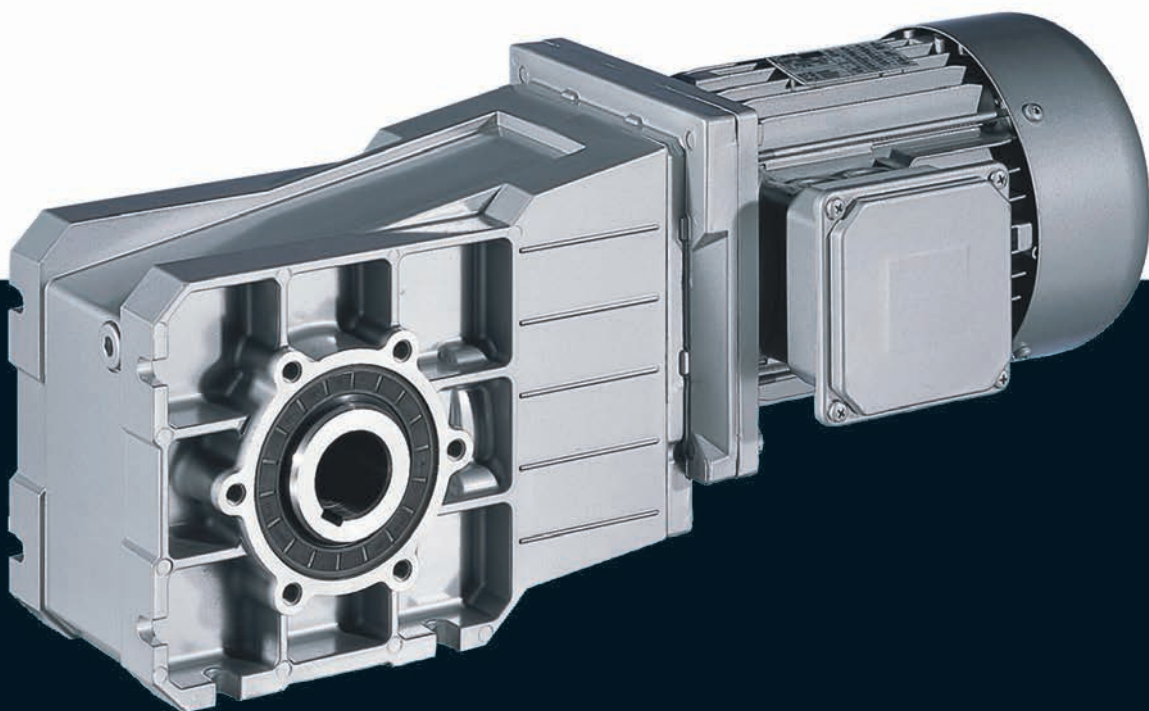


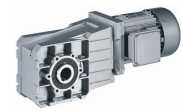
Gearboxes

GKR bevel gearboxes

0.55 ... 11 kW

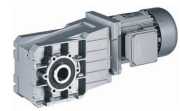


GKR bevel gearboxes



Contents

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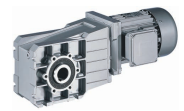
List of abbreviations

$\eta_{c=1}$		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

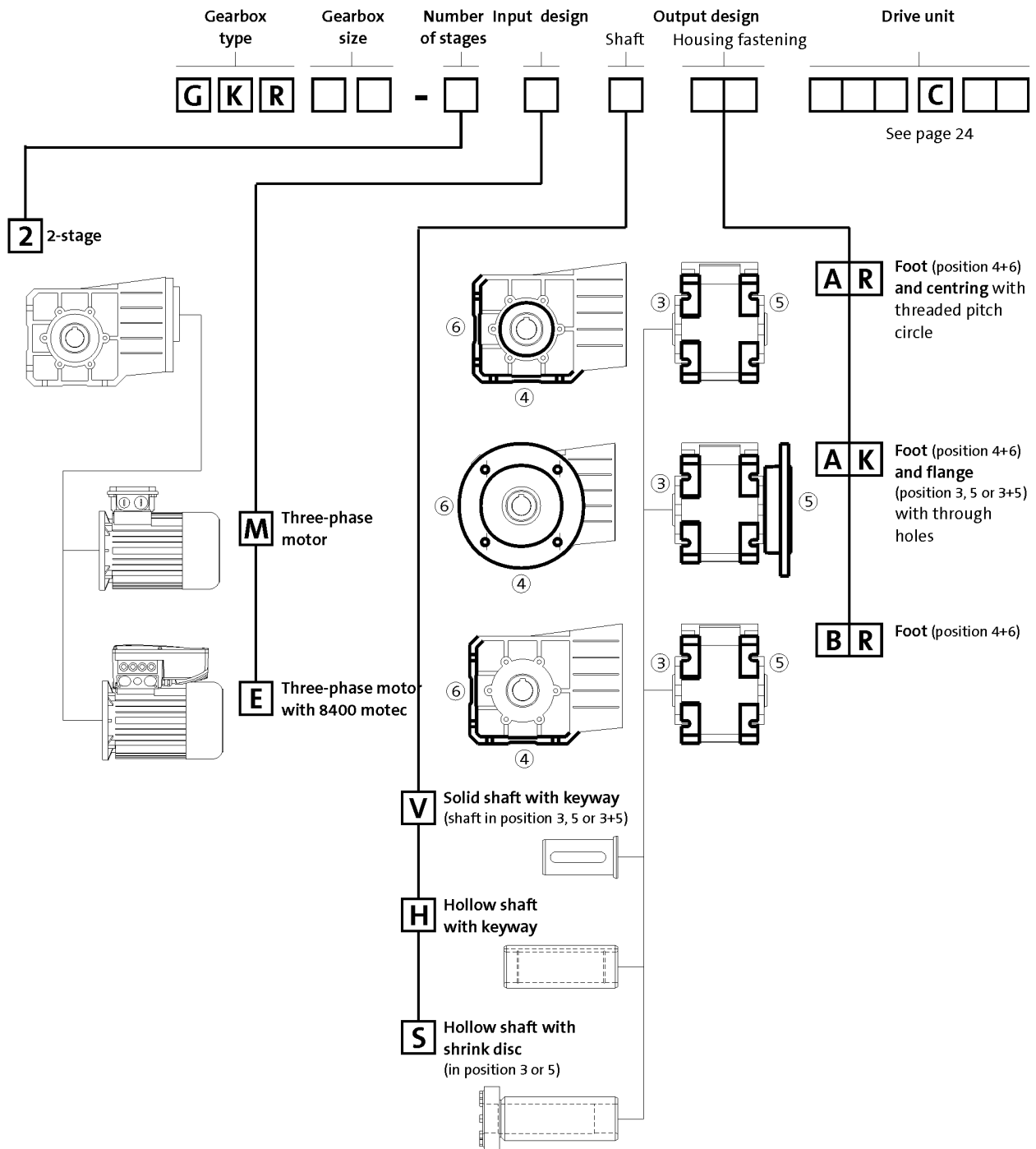
CE	Communauté Européenne
CSA	Canadian Standards Association
DIN	Deutsches Institut für Normung e.V.
EMC	Electromagnetic compatibility
EN	European standard
IEC	International Electrotechnical Commission
IM	International Mounting Code
IP	International Protection Code
NEMA	National Electrical Manufacturers 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

GKR bevel gearboxes

General information



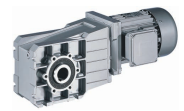
Product key



	Output design			
	V	H	S	K
	d x l [mm]	d [mm]	d [mm]	Øa2 [mm]
GKR03-2	20x40	18/20	20	110/120
GKR04-2	20x40	20/25	20	120/160
GKR05-2	30x60	30/35	30/35	160/200
GKR06-2	35x70	40/45	40	200/250

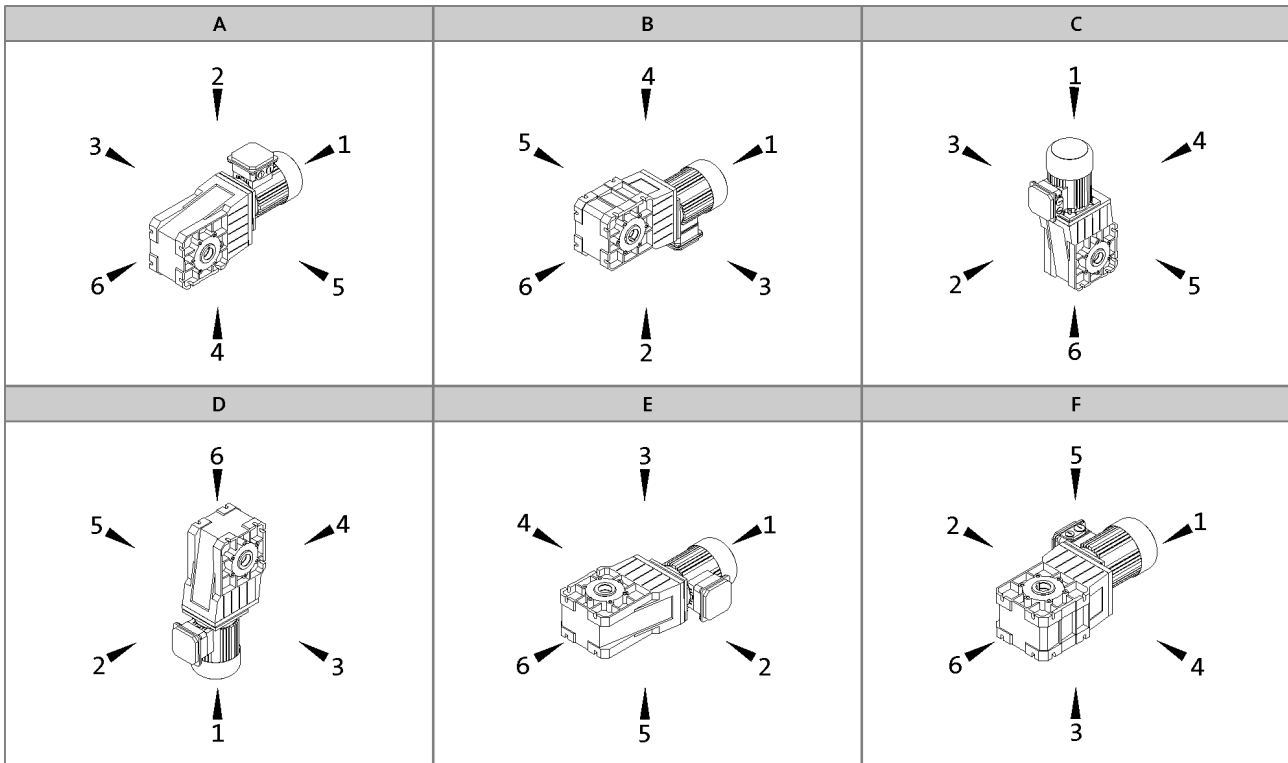
GKR bevel gearboxes

General information



Product key

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



Hollow shaft: 0
 Solid shaft: 3, 5, 8 (3+5)
 Hollow shaft with shrink disc: 3, 5

Without flange: 0
 Flange: 3, 5, 8 (3+5)
 Terminal box / motec: 2, 3, 4, 5

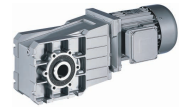
Gearbox designs

Basic versions	
Motor efficiency	Standard efficiency Increased efficiency (IE2)
Surface and corrosion protection	No OKS (unpainted, aluminium housing) OKS-S (paint: RAL 7012)
Lubricant	CLP 460 (mineral)
Ventilation	Breather elements for GKR06

Options	
Surface and corrosion protection	OKS-G (primer: grey) 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
Accessories	Rubber buffer for torque plate (GKR 03/04 only) Torque plate on threaded pitch circle Housing foot torque plate (GKR05/06 only) 2nd output shaft end Shrink disc cover Hoseproof hollow shaft cover Mounting set for hollow shaft circlip
Nameplate	Metal nameplate (supplied loose) Adhesive nameplate (supplied loose)

GKR bevel 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.

For maximum efficiency

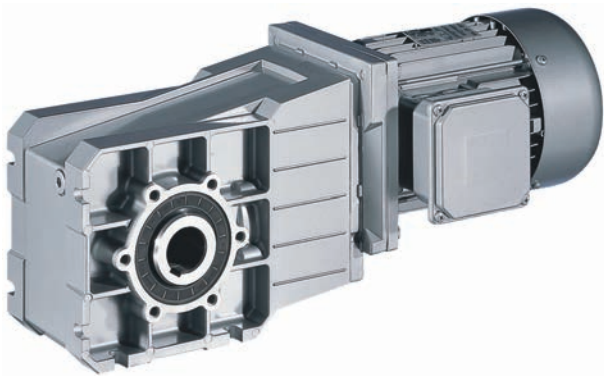
Our bevel gearboxes are a showpiece for lightweight engineering. They are also highly efficient and are equipped with wear free teeth. Together with three-phase AC motors and servo motors, they form an efficient and compact drive unit. They are available as a 2-stage version with a torque of up to 450 Nm and a ratio of up to $i=76$.

Inverters for motor-proximity installation

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

Designs

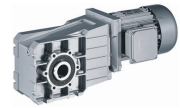
- 2-stage and -stage gearboxes
- Hollow shaft with keyway or shrink disc
- Solid shaft with keyway
- Foot or flange mounting
- Torque plate, including rubber buffer
- With MF three-phase AC motors (inverter-optimised) power range 0.55 ... 7.5 kW



Bevel geared motor GKR05-2M HBR 090-32

GKR bevel gearboxes

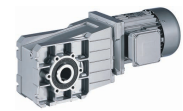
General information



Functions and features

Gearbox type	GKR
Housing	
Design	Cuboid
Material	Aluminium / cast iron
Solid shaft	
Design	with keyway to DIN 6885
Tolerance	m6 (d > 50 mm) k6 (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 parts	
Design	Optimised tooth flanks and profile geometry Ground tooth flanks
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
Lubricants	
Standard	DIN 51502
Quantities	corresponding to mounting position (see operating instructions)
Mechanical efficiency	
1-stage gearboxes [$\eta_{c=1}$]	
2-stage gearboxes [$\eta_{c=1}$]	0.96
3-stage gearboxes [$\eta_{c=1}$]	
4-stage gearboxes [$\eta_{c=1}$]	
Notes	

GKR bevel gearboxes



General information

Functions and features

Lubricants

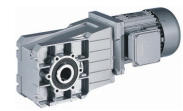
Lenze gearboxes and geared motors are ready for operation on delivery and are filled with lubricants specific to both the drive and the design. The mounting position and design specified in the order are key factors in choosing the volume of lubricant.

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...80 °C)	25000 operating hours not later than after three years (oil temperature 70...80 °C)	16000 operating hours not later than after three years (oil temperature 70...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 460	Shell Omala Oil HD 320	

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



Functions and features

Surface and corrosion protection

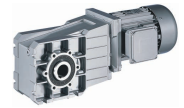
For optimum protection of geared motors against ambient conditions, the surface and corrosion protection system (OKS) offers tailor-made solutions.

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)	<ul style="list-style-type: none"> Dependent on subsequent top coat applied 	<ul style="list-style-type: none"> 1K priming coat (grey) Zinc-coated screws Rust-free breather elements Optional measures <ul style="list-style-type: none"> Stainless steel nameplate
OKS-S (small)	<ul style="list-style-type: none"> Standard applications Internal installation in heated buildings Air humidity up to 90% 	<ul style="list-style-type: none"> Surface coating as per corrosivity category C1 (in line with EN 12944-2) Zinc-coated screws Rust-free breather elements Optional measures <ul style="list-style-type: none"> Stainless steel nameplate
OKS-M (medium)	<ul style="list-style-type: none"> Internal installation in non-heated buildings Covered, protected external installation Air humidity up to 95% 	<ul style="list-style-type: none"> Surface coating as per corrosivity category C2 (in line with EN 12944-2) Zinc-coated screws Rust-free breather elements Optional measures <ul style="list-style-type: none"> Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request)
OKS-L (high)	<ul style="list-style-type: none"> External installation Air humidity above 95% Chemical industry plants Food industry 	<ul style="list-style-type: none"> Surface coating 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 <ul style="list-style-type: none"> Sealed recesses on motor (on request) Stainless steel shaft Stainless steel nameplate Rust-free shrink disc (on request) Additional priming coat on cast iron fan Oil expansion tank and torque plates painted separately and supplied loose

GKR bevel gearboxes

General information



Functions and features

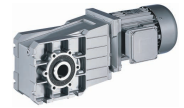
Structure of surface coating

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 1K 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 1K priming coat 2K-PUR top coat	Standard: RAL 7012 Optional: RAL Classic
OKS-L (high)	C3	Dipping primed gearbox 2K-EP priming coat 2K-PUR top coat	Standard: RAL 7012 Optional: RAL Classic

- The gearboxes GKR 03 ... 06 have an aluminium housing, therefore a dipping primer is dispensed with in the case of these gearboxes.

