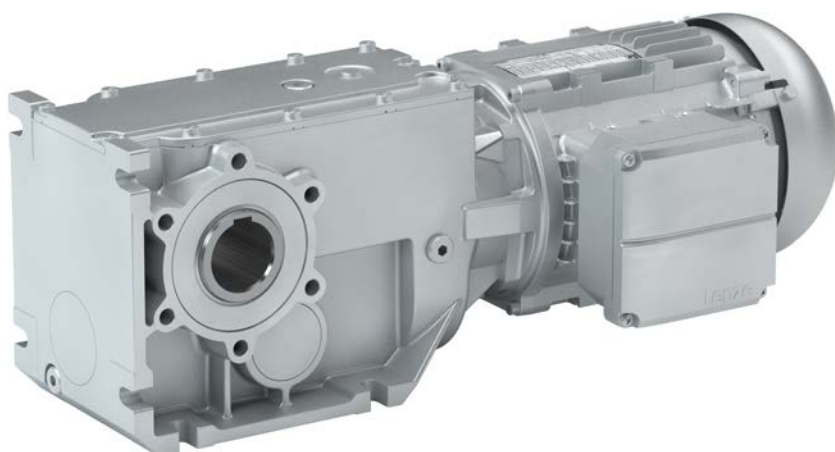


g500-B + m550-U bevel geared motors



Contents

1	About this document	6
1.1	Document description	7
1.2	Further documents	8
1.3	Notations and conventions	9
2	Product information	10
2.1	Product description	10
2.2	Identification of the products	12
2.3	Features	13
2.4	The modular system	14
2.4.1	Designs	16
2.4.2	Mounting positions	17
3	Safety instructions	22
3.1	Basic safety instructions	22
3.2	Application as directed	23
3.3	Foreseeable misuse	24
3.4	Residual hazards	25
4	Information on project planning	27
4.1	General information	27
4.2	Drive dimensioning	30
4.3	Final configuration	34
4.3.1	Surface and corrosion protection	35
4.3.2	Temperature ranges	36
4.3.3	Lubricants	37
4.3.4	Ventilation	38
5	Mechanical installation	44
5.1	Important notes	44
5.2	Transport	45
5.3	Installation	47
6	Electrical installation	48
6.1	Important notes	48
6.2	Preparation	49

Contents

7	Technical data	50
7.1	Notes regarding the given data	50
7.2	Standards and operating conditions	51
7.2.1	Conformities and approvals	51
7.2.2	Protection of persons and device protection	51
7.2.3	EMC data	51
7.2.4	Environmental conditions	52
7.3	Gearbox data	53
7.4	Gearboxes with adapter	66
7.5	Radial forces and axial forces	69
7.6	Selection tables	71
7.7	Dimensions	104
7.7.1	Basic dimensions	105
7.7.2	Gearbox with pre-stage	132
7.7.3	Integrated inverters	133
7.7.4	Additional lengths	135
7.8	Weights	136
7.8.1	Basic weights	136
7.8.2	Additional weights	137
8	Product extensions	138
8.1	Torque plates	138
8.2	Shaft covers	147
8.3	Motor connection	149
8.3.1	Connection options	149
8.3.2	Assignment of the terminal boxes	150
8.3.3	Assignment of the connectors Han	158
8.3.4	Connection via terminal box	160
8.3.5	Connection via connector	162
8.3.6	Connection via Han connector	165
8.4	Spring-applied brakes	167
8.4.1	Information on project planning	168
8.4.2	Spring-applied holding brake	170
8.4.2.1	Assignment of braking torques	170
8.4.2.2	Rated data	170
8.5	Feedback	172
8.5.1	Resolver	173
8.5.2	Incremental encoder	174
8.5.3	Absolute value encoder	175
8.6	Temperature monitoring	176
8.6.1	Thermal contacts TCO	176
9	Accessories	177
9.1	Hollow shaft mounting kit	177
10	Product codes	178
11	Motor data	180
11.1	Rated data	180
12	Environmental notes and recycling	183

13 Appendix.....184

13.1 Good to know184

13.1.1 Operating modes of the motor184

13.1.2 Enclosures185



1 About this document

WARNING!

Read this documentation carefully before starting any work.

► Please observe the safety instructions!



1.1 Document description

This document addresses to all persons who want to carry out any configurations with the products described.

The data and information compiled in this document serve to support you in the dimensioning and selection processes and in carrying out the electrical and mechanical installation. You will receive information regarding product extensions and accessories.

- The document includes safety instructions which must be observed.
- All persons working on and with the drives must have the documentation at hand during work and observe the information and notes relevant for it.
- The documentation must always be complete and in a perfectly readable state.



1.2 Further documents



Information and tools with regard to the Lenze products can be found on the Internet:

www.Lenze.com → Downloads



1.3 Notations and conventions

Conventions are used in this document to distinguish between different types of information.

Numeric notation		
Decimal separator	Point	Generally shown as a decimal point. Example: 1 234.56
Warnings		
UL Warnings	UL	Are used in English and French.
UR warnings	UR	
Text		
Engineering Tools	" "	Software Example: "EASY Starter", "PLC Designer"
Icons		
Page reference		Reference to another page with additional information. Example:  16 = see page 16
Documentation reference		Reference to other documentation with additional information. Example:  EDKxxx = see documentation EDKxxx

Layout of the safety instructions

DANGER!

Indicates an extremely hazardous situation. Failure to comply with this instruction will result in severe irreparable injury and even death.

WARNING!

Indicates an extremely hazardous situation. Failure to comply with this instruction may result in severe irreparable injury and even death.

CAUTION!

Indicates a hazardous situation. Failure to comply with this instruction may result in slight to medium injury.

NOTICE

Indicates a material hazard. Failure to comply with this instruction may result in material damage.



2 Product information

2.1 Product description

In combination with three-phase motors, our bevel gearboxes represent a compact, powerful drive unit. Numerous drive and output options allow the drive to be precisely adapted to your application.

The efficient bevel gearboxes are characterized by high permissible radial forces, closely stepped ratios and low backlash. They are available in a 2-stage, 3-stage and 4-stage design with a torque of up to 4300 Nm and a ratio of up to $i = 3167$.

Versions

- Highly efficient right-angle gearbox in a compact design for space-saving installation
- Highly efficient synchronous motors in the compact and robust design of a three-phase motor
- Shaft dimensions in line with market standard and standardized flanges for easy machine integration
- Low backlash and high torsional stiffness ensure precise results in positioning tasks.
- Optimized for sensorless control and designed for 250% (IE5) and 300% (IE6) overload capacity from 0 rpm

Three-phase motors for inverter operation

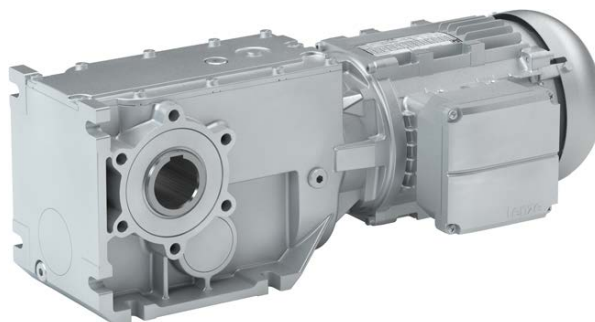
In a power range from 0.25 to 22 kW, Lenze offers inverter-compatible three-phase motors for more extensive tasks.

These motors differ in terms of efficiency class and can be used for the versions required for controlled or regulated inverter operation.

- Efficiency class IE5 in the power range 0.37 ... 22 kW
- Efficiency class IE6 in the power range 0.25 ... 7.5 kW

Customer benefit

- Different efficiency classes for the greatest economic benefit
- Space saving thanks to compact direct mounting on Lenze gearboxes
- Market-oriented modular system enables universal use for extensive machine tasks
- Standard market connectors ensure fast connection, even when servicing is required
- Simple design and commissioning, as easy as with an asynchronous machine
- More compact than an IE3 three-phase motor



g500-B450 gearbox with m550-U80/M4 motor



Flexible in motor mounting

For motor mounting, Lenze offers a scalable modular system of gearboxes with adapters.

Power is transmitted between the motor and the gearbox via a flexible jaw coupling or plug-in hollow shaft. The shaft mountings for motor shafts are available with a featherkey.

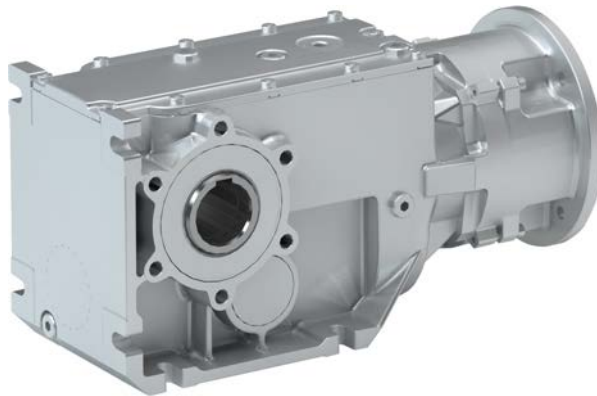
Customer benefit

- Market-oriented modular system enables universal use for extensive machine tasks
- Simple plug-in motor mounting
- Motor mounting according to IEC 72/DIN 42948
- Torsional vibration-damping power transmission of the coupling
- Motor shaft connection with low or no backlash, depending on the version

More information can be found under:

► [Gearbox data](#) 53

► [Gearboxes with adapter](#) 66



g500-B bevel gearbox with adapter for IEC standard motors



2.2 Identification of the products

Gearbox product name

Gearbox type	Product series		Type	Rated torque Nm	Product
Bevel gearbox	g500	-	B	45	g500-B45
				110	g500-B110
				240	g500-B240
				450	g500-B450
				600	g500-B600
				820	g500-B820
				1500	g500-B1500
				2700	g500-B2700
				4300	g500-B4300

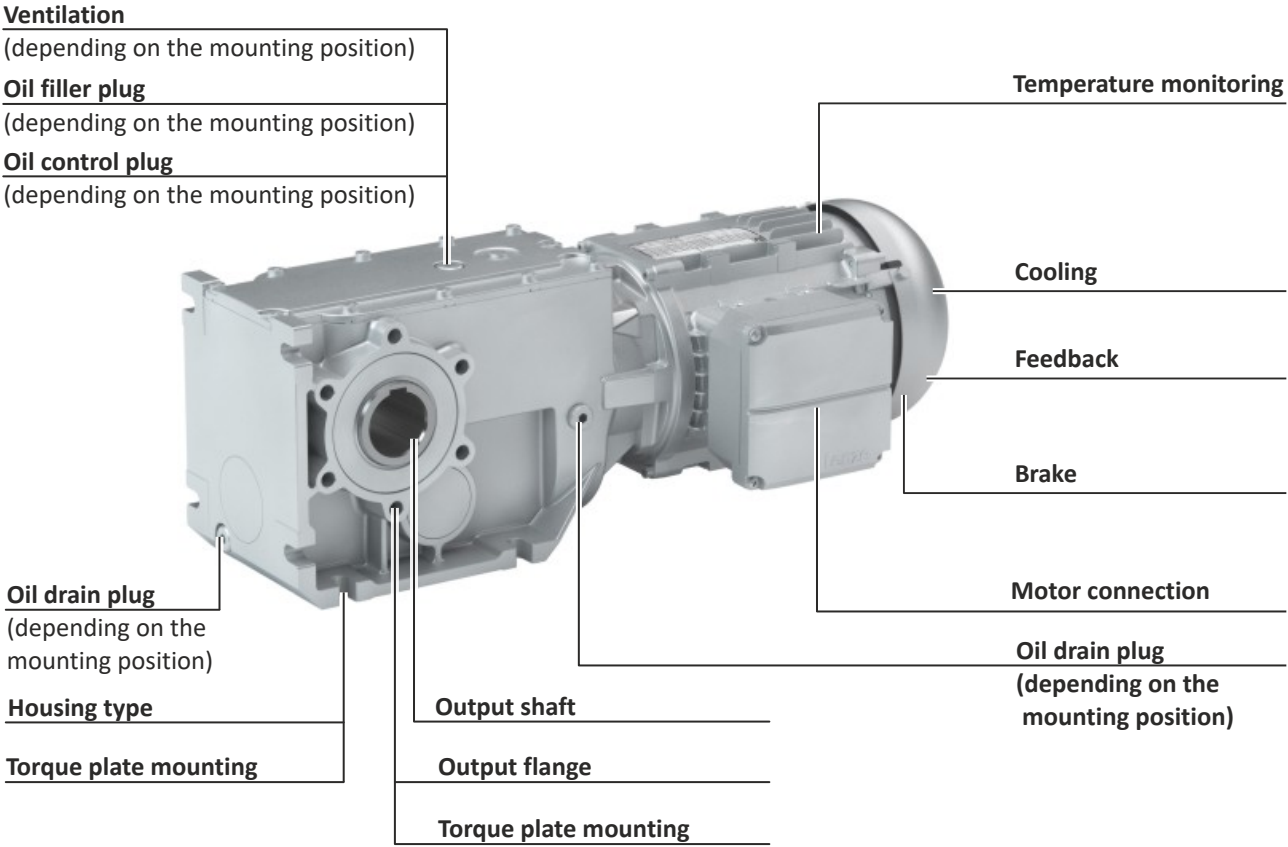
Three-phase AC motor product name

Example		m550	-	V	80	/	S	4
Meaning	Variant	Product name						
Product family		m550						
		m650						
Efficiency class	IE5			U				
	IE6			V				
Size					63 71 80 90 100 112 132			
Motor length	Short						S	
	Medium						M	
	Long						L	
Number of pole pairs	4-pole							4



2.3 Features

The following figure provides an overview of the elements and connections on the product. Their position, size and appearance may vary.





2.4 The modular system



Values printed in bold are standard designs. Values that are not printed in bold are potential extensions, some of them including a surcharge.

Geared motors up to 450 Nm

Gearbox		g500-B45	g500-B110	g500-B240	g500-B450
Min. motor assignment		m550-U63	m550-U63	m550-U63	m550-U63
Max. motor assignment		m550-U71	m550-U90	m550-U100	m550-U132
Technical data					
Max. output torque	Nm	45	110	240	450
Min. drive power at 62 Hz	kW	0.37	0.37	0.37	0.37
Max. drive power at 62 Hz	kW	0.75	2.2	4	11
Mounting position					
Standard		M1, M2, M3, M4, M5, M6 (ABCDEF)			
Combined		M1-M6 (A-F)	M1/5/6 (AEF)		
Temperature package					
Standard		Ambient temperature: 0 °C ... +40 °C			
Color		Unpainted Primed/RAL colors			
Surface and corrosion protection		Without OKS Different types of OKS			
Output shaft					
Solid shaft with featherkey (V)	mm	20 x 40	20 x 40 25 x 50	25 x 50 30 x 60	30 x 60
Hollow shaft with keyway (H)	mm	18/20	20/25	30/35	35/40
Hollow shaft with shrink disk (S)	mm	20	20	30/35	35
Shaft material		Steel Stainless steel			
Output shaft bearing		Normal			
Gearbox design		With foot (HBR)/(VBR/SBR) With foot and centering (HAR/VAR/SAR) With foot and output flange (HAK/VAK/SAK)			
Output flange (K)	mm	110/120	120/160	160/200	200
Ventilation		Without			Vent valve
Cooling		Integral fan			
Product extensions					
Torque plate		At threaded pitch circle			
				On the housing foot	On the housing foot
		Rubber buffers			
Shaft cover		Hollow shaft cover, hoseproof Shrink disc cover			
Connection method		Y			
Connection type		Terminal box M23 connector Han-Modular connector			
Spring-applied brake		Without Holding brake			
Feedback		Without Resolver Incremental encoder Incremental encoder with safety functions Absolute value encoder			
Temperature monitoring		TCO thermal contact			



Geared motors from 600 Nm to 4300 Nm

Gearbox		g500-B600	g500-B820	g500-B1500	g500-B2700	g500-B4300
Min. motor assignment		m550-U63	m550-U63	m550-U63	m550-U63	m550-U63
Max. motor assignment		m550-U132	m550-U132	m550-U132	m550-U132	m550-U132
Technical data						
Max. output torque	Nm	600	820	1500	2700	4300
Min. drive power at 62 Hz	kW	0.37	0.37	0.37	0.37	0.37
Max. drive power at 62 Hz	kW	11	11	11	11	11
Mounting position						
Standard		M1, M2, M3, M4, M5, M6 (ABCDEF)				
Combined						
Temperature package						
Standard		Ambient temperature: 0 °C ... +40 °C				
Color		Primed Painted in RAL colors				
Surface and corrosion protection		OKS-S Different types of OKS				
Output shaft						
Solid shaft with featherkey (V)	mm	35 x 70 40 x 80	40 x 80	50 x 100	60 x 120	70 x 140 80 x160
Hollow shaft with keyway (H)	mm	40/45	40/45	50/55	60/70	70/80
Hollow shaft with shrink disk (S)	mm	40	40	50	-	75/80
Shaft material		Steel Stainless steel				
Output shaft bearing		Normal				
Gearbox design		With foot (HBR)/(VBR/SBR) With foot and centering (HAR/VAR/SAR) With foot and output flange (HAK/VAK/SAK)				
Output flange	mm	200/250	200/250	250/300	350	400/450
Ventilation		Vent valve Oil compensation reservoir				
Cooling		Integral fan				
Product extensions						
Torque plate		At threaded pitch circle	At threaded pitch circle	At threaded pitch circle		
		On the housing foot				
Shaft cover		Hollow shaft cover, hoseproof Shrink disc cover				
Connection method		Y				
Connection type		Terminal box M23 connector Han-Modular connector				
Spring-applied brake		Without Holding brake				
Feedback		Without Resolver Incremental encoder Incremental encoder with safety functions Absolute value encoder				
Temperature monitoring		TCO thermal contact				



2.4.1 Designs

Gearbox designs

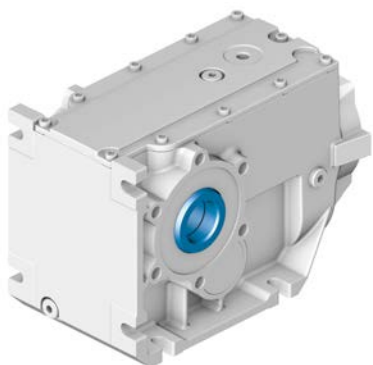


Please observe the available gearbox designs!

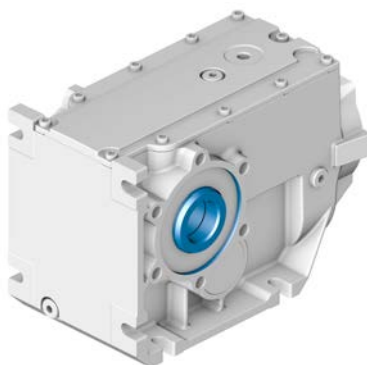
► [The modular system](#) 14

g500-B45 ... B4300

Hollow shaft, with foot



Without centring (HBR)

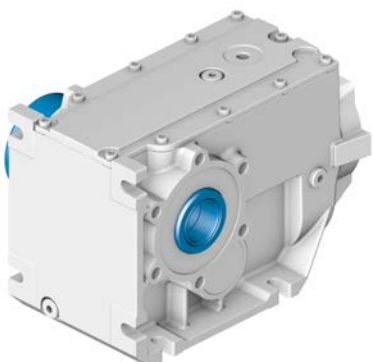


With centring (HAR)

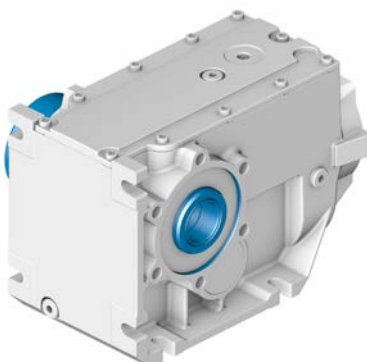


Flange with through holes (HAK)

Hollow shaft with shrink disc, with foot



Without centring (SBR)

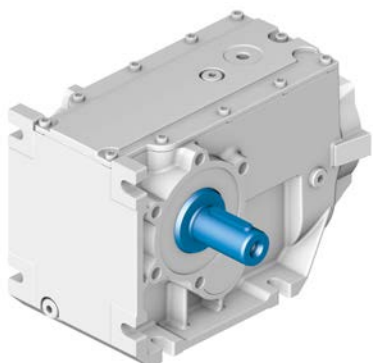


With centring (SAR)

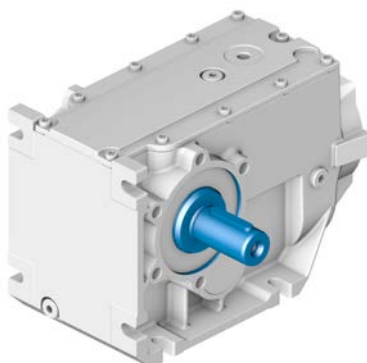


Flange with through holes (SAK)

Solid shaft, with foot



Without centring (VBR)



With centring (VAR)



Flange with through holes (VAK)



2.4.2 Mounting positions

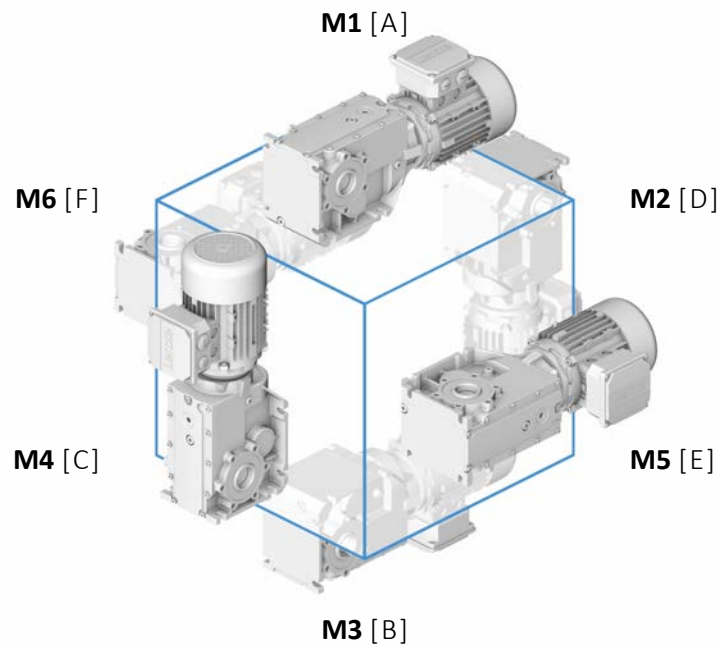
Details of the mounting position are needed to ensure the corresponding lubricant amount, position of the ventilation, oil checks and oil drain plug on the gearbox.

To reduce the number of different versions, the following gearboxes can also be ordered with combined mounting positions:

- g500-B45 in M1-M6 (A-F) mounting position
- g500-B110 ... B450 in M1/5/6 (AEF) mounting position



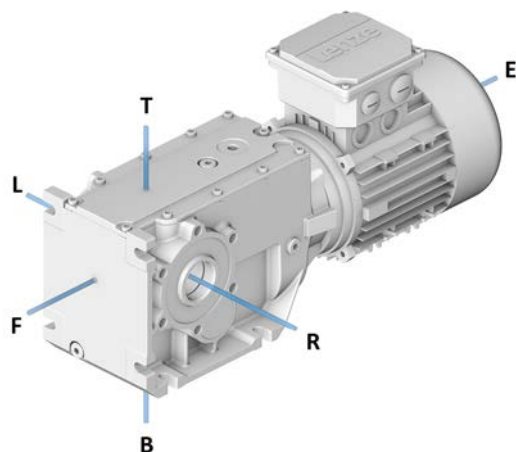
The gearmotors can be swiveled by 5° to 45° in all mounting positions.



Defined positions on the geared motor

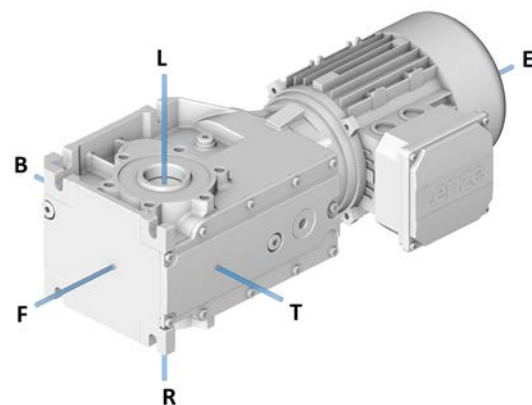
All of the defined positions refer to the areas on the geared motor in mounting position **M1 (A)**.

Position of the built-on accessories with T, L, R, B, F, E (Top, Left, Right, Bottom, Front, and End)



If the geared motor is rotated into a different mounting position M2 ... M6 (B...F), the defined positions on the geared motor are retained.

Example: Mounting position M5 (E)



Product information

The modular system
Mounting positions

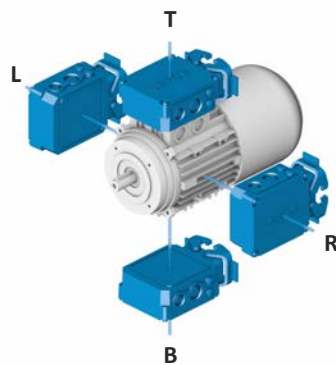
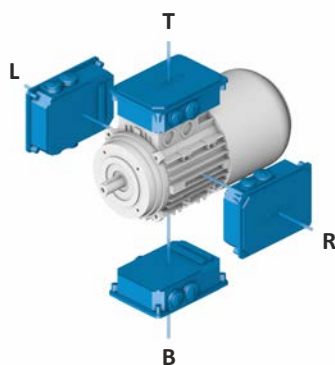


Positions of the terminal boxes/connectors

Power terminal box

with/without M23 connector

Han connector

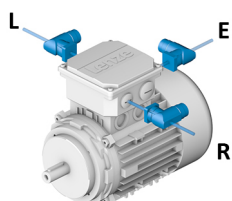


Positions of the connectors

Power terminal box

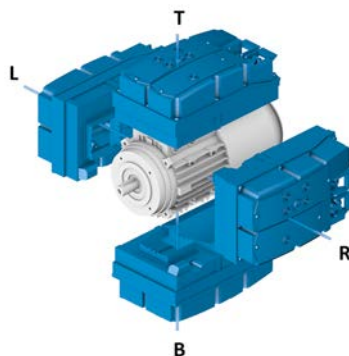
Cable glands/M23 connector

Han connector



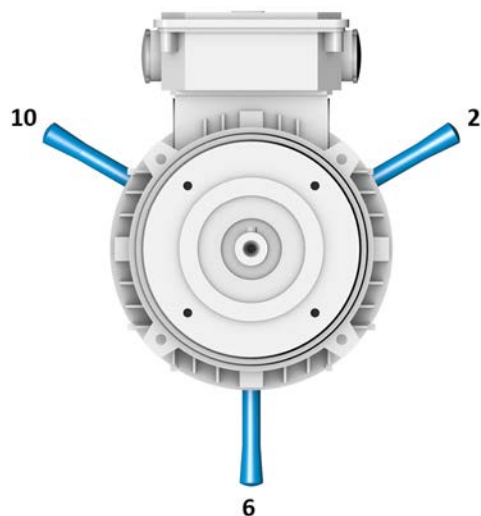
Positions of the i550/i650 motec frequency inverters

Positions of the i550/i650 motec





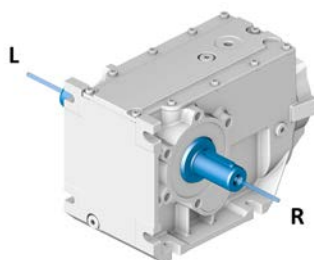
Manual release lever position



Position of the solid shaft



Double-ended output shaft journal "L+R".



Position of the hollow shaft with shrink disc



Output flange and shrink disc are not possible in the same position.



Product information

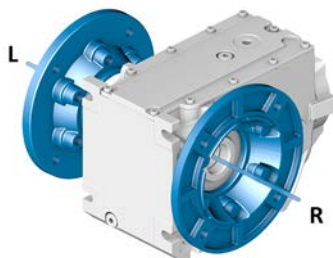
The modular system
Mounting positions



Position of the output flange

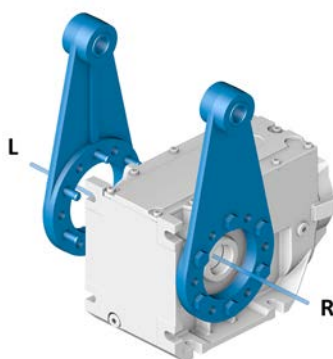


Output flange on both sides "L+R".



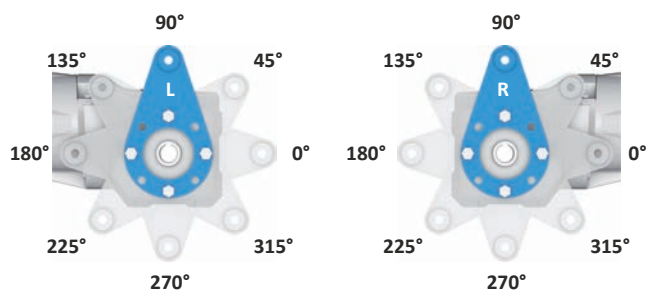
Position of the torque plate on the threaded pitch circle

Position of the torque plate

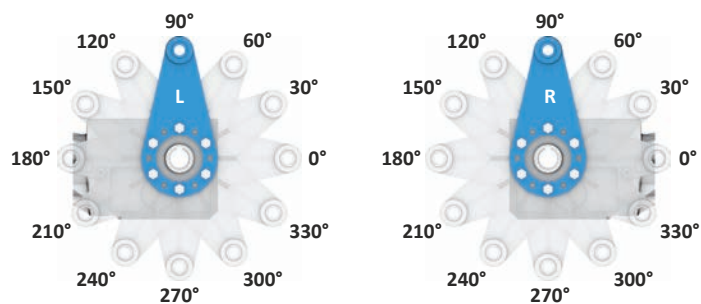


Angle of the torque plate

g500-B45 ... B110



g500-B240 ... B1500



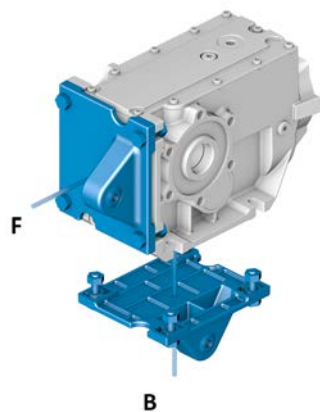


Product information

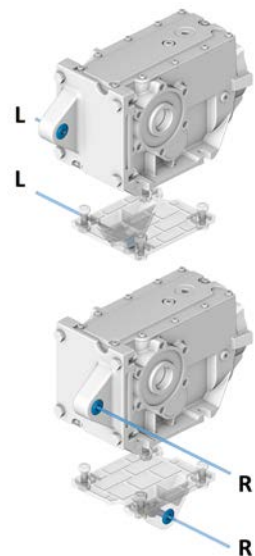
The modular system
Mounting positions

Position of the torque plate on the housing foot

Position of the torque plate



Position of the rubber buffer on the torque plate





3 Safety instructions

3.1 Basic safety instructions

Disregarding the following basic safety instructions and safety information may lead to severe personal injury and damage to property!

- Only use the product as directed.
- Never commission the product in the event of visible damage.
- Never modify the product technically.
- Never commission the product before assembly has been completed.
- Never operate the product without the required covers.
- Connect/disconnect all pluggable connections only in deenergized condition!
- Only remove the product from the installation in the deenergized state.
- The product can – depending on their degree of protection – have live, movable or rotating parts during or after operation. Surfaces can be hot.
- Observe the specifications of the corresponding documentation. This is the condition for safe and trouble-free operation and the achievement of the specified product features.
- The procedural notes and circuit details given in the associated documentation are suggestions and their transferability to the respective application has to be checked. The manufacturer of the product does not take responsibility for the suitability of the process and circuit proposals.
- All work with and on the product may only be carried out by qualified personnel. IEC 60364 and CENELEC HD 384 define the qualifications of these persons:
 - They are familiar with installing, mounting, commissioning, and operating the product.
 - They have the corresponding qualifications for their work.
 - They know and can apply all regulations for the prevention of accidents, directives, and laws applicable at the place of use.

Please observe the specific safety information in the other sections!



3.2 Application as directed

- The product is a piece of professional equipment intended for use by trades, specific professions or industry, and not for sale to the general public. IEC 60050 [IEV 161-05-05]
- To prevent personal injury and damage to property, higher-level safety and protection systems must be used!
- All transport locks must be removed.
- Mounted eye bolts on the motor are not suitable for transporting gearmotors.
- The product may only be operated under the specified operating conditions and in the specified mounting positions.
- The product must be operated with an inverter.
- Only certified application brakes may be used as safety brakes for functional safety.
- The product must not be operated in private areas, in potentially explosive atmospheres and in areas with harmful gases, oils, acids and radiation.



3.3 Foreseeable misuse

- Use in potentially explosive atmospheres
- Use in aggressive environments (acids, gases, vapors, dusts, oils)
- Use under water
- Use under radiation
- Operation on a frequency-rigid mains (public AC system)



3.4 Residual hazards

Even if notes given are taken into consideration and protective measures are implemented, the occurrence of residual risks cannot be fully prevented.

The user must take the residual hazards mentioned into consideration in the risk assessment for his/her machine/system.

If the above is disregarded, this can lead to severe injuries to persons and damage to property!

The user must take the residual hazards mentioned into consideration in the risk assessment for his/her machine/system.

If the above is disregarded, this may result in injuries to persons and material damage!

Product

Observe the warning labels on the product!



Dangerous electrical voltage:

Before working on the product, make sure there is no voltage applied to the power terminals!
After mains disconnection, the power terminals will still carry the hazardous electrical voltage for the time given next to the symbol!



Electrostatic sensitive devices:

Before working on the product, the staff must ensure to be free of electrostatic charge!



High leakage current:

Carry out fixed installation and PE connection in compliance with:
EN 61800-5-1 / EN 60204-1



Hot surface:

Use personal protective equipment or wait until the device has cooled down!

Protection of persons

- The power terminals may carry voltage in the switched-off state or when the motor is stopped.
 - Before working, check whether all power terminals are deenergized.
- Voltages may occur on the drive components (e.g. capacitive, caused by inverter supply).
 - Careful earthing in the marked positions of the components must be carried out.
- There is a risk of burns from hot surfaces.
 - Provide protection against accidental contact.
 - Use personal protective equipment or wait until the device has cooled down.
 - Prevent contact with flammable substances.
- There is a risk of injury due to rotating parts.
 - Before working on the drive system, ensure that the motor is at a standstill.
- There is a risk of accidental start-up or electric shock.



Gearbox protection

- Excessive vibration accelerations and resonances will damage the gearbox.
 - Do not operate the gearbox at vibration accelerations $> 2 \text{ g}$ (20 m/s^2) of the machine.
 - Do not operate the gearbox in the resonance range of the machine.
- Excessive torques will damage the gearboxes.
 - Do not exceed the output torques specified on the nameplate.
- Excessive input speeds lead to increased temperatures.
 - Do not exceed the input speeds specified on the nameplate.
- Avoid excessive lateral forces on the gearbox shaft.
 - Align the shafts of the gearbox and driven machine exactly with each other.
- Machine elements can be damaged by a lack of lubricant.
 - Mount the gearbox only in the mounting position indicated on the nameplate.
 - When changing the lubricant, use the lubricant type and quantity specified on the nameplate.

Motor protection

- Installed temperature contacts are not full protection for the machine.
 - If necessary, limit the maximum current. Parameterize the inverter so that it will be switched off after some seconds of operation with $I > I_{\text{rated}}$, especially if there is a risk of blocking.
 - Integrated overload protection does not prevent overloading under all conditions.
- The fuses are no motor protection.
 - Use a current-dependent motor protection switch.
 - Use the built-in temperature contacts.



4 Information on project planning

4.1 General information

NOTICE

For gearboxes with hollow shaft and shrink disk
observe the following requirements for the machine shaft:

- ▶ Fit tolerance h6
- ▶ Material yield strength $R_e \geq 360 \text{ MPa}$
- ▶ Modulus of elasticity approx. 210000 MPa
- ▶ Surface roughness $R_z \leq 15 \text{ }\mu\text{m}$
- ▶ No radial, axial forces and forces due to stress/rotation permissible

Operation on a frequency inverter

The m550-U, m550-V, and m650-U synchronous motors are optimized for sensorless operation with the i5xx and i6xx frequency inverters. With a frequency inverter operated at 400 V - 480 V, the motor can be operated continuously and efficiently at rated torque in the speed range up to 1860 rpm (m550) or up to 3720 rpm (m650).

On delivery, the frequency inverters are preset for the operation of asynchronous motors. Exceptions are the mounted i550/i650 motec units by Lenze.

Permanent position control during standstill under load can lead to increased gearbox wear.

Ensure that the frequency inverter is operated with the correct motor parameters and in SLSM operating mode.

Further information can be found in the frequency inverter documentation.

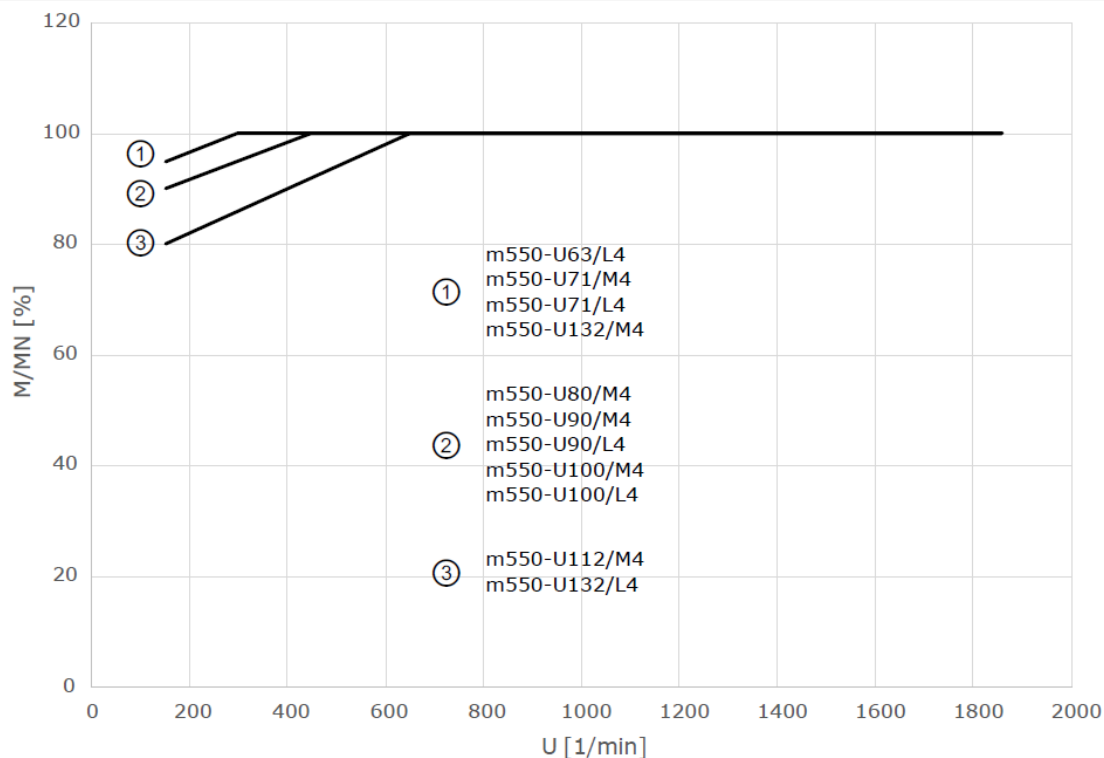
Torque reduction at low motor frequencies

At low motor frequencies (usually $< 20 \text{ Hz}$) and integral-fan operation, the motor is insufficiently cooled at the rated torque. By reducing the torque accordingly, the motor can be operated from 5 Hz.

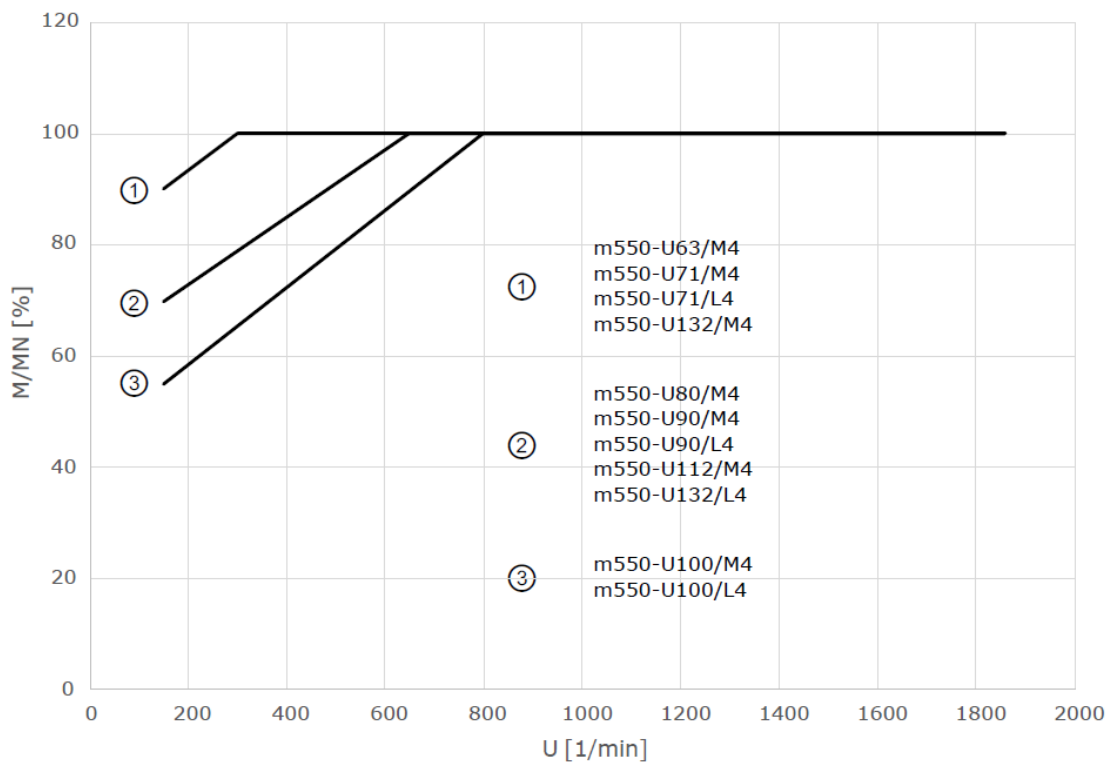


The diagram shows the motor size-dependent torque reduction for self-ventilated motors, taking into account the thermal behavior during operation on the inverter.

Derating wall/control cabinet-mounted inverters in S1 operating mode



Derating i5x0motec/i6x0motec as a drive package in S1 operating mode





Thermal power limit

The thermal power limit, defined by the heat balance, limits the permissible continuous gearbox power. It 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 spectrum.
- the ambient conditions: temperature, air circulation, input or dissipation of heat via shafts and the foundations.

NOTICE

A thermal check using the EASY System Designer (ESD) or consultation with your Lenze representative is required if

- ▶ the input speed $n_1 > 1860$ rpm is exceeded with the gearbox ratios listed below.
- ▶ the input speeds specified below are exceeded depending on the mounting position. For short periods of up to 5 minutes, speeds 30% higher than this are permissible.
- ▶ the ambient temperature is predominantly above +3 0°C.

Gearbox	Ratio i
g500-B1500 ... B4300	≤ 25

Motor	Mounting position M1	Mounting position M3, M5, M6	Mounting position M2, M4
m550-x63 ... x71	3200 rpm	3200 rpm	3000 rpm
m550-x80 ... x100	3200 rpm	3200 rpm	3000 rpm
m550-x112 ... x132	3000 rpm	2600 rpm	1500 rpm

Possible measures for expanding the scope of application

- Shaft sealing rings made of FKM material/Viton (optional)
- Reduction of lubricant quantity (in consultation with Lenze)
- Cooling of the gearmotor by air convection on the machine/system
- A version with a inch shaft is available on request.



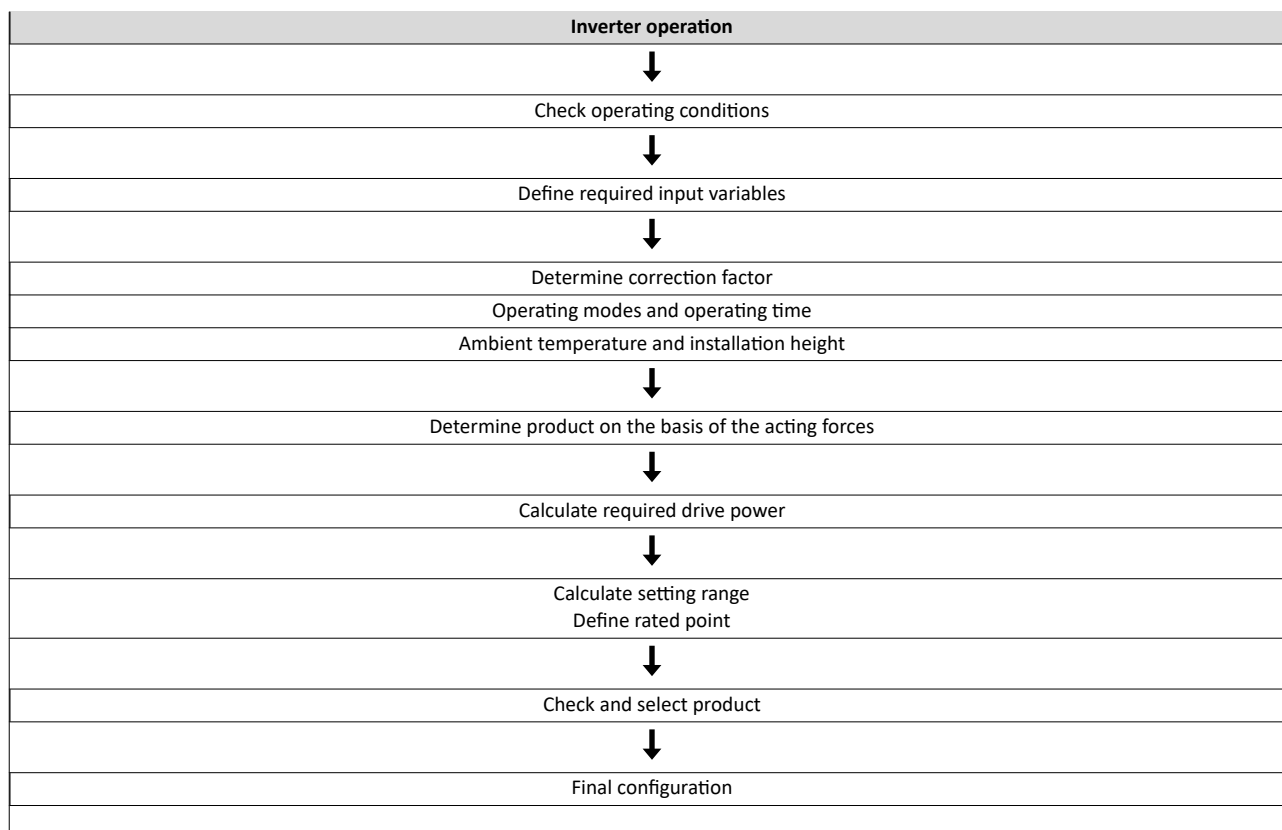
4.2 Drive dimensioning

In order to carry out an accurate drive dimensioning process, you can use our configuring software, the »EASY System Designer«.

With the »EASY System Designer«, you can design the drive both quickly and to a high quality. The software contains profound and proven expertise with regard to drive applications and mechatronic drive components.

Please get in touch with your Lenze representative.

Workflow



Check operating conditions

Check
Approvals Conformities Supply voltage Degree of protection Ambient temperature Surface protection

► [Standards and operating conditions](#) 51

► [Surface and corrosion protection](#) 35



Define required input variables

Necessary input variables	Note	Symbol	Unit
Operating time / day		OD	
Ambient temperature		T_V	°C
Site altitude amsl		H	m
Radial force		F_{rad}	N
Axial force		F_{ax}	N
Transmission element at the output Effective diameter of the transmission element	Gear wheels, sprockets ...	d_w	mm
Load torque	For short-term load peaks	$M_{L,max}$	Nm
	In rated operation	M_L	Nm
	In mains operation, $M_{L,max}/M_L$ should be < 2.0 to guarantee a safe start of the motor		
Load speed		$n_{L,max}$	rpm
	In inverter operation	$n_{L,min}$	rpm
Runtime for $M_{L,max}$	In inverter operation		%
External moments of inertia		J_{ext}	kgcm ²
Switching operations per hour		S_H	1/h

Determine correction factor

Operating modes S1, S2, S3, S6, and operating time							
Operating mode S1		Operating mode S2		Operating mode S3		Operating mode S6	
ED	k_L	ED	k_L	ED	k_L	ED	k_L
%		min		%		%	
100	1.0	10	1.4 - 1.5	15	1.4 - 1.5	15	1.5 - 1.6
		30	1.15 - 1.2	25	1.3 - 1.4	25	1.4 - 1.5
		60	1.07 - 1.1	40	1.15 - 1.2	40	1.3 - 1.4
		90	1.0 - 1.05	60	1.05 - 1.1	60	1.15 - 1.2

► Operating modes of the motor [184](#)

Installation altitude amsl	
≤ 1000 m	≤ 2000 m
Correction factor	
k_H	k_H
1	0.95

Ambient temperature		
≤ 40 °C	≤ 45 °C	≤ 50 °C
Correction factor		
k_{TU}	k_{TU}	k_{TU}
1	0.95	0.90

Mounting position						
Gearbox	Mounting position					
	M1	M2	M3	M4	M5	M6
	Correction factor					
	k_E	k_E	k_E	k_E	k_E	k_E
g500-B	1.00	0.70	0.80	0.80	0.80	0.80

► Selection tables [71](#)



Gearbox efficiency

Gearboxes	Gearbox efficiency	
	η_{c1}	
g500-B		
2-stage	0.96	
3-stage	0.95	
4-stage	0.94	

Determine product on the basis of the forces

Transmission element			Gear wheels	Sprockets	Toothed belt pulleys (depending on the pretension)	Narrow V-belt (depending on the pretension)
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	F_{rad}	N	$F_{rad} = 2000 \times \frac{M_{L,max} \times f_z}{dw}$		$F_{rad} \leq f_W \times F_{rad,max}$	
Axial force	F_{ax}	N			$F_{ax} \leq F_{rad,max} \times 0.5$	

dw Effective diameter of transmission element in mm

f_w Additional load factor

► [Radial forces and axial forces](#) 69

Calculate drive power

Required Drive power	kW	$P_1 = \frac{M_L \times \eta_{L,max}}{9549 \times k_L \times k_H \times k_{TU} \times \eta_g}$	
----------------------	----	--	--

k_L Correction factor - operating mode

k_{TU} Correction factor - ambient temperature

k_H Correction factor - site altitude

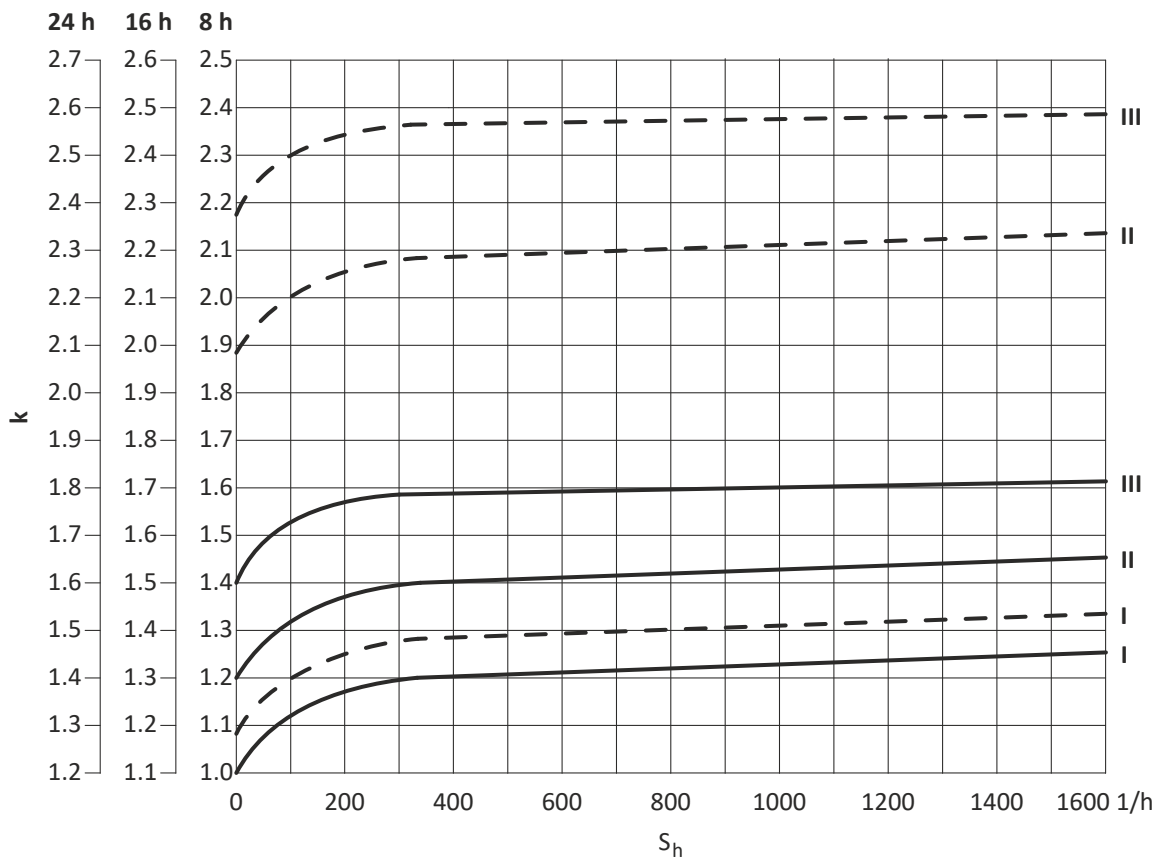
η_g Gearbox efficiency

Intensity and load class for inverter operation

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



Application factor k



k Application factor
 S_h Switching rate
 - - - - Ratio of max. torque/rated torque = 2.5

Stalling torque/rated torque of the motor ▶ [Rated data](#) 180

Inverter operation

Selection table	Check	Unit	Note
Rated frequency	62	Hz	
Rated power	$P_{rated} \geq P_1$	kW	
Output torque	$M_2 \geq M_L$	Nm	The geared motor must be able to provide sufficient torque for $M_{L,max}$.
Max. output speed	$n_2 \approx n_{L,max}$	rpm	
Min. output speed			
Self-ventilated	$n_{21} \approx n_{L,min}$	rpm	Setting ranges ≤ 2.5 (62 Hz)
Self-ventilated (reduced output torque)	$n_{22} \approx n_{L,min}$	rpm	Setting ranges ≤ 10 (62 Hz)
Load factor	$c \geq k$		

Order information	Example
Gearmotor	
Gearbox	g500-B45
Motor	m550-U63/L4
Gearbox ratio i	10466
Number of stages	2



4.3 Final configuration

	Check
Connection dimensions	Output shaft Output flange/foot
Mounting position	Geared motor Connector/terminal box Output shaft/output flange
Product extensions	Torque plate Shaft cover Connector/terminal box Brake Temperature monitoring ...

Further information on final project planning:

- ▶ [The modular system](#)  14
- ▶ [Product extensions](#)  138



4.3.1 Surface and corrosion protection

Depending on the ambient conditions, the surface and corrosion protection system (called OKS) offers tailor-made solutions for optimum protection.

Various surface coatings ensure reliable functioning even at high air humidity, in outdoor installations, or in the presence of atmospheric contamination. Any color from the "RAL Classic" collection can be chosen for the top coat.

For indoor installation in buildings and if no special corrosion protection is required, the products are also available unpainted (without surface and corrosion protection system).



Without OKS (unpainted):

The aluminum parts are uncoated and cast iron parts primed with gray paint. Slight color differences between the components are possible.

Surface and corrosion protection	Applications	Product	
		g500-H45 ... H450 g500-S130 ... S660 g500-B45 ... B450	g500-H600 ... H1500 g500-S950 ... S4500 g500-B600 ... B1500
Without OKS (unpainted)	- Indoor installation, no special corrosion protection necessary - Painting by customer	Default	-
OKS-G (primed)	Dependent on subsequent top coat applied	Optionally	Optionally
OKS-S (small)	- Standard applications - Indoor installation in heated buildings - Air humidity up to 90 %		Default
OKS-M (medium)	- Indoor installation in unheated buildings - Covered, protected outdoor installation - Air humidity up to 95 %		Optionally
OKS-L (large)	- Outdoor installation - Chemical industrial plants - Food industry - Air humidity above 95 %		

Surface and corrosion protection	Corrosivity category	Surface coating	Color	Coating thickness
	DIN EN ISO 12944-2	Design		
Without OKS (unpainted)	-	Dip priming of the gray cast iron parts	-	30 ... 50 µm
OKS-G (primed)	-	- Dip priming of the gray cast iron parts 2K PUR priming coat	-	80 ... 120 µm
OKS-S (small)	Comparable to C1	- Dip priming of the gray cast iron parts 2K-PUR top coat	- Standard: RAL 7012 - Optional: According to RAL Classic possible	80 ... 120 µm
OKS-M (medium)	Comparable to C2	Dip priming of the gray cast iron parts		110 ... 160 µm
OKS-L (large)	Comparable to C3	2K PUR priming coat 2K-PUR top coat		140 ... 200 µm



4.3.2 Temperature ranges

Temperature packages

The following temperature packages are available to suit your ambient conditions:

- Standard

On request:

- Deep-freeze
- Wide range



Observe the instructions given for the temperature packages!

For ambient temperatures < 0 °C or > +40 °C please contact your responsible Lenze sales company.

