 22 | | |
| | g_3 | [mm] | 115 | 122 | 132 | 141 | 150 | 162 |
| | m_2 | [mm] | 95 | | | | | |
| | n_3 | [mm] | 105 | | | | | |
| | P_6 | [mm] | 1x M16x1.5 | | | | | |

Motor data

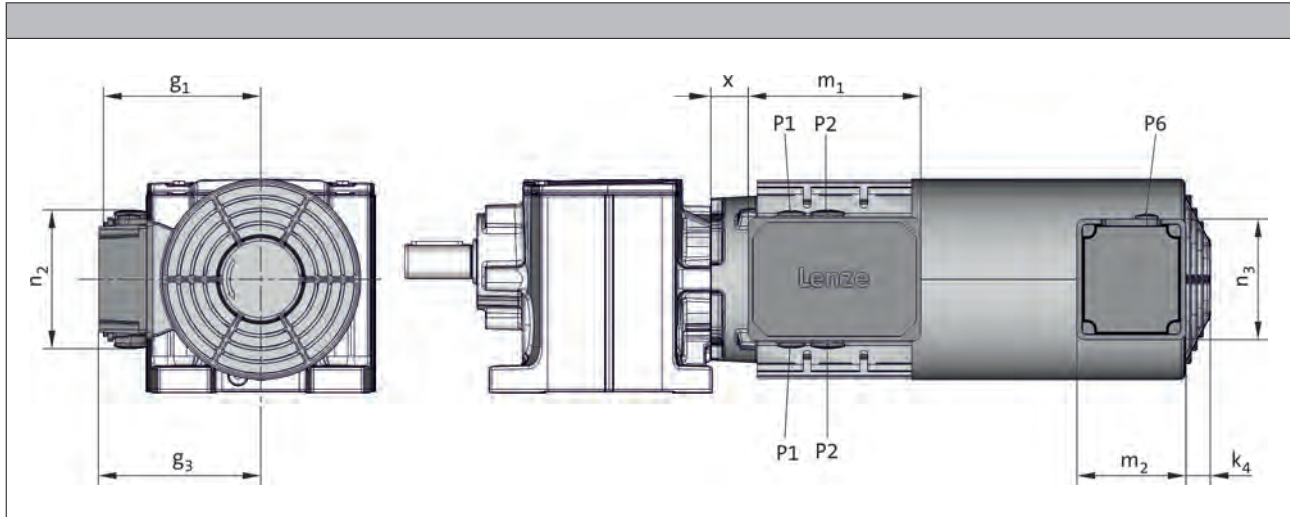
Product extensions



Connection via terminal box

Dimensions of KK2

The connection in the terminal box is implemented by means of conventional cable glands.



| Product | | | MD□MA□□ | | m550 | | | |
|------------|----------------|------|--|------------------|---------|--------------------|----------------------|----------|
| | | | 063-02 063-12 063-22 063-32 063-42 | 071-42 071-32 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 |
| Dimensions | | | | | | | | |
| | x | [mm] | 9.00 | 11.0 | 20.0 | 41.0 | 51.0 | 47.0 |
| | g ₁ | [mm] | 107 | 118 | 137 | 144 | 153 | 161 |
| | m ₁ | [mm] | 136 | | 152 | | | |
| | n ₂ | [mm] | 103 | | 121 | | | |
| | P ₁ | [mm] | M16x1.5 | | M20x1.5 | | | |
| | P ₂ | [mm] | M20x1.5 | | M25x1.5 | | | |
| | k ₄ | [mm] | 12 | | 13 | 22 | | |
| | g ₃ | [mm] | 115 | 122 | 132 | 141 | 150 | 162 |
| | m ₂ | [mm] | 95 | | | | | |
| | n ₃ | [mm] | 105 | | | | | |
| | P ₆ | [mm] | 1x M16x1.5 | | | | | |

Motor data

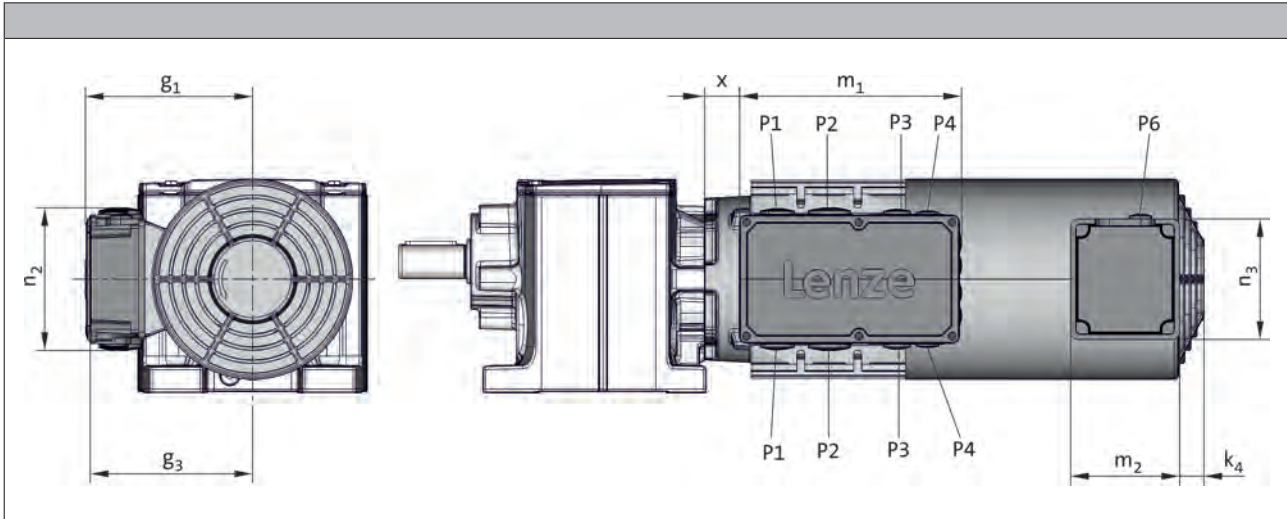
Product extensions



Connection via terminal box

Dimensions of KK3

The connection in the terminal box is implemented by means of conventional cable glands.



| Product | | | MD□MA□□ | | m550 | | | | | |
|------------|----------------|------|--|------------------|---------|--------------------|----------------------|----------|----------------------|--|
| | | | 063-02 063-12 063-22 063-32 063-42 | 071-32 071-42 | -P80/M4 | -P90/L4 -P90/M4 | -P100/L4 -P100/M4 | -P112/M4 | -P132/L4 -P132/M4 | |
| Dimensions | | | | | | | | | | |
| | x | [mm] | -2.000 | 1.00 | 19.0 | 40.0 | 50.0 | 46.0 | 76.0 | |
| | g ₁ | [mm] | 124 | 133 | 147 | 154 | 163 | 171 | 182 | |
| | m ₁ | [mm] | 195 | | 198 | | | | | |
| | n ₂ | [mm] | 125 | | | | | | | |
| | P ₁ | [mm] | M25x1.5 | | | | | | | |
| | P ₂ | [mm] | M32x1.5 | | | | | | | |
| | P ₃ | [mm] | M20x1.5 | | | | | | | |
| | P ₄ | [mm] | M20x1.5 | | | | | | | |
| | k ₄ | [mm] | 12 | | 13 | | 22 | | 32 | |
| | g ₃ | [mm] | 115 | 122 | 132 | 141 | 150 | 162 | 182 | |
| | m ₂ | [mm] | 95 | | | | | | | |
| | n ₃ | [mm] | 105 | | | | | | | |
| | P ₆ | [mm] | 1x M16x1.5 | | | | | | | |

Motor data

Product extensions



Connections via ICN connectors

A connector is used for the power connection, connection of the brake, and the temperature monitoring connection. The feedback and blower connections are implemented via a separate connector in each case.

Connection for power, brake and temperature monitoring

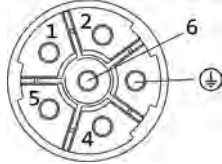
For the power connection of the connector, a max. rated motor current of 16 A is permissible. The connectors can be rotated by 270° and are equipped with a bayonet catch for SpeedTec connectors. As the connector fixing is also compatible with conventional box nuts, existing mating connectors can still be used without difficulty. The motor connection is determined in the terminal box.



► ICN 6-pole

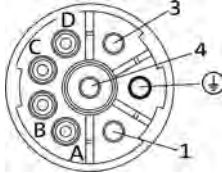
No connection of temperature monitoring possible!

| Pin assignment | | |
|----------------|-------------|---------------|
| Contact | Designation | Meaning |
| 1 | BD1 / BA1 | Brake +/AC |
| 2 | BD2 / BA2 | Brake -/AC |
| PE | PE | PE conductor |
| 4 | U | Phase U power |
| 5 | V | Phase V power |
| 6 | W | Phase W power |



► ICN 8-pole

| Pin assignment | | |
|----------------|----------------|-------------------------------|
| Contact | Designation | Meaning |
| 1 | U | Phase U power |
| PE | PE | PE conductor |
| 3 | W | Phase W power |
| 4 | V | Phase V power |
| A | TB1 / TP1 / R1 | Thermal sensor: TKO/PTC/ +KTY |
| B | TB2 / TP2 / R2 | Thermal sensor: TKO/PTC/-KTY |
| C | BD1 / BA1 | Brake +/AC |
| D | BD2 / BA2 | Brake -/AC |



Motor data

Product extensions



Connections via ICN connectors

Blower connection

The blower is also optionally available with an ICN connector fixed to the terminal box of the blower for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing counter plugs can therefore continue to be used without difficulty.



For the blower, the terminal box cover including the connector can be rotated by 90 ° step by step, if required.

► Blower 1-ph

| Pin assignment | | | |
|----------------|--------------|--------------|--|
| Contact | Designation | Meaning | |
| PE | PE | PE conductor | |
| 1 | U1 | Fan | |
| 2 | U2 | | |
| 3 | Not assigned | Not assigned | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

► Blower 3-ph

| Pin assignment | | | |
|----------------|--------------|---------------|--|
| Contact | Designation | Meaning | |
| PE | PE | PE conductor | |
| 1 | U | Phase U power | |
| 2 | | Not assigned | |
| 3 | V | Phase V power | |
| 4 | Not assigned | Not assigned | |
| 5 | | | |
| 6 | W | Phase W power | |

Motor data

Product extensions



Connections via ICN connectors

Feedback connection

All encoder systems (apart from IG128-24V-H) are also available with an ICN connector fixed to the motor terminal box for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing mating connectors can therefore continue to be used without difficulty.