GKR bevel gearboxes

General information



Functions and features

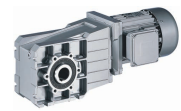
Ventilation

Gearboxes without ventilation

No ventilation is required for gearboxes GKR03 ... 05.

Gearboxes with ventilation

Gearbox GKR06 is supplied with a breather element as standard.



Dimensioning

General information about the data provided in this catalogue

Powers, torques and speeds

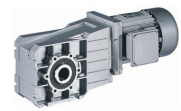
The powers, torques and speeds specified in this catalogue are rounded values and are valid under the following conditions:

- 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.

GKR bevel 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 subsidiary

- 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

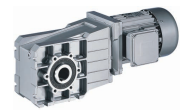
- if the following input speeds n_1 are exceeded:

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

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

GKR bevel 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.

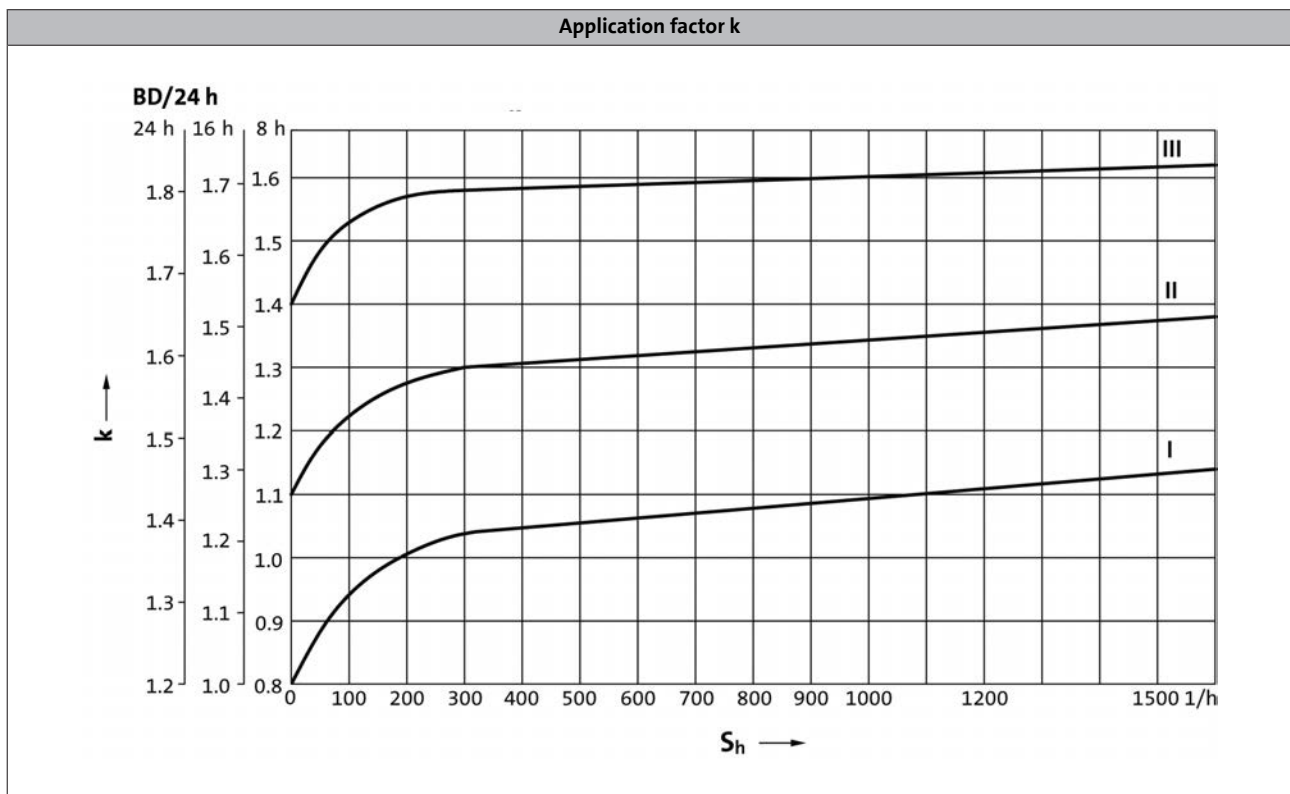
Application factor k (according to DIN 3990)

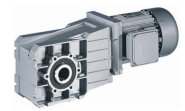
Takes into account the influence of temporally variable loads which are actually present during the anticipated operating time of gearboxes and geared motors.

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

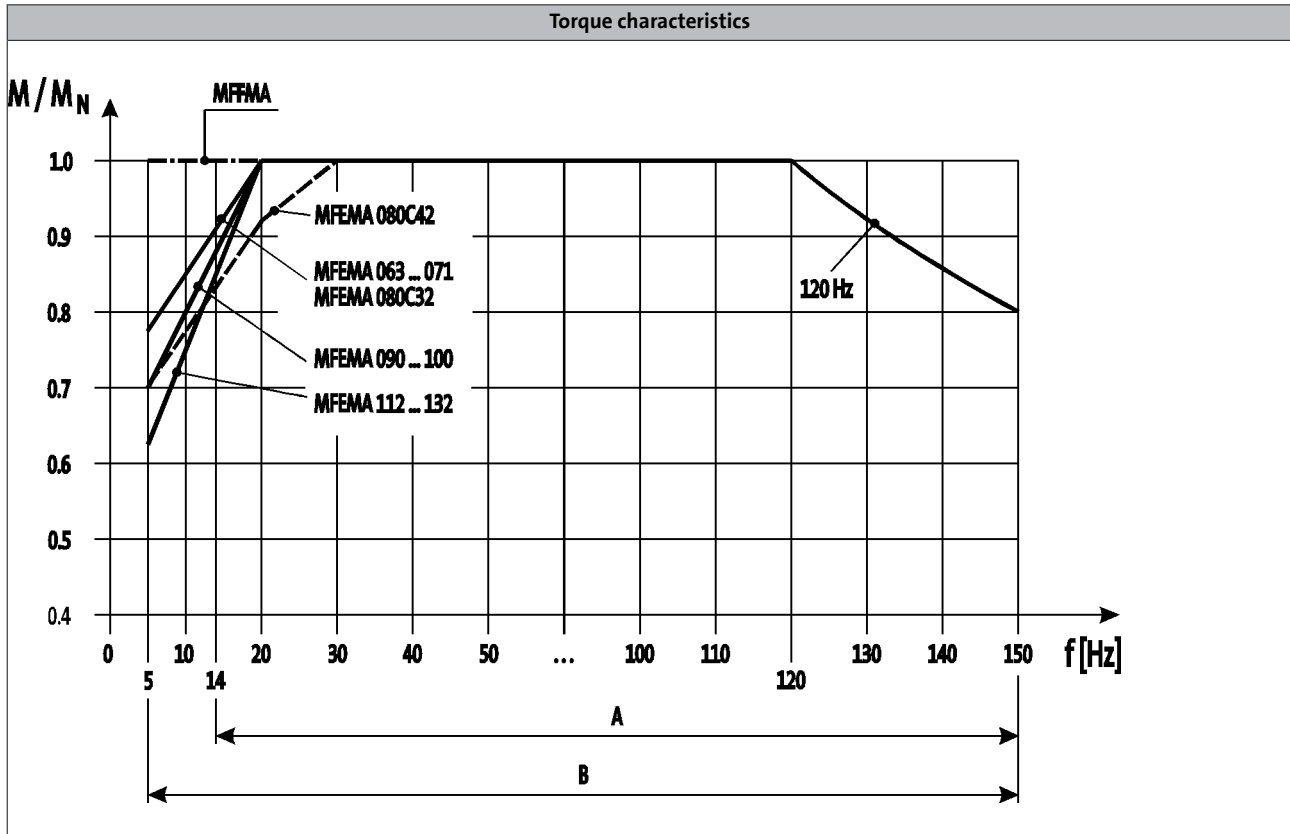




Dimensioning

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.

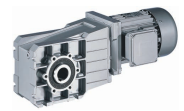
6.8

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.

GKR bevel 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. 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 → 120 Hz; $P_N = 0.55$ kW

Speed setting range → $n_{22}/n_2 = 1 \dots 24.0$

Speed range of the drive motor → $n_1 = 143.3 \dots 3440$ r/min

n_{22}	n_{21}	n_2	M_{22}	M_2	c	i				
[r/min]	[r/min]	[r/min]	[Nm]	[Nm]						
70	293	-	1680	2.3	3.0	4.5	2.048	GST04-1M□□□063C32	E84AV□□□5514□□0	79
64	268	-	1536	2.6	3.0	3.9	2.240	GST05-1M□□□063C32	E84AV□□□5514□□0	79

Speed and torque information
The speed and torque information applies to self-ventilated and forced-ventilated drives. Externally cooled drives can always output the torque M_2 in all the setting ranges. In the case of self-ventilated drives, a reduction to M_{22} is necessary in the lower speed range.

Ratio i

Product key of geared motor

Product key of inverter

Page number for dimensions

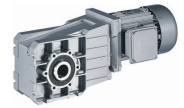
The load capacity c of the gearbox c is the ratio of the gearbox's rated torque to the rated torque of the three-phase motor (calculated in respect of its application to the output shaft). c must always be greater than the application factor k determined for the application.

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

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

GKR bevel 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

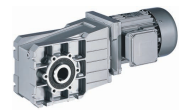
Please use the ordering information checklist to ensure that you provide all the ordering information required for the various products.

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.

GKR bevel gearboxes

General information



Ordering details checklist

Offer

Page __ of __

Order

Customer No.

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

Job No.

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

Fax No. _____

Sender

Company

Made out by (name)

Street/P.O. Box

Department

P.O. Box, City

Telephone No.

Date Signature

Delivery address (if different)

Street/P.O. Box

Desired delivery date

P.O. Box, City

Dispatching notes

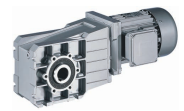
Invoice recipient (if different)

Street/P.O. Box

Postal code, City

GKR bevel gearboxes

General information



Ordering details checklist

Customer No.

Job No.

Page __

Quantity

Efficiency class

Standard efficiency

High efficiency (IE2)

Rated frequency

50 Hz

60 Hz

87 Hz

Ratio i

GKR - **2**

M V H A R B K

E S

Motor frame size **C**

Hollow shaft d = mm Flange a₂ = mm

Mounting position

A B C D E F

Position of system blocks

Shaft/shrink disc

0 3 4 8

Flange

0 3 5 8

Terminal box

2 3 4 5

Surface and corrosion protection

Without OKS
(unpainted)

Options

Special lubricants

CLP HC 320
(synthetic)

CLP HC 220 USDA H1
(for the food industry)

Surface and corrosion protection

OKS-S
small

OKS-M
(medium)

OKS-L
(high)

OKS-G
(primed)

Accessories

Rubber buffer for torque support
(only GKR03/04)

Torque support for housing foot
(only GKR05/06)

Torque support for threaded pitch
circle

2nd output shaft end

Mounting set for hollow-shaft
circlip

Shrink disc cover

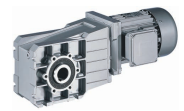
Hollow shaft cover, hoseproof

Shaft sealing rings

Viton

GKR bevel 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
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Blower

- 1~ 3~

- Terminal box with plug-in connector ICN

Terminal box position

2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Spring-applied brake

Brake version

- Standard Longlife

Brake size

Characteristic torque

 Nm

Rated voltage

AC	DC	
<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 40px; height: 20px;" type="text"/> V

Rectifier Only in the case of AC supply voltage

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Half-wave rectifier <input type="checkbox"/> Bridge/half-wave rectifier
(overexcitation) | <ul style="list-style-type: none"> <input type="checkbox"/> Bridge rectifier <input type="checkbox"/> Bridge/half-wave rectifier
(holding current reduction) |
|--|--|

Brake options Manual release lever
in position

2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

GKR bevel 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)

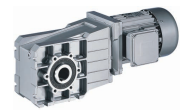
Protection cover

2nd shaft end

Handwheel

Increased centrifugal mass

2nd nameplate (adhesive nameplate/metal nameplate)



Permissible radial and axial forces at output

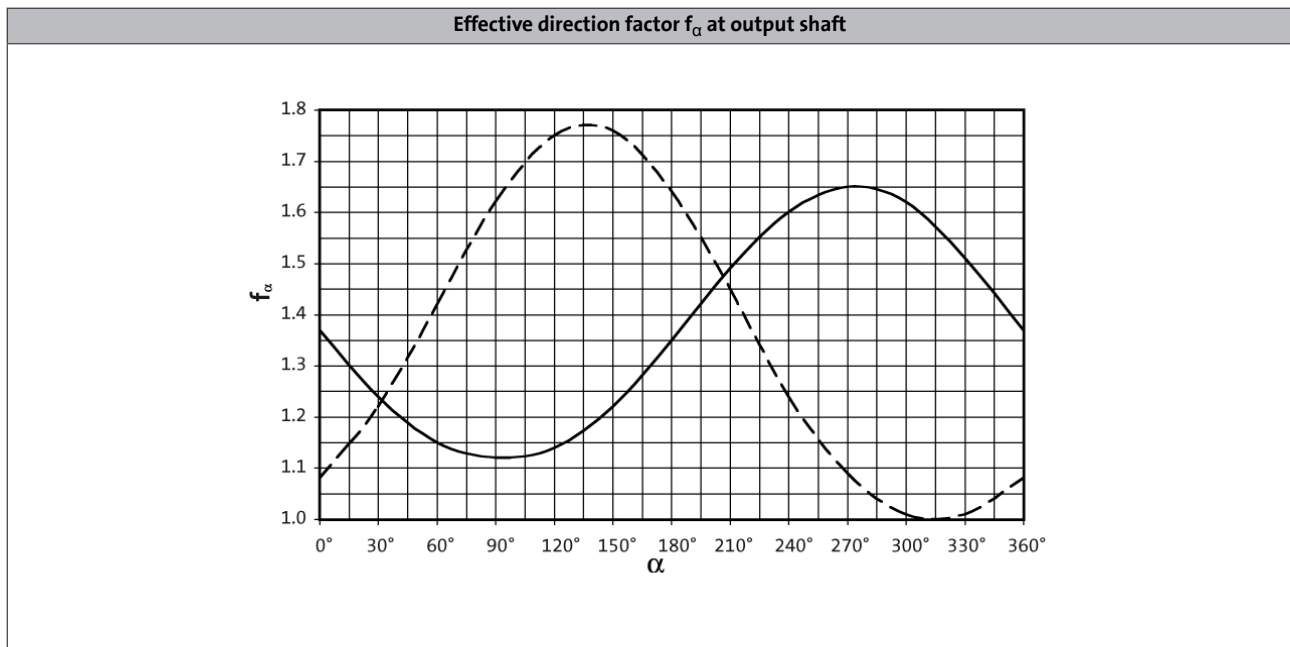
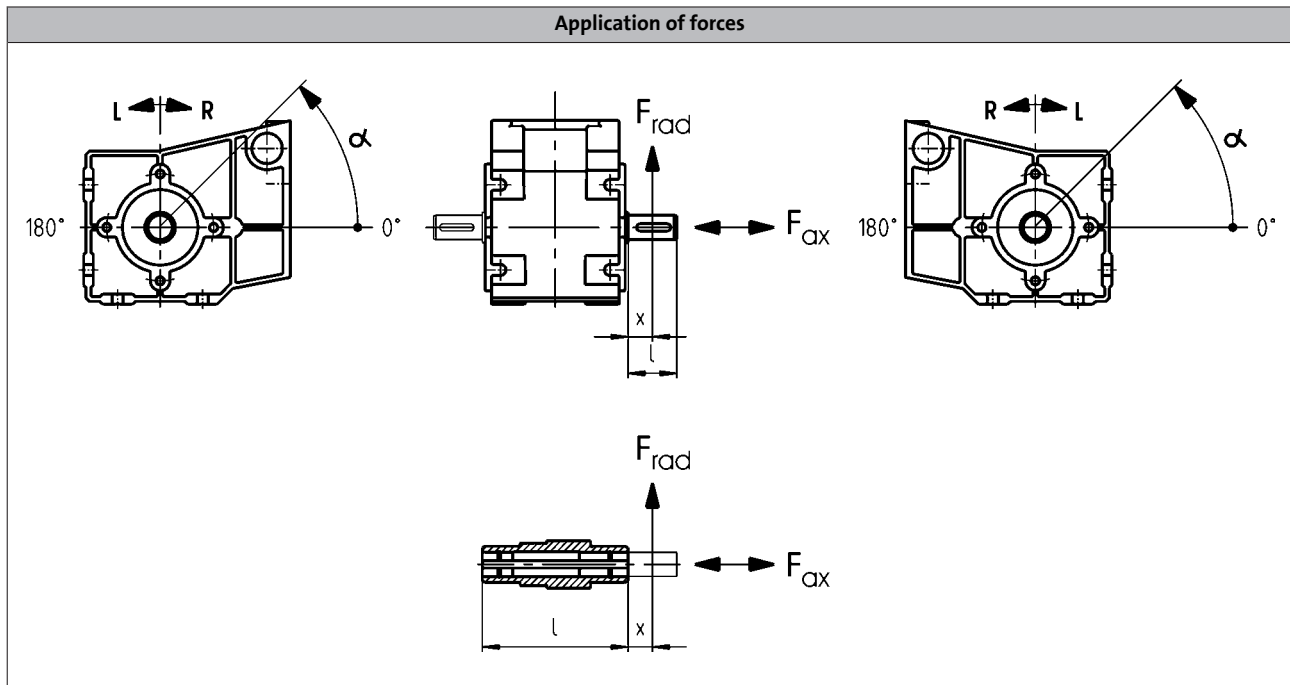
Permissible radial force

