Project planning EN

Geared servo motors

Bevel geared servo motor g500-B / MCA

Lenze

Contents

Contents

About this document

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.

NOTICE

Please observe the notes in the following chapters!

▸ Safety instructions 📖 18
▸ Information on mechanical installation 📖 38
▸ Information on electrical installation 📖 39

Further documents

Information and tools with regard to the Lenze products can be found on the Internet: http://www.lenze.com → Download

Notations and conventions

This document uses the following conventions to distinguish different types of information:

Numeric notation			
	Decimal separator	Point	The decimal point is always used. Example: 1 234.56
Warning			
	UL warning	UL	Are used in English and French.
	UR warning	UR	
Text			
	Engineering tools	» «	Software Example: »Engineer«, »EASY Starter«
Icons			
	Page reference	🕮	Reference to another page with additional information Example: 🕮 16 = see page 16
	Documentation reference	ⓚ	Reference to another 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.

Product information

Product description

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

The efficient bevel gearboxes feature high reliable radial forces, closely stepped gear reductions and a low backlash. They are available in a 2-stage and 3-stage design with a torque of up to 4300 Nm and a ratio of up i= 360.

Designs

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

Asynchronous servo motors as a basis for geared motors

In a power range of 0.8 to 20.3 kW, Lenze offers servo motors with a scalable modular design.

The drives are designed for the open-loop or closed-loop controlled servo inverter operation.

These motors feature a high dynamic performance and a wide speed setting range.

Customer benefit

- High dynamic performance thanks to low moments of inertia
- High efficiency
- Wide speed setting range
- Field weakening operation usable
- Space-saving thanks to compact direct attachment to Lenze gearboxes
- Can be used universally for a wide range of machine tasks due to the market-oriented modular system

Fig. 1: MCA13I asynchronous servo motor - g500-B450 bevel gearbox

Identification of the products

Gearbox product name

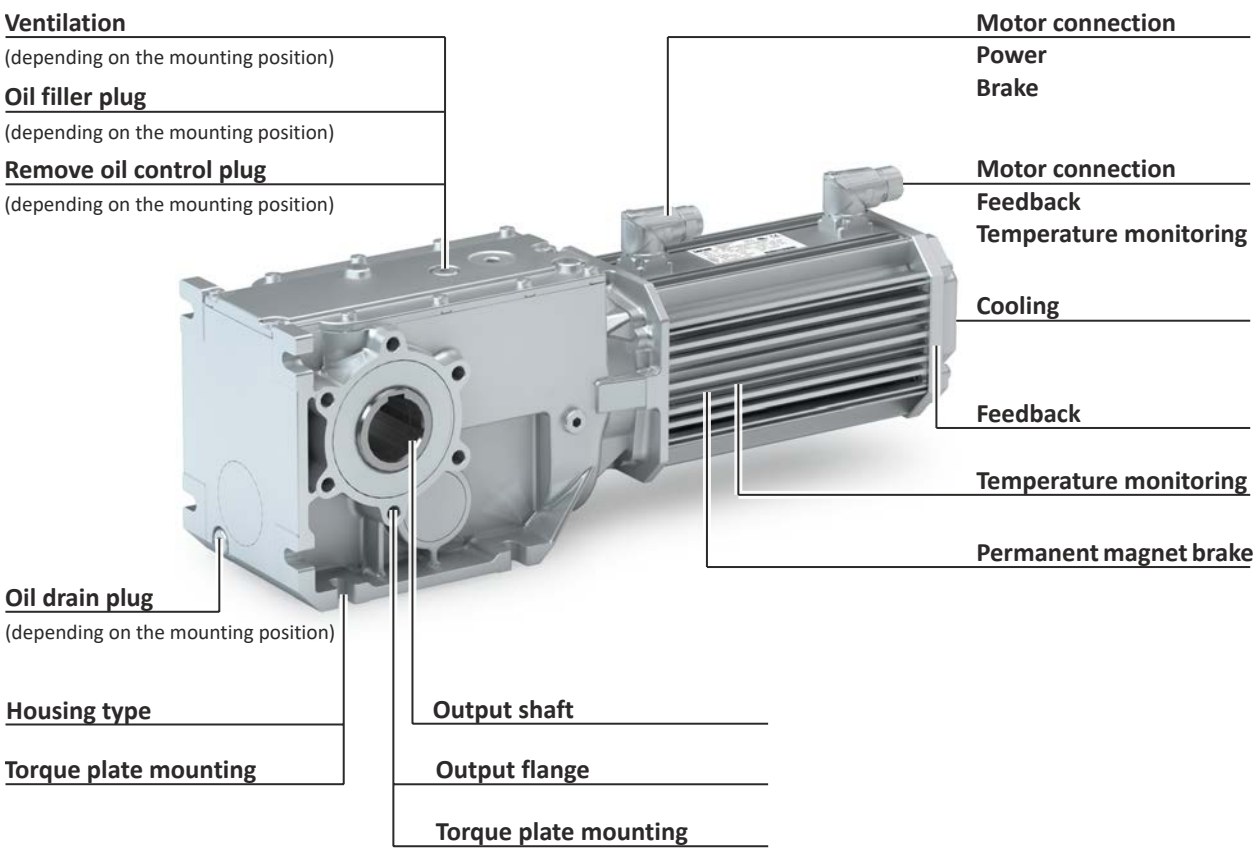
Gearbox type	Product series		Type	Rated torque Nm	Product
Bevel gearbox	g500	-	B	45	g500-B45
				110	g500-B110
				240	g500-B240
				450	g500-B450
				600	g500-B600
				820	g500-B820
				1500	g500-B1500
				2700	g500-B2700
				4300	g500-B4300

Servo motor product name

	Motor				
Example	MCA	10	I	40	-

Meaning	Variant					
Product family		MCA				
Size			10 13 14 17 19 21			
Overall length				I ... X		
Rated speed	rpm x 100				16 ... 42	
Mains voltage	3 x 400 V, IP54/IP65					-

Features


Ventilation
(depending on the mounting position)
Oil filler plug
(depending on the mounting position)
Remove oil control plug
(depending on the mounting position)
Motor connection
Power
Brake
Motor connection
Feedback
Temperature monitoring
Cooling
Feedback
Temperature monitoring
Permanent magnet brake
Oil drain plug
(depending on the mounting position)
Housing type
Torque plate mounting
Output shaft
Output flange
Torque plate mounting

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-B110**	**g500-B240**	**g500-B450**
Min. motor assignment		**MCA10**	**MCA10**	**MCA10**
Max. motor assignment		**MCA13**	**MCS14**	**MCS19**
Technical data				
Max. output torque	Nm	100	140	210
Min. drive torque	Nm	0.8	0.8	0.8
Max. drive torque	Nm	6.3	12	36
Mounting position				
Standard		**A/B/C/D/E/F**		
Combined		AEF		
Colour		**Primed** Painted in RAL colours		
Surface and corrosion protection		**OKS-G** Different types of OKS		
Output shaft				
Solid shaft with featherkey (V)	mm	20 x 40	30 x 60	30 x 60
Hollow shaft with keyway (H)	mm	20/25	30/35	35/40
Hollow shaft with shrink disc (S)	mm	20	30/35	35
Shaft material		**Steel** Stainless steel		
Shaft sealing ring material		**NBR** FKM (Viton)		
Output shaft bearing		**Normal** Reinforced		
Gearbox version		**With foot (HBR)**/(VBR/SBR) With foot and centring (HAR/VAR/SAR) With foot and output flange (HAK/VAK/SAK)		
Output flange (K)	mm	120/160	160/200	200
Lubricant		**Synthetic oil** Food-compatible oil		
Cooling		**Self-ventilated** Forced-ventilated		
Torque plate		At threaded pitch circle	On the housing foot	
Shaft cover		Hoseproof hollow shaft cover Shrink disc cover		
Motor connection		**Connectors** Terminal box		
Permanent magnet holding brake		**Without** Brake design: Standard		
Feedback		**Resolver** Absolute value encoder Incremental encoder		
Temperature monitoring		**Thermal detectors PT1000**		

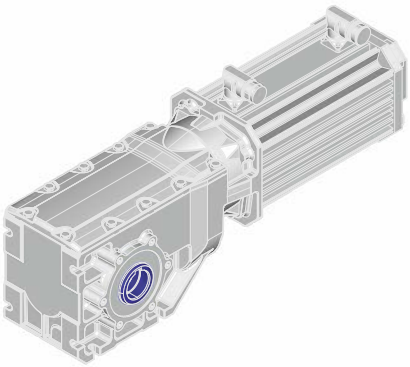
Geared motors from 600 Nm to 4300 Nm

Gearbox		**g500-B600**	**g500-B820**	**g500-B1500**	**g500-B2700**	**g500-B4300**
Min. motor assignment		**MCA10**	**MCA10**	**MCA10**	**MCA14**	**MCA14**
Max. motor assignment		**MCA19**	**MCA19**	**MCA19**	**MCA19**	**MCA19**
Technical data						
Max. output torque	Nm	600	820	1500	2700	4300
Min. drive torque	Nm	0.8	0.8	0.8	5.4	5.4
Max. drive torque	Nm	36	36	36	36	36
Mounting position						
Standard		**A/B/C/D/E/F**				
Combined						
Colour		**Primed** Painted in RAL colours				
Surface and corrosion protection		**OKS-G** Different types of OKS				
Output shaft						
Solid shaft with featherkey (V)	mm	40 x 80	40 x 80	50 x 100	60 x 120	70 x 140
Hollow shaft with keyway (H)	mm	40/45	40/45	50/55	60/70	70/80
Hollow shaft with shrink disc (S)	mm	40	40	50	65	75/80
Shaft material		**Steel** Stainless steel				
Shaft sealing ring material		**NBR** FKM (Viton)				
Output shaft bearing		**Normal** Reinforced				
Gearbox version		**With foot (HBR)**/(VBR/SBR) With foot and centring (HAR/VAR/SAR) With foot and output flange (HAK/VAK/SAK)				
Output flange	mm	200/250	200/250	250/300	350	400/450
Lubricant		**Synthetic oil** Food-compatible oil				
Cooling		**Self-ventilated** Forced-ventilated				
Torque plate		At threaded pitch circle On the housing foot				
Shaft cover		Hoseproof hollow shaft cover Shrink disc cover				
Motor connection		**Connectors** Terminal box				
Permanent magnet holding brake		**Without** Brake design: Standard				
Feedback		**Resolver** Absolute value encoder Incremental encoder				
Temperature monitoring		**Thermal detectors PT1000**				

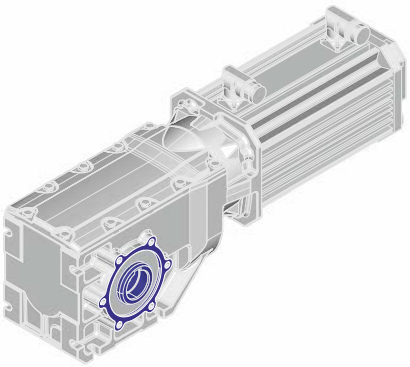
Models at the output

Please observe the available gearbox designs!

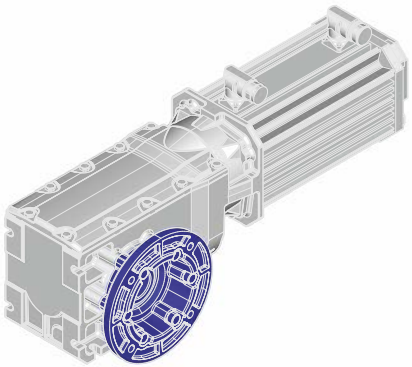
Hollow shaft, with foot



Without centring (HBR)

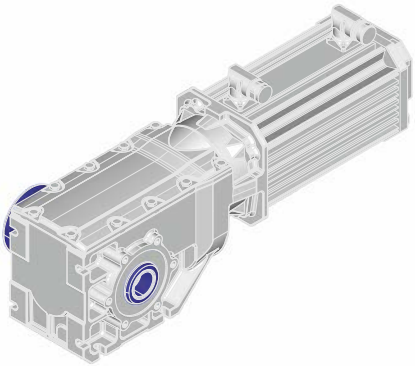


With centring (HAR)

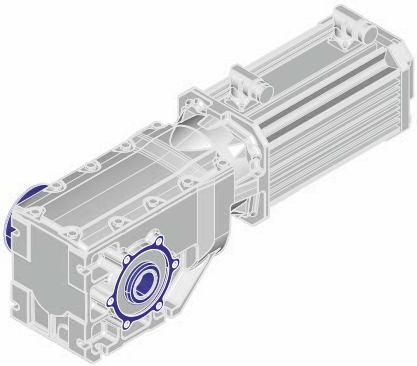


Flange with through holes (HAK)

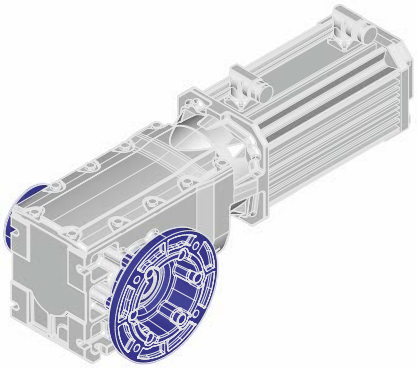
Hollow shaft with shrink disc, with foot



Without centring (SBR)

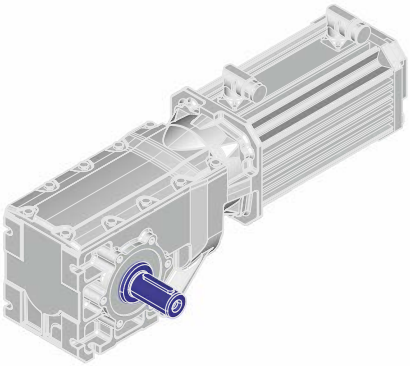


With centring (SAR)

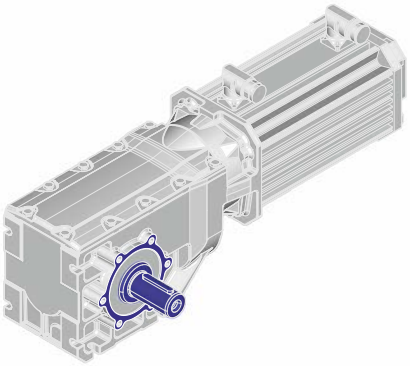


Flange with through holes (SAK)

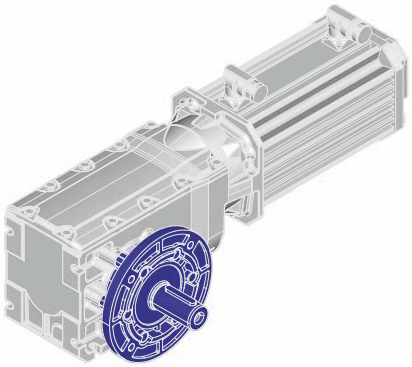
Solid shaft, with foot



Without centring (VBR)



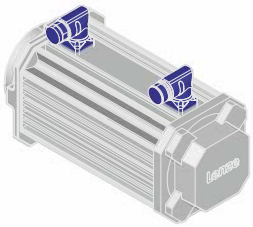
With centring (VAR)



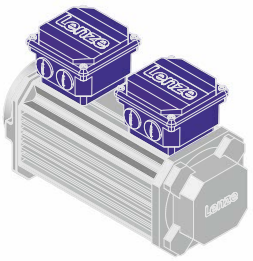
Flange with through holes (VAK)

Models at the output

Motor connection

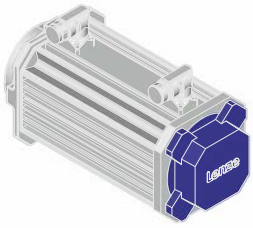


Connectors

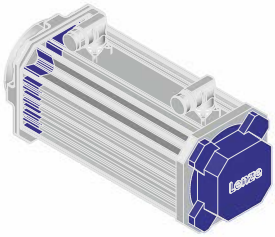


Terminal box

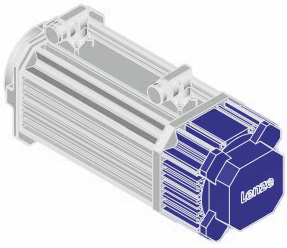
Cooling: self-ventilated



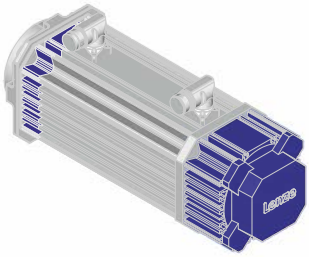
Resolver



Resolver and brake

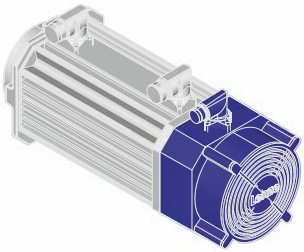


Absolute value/incremental encoder

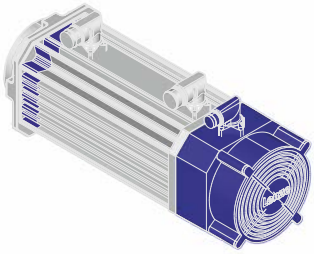


Absolute value/incremental encoder and brake

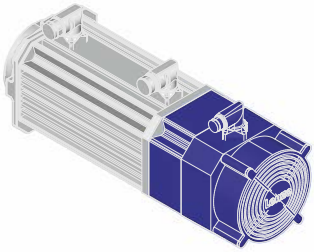
Cooling: forced ventilated



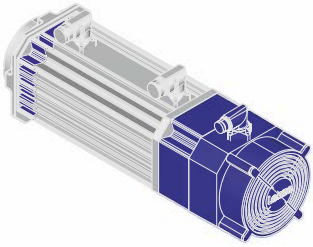
Resolver



Resolver and brake



Absolute value/incremental encoder



Absolute value/incremental encoder and brake

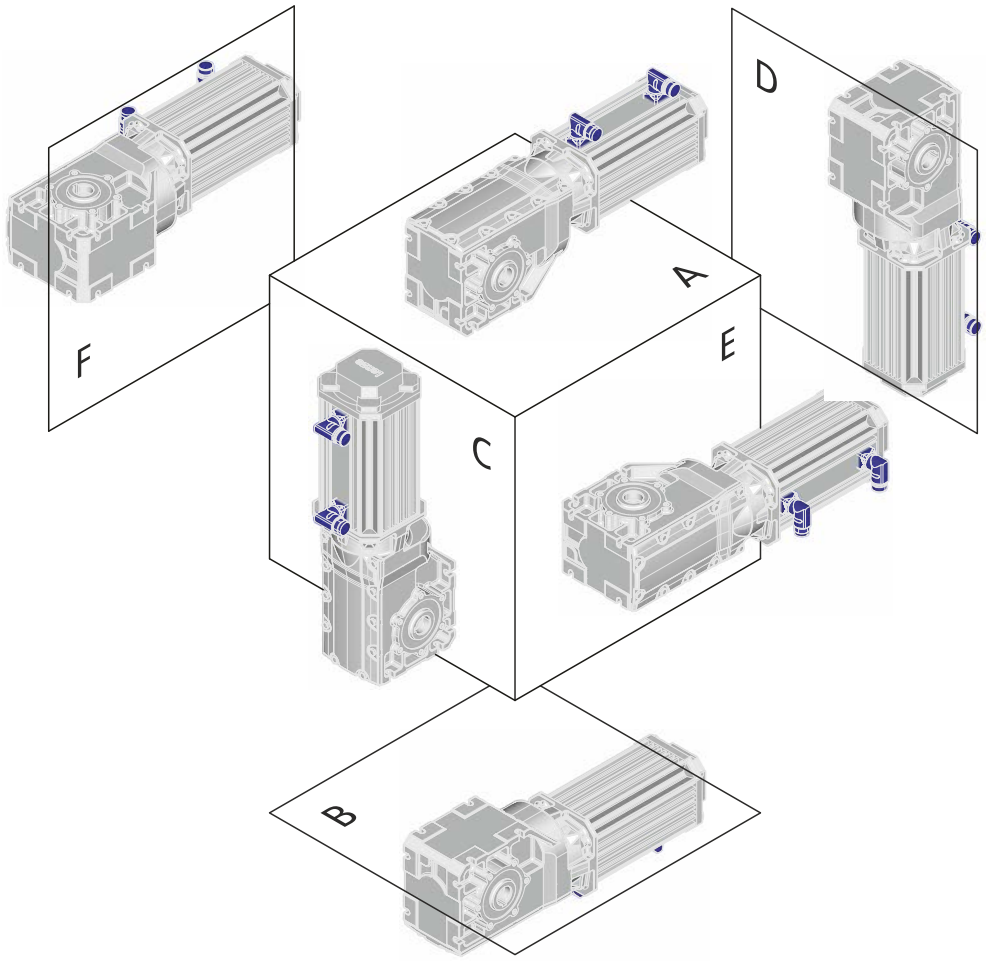
Mounting positions

Geared motors

In the following graphics, the connector in position 2 is colour-coded. If the mounting position (A … F) changes, the connector positions or terminal box positions (2 … 5) are rotated accordingly.

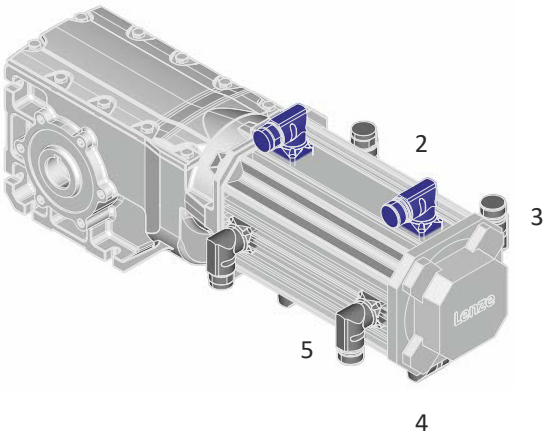
To reduce the number of different versions, the gearboxes can also be ordered with combined mounting positions:

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



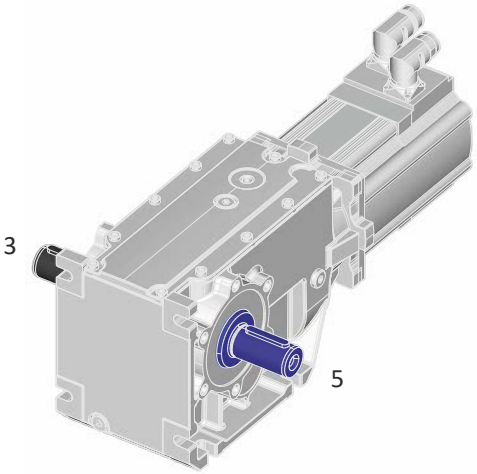
Connector/terminal box

The connector or terminal box position (2 ... 5) must be given as a function of the mounting position.



Solid shaft

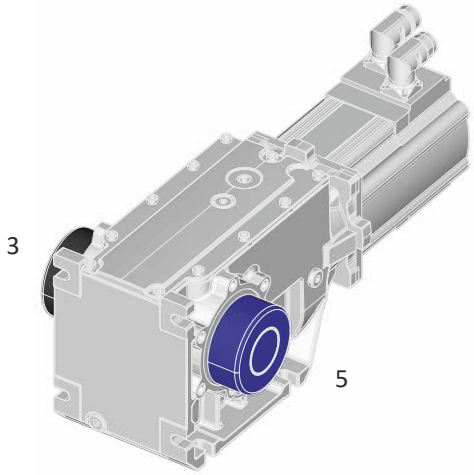
Please specify the shaft position 3 or 5 when ordering.



Shrink disc

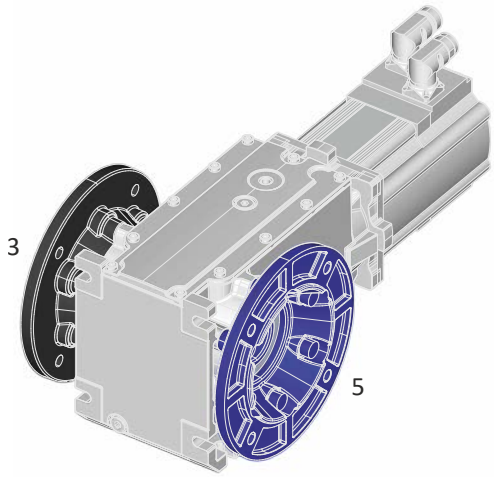
Please specify the shrink disc position 3 or 5 when ordering.

It is not possible to have the flange and the shrink disc in the same position.



Flange

Please specify the flange position 3 or 5 when ordering.



Information on project planning

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

With the» Drive Solution Designer« you can carry out the drive dimensioning process quickly and with top quality. The software contains profound and proven expertise with regard to drive applications and mechatronic drive components.

Please refer to your competent Lenze sales company.

Safety instructions

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

Observe all specifications of the corresponding documentation supplied. This is the precondition for safe and trouble-free operation and for obtaining the product features specified.

Please observe the specific safety information in the other sections!

Basic safety instructions

Personnel

The product must only be used by qualified personnel. IEC 60364 or CENELEC HD 384 define the skills 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.

Process engineering

The procedural notes and circuit details described are only proposals. It is up to the user to check whether they can be adapted to the particular applications. Lenze does not take any responsibility for the suitability of the procedures and circuit proposals described.

Application as directed

- The product must only be actuated under the operating conditions and power limits specified in this documentation.
- The product meets the protection requirements of 2014/35/EU: Low-Voltage Directive.
- The product is not a machine in terms of 2006/42/EU: Machinery Directive.
- Commissioning or starting the operation as directed of a machine with the product is not permitted until it has been ensured that the machine meets the regulations of the EC Directive 2006/42/EU: Machinery Directive; observe EN 60204−1.
- Commissioning or starting operation as directed is only permissible if the EMC Directive 2014/30/EU is complied with.
- The product is not a household appliance, but is only designed as a component for commercial or professional use in terms of EN 61000−3−2.
- The product can be used according to the technical data if drive systems have to comply with categories according to EN 61800−3.
- In residential areas, the product may cause EMC interferences. The operator is responsible for taking interference suppression measures.
- Do not use the built-in brakes as fail-safe brakes. Disruptive factors that cannot be influenced may cause the braking torque to be reduced.
- The product must only be actuated with inverters.

Foreseeable misuse

- Actuate directly on the mains voltage
- Use in potentially explosive areas
- Use in aggressive environments
- Use under water
- Use under radiation
- Use in generator mode

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!

Protection of persons

- The product does not provide safety-related functions.
  - A higher-level safety system must be implemented.
  - Additional monitoring and protective equipment complying with the safety regulations applicable in each case must be used.
- 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 deenergised.
- 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.
- Risk of burns may be caused by hot surfaces!
  - Provide for a protection against accidental contact.
  - Use the personal protective equipment or wait until the components have cooled down completely!
  - 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 danger of unintentional starting or electrical shocks!
- Installed brakes are no fail-safe brakes.
  - The torque may be reduced by disruptive factors that cannot be influenced such as ingressing oil.

Motor protection

- Design with plug:
  - Never disconnect the plug when energised! Otherwise, the plug can be destroyed.
  - Switch off power supply and disable inverter prior to disconnecting the plug.
- Installed thermal detectors are no full protection for the machine.
  - If required, limit the maximum current. Parameterise the inverter so that it will be switched off after seconds of operation with $I > I_N$, especially if there is the danger of blocking.
  - The installed overload protection does not prevent an overload under any conditions.
- The fuses are no motor protection.
  - Use a current-dependent motor protection switch.
  - Use the built-in thermal detectors.
- Too high torques cause a fraction of the motor shaft.
  - The maximum torques according to catalogue must not be exceeded.
- Lateral forces from the motor shaft may occur.
  - Align the shafts of motor and driven machine exactly to each other.

Gearbox protection

- Excessive torques lead to breakage of the gearbox shaft.
  - Do not exceed the maximum output torques specified in this documentation.
- Excessive input speeds lead to increased temperatures.
  - Do not exceed the maximum input speeds specified in this documentation.
- Lateral forces on the gearbox shaft are possible.
  - Ensure the exact alignment of the shafts of the gearbox and the machine driven.
- Geared parts can be damaged due to insufficient lubricant.
  - Install the gearbox with the mounting position(s) specified on the nameplate.
  - When replacing lubricant, use the lubricant type and lubricant amount specified on the nameplate.

Drive dimensioning

NOTICE

The dimensioning is suitable for the operating modes S1, S2, S3 and S6

The following 3 elements are taken into consideration in the dimensioning process :

Drive function

On the basis of the values required for the process that are specified, a drive is selected, for which all operating points are within the speed-torque characteristic curve of the motor.

As a result, a motor with a suitable speed with an inverter with a sufficient maximum current is selected. Further limits (maximum speed, installation height...) are specified in tables.

Mechanical strength

On the basis of the forces and torques which build, a drive is selected that has a sufficient mechanic strength (endurance strength for the periodically occurring torques and fatique strength for the sporadically occurring torques).

Thermal dimensioning

For the inverter, the thermal dimensioning process is carried out on the basis of the continuous inverter current or on the basis of the continuous torque from the motor-inverter combination, which can be reached.

The motor is thermally dimensioned on the basis of the mean speed and the effective torque.

The thermal dimensioning of the gearbox is based on the medium speed and the permanent torque of the motor/gearbox combination. The thermal limit speed is to be understood as a recommendation.

The mean speed of the drive should not exceed the values specified.

If dimensioning processes are complex or reach limit loads, please refer to your Lenze branch office

Operation chart

S1 operation	S2,S3 and S6 operation
↓	↓
Check operating conditions	
↓	
Define required input variables	
↓	
Determine correction factor	
Operating modes and operating time	Operating modes and operating time
Ambient temperature and installation height	Ambient temperature and installation height
Mounting position	Mounting position
	Mean speed utilisation
	Mean speed
↓	
Determine gearbox on the basis of the acting forces	
↓	↓
↓	Determine gearbox efficiency
↓	↓
Determine required gearbox load capacity	
↓	
Calculate required drive power	
↓	
Check and select geared motor	
↓	↓
↓	Check servo motor based on the motor torque characteristic
↓	↓
Final configuration	

Check operating conditions

Check
Approvals
Conformity declarations
Supply voltage
Enclosure
Ambient temperature
Surface protection

▸ Conformities/approvals 41

▸ Environmental conditions 29

Define required input variables

Necessary input variables	Note	Symbol	Unit
Operating time / day		BD	h
Mean speed utilisation of the geared motor	Relating to the load speed n_L		%
Ambient temperature		T_U	°C
Site altitude Amsl		H	m
Radial force		F_{rad}	N
Axial force		F_{ax}	N
Transmission element at the output	Gear wheels, sprockets …		
Effective diameter of the transmission element		d_w	mm
Load torque	Only with S1, S2, S3, and S6 operating modes	M_L	Nm
Load speed	Only with S1, S2, S3, and S6 operating modes	n_L	rpm
Short-time maximum torque	Emergency off, quick stop, occasional high starting duty	$M_{L,max}$	Nm
Runtime with maximum torque		t_L	%

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 📖 247

Ambient temperature and installation height				
Ambient temperature	Installation height amsl			
	≤ 1000 m	≤ 2000 m	≤ 3000 m	≤ 4000 m
	Correction factor			
T_U	k_H	k_H	k_H	k_H
≤ 20 °C	1.15	1.06	0.97	0.89
30 °C	1.07	0.99	0.90	0.83
40 °C	1.00	0.92	0.83	0.77
50 °C	0.92	0.85	0.76	0.71
60 °C	0.83	0.77	0.70	0.65

Mounting position						
Gearbox	Mounting position					
	A	B	C	D	E	F
	Correction factor					
	k_E	k_E	k_E	k_E	k_E	k_E
g500-H	1.00	0.80	0.80	0.70	1.00	1.00
g500-S	1.00	0.80	0.85	0.70	0.90	0.80
g500-B	1.00	0.80	0.80	0.70	0.80	0.80

▸ Mounting positions 📖 14

Mean speed utilisation					
Daily operating time	Mean speed utilisation relating to the load speed n_L				
	100 %	80 %	60 %	50 %	25 %
	Correction factor				
	k_N	k_N	k_N	k_N	k_N
1.0 h	1.29	1.33	1.38	1.42	1.55
2.0 h	1.15	1.20	1.25	1.29	1.42
3.0 h	1.08	1.12	1.17	1.21	1.34
4.0 h	1.02	1.06	1.12	1.15	1.29
5.5 h	0.96	1.00	1.06	1.09	1.22
8.0 h	0.89	0.93	0.99	1.02	1.15
12.0 h	0.81	0.85	0.91	0.94	1.08
16.0 h	0.76	0.80	0.85	0.89	1.02
22.0 h	0.71	0.76	0.81	0.85	0.98
24.0 h	0.68	0.72	0.78	0.81	0.94

Mean speed					
Operating mode S2		Operating mode S3		Operating mode S6	
ED	k_M	ED	k_M	ED	k_M
min		%		%]	
10	0.16	15	0.15	15	1.00
30	0.50	25	0.25	25	
60	1.00	40	0.40	40	
90		60	0.60	60	

Determine product on the basis of the forces

Transmission element			Gear wheels	Sprockets	Toothed belt pulleys (depending on the preloading)	Narrow V-belt (depending on the preloading)
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

▸ Radial forces and axial forces 📖 50

Max. gearbox output torque

Gearbox	Max. output torque	Gearbox	Max. output torque
	$M_{2,GN}$		$M_{2,GN}$
	Nm		Nm
g500-B45	≤ 45	g500-B820	≤ 820
g500-B110	≤ 110	g500-B1500	≤ 1500
g500-B240	≤ 240	g500-B2700	≤ 2700
g500-B450	≤ 450	g500-B4300	≤ 4300
g500-B600	≤ 600		

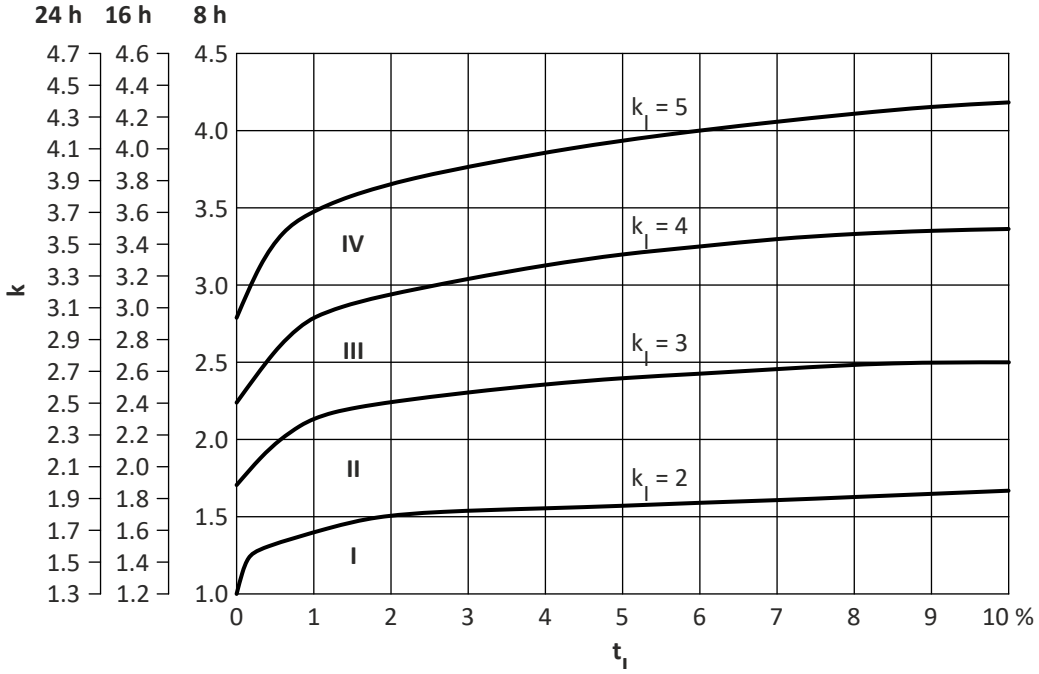
Determine gearbox efficiency

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

Determination of the required gearbox load capacity

Define the required load factor at runtime t_L		
Runtime $t_L \leq 10$ %	Take the load factor k from diagram into account	
Runtime $t_L > 10$ %	Take intensity k_I from calculation into account	
Calculate intensity		
no alternating load	$k_I = M_{L,max} / M_L$	$k_I =$
at alternating load	$k_I = M_{L,max} / M_L \times 1.4$	$k_I =$

Load factor k



Operating mode S1

Calculation of the required drive power			
	Calculation	**Result**	**Unit**
Output torque	$M_r \geq M_L / (k_L \times k_H)$	M_r =	Nm
Output speed	$n_r \geq n_L / k_E$	n_r =	rpm
Drive power	$P_r \geq M_r \times n_r / 9549$	p_r =	kW

Check geared servo motor and determine from the selection table			
	Check	**Selection**	**Unit**
Drive power	$P_1 \geq P_r$	p_1 =	kW
Output torque	$M_2 \geq M_L$	M_2 =	Nm
Output speed	$n_{2,th} \geq n_L$	$n_{2,th}$ =	rpm
Load capacity of the geared motor	$c \geq k$ $c \geq k_I$	c =	
Short-time maximum torque			
no alternating load	$M_{2,max} \geq M_{L,max}$	$M_{2,max}$ =	Nm
at alternating load	$M_{2,max} \times 1.5 \geq M_{L,max}$	$M_{2,max}$ =	Nm
Ratio		i =	
Geared motor		g500-....	

▸ Selection tables 52

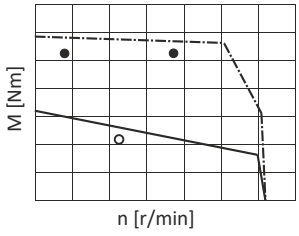
Order data			
	Ratio i	**Geared motor**	
Example	4.600	g500-H100	MCS06C40
Example	4.600	g500-H100	MCA10I40

Operating modes S2, S3, and S6

Calculation of the required drive power			
	Calculation	**Result**	**Unit**
Output torque	$M_r \geq M_L / (k_L \times k_H)$	M_r =	Nm
Output speed	$n_r \geq (n_L \times k_M) / (k_E \times k_N)$	n_r =	rpm
Drive power	$P_r \geq M_r \times n_r / 9549$	p_r =	kW

Check geared servo motor and determine from the selection table			
	Check	**Selection**	**Unit**
Drive power	$P_1 \geq P_r$	p_1 =	kW
Output torque	$M_2 \geq M_L$	M_2 =	Nm
Output speed	$n_2 \geq n_L$	n_2 =	rpm
Load capacity of the geared motor	$c \geq k$ $c \geq k_I$	c =	
Short-time maximum torque			
no alternating load	$M_{2,max} \geq M_{L,max}$	$M_{2,max}$ =	Nm
at alternating load	$M_{2,max} \times 1.5 \geq M_{L,max}$	$M_{2,max}$ =	Nm
Ratio		i =	
Geared motor		g500-....	

▸ Selection tables 📖 52

Check servo motor based on the motor torque characteristic		
Gearbox efficiency	$\eta_G = \eta_{c1} - (c - 1) \times 0.01$	η_G =
All operating points (●)		
Below the maximum torque characteristic of the servo motor-inverter combination, taking $M_{L,max}$ into consideration		$i \times n_L$ $M_L / (i \times \eta_G)$
Thermally effective operating point (○)		$(i \times n_L \times k_M) / (k_E \times k_N)$
Below the S1 torque characteristic of the servo motor		$M_L / (k_L \times k_H \times i \times \eta_G)$

▸ Torque characteristics 📖 236

Order data			
	Ratio i	**Geared motor**	
Example	4.600	g500-H100	MCS06C40
Example	4.600	g500-H100	MCA10I40

Final configuration

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

More information about the final configuration:

▸ The modular system 🕮 10

▸ Product extensions 🕮 206

Environmental conditions

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 that the motors operate reliably even at high air humidity, in outdoor installation or in the presence of atmospheric impurities. Any colour from the "RAL Classic" collection can be chosen for the top coat.

The OKS-XL (extra Large) version requires a check by your responsible Lenze subsidiary.

Surface and corrosion protection	Applications	Product	
		g500-H45 ... H450 g500-S130 ... S660 g500-B45 ... B450	**g500-H600 ... H3000 g500-S950 ... S4500 g500-B600 ... B4300**
OKS-G (primed)	• Dependent on subsequent top coat applied	Standard	Standard
OKS-S (small)	• Standard applications • Internal installation in heated buildings • Air humidity up to 90%	Optional	Optional
OKS-M (medium)	• Internal installation in non-heated buildings • Covered, protected external installation • Air humidity up to 95 %	Optional	Optional
OKS-L (large)	• External installation • Air humidity above 95 % • Chemical industrial plants • Food industry		
OKS-XL (extra Large)	• External installation • Air humidity above 95 % • Chemical industrial plants • Food industry • Coastal areas with moderate salinity		

Surface and corrosion protection	Corrosivity category	Surface coating	Colour	Coating thickness
	DIN EN ISO 12944-2	**Design**		
OKS-G (primed)		• 2K PUR priming coat		60 ... 90 µm
OKS-S (small)	Comparable to C1	• 2K-PUR top coat	• Standard: RAL 7012 • Optional: RAL Classic	80 ... 120 µm
OKS-M (medium)	Comparable to C2	• 2K PUR priming coat • 2K-PUR top coat		110 ... 160 µm
OKS-L (large)	Comparable to C3			140 ... 200 µm
OKS-XL (extra Large)	Comparable to C4	• 2K-EP priming coat (two times) • 2K-PUR top coat		160 ... 240 µm

Lubricants

In case of ambient temperatures < -20 °C or > +40 °C, please contact your responsible Lenze sales company

The following gearboxes are lubricated for life:

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

Recommended lubricants:

Lubricant	CLP HC 220	CLP HC 320	CLP HC 220 USDA H1
Specification	Synthetic oil (polyalfaolefins basis)		
Changing interval			
Operating hours	25000	25000	16000
Not later than after	4 years	4 years	3 years
At an oil temperature of	70 ... 80 C°		
Fuchs	Renolin Unisyn CLP 220 XT 220	Renolin Unisyn CLP 320 XT 320	Cassida Fluid GL 220
Klüber	Klübersynth GEM4-220 N	Klübersynth GEM4-320 N	Klüberoil 4 UH1-220 N
Shell	Shell Omala S4 GX HD 220	Shell Omala S4 GX HD 320	

Free spaces

Ventilation

For the gearboxes g500-B110 … B240, no ventilation measures are required.

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

From g500-B450 onwards, the gearboxes are generally outfitted with breather elements.

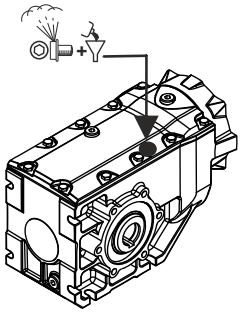
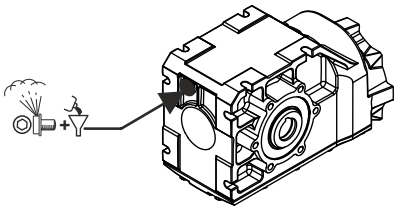
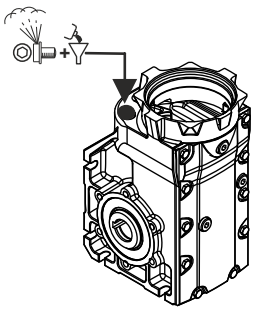
Gearbox in combined mounting position

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

- g500-B110 ... B450 in 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.

g500-B240

Mounting position A	Mounting position B	Mounting position C
Filling and ventilation		
		
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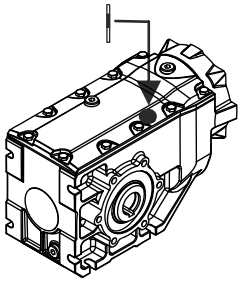	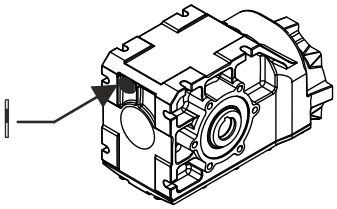	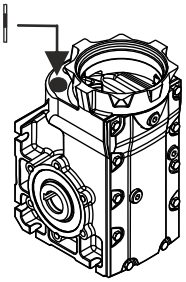
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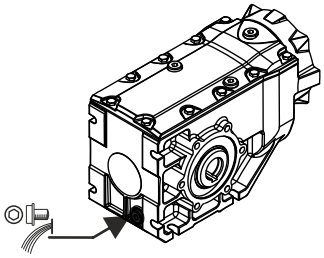
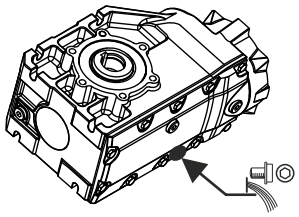
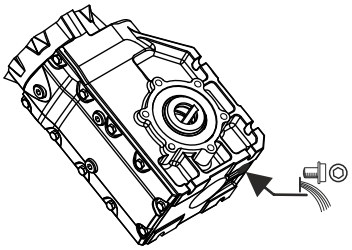
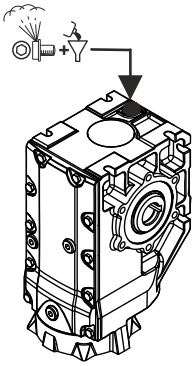
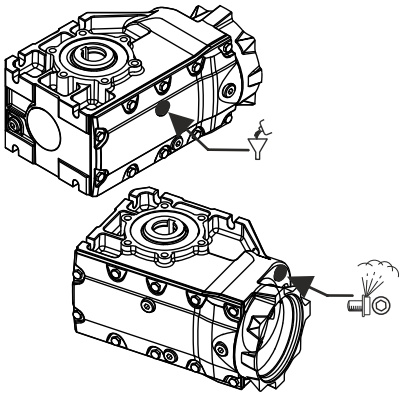
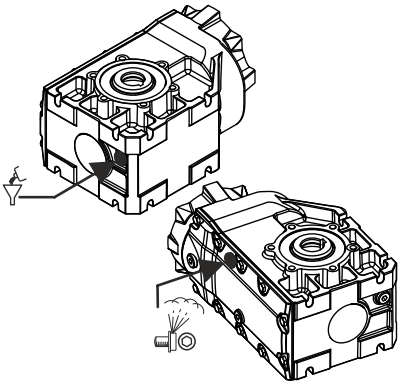
		

Mounting position D	Mounting position E	Mounting position F
Filling and ventilation		
		
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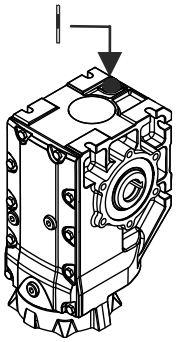	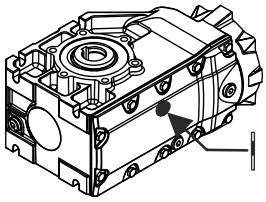	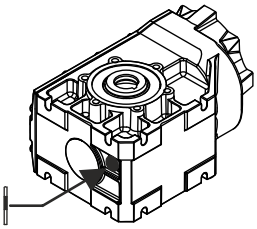
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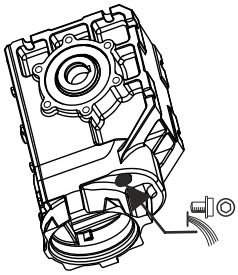
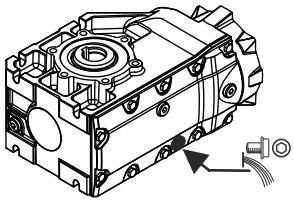
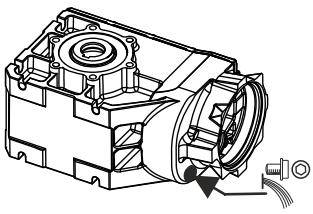
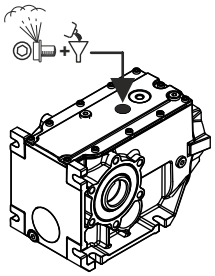
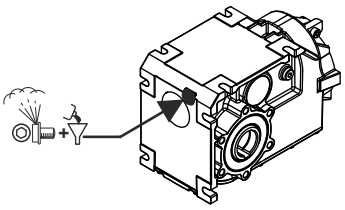
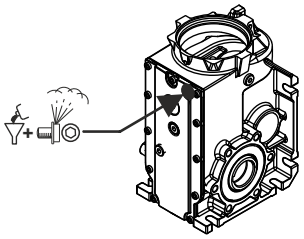
		

g500-B450

Mounting position A	Mounting position B	Mounting position C
Filling and ventilation		
		
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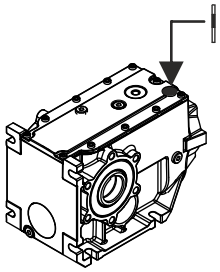	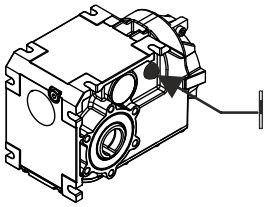	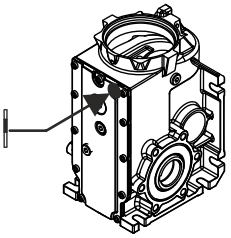
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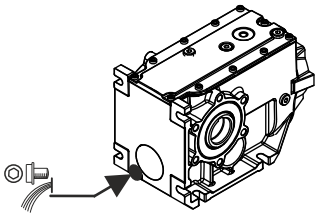
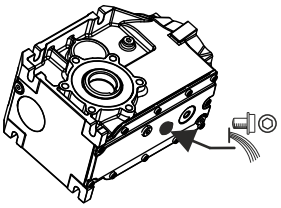
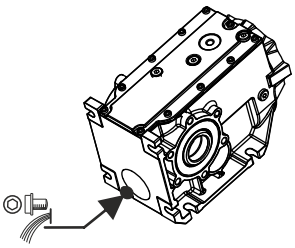
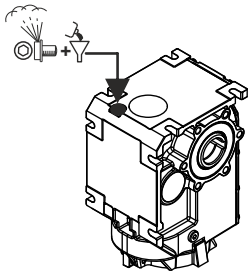
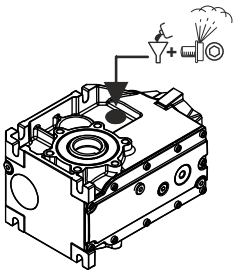
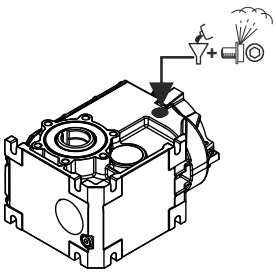
		

Mounting position D	Mounting position E	Mounting position F
Filling and ventilation		
		
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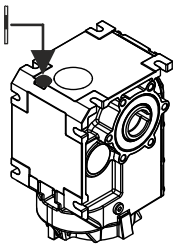
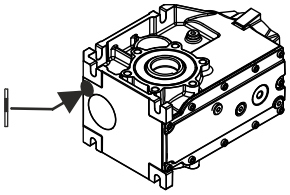
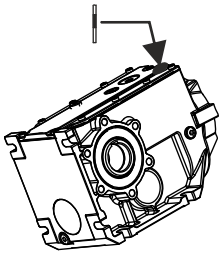
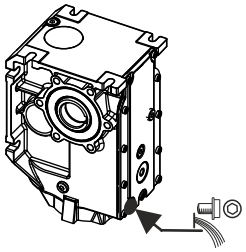
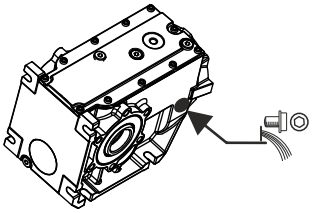
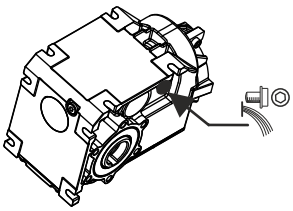
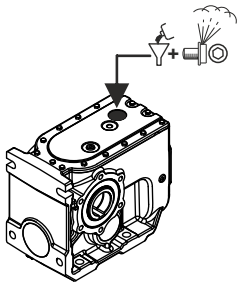
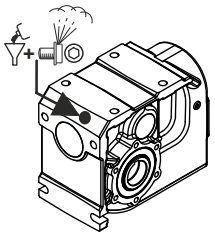
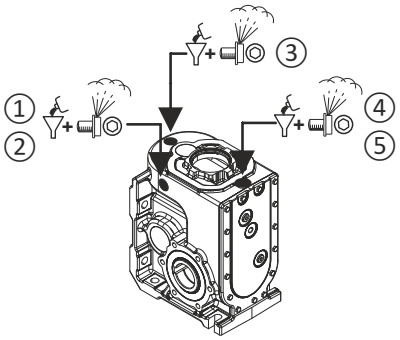
		
Drain		
		

g500-B600 ... B4300

Mounting position A	Mounting position B	Mounting position C
Filling and ventilation		
		
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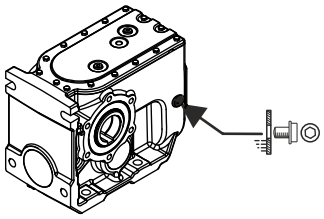
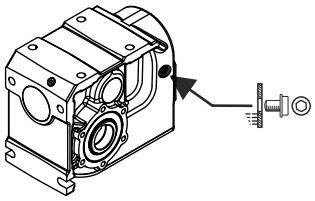
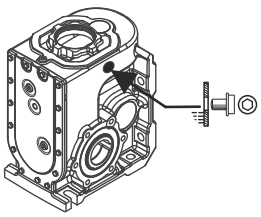
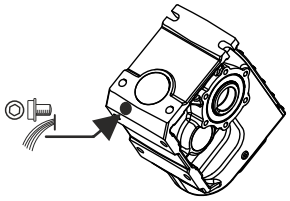
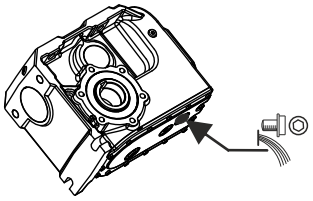
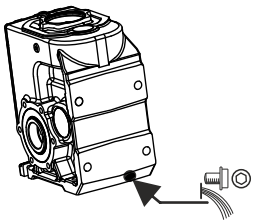
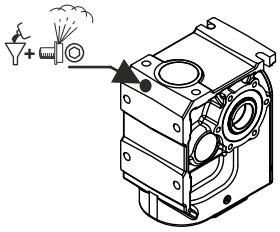
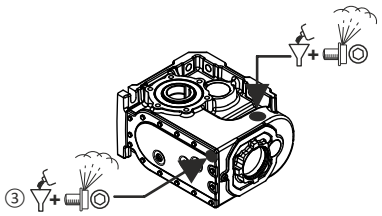
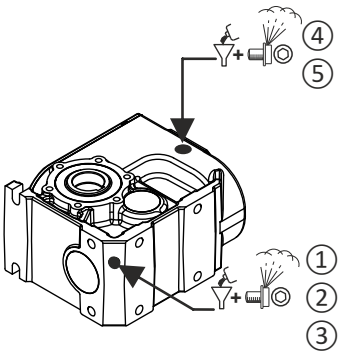
		
Drain		
		

① g500-B600
② g500-B820
③ g500-B1500
④ g500-B2700
⑤ g500-B4300

Mounting position D	Mounting position E	Mounting position F
Filling and ventilation		
		
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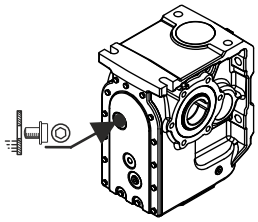	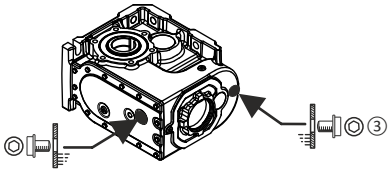	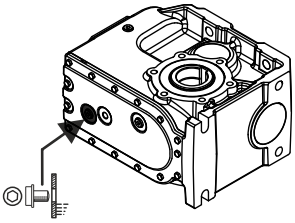
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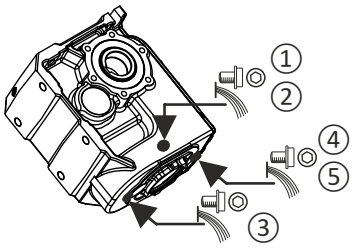
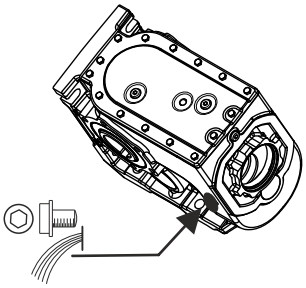
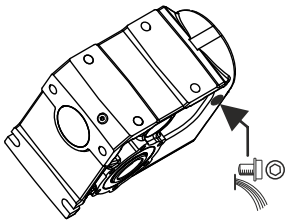
		

① g500-B600
② g500-B820
③ g500-B1500
④ g500-B2700
⑤ g500-B4300

Information on mechanical installation

Important notes

- You must install the product according to specifications in the chapter "standard and operating" conditions.

  ▸ Standards and operating conditions 📖 41
- The technical data and the data regarding the supply conditions can be found on the nameplate and in this documentation.
- Observe the information relating to the surface and corrosion protection.

  ▸ Environmental conditions 📖 29
- Ambient media − especially chemically aggressive ones − may damage shaft sealing rings, lacquers and plastics. If required, contact your responsible Lenze subsidiary.

NOTICE

Bearing damage caused by unbalance!

Shafts with keyway are balanced with a half featherkey!

▸ Balance transmission elements with a half featherkey!

Transport

- Ensure appropriate handling.
- Make sure that all component parts are safely 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 the transport.
- Avoid electrostatic discharge on electronic components and contacts.
- Avoid impacts.
- Check the carrying capacity of the hoists and load handling devices. The weights can be obtained from the shipping documents.
- Secure the load against tipping and falling down.
- Standing under a suspended load is forbidden.

Installation

- Avoid resonances with the rotational frequency and double mains frequency.
- 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.

Information on electrical installation

Important notes

⚠ DANGER!

Hazardous voltage!

On the power connections even when disconnected from the mains: residual voltage >60 V!

- ▸ Disconnect the product from the mains and wait until the motor is at a standstill.
- ▸ Make sure that the product is safely isolated from supply!

- When working on energised products, comply with the applicable national accident prevention regulations.
- Carry out the electrical installation in compliance with the relevant 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.

Preparation

The notes for the electrical connection can be found in the enclosed mounting instructions.

EMC-compliant wiring

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

Technical data

Notes regarding the given data

Catalog data

The power, torque, and speed values specified in the configuration are rounded values and apply for

- Operating time per day = 8 hrs (100 % ED)
- Duty class up to 10 switching operations per hr
- T_U = 40 °C
- Site altitude ≤ 1000 m above sea level
- The selection tables indicate the mechanically permissible power levels and torques.
- The ratings apply to the operating mode S1 (acc. to EN 60034).

NOTICE

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

▶ In case of extreme operating conditions, please contact your responsible Lenze sales company.

Thermal power limit

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

NOTICE

A thermal check with the Drive Solution Designer (DSD) contacting the Lenze office responsible for you is required if

▶ the input speed n_1 > 1500 rpm is exceeded in case of the gearbox ratios given in the following.

▶ The drive speeds given in the following are exceeded as a function of the mounting position. Temporarily up to 5 min, 30 % higher speeds are permissible.

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

Motor	Mounting position A	Mounting position B, E, F	Mounting position C, D
MCA10 to 14	4000 r/min	3500 rpm	3000 r/min
MCA17 ... 21	3000 r/min	2600 rpm	1500 r/min

Possible ways of extending the application area

- Shaft sealing ring made of FKM material/Viton (option)
- Reducing the lubricant amount (after consultation with Lenze)
- Cooling the geared motor by means of air convection on the machine/ system

Standards and operating conditions

Conformities/approvals

Conformity		
CE	2014/35/EU	Low-Voltage Directive
	2014/30/EU	EMC Directive (reference: CE-typical drive system)
EAC	TR TC 004/2011	Eurasian conformity: safety of low voltage equipment
	TP TC 020/2011	Eurasian conformity: electromagnetic compatibility of technical means
Approval		
cURus	UL 1004-1 UL 1004-6	for USA and Canada (requirements of the CSA 22.2 No.100) Industrial Control Equipment, Lenze File No. E210321
UkrSepro		for Ukraine

Protection of persons and device protection

Enclosure		
IP54	EN 60034-5	Self-ventilated: MCA10 ... MCA21 Forced ventilated: MCA13 ... MCA21
IP65	EN 60034-5	Self-ventilated: MCA10 ... MCA21
Temperature class		
F (155 °C)	EN 60034-1	
Max. voltage load		
Limit curve A	IEC/TS 60034-25:2007	
IVIC C/B/B@500V	IEC 60034-18-41	

EMC data

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

Environmental conditions

Climate		
1K3 (-20 °C ... +60 °C)	EN 60721-3-1	Storage, < 3 months
1K3 (-20 °C ... +40 °C)	EN 60721-3-1	Storage, > 3 months
2K3 (-20 °C ... +70 °C)	EN 60721-3-2	Transport
3K3 (0 °C ... -+40 °C)	EN 60721-3-3	operation
Site altitude		
0 … 1000 m a.m.s.l.		Without power reduction
1000 … 4000 m a.m.s.l.		Reduce rated output current by 5 %/1000 m

Data overview

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

The data given for speed, torque and power are valid if the

- input speed n_1= 1400 rpm
- Application factor c= 1.0

The data for the max. radial force refer to

- Gearbox design: Solid shaft without flange
- output shaft bearing: normal bearing
- Application factor c= 1.3

Further designs ▸ Radial forces and axial forces 📖 50

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

The rated torque can be gathered from the last digits of the product name e.g. g500-B110 (110 Nm).

g500-B110, 2-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
270	69	2.05	5.185	140	27	2450	21	0.80	2.20
235	72	1.86	5.963	161	27	2530	21	0.80	2.20
197	77	1.67	7.111	64	9	2620	20	0.80	2.20
171	81	1.53	8.178	368	45	2670	20	0.80	2.20
154	84	1.42	9.101	1720	189	2730	20	0.80	2.20
134	89	1.31	10.466	1978	189	2830	20	0.80	2.20
122	90	1.21	11.449	2576	225	2890	20	0.80	1.70
110	90	1.09	12.698	800	63	2950	20	0.80	1.70
96	90	0.95	14.603	920	63	3000	20	0.80	1.70
90	92	0.91	15.556	140	9	3000	20	0.80	1.70
78	96	0.83	17.889	161	9	3000	20	0.80	1.70
72	100	0.79	19.556	176	9	3000	20	0.80	0.80
62	104	0.71	22.489	1012	45	3000	19	0.80	0.80
56	108	0.66	25.185	680	27	3000	20	0.80	0.80
48	110	0.59	28.963	782	27	3000	19	0.80	0.80
37	106	0.44	37.400	187	5	3000	19	0.80	0.80

g500-B240, 2-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
393	138	5.97	3.565	385	108	3030	17	1.40	3.90
286	147	4.64	4.889	44	9	3450	17	1.40	3.90
224	156	3.85	6.257	2365	378	3860	17	1.40	3.90
203	179	4.01	6.883	413	60	4070	13	1.40	3.90
179	187	3.69	7.817	469	60	4300	13	1.40	3.90
148	191	3.12	9.440	236	25	4600	13	1.40	3.90
131	204	2.94	10.720	268	25	4740	13	1.40	3.90
116	208	2.66	12.081	2537	210	4860	13	1.40	3.90
102	217	2.44	13.719	2881	210	4980	13	1.40	3.90
93	223	2.29	15.008	1876	125	5180	13	0.80	3.90
83	240	2.20	16.857	118	7	5440	13	0.80	3.90
73	240	1.93	19.143	134	7	5710	12	0.80	2.30
68	240	1.79	20.650	413	20	5860	13	0.80	2.30
60	240	1.58	23.450	469	20	6070	12	0.80	2.30
52	240	1.38	26.878	2419	90	6230	13	0.80	2.20
46	240	1.21	30.522	2747	90	6370	12	0.80	1.70
42	240	1.11	33.433	1003	30	6500	13	0.80	1.70
37	240	0.98	37.967	1139	30	6500	12	0.80	1.70
32	240	0.86	43.267	649	15	6500	12	0.80	0.80
29	240	0.75	49.133	737	15	6500	12	0.80	0.80
27	233	0.68	52.510	5251	100	6500	12	0.80	0.80
24	240	0.62	59.630	5963	100	6500	12	0.80	0.80

g500-B240, 3-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
21	240	0.56	68.459	43129	630	6500	13	0.80	0.80
18	240	0.49	77.741	48977	630	6500	13	0.80	0.80
16	240	0.43	87.563	11033	126	6500	13	0.80	0.80
14	240	0.38	99.437	12529	126	6500	13	0.80	0.80
12	240	0.33	113.673	17051	150	6500	13	0.80	0.80

g500-B450, 3-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
280	280	8.64	5.002	2401	480	3760	21	2.10	13.20
204	308	6.93	6.860	343	50	4030	21	2.10	6.90
150	368	6.10	9.315	3577	384	4370	15	1.40	6.90
136	384	5.74	10.328	2107	204	4500	14	1.40	6.90
110	404	4.88	12.775	511	40	4830	15	1.40	6.90
99	422	4.60	14.165	1204	85	5010	14	1.40	6.90
86	434	4.10	16.349	3139	192	5280	15	1.40	6.90
78	446	3.85	17.885	3577	200	5470	15	1.40	6.90
71	450	3.50	19.831	8428	425	5710	14	1.40	4.10
61	450	3.04	22.813	365	16	6060	15	1.40	4.10
55	450	2.75	25.294	430	17	6340	14	1.40	4.10
50	450	2.49	27.945	3577	128	6640	15	1.40	3.90
45	450	2.24	30.985	2107	68	6960	14	0.80	3.90
39	450	1.91	36.373	20951	576	7520	14	0.80	2.20
35	450	1.72	40.330	12341	306	7800	14	0.80	2.20
31	450	1.54	45.245	8687	192	7800	14	0.80	2.20
28	450	1.38	50.167	301	6	7800	14	0.80	2.20
25	450	1.24	56.154	730	13	7800	13	0.80	2.30
23	450	1.12	62.262	13760	221	7800	12	0.80	2.30
20	450	1.01	68.788	3577	52	7800	13	0.80	2.30
18	450	0.91	76.271	16856	221	7800	12	0.80	1.70
16	450	0.78	89.534	20951	234	7800	13	0.80	1.70
14	450	0.70	99.274	197456	1989	7800	12	0.80	0.80
13	450	0.62	111.372	8687	78	7800	13	0.80	0.80
11	450	0.56	123.487	4816	39	7800	12	0.80	0.80
10	450	0.48	144.128	5621	39	7800	13	0.80	0.80
9	450	0.43	159.807	105952	663	7800	12	0.80	0.80
8	450	0.40	174.919	45479	260	7800	13	0.80	0.80
7	450	0.36	193.948	214312	1105	7800	12	0.80	0.80

g500-B600, 3-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
276	376	11.45	5.067	6293	1242	4600	21	3.80	13.20
202	398	8.84	6.949	7192	1035	5000	19	2.10	13.20
184	462	9.36	7.617	15631	2052	5100	17	2.10	13.20
130	542	7.78	10.741	290	27	5600	15	2.10	13.20
105	553	6.38	13.369	13717	1026	6500	17	1.40	6.90
95	600	6.29	14.730	928	63	6900	14	1.40	6.90
74	600	4.91	18.851	24940	1323	7500	14	1.40	6.90
68	600	4.49	20.622	928	45	7800	14	1.40	6.90
61	600	4.05	22.852	15631	684	8100	16	1.40	6.90
55	600	3.65	25.347	2408	95	8300	14	1.40	5.20
54	600	3.55	26.061	860	33	8400	13	1.40	5.20
47	600	3.11	29.744	91553	3078	8700	16	1.40	4.10
43	600	2.85	32.439	1849	57	8900	14	1.40	5.20
39	600	2.59	35.740	2752	77	9000	13	1.40	5.20
38	600	2.50	36.999	37961	1026	9000	16	0.80	3.90
33	600	2.21	41.940	23780	567	9000	14	1.40	4.10
31	600	2.02	45.739	73960	1617	9000	13	1.40	4.10
28	600	1.85	50.036	2752	55	9000	13	1.40	4.10
25	600	1.67	55.447	2107	38	9000	14	1.40	2.60
22	600	1.45	63.822	34400	539	9000	13	0.80	2.30
21	600	1.37	67.513	12760	189	9000	14	0.80	2.20
19	600	1.28	72.170	12341	171	9000	14	0.80	2.30
18	600	1.18	78.182	860	11	9000	13	1.40	2.30
17	600	1.13	81.937	5162	63	9000	14	0.80	2.20
16	600	1.03	89.772	5117	57	9000	14	0.80	2.30
14	600	0.91	101.760	70520	693	9000	13	0.80	1.70
12	600	0.80	116.175	6622	57	9000	14	0.80	1.70
11	600	0.73	126.580	29240	231	9000	12	0.80	1.70
10	600	0.66	140.995	26789	190	9000	14	0.80	1.70
9	600	0.57	163.810	3440	21	9000	12	0.80	0.80
8	600	0.52	178.224	13545	76	9000	14	0.80	0.80
7	600	0.47	198.805	15308	77	9000	12	0.80	0.80
6	600	0.37	251.299	19350	77	9000	12	0.80	0.80

g500-B820, 3-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
282	312	9.71	4.958	119	24	9800	21	2.10	13.20
206	391	8.88	6.800	34	5	10200	20	2.10	13.20
184	424	8.60	7.618	259	34	10700	17	2.10	13.20
164	459	8.32	8.517	511	60	11000	16	2.10	13.20
147	496	8.04	9.520	238	25	11000	20	2.10	13.20
134	528	7.81	10.447	888	85	11000	16	2.10	13.20
120	569	7.52	11.680	292	25	11000	15	2.10	13.20
115	544	6.92	12.143	85	7	11000	19	2.10	6.90
105	619	7.15	13.370	1591	119	11000	16	2.10	13.20
96	653	6.89	14.626	6216	425	11000	16	2.10	6.90
86	708	6.68	16.352	2044	125	11000	16	2.10	6.90
75	747	6.18	18.655	2220	119	11000	16	1.40	6.90
67	820	6.07	20.857	146	7	11000	16	1.40	6.90
61	820	5.54	22.853	777	34	11000	15	1.40	6.90
55	820	4.95	25.550	511	20	11000	15	1.40	6.90
53	820	4.81	26.324	8687	330	11000	12	1.40	6.90
47	820	4.25	29.745	1517	51	11000	15	1.40	6.90
43	820	3.92	32.291	1776	55	11000	13	1.40	6.90
39	820	3.51	36.102	9928	275	11000	14	1.40	5.20
38	820	3.42	37.000	37	1	11000	12	0.80	3.90
34	820	3.06	41.325	3182	77	11000	13	1.40	5.20
31	820	2.80	45.207	12432	275	11000	13	1.40	5.20
28	820	2.50	50.543	69496	1375	11000	12	1.40	5.20
24	820	2.19	57.662	4440	77	11000	13	1.40	5.20
22	820	1.96	64.468	4964	77	11000	12	0.80	4.10
20	820	1.79	70.636	777	11	11000	13	1.40	4.10
18	820	1.60	78.973	8687	110	11000	12	1.40	2.30
15	820	1.38	91.939	3034	33	11000	13	0.80	2.30
14	820	1.23	102.790	50881	495	11000	12	0.80	2.30
12	820	1.11	114.364	1258	11	11000	13	0.80	2.30
11	820	0.99	127.861	21097	165	11000	12	0.80	2.30
10	820	0.86	148.000	148	1	11000	13	0.80	1.70
9	820	0.76	165.467	2482	15	11000	12	0.80	1.70
8	820	0.70	179.618	9879	55	11000	13	0.80	1.70
7	820	0.63	200.816	110449	550	11000	12	0.80	0.80
6	820	0.56	227.045	4995	22	11000	12	0.80	0.80
6	820	0.50	253.841	11169	44	11000	12	0.80	0.80

g500-B1500, 3-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
204	837	18.82	6.866	1792	261	12000	16	3.80	20.30
147	1006	16.32	9.516	1456	153	13000	15	3.80	20.30
128	1330	18.83	10.902	36992	3393	14000	12	3.80	20.30
117	1461	18.82	11.985	3128	261	15000	12	3.80	20.30
107	1118	13.15	13.118	50176	3825	15500	15	3.80	20.30
93	1500	15.32	15.111	136	9	16000	12	3.80	20.30
84	1500	13.94	16.611	299	18	16000	11	3.80	20.30
75	1500	12.45	18.598	2176	117	16000	12	3.80	20.30
69	1500	11.32	20.444	184	9	16000	11	3.80	20.30
61	1500	10.11	22.898	5152	225	16000	11	2.10	13.20
58	1500	9.66	23.973	99416	4147	16000	11	2.60	13.20
53	1500	8.79	26.353	16813	638	16000	10	2.60	13.20
48	1500	7.93	29.206	1840	63	16000	11	2.10	13.20
43	1500	7.11	32.547	3808	117	16000	11	2.10	13.20
39	1500	6.47	35.778	322	9	16000	11	1.40	6.90
38	1500	6.34	36.526	12857	352	16000	10	2.60	7.40
34	1500	5.66	40.895	5848	143	16000	11	1.40	7.40
31	1500	5.15	44.955	989	22	16000	10	1.40	7.40
30	1500	4.97	46.568	3772	81	16000	11	1.40	6.90
27	1500	4.46	51.920	18224	351	16000	11	1.40	6.90
25	1500	4.06	57.074	1541	27	16000	11	1.40	6.90
24	1500	3.96	58.422	58480	1001	16000	10	1.40	6.90
22	1500	3.61	64.221	4945	77	16000	10	1.40	6.90
20	1500	3.24	71.566	10234	143	16000	10	1.40	5.20
19	1500	3.09	74.963	2024	27	16000	11	1.40	3.90
17	1500	2.80	82.762	48416	585	16000	11	0.80	3.90
15	1500	2.54	90.978	4094	45	16000	11	0.80	3.90
15	1500	2.49	93.150	119884	1287	16000	10	1.40	5.20
14	1500	2.26	102.396	40549	396	16000	10	1.40	5.20
12	1500	2.03	114.166	48977	429	16000	10	1.40	4.10
11	1500	1.84	125.498	66263	528	16000	10	1.40	4.10
9	1500	1.54	149.949	5848	39	16000	10	0.80	2.30
9	1500	1.40	164.833	989	6	16000	10	0.80	2.30
8	1500	1.27	181.983	130118	715	16000	10	0.80	2.30
7	1500	1.16	200.048	88021	440	16000	10	0.80	2.30
6	1500	1.01	230.035	32895	143	16000	10	0.80	2.20
6	1500	0.92	252.869	44505	176	16000	10	0.80	1.70

g500-B2700, 3-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
202	1446	32.26	6.918	28917	4180	13000	15	6.40	20.30
159	1528	26.82	8.793	41769	4750	14000	14	6.40	20.30
120	2212	29.15	11.713	2448	209	16000	10	6.40	20.30
109	2262	27.14	12.863	18819	1463	16500	10	6.40	20.30
94	2380	24.67	14.888	7072	475	17000	10	6.40	20.30
86	2429	22.93	16.351	54366	3325	18000	9	6.40	20.30
72	2579	20.37	19.542	23392	1197	19000	10	3.80	20.30
63	2684	18.60	22.269	3808	171	20100	10	3.80	20.30
57	2700	17.04	24.456	1394	57	20500	9	3.80	20.30
52	2700	15.54	26.814	32096	1197	21000	10	3.80	20.30
48	2700	14.15	29.447	82246	2793	21500	9	3.80	20.30
43	2700	12.68	32.873	16864	513	22000	10	3.80	20.30
39	2700	11.54	36.102	43214	1197	22700	9	3.80	20.30
33	2700	9.74	42.772	8084	189	23000	9	3.80	20.30
30	2700	8.87	46.973	82861	1764	24000	8	2.60	13.20
29	2700	8.52	48.912	2788	57	25000	9	2.10	13.20
26	2700	7.71	54.082	9248	171	26000	10	2.10	13.20
24	2700	7.02	59.393	23698	399	27500	9	2.10	13.20
22	2700	6.47	64.452	113693	1764	27500	8	2.10	13.20
20	2700	5.79	71.951	5828	81	27500	9	2.60	7.40
18	2700	5.42	76.862	30668	399	27500	9	1.40	6.90
17	2700	4.91	84.940	24208	285	27500	10	1.40	6.90
15	2700	4.47	93.283	62033	665	27500	9	1.40	6.90
14	2700	4.28	97.481	2632	27	27500	9	1.40	6.90
13	2700	3.89	107.056	1927	18	27500	8	1.40	6.90
12	2700	3.52	118.370	3196	27	27500	9	1.40	6.90
11	2700	3.21	129.996	32759	252	27500	8	1.40	6.90
9	2700	2.72	153.185	4136	27	27500	9	1.40	4.10
8	2700	2.48	168.230	21197	126	27500	8	1.40	4.10
8	2700	2.24	185.911	8366	45	27500	9	1.40	4.10
7	2700	2.04	204.170	171503	840	27500	8	1.40	4.10
6	2700	1.77	235.000	235	1	27500	9	1.40	3.90
5	2700	1.61	258.080	28905	112	27500	8	1.40	2.30

g500-B4300, 3-stage

Output speed	Max. output torque	Max. drive power	Ratio	Number of teeth		Max. radial force	Backlash	Rated power	
							Standard	Motor	
n_2	$M_{2,max}$	$P_{1,max}$	i	z_g	z_t	$F_{rad,max}$			
							± 20 %		
rpm	Nm	kW				N	arcmin	kW	kW
255	1970	55.42	5.488	1147	209	13200	14	11.00	20.30
201	2246	49.70	6.976	29822	4275	14000	14	11.00	20.30
153	2479	41.78	9.156	98642	10773	15100	14	3.80	20.30
138	3640	55.42	10.137	67797	6688	15500	9	11.00	20.30
126	3978	55.41	11.080	23157	2090	16000	9	11.00	20.30
109	4149	49.70	12.885	97929	7600	16800	9	11.00	20.30
99	4300	47.12	14.084	33449	2375	17300	9	11.00	20.30
83	4300	39.24	16.913	35991	2128	18600	9	3.80	20.30
76	4300	35.90	18.486	110639	5985	19300	9	3.80	20.30
67	4300	31.51	21.065	18011	855	20400	9	3.80	20.30
60	4300	28.60	23.206	49383	2128	21200	9	3.80	20.30
55	4300	26.17	25.365	151807	5985	22100	9	3.80	20.30
50	4300	23.69	28.013	2241	80	23100	8	6.40	20.30
45	4300	21.34	31.097	79763	2565	24300	9	3.80	20.30
39	4300	18.64	35.607	35607	1000	25900	8	6.40	20.30
36	4300	17.22	38.546	5859	152	26900	9	2.10	13.20
33	4300	15.52	42.760	38313	896	28300	8	3.80	20.30
30	4300	14.20	46.737	39259	840	29500	8	3.80	20.30
26	4300	12.46	53.258	6391	120	31500	8	3.80	20.30
24	4300	11.31	58.671	52569	896	33000	8	3.80	20.30
22	4300	10.35	64.127	53867	840	34400	8	2.10	20.30
20	4300	9.23	71.930	9207	128	36400	8	2.60	13.20
18	4300	8.44	78.619	28303	360	37900	8	2.60	13.20
14	4300	6.81	97.453	6237	64	40000	8	2.10	13.20
13	4300	6.23	106.517	6391	60	40000	8	2.10	13.20
12	4300	5.61	118.336	15147	128	40000	8	1.40	13.20
11	4300	5.13	129.342	15521	120	40000	8	1.40	6.90
9	4300	4.33	153.141	9801	64	40000	8	1.40	6.90
8	4300	3.97	167.383	10043	60	40000	8	1.40	6.90
8	4300	3.57	185.857	237897	1280	40000	8	1.40	6.90
7	4300	3.27	203.143	81257	400	40000	8	1.40	6.90
6	4300	2.83	234.932	120285	512	40000	8	1.40	3.90
6	4300	2.58	256.781	8217	32	40000	8	1.40	3.90

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.

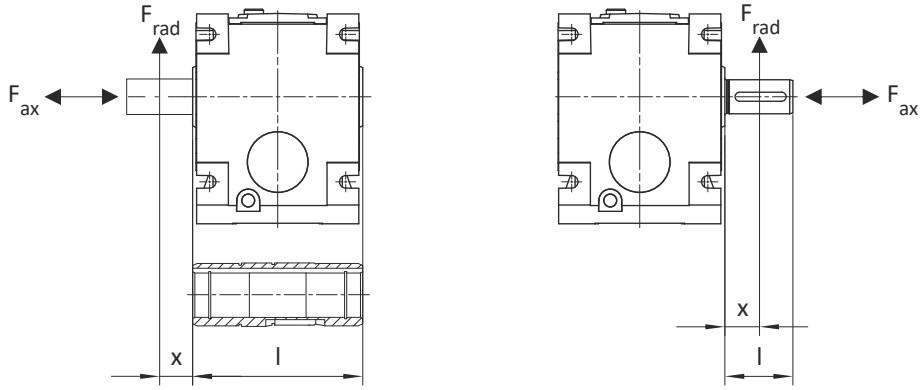
$F_{rad,\ perm} = f_w \times F_{rad,max}$

Permissible axial force

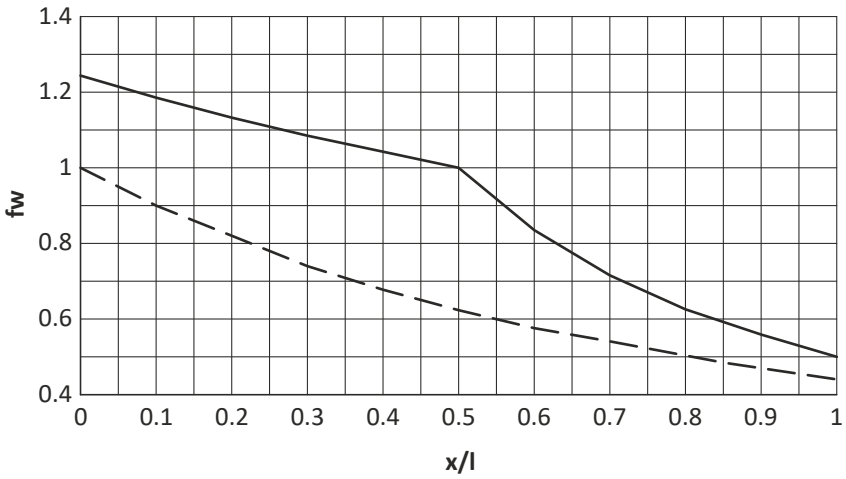
If there is no radial force, the maximum axial force is 50% of the value in the table $F_{rad,max}$

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

Application of forces



Additional load factor f_w on the drive shaft



Solid shaft

Hollow shaft

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 contact Lenze.

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

Max. radial force, gearbox with hollow shaft (HAR/HBR/HAK)

Gearbox	Output speed n_2 [rpm]									
	1000	630	400	250	160	100	63	40	25	≤ 16
	Max. radial force $F_{rad,max}$ [N]									
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 (VAR/VBR)

Gearbox	Output speed n_2 [rpm]									
	1000	630	400	250	160	100	63	40	25	≤ 16
	Max. radial force $F_{rad,max}$ [N]									
g500-B45	900	1200	1800	2100	2400	2800	3000	3000	3000	3000
g500-B110	1000	1800	2100	2500	2700	3000	3000	3000	3000	3000
g500-B240	1500	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 (HAK)

Gearbox	Output speed n_2 [rpm]									
	1000	630	400	250	160	100	63	40	25	≤ 16
	Max. radial force $F_{rad,max}$ [N]									
g500-B45	900	1200	1800	2100	2400	2800	3000	3000	3000	3000
g500-B110	1000	1800	2100	2500	2700	3000	3000	3000	3000	3000
g500-B240	2400	3600	5200	6000	6500	6500	6500	6500	6500	6500
g500-B450	3000	4000	4700	5100	5600	6400	7700	7800	7800	7800
g500-B600	3,400	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

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 A. They only serve as a rough overview.

The following legend shows the layout of the selection tables:

Example

Inverter mains connection 400 V, self-ventilated

0.8 kW

Explanation

Voltag of inverter mains connection, motor cooling type

Rated motor power

Inverter operation						i	Geared motor		Number of stages
M_2	n_2	c	$M_{2,max}$	$n_{2,th}$	J		g500-	MCA	
Nm	rpm		Nm	rpm	$kgcm^2$				
10.0	762	5.1	49.0	698	3.193	5.185	B110	10I40-	2
11.0	662	4.6	57.0	596	3.105	5.963	B110	10I40-	2
14.0	556	4.1	68.0	543	2.878	7.111	B110	10I40-	2
16.0	483	3.8	78.0	465	2.831	8.178	B110	10I40-	2

Number of gear stages

Product name of the motor

Gearbox product name

Ratio

Moment of inertia
With feedback, without brake

Thermal output speed

Max. permissible acceleration torque
Inverter-dependent

Load capacity of the gearbox
c is the ratio of permissible rated torque of the gearbox to the rated torque of the motor (converted to the driven shaft). **c** must always be higher than the application factor detected for the application **k**.