Temperature packages	
Standard	
Ambient temperature	0 °C ... +40 °C
Lubricant	Mineral oil • CLP 460 Synthetic oil • CLP HC 220 Food-grade oil • CLP HC 220 USDA H1
Note	At an ambient temperature predominantly above +30 °C: • Verification of the application by Lenze required.



4.3.3 Lubricants

The following gearboxes are lubricated for life:

- g500-B45
- g500-B110
- g500-B240

Recommended lubricants:

Lubricant	CLP 460	CLP HC 220 NSF H1	CLP HC 220	CLP HC 320
Ambient temperature	0 ... +40 °C	-20 ... +40 °C	-30 ... +40 °C	-20 ... +50 °C
Specification	Mineral oil with EP additives	Synthetic oil (polyalphaolefins basis)	Synthetic oil (polyalphaolefins basis)	
Change interval				
Operating hours	16000		25000	
Not later than after	3 years		4 years	
At oil temperature	70 °C		70 °C	
Fuchs	Renolin CLP 460	Cassida Fluid GL 220	Renolin Unisyn XT 220	Renolin Unisyn XT 320
Klüber	Klüberoil GEM 1-460 N	Klüberoil 4 UH1-220 N	Klübersynth GEM 4-220 N	Klübersynth GEM 4-320 N
Shell	Shell Omala S2 GX 460		Shell Omala S4 GXV 220	Shell Omala S4 GXV 320

Lubricant amounts for stocking

All lubricant amounts are reference values for a change of lubricant. They serve stocking purposes, for example. The specified values may vary if the unit is installed in a tilted position.

The exact values can be found on the nameplate.

Mounting position		M1 (A)	M2 (D)	M3 (B)	M4 (C)	M5 (E)	M6 (F)	M1-M6 (A-F)	M1, M5, M6 (AEF)
Gearboxes									
g500-B45	I	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-
g500-B110	I	.3	0.6	0.7	.9	0.5	0.4	-	0.5
g500-B240	I	.9	1.2	1.3	1.8	1.4	1.0	-	1.4
g500-B450	I	.9	1.6	1.9	2.3	1.8	1.7	-	1.8
g500-B600	I	1.4	2.3	2.7	3.2	2.6	2.6	-	-
g500-B820	I	1.9	2.8	3.4	4.2	3.2	2.7	-	-
g500-B1500	I	3.8	5.7	6.4	8.4	5.9	3.9	-	-
g500-B2700	I	6.0	9.0	10.0	12.7	8.5	9.5	-	-
g500-B4300	I	9.5	11.5	16.5	21.0	14.0	16.0	-	-
Pre-stage	I	0.4							

► Gearbox with pre-stage [132](#)



4.3.4 Ventilation



No venting measures are required for the g500-B45 ... B240 gearboxes.

The g500-B240 gearbox can optionally be equipped with breather elements.

From g500-B450 onwards, the gearboxes are supplied with breather elements as standard.

To reduce the number of different versions, the following gearboxes can also be ordered with combined mounting positions:

- g500-B45 in M1-M6 (A-F) mounting position
- g500-B110 ... B450 in M1/5/6 (AEF) mounting position



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

NOTICE

- For gearboxes with ventilation, a gap of at least 30 mm has to be observed to the machine wall on the corresponding gearbox side.

g500-B240

Mounting position		
M1 (A)	M2 (D)	M3 (B)
M1	M2	M3
M4 (C)	M5 (E)	M6 (F)
M4	M5	M6

Ventilation
 Change oil
 Fill oil
 Oil level



g500-B450

Mounting position		
M1 (A)	M2 (D)	M3 (B)
M1	M2	M3
M4 (C)	M5 (E)	M6 (F)
M4	M5	M6

🌀 Ventilation

🔄 Change oil

⬇️ Fill oil

📊 Oil level

g500-B600

Mounting position		
M1 (A)	M2 (D)	M3 (B)
M1	M2	M3
M4 (C)	M5 (E)	M6 (F)
M4	M5	M6

🌀 Ventilation

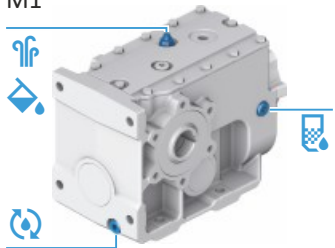
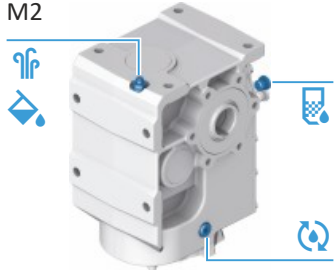
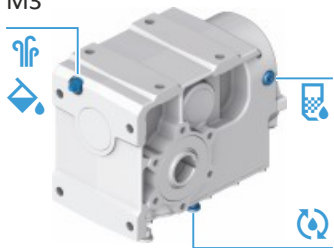
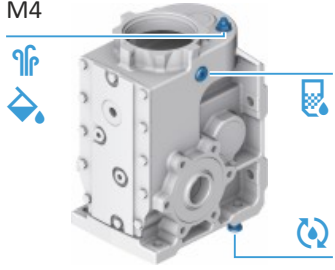
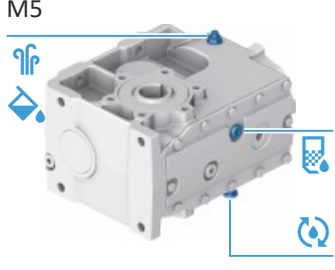
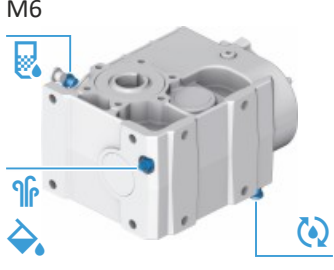
🔄 Change oil

⬇️ Fill oil

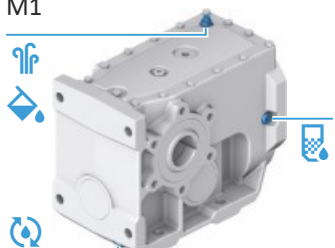
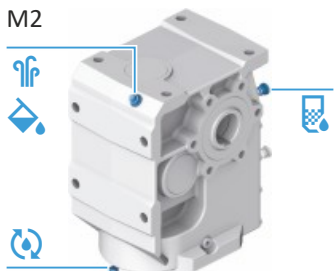
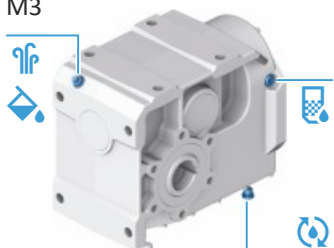
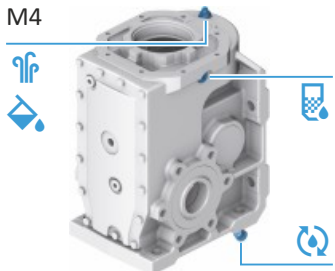
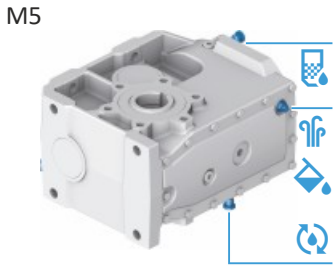
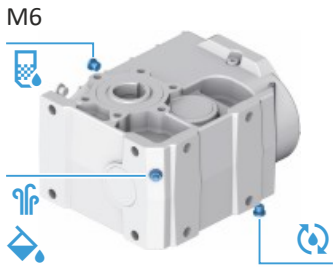
📊 Oil level



g500-B820

Mounting position			
M1 (A)	M2 (D)	M3 (B)	
M1 	M2 	M3 	
M4 (C)	M5 (E)	M6 (F)	
M4 	M5 	M6 	
 Ventilation	 Change oil	 Fill oil	 Oil level

g500-B1500

Mounting position			
M1 (A)	M2 (D)	M3 (B)	
M1 	M2 	M3 	
M4 (C)	M5 (E)	M6 (F)	
M4 	M5 	M6 	
 Ventilation	 Change oil	 Fill oil	 Oil level



g500-B2700

Mounting position		
M1 (A)	M2 (D)	M3 (B)
M1	M2	M3
M4 (C)	M5 (E)	M6 (F)
M4	M5	M6
Ventilation Change oil Fill oil Oil level		

g500-B4300

Mounting position		
M1 (A)	M2 (D)	M3 (B)
M1	M2	M3
M4 (C)	M5 (E)	M6 (F)
M4	M5	M6
Ventilation Change oil Fill oil Oil level		



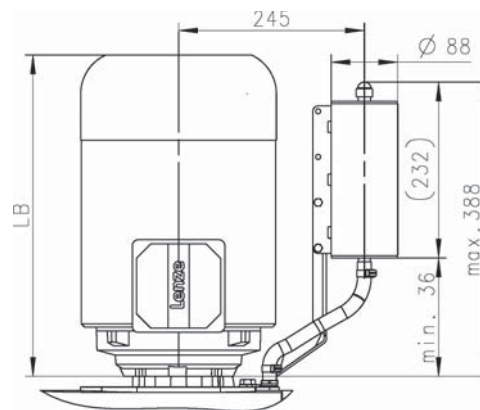
Gearbox with oil compensation reservoir for mounting position M4 (C)

In order to guarantee a reliable lubrication of the toothed parts in mounting position M4 (C) (motor is on the gearbox vertical from the top), a high filling level is required in the gearbox. As a result of the reduced volume of air in the gearbox, this may lead to oil escaping from the ventilation at higher input speeds. The oil compensation reservoir increases the expansion space for the lubricant.

The oil compensation reservoir can be ordered as a mounting set for fastening to the gearbox.

If insufficient space is available, the oil compensation reservoir can also be mounted over the gearbox hose connection on nearby system parts.

Dimensions of the oil compensation reservoir



8800783-00

For the following gearboxes in mounting position M4 (C), which exceed the specified min. input speed, an oil expansion reservoir is required depending on the specified gear ratio:



Information on project planning

Final configuration
Ventilation

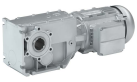
g500-B1500		g500-B2700		g500-B4300	
Gearbox ratio	Min. input speed	Gearbox ratio	Min. input speed	Gearbox ratio	Min. input speed
	rpm		rpm		rpm
6.866	2000	6.918	2000	5.488	2000
9.516	2000	8.793	2000	6.976	2000
10.902	2000	11.713	2000	9.156	2000
11.985	2000	12.863	2000	10.137	2000
13.118	2000	14.888	2000	11.080	2000
15.111	2000	16.351	2000	12.885	2000
16.611	2000	19.542	2000	14.084	2000
18.598	2000	22.269	2000	16.913	2000
20.444	2000	24.456	2000	18.486	2000
22.898	2000	26.814	3000	21.065	2000
23.973	3000	29.447	3000	23.206	3000
26.353	2000	32.873	3000	25.365	3000
29.206	3000	36.102	3000	28.013	2000
32.547	3000	42.772	2000	31.097	3000
35.778	3000	46.973	2000	35.607	2000
36.526	2000	48.912	3000	38.546	3000
40.895	2000	54.082	3000	42.760	2000
44.955	2000	59.393	3000	46.737	2000
46.568	3000	64.452	3000	53.258	2000
51.920	3000	71.951	3000	58.671	3000
57.074	3000	76.862	4000	64.127	3000
58.422	3000	84.940	4000	71.930	3000
64.221	3000	93.283	4000	78.619	3000
71.566	3000	97.481	3000	97.453	3000
74.963	4000	107.056	3000	106.517	3000
82.762	4000	118.370	3000	118.336	3000
90.978	4000	129.996	3000	129.342	3000
93.150	3000	153.185	4000	153.141	4000
102.396	3000	168.230	4000	167.383	4000
114.166	3000	185.911	4000	185.857	4000
125.498	3000	204.170	4000	203.143	4000
149.949	4000	235.000	4000	234.932	4000
164.833	4000	258.080	4000	256.781	4000
181.983	4000				
200.048	4000				
230.035	4000				
252.869	4000				



5 Mechanical installation

5.1 Important notes

- Install the product according to the information in the chapter "Standards and operating conditions".
 - ▶ [Standards and operating conditions](#)  51
- The technical data and the data regarding the supply conditions can be found on the nameplate and in this documentation.
- Ambient media – especially chemically aggressive ones – may damage shaft sealing rings, lacquers and plastics.
- Lenze offers special surface and corrosion protection in this case.



5.2 Transport

CAUTION!

Danger from tipping and falling loads!

Standing beneath suspended loads is prohibited!

Possible consequences: Minor or moderate injuries.

- ▶ To achieve a load direction that is as vertical as possible (maximum load-bearing capacity), use additional, suitable load carriers if necessary. Secure the load carrier against slipping!
- ▶ Screw in the transport aids completely. They must lie flat and over the entire surface!
- ▶ Load the transport aids vertically in the direction of the screw axis! Inclined or lateral tension reduces the load-bearing capacity! Observe the specifications in the DIN 580!

NOTICE

Eye bolts or lifting eyes on the motor are not suitable for transporting geared motors.

Only use these for mounting/dismounting the motor on the gearbox.

Possible consequences: Damage to the geared motor.

- ▶ Only use the threads provided on the gearbox for eye bolts or lifting eyes for transporting the geared motor.

Preconditions

- Ensure appropriate handling.
- Make sure that all component parts are securely mounted. Secure or remove loose component parts.
- Only use safely fixed transport aids (e.g., eye bolts or support plates).
- Do not damage any components during transport.
- Avoid electrostatic discharges on electronic components and contacts.
- Avoid impacts.
- Check the carrying capacity of the hoists and load handling devices. The weights can be found in the shipping documents.
- Secure the load against tipping and falling down.
- Standing beneath suspended loads is prohibited.



The eye bolt is not included in the scope of supply!

Position of the eye bolt or lifting eye

Geared motor			
	Eye bolt on the shaft	Eye bolt on the housing	Lifting eye on the housing
G50AB045Mxxxxxx	M6	-	-
G50BB111Mxxxxxx	M6	-	-
G50BB124Mxxxxxx	M10	-	-
G50BB145Mxxxxxx	-	M10	-
G50BB160Mxxxxxx	-	M12	-
G50BB182Mxxxxxx	-	M16	-
G50BB215Mxxxxxx	-	M16	-
G50BB227Mxxxxxx	-	M16	-
G50BB243Mxxxxxx	-	M20	-
G50BB280Mxxxxxx	-	-	•
G50BB313Mxxxxxx	-	-	•
G50BB320Mxxxxxx	-	-	•



5.3 Installation

Ventilation elements

Gearboxes that are supplied with a pre-assembled ventilation element:

- The ventilation element is identified by a sign on the gearbox.
- Remove the transport lock from the ventilation element before initial commissioning.

Gearboxes that are supplied with a loosely attached ventilation element:

- Before commissioning for the first time, install the ventilation element according to the mounting position.

Mounting surfaces

- The mounting surfaces must be plane, torsionally rigid and free from vibrations.
- The mounting areas must be suited to absorb the forces and torques generated during operation.
- Ensure an unhindered ventilation.
- For versions with a fan, keep a minimum distance of 10 % from the outside diameter of the fan cover in intake direction.



6 Electrical installation

6.1 Important notes

DANGER!

Risk of injury and risk of burns from dangerous voltage

Power terminals may also carry voltage in the switched-off state or when the motor is stopped and may cause life-threatening cardiac arrhythmia and serious burns.

- ▶ Disconnect the product from the mains.
- ▶ Check that the power terminals are deenergized before starting work.

-
- When working on energized products, comply with the applicable national accident prevention regulations.
 - The electrical installation must be carried out according to the appropriate regulations (e.g. cable cross-sections, fuses, PE connection).
 - The manufacturer of the system or machine is responsible for adherence to the limits required in connection with EMC legislation.

Connection for high leakage current

If the leakage current is greater than 3.5 mA for alternating current or greater than 10 mA for direct current, the standard EN 61800-5-1 requires that at least one or more of the following measures be met:

- The minimum PE conductor cross-section is 10 mm² with Cu or 16 mm² with Al.
- Attachment of an additional protective grounding conductor with the same cross-section as the original protective grounding conductor.
 - Do not place the additional terminal on the same terminal.
- Provide automatic disconnection of the mains in case of interruption of the protective conductor.

▶ [Connection options](#)  149

Operation on an external inverter

A max. pulse voltage amplitude of $U_{pk} = 1560$ V at the motor terminals must not be exceeded.

Here, the minimum pulse rise time must be $t_r = 0.1$ μs.

If it cannot be ruled out that the permissible voltage peaks will be exceeded or that the minimum pulse rise time will not be reached, the following measures must be initiated:

- Reduction of the DC-bus voltage (threshold for brake chopper voltage)
- Use of filters, chokes
- Use of special motor cables



6.2 Preparation

EMC-compliant wiring



The EMC-compliant wiring is described in detail in the documentation of the Lenze inverters.



7 Technical data

7.1 Notes regarding the given data

Catalog data

The power values, torques and speeds specified in the configuration are rounded values and apply to:

- Operating time per day = 8 hrs (100 % ED)
- Duty class up to 10 switching operations per hour
- Ambient temperature = 0 ... +40 °C
- Site altitude ≤ 1000 m above mean sea level
- The selection tables indicate the mechanically permissible power levels and torques.
- The specified rated data apply to operating mode S1 (acc. to EN 60034-1).

NOTICE

In case of other operating conditions, the achievable values can differ for those mentioned.

► In case of extreme operating conditions, please get in touch with your Lenze representative.



7.2 Standards and operating conditions

7.2.1 Conformities and approvals

More information and certificates of approval can be found under

[g500 + m500 bevel geared motors \(Lenze.com\)](https://www.lenze.com/g500+m500-bevel-g geared-motors)

Europe					
Country	Conformity/ approval	Law/standard	Description	Special feature	Product representation
European Union	CE	2006/42/EC	Machinery Directive	Only for safety-relevant components	CE mark
		2011/65/EU	RoHS	-	
		2014/30/EU	EMC Directive		
		2014/35/EU	Low-Voltage Directive		
Great Britain	UKCA	S.I. 2008/1597	The Supply of Machinery (Safety) Regulations 2008	Only for safety-relevant components	UKCA mark
		S.I. 2012/3032	The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	-	
		S.I. 2016/1091	The Electromagnetic Compatibility Regulations 2016		
		S.I. 2016/1101	The Electrical Equipment (Safety) Regulations 2016		

America					
Country	Conformity/ approval	Law/standard	Description	Special feature	Product representation
Canada	CSA	CSA 22.1 No. 100	CSA Standard for Motors and Generators	-	cULus mark
USA	UL	UL 1004-1	UL Standard for Rotating Electrical Machines		

Asia					
Country	Conformity/ approval	Law/standard	Description	Special feature	Product representation
China	-	GB 30253	Minimum allowable values of energy efficiency and energy efficiency grades for permanent magnet synchronous motors	in preparation	CEL mark
		GB/T 26572	Requirements on concentration limits for certain restricted substances in electrical and electronic products	-	EFUP mark

7.2.2 Protection of persons and device protection

Degree of protection			
EN	EN IEC 60529,EN IEC 60034-5	IP54	Information applies to the mounted and ready for-use state
		IP55	
Temperature class			
-	EN IEC 60034-1	F (155 °C)	Insulation system
Utilization		B (130 °C)	Utilization
Permissible voltage			
-	IEC 60034-18-41	IVIC C	At 500 V

7.2.3 EMC data

Noise emission		
-	EN IEC 60034-1	A final overall assessment of the drive system is indispensable
Interference immunity		
-	EN IEC 60034-1	A final overall assessment of the drive system is indispensable

Technical data

Standards and operating conditions
Environmental conditions



7.2.4 Environmental conditions

Energy efficiency			
Efficiency level	EN IEC 60034-30-2	Energy efficiency class IE5	
Installation altitude			
0 ... 1000 m amsl	-	Without current derating	
Air humidity			
-	-	Average relative humidity 85 %	Without condensation



7.3 Gearbox data

The following tables contain the most important data of the gearbox for attachable motors of a geared motor.

The specified data for speed, torque, and power are valid at

- input speed $n_1 = 1860$ rpm
- 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).

g500-B45, 2-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
n_2	$M_{2, \max}$	i	z_g	z_t	Standard
rpm	Nm				'
344	39.0	5.411	1120	207	26
299	40.5	6.222	56	9	25
262	43.0	7.111	64	9	25
227	44.0	8.178	368	45	24
204	45.0	9.101	1720	189	25
178	45.0	10.466	1978	189	24
160	45.0	11.640	2200	189	24
139	45.0	13.386	2530	189	23
123	45.0	15.111	136	9	24
107	45.0	17.378	782	45	23
96.0	45.0	19.365	1220	63	23
83.5	45.0	22.270	1403	63	23
74.3	45.0	25.051	2480	99	23
64.6	45.0	28.808	2852	99	22
57.1	45.0	32.593	880	27	23
49.6	45.0	37.481	1012	27	22



g500-B110, 2-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
359	69.0	5.185	140	27	21
312	72.0	5.963	161	27	20
262	77.0	7.111	64	9	20
227	81.0	8.178	368	45	20
204	84.0	9.101	1720	189	20
178	89.0	10.466	1978	189	19
163	90.0	11.449	2576	225	19
147	90.0	12.698	800	63	20
127	90.0	14.603	920	63	19
120	92.0	15.556	140	9	19
104	96.0	17.889	161	9	19
95.1	100	19.556	176	9	19
82.7	104	22.489	1012	45	19
73.9	108	25.185	680	27	19
64.2	110	28.963	782	27	19
58.3	108	31.919	3160	99	18
50.7	110	36.707	3634	99	18
49.7	106	37.400	187	5	18
46.5	101	40.000	40	1	18
40.4	110	46.000	46	1	18
38.6	110	48.167	289	6	18
30.5	110	61.045	1343	22	18
24.3	110	76.500	153	2	18

g500-B110, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n ₂	M _{2, max}	i	z _g	z _t	
rpm	Nm				'
17.4	110	107.090	20240	189	19
16.3	108	114.074	3080	27	19



g500-B240, 2-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
522	138	3.565	385	108	17
381	147	4.889	44	9	17
297	156	6.257	2365	378	17
270	179	6.883	413	60	13
238	187	7.817	469	60	12
197	191	9.440	236	25	13
174	204	10.720	268	25	12
154	208	12.081	2537	210	13
136	217	13.719	2881	210	12
124	223	15.008	1876	125	12
110	240	16.857	118	7	12
97.2	240	19.143	134	7	12
90.1	240	20.650	413	20	12
79.3	240	23.450	469	20	12
69.2	240	26.878	2419	90	12
60.9	240	30.522	2747	90	12
55.6	240	33.433	1003	30	12
49.0	240	37.967	1139	30	12
43.0	240	43.267	649	15	12
37.9	240	49.133	737	15	12
35.4	233	52.510	5251	100	12
31.2	240	59.630	5963	100	11
27.7	178	67.113	5369	80	12
24.4	202	76.213	6097	80	11

g500-B240, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n ₂	M _{2, max}	i	z _g	z _t	
rpm	Nm				'
27.2	240	68.459	43129	630	13
23.9	240	77.741	48977	630	12
21.2	240	87.563	11033	126	13
18.7	240	99.437	12529	126	12
16.4	240	113.673	17051	150	13
14.4	240	129.087	19363	150	12
12.8	240	145.674	61183	420	13
11.2	240	165.426	69479	420	12
9.9	240	188.442	31093	165	13
8.7	240	213.994	35309	165	12
7.6	240	245.178	11033	45	13



g500-B450, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
372	280	5.002	2401	480	21
271	308	6.860	343	50	21
200	368	9.315	3577	384	15
180	384	10.328	2107	204	14
146	404	12.775	511	40	15
131	422	14.165	1204	85	14
114	434	16.349	3139	192	14
104	446	17.885	3577	200	14
93.8	450	19.831	8428	425	13
81.5	450	22.813	365	16	14
73.5	450	25.294	430	17	13
66.6	450	27.945	3577	128	14
60.0	450	30.985	2107	68	13
51.1	450	36.373	20951	576	14
46.1	450	40.330	12341	306	13
41.1	450	45.245	8687	192	14
37.1	450	50.167	301	6	13
33.1	450	56.154	730	13	12
29.9	450	62.262	13760	221	12
27.0	450	68.788	3577	52	12
24.4	450	76.271	16856	221	12
20.8	450	89.534	20951	234	12
18.7	450	99.274	197456	1989	12
16.7	450	111.372	8687	78	12
15.1	450	123.487	4816	39	12
12.9	450	144.128	5621	39	12
11.6	450	159.807	105952	663	12
10.6	450	174.919	45479	260	12
9.6	450	193.948	214312	1105	12
8.3	450	223.563	3577	16	12
7.5	450	247.882	4214	17	12

g500-B450, 4-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
9.1	450	204.072	318353	1560	13
8.1	450	230.605	44968	195	13
7.3	450	255.691	847616	3315	12
6.3	450	295.120	34529	117	13
5.8	450	322.847	314776	975	13
5.2	450	357.968	5933312	16575	12
4.5	450	411.795	16060	39	13
4.1	450	456.591	302720	663	12
3.7	450	504.449	39347	78	13



g500-B600, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	'
rpm	Nm				
367	376	5.067	6293	1242	20
268	398	6.949	7192	1035	19
244	462	7.617	15631	2052	17
173	541	10.741	290	27	14
139	553	13.369	13717	1026	16
126	600	14.730	928	63	14
98.7	600	18.851	24940	1323	14
90.2	600	20.622	928	45	14
81.4	600	22.852	15631	684	16
73.4	600	25.347	2408	95	14
71.4	600	26.061	860	33	12
62.5	600	29.744	91553	3078	16
57.3	600	32.439	1849	57	14
52.0	600	35.740	2752	77	12
50.3	600	36.999	37961	1026	16
44.3	600	41.940	23780	567	13
40.7	600	45.739	73960	1617	12
37.2	600	50.036	2752	55	12
33.5	600	55.447	2107	38	14
29.1	600	63.822	34400	539	12
27.6	600	67.513	12760	189	13
25.8	600	72.170	12341	171	14
23.8	600	78.182	860	11	12
22.7	600	81.937	5162	63	13
20.7	600	89.772	5117	57	14
18.3	600	101.760	70520	693	12
16.0	600	116.175	6622	57	14
14.7	600	126.580	29240	231	12
13.2	600	140.995	26789	190	14
11.4	600	163.810	3440	21	12
10.4	600	178.224	13545	76	14
9.4	600	198.805	15308	77	12
7.4	600	251.299	19350	77	12

g500-B600, 4-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n ₂	M _{2, max}	i	z _g	z _t	
rpm	Nm				'
9.2	600	201.089	286552	1425	14
8.2	600	227.943	112832	495	12
7.4	600	252.594	86387	342	14
6.6	600	283.539	46784	165	12
5.7	600	328.773	505981	1539	14
5.1	600	366.933	5504	15	12
4.6	600	406.614	23177	57	14
4.0	600	468.027	68800	147	12
3.5	600	529.244	271502	513	14
3.2	600	573.333	1720	3	12
2.9	600	642.309	1098349	1710	14



g500-B820, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
n_2	$M_{2, \max}$	i	z_g	z_t	Standard
rpm	Nm				'
375	312	4.958	119	24	21
274	391	6.800	34	5	20
244	424	7.618	259	34	16
218	459	8.517	511	60	15
195	496	9.520	238	25	19
178	528	10.447	888	85	16
159	569	11.680	292	25	15
153	544	12.143	85	7	19
139	619	13.370	1591	119	15
127	653	14.626	6216	425	15
114	708	16.352	2044	125	15
99.7	747	18.655	2220	119	15
89.2	820	20.857	146	7	15
81.4	820	22.853	777	34	15
72.8	820	25.550	511	20	14
70.7	820	26.324	8687	330	12
62.5	820	29.745	1517	51	15
57.6	820	32.291	1776	55	12
51.5	820	36.102	9928	275	14
50.3	820	37.000	37	1	12
45.0	820	41.325	3182	77	12
41.1	820	45.207	12432	275	12
36.8	820	50.543	69496	1375	12
32.3	820	57.662	4440	77	12
28.9	820	64.468	4964	77	12
26.3	820	70.636	777	11	12
23.6	820	78.973	8687	110	12
20.2	820	91.939	3034	33	12
18.1	820	102.790	50881	495	12
16.3	820	114.364	1258	11	12
14.5	820	127.861	21097	165	12
12.6	820	148.000	148	1	12
11.2	820	165.467	2482	15	12
10.4	820	179.618	9879	55	12
9.3	820	200.816	110449	550	12
8.2	820	227.045	4995	22	12
7.3	820	253.841	11169	44	11



g500-B820, 4-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
9.2	820	201.818	2220	11	12
8.2	820	225.636	2482	11	12
7.3	820	256.175	70448	275	12
6.5	820	286.408	1181432	4125	12
5.8	820	321.788	10619	33	12
5.2	820	359.765	356167	990	12
4.6	820	400.273	4403	11	12
4.0	820	468.265	2086121	4455	12
3.6	820	518.000	518	1	12
3.2	820	579.133	8687	15	12
2.8	820	674.222	6068	9	12
2.5	820	753.793	101762	135	12
2.2	820	838.667	2516	3	12



g500-B1500, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
n_2	$M_{2, \max}$	i	z_g	z_t	Standard
rpm	Nm				'
271	837	6.866	1792	261	15
196	1006	9.516	1456	153	15
171	1330	10.902	36992	3393	12
155	1461	11.985	3128	261	11
142	1118	13.118	50176	3825	14
123	1500	15.111	136	9	12
112	1500	16.611	299	18	11
100	1500	18.598	2176	117	11
91.0	1500	20.444	184	9	11
81.2	1500	22.898	5152	225	11
77.6	1500	23.973	99416	4147	10
70.6	1500	26.353	16813	638	10
63.7	1500	29.206	1840	63	11
57.1	1500	32.547	3808	117	11
52.0	1500	35.778	322	9	11
50.9	1500	36.526	12857	352	10
45.5	1500	40.895	5848	143	10
41.4	1500	44.955	989	22	10
39.9	1500	46.568	3772	81	11
35.8	1500	51.920	18224	351	11
32.6	1500	57.074	1541	27	11
31.8	1500	58.422	58480	1001	10
29.0	1500	64.221	4945	77	10
26.0	1500	71.566	10234	143	10
24.8	1500	74.963	2024	27	11
22.5	1500	82.762	48416	585	11
20.4	1500	90.978	4094	45	10
20.0	1500	93.150	119884	1287	10
18.2	1500	102.396	40549	396	10
16.3	1500	114.166	48977	429	10
14.8	1500	125.498	66263	528	10
12.4	1500	149.949	5848	39	10
11.3	1500	164.833	989	6	10
10.2	1500	181.983	130118	715	10
9.3	1500	200.048	88021	440	10
8.1	1500	230.035	32895	143	10
7.4	1500	252.869	44505	176	10



g500-B1500, 4-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
9.1	1500	204.476	29240	143	10
8.3	1500	224.773	4945	22	10
7.4	1500	250.483	35819	143	10
6.8	1500	275.347	48461	176	10
5.7	1500	326.025	419594	1287	10
5.2	1500	358.388	283843	792	10
4.6	1500	405.543	173978	429	10
4.2	1500	445.799	117691	264	10
3.6	1500	520.087	2008057	3861	10
3.3	1500	571.714	2716783	4752	10
2.9	1500	646.938	832609	1287	10
2.6	1500	711.156	1126471	1584	10
2.2	1500	829.035	5334838	6435	10
2.0	1500	911.329	3608861	3960	10
1.8	1500	1016.073	4358953	4290	10
1.7	1500	1116.933	5897407	5280	10
1.5	1500	1208.778	10879	9	10
1.4	1500	1334.544	260236	195	10
1.3	1500	1467.017	88021	60	10
1.1	1500	1619.651	5790251	3575	10



g500-B2700, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
n_2	$M_{2, \max}$	i	z_g	z_t	Standard
rpm	Nm				'
269	1446	6.918	28917	4180	14
212	1528	8.793	41769	4750	14
159	2212	11.713	2448	209	10
145	2262	12.863	18819	1463	9
125	2380	14.888	7072	475	10
114	2429	16.351	54366	3325	9
95.2	2579	19.542	23392	1197	9
83.5	2684	22.269	3808	171	9
76.1	2700	24.456	1394	57	9
69.4	2700	26.814	32096	1197	9
63.2	2700	29.447	82246	2793	9
56.6	2700	32.873	16864	513	9
51.5	2700	36.102	43214	1197	9
43.5	2700	42.772	8084	189	9
39.6	2700	46.973	82861	1764	8
38.0	2700	48.912	2788	57	9
34.4	2700	54.082	9248	171	9
31.3	2700	59.393	23698	399	9
28.9	2700	64.452	113693	1764	8
25.9	2700	71.951	5828	81	8
24.2	2700	76.862	30668	399	9
21.9	2700	84.940	24208	285	9
19.9	2700	93.283	62033	665	9
19.1	2700	97.481	2632	27	8
17.4	2700	107.056	1927	18	8
15.7	2700	118.370	3196	27	8
14.3	2700	129.996	32759	252	8
12.1	2700	153.185	4136	27	8
11.1	2700	168.230	21197	126	8
10.0	2700	185.911	8366	45	8
9.1	2700	204.170	171503	840	8
7.9	2700	235.000	235	1	8
7.2	2700	258.080	28905	112	8



g500-B2700, 4-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
9.1	2700	205.407	5546	27	9
8.2	2700	225.581	113693	504	8
7.0	2700	265.150	178976	675	9
6.4	2700	291.191	65518	225	8
5.6	2700	332.564	188564	567	9
5.1	2700	365.227	1932781	5292	8
4.5	2700	414.296	11186	27	9
4.1	2700	454.986	32759	72	8
3.8	2700	487.698	79007	162	8
3.4	2700	552.395	44744	81	9
3.1	2700	606.648	32759	54	8
2.7	2700	697.844	169576	243	9
2.4	2700	785.074	21197	27	8
2.1	2700	868.049	70312	81	9
2.0	2700	953.304	360349	378	8
1.7	2700	1123.358	90992	81	9
1.5	2700	1233.688	233167	189	8
1.4	2700	1363.348	184052	135	9
1.1	2700	1654.609	372287	225	9
1.0	2700	1817.115	15263767	8400	8
0.9	2700	2114.739	380653	180	8
0.8	2700	2322.436	2229539	960	8
0.7	2700	2673.125	21385	8	8
0.6	2700	2935.664	375765	128	8



g500-B4300, 3-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
339	2160	5.488	1147	209	14
267	2400	6.976	29822	4275	13
203	2700	9.156	98642	10773	13
184	3950	10.137	67797	6688	9
168	4250	11.080	23157	2090	9
144	4300	12.885	97929	7600	9
132	4300	14.084	33449	2375	8
110	4300	16.913	35991	2128	9
101	4300	18.486	110639	5985	8
88.3	4300	21.065	18011	855	8
80.2	4300	23.206	49383	2128	9
73.3	4300	25.365	151807	5985	8
66.4	4300	28.013	2241	80	8
59.8	4300	31.097	79763	2565	8
52.2	4300	35.607	35607	1000	8
48.3	4300	38.546	5859	152	9
43.5	4300	42.760	38313	896	8
39.8	4300	46.737	39259	840	8
34.9	4300	53.258	6391	120	8
31.7	4300	58.671	52569	896	8
29.0	4300	64.127	53867	840	8
25.9	4300	71.930	9207	128	8
23.7	4300	78.619	28303	360	8
19.1	4300	97.453	6237	64	8
17.5	4300	106.517	6391	60	7
15.7	4300	118.336	15147	128	8
14.4	4300	129.342	15521	120	7
12.1	4300	153.141	9801	64	8
11.1	4300	167.383	10043	60	7
10.0	4300	185.857	237897	1280	8
9.2	4300	203.143	81257	400	7
7.9	4300	234.932	120285	512	8
7.2	4300	256.781	8217	32	7



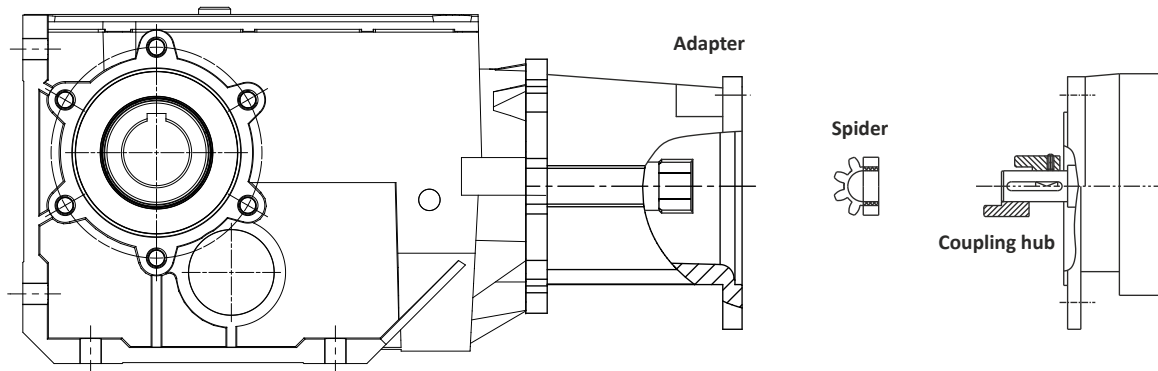
g500-B4300, 4-stage gearboxes

Output speed	Max. output torque	Ratio	Number of teeth		Max. backlash
					Standard
n_2	$M_{2, \max}$	i	z_g	z_t	
rpm	Nm				'
9.1	4300	205.348	52569	256	8
8.3	4300	224.446	53867	240	8
7.0	4300	265.073	106029	400	8
6.7	4300	278.438	4455	16	8
6.1	4300	304.333	913	3	8
5.0	4300	369.548	15521	42	8
4.5	4300	414.176	106029	256	8
4.1	4300	452.696	108647	240	8
3.8	4300	485.243	262031	540	8
3.4	4300	552.234	35343	64	8
3.1	4300	603.594	108647	180	8
2.7	4300	697.641	44649	64	8
2.4	4300	762.524	411763	540	8
2.1	4300	867.797	55539	64	8
2.0	4300	948.506	170731	180	8
1.7	4300	1123.031	35937	32	8
1.5	4300	1227.478	110473	90	8
1.4	4300	1362.952	872289	640	8
1.1	4300	1654.128	21172833	12800	8
1.0	4300	1807.968	7231873	4000	8
0.9	4300	2114.124	21648627	10240	8
0.8	4300	2310.746	7394387	3200	8
0.7	4300	2672.347	10945935	4096	8
0.6	4300	2920.887	747747	256	8



7.4 Gearboxes with adapter

Versions with flexible coupling

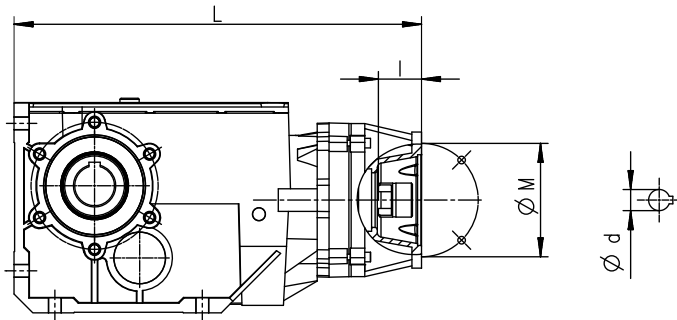


Power is transmitted between the motor and the gearbox via a flexible coupling. The gearbox shaft is designed as a coupling claw on the motor side. The counterpart, the coupling hub, is placed on the motor shaft and secured axially. A spider (elastic ring gear) is located between the two coupling claws, which can absorb shocks and ensures torque transmission with reduced torsional vibration.

- Coupling hub with keyway
 - Form-fit power transmission
 - Suitable for normal operation
- Clamping hub with tangential clamping screw and keyway
 - Form-fit and force-fit power transmission
 - Suitable for reversing duty



Dimensions of gearbox with adapter for IEC standard motors



Gearbox dimensions ► [Basic dimensions](#) 105

Versions with flexible coupling

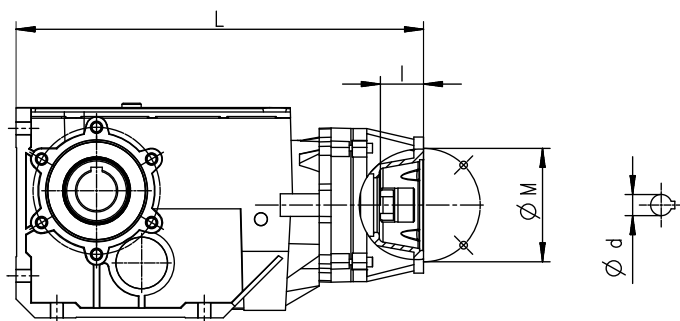
Motor				Adapter		g500 gearbox								
P ₁	Size	Shaft		M	Size	-B45	-B110	-B240	-B450	-B600	-B820	-B1500	-B2700	-B4300
kW		d	l	mm		L	L	L	L	L	L	L	L	L
		mm	mm			mm	mm	mm	mm	mm	mm	mm	mm	mm
0.12 0.18	63	11	23	FF75	N1A	208	275	335	-	-	-	-	-	-
					N2B	-	275	335	342	362	387	-	-	-
				FF130	N6C	-	292	352	359	379	404	470	-	-
0.25 0.37	71	14	30	FF85	N1B	-	292	352	359	379	404	-	-	-
					N3C	-	292	352	359	379	404	470	-	-
				FF100	N4C	-	292	352	359	379	404	470	-	-
				FF130	N2C	-	292	352	359	379	404	470	-	-
0.55 0.75	80	19	40	FF100	N7C	-	292	352	359	379	404	470	-	-
				FF130	N1C	-	292	352	359	379	404	470	-	-
					N2D	-	321	381	388	408	433	499	553	592
					N3E	-	-	381	388	408	433	499	553	592
1.1 1.5	90	24	50	FF130	N1D	-	321	381	388	408	433	499	553	592
					N2E	-	-	381	388	408	433	499	553	592
					N2F	-	-	-	-	-	433	499	553	592
				FT165	N4E	-	-	401	408	428	453	519	573	612
					N3F	-	-	-	-	-	453	519	573	612
2.2 3.0 4.0	100 112	28	60	FF130	N1E	-	-	381	388	408	433	499	553	592
					N1F	-	-	-	-	-	433	499	553	592
				FF215	N2G	-	-	-	-	-	497	563	617	656
5.5 7.5	132	38	80	FF215	N3G	-	-	-	-	-	517	583	637	676
				FF265	N1G	-	-	-	-	-	517	583	637	676
					N3H	-	-	-	-	-	-	623	677	718
11.0 15.0	160	42	110	FF300	N1H	-	-	-	-	-	-	653	707	746
18.5 22.0	180	48	110	FF300	N2H	-	-	-	-	-	-	653	707	746

The N6C adapter is only available with clamping hub.

The N1D adapter is only available with standard and clamping hub.



Dimensions of gearboxes with adapter for servo motors



Gearbox dimensions ► [Basic dimensions](#) 105

Versions with servo adapter

Motor			Adapter		Gearbox g500							
M	Shaft		M	Size	-B110	-B240	-B450	-B600	-B820	-B1500	-B2700	-B4300
mm	d	l	mm		L	L	L	L	L	L	L	L
	mm	mm	mm		mm	mm	mm	mm	mm	mm	mm	mm
75	11	23	FT75	S2B	231	291	298	318	343	-	-	-
	14	30		S3B	231	291	298	318	343	-	-	-
100	14	30	FF100	S4C	246	306	313	333	358	424	-	-
	19	40		S7C	246	306	313	333	358	424	-	-
	16	40		S8C	246	306	313	333	358	424	-	-
115	19	50	FF115	S3D	263	323	330	350	375	441	287	534
	24	50		S4D	263	323	330	350	375	441	287	534
130	19	50	FF130	S2D	263	323	330	350	375	441	287	534
	24	50		S1D	263	323	330	350	375	441	287	534
	24	60		S2E	-	323	330	350	375	441	287	534
	28	60		S1E	-	323	330	350	375	441	287	534
165	24	50	FF165	S4E	-	323	330	350	375	441	287	534
	32	58		S6E	-	323	330	350	375	441	287	534
	28	60		S7E	-	323	330	350	375	441	287	534



7.5 Radial forces and axial forces

Permissible radial force

The calculation of the permissible radial force must take account of the additional load factor f_w .

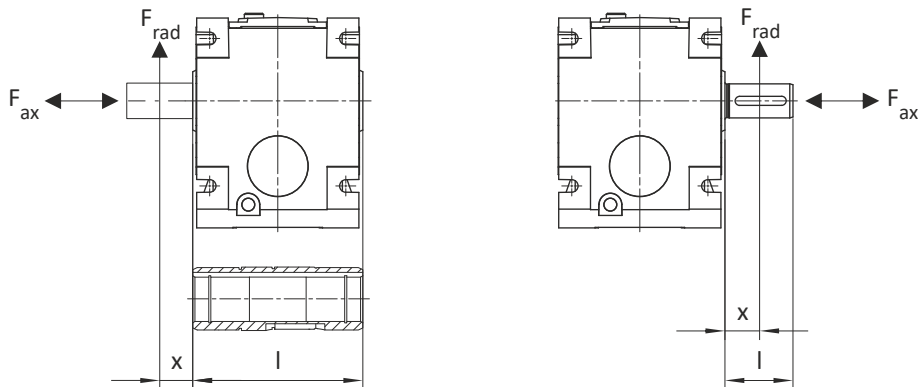
$$F_{\text{rad, perm}} = f_w \times F_{\text{rad, max}}$$

Permissible axial force

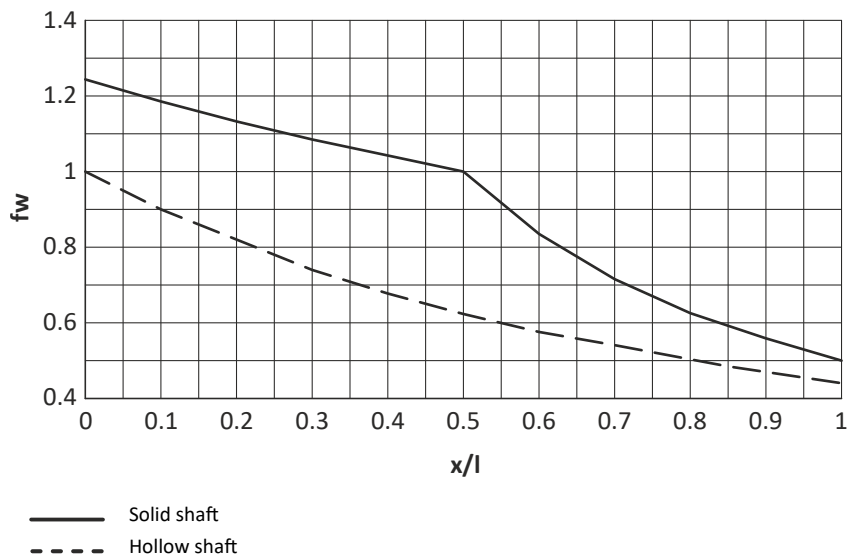
If there is no radial force, the maximum axial force is 50% of the value in the table $F_{\text{rad, max}}$

$$F_{\text{ax, zul}} = 0.5 \times F_{\text{rad, max}}$$

Application of forces



Additional load factor f_w on the drive shaft



Technical data

Radial forces and axial forces



The values given in the tables refer to the centre 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 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 get in touch with your Lenze representative



A hollow shaft with shrink disc (SAR/SBR/SCR/SDR/SAK/SCK) requires a check by Lenze.

Max. radial force, gearbox with hollow shaft (H□□)

Getriebe	Output speed n_2 [rpm]									
	1000	630	400	250	160	100	63	40	25	16
	Max. radial force $F_{rad,max}$ [rated]									
g500-B45	900	1200	2200	2500	2800	3000	3000	3000	3000	3000
g500-B110	1000	2200	2600	3000	3300	3600	3600	3600	3600	3600
g500-B240	1500	2300	3800	4500	5100	6200	7400	7800	7800	7800
g500-B450	3000	3800	4500	5200	5200	5500	7000	9000	9000	9000
g500-B600	3500	4000	4700	5400	5600	6000	8000	9400	9500	9500
g500-B820	4000	4200	5400	5800	6000	7000	9000	9800	10200	10200
g500-B1500	3700	5000	6000	7000	8000	9000	10500	13000	16000	16000
g500-B2700	4400	5700	7000	8200	9400	10600	12200	15000	18000	21900
g500-B4300	5000	6600	8000	9000	10500	12000	15500	21000	27900	35100

Max. radial force, gearbox with solid shaft, without flange (V□R)

Getriebe	Output speed n_2 [rpm]									
	1000	630	400	250	160	100	63	40	25	16
	Max. radial force $F_{rad,max}$ [rated]									
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	2400	3000	3600	4500	5000	6000	6500	6500	6500
g500-B450	2000	2800	3600	3900	4300	5000	6000	7600	7800	7800
g500-B600	2500	3200	4000	4700	5400	6700	8300	9000	9000	9000
g500-B820	5200	6000	8200	9800	11000	11000	11000	11000	11000	11000
g500-B1500	6300	8200	10000	11500	13000	16000	16000	16000	16000	16000
g500-B2700	6600	8500	10400	12000	14000	16500	20100	22700	25500	27500
g500-B4300	7300	9500	11600	13300	14900	17300	20800	25700	32200	40000

Max. radial force, gearbox with solid shaft and flange (V□K)

Getriebe	Output speed n_2 [rpm]									
	1000	630	400	250	160	100	63	40	25	16
	Max. radial force $F_{rad,max}$ [rated]									
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-B600	3400	4100	5000	5300	6000	7300	9000	9000	9000	9000
g500-B820	6000	7000	8900	10200	11000	11000	11000	11000	11000	11000
g500-B1500	7000	9000	11000	12000	13000	15000	16000	16000	16000	16000
g500-B2700	8400	10900	13300	14400	15800	17700	20100	22700	25500	27500
g500-B4300	9200	11700	14300	15800	17800	20800	24800	29500	35100	40000



7.6 Selection tables

Notes on the selection tables

The selection tables represent the available combinations of gearbox, number of stages, ratio and motor for the mounting position M1. They only serve as a rough overview.

The following legend shows the layout of the selection tables:

Example	Explanation
120 Hz: $P_{\text{rated}} = 0.55 \text{ kW}$	Rated motor power at a rated frequency of 120 Hz

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz (1:24)								
n_{22}	n_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
28.0	5.7	116	9.4	359	9.4	4.8	4.033	5.185	g500-B110	m550-U U63/L4	2	11
26.8	6.0	111	9.8	344	9.8	3.7	3.547	5.411	g500-B45	m550-U U63/L4	2	8.9

														Basic weight												
														Number of gear stages												
														Motor product name												
														Gearbox product name												
														Ratio												
Moment of inertia without brake																										
Data at 62/124 Hz																										
n ₂ = output speed - M ₂ = output torque																										
c = the load capacity of the gearbox is the ratio of the permissible rated torque of the gearbox to the rated torque of the motor (converted to the output shaft). c must always be greater than the application factor determined for the application k																										
$c = \frac{M_{2,zul}}{M_{1,N} \times i \times \eta_{Getr}} > k$																										
Data at 20 Hz																										
n ₂₁ = output speed - M ₂ = output torque																										



The following selection tables refer exclusively to inverters from the motec series. For all other inverters, please use the EASY System Designer to view the relevant data.