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

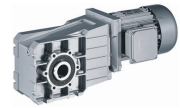
Permissible axial force

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

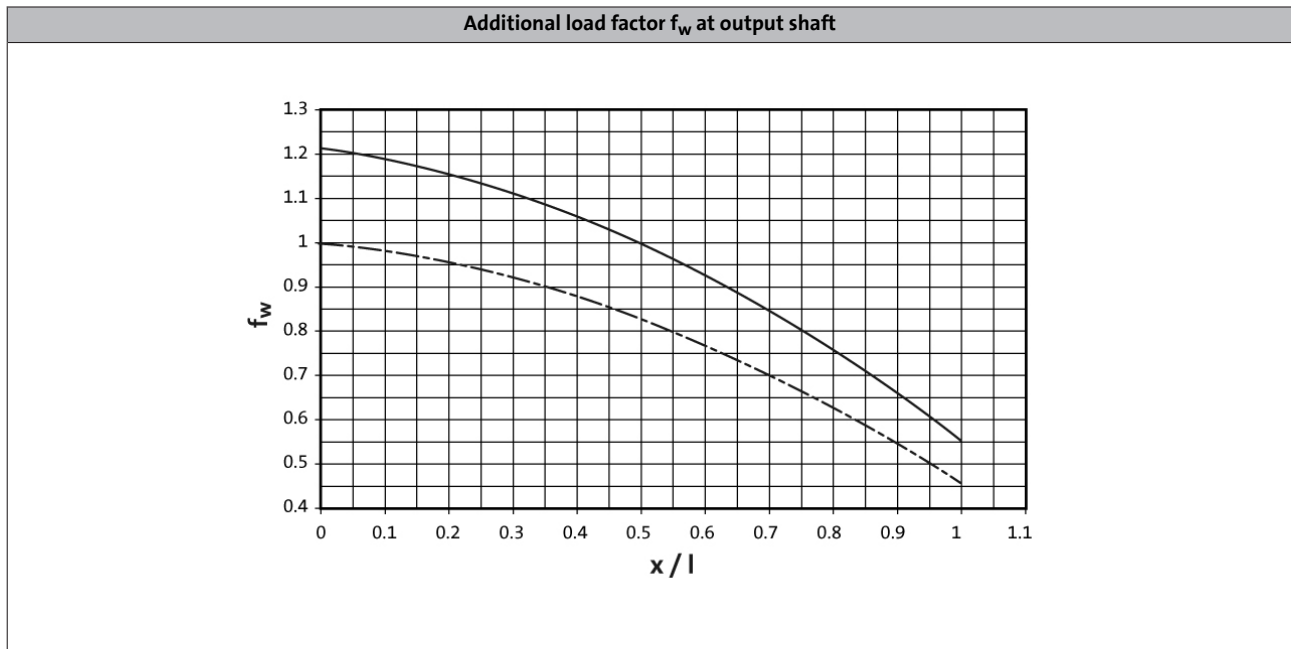
If F_{rad} and $F_{ax} \neq 0$; please contact Lenze.



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



Permissible radial and axial forces at output



—— Solid shaft (V□□)

- - - Hollow shaft (H□□)

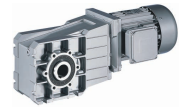
GKR□□-2□ H□□

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]
GKR03	900	1200	2200	2500	2800	3000	3000	3000	3000	3000
GKR04	1000	2200	2550	3000	3300	3600	3600	3600	3600	3600
GKR05	1500	2250	3800	4500	5100	6200	7400	7800	7800	7800
GKR06	3000	3800	5000	5200	5500	7000	9000	10000	10000	10000

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]
GKR03	600	800	1000	1100	1250	1400	1400	1400	1400	1400
GKR04	700	1000	1275	1500	1650	1800	1800	1800	1800	1800
GKR05	1100	1500	1900	2200	2500	3100	3700	3900	3900	3900
GKR06	1500	2000	2500	2600	2750	3500	4500	5000	5000	5000

- ▶ 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□□).



Permissible radial and axial forces at output

GKR□□-2□ 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]
GKR03	900	1200	1800	2100	2400	2800	3000	3000	3000	3000
GKR04	1000	1800	2100	2500	2700	3000	3000	3000	3000	3000
GKR05	1500	2350	3000	3600	4500	5000	6000	6500	6500	6500
GKR06	2000	2800	4000	4200	4500	5600	7300	8600	9000	9000
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]
GKR03	600	800	1000	1100	1250	1400	1400	1400	1400	1400
GKR04	700	1000	1275	1500	1650	1800	1800	1800	1800	1800
GKR05	1100	1520	1900	2200	2500	3100	3700	3900	3900	3900
GKR06	1500	2000	2500	2600	2750	3500	4500	5000	5000	5000

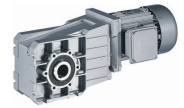
GKR□□-2□ V□K

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]
GKR03	900	1200	1800	2100	2400	2800	3000	3000	3000	3000
GKR04	1000	1800	2100	2500	2700	3000	3000	3000	3000	3000
GKR05	2400	3600	5200	6000	6500	6500	6500	6500	6500	6500
GKR06	3000	4000	5500	6200	7000	9000	9000	9000	9000	9000
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]
GKR03	600	800	1000	1100	1250	1400	1400	1400	1400	1400
GKR04	700	1000	1275	1500	1650	1800	1800	1800	1800	1800
GKR05	1100	1500	1900	2200	2500	3100	3700	3900	3900	3900
GKR06	1500	2000	2500	2600	2750	3500	4500	5000	5000	5000

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

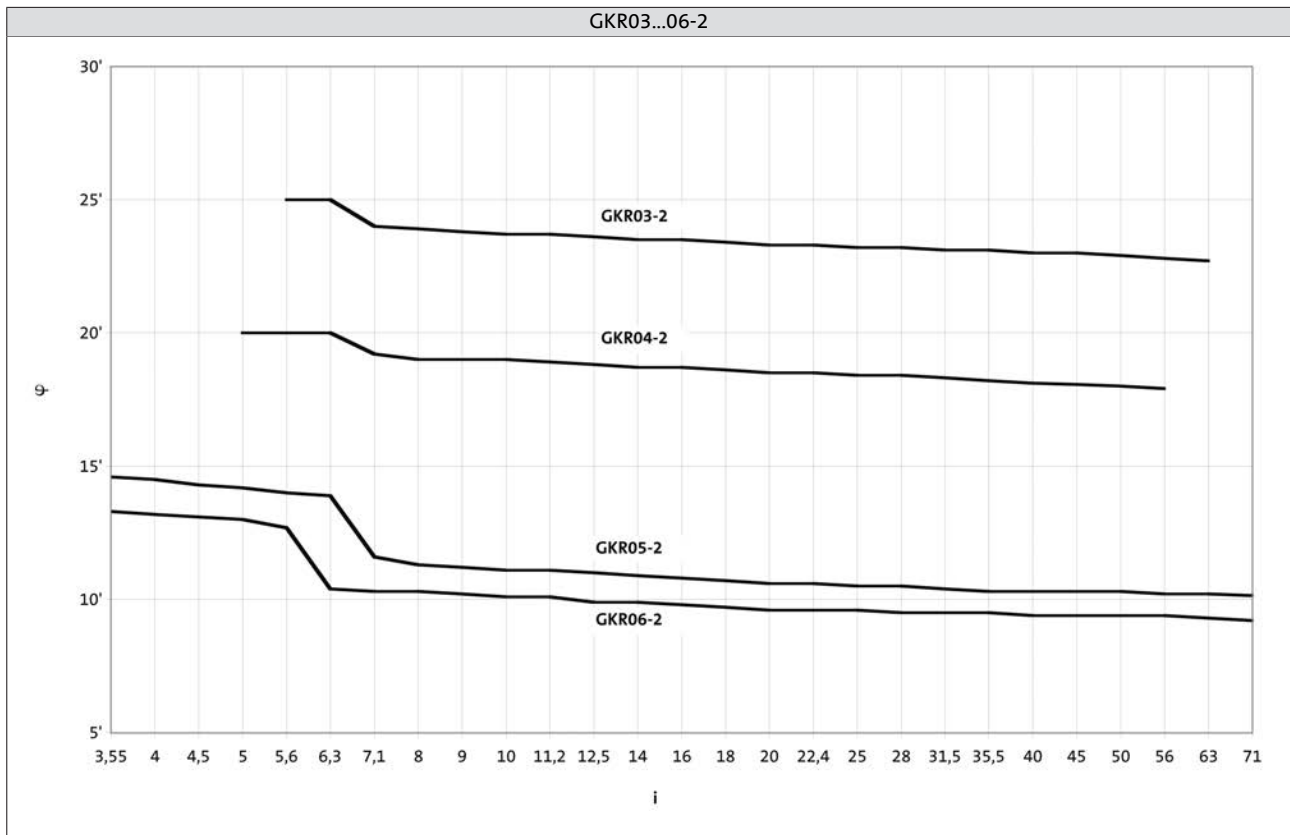
GKR bevel gearboxes

Technical data



Output backlash in angular minutes

► Backlash ϕ depending on ratio i



GKR bevel gearboxes



Technical data

Moments of inertia

GKR□□-2

► Moment of inertia (J) depending on ratio i

Gearbox		[kgcm ²]	GKR03
5.411	J	[kgcm ²]	0.307
6.222	J	[kgcm ²]	0.276
7.111	J	[kgcm ²]	0.196
8.178	J	[kgcm ²]	0.178
9.101	J	[kgcm ²]	0.134
10.466	J	[kgcm ²]	0.123
11.640	J	[kgcm ²]	0.086
13.386	J	[kgcm ²]	0.079
15.111	J	[kgcm ²]	0.059
17.378	J	[kgcm ²]	0.055
19.365	J	[kgcm ²]	0.038
22.270	J	[kgcm ²]	0.054
25.051	J	[kgcm ²]	0.025
28.808	J	[kgcm ²]	0.023
32.593	J	[kgcm ²]	0.016
37.481	J	[kgcm ²]	0.015
42.222	J	[kgcm ²]	0.010
48.556	J	[kgcm ²]	0.009
53.889	J	[kgcm ²]	0.006
61.972	J	[kgcm ²]	0.006

Gearbox		[kgcm ²]	GKR04
5.185	J	[kgcm ²]	0.813
5.963	J	[kgcm ²]	0.723
7.111	J	[kgcm ²]	0.446
8.178	J	[kgcm ²]	0.410
9.101	J	[kgcm ²]	3.270
10.466	J	[kgcm ²]	0.300
11.449	J	[kgcm ²]	0.260
12.698	J	[kgcm ²]	1.990
14.603	J	[kgcm ²]	0.181
15.556	J	[kgcm ²]	1.470
17.889	J	[kgcm ²]	0.135
19.556	J	[kgcm ²]	0.096
22.489	J	[kgcm ²]	0.090
25.185	J	[kgcm ²]	0.065
28.963	J	[kgcm ²]	0.060
31.919	J	[kgcm ²]	0.042
36.707	J	[kgcm ²]	0.040
40.000	J	[kgcm ²]	0.029
46.000	J	[kgcm ²]	0.027
52.698	J	[kgcm ²]	0.017
60.603	J	[kgcm ²]	0.017

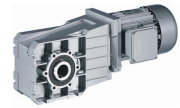
Gearbox		[kgcm ²]	GKR05
3.565	J	[kgcm ²]	4.950
4.889	J	[kgcm ²]	2.793
6.257	J	[kgcm ²]	1.791
6.883	J	[kgcm ²]	2.572
7.817	J	[kgcm ²]	2.316
9.440	J	[kgcm ²]	1.531
10.720	J	[kgcm ²]	1.396
12.081	J	[kgcm ²]	1.021
13.216	J	[kgcm ²]	0.874
13.719	J	[kgcm ²]	0.938
15.008	J	[kgcm ²]	0.805
16.857	J	[kgcm ²]	0.597
19.143	J	[kgcm ²]	0.554
20.650	J	[kgcm ²]	0.439
23.450	J	[kgcm ²]	0.411
26.878	J	[kgcm ²]	0.270
30.522	J	[kgcm ²]	0.253
33.433	J	[kgcm ²]	0.191
37.967	J	[kgcm ²]	0.180
43.267	J	[kgcm ²]	0.118
49.133	J	[kgcm ²]	0.112
52.510	J	[kgcm ²]	0.085
59.630	J	[kgcm ²]	0.081
67.113	J	[kgcm ²]	0.054
76.213	J	[kgcm ²]	0.051

Gearbox		[kgcm ²]	GKR06
3.431	J	[kgcm ²]	9.576
4.706	J	[kgcm ²]	5.607
6.022	J	[kgcm ²]	3.658
6.481	J	[kgcm ²]	5.112
7.146	J	[kgcm ²]	4.539
8.889	J	[kgcm ²]	3.233
9.800	J	[kgcm ²]	2.929
11.376	J	[kgcm ²]	2.209
12.444	J	[kgcm ²]	1.890
13.720	J	[kgcm ²]	1.734
15.873	J	[kgcm ²]	1.321
17.500	J	[kgcm ²]	1.225
19.444	J	[kgcm ²]	0.991
21.438	J	[kgcm ²]	0.928
25.309	J	[kgcm ²]	0.632
27.903	J	[kgcm ²]	0.594
31.481	J	[kgcm ²]	0.457
34.708	J	[kgcm ²]	0.432
40.741	J	[kgcm ²]	0.284
44.917	J	[kgcm ²]	0.270
49.444	J	[kgcm ²]	0.207
54.513	J	[kgcm ²]	0.197
62.500	J	[kgcm ²]	0.134
68.906	J	[kgcm ²]	0.127

- 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.

GKR bevel gearboxes

Technical data



Weights

GKR□□-2M HAR / HBR

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22
GKR03	m [kg]	7						
GKR04	m [kg]	9	11	16				
GKR05	m [kg]	14	16		21	28	37	
GKR06	m [kg]	22	24		29	37	45	58

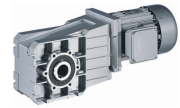
GKR□□-2M HAK

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22
GKR03	m [kg]	7						
GKR04	m [kg]	10	12	17				
GKR05	m [kg]	15	17		22	29	38	
GKR06	m [kg]	23	25		30	38	46	59

- 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.

GKR bevel gearboxes

Technical data



Weights

GKR□□-2M VAR / VBR

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22
GKR03	m [kg]	7						
GKR04	m [kg]	10	12	17				
GKR05	m [kg]	15	17		22	29	38	
GKR06	m [kg]	24	26		30	39	47	60

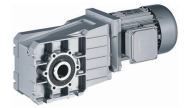
GKR□□-2M VAK

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22
GKR03	m [kg]	8						
GKR04	m [kg]	10	12	17				
GKR05	m [kg]	16	18		23	30	39	
GKR06	m [kg]	25	27		31	40	48	61

- 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.