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

Output speed

Output torque

Inverter mains connection 400 V, Self-ventilated

0.8 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
10.0	762	5.1	49.0	698	3.193	5.185	B110	10I40-	2
11.0	662	4.6	57.0	596	3.105	5.963	B110	10I40-	2
14.0	556	4.1	68.0	543	2.878	7.111	B110	10I40-	2
16.0	483	3.8	78.0	465	2.831	8.178	B110	10I40-	2
17.0	434	3.5	84.0	434	2.723	9.101	B110	10I40-	2
20.0	377	3.2	89.0	377	2.695	10.466	B110	10I40-	2
22.0	345	3.0	90.0	345	2.655	11.449	B110	10I40-	2
24.0	311	2.7	90.0	311	2.593	12.698	B110	10I40-	2
28.0	271	2.4	90.0	271	2.578	14.603	B110	10I40-	2
29.0	263	5.7	143	263	2.986	15.008	B240	10I40-	2
30.0	254	2.3	92.0	254	2.543	15.556	B110	10I40-	2
32.0	234	5.4	160	234	2.847	16.857	B240	10I40-	2
34.0	221	2.1	96.0	221	2.533	17.889	B110	10I40-	2
36.0	206	4.8	182	206	2.820	19.143	B240	10I40-	2
37.0	202	2.0	100	202	2.495	19.556	B110	10I40-	2
39.0	191	4.4	196	191	2.740	20.650	B240	10I40-	2
43.0	176	1.8	104	176	2.488	22.489	B110	10I40-	2
45.0	168	3.9	223	168	2.722	23.450	B240	10I40-	2
48.0	157	1.6	108	157	2.463	25.185	B110	10I40-	2
51.0	147	3.4	240	147	2.611	26.878	B240	10I40-	2
55.0	136	1.5	110	136	2.460	28.963	B110	10I40-	2
58.0	129	3.0	240	129	2.600	30.522	B240	10I40-	2
59.0	128	5.5	294	128	2.894	30.985	B450	10I40-	3
64.0	118	2.7	240	118	2.552	33.433	B240	10I40-	2
69.0	109	4.7	345	109	2.711	36.373	B450	10I40-	3
70.0	107	5.3	351	107	2.880	36.999	B600	10I40-	3
70.0	107	5.3	351	107	3.036	37.000	B820	10I40-	3
71.0	106	1.1	106	106	2.472	37.400	B110	10I40-	2
72.0	104	2.4	240	104	2.546	37.967	B240	10I40-	2
77.0	97.9	4.8	383	97.9	2.702	40.330	B450	10I40-	3
82.0	91.3	2.4	240	91.3	2.496	43.267	B240	10I40-	2
86.0	87.3	4.3	430	87.3	2.617	45.245	B450	10I40-	3
92.0	82.0	1.0	110	82.0	2.450	48.167	B110	10I40-	2
93.0	80.4	2.1	240	80.4	2.492	49.133	B240	10I40-	2
95.0	78.7	3.9	450	78.7	2.611	50.167	B450	10I40-	3
100	75.2	1.9	233	75.2	2.470	52.510	B240	10I40-	2
107	70.3	3.5	450	70.3	2.875	56.154	B450	10I40-	3
113	66.2	1.7	240	66.2	2.467	59.630	B240	10I40-	2
118	63.4	3.1	450	63.4	2.871	62.262	B450	10I40-	3
121	61.9	4.1	600	58.7	3.479	63.822	B600	10I40-	3
122	61.3	5.5	612	61.1	3.512	64.468	B820	10I40-	3
127	57.7	1.6	240	57.7	2.493	68.459	B240	10I40-	3
128	58.5	3.9	600	58.5	2.681	67.513	B600	10I40-	3
131	57.4	2.8	450	57.4	2.759	68.788	B450	10I40-	3
137	54.7	3.6	600	54.7	2.937	72.170	B600	10I40-	3
144	50.8	1.4	240	50.7	2.491	77.741	B240	10I40-	3
145	51.8	2.6	450	51.8	2.756	76.271	B450	10I40-	3
156	48.2	3.2	600	48.2	2.605	81.937	B600	10I40-	3
157	47.7	5.3	786	47.7	3.067	82.762	B1500	10I40-	3
162	45.1	1.2	240	45.1	2.462	87.563	B240	10I40-	3

Technical data

Selection tables

Inverter mains connection 400 V, Self-ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
170	44.1	2.2	450	44.1	2.622	89.534	B450	10I40-	3
171	44.0	2.9	600	44.0	2.761	89.772	B600	10I40-	3
173	43.4	5.3	864	43.4	3.058	90.978	B1500	10I40-	3
175	43.0	3.9	820	43.0	2.892	91.939	B820	10I40-	3
184	39.7	1.1	240	39.7	2.461	99.437	B240	10I40-	3
189	39.8	2.0	450	39.8	2.620	99.274	B450	10I40-	3
193	38.8	2.6	600	38.8	2.929	101.760	B600	10I40-	3
195	38.4	3.5	820	38.4	2.889	102.790	B820	10I40-	3
211	34.7	1.0	240	34.7	2.444	113.673	B240	10I40-	3
212	35.5	1.9	450	35.5	2.560	111.372	B450	10I40-	3
217	34.5	3.4	820	34.5	2.766	114.364	B820	10I40-	3
221	34.0	2.5	600	34.0	2.627	116.175	B600	10I40-	3
235	32.0	1.8	450	32.0	2.559	123.487	B450	10I40-	3
239	30.6	0.9	240	30.6	2.443	129.087	B240	10I40-	3
240	31.2	2.3	600	31.2	2.756	126.580	B600	10I40-	3
243	30.9	3.1	820	30.9	2.765	127.861	B820	10I40-	3
268	28.0	2.0	600	28.0	2.568	140.995	B600	10I40-	3
274	27.4	1.5	450	27.4	2.500	144.128	B450	10I40-	3
281	26.7	2.7	820	26.7	2.630	148.000	B820	10I40-	3
285	26.3	4.8	1424	26.3	3.103	149.949	B1500	10I40-	3
304	24.7	1.4	450	24.7	2.499	159.807	B450	10I40-	3
311	24.1	1.8	600	24.1	2.624	163.810	B600	10I40-	3
313	24.0	4.4	1500	24.0	3.100	164.833	B1500	10I40-	3
314	23.9	2.4	820	23.9	2.629	165.467	B820	10I40-	3
332	22.6	1.2	450	22.6	2.473	174.919	B450	10I40-	3
339	22.2	1.6	600	22.2	2.509	178.224	B600	10I40-	3
341	22.0	2.2	820	22.0	2.570	179.618	B820	10I40-	3
346	21.7	4.0	1500	21.7	2.921	181.983	B1500	10I40-	3
368	20.4	1.1	450	20.4	2.472	193.948	B450	10I40-	3
378	19.9	1.5	600	19.9	2.566	198.805	B600	10I40-	3
380	19.7	3.6	1500	19.7	2.919	200.048	B1500	10I40-	3
381	19.7	2.0	820	19.7	2.569	200.816	B820	10I40-	3
431	17.4	1.7	820	17.4	2.511	227.045	B820	10I40-	3
437	17.2	3.1	1500	17.2	2.736	230.035	B1500	10I40-	3
477	15.7	1.2	600	15.7	2.508	251.299	B600	10I40-	3
480	15.6	2.9	1500	15.6	2.735	252.869	B1500	10I40-	3
482	15.6	1.6	820	15.6	2.510	253.841	B820	10I40-	3

1.4 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
23.0	561	5.5	138	561	22.172	3.565	B240	14L20-	2
31.0	409	4.3	147	409	20.944	4.889	B240	14L20-	2
40.0	320	3.6	156	320	20.351	6.257	B240	14L20-	2
44.0	291	3.7	179	291	20.874	6.883	B240	14L20-	2
50.0	256	3.4	187	256	20.713	7.817	B240	14L20-	2
59.0	215	5.6	368	215	22.406	9.315	B450	14L20-	3
60.0	212	2.9	191	212	20.254	9.440	B240	14L20-	2
66.0	194	5.3	384	194	22.260	10.328	B450	14L20-	3
68.0	187	2.7	204	187	20.168	10.720	B240	14L20-	2
77.0	166	2.5	208	166	19.929	12.081	B240	14L20-	2
81.0	157	4.5	404	157	21.068	12.775	B450	14L20-	3
85.0	150	5.9	553	150	21.706	13.369	B600	14L20-	3
87.0	146	2.3	217	146	19.877	13.719	B240	14L20-	2
90.0	141	4.3	422	141	20.991	14.165	B450	14L20-	3
94.0	136	5.8	600	136	22.506	14.730	B600	14L20-	3
96.0	133	2.1	223	133	19.786	15.008	B240	14L20-	2
104	122	3.8	434	122	20.427	16.349	B450	14L20-	3
107	119	2.0	240	119	19.647	16.857	B240	14L20-	2
114	112	3.6	446	112	20.246	17.885	B450	14L20-	3
119	107	5.7	747	107	21.378	18.655	B820	14L20-	3
120	106	4.5	600	106	21.488	18.851	B600	14L20-	3
122	105	1.8	240	105	19.620	19.143	B240	14L20-	2
126	101	3.2	450	101	20.206	19.831	B450	14L20-	3
131	97.0	4.2	600	97.0	21.223	20.622	B600	14L20-	3
131	96.9	1.7	240	96.9	19.540	20.650	B240	14L20-	2
133	95.9	5.6	820	95.9	21.311	20.857	B820	14L20-	3
145	87.7	2.8	450	87.7	19.902	22.813	B450	14L20-	3
145	87.5	3.8	600	87.5	20.388	22.852	B600	14L20-	3
145	87.5	5.1	820	87.5	20.797	22.853	B820	14L20-	3
149	85.3	1.5	240	85.3	19.522	23.450	B240	14L20-	2
161	79.1	2.5	450	79.1	19.878	25.294	B450	14L20-	3
161	78.9	3.4	600	78.9	21.377	25.347	B600	14L20-	3
163	78.3	4.6	820	78.3	20.753	25.550	B820	14L20-	3
166	76.7	3.3	600	76.7	22.082	26.061	B600	14L20-	3
168	76.0	4.5	820	76.0	22.277	26.324	B820	14L20-	3
178	71.6	2.3	450	71.6	19.710	27.945	B450	14L20-	3
189	67.2	2.9	600	67.2	19.920	29.744	B600	14L20-	3
189	67.2	3.9	820	67.2	20.109	29.745	B820	14L20-	3
197	64.5	2.1	450	64.5	19.694	30.985	B450	14L20-	3
206	61.9	3.6	820	61.9	21.443	32.291	B820	14L20-	3
206	61.7	2.6	600	61.7	20.799	32.439	B600	14L20-	3
227	56.0	2.4	600	56.0	21.317	35.740	B600	14L20-	3
228	55.9	6.0	1500	55.9	22.410	35.778	B1500	14L20-	3
230	55.4	3.2	820	55.4	21.420	36.102	B820	14L20-	3
235	54.1	2.3	600	54.1	19.680	36.999	B600	14L20-	3
235	54.1	3.2	820	54.1	19.836	37.000	B820	14L20-	3
260	48.9	5.8	1500	48.9	24.503	40.895	B1500	14L20-	3
263	48.4	3.1	820	48.4	20.839	41.325	B820	14L20-	3
267	47.7	2.3	600	47.7	19.876	41.940	B600	14L20-	3
286	44.5	5.2	1500	44.5	24.469	44.955	B1500	14L20-	3
288	44.2	2.9	820	44.2	20.681	45.207	B820	14L20-	3

Technical data

Selection tables

Inverter mains connection 400 V, Self-ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
291	43.7	2.1	600	43.7	20.762	45.739	B600	14L20-	3
296	42.9	5.1	1500	42.9	21.338	46.568	B1500	14L20-	3
318	40.0	1.9	600	40.0	20.617	50.036	B600	14L20-	3
322	39.6	2.6	820	39.6	20.670	50.543	B820	14L20-	3
330	38.5	4.5	1500	38.5	20.685	51.920	B1500	14L20-	3
353	36.1	1.7	600	36.1	20.078	55.447	B600	14L20-	3
357	35.6	1.3	450	35.6	19.675	56.154	B450	14L20-	3
363	35.0	4.1	1500	35.0	20.664	57.074	B1500	14L20-	3
367	34.7	2.2	820	34.7	20.319	57.662	B820	14L20-	3
372	34.2	4.0	1500	34.2	22.157	58.422	B1500	14L20-	3
396	32.1	1.1	450	32.1	19.671	62.262	B450	14L20-	3
406	31.3	1.5	600	31.3	20.279	63.822	B600	14L20-	3
409	31.1	3.7	1500	31.1	22.140	64.221	B1500	14L20-	3
410	31.0	2.0	820	31.0	20.312	64.468	B820	14L20-	3
438	29.1	1.0	450	29.1	19.559	68.788	B450	14L20-	3
450	28.3	1.8	820	28.3	20.091	70.636	B820	14L20-	3
455	27.9	3.3	1500	27.9	21.518	71.566	B1500	14L20-	3
459	27.7	1.3	600	27.7	19.737	72.170	B600	14L20-	3
477	26.7	3.1	1500	26.7	20.106	74.963	B1500	14L20-	3
485	26.2	0.9	450	26.2	19.556	76.271	B450	14L20-	3
489	26.0	5.5	2675	26.0	21.809	76.862	B2700	14L20-	3
498	25.6	1.2	600	25.6	20.065	78.182	B600	14L20-	3
503	25.3	1.6	820	25.3	20.087	78.973	B820	14L20-	3
527	24.2	2.9	1500	24.2	19.867	82.762	B1500	14L20-	3
541	23.5	4.6	2475	23.5	21.123	84.940	B2700	14L20-	3
571	22.3	1.1	600	22.3	19.561	89.772	B600	14L20-	3
579	22.0	2.6	1500	22.0	19.858	90.978	B1500	14L20-	3
585	21.8	1.4	820	21.8	19.692	91.939	B820	14L20-	3
593	21.5	2.5	1500	21.5	20.812	93.150	B1500	14L20-	3
594	21.4	4.6	2700	21.4	21.104	93.283	B2700	14L20-	3
620	20.5	4.4	2700	20.5	23.657	97.481	B2700	14L20-	3
648	19.7	0.9	600	19.7	19.729	101.760	B600	14L20-	3
652	19.5	2.3	1500	19.5	20.805	102.396	B1500	14L20-	3
654	19.5	1.3	820	19.5	19.689	102.790	B820	14L20-	3
681	18.7	4.0	2700	18.7	23.642	107.056	B2700	14L20-	3
727	17.5	2.1	1500	17.5	20.313	114.166	B1500	14L20-	3
728	17.5	1.1	820	17.5	19.566	114.364	B820	14L20-	3
753	16.9	3.6	2700	16.9	20.313	118.370	B2700	14L20-	3
753	16.9	5.7	4300	16.9	20.313	118.336	B4300	14L20-	3
799	15.9	1.9	1500	15.9	20.313	125.498	B1500	14L20-	3
806	15.8	0.7	600	15.8	19.556	126.580	B600	14L20-	3
814	15.6	1.0	820	15.6	19.565	127.861	B820	14L20-	3
823	15.5	5.2	4300	15.5	20.313	129.342	B4300	14L20-	3
827	15.4	3.3	2700	15.4	20.313	129.996	B2700	14L20-	3
954	13.3	1.6	1500	13.3	19.903	149.949	B1500	14L20-	3
975	13.1	2.8	2700	13.1	21.399	153.185	B2700	14L20-	3
975	13.1	4.4	4300	13.1	21.617	153.141	B4300	14L20-	3
1049	12.1	1.4	1500	12.1	19.900	164.833	B1500	14L20-	3
1065	11.9	4.0	4300	11.9	21.603	167.383	B4300	14L20-	3
1071	11.9	2.5	2700	11.9	21.393	168.230	B2700	14L20-	3
1158	11.0	1.3	1500	11.0	19.721	181.983	B1500	14L20-	3
1183	10.8	2.3	2700	10.8	20.826	185.911	B2700	14L20-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
1183	10.8	3.6	4300	10.8	20.973	185.857	B4300	14L20-	3
1273	10.0	1.2	1500	10.0	19.719	200.048	B1500	14L20-	3
1293	9.8	3.3	4300	9.8	20.964	203.143	B4300	14L20-	3
1299	9.8	2.1	2700	9.8	20.822	204.170	B2700	14L20-	3
1495	8.5	2.9	4300	8.5	20.373	234.932	B4300	14L20-	3
1496	8.5	1.8	2700	8.5	20.280	235.000	B2700	14L20-	3
1634	7.8	2.6	4300	7.8	20.367	256.781	B4300	14L20-	3
1642	7.7	1.6	2700	7.7	20.278	258.080	B2700	14L20-	3

1.7 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
19.0	828	5.7	147	739	10.044	4.889	B240	13I41-	2
20.0	781	2.5	69.0	611	9.093	5.185	B110	13I41-	2
23.0	679	2.3	72.0	521	9.005	5.963	B110	13I41-	2
24.0	647	4.7	156	608	9.451	6.257	B240	13I41-	2
26.0	588	4.9	179	437	9.974	6.883	B240	13I41-	2
27.0	570	2.1	77.0	480	8.778	7.111	B110	13I41-	2
30.0	518	4.5	187	379	9.813	7.817	B240	13I41-	2
31.0	495	1.9	81.0	404	8.731	8.178	B110	13I41-	2
35.0	445	1.7	84.0	413	8.623	9.101	B110	13I41-	2
36.0	429	3.8	191	356	9.354	9.440	B240	13I41-	2
40.0	387	1.6	89.0	344	8.595	10.466	B110	13I41-	2
41.0	378	3.6	204	310	9.268	10.720	B240	13I41-	2
44.0	354	1.5	90.0	316	8.555	11.449	B110	13I41-	2
46.0	335	3.3	208	295	9.029	12.081	B240	13I41-	2
48.0	319	1.3	90.0	312	8.493	12.698	B110	13I41-	2
49.0	317	6.0	388	286	10.168	12.775	B450	13I41-	3
52.0	295	3.0	217	256	8.977	13.719	B240	13I41-	2
54.0	286	5.6	422	255	10.091	14.165	B450	13I41-	3
55.0	277	1.2	90.0	258	8.478	14.603	B110	13I41-	2
57.0	270	2.8	223	240	8.886	15.008	B240	13I41-	2
59.0	260	1.1	92.0	260	8.443	15.556	B110	13I41-	2
62.0	248	5.0	434	235	9.527	16.349	B450	13I41-	3
64.0	240	2.7	240	240	8.747	16.857	B240	13I41-	2
68.0	226	1.0	96.0	226	8.433	17.889	B110	13I41-	2
68.0	226	4.7	446	220	9.346	17.885	B450	13I41-	3
73.0	212	2.4	240	212	8.720	19.143	B240	13I41-	2
75.0	204	4.3	450	196	9.306	19.831	B450	13I41-	3
78.0	196	5.5	600	174	10.323	20.622	B600	13I41-	3
78.0	196	2.2	240	196	8.640	20.650	B240	13I41-	2
87.0	178	3.7	450	178	9.002	22.813	B450	13I41-	3
87.0	177	5.0	600	177	9.488	22.852	B600	13I41-	3
87.0	177	6.0	695	177	9.897	22.853	B820	13I41-	3
89.0	173	1.9	240	173	8.622	23.450	B240	13I41-	2
96.0	160	3.4	450	160	8.978	25.294	B450	13I41-	3
97.0	159	6.0	777	159	9.853	25.550	B820	13I41-	3
102	151	1.7	240	151	8.511	26.878	B240	13I41-	2
106	145	3.0	450	145	8.810	27.945	B450	13I41-	3
113	136	3.8	600	136	9.020	29.744	B600	13I41-	3
113	136	4.8	758	136	9.209	29.745	B820	13I41-	3
116	133	1.5	240	133	8.500	30.522	B240	13I41-	2
118	131	2.8	450	131	8.794	30.985	B450	13I41-	3
123	125	3.5	600	98.6	9.899	32.439	B600	13I41-	3
127	121	1.4	240	121	8.452	33.433	B240	13I41-	2
138	111	2.3	450	111	8.611	36.373	B450	13I41-	3
141	110	3.1	600	110	8.780	36.999	B600	13I41-	3
141	110	4.0	787	110	8.936	37.000	B820	13I41-	3
144	107	1.2	240	107	8.446	37.967	B240	13I41-	2
153	100	2.4	450	100	8.602	40.330	B450	13I41-	3
157	98.0	4.3	820	80.4	9.939	41.325	B820	13I41-	3
159	96.6	3.1	600	96.6	8.976	41.940	B600	13I41-	3
172	89.6	3.9	820	74.7	9.781	45.207	B820	13I41-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2,\,max}$	$n_{2,\,th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
172	89.5	2.1	450	89.5	8.517	45.245	B450	13I41-	3
174	88.5	2.8	600	66.9	9.862	45.739	B600	13I41-	3
190	80.9	2.6	600	62.2	9.717	50.036	B600	13I41-	3
191	80.7	1.9	450	80.7	8.511	50.167	B450	13I41-	3
192	80.1	3.5	820	65.4	9.770	50.543	B820	13I41-	3
197	78.0	5.8	1401	78.0	9.785	51.920	B1500	13I41-	3
211	73.0	2.3	600	72.1	9.178	55.447	B600	13I41-	3
213	72.1	1.7	450	67.0	8.775	56.154	B450	13I41-	3
217	71.0	5.6	1500	71.0	9.764	57.074	B1500	13I41-	3
219	70.2	3.1	820	61.8	9.419	57.662	B820	13I41-	3
222	69.3	5.5	1500	60.1	11.257	58.422	B1500	13I41-	3
237	65.0	1.6	450	57.3	8.771	62.262	B450	13I41-	3
242	63.5	2.0	600	51.7	9.379	63.822	B600	13I41-	3
244	63.1	5.0	1500	53.7	11.240	64.221	B1500	13I41-	3
245	62.8	2.7	820	54.2	9.412	64.468	B820	13I41-	3
257	60.0	1.9	600	60.0	8.581	67.513	B600	13I41-	3
261	58.9	1.4	450	55.6	8.659	68.788	B450	13I41-	3
268	57.3	2.5	820	57.3	9.191	70.636	B820	13I41-	3
274	56.1	1.8	600	56.1	8.837	72.170	B600	13I41-	3
285	54.0	4.3	1500	54.0	9.206	74.963	B1500	13I41-	3
290	53.1	1.3	450	48.1	8.656	76.271	B450	13I41-	3
297	51.8	1.7	600	45.0	9.165	78.182	B600	13I41-	3
300	51.3	2.2	820	50.2	9.187	78.973	B820	13I41-	3
311	49.4	1.6	600	49.4	8.505	81.937	B600	13I41-	3
314	48.9	3.8	1468	48.9	8.967	82.762	B1500	13I41-	3
340	45.2	1.1	450	45.2	8.522	89.534	B450	13I41-	3
341	45.1	1.4	600	45.1	8.661	89.772	B600	13I41-	3
346	44.5	3.5	1500	44.5	8.958	90.978	B1500	13I41-	3
349	44.1	1.9	820	44.1	8.792	91.939	B820	13I41-	3
354	43.5	3.5	1500	43.5	9.912	93.150	B1500	13I41-	3
377	40.8	1.0	450	39.7	8.520	99.274	B450	13I41-	3
387	39.8	1.3	600	35.8	8.829	101.760	B600	13I41-	3
389	39.6	3.2	1500	39.6	9.905	102.396	B1500	13I41-	3
391	39.4	1.7	820	39.4	8.789	102.790	B820	13I41-	3
423	36.4	1.0	450	36.4	8.460	111.372	B450	13I41-	3
434	35.5	3.1	1500	35.5	9.413	114.166	B1500	13I41-	3
435	35.4	1.7	820	35.4	8.666	114.364	B820	13I41-	3
441	34.9	1.2	600	34.9	8.527	116.175	B600	13I41-	3
469	32.8	0.9	450	32.8	8.459	123.487	B450	13I41-	3
477	32.3	2.9	1500	32.3	9.413	125.498	B1500	13I41-	3
481	32.0	1.1	600	32.0	8.656	126.580	B600	13I41-	3
486	31.7	1.5	820	31.7	8.665	127.861	B820	13I41-	3
536	28.7	1.0	600	28.7	8.468	140.995	B600	13I41-	3
562	27.4	1.3	820	27.4	8.530	148.000	B820	13I41-	3
570	27.0	2.4	1500	27.0	9.003	149.949	B1500	13I41-	3
622	24.7	0.9	600	24.7	8.524	163.810	B600	13I41-	3
626	24.6	2.2	1500	24.6	9.000	164.833	B1500	13I41-	3
629	24.5	1.2	820	24.5	8.529	165.467	B820	13I41-	3
682	22.5	1.1	820	22.5	8.470	179.618	B820	13I41-	3
691	22.3	2.0	1500	22.3	8.821	181.983	B1500	13I41-	3
755	20.4	0.7	600	20.1	8.466	198.805	B600	13I41-	3
760	20.2	1.8	1500	20.2	8.819	200.048	B1500	13I41-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
763	20.2	1.0	820	20.2	8.469	200.816	B820	13I41-	3
874	17.6	1.6	1500	17.6	8.636	230.035	B1500	13I41-	3
961	16.0	1.4	1500	16.0	8.635	252.869	B1500	13I41-	3

2.3 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
18.0	1150	5.4	138	859	22.172	3.565	B240	14L41-	2
25.0	839	4.2	147	700	20.944	4.889	B240	14L41-	2
32.0	655	3.5	156	574	20.351	6.257	B240	14L41-	2
35.0	596	3.6	179	412	20.874	6.883	B240	14L41-	2
40.0	525	3.3	187	356	20.713	7.817	B240	14L41-	2
48.0	440	5.5	368	330	22.406	9.315	B450	14L41-	3
48.0	434	2.8	191	335	20.254	9.440	B240	14L41-	2
53.0	397	5.2	384	294	22.260	10.328	B450	14L41-	3
55.0	383	2.7	204	292	20.168	10.720	B240	14L41-	2
62.0	339	2.4	208	279	19.929	12.081	B240	14L41-	2
66.0	321	4.4	404	270	21.068	12.775	B450	14L41-	3
69.0	307	5.8	553	263	21.706	13.369	B600	14L41-	3
70.0	299	2.2	217	242	19.877	13.719	B240	14L41-	2
73.0	290	4.2	422	241	20.991	14.165	B450	14L41-	3
76.0	278	5.7	600	206	22.506	14.730	B600	14L41-	3
77.0	273	2.1	223	227	19.786	15.008	B240	14L41-	2
84.0	251	3.7	434	220	20.427	16.349	B450	14L41-	3
86.0	243	2.0	240	213	19.647	16.857	B240	14L41-	2
92.0	229	3.5	446	201	20.246	17.885	B450	14L41-	3
96.0	220	5.6	747	193	21.378	18.655	B820	14L41-	3
97.0	218	4.4	600	178	21.488	18.851	B600	14L41-	3
98.0	214	1.8	240	188	19.620	19.143	B240	14L41-	2
102	207	3.2	450	181	20.206	19.831	B450	14L41-	3
106	199	4.1	600	165	21.223	20.622	B600	14L41-	3
106	199	1.6	240	174	19.540	20.650	B240	14L41-	2
107	197	5.5	820	172	21.311	20.857	B820	14L41-	3
117	180	2.8	450	157	19.902	22.813	B450	14L41-	3
117	179	3.7	600	157	20.388	22.852	B600	14L41-	3
117	179	5.0	820	157	20.797	22.853	B820	14L41-	3
120	175	1.4	240	153	19.522	23.450	B240	14L41-	2
130	162	2.5	450	142	19.878	25.294	B450	14L41-	3
130	162	3.3	600	108	21.377	25.347	B600	14L41-	3
131	161	4.5	820	141	20.753	25.550	B820	14L41-	3
134	157	3.2	600	89.4	22.082	26.061	B600	14L41-	3
135	156	4.3	820	94.4	22.277	26.324	B820	14L41-	3
143	147	2.3	450	129	19.710	27.945	B450	14L41-	3
153	138	2.8	600	121	19.920	29.744	B600	14L41-	3
153	138	3.8	820	121	20.109	29.745	B820	14L41-	3
159	132	2.0	450	116	19.694	30.985	B450	14L41-	3
166	127	3.5	820	85.6	21.443	32.291	B820	14L41-	3
166	126	2.6	600	92.6	20.799	32.439	B600	14L41-	3
183	115	2.3	600	70.7	21.317	35.740	B600	14L41-	3
184	115	5.9	1500	100	22.410	35.778	B1500	14L41-	3
185	114	3.2	820	74.8	21.420	36.102	B820	14L41-	3
190	111	2.3	600	97.0	19.680	36.999	B600	14L41-	3
190	111	3.1	820	97.0	19.836	37.000	B820	14L41-	3
210	100	5.8	1500	71.7	24.503	40.895	B1500	14L41-	3
212	99.2	3.1	820	75.7	20.839	41.325	B820	14L41-	3
215	97.8	2.3	600	85.6	19.876	41.940	B600	14L41-	3
231	91.2	5.3	1500	64.0	24.469	44.955	B1500	14L41-	3
232	90.7	2.9	820	70.4	20.681	45.207	B820	14L41-	3

Technical data

Selection tables

Inverter mains connection 400 V, Self-ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
235	89.6	2.1	600	62.6	20.762	45.739	B600	14L41-	3
239	88.0	5.1	1500	77.1	21.338	46.568	B1500	14L41-	3
257	81.9	1.9	600	57.5	20.617	50.036	B600	14L41-	3
259	81.1	2.6	820	61.5	20.670	50.543	B820	14L41-	3
266	79.0	4.6	1500	69.2	20.685	51.920	B1500	14L41-	3
284	73.9	1.7	600	64.8	20.078	55.447	B600	14L41-	3
288	73.0	1.3	450	57.8	19.675	56.154	B450	14L41-	3
293	71.8	4.2	1500	62.9	20.664	57.074	B1500	14L41-	3
296	71.1	2.3	820	58.4	20.319	57.662	B820	14L41-	3
300	70.2	4.1	1500	56.8	22.157	58.422	B1500	14L41-	3
319	65.9	1.2	450	49.9	19.671	62.262	B450	14L41-	3
327	64.2	1.5	600	44.8	20.279	63.822	B600	14L41-	3
329	63.8	3.7	1500	50.7	22.140	64.221	B1500	14L41-	3
331	63.6	2.0	820	51.2	20.312	64.468	B820	14L41-	3
353	59.6	1.0	450	49.5	19.559	68.788	B450	14L41-	3
362	58.0	1.8	820	50.8	20.091	70.636	B820	14L41-	3
367	57.3	3.3	1500	48.6	21.518	71.566	B1500	14L41-	3
370	56.8	1.3	600	49.7	19.737	72.170	B600	14L41-	3
385	54.7	3.2	1500	47.9	20.106	74.963	B1500	14L41-	3
391	53.8	0.9	450	41.3	19.556	76.271	B450	14L41-	3
394	53.3	5.5	2675	46.7	21.809	76.862	B2700	14L41-	3
401	52.4	1.2	600	38.7	20.065	78.182	B600	14L41-	3
405	51.9	1.6	820	44.5	20.087	78.973	B820	14L41-	3
425	49.5	2.9	1500	43.4	19.867	82.762	B1500	14L41-	3
436	48.3	4.6	2475	42.3	21.123	84.940	B2700	14L41-	3
460	45.7	1.1	600	40.0	19.561	89.772	B600	14L41-	3
467	45.1	2.6	1500	39.5	19.858	90.978	B1500	14L41-	3
472	44.6	1.4	820	39.1	19.692	91.939	B820	14L41-	3
478	44.0	2.6	1500	38.5	20.812	93.150	B1500	14L41-	3
478	44.0	4.6	2700	38.5	21.104	93.283	B2700	14L41-	3
500	42.1	4.4	2700	36.8	23.657	97.481	B2700	14L41-	3
522	40.3	0.9	600	30.7	19.729	101.760	B600	14L41-	3
525	40.0	2.3	1500	35.1	20.805	102.396	B1500	14L41-	3
527	39.9	1.3	820	34.9	19.689	102.790	B820	14L41-	3
549	38.3	4.0	2700	33.4	23.642	107.056	B2700	14L41-	3
586	35.9	2.3	1500	31.4	20.313	114.166	B1500	14L41-	3
587	35.9	1.3	820	31.4	19.566	114.364	B820	14L41-	3
607	34.6	4.0	2700	30.3	20.313	118.370	B2700	14L41-	3
644	32.7	2.1	1500	28.6	20.313	125.498	B1500	14L41-	3
649	32.4	0.8	600	25.8	19.556	126.580	B600	14L41-	3
656	32.1	1.1	820	28.1	19.565	127.861	B820	14L41-	3
663	31.7	5.8	4300	27.8	20.313	129.342	B4300	14L41-	3
667	31.5	3.7	2700	27.6	20.313	129.996	B2700	14L41-	3
769	27.3	1.8	1500	23.9	19.903	149.949	B1500	14L41-	3
785	26.8	4.9	4300	23.4	21.617	153.141	B4300	14L41-	3
786	26.8	3.1	2700	23.4	21.399	153.185	B2700	14L41-	3
845	24.9	1.6	1500	21.8	19.900	164.833	B1500	14L41-	3
859	24.5	4.5	4300	21.4	21.603	167.383	B4300	14L41-	3
863	24.4	2.8	2700	21.3	21.393	168.230	B2700	14L41-	3
933	22.5	1.5	1500	19.7	19.721	181.983	B1500	14L41-	3
953	22.1	4.1	4300	19.3	20.973	185.857	B4300	14L41-	3
954	22.1	2.6	2700	19.3	20.826	185.911	B2700	14L41-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
1026	20.5	1.3	1500	17.9	19.719	200.048	B1500	14L41-	3
1042	20.2	3.7	4300	17.7	20.964	203.143	B4300	14L41-	3
1047	20.1	2.3	2700	17.6	20.822	204.170	B2700	14L41-	3
1205	17.5	3.2	4300	15.3	20.373	234.932	B4300	14L41-	3
1205	17.4	2.0	2700	15.3	20.280	235.000	B2700	14L41-	3
1317	16.0	2.9	4300	14.0	20.367	256.781	B4300	14L41-	3
1324	15.9	1.8	2700	13.9	20.278	258.080	B2700	14L41-	3

2.6 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
51.0	464	5.3	312	464	47.522	4.958	B820	17N23-	3
51.0	460	4.7	280	460	40.360	5.002	B450	17N23-	3
70.0	338	4.9	391	338	42.711	6.800	B820	17N23-	3
70.0	335	3.8	308	335	38.482	6.860	B450	17N23-	3
71.0	331	4.8	398	331	40.163	6.949	B600	17N23-	3
78.0	302	4.7	424	302	45.472	7.618	B820	17N23-	3
78.0	302	5.1	462	302	41.790	7.617	B600	17N23-	3
87.0	270	4.6	459	270	45.071	8.517	B820	17N23-	3
96.0	247	3.3	368	247	39.206	9.315	B450	17N23-	3
98.0	242	4.4	496	242	39.761	9.520	B820	17N23-	3
106	223	3.1	384	223	39.060	10.328	B450	17N23-	3
107	220	4.3	528	220	41.620	10.447	B820	17N23-	3
110	214	4.3	541	214	41.118	10.741	B600	17N23-	3
120	197	4.1	569	197	41.407	11.680	B820	17N23-	3
125	189	3.8	544	189	38.520	12.143	B820	17N23-	3
131	180	2.7	404	180	37.868	12.775	B450	17N23-	3
137	172	3.5	553	172	38.506	13.369	B600	17N23-	3
137	172	3.9	619	172	39.701	13.370	B820	17N23-	3
145	162	2.5	422	162	37.791	14.165	B450	17N23-	3
150	157	3.8	653	157	39.204	14.626	B820	17N23-	3
151	156	3.4	600	156	39.306	14.730	B600	17N23-	3
168	141	2.2	434	141	37.227	16.349	B450	17N23-	3
168	141	3.7	708	141	39.096	16.352	B820	17N23-	3
183	129	2.1	446	129	37.046	17.885	B450	17N23-	3
191	123	3.4	747	123	38.178	18.655	B820	17N23-	3
193	122	2.7	600	122	38.288	18.851	B600	17N23-	3
203	116	1.9	450	116	37.006	19.831	B450	17N23-	3
212	112	2.5	600	112	38.023	20.622	B600	17N23-	3
214	110	3.3	820	110	38.111	20.857	B820	17N23-	3
234	101	1.7	450	101	36.702	22.813	B450	17N23-	3
234	101	2.2	600	101	37.188	22.852	B600	17N23-	3
234	101	3.0	820	101	37.597	22.853	B820	17N23-	3
235	100	5.5	1500	100	42.615	22.898	B1500	17N23-	3
246	95.9	5.3	1500	92.4	46.192	23.973	B1500	17N23-	3
259	90.9	1.5	450	90.9	36.678	25.294	B450	17N23-	3
260	90.7	2.0	600	90.7	38.177	25.347	B600	17N23-	3
262	90.0	2.7	820	90.0	37.553	25.550	B820	17N23-	3
267	88.3	2.0	600	79.3	38.882	26.061	B600	17N23-	3
270	87.4	2.6	820	84.7	39.077	26.324	B820	17N23-	3
270	87.3	4.8	1500	82.4	46.093	26.353	B1500	17N23-	3
300	78.8	4.3	1500	78.8	40.294	29.206	B1500	17N23-	3
305	77.3	1.7	600	77.3	36.720	29.744	B600	17N23-	3
305	77.3	2.3	820	77.3	36.909	29.745	B820	17N23-	3
331	71.2	2.2	820	71.2	38.243	32.291	B820	17N23-	3
333	70.9	1.6	600	70.9	37.599	32.439	B600	17N23-	3
334	70.7	3.9	1500	70.7	39.263	32.547	B1500	17N23-	3
367	64.4	1.4	600	56.6	38.117	35.740	B600	17N23-	3
367	64.3	3.5	1500	64.3	39.210	35.778	B1500	17N23-	3
370	63.7	1.9	820	63.7	38.220	36.102	B820	17N23-	3
375	63.0	3.5	1500	63.0	42.890	36.526	B1500	17N23-	3
395	59.7	5.0	2298	59.7	45.371	38.546	B4300	17N23-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2,\ max}$	$n_{2,\ th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
420	56.2	3.5	1500	56.2	41.303	40.895	B1500	17N23-	3
424	55.7	1.9	820	55.7	37.639	41.325	B820	17N23-	3
430	54.8	1.4	600	54.8	36.676	41.940	B600	17N23-	3
461	51.2	3.2	1500	51.2	41.269	44.955	B1500	17N23-	3
464	50.9	1.7	820	50.9	37.481	45.207	B820	17N23-	3
469	50.3	1.3	600	48.1	37.562	45.739	B600	17N23-	3
478	49.4	3.1	1500	49.4	38.138	46.568	B1500	17N23-	3
482	49.0	5.5	2700	49.0	50.065	46.973	B2700	17N23-	3
502	47.0	5.3	2700	47.0	41.468	48.912	B2700	17N23-	3
513	46.0	1.2	600	44.3	37.417	50.036	B600	17N23-	3
518	45.5	1.6	820	45.5	37.470	50.543	B820	17N23-	3
533	44.3	2.8	1500	44.3	37.485	51.920	B1500	17N23-	3
555	42.5	4.8	2700	42.5	37.113	54.082	B2700	17N23-	3
569	41.5	1.0	600	41.5	36.878	55.447	B600	17N23-	3
576	41.0	0.8	450	40.3	36.475	56.154	B450	17N23-	3
585	40.3	2.5	1500	40.3	37.464	57.074	B1500	17N23-	3
592	39.9	1.4	820	39.9	37.119	57.662	B820	17N23-	3
599	39.4	2.5	1500	39.4	38.957	58.422	B1500	17N23-	3
609	38.7	4.4	2700	38.7	37.113	59.393	B2700	17N23-	3
639	36.9	0.7	450	32.8	36.471	62.262	B450	17N23-	3
655	36.0	0.9	600	34.3	37.079	63.822	B600	17N23-	3
659	35.8	2.2	1500	35.8	38.940	64.221	B1500	17N23-	3
661	35.7	1.2	820	35.7	37.112	64.468	B820	17N23-	3
661	35.7	4.0	2700	35.7	45.170	64.452	B2700	17N23-	3
725	32.6	1.1	820	32.6	36.891	70.636	B820	17N23-	3
734	32.1	2.0	1500	32.1	38.318	71.566	B1500	17N23-	3
738	32.0	3.6	2700	32.0	43.266	71.951	B2700	17N23-	3
738	32.0	5.7	4300	32.0	44.253	71.930	B4300	17N23-	3
740	31.9	0.8	600	31.9	36.537	72.170	B600	17N23-	3
788	29.9	3.4	2700	29.9	38.609	76.862	B2700	17N23-	3
802	29.4	0.7	600	26.2	36.865	78.182	B600	17N23-	3
807	29.3	5.3	4300	29.3	44.191	78.619	B4300	17N23-	3
810	29.1	1.0	820	29.1	36.887	78.973	B820	17N23-	3
871	27.1	3.1	2700	27.1	37.923	84.940	B2700	17N23-	3
943	25.0	0.9	820	25.0	36.492	91.939	B820	17N23-	3
956	24.7	1.6	1500	24.7	37.612	93.150	B1500	17N23-	3
957	24.7	2.8	2700	24.7	37.904	93.283	B2700	17N23-	3
1000	23.6	2.7	2700	23.6	40.457	97.481	B2700	17N23-	3
1000	23.6	4.2	4300	23.6	40.994	97.453	B4300	17N23-	3
1044	22.6	0.6	600	18.6	36.529	101.760	B600	17N23-	3
1050	22.5	1.4	1500	22.5	37.605	102.396	B1500	17N23-	3
1054	22.4	0.8	820	22.4	36.489	102.790	B820	17N23-	3
1093	21.6	3.9	4300	21.6	40.960	106.517	B4300	17N23-	3
1098	21.5	2.4	2700	21.5	40.442	107.056	B2700	17N23-	3
1171	20.1	1.3	1500	20.1	37.113	114.166	B1500	17N23-	3
1214	19.4	2.2	2700	19.4	37.113	118.370	B2700	17N23-	3
1214	19.4	3.5	4300	19.4	37.113	118.336	B4300	17N23-	3
1287	18.3	1.2	1500	18.3	37.113	125.498	B1500	17N23-	3
1327	17.8	3.2	4300	17.8	37.113	129.342	B4300	17N23-	3
1334	17.7	2.0	2700	17.7	37.113	129.996	B2700	17N23-	3
1571	15.0	1.7	2700	15.0	38.199	153.185	B2700	17N23-	3
1571	15.0	2.7	4300	15.0	38.417	153.141	B4300	17N23-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
1717	13.7	2.5	4300	13.7	38.403	167.383	B4300	17N23-	3
1726	13.7	1.6	2700	13.7	38.193	168.230	B2700	17N23-	3
1907	12.4	1.4	2700	12.4	37.626	185.911	B2700	17N23-	3
1907	12.4	2.3	4300	12.4	37.773	185.857	B4300	17N23-	3
2084	11.3	2.1	4300	11.3	37.764	203.143	B4300	17N23-	3
2094	11.3	1.3	2700	11.3	37.622	204.170	B2700	17N23-	3

4 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
77.0	472	3.5	312	472	83.522	4.958	B820	19S23-	3
77.0	468	3.1	280	468	76.360	5.002	B450	19S23-	3
78.0	462	4.1	376	462	78.731	5.067	B600	19S23-	3
105	344	3.2	391	344	78.711	6.800	B820	19S23-	3
106	341	2.5	308	341	74.482	6.860	B450	19S23-	3
108	337	3.2	398	337	76.163	6.949	B600	19S23-	3
118	307	3.1	424	304	81.472	7.618	B820	19S23-	3
118	307	3.4	462	307	77.790	7.617	B600	19S23-	3
132	275	3.0	459	270	81.071	8.517	B820	19S23-	3
144	251	2.2	368	251	75.206	9.315	B450	19S23-	3
147	246	5.9	1006	246	85.064	9.516	B1500	19S23-	3
147	246	2.9	496	246	75.761	9.520	B820	19S23-	3
160	227	2.1	384	227	75.060	10.328	B450	19S23-	3
162	224	2.8	528	224	77.620	10.447	B820	19S23-	3
166	218	2.8	541	211	77.118	10.741	B600	19S23-	3
181	200	2.7	569	200	77.407	11.680	B820	19S23-	3
188	193	2.5	544	193	74.520	12.143	B820	19S23-	3
198	183	1.8	404	183	73.868	12.775	B450	19S23-	3
203	178	4.8	1118	178	79.661	13.118	B1500	19S23-	3
207	175	2.3	553	175	74.506	13.369	B600	19S23-	3
207	175	2.6	619	175	75.701	13.370	B820	19S23-	3
219	165	1.7	422	165	73.791	14.165	B450	19S23-	3
226	160	2.5	653	160	75.204	14.626	B820	19S23-	3
228	159	2.3	600	159	75.306	14.730	B600	19S23-	3
234	155	5.5	1500	155	83.326	15.111	B1500	19S23-	3
253	143	2.4	708	143	75.096	16.352	B820	19S23-	3
257	141	5.0	1500	141	83.075	16.611	B1500	19S23-	3
288	126	4.5	1500	126	80.197	18.598	B1500	19S23-	3
289	125	2.2	747	125	74.178	18.655	B820	19S23-	3
292	124	1.8	600	124	74.288	18.851	B600	19S23-	3
317	115	4.1	1500	115	80.031	20.444	B1500	19S23-	3
319	114	1.6	600	114	74.023	20.622	B600	19S23-	3
323	112	2.2	820	112	74.111	20.857	B820	19S23-	3
354	102	1.5	600	102	73.188	22.852	B600	19S23-	3
354	102	2.0	820	102	73.597	22.853	B820	19S23-	3
355	102	3.7	1500	102	78.615	22.898	B1500	19S23-	3
371	97.6	3.5	1500	84.2	82.192	23.973	B1500	19S23-	3
392	92.3	1.3	600	76.9	74.177	25.347	B600	19S23-	3
396	91.6	1.8	820	91.6	73.553	25.550	B820	19S23-	3
403	89.8	1.3	600	63.0	74.882	26.061	B600	19S23-	3
408	88.9	1.7	820	73.4	75.077	26.324	B820	19S23-	3
408	88.8	3.2	1500	74.9	82.093	26.353	B1500	19S23-	3
415	87.3	5.6	2700	87.3	84.188	26.814	B2700	19S23-	3
452	80.1	2.9	1500	80.1	76.294	29.206	B1500	19S23-	3
456	79.5	5.1	2700	79.5	83.999	29.447	B2700	19S23-	3
500	72.5	1.4	820	62.6	74.243	32.291	B820	19S23-	3
502	72.1	1.0	600	61.6	73.599	32.439	B600	19S23-	3
504	71.9	2.6	1500	71.9	75.263	32.547	B1500	19S23-	3
509	71.2	4.6	2700	71.2	81.248	32.873	B2700	19S23-	3
553	65.5	0.9	600	44.8	74.117	35.740	B600	19S23-	3
554	65.4	2.3	1500	65.4	75.210	35.778	B1500	19S23-	3

Technical data

Selection tables

Inverter mains connection 400 V, Self-ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
559	64.8	1.3	820	52.9	74.220	36.102	B820	19S23-	3
559	64.8	4.2	2700	64.8	81.122	36.102	B2700	19S23-	3
566	64.1	2.3	1500	58.0	78.890	36.526	B1500	19S23-	3
633	57.2	2.3	1500	57.2	77.303	40.895	B1500	19S23-	3
640	56.6	1.3	820	53.2	73.639	41.325	B820	19S23-	3
662	54.7	4.0	2700	51.2	86.139	42.772	B2700	19S23-	3
696	52.1	2.1	1500	52.1	77.269	44.955	B1500	19S23-	3
700	51.8	1.2	820	48.9	73.481	45.207	B820	19S23-	3
708	51.2	0.8	600	35.8	73.562	45.739	B600	19S23-	3
721	50.2	2.0	1500	50.2	74.138	46.568	B1500	19S23-	3
724	50.1	5.8	4300	50.1	88.755	46.737	B4300	19S23-	3
727	49.8	3.6	2700	45.7	86.065	46.973	B2700	19S23-	3
757	47.8	3.5	2700	47.8	77.468	48.912	B2700	19S23-	3
775	46.8	0.8	600	31.5	73.417	50.036	B600	19S23-	3
783	46.3	1.0	820	41.6	73.470	50.543	B820	19S23-	3
825	43.9	5.1	4300	43.9	85.583	53.258	B4300	19S23-	3
837	43.3	3.2	2700	43.3	73.113	54.082	B2700	19S23-	3
858	42.2	0.7	600	34.3	72.878	55.447	B600	19S23-	3
893	40.6	0.9	820	37.8	73.119	57.662	B820	19S23-	3
905	40.1	1.6	1500	40.1	74.957	58.422	B1500	19S23-	3
908	39.9	4.6	4300	39.9	82.692	58.671	B4300	19S23-	3
920	39.4	2.9	2700	39.4	73.113	59.393	B2700	19S23-	3
988	36.7	0.6	600	22.6	73.079	63.822	B600	19S23-	3
993	36.5	4.2	4300	36.5	82.598	64.127	B4300	19S23-	3
994	36.4	1.5	1500	36.4	74.940	64.221	B1500	19S23-	3
998	36.3	0.8	820	30.3	73.112	64.468	B820	19S23-	3
998	36.3	2.7	2700	36.3	81.170	64.452	B2700	19S23-	3
1094	33.1	0.7	820	28.9	72.891	70.636	B820	19S23-	3
1108	32.7	1.3	1500	32.7	74.318	71.566	B1500	19S23-	3
1114	32.5	2.4	2700	32.5	79.266	71.951	B2700	19S23-	3
1114	32.5	3.8	4300	32.5	80.253	71.930	B4300	19S23-	3
1217	29.8	3.5	4300	29.8	80.191	78.619	B4300	19S23-	3
1223	29.6	0.7	820	23.1	72.887	78.973	B820	19S23-	3
1442	25.1	1.0	1500	25.1	73.612	93.150	B1500	19S23-	3
1509	24.0	1.8	2700	24.0	76.457	97.481	B2700	19S23-	3
1509	24.0	2.8	4300	24.0	76.994	97.453	B4300	19S23-	3
1585	22.9	0.9	1500	22.9	73.605	102.396	B1500	19S23-	3
1649	22.0	2.6	4300	22.0	76.960	106.517	B4300	19S23-	3
1658	21.9	1.6	2700	21.9	76.442	107.056	B2700	19S23-	3
1832	19.8	2.4	4300	19.8	73.113	118.336	B4300	19S23-	3
1833	19.8	1.5	2700	19.8	73.113	118.370	B2700	19S23-	3
2003	18.1	2.2	4300	18.1	73.113	129.342	B4300	19S23-	3
2013	18.0	1.3	2700	18.0	73.113	129.996	B2700	19S23-	3

4.1 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
45.0	829	5.0	312	515	47.522	4.958	B820	17N41-	3
45.0	822	4.4	280	589	40.360	5.002	B450	17N41-	3
46.0	811	5.9	376	521	42.731	5.067	B600	17N41-	3
61.0	604	4.6	391	428	42.711	6.800	B820	17N41-	3
62.0	599	3.6	308	454	38.482	6.860	B450	17N41-	3
63.0	592	4.5	398	418	40.163	6.949	B600	17N41-	3
69.0	540	4.8	462	333	41.790	7.617	B600	17N41-	3
69.0	540	4.4	424	327	45.472	7.618	B820	17N41-	3
77.0	483	4.3	459	291	45.071	8.517	B820	17N41-	3
84.0	441	3.1	368	295	39.206	9.315	B450	17N41-	3
86.0	432	4.1	496	327	39.761	9.520	B820	17N41-	3
93.0	398	2.9	384	263	39.060	10.328	B450	17N41-	3
94.0	393	4.0	528	271	41.620	10.447	B820	17N41-	3
97.0	383	4.0	541	227	41.118	10.741	B600	17N41-	3
105	352	3.9	569	241	41.407	11.680	B820	17N41-	3
110	339	3.6	544	256	38.520	12.143	B820	17N41-	3
115	322	2.5	404	242	37.868	12.775	B450	17N41-	3
121	307	3.3	553	233	38.506	13.369	B600	17N41-	3
121	307	3.7	619	233	39.701	13.370	B820	17N41-	3
128	290	2.4	422	216	37.791	14.165	B450	17N41-	3
132	281	3.5	653	213	39.204	14.626	B820	17N41-	3
133	279	3.2	600	184	39.306	14.730	B600	17N41-	3
148	251	2.1	434	190	37.227	16.349	B450	17N41-	3
148	251	3.4	708	190	39.096	16.352	B820	17N41-	3
161	230	2.0	446	174	37.046	17.885	B450	17N41-	3
168	220	3.2	747	167	38.178	18.655	B820	17N41-	3
170	218	2.5	600	159	38.288	18.851	B600	17N41-	3
179	207	1.8	450	157	37.006	19.831	B450	17N41-	3
184	201	5.8	1500	143	44.031	20.444	B1500	17N41-	3
186	199	2.3	600	147	38.023	20.622	B600	17N41-	3
188	197	3.1	820	149	38.111	20.857	B820	17N41-	3
206	180	1.6	450	136	36.702	22.813	B450	17N41-	3
206	180	2.1	600	136	37.188	22.852	B600	17N41-	3
206	180	2.8	820	136	37.597	22.853	B820	17N41-	3
207	180	5.2	1500	130	42.615	22.898	B1500	17N41-	3
216	171	5.0	1500	91.1	46.192	23.973	B1500	17N41-	3
228	163	1.4	450	123	36.678	25.294	B450	17N41-	3
229	162	1.9	600	93.2	38.177	25.347	B600	17N41-	3
231	161	2.5	820	122	37.553	25.550	B820	17N41-	3
235	158	1.8	600	76.3	38.882	26.061	B600	17N41-	3
238	156	2.5	820	83.4	39.077	26.324	B820	17N41-	3
238	156	4.5	1500	81.2	46.093	26.353	B1500	17N41-	3
264	141	4.1	1500	107	40.294	29.206	B1500	17N41-	3
268	138	1.6	600	105	36.720	29.744	B600	17N41-	3
268	138	2.2	820	105	36.909	29.745	B820	17N41-	3
291	127	2.0	820	75.6	38.243	32.291	B820	17N41-	3
293	127	1.5	600	73.5	37.599	32.439	B600	17N41-	3
294	126	3.7	1500	95.6	39.263	32.547	B1500	17N41-	3
323	115	1.3	600	54.8	38.117	35.740	B600	17N41-	3
323	115	3.3	1500	87.0	39.210	35.778	B1500	17N41-	3
326	114	1.8	820	63.9	38.220	36.102	B820	17N41-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2,\ max}$	$n_{2,\ th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
326	114	5.9	2700	86.2	45.122	36.102	B2700	17N41-	3
330	113	3.3	1500	62.9	42.890	36.526	B1500	17N41-	3
348	107	4.7	2298	80.7	45.371	38.546	B4300	17N41-	3
369	101	3.3	1500	63.8	41.303	40.895	B1500	17N41-	3
373	99.5	1.8	820	64.6	37.639	41.325	B820	17N41-	3
378	98.0	1.3	600	74.2	36.676	41.940	B600	17N41-	3
386	96.1	5.7	2700	55.1	50.139	42.772	B2700	17N41-	3
406	91.4	3.0	1500	56.8	41.269	44.955	B1500	17N41-	3
408	90.9	1.6	820	58.4	37.481	45.207	B820	17N41-	3
413	89.9	1.2	600	46.6	37.562	45.739	B600	17N41-	3
420	88.3	2.9	1500	66.8	38.138	46.568	B1500	17N41-	3
424	87.5	5.2	2700	49.2	50.065	46.973	B2700	17N41-	3
441	84.0	5.0	2700	63.6	41.468	48.912	B2700	17N41-	3
452	82.1	1.1	600	43.0	37.417	50.036	B600	17N41-	3
456	81.3	1.5	820	49.2	37.470	50.543	B820	17N41-	3
469	79.2	2.6	1500	59.9	37.485	51.920	B1500	17N41-	3
488	76.0	4.5	2700	57.5	37.113	54.082	B2700	17N41-	3
500	74.1	1.0	600	48.8	36.878	55.447	B600	17N41-	3
507	73.2	0.7	450	37.7	36.475	56.154	B450	17N41-	3
515	72.0	2.4	1500	54.5	37.464	57.074	B1500	17N41-	3
520	71.3	1.3	820	46.4	37.119	57.662	B820	17N41-	3
527	70.4	2.3	1500	50.6	38.957	58.422	B1500	17N41-	3
536	69.2	4.1	2700	52.4	37.113	59.393	B2700	17N41-	3
562	66.0	0.7	450	30.7	36.471	62.262	B450	17N41-	3
576	64.4	0.9	600	32.1	37.079	63.822	B600	17N41-	3
580	64.0	2.1	1500	45.0	38.940	64.221	B1500	17N41-	3
582	63.8	1.1	820	39.6	37.112	64.468	B820	17N41-	3
582	63.8	3.8	2700	41.6	45.170	64.452	B2700	17N41-	3
637	58.2	1.0	820	40.0	36.891	70.636	B820	17N41-	3
646	57.4	1.9	1500	42.9	38.318	71.566	B1500	17N41-	3
649	57.1	3.4	2700	39.6	43.266	71.951	B2700	17N41-	3
649	57.1	5.4	4300	43.3	44.253	71.930	B4300	17N41-	3
651	56.9	0.8	600	34.7	36.537	72.170	B600	17N41-	3
694	53.5	3.2	2700	40.5	38.609	76.862	B2700	17N41-	3
705	52.6	0.7	600	24.5	36.865	78.182	B600	17N41-	3
709	52.3	4.9	4300	39.0	44.191	78.619	B4300	17N41-	3
713	52.0	0.9	820	32.9	36.887	78.973	B820	17N41-	3
766	48.4	2.9	2700	36.6	37.923	84.940	B2700	17N41-	3
830	44.7	0.8	820	29.2	36.492	91.939	B820	17N41-	3
841	44.1	1.5	1500	33.4	37.612	93.150	B1500	17N41-	3
842	44.1	2.6	2700	33.4	37.904	93.283	B2700	17N41-	3
879	42.2	4.0	4300	31.9	40.994	97.453	B4300	17N41-	3
880	42.2	2.5	2700	31.9	40.457	97.481	B2700	17N41-	3
918	40.4	0.5	600	17.4	36.529	101.760	B600	17N41-	3
924	40.1	1.3	1500	30.4	37.605	102.396	B1500	17N41-	3
928	40.0	0.7	820	23.3	36.489	102.790	B820	17N41-	3
961	38.6	3.6	4300	29.2	40.960	106.517	B4300	17N41-	3
966	38.4	2.3	2700	29.1	40.442	107.056	B2700	17N41-	3
1030	36.0	1.3	1500	27.3	37.113	114.166	B1500	17N41-	3
1068	34.7	2.3	2700	26.3	37.113	118.370	B2700	17N41-	3
1068	34.7	3.6	4300	26.3	37.113	118.336	B4300	17N41-	3
1132	32.7	1.2	1500	24.8	37.113	125.498	B1500	17N41-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
1167	31.8	3.3	4300	24.1	37.113	129.342	B4300	17N41-	3
1173	31.6	2.1	2700	23.9	37.113	129.996	B2700	17N41-	3
1382	26.8	1.8	2700	20.3	38.199	153.185	B2700	17N41-	3
1382	26.8	2.8	4300	20.3	38.417	153.141	B4300	17N41-	3
1510	24.6	2.6	4300	18.6	38.403	167.383	B4300	17N41-	3
1518	24.4	1.6	2700	18.5	38.193	168.230	B2700	17N41-	3
1677	22.1	2.3	4300	16.7	37.773	185.857	B4300	17N41-	3
1678	22.1	1.5	2700	16.7	37.626	185.911	B2700	17N41-	3
1833	20.2	2.1	4300	15.3	37.764	203.143	B4300	17N41-	3
1842	20.1	1.3	2700	15.2	37.622	204.170	B2700	17N41-	3

5.2 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
57.0	837	3.9	312	491	83.522	4.958	B820	19S42-	3
57.0	830	3.5	280	490	76.360	5.002	B450	19S42-	3
58.0	819	4.6	376	483	78.731	5.067	B600	19S42-	3
78.0	610	3.6	391	360	78.711	6.800	B820	19S42-	3
78.0	605	2.8	308	357	74.482	6.860	B450	19S42-	3
79.0	597	3.6	398	352	76.163	6.949	B600	19S42-	3
87.0	545	3.5	424	311	81.472	7.618	B820	19S42-	3
87.0	545	3.8	462	317	77.790	7.617	B600	19S42-	3
97.0	487	3.4	459	276	81.071	8.517	B820	19S42-	3
106	446	2.5	368	263	75.206	9.315	B450	19S42-	3
109	436	3.3	496	257	75.761	9.520	B820	19S42-	3
118	402	2.3	384	237	75.060	10.328	B450	19S42-	3
119	397	3.2	528	234	77.620	10.447	B820	19S42-	3
122	386	3.2	541	216	77.118	10.741	B600	19S42-	3
133	355	3.0	569	210	77.407	11.680	B820	19S42-	3
138	342	2.8	544	202	74.520	12.143	B820	19S42-	3
146	325	2.0	404	192	73.868	12.775	B450	19S42-	3
150	316	5.3	1118	187	79.661	13.118	B1500	19S42-	3
152	310	2.6	553	183	74.506	13.369	B600	19S42-	3
152	310	2.9	619	183	75.701	13.370	B820	19S42-	3
161	293	1.9	422	173	73.791	14.165	B450	19S42-	3
167	284	2.8	653	167	75.204	14.626	B820	19S42-	3
168	282	2.6	600	166	75.306	14.730	B600	19S42-	3
186	254	2.7	708	150	75.096	16.352	B820	19S42-	3
189	250	5.6	1500	147	83.075	16.611	B1500	19S42-	3
212	223	5.0	1500	132	80.197	18.598	B1500	19S42-	3
213	223	2.5	747	131	74.178	18.655	B820	19S42-	3
215	220	2.0	600	130	74.288	18.851	B600	19S42-	3
233	203	4.6	1500	120	80.031	20.444	B1500	19S42-	3
235	201	1.8	600	119	74.023	20.622	B600	19S42-	3
238	199	2.5	820	117	74.111	20.857	B820	19S42-	3
260	182	1.6	600	107	73.188	22.852	B600	19S42-	3
260	182	2.2	820	107	73.597	22.853	B820	19S42-	3
261	181	4.1	1500	107	78.615	22.898	B1500	19S42-	3
273	173	3.9	1500	86.5	82.192	23.973	B1500	19S42-	3
289	164	1.5	600	81.6	74.177	25.347	B600	19S42-	3
291	162	2.0	820	95.8	73.553	25.550	B820	19S42-	3
297	159	1.4	600	66.8	74.882	26.061	B600	19S42-	3
300	158	2.0	820	78.5	75.077	26.324	B820	19S42-	3
300	158	3.6	1500	77.0	82.093	26.353	B1500	19S42-	3
333	142	3.2	1500	83.8	76.294	29.206	B1500	19S42-	3
336	141	5.7	2700	83.2	83.999	29.447	B2700	19S42-	3
368	129	1.6	820	66.5	74.243	32.291	B820	19S42-	3
370	128	1.2	600	65.0	73.599	32.439	B600	19S42-	3
371	128	2.9	1500	75.2	75.263	32.547	B1500	19S42-	3
375	126	5.1	2700	74.5	81.248	32.873	B2700	19S42-	3
407	116	1.1	600	49.0	74.117	35.740	B600	19S42-	3
408	116	2.6	1500	68.4	75.210	35.778	B1500	19S42-	3
412	115	1.4	820	56.1	74.220	36.102	B820	19S42-	3
412	115	4.7	2700	67.8	81.122	36.102	B2700	19S42-	3
416	114	2.6	1500	59.6	78.890	36.526	B1500	19S42-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
466	102	2.6	1500	59.9	77.303	40.895	B1500	19S42-	3
471	100	1.4	820	56.5	73.639	41.325	B820	19S42-	3
488	97.0	4.5	2700	52.5	86.139	42.772	B2700	19S42-	3
512	92.3	2.4	1500	53.8	77.269	44.955	B1500	19S42-	3
515	91.8	1.3	820	51.7	73.481	45.207	B820	19S42-	3
521	90.7	0.9	600	40.1	73.562	45.739	B600	19S42-	3
531	89.1	2.3	1500	52.6	74.138	46.568	B1500	19S42-	3
535	88.3	4.1	2700	46.9	86.065	46.973	B2700	19S42-	3
558	84.8	3.9	2700	50.1	77.468	48.912	B2700	19S42-	3
570	82.9	0.9	600	35.4	73.417	50.036	B600	19S42-	3
576	82.1	1.2	820	43.8	73.470	50.543	B820	19S42-	3
607	77.9	5.7	4300	46.0	85.583	53.258	B4300	19S42-	3
616	76.7	3.5	2700	45.3	73.113	54.082	B2700	19S42-	3
632	74.8	0.8	600	38.5	72.878	55.447	B600	19S42-	3
657	72.0	1.0	820	42.2	73.119	57.662	B820	19S42-	3
666	71.0	1.8	1500	41.9	74.957	58.422	B1500	19S42-	3
669	70.7	5.2	4300	41.7	82.692	58.671	B4300	19S42-	3
677	69.9	3.2	2700	41.2	73.113	59.393	B2700	19S42-	3
727	65.0	0.7	600	25.4	73.079	63.822	B600	19S42-	3
731	64.7	4.8	4300	38.2	82.598	64.127	B4300	19S42-	3
732	64.6	1.7	1500	38.1	74.940	64.221	B1500	19S42-	3
735	64.4	0.9	820	34.0	73.112	64.468	B820	19S42-	3
735	64.4	3.0	2700	38.0	81.170	64.452	B2700	19S42-	3
805	58.8	0.8	820	32.4	72.891	70.636	B820	19S42-	3
816	58.0	1.5	1500	34.2	74.318	71.566	B1500	19S42-	3
820	57.7	2.7	2700	34.0	79.266	71.951	B2700	19S42-	3
820	57.7	4.2	4300	34.0	80.253	71.930	B4300	19S42-	3
891	53.1	0.5	600	19.4	72.865	78.182	B600	19S42-	3
896	52.8	3.9	4300	31.1	80.191	78.619	B4300	19S42-	3
900	52.5	0.7	820	25.9	72.887	78.973	B820	19S42-	3
1062	44.6	1.1	1500	26.3	73.612	93.150	B1500	19S42-	3
1111	42.6	2.0	2700	25.1	76.457	97.481	B2700	19S42-	3
1111	42.6	3.1	4300	25.1	76.994	97.453	B4300	19S42-	3
1167	40.5	1.0	1500	23.9	73.605	102.396	B1500	19S42-	3
1214	39.0	2.9	4300	23.0	76.960	106.517	B4300	19S42-	3
1220	38.8	1.8	2700	22.9	76.442	107.056	B2700	19S42-	3
1349	35.1	1.8	2700	20.7	73.113	118.370	B2700	19S42-	3
1349	35.1	2.9	4300	20.7	73.113	118.336	B4300	19S42-	3
1474	32.1	2.6	4300	18.9	73.113	129.342	B4300	19S42-	3
1482	31.9	1.6	2700	18.8	73.113	129.996	B2700	19S42-	3

6.4 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
160	363	4.4	837	293	201.952	6.866	B1500	21X25-	3
222	262	3.8	1006	212	193.064	9.516	B1500	21X25-	3
255	228	4.4	1330	185	198.614	10.902	B1500	21X25-	3
280	208	4.4	1461	168	198.132	11.985	B1500	21X25-	3
307	190	3.1	1118	154	187.661	13.118	B1500	21X25-	3
348	167	5.8	2380	135	209.802	14.888	B2700	21X25-	3
353	165	3.6	1500	133	191.326	15.111	B1500	21X25-	3
382	152	5.4	2429	123	209.188	16.351	B2700	21X25-	3
388	150	3.3	1500	121	191.075	16.611	B1500	21X25-	3
435	134	2.9	1500	108	188.197	18.598	B1500	21X25-	3
457	127	4.8	2579	103	199.748	19.542	B2700	21X25-	3
478	122	2.7	1500	98.5	188.031	20.444	B1500	21X25-	3
520	112	4.4	2684	90.4	195.887	22.269	B2700	21X25-	3
535	109	2.4	1500	87.9	186.615	22.898	B1500	21X25-	3
560	104	2.3	1500	75.7	190.192	23.973	B1500	21X25-	3
571	102	4.0	2700	82.3	195.613	24.456	B2700	21X25-	3
616	94.5	2.1	1500	67.2	190.093	26.353	B1500	21X25-	3
627	92.9	3.6	2700	75.1	192.188	26.814	B2700	21X25-	3
655	88.9	5.6	4300	66.7	214.200	28.013	B4300	21X25-	3
688	84.6	3.3	2700	68.4	191.999	29.447	B2700	21X25-	3
727	80.1	5.0	4300	64.8	195.889	31.097	B4300	21X25-	3
768	75.7	3.0	2700	61.3	189.248	32.873	B2700	21X25-	3
832	69.9	4.4	4300	55.2	204.646	35.607	B4300	21X25-	3
844	69.0	2.7	2700	55.8	189.122	36.102	B2700	21X25-	3
853	68.2	1.5	1500	47.4	186.890	36.526	B1500	21X25-	3
956	60.9	1.5	1500	48.2	185.303	40.895	B1500	21X25-	3
999	58.2	2.6	2700	46.5	194.139	42.772	B2700	21X25-	3
999	58.2	4.1	4300	47.1	196.931	42.760	B4300	21X25-	3
1050	55.4	1.4	1500	41.6	185.269	44.955	B1500	21X25-	3
1092	53.3	3.8	4300	43.1	196.755	46.737	B4300	21X25-	3
1098	53.0	2.4	2700	41.4	194.065	46.973	B2700	21X25-	3
1244	46.8	3.3	4300	37.8	193.583	53.258	B4300	21X25-	3
1371	42.4	3.0	4300	34.3	190.692	58.671	B4300	21X25-	3
1498	38.8	2.8	4300	31.4	190.598	64.127	B4300	21X25-	3
1506	38.6	1.7	2700	31.2	189.170	64.452	B2700	21X25-	3
1681	34.6	1.5	2700	28.0	187.266	71.951	B2700	21X25-	3
1681	34.6	2.5	4300	28.0	188.253	71.930	B4300	21X25-	3
1837	31.7	2.3	4300	25.6	188.191	78.619	B4300	21X25-	3

7.4 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
111	606	5.4	837	293	201.952	6.866	B1500	21X42-	3
154	437	4.7	1006	212	193.064	9.516	B1500	21X42-	3
176	382	5.4	1330	185	198.614	10.902	B1500	21X42-	3
194	347	5.4	1461	168	198.132	11.985	B1500	21X42-	3
212	317	3.8	1118	154	187.661	13.118	B1500	21X42-	3
244	275	4.4	1500	133	191.326	15.111	B1500	21X42-	3
268	250	4.0	1500	121	191.075	16.611	B1500	21X42-	3
300	224	3.6	1500	108	188.197	18.598	B1500	21X42-	3
316	213	5.8	2579	103	199.748	19.542	B2700	21X42-	3
330	204	3.2	1500	98.5	188.031	20.444	B1500	21X42-	3
360	187	5.3	2684	90.4	195.887	22.269	B2700	21X42-	3
370	182	2.9	1500	87.9	186.615	22.898	B1500	21X42-	3
387	174	2.8	1500	79.6	190.192	23.973	B1500	21X42-	3
395	170	4.9	2700	82.3	195.613	24.456	B2700	21X42-	3
426	158	2.5	1500	70.8	190.093	26.353	B1500	21X42-	3
433	155	4.4	2700	75.1	192.188	26.814	B2700	21X42-	3
476	141	4.0	2700	68.4	191.999	29.447	B2700	21X42-	3
531	127	3.6	2700	61.3	189.248	32.873	B2700	21X42-	3
575	117	5.3	4300	56.5	204.646	35.607	B4300	21X42-	3
583	115	3.3	2700	55.8	189.122	36.102	B2700	21X42-	3
590	114	1.8	1500	53.1	186.890	36.526	B1500	21X42-	3
660	102	1.8	1500	49.2	185.303	40.895	B1500	21X42-	3
690	97.3	5.0	4300	47.1	196.931	42.760	B4300	21X42-	3
691	97.3	3.2	2700	47.1	194.139	42.772	B2700	21X42-	3
726	92.5	1.7	1500	44.8	185.269	44.955	B1500	21X42-	3
755	89.0	4.6	4300	43.1	196.755	46.737	B4300	21X42-	3
759	88.6	2.9	2700	42.9	194.065	46.973	B2700	21X42-	3
860	78.1	4.0	4300	37.8	193.583	53.258	B4300	21X42-	3
947	70.9	3.7	4300	34.3	190.692	58.671	B4300	21X42-	3
1036	64.9	3.4	4300	31.4	190.598	64.127	B4300	21X42-	3
1041	64.5	2.1	2700	31.2	189.170	64.452	B2700	21X42-	3
1161	57.8	3.0	4300	28.0	188.253	71.930	B4300	21X42-	3
1162	57.8	1.9	2700	28.0	187.266	71.951	B2700	21X42-	3
1270	52.9	2.7	4300	25.6	188.191	78.619	B4300	21X42-	3

Inverter mains connection 400 V, Forced ventilated

2.1 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
41.0	459	3.3	138	459	22.172	3.565	B240	14L16-	2
56.0	334	2.6	147	334	20.944	4.889	B240	14L16-	2
57.0	330	5.4	283	330	30.722	4.958	B820	14L16-	3
57.0	327	4.8	280	327	23.560	5.002	B450	14L16-	3
71.0	261	2.1	156	261	20.351	6.257	B240	14L16-	2
78.0	240	4.9	388	240	25.911	6.800	B820	14L16-	3
78.0	238	3.8	308	238	21.682	6.860	B450	14L16-	3
78.0	238	2.2	179	238	20.874	6.883	B240	14L16-	2
79.0	235	4.9	396	235	23.363	6.949	B600	14L16-	3
87.0	215	4.8	424	215	28.672	7.618	B820	14L16-	3
87.0	215	5.2	434	215	24.990	7.617	B600	14L16-	3
89.0	209	2.0	187	209	20.713	7.817	B240	14L16-	2
97.0	192	4.6	459	192	28.271	8.517	B820	14L16-	3
106	176	3.4	368	176	22.406	9.315	B450	14L16-	3
108	173	1.7	191	173	20.254	9.440	B240	14L16-	2
109	172	4.4	496	172	22.961	9.520	B820	14L16-	3
118	158	3.2	384	158	22.260	10.328	B450	14L16-	3
119	157	4.3	528	157	24.820	10.447	B820	14L16-	3
122	153	1.6	204	153	20.168	10.720	B240	14L16-	2
122	152	4.3	541	152	24.318	10.741	B600	14L16-	3
133	140	4.2	569	140	24.607	11.680	B820	14L16-	3
138	135	1.5	208	135	19.929	12.081	B240	14L16-	2
138	135	3.8	544	135	21.720	12.143	B820	14L16-	3
146	128	2.7	404	128	21.068	12.775	B450	14L16-	3
152	122	3.5	553	122	21.706	13.369	B600	14L16-	3
152	122	4.0	619	122	22.901	13.370	B820	14L16-	3
156	119	1.4	217	119	19.877	13.719	B240	14L16-	2
161	115	2.5	422	115	20.991	14.165	B450	14L16-	3
167	112	3.8	653	112	22.404	14.626	B820	14L16-	3
168	111	3.5	600	111	22.506	14.730	B600	14L16-	3
171	109	1.3	223	109	19.786	15.008	B240	14L16-	2
186	100	2.3	434	100	20.427	16.349	B450	14L16-	3
186	100	3.7	708	100	22.296	16.352	B820	14L16-	3
192	97.0	1.2	240	97.0	19.647	16.857	B240	14L16-	2
204	91.4	2.1	446	91.4	20.246	17.885	B450	14L16-	3
213	87.6	3.4	747	87.6	21.378	18.655	B820	14L16-	3
215	86.7	2.7	600	86.7	21.488	18.851	B600	14L16-	3
218	85.4	1.1	240	85.4	19.620	19.143	B240	14L16-	2
226	82.4	1.9	450	82.4	20.206	19.831	B450	14L16-	3
235	79.3	2.5	600	79.3	21.223	20.622	B600	14L16-	3
235	79.2	1.0	240	79.2	19.540	20.650	B240	14L16-	2
238	78.4	3.4	820	78.4	21.311	20.857	B820	14L16-	3
260	71.7	1.7	450	71.7	19.902	22.813	B450	14L16-	3
260	71.5	2.2	600	71.5	20.388	22.852	B600	14L16-	3
260	71.5	3.1	820	71.5	20.797	22.853	B820	14L16-	3
261	71.4	5.6	1305	71.4	25.815	22.898	B1500	14L16-	3
267	69.7	0.9	240	69.7	19.522	23.450	B240	14L16-	2
288	64.6	1.5	450	64.6	19.878	25.294	B450	14L16-	3
289	64.5	2.0	600	64.5	21.377	25.347	B600	14L16-	3
291	64.0	2.7	820	64.0	20.753	25.550	B820	14L16-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2,\ max}$	$n_{2,\ th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
297	62.7	2.0	600	62.7	22.082	26.061	B600	14L16-	3
300	62.1	2.7	820	62.1	22.277	26.324	B820	14L16-	3
319	58.5	1.4	450	58.5	19.710	27.945	B450	14L16-	3
333	56.0	4.4	1500	56.0	23.494	29.206	B1500	14L16-	3
339	55.0	1.7	600	55.0	19.920	29.744	B600	14L16-	3
339	55.0	2.4	820	55.0	20.109	29.745	B820	14L16-	3
353	52.8	1.2	450	52.8	19.694	30.985	B450	14L16-	3
368	50.6	2.2	820	50.6	21.443	32.291	B820	14L16-	3
370	50.4	1.6	600	50.4	20.799	32.439	B600	14L16-	3
371	50.2	3.9	1500	50.2	22.463	32.547	B1500	14L16-	3
407	45.7	1.4	600	45.7	21.317	35.740	B600	14L16-	3
408	45.7	3.6	1500	45.7	22.410	35.778	B1500	14L16-	3
412	45.3	1.9	820	45.3	21.420	36.102	B820	14L16-	3
422	44.2	1.4	600	44.2	19.680	36.999	B600	14L16-	3
422	44.2	1.9	820	44.2	19.836	37.000	B820	14L16-	3
439	42.4	4.3	1963	42.4	28.571	38.546	B4300	14L16-	3
466	40.0	3.2	1500	40.0	24.503	40.895	B1500	14L16-	3
471	39.6	1.7	820	39.6	20.839	41.325	B820	14L16-	3
478	39.0	1.3	600	39.0	19.876	41.940	B600	14L16-	3
512	36.4	2.9	1500	36.4	24.469	44.955	B1500	14L16-	3
515	36.2	1.6	820	36.2	20.681	45.207	B820	14L16-	3
521	35.7	1.2	600	35.7	20.762	45.739	B600	14L16-	3
531	35.1	2.8	1500	35.1	21.338	46.568	B1500	14L16-	3
558	33.4	4.5	2491	33.4	24.668	48.912	B2700	14L16-	3
570	32.7	1.1	600	32.7	20.617	50.036	B600	14L16-	3
576	32.3	1.4	820	32.3	20.670	50.543	B820	14L16-	3
592	31.5	2.5	1500	31.5	20.685	51.920	B1500	14L16-	3
616	30.2	3.8	2351	30.2	20.313	54.082	B2700	14L16-	3
632	29.5	1.0	600	29.5	20.078	55.447	B600	14L16-	3
640	29.1	0.7	450	29.1	19.675	56.154	B450	14L16-	3
651	28.6	2.3	1500	28.6	20.664	57.074	B1500	14L16-	3
657	28.4	1.3	820	28.4	20.319	57.662	B820	14L16-	3
666	28.0	2.3	1500	28.0	22.157	58.422	B1500	14L16-	3
677	27.5	3.8	2582	27.5	20.313	59.393	B2700	14L16-	3
710	26.3	0.6	450	26.3	19.671	62.262	B450	14L16-	3
727	25.6	0.8	600	25.6	20.279	63.822	B600	14L16-	3
731	25.5	5.9	3655	25.5	29.798	64.127	B4300	14L16-	3
732	25.5	2.1	1500	25.5	22.140	64.221	B1500	14L16-	3
735	25.4	1.1	820	25.4	20.312	64.468	B820	14L16-	3
735	25.4	3.7	2700	25.4	28.370	64.452	B2700	14L16-	3
784	23.8	0.6	450	23.8	19.559	68.788	B450	14L16-	3
805	23.1	1.0	820	23.1	20.091	70.636	B820	14L16-	3
816	22.8	1.8	1500	22.8	21.518	71.566	B1500	14L16-	3
823	22.7	0.7	600	22.7	19.737	72.170	B600	14L16-	3
854	21.8	1.8	1500	21.8	20.106	74.963	B1500	14L16-	3
869	21.4	0.5	450	21.4	19.556	76.271	B450	14L16-	3
876	21.3	3.1	2675	21.3	21.809	76.862	B2700	14L16-	3
891	20.9	0.7	600	20.9	20.065	78.182	B600	14L16-	3
900	20.7	0.9	820	20.7	20.087	78.973	B820	14L16-	3
943	19.8	1.6	1500	19.8	19.867	82.762	B1500	14L16-	3
968	19.2	2.6	2475	19.2	21.123	84.940	B2700	14L16-	3
1023	18.2	0.6	600	18.2	19.561	89.772	B600	14L16-	3

Technical data

Selection tables

Inverter mains connection 400 V, Forced ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
1037	18.0	1.5	1500	18.0	19.858	90.978	B1500	14L16-	3
1048	17.8	0.8	820	17.8	19.692	91.939	B820	14L16-	3
1062	17.6	1.4	1500	17.6	20.812	93.150	B1500	14L16-	3
1063	17.5	2.5	2700	17.5	21.104	93.283	B2700	14L16-	3
1111	16.8	2.4	2700	16.8	23.657	97.481	B2700	14L16-	3
1111	16.8	3.9	4300	16.8	24.194	97.453	B4300	14L16-	3
1160	16.1	0.5	600	16.1	19.729	101.760	B600	14L16-	3
1167	16.0	1.3	1500	16.0	20.805	102.396	B1500	14L16-	3
1172	15.9	0.7	820	15.9	19.689	102.790	B820	14L16-	3
1214	15.3	3.5	4300	15.3	24.160	106.517	B4300	14L16-	3
1220	15.3	2.2	2700	15.3	23.642	107.056	B2700	14L16-	3
1301	14.3	1.2	1500	14.3	20.313	114.166	B1500	14L16-	3
1304	14.3	0.6	820	14.3	19.566	114.364	B820	14L16-	3
1349	13.8	2.0	2700	13.8	20.313	118.370	B2700	14L16-	3
1349	13.8	3.2	4300	13.8	20.313	118.336	B4300	14L16-	3
1430	13.0	1.1	1500	13.0	20.313	125.498	B1500	14L16-	3
1457	12.8	0.6	820	12.8	19.565	127.861	B820	14L16-	3
1474	12.6	2.9	4300	12.6	20.313	129.342	B4300	14L16-	3
1482	12.6	1.8	2700	12.6	20.313	129.996	B2700	14L16-	3
1709	10.9	0.9	1500	10.9	19.903	149.949	B1500	14L16-	3
1746	10.7	1.6	2700	10.7	21.399	153.185	B2700	14L16-	3
1746	10.7	2.5	4300	10.7	21.617	153.141	B4300	14L16-	3
1879	9.9	0.8	1500	9.9	19.900	164.833	B1500	14L16-	3
1908	9.8	2.3	4300	9.8	21.603	167.383	B4300	14L16-	3
1918	9.7	1.4	2700	9.7	21.393	168.230	B2700	14L16-	3
2074	9.0	0.7	1500	9.0	19.721	181.983	B1500	14L16-	3
2118	8.8	2.0	4300	8.8	20.973	185.857	B4300	14L16-	3
2119	8.8	1.3	2700	8.8	20.826	185.911	B2700	14L16-	3
2280	8.2	0.7	1500	8.2	19.719	200.048	B1500	14L16-	3
2315	8.0	1.9	4300	8.0	20.964	203.143	B4300	14L16-	3
2327	8.0	1.2	2700	8.0	20.822	204.170	B2700	14L16-	3
2678	7.0	1.6	4300	7.0	20.373	234.932	B4300	14L16-	3
2679	7.0	1.0	2700	7.0	20.280	235.000	B2700	14L16-	3
2927	6.4	1.5	4300	6.4	20.367	256.781	B4300	14L16-	3
2942	6.3	0.9	2700	6.3	20.278	258.080	B2700	14L16-	3

2.2 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
21.0	957	4.9	108	844	11.272	3.565	B240	13I34-	2
29.0	698	3.8	147	687	10.044	4.889	B240	13I34-	2
30.0	682	5.1	152	606	12.660	5.002	B450	13I34-	3
31.0	658	1.7	69.0	534	9.093	5.185	B110	13I34-	2
36.0	572	1.5	72.0	441	9.005	5.963	B110	13I34-	2
37.0	545	3.2	156	545	9.451	6.257	B240	13I34-	2
41.0	497	5.1	209	497	10.782	6.860	B450	13I34-	3
41.0	495	3.3	179	404	9.974	6.883	B240	13I34-	2
43.0	480	1.4	77.0	403	8.778	7.111	B110	13I34-	2
47.0	436	3.0	187	350	9.813	7.817	B240	13I34-	2
49.0	417	1.3	81.0	337	8.731	8.178	B110	13I34-	2
54.0	375	1.2	84.0	341	8.623	9.101	B110	13I34-	2
56.0	366	5.0	283	324	11.506	9.315	B450	13I34-	3
57.0	361	2.6	191	329	9.354	9.440	B240	13I34-	2
57.0	358	5.1	289	358	12.061	9.520	B820	13I34-	3
62.0	330	4.7	314	289	11.360	10.328	B450	13I34-	3
63.0	326	1.1	89.0	287	8.595	10.466	B110	13I34-	2
64.0	318	2.4	204	286	9.268	10.720	B240	13I34-	2
69.0	298	1.0	90.0	268	8.555	11.449	B110	13I34-	2
72.0	282	2.2	208	274	9.029	12.081	B240	13I34-	2
73.0	281	4.7	369	281	10.820	12.143	B820	13I34-	3
76.0	269	0.9	90.0	254	8.493	12.698	B110	13I34-	2
76.0	267	4.0	388	266	10.168	12.775	B450	13I34-	3
80.0	255	5.1	406	255	10.806	13.369	B600	13I34-	3
80.0	255	5.1	406	255	12.001	13.370	B820	13I34-	3
82.0	249	2.0	217	238	8.977	13.719	B240	13I34-	2
85.0	241	3.8	422	237	10.091	14.165	B450	13I34-	3
87.0	234	0.8	90.0	192	8.478	14.603	B110	13I34-	2
88.0	233	5.1	445	233	11.504	14.626	B820	13I34-	3
90.0	227	1.9	223	221	8.886	15.008	B240	13I34-	2
93.0	219	0.8	92.0	198	8.443	15.556	B110	13I34-	2
98.0	209	3.4	434	209	9.527	16.349	B450	13I34-	3
98.0	209	5.1	497	209	11.396	16.352	B820	13I34-	3
101	202	1.8	240	202	8.747	16.857	B240	13I34-	2
107	191	3.2	446	191	9.346	17.885	B450	13I34-	3
107	191	0.7	96.0	156	8.433	17.889	B110	13I34-	2
112	183	4.7	567	183	10.478	18.655	B820	13I34-	3
113	181	4.1	573	175	10.588	18.851	B600	13I34-	3
115	178	1.6	240	178	8.720	19.143	B240	13I34-	2
119	172	2.9	450	172	9.306	19.831	B450	13I34-	3
123	165	3.7	600	162	10.323	20.622	B600	13I34-	3
124	165	1.5	240	165	8.640	20.650	B240	13I34-	2
125	164	4.7	634	164	10.411	20.857	B820	13I34-	3
137	150	2.5	450	150	9.002	22.813	B450	13I34-	3
137	149	3.3	600	149	9.488	22.852	B600	13I34-	3
137	149	4.0	695	149	9.897	22.853	B820	13I34-	3
140	145	1.3	240	145	8.622	23.450	B240	13I34-	2
151	135	2.3	450	135	8.978	25.294	B450	13I34-	3
153	134	4.0	777	134	9.853	25.550	B820	13I34-	3
161	127	1.1	240	127	8.511	26.878	B240	13I34-	2
167	122	2.1	450	122	8.810	27.945	B450	13I34-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
175	117	5.1	888	117	12.594	29.206	B1500	13I34-	3
178	115	2.6	600	115	9.020	29.744	B600	13I34-	3
178	115	3.2	758	115	9.209	29.745	B820	13I34-	3
183	112	1.0	240	112	8.500	30.522	B240	13I34-	2
185	110	1.9	450	110	8.794	30.985	B450	13I34-	3
194	105	2.4	600	90.7	9.899	32.439	B600	13I34-	3
200	102	0.9	240	102	8.452	33.433	B240	13I34-	2
218	93.8	1.6	450	93.8	8.611	36.373	B450	13I34-	3
221	92.2	2.1	600	92.2	8.780	36.999	B600	13I34-	3
221	92.2	2.7	787	92.2	8.936	37.000	B820	13I34-	3
227	89.8	0.8	240	89.8	8.446	37.967	B240	13I34-	2
241	84.6	1.6	450	84.6	8.602	40.330	B450	13I34-	3
247	82.5	2.9	820	74.3	9.939	41.325	B820	13I34-	3
251	81.3	2.1	600	81.3	8.976	41.940	B600	13I34-	3
271	75.4	1.4	450	75.4	8.517	45.245	B450	13I34-	3
271	75.4	2.6	820	69.0	9.781	45.207	B820	13I34-	3
274	74.6	1.9	600	60.5	9.862	45.739	B600	13I34-	3
279	73.2	4.6	1415	73.2	10.438	46.568	B1500	13I34-	3
299	68.2	1.7	600	54.6	9.717	50.036	B600	13I34-	3
300	68.0	1.3	450	68.0	8.511	50.167	B450	13I34-	3
302	67.5	2.3	820	60.3	9.770	50.543	B820	13I34-	3
311	65.7	3.9	1401	65.7	9.785	51.920	B1500	13I34-	3
332	61.5	1.6	600	61.5	9.178	55.447	B600	13I34-	3
336	60.7	1.2	450	55.5	8.775	56.154	B450	13I34-	3
342	59.7	3.8	1500	59.7	9.764	57.074	B1500	13I34-	3
345	59.1	2.1	820	57.4	9.419	57.662	B820	13I34-	3
350	58.4	3.7	1500	55.7	11.257	58.422	B1500	13I34-	3
373	54.8	1.0	450	48.0	8.771	62.262	B450	13I34-	3
382	53.4	1.4	600	43.0	9.379	63.822	B600	13I34-	3
384	53.1	3.4	1500	49.8	11.240	64.221	B1500	13I34-	3
386	52.9	1.8	820	49.1	9.412	64.468	B820	13I34-	3
404	50.5	1.3	600	50.5	8.581	67.513	B600	13I34-	3
412	49.6	0.9	450	46.2	8.659	68.788	B450	13I34-	3
423	48.3	1.7	820	48.3	9.191	70.636	B820	13I34-	3
432	47.2	1.2	600	47.2	8.837	72.170	B600	13I34-	3
449	45.5	2.9	1500	45.5	9.206	74.963	B1500	13I34-	3
456	44.7	0.9	450	37.6	8.656	76.271	B450	13I34-	3
468	43.6	1.1	600	37.1	9.165	78.182	B600	13I34-	3
473	43.2	1.5	820	42.4	9.187	78.973	B820	13I34-	3
490	41.6	1.1	600	41.6	8.505	81.937	B600	13I34-	3
495	41.2	2.6	1468	41.2	8.967	82.762	B1500	13I34-	3
536	38.1	0.7	450	32.8	8.522	89.534	B450	13I34-	3
537	38.0	1.0	600	38.0	8.661	89.772	B600	13I34-	3
544	37.5	2.4	1500	37.5	8.958	90.978	B1500	13I34-	3
550	37.1	1.3	820	37.1	8.792	91.939	B820	13I34-	3
557	36.6	2.3	1500	36.6	9.912	93.150	B1500	13I34-	3
594	34.3	0.7	450	26.7	8.520	99.274	B450	13I34-	3
609	33.5	0.9	600	28.0	8.829	101.760	B600	13I34-	3
613	33.3	2.1	1500	33.3	9.905	102.396	B1500	13I34-	3
615	33.2	1.2	820	33.2	8.789	102.790	B820	13I34-	3
666	30.6	0.7	450	27.6	8.460	111.372	B450	13I34-	3
683	29.9	2.1	1500	29.9	9.413	114.166	B1500	13I34-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
684	29.8	1.2	820	29.8	8.666	114.364	B820	13I34-	3
695	29.4	0.8	600	29.4	8.527	116.175	B600	13I34-	3
739	27.6	0.6	450	22.5	8.459	123.487	B450	13I34-	3
751	27.2	1.9	1500	27.2	9.413	125.498	B1500	13I34-	3
757	26.9	0.8	600	23.5	8.656	126.580	B600	13I34-	3
765	26.7	1.0	820	26.7	8.665	127.861	B820	13I34-	3
844	24.2	0.7	600	24.2	8.468	140.995	B600	13I34-	3
886	23.0	0.9	820	23.0	8.530	148.000	B820	13I34-	3
897	22.7	1.6	1500	22.7	9.003	149.949	B1500	13I34-	3
980	20.8	0.6	600	17.1	8.524	163.810	B600	13I34-	3
986	20.7	1.5	1500	20.7	9.000	164.833	B1500	13I34-	3
990	20.6	0.8	820	20.6	8.529	165.467	B820	13I34-	3
1075	19.0	0.7	820	19.0	8.470	179.618	B820	13I34-	3
1089	18.7	1.3	1500	18.7	8.821	181.983	B1500	13I34-	3
1197	17.0	1.2	1500	17.0	8.819	200.048	B1500	13I34-	3
1202	17.0	0.7	820	17.0	8.469	200.816	B820	13I34-	3
1377	14.8	1.0	1500	14.8	8.636	230.035	B1500	13I34-	3
1513	13.5	1.0	1500	13.5	8.635	252.869	B1500	13I34-	3

3.8 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
101	339	3.0	312	339	47.522	4.958	B820	17N17-	3
102	336	2.6	280	336	40.360	5.002	B450	17N17-	3
103	332	3.5	376	332	42.731	5.067	B600	17N17-	3
139	247	2.7	391	247	42.711	6.800	B820	17N17-	3
140	245	2.1	308	245	38.482	6.860	B450	17N17-	3
140	245	4.8	652	245	57.952	6.866	B1500	17N17-	3
142	242	2.7	398	242	40.163	6.949	B600	17N17-	3
156	221	2.6	424	221	45.472	7.618	B820	17N17-	3
156	221	2.9	462	221	41.790	7.617	B600	17N17-	3
174	197	2.5	459	197	45.071	8.517	B820	17N17-	3
187	184	5.3	870	184	85.653	9.156	B4300	17N17-	3
190	180	1.9	368	180	39.206	9.315	B450	17N17-	3
194	177	2.5	496	177	39.761	9.520	B820	17N17-	3
194	177	4.8	904	177	49.064	9.516	B1500	17N17-	3
211	163	1.8	384	163	39.060	10.328	B450	17N17-	3
213	161	2.4	528	161	41.620	10.447	B820	17N17-	3
219	156	2.4	541	156	41.118	10.741	B600	17N17-	3
223	154	4.8	1036	154	54.614	10.902	B1500	17N17-	3
239	144	2.3	569	144	41.407	11.680	B820	17N17-	3
245	140	4.8	1138	140	54.132	11.985	B1500	17N17-	3
248	138	2.1	544	138	38.520	12.143	B820	17N17-	3
261	132	1.5	404	132	37.868	12.775	B450	17N17-	3
268	128	3.9	1086	128	43.661	13.118	B1500	17N17-	3
273	126	2.0	553	126	38.506	13.369	B600	17N17-	3
273	126	2.2	619	126	39.701	13.370	B820	17N17-	3
289	119	1.4	422	119	37.791	14.165	B450	17N17-	3
299	115	2.1	653	115	39.204	14.626	B820	17N17-	3
301	114	1.9	600	114	39.306	14.730	B600	17N17-	3
309	111	4.7	1435	111	47.326	15.111	B1500	17N17-	3
334	103	1.3	434	103	37.227	16.349	B450	17N17-	3
334	103	2.0	708	103	39.096	16.352	B820	17N17-	3
339	101	4.3	1500	101	47.075	16.611	B1500	17N17-	3
345	99.3	5.3	1607	99.3	75.664	16.913	B4300	17N17-	3
365	93.9	1.2	446	93.9	37.046	17.885	B450	17N17-	3
378	90.9	5.3	1756	90.9	74.539	18.486	B4300	17N17-	3
380	90.3	3.8	1500	90.3	44.197	18.598	B1500	17N17-	3
381	90.1	1.9	747	90.1	38.178	18.655	B820	17N17-	3
385	89.1	1.5	600	89.1	38.288	18.851	B600	17N17-	3
399	86.0	5.3	1856	86.0	55.748	19.542	B2700	17N17-	3
405	84.7	1.1	450	84.7	37.006	19.831	B450	17N17-	3
418	82.2	3.5	1500	82.2	44.031	20.444	B1500	17N17-	3
421	81.5	1.4	600	81.5	38.023	20.622	B600	17N17-	3
426	80.5	1.9	820	80.5	38.111	20.857	B820	17N17-	3
430	79.8	4.8	2001	79.8	66.359	21.065	B4300	17N17-	3
455	75.4	4.8	2115	75.4	51.887	22.269	B2700	17N17-	3
466	73.6	0.9	450	73.6	36.702	22.813	B450	17N17-	3
467	73.5	1.2	600	73.5	37.188	22.852	B600	17N17-	3
467	73.5	1.7	820	73.5	37.597	22.853	B820	17N17-	3
468	73.4	3.1	1500	73.4	42.615	22.898	B1500	17N17-	3
474	72.4	4.2	2061	72.4	58.767	23.206	B4300	17N17-	3
490	70.1	3.0	1500	70.1	46.192	23.973	B1500	17N17-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2,\ max}$	$n_{2,\ th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
499	68.7	4.8	2323	68.7	51.613	24.456	B2700	17N17-	3
517	66.4	0.8	450	66.4	36.678	25.294	B450	17N17-	3
518	66.3	1.1	600	66.3	38.177	25.347	B600	17N17-	3
518	66.2	4.2	2252	66.2	58.170	25.365	B4300	17N17-	3
522	65.8	1.5	820	65.8	37.553	25.550	B820	17N17-	3
532	64.5	1.1	600	58.1	38.882	26.061	B600	17N17-	3
538	63.8	1.5	820	63.8	39.077	26.324	B820	17N17-	3
538	63.8	2.7	1500	63.8	46.093	26.353	B1500	17N17-	3
548	62.7	4.2	2381	62.7	48.188	26.814	B2700	17N17-	3
596	57.5	2.4	1500	57.5	40.294	29.206	B1500	17N17-	3
601	57.1	4.2	2615	57.1	47.999	29.447	B2700	17N17-	3
607	56.5	1.0	600	56.5	36.720	29.744	B600	17N17-	3
607	56.5	1.3	820	56.5	36.909	29.745	B820	17N17-	3
635	54.0	3.6	2369	54.0	51.889	31.097	B4300	17N17-	3
659	52.0	1.2	820	52.0	38.243	32.291	B820	17N17-	3
662	51.8	0.9	600	51.8	37.599	32.439	B600	17N17-	3
665	51.6	2.2	1500	51.6	39.263	32.547	B1500	17N17-	3
671	51.1	3.6	2504	51.1	45.248	32.873	B2700	17N17-	3
730	47.0	0.8	600	38.0	38.117	35.740	B600	17N17-	3
731	47.0	2.0	1500	47.0	39.210	35.778	B1500	17N17-	3
737	46.5	1.1	820	46.5	38.220	36.102	B820	17N17-	3
737	46.5	3.5	2700	46.5	45.122	36.102	B2700	17N17-	3
746	46.0	1.9	1500	46.0	42.890	36.526	B1500	17N17-	3
787	43.6	2.8	2298	43.6	45.371	38.546	B4300	17N17-	3
835	41.1	1.8	1500	41.1	41.303	40.895	B1500	17N17-	3
844	40.7	1.0	820	40.7	37.639	41.325	B820	17N17-	3
857	40.1	0.7	600	40.1	36.676	41.940	B600	17N17-	3
873	39.3	4.9	4062	39.3	52.931	42.760	B4300	17N17-	3
874	39.3	3.1	2700	39.3	50.139	42.772	B2700	17N17-	3
918	37.4	1.6	1500	37.4	41.269	44.955	B1500	17N17-	3
923	37.2	0.9	820	37.2	37.481	45.207	B820	17N17-	3
934	36.7	0.6	600	27.7	37.562	45.739	B600	17N17-	3
951	36.1	1.6	1500	36.1	38.138	46.568	B1500	17N17-	3
954	35.9	4.5	4300	35.9	52.755	46.737	B4300	17N17-	3
959	35.8	2.8	2700	35.8	50.065	46.973	B2700	17N17-	3
999	34.3	2.7	2700	34.3	41.468	48.912	B2700	17N17-	3
1022	33.6	0.6	600	24.4	37.417	50.036	B600	17N17-	3
1032	33.2	0.8	820	32.7	37.470	50.543	B820	17N17-	3
1060	32.4	1.4	1500	32.4	37.485	51.920	B1500	17N17-	3
1088	31.5	4.0	4300	31.5	49.583	53.258	B4300	17N17-	3
1104	31.1	2.4	2700	31.1	37.113	54.082	B2700	17N17-	3
1132	30.3	0.5	600	26.5	36.878	55.447	B600	17N17-	3
1166	29.4	1.3	1500	29.4	37.464	57.074	B1500	17N17-	3
1178	29.1	0.7	820	29.1	37.119	57.662	B820	17N17-	3
1193	28.8	1.3	1500	28.8	38.957	58.422	B1500	17N17-	3
1198	28.6	3.6	4300	28.6	46.692	58.671	B4300	17N17-	3
1213	28.3	2.2	2700	28.3	37.113	59.393	B2700	17N17-	3
1310	26.2	3.3	4300	26.2	46.598	64.127	B4300	17N17-	3
1312	26.2	1.1	1500	26.2	38.940	64.221	B1500	17N17-	3
1316	26.1	2.1	2700	26.1	45.170	64.452	B2700	17N17-	3
1317	26.1	0.6	820	23.4	37.112	64.468	B820	17N17-	3
1443	23.8	0.6	820	22.3	36.891	70.636	B820	17N17-	3