The feedback connector is located on the terminal box side opposite to the power connection



► Resolver

| Pin assignment | | |
|----------------|-------------|------------------------------|
| Contact | Designation | Meaning |
| 1 | +Ref | Transformer windings |
| 2 | -Ref | |
| 3 | +VCC ETS | Supply: Electronic nameplate |
| 4 | +COS | Cosine stator windings |
| 5 | -COS | |
| 6 | +SIN | Sine stator windings |
| 7 | -SIN | |
| 8 | | Not assigned |
| 9 | | |
| 10 | | |
| 11 | +KTY | KTY temperature sensor |
| 12 | -KTY | |

► Hiperface incremental encoder and SinCos absolute value encoder

| Pin assignment | | |
|----------------|-----------------|---------------------------|
| Contact | Designation | Meaning |
| 1 | B | Track B/+SIN |
| 2 | A ⁻ | Track A inverse/-COS |
| 3 | A | Track A/+COS |
| 4 | +U _B | Supply + |
| 5 | GND | Mass |
| 6 | Z ⁻ | Zero track inverse/-RS485 |
| 7 | Z | Zero track/+RS485 |
| 8 | | Not assigned |
| 9 | B ⁻ | Track B inverse/-SIN |
| 10 | | Not assigned |
| 11 | +KTY | KTY temperature sensor |
| 12 | -KTY | |

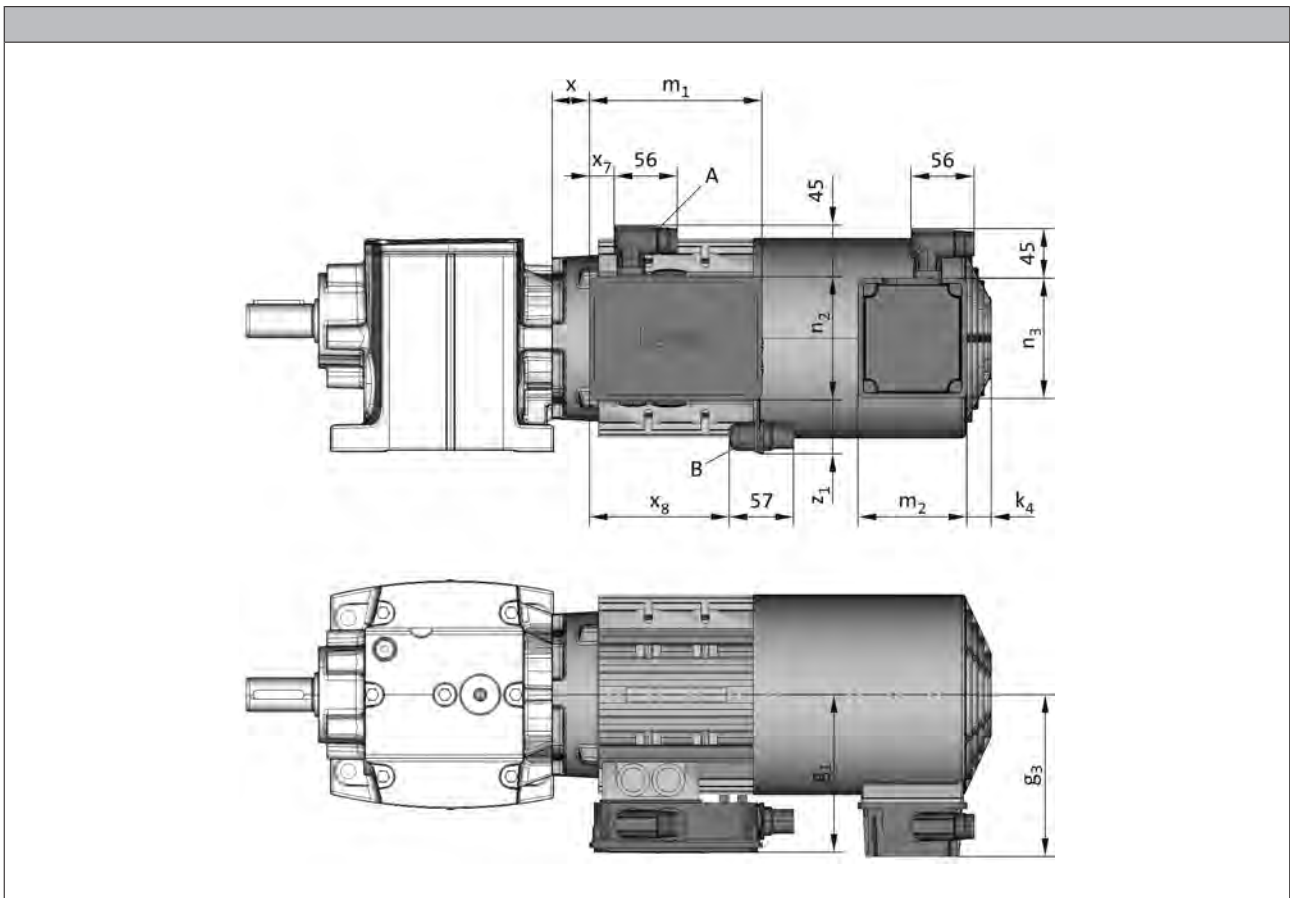
Motor data

Product extensions



Connections via ICN connectors

Dimensions KK1+ICN



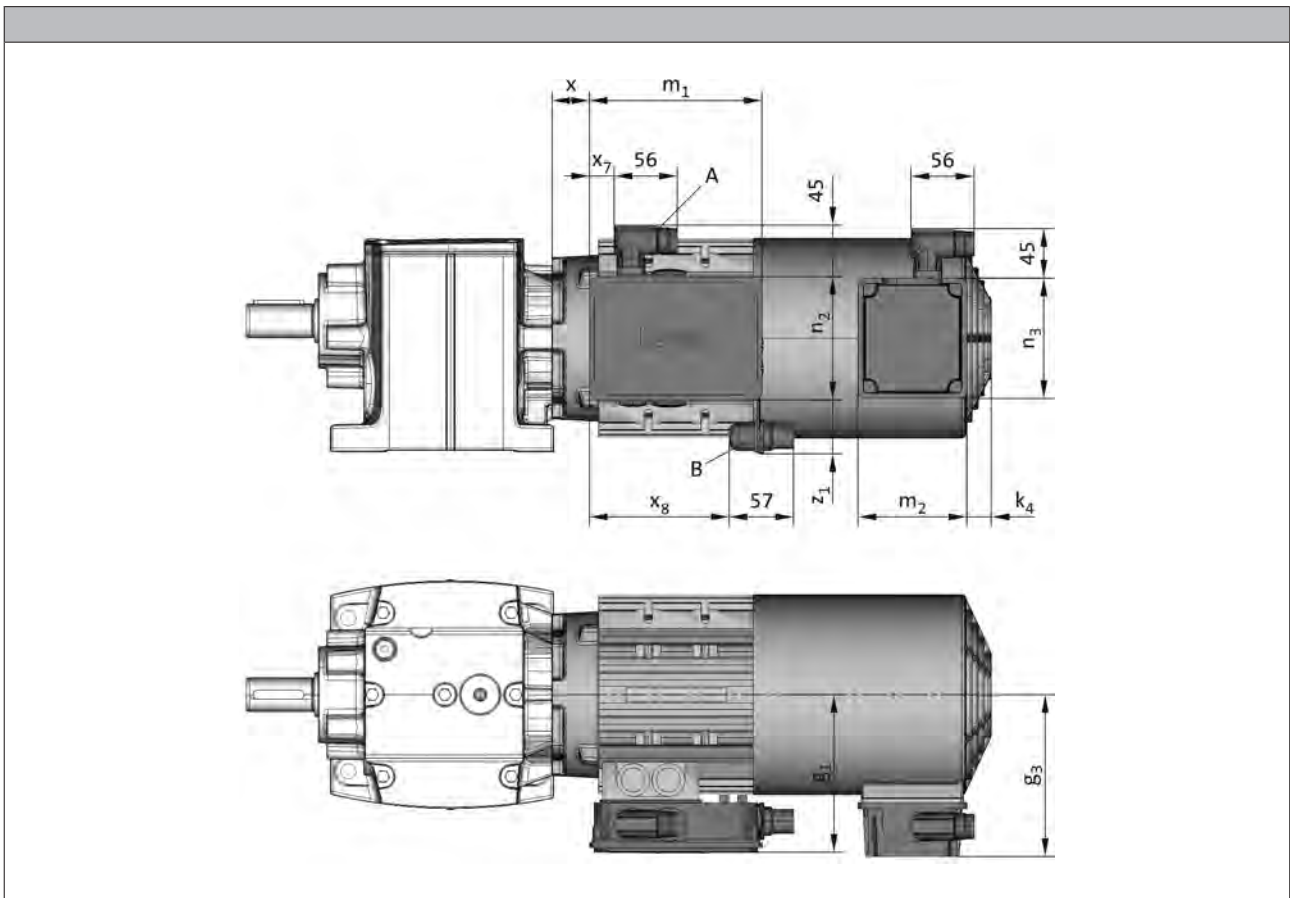
| Product | | | MD□MA□□ | | m550 | | | |
|------------|----------------|------|---------|--------|---------|---------|----------|----------|
| | | | 063-02 | 071-42 | -P80/M4 | -P90/L4 | -P100/L4 | -P112/M4 |
| | | | 063-12 | 071-32 | | -P90/M4 | -P100/M4 | |
| | | | 063-22 | | | | | |
| | | | 063-32 | | | | | |
| | | | 063-42 | | | | | |
| Dimensions | | | | | | | | |
| | x | [mm] | 17.0 | 20.0 | 17.0 | 38.0 | 48.0 | 44.0 |
| | g ₁ | [mm] | 100 | 109 | 149 | 156 | 165 | 173 |
| | m ₁ | [mm] | 75.0 | | 115 | | | |
| | n ₂ | [mm] | 75.0 | | 115 | | | |
| | x ₇ | [mm] | 16 | | 23 | | | |
| | k ₄ | [mm] | 12 | | 13 | 22 | | |
| | g ₃ | [mm] | 115 | 122 | 132 | 141 | 150 | 162 |
| | m ₂ | [mm] | 95 | | | | | |
| | n ₃ | [mm] | 105 | | | | | |

A= power connection
B= feedback connection (not for KK1)