GKR bevel gearboxes

Technical data



Weights

GKR□□-2M SAR / SBR

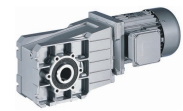
		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22
GKR03	m [kg]	7						
GKR04	m [kg]	10	12	17				
GKR05	m [kg]	14	17		21	29	38	
GKR06	m [kg]	23	25		30	38	46	59

GKR□□-2M SAK

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22
GKR03	m [kg]	8						
GKR04	m [kg]	10	12	17				
GKR05	m [kg]	15	18		22	30	39	
GKR06	m [kg]	24	26		31	39	47	60

- 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.

GKR bevel gearboxes



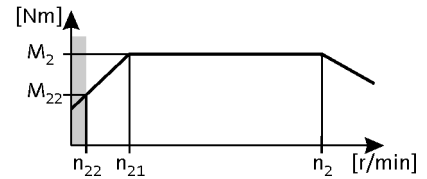
Technical data

Selection tables

► 120 Hz: $P_N = 0.55 \text{ kW}$

$n_{22}/n_2 = 1 \dots 24.0$

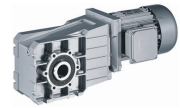
$n_1 = 143.3 \dots 3440 \text{ r/min}$



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
16	66	-	378	10.0	13	2.6	9.101	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
16	66	-	378	10.0	13	4.5	9.101	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
14	57	-	329	12	15	2.2	10.466	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
14	57	-	329	12	15	4.4	10.466	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
13	52	-	301	13	17	4.1	11.449	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
12	52	-	296	13	17	2.0	11.640	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
11	47	-	271	14	18	3.7	12.698	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
11	45	-	260	15	19	3.9	13.216	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42
11	45	-	257	15	19	1.8	13.386	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
9.8	41	-	236	16	21	3.2	14.603	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
9.6	40	-	229	17	22	3.9	15.008	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42
9.5	40	-	228	17	22	1.6	15.111	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
9.2	39	-	221	17	23	3.0	15.556	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
8.3	35	-	198	19	25	1.4	17.378	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
8.0	34	-	192	20	26	2.6	17.889	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
7.4	31	-	178	21	28	1.2	19.365	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
7.3	31	-	176	22	28	2.4	19.556	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
6.4	27	-	155	24	32	1.1	22.270	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
6.4	27	-	153	25	33	2.1	22.489	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
5.7	24	-	137	28	36	1.1	25.051	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
5.7	24	-	137	28	37	2.1	25.185	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
5.0	21	-	119	32	42	0.9	28.808	GKR03-2M□□□063C32	E84AV□□□5514□□□0	42
5.0	21	-	119	32	42	1.8	28.963	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
4.7	20	-	113	34	44	4.2	30.522	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42
4.5	19	-	108	35	46	1.7	31.919	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
3.9	16	-	94	40	53	1.5	36.707	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
3.6	15	-	86	44	58	1.2	40.000	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
3.1	13	-	75	51	67	1.3	46.000	GKR04-2M□□□063C32	E84AV□□□5514□□□0	42
2.9	12	-	70	54	71	3.2	49.133	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42
2.7	11	-	66	58	76	3.0	52.510	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42
2.6	11	-	63	60	79	3.5	54.513	GKR06-2M□□□063C32	E84AV□□□5514□□□0	42
2.4	10	-	58	66	87	2.7	59.630	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42
2.3	9.6	-	55	69	91	2.8	62.500	GKR06-2M□□□063C32	E84AV□□□5514□□□0	42
2.1	8.9	-	51	74	97	1.5	67.113	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42
2.1	8.7	-	50	76	100	2.8	68.906	GKR06-2M□□□063C32	E84AV□□□5514□□□0	42
1.9	7.9	-	45	84	111	1.5	76.213	GKR05-2M□□□063C32	E84AV□□□5514□□□0	42

GKR bevel gearboxes

Technical data

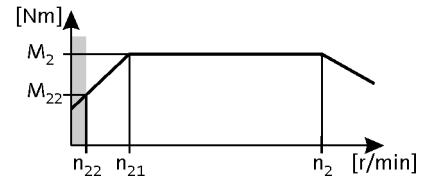


Selection tables

► 120 Hz: $P_N = 0.75$ kW

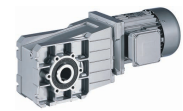
$n_{22}/n_2 = 1 \dots 24.0$

$n_1 = 141.7 \dots 3400$ r/min



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
16	66	-	374	14	18	1.9	9.101	GKR03-2M□□□063C42	E84AV□□□7514□□0	42
16	66	-	374	14	18	3.3	9.101	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
14	57	-	325	16	21	1.6	10.466	GKR03-2M□□□063C42	E84AV□□□7514□□0	42
14	57	-	325	16	21	3.2	10.466	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
12	52	-	297	17	23	3.0	11.449	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
12	52	-	292	17	23	1.5	11.640	GKR03-2M□□□063C42	E84AV□□□7514□□0	42
11	47	-	268	19	25	2.7	12.698	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
11	45	-	257	20	26	2.9	13.216	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
11	45	-	254	20	27	1.3	13.386	GKR03-2M□□□063C42	E84AV□□□7514□□0	42
9.7	41	-	233	22	29	2.3	14.603	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
9.4	40	-	227	23	30	2.9	15.008	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
9.4	40	-	225	23	30	1.1	15.111	GKR03-2M□□□063C42	E84AV□□□7514□□0	42
9.1	39	-	219	23	31	2.2	15.556	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
8.2	35	-	196	26	35	1.0	17.378	GKR03-2M□□□063C42	E84AV□□□7514□□0	42
7.9	34	-	190	27	36	1.9	17.889	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
7.2	31	-	174	29	39	1.8	19.556	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
6.3	27	-	151	34	45	1.5	22.489	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
5.6	24	-	135	38	50	1.5	25.185	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
5.3	22	-	127	40	54	3.1	26.878	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
4.9	21	-	117	43	58	1.3	28.963	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
4.6	20	-	111	46	61	3.1	30.522	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
4.4	19	-	107	48	64	1.2	31.919	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
4.2	18	-	102	50	67	2.6	33.433	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
3.9	16	-	93	55	74	1.1	36.707	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
3.7	16	-	90	57	76	2.6	37.967	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
3.5	15	-	84	61	82	2.9	40.741	GKR06-2M□□□063C42	E84AV□□□7514□□0	42
3.3	14	-	79	65	87	2.6	43.267	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
3.2	13	-	76	67	90	2.9	44.917	GKR06-2M□□□063C42	E84AV□□□7514□□0	42
3.1	13	-	74	69	92	0.9	46.000	GKR04-2M□□□063C42	E84AV□□□7514□□0	42
2.9	12	-	69	74	98	2.3	49.133	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
2.9	12	-	69	74	99	2.5	49.444	GKR06-2M□□□063C42	E84AV□□□7514□□0	42
2.7	11	-	65	79	105	2.2	52.510	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
2.6	11	-	62	82	109	2.5	54.513	GKR06-2M□□□063C42	E84AV□□□7514□□0	42
2.4	10	-	57	89	119	1.9	59.630	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
2.3	9.6	-	54	94	125	2.0	62.500	GKR06-2M□□□063C42	E84AV□□□7514□□0	42
2.1	8.9	-	51	101	134	1.1	67.113	GKR05-2M□□□063C42	E84AV□□□7514□□0	42
2.1	8.7	-	49	103	138	2.0	68.906	GKR06-2M□□□063C42	E84AV□□□7514□□0	42
1.9	7.9	-	45	114	153	1.1	76.213	GKR05-2M□□□063C42	E84AV□□□7514□□0	42

GKR bevel gearboxes



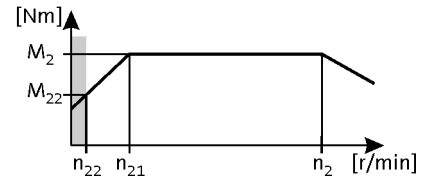
Technical data


Selection tables

► 120 Hz: $P_N = 1.10 \text{ kW}$

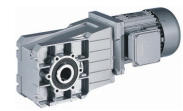
$n_{22}/n_2 = 1 \dots 24.0$

$n_1 = 145.4 \dots 3490 \text{ r/min}$



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
23	96	-	558	14	18	4.2	6.257	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
16	66	-	384	20	26	2.4	9.101	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
14	57	-	334	23	30	2.2	10.466	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
13	52	-	305	25	33	2.1	11.449	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
12	47	-	275	28	36	1.9	12.698	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
11	45	-	264	29	38	4.2	13.216	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
10	41	-	239	32	42	1.6	14.603	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
9.7	40	-	233	33	43	3.9	15.008	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
9.4	39	-	224	34	45	1.5	15.556	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
8.1	34	-	195	39	51	1.3	17.889	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
7.4	31	-	179	43	56	1.2	19.556	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
7.0	29	-	169	45	59	3.1	20.650	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
6.5	27	-	155	49	64	1.1	22.489	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
6.2	26	-	149	52	67	2.7	23.450	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
5.8	24	-	139	55	72	1.1	25.185	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
5.4	22	-	130	59	77	2.7	26.878	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
5.0	21	-	121	64	83	0.9	28.963	GKR04-2M□□□071C32	E84AV□□□1124□□0	42
4.8	20	-	114	67	87	2.4	30.522	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
4.6	19	-	111	69	90	3.4	31.481	GKR06-2M□□□071C32	E84AV□□□1124□□0	42
4.4	18	-	104	73	96	2.2	33.433	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
3.8	16	-	92	83	109	1.9	37.967	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
3.4	14	-	81	95	124	1.8	43.267	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
3.0	12	-	71	108	141	1.6	49.133	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
2.9	12	-	71	109	141	2.8	49.444	GKR06-2M□□□071C32	E84AV□□□1124□□0	42
2.8	11	-	67	115	150	1.5	52.510	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
2.7	11	-	64	120	156	2.7	54.513	GKR06-2M□□□071C32	E84AV□□□1124□□0	42
2.4	10	-	59	131	171	1.3	59.630	GKR05-2M□□□071C32	E84AV□□□1124□□0	42
2.3	9.6	-	56	137	179	1.6	62.500	GKR06-2M□□□071C32	E84AV□□□1124□□0	42
2.1	8.7	-	51	151	197	1.6	68.906	GKR06-2M□□□071C32	E84AV□□□1124□□0	42

GKR bevel gearboxes



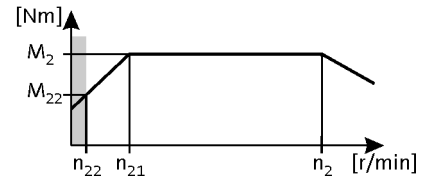
Technical data

Selection tables

► 120 Hz: $P_N = 1.50 \text{ kW}$

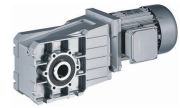
$n_{22}/n_2 = 1 \dots 24.0$

$n_1 = 143.8 \dots 3450 \text{ r/min}$



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
23	96	-	551	19	25	3.1	6.257	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
16	66	-	379	27	36	1.8	9.101	GKR04-2M□□□071C42	E84AV□□□1524□□0	42
14	57	-	330	31	41	1.6	10.466	GKR04-2M□□□071C42	E84AV□□□1524□□0	42
13	52	-	301	34	45	1.5	11.449	GKR04-2M□□□071C42	E84AV□□□1524□□0	42
12	50	-	286	36	48	3.1	12.081	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
11	47	-	272	38	50	1.4	12.698	GKR04-2M□□□071C42	E84AV□□□1524□□0	42
11	45	-	261	40	52	3.1	13.216	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
11	44	-	252	41	54	3.0	13.719	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
9.8	41	-	236	44	58	1.2	14.603	GKR04-2M□□□071C42	E84AV□□□1524□□0	42
9.6	40	-	230	45	59	2.9	15.008	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
9.2	39	-	222	47	61	1.1	15.556	GKR04-2M□□□071C42	E84AV□□□1524□□0	42
9.1	38	-	217	48	63	3.1	15.873	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
8.5	36	-	205	51	67	2.7	16.857	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
8.2	34	-	197	52	69	3.1	17.500	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
8.0	34	-	193	54	71	1.0	17.889	GKR04-2M□□□071C42	E84AV□□□1524□□0	42
7.5	31	-	180	57	76	2.4	19.143	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
7.0	29	-	167	62	82	2.2	20.650	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
6.1	26	-	147	70	93	2.0	23.450	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
5.7	24	-	136	76	100	2.9	25.309	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
5.4	22	-	128	81	106	1.9	26.878	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
5.2	22	-	124	84	110	2.9	27.903	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
4.7	20	-	113	91	120	1.7	30.522	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
4.6	19	-	110	94	124	2.4	31.481	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
4.3	18	-	103	100	132	1.6	33.433	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
4.1	17	-	99	104	137	2.4	34.708	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
3.8	16	-	91	114	150	1.4	37.967	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
3.5	15	-	85	122	161	2.5	40.741	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
3.3	14	-	80	130	171	1.3	43.267	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
3.2	13	-	77	135	177	2.4	44.917	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
2.9	12	-	70	147	194	1.2	49.133	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
2.9	12	-	70	148	195	2.0	49.444	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
2.7	11	-	66	157	207	1.1	52.510	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
2.6	11	-	63	163	215	2.0	54.513	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
2.4	10	-	58	179	235	1.0	59.630	GKR05-2M□□□071C42	E84AV□□□1524□□0	42
2.3	9.6	-	55	187	247	1.2	62.500	GKR06-2M□□□071C42	E84AV□□□1524□□0	42
2.1	8.7	-	50	206	272	1.2	68.906	GKR06-2M□□□071C42	E84AV□□□1524□□0	42

GKR bevel gearboxes



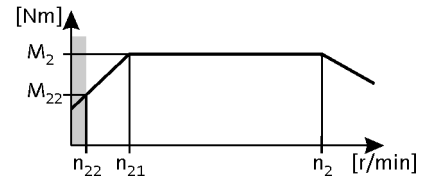
Technical data

Selection tables

► 120 Hz: $P_N = 2.20$ kW

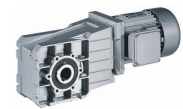
$n_{22}/n_2 = 1 \dots 24.0$

$n_1 = 145.8 \dots 3500$ r/min



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
23	96	-	559	27	36	3.3	6.257	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
16	66	-	385	39	52	1.2	9.101	GKR04-2M□□□080C32	E84AV□□□2224□□0	42
14	57	-	334	45	60	1.1	10.466	GKR04-2M□□□080C32	E84AV□□□2224□□0	42
13	52	-	306	49	65	1.0	11.449	GKR04-2M□□□080C32	E84AV□□□2224□□0	42
12	50	-	290	52	69	2.3	12.081	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
12	47	-	276	54	72	0.9	12.698	GKR04-2M□□□080C32	E84AV□□□2224□□0	42
11	45	-	265	57	75	2.1	13.216	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
11	44	-	255	59	78	2.1	13.719	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
9.7	40	-	233	64	86	2.0	15.008	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
8.7	36	-	208	72	96	1.9	16.857	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
7.6	31	-	183	82	109	1.7	19.143	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
7.5	31	-	180	83	111	3.1	19.444	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
7.1	29	-	170	88	118	1.5	20.650	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
6.8	28	-	163	92	122	2.8	21.438	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
6.2	26	-	149	100	134	1.4	23.450	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
5.8	24	-	138	108	144	2.7	25.309	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
5.4	22	-	130	115	153	1.3	26.878	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
5.2	22	-	125	119	159	2.4	27.903	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
4.8	20	-	115	131	174	1.2	30.522	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
4.6	19	-	111	135	180	2.1	31.481	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
4.4	18	-	105	143	191	1.1	33.433	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
4.2	17	-	101	148	198	1.9	34.708	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
3.8	16	-	92	162	217	0.9	37.967	GKR05-2M□□□080C32	E84AV□□□2224□□0	42
3.6	15	-	86	174	232	1.8	40.741	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
3.3	13	-	78	192	256	1.7	44.917	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
3.0	12	-	71	211	282	1.5	49.444	GKR06-2M□□□080C32	E84AV□□□2224□□0	42
2.7	11	-	64	233	311	1.4	54.513	GKR06-2M□□□080C32	E84AV□□□2224□□0	42