Technical data

Selection tables

Inverter mains connection 400 V, Forced ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
1462	23.5	1.0	1500	23.5	38.318	71.566	B1500	17N17-	3
1469	23.4	2.9	4300	23.4	44.253	71.930	B4300	17N17-	3
1469	23.3	1.8	2700	23.3	43.266	71.951	B2700	17N17-	3
1570	21.9	1.7	2700	21.9	38.609	76.862	B2700	17N17-	3
1606	21.4	2.7	4300	21.4	44.191	78.619	B4300	17N17-	3
1613	21.3	0.5	820	17.9	36.887	78.973	B820	17N17-	3
1735	19.8	1.6	2700	19.8	37.923	84.940	B2700	17N17-	3
1902	18.0	0.8	1500	18.0	37.612	93.150	B1500	17N17-	3
1905	18.0	1.4	2700	18.0	37.904	93.283	B2700	17N17-	3
1990	17.2	2.2	4300	17.2	40.994	97.453	B4300	17N17-	3
1991	17.2	1.4	2700	17.2	40.457	97.481	B2700	17N17-	3
2091	16.4	0.7	1500	16.4	37.605	102.396	B1500	17N17-	3
2175	15.8	2.0	4300	15.8	40.960	106.517	B4300	17N17-	3
2186	15.7	1.2	2700	15.7	40.442	107.056	B2700	17N17-	3
2331	14.7	0.6	1500	14.7	37.113	114.166	B1500	17N17-	3
2417	14.2	1.1	2700	14.2	37.113	118.370	B2700	17N17-	3
2417	14.2	1.8	4300	14.2	37.113	118.336	B4300	17N17-	3
2563	13.4	0.6	1500	13.4	37.113	125.498	B1500	17N17-	3
2641	13.0	1.6	4300	13.0	37.113	129.342	B4300	17N17-	3
2655	12.9	1.0	2700	12.9	37.113	129.996	B2700	17N17-	3
3127	11.0	1.4	4300	11.0	38.417	153.141	B4300	17N17-	3
3128	11.0	0.9	2700	11.0	38.199	153.185	B2700	17N17-	3
3418	10.0	1.3	4300	10.0	38.403	167.383	B4300	17N17-	3
3436	10.0	0.8	2700	10.0	38.193	168.230	B2700	17N17-	3
3796	9.0	1.1	4300	9.0	37.773	185.857	B4300	17N17-	3
3797	9.0	0.7	2700	9.0	37.626	185.911	B2700	17N17-	3
4149	8.3	1.0	4300	8.3	37.764	203.143	B4300	17N17-	3
4170	8.2	0.7	2700	8.2	37.622	204.170	B2700	17N17-	3

3.9 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
37.0	969	2.9	138	757	22.172	3.565	B240	14L35-	2
50.0	707	2.2	147	616	20.944	4.889	B240	14L35-	2
51.0	697	4.6	283	508	30.722	4.958	B820	14L35-	3
51.0	691	4.1	280	581	23.560	5.002	B450	14L35-	3
52.0	682	5.2	289	509	25.931	5.067	B600	14L35-	3
64.0	552	1.8	156	501	20.351	6.257	B240	14L35-	2
70.0	508	4.3	388	422	25.911	6.800	B820	14L35-	3
70.0	504	3.3	308	477	21.682	6.860	B450	14L35-	3
71.0	502	1.9	179	356	20.874	6.883	B240	14L35-	2
71.0	497	4.2	396	412	23.363	6.949	B600	14L35-	3
78.0	454	4.1	424	322	28.672	7.618	B820	14L35-	3
78.0	454	4.5	434	328	24.990	7.617	B600	14L35-	3
80.0	442	1.8	187	299	20.713	7.817	B240	14L35-	2
87.0	406	4.0	459	286	28.271	8.517	B820	14L35-	3
96.0	371	2.9	368	291	22.406	9.315	B450	14L35-	3
97.0	366	1.5	191	267	20.254	9.440	B240	14L35-	2
98.0	363	3.9	496	354	22.961	9.520	B820	14L35-	3
106	335	2.7	384	259	22.260	10.328	B450	14L35-	3
107	331	3.7	528	268	24.820	10.447	B820	14L35-	3
110	322	1.4	204	227	20.168	10.720	B240	14L35-	2
110	322	3.7	541	224	24.318	10.741	B600	14L35-	3
120	296	3.6	569	237	24.607	11.680	B820	14L35-	3
124	286	1.3	208	218	19.929	12.081	B240	14L35-	2
125	285	3.3	544	285	21.720	12.143	B820	14L35-	3
131	271	2.3	404	238	21.068	12.775	B450	14L35-	3
135	263	5.2	748	227	26.861	13.118	B1500	14L35-	3
137	258	3.1	553	233	21.706	13.369	B600	14L35-	3
137	258	3.4	619	238	22.901	13.370	B820	14L35-	3
141	252	1.2	217	185	19.877	13.719	B240	14L35-	2
145	244	2.2	422	212	20.991	14.165	B450	14L35-	3
150	236	3.3	653	224	22.404	14.626	B820	14L35-	3
151	235	3.0	600	181	22.506	14.730	B600	14L35-	3
154	230	1.1	223	174	19.786	15.008	B240	14L35-	2
168	211	2.0	434	198	20.427	16.349	B450	14L35-	3
168	211	3.2	708	199	22.296	16.352	B820	14L35-	3
173	205	1.1	240	178	19.647	16.857	B240	14L35-	2
183	193	1.8	446	183	20.246	17.885	B450	14L35-	3
191	186	5.6	1060	157	27.397	18.598	B1500	14L35-	3
191	185	3.0	747	185	21.378	18.655	B820	14L35-	3
193	183	2.4	600	156	21.488	18.851	B600	14L35-	3
196	181	0.9	240	142	19.620	19.143	B240	14L35-	2
203	174	1.7	450	157	20.206	19.831	B450	14L35-	3
210	169	5.4	1165	141	27.231	20.444	B1500	14L35-	3
212	168	2.2	600	145	21.223	20.622	B600	14L35-	3
212	167	0.9	240	140	19.540	20.650	B240	14L35-	2
214	166	2.9	820	166	21.311	20.857	B820	14L35-	3
234	152	1.5	450	152	19.902	22.813	B450	14L35-	3
234	151	1.9	600	151	20.388	22.852	B600	14L35-	3
234	151	2.7	820	151	20.797	22.853	B820	14L35-	3
235	151	4.8	1305	128	25.815	22.898	B1500	14L35-	3
238	149	5.6	1323	125	41.967	23.206	B4300	14L35-	3

Technical data

Selection tables

Inverter mains connection 400 V, Forced ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
241	147	0.8	240	108	19.522	23.450	B240	14L35-	2
259	137	1.3	450	130	19.878	25.294	B450	14L35-	3
260	136	1.8	600	89.5	21.377	25.347	B600	14L35-	3
260	136	5.6	1446	115	41.370	25.365	B4300	14L35-	3
262	135	2.4	820	135	20.753	25.550	B820	14L35-	3
267	133	1.7	600	73.2	22.082	26.061	B600	14L35-	3
270	131	2.3	820	82.0	22.277	26.324	B820	14L35-	3
275	129	5.6	1528	108	31.388	26.814	B2700	14L35-	3
287	124	1.2	450	124	19.710	27.945	B450	14L35-	3
300	118	3.8	1500	112	23.494	29.206	B1500	14L35-	3
302	117	5.6	1678	98.7	31.199	29.447	B2700	14L35-	3
305	116	1.5	600	116	19.920	29.744	B600	14L35-	3
305	116	2.0	820	116	20.109	29.745	B820	14L35-	3
318	112	1.1	450	111	19.694	30.985	B450	14L35-	3
331	107	1.9	820	73.1	21.443	32.291	B820	14L35-	3
333	107	1.4	600	70.8	20.799	32.439	B600	14L35-	3
334	106	3.4	1500	106	22.463	32.547	B1500	14L35-	3
367	96.7	1.2	600	52.9	21.317	35.740	B600	14L35-	3
367	96.6	3.1	1500	95.9	22.410	35.778	B1500	14L35-	3
370	95.7	1.7	820	61.4	21.420	36.102	B820	14L35-	3
380	93.4	1.2	600	93.4	19.680	36.999	B600	14L35-	3
380	93.4	1.6	820	93.4	19.836	37.000	B820	14L35-	3
395	89.6	3.8	1963	89.6	28.571	38.546	B4300	14L35-	3
420	84.5	3.1	1500	62.8	24.503	40.895	B1500	14L35-	3
424	83.6	1.7	820	62.0	20.839	41.325	B820	14L35-	3
430	82.4	1.2	600	82.4	19.876	41.940	B600	14L35-	3
461	76.9	2.8	1500	55.9	24.469	44.955	B1500	14L35-	3
464	76.4	1.5	820	56.2	20.681	45.207	B820	14L35-	3
469	75.5	1.1	600	45.0	20.762	45.739	B600	14L35-	3
478	74.2	2.7	1500	74.2	21.338	46.568	B1500	14L35-	3
502	70.6	4.3	2491	70.6	24.668	48.912	B2700	14L35-	3
513	69.0	1.0	600	41.7	20.617	50.036	B600	14L35-	3
518	68.4	1.4	820	47.5	20.670	50.543	B820	14L35-	3
533	66.5	2.4	1500	66.5	20.685	51.920	B1500	14L35-	3
555	63.9	3.7	2351	63.9	20.313	54.082	B2700	14L35-	3
569	62.3	0.9	600	45.5	20.078	55.447	B600	14L35-	3
576	61.5	0.7	450	35.2	19.675	56.154	B450	14L35-	3
585	60.5	2.2	1500	60.5	20.664	57.074	B1500	14L35-	3
592	59.9	1.2	820	45.0	20.319	57.662	B820	14L35-	3
599	59.1	2.2	1500	49.8	22.157	58.422	B1500	14L35-	3
609	58.2	3.7	2582	58.2	20.313	59.393	B2700	14L35-	3
639	55.5	0.6	450	28.6	19.671	62.262	B450	14L35-	3
655	54.1	0.8	600	30.0	20.279	63.822	B600	14L35-	3
658	53.9	5.6	3655	45.4	29.798	64.127	B4300	14L35-	3
659	53.8	2.0	1500	44.3	22.140	64.221	B1500	14L35-	3
661	53.6	1.1	820	38.5	20.312	64.468	B820	14L35-	3
661	53.6	3.5	2700	41.0	28.370	64.452	B2700	14L35-	3
706	50.2	0.6	450	26.9	19.559	68.788	B450	14L35-	3
725	48.9	1.0	820	38.3	20.091	70.636	B820	14L35-	3
734	48.3	1.8	1500	41.3	21.518	71.566	B1500	14L35-	3
740	47.9	0.7	600	32.3	19.737	72.170	B600	14L35-	3
769	46.1	1.7	1500	46.1	20.106	74.963	B1500	14L35-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
788	45.0	2.9	2675	45.0	21.809	76.862	B2700	14L35-	3
802	44.2	0.6	600	22.9	20.065	78.182	B600	14L35-	3
810	43.7	0.9	820	30.6	20.087	78.973	B820	14L35-	3
849	41.7	1.5	1500	41.7	19.867	82.762	B1500	14L35-	3
871	40.7	2.4	2475	40.7	21.123	84.940	B2700	14L35-	3
921	38.5	0.6	600	24.5	19.561	89.772	B600	14L35-	3
933	38.0	1.4	1500	38.0	19.858	90.978	B1500	14L35-	3
943	37.6	0.8	820	27.2	19.692	91.939	B820	14L35-	3
956	37.1	1.4	1500	33.8	20.812	93.150	B1500	14L35-	3
957	37.0	2.4	2700	37.0	21.104	93.283	B2700	14L35-	3
1000	35.5	3.7	4300	35.5	24.194	97.453	B4300	14L35-	3
1000	35.4	2.3	2700	33.1	23.657	97.481	B2700	14L35-	3
1050	33.7	1.2	1500	29.4	20.805	102.396	B1500	14L35-	3
1054	33.6	0.7	820	21.8	19.689	102.790	B820	14L35-	3
1093	32.4	3.4	4300	32.4	24.160	106.517	B4300	14L35-	3
1098	32.3	2.1	2700	29.6	23.642	107.056	B2700	14L35-	3
1171	30.3	1.2	1500	30.2	20.313	114.166	B1500	14L35-	3
1173	30.2	0.7	820	22.9	19.566	114.364	B820	14L35-	3
1214	29.2	2.1	2700	29.2	20.313	118.370	B2700	14L35-	3
1214	29.2	3.4	4300	29.2	20.313	118.336	B4300	14L35-	3
1287	27.5	1.1	1500	26.4	20.313	125.498	B1500	14L35-	3
1312	27.0	0.6	820	18.3	19.565	127.861	B820	14L35-	3
1327	26.7	3.1	4300	26.7	20.313	129.342	B4300	14L35-	3
1334	26.6	1.9	2700	26.6	20.313	129.996	B2700	14L35-	3
1538	23.0	0.9	1500	23.0	19.903	149.949	B1500	14L35-	3
1571	22.6	1.6	2700	22.6	21.399	153.185	B2700	14L35-	3
1571	22.6	2.6	4300	22.6	21.617	153.141	B4300	14L35-	3
1691	21.0	0.9	1500	20.2	19.900	164.833	B1500	14L35-	3
1717	20.6	2.4	4300	20.6	21.603	167.383	B4300	14L35-	3
1726	20.5	1.5	2700	20.5	21.393	168.230	B2700	14L35-	3
1867	19.0	0.8	1500	19.0	19.721	181.983	B1500	14L35-	3
1907	18.6	1.4	2700	18.6	20.826	185.911	B2700	14L35-	3
1907	18.6	2.2	4300	18.6	20.973	185.857	B4300	14L35-	3
2052	17.3	0.7	1500	17.3	19.719	200.048	B1500	14L35-	3
2084	17.0	2.0	4300	17.0	20.964	203.143	B4300	14L35-	3
2094	16.9	1.2	2700	16.9	20.822	204.170	B2700	14L35-	3
2410	14.7	1.7	4300	14.7	20.373	234.932	B4300	14L35-	3
2411	14.7	1.1	2700	14.7	20.280	235.000	B2700	14L35-	3
2634	13.5	1.6	4300	13.5	20.367	256.781	B4300	14L35-	3
2648	13.4	1.0	2700	13.4	20.278	258.080	B2700	14L35-	3

6.4 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
171	343	1.8	312	343	83.522	4.958	B820	19S17-	3
172	340	1.6	280	340	76.360	5.002	B450	19S17-	3
175	336	2.1	376	336	78.731	5.067	B600	19S17-	3
234	250	1.6	391	250	78.711	6.800	B820	19S17-	3
237	248	1.3	308	248	74.482	6.860	B450	19S17-	3
237	248	3.4	837	248	93.952	6.866	B1500	19S17-	3
239	246	5.8	1183	246	121.215	6.918	B2700	19S17-	3
240	245	1.6	398	245	76.163	6.949	B600	19S17-	3
263	223	1.6	424	223	81.472	7.618	B820	19S17-	3
263	223	1.7	462	223	77.790	7.617	B600	19S17-	3
294	200	1.5	459	200	81.071	8.517	B820	19S17-	3
303	193	4.8	1503	193	105.939	8.793	B2700	19S17-	3
321	183	1.1	368	183	75.206	9.315	B450	19S17-	3
328	179	1.5	496	179	75.761	9.520	B820	19S17-	3
328	179	2.9	1006	179	85.064	9.516	B1500	19S17-	3
356	165	1.0	384	165	75.060	10.328	B450	19S17-	3
360	163	1.4	528	163	77.620	10.447	B820	19S17-	3
370	158	1.4	541	158	77.118	10.741	B600	19S17-	3
376	156	3.4	1330	156	90.614	10.902	B1500	19S17-	3
403	146	1.4	569	146	77.407	11.680	B820	19S17-	3
404	145	5.3	2003	145	114.531	11.713	B2700	19S17-	3
413	142	3.4	1461	142	90.132	11.985	B1500	19S17-	3
419	140	1.3	544	140	74.520	12.143	B820	19S17-	3
440	133	0.9	404	133	73.868	12.775	B450	19S17-	3
444	132	4.9	2199	132	113.539	12.863	B2700	19S17-	3
452	130	2.4	1118	130	79.661	13.118	B1500	19S17-	3
461	127	1.2	553	127	74.506	13.369	B600	19S17-	3
461	127	1.3	619	127	75.701	13.370	B820	19S17-	3
488	120	0.8	422	120	73.791	14.165	B450	19S17-	3
504	116	1.2	653	116	75.204	14.626	B820	19S17-	3
508	115	1.1	600	115	75.306	14.730	B600	19S17-	3
513	114	4.5	2380	114	101.802	14.888	B2700	19S17-	3
521	113	2.8	1500	113	83.326	15.111	B1500	19S17-	3
564	104	1.2	708	104	75.096	16.352	B820	19S17-	3
564	104	4.1	2429	104	101.188	16.351	B2700	19S17-	3
573	102	2.5	1500	102	83.075	16.611	B1500	19S17-	3
641	91.4	2.2	1500	91.4	80.197	18.598	B1500	19S17-	3
643	91.1	1.1	747	91.1	74.178	18.655	B820	19S17-	3
650	90.2	0.9	600	90.2	74.288	18.851	B600	19S17-	3
674	87.0	3.7	2579	87.0	91.748	19.542	B2700	19S17-	3
705	83.2	2.0	1500	83.2	80.031	20.444	B1500	19S17-	3
711	82.4	0.8	600	81.6	74.023	20.622	B600	19S17-	3
719	81.5	1.1	820	81.5	74.111	20.857	B820	19S17-	3
726	80.7	5.7	3602	80.7	102.359	21.065	B4300	19S17-	3
768	76.3	3.4	2684	76.3	87.887	22.269	B2700	19S17-	3
788	74.4	0.7	600	74.4	73.188	22.852	B600	19S17-	3
788	74.4	1.0	820	74.4	73.597	22.853	B820	19S17-	3
790	74.2	1.8	1500	74.2	78.615	22.898	B1500	19S17-	3
800	73.3	5.2	3968	73.3	94.767	23.206	B4300	19S17-	3
827	70.9	1.7	1500	67.8	82.192	23.973	B1500	19S17-	3
843	69.5	3.1	2700	69.5	87.613	24.456	B2700	19S17-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
874	67.1	0.7	600	44.5	74.177	25.347	B600	19S17-	3
875	67.0	4.7	4300	67.0	94.170	25.365	B4300	19S17-	3
881	66.5	0.9	820	66.5	73.553	25.550	B820	19S17-	3
899	65.2	0.6	600	35.9	74.882	26.061	B600	19S17-	3
908	64.6	0.9	820	48.1	75.077	26.324	B820	19S17-	3
909	64.5	1.6	1500	58.2	82.093	26.353	B1500	19S17-	3
925	63.4	2.8	2700	63.4	84.188	26.814	B2700	19S17-	3
966	60.7	4.3	4300	60.7	106.200	28.013	B4300	19S17-	3
1007	58.2	1.4	1500	58.2	76.294	29.206	B1500	19S17-	3
1015	57.7	2.6	2700	57.7	83.999	29.447	B2700	19S17-	3
1072	54.7	3.9	4300	54.7	87.889	31.097	B4300	19S17-	3
1113	52.6	0.7	820	37.5	74.243	32.291	B820	19S17-	3
1118	52.4	0.5	600	31.3	73.599	32.439	B600	19S17-	3
1122	52.2	1.3	1500	52.2	75.263	32.547	B1500	19S17-	3
1133	51.7	2.3	2700	51.7	81.248	32.873	B2700	19S17-	3
1228	47.7	3.4	4300	47.7	96.646	35.607	B4300	19S17-	3
1234	47.5	1.2	1500	47.5	75.210	35.778	B1500	19S17-	3
1245	47.1	0.6	820	30.0	74.220	36.102	B820	19S17-	3
1245	47.1	2.1	2700	47.1	81.122	36.102	B2700	19S17-	3
1259	46.5	1.1	1500	41.4	78.890	36.526	B1500	19S17-	3
1329	44.1	3.1	4300	44.1	81.371	38.546	B4300	19S17-	3
1410	41.6	1.1	1500	40.2	77.303	40.895	B1500	19S17-	3
1425	41.1	0.6	820	27.4	73.639	41.325	B820	19S17-	3
1474	39.8	2.9	4300	39.8	88.931	42.760	B4300	19S17-	3
1475	39.7	1.8	2700	39.7	86.139	42.772	B2700	19S17-	3
1550	37.8	1.0	1500	34.4	77.269	44.955	B1500	19S17-	3
1559	37.6	0.5	820	24.2	73.481	45.207	B820	19S17-	3
1606	36.5	0.9	1500	36.5	74.138	46.568	B1500	19S17-	3
1611	36.4	2.7	4300	36.4	88.755	46.737	B4300	19S17-	3
1620	36.2	1.7	2700	36.0	86.065	46.973	B2700	19S17-	3
1686	34.8	1.6	2700	34.8	77.468	48.912	B2700	19S17-	3
1836	31.9	2.3	4300	31.9	85.583	53.258	B4300	19S17-	3
1865	31.4	1.5	2700	31.4	73.113	54.082	B2700	19S17-	3
2014	29.1	0.7	1500	25.4	74.957	58.422	B1500	19S17-	3
2023	29.0	2.1	4300	29.0	82.692	58.671	B4300	19S17-	3
2048	28.6	1.3	2700	28.6	73.113	59.393	B2700	19S17-	3
2211	26.5	1.9	4300	26.5	82.598	64.127	B4300	19S17-	3
2214	26.5	0.7	1500	21.0	74.940	64.221	B1500	19S17-	3
2222	26.4	1.2	2700	26.4	81.170	64.452	B2700	19S17-	3
2468	23.8	0.6	1500	19.4	74.318	71.566	B1500	19S17-	3
2480	23.6	1.7	4300	23.6	80.253	71.930	B4300	19S17-	3
2481	23.6	1.1	2700	23.6	79.266	71.951	B2700	19S17-	3
2711	21.6	1.6	4300	21.6	80.191	78.619	B4300	19S17-	3
3360	17.4	1.3	4300	17.4	76.994	97.453	B4300	19S17-	3
3361	17.4	0.8	2700	17.4	76.457	97.481	B2700	19S17-	3
3673	16.0	1.2	4300	16.0	76.960	106.517	B4300	19S17-	3
3691	15.9	0.7	2700	15.5	76.442	107.056	B2700	19S17-	3
4080	14.4	1.1	4300	14.4	73.113	118.336	B4300	19S17-	3
4081	14.4	0.7	2700	14.4	73.113	118.370	B2700	19S17-	3
4460	13.1	1.0	4300	13.1	73.113	129.342	B4300	19S17-	3
4482	13.1	0.6	2700	12.1	73.113	129.996	B2700	19S17-	3

6.9 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
89.0	702	2.6	312	449	47.522	4.958	B820	17N35-	3
90.0	696	2.3	280	517	40.360	5.002	B450	17N35-	3
91.0	687	3.1	376	457	42.731	5.067	B600	17N35-	3
123	512	2.4	391	374	42.711	6.800	B820	17N35-	3
124	507	1.9	308	417	38.482	6.860	B450	17N35-	3
124	507	4.3	652	308	57.952	6.866	B1500	17N35-	3
125	501	2.4	398	366	40.163	6.949	B600	17N35-	3
137	457	2.3	424	284	45.472	7.618	B820	17N35-	3
137	457	2.5	462	290	41.790	7.617	B600	17N35-	3
154	409	2.3	459	252	45.071	8.517	B820	17N35-	3
165	380	4.7	870	248	85.653	9.156	B4300	17N35-	3
168	374	1.7	368	242	39.206	9.315	B450	17N35-	3
172	366	4.3	904	256	49.064	9.516	B1500	17N35-	3
172	366	2.2	496	316	39.761	9.520	B820	17N35-	3
186	337	1.6	384	211	39.060	10.328	B450	17N35-	3
189	333	2.1	528	237	41.620	10.447	B820	17N35-	3
194	324	2.1	541	197	41.118	10.741	B600	17N35-	3
197	319	4.3	1036	194	54.614	10.902	B1500	17N35-	3
211	298	2.0	569	210	41.407	11.680	B820	17N35-	3
216	290	4.3	1138	176	54.132	11.985	B1500	17N35-	3
219	287	1.9	544	256	38.520	12.143	B820	17N35-	3
231	272	1.3	404	185	37.868	12.775	B450	17N35-	3
237	265	3.5	1086	209	43.661	13.118	B1500	17N35-	3
241	260	1.7	553	196	38.506	13.369	B600	17N35-	3
241	260	1.9	619	210	39.701	13.370	B820	17N35-	3
256	246	1.3	422	162	37.791	14.165	B450	17N35-	3
264	238	1.9	653	195	39.204	14.626	B820	17N35-	3
266	236	1.7	600	152	39.306	14.730	B600	17N35-	3
273	230	4.2	1435	160	47.326	15.111	B1500	17N35-	3
295	213	1.1	434	152	37.227	16.349	B450	17N35-	3
295	213	1.8	708	171	39.096	16.352	B820	17N35-	3
300	210	3.8	1500	143	47.075	16.611	B1500	17N35-	3
305	206	4.7	1607	134	75.664	16.913	B4300	17N35-	3
323	195	1.0	446	143	37.046	17.885	B450	17N35-	3
334	188	4.7	1756	123	74.539	18.486	B4300	17N35-	3
336	187	3.4	1500	141	44.197	18.598	B1500	17N35-	3
337	187	1.7	747	162	38.178	18.655	B820	17N35-	3
340	185	1.3	600	120	38.288	18.851	B600	17N35-	3
353	178	4.7	1856	116	55.748	19.542	B2700	17N35-	3
358	176	1.0	450	121	37.006	19.831	B450	17N35-	3
369	170	3.1	1500	126	44.031	20.444	B1500	17N35-	3
372	169	1.2	600	110	38.023	20.622	B600	17N35-	3
376	167	1.7	820	144	38.111	20.857	B820	17N35-	3
380	165	4.2	2001	115	66.359	21.065	B4300	17N35-	3
402	156	4.2	2115	109	51.887	22.269	B2700	17N35-	3
412	153	0.8	450	106	36.702	22.813	B450	17N35-	3
412	152	1.1	600	127	37.188	22.852	B600	17N35-	3
412	152	1.5	820	136	37.597	22.853	B820	17N35-	3
413	152	2.7	1500	114	42.615	22.898	B1500	17N35-	3
419	150	3.7	2061	115	58.767	23.206	B4300	17N35-	3
433	145	2.6	1500	78.6	46.192	23.973	B1500	17N35-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2,\ max}$	$n_{2,\ th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
441	142	4.2	2323	99.4	51.613	24.456	B2700	17N35-	3
456	138	0.7	450	86.5	36.678	25.294	B450	17N35-	3
457	137	1.0	600	67.0	38.177	25.347	B600	17N35-	3
458	137	3.7	2252	105	58.170	25.365	B4300	17N35-	3
461	136	1.3	820	122	37.553	25.550	B820	17N35-	3
470	134	1.0	600	54.0	38.882	26.061	B600	17N35-	3
475	132	1.3	820	62.9	39.077	26.324	B820	17N35-	3
476	132	2.4	1500	69.8	46.093	26.353	B1500	17N35-	3
484	130	3.7	2381	99.7	48.188	26.814	B2700	17N35-	3
527	119	2.2	1500	99.5	40.294	29.206	B1500	17N35-	3
531	118	3.7	2615	90.8	47.999	29.447	B2700	17N35-	3
537	117	0.8	600	94.9	36.720	29.744	B600	17N35-	3
537	117	1.2	820	105	36.909	29.745	B820	17N35-	3
561	112	3.2	2369	90.6	51.889	31.097	B4300	17N35-	3
583	108	1.1	820	54.5	38.243	32.291	B820	17N35-	3
585	107	0.8	600	47.0	37.599	32.439	B600	17N35-	3
587	107	1.9	1500	95.5	39.263	32.547	B1500	17N35-	3
593	106	3.2	2504	85.7	45.248	32.873	B2700	17N35-	3
645	97.4	0.7	600	33.7	38.117	35.740	B600	17N35-	3
646	97.3	1.8	1500	82.5	39.210	35.778	B1500	17N35-	3
652	96.4	1.0	820	45.1	38.220	36.102	B820	17N35-	3
652	96.4	3.1	2700	77.8	45.122	36.102	B2700	17N35-	3
659	95.3	1.7	1500	51.5	42.890	36.526	B1500	17N35-	3
696	90.3	2.5	2298	80.7	45.371	38.546	B4300	17N35-	3
738	85.1	1.7	1500	52.5	41.303	40.895	B1500	17N35-	3
746	84.2	0.9	820	45.0	37.639	41.325	B820	17N35-	3
757	83.0	0.7	600	54.2	36.676	41.940	B600	17N35-	3
772	81.4	3.0	2700	48.1	50.139	42.772	B2700	17N35-	3
772	81.4	4.8	4062	53.2	52.931	42.760	B4300	17N35-	3
811	77.4	1.6	1500	45.2	41.269	44.955	B1500	17N35-	3
816	77.0	0.9	820	39.7	37.481	45.207	B820	17N35-	3
825	76.1	0.6	600	26.9	37.562	45.739	B600	17N35-	3
840	74.7	1.5	1500	66.8	38.138	46.568	B1500	17N35-	3
843	74.5	4.4	4300	47.8	52.755	46.737	B4300	17N35-	3
848	74.1	2.7	2700	42.9	50.065	46.973	B2700	17N35-	3
883	71.1	2.6	2700	63.6	41.468	48.912	B2700	17N35-	3
903	69.5	0.6	600	23.7	37.417	50.036	B600	17N35-	3
912	68.9	0.8	820	31.8	37.470	50.543	B820	17N35-	3
937	67.0	1.4	1500	59.9	37.485	51.920	B1500	17N35-	3
961	65.3	3.8	4300	44.7	49.583	53.258	B4300	17N35-	3
976	64.3	2.4	2700	57.5	37.113	54.082	B2700	17N35-	3
1001	62.8	0.5	600	25.8	36.878	55.447	B600	17N35-	3
1030	61.0	1.3	1500	54.5	37.464	57.074	B1500	17N35-	3
1041	60.4	0.7	820	28.4	37.119	57.662	B820	17N35-	3
1054	59.6	1.2	1500	37.5	38.957	58.422	B1500	17N35-	3
1059	59.3	3.5	4300	44.9	46.692	58.671	B4300	17N35-	3
1072	58.6	2.2	2700	52.4	37.113	59.393	B2700	17N35-	3
1157	54.3	3.2	4300	40.3	46.598	64.127	B4300	17N35-	3
1159	54.2	1.1	1500	32.6	38.940	64.221	B1500	17N35-	3
1163	54.0	0.6	820	22.8	37.112	64.468	B820	17N35-	3
1163	54.0	2.0	2700	36.2	45.170	64.452	B2700	17N35-	3
1275	49.3	0.6	820	21.7	36.891	70.636	B820	17N35-	3

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Selection tables

Inverter mains connection 400 V, Forced ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
1292	48.6	1.0	1500	31.8	38.318	71.566	B1500	17N35-	3
1298	48.4	2.8	4300	38.3	44.253	71.930	B4300	17N35-	3
1299	48.4	1.8	2700	33.5	43.266	71.951	B2700	17N35-	3
1387	45.3	1.7	2700	40.5	38.609	76.862	B2700	17N35-	3
1419	44.3	2.6	4300	34.4	44.191	78.619	B4300	17N35-	3
1533	41.0	1.5	2700	36.6	37.923	84.940	B2700	17N35-	3
1681	37.4	0.8	1500	22.6	37.612	93.150	B1500	17N35-	3
1684	37.3	1.4	2700	33.4	37.904	93.283	B2700	17N35-	3
1759	35.7	1.3	2700	26.1	40.457	97.481	B2700	17N35-	3
1759	35.7	2.1	4300	31.9	40.994	97.453	B4300	17N35-	3
1848	34.0	0.7	1500	18.7	37.605	102.396	B1500	17N35-	3
1922	32.7	1.9	4300	28.9	40.960	106.517	B4300	17N35-	3
1932	32.5	1.2	2700	22.8	40.442	107.056	B2700	17N35-	3
2060	30.5	0.7	1500	19.4	37.113	114.166	B1500	17N35-	3
2136	29.4	1.2	2700	24.0	37.113	118.370	B2700	17N35-	3
2136	29.4	1.9	4300	26.3	37.113	118.336	B4300	17N35-	3
2265	27.7	0.6	1500	16.0	37.113	125.498	B1500	17N35-	3
2334	26.9	1.8	4300	24.1	37.113	129.342	B4300	17N35-	3
2346	26.8	1.1	2700	20.9	37.113	129.996	B2700	17N35-	3
2764	22.7	1.5	4300	20.3	38.417	153.141	B4300	17N35-	3
2765	22.7	0.9	2700	19.3	38.199	153.185	B2700	17N35-	3
3021	20.8	1.4	4300	18.6	38.403	167.383	B4300	17N35-	3
3036	20.7	0.9	2700	16.0	38.193	168.230	B2700	17N35-	3
3354	18.7	1.2	4300	16.7	37.773	185.857	B4300	17N35-	3
3355	18.7	0.8	2700	15.2	37.626	185.911	B2700	17N35-	3
3666	17.1	1.1	4300	15.3	37.764	203.143	B4300	17N35-	3
3685	17.0	0.7	2700	15.2	37.622	204.170	B2700	17N35-	3

11 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
320	312	5.9	1564	312	305.776	5.488	B4300	21X17-	3
400	249	2.0	837	249	201.952	6.866	B1500	21X17-	3
403	247	3.4	1446	242	229.215	6.918	B2700	21X17-	3
407	245	5.3	1988	245	261.324	6.976	B4300	21X17-	3
513	195	2.9	1528	195	213.939	8.793	B2700	21X17-	3
534	187	4.4	2479	187	229.653	9.156	B4300	21X17-	3
555	180	1.7	1006	180	193.064	9.516	B1500	21X17-	3
591	169	5.9	2889	169	277.972	10.137	B4300	21X17-	3
636	157	2.0	1330	157	198.614	10.902	B1500	21X17-	3
646	154	5.9	3157	154	274.840	11.080	B4300	21X17-	3
683	146	3.1	2212	139	222.531	11.713	B2700	21X17-	3
699	143	2.0	1461	143	198.132	11.985	B1500	21X17-	3
750	133	2.9	2262	125	221.539	12.863	B2700	21X17-	3
751	133	5.3	3672	133	244.116	12.885	B4300	21X17-	3
765	130	1.4	1118	130	187.661	13.118	B1500	21X17-	3
821	121	5.0	4013	121	242.177	14.084	B4300	21X17-	3
868	115	2.6	2380	115	209.802	14.888	B2700	21X17-	3
881	113	1.6	1500	113	191.326	15.111	B1500	21X17-	3
954	105	2.4	2429	105	209.188	16.351	B2700	21X17-	3
969	103	1.5	1500	103	191.075	16.611	B1500	21X17-	3
986	101	4.2	4300	101	219.664	16.913	B4300	21X17-	3
1078	92.5	3.8	4300	92.5	218.539	18.486	B4300	21X17-	3
1085	91.9	1.3	1500	91.9	188.197	18.598	B1500	21X17-	3
1140	87.5	2.2	2579	87.5	199.748	19.542	B2700	21X17-	3
1192	83.6	1.2	1500	83.6	188.031	20.444	B1500	21X17-	3
1229	81.2	3.4	4300	81.2	210.359	21.065	B4300	21X17-	3
1299	76.8	2.0	2684	76.8	195.887	22.269	B2700	21X17-	3
1335	74.7	1.1	1500	74.7	186.615	22.898	B1500	21X17-	3
1353	73.7	3.0	4300	73.7	202.767	23.206	B4300	21X17-	3
1398	71.3	1.0	1500	50.8	190.192	23.973	B1500	21X17-	3
1426	69.9	1.8	2700	69.9	195.613	24.456	B2700	21X17-	3
1479	67.4	2.8	4300	67.4	202.170	25.365	B4300	21X17-	3
1537	64.9	0.9	1500	42.6	190.093	26.353	B1500	21X17-	3
1564	63.8	1.7	2700	63.8	192.188	26.814	B2700	21X17-	3
1634	61.0	2.5	4300	55.3	214.200	28.013	B4300	21X17-	3
1717	58.1	1.5	2700	58.1	191.999	29.447	B2700	21X17-	3
1814	55.0	2.3	4300	55.0	195.889	31.097	B4300	21X17-	3
1917	52.0	1.4	2700	52.0	189.248	32.873	B2700	21X17-	3
2077	48.0	2.0	4300	45.8	204.646	35.607	B4300	21X17-	3
2106	47.4	1.2	2700	47.4	189.122	36.102	B2700	21X17-	3
2130	46.8	0.7	1500	26.2	186.890	36.526	B1500	21X17-	3
2385	41.8	0.6	1500	24.6	185.303	40.895	B1500	21X17-	3
2494	40.0	1.7	4300	40.0	196.931	42.760	B4300	21X17-	3
2495	40.0	1.1	2700	31.7	194.139	42.772	B2700	21X17-	3
2622	38.0	0.6	1500	20.3	185.269	44.955	B1500	21X17-	3
2726	36.6	1.6	4300	35.1	196.755	46.737	B4300	21X17-	3
2740	36.4	1.0	2700	27.5	194.065	46.973	B2700	21X17-	3
3106	32.1	1.4	4300	31.3	193.583	53.258	B4300	21X17-	3
3422	29.1	1.3	4300	29.1	190.692	58.671	B4300	21X17-	3
3740	26.7	1.2	4300	26.6	190.598	64.127	B4300	21X17-	3
3759	26.5	0.7	2700	17.8	189.170	64.452	B2700	21X17-	3

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Selection tables

Inverter mains connection 400 V, Forced ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
4195	23.8	1.0	4300	23.8	188.253	71.930	B4300	21X17-	3
4196	23.8	0.6	2700	16.3	187.266	71.951	B2700	21X17-	3
4585	21.8	0.9	4300	21.8	188.191	78.619	B4300	21X17-	3

13.2 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
170	708	1.4	312	344	83.522	4.958	B820	19S35-	3
171	702	1.2	280	388	76.360	5.002	B450	19S35-	3
173	693	1.6	376	369	78.731	5.067	B600	19S35-	3
188	640	5.7	938	342	197.776	5.488	B4300	19S35-	3
233	516	1.3	391	281	78.711	6.800	B820	19S35-	3
235	512	1.0	308	300	74.482	6.860	B450	19S35-	3
235	511	2.7	837	276	93.952	6.866	B1500	19S35-	3
237	507	4.6	1183	259	121.215	6.918	B2700	19S35-	3
238	505	1.3	398	275	76.163	6.949	B600	19S35-	3
239	503	5.2	1193	293	153.324	6.976	B4300	19S35-	3
260	461	1.2	424	211	81.472	7.618	B820	19S35-	3
260	461	1.3	462	220	77.790	7.617	B600	19S35-	3
291	412	1.2	459	186	81.071	8.517	B820	19S35-	3
301	399	3.8	1503	217	105.939	8.793	B2700	19S35-	3
313	383	4.9	1566	250	121.653	9.156	B4300	19S35-	3
319	377	0.9	368	165	75.206	9.315	B450	19S35-	3
325	369	2.3	1006	223	85.064	9.516	B1500	19S35-	3
326	369	1.2	496	232	75.761	9.520	B820	19S35-	3
347	346	5.7	1733	185	169.972	10.137	B4300	19S35-	3
353	340	0.8	384	140	75.060	10.328	B450	19S35-	3
357	336	1.1	528	172	77.620	10.447	B820	19S35-	3
367	327	1.1	541	143	77.118	10.741	B600	19S35-	3
373	322	2.7	1330	174	90.614	10.902	B1500	19S35-	3
379	317	5.7	1894	169	166.840	11.080	B4300	19S35-	3
399	301	1.1	569	151	77.407	11.680	B820	19S35-	3
401	300	4.2	2003	150	114.531	11.713	B2700	19S35-	3
410	293	2.7	1461	158	90.132	11.985	B1500	19S35-	3
415	289	1.0	544	197	74.520	12.143	B820	19S35-	3
437	275	0.7	404	113	73.868	12.775	B450	19S35-	3
440	273	3.9	2199	134	113.539	12.863	B2700	19S35-	3
441	272	5.2	2203	159	136.116	12.885	B4300	19S35-	3
449	268	1.9	1118	180	79.661	13.118	B1500	19S35-	3
457	263	0.9	553	134	74.506	13.369	B600	19S35-	3
457	263	1.0	619	149	75.701	13.370	B820	19S35-	3
482	249	5.2	2408	145	134.177	14.084	B4300	19S35-	3
484	248	0.7	422	96.3	73.791	14.165	B450	19S35-	3
500	240	1.0	653	140	75.204	14.626	B820	19S35-	3
504	238	0.9	600	104	75.306	14.730	B600	19S35-	3
509	236	3.5	2380	126	101.802	14.888	B2700	19S35-	3
517	232	2.2	1500	139	83.326	15.111	B1500	19S35-	3
559	215	1.0	708	121	75.096	16.352	B820	19S35-	3
559	215	3.3	2429	113	101.188	16.351	B2700	19S35-	3
568	211	2.0	1500	124	83.075	16.611	B1500	19S35-	3
578	208	4.9	2892	135	111.664	16.913	B4300	19S35-	3
632	190	4.9	3161	124	110.539	18.486	B4300	19S35-	3
636	189	1.8	1500	117	80.197	18.598	B1500	19S35-	3
638	188	0.9	747	115	74.178	18.655	B820	19S35-	3
645	186	0.7	600	73.3	74.288	18.851	B600	19S35-	3
668	180	2.9	2579	105	91.748	19.542	B2700	19S35-	3
699	172	1.6	1500	101	80.031	20.444	B1500	19S35-	3
705	170	0.6	600	64.6	74.023	20.622	B600	19S35-	3

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Inverter mains connection 400 V, Forced ventilated

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
713	168	0.9	820	101	74.111	20.857	B820	19S35-	3
720	167	4.5	3602	116	102.359	21.065	B4300	19S35-	3
761	158	2.7	2684	98.4	87.887	22.269	B2700	19S35-	3
781	154	0.6	600	70.3	73.188	22.852	B600	19S35-	3
781	154	0.8	820	96.1	73.597	22.853	B820	19S35-	3
783	153	1.4	1500	89.0	78.615	22.898	B1500	19S35-	3
794	151	4.1	3968	106	94.767	23.206	B4300	19S35-	3
820	146	1.4	1500	59.1	82.192	23.973	B1500	19S35-	3
836	144	2.4	2700	87.8	87.613	24.456	B2700	19S35-	3
867	139	0.5	600	35.3	74.177	25.347	B600	19S35-	3
867	138	3.7	4300	96.5	94.170	25.365	B4300	19S35-	3
874	137	0.7	820	76.8	73.553	25.550	B820	19S35-	3
891	135	0.5	600	28.4	74.882	26.061	B600	19S35-	3
900	133	0.7	820	38.0	75.077	26.324	B820	19S35-	3
901	133	1.3	1500	51.1	82.093	26.353	B1500	19S35-	3
917	131	2.2	2700	88.7	84.188	26.814	B2700	19S35-	3
958	125	3.4	4300	59.6	106.200	28.013	B4300	19S35-	3
999	120	1.1	1500	72.2	76.294	29.206	B1500	19S35-	3
1007	119	2.0	2700	79.0	83.999	29.447	B2700	19S35-	3
1063	113	3.1	4300	78.7	87.889	31.097	B4300	19S35-	3
1104	109	0.6	820	29.7	74.243	32.291	B820	19S35-	3
1113	108	1.0	1500	70.5	75.263	32.547	B1500	19S35-	3
1124	107	1.8	2700	73.8	81.248	32.873	B2700	19S35-	3
1218	98.6	2.7	4300	49.2	96.646	35.607	B4300	19S35-	3
1223	98.1	0.9	1500	58.9	75.210	35.778	B1500	19S35-	3
1235	97.2	0.5	820	23.8	74.220	36.102	B820	19S35-	3
1235	97.2	1.7	2700	63.9	81.122	36.102	B2700	19S35-	3
1249	96.1	0.9	1500	35.2	78.890	36.526	B1500	19S35-	3
1318	91.1	2.5	4300	63.5	81.371	38.546	B4300	19S35-	3
1398	85.8	0.9	1500	35.9	77.303	40.895	B1500	19S35-	3
1462	82.1	2.5	4300	46.2	88.931	42.760	B4300	19S35-	3
1463	82.1	1.6	2700	38.4	86.139	42.772	B2700	19S35-	3
1537	78.1	0.8	1500	29.7	77.269	44.955	B1500	19S35-	3
1592	75.4	0.8	1500	47.6	74.138	46.568	B1500	19S35-	3
1598	75.1	2.3	4300	41.4	88.755	46.737	B4300	19S35-	3
1606	74.7	1.4	2700	33.2	86.065	46.973	B2700	19S35-	3
1673	71.8	1.4	2700	50.1	77.468	48.912	B2700	19S35-	3
1821	65.9	2.0	4300	38.5	85.583	53.258	B4300	19S35-	3
1849	64.9	1.3	2700	45.3	73.113	54.082	B2700	19S35-	3
1998	60.1	0.6	1500	21.9	74.957	58.422	B1500	19S35-	3
2006	59.8	1.8	4300	37.7	82.692	58.671	B4300	19S35-	3
2031	59.1	1.1	2700	41.2	73.113	59.393	B2700	19S35-	3
2193	54.7	1.7	4300	32.7	82.598	64.127	B4300	19S35-	3
2196	54.7	0.6	1500	18.1	74.940	64.221	B1500	19S35-	3
2204	54.5	1.1	2700	25.3	81.170	64.452	B2700	19S35-	3
2447	49.0	0.5	1500	16.7	74.318	71.566	B1500	19S35-	3
2460	48.8	0.9	2700	23.9	79.266	71.951	B2700	19S35-	3
2460	48.8	1.5	4300	30.5	80.253	71.930	B4300	19S35-	3
2688	44.6	1.4	4300	26.7	80.191	78.619	B4300	19S35-	3
3332	36.0	1.1	4300	24.2	76.994	97.453	B4300	19S35-	3
3333	36.0	0.7	2700	16.1	76.457	97.481	B2700	19S35-	3
3642	33.0	1.0	4300	21.3	76.960	106.517	B4300	19S35-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
3661	32.8	0.6	2700	13.3	76.442	107.056	B2700	19S35-	3
4047	29.7	1.0	4300	20.7	73.113	118.336	B4300	19S35-	3
4048	29.7	0.6	2700	14.0	73.113	118.370	B2700	19S35-	3
4423	27.1	0.9	4300	18.6	73.113	129.342	B4300	19S35-	3
4445	27.0	0.6	2700	11.6	73.113	129.996	B2700	19S35-	3

20.3 kW

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
287	641	5.2	1564	335	305.776	5.488	B4300	21X35-	3
359	513	1.8	837	238	201.952	6.866	B1500	21X35-	3
361	509	3.0	1446	234	229.215	6.918	B2700	21X35-	3
364	505	4.6	1988	286	261.324	6.976	B4300	21X35-	3
459	400	2.5	1528	196	213.939	8.793	B2700	21X35-	3
478	384	3.9	2479	220	229.653	9.156	B4300	21X35-	3
497	370	1.5	1006	185	193.064	9.516	B1500	21X35-	3
530	347	5.2	2889	182	277.972	10.137	B4300	21X35-	3
570	323	1.8	1330	150	198.614	10.902	B1500	21X35-	3
579	318	5.2	3157	166	274.840	11.080	B4300	21X35-	3
612	301	2.7	2212	135	222.531	11.713	B2700	21X35-	3
626	294	1.8	1461	136	198.132	11.985	B1500	21X35-	3
672	274	2.5	2262	121	221.539	12.863	B2700	21X35-	3
673	273	4.6	3672	155	244.116	12.885	B4300	21X35-	3
685	268	1.2	1118	143	187.661	13.118	B1500	21X35-	3
736	250	4.4	4013	140	242.177	14.084	B4300	21X35-	3
778	236	2.3	2380	113	209.802	14.888	B2700	21X35-	3
789	233	1.4	1500	112	191.326	15.111	B1500	21X35-	3
854	215	2.1	2429	101	209.188	16.351	B2700	21X35-	3
868	212	1.3	1500	97.1	191.075	16.611	B1500	21X35-	3
884	208	3.7	4300	119	219.664	16.913	B4300	21X35-	3
966	190	3.4	4300	109	218.539	18.486	B4300	21X35-	3
972	189	1.2	1500	92.3	188.197	18.598	B1500	21X35-	3
1021	180	1.9	2579	93.4	199.748	19.542	B2700	21X35-	3
1068	172	1.1	1500	80.2	188.031	20.444	B1500	21X35-	3
1101	167	2.9	4300	95.6	210.359	21.065	B4300	21X35-	3
1163	158	1.7	2684	84.9	195.887	22.269	B2700	21X35-	3
1196	154	0.9	1500	70.4	186.615	22.898	B1500	21X35-	3
1212	152	2.7	4300	86.8	202.767	23.206	B4300	21X35-	3
1252	147	0.9	1500	45.2	190.192	23.973	B1500	21X35-	3
1278	144	1.6	2700	73.5	195.613	24.456	B2700	21X35-	3
1325	139	2.4	4300	79.4	202.170	25.365	B4300	21X35-	3
1377	134	0.8	1500	37.4	190.093	26.353	B1500	21X35-	3
1401	131	1.5	2700	72.0	192.188	26.814	B2700	21X35-	3
1463	126	2.2	4300	53.4	214.200	28.013	B4300	21X35-	3
1538	120	1.3	2700	62.3	191.999	29.447	B2700	21X35-	3
1625	113	2.0	4300	64.8	195.889	31.097	B4300	21X35-	3
1717	107	1.2	2700	59.7	189.248	32.873	B2700	21X35-	3
1860	98.9	1.7	4300	42.3	204.646	35.607	B4300	21X35-	3
1886	97.5	1.1	2700	52.2	189.122	36.102	B2700	21X35-	3
1908	96.4	0.6	1500	23.0	186.890	36.526	B1500	21X35-	3
2136	86.1	0.6	1500	23.4	185.303	40.895	B1500	21X35-	3
2234	82.3	1.7	4300	39.3	196.931	42.760	B4300	21X35-	3
2235	82.3	1.0	2700	31.1	194.139	42.772	B2700	21X35-	3
2349	78.3	0.6	1500	19.4	185.269	44.955	B1500	21X35-	3
2442	75.3	1.5	4300	34.2	196.755	46.737	B4300	21X35-	3
2454	74.9	0.9	2700	26.3	194.065	46.973	B2700	21X35-	3
2782	66.1	1.3	4300	30.5	193.583	53.258	B4300	21X35-	3
3065	60.0	1.2	4300	29.7	190.692	58.671	B4300	21X35-	3
3350	54.9	1.1	4300	26.0	190.598	64.127	B4300	21X35-	3
3367	54.6	0.7	2700	17.0	189.170	64.452	B2700	21X35-	3

Inverter operation							Geared motor		Number of stages
M_2	n_2	c	$M_{2, max}$	$n_{2, th}$	J	i	g500-	MCA	
Nm	rpm		Nm	rpm	kgcm²				
3758	48.9	1.0	4300	24.9	188.253	71.930	B4300	21X35-	3
3759	48.9	0.6	2700	15.6	187.266	71.951	B2700	21X35-	3
4107	44.8	0.9	4300	20.8	188.191	78.619	B4300	21X35-	3

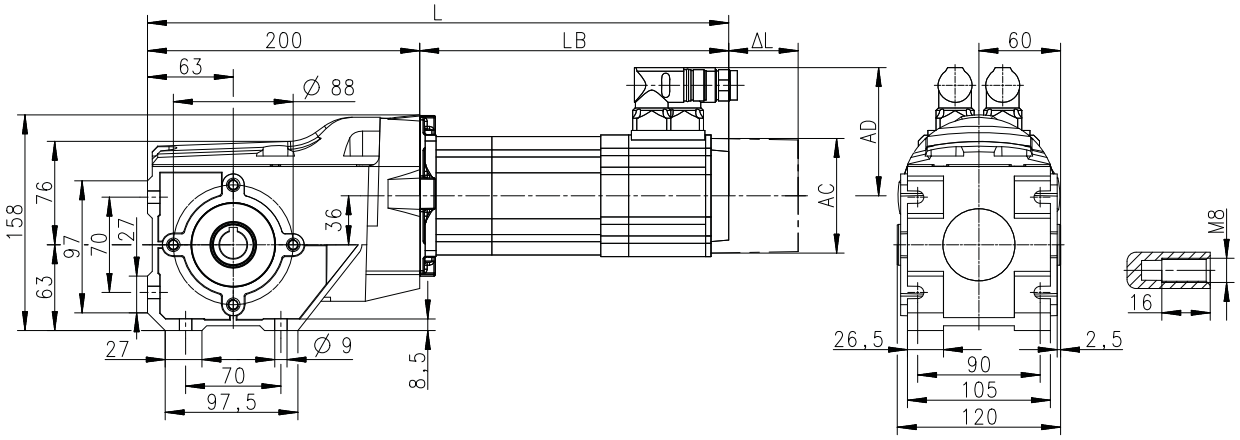
Dimensions

Basic dimensions

Notes on the basic dimensions

The following legend shows the layout of the dimension sheets:

Example	Explanation
g500-B110 with MCA10	Geared motor product
Gearbox design: hollow shaft, with foot (HAR/HBR/HAK)	Gearbox version 12



Motor	MCA
	10I40
Cooling type	Natural

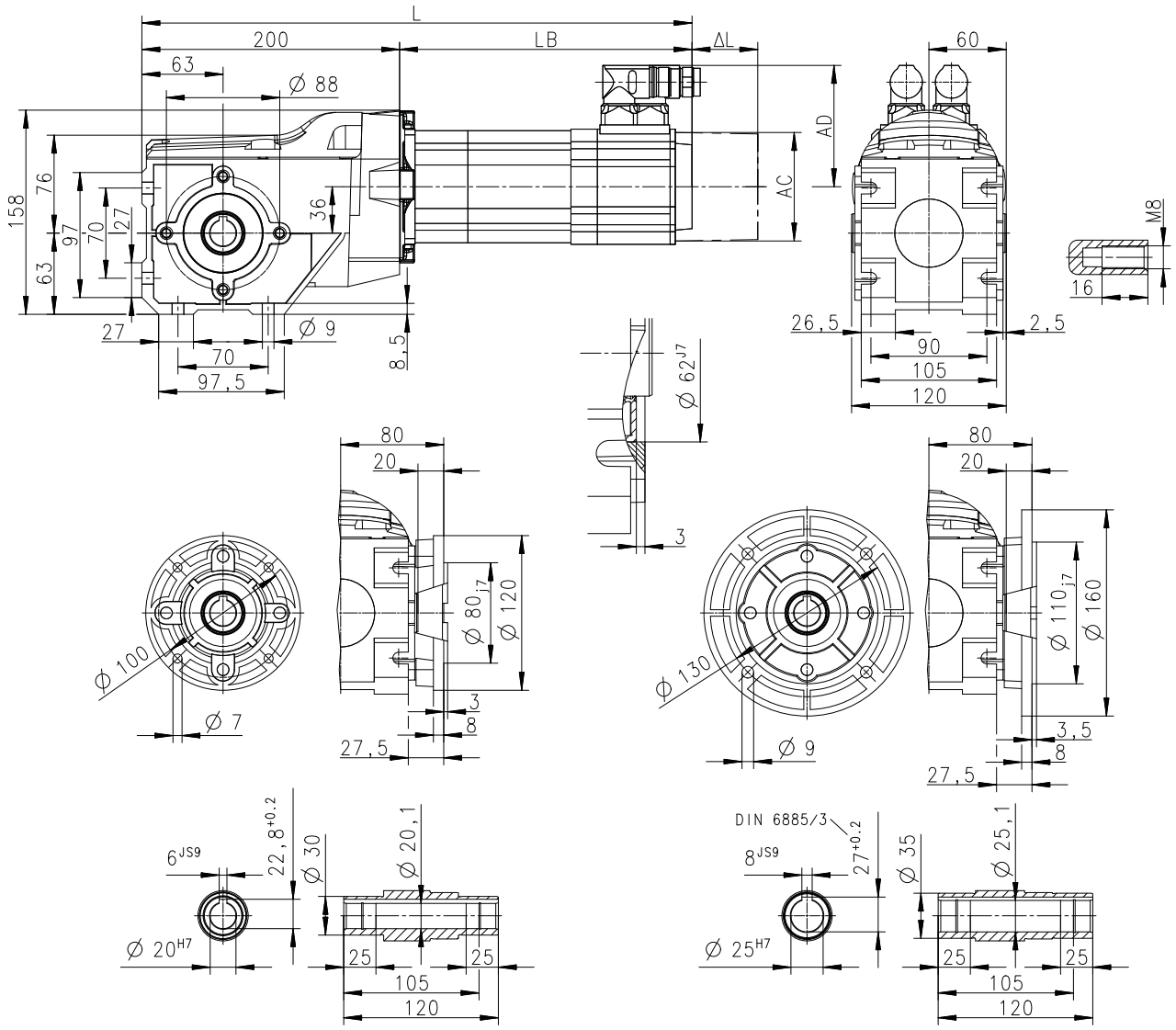
Table content		Explanation
Total length	L	Total length of the drive with resolver
Motor length	LB	Length of the motor with resolver
Length of motor options	Δ L	Additional length (longest design) In detail ▸ Additional lengths 203
Motor diameter	AC	Motor diameter
Motor/connection distance	AD	Distance from motor centre to connector end

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

For an accurate check of the geometrical data, Lenze recommends the use of the »Product Finder« at **www.Lenze.com**.

g500-B110 with MCA10

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

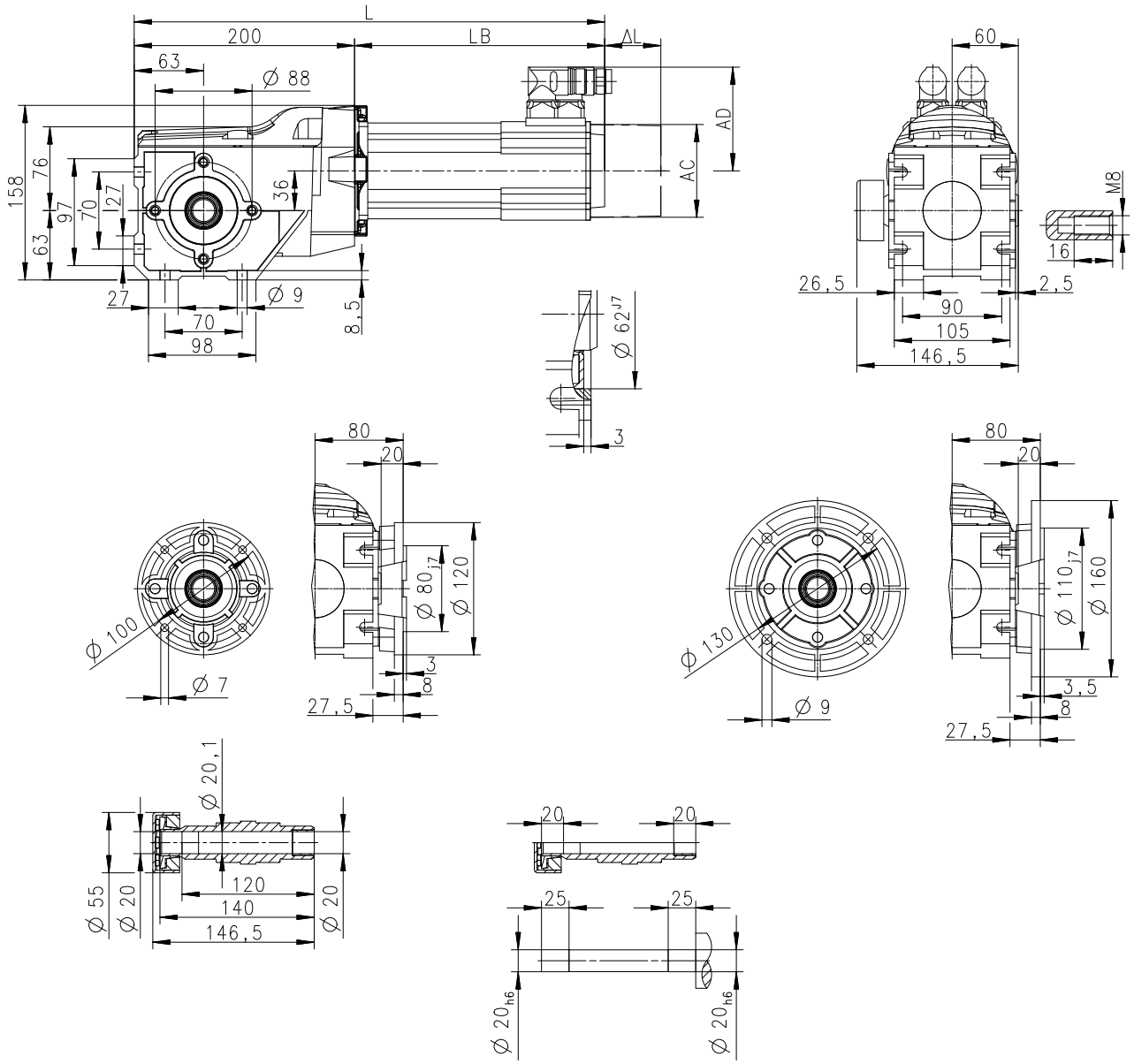


8800153-01

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	459
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B110 with MCA10

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

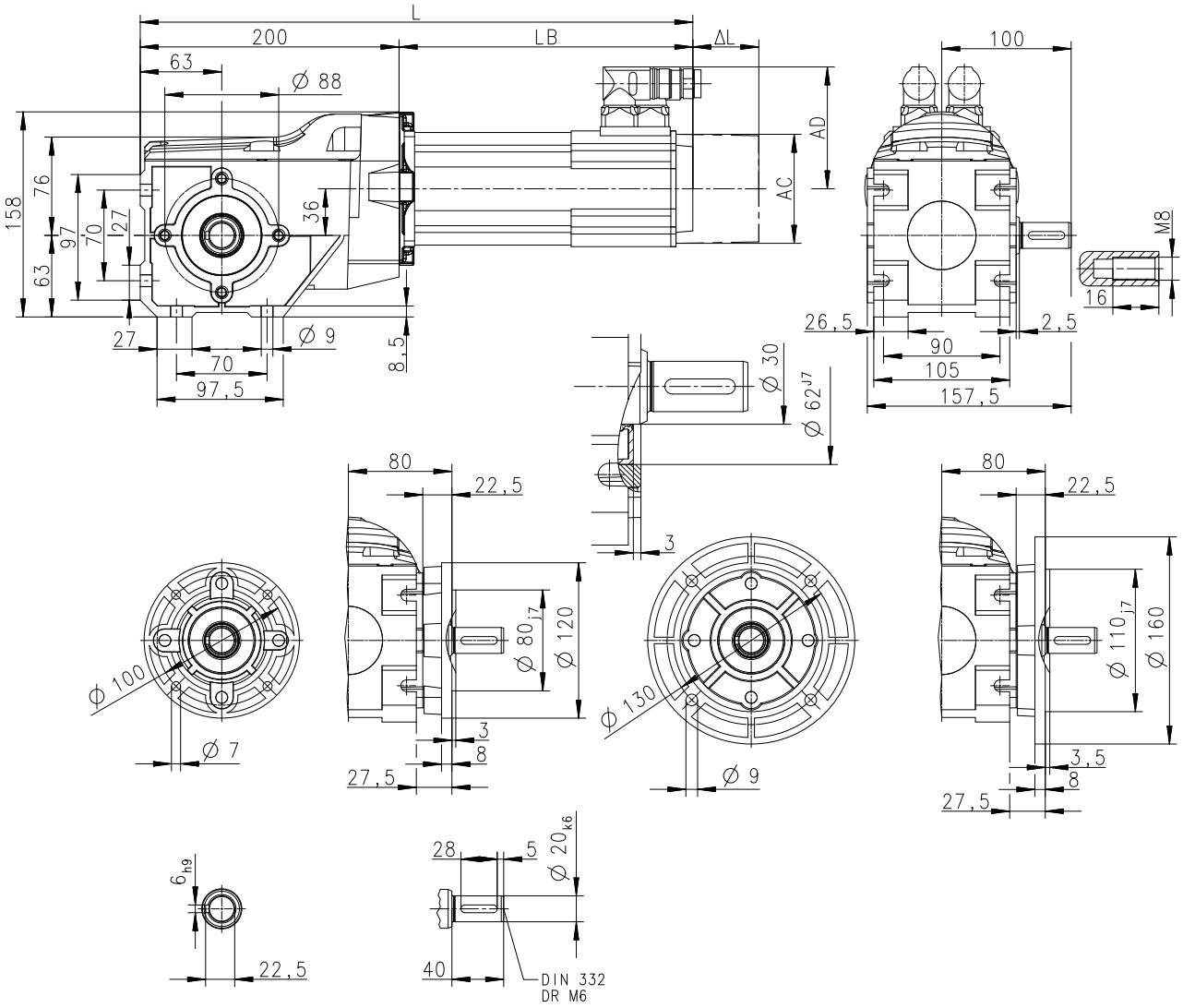


8800221-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	459
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B110 with MCA10

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

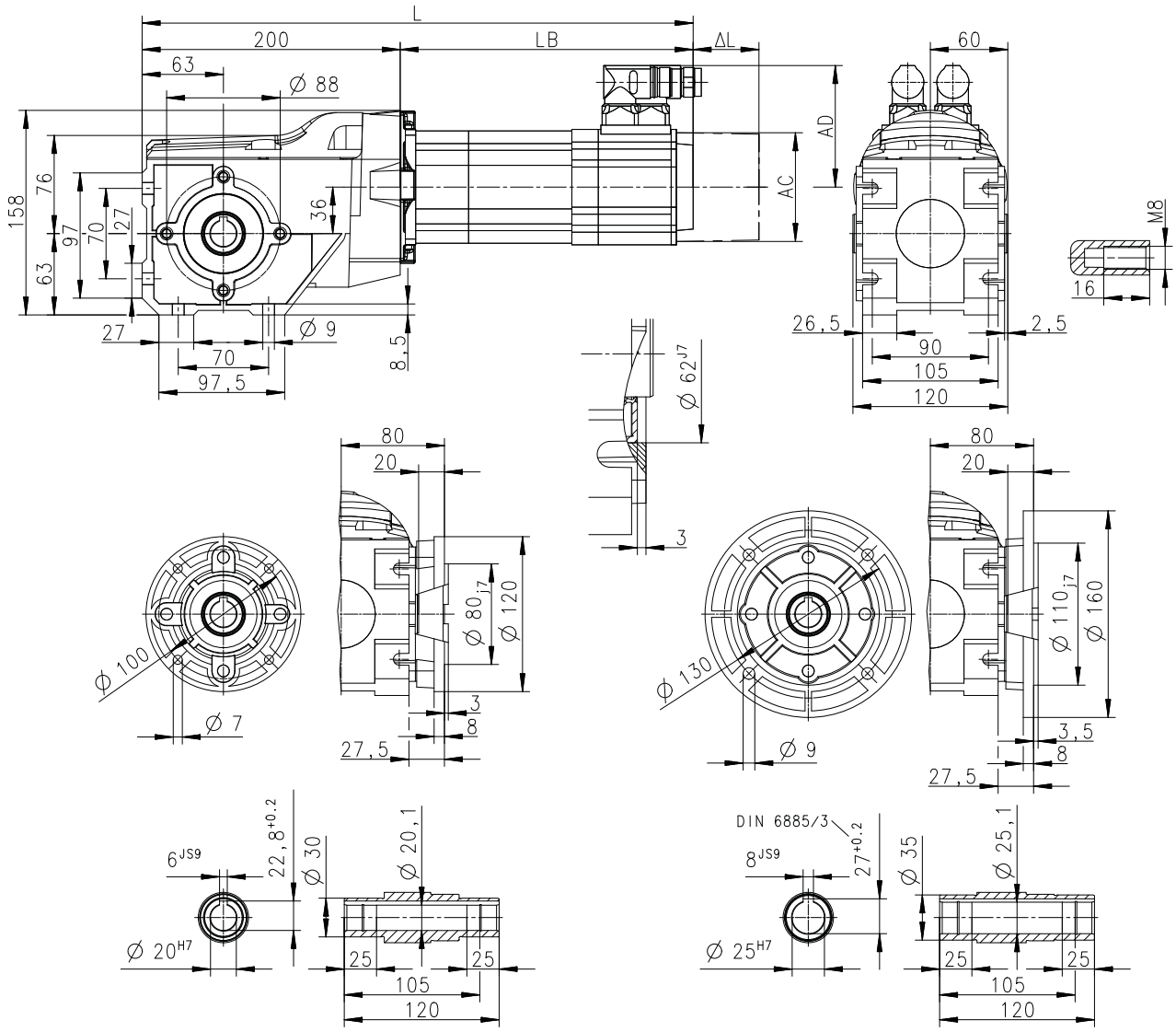


8800154-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	459
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B110 with MCA13

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

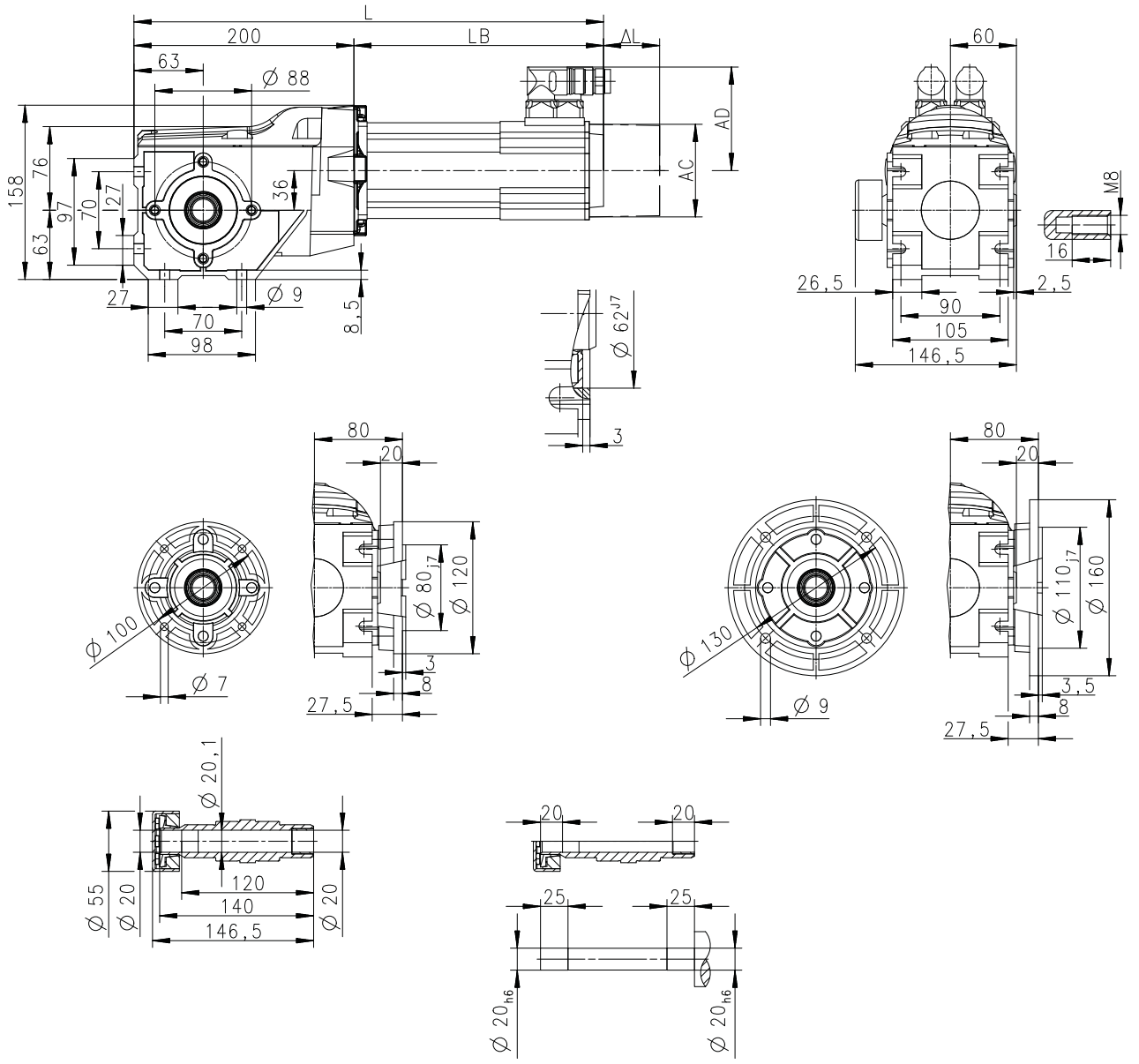


8800153-01

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	536	468
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B110 with MCA13

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

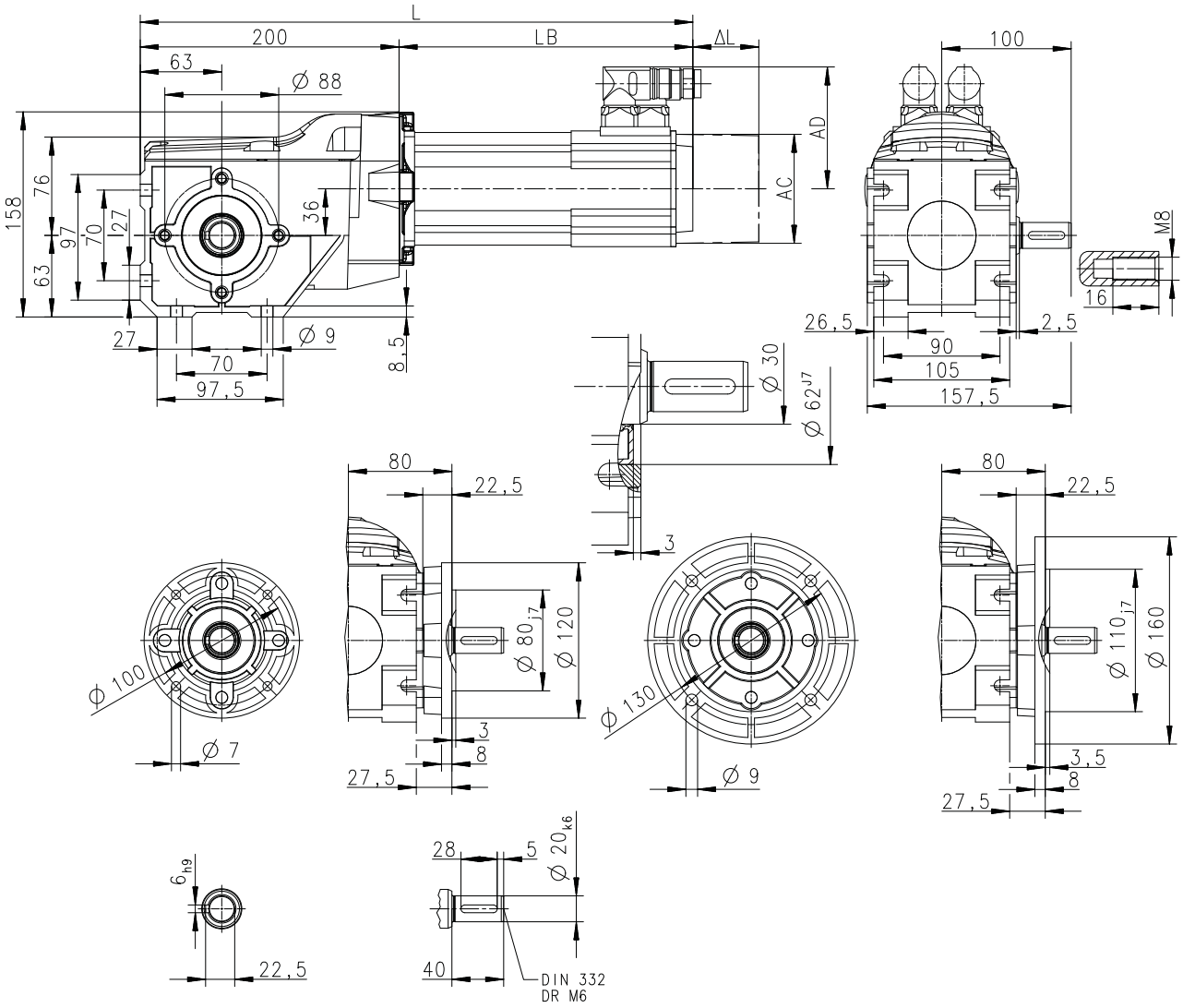


8800221-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	536	468
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B110 with MCA13

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

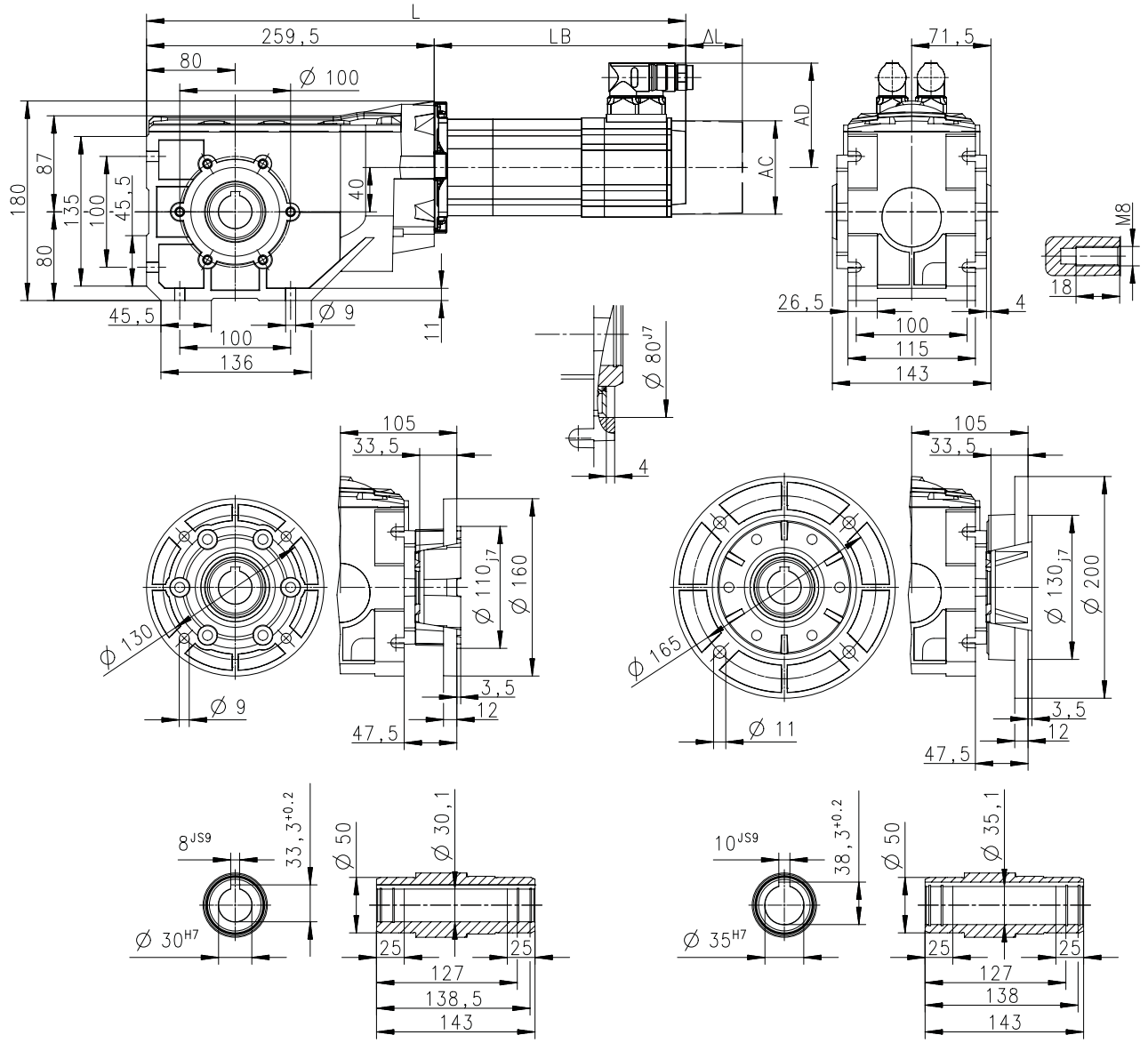


8800154-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	536	468
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B240 with MCA10

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

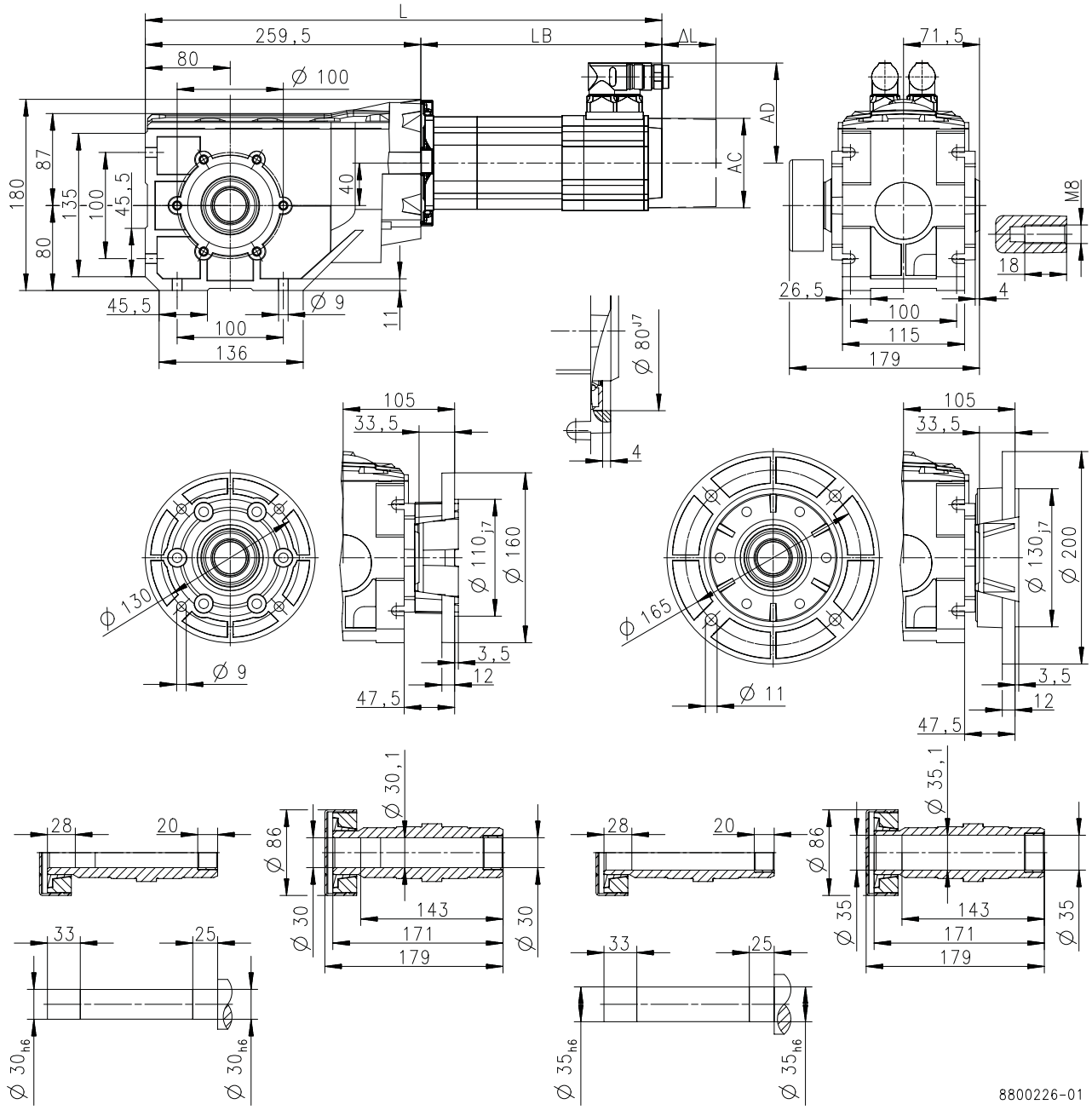


8800161-01

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	519
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B240 with MCA10

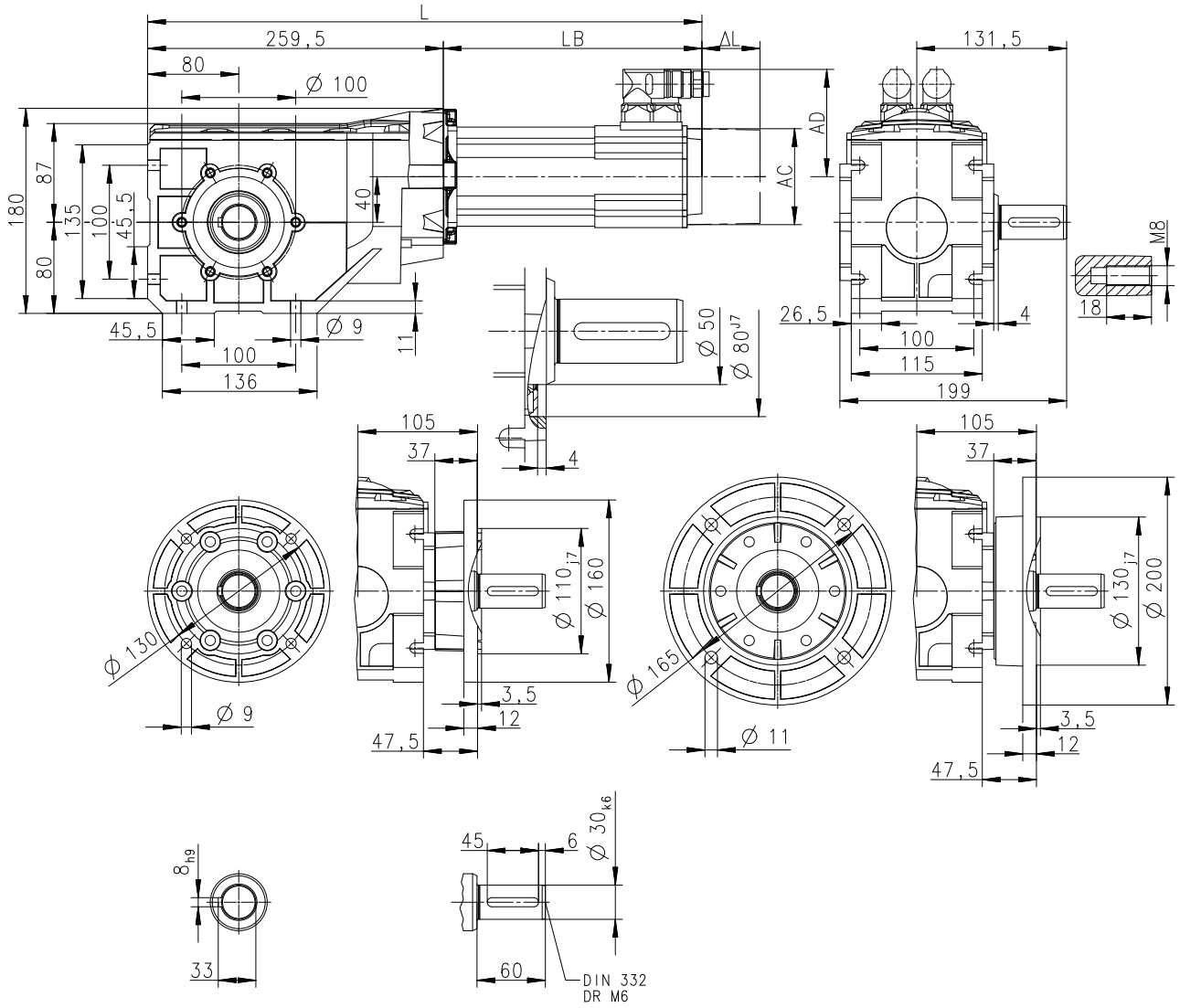
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	519
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B240 with MCA10

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

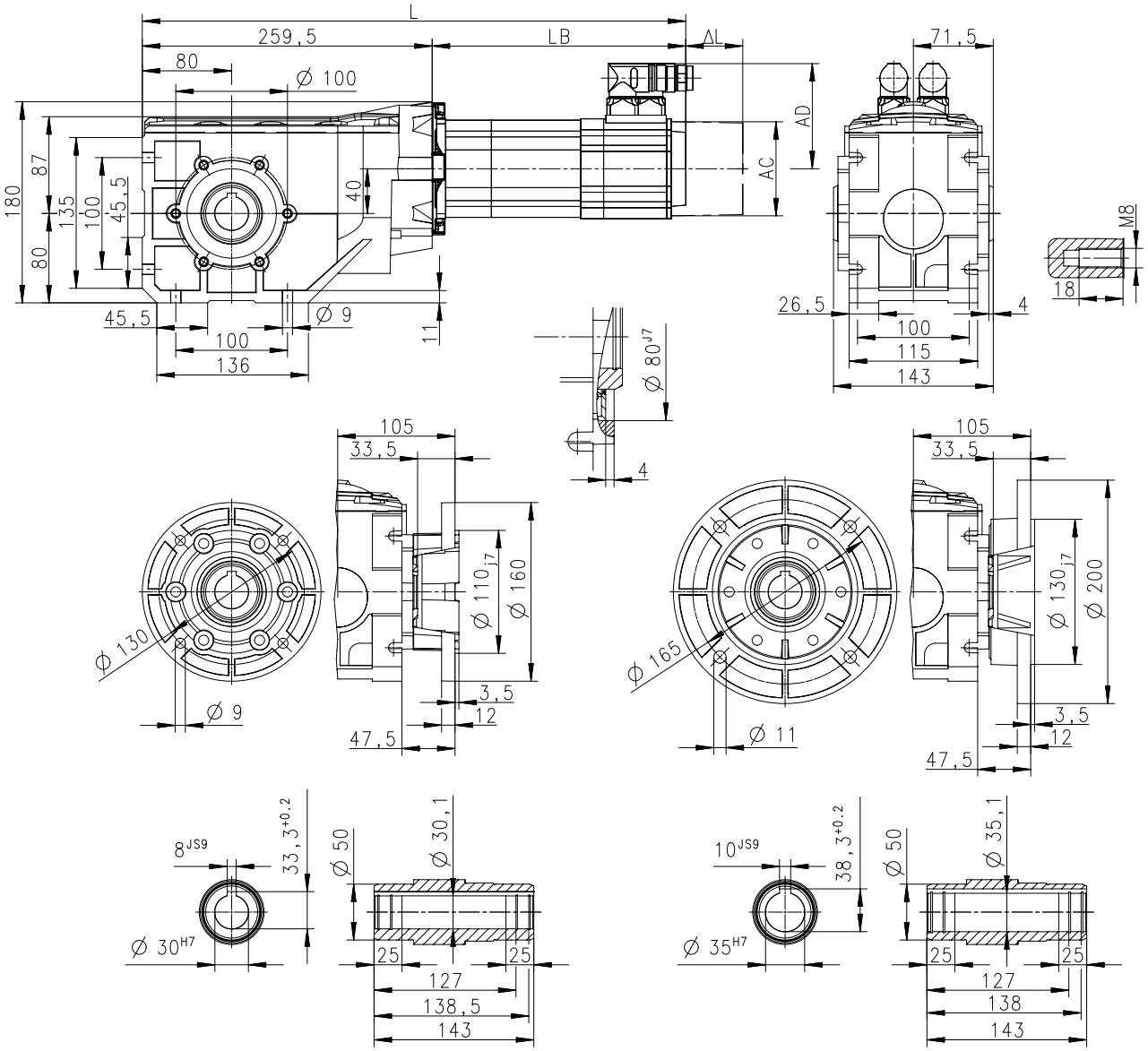


8800162-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	519
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B240 with MCA13

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

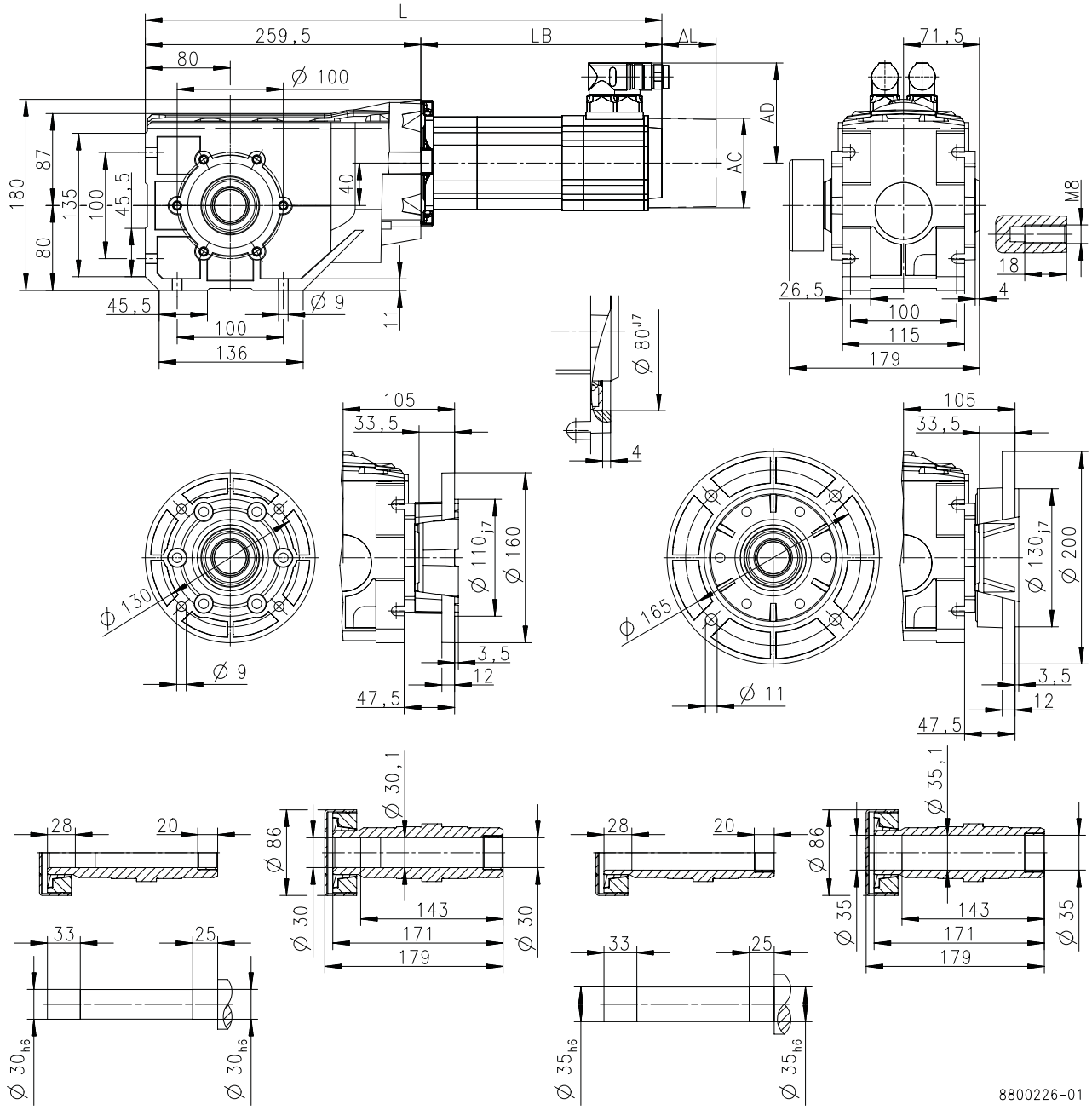


8800161-01

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	595	527
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B240 with MCA13