62 Hz: 0.37 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
28.9	8.9	57.9	9.4	359	9.4	4.8	4.033	5.185	g500-B110	m550-U63/L4	2	9.8
27.7	9.3	55.4	9.8	344	9.8	3.7	3.547	5.411	g500-B45	m550-U63/L4	2	8.2
25.2	10.3	50.3	11.0	312	11.0	4.8	3.945	5.963	g500-B110	m550-U63/L4	2	9.8
24.1	10.7	48.2	11.0	299	11.0	3.4	3.516	6.222	g500-B45	m550-U63/L4	2	8.2
21.1	12.2	42.2	13.0	262	13.0	3.1	3.436	7.111	g500-B45	m550-U63/L4	2	8.2
21.1	12.2	42.2	13.0	262	13.0	4.8	3.718	7.111	g500-B110	m550-U63/L4	2	9.8
18.3	14.1	36.7	15.0	227	15.0	2.8	3.418	8.178	g500-B45	m550-U63/L4	2	8.2
18.3	14.1	36.7	15.0	227	15.0	4.8	3.671	8.178	g500-B110	m550-U63/L4	2	9.8
16.5	15.6	33.0	16.0	204	16.0	2.6	3.374	9.101	g500-B45	m550-U63/L4	2	8.2
16.5	15.6	33.0	16.0	204	16.0	4.5	3.563	9.101	g500-B110	m550-U63/L4	2	9.8
14.3	18.0	28.7	19.0	178	19.0	2.2	3.363	10.466	g500-B45	m550-U63/L4	2	8.2
14.3	18.0	28.7	19.0	178	19.0	4.4	3.535	10.466	g500-B110	m550-U63/L4	2	9.8
13.1	19.7	26.2	21.0	163	21.0	4.1	3.495	11.449	g500-B110	m550-U63/L4	2	9.8
12.9	20.0	25.8	21.0	160	21.0	2.0	3.326	11.640	g500-B45	m550-U63/L4	2	8.2
11.8	21.8	23.6	23.0	147	23.0	3.7	3.433	12.698	g500-B110	m550-U63/L4	2	9.8
11.2	23.0	22.4	24.0	139	24.0	1.7	3.319	13.386	g500-B45	m550-U63/L4	2	8.2
10.3	25.1	20.5	26.0	127	26.0	3.2	3.418	14.603	g500-B110	m550-U63/L4	2	9.8
10.0	25.8	20.0	27.0	124	27.0	4.8	3.826	15.008	g500-B240	m550-U63/L4	2	14
9.9	26.0	19.9	27.0	123	27.0	1.5	3.299	15.111	g500-B45	m550-U63/L4	2	8.2
9.6	26.7	19.3	28.0	120	28.0	3.1	3.383	15.556	g500-B110	m550-U63/L4	2	9.8
8.9	29.0	17.8	30.0	110	30.0	4.5	3.687	16.857	g500-B240	m550-U63/L4	2	14
8.6	29.9	17.3	31.0	107	31.0	1.3	3.295	17.378	g500-B45	m550-U63/L4	2	8.2
8.4	30.8	16.8	32.0	104	32.0	2.8	3.373	17.889	g500-B110	m550-U63/L4	2	9.8
8.4	30.7	16.8	32.0	104	32.0	4.8	4.286	17.885	g500-B450	m550-U63/L4	3	17
7.8	32.9	15.7	35.0	97.2	35.0	4.5	3.660	19.143	g500-B240	m550-U63/L4	2	14
7.7	33.3	15.5	35.0	96.0	35.0	1.2	3.278	19.365	g500-B45	m550-U63/L4	2	8.2
7.7	33.6	15.3	35.0	95.1	35.0	2.6	3.335	19.556	g500-B110	m550-U63/L4	2	9.8
7.6	34.1	15.1	36.0	93.8	36.0	4.8	4.246	19.831	g500-B450	m550-U63/L4	3	17
6.7	38.3	13.5	40.0	83.5	40.0	1.0	3.294	22.270	g500-B45	m550-U63/L4	2	8.2
6.7	38.7	13.3	41.0	82.7	41.0	2.4	3.328	22.489	g500-B110	m550-U63/L4	2	9.8
6.6	39.2	13.2	41.0	81.5	41.0	4.5	3.942	22.813	g500-B450	m550-U63/L4	3	17
6.0	43.1	12.0	45.0	74.3	45.0	1.0	3.265	25.051	g500-B45	m550-U63/L4	2	8.2
6.0	43.3	11.9	45.0	73.9	45.0	2.2	3.303	25.185	g500-B110	m550-U63/L4	2	9.8
5.9	43.5	11.9	46.0	73.5	46.0	4.5	3.918	25.294	g500-B450	m550-U63/L4	3	17
5.6	46.2	11.2	49.0	69.2	49.0	3.7	3.451	26.878	g500-B240	m550-U63/L4	2	14
5.2	49.5	10.4	52.0	64.6	52.0	0.9	3.263	28.808	g500-B45	m550-U63/L4	2	8.2
5.2	49.8	10.4	52.0	64.2	52.0	2.0	3.300	28.963	g500-B110	m550-U63/L4	2	9.8
4.9	52.5	9.8	55.0	60.9	55.0	3.7	3.440	30.522	g500-B240	m550-U63/L4	2	14
4.7	54.9	9.4	58.0	58.3	58.0	1.7	3.281	31.919	g500-B110	m550-U63/L4	2	9.8
4.5	57.5	9.0	60.0	55.6	60.0	3.1	3.392	33.433	g500-B240	m550-U63/L4	2	14
4.1	62.5	8.2	66.0	51.1	66.0	3.7	3.551	36.373	g500-B450	m550-U63/L4	3	17
4.1	63.1	8.2	66.0	50.7	66.0	1.6	3.279	36.707	g500-B110	m550-U63/L4	2	9.8
4.0	64.3	8.0	68.0	49.7	68.0	1.5	3.312	37.400	g500-B110	m550-U63/L4	2	9.8
4.0	65.3	7.9	69.0	49.0	69.0	3.1	3.386	37.967	g500-B240	m550-U63/L4	2	14
3.8	68.8	7.5	72.0	46.5	72.0	1.1	3.268	40.000	g500-B110	m550-U63/L4	2	9.8
3.7	69.3	7.4	73.0	46.1	73.0	4.0	3.542	40.330	g500-B450	m550-U63/L4	3	17
3.5	74.4	6.9	78.0	43.0	78.0	3.0	3.336	43.267	g500-B240	m550-U63/L4	2	14
3.3	77.8	6.6	82.0	41.1	82.0	3.4	3.457	45.245	g500-B450	m550-U63/L4	3	17
3.3	79.1	6.5	83.0	40.4	83.0	1.1	3.267	46.000	g500-B110	m550-U63/L4	2	9.8
3.1	82.8	6.2	87.0	38.6	87.0	1.3	3.290	48.167	g500-B110	m550-U63/L4	2	9.8
3.1	84.5	6.1	89.0	37.9	89.0	2.7	3.332	49.133	g500-B240	m550-U63/L4	2	14



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
3.0	86.2	6.0	91.0	37.1	91.0	3.4	3.451	50.167	g500-B450	m550-U63/L4	3	17
2.9	90.3	5.7	95.0	35.4	95.0	2.5	3.310	52.510	g500-B240	m550-U63/L4	2	14
2.7	96.5	5.3	101	33.1	101	4.4	3.715	56.154	g500-B450	m550-U63/L4	3	17
2.5	103	5.0	108	31.2	108	2.2	3.307	59.630	g500-B240	m550-U63/L4	2	14
2.5	105	4.9	110	30.5	110	1.0	3.273	61.045	g500-B110	m550-U63/L4	2	9.8
2.4	107	4.8	112	29.9	112	4.0	3.711	62.262	g500-B450	m550-U63/L4	3	17
2.2	115	4.4	120	27.2	120	2.0	3.333	68.459	g500-B240	m550-U63/L4	3	14
2.2	115	4.5	121	27.7	121	1.3	3.285	67.113	g500-B240	m550-U63/L4	2	14
2.2	116	4.4	122	27.6	122	3.4	3.521	67.513	g500-B600	m550-U63/L4	3	35
1.9	130	3.9	137	23.9	137	1.8	3.331	77.741	g500-B240	m550-U63/L4	3	14
2.0	131	3.9	138	24.4	138	1.3	3.283	76.213	g500-B240	m550-U63/L4	2	14
2.0	132	3.9	138	24.3	138	0.8	3.263	76.500	g500-B110	m550-U63/L4	2	9.8
1.8	141	3.7	148	22.7	148	2.9	3.445	81.937	g500-B600	m550-U63/L4	3	35
1.7	147	3.4	154	21.2	154	1.6	3.302	87.563	g500-B240	m550-U63/L4	3	14
1.7	154	3.4	162	20.8	162	2.8	3.462	89.534	g500-B450	m550-U63/L4	3	17
1.5	167	3.0	175	18.7	175	1.4	3.301	99.437	g500-B240	m550-U63/L4	3	14
1.5	171	3.0	179	18.7	179	2.5	3.460	99.274	g500-B450	m550-U63/L4	3	17
1.3	191	2.6	200	16.4	200	1.2	3.284	113.673	g500-B240	m550-U63/L4	3	14
1.3	192	2.7	201	16.7	201	2.2	3.400	111.372	g500-B450	m550-U63/L4	3	17
1.3	200	2.6	210	16.0	210	2.9	3.467	116.175	g500-B600	m550-U63/L4	3	35
1.2	212	2.4	223	15.1	223	2.0	3.399	123.487	g500-B450	m550-U63/L4	3	17
1.2	216	2.3	227	14.4	227	1.1	3.283	129.087	g500-B240	m550-U63/L4	3	14
1.1	242	2.1	254	13.2	254	2.4	3.408	140.995	g500-B600	m550-U63/L4	3	35
1.0	244	2.1	256	12.8	256	0.9	3.270	145.674	g500-B240	m550-U63/L4	3	14
1.0	248	2.1	260	12.9	260	1.7	3.340	144.128	g500-B450	m550-U63/L4	3	17
1.0	254	2.0	267	12.6	267	3.1	3.470	148.000	g500-B820	m550-U63/L4	3	41
0.9	275	1.9	288	11.6	288	1.6	3.339	159.807	g500-B450	m550-U63/L4	3	17
0.9	277	1.8	291	11.2	291	0.8	3.270	165.426	g500-B240	m550-U63/L4	3	14
0.9	282	1.8	296	11.4	296	2.0	3.464	163.810	g500-B600	m550-U63/L4	3	35
0.9	285	1.8	299	11.2	299	2.8	3.469	165.467	g500-B820	m550-U63/L4	3	41
0.9	301	1.7	316	10.6	316	1.4	3.313	174.919	g500-B450	m550-U63/L4	3	17
0.8	306	1.7	322	10.4	322	1.9	3.349	178.224	g500-B600	m550-U63/L4	3	35
0.8	309	1.7	324	10.4	324	2.5	3.410	179.618	g500-B820	m550-U63/L4	3	41
0.8	333	1.5	350	9.6	350	1.3	3.312	193.948	g500-B450	m550-U63/L4	3	17
0.7	340	1.5	357	9.2	357	1.7	3.419	201.089	g500-B600	m550-U63/L4	4	38
0.8	342	1.5	359	9.4	359	1.7	3.406	198.805	g500-B600	m550-U63/L4	3	35
0.7	345	1.5	362	9.3	362	2.3	3.409	200.816	g500-B820	m550-U63/L4	3	41
0.7	345	1.5	362	9.1	362	1.2	3.328	204.072	g500-B450	m550-U63/L4	4	20
0.7	381	1.3	400	8.2	400	2.1	3.727	225.636	g500-B820	m550-U63/L4	4	44
0.7	384	1.3	403	8.3	403	1.1	3.286	223.563	g500-B450	m550-U63/L4	3	17
0.7	385	1.3	404	8.2	404	1.5	3.490	227.943	g500-B600	m550-U63/L4	4	38
0.7	390	1.3	409	8.1	409	1.1	3.350	230.605	g500-B450	m550-U63/L4	4	20
0.7	390	1.3	410	8.2	410	2.0	3.351	227.045	g500-B820	m550-U63/L4	3	41
0.6	426	1.2	447	7.5	447	1.0	3.286	247.882	g500-B450	m550-U63/L4	3	17
0.6	427	1.2	448	7.4	448	1.3	3.466	252.594	g500-B600	m550-U63/L4	4	38
0.6	432	1.2	454	7.4	454	1.3	3.348	251.299	g500-B600	m550-U63/L4	3	35
0.6	432	1.2	454	7.3	454	1.0	3.350	255.691	g500-B450	m550-U63/L4	4	20
0.6	433	1.2	454	7.3	454	1.8	3.420	256.175	g500-B820	m550-U63/L4	4	44
0.6	436	1.2	458	7.3	458	1.8	3.350	253.841	g500-B820	m550-U63/L4	3	41
0.5	471	1.1	494	6.7	494	4.8	4.230	278.438	g500-B4300	m550-U63/L4	4	177
0.5	479	1.1	503	6.6	503	1.2	3.418	283.539	g500-B600	m550-U63/L4	4	38
0.5	484	1.0	508	6.5	508	1.6	3.420	286.408	g500-B820	m550-U63/L4	4	44



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.5	499	1.0	524	6.3	524	0.9	3.343	295.120	g500-B450	m550-U63/L4	4	20
0.5	514	1.0	540	6.1	540	4.8	4.226	304.333	g500-B4300	m550-U63/L4	4	177
0.5	544	0.9	571	5.8	571	1.4	3.467	321.788	g500-B820	m550-U63/L4	4	44
0.5	551	0.9	578	5.7	578	2.6	3.535	326.025	g500-B1500	m550-U63/L4	4	74
0.5	556	0.9	583	5.7	583	1.0	3.455	328.773	g500-B600	m550-U63/L4	4	38
0.5	562	0.9	590	5.6	590	3.4	3.651	332.564	g500-B2700	m550-U63/L4	4	115
0.4	606	0.8	636	5.2	636	2.4	3.535	358.388	g500-B1500	m550-U63/L4	4	74
0.4	608	0.8	638	5.2	638	1.3	3.466	359.765	g500-B820	m550-U63/L4	4	44
0.4	617	0.8	648	5.1	648	3.4	3.650	365.227	g500-B2700	m550-U63/L4	4	115
0.4	620	0.8	651	5.1	651	0.9	3.351	366.933	g500-B600	m550-U63/L4	4	38
0.4	625	0.8	656	5.0	656	4.8	4.078	369.548	g500-B4300	m550-U63/L4	4	177
0.4	677	0.7	710	4.6	710	1.2	3.403	400.273	g500-B820	m550-U63/L4	4	44
0.4	685	0.7	719	4.6	719	2.1	3.447	405.543	g500-B1500	m550-U63/L4	4	74
0.4	687	0.7	721	4.6	721	0.8	3.342	406.614	g500-B600	m550-U63/L4	4	38
0.3	753	0.7	791	4.2	791	1.9	3.447	445.799	g500-B1500	m550-U63/L4	4	74
0.3	791	0.6	831	4.0	831	1.0	3.455	468.265	g500-B820	m550-U63/L4	4	44
0.3	820	0.6	861	3.8	861	4.0	3.663	485.243	g500-B4300	m550-U63/L4	4	177
0.3	824	0.6	865	3.8	865	3.1	3.638	487.698	g500-B2700	m550-U63/L4	4	115
0.3	875	0.6	919	3.6	919	0.9	3.342	518.000	g500-B820	m550-U63/L4	4	44
0.3	879	0.6	923	3.6	923	1.6	3.484	520.087	g500-B1500	m550-U63/L4	4	74
0.3	934	0.5	980	3.4	980	2.8	3.514	552.395	g500-B2700	m550-U63/L4	4	115
0.3	933	0.5	980	3.4	980	3.4	3.531	552.234	g500-B4300	m550-U63/L4	4	177
0.3	966	0.5	1014	3.3	1014	1.5	3.483	571.714	g500-B1500	m550-U63/L4	4	74
0.3	979	0.5	1027	3.2	1027	0.8	3.342	579.133	g500-B820	m550-U63/L4	4	44
0.2	1020	0.5	1071	3.1	1071	3.4	3.530	603.594	g500-B4300	m550-U63/L4	4	177
0.2	1025	0.5	1076	3.1	1076	2.5	3.513	606.648	g500-B2700	m550-U63/L4	4	115
0.2	1093	0.5	1148	2.9	1148	1.3	3.414	646.938	g500-B1500	m550-U63/L4	4	74
0.2	1179	0.4	1238	2.7	1238	2.2	3.536	697.844	g500-B2700	m550-U63/L4	4	115
0.2	1179	0.4	1238	2.7	1238	3.5	3.546	697.641	g500-B4300	m550-U63/L4	4	177
0.2	1202	0.4	1262	2.6	1262	1.2	3.414	711.156	g500-B1500	m550-U63/L4	4	74
0.2	1289	0.4	1353	2.4	1353	3.2	3.546	762.524	g500-B4300	m550-U63/L4	4	177
0.2	1327	0.4	1393	2.4	1393	1.9	3.408	785.074	g500-B2700	m550-U63/L4	4	115
0.2	1401	0.4	1471	2.2	1471	1.0	3.323	829.035	g500-B1500	m550-U63/L4	4	74
0.2	1467	0.3	1540	2.1	1540	1.8	3.389	868.049	g500-B2700	m550-U63/L4	4	115
0.2	1467	0.3	1540	2.1	1540	2.8	3.454	867.797	g500-B4300	m550-U63/L4	4	177
0.2	1540	0.3	1617	2.0	1617	0.9	3.323	911.329	g500-B1500	m550-U63/L4	4	74
0.2	1603	0.3	1683	2.0	1683	2.6	3.454	948.506	g500-B4300	m550-U63/L4	4	177
0.2	1611	0.3	1691	2.0	1691	1.6	3.389	953.304	g500-B2700	m550-U63/L4	4	115
0.1	1717	0.3	1803	1.8	1803	0.8	3.318	1016.073	g500-B1500	m550-U63/L4	4	74
0.1	1898	0.3	1992	1.7	1992	2.2	3.373	1123.031	g500-B4300	m550-U63/L4	4	177
0.1	1899	0.3	1993	1.7	1993	1.4	3.369	1123.358	g500-B2700	m550-U63/L4	4	115
0.1	2075	0.2	2178	1.5	2178	2.0	3.372	1227.478	g500-B4300	m550-U63/L4	4	177
0.1	2085	0.2	2189	1.5	2189	1.2	3.369	1233.688	g500-B2700	m550-U63/L4	4	115
0.1	2303	0.2	2418	1.4	2418	1.8	3.335	1362.952	g500-B4300	m550-U63/L4	4	177
0.1	2304	0.2	2419	1.4	2419	1.1	3.332	1363.348	g500-B2700	m550-U63/L4	4	115
0.1	2796	0.2	2935	1.1	2935	0.9	3.325	1654.609	g500-B2700	m550-U63/L4	4	115
0.1	2796	0.2	2935	1.1	2935	1.5	3.327	1654.128	g500-B4300	m550-U63/L4	4	177
0.1	3056	0.2	3207	1.0	3207	1.3	3.327	1807.968	g500-B4300	m550-U63/L4	4	177
0.1	3071	0.2	3224	1.0	3224	0.8	3.325	1817.115	g500-B2700	m550-U63/L4	4	115
0.1	3573	0.1	3751	0.9	3751	1.2	3.295	2114.124	g500-B4300	m550-U63/L4	4	177
0.1	3905	0.1	4099	0.8	4099	1.1	3.295	2310.746	g500-B4300	m550-U63/L4	4	177
0.1	4516	0.1	4741	0.7	4741	0.9	3.291	2672.347	g500-B4300	m550-U63/L4	4	177



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.1	4936	0.1	5182	0.6	5182	0.8	3.291	2920.887	g500-B4300	m550-U63/L4	4	177



62 Hz: 0.55 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
28.9	13.1	57.9	14.0	359	14.0	4.7	9.543	5.185	g500-B110	m550-U71/M4	2	12
27.7	13.7	55.4	14.0	344	14.0	2.5	9.057	5.411	g500-B45	m550-U71/M4	2	10
25.2	15.1	50.3	16.0	312	16.0	4.2	9.455	5.963	g500-B110	m550-U71/M4	2	12
24.1	15.7	48.2	17.0	299	17.0	2.3	9.026	6.222	g500-B45	m550-U71/M4	2	10
21.1	18.0	42.2	19.0	262	19.0	2.1	8.946	7.111	g500-B45	m550-U71/M4	2	10
21.1	18.0	42.2	19.0	262	19.0	3.8	9.228	7.111	g500-B110	m550-U71/M4	2	12
18.3	20.7	36.7	22.0	227	22.0	1.9	8.928	8.178	g500-B45	m550-U71/M4	2	10
18.3	20.7	36.7	22.0	227	22.0	3.5	9.181	8.178	g500-B110	m550-U71/M4	2	12
16.5	23.0	33.0	24.0	204	24.0	1.7	8.884	9.101	g500-B45	m550-U71/M4	2	10
16.5	23.0	33.0	24.0	204	24.0	3.2	9.073	9.101	g500-B110	m550-U71/M4	2	12
14.3	26.4	28.7	28.0	178	28.0	1.5	8.873	10.466	g500-B45	m550-U71/M4	2	10
14.3	26.4	28.7	28.0	178	28.0	3.0	9.045	10.466	g500-B110	m550-U71/M4	2	12
13.1	28.9	26.2	30.0	163	30.0	2.8	9.005	11.449	g500-B110	m550-U71/M4	2	12
12.9	29.4	25.8	31.0	160	31.0	1.4	8.836	11.640	g500-B45	m550-U71/M4	2	10
11.8	32.1	23.6	34.0	147	34.0	2.5	8.943	12.698	g500-B110	m550-U71/M4	2	12
11.2	33.8	22.4	36.0	139	36.0	1.2	8.829	13.386	g500-B45	m550-U71/M4	2	10
10.3	36.9	20.5	39.0	127	39.0	2.2	8.928	14.603	g500-B110	m550-U71/M4	2	12
9.9	38.2	19.9	40.0	123	40.0	1.0	8.809	15.111	g500-B45	m550-U71/M4	2	10
9.6	39.3	19.3	41.0	120	41.0	2.1	8.893	15.556	g500-B110	m550-U71/M4	2	12
8.9	42.6	17.8	45.0	110	45.0	5.0	9.197	16.857	g500-B240	m550-U71/M4	2	16
8.6	43.9	17.3	46.0	107	46.0	0.9	8.805	17.378	g500-B45	m550-U71/M4	2	10
8.4	45.2	16.8	48.0	104	48.0	1.9	8.883	17.889	g500-B110	m550-U71/M4	2	12
7.8	48.4	15.7	51.0	97.2	51.0	4.4	9.170	19.143	g500-B240	m550-U71/M4	2	16
7.7	48.9	15.5	52.0	96.0	52.0	0.8	8.788	19.365	g500-B45	m550-U71/M4	2	10
7.7	49.4	15.3	52.0	95.1	52.0	1.8	8.845	19.556	g500-B110	m550-U71/M4	2	12
7.3	52.2	14.5	55.0	90.1	55.0	4.1	9.090	20.650	g500-B240	m550-U71/M4	2	16
6.7	56.8	13.3	60.0	82.7	60.0	1.6	8.838	22.489	g500-B110	m550-U71/M4	2	12
6.4	59.3	12.8	62.0	79.3	62.0	3.6	9.072	23.450	g500-B240	m550-U71/M4	2	16
6.0	63.6	11.9	67.0	73.9	67.0	1.5	8.813	25.185	g500-B110	m550-U71/M4	2	12
5.6	67.9	11.2	71.0	69.2	71.0	3.1	8.961	26.878	g500-B240	m550-U71/M4	2	16
5.4	70.6	10.7	74.0	66.6	74.0	4.7	9.260	27.945	g500-B450	m550-U71/M4	3	20
5.2	73.2	10.4	77.0	64.2	77.0	1.3	8.810	28.963	g500-B110	m550-U71/M4	2	12
5.0	75.2	10.1	79.0	62.5	79.0	4.7	9.659	29.745	g500-B820	m550-U71/M4	3	43
5.0	75.2	10.1	79.0	62.5	79.0	4.7	9.470	29.744	g500-B600	m550-U71/M4	3	38
4.9	77.1	9.8	81.0	60.9	81.0	2.8	8.950	30.522	g500-B240	m550-U71/M4	2	16
4.8	78.3	9.7	82.0	60.0	82.0	4.7	9.244	30.985	g500-B450	m550-U71/M4	3	20
4.5	84.5	9.0	89.0	55.6	89.0	2.5	8.902	33.433	g500-B240	m550-U71/M4	2	16
4.1	91.9	8.2	97.0	51.1	97.0	4.2	9.061	36.373	g500-B450	m550-U71/M4	3	20
4.1	93.5	8.1	98.0	50.3	98.0	3.9	9.386	37.000	g500-B820	m550-U71/M4	3	43
4.1	93.5	8.1	98.0	50.3	98.0	3.9	9.230	36.999	g500-B600	m550-U71/M4	3	38
4.0	94.5	8.0	99.0	49.7	99.0	1.0	8.822	37.400	g500-B110	m550-U71/M4	2	12
4.0	95.9	7.9	101	49.0	101	2.2	8.896	37.967	g500-B240	m550-U71/M4	2	16
3.7	102	7.4	107	46.1	107	4.2	9.052	40.330	g500-B450	m550-U71/M4	3	20
3.6	106	7.2	112	44.3	112	5.0	9.426	41.940	g500-B600	m550-U71/M4	3	38
3.5	109	6.9	115	43.0	115	2.1	8.846	43.267	g500-B240	m550-U71/M4	2	16
3.3	114	6.6	120	41.1	120	3.7	8.967	45.245	g500-B450	m550-U71/M4	3	20
3.1	122	6.2	128	38.6	128	0.9	8.800	48.167	g500-B110	m550-U71/M4	2	12
3.1	124	6.1	131	37.9	131	1.8	8.842	49.133	g500-B240	m550-U71/M4	2	16
3.0	127	6.0	133	37.1	133	3.4	8.961	50.167	g500-B450	m550-U71/M4	3	20
2.9	133	5.7	140	35.4	140	1.7	8.820	52.510	g500-B240	m550-U71/M4	2	16
2.7	142	5.3	149	33.1	149	3.0	9.225	56.154	g500-B450	m550-U71/M4	3	20



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
2.5	151	5.0	159	31.2	159	1.5	8.817	59.630	g500-B240	m550-U71/M4	2	16
2.4	157	4.8	166	29.9	166	2.7	9.221	62.262	g500-B450	m550-U71/M4	3	20
2.4	161	4.7	170	29.1	170	3.5	9.829	63.822	g500-B600	m550-U71/M4	3	38
2.3	163	4.7	171	28.9	171	4.8	9.862	64.468	g500-B820	m550-U71/M4	3	43
2.2	169	4.4	178	27.2	178	1.4	8.843	68.459	g500-B240	m550-U71/M4	3	17
2.2	171	4.4	180	27.6	180	3.3	9.031	67.513	g500-B600	m550-U71/M4	3	38
2.2	174	4.4	183	27.0	183	2.5	9.109	68.788	g500-B450	m550-U71/M4	3	20
2.1	182	4.2	192	25.8	192	3.1	9.287	72.170	g500-B600	m550-U71/M4	3	38
2.0	189	4.0	199	24.8	199	4.2	9.656	74.963	g500-B1500	m550-U71/M4	3	73
1.9	192	3.9	202	23.9	202	1.2	8.841	77.741	g500-B240	m550-U71/M4	3	17
2.0	193	3.9	203	24.4	203	2.2	9.106	76.271	g500-B450	m550-U71/M4	3	20
1.8	207	3.7	218	22.7	218	2.8	8.955	81.937	g500-B600	m550-U71/M4	3	38
1.8	209	3.6	220	22.5	220	3.7	9.417	82.762	g500-B1500	m550-U71/M4	3	73
1.7	216	3.4	227	21.2	227	1.1	8.812	87.563	g500-B240	m550-U71/M4	3	17
1.7	226	3.4	238	20.8	238	1.9	8.972	89.534	g500-B450	m550-U71/M4	3	20
1.7	227	3.3	239	20.7	239	2.5	9.111	89.772	g500-B600	m550-U71/M4	3	38
1.6	230	3.3	242	20.4	242	3.7	9.408	90.978	g500-B1500	m550-U71/M4	3	73
1.6	232	3.3	245	20.2	245	3.4	9.242	91.939	g500-B820	m550-U71/M4	3	43
1.5	245	3.0	258	18.7	258	0.9	8.811	99.437	g500-B240	m550-U71/M4	3	17
1.5	251	3.0	264	18.7	264	1.7	8.970	99.274	g500-B450	m550-U71/M4	3	20
1.5	257	2.9	271	18.3	271	2.2	9.279	101.760	g500-B600	m550-U71/M4	3	38
1.5	260	2.9	273	18.1	273	3.0	9.239	102.790	g500-B820	m550-U71/M4	3	43
1.3	280	2.6	295	16.4	295	0.8	8.794	113.673	g500-B240	m550-U71/M4	3	17
1.3	281	2.7	296	16.7	296	1.5	8.910	111.372	g500-B450	m550-U71/M4	3	20
1.3	289	2.6	304	16.3	304	2.7	9.116	114.364	g500-B820	m550-U71/M4	3	43
1.3	294	2.6	309	16.0	309	1.9	8.977	116.175	g500-B600	m550-U71/M4	3	38
1.2	312	2.4	328	15.1	328	1.4	8.909	123.487	g500-B450	m550-U71/M4	3	20
1.2	320	2.4	337	14.7	337	1.8	9.106	126.580	g500-B600	m550-U71/M4	3	38
1.2	323	2.3	340	14.5	340	2.4	9.115	127.861	g500-B820	m550-U71/M4	3	43
1.1	356	2.1	375	13.2	375	1.6	8.918	140.995	g500-B600	m550-U71/M4	3	38
1.0	364	2.1	383	12.9	383	1.2	8.850	144.128	g500-B450	m550-U71/M4	3	20
1.0	374	2.0	394	12.6	394	2.1	8.980	148.000	g500-B820	m550-U71/M4	3	43
1.0	379	2.0	399	12.4	399	3.8	9.453	149.949	g500-B1500	m550-U71/M4	3	73
0.9	404	1.9	425	11.6	425	1.1	8.849	159.807	g500-B450	m550-U71/M4	3	20
0.9	414	1.8	436	11.4	436	1.4	8.974	163.810	g500-B600	m550-U71/M4	3	38
0.9	417	1.8	438	11.3	438	3.4	9.450	164.833	g500-B1500	m550-U71/M4	3	73
0.9	418	1.8	440	11.2	440	1.9	8.979	165.467	g500-B820	m550-U71/M4	3	43
0.9	442	1.7	465	10.6	465	1.0	8.823	174.919	g500-B450	m550-U71/M4	3	20
0.8	450	1.7	474	10.4	474	1.3	8.859	178.224	g500-B600	m550-U71/M4	3	38
0.8	454	1.7	478	10.4	478	1.7	8.920	179.618	g500-B820	m550-U71/M4	3	43
0.8	460	1.6	484	10.2	484	3.1	9.271	181.983	g500-B1500	m550-U71/M4	3	73
0.8	490	1.5	516	9.6	516	0.9	8.822	193.948	g500-B450	m550-U71/M4	3	20
0.7	499	1.5	526	9.2	526	1.1	8.929	201.089	g500-B600	m550-U71/M4	4	41
0.7	501	1.5	528	9.2	528	1.6	9.134	201.818	g500-B820	m550-U71/M4	4	46
0.8	502	1.5	529	9.4	529	1.1	8.916	198.805	g500-B600	m550-U71/M4	3	38
0.7	505	1.5	532	9.3	532	2.8	9.269	200.048	g500-B1500	m550-U71/M4	3	73
0.7	507	1.5	534	9.3	534	1.5	8.919	200.816	g500-B820	m550-U71/M4	3	43
0.7	507	1.5	534	9.1	534	0.8	8.838	204.072	g500-B450	m550-U71/M4	4	23
0.7	508	1.5	535	9.1	535	2.8	9.287	204.476	g500-B1500	m550-U71/M4	4	76
0.7	510	1.5	537	9.1	537	5.0	9.889	205.348	g500-B4300	m550-U71/M4	4	179
0.7	510	1.5	537	9.1	537	5.0	9.768	205.407	g500-B2700	m550-U71/M4	4	117
0.7	558	1.3	587	8.3	587	5.0	9.881	224.446	g500-B4300	m550-U71/M4	4	179



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.7	558	1.3	588	8.3	588	2.6	9.285	224.773	g500-B1500	m550-U71/M4	4	76
0.7	560	1.3	590	8.2	590	1.4	9.237	225.636	g500-B820	m550-U71/M4	4	46
0.7	560	1.3	590	8.2	590	4.6	9.764	225.581	g500-B2700	m550-U71/M4	4	117
0.7	566	1.3	596	8.2	596	1.0	9.000	227.943	g500-B600	m550-U71/M4	4	41
0.7	574	1.3	604	8.2	604	1.4	8.861	227.045	g500-B820	m550-U71/M4	3	43
0.7	581	1.3	612	8.1	612	2.5	9.086	230.035	g500-B1500	m550-U71/M4	3	73
0.6	622	1.2	655	7.4	655	2.3	9.233	250.483	g500-B1500	m550-U71/M4	4	76
0.6	627	1.2	660	7.4	660	0.9	8.976	252.594	g500-B600	m550-U71/M4	4	41
0.6	635	1.2	668	7.4	668	0.9	8.858	251.299	g500-B600	m550-U71/M4	3	38
0.6	636	1.2	670	7.3	670	1.2	8.930	256.175	g500-B820	m550-U71/M4	4	46
0.6	639	1.2	673	7.4	673	2.2	9.085	252.869	g500-B1500	m550-U71/M4	3	73
0.6	641	1.2	675	7.3	675	1.2	8.860	253.841	g500-B820	m550-U71/M4	3	43
0.6	659	1.1	693	7.0	693	3.9	9.948	265.150	g500-B2700	m550-U71/M4	4	117
0.5	684	1.1	720	6.8	720	2.1	9.232	275.347	g500-B1500	m550-U71/M4	4	76
0.5	704	1.1	741	6.6	741	0.8	8.928	283.539	g500-B600	m550-U71/M4	4	41
0.5	711	1.0	749	6.5	749	1.1	8.930	286.408	g500-B820	m550-U71/M4	4	46
0.5	723	1.0	761	6.4	761	3.6	9.946	291.191	g500-B2700	m550-U71/M4	4	117
0.5	799	0.9	841	5.8	841	1.0	8.977	321.788	g500-B820	m550-U71/M4	4	46
0.5	810	0.9	852	5.7	852	1.8	9.045	326.025	g500-B1500	m550-U71/M4	4	76
0.5	826	0.9	869	5.6	869	3.1	9.161	332.564	g500-B2700	m550-U71/M4	4	117
0.4	890	0.8	937	5.2	937	1.6	9.045	358.388	g500-B1500	m550-U71/M4	4	76
0.4	894	0.8	941	5.2	941	0.9	8.976	359.765	g500-B820	m550-U71/M4	4	46
0.4	907	0.8	955	5.1	955	2.8	9.160	365.227	g500-B2700	m550-U71/M4	4	117
0.4	918	0.8	966	5.0	966	4.5	9.588	369.548	g500-B4300	m550-U71/M4	4	179
0.4	1007	0.7	1060	4.6	1060	1.4	8.957	405.543	g500-B1500	m550-U71/M4	4	76
0.4	1029	0.7	1083	4.5	1083	2.5	9.322	414.296	g500-B2700	m550-U71/M4	4	117
0.4	1029	0.7	1083	4.5	1083	4.0	9.352	414.176	g500-B4300	m550-U71/M4	4	179
0.3	1107	0.7	1165	4.2	1165	1.3	8.957	445.799	g500-B1500	m550-U71/M4	4	76
0.3	1124	0.7	1184	4.1	1184	3.6	9.350	452.696	g500-B4300	m550-U71/M4	4	179
0.3	1130	0.7	1190	4.1	1190	2.3	9.321	454.986	g500-B2700	m550-U71/M4	4	117
0.3	1205	0.6	1269	3.8	1269	3.4	9.173	485.243	g500-B4300	m550-U71/M4	4	179
0.3	1211	0.6	1275	3.8	1275	2.1	9.148	487.698	g500-B2700	m550-U71/M4	4	117
0.3	1292	0.6	1360	3.6	1360	1.1	8.994	520.087	g500-B1500	m550-U71/M4	4	76
0.3	1372	0.5	1444	3.4	1444	1.9	9.024	552.395	g500-B2700	m550-U71/M4	4	117
0.3	1372	0.5	1444	3.4	1444	3.0	9.041	552.234	g500-B4300	m550-U71/M4	4	179
0.3	1420	0.5	1495	3.3	1495	1.0	8.993	571.714	g500-B1500	m550-U71/M4	4	76
0.2	1499	0.5	1578	3.1	1578	2.7	9.040	603.594	g500-B4300	m550-U71/M4	4	179
0.2	1507	0.5	1586	3.1	1586	1.7	9.023	606.648	g500-B2700	m550-U71/M4	4	117
0.2	1607	0.5	1691	2.9	1691	0.9	8.924	646.938	g500-B1500	m550-U71/M4	4	76
0.2	1733	0.4	1824	2.7	1824	1.5	9.046	697.844	g500-B2700	m550-U71/M4	4	117
0.2	1733	0.4	1824	2.7	1824	2.4	9.056	697.641	g500-B4300	m550-U71/M4	4	179
0.2	1766	0.4	1859	2.6	1859	0.8	8.924	711.156	g500-B1500	m550-U71/M4	4	76
0.2	1894	0.4	1994	2.4	1994	2.2	9.056	762.524	g500-B4300	m550-U71/M4	4	179
0.2	1950	0.4	2052	2.4	2052	1.3	8.918	785.074	g500-B2700	m550-U71/M4	4	117
0.2	2156	0.3	2269	2.1	2269	1.2	8.899	868.049	g500-B2700	m550-U71/M4	4	117
0.2	2155	0.3	2269	2.1	2269	1.9	8.964	867.797	g500-B4300	m550-U71/M4	4	179
0.2	2356	0.3	2480	2.0	2480	1.7	8.964	948.506	g500-B4300	m550-U71/M4	4	179
0.2	2368	0.3	2492	2.0	2492	1.1	8.899	953.304	g500-B2700	m550-U71/M4	4	117
0.1	2789	0.3	2936	1.7	2936	1.5	8.883	1123.031	g500-B4300	m550-U71/M4	4	179
0.1	2790	0.3	2937	1.7	2937	0.9	8.879	1123.358	g500-B2700	m550-U71/M4	4	117
0.1	3049	0.2	3209	1.5	3209	1.3	8.882	1227.478	g500-B4300	m550-U71/M4	4	179
0.1	3064	0.2	3225	1.5	3225	0.8	8.879	1233.688	g500-B2700	m550-U71/M4	4	117



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.1	3385	0.2	3563	1.4	3563	1.2	8.845	1362.952	g500-B4300	m550-U71/M4	4	179
0.1	4108	0.2	4325	1.1	4325	1.0	8.837	1654.128	g500-B4300	m550-U71/M4	4	179
0.1	4490	0.2	4727	1.0	4727	0.9	8.837	1807.968	g500-B4300	m550-U71/M4	4	179



62 Hz: 0.75 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
42.1	12.6	84.2	13.0	522	13.0	4.6	14.072	3.565	g500-B240	m550-U71/L4	2	18
30.0	17.6	60.0	19.0	372	19.0	4.6	15.460	5.002	g500-B450	m550-U71/L4	3	21
28.9	18.3	57.9	19.0	359	19.0	3.3	11.893	5.185	g500-B110	m550-U71/L4	2	13
27.7	19.1	55.4	20.0	344	20.0	1.8	11.407	5.411	g500-B45	m550-U71/L4	2	12
25.2	21.0	50.3	22.0	312	22.0	3.0	11.805	5.963	g500-B110	m550-U71/L4	2	13
24.1	21.9	48.2	23.0	299	23.0	1.6	11.376	6.222	g500-B45	m550-U71/L4	2	12
24.0	22.1	47.9	23.0	297	23.0	4.0	12.251	6.257	g500-B240	m550-U71/L4	2	18
21.8	24.3	43.6	26.0	270	26.0	4.6	12.774	6.883	g500-B240	m550-U71/L4	2	18
21.1	25.1	42.2	26.0	262	26.0	1.5	11.296	7.111	g500-B45	m550-U71/L4	2	12
21.1	25.1	42.2	26.0	262	26.0	2.7	11.578	7.111	g500-B110	m550-U71/L4	2	13
19.2	27.6	38.4	29.0	238	29.0	4.6	12.613	7.817	g500-B240	m550-U71/L4	2	18
18.3	28.8	36.7	30.0	227	30.0	1.4	11.278	8.178	g500-B45	m550-U71/L4	2	12
18.3	28.8	36.7	30.0	227	30.0	2.5	11.531	8.178	g500-B110	m550-U71/L4	2	13
16.5	32.1	33.0	34.0	204	34.0	1.2	11.234	9.101	g500-B45	m550-U71/L4	2	12
16.5	32.1	33.0	34.0	204	34.0	2.3	11.423	9.101	g500-B110	m550-U71/L4	2	13
16.1	32.8	32.2	35.0	200	35.0	4.6	14.306	9.315	g500-B450	m550-U71/L4	3	21
14.5	36.4	29.0	38.0	180	38.0	4.6	14.160	10.328	g500-B450	m550-U71/L4	3	21
14.3	36.9	28.7	39.0	178	39.0	1.1	11.223	10.466	g500-B45	m550-U71/L4	2	12
14.3	36.9	28.7	39.0	178	39.0	2.1	11.395	10.466	g500-B110	m550-U71/L4	2	13
13.1	40.4	26.2	42.0	163	42.0	2.0	11.355	11.449	g500-B110	m550-U71/L4	2	13
12.9	41.0	25.8	43.0	160	43.0	1.0	11.186	11.640	g500-B45	m550-U71/L4	2	12
12.4	42.6	24.8	45.0	154	45.0	4.0	11.829	12.081	g500-B240	m550-U71/L4	2	18
12.4	42.8	24.7	45.0	153	45.0	4.0	13.620	12.143	g500-B820	m550-U71/L4	3	44
11.8	44.8	23.6	47.0	147	47.0	1.8	11.293	12.698	g500-B110	m550-U71/L4	2	13
11.2	47.2	22.4	50.0	139	50.0	0.8	11.179	13.386	g500-B45	m550-U71/L4	2	12
10.9	48.4	21.9	51.0	136	51.0	4.0	11.777	13.719	g500-B240	m550-U71/L4	2	18
10.3	51.5	20.5	54.0	127	54.0	1.6	11.278	14.603	g500-B110	m550-U71/L4	2	13
10.0	52.9	20.0	56.0	124	56.0	3.7	11.686	15.008	g500-B240	m550-U71/L4	2	18
9.6	54.8	19.3	58.0	120	58.0	1.5	11.243	15.556	g500-B110	m550-U71/L4	2	13
9.2	57.6	18.3	61.0	114	61.0	4.0	12.327	16.349	g500-B450	m550-U71/L4	3	21
8.9	59.4	17.8	62.0	110	62.0	3.6	11.547	16.857	g500-B240	m550-U71/L4	2	18
8.4	63.1	16.8	66.0	104	66.0	1.4	11.233	17.889	g500-B110	m550-U71/L4	2	13
8.4	63.0	16.8	66.0	104	66.0	4.0	12.146	17.885	g500-B450	m550-U71/L4	3	21
8.0	65.7	16.1	69.0	99.7	69.0	4.0	13.278	18.655	g500-B820	m550-U71/L4	3	44
7.8	67.5	15.7	71.0	97.2	71.0	3.2	11.520	19.143	g500-B240	m550-U71/L4	2	18
7.7	68.9	15.3	72.0	95.1	72.0	1.3	11.195	19.556	g500-B110	m550-U71/L4	2	13
7.6	69.9	15.1	73.0	93.8	73.0	4.0	12.106	19.831	g500-B450	m550-U71/L4	3	21
7.3	72.8	14.5	77.0	90.1	77.0	2.9	11.440	20.650	g500-B240	m550-U71/L4	2	18
7.2	73.5	14.4	77.0	89.2	77.0	4.0	13.211	20.857	g500-B820	m550-U71/L4	3	44
6.7	79.3	13.3	83.0	82.7	83.0	1.2	11.188	22.489	g500-B110	m550-U71/L4	2	13
6.6	80.4	13.2	85.0	81.5	85.0	3.7	11.802	22.813	g500-B450	m550-U71/L4	3	21
6.4	82.7	12.8	87.0	79.3	87.0	2.6	11.422	23.450	g500-B240	m550-U71/L4	2	18
6.0	88.8	11.9	93.0	73.9	93.0	1.1	11.163	25.185	g500-B110	m550-U71/L4	2	13
5.9	89.1	11.9	94.0	73.5	94.0	3.7	11.778	25.294	g500-B450	m550-U71/L4	3	21
5.6	94.7	11.2	100	69.2	100	2.2	11.311	26.878	g500-B240	m550-U71/L4	2	18
5.4	98.5	10.7	104	66.6	104	3.3	11.610	27.945	g500-B450	m550-U71/L4	3	21
5.2	102	10.4	107	64.2	107	1.0	11.160	28.963	g500-B110	m550-U71/L4	2	13
5.0	105	10.1	110	62.5	110	3.3	12.009	29.745	g500-B820	m550-U71/L4	3	44
5.0	105	10.1	110	62.5	110	3.3	11.820	29.744	g500-B600	m550-U71/L4	3	39
4.9	108	9.8	113	60.9	113	2.0	11.300	30.522	g500-B240	m550-U71/L4	2	18
4.8	109	9.7	115	60.0	115	3.3	11.594	30.985	g500-B450	m550-U71/L4	3	21



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
4.5	118	9.0	124	55.6	124	1.8	11.252	33.433	g500-B240	m550-U71/L4	2	18
4.1	128	8.2	135	51.1	135	3.0	11.411	36.373	g500-B450	m550-U71/L4	3	21
4.1	130	8.1	137	50.3	137	2.8	11.736	37.000	g500-B820	m550-U71/L4	3	44
4.1	130	8.1	137	50.3	137	2.8	11.580	36.999	g500-B600	m550-U71/L4	3	39
4.0	134	7.9	141	49.0	141	1.6	11.246	37.967	g500-B240	m550-U71/L4	2	18
3.7	142	7.4	149	46.1	149	3.0	11.402	40.330	g500-B450	m550-U71/L4	3	21
3.6	148	7.2	155	44.3	155	3.6	11.776	41.940	g500-B600	m550-U71/L4	3	39
3.5	153	6.9	160	43.0	160	1.5	11.196	43.267	g500-B240	m550-U71/L4	2	18
3.3	159	6.6	168	41.1	168	2.7	11.317	45.245	g500-B450	m550-U71/L4	3	21
3.1	173	6.1	182	37.9	182	1.3	11.192	49.133	g500-B240	m550-U71/L4	2	18
3.0	177	6.0	186	37.1	186	2.4	11.311	50.167	g500-B450	m550-U71/L4	3	21
2.9	185	5.7	195	35.4	195	1.2	11.170	52.510	g500-B240	m550-U71/L4	2	18
2.7	198	5.3	208	33.1	208	2.2	11.575	56.154	g500-B450	m550-U71/L4	3	21
2.6	203	5.2	214	32.3	214	3.8	12.219	57.662	g500-B820	m550-U71/L4	3	44
2.5	210	5.0	221	31.2	221	1.1	11.167	59.630	g500-B240	m550-U71/L4	2	18
2.4	219	4.8	231	29.9	231	2.0	11.571	62.262	g500-B450	m550-U71/L4	3	21
2.4	225	4.7	236	29.1	236	2.5	12.179	63.822	g500-B600	m550-U71/L4	3	39
2.3	227	4.7	239	28.9	239	3.4	12.212	64.468	g500-B820	m550-U71/L4	3	44
2.2	235	4.4	247	27.2	247	1.0	11.193	68.459	g500-B240	m550-U71/L4	3	18
2.2	238	4.4	250	27.6	250	2.4	11.381	67.513	g500-B600	m550-U71/L4	3	39
2.2	242	4.4	255	27.0	255	1.8	11.459	68.788	g500-B450	m550-U71/L4	3	21
2.1	254	4.2	267	25.8	267	2.2	11.637	72.170	g500-B600	m550-U71/L4	3	39
2.0	264	4.0	278	24.8	278	3.0	12.006	74.963	g500-B1500	m550-U71/L4	3	74
1.9	267	3.9	281	23.9	281	0.9	11.191	77.741	g500-B240	m550-U71/L4	3	18
2.0	269	3.9	283	24.4	283	1.6	11.456	76.271	g500-B450	m550-U71/L4	3	21
1.8	289	3.7	304	22.7	304	2.0	11.305	81.937	g500-B600	m550-U71/L4	3	39
1.8	292	3.6	307	22.5	307	2.7	11.767	82.762	g500-B1500	m550-U71/L4	3	74
1.7	316	3.4	332	20.8	332	1.4	11.322	89.534	g500-B450	m550-U71/L4	3	21
1.7	316	3.3	333	20.7	333	1.8	11.461	89.772	g500-B600	m550-U71/L4	3	39
1.6	321	3.3	337	20.4	337	2.7	11.758	90.978	g500-B1500	m550-U71/L4	3	74
1.6	324	3.3	341	20.2	341	2.4	11.592	91.939	g500-B820	m550-U71/L4	3	44
1.5	350	3.0	368	18.7	368	1.2	11.320	99.274	g500-B450	m550-U71/L4	3	21
1.5	359	2.9	377	18.3	377	1.6	11.629	101.760	g500-B600	m550-U71/L4	3	39
1.5	362	2.9	381	18.1	381	2.2	11.589	102.790	g500-B820	m550-U71/L4	3	44
1.3	393	2.7	413	16.7	413	1.1	11.260	111.372	g500-B450	m550-U71/L4	3	21
1.3	403	2.6	424	16.3	424	1.9	11.466	114.364	g500-B820	m550-U71/L4	3	44
1.3	409	2.6	430	16.0	430	1.4	11.327	116.175	g500-B600	m550-U71/L4	3	39
1.2	435	2.4	457	15.1	457	1.0	11.259	123.487	g500-B450	m550-U71/L4	3	21
1.2	446	2.4	469	14.7	469	1.3	11.456	126.580	g500-B600	m550-U71/L4	3	39
1.2	451	2.3	474	14.5	474	1.7	11.465	127.861	g500-B820	m550-U71/L4	3	44
1.1	497	2.1	522	13.2	522	1.2	11.268	140.995	g500-B600	m550-U71/L4	3	39
1.0	508	2.1	534	12.9	534	0.8	11.200	144.128	g500-B450	m550-U71/L4	3	21
1.0	522	2.0	548	12.6	548	1.5	11.330	148.000	g500-B820	m550-U71/L4	3	44
1.0	528	2.0	555	12.4	555	2.7	11.803	149.949	g500-B1500	m550-U71/L4	3	74
0.9	577	1.8	607	11.4	607	1.0	11.324	163.810	g500-B600	m550-U71/L4	3	39
0.9	581	1.8	611	11.3	611	2.5	11.800	164.833	g500-B1500	m550-U71/L4	3	74
0.9	583	1.8	613	11.2	613	1.3	11.329	165.467	g500-B820	m550-U71/L4	3	44
0.8	628	1.7	660	10.4	660	0.9	11.209	178.224	g500-B600	m550-U71/L4	3	39
0.8	633	1.7	665	10.4	665	1.2	11.270	179.618	g500-B820	m550-U71/L4	3	44
0.8	641	1.6	674	10.2	674	2.2	11.621	181.983	g500-B1500	m550-U71/L4	3	74
0.7	697	1.5	732	9.2	732	0.8	11.279	201.089	g500-B600	m550-U71/L4	4	42
0.7	699	1.5	735	9.2	735	1.1	11.484	201.818	g500-B820	m550-U71/L4	4	47



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.8	701	1.5	736	9.4	736	0.8	11.266	198.805	g500-B600	m550-U71/L4	3	39
0.7	705	1.5	741	9.3	741	2.0	11.619	200.048	g500-B1500	m550-U71/L4	3	74
0.7	708	1.5	744	9.3	744	1.1	11.269	200.816	g500-B820	m550-U71/L4	3	44
0.7	708	1.5	745	9.1	745	2.0	11.637	204.476	g500-B1500	m550-U71/L4	4	77
0.7	711	1.5	748	9.1	748	3.6	12.239	205.348	g500-B4300	m550-U71/L4	4	181
0.7	712	1.5	748	9.1	748	3.6	12.118	205.407	g500-B2700	m550-U71/L4	4	119
0.7	778	1.3	817	8.3	817	3.6	12.231	224.446	g500-B4300	m550-U71/L4	4	181
0.7	779	1.3	819	8.3	819	1.8	11.635	224.773	g500-B1500	m550-U71/L4	4	77
0.7	781	1.3	821	8.2	821	3.3	12.114	225.581	g500-B2700	m550-U71/L4	4	119
0.7	782	1.3	822	8.2	822	1.0	11.587	225.636	g500-B820	m550-U71/L4	4	47
0.7	800	1.3	841	8.2	841	1.0	11.211	227.045	g500-B820	m550-U71/L4	3	44
0.7	811	1.3	852	8.1	852	1.8	11.436	230.035	g500-B1500	m550-U71/L4	3	74
0.6	868	1.2	912	7.4	912	1.6	11.583	250.483	g500-B1500	m550-U71/L4	4	77
0.6	887	1.2	933	7.3	933	0.9	11.280	256.175	g500-B820	m550-U71/L4	4	47
0.6	891	1.2	937	7.4	937	1.6	11.435	252.869	g500-B1500	m550-U71/L4	3	74
0.6	895	1.2	940	7.3	940	0.9	11.210	253.841	g500-B820	m550-U71/L4	3	44
0.6	918	1.1	965	7.0	965	4.3	12.371	265.073	g500-B4300	m550-U71/L4	4	181
0.6	919	1.1	966	7.0	966	2.8	12.298	265.150	g500-B2700	m550-U71/L4	4	119
0.5	954	1.1	1003	6.8	1003	1.5	11.582	275.347	g500-B1500	m550-U71/L4	4	77
0.5	965	1.1	1014	6.7	1014	4.0	12.090	278.438	g500-B4300	m550-U71/L4	4	181
0.5	1009	1.0	1060	6.4	1060	2.6	12.296	291.191	g500-B2700	m550-U71/L4	4	119
0.5	1054	1.0	1108	6.1	1108	3.9	12.086	304.333	g500-B4300	m550-U71/L4	4	181
0.5	1129	0.9	1187	5.7	1187	1.3	11.395	326.025	g500-B1500	m550-U71/L4	4	77
0.5	1152	0.9	1211	5.6	1211	2.2	11.511	332.564	g500-B2700	m550-U71/L4	4	119
0.4	1242	0.8	1305	5.2	1305	1.2	11.395	358.388	g500-B1500	m550-U71/L4	4	77
0.4	1265	0.8	1330	5.1	1330	2.0	11.510	365.227	g500-B2700	m550-U71/L4	4	119
0.4	1280	0.8	1346	5.0	1346	3.2	11.938	369.548	g500-B4300	m550-U71/L4	4	181
0.4	1405	0.7	1477	4.6	1477	1.0	11.307	405.543	g500-B1500	m550-U71/L4	4	77
0.4	1435	0.7	1508	4.5	1508	2.9	11.702	414.176	g500-B4300	m550-U71/L4	4	181
0.4	1435	0.7	1509	4.5	1509	1.8	11.672	414.296	g500-B2700	m550-U71/L4	4	119
0.3	1544	0.7	1623	4.2	1623	0.9	11.307	445.799	g500-B1500	m550-U71/L4	4	77
0.3	1568	0.7	1648	4.1	1648	2.6	11.700	452.696	g500-B4300	m550-U71/L4	4	181
0.3	1576	0.7	1657	4.1	1657	1.6	11.671	454.986	g500-B2700	m550-U71/L4	4	119
0.3	1681	0.6	1767	3.8	1767	2.4	11.523	485.243	g500-B4300	m550-U71/L4	4	181
0.3	1689	0.6	1776	3.8	1776	1.5	11.498	487.698	g500-B2700	m550-U71/L4	4	119
0.3	1913	0.5	2011	3.4	2011	2.1	11.391	552.234	g500-B4300	m550-U71/L4	4	181
0.3	1914	0.5	2012	3.4	2012	1.3	11.374	552.395	g500-B2700	m550-U71/L4	4	119
0.2	2091	0.5	2198	3.1	2198	2.0	11.390	603.594	g500-B4300	m550-U71/L4	4	181
0.2	2102	0.5	2209	3.1	2209	1.2	11.373	606.648	g500-B2700	m550-U71/L4	4	119
0.2	2417	0.4	2540	2.7	2540	1.7	11.406	697.641	g500-B4300	m550-U71/L4	4	181
0.2	2417	0.4	2541	2.7	2541	1.1	11.396	697.844	g500-B2700	m550-U71/L4	4	119
0.2	2641	0.4	2777	2.4	2777	1.6	11.406	762.524	g500-B4300	m550-U71/L4	4	181
0.2	2720	0.4	2859	2.4	2859	0.9	11.268	785.074	g500-B2700	m550-U71/L4	4	119
0.2	3006	0.3	3160	2.1	3160	1.4	11.314	867.797	g500-B4300	m550-U71/L4	4	181
0.2	3007	0.3	3161	2.1	3161	0.9	11.249	868.049	g500-B2700	m550-U71/L4	4	119
0.2	3286	0.3	3454	2.0	3454	1.2	11.314	948.506	g500-B4300	m550-U71/L4	4	181
0.1	3890	0.3	4090	1.7	4090	1.1	11.233	1123.031	g500-B4300	m550-U71/L4	4	181
0.1	4252	0.2	4470	1.5	4470	1.0	11.232	1227.478	g500-B4300	m550-U71/L4	4	181
0.1	4721	0.2	4963	1.4	4963	0.9	11.195	1362.952	g500-B4300	m550-U71/L4	4	181



62 Hz: 1.1 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
42.1	17.1	126	19.0	522	19.0	4.0	24.072	3.565	g500-B240	m550-U80/M4	2	20
30.0	23.9	90.0	27.0	372	27.0	4.0	25.460	5.002	g500-B450	m550-U80/M4	3	23
28.9	24.8	86.8	28.0	359	28.0	2.3	21.893	5.185	g500-B110	m550-U80/M4	2	15
25.2	28.6	75.5	32.0	312	32.0	2.1	21.805	5.963	g500-B110	m550-U80/M4	2	15
24.0	30.0	71.9	33.0	297	33.0	3.5	22.251	6.257	g500-B240	m550-U80/M4	2	20
21.8	33.0	65.4	37.0	270	37.0	4.0	22.774	6.883	g500-B240	m550-U80/M4	2	20
21.1	34.0	63.3	38.0	262	38.0	1.9	21.578	7.111	g500-B110	m550-U80/M4	2	15
19.2	37.4	57.6	42.0	238	42.0	4.0	22.613	7.817	g500-B240	m550-U80/M4	2	20
18.3	39.2	55.0	44.0	227	44.0	1.7	21.531	8.178	g500-B110	m550-U80/M4	2	15
16.5	43.6	49.4	48.0	204	48.0	1.6	21.423	9.101	g500-B110	m550-U80/M4	2	15
16.1	44.6	48.3	50.0	200	50.0	4.0	24.306	9.315	g500-B450	m550-U80/M4	3	23
14.5	49.4	43.6	55.0	180	55.0	4.0	24.160	10.328	g500-B450	m550-U80/M4	3	23
14.3	50.1	43.0	56.0	178	56.0	1.5	21.395	10.466	g500-B110	m550-U80/M4	2	15
13.1	54.8	39.3	61.0	163	61.0	1.4	21.355	11.449	g500-B110	m550-U80/M4	2	15
12.4	57.8	37.2	64.0	154	64.0	3.0	21.829	12.081	g500-B240	m550-U80/M4	2	20
12.4	58.1	37.1	65.0	153	65.0	3.5	23.620	12.143	g500-B820	m550-U80/M4	3	46
11.8	60.8	35.4	68.0	147	68.0	1.2	21.293	12.698	g500-B110	m550-U80/M4	2	15
10.9	65.7	32.8	73.0	136	73.0	2.8	21.777	13.719	g500-B240	m550-U80/M4	2	20
10.3	69.9	30.8	78.0	127	78.0	1.1	21.278	14.603	g500-B110	m550-U80/M4	2	15
10.0	71.9	30.0	80.0	124	80.0	2.6	21.686	15.008	g500-B240	m550-U80/M4	2	20
9.6	74.5	28.9	83.0	120	83.0	1.0	21.243	15.556	g500-B110	m550-U80/M4	2	15
9.2	78.3	27.5	87.0	114	87.0	3.5	22.327	16.349	g500-B450	m550-U80/M4	3	23
8.9	80.7	26.7	90.0	110	90.0	2.5	21.547	16.857	g500-B240	m550-U80/M4	2	20
8.4	85.7	25.2	95.0	104	95.0	0.9	21.233	17.889	g500-B110	m550-U80/M4	2	15
8.4	85.6	25.2	95.0	104	95.0	3.5	22.146	17.885	g500-B450	m550-U80/M4	3	23
8.0	89.3	24.1	99.0	99.7	99.0	3.5	23.278	18.655	g500-B820	m550-U80/M4	3	46
7.8	91.7	23.5	102	97.2	102	2.2	21.520	19.143	g500-B240	m550-U80/M4	2	20
7.7	93.6	23.0	104	95.1	104	0.9	21.195	19.556	g500-B110	m550-U80/M4	2	15
7.6	94.9	22.7	105	93.8	105	3.5	22.106	19.831	g500-B450	m550-U80/M4	3	23
7.3	98.9	21.8	110	90.1	110	2.0	21.440	20.650	g500-B240	m550-U80/M4	2	20
7.2	99.8	21.6	111	89.2	111	3.5	23.211	20.857	g500-B820	m550-U80/M4	3	46
6.7	108	20.0	120	82.7	120	0.8	21.188	22.489	g500-B110	m550-U80/M4	2	15
6.6	109	19.7	121	81.5	121	3.3	21.802	22.813	g500-B450	m550-U80/M4	3	23
6.4	112	19.2	125	79.3	125	1.8	21.422	23.450	g500-B240	m550-U80/M4	2	20
5.9	121	17.8	135	73.5	135	3.1	21.778	25.294	g500-B450	m550-U80/M4	3	23
5.6	129	16.7	143	69.2	143	1.6	21.311	26.878	g500-B240	m550-U80/M4	2	20
5.4	134	16.1	149	66.6	149	2.8	21.610	27.945	g500-B450	m550-U80/M4	3	23
5.0	142	15.1	158	62.5	158	2.9	22.009	29.745	g500-B820	m550-U80/M4	3	46
5.0	142	15.1	158	62.5	158	2.9	21.820	29.744	g500-B600	m550-U80/M4	3	41
4.9	146	14.7	162	60.9	162	1.4	21.300	30.522	g500-B240	m550-U80/M4	2	20
4.8	148	14.5	165	60.0	165	2.5	21.594	30.985	g500-B450	m550-U80/M4	3	23
4.5	160	13.5	178	55.6	178	1.3	21.252	33.433	g500-B240	m550-U80/M4	2	20
4.1	174	12.4	193	51.1	193	2.2	21.411	36.373	g500-B450	m550-U80/M4	3	23
4.1	177	12.2	197	50.3	197	2.5	21.736	37.000	g500-B820	m550-U80/M4	3	46
4.1	177	12.2	197	50.3	197	2.5	21.580	36.999	g500-B600	m550-U80/M4	3	41
4.0	182	11.9	202	49.0	202	1.1	21.246	37.967	g500-B240	m550-U80/M4	2	20
3.7	193	11.2	215	46.1	215	2.1	21.402	40.330	g500-B450	m550-U80/M4	3	23
3.6	201	10.7	223	44.3	223	2.7	21.776	41.940	g500-B600	m550-U80/M4	3	41
3.5	207	10.4	230	43.0	230	1.0	21.196	43.267	g500-B240	m550-U80/M4	2	20
3.3	217	9.9	241	41.1	241	1.9	21.317	45.245	g500-B450	m550-U80/M4	3	23
3.1	235	9.2	261	37.9	261	0.9	21.192	49.133	g500-B240	m550-U80/M4	2	20



