L-force catalogue

Automation systems
Drive solutions

Controls
Inverters
Motors
Gearboxes
Engineering Tools

Motors: MD three-phase AC motors

Gearboxes: GSS helical-worm gearboxes

Lenze
As easy as that.

Contents of the L-force catalogue

Selected portfolio

Additional portfolio

Lenze makes many things easy for you.

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

1

Developing ideas

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

2

Drafting concepts

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

3

Implementing solutions

Our easy formula for satisfied customers is to establish an active partnership with fast decision-making processes and an individually tailored offer. We have been using this 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.

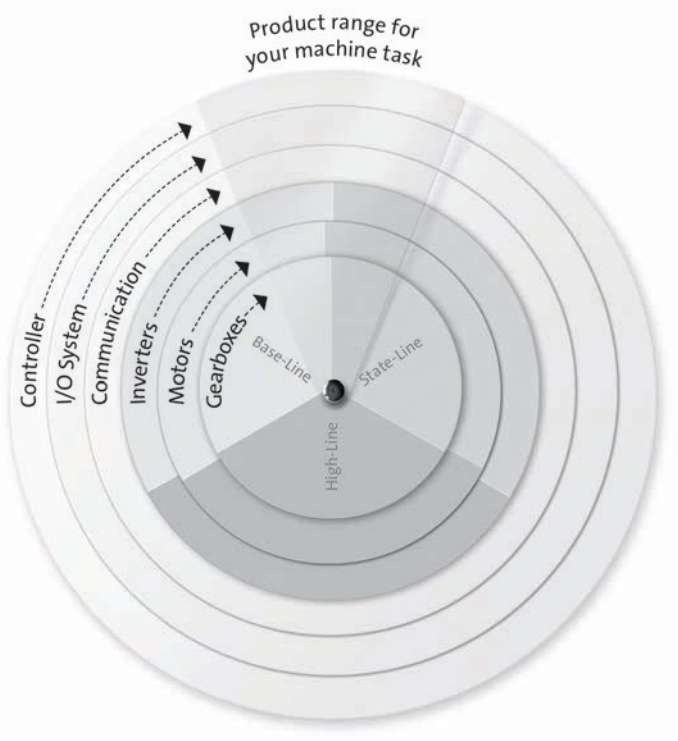
A matter of principle: the right products for every application.

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.

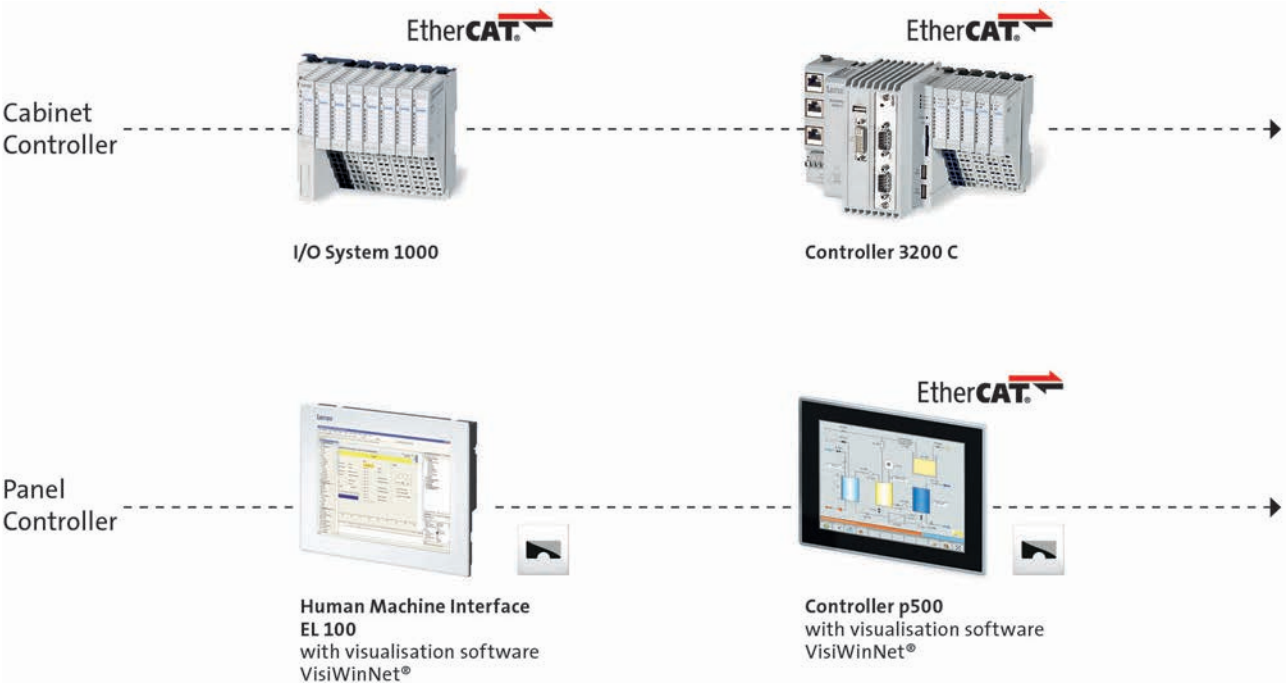
Powerful products with a major impact:
- Easy handling
- High quality and durability
- Reliable technologies in tune with the latest developments

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!

