

Automation systems Drive solutions

Controls
Inverters

Motors

Gearboxes

Engineering Tools

Motors: MD three-phase AC motors

Gearboxes: GFL shaft-mounted helical gearboxes

Contents of the L-force catalogue

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Lenze makes many things easy for you.

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

1

Developing ideas

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

2

Drafting concepts

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

3

Implementing solutions

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

4

Manufacturing machines

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

5

Ensuring productivity

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

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

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

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

Powerful products with a major impact:

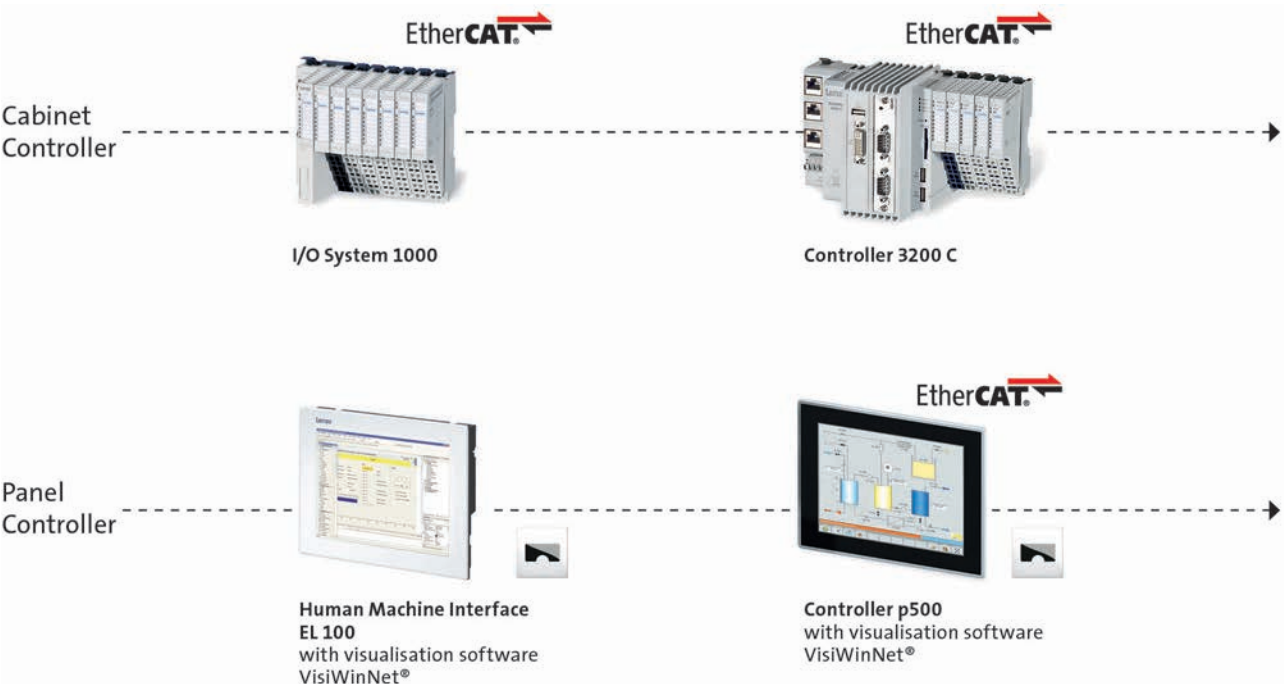
- Easy handling
- High quality and durability
- Reliable technologies in tune with the latest developments

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

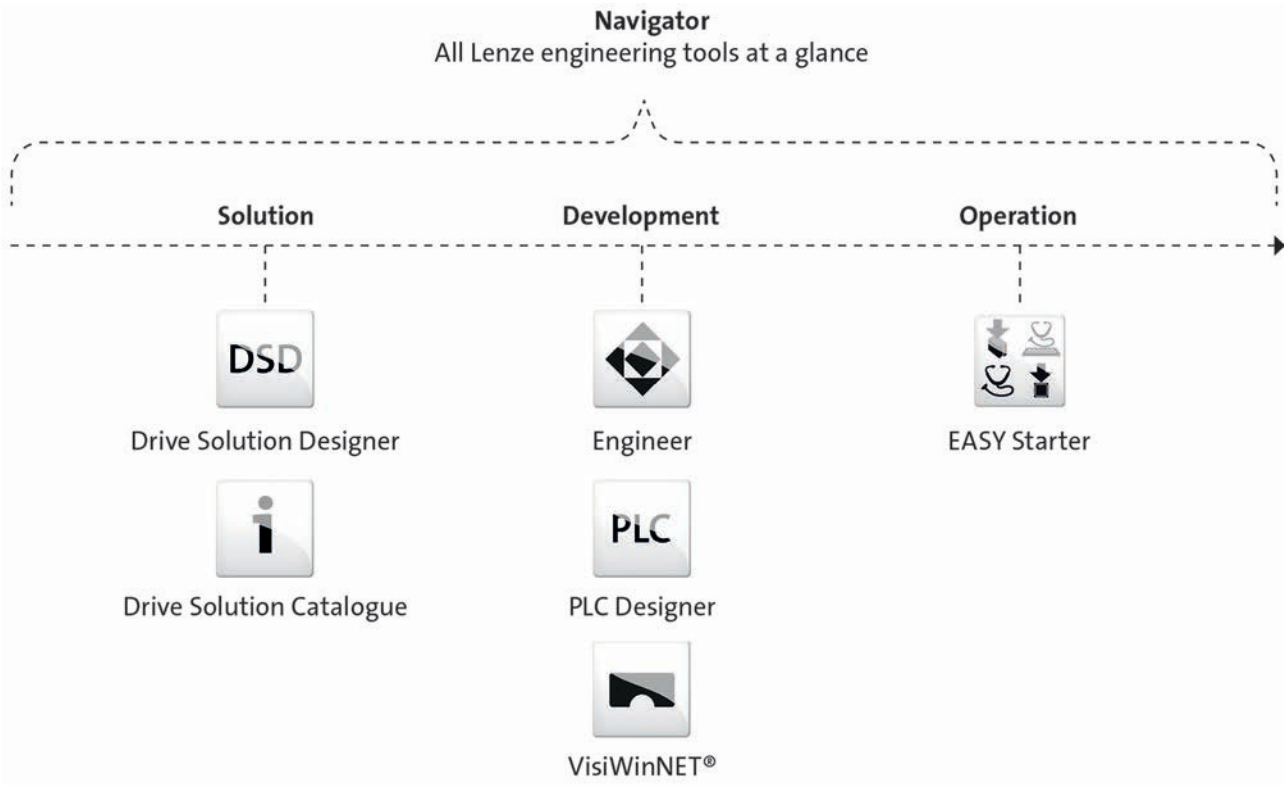


L-force product portfolio

Controls

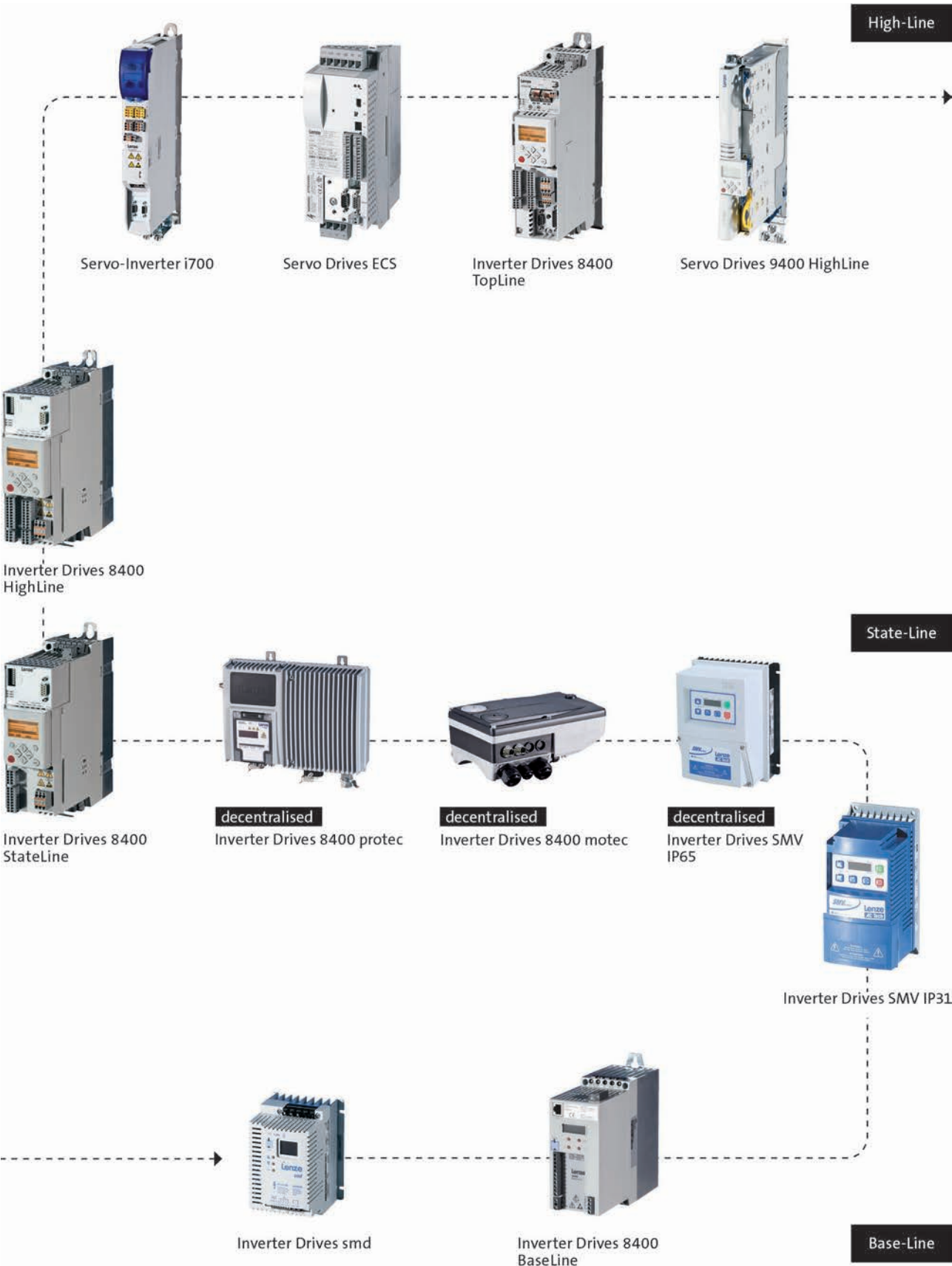


Engineering Tools



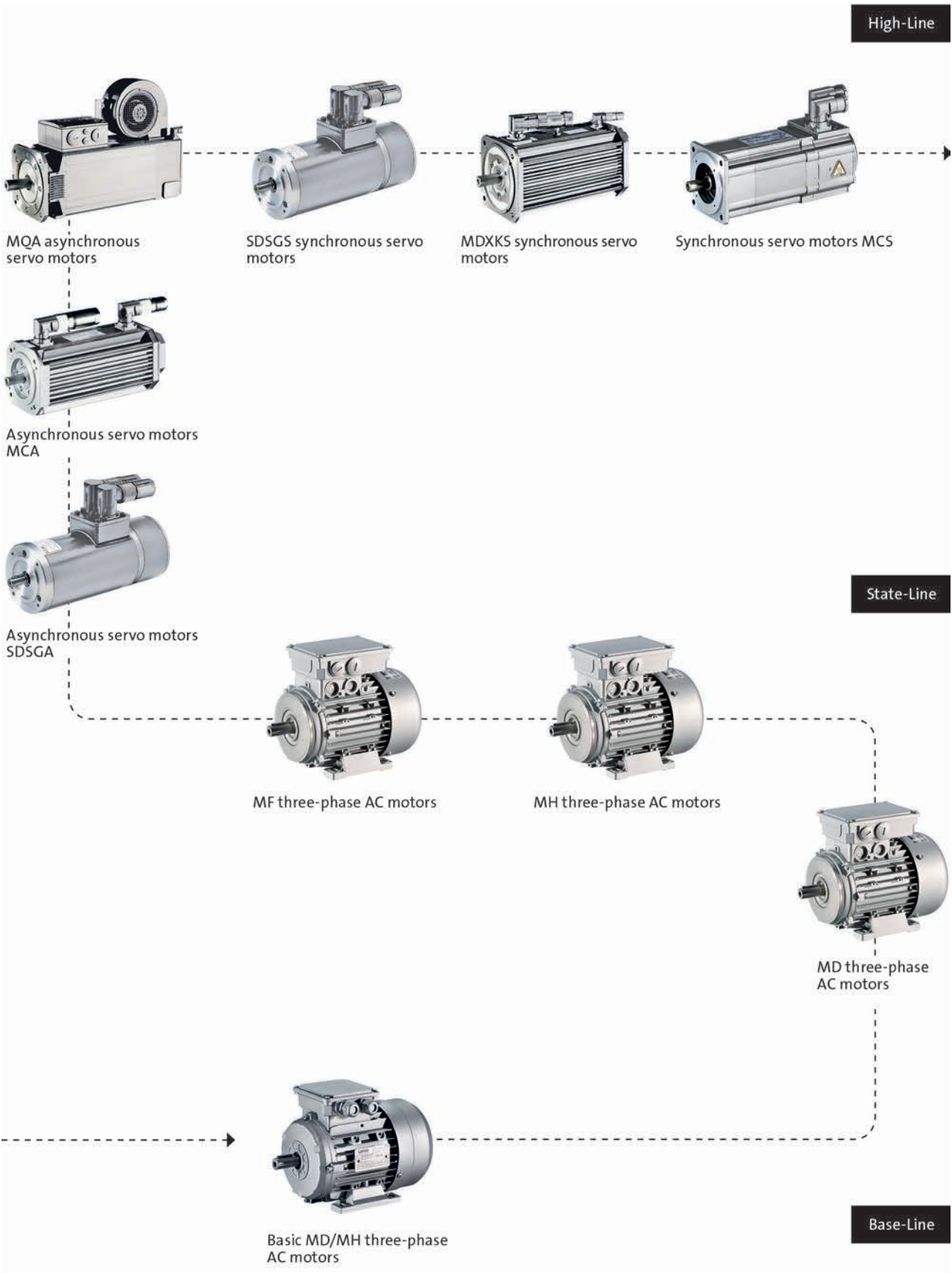
L-force product portfolio

Inverters



L-force product portfolio

Motors



L-force product portfolio

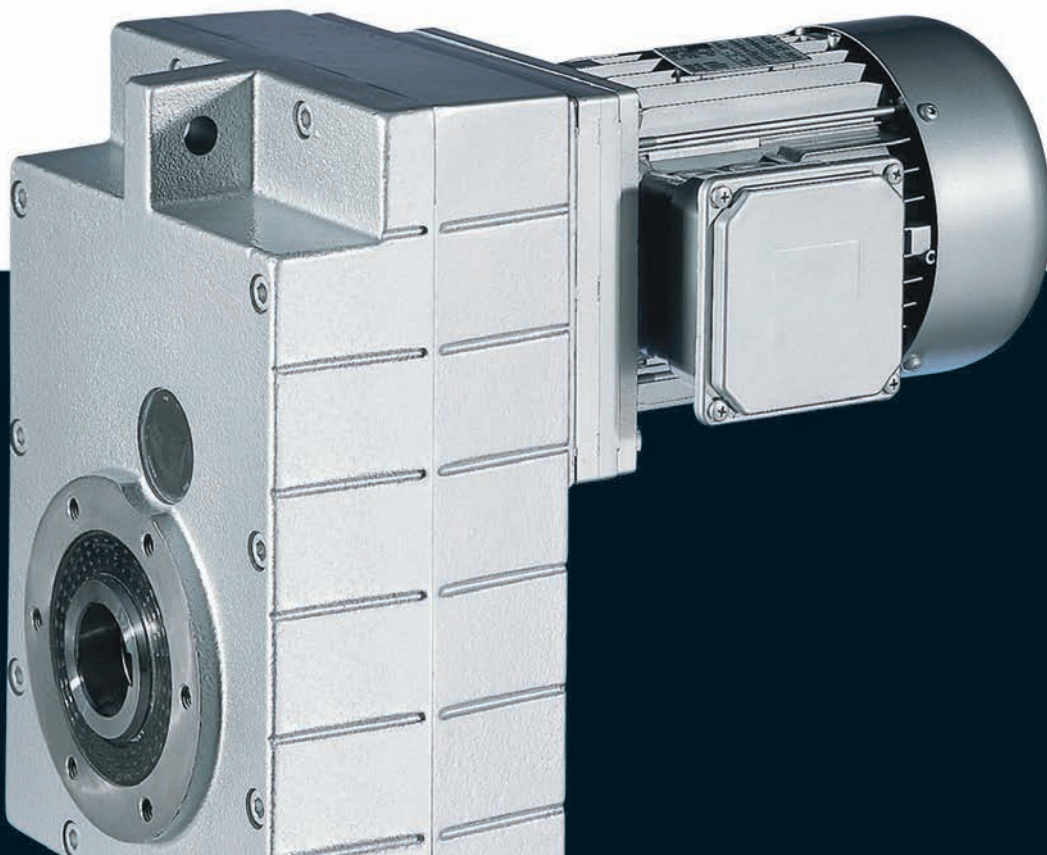
Gearboxes



Gearboxes

GFL shaft-mounted helical gearboxes

0.12 to 45 kW



GFL shaft-mounted helical gearboxes

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GFL shaft-mounted helical gearboxes

General information

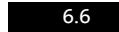


List of abbreviations

$\eta_{c=1}$		Efficiency
c		Load capacity
f_N	[Hz]	Rated frequency
$F_{ax,max}$	[N]	Max. axial force
$F_{rad,max}$	[N]	Max. radial force
H_{max}	[m]	Site altitude
i		Ratio
J	[kgcm ²]	Moment of inertia
m	[kg]	Mass
M_2	[Nm]	Output torque
n_2	[r/min]	Output speed
n_N	[r/min]	Rated speed
P_N	[kW]	Rated power
$S_{hü}$	[1/h]	Transition operating frequency
$T_{opr,max}$	[°C]	Max. ambient operating temperature
$T_{opr,min}$	[°C]	Min. ambient operating temperature
$U_{N,\Delta}$	[V]	Rated voltage
$U_{N,Y}$	[V]	Rated voltage

CE	Communauté Européenne
CSA	Canadian Standards Association
DIN	Deutsches Institut für Normung e.V.
EMC	Electromagnetic compatibility
EN	European standard
IEC	International Electrotechnical Commission
IM	International Mounting Code
IP	International Protection Code
NEMA	National Electrical Manufacturers Association
UL	Underwriters Laboratory Listed Product
UR	Underwriters Laboratory Recognized Product
VDE	Verband deutscher Elektrotechniker (Association of German Electrical Engineers)
CCC	China Compulsory Certificate
GOST	Certificate for Russian Federation
cURus	Combined certification marks of UL for the USA and Canada
UkrSEPRO	Certificate for Ukraine

Product key

²⁾ Output H version not possible with motor size 090

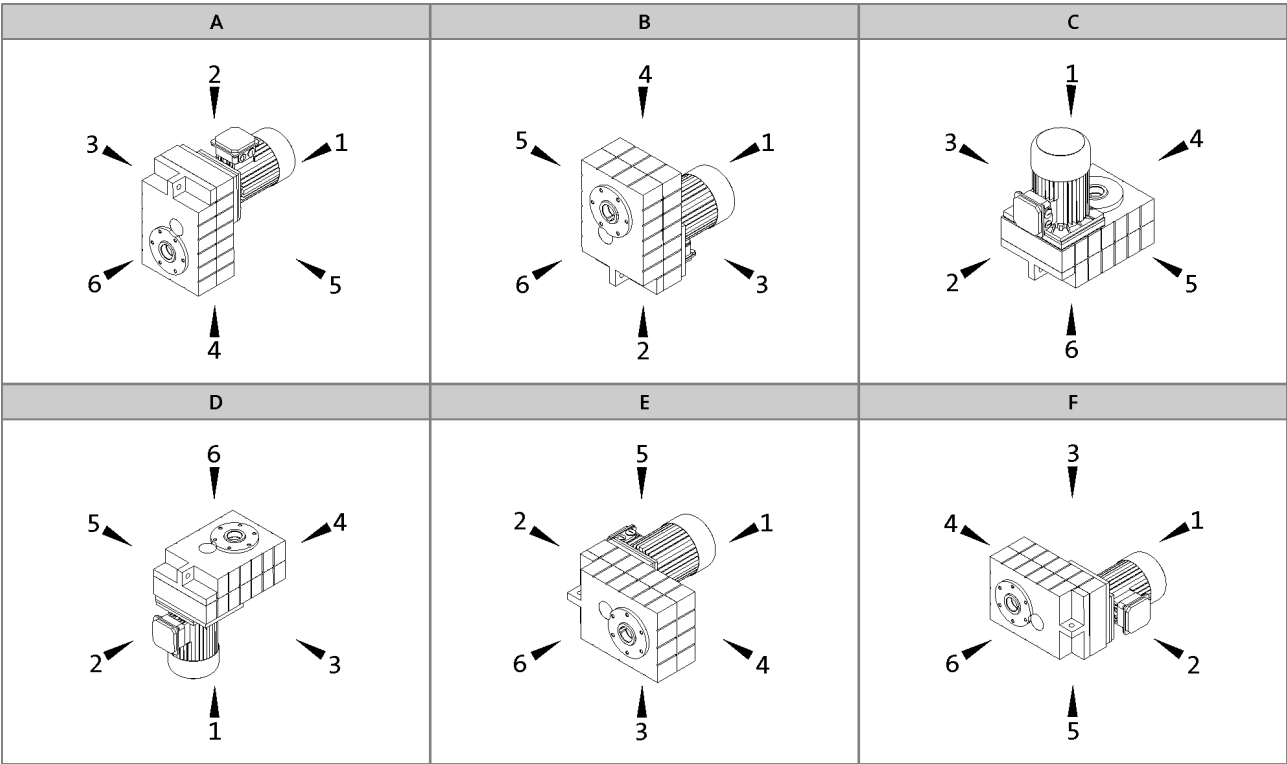
GFL shaft-mounted helical gearboxes

General information



Product key

Mounting position (A to F) and position of system blocks (1 to 6)



Hollow shaft: 0
Solid shaft: 6
Hollow shaft with shrink disc: 1, 6

Without foot: 0
Foot: 3, 4
Terminal box / motec: 2, 3, 4, 5

Gearbox designs

Basic versions	
Motor efficiency	Standard efficiency Increased efficiency (IE2)
Surface and corrosion protection	OKS-G (primer: grey) OKS-S (paint: RAL 7012)
Lubricant	CLP 460 (mineral)
Ventilation	Oil control plugs for GFL05 to 14 Breather elements for GFL06 ... 14

Options	
Surface and corrosion protection	OKS-S (special paint according to RAL) OKS-M (special paint according to RAL) OKS-L (special paint according to RAL)
Lubricant	CLP HC 320 (synthetic) CLP HC 220 USDA H1 (synthetic)
Shaft sealing rings	Driven shaft: Viton
Ventilation	Breather elements for GFL05 Compensation reservoir for GFL09 to 14-2 in mounting position C
Accessories	Rubber buffer for torque plate Shrink disc cover Mounting set for hollow shaft circlip
Nameplate	Metal nameplate (supplied loose) Adhesive nameplate (supplied loose)

GFL shaft-mounted helical gearboxes

General information



Product information

Lenze provides a geared motor construction kit, which covers a wide range of requirements. Numerous drive-side and output-side options enable precise adaptation of the drive to the specific application. This is the basis for versatile applications and functional scalability of our gearboxes and geared motors.

The modular concept and high power density make extremely compact sizes possible. Optimised teeth profiles and ground gears ensure low-noise operation and low backlash. The gearboxes are of compact and hence space-saving construction.

Designs

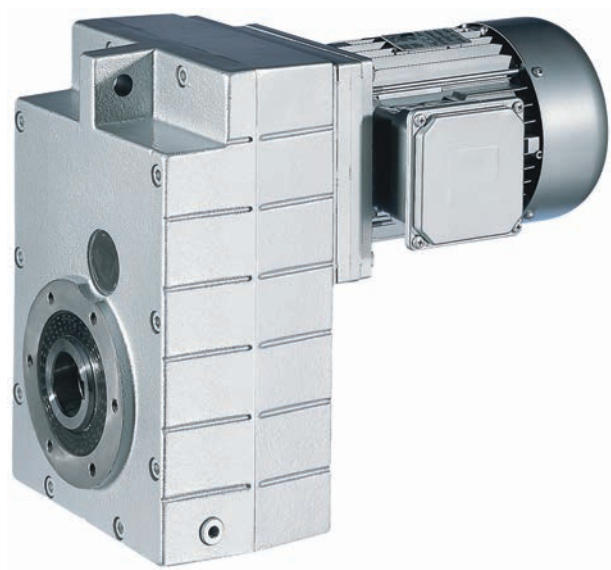
- 2-stage and 3-stage gearboxes
- Hollow shaft with keyway or shrink disc
- Solid shaft with keyway
- Foot or flange mounting
- Torque plate, including rubber buffer
- With MD three-phase AC motors (efficiency classes IE1) power range 0.12 ... 45 kW

Compact and powerful

In combination with three-phase AC motors, our shaft-mounted helical gearboxes form a compact and effective drive unit. The low level of backlash of the gear teeth ensures highest precision. In addition, they can also distribute the power output and torque via an output shaft on both sides. The gearboxes are available in 2- and 3-stage versions with a torque of up to 11,615 Nm and a ratio of up to $i=856$.

Inverters for motor-proximity installation

The Drive Package with decentralised Inverter Drives 8400 motec covers a power range up to 7.5 kW.



Shaft-mounted helical geared motor GFL07-2M HCR 100-32

GFL shaft-mounted helical gearboxes

General information



Functions and features

Gearbox type	GFL
Housing	
Design	Cuboid
Material	Aluminium / cast iron
Solid shaft	
Design	with keyway to DIN 6885
Tolerance	k6 (d ≤ 50 mm) m6 (d > 50 mm)
Material	Tempered steel C45 or 42CrMo4
Hollow shaft	
Design	H: with keyway S: smooth
Tolerance	Bore H7
Material	Tempered steel C45
Toothed part	
Design	Ground tooth flanks Optimised tooth flank geometry
Material	Case-hardened steel
Shaft-hub joint	
	1st stage/prestage/helical (bevel) gearbox: Friction-type connection Output stage (= 2nd, 3rd or 4th stage): Friction-type or positive-fit connection
Shaft sealing rings	
Design	With dust lip
Material	NB / FP
Bearing	
Design	Ball bearing / tapered-roller bearing depending on size and design
Schmierstoffe	
Standard	DIN 51502
Quantities	corresponding to mounting position (see operating instructions)
Mechanical efficiency	
1-stage gearboxes [$\eta_{c=1}$]	
2-stage gearboxes [$\eta_{c=1}$]	0.97
3-stage gearboxes [$\eta_{c=1}$]	0.95
4-stage gearboxes [$\eta_{c=1}$]	
Notes	

GFL shaft-mounted helical gearboxes

General information



Functions and features

Lubricants

Lenze gearboxes and geared motors are ready for operation on delivery and are filled with lubricants specific to both the drive and the design. The mounting position and design specified in the order are key factors in choosing the volume of lubricant.

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

Lubricant table

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

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

GFL shaft-mounted helical gearboxes

General information



Functions and features

Surface and corrosion protection

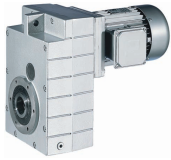
For optimum protection of geared motors against ambient conditions, the surface and corrosion protection system (OKS) offers tailor-made solutions.

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

Surface and corrosion protection system	Applications	Measures
	Catalogue text	Catalogue text
OKS-G (primed)	Dependent on subsequent top coat applied	2K PUR priming coat (grey) - Zinc-coated screws - Rust-free breather elements Optional measures - Stainless steel nameplate
OKS-S (small)	- Standard applications - Internal installation in heated buildings - Air humidity up to 90%	- Surface coating as per corrosivity category C1 (in line with EN 12944-2) - Zinc-coated screws - Rust-free breather elements Optional measures - Stainless steel nameplate
OKS-M (medium)	- Internal installation in non-heated buildings - Covered, protected external installation - Air humidity up to 95%	- Surface coating as per corrosivity category C2 (in line with EN 12944-2) - Zinc-coated screws - Rust-free breather elements Optional measures - Stainless steel shaft - Stainless steel nameplate - Rust-free shrink disc (on request)
OKS-L (high)	- External installation - Air humidity above 95% - Chemical industry plants - Food industry	- Surface coating as per corrosivity category C3 (in line with EN 12944-2) - Blower cover and B end shield additionally primed - Cable glands with gaskets - Corrosion-resistant brake with cover ring, stainless friction plate, and chrome-plated armature plate (on request) - All screws/screw plugs zinc-coated - Stainless breather elements - Threaded holes that are not used are closed by means of plastic plugs Optional measures - Sealed recesses on motor (on request) - Stainless steel shaft - Stainless steel nameplate - Rust-free shrink disc (on request) - Additional priming coat on cast iron fan - Oil expansion tank and torque plates painted separately and supplied loose

GFL shaft-mounted helical gearboxes

General information



Functions and features

Structure of surface coating

Surface and corrosion protection system	Corrosivity category	Surface coating	Colour
	DIN EN ISO 12944-2	Structure	
Without OKS (uncoated)		Dipping primed gearbox	
OKS-G (primed)		Dipping primed gearbox 2K PUR priming coat	
OKS-S (small)	C1	Dipping primed gearbox 2K-PUR top coat	Standard: RAL 7012 Optional: RAL Classic
OKS-M (medium)	C2	Dipping primed gearbox 2K PUR priming coat 2K-PUR top coat	Standard: RAL 7012 Optional: RAL Classic
OKS-L (high)	C3	Dipping primed gearbox 2K PUR priming coat 2K-PUR top coat	Standard: RAL 7012 Optional: RAL Classic

GFL shaft-mounted helical gearboxes

General information



Functions and features

Ventilation

Non-ventilated gearboxes

No ventilation is required for the GFL04 gearbox.

Gearboxes that may optionally be equipped with ventilation

Special measures are not usually required when using the GFL05 gearbox. In borderline cases, e.g. at input speeds > 2000 rpm, we recommend the use of breather elements, which we can supply if required.

Ventilated gearboxes

The gearboxes GFL06 to 14 are supplied with breather elements as standard.

Special measures for mounting position C (motor on top)

We recommend that an oil compensation reservoir is always used with gearbox sizes G□□09 to 14 in this mounting position. This reservoir can be purchased as an option. For illustrations and measures, please refer to the Accessories chapter.

This is not required at higher ratios or low input speeds. Please contact Lenze for confirmation in this case.

GFL shaft-mounted helical gearboxes

General information



Dimensioning

General information about the data provided in this catalogue

Powers, torques and speeds

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

- Operating time/day = 8 h (100% OT)
- Duty class I for up to 10 switching operations/h
- Mounting positions and designs in this catalogue
- Standard lubricant
- $T_{amb} = 20\text{ °C}$ for gearboxes,
 $T_{amb} = 40\text{ °C}$ for motors (in accordance with EN 60034)
- Site altitude $< = 1000\text{ m amsl}$
- The selection tables provide the permissible mechanical powers and torques. For notes on the thermal power limit, see chapter drive dimensioning.
- The rated power specified for motors and geared motors applies to operating mode S1 (in accordance with EN 60034).

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

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

GFL shaft-mounted helical gearboxes

General information



Dimensioning

Thermal power limit

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

The thermal power limit is affected by:

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

Please consult your Lenze sales office

- if the following input speeds n_1 are exceeded on a continuous basis (continuous is defined as more than 8 h/day):

Motor frame size	Mounting position A, B, E, F	Mounting position C, D
063 ... 100	3000 r/min	3000 r/min
112 ... 132	3000 r/min	1500 r/min
160 ... 225	2000 r/min	1500 r/min

- if the following input speeds n_1 are exceeded:

Motor frame size	Mounting position A, B, E, F	Mounting position C, D
063 ... 100	4000 r/min	3000 r/min
112 ... 132	4000 r/min	2000 r/min
160 ... 225	3000 r/min	1500 r/min

- or if you are using the following gearbox type, size and ratio combinations at an input speed of $n_1 > 1500$ r/min:

Gearbox type	Gearbox size	Ratio i
GFL shaft-mounted helical gearbox	07, 09, 11, 14	≤ 16

Possible ways of extending the application area

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

GFL shaft-mounted helical gearboxes

General information



Dimensioning

Load capacity and application factor

Load capacity c of gearbox

Rated value for the load capacity of Lenze geared motors.

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

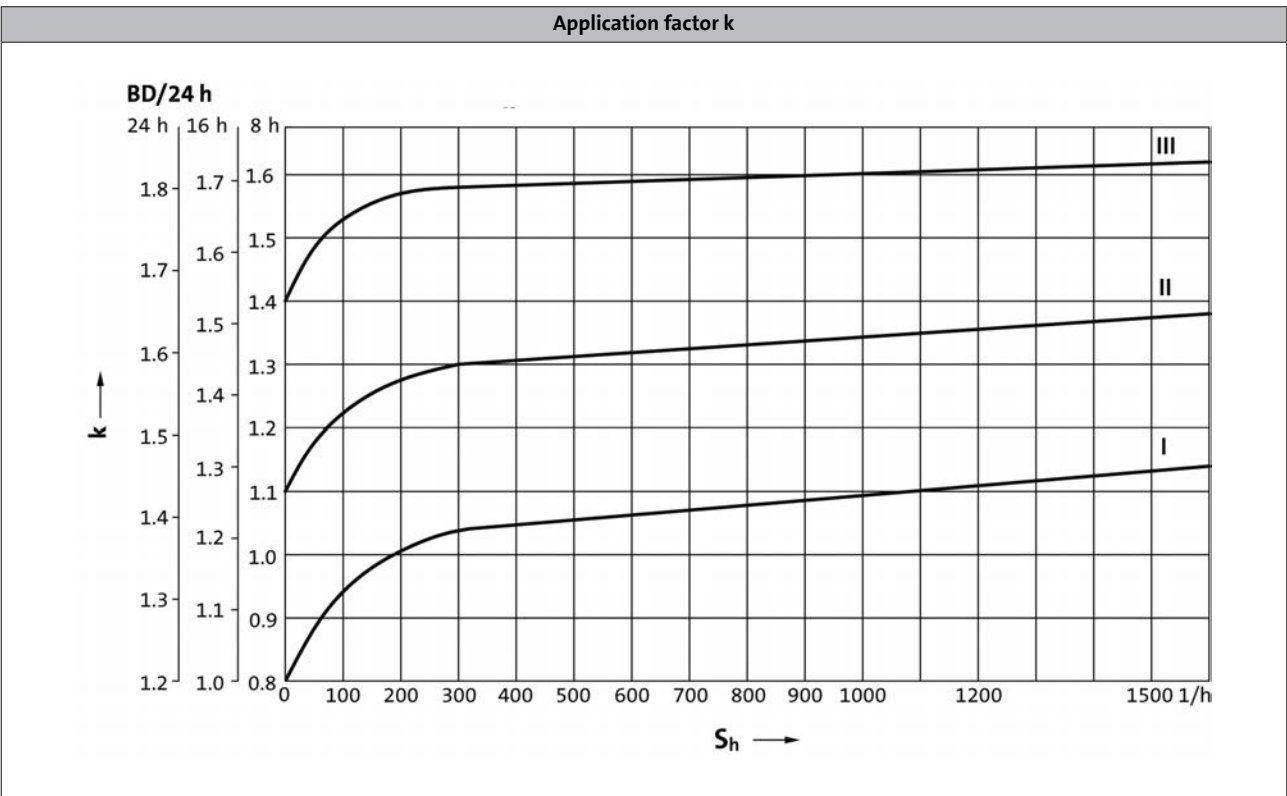
Application factor k (according to DIN 3990)

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

k is determined by:

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

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



GFL shaft-mounted helical gearboxes

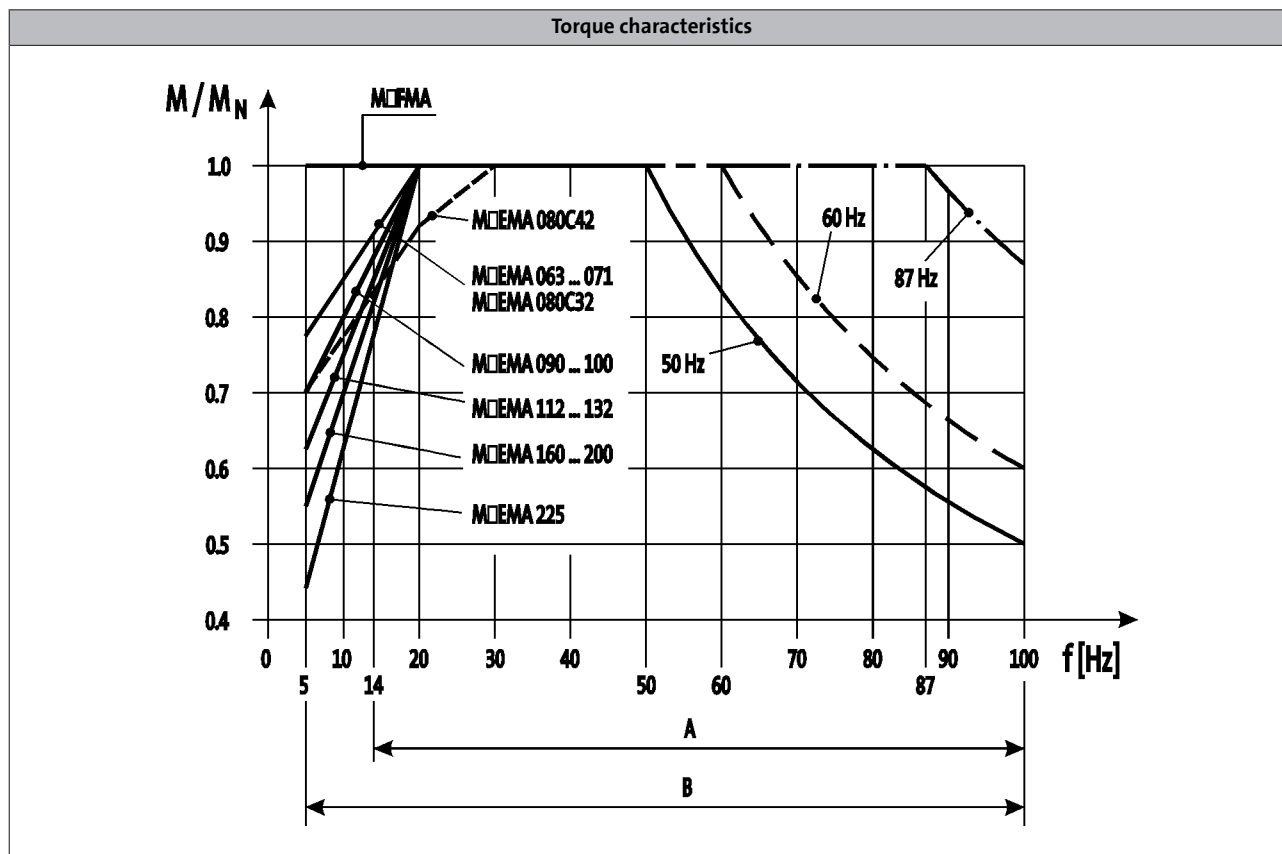
General information



Dimensioning

Torque derating at low motor frequencies

Motor size-dependent torque reduction, taking into account the thermal response during operation on the inverter.



A = Operation with integral fan and brake

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

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

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

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

Please contact your Lenze sales office.

GFL shaft-mounted helical gearboxes

General information



Dimensioning

Notes on the selection tables

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

The following legend indicates the structure of the selection tables.

Gearbox type
↓
GST helical gearbox

Technical data

Selection tables

Rated power P_N of the drive motor in relation to the rated frequency

► 50 Hz, 60 Hz: $P_N = 0.75$ kW

n_N		1410 r/min			1720 r/min			i	Product key of geared motor	
		n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
f_N	50 Hz	881	8.0	2.4	1069	6.6	2.8	1.600	GST04-1M □□□080C32	76
	60 Hz	689	10	2.2	835	8.4	2.6	2.048	GST04-1M □□□080C32	76

Rated speed n_N of the drive motor

Output speed n_2

Output torque M_2 (constant for all listed frequencies)

The load capacity c of the gearbox c is the ratio of the gearbox's rated torque to the rated torque of the three-phase motor (calculated in respect of its application to the output shaft). c must always be greater than the application factor k determined for the application

Ratio i

Page number for dimensions

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

GFL shaft-mounted helical gearboxes

General information



Dimensioning

Notes on the selection tables

Motor voltages

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

- 50 Hz : Δ 230 V / Y 400 V
- 60 Hz : 230 V or 460 V
- 87 Hz : Δ 400 V

Operation at 87 Hz

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

This offers the following advantages over 50 Hz operation:

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

GFL shaft-mounted helical gearboxes

General information



Notes on ordering

We want to be sure that you receive the correct products in good time.

To allow us to achieve this we need:

- your address and your company data
- our product key for the individual products in this catalogue
- your delivery date and delivery address

Ordering procedure

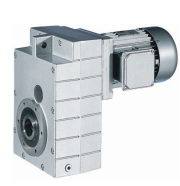
Please use the ordering information checklist to ensure that you provide all the ordering information required for the various products.

The ordering information checklist, the product key, the basic versions, options, mounting position and position of the system blocks will be found in the General – Product key section.

A list of Lenze's worldwide sales offices can be found on the Internet: www.Lenze.com.

GFL shaft-mounted helical gearboxes

General information



Ordering details checklist

☐ Offer

Page __ of __

☐ Order

Customer No.

--	--	--	--	--	--	--	--

Job No.

--	--	--	--	--	--	--	--	--	--

Fax No.

Sender

Company

Street/P.O. Box

P.O. Box, City

Date

Signature

Made out by (name)

Department

Telephone No.

Delivery address (if different)

Street/P.O. Box

P.O. Box, City

Desired delivery date

Dispatching notes

Invoice recipient (if different)

Street/P.O. Box

Postal code, City

Ordering details checklist

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Page ____

9

9

9

9

9

11

[illegible]

A	B	C	D	E	F

0 6 1

0	3	4
☐	☐	☐

2 3 4 5

9

7

OKS-G
(primed)

1

7

7

7

11

9

☐

9

1

9

7

□

☐

Compensation reservoir in mounting position for GFL09 ... 14-2

GFL shaft-mounted helical gearboxes

General information



Ordering details checklist

Three-phase AC motors options

Customer No.

Job No.

Page ____

Motor connection

Terminal box

- ☐ with plug-in connector ICN 6-pin.
Adhere to permissible rated motor current 20 A!
- ☐ with plug-in connector ICN 8-pin.
Adhere to permissible rated motor current 20 A!
- ☐ with plug-in connector HAN10E.
Adhere to permissible rated current 16 A!
- ☐ with plug-in connector HAN-Modular.
Adhere to permissible rated current 16 / 40 A!

Cable entry

only with M□□MAXX/LL063 ... 132
or terminal box with plug-in connector
in position

1	2	3	4	5

Blower

☐ 1~	☐ 3~
-----------------------------	-----------------------------

☐ Terminal box with plug-in connector ICN

Terminal box position

2	3	4	5

Spring-applied brake

Brake version

☐ Standard	☐ Longlife
-----------------------------------	-----------------------------------

Brake size

Characteristic torque

 Nm

Rated voltage

AC	DC	
		V

Rectifier

Only in the case of AC supply voltage

☐ Half-wave rectifier	☐ Bridge rectifier
☐ Bridge/half-wave rectifier (overexcitation)	☐ Bridge/half-wave rectifier (holding current reduction)

Brake options

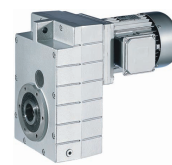
Manual release lever
in position

2	3	4	5

☐ Low-noise version
(Standard in the case of brake with speed/position encoder)

GFL shaft-mounted helical gearboxes

General information



Ordering details checklist

Three-phase AC motors options

Customer No.

Job No.

Page ____

Speed/position
encoder

Resolver ☐ RS1

Incremental encoder HTL ☐ IG128-24V-H ☐ IG512-24V-H ☐ IG1024-24V-H ☐ IG2048-24V-H

Incremental encoder TTL ☐ IG512-5V-T ☐ IG1024-5V-T ☐ IG2048-5V-T

Feedback with ICN connector ☐ IG128-24V-H not possible with plug-in connector!

Motor protection

☐ PTC

☐ KTY 83-110

☐ KTY 84-130

Approval

☐ UL/CSA
approval: cURus

☐ CCC

☐ China Energy Label

Further options

Indication of supply voltage only for motor frame sizes 112C32 to 225C22

☐ Δ; 400V-50Hz; 460V-60Hz

☐ Y/Δ; 400/230V-50Hz; 460/265V-60Hz
(-/400V-87Hz possible in operation with
frequency inverter)

☐ Protection cover

☐ 2nd shaft end

☐ Handwheel

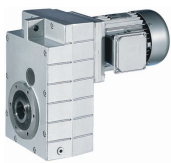
☐ Increased centrifugal mass

☐ 2nd nameplate (adhesive nameplate/metal nameplate)

GFL shaft-mounted helical gearboxes

General information





Permissible radial and axial forces at output

Permissible radial force

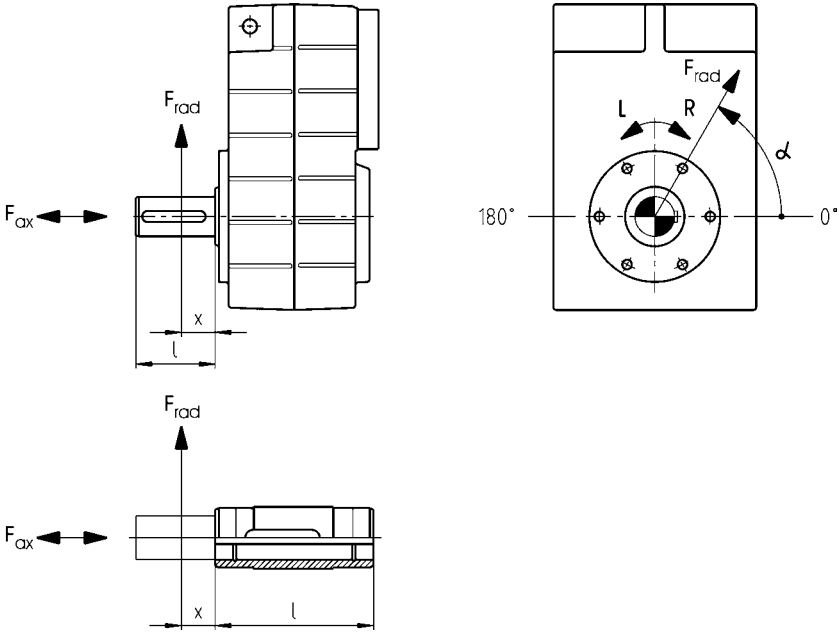
$F_{rad,per} = \min(f_w \times f_\alpha \times F_{rad,max} ; f_w \times F_{rad,max} \text{ at } n_2 \leq 16 \text{ r/min})$

Permissible axial force

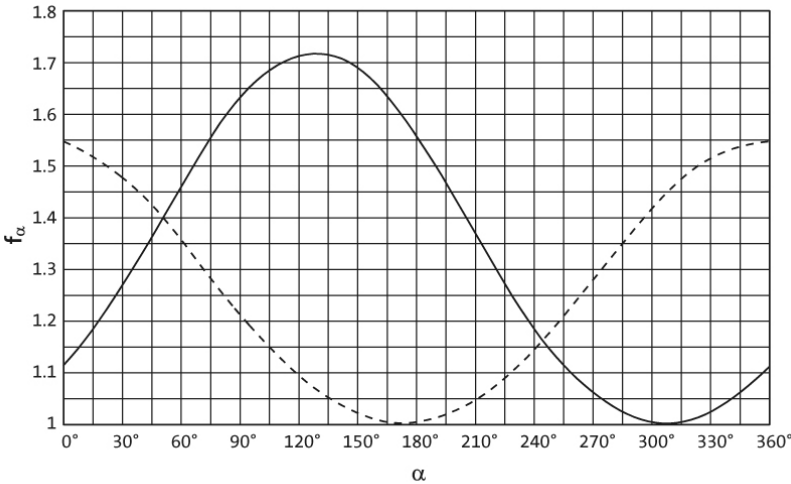
$F_{ax,per} = F_{ax,max} \text{ if } F_{rad} = 0$

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

Application of forces



Effective direction factor f_α at output shaft



—— Direction of rotation R
- - - Direction of rotation L

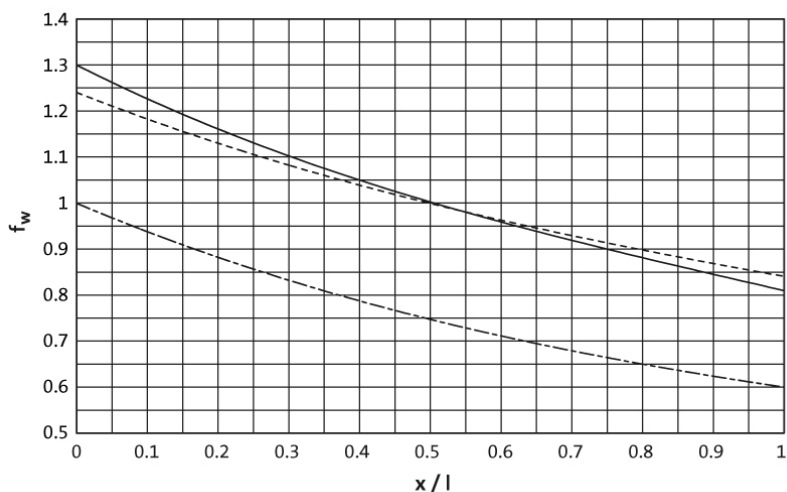
GFL shaft-mounted helical gearboxes

Technical data



Permissible radial and axial forces at output

Additional load factor f_w at output shaft



— Solid shaft (V□□)

- - - Solid shaft with flange (V□K)

- · - Hollow shaft (H□□)

GFL□□-2/3□ H□□

Size	n_2 [r/min]									
Gearbox	1000	630	400	250	160	100	63	40	25	≤16

Max. radial force, Hollow shaft										
	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GFL04	2100	2700	2800	3200	3800	4600	5500	6300	7000	7000
GFL05	1800	2400	3000	3400	4100	5000	6000	7100	8000	8000
GFL06	2400	3300	4300	4700	5000	6600	8500	10800	12000	12000
GFL07	2200	3400	4500	5100	6400	7900	9300	11500	15000	16000
GFL09			5000	6000	7200	10500	13000	15000	22000	24000
GFL11			7300	8700	10000	14200	19000	23000	27000	30000
GFL14			8000	9000	9500	11500	14000	18000	30000	45000

Max. axial force, Hollow shaft										
	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GFL04	1300	1700	2200	2600	3200	4200	5300	5500	5500	5500
GFL05	1600	2200	2800	3600	4200	5900	6600	6600	6600	6600
GFL06	2400	3200	4000	5200	6000	8500	10000	10000	10000	10000
GFL07	2000	2700	3400	4700	6000	8500	12000	14000	14000	14000
GFL09			3100	4200	5800	10000	13500	17000	21000	21000
GFL11			4700	6000	7500	14000	19000	25000	27000	27000
GFL14			4000	5000	6200	7500	11000	17500	31000	35000

- Application of force F_{rad} at hollow shaft end face ($x = 0$)
- $F_{ax,max}$ only valid with $F_{rad} = 0$
- Neither radial nor axial forces are permissible for the hollow shaft with shrink disc (S□□).

6.6

GFL shaft-mounted helical gearboxes

Technical data



Permissible radial and axial forces at output

GFL□□-2/3□ V□R

Size	n ₂ [r/min]									
Gearbox	1000	630	400	250	160	100	63	40	25	≤16
Max. radial force, Solid shaft without flange										
	F _{rad,max}	F _{rad,max}	F _{rad,max}	F _{rad,max}	F _{rad,max}	F _{rad,max}	F _{rad,max}	F _{rad,max}	F _{rad,max}	F _{rad,max}
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GFL04	1650	2100	2300	2700	3200	3600	3600	3600	3600	3600
GFL05	1400	1900	2400	2700	3200	4000	4800	5800	6200	6200
GFL06	1850	2500	3200	3600	3900	5100	6500	8400	9000	9000
GFL07	1650	2600	3200	3600	3900	5100	6500	8400	9000	9000
GFL09 ¹⁾			3800	4400	5500	8000	10000	12000	18000	18000
GFL11 ¹⁾			5500	6300	7300	11200	14500	17400	20500	23000
GFL14			47000	54000	62000	65000	65000	65000	65000	65000
Max. axial force, Solid shaft without flange										
	F _{ax,max}	F _{ax,max}	F _{ax,max}	F _{ax,max}	F _{ax,max}	F _{ax,max}	F _{ax,max}	F _{ax,max}	F _{ax,max}	F _{ax,max}
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GFL04	1300	1700	2200	2600	3200	4200	5300	5500	5500	5500
GFL05	1600	2200	2800	3600	4200	5900	6600	6600	6600	6600
GFL06	2400	3200	4000	5200	6000	8500	10000	10000	10000	10000
GFL07	2000	2700	3400	4700	6000	8500	12000	14000	14000	14000
GFL09 ¹⁾			3100	4200	5800	10000	13500	17000	21000	21000
GFL11 ¹⁾			4700	6000	7500	14000	19000	25000	27000	27000
GFL14			25000	27000	29000	32000	35000	35000	35000	35000

¹⁾ Reinforced output shaft bearings are available on request for V□R versions.

- Application of force F_{rad}: centre of shaft journal (x = l/2)
- F_{ax,max} only valid with F_{rad} = 0

GFL shaft-mounted helical gearboxes

Technical data



Permissible radial and axial forces at output

GFL□□-2/3□ V□K

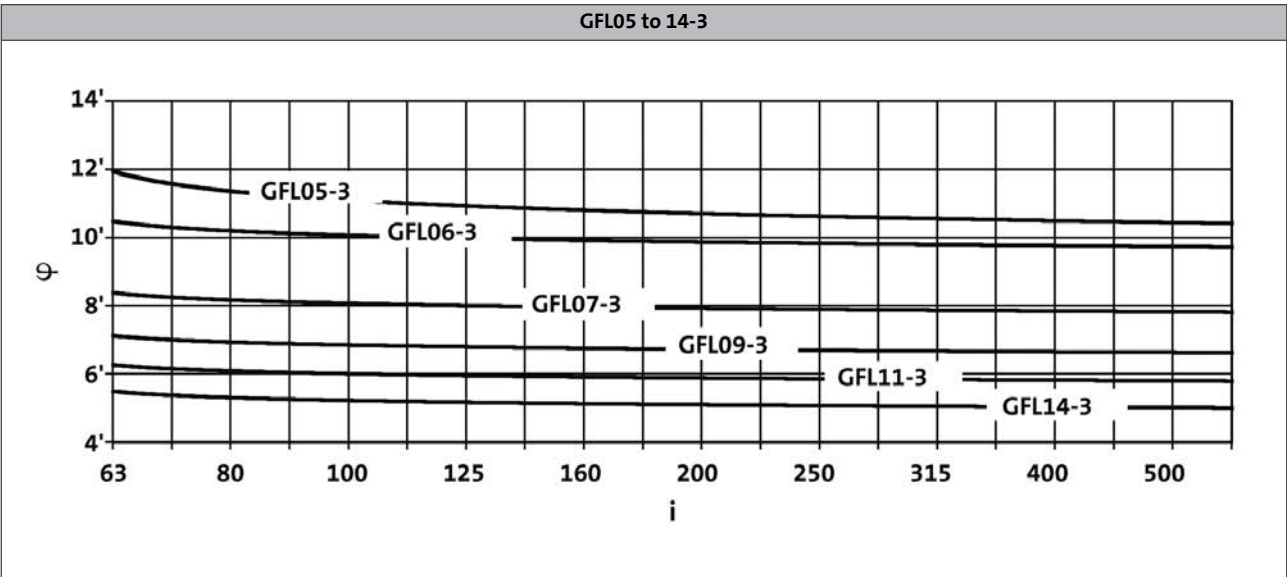
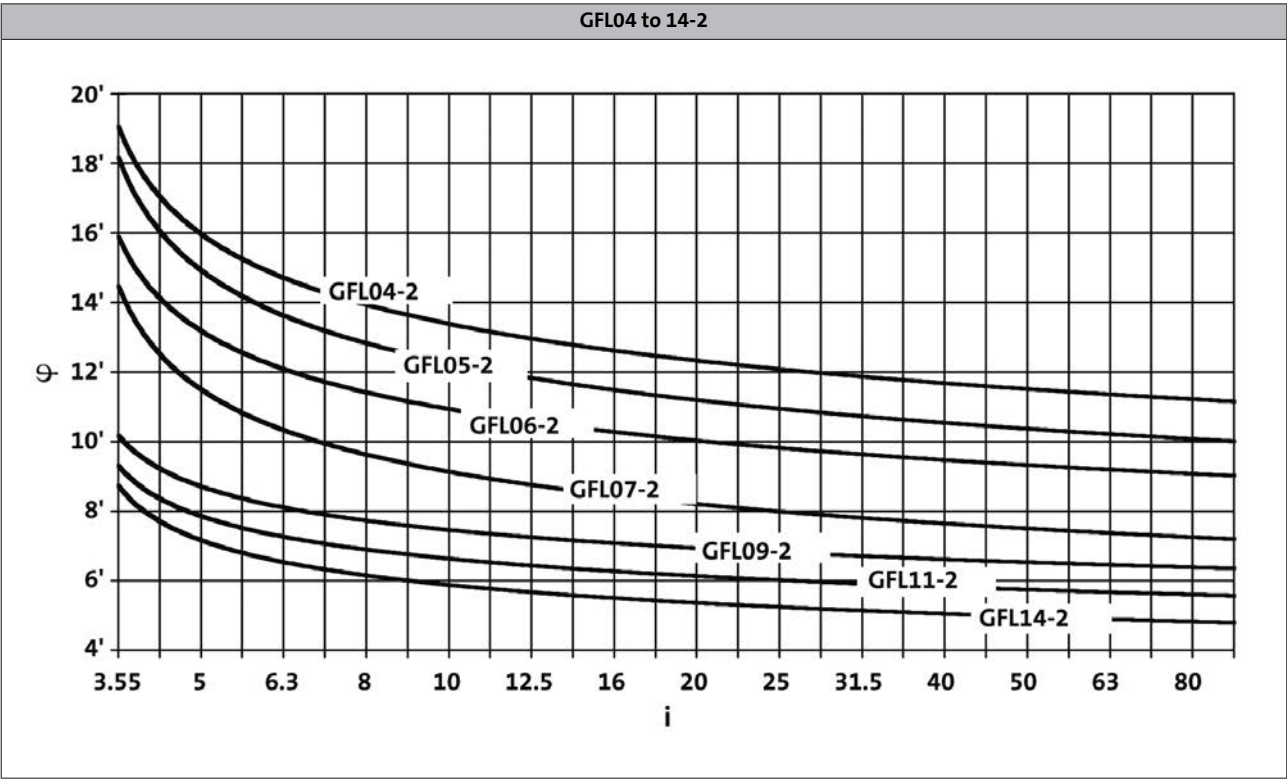
Size	n_2 [r/min]									
Gearbox	1000	630	400	250	160	100	63	40	25	≤16
Max. radial force, Solid shaft with flange										
	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GFL04	2300	2800	3200	3700	4400	4600	4600	4600	4600	4600
GFL05	2900	3700	4300	5100	5900	6800	7000	7000	7000	7000
GFL06	4000	5000	6100	7000	7800	9600	10000	10000	10000	10000
GFL07	4000	5200	6400	7400	8900	10500	12000	13000	14000	14000
GFL09			7800	9000	10500	14000	15000	15000	15000	15000
GFL11			12500	14500	17000	21500	26000	30000	30000	30000
GFL14			18000	20000	23000	27500	32000	38000	43000	43000
Max. axial force, Solid shaft with flange										
	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GFL04	1300	1700	2200	2600	3200	4200	4400	4400	4400	4400
GFL05	1800	2400	3100	3900	4800	6400	6600	6600	6600	6600
GFL06	2500	3400	4300	5500	6500	8500	10000	10000	10000	10000
GFL07	3600	4800	6100	6500	7000	9500	11500	11500	11500	11500
GFL09			6100	6500	7000	9500	11500	11500	11500	11500
GFL11			6800	8500	10500	17000	22000	27000	27000	27000
GFL14			6000	8000	10000	13000	19000	26000	35000	35000

- Application of force F_{rad} : centre of shaft journal ($x = l/2$)
- $F_{ax,max}$ only valid with $F_{rad} = 0$



Output backlash in angular minutes

► Backlash ϕ depending on ratio i



GFL shaft-mounted helical gearboxes

Technical data



Moments of inertia

GFL□□-2

- Moment of inertia (J) depending on ratio i

Gearbox			GFL04
3.659	J	[kgcm ²]	1.510
5.018	J	[kgcm ²]	0.858
5.833	J	[kgcm ²]	0.925
6.422	J	[kgcm ²]	0.555
7.025	J	[kgcm ²]	0.473
8.379	J	[kgcm ²]	0.666
9.333	J	[kgcm ²]	0.613
10.238	J	[kgcm ²]	0.366
11.491	J	[kgcm ²]	0.410
12.800	J	[kgcm ²]	0.382
14.706	J	[kgcm ²]	0.282
16.087	J	[kgcm ²]	0.245
17.920	J	[kgcm ²]	0.230
20.519	J	[kgcm ²]	0.171
22.857	J	[kgcm ²]	0.163
25.136	J	[kgcm ²]	0.129
28.000	J	[kgcm ²]	0.123
31.600	J	[kgcm ²]	0.086
35.200	J	[kgcm ²]	0.082
40.697	J	[kgcm ²]	0.058
45.333	J	[kgcm ²]	0.056
51.579	J	[kgcm ²]	0.038
57.455	J	[kgcm ²]	0.037
64.636	J	[kgcm ²]	0.026
72.000	J	[kgcm ²]	0.025
85.156	J	[kgcm ²]	0.016
94.857	J	[kgcm ²]	0.015

Gearbox			GFL05
3.333	J	[kgcm ²]	1.677
4.571	J	[kgcm ²]	2.133
5.133	J	[kgcm ²]	2.372
5.667	J	[kgcm ²]	2.329
6.400	J	[kgcm ²]	0.822
7.040	J	[kgcm ²]	1.470
7.771	J	[kgcm ²]	1.450
9.010	J	[kgcm ²]	0.951
9.946	J	[kgcm ²]	0.885
11.360	J	[kgcm ²]	1.082
12.800	J	[kgcm ²]	1.012
14.538	J	[kgcm ²]	0.746
15.904	J	[kgcm ²]	0.603
17.920	J	[kgcm ²]	0.609
20.286	J	[kgcm ²]	0.428
22.857	J	[kgcm ²]	0.434
24.850	J	[kgcm ²]	0.345
28.000	J	[kgcm ²]	0.331
32.344	J	[kgcm ²]	0.204
36.444	J	[kgcm ²]	0.195
40.233	J	[kgcm ²]	0.148
45.333	J	[kgcm ²]	0.142
52.067	J	[kgcm ²]	0.093
58.667	J	[kgcm ²]	0.090
63.190	J	[kgcm ²]	0.068
71.200	J	[kgcm ²]	0.064
80.763	J	[kgcm ²]	0.043
91.000	J	[kgcm ²]	0.042

- The moments of inertia relate to the drive shaft of the gearbox.
- The total moment of inertia is calculated by adding the values of the gearbox, motor and accessories.

GFL shaft-mounted helical gearboxes

Technical data



Moments of inertia

GFL□□-2

- Moment of inertia (J) depending on ratio i

Gearbox			GFL06
3.675	J	[kgcm ²]	7.755
5.211	J	[kgcm ²]	6.636
5.750	J	[kgcm ²]	6.044
6.450	J	[kgcm ²]	3.651
7.147	J	[kgcm ²]	4.044
8.400	J	[kgcm ²]	4.264
9.463	J	[kgcm ²]	3.879
10.092	J	[kgcm ²]	2.520
11.520	J	[kgcm ²]	1.730
12.978	J	[kgcm ²]	2.610
14.743	J	[kgcm ²]	1.950
16.128	J	[kgcm ²]	1.680
18.169	J	[kgcm ²]	1.570
20.571	J	[kgcm ²]	1.190
23.175	J	[kgcm ²]	1.130
25.200	J	[kgcm ²]	0.904
28.389	J	[kgcm ²]	0.861
32.800	J	[kgcm ²]	0.581
36.951	J	[kgcm ²]	0.556
40.800	J	[kgcm ²]	0.425
45.963	J	[kgcm ²]	0.407
52.800	J	[kgcm ²]	0.264
59.481	J	[kgcm ²]	0.251
64.080	J	[kgcm ²]	0.193
72.189	J	[kgcm ²]	0.187
81.000	J	[kgcm ²]	0.125
91.250	J	[kgcm ²]	0.121

Gearbox			GFL07
3.350	J	[kgcm ²]	19.570
4.643	J	[kgcm ²]	11.988
5.159	J	[kgcm ²]	11.120
5.695	J	[kgcm ²]	18.094
6.400	J	[kgcm ²]	9.831
7.150	J	[kgcm ²]	11.878
8.324	J	[kgcm ²]	13.113
9.379	J	[kgcm ²]	12.037
9.714	J	[kgcm ²]	8.030
11.538	J	[kgcm ²]	8.520
13.000	J	[kgcm ²]	7.970
14.200	J	[kgcm ²]	6.350
15.904	J	[kgcm ²]	5.270
17.920	J	[kgcm ²]	4.980
20.286	J	[kgcm ²]	3.470
22.857	J	[kgcm ²]	3.268
24.850	J	[kgcm ²]	2.645
28.000	J	[kgcm ²]	2.525
32.344	J	[kgcm ²]	1.690
36.444	J	[kgcm ²]	1.610
39.642	J	[kgcm ²]	1.250
44.667	J	[kgcm ²]	1.200
52.067	J	[kgcm ²]	0.783
58.667	J	[kgcm ²]	0.753
63.190	J	[kgcm ²]	0.573
71.200	J	[kgcm ²]	0.555
79.875	J	[kgcm ²]	0.366
90.000	J	[kgcm ²]	0.358

- The moments of inertia relate to the drive shaft of the gearbox.
- The total moment of inertia is calculated by adding the values of the gearbox, motor and accessories.

GFL shaft-mounted helical gearboxes

Technical data



Moments of inertia

GFL□□-2

- Moment of inertia (J) depending on ratio i

Gearbox			GFL09
6.864	J	[kgcm ²]	41.300
7.466	J	[kgcm ²]	38.700
9.010	J	[kgcm ²]	26.800
9.799	J	[kgcm ²]	25.300
11.167	J	[kgcm ²]	19.500
12.307	J	[kgcm ²]	27.600
14.333	J	[kgcm ²]	20.000
16.333	J	[kgcm ²]	15.500
18.407	J	[kgcm ²]	14.600
19.667	J	[kgcm ²]	12.100
22.164	J	[kgcm ²]	11.300
24.111	J	[kgcm ²]	9.040
27.173	J	[kgcm ²]	8.630
32.667	J	[kgcm ²]	5.430
36.815	J	[kgcm ²]	5.210
39.667	J	[kgcm ²]	4.070
44.704	J	[kgcm ²]	3.920
51.333	J	[kgcm ²]	2.590
57.852	J	[kgcm ²]	2.500
62.300	J	[kgcm ²]	1.890
70.211	J	[kgcm ²]	1.830
78.750	J	[kgcm ²]	1.250
88.750	J	[kgcm ²]	1.210

Gearbox			GFL14
7.150	J	[kgcm ²]	344.000
7.777	J	[kgcm ²]	321.000
8.800	J	[kgcm ²]	247.000
9.571	J	[kgcm ²]	232.000
11.538	J	[kgcm ²]	242.000
13.000	J	[kgcm ²]	225.000
14.200	J	[kgcm ²]	625.000
15.620	J	[kgcm ²]	156.000
17.600	J	[kgcm ²]	146.000
19.948	J	[kgcm ²]	111.000
22.476	J	[kgcm ²]	105.000
24.456	J	[kgcm ²]	83.200
27.556	J	[kgcm ²]	79.400
32.344	J	[kgcm ²]	52.900
36.444	J	[kgcm ²]	50.700
39.642	J	[kgcm ²]	38.000
44.667	J	[kgcm ²]	36.600
52.067	J	[kgcm ²]	24.600
58.667	J	[kgcm ²]	23.800
63.190	J	[kgcm ²]	18.000
71.200	J	[kgcm ²]	17.400
79.875	J	[kgcm ²]	11.800
90.000	J	[kgcm ²]	11.500

Gearbox			GFL11
6.864	J	[kgcm ²]	124.000
7.466	J	[kgcm ²]	116.000
9.010	J	[kgcm ²]	79.600
9.799	J	[kgcm ²]	74.800
10.720	J	[kgcm ²]	65.000
12.480	J	[kgcm ²]	81.500
14.538	J	[kgcm ²]	58.400
15.904	J	[kgcm ²]	51.300
17.920	J	[kgcm ²]	48.300
20.286	J	[kgcm ²]	36.100
22.857	J	[kgcm ²]	34.300
24.850	J	[kgcm ²]	26.900
28.000	J	[kgcm ²]	25.700
32.739	J	[kgcm ²]	17.100
36.889	J	[kgcm ²]	16.500
40.233	J	[kgcm ²]	12.600
45.333	J	[kgcm ²]	12.200
52.067	J	[kgcm ²]	8.080
58.667	J	[kgcm ²]	7.810
63.190	J	[kgcm ²]	5.900
71.200	J	[kgcm ²]	5.720
79.875	J	[kgcm ²]	3.870
90.000	J	[kgcm ²]	3.760

- The moments of inertia relate to the drive shaft of the gearbox.
- The total moment of inertia is calculated by adding the values of the gearbox, motor and accessories.

GFL shaft-mounted helical gearboxes

Technical data



Moments of inertia

GFL□□-3

- Moment of inertia (J) depending on ratio i

Gearbox			GFL05
61.653	J	[kgcm ²]	0.202
78.639	J	[kgcm ²]	0.145
90.123	J	[kgcm ²]	0.197
101.547	J	[kgcm ²]	0.196
114.952	J	[kgcm ²]	0.142
129.524	J	[kgcm ²]	0.141
140.817	J	[kgcm ²]	0.109
158.667	J	[kgcm ²]	0.109
177.027	J	[kgcm ²]	0.073
199.467	J	[kgcm ²]	0.073
227.989	J	[kgcm ²]	0.051
256.889	J	[kgcm ²]	0.050
288.948	J	[kgcm ²]	0.033
325.576	J	[kgcm ²]	0.033
362.100	J	[kgcm ²]	0.023
408.000	J	[kgcm ²]	0.023
477.052	J	[kgcm ²]	0.014
537.524	J	[kgcm ²]	0.014

Gearbox			GFL06
66.213	J	[kgcm ²]	0.292
72.000	J	[kgcm ²]	0.264
81.111	J	[kgcm ²]	0.259
88.200	J	[kgcm ²]	0.190
99.361	J	[kgcm ²]	0.187
116.571	J	[kgcm ²]	0.091
131.323	J	[kgcm ²]	0.208
144.320	J	[kgcm ²]	0.110
162.583	J	[kgcm ²]	0.109
179.520	J	[kgcm ²]	0.102
202.237	J	[kgcm ²]	0.101
231.200	J	[kgcm ²]	0.068
260.457	J	[kgcm ²]	0.067
293.018	J	[kgcm ²]	0.044
299.200	J	[kgcm ²]	0.064
367.200	J	[kgcm ²]	0.030
413.667	J	[kgcm ²]	0.030
475.200	J	[kgcm ²]	0.029
535.333	J	[kgcm ²]	0.028
576.720	J	[kgcm ²]	0.028
649.700	J	[kgcm ²]	0.028
759.806	J	[kgcm ²]	0.017
855.954	J	[kgcm ²]	0.017

Gearbox			GFL07
65.306	J	[kgcm ²]	0.790
72.452	J	[kgcm ²]	0.894
81.636	J	[kgcm ²]	0.880
92.413	J	[kgcm ²]	0.609
104.127	J	[kgcm ²]	0.601
113.206	J	[kgcm ²]	0.448
127.556	J	[kgcm ²]	0.442
147.347	J	[kgcm ²]	0.275
166.025	J	[kgcm ²]	0.271
183.285	J	[kgcm ²]	0.194
206.519	J	[kgcm ²]	0.192
224.636	J	[kgcm ²]	0.180
253.111	J	[kgcm ²]	0.179
290.706	J	[kgcm ²]	0.112
327.556	J	[kgcm ²]	0.111
352.811	J	[kgcm ²]	0.081
397.533	J	[kgcm ²]	0.080
430.222	J	[kgcm ²]	0.104
522.133	J	[kgcm ²]	0.075
562.391	J	[kgcm ²]	0.073
633.680	J	[kgcm ²]	0.073
718.786	J	[kgcm ²]	0.047
809.900	J	[kgcm ²]	0.046

Gearbox			GFL09
63.326	J	[kgcm ²]	2.344
73.173	J	[kgcm ²]	2.472
82.465	J	[kgcm ²]	2.428
93.333	J	[kgcm ²]	1.679
105.185	J	[kgcm ²]	1.651
114.333	J	[kgcm ²]	1.230
128.852	J	[kgcm ²]	1.212
148.815	J	[kgcm ²]	0.773
167.712	J	[kgcm ²]	0.762
185.111	J	[kgcm ²]	0.548
208.617	J	[kgcm ²]	0.541
224.778	J	[kgcm ²]	0.505
253.321	J	[kgcm ²]	0.500
290.889	J	[kgcm ²]	0.313
327.827	J	[kgcm ²]	0.310
353.033	J	[kgcm ²]	0.226
397.863	J	[kgcm ²]	0.224
424.247	J	[kgcm ²]	0.286
514.881	J	[kgcm ²]	0.208
554.470	J	[kgcm ²]	0.201
624.879	J	[kgcm ²]	0.200
700.875	J	[kgcm ²]	0.130
789.875	J	[kgcm ²]	0.129

- The moments of inertia relate to the drive shaft of the gearbox.
- The total moment of inertia is calculated by adding the values of the gearbox, motor and accessories.