Connections via ICN connectors

Dimensions KK2+ICN and KK3+ICN



| Product | | | MD□MA□□ | | m550 | | | | | | | | | | | | | | | | | | | |
|------------|--|--|---------|--------|----------------|---------|----------------|----------|----------------|------|----------------|------|----------------|------|---------------------|------|----------------|------|----------------|------|----------------|------|----------------|------|
| | | | 063-02 | 071-32 | -P80/M4 | -P90/L4 | -P100/L4 | -P112/M4 | -P132/L4 | | | | | | | | | | | | | | | |
| | | | 063-12 | 071-42 | | -P90/M4 | -P100/M4 | | -P132/M4 | | | | | | | | | | | | | | | |
| | | | 063-22 | | | | | | | | | | | | | | | | | | | | | |
| | | | 063-32 | | | | | | | | | | | | | | | | | | | | | |
| | | | 063-42 | | | | | | | | | | | | | | | | | | | | | |
| Dimensions | | | x | [mm] | g ₁ | [mm] | m ₁ | [mm] | n ₂ | [mm] | x ₇ | [mm] | x ₈ | [mm] | z _{1, max} | [mm] | k ₄ | [mm] | g ₃ | [mm] | m ₂ | [mm] | n ₃ | [mm] |
| | | | 9.00 | | 107 | | 136 | | 103 | | 16 | | 109 | | 43 | | 12 | | 115 | | | | | |
| | | | 11.0 | | 118 | | | | 121 | | | | | | 41 | | 13 | | 122 | | 95 | | | |
| | | | 20.0 | | 137 | | | | 125 | | | | | | | | 22 | | 132 | | | | | |
| | | | 41.0 | | 144 | | | | 152 | | | | | | | | | | 141 | | | | | |
| | | | 51.0 | | 153 | | | | 152 | | | | | | | | | | 150 | | | | | |
| | | | 47.0 | | 161 | | | | 125 | | | | | | | | | | 162 | | | | | |
| | | | 76.0 | | 182 | | | | 198 | | | | | | | | | | 182 | | | | | |

A= power connection
B= feedback connection (not for KK1)

Motor data

Product extensions




Connection via M12 connector

IG128-24V-H incremental encoder connection

As a standard this incremental encoder is equipped with a connection cable of about 0.5 m length and with a common industry standard M12 connector at its end.

| Pin assignment | | |
|----------------|-----------------|----------|
| Contact | Designation | Meaning |
| 1 | +U _B | Supply + |
| 2 | B | Track B |
| 3 | GND | Mass |
| 4 | A | Track A |



Motor data

Product extensions



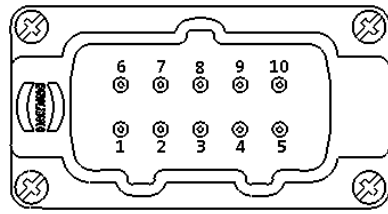
Connections via HAN connectors

10E

In the case of the rectangular HAN-10E connectors, all six ends of the three winding phases are taken out to the power contacts. The motor circuit is therefore determined in the mating connector.



| Pin assignment | |
|----------------|------------------------------|
| Contact | Meaning |
| 1 | Terminal board: U1 |
| 2 | Terminal board: V1 |
| 3 | Terminal board: W1 |
| 4 | Brake +/AC |
| 5 | Brake -/AC |
| 6 | Terminal board: W2 |
| 7 | Terminal board: U2 |
| 8 | Terminal board: V2 |
| 9 | Thermal sensor: +KTY/PTC/TKO |
| 10 | Thermal sensor: KTY/PTC/TKO |



Motor data

Product extensions



Connections via HAN connectors

HAN modular

The connector is available with two different power modules (16 A or 40 A), depending on the rated motor current. The motor connection is determined in the terminal box and must be checked before commissioning.



► HAN modular 16 A

| Pin assignment | | |
|----------------|-----------------------------|------------------------------|
| Module | Contact | Meaning |
| A | 1 | Terminal board: U1 |
| | 2 | Terminal board: V1 |
| | 3 | Terminal board: W1 |
| B | | Dummy module |
| C | 1 | Thermal sensor: +KTY/PTC/TKO |
| | 2 | Brake +/AC |
| | 3 | Brake -/AC |
| | 4 | Rectifier: Switching contact |
| | 5 | |
| 6 | Thermal sensor: KTY/PTC/TKO | |

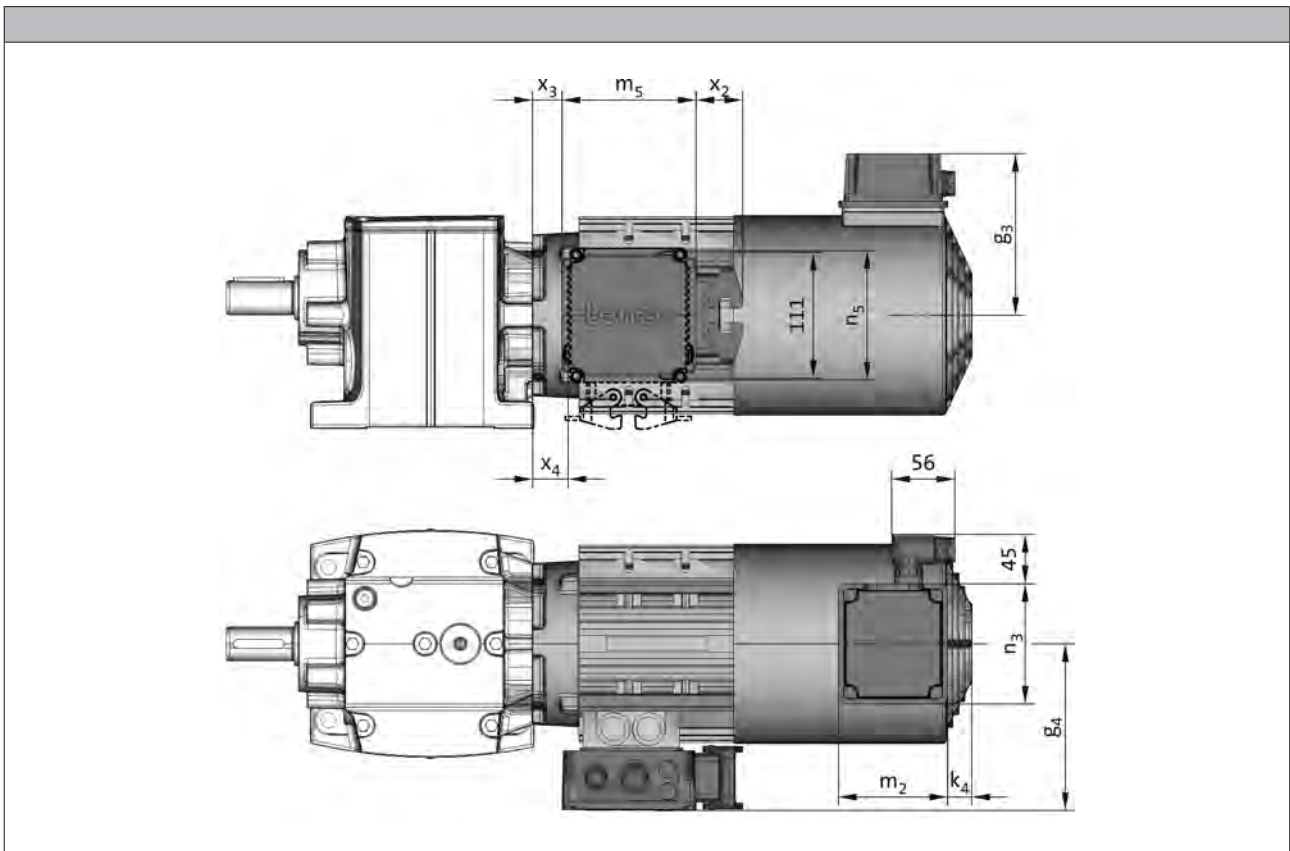
► HAN modular 40 A

| Pin assignment | | |
|----------------|-----------------------------|------------------------------|
| Module | Contact | Meaning |
| A | 1 | Terminal board: U1 |
| | 2 | Terminal board: V1 |
| | 3 | Terminal board: W1 |
| B | | Dummy module |
| C | 1 | Thermal sensor: +KTY/PTC/TKO |
| | 2 | Brake +/AC |
| | 3 | Brake -/AC |
| | 4 | Rectifier: Switching contact |
| | 5 | |
| 6 | Thermal sensor: KTY/PTC/TKO | |



Connections via HAN connectors

Dimensions



| Product | | | MD□MA□□ | | m550 | | | | | |
|------------|----------------|------|---------|--------|---------|---------|----------|----------|----------|-----|
| | | | 063-02 | 071-32 | -P80/M4 | -P90/L4 | -P100/L4 | -P112/M4 | -P132/L4 | |
| | | | 063-12 | 071-42 | | -P90/M4 | -P100/M4 | | -P132/M4 | |
| | | | 063-22 | | | | | | | |
| | | | 063-32 | | | | | | | |
| | | | 063-42 | | | | | | | |
| Dimensions | | | | | | | | | | |
| | g ₄ | [mm] | 120 | 129 | 148 | 152 | 161 | 169 | 227 | |
| | x ₃ | [mm] | 1.00 | 3.00 | 13.0 | 33.0 | 43.0 | 41.0 | 72.0 | |
| | x ₄ | [mm] | 2.00 | 4.00 | 17.0 | 37.0 | 47.0 | 44.0 | 42.0 | |
| | x ₂ | [mm] | 41 | | | | | | | 47 |
| | m ₅ | [mm] | 118 | | | | | | | 120 |
| | n ₅ | [mm] | 102 | | | | | | | 180 |
| | k ₄ | [mm] | 12 | | 13 | 22 | | | 32 | |
| | g ₃ | [mm] | 115 | 122 | 132 | 141 | 150 | 162 | 182 | |
| | m ₂ | [mm] | 95 | | | | | | | |
| | n ₃ | [mm] | 105 | | | | | | | |



Spring-applied brake

The three-phase AC motors can be equipped with a spring-applied brake which is active when the supply voltage has been switched off (closed-circuit principle). In the deenergised state, the brake is applied. This prevents possible movement of the motor shaft with regard to the load after switch-off or in the event of a power failure.

For optimum adaptation of the brake motor to the application, several brake sizes and control variants are provided for each motor.