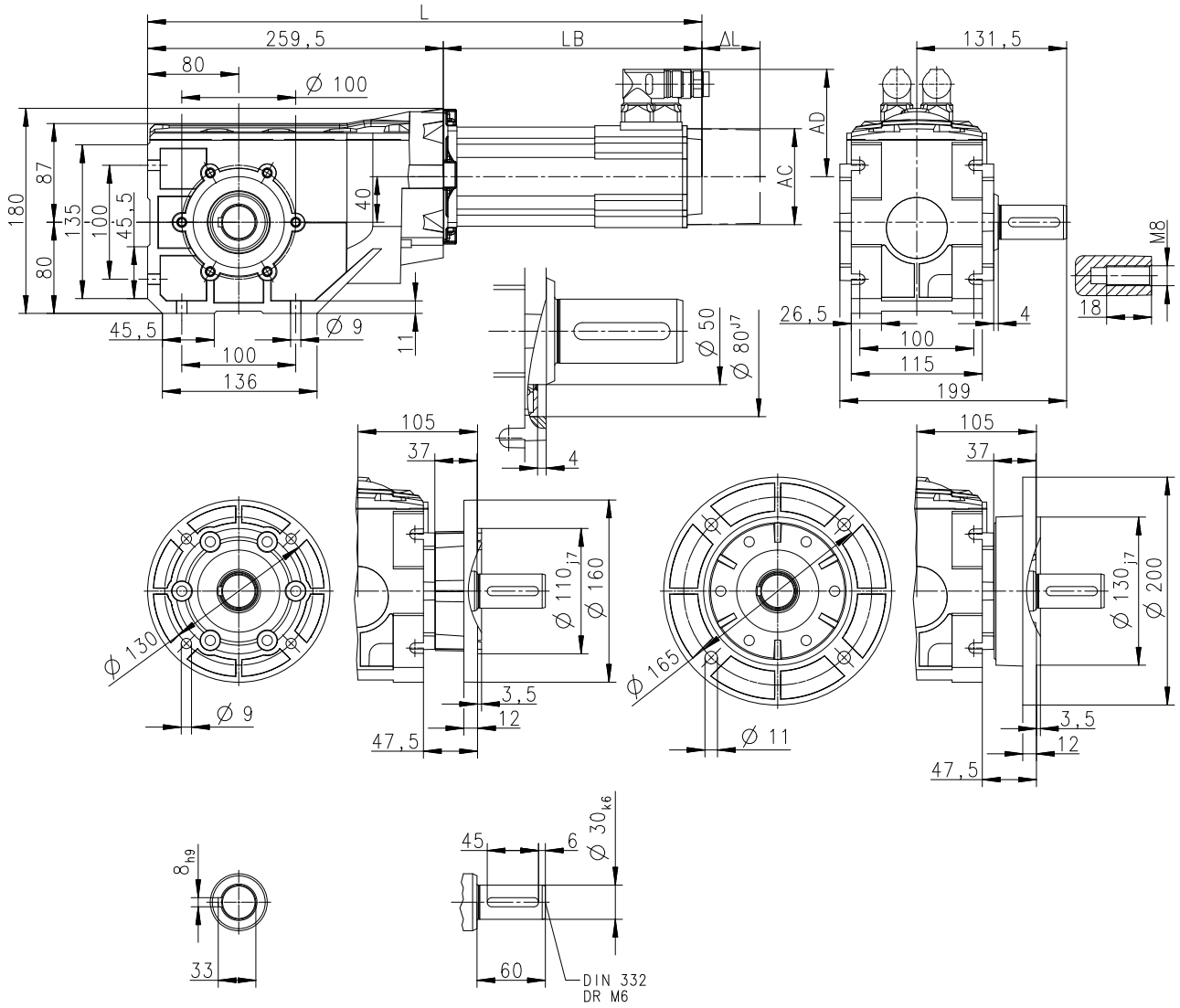
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	595	527
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B240 with MCA13

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

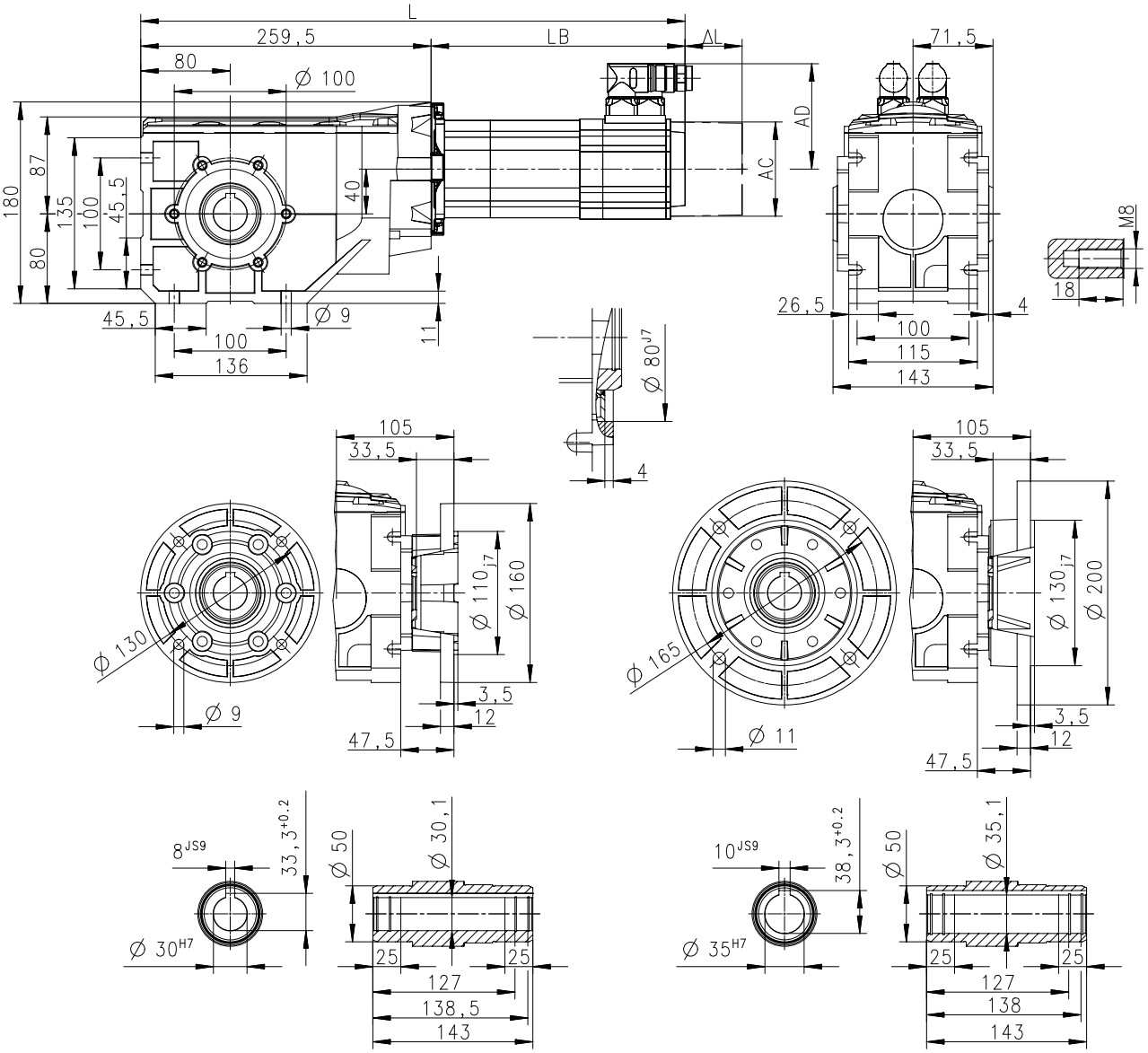


8800162-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	595	527
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B240 with MCA14

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

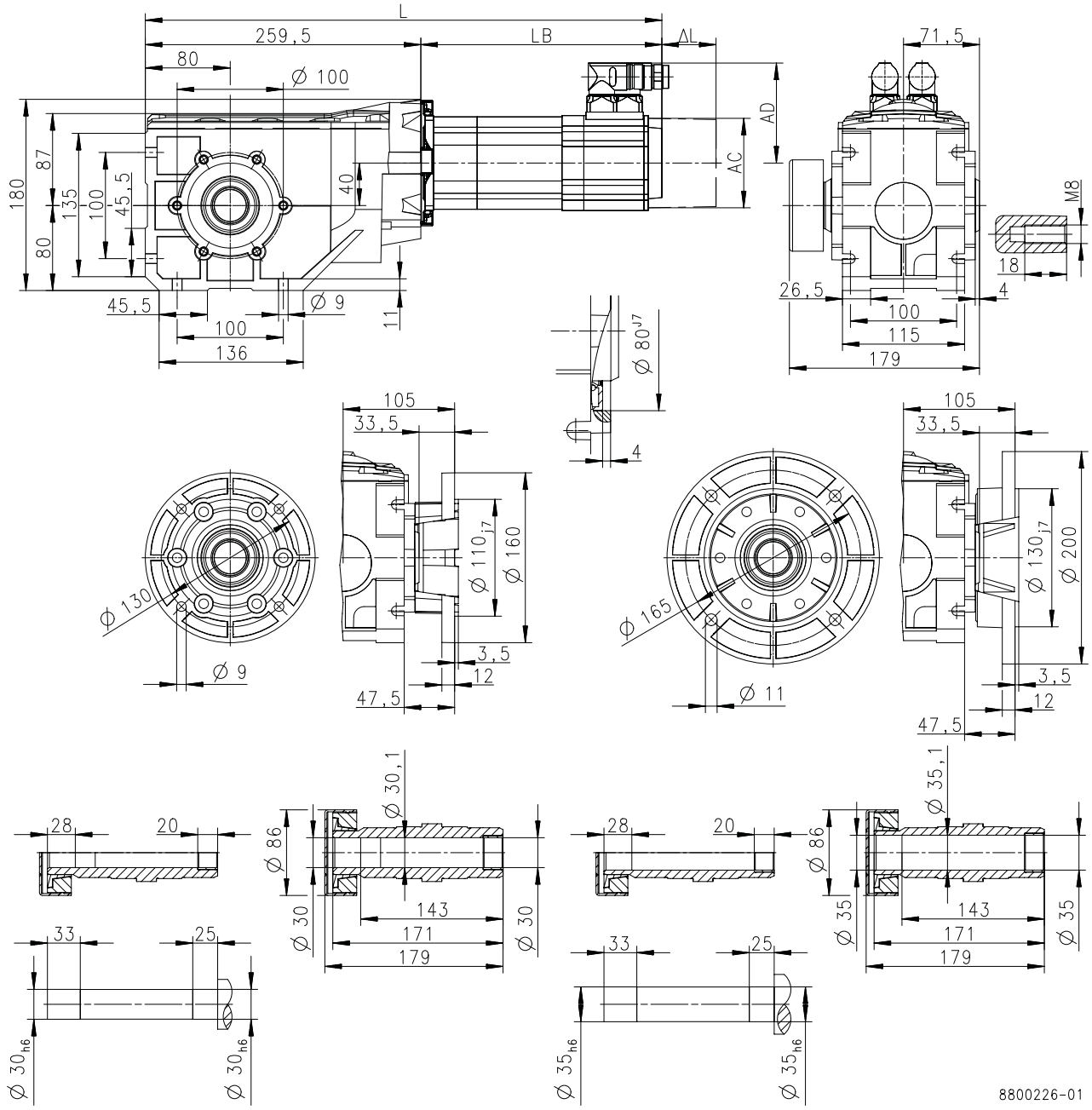


8800161-01

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	639	577	639	577
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B240 with MCA14

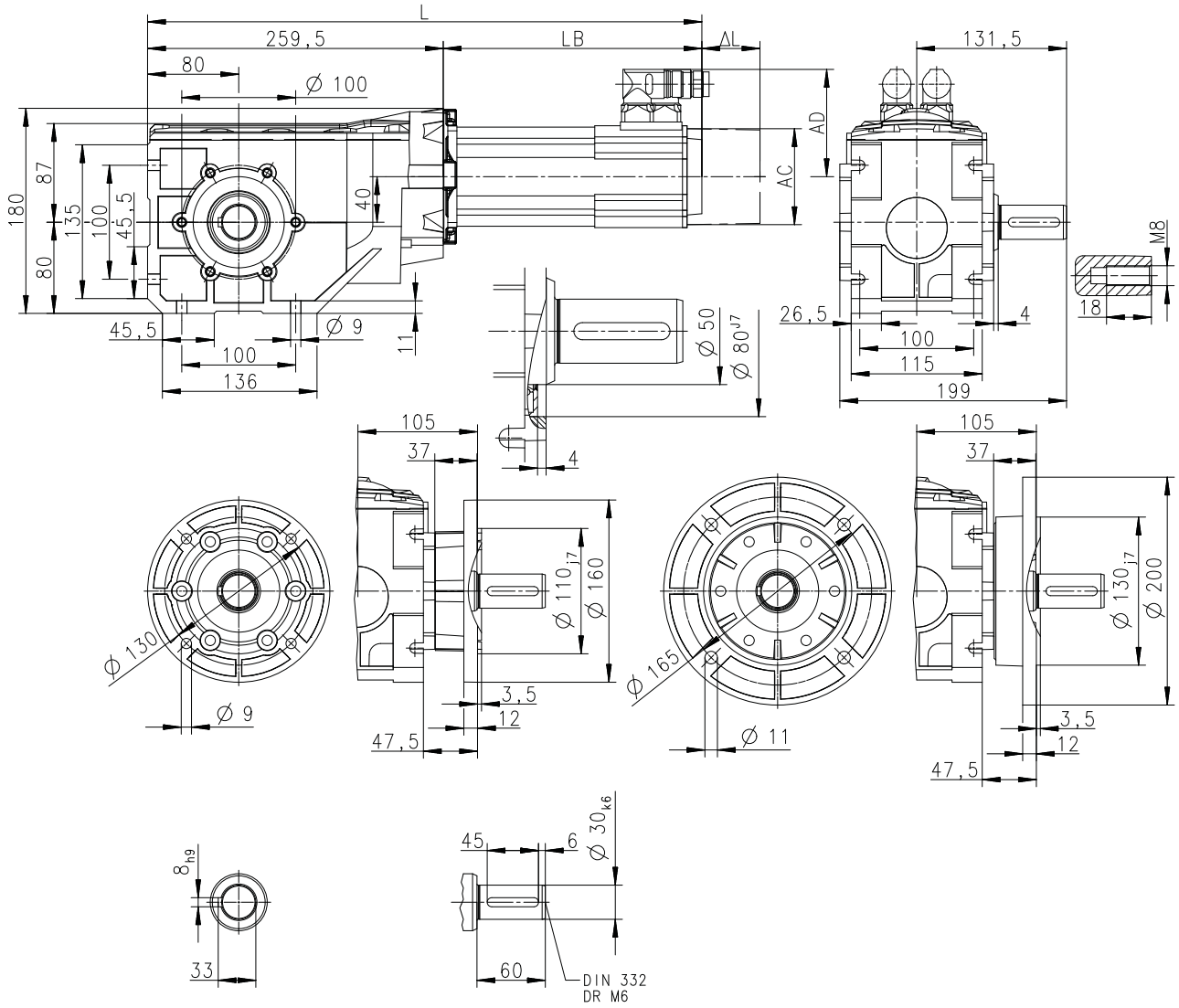
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	639	577	639	577
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B240 with MCA14

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

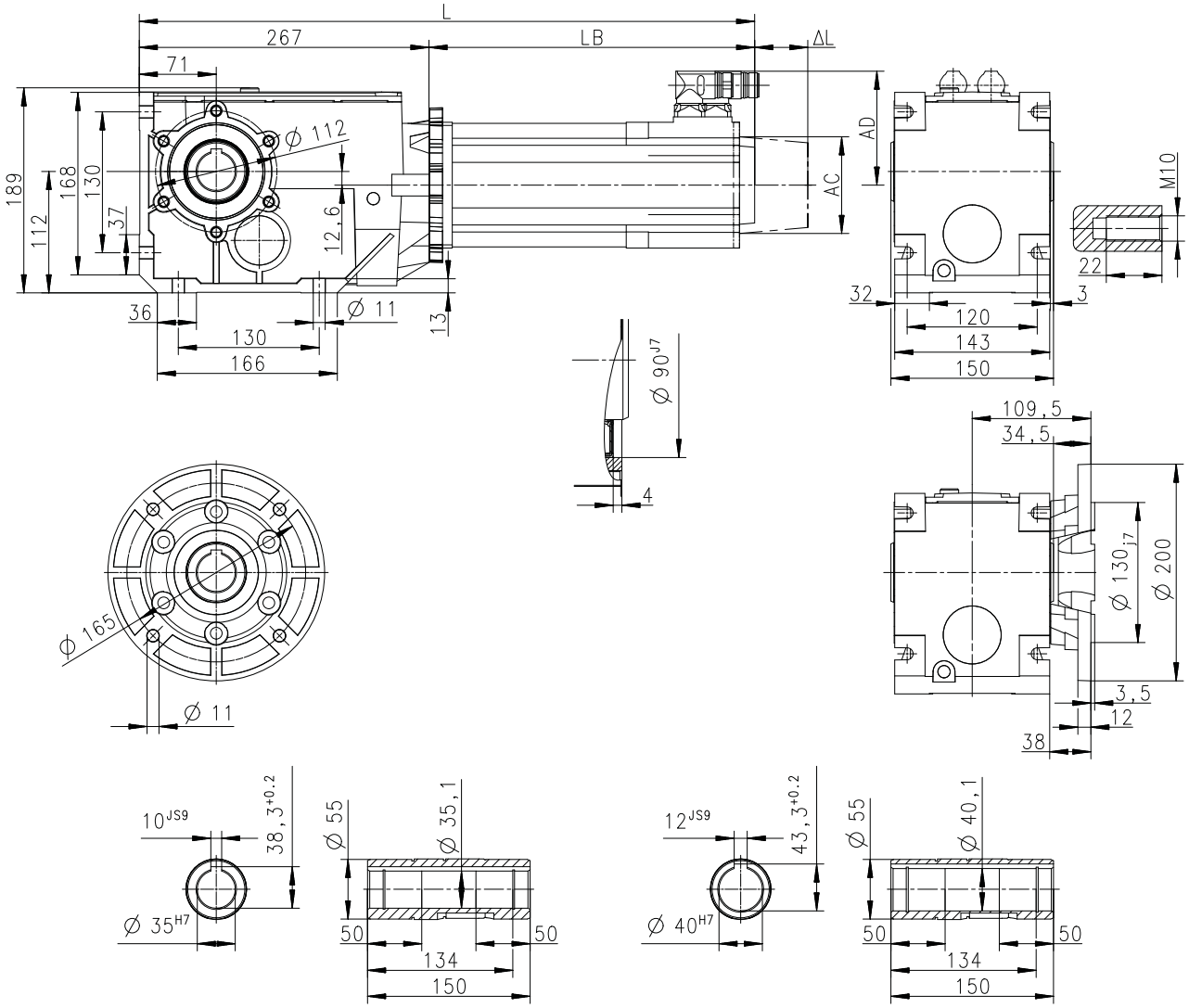


8800162-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	639	577	639	577
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B450 with MCA10

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

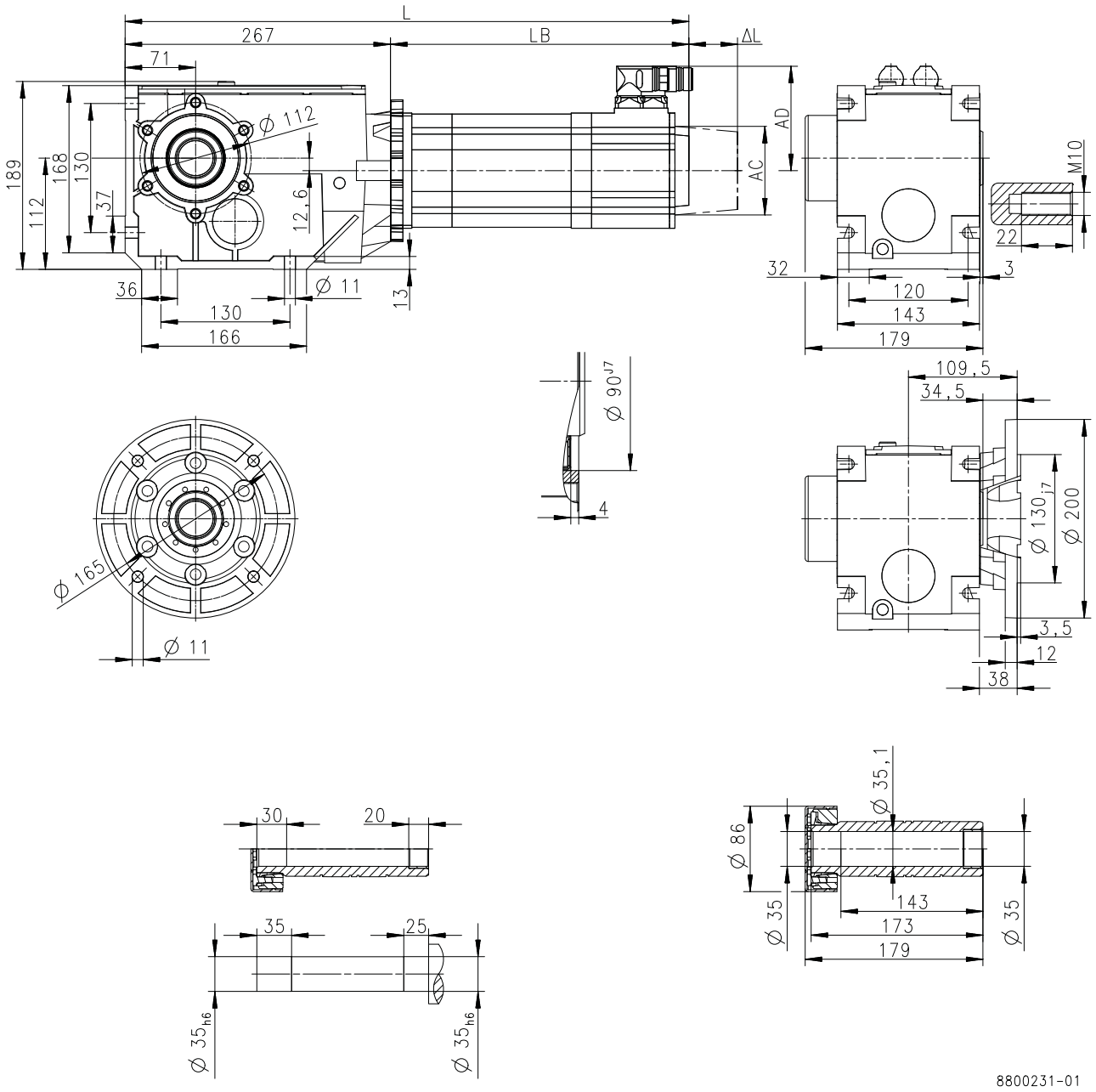


8800169-00

Motor			MCA
			10l40-
Cooling type			**Natural**
Total length	L	mm	526
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B450 with MCA10

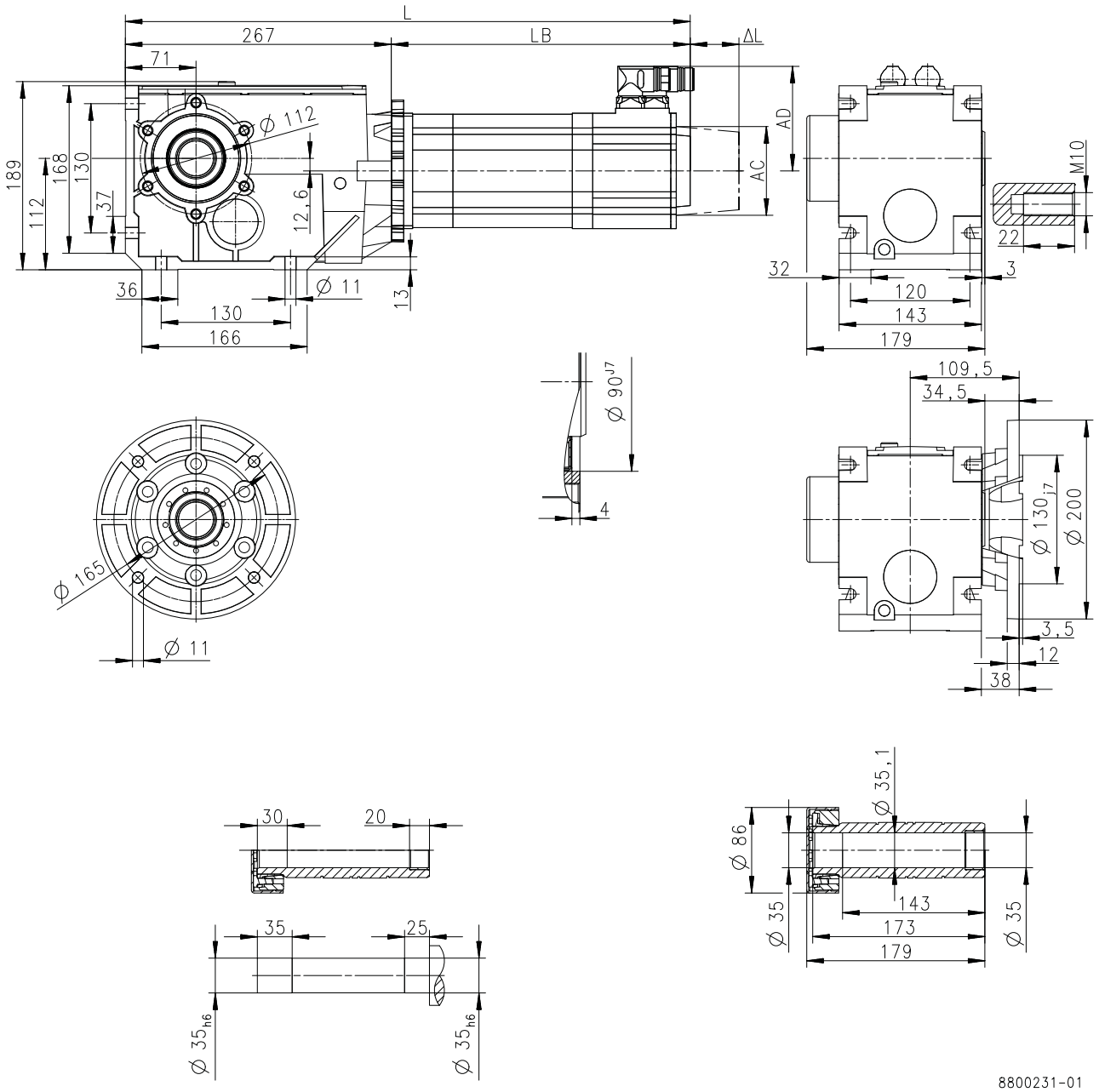
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	526
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B450 with MCA10

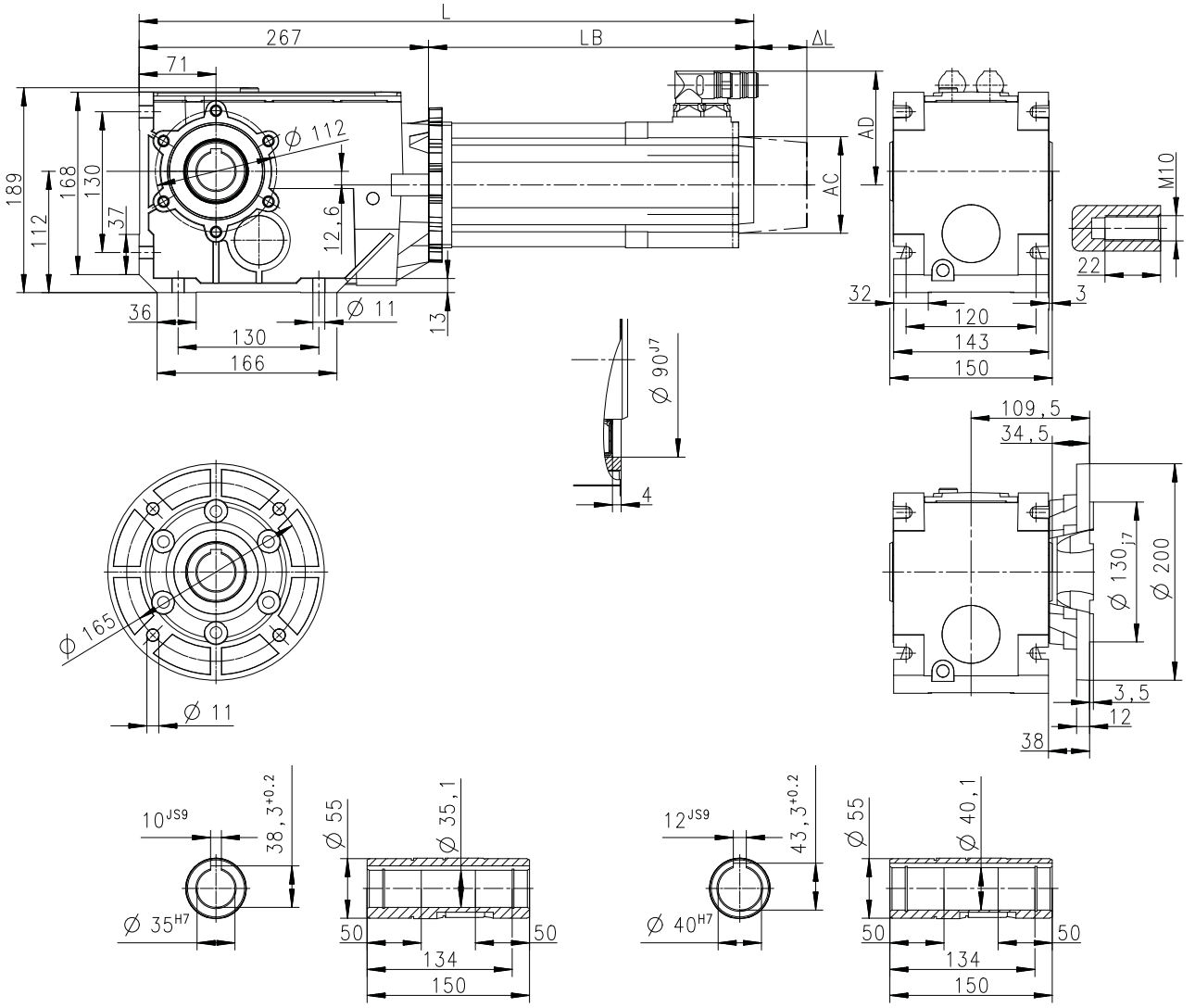
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	526
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B450 with MCA13

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

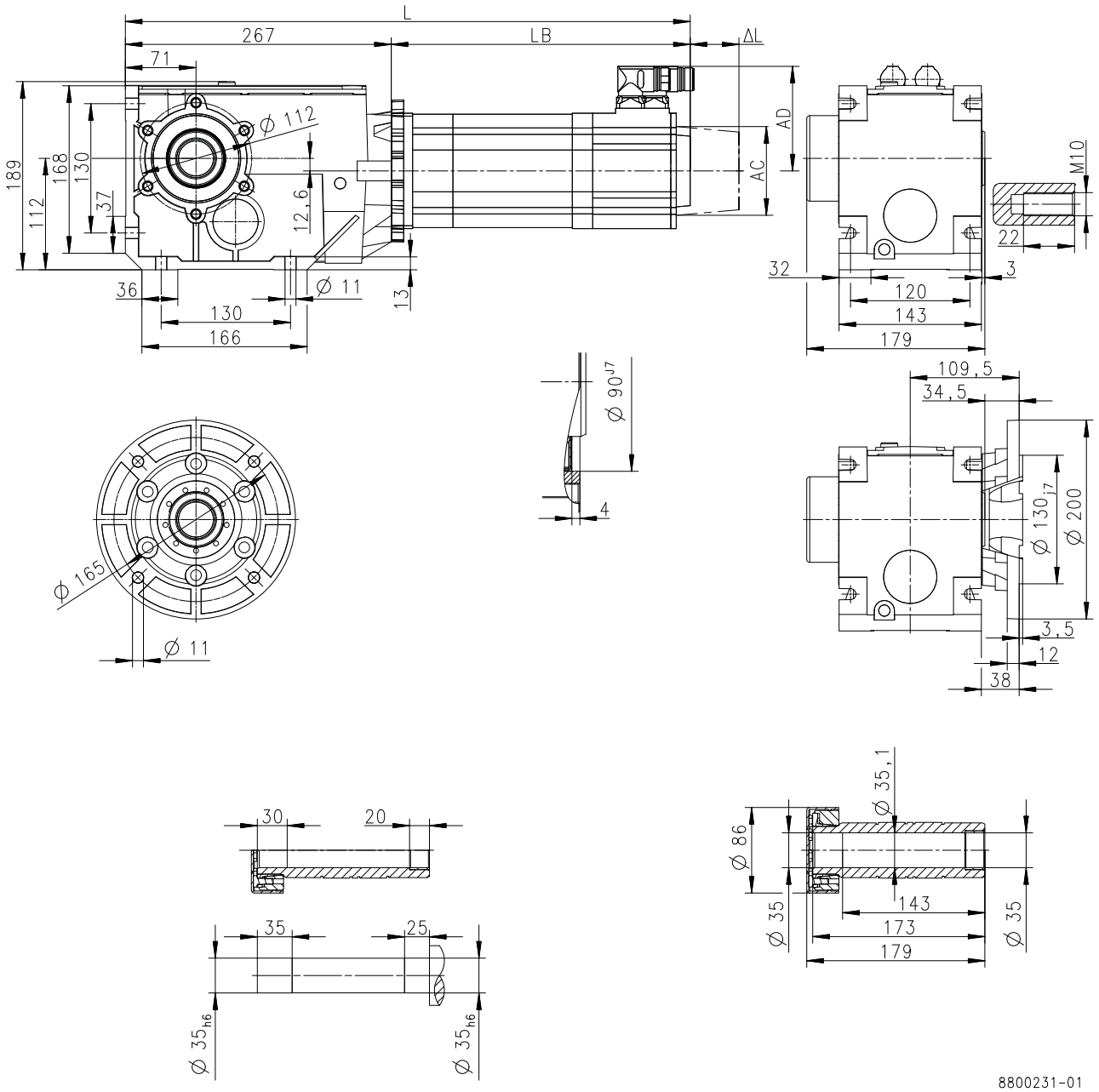


8800169-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	603	535
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B450 with MCA13

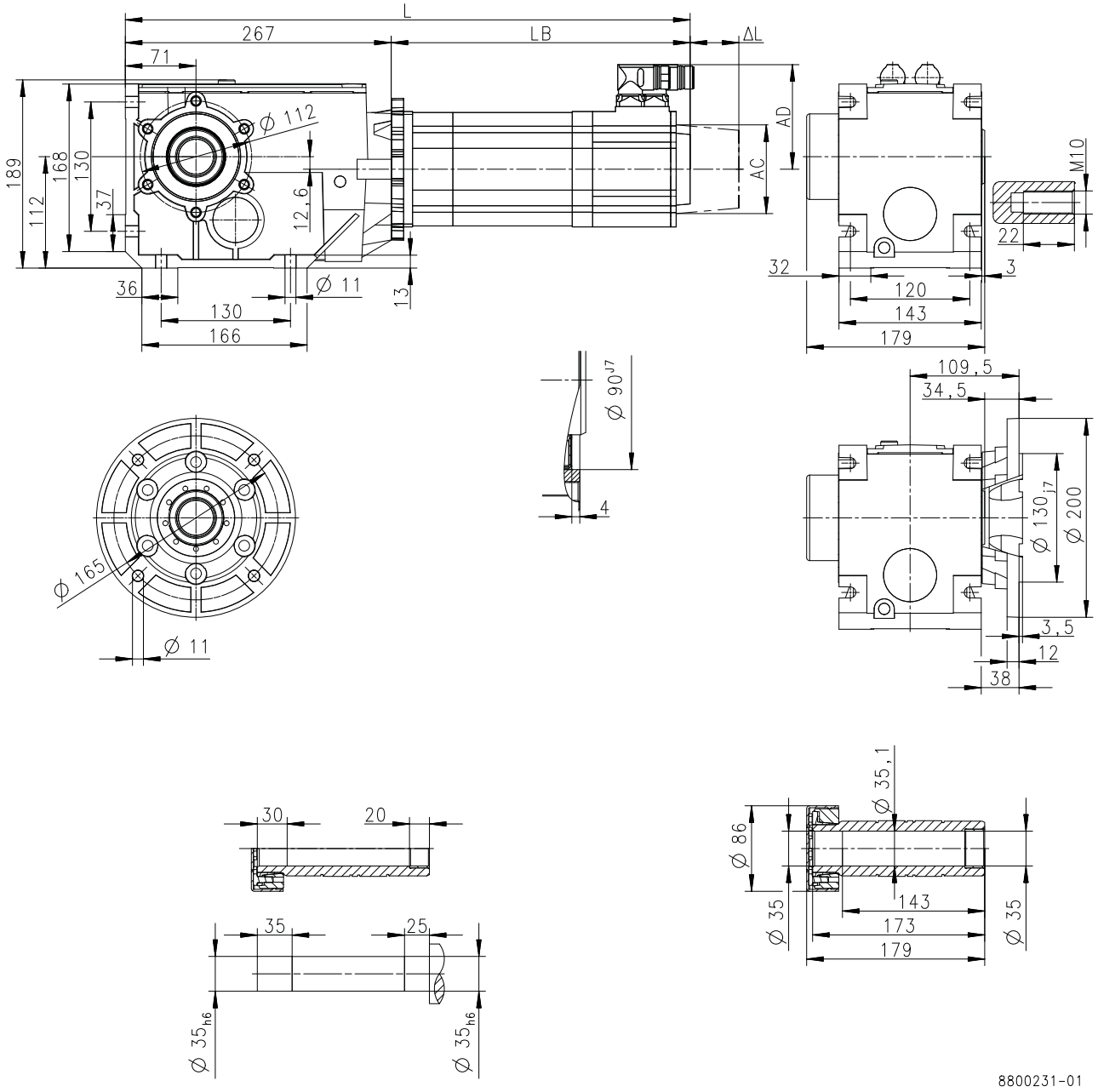
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	603	535
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B450 with MCA13

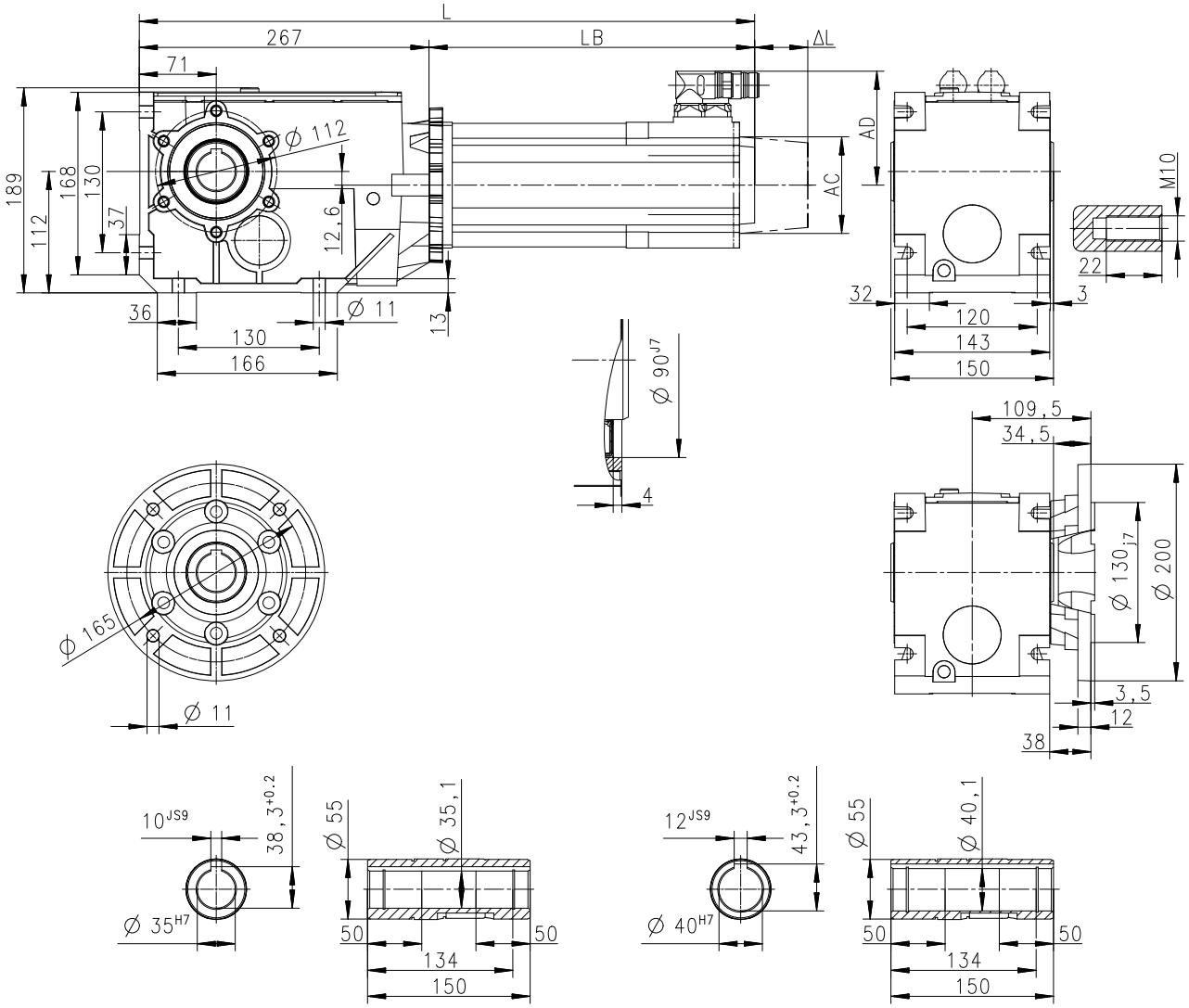
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	603	535
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B450 with MCA14

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

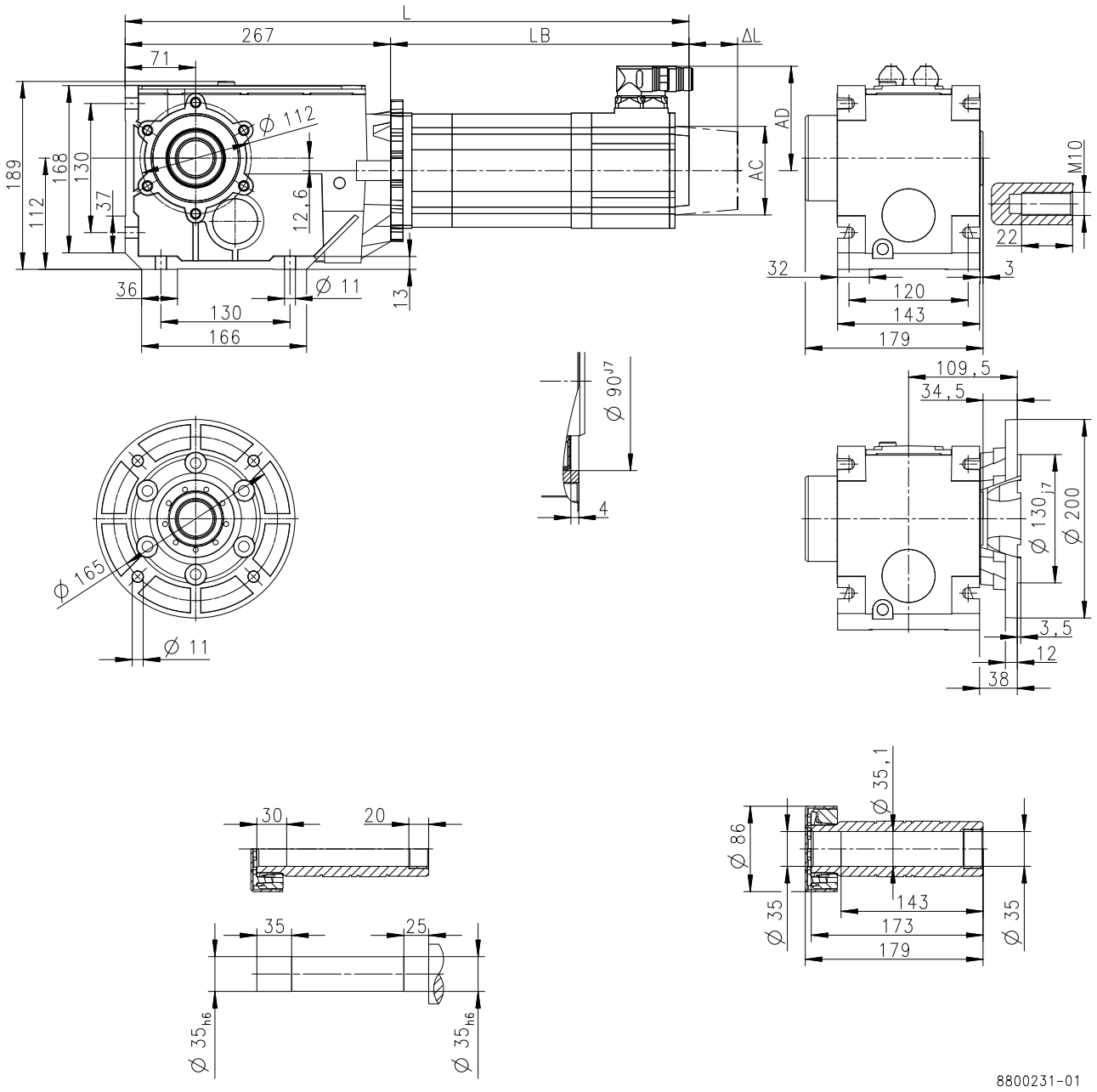


8800169-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	647	585	647	585
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B450 with MCA14

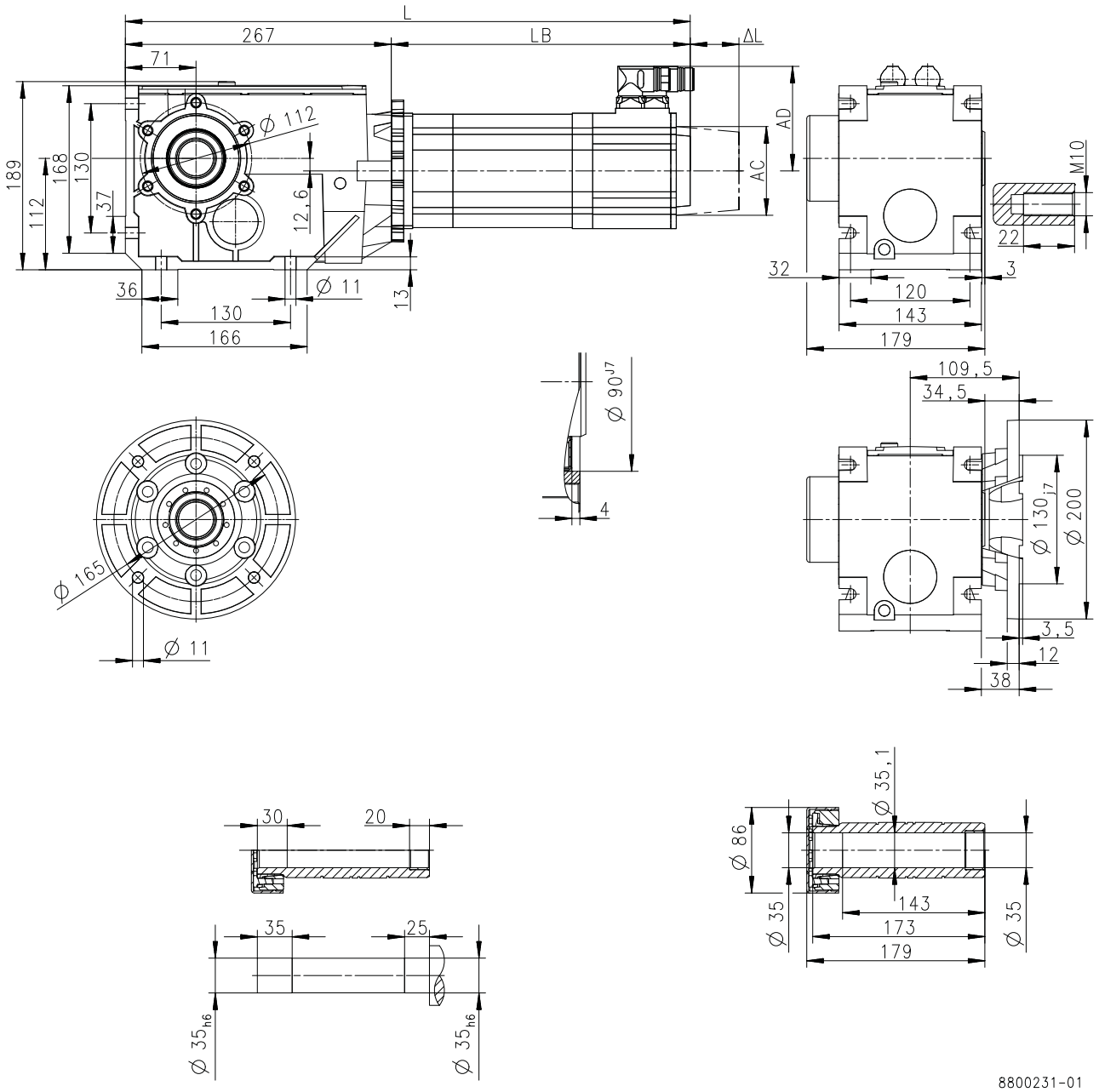
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			Forced	Natural	Forced	Natural
Total length	L	mm	647	585	647	585
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B450 with MCA14

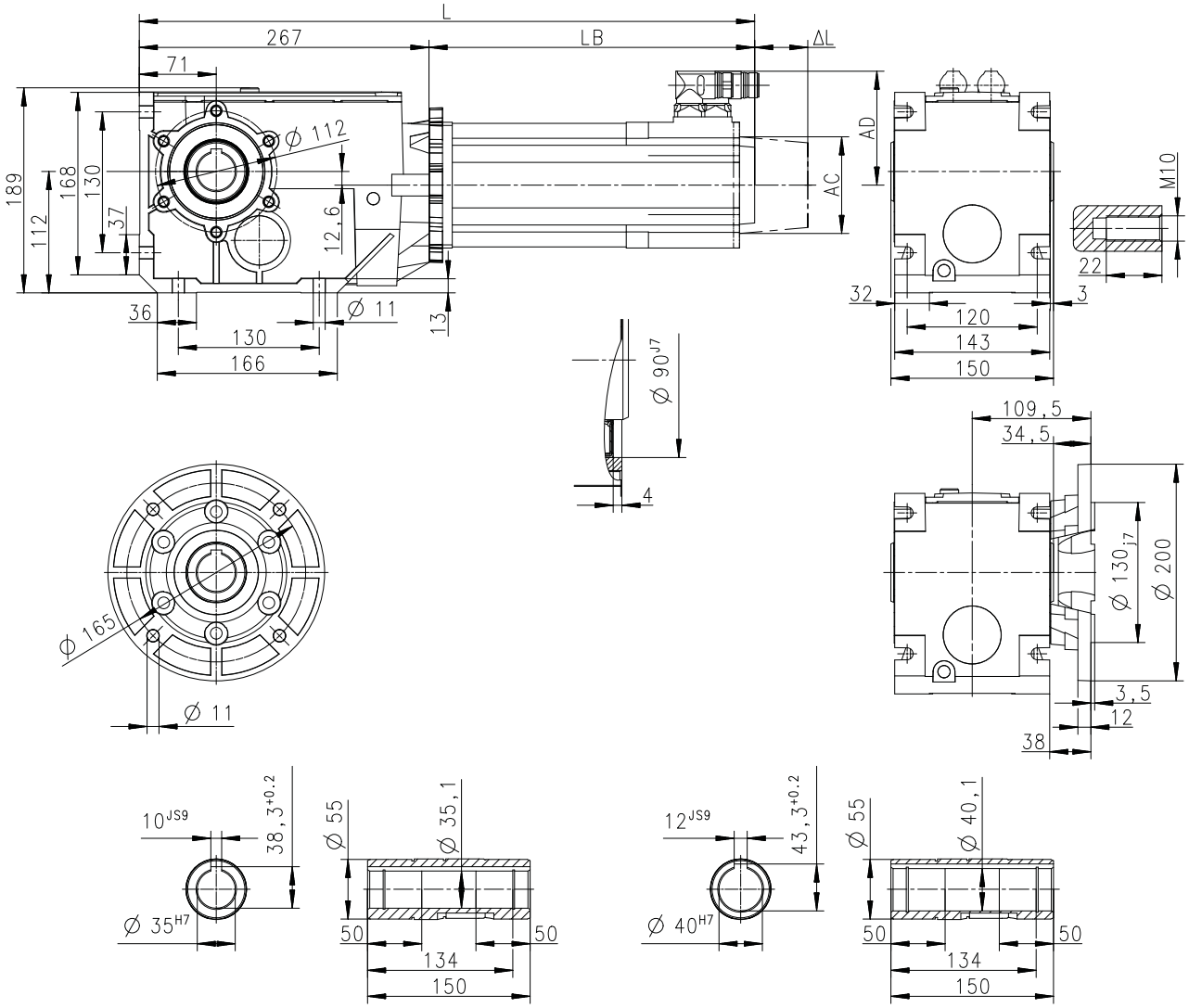
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	647	585	647	585
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B450 with MCA17

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

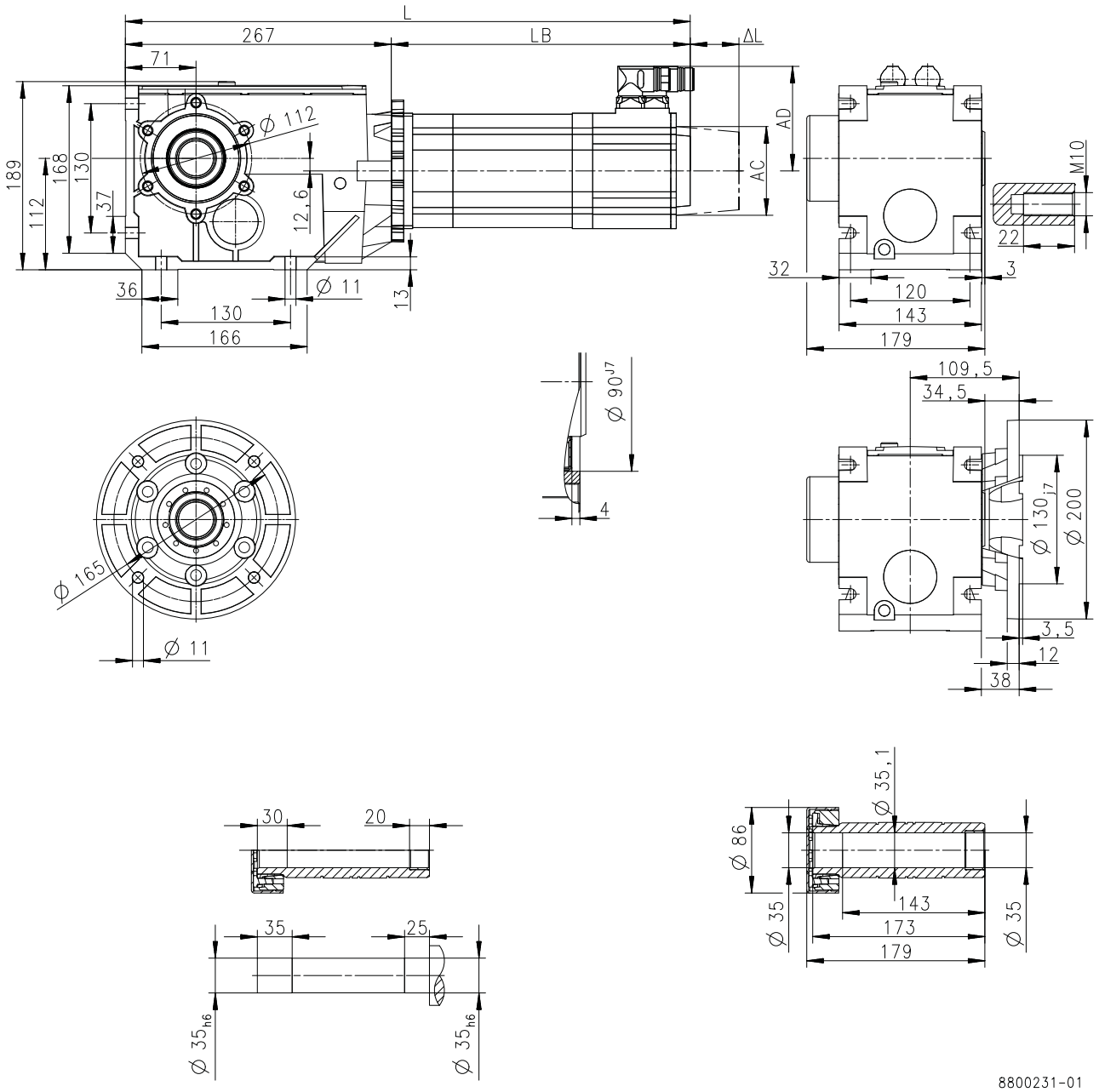


8800169-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	710	624	710	624
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B450 with MCA17

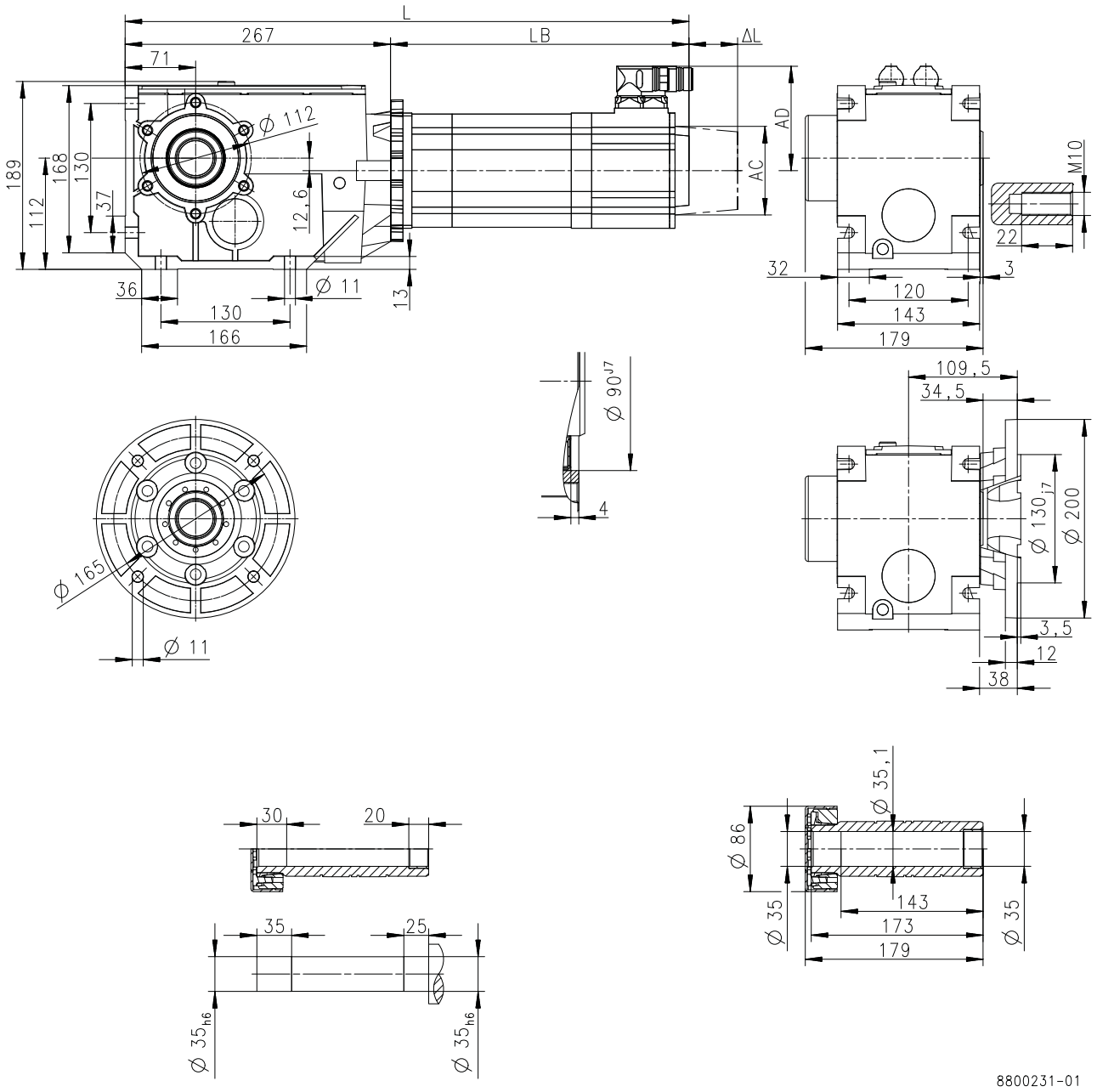
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	710	624	710	624
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B450 with MCA17

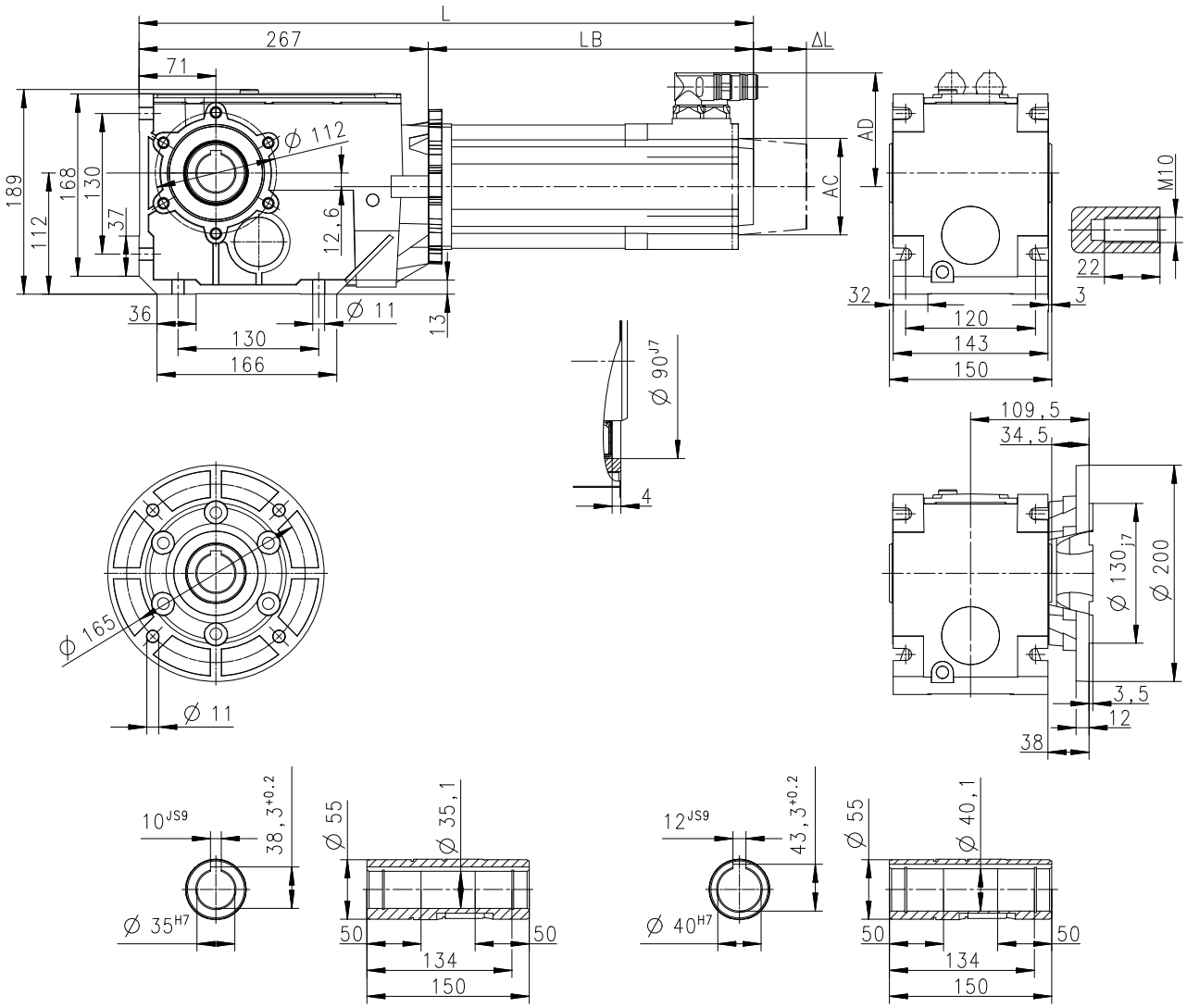
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	710	624	710	624
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B450 with MCA19

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

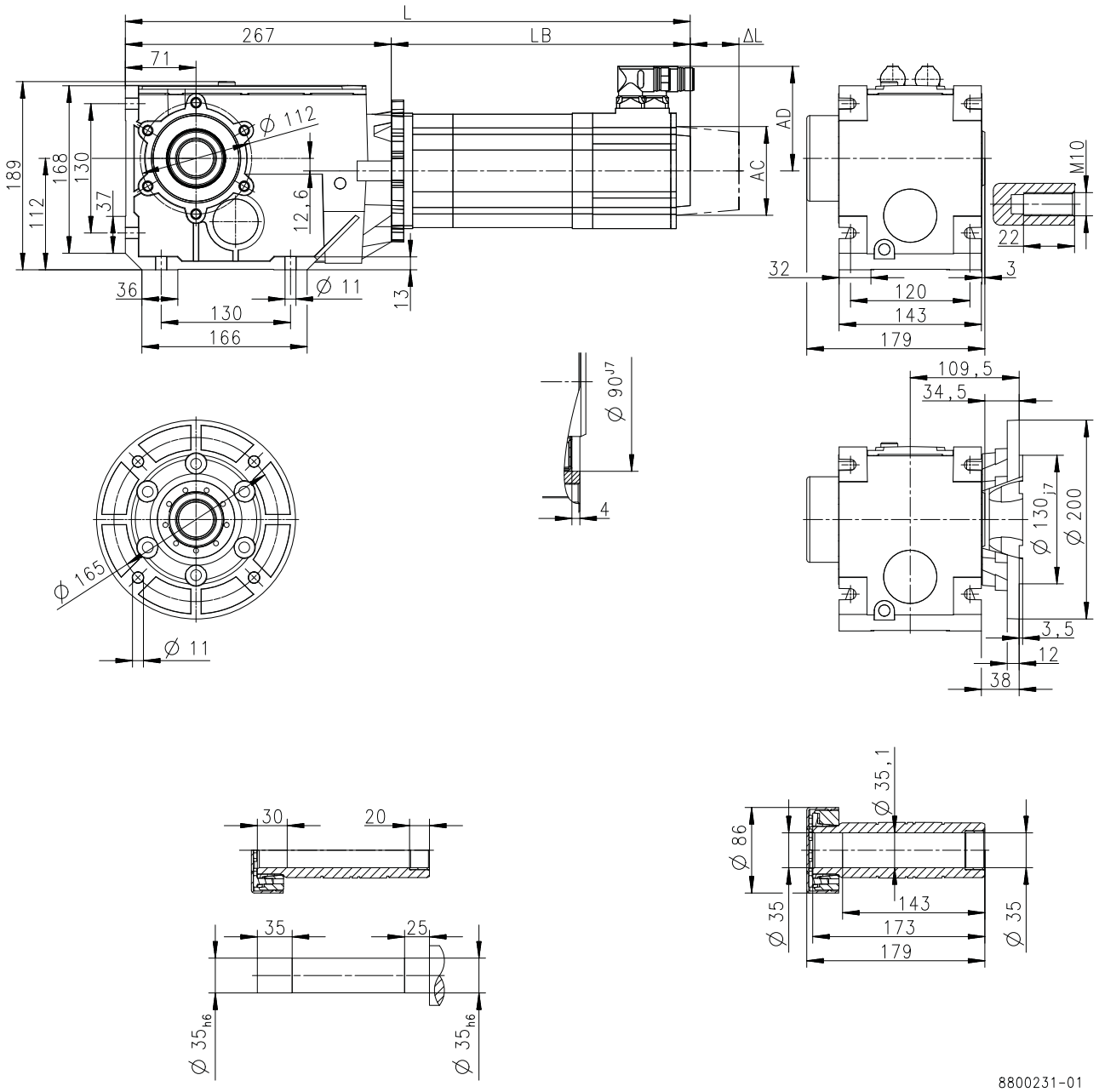


8800169-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	789	692	789	692
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B450 with MCA19

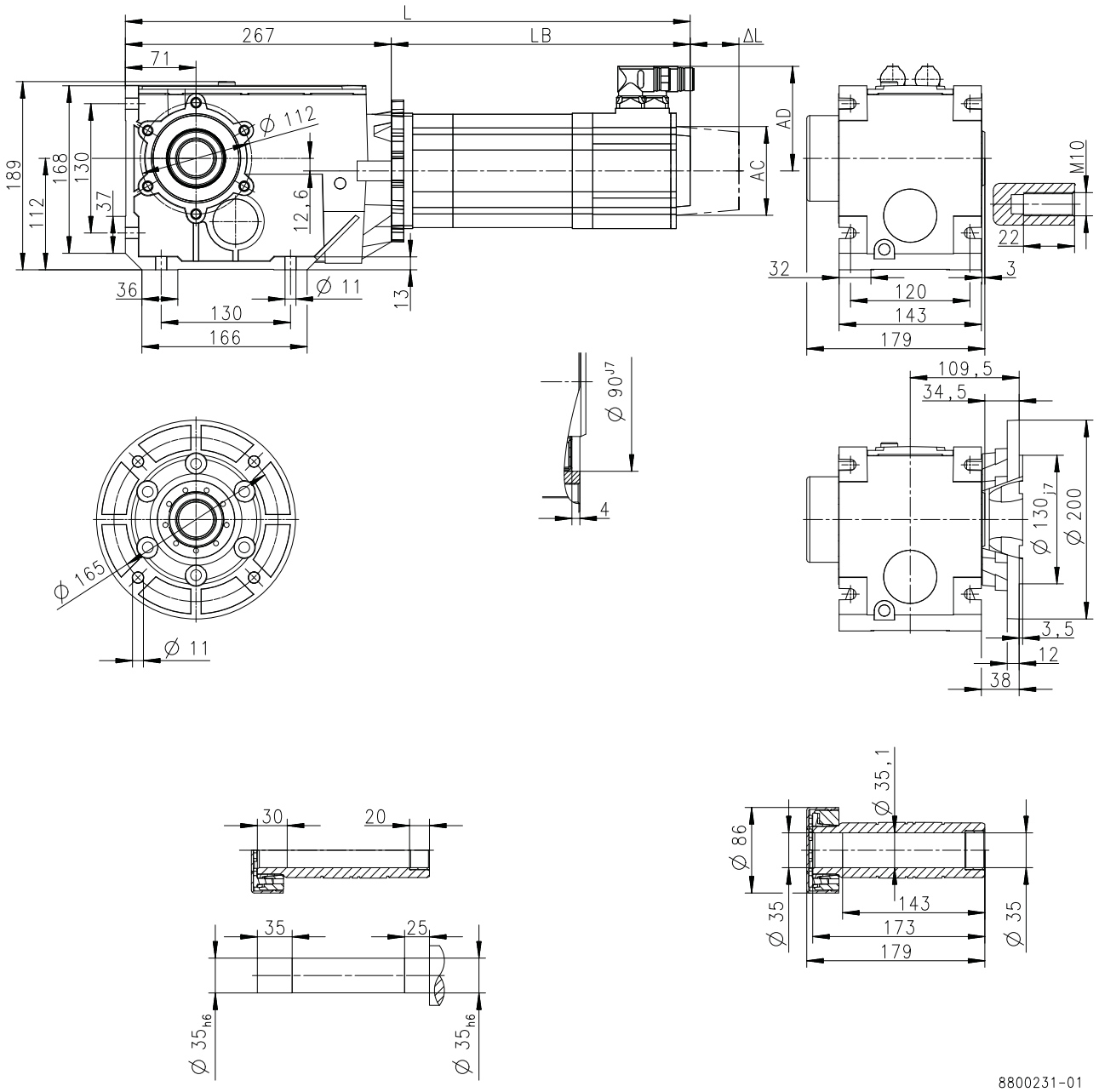
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	789	692	789	692
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B450 with MCA19

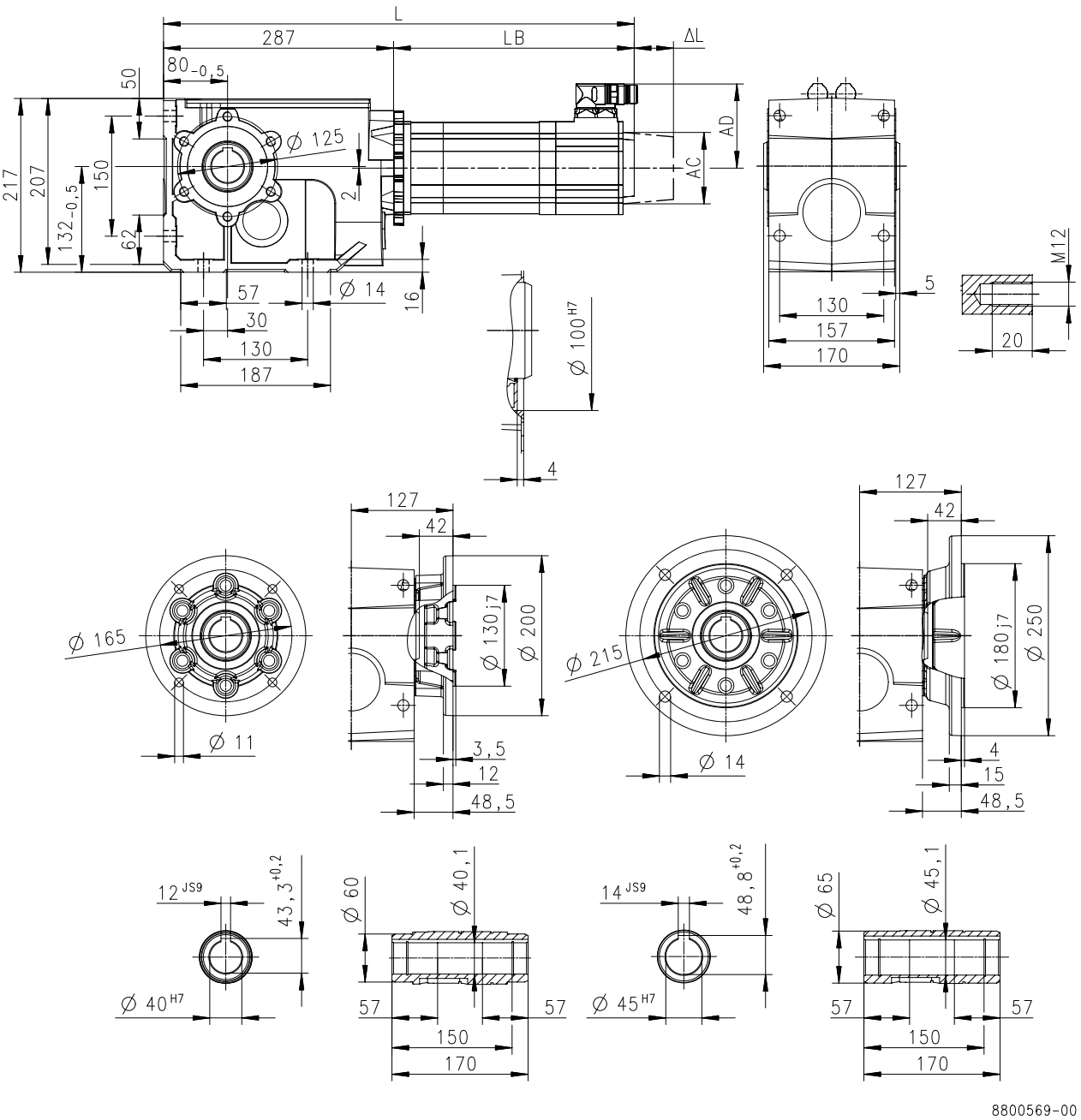
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	789	692	789	692
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B600 with MCA10

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

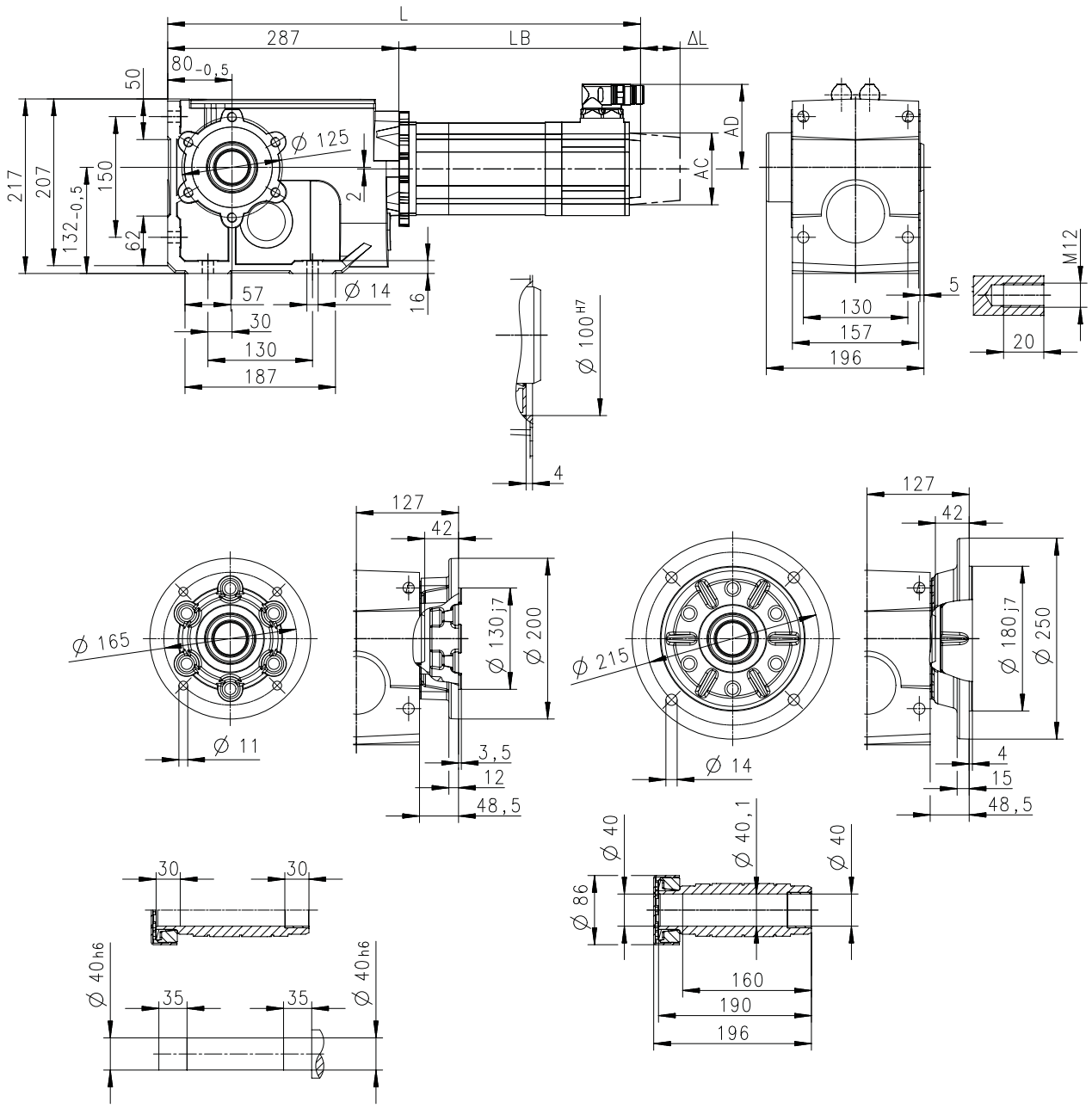


8800569-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	546
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B600 with MCA10

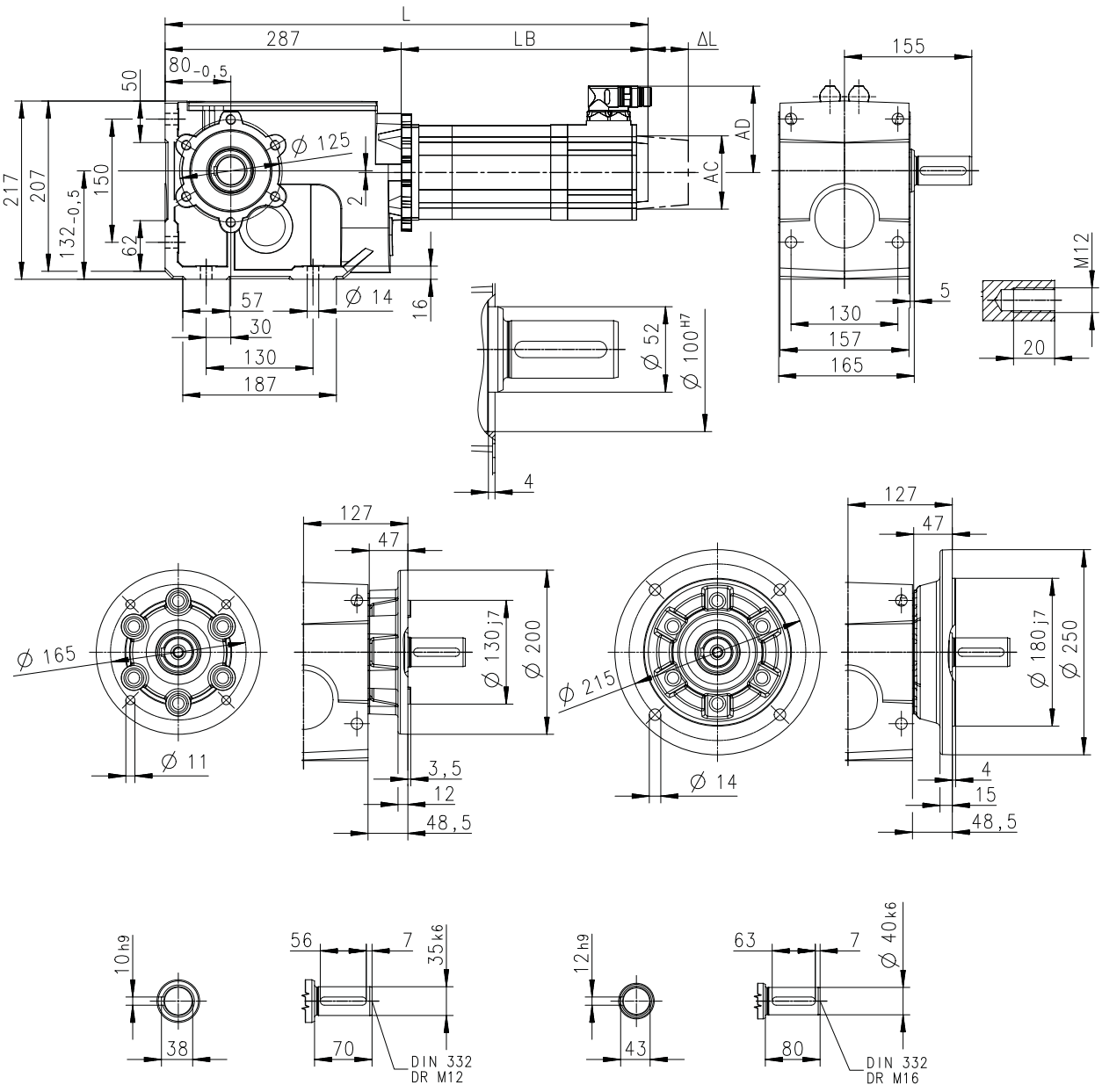
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	546
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B600 with MCA10

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

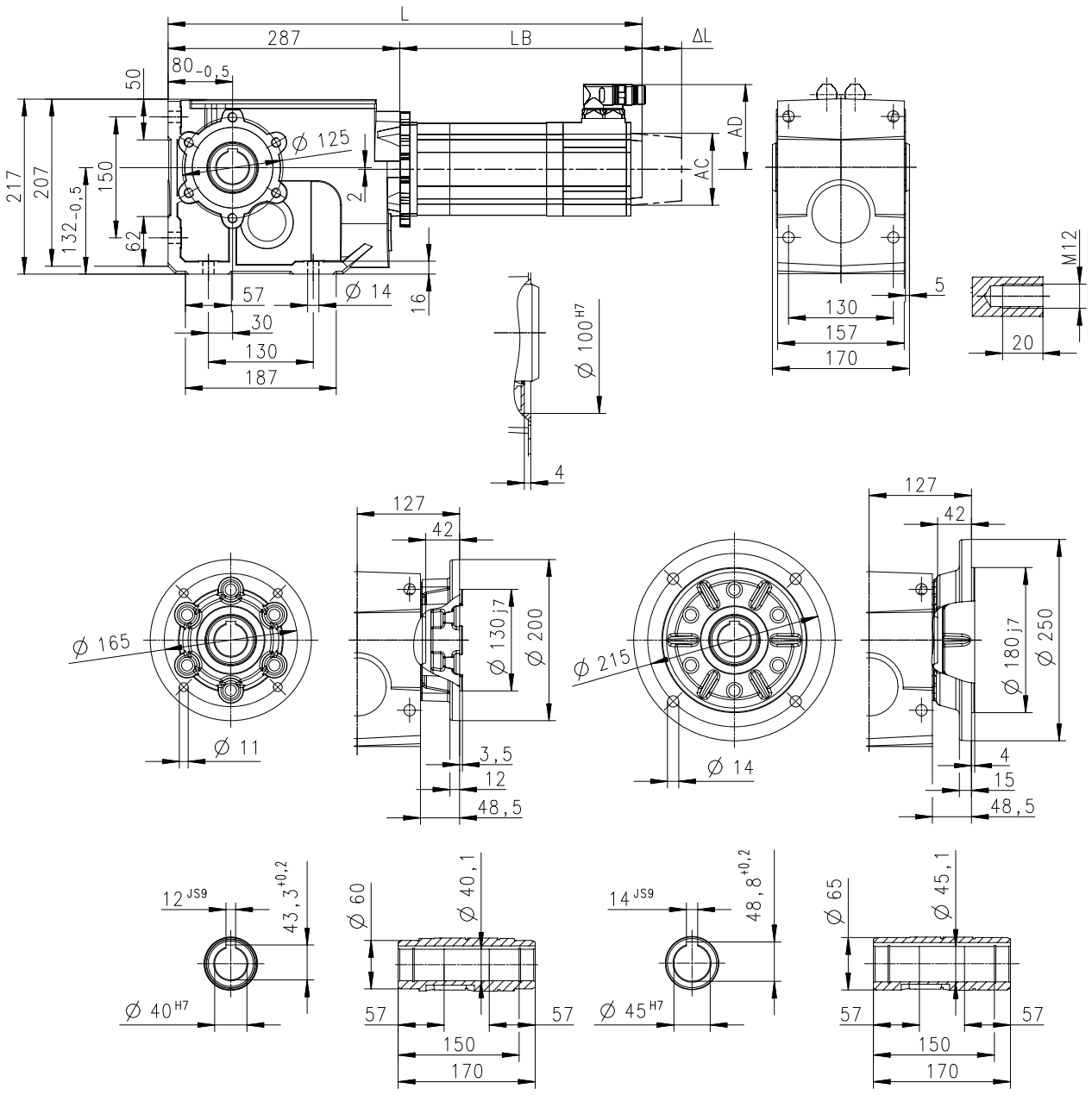


8800570-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	546
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B600 with MCA13

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

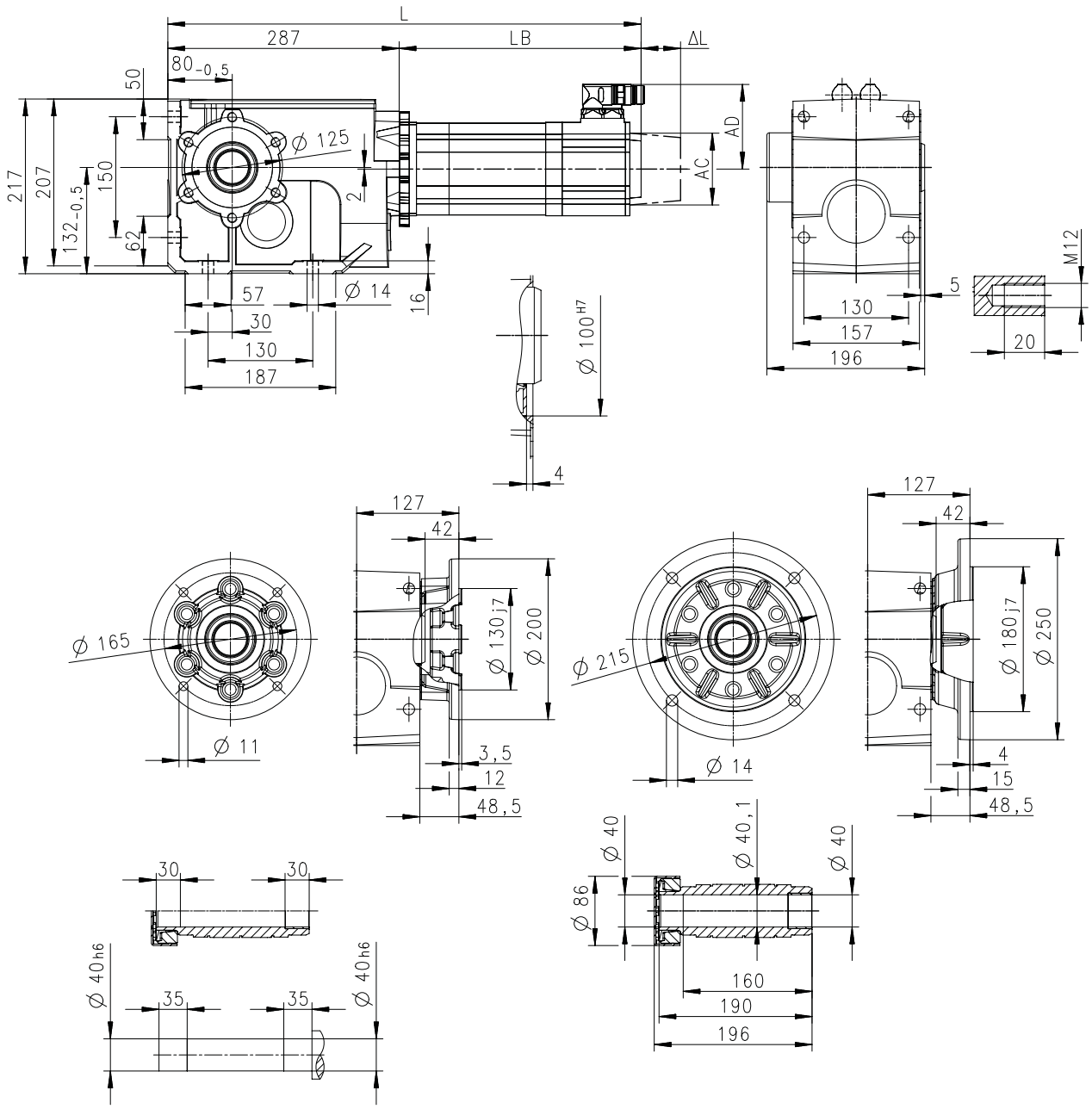


8800569-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	623	555
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B600 with MCA13

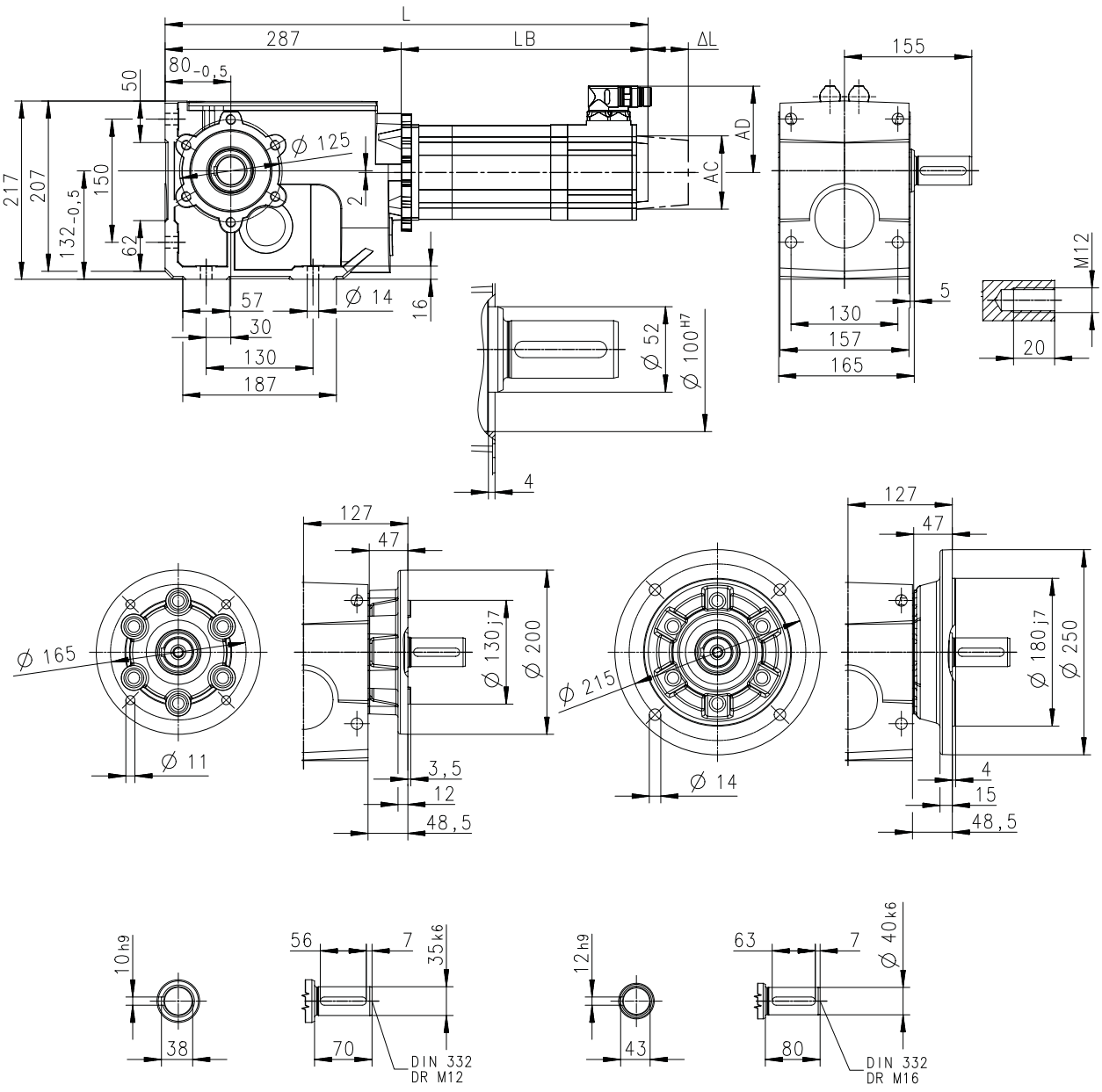
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	623	555
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B600 with MCA13