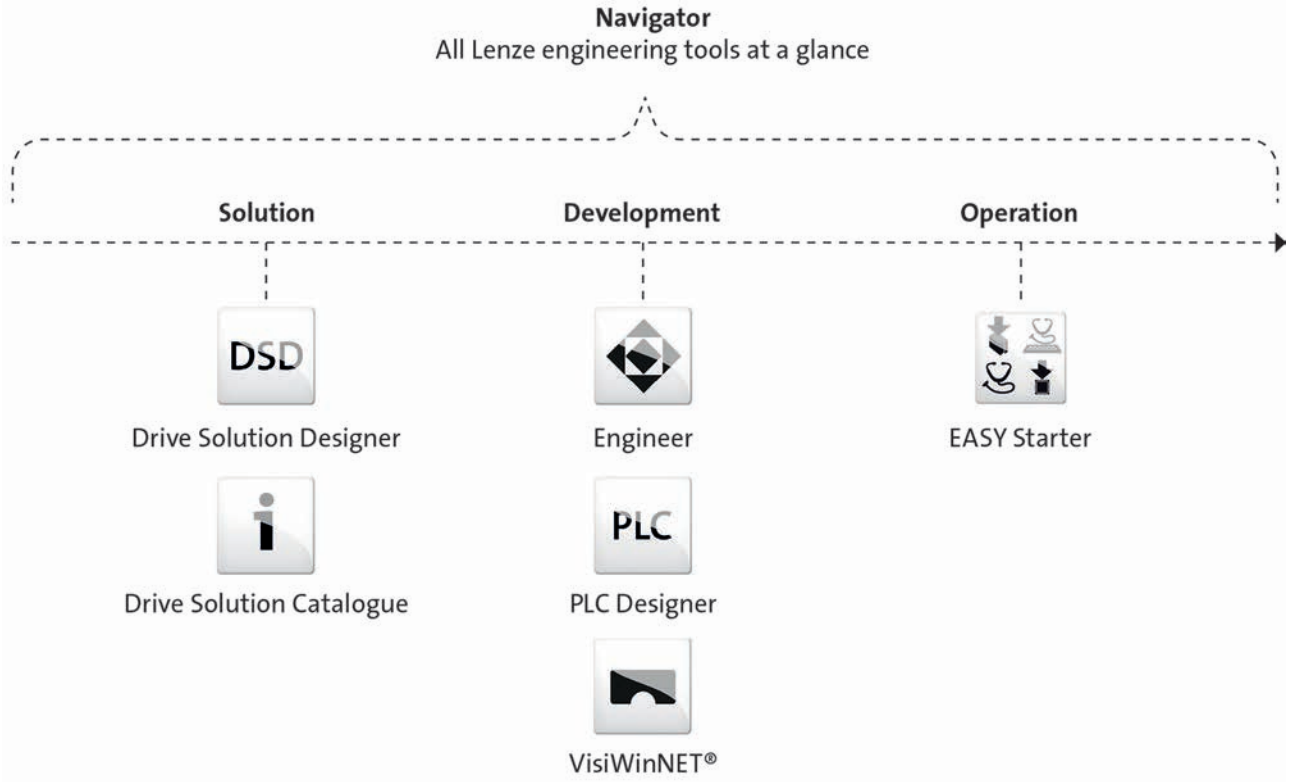


L-force product portfolio

Controls

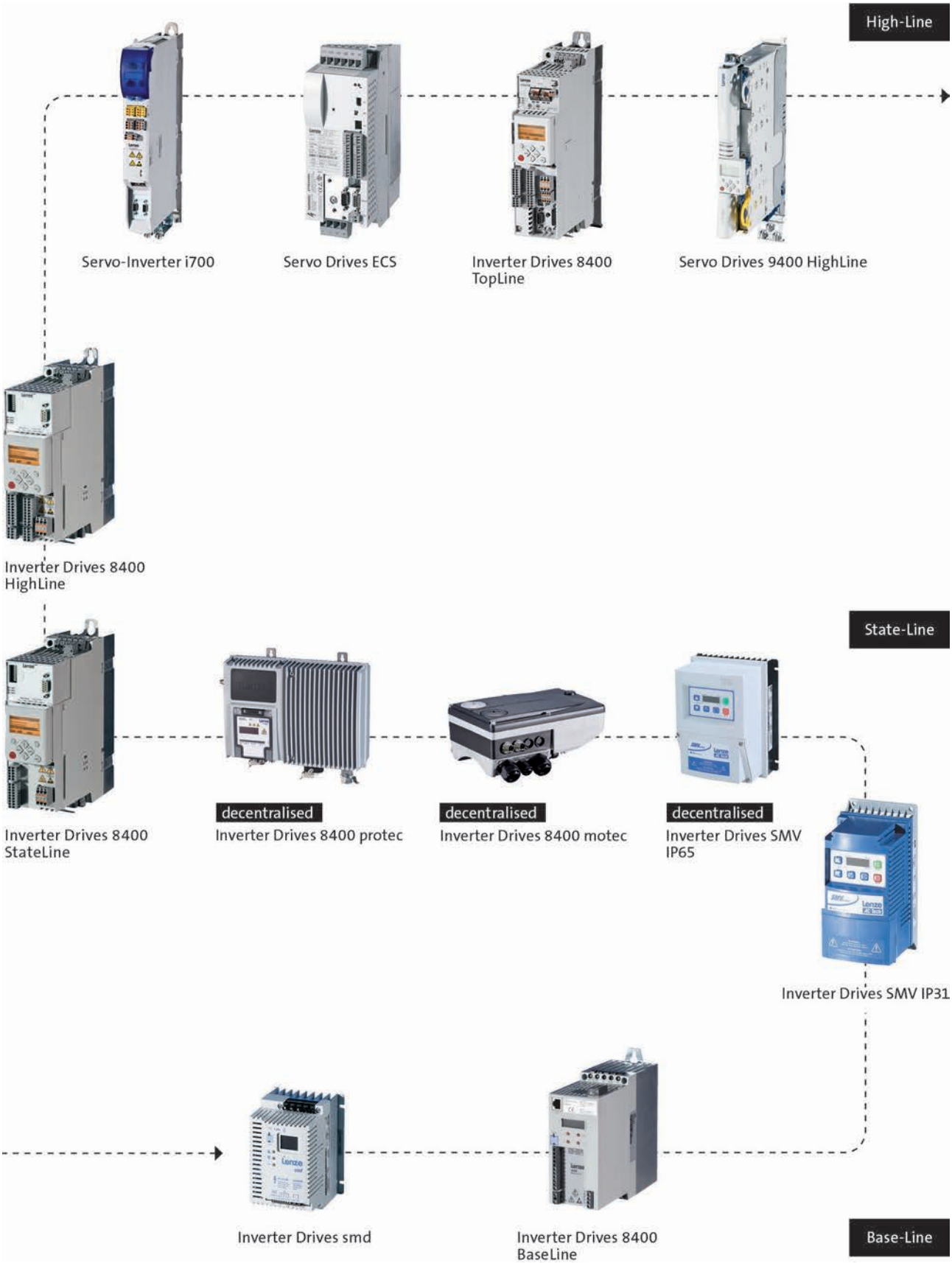


Engineering Tools



L-force product portfolio

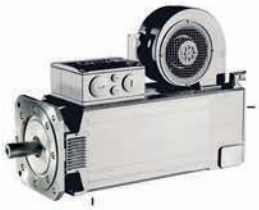
Inverters



L-force product portfolio

Motors

High-Line



MQA asynchronous servo motors

SDSGS synchronous servo motors

MDXKS synchronous servo motors

Synchronous servo motors MCS

Asynchronous servo motors MCA

Asynchronous servo motors SDSGA

State-Line

MF three-phase AC motors

MH three-phase AC motors

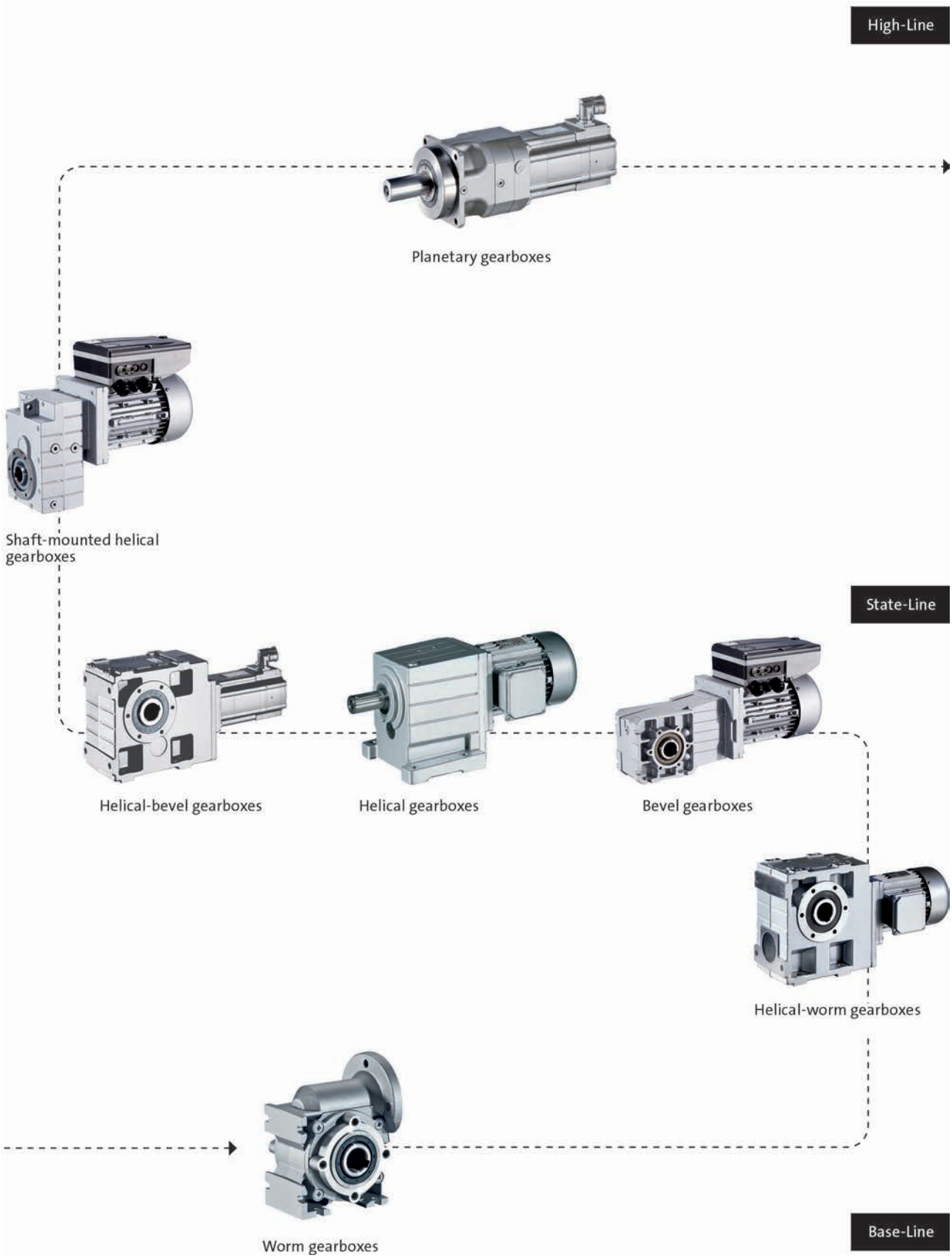
MD three-phase AC motors

Basic MD/MH three-phase AC motors

Base-Line

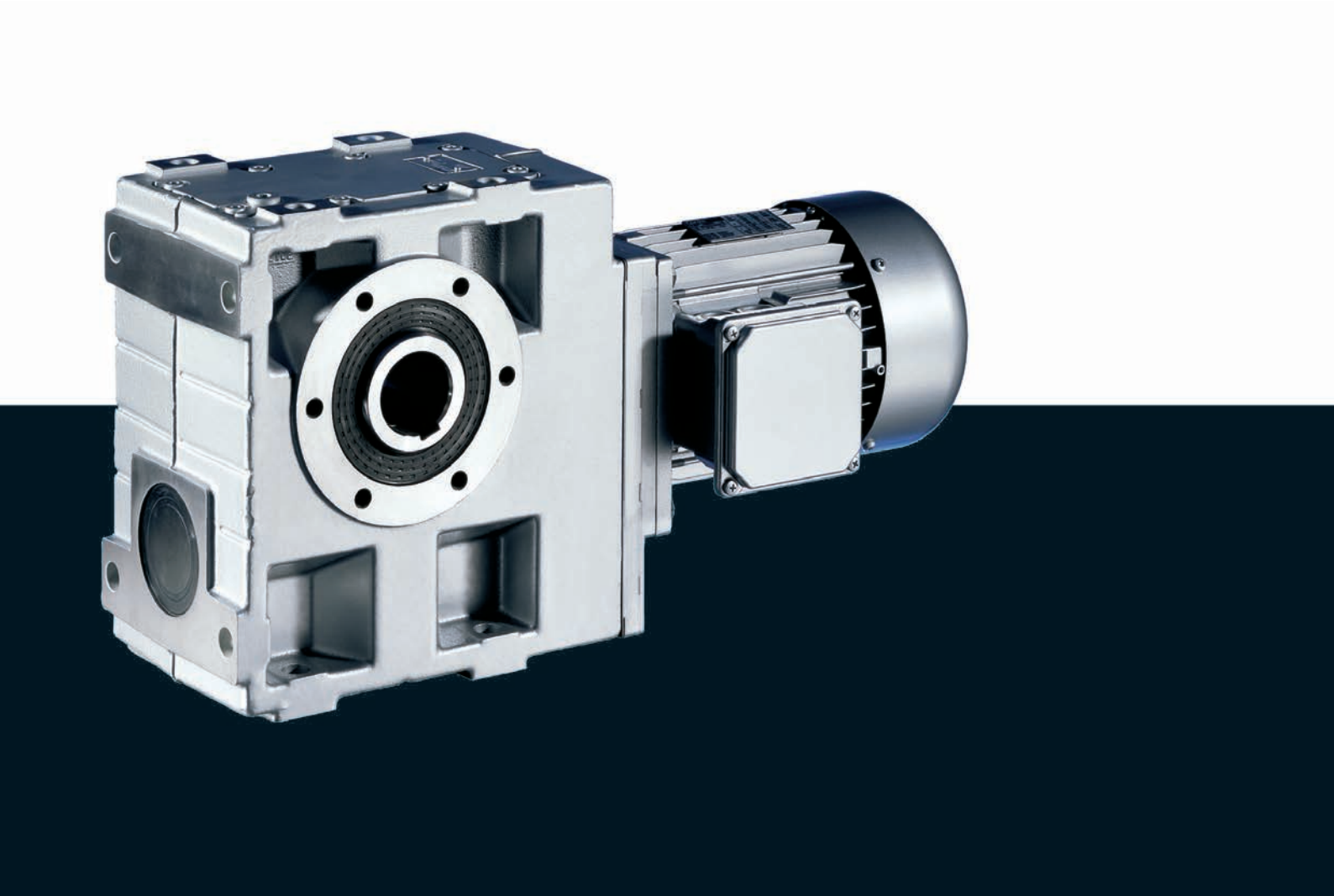
L-force product portfolio

Gearboxes



GSS helical-worm gearboxes

0.12 ... 15 kW



GSS helical-worm gearboxes

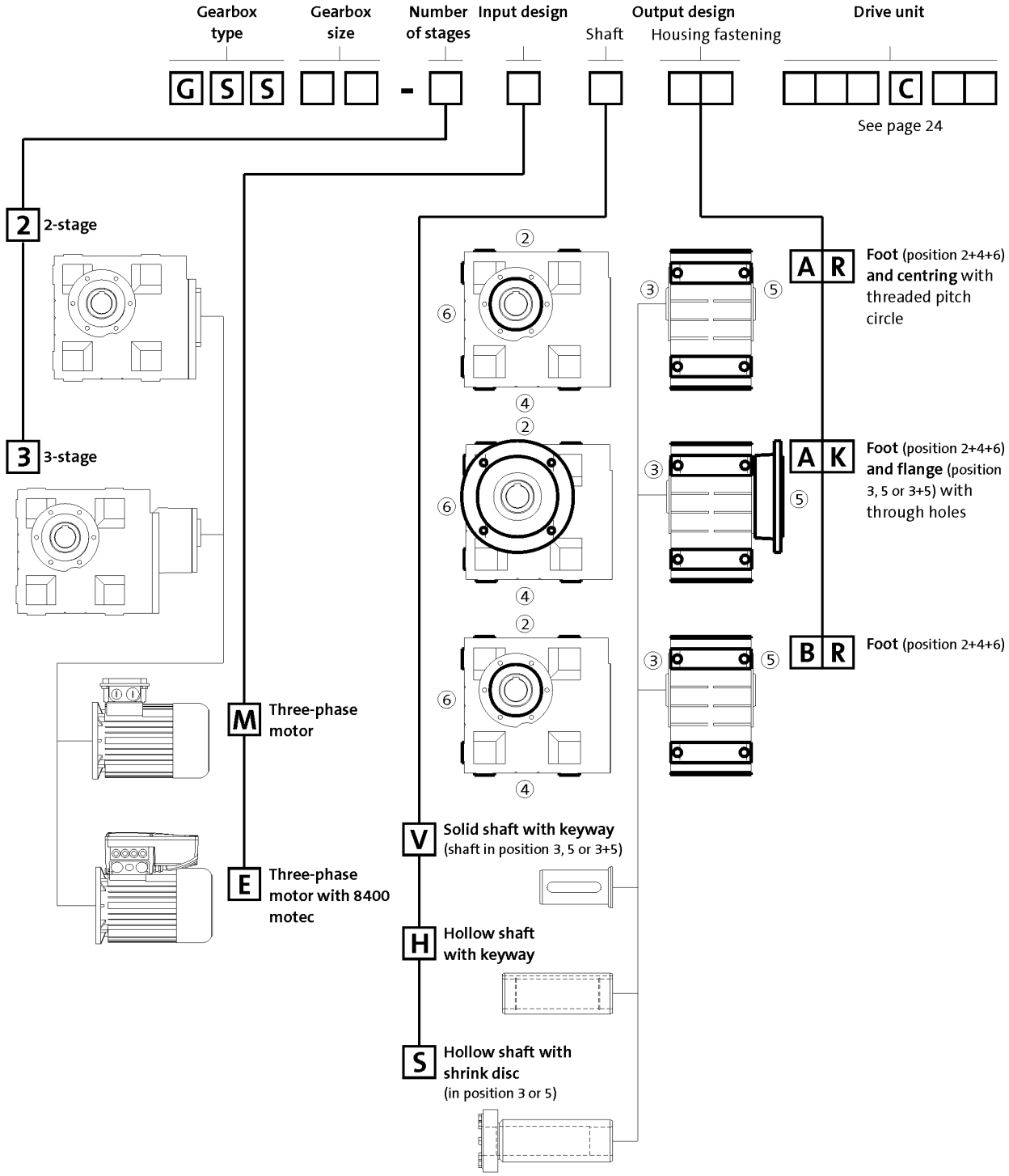
Contents

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	[kgcm²]	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

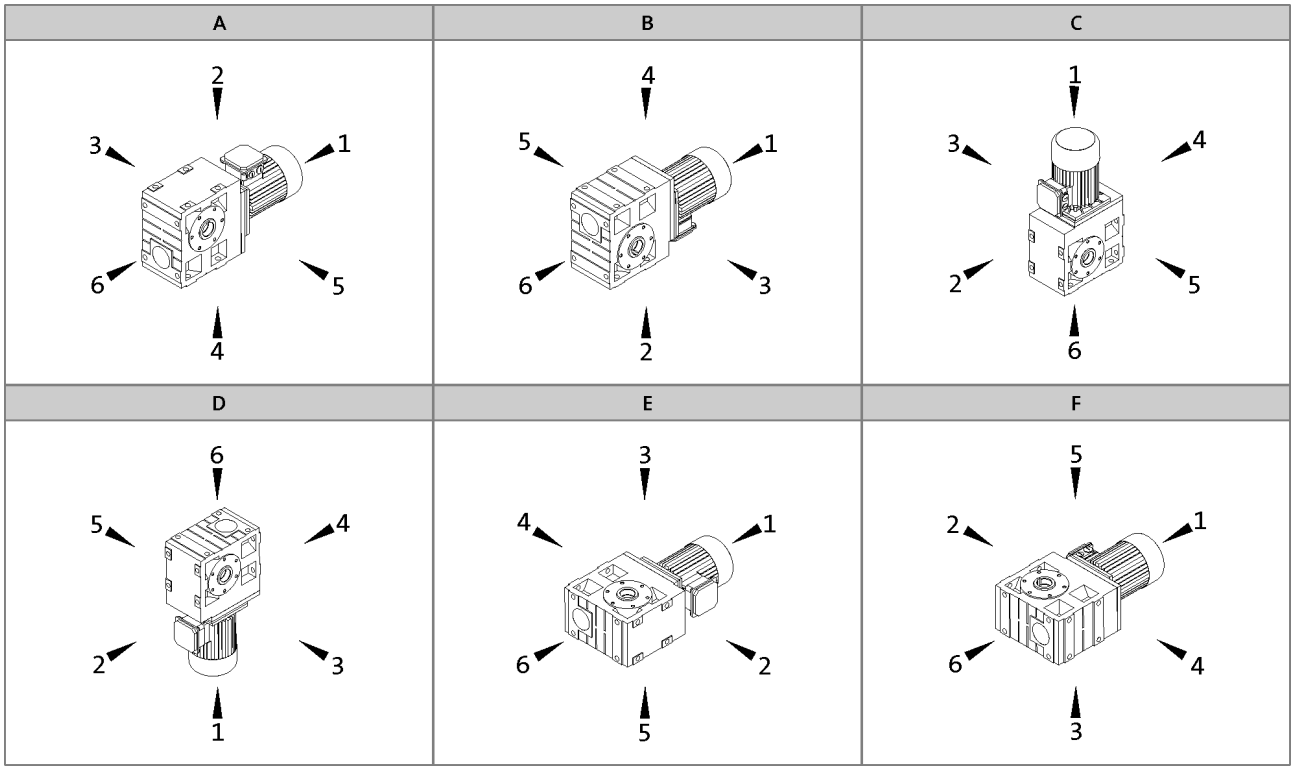


	Output design			
	V	H	S	K
	d x l [mm]	d [mm]	d [mm]	Øa2 [mm]
GSS04-2	25x50	25/30	25/30	160
GSS05-2/3	30x60	30/35	35	200
GSS06-2/3	40x80	40/45	40	200[1)]/250
GSS07-2/3	50x100	50/55	50	250/300

[1)] Only in the case of H and S type of output

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	OKS-G (primer: grey) OKS-S (paint: RAL 7012)
Lubricant	CLP PG 460 (synthetic)
Ventilation	Oil control plugs for GSS05 ... 07 Breather elements for GSS05 ... 07

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 220 USDA H1 (synthetic)
Shaft sealing rings	Driven shaft: Viton
Accessories	Torque plate on threaded pitch circle Housing foot torque plate 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)

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.

A low noise solution

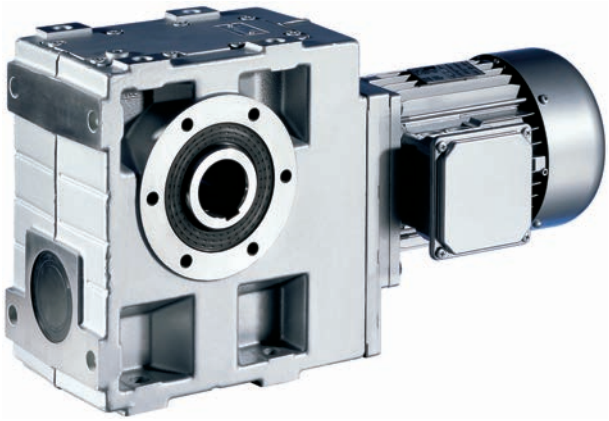
Helical worm gearboxes are particularly low-noise drive components. They create a compact drive unit in combination with our servo motors. The helical worm gearboxes are designed in 2- and 3-stage versions and can reach a torque of up to 1,250 Nm and a ratio of up to i=1847.

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 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 ... 15 kW



Helical-bevel geared motor GSS07-2M HBR 100-32

Functions and features

Gearbox type	GSS
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, bronze (worm gear only)
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 [$\eta_{c=1}$]	0.62 ... 0.92 [1)]
3-stage gearboxes [$\eta_{c=1}$]	0.64 ... 0.92 [1)]
4-stage gearboxes [$\eta_{c=1}$]	
Notes	Dependent on transmission ratio Housing at operating temperature and teeth run in

[1)] 32 - Efficiencies depending on ratio

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 PG 460	CLP HC 220 USDA H1
Ambient temperature [°C]	-20 ... +40	
Specification	Synthetic-based oil (polyglycol)	Synthetic-based oil (synthetic hydrocarbon / poly-alpha-olefin oil)
Note	Cannot be mixed with other oil types.	For food processing industry
Changing interval	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		bremer & leguil Cassida Fluid GL 220
Klüber	Klübersynth GH 6-460	Klüberoil 4 UH1-220 N
Shell	Shell Tivela S 460	

- ► Please contact your Lenze office if you are operating at ambient temperatures in areas up to < -20 °C > or up to +40°C.
- ► Caution: when using the lubricant CLP HC 220 with the GSS helical-worm gearbox, the load capacity c is reduced to 80 % of the values stated in the catalogue.

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	• 1K 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

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

Functions and features

Ventilation

Gearboxes without ventilation
No ventilation is required for gearbox GSS04.

Gearboxes with ventilation
Gearboxes GSS05 ... 07 are supplied with breather elements 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 °C for gearboxes,
  T_{amb} = 40 °C for motors (in accordance with EN 60034)
- Site altitude < = 1000 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.

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

Dimensioning

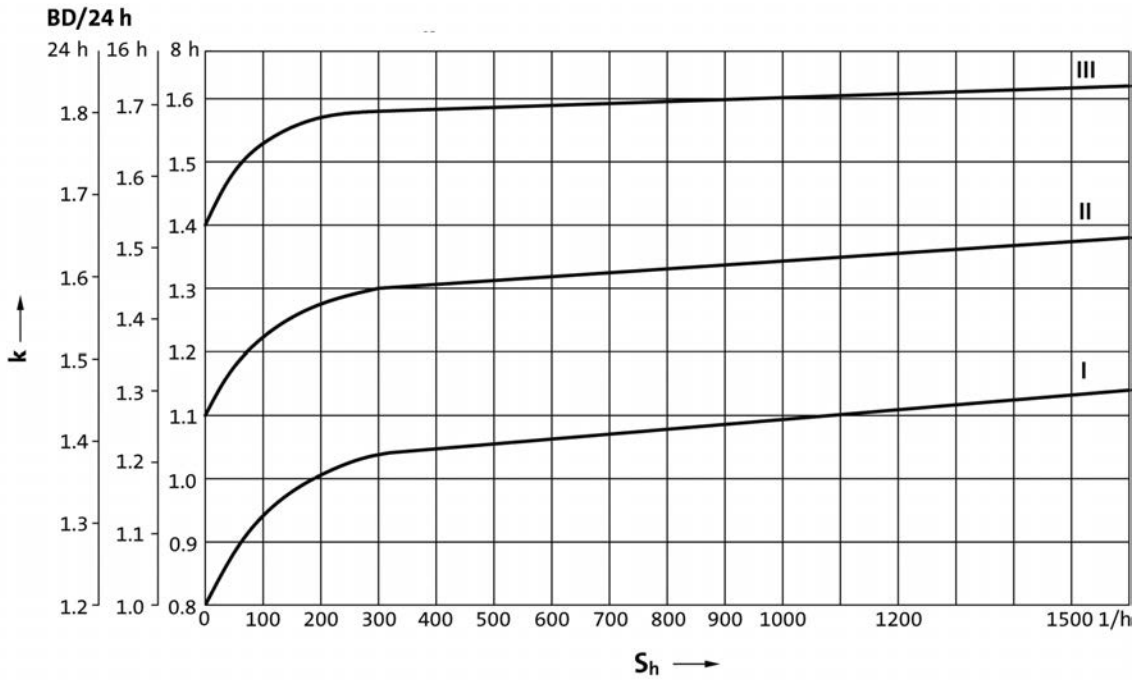
Load capacity and application factor

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

Application factor k

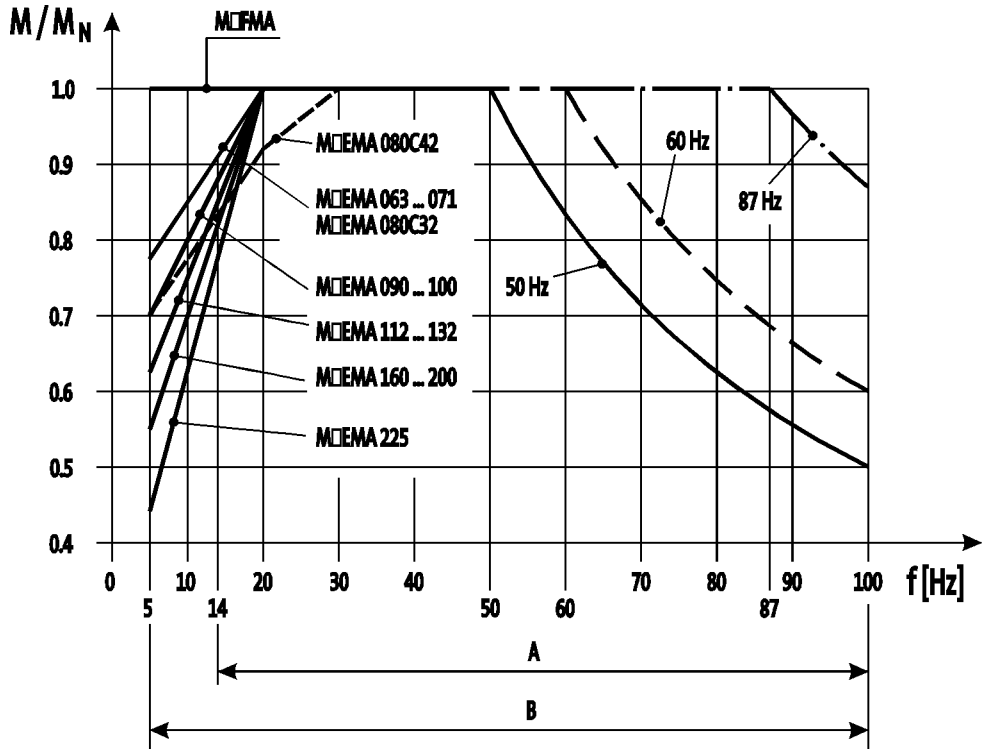


Dimensioning

Torque derating at low motor frequencies

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

Torque characteristics



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.