GKR bevel gearboxes



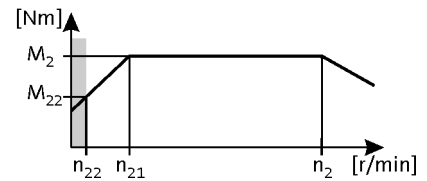
Technical data

Selection tables

► 120 Hz: $P_N = 3.00 \text{ kW}$

$n_{22}/n_2 = 1 \dots 24.0$

$n_1 = 145.0 \dots 3480 \text{ r/min}$



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
24	149	-	578	35	47	3.1	6.022	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
23	144	-	556	37	49	2.4	6.257	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
13	79	-	306	67	89	3.1	11.376	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
12	75	-	288	71	95	1.7	12.081	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
12	72	-	280	73	97	3.1	12.444	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
11	68	-	263	78	103	1.6	13.216	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
11	66	-	254	81	107	1.5	13.719	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
11	66	-	254	81	107	3.0	13.720	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
9.7	60	-	232	88	117	1.4	15.008	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
9.1	57	-	219	93	124	2.7	15.873	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
8.6	53	-	206	99	132	1.4	16.857	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
8.3	51	-	199	103	137	2.5	17.500	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
7.6	47	-	182	112	150	1.2	19.143	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
7.5	46	-	179	114	152	2.2	19.444	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
7.0	44	-	169	121	162	1.1	20.650	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
6.8	42	-	162	126	168	2.0	21.438	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
6.2	38	-	148	138	183	1.0	23.450	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
5.7	36	-	138	149	198	2.0	25.309	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
5.4	34	-	130	158	210	1.0	26.878	GKR05-2M□□□080C42	E84AV□□□3024□□0	42
5.2	32	-	125	164	218	1.8	27.903	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
4.6	29	-	111	185	246	1.6	31.481	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
4.2	26	-	100	204	272	1.4	34.708	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
3.6	22	-	85	239	319	1.3	40.741	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
3.2	20	-	78	264	351	1.2	44.917	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
2.9	18	-	70	290	387	1.1	49.444	GKR06-2M□□□080C42	E84AV□□□3024□□0	42
2.7	17	-	64	320	426	1.0	54.513	GKR06-2M□□□080C42	E84AV□□□3024□□0	42

GKR bevel gearboxes



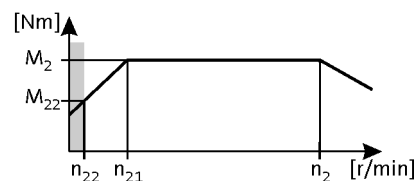
Technical data

Selection tables

► 120 Hz: $P_N = 4.00$ kW

$n_{22}/n_2 = 1 \dots 24.0$

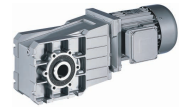
$n_1 = 145.0 \dots 3480$ r/min



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
24	100	-	578	44	63	2.9	6.022	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
23	96	-	556	46	65	1.8	6.257	GKR05-2M□□□090C32	E84AV□□□4024□□0	42
13	53	-	306	83	119	2.8	11.376	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
12	50	-	288	88	126	1.2	12.081	GKR05-2M□□□090C32	E84AV□□□4024□□0	42
12	48	-	280	91	130	2.6	12.444	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
11	45	-	263	97	138	1.2	13.216	GKR05-2M□□□090C32	E84AV□□□4024□□0	42
11	44	-	254	100	143	1.1	13.719	GKR05-2M□□□090C32	E84AV□□□4024□□0	42
11	44	-	254	100	143	2.3	13.720	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
9.7	40	-	232	110	157	1.1	15.008	GKR05-2M□□□090C32	E84AV□□□4024□□0	42
9.1	38	-	219	116	166	2.1	15.873	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
8.6	36	-	206	123	176	1.0	16.857	GKR05-2M□□□090C32	E84AV□□□4024□□0	42
8.3	34	-	199	128	183	1.9	17.500	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
7.6	31	-	182	140	200	0.9	19.143	GKR05-2M□□□090C32	E84AV□□□4024□□0	42
7.5	31	-	179	142	203	1.7	19.444	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
6.8	28	-	162	157	224	1.5	21.438	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
5.7	24	-	138	185	264	1.5	25.309	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
5.2	22	-	125	204	291	1.3	27.903	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
4.6	19	-	111	230	328	1.2	31.481	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
4.2	17	-	100	253	362	1.1	34.708	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
3.6	15	-	85	297	425	1.0	40.741	GKR06-2M□□□090C32	E84AV□□□4024□□0	42
3.2	13	-	78	328	468	0.9	44.917	GKR06-2M□□□090C32	E84AV□□□4024□□0	42

GKR bevel gearboxes

Technical data

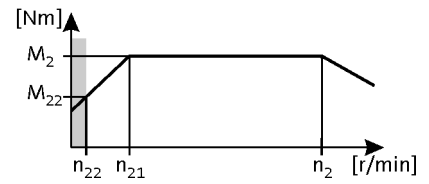


Selection tables

► 120 Hz: $P_N = 5.50 \text{ kW}$

$n_{22}/n_2 = 1 \dots 24.0$

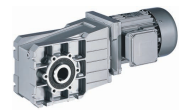
$n_1 = 146.9 \dots 3525 \text{ r/min}$



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
24	100	-	585	60	85	2.5	6.022	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
24	96	-	563	62	89	1.3	6.257	GKR05-2M□□□100C12	E84AV□□□5524□□0	42
13	53	-	310	113	161	2.0	11.376	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
12	50	-	292	120	171	0.9	12.081	GKR05-2M□□□100C12	E84AV□□□5524□□0	42
12	48	-	283	123	176	1.9	12.444	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
11	44	-	257	136	194	1.7	13.720	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
9.3	38	-	222	157	225	1.5	15.873	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
8.4	34	-	201	173	248	1.4	17.500	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
7.6	31	-	181	193	275	1.2	19.444	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
6.9	28	-	164	212	304	1.1	21.438	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
5.8	24	-	139	251	358	1.1	25.309	GKR06-2M□□□100C12	E84AV□□□5524□□0	42
5.3	22	-	126	277	395	1.0	27.903	GKR06-2M□□□100C12	E84AV□□□5524□□0	42

GKR bevel gearboxes

Technical data

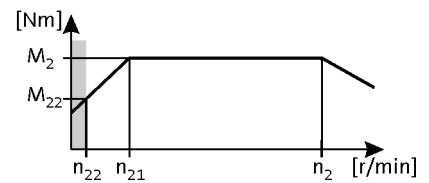


Selection tables

► 120 Hz: $P_N = 7.50 \text{ kW}$

$n_{22}/n_2 = 1 \dots 24.0$

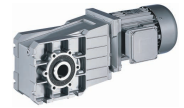
$n_1 = 146.5 \dots 3515 \text{ r/min}$



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
24	100	-	584	82	117	1.8	6.022	GKR06-2M□□□100C32	E84AV□□□7524□□0	42
23	96	-	562	85	121	1.0	6.257	GKR05-2M□□□100C32	E84AV□□□7524□□0	42
13	53	-	309	154	220	1.5	11.376	GKR06-2M□□□100C32	E84AV□□□7524□□0	42
12	48	-	283	169	241	1.4	12.444	GKR06-2M□□□100C32	E84AV□□□7524□□0	42
11	44	-	256	186	266	1.2	13.720	GKR06-2M□□□100C32	E84AV□□□7524□□0	42
9.2	38	-	221	215	307	1.1	15.873	GKR06-2M□□□100C32	E84AV□□□7524□□0	42
8.4	34	-	201	237	339	1.0	17.500	GKR06-2M□□□100C32	E84AV□□□7524□□0	42
7.5	31	-	181	264	376	0.9	19.444	GKR06-2M□□□100C32	E84AV□□□7524□□0	42

GKR bevel gearboxes

Technical data

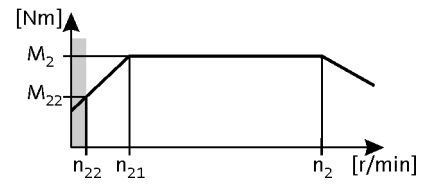


Selection tables

► 120 Hz: $P_N = 11.00$ kW

$n_{22}/n_2 = 1 \dots 24.0$

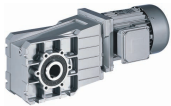
$n_1 = 147.1 \dots 3530$ r/min



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
24	100	-	586	109	170	1.2	6.022	GKR06-2M□□□112C22	E84AV□□□1134□□0	42
13	53	-	310	206	322	1.0	11.376	GKR06-2M□□□112C22	E84AV□□□1134□□0	42
12	48	-	284	225	352	1.0	12.444	GKR06-2M□□□112C22	E84AV□□□1134□□0	42

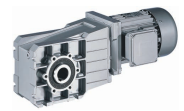
GKR bevel gearboxes

Technical data



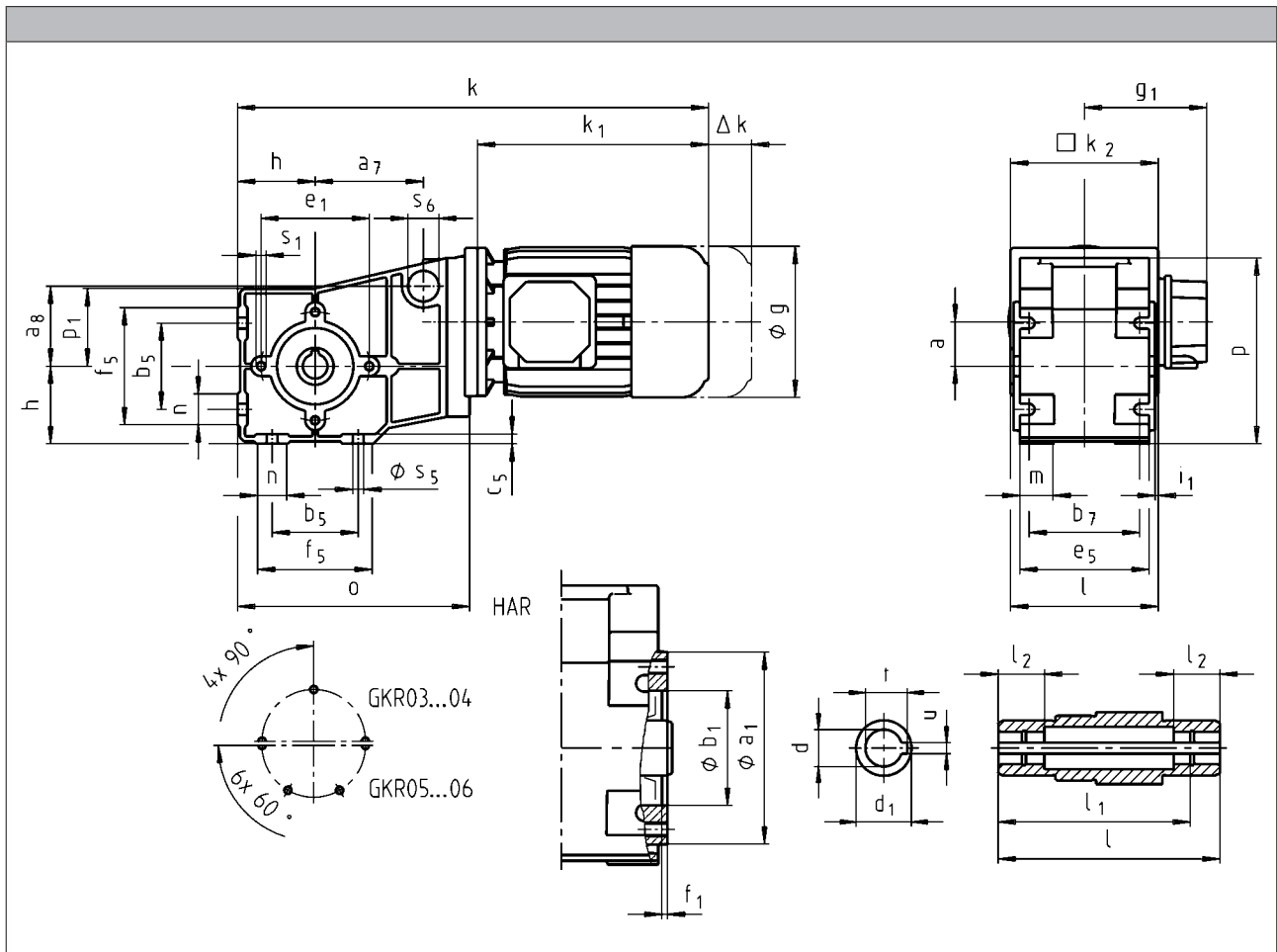
GKR bevel gearboxes

Technical data

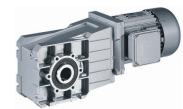


Dimensions

GKR□□-2M H□R



GKR bevel gearboxes



Technical data

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22	
g		123	139	156		176	194	218	
g ₁	MFEMAXX	100	109	150		157	166	176	
	MFEMABR	107	118	132		137	147	158	
k ₁	MFEMAXX	187	207	224.5		274	324	319	
k ₂		120		145		180		222	
	MFEMABR	40	52	73		68	76	90	
Δ k	MFEMAXX	128						109	102
	MFEMABR	170	165	183		181	170	183	
		k							
GKR03		332							
GKR04		383	403	425					
GKR05		436	456		479	538	588		
GKR06		488	508		530	590	640	641	

	a	a ₇	a ₈	h	o	p ¹⁾	p ₁	s ₆
GKR03	29	66	39	50	142	117	48	25
GKR04	36	88	65	63	189	151	63	25
GKR05	40			80	250.5	181	82	
GKR06	51			100	307	226	100	

	d ²⁾	d ₁	l ¹⁾	l ₁	l ₂	u	t ³⁾	i ₁	a ₁	b ₁	e ₁	f ₁	s ₁
	H7					JS9	+0,2			J7			
GKR03	18	30	100	85	22	6	20.8	2.5	85	55	70	2.5	M6x12
	20	30	100	85	22	6	22.8	2.5					
GKR04	20	30	120	105	25	6	22.8	2.5	104	62	88	3	M8x16
	25	35	120	105	25	8	27	2.5					
GKR05	30	50	143	127	25	8	33.3	4	116	80	100	4	M8x15
	35	50	143	127	25	10	38.3	4					
GKR06	40	65	170	150	30	12	43.3	5	140	100	120	4	M10x22
	45	65	170	150	30	14	48.8	5					

	b ₅	b ₇	c ₅	e ₅	f ₅	m	n	s ₅
GKR03	60	75	7	90	80	22	20	6.6
GKR04	70	90	8	105	95	28	25	9
GKR05	100	100	11	115	138	27	48	9
GKR06	120	125	12	145	164	32	53	11

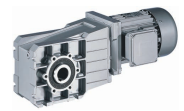
¹⁾ k₂ !

²⁾ l₂ !