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

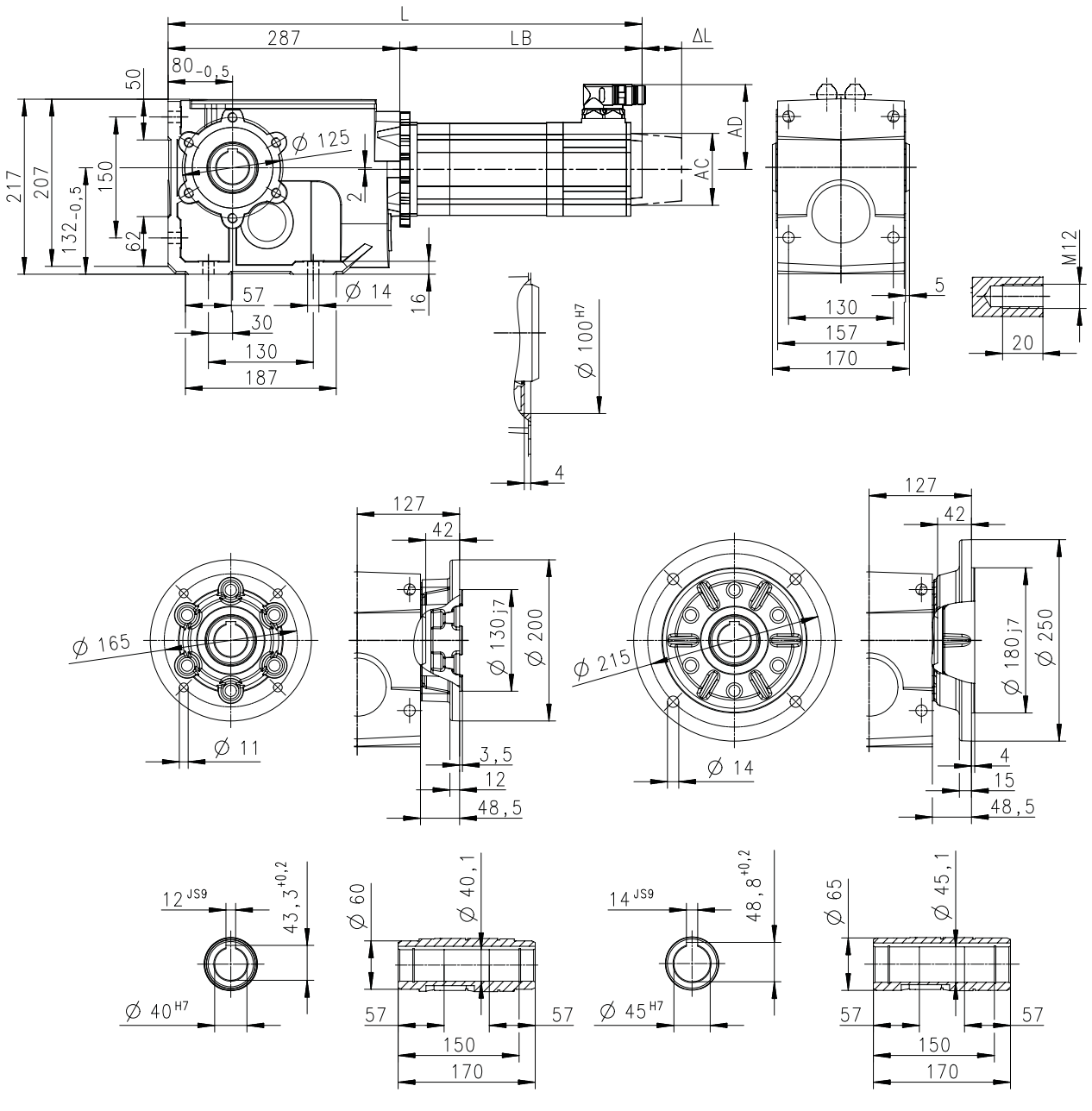


8800570-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	623	555
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B600 with MCA14

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

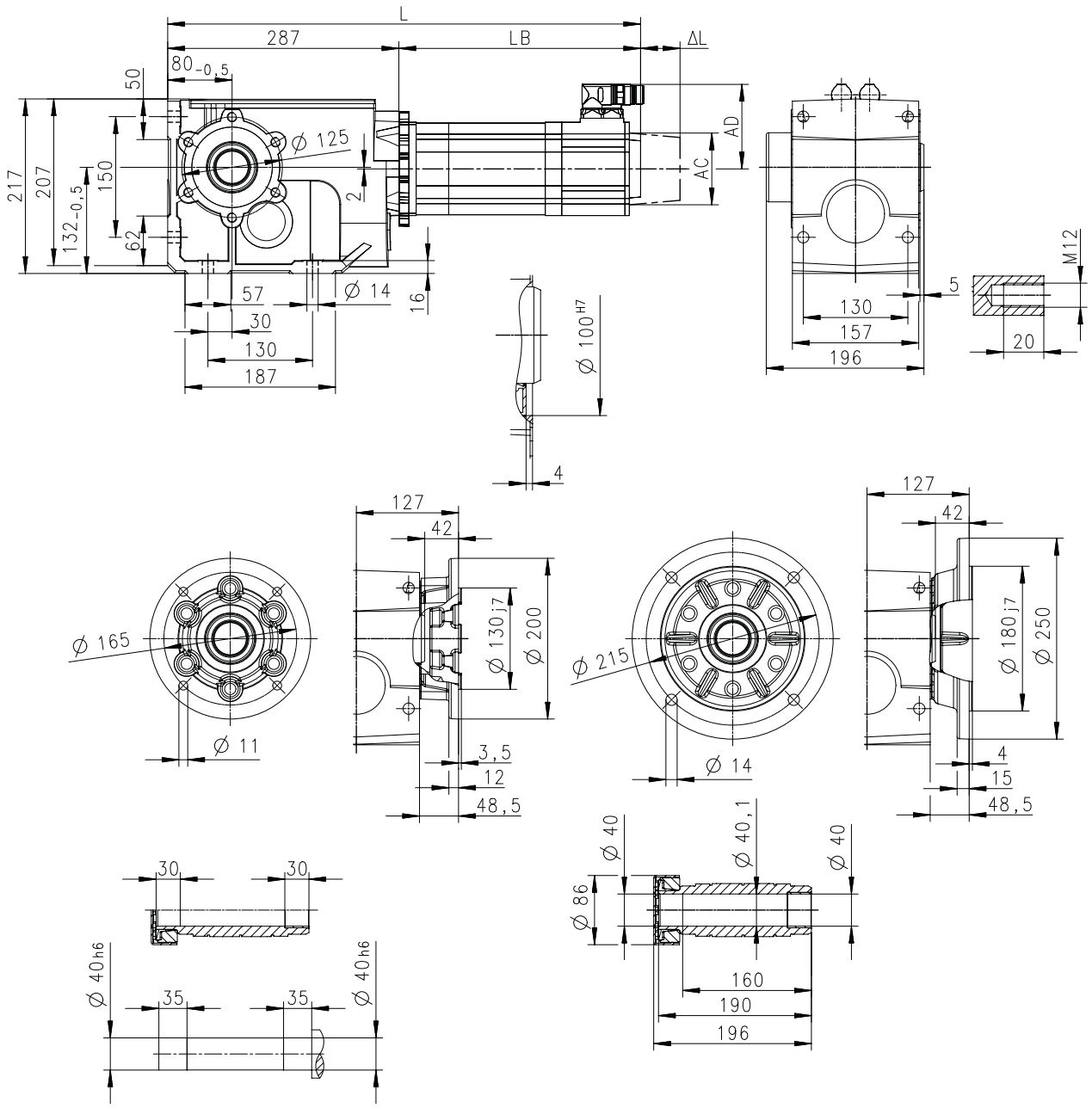


8800569-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	667	605	667	605
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B600 with MCA14

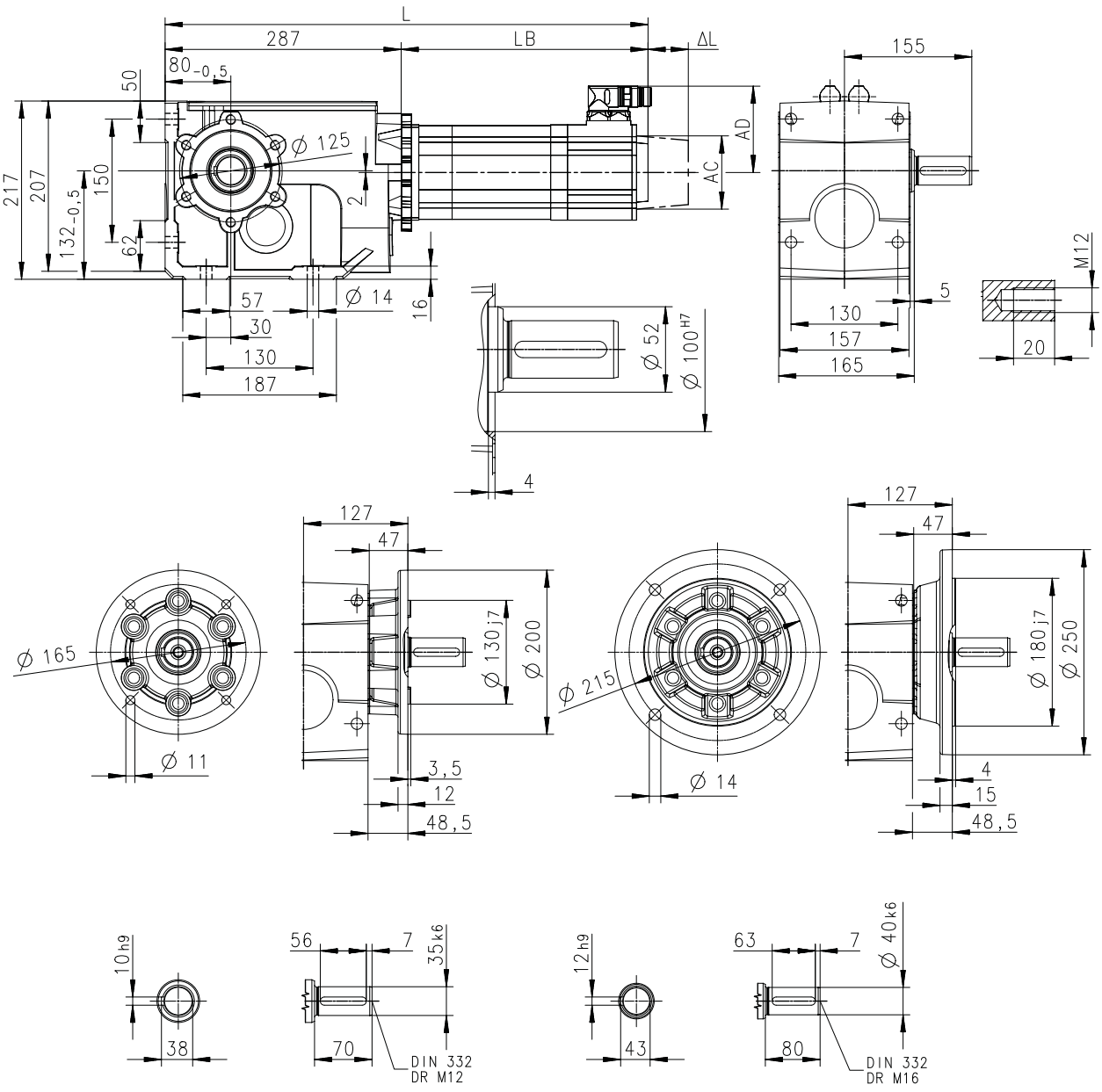
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			Forced	Natural	Forced	Natural
Total length	L	mm	667	605	667	605
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B600 with MCA14

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

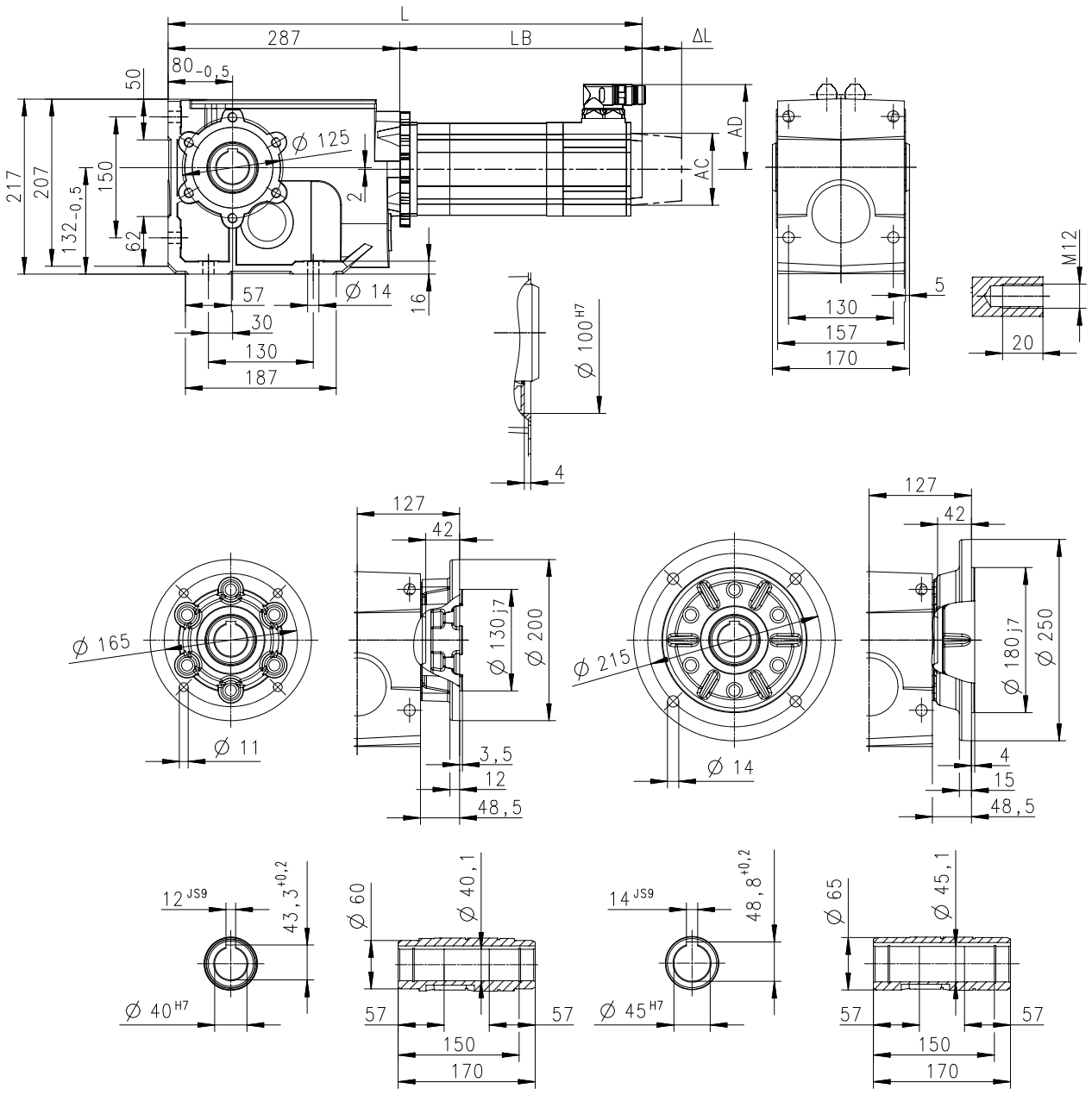


8800570-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	667	605	667	605
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B600 with MCA17

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

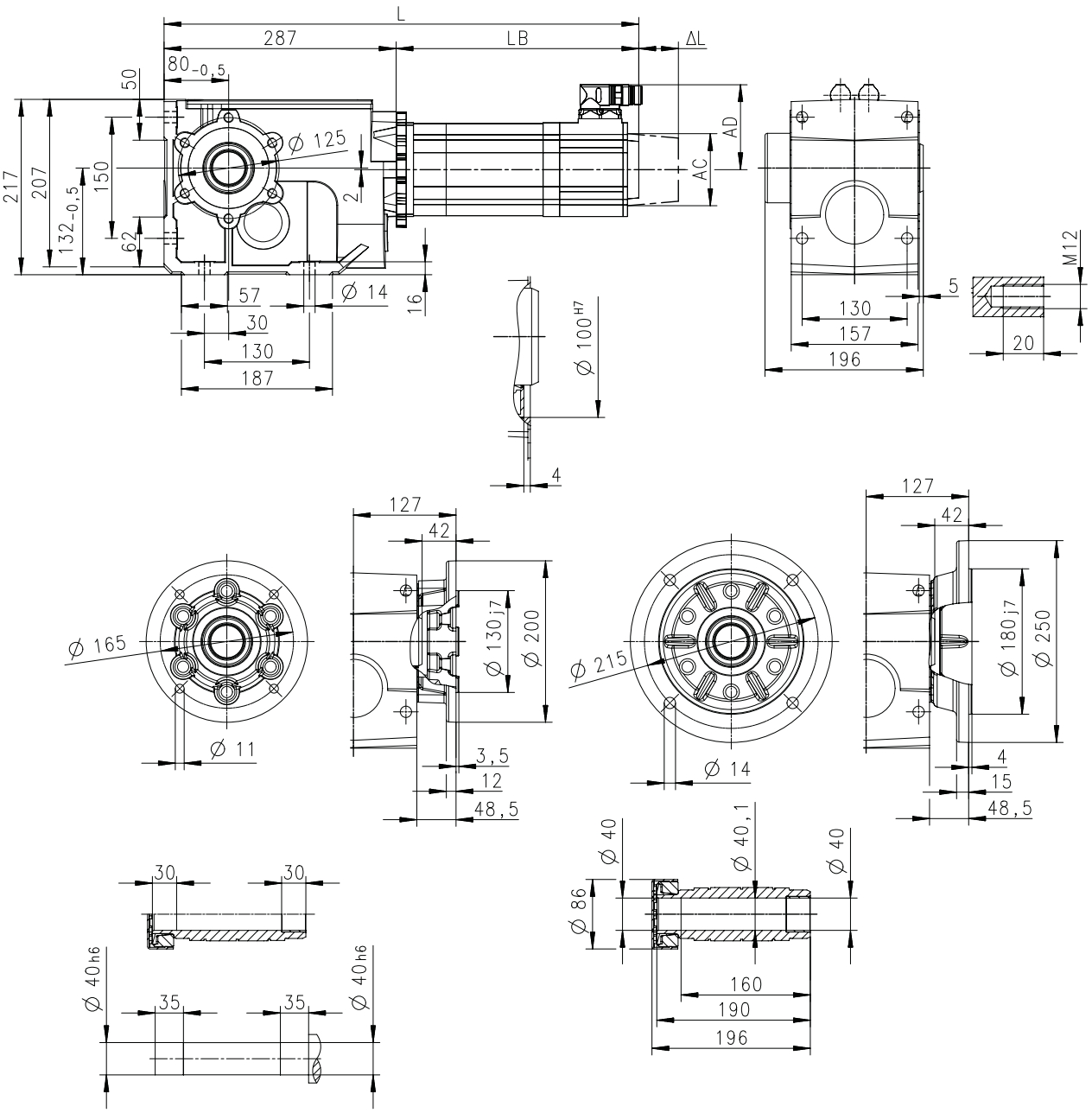


8800569-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	730	644	730	644
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B600 with MCA17

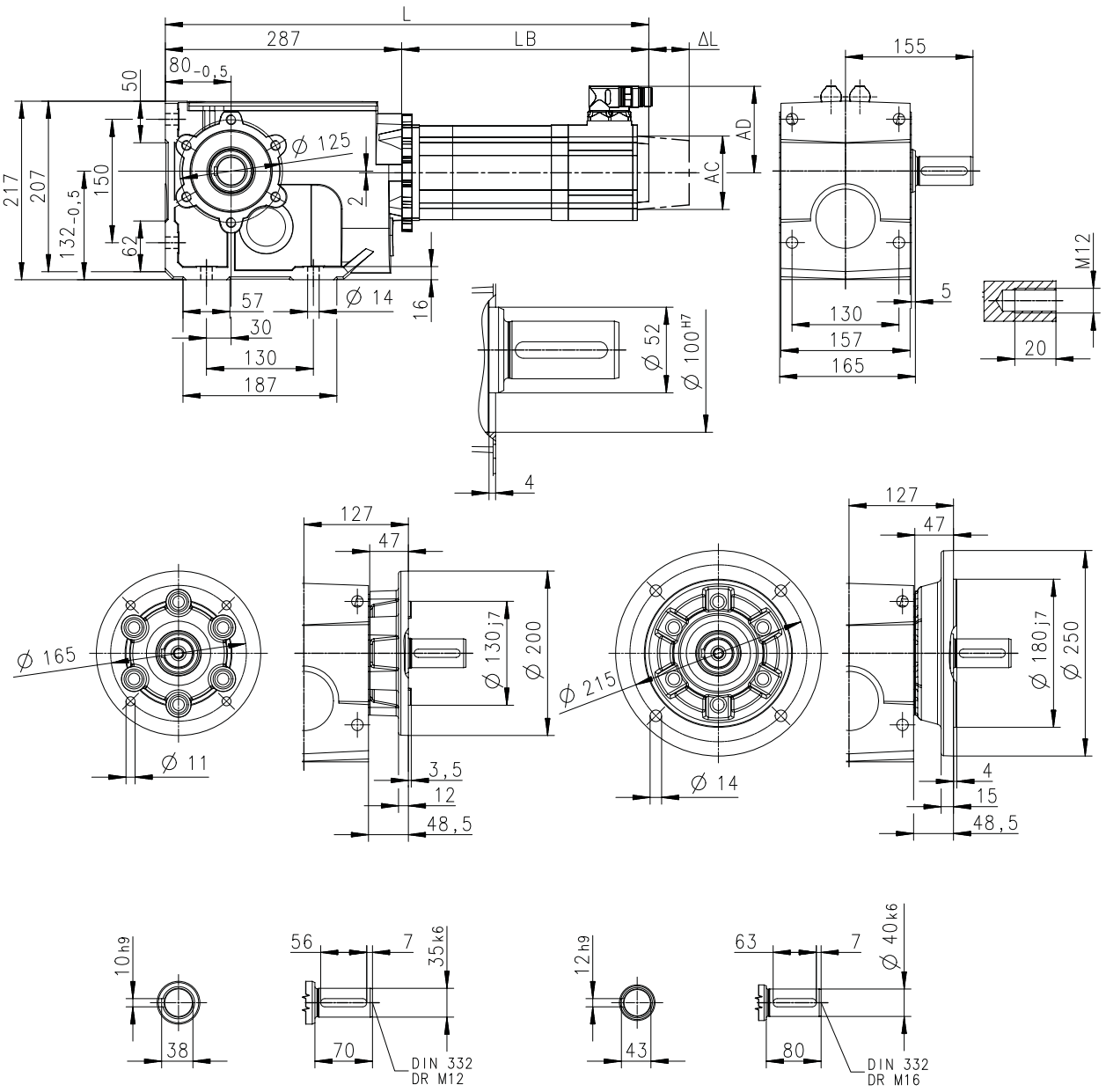
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	730	644	730	644
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B600 with MCA17

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

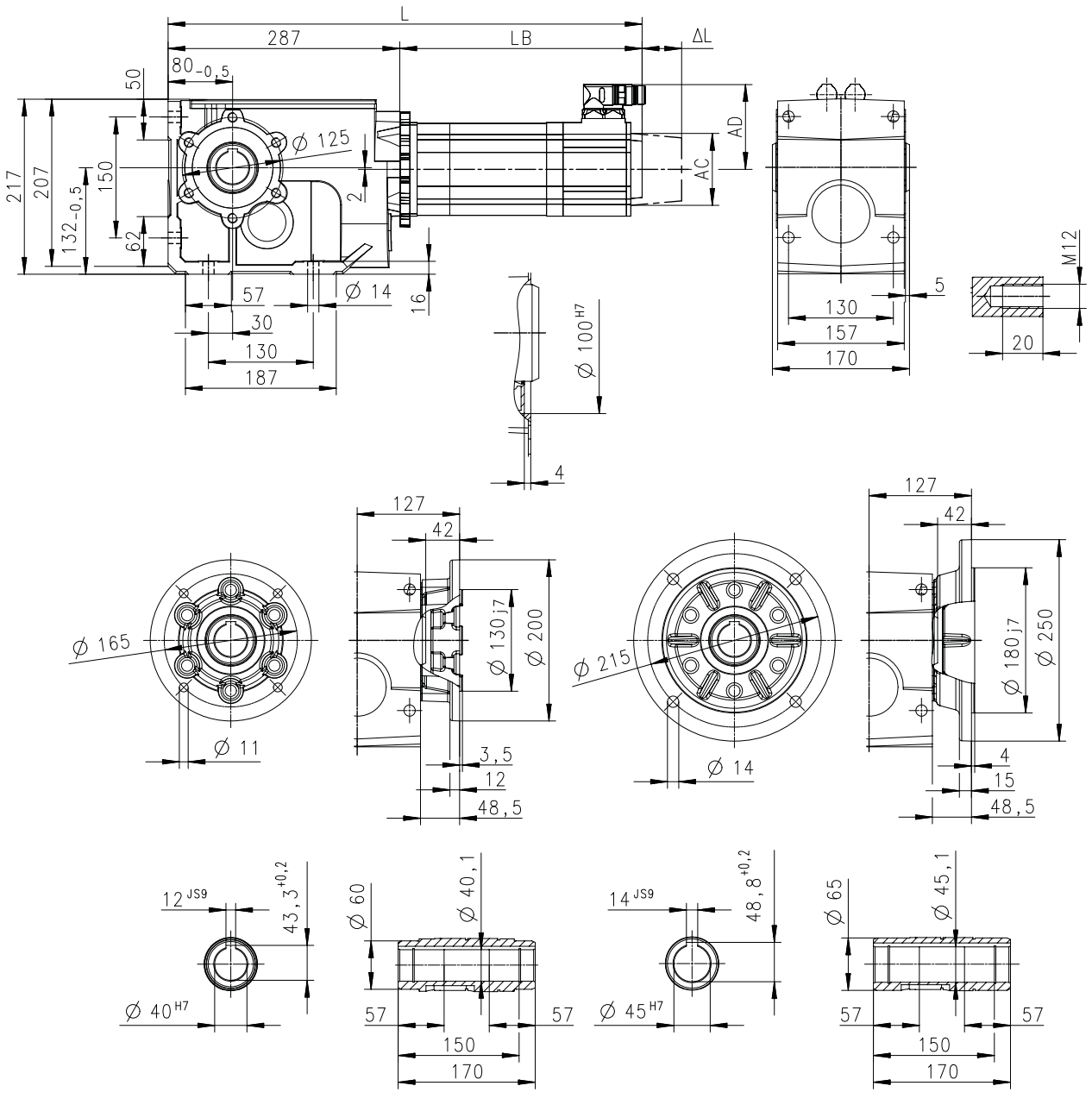


8800570-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	730	644	730	644
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B600 with MCA19

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

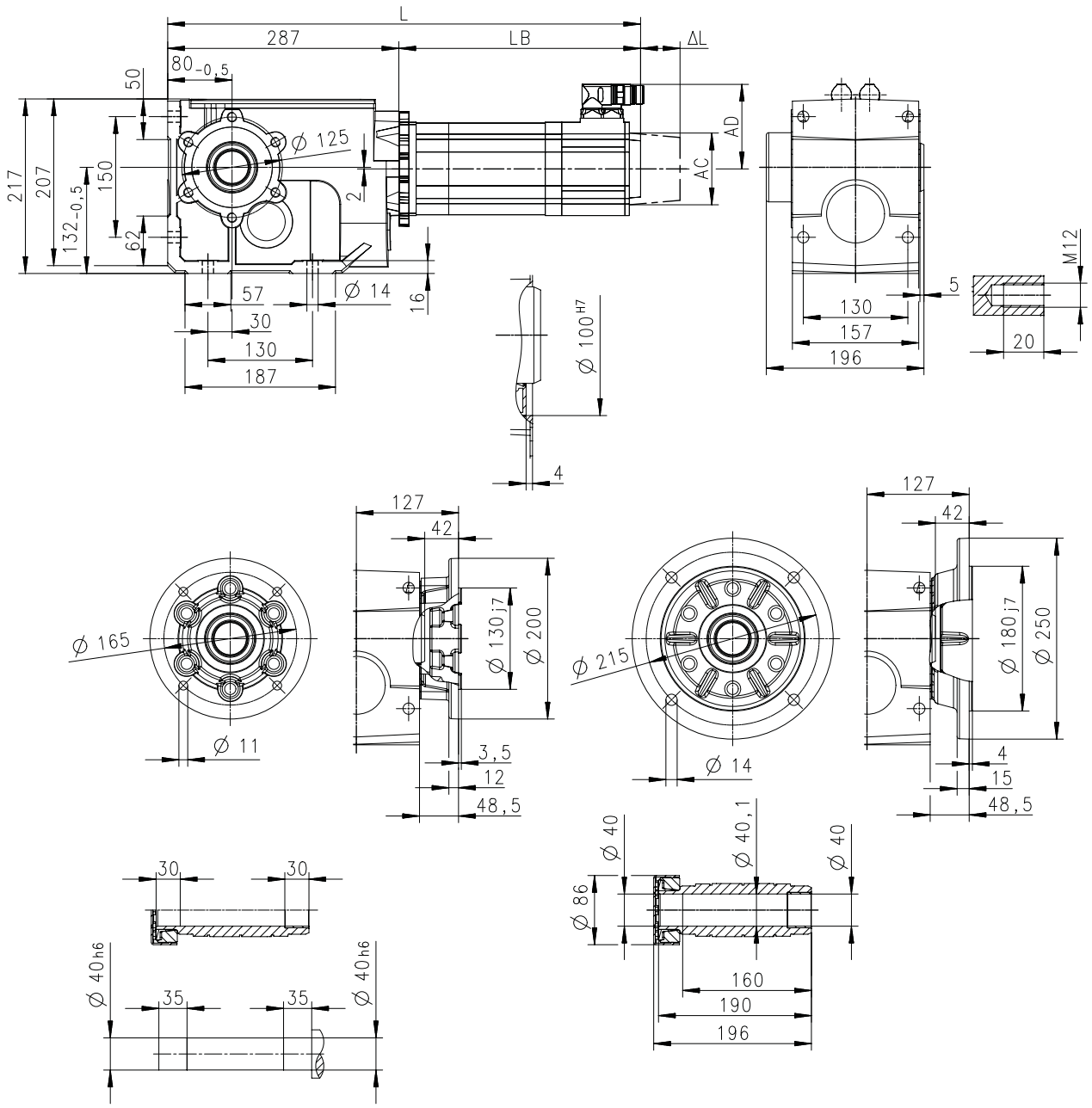


8800569-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	809	712	809	712
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B600 with MCA19

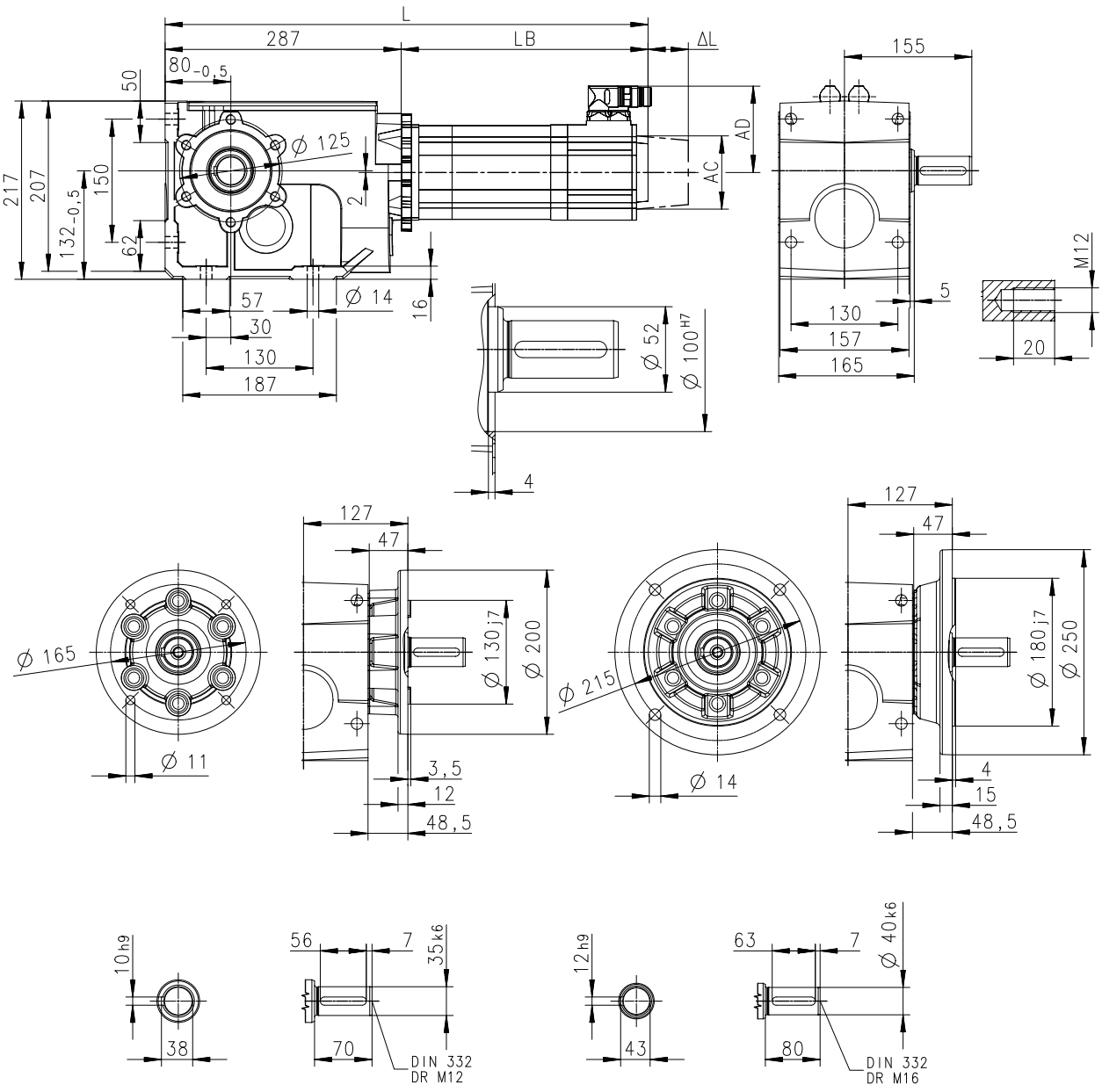
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	809	712	809	712
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B600 with MCA19

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

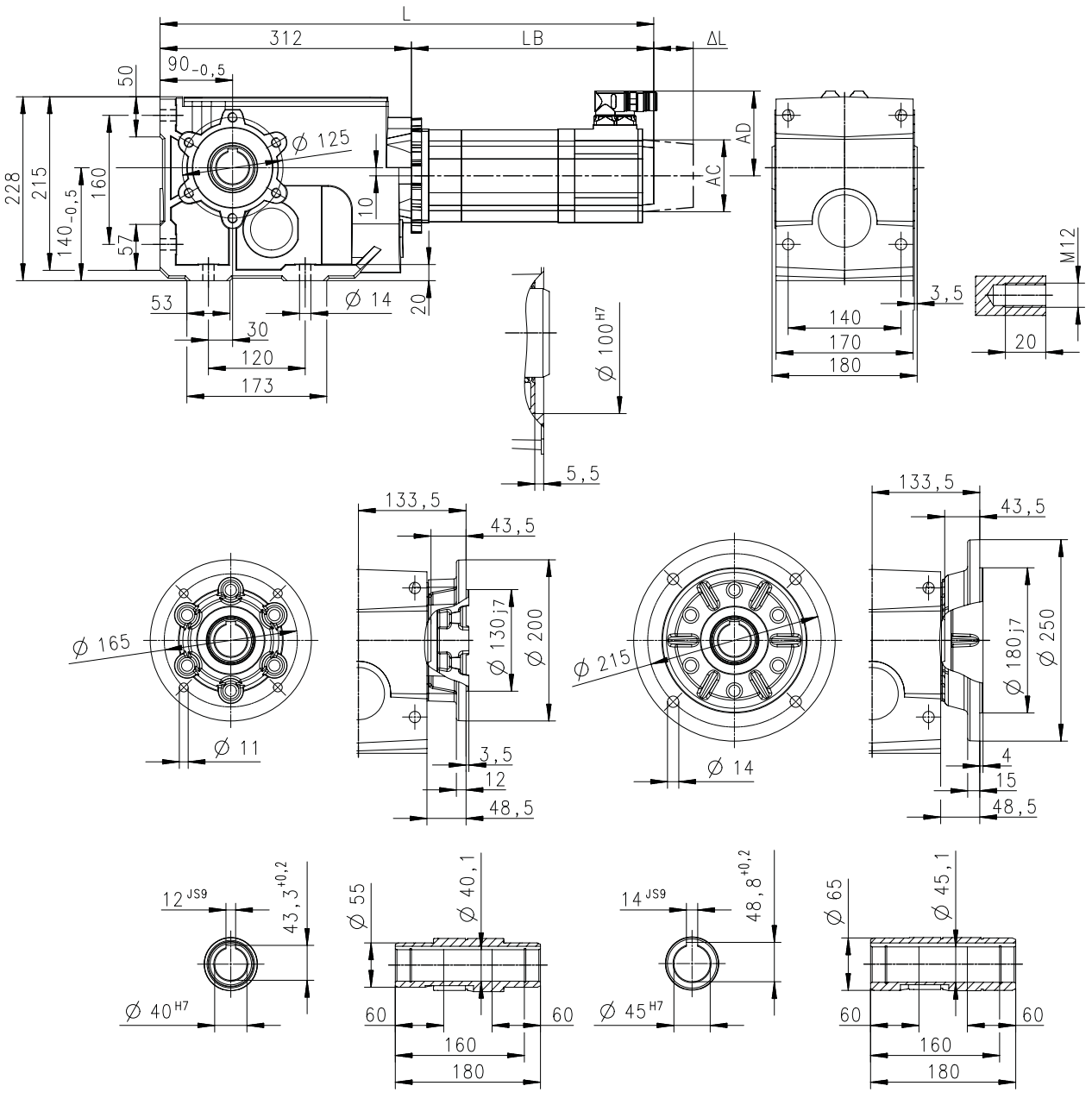


8800570-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	809	712	809	712
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B820 with MCA10

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

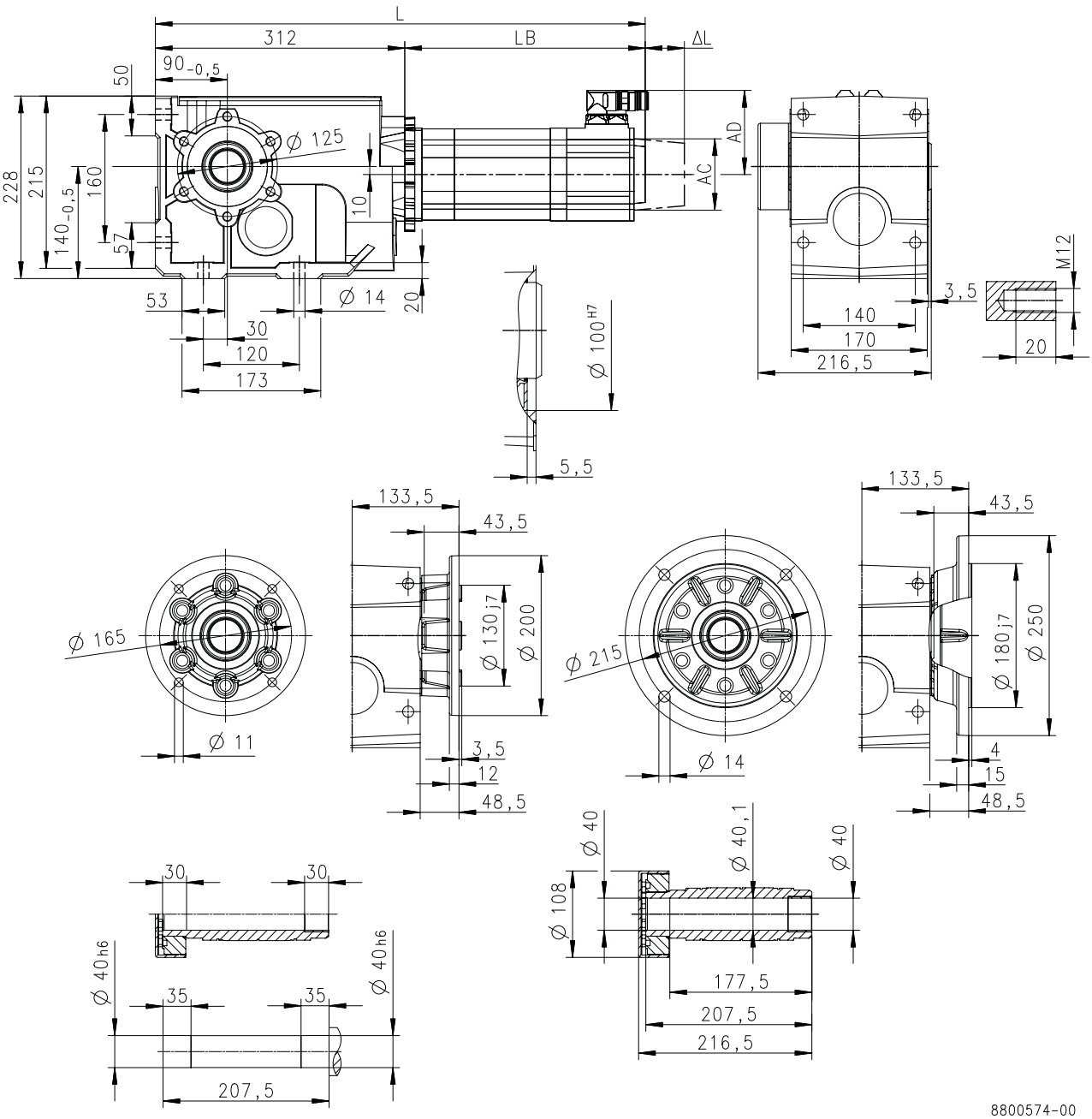


8800572-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	571
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B820 with MCA10

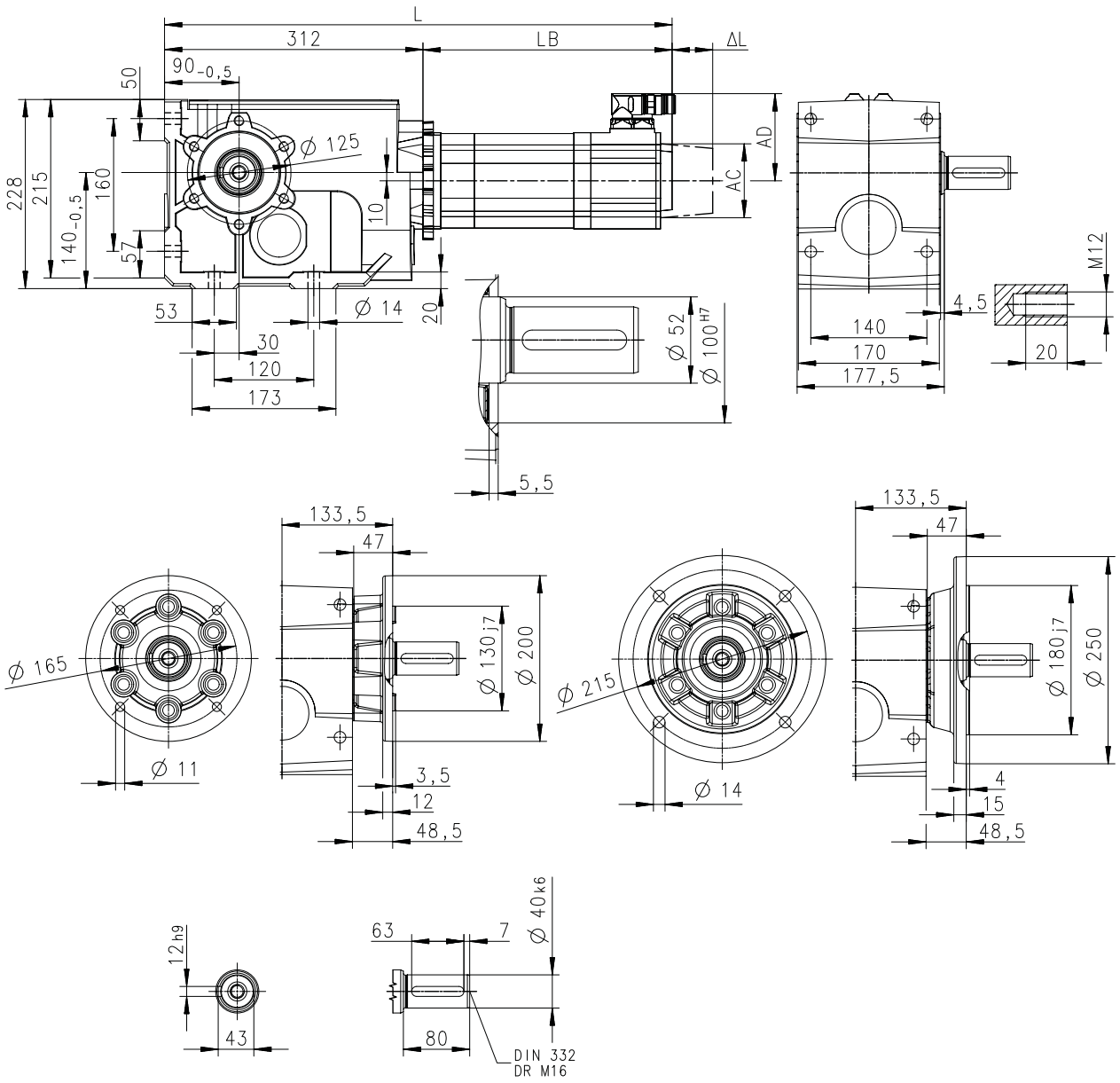
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	571
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B820 with MCA10

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

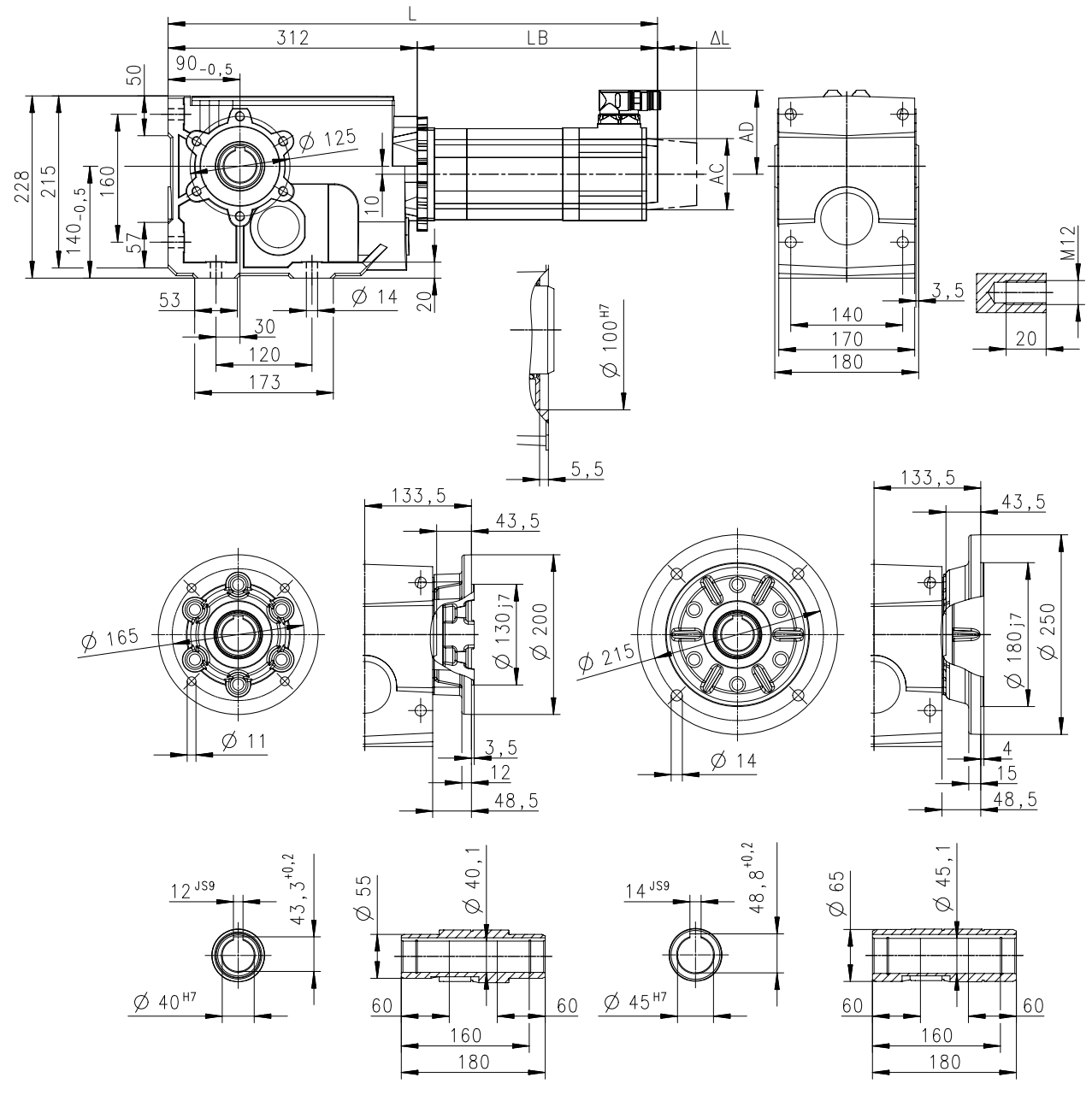


8800573-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	571
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B820 with MCA13

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

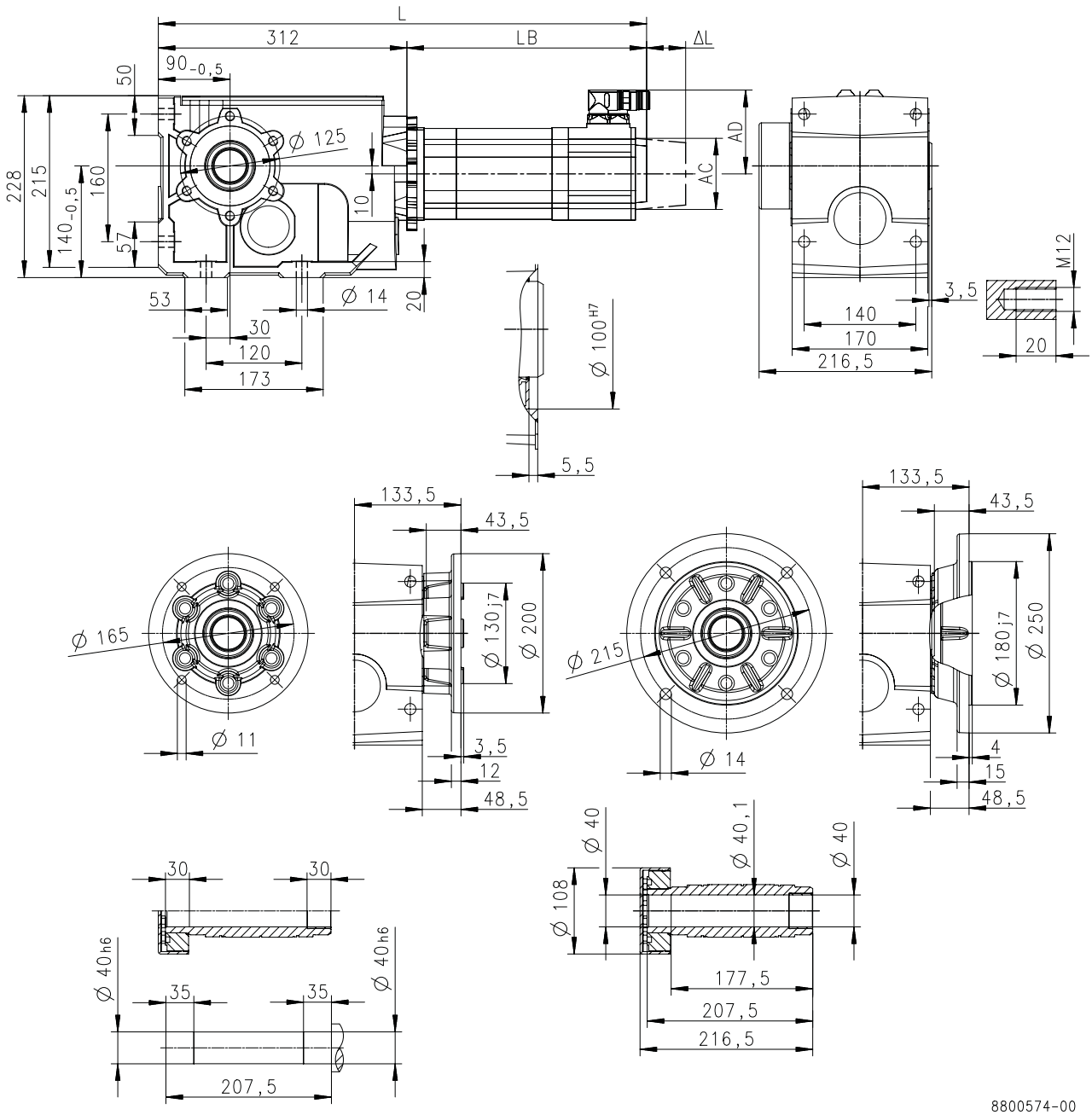


8800572-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	648	580
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B820 with MCA13

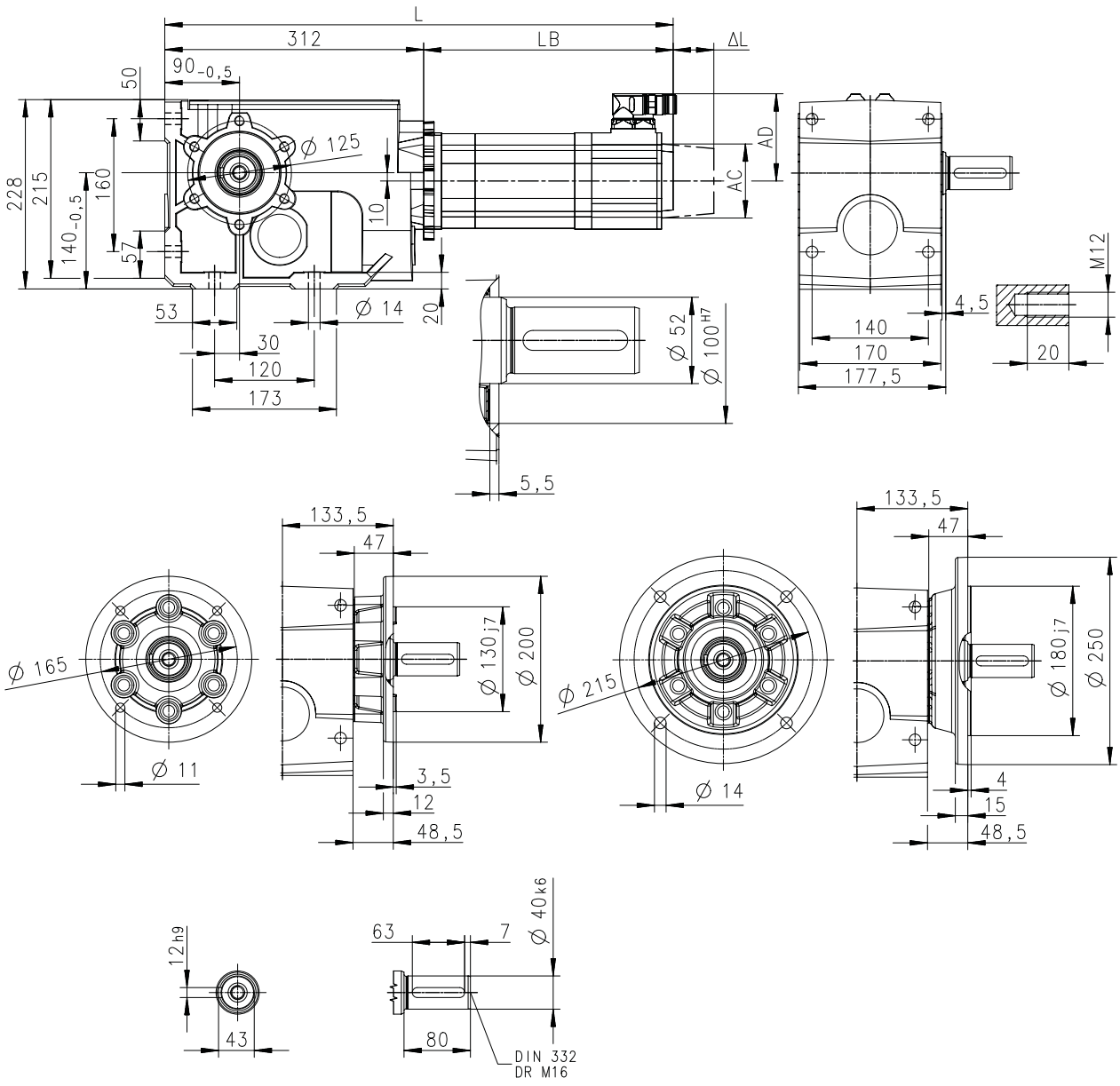
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	648	580
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B820 with MCA13

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

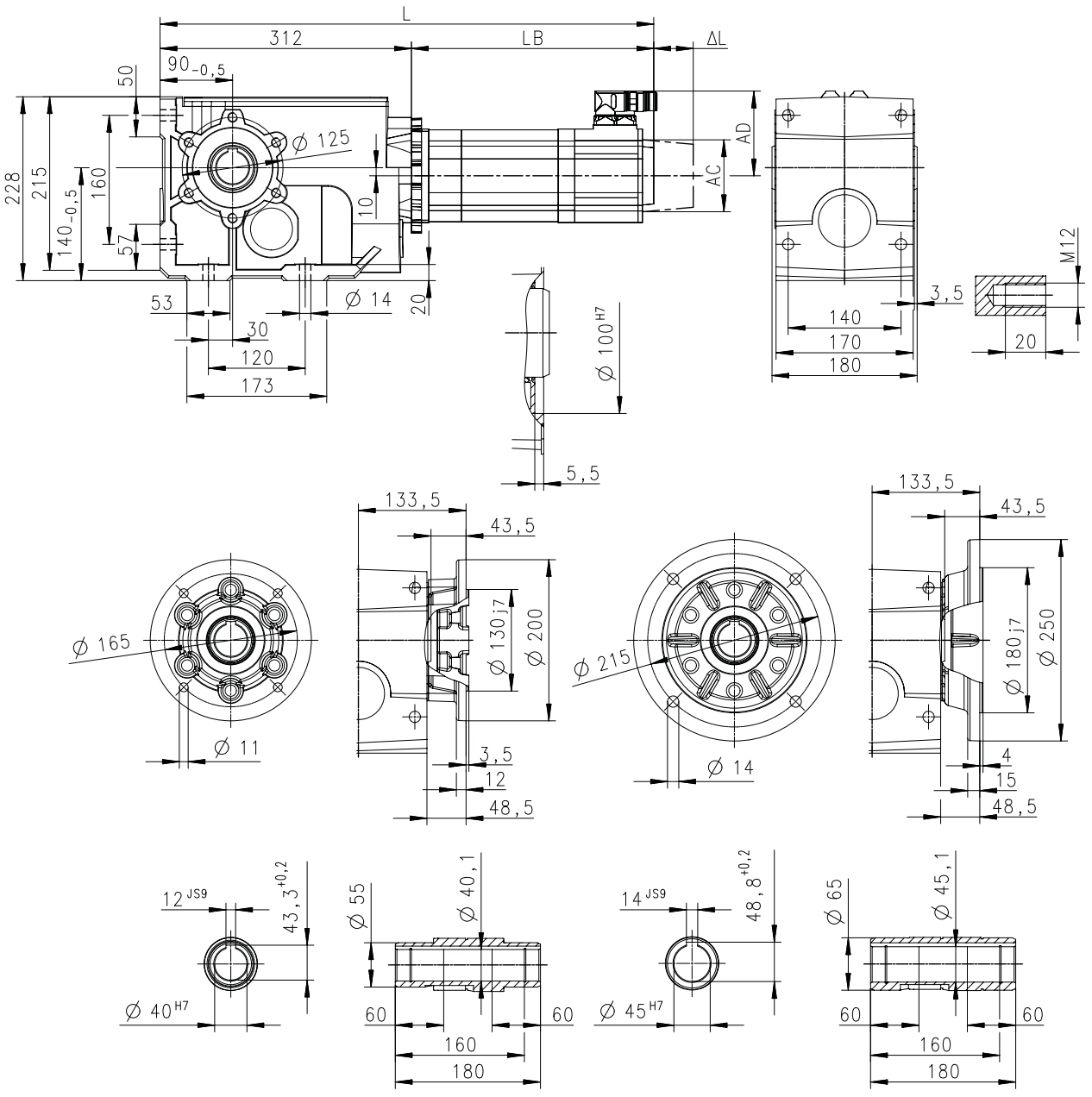


8800573-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	648	580
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B820 with MCA14

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

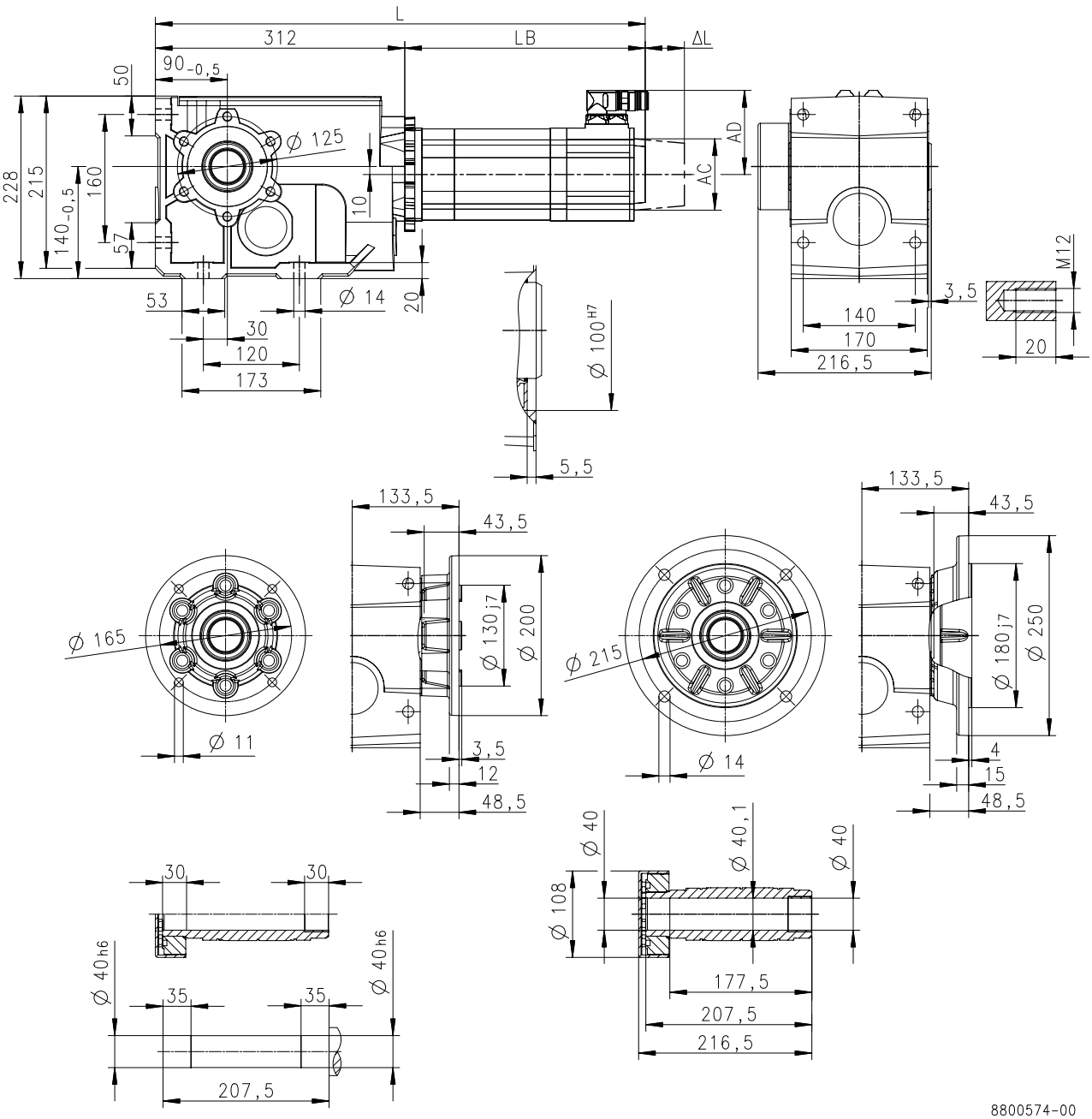


8800572-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	692	630	692	630
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B820 with MCA14

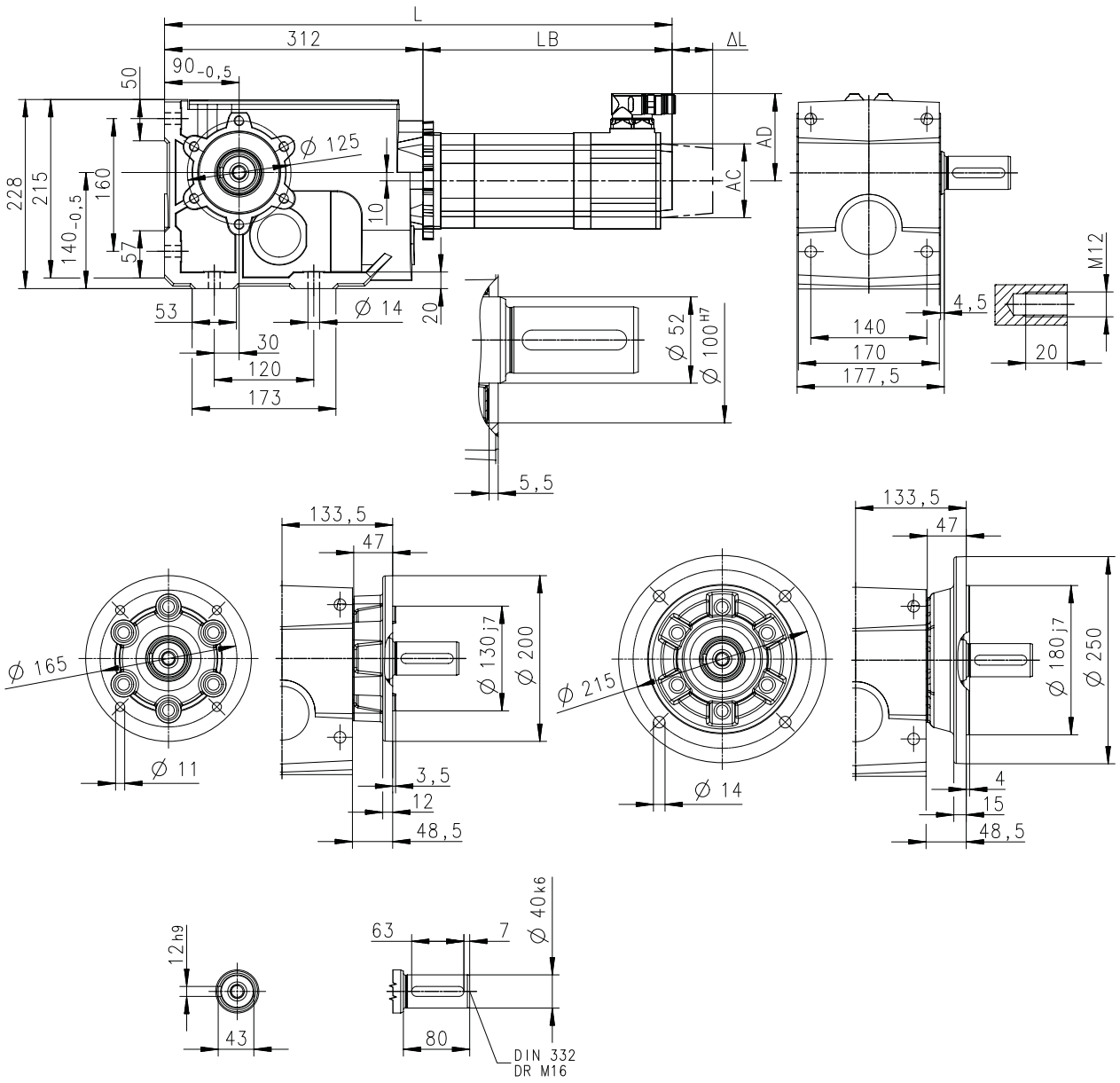
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	692	630	692	630
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B820 with MCA14

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

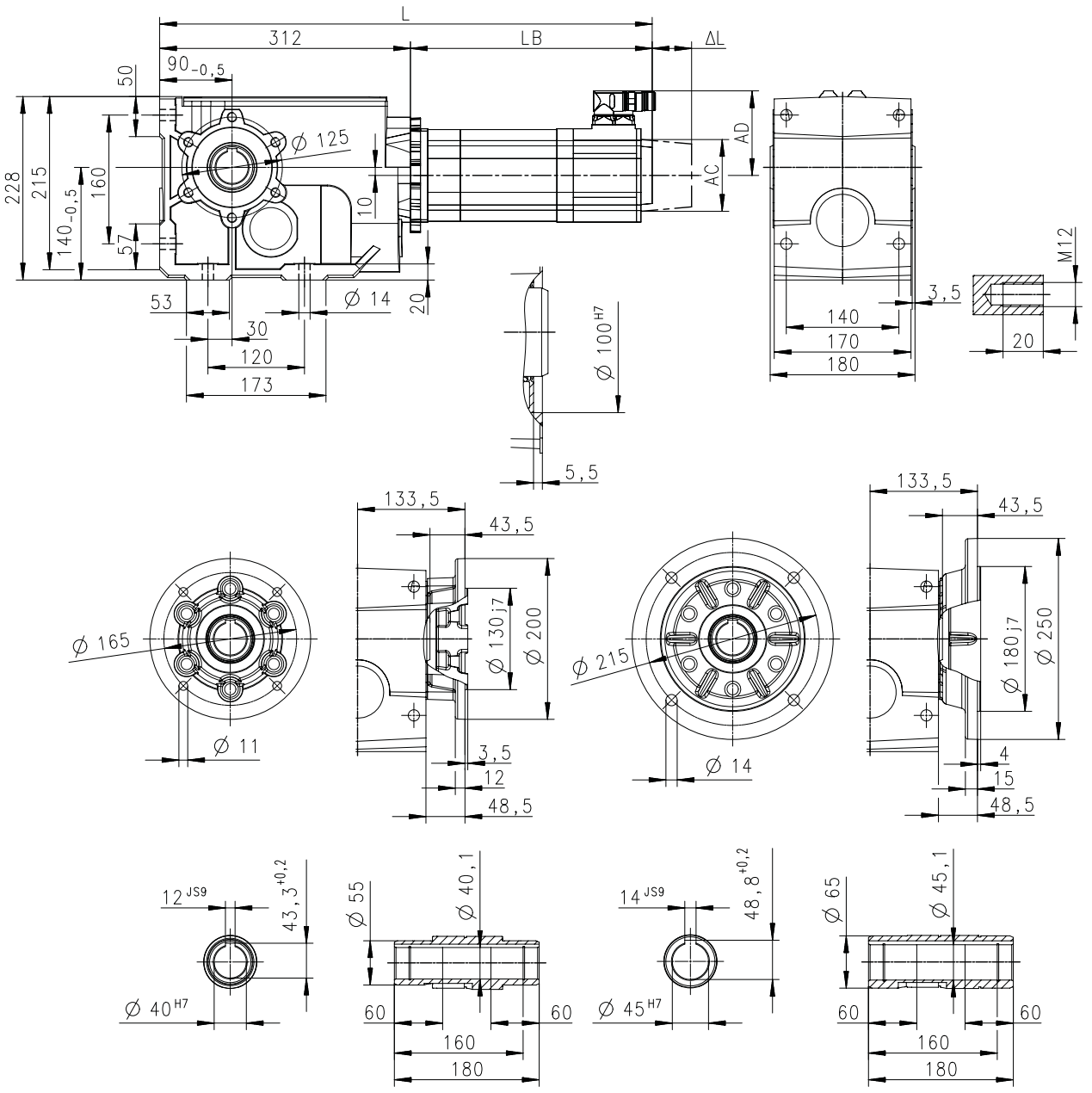


8800573-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	692	630	692	630
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B820 with MCA17

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

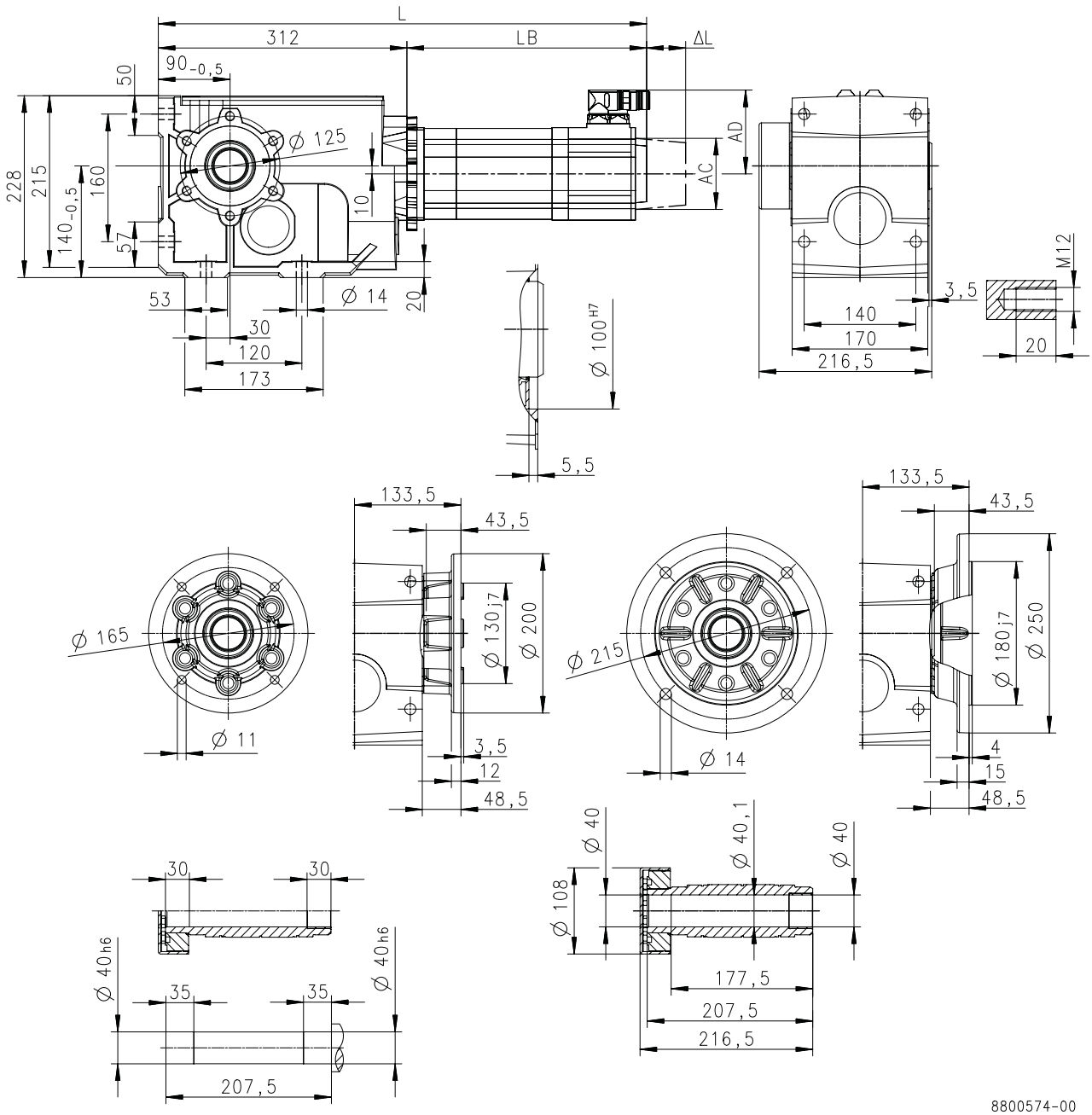


8800572-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			Forced	Natural	Forced	Natural
Total length	L	mm	755	669	755	669
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B820 with MCA17

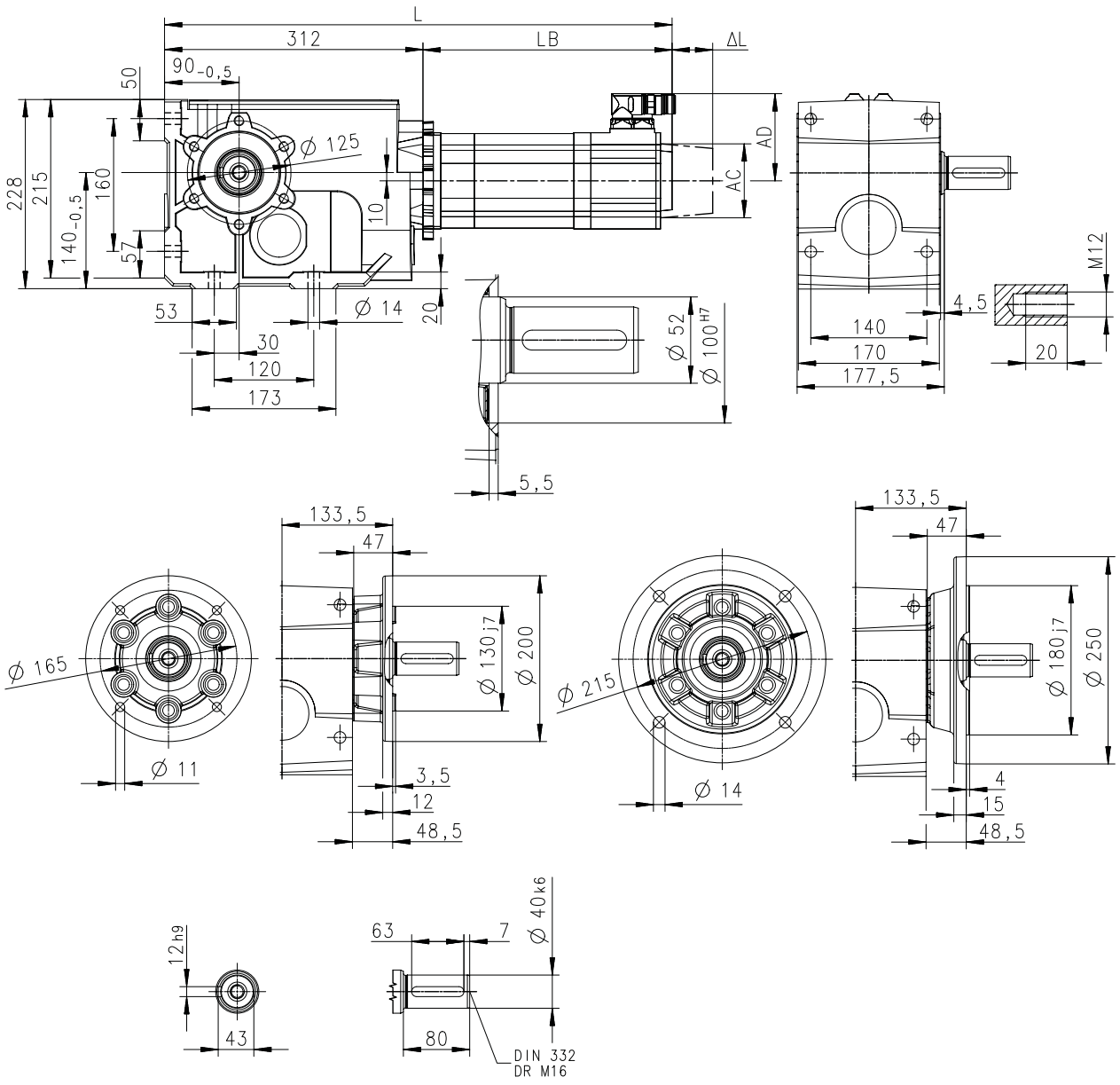
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	755	669	755	669
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B820 with MCA17

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

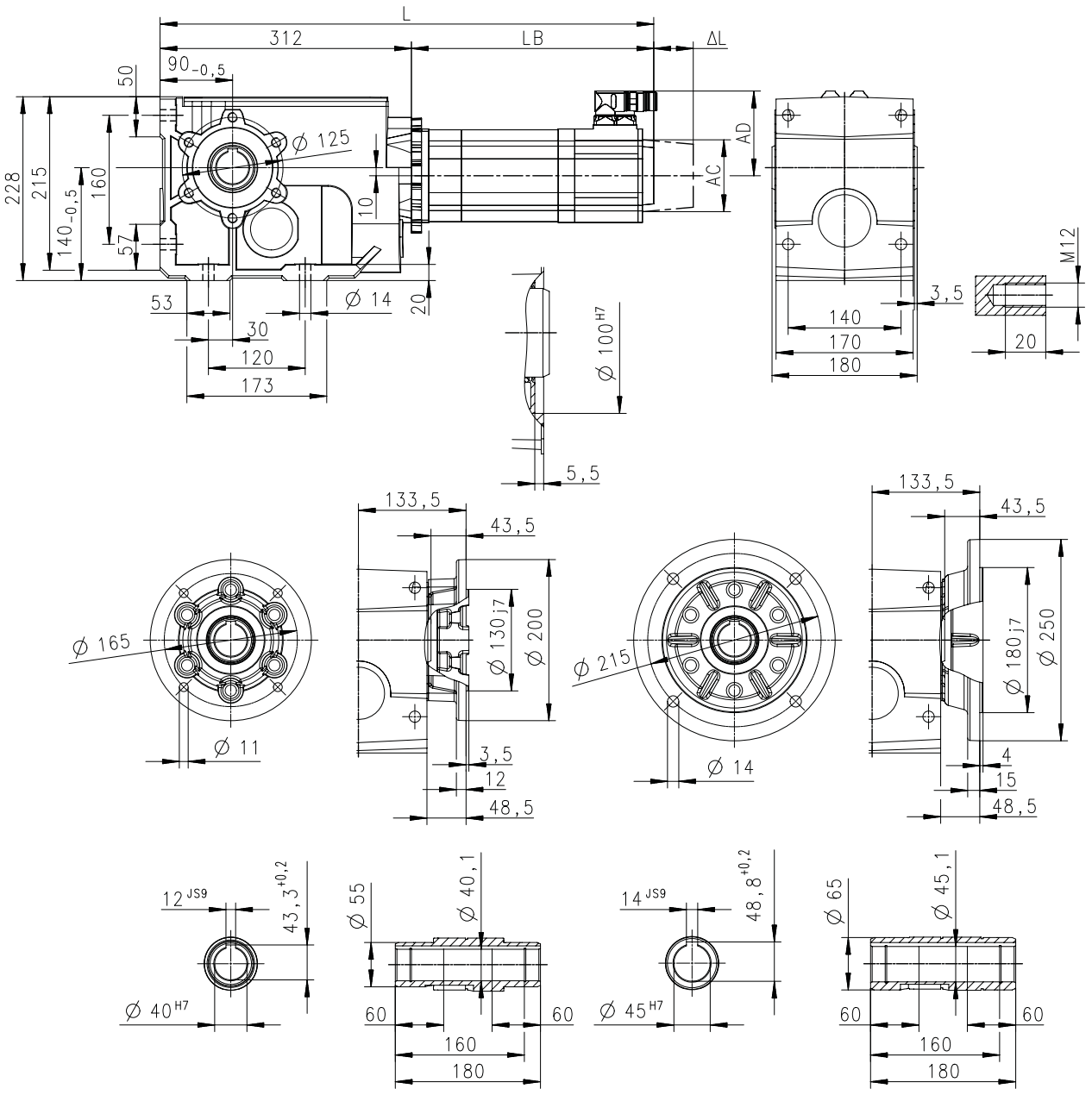


8800573-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	755	669	755	669
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B820 with MCA19

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

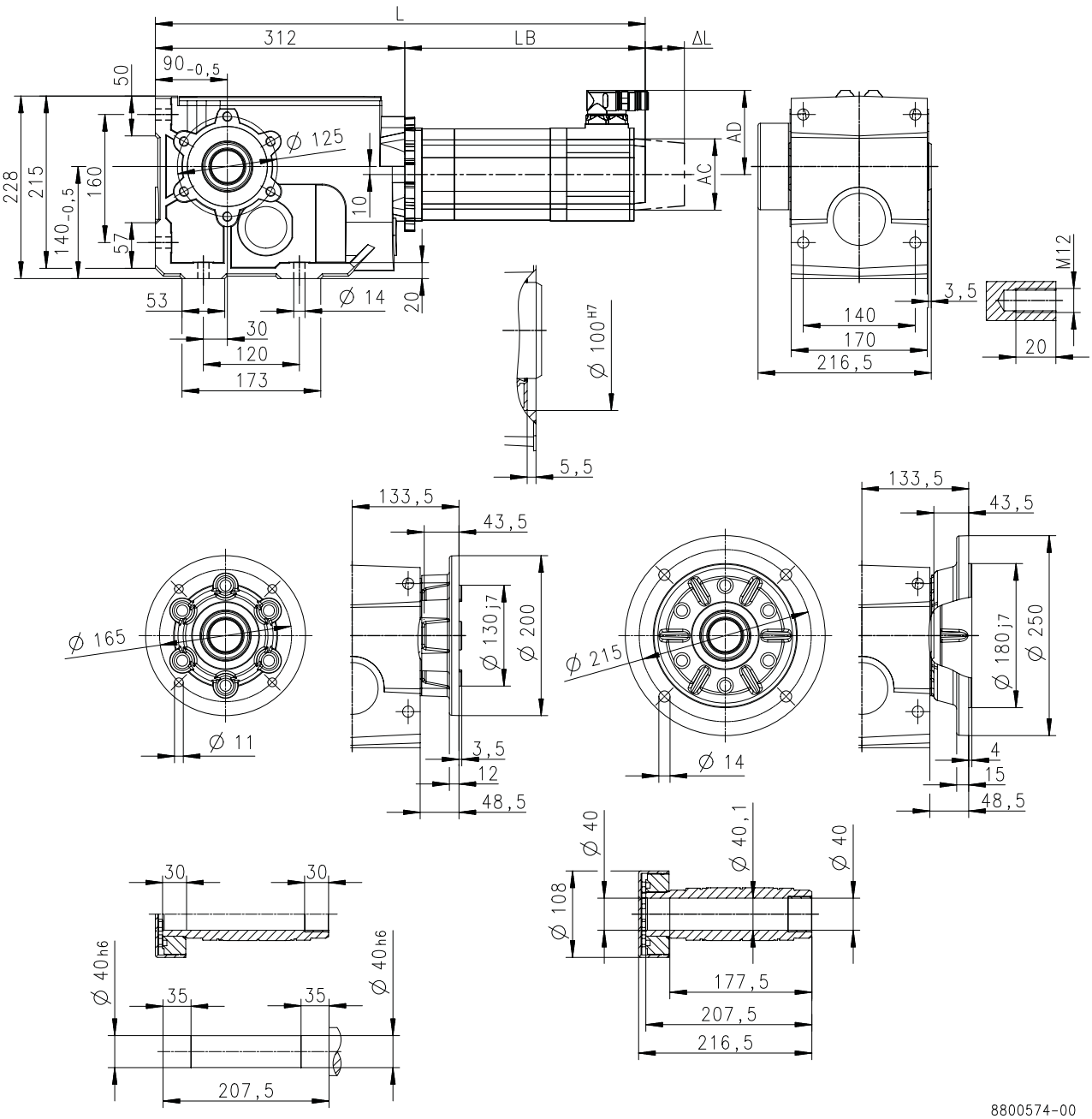


8800572-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	834	737	834	737
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B820 with MCA19

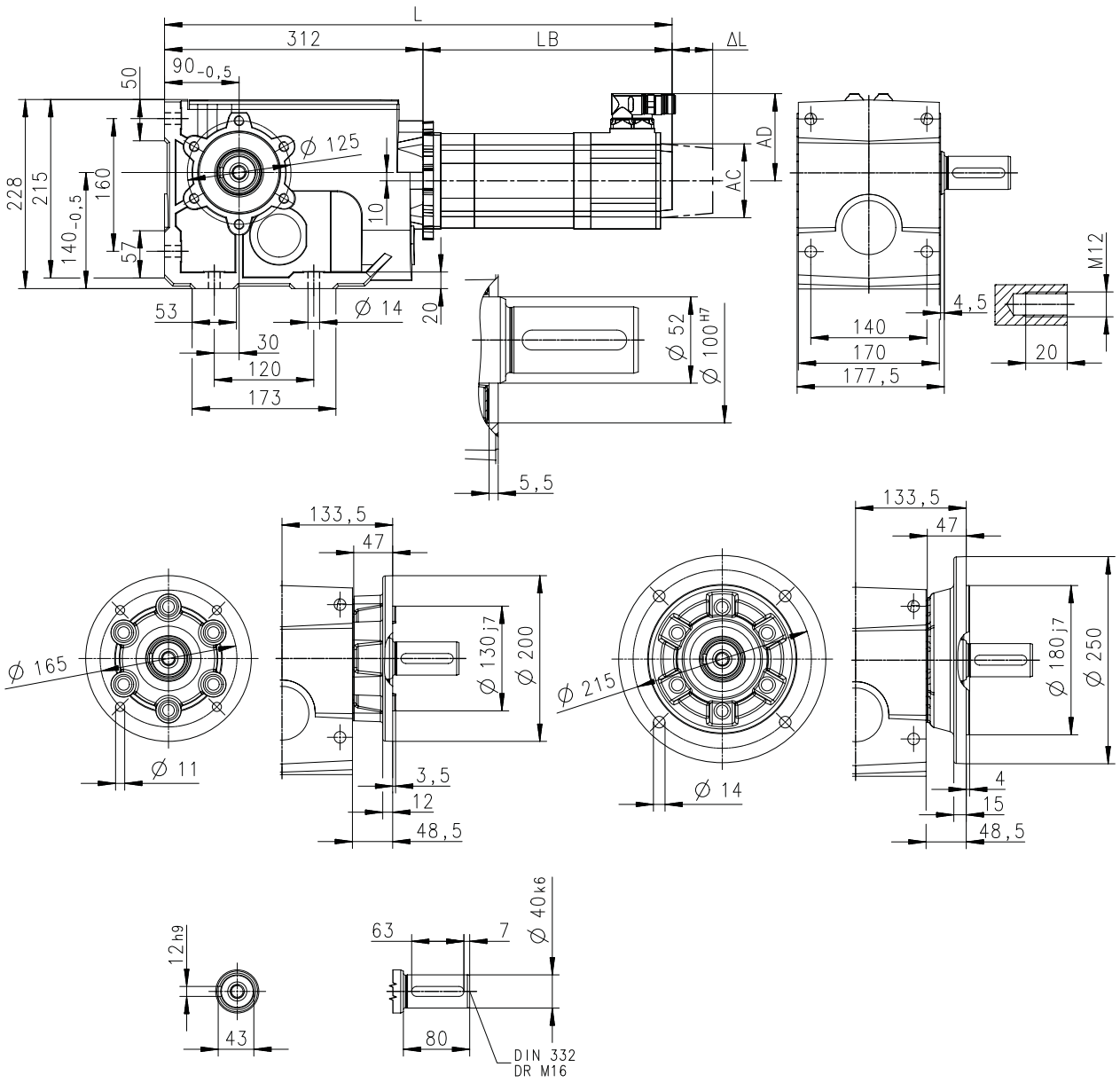
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	834	737	834	737
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B820 with MCA19