Versions

- **Standard**
 - 1×10^6 repeating switching cycles
 - 1×10^6 reversing switching cycles
- **LongLife**
 - 10×10^6 repeating switching cycles
 - 15×10^6 reversing switching cycles

Braking torques

In addition to the standard braking torque, depending on the brake size, the possibility of choosing between a reduced and an increased braking torque is provided.

- When the braking torque is reduced, great wear reserves can be attained. This is enabled by a reduction of the spring rate.
- In order to obtain a greater braking torque, the spring rate is increased. This is practical, for instance, for hoists, since here the gravity acts as an additional acceleration in the negative direction.

Manual release

By using the manual release lever, the brake can be released manually in deenergised operating state. The manual release makes positioning and maintenance work easier.

Motor data

Product extensions



Spring-applied brake

Direct connection without rectifier

If the brake is activated directly without a rectifier, a freewheeling diode or a spark suppressor is required for protection against induction peaks.

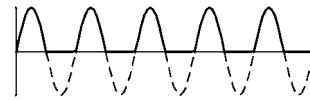
- Supply voltages
DC 24 V

Connection via mains voltage with brake rectifier

If the brake is not directly supplied with DC voltage, a rectifier is required. This is included in the scope of supply and is located in the terminal box of the motor. The rectifier converts the AC voltage of the connection into DC voltage. The following rectifiers are available:

Half-wave rectifier, 6-pole

- Supply voltage / brake coil voltage ratio = 2.22
- Approved by UL / CSA
- Supply voltages
AC 400 V
AC 460 V



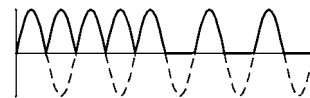
Bridge rectifier, 6-pole

- Ratio of supply voltage to brake coil voltage = 1.11
- Supply voltage
AC 230 V



Bridge/half-wave rectifier, 6-pole

- Supply voltage / brake coil voltage ratio up to the overexcitation time = 1.11
From the overexcitation time = 2.22
- Supply voltages
AC 230 V
AC 400 V



Motor data

Product extensions



Spring-applied brake

Assignment of 4-pole motors and brakes

| Design | Standard | | LongLife | |
|---|----------------------------|--------------------------------------|----------------------|-------------------------------|
| Product | Size Brake | Rated torque M_k [Nm] | Size Brake | Rated torque M_k [Nm] |
| MD□MA□□063-02 MD□MA□□063-12 MD□MA□□063-22 MD□MA□□063-32 MD□MA□□063-42 | 06 06 | 2.50 4.00 | 06 | 4.00 |
| MD□MA□□071-32 | 06 06 08 | 2.50 4.00 3.50 | 06 08 | 4.00 3.50 |
| MD□MA□□071-42 | 06 06 08 08 | 2.50 4.00 3.50 8.00 | 06 08 08 | 4.00 3.50 8.00 |
| m550-P80/M4 | 08 08 10 | 3.50 8.00 7.00 | 08 10 | 8.00 7.00 |
| m550-P90/M4 m550-P90/L4 | 08 08 10 10 10 | 3.50 8.00 7.00 16.0 23.0 | 08 10 10 | 8.00 7.00 16.0 |
| m550-P100/M4 | 10 10 12 12 | 7.00 16.0 14.0 32.0 | 10 12 12 | 16.0 14.0 32.0 |
| m550-P100/L4 | 10 10 12 12 12 | 7.00 16.0 14.0 32.0 46.0 | | |
| m550-P112/M4 | 12 12 14 14 | 14.0 32.0 35.0 60.0 | 14 14 16 16 | 35.0 60.0 60.0 80.0 |
| m550-P132/M4 | 14 14 16 16 | 35.0 60.0 60.0 80.0 | | |
| m550-P132/L4 | 14 14 16 16 16 | 35.0 60.0 60.0 80.0 100 | | |

Motor data

Product extensions



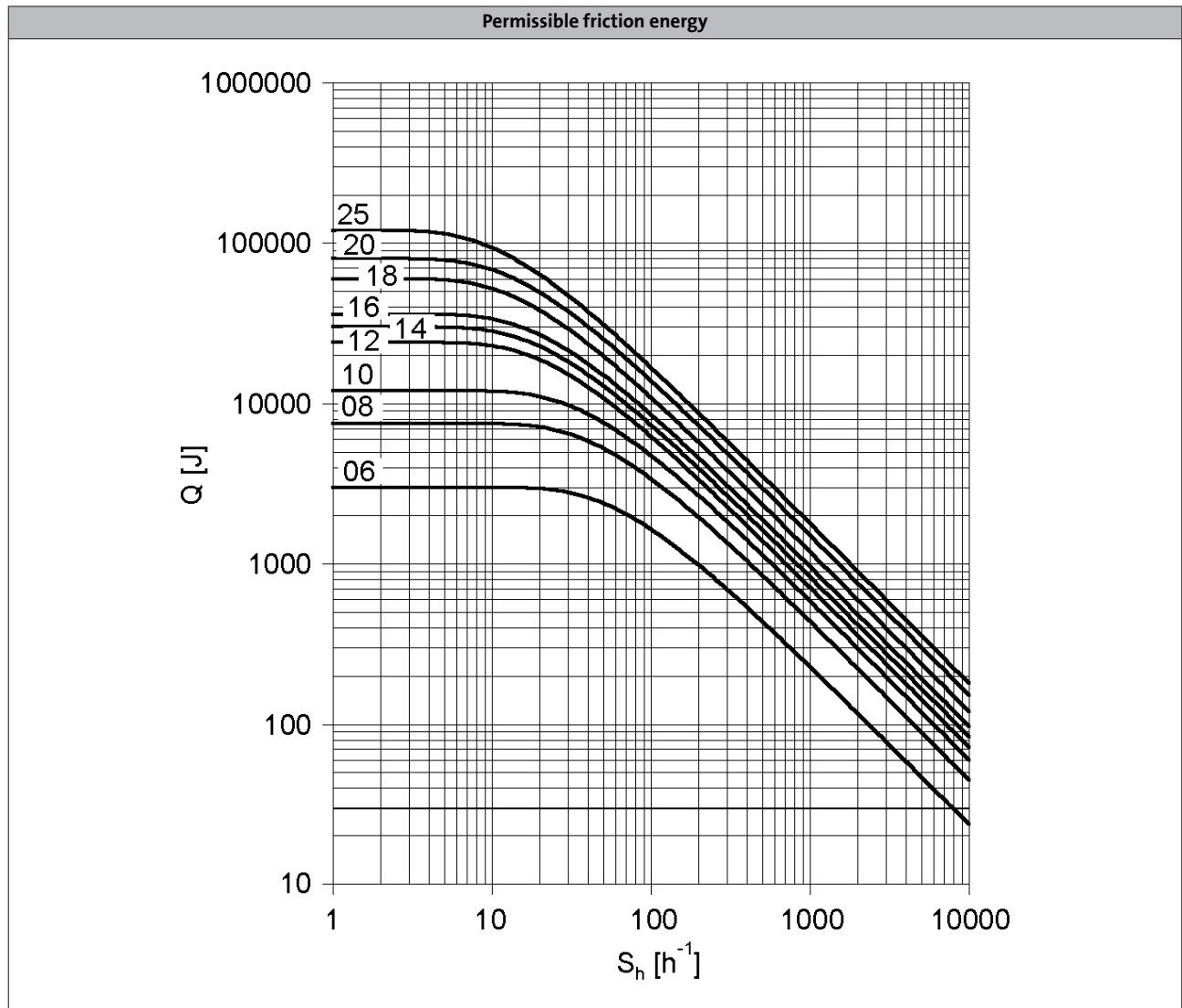
Spring-applied brake

Assignment of 4-pole motors and brakes

| Design | Standard | | LongLife | |
|------------------------------|----------|--------------|----------|--------------|
| Product | Size | Rated torque | Size | Rated torque |
| | Brake | | Brake | |
| | | M_k | | M_k |
| | | [Nm] | | [Nm] |
| m550-P160/M4 | 16 | 60.0 | | |
| | 16 | 80.0 | | |
| | 18 | 80.0 | | |
| | 18 | 150 | | |
| m550-P160/L4 | 18 | 80.0 | | |
| | 18 | 150 | | |
| | 18 | 200 | | |
| m550-P180/M4 | 18 | 80.0 | | |
| | 18 | 150 | | |
| | 20 | 145 | | |
| | 20 | 260 | | |
| m550-P180/L4 | 18 | 80.0 | | |
| | 18 | 150 | | |
| | 20 | 145 | | |
| | 20 | 260 | | |
| | 20 | 315 | | |
| m550-P180/V4 m550-P200/M4 | 18 | 80.0 | | |
| | 18 | 150 | | |
| | 20 | 145 | | |
| | 20 | 260 | | |
| | 20 | 315 | | |
| m550-P225/M4 | 25 | 265 | | |
| | 25 | 400 | | |
| | 25 | 490 | | |
| m550-P225/L4 | 25 | 265 | | |
| | 25 | 400 | | |
| | 25 | 490 | | |
| | 25 | 600 | | |



Spring-applied brake



Q = Switching energy per switching cycle

S_h = Operating frequency

Brake size = 06 to 25

Motor data

Product extensions



Spring-applied brake

Rated data with reduced braking torque

- ▶ In case of the braking torque and the maximum switching energy, the unit for the values (100 ... 3600) is rpm.
- ▶ Please enquire for braking torques and maximum switching work values not listed here.