GFL shaft-mounted helical gearboxes

Technical data



Moments of inertia

GFL□□-3

- Moment of inertia (J) depending on ratio i

Gearbox			GFL11
65.306	J	[kgcm²]	6.967
73.335	J	[kgcm²]	7.844
82.631	J	[kgcm²]	7.707
93.540	J	[kgcm²]	5.050
105.397	J	[kgcm²]	4.965
114.586	J	[kgcm²]	3.712
129.111	J	[kgcm²]	3.656
149.144	J	[kgcm²]	2.299
168.049	J	[kgcm²]	2.265
182.792	J	[kgcm²]	1.661
205.963	J	[kgcm²]	1.639
224.636	J	[kgcm²]	1.515
253.111	J	[kgcm²]	1.501
267.259	J	[kgcm²]	1.865
327.556	J	[kgcm²]	1.373
358.077	J	[kgcm²]	0.679
403.467	J	[kgcm²]	0.673
430.222	J	[kgcm²]	0.853
522.133	J	[kgcm²]	0.623
562.391	J	[kgcm²]	0.599
633.680	J	[kgcm²]	0.596
710.888	J	[kgcm²]	0.385
801.000	J	[kgcm²]	0.384

Gearbox			GFL14
64.296	J	[kgcm²]	26.316
68.708	J	[kgcm²]	19.862
77.418	J	[kgcm²]	19.381
85.037	J	[kgcm²]	21.590
104.889	J	[kgcm²]	9.324
114.126	J	[kgcm²]	8.318
128.593	J	[kgcm²]	8.144
136.889	J	[kgcm²]	16.779
156.148	J	[kgcm²]	5.917
170.074	J	[kgcm²]	6.962
202.074	J	[kgcm²]	3.692
224.636	J	[kgcm²]	4.742
253.111	J	[kgcm²]	4.697
273.778	J	[kgcm²]	5.759
332.444	J	[kgcm²]	4.300
352.811	J	[kgcm²]	2.163
397.533	J	[kgcm²]	2.145
430.222	J	[kgcm²]	2.727
522.133	J	[kgcm²]	1.984
562.391	J	[kgcm²]	1.910
633.680	J	[kgcm²]	1.903
710.888	J	[kgcm²]	1.259
801.000	J	[kgcm²]	1.254

- The moments of inertia relate to the drive shaft of the gearbox.
- The total moment of inertia is calculated by adding the values of the gearbox, motor and accessories.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-2M HCR / HDR

		063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13
GFL04	m [kg]	10	11	10	11		13		12	13	17	18
GFL05	m [kg]					24		26			30	31
GFL06	m [kg]					38		40	39	40	44	45
GFL07	m [kg]											71

		080C31	080C32 080C33 080C42	090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GFL04	m [kg]	17	18									
GFL05	m [kg]	30	31	38		36	45	42	45	42		
GFL06	m [kg]	44	45	52		50	59	56	59	56	67	64
GFL07	m [kg]	70	71	78		76	85	82	85	82	93	90
GFL09	m [kg]				124	122	131	128	131	128	139	136
GFL11	m [kg]						217		217	214	224	221
GFL14	m [kg]										366	363

		112C32	112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m [kg]	74	71									
GFL07	m [kg]	100	97	132	130	174	194					
GFL09	m [kg]	146	143	179	177	221	241	276	286	311		
GFL11	m [kg]	231	228	262	260	304	324	359	369	394	519	544
GFL14	m [kg]	373	370	403	401	445	465	500	510	535	657	752

GFL□□-2M HAR / HBR

		063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13
GFL04	m [kg]	11	12	11	12		14		13	14	18	19
GFL05	m [kg]					25	27	28	27	28	31	32
GFL06	m [kg]					41		43	42	43	46	47
GFL07	m [kg]											75

		080C31	080C32 080C33 080C42	090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GFL04	m [kg]	18	19									
GFL05	m [kg]	31	32	39		37	46	43	46	43		
GFL06	m [kg]	46	47	55		53	62	59	62	59	70	67
GFL07	m [kg]	74	75	82		80	89	86	89	86	97	94
GFL09	m [kg]				131	129	138	135	138	135	146	143
GFL11	m [kg]						231		231	228	238	235
GFL14	m [kg]										389	386

		112C32	112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m [kg]	77	74									
GFL07	m [kg]	104	101	136	134	178	198					
GFL09	m [kg]	153	150	186	184	228	248	283	293	318		
GFL11	m [kg]	245	242	276	274	318	338	373	383	408	533	558
GFL14	m [kg]	396	393	426	424	468	488	523	533	558	680	775

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-2M HAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13	080C31	080C32 080C33 080C42
GFL04	m	[kg]	14		16	17	16	17	16	21	22	21	22
GFL05	m	[kg]		29	31	32	31	32		35	36	35	36
GFL06	m	[kg]		48		50	49	50		53	54	53	54
GFL07	m	[kg]									86	85	86

			090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32	112C41
GFL05	m	[kg]	43		41	50	47	50	47				
GFL06	m	[kg]	62		60	69	66	69	66	77	74	84	81
GFL07	m	[kg]	93		91	100	97	100	97	108	105	115	112
GFL09	m	[kg]		147	145	154	151	154	151	162	159	169	166
GFL11	m	[kg]				255		255	252	262	259	269	266
GFL14	m	[kg]								422	419	429	426

			132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL07	m	[kg]	147	145	189	209					
GFL09	m	[kg]	202	200	244	264	299	309	334		
GFL11	m	[kg]	300	298	342	362	397	407	432	557	582
GFL14	m	[kg]	459	457	501	521	556	566	591	713	808

GFL□□-2M HCK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13	080C31	080C32 080C33 080C42
GFL04	m	[kg]	13		15	16	15	16	15	20	21	20	21
GFL05	m	[kg]		28			30			34	35	34	35
GFL06	m	[kg]		45		47	46	47		51	52	51	52
GFL07	m	[kg]									82	81	82

			090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32	112C41
GFL05	m	[kg]	42		40	49	46	49	46				
GFL06	m	[kg]	59		57	66	63	66	63	74	71	81	78
GFL07	m	[kg]	89		87	96	93	96	93	104	101	111	108
GFL09	m	[kg]		140	138	147	144	147	144	155	152	162	159
GFL11	m	[kg]				241		241	238	248	245	255	252
GFL14	m	[kg]								399	396	406	403

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			132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL07	m	[kg]	143	141	185	205					
GFL09	m	[kg]	195	193	237	257	292	302	327		
GFL11	m	[kg]	286	284	328	348	383	393	418	543	568
GFL14	m	[kg]	436	434	478	498	533	543	568	690	785

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-2M VCR / VDR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31	080C32 080C33 080C42
GFL04	m	[kg]	11		13	14	13	14	18	19	18	19
GFL05	m	[kg]		25	27				31	32	31	32
GFL06	m	[kg]		41		43	42	43	46	47	46	47
GFL07	m	[kg]								76	75	76

			090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32
GFL04	m	[kg]	25		23							
GFL05	m	[kg]	39		37	46	43	46	43			
GFL06	m	[kg]	55		53	62	59	62	59	70	67	77
GFL07	m	[kg]	83		81	90	87	90	87	98	95	105
GFL09	m	[kg]		132	130	139	136	139	136	147	144	154
GFL11	m	[kg]				233		233	230	240	237	247
GFL14	m	[kg]								399	396	406

			112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m	[kg]	74									
GFL07	m	[kg]	102	137	135	179	199					
GFL09	m	[kg]	151	187	185	229	249	284	294	319		
GFL11	m	[kg]	244	278	276	320	340	375	385	410	535	560
GFL14	m	[kg]	403	436	434	478	498	533	543	568	690	785

GFL□□-2M VAR / VBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31	080C32 080C33 080C42
GFL04	m	[kg]	12		14	15	14	15	19	20	19	20
GFL05	m	[kg]		26	28	29	28	29	32	33	32	33
GFL06	m	[kg]		43		45	44	45	49	50	49	50
GFL07	m	[kg]								80	79	80

			090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32
GFL04	m	[kg]	26		24							
GFL05	m	[kg]	40		38	47	44	47	44			
GFL06	m	[kg]	57		55	64	61	64	61	72	69	79
GFL07	m	[kg]	87		85	94	91	94	91	102	99	109
GFL09	m	[kg]		139	137	146	143	146	143	154	151	161
GFL11	m	[kg]				247		247	244	254	251	261
GFL14	m	[kg]								422	419	429

			112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m	[kg]	76									
GFL07	m	[kg]	106	141	139	183	203					
GFL09	m	[kg]	158	194	192	236	256	291	301	326		
GFL11	m	[kg]	258	292	290	334	354	389	399	424	549	574
GFL14	m	[kg]	426	459	457	501	521	556	566	591	713	808

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-2M VAK

		063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13
GFL04	m [kg]	14	15	14	15		17		16	17	21	22
GFL05	m [kg]					30	32	33	32	33	36	37
GFL06	m [kg]					50		52	51	52	56	57
GFL07	m [kg]											91

		080C31	080C32 080C33 080C42	090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GFL04	m [kg]	21	22	29		27						
GFL05	m [kg]	36	37	44		42	51	48	51	48		
GFL06	m [kg]	56	57	64		62	71	68	71	68	79	76
GFL07	m [kg]	90	91	98		96	105	102	105	102	113	110
GFL09	m [kg]				155	153	162	159	162	159	170	167
GFL11	m [kg]						271		271	268	278	275
GFL14	m [kg]										455	452

		112C32	112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m [kg]	86	83									
GFL07	m [kg]	120	117	152	150	194	214					
GFL09	m [kg]	177	174	210	208	252	272	307	317	342		
GFL11	m [kg]	285	282	316	314	358	378	413	423	448	573	598
GFL14	m [kg]	462	459	492	490	534	554	589	599	624	746	841

GFL□□-2M VCK

		063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13
GFL04	m [kg]	13	14	13	14		16		15	16	20	21
GFL05	m [kg]					29		31			35	36
GFL06	m [kg]					48		50	49	50	53	54
GFL07	m [kg]											87

		080C31	080C32 080C33 080C42	090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GFL04	m [kg]	20	21	28		26						
GFL05	m [kg]	35	36	43		41	50	47	50	47		
GFL06	m [kg]	53	54	62		60	69	66	69	66	77	74
GFL07	m [kg]	86	87	94		92	101	98	101	98	109	106
GFL09	m [kg]				148	146	155	152	155	152	163	160
GFL11	m [kg]						257		257	254	264	261
GFL14	m [kg]										432	429

		112C32	112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m [kg]	84	81									
GFL07	m [kg]	116	113	148	146	190	210					
GFL09	m [kg]	170	167	203	201	245	265	300	310	335		
GFL11	m [kg]	271	268	302	300	344	364	399	409	434	559	584
GFL14	m [kg]	439	436	469	467	511	531	566	576	601	723	818

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-2M SCR / SDR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31	080C32 080C33 080C42
GFL04	m	[kg]	11		13	14	13	14	18	19	18	19
GFL05	m	[kg]		25	27		26	27	31	32	31	32
GFL06	m	[kg]		39		41	40	41	45	46	45	46
GFL07	m	[kg]								72	71	72

			090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32
GFL04	m	[kg]	25		23							
GFL05	m	[kg]	39		37	46	43	46	43			
GFL06	m	[kg]	53		51	60	57	60	57	68	65	75
GFL07	m	[kg]	79		77	86	83	86	83	95	92	102
GFL09	m	[kg]		127	125	134	131	134	131	142	139	149
GFL11	m	[kg]				222		222	219	229	226	236
GFL14	m	[kg]								377	374	384

			112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m	[kg]	72									
GFL07	m	[kg]	99	133	131	175	195					
GFL09	m	[kg]	146	182	180	224	244	279	289	314		
GFL11	m	[kg]	233	267	265	309	329	364	374	399	524	549
GFL14	m	[kg]	381	414	412	456	476	511	521	546	668	763

GFL□□-2M SAR / SBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31	080C32 080C33 080C42
GFL04	m	[kg]	12		14	15	14	15	19	20	19	20
GFL05	m	[kg]		26	28	29	28	29	32	33	32	33
GFL06	m	[kg]		42		44	43	44	47	48	47	48
GFL07	m	[kg]								76	75	76

			090C11	090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32
GFL04	m	[kg]	26		24							
GFL05	m	[kg]	40		38	47	44	47	44			
GFL06	m	[kg]	56		54	63	60	63	60	71	68	78
GFL07	m	[kg]	83		81	90	87	90	87	99	96	106
GFL09	m	[kg]		134	132	141	138	141	138	149	146	156
GFL11	m	[kg]				236		236	233	243	240	250
GFL14	m	[kg]								400	397	407

			112C41	132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL06	m	[kg]	75									
GFL07	m	[kg]	103	137	135	179	199					
GFL09	m	[kg]	153	189	187	231	251	286	296	321		
GFL11	m	[kg]	247	281	279	323	343	378	388	413	538	563
GFL14	m	[kg]	404	437	435	479	499	534	544	569	691	786

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-2M SAK

			063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31	080C32 080C33 080C42	090C11
GFL05	m	[kg]	30	32	33	32	33	36	37	36	37	44
GFL06	m	[kg]	49		51	50	51	54	55	54	55	63
GFL07	m	[kg]							87	86	87	94

			090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32	112C41
GFL05	m	[kg]	44	42	51	48	51	48				
GFL06	m	[kg]	63	61	70	67	70	67	78	75	85	82
GFL07	m	[kg]	94	92	101	98	101	98	110	107	117	114
GFL09	m	[kg]	150	148	157	154	157	154	165	162	172	169
GFL11	m	[kg]			260		260	257	267	264	274	271
GFL14	m	[kg]							433	430	440	437

			132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL07	m	[kg]	148	146	190	210					
GFL09	m	[kg]	205	203	247	267	302	312	337		
GFL11	m	[kg]	305	303	347	367	402	412	437	562	587
GFL14	m	[kg]	470	468	512	532	567	577	602	724	819

GFL□□-2M SCK

			063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31	080C32 080C33 080C42	090C11
GFL05	m	[kg]	29	31		30	31	35	36	35	36	43
GFL06	m	[kg]	46		48	47	48	52	53	52	53	60
GFL07	m	[kg]							83	82	83	90

			090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31	112C32	112C41
GFL05	m	[kg]	43	41	50	47	50	47				
GFL06	m	[kg]	60	58	67	64	67	64	75	72	82	79
GFL07	m	[kg]	90	88	97	94	97	94	106	103	113	110
GFL09	m	[kg]	143	141	150	147	150	147	158	155	165	162
GFL11	m	[kg]			246		246	243	253	250	260	257
GFL14	m	[kg]							410	407	417	414

			132C21	132C22 132C32	160C22	160C32	180C12	180C32	180C42	225C12	225C22
GFL07	m	[kg]	144	142	186	206					
GFL09	m	[kg]	198	196	240	260	295	305	330		
GFL11	m	[kg]	291	289	333	353	388	398	423	548	573
GFL14	m	[kg]	447	445	489	509	544	554	579	701	796

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-3M HCR / HDR

		063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42
GFL05	m [kg]	24	25	24	25		27		26		27
GFL06	m [kg]		41			42	43	44	43		44
GFL07	m [kg]					72			74		
GFL09	m [kg]					123	125	126	125	126	125

		080C11	080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41
GFL05	m [kg]	31	32	31							
GFL06	m [kg]	48	49	48	49	55					
GFL07	m [kg]	78	79	78	79	86	84	93	90		90
GFL09	m [kg]	129	130	129	130	137	135	144	141	144	141
GFL11	m [kg]	222	223	222	223	230	228	237	234	237	234
GFL14	m [kg]					387	385	394	391	394	391

		112C22	112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m [kg]	153	150		157				
GFL11	m [kg]	246	243	253	250	285	283		
GFL14	m [kg]	402	399	409	406	441	439	483	503

GFL□□-3M HAR / HBR

		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m [kg]	26		28	29	28	29	28	33	34
GFL06	m [kg]	44				46			50	51
GFL07	m [kg]		76			78			82	83
GFL09	m [kg]		130	132	133	132	133	132	136	137
GFL11	m [kg]								236	237

		080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m [kg]	33								
GFL06	m [kg]	50	51	58						
GFL07	m [kg]	82	83	90	88	97	94		94	
GFL09	m [kg]	136	137	144	142	151	148	151	148	160
GFL11	m [kg]	236	237	244	242	251	248	251	248	260
GFL14	m [kg]			410	408	417	414	417	414	425

		112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m [kg]	157		164				
GFL11	m [kg]	257	267	264	299	297		
GFL14	m [kg]	422	432	429	464	462	506	526

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-3M HAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m	[kg]	30		32	33	32	33	32	37	38
GFL06	m	[kg]	51		53					57	58
GFL07	m	[kg]	87		89					93	94
GFL09	m	[kg]	146		148	149	148	149	148	152	153
GFL11	m	[kg]								260	261

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m	[kg]	37								
GFL06	m	[kg]	57	58	65						
GFL07	m	[kg]	93	94	101	99	108	105		105	
GFL09	m	[kg]	152	153	160	158	167	164	167	164	176
GFL11	m	[kg]	260	261	268	266	275	272	275	272	284
GFL14	m	[kg]			443	441	450	447	450	447	458

			112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	173		180				
GFL11	m	[kg]	281	291	288	323	321		
GFL14	m	[kg]	455	465	462	497	495	539	559

GFL□□-3M HCK

			063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42
GFL05	m	[kg]	28	29	28	29		31		30	31	
GFL06	m	[kg]	48				49	50	51	50	51	
GFL07	m	[kg]					83			85		
GFL09	m	[kg]					139	141	142	141	142	141

			080C11	080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41
GFL05	m	[kg]	35	36	35							
GFL06	m	[kg]	55	56	55	56	62					
GFL07	m	[kg]	89	90	89	90	97	95	104	101		101
GFL09	m	[kg]	145	146	145	146	153	151	160	157	160	157
GFL11	m	[kg]	246	247	246	247	254	252	261	258	261	258
GFL14	m	[kg]					420	418	427	424	427	424

			112C22	112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	169	166		173				
GFL11	m	[kg]	270	267	277	274	309	307		
GFL14	m	[kg]	435	432	442	439	474	472	516	536

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-3M VCR / VDR

		063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42
GFL05	m [kg]	25	26	25	26		28		27	28	
GFL06	m [kg]			44					46		
GFL07	m [kg]					77			79		
GFL09	m [kg]					131	133	134	133	134	133

		080C11	080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41
GFL05	m [kg]	32	33	32							
GFL06	m [kg]	50	51	50	51	58					
GFL07	m [kg]	83	84	83	84	91	89	98	95		95
GFL09	m [kg]	137	138	137	138	145	143	152	149	152	149
GFL11	m [kg]	238	239	238	239	246	244	253	250	253	250
GFL14	m [kg]					420	418	427	424	427	424

		112C22	112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m [kg]	161	158		165				
GFL11	m [kg]	262	259	269	266	301	299		
GFL14	m [kg]	435	432	442	439	474	472	516	536

GFL□□-3M VAR / VBR

		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m [kg]	27		29	30	29	30	29	34	35
GFL06	m [kg]	46	47	48	49	48	49		53	54
GFL07	m [kg]		81			83			87	88
GFL09	m [kg]		138	140	141	140	141	140	144	145
GFL11	m [kg]								252	253

		080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m [kg]	34								
GFL06	m [kg]	53	54	60						
GFL07	m [kg]	87	88	95	93	102	99		99	
GFL09	m [kg]	144	145	152	150	159	156	159	156	168
GFL11	m [kg]	252	253	260	258	267	264	267	264	276
GFL14	m [kg]			443	441	450	447	450	447	458

		112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m [kg]	165		172				
GFL11	m [kg]	273	283	280	315	313		
GFL14	m [kg]	455	465	462	497	495	539	559

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-3M VAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m	[kg]	31		33	34	33	34	33	38	39
GFL06	m	[kg]	53	54	55	56	55	56		60	61
GFL07	m	[kg]	92		94					98	99
GFL09	m	[kg]	154		156	157	156	157	156	160	161
GFL11	m	[kg]								276	277

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m	[kg]	38								
GFL06	m	[kg]	60	61	67						
GFL07	m	[kg]	98	99	106	104	113	110		110	
GFL09	m	[kg]	160	161	168	166	175	172	175	172	184
GFL11	m	[kg]	276	277	284	282	291	288	291	288	300
GFL14	m	[kg]			476	474	483	480	483	480	491

			112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	181		188				
GFL11	m	[kg]	297	307	304	339	337		
GFL14	m	[kg]	488	498	495	530	528	572	592

GFL□□-3M VCK

			063C11	063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42
GFL05	m	[kg]	29	30	29	30		32		31	32	
GFL06	m	[kg]	51					53				
GFL07	m	[kg]					88	90				
GFL09	m	[kg]					147	149	150	149	150	149

			080C11	080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41
GFL05	m	[kg]	36	37	36							
GFL06	m	[kg]	57	58	57	58	65					
GFL07	m	[kg]	94	95	94	95	102	100	109	106		106
GFL09	m	[kg]	153	154	153	154	161	159	168	165	168	165
GFL11	m	[kg]	262	263	262	263	270	268	277	274	277	274
GFL14	m	[kg]					453	451	460	457	460	457

			112C22	112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	177	174		181				
GFL11	m	[kg]	286	283	293	290	325	323		
GFL14	m	[kg]	468	465	475	472	507	505	549	569

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-3M SCR / SDR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m	[kg]	25	26	27	28	27	28		32	33
GFL06	m	[kg]	42	43	44	45	44	45		49	50
GFL07	m	[kg]		73	75	76	75	76		79	80
GFL09	m	[kg]		126	128	129	128	129	128	132	133
GFL11	m	[kg]								227	228

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m	[kg]	32								
GFL06	m	[kg]	49	50	56						
GFL07	m	[kg]	79	80	87	85	94	91		91	
GFL09	m	[kg]	132	133	140	138	147	144	147	144	156
GFL11	m	[kg]	227	228	235	233	242	239	242	239	251
GFL14	m	[kg]			398	396	405	402	405	402	413

			112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	153		160				
GFL11	m	[kg]	248	258	255	290	288		
GFL14	m	[kg]	410	420	417	452	450	494	514

GFL□□-3M SAR / SBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m	[kg]	27				29			33	34
GFL06	m	[kg]	45				47			51	52
GFL07	m	[kg]		77	79	80	79	80		83	84
GFL09	m	[kg]		133	135	136	135	136	135	139	140
GFL11	m	[kg]								241	242

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m	[kg]	33								
GFL06	m	[kg]	51	52	59						
GFL07	m	[kg]	83	84	91	89	98	95		95	
GFL09	m	[kg]	139	140	147	145	154	151	154	151	163
GFL11	m	[kg]	241	242	249	247	256	253	256	253	265
GFL14	m	[kg]			421	419	428	425	428	425	436

			112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	160		167				
GFL11	m	[kg]	262	272	269	304	302		
GFL14	m	[kg]	433	443	440	475	473	517	537

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



Weights

GFL□□-3M SAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m	[kg]	31		33					37	38
GFL06	m	[kg]	52		54					58	59
GFL07	m	[kg]			88	90	91	90	91	94	95
GFL09	m	[kg]			149	151	152	151	152	155	156
GFL11	m	[kg]								265	266

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m	[kg]	37								
GFL06	m	[kg]	58	59	66						
GFL07	m	[kg]	94	95	102	100	109	106		106	
GFL09	m	[kg]	155	156	163	161	170	167	170	167	179
GFL11	m	[kg]	265	266	273	271	280	277	280	277	289
GFL14	m	[kg]			454	452	461	458	461	458	469

			112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	176		183				
GFL11	m	[kg]	286	296	293	328	326		
GFL14	m	[kg]	466	476	473	508	506	550	570

GFL□□-3M SCK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GFL05	m	[kg]	29	30	31	32	31	32		36	37
GFL06	m	[kg]	49	50	51	52	51	52		56	57
GFL07	m	[kg]		84	86	87	86	87		90	91
GFL09	m	[kg]		142	144	145	144	145	144	148	149
GFL11	m	[kg]								251	252

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GFL05	m	[kg]	36								
GFL06	m	[kg]	56	57	63						
GFL07	m	[kg]	90	91	98	96	105	102		102	
GFL09	m	[kg]	148	149	156	154	163	160	163	160	172
GFL11	m	[kg]	251	252	259	257	266	263	266	263	275
GFL14	m	[kg]			431	429	438	435	438	435	446

			112C31	112C32	112C41	132C21	132C22 132C32	160C22	160C32
GFL09	m	[kg]	169		176				
GFL11	m	[kg]	272	282	279	314	312		
GFL14	m	[kg]	443	453	450	485	483	527	547

- Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed, e.g. for motor options.

GFL shaft-mounted helical gearboxes

Technical data



GFL shaft-mounted helical gearboxes

Technical data



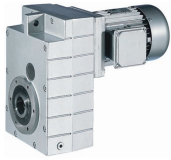
Selection tables

50 Hz, 60 Hz: $P_N = 0.12 \text{ kW}$

n _N f _N	1425 r/min			1735 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	203	5.5	5.4	246	4.5	6.2	7.025	GFL04-2M □□□063C12	134
	89	13	5.4	107	10	6.2	16.087	GFL04-2M □□□063C12	134
	80	14	5.4	96	11	6.2	17.920	GFL04-2M □□□063C12	134
	69	16	5.0	84	13	5.8	20.519	GFL04-2M □□□063C12	134
	62	18	5.0	76	15	5.8	22.857	GFL04-2M □□□063C12	134
	45	25	5.5	55	20	6.7	31.600	GFL04-2M □□□063C12	134
	40	27	5.5	49	23	6.7	35.200	GFL04-2M □□□063C12	134
	35	32	4.6	42	26	5.6	40.697	GFL04-2M □□□063C12	134
	31	35	4.6	38	29	5.6	45.333	GFL04-2M □□□063C12	134
	28	40	4.0	33	33	4.9	51.579	GFL04-2M □□□063C12	134
	25	45	3.9	30	37	4.7	57.455	GFL04-2M □□□063C12	134
	22	50	3.2	27	41	4.0	64.636	GFL04-2M □□□063C12	134
	20	56	3.2	24	46	3.8	72.000	GFL04-2M □□□063C12	134
	17	66	1.6	20	55	1.9	85.156	GFL04-2M □□□063C12	134
	15	74	1.6	18	61	1.9	94.857	GFL04-2M □□□063C12	134
	14	78	4.2	17	64	5.1	101.547	GFL05-3M □□□063C12	142
	12	88	3.7	15	73	4.5	114.952	GFL05-3M □□□063C12	142
	11	100	3.3	13	82	4.0	129.524	GFL05-3M □□□063C12	142
	9.9	111	5.0	12	91	6.1	144.320	GFL06-3M □□□063C12	142
	8.8	125	4.9	11	103	6.0	162.583	GFL06-3M □□□063C12	142
	8.1	136	2.5	9.7	112	3.1	177.027	GFL05-3M □□□063C12	142
	7.1	153	2.1	8.7	126	2.6	199.467	GFL05-3M □□□063C12	142
	6.3	175	2.0	7.6	144	2.4	227.989	GFL05-3M □□□063C12	142
	5.6	197	1.7	6.7	162	2.0	256.889	GFL05-3M □□□063C12	142
	5.5	200	3.1	6.6	164	3.7	260.457	GFL06-3M □□□063C12	142
	4.9	222	1.6	6.0	182	1.9	288.948	GFL05-3M □□□063C12	142
	4.9	225	2.9	5.9	185	3.6	293.018	GFL06-3M □□□063C12	142
	4.8	230	2.7	5.8	189	3.2	299.200	GFL06-3M □□□063C12	142
	4.4	250	1.3	5.3	206	1.6	325.576	GFL05-3M □□□063C12	142
	3.9	278	1.2	4.8	229	1.5	362.100	GFL05-3M □□□063C12	142
	3.9	282	2.3	4.7	232	2.8	367.200	GFL06-3M □□□063C12	142
	3.5	314	1.0	4.2	258	1.3	408.000	GFL05-3M □□□063C12	142
	3.4	318	1.9	4.2	261	2.4	413.667	GFL06-3M □□□063C12	142
	3.0	365	1.8	3.6	300	2.2	475.200	GFL06-3M □□□063C12	142
	3.0	367	0.9	3.6	301	1.1	477.052	GFL05-3M □□□063C12	142
	2.7	411	1.5	3.2	338	1.8	535.333	GFL06-3M □□□063C12	142
				3.2	339	1.0	537.524	GFL05-3M □□□063C12	142
	2.5	443	1.4	3.0	364	1.7	576.720	GFL06-3M □□□063C12	142
	2.2	499	1.2	2.7	410	1.5	649.700	GFL06-3M □□□063C12	142
	1.9	584	0.9	2.3	480	1.1	759.806	GFL06-3M □□□063C12	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.12 \text{ kW}$

n_N	1425 r/min			1735 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	1.7	658	0.9	2.0	540	1.0	855.954	GFL06-3M □□□063C12	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.18 \text{ kW}$

n_N	2740 r/min			3370 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	390	4.3	5.6	475	3.5	6.5	7.025	GFL04-2M □□□063C11	134
	170	9.8	5.6	208	8.0	6.5	16.087	GFL04-2M □□□063C11	134
	153	11	5.6	186	8.9	6.5	17.920	GFL04-2M □□□063C11	134
	134	12	5.2	163	10	6.0	20.519	GFL04-2M □□□063C11	134
	120	14	5.2	146	11	6.0	22.857	GFL04-2M □□□063C11	134
	67	25	5.5	82	20	6.3	40.697	GFL04-2M □□□063C11	134
	60	28	5.5	74	22	6.3	45.333	GFL04-2M □□□063C11	134
	53	31	4.8	65	26	5.5	51.579	GFL04-2M □□□063C11	134
	48	35	4.6	58	28	5.3	57.455	GFL04-2M □□□063C11	134
	42	39	3.9	52	32	4.4	64.636	GFL04-2M □□□063C11	134
	38	44	4.0	46	36	4.8	72.000	GFL04-2M □□□063C11	134
	32	52	2.0	39	42	2.4	85.156	GFL04-2M □□□063C11	134
	29	58	2.0	35	47	2.4	94.857	GFL04-2M □□□063C11	134
	27	61	5.4	33	49	6.4	101.547	GFL05-3M □□□063C11	142
	24	69	4.8	29	56	5.6	114.952	GFL05-3M □□□063C11	142
	21	78	4.2	26	63	5.0	129.524	GFL05-3M □□□063C11	142
	16	106	3.3	19	86	3.8	177.027	GFL05-3M □□□063C11	142
	14	120	2.7	17	97	3.2	199.467	GFL05-3M □□□063C11	142
	12	137	2.5	15	111	3.0	227.989	GFL05-3M □□□063C11	142
	11	154	2.1	13	125	2.5	256.889	GFL05-3M □□□063C11	142
	9.5	173	2.0	12	141	2.4	288.948	GFL05-3M □□□063C11	142
	8.4	195	1.7	10	159	2.0	325.576	GFL05-3M □□□063C11	142
	7.6	217	1.6	9.2	177	1.9	362.100	GFL05-3M □□□063C11	142
	7.5	220	3.0	9.1	179	3.5	367.200	GFL06-3M □□□063C11	142
	6.7	245	1.3	8.2	199	1.6	408.000	GFL05-3M □□□063C11	142
	6.6	248	2.5	8.1	202	2.9	413.667	GFL06-3M □□□063C11	142
	5.8	285	2.3	7.0	232	2.7	475.200	GFL06-3M □□□063C11	142
	5.7	286	1.2	7.0	233	1.4	477.052	GFL05-3M □□□063C11	142
	5.1	321	1.9	6.2	261	2.3	535.333	GFL06-3M □□□063C11	142
	5.1	322	1.0	6.2	262	1.2	537.524	GFL05-3M □□□063C11	142
	4.8	346	1.8	5.8	281	2.1	576.720	GFL06-3M □□□063C11	142
	4.2	390	1.6	5.1	317	1.9	649.700	GFL06-3M □□□063C11	142
	3.6	456	1.1	4.4	370	1.4	759.806	GFL06-3M □□□063C11	142
	3.2	513	1.1	3.9	417	1.3	855.954	GFL06-3M □□□063C11	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.18 \text{ kW}$

n _N f _N	1365 r/min			1695 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	194	8.6	3.4	237	6.9	4.1	7.025	GFL04-2M □□□063C32	134
	85	20	3.4	104	16	4.1	16.087	GFL04-2M □□□063C32	134
	76	22	3.4	93	18	4.1	17.920	GFL04-2M □□□063C32	134
	67	25	3.2	81	20	3.8	20.519	GFL04-2M □□□063C32	134
	60	28	3.2	73	22	3.8	22.857	GFL04-2M □□□063C32	134
	43	39	3.5	53	31	4.3	31.600	GFL04-2M □□□063C32	134
	39	43	3.5	47	35	4.3	35.200	GFL04-2M □□□063C32	134
	34	50	2.9	41	40	3.6	40.697	GFL04-2M □□□063C32	134
	30	55	2.9	37	45	3.6	45.333	GFL04-2M □□□063C32	134
	27	63	2.6	32	51	3.2	51.579	GFL04-2M □□□063C32	134
	24	70	2.5	29	57	3.1	57.455	GFL04-2M □□□063C32	134
	22	74	2.8	27	60	3.5	61.653	GFL05-3M □□□063C32	142
	21	79	2.1	26	64	2.6	64.636	GFL04-2M □□□063C32	134
	21	80	3.2	25	64	4.0	66.213	GFL06-3M □□□063C32	142
	19	88	2.0	23	71	2.5	72.000	GFL04-2M □□□063C32	134
	19	87	3.2	23	70	4.0	72.000	GFL06-3M □□□063C32	142
	17	95	2.4	21	76	3.0	78.639	GFL05-3M □□□063C32	142
	17	98	3.2	21	79	4.0	81.111	GFL06-3M □□□063C32	142
	16	104	1.0	20	84	1.2	85.156	GFL04-2M □□□063C32	134
	15	108	2.8	19	87	3.5	90.123	GFL05-3M □□□063C32	142
	14	116	1.0	18	93	1.2	94.857	GFL04-2M □□□063C32	134
	13	122	2.7	16	98	3.3	101.547	GFL05-3M □□□063C32	142
	12	138	2.4	15	111	3.0	114.952	GFL05-3M □□□063C32	142
	12	140	2.9	14	113	3.6	116.571	GFL06-3M □□□063C32	142
	11	156	2.1	13	126	2.6	129.524	GFL05-3M □□□063C32	142
	10	158	3.2	13	127	4.0	131.323	GFL06-3M □□□063C32	142
	9.5	174	3.2	12	140	4.0	144.320	GFL06-3M □□□063C32	142
	8.4	196	3.1	10	158	3.9	162.583	GFL06-3M □□□063C32	142
	7.7	213	1.6	9.4	172	2.0	177.027	GFL05-3M □□□063C32	142
	7.6	216	2.8	9.3	174	3.5	179.520	GFL06-3M □□□063C32	142
	6.8	240	1.4	8.4	193	1.7	199.467	GFL05-3M □□□063C32	142
	6.8	243	2.5	8.2	196	3.1	202.237	GFL06-3M □□□063C32	142
	6.0	274	1.3	7.3	221	1.6	227.989	GFL05-3M □□□063C32	142
	5.9	278	2.3	7.2	224	2.8	231.200	GFL06-3M □□□063C32	142
	5.3	309	1.1	6.5	249	1.3	256.889	GFL05-3M □□□063C32	142
	5.2	313	2.0	6.4	252	2.4	260.457	GFL06-3M □□□063C32	142
	4.7	348	1.0	5.8	280	1.2	288.948	GFL05-3M □□□063C32	142
	4.7	353	1.9	5.7	284	2.3	293.018	GFL06-3M □□□063C32	142
	4.6	360	1.7	5.6	290	2.1	299.200	GFL06-3M □□□063C32	142
	4.2	392	0.8	5.1	316	1.0	325.576	GFL05-3M □□□063C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.18 \text{ kW}$

n _N	1365 r/min			1695 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
				4.7	351	1.0	362.100	GFL05-3M □□□063C32	142
	3.7	442	1.5	4.5	356	1.8	367.200	GFL06-3M □□□063C32	142
				4.2	395	0.8	408.000	GFL05-3M □□□063C32	142
	3.3	498	1.2	4.0	401	1.5	413.667	GFL06-3M □□□063C32	142
	2.9	572	1.1	3.5	461	1.4	475.200	GFL06-3M □□□063C32	142
	2.6	644	1.0	3.1	519	1.2	535.333	GFL06-3M □□□063C32	142
	2.4	694	0.9	2.9	559	1.1	576.720	GFL06-3M □□□063C32	142
				2.6	630	1.0	649.700	GFL06-3M □□□063C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.18 \text{ kW}$

n _N f _N	930 r/min			1140 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	254	6.6	5.4	309	5.4	6.6	3.659	GFL04-2M □□□071C13	134
	185	9.0	5.4	225	7.3	6.6	5.018	GFL04-2M □□□071C13	134
	159	10	5.4	194	8.5	6.6	5.833	GFL04-2M □□□071C13	134
	145	11	5.4	177	9.4	6.6	6.400	GFL05-2M □□□071C13	134
	111	15	5.4	135	12	6.6	8.379	GFL04-2M □□□071C13	134
	100	17	5.4	121	14	6.6	9.333	GFL04-2M □□□071C13	134
	81	21	5.4	98	17	6.6	11.491	GFL04-2M □□□071C13	134
	73	23	5.4	88	19	6.6	12.800	GFL04-2M □□□071C13	134
	59	29	5.4	71	23	6.6	15.904	GFL05-2M □□□071C13	134
	52	32	5.2	63	26	6.4	17.920	GFL04-2M □□□071C13	134
	45	37	5.0	55	30	6.1	20.519	GFL04-2M □□□071C13	134
	41	41	4.1	49	33	5.0	22.857	GFL04-2M □□□071C13	134
	37	45	4.1	45	37	5.0	25.136	GFL04-2M □□□071C13	134
	33	50	3.3	40	41	4.1	28.000	GFL04-2M □□□071C13	134
	29	57	3.3	36	46	4.0	31.600	GFL04-2M □□□071C13	134
	26	63	2.7	32	51	3.3	35.200	GFL04-2M □□□071C13	134
	23	73	2.6	28	60	3.1	40.697	GFL04-2M □□□071C13	134
	21	81	2.1	25	66	2.6	45.333	GFL04-2M □□□071C13	134
	18	92	2.1	22	75	2.5	51.579	GFL04-2M □□□071C13	134
	16	103	1.7	20	84	2.1	57.455	GFL04-2M □□□071C13	134
	16	105	3.1	19	86	3.8	58.667	GFL05-2M □□□071C13	134
	15	109	1.9	18	89	2.3	61.653	GFL05-3M □□□071C13	142
	15	113	2.5	18	92	3.1	63.190	GFL05-2M □□□071C13	134
	14	116	1.4	18	95	1.7	64.636	GFL04-2M □□□071C13	134
	13	128	2.4	16	104	2.9	71.200	GFL05-2M □□□071C13	134
	13	129	1.4	16	105	1.7	72.000	GFL04-2M □□□071C13	134
	12	139	1.6	14	113	2.0	78.639	GFL05-3M □□□071C13	142
	12	145	1.5	14	118	1.8	80.763	GFL05-2M □□□071C13	134
	12	145	3.0	14	118	3.7	81.000	GFL06-2M □□□071C13	134
	11	156	3.1	13	127	3.8	88.200	GFL06-3M □□□071C13	142
	10	159	1.9	13	130	2.3	90.123	GFL05-3M □□□071C13	142
	10	163	1.4	12	133	1.8	91.000	GFL05-2M □□□071C13	134
	10	164	2.9	12	133	3.6	91.250	GFL06-2M □□□071C13	134
	9.4	176	3.1	11	143	3.8	99.361	GFL06-3M □□□071C13	142
	9.2	179	1.8	11	146	2.2	101.547	GFL05-3M □□□071C13	142
	8.1	203	1.6	9.8	166	2.0	114.952	GFL05-3M □□□071C13	142
	8.0	206	2.6	9.7	168	3.1	116.571	GFL06-3M □□□071C13	142
	7.2	229	1.4	8.7	187	1.8	129.524	GFL05-3M □□□071C13	142
	7.1	232	2.6	8.6	189	3.1	131.323	GFL06-3M □□□071C13	142
	6.6	249	1.4	8.0	203	1.7	140.817	GFL05-3M □□□071C13	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.18 \text{ kW}$

n _N f _N	930 r/min			1140 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	6.4	255	2.2	7.8	208	2.7	144.320	GFL06-3M □□□071C13	142
	5.9	280	1.2	7.1	229	1.4	158.667	GFL05-3M □□□071C13	142
	5.7	287	2.1	7.0	234	2.6	162.583	GFL06-3M □□□071C13	142
	5.3	313	1.1	6.4	255	1.4	177.027	GFL05-3M □□□071C13	142
	5.2	317	1.9	6.3	259	2.3	179.520	GFL06-3M □□□071C13	142
	4.7	352	0.9	5.7	287	1.1	199.467	GFL05-3M □□□071C13	142
	4.6	357	1.7	5.6	291	2.1	202.237	GFL06-3M □□□071C13	142
	4.1	403	0.9	5.0	329	1.1	227.989	GFL05-3M □□□071C13	142
	4.0	408	1.6	4.9	333	1.9	231.200	GFL06-3M □□□071C13	142
	3.7	447	2.8	4.5	365	3.4	253.111	GFL07-3M □□□071C13	142
	3.6	460	1.3	4.3	375	1.6	260.457	GFL06-3M □□□071C13	142
	3.2	513	2.7	3.9	419	3.3	290.706	GFL07-3M □□□071C13	142
	3.2	518	1.3	3.9	422	1.6	293.018	GFL06-3M □□□071C13	142
	3.1	528	1.2	3.8	431	1.4	299.200	GFL06-3M □□□071C13	142
	2.8	579	2.2	3.5	472	2.7	327.556	GFL07-3M □□□071C13	142
	2.6	623	2.2	3.2	508	2.7	352.811	GFL07-3M □□□071C13	142
	2.5	649	1.0	3.1	529	1.2	367.200	GFL06-3M □□□071C13	142
	2.3	702	1.8	2.8	573	2.2	397.533	GFL07-3M □□□071C13	142
	2.3	731	0.8	2.7	596	1.0	413.667	GFL06-3M □□□071C13	142
	2.2	760	1.7	2.6	620	2.0	430.222	GFL07-3M □□□071C13	142
	1.8	909	3.0	2.2	742	3.7	514.881	GFL09-3M □□□071C13	142
	1.8	922	1.4	2.2	752	1.7	522.133	GFL07-3M □□□071C13	142
	1.7	979	2.2	2.0	799	2.6	554.470	GFL09-3M □□□071C13	142
	1.7	993	1.1	2.0	810	1.4	562.391	GFL07-3M □□□071C13	142
	1.5	1104	2.1	1.8	900	2.5	624.879	GFL09-3M □□□071C13	142
	1.5	1119	1.1	1.8	913	1.3	633.680	GFL07-3M □□□071C13	142
	1.3	1238	1.7	1.6	1010	2.1	700.875	GFL09-3M □□□071C13	142
	1.3	1270	0.9	1.6	1036	1.1	718.786	GFL07-3M □□□071C13	142
	1.2	1395	1.6	1.4	1138	2.0	789.875	GFL09-3M □□□071C13	142
	1.2	1431	0.9	1.4	1167	1.0	809.900	GFL07-3M □□□071C13	142

6.6

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.25 \text{ kW}$

n _N f _N	2710 r/min			3390 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	386	6.0	4.0	471	4.8	4.7	7.025	GFL04-2M □□□063C31	134
	169	14	4.0	206	11	4.7	16.087	GFL04-2M □□□063C31	134
	151	15	4.0	185	12	4.7	17.920	GFL04-2M □□□063C31	134
	132	18	3.8	161	14	4.4	20.519	GFL04-2M □□□063C31	134
	119	20	3.8	145	16	4.4	22.857	GFL04-2M □□□063C31	134
	86	27	4.7	105	22	5.4	31.600	GFL04-2M □□□063C31	134
	77	30	4.7	94	24	5.4	35.200	GFL04-2M □□□063C31	134
	67	35	3.9	81	28	4.5	40.697	GFL04-2M □□□063C31	134
	60	39	3.9	73	31	4.5	45.333	GFL04-2M □□□063C31	134
	53	44	3.4	64	35	4.0	51.579	GFL04-2M □□□063C31	134
	47	49	3.3	58	39	3.8	57.455	GFL04-2M □□□063C31	134
	42	55	2.8	51	44	3.2	64.636	GFL04-2M □□□063C31	134
	38	62	2.9	46	49	3.5	72.000	GFL04-2M □□□063C31	134
	32	73	1.4	39	58	1.7	85.156	GFL04-2M □□□063C31	134
	29	81	1.4	35	65	1.7	94.857	GFL04-2M □□□063C31	134
	27	85	3.8	33	68	4.6	101.547	GFL05-3M □□□063C31	142
	24	97	3.4	29	77	4.1	114.952	GFL05-3M □□□063C31	142
	21	109	3.0	26	87	3.6	129.524	GFL05-3M □□□063C31	142
	19	122	4.6	23	97	5.5	144.320	GFL06-3M □□□063C31	142
	17	137	4.5	20	109	5.4	162.583	GFL06-3M □□□063C31	142
	15	149	2.3	19	119	2.8	177.027	GFL05-3M □□□063C31	142
	14	168	2.0	17	134	2.3	199.467	GFL05-3M □□□063C31	142
	12	192	1.8	15	153	2.2	227.989	GFL05-3M □□□063C31	142
	11	216	1.5	13	173	1.8	256.889	GFL05-3M □□□063C31	142
	10	219	2.8	13	175	3.4	260.457	GFL06-3M □□□063C31	142
	9.4	243	1.4	12	194	1.7	288.948	GFL05-3M □□□063C31	142
	9.3	247	2.7	11	197	3.2	293.018	GFL06-3M □□□063C31	142
	9.1	252	2.4	11	201	2.9	299.200	GFL06-3M □□□063C31	142
	8.3	274	1.2	10	219	1.4	325.576	GFL05-3M □□□063C31	142
	7.5	305	1.1	9.1	244	1.4	362.100	GFL05-3M □□□063C31	142
	7.4	309	2.1	9.0	247	2.6	367.200	GFL06-3M □□□063C31	142
	6.6	343	1.0	8.1	275	1.1	408.000	GFL05-3M □□□063C31	142
	6.6	348	1.8	8.0	278	2.1	413.667	GFL06-3M □□□063C31	142
	5.7	400	1.6	7.0	320	2.0	475.200	GFL06-3M □□□063C31	142
	5.7	402	0.9	6.9	321	1.0	477.052	GFL05-3M □□□063C31	142
	5.1	451	1.4	6.2	360	1.6	535.333	GFL06-3M □□□063C31	142
	4.7	486	1.3	5.7	388	1.5	576.720	GFL06-3M □□□063C31	142
	4.2	547	1.1	5.1	437	1.4	649.700	GFL06-3M □□□063C31	142
	3.6	640	0.8	4.5	511	1.0	759.806	GFL06-3M □□□063C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.25 \text{ kW}$

n _N f _N	1370 r/min			1680 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	374	6.2	4.5	456	5.0	5.4	3.659	GFL04-2M □□□063C42	134
	273	8.5	4.5	333	6.9	5.4	5.018	GFL04-2M □□□063C42	134
	235	9.9	4.5	286	8.0	5.4	5.833	GFL04-2M □□□063C42	134
	214	11	4.5	261	8.8	5.4	6.400	GFL05-2M □□□063C42	134
	195	12	5.2	238	9.7	6.1	7.025	GFL04-2M □□□063C42	134
	164	14	4.5	199	12	5.4	8.379	GFL04-2M □□□063C42	134
	147	16	4.5	179	13	5.4	9.333	GFL04-2M □□□063C42	134
	134	17	5.2	163	14	6.2	10.238	GFL04-2M □□□063C42	134
	119	19	4.5	145	16	5.4	11.491	GFL04-2M □□□063C42	134
	107	22	4.5	131	18	5.4	12.800	GFL04-2M □□□063C42	134
	93	25	5.2	114	20	6.2	14.706	GFL04-2M □□□063C42	134
	86	27	4.5	105	22	5.4	15.904	GFL05-2M □□□063C42	134
	77	30	4.5	93	25	5.4	17.920	GFL05-2M □□□063C42	134
	67	35	4.8	81	28	5.7	20.519	GFL04-2M □□□063C42	134
	60	39	4.3	73	32	5.1	22.857	GFL04-2M □□□063C42	134
	55	42	4.3	66	35	5.3	25.136	GFL04-2M □□□063C42	134
	49	47	3.5	60	39	4.4	28.000	GFL04-2M □□□063C42	134
	43	53	3.5	53	44	4.2	31.600	GFL04-2M □□□063C42	134
	39	60	2.9	47	49	3.5	35.200	GFL04-2M □□□063C42	134
	34	69	2.7	41	56	3.3	40.697	GFL04-2M □□□063C42	134
	30	77	2.2	37	63	2.8	45.333	GFL04-2M □□□063C42	134
	27	87	2.2	32	71	2.7	51.579	GFL04-2M □□□063C42	134
	24	97	1.8	29	79	2.2	57.455	GFL04-2M □□□063C42	134
	23	99	3.2	29	81	4.0	58.667	GFL05-2M □□□063C42	134
	22	103	2.0	27	84	2.5	61.653	GFL05-3M □□□063C42	142
	22	107	2.6	26	87	3.2	63.190	GFL05-2M □□□063C42	134
	21	108	3.2	26	88	3.9	64.080	GFL06-2M □□□063C42	134
	21	109	1.2	26	89	1.5	64.636	GFL04-2M □□□063C42	134
	19	120	2.5	24	98	3.1	71.200	GFL05-2M □□□063C42	134
	19	122	1.2	23	99	1.5	72.000	GFL04-2M □□□063C42	134
	19	122	3.2	23	100	3.9	72.189	GFL06-2M □□□063C42	134
	17	131	1.7	21	107	2.1	78.639	GFL05-3M □□□063C42	142
	17	137	1.4	21	111	1.7	80.763	GFL05-2M □□□063C42	134
	17	137	2.6	21	112	3.2	81.000	GFL06-2M □□□063C42	134
	15	150	2.0	19	122	2.5	90.123	GFL05-3M □□□063C42	142
	15	154	1.4	18	125	1.7	91.000	GFL05-2M □□□063C42	134
	15	154	2.6	18	126	3.2	91.250	GFL06-2M □□□063C42	134
	14	169	1.9	16	138	2.4	101.547	GFL05-3M □□□063C42	142
	12	191	1.7	15	156	2.1	114.952	GFL05-3M □□□063C42	142
	12	194	2.7	14	158	3.3	116.571	GFL06-3M □□□063C42	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.25 \text{ kW}$

n _N f _N	1370 r/min			1680 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	11	216	1.5	13	176	1.9	129.524	GFL05-3M □□□063C42	142
	10	219	2.7	13	178	3.3	131.323	GFL06-3M □□□063C42	142
	9.7	235	1.5	12	191	1.8	140.817	GFL05-3M □□□063C42	142
	9.5	240	2.3	12	196	2.9	144.320	GFL06-3M □□□063C42	142
	8.6	264	1.2	11	215	1.5	158.667	GFL05-3M □□□063C42	142
	8.4	271	2.3	10	221	2.8	162.583	GFL06-3M □□□063C42	142
	7.7	295	1.2	9.4	240	1.4	177.027	GFL05-3M □□□063C42	142
	7.6	299	2.0	9.3	244	2.5	179.520	GFL06-3M □□□063C42	142
	6.9	332	1.0	8.4	271	1.2	199.467	GFL05-3M □□□063C42	142
	6.8	337	1.8	8.3	275	2.2	202.237	GFL06-3M □□□063C42	142
	6.0	380	0.9	7.3	310	1.1	227.989	GFL05-3M □□□063C42	142
	5.9	385	1.6	7.2	314	2.0	231.200	GFL06-3M □□□063C42	142
	5.4	422	3.0	6.6	344	3.7	253.111	GFL07-3M □□□063C42	142
				6.5	349	0.9	256.889	GFL05-3M □□□063C42	142
	5.3	434	1.4	6.4	354	1.7	260.457	GFL06-3M □□□063C42	142
				5.8	392	0.9	288.948	GFL05-3M □□□063C42	142
	4.7	484	2.8	5.7	395	3.5	290.706	GFL07-3M □□□063C42	142
	4.7	488	1.3	5.7	398	1.7	293.018	GFL06-3M □□□063C42	142
	4.6	498	1.2	5.6	406	1.5	299.200	GFL06-3M □□□063C42	142
	4.2	545	2.3	5.1	445	2.8	327.556	GFL07-3M □□□063C42	142
	3.9	588	2.3	4.7	479	2.9	352.811	GFL07-3M □□□063C42	142
	3.9	588	3.2	4.7	479	3.9	353.033	GFL09-3M □□□063C42	142
	3.7	612	1.1	4.6	499	1.3	367.200	GFL06-3M □□□063C42	142
	3.5	662	1.9	4.2	540	2.3	397.533	GFL07-3M □□□063C42	142
	3.4	663	3.2	4.2	540	3.9	397.863	GFL09-3M □□□063C42	142
	3.3	689	0.9	4.0	562	1.1	413.667	GFL06-3M □□□063C42	142
	3.2	716	1.8	3.9	584	2.2	430.222	GFL07-3M □□□063C42	142
	2.9	791	0.8	3.5	645	1.0	475.200	GFL06-3M □□□063C42	142
	2.7	857	3.2	3.2	699	3.9	514.881	GFL09-3M □□□063C42	142
	2.6	870	1.5	3.2	709	1.8	522.133	GFL07-3M □□□063C42	142
				3.1	727	0.8	535.333	GFL06-3M □□□063C42	142
	2.5	923	2.3	3.0	753	2.8	554.470	GFL09-3M □□□063C42	142
	2.4	937	1.2	3.0	764	1.5	562.391	GFL07-3M □□□063C42	142
	2.2	1041	2.2	2.7	849	2.7	624.879	GFL09-3M □□□063C42	142
	2.2	1055	1.2	2.6	861	1.4	633.680	GFL07-3M □□□063C42	142
	2.0	1167	1.8	2.4	952	2.2	700.875	GFL09-3M □□□063C42	142
	1.9	1197	0.9	2.3	976	1.2	718.786	GFL07-3M □□□063C42	142
	1.7	1315	1.7	2.1	1073	2.1	789.875	GFL09-3M □□□063C42	142
	1.7	1349	0.9	2.1	1100	1.1	809.900	GFL07-3M □□□063C42	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.25 \text{ kW}$

n_N f_N	930 r/min			1140 r/min			i		
	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	254	9.1	3.9	309	7.4	4.7	3.659	GFL04-2M □□□071C33	134
	185	12	3.9	225	10	4.7	5.018	GFL04-2M □□□071C33	134
	159	15	3.9	194	12	4.7	5.833	GFL04-2M □□□071C33	134
	145	16	3.9				6.400	GFL05-2M □□□071C33	134
				178	13	5.4	6.422	GFL04-2M □□□071C33	134
	132	17	4.4	161	14	5.4	7.025	GFL04-2M □□□071C33	134
	111	21	3.9	135	17	4.7	8.379	GFL04-2M □□□071C33	134
	100	23	3.9	121	19	4.7	9.333	GFL04-2M □□□071C33	134
	91	25	4.4	110	21	5.4	10.238	GFL04-2M □□□071C33	134
	81	29	3.9	98	23	4.7	11.491	GFL04-2M □□□071C33	134
	73	32	3.9	88	26	4.7	12.800	GFL04-2M □□□071C33	134
	63	37	4.4	77	30	5.4	14.706	GFL04-2M □□□071C33	134
	59	40	3.9				15.904	GFL05-2M □□□071C33	134
				71	33	5.4	16.087	GFL04-2M □□□071C33	134
	52	45	3.7	63	36	4.6	17.920	GFL04-2M □□□071C33	134
	45	51	3.6	55	42	4.4	20.519	GFL04-2M □□□071C33	134
	41	57	2.9	49	46	3.6	22.857	GFL04-2M □□□071C33	134
	37	63	2.9	45	51	3.6	25.136	GFL04-2M □□□071C33	134
	33	70	2.4	40	57	3.0	28.000	GFL04-2M □□□071C33	134
	29	79	2.4	36	64	2.9	31.600	GFL04-2M □□□071C33	134
	26	88	1.9	32	72	2.4	35.200	GFL04-2M □□□071C33	134
	23	100	3.1	28	82	3.8	40.233	GFL05-2M □□□071C33	134
	23	101	1.8	28	83	2.3	40.697	GFL04-2M □□□071C33	134
	21	113	1.5	25	92	1.9	45.333	GFL04-2M □□□071C33	134
	21	113	2.8	25	92	3.5	45.333	GFL05-2M □□□071C33	134
	18	128	1.5	22	105	1.8	51.579	GFL04-2M □□□071C33	134
	18	130	2.4	22	106	2.9	52.067	GFL05-2M □□□071C33	134
	18	132	3.1	21	107	3.8	52.800	GFL06-2M □□□071C33	134
	16	143	1.2	20	117	1.5	57.455	GFL04-2M □□□071C33	134
	16	146	2.2	19	119	2.7	58.667	GFL05-2M □□□071C33	134
	16	148	3.1	19	121	3.8	59.481	GFL06-2M □□□071C33	134
	15	151	1.4	18	123	1.7	61.653	GFL05-3M □□□071C33	142
	15	157	1.8	18	128	2.2	63.190	GFL05-2M □□□071C33	134
	15	160	2.7	18	130	3.3	64.080	GFL06-2M □□□071C33	134
	14	161	1.0	18	131	1.2	64.636	GFL04-2M □□□071C33	134
	14	162	3.1	17	133	3.7	66.213	GFL06-3M □□□071C33	142
	13	177	1.7	16	145	2.1	71.200	GFL05-2M □□□071C33	134
	13	179	1.0	16	146	1.2	72.000	GFL04-2M □□□071C33	134
	13	177	2.8	16	144	3.4	72.000	GFL06-3M □□□071C33	142
	13	180	2.7	16	147	3.3	72.189	GFL06-2M □□□071C33	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.25 \text{ kW}$

n _N f _N	930 r/min			1140 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	12	193	1.2	14	157	1.4	78.639	GFL05-3M □□□071C33	142
	12	201	1.1	14	164	1.3	80.763	GFL05-2M □□□071C33	134
	12	202	2.2	14	165	2.6	81.000	GFL06-2M □□□071C33	134
	12	199	2.5	14	162	3.1	81.111	GFL06-3M □□□071C33	142
	11	216	2.3	13	177	2.8	88.200	GFL06-3M □□□071C33	142
	10	221	1.4	13	180	1.7	90.123	GFL05-3M □□□071C33	142
	10	227	1.0	12	185	1.3	91.000	GFL05-2M □□□071C33	134
	10	227	2.1	12	185	2.6	91.250	GFL06-2M □□□071C33	134
	9.4	244	2.3	11	199	2.8	99.361	GFL06-3M □□□071C33	142
	9.2	249	1.3	11	203	1.6	101.547	GFL05-3M □□□071C33	142
	8.1	282	1.2	9.8	230	1.4	114.952	GFL05-3M □□□071C33	142
	8.0	286	1.8	9.7	233	2.3	116.571	GFL06-3M □□□071C33	142
	7.2	318	1.0	8.7	259	1.3	129.524	GFL05-3M □□□071C33	142
	7.1	322	1.8	8.6	263	2.3	131.323	GFL06-3M □□□071C33	142
	6.6	345	1.0	8.0	282	1.2	140.817	GFL05-3M □□□071C33	142
	6.4	354	1.6	7.8	289	1.9	144.320	GFL06-3M □□□071C33	142
	6.3	361	3.2	7.7	295	3.9	147.347	GFL07-3M □□□071C33	142
	5.9	389	0.8	7.1	318	1.0	158.667	GFL05-3M □□□071C33	142
	5.7	399	1.5	7.0	325	1.9	162.583	GFL06-3M □□□071C33	142
	5.6	407	3.1	6.8	332	3.8	166.025	GFL07-3M □□□071C33	142
	5.2	440	1.4	6.3	359	1.7	179.520	GFL06-3M □□□071C33	142
	5.1	450	2.7	6.2	367	3.4	183.285	GFL07-3M □□□071C33	142
	4.6	496	1.2	5.6	405	1.5	202.237	GFL06-3M □□□071C33	142
	4.5	507	2.5	5.5	413	3.0	206.519	GFL07-3M □□□071C33	142
	4.1	551	2.4	5.0	450	3.0	224.636	GFL07-3M □□□071C33	142
	4.0	567	1.1	4.9	463	1.4	231.200	GFL06-3M □□□071C33	142
	3.7	621	2.0	4.5	507	2.5	253.111	GFL07-3M □□□071C33	142
	3.6	639	1.0	4.3	521	1.2	260.457	GFL06-3M □□□071C33	142
	3.2	713	1.9	3.9	582	2.4	290.706	GFL07-3M □□□071C33	142
	3.2	714	3.1	3.9	582	3.8	290.889	GFL09-3M □□□071C33	142
	3.2	719	0.9	3.9	586	1.1	293.018	GFL06-3M □□□071C33	142
	3.1	734	0.8	3.8	599	1.0	299.200	GFL06-3M □□□071C33	142
	2.8	804	1.6	3.5	656	1.9	327.556	GFL07-3M □□□071C33	142
	2.8	804	3.1	3.5	656	3.8	327.827	GFL09-3M □□□071C33	142
	2.6	866	1.6	3.2	706	2.0	352.811	GFL07-3M □□□071C33	142
	2.6	866	2.7	3.2	707	3.3	353.033	GFL09-3M □□□071C33	142
	2.3	975	1.3	2.8	796	1.6	397.533	GFL07-3M □□□071C33	142
	2.3	976	2.7	2.8	796	3.3	397.863	GFL09-3M □□□071C33	142
	2.2	1041	2.6	2.7	849	3.2	424.247	GFL09-3M □□□071C33	142
	2.2	1055	1.2	2.6	861	1.5	430.222	GFL07-3M □□□071C33	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.25$ kW

n_N	930 r/min			1140 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	1.8	1263	2.2	2.2	1030	2.6	514.881	GFL09-3M □□□071C33	142
	1.8	1281	1.0	2.2	1045	1.2	522.133	GFL07-3M □□□071C33	142
	1.7	1360	1.6	2.0	1110	1.9	554.470	GFL09-3M □□□071C33	142
	1.7	1380	0.8	2.0	1126	1.0	562.391	GFL07-3M □□□071C33	142
	1.5	1533	1.5	1.8	1251	1.8	624.879	GFL09-3M □□□071C33	142
	1.3	1719	1.2	1.6	1403	1.5	700.875	GFL09-3M □□□071C33	142
	1.2	1938	1.2	1.4	1581	1.4	789.875	GFL09-3M □□□071C33	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37 \text{ kW}$

n _N f _N	2720 r/min			3360 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	133	26	5.8	162	21	6.7	20.519	GFL04-2M □□□071C11	134
	119	29	4.8	145	23	5.5	22.857	GFL04-2M □□□071C11	134
	108	32	5.4	132	26	6.2	25.136	GFL04-2M □□□071C11	134
	97	35	4.4	119	29	5.1	28.000	GFL04-2M □□□071C11	134
	86	40	4.3	105	32	5.0	31.600	GFL04-2M □□□071C11	134
	77	44	3.6	94	36	4.1	35.200	GFL04-2M □□□071C11	134
	67	51	3.4	82	42	3.9	40.697	GFL04-2M □□□071C11	134
	60	57	2.8	73	46	3.2	45.333	GFL04-2M □□□071C11	134
	53	65	2.7	64	53	3.1	51.579	GFL04-2M □□□071C11	134
	47	72	2.2	58	59	2.6	57.455	GFL04-2M □□□071C11	134
	44	77	2.5	54	62	2.9	61.653	GFL05-3M □□□071C11	142
	42	81	1.9	51	66	2.2	64.636	GFL04-2M □□□071C11	134
	38	91	2.0	46	73	2.3	72.000	GFL04-2M □□□071C11	134
	35	98	2.3	42	79	2.7	78.639	GFL05-3M □□□071C11	142
	34	102	2.1	42	82	2.5	80.763	GFL05-2M □□□071C11	134
	30	112	2.7	37	91	3.2	90.123	GFL05-3M □□□071C11	142
	30	115	2.1	37	93	2.5	91.000	GFL05-2M □□□071C11	134
	27	126	2.6	33	102	3.1	101.547	GFL05-3M □□□071C11	142
	24	143	2.3	29	116	2.7	114.952	GFL05-3M □□□071C11	142
	21	161	2.0	26	130	2.4	129.524	GFL05-3M □□□071C11	142
	19	175	2.0	24	142	2.3	140.817	GFL05-3M □□□071C11	142
	19	179	3.1	23	145	3.7	144.320	GFL06-3M □□□071C11	142
	17	197	1.7	21	159	2.0	158.667	GFL05-3M □□□071C11	142
	17	202	3.0	20	163	3.6	162.583	GFL06-3M □□□071C11	142
	15	220	1.6	19	178	1.9	177.027	GFL05-3M □□□071C11	142
	15	223	2.7	19	180	3.2	179.520	GFL06-3M □□□071C11	142
	14	248	1.3	17	200	1.6	199.467	GFL05-3M □□□071C11	142
	13	251	2.4	16	203	2.9	202.237	GFL06-3M □□□071C11	142
	12	283	1.2	15	229	1.4	227.989	GFL05-3M □□□071C11	142
	12	287	2.2	14	232	2.6	231.200	GFL06-3M □□□071C11	142
	11	319	1.0	13	258	1.2	256.889	GFL05-3M □□□071C11	142
	10	323	1.9	13	262	2.3	260.457	GFL06-3M □□□071C11	142
	9.4	359	1.0	12	290	1.1	288.948	GFL05-3M □□□071C11	142
	9.3	364	1.8	11	294	2.1	293.018	GFL06-3M □□□071C11	142
	9.1	371	1.6	11	301	2.0	299.200	GFL06-3M □□□071C11	142
	8.4	404	0.8	10	327	1.0	325.576	GFL05-3M □□□071C11	142
	8.3	407	3.1	10	329	3.7	327.556	GFL07-3M □□□071C11	142
	7.7	438	3.1	9.4	355	3.7	352.811	GFL07-3M □□□071C11	142
	7.4	456	1.4	9.0	369	1.7	367.200	GFL06-3M □□□071C11	142
	6.8	493	2.5	8.4	399	3.0	397.533	GFL07-3M □□□071C11	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37$ kW

n_N	2720 r/min				3360 r/min			i		
f_N	50 Hz				60 Hz					
	n_2 [r/min]	M_2 [Nm]	c		n_2 [r/min]	M_2 [Nm]	c			
	6.6	514	1.2		8.0	416	1.4	413.667	GFL06-3M □□□071C11	142
	6.3	534	2.4		7.7	432	2.8	430.222	GFL07-3M □□□071C11	142
	5.7	590	1.1		7.0	478	1.3	475.200	GFL06-3M □□□071C11	142
	5.2	648	2.0		6.4	525	2.3	522.133	GFL07-3M □□□071C11	142
	5.1	665	0.9		6.2	538	1.1	535.333	GFL06-3M □□□071C11	142
	4.9	688	3.1		6.0	557	3.7	554.470	GFL09-3M □□□071C11	142
	4.8	698	1.6		5.9	565	1.9	562.391	GFL07-3M □□□071C11	142
	4.7	716	0.9		5.8	580	1.0	576.720	GFL06-3M □□□071C11	142
	4.4	776	2.9		5.3	628	3.5	624.879	GFL09-3M □□□071C11	142
	4.3	787	1.6		5.2	637	1.8	633.680	GFL07-3M □□□071C11	142
	3.9	870	2.4		4.7	704	2.9	700.875	GFL09-3M □□□071C11	142
	3.8	892	1.3		4.6	722	1.5	718.786	GFL07-3M □□□071C11	142
	3.4	981	2.3		4.2	794	2.8	789.875	GFL09-3M □□□071C11	142
	3.4	1005	1.2		4.1	814	1.4	809.900	GFL07-3M □□□071C11	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37 \text{ kW}$

n _N f _N	1410 r/min			1720 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	385	8.9	4.0	467	7.3	4.6	3.659	GFL04-2M □□□071C32	134
	281	12	4.0	341	10	4.6	5.018	GFL04-2M □□□071C32	134
	242	14	4.0	293	12	4.6	5.833	GFL04-2M □□□071C32	134
	220	16	4.0	267	13	4.6	6.400	GFL05-2M □□□071C32	134
				268	13	5.3	6.422	GFL04-2M □□□071C32	134
	201	17	4.5	243	14	5.3	7.025	GFL04-2M □□□071C32	134
	168	20	4.0	204	17	4.6	8.379	GFL04-2M □□□071C32	134
	151	23	4.0	183	19	4.6	9.333	GFL04-2M □□□071C32	134
	138	25	4.5	167	20	5.3	10.238	GFL04-2M □□□071C32	134
	123	28	4.0	149	23	4.6	11.491	GFL04-2M □□□071C32	134
	110	31	4.0	134	26	4.6	12.800	GFL04-2M □□□071C32	134
	96	36	4.5	116	29	5.3	14.706	GFL04-2M □□□071C32	134
	89	39	4.0	108	32	4.6	15.904	GFL05-2M □□□071C32	134
				107	32	5.3	16.087	GFL04-2M □□□071C32	134
	79	44	3.8	95	36	4.5	17.920	GFL04-2M □□□071C32	134
	69	50	3.7	83	41	4.3	20.519	GFL04-2M □□□071C32	134
	62	56	3.0	75	46	3.5	22.857	GFL04-2M □□□071C32	134
	56	61	3.0	68	50	3.7	25.136	GFL04-2M □□□071C32	134
	50	68	2.5	61	56	3.0	28.000	GFL04-2M □□□071C32	134
	45	77	2.4	54	63	2.9	31.600	GFL04-2M □□□071C32	134
	40	86	2.0	49	70	2.4	35.200	GFL04-2M □□□071C32	134
	35	98	3.2	43	80	3.9	40.233	GFL05-2M □□□071C32	134
	35	99	1.9	42	81	2.3	40.697	GFL04-2M □□□071C32	134
	31	110	1.6	38	90	1.9	45.333	GFL04-2M □□□071C32	134
	31	110	2.9	38	90	3.5	45.333	GFL05-2M □□□071C32	134
	27	125	1.5	33	103	1.8	51.579	GFL04-2M □□□071C32	134
	27	127	2.4	33	104	3.0	52.067	GFL05-2M □□□071C32	134
	27	128	3.2	32	105	3.9	52.800	GFL06-2M □□□071C32	134
	25	140	1.2	30	115	1.5	57.455	GFL04-2M □□□071C32	134
	24	143	2.3	29	117	2.8	58.667	GFL05-2M □□□071C32	134
	24	145	3.2	29	119	3.9	59.481	GFL06-2M □□□071C32	134
	23	148	1.4	28	121	1.7	61.653	GFL05-3M □□□071C32	142
	22	154	1.8	27	126	2.2	63.190	GFL05-2M □□□071C32	134
	22	156	2.8	27	128	3.4	64.080	GFL06-2M □□□071C32	134
	22	157	1.0	27	129	1.3	64.636	GFL04-2M □□□071C32	134
	21	159	3.1	26	130	3.8	66.213	GFL06-3M □□□071C32	142
	20	173	1.8	24	142	2.2	71.200	GFL05-2M □□□071C32	134
	20	175	1.0	24	143	1.2	72.000	GFL04-2M □□□071C32	134
	20	172	2.9	24	141	3.5	72.000	GFL06-3M □□□071C32	142
	20	176	2.8	24	144	3.4	72.189	GFL06-2M □□□071C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37 \text{ kW}$

n _N f _N	1410 r/min			1720 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	18	188	1.2	22	154	1.5	78.639	GFL05-3M □□□071C32	142
	17	196	1.1	21	161	1.4	80.763	GFL05-2M □□□071C32	134
	17	197	2.2	21	161	2.7	81.000	GFL06-2M □□□071C32	134
	17	194	2.6	21	159	3.1	81.111	GFL06-3M □□□071C32	142
	16	211	2.3	19	173	2.8	88.200	GFL06-3M □□□071C32	142
	16	216	1.4	19	177	1.7	90.123	GFL05-3M □□□071C32	142
	16	221	1.1	19	181	1.3	91.000	GFL05-2M □□□071C32	134
	16	222	2.1	19	182	2.6	91.250	GFL06-2M □□□071C32	134
	14	238	2.3	17	195	2.8	99.361	GFL06-3M □□□071C32	142
	14	243	1.3	17	199	1.6	101.547	GFL05-3M □□□071C32	142
	12	275	1.2	15	226	1.5	114.952	GFL05-3M □□□071C32	142
	12	279	1.9	15	229	2.3	116.571	GFL06-3M □□□071C32	142
	11	310	1.1	13	254	1.3	129.524	GFL05-3M □□□071C32	142
	11	314	1.9	13	258	2.3	131.323	GFL06-3M □□□071C32	142
	10	337	1.0	12	276	1.2	140.817	GFL05-3M □□□071C32	142
	9.8	346	1.6	12	283	2.0	144.320	GFL06-3M □□□071C32	142
	9.6	353	3.2	12	289	3.9	147.347	GFL07-3M □□□071C32	142
	8.9	380	0.9	11	311	1.1	158.667	GFL05-3M □□□071C32	142
	8.7	389	1.6	11	319	1.9	162.583	GFL06-3M □□□071C32	142
	8.5	398	3.1	10	326	3.8	166.025	GFL07-3M □□□071C32	142
	8.0	424	0.8	9.7	348	1.0	177.027	GFL05-3M □□□071C32	142
	7.9	430	1.4	9.5	352	1.7	179.520	GFL06-3M □□□071C32	142
	7.7	439	2.8	9.3	360	3.4	183.285	GFL07-3M □□□071C32	142
	7.0	484	1.3	8.5	397	1.5	202.237	GFL06-3M □□□071C32	142
	6.8	495	2.5	8.3	405	3.1	206.519	GFL07-3M □□□071C32	142
	6.3	538	2.5	7.6	441	3.0	224.636	GFL07-3M □□□071C32	142
	6.1	554	1.1	7.4	454	1.4	231.200	GFL06-3M □□□071C32	142
	5.6	606	2.1	6.8	497	2.5	253.111	GFL07-3M □□□071C32	142
	5.4	624	1.0	6.6	511	1.2	260.457	GFL06-3M □□□071C32	142
	4.9	696	2.0	5.9	571	2.4	290.706	GFL07-3M □□□071C32	142
	4.9	697	3.2	5.9	571	3.9	290.889	GFL09-3M □□□071C32	142
	4.8	702	0.9	5.8	575	1.1	293.018	GFL06-3M □□□071C32	142
	4.7	717	0.9	5.7	587	1.0	299.200	GFL06-3M □□□071C32	142
	4.3	784	1.6	5.2	643	2.0	327.556	GFL07-3M □□□071C32	142
	4.3	785	3.2	5.2	644	3.9	327.827	GFL09-3M □□□071C32	142
	4.0	845	1.6	4.9	693	2.0	352.811	GFL07-3M □□□071C32	142
	4.0	845	2.8	4.8	693	3.4	353.033	GFL09-3M □□□071C32	142
	3.6	952	1.3	4.3	780	1.6	397.533	GFL07-3M □□□071C32	142
	3.5	953	2.8	4.3	781	3.4	397.863	GFL09-3M □□□071C32	142
	3.3	1016	2.7	4.0	833	3.3	424.247	GFL09-3M □□□071C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37$ kW

n _N	1410 r/min			1720 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	3.3	1030	1.2	4.0	845	1.5	430.222	GFL07-3M □□□071C32	142
	2.7	1233	2.2	3.3	1011	2.7	514.881	GFL09-3M □□□071C32	142
	2.7	1250	1.0	3.3	1025	1.2	522.133	GFL07-3M □□□071C32	142
	2.5	1328	1.6	3.1	1089	1.9	554.470	GFL09-3M □□□071C32	142
	2.5	1347	0.8	3.0	1104	1.0	562.391	GFL07-3M □□□071C32	142
	2.3	1496	1.5	2.7	1227	1.9	624.879	GFL09-3M □□□071C32	142
	2.2	1518	0.8	2.7	1244	1.0	633.680	GFL07-3M □□□071C32	142
	2.0	1678	1.3	2.4	1376	1.5	700.875	GFL09-3M □□□071C32	142
	1.8	1892	1.2	2.2	1551	1.5	789.875	GFL09-3M □□□071C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37 \text{ kW}$