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 speed n_N of the drive motor

Product key of geared motor

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		
f_N	50 Hz			60 Hz					
	n_2 [r/min]	M_2 [Nm]	c	n_2 [r/min]	M_2 [Nm]	c			
	881	8.0	2.4	1069	6.6	2.8	1.600	GST04-1M □□□080C32	76
	689	10	2.2	835	8.4	2.6	2.048	GST04-1M □□□080C32	76

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

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

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 : Δ 265 V / Y 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.

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.

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 _____

6.10

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

GSS ☐☐ – ☐2 ☐3 ☐M ☐E ☐V ☐H ☐S ☐A ☐B ☐R ☐K Motor frame size ☐☐☐C☐☐

Hollow shaft d = ☐ mm

Flange a_2 = ☐ 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 ☐ OKS-S colour: RAL 7012 ☐ OKS-G (primed)

Options

Special lubricants ☐ CLP HC 220 USDA H1 (for the food industry)

Surface and corrosion protection ☐ OKS-S (small) ☐ OKS-M (medium) RAL ☐ ☐ OKS-L (high) ☐ OKS-G (primed)

Accessories ☐ Torque support for housing foot ☐ 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

Breathing ☐ Breather elements for GSS05

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)

6.10

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)

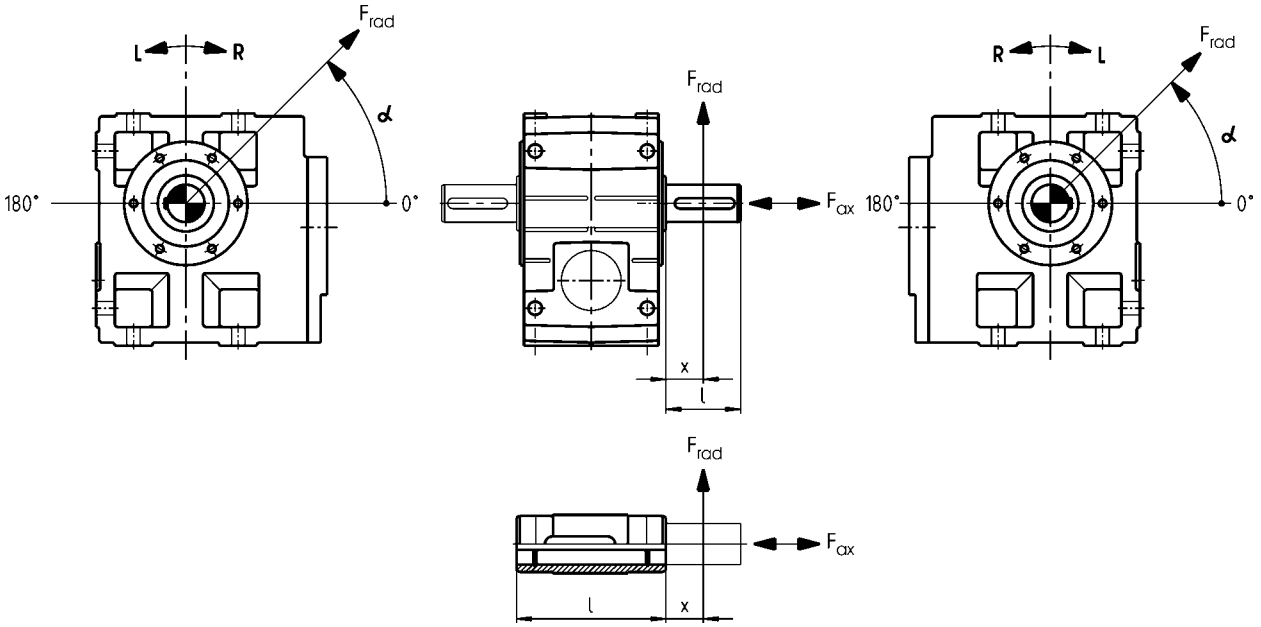
Permissible radial and axial forces at output

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

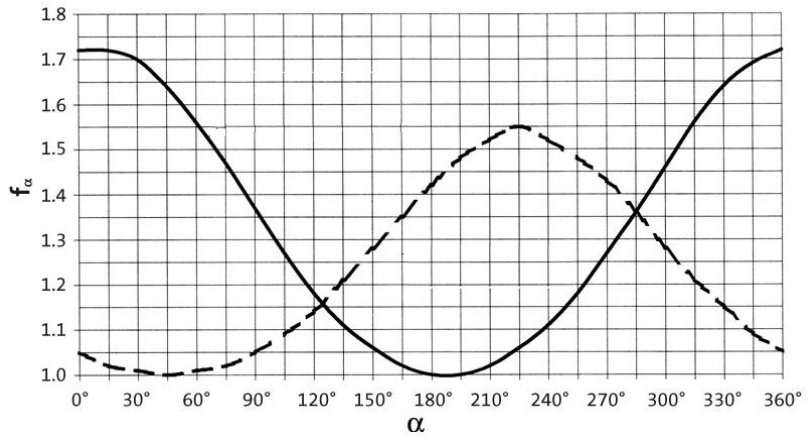
Permissible axial force
$F_{ax,per} = F_{ax,max}$ if $F_{rad} = 0$

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

Application of forces



Effective direction factor f_α at output shaft

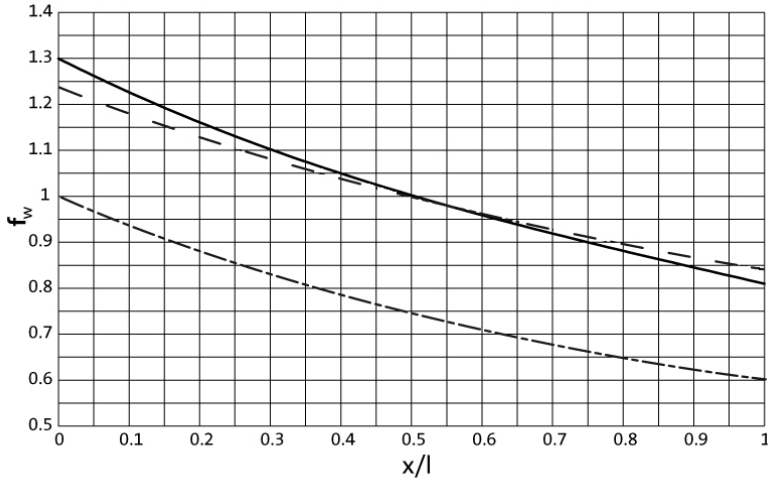


——— Direction of rotation R
— — — Direction of rotation L

6.10

Permissible radial and axial forces at output

Additional load factor f_w at output shaft



——— Solid shaft (V□□)
— · — Hollow shaft (H□□)
— — — Solid shaft with flange (V□K)

GSS□□-2/3□ H□□

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

	Max. radial force, Hollow shaft								
	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GSS04	2800	3000	3800	4500	5300	6000	6000	6000	6000
GSS05	3000	3200	3600	4300	5100	6000	7000	7500	7500
GSS06	4400	4600	4800	5600	6600	7700	9100	10700	11500
GSS07	4600	5100	5600	6700	8200	10000	12100	14800	16000

	Max. axial force, Hollow shaft								
	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GSS04	2200	2900	3700	4200	4900	5500	5500	5500	5500
GSS05	1600	2200	2800	3500	4400	5500	6000	6000	6000
GSS06	1900	2500	3200	4100	5200	6500	8200	9000	9000
GSS07	1800	2400	3100	4100	5500	7200	9500	12500	12500

6.10

- 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

GSS□□-2/3□ V□R

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

	Max. radial force, Solid shaft without flange								
	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GSS04	2200	2400	3000	3500	4100	4200	4200	4200	4200
GSS05	2300	2500	2900	3400	4000	4300	4300	4300	4300
GSS06	3400	3500	3600	4200	5000	5900	6900	8200	8500
GSS07	3700	4000	4200	5100	6300	7700	9300	11300	12000

	Max. axial force, Solid shaft without flange								
	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GSS04	2200	2900	3700	4200	4900	5500	5500	5500	5500
GSS05	1600	2200	2800	3500	4400	5500	6000	6000	6000
GSS06	1900	2500	3200	4100	5200	6500	8200	9000	9000
GSS07	1800	2400	3100	4100	5500	7200	9500	12500	12500

GSS□□-2/3□ V□K

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

	Max. radial force, Solid shaft with flange								
	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GSS04	2750	3000	4100	4400	4700	4700	4700	4700	4700
GSS05	3450	3750	4900	4900	4900	4900	4900	4900	4900
GSS06	5100	5250	7000	8100	9400	9400	9400	9400	9400
GSS07	5500	6000	7900	9100	10600	12400	14000	14000	14000

	Max. axial force, Solid shaft with flange								
	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GSS04	2100	2800	3500	4000	4200	4200	4200	4200	4200
GSS05	1500	2000	2500	3100	4000	4900	5500	5500	5500
GSS06	1600	2200	2800	3500	4500	5700	7300	8800	8800
GSS07	1400	1900	2400	3200	4300	5900	8000	10000	10000

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

Moments of inertia

GSS□□-2

► Moment of inertia (J) depending on ratio i

Gearbox			GSS04
5.639	J	[kgcm²]	1.120
7.733	J	[kgcm²]	0.652
9.042	J	[kgcm²]	0.809
9.897	J	[kgcm²]	0.430
10.827	J	[kgcm²]	0.368
12.400	J	[kgcm²]	0.487
13.810	J	[kgcm²]	0.247
15.869	J	[kgcm²]	0.329
17.360	J	[kgcm²]	0.284
20.417	J	[kgcm²]	0.673
22.143	J	[kgcm²]	0.195
24.800	J	[kgcm²]	0.420
27.125	J	[kgcm²]	0.145
31.738	J	[kgcm²]	0.288
34.100	J	[kgcm²]	0.096
39.200	J	[kgcm²]	0.247
43.917	J	[kgcm²]	0.064
50.000	J	[kgcm²]	0.173
54.250	J	[kgcm²]	0.131
61.250	J	[kgcm²]	0.130
68.200	J	[kgcm²]	0.087
77.000	J	[kgcm²]	0.086
87.833	J	[kgcm²]	0.059
99.167	J	[kgcm²]	0.058
111.318	J	[kgcm²]	0.039
125.682	J	[kgcm²]	0.038
139.500	J	[kgcm²]	0.027
157.500	J	[kgcm²]	0.026
183.786	J	[kgcm²]	0.016
207.500	J	[kgcm²]	0.016

Gearbox			GSS05
5.639	J	[kgcm²]	2.821
7.733	J	[kgcm²]	1.664
9.042	J	[kgcm²]	2.014
9.897	J	[kgcm²]	1.102
10.827	J	[kgcm²]	0.941
12.400	J	[kgcm²]	1.235
13.810	J	[kgcm²]	0.638
15.869	J	[kgcm²]	0.840
17.360	J	[kgcm²]	0.722
20.417	J	[kgcm²]	1.601
22.143	J	[kgcm²]	0.504
24.800	J	[kgcm²]	1.059
27.125	J	[kgcm²]	0.377
31.738	J	[kgcm²]	0.733
35.306	J	[kgcm²]	0.233
39.200	J	[kgcm²]	0.610
43.917	J	[kgcm²]	0.167
50.000	J	[kgcm²]	0.435
54.250	J	[kgcm²]	0.341
61.250	J	[kgcm²]	0.332
70.611	J	[kgcm²]	0.211
79.722	J	[kgcm²]	0.206
87.833	J	[kgcm²]	0.153
99.167	J	[kgcm²]	0.149
113.667	J	[kgcm²]	0.096
128.333	J	[kgcm²]	0.094
137.950	J	[kgcm²]	0.070
155.750	J	[kgcm²]	0.069
176.313	J	[kgcm²]	0.045
199.063	J	[kgcm²]	0.044

► 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.

Moments of inertia

GSS□□-2

► Moment of inertia (J) depending on ratio i

Gearbox			GSS06
5.833	J	[kgcm²]	6.966
8.000	J	[kgcm²]	4.219
9.042	J	[kgcm²]	5.541
10.238	J	[kgcm²]	2.811
11.200	J	[kgcm²]	2.393
12.400	J	[kgcm²]	3.461
14.286	J	[kgcm²]	1.630
15.869	J	[kgcm²]	2.348
17.360	J	[kgcm²]	2.006
20.417	J	[kgcm²]	4.172
22.143	J	[kgcm²]	1.392
24.800	J	[kgcm²]	3.056
27.125	J	[kgcm²]	1.039
31.738	J	[kgcm²]	2.101
35.306	J	[kgcm²]	0.660
39.200	J	[kgcm²]	1.635
43.917	J	[kgcm²]	0.475
50.000	J	[kgcm²]	1.164
54.250	J	[kgcm²]	0.955
61.250	J	[kgcm²]	0.887
70.611	J	[kgcm²]	0.610
79.722	J	[kgcm²]	0.570
87.833	J	[kgcm²]	0.443
99.167	J	[kgcm²]	0.417
113.667	J	[kgcm²]	0.276
128.333	J	[kgcm²]	0.260
137.950	J	[kgcm²]	0.201
155.750	J	[kgcm²]	0.191
174.375	J	[kgcm²]	0.130
196.875	J	[kgcm²]	0.123

Gearbox			GSS07
5.862	J	[kgcm²]	21.357
8.125	J	[kgcm²]	12.754
9.086	J	[kgcm²]	17.436
10.000	J	[kgcm²]	9.140
11.200	J	[kgcm²]	7.498
12.594	J	[kgcm²]	10.713
14.286	J	[kgcm²]	4.837
15.500	J	[kgcm²]	7.792
17.360	J	[kgcm²]	6.424
20.517	J	[kgcm²]	13.579
22.143	J	[kgcm²]	4.177
25.188	J	[kgcm²]	9.590
27.125	J	[kgcm²]	3.130
31.000	J	[kgcm²]	7.051
35.306	J	[kgcm²]	1.955
39.200	J	[kgcm²]	5.368
43.271	J	[kgcm²]	1.433
50.000	J	[kgcm²]	3.527
54.250	J	[kgcm²]	2.888
61.250	J	[kgcm²]	2.698
70.611	J	[kgcm²]	1.812
79.722	J	[kgcm²]	1.700
86.542	J	[kgcm²]	1.338
97.708	J	[kgcm²]	1.263
113.667	J	[kgcm²]	0.833
128.333	J	[kgcm²]	0.789
137.950	J	[kgcm²]	0.609
155.750	J	[kgcm²]	0.579
174.375	J	[kgcm²]	0.391
196.875	J	[kgcm²]	0.373

► 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.

Moments of inertia

GSS□□-3

► Moment of inertia (J) depending on ratio i

Gearbox			GSS05
125.476	J	[kgcm²]	0.154
153.708	J	[kgcm²]	0.117
193.233	J	[kgcm²]	0.078
222.133	J	[kgcm²]	0.206
250.952	J	[kgcm²]	0.151
283.333	J	[kgcm²]	0.148
307.417	J	[kgcm²]	0.115
347.083	J	[kgcm²]	0.113
386.467	J	[kgcm²]	0.077
436.333	J	[kgcm²]	0.076
497.722	J	[kgcm²]	0.053
561.944	J	[kgcm²]	0.052
630.803	J	[kgcm²]	0.035
712.197	J	[kgcm²]	0.034
790.500	J	[kgcm²]	0.024
892.500	J	[kgcm²]	0.024
1041.452	J	[kgcm²]	0.015
1175.833	J	[kgcm²]	0.015

Gearbox			GSS06
126.531	J	[kgcm²]	0.310
142.857	J	[kgcm²]	0.298
155.000	J	[kgcm²]	0.271
175.000	J	[kgcm²]	0.263
194.857	J	[kgcm²]	0.144
220.000	J	[kgcm²]	0.139
238.700	J	[kgcm²]	0.128
269.500	J	[kgcm²]	0.124
310.689	J	[kgcm²]	0.112
350.778	J	[kgcm²]	0.110
386.467	J	[kgcm²]	0.103
436.333	J	[kgcm²]	0.102
497.722	J	[kgcm²]	0.069
561.944	J	[kgcm²]	0.068
630.803	J	[kgcm²]	0.045
712.197	J	[kgcm²]	0.044
816.333	J	[kgcm²]	0.042
921.667	J	[kgcm²]	0.042
1023.000	J	[kgcm²]	0.029
1155.000	J	[kgcm²]	0.029
1241.550	J	[kgcm²]	0.028
1401.750	J	[kgcm²]	0.028
1635.693	J	[kgcm²]	0.017
1846.750	J	[kgcm²]	0.017

► 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.