³⁾ d = 25 mm > DIN 6885/3

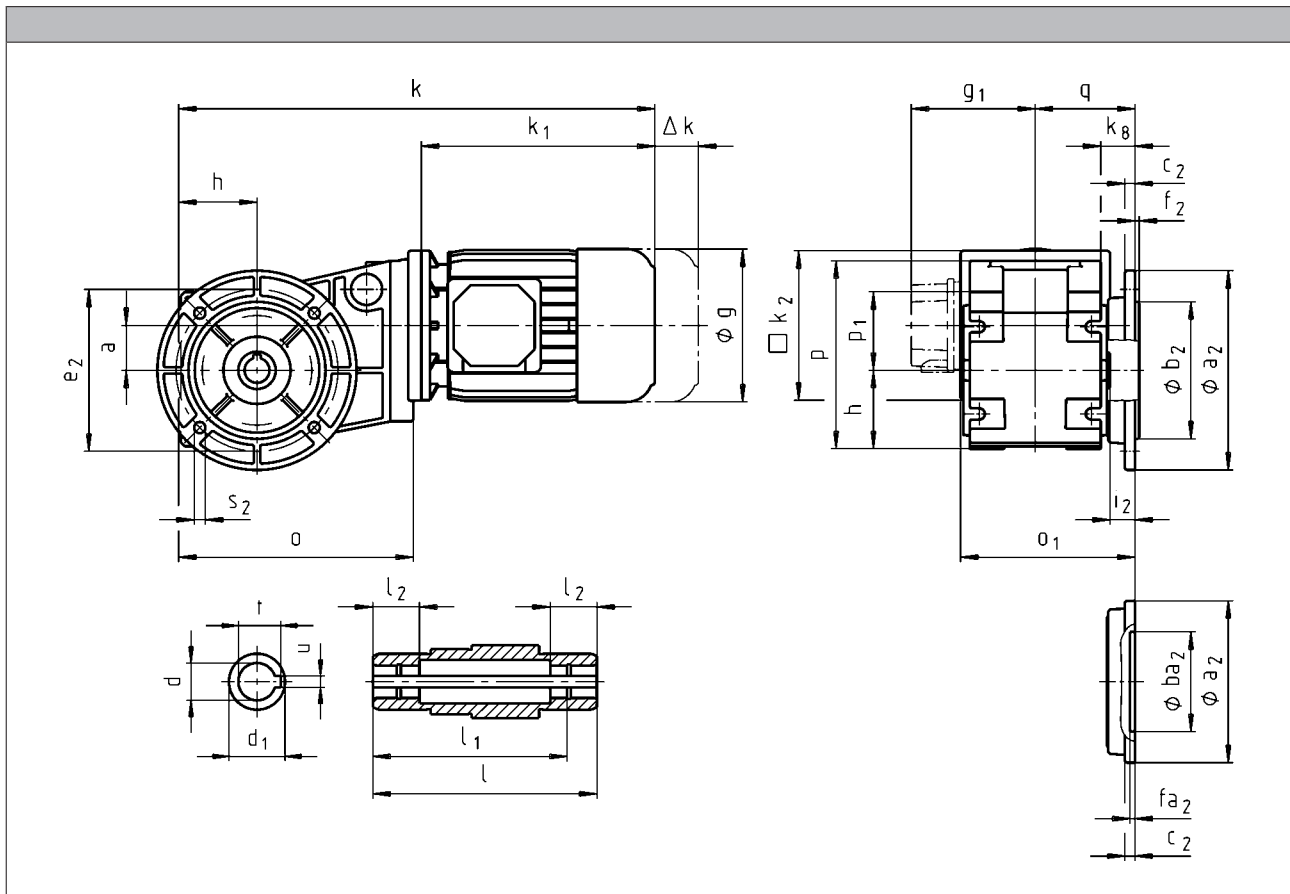
GKR bevel gearboxes

Technical data

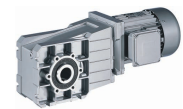


Dimensions

GKR□□-2M HAK



GKR bevel gearboxes



Technical data

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22
g		123	139	156		176	194	218
g ₁	MFEMAXX	100	109	150		157	166	176
	MFEMABR	107	118	132		137	147	158
k ₁	MFEMAXX	187	207	224.5		274	324	319
k ₂		120		145		180		222
	MFEMABR	40	52	73		68	76	90
Δ k	MFEMAXX	128					109	102
	MFEMABR	170	165	183		181	170	183
k								
GKR03		332						
GKR04		383	403	425				
GKR05		436	456	479		538	588	
GKR06		488	508	530		590	640	641

	a	h	k _g	o	p ¹⁾	p ₁	q
GKR03	29	50	35	142	117	48	80
GKR04	36	63	28	189	151	63	80
GKR05	40	80	47.5	250.5	181	82	105
GKR06	51	100	54	307	226	100	126.5

	d ²⁾	d ₁	l	l ₁	l ₂	u	t ³⁾	i ₂	o ₁ ¹⁾	a ₂	b ₂	ba ₂	c ₂	e ₂	f ₂	fa ₂	s ₂
	H7					JS9	+0,2				j7	H7					
GKR03	18	30	100	85	22	6	20.8	30	130	120	80	-	8	100	3	-	7
	20	30	100	85	22	6	22.8	30	130	110	-	60	8	87	-	4	9
GKR04	20	30	120	105	25	6	22.8	20	140	120	80		8	100	3		7
	25	35	120	105	25	8	27	20	140	160	110		8	130	3.5		9
GKR05	30	50	143	127	25	8	33.3	33.5	176.5	160	110		12	130	3.5		9
	35	50	143	127	25	10	38.3	33.5	176.5	200	130		12	165	3.5		11
GKR06	40	65	170	150	30	12	43.3	41.5	211.5	200	130		12	165	3.5		11
	45	65	170	150	30	14	48.8	41.5	211.5	250	180		12	215	4		14

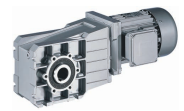
¹⁾ k₂ !

²⁾ l₂ !

³⁾ d = 25 mm > DIN 6885/3

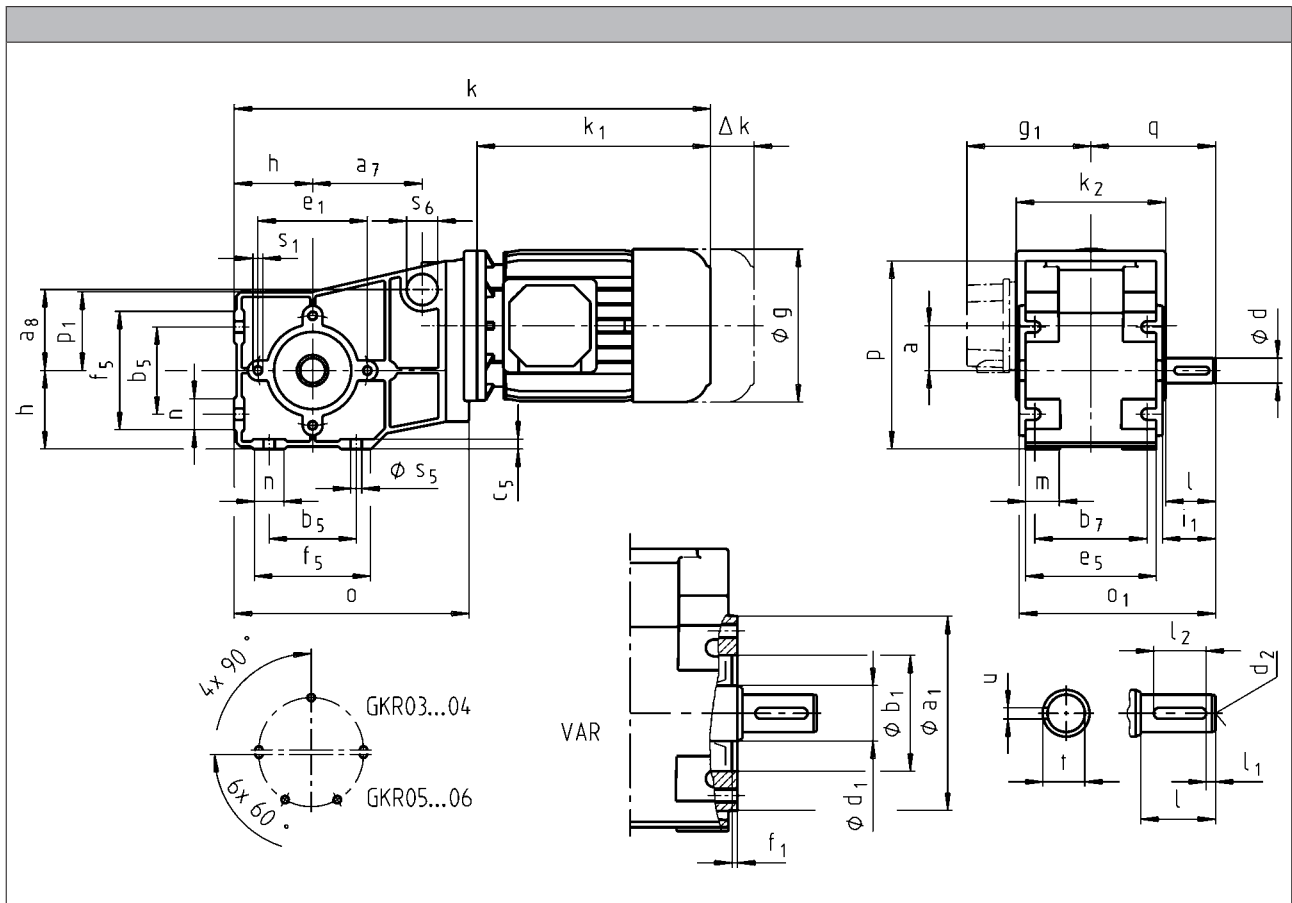
GKR bevel gearboxes

Technical data

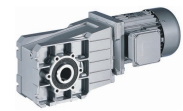


Dimensions

GKR□□-2M V□R



GKR bevel gearboxes



Technical data

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22	
g		123	139	156	156	176	194	218	
g ₁	MFEMAXX	100	109	132	132	157	166	176	
	MFEMABR	107	118	132	132	137	147	158	
k ₁	MFEMAXX	187	207	224.5	224.5	274	324	319	
k ₂		120		145	145	180		222	
	MFEMABR	40	52	73	73	68	76	90	
Δ k	MFEMAXX	128						109	102
	MFEMABR	170	165	183	183	181	170	183	
k									
GKR03		332							
GKR04		383	403	425					
GKR05		436	456	479	479	538	588		
GKR06		488	508	530	530	590	640	641	

	a	a ₇	a ₈	h	o	p ¹⁾	p ₁	q	s ₆
GKR03	29	66	39	50	142	117	48	90	25
GKR04	36	88	65	63	189	151	63	100	25
GKR05	40			80	250.5	181	82	131.5	
GKR06	51			100	307	226	100	155	

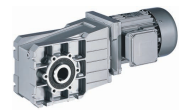
	d	d ₁	d ₂	l	l ₁	l ₂	u	t	i ₁	o ₁ ¹⁾	a ₁	b ₁	e ₁	f ₁	s ₁
	k6											J7			
GKR03	20	30	M6	40	5	28	6	22.5	42.5	137.5	85	55	70	2.5	M6x12
GKR04	20	30	M6	40	5	28	6	22.5	42.5	158	104	62	88	3	M8x16
GKR05	30	50	M10	60	6	45	8	33	64	199	116	80	100	4	M8x15
GKR06	35	65	M12	70	7	56	10	38	75	235	140	100	120	4	M10x22

	b ₅	b ₇	c ₅	e ₅	f ₅	m	n	s ₅
GKR03	60	75	7	90	80	22	20	6.6
GKR04	70	90	8	105	95	28	25	9
GKR05	100	100	11	115	138	27	48	9
GKR06	120	125	12	145	164	32	53	11

¹⁾ k₂ !

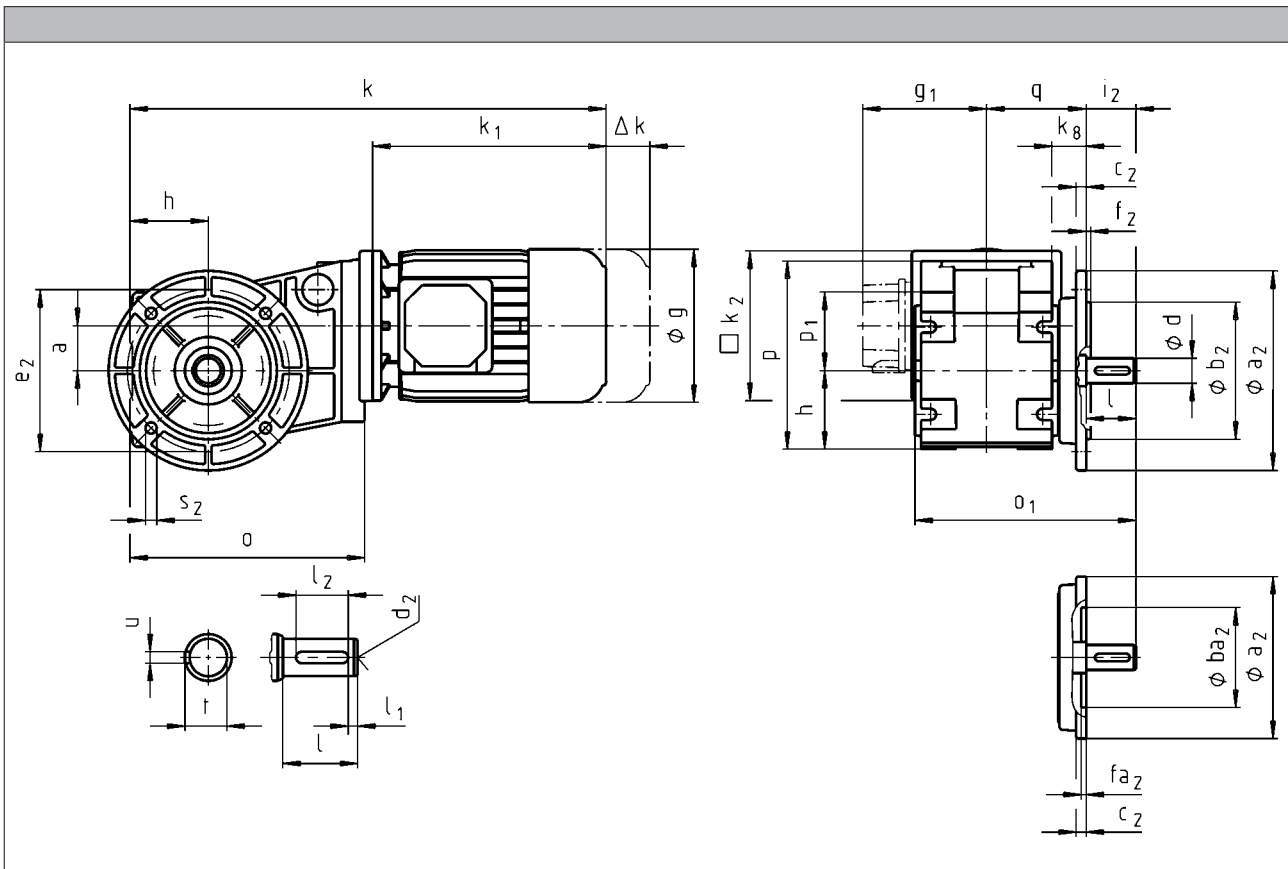
GKR bevel gearboxes

Technical data

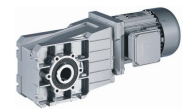


Dimensions

GKR□□-2M VAK



GKR bevel gearboxes



Technical data

		063C32 063C42	071C32 071C42	080C32	080C42	090C32	100C12 100C32	112C22	
g		123	139	156		176	194	218	
g ₁	MFEMAXX	100	109	150		157	166	176	
	MFEMABR	107	118	132		137	147	158	
k ₁	MFEMAXX	187	207	224.5		274	324	319	
k ₂		120		145		180		222	
Δ k	MFEMABR	40	52	73		68	76	90	
	MFFMAXX				128		109		102
	MFFMABR	170	165	183		181	170	183	
k									
GKR03		332							
GKR04		383	403	425					
GKR05		436	456	479		538	588		
GKR06		488	508	530		590	640	641	

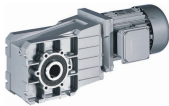
	a	h	k _g	o	p ¹⁾	p ₁	q
GKR03	29	50	35	142	117	48	80
GKR04	36	63	28	189	151	63	80.5
GKR05	40	80	47.5	250.5	181	82	105
GKR06	51	100	54	307	226	100	126.5

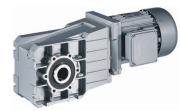
	d	d ₂	l	l ₁	l ₂	u	t	i ₂	o ₁ ¹⁾	a ₂	b ₂	ba ₂	c ₂	e ₂	f ₂	fa ₂	s ₂
	k6									j7	H7						
GKR03	20	M6	40	5	28	6	22.5	40	167.5	120 110	80 -	- 60	8 8	100 87	3 -	- 4	7 9
GKR04	20	M6	40	5	28	6	22.5	40	178	120 160	80 110		8 8	100 130	3 3.5		7 9
GKR05	30	M10	60	6	45	8	33	60	232.5	160 200	110 130		12 12	130 165	3.5 3.5		9 11
GKR06	35	M12	70	7	56	10	38	70	276.5	200 250	130 180		12 12	165 215	3.5 4		11 14

¹⁾ k₂ !