n _N f _N	950 r/min			1160 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	260	13	5.7	314	11	6.9	3.659	GFL04-2M □□□080C13	134
	189	18	5.7	229	15	6.9	5.018	GFL04-2M □□□080C13	134
	163	21	5.7	197	17	6.9	5.833	GFL04-2M □□□080C13	134
	148	23	4.9	179	19	5.9	6.422	GFL04-2M □□□080C13	134
	135	25	4.5	164	21	5.4	7.025	GFL04-2M □□□080C13	134
	113	30	5.7	137	25	6.9	8.379	GFL04-2M □□□080C13	134
	102	34	4.9	123	28	6.0	9.333	GFL04-2M □□□080C13	134
	93	37	4.3	112	30	5.3	10.238	GFL04-2M □□□080C13	134
	83	41	4.4	100	34	5.3	11.491	GFL04-2M □□□080C13	134
	74	46	3.6	90	38	4.4	12.800	GFL04-2M □□□080C13	134
	65	53	3.4	78	43	4.2	14.706	GFL04-2M □□□080C13	134
	59	58	3.1	72	48	3.8	16.087	GFL04-2M □□□080C13	134
	53	65	2.6	64	53	3.2	17.920	GFL04-2M □□□080C13	134
	46	74	2.5	56	61	3.0	20.519	GFL04-2M □□□080C13	134
	42	82	2.0	50	68	2.5	22.857	GFL04-2M □□□080C13	134
	38	91	2.0	46	74	2.5	25.136	GFL04-2M □□□080C13	134
	34	101	1.7	41	83	2.0	28.000	GFL04-2M □□□080C13	134
	34	101	3.1	41	83	3.8	28.000	GFL05-2M □□□080C13	134
	30	114	1.6	36	93	2.0	31.600	GFL04-2M □□□080C13	134
	29	117	3.0	36	96	3.6	32.344	GFL05-2M □□□080C13	134
	27	127	1.3	33	104	1.6	35.200	GFL04-2M □□□080C13	134
	26	132	2.4	32	108	2.9	36.444	GFL05-2M □□□080C13	134
	24	145	2.4	29	119	2.9	40.233	GFL05-2M □□□080C13	134
	23	147	1.3	28	120	1.6	40.697	GFL04-2M □□□080C13	134
	21	164	1.1	25	134	1.3	45.333	GFL04-2M □□□080C13	134
	21	164	2.0	25	134	2.4	45.333	GFL05-2M □□□080C13	134
	18	188	1.6	22	154	2.0	52.067	GFL05-2M □□□080C13	134
	16	212	1.5	20	173	1.9	58.667	GFL05-2M □□□080C13	134
	16	215	2.9	19	176	3.5	59.481	GFL06-2M □□□080C13	134
	15	219	0.9	19	179	1.2	61.653	GFL05-3M □□□080C13	142
	15	228	1.2	18	187	1.5	63.190	GFL05-2M □□□080C13	134
	15	231	2.5	18	189	3.0	64.080	GFL06-2M □□□080C13	134
	14	235	2.1	17	193	2.6	66.213	GFL06-3M □□□080C13	142
	13	257	1.2	16	210	1.5	71.200	GFL05-2M □□□080C13	134
	13	256	1.9	16	210	2.4	72.000	GFL06-3M □□□080C13	142
	13	260	2.4	16	213	2.9	72.189	GFL06-2M □□□080C13	134
	12	280	0.8	15	229	1.0	78.639	GFL05-3M □□□080C13	142
	12	288	2.8	14	236	3.4	79.875	GFL07-2M □□□080C13	134
	12	292	1.5	14	239	1.8	81.000	GFL06-2M □□□080C13	134
	12	288	1.7	14	236	2.1	81.111	GFL06-3M □□□080C13	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37 \text{ kW}$

n _N f _N	950 r/min			1160 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	11	313	1.6	13	257	1.9	88.200	GFL06-3M □□□080C13	142
	11	325	2.8	13	266	3.4	90.000	GFL07-2M □□□080C13	134
	11	320	0.9	13	262	1.2	90.123	GFL05-3M □□□080C13	142
	10	329	1.4	13	270	1.8	91.250	GFL06-2M □□□080C13	134
	10	328	2.9	12	269	3.6	92.413	GFL07-3M □□□080C13	142
	9.6	353	1.6	12	289	1.9	99.361	GFL06-3M □□□080C13	142
	9.4	361	0.9	11	296	1.1	101.547	GFL05-3M □□□080C13	142
	9.1	370	2.9	11	303	3.6	104.127	GFL07-3M □□□080C13	142
	8.4	402	2.6	10	330	3.2	113.206	GFL07-3M □□□080C13	142
	8.3	409	0.8	10	335	1.0	114.952	GFL05-3M □□□080C13	142
	8.2	414	1.3	9.9	339	1.6	116.571	GFL06-3M □□□080C13	142
	7.5	453	2.6	9.0	371	3.2	127.556	GFL07-3M □□□080C13	142
	7.2	467	1.3	8.8	382	1.6	131.323	GFL06-3M □□□080C13	142
	6.6	513	1.1	8.0	420	1.3	144.320	GFL06-3M □□□080C13	142
	6.5	524	2.2	7.8	429	2.7	147.347	GFL07-3M □□□080C13	142
	5.8	578	1.1	7.1	473	1.3	162.583	GFL06-3M □□□080C13	142
	5.7	590	2.1	6.9	483	2.6	166.025	GFL07-3M □□□080C13	142
	5.3	638	0.9	6.4	523	1.2	179.520	GFL06-3M □□□080C13	142
	5.2	651	1.9	6.3	534	2.3	183.285	GFL07-3M □□□080C13	142
	4.7	719	0.8	5.7	589	1.0	202.237	GFL06-3M □□□080C13	142
	4.6	734	1.7	5.6	601	2.1	206.519	GFL07-3M □□□080C13	142
	4.2	798	1.7	5.1	654	2.1	224.636	GFL07-3M □□□080C13	142
	4.2	799	3.0	5.1	654	3.7	224.778	GFL09-3M □□□080C13	142
	3.8	900	1.4	4.5	737	1.7	253.111	GFL07-3M □□□080C13	142
	3.8	900	3.0	4.5	737	3.7	253.321	GFL09-3M □□□080C13	142
	3.3	1033	1.3	4.0	846	1.6	290.706	GFL07-3M □□□080C13	142
	3.3	1034	2.6	4.0	847	3.1	290.889	GFL09-3M □□□080C13	142
	2.9	1164	1.1	3.5	953	1.3	327.556	GFL07-3M □□□080C13	142
	2.9	1165	2.6	3.5	954	3.1	327.827	GFL09-3M □□□080C13	142
	2.7	1254	1.1	3.3	1027	1.3	352.811	GFL07-3M □□□080C13	142
	2.7	1255	2.2	3.3	1028	2.7	353.033	GFL09-3M □□□080C13	142
	2.4	1413	0.9	2.9	1157	1.1	397.533	GFL07-3M □□□080C13	142
	2.4	1414	2.2	2.9	1158	2.7	397.863	GFL09-3M □□□080C13	142
	2.2	1508	1.8	2.7	1235	2.2	424.247	GFL09-3M □□□080C13	142
	2.2	1529	0.8	2.7	1252	1.0	430.222	GFL07-3M □□□080C13	142
	1.9	1830	1.5	2.2	1499	1.8	514.881	GFL09-3M □□□080C13	142
	1.8	1856	3.2	2.2	1520	3.9	522.133	GFL11-3M □□□080C13	142
	1.7	1971	1.1	2.1	1614	1.3	554.470	GFL09-3M □□□080C13	142
	1.7	1999	2.7	2.0	1637	3.2	562.391	GFL11-3M □□□080C13	142
	1.5	2221	1.0	1.8	1819	1.2	624.879	GFL09-3M □□□080C13	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.37$ kW

n_N	950 r/min			1160 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	1.5	2252	2.6	1.8	1845	3.2	633.680	GFL11-3M □□□080C13	142
	1.4	2491	0.8	1.6	2040	1.0	700.875	GFL09-3M □□□080C13	142
	1.3	2527	2.1	1.6	2069	2.6	710.888	GFL11-3M □□□080C13	142
	1.2	2807	0.8	1.5	2299	1.0	789.875	GFL09-3M □□□080C13	142
	1.2	2847	2.1	1.4	2332	2.5	801.000	GFL11-3M □□□080C13	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n _N f _N	2630 r/min			3240 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	719	7.1	4.1	883	5.8	4.7	3.659	GFL04-2M □□□071C31	134
	524	9.7	4.1	644	7.9	4.7	5.018	GFL04-2M □□□071C31	134
	451	11	4.1	554	9.2	4.7	5.833	GFL04-2M □□□071C31	134
	411	12	4.1				6.400	GFL05-2M □□□071C31	134
				505	10	5.4	6.422	GFL04-2M □□□071C31	134
	374	14	4.7	460	11	5.4	7.025	GFL04-2M □□□071C31	134
	314	16	4.1	386	13	4.7	8.379	GFL04-2M □□□071C31	134
	282	18	4.1	346	15	4.7	9.333	GFL04-2M □□□071C31	134
	257	20	4.7	316	16	5.4	10.238	GFL04-2M □□□071C31	134
	229	22	4.1	281	18	4.7	11.491	GFL04-2M □□□071C31	134
	206	25	4.1	252	20	4.7	12.800	GFL04-2M □□□071C31	134
	179	28	4.7	220	23	5.4	14.706	GFL04-2M □□□071C31	134
	165	31	4.1				15.904	GFL05-2M □□□071C31	134
				201	25	5.4	16.087	GFL04-2M □□□071C31	134
	147	35	4.0	180	28	4.6	17.920	GFL04-2M □□□071C31	134
	128	40	3.8	157	32	4.4	20.519	GFL04-2M □□□071C31	134
	115	44	3.1	141	36	3.6	22.857	GFL04-2M □□□071C31	134
	105	49	3.5	129	40	4.1	25.136	GFL04-2M □□□071C31	134
	94	54	2.9	115	44	3.4	28.000	GFL04-2M □□□071C31	134
	83	61	2.8	102	50	3.3	31.600	GFL04-2M □□□071C31	134
	75	68	2.3	92	55	2.7	35.200	GFL04-2M □□□071C31	134
	65	79	2.2	79	64	2.6	40.697	GFL04-2M □□□071C31	134
	58	88	1.8	71	71	2.1	45.333	GFL04-2M □□□071C31	134
	51	100	1.8	63	81	2.1	51.579	GFL04-2M □□□071C31	134
	51	101	2.9	62	82	3.3	52.067	GFL05-2M □□□071C31	134
	46	111	1.5	56	90	1.7	57.455	GFL04-2M □□□071C31	134
	45	114	2.7	55	92	3.1	58.667	GFL05-2M □□□071C31	134
	43	118	1.7	52	96	1.9	61.653	GFL05-3M □□□071C31	142
	42	122	2.2	51	99	2.5	63.190	GFL05-2M □□□071C31	134
	41	125	1.2	50	102	1.4	64.636	GFL04-2M □□□071C31	134
	37	138	2.2	45	112	2.7	71.200	GFL05-2M □□□071C31	134
	37	140	1.3	45	113	1.5	72.000	GFL04-2M □□□071C31	134
	33	150	1.5	41	122	1.8	78.639	GFL05-3M □□□071C31	142
	33	156	1.4	40	127	1.7	80.763	GFL05-2M □□□071C31	134
	33	157	2.8	40	127	3.3	81.000	GFL06-2M □□□071C31	134
	32	155	3.2	40	126	3.9	81.111	GFL06-3M □□□071C31	142
	30	168	2.9	37	137	3.5	88.200	GFL06-3M □□□071C31	142
	29	172	1.8	36	140	2.1	90.123	GFL05-3M □□□071C31	142
	29	176	1.3	36	143	1.6	91.000	GFL05-2M □□□071C31	134
	29	177	2.7	35	144	3.2	91.250	GFL06-2M □□□071C31	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n _N f _N	2630 r/min			3240 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	27	190	2.9	33	154	3.5	99.361	GFL06-3M □□□071C31	142
	26	194	1.7	32	157	2.0	101.547	GFL05-3M □□□071C31	142
	23	219	1.5	28	178	1.8	114.952	GFL05-3M □□□071C31	142
	23	222	2.4	28	181	2.9	116.571	GFL06-3M □□□071C31	142
	20	247	1.3	25	201	1.6	129.524	GFL05-3M □□□071C31	142
	20	251	2.4	25	203	2.9	131.323	GFL06-3M □□□071C31	142
	19	269	1.3	23	218	1.5	140.817	GFL05-3M □□□071C31	142
	18	275	2.0	22	224	2.4	144.320	GFL06-3M □□□071C31	142
	17	303	1.1	20	246	1.3	158.667	GFL05-3M □□□071C31	142
	16	310	2.0	20	252	2.4	162.583	GFL06-3M □□□071C31	142
	15	338	1.0	18	274	1.2	177.027	GFL05-3M □□□071C31	142
	15	343	1.8	18	278	2.1	179.520	GFL06-3M □□□071C31	142
	13	381	0.9	16	309	1.0	199.467	GFL05-3M □□□071C31	142
	13	386	1.6	16	313	1.9	202.237	GFL06-3M □□□071C31	142
	13	394	3.2	16	320	3.8	206.519	GFL07-3M □□□071C31	142
	12	429	3.1	14	348	3.8	224.636	GFL07-3M □□□071C31	142
	11	441	1.4	14	358	1.7	231.200	GFL06-3M □□□071C31	142
	10	483	2.6	13	392	3.1	253.111	GFL07-3M □□□071C31	142
	10	497	1.2	12	403	1.5	260.457	GFL06-3M □□□071C31	142
	9.1	555	2.5	11	450	3.0	290.706	GFL07-3M □□□071C31	142
	9.0	559	1.2	11	454	1.4	293.018	GFL06-3M □□□071C31	142
	8.8	571	1.1	11	464	1.3	299.200	GFL06-3M □□□071C31	142
	8.0	625	2.0	9.9	507	2.4	327.556	GFL07-3M □□□071C31	142
	7.5	673	2.0	9.2	547	2.5	352.811	GFL07-3M □□□071C31	142
	7.2	701	0.9	8.8	569	1.1	367.200	GFL06-3M □□□071C31	142
	6.6	759	1.7	8.1	616	2.0	397.533	GFL07-3M □□□071C31	142
	6.1	821	1.5	7.5	666	1.9	430.222	GFL07-3M □□□071C31	142
	5.1	983	2.8	6.3	798	3.3	514.881	GFL09-3M □□□071C31	142
	5.0	996	1.3	6.2	809	1.5	522.133	GFL07-3M □□□071C31	142
	4.7	1058	2.0	5.8	859	2.4	554.470	GFL09-3M □□□071C31	142
	4.7	1073	1.1	5.7	871	1.3	562.391	GFL07-3M □□□071C31	142
	4.2	1193	1.9	5.2	968	2.3	624.879	GFL09-3M □□□071C31	142
	4.2	1209	1.0	5.1	982	1.2	633.680	GFL07-3M □□□071C31	142
	3.8	1338	1.6	4.6	1086	1.9	700.875	GFL09-3M □□□071C31	142
	3.7	1372	0.8	4.5	1114	1.0	718.786	GFL07-3M □□□071C31	142
	3.3	1507	1.5	4.1	1224	1.8	789.875	GFL09-3M □□□071C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n _N f _N	1405 r/min			1720 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	384	13	4.5	466	11	5.3	3.659	GFL04-2M □□□071C42	134
	280	18	4.5	340	15	5.3	5.018	GFL04-2M □□□071C42	134
	241	21	4.5	292	17	5.3	5.833	GFL04-2M □□□071C42	134
	219	23	4.2	266	19	4.9	6.422	GFL04-2M □□□071C42	134
	200	25	4.2	243	21	4.9	7.025	GFL04-2M □□□071C42	134
	168	30	4.5	204	25	5.3	8.379	GFL04-2M □□□071C42	134
	156	33	4.5	189	27	5.3	9.010	GFL05-2M □□□071C42	134
				184	28	5.3	9.333	GFL04-2M □□□071C42	134
	137	37	4.2	167	30	4.9	10.238	GFL04-2M □□□071C42	134
	122	42	4.3	148	34	5.1	11.491	GFL04-2M □□□071C42	134
	110	46	3.6	133	38	4.2	12.800	GFL04-2M □□□071C42	134
	96	53	3.4	116	44	4.0	14.706	GFL04-2M □□□071C42	134
	87	58	3.1	106	48	3.6	16.087	GFL04-2M □□□071C42	134
	78	65	2.6	95	53	3.0	17.920	GFL04-2M □□□071C42	134
	69	74	2.5	83	61	2.9	20.519	GFL04-2M □□□071C42	134
	62	83	2.0	75	68	2.4	22.857	GFL04-2M □□□071C42	134
	56	91	2.0	68	74	2.5	25.136	GFL04-2M □□□071C42	134
	50	102	1.7	61	83	2.0	28.000	GFL04-2M □□□071C42	134
	50	102	3.1	61	83	3.8	28.000	GFL05-2M □□□071C42	134
	45	115	1.6	54	94	2.0	31.600	GFL04-2M □□□071C42	134
	43	117	2.9	53	96	3.6	32.344	GFL05-2M □□□071C42	134
	40	128	1.3	48	104	1.6	35.200	GFL04-2M □□□071C42	134
	39	132	2.4	47	108	2.9	36.444	GFL05-2M □□□071C42	134
	35	146	2.4	42	119	2.9	40.233	GFL05-2M □□□071C42	134
	35	148	1.3	42	121	1.6	40.697	GFL04-2M □□□071C42	134
	34	148	3.2	42	121	3.9	40.800	GFL06-2M □□□071C42	134
	31	164	1.0	38	134	1.3	45.333	GFL04-2M □□□071C42	134
	31	164	1.9	38	134	2.4	45.333	GFL05-2M □□□071C42	134
	31	167	3.2	37	136	3.9	45.963	GFL06-2M □□□071C42	134
	27	189	1.6	33	154	2.0	52.067	GFL05-2M □□□071C42	134
	27	191	2.9	32	156	3.5	52.800	GFL06-2M □□□071C42	134
	24	213	1.5	29	174	1.9	58.667	GFL05-2M □□□071C42	134
	24	216	2.9	29	176	3.5	59.481	GFL06-2M □□□071C42	134
	23	220	0.9	28	180	1.2	61.653	GFL05-3M □□□071C42	142
	22	229	1.2	27	187	1.5	63.190	GFL05-2M □□□071C42	134
	22	232	2.4	27	190	2.9	64.080	GFL06-2M □□□071C42	134
	21	237	2.1	26	193	2.6	66.213	GFL06-3M □□□071C42	142
	20	258	1.2	24	211	1.4	71.200	GFL05-2M □□□071C42	134
	20	257	1.9	24	210	2.4	72.000	GFL06-3M □□□071C42	142
	20	262	2.4	24	214	2.9	72.189	GFL06-2M □□□071C42	134

GFL shaft-mounted helical gearboxes

Technical data



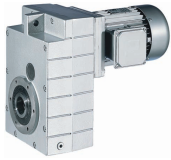
Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n_N	1405 r/min			1720 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	18	281	0.8	22	229	1.0	78.639	GFL05-3M □□□071C42	142
	17	294	1.4	21	240	1.7	81.000	GFL06-2M □□□071C42	134
	17	290	1.7	21	237	2.1	81.111	GFL06-3M □□□071C42	142
	16	315	1.5	19	257	1.9	88.200	GFL06-3M □□□071C42	142
	16	322	0.9	19	263	1.2	90.123	GFL05-3M □□□071C42	142
	15	331	1.4	19	270	1.7	91.250	GFL06-2M □□□071C42	134
	15	330	2.9	18	270	3.6	92.413	GFL07-3M □□□071C42	142
	14	355	1.5	17	290	1.9	99.361	GFL06-3M □□□071C42	142
	14	363	0.9	17	296	1.1	101.547	GFL05-3M □□□071C42	142
	14	372	2.9	16	304	3.6	104.127	GFL07-3M □□□071C42	142
	12	404	2.6	15	330	3.1	113.206	GFL07-3M □□□071C42	142
	12	411	0.8	15	335	1.0	114.952	GFL05-3M □□□071C42	142
	12	416	1.3	15	340	1.6	116.571	GFL06-3M □□□071C42	142
	11	456	2.6	13	372	3.1	127.556	GFL07-3M □□□071C42	142
	11	469	1.3	13	383	1.6	131.323	GFL06-3M □□□071C42	142
	9.7	516	1.1	12	421	1.3	144.320	GFL06-3M □□□071C42	142
	9.5	526	2.2	12	430	2.7	147.347	GFL07-3M □□□071C42	142
	8.6	581	1.1	11	474	1.3	162.583	GFL06-3M □□□071C42	142
	8.5	593	2.1	10	484	2.6	166.025	GFL07-3M □□□071C42	142
	7.8	641	0.9	9.5	524	1.2	179.520	GFL06-3M □□□071C42	142
	7.7	655	1.9	9.3	535	2.3	183.285	GFL07-3M □□□071C42	142
	7.6	661	3.2	9.2	540	3.9	185.111	GFL09-3M □□□071C42	142
	7.0	722	0.8	8.4	590	1.0	202.237	GFL06-3M □□□071C42	142
	6.8	738	1.7	8.3	603	2.1	206.519	GFL07-3M □□□071C42	142
	6.7	745	3.2	8.2	609	3.9	208.617	GFL09-3M □□□071C42	142
	6.3	803	1.7	7.6	656	2.0	224.636	GFL07-3M □□□071C42	142
	6.3	803	3.0	7.6	656	3.7	224.778	GFL09-3M □□□071C42	142
	5.6	904	1.4	6.7	739	1.7	253.111	GFL07-3M □□□071C42	142
	5.6	905	3.0	6.7	739	3.7	253.321	GFL09-3M □□□071C42	142
	4.8	1039	1.3	5.9	848	1.6	290.706	GFL07-3M □□□071C42	142
	4.8	1039	2.5	5.9	849	3.1	290.889	GFL09-3M □□□071C42	142
	4.3	1170	1.1	5.2	956	1.3	327.556	GFL07-3M □□□071C42	142
	4.3	1171	2.5	5.2	957	3.1	327.827	GFL09-3M □□□071C42	142
	4.0	1260	1.1	4.8	1030	1.3	352.811	GFL07-3M □□□071C42	142
	4.0	1261	2.2	4.8	1030	2.7	353.033	GFL09-3M □□□071C42	142
	3.5	1420	0.9	4.3	1160	1.1	397.533	GFL07-3M □□□071C42	142
	3.5	1421	2.2	4.3	1161	2.7	397.863	GFL09-3M □□□071C42	142
	3.3	1516	1.8	4.0	1238	2.2	424.247	GFL09-3M □□□071C42	142
	3.3	1537	0.8	4.0	1255	1.0	430.222	GFL07-3M □□□071C42	142
	2.7	1839	1.5	3.3	1503	1.8	514.881	GFL09-3M □□□071C42	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n _N	1405 r/min			1720 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	2.5	1981	1.1	3.1	1618	1.3	554.470	GFL09-3M □□□071C42	142
	2.3	2232	1.0	2.7	1824	1.2	624.879	GFL09-3M □□□071C42	142
	2.0	2504	0.8	2.4	2045	1.0	700.875	GFL09-3M □□□071C42	142
	1.8	2822	0.8	2.2	2305	1.0	789.875	GFL09-3M □□□071C42	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n _N f _N	930 r/min			1140 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	254	20	3.7	309	16	4.6	3.659	GFL04-2M □□□080C33	134
	185	27	3.7	225	22	4.6	5.018	GFL04-2M □□□080C33	134
	159	32	3.7	194	26	4.6	5.833	GFL04-2M □□□080C33	134
	145	35	3.2	176	29	3.9	6.422	GFL04-2M □□□080C33	134
	132	38	2.9	161	31	3.6	7.025	GFL04-2M □□□080C33	134
	111	46	3.7	135	37	4.6	8.379	GFL04-2M □□□080C33	134
	100	51	3.2	121	42	4.0	9.333	GFL04-2M □□□080C33	134
	91	56	2.8	110	46	3.5	10.238	GFL04-2M □□□080C33	134
	81	63	2.9	98	51	3.5	11.491	GFL04-2M □□□080C33	134
	73	70	2.4	88	57	2.9	12.800	GFL04-2M □□□080C33	134
	63	81	2.3	77	66	2.8	14.706	GFL04-2M □□□080C33	134
	58	88	2.1	70	72	2.5	16.087	GFL04-2M □□□080C33	134
	52	98	1.7	63	80	2.1	17.920	GFL04-2M □□□080C33	134
	52	98	3.2	63	80	3.9	17.920	GFL05-2M □□□080C33	134
	46	111	3.0	56	91	3.7	20.286	GFL05-2M □□□080C33	134
	45	112	1.6	55	92	2.0	20.519	GFL04-2M □□□080C33	134
	41	125	1.3	49	102	1.6	22.857	GFL04-2M □□□080C33	134
	41	125	2.5	49	102	3.1	22.857	GFL05-2M □□□080C33	134
	37	136	2.5	46	111	3.1	24.850	GFL05-2M □□□080C33	134
	37	138	1.3	45	112	1.6	25.136	GFL04-2M □□□080C33	134
	33	153	1.1	40	125	1.3	28.000	GFL04-2M □□□080C33	134
	33	153	2.0	40	125	2.5	28.000	GFL05-2M □□□080C33	134
	29	173	1.1	36	141	1.3	31.600	GFL04-2M □□□080C33	134
	29	177	1.9	35	145	2.4	32.344	GFL05-2M □□□080C33	134
	28	180	3.1	35	147	3.8	32.800	GFL06-2M □□□080C33	134
	26	193	0.9	32	157	1.1	35.200	GFL04-2M □□□080C33	134
	26	200	1.6	31	163	1.9	36.444	GFL05-2M □□□080C33	134
	25	202	3.0	31	165	3.7	36.951	GFL06-2M □□□080C33	134
	23	220	1.6	28	180	1.9	40.233	GFL05-2M □□□080C33	134
	23	223	0.8	28	182	1.0	40.697	GFL04-2M □□□080C33	134
	23	224	2.6	28	182	3.2	40.800	GFL06-2M □□□080C33	134
	21	248	1.3	25	203	1.6	45.333	GFL05-2M □□□080C33	134
	20	252	2.4	25	205	3.0	45.963	GFL06-2M □□□080C33	134
	18	285	1.1	22	233	1.3	52.067	GFL05-2M □□□080C33	134
	18	285	2.6	22	233	3.2	52.067	GFL07-2M □□□080C33	134
	18	289	2.3	21	236	2.8	52.800	GFL06-2M □□□080C33	134
	16	321	1.0	19	262	1.2	58.667	GFL05-2M □□□080C33	134
	16	321	2.6	19	262	3.2	58.667	GFL07-2M □□□080C33	134
	16	326	1.9	19	266	2.3	59.481	GFL06-2M □□□080C33	134
	15	346	0.8	18	282	1.0	63.190	GFL05-2M □□□080C33	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n_N f_N	930 r/min			1140 r/min			i		
	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	15	346	2.3	18	282	2.8	63.190	GFL07-2M □□□080C33	134
	15	351	1.6	18	286	2.0	64.080	GFL06-2M □□□080C33	134
	14	352	2.5	17	288	3.1	65.306	GFL07-3M □□□080C33	142
	14	357	1.4	17	292	1.7	66.213	GFL06-3M □□□080C33	142
	13	390	2.3	16	318	2.8	71.200	GFL07-2M □□□080C33	134
	13	389	1.3	16	317	1.6	72.000	GFL06-3M □□□080C33	142
	13	396	1.6	16	323	1.9	72.189	GFL06-2M □□□080C33	134
	13	391	2.2	16	319	2.7	72.452	GFL07-3M □□□080C33	142
	12	438	1.8	14	357	2.2	79.875	GFL07-2M □□□080C33	134
	12	444	1.0	14	362	1.2	81.000	GFL06-2M □□□080C33	134
	12	438	1.1	14	357	1.4	81.111	GFL06-3M □□□080C33	142
	11	441	2.2	14	359	2.7	81.636	GFL07-3M □□□080C33	142
	11	476	1.0	13	388	1.3	88.200	GFL06-3M □□□080C33	142
	10	493	1.8	13	402	2.2	90.000	GFL07-2M □□□080C33	134
	10	500	1.0	12	408	1.2	91.250	GFL06-2M □□□080C33	134
	10	499	1.9	12	407	2.4	92.413	GFL07-3M □□□080C33	142
	9.4	536	1.0	11	437	1.3	99.361	GFL06-3M □□□080C33	142
	8.9	562	1.9	11	458	2.4	104.127	GFL07-3M □□□080C33	142
	8.2	611	1.7	10	498	2.1	113.206	GFL07-3M □□□080C33	142
	8.0	629	0.8	9.7	513	1.0	116.571	GFL06-3M □□□080C33	142
	7.3	688	1.7	8.9	562	2.1	127.556	GFL07-3M □□□080C33	142
	7.1	709	0.8	8.6	578	1.0	131.323	GFL06-3M □□□080C33	142
	6.3	795	1.4	7.7	649	1.8	147.347	GFL07-3M □□□080C33	142
	6.3	803	2.6	7.6	655	3.1	148.815	GFL09-3M □□□080C33	142
	5.6	896	1.4	6.8	731	1.7	166.025	GFL07-3M □□□080C33	142
	5.6	905	2.6	6.7	738	3.1	167.712	GFL09-3M □□□080C33	142
	5.1	989	1.2	6.2	807	1.5	183.285	GFL07-3M □□□080C33	142
	5.0	999	2.2	6.1	815	2.7	185.111	GFL09-3M □□□080C33	142
	4.5	1115	1.1	5.5	909	1.4	206.519	GFL07-3M □□□080C33	142
	4.5	1126	2.2	5.4	919	2.7	208.617	GFL09-3M □□□080C33	142
	4.1	1212	1.1	5.0	989	1.4	224.636	GFL07-3M □□□080C33	142
	4.1	1213	2.0	5.0	990	2.4	224.778	GFL09-3M □□□080C33	142
	3.7	1366	0.9	4.5	1114	1.1	253.111	GFL07-3M □□□080C33	142
	3.7	1367	2.0	4.5	1115	2.4	253.321	GFL09-3M □□□080C33	142
	3.2	1569	0.9	3.9	1280	1.1	290.706	GFL07-3M □□□080C33	142
	3.2	1570	1.7	3.9	1281	2.1	290.889	GFL09-3M □□□080C33	142
	2.8	1769	1.7	3.5	1443	2.1	327.827	GFL09-3M □□□080C33	142
	2.6	1905	1.5	3.2	1554	1.8	353.033	GFL09-3M □□□080C33	142
	2.6	1933	2.3	3.2	1577	2.8	358.077	GFL11-3M □□□080C33	142
	2.3	2147	1.5	2.8	1752	1.8	397.863	GFL09-3M □□□080C33	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.55 \text{ kW}$

n _N	930 r/min			1140 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	2.3	2178	2.3	2.8	1776	2.8	403.467	GFL11-3M □□□080C33	142
	2.2	2290	1.2	2.7	1868	1.5	424.247	GFL09-3M □□□080C33	142
	2.2	2322	2.6	2.6	1894	3.1	430.222	GFL11-3M □□□080C33	142
	1.8	2779	1.0	2.2	2267	1.2	514.881	GFL09-3M □□□080C33	142
	1.8	2818	2.1	2.2	2299	2.6	522.133	GFL11-3M □□□080C33	142
	1.7	3035	1.8	2.0	2476	2.1	562.391	GFL11-3M □□□080C33	142
	1.5	3420	1.7	1.8	2790	2.1	633.680	GFL11-3M □□□080C33	142
	1.3	3837	1.4	1.6	3130	1.7	710.888	GFL11-3M □□□080C33	142
	1.2	4323	1.4	1.4	3527	1.7	801.000	GFL11-3M □□□080C33	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.75 \text{ kW}$

n _N f _N	2720 r/min			3380 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	424	16	5.6	517	13	6.5	6.422	GFL04-2M □□□080C11	134
	387	18	5.2	473	14	6.0	7.025	GFL04-2M □□□080C11	134
	291	24	5.7	356	19	6.6	9.333	GFL04-2M □□□080C11	134
	266	26	5.0	324	21	5.8	10.238	GFL04-2M □□□080C11	134
	237	29	5.1	289	24	5.8	11.491	GFL04-2M □□□080C11	134
	213	33	4.2	259	26	4.8	12.800	GFL04-2M □□□080C11	134
	185	38	4.0	226	30	4.6	14.706	GFL04-2M □□□080C11	134
	169	41	3.6	206	33	4.2	16.087	GFL04-2M □□□080C11	134
	152	46	3.0	185	37	3.5	17.920	GFL04-2M □□□080C11	134
	133	52	2.9	162	42	3.3	20.519	GFL04-2M □□□080C11	134
	119	58	2.3	145	47	2.7	22.857	GFL04-2M □□□080C11	134
	108	64	2.7	132	52	3.1	25.136	GFL04-2M □□□080C11	134
	97	72	2.2	119	58	2.5	28.000	GFL04-2M □□□080C11	134
	86	81	2.1	105	65	2.5	31.600	GFL04-2M □□□080C11	134
	77	90	1.8	94	72	2.0	35.200	GFL04-2M □□□080C11	134
	75	93	3.2	91	75	3.7	36.444	GFL05-2M □□□080C11	134
	68	103	3.1	83	83	3.6	40.233	GFL05-2M □□□080C11	134
	67	104	1.7	82	84	1.9	40.697	GFL04-2M □□□080C11	134
	60	116	1.4	73	93	1.6	45.333	GFL04-2M □□□080C11	134
	60	116	2.6	73	93	3.0	45.333	GFL05-2M □□□080C11	134
	52	133	2.2	64	107	2.5	52.067	GFL05-2M □□□080C11	134
	46	150	2.0	57	121	2.3	58.667	GFL05-2M □□□080C11	134
	44	155	1.2	54	125	1.4	61.653	GFL05-3M □□□080C11	142
	43	161	1.6	53	130	1.9	63.190	GFL05-2M □□□080C11	134
	41	167	3.0	50	134	3.6	66.213	GFL06-3M □□□080C11	142
	38	182	1.7	47	146	2.0	71.200	GFL05-2M □□□080C11	134
	38	181	2.7	46	146	3.3	72.000	GFL06-3M □□□080C11	142
	35	198	1.1	42	159	1.4	78.639	GFL05-3M □□□080C11	142
	34	207	2.1	41	167	2.5	81.000	GFL06-2M □□□080C11	134
	34	204	2.4	41	164	2.9	81.111	GFL06-3M □□□080C11	142
	31	222	2.2	38	179	2.6	88.200	GFL06-3M □□□080C11	142
	30	227	1.3	37	182	1.6	90.123	GFL05-3M □□□080C11	142
	30	233	2.0	36	188	2.4	91.250	GFL06-2M □□□080C11	134
	27	250	2.2	33	201	2.6	99.361	GFL06-3M □□□080C11	142
	27	256	1.3	33	206	1.5	101.547	GFL05-3M □□□080C11	142
	24	289	1.1	29	233	1.4	114.952	GFL05-3M □□□080C11	142
	23	293	1.8	29	236	2.2	116.571	GFL06-3M □□□080C11	142
	21	326	1.0	26	262	1.2	129.524	GFL05-3M □□□080C11	142
	21	330	1.8	25	266	2.2	131.323	GFL06-3M □□□080C11	142
	19	354	1.0	24	285	1.2	140.817	GFL05-3M □□□080C11	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.75$ kW

n_N	2720 r/min			3380 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	19	363	1.5	23	292	1.8	144.320	GFL06-3M □□□080C11	142
	19	371	3.1	23	298	3.7	147.347	GFL07-3M □□□080C11	142
	17	399	0.8	21	321	1.0	158.667	GFL05-3M □□□080C11	142
	17	409	1.5	20	329	1.8	162.583	GFL06-3M □□□080C11	142
	16	418	3.0	20	336	3.6	166.025	GFL07-3M □□□080C11	142
	15	452	1.3	19	364	1.6	179.520	GFL06-3M □□□080C11	142
	15	461	2.7	18	371	3.2	183.285	GFL07-3M □□□080C11	142
	13	509	1.2	16	410	1.4	202.237	GFL06-3M □□□080C11	142
	13	520	2.4	16	418	2.9	206.519	GFL07-3M □□□080C11	142
	12	565	2.4	15	455	2.8	224.636	GFL07-3M □□□080C11	142
	12	582	1.1	14	468	1.3	231.200	GFL06-3M □□□080C11	142
	11	637	2.0	13	513	2.4	253.111	GFL07-3M □□□080C11	142
	10	655	0.9	13	527	1.1	260.457	GFL06-3M □□□080C11	142
	9.4	732	1.9	11	589	2.2	290.706	GFL07-3M □□□080C11	142
	9.1	753	0.8	11	606	1.0	299.200	GFL06-3M □□□080C11	142
	8.3	824	1.5	10	663	1.8	327.556	GFL07-3M □□□080C11	142
	7.7	888	1.6	9.4	714	1.9	352.811	GFL07-3M □□□080C11	142
	7.7	888	3.2	9.4	715	3.8	353.033	GFL09-3M □□□080C11	142
	6.8	1000	1.3	8.4	805	1.5	397.533	GFL07-3M □□□080C11	142
	6.8	1001	3.2	8.3	806	3.8	397.863	GFL09-3M □□□080C11	142
	6.4	1068	2.6	7.8	859	3.0	424.247	GFL09-3M □□□080C11	142
	6.3	1083	1.2	7.7	871	1.4	430.222	GFL07-3M □□□080C11	142
	5.3	1296	2.1	6.5	1043	2.5	514.881	GFL09-3M □□□080C11	142
	5.2	1314	1.0	6.4	1057	1.2	522.133	GFL07-3M □□□080C11	142
	4.9	1395	1.5	6.0	1123	1.8	554.470	GFL09-3M □□□080C11	142
	4.4	1572	1.4	5.3	1265	1.7	624.879	GFL09-3M □□□080C11	142
	3.9	1764	1.2	4.7	1419	1.4	700.875	GFL09-3M □□□080C11	142
	3.8	1789	3.0	4.8	1440	3.6	710.888	GFL11-3M □□□080C11	142
	3.4	1988	1.1	4.2	1599	1.4	789.875	GFL09-3M □□□080C11	142
	3.4	2016	2.9	4.1	1622	3.5	801.000	GFL11-3M □□□080C11	142

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GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.75 \text{ kW}$

n_N	1410 r/min			1720 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	385	18	4.2	467	15	4.8	3.659	GFL04-2M □□□080C32	134
	281	25	4.2	341	20	4.8	5.018	GFL04-2M □□□080C32	134
	242	29	4.2	293	24	4.8	5.833	GFL04-2M □□□080C32	134
	220	32	3.6	266	26	4.1	6.422	GFL04-2M □□□080C32	134
	201	35	3.3	243	28	3.8	7.025	GFL04-2M □□□080C32	134
	168	41	4.2	204	34	4.8	8.379	GFL04-2M □□□080C32	134
	151	46	3.6	183	38	4.2	9.333	GFL04-2M □□□080C32	134
	138	50	3.2	167	41	3.7	10.238	GFL04-2M □□□080C32	134
	123	57	3.2	149	46	3.7	11.491	GFL04-2M □□□080C32	134
	110	63	2.6	134	52	3.1	12.800	GFL04-2M □□□080C32	134
	96	72	2.5	116	59	2.9	14.706	GFL04-2M □□□080C32	134
	88	79	2.3	106	65	2.7	16.087	GFL04-2M □□□080C32	134
	79	88	1.9	95	72	2.2	17.920	GFL04-2M □□□080C32	134
	69	101	1.8	83	83	2.1	20.519	GFL04-2M □□□080C32	134
	62	113	1.5	75	92	1.7	22.857	GFL04-2M □□□080C32	134
	62	113	2.8	75	92	3.2	22.857	GFL05-2M □□□080C32	134
	57	122	2.8	69	100	3.4	24.850	GFL05-2M □□□080C32	134
	56	124	1.5	68	102	1.8	25.136	GFL04-2M □□□080C32	134
	50	138	1.2	61	113	1.5	28.000	GFL04-2M □□□080C32	134
	50	138	2.3	61	113	2.8	28.000	GFL05-2M □□□080C32	134
	45	156	1.2	54	128	1.4	31.600	GFL04-2M □□□080C32	134
	44	159	2.2	53	131	2.6	32.344	GFL05-2M □□□080C32	134
	40	173	1.0	49	142	1.2	35.200	GFL04-2M □□□080C32	134
	39	180	1.8	47	147	2.1	36.444	GFL05-2M □□□080C32	134
	35	198	1.7	43	163	2.1	40.233	GFL05-2M □□□080C32	134
	35	201	0.9	42	164	1.1	40.697	GFL04-2M □□□080C32	134
	35	201	2.9	42	165	3.5	40.800	GFL06-2M □□□080C32	134
	31	223	1.4	38	183	1.7	45.333	GFL05-2M □□□080C32	134
	31	227	2.7	37	186	3.3	45.963	GFL06-2M □□□080C32	134
	27	257	1.2	33	210	1.5	52.067	GFL05-2M □□□080C32	134
	27	257	2.9	33	210	3.5	52.067	GFL07-2M □□□080C32	134
	27	260	2.5	32	213	3.1	52.800	GFL06-2M □□□080C32	134
	24	289	1.1	29	237	1.4	58.667	GFL05-2M □□□080C32	134
	24	289	2.9	29	237	3.5	58.667	GFL07-2M □□□080C32	134
	24	293	2.1	29	240	2.6	59.481	GFL06-2M □□□080C32	134
	22	311	0.9	27	255	1.1	63.190	GFL05-2M □□□080C32	134
	22	311	2.5	27	255	3.1	63.190	GFL07-2M □□□080C32	134
	22	316	1.8	27	259	2.2	64.080	GFL06-2M □□□080C32	134
	22	317	2.8	26	260	3.4	65.306	GFL07-3M □□□080C32	142
	21	321	1.5	26	263	1.9	66.213	GFL06-3M □□□080C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.75 \text{ kW}$

n _N f _N	1410 r/min			1720 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	20	351	0.9	24	288	1.1	71.200	GFL05-2M □□□080C32	134
	20	351	2.5	24	288	3.1	71.200	GFL07-2M □□□080C32	134
	20	350	1.4	24	287	1.7	72.000	GFL06-3M □□□080C32	142
	20	356	1.7	24	292	2.1	72.189	GFL06-2M □□□080C32	134
	20	352	2.5	24	288	3.0	72.452	GFL07-3M □□□080C32	142
	18	394	2.0	21	323	2.5	79.875	GFL07-2M □□□080C32	134
	17	399	1.1	21	327	1.3	81.000	GFL06-2M □□□080C32	134
	17	394	1.3	21	323	1.5	81.111	GFL06-3M □□□080C32	142
	17	396	2.5	21	325	3.0	81.636	GFL07-3M □□□080C32	142
	16	428	1.1	19	351	1.4	88.200	GFL06-3M □□□080C32	142
	16	444	2.0	19	364	2.5	90.000	GFL07-2M □□□080C32	134
	16	450	1.1	19	369	1.3	91.250	GFL06-2M □□□080C32	134
	15	449	2.1	19	368	2.6	92.413	GFL07-3M □□□080C32	142
	14	482	1.1	17	395	1.4	99.361	GFL06-3M □□□080C32	142
	14	505	2.1	16	414	2.6	104.127	GFL07-3M □□□080C32	142
	13	550	1.9	15	450	2.3	113.206	GFL07-3M □□□080C32	142
	12	566	0.9	15	464	1.1	116.571	GFL06-3M □□□080C32	142
	11	619	1.9	13	508	2.3	127.556	GFL07-3M □□□080C32	142
	11	637	0.9	13	523	1.1	131.323	GFL06-3M □□□080C32	142
	9.6	715	1.6	12	586	1.9	147.347	GFL07-3M □□□080C32	142
	9.5	722	2.8	12	592	3.5	148.815	GFL09-3M □□□080C32	142
	8.5	806	1.5	10	661	1.9	166.025	GFL07-3M □□□080C32	142
	8.4	814	2.8	10	667	3.5	167.712	GFL09-3M □□□080C32	142
	7.7	890	1.4	9.3	729	1.7	183.285	GFL07-3M □□□080C32	142
	7.6	899	2.5	9.2	737	3.0	185.111	GFL09-3M □□□080C32	142
	6.8	1002	1.2	8.3	822	1.5	206.519	GFL07-3M □□□080C32	142
	6.8	1013	2.5	8.2	830	3.0	208.617	GFL09-3M □□□080C32	142
	6.3	1090	1.2	7.6	894	1.5	224.636	GFL07-3M □□□080C32	142
	6.3	1091	2.2	7.6	894	2.7	224.778	GFL09-3M □□□080C32	142
	5.6	1229	1.0	6.8	1007	1.2	253.111	GFL07-3M □□□080C32	142
	5.6	1230	2.2	6.8	1008	2.7	253.321	GFL09-3M □□□080C32	142
	4.9	1411	1.0	5.9	1157	1.2	290.706	GFL07-3M □□□080C32	142
	4.9	1412	1.9	5.9	1158	2.3	290.889	GFL09-3M □□□080C32	142
	4.3	1591	1.9	5.2	1305	2.3	327.827	GFL09-3M □□□080C32	142
	4.0	1713	0.8	4.9	1404	1.0	352.811	GFL07-3M □□□080C32	142
	4.0	1714	1.6	4.8	1405	2.0	353.033	GFL09-3M □□□080C32	142
	3.9	1738	2.5	4.8	1425	3.1	358.077	GFL11-3M □□□080C32	142
	3.5	1931	1.6	4.3	1583	2.0	397.863	GFL09-3M □□□080C32	142
	3.5	1959	2.5	4.2	1606	3.1	403.467	GFL11-3M □□□080C32	142
	3.3	2059	1.3	4.0	1688	1.6	424.247	GFL09-3M □□□080C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 0.75$ kW

n_N	1410 r/min			1720 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	3.3	2088	2.8	4.0	1712	3.5	430.222	GFL11-3M □□□080C32	142
	2.7	2499	1.1	3.3	2049	1.3	514.881	GFL09-3M □□□080C32	142
	2.7	2535	2.3	3.3	2078	2.9	522.133	GFL11-3M □□□080C32	142
	2.5	2730	1.9	3.0	2238	2.4	562.391	GFL11-3M □□□080C32	142
	2.2	3076	1.9	2.7	2522	2.3	633.680	GFL11-3M □□□080C32	142
	2.0	3451	1.5	2.4	2829	1.9	710.888	GFL11-3M □□□080C32	142
	1.8	3888	1.5	2.1	3187	1.8	801.000	GFL11-3M □□□080C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.1 \text{ kW}$

n _N f _N	2720 r/min			3370 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	743	14	4.5	907	11	5.2	3.659	GFL04-2M □□□080C31	134
	542	19	4.5	662	15	5.2	5.018	GFL04-2M □□□080C31	134
	466	22	4.5	569	18	5.2	5.833	GFL04-2M □□□080C31	134
	424	24	3.8	517	19	4.4	6.422	GFL04-2M □□□080C31	134
	387	26	3.5	473	21	4.1	7.025	GFL04-2M □□□080C31	134
	325	31	4.5	396	25	5.2	8.379	GFL04-2M □□□080C31	134
	291	35	3.9	356	28	4.5	9.333	GFL04-2M □□□080C31	134
	266	38	3.4	324	31	3.9	10.238	GFL04-2M □□□080C31	134
	237	43	3.4	289	35	4.0	11.491	GFL04-2M □□□080C31	134
	213	48	2.8	259	39	3.3	12.800	GFL04-2M □□□080C31	134
	185	55	2.7	226	44	3.1	14.706	GFL04-2M □□□080C31	134
	169	60	2.5	206	49	2.9	16.087	GFL04-2M □□□080C31	134
	152	67	2.0	185	54	2.4	17.920	GFL04-2M □□□080C31	134
	133	77	2.0	162	62	2.3	20.519	GFL04-2M □□□080C31	134
	119	86	1.6	145	69	1.8	22.857	GFL04-2M □□□080C31	134
	119	86	3.0	145	69	3.5	22.857	GFL05-2M □□□080C31	134
	108	94	1.8	132	76	2.1	25.136	GFL04-2M □□□080C31	134
	97	105	1.5	119	85	1.7	28.000	GFL04-2M □□□080C31	134
	97	105	2.8	119	85	3.2	28.000	GFL05-2M □□□080C31	134
	86	118	1.5	105	96	1.7	31.600	GFL04-2M □□□080C31	134
	84	121	2.7	103	98	3.1	32.344	GFL05-2M □□□080C31	134
	77	132	1.2	94	106	1.4	35.200	GFL04-2M □□□080C31	134
	75	137	2.2	91	110	2.5	36.444	GFL05-2M □□□080C31	134
	68	151	2.1	83	122	2.5	40.233	GFL05-2M □□□080C31	134
	67	152	1.1	82	123	1.3	40.697	GFL04-2M □□□080C31	134
	60	170	0.9	73	137	1.1	45.333	GFL04-2M □□□080C31	134
	60	170	1.7	73	137	2.0	45.333	GFL05-2M □□□080C31	134
	52	195	1.5	64	157	1.7	52.067	GFL05-2M □□□080C31	134
	52	198	3.1	63	160	3.6	52.800	GFL06-2M □□□080C31	134
	46	220	1.4	57	177	1.6	58.667	GFL05-2M □□□080C31	134
	46	223	2.6	56	180	3.0	59.481	GFL06-2M □□□080C31	134
	44	228	0.8	55	184	1.0	61.653	GFL05-3M □□□080C31	142
	43	237	1.1	53	191	1.3	63.190	GFL05-2M □□□080C31	134
	43	237	3.1	53	191	3.6	63.190	GFL07-2M □□□080C31	134
	42	240	2.2	52	194	2.6	64.080	GFL06-2M □□□080C31	134
	41	244	2.0	50	197	2.4	66.213	GFL06-3M □□□080C31	142
	38	267	1.1	47	215	1.4	71.200	GFL05-2M □□□080C31	134
	38	266	1.9	46	214	2.2	72.000	GFL06-3M □□□080C31	142
	38	270	2.3	46	218	2.7	72.189	GFL06-2M □□□080C31	134
	38	267	3.2	46	216	3.9	72.452	GFL07-3M □□□080C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.1 \text{ kW}$

n_N	2720 r/min			3370 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	34	299	2.7	42	242	3.2	79.875	GFL07-2M □□□080C31	134
	34	303	1.4	41	245	1.7	81.000	GFL06-2M □□□080C31	134
	34	299	1.7	41	242	2.0	81.111	GFL06-3M □□□080C31	142
	33	301	3.2	41	243	3.9	81.636	GFL07-3M □□□080C31	142
	31	326	1.5	38	263	1.8	88.200	GFL06-3M □□□080C31	142
	30	337	2.7	37	272	3.2	90.000	GFL07-2M □□□080C31	134
	30	333	0.9	37	268	1.1	90.123	GFL05-3M □□□080C31	142
	30	342	1.4	36	276	1.7	91.250	GFL06-2M □□□080C31	134
	29	341	2.8	36	275	3.4	92.413	GFL07-3M □□□080C31	142
	27	367	1.5	33	296	1.8	99.361	GFL06-3M □□□080C31	142
	27	375	0.9	33	302	1.0	101.547	GFL05-3M □□□080C31	142
	26	384	2.8	32	310	3.4	104.127	GFL07-3M □□□080C31	142
	24	418	2.5	29	337	3.0	113.206	GFL07-3M □□□080C31	142
	23	430	1.2	29	347	1.5	116.571	GFL06-3M □□□080C31	142
	21	471	2.5	26	380	3.0	127.556	GFL07-3M □□□080C31	142
	21	485	1.2	25	391	1.5	131.323	GFL06-3M □□□080C31	142
	19	533	1.1	23	430	1.3	144.320	GFL06-3M □□□080C31	142
	19	544	2.1	23	439	2.5	147.347	GFL07-3M □□□080C31	142
	17	600	1.0	20	484	1.2	162.583	GFL06-3M □□□080C31	142
	16	613	2.0	20	495	2.4	166.025	GFL07-3M □□□080C31	142
	15	663	0.9	19	535	1.1	179.520	GFL06-3M □□□080C31	142
	15	676	1.8	18	546	2.2	183.285	GFL07-3M □□□080C31	142
	13	746	0.8	17	602	1.0	202.237	GFL06-3M □□□080C31	142
	13	762	1.6	16	615	2.0	206.519	GFL07-3M □□□080C31	142
	12	829	1.6	15	669	1.9	224.636	GFL07-3M □□□080C31	142
	12	830	2.9	15	670	3.5	224.778	GFL09-3M □□□080C31	142
	11	934	1.3	13	754	1.6	253.111	GFL07-3M □□□080C31	142
	11	935	2.9	13	755	3.5	253.321	GFL09-3M □□□080C31	142
	9.4	1073	1.3	11	866	1.5	290.706	GFL07-3M □□□080C31	142
	9.4	1074	2.5	11	867	2.9	290.889	GFL09-3M □□□080C31	142
	8.3	1209	1.0	10	976	1.2	327.556	GFL07-3M □□□080C31	142
	8.3	1210	2.5	10	977	2.9	327.827	GFL09-3M □□□080C31	142
	7.7	1302	1.1	9.4	1051	1.3	352.811	GFL07-3M □□□080C31	142
	7.7	1303	2.2	9.4	1052	2.6	353.033	GFL09-3M □□□080C31	142
	6.8	1467	0.9	8.4	1184	1.0	397.533	GFL07-3M □□□080C31	142
	6.8	1468	2.2	8.3	1185	2.6	397.863	GFL09-3M □□□080C31	142
	6.4	1566	1.7	7.8	1264	2.1	424.247	GFL09-3M □□□080C31	142
	5.3	1900	1.4	6.5	1534	1.7	514.881	GFL09-3M □□□080C31	142
	5.2	1927	3.1	6.4	1555	3.7	522.133	GFL11-3M □□□080C31	142
	4.9	2046	1.0	6.0	1652	1.2	554.470	GFL09-3M □□□080C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.1 \text{ kW}$

n_N	2720 r/min			3370 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	4.8	2076	2.6	5.9	1675	3.1	562.391	GFL11-3M □□□080C31	142
	4.4	2306	1.0	5.3	1861	1.2	624.879	GFL09-3M □□□080C31	142
	4.3	2339	2.5	5.2	1888	3.0	633.680	GFL11-3M □□□080C31	142
	3.9	2587	0.8	4.8	2088	1.0	700.875	GFL09-3M □□□080C31	142
	3.8	2624	2.0	4.7	2118	2.4	710.888	GFL11-3M □□□080C31	142
	3.4	2956	2.0	4.1	2386	2.4	801.000	GFL11-3M □□□080C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.1 \text{ kW}$

n _N	1390 r/min			1705 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	380	27	4.1	462	22	4.8	3.659	GFL04-2M □□□080C42	134
	304	34	4.5	370	27	5.3	4.571	GFL05-2M □□□080C42	134
	277	37	3.0	337	30	3.6	5.018	GFL04-2M □□□080C42	134
	238	43	3.6	290	35	4.2	5.833	GFL04-2M □□□080C42	134
	216	47	2.4	263	38	2.8	6.422	GFL04-2M □□□080C42	134
	198	52	2.2	241	42	2.6	7.025	GFL04-2M □□□080C42	134
	166	61	2.9	202	50	3.4	8.379	GFL04-2M □□□080C42	134
	149	68	2.4	181	56	2.8	9.333	GFL04-2M □□□080C42	134
	136	75	2.1	165	61	2.5	10.238	GFL04-2M □□□080C42	134
	121	84	2.1	147	69	2.5	11.491	GFL04-2M □□□080C42	134
	109	94	1.8	132	77	2.1	12.800	GFL04-2M □□□080C42	134
	109	94	3.0	132	77	3.6	12.800	GFL05-2M □□□080C42	134
	96	107	2.8	116	87	3.3	14.538	GFL05-2M □□□080C42	134
	95	108	1.7	115	88	2.0	14.706	GFL04-2M □□□080C42	134
	87	117	2.7	106	95	3.1	15.904	GFL05-2M □□□080C42	134
	86	118	1.5	105	96	1.8	16.087	GFL04-2M □□□080C42	134
	78	131	1.3	94	107	1.5	17.920	GFL04-2M □□□080C42	134
	78	131	2.4	94	107	2.8	17.920	GFL05-2M □□□080C42	134
	69	149	2.2	83	121	2.6	20.286	GFL05-2M □□□080C42	134
	68	150	1.2	82	123	1.4	20.519	GFL04-2M □□□080C42	134
	61	168	1.0	74	137	1.2	22.857	GFL04-2M □□□080C42	134
	61	168	1.9	74	137	2.2	22.857	GFL05-2M □□□080C42	134
	56	182	1.9	68	149	2.3	24.850	GFL05-2M □□□080C42	134
	55	184	1.0	67	150	1.2	25.136	GFL04-2M □□□080C42	134
	50	205	0.8	60	167	1.0	28.000	GFL04-2M □□□080C42	134
	50	205	1.5	60	167	1.9	28.000	GFL05-2M □□□080C42	134
	49	208	2.9	60	170	3.6	28.389	GFL06-2M □□□080C42	134
	43	237	1.5	52	193	1.8	32.344	GFL05-2M □□□080C42	134
	42	240	2.7	52	196	3.3	32.800	GFL06-2M □□□080C42	134
	38	267	1.2	46	218	1.5	36.444	GFL05-2M □□□080C42	134
	38	271	2.3	46	221	2.8	36.951	GFL06-2M □□□080C42	134
	35	291	3.1	43	237	3.8	39.642	GFL07-2M □□□080C42	134
	35	295	1.2	42	240	1.4	40.233	GFL05-2M □□□080C42	134
	34	299	2.2	41	244	2.7	40.800	GFL06-2M □□□080C42	134
	31	327	3.1	38	267	3.8	44.667	GFL07-2M □□□080C42	134
	31	332	1.0	37	271	1.2	45.333	GFL05-2M □□□080C42	134
	30	337	1.8	37	275	2.2	45.963	GFL06-2M □□□080C42	134
	27	382	2.9	33	311	3.5	52.067	GFL07-2M □□□080C42	134
	26	387	1.7	32	316	2.1	52.800	GFL06-2M □□□080C42	134
	24	430	2.9	29	351	3.5	58.667	GFL07-2M □□□080C42	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.1 \text{ kW}$

n _N f _N	1390 r/min			1705 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	23	436	1.4	28	356	1.7	59.481	GFL06-2M □□□080C42	134
	22	463	2.3	27	378	2.8	63.190	GFL07-2M □□□080C42	134
	22	470	1.2	26	383	1.5	64.080	GFL06-2M □□□080C42	134
	21	472	1.9	26	385	2.3	65.306	GFL07-3M □□□080C42	142
	21	478	1.0	26	390	1.3	66.213	GFL06-3M □□□080C42	142
	20	522	2.3	24	426	2.8	71.200	GFL07-2M □□□080C42	134
	19	520	1.0	24	424	1.2	72.000	GFL06-3M □□□080C42	142
	19	529	1.2	23	432	1.4	72.189	GFL06-2M □□□080C42	134
	19	523	1.7	23	427	2.0	72.452	GFL07-3M □□□080C42	142
	19	528	2.9	23	431	3.5	73.173	GFL09-3M □□□080C42	142
	17	586	1.4	21	477	1.7	79.875	GFL07-2M □□□080C42	134
	17	586	0.8	21	478	1.0	81.111	GFL06-3M □□□080C42	142
	17	590	1.7	21	481	2.0	81.636	GFL07-3M □□□080C42	142
	17	596	2.9	21	486	3.5	82.465	GFL09-3M □□□080C42	142
	15	660	1.4	19	538	1.7	90.000	GFL07-2M □□□080C42	134
	15	667	1.4	18	544	1.8	92.413	GFL07-3M □□□080C42	142
	15	674	2.5	18	550	3.1	93.333	GFL09-3M □□□080C42	142
	13	752	1.4	16	613	1.8	104.127	GFL07-3M □□□080C42	142
	13	760	2.5	16	619	3.1	105.185	GFL09-3M □□□080C42	142
	12	818	1.3	15	667	1.6	113.206	GFL07-3M □□□080C42	142
	12	826	2.2	15	673	2.7	114.333	GFL09-3M □□□080C42	142
	11	921	1.3	13	751	1.6	127.556	GFL07-3M □□□080C42	142
	11	931	2.2	13	759	2.7	128.852	GFL09-3M □□□080C42	142
	9.4	1064	1.1	12	868	1.3	147.347	GFL07-3M □□□080C42	142
	9.3	1075	1.9	11	876	2.3	148.815	GFL09-3M □□□080C42	142
	8.4	1199	1.0	10	978	1.3	166.025	GFL07-3M □□□080C42	142
	8.3	1211	1.9	10	987	2.3	167.712	GFL09-3M □□□080C42	142
	7.6	1320	3.1	9.3	1076	3.8	182.792	GFL11-3M □□□080C42	142
	7.6	1324	0.9	9.2	1079	1.1	183.285	GFL07-3M □□□080C42	142
	7.5	1337	1.7	9.1	1090	2.0	185.111	GFL09-3M □□□080C42	142
	6.8	1487	3.1	8.2	1213	3.8	205.963	GFL11-3M □□□080C42	142
	6.7	1491	0.8	8.2	1216	1.0	206.519	GFL07-3M □□□080C42	142
	6.7	1507	1.7	8.1	1228	2.0	208.617	GFL09-3M □□□080C42	142
	6.2	1622	0.8	7.5	1323	1.0	224.636	GFL07-3M □□□080C42	142
	6.2	1622	2.8	7.5	1323	3.4	224.636	GFL11-3M □□□080C42	142
	6.2	1623	1.5	7.5	1323	1.8	224.778	GFL09-3M □□□080C42	142
	5.5	1828	2.8	6.7	1490	3.4	253.111	GFL11-3M □□□080C42	142
	5.5	1829	1.5	6.7	1491	1.8	253.321	GFL09-3M □□□080C42	142
	5.2	1930	2.6	6.3	1574	3.2	267.259	GFL11-3M □□□080C42	142
	4.8	2101	1.3	5.8	1713	1.5	290.889	GFL09-3M □□□080C42	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.1 \text{ kW}$

n_N	1390 r/min				1705 r/min			i		
f_N	50 Hz				60 Hz					
	n_2 [r/min]	M_2 [Nm]	c		n_2 [r/min]	M_2 [Nm]	c			
	4.2	2366	2.3		5.2	1929	2.9	327.556	GFL11-3M □□□080C42	142
	4.2	2368	1.3		5.2	1930	1.5	327.827	GFL09-3M □□□080C42	142
	3.9	2550	1.1		4.8	2079	1.4	353.033	GFL09-3M □□□080C42	142
	3.9	2586	2.0		4.7	2108	2.5	358.077	GFL11-3M □□□080C42	142
	3.5	2873	1.1		4.3	2343	1.4	397.863	GFL09-3M □□□080C42	142
	3.5	2914	2.0		4.2	2376	2.5	403.467	GFL11-3M □□□080C42	142
	3.3	3064	0.9		4.0	2498	1.1	424.247	GFL09-3M □□□080C42	142
	3.2	3107	1.9		3.9	2533	2.3	430.222	GFL11-3M □□□080C42	142
	2.7	3771	1.6		3.2	3074	1.9	522.133	GFL11-3M □□□080C42	142
	2.5	4062	1.3		3.0	3311	1.6	562.391	GFL11-3M □□□080C42	142
	2.2	4576	1.3		2.7	3731	1.6	633.680	GFL11-3M □□□080C42	142
	2.0	5134	1.0		2.4	4186	1.3	710.888	GFL11-3M □□□080C42	142
	1.7	5785	1.0		2.1	4716	1.2	801.000	GFL11-3M □□□080C42	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.5 \text{ kW}$

n _N f _N	2710 r/min			3310 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	741	19	4.8	905	15	5.5	3.659	GFL04-2M □□□090C11	138
	593	23	6.0	724	19	6.8	4.571	GFL05-2M □□□090C11	134
	540	26	3.5	660	21	4.1	5.018	GFL04-2M □□□090C11	138
	465	30	4.2	567	24	4.8	5.833	GFL04-2M □□□090C11	138
	422	33	2.8	515	27	3.2	6.422	GFL04-2M □□□090C11	138
	386	36	2.6	471	29	2.9	7.025	GFL04-2M □□□090C11	138
	323	43	3.4	395	35	3.9	8.379	GFL04-2M □□□090C11	138
	290	48	2.8	355	39	3.2	9.333	GFL04-2M □□□090C11	138
	265	53	2.5	323	43	2.8	10.238	GFL04-2M □□□090C11	138
	236	59	2.5	288	48	2.9	11.491	GFL04-2M □□□090C11	138
	212	66	2.1	259	54	2.4	12.800	GFL04-2M □□□090C11	138
	184	75	2.0	225	62	2.3	14.706	GFL04-2M □□□090C11	138
	170	82	3.1	208	67	3.6	15.904	GFL05-2M □□□090C11	134
	169	82	1.8	206	68	2.1	16.087	GFL04-2M □□□090C11	138
	151	92	1.5	185	75	1.7	17.920	GFL04-2M □□□090C11	138
	151	92	2.8	185	75	3.2	17.920	GFL05-2M □□□090C11	134
	134	104	2.6	163	85	3.0	20.286	GFL05-2M □□□090C11	134
	132	105	1.4	161	86	1.6	20.519	GFL04-2M □□□090C11	138
	119	117	1.2	145	96	1.3	22.857	GFL04-2M □□□090C11	138
	119	117	2.2	145	96	2.5	22.857	GFL05-2M □□□090C11	134
	109	127	2.5	133	104	2.9	24.850	GFL05-2M □□□090C11	134
	108	129	1.3	132	106	1.5	25.136	GFL04-2M □□□090C11	138
	97	144	1.1	118	118	1.2	28.000	GFL04-2M □□□090C11	138
	97	144	2.0	118	118	2.3	28.000	GFL05-2M □□□090C11	134
	84	166	1.9	102	136	2.2	32.344	GFL05-2M □□□090C11	134
	74	187	1.6	91	153	1.8	36.444	GFL05-2M □□□090C11	134
	73	189	3.0	90	155	3.4	36.951	GFL06-2M □□□090C11	134
	67	206	1.6	82	169	1.8	40.233	GFL05-2M □□□090C11	134
	66	209	2.9	81	171	3.3	40.800	GFL06-2M □□□090C11	134
	60	232	1.3	73	190	1.5	45.333	GFL05-2M □□□090C11	134
	59	236	2.4	72	193	2.8	45.963	GFL06-2M □□□090C11	134
	51	271	2.3	63	222	2.6	52.800	GFL06-2M □□□090C11	134
	46	305	1.9	56	250	2.1	59.481	GFL06-2M □□□090C11	134
	42	329	1.6	52	269	1.9	64.080	GFL06-2M □□□090C11	134
	42	330	2.7	51	270	3.2	65.306	GFL07-3M □□□090C11	142
	41	334	1.5	50	274	1.8	66.213	GFL06-3M □□□090C11	142
	38	364	1.4	46	298	1.6	72.000	GFL06-3M □□□090C11	142
	38	370	1.7	46	303	2.0	72.189	GFL06-2M □□□090C11	134
	37	366	2.4	46	300	2.8	72.452	GFL07-3M □□□090C11	142
	34	410	2.1	41	335	2.5	79.875	GFL07-2M □□□090C11	134