Moments of inertia

GSS□□-3

► Moment of inertia (J) depending on ratio i

Gearbox			GSS07
126.531	J	[kgcm²]	0.857
142.857	J	[kgcm²]	0.822
155.000	J	[kgcm²]	0.742
175.000	J	[kgcm²]	0.719
201.746	J	[kgcm²]	0.372
227.778	J	[kgcm²]	0.358
247.139	J	[kgcm²]	0.327
279.028	J	[kgcm²]	0.317
321.673	J	[kgcm²]	0.281
363.179	J	[kgcm²]	0.276
394.245	J	[kgcm²]	0.258
445.116	J	[kgcm²]	0.255
490.403	J	[kgcm²]	0.183
553.681	J	[kgcm²]	0.181
634.639	J	[kgcm²]	0.114
716.528	J	[kgcm²]	0.113
833.556	J	[kgcm²]	0.105
941.111	J	[kgcm²]	0.105
1011.633	J	[kgcm²]	0.076
1142.167	J	[kgcm²]	0.076
1227.755	J	[kgcm²]	0.074
1386.175	J	[kgcm²]	0.073
1569.181	J	[kgcm²]	0.047
1771.656	J	[kgcm²]	0.047

► 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.

Efficiencies

► During start-up, the start-up efficiency η_a of a helical-worm gearbox is lower than its operative efficiency at rated speed.
The start-up efficiency η_a must therefore always be considered when starting under load.

GSS04-2

				n_2 [r/min]											
				10	16	25	32	40	63	100	160	250	400	630	800
5.639	η_a	0.71	$\eta_{c=1}$	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
7.733	η_a	0.71	$\eta_{c=1}$	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
9.042	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
9.897	η_a	0.71	$\eta_{c=1}$	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
10.827	η_a	0.71	$\eta_{c=1}$	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
12.400	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
13.810	η_a	0.71	$\eta_{c=1}$	0.83	0.86	0.88	0.89	0.89	0.90	0.90	0.90	0.90	0.90	0.89	0.89
15.869	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
17.360	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
20.417	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
22.143	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
24.800	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
27.125	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
31.738	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
34.100	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
39.200	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
43.917	η_a	0.67	$\eta_{c=1}$	0.81	0.84	0.86	0.87	0.87	0.88	0.88	0.87	0.87	0.87	0.87	
50.000	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
54.250	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
61.250	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
68.200	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
77.000	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
87.833	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
99.167	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
111.318	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
125.682	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
139.500	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
157.500	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			
183.786	η_a	0.56	$\eta_{c=1}$	0.77	0.79	0.80	0.81	0.81	0.81	0.80	0.80	0.79			
207.500	η_a	0.55	$\eta_{c=1}$	0.76	0.78	0.79	0.79	0.79	0.79	0.79	0.78	0.78			

Efficiencies

► During start-up, the start-up efficiency η_a of a helical-worm gearbox is lower than its operative efficiency at rated speed.
The start-up efficiency η_a must therefore always be considered when starting under load.

GSS05-2

				n_2 [r/min]											
				10	16	25	32	40	63	100	160	250	400	630	800
5.639	η_a	0.71	$\eta_{c=1}$	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
7.733	η_a	0.71	$\eta_{c=1}$	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
9.042	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
9.897	η_a	0.71	$\eta_{c=1}$	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
10.827	η_a	0.71	$\eta_{c=1}$	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
12.400	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
13.810	η_a	0.71	$\eta_{c=1}$	0.85	0.87	0.89	0.90	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90
15.869	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
17.360	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
20.417	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
22.143	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
24.800	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
27.125	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
31.738	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
35.306	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
39.200	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
43.917	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88	
50.000	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
54.250	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
61.250	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
70.611	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
79.722	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
87.833	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
99.167	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
113.667	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
128.333	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
137.950	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
155.750	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
176.313	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82			
199.063	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81			

Efficiencies

► During start-up, the start-up efficiency η_a of a helical-worm gearbox is lower than its operative efficiency at rated speed.
The start-up efficiency η_a must therefore always be considered when starting under load.

GSS05-3

				n_2 [r/min]										
				10	16	25	32	40	63	100	160	250	400	630
125.476	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88
153.708	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88
193.233	η_a	0.67	$\eta_{c=1}$	0.83	0.86	0.87	0.88	0.88	0.89	0.89	0.88	0.88	0.88	0.88
222.133	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81		
250.952	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82		
283.333	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81		
307.417	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82		
347.083	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81		
386.467	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82		
436.333	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81		
497.722	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82		
561.945	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81		
630.803	η_a	0.57	$\eta_{c=1}$	0.79	0.81	0.82	0.82	0.83	0.83	0.82	0.82	0.82		
712.197	η_a	0.55	$\eta_{c=1}$	0.79	0.80	0.81	0.81	0.81	0.81	0.81	0.81	0.81		

Efficiencies

► During start-up, the start-up efficiency η_a of a helical-worm gearbox is lower than its operative efficiency at rated speed.
The start-up efficiency η_a must therefore always be considered when starting under load.

GSS06-2

				n_2 [r/min]											
				10	16	25	32	40	63	100	160	250	400	630	800
5.833	η_a	0.72	$\eta_{c=1}$	0.87	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91
8.000	η_a	0.72	$\eta_{c=1}$	0.87	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91
9.042	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
10.238	η_a	0.72	$\eta_{c=1}$	0.87	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91
11.200	η_a	0.72	$\eta_{c=1}$	0.87	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91
12.400	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.80
14.286	η_a	0.72	$\eta_{c=1}$	0.89	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.91	0.91	0.91	
15.869	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
17.360	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
20.417	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
22.143	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
24.800	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
27.125	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
31.738	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
35.306	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
39.200	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
43.917	η_a	0.67	$\eta_{c=1}$	0.85	0.87	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
50.000	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
54.250	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
61.250	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
70.611	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
79.722	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
87.833	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
99.167	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
113.667	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
128.333	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
137.950	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
155.750	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
174.375	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
196.875	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			

Efficiencies

► During start-up, the start-up efficiency η_a of a helical-worm gearbox is lower than its operative efficiency at rated speed.
The start-up efficiency η_a must therefore always be considered when starting under load.

GSS06-3

				n_2 [r/min]											
				10	16	25	32	40	63	100	160	250	400	630	800
126.531	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.91	0.91	0.91
142.857	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
155.000	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
175.000	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
194.857	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
220.000	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
238.700	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
269.500	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
310.689	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
350.778	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
386.467	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
436.333	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
497.722	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
561.945	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
630.803	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
712.197	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
816.333	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
921.667	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
1023.000	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
1155.000	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
1241.550	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
1401.750	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
1635.693	η_a	0.57	$\eta_{c=1}$	0.81	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
1846.750	η_a	0.57	$\eta_{c=1}$	0.81	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83			

Efficiencies

► During start-up, the start-up efficiency η_a of a helical-worm gearbox is lower than its operative efficiency at rated speed.
The start-up efficiency η_a must therefore always be considered when starting under load.

GSS07-2

				n_2 [r/min]											
				10	16	25	32	40	63	100	160	250	400	630	800
5.862	η_a	0.74	$\eta_{c=1}$	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
8.125	η_a	0.74	$\eta_{c=1}$	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
9.086	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
10.000	η_a	0.74	$\eta_{c=1}$	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
11.200	η_a	0.74	$\eta_{c=1}$	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
12.594	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
14.286	η_a	0.74	$\eta_{c=1}$	0.89	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
15.500	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
17.360	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
20.517	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
22.143	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
25.188	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
27.125	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
31.000	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
35.306	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
39.200	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
43.271	η_a	0.69	$\eta_{c=1}$	0.88	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
50.000	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
54.250	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
61.250	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
70.611	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
79.722	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
86.542	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
97.708	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
113.667	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
128.333	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
137.950	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
155.750	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
174.375	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
196.875	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85			

Efficiencies

► During start-up, the start-up efficiency η_a of a helical-worm gearbox is lower than its operative efficiency at rated speed.
The start-up efficiency η_a must therefore always be considered when starting under load.

GSS07-3

				n_2 [r/min]								
				10	16	25	32	40	63	100	160	250
126.531	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
142.857	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
155.000	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
175.000	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
201.746	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
227.778	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
247.139	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
279.028	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
321.673	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
363.179	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
394.245	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
445.116	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
490.403	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
553.681	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
634.639	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
716.528	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
833.556	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
941.111	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
1011.633	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
1142.167	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
1227.755	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
1386.175	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85
1569.181	η_a	0.60	$\eta_{c=1}$	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
1771.656	η_a	0.60	$\eta_{c=1}$	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85

Weights

GSS□□-2M HAR / HBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31
GSS04	m	[kg]	16		18				22	23	22
GSS05	m	[kg]		26	27	28	27	28	31	32	31
GSS06	m	[kg]		38		40	39	40	44	45	44
GSS07	m	[kg]							69	70	69

			080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GSS04	m	[kg]	23	30	28						
GSS05	m	[kg]	32	39	37	46	43	46	43		
GSS06	m	[kg]	45	52	50	59	56	59	56	67	64
GSS07	m	[kg]	70	77	75	84	81	84	81	92	89

			112C32	112C41	132C12	132C21	132C22 132C32	160C22	160C32
GSS06	m	[kg]	74	71					
GSS07	m	[kg]	99	96	119	131	129	173	193

GSS□□-2M HAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31
GSS04	m	[kg]	18	19	20	21	20	21	25	26	25
GSS05	m	[kg]		30	31	32	31	32	35	36	35
GSS06	m	[kg]		45		47	46	47	51	52	51
GSS07	m	[kg]							80	81	80

			080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GSS04	m	[kg]	26	32	30						
GSS05	m	[kg]	36	43	41	50	47	50	47		
GSS06	m	[kg]	52	59	57	66	63	66	63	74	71
GSS07	m	[kg]	81	88	86	95	92	95	92	103	100

			112C32	112C41	132C12	132C21	132C22 132C32	160C22	160C32
GSS06	m	[kg]	81	78					
GSS07	m	[kg]	110	107	130	142	140	184	204

► 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.

Weights

GSS□□-2M VAR / VBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GSS04	m	[kg]	16	17	18	19	18	19		23	24
GSS05	m	[kg]		27	28	29	28	29		32	33
GSS06	m	[kg]		40		43	42	43	42	46	47
GSS07	m	[kg]								74	75

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GSS04	m	[kg]	23	24	30	28					
GSS05	m	[kg]	32	33	40	38	47	44	47	44	
GSS06	m	[kg]	46	47	54	52	61	58	61	58	70
GSS07	m	[kg]	74	75	82	80	89	86	89	86	97

			112C31	112C32	112C41	132C12	132C21	132C22 132C32	160C22	160C32
GSS06	m	[kg]	67	77	74					
GSS07	m	[kg]	94	104	101	124	136	134	178	198

GSS□□-2M VAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11	080C13
GSS04	m	[kg]	19		21					25	26
GSS05	m	[kg]		31	32	33	32	33		36	37
GSS06	m	[kg]		47		50	49	50	49	53	54
GSS07	m	[kg]								85	86

			080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22
GSS04	m	[kg]	25	26	33	31					
GSS05	m	[kg]	36	37	44	42	51	48	51	48	
GSS06	m	[kg]	53	54	61	59	68	65	68	65	77
GSS07	m	[kg]	85	86	93	91	100	97	100	97	108

			112C31	112C32	112C41	132C12	132C21	132C22 132C32	160C22	160C32
GSS06	m	[kg]	74	84	81					
GSS07	m	[kg]	105	115	112	135	147	145	189	209

6.10

► 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.

Weights

GSS□□-2M SAR / SBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31
GSS04	m	[kg]	16	17	18	19	18	19	23	24	23
GSS05	m	[kg]		26	28	29	28	29	32	33	32
GSS06	m	[kg]		39		41	40	41	45	46	45
GSS07	m	[kg]							70	71	70

			080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GSS04	m	[kg]	24	30	28						
GSS05	m	[kg]	33	40	38	47	44	47	44		
GSS06	m	[kg]	46	53	51	60	57	60	57	68	65
GSS07	m	[kg]	71	78	76	85	82	85	82	94	91

			112C32	112C41	132C12	132C21	132C22 132C32	160C22	160C32
GSS06	m	[kg]	75	72					
GSS07	m	[kg]	101	98	120	132	130	174	194

GSS□□-2M SAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33 071C42	080C11	080C13	080C31
GSS04	m	[kg]	19		21				25	26	25
GSS05	m	[kg]		30	32	33	32	33	36	37	36
GSS06	m	[kg]		46		48	47	48	52	53	52
GSS07	m	[kg]							81	82	81

			080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31	100C32	100C41	112C22	112C31
GSS04	m	[kg]	26	33	31						
GSS05	m	[kg]	37	44	42	51	48	51	48		
GSS06	m	[kg]	53	60	58	67	64	67	64	75	72
GSS07	m	[kg]	82	89	87	96	93	96	93	105	102

			112C32	112C41	132C12	132C21	132C22 132C32	160C22	160C32
GSS06	m	[kg]	82	79					
GSS07	m	[kg]	112	109	131	143	141	185	205

► 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.

Weights

GSS□□-3M HAR / HBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11
GSS05	m	[kg]	26		28	29	28	29	28	33
GSS06	m	[kg]	41	42	43	44	43	44		48
GSS07	m	[kg]		71	73		72	73		77

			080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31 100C41
GSS05	m	[kg]	34						
GSS06	m	[kg]	49	48	49	55			
GSS07	m	[kg]	78	77	78	84	82	91	88

GSS□□-3M HAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11
GSS05	m	[kg]	30		32	33	32	33	32	37
GSS06	m	[kg]	48	49	50	51	50	51		55
GSS07	m	[kg]		82	84		83	84		88

			080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31 100C41
GSS05	m	[kg]	38						
GSS06	m	[kg]	56	55	56	62			
GSS07	m	[kg]	89	88	89	95	93	102	99

► 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.

Weights

GSS□□-3M VAR / VBR

			063C11 063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42
GSS05	m	[kg]	27				29	30	29	30	29
GSS06	m	[kg]	44	43	44		46				
GSS07	m	[kg]				76	78		77	78	

			080C11	080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31 100C41
GSS05	m	[kg]	34	35						
GSS06	m	[kg]	50	51	50	51	58			
GSS07	m	[kg]	82	83	82	83	89	87	96	93

GSS□□-3M VAK

			063C11 063C12	063C31	063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42
GSS05	m	[kg]	31				33	34	33	34	33
GSS06	m	[kg]	51	50	51		53				
GSS07	m	[kg]				87	89		88	89	

			080C11	080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31 100C41
GSS05	m	[kg]	38	39						
GSS06	m	[kg]	57	58	57	58	65			
GSS07	m	[kg]	93	94	93	94	100	98	107	104

► 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.

Weights

GSS□□-3M SAR / SBR

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11
GSS05	m	[kg]	27		29					33
GSS06	m	[kg]	42	43	44	45	44	45		49
GSS07	m	[kg]		72	74	75	74	75	74	78

			080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31 100C41
GSS05	m	[kg]	34						
GSS06	m	[kg]	50	49	50	56			
GSS07	m	[kg]	79	78	79	86	84	93	90

GSS□□-3M SAK

			063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31	071C32	071C33	071C42	080C11
GSS05	m	[kg]	31		33					37
GSS06	m	[kg]	49	50	51	52	51	52		56
GSS07	m	[kg]		83	85	86	85	86	85	89

			080C13	080C31	080C32 080C33 080C42	090C11 090C31	090C32	100C12	100C31 100C41
GSS05	m	[kg]	38						
GSS06	m	[kg]	57	56	57	63			
GSS07	m	[kg]	90	89	90	97	95	104	101

► 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.