| Size | | | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 25 |
|---------------------------------------|-----------------|----------------------|-------|-------|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Power input | | | | | | | | | | | |
| | P_{in} | [kW] | 0.020 | 0.025 | 0.030 | 0.040 | 0.050 | 0.055 | 0.085 | 0.10 | 0.11 |
| Braking torque | | | | | | | | | | | |
| 100 | M_B | [Nm] | 2.50 | 3.50 | 7.00 | 14.0 | 35.0 | 60.0 | 80.0 | 145 | 265 |
| 1000 | M_B | [Nm] | 2.30 | 3.10 | 6.10 | 12.0 | 30.0 | 50.0 | 65.0 | 115 | 203 |
| 1200 | M_B | [Nm] | 2.30 | 3.10 | 6.00 | 12.0 | 29.0 | 48.0 | 63.0 | 112 | 199 |
| 1500 | M_B | [Nm] | 2.20 | 3.00 | 5.80 | 11.0 | 28.0 | 47.0 | 61.0 | 109 ¹⁾ | 193 ¹⁾ |
| 1800 | M_B | [Nm] | 2.10 | 2.90 | 5.70 | 11.0 | 28.0 | 46.0 | 60.0 ¹⁾ | | |
| 3000 | M_B | [Nm] | 2.00 | 2.80 | 5.30 | 10.0 | 26.0 ¹⁾ | 43.0 ¹⁾ | | | |
| 3600 | M_B | [Nm] | 2.00 | 2.70 | 5.20 | 10.0 ¹⁾ | | | | | |
| Maximum switching energy | | | | | | | | | | | |
| 100 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 80.0 | 120 |
| 1000 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 80.0 | 120 |
| 1200 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 80.0 | 120 |
| 1500 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 24.0 ¹⁾ | 36.0 ¹⁾ |
| 1800 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 36.0 ¹⁾ | | |
| 3000 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 18.0 ¹⁾ | 11.0 ¹⁾ | | | |
| 3600 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 7.00 ¹⁾ | | | | | |
| Transition operating frequency | | | | | | | | | | | |
| | $S_{h\ddot{u}}$ | [1/h] | 79.0 | 50.0 | 40.0 | 30.0 | 28.0 | 27.0 | 20.0 | 19.0 | 15.0 |
| Moment of inertia | | | | | | | | | | | |
| | J | [kgcm ²] | 0.15 | 0.61 | 2.00 | 4.50 | 6.30 | 15.0 | 29.0 | 73.0 | 200 |
| Mass | | | | | | | | | | | |
| | m | [kg] | 0.90 | 1.50 | 2.60 | 4.20 | 5.80 | 8.70 | 12.6 | 19.5 | 31.0 |

¹⁾ In the region of the load limit the value for friction energy Q_{BW} can be reduced to 40 %.



Spring-applied brake

Rated data with reduced braking torque

- Activation via half-wave or bridge rectifier

| Size | | | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 25 |
|---------------------------|----------|------|------|------|------|------|------|------|------|------|------|
| Friction energy | Q_{BW} | [MJ] | 113 | 210 | 264 | 706 | 761 | 966 | 1542 | 2322 | 3522 |
| Delay time | | | | | | | | | | | |
| Engaging | t_{11} | [ms] | 11.0 | 14.0 | 20.0 | 21.0 | 37.0 | 53.0 | 32.0 | 47.0 | 264 |
| Rise time | | | | | | | | | | | |
| Braking torque | t_{12} | [ms] | 13.0 | 10.0 | 17.0 | 19.0 | 22.0 | 30.0 | 20.0 | 100 | 120 |
| Engagement time | | | | | | | | | | | |
| | t_1 | [ms] | 24.0 | | 37.0 | 40.0 | 59.0 | 83.0 | 52.0 | 147 | 384 |
| Disengagement time | | | | | | | | | | | |
| | t_2 | [ms] | 35.0 | 37.0 | 57.0 | 65.0 | 148 | 169 | 230 | 207 | 269 |

- Activation via bridge/half-wave rectifier

| Design | | | Holding current reduction (cold brake) | | | | | | | | |
|----------------------------|----------------|------|--|------|------|------|------|------|------|------|------|
| Size | | | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 25 |
| Friction energy | Q_{BW} | [MJ] | 113 | 210 | 264 | 706 | 761 | 966 | 1542 | 2322 | 3522 |
| Overexcitation time | | | | | | | | | | | |
| | $t_{\ddot{u}}$ | [ms] | 300 | | | | 1300 | | | | |
| Min. rest time | | | | | | | | | | | |
| | t | [ms] | 900 | | | | 3900 | | | | |
| Delay time | | | | | | | | | | | |
| Engaging | t_{11} | [ms] | 12.0 | 22.0 | 35.0 | 49.0 | 61.0 | 114 | 83.0 | 126 | 304 |
| Rise time | | | | | | | | | | | |
| Braking torque | t_{12} | [ms] | 14.0 | 16.0 | 30.0 | 45.0 | 37.0 | 65.0 | 52.0 | 269 | 138 |
| Engagement time | | | | | | | | | | | |
| | t_1 | [ms] | 26.0 | 38.0 | 66.0 | 93.0 | 97.0 | 180 | 134 | 395 | 443 |
| Disengagement time | | | | | | | | | | | |
| | t_2 | [ms] | 35.0 | 37.0 | 57.0 | 65.0 | 148 | 169 | 230 | 207 | 269 |

- The brake response and application times are guide values. The engagement time is 10 times longer with AC-side switching. With the maximum air gap the disengagement time t_2 – depending on the brake and control – is up to 4 times longer than the disengagement time with the rated air gap.



Spring-applied brake

Rated data with standard braking torque

- ▶ In case of the braking torque and the maximum switching energy, the unit for the values (100 ... 3600) is rpm.
- ▶ Please enquire for braking torques and maximum switching work values not listed here.

| Size | | | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 25 |
|---------------------------------------|-----------------|----------------------|-------|-------|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Power input | | | | | | | | | | | |
| | P_{in} | [kW] | 0.020 | 0.025 | 0.030 | 0.040 | 0.050 | 0.055 | 0.085 | 0.10 | 0.11 |
| Braking torque | | | | | | | | | | | |
| 100 | M_B | [Nm] | 4.00 | 8.00 | 16.0 | 32.0 | 60.0 | 80.0 | 150 | 260 | 400 |
| 1000 | M_B | [Nm] | 3.70 | 7.20 | 14.0 | 27.0 | 51.0 | 66.0 | 121 | 206 | 307 |
| 1200 | M_B | [Nm] | 3.60 | 7.00 | 14.0 | 27.0 | 50.0 | 65.0 | 118 | 201 | 300 |
| 1500 | M_B | [Nm] | 3.50 | 6.80 | 13.0 | 26.0 | 48.0 | 63.0 | 115 | 195 ¹⁾ | 291 ¹⁾ |
| 1800 | M_B | [Nm] | 3.40 | 6.70 | 13.0 | 26.0 | 47.0 | 61.0 | 112 ¹⁾ | | |
| 3000 | M_B | [Nm] | 3.20 | 6.30 | 12.0 | 24.0 | 44.0 ¹⁾ | 57.0 ¹⁾ | | | |
| 3600 | M_B | [Nm] | 3.20 | 6.10 | 12.0 | 23.0 ¹⁾ | | | | | |
| Maximum switching energy | | | | | | | | | | | |
| 100 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 80.0 | 120 |
| 1000 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 80.0 | 120 |
| 1200 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 80.0 | 120 |
| 1500 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 60.0 | 24.0 ¹⁾ | 36.0 ¹⁾ |
| 1800 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 30.0 | 36.0 | 36.0 ¹⁾ | | |
| 3000 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 24.0 | 18.0 ¹⁾ | 11.0 ¹⁾ | | | |
| 3600 | Q_E | [KJ] | 3.00 | 7.50 | 12.0 | 7.00 ¹⁾ | | | | | |
| Transition operating frequency | | | | | | | | | | | |
| | $S_{h\ddot{u}}$ | [1/h] | 79.0 | 50.0 | 40.0 | 30.0 | 28.0 | 27.0 | 20.0 | 19.0 | 15.0 |
| Moment of inertia | | | | | | | | | | | |
| | J | [kgcm ²] | 0.15 | 0.61 | 2.00 | 4.50 | 6.30 | 15.0 | 29.0 | 73.0 | 200 |
| Mass | | | | | | | | | | | |
| | m | [kg] | 0.90 | 1.50 | 2.60 | 4.20 | 5.80 | 8.70 | 12.6 | 19.5 | 31.0 |

¹⁾ In the region of the load limit the value for friction energy Q_{BW} can be reduced to 40 %.



Spring-applied brake

Rated data with standard braking torque

- ▶ Activation via half-wave or bridge rectifier

| Size | | | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 25 |
|---------------------------|----------|------|------|------|------|------|------|------|------|------|------|
| Friction energy | Q_{BW} | [MJ] | 85.0 | 158 | 264 | 530 | 571 | 966 | 1542 | 2322 | 3522 |
| Delay time | | | | | | | | | | | |
| Engaging | t_{11} | [ms] | 15.0 | | 28.0 | | 17.0 | 27.0 | 33.0 | 65.0 | 110 |
| Rise time | | | | | | | | | | | |
| Braking torque | t_{12} | [ms] | 13.0 | 16.0 | 19.0 | 25.0 | | 30.0 | 45.0 | 100 | 120 |
| Engagement time | | | | | | | | | | | |
| | t_1 | [ms] | 28.0 | 31.0 | 47.0 | 53.0 | 42.0 | 57.0 | 78.0 | 165 | 230 |
| Disengagement time | | | | | | | | | | | |
| | t_2 | [ms] | 45.0 | 57.0 | 76.0 | 115 | 210 | 220 | 270 | 340 | 390 |

- ▶ Activation via bridge/half-wave rectifier

| Design | | | Holding current reduction (cold brake) | | | | | | | | |
|----------------------------|----------------|------|--|------|------|------|------|------|------|------|------|
| Size | | | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 25 |
| Friction energy | Q_{BW} | [MJ] | 85.0 | 158 | 264 | 530 | 571 | 966 | 1542 | 2322 | 3522 |
| Overexcitation time | | | | | | | | | | | |
| | $t_{\ddot{u}}$ | [ms] | 300 | | | | 1300 | | | | |
| Min. rest time | | | | | | | | | | | |
| | t | [ms] | 900 | | | | 3900 | | | | |
| Delay time | | | | | | | | | | | |
| Engaging | t_{11} | [ms] | 16.0 | 25.0 | 31.0 | 48.0 | 33.0 | 58.0 | 80.0 | 102 | 154 |
| Rise time | | | | | | | | | | | |
| Braking torque | t_{12} | [ms] | 14.0 | 27.0 | 21.0 | 43.0 | 49.0 | 64.0 | 109 | 157 | 168 |
| Engagement time | | | | | | | | | | | |
| | t_1 | [ms] | 30.0 | 52.0 | | 90.0 | 82.0 | 122 | 189 | 259 | 322 |
| Disengagement time | | | | | | | | | | | |
| | t_2 | [ms] | 45.0 | 57.0 | 76.0 | 115 | 210 | 220 | 270 | 340 | 390 |

- ▶ The brake response and application times are guide values. The engagement time is 10 times longer with AC-side switching. With the maximum air gap the disengagement time t_2 – depending on the brake and control – is up to 4 times longer than the disengagement time with the rated air gap.