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
3.0	240	9.0	267	37.1	267	1.7	21.311	50.167	g500-B450	m550-U80/M4	3	23
2.9	251	8.6	279	35.4	279	0.8	21.170	52.510	g500-B240	m550-U80/M4	2	20
2.7	269	8.0	299	33.1	299	1.5	21.575	56.154	g500-B450	m550-U80/M4	3	23
2.6	276	7.8	307	32.3	307	2.7	22.219	57.662	g500-B820	m550-U80/M4	3	46
2.4	298	7.2	331	29.9	331	1.4	21.571	62.262	g500-B450	m550-U80/M4	3	23
2.4	306	7.1	339	29.1	339	1.8	22.179	63.822	g500-B600	m550-U80/M4	3	41
2.3	309	7.0	343	28.9	343	2.4	22.212	64.468	g500-B820	m550-U80/M4	3	46
2.2	323	6.7	359	27.6	359	1.7	21.381	67.513	g500-B600	m550-U80/M4	3	41
2.2	329	6.5	366	27.0	366	1.2	21.459	68.788	g500-B450	m550-U80/M4	3	23
2.1	346	6.2	384	25.8	384	1.6	21.637	72.170	g500-B600	m550-U80/M4	3	41
2.0	359	6.0	399	24.8	399	2.6	22.006	74.963	g500-B1500	m550-U80/M4	3	76
2.0	365	5.9	406	24.4	406	1.1	21.456	76.271	g500-B450	m550-U80/M4	3	23
1.8	392	5.5	436	22.7	436	1.4	21.305	81.937	g500-B600	m550-U80/M4	3	41
1.8	396	5.4	440	22.5	440	2.3	21.767	82.762	g500-B1500	m550-U80/M4	3	76
1.7	429	5.0	476	20.8	476	0.9	21.322	89.534	g500-B450	m550-U80/M4	3	23
1.7	430	5.0	478	20.7	478	1.3	21.461	89.772	g500-B600	m550-U80/M4	3	41
1.6	436	4.9	484	20.4	484	2.3	21.758	90.978	g500-B1500	m550-U80/M4	3	76
1.6	440	4.9	489	20.2	489	1.7	21.592	91.939	g500-B820	m550-U80/M4	3	46
1.5	475	4.5	528	18.7	528	0.9	21.320	99.274	g500-B450	m550-U80/M4	3	23
1.5	487	4.4	541	18.3	541	1.1	21.629	101.760	g500-B600	m550-U80/M4	3	41
1.5	492	4.4	547	18.1	547	1.5	21.589	102.790	g500-B820	m550-U80/M4	3	46
1.3	548	3.9	608	16.3	608	1.4	21.466	114.364	g500-B820	m550-U80/M4	3	46
1.3	556	3.9	618	16.0	618	1.0	21.327	116.175	g500-B600	m550-U80/M4	3	41
1.2	606	3.6	673	14.7	673	0.9	21.456	126.580	g500-B600	m550-U80/M4	3	41
1.2	612	3.5	680	14.5	680	1.2	21.465	127.861	g500-B820	m550-U80/M4	3	46
1.1	675	3.2	750	13.2	750	0.8	21.268	140.995	g500-B600	m550-U80/M4	3	41
1.0	709	3.0	787	12.6	787	1.0	21.330	148.000	g500-B820	m550-U80/M4	3	46
1.0	718	3.0	798	12.4	798	1.9	21.803	149.949	g500-B1500	m550-U80/M4	3	76
0.9	789	2.7	877	11.3	877	1.7	21.800	164.833	g500-B1500	m550-U80/M4	3	76
0.9	792	2.7	880	11.2	880	0.9	21.329	165.467	g500-B820	m550-U80/M4	3	46
0.8	860	2.5	955	10.4	955	0.9	21.270	179.618	g500-B820	m550-U80/M4	3	46
0.8	871	2.5	968	10.2	968	1.6	21.621	181.983	g500-B1500	m550-U80/M4	3	76
0.7	958	2.2	1064	9.3	1064	1.4	21.619	200.048	g500-B1500	m550-U80/M4	3	76
0.7	962	2.2	1069	9.1	1069	1.4	21.637	204.476	g500-B1500	m550-U80/M4	4	79
0.7	967	2.2	1074	9.1	1074	2.5	22.118	205.407	g500-B2700	m550-U80/M4	4	121
0.7	966	2.2	1074	9.1	1074	3.1	22.239	205.348	g500-B4300	m550-U80/M4	4	183
0.7	1056	2.0	1174	8.3	1174	3.1	22.231	224.446	g500-B4300	m550-U80/M4	4	183
0.7	1058	2.0	1175	8.3	1175	1.3	21.635	224.773	g500-B1500	m550-U80/M4	4	79
0.7	1062	2.0	1180	8.2	1180	2.3	22.114	225.581	g500-B2700	m550-U80/M4	4	121
0.7	1101	2.0	1224	8.1	1224	1.2	21.436	230.035	g500-B1500	m550-U80/M4	3	76
0.6	1179	1.8	1310	7.4	1310	1.2	21.583	250.483	g500-B1500	m550-U80/M4	4	79
0.6	1211	1.8	1345	7.4	1345	1.1	21.435	252.869	g500-B1500	m550-U80/M4	3	76
0.6	1248	1.7	1386	7.0	1386	2.0	22.298	265.150	g500-B2700	m550-U80/M4	4	121
0.6	1247	1.7	1386	7.0	1386	3.1	22.371	265.073	g500-B4300	m550-U80/M4	4	183
0.5	1296	1.6	1440	6.8	1440	1.0	21.582	275.347	g500-B1500	m550-U80/M4	4	79
0.5	1310	1.6	1456	6.7	1456	3.0	22.090	278.438	g500-B4300	m550-U80/M4	4	183
0.5	1370	1.5	1523	6.4	1523	1.8	22.296	291.191	g500-B2700	m550-U80/M4	4	121
0.5	1432	1.5	1591	6.1	1591	2.7	22.086	304.333	g500-B4300	m550-U80/M4	4	183
0.5	1534	1.4	1705	5.7	1705	0.9	21.395	326.025	g500-B1500	m550-U80/M4	4	79
0.5	1565	1.4	1739	5.6	1739	1.6	21.511	332.564	g500-B2700	m550-U80/M4	4	121
0.4	1687	1.3	1874	5.2	1874	0.8	21.395	358.388	g500-B1500	m550-U80/M4	4	79
0.4	1719	1.2	1910	5.1	1910	1.4	21.510	365.227	g500-B2700	m550-U80/M4	4	121



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.4	1739	1.2	1932	5.0	1932	2.2	21.938	369.548	g500-B4300	m550-U80/M4	4	183
0.4	1950	1.1	2166	4.5	2166	1.3	21.672	414.296	g500-B2700	m550-U80/M4	4	121
0.4	1949	1.1	2166	4.5	2166	2.0	21.702	414.176	g500-B4300	m550-U80/M4	4	183
0.3	2130	1.0	2367	4.1	2367	1.8	21.700	452.696	g500-B4300	m550-U80/M4	4	183
0.3	2141	1.0	2379	4.1	2379	1.1	21.671	454.986	g500-B2700	m550-U80/M4	4	121
0.3	2284	0.9	2537	3.8	2537	1.7	21.523	485.243	g500-B4300	m550-U80/M4	4	183
0.3	2295	0.9	2550	3.8	2550	1.1	21.498	487.698	g500-B2700	m550-U80/M4	4	121
0.3	2600	0.8	2888	3.4	2888	0.9	21.374	552.395	g500-B2700	m550-U80/M4	4	121
0.3	2599	0.8	2888	3.4	2888	1.5	21.391	552.234	g500-B4300	m550-U80/M4	4	183
0.2	2841	0.7	3156	3.1	3156	1.4	21.390	603.594	g500-B4300	m550-U80/M4	4	183
0.2	2855	0.7	3172	3.1	3172	0.9	21.373	606.648	g500-B2700	m550-U80/M4	4	121
0.2	3283	0.6	3648	2.7	3648	1.2	21.406	697.641	g500-B4300	m550-U80/M4	4	183
0.2	3588	0.6	3987	2.4	3987	1.1	21.406	762.524	g500-B4300	m550-U80/M4	4	183
0.2	4084	0.5	4538	2.1	4538	1.0	21.314	867.797	g500-B4300	m550-U80/M4	4	183
0.2	4464	0.5	4960	2.0	4960	0.9	21.314	948.506	g500-B4300	m550-U80/M4	4	183



62 Hz: 1.5 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
42.1	23.5	126	26.0	522	26.0	4.9	38.772	3.565	g500-B240	m550-U90/M4	2	23
30.7	32.2	92.0	36.0	381	36.0	3.8	37.544	4.889	g500-B240	m550-U90/M4	2	23
28.9	34.1	86.8	38.0	359	38.0	1.7	36.593	5.185	g500-B110	m550-U90/M4	2	19
25.2	39.3	75.5	44.0	312	44.0	1.5	36.505	5.963	g500-B110	m550-U90/M4	2	19
24.0	41.2	71.9	46.0	297	46.0	3.2	36.951	6.257	g500-B240	m550-U90/M4	2	23
21.8	45.3	65.4	50.0	270	50.0	3.3	37.474	6.883	g500-B240	m550-U90/M4	2	23
21.1	46.8	63.3	52.0	262	52.0	1.4	36.278	7.111	g500-B110	m550-U90/M4	2	19
19.2	51.5	57.6	57.0	238	57.0	3.0	37.313	7.817	g500-B240	m550-U90/M4	2	23
18.3	53.8	55.0	60.0	227	60.0	1.3	36.231	8.178	g500-B110	m550-U90/M4	2	19
16.5	59.9	49.4	67.0	204	67.0	1.2	36.123	9.101	g500-B110	m550-U90/M4	2	19
15.9	62.2	47.7	69.0	197	69.0	2.6	36.854	9.440	g500-B240	m550-U90/M4	2	23
14.5	68.0	43.6	76.0	180	76.0	4.7	38.860	10.328	g500-B450	m550-U90/M4	3	26
14.3	68.9	43.0	77.0	178	77.0	1.1	36.095	10.466	g500-B110	m550-U90/M4	2	19
14.0	70.6	42.0	78.0	174	78.0	2.4	36.768	10.720	g500-B240	m550-U90/M4	2	23
13.1	75.4	39.3	84.0	163	84.0	1.0	36.055	11.449	g500-B110	m550-U90/M4	2	19
12.4	79.5	37.2	88.0	154	88.0	2.2	36.529	12.081	g500-B240	m550-U90/M4	2	23
12.4	79.9	37.1	89.0	153	89.0	4.8	38.320	12.143	g500-B820	m550-U90/M4	3	49
11.8	83.6	35.4	93.0	147	93.0	0.9	35.993	12.698	g500-B110	m550-U90/M4	2	19
11.7	84.1	35.2	93.0	146	93.0	4.0	37.668	12.775	g500-B450	m550-U90/M4	3	26
10.9	90.3	32.8	100	136	100	2.0	36.477	13.719	g500-B240	m550-U90/M4	2	23
10.6	93.2	31.8	104	131	104	3.8	37.591	14.165	g500-B450	m550-U90/M4	3	26
10.0	98.8	30.0	110	124	110	1.9	36.386	15.008	g500-B240	m550-U90/M4	2	23
9.2	108	27.5	120	114	120	3.4	37.027	16.349	g500-B450	m550-U90/M4	3	26
8.9	111	26.7	123	110	123	1.8	36.247	16.857	g500-B240	m550-U90/M4	2	23
8.4	118	25.2	131	104	131	3.2	36.846	17.885	g500-B450	m550-U90/M4	3	26
8.0	123	24.1	136	99.7	136	4.8	37.978	18.655	g500-B820	m550-U90/M4	3	49
8.0	124	23.9	138	98.7	138	4.1	38.088	18.851	g500-B600	m550-U90/M4	3	44
7.8	126	23.5	140	97.2	140	1.6	36.220	19.143	g500-B240	m550-U90/M4	2	23
7.6	131	22.7	145	93.8	145	2.9	36.806	19.831	g500-B450	m550-U90/M4	3	26
7.3	136	21.8	151	90.2	151	3.7	37.823	20.622	g500-B600	m550-U90/M4	3	44
7.3	136	21.8	151	90.1	151	1.5	36.140	20.650	g500-B240	m550-U90/M4	2	23
7.2	137	21.6	153	89.2	153	4.8	37.911	20.857	g500-B820	m550-U90/M4	3	49
6.6	150	19.7	167	81.5	167	2.5	36.502	22.813	g500-B450	m550-U90/M4	3	26
6.6	150	19.7	167	81.4	167	3.3	36.988	22.852	g500-B600	m550-U90/M4	3	44
6.6	150	19.7	167	81.4	167	4.3	37.397	22.853	g500-B820	m550-U90/M4	3	49
6.4	154	19.2	172	79.3	172	1.3	36.122	23.450	g500-B240	m550-U90/M4	2	23
5.9	167	17.8	185	73.5	185	2.3	36.478	25.294	g500-B450	m550-U90/M4	3	26
5.9	168	17.6	187	72.8	187	4.1	37.353	25.550	g500-B820	m550-U90/M4	3	49
5.6	177	16.7	197	69.2	197	1.1	36.011	26.878	g500-B240	m550-U90/M4	2	23
5.4	184	16.1	204	66.6	204	2.1	36.310	27.945	g500-B450	m550-U90/M4	3	26
5.0	196	15.1	218	62.5	218	2.6	36.520	29.744	g500-B600	m550-U90/M4	3	44
5.0	196	15.1	218	62.5	218	3.5	36.709	29.745	g500-B820	m550-U90/M4	3	49
4.9	201	14.7	223	60.9	223	1.0	36.000	30.522	g500-B240	m550-U90/M4	2	23
4.8	204	14.5	227	60.0	227	1.9	36.294	30.985	g500-B450	m550-U90/M4	3	26
4.6	214	13.9	237	57.3	237	2.4	37.399	32.439	g500-B600	m550-U90/M4	3	44
4.5	220	13.5	245	55.6	245	0.9	35.952	33.433	g500-B240	m550-U90/M4	2	23
4.1	239	12.4	266	51.1	266	1.6	36.111	36.373	g500-B450	m550-U90/M4	3	26
4.1	244	12.2	271	50.3	271	2.1	36.280	36.999	g500-B600	m550-U90/M4	3	44
4.1	244	12.2	271	50.3	271	2.8	36.436	37.000	g500-B820	m550-U90/M4	3	49
4.0	250	11.9	278	49.0	278	0.8	35.946	37.967	g500-B240	m550-U90/M4	2	23
3.7	266	11.2	295	46.1	295	1.5	36.102	40.330	g500-B450	m550-U90/M4	3	26



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
3.6	272	10.9	302	45.0	302	2.7	37.439	41.325	g500-B820	m550-U90/M4	3	49
3.6	276	10.7	307	44.3	307	2.0	36.476	41.940	g500-B600	m550-U90/M4	3	44
3.3	298	9.9	331	41.1	331	1.4	36.017	45.245	g500-B450	m550-U90/M4	3	26
3.3	298	10.0	331	41.1	331	2.5	37.281	45.207	g500-B820	m550-U90/M4	3	49
3.3	301	9.8	335	40.7	335	1.8	37.362	45.739	g500-B600	m550-U90/M4	3	44
3.2	307	9.7	341	39.9	341	4.4	37.938	46.568	g500-B1500	m550-U90/M4	3	80
3.0	329	9.0	366	37.2	366	1.6	37.217	50.036	g500-B600	m550-U90/M4	3	44
3.0	330	9.0	367	37.1	367	1.2	36.011	50.167	g500-B450	m550-U90/M4	3	26
3.0	333	8.9	370	36.8	370	2.2	37.270	50.543	g500-B820	m550-U90/M4	3	49
2.9	342	8.7	380	35.8	380	3.8	37.285	51.920	g500-B1500	m550-U90/M4	3	80
2.7	365	8.1	406	33.5	406	1.5	36.678	55.447	g500-B600	m550-U90/M4	3	44
2.7	370	8.0	411	33.1	411	1.1	36.275	56.154	g500-B450	m550-U90/M4	3	26
2.6	376	7.9	417	32.6	417	3.6	37.264	57.074	g500-B1500	m550-U90/M4	3	80
2.6	380	7.8	422	32.3	422	1.9	36.919	57.662	g500-B820	m550-U90/M4	3	49
2.6	385	7.7	427	31.8	427	3.5	38.757	58.422	g500-B1500	m550-U90/M4	3	80
2.4	410	7.2	455	29.9	455	1.0	36.271	62.262	g500-B450	m550-U90/M4	3	26
2.4	420	7.1	467	29.1	467	1.3	36.879	63.822	g500-B600	m550-U90/M4	3	44
2.3	423	7.0	470	29.0	470	3.2	38.740	64.221	g500-B1500	m550-U90/M4	3	80
2.3	424	7.0	472	28.9	472	1.7	36.912	64.468	g500-B820	m550-U90/M4	3	49
2.2	444	6.7	494	27.6	494	1.2	36.081	67.513	g500-B600	m550-U90/M4	3	44
2.2	453	6.5	503	27.0	503	0.9	36.159	68.788	g500-B450	m550-U90/M4	3	26
2.1	465	6.4	517	26.3	517	1.6	36.691	70.636	g500-B820	m550-U90/M4	3	49
2.1	475	6.2	528	25.8	528	1.1	36.337	72.170	g500-B600	m550-U90/M4	3	44
2.0	493	6.0	548	24.8	548	2.7	36.706	74.963	g500-B1500	m550-U90/M4	3	80
2.0	502	5.9	558	24.4	558	0.8	36.156	76.271	g500-B450	m550-U90/M4	3	26
2.0	506	5.9	562	24.2	562	3.8	38.409	76.862	g500-B2700	m550-U90/M4	3	121
1.9	515	5.8	572	23.8	572	1.1	36.665	78.182	g500-B600	m550-U90/M4	3	44
1.9	520	5.7	578	23.6	578	1.4	36.687	78.973	g500-B820	m550-U90/M4	3	49
1.8	539	5.5	599	22.7	599	1.0	36.005	81.937	g500-B600	m550-U90/M4	3	44
1.8	545	5.4	605	22.5	605	2.5	36.467	82.762	g500-B1500	m550-U90/M4	3	80
1.8	559	5.3	621	21.9	621	3.3	37.723	84.940	g500-B2700	m550-U90/M4	3	121
1.7	591	5.0	657	20.7	657	0.9	36.161	89.772	g500-B600	m550-U90/M4	3	44
1.6	599	4.9	665	20.4	665	2.3	36.458	90.978	g500-B1500	m550-U90/M4	3	80
1.6	605	4.9	672	20.2	672	1.2	36.292	91.939	g500-B820	m550-U90/M4	3	49
1.6	613	4.8	681	20.0	681	2.2	37.412	93.150	g500-B1500	m550-U90/M4	3	80
1.6	614	4.8	682	19.9	682	3.3	37.704	93.283	g500-B2700	m550-U90/M4	3	121
1.5	670	4.4	744	18.3	744	0.8	36.329	101.760	g500-B600	m550-U90/M4	3	44
1.5	674	4.4	749	18.2	749	2.0	37.405	102.396	g500-B1500	m550-U90/M4	3	80
1.5	677	4.4	752	18.1	752	1.1	36.289	102.790	g500-B820	m550-U90/M4	3	49
1.3	752	3.9	835	16.3	835	1.8	36.913	114.166	g500-B1500	m550-U90/M4	3	80
1.3	753	3.9	836	16.3	836	1.0	36.166	114.364	g500-B820	m550-U90/M4	3	49
1.2	826	3.6	918	14.8	918	1.6	36.913	125.498	g500-B1500	m550-U90/M4	3	80
1.2	842	3.5	935	14.5	935	0.9	36.165	127.861	g500-B820	m550-U90/M4	3	49
1.0	987	3.0	1097	12.4	1097	1.4	36.503	149.949	g500-B1500	m550-U90/M4	3	80
1.0	1008	2.9	1120	12.1	1120	2.4	37.999	153.185	g500-B2700	m550-U90/M4	3	121
1.0	1008	2.9	1120	12.1	1120	3.8	38.217	153.141	g500-B4300	m550-U90/M4	3	183
0.9	1085	2.7	1206	11.3	1206	1.2	36.500	164.833	g500-B1500	m550-U90/M4	3	80
0.9	1102	2.7	1224	11.1	1224	3.5	38.203	167.383	g500-B4300	m550-U90/M4	3	183
0.9	1107	2.7	1230	11.1	1230	2.2	37.993	168.230	g500-B2700	m550-U90/M4	3	121
0.8	1198	2.5	1331	10.2	1331	1.1	36.321	181.983	g500-B1500	m550-U90/M4	3	80
0.8	1223	2.4	1359	10.0	1359	3.2	37.573	185.857	g500-B4300	m550-U90/M4	3	183
0.8	1224	2.4	1360	10.0	1360	2.0	37.426	185.911	g500-B2700	m550-U90/M4	3	121



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.7	1317	2.2	1463	9.3	1463	1.0	36.319	200.048	g500-B1500	m550-U90/M4	3	80
0.7	1323	2.2	1470	9.1	1470	1.0	36.337	204.476	g500-B1500	m550-U90/M4	4	83
0.7	1329	2.2	1476	9.1	1476	2.9	36.939	205.348	g500-B4300	m550-U90/M4	4	186
0.7	1329	2.2	1477	9.1	1477	1.8	36.818	205.407	g500-B2700	m550-U90/M4	4	124
0.7	1337	2.2	1486	9.2	1486	2.9	37.564	203.143	g500-B4300	m550-U90/M4	3	183
0.7	1344	2.2	1493	9.1	1493	1.8	37.422	204.170	g500-B2700	m550-U90/M4	3	121
0.7	1452	2.0	1614	8.3	1614	2.7	36.931	224.446	g500-B4300	m550-U90/M4	4	186
0.7	1454	2.0	1616	8.3	1616	0.9	36.335	224.773	g500-B1500	m550-U90/M4	4	83
0.7	1460	2.0	1622	8.2	1622	1.7	36.814	225.581	g500-B2700	m550-U90/M4	4	124
0.7	1514	2.0	1682	8.1	1682	0.9	36.136	230.035	g500-B1500	m550-U90/M4	3	80
0.6	1546	1.9	1718	7.9	1718	2.5	36.973	234.932	g500-B4300	m550-U90/M4	3	183
0.6	1547	1.9	1719	7.9	1719	1.6	36.880	235.000	g500-B2700	m550-U90/M4	3	121
0.6	1621	1.8	1801	7.4	1801	0.8	36.283	250.483	g500-B1500	m550-U90/M4	4	83
0.6	1665	1.8	1849	7.4	1849	0.8	36.135	252.869	g500-B1500	m550-U90/M4	3	80
0.6	1690	1.8	1878	7.2	1878	2.3	36.967	256.781	g500-B4300	m550-U90/M4	3	183
0.6	1699	1.7	1888	7.2	1888	1.4	36.878	258.080	g500-B2700	m550-U90/M4	3	121
0.6	1716	1.7	1906	7.0	1906	1.4	36.998	265.150	g500-B2700	m550-U90/M4	4	124
0.6	1715	1.7	1906	7.0	1906	2.3	37.071	265.073	g500-B4300	m550-U90/M4	4	186
0.5	1802	1.6	2002	6.7	2002	2.2	36.790	278.438	g500-B4300	m550-U90/M4	4	186
0.5	1884	1.5	2094	6.4	2094	1.3	36.996	291.191	g500-B2700	m550-U90/M4	4	124
0.5	1969	1.5	2188	6.1	2188	2.0	36.786	304.333	g500-B4300	m550-U90/M4	4	186
0.5	2152	1.4	2391	5.6	2391	1.1	36.211	332.564	g500-B2700	m550-U90/M4	4	124
0.4	2363	1.2	2626	5.1	2626	1.0	36.210	365.227	g500-B2700	m550-U90/M4	4	124
0.4	2391	1.2	2657	5.0	2657	1.6	36.638	369.548	g500-B4300	m550-U90/M4	4	186
0.4	2680	1.1	2978	4.5	2978	1.4	36.402	414.176	g500-B4300	m550-U90/M4	4	186
0.4	2681	1.1	2979	4.5	2979	0.9	36.372	414.296	g500-B2700	m550-U90/M4	4	124
0.3	2929	1.0	3255	4.1	3255	1.3	36.400	452.696	g500-B4300	m550-U90/M4	4	186
0.3	2944	1.0	3271	4.1	3271	0.8	36.371	454.986	g500-B2700	m550-U90/M4	4	124
0.3	3140	0.9	3489	3.8	3489	1.2	36.223	485.243	g500-B4300	m550-U90/M4	4	186
0.3	3573	0.8	3970	3.4	3970	1.1	36.091	552.234	g500-B4300	m550-U90/M4	4	186
0.2	3906	0.7	4340	3.1	4340	1.0	36.090	603.594	g500-B4300	m550-U90/M4	4	186
0.2	4514	0.6	5016	2.7	5016	0.9	36.106	697.641	g500-B4300	m550-U90/M4	4	186



62 Hz: 2.2 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
42.1	34.5	126	38.0	522	38.0	3.4	48.872	3.565	g500-B240	m550-U90/L4	2	25
30.7	47.4	92.0	52.0	381	52.0	2.6	47.644	4.889	g500-B240	m550-U90/L4	2	25
30.0	48.5	90.0	54.0	372	54.0	3.5	50.260	5.002	g500-B450	m550-U90/L4	3	28
28.9	50.2	86.8	56.0	359	56.0	1.2	46.693	5.185	g500-B110	m550-U90/L4	2	21
25.2	57.8	75.5	64.0	312	64.0	1.1	46.605	5.963	g500-B110	m550-U90/L4	2	21
24.0	60.6	71.9	67.0	297	67.0	2.2	47.051	6.257	g500-B240	m550-U90/L4	2	25
21.9	66.5	65.6	74.0	271	74.0	3.5	48.382	6.860	g500-B450	m550-U90/L4	3	28
21.8	66.7	65.4	74.0	270	74.0	2.3	47.574	6.883	g500-B240	m550-U90/L4	2	25
21.1	68.9	63.3	76.0	262	76.0	0.9	46.378	7.111	g500-B110	m550-U90/L4	2	21
19.2	75.7	57.6	84.0	238	84.0	2.1	47.413	7.817	g500-B240	m550-U90/L4	2	25
18.3	79.2	55.0	88.0	227	88.0	0.9	46.331	8.178	g500-B110	m550-U90/L4	2	21
16.5	88.2	49.4	98.0	204	98.0	0.8	46.223	9.101	g500-B110	m550-U90/L4	2	21
16.1	90.3	48.3	100	200	100	3.4	49.106	9.315	g500-B450	m550-U90/L4	3	28
15.9	91.5	47.7	101	197	101	1.8	46.954	9.440	g500-B240	m550-U90/L4	2	25
15.8	92.2	47.3	102	195	102	3.5	49.661	9.520	g500-B820	m550-U90/L4	3	51
14.5	100	43.6	111	180	111	3.2	48.960	10.328	g500-B450	m550-U90/L4	3	28
14.0	104	42.0	115	174	115	1.7	46.868	10.720	g500-B240	m550-U90/L4	2	25
12.4	117	37.2	130	154	130	1.5	46.629	12.081	g500-B240	m550-U90/L4	2	25
12.4	118	37.1	130	153	130	3.3	48.420	12.143	g500-B820	m550-U90/L4	3	51
11.7	124	35.2	137	146	137	2.7	47.768	12.775	g500-B450	m550-U90/L4	3	28
11.2	130	33.7	143	139	143	3.5	48.406	13.369	g500-B600	m550-U90/L4	3	46
11.2	130	33.7	144	139	144	3.5	49.601	13.370	g500-B820	m550-U90/L4	3	51
10.9	133	32.8	147	136	147	1.4	46.577	13.719	g500-B240	m550-U90/L4	2	25
10.6	137	31.8	152	131	152	2.6	47.691	14.165	g500-B450	m550-U90/L4	3	28
10.3	142	30.8	157	127	157	3.5	49.104	14.626	g500-B820	m550-U90/L4	3	51
10.0	145	30.0	161	124	161	1.3	46.486	15.008	g500-B240	m550-U90/L4	2	25
9.2	158	27.5	175	114	175	2.3	47.127	16.349	g500-B450	m550-U90/L4	3	28
9.2	158	27.5	176	114	176	3.5	48.996	16.352	g500-B820	m550-U90/L4	3	51
8.9	163	26.7	181	110	181	1.2	46.347	16.857	g500-B240	m550-U90/L4	2	25
8.4	173	25.2	192	104	192	2.2	46.946	17.885	g500-B450	m550-U90/L4	3	28
8.0	181	24.1	200	99.7	200	3.3	48.078	18.655	g500-B820	m550-U90/L4	3	51
8.0	183	23.9	202	98.7	202	2.8	48.188	18.851	g500-B600	m550-U90/L4	3	46
7.8	186	23.5	206	97.2	206	1.1	46.320	19.143	g500-B240	m550-U90/L4	2	25
7.6	192	22.7	213	93.8	213	2.0	46.906	19.831	g500-B450	m550-U90/L4	3	28
7.3	200	21.8	221	90.2	221	2.5	47.923	20.622	g500-B600	m550-U90/L4	3	46
7.3	200	21.8	222	90.1	222	1.0	46.240	20.650	g500-B240	m550-U90/L4	2	25
7.2	202	21.6	224	89.2	224	3.3	48.011	20.857	g500-B820	m550-U90/L4	3	51
6.6	221	19.7	245	81.5	245	1.7	46.602	22.813	g500-B450	m550-U90/L4	3	28
6.6	221	19.7	245	81.4	245	2.3	47.088	22.852	g500-B600	m550-U90/L4	3	46
6.6	221	19.7	245	81.4	245	2.9	47.497	22.853	g500-B820	m550-U90/L4	3	51
6.4	227	19.2	252	79.3	252	0.9	46.222	23.450	g500-B240	m550-U90/L4	2	25
5.9	245	17.8	271	73.5	271	1.5	46.578	25.294	g500-B450	m550-U90/L4	3	28
5.9	248	17.6	274	72.8	274	2.8	47.453	25.550	g500-B820	m550-U90/L4	3	51
5.4	271	16.1	300	66.6	300	1.4	46.410	27.945	g500-B450	m550-U90/L4	3	28
5.1	283	15.4	313	63.7	313	3.5	50.194	29.206	g500-B1500	m550-U90/L4	3	82
5.0	288	15.1	319	62.5	319	1.8	46.620	29.744	g500-B600	m550-U90/L4	3	46
5.0	288	15.1	319	62.5	319	2.4	46.809	29.745	g500-B820	m550-U90/L4	3	51
4.8	300	14.5	333	60.0	333	1.3	46.394	30.985	g500-B450	m550-U90/L4	3	28
4.6	314	13.9	348	57.3	348	1.6	47.499	32.439	g500-B600	m550-U90/L4	3	46
4.1	352	12.4	390	51.1	390	1.1	46.211	36.373	g500-B450	m550-U90/L4	3	28
4.1	359	12.2	397	50.3	397	1.4	46.380	36.999	g500-B600	m550-U90/L4	3	46



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
4.1	359	12.2	397	50.3	397	1.9	46.536	37.000	g500-B820	m550-U90/L4	3	51
3.7	391	11.2	433	46.1	433	1.0	46.202	40.330	g500-B450	m550-U90/L4	3	28
3.6	400	10.9	444	45.0	444	1.9	47.539	41.325	g500-B820	m550-U90/L4	3	51
3.6	406	10.7	450	44.3	450	1.3	46.576	41.940	g500-B600	m550-U90/L4	3	46
3.3	438	10.0	485	41.1	485	1.7	47.381	45.207	g500-B820	m550-U90/L4	3	51
3.3	438	9.9	486	41.1	486	0.9	46.117	45.245	g500-B450	m550-U90/L4	3	28
3.3	443	9.8	491	40.7	491	1.2	47.462	45.739	g500-B600	m550-U90/L4	3	46
3.2	451	9.7	500	39.9	500	3.0	48.038	46.568	g500-B1500	m550-U90/L4	3	82
3.0	485	9.0	537	37.2	537	1.1	47.317	50.036	g500-B600	m550-U90/L4	3	46
3.0	486	9.0	538	37.1	538	0.8	46.111	50.167	g500-B450	m550-U90/L4	3	28
3.0	490	8.9	542	36.8	542	1.5	47.370	50.543	g500-B820	m550-U90/L4	3	51
2.9	503	8.7	557	35.8	557	2.6	47.385	51.920	g500-B1500	m550-U90/L4	3	82
2.7	537	8.1	595	33.5	595	1.0	46.778	55.447	g500-B600	m550-U90/L4	3	46
2.6	553	7.9	613	32.6	613	2.5	47.364	57.074	g500-B1500	m550-U90/L4	3	82
2.6	559	7.8	619	32.3	619	1.3	47.019	57.662	g500-B820	m550-U90/L4	3	51
2.6	566	7.7	627	31.8	627	2.4	48.857	58.422	g500-B1500	m550-U90/L4	3	82
2.4	618	7.1	685	29.1	685	0.9	46.979	63.822	g500-B600	m550-U90/L4	3	46
2.3	622	7.0	689	29.0	689	2.2	48.840	64.221	g500-B1500	m550-U90/L4	3	82
2.3	625	7.0	692	28.9	692	1.2	47.012	64.468	g500-B820	m550-U90/L4	3	51
2.2	654	6.7	725	27.6	725	0.8	46.181	67.513	g500-B600	m550-U90/L4	3	46
2.1	684	6.4	758	26.3	758	1.1	46.791	70.636	g500-B820	m550-U90/L4	3	51
2.0	726	6.0	805	24.8	805	1.9	46.806	74.963	g500-B1500	m550-U90/L4	3	82
2.0	745	5.9	825	24.2	825	2.6	48.509	76.862	g500-B2700	m550-U90/L4	3	123
1.9	765	5.7	848	23.6	848	1.0	46.787	78.973	g500-B820	m550-U90/L4	3	51
1.8	802	5.4	888	22.5	888	1.7	46.567	82.762	g500-B1500	m550-U90/L4	3	82
1.8	823	5.3	912	21.9	912	2.3	47.823	84.940	g500-B2700	m550-U90/L4	3	123
1.6	881	4.9	977	20.4	977	1.5	46.558	90.978	g500-B1500	m550-U90/L4	3	82
1.6	891	4.9	987	20.2	987	0.8	46.392	91.939	g500-B820	m550-U90/L4	3	51
1.6	903	4.8	1000	20.0	1000	1.5	47.512	93.150	g500-B1500	m550-U90/L4	3	82
1.6	904	4.8	1001	19.9	1001	2.3	47.804	93.283	g500-B2700	m550-U90/L4	3	123
1.5	992	4.4	1099	18.2	1099	1.4	47.505	102.396	g500-B1500	m550-U90/L4	3	82
1.3	1106	3.9	1225	16.3	1225	1.2	47.013	114.166	g500-B1500	m550-U90/L4	3	82
1.2	1216	3.6	1347	14.8	1347	1.1	47.013	125.498	g500-B1500	m550-U90/L4	3	82
1.0	1453	3.0	1609	12.4	1609	0.9	46.603	149.949	g500-B1500	m550-U90/L4	3	82
1.0	1484	2.9	1644	12.1	1644	1.6	48.099	153.185	g500-B2700	m550-U90/L4	3	123
1.0	1484	2.9	1644	12.1	1644	2.6	48.317	153.141	g500-B4300	m550-U90/L4	3	185
0.9	1597	2.7	1769	11.3	1769	0.9	46.600	164.833	g500-B1500	m550-U90/L4	3	82
0.9	1622	2.7	1797	11.1	1797	2.4	48.303	167.383	g500-B4300	m550-U90/L4	3	185
0.9	1630	2.7	1806	11.1	1806	1.5	48.093	168.230	g500-B2700	m550-U90/L4	3	123
0.8	1801	2.4	1995	10.0	1995	1.4	47.526	185.911	g500-B2700	m550-U90/L4	3	123
0.8	1801	2.4	1995	10.0	1995	2.2	47.673	185.857	g500-B4300	m550-U90/L4	3	185
0.7	1956	2.2	2167	9.1	2167	1.3	46.918	205.407	g500-B2700	m550-U90/L4	4	126
0.7	1956	2.2	2167	9.1	2167	2.0	47.039	205.348	g500-B4300	m550-U90/L4	4	188
0.7	1968	2.2	2180	9.2	2180	2.0	47.664	203.143	g500-B4300	m550-U90/L4	3	185
0.7	1978	2.2	2191	9.1	2191	1.2	47.522	204.170	g500-B2700	m550-U90/L4	3	123
0.7	2138	2.0	2368	8.3	2368	1.8	47.031	224.446	g500-B4300	m550-U90/L4	4	188
0.7	2148	2.0	2380	8.2	2380	1.1	46.914	225.581	g500-B2700	m550-U90/L4	4	126
0.6	2277	1.9	2522	7.9	2522	1.1	46.980	235.000	g500-B2700	m550-U90/L4	3	123
0.6	2276	1.9	2522	7.9	2522	1.7	47.073	234.932	g500-B4300	m550-U90/L4	3	185
0.6	2488	1.8	2756	7.2	2756	1.6	47.067	256.781	g500-B4300	m550-U90/L4	3	185
0.6	2500	1.7	2770	7.2	2770	1.0	46.978	258.080	g500-B2700	m550-U90/L4	3	123
0.6	2525	1.7	2797	7.0	2797	1.5	47.171	265.073	g500-B4300	m550-U90/L4	4	188



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.6	2525	1.7	2798	7.0	2798	1.0	47.098	265.150	g500-B2700	m550-U90/L4	4	126
0.5	2652	1.6	2938	6.7	2938	1.5	46.890	278.438	g500-B4300	m550-U90/L4	4	188
0.5	2773	1.5	3072	6.4	3072	0.9	47.096	291.191	g500-B2700	m550-U90/L4	4	126
0.5	2898	1.5	3211	6.1	3211	1.3	46.886	304.333	g500-B4300	m550-U90/L4	4	188
0.4	3520	1.2	3899	5.0	3899	1.1	46.738	369.548	g500-B4300	m550-U90/L4	4	188
0.4	3945	1.1	4370	4.5	4370	1.0	46.502	414.176	g500-B4300	m550-U90/L4	4	188
0.3	4311	1.0	4776	4.1	4776	0.9	46.500	452.696	g500-B4300	m550-U90/L4	4	188
0.3	4621	0.9	5120	3.8	5120	0.8	46.323	485.243	g500-B4300	m550-U90/L4	4	188



62 Hz: 3 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
42.1	47.1	126	52.0	522	52.0	2.5	78.872	3.565	g500-B240	m550-U100/M4	2	31
30.7	64.6	92.0	72.0	381	72.0	1.9	77.644	4.889	g500-B240	m550-U100/M4	2	31
30.3	65.5	90.8	73.0	375	73.0	4.0	87.422	4.958	g500-B820	m550-U100/M4	3	57
30.0	66.0	90.0	73.0	372	73.0	3.6	80.260	5.002	g500-B450	m550-U100/M4	3	34
29.6	66.9	88.8	74.0	367	74.0	4.7	82.631	5.067	g500-B600	m550-U100/M4	3	52
24.0	82.6	71.9	92.0	297	92.0	1.6	77.051	6.257	g500-B240	m550-U100/M4	2	31
22.1	89.8	66.2	99.0	274	99.0	3.7	82.611	6.800	g500-B820	m550-U100/M4	3	57
21.9	90.6	65.6	100	271	100	2.9	78.382	6.860	g500-B450	m550-U100/M4	3	34
21.8	90.9	65.4	101	270	101	1.7	77.574	6.883	g500-B240	m550-U100/M4	2	31
21.6	91.7	64.8	102	268	102	3.6	80.063	6.949	g500-B600	m550-U100/M4	3	52
19.7	101	59.1	111	244	111	3.5	85.372	7.618	g500-B820	m550-U100/M4	3	57
19.7	101	59.1	111	244	111	3.9	81.690	7.617	g500-B600	m550-U100/M4	3	52
19.2	103	57.6	114	238	114	1.5	77.413	7.817	g500-B240	m550-U100/M4	2	31
17.6	112	52.8	125	218	125	3.4	84.971	8.517	g500-B820	m550-U100/M4	3	57
16.1	123	48.3	136	200	136	2.5	79.106	9.315	g500-B450	m550-U100/M4	3	34
15.9	125	47.7	138	197	138	1.3	76.954	9.440	g500-B240	m550-U100/M4	2	31
15.8	126	47.3	139	195	139	3.3	79.661	9.520	g500-B820	m550-U100/M4	3	57
14.5	136	43.6	151	180	151	2.4	78.960	10.328	g500-B450	m550-U100/M4	3	34
14.4	138	43.1	153	178	153	3.2	81.520	10.447	g500-B820	m550-U100/M4	3	57
14.0	142	42.0	157	174	157	1.2	76.868	10.720	g500-B240	m550-U100/M4	2	31
14.0	142	41.9	157	173	157	3.2	81.018	10.741	g500-B600	m550-U100/M4	3	52
12.8	154	38.5	171	159	171	3.1	81.307	11.680	g500-B820	m550-U100/M4	3	57
12.4	160	37.2	177	154	177	1.1	76.629	12.081	g500-B240	m550-U100/M4	2	31
12.4	160	37.1	178	153	178	2.9	78.420	12.143	g500-B820	m550-U100/M4	3	57
11.7	169	35.2	187	146	187	2.0	77.768	12.775	g500-B450	m550-U100/M4	3	34
11.4	173	34.3	192	142	192	4.9	83.561	13.118	g500-B1500	m550-U100/M4	3	87
11.2	177	33.7	196	139	196	2.6	78.406	13.369	g500-B600	m550-U100/M4	3	52
11.2	177	33.7	196	139	196	3.0	79.601	13.370	g500-B820	m550-U100/M4	3	57
10.9	181	32.8	201	136	201	1.0	76.577	13.719	g500-B240	m550-U100/M4	2	31
10.6	187	31.8	207	131	207	1.9	77.691	14.165	g500-B450	m550-U100/M4	3	34
10.3	193	30.8	214	127	214	2.8	79.104	14.626	g500-B820	m550-U100/M4	3	57
10.2	195	30.5	215	126	215	2.6	79.206	14.730	g500-B600	m550-U100/M4	3	52
10.0	198	30.0	220	124	220	1.0	76.486	15.008	g500-B240	m550-U100/M4	2	31
9.2	216	27.5	239	114	239	1.7	77.127	16.349	g500-B450	m550-U100/M4	3	34
9.2	216	27.5	239	114	239	2.8	78.996	16.352	g500-B820	m550-U100/M4	3	57
8.9	223	26.7	247	110	247	0.9	76.347	16.857	g500-B240	m550-U100/M4	2	31
8.4	236	25.2	262	104	262	1.6	76.946	17.885	g500-B450	m550-U100/M4	3	34
8.0	246	24.1	273	99.7	273	2.6	78.078	18.655	g500-B820	m550-U100/M4	3	57
8.0	249	23.9	276	98.7	276	2.0	78.188	18.851	g500-B600	m550-U100/M4	3	52
7.8	253	23.5	280	97.2	280	0.8	76.320	19.143	g500-B240	m550-U100/M4	2	31
7.6	262	22.7	290	93.8	290	1.4	76.906	19.831	g500-B450	m550-U100/M4	3	34
7.3	270	22.0	299	91.0	299	4.7	83.931	20.444	g500-B1500	m550-U100/M4	3	87
7.3	272	21.8	302	90.2	302	1.9	77.923	20.622	g500-B600	m550-U100/M4	3	52
7.2	275	21.6	305	89.2	305	2.5	78.011	20.857	g500-B820	m550-U100/M4	3	57
6.6	301	19.7	334	81.5	334	1.3	76.602	22.813	g500-B450	m550-U100/M4	3	34
6.6	302	19.7	334	81.4	334	1.7	77.088	22.852	g500-B600	m550-U100/M4	3	52
6.6	302	19.7	334	81.4	334	2.3	77.497	22.853	g500-B820	m550-U100/M4	3	57
6.6	302	19.7	335	81.2	335	4.2	82.515	22.898	g500-B1500	m550-U100/M4	3	87
5.9	334	17.8	370	73.5	370	1.1	76.578	25.294	g500-B450	m550-U100/M4	3	34
5.9	335	17.8	371	73.4	371	1.5	78.077	25.347	g500-B600	m550-U100/M4	3	52
5.9	337	17.6	374	72.8	374	2.0	77.453	25.550	g500-B820	m550-U100/M4	3	57



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
5.8	344	17.3	381	71.4	381	1.5	78.782	26.061	g500-B600	m550-U100/M4	3	52
5.7	348	17.1	385	70.7	385	2.0	78.977	26.324	g500-B820	m550-U100/M4	3	57
5.4	369	16.1	409	66.6	409	1.0	76.410	27.945	g500-B450	m550-U100/M4	3	34
5.1	386	15.4	427	63.7	427	3.3	80.194	29.206	g500-B1500	m550-U100/M4	3	87
5.0	393	15.1	435	62.5	435	1.3	76.620	29.744	g500-B600	m550-U100/M4	3	52
5.0	393	15.1	435	62.5	435	1.8	76.809	29.745	g500-B820	m550-U100/M4	3	57
4.8	409	14.5	453	60.0	453	0.9	76.394	30.985	g500-B450	m550-U100/M4	3	34
4.6	426	13.9	472	57.6	472	1.6	78.143	32.291	g500-B820	m550-U100/M4	3	57
4.6	428	13.9	475	57.3	475	1.2	77.499	32.439	g500-B600	m550-U100/M4	3	52
4.6	430	13.8	476	57.1	476	2.9	79.163	32.547	g500-B1500	m550-U100/M4	3	87
4.2	472	12.6	523	52.0	523	1.1	78.017	35.740	g500-B600	m550-U100/M4	3	52
4.2	472	12.6	523	52.0	523	2.7	79.110	35.778	g500-B1500	m550-U100/M4	3	87
4.2	477	12.5	528	51.5	528	1.5	78.120	36.102	g500-B820	m550-U100/M4	3	57
4.1	489	12.2	541	50.3	541	1.0	76.380	36.999	g500-B600	m550-U100/M4	3	52
4.1	489	12.2	541	50.3	541	1.4	76.536	37.000	g500-B820	m550-U100/M4	3	57
3.9	509	11.7	564	48.3	564	3.6	85.271	38.546	g500-B4300	m550-U100/M4	3	191
3.7	540	11.0	598	45.5	598	2.5	81.203	40.895	g500-B1500	m550-U100/M4	3	87
3.6	546	10.9	604	45.0	604	1.4	77.539	41.325	g500-B820	m550-U100/M4	3	57
3.6	554	10.7	613	44.3	613	1.0	76.576	41.940	g500-B600	m550-U100/M4	3	52
3.3	594	10.0	658	41.4	658	2.3	81.169	44.955	g500-B1500	m550-U100/M4	3	87
3.3	597	10.0	661	41.1	661	1.2	77.381	45.207	g500-B820	m550-U100/M4	3	57
3.3	604	9.8	669	40.7	669	0.9	77.462	45.739	g500-B600	m550-U100/M4	3	52
3.2	615	9.7	681	39.9	681	2.2	78.038	46.568	g500-B1500	m550-U100/M4	3	87
3.1	646	9.2	715	38.0	715	3.8	81.368	48.912	g500-B2700	m550-U100/M4	3	129
3.0	661	9.0	732	37.2	732	0.8	77.317	50.036	g500-B600	m550-U100/M4	3	52
3.0	667	8.9	739	36.8	739	1.1	77.370	50.543	g500-B820	m550-U100/M4	3	57
2.9	686	8.7	759	35.8	759	2.0	77.385	51.920	g500-B1500	m550-U100/M4	3	87
2.8	714	8.3	791	34.4	791	3.3	77.013	54.082	g500-B2700	m550-U100/M4	3	129
2.6	754	7.9	835	32.6	835	1.8	77.364	57.074	g500-B1500	m550-U100/M4	3	87
2.6	761	7.8	843	32.3	843	1.0	77.019	57.662	g500-B820	m550-U100/M4	3	57
2.6	771	7.7	855	31.8	855	1.8	78.857	58.422	g500-B1500	m550-U100/M4	3	87
2.5	784	7.6	869	31.3	869	3.1	77.013	59.393	g500-B2700	m550-U100/M4	3	129
2.3	847	7.0	938	29.0	938	4.6	86.498	64.127	g500-B4300	m550-U100/M4	3	191
2.3	848	7.0	939	29.0	939	1.6	78.840	64.221	g500-B1500	m550-U100/M4	3	87
2.3	851	7.0	943	28.9	943	0.9	77.012	64.468	g500-B820	m550-U100/M4	3	57
2.3	851	7.0	943	28.9	943	2.9	85.070	64.452	g500-B2700	m550-U100/M4	3	129
2.1	945	6.3	1047	26.0	1047	1.4	78.218	71.566	g500-B1500	m550-U100/M4	3	87
2.0	990	6.0	1097	24.8	1097	1.4	76.806	74.963	g500-B1500	m550-U100/M4	3	87
2.0	1015	5.9	1124	24.2	1124	2.4	78.509	76.862	g500-B2700	m550-U100/M4	3	129
1.8	1093	5.4	1211	22.5	1211	1.2	76.567	82.762	g500-B1500	m550-U100/M4	3	87
1.8	1122	5.3	1242	21.9	1242	2.2	77.823	84.940	g500-B2700	m550-U100/M4	3	129
1.6	1201	4.9	1331	20.4	1331	1.1	76.558	90.978	g500-B1500	m550-U100/M4	3	87
1.6	1230	4.8	1363	20.0	1363	1.1	77.512	93.150	g500-B1500	m550-U100/M4	3	87
1.6	1232	4.8	1365	19.9	1365	2.0	77.804	93.283	g500-B2700	m550-U100/M4	3	129
1.5	1287	4.6	1426	19.1	1426	1.9	80.357	97.481	g500-B2700	m550-U100/M4	3	129
1.5	1287	4.6	1426	19.1	1426	3.0	80.894	97.453	g500-B4300	m550-U100/M4	3	191
1.5	1352	4.4	1498	18.2	1498	1.0	77.505	102.396	g500-B1500	m550-U100/M4	3	87
1.4	1406	4.2	1558	17.5	1558	2.8	80.860	106.517	g500-B4300	m550-U100/M4	3	191
1.4	1414	4.2	1566	17.4	1566	1.7	80.342	107.056	g500-B2700	m550-U100/M4	3	129
1.3	1507	3.9	1670	16.3	1670	0.9	77.013	114.166	g500-B1500	m550-U100/M4	3	87
1.3	1562	3.8	1731	15.7	1731	2.5	77.013	118.336	g500-B4300	m550-U100/M4	3	191
1.3	1563	3.8	1732	15.7	1732	1.6	77.013	118.370	g500-B2700	m550-U100/M4	3	129



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
1.2	1657	3.6	1836	14.8	1836	0.8	77.013	125.498	g500-B1500	m550-U100/M4	3	87
1.2	1708	3.5	1892	14.4	1892	2.3	77.013	129.342	g500-B4300	m550-U100/M4	3	191
1.2	1716	3.5	1902	14.3	1902	1.4	77.013	129.996	g500-B2700	m550-U100/M4	3	129
1.0	2022	2.9	2240	12.1	2240	1.9	78.317	153.141	g500-B4300	m550-U100/M4	3	191
1.0	2023	2.9	2241	12.1	2241	1.2	78.099	153.185	g500-B2700	m550-U100/M4	3	129
0.9	2210	2.7	2448	11.1	2448	1.8	78.303	167.383	g500-B4300	m550-U100/M4	3	191
0.9	2221	2.7	2461	11.1	2461	1.1	78.093	168.230	g500-B2700	m550-U100/M4	3	129
0.8	2455	2.4	2719	10.0	2719	1.0	77.526	185.911	g500-B2700	m550-U100/M4	3	129
0.8	2454	2.4	2719	10.0	2719	1.6	77.673	185.857	g500-B4300	m550-U100/M4	3	191
0.7	2665	2.2	2953	9.1	2953	1.5	77.039	205.348	g500-B4300	m550-U100/M4	4	194
0.7	2666	2.2	2954	9.1	2954	0.9	76.918	205.407	g500-B2700	m550-U100/M4	4	132
0.7	2682	2.2	2972	9.2	2972	1.5	77.664	203.143	g500-B4300	m550-U100/M4	3	191
0.7	2696	2.2	2987	9.1	2987	0.9	77.522	204.170	g500-B2700	m550-U100/M4	3	129
0.7	2913	2.0	3227	8.3	3227	1.3	77.031	224.446	g500-B4300	m550-U100/M4	4	194
0.7	2928	2.0	3244	8.2	3244	0.8	76.914	225.581	g500-B2700	m550-U100/M4	4	132
0.6	3102	1.9	3437	7.9	3437	1.3	77.073	234.932	g500-B4300	m550-U100/M4	3	191
0.6	3390	1.8	3756	7.2	3756	1.1	77.067	256.781	g500-B4300	m550-U100/M4	3	191
0.6	3440	1.7	3812	7.0	3812	1.1	77.171	265.073	g500-B4300	m550-U100/M4	4	194
0.5	3614	1.6	4004	6.7	4004	1.1	76.890	278.438	g500-B4300	m550-U100/M4	4	194
0.5	3950	1.5	4376	6.1	4376	1.0	76.886	304.333	g500-B4300	m550-U100/M4	4	194
0.4	4796	1.2	5314	5.0	5314	0.8	76.738	369.548	g500-B4300	m550-U100/M4	4	194



62 Hz: 4 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
42.1	62.7	126	69.0	522	69.0	1.9	100.472	3.565	g500-B240	m550-U100/L4	2	35
30.7	85.9	92.0	95.0	381	95.0	1.4	99.244	4.889	g500-B240	m550-U100/L4	2	35
30.3	87.1	90.8	97.0	375	97.0	3.0	109.022	4.958	g500-B820	m550-U100/L4	3	61
30.0	87.9	90.0	97.0	372	97.0	2.7	101.860	5.002	g500-B450	m550-U100/L4	3	38
29.6	89.0	88.8	99.0	367	99.0	3.6	104.231	5.067	g500-B600	m550-U100/L4	3	56
24.0	110	71.9	122	297	122	1.2	98.651	6.257	g500-B240	m550-U100/L4	2	35
22.1	120	66.2	132	274	132	2.8	104.211	6.800	g500-B820	m550-U100/L4	3	61
21.9	121	65.6	134	271	134	2.2	99.982	6.860	g500-B450	m550-U100/L4	3	38
21.8	121	65.4	134	270	134	1.2	99.174	6.883	g500-B240	m550-U100/L4	2	35
21.6	122	64.8	135	268	135	2.7	101.663	6.949	g500-B600	m550-U100/L4	3	56
19.7	134	59.1	148	244	148	2.7	106.972	7.618	g500-B820	m550-U100/L4	3	61
19.7	134	59.1	148	244	148	2.9	103.290	7.617	g500-B600	m550-U100/L4	3	56
19.2	137	57.6	152	238	152	1.1	99.013	7.817	g500-B240	m550-U100/L4	2	35
17.6	150	52.8	166	218	166	2.6	106.571	8.517	g500-B820	m550-U100/L4	3	61
16.1	164	48.3	181	200	181	1.9	100.706	9.315	g500-B450	m550-U100/L4	3	38
15.9	166	47.7	184	197	184	1.0	98.554	9.440	g500-B240	m550-U100/L4	2	35
15.8	167	47.3	185	195	185	2.5	101.261	9.520	g500-B820	m550-U100/L4	3	61
14.5	182	43.6	201	180	201	1.8	100.560	10.328	g500-B450	m550-U100/L4	3	38
14.4	184	43.1	203	178	203	2.4	103.120	10.447	g500-B820	m550-U100/L4	3	61
14.0	188	42.0	209	174	209	0.9	98.468	10.720	g500-B240	m550-U100/L4	2	35
14.0	189	41.9	209	173	209	2.4	102.618	10.741	g500-B600	m550-U100/L4	3	56
12.8	205	38.5	227	159	227	2.3	102.907	11.680	g500-B820	m550-U100/L4	3	61
12.4	212	37.2	235	154	235	0.8	98.229	12.081	g500-B240	m550-U100/L4	2	35
12.4	213	37.1	236	153	236	2.1	100.020	12.143	g500-B820	m550-U100/L4	3	61
11.7	225	35.2	249	146	249	1.5	99.368	12.775	g500-B450	m550-U100/L4	3	38
11.4	231	34.3	255	142	255	3.7	105.161	13.118	g500-B1500	m550-U100/L4	3	91
11.2	235	33.7	260	139	260	2.0	100.006	13.369	g500-B600	m550-U100/L4	3	56
11.2	235	33.7	260	139	260	2.2	101.201	13.370	g500-B820	m550-U100/L4	3	61
10.6	249	31.8	276	131	276	1.4	99.291	14.165	g500-B450	m550-U100/L4	3	38
10.3	257	30.8	285	127	285	2.1	100.704	14.626	g500-B820	m550-U100/L4	3	61
10.2	259	30.5	287	126	287	2.0	100.806	14.730	g500-B600	m550-U100/L4	3	56
9.2	287	27.5	318	114	318	1.3	98.727	16.349	g500-B450	m550-U100/L4	3	38
9.2	287	27.5	318	114	318	2.1	100.596	16.352	g500-B820	m550-U100/L4	3	61
8.4	314	25.2	348	104	348	1.2	98.546	17.885	g500-B450	m550-U100/L4	3	38
8.1	327	24.2	362	100	362	3.8	105.697	18.598	g500-B1500	m550-U100/L4	3	91
8.0	328	24.1	363	99.7	363	1.9	99.678	18.655	g500-B820	m550-U100/L4	3	61
8.0	331	23.9	367	98.7	367	1.5	99.788	18.851	g500-B600	m550-U100/L4	3	56
7.6	349	22.7	386	93.8	386	1.1	98.506	19.831	g500-B450	m550-U100/L4	3	38
7.3	359	22.0	398	91.0	398	3.5	105.531	20.444	g500-B1500	m550-U100/L4	3	91
7.3	362	21.8	402	90.2	402	1.4	99.523	20.622	g500-B600	m550-U100/L4	3	56
7.2	367	21.6	406	89.2	406	1.9	99.611	20.857	g500-B820	m550-U100/L4	3	61
6.6	401	19.7	444	81.5	444	0.9	98.202	22.813	g500-B450	m550-U100/L4	3	38
6.6	402	19.7	445	81.4	445	1.3	98.688	22.852	g500-B600	m550-U100/L4	3	56
6.6	402	19.7	445	81.4	445	1.7	99.097	22.853	g500-B820	m550-U100/L4	3	61
6.6	402	19.7	446	81.2	446	3.1	104.115	22.898	g500-B1500	m550-U100/L4	3	91
6.5	408	19.4	452	80.2	452	3.8	120.267	23.206	g500-B4300	m550-U100/L4	3	195
5.9	445	17.8	493	73.5	493	0.9	98.178	25.294	g500-B450	m550-U100/L4	3	38
5.9	445	17.8	494	73.4	494	1.1	99.677	25.347	g500-B600	m550-U100/L4	3	56
5.9	446	17.7	494	73.3	494	3.8	119.670	25.365	g500-B4300	m550-U100/L4	3	195
5.9	449	17.6	498	72.8	498	1.5	99.053	25.550	g500-B820	m550-U100/L4	3	61
5.8	458	17.3	507	71.4	507	1.1	100.382	26.061	g500-B600	m550-U100/L4	3	56