Selection tables

50 Hz, 60 Hz: P_N = 0.12 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			
	132	7.6	5.4		159	6.1	6.6	10.827	GSS04-2M □□□063C12	102
	103	9.7	5.0		125	7.9	6.1	13.810	GSS04-2M □□□063C12	102
	82	12	5.4		99	9.4	6.6	17.360	GSS04-2M □□□063C12	102
	64	15	5.0		78	12	6.1	22.143	GSS04-2M □□□063C12	102
	42	22	5.5		51	18	6.7	34.100	GSS04-2M □□□063C12	102
	36	23	5.4		44	19	6.6	39.200	GSS04-2M □□□063C12	102
	32	29	4.6		39	24	5.6	43.917	GSS04-2M □□□063C12	102
	29	29	5.0		35	24	6.1	50.000	GSS04-2M □□□063C12	102
	21	41	4.2		25	34	5.1	68.200	GSS04-2M □□□063C12	102
	19	45	3.9		22	37	4.7	77.000	GSS04-2M □□□063C12	102
	16	52	3.3		20	43	4.0	87.833	GSS04-2M □□□063C12	102
	14	57	3.1		17	47	3.7	99.167	GSS04-2M □□□063C12	102
	13	66	2.7		16	54	3.2	111.318	GSS04-2M □□□063C12	102
	11	72	2.5		14	60	2.9	125.682	GSS04-2M □□□063C12	102
	10	82	2.2		12	67	2.6	139.500	GSS04-2M □□□063C12	102
	9.1	89	2.0		11	74	2.4	157.500	GSS04-2M □□□063C12	102
	7.8	106	1.7		9.4	88	2.0	183.786	GSS04-2M □□□063C12	102
	7.4	122	2.9		8.9	101	3.5	193.233	GSS05-3M □□□063C12	110
	6.9	116	1.5		8.3	96	1.9	207.500	GSS04-2M □□□063C12	102
	6.4	131	2.7		7.8	108	3.2	222.133	GSS05-3M □□□063C12	110
	5.7	148	2.4		6.9	123	2.8	250.952	GSS05-3M □□□063C12	110
	5.0	163	2.2		6.1	136	2.6	283.333	GSS05-3M □□□063C12	110
	4.6	169	4.1		5.6	139	4.9	310.689	GSS06-3M □□□063C12	110
	4.1	187	3.7		4.9	155	4.4	350.778	GSS06-3M □□□063C12	110
	3.7	218	1.6		4.5	182	1.9	386.467	GSS05-3M □□□063C12	110
	3.3	239	1.5		4.0	200	1.8	436.333	GSS05-3M □□□063C12	110
	3.3	230	3.0		4.0	191	3.6	436.333	GSS06-3M □□□063C12	110
	2.9	272	1.3		3.5	228	1.6	497.722	GSS05-3M □□□063C12	110
	2.9	263	2.7		3.5	218	3.2	497.722	GSS06-3M □□□063C12	110
	2.5	298	1.2		3.1	250	1.4	561.944	GSS05-3M □□□063C12	110
	2.5	290	2.4		3.1	241	2.9	561.944	GSS06-3M □□□063C12	110
	2.3	335	1.1		2.7	281	1.3	630.803	GSS05-3M □□□063C12	110
	2.3	327	2.2		2.7	272	2.6	630.803	GSS06-3M □□□063C12	110
	2.0	367	1.0		2.4	308	1.2	712.197	GSS05-3M □□□063C12	110
	2.0	361	2.0		2.4	301	2.3	712.197	GSS06-3M □□□063C12	110
	1.8	407	0.9		2.2	343	1.0	790.500	GSS05-3M □□□063C12	110
	1.8	415	1.7		2.1	345	2.1	816.333	GSS06-3M □□□063C12	110
	1.6	445	0.8		1.9	375	1.0	892.500	GSS05-3M □□□063C12	110
	1.6	459	1.6		1.9	382	1.9	921.667	GSS06-3M □□□063C12	110
	1.4	512	1.4		1.7	426	1.7	1023.000	GSS06-3M □□□063C12	110

Selection tables

50 Hz, 60 Hz: P_N = 0.12 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	435	0.8	1041.452	GSS05-3M □□□063C12	110
	1.2	567	1.3		1.5	471	1.5	1155.000	GSS06-3M □□□063C12	110
	1.2	614	1.2		1.4	510	1.4	1241.550	GSS06-3M □□□063C12	110
	1.0	681	1.1		1.2	565	1.3	1401.750	GSS06-3M □□□063C12	110
	0.9	797	0.9		1.1	661	1.1	1635.693	GSS06-3M □□□063C12	110
	0.8	886	0.8		0.9	734	1.0	1846.750	GSS06-3M □□□063C12	110

Selection tables

50 Hz, 60 Hz: P_N = 0.18 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			
	62	23	5.9		77	18	7.2	43.917	GSS04-2M □□□063C11	102
	40	32	5.3		49	26	6.3	68.200	GSS04-2M □□□063C11	102
	36	36	4.8		44	29	5.7	77.000	GSS04-2M □□□063C11	102
	31	42	4.1		38	34	5.0	87.833	GSS04-2M □□□063C11	102
	28	46	3.8		34	38	4.6	99.167	GSS04-2M □□□063C11	102
	25	53	3.3		30	43	4.0	111.318	GSS04-2M □□□063C11	102
	22	58	3.0		27	48	3.7	125.682	GSS04-2M □□□063C11	102
	20	66	2.7		24	54	3.2	139.500	GSS04-2M □□□063C11	102
	17	73	2.4		21	59	3.0	157.500	GSS04-2M □□□063C11	102
	15	86	2.1		18	71	2.5	183.786	GSS04-2M □□□063C11	102
	14	100	3.1		17	82	3.6	193.233	GSS05-3M □□□063C11	110
	13	95	1.9		16	78	2.3	207.500	GSS04-2M □□□063C11	102
	12	106	3.3		15	87	4.0	222.133	GSS05-3M □□□063C11	110
	11	122	2.9		13	99	3.5	250.952	GSS05-3M □□□063C11	110
	9.7	135	2.6		12	110	3.2	283.333	GSS05-3M □□□063C11	110
	8.8	136	5.0		11	111	6.1	310.689	GSS06-3M □□□063C11	110
	7.8	152	4.5		9.6	123	5.5	350.778	GSS06-3M □□□063C11	110
	7.1	184	1.9		8.7	151	2.3	386.467	GSS05-3M □□□063C11	110
	6.3	203	1.8		7.7	167	2.1	436.333	GSS05-3M □□□063C11	110
	5.5	232	1.5		6.8	192	1.9	497.722	GSS05-3M □□□063C11	110
	5.5	218	3.2		6.8	177	3.9	497.722	GSS06-3M □□□063C11	110
	4.9	255	1.4		6.0	211	1.7	561.944	GSS05-3M □□□063C11	110
	4.9	242	2.9		6.0	198	3.5	561.944	GSS06-3M □□□063C11	110
	4.3	286	1.3		5.3	237	1.5	630.803	GSS05-3M □□□063C11	110
	4.3	273	2.6		5.3	224	3.1	630.803	GSS06-3M □□□063C11	110
	3.8	314	1.1		4.7	261	1.4	712.197	GSS05-3M □□□063C11	110
	3.8	302	2.3		4.7	248	2.8	712.197	GSS06-3M □□□063C11	110
	3.5	349	1.0		4.3	290	1.2	790.500	GSS05-3M □□□063C11	110
	3.4	347	2.0		4.1	285	2.5	816.333	GSS06-3M □□□063C11	110
	3.1	383	0.9		3.8	318	1.1	892.500	GSS05-3M □□□063C11	110
	3.0	383	1.9		3.7	316	2.2	921.667	GSS06-3M □□□063C11	110
	2.7	426	1.7		3.3	352	2.0	1023.000	GSS06-3M □□□063C11	110
	2.6	445	0.8		3.2	370	1.0	1041.452	GSS05-3M □□□063C11	110
	2.4	470	1.5		2.9	388	1.8	1155.000	GSS06-3M □□□063C11	110
	2.2	509	1.4		2.7	420	1.7	1241.550	GSS06-3M □□□063C11	110
	2.0	562	1.3		2.4	463	1.5	1401.750	GSS06-3M □□□063C11	110
	1.7	655	1.1		2.1	540	1.3	1635.693	GSS06-3M □□□063C11	110
	1.5	724	1.0		1.8	597	1.2	1846.750	GSS06-3M □□□063C11	110

Selection tables

50 Hz, 60 Hz: P_N = 0.18 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			
	126	12	3.4		154	9.6	4.3	10.827	GSS04-2M □□□063C32	102
	99	16	3.2		121	12	4.0	13.810	GSS04-2M □□□063C32	102
	79	19	3.4		96	15	4.3	17.360	GSS04-2M □□□063C32	102
	62	24	3.2		75	19	4.0	22.143	GSS04-2M □□□063C32	102
	40	36	3.5		49	29	4.3	34.100	GSS04-2M □□□063C32	102
	35	37	3.4		43	30	4.3	39.200	GSS04-2M □□□063C32	102
	31	46	2.9		38	37	3.6	43.917	GSS04-2M □□□063C32	102
	27	47	3.2		33	38	4.0	50.000	GSS04-2M □□□063C32	102
	20	65	2.7		24	53	3.3	68.200	GSS04-2M □□□063C32	102
	18	72	2.5		22	58	3.0	77.000	GSS04-2M □□□063C32	102
	16	83	2.1		19	67	2.6	87.833	GSS04-2M □□□063C32	102
	14	91	2.0		17	74	2.4	99.167	GSS04-2M □□□063C32	102
	12	104	1.7		15	85	2.1	111.318	GSS04-2M □□□063C32	102
	11	129	2.6		13	105	3.1	125.476	GSS05-3M □□□063C32	110
	11	114	1.6		13	93	1.9	125.682	GSS04-2M □□□063C32	102
	11	116	3.2		13	93	4.0	126.531	GSS06-3M □□□063C32	110
	9.8	129	1.4		12	105	1.7	139.500	GSS04-2M □□□063C32	102
	9.6	128	3.2		12	104	4.0	142.857	GSS06-3M □□□063C32	110
	8.8	140	3.2		11	113	4.0	155.000	GSS06-3M □□□063C32	110
	8.7	141	1.3		11	115	1.6	157.500	GSS04-2M □□□063C32	102
	7.8	155	3.2		9.5	125	4.0	175.000	GSS06-3M □□□063C32	110
	7.4	168	1.1		9.1	136	1.3	183.786	GSS04-2M □□□063C32	102
	7.1	193	1.8		8.6	157	2.3	193.233	GSS05-3M □□□063C32	110
	6.6	183	1.0		8.0	149	1.2	207.500	GSS04-2M □□□063C32	102
	6.1	208	1.7		7.5	168	2.1	222.133	GSS05-3M □□□063C32	110
	5.4	234	1.5		6.6	192	1.9	250.952	GSS05-3M □□□063C32	110
	5.1	233	3.0		6.2	189	3.7	269.500	GSS06-3M □□□063C32	110
	4.8	258	1.4		5.9	212	1.7	283.333	GSS05-3M □□□063C32	110
	4.4	270	2.6		5.4	219	3.2	310.689	GSS06-3M □□□063C32	110
	3.9	299	2.4		4.8	243	2.9	350.778	GSS06-3M □□□063C32	110
	3.5	344	1.0		4.3	283	1.3	386.467	GSS05-3M □□□063C32	110
	3.5	331	2.1		4.3	270	2.6	386.467	GSS06-3M □□□063C32	110
	3.1	377	1.0		3.8	310	1.2	436.333	GSS05-3M □□□063C32	110
	3.1	365	1.9		3.8	298	2.4	436.333	GSS06-3M □□□063C32	110
	2.7	429	0.8		3.4	353	1.0	497.722	GSS05-3M □□□063C32	110
	2.7	417	1.7		3.4	341	2.1	497.722	GSS06-3M □□□063C32	110
	2.4	460	1.6		3.0	376	1.9	561.944	GSS06-3M □□□063C32	110
					3.0	387	0.9	561.944	GSS05-3M □□□063C32	110
	2.2	518	1.4		2.6	424	1.7	630.803	GSS06-3M □□□063C32	110
					2.7	435	0.8	630.803	GSS05-3M □□□063C32	110

Selection tables

50 Hz, 60 Hz: P_N = 0.18 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			
	1.9	572	1.3		2.3	467	1.5	712.197	GSS06-3M □□□063C32	110
	1.7	656	1.1		2.0	536	1.3	816.333	GSS06-3M □□□063C32	110
	1.5	725	1.0		1.8	592	1.2	921.667	GSS06-3M □□□063C32	110
	1.3	808	0.9		1.6	660	1.1	1023.000	GSS06-3M □□□063C32	110
	1.2	895	0.8		1.5	729	1.0	1155.000	GSS06-3M □□□063C32	110
					1.4	789	0.9	1241.550	GSS06-3M □□□063C32	110
					1.2	874	0.8	1401.750	GSS06-3M □□□063C32	110

Selection tables

50 Hz, 60 Hz: P_N = 0.18 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			
	165	9.0	5.4		202	7.3	6.6	5.639	GSS04-2M □□□071C13	102
	120	12	5.4		147	10.0	6.6	7.733	GSS04-2M □□□071C13	102
	103	14	5.4		126	11	6.6	9.042	GSS04-2M □□□071C13	102
	86	18	5.4		105	14	6.6	10.827	GSS05-2M □□□071C13	102
	75	19	5.4		92	15	6.6	12.400	GSS04-2M □□□071C13	102
	67	22	5.6		83	18	6.9	13.810	GSS04-2M □□□071C13	102
	54	27	5.4		66	22	6.6	17.360	GSS05-2M □□□071C13	102
	46	28	5.4		56	23	6.6	20.417	GSS04-2M □□□071C13	102
	42	33	5.1		51	27	6.2	22.143	GSS04-2M □□□071C13	102
	38	35	4.9		46	28	6.0	24.800	GSS04-2M □□□071C13	102
	34	41	4.2		42	33	5.1	27.125	GSS04-2M □□□071C13	102
	29	45	3.9		36	36	4.7	31.738	GSS04-2M □□□071C13	102
	27	52	3.4		33	42	4.1	34.100	GSS04-2M □□□071C13	102
	24	54	3.3		29	44	3.9	39.200	GSS04-2M □□□071C13	102
	21	66	2.7		26	54	3.2	43.917	GSS04-2M □□□071C13	102
	19	68	2.6		23	56	3.1	50.000	GSS04-2M □□□071C13	102
	17	75	2.3		21	62	2.8	54.250	GSS04-2M □□□071C13	102
	15	83	2.1		19	68	2.6	61.250	GSS04-2M □□□071C13	102
	14	94	1.9		17	77	2.3	68.200	GSS04-2M □□□071C13	102
	12	103	1.7		15	85	2.1	77.000	GSS04-2M □□□071C13	102
	12	114	3.1		14	93	3.7	79.722	GSS05-2M □□□071C13	102
	11	119	1.5		13	98	1.8	87.833	GSS04-2M □□□071C13	102
	11	127	2.8		13	104	3.4	87.833	GSS05-2M □□□071C13	102
	9.4	130	1.4		11	108	1.7	99.167	GSS04-2M □□□071C13	102
	9.4	140	2.5		11	115	3.0	99.167	GSS05-2M □□□071C13	102
	8.4	150	1.2		10	123	1.5	111.318	GSS04-2M □□□071C13	102
	8.2	163	2.2		10	134	2.6	113.667	GSS05-2M □□□071C13	102
	7.4	184	1.8		9.1	152	2.1	125.476	GSS05-3M □□□071C13	110
	7.4	163	1.1		9.1	135	1.3	125.682	GSS04-2M □□□071C13	102
	7.2	180	2.0		8.9	148	2.4	128.333	GSS05-2M □□□071C13	102
	6.7	195	1.8		8.3	161	2.2	137.950	GSS05-2M □□□071C13	102
	6.7	184	1.0		8.2	153	1.2	139.500	GSS04-2M □□□071C13	102
	6.1	223	1.5		7.4	184	1.9	153.708	GSS05-3M □□□071C13	110
	6.0	215	1.7		7.3	178	2.0	155.750	GSS05-2M □□□071C13	102
	5.9	200	0.9		7.2	167	1.1	157.500	GSS04-2M □□□071C13	102
	5.3	235	3.0		6.5	193	3.6	174.375	GSS06-2M □□□071C13	102
	5.3	222	3.1		6.5	182	3.8	175.000	GSS06-3M □□□071C13	110
	5.3	243	1.5		6.5	203	1.8	176.313	GSS05-2M □□□071C13	102
	4.8	275	1.3		5.9	228	1.6	193.233	GSS05-3M □□□071C13	110
	4.8	249	2.8		5.9	205	3.4	194.857	GSS06-3M □□□071C13	110

Selection tables

50 Hz, 60 Hz: P_N = 0.18 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			
	4.7	261	2.7		5.8	214	3.3	196.875	GSS06-2M □□□071C13	102
	4.7	267	1.3		5.7	223	1.6	199.063	GSS05-2M □□□071C13	102
	4.2	276	2.6		5.2	228	3.1	220.000	GSS06-3M □□□071C13	110
	4.2	290	1.2		5.1	242	1.5	222.133	GSS05-3M □□□071C13	110
	3.9	301	2.3		4.8	249	2.8	238.700	GSS06-3M □□□071C13	110
	3.7	328	1.1		4.5	274	1.3	250.952	GSS05-3M □□□071C13	110
	3.5	332	2.1		4.2	275	2.6	269.500	GSS06-3M □□□071C13	110
	3.3	359	1.0		4.0	300	1.2	283.333	GSS05-3M □□□071C13	110
	3.0	391	0.9		3.7	327	1.1	307.417	GSS05-3M □□□071C13	110
	3.0	383	1.9		3.7	318	2.2	310.689	GSS06-3M □□□071C13	110
	2.9	412	3.0		3.5	339	3.6	321.673	GSS07-3M □□□071C13	110
	2.7	429	0.8		3.3	359	1.0	347.083	GSS05-3M □□□071C13	110
	2.7	423	1.7		3.2	351	2.0	350.778	GSS06-3M □□□071C13	110
	2.6	457	2.7		3.1	377	3.2	363.179	GSS07-3M □□□071C13	110
	2.4	468	1.5		2.9	389	1.8	386.467	GSS06-3M □□□071C13	110
	2.4	498	2.5		2.9	411	3.0	394.245	GSS07-3M □□□071C13	110
	2.1	517	1.4		2.6	429	1.7	436.333	GSS06-3M □□□071C13	110
	2.1	553	2.2		2.6	456	2.7	445.116	GSS07-3M □□□071C13	110
	1.9	610	2.0		2.3	504	2.4	490.403	GSS07-3M □□□071C13	110
	1.9	590	1.2		2.3	490	1.5	497.722	GSS06-3M □□□071C13	110
	1.7	676	1.8		2.1	559	2.2	553.681	GSS07-3M □□□071C13	110
	1.7	652	1.1		2.0	541	1.3	561.944	GSS06-3M □□□071C13	110
	1.5	734	1.0		1.8	608	1.2	630.803	GSS06-3M □□□071C13	110
	1.5	775	1.6		1.8	641	1.9	634.639	GSS07-3M □□□071C13	110
	1.3	813	0.9		1.6	672	1.1	712.197	GSS06-3M □□□071C13	110
	1.3	858	1.4		1.6	709	1.7	716.528	GSS07-3M □□□071C13	110
	1.1	1000	1.2		1.4	826	1.5	833.556	GSS07-3M □□□071C13	110
	1.0	1106	1.1		1.2	913	1.4	941.111	GSS07-3M □□□071C13	110
	0.9	1200	1.0		1.1	989	1.3	1011.633	GSS07-3M □□□071C13	110
	0.8	1327	0.9		1.0	1094	1.1	1142.167	GSS07-3M □□□071C13	110
	0.8	1442	0.9		0.9	1187	1.1	1227.755	GSS07-3M □□□071C13	110