Spring-applied brake

Rated data with increased braking torque

- ▶ In case of the braking torque and the maximum switching energy, the unit for the values (100 ... 3600) is rpm.
- ▶ Please enquire for braking torques and maximum switching work values not listed here.

| Size | | | 10 | 12 | 14 | 16 | 16 | 18 | 20 | 20 | 25 | 25 |
|---------------------------------------|-----------------|----------------------|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Power input | | | | | | | | | | | | |
| | P_{in} | [kW] | 0.030 | 0.040 | 0.050 | 0.055 | 0.055 | 0.085 | 0.10 | 0.10 | 0.11 | 0.11 |
| Braking torque | | | | | | | | | | | | |
| 100 | M_B | [Nm] | 23.0 | 46.0 | 75.0 | 100 | 125 | 200 | 315 | 400 | 490 | 600 |
| 1000 | M_B | [Nm] | 20.0 | 39.0 | 64.0 | 83.0 | 103 | 162 | 249 | 317 | 376 | 461 |
| 1200 | M_B | [Nm] | 20.0 | 39.0 | 62.0 | 81.0 | 101 | 158 | 244 | 309 | 367 | 449 |
| 1500 | M_B | [Nm] | 19.0 | 38.0 | 60.0 | 78.0 | 98.0 | 153 | 237 ¹⁾ | 300 ¹⁾ | 356 ¹⁾ | 436 ¹⁾ |
| 1800 | M_B | [Nm] | 19.0 | 37.0 | 59.0 | 77.0 | 96.0 | 150 ¹⁾ | | | | |
| 3000 | M_B | [Nm] | 17.0 | 34.0 | 55.0 ¹⁾ | 71.0 ¹⁾ | 89.0 ¹⁾ | | | | | |
| 3600 | M_B | [Nm] | 17.0 | 33.0 ¹⁾ | | | | | | | | |
| Maximum switching energy | | | | | | | | | | | | |
| 100 | Q_E | [KJ] | 12.0 | 24.0 | 30.0 | 36.0 | 36.0 | 60.0 | 80.0 | 80.0 | 120 | 120 |
| 1000 | Q_E | [KJ] | 12.0 | 24.0 | 30.0 | 36.0 | 36.0 | 60.0 | 80.0 | 80.0 | 120 | 120 |
| 1200 | Q_E | [KJ] | 12.0 | 24.0 | 30.0 | 36.0 | 36.0 | 60.0 | 80.0 | 80.0 | 120 | 120 |
| 1500 | Q_E | [KJ] | 12.0 | 24.0 | 30.0 | 36.0 | 36.0 | 60.0 | 24.0 ¹⁾ | 24.0 ¹⁾ | 36.0 ¹⁾ | 36.0 ¹⁾ |
| 1800 | Q_E | [KJ] | 12.0 | 24.0 | 30.0 | 36.0 | 36.0 | 36.0 ¹⁾ | | | | |
| 3000 | Q_E | [KJ] | 12.0 | 24.0 | 18.0 ¹⁾ | 11.0 ¹⁾ | 11.0 ¹⁾ | | | | | |
| 3600 | Q_E | [KJ] | 12.0 | 7.00 ¹⁾ | | | | | | | | |
| Transition operating frequency | | | | | | | | | | | | |
| | $S_{h\ddot{u}}$ | [1/h] | 40.0 | 30.0 | 28.0 | 27.0 | 27.0 | 20.0 | 19.0 | 19.0 | 15.0 | 15.0 |
| Moment of inertia | | | | | | | | | | | | |
| | J | [kgcm ²] | 2.00 | 4.50 | 6.30 | 15.0 | 15.0 | 29.0 | 73.0 | 73.0 | 200 | 200 |
| Mass | | | | | | | | | | | | |
| | m | [kg] | 2.60 | 4.20 | 5.80 | 8.70 | 8.70 | 12.6 | 19.5 | 19.5 | 31.0 | 31.0 |

¹⁾ In the region of the load limit the value for friction energy Q_{BW} can be reduced to 40 %.

- ▶ Activation via half-wave or bridge rectifier

| Size | | | 10 | 12 | 14 | 16 | 18 | 20 | 25 | | | |
|---------------------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Friction energy | | | | | | | | | | | | |
| | Q_{BW} | [MJ] | 198 | 353 | 253 | 563 | 241 | 578 | 1596 | 580 | 2465 | 1409 |
| Delay time | | | | | | | | | | | | |
| Engaging | t_{11} | [ms] | 10.0 | 16.0 | 11.0 | 22.0 | 17.0 | 24.0 | 46.0 | 17.0 | 77.0 | 38.0 |
| Rise time | | | | | | | | | | | | |
| Braking torque | t_{12} | [ms] | 19.0 | 25.0 | 30.0 | 45.0 | 100 | 120 | | | | |
| Engagement time | | | | | | | | | | | | |
| | t_1 | [ms] | 29.0 | 41.0 | 36.0 | 52.0 | 47.0 | 69.0 | 146 | 117 | 197 | 158 |
| Disengagement time | | | | | | | | | | | | |
| | t_2 | [ms] | 109 | 193 | 308 | 297 | 435 | 356 | 378 | 470 | 451 | 532 |



Spring-applied brake

Rated data with increased braking torque

- Activation via bridge/half-wave rectifier

| Design | | | Holding current reduction (cold brake) | | | | | | | | | |
|----------------------------|----------------|------|--|------|------|------|------|------|------|------|------|------|
| Size | | | 10 | 12 | 14 | 16 | 18 | 20 | 25 | | | |
| Friction energy | | | | | | | | | | | | |
| | Q_{BW} | [MJ] | 198 | 353 | 253 | 563 | 241 | 578 | 1596 | 580 | 2465 | 1409 |
| Overexcitation time | | | | | | | | | | | | |
| | $t_{\ddot{u}}$ | [ms] | 300 | | | | | 1300 | | | | |
| Min. rest time | | | | | | | | | | | | |
| | t | [ms] | 900 | | | | | 3900 | | | | |
| Delay time | | | | | | | | | | | | |
| Engaging | t_{11} | [ms] | 24.0 | 27.0 | 17.0 | 41.0 | 21.0 | 60.0 | 69.0 | 17.0 | 123 | 85.0 |
| Rise time | | | | | | | | | | | | |
| Braking torque | t_{12} | [ms] | 44.0 | 43.0 | 37.0 | 55.0 | 37.0 | 113 | 148 | 100 | 190 | 270 |
| Engagement time | | | | | | | | | | | | |
| | t_1 | [ms] | 68.0 | 70.0 | 54.0 | 97.0 | 57.0 | 173 | 217 | 334 | 313 | 355 |
| Disengagement time | | | | | | | | | | | | |
| | t_2 | [ms] | 109 | 193 | 308 | 297 | 435 | 356 | 378 | 470 | 451 | 532 |

| Design | | | Over-excitation | | | | | | | | | |
|----------------------------|----------------|------|-----------------|------|------|------|------|------|------|------|-----|-----|
| Size | | | 10 | 12 | 14 | 16 | 18 | 20 | 25 | | | |
| Friction energy | | | | | | | | | | | | |
| | Q_{BW} | [MJ] | 264 | 706 | 761 | 966 | 1542 | 2322 | 3522 | | | |
| Overexcitation time | | | | | | | | | | | | |
| | $t_{\ddot{u}}$ | [ms] | 300 | | | | | 1300 | | | | |
| Min. rest time | | | | | | | | | | | | |
| | t | [ms] | 900 | | | | | 3900 | | | | |
| Delay time | | | | | | | | | | | | |
| Engaging | t_{11} | [ms] | 29.0 | 54.0 | 31.0 | 70.0 | 46.0 | 86.0 | 103 | 55.0 | 171 | 135 |
| Rise time | | | | | | | | | | | | |
| Braking torque | t_{12} | [ms] | 53.0 | 87.0 | 68.0 | 93.0 | 83.0 | 160 | 222 | 319 | 266 | 430 |
| Engagement time | | | | | | | | | | | | |
| | t_1 | [ms] | 82.0 | 141 | 99.0 | 163 | 129 | 246 | 325 | 374 | 437 | 565 |
| Disengagement time | | | | | | | | | | | | |
| | t_2 | [ms] | 53.0 | 81.0 | 117 | 141 | 168 | 151 | 160 | 167 | 184 | 204 |

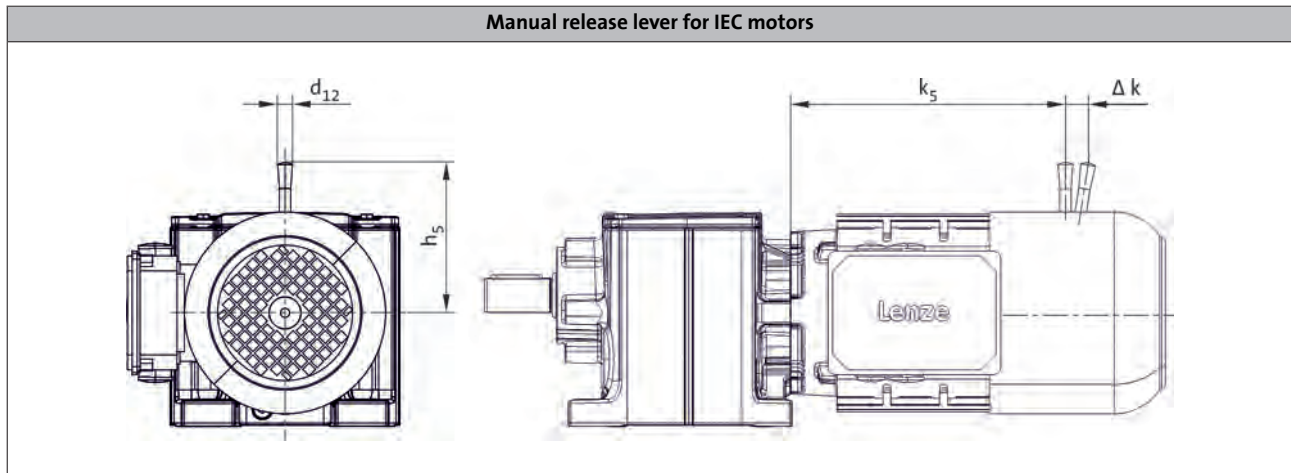
- The brake response and application times are guide values. The engagement time is 10 times longer with AC-side switching. With the maximum air gap the disengagement time t_2 – depending on the brake and control – is up to 4 times longer than the disengagement time with the rated air gap.