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
5.7	463	17.1	513	70.7	513	1.5	100.577	26.324	g500-B820	m550-U100/L4	3	61
5.6	471	16.8	522	69.4	522	3.8	109.688	26.814	g500-B2700	m550-U100/L4	3	133
5.1	513	15.4	569	63.7	569	2.5	101.794	29.206	g500-B1500	m550-U100/L4	3	91
5.1	518	15.3	573	63.2	573	3.8	109.499	29.447	g500-B2700	m550-U100/L4	3	133
5.0	523	15.1	579	62.5	579	1.0	98.220	29.744	g500-B600	m550-U100/L4	3	56
5.0	523	15.1	579	62.5	579	1.3	98.409	29.745	g500-B820	m550-U100/L4	3	61
4.6	567	13.9	629	57.6	629	1.2	99.743	32.291	g500-B820	m550-U100/L4	3	61
4.6	570	13.9	632	57.3	632	0.9	99.099	32.439	g500-B600	m550-U100/L4	3	56
4.6	572	13.8	634	57.1	634	2.2	100.763	32.547	g500-B1500	m550-U100/L4	3	91
4.2	628	12.6	696	52.0	696	0.8	99.617	35.740	g500-B600	m550-U100/L4	3	56
4.2	629	12.6	697	52.0	697	2.0	100.710	35.778	g500-B1500	m550-U100/L4	3	91
4.2	634	12.5	703	51.5	703	1.1	99.720	36.102	g500-B820	m550-U100/L4	3	61
4.1	650	12.2	720	50.3	720	1.1	98.136	37.000	g500-B820	m550-U100/L4	3	61
3.9	677	11.7	751	48.3	751	2.7	106.871	38.546	g500-B4300	m550-U100/L4	3	195
3.7	719	11.0	796	45.5	796	1.9	102.803	40.895	g500-B1500	m550-U100/L4	3	91
3.6	726	10.9	805	45.0	805	1.0	99.139	41.325	g500-B820	m550-U100/L4	3	61
3.3	790	10.0	875	41.4	875	1.7	102.769	44.955	g500-B1500	m550-U100/L4	3	91
3.3	794	10.0	880	41.1	880	0.9	98.981	45.207	g500-B820	m550-U100/L4	3	61
3.2	818	9.7	907	39.9	907	1.7	99.638	46.568	g500-B1500	m550-U100/L4	3	91
3.1	860	9.2	952	38.0	952	2.8	102.968	48.912	g500-B2700	m550-U100/L4	3	133
3.0	888	8.9	984	36.8	984	0.8	98.970	50.543	g500-B820	m550-U100/L4	3	61
2.9	912	8.7	1011	35.8	1011	1.5	98.985	51.920	g500-B1500	m550-U100/L4	3	91
2.8	950	8.3	1053	34.4	1053	2.5	98.613	54.082	g500-B2700	m550-U100/L4	3	133
2.6	1003	7.9	1111	32.6	1111	1.4	98.964	57.074	g500-B1500	m550-U100/L4	3	91
2.6	1027	7.7	1138	31.8	1138	1.3	100.457	58.422	g500-B1500	m550-U100/L4	3	91
2.6	1031	7.7	1142	31.7	1142	3.8	108.192	58.671	g500-B4300	m550-U100/L4	3	195
2.5	1044	7.6	1157	31.3	1157	2.3	98.613	59.393	g500-B2700	m550-U100/L4	3	133
2.3	1127	7.0	1249	29.0	1249	3.4	108.098	64.127	g500-B4300	m550-U100/L4	3	195
2.3	1129	7.0	1251	29.0	1251	1.2	100.440	64.221	g500-B1500	m550-U100/L4	3	91
2.3	1133	7.0	1255	28.9	1255	2.2	106.670	64.452	g500-B2700	m550-U100/L4	3	133
2.1	1258	6.3	1394	26.0	1394	1.1	99.818	71.566	g500-B1500	m550-U100/L4	3	91
2.0	1317	6.0	1460	24.8	1460	1.0	98.406	74.963	g500-B1500	m550-U100/L4	3	91
2.0	1351	5.9	1497	24.2	1497	1.8	100.109	76.862	g500-B2700	m550-U100/L4	3	133
1.8	1454	5.4	1612	22.5	1612	0.9	98.167	82.762	g500-B1500	m550-U100/L4	3	91
1.8	1493	5.3	1654	21.9	1654	1.6	99.423	84.940	g500-B2700	m550-U100/L4	3	133
1.6	1599	4.9	1772	20.4	1772	0.9	98.158	90.978	g500-B1500	m550-U100/L4	3	91
1.6	1637	4.8	1814	20.0	1814	0.8	99.112	93.150	g500-B1500	m550-U100/L4	3	91
1.6	1639	4.8	1816	19.9	1816	1.5	99.404	93.283	g500-B2700	m550-U100/L4	3	133
1.5	1713	4.6	1898	19.1	1898	1.4	101.957	97.481	g500-B2700	m550-U100/L4	3	133
1.5	1713	4.6	1898	19.1	1898	2.3	102.494	97.453	g500-B4300	m550-U100/L4	3	195
1.4	1872	4.2	2074	17.5	2074	2.1	102.460	106.517	g500-B4300	m550-U100/L4	3	195
1.4	1881	4.2	2085	17.4	2085	1.3	101.942	107.056	g500-B2700	m550-U100/L4	3	133
1.3	2080	3.8	2304	15.7	2304	1.9	98.613	118.336	g500-B4300	m550-U100/L4	3	195
1.3	2080	3.8	2305	15.7	2305	1.2	98.613	118.370	g500-B2700	m550-U100/L4	3	133
1.2	2273	3.5	2519	14.4	2519	1.7	98.613	129.342	g500-B4300	m550-U100/L4	3	195
1.2	2284	3.5	2531	14.3	2531	1.1	98.613	129.996	g500-B2700	m550-U100/L4	3	133
1.0	2691	2.9	2982	12.1	2982	1.4	99.917	153.141	g500-B4300	m550-U100/L4	3	195
1.0	2692	2.9	2983	12.1	2983	0.9	99.699	153.185	g500-B2700	m550-U100/L4	3	133
0.9	2941	2.7	3259	11.1	3259	1.3	99.903	167.383	g500-B4300	m550-U100/L4	3	195
0.9	2956	2.7	3276	11.1	3276	0.8	99.693	168.230	g500-B2700	m550-U100/L4	3	133
0.8	3266	2.4	3619	10.0	3619	1.2	99.273	185.857	g500-B4300	m550-U100/L4	3	195
0.7	3547	2.2	3931	9.1	3931	1.1	98.639	205.348	g500-B4300	m550-U100/L4	4	198



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
0.7	3570	2.2	3956	9.2	3956	1.1	99.264	203.143	g500-B4300	m550-U100/L4	3	195
0.7	3877	2.0	4296	8.3	4296	1.0	98.631	224.446	g500-B4300	m550-U100/L4	4	198
0.6	4128	1.9	4575	7.9	4575	0.9	98.673	234.932	g500-B4300	m550-U100/L4	3	195
0.6	4512	1.8	5000	7.2	5000	0.9	98.667	256.781	g500-B4300	m550-U100/L4	3	195
0.6	4579	1.7	5074	7.0	5074	0.9	98.771	265.073	g500-B4300	m550-U100/L4	4	198
0.5	4810	1.6	5330	6.7	5330	0.8	98.490	278.438	g500-B4300	m550-U100/L4	4	198



62 Hz: 5.5 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
30.3	106	131	133	375	133	2.2	163.322	4.958	g500-B820	m550-U112/M4	3	67
30.0	107	130	134	372	134	2.0	156.160	5.002	g500-B450	m550-U112/M4	3	44
29.6	108	128	136	367	136	2.6	158.531	5.067	g500-B600	m550-U112/M4	3	62
22.1	145	95.6	182	274	182	2.0	158.511	6.800	g500-B820	m550-U112/M4	3	67
21.9	147	94.8	184	271	184	1.6	154.282	6.860	g500-B450	m550-U112/M4	3	44
21.8	147	94.7	184	271	184	3.7	173.752	6.866	g500-B1500	m550-U112/M4	3	98
21.6	149	93.5	186	268	186	2.0	155.963	6.949	g500-B600	m550-U112/M4	3	62
19.7	163	85.3	204	244	204	1.9	161.272	7.618	g500-B820	m550-U112/M4	3	67
19.7	163	85.3	204	244	204	2.1	157.590	7.617	g500-B600	m550-U112/M4	3	62
17.6	182	76.3	228	218	228	1.9	160.871	8.517	g500-B820	m550-U112/M4	3	67
16.4	196	71.0	245	203	245	4.1	201.453	9.156	g500-B4300	m550-U112/M4	3	201
16.1	199	69.8	250	200	250	1.4	155.006	9.315	g500-B450	m550-U112/M4	3	44
15.8	203	68.3	255	196	255	3.7	164.864	9.516	g500-B1500	m550-U112/M4	3	98
15.8	204	68.3	255	195	255	1.8	155.561	9.520	g500-B820	m550-U112/M4	3	67
14.5	221	62.9	277	180	277	1.3	154.860	10.328	g500-B450	m550-U112/M4	3	44
14.4	223	62.2	280	178	280	1.8	157.420	10.447	g500-B820	m550-U112/M4	3	67
14.0	230	60.5	288	173	288	1.8	156.918	10.741	g500-B600	m550-U112/M4	3	62
13.8	233	59.6	292	171	292	3.7	170.414	10.902	g500-B1500	m550-U112/M4	3	98
12.8	250	55.7	313	159	313	1.7	157.207	11.680	g500-B820	m550-U112/M4	3	67
12.5	256	54.2	321	155	321	3.7	169.932	11.985	g500-B1500	m550-U112/M4	3	98
12.4	260	53.5	325	153	325	1.6	154.320	12.143	g500-B820	m550-U112/M4	3	67
11.7	273	50.9	342	146	342	1.1	153.668	12.775	g500-B450	m550-U112/M4	3	44
11.4	280	49.6	351	142	351	3.0	159.461	13.118	g500-B1500	m550-U112/M4	3	98
11.2	286	48.6	358	139	358	1.4	154.306	13.369	g500-B600	m550-U112/M4	3	62
11.2	286	48.6	358	139	358	1.6	155.501	13.370	g500-B820	m550-U112/M4	3	67
10.6	303	45.9	379	131	379	1.0	153.591	14.165	g500-B450	m550-U112/M4	3	44
10.3	313	44.4	392	127	392	1.6	155.004	14.626	g500-B820	m550-U112/M4	3	67
10.2	315	44.1	395	126	395	1.4	155.106	14.730	g500-B600	m550-U112/M4	3	62
9.9	323	43.0	405	123	405	3.5	163.126	15.111	g500-B1500	m550-U112/M4	3	98
9.2	349	39.8	438	114	438	0.9	153.027	16.349	g500-B450	m550-U112/M4	3	44
9.2	350	39.8	438	114	438	1.5	154.896	16.352	g500-B820	m550-U112/M4	3	67
9.0	355	39.1	445	112	445	3.1	162.875	16.611	g500-B1500	m550-U112/M4	3	98
8.9	362	38.4	453	110	453	4.1	191.464	16.913	g500-B4300	m550-U112/M4	3	201
8.4	382	36.3	479	104	479	0.9	152.846	17.885	g500-B450	m550-U112/M4	3	44
8.1	395	35.2	495	101	495	4.1	190.339	18.486	g500-B4300	m550-U112/M4	3	201
8.1	398	34.9	498	100	498	2.8	159.997	18.598	g500-B1500	m550-U112/M4	3	98
8.0	399	34.8	500	99.7	500	1.4	153.978	18.655	g500-B820	m550-U112/M4	3	67
8.0	403	34.5	505	98.7	505	1.1	154.088	18.851	g500-B600	m550-U112/M4	3	62
7.7	418	33.3	523	95.2	523	4.1	171.548	19.542	g500-B2700	m550-U112/M4	3	139
7.3	437	31.8	548	91.0	548	2.6	159.831	20.444	g500-B1500	m550-U112/M4	3	98
7.3	441	31.5	552	90.2	552	1.0	153.823	20.622	g500-B600	m550-U112/M4	3	62
7.2	446	31.2	559	89.2	559	1.4	153.911	20.857	g500-B820	m550-U112/M4	3	67
7.1	450	30.9	564	88.3	564	3.8	182.159	21.065	g500-B4300	m550-U112/M4	3	201
6.7	476	29.2	597	83.5	597	3.8	167.687	22.269	g500-B2700	m550-U112/M4	3	139
6.6	488	28.4	612	81.4	612	0.9	152.988	22.852	g500-B600	m550-U112/M4	3	62
6.6	488	28.4	612	81.4	612	1.3	153.397	22.853	g500-B820	m550-U112/M4	3	67
6.6	489	28.4	613	81.2	613	2.3	158.415	22.898	g500-B1500	m550-U112/M4	3	98
6.5	496	28.0	622	80.2	622	3.3	174.567	23.206	g500-B4300	m550-U112/M4	3	201
6.3	512	27.1	642	77.6	642	2.2	161.992	23.973	g500-B1500	m550-U112/M4	3	98
6.1	523	26.6	655	76.1	655	3.8	167.413	24.456	g500-B2700	m550-U112/M4	3	139
5.9	542	25.6	679	73.4	679	0.8	153.977	25.347	g500-B600	m550-U112/M4	3	62



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_{21}	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
5.9	542	25.6	679	73.3	679	3.3	173.970	25.365	g500-B4300	m550-U112/M4	3	201
5.9	546	25.4	684	72.8	684	1.1	153.353	25.550	g500-B820	m550-U112/M4	3	67
5.8	557	24.9	698	71.4	698	0.8	154.682	26.061	g500-B600	m550-U112/M4	3	62
5.7	563	24.7	705	70.7	705	1.1	154.877	26.324	g500-B820	m550-U112/M4	3	67
5.7	563	24.7	706	70.6	706	2.0	161.893	26.353	g500-B1500	m550-U112/M4	3	98
5.6	573	24.2	718	69.4	718	3.3	163.988	26.814	g500-B2700	m550-U112/M4	3	139
5.1	624	22.3	782	63.7	782	1.8	156.094	29.206	g500-B1500	m550-U112/M4	3	98
5.1	629	22.1	789	63.2	789	3.2	163.799	29.447	g500-B2700	m550-U112/M4	3	139
5.0	636	21.9	797	62.5	797	1.0	152.709	29.745	g500-B820	m550-U112/M4	3	67
4.8	665	20.9	833	59.8	833	2.8	167.689	31.097	g500-B4300	m550-U112/M4	3	201
4.6	690	20.1	865	57.6	865	0.9	154.043	32.291	g500-B820	m550-U112/M4	3	67
4.6	696	20.0	872	57.1	872	1.6	155.063	32.547	g500-B1500	m550-U112/M4	3	98
4.6	703	19.8	881	56.6	881	2.8	161.048	32.873	g500-B2700	m550-U112/M4	3	139
4.2	765	18.2	958	52.0	958	1.5	155.010	35.778	g500-B1500	m550-U112/M4	3	98
4.2	772	18.0	967	51.5	967	2.6	160.922	36.102	g500-B2700	m550-U112/M4	3	139
4.1	781	17.8	978	50.9	978	1.4	158.690	36.526	g500-B1500	m550-U112/M4	3	98
3.9	824	16.9	1032	48.3	1032	2.2	161.171	38.546	g500-B4300	m550-U112/M4	3	201
3.7	874	15.9	1095	45.5	1095	1.4	157.103	40.895	g500-B1500	m550-U112/M4	3	98
3.5	914	15.2	1145	43.5	1145	3.8	168.731	42.760	g500-B4300	m550-U112/M4	3	201
3.5	914	15.2	1146	43.5	1146	2.4	165.939	42.772	g500-B2700	m550-U112/M4	3	139
3.3	961	14.5	1204	41.4	1204	1.3	157.069	44.955	g500-B1500	m550-U112/M4	3	98
3.2	995	14.0	1247	39.9	1247	1.2	153.938	46.568	g500-B1500	m550-U112/M4	3	98
3.2	999	13.9	1252	39.8	1252	3.4	168.555	46.737	g500-B4300	m550-U112/M4	3	201
3.2	1004	13.8	1258	39.6	1258	2.2	165.865	46.973	g500-B2700	m550-U112/M4	3	139
3.1	1045	13.3	1310	38.0	1310	2.1	157.268	48.912	g500-B2700	m550-U112/M4	3	139
2.9	1110	12.5	1391	35.8	1391	1.1	153.285	51.920	g500-B1500	m550-U112/M4	3	98
2.8	1138	12.2	1427	34.9	1427	3.0	165.383	53.258	g500-B4300	m550-U112/M4	3	201
2.8	1156	12.0	1449	34.4	1449	1.9	152.913	54.082	g500-B2700	m550-U112/M4	3	139
2.6	1220	11.4	1529	32.6	1529	1.0	153.264	57.074	g500-B1500	m550-U112/M4	3	98
2.6	1249	11.1	1565	31.8	1565	1.0	154.757	58.422	g500-B1500	m550-U112/M4	3	98
2.6	1254	11.1	1572	31.7	1572	2.7	162.492	58.671	g500-B4300	m550-U112/M4	3	201
2.5	1269	10.9	1591	31.3	1591	1.7	152.913	59.393	g500-B2700	m550-U112/M4	3	139
2.3	1371	10.1	1718	29.0	1718	2.5	162.398	64.127	g500-B4300	m550-U112/M4	3	201
2.3	1373	10.1	1720	29.0	1720	0.9	154.740	64.221	g500-B1500	m550-U112/M4	3	98
2.3	1378	10.1	1726	28.9	1726	1.6	160.970	64.452	g500-B2700	m550-U112/M4	3	139
2.1	1538	9.0	1927	25.9	1927	1.4	159.066	71.951	g500-B2700	m550-U112/M4	3	139
2.1	1537	9.0	1927	25.9	1927	2.2	160.053	71.930	g500-B4300	m550-U112/M4	3	201
2.0	1643	8.5	2059	24.2	2059	1.3	154.409	76.862	g500-B2700	m550-U112/M4	3	139
1.9	1680	8.3	2106	23.7	2106	2.0	159.991	78.619	g500-B4300	m550-U112/M4	3	201
1.8	1815	7.7	2275	21.9	2275	1.2	153.723	84.940	g500-B2700	m550-U112/M4	3	139
1.6	1994	7.0	2499	19.9	2499	1.1	153.704	93.283	g500-B2700	m550-U112/M4	3	139
1.5	2083	6.7	2610	19.1	2610	1.7	156.794	97.453	g500-B4300	m550-U112/M4	3	201
1.5	2083	6.7	2611	19.1	2611	1.0	156.257	97.481	g500-B2700	m550-U112/M4	3	139
1.4	2277	6.1	2853	17.5	2853	1.5	156.760	106.517	g500-B4300	m550-U112/M4	3	201
1.4	2288	6.1	2868	17.4	2868	0.9	156.242	107.056	g500-B2700	m550-U112/M4	3	139
1.3	2529	5.5	3170	15.7	3170	1.4	152.913	118.336	g500-B4300	m550-U112/M4	3	201
1.3	2530	5.5	3171	15.7	3171	0.9	152.913	118.370	g500-B2700	m550-U112/M4	3	139
1.2	2764	5.0	3465	14.4	3465	1.2	152.913	129.342	g500-B4300	m550-U112/M4	3	201
1.0	3273	4.2	4102	12.1	4102	1.1	154.217	153.141	g500-B4300	m550-U112/M4	3	201
0.9	3577	3.9	4484	11.1	4484	1.0	154.203	167.383	g500-B4300	m550-U112/M4	3	201
0.8	3972	3.5	4978	10.0	4978	0.9	153.573	185.857	g500-B4300	m550-U112/M4	3	201



62 Hz: 7.5 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
30.3	172	60.5	181	375	181	1.6	331.922	4.958	g500-B820	m550-U132/M4	3	86
30.0	174	60.0	183	372	183	1.4	324.760	5.002	g500-B450	m550-U132/M4	3	63
29.6	176	59.2	185	367	185	1.9	327.131	5.067	g500-B600	m550-U132/M4	3	81
22.1	236	44.1	249	274	249	1.5	327.111	6.800	g500-B820	m550-U132/M4	3	86
21.9	239	43.7	251	271	251	1.1	322.882	6.860	g500-B450	m550-U132/M4	3	63
21.8	239	43.7	251	271	251	3.1	342.352	6.866	g500-B1500	m550-U132/M4	3	116
21.6	242	43.2	254	268	254	1.5	324.563	6.949	g500-B600	m550-U132/M4	3	81
19.7	265	39.4	279	244	279	1.4	329.872	7.618	g500-B820	m550-U132/M4	3	86
19.7	265	39.4	279	244	279	1.5	326.190	7.617	g500-B600	m550-U132/M4	3	81
17.6	296	35.2	311	218	311	1.4	329.471	8.517	g500-B820	m550-U132/M4	3	86
17.1	306	34.1	322	212	322	4.4	354.339	8.793	g500-B2700	m550-U132/M4	3	158
16.1	324	32.2	341	200	341	1.0	323.606	9.315	g500-B450	m550-U132/M4	3	63
15.8	331	31.5	348	196	348	2.7	333.464	9.516	g500-B1500	m550-U132/M4	3	116
15.8	331	31.5	348	195	348	1.3	324.161	9.520	g500-B820	m550-U132/M4	3	86
14.5	359	29.0	378	180	378	1.0	323.460	10.328	g500-B450	m550-U132/M4	3	63
14.4	363	28.7	382	178	382	1.3	326.020	10.447	g500-B820	m550-U132/M4	3	86
14.0	373	27.9	393	173	393	1.3	325.518	10.741	g500-B600	m550-U132/M4	3	81
13.8	379	27.5	399	171	399	3.1	339.014	10.902	g500-B1500	m550-U132/M4	3	116
12.8	406	25.7	427	159	427	1.2	325.807	11.680	g500-B820	m550-U132/M4	3	86
12.8	407	25.6	428	159	428	4.8	362.931	11.713	g500-B2700	m550-U132/M4	3	158
12.5	417	25.0	438	155	438	3.1	338.532	11.985	g500-B1500	m550-U132/M4	3	116
12.4	422	24.7	444	153	444	1.1	322.920	12.143	g500-B820	m550-U132/M4	3	86
11.7	444	23.5	467	146	467	0.8	322.268	12.775	g500-B450	m550-U132/M4	3	63
11.7	447	23.3	470	145	470	4.5	361.939	12.863	g500-B2700	m550-U132/M4	3	158
11.4	456	22.9	480	142	480	2.2	328.061	13.118	g500-B1500	m550-U132/M4	3	116
11.2	465	22.4	489	139	489	1.1	322.906	13.369	g500-B600	m550-U132/M4	3	81
11.2	465	22.4	489	139	489	1.2	324.101	13.370	g500-B820	m550-U132/M4	3	86
10.3	509	20.5	535	127	535	1.1	323.604	14.626	g500-B820	m550-U132/M4	3	86
10.2	512	20.4	539	126	539	1.0	323.706	14.730	g500-B600	m550-U132/M4	3	81
10.1	518	20.1	544	125	544	4.1	350.202	14.888	g500-B2700	m550-U132/M4	3	158
9.9	525	19.9	553	123	553	2.5	331.726	15.111	g500-B1500	m550-U132/M4	3	116
9.2	568	18.3	598	114	598	3.8	349.588	16.351	g500-B2700	m550-U132/M4	3	158
9.2	569	18.3	598	114	598	1.1	323.496	16.352	g500-B820	m550-U132/M4	3	86
9.0	578	18.1	607	112	607	2.3	331.475	16.611	g500-B1500	m550-U132/M4	3	116
8.1	647	16.1	680	100	680	2.1	328.597	18.598	g500-B1500	m550-U132/M4	3	116
8.0	649	16.1	682	99.7	682	1.0	322.578	18.655	g500-B820	m550-U132/M4	3	86
8.0	655	15.9	689	98.7	689	0.8	322.688	18.851	g500-B600	m550-U132/M4	3	81
7.7	679	15.4	715	95.2	715	3.4	340.148	19.542	g500-B2700	m550-U132/M4	3	158
7.3	711	14.7	748	91.0	748	1.9	328.431	20.444	g500-B1500	m550-U132/M4	3	116
7.2	725	14.4	763	89.2	763	1.0	322.511	20.857	g500-B820	m550-U132/M4	3	86
6.7	774	13.5	814	83.5	814	3.1	336.287	22.269	g500-B2700	m550-U132/M4	3	158
6.6	795	13.1	836	81.4	836	0.9	321.997	22.853	g500-B820	m550-U132/M4	3	86
6.6	796	13.1	837	81.2	837	1.7	327.015	22.898	g500-B1500	m550-U132/M4	3	116
6.5	807	12.9	849	80.2	849	4.7	343.167	23.206	g500-B4300	m550-U132/M4	3	220
6.3	833	12.5	877	77.6	877	1.6	330.592	23.973	g500-B1500	m550-U132/M4	3	116
6.1	850	12.3	894	76.1	894	2.8	336.013	24.456	g500-B2700	m550-U132/M4	3	158
5.9	882	11.8	928	73.3	928	4.3	342.570	25.365	g500-B4300	m550-U132/M4	3	220
5.9	888	11.7	934	72.8	934	0.8	321.953	25.550	g500-B820	m550-U132/M4	3	86
5.7	916	11.4	964	70.6	964	1.5	330.493	26.353	g500-B1500	m550-U132/M4	3	116
5.6	932	11.2	981	69.4	981	2.6	332.588	26.814	g500-B2700	m550-U132/M4	3	158
5.4	974	10.7	1024	66.4	1024	3.9	354.600	28.013	g500-B4300	m550-U132/M4	3	220



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
5.1	1015	10.3	1068	63.7	1068	1.3	324.694	29.206	g500-B1500	m550-U132/M4	3	116
5.1	1024	10.2	1077	63.2	1077	2.3	332.399	29.447	g500-B2700	m550-U132/M4	3	158
4.8	1081	9.6	1137	59.8	1137	3.5	336.289	31.097	g500-B4300	m550-U132/M4	3	220
4.6	1132	9.2	1190	57.1	1190	1.2	323.663	32.547	g500-B1500	m550-U132/M4	3	116
4.6	1143	9.1	1202	56.6	1202	2.1	329.648	32.873	g500-B2700	m550-U132/M4	3	158
4.2	1238	8.4	1302	52.2	1302	3.1	345.046	35.607	g500-B4300	m550-U132/M4	3	220
4.2	1244	8.4	1308	52.0	1308	1.1	323.610	35.778	g500-B1500	m550-U132/M4	3	116
4.2	1255	8.3	1320	51.5	1320	1.9	329.522	36.102	g500-B2700	m550-U132/M4	3	158
4.1	1270	8.2	1336	50.9	1336	1.1	327.290	36.526	g500-B1500	m550-U132/M4	3	116
3.9	1340	7.8	1410	48.3	1410	2.8	329.771	38.546	g500-B4300	m550-U132/M4	3	220
3.7	1422	7.3	1496	45.5	1496	1.0	325.703	40.895	g500-B1500	m550-U132/M4	3	116
3.5	1487	7.0	1564	43.5	1564	1.7	334.539	42.772	g500-B2700	m550-U132/M4	3	158
3.5	1487	7.0	1564	43.5	1564	2.8	337.331	42.760	g500-B4300	m550-U132/M4	3	220
3.3	1563	6.7	1644	41.4	1644	0.9	325.669	44.955	g500-B1500	m550-U132/M4	3	116
3.2	1619	6.4	1703	39.9	1703	0.9	322.538	46.568	g500-B1500	m550-U132/M4	3	116
3.2	1625	6.4	1709	39.8	1709	2.5	337.155	46.737	g500-B4300	m550-U132/M4	3	220
3.2	1633	6.4	1718	39.6	1718	1.6	334.465	46.973	g500-B2700	m550-U132/M4	3	158
3.1	1700	6.1	1789	38.0	1789	1.5	325.868	48.912	g500-B2700	m550-U132/M4	3	158
2.8	1852	5.6	1948	34.9	1948	2.2	333.983	53.258	g500-B4300	m550-U132/M4	3	220
2.8	1880	5.5	1978	34.4	1978	1.4	321.513	54.082	g500-B2700	m550-U132/M4	3	158
2.6	2040	5.1	2146	31.7	2146	2.0	331.092	58.671	g500-B4300	m550-U132/M4	3	220
2.5	2065	5.1	2172	31.3	2172	1.2	321.513	59.393	g500-B2700	m550-U132/M4	3	158
2.3	2229	4.7	2345	29.0	2345	1.8	330.998	64.127	g500-B4300	m550-U132/M4	3	220
2.3	2241	4.7	2357	28.9	2357	1.2	329.570	64.452	g500-B2700	m550-U132/M4	3	158
2.1	2501	4.2	2630	25.9	2630	1.6	328.653	71.930	g500-B4300	m550-U132/M4	3	220
2.1	2501	4.2	2631	25.9	2631	1.0	327.666	71.951	g500-B2700	m550-U132/M4	3	158
1.9	2733	3.8	2875	23.7	2875	1.5	328.591	78.619	g500-B4300	m550-U132/M4	3	220
1.5	3388	3.1	3564	19.1	3564	1.2	325.394	97.453	g500-B4300	m550-U132/M4	3	220
1.4	3703	2.8	3895	17.5	3895	1.1	325.360	106.517	g500-B4300	m550-U132/M4	3	220
1.3	4114	2.5	4328	15.7	4328	1.0	321.513	118.336	g500-B4300	m550-U132/M4	3	220
1.2	4497	2.3	4730	14.4	4730	0.9	321.513	129.342	g500-B4300	m550-U132/M4	3	220



62 Hz: 11 kW

Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz							z	m
n ₂₂	M ₂₂	n ₂₁	M ₂	n ₂	M ₂	c	J	i				
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
30.3	213	131	266	375	266	1.1	427.722	4.958	g500-B820	m550-U132/L4	3	96
30.0	215	130	268	372	268	1.0	420.560	5.002	g500-B450	m550-U132/L4	3	73
29.6	218	128	272	367	272	1.3	422.931	5.067	g500-B600	m550-U132/L4	3	91
27.3	236	118	295	339	295	4.5	541.976	5.488	g500-B4300	m550-U132/L4	3	230
22.1	292	95.6	365	274	365	1.0	422.911	6.800	g500-B820	m550-U132/L4	3	96
21.8	295	94.7	368	271	368	2.1	438.152	6.866	g500-B1500	m550-U132/L4	3	127
21.7	297	94.0	371	269	371	3.6	465.415	6.918	g500-B2700	m550-U132/L4	3	168
21.6	298	93.5	373	268	373	1.0	420.363	6.949	g500-B600	m550-U132/L4	3	91
21.5	300	93.2	374	267	374	4.1	497.524	6.976	g500-B4300	m550-U132/L4	3	230
19.7	327	85.3	409	244	409	1.0	425.672	7.618	g500-B820	m550-U132/L4	3	96
19.7	327	85.3	409	244	409	1.1	421.990	7.617	g500-B600	m550-U132/L4	3	91
17.6	366	76.3	457	218	457	0.9	425.271	8.517	g500-B820	m550-U132/L4	3	96
17.1	378	73.9	472	212	472	3.0	450.139	8.793	g500-B2700	m550-U132/L4	3	168
16.4	393	71.0	491	203	491	3.9	465.853	9.156	g500-B4300	m550-U132/L4	3	230
15.8	409	68.3	511	196	511	1.8	429.264	9.516	g500-B1500	m550-U132/L4	3	127
15.8	409	68.3	511	195	511	0.9	419.961	9.520	g500-B820	m550-U132/L4	3	96
14.8	435	64.1	544	184	544	4.5	514.172	10.137	g500-B4300	m550-U132/L4	3	230
14.4	449	62.2	561	178	561	0.9	421.820	10.447	g500-B820	m550-U132/L4	3	96
14.0	461	60.5	576	173	576	0.9	421.318	10.741	g500-B600	m550-U132/L4	3	91
13.8	468	59.6	585	171	585	2.1	434.814	10.902	g500-B1500	m550-U132/L4	3	127
13.5	476	58.7	595	168	595	4.5	511.040	11.080	g500-B4300	m550-U132/L4	3	230
12.8	502	55.7	627	159	627	0.8	421.607	11.680	g500-B820	m550-U132/L4	3	96
12.8	503	55.5	629	159	629	3.3	458.731	11.713	g500-B2700	m550-U132/L4	3	168
12.5	515	54.2	643	155	643	2.1	434.332	11.985	g500-B1500	m550-U132/L4	3	127
11.7	552	50.5	690	145	690	3.1	457.739	12.863	g500-B2700	m550-U132/L4	3	168
11.6	553	50.4	692	144	692	4.1	480.316	12.885	g500-B4300	m550-U132/L4	3	230
11.4	563	49.6	704	142	704	1.5	423.861	13.118	g500-B1500	m550-U132/L4	3	127
11.2	574	48.6	718	139	718	0.8	419.901	13.370	g500-B820	m550-U132/L4	3	96
10.7	605	46.2	756	132	756	4.1	478.377	14.084	g500-B4300	m550-U132/L4	3	230
10.1	639	43.7	799	125	799	2.8	446.002	14.888	g500-B2700	m550-U132/L4	3	168
9.9	649	43.0	811	123	811	1.7	427.526	15.111	g500-B1500	m550-U132/L4	3	127
9.2	702	39.8	877	114	877	2.6	445.388	16.351	g500-B2700	m550-U132/L4	3	168
9.0	713	39.1	891	112	891	1.6	427.275	16.611	g500-B1500	m550-U132/L4	3	127
8.9	726	38.4	908	110	908	3.9	455.864	16.913	g500-B4300	m550-U132/L4	3	230
8.1	794	35.2	992	101	992	3.9	454.739	18.486	g500-B4300	m550-U132/L4	3	230
8.1	799	34.9	998	100	998	1.4	424.397	18.598	g500-B1500	m550-U132/L4	3	127
7.7	839	33.3	1049	95.2	1049	2.3	435.948	19.542	g500-B2700	m550-U132/L4	3	168
7.3	878	31.8	1097	91.0	1097	1.3	424.231	20.444	g500-B1500	m550-U132/L4	3	127
7.1	904	30.9	1131	88.3	1131	3.5	446.559	21.065	g500-B4300	m550-U132/L4	3	230
6.7	956	29.2	1195	83.5	1195	2.1	432.087	22.269	g500-B2700	m550-U132/L4	3	168
6.6	983	28.4	1229	81.2	1229	1.1	422.815	22.898	g500-B1500	m550-U132/L4	3	127
6.5	996	28.0	1245	80.2	1245	3.2	438.967	23.206	g500-B4300	m550-U132/L4	3	230
6.3	1029	27.1	1287	77.6	1287	1.1	426.392	23.973	g500-B1500	m550-U132/L4	3	127
6.1	1050	26.6	1312	76.1	1312	1.9	431.813	24.456	g500-B2700	m550-U132/L4	3	168
5.9	1089	25.6	1361	73.3	1361	2.9	438.370	25.365	g500-B4300	m550-U132/L4	3	230
5.7	1131	24.7	1414	70.6	1414	1.0	426.293	26.353	g500-B1500	m550-U132/L4	3	127
5.6	1151	24.2	1439	69.4	1439	1.8	428.388	26.814	g500-B2700	m550-U132/L4	3	168
5.4	1203	23.2	1503	66.4	1503	2.7	450.400	28.013	g500-B4300	m550-U132/L4	3	230
5.1	1254	22.3	1567	63.7	1567	0.9	420.494	29.206	g500-B1500	m550-U132/L4	3	127
5.1	1264	22.1	1580	63.2	1580	1.6	428.199	29.447	g500-B2700	m550-U132/L4	3	168
4.8	1335	20.9	1669	59.8	1669	2.4	432.089	31.097	g500-B4300	m550-U132/L4	3	230



Inverter operation									Geared motor			
5 Hz -		- 20 Hz		- 62 Hz								
n_{22}	M_{22}	n_{21}	M_2	n_2	M_2	c	J	i			z	m
rpm	Nm	rpm	Nm	rpm	Nm		kgcm ²					kg
4.6	1397	20.0	1747	57.1	1747	0.8	419.463	32.547	g500-B1500	m550-U132/L4	3	127
4.6	1411	19.8	1764	56.6	1764	1.4	425.448	32.873	g500-B2700	m550-U132/L4	3	168
4.2	1529	18.3	1911	52.2	1911	2.1	440.846	35.607	g500-B4300	m550-U132/L4	3	230
4.2	1550	18.0	1937	51.5	1937	1.3	425.322	36.102	g500-B2700	m550-U132/L4	3	168
3.9	1655	16.9	2069	48.3	2069	1.9	425.571	38.546	g500-B4300	m550-U132/L4	3	230
3.5	1836	15.2	2295	43.5	2295	1.2	430.339	42.772	g500-B2700	m550-U132/L4	3	168
3.5	1836	15.2	2295	43.5	2295	1.9	433.131	42.760	g500-B4300	m550-U132/L4	3	230
3.2	2007	13.9	2508	39.8	2508	1.7	432.955	46.737	g500-B4300	m550-U132/L4	3	230
3.2	2017	13.8	2521	39.6	2521	1.1	430.265	46.973	g500-B2700	m550-U132/L4	3	168
3.1	2100	13.3	2625	38.0	2625	1.0	421.668	48.912	g500-B2700	m550-U132/L4	3	168
2.8	2287	12.2	2858	34.9	2858	1.5	429.783	53.258	g500-B4300	m550-U132/L4	3	230
2.8	2322	12.0	2902	34.4	2902	0.9	417.313	54.082	g500-B2700	m550-U132/L4	3	168
2.6	2519	11.1	3149	31.7	3149	1.4	426.892	58.671	g500-B4300	m550-U132/L4	3	230
2.5	2550	10.9	3187	31.3	3187	0.9	417.313	59.393	g500-B2700	m550-U132/L4	3	168
2.3	2753	10.1	3442	29.0	3442	1.3	426.798	64.127	g500-B4300	m550-U132/L4	3	230
2.1	3088	9.0	3860	25.9	3860	1.1	424.453	71.930	g500-B4300	m550-U132/L4	3	230
1.9	3375	8.3	4219	23.7	4219	1.0	424.391	78.619	g500-B4300	m550-U132/L4	3	230
1.5	4184	6.7	5230	19.1	5230	0.8	421.194	97.453	g500-B4300	m550-U132/L4	3	230



7.7 Dimensions

Notes on the basic dimensions

Gearboxes	Without pre-stage	With pre-stage
g500-B45	2-stufig	-
g500-B110	2-stage	3-stage
g500-B240	2-/3-stage	4-stage
g500-B450 ... B4300	3-stage	4-stage

The ratio range of gearboxes with pre-stage is extended via an additional housing with gear stage between the gearbox and motor.

The basic dimensions are shown without pre-stage and are valid up to the following deviating dimensions for gearbox with pre-stage valid:

- Total length "L"
- Center distance "a" (gearbox output shaft – motor shaft)

Deviating dimensions: ▶ [Gearbox with pre-stage](#) 132

The following legend shows the structure of the dimension tables:

Motor	m550-H		
	63/S4	63/M4	63/L4

Table content		Explanation
Total length	L	Total length of the drive without brake/feedback
Motor length	LB	Length of the motor without brake/feedback
Motor diameter	AC	Motor diameter
Motor/connection distance	AD	Distance from center of motor to terminal box end

NOTICE

For gearboxes with hollow shaft and keyway (H□□), the hole fitting H7 is interrupted in the middle area of the hollow shaft length by a free rotation.

Ensure the double-ended control of the machine shaft in the hollow shaft.

▶ The specified min. length of the machine shaft must be reached.

Gearboxes	Min. length of the machine shaft
	mm
g500-B45	85
g500-B110	105
g500-B240	127
g500-B450	100
g500-B600	110
g500-B820	120
g500-B1500	135
g500-B2700	155
g500-B4300	190

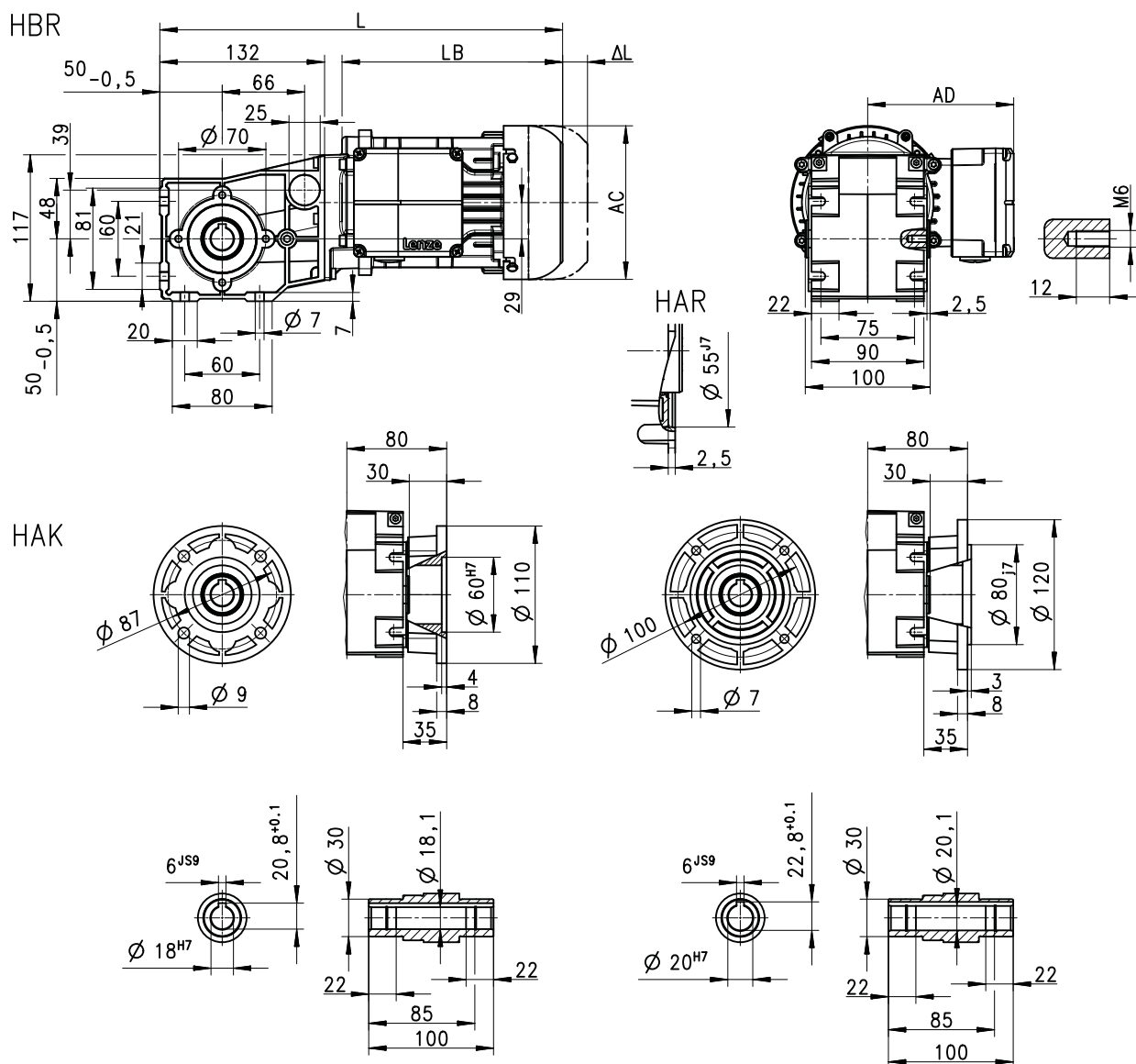


7.7.1 Basic dimensions

g500-B45, 2-stage

g500-B45, 2-stage

Gearbox design: Hollow shaft, with foot (HBR/HAR/HAK)



8801246-00

Motor series			m550-U	
Motor			063L04	071M04 071L04
Total length	L	mm	323	358
Motor length	LB	mm	188	217
Motor diameter	AC	mm	123	139
Motor/connection distance	AD	mm	117	129

Δ L ▶ Additional lengths 135

Technical data

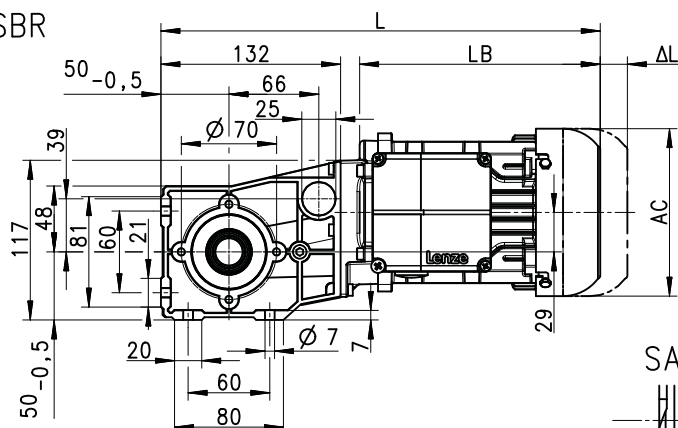
Dimensions
Basic dimensions



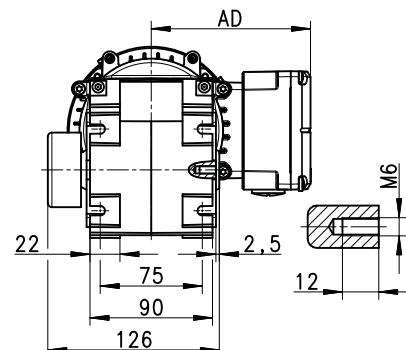
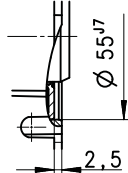
g500-B45, 2-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

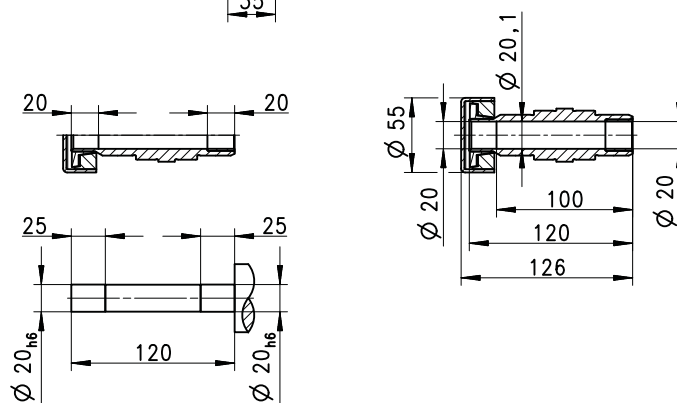
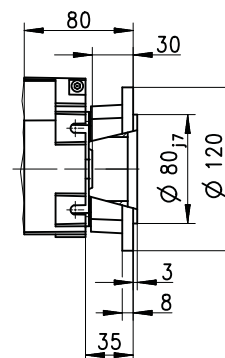
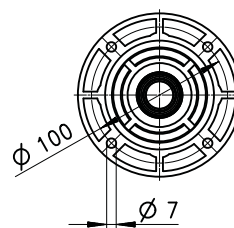
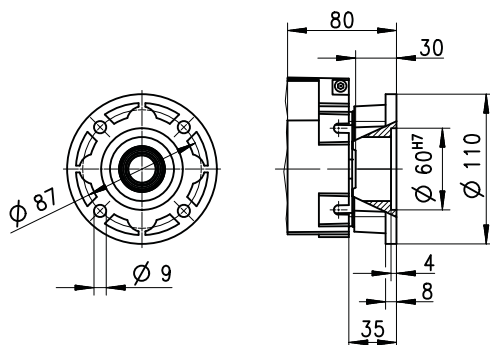
SBR



SAR



SAK



8801248-01

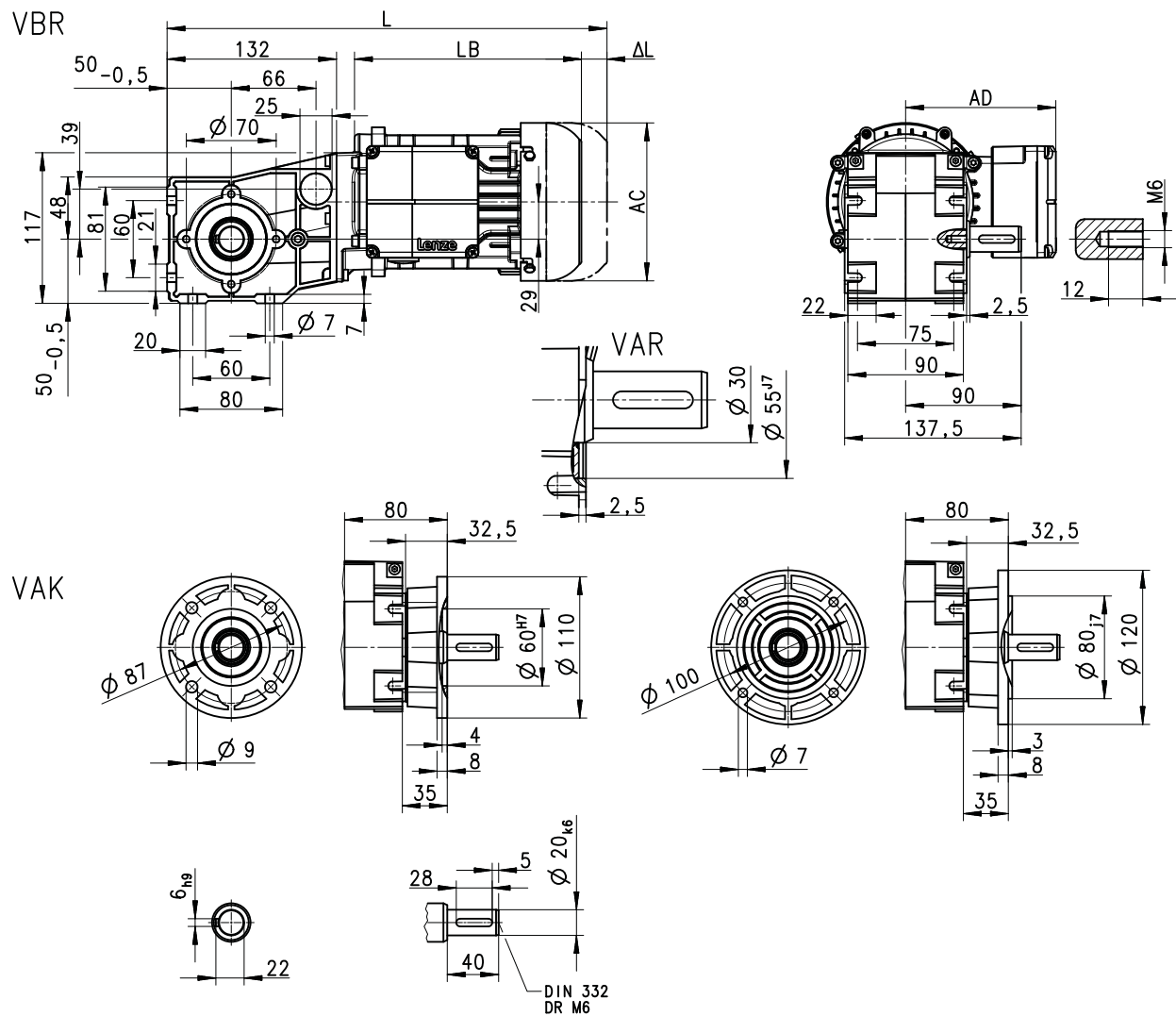
Motor series			m550-U	
Motor			063L04	071M04 071L04
Total length	L	mm	323	358
Motor length	LB	mm	188	217
Motor diameter	AC	mm	123	139
Motor/connection distance	AD	mm	117	129

ΔL ▶ Additional lengths 135



g500-B45, 2-stage

Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)



8801247-00

Motor series			m550-U	
Motor			063L04	071M04 071L04
Total length	L	mm	323	358
Motor length	LB	mm	188	217
Motor diameter	AC	mm	123	139
Motor/connection distance	AD	mm	117	129

Δ L ▶ Additional lengths 135

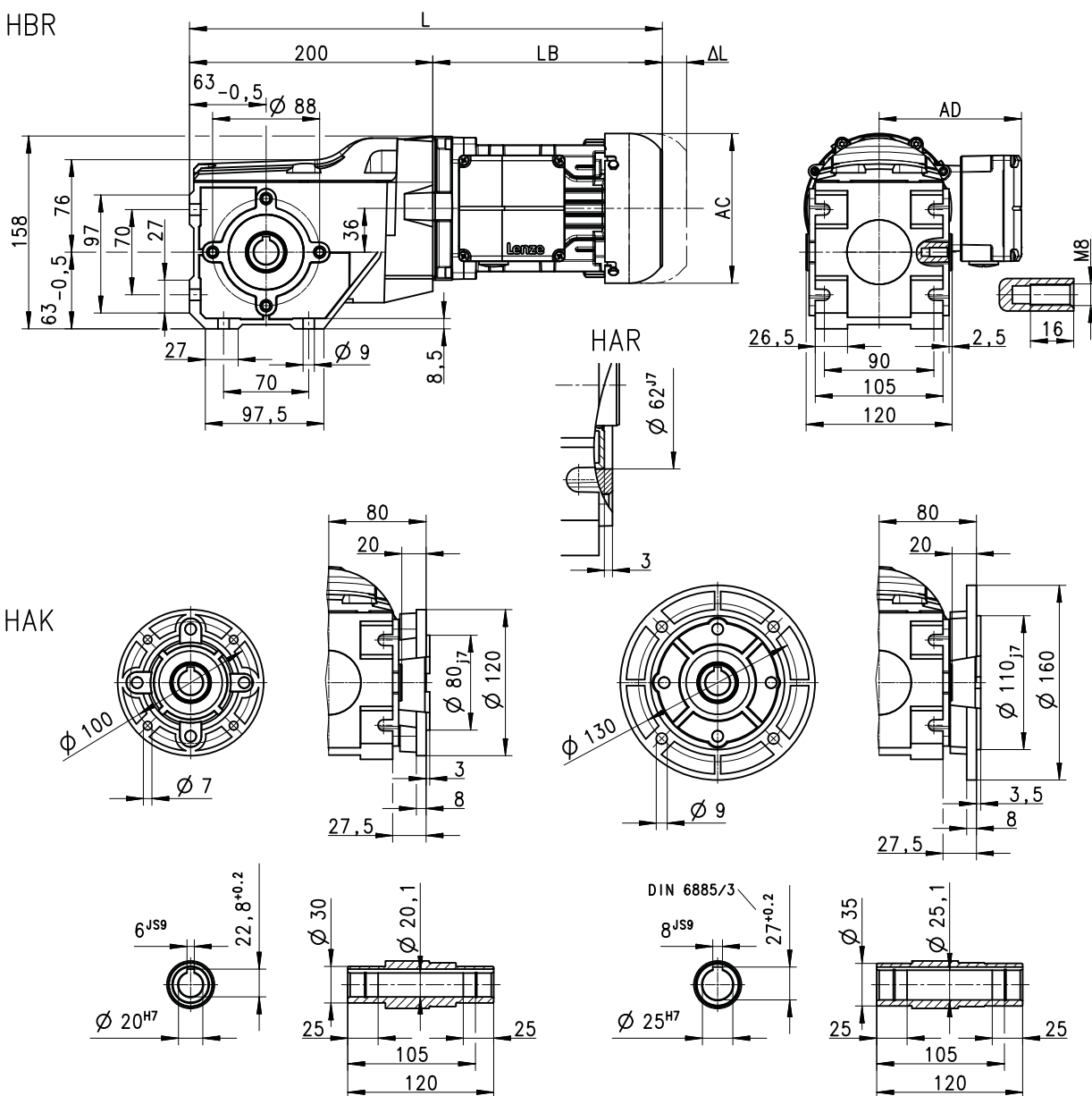


g500-B110, 2-stage

g500-B110, 2-stage

Gearbox design: Hollow shaft, with foot (HBR/HAR/HAK)

HBR



8801249-00

Motor series			m550-U			
Motor			063L04	071M04 071L04	080M04	090M04 090L04
Total length	L	mm	389	418	442	485
Motor length	LB	mm	189	218	242	285
Motor diameter	AC	mm	123	139	156	177
Motor/connection distance	AD	mm	117	129	145	153

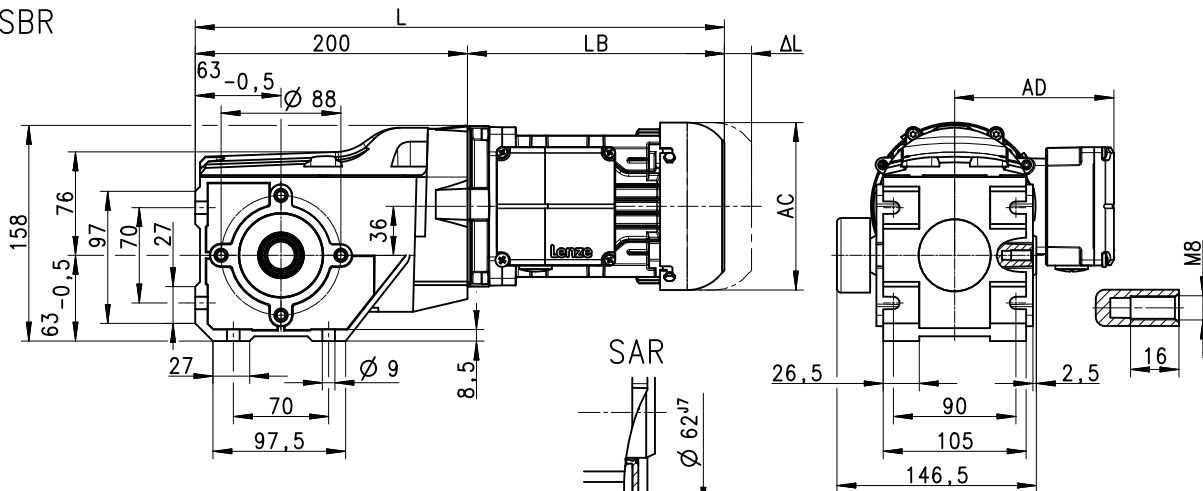
ΔL ▶ Additional lengths  135



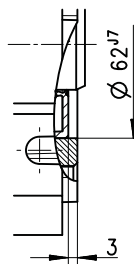
g500-B110, 2-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