GFL shaft-mounted helical gearboxes

Technical data



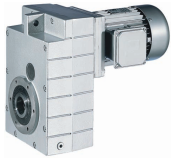
Selection tables

50 Hz, 60 Hz: $P_N = 1.5 \text{ kW}$

n _N f _N	2710 r/min			3310 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	33	410	1.2	41	335	1.4	81.111	GFL06-3M □□□090C11	142
	33	412	2.4	41	338	2.8	81.636	GFL07-3M □□□090C11	142
	31	446	1.1	38	365	1.3	88.200	GFL06-3M □□□090C11	142
	30	462	2.0	37	378	2.4	90.000	GFL07-2M □□□090C11	134
	29	467	2.1	36	382	2.4	92.413	GFL07-3M □□□090C11	142
	27	502	1.1	33	411	1.3	99.361	GFL06-3M □□□090C11	142
	26	526	2.1	32	431	2.4	104.127	GFL07-3M □□□090C11	142
	24	572	1.8	29	468	2.1	113.206	GFL07-3M □□□090C11	142
	24	578	3.2	29	473	3.8	114.333	GFL09-3M □□□090C11	142
	21	644	1.8	26	528	2.1	127.556	GFL07-3M □□□090C11	142
	21	651	3.2	26	533	3.8	128.852	GFL09-3M □□□090C11	142
	21	663	0.9	25	543	1.1	131.323	GFL06-3M □□□090C11	142
	18	744	1.5	23	609	1.8	147.347	GFL07-3M □□□090C11	142
	18	752	2.7	22	615	3.2	148.815	GFL09-3M □□□090C11	142
	16	839	1.5	20	687	1.8	166.025	GFL07-3M □□□090C11	142
	16	847	2.7	20	694	3.2	167.712	GFL09-3M □□□090C11	142
	15	926	1.3	18	758	1.6	183.285	GFL07-3M □□□090C11	142
	15	935	2.4	18	766	2.8	185.111	GFL09-3M □□□090C11	142
	13	1043	1.2	16	854	1.4	206.519	GFL07-3M □□□090C11	142
	13	1054	2.4	16	863	2.8	208.617	GFL09-3M □□□090C11	142
	12	1135	1.2	15	929	1.4	224.636	GFL07-3M □□□090C11	142
	12	1135	2.1	15	930	2.5	224.778	GFL09-3M □□□090C11	142
	11	1279	1.0	13	1047	1.2	253.111	GFL07-3M □□□090C11	142
	11	1280	2.1	13	1048	2.5	253.321	GFL09-3M □□□090C11	142
	9.3	1469	1.8	11	1203	2.1	290.889	GFL09-3M □□□090C11	142
	8.3	1656	1.8	10	1356	2.1	327.827	GFL09-3M □□□090C11	142
	7.7	1783	1.6	9.4	1460	1.9	353.033	GFL09-3M □□□090C11	142
	7.6	1809	2.9	9.2	1481	3.5	358.077	GFL11-3M □□□090C11	142
	6.8	2010	1.6	8.3	1645	1.9	397.863	GFL09-3M □□□090C11	142
	6.7	2038	2.9	8.2	1669	3.5	403.467	GFL11-3M □□□090C11	142
	6.4	2143	1.3	7.8	1755	1.5	424.247	GFL09-3M □□□090C11	142
	6.3	2173	2.7	7.7	1779	3.2	430.222	GFL11-3M □□□090C11	142
	5.3	2601	1.0	6.4	2129	1.2	514.881	GFL09-3M □□□090C11	142
	5.2	2637	2.3	6.3	2159	2.7	522.133	GFL11-3M □□□090C11	142
	4.8	2841	1.9	5.9	2326	2.2	562.391	GFL11-3M □□□090C11	142
	4.8	2841	3.2	5.9	2326	3.8	562.391	GFL14-3M □□□090C11	142
	4.3	3201	1.8	5.2	2621	2.2	633.680	GFL11-3M □□□090C11	142
	4.3	3201	3.1	5.2	2621	3.6	633.680	GFL14-3M □□□090C11	142
	3.8	3591	1.5	4.7	2940	1.8	710.888	GFL11-3M □□□090C11	142
	3.8	3591	2.5	4.7	2940	3.0	710.888	GFL14-3M □□□090C11	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.5 \text{ kW}$

n _N	2710 r/min			3310 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	3.4	4046	1.4	4.1	3 313	1.7	801.000	GFL11-3M □□□090C11	142
	3.4	4046	2.4	4.1	3 313	2.9	801.000	GFL14-3M □□□090C11	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.5 \text{ kW}$

n _N f _N	1410 r/min			1720 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	381	36	3.0	463	30	3.5	3.659	GFL04-2M □□□090C32	138
	305	45	3.8	371	37	4.4	4.571	GFL05-2M □□□090C32	134
	278	49	2.2	338	41	2.6	5.018	GFL04-2M □□□090C32	138
	239	57	2.7	291	47	3.1	5.833	GFL04-2M □□□090C32	138
	218	63	2.7	265	52	3.2	6.400	GFL05-2M □□□090C32	134
	217	63	1.8	264	52	2.1	6.422	GFL04-2M □□□090C32	138
	199	69	1.6	241	57	1.9	7.025	GFL04-2M □□□090C32	138
	167	83	2.2	202	68	2.5	8.379	GFL04-2M □□□090C32	138
	155	89	3.0	188	73	3.5	9.010	GFL05-2M □□□090C32	134
	150	92	1.8	182	75	2.1	9.333	GFL04-2M □□□090C32	138
	140	98	2.8	170	80	3.3	9.946	GFL05-2M □□□090C32	134
	136	101	1.6	166	83	1.8	10.238	GFL04-2M □□□090C32	138
	123	112	2.5	149	92	2.9	11.360	GFL05-2M □□□090C32	134
	121	113	1.6	148	93	1.9	11.491	GFL04-2M □□□090C32	138
	109	126	1.3	132	103	1.5	12.800	GFL04-2M □□□090C32	138
	109	126	2.3	132	103	2.6	12.800	GFL05-2M □□□090C32	134
	96	143	2.1	117	117	2.5	14.538	GFL05-2M □□□090C32	134
	95	145	1.3	115	119	1.5	14.706	GFL04-2M □□□090C32	138
	88	157	2.0	107	129	2.3	15.904	GFL05-2M □□□090C32	134
	87	159	1.1	105	130	1.3	16.087	GFL04-2M □□□090C32	138
	78	177	0.9	95	145	1.1	17.920	GFL04-2M □□□090C32	138
	78	177	1.8	95	145	2.1	17.920	GFL05-2M □□□090C32	134
	69	200	1.7	84	164	1.9	20.286	GFL05-2M □□□090C32	134
	68	202	0.9	83	166	1.1	20.519	GFL04-2M □□□090C32	138
	68	203	3.2	82	166	3.7	20.571	GFL06-2M □□□090C32	134
	61	225	1.4	74	185	1.6	22.857	GFL05-2M □□□090C32	134
	60	228	2.6	73	187	3.1	23.175	GFL06-2M □□□090C32	134
	56	245	1.4	68	201	1.7	24.850	GFL05-2M □□□090C32	134
	55	248	2.6	67	204	3.2	25.200	GFL06-2M □□□090C32	134
	50	276	1.1	61	226	1.4	28.000	GFL05-2M □□□090C32	134
	49	280	2.2	60	229	2.6	28.389	GFL06-2M □□□090C32	134
	43	319	1.1	52	261	1.3	32.344	GFL05-2M □□□090C32	134
	43	323	2.0	52	265	2.4	32.800	GFL06-2M □□□090C32	134
	38	359	0.9	47	294	1.1	36.444	GFL05-2M □□□090C32	134
	38	364	1.7	46	299	2.0	36.951	GFL06-2M □□□090C32	134
	35	391	2.9	43	320	3.5	39.642	GFL07-2M □□□090C32	134
	35	397	0.9	42	325	1.1	40.233	GFL05-2M □□□090C32	134
	34	402	1.6	42	330	2.0	40.800	GFL06-2M □□□090C32	134
	31	440	2.9	38	361	3.5	44.667	GFL07-2M □□□090C32	134
	30	453	1.4	37	371	1.6	45.963	GFL06-2M □□□090C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.5 \text{ kW}$

n_N	1410 r/min			1720 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	27	506	2.9	33	415	3.5	51.333	GFL09-2M □□□090C32	134
	27	513	2.4	33	421	2.9	52.067	GFL07-2M □□□090C32	134
	26	520	1.3	32	427	1.5	52.800	GFL06-2M □□□090C32	134
	24	570	2.9	29	467	3.5	57.852	GFL09-2M □□□090C32	134
	24	578	2.2	29	474	2.7	58.667	GFL07-2M □□□090C32	134
	24	586	1.0	29	481	1.3	59.481	GFL06-2M □□□090C32	134
	22	614	2.5	27	503	3.1	62.300	GFL09-2M □□□090C32	134
	22	623	2.0	27	511	2.4	63.190	GFL07-2M □□□090C32	134
	22	615	2.5	27	504	3.0	63.326	GFL09-3M □□□090C32	142
	22	632	0.9	27	518	1.1	64.080	GFL06-2M □□□090C32	134
	21	634	1.4	26	520	1.7	65.306	GFL07-3M □□□090C32	142
	20	692	2.5	24	567	3.1	70.211	GFL09-2M □□□090C32	134
	20	702	1.8	24	575	2.2	71.200	GFL07-2M □□□090C32	134
	19	712	0.9	24	583	1.1	72.189	GFL06-2M □□□090C32	134
	19	703	1.2	23	577	1.5	72.452	GFL07-3M □□□090C32	142
	19	710	2.1	23	582	2.6	73.173	GFL09-3M □□□090C32	142
	18	776	1.9	22	636	2.4	78.750	GFL09-2M □□□090C32	134
	18	787	1.1	21	645	1.3	79.875	GFL07-2M □□□090C32	134
	17	793	1.2	21	650	1.5	81.636	GFL07-3M □□□090C32	142
	17	801	2.1	21	656	2.6	82.465	GFL09-3M □□□090C32	142
	16	875	1.9	19	717	2.4	88.750	GFL09-2M □□□090C32	134
	16	887	1.0	19	727	1.3	90.000	GFL07-2M □□□090C32	134
	15	897	1.1	18	735	1.3	92.413	GFL07-3M □□□090C32	142
	15	906	1.9	18	743	2.3	93.333	GFL09-3M □□□090C32	142
	13	1011	1.1	16	829	1.3	104.127	GFL07-3M □□□090C32	142
	13	1021	1.9	16	837	2.3	105.185	GFL09-3M □□□090C32	142
	12	1099	0.9	15	901	1.2	113.206	GFL07-3M □□□090C32	142
	12	1110	1.7	15	910	2.0	114.333	GFL09-3M □□□090C32	142
	11	1238	0.9	13	1015	1.2	127.556	GFL07-3M □□□090C32	142
	11	1251	1.7	13	1025	2.0	128.852	GFL09-3M □□□090C32	142
	9.4	1445	1.4	11	1184	1.7	148.815	GFL09-3M □□□090C32	142
	9.4	1448	2.7	11	1187	3.3	149.144	GFL11-3M □□□090C32	142
	8.3	1628	1.4	10	1335	1.7	167.712	GFL09-3M □□□090C32	142
	8.3	1632	2.7	10	1337	3.3	168.049	GFL11-3M □□□090C32	142
	7.6	1775	2.4	9.3	1455	2.9	182.792	GFL11-3M □□□090C32	142
	7.5	1797	1.2	9.2	1473	1.5	185.111	GFL09-3M □□□090C32	142
	6.9	1962	2.9	8.4	1608	3.5	202.074	GFL14-3M □□□090C32	142
	6.8	2000	2.4	8.2	1639	2.9	205.963	GFL11-3M □□□090C32	142
	6.7	2025	1.2	8.1	1660	1.5	208.617	GFL09-3M □□□090C32	142
	6.2	2181	2.1	7.6	1788	2.5	224.636	GFL11-3M □□□090C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 1.5 \text{ kW}$

n _N	1410 r/min			1720 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	6.2	2182	1.1	7.5	1789	1.3	224.778	GFL09-3M □□□090C32	142
	5.5	2457	2.1	6.7	2014	2.5	253.111	GFL11-3M □□□090C32	142
	5.5	2459	1.1	6.7	2016	1.3	253.321	GFL09-3M □□□090C32	142
	5.2	2595	2.0	6.3	2127	2.4	267.259	GFL11-3M □□□090C32	142
	4.8	2824	0.9	5.8	2315	1.1	290.889	GFL09-3M □□□090C32	142
	4.3	3180	1.7	5.2	2607	2.1	327.556	GFL11-3M □□□090C32	142
	4.3	3183	0.9	5.2	2609	1.1	327.827	GFL09-3M □□□090C32	142
	4.0	3425	2.5	4.8	2808	3.1	352.811	GFL14-3M □□□090C32	142
	4.0	3427	0.8	4.8	2810	1.0	353.033	GFL09-3M □□□090C32	142
	3.9	3476	1.5	4.7	2850	1.9	358.077	GFL11-3M □□□090C32	142
	3.5	3859	2.5	4.3	3164	3.1	397.533	GFL14-3M □□□090C32	142
	3.5	3863	0.8	4.3	3166	1.0	397.863	GFL09-3M □□□090C32	142
	3.5	3917	1.5	4.2	3211	1.9	403.467	GFL11-3M □□□090C32	142
	3.2	4177	1.4	3.9	3424	1.7	430.222	GFL11-3M □□□090C32	142
	3.2	4177	2.5	3.9	3424	3.1	430.222	GFL14-3M □□□090C32	142
	2.7	5069	1.2	3.3	4156	1.4	522.133	GFL11-3M □□□090C32	142
	2.7	5069	2.1	3.3	4156	2.5	522.133	GFL14-3M □□□090C32	142
	2.5	5460	1.0	3.0	4476	1.2	562.391	GFL11-3M □□□090C32	142
	2.5	5460	1.7	3.0	4476	2.0	562.391	GFL14-3M □□□090C32	142
	2.2	6152	0.9	2.7	5043	1.2	633.680	GFL11-3M □□□090C32	142
	2.2	6152	1.6	2.7	5043	1.9	633.680	GFL14-3M □□□090C32	142
	2.0	6902	1.3	2.4	5658	1.6	710.888	GFL14-3M □□□090C32	142
	1.7	7777	1.3	2.1	6375	1.5	801.000	GFL14-3M □□□090C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 2.2 \text{ kW}$

n _N f _N	2730 r/min			3320 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	746	27	3.3	910	22	3.7	3.659	GFL04-2M □□□090C31	138
	597	34	4.1	728	28	4.7	4.571	GFL05-2M □□□090C31	134
	544	37	2.4	664	31	2.8	5.018	GFL04-2M □□□090C31	138
	468	44	2.9	571	36	3.3	5.833	GFL04-2M □□□090C31	138
	427	48	3.0	520	39	3.4	6.400	GFL05-2M □□□090C31	134
	425	48	1.9	519	39	2.2	6.422	GFL04-2M □□□090C31	138
	389	52	1.8	474	43	2.0	7.025	GFL04-2M □□□090C31	138
	326	63	2.3	397	51	2.7	8.379	GFL04-2M □□□090C31	138
	303	67	3.2	370	55	3.7	9.010	GFL05-2M □□□090C31	134
	293	70	1.9	357	57	2.2	9.333	GFL04-2M □□□090C31	138
	275	74	3.0	335	61	3.5	9.946	GFL05-2M □□□090C31	134
	267	76	1.7	325	63	1.9	10.238	GFL04-2M □□□090C31	138
	240	85	2.7	293	70	3.1	11.360	GFL05-2M □□□090C31	134
	238	86	1.7	290	71	2.0	11.491	GFL04-2M □□□090C31	138
	213	96	1.4	260	79	1.6	12.800	GFL04-2M □□□090C31	138
	213	96	2.4	260	79	2.8	12.800	GFL05-2M □□□090C31	134
	188	109	2.3	229	89	2.6	14.538	GFL05-2M □□□090C31	134
	186	110	1.4	226	90	1.5	14.706	GFL04-2M □□□090C31	138
	172	119	2.1	209	98	2.4	15.904	GFL05-2M □□□090C31	134
	170	120	1.2	207	99	1.4	16.087	GFL04-2M □□□090C31	138
	152	134	1.0	186	110	1.2	17.920	GFL04-2M □□□090C31	138
	152	134	1.9	186	110	2.2	17.920	GFL05-2M □□□090C31	134
	135	151	1.8	164	125	2.1	20.286	GFL05-2M □□□090C31	134
	133	153	1.0	162	126	1.1	20.519	GFL04-2M □□□090C31	138
	119	171	0.8	145	140	0.9	22.857	GFL04-2M □□□090C31	138
	119	171	1.5	146	140	1.7	22.857	GFL05-2M □□□090C31	134
	118	173	2.9	144	142	3.3	23.175	GFL06-2M □□□090C31	134
	110	186	1.7	134	153	2.0	24.850	GFL05-2M □□□090C31	134
	109	188	0.9	133	154	1.0	25.136	GFL04-2M □□□090C31	138
	108	188	3.2	132	155	3.7	25.200	GFL06-2M □□□090C31	134
	98	209	1.4	119	172	1.6	28.000	GFL05-2M □□□090C31	134
	96	212	2.7	117	174	3.0	28.389	GFL06-2M □□□090C31	134
	84	241	1.3	103	199	1.5	32.344	GFL05-2M □□□090C31	134
	83	245	2.4	102	201	2.8	32.800	GFL06-2M □□□090C31	134
	75	272	1.1	91	224	1.2	36.444	GFL05-2M □□□090C31	134
	74	276	2.1	90	227	2.3	36.951	GFL06-2M □□□090C31	134
	68	300	1.1	83	247	1.2	40.233	GFL05-2M □□□090C31	134
	67	305	2.0	82	250	2.3	40.800	GFL06-2M □□□090C31	134
	60	338	0.9	74	278	1.0	45.333	GFL05-2M □□□090C31	134
	59	343	1.7	72	282	1.9	45.963	GFL06-2M □□□090C31	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 2.2 \text{ kW}$

n _N f _N	2730 r/min			3320 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	52	389	2.9	64	320	3.3	52.067	GFL07-2M □□□090C31	134
	52	394	1.6	63	324	1.8	52.800	GFL06-2M □□□090C31	134
	47	438	2.7	57	360	3.1	58.667	GFL07-2M □□□090C31	134
	46	444	1.3	56	365	1.5	59.481	GFL06-2M □□□090C31	134
	44	465	3.1	54	382	3.5	62.300	GFL09-2M □□□090C31	134
	43	472	2.4	53	388	2.8	63.190	GFL07-2M □□□090C31	134
	43	466	3.0	53	383	3.4	63.326	GFL09-3M □□□090C31	142
	43	478	1.1	52	393	1.3	64.080	GFL06-2M □□□090C31	134
	42	480	1.8	51	395	2.2	65.306	GFL07-3M □□□090C31	142
	41	487	1.0	50	400	1.2	66.213	GFL06-3M □□□090C31	142
	38	532	2.4	47	437	2.8	71.200	GFL07-2M □□□090C31	134
	38	530	0.9	46	435	1.1	72.000	GFL06-3M □□□090C31	142
	38	539	1.1	46	443	1.3	72.189	GFL06-2M □□□090C31	134
	38	533	1.6	46	438	1.9	72.452	GFL07-3M □□□090C31	142
	37	538	2.8	46	443	3.3	73.173	GFL09-3M □□□090C31	142
	35	588	2.6	42	483	3.0	78.750	GFL09-2M □□□090C31	134
	34	596	1.4	42	490	1.7	79.875	GFL07-2M □□□090C31	134
	34	597	0.8	41	491	1.0	81.111	GFL06-3M □□□090C31	142
	33	600	1.6	41	494	1.9	81.636	GFL07-3M □□□090C31	142
	33	606	2.8	40	499	3.3	82.465	GFL09-3M □□□090C31	142
	31	663	2.6	38	545	3.0	88.750	GFL09-2M □□□090C31	134
	30	672	1.4	37	553	1.6	90.000	GFL07-2M □□□090C31	134
	30	680	1.4	36	559	1.7	92.413	GFL07-3M □□□090C31	142
	29	686	2.5	36	564	2.9	93.333	GFL09-3M □□□090C31	142
	26	766	1.4	32	630	1.7	104.127	GFL07-3M □□□090C31	142
	26	774	2.5	32	636	2.9	105.185	GFL09-3M □□□090C31	142
	24	833	1.2	29	685	1.5	113.206	GFL07-3M □□□090C31	142
	24	841	2.2	29	691	2.6	114.333	GFL09-3M □□□090C31	142
	21	938	1.2	26	771	1.5	127.556	GFL07-3M □□□090C31	142
	21	948	2.2	26	779	2.6	128.852	GFL09-3M □□□090C31	142
	19	1084	1.1	23	891	1.2	147.347	GFL07-3M □□□090C31	142
	18	1094	1.9	22	900	2.2	148.815	GFL09-3M □□□090C31	142
	16	1221	1.0	20	1004	1.2	166.025	GFL07-3M □□□090C31	142
	16	1233	1.9	20	1014	2.2	167.712	GFL09-3M □□□090C31	142
	15	1344	3.1	18	1105	3.7	182.792	GFL11-3M □□□090C31	142
	15	1348	0.9	18	1108	1.1	183.285	GFL07-3M □□□090C31	142
	15	1361	1.6	18	1119	1.9	185.111	GFL09-3M □□□090C31	142
	13	1515	3.1	16	1246	3.7	205.963	GFL11-3M □□□090C31	142
	13	1519	0.8	16	1249	1.0	206.519	GFL07-3M □□□090C31	142
	13	1534	1.6	16	1262	1.9	208.617	GFL09-3M □□□090C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 2.2 \text{ kW}$

n_N	2730 r/min				3320 r/min			i		
f_N	50 Hz				60 Hz					
	n_2 [r/min]	M_2 [Nm]	c		n_2 [r/min]	M_2 [Nm]	c			
	12	1652	0.8		15	1358	1.0	224.636	GFL07-3M □□□090C31	142
	12	1652	2.7		15	1358	3.2	224.636	GFL11-3M □□□090C31	142
	12	1653	1.5		15	1359	1.7	224.778	GFL09-3M □□□090C31	142
	11	1861	2.7		13	1531	3.2	253.111	GFL11-3M □□□090C31	142
	11	1863	1.5		13	1532	1.7	253.321	GFL09-3M □□□090C31	142
	10	1965	2.6		13	1616	3.1	267.259	GFL11-3M □□□090C31	142
	9.4	2139	1.2		11	1759	1.5	290.889	GFL09-3M □□□090C31	142
	8.3	2409	2.3		10	1981	2.7	327.556	GFL11-3M □□□090C31	142
	8.3	2411	1.2		10	1982	1.5	327.827	GFL09-3M □□□090C31	142
	7.7	2596	1.1		9.4	2135	1.3	353.033	GFL09-3M □□□090C31	142
	7.6	2633	2.0		9.3	2165	2.4	358.077	GFL11-3M □□□090C31	142
	6.9	2926	1.1		8.4	2406	1.3	397.863	GFL09-3M □□□090C31	142
	6.8	2967	2.0		8.3	2440	2.4	403.467	GFL11-3M □□□090C31	142
	6.4	3120	0.9		7.9	2566	1.0	424.247	GFL09-3M □□□090C31	142
	6.4	3164	1.9		7.7	2602	2.2	430.222	GFL11-3M □□□090C31	142
	5.2	3840	1.5		6.4	3158	1.8	522.133	GFL11-3M □□□090C31	142
	5.2	3840	2.8		6.4	3158	3.2	522.133	GFL14-3M □□□090C31	142
	4.9	4136	1.3		5.9	3401	1.5	562.391	GFL11-3M □□□090C31	142
	4.9	4136	2.2		5.9	3401	2.6	562.391	GFL14-3M □□□090C31	142
	4.3	4660	1.3		5.3	3832	1.5	633.680	GFL11-3M □□□090C31	142
	4.3	4660	2.1		5.3	3832	2.5	633.680	GFL14-3M □□□090C31	142
	3.8	5228	1.0		4.7	4299	1.2	710.888	GFL11-3M □□□090C31	142
	3.8	5228	1.7		4.7	4299	2.0	710.888	GFL14-3M □□□090C31	142
	3.4	5891	1.0		4.2	4844	1.2	801.000	GFL11-3M □□□090C31	142
	3.4	5891	1.7		4.2	4844	2.0	801.000	GFL14-3M □□□090C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 2.2 \text{ kW}$

n _N f _N	1440 r/min			1745 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	432	47	3.5	522	39	4.1	3.333	GFL05-2M □□□100C12	134
	315	65	2.6	381	53	3.0	4.571	GFL05-2M □□□100C12	134
	281	73	3.1	339	60	3.5	5.133	GFL05-2M □□□100C12	134
	254	80	2.9	307	66	3.3	5.667	GFL05-2M □□□100C12	134
	225	91	1.9	272	75	2.2	6.400	GFL05-2M □□□100C12	134
	205	100	2.5	247	82	2.9	7.040	GFL05-2M □□□100C12	134
	185	110	2.3	224	91	2.7	7.771	GFL05-2M □□□100C12	134
	160	128	2.1	193	105	2.4	9.010	GFL05-2M □□□100C12	134
	145	141	2.0	175	116	2.2	9.946	GFL05-2M □□□100C12	134
	143	143	3.2	172	118	3.7	10.092	GFL06-2M □□□100C12	134
	127	161	1.7	153	133	2.0	11.360	GFL05-2M □□□100C12	134
	113	181	1.6	136	150	1.8	12.800	GFL05-2M □□□100C12	134
	111	184	3.2	134	152	3.7	12.978	GFL06-2M □□□100C12	134
	99	206	1.5	120	170	1.7	14.538	GFL05-2M □□□100C12	134
	98	209	3.1	118	172	3.5	14.743	GFL06-2M □□□100C12	134
	91	225	1.4	109	186	1.6	15.904	GFL05-2M □□□100C12	134
	89	228	2.8	108	188	3.2	16.128	GFL06-2M □□□100C12	134
	80	254	1.2	97	209	1.4	17.920	GFL05-2M □□□100C12	134
	79	257	2.3	96	212	2.7	18.169	GFL06-2M □□□100C12	134
	71	287	1.2	86	237	1.3	20.286	GFL05-2M □□□100C12	134
	70	291	2.2	85	240	2.6	20.571	GFL06-2M □□□100C12	134
	63	324	1.0	76	267	1.1	22.857	GFL05-2M □□□100C12	134
	62	328	1.8	75	271	2.1	23.175	GFL06-2M □□□100C12	134
	58	352	1.0	70	290	1.2	24.850	GFL05-2M □□□100C12	134
	57	357	1.8	69	294	2.2	25.200	GFL06-2M □□□100C12	134
	51	396	3.1	62	327	3.8	28.000	GFL07-2M □□□100C12	134
	51	402	1.5	61	332	1.8	28.389	GFL06-2M □□□100C12	134
	45	458	3.0	54	378	3.6	32.344	GFL07-2M □□□100C12	134
	44	464	1.4	53	383	1.7	32.800	GFL06-2M □□□100C12	134
	40	516	2.4	48	426	2.9	36.444	GFL07-2M □□□100C12	134
	39	523	1.2	47	432	1.4	36.951	GFL06-2M □□□100C12	134
	36	561	2.5	44	463	3.0	39.642	GFL07-2M □□□100C12	134
	35	578	1.1	43	477	1.4	40.800	GFL06-2M □□□100C12	134
	32	632	2.0	39	522	2.4	44.667	GFL07-2M □□□100C12	134
	31	651	0.9	38	537	1.1	45.963	GFL06-2M □□□100C12	134
	28	727	2.8	34	600	3.4	51.333	GFL09-2M □□□100C12	134
	28	737	1.8	33	608	2.2	52.067	GFL07-2M □□□100C12	134
	25	819	2.8	30	676	3.4	57.852	GFL09-2M □□□100C12	134
	25	830	1.5	30	685	1.9	58.667	GFL07-2M □□□100C12	134
	23	882	2.3	28	728	2.8	62.300	GFL09-2M □□□100C12	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 2.2 \text{ kW}$

n _N f _N	1440 r/min			1745 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	23	894	1.4	28	738	1.7	63.190	GFL07-2M □□□100C12	134
	23	894	2.9	28	738	3.5	63.190	GFL11-2M □□□100C12	134
	23	883	1.7	28	729	2.1	63.326	GFL09-3M □□□100C12	142
	22	911	1.0	27	751	1.2	65.306	GFL07-3M □□□100C12	142
	22	911	3.2	27	751	3.8	65.306	GFL11-3M □□□100C12	142
	21	994	2.3	25	820	2.8	70.211	GFL09-2M □□□100C12	134
	20	1008	1.3	24	832	1.5	71.200	GFL07-2M □□□100C12	134
	20	1008	2.9	24	832	3.5	71.200	GFL11-2M □□□100C12	134
	20	1010	0.9	24	834	1.0	72.452	GFL07-3M □□□100C12	142
	20	1020	1.5	24	842	1.8	73.173	GFL09-3M □□□100C12	142
	20	1022	2.8	24	844	3.4	73.335	GFL11-3M □□□100C12	142
	18	1115	1.5	22	920	1.8	78.750	GFL09-2M □□□100C12	134
	18	1131	2.3	22	933	2.8	79.875	GFL11-2M □□□100C12	134
	18	1138	0.9	21	939	1.0	81.636	GFL07-3M □□□100C12	142
	18	1150	1.5	21	949	1.8	82.465	GFL09-3M □□□100C12	142
	17	1152	2.8	21	951	3.4	82.631	GFL11-3M □□□100C12	142
	16	1256	1.4	20	1037	1.7	88.750	GFL09-2M □□□100C12	134
	16	1274	2.3	19	1051	2.8	90.000	GFL11-2M □□□100C12	134
	15	1301	1.3	19	1074	1.6	93.333	GFL09-3M □□□100C12	142
	15	1304	2.5	19	1076	3.0	93.540	GFL11-3M □□□100C12	142
	14	1467	1.3	17	1210	1.6	105.185	GFL09-3M □□□100C12	142
	14	1469	2.5	17	1213	3.0	105.397	GFL11-3M □□□100C12	142
	13	1594	1.2	15	1315	1.4	114.333	GFL09-3M □□□100C12	142
	13	1598	2.2	15	1318	2.7	114.586	GFL11-3M □□□100C12	142
	11	1797	1.2	14	1483	1.4	128.852	GFL09-3M □□□100C12	142
	11	1800	2.2	14	1485	2.7	129.111	GFL11-3M □□□100C12	142
	9.7	2075	1.0	12	1712	1.2	148.815	GFL09-3M □□□100C12	142
	9.7	2079	1.9	12	1716	2.3	149.144	GFL11-3M □□□100C12	142
	8.6	2338	1.0	10	1930	1.2	167.712	GFL09-3M □□□100C12	142
	8.6	2343	1.9	10	1934	2.3	168.049	GFL11-3M □□□100C12	142
	7.9	2549	1.7	9.5	2103	2.0	182.792	GFL11-3M □□□100C12	142
	7.8	2581	0.9	9.4	2130	1.0	185.111	GFL09-3M □□□100C12	142
	7.1	2817	2.8	8.6	2325	3.4	202.074	GFL14-3M □□□100C12	142
	7.0	2872	1.7	8.5	2370	2.0	205.963	GFL11-3M □□□100C12	142
	6.9	2909	0.9	8.3	2400	1.0	208.617	GFL09-3M □□□100C12	142
	6.4	3132	1.4	7.8	2585	1.8	224.636	GFL11-3M □□□100C12	142
	6.4	3132	2.8	7.8	2585	3.4	224.636	GFL14-3M □□□100C12	142
	5.7	3529	1.4	6.9	2912	1.8	253.111	GFL11-3M □□□100C12	142
	5.7	3529	2.8	6.9	2912	3.4	253.111	GFL14-3M □□□100C12	142
	5.4	3726	1.4	6.5	3075	1.7	267.259	GFL11-3M □□□100C12	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 2.2 \text{ kW}$

n_N	1440 r/min			1745 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	5.3	3817	2.6	6.4	3150	3.1	273.778	GFL14-3M □□□100C12	142
	4.4	4567	1.2	5.3	3769	1.5	327.556	GFL11-3M □□□100C12	142
	4.3	4635	2.3	5.2	3825	2.8	332.444	GFL14-3M □□□100C12	142
	4.1	4919	2.1	4.9	4059	2.6	352.811	GFL14-3M □□□100C12	142
	4.0	4992	1.1	4.9	4120	1.3	358.077	GFL11-3M □□□100C12	142
	3.6	5543	2.1	4.4	4574	2.5	397.533	GFL14-3M □□□100C12	142
	3.6	5625	1.1	4.3	4642	1.3	403.467	GFL11-3M □□□100C12	142
	3.4	5998	1.0	4.0	4950	1.2	430.222	GFL11-3M □□□100C12	142
	3.4	5998	1.8	4.0	4950	2.1	430.222	GFL14-3M □□□100C12	142
	2.8	7280	0.8	3.3	6007	1.0	522.133	GFL11-3M □□□100C12	142
	2.8	7280	1.5	3.3	6007	1.8	522.133	GFL14-3M □□□100C12	142
	2.6	7841	1.2	3.1	6471	1.4	562.391	GFL14-3M □□□100C12	142
	2.3	8835	1.1	2.8	7291	1.3	633.680	GFL14-3M □□□100C12	142
	2.0	9912	0.9	2.5	8179	1.1	710.888	GFL14-3M □□□100C12	142
	1.8	11168	0.9	2.2	9216	1.1	801.000	GFL14-3M □□□100C12	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 3.0 \text{ kW}$

n _N f _N	2890 r/min			3510 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	867	32	4.2	1047	26	4.7	3.333	GFL05-2M □□□100C31	134
	632	44	3.1	763	36	3.5	4.571	GFL05-2M □□□100C31	134
	563	49	3.6	680	41	4.1	5.133	GFL05-2M □□□100C31	134
	510	54	3.4	616	45	3.9	5.667	GFL05-2M □□□100C31	134
	452	62	2.3	545	51	2.6	6.400	GFL05-2M □□□100C31	134
	411	68	2.9	496	56	3.4	7.040	GFL05-2M □□□100C31	134
	372	75	2.8	449	62	3.2	7.771	GFL05-2M □□□100C31	134
	321	87	2.5	387	71	2.8	9.010	GFL05-2M □□□100C31	134
	291	96	2.3	351	79	2.6	9.946	GFL05-2M □□□100C31	134
	254	109	2.0	307	90	2.3	11.360	GFL05-2M □□□100C31	134
	226	123	1.9	273	101	2.1	12.800	GFL05-2M □□□100C31	134
	199	140	1.7	240	115	2.0	14.538	GFL05-2M □□□100C31	134
	182	153	1.6	219	126	1.9	15.904	GFL05-2M □□□100C31	134
	161	172	1.5	195	142	1.7	17.920	GFL05-2M □□□100C31	134
	159	175	2.8	192	144	3.1	18.169	GFL06-2M □□□100C31	134
	143	195	1.4	172	161	1.6	20.286	GFL05-2M □□□100C31	134
	141	198	2.6	170	163	3.0	20.571	GFL06-2M □□□100C31	134
	126	220	1.1	153	181	1.3	22.857	GFL05-2M □□□100C31	134
	125	223	2.2	151	184	2.5	23.175	GFL06-2M □□□100C31	134
	116	239	1.3	140	197	1.5	24.850	GFL05-2M □□□100C31	134
	115	242	2.5	139	200	2.8	25.200	GFL06-2M □□□100C31	134
	103	269	1.1	125	222	1.2	28.000	GFL05-2M □□□100C31	134
	102	273	2.0	123	225	2.3	28.389	GFL06-2M □□□100C31	134
	88	315	1.9	106	260	2.1	32.800	GFL06-2M □□□100C31	134
	78	355	1.6	95	293	1.8	36.951	GFL06-2M □□□100C31	134
	71	392	1.5	86	323	1.7	40.800	GFL06-2M □□□100C31	134
	65	430	2.7	78	354	3.0	44.667	GFL07-2M □□□100C31	134
	63	442	1.3	76	364	1.4	45.963	GFL06-2M □□□100C31	134
	56	501	2.4	67	412	2.8	52.067	GFL07-2M □□□100C31	134
	49	564	2.1	60	465	2.3	58.667	GFL07-2M □□□100C31	134
	46	599	3.1	56	493	3.5	62.300	GFL09-2M □□□100C31	134
	46	608	1.9	55	500	2.1	63.190	GFL07-2M □□□100C31	134
	46	600	2.3	55	494	2.6	63.326	GFL09-3M □□□100C31	142
	44	619	1.4	53	509	1.6	65.306	GFL07-3M □□□100C31	142
	41	685	1.9	49	564	2.2	71.200	GFL07-2M □□□100C31	134
	40	686	1.3	48	565	1.5	72.452	GFL07-3M □□□100C31	142
	40	693	2.2	48	571	2.5	73.173	GFL09-3M □□□100C31	142
	37	757	2.2	44	624	2.5	78.750	GFL09-2M □□□100C31	134
	35	773	1.3	43	637	1.5	81.636	GFL07-3M □□□100C31	142
	35	781	2.2	42	643	2.5	82.465	GFL09-3M □□□100C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 3.0 \text{ kW}$

n _N f _N	2890 r/min			3510 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	33	854	2.1	39	703	2.4	88.750	GFL09-2M □□□100C31	134
	31	875	1.1	38	721	1.3	92.413	GFL07-3M □□□100C31	142
	31	884	1.9	37	728	2.2	93.333	GFL09-3M □□□100C31	142
	28	986	1.1	34	812	1.3	104.127	GFL07-3M □□□100C31	142
	28	996	1.9	33	820	2.2	105.185	GFL09-3M □□□100C31	142
	26	1072	1.0	31	883	1.1	113.206	GFL07-3M □□□100C31	142
	25	1083	1.7	31	892	2.0	114.333	GFL09-3M □□□100C31	142
	25	1086	3.2	31	894	3.7	114.586	GFL11-3M □□□100C31	142
	23	1208	1.0	27	995	1.1	127.556	GFL07-3M □□□100C31	142
	22	1221	1.7	27	1005	2.0	128.852	GFL09-3M □□□100C31	142
	22	1223	3.2	27	1007	3.7	129.111	GFL11-3M □□□100C31	142
	19	1410	1.5	24	1161	1.7	148.815	GFL09-3M □□□100C31	142
	19	1413	2.8	23	1163	3.2	149.144	GFL11-3M □□□100C31	142
	17	1589	1.5	21	1308	1.7	167.712	GFL09-3M □□□100C31	142
	17	1592	2.8	21	1311	3.2	168.049	GFL11-3M □□□100C31	142
	16	1732	2.4	19	1426	2.8	182.792	GFL11-3M □□□100C31	142
	16	1754	1.3	19	1444	1.5	185.111	GFL09-3M □□□100C31	142
	14	1951	2.4	17	1607	2.8	205.963	GFL11-3M □□□100C31	142
	14	1976	1.3	17	1627	1.5	208.617	GFL09-3M □□□100C31	142
	13	2128	2.1	16	1752	2.4	224.636	GFL11-3M □□□100C31	142
	13	2129	1.1	16	1753	1.3	224.778	GFL09-3M □□□100C31	142
	11	2398	2.1	14	1974	2.4	253.111	GFL11-3M □□□100C31	142
	11	2400	1.1	14	1976	1.3	253.321	GFL09-3M □□□100C31	142
	11	2532	2.0	13	2085	2.3	267.259	GFL11-3M □□□100C31	142
	8.8	3103	1.8	11	2555	2.1	327.556	GFL11-3M □□□100C31	142
	8.2	3342	3.1	9.9	2752	3.6	352.811	GFL14-3M □□□100C31	142
	8.1	3392	1.6	9.8	2793	1.8	358.077	GFL11-3M □□□100C31	142
	7.3	3766	3.1	8.8	3101	3.6	397.533	GFL14-3M □□□100C31	142
	7.2	3822	1.6	8.7	3147	1.8	403.467	GFL11-3M □□□100C31	142
	6.7	4076	1.5	8.1	3356	1.7	430.222	GFL11-3M □□□100C31	142
	6.7	4076	2.6	8.1	3356	3.0	430.222	GFL14-3M □□□100C31	142
	5.5	4946	1.2	6.7	4073	1.4	522.133	GFL11-3M □□□100C31	142
	5.5	4946	2.1	6.7	4073	2.5	522.133	GFL14-3M □□□100C31	142
	5.1	5328	1.0	6.2	4387	1.2	562.391	GFL11-3M □□□100C31	142
	5.1	5328	1.7	6.2	4387	2.0	562.391	GFL14-3M □□□100C31	142
	4.6	6003	1.0	5.5	4943	1.1	633.680	GFL11-3M □□□100C31	142
	4.6	6003	1.6	5.5	4943	1.9	633.680	GFL14-3M □□□100C31	142
	4.1	6734	1.3	4.9	5545	1.5	710.888	GFL14-3M □□□100C31	142
	3.6	7588	1.3	4.4	6248	1.5	801.000	GFL14-3M □□□100C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 3.0 \text{ kW}$

n _N f _N	1430 r/min			1740 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	429	65	2.6	519	53	3.0	3.333	GFL05-2M □□□100C32	134
	313	89	1.9	378	73	2.2	4.571	GFL05-2M □□□100C32	134
	279	100	2.2	337	82	2.6	5.133	GFL05-2M □□□100C32	134
	252	110	2.1	305	91	2.4	5.667	GFL05-2M □□□100C32	134
	223	124	1.4	270	102	1.6	6.400	GFL05-2M □□□100C32	134
	222	125	2.8	268	103	3.2	6.450	GFL06-2M □□□100C32	134
	203	137	1.8	246	112	2.1	7.040	GFL05-2M □□□100C32	134
	200	139	3.1	242	114	3.6	7.147	GFL06-2M □□□100C32	134
	184	151	1.7	223	124	2.0	7.771	GFL05-2M □□□100C32	134
	159	175	1.5	192	144	1.8	9.010	GFL05-2M □□□100C32	134
	151	184	3.2	183	151	3.7	9.463	GFL06-2M □□□100C32	134
	144	193	1.4	174	159	1.6	9.946	GFL05-2M □□□100C32	134
	142	196	2.3	171	161	2.7	10.092	GFL06-2M □□□100C32	134
	126	221	1.3	152	181	1.5	11.360	GFL05-2M □□□100C32	134
	124	224	2.8	150	184	3.3	11.520	GFL06-2M □□□100C32	134
	112	249	1.1	135	204	1.3	12.800	GFL05-2M □□□100C32	134
	110	252	2.3	133	207	2.7	12.978	GFL06-2M □□□100C32	134
	98	283	1.1	119	232	1.2	14.538	GFL05-2M □□□100C32	134
	97	287	2.2	117	236	2.6	14.743	GFL06-2M □□□100C32	134
	90	309	1.0	109	254	1.2	15.904	GFL05-2M □□□100C32	134
	89	313	2.0	107	258	2.4	16.128	GFL06-2M □□□100C32	134
	80	348	0.9	97	286	1.0	17.920	GFL05-2M □□□100C32	134
	79	353	1.7	95	290	2.0	18.169	GFL06-2M □□□100C32	134
	71	394	0.8	85	324	1.0	20.286	GFL05-2M □□□100C32	134
	71	394	3.2	85	324	3.7	20.286	GFL07-2M □□□100C32	134
	70	400	1.6	84	329	1.9	20.571	GFL06-2M □□□100C32	134
	63	444	2.8	76	365	3.2	22.857	GFL07-2M □□□100C32	134
	62	450	1.3	75	370	1.6	23.175	GFL06-2M □□□100C32	134
	58	483	2.8	70	397	3.4	24.850	GFL07-2M □□□100C32	134
	57	490	1.3	69	403	1.6	25.200	GFL06-2M □□□100C32	134
	51	544	2.3	62	447	2.8	28.000	GFL07-2M □□□100C32	134
	50	552	1.1	61	453	1.3	28.389	GFL06-2M □□□100C32	134
	44	629	2.2	54	517	2.7	32.344	GFL07-2M □□□100C32	134
	44	635	2.9	53	522	3.6	32.667	GFL09-2M □□□100C32	134
	44	638	1.0	53	524	1.2	32.800	GFL06-2M □□□100C32	134
	39	708	1.8	48	582	2.1	36.444	GFL07-2M □□□100C32	134
	39	716	2.9	47	588	3.6	36.815	GFL09-2M □□□100C32	134
	39	718	0.9	47	590	1.0	36.951	GFL06-2M □□□100C32	134
	36	771	1.8	44	633	2.2	39.642	GFL07-2M □□□100C32	134
	36	771	2.5	44	634	3.1	39.667	GFL09-2M □□□100C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 3.0 \text{ kW}$

n _N f _N	1430 r/min			1740 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	35	793	0.8	42	652	1.0	40.800	GFL06-2M □□□100C32	134
	32	868	1.4	39	714	1.8	44.667	GFL07-2M □□□100C32	134
	32	869	2.5	39	714	3.1	44.704	GFL09-2M □□□100C32	134
	28	998	2.0	34	820	2.5	51.333	GFL09-2M □□□100C32	134
	28	1012	1.3	33	832	1.6	52.067	GFL07-2M □□□100C32	134
	28	1012	2.5	33	832	3.1	52.067	GFL11-2M □□□100C32	134
	25	1124	2.0	30	924	2.5	57.852	GFL09-2M □□□100C32	134
	24	1140	1.1	30	937	1.4	58.667	GFL07-2M □□□100C32	134
	24	1140	2.5	30	937	3.1	58.667	GFL11-2M □□□100C32	134
	23	1211	1.7	28	995	2.1	62.300	GFL09-2M □□□100C32	134
	23	1228	1.0	27	1009	1.2	63.190	GFL07-2M □□□100C32	134
	23	1228	2.1	27	1009	2.6	63.190	GFL11-2M □□□100C32	134
	23	1212	1.2	27	996	1.5	63.326	GFL09-3M □□□100C32	142
	22	1250	2.3	27	1028	2.8	65.306	GFL11-3M □□□100C32	142
	20	1365	1.7	25	1122	2.1	70.211	GFL09-2M □□□100C32	134
	20	1384	0.9	24	1137	1.1	71.200	GFL07-2M □□□100C32	134
	20	1384	2.1	24	1137	2.6	71.200	GFL11-2M □□□100C32	134
	20	1401	1.1	24	1151	1.3	73.173	GFL09-3M □□□100C32	142
	20	1404	2.0	24	1154	2.5	73.335	GFL11-3M □□□100C32	142
	18	1531	1.1	22	1258	1.3	78.750	GFL09-2M □□□100C32	134
	18	1553	1.7	22	1276	2.1	79.875	GFL11-2M □□□100C32	134
	17	1579	1.1	21	1298	1.3	82.465	GFL09-3M □□□100C32	142
	17	1582	2.0	21	1300	2.5	82.631	GFL11-3M □□□100C32	142
	16	1725	1.0	20	1418	1.3	88.750	GFL09-2M □□□100C32	134
	16	1749	1.7	19	1438	2.1	90.000	GFL11-2M □□□100C32	134
	15	1787	0.9	19	1469	1.2	93.333	GFL09-3M □□□100C32	142
	15	1791	1.8	19	1472	2.2	93.540	GFL11-3M □□□100C32	142
	14	2008	2.9	17	1650	3.6	104.889	GFL14-3M □□□100C32	142
	14	2014	0.9	16	1655	1.2	105.185	GFL09-3M □□□100C32	142
	14	2018	1.8	16	1658	2.2	105.397	GFL11-3M □□□100C32	142
	13	2185	2.9	15	1796	3.6	114.126	GFL14-3M □□□100C32	142
	13	2189	0.8	15	1799	1.0	114.333	GFL09-3M □□□100C32	142
	13	2194	1.6	15	1803	1.9	114.586	GFL11-3M □□□100C32	142
	11	2462	2.9	14	2023	3.6	128.593	GFL14-3M □□□100C32	142
	11	2467	0.8	13	2027	1.0	128.852	GFL09-3M □□□100C32	142
	11	2472	1.6	13	2031	1.9	129.111	GFL11-3M □□□100C32	142
	9.6	2855	1.4	12	2347	1.7	149.144	GFL11-3M □□□100C32	142
	9.2	2990	2.5	11	2457	3.1	156.148	GFL14-3M □□□100C32	142
	8.5	3217	1.4	10	2644	1.7	168.049	GFL11-3M □□□100C32	142
	8.4	3256	2.6	10	2676	3.1	170.074	GFL14-3M □□□100C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 3.0 \text{ kW}$

n _N	1430 r/min			1740 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	7.8	3500	1.2	9.5	2876	1.5	182.792	GFL11-3M □□□100C32	142
	7.1	3869	2.0	8.6	3180	2.5	202.074	GFL14-3M □□□100C32	142
	6.9	3943	1.2	8.4	3241	1.5	205.963	GFL11-3M □□□100C32	142
	6.4	4301	1.1	7.7	3535	1.3	224.636	GFL11-3M □□□100C32	142
	6.4	4301	2.0	7.7	3535	2.5	224.636	GFL14-3M □□□100C32	142
	5.7	4846	1.1	6.8	3983	1.3	253.111	GFL11-3M □□□100C32	142
	5.7	4846	2.0	6.8	3983	2.5	253.111	GFL14-3M □□□100C32	142
	5.4	5117	1.0	6.5	4205	1.2	267.259	GFL11-3M □□□100C32	142
	5.2	5242	1.9	6.3	4308	2.3	273.778	GFL14-3M □□□100C32	142
	4.4	6271	0.9	5.3	5154	1.1	327.556	GFL11-3M □□□100C32	142
	4.3	6365	1.7	5.2	5231	2.0	332.444	GFL14-3M □□□100C32	142
	4.1	6755	1.5	4.9	5551	1.9	352.811	GFL14-3M □□□100C32	142
	3.6	7611	1.5	4.4	6255	1.9	397.533	GFL14-3M □□□100C32	142
	3.3	8237	1.3	4.0	6769	1.6	430.222	GFL14-3M □□□100C32	142
	2.7	9996	1.1	3.3	8215	1.3	522.133	GFL14-3M □□□100C32	142
	2.5	10767	0.8	3.1	8849	1.0	562.391	GFL14-3M □□□100C32	142
	2.3	12132	0.8	2.7	9971	1.0	633.680	GFL14-3M □□□100C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 4.0 \text{ kW}$

n _N f _N	2840 r/min			3440 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	852	43	3.1	1032	36	3.5	3.333	GFL05-2M □□□100C41	134
	621	60	2.3	753	49	2.6	4.571	GFL05-2M □□□100C41	134
	553	67	2.7	670	55	3.1	5.133	GFL05-2M □□□100C41	134
	501	74	2.5	607	61	2.9	5.667	GFL05-2M □□□100C41	134
	444	84	1.7	538	69	1.9	6.400	GFL05-2M □□□100C41	134
	403	92	2.2	489	76	2.5	7.040	GFL05-2M □□□100C41	134
	365	101	2.1	443	84	2.3	7.771	GFL05-2M □□□100C41	134
	315	118	1.8	382	97	2.1	9.010	GFL05-2M □□□100C41	134
	286	130	1.7	346	107	1.9	9.946	GFL05-2M □□□100C41	134
	281	132	2.8	341	109	3.2	10.092	GFL06-2M □□□100C41	134
	250	148	1.5	303	122	1.7	11.360	GFL05-2M □□□100C41	134
	222	167	1.4	269	138	1.6	12.800	GFL05-2M □□□100C41	134
	219	169	2.8	265	140	3.2	12.978	GFL06-2M □□□100C41	134
	195	190	1.3	237	157	1.5	14.538	GFL05-2M □□□100C41	134
	193	192	2.7	233	159	3.1	14.743	GFL06-2M □□□100C41	134
	179	208	1.2	216	171	1.4	15.904	GFL05-2M □□□100C41	134
	176	210	2.5	213	174	2.8	16.128	GFL06-2M □□□100C41	134
	159	234	1.1	192	193	1.2	17.920	GFL05-2M □□□100C41	134
	156	237	2.0	189	196	2.3	18.169	GFL06-2M □□□100C41	134
	140	265	1.0	170	219	1.2	20.286	GFL05-2M □□□100C41	134
	138	268	1.9	167	222	2.2	20.571	GFL06-2M □□□100C41	134
	124	298	0.8	151	246	1.0	22.857	GFL05-2M □□□100C41	134
	123	302	1.6	148	250	1.8	23.175	GFL06-2M □□□100C41	134
	114	324	1.0	138	268	1.1	24.850	GFL05-2M □□□100C41	134
	113	329	1.8	137	271	2.1	25.200	GFL06-2M □□□100C41	134
	101	365	3.1	123	302	3.5	28.000	GFL07-2M □□□100C41	134
	100	370	1.5	121	306	1.7	28.389	GFL06-2M □□□100C41	134
	88	422	3.0	106	348	3.4	32.344	GFL07-2M □□□100C41	134
	87	428	1.4	105	353	1.6	32.800	GFL06-2M □□□100C41	134
	78	476	2.4	94	393	2.7	36.444	GFL07-2M □□□100C41	134
	77	482	1.2	93	398	1.3	36.951	GFL06-2M □□□100C41	134
	72	517	2.4	87	427	2.8	39.642	GFL07-2M □□□100C41	134
	70	532	1.1	84	440	1.3	40.800	GFL06-2M □□□100C41	134
	64	583	2.0	77	481	2.3	44.667	GFL07-2M □□□100C41	134
	62	600	0.9	75	495	1.1	45.963	GFL06-2M □□□100C41	134
	55	670	2.8	67	553	3.1	51.333	GFL09-2M □□□100C41	134
	55	679	1.8	66	561	2.1	52.067	GFL07-2M □□□100C41	134
	49	755	2.8	60	623	3.1	57.852	GFL09-2M □□□100C41	134
	48	766	1.5	59	632	1.7	58.667	GFL07-2M □□□100C41	134
	46	813	2.3	55	671	2.6	62.300	GFL09-2M □□□100C41	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 4.0 \text{ kW}$

n _N f _N	2840 r/min			3440 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	45	825	1.4	54	681	1.6	63.190	GFL07-2M □□□100C41	134
	45	825	2.9	54	681	3.3	63.190	GFL11-2M □□□100C41	134
	45	814	1.7	54	672	1.9	63.326	GFL09-3M □□□100C41	142
	44	839	1.1	53	693	1.2	65.306	GFL07-3M □□□100C41	142
	40	916	2.5	49	756	2.9	70.211	GFL09-2M □□□100C41	134
	40	929	1.4	48	767	1.6	71.200	GFL07-2M □□□100C41	134
	40	929	3.1	48	767	3.6	71.200	GFL11-2M □□□100C41	134
	39	931	0.9	48	769	1.1	72.452	GFL07-3M □□□100C41	142
	39	941	1.6	47	776	1.9	73.173	GFL09-3M □□□100C41	142
	39	943	3.1	47	778	3.5	73.335	GFL11-3M □□□100C41	142
	36	1028	1.6	44	848	1.8	78.750	GFL09-2M □□□100C41	134
	36	1042	2.5	43	861	2.9	79.875	GFL11-2M □□□100C41	134
	35	1049	0.9	42	866	1.1	81.636	GFL07-3M □□□100C41	142
	34	1060	1.6	42	875	1.9	82.465	GFL09-3M □□□100C41	142
	34	1062	3.1	42	877	3.5	82.631	GFL11-3M □□□100C41	142
	32	1158	1.5	39	956	1.8	88.750	GFL09-2M □□□100C41	134
	32	1174	2.5	38	970	2.9	90.000	GFL11-2M □□□100C41	134
	31	1188	0.8	37	981	0.9	92.413	GFL07-3M □□□100C41	142
	30	1200	1.4	37	990	1.6	93.333	GFL09-3M □□□100C41	142
	30	1202	2.7	37	993	3.1	93.540	GFL11-3M □□□100C41	142
	27	1338	0.8	33	1105	0.9	104.127	GFL07-3M □□□100C41	142
	27	1352	1.4	33	1116	1.6	105.185	GFL09-3M □□□100C41	142
	27	1355	2.7	33	1118	3.1	105.397	GFL11-3M □□□100C41	142
	25	1470	1.3	30	1213	1.5	114.333	GFL09-3M □□□100C41	142
	25	1473	2.4	30	1216	2.8	114.586	GFL11-3M □□□100C41	142
	22	1656	1.3	27	1367	1.5	128.852	GFL09-3M □□□100C41	142
	22	1660	2.4	27	1370	2.8	129.111	GFL11-3M □□□100C41	142
	19	1913	1.1	23	1579	1.2	148.815	GFL09-3M □□□100C41	142
	19	1917	2.0	23	1583	2.4	149.144	GFL11-3M □□□100C41	142
	17	2156	1.1	21	1780	1.2	167.712	GFL09-3M □□□100C41	142
	17	2160	2.0	21	1783	2.4	168.049	GFL11-3M □□□100C41	142
	16	2350	1.8	19	1940	2.1	182.792	GFL11-3M □□□100C41	142
	15	2379	0.9	19	1964	1.1	185.111	GFL09-3M □□□100C41	142
	14	2597	3.0	17	2144	3.5	202.074	GFL14-3M □□□100C41	142
	14	2647	1.8	17	2186	2.1	205.963	GFL11-3M □□□100C41	142
	14	2681	0.9	17	2214	1.1	208.617	GFL09-3M □□□100C41	142
	13	2887	1.6	15	2384	1.8	224.636	GFL11-3M □□□100C41	142
	13	2887	3.0	15	2384	3.5	224.636	GFL14-3M □□□100C41	142
	13	2889	0.8	15	2385	1.0	224.778	GFL09-3M □□□100C41	142
	11	3253	1.6	14	2686	1.8	253.111	GFL11-3M □□□100C41	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 4.0$ kW

n _N	2840 r/min			3440 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	11	3253	3.0	14	2686	3.5	253.111	GFL14-3M □□□100C41	142
	11	3256	0.8	14	2688	1.0	253.321	GFL09-3M □□□100C41	142
	11	3435	1.5	13	2836	1.7	267.259	GFL11-3M □□□100C41	142
	10	3519	2.8	13	2905	3.2	273.778	GFL14-3M □□□100C41	142
	8.7	4210	1.3	11	3476	1.5	327.556	GFL11-3M □□□100C41	142
	8.5	4273	2.5	10	3528	2.9	332.444	GFL14-3M □□□100C41	142
	8.1	4535	2.3	9.8	3744	2.7	352.811	GFL14-3M □□□100C41	142
	7.9	4603	1.1	9.6	3800	1.3	358.077	GFL11-3M □□□100C41	142
	7.1	5110	2.3	8.7	4218	2.6	397.533	GFL14-3M □□□100C41	142
	7.0	5186	1.1	8.5	4281	1.3	403.467	GFL11-3M □□□100C41	142
	6.6	5530	1.1	8.0	4565	1.2	430.222	GFL11-3M □□□100C41	142
	6.6	5530	1.9	8.0	4565	2.2	430.222	GFL14-3M □□□100C41	142
	5.4	6711	0.9	6.6	5541	1.0	522.133	GFL11-3M □□□100C41	142
	5.4	6711	1.6	6.6	5541	1.8	522.133	GFL14-3M □□□100C41	142
	5.1	7229	1.3	6.1	5968	1.4	562.391	GFL14-3M □□□100C41	142
	4.5	8145	1.2	5.4	6724	1.4	633.680	GFL14-3M □□□100C41	142
	4.0	9137	1.0	4.8	7544	1.1	710.888	GFL14-3M □□□100C41	142
	3.6	10296	1.0	4.3	8500	1.1	801.000	GFL14-3M □□□100C41	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 4.0 \text{ kW}$

n _N f _N	1450 r/min			1755 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	395	94	3.4	476	78	3.9	3.675	GFL06-2M □□□112C22	134
	312	119	4.2	377	98	4.8	4.643	GFL07-2M □□□112C22	134
	278	133	3.2	336	110	3.7	5.211	GFL06-2M □□□112C22	134
	252	147	3.0	304	121	3.5	5.750	GFL06-2M □□□112C22	134
	225	165	2.1	271	136	2.4	6.450	GFL06-2M □□□112C22	134
	203	183	2.4	245	151	2.7	7.147	GFL06-2M □□□112C22	134
	173	215	2.8	208	177	3.2	8.400	GFL06-2M □□□112C22	134
	153	242	2.4	185	200	2.8	9.463	GFL06-2M □□□112C22	134
	144	258	1.8	173	213	2.0	10.092	GFL06-2M □□□112C22	134
	126	294	2.1	152	243	2.5	11.520	GFL06-2M □□□112C22	134
	112	332	1.8	135	274	2.0	12.978	GFL06-2M □□□112C22	134
	102	363	3.2	123	300	3.6	14.200	GFL07-2M □□□112C22	134
	98	377	1.7	119	311	2.0	14.743	GFL06-2M □□□112C22	134
	91	406	2.9	110	336	3.3	15.904	GFL07-2M □□□112C22	134
	90	412	1.6	109	341	1.8	16.128	GFL06-2M □□□112C22	134
	81	458	2.6	98	378	3.0	17.920	GFL07-2M □□□112C22	134
	80	464	1.3	96	384	1.5	18.169	GFL06-2M □□□112C22	134
	72	518	2.4	86	428	2.8	20.286	GFL07-2M □□□112C22	134
	71	526	1.2	85	434	1.4	20.571	GFL06-2M □□□112C22	134
	63	584	2.1	77	483	2.4	22.857	GFL07-2M □□□112C22	134
	63	592	1.0	76	489	1.2	23.175	GFL06-2M □□□112C22	134
	58	635	2.1	70	525	2.5	24.850	GFL07-2M □□□112C22	134
	58	644	1.0	69	532	1.2	25.200	GFL06-2M □□□112C22	134
	52	716	1.7	63	591	2.1	28.000	GFL07-2M □□□112C22	134
	51	726	0.8	62	599	1.0	28.389	GFL06-2M □□□112C22	134
	45	827	1.7	54	683	2.0	32.344	GFL07-2M □□□112C22	134
	44	835	2.6	54	690	3.1	32.667	GFL09-2M □□□112C22	134
	44	837	3.2	54	691	3.9	32.739	GFL11-2M □□□112C22	134
	40	931	1.3	48	770	1.6	36.444	GFL07-2M □□□112C22	134
	39	941	2.6	48	777	3.1	36.815	GFL09-2M □□□112C22	134
	39	943	3.2	47	779	3.9	36.889	GFL11-2M □□□112C22	134
	37	1013	1.4	44	837	1.6	39.642	GFL07-2M □□□112C22	134
	37	1014	2.2	44	838	2.6	39.667	GFL09-2M □□□112C22	134
	36	1028	2.7	44	850	3.3	40.233	GFL11-2M □□□112C22	134
	33	1142	1.1	39	943	1.3	44.667	GFL07-2M □□□112C22	134
	32	1143	2.2	39	944	2.6	44.704	GFL09-2M □□□112C22	134
	32	1159	2.7	39	957	3.3	45.333	GFL11-2M □□□112C22	134
	28	1312	1.7	34	1084	2.1	51.333	GFL09-2M □□□112C22	134
	28	1331	2.2	34	1099	2.6	52.067	GFL11-2M □□□112C22	134
	28	1331	2.7	34	1099	3.3	52.067	GFL14-2M □□□112C22	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 4.0 \text{ kW}$

n _N f _N	1450 r/min			1755 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	25	1479	1.7	30	1222	2.1	57.852	GFL09-2M □□□112C22	134
	25	1499	2.2	30	1239	2.6	58.667	GFL11-2M □□□112C22	134
	25	1499	2.7	30	1239	3.3	58.667	GFL14-2M □□□112C22	134
	23	1592	1.5	28	1316	1.8	62.300	GFL09-2M □□□112C22	134
	23	1615	1.8	28	1334	2.2	63.190	GFL11-2M □□□112C22	134
	23	1615	2.3	28	1334	2.7	63.190	GFL14-2M □□□112C22	134
	23	1594	0.9	28	1317	1.1	63.326	GFL09-3M □□□112C22	142
	22	1644	1.8	27	1358	2.1	65.306	GFL11-3M □□□112C22	142
	21	1730	3.1	26	1429	3.8	68.708	GFL14-3M □□□112C22	142
	21	1794	1.4	25	1483	1.7	70.211	GFL09-2M □□□112C22	134
	20	1820	1.8	25	1504	2.2	71.200	GFL11-2M □□□112C22	134
	20	1820	2.3	25	1504	2.7	71.200	GFL14-2M □□□112C22	134
	20	1842	0.8	24	1522	1.0	73.173	GFL09-3M □□□112C22	142
	20	1846	1.6	24	1525	1.9	73.335	GFL11-3M □□□112C22	142
	19	1949	3.1	23	1610	3.8	77.418	GFL14-3M □□□112C22	142
	18	2041	1.5	22	1687	1.8	79.875	GFL11-2M □□□112C22	134
	18	2041	1.8	22	1687	2.2	79.875	GFL14-2M □□□112C22	134
	18	2076	0.8	21	1715	1.0	82.465	GFL09-3M □□□112C22	142
	18	2080	1.6	21	1719	1.9	82.631	GFL11-3M □□□112C22	142
	17	2141	2.9	21	1769	3.5	85.037	GFL14-3M □□□112C22	142
	16	2300	1.5	19	1901	1.8	90.000	GFL11-2M □□□112C22	134
	16	2300	1.8	19	1901	2.2	90.000	GFL14-2M □□□112C22	134
	16	2355	1.4	19	1946	1.6	93.540	GFL11-3M □□□112C22	142
	14	2641	2.6	17	2182	3.1	104.889	GFL14-3M □□□112C22	142
	14	2653	1.4	17	2192	1.6	105.397	GFL11-3M □□□112C22	142
	13	2873	2.3	15	2374	2.8	114.126	GFL14-3M □□□112C22	142
	13	2885	1.2	15	2383	1.5	114.586	GFL11-3M □□□112C22	142
	11	3237	2.3	14	2675	2.8	128.593	GFL14-3M □□□112C22	142
	11	3250	1.2	14	2686	1.5	129.111	GFL11-3M □□□112C22	142
	11	3446	2.1	13	2847	2.6	136.889	GFL14-3M □□□112C22	142
	9.7	3755	1.0	12	3102	1.3	149.144	GFL11-3M □□□112C22	142
	9.3	3931	2.1	11	3248	2.5	156.148	GFL14-3M □□□112C22	142
	8.6	4231	1.0	10	3495	1.3	168.049	GFL11-3M □□□112C22	142
	8.5	4282	2.0	10	3538	2.4	170.074	GFL14-3M □□□112C22	142
	7.9	4602	0.9	9.6	3802	1.1	182.792	GFL11-3M □□□112C22	142
	7.2	5087	1.7	8.7	4203	2.1	202.074	GFL14-3M □□□112C22	142
	7.0	5185	0.9	8.5	4284	1.1	205.963	GFL11-3M □□□112C22	142
	6.5	5655	1.5	7.8	4672	1.9	224.636	GFL14-3M □□□112C22	142
	5.7	6372	1.5	6.9	5265	1.9	253.111	GFL14-3M □□□112C22	142
	5.3	6892	1.4	6.4	5695	1.7	273.778	GFL14-3M □□□112C22	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 4.0 \text{ kW}$

n_N	1450 r/min			1755 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	4.4	8369	1.3	5.3	6915	1.5	332.444	GFL14-3M □□□112C22	142
	4.1	8882	1.2	5.0	7338	1.4	352.811	GFL14-3M □□□112C22	142
	3.7	10008	1.2	4.4	8269	1.4	397.533	GFL14-3M □□□112C22	142
	3.4	10831	1.0	4.1	8949	1.2	430.222	GFL14-3M □□□112C22	142
	2.8	13145	0.8	3.4	10860	1.0	522.133	GFL14-3M □□□112C22	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 5.5 \text{ kW}$

n _N f _N	2900 r/min			3510 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	789	65	4.0	952	53	4.5	3.675	GFL06-2M □□□112C31	134
	625	82	4.9	754	67	5.6	4.643	GFL07-2M □□□112C31	134
	557	92	3.7	672	76	4.2	5.211	GFL06-2M □□□112C31	134
	504	101	3.5	609	83	4.0	5.750	GFL06-2M □□□112C31	134
	450	113	2.5	543	94	2.8	6.450	GFL06-2M □□□112C31	134
	406	126	2.8	490	104	3.1	7.147	GFL06-2M □□□112C31	134
	345	148	3.3	417	122	3.7	8.400	GFL06-2M □□□112C31	134
	307	166	2.8	370	137	3.2	9.463	GFL06-2M □□□112C31	134
	287	177	2.1	347	147	2.4	10.092	GFL06-2M □□□112C31	134
	252	202	2.5	304	167	2.8	11.520	GFL06-2M □□□112C31	134
	224	228	2.1	270	188	2.4	12.978	GFL06-2M □□□112C31	134
	197	259	2.0	237	214	2.3	14.743	GFL06-2M □□□112C31	134
	180	283	1.8	217	234	2.1	16.128	GFL06-2M □□□112C31	134
	162	315	3.0	195	260	3.4	17.920	GFL07-2M □□□112C31	134
	160	319	1.5	193	264	1.7	18.169	GFL06-2M □□□112C31	134
	143	356	2.8	173	295	3.2	20.286	GFL07-2M □□□112C31	134
	141	361	1.4	170	299	1.6	20.571	GFL06-2M □□□112C31	134
	127	402	2.5	153	332	2.8	22.857	GFL07-2M □□□112C31	134
	125	407	1.2	151	336	1.4	23.175	GFL06-2M □□□112C31	134
	117	437	2.8	141	361	3.2	24.850	GFL07-2M □□□112C31	134
	115	443	1.3	139	366	1.5	25.200	GFL06-2M □□□112C31	134
	104	492	2.3	125	406	2.6	28.000	GFL07-2M □□□112C31	134
	102	499	1.1	123	412	1.3	28.389	GFL06-2M □□□112C31	134
	90	568	2.2	108	470	2.5	32.344	GFL07-2M □□□112C31	134
	80	640	1.8	96	529	2.0	36.444	GFL07-2M □□□112C31	134
	73	697	1.8	88	576	2.0	39.642	GFL07-2M □□□112C31	134
	73	697	2.9	88	576	3.3	39.667	GFL09-2M □□□112C31	134
	65	785	1.5	78	648	1.7	44.667	GFL07-2M □□□112C31	134
	65	786	2.9	78	649	3.3	44.704	GFL09-2M □□□112C31	134
	57	902	2.3	68	745	2.6	51.333	GFL09-2M □□□112C31	134
	56	915	2.9	67	756	3.3	52.067	GFL11-2M □□□112C31	134
	50	1017	2.3	61	840	2.6	57.852	GFL09-2M □□□112C31	134
	49	1031	2.9	60	852	3.3	58.667	GFL11-2M □□□112C31	134
	47	1095	1.9	56	904	2.2	62.300	GFL09-2M □□□112C31	134
	46	1110	2.4	55	917	2.7	63.190	GFL11-2M □□□112C31	134
	46	1110	3.0	55	917	3.4	63.190	GFL14-2M □□□112C31	134
	46	1096	1.3	55	906	1.4	63.326	GFL09-3M □□□112C31	142
	44	1130	2.6	54	934	2.9	65.306	GFL11-3M □□□112C31	142
	41	1234	2.0	50	1019	2.3	70.211	GFL09-2M □□□112C31	134
	41	1251	2.6	49	1034	3.0	71.200	GFL11-2M □□□112C31	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 5.5 \text{ kW}$

n _N f _N	2900 r/min			3510 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	40	1266	1.2	48	1046	1.4	73.173	GFL09-3M □□□112C31	142
	40	1269	2.3	48	1049	2.6	73.335	GFL11-3M □□□112C31	142
	36	1404	2.1	44	1160	2.4	79.875	GFL11-2M □□□112C31	134
	36	1404	2.6	44	1160	3.0	79.875	GFL14-2M □□□112C31	134
	35	1427	1.2	42	1179	1.4	82.465	GFL09-3M □□□112C31	142
	35	1430	2.3	42	1182	2.6	82.631	GFL11-3M □□□112C31	142
	32	1581	2.1	39	1307	2.4	90.000	GFL11-2M □□□112C31	134
	32	1581	2.6	39	1307	3.0	90.000	GFL14-2M □□□112C31	134
	31	1615	1.0	38	1335	1.2	93.333	GFL09-3M □□□112C31	142
	31	1619	2.0	37	1338	2.3	93.540	GFL11-3M □□□112C31	142
	28	1821	1.0	33	1504	1.2	105.185	GFL09-3M □□□112C31	142
	28	1824	2.0	33	1507	2.3	105.397	GFL11-3M □□□112C31	142
	25	1979	0.9	31	1635	1.1	114.333	GFL09-3M □□□112C31	142
	25	1983	1.8	31	1639	2.0	114.586	GFL11-3M □□□112C31	142
	23	2230	0.9	27	1843	1.1	128.852	GFL09-3M □□□112C31	142
	23	2235	1.8	27	1846	2.0	129.111	GFL11-3M □□□112C31	142
	21	2369	3.1	26	1958	3.6	136.889	GFL14-3M □□□112C31	142
	19	2581	1.5	24	2133	1.7	149.144	GFL11-3M □□□112C31	142
	19	2703	3.0	22	2233	3.5	156.148	GFL14-3M □□□112C31	142
	17	2909	1.5	21	2403	1.7	168.049	GFL11-3M □□□112C31	142
	17	2944	2.9	21	2432	3.3	170.074	GFL14-3M □□□112C31	142
	16	3164	1.3	19	2614	1.5	182.792	GFL11-3M □□□112C31	142
	14	3497	2.5	17	2890	2.9	202.074	GFL14-3M □□□112C31	142
	14	3565	1.3	17	2945	1.5	205.963	GFL11-3M □□□112C31	142
	13	3888	1.2	16	3212	1.3	224.636	GFL11-3M □□□112C31	142
	13	3888	2.2	16	3212	2.6	224.636	GFL14-3M □□□112C31	142
	12	4381	1.2	14	3619	1.3	253.111	GFL11-3M □□□112C31	142
	12	4381	2.2	14	3619	2.6	253.111	GFL14-3M □□□112C31	142
	11	4626	1.1	13	3822	1.3	267.259	GFL11-3M □□□112C31	142
	11	4739	2.1	13	3915	2.4	273.778	GFL14-3M □□□112C31	142
	8.9	5669	1.0	11	4684	1.1	327.556	GFL11-3M □□□112C31	142
	8.7	5754	1.8	11	4754	2.1	332.444	GFL14-3M □□□112C31	142
	8.2	6106	1.7	9.9	5045	2.0	352.811	GFL14-3M □□□112C31	142
	7.3	6880	1.7	8.8	5685	1.9	397.533	GFL14-3M □□□112C31	142
	6.7	7446	1.4	8.1	6152	1.6	430.222	GFL14-3M □□□112C31	142
	5.6	9037	1.2	6.7	7467	1.3	522.133	GFL14-3M □□□112C31	142
	5.2	9734	0.9	6.2	8042	1.1	562.391	GFL14-3M □□□112C31	142
	4.6	10968	0.9	5.5	9062	1.0	633.680	GFL14-3M □□□112C31	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 5.5 \text{ kW}$

n _N f _N	1445 r/min			1750 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	431	118	3.0	521	98	3.5	3.350	GFL07-2M □□□112C32	134
	393	130	2.5	475	107	2.8	3.675	GFL06-2M □□□112C32	134
	311	164	3.0	376	135	3.5	4.643	GFL07-2M □□□112C32	134
	280	182	3.0	338	150	3.5	5.159	GFL07-2M □□□112C32	134
	277	184	2.3	335	152	2.7	5.211	GFL06-2M □□□112C32	134
	254	201	3.0	306	166	3.5	5.695	GFL07-2M □□□112C32	134
	251	203	2.2	304	167	2.5	5.750	GFL06-2M □□□112C32	134
	226	226	2.5	273	186	2.8	6.400	GFL07-2M □□□112C32	134
	224	227	1.5	271	188	1.8	6.450	GFL06-2M □□□112C32	134
	202	252	1.7	244	208	2.0	7.147	GFL06-2M □□□112C32	134
	202	252	3.0	244	208	3.5	7.150	GFL07-2M □□□112C32	134
	174	294	3.0	210	242	3.5	8.324	GFL07-2M □□□112C32	134
	172	296	2.0	208	245	2.3	8.400	GFL06-2M □□□112C32	134
	154	331	3.0	186	273	3.5	9.379	GFL07-2M □□□112C32	134
	153	334	1.7	184	276	2.0	9.463	GFL06-2M □□□112C32	134
	149	343	2.7	180	283	3.0	9.714	GFL07-2M □□□112C32	134
	143	356	1.3	173	294	1.5	10.092	GFL06-2M □□□112C32	134
	129	394	3.1	156	325	3.6	11.167	GFL09-2M □□□112C32	134
	125	406	1.6	152	335	1.8	11.520	GFL06-2M □□□112C32	134
	125	407	2.7	152	336	3.1	11.537	GFL07-2M □□□112C32	134
	111	458	1.3	135	378	1.5	12.978	GFL06-2M □□□112C32	134
	111	458	2.4	134	379	2.7	13.000	GFL07-2M □□□112C32	134
	102	501	2.3	123	413	2.6	14.200	GFL07-2M □□□112C32	134
	98	520	1.2	118	429	1.4	14.743	GFL06-2M □□□112C32	134
	91	561	2.1	110	463	2.4	15.904	GFL07-2M □□□112C32	134
	90	569	1.1	108	470	1.3	16.128	GFL06-2M □□□112C32	134
	89	576	3.1	107	476	3.6	16.333	GFL09-2M □□□112C32	134
	81	632	1.9	97	522	2.2	17.920	GFL07-2M □□□112C32	134
	80	641	0.9	96	529	1.1	18.169	GFL06-2M □□□112C32	134
	79	649	3.1	95	536	3.6	18.407	GFL09-2M □□□112C32	134
	74	694	2.8	89	573	3.2	19.667	GFL09-2M □□□112C32	134
	71	715	1.8	86	591	2.0	20.286	GFL07-2M □□□112C32	134
	70	725	0.9	85	599	1.0	20.571	GFL06-2M □□□112C32	134
	65	782	2.8	79	645	3.2	22.164	GFL09-2M □□□112C32	134
	63	806	1.5	76	666	1.8	22.857	GFL07-2M □□□112C32	134
	60	850	2.4	72	702	2.9	24.111	GFL09-2M □□□112C32	134
	58	876	1.5	70	724	1.8	24.850	GFL07-2M □□□112C32	134
	53	958	2.4	64	791	2.9	27.173	GFL09-2M □□□112C32	134
	52	987	1.3	62	815	1.5	28.000	GFL07-2M □□□112C32	134
	45	1141	1.2	54	942	1.5	32.344	GFL07-2M □□□112C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 5.5 \text{ kW}$

n _N f _N	1445 r/min			1750 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	44	1152	1.9	53	951	2.2	32.667	GFL09-2M □□□112C32	134
	44	1155	2.4	53	953	2.8	32.739	GFL11-2M □□□112C32	134
	40	1285	1.0	48	1061	1.2	36.444	GFL07-2M □□□112C32	134
	39	1298	1.9	47	1072	2.2	36.815	GFL09-2M □□□112C32	134
	39	1301	2.4	47	1074	2.8	36.889	GFL11-2M □□□112C32	134
	37	1398	1.0	44	1154	1.2	39.642	GFL07-2M □□□112C32	134
	36	1399	1.6	44	1155	1.9	39.667	GFL09-2M □□□112C32	134
	36	1419	2.0	43	1172	2.4	40.233	GFL11-2M □□□112C32	134
	32	1576	1.6	39	1302	1.9	44.704	GFL09-2M □□□112C32	134
	32	1599	2.0	39	1320	2.4	45.333	GFL11-2M □□□112C32	134
	28	1810	1.3	34	1495	1.5	51.333	GFL09-2M □□□112C32	134
	28	1836	1.6	34	1516	1.9	52.067	GFL11-2M □□□112C32	134
	28	1836	2.0	34	1516	2.4	52.067	GFL14-2M □□□112C32	134
	25	2040	1.3	30	1685	1.5	57.852	GFL09-2M □□□112C32	134
	25	2069	1.6	30	1708	1.9	58.667	GFL11-2M □□□112C32	134
	25	2069	2.0	30	1708	2.4	58.667	GFL14-2M □□□112C32	134
	23	2197	1.1	28	1814	1.3	62.300	GFL09-2M □□□112C32	134
	23	2228	1.3	28	1840	1.6	63.190	GFL11-2M □□□112C32	134
	23	2228	1.6	28	1840	2.0	63.190	GFL14-2M □□□112C32	134
	23	2233	2.5	27	1844	3.0	64.296	GFL14-3M □□□112C32	142
	22	2268	1.3	27	1873	1.5	65.306	GFL11-3M □□□112C32	142
	21	2387	2.3	25	1971	2.7	68.708	GFL14-3M □□□112C32	142
	21	2476	1.0	25	2044	1.2	70.211	GFL09-2M □□□112C32	134
	20	2511	1.3	25	2073	1.6	71.200	GFL11-2M □□□112C32	134
	20	2511	1.6	25	2073	2.0	71.200	GFL14-2M □□□112C32	134
	20	2547	1.1	24	2103	1.4	73.335	GFL11-3M □□□112C32	142
	19	2689	2.3	23	2220	2.7	77.418	GFL14-3M □□□112C32	142
	18	2817	1.1	22	2326	1.3	79.875	GFL11-2M □□□112C32	134
	18	2817	1.3	22	2326	1.6	79.875	GFL14-2M □□□112C32	134
	18	2870	1.1	21	2370	1.4	82.631	GFL11-3M □□□112C32	142
	17	2954	2.1	21	2439	2.6	85.037	GFL14-3M □□□112C32	142
	16	3174	1.1	19	2621	1.3	90.000	GFL11-2M □□□112C32	134
	16	3174	1.3	19	2621	1.6	90.000	GFL14-2M □□□112C32	134
	15	3249	1.0	19	2683	1.2	93.540	GFL11-3M □□□112C32	142
	14	3643	1.9	17	3008	2.2	104.889	GFL14-3M □□□112C32	142
	14	3661	1.0	17	3023	1.2	105.397	GFL11-3M □□□112C32	142
	13	3964	1.7	15	3273	2.1	114.126	GFL14-3M □□□112C32	142
	13	3980	0.9	15	3287	1.1	114.586	GFL11-3M □□□112C32	142
	11	4467	1.7	14	3688	2.1	128.593	GFL14-3M □□□112C32	142
	11	4485	0.9	14	3703	1.1	129.111	GFL11-3M □□□112C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 5.5 \text{ kW}$

n _N	1445 r/min			1750 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	11	4755	1.5	13	3926	1.9	136.889	GFL14-3M □□□112C32	142
	9.3	5424	1.5	11	4479	1.8	156.148	GFL14-3M □□□112C32	142
	8.5	5908	1.4	10	4878	1.7	170.074	GFL14-3M □□□112C32	142
	7.2	7019	1.3	8.6	5796	1.5	202.074	GFL14-3M □□□112C32	142
	6.4	7803	1.1	7.8	6443	1.4	224.636	GFL14-3M □□□112C32	142
	5.7	8792	1.1	6.9	7260	1.4	253.111	GFL14-3M □□□112C32	142
	5.3	9510	1.0	6.4	7852	1.2	273.778	GFL14-3M □□□112C32	142
	4.4	11548	0.9	5.3	9535	1.1	332.444	GFL14-3M □□□112C32	142
	4.1	12255	0.8	5.0	10119	1.0	352.811	GFL14-3M □□□112C32	142
	3.6	13809	0.8	4.4	11402	1.0	397.533	GFL14-3M □□□112C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 7.5 \text{ kW}$

n _N f _N	2890 r/min			3500 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	786	88	2.9	950	73	3.3	3.675	GFL06-2M □□□112C41	134
	623	112	3.6	752	92	4.1	4.643	GFL07-2M □□□112C41	134
	555	125	2.7	670	103	3.1	5.211	GFL06-2M □□□112C41	134
	503	138	2.6	607	114	2.9	5.750	GFL06-2M □□□112C41	134
	452	154	2.9	545	127	3.3	6.400	GFL07-2M □□□112C41	134
	448	155	1.8	541	128	2.1	6.450	GFL06-2M □□□112C41	134
	404	172	2.0	488	142	2.3	7.147	GFL06-2M □□□112C41	134
	344	202	2.4	416	167	2.7	8.400	GFL06-2M □□□112C41	134
	305	228	2.1	369	188	2.3	9.463	GFL06-2M □□□112C41	134
	298	234	3.1	359	193	3.5	9.714	GFL07-2M □□□112C41	134
	286	243	1.5	346	200	1.7	10.092	GFL06-2M □□□112C41	134
	251	277	1.8	303	229	2.1	11.520	GFL06-2M □□□112C41	134
	250	277	3.1	303	229	3.6	11.537	GFL07-2M □□□112C41	134
	223	312	1.5	269	258	1.7	12.978	GFL06-2M □□□112C41	134
	222	313	2.8	269	258	3.2	13.000	GFL07-2M □□□112C41	134
	204	341	2.7	246	282	3.1	14.200	GFL07-2M □□□112C41	134
	196	354	1.5	237	293	1.7	14.743	GFL06-2M □□□112C41	134
	182	382	2.5	219	316	2.8	15.904	GFL07-2M □□□112C41	134
	179	388	1.3	216	320	1.5	16.128	GFL06-2M □□□112C41	134
	161	431	2.2	195	356	2.5	17.920	GFL07-2M □□□112C41	134
	159	437	1.1	192	361	1.3	18.169	GFL06-2M □□□112C41	134
	143	488	2.1	172	403	2.4	20.286	GFL07-2M □□□112C41	134
	141	495	1.0	170	408	1.2	20.571	GFL06-2M □□□112C41	134
	126	550	1.8	153	454	2.1	22.857	GFL07-2M □□□112C41	134
	125	557	0.9	151	460	1.0	23.175	GFL06-2M □□□112C41	134
	120	580	3.2	145	479	3.6	24.111	GFL09-2M □□□112C41	134
	116	597	2.0	140	493	2.3	24.850	GFL07-2M □□□112C41	134
	115	606	1.0	139	500	1.1	25.200	GFL06-2M □□□112C41	134
	106	653	3.2	128	539	3.6	27.173	GFL09-2M □□□112C41	134
	103	673	1.7	125	556	1.9	28.000	GFL07-2M □□□112C41	134
	102	683	0.8	123	564	0.9	28.389	GFL06-2M □□□112C41	134
	89	778	1.6	108	642	1.8	32.344	GFL07-2M □□□112C41	134
	89	785	2.5	107	649	2.8	32.667	GFL09-2M □□□112C41	134
	88	787	3.1	107	650	3.6	32.739	GFL11-2M □□□112C41	134
	79	876	1.3	96	724	1.5	36.444	GFL07-2M □□□112C41	134
	79	885	2.5	95	731	2.8	36.815	GFL09-2M □□□112C41	134
	78	887	3.1	95	732	3.6	36.889	GFL11-2M □□□112C41	134
	73	953	1.3	88	787	1.5	39.642	GFL07-2M □□□112C41	134
	73	954	2.1	88	788	2.4	39.667	GFL09-2M □□□112C41	134
	72	967	2.6	87	799	3.0	40.233	GFL11-2M □□□112C41	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 7.5 \text{ kW}$