Spring-applied brake

Manual release

By using the manual release lever, the brake can be released manually in deenergised operating state. The manual release makes positioning and maintenance work easier.



| Product | Size Brake | Dimensions | | | |
|---|---------------|---------------|--------------------|---------------|------------------|
| | | k_5 [mm] | Δk [mm] | h_5 [mm] | d_{12} [mm] |
| MD□MA□□063-02 MD□MA□□063-22 | 06 | 185 | 29 | 107 | 13.0 |
| MD□MA□□063-12 MD□MA□□063-32 MD□MA□□063-42 | 06 | 169 | 29 | 107 | 13.0 |
| MD□MA□□071-32 MD□MA□□071-42 | 06 08 | 182 183 | 29 27 | 107 116 | 13.0 13.0 |
| m550-P80/M4 | 08 | 243 | 27 | 116 | 13.0 |
| m550-P90/M4 m550-P90/L4 | 08 10 | 291 302 | 27 28 | 116 132 | 13.0 13.0 |
| m550-P100/M4 m550-P100/L4 | 10 12 | 355 359 | 28 37 | 132 161 | 13.0 13.0 |
| m550-P112/M4 | 12 14 | 366 368 | 37 41 | 161 195 | 13.0 24.0 |
| m550-P132/M4 m550-P132/L4 | 14 16 | 428 431 | 41 55 | 195 240 | 24.0 24.0 |

The following combinations with manual release lever and motor connection in the same position are not possible:

- HAN connector with connection in position 1

Motor data

Product extensions



Feedback

Depending on the application, the following resolvers, incremental encoders or absolute value encoders are provided for speed and position detection.

Resolver

The stator-supplied resolver with two stator windings shifted by 90° and a rotor winding with transformer winding can detect both the speed and the rotor position. The rotor position is retained in the event of a voltage failure.

- The three-phase AC motors with resolver cannot be used for speed-dependent safety functions in connection with the SM 301 safety module.

| | | | | |
|-----------------------------------|--------------|-----------|---------------|--------------|
| Product key | | | | RS1 |
| Accuracy | | | [°] | -10 ... 10 |
| Absolute positioning | | | | 1 revolution |
| Max. input voltage | | | | |
| DC | $U_{in,max}$ | | [V] | 10.0 |
| Max. input frequency | | | | |
| | $f_{in,max}$ | | [kHz] | 4.00 |
| Ratio | | | | |
| Stator / rotor | | $\pm 5\%$ | | 0.30 |
| Rotor impedance | | | | |
| | Z_{ro} | | [Ω] | $51 + j90$ |
| Stator impedance | | | | |
| | Z_{so} | | [Ω] | $102 + j150$ |
| Impedance | | | | |
| | Z_{rs} | | [Ω] | $44 + j76$ |
| Min. insulation resistance | | | | |
| At DC 500 V | R | | [M Ω] | 10.0 |
| Number of pole pairs | | | | 1 |

Motor data

Product extensions



Feedback

Incremental encoder and SinCos absolute value encoder

Incremental encoders can only be used for speed measurement, but not for speed control. Homing is required in order to enable positioning later.

Absolute value encoders can detect the speed, the rotor position, and the machine position with a very high resolution. They are used for the positioning of dynamic applications and do not require homing.

- The three-phase AC motors with incremental encoders or SinCos absolute value encoders cannot be used for speed-dependent safety functions in connection with the SM 301 safety module.

| Encoder type | | | HTL incremental | | | | TTL incremental | | | SinCos absolute value | |
|---------------------------------|--------------|-------|-----------------|----------------------------|--------------|--------------|-----------------|-------------|--------------|-----------------------|------|
| Product key | | | IG128-24V-H | IG512-24V-H | IG1024-24V-H | IG2048-24V-H | IG512-5V-T | IG1024-5V-T | IG2048-5V-T | AM1024-8V-H | |
| Encoder type | | | | | | | | | | Multi-turn | |
| Pulses | | | 128 | 512 | 1024 | 2048 | 512 | 1024 | 2048 | 1024 | |
| Output signals | | | HTL | | | | TTL | | | 1 Vss | |
| Interfaces | | | A, B track | A, B, N track and inverted | | | | | Hiperface | | |
| Absolute revolutions | | | 0 | | | | | | | 4096 | |
| Accuracy | | | -22.5 ... 22.5 | | -2 ... 2 | | | | -0.8 ... 0.8 | | |
| Min. input voltage | | | 8.00 | | | | 4.75 | | | 7.00 | |
| DC | $U_{in,min}$ | [V] | 8.00 | | | | 4.75 | | | 7.00 | |
| Max. input voltage | | | 30.0 | | | | 5.25 | | | 12.0 | |
| DC | $U_{in,max}$ | [V] | 26.0 | 30.0 | | | | 5.25 | | | 12.0 |
| Max. current consumption | | | 0.15 | | | | 0.080 | | | | |
| | I_{max} | [A] | 0.040 | 0.15 | | | | 0.080 | | | |
| Limit frequency | | | 160 | | | | 300 | | | 200 | |
| | f_{max} | [kHz] | 30.0 | 160 | | | | 300 | | | 200 |

Motor data

Product extensions



Blower

During operation with the rated torque at low speeds (< 20 Hz), the integral fan does not rotate fast enough anymore to ensure sufficient cooling of the motor. In order to prevent overheating, operation without a blower requires a torque reduction of the motor. The blower cools the motor steadily and irrespective of the motor speed. A torque reduction is not required and the motor can be actuated with its rated torque from 5 Hz to the rated frequency.

Rated data for 50 Hz

| Product | Number of phases | Connection method | U_{min} | U_{max} | P_{max} | I_{max} | m |
|------------------------------|------------------|-------------------|-----------|-----------|-----------|-----------|------|
| | | | [V] | [V] | [kW] | [A] | [kg] |
| MD□MA□□063-12 | 1 | | 230 | 277 | 0.027 | 0.11 | 2.00 |
| MD□MA□□063-32 | 3 | Δ | 200 | 303 | 0.028 | 0.12 | |
| MD□MA□□063-42 | | Y | 346 | 525 | | 0.070 | |
| MD□MA□□071-32 | 1 | | 230 | 277 | 0.027 | 0.10 | 2.10 |
| MD□MA□□071-42 | 3 | Δ | 200 | 303 | 0.031 | 0.11 | |
| | | Y | 346 | 525 | | 0.060 | |
| m550-P80/M4 | 1 | | 230 | 277 | 0.029 | 0.11 | 2.30 |
| | 3 | Δ | 200 | 303 | 0.031 | 0.060 | |
| | | Y | 346 | 525 | | | |
| m550-P90/M4 m550-P90/L4 | 1 | | 220 | 277 | 0.065 | 0.29 | 2.70 |
| | 3 | Δ | 200 | 303 | 0.091 | 0.38 | |
| | | Y | 346 | 525 | | 0.22 | |
| m550-P100/M4 m550-P100/L4 | 1 | | 220 | 277 | 0.066 | 0.28 | 3.00 |
| | 3 | Δ | 200 | 303 | 0.091 | 0.37 | |
| | | Y | 346 | 525 | | 0.22 | |
| m550-P112/M4 | 1 | | 220 | 277 | 0.071 | 0.28 | 3.10 |
| | 3 | Δ | 200 | 303 | 0.097 | 0.35 | |
| | | Y | 346 | 525 | | 0.20 | |

| Product | Number of phases | Connection method | $U_{N,AC}$ | P_N | I_N | m |
|--|------------------|-------------------|------------|-------|-------|------|
| | | | [V] | [kW] | [A] | [kg] |
| m550-P132/L4 m550-P132/M4 | 1 | | 230 | 0.095 | 0.42 | 5.00 |
| | 3 | Δ | | 400 | 0.091 | |
| | | Y | 0.19 | | | |
| m550-P160/M4 m550-P160/L4 | 1 | | 230 | 0.22 | 0.97 | 7.30 |
| | 3 | Δ | 400 | 0.21 | 0.68 | |
| | | Y | | | 0.39 | |
| m550-P180/M4 m550-P180/L4 m550-P180/V4 | 1 | | 230 | 0.22 | 0.97 | 10.3 |
| | 3 | Δ | 400 | 0.21 | 0.68 | |
| | | Y | | | 0.39 | |
| m550-P200/M4 | 1 | | 230 | 0.22 | 0.97 | 15.0 |
| | 3 | Δ | 400 | 0.21 | 0.68 | |
| | | Y | | | 0.39 | |
| m550-P225/L4 m550-P225/M4 | 1 | | 230 | 0.23 | 0.94 | 15.0 |
| | 3 | Δ | 400 | 0.20 | 0.63 | |
| | | Y | | | 0.37 | |

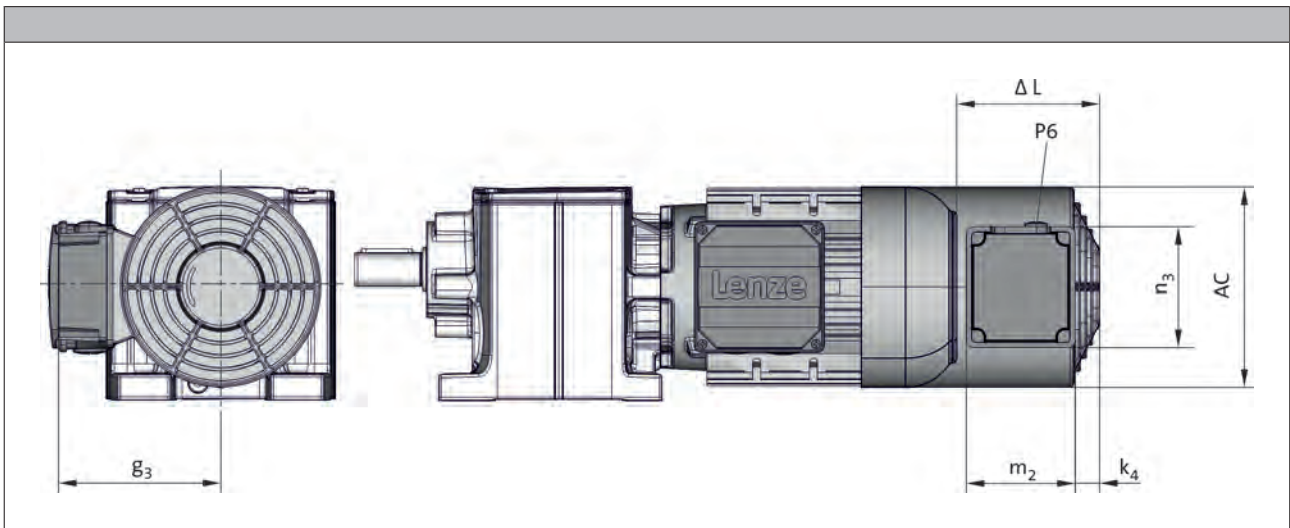
Motor data

Product extensions



Blower

Dimensions, 4-pole motors



| Built-on accessories | | | | | |
|---|--------------------|--------------------|--------------------|--------------------|------------|
| | Without | Brake | Brake + Feedback | Feedback | |
| Product | Dimensions | | | | |
| | ΔL [mm] | ΔL [mm] | ΔL [mm] | ΔL [mm] | AC [mm] |
| MD□MA□□063-12 MD□MA□□063-32 MD□MA□□063-42 | 128 | 170 | 170 | 128 | 123 |
| MD□MA□□071-32 MD□MA□□071-32 MD□MA□□071-42 | | 165 | 165 | | 138 |

| Product | Dimensions | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| | k_4 [mm] | g_3 [mm] | m_2 [mm] | n_3 [mm] | P_6 [mm] |
| MD□MA□□063-12 MD□MA□□063-32 MD□MA□□063-42 | 12 | 115 | 95 | 105 | 1x M16x1.5 |
| MD□MA□□071-32 MD□MA□□071-42 | | 122 | | | |