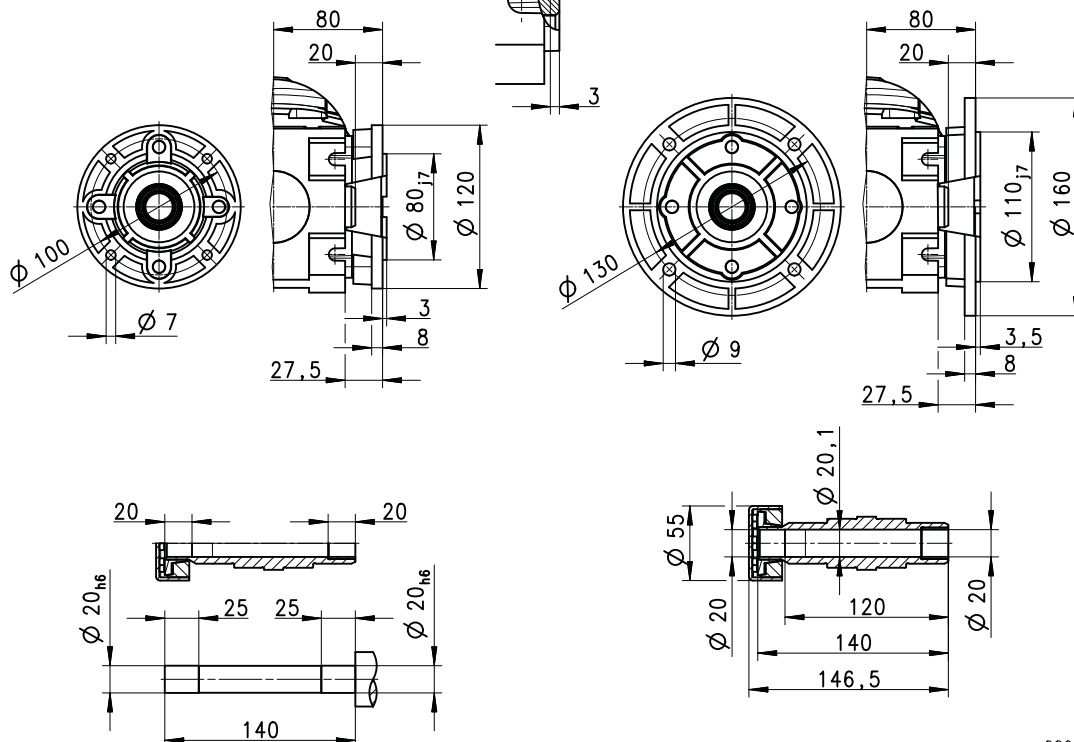
SBR



SAR



SAK



8801251-01

Motor series			m550-U			
Motor			063L04	071M04 071L04	080M04	090M04 090L04
Total length	L	mm	389	418	442	485
Motor length	LB	mm	189	218	242	285
Motor diameter	AC	mm	123	139	156	177
Motor/connection distance	AD	mm	117	129	145	153

Δ L ▶ Additional lengths □ 135

Technical data

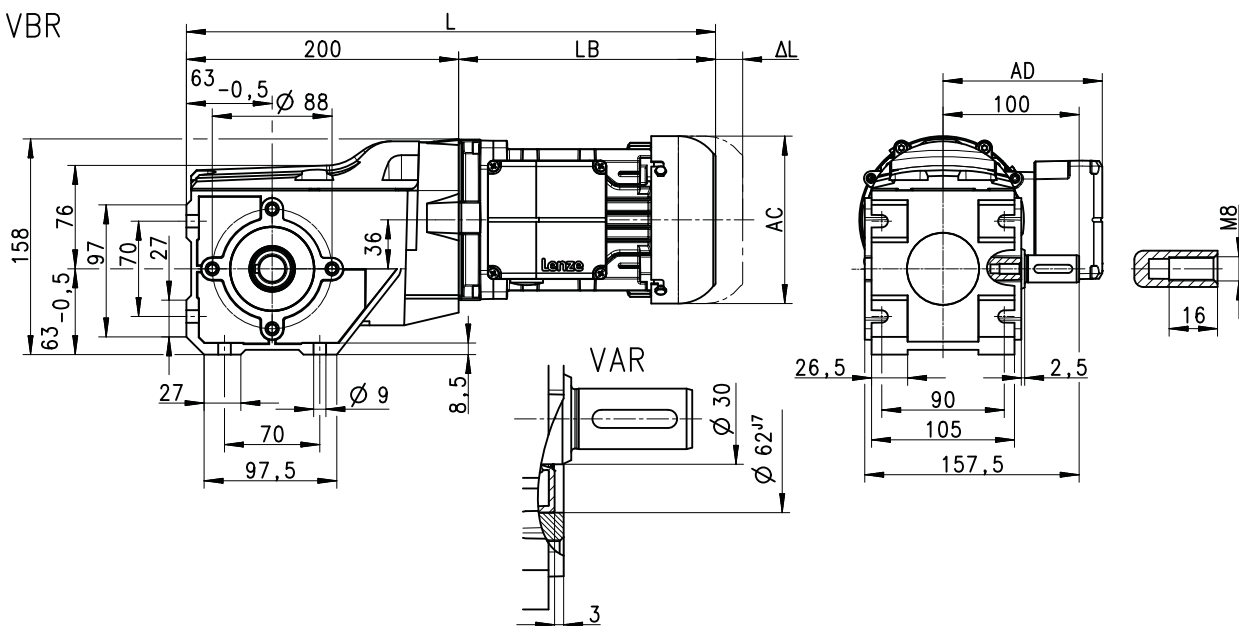
Dimensions
Basic dimensions



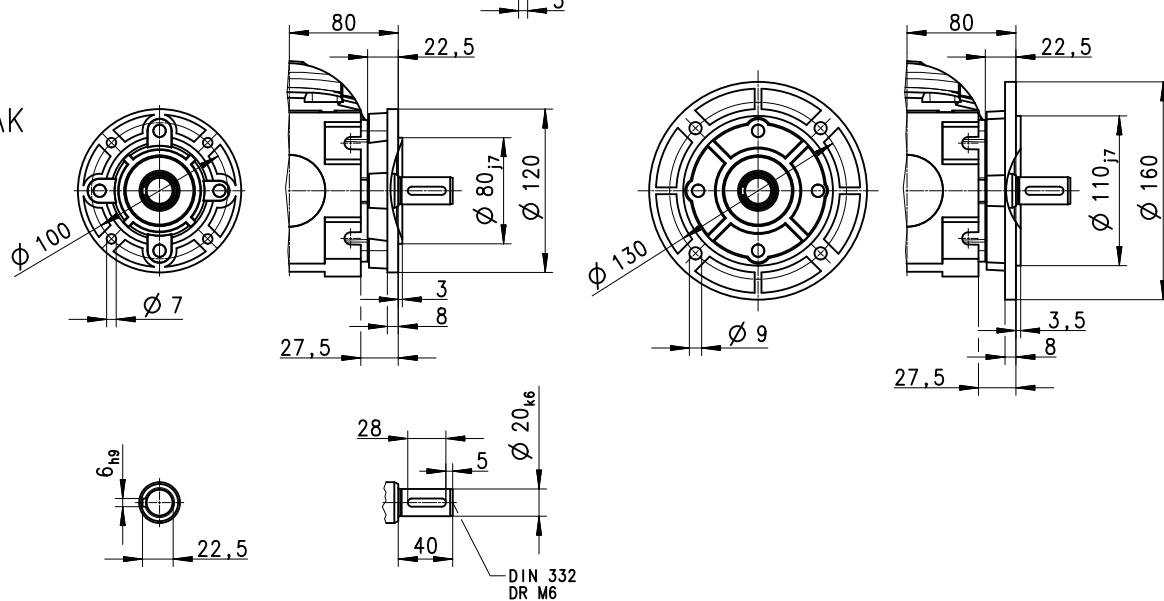
g500-B110, 2-stage

Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

VBR



VAK



8801250-00

Motor series			m550-U			
Motor			063L04	071M04 071L04	080M04	090M04 090L04
Total length	L	mm	389	418	442	485
Motor length	LB	mm	189	218	242	285
Motor diameter	AC	mm	123	139	156	177
Motor/connection distance	AD	mm	117	129	145	153

Δ L ▶ Additional lengths 135

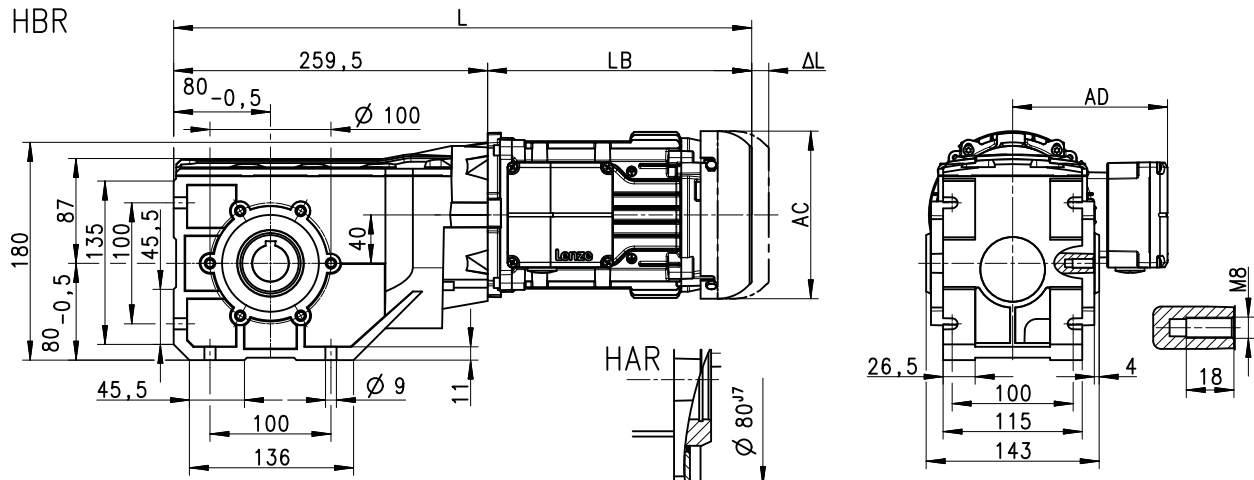


g500-B240, 2-/3-stage

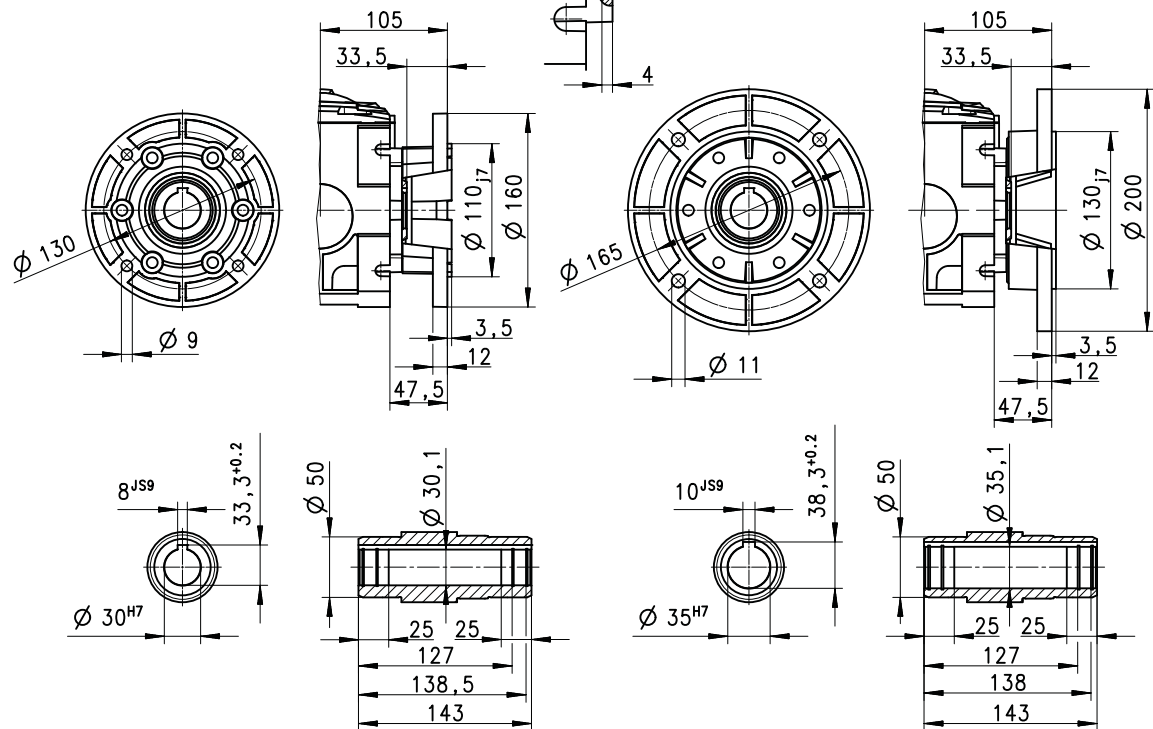
g500-B240, 2-/3-stage

Gearbox design: Hollow shaft, with foot (HBR/HAR/HAK)

HBR



HAK



8801252-00

Motor series			m550-U				
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04
Total length	L	mm	448	478	502	544	608
Motor length	LB	mm	189	218	242	285	348
Motor diameter	AC	mm	123	139	156	177	194
Motor/connection distance	AD	mm	117	129	145	153	164

Δ L ▶ Additional lengths 135

Technical data

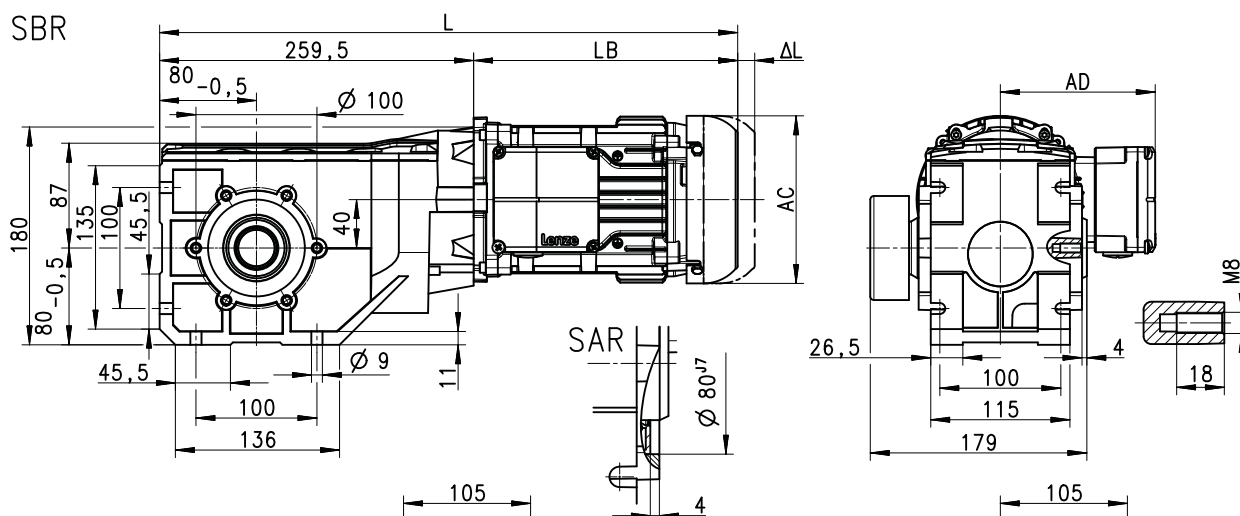
Dimensions
Basic dimensions



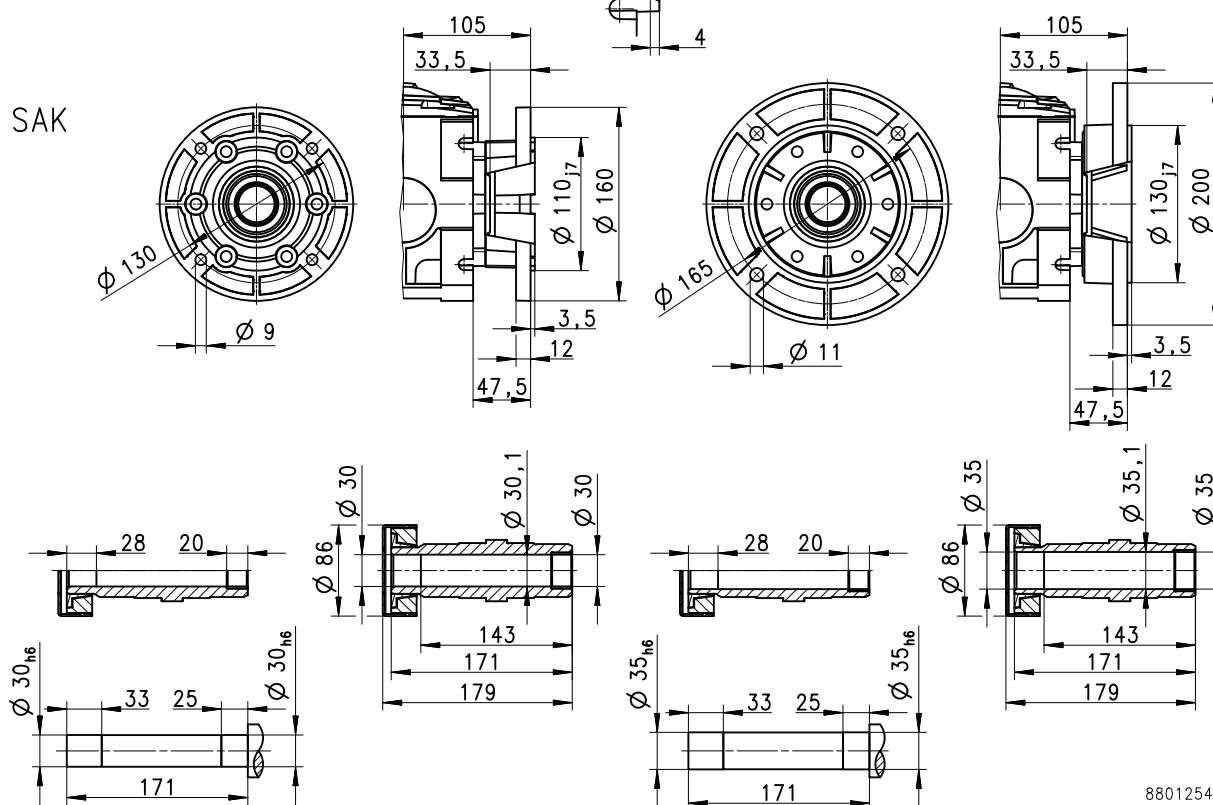
g500-B240, 2-/3-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

SBR



SAK



8801254-01

Motor series			m550-U				
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04
Total length	L	mm	448	478	502	544	608
Motor length	LB	mm	189	218	242	285	348
Motor diameter	AC	mm	123	139	156	177	194
Motor/connection distance	AD	mm	117	129	145	153	164

Δ L ▶ Additional lengths 135



Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

VBR

Technical drawing of the VBR valve showing side and top views with dimensions: L, LB, ΔL, AC, AD, 259,5, 80, 180, 45,5, 100, 136, 11, 135, 100, 145,5, 87, 80, Ø 100, Ø 9, Ø 50, Ø 80, M8, 18.

VAK

Technical drawing of the VAK valve showing side and top views with dimensions: 105, 37, 160, 110, 165, 11, 3,5, 12, 47,5, 105, 37, 130, 9, 165, 11, 3,5, 12, 47,5, Ø 130, Ø 9, Ø 165, Ø 11, DIN 332 DR M10, 30_{k6}.

Motor series			m550-U				
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04
Total length	L	mm	448	478	502	544	608
Motor length	LB	mm	189	218	242	285	348
Motor diameter	AC	mm	123	139	156	177	194
Motor/connection distance	AD	mm	117	129	145	153	164

113

Technical data

Dimensions
Basic dimensions

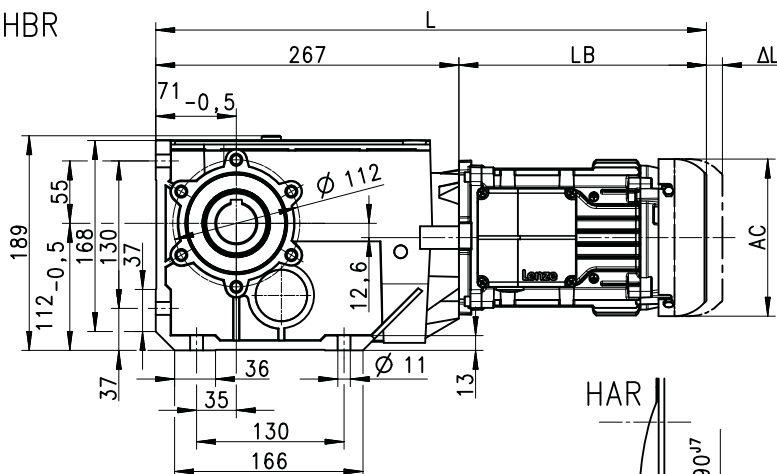


g500-B450, 3-stage

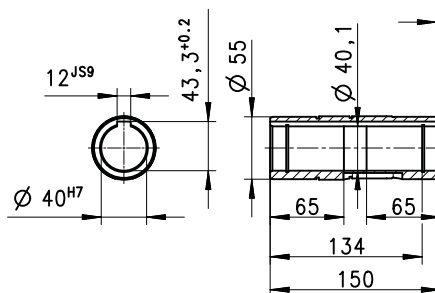
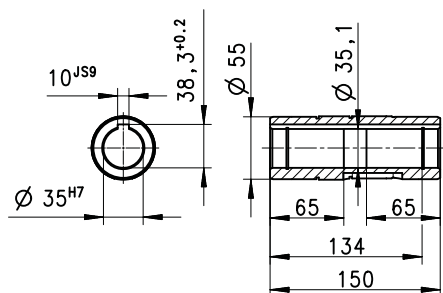
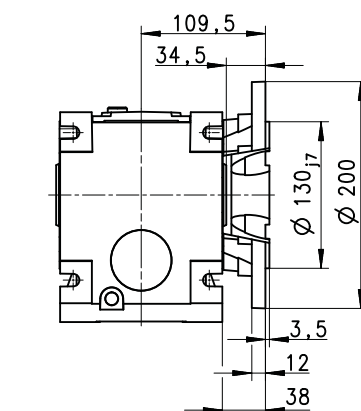
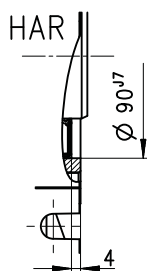
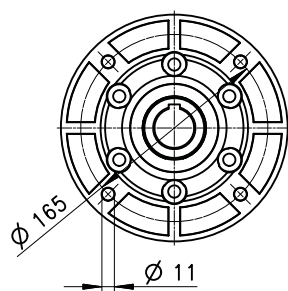
g500-B450, 3-stage

Gearbox design: Hollow shaft, with foot (HBR/HAR/HAK)

HBR



HAK



8801255-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	456	485	509	552	615	628	692
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths 135



Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

[illegible]

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	456	485	509	552	615	628	692
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

115

Technical data

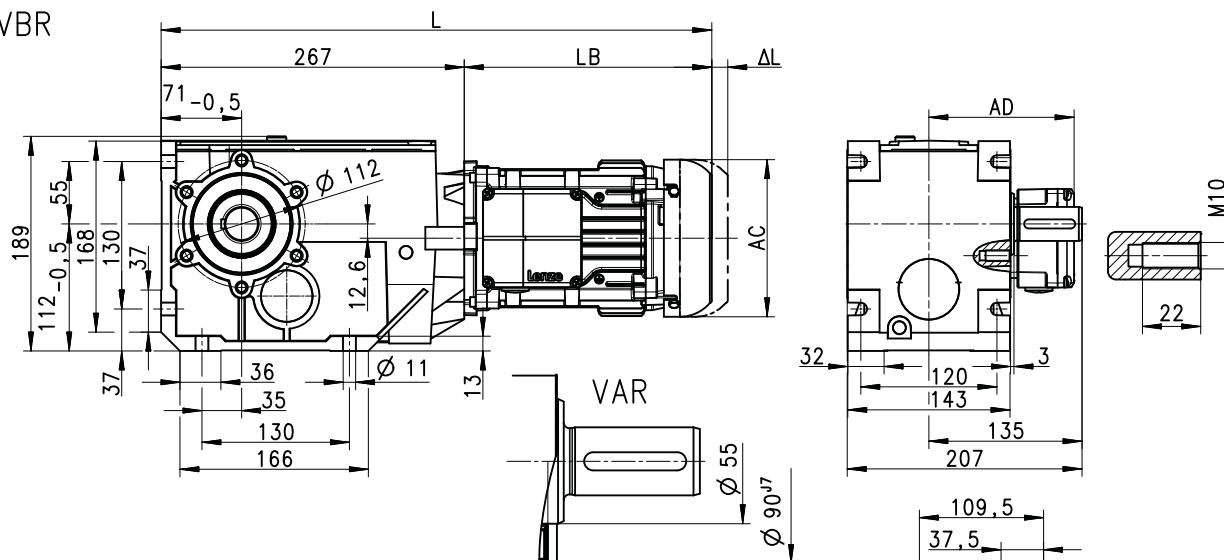
Dimensions
Basic dimensions



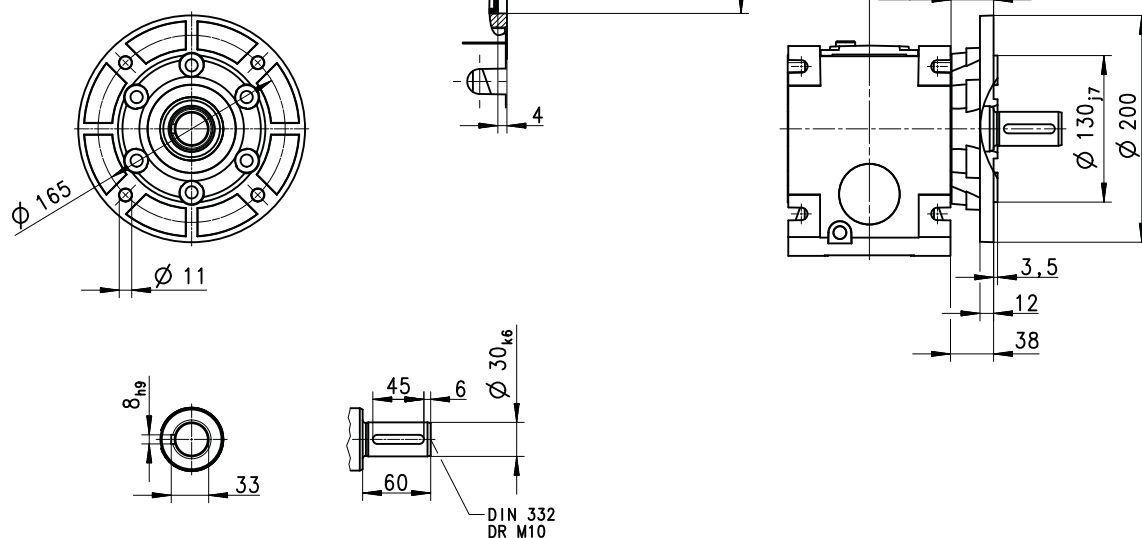
g500-B450, 3-stage

Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

VBR



VAK



8801256-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	456	485	509	552	615	628	692
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths 135

Technical data

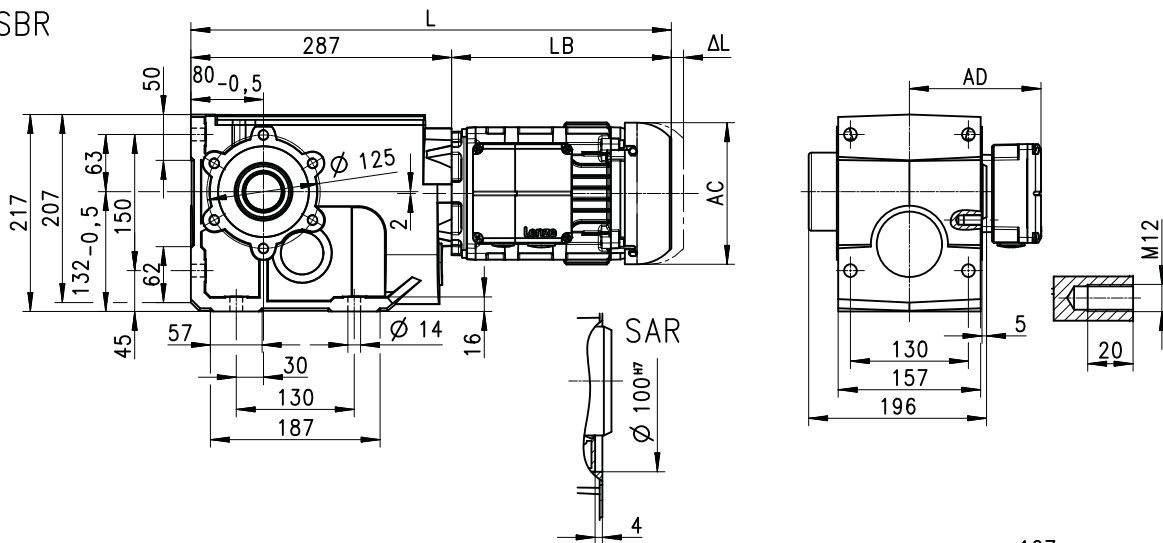
Dimensions
Basic dimensions



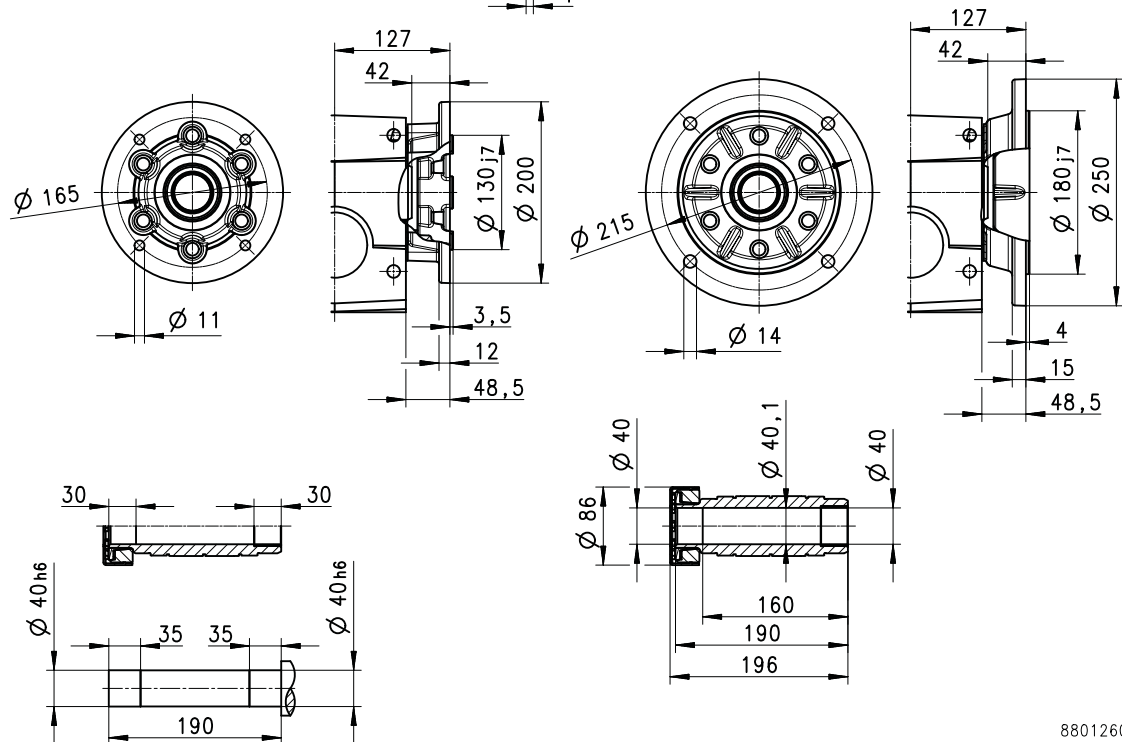
g500-B600, 3-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

SBR



SAK



8801260-01

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	476	505	529	572	635	648	712
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths 135



Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

Technical drawing of the VBR and VAK series of valves. The drawing includes dimensions for various parts of the valve, such as the body, handle, and mounting bracket. The VBR series has a maximum length of 287 mm and a maximum width of 155 mm. The VAK series has a maximum length of 127 mm and a maximum width of 155 mm. The drawing also shows the internal components of the valve, including the handle and the mounting bracket.

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	476	505	529	572	635	648	712
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

119

Technical data

Dimensions
Basic dimensions

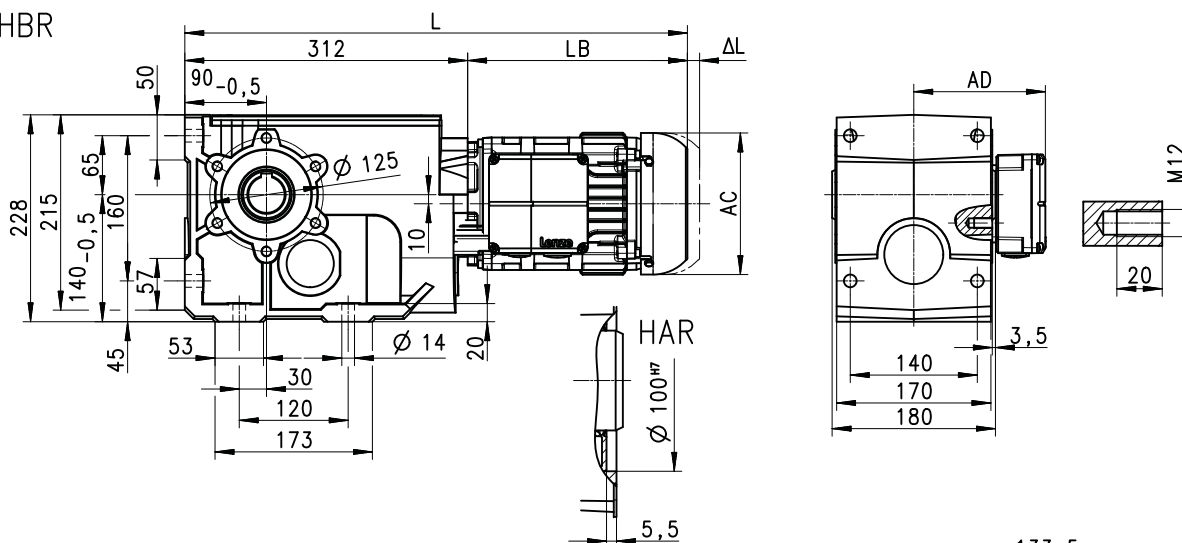


g500-B820, 3-stage

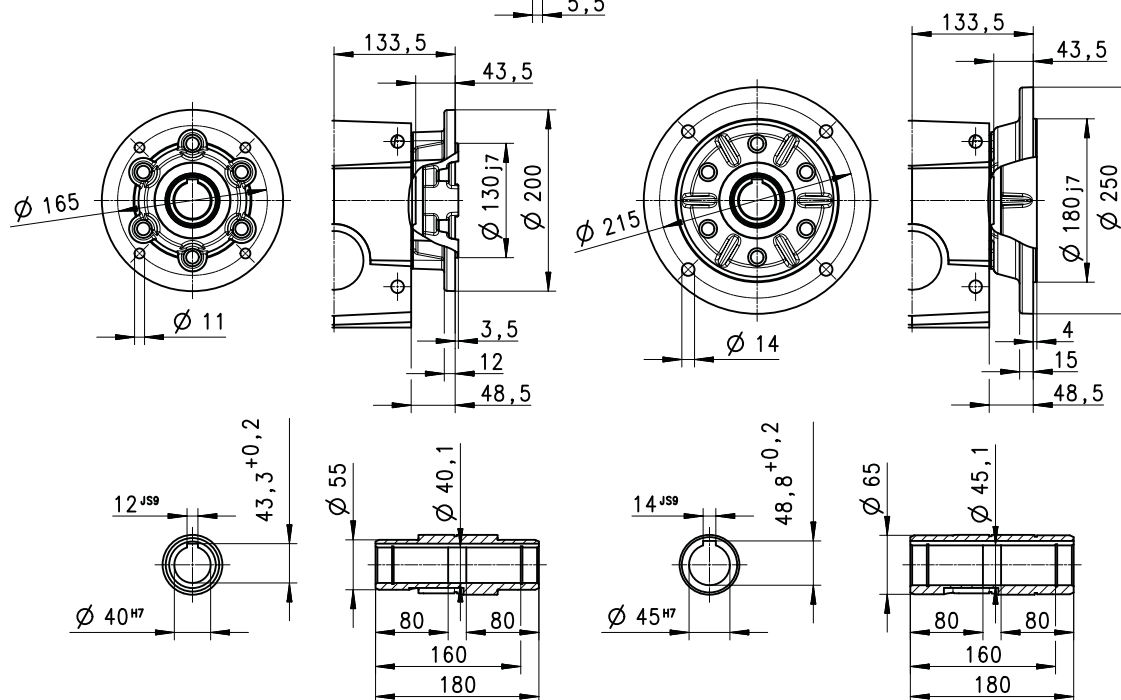
g500-B820, 3-stage

Gearbox design: Hollow shaft, with foot (HBR/HAR/HAK)

HBR



HAK



8801261-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	501	530	554	597	660	673	737
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

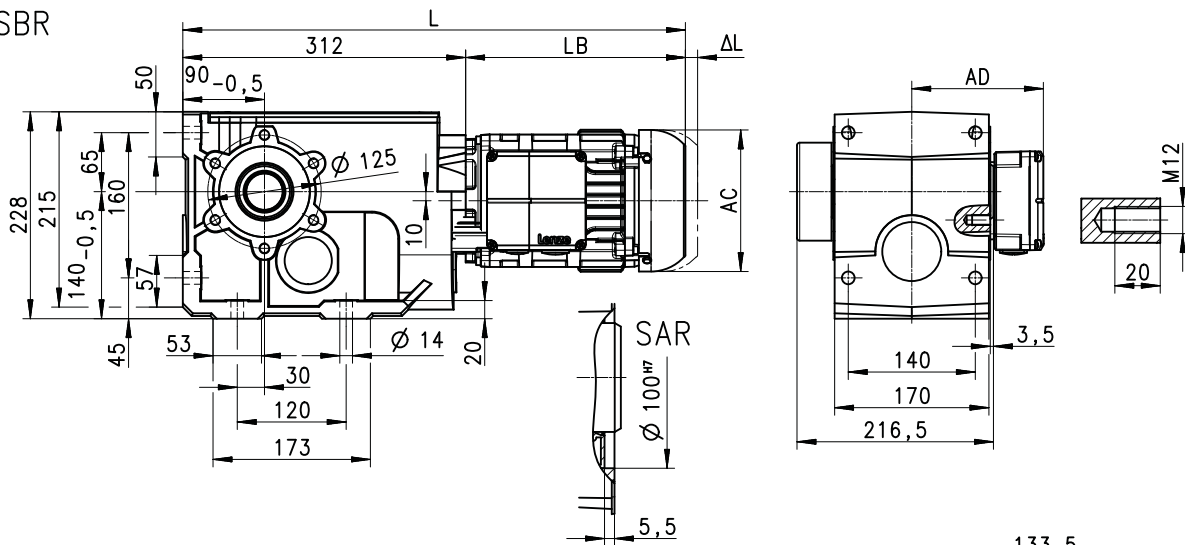
Δ L ▶ Additional lengths 135



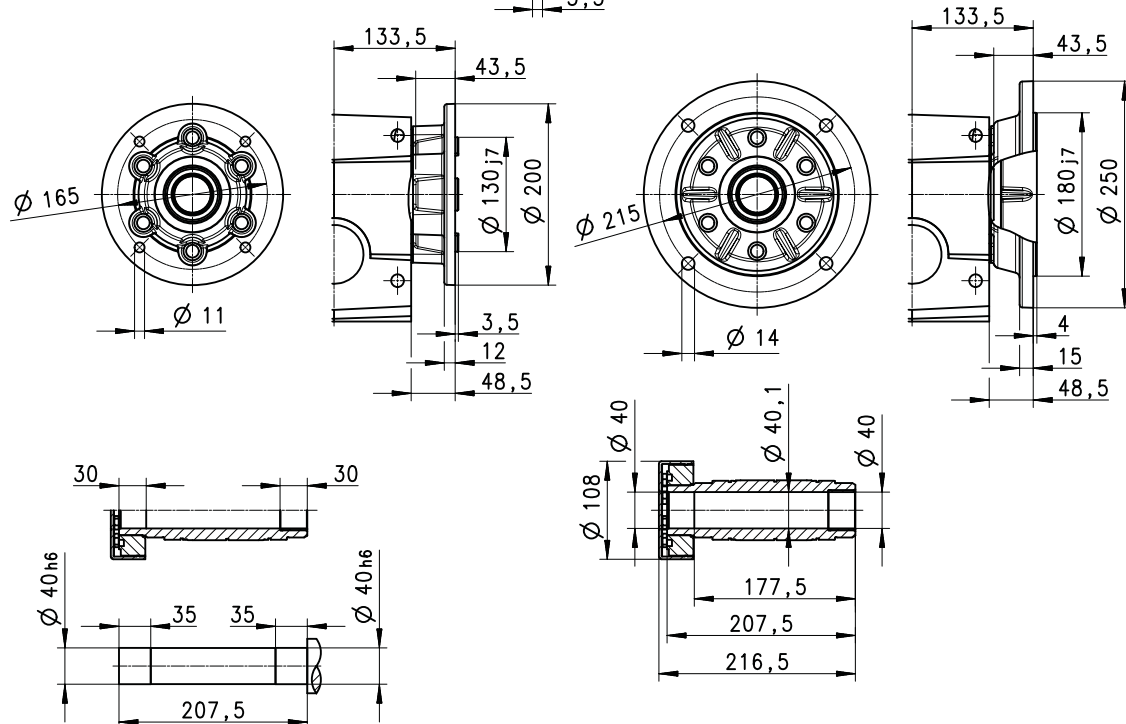
g500-B820, 3-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

SBR



SAK



8801263-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	501	530	554	597	660	673	737
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths □ 135

Technical data

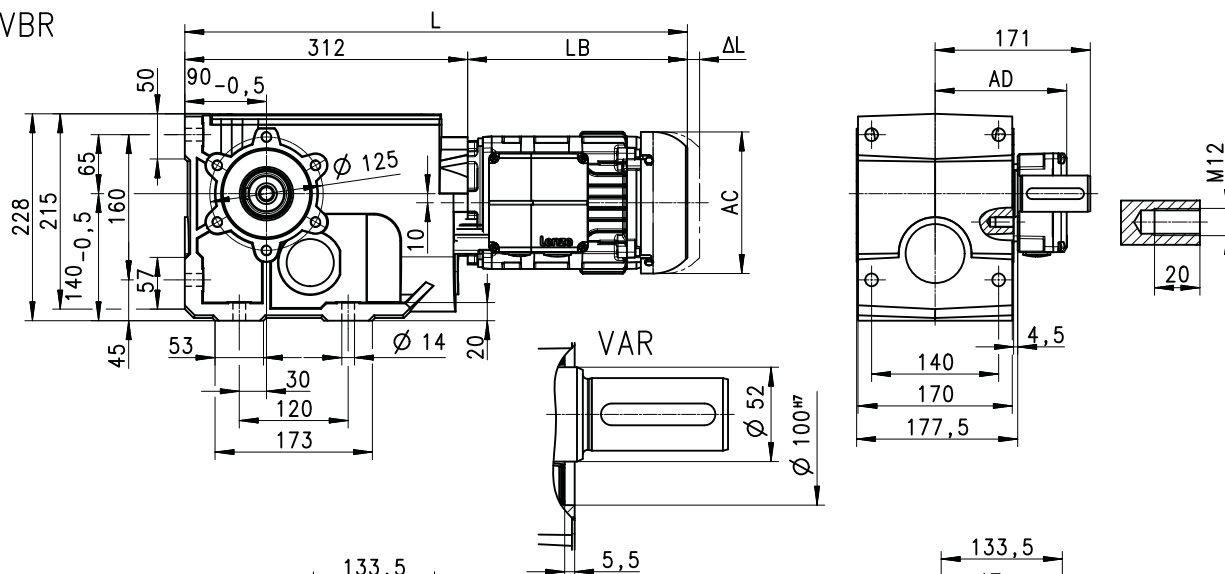
Dimensions
Basic dimensions



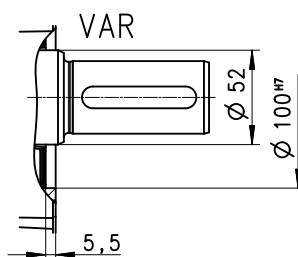
g500-B820, 3-stage

Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

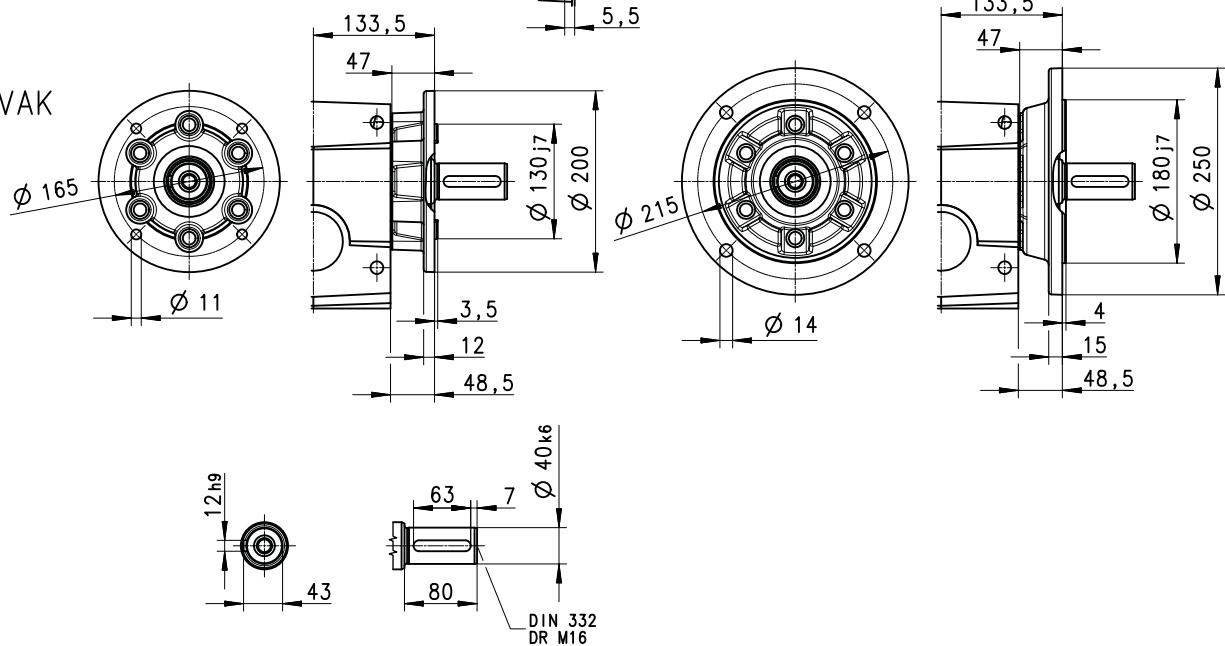
VBR



VAR



VAK



8801262-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	501	530	554	597	660	673	737
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths □ 135

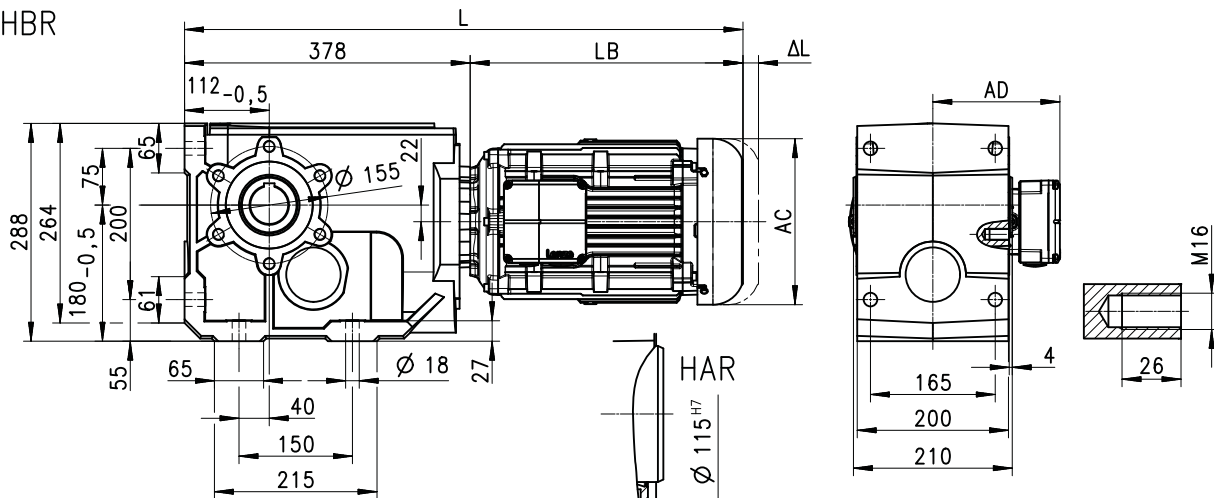


g500-B1500, 3-stage

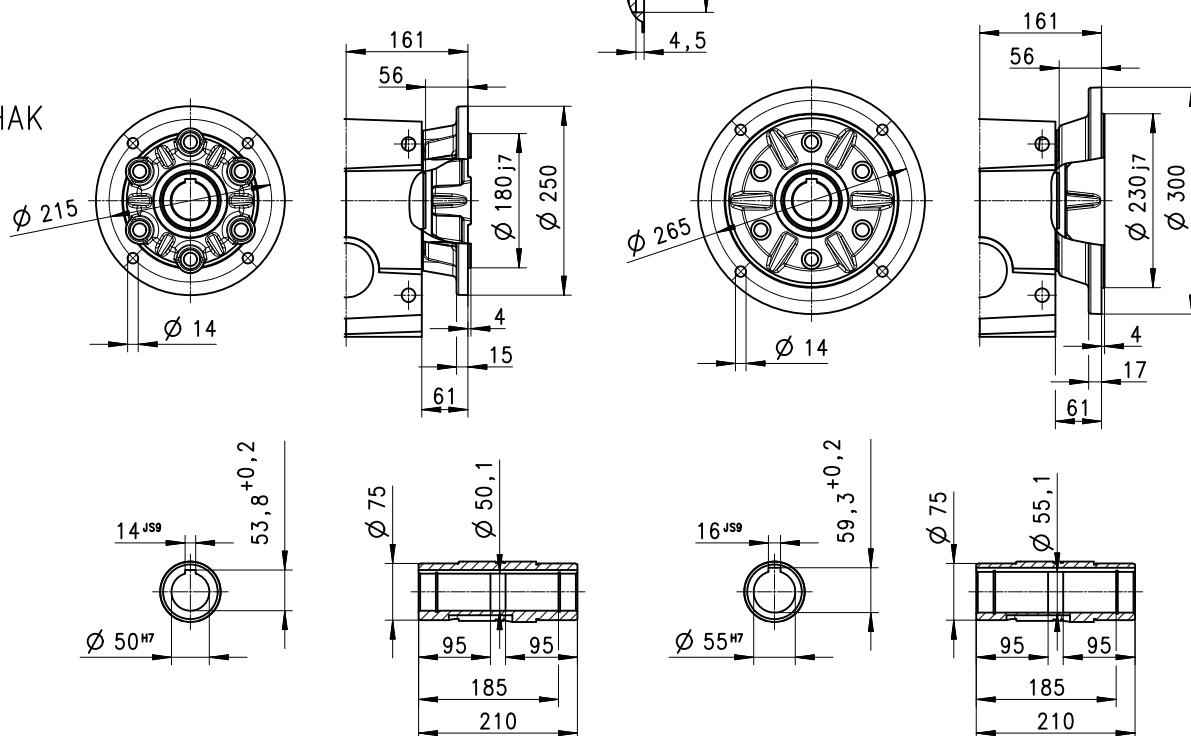
g500-B1500, 3-stage

Gearbox design: Hollow shaft, with foot (HBR/HAR/HAK)

HBR



HAK



8801264-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	567	596	620	663	726	739	803
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths 135

Technical data

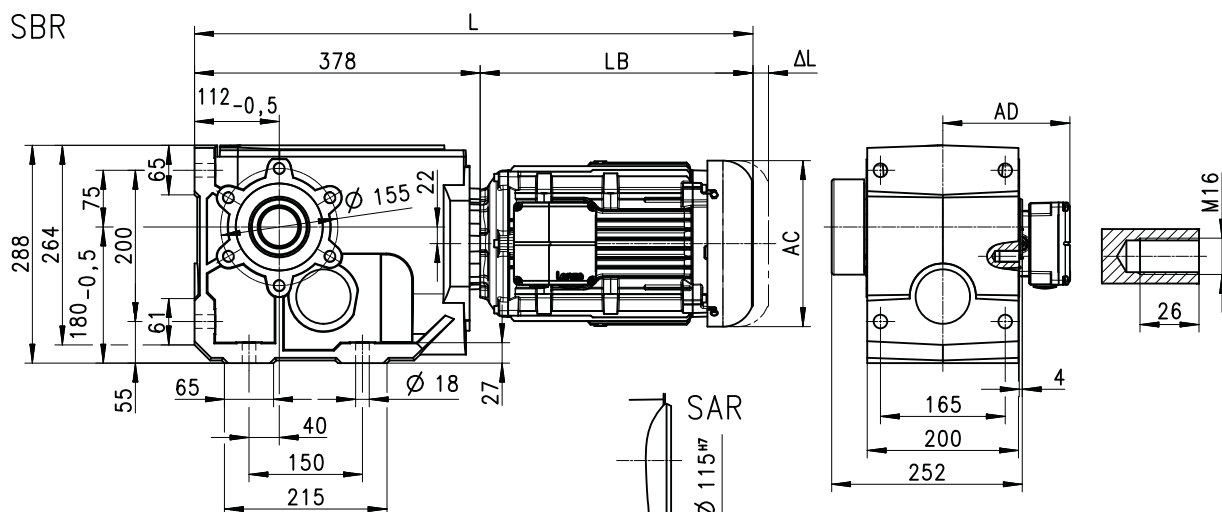
Dimensions
Basic dimensions



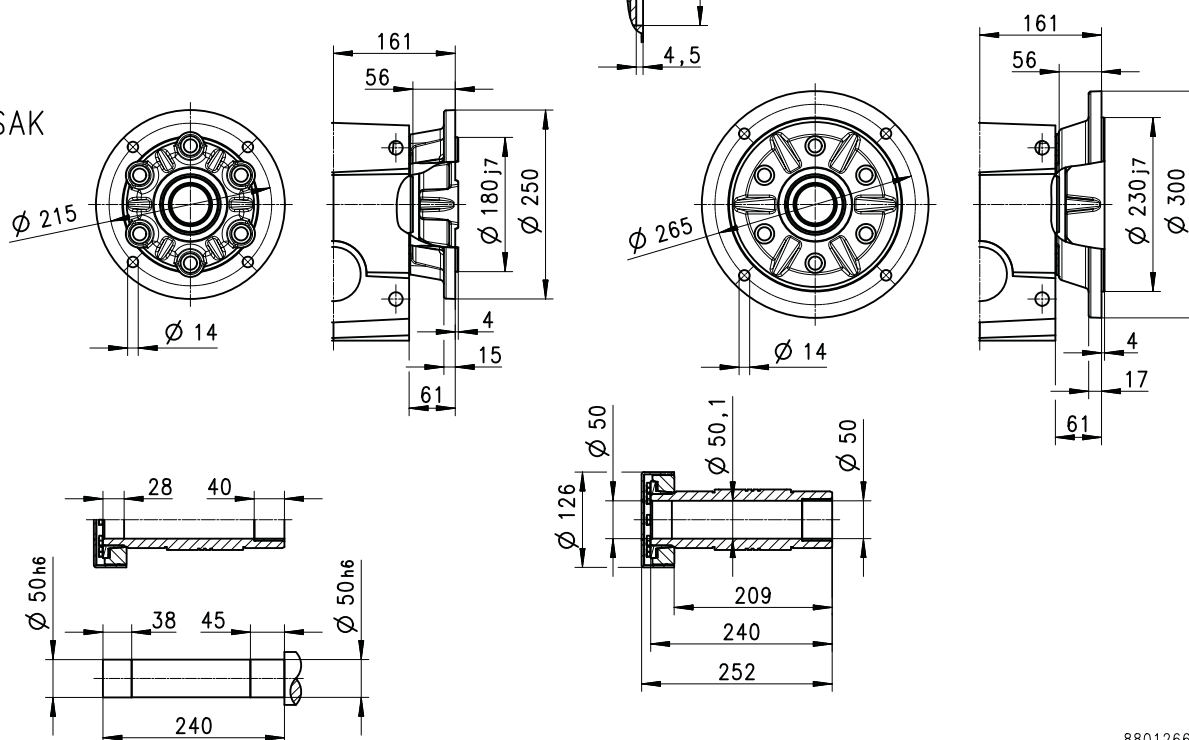
g500-B1500, 3-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