Selection tables

50 Hz, 60 Hz: P_N = 0.25 kW

n_N	2710 r/min				3390 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			
	250	8.3	4.9		313	6.5	6.2	10.827	GSS04-2M □□□063C31	102
	196	11	4.6		245	8.4	5.7	13.810	GSS04-2M □□□063C31	102
	156	13	4.9		195	10	6.2	17.360	GSS04-2M □□□063C31	102
	122	17	4.6		153	13	5.7	22.143	GSS04-2M □□□063C31	102
	79	25	5.0		99	20	6.3	34.100	GSS04-2M □□□063C31	102
	69	26	4.9		86	21	6.2	39.200	GSS04-2M □□□063C31	102
	62	32	4.2		77	26	5.2	43.917	GSS04-2M □□□063C31	102
	54	33	4.6		68	27	5.5	50.000	GSS04-2M □□□063C31	102
	40	46	3.7		50	37	4.6	68.200	GSS04-2M □□□063C31	102
	35	51	3.4		44	41	4.1	77.000	GSS04-2M □□□063C31	102
	31	60	2.9		39	48	3.6	87.833	GSS04-2M □□□063C31	102
	27	66	2.7		34	53	3.3	99.167	GSS04-2M □□□063C31	102
	24	76	2.3		30	61	2.9	111.318	GSS04-2M □□□063C31	102
	22	93	3.0		27	75	3.5	125.476	GSS05-3M □□□063C31	110
	22	83	2.1		27	67	2.6	125.682	GSS04-2M □□□063C31	102
	19	94	1.9		24	76	2.3	139.500	GSS04-2M □□□063C31	102
	17	103	1.7		22	83	2.1	157.500	GSS04-2M □□□063C31	102
	15	122	1.5		18	99	1.8	183.786	GSS04-2M □□□063C31	102
	14	142	2.2		18	114	2.6	193.233	GSS05-3M □□□063C31	110
	13	134	1.3		16	108	1.7	207.500	GSS04-2M □□□063C31	102
	12	151	2.3		15	121	2.9	222.133	GSS05-3M □□□063C31	110
	11	173	2.1		14	139	2.5	250.952	GSS05-3M □□□063C31	110
	9.6	191	1.9		12	154	2.3	283.333	GSS05-3M □□□063C31	110
	8.7	195	3.6		11	156	4.4	310.689	GSS06-3M □□□063C31	110
	7.7	218	3.2		9.7	174	4.0	350.778	GSS06-3M □□□063C31	110
	7.0	260	1.4		8.8	210	1.7	386.467	GSS05-3M □□□063C31	110
	7.0	242	2.9		8.8	194	3.6	386.467	GSS06-3M □□□063C31	110
	6.2	288	1.2		7.8	232	1.5	436.333	GSS05-3M □□□063C31	110
	6.2	270	2.6		7.8	216	3.2	436.333	GSS06-3M □□□063C31	110
	5.4	327	1.1		6.8	266	1.3	497.722	GSS05-3M □□□063C31	110
	5.4	310	2.3		6.8	248	2.8	497.722	GSS06-3M □□□063C31	110
	4.8	360	1.0		6.0	294	1.2	561.944	GSS05-3M □□□063C31	110
	4.8	344	2.1		6.0	277	2.5	561.944	GSS06-3M □□□063C31	110
	4.3	404	0.9		5.4	330	1.1	630.803	GSS05-3M □□□063C31	110
	4.3	387	1.8		5.4	312	2.3	630.803	GSS06-3M □□□063C31	110
	3.8	443	0.8		4.8	362	1.0	712.197	GSS05-3M □□□063C31	110
	3.8	428	1.7		4.8	347	2.0	712.197	GSS06-3M □□□063C31	110
	3.3	491	1.5		4.2	398	1.8	816.333	GSS06-3M □□□063C31	110
	2.9	542	1.3		3.7	440	1.6	921.667	GSS06-3M □□□063C31	110
	2.6	603	1.2		3.3	490	1.5	1023.000	GSS06-3M □□□063C31	110

Selection tables

50 Hz, 60 Hz: P_N = 0.25 kW

n_N	2710 r/min				3390 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	665	1.1		2.9	540	1.3	1155.000	GSS06-3M □□□063C31	110
	2.2	719	1.0		2.7	584	1.2	1241.550	GSS06-3M □□□063C31	110
	1.9	793	0.9		2.4	644	1.1	1401.750	GSS06-3M □□□063C31	110

Selection tables

50 Hz, 60 Hz: P_N = 0.25 kW

n_N	1370 r/min				1680 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			
	243	8.5	4.5		296	6.9	5.6	5.639	GSS04-2M □□□063C42	102
	177	12	4.5		216	9.5	5.6	7.733	GSS04-2M □□□063C42	102
	152	13	4.5		185	11	5.6	9.042	GSS04-2M □□□063C42	102
	138	15	5.2		169	12	6.4	9.897	GSS04-2M □□□063C42	102
	127	17	4.5		154	13	5.6	10.827	GSS05-2M □□□063C42	102
	111	18	4.5		135	15	5.6	12.400	GSS04-2M □□□063C42	102
	99	21	4.8		121	17	5.9	13.810	GSS04-2M □□□063C42	102
	86	23	5.2		105	19	6.4	15.869	GSS04-2M □□□063C42	102
	79	26	4.5		96	21	5.6	17.360	GSS05-2M □□□063C42	102
	67	27	4.5		82	22	5.6	20.417	GSS04-2M □□□063C42	102
	62	32	4.8		75	26	5.9	22.143	GSS04-2M □□□063C42	102
	55	34	4.5		67	27	5.6	24.800	GSS04-2M □□□063C42	102
	51	39	4.3		62	32	5.3	27.125	GSS04-2M □□□063C42	102
	43	43	4.1		53	35	4.8	31.738	GSS04-2M □□□063C42	102
	40	50	3.5		49	40	4.3	34.100	GSS04-2M □□□063C42	102
	35	52	3.4		43	42	4.1	39.200	GSS04-2M □□□063C42	102
	31	64	2.8		38	52	3.4	43.917	GSS04-2M □□□063C42	102
	27	66	2.7		33	54	3.3	50.000	GSS04-2M □□□063C42	102
	25	73	2.4		31	60	2.9	54.250	GSS04-2M □□□063C42	102
	22	80	2.2		27	66	2.7	61.250	GSS04-2M □□□063C42	102
	20	91	2.0		25	75	2.4	68.200	GSS04-2M □□□063C42	102
	18	100	1.8		22	82	2.2	77.000	GSS04-2M □□□063C42	102
	17	110	3.2		21	89	3.9	79.722	GSS05-2M □□□063C42	102
	16	116	1.5		19	95	1.9	87.833	GSS04-2M □□□063C42	102
	16	122	2.9		19	99	3.5	87.833	GSS05-2M □□□063C42	102
	14	127	1.4		17	105	1.7	99.167	GSS04-2M □□□063C42	102
	14	136	2.6		17	111	3.2	99.167	GSS05-2M □□□063C42	102
	12	145	1.2		15	119	1.5	111.318	GSS04-2M □□□063C42	102
	12	158	2.2		15	129	2.7	113.667	GSS05-2M □□□063C42	102
	11	180	1.9		13	148	2.2	125.476	GSS05-3M □□□063C42	110
	11	159	1.1		13	131	1.4	125.682	GSS04-2M □□□063C42	102
	11	174	2.0		13	143	2.5	128.333	GSS05-2M □□□063C42	102
	9.9	190	1.9		12	156	2.3	137.950	GSS05-2M □□□063C42	102
	9.9	182	3.2		12	149	3.9	137.950	GSS06-2M □□□063C42	102
	9.8	180	1.0		12	148	1.2	139.500	GSS04-2M □□□063C42	102
	8.9	218	1.6		11	180	1.9	153.708	GSS05-3M □□□063C42	110
	8.8	210	1.7		11	172	2.1	155.750	GSS05-2M □□□063C42	102
	8.8	202	3.2		11	165	3.9	155.750	GSS06-2M □□□063C42	102
	8.7	196	0.9		11	162	1.1	157.500	GSS04-2M □□□063C42	102
	7.9	228	2.6		9.6	187	3.2	174.375	GSS06-2M □□□063C42	102

Selection tables

50 Hz, 60 Hz: P_N = 0.25 kW

n_N	1370 r/min				1680 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	215	3.2		9.5	175	3.9	175.000	GSS06-3M □□□063C42	110
	7.8	240	1.4		9.5	198	1.7	176.313	GSS05-2M □□□063C42	102
	7.1	269	1.3		8.6	222	1.6	193.233	GSS05-3M □□□063C42	110
	7.0	241	2.9		8.6	197	3.5	194.857	GSS06-3M □□□063C42	110
	7.0	254	2.6		8.5	208	3.2	196.875	GSS06-2M □□□063C42	102
	6.9	265	1.4		8.4	218	1.6	199.063	GSS05-2M □□□063C42	102
	6.2	269	2.6		7.6	220	3.2	220.000	GSS06-3M □□□063C42	110
	6.2	289	1.2		7.5	238	1.5	222.133	GSS05-3M □□□063C42	110
	5.7	294	2.4		7.0	241	2.9	238.700	GSS06-3M □□□063C42	110
	5.5	326	1.1		6.7	271	1.3	250.952	GSS05-3M □□□063C42	110
	5.1	327	2.2		6.2	269	2.6	269.500	GSS06-3M □□□063C42	110
	4.8	358	1.0		5.9	298	1.2	283.333	GSS05-3M □□□063C42	110
	4.5	390	0.9		5.4	325	1.1	307.417	GSS05-3M □□□063C42	110
	4.4	377	1.9		5.4	311	2.3	310.689	GSS06-3M □□□063C42	110
	4.3	402	3.0		5.2	329	3.7	321.673	GSS07-3M □□□063C42	110
	4.0	429	0.8		4.8	357	1.0	347.083	GSS05-3M □□□063C42	110
	3.9	417	1.7		4.8	345	2.1	350.778	GSS06-3M □□□063C42	110
	3.8	447	2.7		4.6	366	3.3	363.179	GSS07-3M □□□063C42	110
	3.5	462	1.5		4.3	382	1.9	386.467	GSS06-3M □□□063C42	110
					4.3	398	0.9	386.467	GSS05-3M □□□063C42	110
	3.5	488	2.5		4.2	401	3.0	394.245	GSS07-3M □□□063C42	110
	3.1	510	1.4		3.8	422	1.7	436.333	GSS06-3M □□□063C42	110
					3.9	437	0.8	436.333	GSS05-3M □□□063C42	110
	3.1	542	2.3		3.8	446	2.7	445.116	GSS07-3M □□□063C42	110
	2.8	599	2.1		3.4	494	2.5	490.403	GSS07-3M □□□063C42	110
	2.8	581	1.2		3.4	482	1.5	497.722	GSS06-3M □□□063C42	110
	2.5	664	1.9		3.0	548	2.2	553.681	GSS07-3M □□□063C42	110
	2.4	641	1.1		3.0	532	1.3	561.944	GSS06-3M □□□063C42	110
	2.2	721	1.0		2.7	598	1.2	630.803	GSS06-3M □□□063C42	110
	2.2	760	1.6		2.6	628	2.0	634.639	GSS07-3M □□□063C42	110
	1.9	796	0.9		2.3	659	1.1	712.197	GSS06-3M □□□063C42	110
	1.9	842	1.5		2.3	696	1.8	716.528	GSS07-3M □□□063C42	110
					2.1	756	1.0	816.333	GSS06-3M □□□063C42	110
	1.6	977	1.3		2.0	808	1.5	833.556	GSS07-3M □□□063C42	110
					1.8	834	0.9	921.667	GSS06-3M □□□063C42	110
	1.5	1081	1.2		1.8	895	1.4	941.111	GSS07-3M □□□063C42	110
	1.4	1168	1.1		1.7	966	1.3	1011.633	GSS07-3M □□□063C42	110
	1.2	1292	1.0		1.5	1069	1.2	1142.167	GSS07-3M □□□063C42	110
	1.1	1399	0.9		1.4	1155	1.1	1227.755	GSS07-3M □□□063C42	110
	1.0	1546	0.8		1.2	1277	1.0	1386.175	GSS07-3M □□□063C42	110

Selection tables

50 Hz, 60 Hz: P_N = 0.25 kW

n_N	1370 r/min				1680 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			
					1.1	1451	0.9	1569.181	GSS07-3M □□□063C42	110

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			
	165	13	3.9		202	10	4.7	5.639	GSS04-2M □□□071C33	102
	120	18	3.9		147	14	4.7	7.733	GSS04-2M □□□071C33	102
	103	20	3.9		126	16	4.7	9.042	GSS04-2M □□□071C33	102
	94	22	4.4		115	18	5.4	9.897	GSS04-2M □□□071C33	102
	86	25	4.4		105	20	5.4	10.827	GSS04-2M □□□071C33	102
	75	27	3.9		92	22	4.7	12.400	GSS04-2M □□□071C33	102
	67	31	4.1		83	25	5.0	13.810	GSS04-2M □□□071C33	102
	59	34	4.4		72	27	5.4	15.869	GSS04-2M □□□071C33	102
	54	37	4.4		66	30	5.4	17.360	GSS04-2M □□□071C33	102
	46	40	3.9		56	32	4.7	20.417	GSS04-2M □□□071C33	102
	42	47	3.7		51	38	4.5	22.143	GSS04-2M □□□071C33	102
	38	49	3.5		46	40	4.3	24.800	GSS04-2M □□□071C33	102
	34	58	3.0		42	47	3.7	27.125	GSS04-2M □□□071C33	102
	29	63	2.8		36	51	3.4	31.738	GSS04-2M □□□071C33	102
	27	72	2.4		33	59	3.0	34.100	GSS04-2M □□□071C33	102
	24	75	2.3		29	62	2.8	39.200	GSS04-2M □□□071C33	102
	21	93	1.9		26	76	2.3	43.917	GSS04-2M □□□071C33	102
	21	96	3.1		26	79	3.8	43.917	GSS05-2M □□□071C33	102
	19	95	1.9		23	78	2.3	50.000	GSS04-2M □□□071C33	102
	17	106	1.7		21	87	2.0	54.250	GSS04-2M □□□071C33	102
	15	116	1.5		19	95	1.9	61.250	GSS04-2M □□□071C33	102
	14	131	1.4		17	108	1.6	68.200	GSS04-2M □□□071C33	102
	13	144	2.4		16	118	3.0	70.611	GSS05-2M □□□071C33	102
	12	144	1.2		15	119	1.5	77.000	GSS04-2M □□□071C33	102
	12	160	2.2		14	131	2.7	79.722	GSS05-2M □□□071C33	102
	11	167	1.1		13	138	1.3	87.833	GSS04-2M □□□071C33	102
	11	178	2.0		13	146	2.4	87.833	GSS05-2M □□□071C33	102
	9.4	182	1.0		11	151	1.2	99.167	GSS04-2M □□□071C33	102
	9.4	197	1.8		11	162	2.2	99.167	GSS05-2M □□□071C33	102
	8.4	209	0.9		10	172	1.0	111.318	GSS04-2M □□□071C33	102
	8.2	227	1.6		10	188	1.9	113.667	GSS05-2M □□□071C33	102
	8.2	218	3.1		10	179	3.8	113.667	GSS06-2M □□□071C33	102
	7.4	258	1.3		9.1	213	1.5	125.476	GSS05-3M □□□071C33	110
	7.3	230	3.0		9.0	188	3.7	126.531	GSS06-3M □□□071C33	110
	7.2	251	1.4		8.9	207	1.7	128.333	GSS05-2M □□□071C33	102
	7.2	243	2.9		8.9	199	3.5	128.333	GSS06-2M □□□071C33	102
	6.7	273	1.3		8.3	225	1.6	137.950	GSS05-2M □□□071C33	102
	6.7	263	2.7		8.3	215	3.2	137.950	GSS06-2M □□□071C33	102
	6.5	257	2.7		8.0	211	3.3	142.857	GSS06-3M □□□071C33	110
	6.1	311	1.1		7.4	257	1.3	153.708	GSS05-3M □□□071C33	110

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			
	6.0	281	2.5		7.4	230	3.0	155.000	GSS06-3M □□□071C33	110
	6.0	300	1.2		7.3	249	1.4	155.750	GSS05-2M □□□071C33	102
	6.0	293	2.4		7.3	240	2.9	155.750	GSS06-2M □□□071C33	102
	5.3	330	2.2		6.5	271	2.6	174.375	GSS06-2M □□□071C33	102
	5.3	312	2.3		6.5	257	2.7	175.000	GSS06-3M □□□071C33	110
	5.3	340	1.1		6.5	284	1.3	176.313	GSS05-2M □□□071C33	102
	4.8	384	0.9		5.9	318	1.1	193.233	GSS05-3M □□□071C33	110
	4.8	349	2.0		5.9	288	2.5	194.857	GSS06-3M □□□071C33	110
	4.7	366	1.9		5.8	302	2.3	196.875	GSS06-2M □□□071C33	102
	4.7	373	1.0		5.7	312	1.2	199.063	GSS05-2M □□□071C33	102
	4.2	387	1.8		5.2	320	2.2	220.000	GSS06-3M □□□071C33	110
	4.2	405	0.9		5.1	338	1.1	222.133	GSS05-3M □□□071C33	110
	4.1	413	2.9		5.0	338	3.6	227.778	GSS07-3M □□□071C33	110
	3.9	422	1.7		4.8	349	2.0	238.700	GSS06-3M □□□071C33	110
	3.8	452	2.7		4.6	371	3.3	247.139	GSS07-3M □□□071C33	110
	3.5	466	1.5		4.2	386	1.8	269.500	GSS06-3M □□□071C33	110
	3.3	502	2.4		4.1	413	2.9	279.028	GSS07-3M □□□071C33	110
	3.0	537	1.3		3.7	446	1.6	310.689	GSS06-3M □□□071C33	110
	2.9	579	2.1		3.5	477	2.6	321.673	GSS07-3M □□□071C33	110
	2.7	592	1.2		3.2	492	1.5	350.778	GSS06-3M □□□071C33	110
	2.6	642	1.9		3.1	530	2.3	363.179	GSS07-3M □□□071C33	110
	2.4	654	1.1		2.9	544	1.3	386.467	GSS06-3M □□□071C33	110
	2.4	699	1.8		2.9	578	2.1	394.245	GSS07-3M □□□071C33	110
	2.1	722	1.0		2.6	600	1.2	436.333	GSS06-3M □□□071C33	110
	2.1	774	1.6		2.6	641	1.9	445.116	GSS07-3M □□□071C33	110
	1.9	854	1.5		2.3	707	1.7	490.403	GSS07-3M □□□071C33	110
	1.9	824	0.9		2.3	684	1.1	497.722	GSS06-3M □□□071C33	110
	1.7	946	1.3		2.1	783	1.6	553.681	GSS07-3M □□□071C33	110
	1.5	1084	1.2		1.8	897	1.4	634.639	GSS07-3M □□□071C33	110
	1.3	1199	1.0		1.6	992	1.3	716.528	GSS07-3M □□□071C33	110
	1.1	1396	0.9		1.4	1154	1.1	833.556	GSS07-3M □□□071C33	110
	1.0	1544	0.8		1.2	1276	1.0	941.111	GSS07-3M □□□071C33	110