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

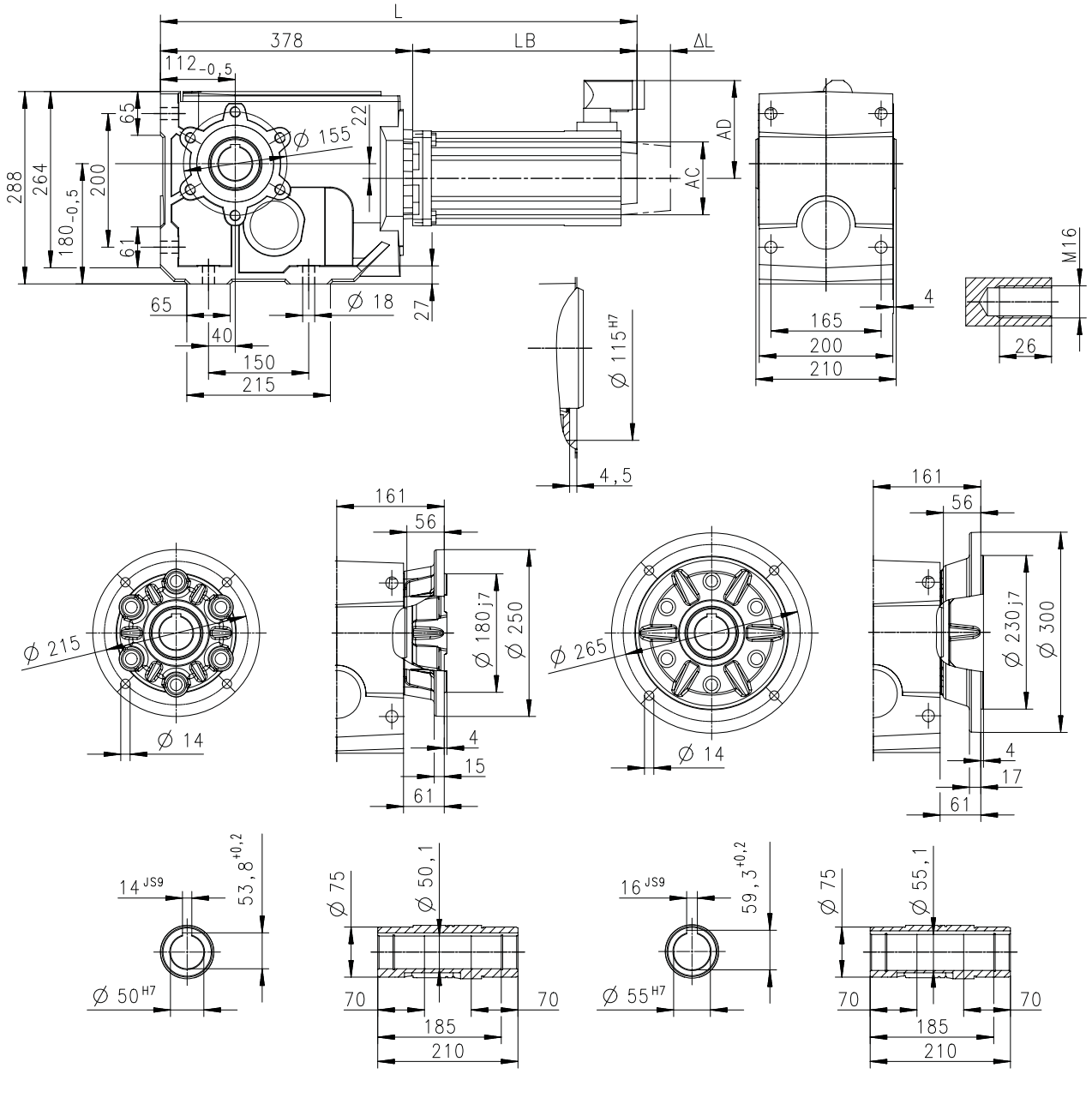


8800573-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	834	737	834	737
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B1500 with MCA10

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

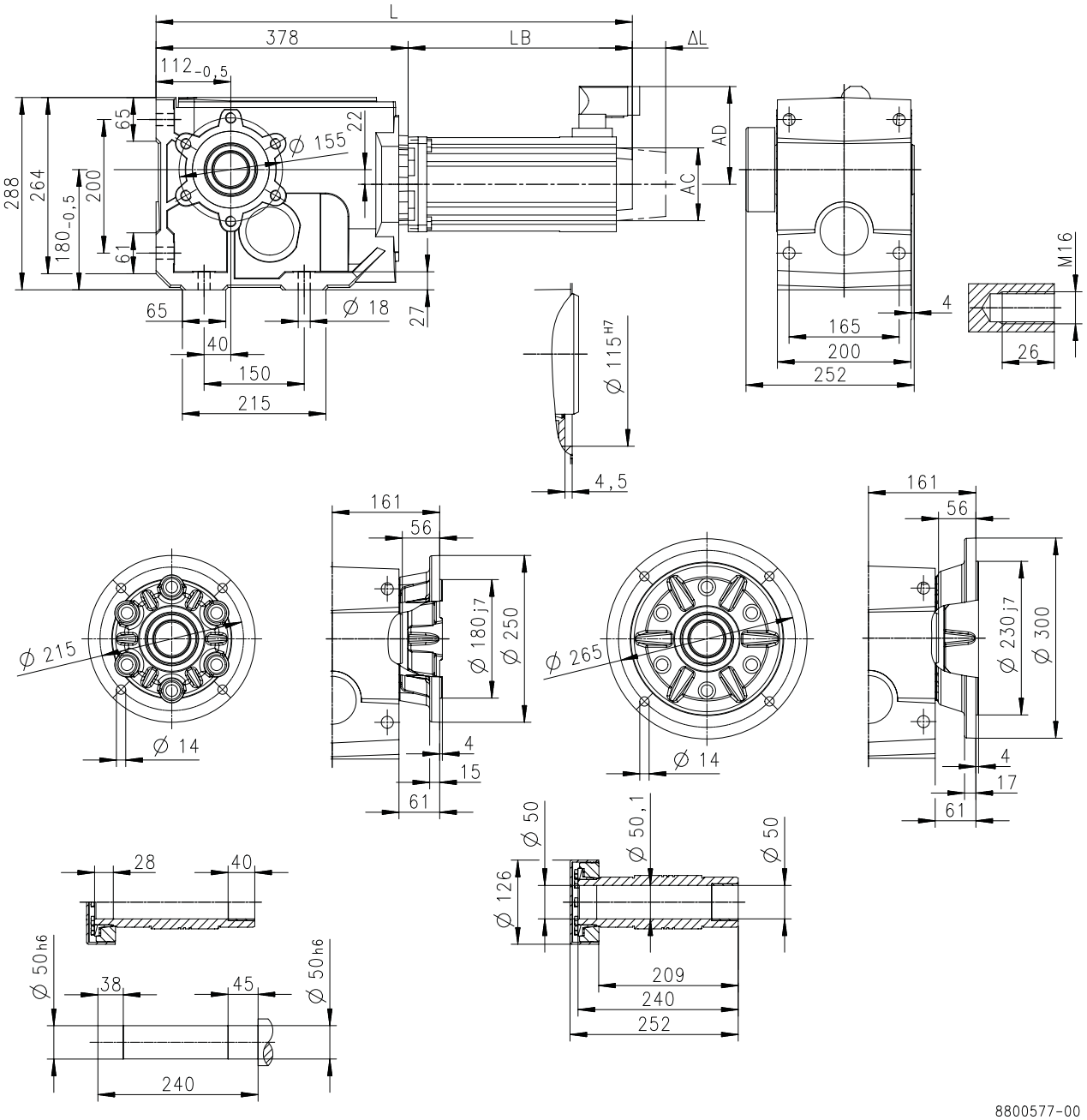


8800575-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	637
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B1500 with MCA10

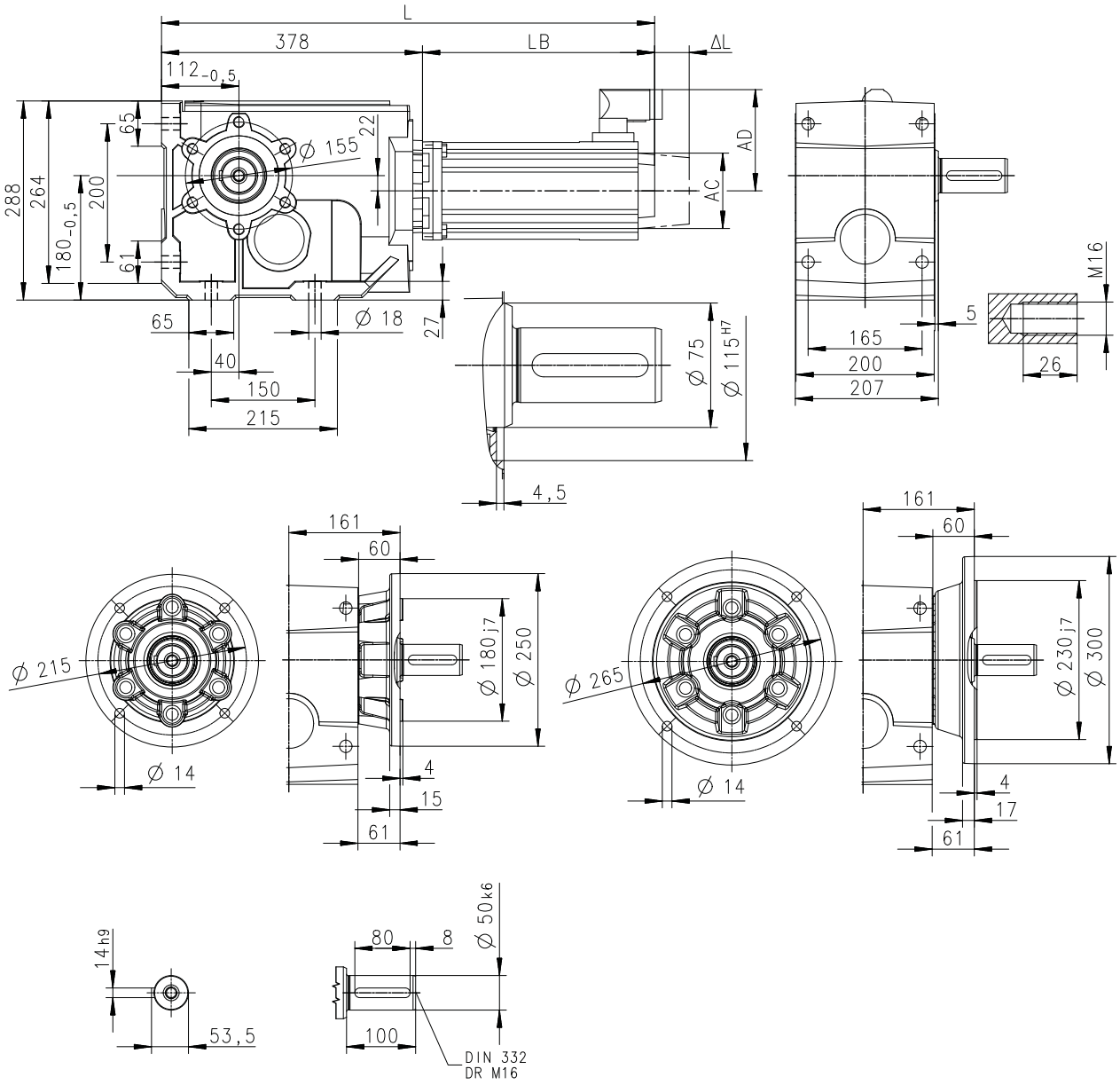
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	637
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B1500 with MCA10

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

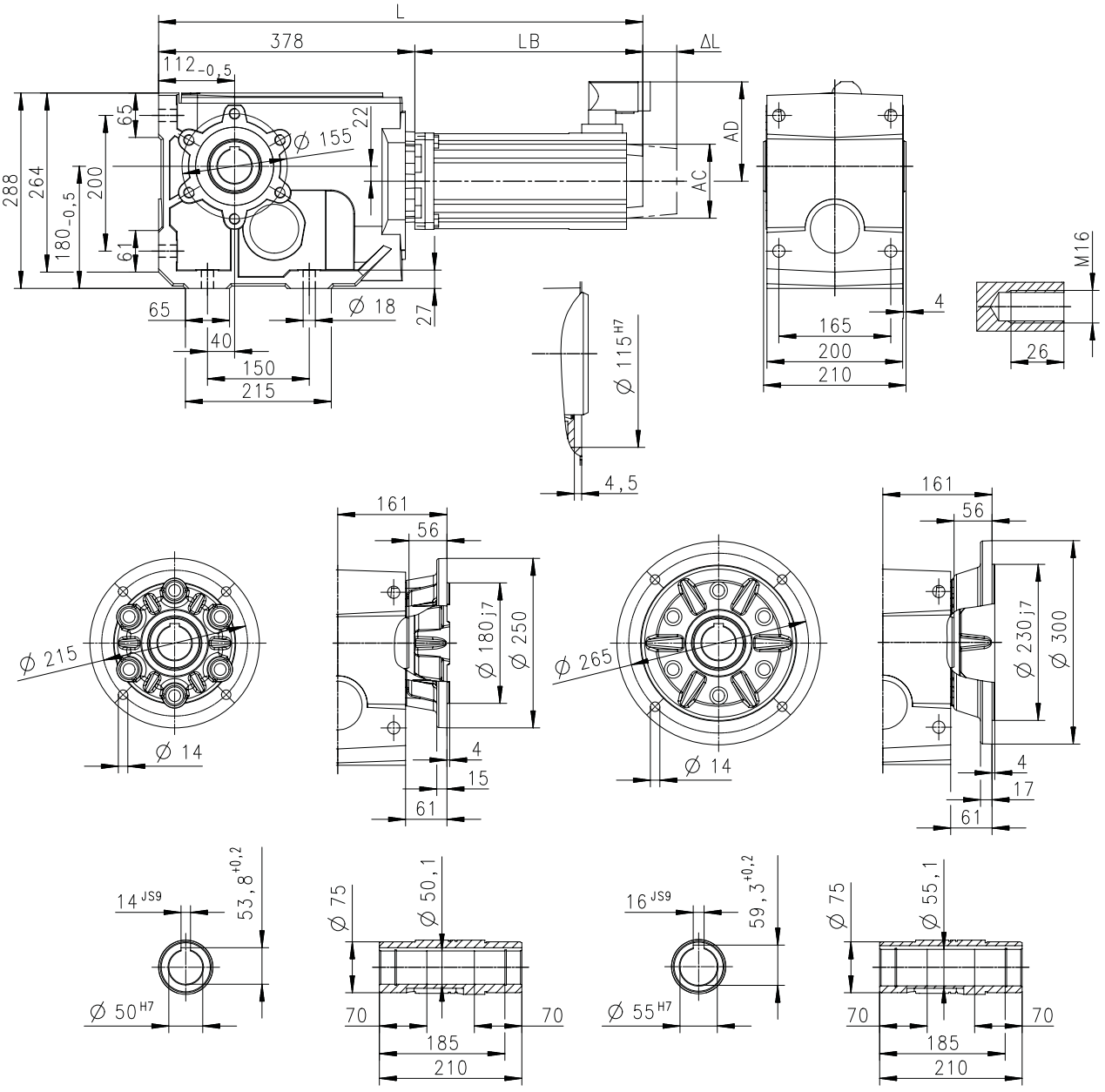


8800576-00

Motor			MCA
			10I40-
Cooling type			**Natural**
Total length	L	mm	637
Motor length	LB	mm	259
Length of motor options	Δ L	mm	78
Motor diameter	AC	mm	102
Motor/connection distance	AD	mm	90

g500-B1500 with MCA13

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

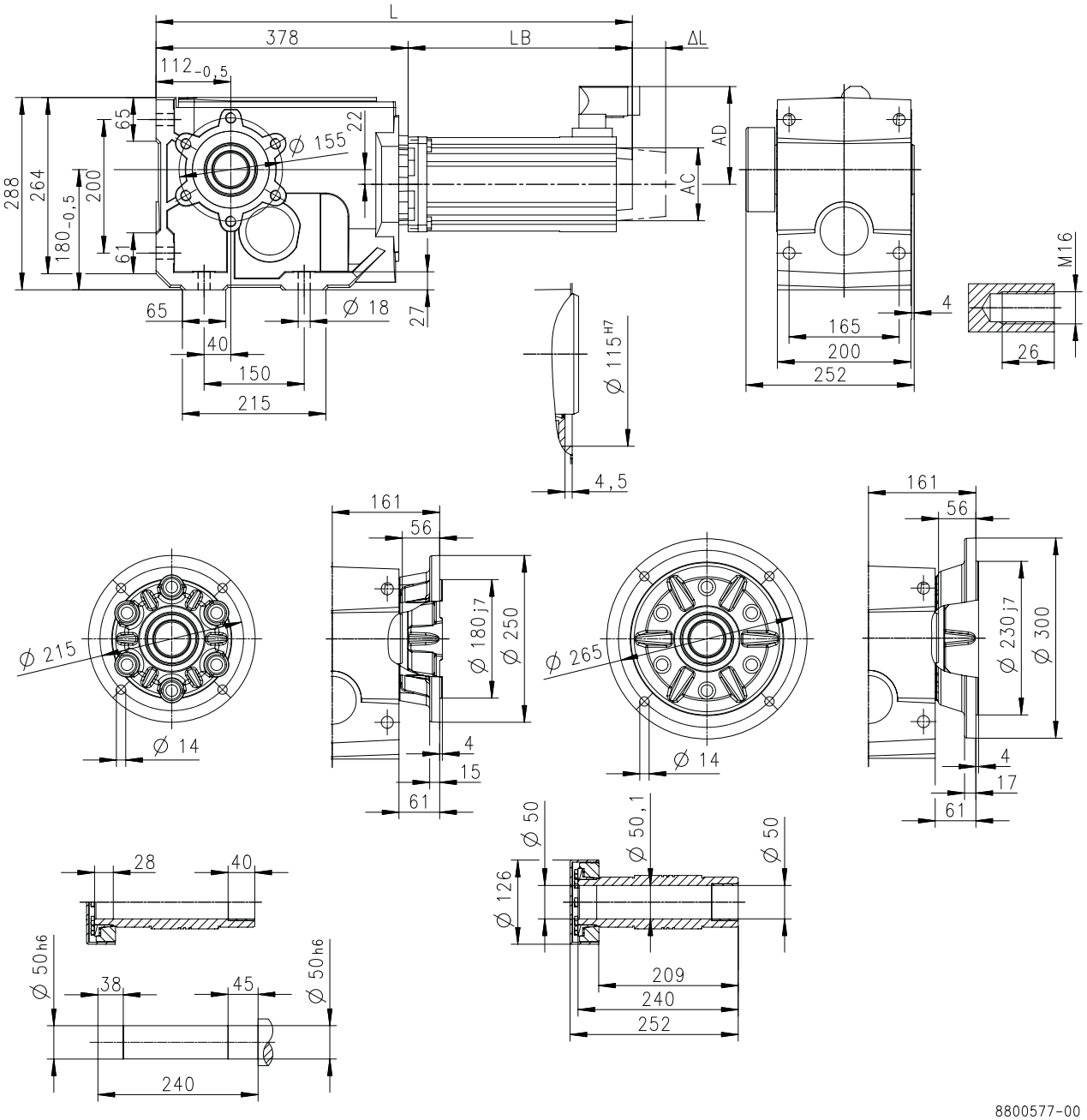


8800575-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	714	646
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B1500 with MCA13

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

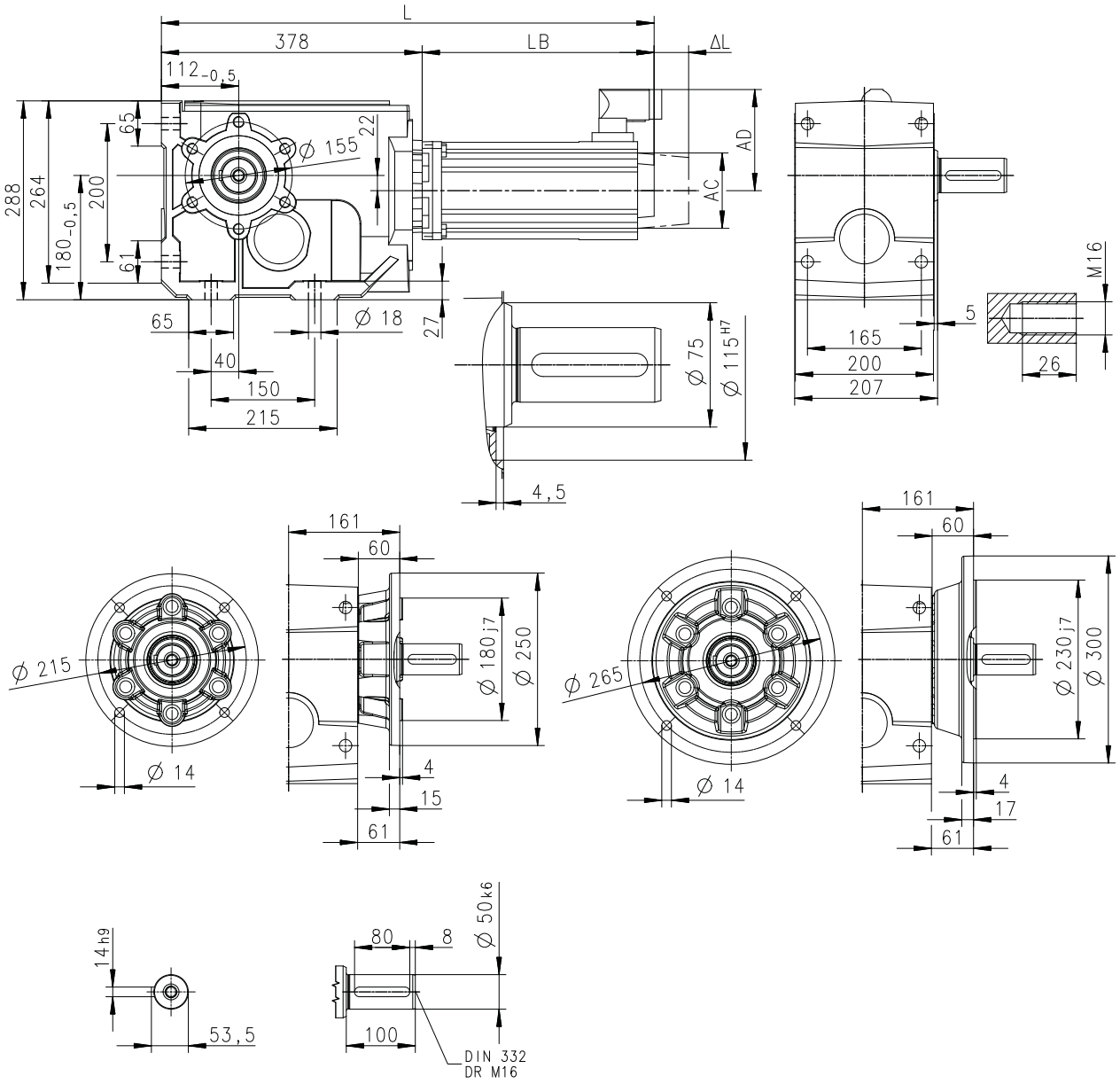


8800577-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	714	646
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B1500 with MCA13

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

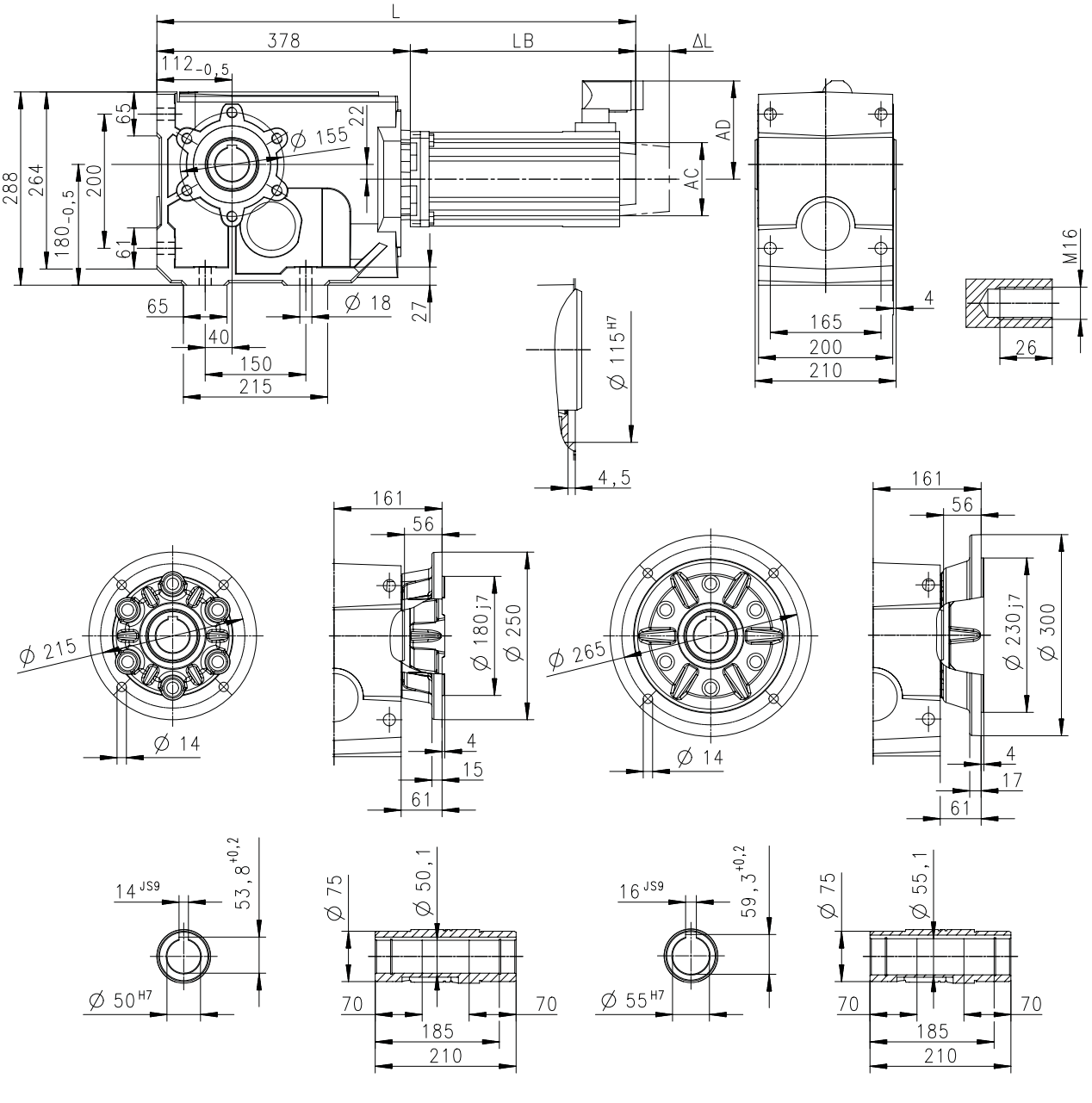


8800576-00

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Total length	L	mm	714	646
Motor length	LB	mm	336	268
Length of motor options	Δ L	mm	90	90
Motor diameter	AC	mm	130	130
Motor/connection distance	AD	mm	102	102

g500-B1500 with MCA14

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

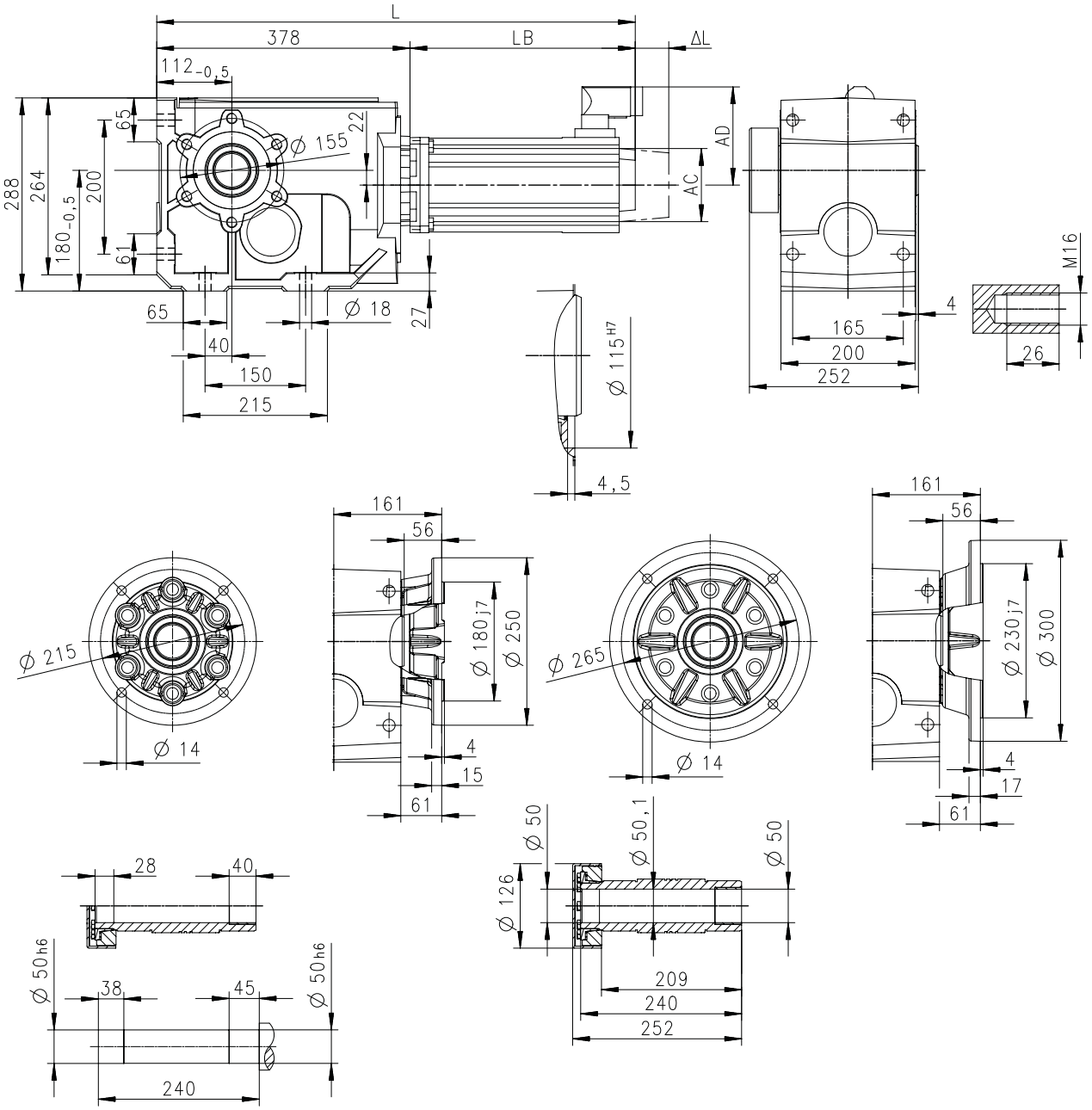


8800575-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	758	696	758	696
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B1500 with MCA14

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

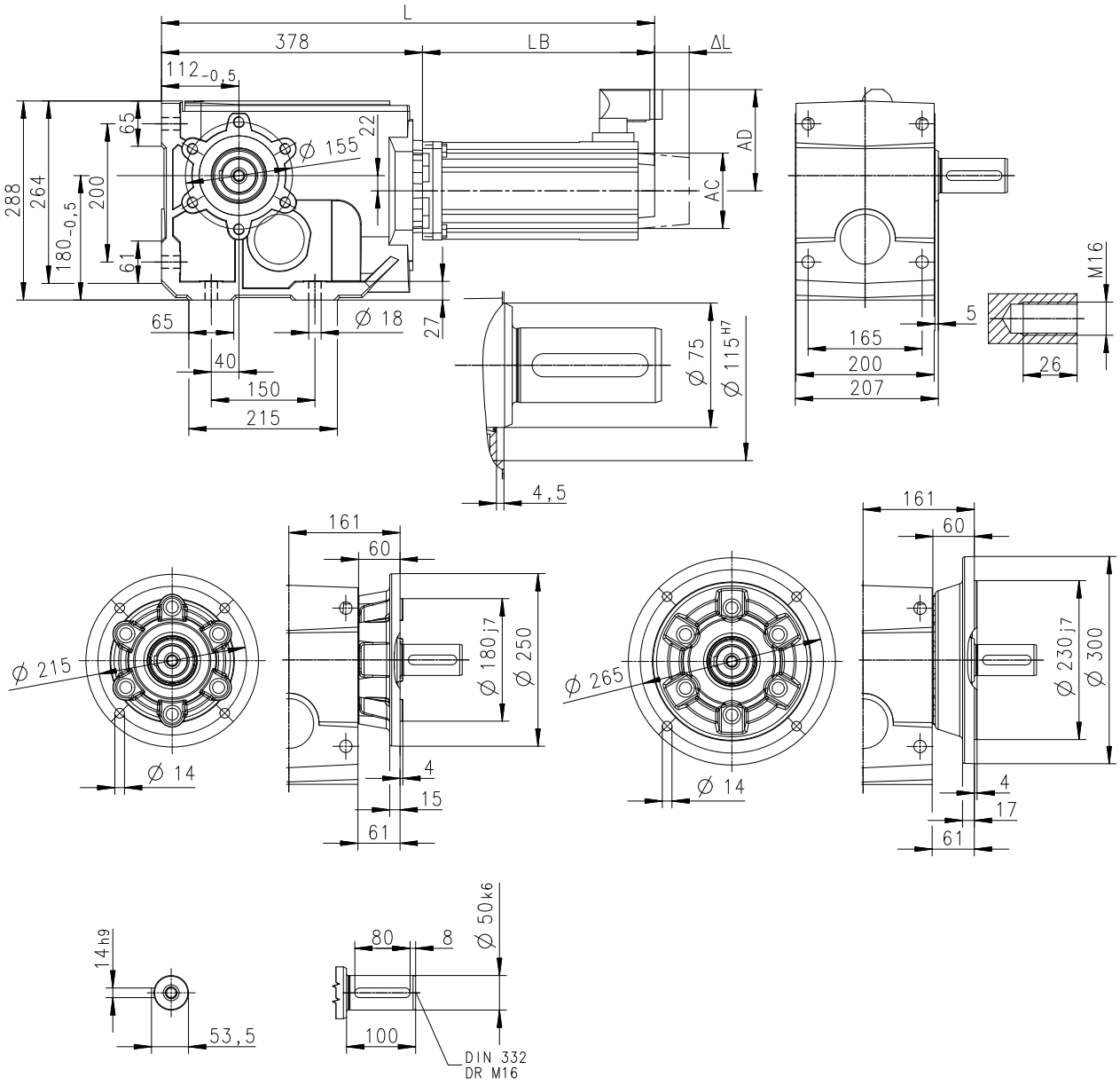


8800577-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	758	696	758	696
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B1500 with MCA14

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

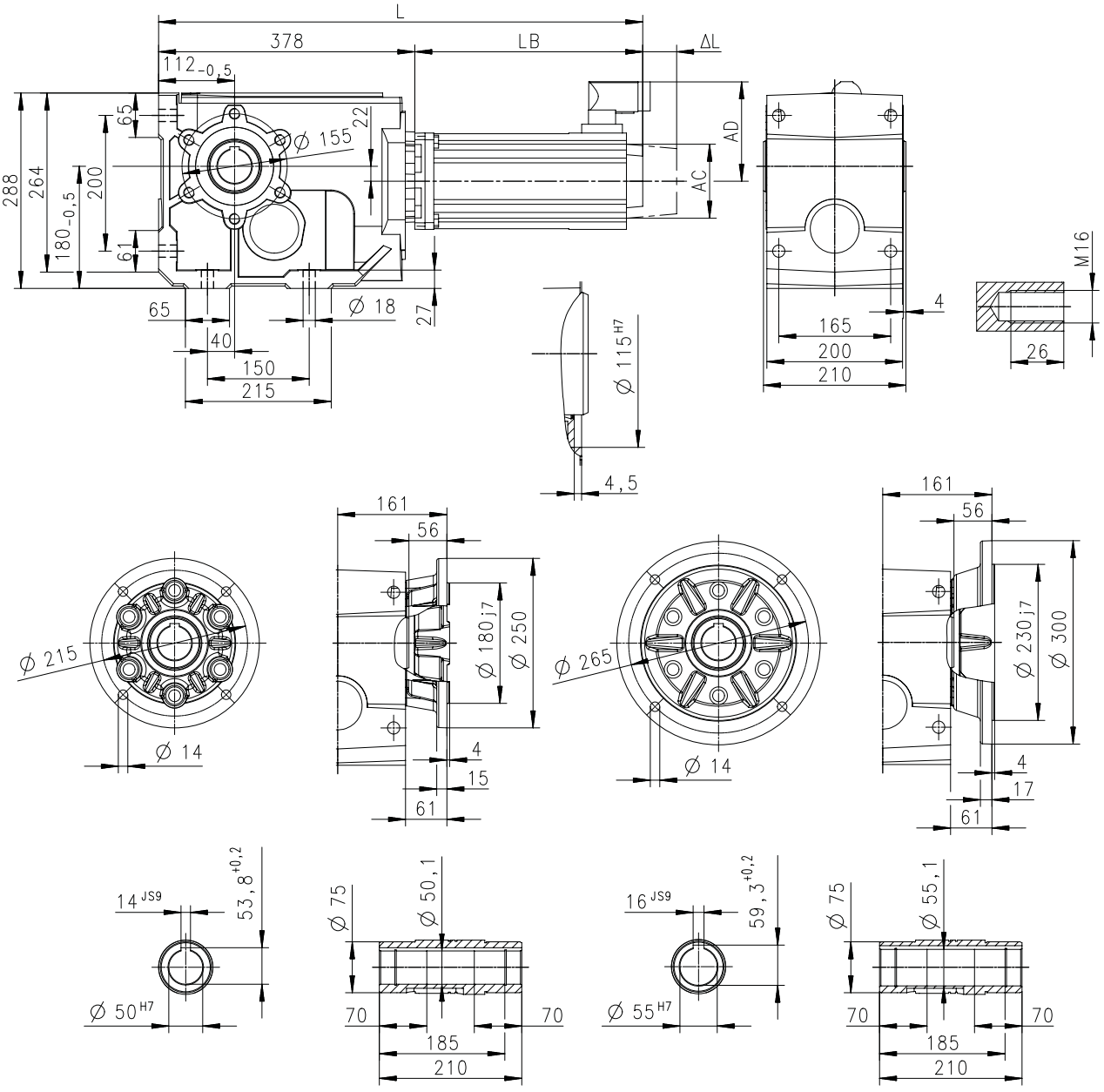


8800576-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	758	696	758	696
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B1500 with MCA17

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

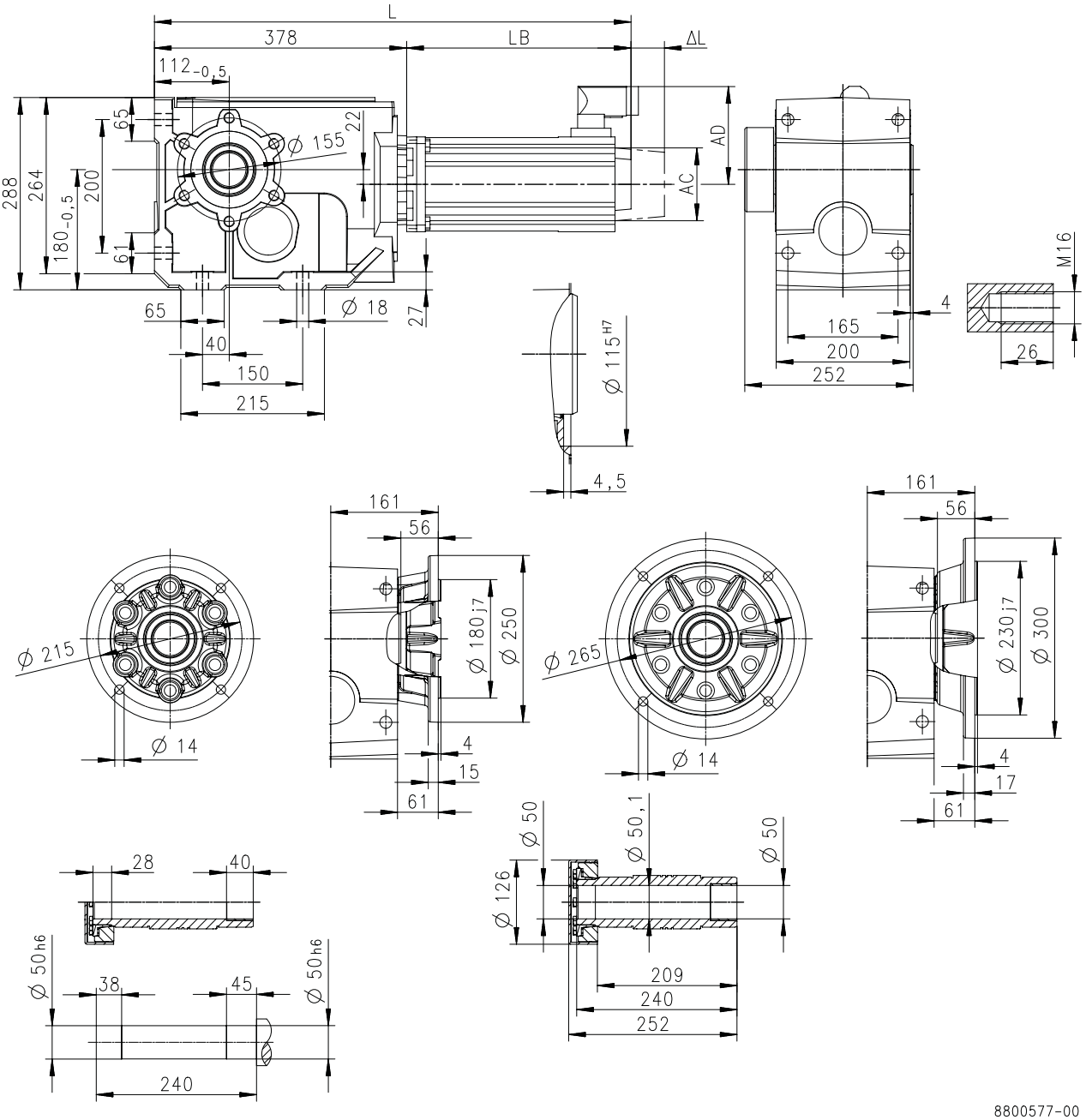


8800575-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	821	735	821	735
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B1500 with MCA17

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

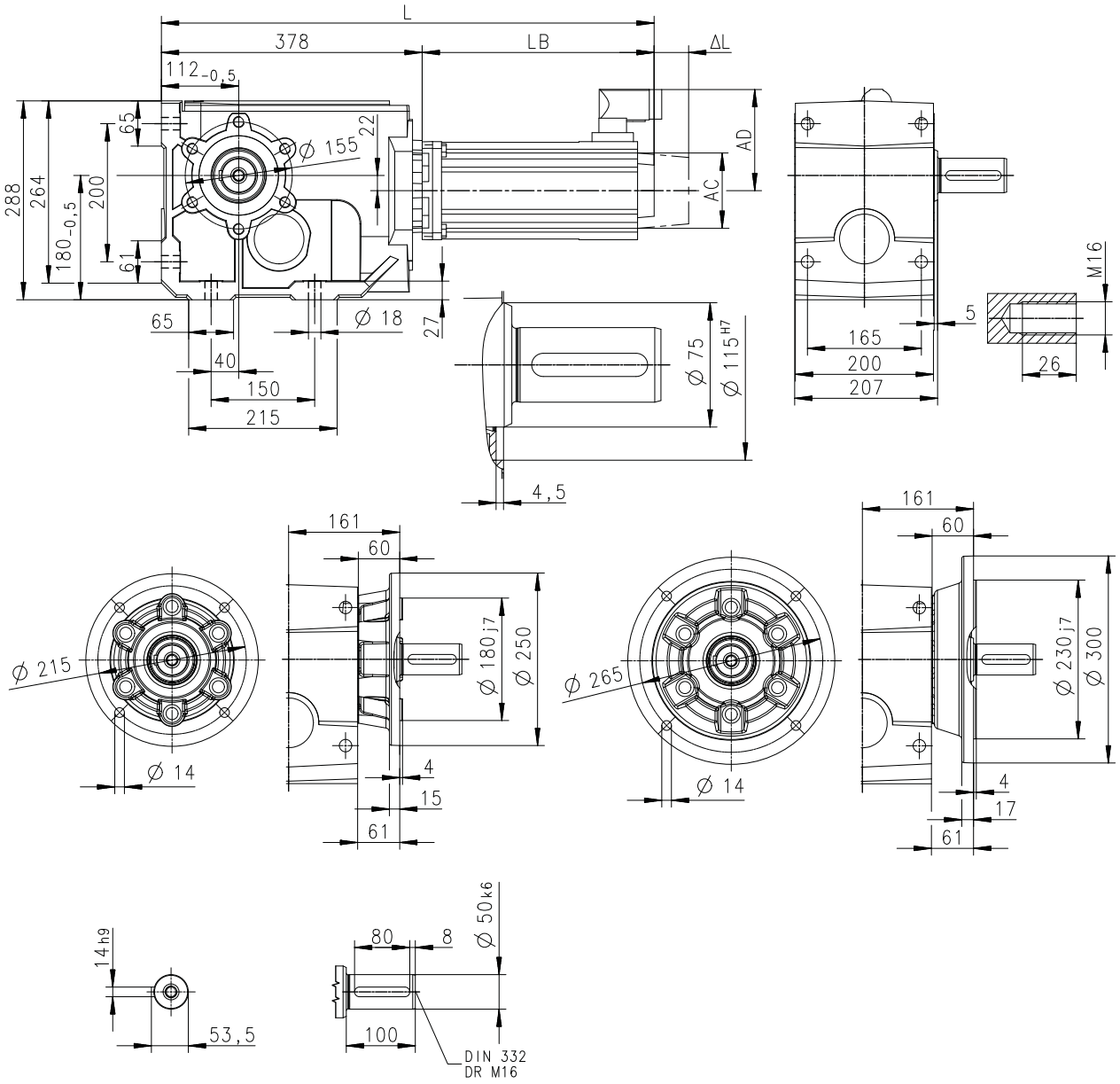


8800577-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	821	735	821	735
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B1500 with MCA17

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

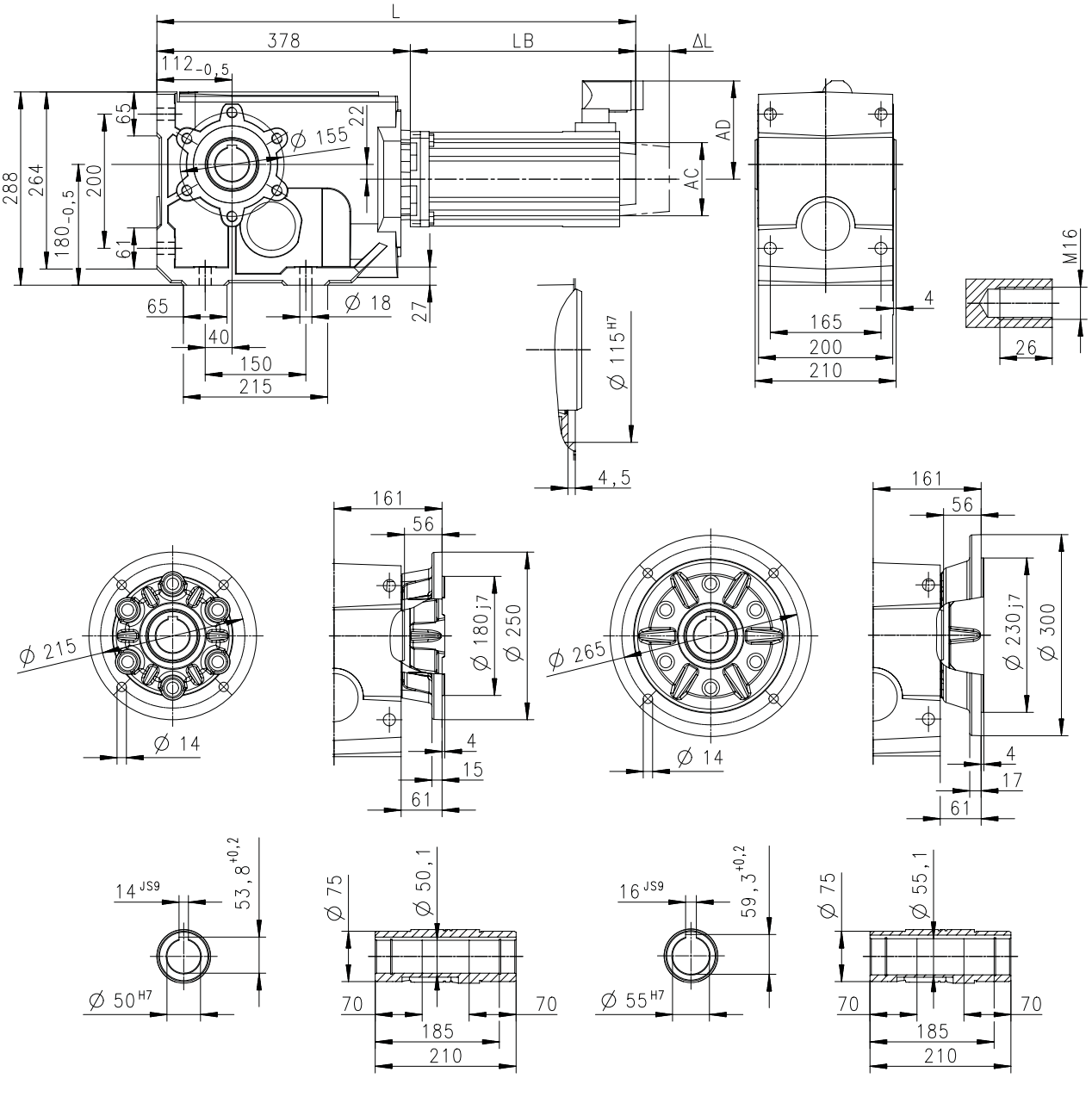


8800576-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	821	735	821	735
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B1500 with MCA19

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

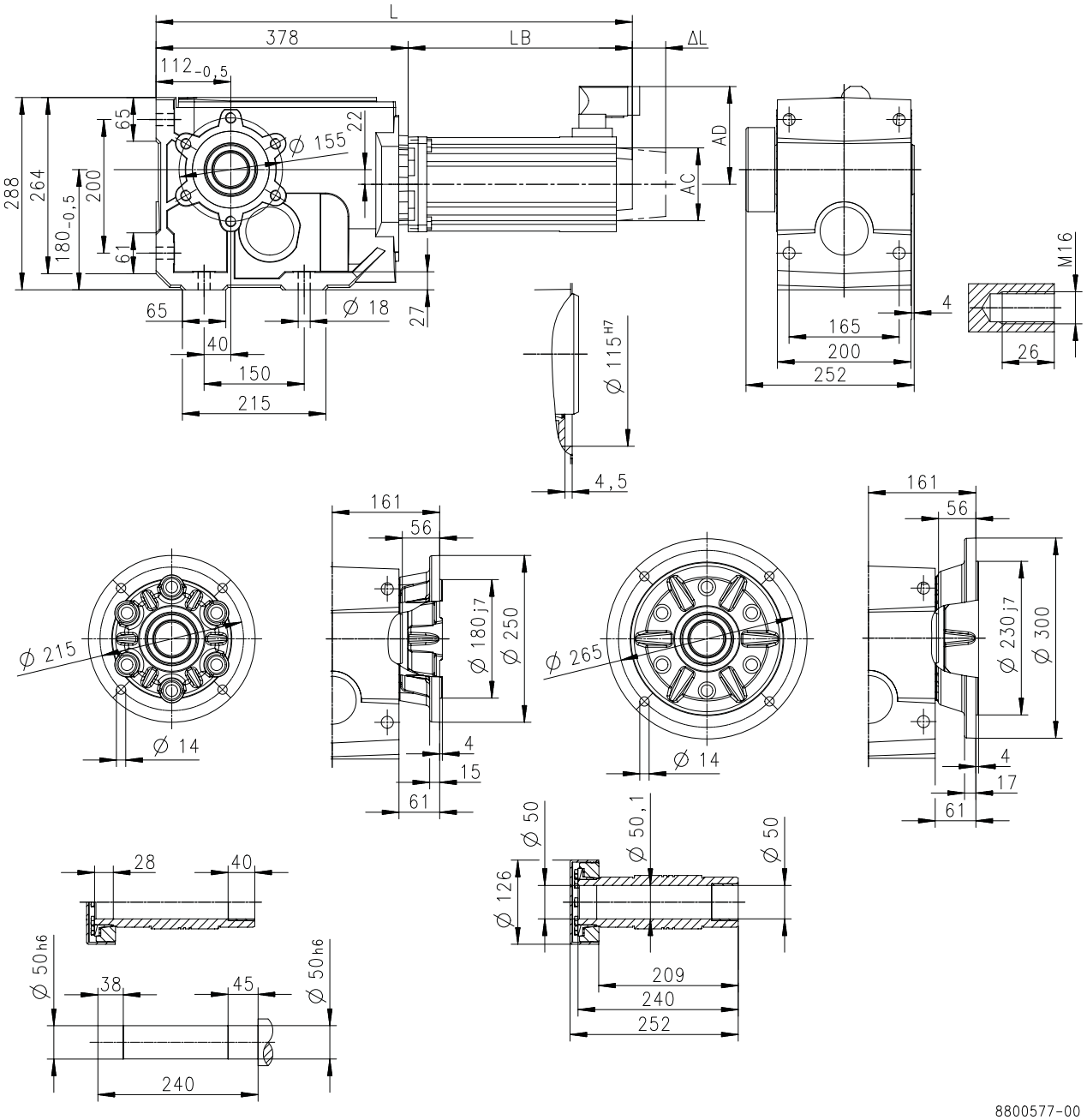


8800575-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	900	803	900	803
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B1500 with MCA19

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

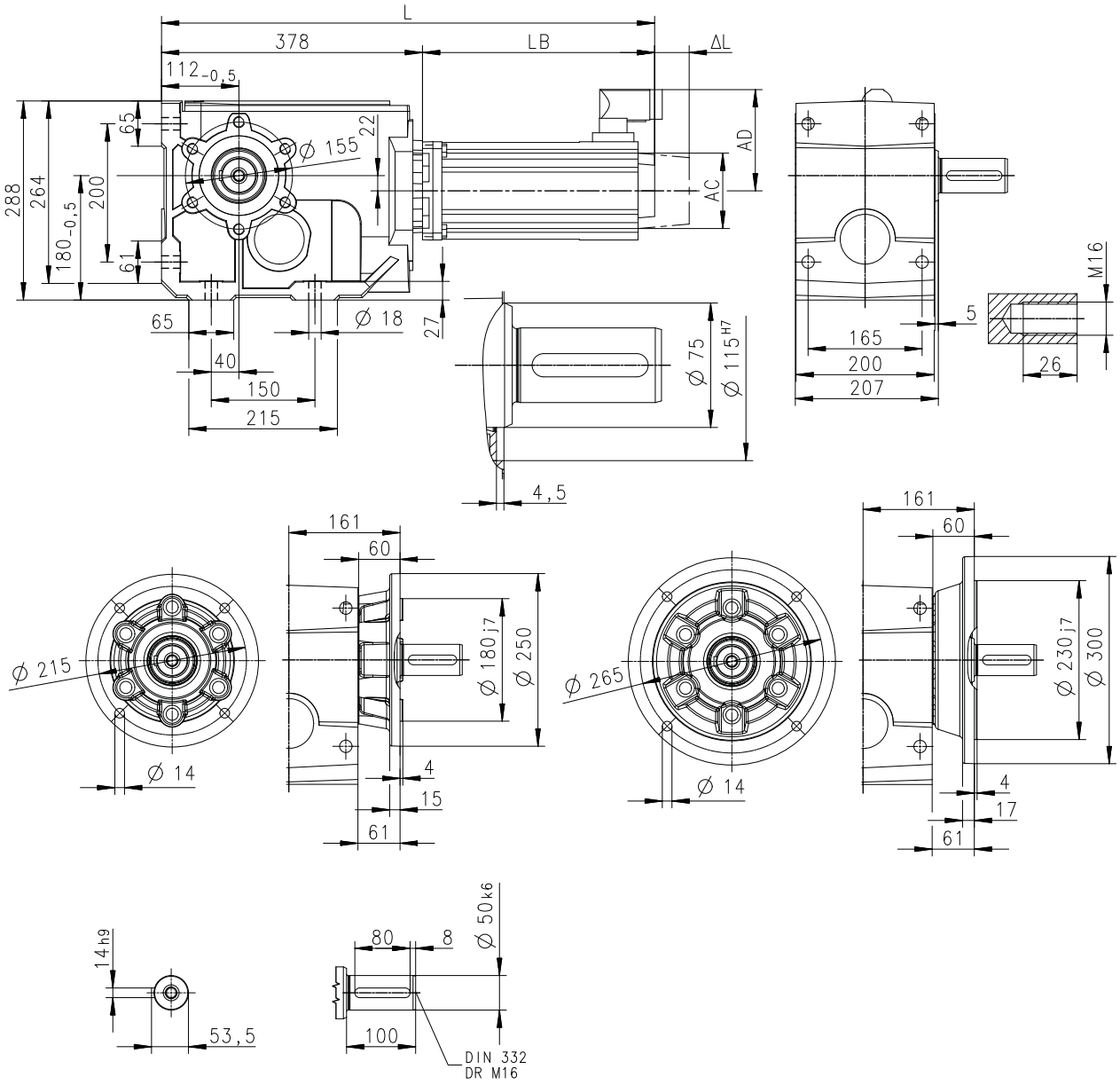


8800577-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	900	803	900	803
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B1500 with MCA19

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

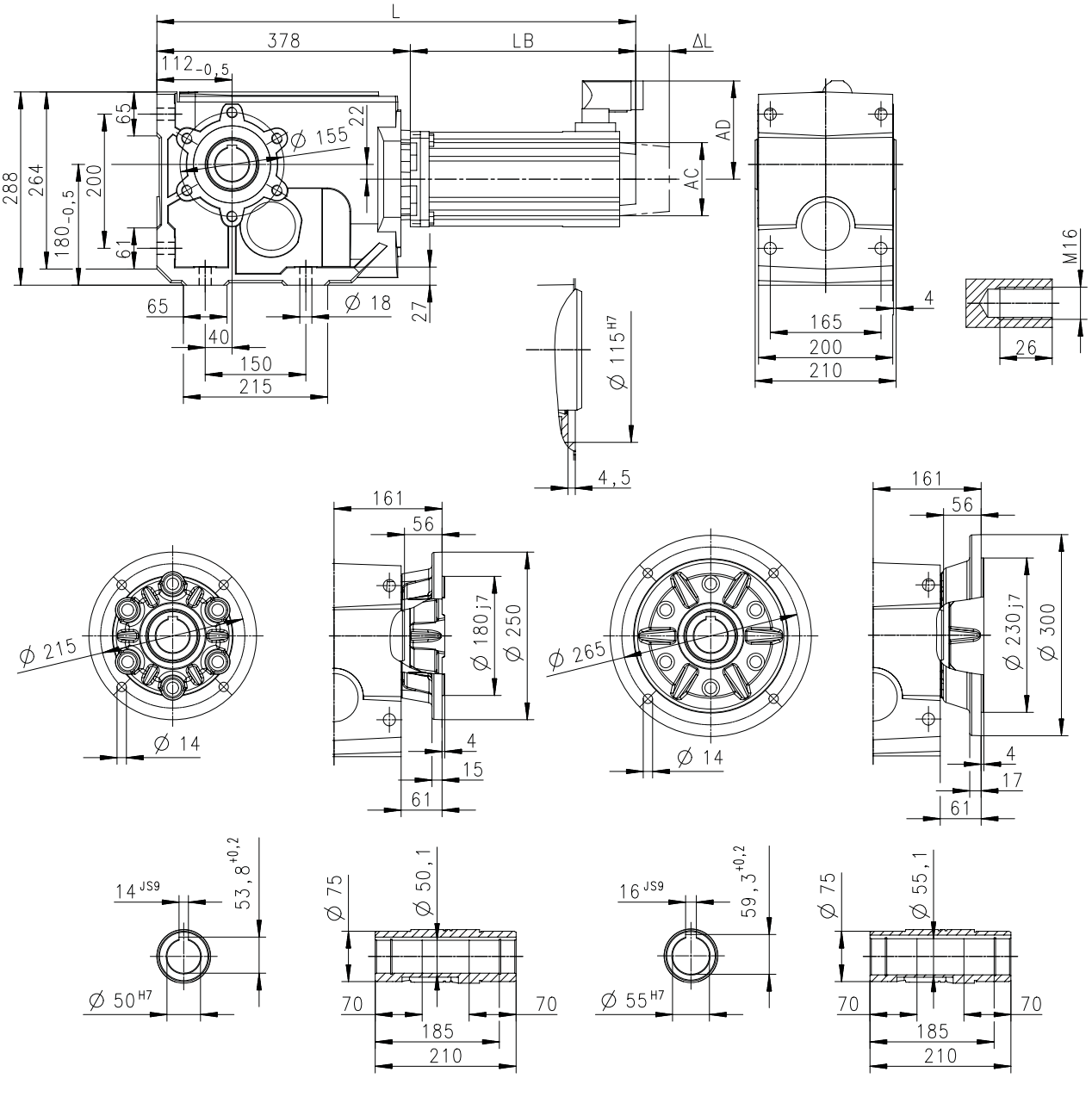


8800576-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	900	803	900	803
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B1500 with MCA21

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

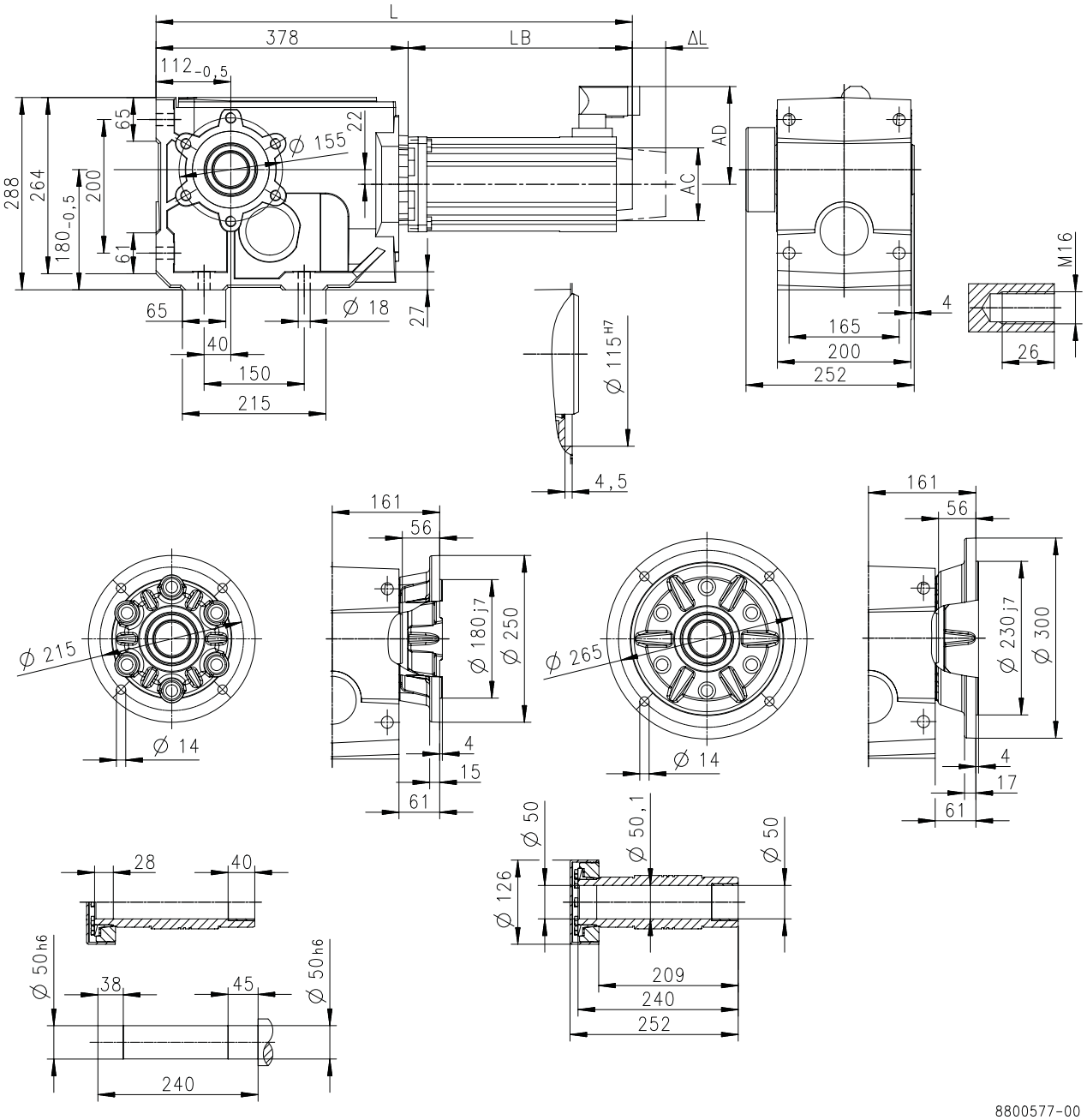


8800575-00

Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	992	896	992	896
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B1500 with MCA21

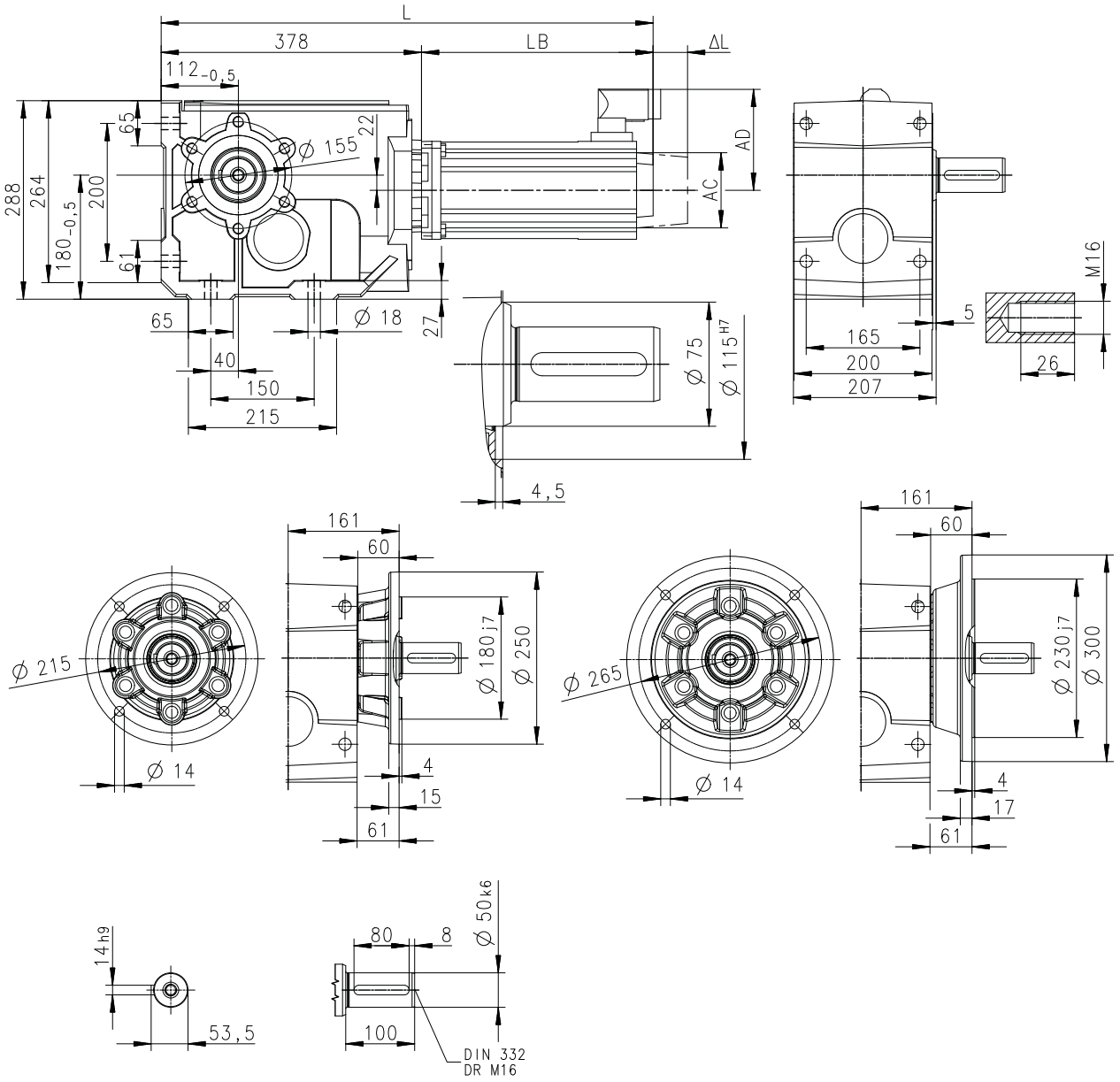
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	992	896	992	896
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B1500 with MCA21

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

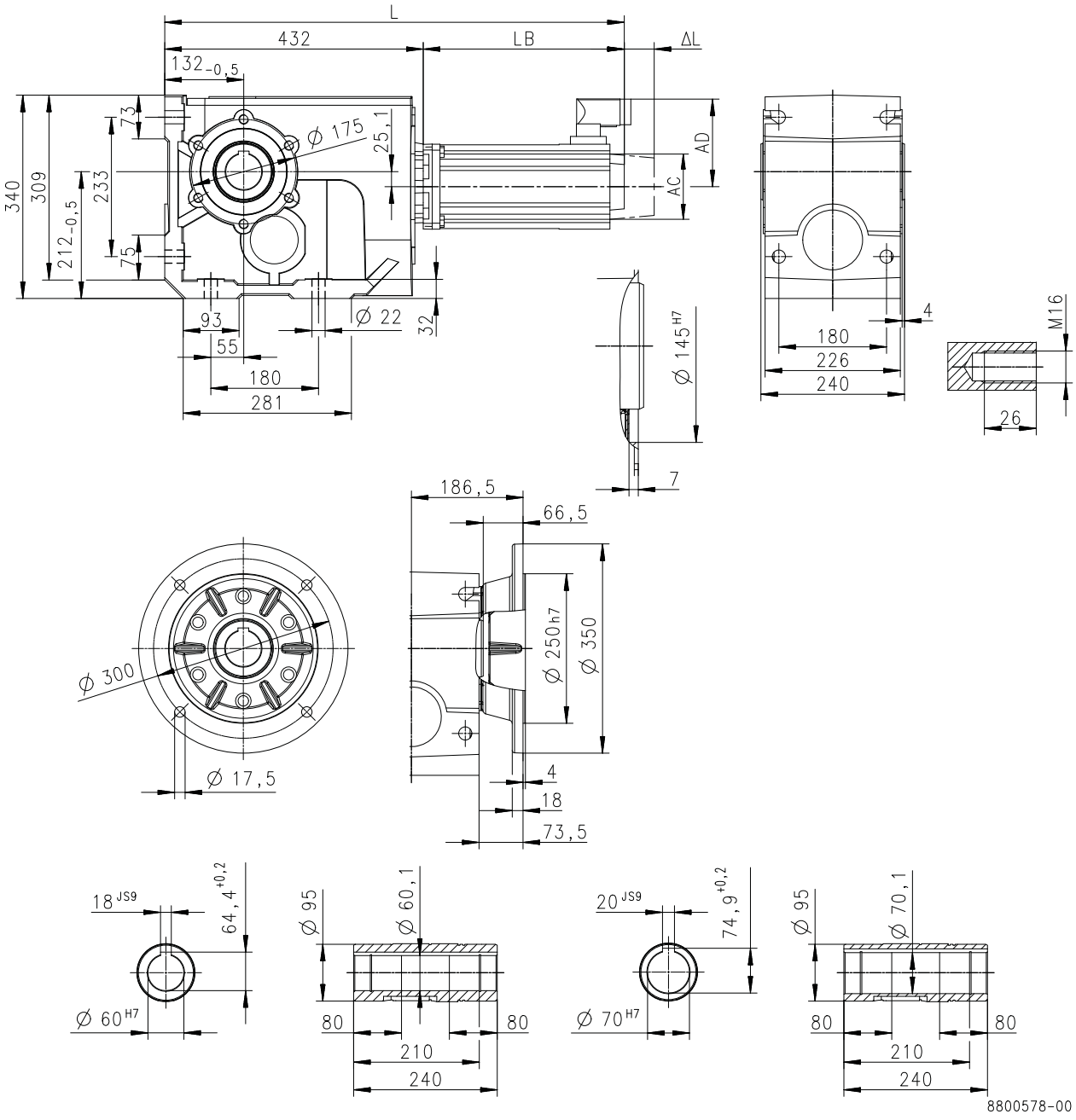


8800576-00

Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	992	896	992	896
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B2700 with MCA14

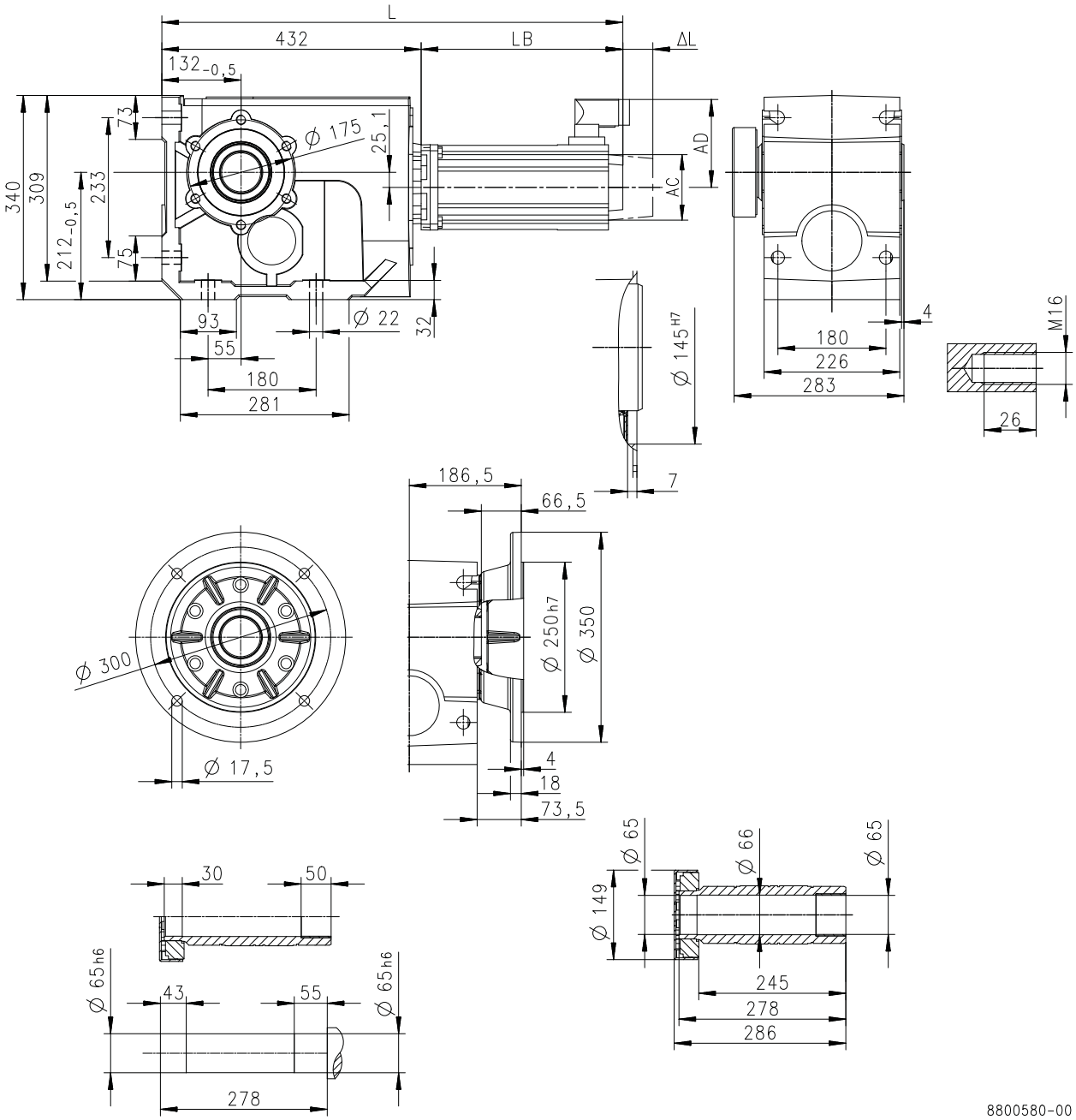
Gearbox design: hollow shaft, with foot (HAR/HBR/HAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	812	750	812	750
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B2700 with MCA14

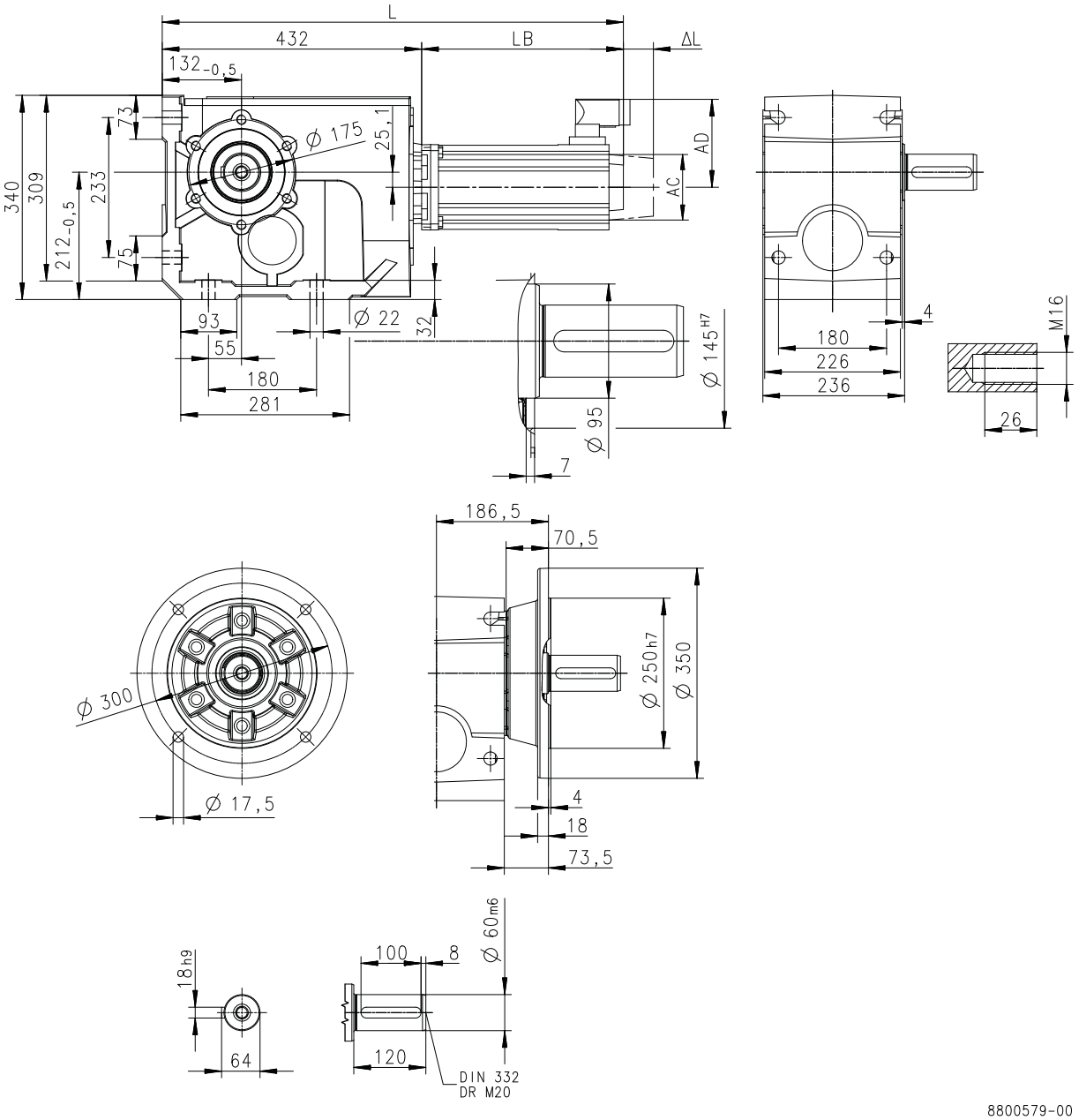
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			Forced	Natural	Forced	Natural
Total length	L	mm	812	750	812	750
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B2700 with MCA14

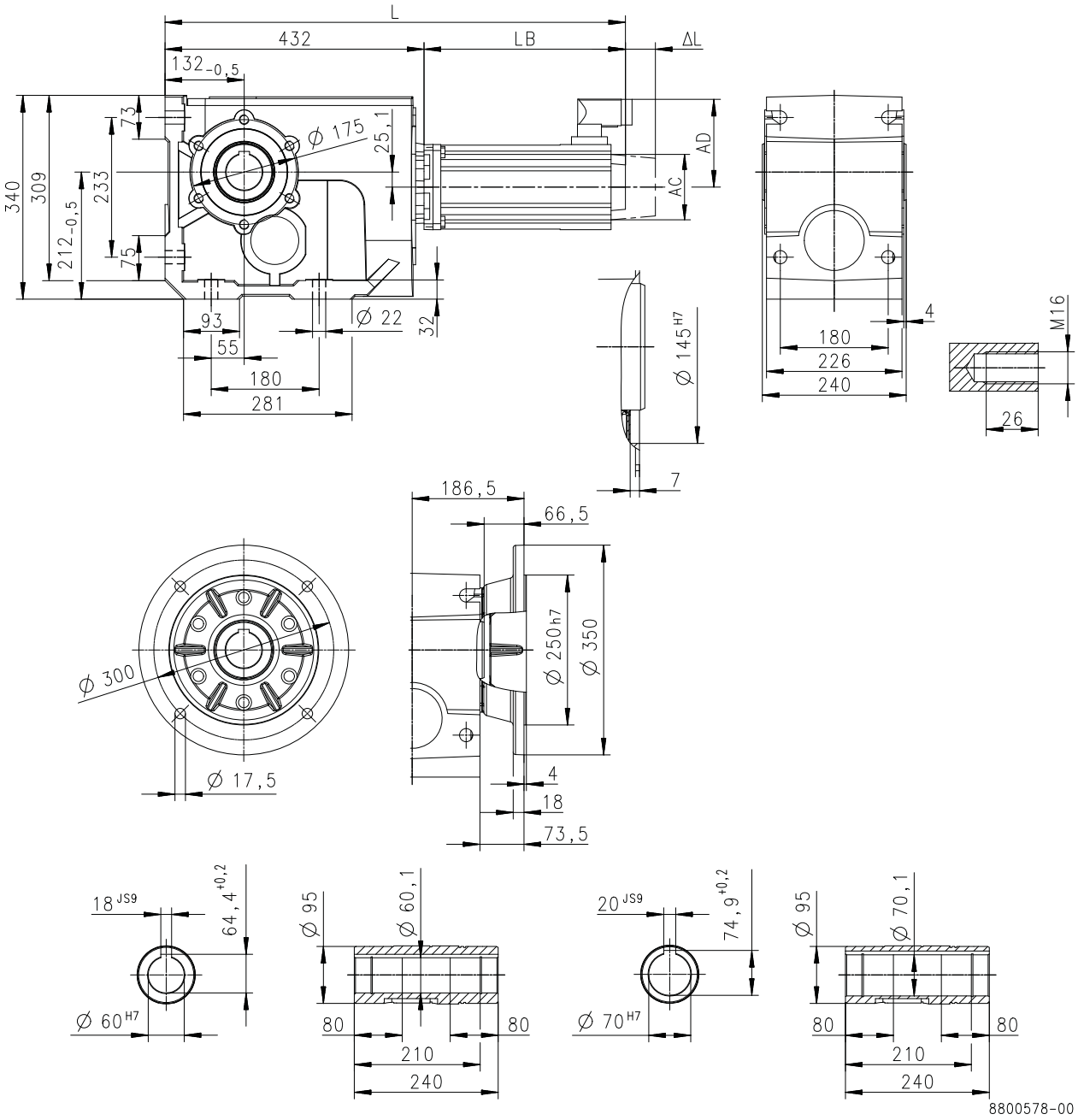
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	812	750	812	750
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B2700 with MCA17

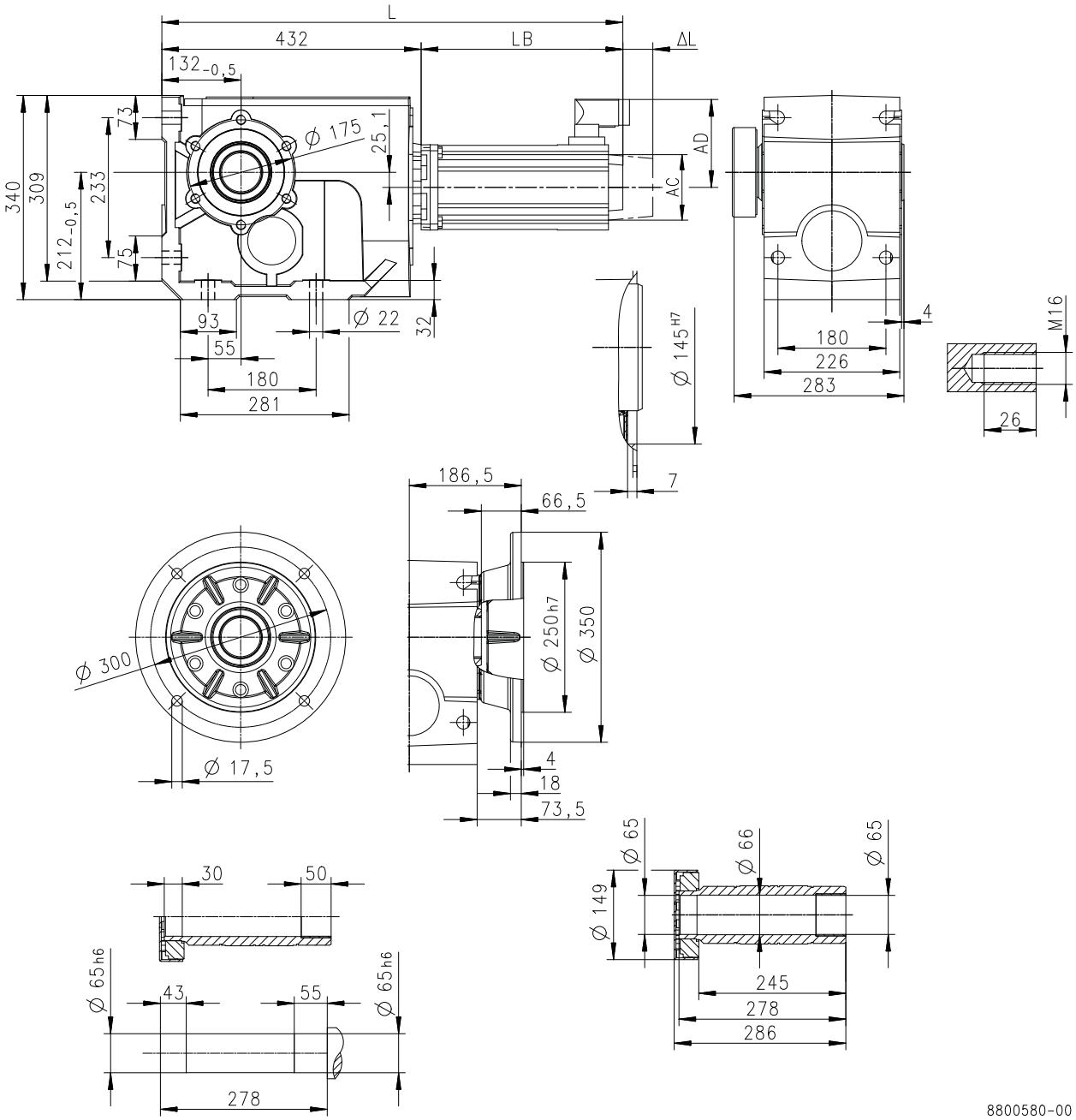
Gearbox design: hollow shaft, with foot (HAR/HBR/HAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	875	789	875	789
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B2700 with MCA17

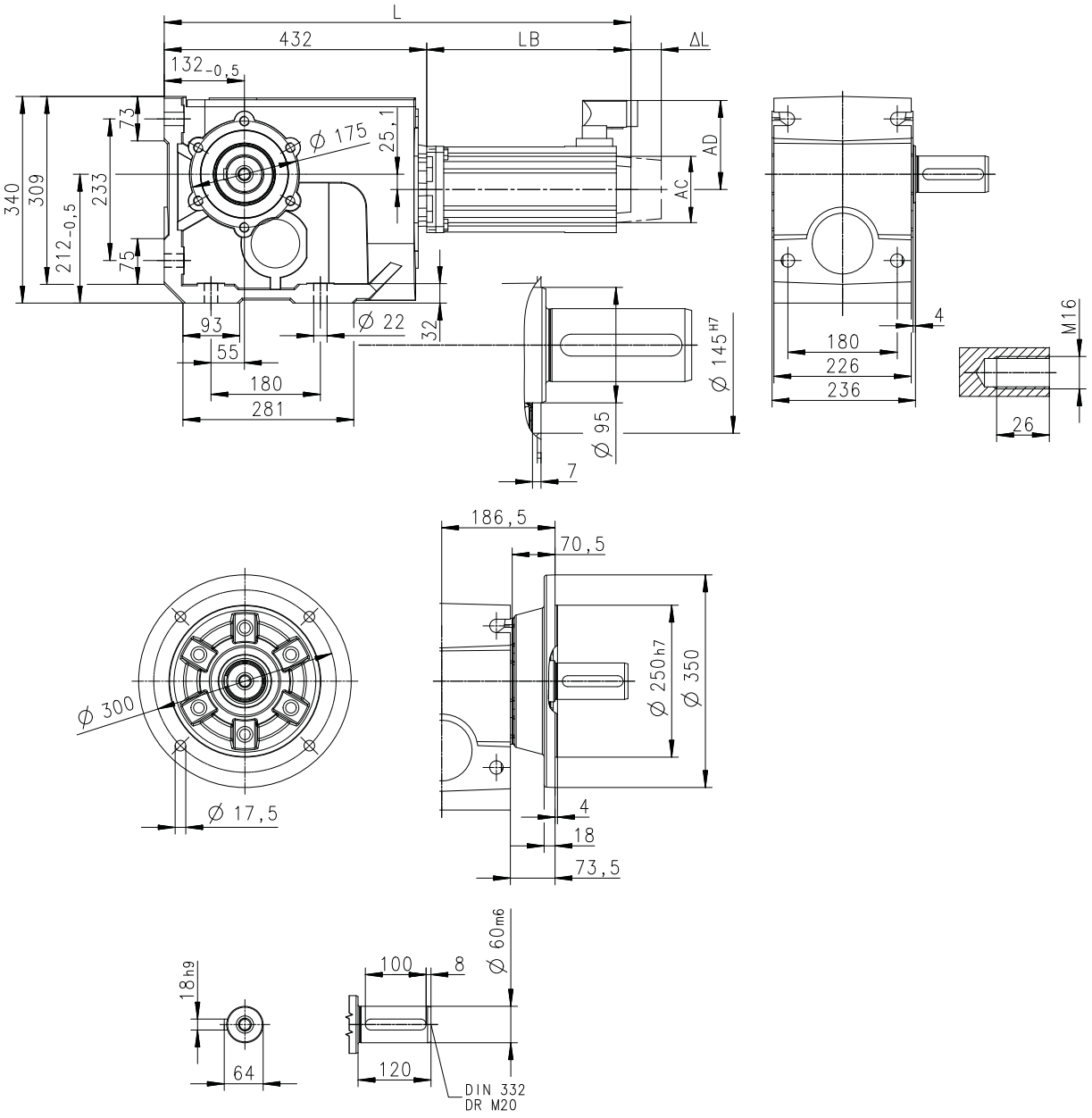
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	875	789	875	789
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B2700 with MCA17

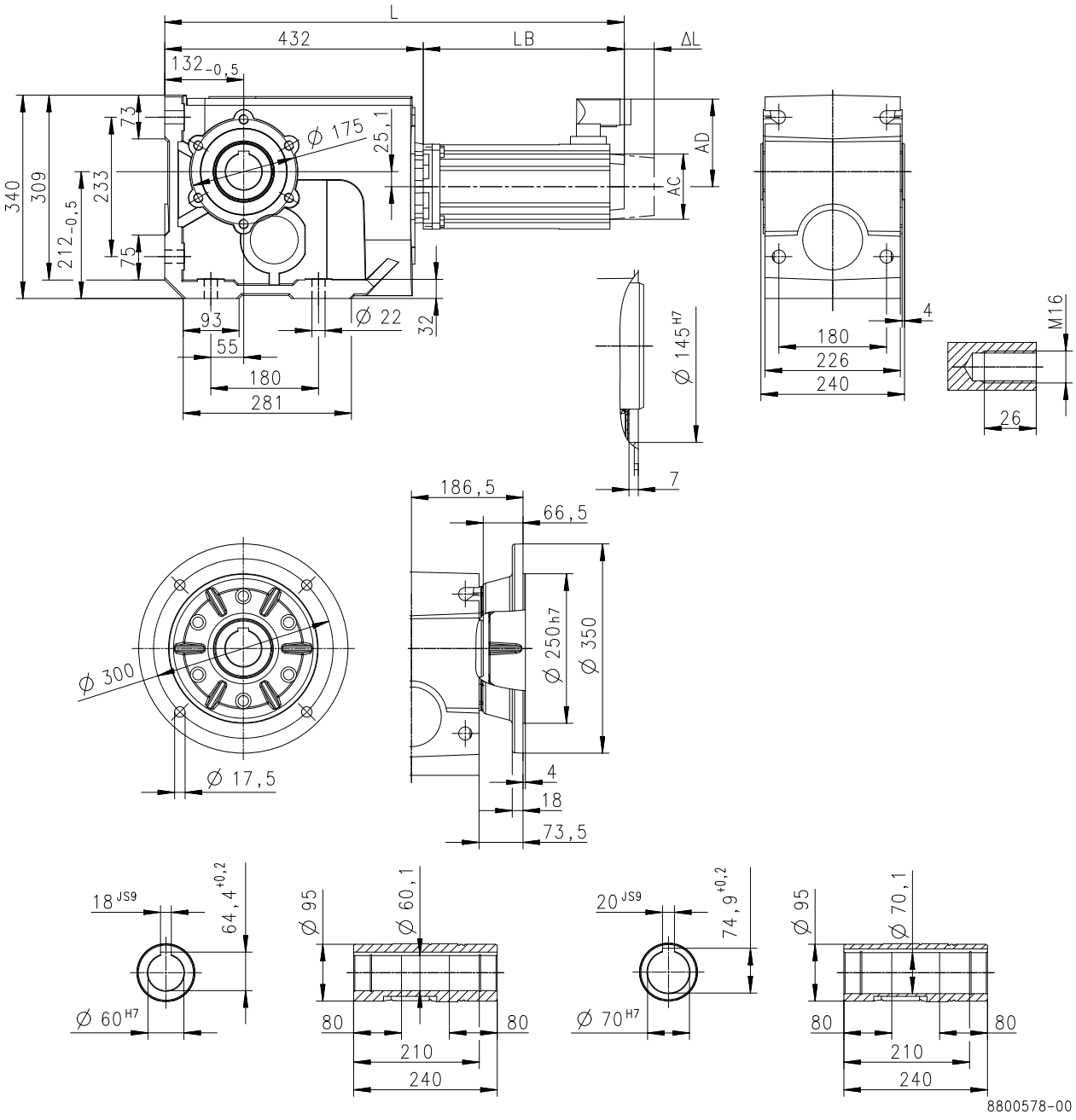
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	875	789	875	789
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B2700 with MCA19