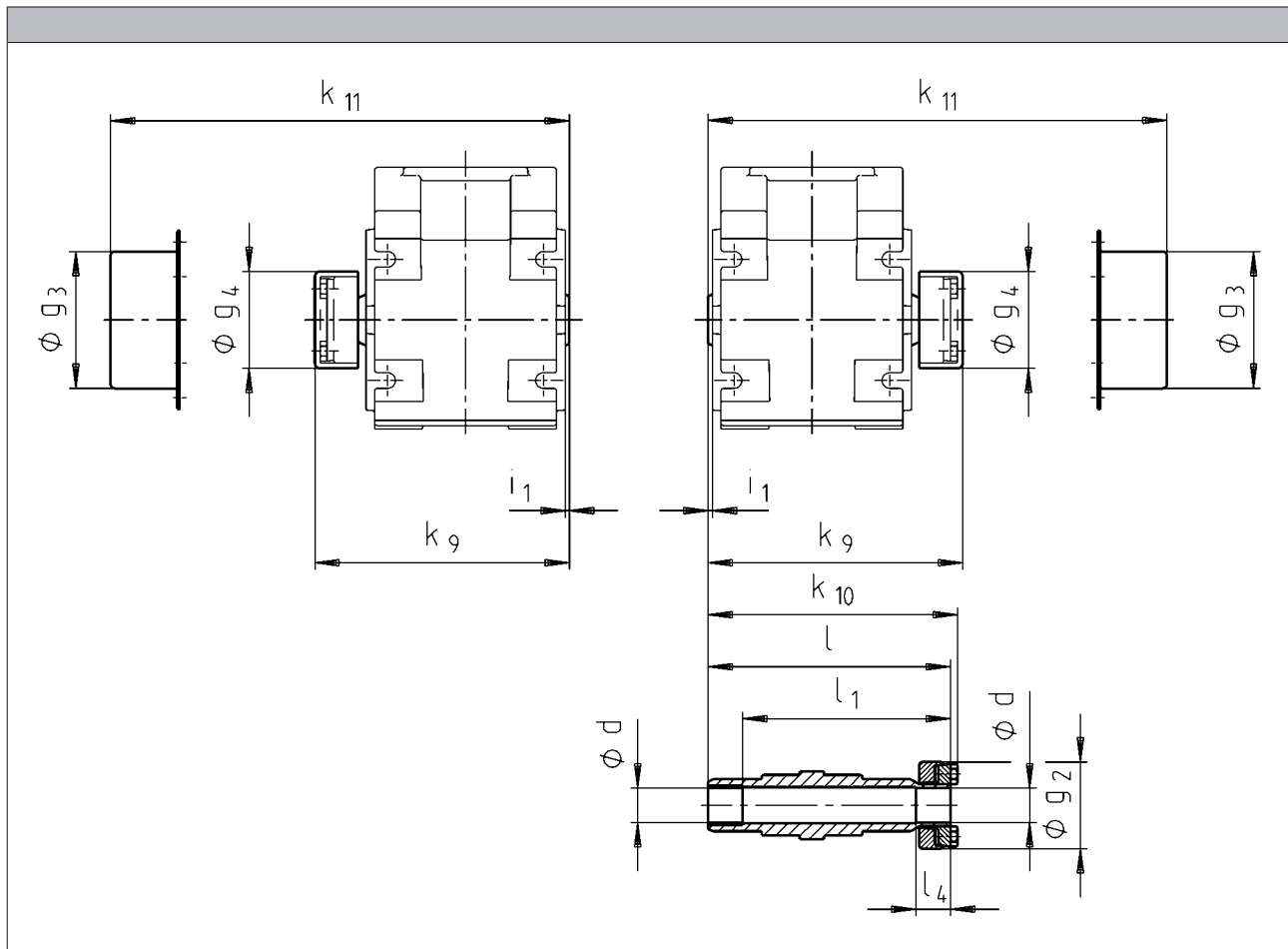
GKR bevel gearboxes

Technical data





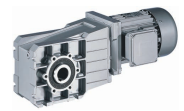
Hollow shaft with shrink disc



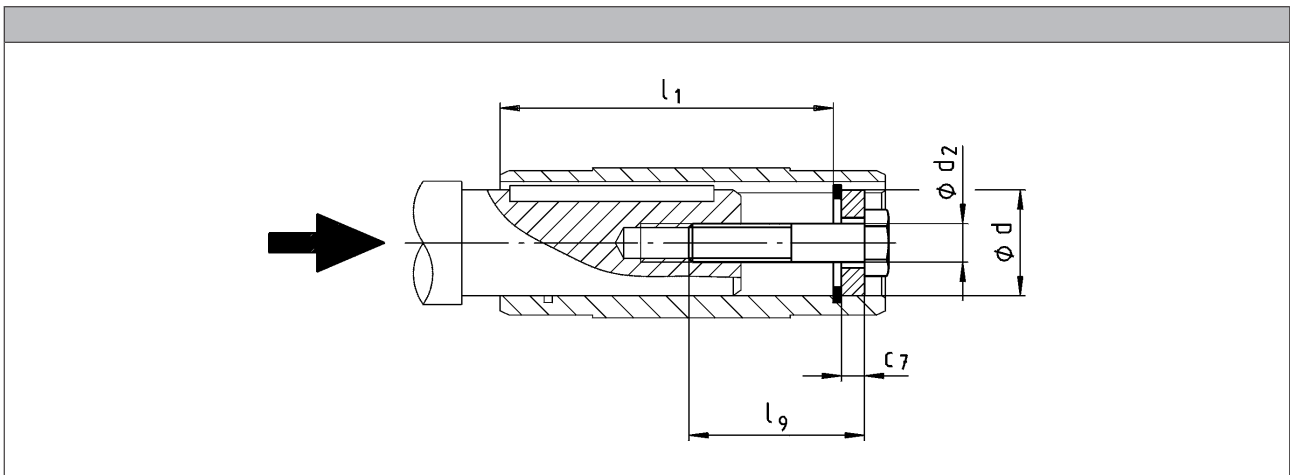
	d ¹⁾	g ₂	g ₃	g ₄	i ₁	k ₉	k ₁₀	k ₁₁	l	l ₁	l ₄
	h6										
GKR03	20	50	65	54	2.5	126	124	138	120	100	20
GKR04						146	144	158	144	120	
GKR05	30 35	80	90	84	4.0	176	177	182	171	151	28
GKR06	40	90	100	94	5.0	202	210	214	204	174	30

¹⁾ Machine shaft design.

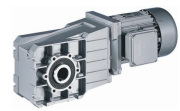
- ▶ Output flange and hollow shaft with shrink disc (output version SAK) are not possible in the same location. For additional dimensions see output version H□□.
- ▶ Ensure that the strength of the machine shaft material is adequate in shrink disc designs.
When using typical steels, e.g. C45, 42CrMo4, 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).



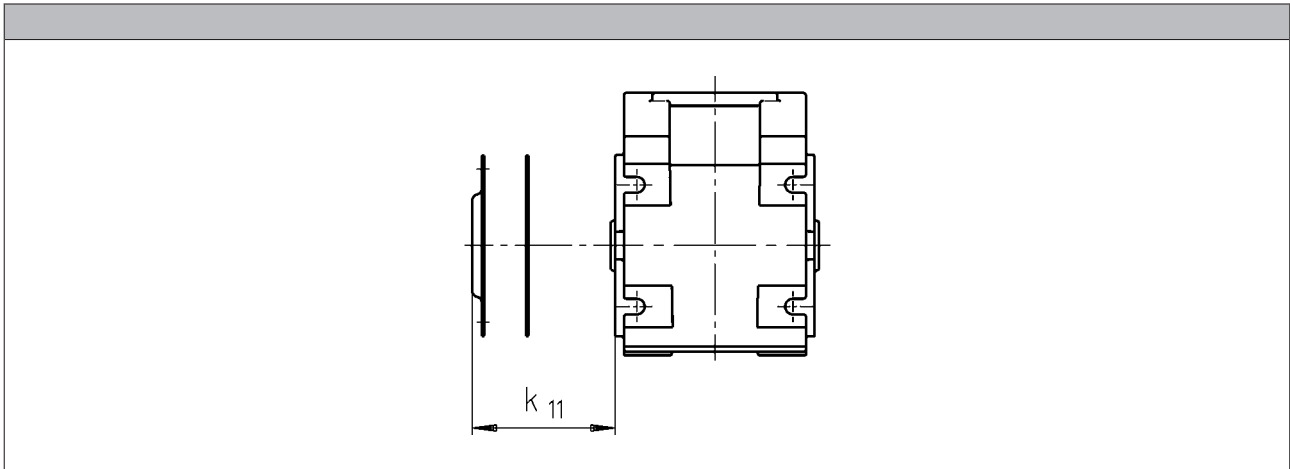
**Mounting set for hollow shaft circlip:
Proposed design for auxiliary tools**



	d	l_1	d_2	l_9	c_7
	H7				
GKR03	18 20	85	M6	40	4
GKR04	20 25	105			M10
GKR05	30 35	127	M12	50	
GKR06	40 45	150	M16	60	8 9



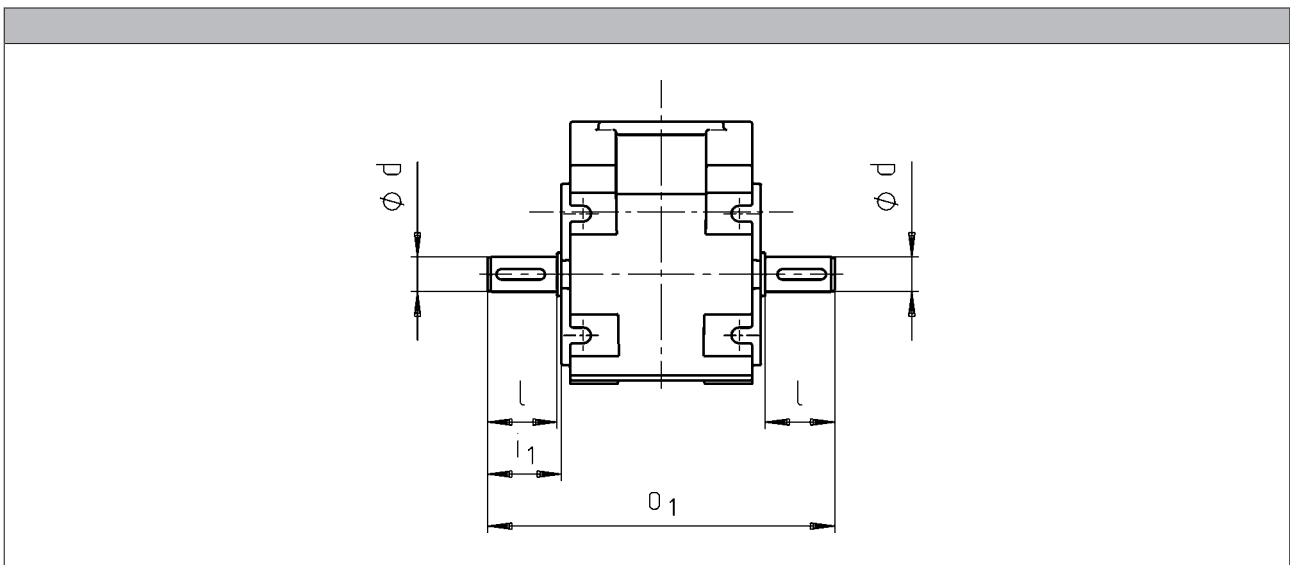
Hoseproof hollow shaft cover



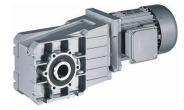
► Cover including gasket

	k_{11} [mm]
GKR03	9
GKR04	10
GKR05	11
GKR06	11

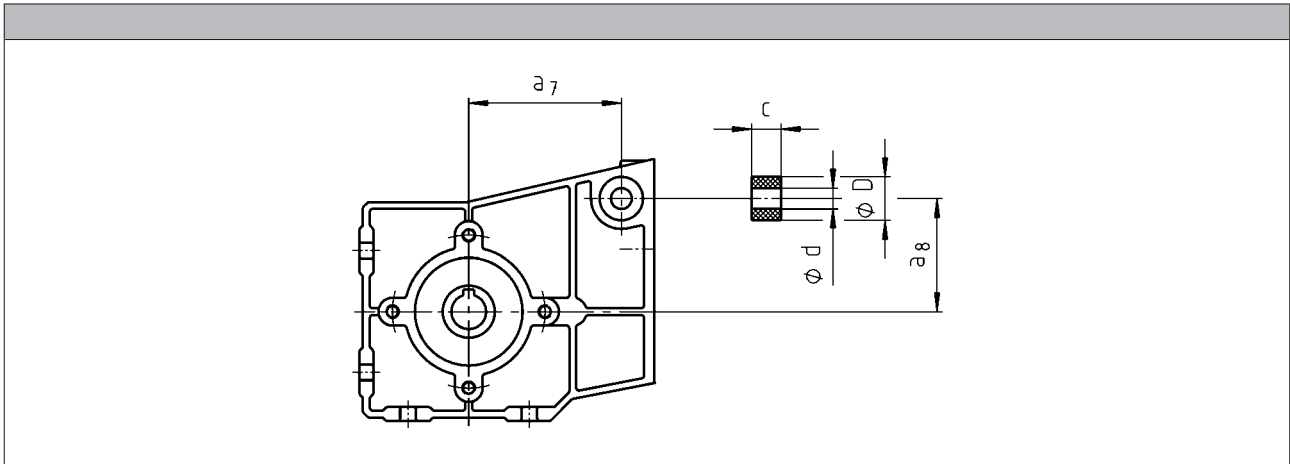
Gearboxes with 2nd output shaft end



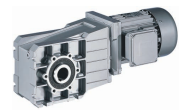
	d k6 [mm]	l [mm]	i_1 [mm]	o_1 [mm]
GKR03	20	40	42.5	180
GKR04				200
GKR05	30	60	64.0	263
GKR06	35	70	75.0	310



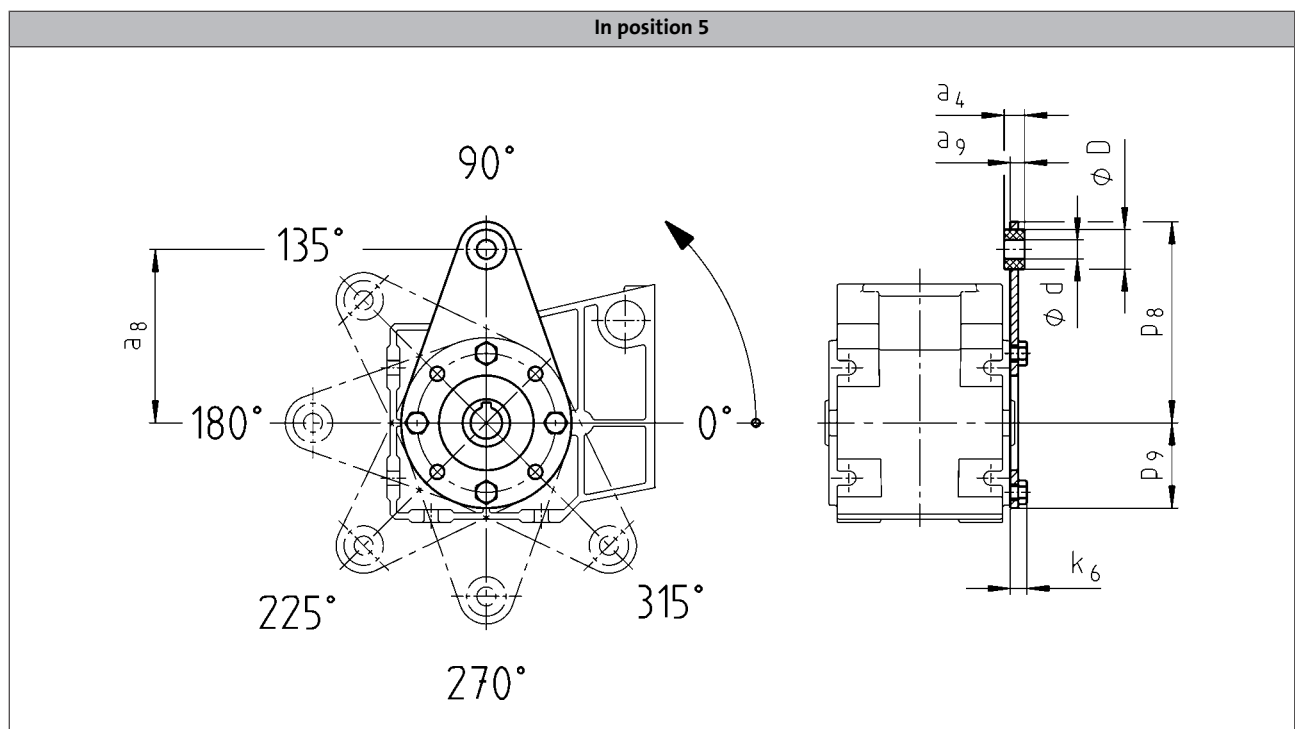
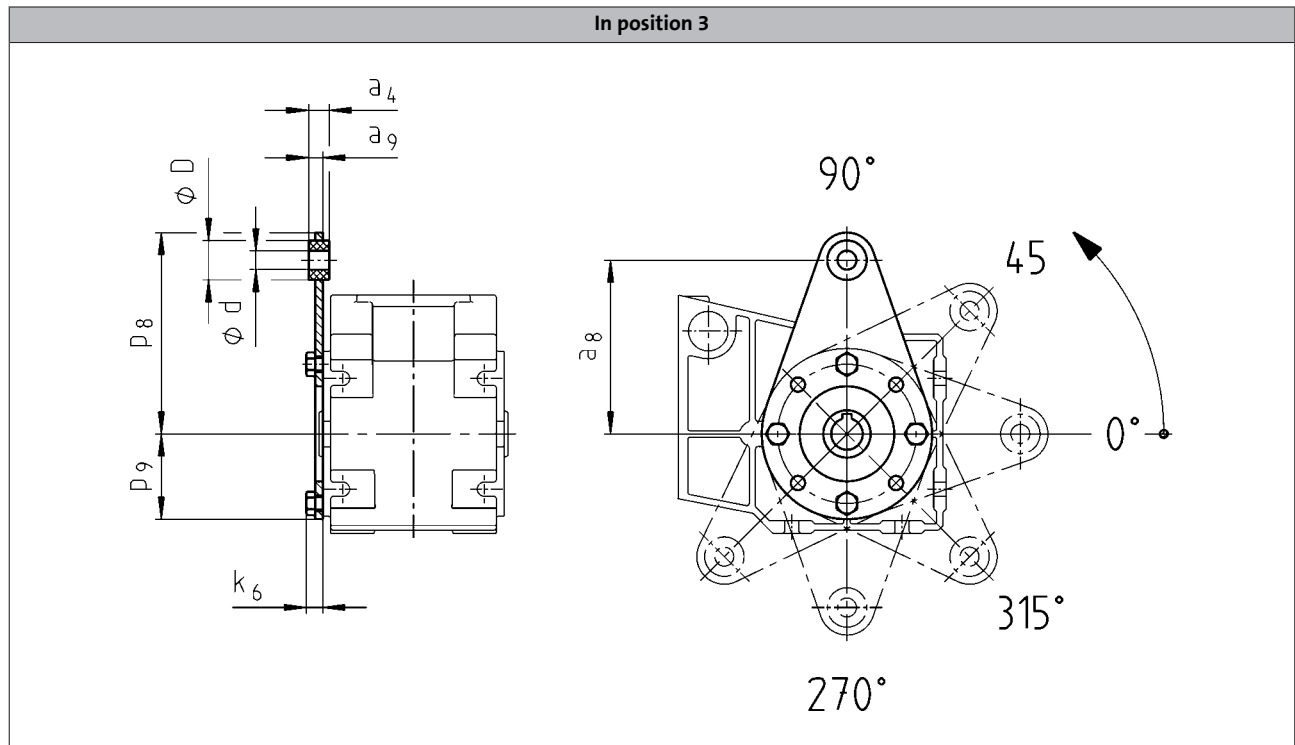
Rubber buffer for torque plate