n _N f _N	2890 r/min			3500 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	65	1074	1.1	78	887	1.2	44.667	GFL07-2M □□□112C41	134
	65	1075	2.1	78	888	2.4	44.704	GFL09-2M □□□112C41	134
	64	1090	2.6	77	900	3.0	45.333	GFL11-2M □□□112C41	134
	56	1234	1.7	68	1019	1.9	51.333	GFL09-2M □□□112C41	134
	56	1252	2.1	67	1034	2.4	52.067	GFL11-2M □□□112C41	134
	56	1252	2.6	67	1034	3.0	52.067	GFL14-2M □□□112C41	134
	50	1391	1.7	60	1149	1.9	57.852	GFL09-2M □□□112C41	134
	49	1411	2.1	60	1165	2.4	58.667	GFL11-2M □□□112C41	134
	49	1411	2.6	60	1165	3.0	58.667	GFL14-2M □□□112C41	134
	46	1498	1.4	56	1237	1.6	62.300	GFL09-2M □□□112C41	134
	46	1519	1.8	55	1255	2.0	63.190	GFL11-2M □□□112C41	134
	46	1519	2.2	55	1255	2.5	63.190	GFL14-2M □□□112C41	134
	46	1500	0.9	55	1238	1.0	63.326	GFL09-3M □□□112C41	142
	44	1547	1.9	53	1277	2.2	65.306	GFL11-3M □□□112C41	142
	41	1688	1.5	50	1394	1.7	70.211	GFL09-2M □□□112C41	134
	41	1712	1.9	49	1414	2.2	71.200	GFL11-2M □□□112C41	134
	41	1712	2.4	49	1414	2.8	71.200	GFL14-2M □□□112C41	134
	40	1733	0.9	48	1431	1.0	73.173	GFL09-3M □□□112C41	142
	39	1737	1.7	48	1434	1.9	73.335	GFL11-3M □□□112C41	142
	36	1921	1.6	44	1586	1.8	79.875	GFL11-2M □□□112C41	134
	36	1921	1.9	44	1586	2.2	79.875	GFL14-2M □□□112C41	134
	35	1953	0.9	42	1613	1.0	82.465	GFL09-3M □□□112C41	142
	35	1957	1.7	42	1616	1.9	82.631	GFL11-3M □□□112C41	142
	34	2014	3.1	41	1663	3.6	85.037	GFL14-3M □□□112C41	142
	32	2164	1.6	39	1787	1.8	90.000	GFL11-2M □□□112C41	134
	32	2164	1.9	39	1787	2.2	90.000	GFL14-2M □□□112C41	134
	31	2215	1.4	37	1829	1.7	93.540	GFL11-3M □□□112C41	142
	28	2484	2.7	33	2051	3.1	104.889	GFL14-3M □□□112C41	142
	27	2496	1.4	33	2061	1.7	105.397	GFL11-3M □□□112C41	142
	25	2703	2.5	31	2232	2.9	114.126	GFL14-3M □□□112C41	142
	25	2714	1.3	31	2241	1.5	114.586	GFL11-3M □□□112C41	142
	23	3046	2.5	27	2515	2.9	128.593	GFL14-3M □□□112C41	142
	22	3058	1.3	27	2525	1.5	129.111	GFL11-3M □□□112C41	142
	21	3242	2.3	26	2677	2.6	136.889	GFL14-3M □□□112C41	142
	19	3532	1.1	23	2917	1.3	149.144	GFL11-3M □□□112C41	142
	19	3698	2.2	22	3054	2.6	156.148	GFL14-3M □□□112C41	142
	17	3980	1.1	21	3286	1.3	168.049	GFL11-3M □□□112C41	142
	17	4028	2.1	21	3326	2.4	170.074	GFL14-3M □□□112C41	142
	16	4329	1.0	19	3575	1.1	182.792	GFL11-3M □□□112C41	142
	14	4786	1.9	17	3952	2.1	202.074	GFL14-3M □□□112C41	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 7.5 \text{ kW}$

n_N	2890 r/min			3500 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	14	4878	1.0	17	4028	1.1	205.963	GFL11-3M □□□112C41	142
	13	5320	0.9	16	4393	1.0	224.636	GFL11-3M □□□112C41	142
	13	5320	1.6	16	4393	1.9	224.636	GFL14-3M □□□112C41	142
	11	5995	0.9	14	4950	1.0	253.111	GFL11-3M □□□112C41	142
	11	5995	1.6	14	4950	1.9	253.111	GFL14-3M □□□112C41	142
	11	6330	0.8	13	5226	0.9	267.259	GFL11-3M □□□112C41	142
	11	6484	1.5	13	5354	1.7	273.778	GFL14-3M □□□112C41	142
	8.7	7873	1.3	11	6501	1.5	332.444	GFL14-3M □□□112C41	142
	8.2	8356	1.2	9.9	6899	1.4	352.811	GFL14-3M □□□112C41	142
	7.3	9415	1.2	8.8	7774	1.4	397.533	GFL14-3M □□□112C41	142
	6.7	10189	1.0	8.1	8413	1.2	430.222	GFL14-3M □□□112C41	142
	5.5	12366	0.9	6.7	10211	1.0	522.133	GFL14-3M □□□112C41	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 7.5 \text{ kW}$

n _N f _N	1455 r/min			1760 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	313	222	2.9	378	183	3.4	4.643	GFL07-2M □□□132C22	134
	227	306	2.2	274	253	2.5	6.400	GFL07-2M □□□132C22	134
	204	341	2.7	246	282	3.1	7.150	GFL07-2M □□□132C22	134
	175	398	2.5	211	329	2.9	8.324	GFL07-2M □□□132C22	134
	155	448	2.2	187	370	2.6	9.379	GFL07-2M □□□132C22	134
	150	464	2.1	181	384	2.4	9.714	GFL07-2M □□□132C22	134
	126	551	2.0	153	456	2.2	11.537	GFL07-2M □□□132C22	134
	112	621	1.8	135	513	2.0	13.000	GFL07-2M □□□132C22	134
	103	678	1.7	124	561	1.9	14.200	GFL07-2M □□□132C22	134
	92	760	1.6	110	628	1.8	15.904	GFL07-2M □□□132C22	134
	89	780	3.2	107	645	3.6	16.333	GFL09-2M □□□132C22	134
	81	856	1.4	98	708	1.6	17.920	GFL07-2M □□□132C22	134
	79	879	2.8	95	727	3.2	18.407	GFL09-2M □□□132C22	134
	74	939	2.7	89	776	3.1	19.667	GFL09-2M □□□132C22	134
	72	969	1.3	87	801	1.5	20.286	GFL07-2M □□□132C22	134
	66	1058	2.5	79	875	2.8	22.164	GFL09-2M □□□132C22	134
	64	1092	1.1	77	902	1.3	22.857	GFL07-2M □□□132C22	134
	60	1151	2.4	73	952	2.9	24.111	GFL09-2M □□□132C22	134
	59	1187	1.1	71	981	1.4	24.850	GFL07-2M □□□132C22	134
	54	1298	2.1	65	1073	2.6	27.173	GFL09-2M □□□132C22	134
	52	1337	0.9	63	1105	1.1	28.000	GFL07-2M □□□132C22	134
	52	1337	3.2	63	1105	3.9	28.000	GFL11-2M □□□132C22	134
	45	1545	0.9	54	1277	1.1	32.344	GFL07-2M □□□132C22	134
	45	1560	1.9	54	1290	2.3	32.667	GFL09-2M □□□132C22	134
	44	1564	2.9	54	1293	3.6	32.739	GFL11-2M □□□132C22	134
	40	1758	1.7	48	1454	2.1	36.815	GFL09-2M □□□132C22	134
	39	1762	2.6	48	1456	3.2	36.889	GFL11-2M □□□132C22	134
	37	1894	1.6	44	1566	2.0	39.667	GFL09-2M □□□132C22	134
	36	1921	2.5	44	1588	3.1	40.233	GFL11-2M □□□132C22	134
	33	2135	1.4	39	1765	1.7	44.704	GFL09-2M □□□132C22	134
	32	2165	2.3	39	1790	2.7	45.333	GFL11-2M □□□132C22	134
	28	2487	2.1	34	2056	2.6	52.067	GFL11-2M □□□132C22	134
	28	2487	3.1	34	2056	3.7	52.067	GFL14-2M □□□132C22	134
	25	2802	1.9	30	2316	2.3	58.667	GFL11-2M □□□132C22	134
	25	2802	3.1	30	2316	3.7	58.667	GFL14-2M □□□132C22	134
	23	3018	1.8	28	2495	2.2	63.190	GFL11-2M □□□132C22	134
	23	3018	2.6	28	2495	3.1	63.190	GFL14-2M □□□132C22	134
	23	3025	1.9	27	2500	2.2	64.296	GFL14-3M □□□132C22	142
	22	3072	0.9	27	2540	1.1	65.306	GFL11-3M □□□132C22	142
	21	3232	1.7	26	2672	2.0	68.708	GFL14-3M □□□132C22	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 7.5 \text{ kW}$

n_N	1455 r/min			1760 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	20	3400	1.6	25	2811	2.0	71.200	GFL11-2M □□□132C22	134
	20	3400	2.6	25	2811	3.1	71.200	GFL14-2M □□□132C22	134
	20	3450	0.8	24	2852	1.0	73.335	GFL11-3M □□□132C22	142
	19	3642	1.7	23	3011	2.0	77.418	GFL14-3M □□□132C22	142
	18	3815	1.8	22	3154	2.2	79.875	GFL14-2M □□□132C22	134
	18	3887	0.8	21	3213	1.0	82.631	GFL11-3M □□□132C22	142
	17	4000	1.6	21	3307	1.9	85.037	GFL14-3M □□□132C22	142
	16	4298	1.8	20	3553	2.2	90.000	GFL14-2M □□□132C22	134
	14	4934	1.4	17	4079	1.7	104.889	GFL14-3M □□□132C22	142
	13	5369	1.3	15	4438	1.5	114.126	GFL14-3M □□□132C22	142
	11	6049	1.3	14	5001	1.5	128.593	GFL14-3M □□□132C22	142
	11	6439	1.1	13	5323	1.4	136.889	GFL14-3M □□□132C22	142
	9.3	7345	1.1	11	6072	1.4	156.148	GFL14-3M □□□132C22	142
	8.6	8000	1.1	10	6614	1.3	170.074	GFL14-3M □□□132C22	142
	6.5	10567	0.8	7.8	8736	1.0	224.636	GFL14-3M □□□132C22	142
	5.8	11907	0.8	6.9	9843	1.0	253.111	GFL14-3M □□□132C22	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 9.0 \text{ kW}$

n _N f _N	2890 r/min			3500 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	623	134	3.9	752	111	4.4	4.643	GFL07-2M □□□132C21	134
	452	185	2.9	545	152	3.3	6.400	GFL07-2M □□□132C21	134
	308	271	3.0	372	223	3.4	9.379	GFL07-2M □□□132C21	134
	298	280	2.8	359	231	3.2	9.714	GFL07-2M □□□132C21	134
	250	333	2.6	303	275	3.0	11.537	GFL07-2M □□□132C21	134
	222	375	2.3	269	310	2.7	13.000	GFL07-2M □□□132C21	134
	204	410	2.2	246	338	2.5	14.200	GFL07-2M □□□132C21	134
	182	459	2.1	219	379	2.3	15.904	GFL07-2M □□□132C21	134
	161	517	1.8	195	427	2.1	17.920	GFL07-2M □□□132C21	134
	143	585	1.7	172	483	2.0	20.286	GFL07-2M □□□132C21	134
	126	659	1.5	153	545	1.7	22.857	GFL07-2M □□□132C21	134
	116	717	1.7	140	592	1.9	24.850	GFL07-2M □□□132C21	134
	106	784	3.2	128	647	3.7	27.173	GFL09-2M □□□132C21	134
	103	808	1.4	125	667	1.6	28.000	GFL07-2M □□□132C21	134
	89	933	1.3	108	771	1.5	32.344	GFL07-2M □□□132C21	134
	89	943	2.9	107	778	3.3	32.667	GFL09-2M □□□132C21	134
	79	1052	1.1	96	868	1.2	36.444	GFL07-2M □□□132C21	134
	79	1062	2.6	95	877	2.9	36.815	GFL09-2M □□□132C21	134
	73	1144	2.5	88	945	2.8	39.667	GFL09-2M □□□132C21	134
	65	1290	2.1	78	1065	2.4	44.704	GFL09-2M □□□132C21	134
	56	1502	3.2	67	1240	3.6	52.067	GFL11-2M □□□132C21	134
	49	1693	2.8	60	1398	3.2	58.667	GFL11-2M □□□132C21	134
	46	1823	2.8	55	1505	3.2	63.190	GFL11-2M □□□132C21	134
	45	1827	2.8	54	1509	3.2	64.296	GFL14-3M □□□132C21	142
	44	1856	1.6	53	1533	1.8	65.306	GFL11-3M □□□132C21	142
	42	1953	2.8	51	1612	3.2	68.708	GFL14-3M □□□132C21	142
	41	2054	2.7	49	1696	3.1	71.200	GFL11-2M □□□132C21	134
	39	2084	1.4	48	1721	1.6	73.335	GFL11-3M □□□132C21	142
	37	2200	2.8	45	1817	3.2	77.418	GFL14-3M □□□132C21	142
	36	2305	3.0	44	1903	3.5	79.875	GFL14-2M □□□132C21	134
	35	2348	1.4	42	1939	1.6	82.631	GFL11-3M □□□132C21	142
	34	2417	2.6	41	1996	3.0	85.037	GFL14-3M □□□132C21	142
	32	2597	3.0	39	2144	3.5	90.000	GFL14-2M □□□132C21	134
	31	2658	1.2	37	2195	1.4	93.540	GFL11-3M □□□132C21	142
	28	2981	2.3	33	2461	2.7	104.889	GFL14-3M □□□132C21	142
	27	2995	1.2	33	2473	1.4	105.397	GFL11-3M □□□132C21	142
	25	3243	2.1	31	2678	2.4	114.126	GFL14-3M □□□132C21	142
	25	3257	1.1	31	2689	1.2	114.586	GFL11-3M □□□132C21	142
	23	3655	2.1	27	3018	2.4	128.593	GFL14-3M □□□132C21	142
	22	3669	1.1	27	3030	1.2	129.111	GFL11-3M □□□132C21	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 9.0 \text{ kW}$

n_N	2890 r/min			3500 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	21	3890	1.9	26	3212	2.2	136.889	GFL14-3M □□□132C21	142
	19	4239	0.9	23	3500	1.1	149.144	GFL11-3M □□□132C21	142
	19	4438	1.9	22	3664	2.1	156.148	GFL14-3M □□□132C21	142
	17	4776	0.9	21	3944	1.1	168.049	GFL11-3M □□□132C21	142
	17	4834	1.7	21	3991	2.0	170.074	GFL14-3M □□□132C21	142
	13	6384	1.4	16	5271	1.6	224.636	GFL14-3M □□□132C21	142
	11	7193	1.4	14	5940	1.6	253.111	GFL14-3M □□□132C21	142
	11	7781	1.3	13	6425	1.4	273.778	GFL14-3M □□□132C21	142
	8.7	9448	1.1	11	7801	1.3	332.444	GFL14-3M □□□132C21	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 9.2 \text{ kW}$

n _N	1450 r/min			1750 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	433	197	3.2	522	163	3.7	3.350	GFL07-2M □□□132C32	134
	312	273	2.4	377	226	2.7	4.643	GFL07-2M □□□132C32	134
	281	303	2.8	339	251	3.2	5.159	GFL07-2M □□□132C32	134
	255	335	2.7	307	277	3.1	5.695	GFL07-2M □□□132C32	134
	227	376	1.8	273	312	2.0	6.400	GFL07-2M □□□132C32	134
	203	420	2.2	245	348	2.5	7.150	GFL07-2M □□□132C32	134
	174	489	2.0	210	405	2.3	8.324	GFL07-2M □□□132C32	134
	155	551	1.8	187	457	2.1	9.379	GFL07-2M □□□132C32	134
	149	571	1.7	180	473	1.9	9.714	GFL07-2M □□□132C32	134
	126	678	1.6	152	562	1.8	11.537	GFL07-2M □□□132C32	134
	118	723	3.1	142	599	3.5	12.307	GFL09-2M □□□132C32	134
	112	764	1.4	135	633	1.6	13.000	GFL07-2M □□□132C32	134
	102	835	1.4	123	692	1.6	14.200	GFL07-2M □□□132C32	134
	101	843	2.8	122	698	3.2	14.333	GFL09-2M □□□132C32	134
	91	935	1.3	110	775	1.4	15.904	GFL07-2M □□□132C32	134
	89	960	2.6	107	796	2.9	16.333	GFL09-2M □□□132C32	134
	81	1053	1.1	98	873	1.3	17.920	GFL07-2M □□□132C32	134
	79	1082	2.3	95	897	2.6	18.407	GFL09-2M □□□132C32	134
	74	1156	2.2	89	958	2.5	19.667	GFL09-2M □□□132C32	134
	72	1192	1.1	86	988	1.2	20.286	GFL07-2M □□□132C32	134
	65	1303	2.0	79	1080	2.3	22.164	GFL09-2M □□□132C32	134
	63	1344	0.9	77	1113	1.1	22.857	GFL07-2M □□□132C32	134
	63	1344	3.0	77	1113	3.4	22.857	GFL11-2M □□□132C32	134
	60	1417	1.9	73	1174	2.3	24.111	GFL09-2M □□□132C32	134
	58	1461	0.9	70	1210	1.1	24.850	GFL07-2M □□□132C32	134
	58	1461	2.9	70	1210	3.5	24.850	GFL11-2M □□□132C32	134
	53	1597	1.7	64	1324	2.1	27.173	GFL09-2M □□□132C32	134
	52	1646	2.6	63	1364	3.1	28.000	GFL11-2M □□□132C32	134
	44	1920	1.6	54	1591	1.9	32.667	GFL09-2M □□□132C32	134
	44	1925	2.4	54	1595	2.9	32.739	GFL11-2M □□□132C32	134
	39	2164	1.4	48	1793	1.7	36.815	GFL09-2M □□□132C32	134
	39	2168	2.1	47	1797	2.6	36.889	GFL11-2M □□□132C32	134
	37	2330	3.1	44	1931	3.7	39.642	GFL14-2M □□□132C32	134
	37	2332	1.3	44	1932	1.6	39.667	GFL09-2M □□□132C32	134
	36	2365	2.1	44	1960	2.5	40.233	GFL11-2M □□□132C32	134
	33	2626	3.1	39	2176	3.7	44.667	GFL14-2M □□□132C32	134
	32	2628	1.2	39	2177	1.4	44.704	GFL09-2M □□□132C32	134
	32	2665	1.8	39	2208	2.2	45.333	GFL11-2M □□□132C32	134
	28	3061	1.7	34	2536	2.1	52.067	GFL11-2M □□□132C32	134
	28	3061	2.5	34	2536	3.0	52.067	GFL14-2M □□□132C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 9.2 \text{ kW}$

n_N	1450 r/min			1750 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	25	3449	1.5	30	2857	1.8	58.667	GFL11-2M □□□132C32	134
	25	3449	2.5	30	2857	3.0	58.667	GFL14-2M □□□132C32	134
	23	3715	1.5	28	3078	1.8	63.190	GFL11-2M □□□132C32	134
	23	3715	2.1	28	3078	2.5	63.190	GFL14-2M □□□132C32	134
	23	3723	1.5	27	3085	1.8	64.296	GFL14-3M □□□132C32	142
	21	3978	1.4	26	3296	1.6	68.708	GFL14-3M □□□132C32	142
	20	4185	1.3	25	3468	1.6	71.200	GFL11-2M □□□132C32	134
	20	4185	2.1	25	3468	2.5	71.200	GFL14-2M □□□132C32	134
	19	4483	1.4	23	3714	1.6	77.418	GFL14-3M □□□132C32	142
	18	4695	1.5	22	3890	1.8	79.875	GFL14-2M □□□132C32	134
	17	4924	1.3	21	4080	1.5	85.037	GFL14-3M □□□132C32	142
	16	5291	1.5	19	4384	1.8	90.000	GFL14-2M □□□132C32	134
	14	6073	1.1	17	5032	1.4	104.889	GFL14-3M □□□132C32	142
	13	6608	1.0	15	5475	1.2	114.126	GFL14-3M □□□132C32	142
	11	7446	1.0	14	6169	1.2	128.593	GFL14-3M □□□132C32	142
	11	7926	0.9	13	6567	1.1	136.889	GFL14-3M □□□132C32	142
	9.3	9041	0.9	11	7491	1.1	156.148	GFL14-3M □□□132C32	142
	8.5	9848	0.9	10	8160	1.0	170.074	GFL14-3M □□□132C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 11.0 \text{ kW}$

n _N f _N	1460 r/min			1770 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	436	234	2.7	525	193	3.1	3.350	GFL07-2M □□□160C22	134
	315	324	2.0	379	267	2.3	4.643	GFL07-2M □□□160C22	134
	283	360	2.4	341	297	2.7	5.159	GFL07-2M □□□160C22	134
	256	398	2.3	309	328	2.6	5.695	GFL07-2M □□□160C22	134
	228	447	1.5	275	369	1.7	6.400	GFL07-2M □□□160C22	134
	204	499	1.8	246	412	2.1	7.150	GFL07-2M □□□160C22	134
	175	581	1.7	211	479	2.0	8.324	GFL07-2M □□□160C22	134
	156	655	1.5	188	540	1.8	9.379	GFL07-2M □□□160C22	134
	150	678	1.4	181	559	1.6	9.714	GFL07-2M □□□160C22	134
	131	779	3.0	158	643	3.4	11.167	GFL09-2M □□□160C22	134
	127	805	1.3	153	664	1.5	11.537	GFL07-2M □□□160C22	134
	119	859	2.6	143	709	3.0	12.307	GFL09-2M □□□160C22	134
	112	907	1.2	135	749	1.4	13.000	GFL07-2M □□□160C22	134
	103	991	1.2	124	818	1.3	14.200	GFL07-2M □□□160C22	134
	102	1001	2.4	123	825	2.7	14.333	GFL09-2M □□□160C22	134
	92	1110	1.1	111	916	1.2	15.904	GFL07-2M □□□160C22	134
	89	1140	2.2	108	940	2.5	16.333	GFL09-2M □□□160C22	134
	82	1251	1.0	98	1032	1.1	17.920	GFL07-2M □□□160C22	134
	82	1251	3.0	98	1032	3.5	17.920	GFL11-2M □□□160C22	134
	79	1285	1.9	96	1060	2.2	18.407	GFL09-2M □□□160C22	134
	74	1373	1.9	90	1132	2.1	19.667	GFL09-2M □□□160C22	134
	72	1416	2.9	87	1168	3.3	20.286	GFL11-2M □□□160C22	134
	66	1547	1.7	79	1276	1.9	22.164	GFL09-2M □□□160C22	134
	64	1596	2.5	77	1316	2.9	22.857	GFL11-2M □□□160C22	134
	61	1683	1.6	73	1388	2.0	24.111	GFL09-2M □□□160C22	134
	59	1735	2.5	71	1431	3.0	24.850	GFL11-2M □□□160C22	134
	54	1897	1.5	65	1565	1.8	27.173	GFL09-2M □□□160C22	134
	52	1955	2.2	63	1612	2.6	28.000	GFL11-2M □□□160C22	134
	45	2285	2.0	54	1885	2.4	32.739	GFL11-2M □□□160C22	134
	40	2575	1.8	48	2124	2.2	36.889	GFL11-2M □□□160C22	134
	36	2808	1.7	44	2317	2.1	40.233	GFL11-2M □□□160C22	134
	32	3164	1.5	39	2610	1.9	45.333	GFL11-2M □□□160C22	134
	28	3634	2.8	34	2998	3.4	52.067	GFL14-2M □□□160C22	134
	25	4095	2.8	30	3378	3.3	58.667	GFL14-2M □□□160C22	134
	23	4411	2.3	28	3638	2.7	63.190	GFL14-2M □□□160C22	134
	23	4421	1.3	27	3647	1.5	64.296	GFL14-3M □□□160C22	142
	21	4724	1.1	26	3897	1.4	68.708	GFL14-3M □□□160C22	142
	21	4970	2.1	25	4100	2.6	71.200	GFL14-2M □□□160C22	134
	19	5323	1.1	23	4391	1.4	77.418	GFL14-3M □□□160C22	142
	17	5847	1.1	21	4823	1.3	85.037	GFL14-3M □□□160C22	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 15.0 \text{ kW}$

n _N	1460 r/min			1760 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	436	319	2.0	525	265	2.3	3.350	GFL07-2M □□□160C32	134
	315	442	1.5	379	367	1.7	4.643	GFL07-2M □□□160C32	134
	283	491	1.7	341	407	2.0	5.159	GFL07-2M □□□160C32	134
	256	542	1.7	309	450	1.9	5.695	GFL07-2M □□□160C32	134
	228	609	1.1	275	505	1.2	6.400	GFL07-2M □□□160C32	134
	213	653	3.2	256	542	3.7	6.864	GFL09-2M □□□160C32	134
	204	681	1.3	246	565	1.5	7.150	GFL07-2M □□□160C32	134
	196	711	3.0	236	590	3.5	7.466	GFL09-2M □□□160C32	134
	175	792	1.3	211	657	1.4	8.324	GFL07-2M □□□160C32	134
	162	858	2.6	195	711	3.0	9.010	GFL09-2M □□□160C32	134
	156	893	1.1	188	741	1.3	9.379	GFL07-2M □□□160C32	134
	150	925	1.0	181	767	1.2	9.714	GFL07-2M □□□160C32	134
	149	933	2.5	180	774	2.8	9.799	GFL09-2M □□□160C32	134
	131	1063	2.2	158	882	2.5	11.167	GFL09-2M □□□160C32	134
	127	1098	1.0	153	911	1.1	11.537	GFL07-2M □□□160C32	134
	119	1171	1.9	143	972	2.2	12.307	GFL09-2M □□□160C32	134
	117	1188	2.9	141	985	3.3	12.480	GFL11-2M □□□160C32	134
	112	1237	0.9	135	1027	1.0	13.000	GFL07-2M □□□160C32	134
	103	1352	0.8	124	1121	1.0	14.200	GFL07-2M □□□160C32	134
	102	1364	1.7	123	1132	2.0	14.333	GFL09-2M □□□160C32	134
	100	1384	2.7	121	1148	3.1	14.538	GFL11-2M □□□160C32	134
	92	1514	2.5	111	1256	2.9	15.904	GFL11-2M □□□160C32	134
	89	1555	1.6	108	1290	1.8	16.333	GFL09-2M □□□160C32	134
	82	1706	2.2	98	1415	2.5	17.920	GFL11-2M □□□160C32	134
	79	1752	1.4	96	1454	1.6	18.407	GFL09-2M □□□160C32	134
	74	1872	1.4	90	1553	1.6	19.667	GFL09-2M □□□160C32	134
	72	1931	2.1	87	1602	2.4	20.286	GFL11-2M □□□160C32	134
	66	2110	1.2	79	1750	1.4	22.164	GFL09-2M □□□160C32	134
	64	2176	1.9	77	1805	2.1	22.857	GFL11-2M □□□160C32	134
	61	2295	1.2	73	1904	1.4	24.111	GFL09-2M □□□160C32	134
	59	2365	1.8	71	1962	2.2	24.850	GFL11-2M □□□160C32	134
	54	2587	1.1	65	2146	1.3	27.173	GFL09-2M □□□160C32	134
	52	2665	1.6	63	2211	1.9	28.000	GFL11-2M □□□160C32	134
	45	3079	3.0	54	2554	3.7	32.344	GFL14-2M □□□160C32	134
	45	3116	1.5	54	2585	1.8	32.739	GFL11-2M □□□160C32	134
	40	3469	3.0	48	2878	3.7	36.444	GFL14-2M □□□160C32	134
	40	3511	1.3	48	2913	1.6	36.889	GFL11-2M □□□160C32	134
	37	3773	2.6	44	3130	3.1	39.642	GFL14-2M □□□160C32	134
	36	3830	1.3	44	3177	1.5	40.233	GFL11-2M □□□160C32	134
	33	4252	2.6	39	3527	3.1	44.667	GFL14-2M □□□160C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 15.0 \text{ kW}$

n _N	1460 r/min			1760 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	32	4315	1.1	39	3580	1.4	45.333	GFL11-2M □□□160C32	134
	28	4956	2.0	34	4111	2.5	52.067	GFL14-2M □□□160C32	134
	25	5584	2.0	30	4632	2.4	58.667	GFL14-2M □□□160C32	134
	23	6015	1.7	28	4990	2.0	63.190	GFL14-2M □□□160C32	134
	23	6028	0.9	27	5001	1.1	64.296	GFL14-3M □□□160C32	142
	21	6442	0.8	26	5344	1.0	68.708	GFL14-3M □□□160C32	142
	21	6777	1.6	25	5622	1.9	71.200	GFL14-2M □□□160C32	134
	19	7259	0.8	23	6021	1.0	77.418	GFL14-3M □□□160C32	142

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 18.5 \text{ kW}$

n _N f _N	1470 r/min			1780 r/min			i		
	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	214	800	2.6	258	661	3.0	6.864	GFL09-2M □□□180C12	134
	197	871	2.5	237	719	2.8	7.466	GFL09-2M □□□180C12	134
	163	1051	2.1	197	868	2.4	9.010	GFL09-2M □□□180C12	134
	150	1143	2.0	181	944	2.3	9.799	GFL09-2M □□□180C12	134
	137	1250	3.1	165	1032	3.5	10.720	GFL11-2M □□□180C12	134
	132	1302	1.8	159	1075	2.0	11.167	GFL09-2M □□□180C12	134
	119	1435	1.5	144	1185	1.8	12.307	GFL09-2M □□□180C12	134
	118	1455	2.4	142	1202	2.7	12.480	GFL11-2M □□□180C12	134
	103	1671	1.4	124	1380	1.6	14.333	GFL09-2M □□□180C12	134
	101	1695	2.2	122	1400	2.5	14.538	GFL11-2M □□□180C12	134
	92	1854	2.0	111	1531	2.3	15.904	GFL11-2M □□□180C12	134
	90	1904	1.3	108	1573	1.5	16.333	GFL09-2M □□□180C12	134
	82	2089	1.8	99	1726	2.1	17.920	GFL11-2M □□□180C12	134
	80	2146	1.2	96	1773	1.3	18.407	GFL09-2M □□□180C12	134
	75	2293	1.1	90	1894	1.3	19.667	GFL09-2M □□□180C12	134
	73	2365	1.7	87	1953	2.0	20.286	GFL11-2M □□□180C12	134
	66	2584	1.0	80	2134	1.2	22.164	GFL09-2M □□□180C12	134
	64	2665	1.5	77	2201	1.7	22.857	GFL11-2M □□□180C12	134
	61	2811	1.0	73	2322	1.2	24.111	GFL09-2M □□□180C12	134
	60	2852	3.1	72	2355	3.8	24.456	GFL14-2M □□□180C12	134
	59	2898	1.5	71	2393	1.8	24.850	GFL11-2M □□□180C12	134
	54	3168	0.9	65	2617	1.1	27.173	GFL09-2M □□□180C12	134
	53	3213	3.1	64	2653	3.8	27.556	GFL14-2M □□□180C12	134
	53	3265	1.3	63	2696	1.6	28.000	GFL11-2M □□□180C12	134
	45	3771	2.5	55	3115	3.0	32.344	GFL14-2M □□□180C12	134
	45	3817	1.2	54	3153	1.5	32.739	GFL11-2M □□□180C12	134
	40	4249	2.5	49	3509	3.0	36.444	GFL14-2M □□□180C12	134
	40	4301	1.1	48	3552	1.3	36.889	GFL11-2M □□□180C12	134
	37	4622	2.1	45	3817	2.6	39.642	GFL14-2M □□□180C12	134
	37	4691	1.0	44	3874	1.3	40.233	GFL11-2M □□□180C12	134
	33	5208	2.1	40	4301	2.6	44.667	GFL14-2M □□□180C12	134
	32	5286	0.9	39	4365	1.1	45.333	GFL11-2M □□□180C12	134
	28	6071	1.7	34	5014	2.0	52.067	GFL14-2M □□□180C12	134
	25	6841	1.6	30	5649	2.0	58.667	GFL14-2M □□□180C12	134
	23	7368	1.3	28	6085	1.6	63.190	GFL14-2M □□□180C12	134
	21	8302	1.3	25	6856	1.6	71.200	GFL14-2M □□□180C12	134

GFL shaft-mounted helical gearboxes

Technical data



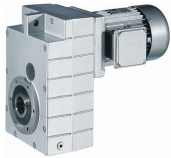
Selection tables

50 Hz, 60 Hz: $P_N = 22.0 \text{ kW}$

n_N	1465 r/min			1760 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	213	955	2.2	257	795	2.5	6.864	GFL09-2M □□□180C32	134
	213	955	3.1	257	795	3.5	6.864	GFL11-2M □□□180C32	134
	196	1039	2.1	236	865	2.4	7.466	GFL09-2M □□□180C32	134
	196	1039	3.1	236	865	3.5	7.466	GFL11-2M □□□180C32	134
	167	1224	3.2	201	1019	3.6	8.800	GFL14-2M □□□180C32	134
	163	1254	1.8	196	1043	2.0	9.010	GFL09-2M □□□180C32	134
	163	1254	2.9	196	1043	3.3	9.010	GFL11-2M □□□180C32	134
	153	1332	3.2	184	1108	3.6	9.571	GFL14-2M □□□180C32	134
	150	1363	1.7	180	1135	1.9	9.799	GFL09-2M □□□180C32	134
	150	1363	2.8	180	1135	3.1	9.799	GFL11-2M □□□180C32	134
	137	1492	2.6	165	1242	2.9	10.720	GFL11-2M □□□180C32	134
	131	1554	1.5	158	1293	1.7	11.167	GFL09-2M □□□180C32	134
	119	1712	1.3	143	1425	1.5	12.307	GFL09-2M □□□180C32	134
	117	1736	2.0	141	1445	2.3	12.480	GFL11-2M □□□180C32	134
	103	1976	3.2	124	1645	3.6	14.200	GFL14-2M □□□180C32	134
	102	1994	1.2	123	1660	1.4	14.333	GFL09-2M □□□180C32	134
	101	2023	1.8	121	1684	2.1	14.538	GFL11-2M □□□180C32	134
	94	2173	3.1	113	1809	3.5	15.620	GFL14-2M □□□180C32	134
	92	2213	1.7	111	1842	2.0	15.904	GFL11-2M □□□180C32	134
	90	2272	1.1	108	1892	1.2	16.333	GFL09-2M □□□180C32	134
	83	2449	3.1	100	2038	3.5	17.600	GFL14-2M □□□180C32	134
	82	2493	1.5	99	2075	1.7	17.920	GFL11-2M □□□180C32	134
	80	2561	1.0	96	2132	1.1	18.407	GFL09-2M □□□180C32	134
	75	2736	0.9	90	2278	1.1	19.667	GFL09-2M □□□180C32	134
	73	2775	2.9	89	2310	3.3	19.948	GFL14-2M □□□180C32	134
	72	2822	1.4	87	2349	1.6	20.286	GFL11-2M □□□180C32	134
	66	3084	0.8	80	2567	1.0	22.164	GFL09-2M □□□180C32	134
	65	3127	2.9	79	2603	3.3	22.476	GFL14-2M □□□180C32	134
	64	3180	1.3	77	2647	1.4	22.857	GFL11-2M □□□180C32	134
	61	3355	0.8	73	2792	1.0	24.111	GFL09-2M □□□180C32	134
	60	3403	2.6	72	2832	3.1	24.456	GFL14-2M □□□180C32	134
	59	3457	1.2	71	2878	1.5	24.850	GFL11-2M □□□180C32	134
	53	3834	2.6	64	3191	3.1	27.556	GFL14-2M □□□180C32	134
	52	3896	1.1	63	3243	1.3	28.000	GFL11-2M □□□180C32	134
	45	4500	2.1	55	3746	2.5	32.344	GFL14-2M □□□180C32	134
	45	4555	1.0	54	3792	1.2	32.739	GFL11-2M □□□180C32	134
	40	5071	2.1	48	4221	2.5	36.444	GFL14-2M □□□180C32	134
	40	5132	0.9	48	4272	1.1	36.889	GFL11-2M □□□180C32	134
	37	5515	1.8	45	4591	2.1	39.642	GFL14-2M □□□180C32	134
	36	5598	0.9	44	4660	1.0	40.233	GFL11-2M □□□180C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 22.0 \text{ kW}$

n _N	1465 r/min			1760 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	33	6215	1.8	40	5173	2.1	44.667	GFL14-2M □□□180C32	134
	28	7244	1.4	34	6030	1.7	52.067	GFL14-2M □□□180C32	134
	25	8162	1.4	30	6794	1.7	58.667	GFL14-2M □□□180C32	134
	23	8792	1.1	28	7318	1.4	63.190	GFL14-2M □□□180C32	134
	21	9906	1.1	25	8246	1.3	71.200	GFL14-2M □□□180C32	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 30.0 \text{ kW}$

n_N	1465 r/min			1770 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	213	1302	1.6	257	1078	1.8	6.864	GFL09-2M □□□180C42	134
	213	1302	2.3	257	1078	2.6	6.864	GFL11-2M □□□180C42	134
	196	1416	1.5	236	1172	1.7	7.466	GFL09-2M □□□180C42	134
	196	1416	2.3	236	1172	2.6	7.466	GFL11-2M □□□180C42	134
	167	1670	2.3	201	1382	2.6	8.800	GFL14-2M □□□180C42	134
	163	1709	1.3	196	1415	1.5	9.010	GFL09-2M □□□180C42	134
	163	1709	2.1	196	1415	2.4	9.010	GFL11-2M □□□180C42	134
	153	1816	2.3	184	1503	2.6	9.571	GFL14-2M □□□180C42	134
	150	1859	1.2	180	1539	1.4	9.799	GFL09-2M □□□180C42	134
	150	1859	2.0	180	1539	2.3	9.799	GFL11-2M □□□180C42	134
	137	2034	1.9	165	1683	2.1	10.720	GFL11-2M □□□180C42	134
	131	2119	1.1	158	1754	1.2	11.167	GFL09-2M □□□180C42	134
	119	2335	1.0	143	1933	1.1	12.307	GFL09-2M □□□180C42	134
	117	2368	1.5	141	1960	1.7	12.480	GFL11-2M □□□180C42	134
	103	2694	2.3	124	2230	2.6	14.200	GFL14-2M □□□180C42	134
	102	2719	0.9	123	2251	1.0	14.333	GFL09-2M □□□180C42	134
	101	2758	1.3	121	2283	1.5	14.538	GFL11-2M □□□180C42	134
	94	2964	2.3	113	2453	2.6	15.620	GFL14-2M □□□180C42	134
	92	3017	1.3	111	2497	1.4	15.904	GFL11-2M □□□180C42	134
	83	3339	2.3	100	2764	2.6	17.600	GFL14-2M □□□180C42	134
	82	3400	1.1	99	2814	1.3	17.920	GFL11-2M □□□180C42	134
	73	3785	2.1	89	3132	2.4	19.948	GFL14-2M □□□180C42	134
	72	3849	1.1	87	3186	1.2	20.286	GFL11-2M □□□180C42	134
	65	4264	2.1	79	3530	2.4	22.476	GFL14-2M □□□180C42	134
	64	4337	0.9	77	3589	1.1	22.857	GFL11-2M □□□180C42	134
	60	4640	1.9	72	3840	2.3	24.456	GFL14-2M □□□180C42	134
	59	4715	0.9	71	3902	1.1	24.850	GFL11-2M □□□180C42	134
	53	5228	1.9	64	4327	2.3	27.556	GFL14-2M □□□180C42	134
	52	5312	0.8	63	4397	1.0	28.000	GFL11-2M □□□180C42	134
	45	6137	1.5	55	5079	1.8	32.344	GFL14-2M □□□180C42	134
	40	6914	1.5	48	5723	1.8	36.444	GFL14-2M □□□180C42	134
	37	7521	1.3	45	6225	1.6	39.642	GFL14-2M □□□180C42	134
	33	8474	1.3	40	7014	1.6	44.667	GFL14-2M □□□180C42	134
	28	9878	1.0	34	8176	1.2	52.067	GFL14-2M □□□180C42	134
	25	11131	1.0	30	9213	1.2	58.667	GFL14-2M □□□180C42	134
	23	11989	0.8	28	9923	1.0	63.190	GFL14-2M □□□180C42	134

GFL shaft-mounted helical gearboxes

Technical data



Selection tables

50 Hz, 60 Hz: $P_N = 37.0 \text{ kW}$

n_N	1475 r/min			1780 r/min			i		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	215	1595	2.1	258	1322	2.4	6.864	GFL11-2M □□□225C12	134
	198	1735	2.0	237	1438	2.3	7.466	GFL11-2M □□□225C12	134
	168	2045	3.1	201	1695	3.6	8.800	GFL14-2M □□□225C12	134
	164	2094	1.8	197	1735	2.0	9.010	GFL11-2M □□□225C12	134
	154	2224	3.1	185	1843	3.6	9.571	GFL14-2M □□□225C12	134
	151	2277	1.7	181	1887	1.9	9.799	GFL11-2M □□□225C12	134
	138	2491	1.5	165	2065	1.7	10.720	GFL11-2M □□□225C12	134
	128	2681	3.1	154	2222	3.5	11.537	GFL14-2M □□□225C12	134
	118	2900	1.2	142	2403	1.4	12.480	GFL11-2M □□□225C12	134
	114	3021	2.8	136	2504	3.2	13.000	GFL14-2M □□□225C12	134
	104	3300	2.7	125	2735	3.1	14.200	GFL14-2M □□□225C12	134
	102	3379	1.1	122	2800	1.3	14.538	GFL11-2M □□□225C12	134
	94	3630	2.5	113	3008	2.9	15.620	GFL14-2M □□□225C12	134
	93	3696	1.0	111	3063	1.2	15.904	GFL11-2M □□□225C12	134
	84	4090	2.3	101	3390	2.6	17.600	GFL14-2M □□□225C12	134
	82	4165	0.9	99	3451	1.0	17.920	GFL11-2M □□□225C12	134
	74	4636	2.1	89	3842	2.4	19.948	GFL14-2M □□□225C12	134
	73	4715	0.9	87	3907	1.0	20.286	GFL11-2M □□□225C12	134
	66	5224	1.9	79	4329	2.2	22.476	GFL14-2M □□□225C12	134
	60	5684	1.8	72	4710	2.2	24.456	GFL14-2M □□□225C12	134
	54	6404	1.6	64	5307	2.0	27.556	GFL14-2M □□□225C12	134
	46	7517	1.5	55	6229	1.8	32.344	GFL14-2M □□□225C12	134
	41	8470	1.3	49	7019	1.6	36.444	GFL14-2M □□□225C12	134

GFL shaft-mounted helical gearboxes

Technical data



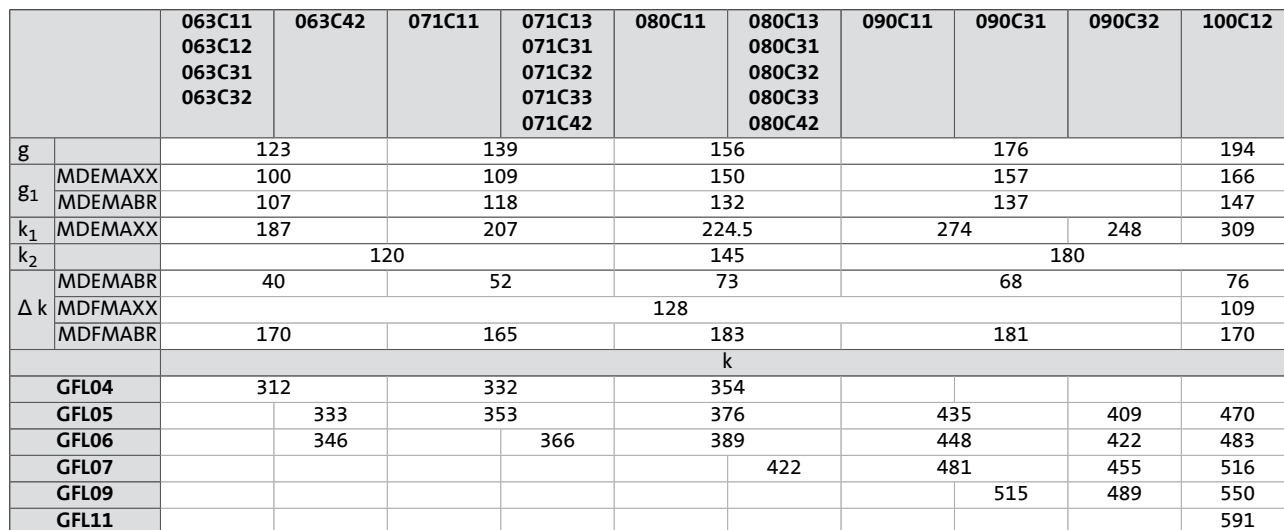
Selection tables

50 Hz, 60 Hz: $P_N = 45.0 \text{ kW}$

n _N	1480 r/min			1784 r/min			i		
f _N	50 Hz			60 Hz					
	n ₂ [r/min]	M ₂ [Nm]	c	n ₂ [r/min]	M ₂ [Nm]	c			
	216	1934	1.7	259	1608	2.0	6.864	GFL11-2M □□□225C22	134
	207	2014	2.7	248	1675	3.1	7.150	GFL14-2M □□□225C22	134
	198	2103	1.7	238	1749	1.9	7.466	GFL11-2M □□□225C22	134
	190	2191	2.7	228	1822	3.1	7.777	GFL14-2M □□□225C22	134
	168	2479	2.6	202	2061	2.9	8.800	GFL14-2M □□□225C22	134
	164	2538	1.5	197	2110	1.7	9.010	GFL11-2M □□□225C22	134
	155	2696	2.6	186	2242	2.9	9.571	GFL14-2M □□□225C22	134
	151	2761	1.4	181	2295	1.6	9.799	GFL11-2M □□□225C22	134
	138	3020	1.3	166	2511	1.4	10.720	GFL11-2M □□□225C22	134
	128	3250	2.5	154	2702	2.9	11.537	GFL14-2M □□□225C22	134
	119	3516	1.0	142	2923	1.1	12.480	GFL11-2M □□□225C22	134
	114	3662	2.3	137	3045	2.6	13.000	GFL14-2M □□□225C22	134
	104	4000	2.2	125	3326	2.5	14.200	GFL14-2M □□□225C22	134
	102	4095	0.9	122	3405	1.0	14.538	GFL11-2M □□□225C22	134
	95	4400	2.1	114	3659	2.3	15.620	GFL14-2M □□□225C22	134
	93	4480	0.8	112	3725	1.0	15.904	GFL11-2M □□□225C22	134
	84	4958	1.9	101	4122	2.1	17.600	GFL14-2M □□□225C22	134
	74	5619	1.7	89	4672	2.0	19.948	GFL14-2M □□□225C22	134
	66	6332	1.6	79	5265	1.8	22.476	GFL14-2M □□□225C22	134
	61	6889	1.5	73	5728	1.8	24.456	GFL14-2M □□□225C22	134
	54	7763	1.4	65	6454	1.6	27.556	GFL14-2M □□□225C22	134
	46	9112	1.2	55	7576	1.5	32.344	GFL14-2M □□□225C22	134
	41	10267	1.1	49	8536	1.3	36.444	GFL14-2M □□□225C22	134

Dimensions

GFL□□-2M H□R



GFL shaft-mounted helical gearboxes

Technical data



		100C31	100C32 100C41	112C22 112C31	112C32 112C41	132C21 132C22 132C32	160C22	160C32	180C12 180C32	180C42	225C12 225C22
g		194		218		258	310		348		447
g ₁	MDEMAXX	166		176		195	210		230		346
	MDEMABR	147		158		187	210		230		346
k ₁	MDEMAXX	309		319	363	403	457.5	501.5	561	618	848
k ₂		180		222		265			300		
Δ k	MDEMABR	76		90		109.5	105		113		
	MDFMAXX	109		102		115	149		155		213
	MDFMABR	170		183		201.5	179		215		213
k											
GFL05		470									
GFL06		483		499	543						
GFL07		516		532	576	624	684	728			
GFL09		550		566	610	658	718	762	821	878	
GFL11			591	607	651	699	759	803	862	919	1149
GFL14				652	696	744	804	848	907	964	1194

	a	a ₄	a ₇	a ₈	c ₆	k ₆	k ₇	o ¹⁾	p ¹⁾	p ₁	s ₆
GFL04	90.5	12.5	22.5	128	14	32	35	148	214	69	12.5
GFL05	112.5	18.5	29	155	16	35	38	165	252	78	14
GFL06	140	22	35	195	20	46	46	206	315	98	14
GFL07	173	29	44	240	25	56	56	256	386	118	18
GFL09	220	37.5	50	300	32	70	70	318	486	149	22
GFL11	276.5	50	65	375	40	84	90	395	600	181	26
GFL14	339	65	80	455	50	100	114	490	740	228	32

	d ²⁾	d ₁	l	l ₁	u	t	i ₁	o ₁	a ₁	b ₁	e ₁	f ₁	s ₁
	H7				JS9	+0,2				H7			
GFL04	25 30	45 45	115 115	100 100	8 8	28.3 33.3	2.5 2.5	115 115	110	75	90	3	M6x12
GFL05	30 35	50 50	140 140	124 124	8 10	33.3 38.3	4 4	140 140	118	80	100	4	M8x14
GFL06	40 45	65 65	160 160	140 140	12 14	43.3 48.8	5 5	160 160	140	100	120	4	M10x16
GFL07	50 55	75 75	200 200	175 175	14 16	53.8 59.3	5 5	200 200	165	115	140	5	M12x18
GFL09	60 70	95 95	240 240	210 210	18 20	64.4 74.9	5 5	240 240	205	145	175	6	M16x24
GFL11	70 80	108 108	290 290	250 250	20 22	74.9 85.4	6 6	290 290	240	170	205	4	M20x32
GFL14	100	135	350	305	28	106.4	7	350	290	170	250	6	M24x35

¹⁾ k₂ !

²⁾ Not suitable for through machine shaft at motor end:

GFL04-2M H□□ 080□□; d=30

GFL05-2M H□□ 100□□; d=35

GFL06-2M H□□ 132□□; d=40/45

GFL07-2M H□□ 160□□; d=50/55

GFL11-2M H□□ 225□□; d=80

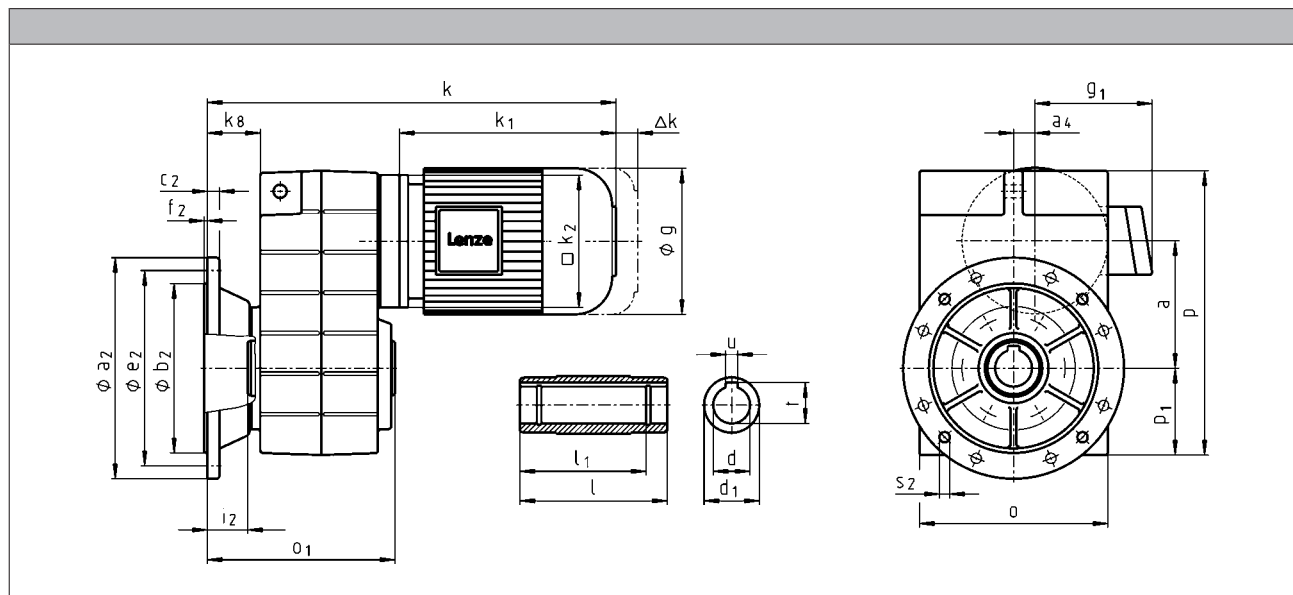
GFL shaft-mounted helical gearboxes

Technical data



Dimensions

GFL□□-2M HCK



		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31 071C32 071C33 071C42	080C11	080C13 080C31 080C32 080C33 080C42	090C11	090C31	090C32	100C12
g		123		139		156		176			194
g ₁	MDEMAXX	100		109		150		157			166
	MDEMABR	107		118		132		137			147
k ₁	MDEMAXX	187		207		224.5		274		248	309
k ₂			120			145			180		
	MDEMABR	40		52		73		68			76
Δ k	MDFMAXX				128						109
	MDFMABR	170		165		183		181			170
						k					
GFL04		345		365		387					
GFL05			366	386		409		468		442	503
GFL06			387		407	430		489		463	524
GFL07							477	536		510	571
GFL09									575	549	610
GFL11											651

GFL shaft-mounted helical gearboxes

Technical data



		100C31	100C32 100C41	112C22 112C31	112C32 112C41	132C21 132C22 132C32	160C22	160C32	180C12 180C32	180C42	225C12 225C22
g		194		218		258	310		348		447
g ₁	MDEMAXX	166		176		195	210		230		346
	MDEMABR	147		158		187	210		230		346
k ₁	MDEMAXX	309		319	363	403	457.5	501.5	561	618	848
k ₂		180		222		265			300		
Δ k	MDEMABR	76		90		109.5	105		113		
	MDFMAXX	109		102		115	149		155		213
	MDFMABR	170		183		201.5	179		215		213
k											
GFL05		503									
GFL06		524		540	584						
GFL07		571		587	631	679	739	783			
GFL09		610		626	670	718	778	822	881	938	
GFL11			651	667	711	759	819	863	922	979	1209
GFL14				712	756	804	864	908	967	1024	1254

	a	a ₄	k _g	o ¹⁾	p ¹⁾	p ₁
GFL04	90.5	12.5	41.8	148	214	69
GFL05	112.5	18.5	46	165	252	78
GFL06	140	22	55.5	206	315	98
GFL07	173	29	72.5	256	386	118
GFL09	220	37.5	77.5	318	486	149
GFL11	276.5	50	85.5	395	600	181
GFL14	339	65	89.5	490	740	228

	d ²⁾	d ₁	l	l ₁	u	t	i ₂	o ₁	a ₂	b ₂	c ₂	e ₂	f ₂	s ₂
	H7				J59	+0,2				j7				
GFL04	25	45	115	100	8	28.3	33.5	148						
	30	45	115	100	8	33.3	33.5	148	160	110	10	130	3.5	4 x 9
GFL05	30	50	140	124	8	33.3	33	173						
	35	50	140	124	10	38.3	33	173	200	130	12	165	4	4 x 11
GFL06	40	65	160	140	12	43.3	42	201						
	45	65	160	140	14	48.8	41	201	250	180	15	215	4	4 x 14
GFL07	50	75	200	175	14	53.8	55	255						
	55	75	200	175	16	59.3	55	255	250	180	15	215	4	4 x 14
GFL09	60	95	240	210	18	64.4	60	300						
	70	95	240	210	20	74.9	60	300	350	250	18	300	4	4 x 17.5
GFL11	70	108	290	250	20	74.9	60	350						
	80	108	290	250	22	85.4	60	350	400	300	20	350	5	4 x 17.5
GFL14														

¹⁾ k₂ !

²⁾ Not suitable for through machine shaft at motor end:

GFL04-2M H□□ 080C□□; d=30
 GFL05-2M H□□ 100C□□; d=35
 GFL06-2M H□□ 132C□□; d=40/45
 GFL07-2M H□□ 160C□□; d=50/55
 GFL11-2M H□□ 225C□□; d=80

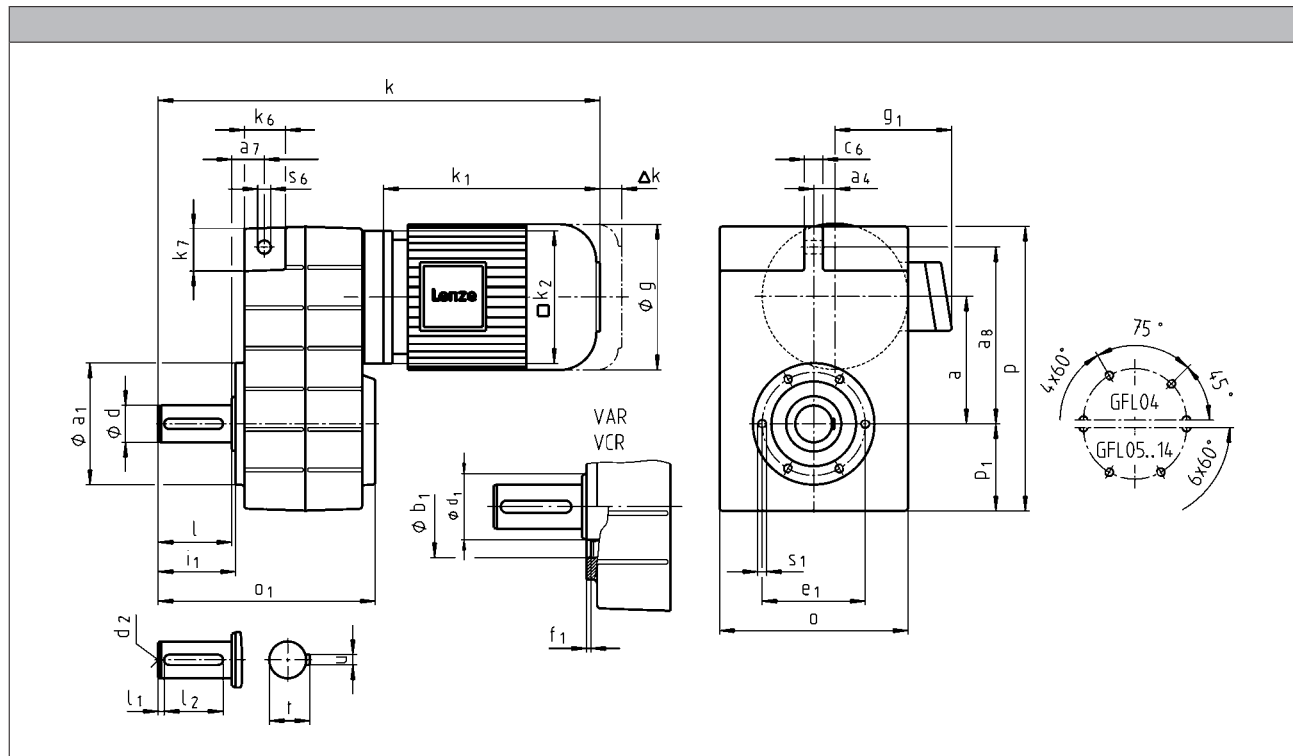
GFL shaft-mounted helical gearboxes

Technical data



Dimensions

GFL□□-2M V□R



		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31 071C32 071C33 071C42	080C11	080C13 080C31 080C32 080C33 080C42	090C11	090C31	090C32	100C12
g		123		139		156		176			194
g ₁	MDEMAXX	100		109		150		157			166
	MDEMABR	107		118		132		137			147
k ₁	MDEMAXX	187		207		224.5		274		248	309
k ₂			120			145			180		
Δk	MDEMABR	40		52		73		68			76
	MDFMAXX				128						109
	MDFMABR	170		165		183		181			170
		k									
GFL04		362		382		404		464		438	
GFL05			393	413		436		495		469	530
GFL06			426		446	469		528		502	563
GFL07							522	581		555	616
GFL09									635	609	670
GFL11											751

6.6

GFL shaft-mounted helical gearboxes

Technical data



		100C31	100C32 100C41	112C22 112C31	112C32 112C41	132C21 132C22 132C32	160C22	160C32	180C12 180C32	180C42	225C12 225C22
g		194		218		258	310		348		447
g ₁	MDEMAXX	166		176		195	210		230		346
	MDEMABR	147		158		187	210		230		346
k ₁	MDEMAXX	309		319	363	403	457.5	501.5	561	618	848
k ₂		180		222		265			300		
Δ k	MDEMABR	76		90		109.5	105		113		
	MDFMAXX	109		102		115	149		155		213
	MDFMABR	170		183		201.5	179		215		213
k											
GFL05		530									
GFL06		563		579	623						
GFL07		616		632	676	724	784	828			
GFL09		670		686	730	778	838	882	941	998	
GFL11			751	767	811	859	919	963	1022	1079	1309
GFL14				852	896	944	1004	1048	1107	1164	1394

	a	a ₄	a ₇	a ₈	c ₆	k ₆	k ₇	o ¹⁾	p ¹⁾	p ₁	s ₆
GFL04	90.5	12.5	22.5	128	14	32	35	148	214	69	12.5
GFL05	112.5	18.5	29	155	16	35	38	165	252	78	14
GFL06	140	22	35	195	20	46	46	206	315	98	14
GFL07	173	29	44	240	25	56	56	256	386	118	18
GFL09	220	37.5	50	300	32	70	70	318	486	149	22
GFL11	276.5	50	65	375	40	84	90	395	600	181	26
GFL14	339	65	80	455	50	100	114	490	740	228	32

	d	d	d ₁	d ₂	l	l ₁	l ₂	u	t	o ₁	a ₁	b ₁	e ₁	f ₁	s ₁
	k6	m6										H7			
GFL04	25		45	M10	50	6	40	8	28	162.5	110	75	90	3	M6x12
GFL05	30		45	M10	60	6	45	8	33	196.5	118	80	100	4	M8x14
GFL06	40		65	M16	80	7	63	12	43	235.5	140	100	120	4	M10x16
GFL07	50		75	M16	100	8	80	14	53.5	295.5	165	115	140	5	M12x18
GFL09		60	95	M20	120	8	100	18	64	355.5	205	145	175	6	M16x24
GFL11		80	108	M20	160	15	125	22	85	444.5	240	170	205	4	M20x32
GFL14		100	135	M24	200	18	160	28	106	543.5	290	170	250	6	M24x35

¹⁾ k₂ !

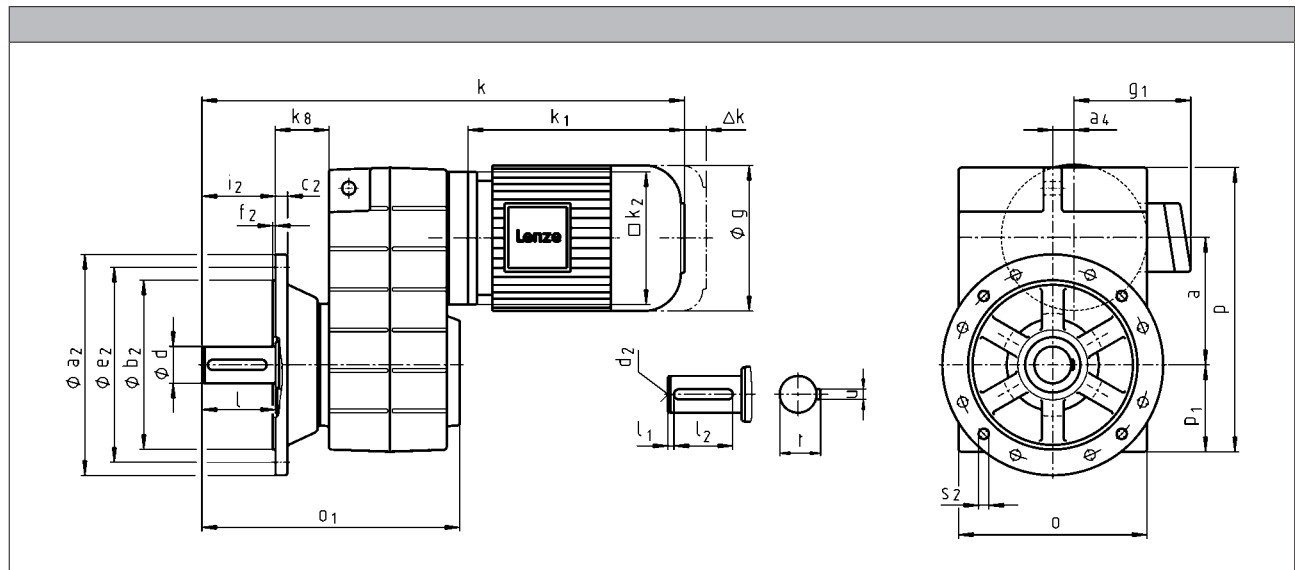
GFL shaft-mounted helical gearboxes

Technical data



Dimensions

GFL□□-2M VCK



		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31 071C32 071C33 071C42	080C11	080C13 080C31 080C32 080C33 080C42	090C11	090C31	090C32	100C12
g		123		139		156		176			194
g ₁	MDEMAXX	100		109		150		157			166
	MDEMABR	107		118		132		137			147
k ₁	MDEMAXX	187		207		224.5		274		248	309
k ₂		120				145		180			
Δ k	MDEMABR	40		52		73		68			76
	MDFMAXX					128					109
	MDFMABR	170		165		183		181			170
		k									
GFL04		395		415		437		497		471	
GFL05			426		446		469		528		563
GFL06			467		487		510		569		604
GFL07							577		636		671
GFL09									695		730
GFL11											811

GFL shaft-mounted helical gearboxes

Technical data



		100C31	100C32 100C41	112C22 112C31	112C32 112C41	132C21 132C22 132C32	160C22	160C32	180C12 180C32	180C42	225C12 225C22
g		194		218		258	310		348		447
g ₁	MDEMAXX	166		176		195	210		230		346
	MDEMABR	147		158		187	210		230		346
k ₁	MDEMAXX	309		319	363	403	457.5	501.5	561	618	848
k ₂		180		222		265			300		
Δ k	MDEMABR	76		90		109.5	105		113		
	MDFMAXX	109		102		115	149		155		213
	MDFMABR	170		183		201.5	179		215		213
k											
GFL05		563									
GFL06		604		620	664						
GFL07		671		687	731	779	839	883			
GFL09		730		746	790	838	898	942	1001	1058	
GFL11			811	827	871	919	979	1023	1082	1139	1369
GFL14				912	956	1004	1064	1108	1167	1224	1454

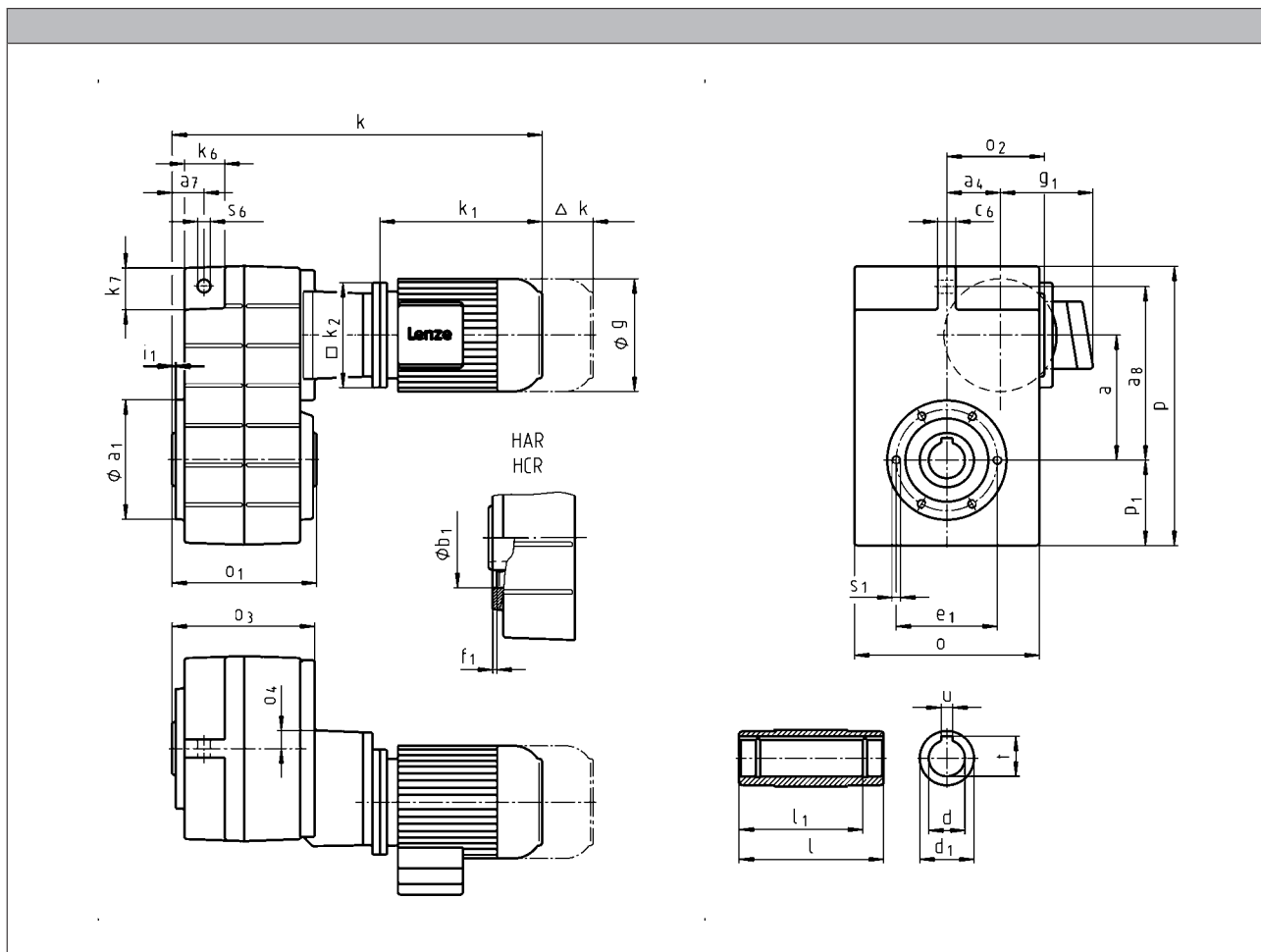
	a	a ₄	k _g	o ¹⁾	p ¹⁾	p ₁
GFL04	90.5	12.5	41.8	148	214	69
GFL05	112.5	18.5	46	165	252	78
GFL06	140	22	55.5	206	315	98
GFL07	173	29	72.5	256	386	118
GFL09	220	37.5	77.5	318	486	149
GFL11	276.5	50	85.5	395	600	181
GFL14	339	65	89.5	490	740	228

	d	d	d ₁	d ₂	l	l ₁	l ₂	u	t	i ₂	o ₁	a ₂	b ₂	c ₂	e ₂	f ₂	s ₂
	k6	m6											j7				
GFL04	25		45	M10	50	6	40	8	28	50	195.5	160	110	10	130	3.5	4 x 9
GFL05	30		45	M10	60	6	45	8	33	60	229.5	200	130	12	165	4	4 x 11
GFL06	40		65	M16	80	7	63	12	43	80	276.5	250	180	15	215	4	4 x 14
GFL07	50		75	M16	100	8	80	14	53.5	100	350.5	250 300	180 230	15 17	215 265	4 4	4 x 14 4 x 14 4 x 14
GFL09		60	95	M20	120	8	100	18	64	120	415.5	350	250	18	300	4	4 x 17.5
GFL11		80	108	M20	160	15	125	22	85	160	504.5	400 450	300 350	20 22	350 400	5 5	4 x 17.5 8 x 17.5 8 x 17.5
GFL14		100	135	M24	200	18	160	28	106	200	603.5	450	350	22	400	5	8 x 17.5

¹⁾ k₂ !

Dimensions

GFL□□-3M H□R



		063C11 063C12 063C31 063C32	063C42	071C11 071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12 100C31
g		123		139	156		176		194
g ₁	MDEMAXX	100		109	150		157		166
	MDEMABR	107		118	132		137		147
k ₁	MDEMAXX	187		207	224.5		274	248	309
k ₂		120			145		180		
Δ k	MDEMABR	40	52		73		68		76
	MDFMAXX				128				109
	MDFMABR	170		165	183		181		170
		k							
GFL05		410		430	452				
GFL06		440		460		482	542		
GFL07			484	504		526	586	560	621
GFL09			536	556		578	638	612	673
GFL11						638	698	672	733
GFL14							777	751	812

GFL shaft-mounted helical gearboxes

Technical data



		100C32	100C41	112C22 112C31	112C32	112C41	132C21 132C22 132C32	160C22	160C32
g		194		218			258	310	
g ₁	MDEMAXX	166		176			195	210	
	MDEMABR	147		158			187	210	
k ₁	MDEMAXX	309		319	363		403	457.5	501.5
k ₂		180		222			265	300	
Δ k	MDEMABR	76		90			109.5	105	
	MDFMAXX	109		102			115	149	
	MDFMABR	170		183			201.5	179	
k									
GFL07		621							
GFL09		673		689		733			
GFL11		733		749		793	841		
GFL14		812		828		872	920	979	1023

	a	a ₄	a ₇	a ₈	c ₆	k ₆	k ₇	o ¹⁾	o ₂	o ₃	o ₄	p ¹⁾	p ₁	s ₆
GFL05	112.5	54.5	29	155	16	35	38	165	106.5	140.5	22.6	252	78	14
GFL06	140	58	35	195	20	46	46	206	111	159.5	20.2	315	98	14
GFL07	173	74	44	240	25	56	56	256	135	199	24	386	118	18
GFL09	220	93.5	50	300	32	70	70	318	170	237.5	27	486	149	22
GFL11	276.5	120	65	375	40	84	90	395	216	284.5	33.5	600	181	26
GFL14	339	154	80	455	50	100	114	490	271	339.5	38	740	228	32

	d	d ₁	l	l ₁	u	t	i ₁	o ₁	a ₁	b ₁	e ₁	f ₁	s ₁
	H7				JS9	+0,2				H7			
GFL05	30	50	140	124	8	33.3	4	140	118	80	100	4	M8x14
	35	50	140	124	10	38.3	4	140					
GFL06	40	65	160	140	12	43.3	5	160	140	100	120	4	M10x16
	45	65	160	140	14	48.8	5	160					
GFL07	50	75	200	175	14	53.8	5	200	165	115	140	5	M12x18
	55	75	200	175	16	59.3	5	200					
GFL09	60	95	240	210	18	64.4	5	240	205	145	175	6	M16x24
	70	95	240	210	20	74.9	5	240					
GFL11	70	108	290	250	20	74.9	6	290	240	170	205	4	M20x32
	80	108	290	250	22	85.4	6	290					
GFL14	100	135	350	305	28	106.4	7	350	290	170	250	6	M24x35

¹⁾ k₂ !