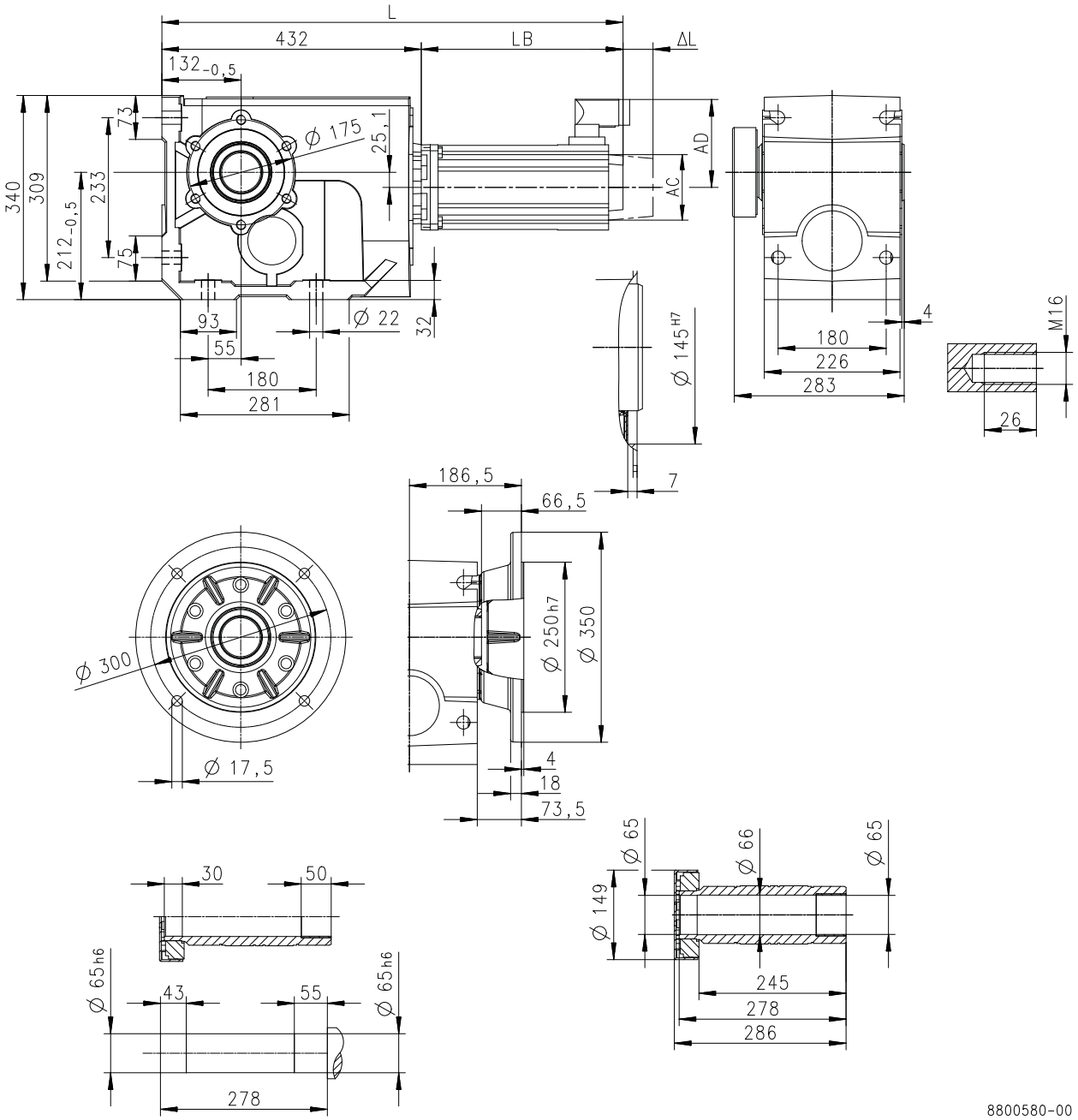
Gearbox design: hollow shaft, with foot (HAR/HBR/HAK)



Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	954	857	954	857
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B2700 with MCA19

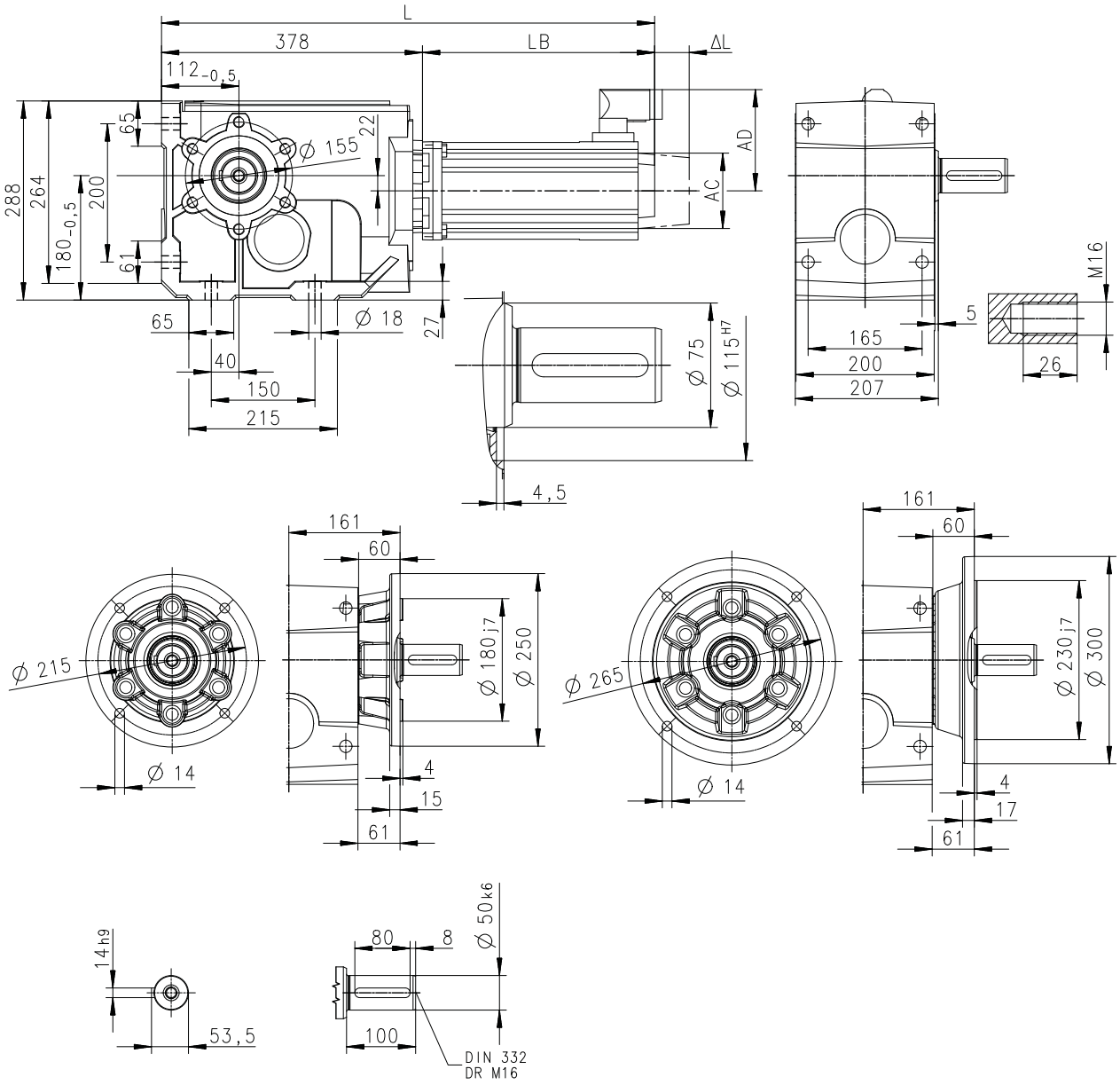
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	954	857	954	857
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B2700 with MCA19

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

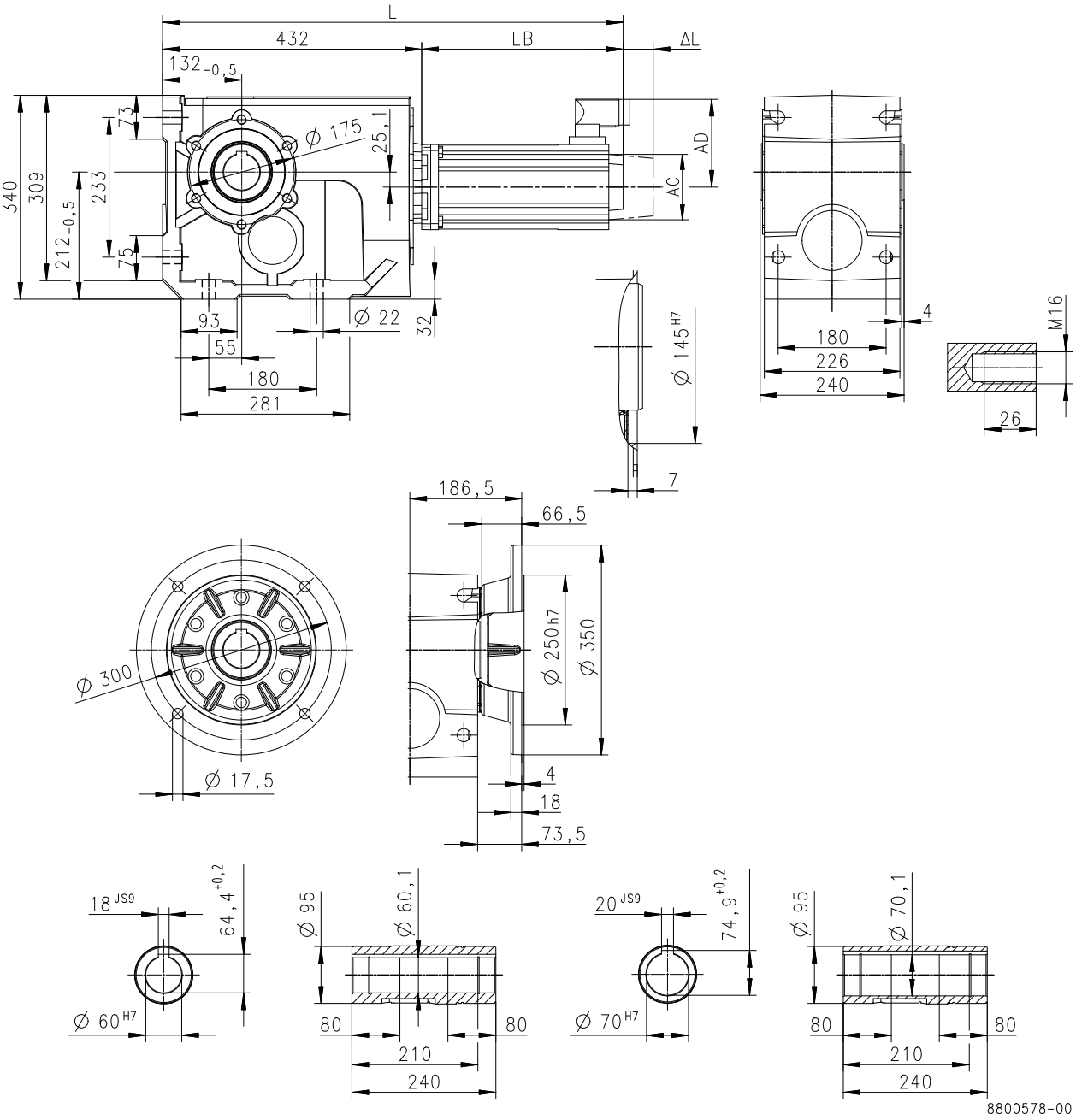


8800576-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	954	857	954	857
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B2700 with MCA21

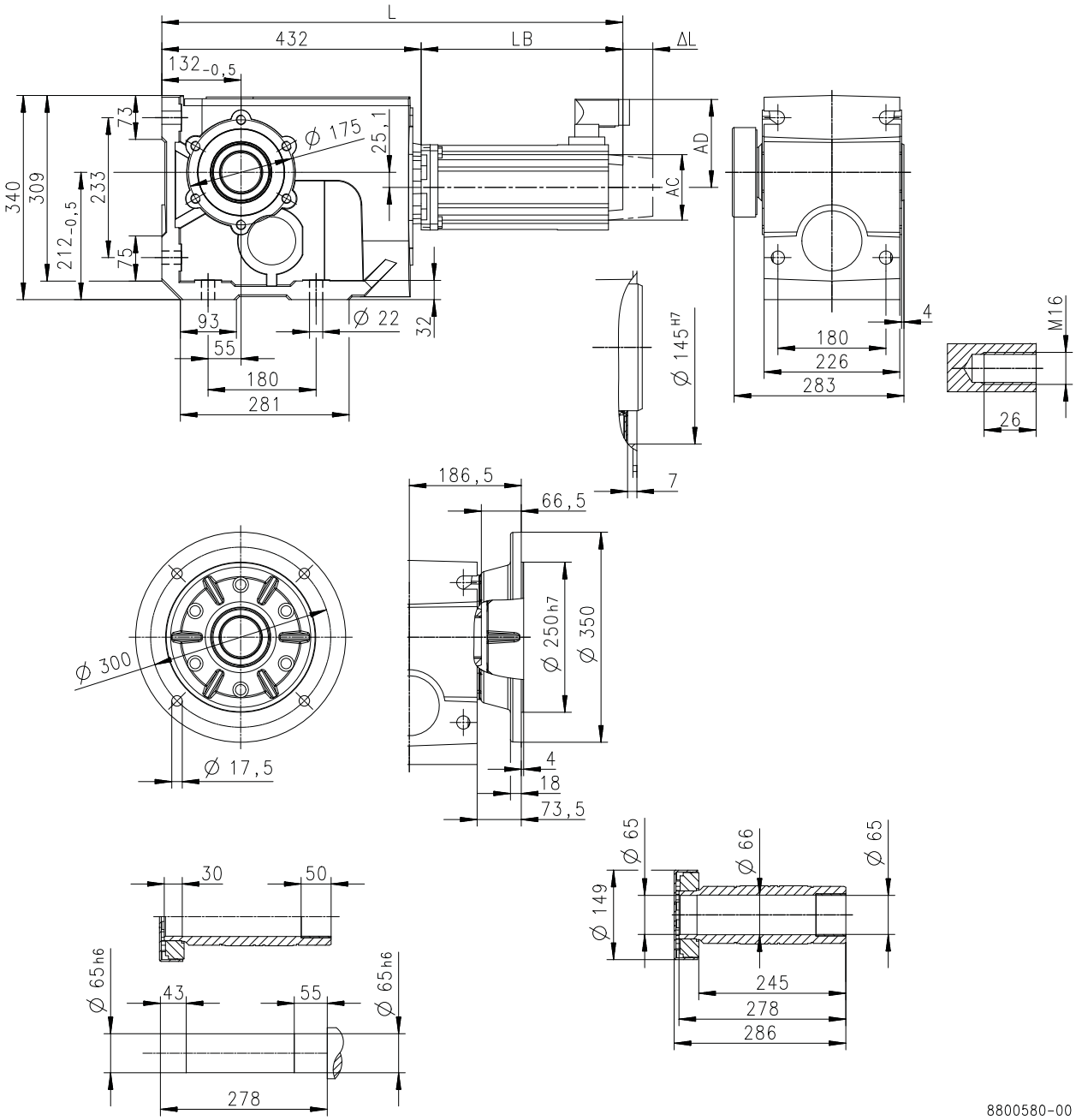
Gearbox design: hollow shaft, with foot (HAR/HBR/HAK)



Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	1046	950	1046	950
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B2700 with MCA21

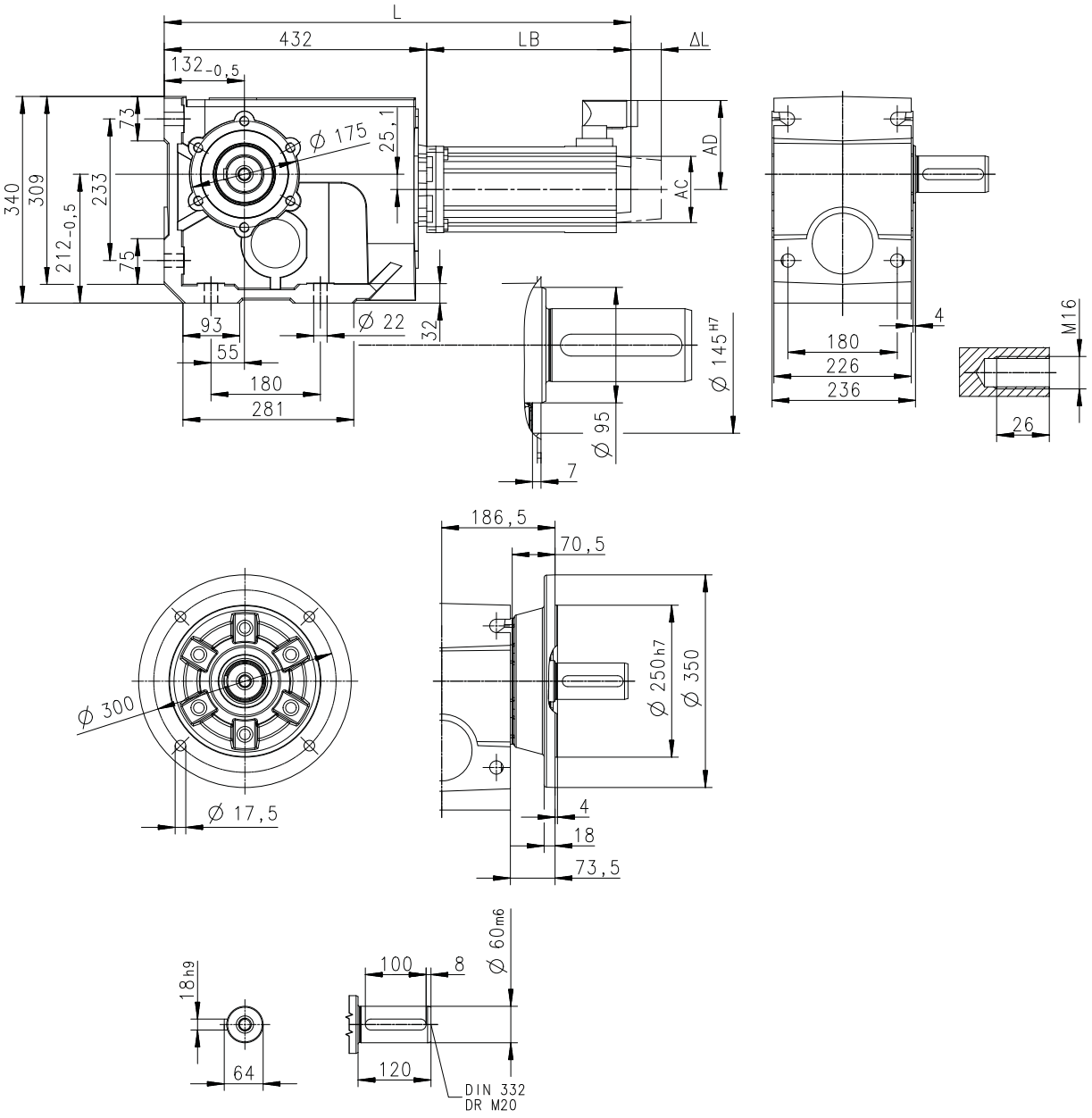
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			Forced	Natural	Forced	Natural
Total length	L	mm	1046	950	1046	950
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B2700 with MCA21

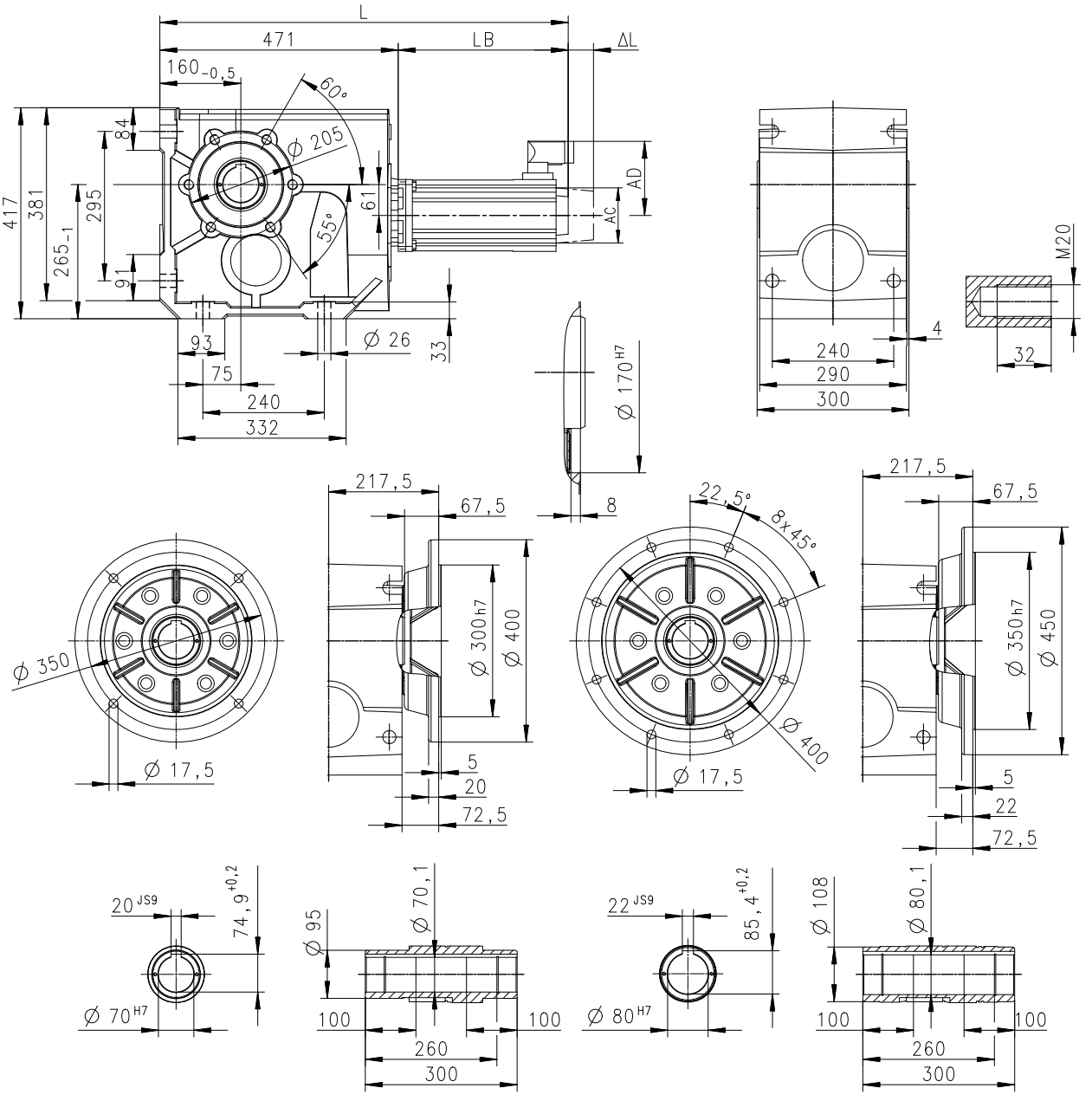
Gearbox design: solid shaft, with foot (VAR/VBR/VAK)



Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	1046	950	1046	950
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B4300 with MCA14

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

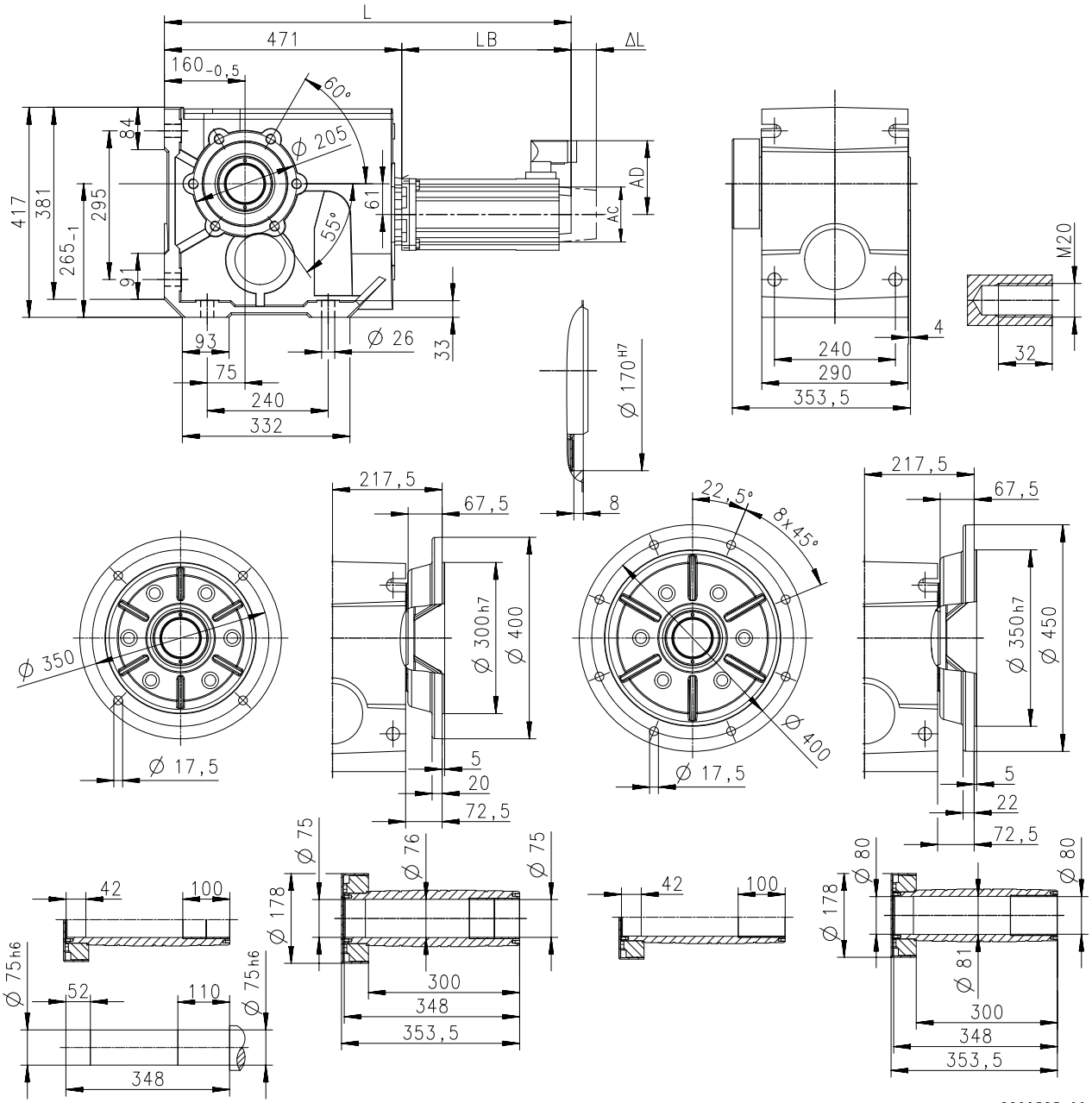


8800581-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	851	789	851	789
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B4300 with MCA14

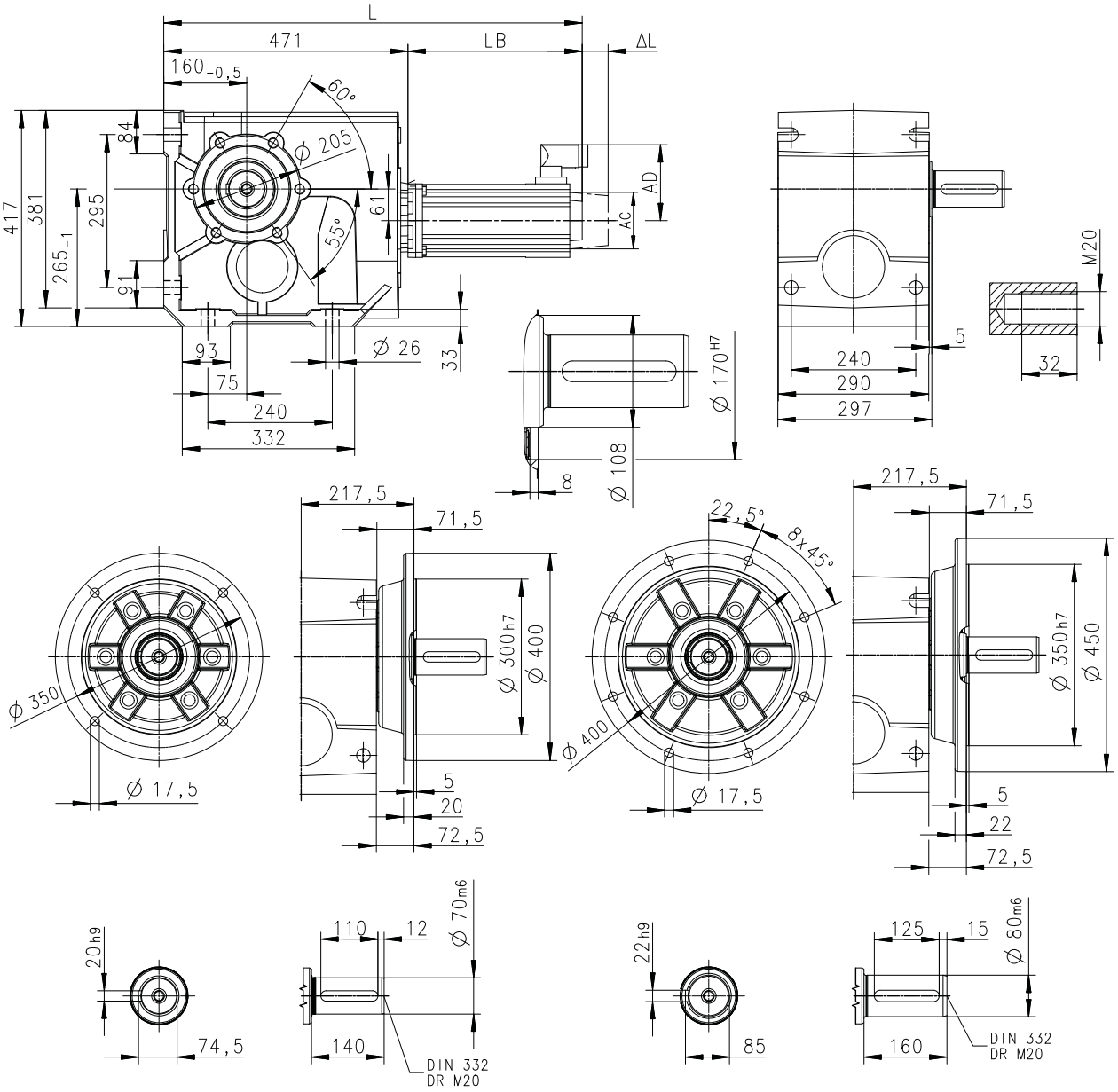
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	851	789	851	789
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B4300 with MCA14

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

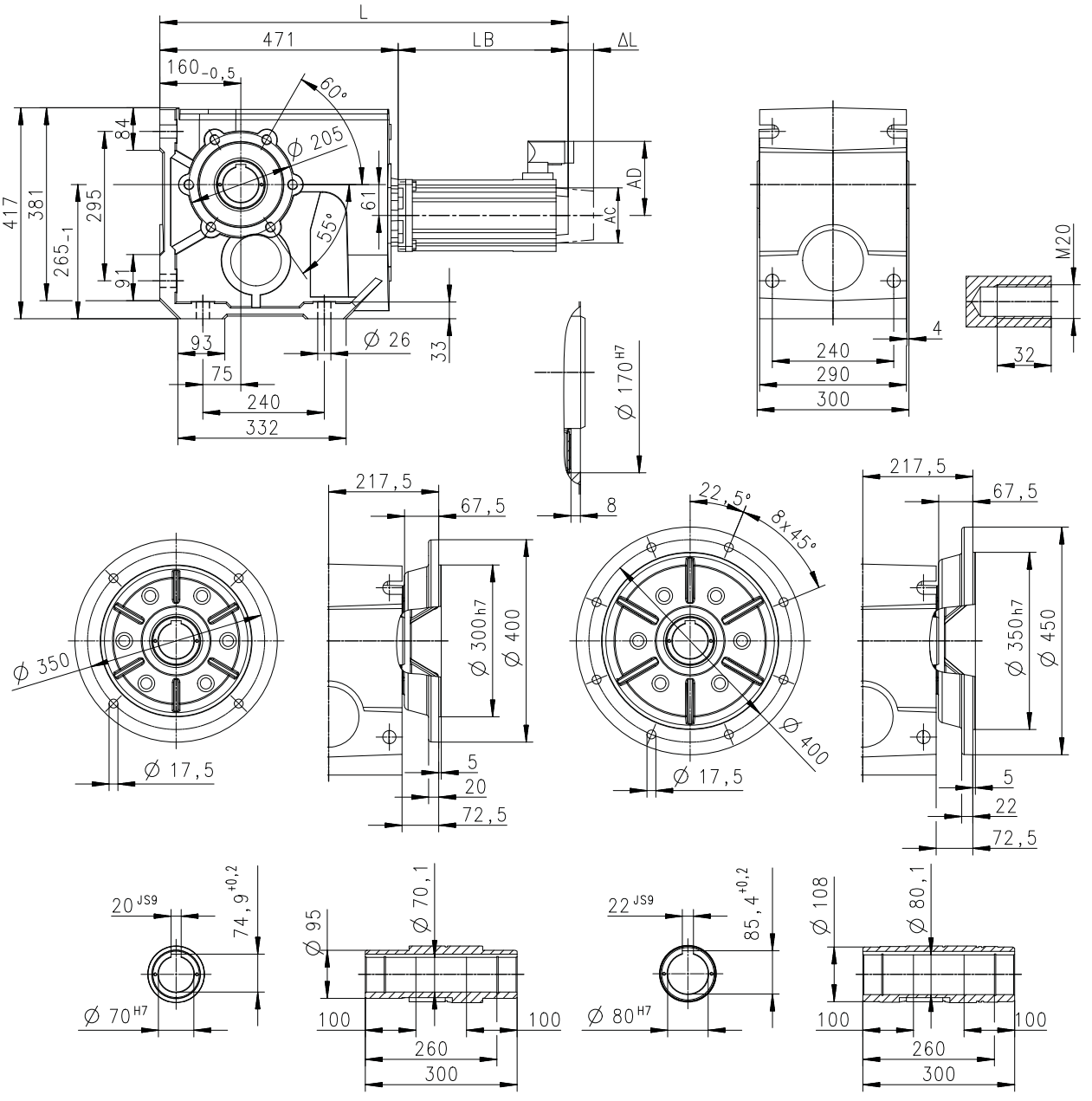


8800582-00

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			Forced	Natural	Forced	Natural
Total length	L	mm	851	789	851	789
Motor length	LB	mm	380	318	380	318
Length of motor options	Δ L	mm	89	89	89	89
Motor diameter	AC	mm	142	142	142	142
Motor/connection distance	AD	mm	109	109	109	109

g500-B4300 with MCA17

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

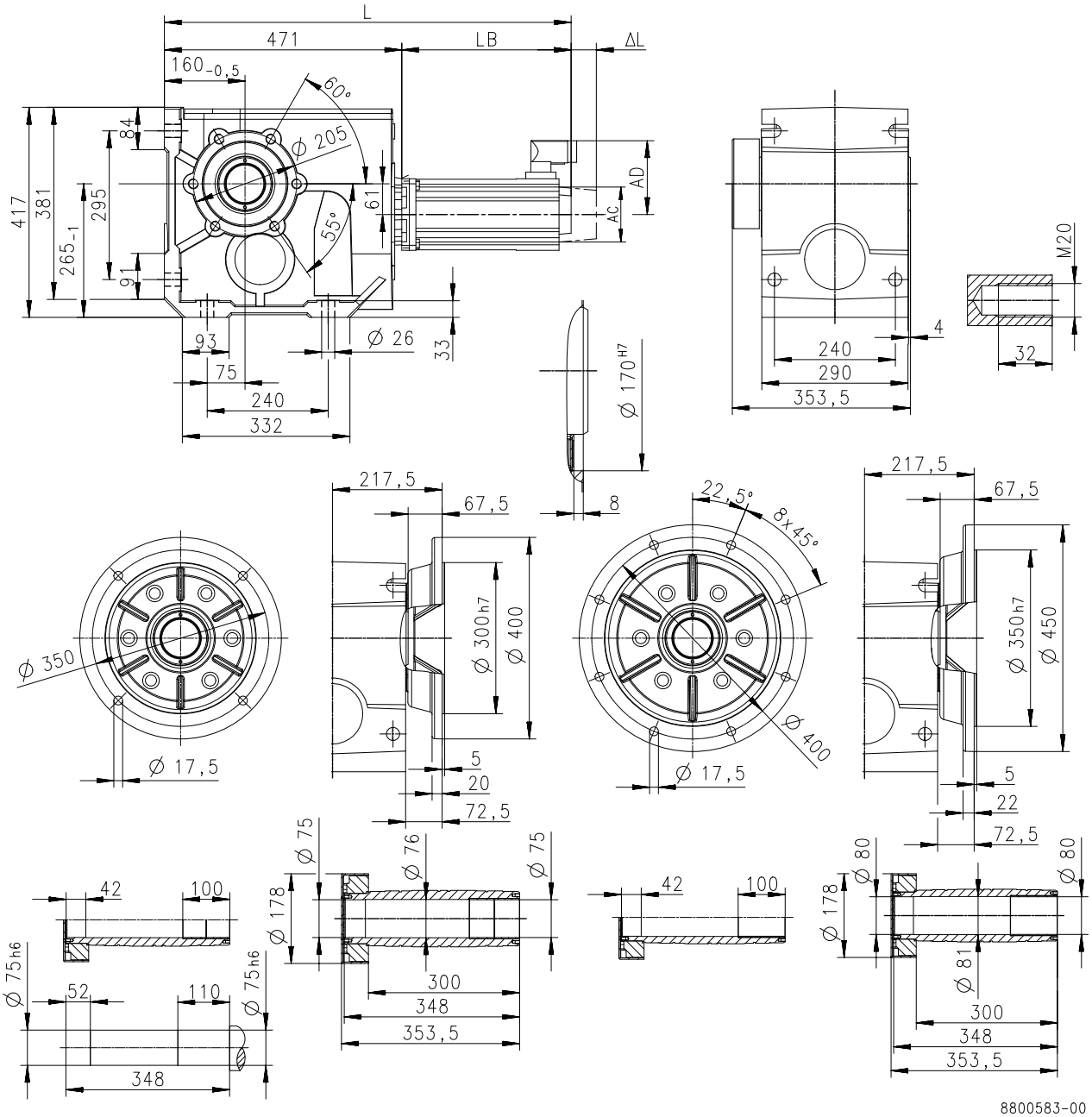


8800581-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	914	828	914	828
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B4300 with MCA17

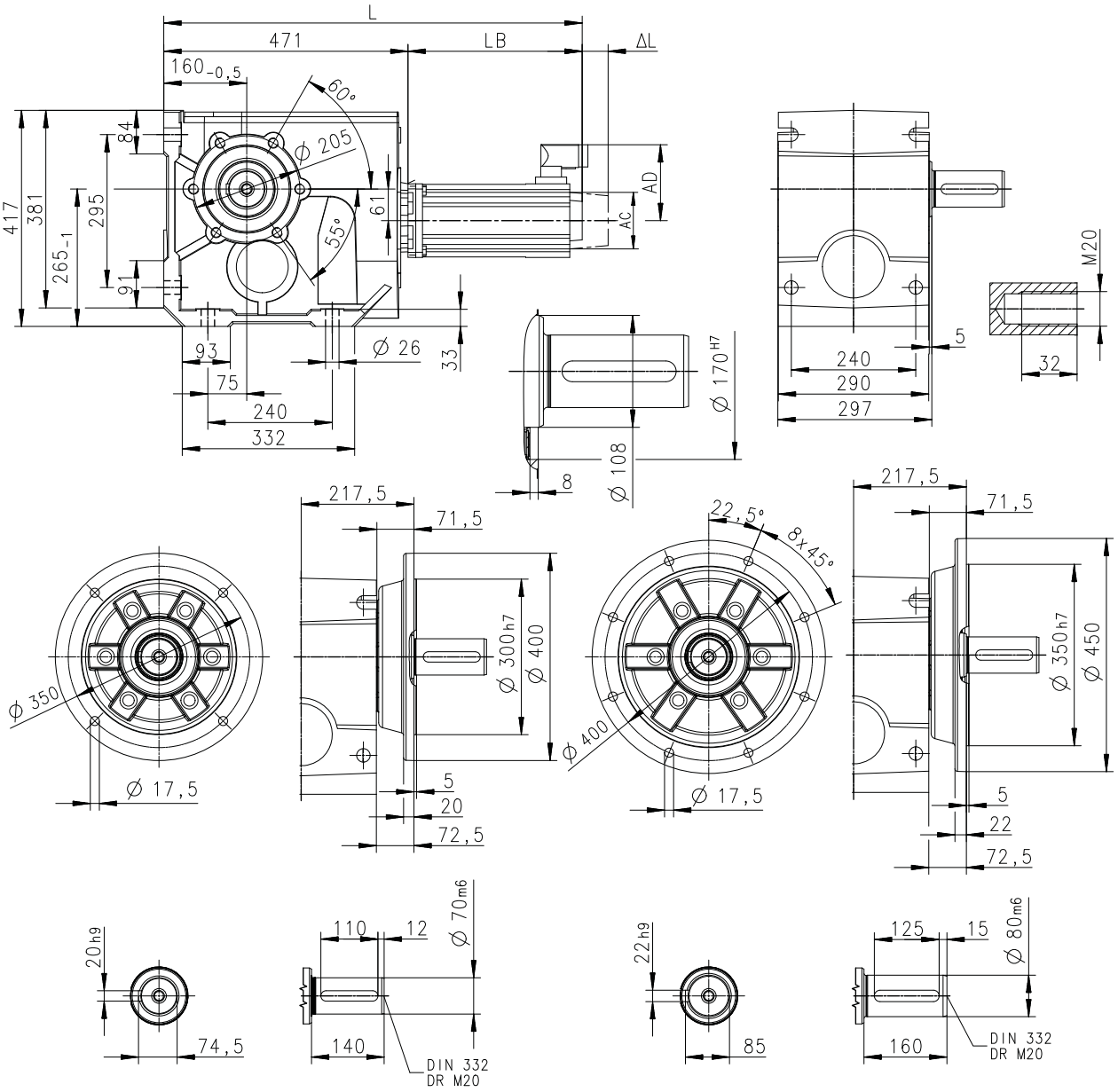
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	914	828	914	828
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B4300 with MCA17

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

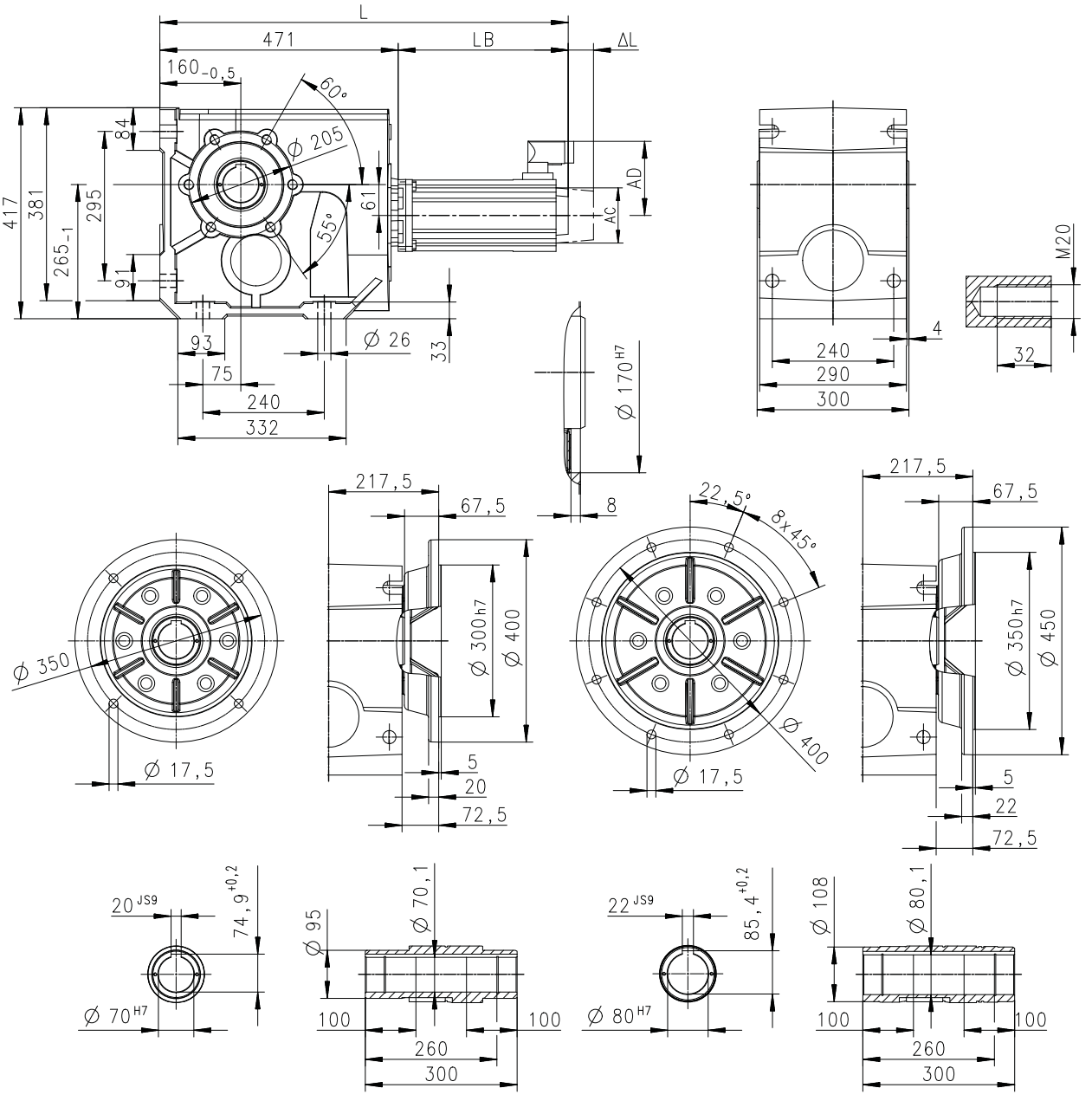


8800582-00

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	914	828	914	828
Motor length	LB	mm	443	357	443	357
Length of motor options	Δ L	mm	90	90	90	90
Motor diameter	AC	mm	165	165	165	165
Motor/connection distance	AD	mm	118	118	118	118

g500-B4300 with MCA19

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

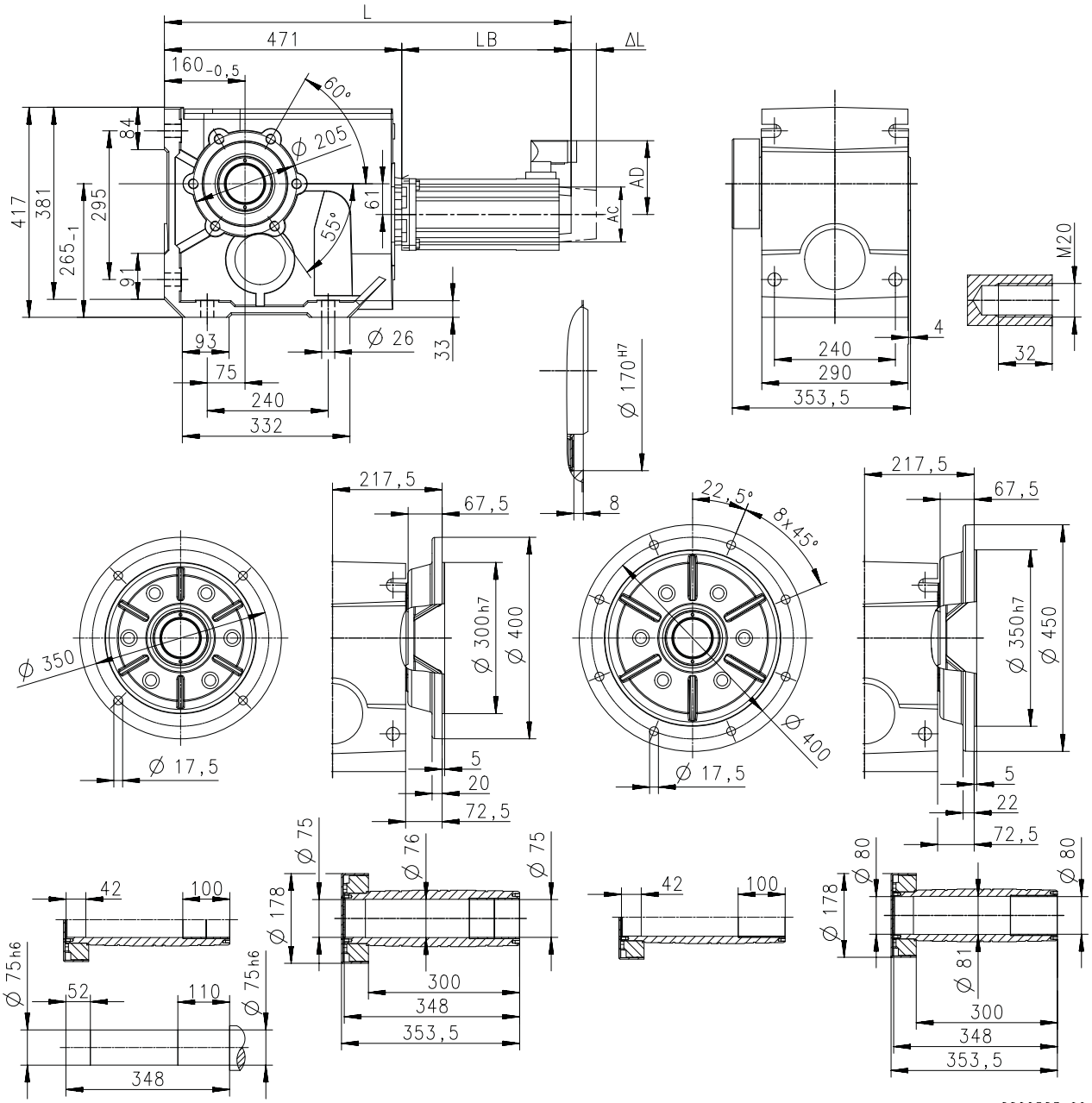


8800581-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	993	896	993	896
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B4300 with MCA19

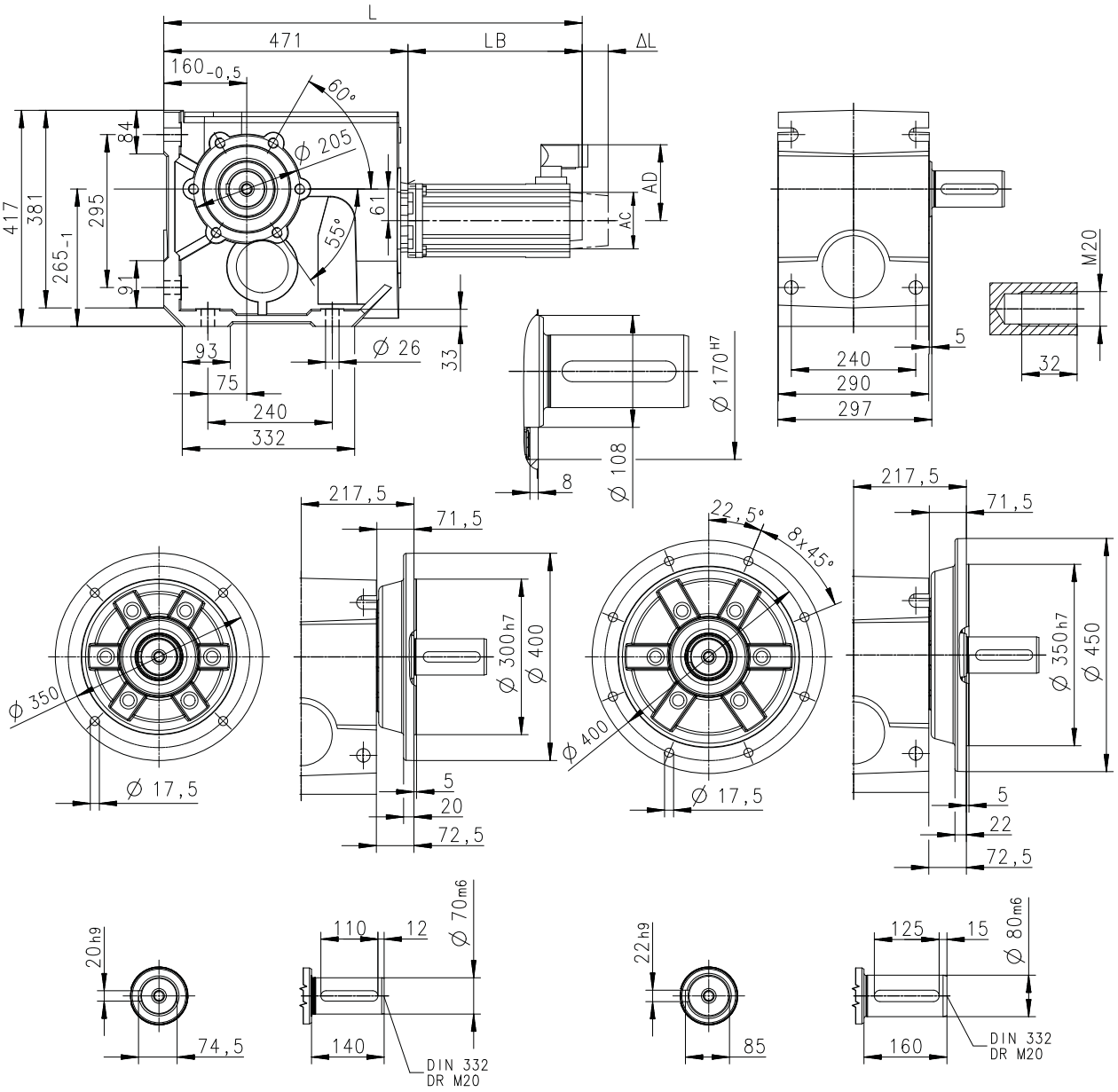
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	993	896	993	896
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B4300 with MCA19

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

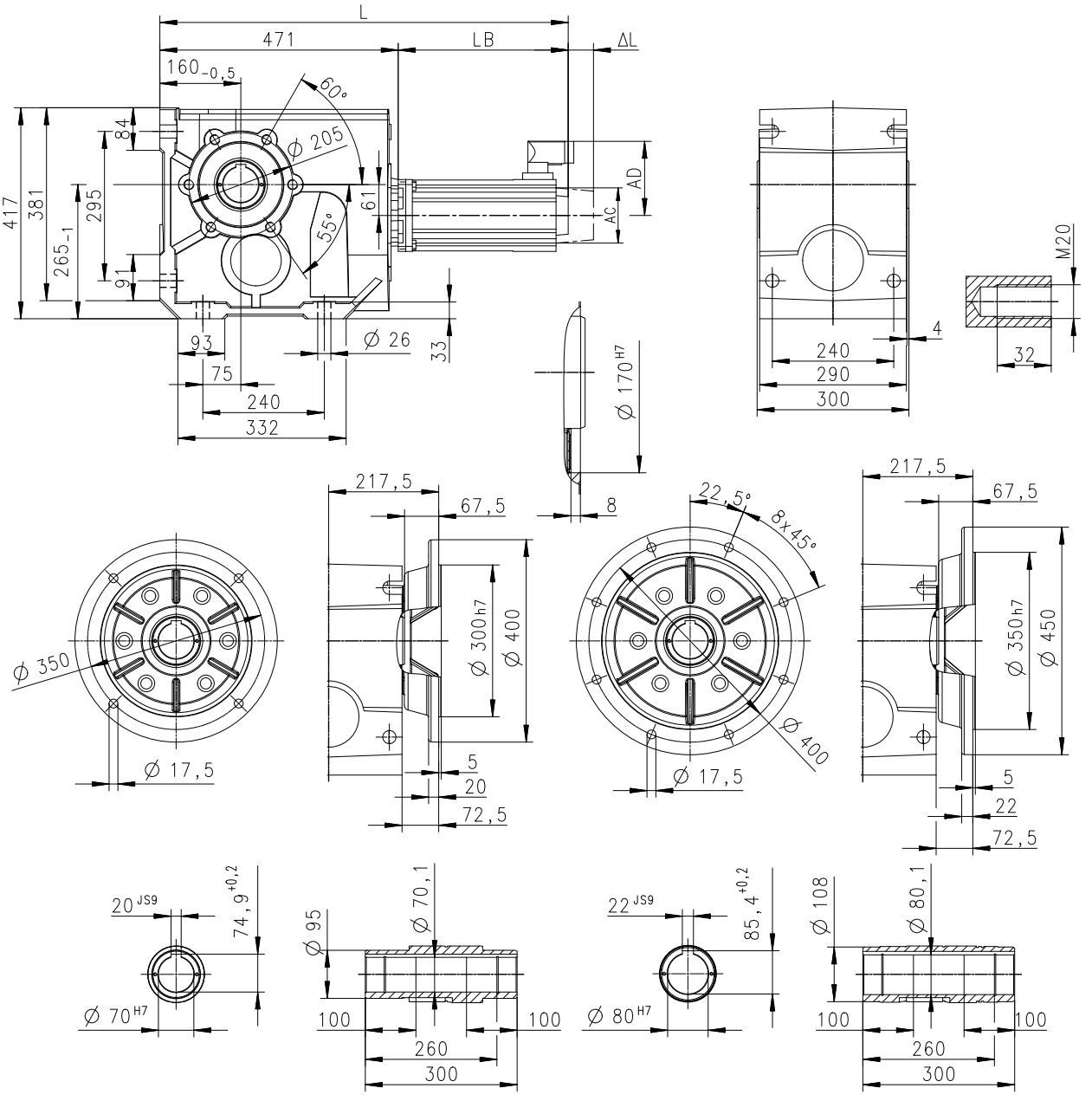


8800582-00

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	993	896	993	896
Motor length	LB	mm	522	425	522	425
Length of motor options	Δ L	mm	88	88	88	88
Motor diameter	AC	mm	192	192	192	192
Motor/connection distance	AD	mm	151	151	151	151

g500-B4300 with MCA21

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

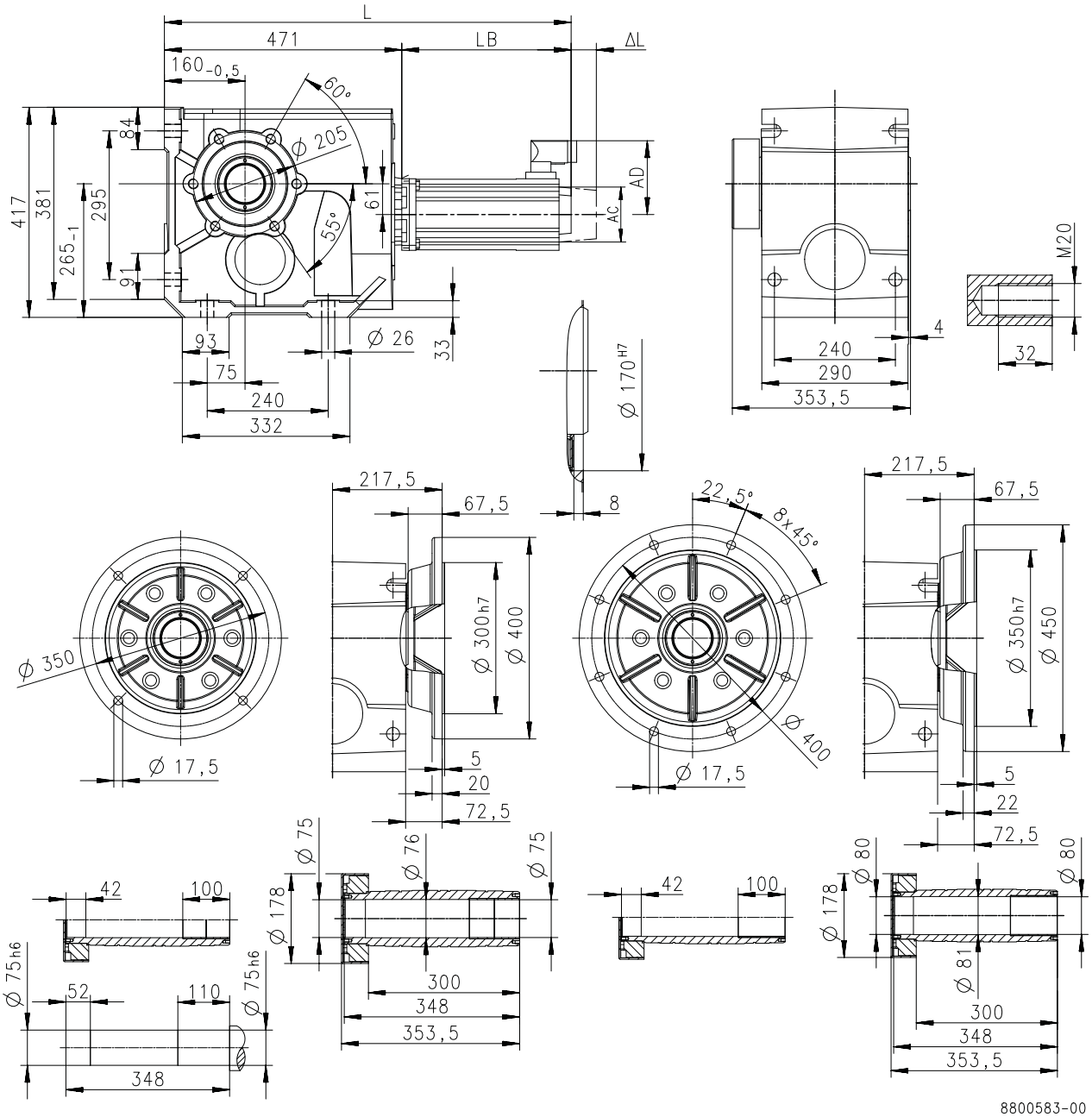


8800581-00

Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	1085	989	1085	989
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B4300 with MCA21

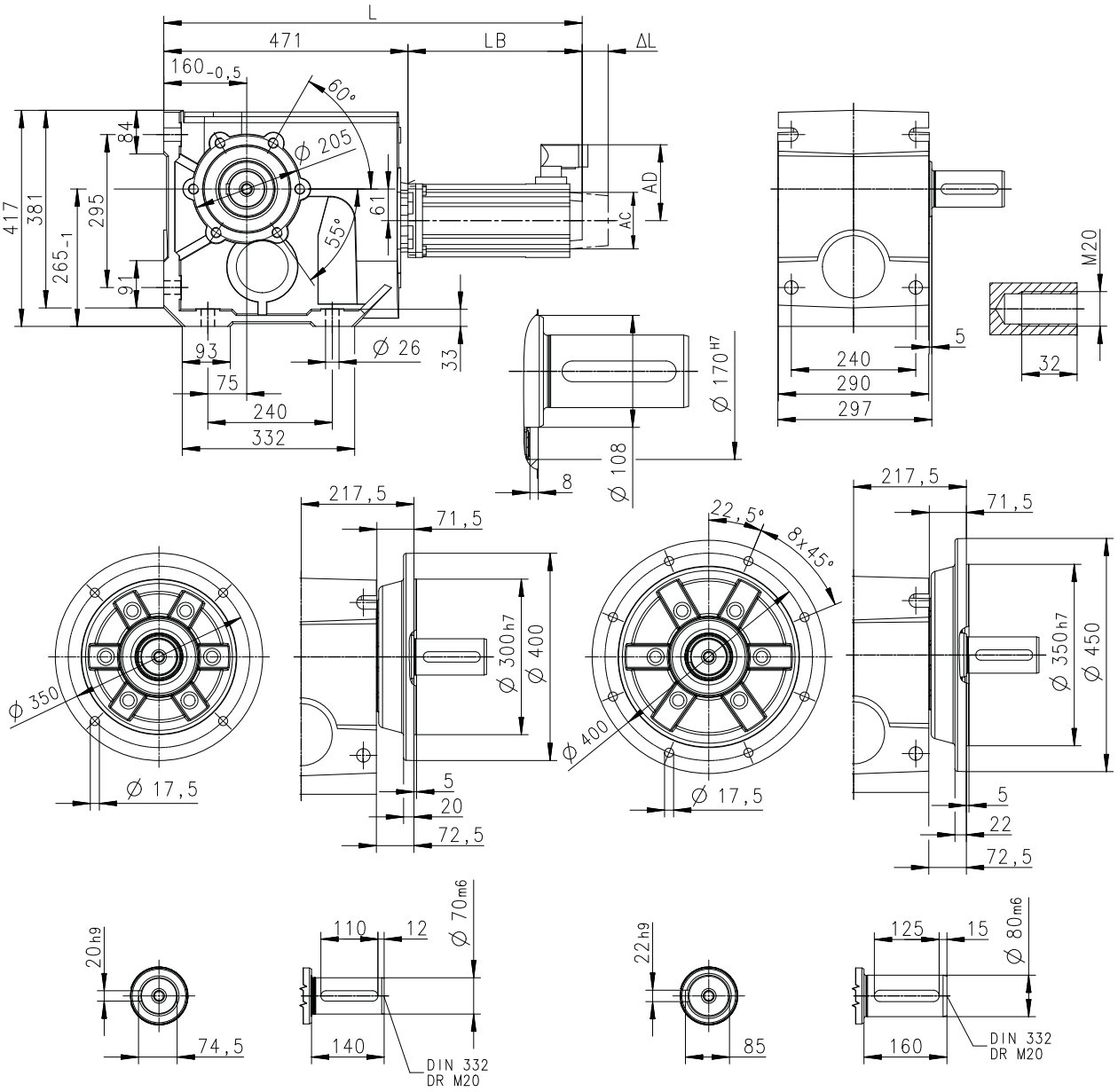
Gearbox design: Hollow shaft with shrink disc, with foot (SAR/SBR/SAK)



Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	1085	989	1085	989
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

g500-B4300 with MCA21

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



8800582-00

Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Total length	L	mm	1085	989	1085	989
Motor length	LB	mm	614	518	614	518
Length of motor options	Δ L	mm	92	92	92	92
Motor diameter	AC	mm	214	214	214	214
Motor/connection distance	AD	mm	162	162	162	162

Additional lengths

The motor code indicates the short designation of the brake and feedback.
Detailed information can be found for

- Product codes 229
- Brakes 222
- Feedback 225

MCA10

Motor			MCA
			10I40-
Cooling type			**Natural**
Feedback (without brake B0)			
R☐0	Δ L	mm	0
SR☐ / T20 / E☐☐	Δ L	mm	54
Brake (P1/P2) and feedback			
R☐0 / C40	Δ L	mm	25
SR☐ / T20 / E☐☐	Δ L	mm	78

MCA13

Motor			MCA	
			13I34-	13I41-
Cooling type			**Forced**	**Natural**
Feedback (without brake B0)				
R☐0	Δ L	mm	0	0
SR☐ / T20 / E☐☐	Δ L	mm	54	54
Brake (P1/P2) and feedback				
R☐0 / C40	Δ L	mm	35	35
SR☐ / T20 / E☐☐	Δ L	mm	90	90

MCA14

Motor			MCA			
			14L16-	14L20-	14L35-	14L41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Feedback (without brake B0)						
R☐0	Δ L	mm	0	0	0	0
SR☐ / T20 / E☐☐	Δ L	mm	55	55	55	55
Brake (P1/P2) and feedback						
R☐0	Δ L	mm	33	33	33	33
SR☐ / T20 / E☐☐	Δ L	mm	89	89	89	89

MCA17

Motor			MCA			
			17N17-	17N23-	17N35-	17N41-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Feedback (without brake B0)						
R☐0	Δ L	mm	0	0	0	0
SR☐ / T20 / E☐☐	Δ L	mm	54	54	54	54
Brake (P1/P2) and feedback						
R☐0	Δ L	mm	35	35	35	35
SR☐ / T20 / E☐☐	Δ L	mm	90	90	90	90

MCA19

Motor			MCA			
			19S17-	19S23-	19S35-	19S42-
Cooling type			Forced	Natural	Forced	Natural
Feedback (without brake B0)						
R☐0	Δ L	mm	0	0	0	0
SR☐ / T20 / E☐☐	Δ L	mm	50	50	50	50
Brake (P1/P2) and feedback						
R☐0	Δ L	mm	38	38	38	38
SR☐ / T20 / E☐☐	Δ L	mm	88	88	88	88

MCA21

Motor			MCA			
			21X17-	21X25-	21X35-	21X42-
Cooling type			Forced	Natural	Forced	Natural
Feedback (without brake B0)						
R☐0	Δ L	mm	0	0	0	0
SR☐ / T20 / E☐☐	Δ L	mm	49	49	49	49
Brake (P1/P2) and feedback						
R☐0	Δ L	mm	42	42	42	42
SR☐ / T20 / E☐☐	Δ L	mm	92	92	92	92

Weights

Basic weights

2-stage gearboxes

Geared motor			MCA						
			10I40-	13I34-	13I41-	14L16-	14L20-	14L35-	14L41-
			Cooling						
			Natural	Forced	Natural	Forced	Natural	Forced	Natural
g500-B110	m	kg	12	17	16				
g500-B240	m	kg	16	22	20	27	25	27	25

3-stage gearboxes

Geared motor			MCA									
			10I40-	13I34-	13I41-	14L16-	14L20-	14L35-	14L41-	17N17-	17N23-	17N35-	17N41-
			Cooling										
			Natural	Forced	Natural	Forced	Natural	Forced	Natural	Forced	Natural	Forced	Natural
g500-B240	m	kg	16										
g500-B450	m	kg	19	25	23	30	29	30	29	39	36	39	36
g500-B600	m	kg	37	43	41	48	47	48	47	57	54	57	54
g500-B820	m	kg	42	48	47	54	52	54	52	62	60	62	60
g500-B1500	m	kg	73	78	77	84	82	84	82	92	90	92	90
g500-B2700	m	kg				125	123	125	123	134	131	134	131
g500-B4300	m	kg				187	185	187	185	196	193	196	193

Geared motor			MCA							
			19S17-	19S23-	19S35-	19S42-	21X17-	21X25-	21X35-	21X42-
			Cooling							
			Forced	Natural	Forced	Natural	Forced	Natural	Forced	Natural
g500-B450	m	kg	66	62	66	62				
g500-B600	m	kg	84	81	84	81				
g500-B820	m	kg	89	86	89	86				
g500-B1500	m	kg	119	116	119	116	136	133	136	133
g500-B2700	m	kg	161	157	161	157	178	174	178	174
g500-B4300	m	kg	223	219	223	219	240	236	240	236

Additional weights

Gearbox

Gearbox			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

Gearbox			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

Motors

Motor			MCA10	MCA13	MCA14	MCA17	MCA19	MCA21
Permanent magnet holding brake								
Increased braking torque	m	kg	0.8	1.5	2.4	2.4	4.8	5.0

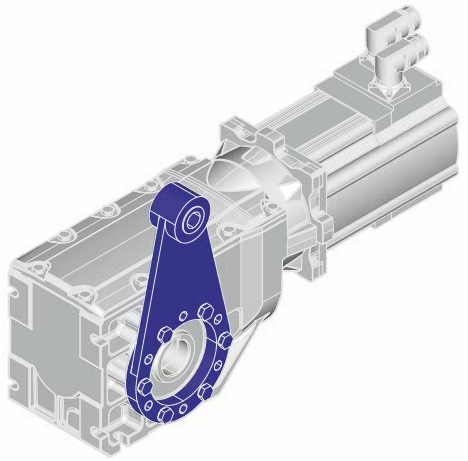
Product extensions

Torque plates

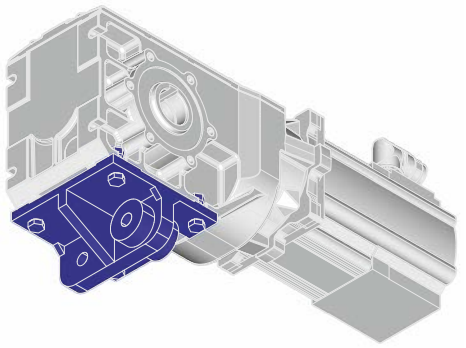
The torque support is usually effected by means of the foot or flange. The torque plates that can be fitted are another possibility. In this case, the torque support is provided only via one point and is suitable for shaft-mounted gearboxes, among other things. Supplied rubber buffers ensure a stress-free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

Versions

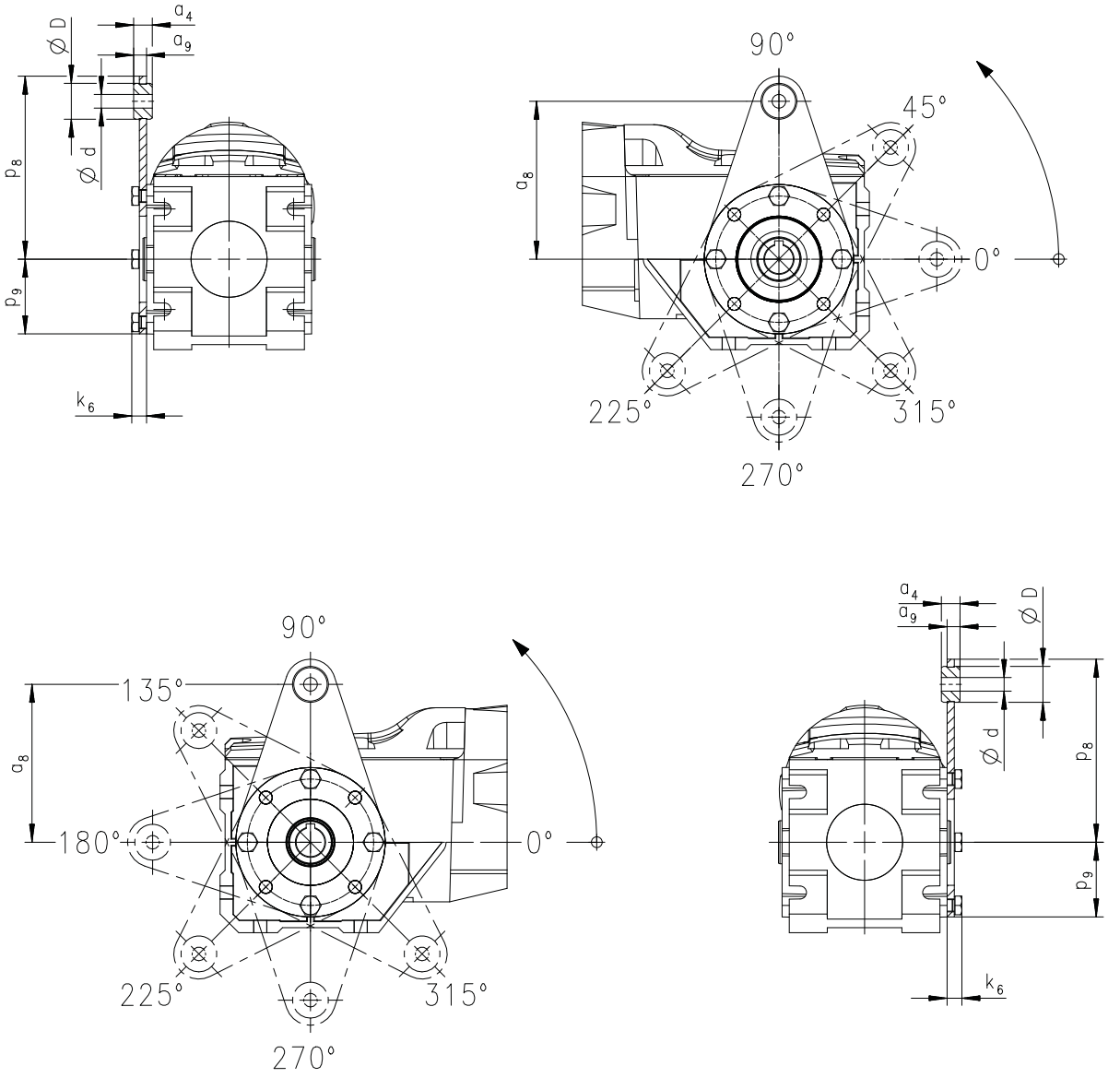


Torque plate on threaded pitch circle



Torque plate at housing foot

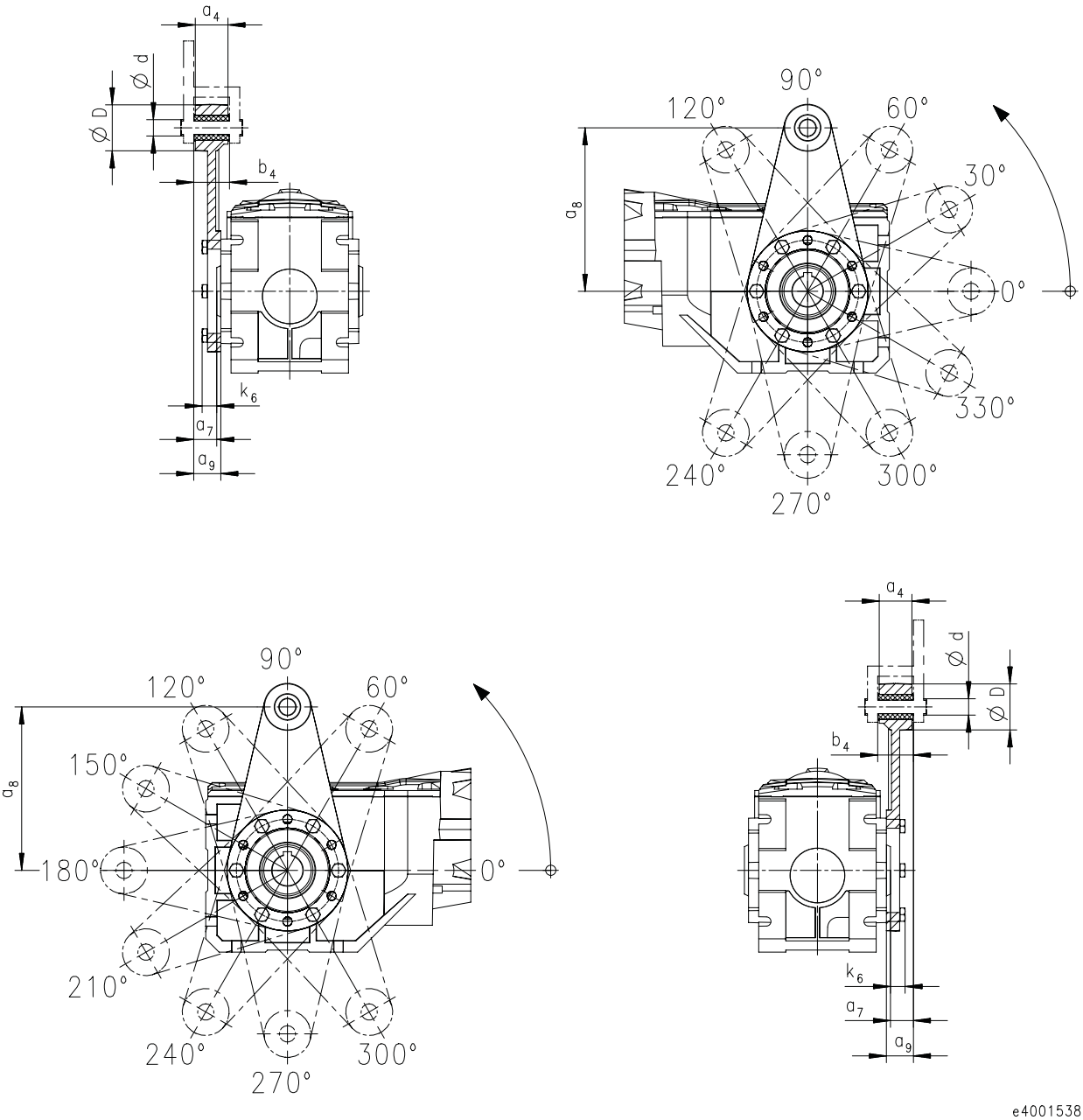
Torque plate on threaded pitch circle
g500-B45 ...B110



e4001537-00

Gearbox	Dimensions								Mass
	a_4	a_8	a_9	d	D	p_8	p_9	k_6	m
	mm	mm	mm	mm	mm	mm	mm	mm	kg
g500-B45	12.0	100	8.0	8.0	20.0	115	42.0	9.0	0.3
g500-B110	13.0	110	9.0	10.0	25.0	128	54.0	11.0	0.5

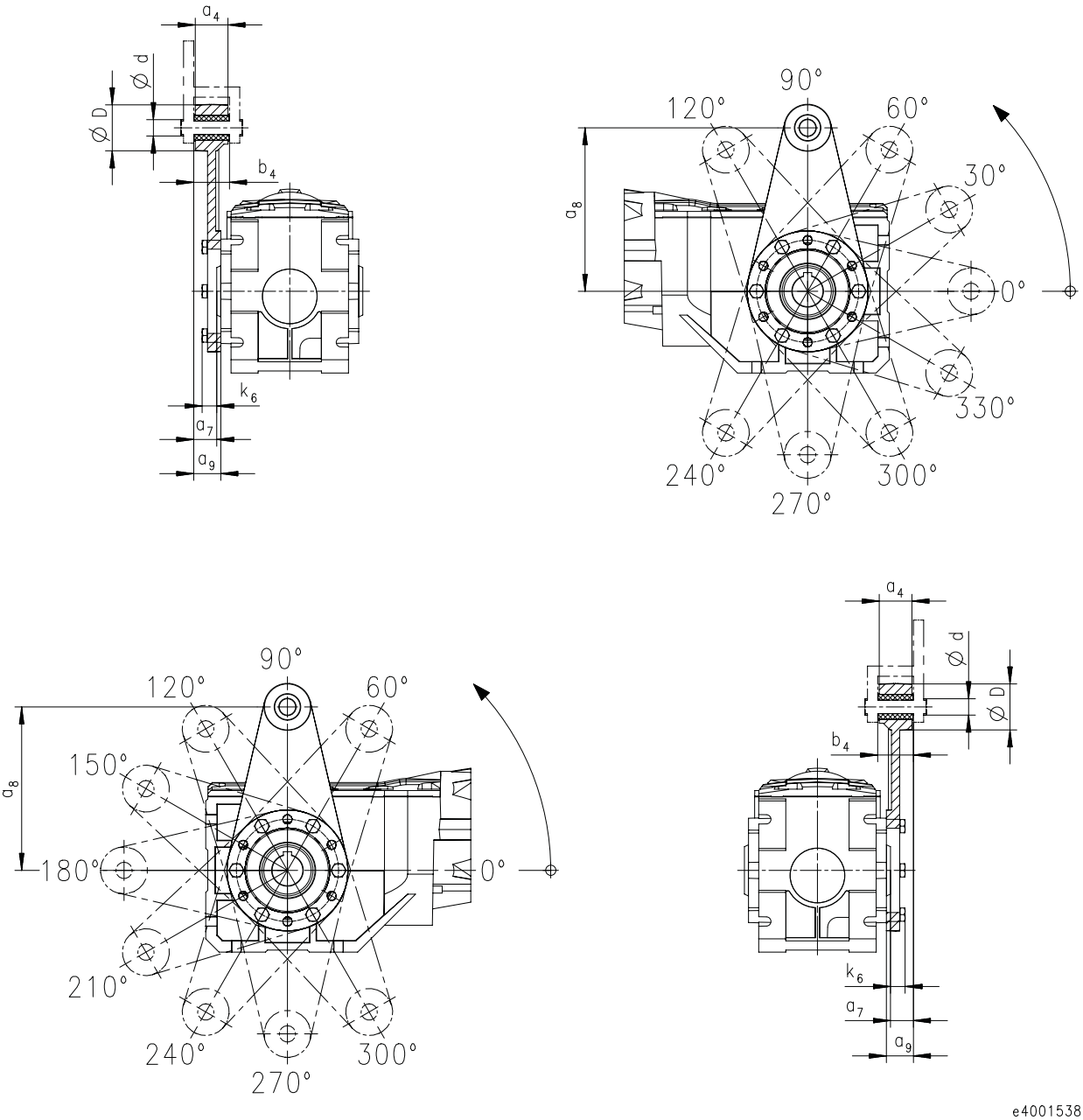
g500-B240 ... B450



e4001538-00

Gearbox	Dimensions								Mass
	a_4	a_7	a_8	a_9	b_4	d	D	k_6	m
	mm	mm	mm	mm	mm	mm	mm	mm	kg
g500-B240	34.0	23.5	160	27.5	38.5	16.0	45.0	15.0	1.3
g500-B450	40.0	29.0	200	32.0	44.5	20.0	50.0	18.0	2.5
g500-B600	38.0	26.5	200	31.5	40.0	20.0	50.0	19.0	2.5

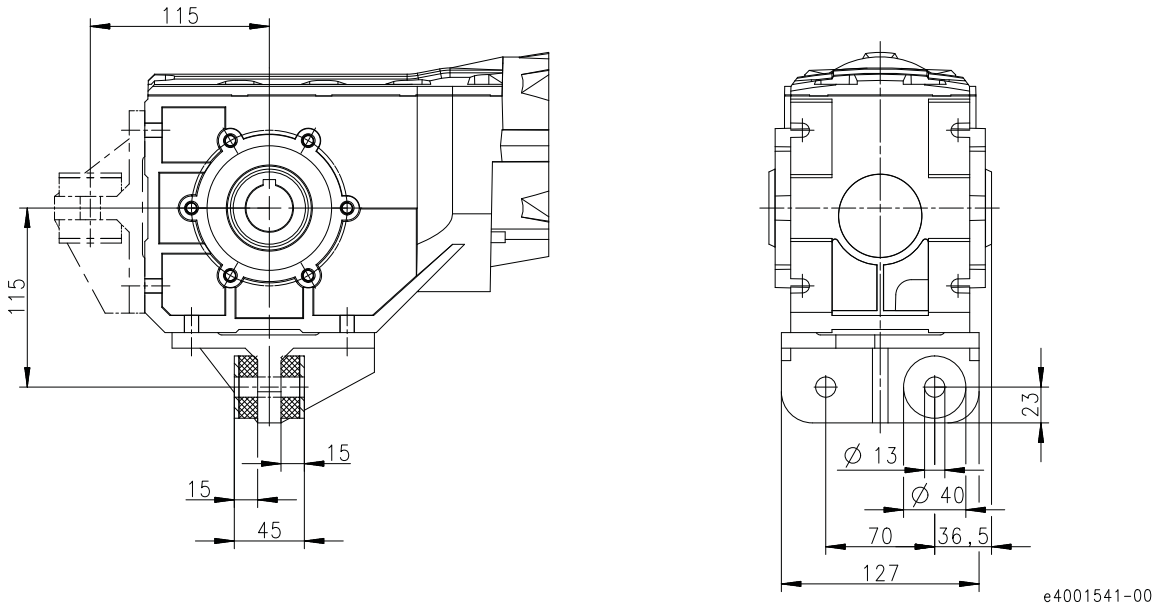
g500-B820 ... B1500



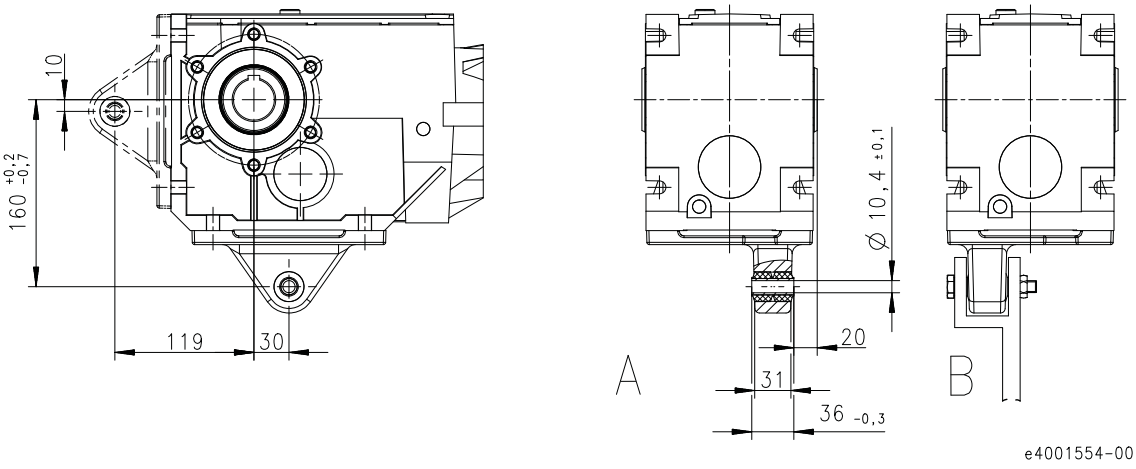
e4001538-00

Gearbox	Dimensions								Mass
	a_4	a_7	a_8	a_9	b_4	d	D	k_6	m
	mm	mm	mm	mm	mm	mm	mm	mm	kg
g500-B820	38.0	28.0	200	31.5	40.0	20.0	50.0	20.5	2.5
g500-B1500	44.0	32.0	250	36.0	46.0	25.0	65.0	24.0	4.5

Torque plate at housing foot
g500-B240

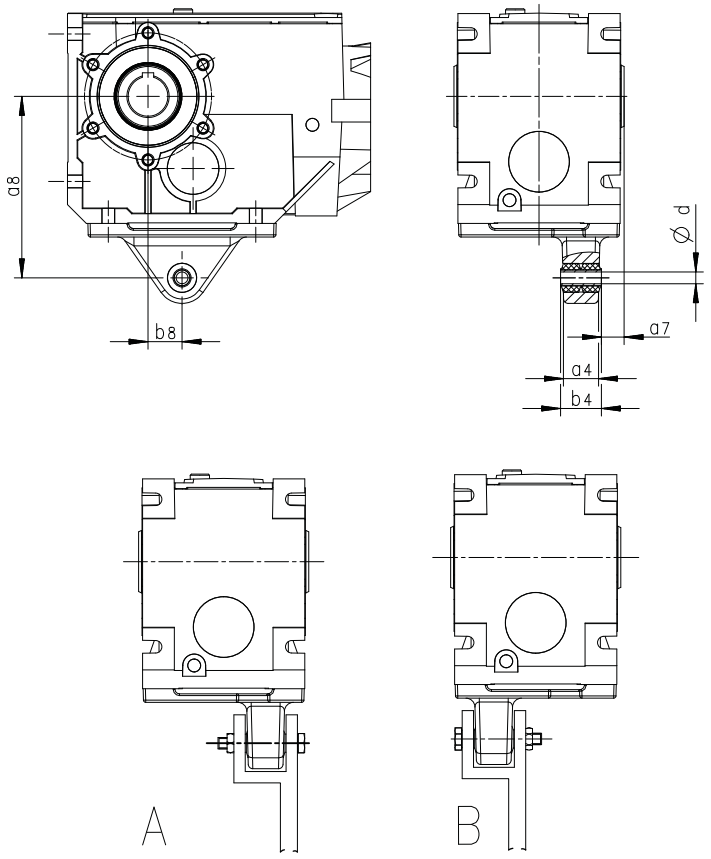


g500-B450



Gearbox	Mass
	m
	kg
g500-B240	2.4
g500-B450	1.1

g500-B600 ... B4300



e4002718-00.001

Gearbox	Dimensions						Mass
	d	a_8	b_8	a_4	b_4	a_7	m
	mm	mm	mm	mm	mm	mm	kg
g500-B600	16.4	192	40.0	55.0	60.0	18.0	2.8
g500-B820	16.4	200	45.0	55.0	60.0	25.0	3.0
g500-B1500	16.4	250	52.5	55.0	60.0	25.0	4.3
g500-B2700	25.0	300	60.0	72.0	80.0	30.0	10.0
g500-B4300	25.0	350	70.0	92.0	100	40.0	13.0

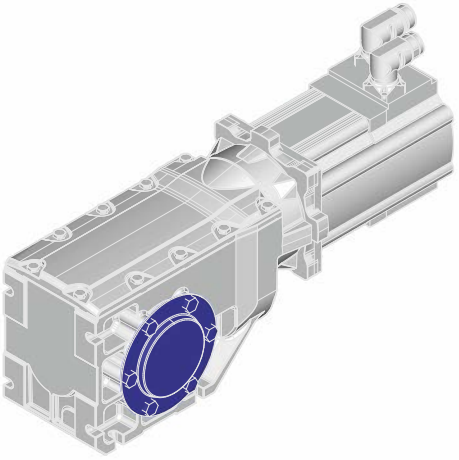
Shaft covers

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.

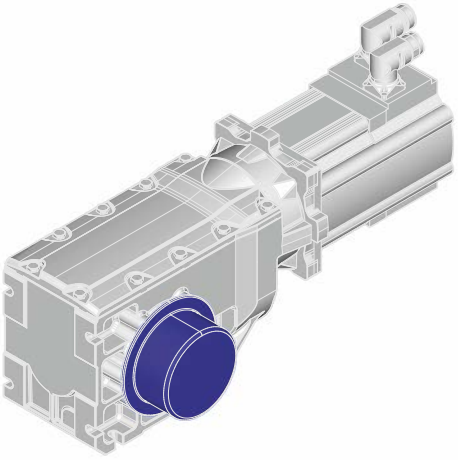
The cover is loosely enclosed and can be mounted on both sides of the hollow shaft bore.