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			
	133	20	5.6		165	16	6.4	20.417	GSS04-2M □□□071C11	102
	110	25	5.1		135	20	5.8	24.800	GSS04-2M □□□071C11	102
	100	29	5.6		124	24	6.5	27.125	GSS04-2M □□□071C11	102
	86	32	4.3		106	26	5.0	31.738	GSS04-2M □□□071C11	102
	80	37	4.6		99	30	5.6	34.100	GSS04-2M □□□071C11	102
	69	39	3.7		86	32	4.3	39.200	GSS04-2M □□□071C11	102
	62	48	3.6		77	39	4.5	43.917	GSS04-2M □□□071C11	102
	54	50	3.2		67	41	3.7	50.000	GSS04-2M □□□071C11	102
	50	56	3.1		62	45	3.5	54.250	GSS04-2M □□□071C11	102
	44	61	2.8		55	50	3.2	61.250	GSS04-2M □□□071C11	102
	40	70	2.5		49	56	3.1	68.200	GSS04-2M □□□071C11	102
	35	77	2.3		44	62	2.8	77.000	GSS04-2M □□□071C11	102
	31	89	2.0		38	72	2.4	87.833	GSS04-2M □□□071C11	102
	27	98	1.8		34	80	2.2	99.167	GSS04-2M □□□071C11	102
	24	113	1.6		30	92	1.9	111.318	GSS04-2M □□□071C11	102
	24	119	3.0		30	96	3.6	113.667	GSS05-2M □□□071C11	102
	22	139	2.0		27	113	2.4	125.476	GSS05-3M □□□071C11	110
	22	124	1.4		27	101	1.8	125.682	GSS04-2M □□□071C11	102
	21	132	2.7		26	106	3.3	128.333	GSS05-2M □□□071C11	102
	20	145	2.4		24	117	3.0	137.950	GSS05-2M □□□071C11	102
	19	140	1.3		24	114	1.6	139.500	GSS04-2M □□□071C11	102
	18	169	1.8		22	138	2.1	153.708	GSS05-3M □□□071C11	110
	17	162	2.2		22	130	2.7	155.750	GSS05-2M □□□071C11	102
	17	153	1.2		21	125	1.4	157.500	GSS04-2M □□□071C11	102
	15	185	1.9		19	150	2.4	176.313	GSS05-2M □□□071C11	102
	14	211	1.5		17	172	1.8	193.233	GSS05-3M □□□071C11	110
	14	206	1.7		17	167	2.1	199.063	GSS05-2M □□□071C11	102
	12	225	1.6		15	183	1.9	222.133	GSS05-3M □□□071C11	110
	11	227	3.1		14	184	3.8	238.700	GSS06-3M □□□071C11	110
	11	257	1.4		13	209	1.7	250.952	GSS05-3M □□□071C11	110
	10	252	2.8		12	205	3.4	269.500	GSS06-3M □□□071C11	110
	9.6	283	1.3		12	232	1.5	283.333	GSS05-3M □□□071C11	110
	8.8	311	1.2		11	254	1.4	307.417	GSS05-3M □□□071C11	110
	8.8	292	2.4		11	238	2.9	310.689	GSS06-3M □□□071C11	110
	7.8	343	1.0		9.7	281	1.3	347.083	GSS05-3M □□□071C11	110
	7.8	326	2.2		9.6	264	2.7	350.778	GSS06-3M □□□071C11	110
	7.0	386	0.9		8.7	316	1.1	386.467	GSS05-3M □□□071C11	110
	7.0	361	2.0		8.7	294	2.4	386.467	GSS06-3M □□□071C11	110
	6.9	376	3.2		8.5	307	3.9	394.245	GSS07-3M □□□071C11	110
	6.2	426	0.8		7.7	348	1.0	436.333	GSS05-3M □□□071C11	110

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			
	6.2	403	1.8		7.7	328	2.2	436.333	GSS06-3M □□□071C11	110
	6.1	420	2.9		7.5	341	3.5	445.116	GSS07-3M □□□071C11	110
	5.5	466	2.6		6.9	378	3.2	490.403	GSS07-3M □□□071C11	110
	5.5	461	1.5		6.8	376	1.9	497.722	GSS06-3M □□□071C11	110
	4.9	519	2.4		6.1	422	2.9	553.681	GSS07-3M □□□071C11	110
	4.8	512	1.4		6.0	418	1.7	561.944	GSS06-3M □□□071C11	110
	4.3	576	1.2		5.3	471	1.5	630.803	GSS06-3M □□□071C11	110
	4.3	599	2.1		5.3	487	2.5	634.639	GSS07-3M □□□071C11	110
	3.8	636	1.1		4.7	522	1.4	712.197	GSS06-3M □□□071C11	110
	3.8	666	1.9		4.7	543	2.3	716.528	GSS07-3M □□□071C11	110
	3.3	729	1.0		4.1	599	1.2	816.333	GSS06-3M □□□071C11	110
	3.3	775	1.6		4.0	634	1.9	833.556	GSS07-3M □□□071C11	110
	3.0	804	0.9		3.6	662	1.1	921.667	GSS06-3M □□□071C11	110
	2.9	860	1.4		3.6	704	1.8	941.111	GSS07-3M □□□071C11	110
	2.7	927	1.3		3.3	761	1.6	1011.633	GSS07-3M □□□071C11	110
	2.7	894	0.8		3.3	736	1.0	1023.000	GSS06-3M □□□071C11	110
	2.4	1027	1.2		2.9	843	1.5	1142.167	GSS07-3M □□□071C11	110
	2.2	1108	1.1		2.7	910	1.4	1227.755	GSS07-3M □□□071C11	110
	2.0	1226	1.0		2.4	1008	1.2	1386.175	GSS07-3M □□□071C11	110
	1.7	1386	0.9		2.1	1139	1.1	1569.181	GSS07-3M □□□071C11	110
	1.5	1534	0.8		1.9	1261	1.0	1771.656	GSS07-3M □□□071C11	110

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			
	250	12	4.0		303	10	4.8	5.639	GSS04-2M □□□071C32	102
	182	17	4.0		221	14	4.8	7.733	GSS04-2M □□□071C32	102
	156	19	4.0		189	16	4.8	9.042	GSS04-2M □□□071C32	102
	143	22	4.5		173	18	5.5	9.897	GSS04-2M □□□071C32	102
	130	24	4.0		158	20	4.8	10.827	GSS05-2M □□□071C32	102
					159	19	5.5	10.827	GSS04-2M □□□071C32	102
	114	26	4.0		138	22	4.8	12.400	GSS04-2M □□□071C32	102
	102	31	4.2		124	25	5.1	13.810	GSS04-2M □□□071C32	102
	89	33	4.5		108	27	5.5	15.869	GSS04-2M □□□071C32	102
	81	37	4.0		99	30	4.8	17.360	GSS05-2M □□□071C32	102
					99	30	5.5	17.360	GSS04-2M □□□071C32	102
	69	39	3.8		84	32	4.3	20.417	GSS04-2M □□□071C32	102
	64	47	3.7		77	38	4.5	22.143	GSS04-2M □□□071C32	102
	57	49	3.4		69	40	3.9	24.800	GSS04-2M □□□071C32	102
	52	57	3.1		63	47	3.7	27.125	GSS04-2M □□□071C32	102
	44	62	2.8		54	51	3.3	31.738	GSS04-2M □□□071C32	102
	41	72	2.5		50	59	3.0	34.100	GSS04-2M □□□071C32	102
	36	75	2.3		44	62	2.8	39.200	GSS04-2M □□□071C32	102
	32	92	1.9		39	76	2.3	43.917	GSS04-2M □□□071C32	102
	32	95	3.2		39	77	3.9	43.917	GSS05-2M □□□071C32	102
	28	96	1.9		34	79	2.2	50.000	GSS04-2M □□□071C32	102
	26	106	1.7		32	87	2.0	54.250	GSS04-2M □□□071C32	102
	23	116	1.5		28	96	1.9	61.250	GSS04-2M □□□071C32	102
	21	132	1.4		25	109	1.6	68.200	GSS04-2M □□□071C32	102
	20	143	2.5		24	117	3.0	70.611	GSS05-2M □□□071C32	102
	18	145	1.2		22	119	1.5	77.000	GSS04-2M □□□071C32	102
	18	159	2.2		21	130	2.7	79.722	GSS05-2M □□□071C32	102
	16	168	1.1		20	139	1.3	87.833	GSS04-2M □□□071C32	102
	16	178	2.0		20	146	2.4	87.833	GSS05-2M □□□071C32	102
	14	184	1.0		17	152	1.2	99.167	GSS04-2M □□□071C32	102
	14	198	1.8		17	163	2.2	99.167	GSS05-2M □□□071C32	102
	13	210	0.9		15	174	1.0	111.318	GSS04-2M □□□071C32	102
	12	229	1.6		15	188	1.9	113.667	GSS05-2M □□□071C32	102
	12	218	3.2		15	179	3.9	113.667	GSS06-2M □□□071C32	102
	11	261	1.3		14	216	1.5	125.476	GSS05-3M □□□071C32	110
	11	231	3.0		14	190	3.7	126.531	GSS06-3M □□□071C32	110
	11	253	1.4		13	209	1.7	128.333	GSS05-2M □□□071C32	102
	11	243	2.9		13	200	3.5	128.333	GSS06-2M □□□071C32	102
	10	275	1.3		12	227	1.6	137.950	GSS05-2M □□□071C32	102
	10	264	2.7		12	217	3.2	137.950	GSS06-2M □□□071C32	102

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			
	9.9	257	2.7		12	212	3.3	142.857	GSS06-3M □□□071C32	110
	9.2	315	1.1		11	261	1.3	153.708	GSS05-3M □□□071C32	110
	9.1	281	2.5		11	232	3.0	155.000	GSS06-3M □□□071C32	110
	9.1	303	1.2		11	251	1.4	155.750	GSS05-2M □□□071C32	102
	9.1	294	2.4		11	242	2.9	155.750	GSS06-2M □□□071C32	102
	8.1	330	2.1		9.8	272	2.6	174.375	GSS06-2M □□□071C32	102
	8.1	313	2.3		9.8	257	2.7	175.000	GSS06-3M □□□071C32	110
	8.0	347	1.0		9.7	287	1.2	176.313	GSS05-2M □□□071C32	102
	7.3	389	0.9		8.9	323	1.1	193.233	GSS05-3M □□□071C32	110
	7.2	351	2.0		8.8	289	2.4	194.857	GSS06-3M □□□071C32	110
	7.2	368	1.9		8.7	304	2.3	196.875	GSS06-2M □□□071C32	102
	7.1	382	0.9		8.6	317	1.1	199.063	GSS05-2M □□□071C32	102
	6.4	391	1.8		7.8	322	2.2	220.000	GSS06-3M □□□071C32	110
	6.4	418	0.9		7.7	346	1.0	222.133	GSS05-3M □□□071C32	110
	6.2	414	2.9		7.5	341	3.5	227.778	GSS07-3M □□□071C32	110
	5.9	427	1.7		7.2	352	2.0	238.700	GSS06-3M □□□071C32	110
	5.7	453	2.7		6.9	372	3.3	247.139	GSS07-3M □□□071C32	110
	5.2	474	1.5		6.4	393	1.8	269.500	GSS06-3M □□□071C32	110
	5.1	504	2.4		6.1	415	2.9	279.028	GSS07-3M □□□071C32	110
	4.5	547	1.3		5.5	454	1.6	310.689	GSS06-3M □□□071C32	110
	4.4	585	2.1		5.3	482	2.5	321.673	GSS07-3M □□□071C32	110
	4.0	605	1.2		4.9	503	1.4	350.778	GSS06-3M □□□071C32	110
	3.9	650	1.9		4.7	537	2.3	363.179	GSS07-3M □□□071C32	110
	3.7	668	1.1		4.4	556	1.3	386.467	GSS06-3M □□□071C32	110
	3.6	709	1.7		4.3	587	2.1	394.245	GSS07-3M □□□071C32	110
	3.2	737	1.0		3.9	615	1.2	436.333	GSS06-3M □□□071C32	110
	3.2	787	1.6		3.8	652	1.9	445.116	GSS07-3M □□□071C32	110
	2.9	869	1.4		3.5	721	1.7	490.403	GSS07-3M □□□071C32	110
	2.8	841	0.9		3.4	701	1.0	497.722	GSS06-3M □□□071C32	110
	2.6	963	1.3		3.1	800	1.6	553.681	GSS07-3M □□□071C32	110
	2.2	1101	1.1		2.7	916	1.4	634.639	GSS07-3M □□□071C32	110
	2.0	1218	1.0		2.4	1015	1.2	716.528	GSS07-3M □□□071C32	110
	1.7	1413	0.9		2.1	1176	1.1	833.556	GSS07-3M □□□071C32	110
	1.5	1563	0.8		1.8	1301	1.0	941.111	GSS07-3M □□□071C32	110

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			
	168	18	5.7		206	15	6.9	5.639	GSS04-2M □□□080C13	102
	123	25	5.7		150	20	6.9	7.733	GSS04-2M □□□080C13	102
	105	28	5.7		128	23	6.8	9.042	GSS04-2M □□□080C13	102
	96	32	4.8		117	26	5.8	9.897	GSS04-2M □□□080C13	102
	88	36	4.4		107	29	5.4	10.827	GSS04-2M □□□080C13	102
	77	39	4.5		94	31	5.4	12.400	GSS04-2M □□□080C13	102
	69	46	3.5		84	37	4.2	13.810	GSS04-2M □□□080C13	102
	60	50	3.5		73	41	4.3	15.869	GSS04-2M □□□080C13	102
	55	54	3.2		67	44	3.9	17.360	GSS04-2M □□□080C13	102
	47	58	3.0		57	48	3.4	20.417	GSS04-2M □□□080C13	102
	43	69	2.5		52	57	3.1	22.143	GSS04-2M □□□080C13	102
	38	72	2.4		47	59	3.0	24.800	GSS04-2M □□□080C13	102
	35	85	2.1		43	70	2.5	27.125	GSS04-2M □□□080C13	102
	30	92	1.9		37	76	2.3	31.738	GSS04-2M □□□080C13	102
	28	106	1.7		34	87	2.0	34.100	GSS04-2M □□□080C13	102
	27	113	3.1		33	92	3.8	35.306	GSS05-2M □□□080C13	102
	24	110	1.6		30	91	2.0	39.200	GSS04-2M □□□080C13	102
	24	115	3.0		30	94	3.6	39.200	GSS05-2M □□□080C13	102
	22	135	1.3		26	112	1.6	43.917	GSS04-2M □□□080C13	102
	22	140	2.5		26	115	3.1	43.917	GSS05-2M □□□080C13	102
	19	139	1.3		23	115	1.6	50.000	GSS04-2M □□□080C13	102
	19	148	2.4		23	121	2.9	50.000	GSS05-2M □□□080C13	102
	18	154	1.2		21	128	1.4	54.250	GSS04-2M □□□080C13	102
	18	163	2.2		21	133	2.6	54.250	GSS05-2M □□□080C13	102
	16	169	1.1		19	140	1.3	61.250	GSS04-2M □□□080C13	102
	16	181	2.0		19	149	2.4	61.250	GSS05-2M □□□080C13	102
	14	191	0.9		17	159	1.1	68.200	GSS04-2M □□□080C13	102
	13	211	1.7		16	174	2.0	70.611	GSS05-2M □□□080C13	102
	12	209	0.9		15	174	1.0	77.000	GSS04-2M □□□080C13	102
	12	233	1.5		15	193	1.8	79.722	GSS05-2M □□□080C13	102
	12	224	3.1		15	185	3.8	79.722	GSS06-2M □□□080C13	102
	11	260	1.4		13	215	1.7	87.833	GSS05-2M □□□080C13	102
	11	249	2.8		13	205	3.4	87.833	GSS06-2M □□□080C13	102
	9.6	287	1.3		12	238	1.5	99.167	GSS05-2M □□□080C13	102
	9.6	278	2.5		12	229	3.1	99.167	GSS06-2M □□□080C13	102
	8.4	332	1.1		10	275	1.3	113.667	GSS05-2M □□□080C13	102
	8.4	319	2.2		10	264	2.7	113.667	GSS06-2M □□□080C13	102
	7.6	375	0.9		9.2	312	1.1	125.476	GSS05-3M □□□080C13	110
	7.5	338	2.1		9.2	278	2.5	126.531	GSS06-3M □□□080C13	110
	7.4	366	1.0		9.0	303	1.2	128.333	GSS05-2M □□□080C13	102