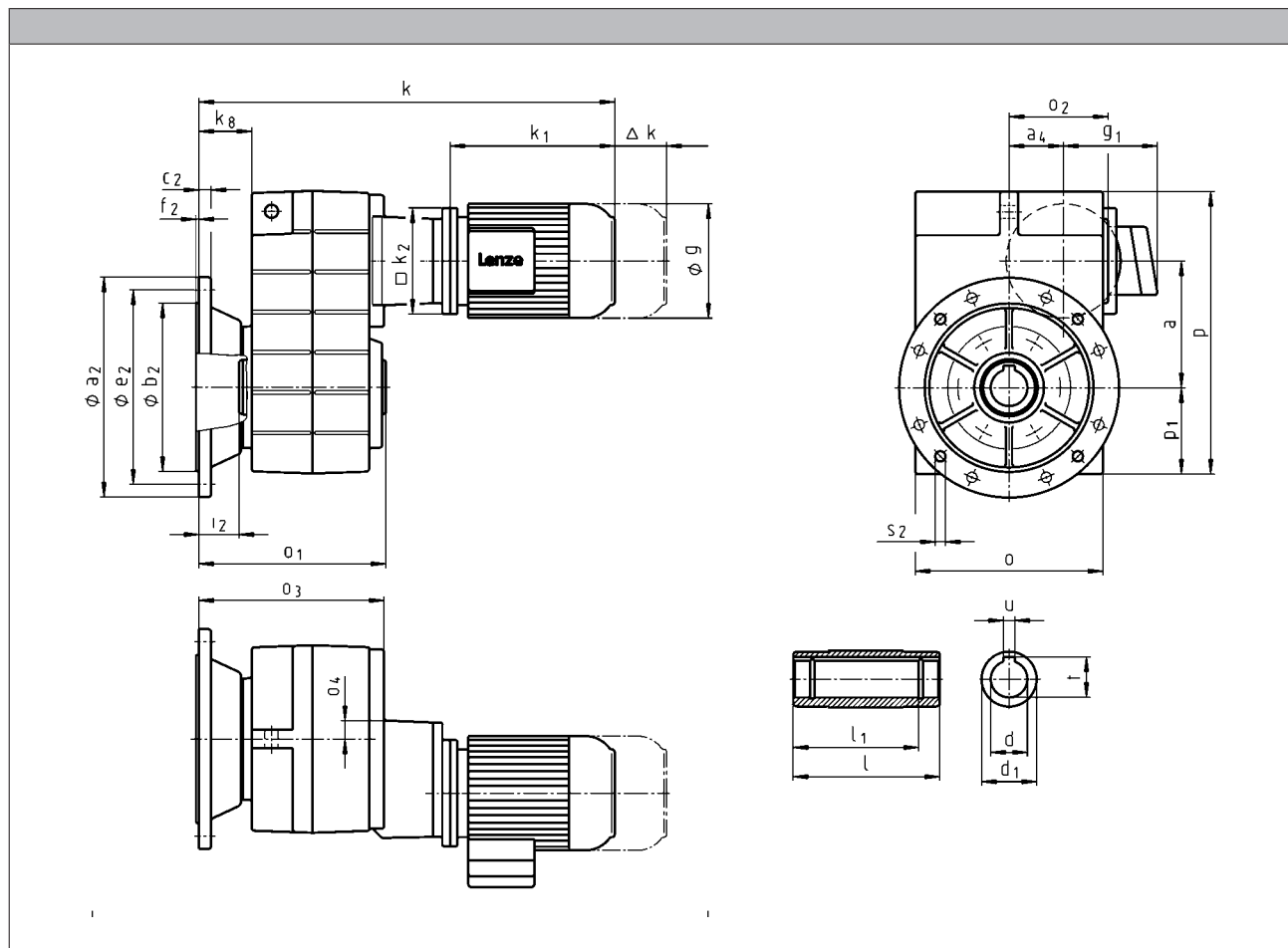
GFL shaft-mounted helical gearboxes

Technical data



Dimensions

GFL□□-3M HCK



		063C11 063C12 063C31 063C32	063C42	071C11 071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12 100C31
g		123		139	156		176		194
g ₁	MDEMAXX	100		109	150		157		166
	MDEMABR	107		118	132		137		147
k ₁	MDEMAXX	187		207	224.5		274	248	309
k ₂		120			145			180	
	MDEMABR	40		52	73		68		76
Δ k	MDFMAXX				128				109
	MDFMABR	170		165	183		181		170
		k							
GFL05		443		463	485				
GFL06		481		501		523	583		
GFL07			539	559	581		641	615	676
GFL09			596	616	638		698	672	733
GFL11					698		758	732	793
GFL14							837	811	872

6.6

GFL shaft-mounted helical gearboxes

Technical data



		100C32	100C41	112C22 112C31	112C32	112C41	132C21 132C22 132C32	160C22	160C32
g		194		218			258	310	
g ₁	MDEMAXX	166		176			195	210	
	MDEMABR	147		158			187	210	
k ₁	MDEMAXX	309	319		363		403	457.5	501.5
k ₂		180		222			265	300	
Δ k	MDEMABR	76		90			109.5	105	
	MDFMAXX	109		102			115	149	
	MDFMABR	170		183			201.5	179	
k									
GFL07		676							
GFL09		733	749		793				
GFL11		793	809		853		901		
GFL14		872	888		932		980	1039	1083

	a	a ₄	k _g	o ¹⁾	o ₂	o ₃	o ₄	p ¹⁾	p ₁
GFL05	112.5	54.5	46	165	106.5	173.5	22.6	252	78
GFL06	140	58	55.5	206	111	200.5	20.2	315	98
GFL07	173	74	72.5	256	135	254	24	386	118
GFL09	220	93.5	77.5	318	170	297.5	27	486	149
GFL11	276.5	120	85.5	395	216	344.5	33.5	600	181
GFL14	339	154	89.5	490	271	399.5	38	740	228

	d	d ₁	l	l ₁	u	t	i ₂	o ₁	a ₂	b ₂	c ₂	e ₂	f ₂	s ₂
	H7				JS9	+0,2				j7				
GFL05	30	50	140	124	8	33.3	33	173	200	130	12	165	4	4 x 11
	35	50	140	124	10	38.3	33	173						
GFL06	40	65	160	140	12	43.3	42	201	250	180	15	215	4	4 x 14
	45	65	160	140	14	48.8	41	201						
GFL07	50	75	200	175	14	53.8	55	255	250	180	15	215	4	4 x 14
	55	75	200	175	16	59.3	55	255	300	230	17	265	4	4 x 14
GFL09	60	95	240	210	18	64.4	60	300	350	250	18	300	4	4 x 17.5
	70	95	240	210	20	74.9	60	300						
GFL11	70	108	290	250	20	74.9	60	350	400	300	20	350	5	4 x 17.5
	80	108	290	250	22	85.4	60	350	450	350	22	400	5	8 x 17.5
GFL14	100	135	350	305	28	106.4	60	410	450	350	22	400	5	8 x 17.5

¹⁾ k₂ !

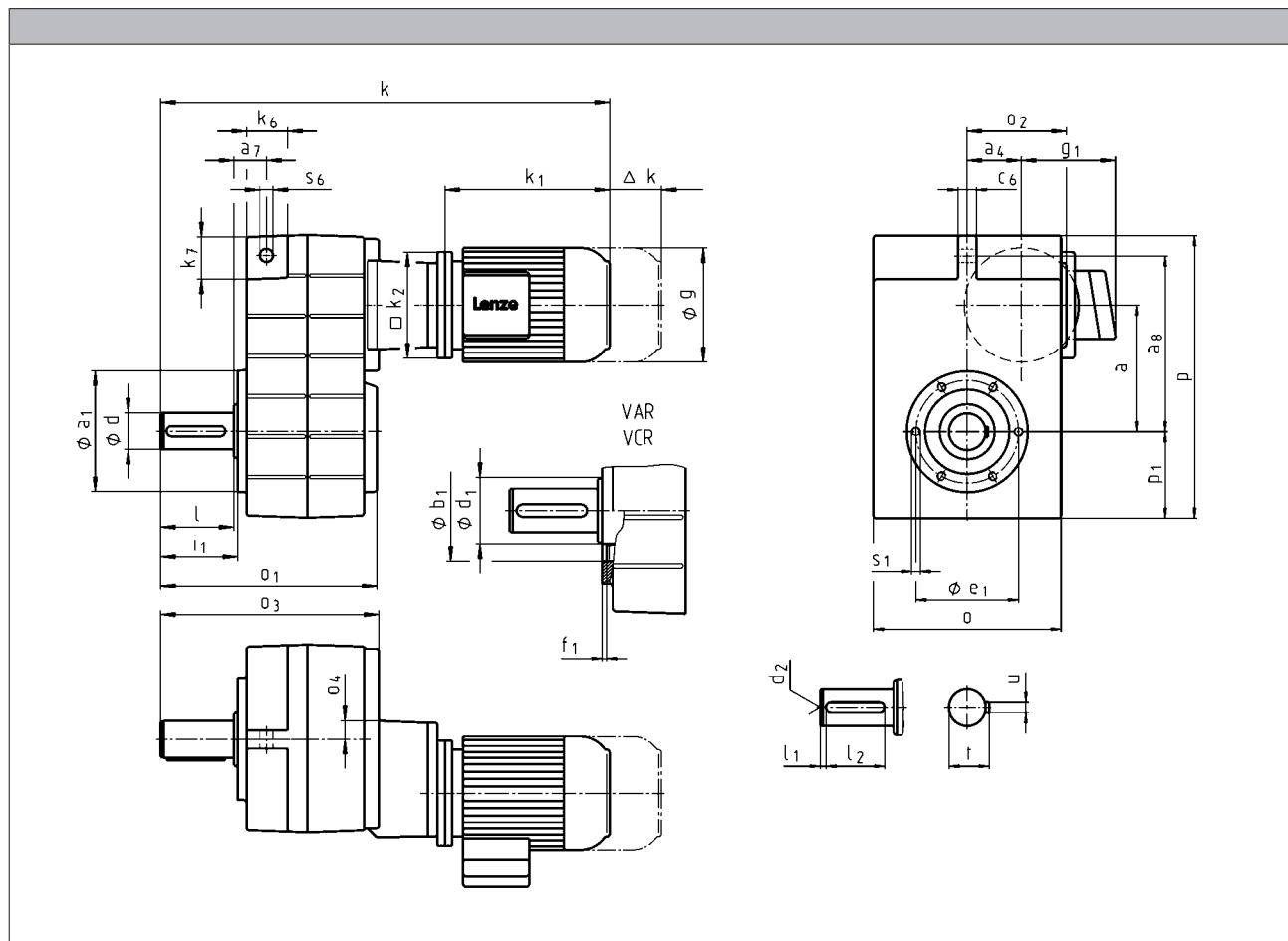
GFL shaft-mounted helical gearboxes

Technical data



Dimensions

GFL□□-3M V□R



		063C11 063C12 063C31 063C32	063C42	071C11 071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12 100C31
g		123		139	156		176		194
g ₁	MDEMXX	100		109	150		157		166
	MDEMABR	107		118	132		137		147
k ₁	MDEMXX	187		207	224.5		274	248	309
k ₂		120			145		180		
	MDEMABR	40		52	73		68		76
Δk	MDFMAXX				128				109
	MDFMABR	170		165	183		181		170
k									
GFL05		470		490	512				
GFL06		520		540	562		622		
GFL07			584	604	626		686	660	721
GFL09			656	676	698		758	732	793
GFL11					798		858	832	893
GFL14							977	951	1012

6.6

GFL shaft-mounted helical gearboxes

Technical data



		100C32	100C41	112C22 112C31	112C32	112C41	132C21 132C22 132C32	160C22	160C32
g		194		218			258	310	
g ₁	MDEMAXX	166		176			195	210	
	MDEMABR	147		158			187	210	
k ₁	MDEMAXX	309		319	363		403	457.5	501.5
k ₂		180		222			265	300	
Δ k	MDEMABR	76		90			109.5	105	
	MDFMAXX	109		102			115	149	
	MDFMABR	170		183			201.5	179	
		k							
GFL07		721				853			
GFL09		793		809					
GFL11		893		909	953		1001		
GFL14		1012		1028	1072		1120	1179	1223

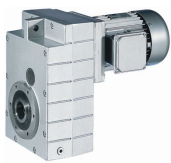
	a	a ₄	a ₇	a ₈	c ₆	k ₆	k ₇	o ¹⁾	o ₂	o ₃	o ₄	p ¹⁾	p ₁	s ₆
GFL05	112.5	54.5	29	155	16	35	38	165	106.5	200.5	22.6	252	78	14
GFL06	140	58	35	195	20	46	46	206	111	239.5	20.2	315	98	14
GFL07	173	74	44	240	25	56	56	256	135	299	24	386	118	18
GFL09	220	93.5	50	300	32	70	70	318	170	357.5	27	486	149	22
GFL11	276.5	120	65	375	40	84	90	395	216	444.5	33.5	600	181	26
GFL14	339	154	80	455	50	100	114	490	271	539.5	38	740	228	32

	d	d	d ₁	d ₂	l	l ₁	l ₂	u	t	o ₁	a ₁	b ₁	e ₁	f ₁	s ₁
	k6	m6										H7			
GFL05	30		45	M10	60	6	45	8	33	196.5	118	80	100	4	M8x14
GFL06	40		65	M16	80	7	63	12	43	235.5	140	100	120	4	M10x16
GFL07	50		75	M16	100	8	80	14	53.5	295.5	165	115	140	5	M12x18
GFL09		60	95	M20	120	8	100	18	64	355.5	205	145	175	6	M16x24
GFL11		80	108	M20	160	15	125	22	85	444.5	240	170	205	4	M20x32
GFL14		100	135	M24	200	18	160	28	106	543.5	290	170	250	6	M24x35

¹⁾ k₂ !

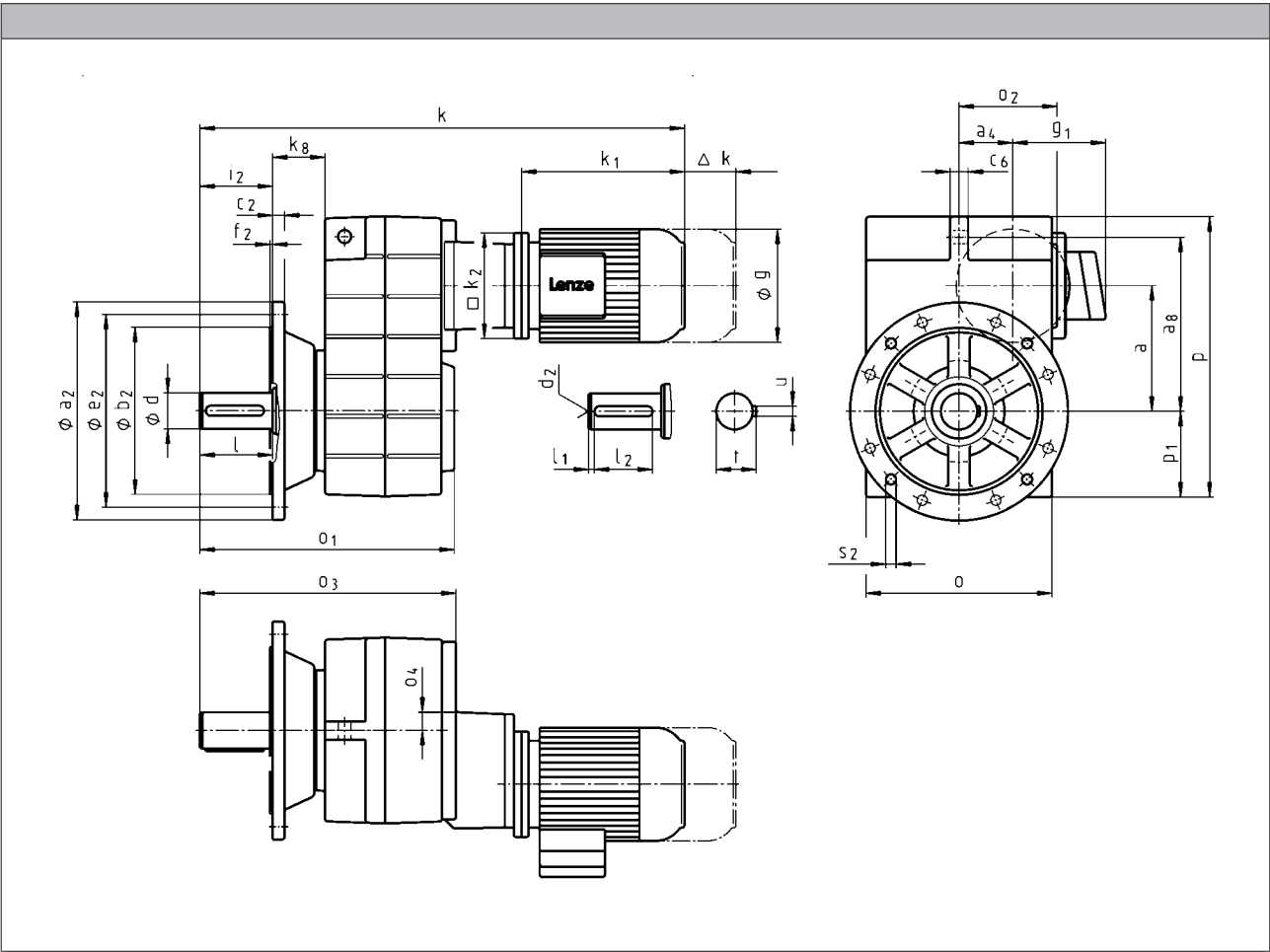
GFL shaft-mounted helical gearboxes

Technical data



Dimensions

GFL□□-3M VCK



		063C11 063C12 063C31 063C32	063C42	071C11 071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12 100C31	
g		123		139	156		176		194	
g ₁	MDEMAXX	100		109	150		157		166	
	MDEMABR	107		118	132		137		147	
k ₁	MDEMAXX	187		207	224.5		274	248	309	
k ₂		120			145		180			
	MDEMABR	40	52	73		68			76	
Δ k	MDFMAXX				128					109
	MDFMABR	170		165	183		181		170	
		k								
GFL05		503		523	545					
GFL06		561		581	603	663				
GFL07			639	659	681		741	715	776	
GFL09			716	736	758		818	792	853	
GFL11					858		918	892	953	
GFL14							1037	1011	1072	

GFL shaft-mounted helical gearboxes

Technical data



		100C32	100C41	112C22 112C31	112C32	112C41	132C21 132C22 132C32	160C22	160C32
g		194		218			258	310	
g ₁	MDEMAXX	166		176			195	210	
	MDEMABR	147		158			187	210	
k ₁	MDEMAXX	309		319	363		403	457.5	501.5
k ₂		180		222			265	300	
Δ k	MDEMABR	76		90			109.5	105	
	MDFMAXX	109		102			115	149	
	MDFMABR	170		183			201.5	179	
k									
GFL07		776							
GFL09		853		869		913			
GFL11		953		969		1013	1061		
GFL14		1072		1088		1132	1180	1239	1283

	a	a ₄	k _g	o ¹⁾	o ₂	o ₃	o ₄	p ¹⁾	p ₁
GFL05	112.5	54.5	46	165	106.5	233.5	22.6	252	78
GFL06	140	58	55.5	206	111	280.5	20.2	315	98
GFL07	173	74	72.5	256	135	354	24	386	118
GFL09	220	93.5	77.5	318	170	417.5	27	486	149
GFL11	276.5	120	85.5	395	216	504.5	33.5	600	181
GFL14	339	154	89.5	490	271	599.5	38	740	228

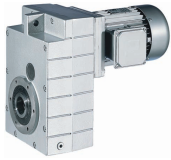
	d	d	d ₁	d ₂	l	l ₁	l ₂	u	t	i ₂	o ₁	a ₂	b ₂	c ₂	e ₂	f ₂	s ₂
	k6	m6											j7				
GFL05	30		45	M10	60	6	45	8	33	60	229.5	200	130	12	165	4	4 x 11
GFL06	40		65	M16	80	7	63	12	43	80	276.5	250	180	15	215	4	4 x 14
GFL07	50		75	M16	100	8	80	14	53.5	100	350.5	250 300	180 230	15 17	215 265	4 4	4 x 14 4 x 14
GFL09		60	95	M20	120	8	100	18	64	120	415.5	350	250	18	300	4	4 x 17.5
GFL11		80	108	M20	160	15	125	22	85	160	504.5	400 450	300 350	20 22	350 400	5 5	4 x 17.5 8 x 17.5
GFL14		100	135	M24	200	18	160	28	106	200	603.5	450	350	22	400	5	8 x 17.5

¹⁾ k₂ !

6.6

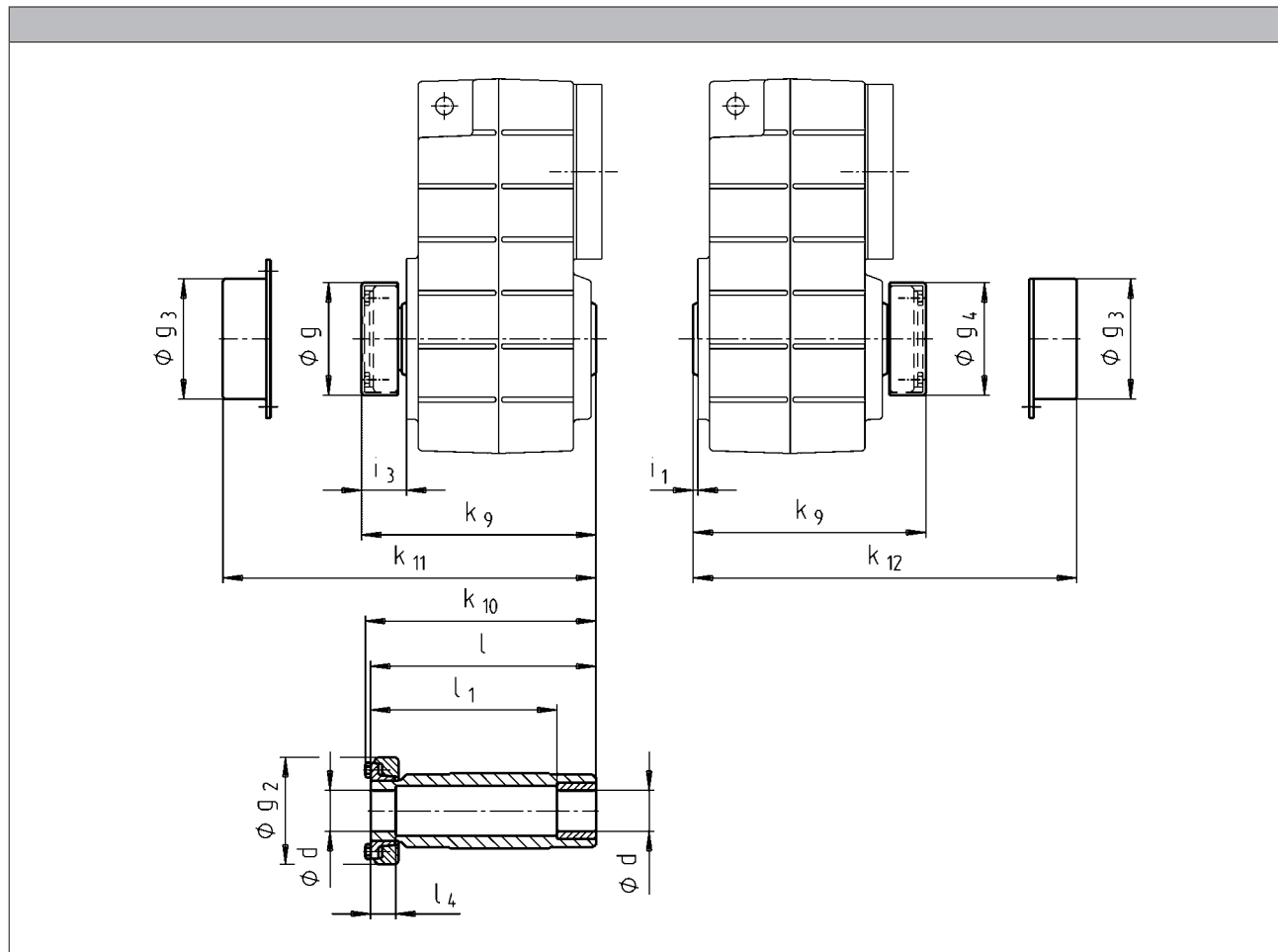
GFL shaft-mounted helical gearboxes

Technical data





Hollow shaft with shrink disc



	d ¹⁾	g ₂	g ₃	g ₄	i ₁	k ₉	k ₁₀	k ₁₁	k ₁₂	l	l ₁	l ₄
	h6											
GFL04	25 30	72	79	76	2.5	150	148	154	154	142	122	26
GFL04	25 30	72	79	76	2.5	150	148	154	154	142	122	26
GFL05	35	80	90	84	4.0	176	174	179	180	168	148	28
GFL06	40	90	100	94	5.0	202	200	204	205	194	164	30
GFL07	50	110	124	116	5.0	241	238	244	245	232	192	26
GFL09	65	141	159	147	5.0	288	285	287	288	278	228	30
GFL11	80	170	191	176	6.0	347	344	349	350	338	238	42
GFL14	100	215	253	221	7.0	418	415	421	422	407	307	55

¹⁾ Machine shaft design.

- Output flange and hollow shaft with shrink disc (design S□K) is only possible with shrink disc in position 1.
- Not suitable for through machine shaft at motor end:
 GFL04-2M S□□ 080C□□; d=30
 GFL05-2M S□□ 100C□□; d=35
 GFL06-2M S□□ 132C□□; d=40
 GFL07-2M S□□ 160C□□; d=50
 GFL11-2M S□□ 225C□□; d=80



Hollow shaft with shrink disc

- Ensure that the strength of the machine shaft material is adequate in shrink disc designs.
When using typical steels, e.g. C45, 42CrMo4, the torques listed in the selection tables can be used without restriction.
Please consult us if you wish to use material that is considerably weaker. Medium surface roughness Rz must not exceed 15 µm (turning is sufficient).

Combination options with shrink disc in position 1 (drive end)

GFL□□-2M

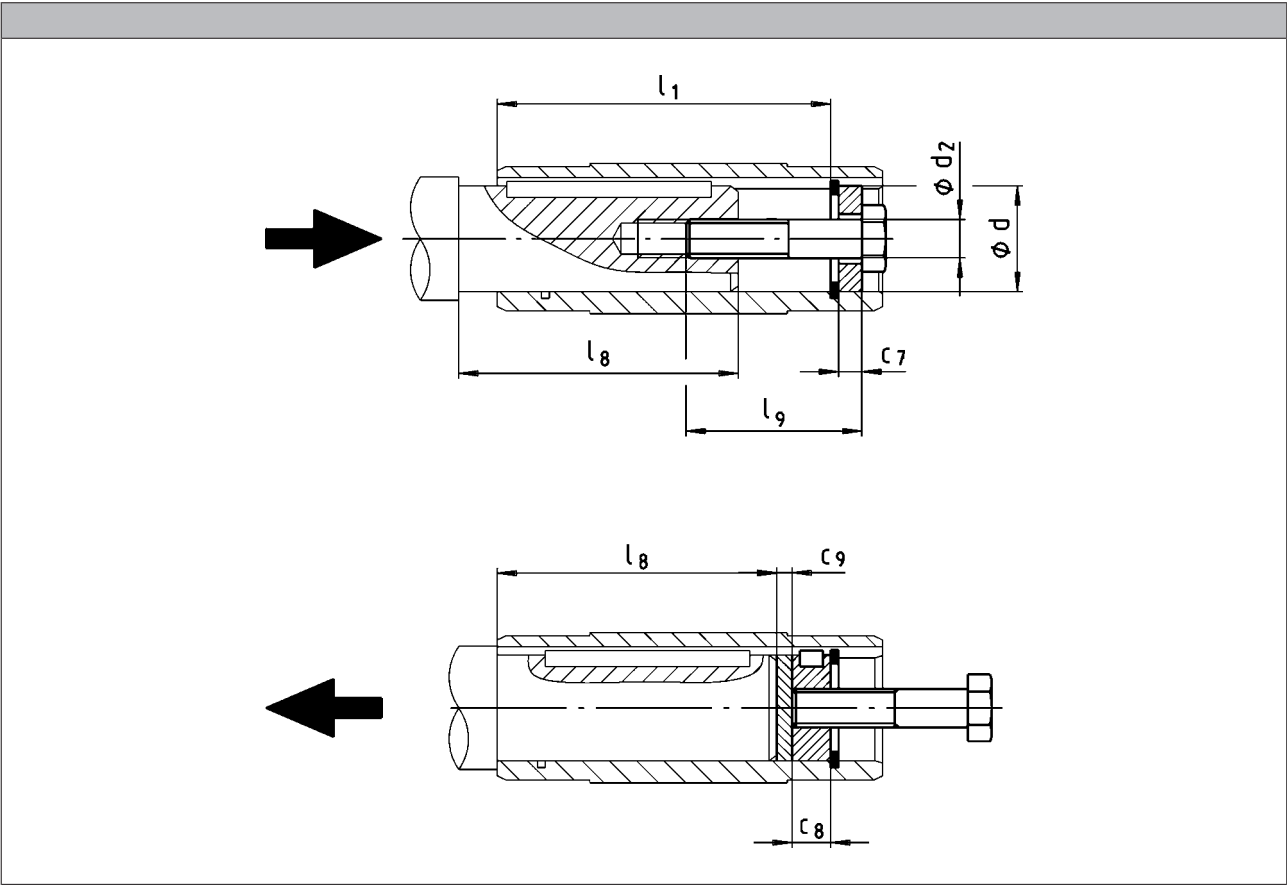
Gearbox	Motor frame size
GFL04	
GFL05	063 ¹⁾ 071 ¹⁾
GFL06	063 071 080 090 ¹⁾ 100 ¹⁾
GFL07	080 090 100 112 ¹⁾
GFL09	090 100 112 132
GFL11	100 112 132 160 180 225
GFL14	112 132 160 180 225

¹⁾ Only possible without cover

- For geared motors GFL□□-2M/E S... with shrink disc position 1: terminal box position / motec position 4 not possible!



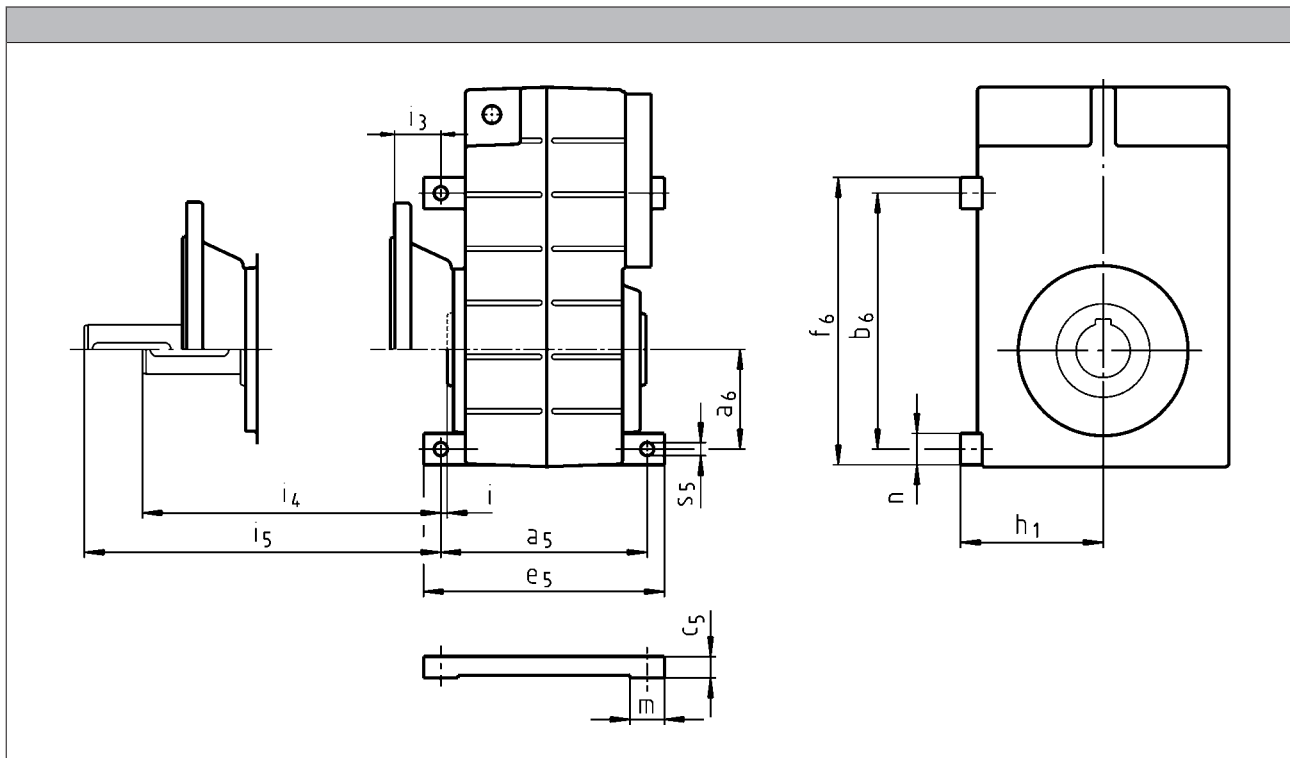
Mounting set for hollow shaft circlip:
Proposed design for auxiliary tools



	d	l ₁	d ₂	l ₉	c ₇	c ₈	c ₉	l _{8, max}
	H7							
GFL04	25 30	100	M10	40	5	10	3	85
GFL05	30 35	124			6			107
			M12	50	7	12		
GFL06	40 45	140	M16	60	8	16	4	118
					9			
					10			
GFL07	50 55	175	M20	80	11	20	5	148
					13			
GFL09	60 70	210			14			182
					16			
GFL11	70 80	250					6	221
GFL14	100	305	M24	100	20	24	8	270



Foot mounting in position 3



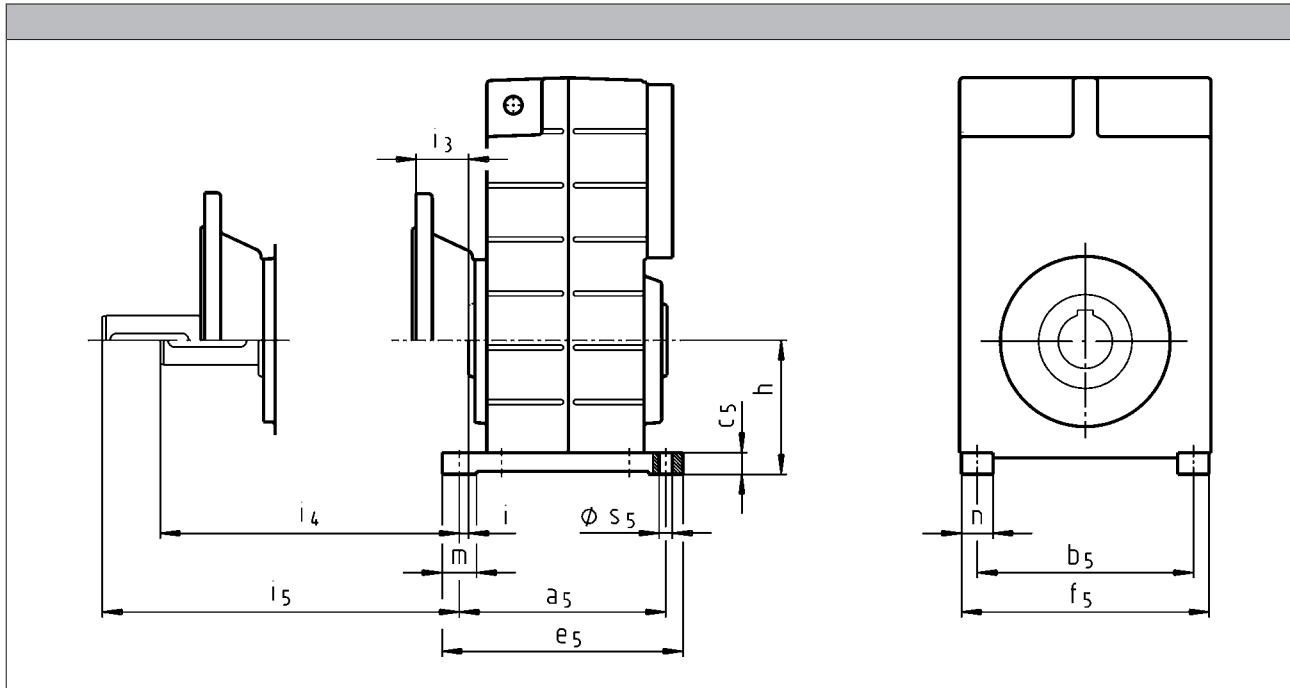
	a ₅	a ₆	b ₆	c ₅	e ₅	f ₆	h ₁	i	i ₃	i ₄	i ₅	m	n	s ₅
GFL04	130	47	115	18	152	140	90	4.5	28.5	45.5	78.5	22	25	6.6
GFL05	160	65	167	21	185	192	100	2.0	31.0	58.0	91.0	25		9.0
GFL06	175	80	205	27	205	233	125		39.0	78.0	119	30	28	11.0
GFL07	220	100	260	31	255	292	155	3.0	52.0	97.0	152	35	32	13.5
GFL09	260	125	335	36	300	375	190		57.0	117	177	40	40	17.5
GFL11	315	155	435	48	365	485	240			157	217	50	50	22.0
GFL14	375	200	540	57	430	600	295			197	257	55	60	26.0

Foot design is not available for the following combinations:

- GFL04: Motor frame size 090
- GFL05: Motor frame size 090
- GFL05: Motor frame size 100
- GFL06: Motor frame size 112
- GFL06: Motor frame size 132
- GFL07: Motor frame size 160



Foot mounting in position 4

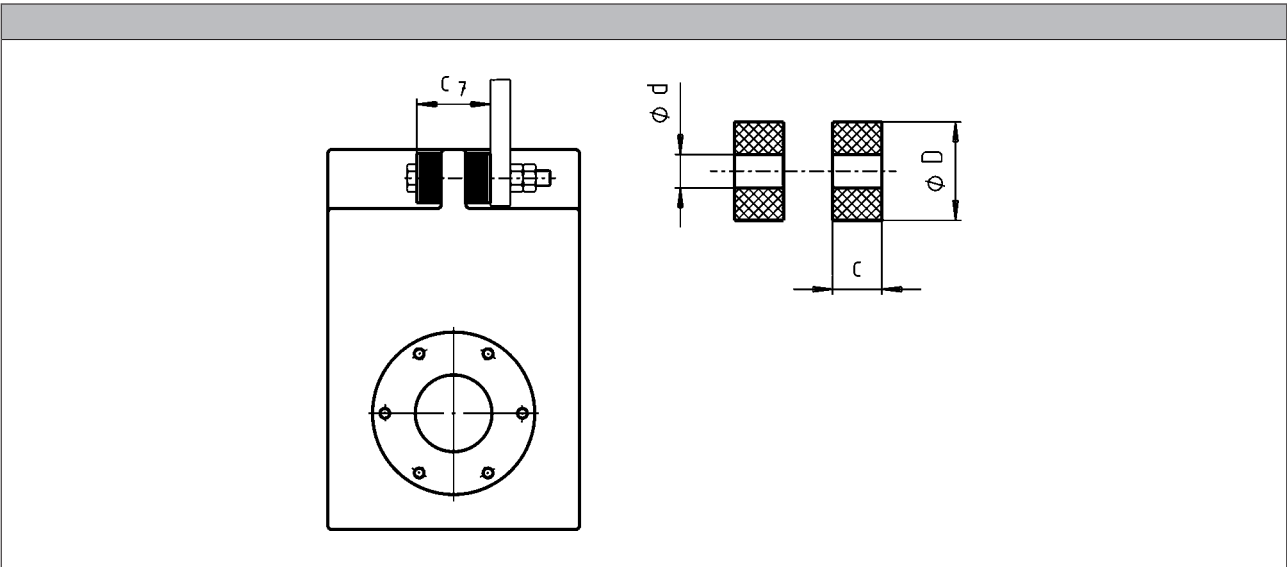


	a ₅	b ₅	c ₅	e ₅	f ₅	h	i	i ₃	i ₄	i ₅	m	n	s ₅
GFL04	130	108	18	152	133.0	85	4.5	28.5	45.5	78.5	22	25	6.6
GFL05	160	140	21	185	165.0	95	2.0	31.0	58.0	91.0	25		9.0
GFL06	175	175	27	205	203.0	120		39.0	78.0	119	30	28	11.0
GFL07	220	220	31	255	252.0	145	3.0	52.0	97.0	152	35	32	13.5
GFL09	260	275	36	300	315.0	180		57.0	117	177	40	40	17.5
GFL11	315	340	48	365	390.0	224			157	217	50	50	22.0
GFL14	375	425	57	430	485.0	278			197	257	55	60	26.0

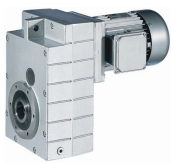
- In mounting positions E and F, the oil check bore hole/oil-sight glass are located between the feet in position 4!



Rubber buffer for torque plate



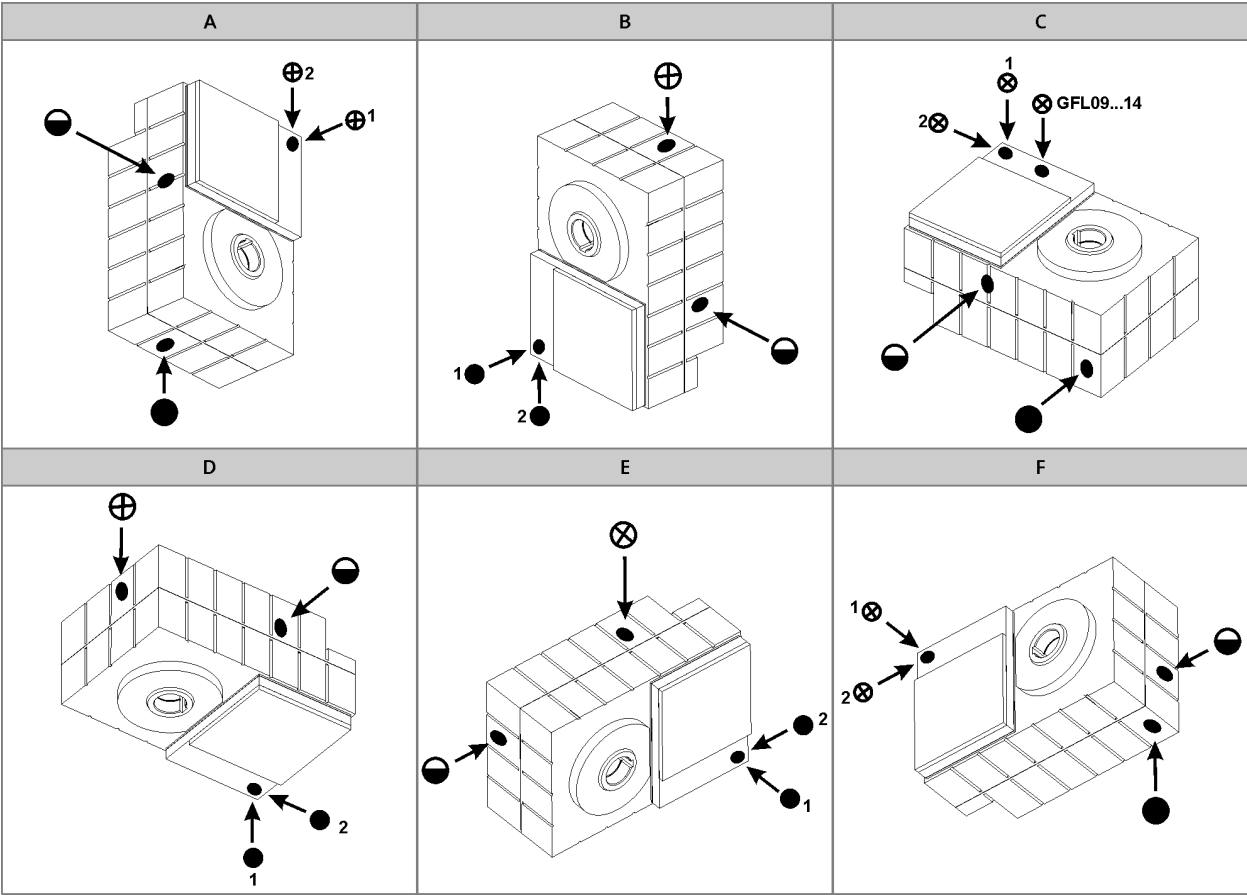
	d	D	c	c ₇
GFL04	11	30	14.5	43
GFL05	11	30	14.5	45
GFL06	13	40	15.0	50
GFL07	17	50	27.0	79
GFL09	21	60	28.0	88
GFL11	26	72	29.0	98
GFL14	33	92	30.0	110



Ventilations

Position of ventilation, sealing elements and oil level check

GFL05...14-2



A to F Mounting position
⊗ Ventilation / Oil filler plug
● Oil drain plug
◐ Oil control plug
* On both sides
** On opposite side

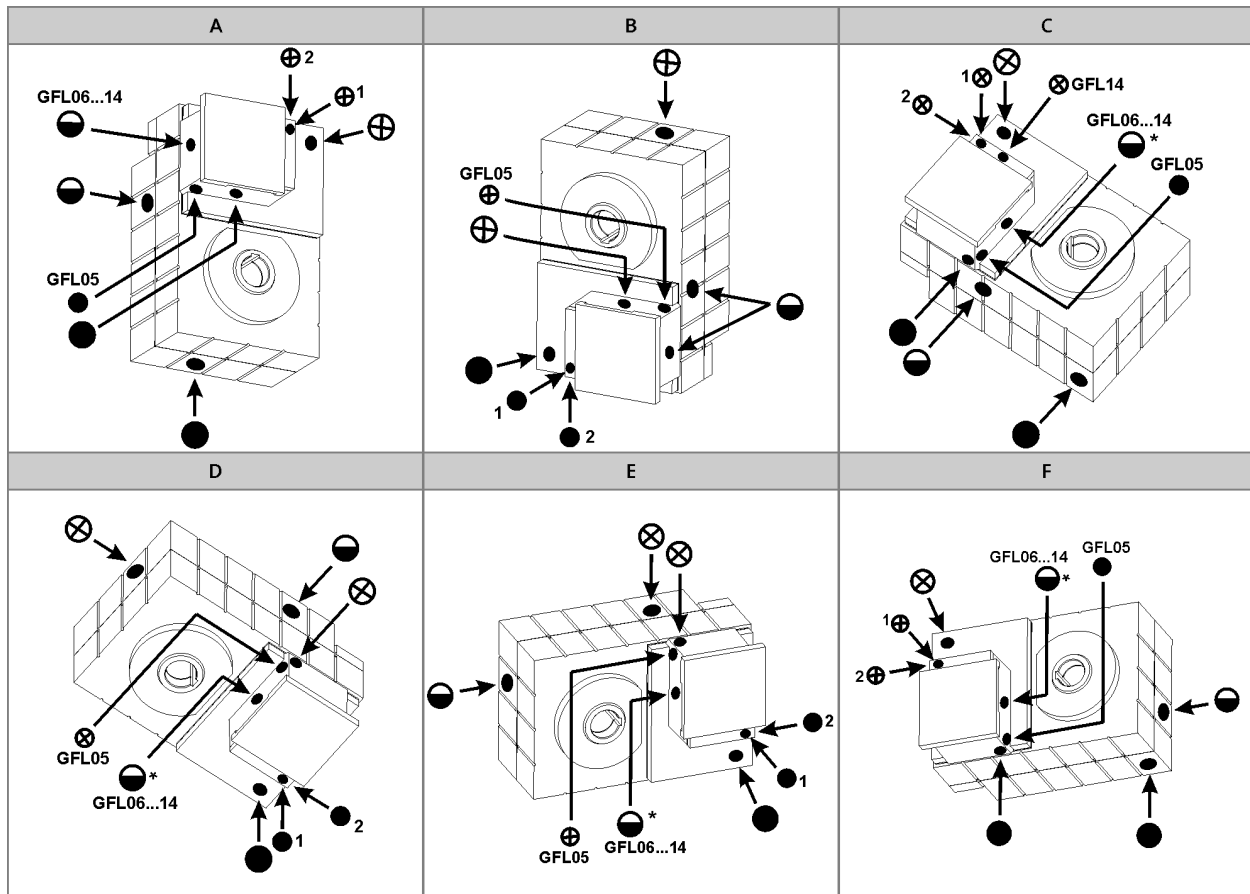
Item 1 standard
Item 2 only with:
• GFL05-2M □□□ 090C□□
• GFL05-2M □□□ 100C□□
• GFL06-2M □□□ 112C□□
• GFL07-2M □□□ 160C□□



Ventilations

Position of ventilation, sealing elements and oil level check

GFL05...14-3



A to F Mounting position

⊗ Ventilation / Oil filler plug

● Oil drain plug

◐ Oil control plug

* On both sides

** On opposite side

Item 1 standard

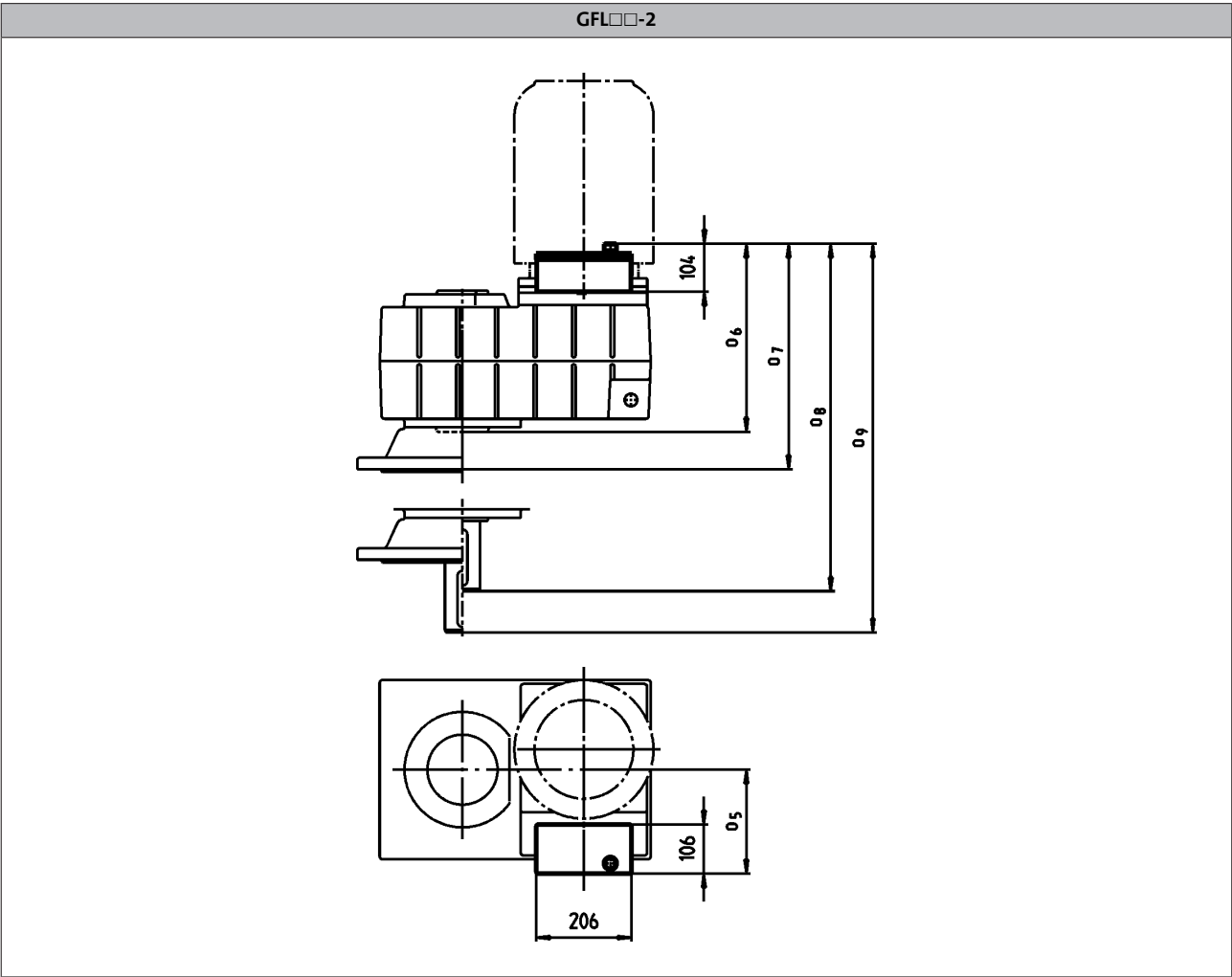
Item 2 only with:

- GFL07-3M □□□ 090C□□
- GFL07-3M □□□ 100C□□
- GFL09-3M □□□ 112C□□



Ventilations

Compensation reservoir for mounting position C



Motor	090					112				
	100									

	O ₅	O ₆	O ₇	O ₈	O ₉	O ₅	O ₆	O ₇	O ₈	O ₉
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
GFL09	165	344	405	464	525	187	344	405	464	525
GFL11	154	387	448	547	608	176	391	452	551	612
GFL14						181	446	507	646	707

Motor	132					160				
						180				
						225				

	O ₅	O ₆	O ₇	O ₈	O ₉	O ₅	O ₆	O ₇	O ₈	O ₉
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
GFL09	204	344	405	464	525	219	344	405	464	525
GFL11	200	391	452	551	612	214	391	452	551	612
GFL14	211	446	507	646	707	211	446	507	646	707

- Terminal box position 3 not permitted.
- Foot in position 3 not permitted.

GFL shaft-mounted helical gearboxes

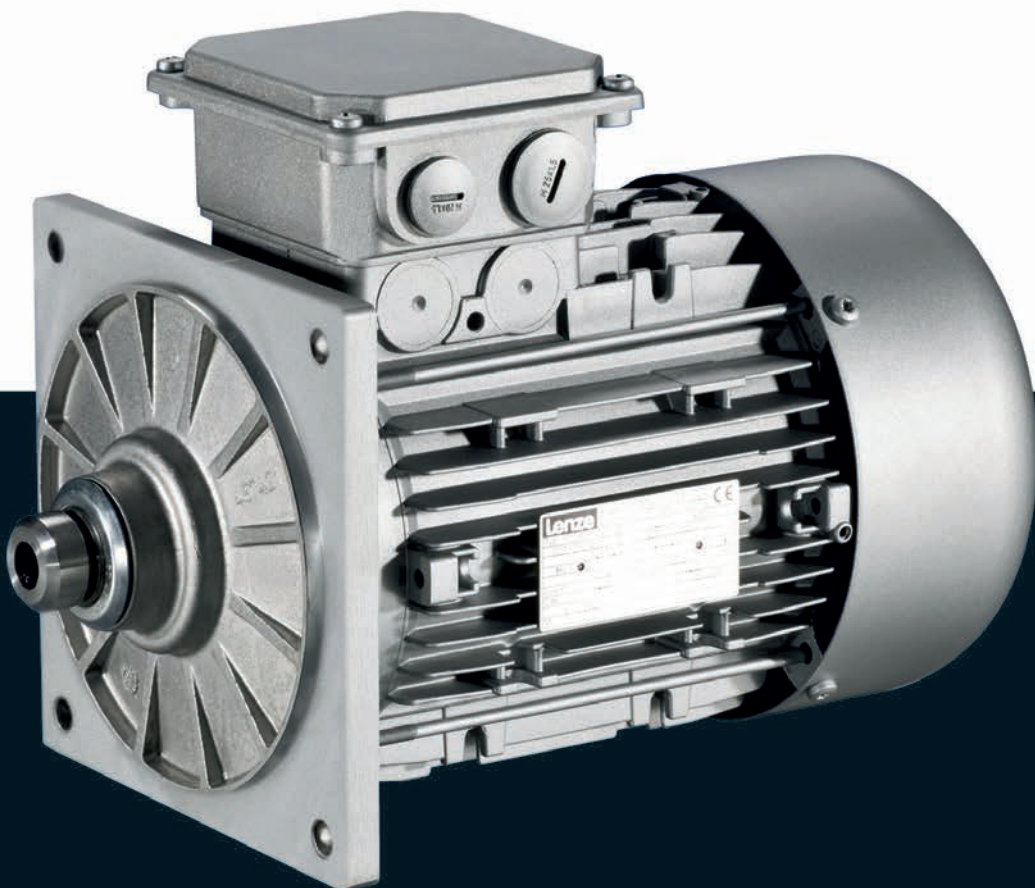
Accessories



Motors

MD three-phase AC motors

0.06 to 45 kW



MD three-phase AC motors

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MD three-phase AC motors

General information



List of abbreviations

$\eta_{100\%}$	[%]	Efficiency
$\eta_{75\%}$	[%]	Efficiency
$\eta_{50\%}$	[%]	Efficiency
$\cos \phi$		Power factor
I_N	[A]	Rated current
$I_{\max}$	[A]	Max. current consumption
J	[kgcm ²]	Moment of inertia
m	[kg]	Mass
M_a	[Nm]	Starting torque
M_b	[Nm]	Stalling torque
$M_{\max}$	[Nm]	Max. torque
M_N	[Nm]	Rated torque
n_N	[r/min]	Rated speed
P_N	[kW]	Rated power
$P_{\max}$	[kW]	Max. power input

$U_{\max}$	[V]	Max. mains voltage
$U_{\min}$	[V]	Min. mains voltage
$U_{N, \Delta}$	[V]	Rated voltage
$U_{N, Y}$	[V]	Rated voltage

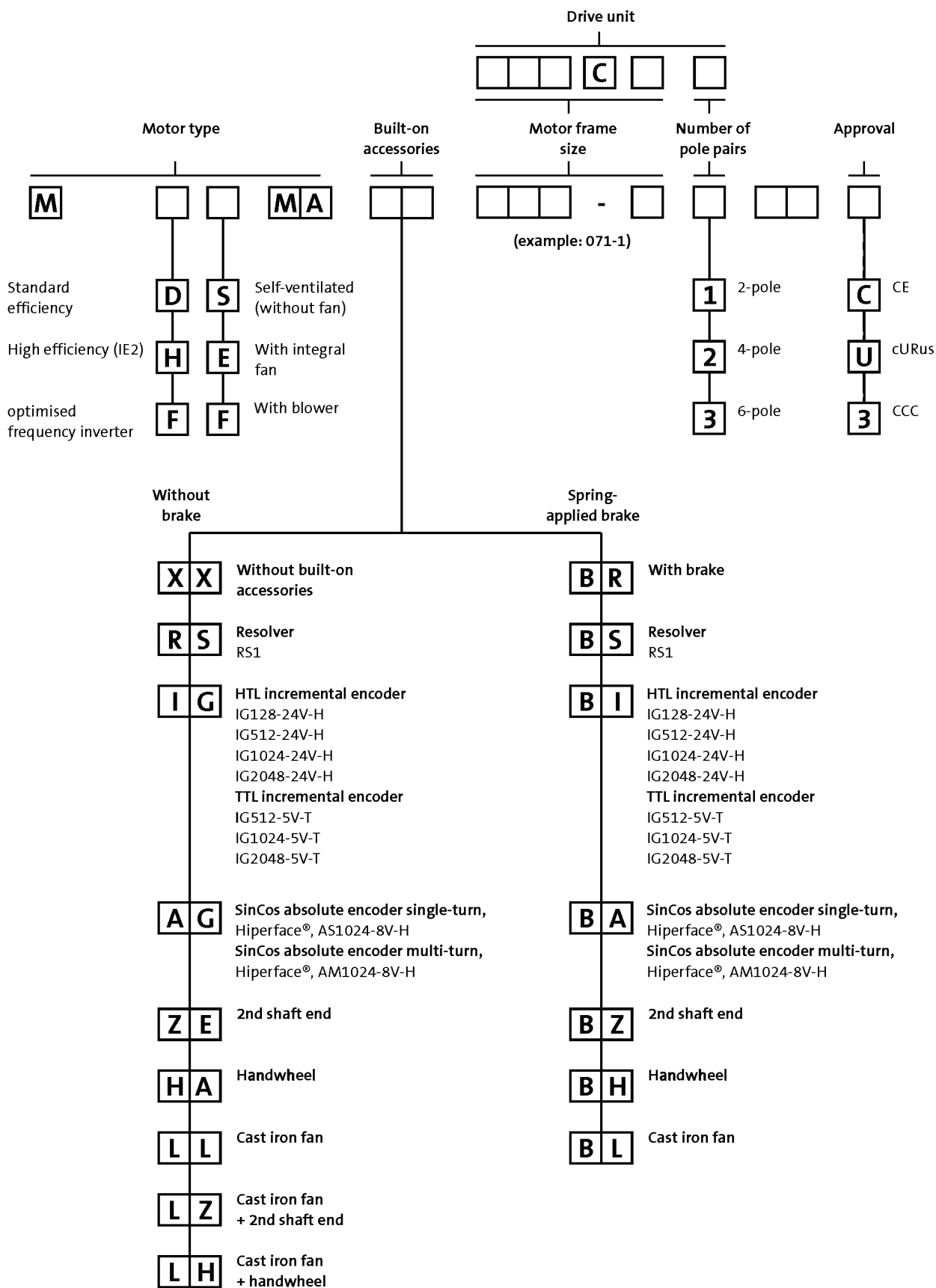
CE	Communauté Européenne
CSA	Canadian Standards Association
DIN	Deutsches Institut für Normung e.V.
EMC	Electromagnetic compatibility
EN	European standard
IEC	International Electrotechnical Commission
IM	International Mounting Code
IP	International Protection Code
NEMA	National Electrical Manufacturers Association
UL	Underwriters Laboratory Listed Product
UR	Underwriters Laboratory Recognized Product
VDE	Verband deutscher Elektrotechniker (Association of German Electrical Engineers)
CCC	China Compulsory Certificate
GOST	Certificate for Russian Federation
cURus	Combined certification marks of UL for the USA and Canada
UkrSEPRO	Certificate for Ukraine

MD three-phase AC motors

General information



Product key



MD three-phase AC motors

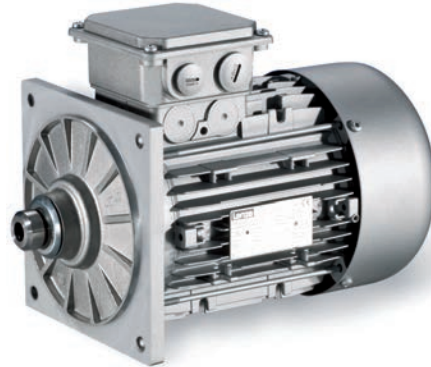
General information



Product information

Special motors have been designed for direct attachment to Lenze gearboxes.

These motors are attached to the gearbox without the use of a clutch. Torque transmission between the toothing and the motor shaft is friction-locked via a tapered connection here. This motor design means that the geared motors only require a small installation space.



L-force MD three-phase AC motors are available in a power range from 0.06 to 45 kW and comply with efficiency class 4IE1 (standard efficiency) as per IEC 60034-30.

Basic versions

- The thermal sensors integrated as standard allow for permanent temperature monitoring and are coordinated to the motor winding's temperature class F (155°C).
- The motors of the basic version are adapted to ambient conditions by enclosure IP55.
- In tough operating conditions, the surface and corrosion protection system is provided to reliably protect the motor from corrosive media.

Options

- Various brake sizes – each available with several braking torques – can be combined with the three-phase AC motors.
- The LongLife version of the brake can easily reach 10×10^6 switching cycles.
- A resolver and various incremental and absolute value encoders can be fitted for speed and position detection.
- For fast commissioning, the motors are also available with connectors for the power connection, brake, blower and feedback.
- Instead of an integral fan, the motor can optionally be equipped with a blower. No torque reduction is then necessary, even at speeds below 20 Hz.
- For drive tasks in decentralised applications, the motor can be ordered with the motec inverter connected to the terminal box.
- The motors are available with cURus, GOST-R, CCC and UkrSepr approval.
- Smooth start/braking is possible by increasing the motor's centrifugal mass with a cast iron fan.
- The motor can be equipped with a handwheel for manual setup or emergency operations.
- To protect the fan from falling objects, the fan cover can be equipped with a protection cover.
- A 2nd shaft end is available for further modifications.

MD three-phase AC motors

General information



Functions and features

Size				
Motor	063	071	080	090
Spring-applied brake				
Design	Standard or LongLife design Reduced or standard braking torque With rectifier With manual release lever Low noise		Standard or LongLife design Reduced, standard or increased braking torque With rectifier With manual release lever Low noise	
Feedback				
Design	Resolver ¹⁾ Incremental encoder ¹⁾ Absolute value encoder (multi-turn) ¹⁾			
Thermal sensor				
Thermal contact	TKO			
Thermal detector	KTY83-110 KTY84-130			
PTC thermistor	PTC			
Motor connection				
Power connection	Terminal box ICN connector HAN10E connector HAN modular connector			
Brake connection	Terminal box ICN connector HAN modular connector HAN10E connector			
Blower connection	Terminal box ICN connector			
Feedback connection	Terminal box ICN connector			
Temperature sensor connection	Terminal box TKO or PTC at connector in the power connection KTY at connector in the feedback connection			
Shaft bearings				
Position of the locating bearing	Standard motors (B3, B5, B14): side B Motors for gearbox direct mounting: side A			
Bearing type	Deep-groove ball bearing with high-temperature resistant grease, 2 sealing discs or cover plates			
Colour				
	Not coated Primed Paint in various corrosion-protection designs in accordance with RAL colours			
Further options				
	Protection cover	Protection cover Increased centrifugal mass Handwheel ¹⁾ 2nd shaft end		

¹⁾ With 2-pole motors not available.

MD three-phase AC motors

General information



Functions and features

Size	100	112	132
Motor			
Spring-applied brake			
Design	Standard or LongLife design Reduced, standard or increased braking torque With rectifier With manual release lever Low noise	Standard design Reduced, standard or increased braking torque With rectifier With manual release lever Low noise	
Feedback			
Design	Resolver ¹⁾ Incremental encoder ¹⁾ Absolute value encoder (multi-turn) ¹⁾		
Thermal sensor			
Thermal contact	TKO		
Thermal detector	KTY83-110 KTY84-130		
PTC thermistor	PTC		
Motor connection			
Power connection	Terminal box ICN connector HAN10E connector HAN modular connector		Terminal box ICN connector HAN modular connector
Brake connection	Terminal box ICN connector HAN modular connector HAN10E connector		Terminal box ICN connector HAN modular connector
Blower connection	Terminal box ICN connector		
Feedback connection	Terminal box ICN connector		
Temperature sensor connection	Terminal box TKO or PTC at connector in the power connection KTY at connector in the feedback connection		
Shaft bearings			
Position of the locating bearing	Standard motors (B3, B5, B14): side B Motors for gearbox direct mounting: side A		
Bearing type	Deep-groove ball bearing with high-temperature resistant grease, 2 sealing discs or cover plates		
Colour			
	Not coated Primed Paint in various corrosion-protection designs in accordance with RAL colours		
Further options			
	Protection cover Increased centrifugal mass Handwheel ¹⁾ 2nd shaft end		

¹⁾ With 2-pole motors not available.

MD three-phase AC motors

General information



Functions and features

Size			
Motor	160	180	225
Spring-applied brake			
Design	Standard design Reduced, standard or increased braking torque With rectifier With manual release lever Low noise		
Feedback			
Design	Resolver Incremental encoder Absolute value encoder (multi-turn)		
Thermal sensor			
Thermal contact	TKO		
Thermal detector	KTY83-110 KTY84-130		
PTC thermistor	PTC		
Motor connection			
Power connection	Terminal box HAN modular connector	Terminal box	
Brake connection	Terminal box HAN modular connector	Terminal box	
Blower connection	Terminal box ICN connector		
Feedback connection	Terminal box ICN connector		
Temperature sensor connection	Terminal box TKO or PTC at connector in the power connection KTY at connector in the feedback connection	Terminal box	
Shaft bearings			
Position of the locating bearing	Standard motors (B3, B5, B14): side B Motors for gearbox direct mounting: side A		Drive end
Bearing type	Deep-groove ball bearing with high-temperature resistant grease, 2 sealing discs or cover plates		
Colour			
	Not coated Primed Paint in various corrosion-protection designs in accordance with RAL colours		
Further options			
	Protection cover		

MD three-phase AC motors

General information



Functions and features

Surface and corrosion protection

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

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 three-phase AC motors are also available unpainted (no surface and corrosion protection).

Surface and corrosion protection system	Applications	Measures
OKS-G (primed)	Dependent on subsequent top coat applied	2K PUR priming coat (grey)
OKS-S (small)	- Standard applications - Internal installation in heated buildings - Air humidity up to 90%	Surface coating as per corrosivity category C1 (in line with EN 12944-2)
OKS-M (medium)	- Internal installation in non-heated buildings - Covered, protected external installation - Air humidity up to 95%	Surface coating as per corrosivity category C2 (in line with EN 12944-2)
OKS-L (high)	- External installation - Air humidity above 95% - Chemical industry plants - Food industry	- Surface coating as per corrosivity category C3 (in line with EN 12944-2) - Blower cover and B end shield additionally primed - Screws zinc-coated - Cable glands with gaskets - Corrosion-resistant brake with cover ring, stainless friction plate, and chrome-plated armature plate (on request) Optional measures: - Motor recesses sealed off (on request)

Structure of surface coating

Surface and corrosion protection system	Corrosivity category	Surface coating	Colour
	DIN EN ISO 12944-2	Structure	
Without OKS (uncoated)			
OKS-G (primed)		2K PUR priming coat	
OKS-S (small)	C1	2K-PUR top coat	
OKS-M (medium)	C2	2K PUR priming coat	
OKS-L (high)	C3	2K-PUR top coat	
			Standard: RAL 7012 Optional: RAL Classic

MD three-phase AC motors

General information



Motor – inverter assignment

Rated frequency 50/60 Hz

- Decentralised inverter 8400 motec (E84DVB)
- Inverter Drives 8400 (E84AV)

Rated power	Product key		
	Motor	Inverter	
P _N			
[kW]			
0.12	MD□□□□□063-12		
0.18	MD□□□□□063-32		
0.25	MD□□□□□063-42		
0.37	MD□□□□□071-32	E84DVB□3714S□□□2□	
0.55	MD□□□□□071-42	E84DVB□5514S□□□2□	
0.75	MD□□□□□080-32	E84DVB□7514S□□□2□	
1.10	MD□□□□□080-42	E84DVB□1124S□□□2□	
1.50	MD□□□□□090-32	E84DVB□1524S□□□2□	
2.20	MD□□□□□100-12	E84DVB□2224S□□□2□	
3.00	MD□□□□□100-32	E84DVB□3024S□□□2□	
4.00	MD□□□□□112-22	E84DVB□4024S□□□2□	
5.50	MD□□□□□112-32	E84DVB□5524S□□□2□	
7.50	MD□□□□□132-22	E84DVB□7524S□□□2□	
11.0	MD□□□□□160-22		
15.0	MD□□□□□160-32		
18.5	MD□□□□□180-12		
22.0	MD□□□□□180-32		
30.0	MD□□□□□180-42		
37.0	MD□□□□□225-12		
45.0	MD□□□□□225-22		

MD three-phase AC motors

General information



Motor – inverter assignment

Rated frequency 87 Hz

- Decentralised inverter 8400 motec (E84DVB)
- Inverter Drives 8400 (E84AV)

Rated power	Product key		
	Motor	Inverter	
P _N			
[kW]			
0.21	MD□□□□□063-12		
0.33	MD□□□□□063-32	E84DVB□5514S□□□2□	
0.45	MD□□□□□063-42		
0.66	MD□□□□□071-32	E84DVB□7514S□□□2□	
1.00	MD□□□□□071-42	E84DVB□1124S□□□2□	
1.35	MD□□□□□080-32	E84DVB□1524S□□□2□	
2.00	MD□□□□□080-42	E84DVB□2224S□□□2□	
2.70	MD□□□□□090-32	E84DVB□3024S□□□2□	
3.90	MD□□□□□100-12	E84DVB□4024S□□□2□	
5.40	MD□□□□□100-32	E84DVB□5524S□□□2□	
7.10	MD□□□□□112-22	E84DVB□7524S□□□2□	
9.70	MD□□□□□112-32		
13.2	MD□□□□□132-22		
19.3	MD□□□□□160-22		
26.4	MD□□□□□160-32		
32.4	MD□□□□□180-12		
38.7	MD□□□□□180-32		

MD three-phase AC motors

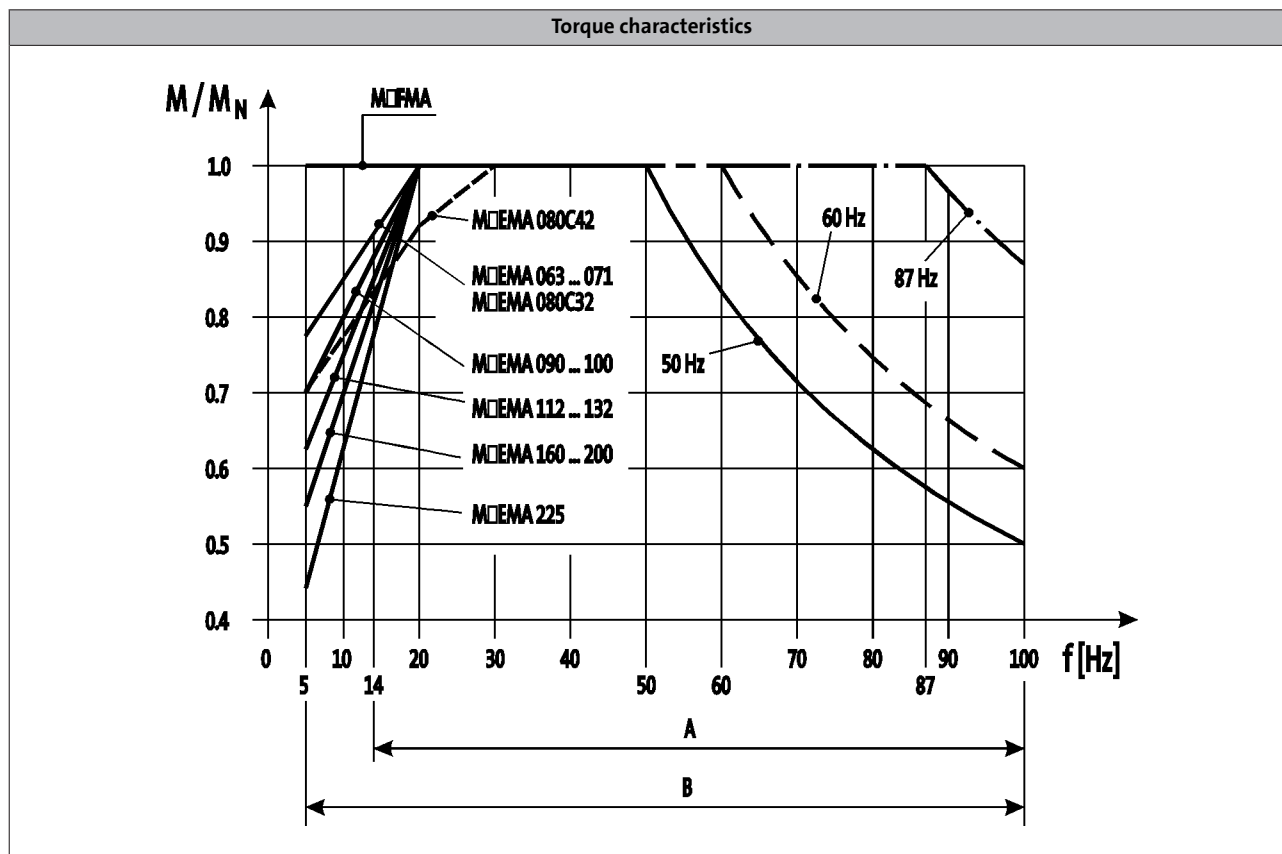
General information



Dimensioning

Torque derating at low motor frequencies

Motor size-dependent torque reduction, taking into account the thermal response during operation on the inverter.



A = Operation with integral fan and brake

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

- The motor specifications stated in this catalogue for inverter operation apply to operation with a Lenze inverter. If you are uncertain, get in touch with the manufacturer of the inverter to ask whether the device is capable of driving the motor with the stated specifications (e.g. setting range, base frequency).

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

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

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

Please contact your Lenze sales office.

MD three-phase AC motors

General information



MD three-phase AC motors

Technical data



Standards and operating conditions

Enclosure			IP55
EN 60529			
Energy efficiency class			IE1 1)
IEC 60034-30			
IEC 60034-2-1			Methodology for measuring efficiency
Approval			cURus 2) CCC GOST-R UkrSepro
Class			
Temperature class			B
IEC/EN 60034-1; utilisation			
IEC/EN 60034-1; insulation system (enamel-insulated wire)			F
Min. ambient operating temperature			-20
	T _{opr,min}	[°C]	
Max. ambient operating temperature			40
	T _{opr,max}	[°C]	
With power reduction	T _{opr,max}	[°C]	60
Site altitude			4000
Amsl	H _{max}	[m]	
Max. speed			4500
	n _{max}	[r/min]	

¹⁾ Only applies to 4-pole motors.

²⁾ Motor frame size 225, in preparation.