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

Versions

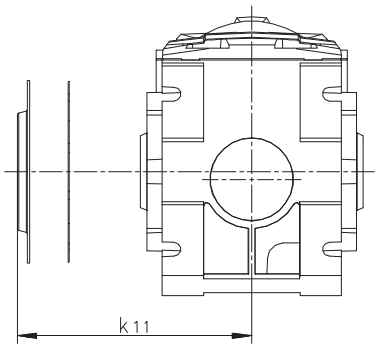


Hoseproof hollow shaft cover



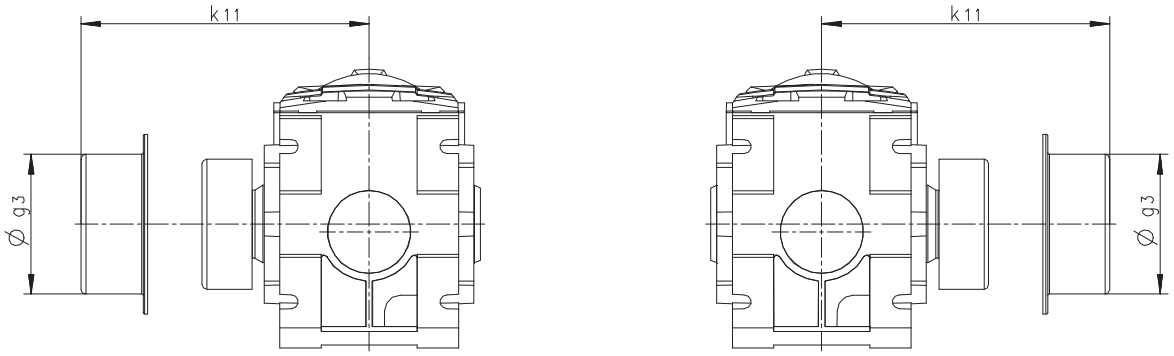
Shrink disc cover

Hoseproof hollow shaft cover
g500-B45 .... B4300



Product	Dimensions	Mass
	k_{11}	m
	mm	kg
g500-B45	55.0	0.1
g500-B110	65.0	0.1
g500-B240	75.0	0.1
g500-B450	79.5	0.2
g500-B600	90.0	0.3
g500-B820	97.0	0.3
g500-B1500	113	0.6
g500-B2700	131	0.6
g500-B4300	161	0.8

Shrink disc cover
g500-B45 ... B4300



Product	Dimensions		Mass
	g3	k11	m
	mm	mm	kg
g500-B45	65.0	87.5	0.1
g500-B110	79.0	97.5	0.1
g500-B240	90.0	111	0.1
g500-B450	90.0	108	0.1
g500-B600	110	124	0.1
g500-B820	110	131	0.1
g500-B1500	128	148	0.2
g500-B2700	155	171	0.3
g500-B4300	188	205	0.4

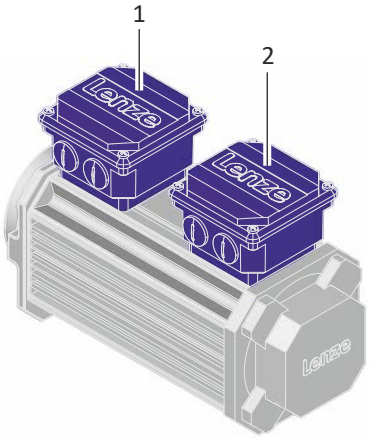
Motor connection

Connection via terminal box

If a motor is to be connected to an existing cable or plug connectors are not to be used for other reasons, the connection can also be made via a terminal box.

The terminals are designed as tension spring terminals to ensure here the long-term vibration resistance of the cable contacts with adequate contact pressure required.

Position of the connections



Position	Meaning
1	Power connection Brake connection PE connection
2	Feedback connection Connection of temperature monitoring Blower connection

Cable glands MCA10 ... 19/21

The openings for the cable glands are closed with plugs and arranged on one side. If required, the terminal box can be rotated step by step by 90 ° after loosening the screws in the terminal box.

Motor		MCA10 MCA13	MCA14 MCA17	MCA19 MCA21
Screwed connections		2x M20 x 1.5		1x M32 x 1.5 1x M25 x 1.5
cable cross-section	mm^2	0.08 ... 2.5		0.2 ... 10
Stripping length	mm	10 ... 11		
Terminal design		Spring-loaded terminal		

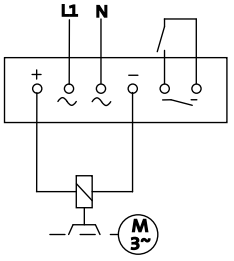
Power connection

Contact	Name	Meaning
PE	PE	PE conductor
V	V	Motor winding phase U
V	V	Motor winding phase V
W	W	Motor winding phase W

DC brake connection

Contact	Name	Meaning
BD1	+	Brake +
BD2	-	Brake -

Connection of brake AC

Connection via rectifiers			
Contact	**Name**	**Meaning**	
~	BA1	Mains L1	
~	BA2	Mains N	
+	BD1	Holding brake + (factory-wired)	
-	BD2	Holding brake - (factory-wired)	
		Switching contact - DC switching	

Feedback connection

Resolver		
Contact	**Name**	**Meaning**
B1	+Ref	Transformer windings (reference windings)
B2	-Ref	
B3	+VCC ETS	Power supply: electronic nameplate (Only for model with electronic nameplate ETS)
B4	+COS	Cosine stator winding
B5	-COS	
B6	+SIN	Sine stator winding
B7	-SIN	
B8		Not assigned

Incremental encoder Sin/Cos absolute value encoder with Hiperface		
Contact	**Name**	**Meaning**
B1	+ UB	Supply +
B2	GND	Mass
B3	A	Track A/+COS
B4	A^-	Track A inverse/-COS
B5	B	Track B/+SIN
B6	B^-	Track B inverse/-SIN
B7	Z	Zero track/+RS485
B8	Z^-	Zero track inverse/-RS485

Sin/Cos absolute value encoder with EnDat interface		
Contact	**Name**	**Meaning**
B1	+ UB	Supply + / supply: electronic nameplate (only for model with electronic nameplate ETS)
B2	GND	Mass
B3	A	Track A/+COS
B4	A^-	Track A inverse/-COS
B5	B	Track B/+SIN
B6	B^-	Track B inverse/-SIN
B7	Data	EnDat interface data
B8	$Data^-$	Data inverse EnDat interface
B20	Cycle	EnDat interface cycle
B21	$Cycle^-$	Inverse EnDat interface cycle
B22	U_P sensor	U_P sensor
B23	0 V sensor	0 V sensor
B24	Shield	Encoder housing shield
B25		not assigned

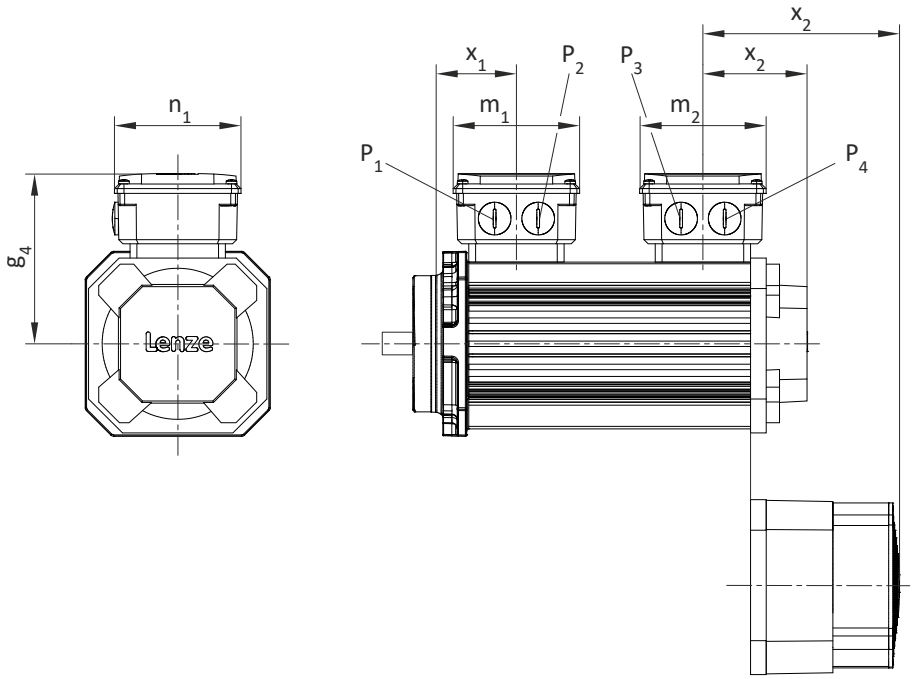
Blower connection

1-phase		
Contact	**Name**	**Meaning**
PE	PE	PE conductor
U1	L1	Mains connection
U2	N	

Connection of temperature monitoring

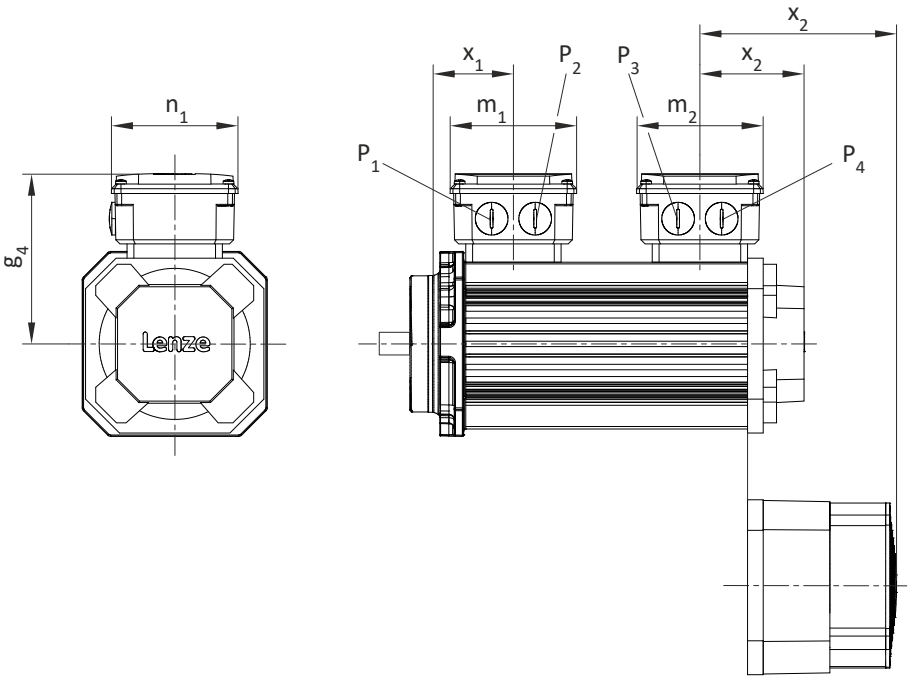
Contact	Name	Meaning
R1	+	Thermal detector +
R2	-	Thermal detector -

Terminal box dimensions MCA10 ... 17



Motor			MCA						
			10I40-	13I34-	13I41-	14L16- 14L35-	14L20- 14L41-	17N17- 17N35-	17N23- 17N41-
Cooling type			**Natural**	**Forced**	**Natural**	**Forced**	**Natural**	**Forced**	**Natural**
Motor/connection distance	g_4	mm	113	125		133		141	
Power connection, brake									
Screwed connections	P_1	mm	M20x1.5						
	P_2	mm	M20x1.5						
Terminal box	m_1	mm	93						
	n_1	mm	93						
	x_1		51	54		69		72	
Feedback connection, temperature monitoring									
Screwed connections	P_3	mm	M20x1.5						
	P_4	mm	M20x1.5						
Terminal box	m_2	mm	93						
	n_1	mm	93						
Resolver	x_2	mm	78	145	77	147	85	171	85
Absolute value encoder/incremental encoder	x_2	mm	132	199	131	202	140	225	139

Terminal box dimensions MCA19/21



Motor			MCA			
			19S17-	19S23-	21X17-	21X25-
			19S35-	19S42-	21X35-	21X42-
Cooling type			**Forced**	**Natural**	**Forced**	**Natural**
Motor/connection distance	g_4	mm	158		169	
Powe connection, brake						
Screwed connections	P_1	mm	M25x1.5			
	P_2	mm	M32x1.5			
Terminal box	m_1	mm	115			
	n_1	mm	115			
	x_1		88		118	
Feedback connection, temperature monitoring						
Screwed connections	P_3	mm	M20x1.5			
	P_4	mm	M20x1.5			
Terminal box	m_2	mm	115			
	n_1	mm	115			
Resolver	x_2	mm	190	93	193	97
Absolute value encoder/incremental encoder	x_2	mm	240	143	243	147

Connection via ICN connector

The electrical connection to the servo motors as a standard is established via ICN connectors.

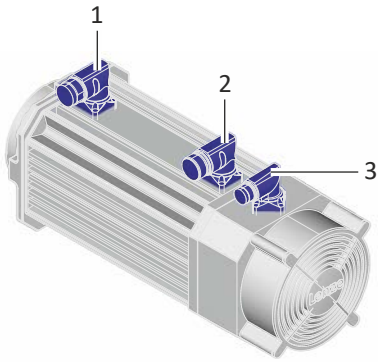
The connector can be rotated by 270 ° and are provided with a bayonet catch for SpeedTec connectors. Since the catch of the connector is compatible with conventional box nuts, existing counter plugs with a screw plug can be continued to use without any problems.

In order to provide for a quick and error-free connection of Lenze motors to Lenze inverters, we recommend using prefabricated Lenze system cables. In this way, proper functioning and the compliance with statutory provisions such as EMC, UL, etc. are ensured.

The use of different cables may cause unexpected faults and may void the warranty.

Position of the connections

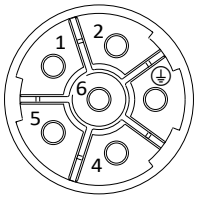
Each connection is made via a separate connector



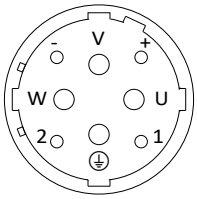
Position	Meaning
1	Power connection Brake connection PE connection
2	Feedback connection Connection of temperature monitoring
3	Blower connection

Power and brake connection

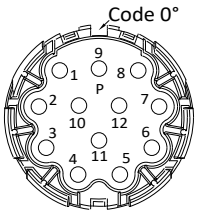
Valid for MCA10 ... 17

ICN-M23 connector assignment 6-pole			
Contact	**Name**	**Meaning**	
1	BD1	Holding brake +	
2	BD2	Holding brake -	
PE	PE	PE conductor	
4	U	Power phase U	
5	V	Power phase V	
6	W	Power phase W	

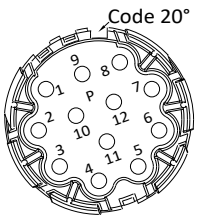
Valid for MCA19 ... 21

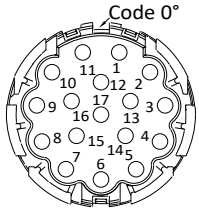
ICN-M40 connector assignment 8-pole			
Contact	**Name**	**Meaning**	
1		Not assigned	
2		Not assigned	
+	BD1	Holding brake +	
-	BD2	Holding brake -	
PE	PE	PE conductor	
V	V	Power phase U	
V	V	Power phase V	
W	W	Power phase W	

Feedback and temperature monitoring connection

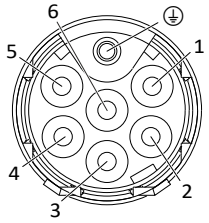
ICN-M23 connector assignment Resolver			
Contact	**Name**	**Meaning**	
1	+Ref	Transformer windings	
2	-Ref		
3	+VCC ETS	Power supply: electronic nameplate	
4	+COS	Stator windings cosine	
5	-COS		
6	+SIN	Stator windings Sine	
7	-SIN		
8		Not assigned	
9			
10	Shield	Encoder housing shield	
11	+	Temperature monitoring: KTY/PT1000	
12	-		

Contact 3: only for motors and inverters which support this function.

ICN-M23 connector assignment Incremental and SinCos absolute value encoder Hiperface			
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	Shield	Encoder housing shield	
11	+	Temperature monitoring: KTY/PT1000	
12	-		

Pin assignment ICN-M23 SinCos absolute value encoder with EnDat interface			
Contact	**Name**	**Meaning**	
1	UP sensor	Supply: UP sensor	
2		Not assigned	
3		Not assigned	
4	0 V sensor	Supply: 0 V sensor	
5	+	Temperature monitoring: KTY/PT1000	
6	-		
7	+ UB	Supply +	
8	Cycle	EnDat interface cycle	
9	Cycle¯	EnDat interface inverse cycle	
10	GND	Mass	
11	Shield	Encoder housing shield	
12	B	Track B	
13	B¯	Track B inverse/-SIN	
14	Data	EnDat interface data	
15	A	Track A	
16	A¯	Track A inverse	
17	Data¯	Inverse EnDat interface data	

Blower connection

Pin assignment ICN-M17 Single−phase			
Contact	**Name**	**Meaning**	
PE	PE	PE conductor	
1	U1	Fan	
2	U2		
3		Not assigned	
4			
5			
6			

Brakes

Optionally, the motors can be ordered with a permanent magnet brake as holding brake.

⚠CAUTION!

They may not be used as safety elements (particularly with hoist axes) without additional measures being implemented.

The brakes used are not fail-safe brakes in the sense that prospective disruptive factors, e.g. oil ingress, can lead to a reduction in torque!

- The brakes must only be used as holding brakes for holding the axes at a standstill or in the deenergised state.
- The brake must not be used as a service brake.

⚠CAUTION!

If no suitable voltage (incorrect value, incorrect polarity) is applied to the brake, the brake will be applied and can be overheated and destroyed by the motor continuing to rotate.

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:

$$U[V] = U_B[V] + 0.08\frac{[V]}{[A]\times[m]} \times l_{Lg}[m] \times I_B[A]$$

V	V	Resulting supply voltage
U_B	V	Rated voltage of the brake
l_{Lg}	m	Cable length
I	A	Rated current of the brake

NOTICE

- The brakes become active when the supply voltage has been switched off (closed-circuit principle).
- When using the brakes purely as holding brakes, virtually no wear occurs on the friction surfaces.
- The friction surfaces must always be free from oil and grease because even small amounts of grease or oil will considerably reduce the braking torque.

NOTICE

In case of these permanent magnet brakes, the rated torque applies solely as holding torque at standstill.

- Emergency stops at higher speeds are possible but high switching energy increases wear on the friction surfaces and the hub.
- During braking from full motor speed, e .g. in the event of emergency stops, the braking torque is significantly reduced.

NOTICE

In case of travel axes, the compliance of the permissible ratio of mass inertia load/brake motor (J_L/J_{MB}) ensures that the permissible maximum switching energy of the brake will not be exceeded and at least the values given for the emergency stop functions from the given speed (see rated data) are applied.

For hoist axes, the load torque resulting from the weight acts additionally. In this case, the specifications for (J_L/J_{MB}) do not apply.

To simplify matters, the friction energy per switching cycle can be calculated using the formula below and must not exceed the limit value for emergency stops, which depends on the switching rate:

$$Q = \frac{1}{2} \times J_{ges} \times \left(2\pi \times \frac{\Delta n}{60} \right)^2 \times \frac{M_N}{M_N - M_L}$$

Q	J	Friction energy
J_{total}	kgm^2	Total mass inertia (motor + load)
Δn	rpm	Differential speed
M_N	Nm	Rated torque of the brake
M_L	nM	Load torque

The shortest operating times of the brakes are achieved by DC switching of the voltage and an external suppressor circuit (varistor or spark suppressor).

Without suppressor circuit, the operating times may increase. A varistor/ spark suppressor limits the breaking voltage peaks. It must be ensured that the power limit of the suppressor circuit is not exceeded. This limit depends on the brake current, brake voltage, disengagement time and the switching operations per time unit.

Furthermore the suppressor circuit is necessary for interference suppression and for increasing the service life of the relay contacts (external, is not integrated into the motor).

It is not possible to readjust the brake.

Permanent magnet brakes

Rated data

Engagement and disengagement times apply to rated voltage (± 0 %) and suppressor circuit of the brakes with a varistor with DC switching. Without a suppressor circuit, the times may be longer.

The currents are the maximum values when the brake is cold (value used for dimensioning the current supply). The values for a motor at operating temperature are considerably lower.

With 24 V DC brake: smoothed DC voltage, ripple ≤ 1 %.

With 205 V DC brake: connection to 230 V AC via external rectifier (no cURus possible).

Maximum switching energy per emergency stop with n= 3000 rpm for at least 2000 emergency stops.

Rated data with increased braking torque

DC 24 V, motor code= P2

Motor			MCA10I	MCA13I	MCA14L	MCA17N	MCA19S	MCA21X
Supply voltage range	$U_{in,DC}$	V	21.6 ... 25.2					
Rated voltage	$U_{N,DC}$	V	24					
Rated torque								
At 20 °C	M_N	Nm	6.00	15.0	23.0	23.0	48.0	88.0
At 120 °C	M_N	Nm	5.00	12.0	20.0	20.0	40.0	80.0
Rated current	I_N	A	0.67	0.75	0.92	0.92	1.46	1.46
Engagement time	t_1	ms	20.0	13.0	18.0	18.0	30.0	53.0
Disengagement time	t_2	ms	29.0	30.0	55.0	55.0	100	97.0
Maximum switching energy	Q_E	J	400	700	1350	1350	2800	2800
Mass	m	kg	0.80	1.50	2.40	2.40	4.80	5.00
Moment of inertia								
Brake	J	$kgcm^2$	1.06	3.60	9.50	9.50	31.8	31.8
Brake motor	J_{MB}	$kgcm^2$	3.46	11.9	22.8	45.5	104	212
Load/brake motor ratio	J_L/J_{MB}		22.4	8.40	6.60	5.00	4.50	1.70

Motor			MCA10I	MCA13I	MCA14L	MCA17N	MCA19S	MCA21X
Supply voltage range	$U_{in,DC}$	V	184.5 ... 215.2					
Rated voltage	$U_{N,DC}$	V	205					
Rated torque								
At 20 °C	M_N	Nm	6.00	15.0	23.0	23.0	48.0	88.0
At 120 °C	M_N	Nm	5.00	12.0	20.0	20.0	40.0	80.0
Rated current	I_N	A	0.80	0.090	0.12	0.12	0.18	0.18
Engagement time	t_1	ms	20.0	13.0	18.0	18.0	30.0	53.0
Disengagement time	t_2	ms	29.0	30.0	55.0	55.0	100	97.0
Maximum switching energy	Q_E	J	400	700	1350	1350	2800	2800
Mass	m	kg	0.80	1.50	2.40	2.40	4.80	5.00
Moment of inertia								
Brake	J	$kgcm^2$	1.06	3.60	9.50	9.50	31.8	31.8
Brake motor	J_{MB}	$kgcm^2$	3.46	11.9	22.8	45.5	104	212
Load/brake motor ratio	J_L/J_{MB}		22.4	8.40	6.60	5.00	4.50	1.70

Feedback

For speed control with a servo inverter, the servo motor can be equipped with the following feedback systems:

Feedback	Inverter			
	Connectable			Supports safety functions
	i700	E84AVTC	E94A	E94A
Resolver				
RS0	i700	E84AVTC	E94A	
RV03	i700	E84AVTC	E94A	E94A
Incremental encoder				
IG1024-5V-V3		E84AVTC	E94A	E94A
IG2048-5V-S		E84AVTC	E94A	
IG2048-5V-T		E84AVTC	E94A	
IG4096-5V-T		E84AVTC	E94A	
Absolute value encoder				
AM32-5V-E			E94A	
AM1024-8V-H		E84AVTC	E94A	
AM2048-5V-E			E94A	
AS1024-8V-H		E84AVTC	E94A	
AS2048-5V-E			E94A	

Safety engineering

Servo 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 IEC 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, 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) of motion
- Operation mode selector (OMS) with confirmation (ES)
- Safe speed monitor (SSM)
- Safely limited increment (SLI)

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			**RS0**	**RV03**
Motor code			**RS0**	**RV03**
Speed-dependent safety functions			No	Yes
Resolution				
Angle		'	0.80	
Accuracy		'	-10 ... 10	
Absolute positioning			1 revolution	
Max. speed	n_{max}	rpm	8000	
Max. input voltage				
DC	$U_{in,max}$	V	10.0	
Max. input frequency	$f_{in,max}$	kHz	4.00	
Ratio				
Stator / rotor			0.30 ± 5 %	
Rotor impedance	Z_{ro}	Ω	51 + j90	
Stator impedance	Z_{so}	Ω	102 + j150	
Impedance	Z_{rs}	Ω	44 + j76	
Min. insulation resistance				
With DC 500 V	R_{min}	MΩ	10.0	
Number of pole pairs			1	
Max. angle error		'	-10 ... 10	

Speed-dependent safety functions

Feedback			**RV03**
Motor code			**RV03**
Max. permissible angular acceleration	α	rad/s^2	22000
Functional safety			
IEC 61508			SIL3
EN 13849-1			Up to Performance Level e

Incremental encoder

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

Feedback type		TTL incremental		SinCos incremental	
Feedback		**IG2048-5V-T**	**IG4096-5V-T**	**IG2048-5V-S**	**IG1024-5V-V3**
Motor code		**T20**	**T40**	**S20**	**S1S**
Speed-dependent safety functions		No	No	No	Yes
Encoder type		-	-	Single-turn	Single-turn
Pulses		2048	4096	2048	1024
Output signals		TTL	TTL	1 Vss	1 Vss
Interfaces		A, B, N track and inverted	-	-	-
Absolute revolution		0	0	0	-
Resolution (angle)	'	2.60	1.30	0.40	0.40
Accuracy	'	-2 ... 2	-2 ... 2	-0.8 ... 0.8	-0.8 ... 0.8
Min. DC input voltage	V	4.75	4.75	4.50	4.75
Max. DC input voltage	V	5.25	5.25	5.50	5.25
Max. speed	rpm	8789	8789	5273	8000
Max. current consumption	A	0.15	0.15	0.10	0.070
Limit frequency	kHz	300	300	180	200

Speed-dependent safety functions

Feedback			SinCos incremental
Motor code			**S1S**
Functional safety			
IEC 61508			SIL3
EN 13849-1			Up to Performance Level e

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.

Feedback type		SinCos absolute value				
Feedback		**AM32-5V-E**	**AM1024-8V-H**	**AM2048-5V-E**	**AS1024-8V-H**	**AS2048-5V-E**
Motor code		**EQI**	**SRM**	**EQN**	**SRS**	**ECN**
Speed-dependent safety functions		No	No	No	No	No
Encoder type		Multi-turn	Multi-turn	Multi-turn	Single-turn	Single-turn
Pulses		32	1024	2048	1024	2048
Output signals		1 Vss	1 Vss	1 Vss	1 Vss	1 Vss
Interfaces		EnDat	Hiperface	EnDat	Hiperface	EnDat
Absolute revolution		4096	4096	4096	1	1
Resolution (angle)	'	0.40	0.40	0.40	0.40	0.40
Accuracy	'	-5 ... 5	-0.8 ... 0.8	-0.6 ... 0.6	-0.8 ... 0.8	-0.6 ... 0.6
Min. DC input voltage	V	4.75	7.00	4.75	7.00	4.75
Max. DC input voltage	V	5.25	12.0	5.25	12.0	5.25
Max. speed	rpm	12000	6000	12000	6000	12000
Max. current consumption	A	0.17	0.080	0.25	0.080	0.15
Limit frequency	kHz	600	200	200	200	200

Blower

The forced ventilation motors are cooled as a standard by means of a separate axial fan.

Rated data 50 Hz

Motor		MCA13I34-	MCA14L16- MCA14L35-	MCA17N17- MCA17N35-	MCA19S17- MCA19S35-	MCA21X17- MCA21X35-
Degree of protection		IP54				
Number of phases		1				
Rated voltage AC	V	230				
Min. AC mains voltage	V	210				
Max. AC mains voltage	V	240				
Rated power	kW	0.019	0.019	0.040	0.040	0.060
Rated current	A	0.12	0.12	0.3	0.3	0.25

Rated data 60 Hz

Motor		MCA13I34-	MCA14L16- MCA14L35-	MCA17N17- MCA17N35-	MCA19S17- MCA19S35-	MCA21X17- MCA21X35-
Degree of protection		IP54				
Number of phases		1				
Rated voltage AC	V	230				
Min. AC mains voltage	V	210				
Max. AC mains voltage	V	240				
Rated power	kW	0.019	0.019	0.040	0.040	0.060
Rated current	A	0.11	0.11	0.25	0.25	0.29

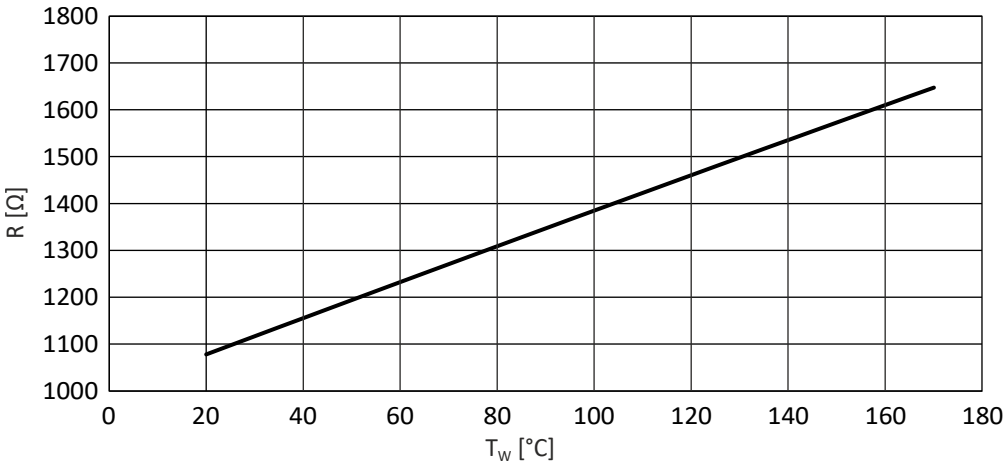
Temperature monitoring

Thermal detectors PT1000

The thermal detector used continuously monitors the motor temperature. The temperature information is transferred to the inverter using the system cable of the feedback system. **This is not a full motor protection!**

This makes it possible to determine the motor temperature in the permissible operating range with great accuracy.

When supplying the thermal sensors with a measurement current of 1 mA, the connection between the temperature and the resistance measured applies.



R Resistance

T_W Winding temperature

Product codes

Gearbox product code

Example		G	50	A	B	045	M	H	B	R	1	C	1A
Product type	Gearboxes	G											
Product family			50										
Generation				A B									
Gearbox type	Bevel gearbox				B								
Output torque	45 Nm					45							
	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		
Motor mounting	Motor integrated											C	
	IEC adapter with jaw coupling											N T	
	IEC adapter with plug-in hollow shaft											H	
	NEMA adapter with jaw coupling											A	
	NEMA adapter with plug-in hollow shaft											B	
	Servo motor adapter with plug-in hollow shaft											S	
	Servo motor adapter with jaw coupling											E D G	
Drive size													1A ... □H 08 ... 82

Product codes

Motor product code

Example	M	C	A	10	C	40	-	RS0	B0

Meaning	Variant	Product code
Product family	Motor	M
Type	Compact servo motors	C
Type	Asynchronous	A
Motor frame size	Square dimension 102 mm	10
	Square dimension 130 mm	13
	Square dimension 142 mm	14
	Square dimension 165 mm	17
	Square dimension 192 mm	19
	Square dimension 200 mm	20
	Square dimension 214 mm	21
	Square dimension 220 mm	22
	Square dimension 260 mm	26
Overall length		I ... X
Rated speed	rpm x 100	05 ... 42
Inverter mains voltage	3 x 400 V, IP54/IP65	-
	3 x 400 V, IP23	H
Feedback	SinCos single-turn absolute value encoder, EnDat AS2048-5V-E	ECN
	SinCos multi-turn absolute value encoder, EnDat AM32-5V-E	EQI
	SinCos multi-turn absolute value encoder, EnDat AM2048-5V-E	EQN
	Resolver	RS0
	Safety resolver RV03	RV0
	SinCos safety incremental encoder, IG1024-5V-V3	S1S
	SinCos incremental encoder, IG2048-5V-S	S20
	SinCos multi-turn absolute value encoder, Hiperface® AM1024-8V-H	SRM
	SinCos single-turn absolute value encoder, Hiperface® AS1024-8V-H	SRS
	TTL incremental encoder, IG2048-5V-T	T20
	TTL incremental encoder, IG4096-5V-T	T40
Brake	Without brake	B0
	Spring-applied brake DC 24 V	F1
	Spring-applied brake DC 24 V, reinforced	F2
	Spring-applied brake AC 230 V	FG
	Spring-applied brake AC 230 V, reinforced	FH
	Permanent magnet brake DC 24 V	P1
	Permanent magnet brake DC 24 V, reinforced	P2
	Permanent magnet brake DC 205 V	P5
	Permanent magnet brake DC 205 V, reinforced	P6

Motor data

Rated data

Inverter mains connection 400 V, Self-ventilated

Product name			MCA10I40-	MCA13I41-	MCA14L20-
Standstill torque	M_0	Nm	2.30	4.60	8.00
Rated torque	M_N	Nm	2.00	4.00	6.70
Max. torque	$M_{Max.}$	Nm	10.0	32.0	60.0
Rated speed	n_N	rpm	3950	4050	2000
Rated power	P_N	kW	0.80	1.70	1.40
Standstill current	I_0	A	2.55	4.60	3.85
Rated current	I_N	A	2.40	4.40	3.30
Max. current	$I_{Max.}$	A	9.60	17.6	13.2
Rated voltage	$U_{N, AC}$	V	390	390	390
Rated frequency	f_N	Hz	140	140	70
Moment of inertia	J	kgcm²	2.40	8.30	19.2
Efficiency	$\eta_{100\ \%}$		0.700	0.750	0.840
Stator terminal resistance	$R_{UV\ 20°C}$	Ω	9.40	3.40	6.00
Stator terminal resistance	$R_{UV\ 150°C}$	Ω	14.2	5.12	9.04
Mutual inductance	L_H	mH	169	92.6	269
Stator leakage inductance	$L_{1\sigma}$	mH	9.80	5.41	9.97
Rotor leakage inductance	$L_{2\sigma}$	mH	10.0	4.90	10.0
Stator resistance	$R_{1\ UV\ 20°C}$	Ω	4.70	1.70	3.00
Rotor resistance	$R_{2\ UV\ 20°C}$	Ω	5.20	1.40	3.13
Mass	m	kg	6.40	10.4	15.1

Motor data

Rated data

Inverter mains connection 400 V, Self-ventilated

Product name			MCA14L41-	MCA17N23-	MCA17N41-
Standstill torque	M_0	Nm	8.00	12.8	12.8
Rated torque	M_N	Nm	5.40	10.8	9.50
Max. torque	$M_{Max.}$	Nm	60.0	100	100
Rated speed	n_N	rpm	4100	2300	4110
Rated power	P_N	kW	2.30	2.60	4.10
Standstill current	I_0	A	7.70	6.00	12.0
Rated current	I_N	A	5.80	5.50	10.2
Max. current	$I_{Max.}$	A	23.2	22.0	40.8
Rated voltage	$U_{N, AC}$	V	390	390	350
Rated frequency	f_N	Hz	140	80	140
Moment of inertia	J	kgcm²	19.2	36.0	36.0
Efficiency	$\eta_{100\ \%}$		0.780	0.860	0.830
Stator terminal resistance	$R_{UV\ 20°C}$	Ω	1.50	3.04	0.76
Stator terminal resistance	$R_{UV\ 150°C}$	Ω	2.26	4.58	1.15
Mutual inductance	L_H	mH	65.8	176	43.4
Stator leakage inductance	$L_{1\sigma}$	mH	2.49	6.16	1.54
Rotor leakage inductance	$L_{2\sigma}$	mH	2.50	6.84	1.70
Stator resistance	$R_{1\ UV\ 20°C}$	Ω	0.75	1.52	0.38
Rotor resistance	$R_{2\ UV\ 20°C}$	Ω	0.78	1.37	0.34
Mass	m	kg	15.1	22.9	22.9

Product name			MCA19S23-	MCA19S42-	MCA21X25-
Standstill torque	M_0	Nm	22.5	22.5	39.0
Rated torque	M_N	Nm	16.3	12.0	24.6
Max. torque	$M_{Max.}$	Nm	180	180	300
Rated speed	n_N	rpm	2340	4150	2490
Rated power	P_N	kW	4.00	5.20	6.40
Standstill current	I_0	A	9.85	19.7	15.9
Rated current	I_N	A	8.20	14.0	13.5
Max. current	$I_{Max.}$	A	32.8	56.0	54.0
Rated voltage	$U_{N, AC}$	V	390	330	390
Rated frequency	f_N	Hz	80	140	85
Moment of inertia	J	kgcm²	72.0	72.0	180
Efficiency	$\eta_{100\ \%}$		0.900	0.830	0.850
Stator terminal resistance	$R_{UV\ 20°C}$	Ω	1.38	0.35	0.72
Stator terminal resistance	$R_{UV\ 150°C}$	Ω	2.08	0.53	1.09
Mutual inductance	L_H	mH	111	28.0	78.1
Stator leakage inductance	$L_{1\sigma}$	mH	3.25	0.82	2.26
Rotor leakage inductance	$L_{2\sigma}$	mH	3.90	0.99	2.82
Stator resistance	$R_{1\ UV\ 20°C}$	Ω	0.69	0.18	0.36
Rotor resistance	$R_{2\ UV\ 20°C}$	Ω	0.62	0.15	0.36
Mass	m	kg	44.7	44.7	60.0

Product name			**MCA21X42-**
Standstill torque	M_0	Nm	39.0
Rated torque	M_N	Nm	17.0
Max. torque	$M_{Max.}$	Nm	300
Rated speed	n_N	rpm	4160
Rated power	P_N	kW	7.40
Standstill current	I_0	A	31.8
Rated current	I_N	A	19.8
Max. current	$I_{Max.}$	A	79.2
Rated voltage	$U_{N, AC}$	V	320
Rated frequency	f_N	Hz	140
Moment of inertia	J	kgcm²	180
Efficiency	$\eta_{100\ \%}$		0.840
Stator terminal resistance	$R_{UV\ 20°C}$	Ω	0.18
Stator terminal resistance	$R_{UV\ 150°C}$	Ω	0.27
Mutual inductance	L_H	mH	19.5
Stator leakage inductance	$L_{1\sigma}$	mH	0.56
Rotor leakage inductance	$L_{2\sigma}$	mH	0.70
Stator resistance	$R_{1\ UV\ 20°C}$	Ω	0.09
Rotor resistance	$R_{2\ UV\ 20°C}$	Ω	0.09
Mass	m	kg	60.0

Motor data
Rated data
Inverter mains connection 400 V, Forced ventilated

Inverter mains connection 400 V, Forced ventilated

Product name			MCA13I34-	MCA14L16-	MCA14L35-
Standstill torque	M_0	Nm	7.00	13.5	13.5
Rated torque	M_N	Nm	6.30	12.0	10.8
Max. torque	$M_{Max.}$	Nm	32.0	60.0	60.0
Rated speed	n_N	rpm	3410	1635	3455
Rated power	P_N	kW	2.20	2.10	3.90
Standstill current	I_0	A	6.30	5.25	10.5
Rated current	I_N	A	6.00	4.80	9.10
Max. current	$I_{Max.}$	A	24.0	19.2	36.4
Rated voltage	$U_{N, AC}$	V	390	390	390
Rated frequency	f_N	Hz	120	60	120
Moment of inertia	J	kgcm²	8.30	19.2	19.2
Efficiency	$\eta_{100\ \%}$		0.720	0.800	0.790
Stator terminal resistance	$R_{UV\ 20°C}$	Ω	3.40	6.00	1.50
Stator terminal resistance	$R_{UV\ 150°C}$	Ω	5.12	9.04	2.26
Mutual inductance	L_H	mH	76.7	224	56.7
Stator leakage inductance	$L_{1\sigma}$	mH	4.95	9.46	2.37
Rotor leakage inductance	$L_{2\sigma}$	mH	4.39	9.30	2.32
Stator resistance	$R_{1\ UV\ 20°C}$	Ω	1.70	3.00	0.75
Rotor resistance	$R_{2\ UV\ 20°C}$	Ω	1.41	3.13	0.78
Mass	m	kg	12.0	16.9	16.9

Product name			MCA17N17-	MCA17N35-	MCA19S17-
Standstill torque	M_0	Nm	23.9	23.9	40.0
Rated torque	M_N	Nm	21.5	19.0	36.3
Max. torque	$M_{Max.}$	Nm	100	100	180
Rated speed	n_N	rpm	1680	3480	1700
Rated power	P_N	kW	3.80	6.90	6.40
Standstill current	I_0	A	9.05	18.1	15.4
Rated current	I_N	A	8.50	15.8	13.9
Max. current	$I_{Max.}$	A	34.0	63.2	55.6
Rated voltage	$U_{N, AC}$	V	390	390	390
Rated frequency	f_N	Hz	60	120	60
Moment of inertia	J	kgcm²	36.0	36.0	72.0
Efficiency	$\eta_{100\ \%}$		0.830	0.810	0.820
Stator terminal resistance	$R_{UV\ 20°C}$	Ω	3.04	0.76	1.38
Stator terminal resistance	$R_{UV\ 150°C}$	Ω	4.58	1.15	2.08
Mutual inductance	L_H	mH	144	36.9	80.9
Stator leakage inductance	$L_{1\sigma}$	mH	5.59	1.40	2.61
Rotor leakage inductance	$L_{2\sigma}$	mH	6.04	1.51	3.06
Stator resistance	$R_{1\ UV\ 20°C}$	Ω	1.52	0.38	0.69
Rotor resistance	$R_{2\ UV\ 20°C}$	Ω	1.37	0.34	0.62
Mass	m	kg	25.5	25.5	48.2

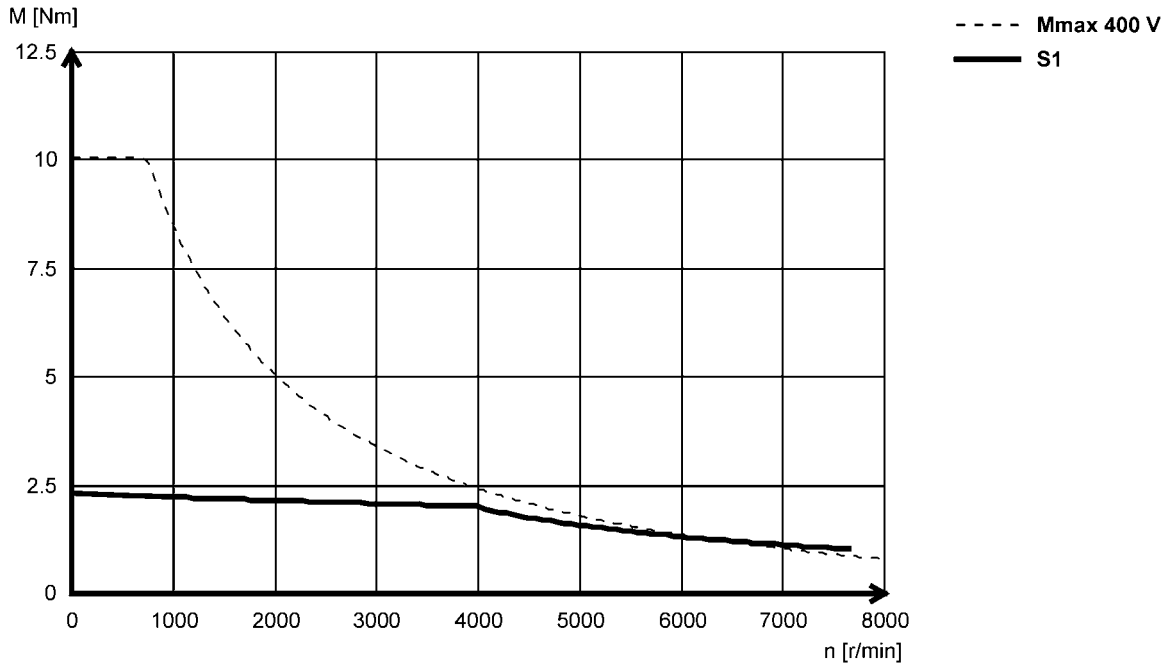
Product name			MCA19S35-	MCA21X17-	MCA21X35-
Standstill torque	M_0	Nm	40.0	75.0	75.0
Rated torque	M_N	Nm	36.0	61.4	55.0
Max. torque	$M_{Max.}$	Nm	180	300	300
Rated speed	n_N	rpm	3510	1710	3520
Rated power	P_N	kW	13.2	11.0	20.3
Standstill current	I_0	A	30.8	25.8	49.5
Rated current	I_N	A	28.7	22.5	42.5
Max. current	$I_{Max.}$	A	115	90.0	170
Rated voltage	$U_{N, AC}$	V	390	390	390
Rated frequency	f_N	Hz	120	60	120
Moment of inertia	J	$kgcm^2$	72.0	180	180
Efficiency	$\eta_{100\,\%}$		0.850	0.850	0.880
Stator terminal resistance	$R_{UV\ 20°C}$	Ω	0.35	0.72	0.18
Stator terminal resistance	$R_{UV\ 150°C}$	Ω	0.53	1.09	0.27
Mutual inductance	L_H	mH	20.3	68.9	16.8
Stator leakage inductance	$L_{1\sigma}$	mH	0.65	2.08	0.52
Rotor leakage inductance	$L_{2\sigma}$	mH	0.77	2.58	0.65
Stator resistance	$R_{1\ UV\ 20°C}$	Ω	0.18	0.36	0.09
Rotor resistance	$R_{2\ UV\ 20°C}$	Ω	0.15	0.36	0.09
Mass	m	kg	48.2	63.5	63.5

Torque characteristics

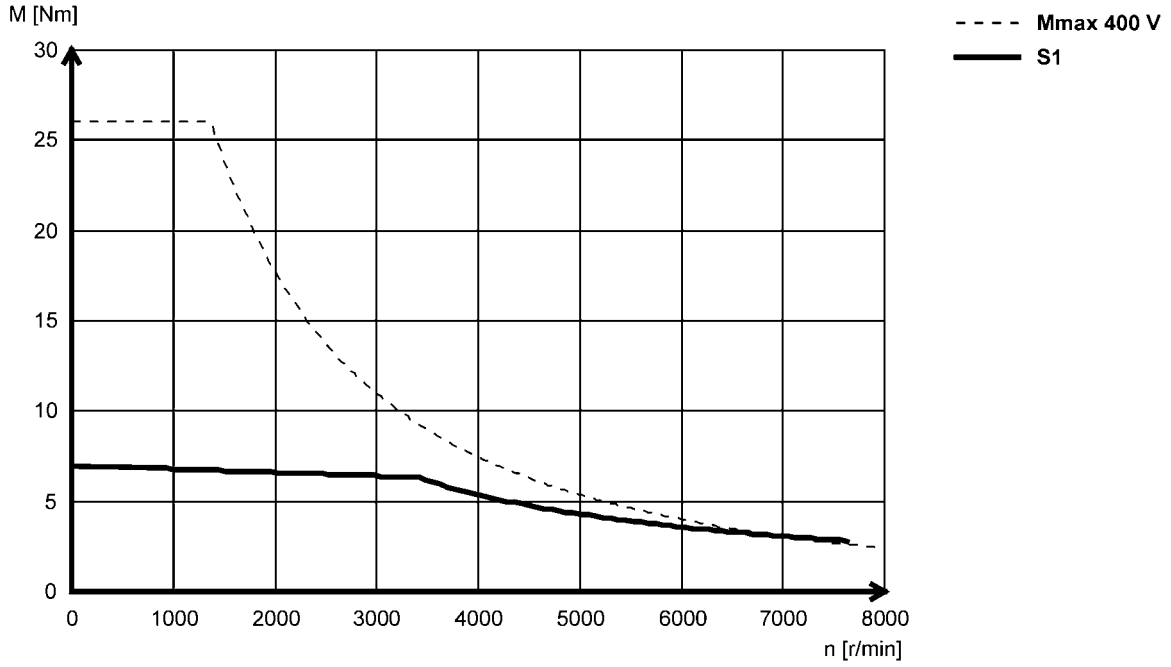
m-n characteristics for your motor-inverter combination can be found on the Internet: http://www.lenze.com → Product Finder → M-n characteristics

The data apply to an inverter mains voltage of 3 x 400 V.

MCA10I40- (self-ventilated)



MCA13I34- (forced ventilated)



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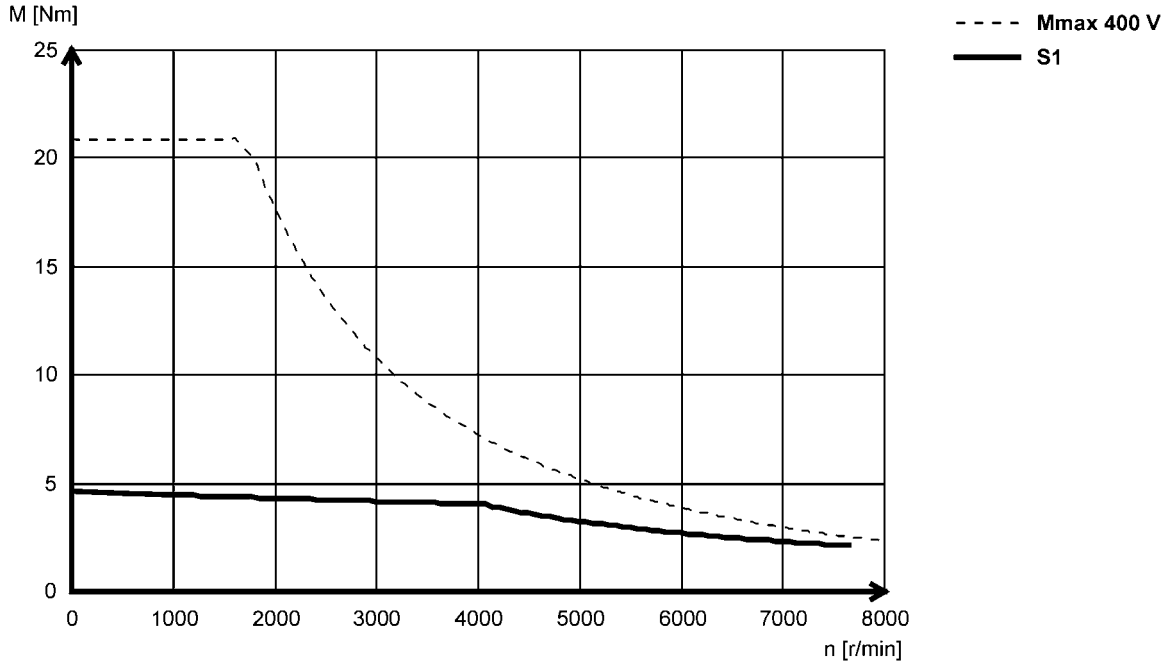
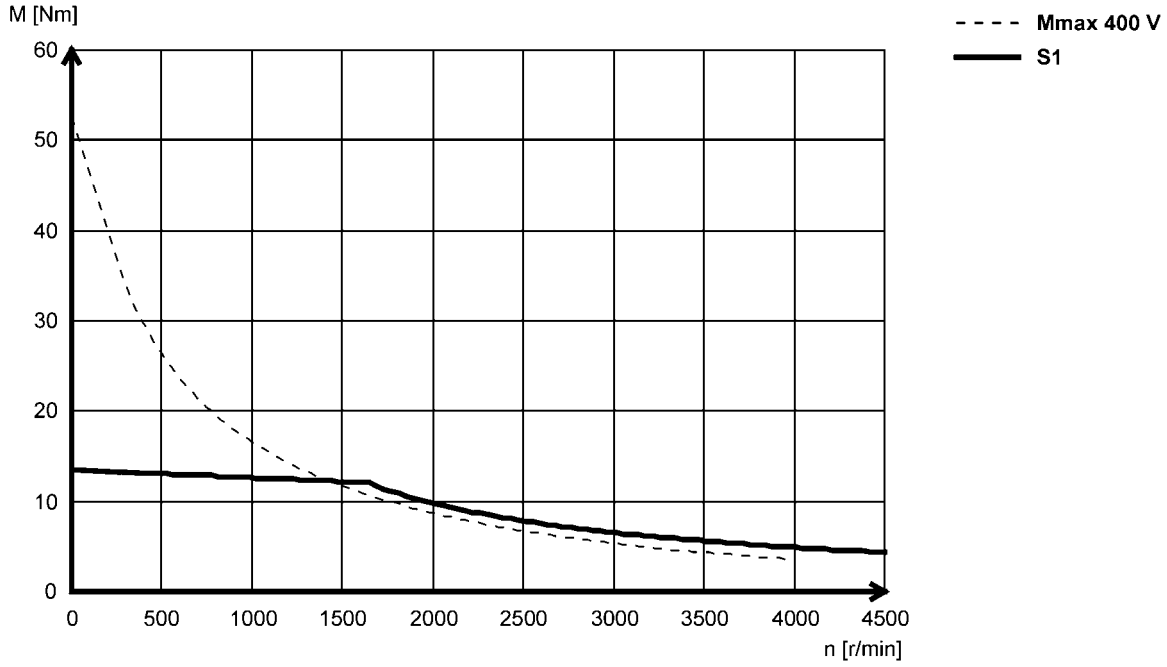
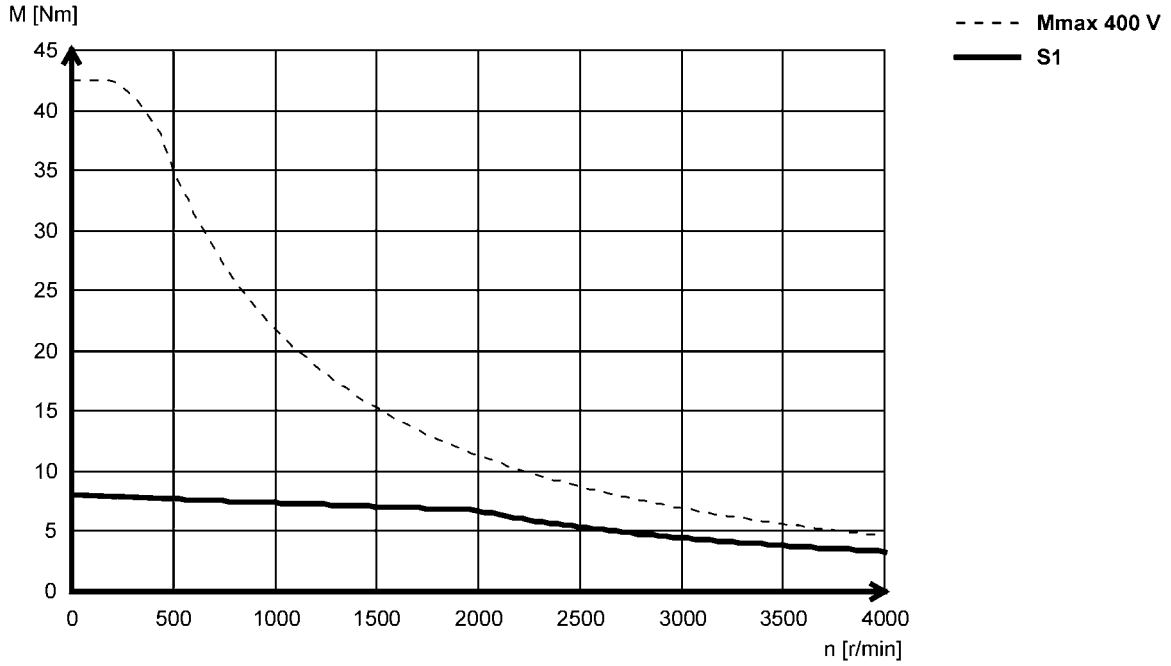


MCA14L16- (forced ventilated)



MCA14L20- (self-ventilated)



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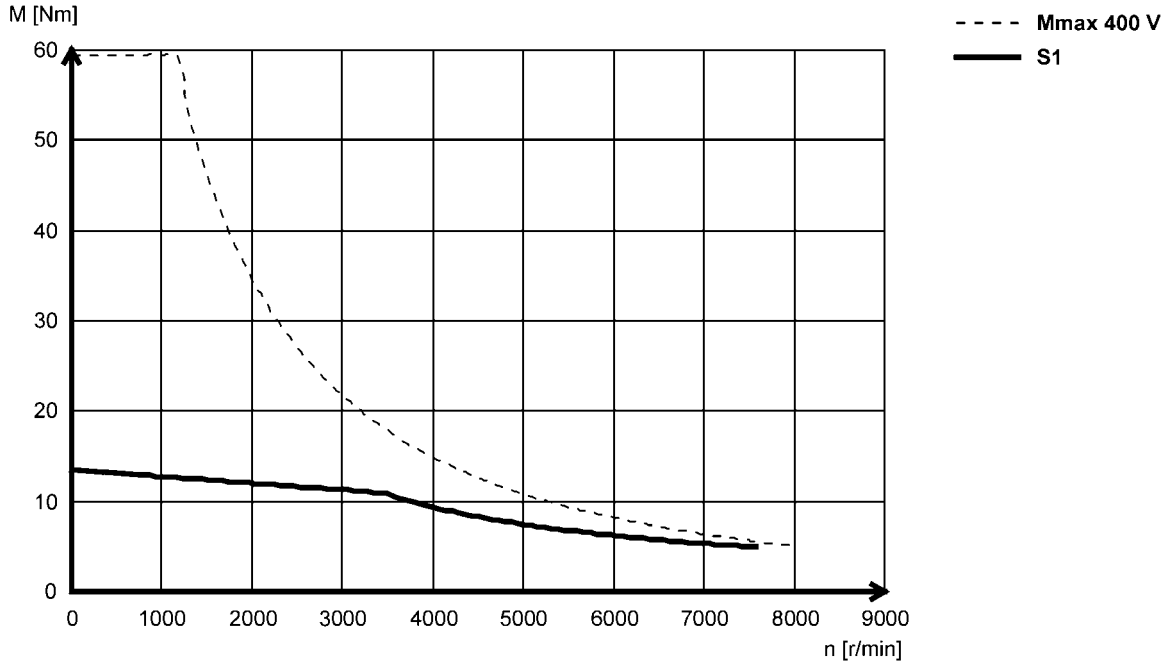

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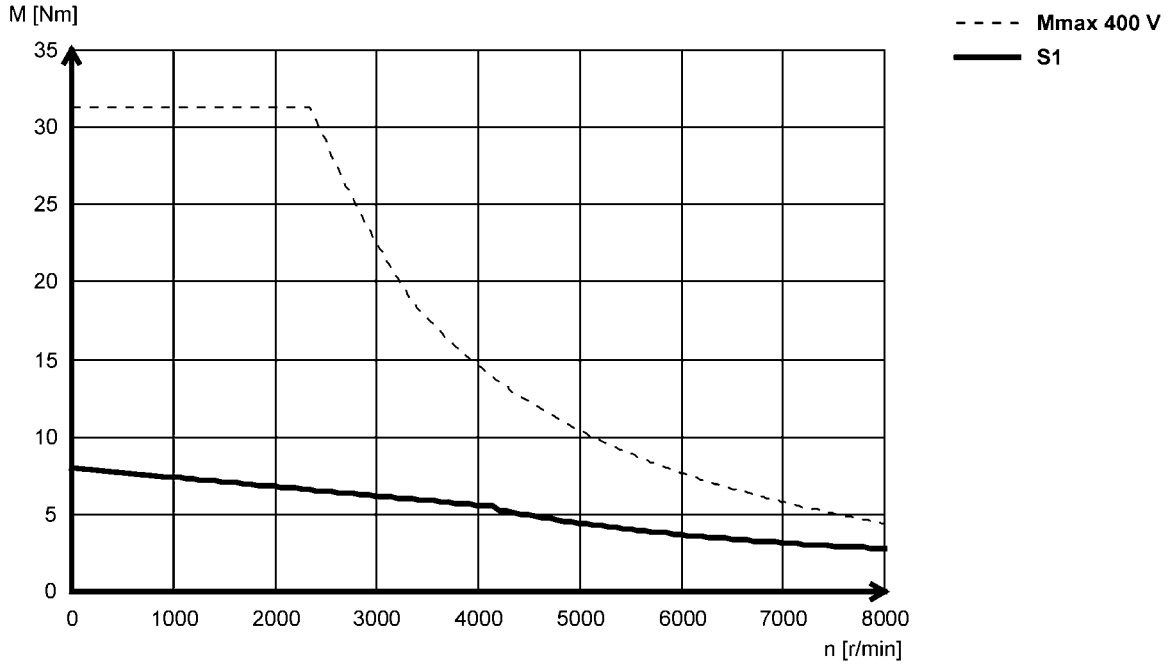
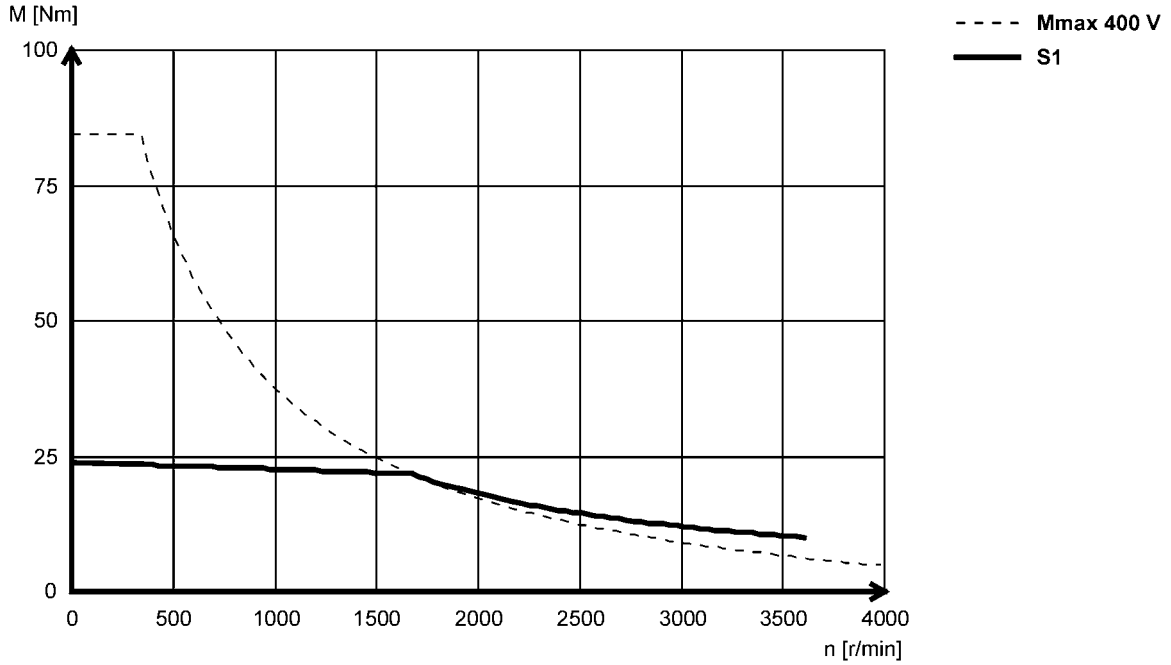


MCA17N17- (forced ventilated)



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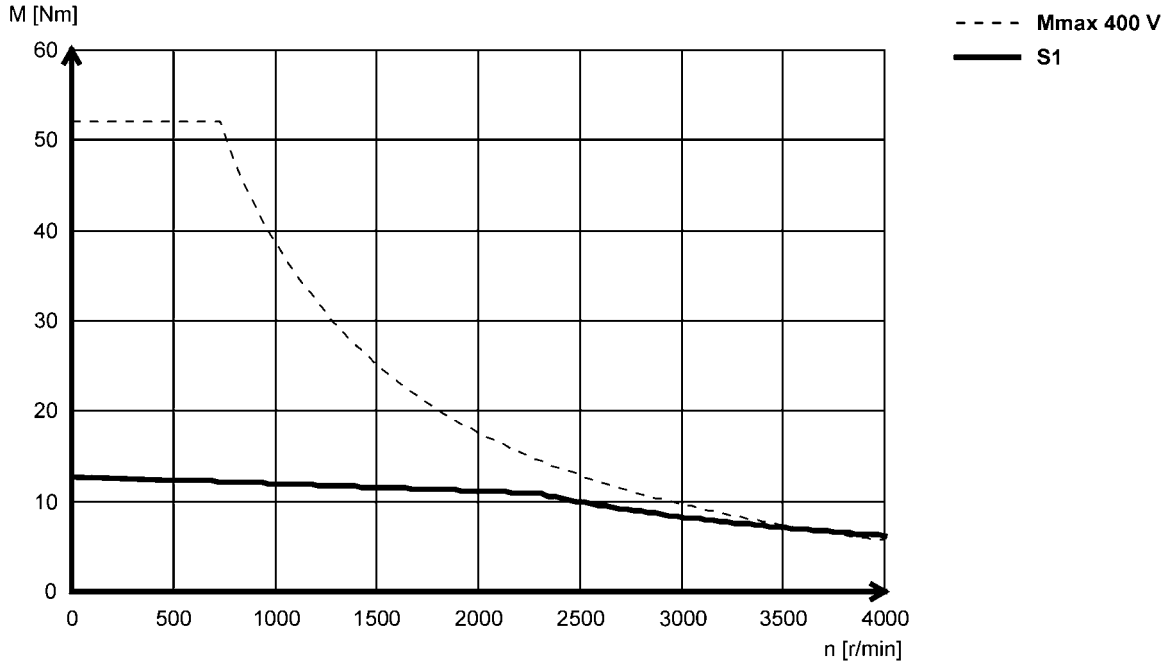

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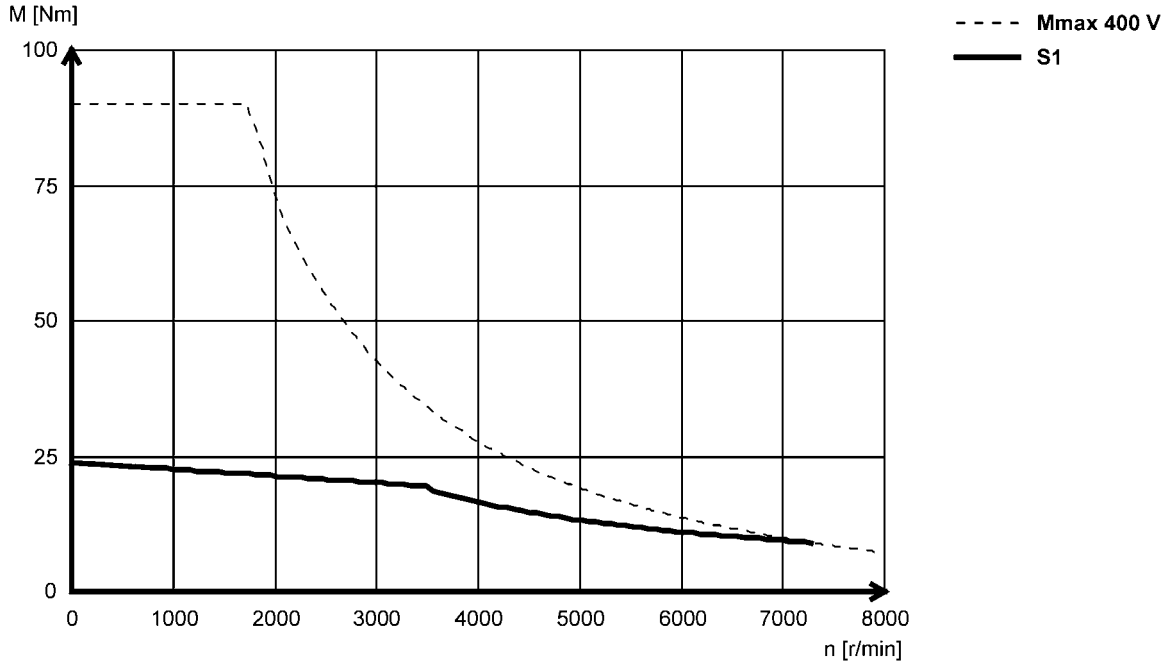

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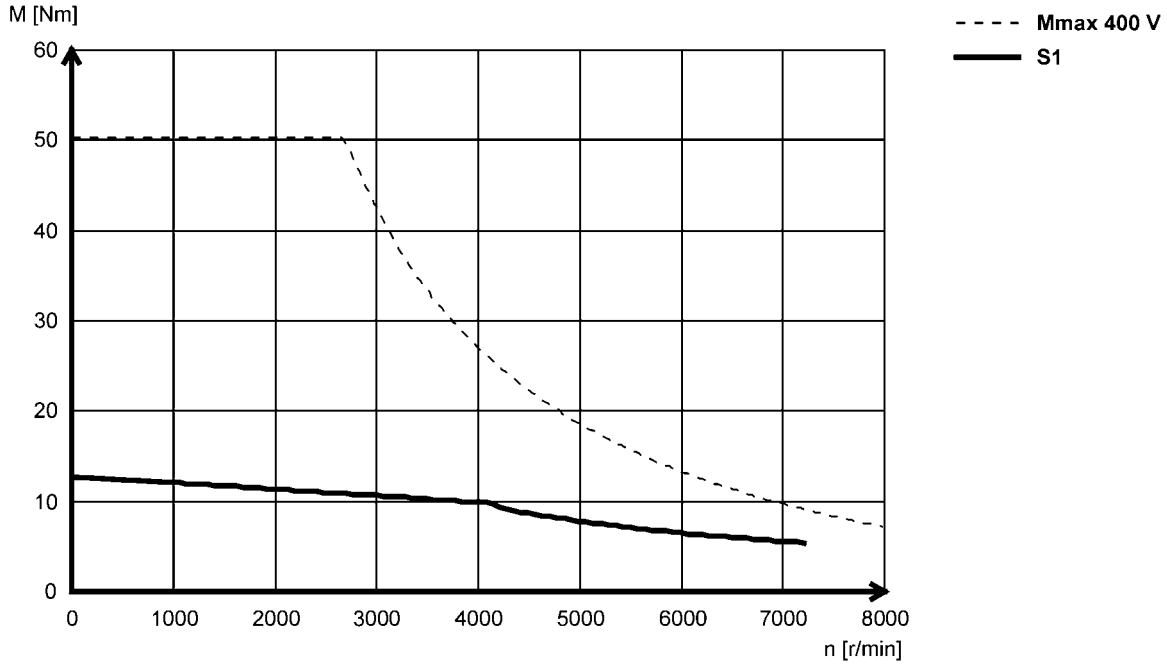
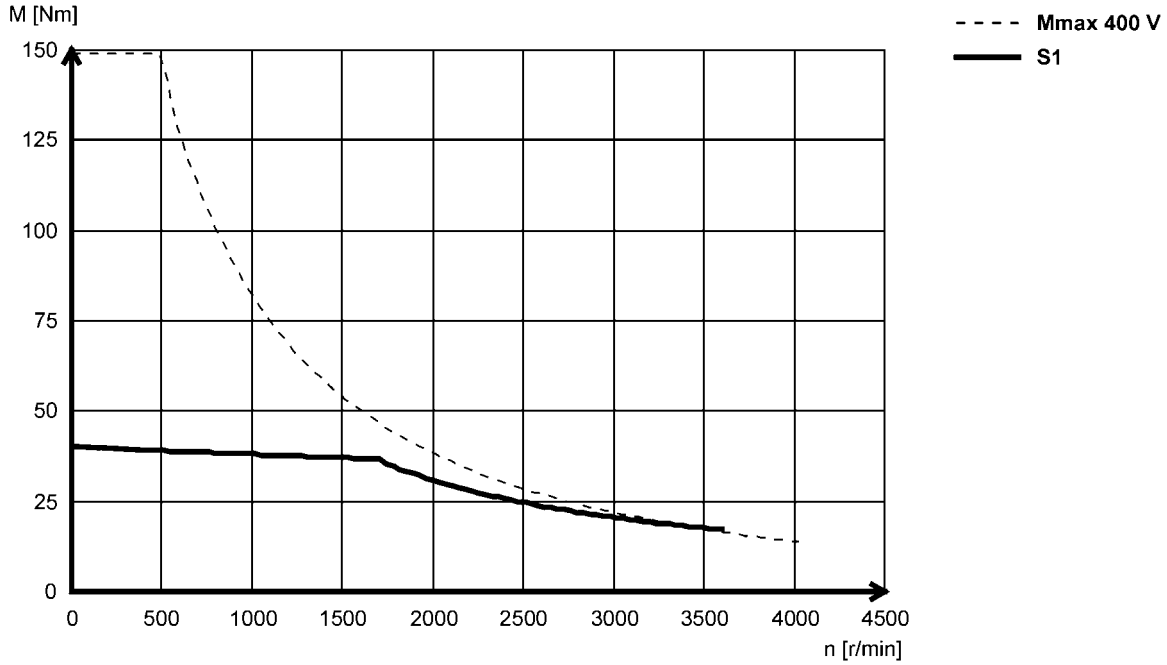
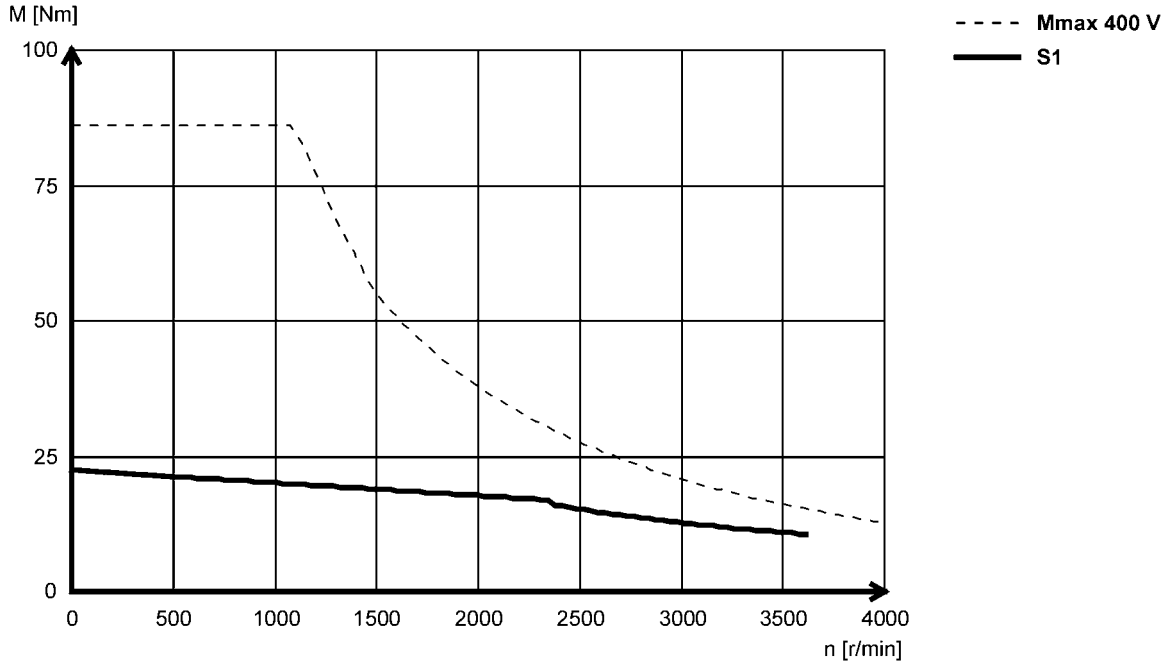


MCA19S17- (forced ventilated)



MCA19S23- (self-ventilated) Lenze



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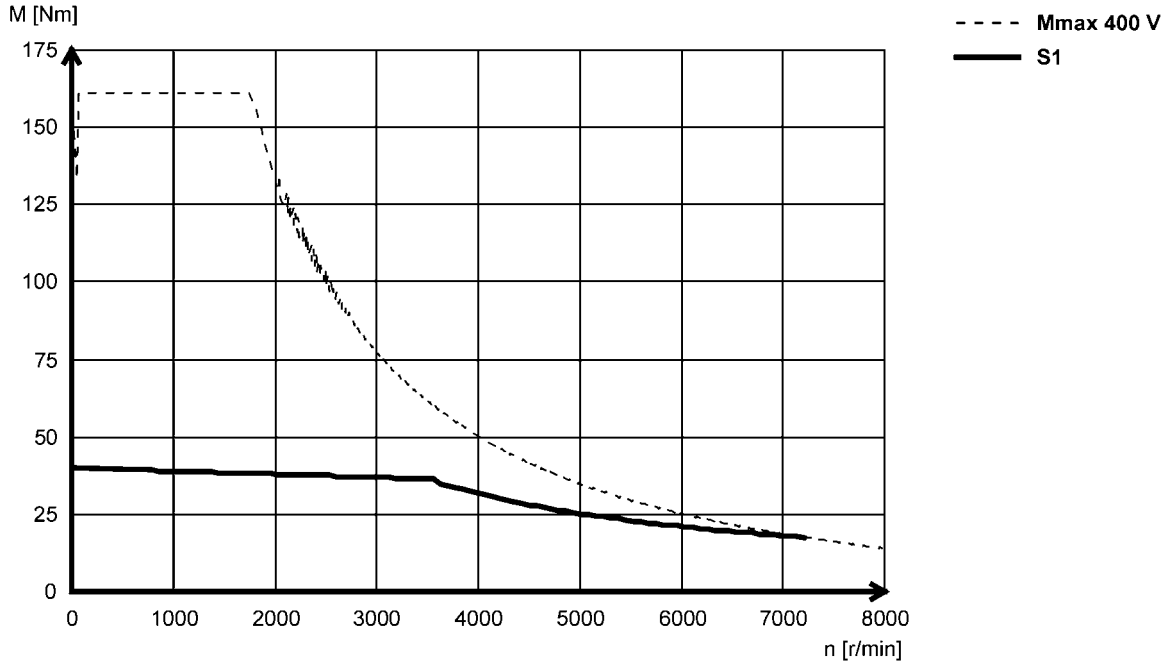
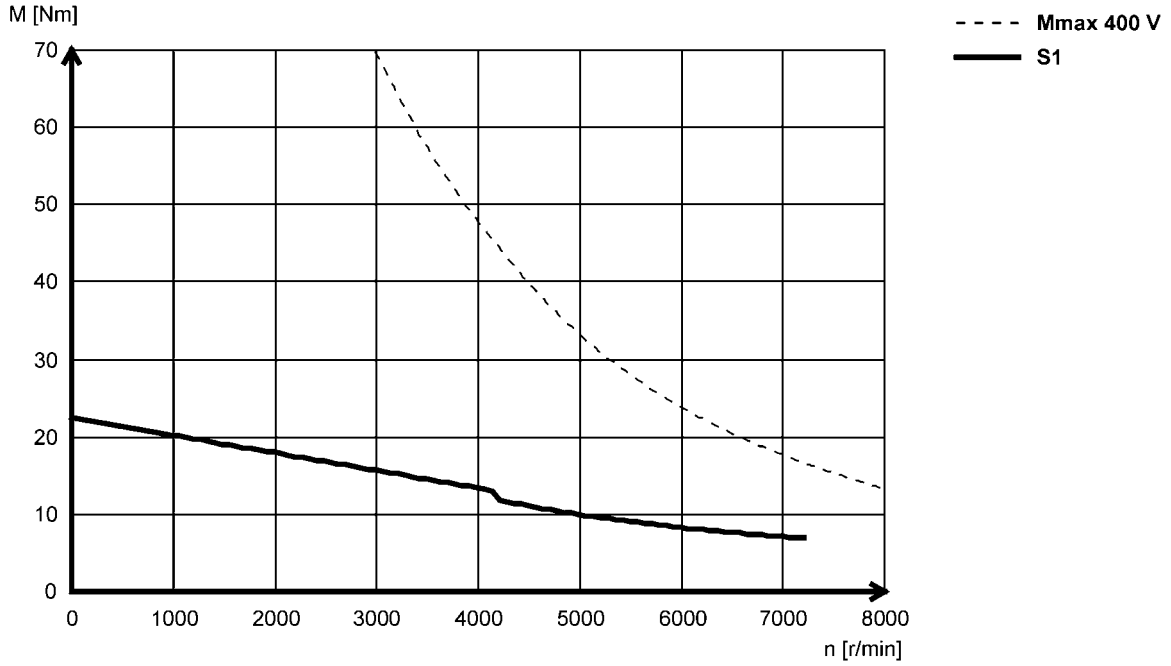
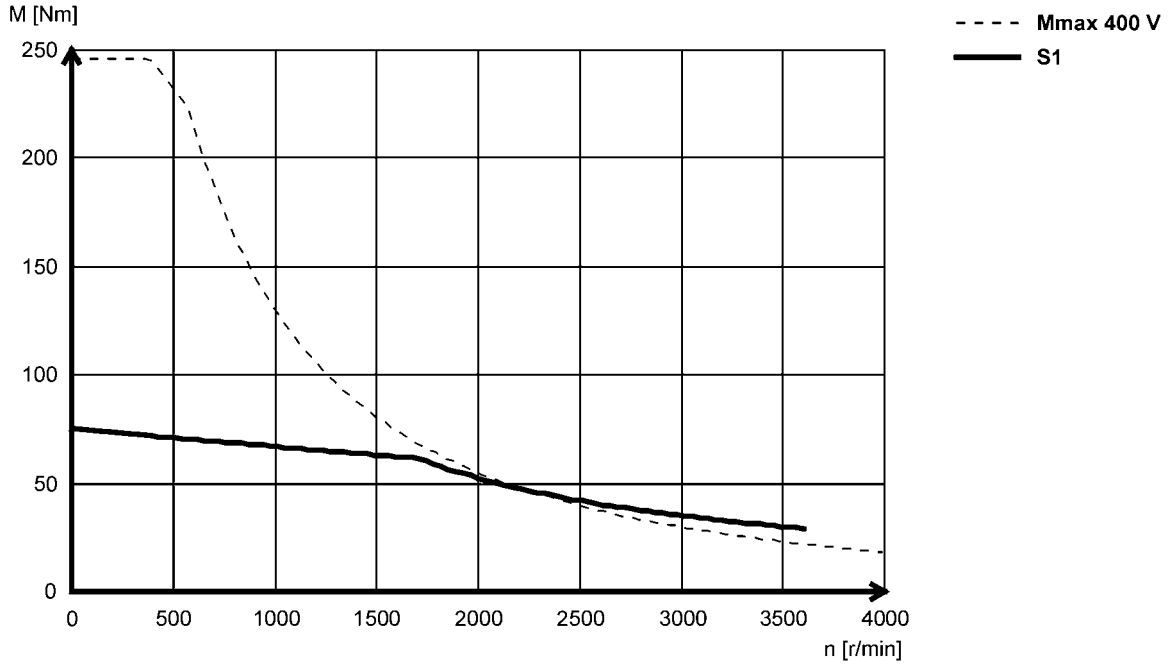


MCA19S42- (self-ventilated)



MCA21X17- (forced ventilated)



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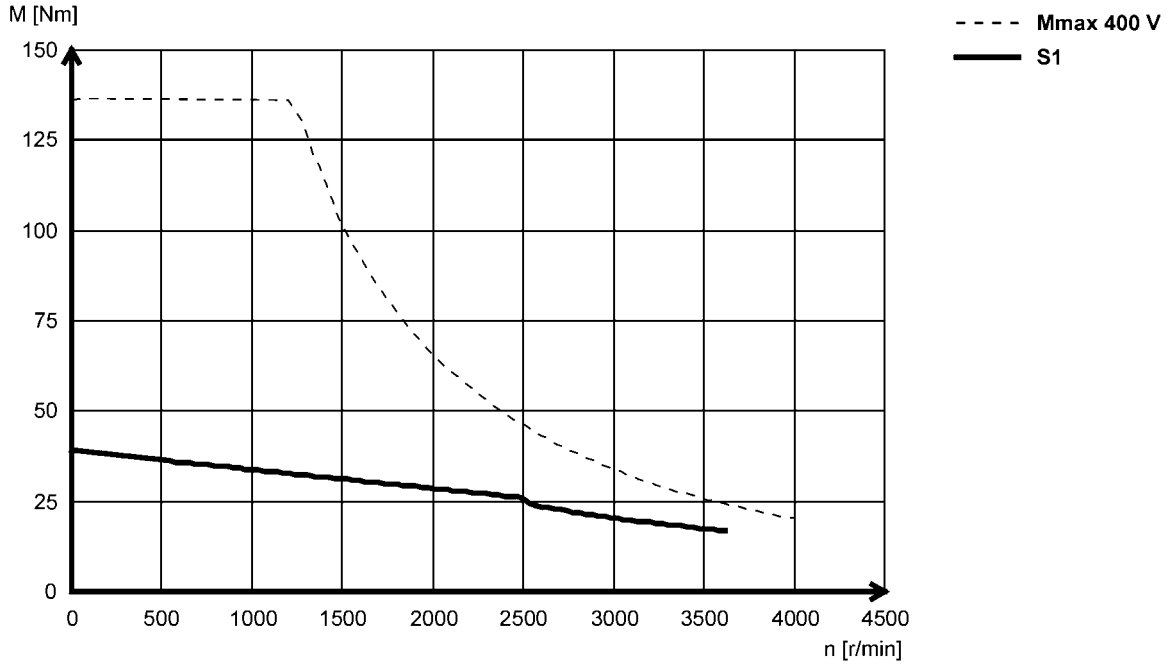

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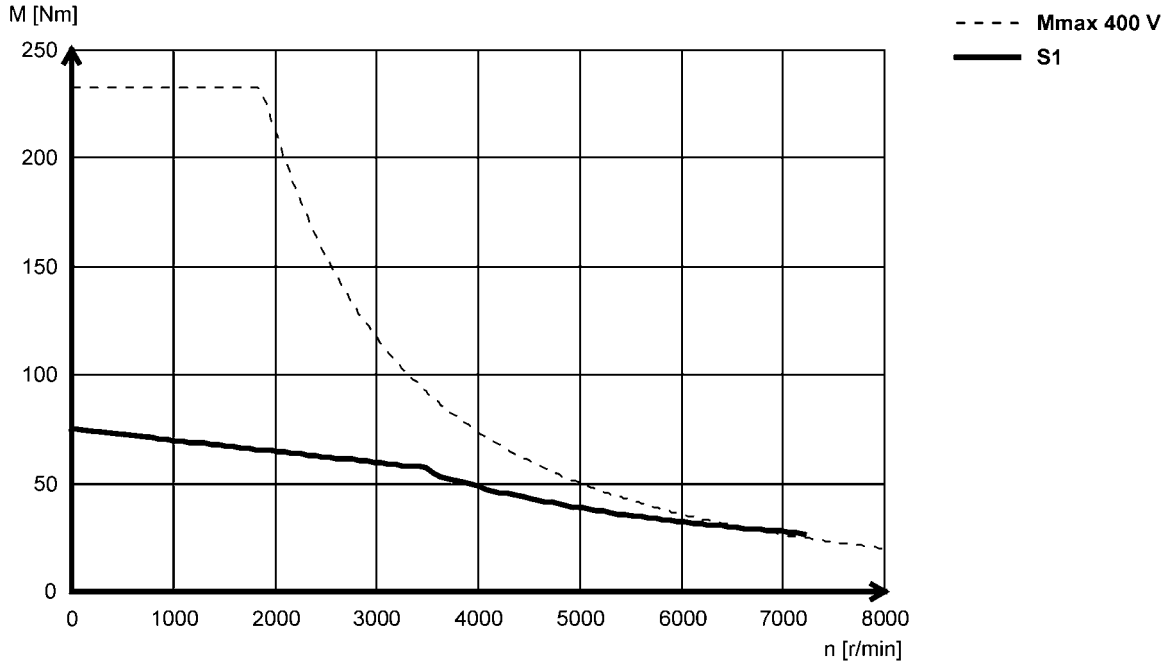
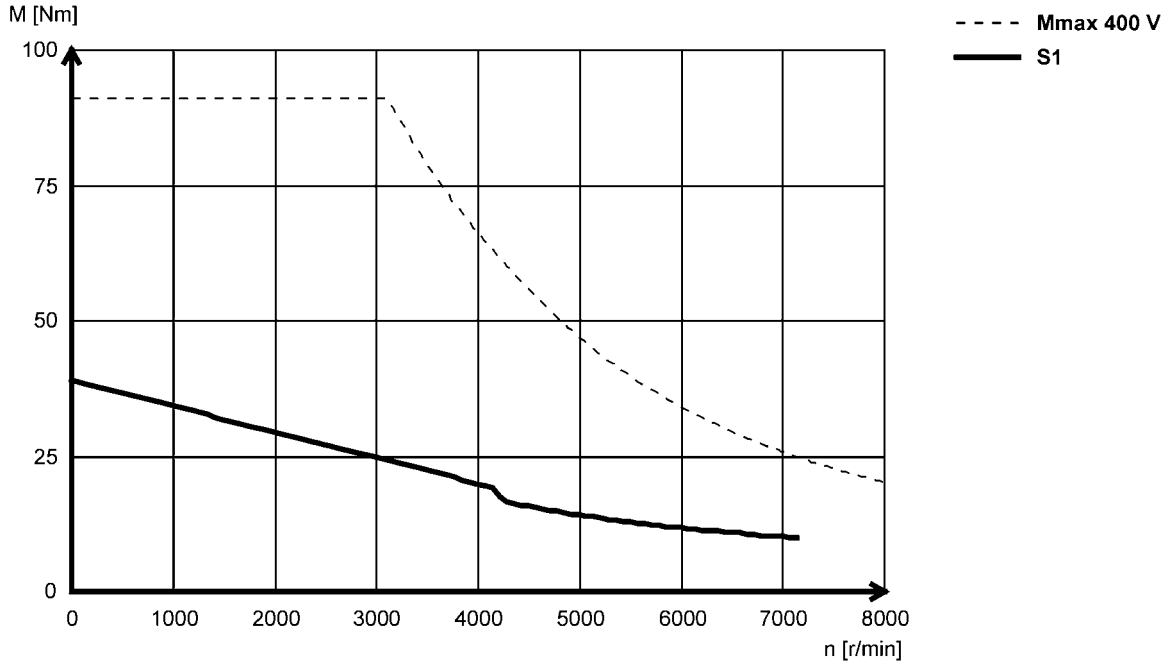


MCA21X42- (self-ventilated)



Appendix

Good to know

Approvals/directives

CCC	China Compulsory Certification documents the compliance with the legal product safety requirements of the PR of China - in accordance with Guobiao standards.
$_{C}CSA_{US}$	CSA certificate, tested according to US and Canada standards
UE	Union Européenne documents the declaration of the manufacturer that EU Directives are complied with.
CEL	China Energy Label documents the compliance with the legal energy efficiency requirements for motors, tested according to the PR of China and Guobiao standards
CSA	CSA Group (Canadian Standards Association) CSA certificate, tested according to Canada standards
$UL^{Energy}{}_{US\ CA}$	Energy Verified Certificate Determining the energy efficiency according to CSA C390 for products within the scope of energy efficiency requirements in the USA and Canada
$_{C}UL_{US}$	UL certificate for products, tested according to US and Canada standards
$_{C}UR_{US}$	UL certificate for components, tested according to US and Canada standards
EAC	Customs union Russia / Belarus / Kazakhstan certificate documents the declaration of the manufacturer that the specifications for the Eurasian conformity (EAC) required for placing electronic and electromechanical products on the market of the entire territory of the Customs Union (Russia, Belarus, Kazakhstan, Armenia and Kyrgyzstan) are complied with.
UL	Underwriters Laboratory Listed Product
UL_{LISTED}	UL Listing approval mark as proof that the product has been tested and the applicable safety requirements have been confirmed by UL (Underwriters Laboratory).
UR	UL Recognized Component approval mark as proof that the UL approved component can be used in a product or system bearing the UL Listing approval mark.

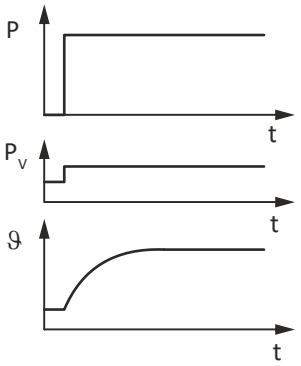
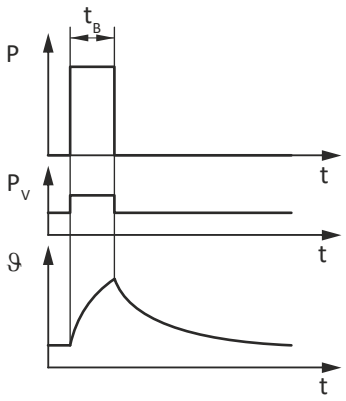
Operating modes of the motor

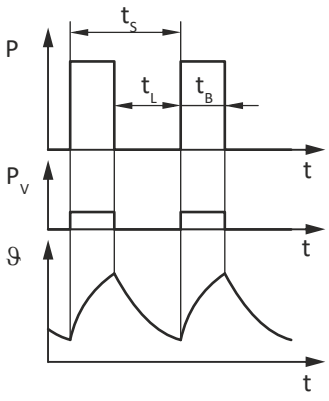
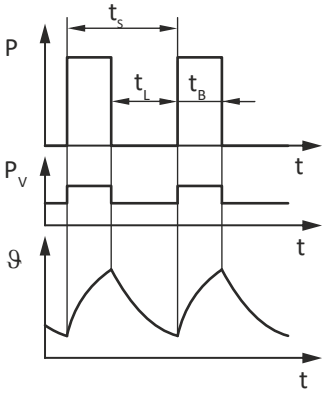
Operating modes S1 ... S10 as specified by EN 60034-1 describe the basic stress of an electrical machine.

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	P_V	Power loss
t	Time	t_B	Load period
t_L	Idle time	t_S	Cycle duration
ϑ	Temperature		

Enclosures

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

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

Code number 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 Drives GmbH
Postfach 10 13 52, D-31763 Hameln
Breslauer Straße 3, D-32699 Extertal
Germany
HR Lemgo B 6478
+49 5154 82-0
+49 5154 82-2800
sales.de@lenze.com
www.lenze.com