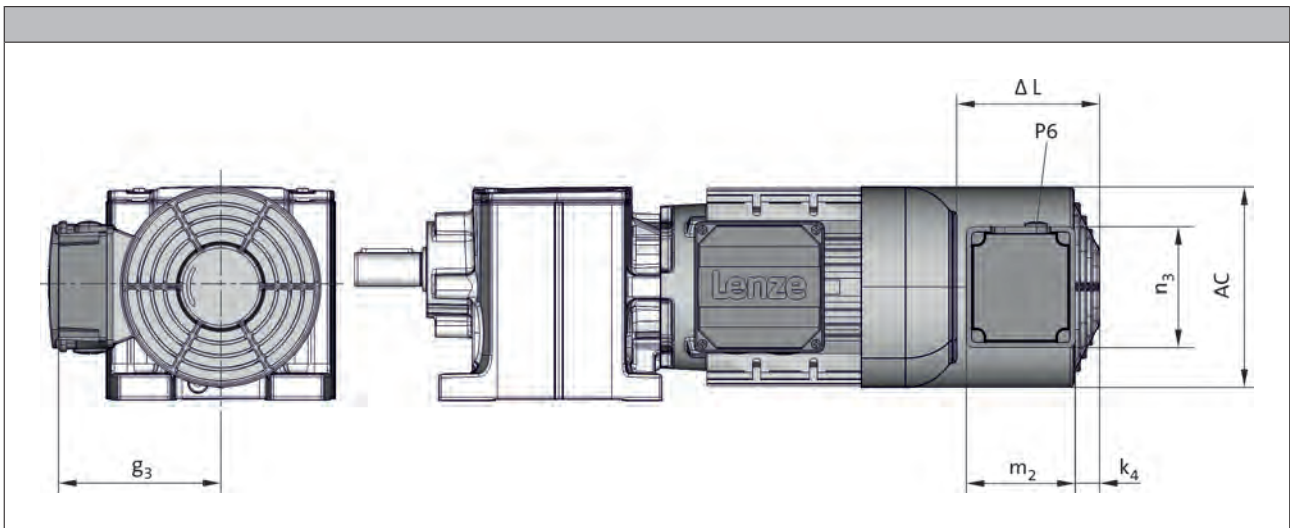
Motor data

Product extensions



Blower

Dimensions, 4-pole motors



| Built-on accessories | | | | | |
|----------------------|---------|-------|------------------|----------|--|
| | Without | Brake | Brake + Feedback | Feedback | |

| Product | Dimensions | | | | |
|------------------------------|--------------------|--------------------|--------------------|--------------------|------------|
| | ΔL [mm] | ΔL [mm] | ΔL [mm] | ΔL [mm] | AC [mm] |
| m550-P80/M4 | 127 | 183 | 183 | 127 | 157 |
| m550-P90/L4 m550-P90/M4 | 122 | 175 | 175 | 122 | 177 |
| m550-P100/L4 m550-P100/M4 | 109 | 170 | 170 | 109 | 195 |
| m550-P112/M4 | 103 | 183 | 183 | 183 | 219 |
| m550-P132/L4 m550-P132/M4 | 121 | 201 | 201 | 201 | 261 |

| Product | Dimensions | | | | |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| | k_4 [mm] | g_3 [mm] | m_2 [mm] | n_3 [mm] | P_6 [mm] |
| m550-P80/M4 | 13 | 132 | 95 | 105 | 1x M16x1.5 |
| m550-P90/L4 m550-P90/M4 | | 141 | | | |
| m550-P100/L4 m550-P100/M4 | 22 | 150 | | | |
| m550-P112/M4 | | 162 | | | |
| m550-P132/L4 m550-P132/M4 | 32 | 182 | | | |

Motor data

Product extensions



Temperature monitoring

To protect the motor against overheating, the following thermal sensors are provided.

The thermal sensors are integrated into the windings. We recommend using an additional motor protection switch.

TKO thermal contacts

The TCO thermal contact (thermal NC contact) is a bimetallic-element switch. The TCO monitors the motor winding temperature; at too high temperatures, the motor relay switches. The motor is disconnected from the mains.

| Function | Operating temperature | Min. reset temperature | Max. reset temperature | Max. input current | Max. input voltage |
|------------|-----------------------|------------------------|------------------------|---------------------|---------------------|
| | | | | | AC |
| | T | T_{\min} | T_{\max} | $I_{\text{in,max}}$ | $U_{\text{in,max}}$ |
| | -5 ... 5 | | | | |
| | [°C] | [°C] | [°C] | [A] | [V] |
| NC contact | 150 | 90.0 | 135 | 2.50 | 250 |

PTC thermistor

The PTC thermistor is actuated in connection with a tripping unit. If the motor gets too hot, the motor can be switched off by means of a contactor. In contrast to the thermal contact, quick restart is possible.

| Function | Operating temperature | Rated resistance | | | Standard |
|-----------------------------|-----------------------|------------------|--------|--------|---------------------------------------|
| | | 155 °C | -20 °C | 140 °C | |
| | T | R_N | R_N | R_N | |
| | -5 ... 5 | | | | |
| | [°C] | [Ω] | [Ω] | [Ω] | |
| Sudden change in resistance | 150 | 550 | 30.0 | 250 | DIN 44080 DIN VDE 0660 Part 303 |

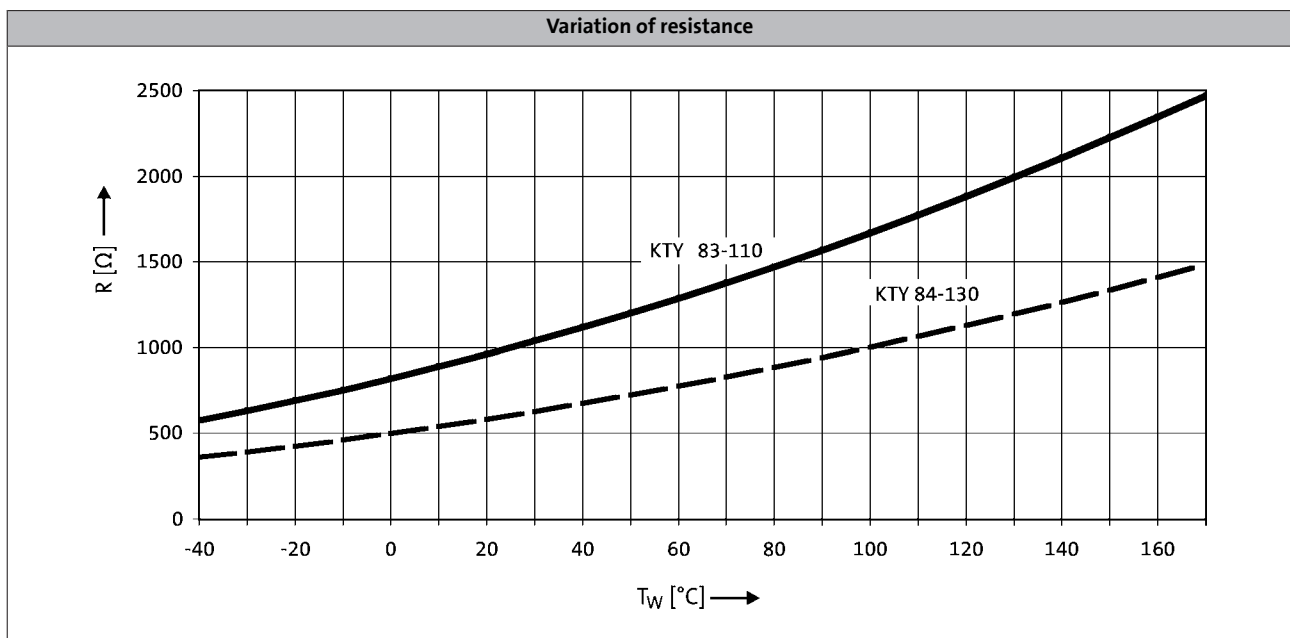


Temperature monitoring

KTY temperature sensor

The KTY thermal detectors work as continuously variable resistors, showing a similar tendency as PTC thermistors. However, with an increasing temperature, the resistance only increases comparatively slowly, enabling the controller to determine the temperature at regular intervals and to already perform a process evaluation at an early stage. In this way, the motor can already be switched off before it is overheated.

| | Function | Rated resistance | | | Max. input current | |
|-----------|------------------------------|------------------|----------------|----------------|---------------------|---------------------|
| | | 25 °C | 150 °C | 170 °C | 25 °C | 170 °C |
| | | R _N | R _N | R _N | I _{in,max} | I _{in,max} |
| | | [Ω] | [Ω] | [Ω] | [A] | [A] |
| KTY83-110 | Continuous resistance change | 1000 | 2225 | 2471 | 0.010 | 0.002 |
| KTY84-130 | Continuous resistance change | 603 | 1334 | 1482 | 0.010 | 0.002 |



- If the thermal sensor is supplied with a measurement current of 1 mA, the above relationship between the temperature and the resistance applies.

Motor data

Product extensions



Motor data

Product extensions



Motor data

Product extensions



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