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

MD three-phase AC motors

Technical data



Rated data for 50 Hz

2-pole motors

	P_N	n_N	$U_{N,\Delta}$	$I_{N,\Delta}$	$U_{N,Y}$	$I_{N,Y}$	I_a/I_N
			$\pm 10\%$		$\pm 10\%$		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□□063-11	0.18	2740	230	0.80	400	0.46	4.30
MD□□□□□063-31	0.25	2710	230	1.10	400	0.60	3.70
MD□□□□□071-11	0.37	2720	230	1.50	400	0.90	4.40
MD□□□□□071-31	0.55	2630	230	2.40	400	1.40	3.80
MD□□□□□080-11	0.75	2720	230	3.10	400	1.80	4.70
MD□□□□□080-31	1.10	2720	230	4.50	400	2.60	4.70
MD□□□□□090-11	1.50	2710	230	5.50	400	3.20	4.50
MD□□□□□090-31	2.20	2730	230	8.30	400	4.80	3.70
MD□□□□□100-31	3.00	2890	230	10.2	400	5.90	7.00
MD□□□□□100-41	4.00	2840	230	14.2	400	8.30	6.60
MD□□□□□112-31	5.50	2900	400 ²⁾	11.5			6.00
MD□□□□□112-41	7.50	2890	400 ²⁾	16.5			6.00
MD□□□□□132-21	9.00	2890	400 ²⁾	17.0			6.50

	M_N	M_a	M_b	$\cos \phi$	$\eta_{75\%}$	$\eta_{100\%}$	$J^{1)}$	$m^{1)}$
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□063-11	0.63	1.50	1.50	0.88	66.5	66.0	1.70	3.90
MD□□□□□063-31	0.90	1.90	2.00	0.89	67.0	66.0	1.70	3.80
MD□□□□□071-11	1.29	3.10	2.90	0.92	71.0	69.0	5.10	6.00
MD□□□□□071-31	2.00	3.80	4.20	0.93	70.0	63.0	5.10	6.50
MD□□□□□080-11	2.65	5.40	6.50	0.89	70.0	70.0	9.70	10.0
MD□□□□□080-31	3.90	7.50	8.50	0.89	75.0	73.0	9.70	10.0
MD□□□□□090-11	5.20	10.1	10.4	0.95	76.5	75.0	35.0	17.0
MD□□□□□090-31	7.60	16.4	15.5	0.90	77.0	76.0	35.0	17.0
MD□□□□□100-31	9.90	19.0	27.0	0.90	83.0	82.0	32.6	21.0
MD□□□□□100-41	13.6	24.0	29.0	0.91	77.0	78.0	32.6	21.0
MD□□□□□112-31	18.1	46.0	49.0	0.83	86.0	86.0	53.8	28.0
MD□□□□□112-41	24.8	71.0	77.0	0.78	87.0	87.0	70.0	35.0
MD□□□□□132-21	29.8	72.0	72.0	0.92	88.0	88.0	205	68.0

¹⁾ Without accessories

²⁾ Star/delta start-up possible at 400 V.

MD three-phase AC motors

Technical data



Rated data for 50 Hz

4-pole motors

	P _N	n _N	U _{N, Δ} ²⁾	I _{N, Δ}	U _{N, Y}	I _{N, Y}	I _a /I _N
			± 10 %		± 10 %		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□□063-02	0.060	1425	230	0.42	400	0.24	3.50
MD□□□□□063-22	0.090	1375	230	0.48	400	0.28	2.90
MD□□□□□063-12	0.12	1425	230	0.85	400	0.49	3.10
MD□□□□□063-32	0.18	1365	230	1.00	400	0.58	2.70
MD□□□□□063-42	0.25	1370	230	1.40	400	0.82	2.90
MD□□□□□071-32	0.37	1410	230	1.60	400	0.95	3.30
MD□□□□□071-42	0.55	1405	230	2.40	400	1.40	3.50
MD□□□□□080-32	0.75	1410	230	3.30	400	1.90	4.60
MD□□□□□080-42	1.10	1390	230	4.80	400	2.80	4.40
MD□□□□□090-32	1.50	1410	230	6.60	400	3.80	4.80
MD□□□□□100-12	2.20	1440	230	9.20	400	5.30	6.00
MD□□□□□100-32	3.00	1430	230	12.5	400	7.20	4.60
MD□□□□□112-22	4.00	1450	230	16.1	400	9.30	6.20
MD□□□□□112-32	5.50	1445	230 400 ³⁾	21.7 12.5	400	12.5	6.10
MD□□□□□132-22	7.50	1455	230 400 ³⁾	28.6 16.5	400	16.5	5.90
MD□□□□□132-32	9.20	1450	230 400 ³⁾	34.1 19.7	400	19.7	5.10

	M _N	M _a	M _b	cos φ	η _{75 %}	η _{100 %}	J ¹⁾	m ¹⁾
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□063-02	0.40	1.30	1.36	0.57	59.0	63.0	3.30	3.90
MD□□□□□063-22	0.63	1.30	1.39	0.71	63.0	65.0	3.30	3.90
MD□□□□□063-12	0.80	2.50	2.64	0.56	58.0	63.0	3.30	4.10
MD□□□□□063-32	1.26	2.50	2.61	0.70	63.0	64.0	3.30	4.10
MD□□□□□063-42	1.74	3.80	4.10	0.67	65.0	66.0	3.70	4.40
MD□□□□□071-32	2.51	4.76	5.81	0.77	73.0	73.0	10.7	5.80
MD□□□□□071-42	3.74	7.85	9.12	0.77	74.0	74.0	12.8	6.40
MD□□□□□080-32	5.10	11.0	12.1	0.80	73.0	74.0	26.0	11.0
MD□□□□□080-42	7.50	16.5	18.4	0.80	77.0	77.0	26.0	11.0
MD□□□□□090-32	10.1	23.7	27.1	0.76	78.0	79.0	28.4	15.0
MD□□□□□100-12	14.6	38.0	44.0	0.73	83.0	84.0	61.0	24.0
MD□□□□□100-32	20.5	43.0	50.0	0.75	83.0	83.0	61.0	24.0
MD□□□□□112-22	26.3	70.0	95.0	0.73	85.0	86.0	107	31.0
MD□□□□□112-32	36.6	95.0	120	0.77	85.0	86.0	135	38.0
MD□□□□□132-22	49.2	100	150	0.76	87.0	88.0	336	66.0
MD□□□□□132-32	60.6	100	150	0.80	88.0	88.0	336	66.0

¹⁾ Without accessories

²⁾ Operation at 87 Hz is possible with 4-pole motors whose rated data at 50 Hz displays the voltage values Δ 230 V.
With motor frame sizes 132-12 to 180-32, the required voltage must also be specified in your order.

³⁾ Star/delta start-up possible at 400 V.

MD three-phase AC motors

Technical data



Rated data for 50 Hz

4-pole motors

	P_N	n_N	$U_{N, \Delta}^{2)}$	$I_{N, \Delta}$	$U_{N, Y}$	$I_{N, Y}$	I_a/I_N
			$\pm 10 \%$		$\pm 10 \%$		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□□160-22	11.0	1460	230 400 ³⁾	36.5 21.0	400	21.0	7.00
MD□□□□□160-32	15.0	1460	230 400 ³⁾	48.4 27.8	400	27.8	7.10
MD□□□□□180-12	18.5	1470	230 400 ³⁾	57.8 32.8	400	32.8	6.80
MD□□□□□180-32	22.0	1465	230 400 ³⁾	67.4 38.8	400	38.8	7.30
MD□□□□□180-42	30.0	1465	230 400 ³⁾	91.1 52.6	400	52.6	7.50
MD□□□□□225-12	37.0	1475	230 400 ³⁾	114 66.0	400	66.0	6.30
MD□□□□□225-22	45.0	1480	230 400 ³⁾	137 79.0	400	79.0	7.60

	M_N	M_a	M_b	$\cos \phi$	$\eta_{75 \%}$	$\eta_{100 \%}$	$J^{1)}$	$m^{1)}$
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□160-22	71.9	150	204	0.85	89.2	89.0	610	110
MD□□□□□160-32	98.1	214	288	0.87	89.7	90.0	750	130
MD□□□□□180-12	120	260	313	0.90	90.7	90.5	1350	165
MD□□□□□180-32	144	330	360	0.90	91.2	91.0	1550	175
MD□□□□□180-42	196	548	547	0.90	91.6	91.0	1850	200
MD□□□□□225-12	240	504	528	0.88	93.0	93.0	4400	320
MD□□□□□225-22	290	698	669	0.88	94.5	94.3	5300	415

¹⁾ Without accessories

²⁾ Operation at 87 Hz is possible with 4-pole motors whose rated data at 50 Hz displays the voltage values Δ 230 V.
With motor frame sizes 132-12 to 180-32, the required voltage must also be specified in your order.

³⁾ Star/delta start-up possible at 400 V.

MD three-phase AC motors

Technical data



Rated data for 50 Hz

6-pole motors

	P_N	n_N	$U_{N,\Delta}$	$I_{N,\Delta}$	$U_{N,Y}$	$I_{N,Y}$	I_a/I_N
			$\pm 10\%$		$\pm 10\%$		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□071-13	0.18	930	230	1.10	400	0.60	3.90
MD□□□□071-33	0.25	930	230	1.80	400	1.10	2.80
MD□□□□080-13	0.37	950	230	2.20	400	1.30	4.00
MD□□□□080-33	0.55	930	230	2.90	400	1.70	3.50

	M_N	M_a	M_b	$\cos \phi$	$\eta_{75\%}$	$\eta_{100\%}$	$J^{1)}$	$m^{1)}$
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□071-13	1.80	5.00	5.00	0.66	67.0	69.0	12.5	6.50
MD□□□□071-33	2.50	6.60	6.60	0.66	67.0	68.0	12.5	6.50
MD□□□□080-13	3.70	10.1	10.7	0.63	68.0	69.0	26.0	11.0
MD□□□□080-33	5.60	12.2	12.8	0.70	68.0	68.0	26.0	11.0

¹⁾ Without accessories

MD three-phase AC motors

Technical data



Rated data for 60 Hz

2-pole motors

- The motors are designed for an operation at 265/460 V but are also able to be operated at 230 V, 60 Hz. The same technical data apply, the starting torque is a bit lower.
- The motors have a service factor of 1.15 at 60 Hz. The service factor indicates the permissible overload during operation within the mains voltage fluctuations.

	P_N	n_N	$U_{N,\Delta}$	$I_{N,\Delta}$	$U_{N,Y}$	$I_{N,Y}$	I_a/I_N
			$\pm 10\%$		$\pm 10\%$		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□□063-11	0.18	3370	265	0.72	460	0.41	5.50
MD□□□□□063-31	0.25	3390	265	0.88	460	0.51	4.80
MD□□□□□071-11	0.37	3360	265	1.30	460	0.76	5.50
MD□□□□□071-31	0.55	3240	265	2.10	460	1.20	4.80
MD□□□□□080-11	0.75	3380	265	2.60	460	1.50	5.90
MD□□□□□080-31	1.10	3370	265	3.80	460	2.20	5.90
MD□□□□□090-11	1.50	3310	265	4.80	460	2.80	5.30
MD□□□□□090-31	2.20	3320	265	7.20	460	4.10	4.30
MD□□□□□100-31	3.00	3510	265	8.80	460	5.10	8.10
MD□□□□□100-41	4.00	3440	265	12.4	460	7.10	7.70
MD□□□□□112-31	5.50	3510	460 ²⁾	9.90			6.90
MD□□□□□112-41	7.50	3500	460 ²⁾	14.4			6.80
MD□□□□□132-21	9.00	3500	460 ²⁾	14.8			7.60

	M_N	M_a	M_b	$\cos \phi$	$\eta_{75\%}$	$\eta_{100\%}$	$J^{1)}$	$m^{1)}$
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□063-11	0.51	1.38	1.38	0.84	68.3	67.8	1.70	3.90
MD□□□□□063-31	0.72	1.74	1.84	0.86	71.1	70.0	1.70	3.80
MD□□□□□071-11	1.05	2.85	2.66	0.91	74.4	72.3	5.10	6.00
MD□□□□□071-31	1.62	3.49	3.86	0.90	73.6	66.3	5.10	6.50
MD□□□□□080-11	2.13	4.96	5.97	0.88	74.4	74.4	9.70	10.0
MD□□□□□080-31	3.14	6.89	7.81	0.87	79.2	77.1	9.70	10.0
MD□□□□□090-11	4.31	9.28	9.55	0.94	78.3	76.7	35.0	17.0
MD□□□□□090-31	6.25	15.1	14.2	0.89	78.7	77.7	35.0	17.0
MD□□□□□100-31	8.13	17.4	24.8	0.89	84.5	83.5	32.6	21.0
MD□□□□□100-41	11.3	22.0	26.6	0.90	78.6	79.7	32.6	21.0
MD□□□□□112-31	14.9	42.2	45.0	0.83	87.5	87.5	53.8	28.0
MD□□□□□112-41	20.5	65.2	70.7	0.77	88.5	88.5	70.0	35.0
MD□□□□□132-21	24.7	66.1	66.1	0.91	88.9	88.9	205	68.0

¹⁾ Without accessories

²⁾ Star/delta start-up possible at 460 V.

MD three-phase AC motors

Technical data



Rated data for 60 Hz

4-pole motors

- The motors are designed for an operation at 265/460 V but are also able to be operated at 230 V, 60 Hz. The same technical data apply, the starting torque is a bit lower.
- The motors have a service factor of 1.15 at 60 Hz. The service factor indicates the permissible overload during operation within the mains voltage fluctuations.

	P _N	n _N	U _{N, Δ} ²⁾	I _{N, Δ}	U _{N, Y}	I _{N, Y}	I _a /I _N
			± 10 %		± 10 %		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□□063-02	0.060	1735	265	0.37	460	0.21	4.40
MD□□□□□063-22	0.090	1695	265	0.43	460	0.25	4.20
MD□□□□□063-12	0.12	1735	265	0.69	460	0.40	4.00
MD□□□□□063-32	0.18	1695	265	0.80	460	0.46	3.60
MD□□□□□063-42	0.25	1680	265	1.30	460	0.75	3.80
MD□□□□□071-32	0.37	1720	265	1.50	460	0.84	3.90
MD□□□□□071-42	0.55	1720	265	2.10	460	1.20	4.10
MD□□□□□080-32	0.75	1720	265	2.90	460	1.70	5.60
MD□□□□□080-42	1.10	1705	265	4.20	460	2.40	5.40
MD□□□□□090-32	1.50	1720	265	5.80	460	3.40	5.70
MD□□□□□100-12	2.20	1745	265	8.10	460	4.70	6.90
MD□□□□□100-32	3.00	1740	265	10.8	460	6.30	5.30
MD□□□□□112-22	4.00	1755	265	14.1	460	8.20	6.90
MD□□□□□112-32	5.50	1750	265 460 ³⁾	18.9 10.9	460	10.9	6.90
MD□□□□□132-22	7.50	1760	265 460 ³⁾	25.7 14.8	460	14.8	6.50
MD□□□□□132-32	9.20	1750	265 460 ³⁾	29.6 17.1	460	17.1	5.70

	M _N	M _a	M _b	cos φ	η _{75 %}	η _{100 %}	J ¹⁾	m ¹⁾
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□063-02	0.33	1.10	1.36	0.54	60.0	63.0	3.30	3.90
MD□□□□□063-22	0.51	1.10	1.40	0.67	64.9	67.0	3.30	3.90
MD□□□□□063-12	0.66	2.25	2.64	0.55	58.0	63.0	3.30	4.10
MD□□□□□063-32	1.00	2.21	2.56	0.68	65.0	66.0	3.30	4.10
MD□□□□□063-42	1.40	3.71	4.20	0.60	64.0	66.0	3.70	4.40
MD□□□□□071-32	2.05	4.40	5.80	0.74	74.0	75.0	10.7	5.80
MD□□□□□071-42	3.05	7.00	9.00	0.73	76.0	77.0	12.8	6.40
MD□□□□□080-32	4.16	10.3	12.2	0.78	78.0	78.0	26.0	11.0
MD□□□□□080-42	6.16	15.5	18.5	0.78	79.0	80.0	26.0	11.0
MD□□□□□090-32	8.33	22.0	27.0	0.73	79.0	81.0	28.4	15.0
MD□□□□□100-12	12.0	33.0	43.0	0.71	83.0	85.0	61.0	24.0
MD□□□□□100-32	16.5	38.0	48.0	0.73	84.0	85.0	61.0	24.0
MD□□□□□112-22	21.8	57.0	89.0	0.72	85.0	87.0	107	31.0
MD□□□□□112-32	30.0	79.0	114	0.75	87.0	87.0	135	38.0
MD□□□□□132-22	40.7	83.0	137	0.75	88.0	89.0	336	66.0
MD□□□□□132-32	50.2	83.0	137	0.79	88.0	89.0	336	66.0

¹⁾ Without accessories

²⁾ Operation at 87 Hz is possible with 4-pole motors whose rated data at 60 Hz displays the voltage values Δ 265 V.
With motor frame sizes 112-32 to 180-42, the required voltage must also be specified in your order.

³⁾ Star/delta start-up possible at 460 V.

MD three-phase AC motors

Technical data



Rated data for 60 Hz

4-pole motors

- The motors are designed for an operation at 265/460 V but are also able to be operated at 230 V, 60 Hz. The same technical data apply, the starting torque is a bit lower.
- The motors have a service factor of 1.15 at 60 Hz. The service factor indicates the permissible overload during operation within the mains voltage fluctuations.

	P_N	n_N	$U_{N, \Delta}^{2)}$	$I_{N, \Delta}$	$U_{N, Y}$	$I_{N, Y}$	I_a/I_N
			$\pm 10 \%$		$\pm 10 \%$		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□□160-22	11.0	1770	265 460 ³⁾	31.7 18.3	460	18.3	7.60
MD□□□□□160-32	15.0	1760	265 460 ³⁾	40.7 23.5	460	23.5	7.60
MD□□□□□180-12	18.5	1780	265 460 ³⁾	48.5 28.0	460	28.0	7.20
MD□□□□□180-32	22.0	1760	265 460 ³⁾	57.2 33.0	460	33.0	7.60
MD□□□□□180-42	30.0	1770	265 460 ³⁾	78.8 45.5	460	45.5	7.80
MD□□□□□225-12	37.0	1780	265 460 ³⁾	97.2 56.1	460	56.1	6.50
MD□□□□□225-22	45.0	1784	265 460 ³⁾	111 64.2	460	64.2	8.80

	M_N	M_a	M_b	$\cos \phi$	$\eta_{75 \%}$	$\eta_{100 \%}$	$J^{1)}$	$m^{1)}$
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□160-22	59.5	122	187	0.84	91.1	90.0	610	110
MD□□□□□160-32	81.2	171	265	0.87	92.6	92.0	750	130
MD□□□□□180-12	99.3	203	287	0.90	93.0	92.0	1350	165
MD□□□□□180-32	119	248	331	0.90	94.0	93.0	1550	175
MD□□□□□180-42	162	395	502	0.90	91.8	92.0	1850	200
MD□□□□□225-12	199	358	485	0.88	94.0	94.0	4400	320
MD□□□□□225-22	241	660	635	0.88	93.5	93.6	5300	415

¹⁾ Without accessories

²⁾ Operation at 87 Hz is possible with 4-pole motors whose rated data at 60 Hz displays the voltage values Δ 265 V.
With motor frame sizes 112-32 to 180-42, the required voltage must also be specified in your order.

³⁾ Star/delta start-up possible at 460 V.

MD three-phase AC motors

Technical data



Rated data for 60 Hz

6-pole motors

- The motors are designed for an operation at 265/460 V but are also able to be operated at 230 V, 60 Hz. The same technical data apply, the starting torque is a bit lower.
- The motors have a service factor of 1.15 at 60 Hz. The service factor indicates the permissible overload during operation within the mains voltage fluctuations.

	P_N	n_N	$U_{N,\Delta}$	$I_{N,\Delta}$	$U_{N,Y}$	$I_{N,Y}$	I_a/I_N
			$\pm 10\%$		$\pm 10\%$		
	[kW]	[r/min]	[V]	[A]	[V]	[A]	
MD□□□□□071-13	0.18	1140	265	0.95	460	0.55	4.60
MD□□□□□071-33	0.25	1140	265	1.70	460	1.00	3.40
MD□□□□□080-13	0.37	1160	265	2.00	460	1.20	4.60
MD□□□□□080-33	0.55	1140	265	2.60	460	1.50	4.10

	M_N	M_a	M_b	$\cos \phi$	$\eta_{75\%}$	$\eta_{100\%}$	$J^{1)}$	$m^{1)}$
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□071-13	1.47	4.59	4.59	0.62	68.4	70.5	12.5	6.50
MD□□□□□071-33	2.04	6.06	6.06	0.61	69.1	70.1	12.5	6.50
MD□□□□□080-13	3.03	9.28	9.83	0.59	69.5	70.5	26.0	11.0
MD□□□□□080-33	4.56	11.2	11.8	0.66	70.7	70.7	26.0	11.0

¹⁾ Without accessories

MD three-phase AC motors

Technical data



Rated data for 87 Hz

4-pole motors

	P _N	n _N	M _N	M _{max}	U _{N, Δ}	I _{N, Δ}	cos φ	η _{75 %}	η _{100 %}	J ¹⁾	m ¹⁾
					± 10 %						
	[kW]	[r/min]	[Nm]	[Nm]	[V]	[A]		[%]	[%]	[kgcm ²]	[kg]
MD□□□□□063-02	0.11	2535	0.40	1.60	400	0.42	0.55	62.0	67.0	3.30	3.90
MD□□□□□063-22	0.16	2485	0.63	2.50	400	0.48	0.67	66.0	70.0	3.30	3.90
MD□□□□□063-12	0.21	2535	0.80	3.20	400	0.85	0.52	61.0	66.0	3.30	4.10
MD□□□□□063-32	0.33	2475	1.26	5.00	400	1.00	0.65	68.0	71.0	3.30	4.10
MD□□□□□063-42	0.45	2480	1.74	7.00	400	1.40	0.63	66.0	73.0	3.70	4.40
MD□□□□□071-32	0.66	2520	2.51	10.0	400	1.60	0.72	76.0	78.0	10.7	5.80
MD□□□□□071-42	1.00	2515	3.74	15.0	400	2.40	0.74	79.0	80.0	12.8	6.40
MD□□□□□080-32	1.35	2520	5.10	20.0	400	3.30	0.80	75.0	77.0	26.0	11.0
MD□□□□□080-42	2.00	2500	7.50	30.0	400	4.80	0.80	81.0	82.0	26.0	11.0
MD□□□□□090-32	2.70	2520	10.1	40.0	400	6.70	0.73	83.0	85.0	28.4	15.0
MD□□□□□100-12	3.90	2550	14.6	60.0	400	9.20	0.71	87.0	88.0	61.0	24.0
MD□□□□□100-32	5.40	2540	20.5	80.0	400	12.5	0.73	87.0	88.0	61.0	24.0
MD□□□□□112-22	7.10	2560	26.3	105	400	16.1	0.71	87.0	88.0	107	31.0
MD□□□□□112-32	9.70	2555	36.6	145	400	21.7	0.75	87.0	89.0	135	38.0
MD□□□□□132-22	13.2	2565	49.2	200	400	28.6	0.75	90.0	90.0	336	66.0
MD□□□□□132-32	16.2	2560	60.6	242	400	34.1	0.79	90.0	91.0	336	66.0
MD□□□□□160-22	19.3	2565	71.9	280	400	36.5	0.85	91.7	90.0	610	110
MD□□□□□160-32	26.4	2565	98.1	390	400	48.4	0.86	91.9	92.0	750	130
MD□□□□□180-12	32.4	2575	120	480	400	57.8	0.89	92.8	92.0	1350	165
MD□□□□□180-32	38.7	2560	144	572	400	67.4	0.89	92.8	92.0	1550	175
MD□□□□□180-42	52.7	2565	196	780	400	91.1	0.89	93.0	93.0	1850	200

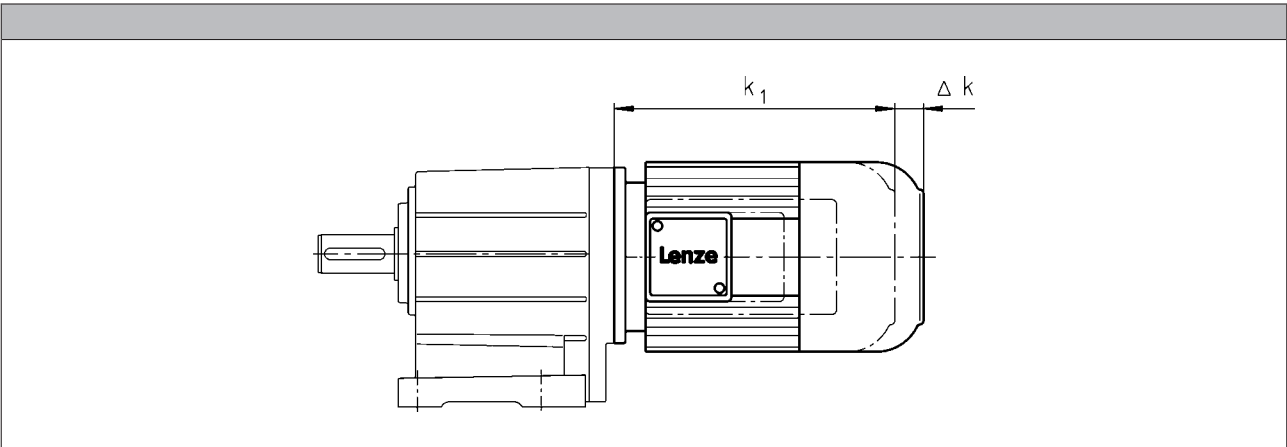
¹⁾ Without accessories

MD three-phase AC motors

Technical data



Dimensions, self-ventilated (2-pole)



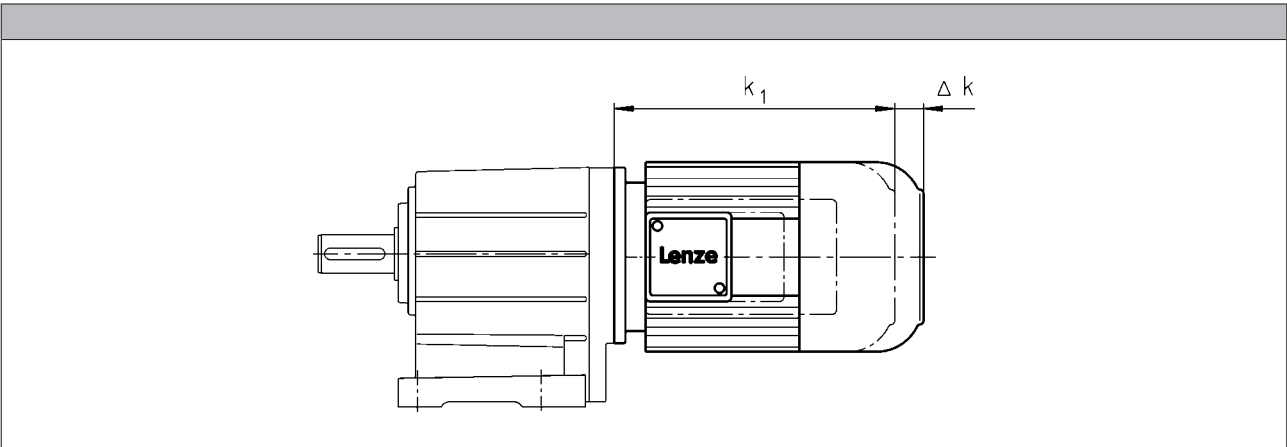
Motor type				
	MDEMAXX	MDEMABR	MDEMABL	MDEMALL
Motor frame size				
	Δ k	Δ k	Δ k	Δ k
	[mm]	[mm]	[mm]	[mm]
063-11 063-31	0	40		
071-11 071-31		52	52	0
080-11 080-31		73	73	4
090-11 090-31		68	68	0
100-31 100-41		76	76	76
112-31 112-41		90	90	0
132-21		110	110	

MD three-phase AC motors

Technical data



Dimensions, self-ventilated (4-pole)



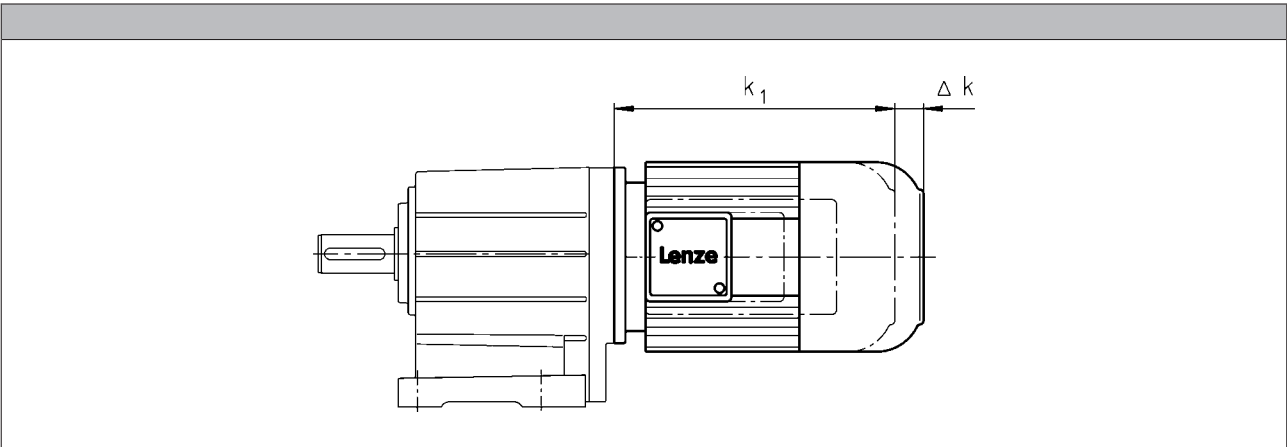
Motor type							
	MDEMAXX	MDEMABR	MDEMABS MDEMABI MDEMABA	MDEMABL	MDEMARS MDEMAIG MDEMAAG	MDEMALL	
Motor frame size							
	Δ k	Δ k	Δ k	Δ k	Δ k	Δ k	
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
063-02 063-22	0	71	135		71		
063-12 063-32 063-42		40	103		56		
071-32 071-42		52	96	52	52	0	
080-32 080-42		73	111	73	111	4	
090-32		68	105	68	87	0	
100-12 100-32		76	101	76	81	76	
112-22 112-32		90	120	90	80	0	
132-22 132-32		110	125	110	103		
160-22 160-32		105	191		83		
180-12 180-32		113	192		79		
180-42			193		80		
225-12 225-22							

MD three-phase AC motors

Technical data



Dimensions, self-ventilated (6-pole)



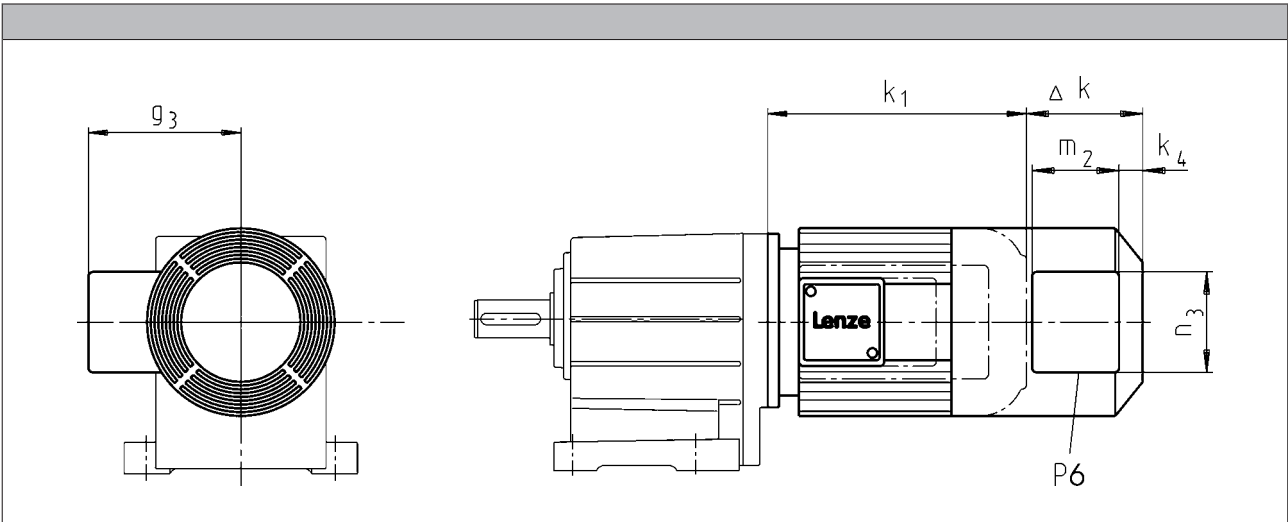
Motor type						
	MDEMAXX	MDEMABR	MDEMABS MDEMABI MDEMABA	MDEMABL	MDEMARS MDEMAIG MDEMAAG	MDEMALL
Motor frame size						
	Δ k [mm]	Δ k [mm]	Δ k [mm]	Δ k [mm]	Δ k [mm]	Δ k [mm]
071-13 071-33	0	52	96	52	52	0
080-13 080-33		73	111	73	111	4

MD three-phase AC motors

Technical data



Dimensions, forced ventilated (2-pole)



Motor type							
	MDFMAXX	MDFMABR					

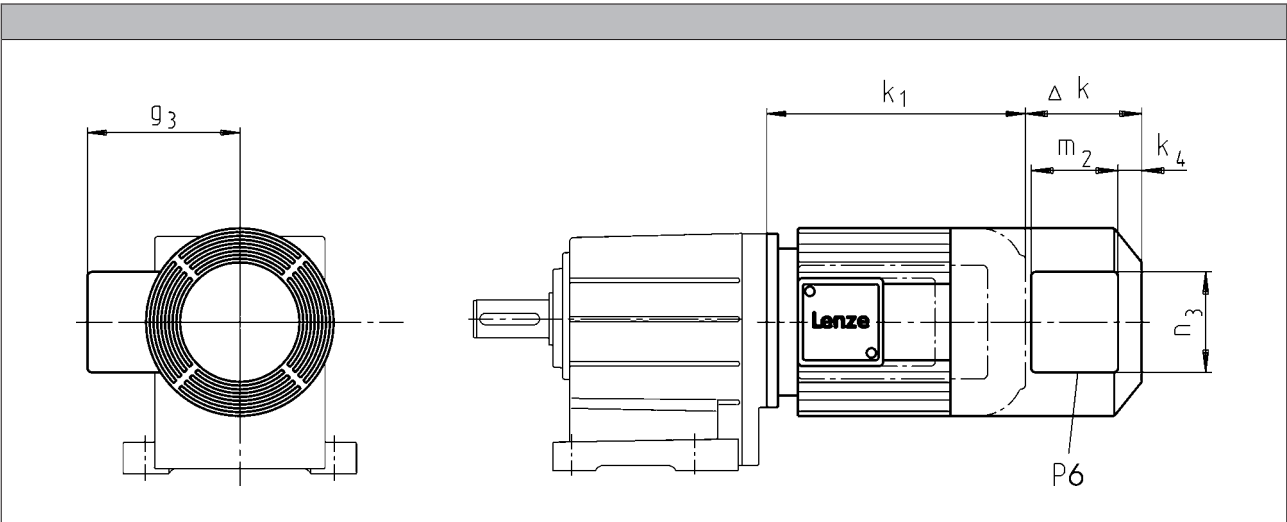
Motor frame size																
	Δ k	Δ k	k ₄	g ₃	m ₂	n ₃	P ₆									
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]									
063-11	128	170	12	115	95	105	1x M16x1.5									
063-31		165		122												
071-11		183		96	106											
071-31		141														
080-11		181	22	132	95	105										
080-31	109	170		150												
090-11																
090-31				162												
100-31	102	183														
100-41																
112-31	115	202	32	182												
112-41																
132-21																

MD three-phase AC motors

Technical data



Dimensions, forced ventilated (4-pole)



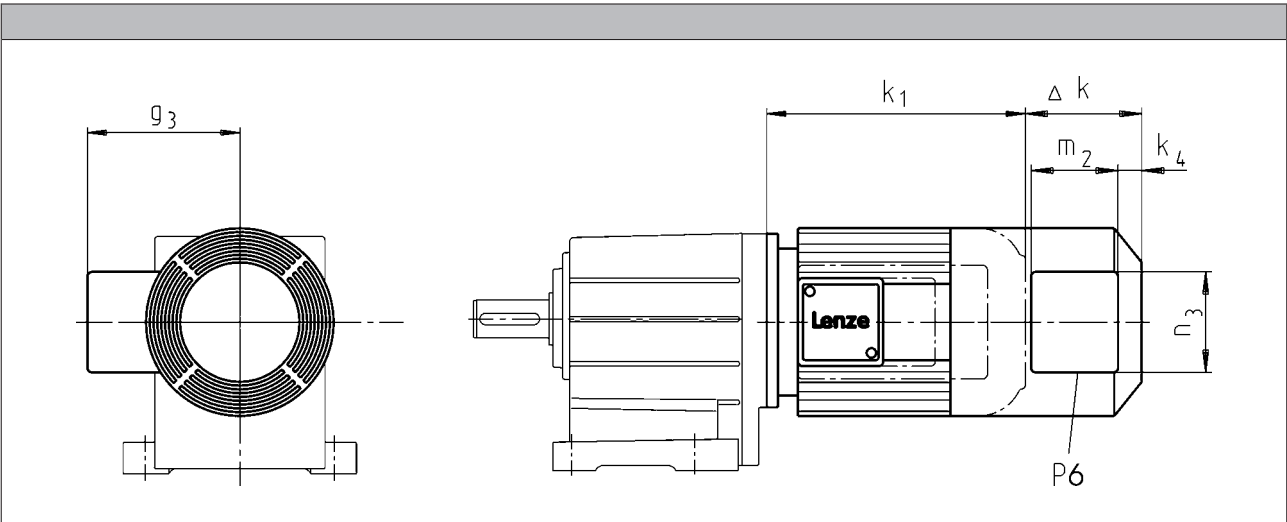
Motor type									
	MDFMAXX	MDFMABR	MDFMABS MDFMABI MDFMABA	MDFMARS MDFMAIG MDFMAAG					
Motor frame size									
	Δ k	Δ k	Δ k	Δ k	k ₄	g ₃	m ₂	n ₃	P ₆
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063-12 063-32 063-42	128	170	170	128	12	115	95	105	1x M16x1.5
071-32 071-42		165	165			122			
080-32 080-42		183	183		13	132	96	106	
090-32		181	181		22	141	95	105	
100-12 100-32	109	170	170	109		150			
112-22 112-32	102	183	183	183		162			
132-22 132-32	115	202	202	202	32	182	96	106	
160-22 160-32	149	179	237	224	31	209			
180-12 180-32		215	275	215					
180-42	155		260						
225-12 225-22	213	213	213	213					

MD three-phase AC motors

Technical data



Dimensions, forced ventilated (6-pole)



Motor type									
	MDFMAXX	MDFMABR	MDFMABS MDFMABI MDFMABA	MDFMARS MDFMAIG MDFMAAG					
Motor frame size									
	Δ k	Δ k	Δ k	Δ k	k ₄	g ₃	m ₂	n ₃	P ₆
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
071-13 071-33	128	165	165	128	12	122	95	105	1xM16x1.5
080-13 080-33		183	183		13	132	96	106	

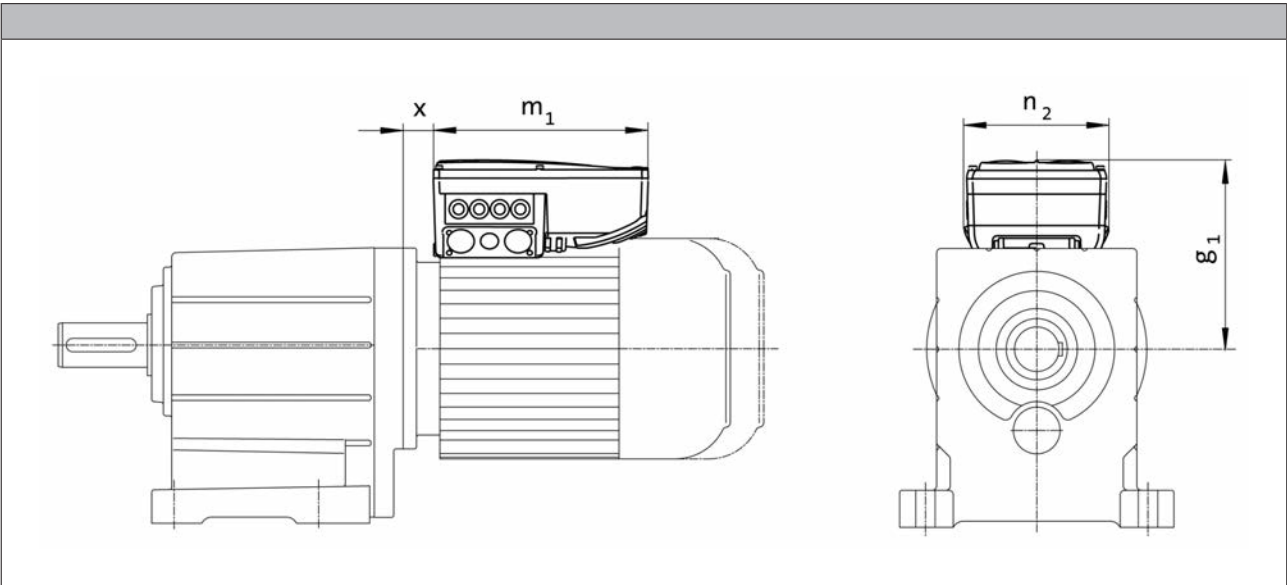
MD three-phase AC motors

Technical data



Dimensions, 8400 motec inverter

Rated frequency 50/60 Hz



Product key					
Motor	Inverter	g ₁ , 50Hz	m ₁ , 50Hz	n ₂ , 50Hz	x _{50Hz}
		[mm]	[mm]	[mm]	[mm]
MD□□□□□071-32	E84DVB□3714S□□□□2□	163	241	161	21.0
MD□□□□□071-42	E84DVB□5514S□□□□2□				25.5
MD□□□□□080-32	E84DVB□7514S□□□□2□				
MD□□□□□080-42	E84DVB□1124S□□□□2□	172	260	176	28.8
MD□□□□□090-32	E84DVB□1524S□□□□2□	177			
MD□□□□□100-12	E84DVB□2224S□□□□2□	217			29.6
MD□□□□□100-32	E84DVB□3024S□□□□2□	282	325	195	19.0
MD□□□□□112-22	E84DVB□4024S□□□□2□				
MD□□□□□112-32	E84DVB□5524S□□□□2□				34.5
MD□□□□□132-22	E84DVB□7524S□□□□2□	301			

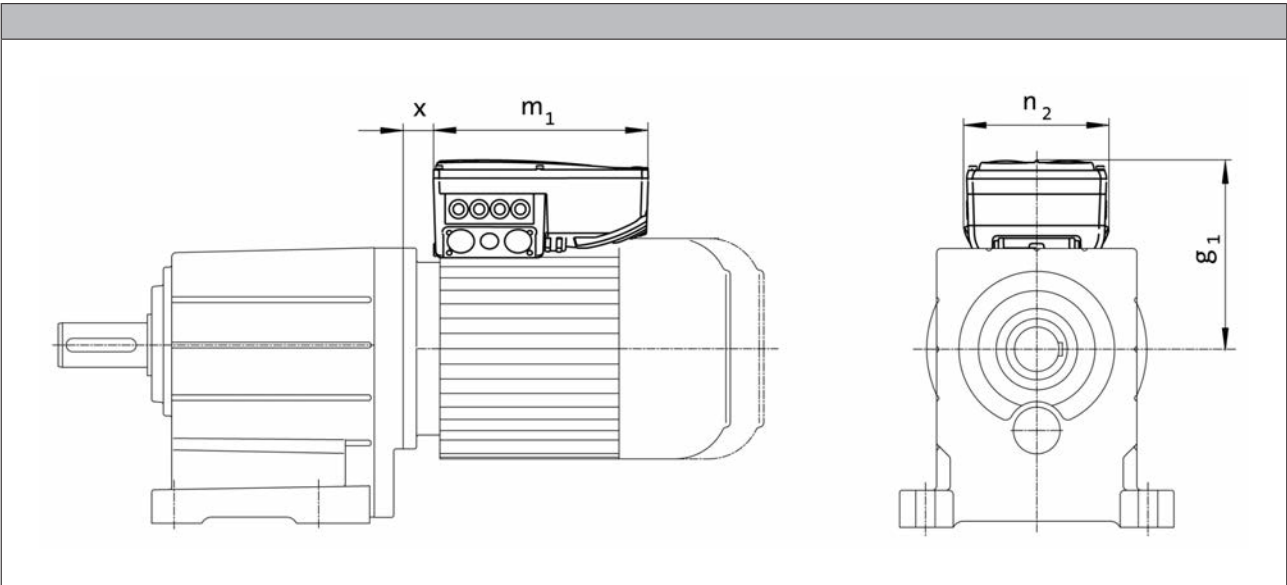
MD three-phase AC motors

Technical data



Dimensions, 8400 motec inverter

Rated frequency 87 Hz



Product key					
Motor	Inverter				
		g ₁ , 87Hz	m ₁ , 87Hz	n ₂ , 87Hz	x _{87Hz}
		[mm]	[mm]	[mm]	[mm]
MD□□□□063-32	E84DVB□3714S□□□2□	154	241	161	18.8
MD□□□□063-42	E84DVB□5514S□□□2□				21.0
MD□□□□071-32	E84DVB□7514S□□□2□	163			
MD□□□□071-42	E84DVB□1124S□□□2□			24.5	
MD□□□□080-32	E84DVB□1524S□□□2□		201		176
MD□□□□080-42	E84DVB□2224S□□□2□	260			
MD□□□□090-32	E84DVB□3024S□□□2□		272		
MD□□□□100-12	E84DVB□4024S□□□2□			325	195
MD□□□□100-32	E84DVB□5524S□□□2□				
MD□□□□112-22	E84DVB□7524S□□□2□	17.1			
		282			19.0

MD three-phase AC motors

Accessories



Spring-applied brake

Three-phase AC motors can be fitted with a spring-applied brake. This is activated after the supply voltage is switched off (closed-circuit principle). For optimum adjustment of the brake motor to the application, a range of braking torques and control modes is available for every motor frame size. For applications with very high operating frequencies the brake is also available in a LongLife version, with reinforced mechanical brake components.

Features

Versions

- **Standard**
 - 1 x 10⁶ repeating switching cycles
 - 1 x 10⁶ reversing switching cycles
- **LongLife**
 - 10 x 10⁶ repeating switching cycles
 - 15 x 10⁶ reversing switching cycles

Control

- DC supply
- AC supply via rectifier in the terminal box

Enclosure

- Without manual release IP55
- With manual release IP54

Friction lining

- Non-asbestos, low wearing

Options

- Manual release
- UL/CSA approval
- Noise-reduced

Assignment of 4-pole motors and brakes

Design	Standard		LongLife	
Motor frame size	Size	Rated torque	Size	Rated torque
	Brake		Brake	
		M _k		M _k
		[Nm]		[Nm]
063-02 063-12 063-22 063-32 063-42	06 06	2.50 4.00	06	4.00
071-12 071-32	06 06 08	2.50 4.00 3.50	06 08	4.00 3.50
071-42	06 06 08 08	2.50 4.00 3.50 8.00	06 08 08	4.00 3.50 8.00
080-12 080-32	08 08 10	3.50 8.00 7.00	08 10	8.00 7.00
080-42	08 08 10 10	3.50 8.00 7.00 16.0	08 10 10	8.00 7.00 16.0

MD three-phase AC motors

Accessories



Spring-applied brake

Assignment of 4-pole motors and brakes

Design	Standard		LongLife	
Motor frame size	Size	Rated torque	Size	Rated torque
	Brake		Brake	
		M_k		M_k
		[Nm]		[Nm]
090-12 090-32	08	3.50	08 10 10	8.00 7.00 16.0
	08	8.00		
	10	7.00		
	10	16.0		
	10	23.0		
100-12	10	7.00	10 12 12	16.0 14.0 32.0
	10	16.0		
	12	14.0		
	12	32.0		
100-32	10	7.00		
	10	16.0		
	12	14.0		
	12	32.0		
	12	46.0		
112-22 112-32	12	14.0		
	12	32.0		
	14	35.0		
132-12	14	60.0		
	14	35.0		
	14	60.0		
	16	60.0		
132-22 132-32	16	80.0		
	16	100		
	16	35.0		
	14	60.0		
	16	60.0		
160-22	16	80.0		
	16	80.0		
	18	80.0		
	18	150		
160-32	18	200		
	18	80.0		
	18	150		
180-12	18	260		
	20	145		
	20	150		
	20	80.0		
180-32	18	80.0		
	18	150		
	20	145		
	20	260		
	20	315		
180-42	18	80.0		
	18	150		
	20	145		
	20	260		
	20	315		
	20	400		

6.11

MD three-phase AC motors

Accessories



Spring-applied brake

Assignment of 4-pole motors and brakes

Design	Standard		LongLife	
Motor frame size	Size	Rated torque	Size	Rated torque
	Brake		Brake	
		M _k		M _k
		[Nm]		[Nm]
225-12	25	265		
	25	400		
	25	490		
225-22	25	265		
	25	400		
	25	490		
	25	600		

Assignment of 2-pole motors and brakes

Design				
	Standard		LongLife	
Motor frame size	Size	Rated torque	Size	Rated torque
	Brake		Brake	
		M _k		M _k
		[Nm]		[Nm]
063-11	06	2.50	06	2.50
063-31	06	4.00	06	4.00
071-11	06	2.50	06	4.00
071-31	06	4.00	08	3.50
	08	3.50		
080-11	08	3.50	08	8.00
080-31	08	8.00	10	7.00
090-11	10	7.00		
090-31	08	3.50	08	8.00
	08	8.00	10	7.00
	10	7.00	10	16.0
	10	16.0		
100-31	12	14.0	12	14.0
100-41	12	32.0	12	32.0
112-31	12	14.0		
112-41	12	32.0		
	14	35.0		
	14	60.0		
132-21	14	35.0		
	16	60.0		
	14	60.0		
	16	80.0		



Spring-applied brake

Direct connection without rectifier

If the brake is activated directly without a rectifier, a freewheeling diode or a spark suppressor is required to protect against induction peaks.

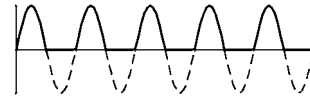
- Supply voltages
 - DC 24 V
 - DC 180 V
 - DC 205 V

Connection via mains voltage with brake rectifier

If the brake is not directly supplied with DC voltage, a rectifier is required. This is included in the scope of supply and is located in the terminal box of the motor. The rectifier converts the AC voltage of the connection into DC voltage. The following rectifiers are available:

Half-wave rectifier, 6-pole

- Ratio of supply voltage to brake coil voltage = 2.22
- Approved by UL/CSA
- Supply voltages
 - AC 230 V
 - AC 400 V
 - AC 460 V



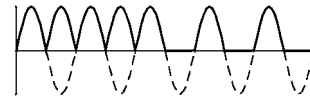
Bridge rectifier, 6-pole

- Ratio of supply voltage to brake coil voltage = 1.11
- Supply voltage
 - AC 230 V



Bridge/half-wave rectifier, 6-pole

- Ratio of supply voltage to brake coil voltage
 - up to overexcitation time = 1.11
 - beyond overexcitation time = 2.22



Supply voltages:

- AC 230 V
- AC 400 V



Spring-applied brake

Connection via mains voltage with brake rectifier

Bridge/half-wave rectifier, 6-pole

- Ratio of supply voltage to brake coil voltage
up to overexcitation time = 1.11
beyond overexcitation time = 2.22



Supply voltages:

- AC 230 V
- AC 400 V

During the switching operation the bridge/half-wave rectifier functions as a bridge rectifier for the overexcitation time t_{ij} and then as a half-wave rectifier. This combination optimises the performance of the brake – depending on the assignment of brake coil voltage and supply voltage:

- **Short-time overexcitation of the brake coil**

Activating the brake coil for the overexcitation time t_{ij} with twice the rated voltage allows the disengagement time to be reduced. The brake opens more quickly and wear on the friction lining is reduced.

These features make this activation version particularly suitable for lifting applications. It is therefore only available in combination with a brake with increased braking torque.

- **Holding current reduction (cold brake)**

By reducing the holding current, the bridge/half-wave rectifier is able to reduce the power input to the open brake. As the brake heats up less, this type of activation is known as "cold brake".

MD three-phase AC motors

Accessories



Spring-applied brake

Rated data with reduced braking torque

- Please enquire for braking torques and maximum switching work values not listed here.

Size			06	08	10	12	14	16	18	20	25
Power input											
	P_{in}	[kW]	0.020	0.025	0.030	0.040	0.050	0.055	0.085	0.10	0.11
Braking torque											
100	M_B	[Nm]	2.50	3.50	7.00	14.0	35.0	60.0	80.0	145	265
1000	M_B	[Nm]	2.30	3.10	6.10	12.0	30.0	50.0	65.0	115	203
1200	M_B	[Nm]	2.30	3.10	6.00	12.0	29.0	48.0	63.0	112	199
1500	M_B	[Nm]	2.20	3.00	5.80	11.0	28.0	47.0	61.0	109 ¹⁾	193 ¹⁾
1800	M_B	[Nm]	2.10	2.90	5.70	11.0	28.0	46.0	60.0 ¹⁾		
3000	M_B	[Nm]	2.00	2.80	5.30	10.0	26.0 ¹⁾	43.0 ¹⁾			
3600	M_B	[Nm]	2.00	2.70	5.20	10.0 ¹⁾					
Maximum switching energy											
100	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	80.0	120
1000	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	80.0	120
1200	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	80.0	120
1500	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	24.0 ¹⁾	36.0 ¹⁾
1800	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	36.0 ¹⁾		
3000	Q_E	[KJ]	3.00	7.50	12.0	24.0	18.0 ¹⁾	11.0 ¹⁾			
3600	Q_E	[KJ]	3.00	7.50	12.0	7.00 ¹⁾					
Transition operating frequency											
	$S_{h\ddot{u}}$	[1/h]	79.0	50.0	40.0	30.0	28.0	27.0	20.0	19.0	15.0
Moment of inertia											
	J	[kgcm ²]	0.015	0.061	0.20	0.45	0.63	1.50	2.90	7.30	20.0
Mass											
	m	[kg]	0.90	1.50	2.60	4.20	5.80	8.70	12.6	19.5	31.0

¹⁾ In the region of the load limit the value for friction energy Q_{BW} can be reduced to 40 %.

MD three-phase AC motors

Accessories



Spring-applied brake

Rated data with reduced braking torque

- Activation via half-wave or bridge rectifier

Size			06	08	10	12	14	16	18	20	25
Friction energy											
	Q_{BW}	[MJ]	113	210	264	706	761	966	1542	2322	3522
Delay time											
Engaging	t_{11}	[ms]	11.0	14.0	20.0	21.0	37.0	53.0	32.0	47.0	264
Rise time											
Braking torque	t_{12}	[ms]	13.0	10.0	17.0	19.0	22.0	30.0	20.0	100	120
Engagement time											
	t_1	[ms]	24.0		37.0	40.0	59.0	83.0	52.0	147	384
Disengagement time											
	t_2	[ms]	35.0	37.0	57.0	65.0	148	169	230	207	269

- Activation via bridge/half-wave rectifier

Design			Holding current reduction (cold brake)								
Size			06	08	10	12	14	16	18	20	25
Friction energy											
	Q_{BW}	[MJ]	113	210	264	706	761	966	1542	2322	3522
Overexcitation time											
	$t_{\bar{u}}$	[ms]	300						1300		
Min. rest time											
	t	[ms]	900						3900		
Delay time											
Engaging	t_{11}	[ms]	12.0	22.0	35.0	49.0	61.0	114	83.0	126	304
Rise time											
Braking torque	t_{12}	[ms]	14.0	16.0	30.0	45.0	37.0	65.0	52.0	269	138
Engagement time											
	t_1	[ms]	26.0	38.0	66.0	93.0	97.0	180	134	395	443
Disengagement time											
	t_2	[ms]	35.0	37.0	57.0	65.0	148	169	230	207	269

- The brake response and application times are guide values. The engagement time is 10 times longer with AC-side switching. With the maximum air gap the disengagement time t_2 – depending on the brake and control – is up to 4 times longer than the disengagement time with the rated air gap.

MD three-phase AC motors

Accessories



Spring-applied brake

Rated data with standard braking torque

- Please enquire for braking torques and maximum switching work values not listed here.

Size			06	08	10	12	14	16	18	20	25
Power input											
	P_{in}	[kW]	0.020	0.025	0.030	0.040	0.050	0.055	0.085	0.10	0.11
Braking torque											
100	M_B	[Nm]	4.00	8.00	16.0	32.0	60.0	80.0	150	260	400
1000	M_B	[Nm]	3.70	7.20	14.0	27.0	51.0	66.0	121	206	307
1200	M_B	[Nm]	3.60	7.00	14.0	27.0	50.0	65.0	118	201	300
1500	M_B	[Nm]	3.50	6.80	13.0	26.0	48.0	63.0	115	195 ¹⁾	291 ¹⁾
1800	M_B	[Nm]	3.40	6.70	13.0	26.0	47.0	61.0	112 ¹⁾		
3000	M_B	[Nm]	3.20	6.30	12.0	24.0	44.0 ¹⁾	57.0 ¹⁾			
3600	M_B	[Nm]	3.20	6.10	12.0	23.0 ¹⁾					
Maximum switching energy											
100	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	80.0	120
1000	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	80.0	120
1200	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	80.0	120
1500	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	60.0	24.0 ¹⁾	36.0 ¹⁾
1800	Q_E	[KJ]	3.00	7.50	12.0	24.0	30.0	36.0	36.0 ¹⁾		
3000	Q_E	[KJ]	3.00	7.50	12.0	24.0	18.0 ¹⁾	11.0 ¹⁾			
3600	Q_E	[KJ]	3.00	7.50	12.0	7.00 ¹⁾					
Transition operating frequency											
	$S_{h\ddot{u}}$	[1/h]	79.0	50.0	40.0	30.0	28.0	27.0	20.0	19.0	15.0
Moment of inertia											
	J	[kgcm ²]	0.015	0.061	0.20	0.45	0.63	1.50	2.90	7.30	20.0
Mass											
	m	[kg]	0.90	1.50	2.60	4.20	5.80	8.70	12.6	19.5	31.0

¹⁾ In the region of the load limit the value for friction energy Q_{BW} can be reduced to 40 %.

MD three-phase AC motors

Accessories



Spring-applied brake

Rated data with standard braking torque

- Activation via half-wave or bridge rectifier

Size			06	08	10	12	14	16	18	20	25
Friction energy											
	Q_{BW}	[MJ]	85.0	158	264	530	571	966	1542	2322	3522
Delay time											
Engaging	t_{11}	[ms]	15.0		28.0		17.0	27.0	33.0	65.0	110
Rise time											
Braking torque	t_{12}	[ms]	13.0	16.0	19.0	25.0		30.0	45.0	100	120
Engagement time											
	t_1	[ms]	28.0	31.0	47.0	53.0	42.0	57.0	78.0	165	230
Disengagement time											
	t_2	[ms]	45.0	57.0	76.0	115	210	220	270	340	390

- Activation via bridge/half-wave rectifier

Design			Holding current reduction (cold brake)								
Size			06	08	10	12	14	16	18	20	25
Friction energy											
	Q_{BW}	[MJ]	85.0	158	264	530	571	966	1542	2322	3522
Overexcitation time											
	$t_{\bar{u}}$	[ms]		300					1300		
Min. rest time											
	t	[ms]		900					3900		
Delay time											
Engaging	t_{11}	[ms]	16.0	25.0	31.0	48.0	33.0	58.0	80.0	102	154
Rise time											
Braking torque	t_{12}	[ms]	14.0	27.0	21.0	43.0	49.0	64.0	109	157	168
Engagement time											
	t_1	[ms]	30.0	52.0		90.0	82.0	122	189	259	322
Disengagement time											
	t_2	[ms]	45.0	57.0	76.0	115	210	220	270	340	390

- The brake response and application times are guide values. The engagement time is 10 times longer with AC-side switching. With the maximum air gap the disengagement time t_2 – depending on the brake and control – is up to 4 times longer than the disengagement time with the rated air gap.

MD three-phase AC motors

Accessories



Spring-applied brake

Rated data with increased braking torque

- Please enquire for braking torques and maximum switching work values not listed here.

Size			10	12	14	16	16	18	20	20	25	25
Power input												
	P_{in}	[kW]	0.030	0.040	0.050	0.055	0.055	0.085	0.10	0.10	0.11	0.11
Braking torque												
100	M_B	[Nm]	23.0	46.0	75.0	100	125	200	315	400	490	600
1000	M_B	[Nm]	20.0	39.0	64.0	83.0	103	162	249	317	376	461
1200	M_B	[Nm]	20.0	39.0	62.0	81.0	101	158	244	309	367	449
1500	M_B	[Nm]	19.0	38.0	60.0	78.0	98.0	153	237 ¹⁾	300 ¹⁾	356 ¹⁾	436 ¹⁾
1800	M_B	[Nm]	19.0	37.0	59.0	77.0	96.0	150 ¹⁾				
3000	M_B	[Nm]	17.0	34.0	55.0 ¹⁾	71.0 ¹⁾	89.0 ¹⁾					
3600	M_B	[Nm]	17.0	33.0 ¹⁾								
Maximum switching energy												
100	Q_E	[KJ]	12.0	24.0	30.0	36.0	36.0	60.0	80.0	80.0	120	120
1000	Q_E	[KJ]	12.0	24.0	30.0	36.0	36.0	60.0	80.0	80.0	120	120
1200	Q_E	[KJ]	12.0	24.0	30.0	36.0	36.0	60.0	80.0	80.0	120	120
1500	Q_E	[KJ]	12.0	24.0	30.0	36.0	36.0	60.0	24.0 ¹⁾	24.0 ¹⁾	36.0 ¹⁾	36.0 ¹⁾
1800	Q_E	[KJ]	12.0	24.0	30.0	36.0	36.0	36.0 ¹⁾				
3000	Q_E	[KJ]	12.0	24.0	18.0 ¹⁾	11.0 ¹⁾	11.0 ¹⁾					
3600	Q_E	[KJ]	12.0	7.00 ¹⁾								
Transition operating frequency												
	$S_{h\ddot{u}}$	[1/h]	40.0	30.0	28.0	27.0	27.0	20.0	19.0	19.0	15.0	15.0
Moment of inertia												
	J	[kgcm ²]	0.20	0.45	0.63	1.50	1.50	2.90	7.30	7.30	20.0	20.0
Mass												
	m	[kg]	2.60	4.20	5.80	8.70	8.70	12.6	19.5	19.5	31.0	31.0

¹⁾ In the region of the load limit the value for friction energy Q_{BW} can be reduced to 40 %.

- Activation via half-wave or bridge rectifier

Size												
			10	12	14	16		18	20		25	
Friction energy												
	Q _{BW}	[MJ]	198	353	253	563	241	578	1596	580	2465	1409
Delay time												
Engaging	t ₁₁	[ms]	10.0	16.0	11.0	22.0	17.0	24.0	46.0	17.0	77.0	38.0
Rise time												
Braking torque	t ₁₂	[ms]	19.0	25.0		30.0		45.0	100		120	
Engagement time												
	t ₁	[ms]	29.0	41.0	36.0	52.0	47.0	69.0	146	117	197	158
Disengagement time												
	t ₂	[ms]	109	193	308	297	435	356	378	470	451	532

MD three-phase AC motors

Accessories



Spring-applied brake

Rated data with increased braking torque

- Activation via bridge/half-wave rectifier

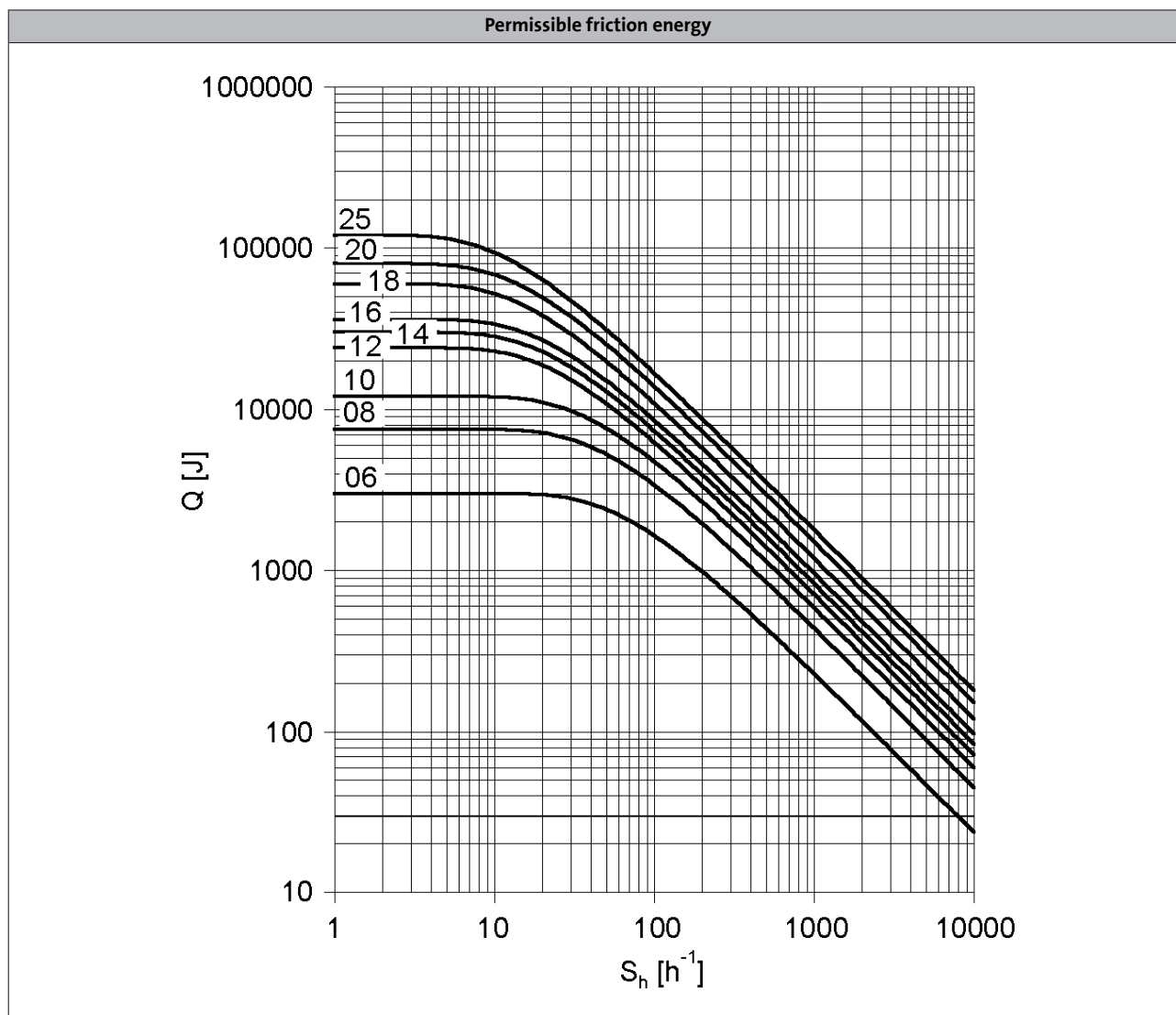
Design			Holding current reduction (cold brake)									
Size			10	12	14	16	18	20	25			
Friction energy	Q_{BW}	[MJ]	198	353	253	563	241	578	1596	580	2465	1409
Overexcitation time	$t_{\ddot{u}}$	[ms]	300			1300						
Min. rest time	t	[ms]	900			3900						
Delay time												
Engaging	t_{11}	[ms]	24.0	27.0	17.0	41.0	21.0	60.0	69.0	17.0	123	85.0
Rise time												
Braking torque	t_{12}	[ms]	44.0	43.0	37.0	55.0	37.0	113	148	100	190	270
Engagement time	t_1	[ms]	68.0	70.0	54.0	97.0	57.0	173	217	334	313	355
Disengagement time	t_2	[ms]	109	193	308	297	435	356	378	470	451	532

Design			Over-excitation									
Size			10	12	14	16	18	20	25			
Friction energy	Q _{BW}	[MJ]	264	706	761	966	1542	2322	3522			
Overexcitation time	t _ü	[ms]	300			1300						
Min. rest time	t	[ms]	900			3900						
Delay time												
Engaging	t ₁₁	[ms]	29.0	54.0	31.0	70.0	46.0	86.0	103	55.0	171	135
Rise time												
Braking torque	t ₁₂	[ms]	53.0	87.0	68.0	93.0	83.0	160	222	319	266	430
Engagement time												
	t ₁	[ms]	82.0	141	99.0	163	129	246	325	374	437	565
Disengagement time												
	t ₂	[ms]	53.0	81.0	117	141	168	151	160	167	184	204

- The brake response and application times are guide values. The engagement time is 10 times longer with AC-side switching. With the maximum air gap the disengagement time t_2 – depending on the brake and control – is up to 4 times longer than the disengagement time with the rated air gap.



Spring-applied brake



Q = Switching energy per switching cycle

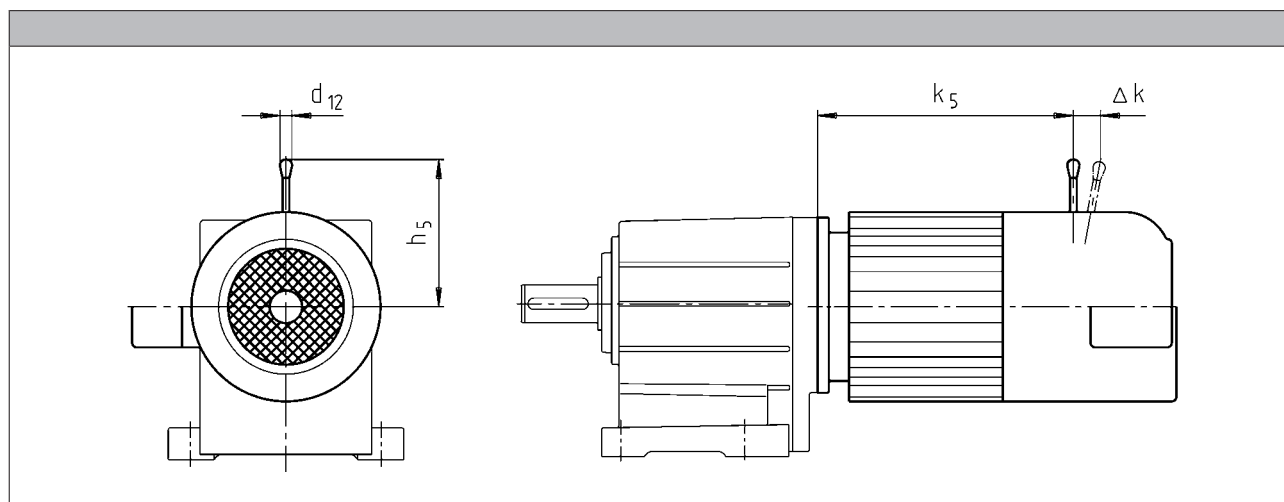
S_h = Operating frequency

Brake size = 06 to 25



Spring-applied brake

Manual release lever



Motor frame size			Size				
			Brake				
				k ₅	Δ k	h ₅	d ₁₂
				[mm]	[mm]	[mm]	[mm]
063-11 063-31	063-02 063-22		06	185	29	107	13.0
	063-12 063-32 063-42		06	173	29	107	13.0
	071-11 071-31	071-13 071-33	06 08	186 187	29 27	107 116	13.0 13.0
080-11 080-31	080-32 080-42	080-13 080-33	06 08	207 218	29 27	107 116	13.0 13.0
	090-11 090-31	090-32	08 10	245 256	27 28	116 132	13.0 13.0
100-31 100-41	100-12 100-32		10 12	279 281	28 37	132 161	13.0 13.0
	112-31	112-22	12 14	292 296	37 41	161 195	13.0 24.0
112-41	112-32		12 14	336 340	37 41	161 195	13.0 24.0
	132-21	132-22 132-32	14 16	373 373	41 55	195 240	24.0 24.0
	160-22		16 18	420 423	59 55	279 240	24.0 24.0
	160-32		16 18	464 467	55 59	240 279	24.0 24.0
	180-12 180-32		18 20	539 546	59 74	279 319	24.0 24.0
	180-42		18 20	596 603	59 74	279 319	24.0 24.0
	225-12 225-22		25 25	785 785	103 103	445 445	24.0 24.0

The following combinations with manual release lever and motor connection in the same position are not possible:

- HAN connector with connection in position 1
- Inverter motec
- Terminal box of motor sizes 071, 080, 090 for brake and retracting (M□□MA BR/BS/BA/BI)

MD three-phase AC motors

Accessories



Resolver

Stator-fed resolver with two stator windings offset by 90° and one rotor winding with transformer winding.

- The three-phase AC motors with resolver cannot be used for speed-dependent safety functions in connection with the SM 301 safety module.

Product key				
				RS1
Accuracy				
			[°]	-10 ... 10
Absolute positioning				
				1 revolution
Max. input voltage				
DC	$U_{in,max}$		[V]	10.0
Max. input frequency				
	$f_{in,max}$		[kHz]	4.00
Ratio				
Stator / rotor		$\pm 5 \%$		0.30
Rotor impedance				
	Z_{ro}		[Ω]	51 + j90
Stator impedance				
	Z_{so}		[Ω]	102 + j150
Impedance				
	Z_{rs}		[Ω]	44 + j76
Min. insulation resistance				
At DC 500 V	R		[MΩ]	10.0
Number of pole pairs				
				1

MD three-phase AC motors

Accessories



Incremental encoder and SinCos absolute value encoder

- The three-phase AC motors with incremental encoders or SinCos absolute value encoders cannot be used for speed-dependent safety functions in connection with the SM 301 safety module.

Encoder type			HTL incremental				TTL incremental			SinCos absolute value
Product key			IG128-24V-H	IG512-24V-H	IG1024-24V-H	IG2048-24V-H	IG512-5V-T	IG1024-5V-T	IG2048-5V-T	AM1024-8V-H
Encoder type										Multi-turn
Pulses										
			128	512	1024	2048	512	1024	2048	1024
Output signals			HTL				TTL			1 Vss
Interfaces										
			A, B track	A, B, N track and inverted						Hiperface
Absolute revolutions										
			0							4096
Accuracy										
		[°]	-22.5 ... 22.5	-2 ... 2						-0.8 ... 0.8
Min. input voltage										
DC	U _{in,min}	[V]	8.00				4.75			7.00
Max. input voltage										
DC	U _{in,max}	[V]	26.0	30.0			5.25			12.0
Max. current consumption										
	I _{max}	[A]	0.040	0.15						0.080
Limit frequency										
	f _{max}	[kHz]	30.0	160			300			200
Inverter assignment										
			E84AVSC E84AVHC	E84AVHC			E84AVTC E94A ECS EVS93			

Inverters

- Inverter Drives 8400 StateLine (E84AVSC)
- Inverter Drives 8400 HighLine (E84AVHC)
- Inverter Drives 8400 TopLine (E84AVTC)

Servo-Inverters

- Servo Drives 9400 (E94A)
- 9300 servo inverters (EVS93)
- Servo Drives ECS

MD three-phase AC motors

Accessories



Blowers

- The use of a blower enables operation below 20 Hz without torque derating.