SBR



SAK



8801266-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	567	596	620	663	726	739	803
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths □ 135



Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	567	596	620	663	726	739	803
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

125

Technical data

Dimensions
Basic dimensions

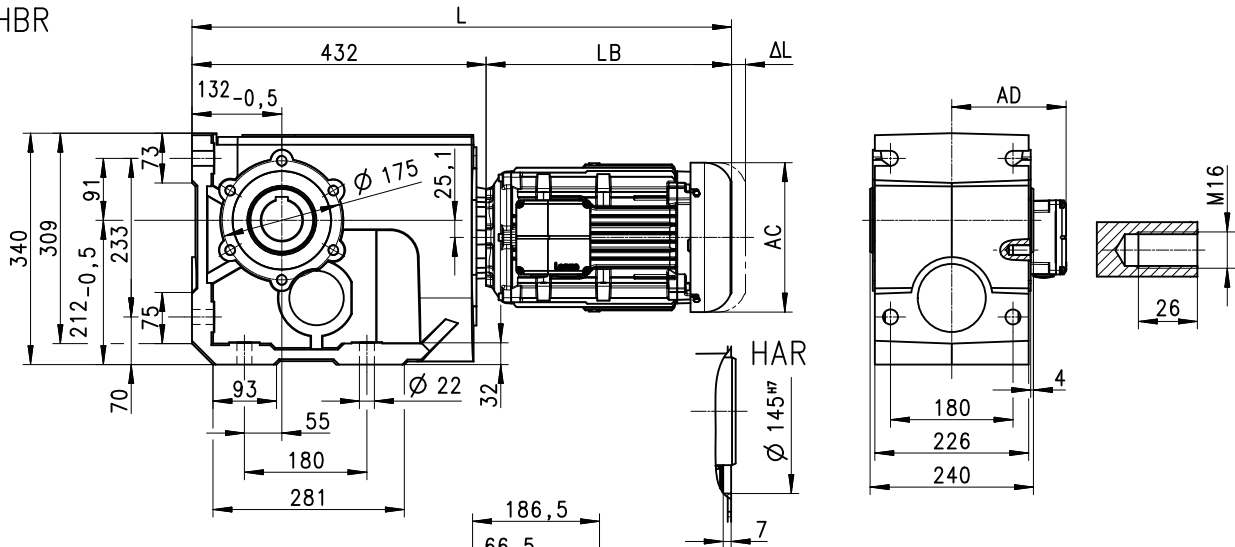


g500-B2700, 3-stage

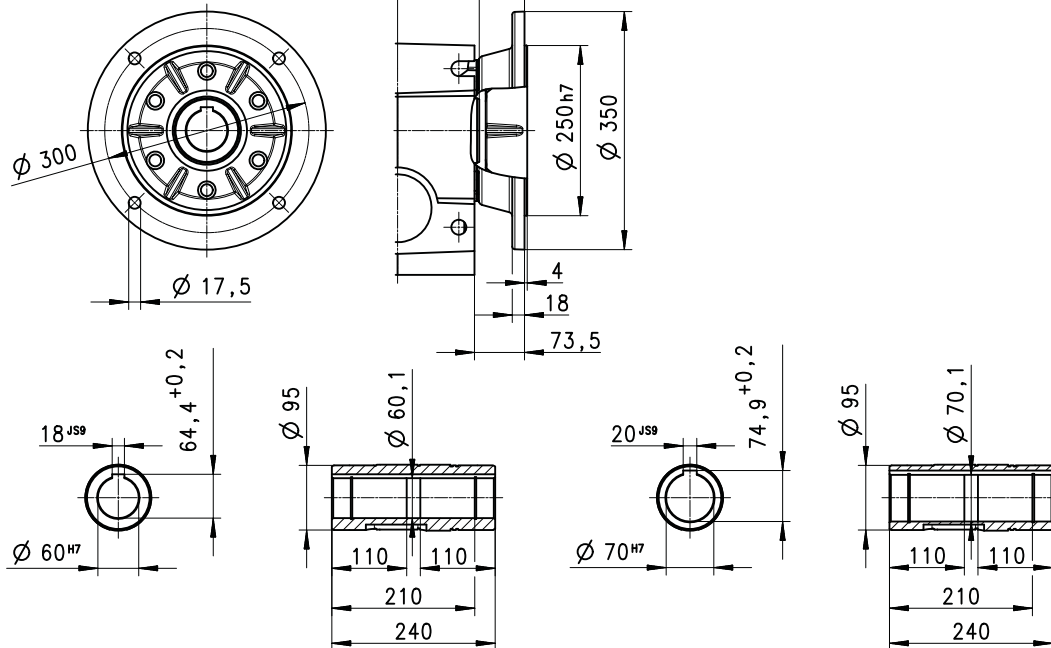
g500-B2700, 3-stage

Gearbox design: Hollow shaft, with foot (HBR/HAR/HAK)

HBR



HAK



8801267-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	621	650	674	717	780	793	857
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

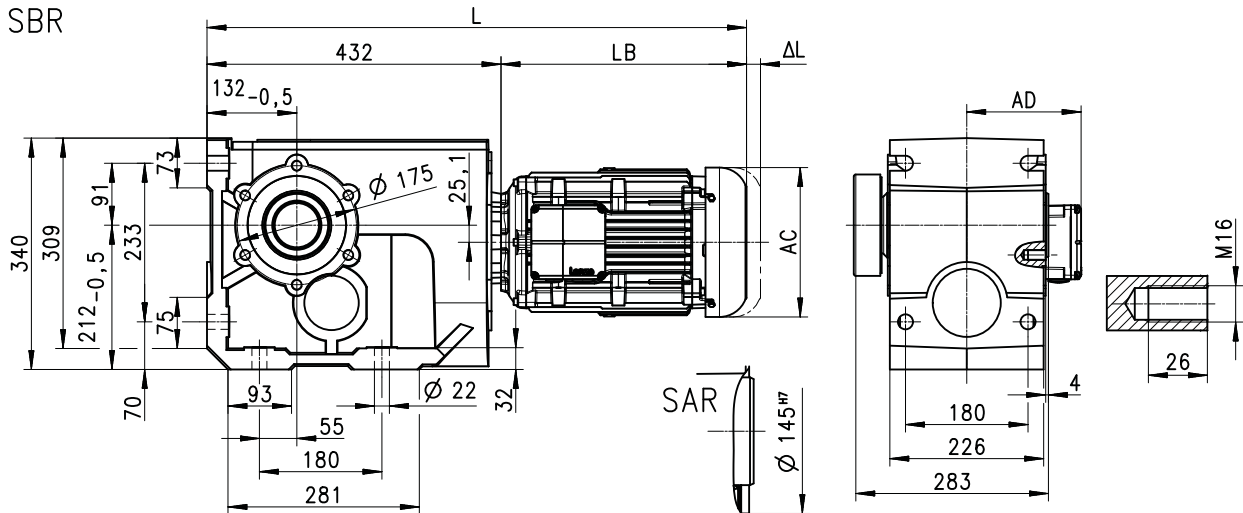
Δ L ▶ Additional lengths 135



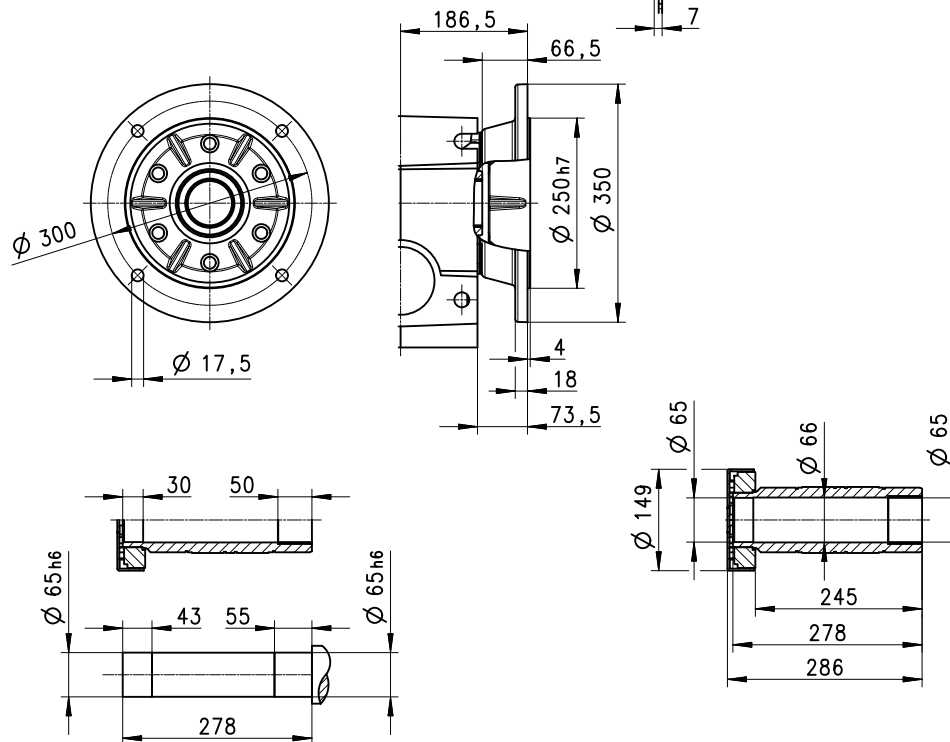
g500-B2700, 3-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

SBR



SAK



8801269-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	621	650	674	717	780	793	857
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths 135

Technical data

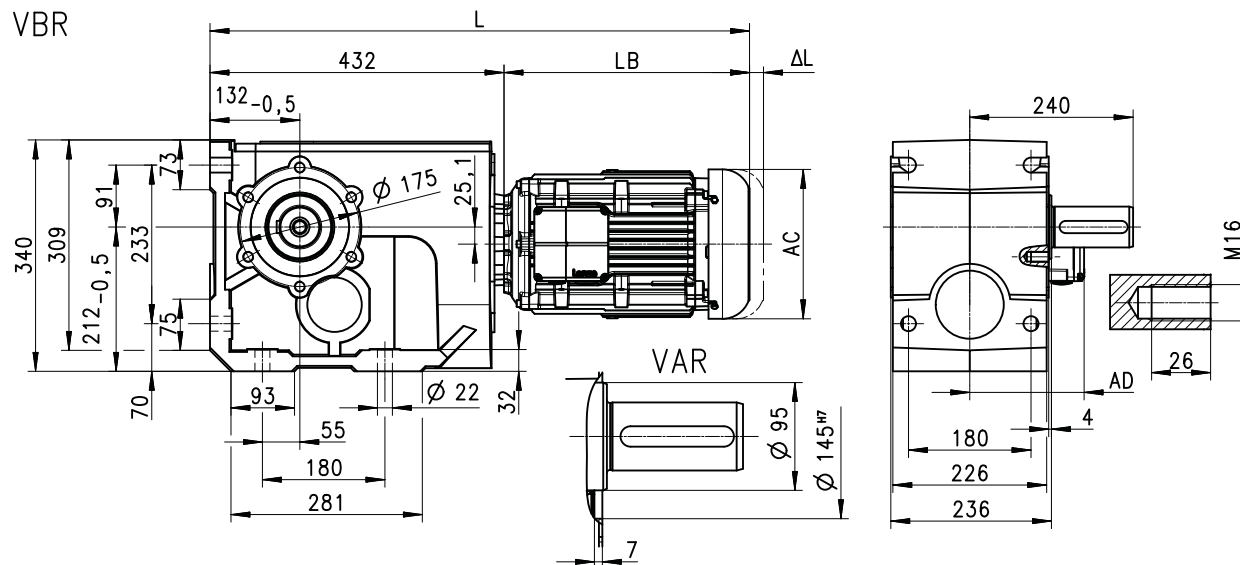
Dimensions
Basic dimensions



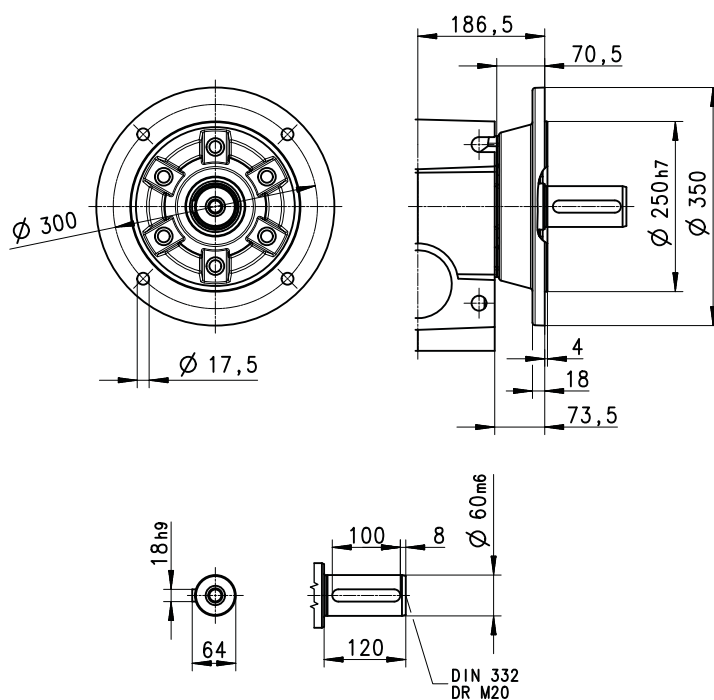
g500-B2700, 3-stage

Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

VBR



VAK



8801268-00

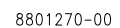
Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	621	650	674	717	780	793	857
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths □ 135



g500-B4300, 3-stage

HBR



Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	660	689	713	756	819	832	896
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

129

Technical data

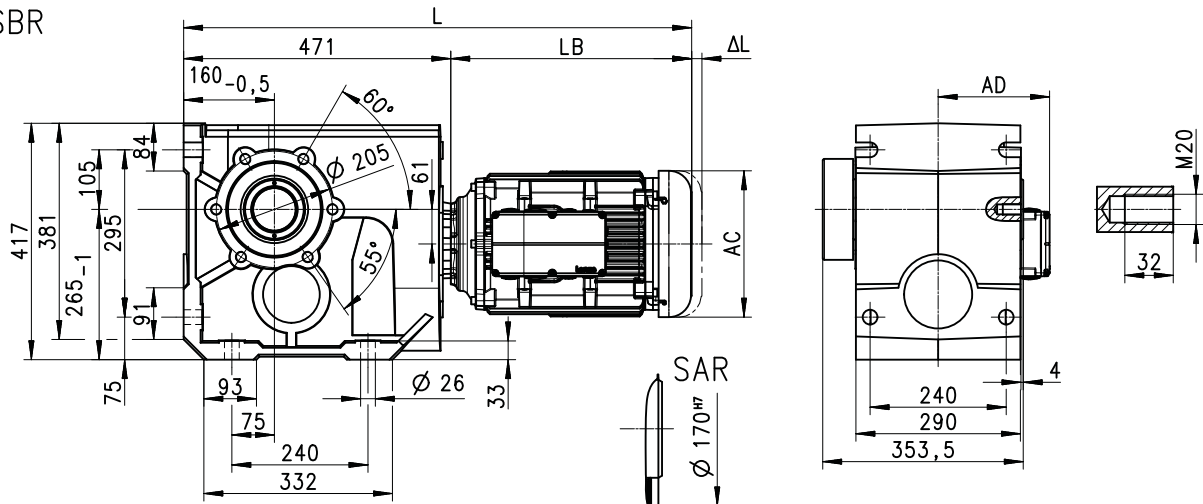
Dimensions
Basic dimensions



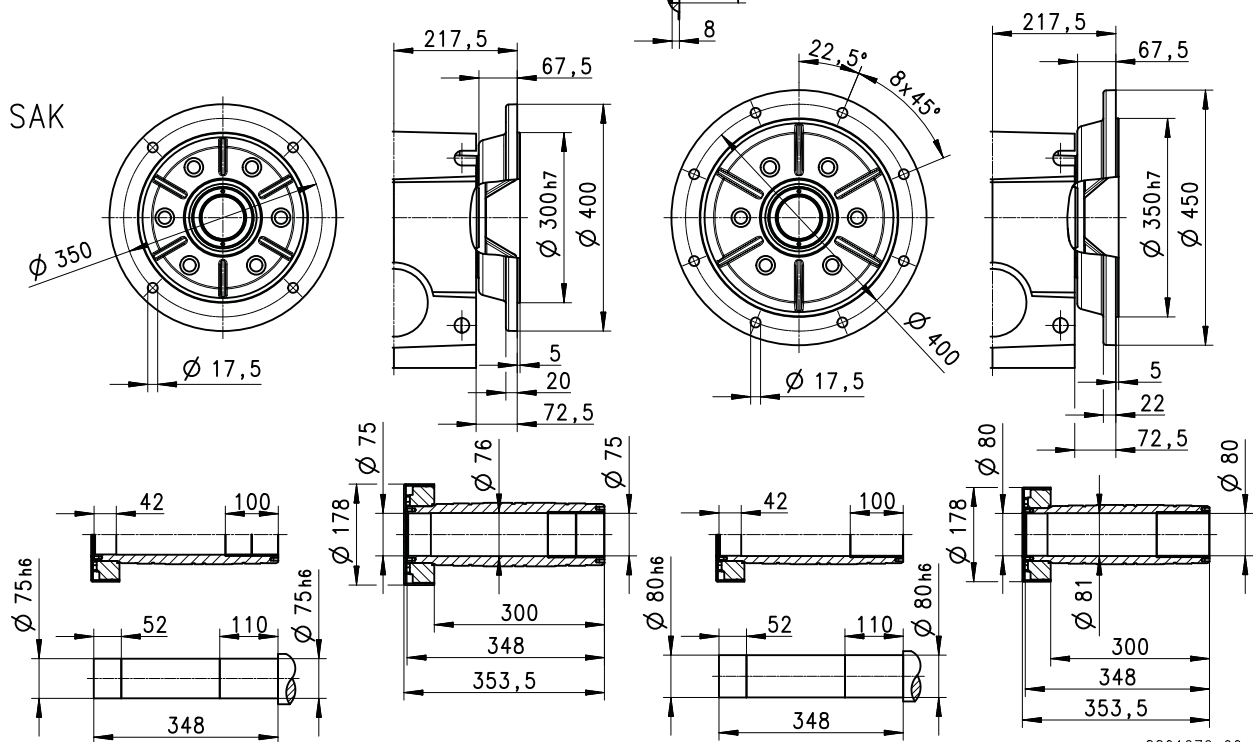
g500-B4300, 3-stage

Gearbox design: Hollow shaft with shrink disc, with foot (SBR/SAR/SAK)

SBR



SAK



8801272-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	660	689	713	756	819	832	896
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

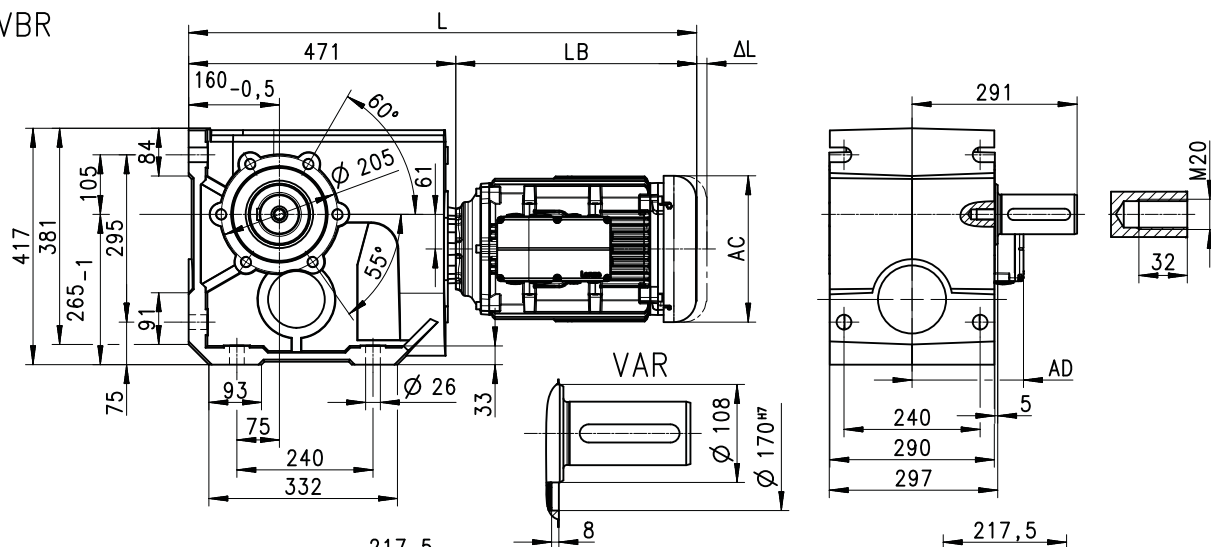
Δ L ▶ Additional lengths 135



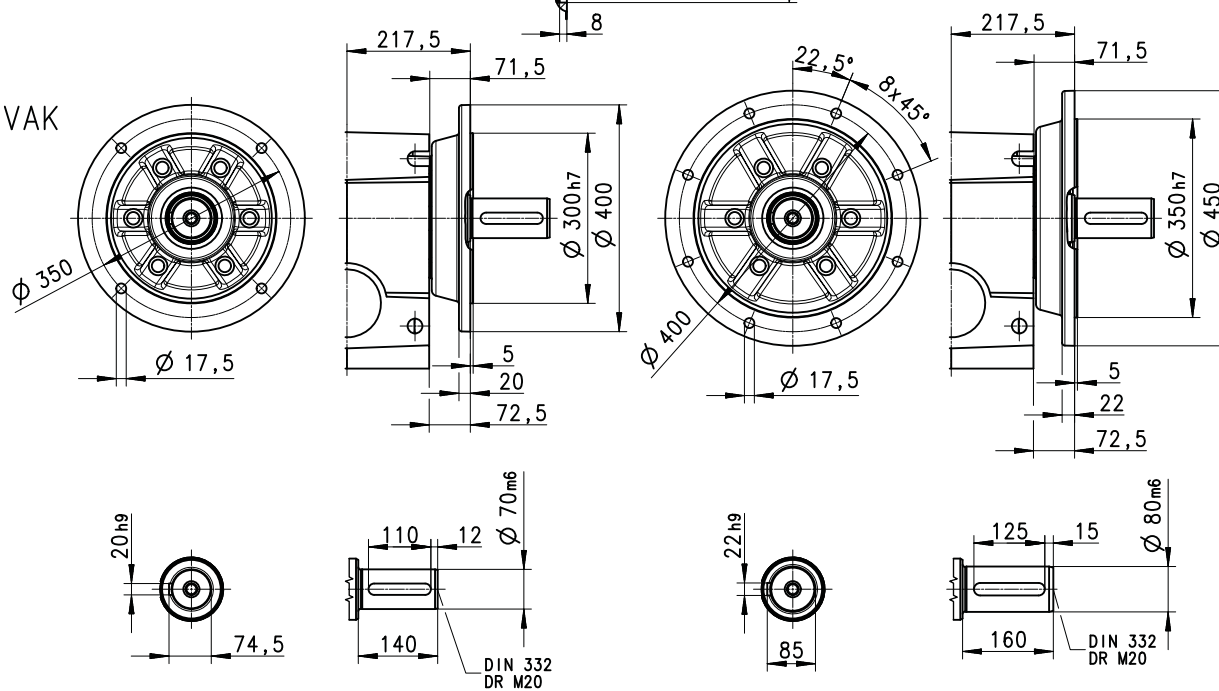
g500-B4300, 3-stage

Gearbox design: Solid shaft, with foot (VBR/VAR/VAK)

VBR



VAK



8801271-00

Motor series			m550-U						
Motor			063L04	071M04 071L04	080M04	090M04 090L04	100M04 100L04	112M04	132M04 132L04
Total length	L	mm	660	689	713	756	819	832	896
Motor length	LB	mm	189	218	242	285	348	361	425
Motor diameter	AC	mm	123	139	156	177	194	220	258
Motor/connection distance	AD	mm	117	129	145	153	164	169	197

Δ L ▶ Additional lengths 135



7.7.2 Gearbox with pre-stage

g500-B110, 3-stage

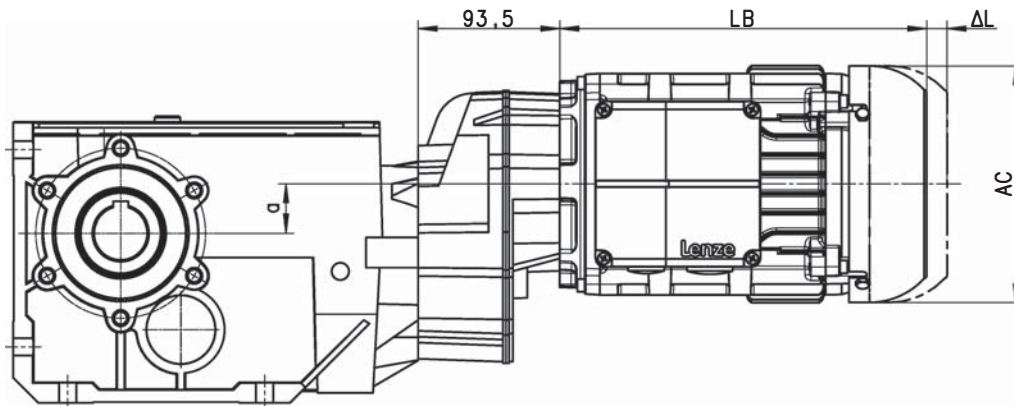
g500-B240 ... B4300, 4-stage

The geared motor dimensions can be found in the basic dimensions, except the total length "L" and the center distance "a".

► [Basic dimensions](#) 105

The total length "L" in the basic dimensions is extended by the 93.5 mm of the pre-stage.

Pay attention to the altered center distance "a" between the gearbox and motor shaft.



8801277-00

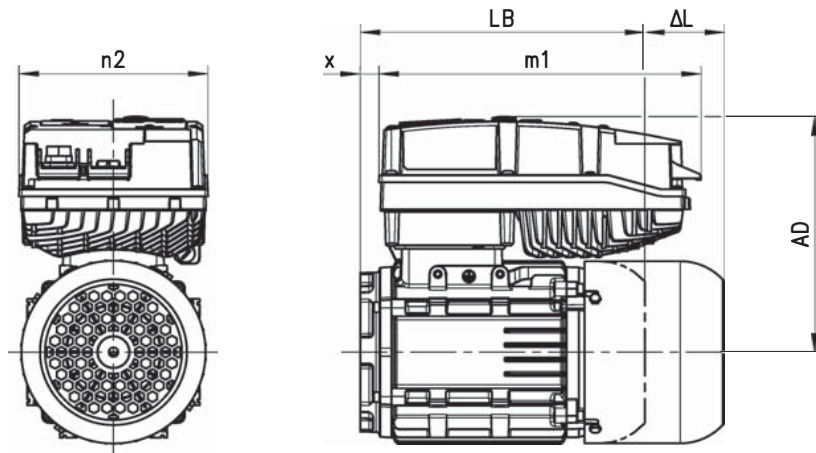
Gearboxes			g500-B110	g500-B240	g500-B450	g500-B600	g500-B820	g500-B1500	g500-B2700	g500-B4300
			3-stage	4-stage						
Center distance	a	mm	81	85	32.4	43	35	23	19.9	16



7.7.3 Integrated inverters

i550/i650 motec

Supply voltage 3x 400/480 V



8801826-01

Rated frequency 62 Hz

Motor	i550 motec	AD	m1	n2	x
		g_1	m_1	n_2	x
		mm	mm	mm	mm
m550-U63/L4	i550-M0.37/400-3	179	265	160	11
m550-U71/M4	i550-M0.55/400-3	190	265	160	21
m550-U71/M4	i550-M0.37/400-3	190	265	160	21
m550-U71/L4	i550-M0.75/400-3	190	265	160	21
m550-U71/L4	i550-M1.1/400-3	190	265	160	21
m550-U71/L4	i550-M0.55/400-3	190	265	160	21
m550-U80/M4	i550-M1.1/400-3	203	265	160	25
m550-U80/M4	i550-M1.5/400-3	203	265	160	25
m550-U80/M4	i550-M0.75/400-3	203	265	160	25
m550-U90/M4	i550-M1.5/400-3	211	265	160	44
m550-U90/M4	i550-M2.2/400-3	211	265	160	44
m550-U90/M4	i550-M1.1/400-3	211	265	160	44
m550-U90/L4	i550-M2.2/400-3	211	265	160	44
m550-U90/L4	i550-M1.5/400-3	211	265	160	44
m550-U90/L4	i550-M3.0/400-3	229	265	160	44
m550-U100/M4	i550-M2.2/400-3	221	265	160	34
m550-U100/M4	i550-M4.0/400-3	239	265	160	34
m550-U100/M4	i550-M3.0/400-3	239	265	160	34
m550-U100/L4	i550-M5.5/400-3	239	265	160	34
m550-U100/L4	i550-M4.0/400-3	239	265	160	34
m550-U100/L4	i550-M3.0/400-3	239	265	160	34
m550-U112/M4	i550-M5.5/400-3	244	265	160	50
m550-U112/M4	i550-M4.0/400-3	244	265	160	50
m550-U112/M4	i550-M7.5/400-3	269	362	211	39
m550-U132/M4	i550-M5.5/400-3	264	265	160	59
m550-U132/M4	i550-M11/400-3	289	362	211	48
m550-U132/M4	i550-M7.5/400-3	289	362	211	48
m550-U132/L4	i550-M11/400-3	289	362	211	48
m550-U132/L4	i550-M7.5/400-3	289	362	211	48
m550-U132/L4	i550-M15/400-3	341	443	280	27

Technical data

Dimensions
Integrated inverters



Motor	i650 motec	AD	m1	n2	x
		g_1	m_1	n_2	x
		mm	mm	mm	mm
m550-U63/L4	i650-M0.37/400-3	179	265	160	11
m550-U71/M4	i650-M0.55/400-3	190	265	160	21
m550-U71/M4	i650-M0.37/400-3	190	265	160	21
m550-U71/L4	i650-M0.75/400-3	190	265	160	21
m550-U71/L4	i650-M1.1/400-3	190	265	160	21
m550-U71/L4	i650-M0.55/400-3	190	265	160	21
m550-U80/M4	i650-M1.1/400-3	203	265	160	25
m550-U80/M4	i650-M1.5/400-3	203	265	160	25
m550-U80/M4	i650-M0.75/400-3	203	265	160	25
m550-U90/M4	i650-M1.5/400-3	211	265	160	44
m550-U90/M4	i650-M2.2/400-3	211	265	160	44
m550-U90/M4	i650-M1.1/400-3	211	265	160	44
m550-U90/L4	i650-M3.0/400-3	229	265	160	44
m550-U90/L4	i650-M2.2/400-3	211	265	160	44
m550-U90/L4	i650-M1.5/400-3	211	265	160	44
m550-U100/M4	i650-M4.0/400-3	239	265	160	34
m550-U100/M4	i650-M3.0/400-3	239	265	160	34
m550-U100/M4	i650-M2.2/400-3	221	265	160	34
m550-U100/L4	i650-M5.5/400-3	239	265	160	34
m550-U100/L4	i650-M4.0/400-3	239	265	160	34
m550-U100/L4	i650-M3.0/400-3	239	265	160	34
m550-U112/M4	i650-M5.5/400-3	244	265	160	50
m550-U112/M4	i650-M7.5/400-3	269	362	211	39
m550-U112/M4	i650-M4.0/400-3	244	265	160	50
m550-U132/M4	i650-M11/400-3	289	362	211	48
m550-U132/M4	i650-M7.5/400-3	289	362	211	48
m550-U132/M4	i650-M5.5/400-3	264	265	160	59
m550-U132/L4	i650-M15/400-3	341	443	280	27
m550-U132/L4	i650-M11/400-3	289	362	211	48
m550-U132/L4	i650-M7.5/400-3	289	362	211	48

Dimensions LB and ΔL ► [Basic dimensions](#) 105



7.7.4 Additional lengths

Self-ventilated motors

Motor			m550-U						
			63/L4	71/M4	80/M4	90/M4	100/M4	112/M4	132/M4
				71/L4		90/L4	100/L4		132/L4
Without feedback/brake									
Protection class IP54/IP55	Δ L	mm	0	0	0	0	0	0	0
With integrated feedback									
Protection class IP54/IP55	Δ L	mm	23	9	7	7	13	0	9
With mounted feedback									
Protection class IP54/IP55	Δ L	mm	85	75	68	63	74	77	91
With spring-applied brake									
Protection class IP54/IP55	Δ L	mm	61	60	68	63	74	77	91
With spring-applied brake and integrated feedback									
Protection class IP54/IP55	Δ L	mm	61	60	68	63	74	77	91
With spring-applied brake and mounted feedback									
Protection class IP54/IP55	Δ L	mm	135	128	136	131	145	148	162



7.8 Weights

7.8.1 Basic weights



The basic weights are listed in the selection tables.

Weights with lubricant for mounting position M1, all data approximate values. The exact values can be found in the delivery documents

► [Selection tables](#)  71

Observe ► [Additional weights](#)  137!



7.8.2 Additional weights



Add the individual additional weights to the basic weight depending on the design.

Gearboxes

Gearboxes			g500-B45	g500-B110	g500-B240	g500-B450
Solid shaft	m	kg	0.4	0.5	1.4	1.0
Shrink disc	m	kg	0.2	0.2	0.7	0.6
Flange	m	kg	0.3	0.4	0.7	0.9
Torque plate						
Threaded pitch circle	m	kg	0.3	0.5	1.3	2.5
Housing foot	m	kg	-	-	2.4	1.1
Housing foot, GKS compatible	m	kg	-	-	-	-
Shaft cover						
Shrink disc cover	m	kg	0.1	0.1	0.1	0.1
Hollow shaft cover, hoseproof	m	kg	0.1	0.1	0.1	0.2

Gearboxes			g500-B600	g500-B820	g500-B1500	g500-B2700	g500-B4300
Solid shaft	m	kg	1.5	1.9	3.7	6.0	15.5
Shrink disc	m	kg	0.6	1.2	1.7	2.3	4.3
Flange	m	kg	6.1	6.1	11.5	15.0	29.0
Torque plate							
Threaded pitch circle	m	kg	2.5	2.5	4.5	-	-
Housing foot	m	kg	2.8	3.0	4.3	10	13
Housing foot, GKS compatible	m	kg	5,0	5,0	8.2	16.5	30.5
Shaft cover							
Shrink disc cover	m	kg	0.1	0.1	0.2	0.3	0.4
Hollow shaft cover, hoseproof	m	kg	0.3	0.3	0.6	0.6	0.8

Motors

Motor			m550-U						
			63/L4	71/M4	80/M4	90/M4	100/M4	112/M4	132/M4
				71/L4		90/L4	100/L4		132/L4
Self-ventilated fan cover									
Spring-applied brake									
06	m	kg	1.5	1.5					
08	m	kg			2.2	2.2			
10	m	kg				3.9	3.9		
12	m	kg						5.6	
14	m	kg							8.5
16	m	kg							
18	m	kg							
20	m	kg							
Manual release lever	m	kg	0.1	0.1	0.2	0.2	0.2	0.4	0.5
Feedback	m	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5



8 Product extensions

8.1 Torque plates

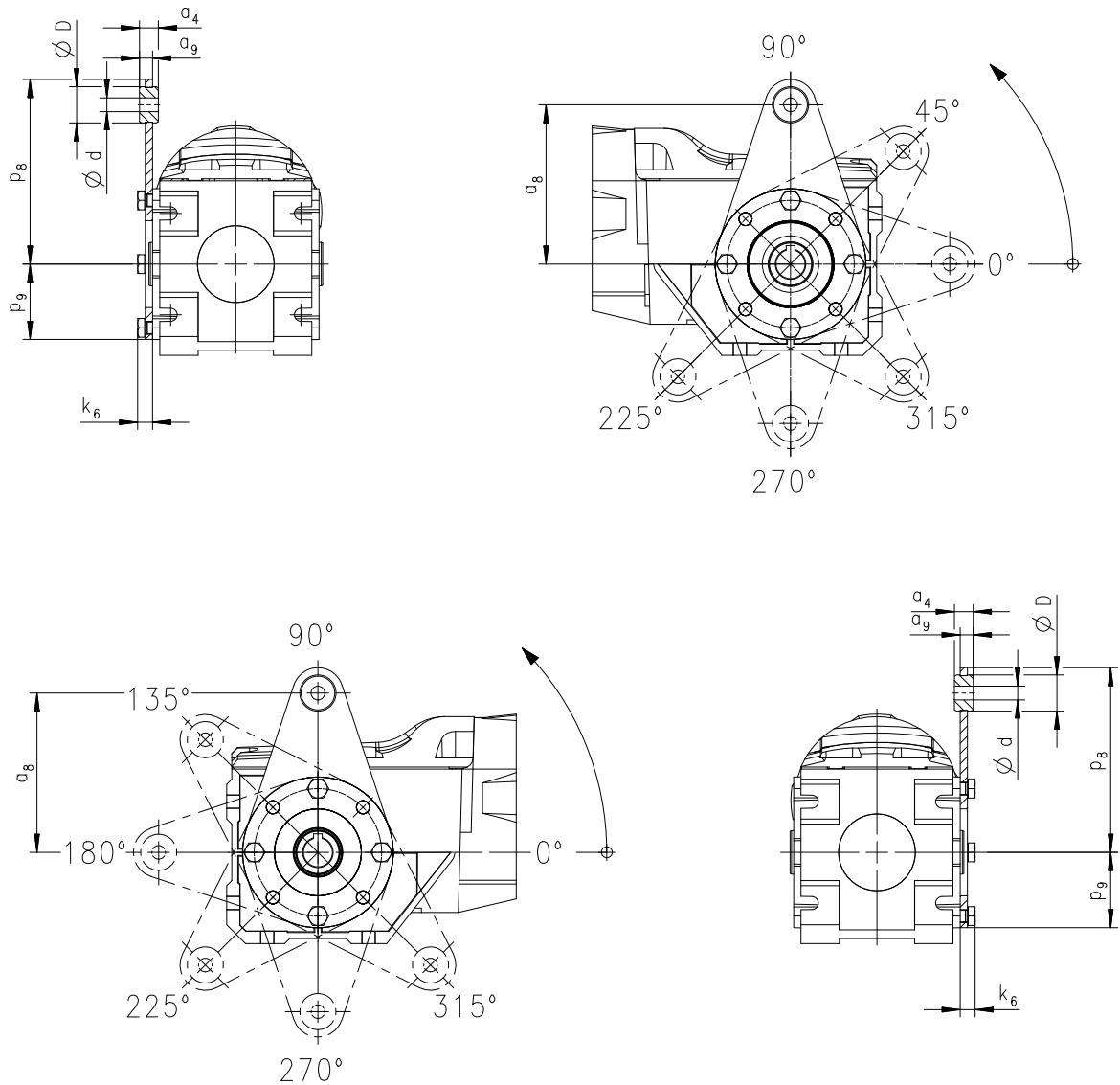
The torque support is usually effected by means of the foot or flange. The torque plates that can be fitted are another possibility. In this case, the torque support is provided only via one point and is suitable for shaft-mounted gearboxes, among other things. Supplied rubber buffers ensure a stress-free installation and absorb slight impacts.

The torque plates are available in two versions, for being installed at the existing threaded pitch circle or for the foot at the gearbox.

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.



Torque plate on threaded pitch circle
g500-B45 ... B110

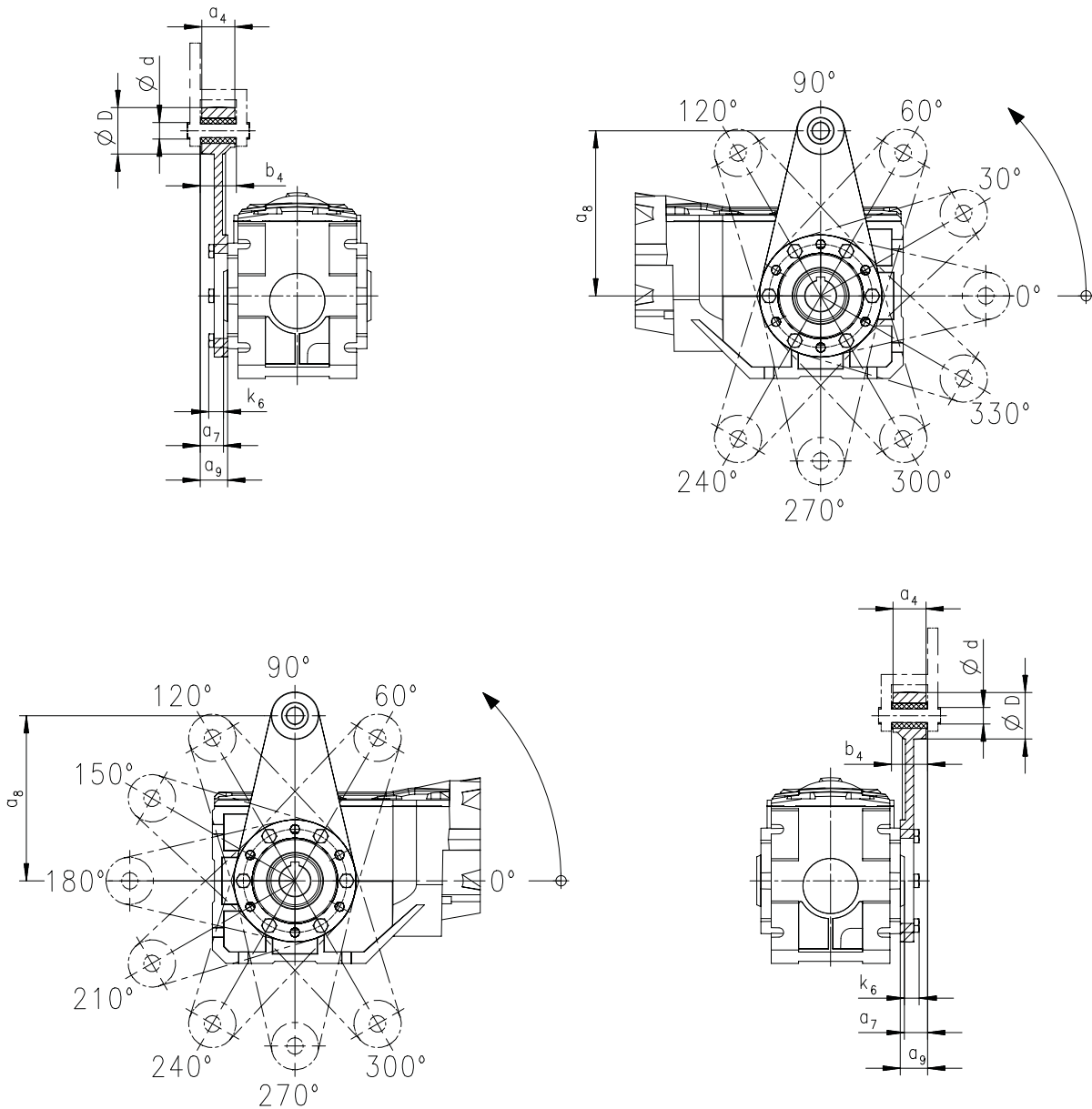


e4001537-00

Gearboxes	Dimensions							
	a ₄	a ₈	a ₉	d	D	p ₈	p ₉	k ₆
	mm	mm	mm	mm	mm	mm	mm	mm
g500-B45	12.0	100	8.0	8.0	20,0	115	42.0	9.0
g500-B110	13.0	110	9.0	10.0	25.0	128	54.0	11.0



g500-B240 ... B600

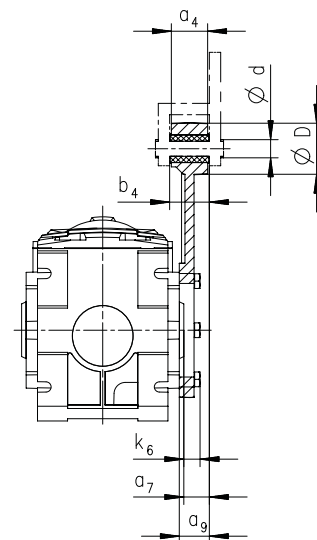
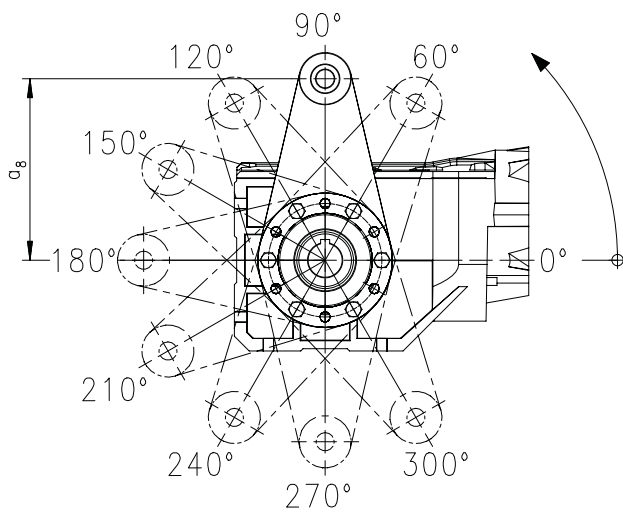
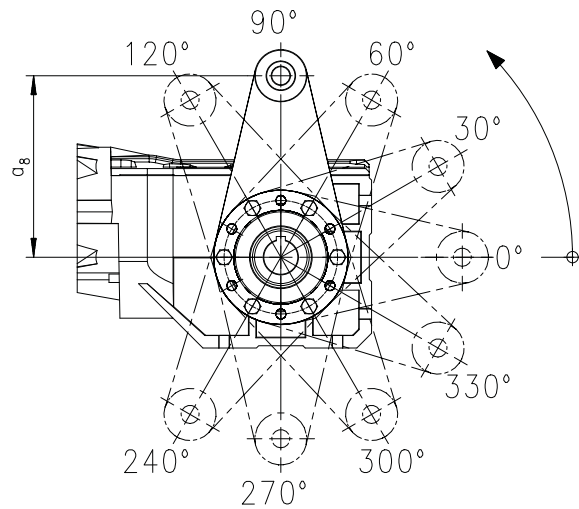
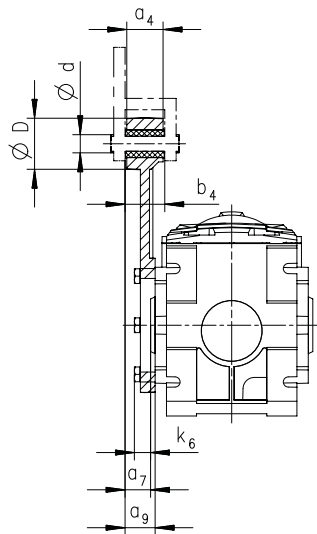


e4001538-00

Gearboxes	Dimensions							
	a_4	a_7	a_8	a_9	b_4	d	D	k_6
	mm	mm	mm	mm	mm	mm	mm	mm
g500-B240	34.0	23.5	160	27.5	38.5	16.0	45.0	15.0
g500-B450	40.0	29.0	200	32.0	44.5	20.0	50.0	18.0
g500-B600	38.0	26.5	200	31.5	40.0	20.0	50.0	19.0



g500-B820 ... B1500

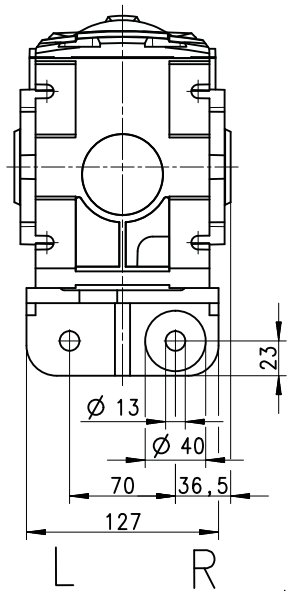
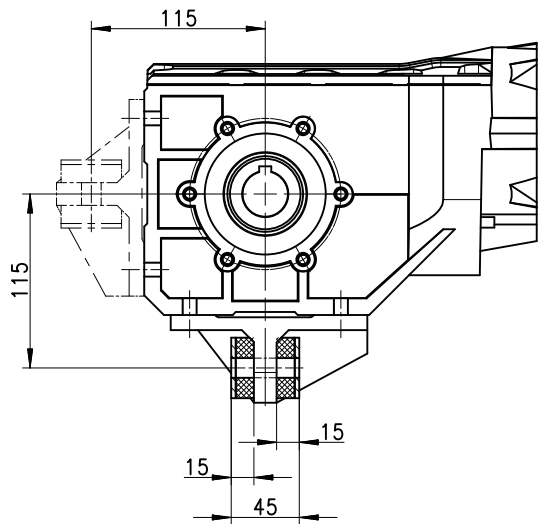


e4001538-00

Gearboxes	Dimensions							
	a ₄	a ₇	a ₈	a ₉	b ₄	d	D	k ₆
	mm	mm	mm	mm	mm	mm	mm	mm
g500-B820	38.0	28.0	200	31.5	40,0	20,0	50.0	20.5
g500-B1500	44.0	32.0	250	36.0	46.0	25.0	65.0	24.0



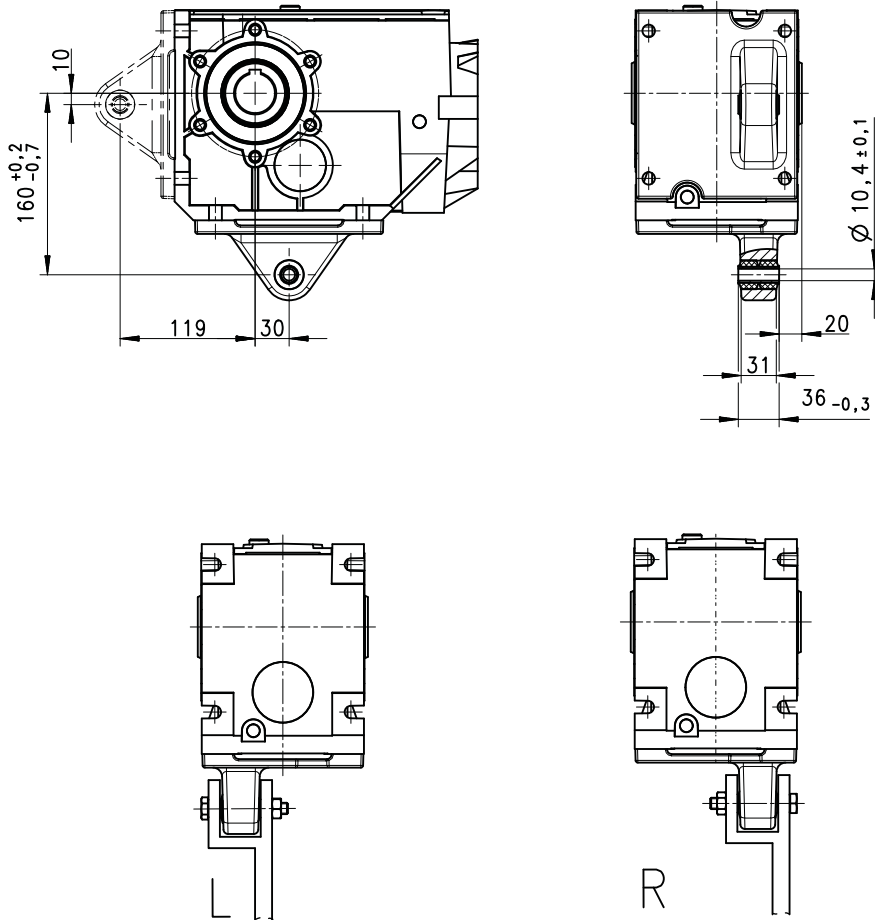
Torque plate on housing foot
g500-B240



e4001541-01



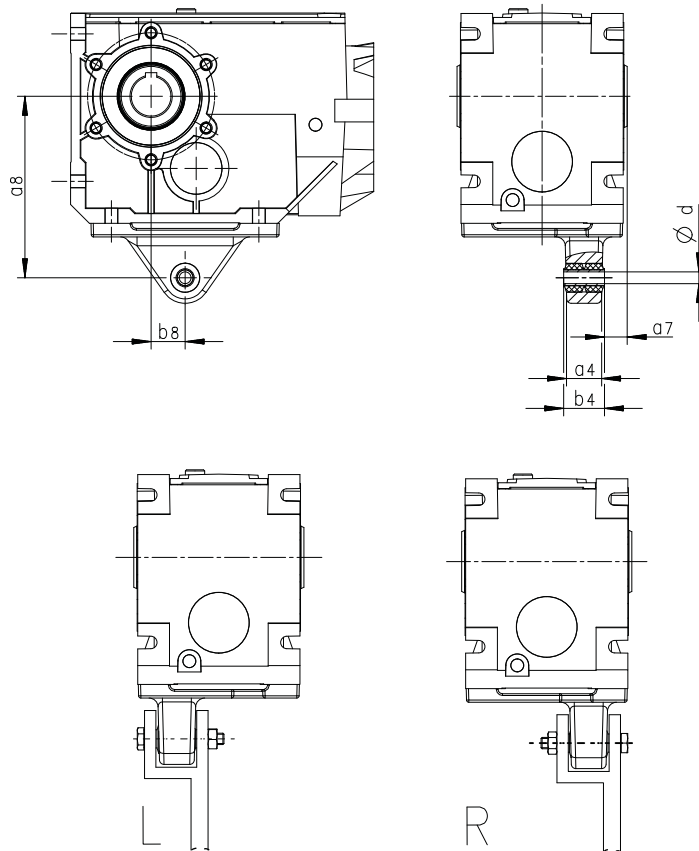
g500-B450



e4001554_01



g500-B600 ... B4300



e4002718-01

Gearboxes	Dimensions					
	d	a ₈	b ₈	a ₄	b ₄	a ₇
	mm	mm	mm	mm	mm	mm
g500-B600	16.4	192	40,0	55.0	60.0	18.0
g500-B820	16.4	200	45.0	55.0	60.0	25.0
g500-B1500	16.4	250	52.5	55.0	60.0	25.0
g500-B2700	25.0	300	60.0	72.0	80.0	30.0
g500-B4300	25.0	350	70.0	92.0	100	40,0



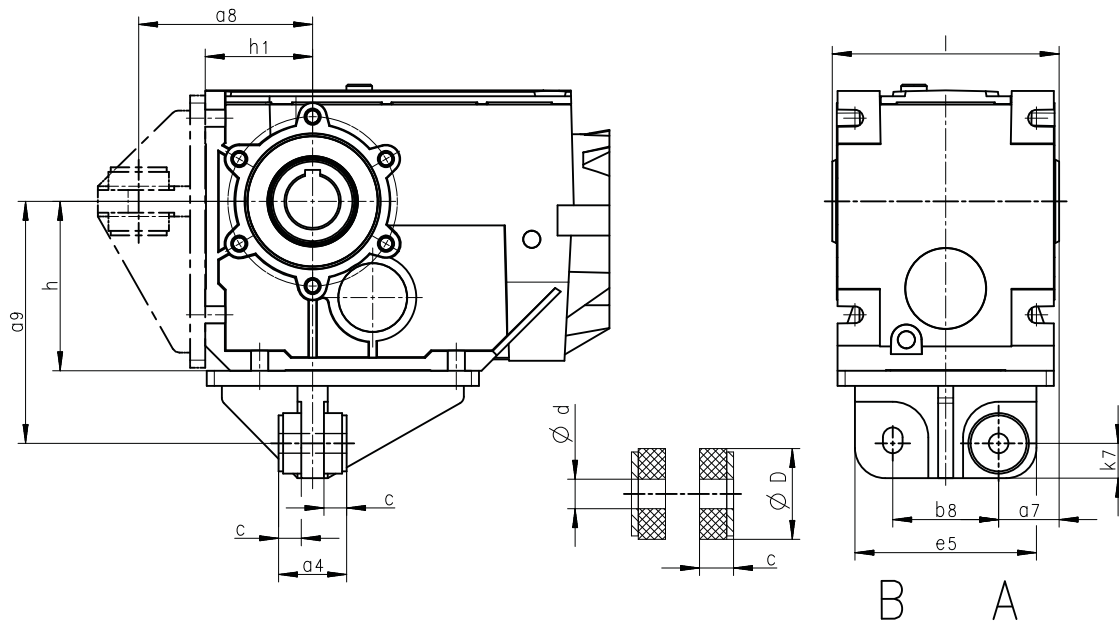
GKS compatible



The connection dimensions are identical to the previous product GKS for these torque plates.