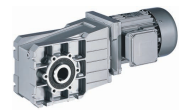
	d	D	c	a ₇	a ₈
GKR03	10	25	13.0	66.0	39
GKR04				88.0	65



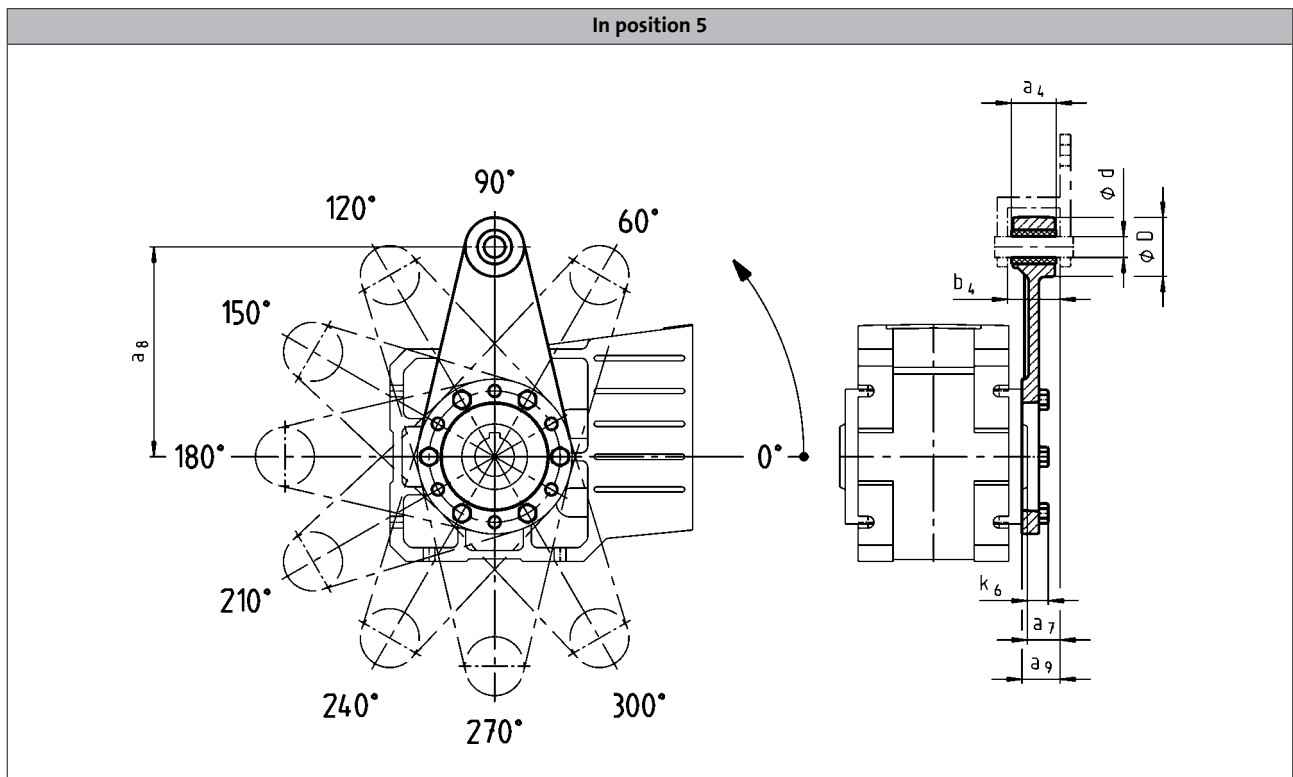
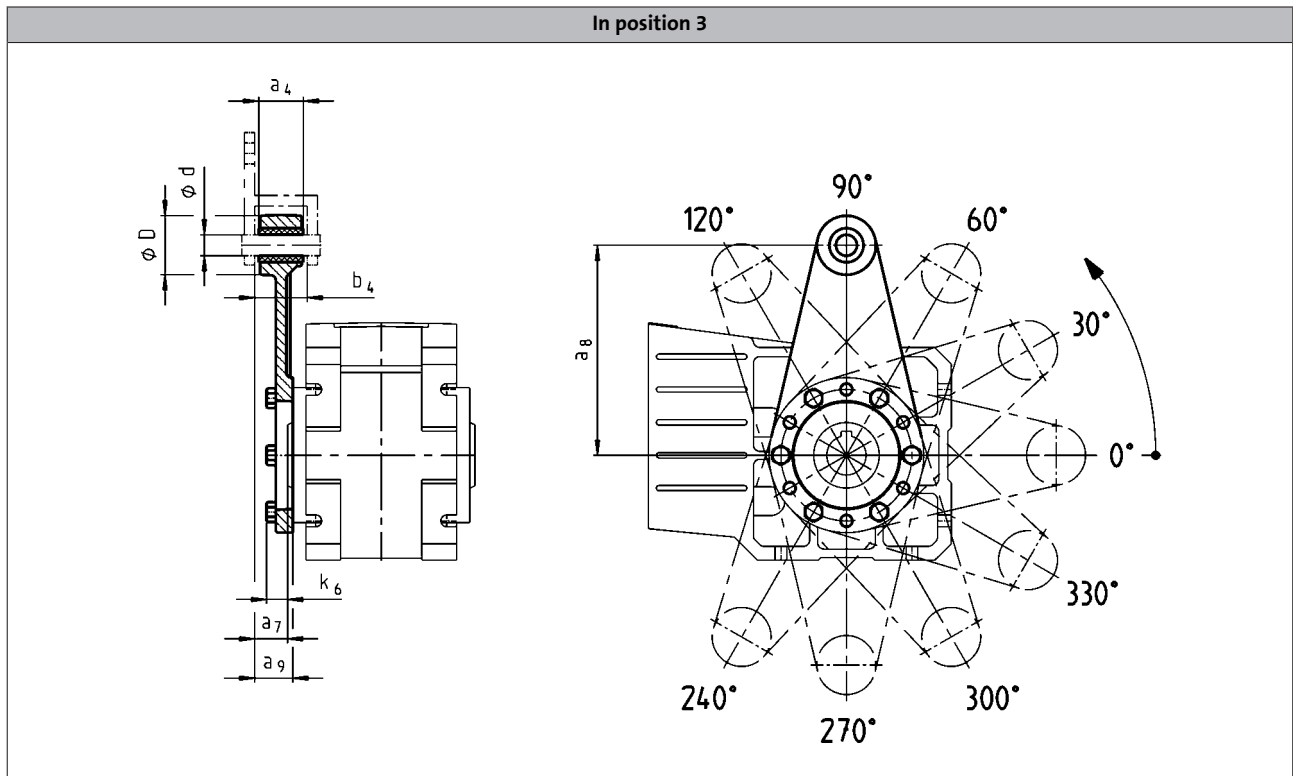
Torque plate on threaded pitch circle



	a_4	a_8	a_9	d	D	k_6	p_8	p_9
GKR03	12	100	8.0	8	20	9	115	42
GKR04	13	110	9.0	10	25	11	128	54

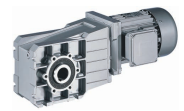


Torque plate on threaded pitch circle

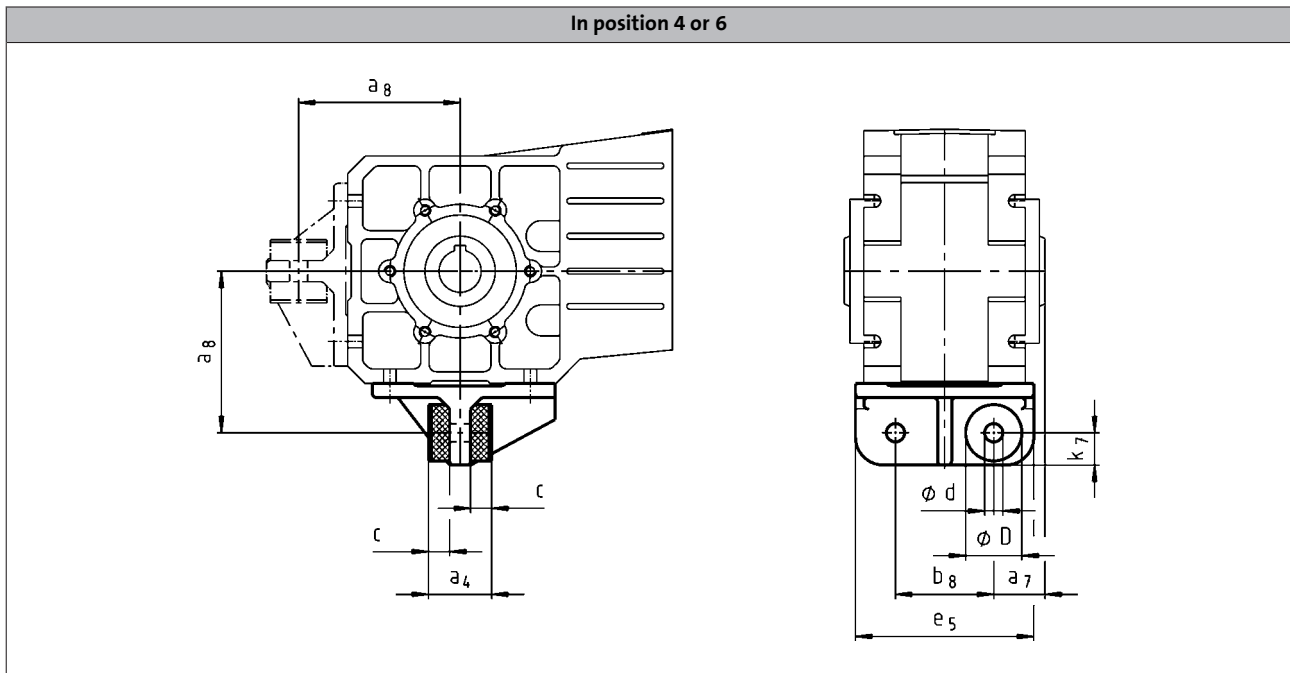


6.8

	a_4	a_7	a_8	a_9	b_4	d	D	k_6
GKR05	34	23.5	160	27.5	38.5	16	45	15
GKR06	40	28.0	200	33.0	44.5	20	50	18



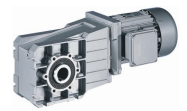
Torque plate at housing foot



	a ₄	a ₇	a ₈	b ₈	c	d	D	e ₅	k ₇
GKR05	45	36.5	115	70	15.0	13	40	127	25
GKR06	72	45.0	145	80	27.0	17	50	145	30

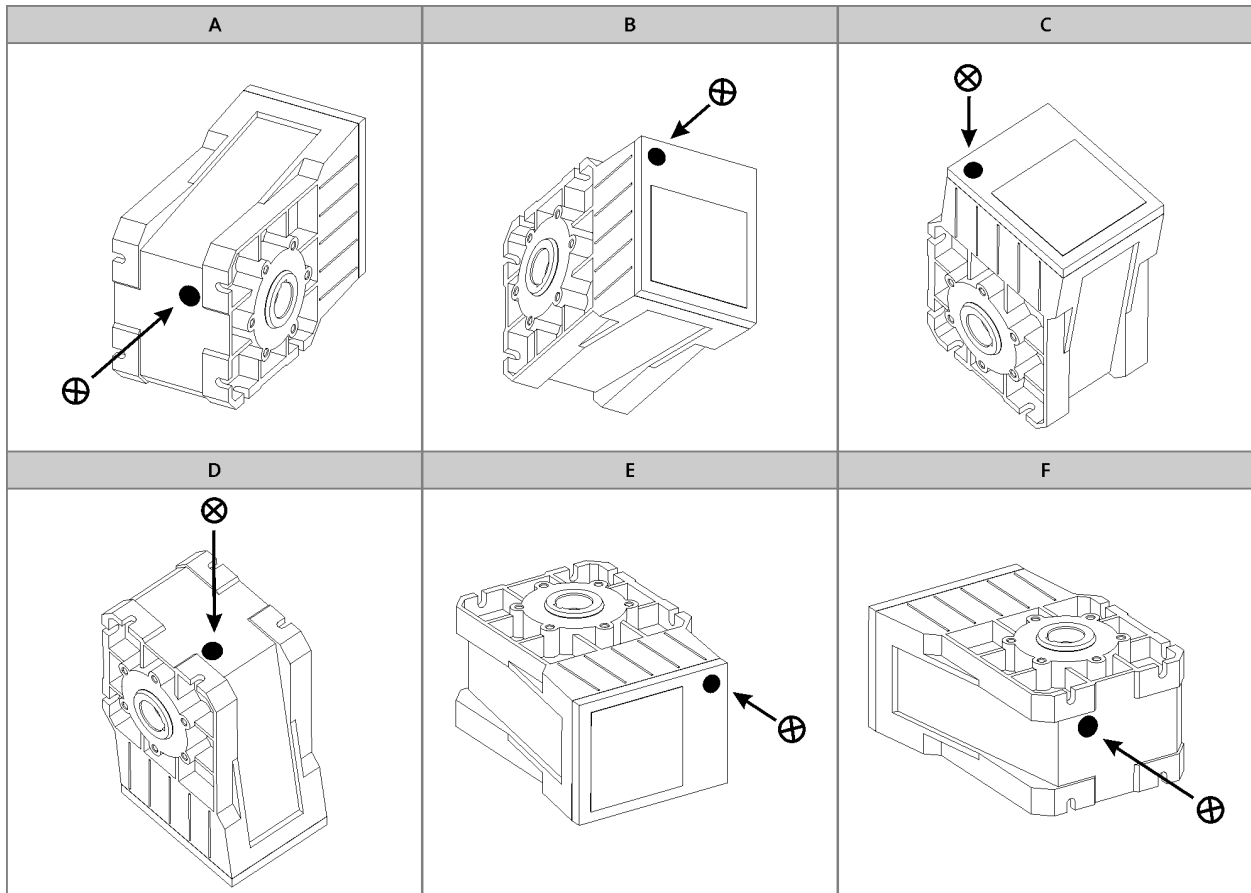
GKR bevel gearboxes

Accessories



Ventilation position

GKR06



⊗ Ventilation