Rated data for 50 Hz

Size	Number of phases	Connection method					
Motor							
			U _{min}	U _{max}	P _{max}	I _{max}	m
			[V]	[V]	[kW]	[A]	[kg]
063	1		230	277	0.027	0.11	2.00
	3	Δ	200	303	0.028	0.12	
		Y	346	525		0.070	
071	1		230	277	0.027	0.10	2.10
	3	Δ	200	303	0.031	0.11	
		Y	346	525		0.060	
080	1		230	277	0.029	0.11	2.30
	3	Δ	200	303	0.031	0.11	
		Y	346	525		0.060	
090	1		220	277	0.065	0.29	2.70
	3	Δ	200	303	0.091	0.38	
		Y	346	525		0.22	
100	1		220	277	0.066	0.28	3.00
	3	Δ	200	303	0.091	0.37	
		Y	346	525		0.22	
112	1		220	277	0.071	0.28	3.10
	3	Δ	200	303	0.097	0.35	
		Y	346	525		0.20	
132	1		230	277	0.098	0.40	4.20
	3	Δ	200	303	0.12	0.58	
		Y	346	525		0.33	
160	1		230	277	0.25	0.97	6.20
	3	Δ	200	303		0.87	
		Y	346	525		0.50	
180	1		230	277		0.97	8.00
	3	Δ	200	303		0.87	
		Y	346	525		0.50	

MD three-phase AC motors

Accessories



Blowers

Rated data for 50 Hz

Size	Number of phases	Connection method					
Motor							
			$U_{\min}$	$U_{\max}$	$P_{\max}$	$I_{\max}$	m
			[V]	[V]	[kW]	[A]	[kg]
200	1		230	277	0.25	0.97	8.00
	3	Δ	200	303		0.87	
		Y	346	525		0.50	
225	3	Δ	200	400	0.28	1.10	15.0
		Y	346	525	0.17	0.35	

Rated data for 60 Hz

Size	Number of phases	Connection method					
Motor							
			$U_{\min}$	$U_{\max}$	$P_{\max}$	$I_{\max}$	m
			[V]	[V]	[kW]	[A]	[kg]
063	1		230	277	0.032	0.12	2.00
	3	Δ	220	332	0.028	0.10	
		Y	380	575		0.060	
071	1		230	277	0.033	0.12	2.10
	3	Δ	220	332	0.029	0.10	
		Y	380	575		0.060	
080	1		230	277	0.037	0.14	2.30
	3	Δ	220	332	0.034	0.10	
		Y	380	575		0.060	
090	1		220	277	0.065	0.25	2.70
	3	Δ		332	0.077	0.33	
		Y	380	575		0.19	
100	1		220	277	0.075	0.30	3.00
	3	Δ		332	0.087	0.31	
		Y	380	575		0.18	
112	1		220	277	0.094	0.37	3.10
	3	Δ		332	0.10	0.31	
		Y	380	575		0.18	
132	1		230	277	0.15	0.57	4.20
	3	Δ	220	332		0.44	
		Y	380	575		0.25	
160	3	Δ	220	332	0.36	0.93	6.20
		Y	380	575		0.56	
180	3	Δ	220	332	0.36	0.93	8.00
		Y	380	575		0.56	
200	3	Δ	220	332	0.36	0.93	8.00
		Y	380	575		0.56	
225	3	Δ	220	400	0.28	0.76	15.0
		Y	380	575	0.26	0.43	

MD three-phase AC motors

Accessories



Temperature monitoring

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

TKO thermal contacts

Function	Operating temperature	Min. reset temperature	Max. reset temperature	Max. input current	Max. input voltage
	T	$T_{\min}$	$T_{\max}$	$I_{\text{in,max}}$	AC $U_{\text{in,max}}$
	-5 ... 5 [°C]				
	[°C]	[°C]	[°C]	[A]	[V]
NC contact	150	90.0	135	2.50	250

PTC thermistor

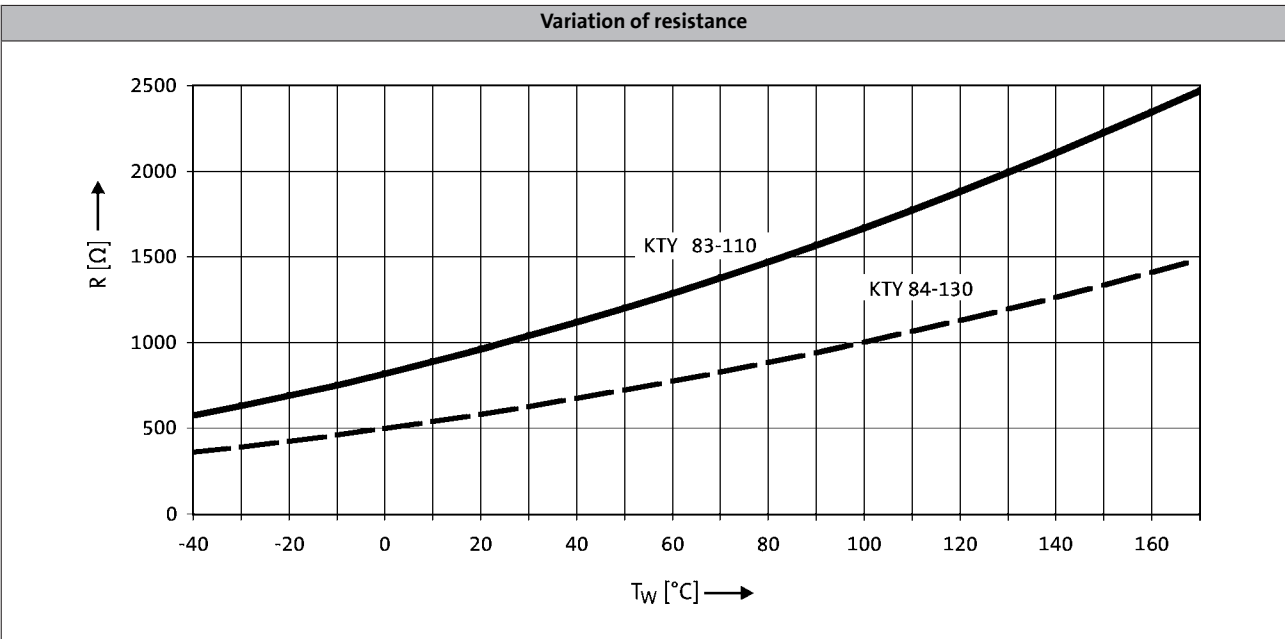
Function	Operating temperature	Rated resistance			Standard
		155 °C	-20 °C	140 °C	
	T	R_N	R_N	R_N	
	-5 ... 5 [°C]				
	[°C]	[Ω]	[Ω]	[Ω]	
Sudden change in resistance	150	550	30.0	250	DIN 44080 DIN VDE 0660 Part 303



Temperature monitoring

KTY temperature sensor

	Function	Rated resistance			Max. input current	
		25 °C	150 °C	170 °C	25 °C	170 °C
		R _N	R _N	R _N	I _{in,max}	I _{in,max}
		[Ω]	[Ω]	[Ω]	[A]	[A]
KTY83-110	Continuous resistance change	1000	2225	2471	0.010	0.002
KTY84-130	Continuous resistance change	603	1334	1482	0.010	0.002



- If the detector is supplied with a measured current of 1 mA, the above relationship between the temperature and the resistance applies.

MD three-phase AC motors

Accessories



Terminal box

The three-phase AC motors are designed for operation at a constant mains frequency and with an inverter.

For 50 Hz operation, the motors are operated in Δ configuration at 230 V or in star configuration at 400 V.

For inverter operation, the base frequency has been specified as 87 Hz at a rated voltage of 400 V in Δ configuration.

In the standard version, the motors are connected in the terminal box. As an option, the motors are also available with the connectors described on the following pages as long as the permissible ratings are not exceeded.

Motor terminal box - built-on accessories assignment: 4-pole / 6-pole motors

Motor type	M□□MAXX	M□□MARS M□□MAIG M□□MAAG	M□□MAZE M□□MAHA	M□□MALL	M□□MALZ M□□MALH
Motor frame size	Terminal box				
063-02 063-22	KK1	KK2			
063-12 063-32 063-42	KK1	KK2			
071-32 071-42 071-13 071-33	KK1	KK2	KK2	KK1	KK1
080-13 080-32 080-33 080-42	KK1	KK2	KK2	KK1	KK1
090-12 090-32	KK1	KK2	KK2	KK1	KK1
100-12 100-32	KK1	KK2	KK2	KK2	KK2
112-22 112-32	KK1	KK2	KK2	KK1	KK1
132-12 132-22 132-32	KK1	KK3	KK3	KK1	KK1
160-22 160-32	KK3	KK3			
180-12 180-32 180-42 180-42	KK3	KK3			
225-12 225-22	KK3	KK3			

MD three-phase AC motors

Accessories



Terminal box

Motor terminal box - built-on accessories assignment: 4-pole / 6-pole motors

Motor type	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MABZ M□□MABH	M□□MABL
Motor frame size	Terminal box			
063-02 063-22	KK2	KK3		
063-12 063-32 063-42	KK2	KK3		
071-32 071-42 071-13 071-33	KK2	KK3	KK2	KK2
080-13 080-32 080-33 080-42	KK2	KK3	KK2	KK2
090-12 090-32	KK2	KK3	KK2	KK2
100-12 100-32	KK2	KK3	KK2	KK2
112-22 112-32	KK2	KK3	KK2	KK2
132-12 132-22 132-32	KK3	KK3	KK3	KK3
160-22 160-32	KK3	KK3		
180-12 180-32 180-42	KK3	KK3		
225-12 225-22	KK3	KK3		

MD three-phase AC motors

Accessories



Terminal box

Motor terminal box - built-on accessories assignment: 2-pole motors

Motor type	M□□MAXX	M□□MAZE	M□□MALL	M□□MALZ
------------	---------	---------	---------	---------

Motor frame size	Terminal box			
063-11 063-31	KK1			
071-11 071-31	KK1	KK2	KK1	KK2
080-11 080-31	KK1	KK2	KK1	KK2
090-31 090-11	KK1	KK2	KK1	KK2
100-31 100-41	KK1	KK2	KK1	KK2
112-31 112-41	KK1	KK2	KK1	KK2
132-21	KK1	KK3	KK1	KK3

Motor type	MD□MABR	MD□MABZ	MD□MABL
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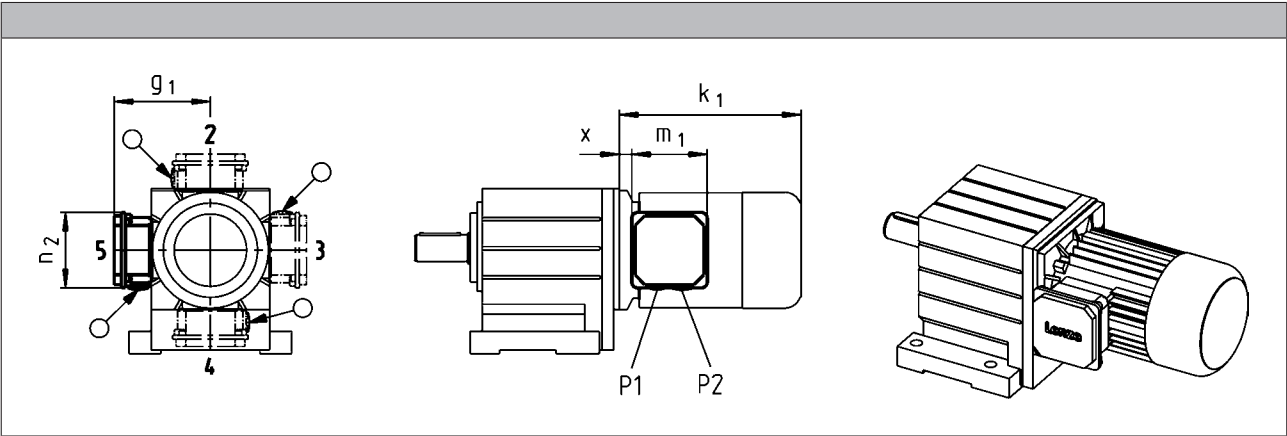
Motor frame size	Terminal box		
063-11 063-31	KK2		
071-11 071-31	KK2	KK2	
080-11 080-31	KK2	KK2	KK2
090-31 090-11	KK2	KK2	KK2
100-31 100-41	KK2	KK2	KK2
112-31 112-41	KK2	KK2	KK2
132-21	KK3	KK3	KK3



Terminal box

Dimensions of KK1

- For motors with motor terminal box KK1, the connector position can be selected in accordance with the terminal box position.
- If preferred positions are not specified in the order, the cable entry will be positioned as circled on the diagram below.



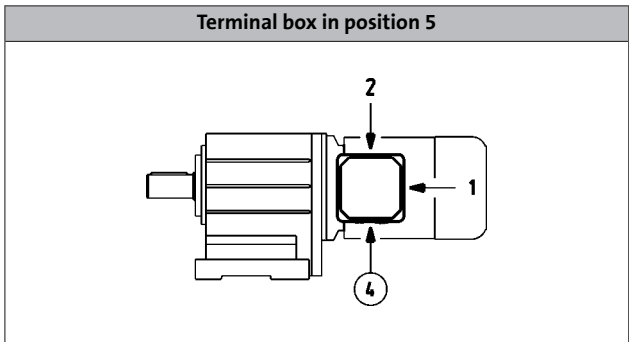
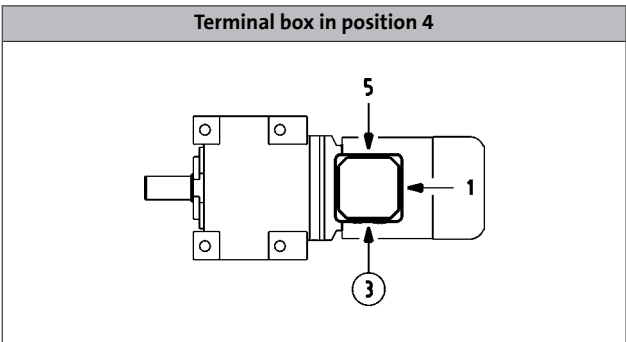
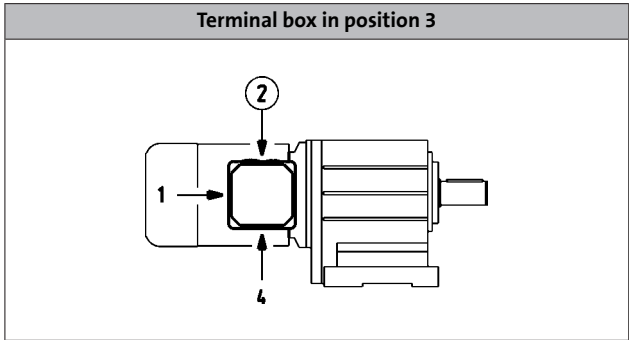
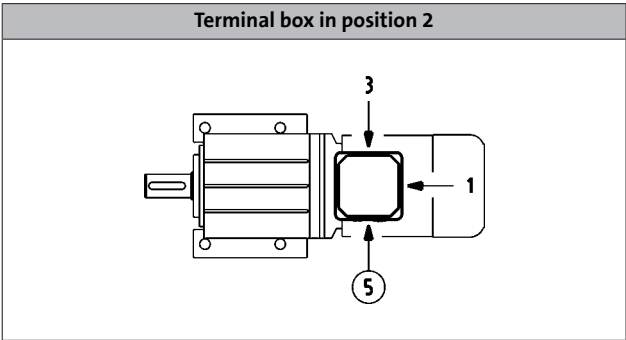
Size						
Motor						
	x	g ₁	m ₁	n ₂	P ₁	P ₂
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063	21	100	75.0 93.0 ¹⁾	75.0 93.0 ¹⁾	M16x1.5 M20x1.5 ¹⁾	M20x1.5 M20x1.5
071	12 ¹⁾	117 ¹⁾				
	24	109	115	115	M20x1.5	M25x1.5
080	15 ¹⁾	126 ¹⁾				
090	14	150				
100	19	157				
112	20	166	122	122	M32x1.5	M32x1.5
132	22	176				
	33	195				

¹⁾ UL/CSA approval: cURus



Terminal box

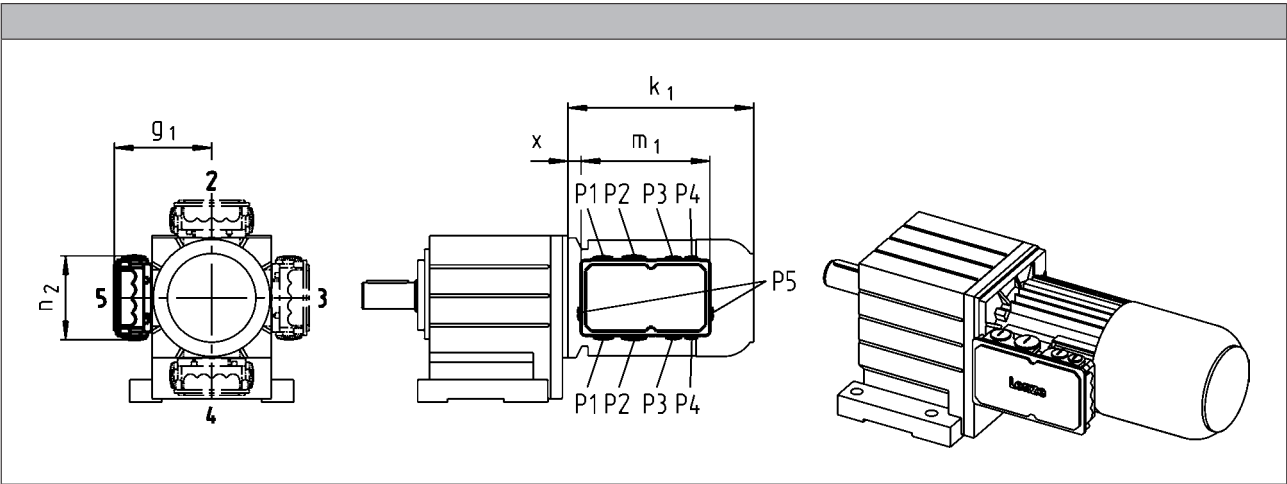
Cable entry position when using KK1





Terminal box

Dimensions of KK2

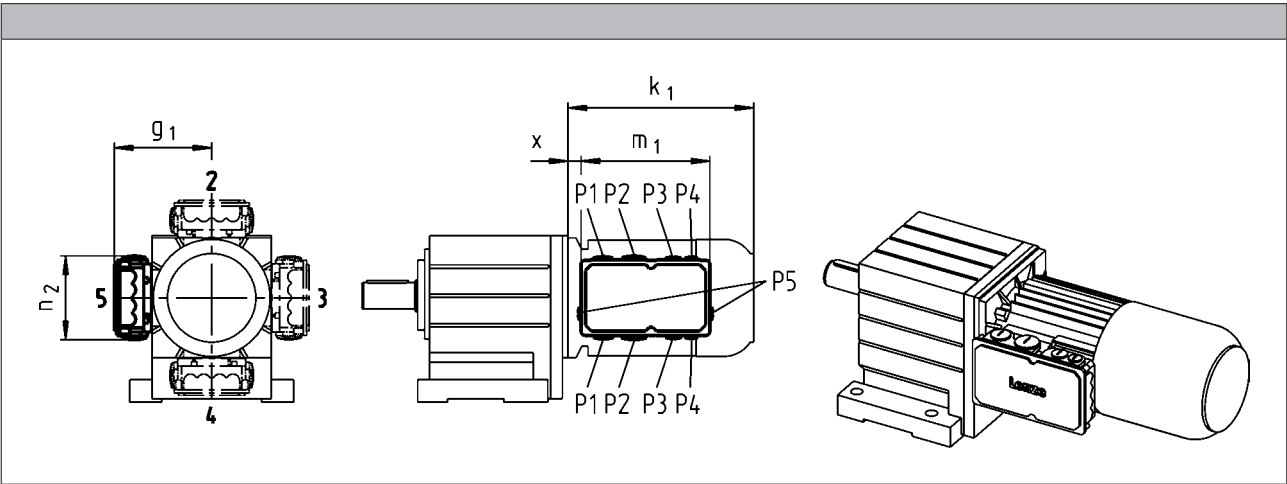


Size						
Motor						
	x	g ₁	m ₁	n ₂	P ₁	P ₂
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063	13	107	136	103	M16x1.5	M20x1.5
071	15	118				
080	17	132				
090	22	137	152	121	M20x1.5	M25x1.5
100	23	147				
112	25	158				



Terminal box

Dimensions of KK3



Size									
Motor									
	x	g ₁	m ₁	n ₂	P ₁	P ₂	P ₃	P ₄	P ₅
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063	2	124	195	125	M25x1.5	M32x1.5	M20x1.5	M20x1.5	
071	5	133							
080	15	142							
090	20	147							
100	21	158							
112	23	168							
132	38	187	226	127	M50x1.5	M16x1.5	M16x1.5	M16x1.5	
160	35	210							
180	73	230							
225	95	346	354	205		M63x1.5 ¹⁾	M50x1.5 ¹⁾		M16x1.5

¹⁾ Cable entry only possible at one position.
Terminal box position 2: cable entry at position 5.
Terminal box position 3: cable entry at position 2.
Terminal box position 4: cable entry at position 3.
Terminal box position 5: cable entry at position 4.

MD three-phase AC motors

Accessories

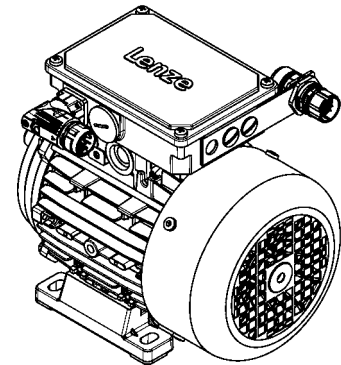


Plug connectors

ICN, HAN and M12 connectors (only for IG128-24V-H incremental encoder) are available for the three-phase AC motors.

ICN connector

A connector is used for power, brake and temperature monitoring. The connections to the feedback system and the blower each employ a separate connector.



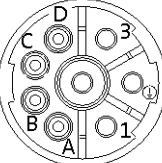
Connection for power, brake and temperature monitoring

The connectors can be rotated through 270° and are fitted with a bayonet catch for SpeedTec connectors. As this connector is also compatible with conventional union nuts, existing mating connectors can continue to be used without difficulty. The motor connection is determined in the terminal box and must be checked before commissioning.

► ICN 6-pole

Pin assignment			
Contact	Designation	Meaning	
1	BD1 / BA1	Brake +/AC	
2	BD2 / BA2	Brake /AC	
PE	PE	PE conductor	
4	U	Phase U power	
5	V	Phase V power	
6	W	Phase W power	

► ICN 8-pole

Pin assignment			
Contact	Designation	Meaning	
1	U	Phase U power	
PE	PE	PE conductor	
3	V	Phase V power	
4	W	Phase W power	
A	TB1 / TP1 / R1	Thermal sensor: TKO/PTC/ +KTY	
B	TB2 / TP2 / R2	Thermal sensor: TKO/PTC/-KTY	
C	BD1 / BA1	Brake +/AC	
D	BD2 / BA2	Brake /AC	

MD three-phase AC motors

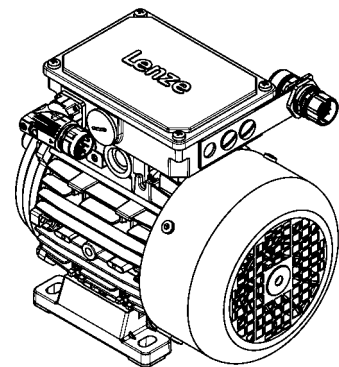
Accessories



ICN connector

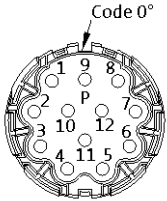
Feedback connection

All encoder systems (apart from IG128-24V-H) are also available with an ICN connector fixed to the motor terminal box for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing mating connectors can therefore continue to be used without difficulty.



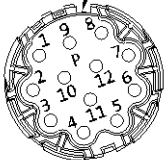
► Resolver

Pin assignment		
Contact	Designation	Meaning
1	+Ref	Transformer windings
2	-Ref	
3	+VCC ETS	Supply: Electronic nameplate
4	+COS	Cosine stator windings
5	-COS	
6	+SIN	Sine stator windings
7	-SIN	
8		Not assigned
9		
10		
11	+KTY	KTY temperature sensor
12	-KTY	



► Hiperface incremental encoder and SinCos absolute value encoder

Pin assignment		
Contact	Designation	Meaning
1	B	Track B/+SIN
2	A ⁻	Track A inverse/-COS
3	A	Track A/+COS
4	+U _B	Supply +
5	GND	Mass
6	Z ⁻	Zero track inverse/-RS485
7	Z	Zero track/+RS485
8		Not assigned
9	B ⁻	Track B inverse/-SIN
10		Not assigned
11	+KTY	KTY temperature sensor
12	-KTY	



MD three-phase AC motors

Accessories



ICN connector

Motor terminal box with ICN connectors - built-on accessories assignment: 2-pole motors

Motor type	M□□MAXX	M□□MAZE	M□□MALL	M□□MALZ
Motor frame size	Terminal box with ICN connector			
063-11 063-31	KK1			
071-11 071-31	KK1	KK2	KK1	KK2
080-11 080-31	KK1	KK2	KK1	KK2
090-31 090-11	KK1	KK2	KK1	KK2
100-31 100-41	KK1	KK2	KK1	KK2
112-31 112-41	KK1	KK2	KK1	KK2
132-21	KK1	KK3	KK1	KK3

Motor type	M□□MABR	M□□MABZ	M□□MABL
Motor frame size	Terminal box with ICN connector		
063-11 063-31	KK2		
071-11 071-31	KK2	KK2	
080-11 080-31	KK2	KK2	KK2
090-31 090-11	KK2	KK2	KK2
100-31 100-41	KK2	KK2	KK2
112-31 112-41	KK2	KK2	KK2
132-21	KK3	KK3	KK3

MD three-phase AC motors

Accessories



ICN connector

Motor terminal box with ICN connectors - built-on accessories assignment: 4-pole / 6-pole motors

Motor type	M□□MAXX	M□□MARS M□□MAIG M□□MAAG	M□□MAZE M□□MAHA	M□□MALL	M□□MALZ M□□MALH
Motor frame size	Terminal box with ICN connector				
063-02 063-22	KK1	KK2			
063-12 063-32 063-42	KK1	KK2			
071-32 071-42 071-13 071-33	KK1	KK2	KK2	KK1	KK1
080-13 080-32 080-33 080-42	KK1	KK2	KK2	KK1	KK1
090-12 090-32	KK1	KK2	KK2	KK1	KK1
100-12 100-32	KK1	KK2	KK2	KK2	KK2
112-22 112-32	KK1	KK2	KK2	KK1	KK1
132-12 132-22 132-32	KK1	KK3	KK3	KK1	KK1

MD three-phase AC motors

Accessories



ICN connector

Motor terminal box with ICN connectors - built-on accessories assignment: 4-pole / 6-pole motors

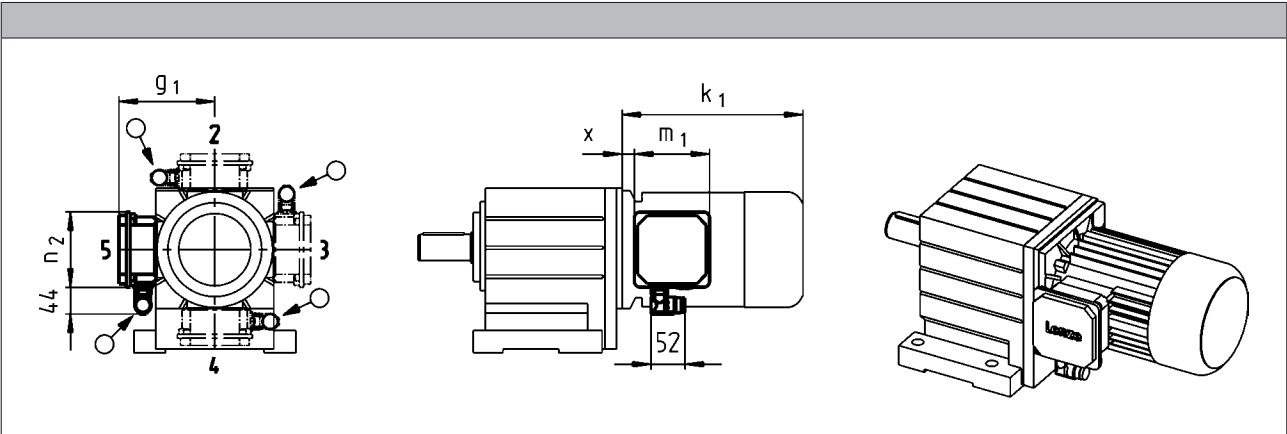
Motor type	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MABZ M□□MABH	M□□MABL
Motor frame size	Terminal box with ICN connector			
063-02 063-22	KK2	KK2		
063-12 063-32 063-42	KK2	KK2		
071-32 071-42 071-13 071-33	KK2	KK2	KK2	KK2
080-13 080-32 080-33 080-42	KK2	KK2	KK2	KK2
090-12 090-32	KK2	KK2	KK2	KK2
100-12 100-32	KK2	KK2	KK2	KK2
112-22 112-32	KK2	KK2	KK2	KK2
132-12 132-22 132-32	KK3	KK3	KK3	KK3



ICN connector

Dimensions of KK1

- For motors with connectors, the connector position can be selected in accordance with the terminal box position.
- If preferred positions are not specified in the order, the connector will be positioned as circled on the diagram below.

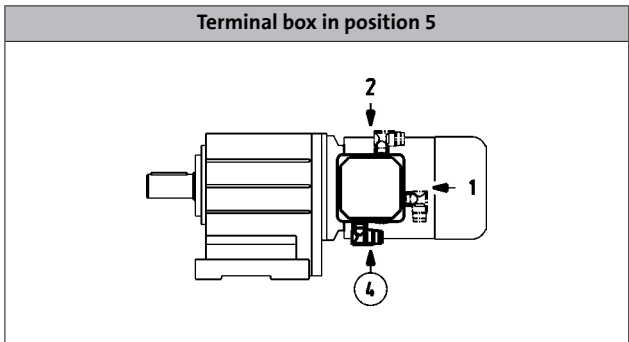
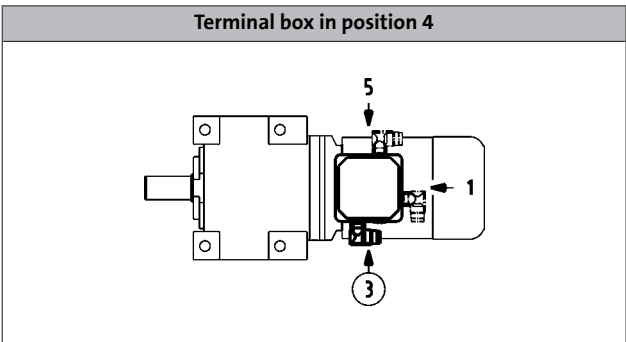
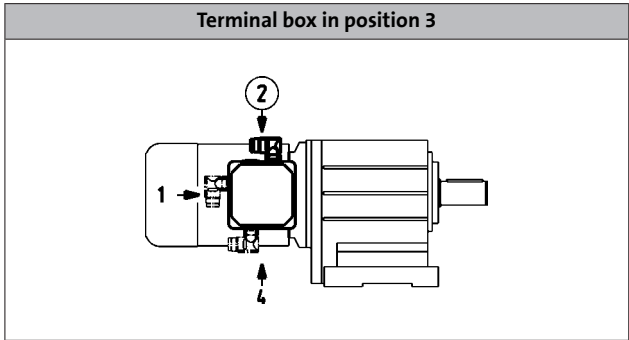
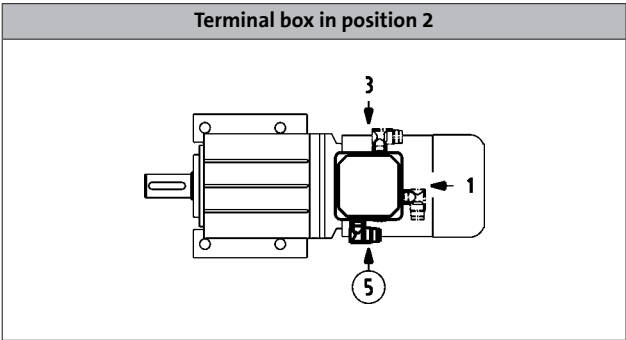


Size				
Motor				
	x	g ₁	m ₁	n ₂
	[mm]	[mm]	[mm]	[mm]
063	12	117	93.0	93.0
071	15	126		
080	14	150		
090	19	157	115	115
100	20	166		
112	22	176		
132	33	195	122	122



ICN connector

Connector position when using KK1



MD three-phase AC motors

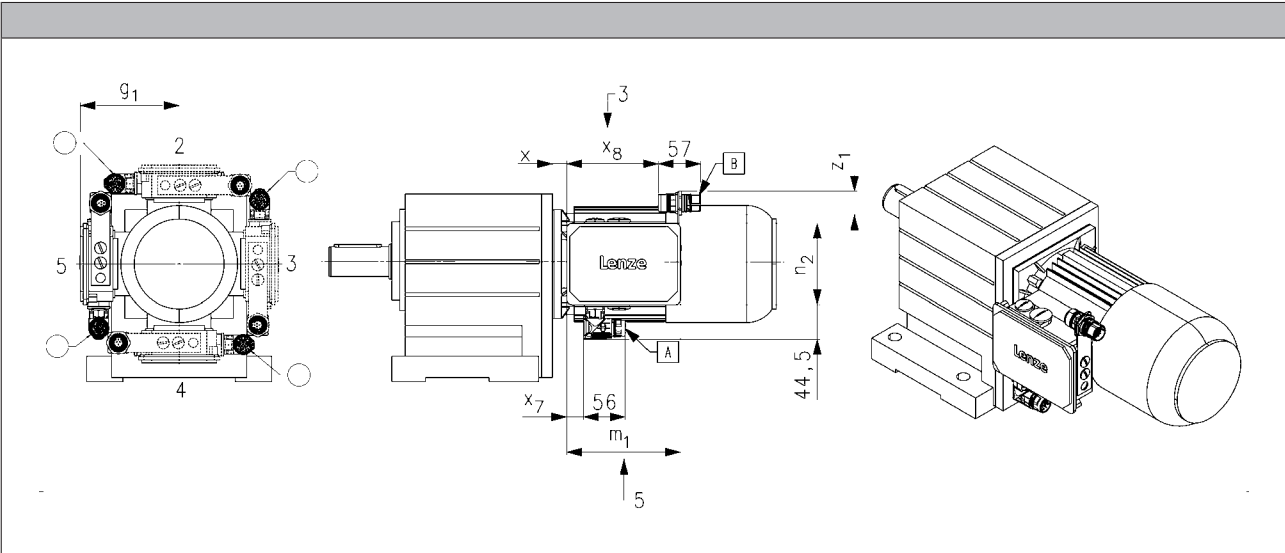
Accessories



ICN connector

Dimensions of KK2/KK3

- For motors with connectors, the connector position can be selected in accordance with the terminal box position.
- If preferred positions are not specified in the order, the connector will be positioned as circled on the diagram below.

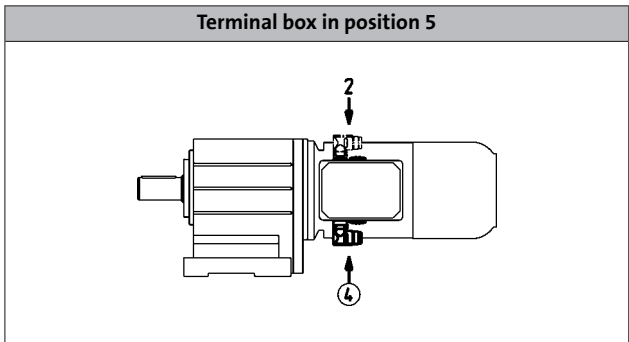
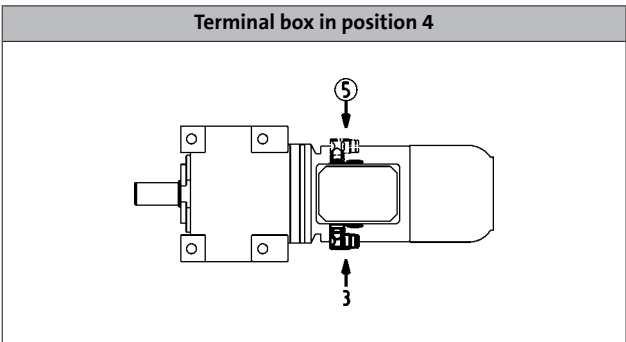
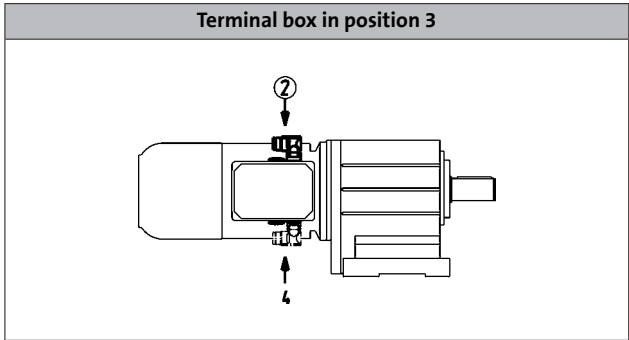
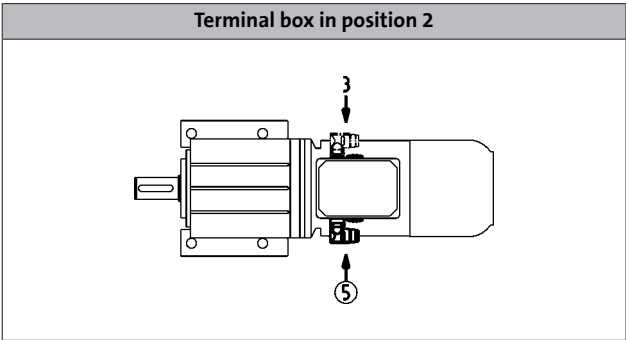


Size							
Motor							
	x	g ₁	m ₁	n ₂	x ₇	x ₈	z _{1, max}
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063	13	107	136	103	16	109	43
071	15	118					
080	17	132	152	121	23	125	41
090	22	137					
100	23	147					
112	25	158	195	125	27	166	71
132	38	187					



ICN connector

Connector position when using KK2/KK3



MD three-phase AC motors

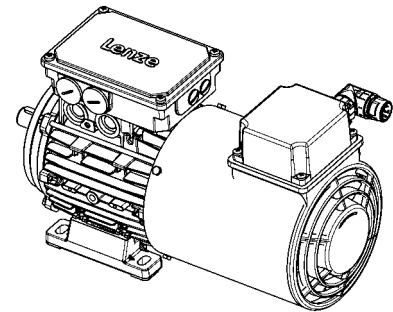
Accessories



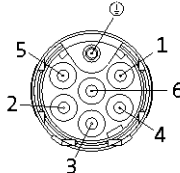
ICN connector

Blower connection

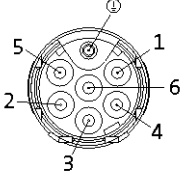
The blower is also optionally available with an ICN connector fixed to the terminal box of the blower for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing counter plugs can therefore continue to be used without difficulty.



► Blower 1-ph

Pin assignment			
Contact	Designation	Meaning	
PE	PE	PE conductor	
1	U1	Fan	
2	U2		
3		Not assigned	
4			
5			
6			

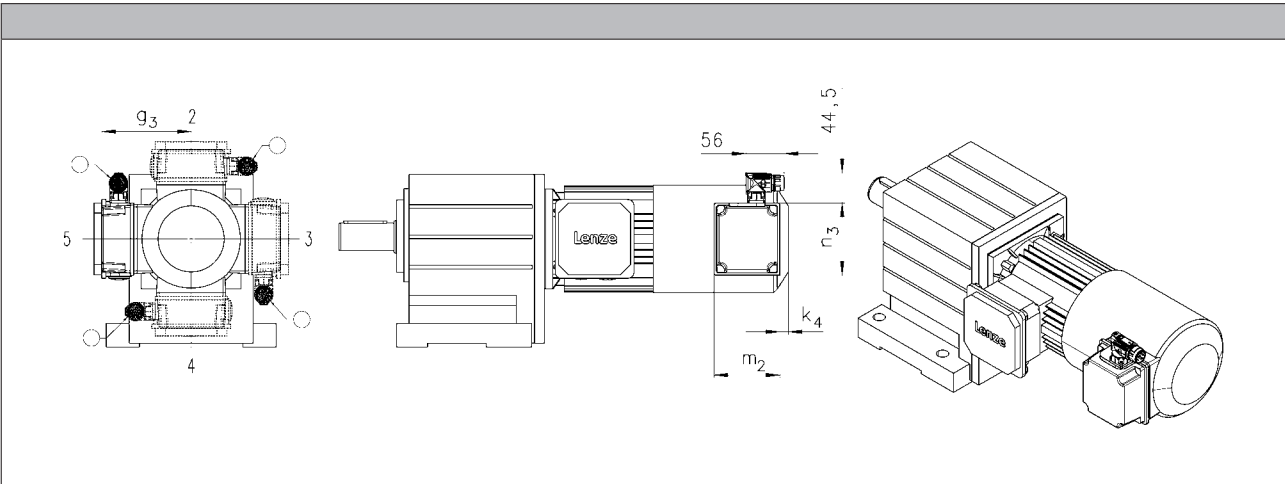
► Blower 3-ph

Pin assignment			
Contact	Designation	Meaning	
PE	PE	PE conductor	
1	U	Phase U power	
2		Not assigned	
3	V	Phase V power	
4		Not assigned	
5			
6	W	Phase W power	



ICN connector

Dimensions of blower



Size						
Motor						
	k ₄	g ₃	m ₂	n ₃		
	[mm]	[mm]	[mm]	[mm]		
063	12	115	95	105		
071		122				
080	13	132	96	106		
090	22	141	95	105		
100		150				
112		162				
132	32	182	96	106		
160	31	209				
180						
225						

- In addition, the cover of the blower terminal box (including connectors) can be rotated progressively through 90° if necessary.

MD three-phase AC motors

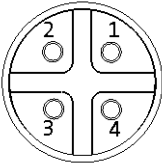
Accessories



M12 connector

IG128-24V-H incremental encoder connection

As a standard this incremental encoder is equipped with a connection cable of about 0.5 m length and with a common industry standard M12 connector at its end.

Pin assignment			
Contact	Designation	Meaning	
1	+U _B	Supply +	
2	B	Track B	
3	GND	Mass	
4	A	Track A	

MD three-phase AC motors

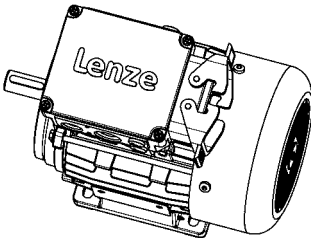
Accessories



HAN connector

10E

In the case of the rectangular HAN-10E connectors, all six ends of the three winding phases are taken out to the power contacts. The motor circuit is therefore determined in the mating connector.



Pin assignment		
Contact	Meaning	
1	Terminal board: U1	
2	Terminal board: V1	
3	Terminal board: W1	
4	Brake +/AC	
5	Brake -/AC	
6	Terminal board: W2	
7	Terminal board: U2	
8	Terminal board: V2	
9	Thermal sensor: +KTY/PTC/TKO	
10	Thermal sensor: KTY/PTC/TKO	

MD three-phase AC motors

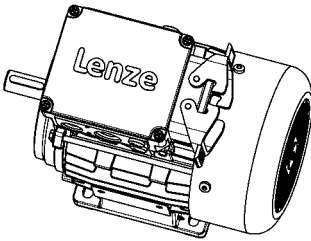
Accessories



HAN connector

Modular

The connector is available with two different power modules (16 A or 40 A), depending on the rated motor current. The motor connection is determined in the terminal box and must be checked before commissioning.



► HAN modular 16 A

Pin assignment			
Module	Contact	Meaning	
B		Dummy module	
C	1	Thermal sensor: +KTY/PTC/TKO	
	2	Brake +/-AC	
	3	Brake -/AC	
	4	Rectifier: Switching contact	
	5		
	6	Thermal sensor: KTY/PTC/TKO	

► HAN modular 40 A

Pin assignment			
Module	Contact	Meaning	
A	1	Terminal board: U1	
	2	Terminal board: V1	
	3	Terminal board: W1	
B		Dummy module	
	1	Thermal sensor: +KTY/PTC/TKO	
	2	Brake +/-AC	
	3	Brake -/AC	
	4	Rectifier: Switching contact	
	5		
	6	Thermal sensor: KTY/PTC/TKO	

MD three-phase AC motors

Accessories



HAN connector

Motor terminal box with HAN connectors - built-on accessories as-signment: 2-pole motors

Motor type	M□□MAXX M□□MABR	M□□MAZE M□□MABZ	M□□MALL M□□MABL	M□□MALZ
Motor frame size	Terminal box with HAN connector			
063-11 063-31	HAN-10E HAN modular			
071-11 071-31	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
080-11 080-31	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
090-31 090-11	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
100-31 100-41	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
112-31 112-41	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
132-21	HAN modular	HAN modular	HAN modular	HAN modular

MD three-phase AC motors

Accessories



HAN connector

Motor terminal box with HAN connectors - built-on accessories assignment: 4-pole / 6-pole motors

Motor type	M□□MAXX M□□MABR	M□□MAZE M□□MAHA M□□MABZ M□□MABH	M□□MALL M□□MABL	M□□MALZ M□□MALH
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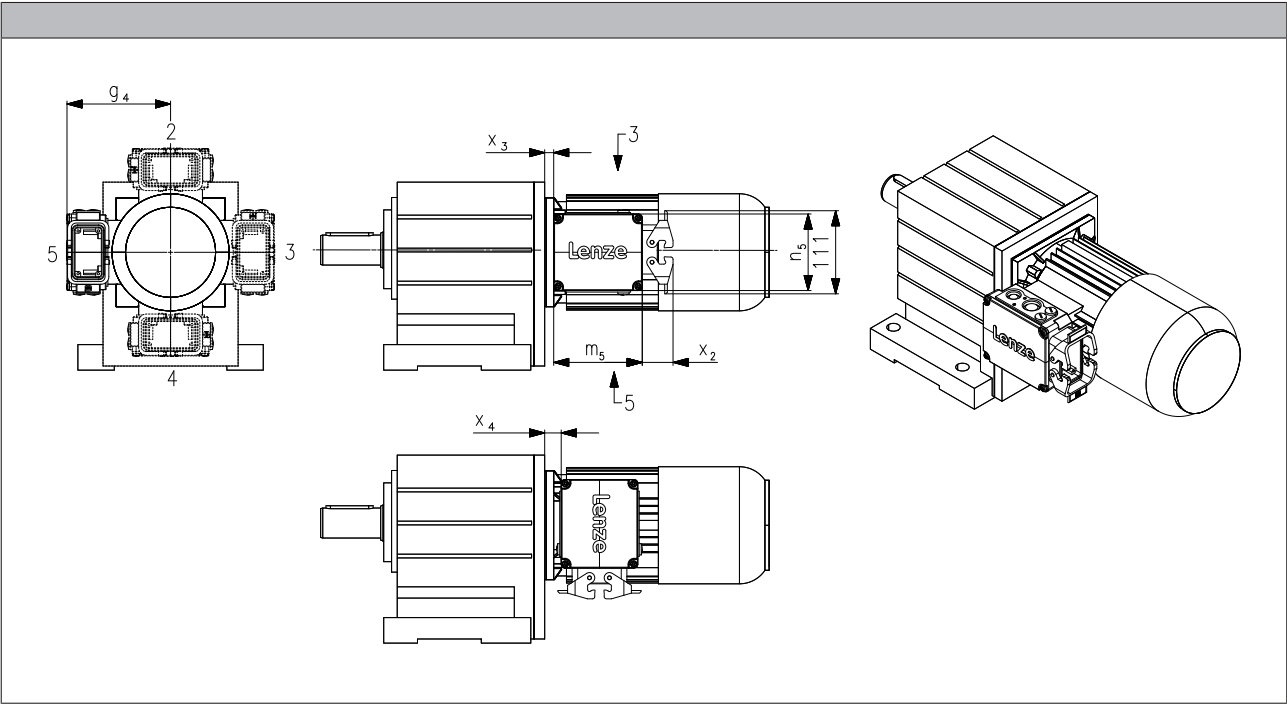
Motor frame size	Terminal box with HAN connector			
063-02 063-22	HAN-10E HAN modular			
063-12 063-32 063-42	HAN-10E HAN modular			
071-32 071-42 071-13 071-33	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
080-13 080-32 080-33 080-42	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
090-12 090-32	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
100-12 100-32	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
112-22 112-32	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular	HAN-10E HAN modular
132-12 132-22 132-32	HAN modular	HAN modular	HAN modular	HAN modular
160-22 160-32	HAN modular			



HAN connector

Dimensions

- For motors with connectors, the connector position can be selected in accordance with the terminal box position.
- Unless the connector position is specified, it will be supplied in position 1.

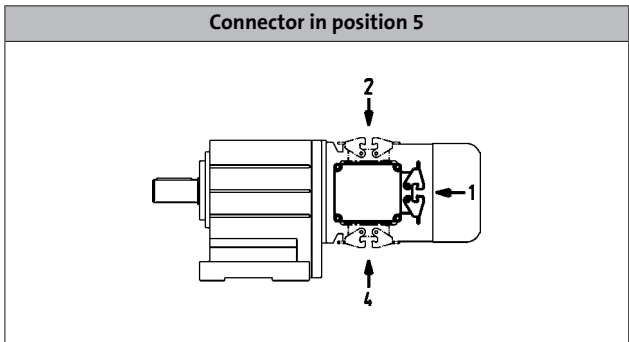
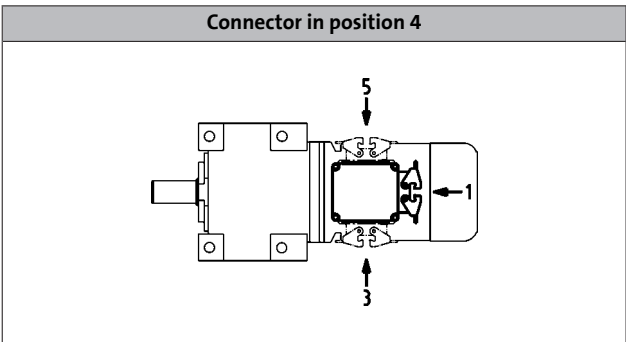
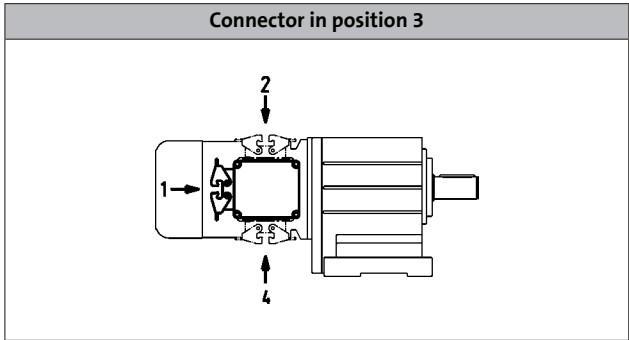
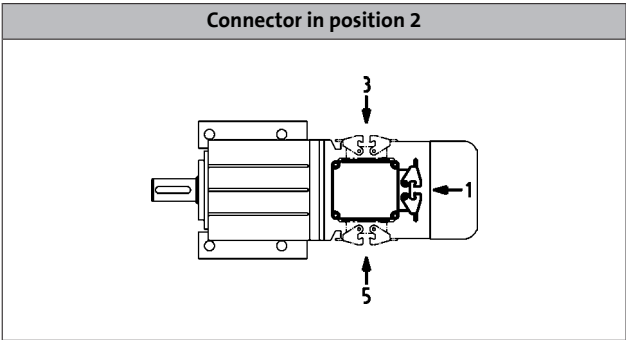


Size			
Motor			
	g ₄	x ₃	x ₄
	[mm]	[mm]	[mm]
063	120	5.00	6.00
071	129	7.00	8.00
080	138	11.0	19.0
090	143	15.0	23.0
100	154	16.0	24.0
112	164	13.5	21.5
132	233	34.5	4.50
160	248	39.0	9.00



HAN connector

Position of connector



MD three-phase AC motors

Accessories



Handwheel

Design	Handwheel made from alloy, smooth wheel surface
Function	Manual operation: • Emergency operation • Setting-up operation for machines/systems
Note	The increased moment of inertia must be taken into account during project planning! For frequent switching operations, in particular if the direction of rotation changes: Please contact Lenze.

Size	Moment of inertia	Mass
Motor	Additional	Additional
	J	m
	[kgcm ²]	[kg]
071	16.0	0.60
080	16.0	0.60
090	16.0	0.60
100	16.0	0.60
112	16.0	0.60
132	139	1.80

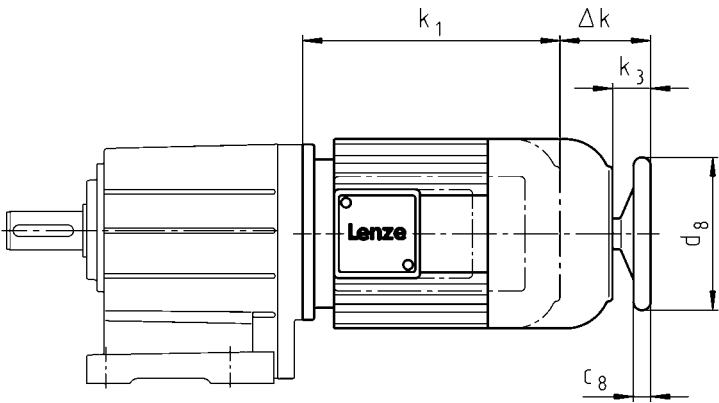
MD three-phase AC motors

Accessories



Handwheel

Dimensions, self-ventilated (4/6-pole)



Motor type	
Built-on accessories	M□□MAHA M□□MABH M□□MALH

Motor frame size				
	Δ k	k ₃	c ₈	d ₈
	[mm]	[mm]	[mm]	[mm]
071-32 071-42 071-13 071-33	70	34.0	18.0	160
080-32 080-42 080-13 080-33	91	34.0	18.0	160
090-12 090-32	80	32.0	18.0	160
100-12 100-32	94	42.0	18.0	160
112-22 112-32	107	39.0	18.0	160
132-12 132-22 132-32	126	50.0	26.0	250

MD three-phase AC motors

Accessories



Centrifugal mass

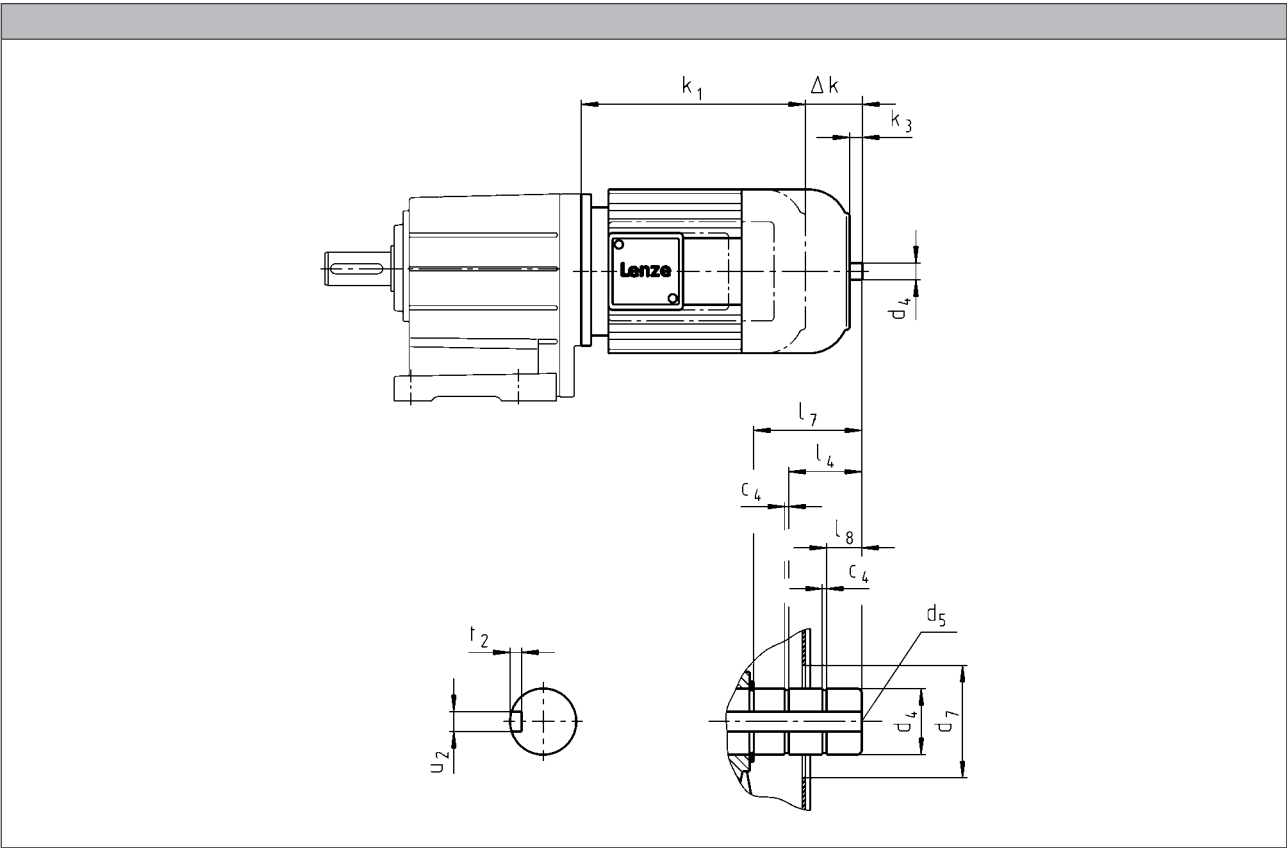
Note	The increased moment of inertia must be taken into account during project planning! For frequent switching operations, in particular if the direction of rotation changes: Please contact Lenze.
Function	Increased motor centrifugal mass for smooth starting/braking
Design	Integral fan made from cast iron

Motor frame size	Moment of inertia	Mass
	Additional	Additional
	J	m
	[kgcm ²]	[kg]
071	18.0	1.20
080	29.0	1.40
090-□1	83.0	2.80
090-□2	55.0	2.00
100	77.0	2.50
112	153	3.80
132	356	6.00



2nd shaft end

Dimensions, self-ventilated (2-pole)



Motor type	
Built-on accessories	M□□MAZE M□□MABZ M□□MALZ

Motor frame size	Δ k	k ₃	c ₄	d ₄	d ₄	d ₅	d ₇ ¹⁾	l ₄	l ₇	l ₈	u ₂	t ₂
				h6	j6							
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
071-11 071-31	47	11.0	1.10	14.0		M5	34.0		19.0	3.00	5.00	3.00
080-11 080-31	68	9.00	1.30	19.0		M6	34.0		19.0	4.50	6.00	3.20
090-11 090-31	57	9.00	1.30		20.0	M6	34.0		19.5	5.50	6.00	3.50
100-31 100-41	71	18.5	1.30		25.0	M10	34.0	17.0	32.5	10.5	8.00	4.00
112-31 112-41	84	16.0	1.30		25.0	M10	34.0	17.0	28.5	7.00	8.00	4.00
132-21	101	24.5	1.60		30.0	M10	48.0	24.5	42.0	8.50	8.00	4.00

¹⁾ During operation, appropriate measures must be taken to make fan cover opening safe.

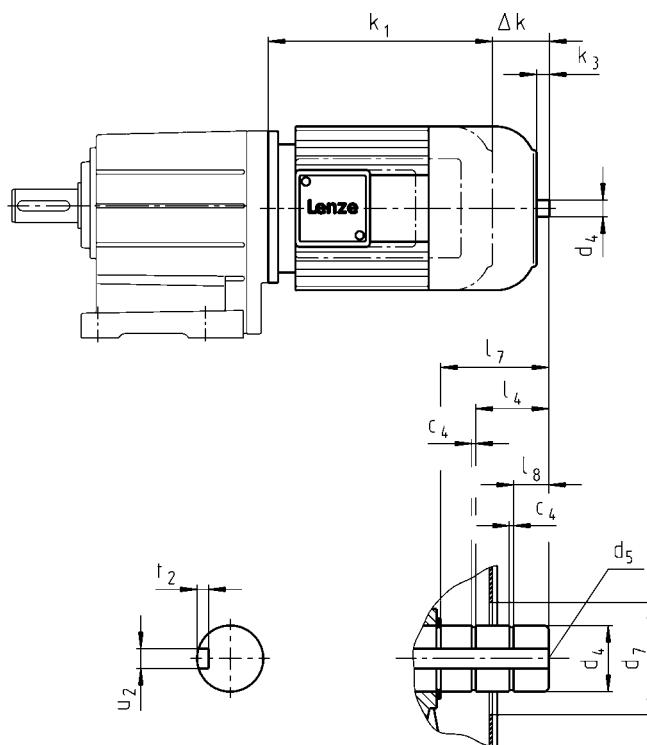
MD three-phase AC motors

Accessories



2nd shaft end

Dimensions, self-ventilated (4/6-pole)



Motor type	
Built-on accessories	M□□MAZE M□□MABZ M□□MALZ

Motor frame size	Δ k	k ₃	c ₄	d ₄ h6	d ₄ j6	d ₅	d ₇ ¹⁾	l ₄	l ₇	l ₈	u ₂	t ₂
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
071-32 071-42 071-13 071-33	47	11.0	1.10	14.0		M5	34.0		19.0	3.00	5.00	3.00
080-32 080-42 080-13 080-33	68	9.00	1.10	14.0		M5	34.0		19.0	4.50	5.00	3.00
090-12 090-32	57	9.00	1.10	14.0		M5	34.0		19.0	5.00	5.00	3.00
100-12 100-32	71	18.5	1.30		20.0	M6	34.0	17.0	32.5	10.5	6.00	3.50
112-22 112-32	84	16.0	1.30		20.0	M6	34.0	17.0	28.5	7.00	6.00	3.50
132-12 132-22 132-32	101	24.5	1.60		30.0	M10	46.0	24.5	42.0	8.50	8.00	4.00

¹⁾ During operation, appropriate measures must be taken to make fan cover opening safe.

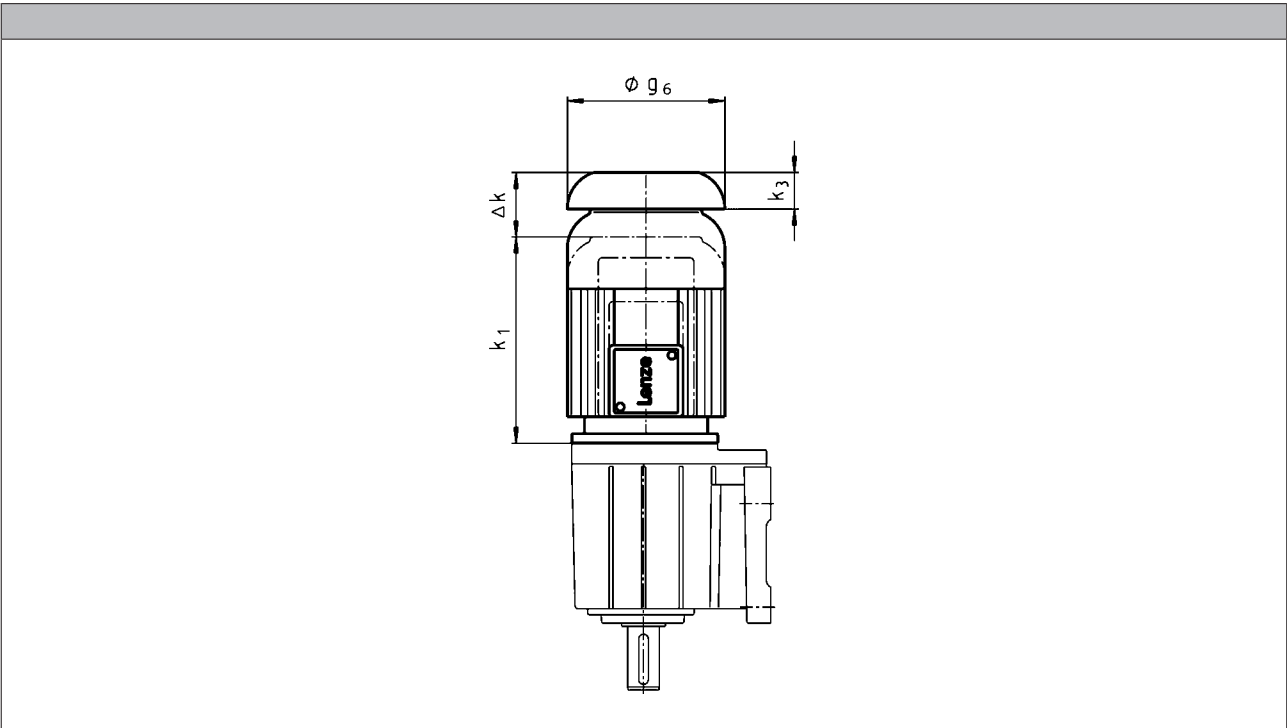
MD three-phase AC motors

Accessories



Protection cover

Dimensions, self-ventilated (2-pole)



Motor type						
	M□□MAXX	M□□MABR	M□□MABL	M□□MALL		
Motor frame size						
	Δ k	Δ k	Δ k	Δ k	k ₃	g ₆
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063-11 063-31	26	66			11.0	123
071-11 071-31	26	78	78	26	12.0	138
080-11 080-31	26	99	99	30	16.0	156
090-11 090-31	26	94	94	26	15.0	176
100-31 100-41	31	107	107	107	17.0	194
112-31 112-41	31	121	121	31	18.0	218
132-21	31	141	141	31	20.0	257

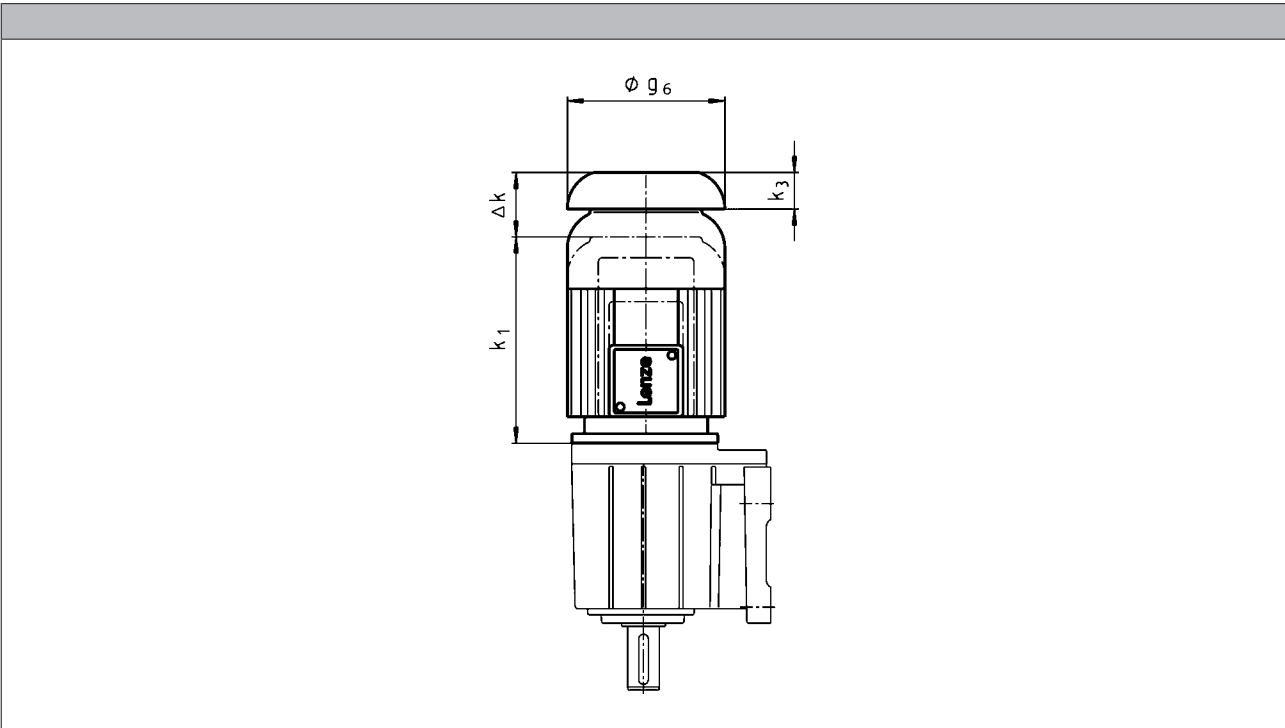
MD three-phase AC motors

Accessories



Protection cover

Dimensions, self-ventilated (4/6-pole)

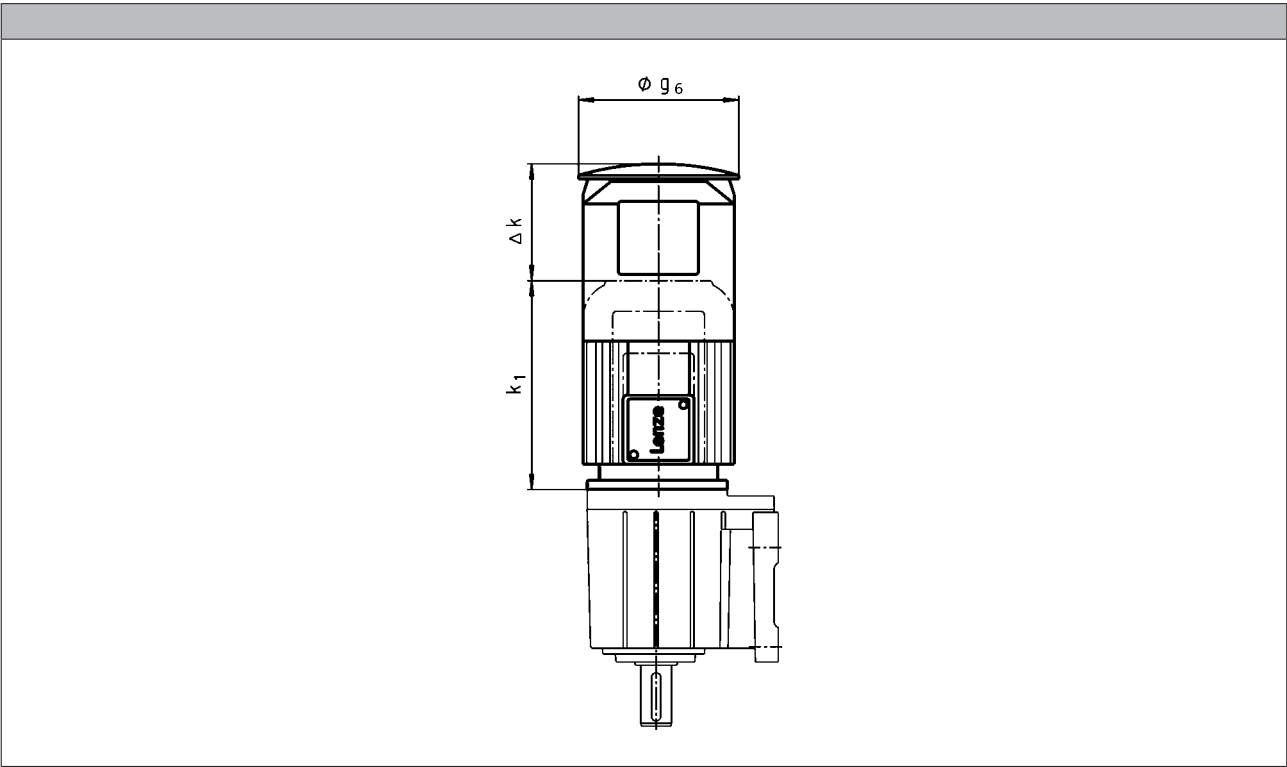


Motor type								
	M□□MAXX	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MABL	M□□MARS M□□MAIG M□□MAAG	M□□MALL		
Motor frame size	Δ k	Δ k	Δ k	Δ k	Δ k	Δ k	k ₃	g ₆
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063-02 063-22		97	160		97		11.0	123
063-12 063-32 063-42	26	66	129		82		11.0	123
071-32 071-42 071-13 071-33	26	78	122	78	78	26	12.0	138
080-32 080-42 080-13 080-33	26	99	137	99	127	30	16.0	156
090-12 090-32	26	94	131	94	113	26	15.0	176
100-12 100-32	31	107	132	107	112	107	17.0	194
112-22 112-32	31	121	151	121	111	31	18.0	218
132-12 132-22 132-32	31	141	156	141	134	31	20.0	257
160-22 160-32	37	142	228		120		25.0	310



Protection cover

Dimensions, forced ventilated (2-pole)



Motor type			
	M□□MAXX	M□□MABR	
Motor frame size	Δ k	Δ k	g ₆
	[mm]	[mm]	[mm]
063-11	169	209	133
063-31			
071-11	165	202	150
071-31			
080-11	168	224	170
080-31			
090-11	157		
090-31			
100-31	137	198	210
100-41			
112-31	135	216	249
112-41			
132-21	140	226	300

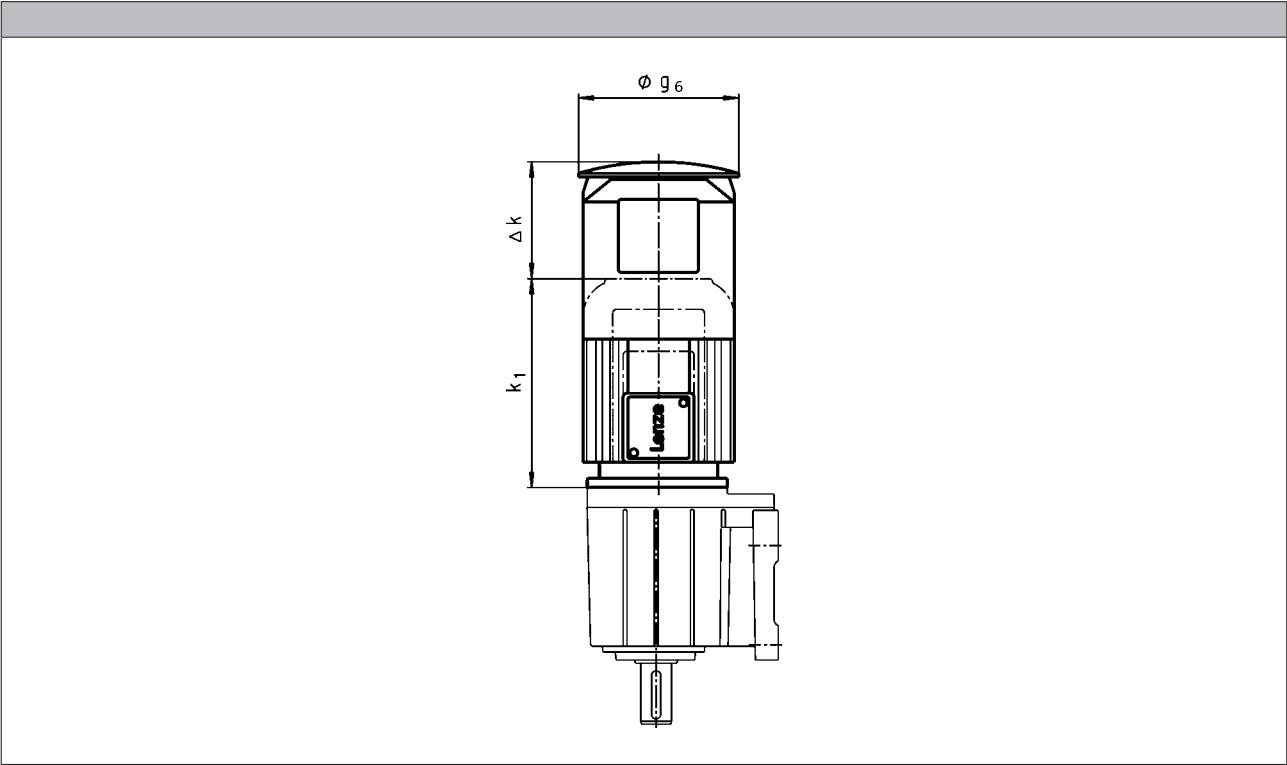
MD three-phase AC motors

Accessories



Protection cover

Dimensions, forced ventilated (4/6-pole)



Motor type				
	M□□MAXX	M□□MABR M□□MABS M□□MABI M□□MABA	M□□MARS M□□MAIG M□□MAAG	

Motor frame size				
	Δ k	Δ k	Δ k	g ₆
	[mm]	[mm]	[mm]	[mm]
063-12 063-32 063-42	169	209	209	133
071-32 071-42 071-13 071-33	165	202	202	150
080-32 080-42 080-13 080-33	168	224	224	170
090-12 090-32	157	210	210	188
100-12 100-32	137	198	198	210
112-22 112-32	135	216	216	249
132-12 132-22 132-32	140	226	226	300
160-22 160-32	155	267	267	338

MD three-phase AC motors

Accessories



MD three-phase AC motors

Accessories



MD three-phase AC motors

Accessories



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