The GKS gearbox can be replaced by the gearbox from the g500-B series.

g500-B600 ... B4300

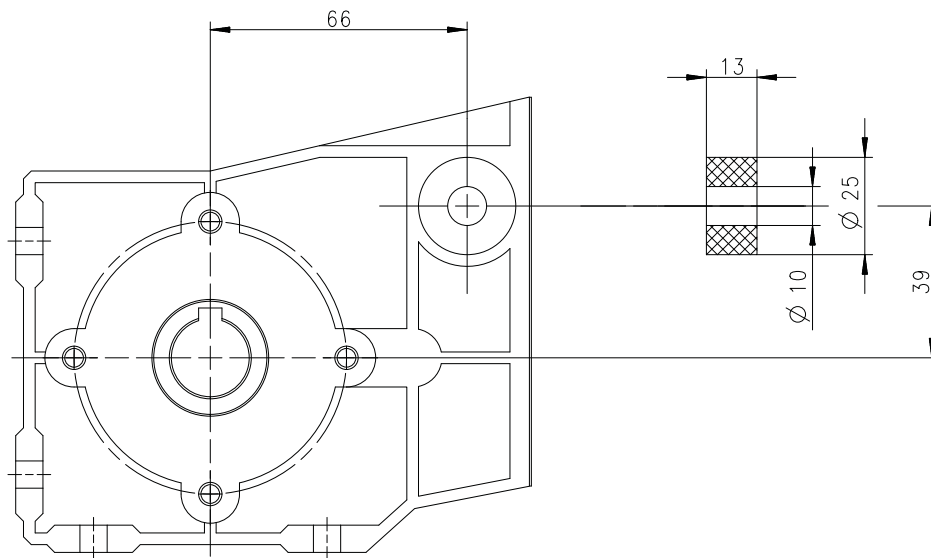


Gearboxes		Dimensions											
	Replacement for	a ₄	a ₇	a ₈	a ₉	b ₄	b ₈	c	Ø d	Ø D	e ₅	k ₇	k ₈
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
g500-B600	GKS06	72	45.0	145	195	72	80	27	17	50	135	28.0	26.0
g500-B820	GKS06	72	50.0	145	195	72	80	27	17	50	140	27.5	27.5
g500-B1500	GKS07	78	55.0	170	240	78	100	28	21	60	180	30.0	32.0
g500-B2700	GKS09	86	60.0	214	300	86	120	29	26	72	205	42.0	48.0
g500-B4300	GKS11	94	77.5	260	375	94	145	30	33	92	255	50.0	60.0



Rubber buffer for torque plate

g500-B45





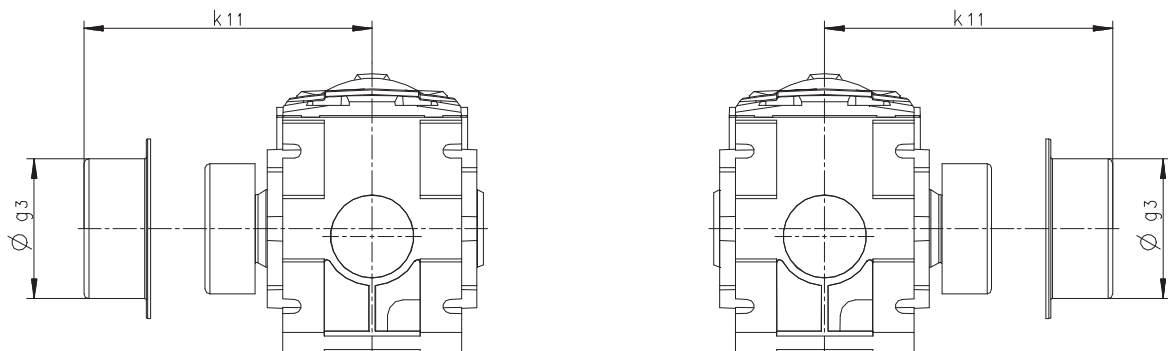
8.2 Shaft covers

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

The hoseproof hollow shaft 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 on this side.

Shrink disc cover

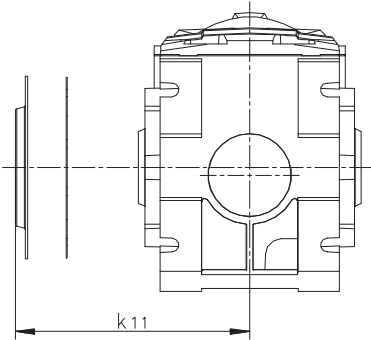
g500-B45 ... B4300



Product	Dimensions	
	g3	k11
	mm	mm
g500-B45	65.0	87.5
g500-B110	79.0	97.5
g500-B240	90.0	111
g500-B450	90.0	108
g500-B600	110	124
g500-B820	110	131
g500-B1500	128	148
g500-B2700	155	171
g500-B4300	188	205



Hollow shaft cover, hoseproof
g500-B45 B4300



Product	Dimensions
	k_{11}
	mm
g500-B45	55.0
g500-B110	65.0
g500-B240	75.0
g500-B450	79.5
g500-B600	90.0
g500-B820	97.0
g500-B1500	113
g500-B2700	131
g500-B4300	161



8.3 Motor connection

8.3.1 Connection options

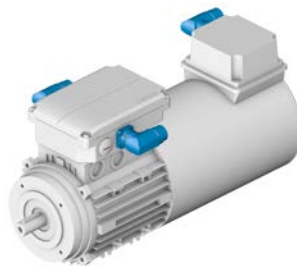


The motors are equipped with a terminal box as standard.

Alternatively, various connectors can be selected for quick commissioning or maintenance.



Terminal box with cable gland



Terminal box with M23 connector



Han connector

The three-phase motors are intended for operation on the inverter.

Frequency inverter operation

For frequency inverter operation, the base frequencies have been set to the following rated voltages:

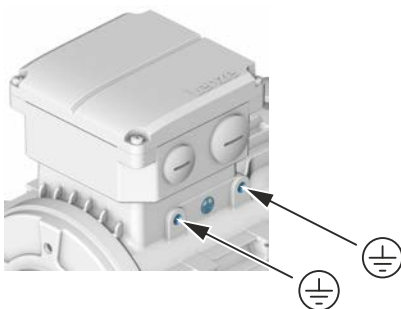
Rated frequency	Rated voltage	Circuit
Hz	V	
62	400	Y
124		

Second ground connection on the motor

According to the EN 61800-5-1 standard, additional measures are required for the protective earth connection if the leakage current is greater than 3.5 mA for alternating current or greater than 10 mA for direct current.

► [Important notes](#) 48

A possible measure is the execution via a second ground connection.



Scope of delivery when a second ground connection is selected:

- Toothed lock washer
- Washer
- Fixing screw



An additional grounding cable is not included in the scope of delivery.

The dimensioning of the grounding is done by the customer.

Product extensions

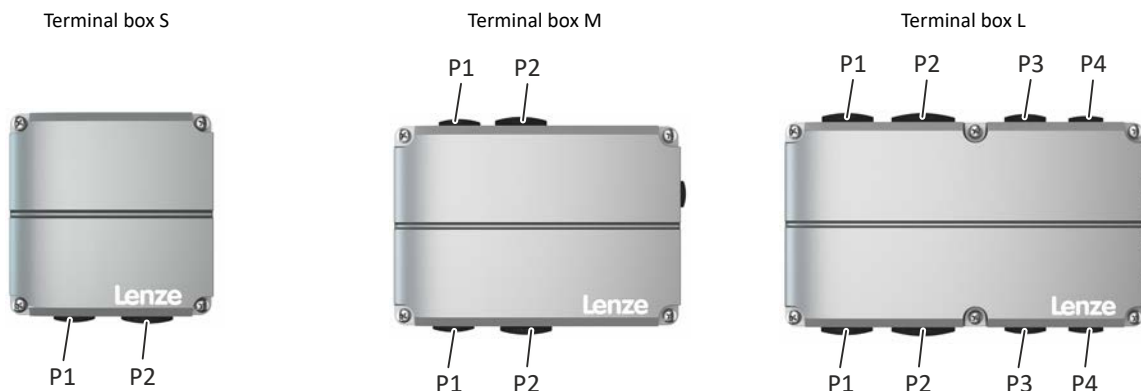
Motor connection
Assignment of the terminal boxes



8.3.2 Assignment of the terminal boxes

Depending on the product extension of the motor, different terminal box sizes (S, M or L) are used.

The M23 connectors are mounted on the terminal boxes (S, M and L) in the positions described.

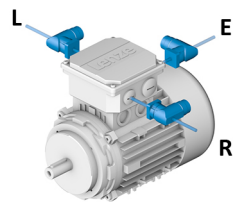


Motor	m550-U						
	63/L4	71/M4	80/M4	90/M4	100/M4	112/M4	132/M4
		71/L4		90/L4	100/L4		132/L4
Without product extensions							
Terminal box	S	S	S	S	S	S	L
Power: M23 connector	P1	P1	P1	P1	P1	P1	P1
Product extension - brake							
Terminal box	M	M	M	M	M	M	L
Power + brake: M23 connector	P2	P2	P1	P1	P1	P1	P1
Product extension - brake + feedback							
Terminal box	L	L	L	L	L	L	L
Power + brake: M23 connector	P1	P1	P1	P1	P1	P1	P1
Feedback: M23 connector	P3	P3	P3	P3	P3	P3	P3
Feedback: M12 connector	P4	P4	P4	P4	P4	P4	P4



Positions of the connectors

Positions on the motor terminal box



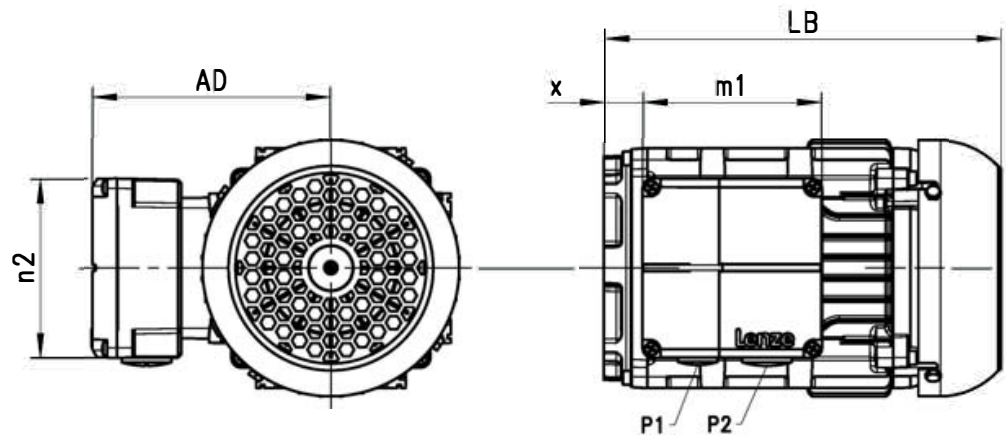
Terminal box	Positions	Note
Motor terminal box S		
Cable glands	L, E or R	
M23 connector: Power	L, E or R	
Motor terminal box M		
Cable glands	L and R	
M23 connector: Power/brake	L or R	
Motor terminal box L		
Cable glands	L and R	The plug connectors for power and brake can be arranged on the same side or on the opposite side
M23 connector: Power/brake	L or R	

Product extensions

Motor connection
Assignment of the terminal boxes



Dimensions of "S" power terminal box



8801784 00

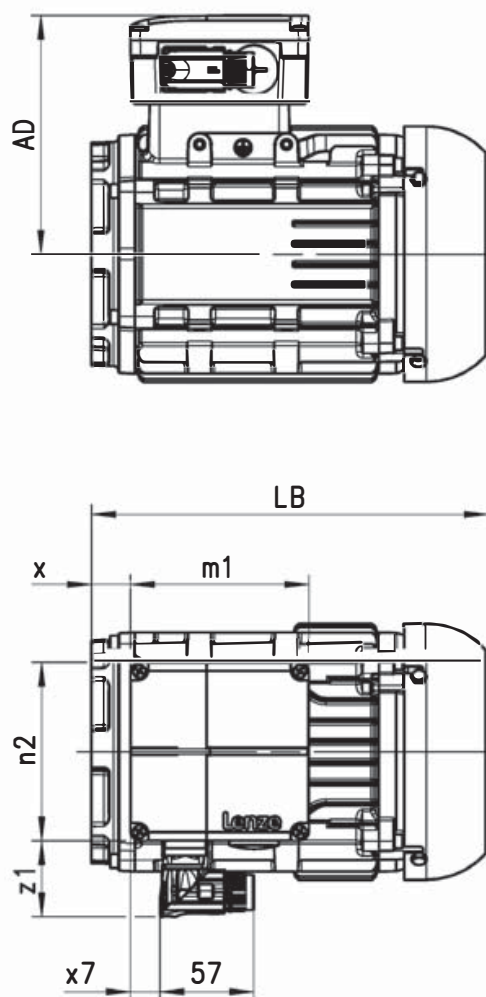
Motor		m550-U m550-V					
		63/L4	71/M4 71/L4	80/M4	90/M4 90/L4	100/M4 100/L4	112/M4
Motor terminal box							
AD	mm	117	128	145	153	163	168
x	mm	22	17	24	30	39	45
m ₁	mm	87	87	109	109	109	109
n ₂	mm	87	87	109	109	109	109
P ₁	mm	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5
P ₂	mm	-	-	M25x1.5	M25x1.5	M25x1.5	M25x1.5

Dimensions LB ▶ [Basic dimensions](#) 105

Dimensions Δ L ▶ [Additional lengths](#) 135



Dimensions of "S" power terminal box with M23 connector



8801787-00

Motor		m550-U m550-V					
		63/L4	71/M4 71/L4	80/M4	90/M4 90/L4	100/M4 100/L4	112/M4
Motor terminal box							
AD	mm	117	128	145	153	163	168
x	mm	22	17	24	30	39	45
m ₁	mm	87	87	109	109	109	109
n ₂	mm	87	87	109	109	109	109
M23 connector Power							
x ₇	mm	13	13	18	18	18	18
z ₁	mm	42	42	42	42	42	42

Dimensions LB ▶ [Basic dimensions](#) 105

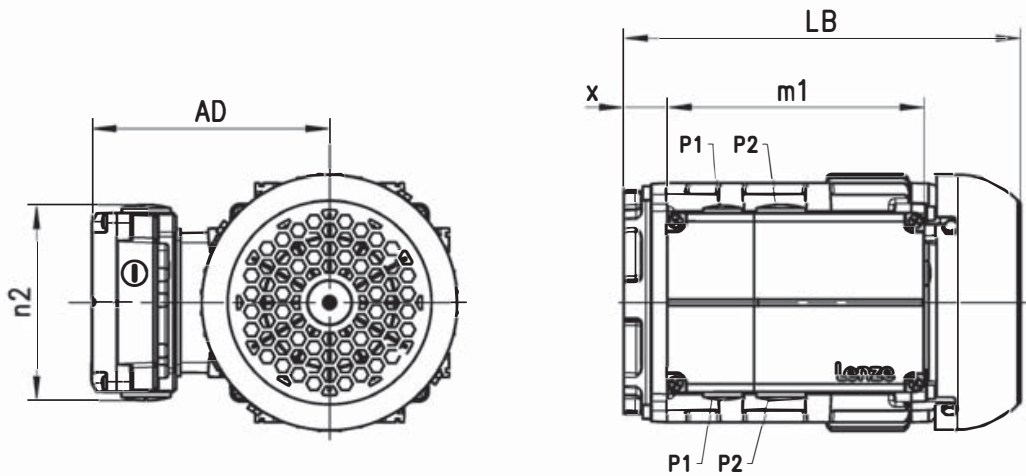
Dimensions Δ L ▶ [Additional lengths](#) 135

Product extensions

Motor connection
Assignment of the terminal boxes



Dimensions of "M" power terminal box



8801785-00

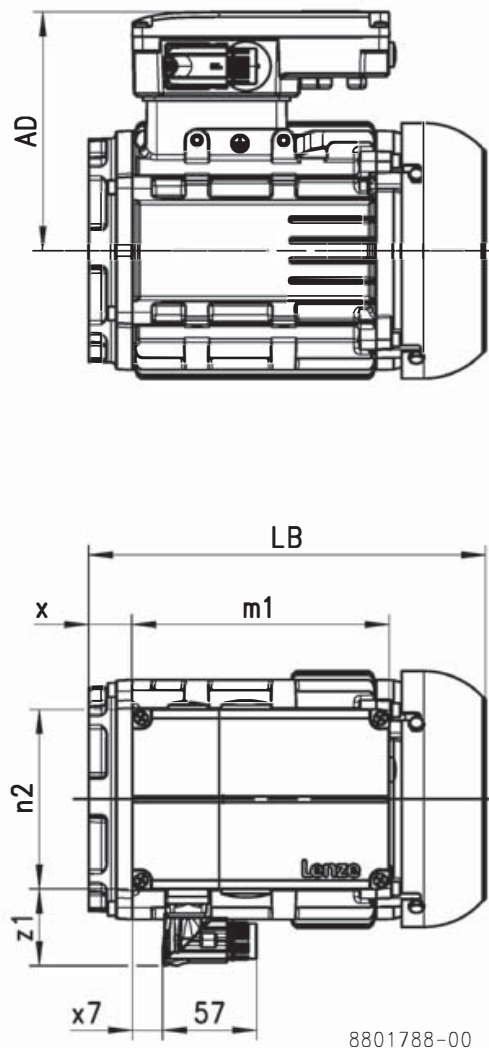
Motor		m550-U m550-V					
		63/L4	71/M4 71/L4	80/M4	90/M4 90/L4	100/M4 100/L4	112/M4
Motor terminal box							
AD	mm	113	124	145	153	163	168
x	mm	21	16	27	34	43	49
m ₁	mm	141	141	157	157	157	157
n ₂	mm	110	110	110	110	110	110
P ₁	mm	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5
P ₂	mm	M20x1.5	M20x1.5	M25x1.5	M25x1.5	M25x1.5	M25x1.5

Dimensions LB ▶ [Basic dimensions](#) 105

Dimensions Δ L ▶ [Additional lengths](#) 135



Dimensions of "M" power terminal box with M23 connector



8801788-00

Motor		m550-U m550-V					
		63/L4	71/M4 71/L4	80/M4	90/M4 90/L4	100/M4 100/L4	112/M4
Motor terminal box							
AD	mm	113	124	145	153	163	168
x	mm	21	16	27	34	43	49
m ₁	mm	141	141	157	157	157	157
n ₂	mm	110	110	110	110	110	110
M23 connector Power/brake							
x ₇	mm	45.3	45.3	18	18	18	18
z ₁	mm	42	42	42	42	42	42
M23 connector Feedback							
x ₇	mm	45.3	45.3	53.5	53.5	53.5	53.5
z ₁	mm	42	42	46	46	46	46

Product extensions

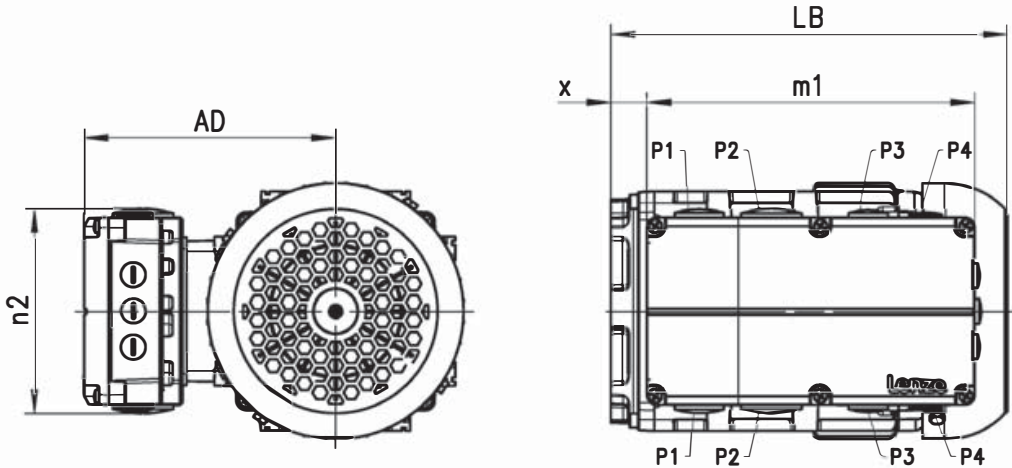
Motor connection
Assignment of the terminal boxes



Dimensions LB ▶ [Basic dimensions](#) 105

Dimensions Δ L ▶ [Additional lengths](#) 135

Dimensions of "L" power terminal box



8801786-00

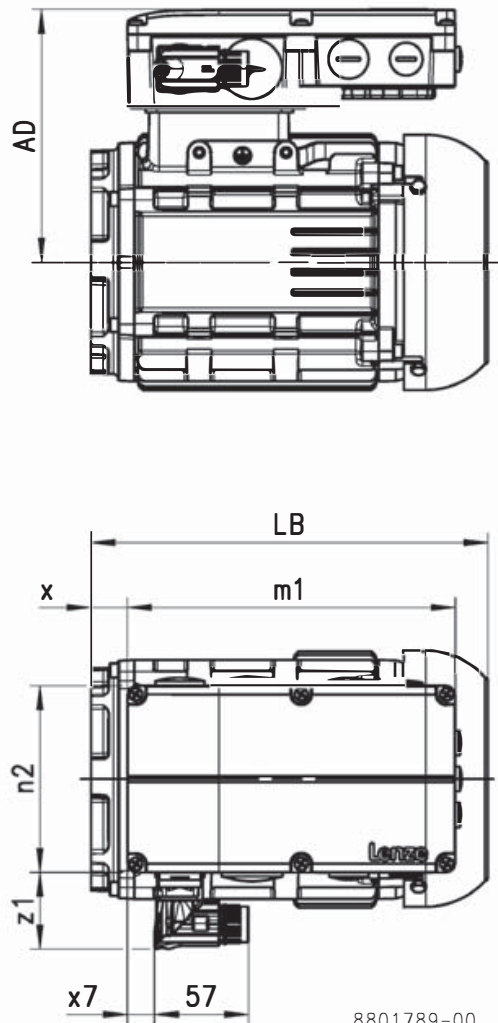
Motor		m550-U m550-V						
		63/L4	71/M4 71/L4	80/M4	90/M4 90/L4	100/M4 100/L4	112/M4	132/M4 132/L4
Motor terminal box								
AD	mm	113	141	154	162	172	177	197
x	mm	9	4	22	29	39	44	73
m ₁	mm	141	200	200	200	200	200	200
n ₂	mm	110	114	114	114	114	114	114
P ₁	mm	M25x1.5	M25x1.5	M25x1.5	M25x1.5	M25x1.5	M25x1.5	M25x1.5
P ₂	mm	M32x1.5	M32x1.5	M32x1.5	M32x1.5	M32x1.5	M32x1.5	M32x1.5
P ₃	mm	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5	M20x1.5
P ₄	mm	M16x1.5	M16x1.5	M16x1.5	M16x1.5	M16x1.5	M16x1.5	M16x1.5

Dimensions LB ▶ [Basic dimensions](#) 105

Dimensions Δ L ▶ [Additional lengths](#) 135



Dimensions of "L" power terminal box with M23 connector



8801789-00

Motor		m550-U m550-V						
		63/L4	71/M4 71/L4	80/M4	90/M4 90/L4	100/M4 100/L4	112/M4	132/M4 132/L4
Motor terminal box								
AD	mm	113	141	154	162	172	177	197
x	mm	9	4	22	29	39	44	73
m ₁	mm	141	200	200	200	200	200	200
n ₂	mm	110	114	114	114	114	114	114
M23 connector Power/brake								
x ₇	mm	16	16	16	16	16	16	16
z ₁	mm	46	46	46	46	46	46	46
M23 connector Feedback								
x ₇	mm	120	120	120	120	120	120	120
z ₁	mm	42	42	42	42	42	42	42

Dimensions LB ▶ [Basic dimensions](#) 105

Dimensions Δ L ▶ [Additional lengths](#) 135



8.3.3 Assignment of the connectors Han

The power, brake and temperature monitoring can be connected in the Han connector.

The Han-Modular versions are available with two power modules (16 A or 40 A).

- 

A rectifier can also be connected to the Han-Modular connector.
- 

Feedback in conjunction with the Han plug connector or the integrated i550/i650 motec is only available with the IG128-24V-H add-on incremental encoder (with 0.5 m cable and M12 plug connector).

Motor	m550-U						
	63/L4	71/M4	80/S4	90/M4	100/M4	112/M4	132/M4
		71/L4	80/M4	90/L4	100/L4		132/L4
Han-Modular connector							
Connection: • Power • Brake • Temperature monitoring TK0	•	•	•	•	•	•	•

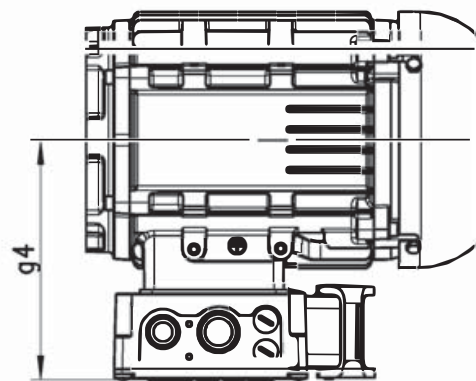
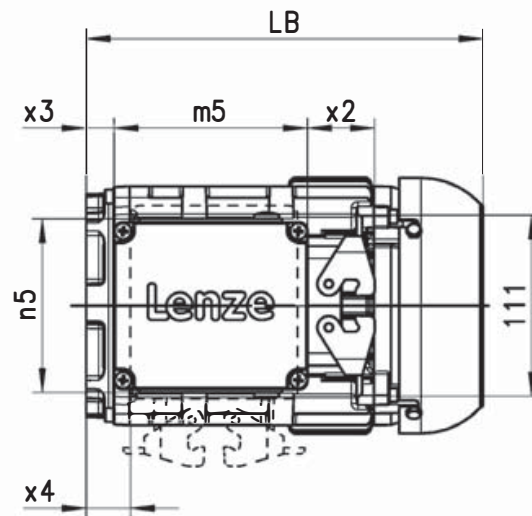
Positions of the connectors

Positions of the Han connector





Dimensions of HAN connector



8801790-00

Motor		m550-U m550-V						
		63/L4	71/M4 71/L4	80/M4	90/M4 90/L4	100/M4 100/L4	112/M4	132/M4 132/L4
HAN connector								
Power/brake								
g_4	mm	123	134	147	155	165	170	237
x_2	mm	41	41	41	41	41	41	47
x_3	mm	6	1	19	25	34.5	40	39
m_5	mm	118	118	118	118	118	118	120
x_4	mm	7	2	20	26	35.5	41	9
n_5	mm	106	106	106	106	106	106	180

Dimensions LB ▶ [Basic dimensions](#) 105

Dimensions ΔL ▶ [Additional lengths](#) 135

Product extensions

Motor connection
Connection via terminal box



8.3.4 Connection via terminal box

Cable glands

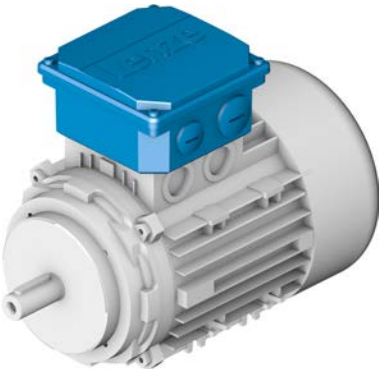


The opening cutouts for the cable glands are closed with plugs.

As the cable glands are only arranged on one side of the motor terminal box "S", the position of the cable glands must be specified.

The motor terminal box "M" and "L" have openings on both sides.

Position of the connections



Position	Meaning	Note
1	Power connection Brake connection PE connection Feedback connection Temperature monitoring connection	For the terminal box "S", the position of the cable connections "L", "R" or "E" must be specified.



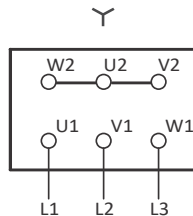
Product extensions

Motor connection
Connection via terminal box

Power connections

Bridge arrangement

Y circuit

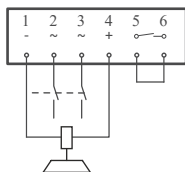


Terminal box, power		
Contact	Name	Meaning
PE	PE	PE conductor
U1	L1	Motor winding phase
V1	L2	
W1	L3	

DC brake connection

Contact	Name	Meaning
BD1	+	Brake +
BD2	-	Brake -

Connection of brake AC



Connection via rectifiers		
Contact	Name	Meaning
~	L1	Mains
~	N	
+	+	Holding brake (factory-wired)
-	-	
		Switching contact - DC switching

Temperature monitoring connection

Contact	Name	Meaning
TB1		TCO thermal contact
TB2		

Product extensions

Motor connection
Connection via connector



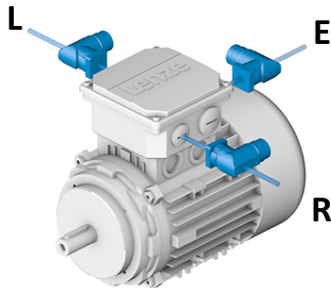
8.3.5 Connection via connector



Preassembled Lenze system cables are available for fast and error-free connection of Lenze motors to Lenze inverters.

Details and data can be found in the "Accessories" brochure on the Internet.

Position of the connections



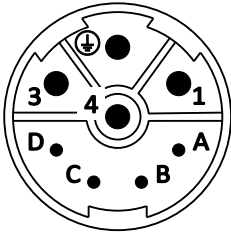
Position	Meaning	Note
L, E and R	Additionally for the 8-pole M23 connector: • Temperature monitoring connection - TCO thermal contact • Brake supply connection	Caution: Max. brake supply voltage ≤ 230 V
L	M23 connector: • Feedback connection	The mounting position for the feedback connector is on the opposite side to the power connection (position L/R).



Power and brake connection

M23 connector assignment

8-pole



M23 8-pole		
Contact	Name	Meaning
PE	PE	PE conductor
A	TB1	Temperature monitoring: TCO
B	TB2	Temperature monitoring: TCO
C	BD1 / BA1	Brake DC +/-AC ≤ 230 V
D	BD2 / BA2	Brake DC-/AC ≤ 230V
1	U	Power phase U
3	W	Power phase W
4	V	Power phase V

Product extensions

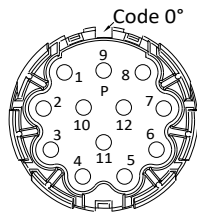
Motor connection
Connection via connector



Feedback and temperature monitoring connection

ICN-M23 connector assignment

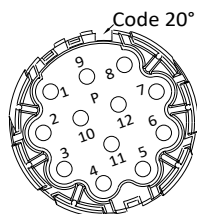
Resolver



M23 for resolvers		
Contact	Name	Meaning
1	+Ref	Transformer windings
2	-Ref	Transformer windings
3	+VCC ETS	Supply: Electronic nameplate (Only for motors and inverters that support this function)
4	+COS	Cosine stator windings
5	-COS	Cosine stator windings
6	+SIN	Sine stator windings
7	-SIN	Sine stator windings
8		Not assigned
9		Not assigned
10		Not assigned
11	+	Not assigned
12	-	Not assigned

ICN-M23 connector assignment

Incremental and SinCos absolute value encoder Hiperface®

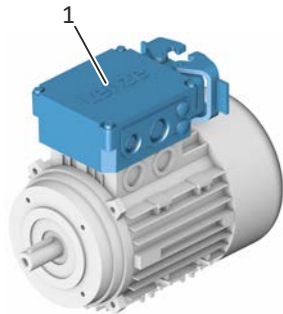


ICN M23 for encoders		
Contact	Name	Meaning
1	B	Track B / +SIN
2	A ⁻	Track A inverse / -COS
3	A	Track A / + COS
4	+UB	Supply +
5	GND	Mass
6	Z ⁻	Zero track inverse / -RS485
7	Z	Zero track / + RS485
8		Not assigned
9	B ⁻	Track B inverse/-SIN
10		Not assigned
11	+	Not assigned
12	-	Not assigned



8.3.6 Connection via Han connector

Position of the connections



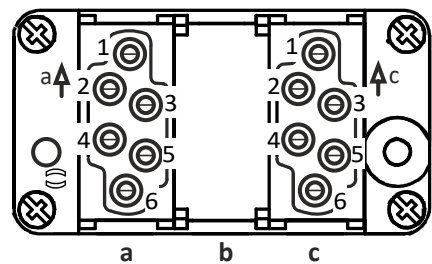
Position	Meaning
1	Power connection Brake connection PE connection Temperature monitoring connection
	Additionally for the Han-Modular: Rectifier connection

Han-Modular connector



The motor circuit is defined in the terminal box.

Han-Modular 16 A connector assignment



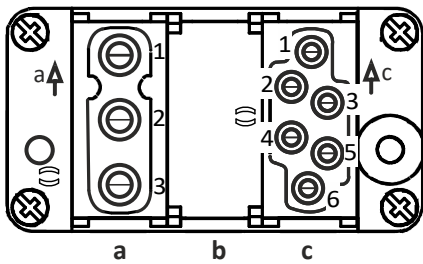
Han-modular 16 A			
Module	Contact	Name	Meaning
a	1	U1	Motor winding phase
	2	V1	
	3	W1	
b			Blank module
c	1	TKO	Temperature monitoring
	2	+/-AC	Brake
	3	-/-AC	
	4	Schaltkontakt	Rectifier
	5		
	6	TKO	Temperature monitoring

Product extensions

Motor connection
Connection via Han connector



Han-Modular 40 A connector assignment



Han-modular 40 A			
Module	Contact	Name	Meaning
a	1	U1	Motor winding phase
	2	V1	
	3	W1	
b			Blank module
c	1	TKO	Temperature monitoring
	2	+/-AC	Brake
	3	-/-AC	
	4	Schaltkontakt	Rectifier
	5		
	6	TKO	Temperature monitoring



8.4 Spring-applied brakes

The motors can be ordered with a spring-applied brake to allow stopping or deceleration of the moving masses. The spring-applied brake operates according to the closed-circuit principle. In the deenergized state, the brake is closed. The spring-applied brakes can be used as holding brakes.

Overview

The following table shows the possible versions of the spring-applied brakes.

Versions		Holding brake
		Single brake IP54/55
Standard		•
Supply voltages		
	DC supply	
	DC 24 V $\pm 10\%$	•
	DC 180 V ... 205 V $>10\%$	•
	AC supply via rectifier in the terminal box	
	AC 230 V $\pm 10\%$	•
	AC 400 V ... 460 V $>10\%$	•
Friction lining		
	Standard	•
Options		
	Manual release	•
	UL/CSA-approved	•
	Low noise during operation (noise-reduced rotor)	•
	Cover ring	•

Control	Without rectifier	Bridge/half-wave rectifier
		6-pole
Supply voltages	24 V DC DC 180 ... 205 V	AC 230 V AC 400 ... 460 V



8.4.1 Information on project planning

Important notes

DANGER!

Malfunction of the brake

Even small amounts of oil or grease on the friction surfaces reduce the braking torque considerably.

Possible consequences: Death or severe injuries

► Always keep the friction surfaces free of oil and grease.

Emergency stops

A maximum of 100 emergency stops are possible from $n = 2700$ rpm.



Connection

NOTICE

If used as a service brake, the braking torques are dependent on the motor speed to be braked.

- During braking from a high speed and in the event of emergency stops, the braking torque is significantly reduced.

Connection of the spring-applied brake

The spring-applied brakes can be ordered for connection to AC or DC voltage.

Connection to AC voltage

- A rectifier is required to convert the AC voltage into a DC voltage.
- The rectifier is included in the scope of supply. It is mounted in the terminal box of the motor.
- Available rectifiers:
 - Bridge rectifier, 6-pole

Connection to DC voltage

- No rectifier is required.
- A freewheeling diode or a spark suppressor must be used to prevent high induction peaks.

Motor supply cables

If long motor supply cables are used, pay attention to the ohmic voltage drop along the cable and compensate for it with a higher voltage at the input end of the cable.

The following applies to Lenze system cables:

$U[V] = U_B[V] + 0.08 \frac{[V]}{[A] \times [m]} \times I_{Lg}[m] \times I_B[A]$	U	V	Resulting supply voltage
	U _B	V	Rated voltage of the brake
	I _{Lg}	m	Cable length
	I _B	A	Rated current of the brake

Switching on the AC or DC side

Brakes can be switched both upstream of the rectifier (AC-side switching) and downstream of the rectifier (DC-side switching). The choice of control influences, among other things, the engagement time of the armature plate.

With switching on the AC side, the connection time increases by a factor of 5 to 10 compared to switching on the DC side. This must be taken into account when selecting the control. By simply removing a bridge and using the connections of the switching contact, DC-side switching is possible. However, this requires two additional wires in the control cabinet.

Product extensions

Spring-applied brakes
Spring-applied holding brake
Assignment of braking torques



8.4.2 Spring-applied holding brake

The spring-applied brakes are pure holding brakes. Emergency stops are possible.

DANGER!

An emergency stop during operation can cause the holding brake to malfunction.

Possible consequences: Personal injury and/or damage to property.

- After an emergency stop, check the air gap and the friction lining for damage.
- If the air gap is too large or the friction lining is damaged, replace the brake rotor.

8.4.2.1 Assignment of braking torques

For optimum adaptation of the brake motor to the application, spring-applied brakes with several braking torques are available for each motor frame size.

Motor	Single brake				
	HBR 06	HBR 08	HBR 10	HBR 12	HBR 14
	Nm	Nm	Nm	Nm	Nm
m550-U63/L4	4				
m550-U71/M4					
m550-U71/L4					
m550-U80/M4		8			
m550-U90/M4					
m550-U90/L4		16			
m550-U100/M4		23			
m550-U100/L4			32		
m550-U112/M4					
m550-U132/M4					
m550-U132/L4					60

8.4.2.2 Rated data

Holding brake		HBR 06	HBR 08	HBR 10	HBR 10	HBR 12	HBR 14
Braking torque is static	Nm	4	8	16	23	32	60
Moment of inertia	kgcm ²	0.128	0.401	2	2	4.5	6.3
Power input							
DC 24 V	W	20	25	30	30	40	50
DC 180 V ... 205 V	W	20	25	30	30	40	53
AC 230 V	W	20	25	30	30	40	53
AC 400 V ... 460 V	W	20	25	30	30	40	53
Min. static braking torque tolerance	%	0	0	0	0	0	0
Max. static braking torque tolerance	%	80	80	80	80	80	80
Reversing cycles		1000000	1000000	1000000	1000000	1000000	1000000
Repetitive cycles		1000000	1000000	1000000	1000000	1000000	1000000
Maximum switching energy	J	3000	7500	12000	12000	24000	30000



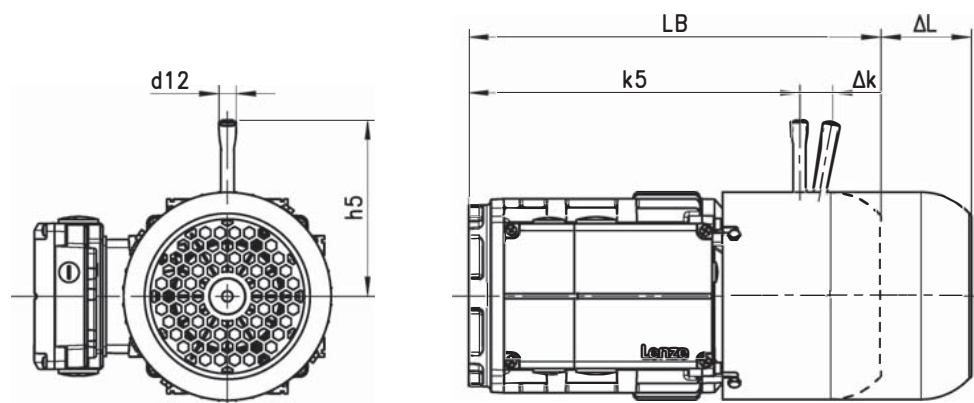
Product extensions

Spring-applied brakes
Spring-applied holding brake

Option: Manual release

The brake can be ordered with a manual release lever to facilitate positioning and maintenance work. The brake can be released manually in deenergized mode by actuating the manual release lever.

Dimensions of manual release lever



8801827-01

Motor	Brake	Dimensions			
		k_5	Δk	h_5	d_{12}
		mm	mm	mm	mm
m550-U63/L4	HBR 06	193	25	107	13
m550-U71/M4 m550-U71/L4	HBR 06	211	25	107	13
m550-U80/M4	HBR 08	231	27	116	13
m550-U90/M4	HBR 08	270	27	116	13
m550-U90/L4	HBR 10	286	23	131	13
m550-U100/M4 m550-U100/L4	HBR 10	344	23	131	13
m550-U112/M4	HBR 12	345	37	161	13
m550-U132/M4 m550-U132/L4	HBR 14	408	53	229	20

Dimensions LB ► [Basic dimensions](#) 105

Dimensions ΔL ► [Additional lengths](#) 135



8.5 Feedback

The motor can be equipped with the following feedback systems for speed control via an inverter:

A resolver, incremental encoder and SinCos absolute value encoder are optionally available to evaluate the speed and position of the motor shaft.

The resolver can be used to measure an absolute value within one revolution of the rotor. A SinCos absolute value encoder is used if not only the angle within one revolution is to be made available immediately but also the revolution within a set range. The SinCos absolute value encoder detects not only the speed and rotor position but also the position of the machine. It consists of a speed sensor system, for example TTL, and an absolute value information recorder, for example Hyperface.

The HTL incremental encoder is used in the frequency inverter range for less dynamic applications.

It is used for dynamic applications with very high requirements regarding accuracy. If the absolute angular position of the drive is required directly after the system is switched on without performing additional homing, this can be realized via a resolver or SinCos absolute value encoder.



Resolver, absolute encoder and the IG128-24V-H add-on incremental encoder are mounted behind the B-bearing shield under the fan cover.

All other incremental encoders are integrated in the B-bearing shield, which usually makes the drive shorter.

Feedbacks in the environment of functional safety

Motors can perform speed-dependent safety functions for safe speed and/or safe relative position monitoring in a drive system by Lenze inverters or Controllers. In case of inverters, these functions are implemented by integrable safety modules and in case of Controllers by the additionally required Safety Controller.

When planning systems/installations of this kind, always observe the following:

- When using just one single feedback system in the environment of these safety applications, the applicable safety engineering standard EN 61800-5-2 (adjustable speed electrical power drive systems - Part: 5-2: Safety requirements - Functional) stipulates special requirements for the connection between feedback system and motor shaft.
- This is due to the fact that two-channel safety systems at this point in the mechanical system are actually designed as single-channel systems. If this mechanical connection is designed with considerable overdimensioning, the standard permits exclusion of the fault "encoder-shaft breakage" or "encoder-shaft slip". As such, the permissible angular acceleration limit values must not be exceeded for the individual drive solutions.

You can find the limit values in the corresponding feedback data of the individual motor ranges.

Speed-dependent safety functions

Examples of speed-dependent safety functions:

- Safe stop 1 (SS1)
- Safe operational stop (SOS)
- Safely limited speed (SLS)
- Safe maximum speed (SMS)
- Safe direction (SDI)
- Operation mode selector (OMS) with confirmation (ES)
- Safe speed monitor (SSM)
- Safely limited increment (SLI)



8.5.1 Resolver

The stator-supplied, 2-pole resolver with two stator windings shifted by 90 degrees and a rotor winding with a transformer winding can record both the speed and the rotor position, just like a single-turn absolute value encoder. The rotor position can be determined within one mechanical motor revolution after a voltage failure.

Feedback type			Resolver
Feedback			RS1
Speed-dependent safety functions			Nein
Design			Mounting
Resolution - angle		'	0.8
Min. accuracy		'	-10
Max. accuracy		'	10
Absolute positioning			1 revolution
Max. speed	$n_{\max}$	rpm	8000
Max. DC input voltage	$V_{\text{in,max}}$	V	10
Max. input frequency	$f_{\text{in,max}}$	kHz	4
Ratio stator/rotor			0.3
Min ratio tolerance		%	-5
Max ratio tolerance		%	5
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_{min}	M Ω	10
Number of pole pairs			1
Max. angle error Min		'	-10
Max. angle error Max		'	10



8.5.2 Incremental encoder

Incremental encoders can be used for speed measurement. Homing is required in order to enable positioning later.

Incremental HTL encoder



Feedback in conjunction with the Han plug connector or the integrated i550/i650 motec is only available with the IG128-24V-H add-on incremental encoder (with 0.5 m cable and M12 plug connector).

Feedback type			Encoder			
Feedback			IG128-24V-H		IG1024-24V-H	IG2048-24V-H
Design			Mounting	integrated	integrated	integrated
Pulses			128	128	1024	2048
Output signals			HTL	HTL	HTL	HTL
Interfaces			A, B	A, B	A, B; N; Ai, Bi; Ni	A, B; N; Ai, Bi; Ni
Absolute revolution			0	0	0	0
Min. accuracy		'	-22.5	-2	-2	-2
Max. accuracy		'	22.5	2	2	2
Min. DC input voltage	$V_{in,min}$	V	8	10	10	10
Max. DC input voltage	$V_{in,max}$	V	26	30	30	30
Max. current consumption	I_{max}	A	0.04	0.15	0.15	0.15
Cut-off frequency	f_{max}	kHz	30	200	200	200

SinCos-incremental encoder with safety functions



The connection of the safety sensors to the terminal box is only available in conjunction with a M23 connector.

Feedback type			Encoder	
Feedback			IG2048-5V-V2	IG2048-5V-V3
Design			Mounting	
Pulses			2048	2048
Output signals			SinCos 1 Vss	SinCos 1 Vss
Interfaces			SinCos	SinCos
Absolute revolution			0	0
Min. accuracy			-	-
Max. accuracy			-	-
Min. DC input voltage	$V_{in,min}$	V	4.75	4.75
Max. DC input voltage	$V_{in,max}$	V	5.25	5.25
Max. current consumption	I_{max}	A	0.07	0.07
Cut-off frequency	f_{max}	kHz	400	400
Max. Safety Integrity Level			SIL 2	SIL 3
Max. Safety Performance Level			d	e



8.5.3 Absolute value encoder

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.

SinCos absolute value encoder

Feedback type			SinCos absolute value encoder
Feedback			AM1024-8V-H
Speed-dependent safety functions			Nein
Design			Mounting
Encoder type			Multi-turn
Resolution		bit	-
Pulses			1024
Output signals			SinCos 1 Vss
Interfaces			Hiperface
Absolute revolution			4096
Resolution - angle			0.4
Min. accuracy		'	-0.8
Max. accuracy		'	0.8
Fehlergrenze Positionswert			
System accuracy			-
Integral nonlinearity			-
Min. DC input voltage	$V_{in,min}$	V	7
Max. DC input voltage	$V_{in,max}$	V	12
Max. current consumption	I_{max}	A	0.08
Cut-off frequency	f_{max}	kHz	200



8.6 Temperature monitoring



The temperature sensors are integrated in the windings. The use of an additional motor protection switch is recommended.

8.6.1 Thermal contacts TC0

The TCO thermal contact (thermal break contact) is a bimetallic switch. The thermal contact monitors the motor winding temperature; e.g., at excessively high temperatures, it switches the upstream motor relay. The motor is disconnected from the line voltage and coasts down via the relay.

Functional principle			Normally-closed contact
Operating temperature		°C	150
Min. switching temperature		°C	145
Max. switching temperature		°C	155
Min. reset temperature		°C	90
Max. reset temperature		°C	135
Max. AC switching current		A	2.5
Max. AC switching voltage		V	250
Max. DC switching current		A	2.5
Max. DC switching voltage		V	12

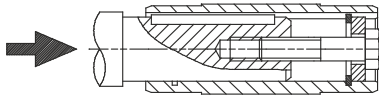


9 Accessories

9.1 Hollow shaft mounting kit

A mounting kit is available for easy installation of the hollow shaft.

Scope of supply



- Hexagon head screw
- Circlip
- Washer

Mounting set		Solid shaft	Hollow shaft diameter g500-																	
Name	Material number	Thread	B45		B110		B240		B450		B600		B820		B1500		B2700		B4300	
			18	20	20	25	30	35	35	40	40	45	40	45	50	55	60	70	70	80
Mounting kit B18	415783	M6	•																	
Mounting kit B20	407309	M6		•	•															
Mounting kit B25	395903	M10				•														
Mounting kit B30	395904	M10					•													
Mounting kit B35	395905	M12						•	•											
Mounting kit B40	395906	M16							•	•			•							
Mounting kit B45	395907	M16									•		•							
Mounting kit B50	395908	M16												•						
Mounting kit B55	395909	M20													•					
Mounting kit B60	395910	M20														•				
Mounting kit B70	395911	M20															•	•		
Mounting kit B80	395912	M20																	•	



10 Product codes

Gearbox product code

Example		G	50	A	B	045	M	H	B	R	2	C	1A
Product type	Gearboxes	G											
Product family			50										
Generation				A B									
Gearbox type	Bevel gearbox				B								
Output torque	45 Nm					045							
	110 Nm					111							
	240 Nm					124							
	450 Nm					145							
	600 Nm					160							
	820 Nm					182							
	1500 Nm					215							
	2700 Nm					227							
	4300 Nm					243							
	8000 Nm					280							
	13000 Nm					313							
	20000 Nm					320							
Type of construction	Geared motor						M						
	Gearboxes						N						
Shaft type	Solid shaft with featherkey							V					
	Hollow shaft with keyway							H					
	Hollow shaft with shrink disc							S					
Housing type	Foot mounting + centering								A				
	Foot mounting								B				
	With 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		
	4-stage										4		
Motor mounting	Integrated motor											C	
	IEC adapter with jaw coupling											N U	
	IEC adapter with plug-in hollow shaft											H	
	NEMA adapter with jaw coupling											A	
	NEMA adapter with plug-in hollow shaft											B	
	Servomotor adapter with plug-in hollow shaft											S	
	Servomotor adapter with jaw coupling											E D G	
Drive size													1A ... □H 08 ... 82



Motor product code

Example		M	55	A	U	063	M	04	5	E	0	0	C	C
Product type	Motor	M												
Product family			55											
Generation				A										
Efficiency class	IE5				U									
	IE6				V									
Size						063 071 080 090 100 112 132								
Overall length	Short						S							
	Medium						M							
	Long						L							
Number of poles	4-pole							04						
Degree of protection	IP54/IP55								5					
Cooling	Integral fan									E				
Brake	Without										0			
	Spring-applied brake										F			
Feedback	Without											0		
	Absolute value encoder											A		
	Incremental encoder											E		
	Resolver											R		
Approvals	None												N	
	CE												C	
	CE, CCC												3	
	CE, cULus												L	
	CE, cULus, CCC												5	
	CE, cURus												U	
	CE, cURus, CCC												W	
Design type	Internal key													C



11 Motor data

11.1 Rated data

Motor			m550-U				
			63/L4	71/M4	71/L4	80/M4	90/M4
Rated power	P_{rated}	kW	0.37	0.55	0.75	1.1	1.5
Rated speed	n_{rated}	rpm	1860	1860	1860	1860	1860
Max. speed	n_{max}	rpm	3200	3200	3200	3200	3200
Rated voltage	V_{rated}	V	308	298	298	304	315
Rated current	I_{rated}	A	0.900	1.35	1.72	2.51	3.20
Standstill current	I_0	A	1.09	1.65	2.20	2.80	3.90
Max. current	I_{max}	A	2.50	3.65	5.00	7.00	8.85
Rated torque	M_{rated}	Nm	1.90	2.80	3.90	5.60	7.70
Standstill torque	M_0	Nm	2.10	3.45	4.70	6.00	9.30
Max. torque	M_{max}	Nm	4.75	7.1	9.9	14.2	19.4
Power factor	$\cos \phi$		0.96	0.96	0.95	0.95	0.97
Efficiency							
at 50% P_{rated}	η		0.873	0.884	0.921	0.887	0.896
at 75% P_{rated}	η		0.848	0.856	0.894	0.900	0.915
at 100% P_{rated}	η		0.795	0.827	0.846	0.862	0.874
Moment of inertia	J	kgcm ²	3.24	8.75	11.1	21.1	35.8
Weight	m	kg	5.1	7.3	8.5	10.6	13.9
Power losses							
25; 25	$P_V(n; M)$	%	1.6	1.5	0.9	1.6	1.9
25; 100	$P_V(n; M)$	%	19.7	14.4	10.5	11.6	12.2
50; 25	$P_V(n; M)$	%	2.2	2.2	1.3	2.5	3.2
50; 50	$P_V(n; M)$	%	5.9	4.7	3.3	4.6	5.3
50; 100	$P_V(n; M)$	%	20.3	15.3	11.1	12.6	13.5
90; 50	$P_V(n; M)$	%	7.3	6.5	4.3	6.4	7.9
90; 100	$P_V(n; M)$	%	20.8	17.1	12.8	11.5	16.3
100; 100	$P_V(n; M)$	%	22.4	18.7	12.5	14.6	16.8
Power losses							
25; 25	$P_V(n; M)$	W	6	8	7	18	21
25; 100	$P_V(n; M)$	W	73	79	79	128	134
50; 25	$P_V(n; M)$	W	8	12	10	28	35
50; 50	$P_V(n; M)$	W	22	26	25	51	58
50; 100	$P_V(n; M)$	W	75	84	83	139	149
90; 50	$P_V(n; M)$	W	27	36	32	70	87
90; 100	$P_V(n; M)$	W	77	98	91	159	179
100; 100	$P_V(n; M)$	W	83	103	94	161	185



Motor data

Rated data

Motor			m550-U				
			90/L4	100/M4	100/L4	112/M4	132/M4
Rated power	P_{rated}	kW	2.2	3	4	5.5	7.5
Rated speed	n_{rated}	rpm	1860	1860	1860	1860	1860
Max. speed	n_{max}	rpm	3200	3200	3200	3200	3200
Rated voltage	V_{rated}	V	310	320	310	330	330
Rated current	I_{rated}	A	4.70	6.45	8.60	10.7	14.4
Standstill current	I_0	A	5.10	7.14	9.10	11.2	16.8
Max. current	I_{max}	A	13.4	18.5	24.5	30.7	41.1
Rated torque	M_{rated}	Nm	11.3	15.4	20.5	28.2	38.5
Standstill torque	M_0	Nm	11.9	17.1	21.5	28.8	44.3
Max. torque	M_{max}	Nm	28.4	39.7	54.2	72.4	96.25
Power factor	$\cos \phi$		0.97	0.95	0.96	0.97	0.96
Efficiency							
at 50% P_{rated}	η		0.910	0.938	0.940	0.928	0.955
at 75% P_{rated}	η		0.925	0.922	0.934	0.948	0.946
at 100% P_{rated}	η		0.889	0.899	0.907	0.916	0.924
Moment of inertia	J	kgcm ²	45.9	75.9	97.5	151.8	320.4
Weight	m	kg	16	21.7	25.6	31.8	50.7
Power losses							
25; 25	$P_V(n; M)$	%	1.2	0.7	0.7	0.8	0.5
25; 100	$P_V(n; M)$	%	8.6	7.0	6.4	6.0	4.1
50; 25	$P_V(n; M)$	%	2.0	1.1	1.1	1.4	0.8
50; 50	$P_V(n; M)$	%	3.5	2.5	2.3	2.5	1.5
50; 100	$P_V(n; M)$	%	9.5	7.5	7.0	6.7	4.5
90; 50	$P_V(n; M)$	%	4.9	3.3	3.2	3.9	2.4
90; 100	$P_V(n; M)$	%	9.8	8.6	7.8	6.7	5.9
100; 100	$P_V(n; M)$	%	11.3	8.9	8.2	8.7	6.4
Power losses							
25; 25	$P_V(n; M)$	W	26	22	27	42	34
25; 100	$P_V(n; M)$	W	190	209	256	329	304
50; 25	$P_V(n; M)$	W	43	34	43	77	57
50; 50	$P_V(n; M)$	W	77	74	91	135	115
50; 100	$P_V(n; M)$	W	209	226	278	367	339
90; 50	$P_V(n; M)$	W	108	100	127	212	177
90; 100	$P_V(n; M)$	W	242	250	312	443	409
100; 100	$P_V(n; M)$	W	247.7	266	329	477.3	481



Motor			m550-U
			132/L4
Rated power	P_{rated}	kW	11
Rated speed	n_{rated}	rpm	1860
Max. speed	n_{max}	rpm	3200
Rated voltage	V_{rated}	V	338
Rated current	I_{rated}	A	21.1
Standstill current	I_0	A	21.9
Max. current	I_{max}	A	58.7
Rated torque	M_{rated}	Nm	56.5
Standstill torque	M_0	Nm	57.7
Max. torque	M_{max}	Nm	141.9
Power factor	$\cos \phi$		0.95
Efficiency			
at 50% P_{rated}	η		0.960
at 75% P_{rated}	η		0.947
at 100% P_{rated}	η		0.932
Moment of inertia	J	kgcm ²	416.2
Weight	m	kg	60.8
Power losses			
25; 25	$P_v(n; M)$	%	0.4
25; 100	$P_v(n; M)$	%	3.8
50; 25	$P_v(n; M)$	%	0.7
50; 50	$P_v(n; M)$	%	1.4
50; 100	$P_v(n; M)$	%	4.2
90; 50	$P_v(n; M)$	%	2.1
90; 100	$P_v(n; M)$	%	5.3
100; 100	$P_v(n; M)$	%	5.7
Power losses			
25; 25	$P_v(n; M)$	W	42
25; 100	$P_v(n; M)$	W	422
50; 25	$P_v(n; M)$	W	76
50; 50	$P_v(n; M)$	W	155
50; 100	$P_v(n; M)$	W	464
90; 50	$P_v(n; M)$	W	231
90; 100	$P_v(n; M)$	W	544
100; 100	$P_v(n; M)$	W	623



12 Environmental notes and recycling

Lenze products are intended for use by companies in industrial environments. This means that they are also subject to requirements regarding recycling and disposal. Both mechanical and electrical components such as electric motors, gearboxes, and inverters contain valuable raw materials that can be recycled and reused. Proper recycling is important and sensible from both an economic and ecological perspective.

For information on the proper disposal and legal requirements of our products, please refer to the information on the respective product page on the Internet:

<https://www.lenze.com/en-de/products>

If you require support, please contact your local branch:

<https://www.lenze.com/en-de/company/global-presence>

Note: By disposing of devices and packaging properly, you are helping us to protect the environment and conserve resources.



Further information on Lenze's environmental and climate responsibility and on the topic of energy efficiency can be found on the Internet:

<https://www.lenze.com/en-de/company/sustainability>



13 **Appendix**

13.1 **Good to know**

13.1.1 **Operating modes of the motor**

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
Operation with a constant load until the motor reaches the thermal steady state. The motor may be actuated continuously with its rated power.	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.



Intermittent operation S3	Non-intermittent periodic operation S6
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.	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 Power t Time t_L Idle time θ Temperature	P_V Power loss t_B Load period t_S Cycle duration

13.1.2 Enclosures

The protection class indicates the suitability of a product for specific ambient conditions with regard to humidity as well as the protection against contact and the ingress of foreign particles. The protection classes are classified in the EN IEC 60034-5/EN IEC 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 1	Degree of protection	Code number 2	Degree of protection
0	No protection	0	No protection
1	Protection against the ingress of foreign particles $d > 50$ mm. No protection in 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 the like.	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 or the like.	3	Protection against spraying water, up to 60° from vertical.
4	Protection against granular foreign particles, $d > 1$ mm, keeping away tools, wire or 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).

Lenze SE

Postfach 101352 · 31763 Hameln
Hans-Lenze-Straße 1 · 31855 Aerzen
GERMANY

Hannover HRB 204803
Phone +49 5154 82-0
sales.de@lenze.com
www.lenze.com