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			
	7.4	356	2.0		9.0	294	2.4	128.333	GSS06-2M □□□080C13	102
	6.9	397	0.9		8.4	330	1.1	137.950	GSS05-2M □□□080C13	102
	6.9	385	1.8		8.4	317	2.2	137.950	GSS06-2M □□□080C13	102
	6.9	394	3.1		8.4	325	3.7	137.950	GSS07-2M □□□080C13	102
	6.7	377	1.9		8.1	311	2.3	142.857	GSS06-3M □□□080C13	110
	6.7	386	3.2		8.1	317	3.8	142.857	GSS07-3M □□□080C13	110
	6.1	411	1.7		7.5	339	2.1	155.000	GSS06-3M □□□080C13	110
	6.1	422	2.9		7.5	346	3.5	155.000	GSS07-3M □□□080C13	110
	6.1	437	0.8		7.4	364	1.0	155.750	GSS05-2M □□□080C13	102
	6.1	428	1.7		7.4	354	2.0	155.750	GSS06-2M □□□080C13	102
	6.1	440	2.8		7.4	363	3.3	155.750	GSS07-2M □□□080C13	102
	5.4	482	1.5		6.7	399	1.8	174.375	GSS06-2M □□□080C13	102
	5.4	497	2.5		6.7	408	3.0	174.375	GSS07-2M □□□080C13	102
	5.4	457	1.6		6.6	378	1.9	175.000	GSS06-3M □□□080C13	110
	5.4	470	2.6		6.6	386	3.1	175.000	GSS07-3M □□□080C13	110
	4.9	511	1.4		6.0	423	1.7	194.857	GSS06-3M □□□080C13	110
	4.8	534	1.3		5.9	443	1.6	196.875	GSS06-2M □□□080C13	102
	4.8	553	2.2		5.9	454	2.7	196.875	GSS07-2M □□□080C13	102
	4.7	546	2.3		5.7	449	2.7	201.746	GSS07-3M □□□080C13	110
	4.3	565	1.3		5.3	470	1.5	220.000	GSS06-3M □□□080C13	110
	4.2	607	2.0		5.1	500	2.5	227.778	GSS07-3M □□□080C13	110
	4.0	616	1.2		4.9	512	1.4	238.700	GSS06-3M □□□080C13	110
	3.8	662	1.9		4.7	547	2.2	247.139	GSS07-3M □□□080C13	110
	3.5	679	1.1		4.3	566	1.3	269.500	GSS06-3M □□□080C13	110
	3.4	735	1.7		4.2	608	2.0	279.028	GSS07-3M □□□080C13	110
	3.1	782	0.9		3.7	653	1.1	310.689	GSS06-3M □□□080C13	110
	3.0	846	1.5		3.6	702	1.8	321.673	GSS07-3M □□□080C13	110
	2.7	862	0.8		3.3	720	1.0	350.778	GSS06-3M □□□080C13	110
	2.6	938	1.3		3.2	779	1.6	363.179	GSS07-3M □□□080C13	110
	2.4	1020	1.2		2.9	848	1.5	394.245	GSS07-3M □□□080C13	110
	2.1	1130	1.1		2.6	940	1.3	445.116	GSS07-3M □□□080C13	110
	1.9	1246	1.0		2.4	1036	1.2	490.403	GSS07-3M □□□080C13	110
	1.7	1379	0.9		2.1	1147	1.1	553.681	GSS07-3M □□□080C13	110

Selection tables

50 Hz, 60 Hz: P_N = 0.55 kW

n_N	2630 r/min				3240 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			
	466	9.6	5.0		575	7.6	6.1	5.639	GSS04-2M □□□071C31	102
	340	13	5.0		419	11	6.1	7.733	GSS04-2M □□□071C31	102
	291	15	5.0		358	12	6.1	9.042	GSS04-2M □□□071C31	102
	266	17	5.7		327	13	7.0	9.897	GSS04-2M □□□071C31	102
	243	19	5.7		299	15	7.0	10.827	GSS04-2M □□□071C31	102
	212	21	5.0		261	17	6.1	12.400	GSS04-2M □□□071C31	102
	190	24	5.2		235	19	6.4	13.810	GSS04-2M □□□071C31	102
	166	27	5.2		204	22	6.0	15.869	GSS04-2M □□□071C31	102
	151	29	4.9		187	24	5.7	17.360	GSS04-2M □□□071C31	102
	129	32	3.6		159	26	4.2	20.417	GSS04-2M □□□071C31	102
	119	38	4.2		146	30	4.8	22.143	GSS04-2M □□□071C31	102
	106	40	3.3		131	32	3.8	24.800	GSS04-2M □□□071C31	102
	97	46	3.6		119	37	4.2	27.125	GSS04-2M □□□071C31	102
	83	51	2.8		102	41	3.2	31.738	GSS04-2M □□□071C31	102
	77	58	3.0		95	47	3.6	34.100	GSS04-2M □□□071C31	102
	67	61	2.4		83	50	2.8	39.200	GSS04-2M □□□071C31	102
	60	75	2.4		74	61	2.9	43.917	GSS04-2M □□□071C31	102
	53	78	2.1		65	64	2.4	50.000	GSS04-2M □□□071C31	102
	48	87	2.0		60	70	2.3	54.250	GSS04-2M □□□071C31	102
	43	95	1.8		53	78	2.1	61.250	GSS04-2M □□□071C31	102
	39	108	1.7		48	88	2.0	68.200	GSS04-2M □□□071C31	102
	37	114	2.7		46	92	3.1	70.611	GSS05-2M □□□071C31	102
	34	119	1.5		42	97	1.8	77.000	GSS04-2M □□□071C31	102
	33	127	2.5		41	102	2.9	79.722	GSS05-2M □□□071C31	102
	30	139	1.3		37	113	1.6	87.833	GSS04-2M □□□071C31	102
	30	142	2.4		37	115	2.7	87.833	GSS05-2M □□□071C31	102
	27	152	1.2		33	125	1.4	99.167	GSS04-2M □□□071C31	102
	27	158	2.2		33	128	2.5	99.167	GSS05-2M □□□071C31	102
	24	175	1.0		29	142	1.3	111.318	GSS04-2M □□□071C31	102
	23	185	1.9		29	150	2.3	113.667	GSS05-2M □□□071C31	102
	21	216	1.3		26	176	1.5	125.476	GSS05-3M □□□071C31	110
	21	191	0.9		26	156	1.1	125.682	GSS04-2M □□□071C31	102
	20	206	1.7		25	166	2.1	128.333	GSS05-2M □□□071C31	102
	19	225	1.6		23	182	2.0	137.950	GSS05-2M □□□071C31	102
	19	217	3.2		23	176	3.9	137.950	GSS06-2M □□□071C31	102
	19	216	0.8		23	177	1.0	139.500	GSS04-2M □□□071C31	102
	17	262	1.1		21	214	1.3	153.708	GSS05-3M □□□071C31	110
	17	232	3.0		21	188	3.7	155.000	GSS06-3M □□□071C31	110
	17	251	1.4		21	203	1.8	155.750	GSS05-2M □□□071C31	102
	17	243	2.9		21	197	3.5	155.750	GSS06-2M □□□071C31	102

Selection tables

50 Hz, 60 Hz: P_N = 0.55 kW

n_N	2630 r/min				3240 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			
	15	273	2.6		19	222	3.2	174.375	GSS06-2M □□□071C31	102
	15	259	2.7		19	210	3.3	175.000	GSS06-3M □□□071C31	110
	15	287	1.2		18	233	1.5	176.313	GSS05-2M □□□071C31	102
	14	327	1.0		17	267	1.1	193.233	GSS05-3M □□□071C31	110
	13	290	2.4		17	236	3.0	194.857	GSS06-3M □□□071C31	110
	13	305	2.3		16	248	2.8	196.875	GSS06-2M □□□071C31	102
	13	319	1.1		16	260	1.4	199.063	GSS05-2M □□□071C31	102
	12	324	2.2		15	264	2.7	220.000	GSS06-3M □□□071C31	110
	12	348	1.0		15	285	1.3	222.133	GSS05-3M □□□071C31	110
	11	353	2.0		14	288	2.5	238.700	GSS06-3M □□□071C31	110
	10	397	0.9		13	325	1.1	250.952	GSS05-3M □□□071C31	110
	9.8	392	1.8		12	321	2.2	269.500	GSS06-3M □□□071C31	110
	9.4	416	2.9		12	338	3.6	279.028	GSS07-3M □□□071C31	110
	9.3	438	0.8		11	359	1.0	283.333	GSS05-3M □□□071C31	110
	8.5	454	1.6		10	372	1.9	310.689	GSS06-3M □□□071C31	110
	8.2	485	2.5		10	394	3.1	321.673	GSS07-3M □□□071C31	110
	7.5	506	1.4		9.2	413	1.7	350.778	GSS06-3M □□□071C31	110
	7.2	538	2.3		8.9	438	2.8	363.179	GSS07-3M □□□071C31	110
	6.8	561	1.3		8.4	458	1.6	386.467	GSS06-3M □□□071C31	110
	6.7	587	2.1		8.2	482	2.5	394.245	GSS07-3M □□□071C31	110
	6.0	625	1.2		7.4	510	1.4	436.333	GSS06-3M □□□071C31	110
	5.9	654	1.9		7.3	535	2.3	445.116	GSS07-3M □□□071C31	110
	5.4	726	1.7		6.6	591	2.1	490.403	GSS07-3M □□□071C31	110
	5.3	714	1.0		6.5	585	1.2	497.722	GSS06-3M □□□071C31	110
	4.8	808	1.5		5.9	659	1.9	553.681	GSS07-3M □□□071C31	110
	4.7	792	0.9		5.8	650	1.1	561.944	GSS06-3M □□□071C31	110
	4.2	890	0.8		5.1	732	1.0	630.803	GSS06-3M □□□071C31	110
	4.1	930	1.3		5.1	760	1.6	634.639	GSS07-3M □□□071C31	110
	3.7	1033	1.2		4.5	845	1.5	716.528	GSS07-3M □□□071C31	110
	3.2	1201	1.0		3.9	986	1.3	833.556	GSS07-3M □□□071C31	110
	2.8	1331	0.9		3.4	1095	1.1	941.111	GSS07-3M □□□071C31	110
	2.6	1435	0.9		3.2	1182	1.1	1011.633	GSS07-3M □□□071C31	110

Selection tables

50 Hz, 60 Hz: P_N = 0.55 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			
	249	18	4.5		302	15	5.5	5.639	GSS04-2M □□□071C42	102
	182	25	4.5		221	20	5.5	7.733	GSS04-2M □□□071C42	102
	155	29	4.5		189	23	5.5	9.042	GSS04-2M □□□071C42	102
	142	33	4.2		172	26	5.1	9.897	GSS04-2M □□□071C42	102
	130	36	4.2		158	29	5.1	10.827	GSS04-2M □□□071C42	102
	113	39	4.2		138	32	4.8	12.400	GSS04-2M □□□071C42	102
	102	46	3.4		124	37	4.2	13.810	GSS04-2M □□□071C42	102
	89	51	3.5		107	41	4.1	15.869	GSS04-2M □□□071C42	102
	81	55	3.2		98	45	3.8	17.360	GSS04-2M □□□071C42	102
	69	60	2.5		84	49	2.9	20.417	GSS04-2M □□□071C42	102
	64	71	2.5		77	58	3.0	22.143	GSS04-2M □□□071C42	102
	57	74	2.3		69	60	2.6	24.800	GSS04-2M □□□071C42	102
	52	87	2.1		63	71	2.5	27.125	GSS04-2M □□□071C42	102
	44	94	1.9		54	77	2.2	31.738	GSS04-2M □□□071C42	102
	44	95	3.1		54	77	3.6	31.738	GSS05-2M □□□071C42	102
	41	109	1.6		50	89	2.0	34.100	GSS04-2M □□□071C42	102
	40	114	3.1		48	93	3.8	35.306	GSS05-2M □□□071C42	102
	36	114	1.6		44	93	1.9	39.200	GSS04-2M □□□071C42	102
	36	116	2.7		44	94	3.1	39.200	GSS05-2M □□□071C42	102
	32	139	1.3		39	114	1.6	43.917	GSS04-2M □□□071C42	102
	32	143	2.5		39	116	3.0	43.917	GSS05-2M □□□071C42	102
	32	140	3.2		39	114	3.9	43.917	GSS06-2M □□□071C42	102
	28	144	1.2		34	118	1.5	50.000	GSS04-2M □□□071C42	102
	28	149	2.3		34	121	2.7	50.000	GSS05-2M □□□071C42	102
	26	159	1.1		31	131	1.4	54.250	GSS04-2M □□□071C42	102
	26	165	2.2		31	134	2.5	54.250	GSS05-2M □□□071C42	102
	23	174	1.0		28	144	1.3	61.250	GSS04-2M □□□071C42	102
	23	183	1.9		28	149	2.3	61.250	GSS05-2M □□□071C42	102
	21	198	0.9		25	163	1.1	68.200	GSS04-2M □□□071C42	102
	20	215	1.7		24	176	2.0	70.611	GSS05-2M □□□071C42	102
	18	217	0.8		22	179	1.0	77.000	GSS04-2M □□□071C42	102
	18	240	1.5		21	195	1.8	79.722	GSS05-2M □□□071C42	102
	18	232	3.0		21	190	3.7	79.722	GSS06-2M □□□071C42	102
	16	267	1.3		19	219	1.6	87.833	GSS05-2M □□□071C42	102
	16	257	2.7		19	210	3.3	87.833	GSS06-2M □□□071C42	102
	14	297	1.2		17	244	1.5	99.167	GSS05-2M □□□071C42	102
	14	287	2.5		17	235	3.0	99.167	GSS06-2M □□□071C42	102
	12	343	1.0		15	282	1.3	113.667	GSS05-2M □□□071C42	102
	12	330	2.2		15	271	2.6	113.667	GSS06-2M □□□071C42	102
	11	391	0.9		14	323	1.0	125.476	GSS05-3M □□□071C42	110

Selection tables

50 Hz, 60 Hz: P_N = 0.55 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			
	11	349	2.0		14	287	2.5	126.531	GSS06-3M □□□071C42	110
	11	379	1.0		13	313	1.1	128.333	GSS05-2M □□□071C42	102
	11	368	1.9		13	302	2.3	128.333	GSS06-2M □□□071C42	102
	10	413	0.9		12	340	1.1	137.950	GSS05-2M □□□071C42	102
	10	398	1.8		12	327	2.2	137.950	GSS06-2M □□□071C42	102
	9.8	388	1.8		12	320	2.2	142.857	GSS06-3M □□□071C42	110
	9.8	397	3.1		12	325	3.7	142.857	GSS07-3M □□□071C42	110
	9.1	424	1.7		11	349	2.0	155.000	GSS06-3M □□□071C42	110
	9.1	437	2.8		11	356	3.4	155.000	GSS07-3M □□□071C42	110
	9.0	443	1.6		11	364	2.0	155.750	GSS06-2M □□□071C42	102
	8.1	498	1.4		9.8	410	1.7	174.375	GSS06-2M □□□071C42	102
	8.0	472	1.5		9.7	387	1.8	175.000	GSS06-3M □□□071C42	110
	8.0	485	2.5		9.7	397	3.1	175.000	GSS07-3M □□□071C42	110
	7.2	529	1.4		8.8	434	1.6	194.857	GSS06-3M □□□071C42	110
	7.1	553	1.3		8.7	456	1.6	196.875	GSS06-2M □□□071C42	102
	7.0	561	2.2		8.5	463	2.6	201.746	GSS07-3M □□□071C42	110
	6.4	589	1.2		7.8	484	1.5	220.000	GSS06-3M □□□071C42	110
	6.2	625	2.0		7.5	514	2.4	227.778	GSS07-3M □□□071C42	110
	5.9	642	1.1		7.1	528	1.4	238.700	GSS06-3M □□□071C42	110
	5.7	683	1.8		6.9	560	2.2	247.139	GSS07-3M □□□071C42	110
	5.2	712	1.0		6.3	588	1.2	269.500	GSS06-3M □□□071C42	110
	5.0	760	1.6		6.1	625	2.0	279.028	GSS07-3M □□□071C42	110
	4.5	821	0.9		5.5	679	1.1	310.689	GSS06-3M □□□071C42	110
	4.4	881	1.4		5.3	725	1.7	321.673	GSS07-3M □□□071C42	110
	3.9	978	1.3		4.7	806	1.5	363.179	GSS07-3M □□□071C42	110
	3.6	1066	1.2		4.3	881	1.4	394.245	GSS07-3M □□□071C42	110
	3.2	1182	1.1		3.8	978	1.3	445.116	GSS07-3M □□□071C42	110
	2.9	1304	1.0		3.5	1080	1.2	490.403	GSS07-3M □□□071C42	110
	2.5	1445	0.9		3.1	1198	1.0	553.681	GSS07-3M □□□071C42	110

Selection tables

50 Hz, 60 Hz: P_N = 0.55 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			
	165	28	3.7		202	23	4.6	5.639	GSS04-2M □□□080C33	102
	120	39	3.7		147	31	4.6	7.733	GSS04-2M □□□080C33	102
	103	43	3.7		126	35	4.5	9.042	GSS04-2M □□□080C33	102
	94	50	3.1		115	40	3.9	9.897	GSS04-2M □□□080C33	102
	86	55	2.9		105	44	3.5	10.827	GSS04-2M □□□080C33	102
	75	60	2.9		92	49	3.6	12.400	GSS04-2M □□□080C33	102
	67	70	2.3		83	57	2.8	13.810	GSS04-2M □□□080C33	102
	59	76	2.3		72	62	2.8	15.869	GSS04-2M □□□080C33	102
	54	84	2.1		66	68	2.6	17.360	GSS04-2M □□□080C33	102
	46	90	2.0		56	73	2.2	20.417	GSS04-2M □□□080C33	102
	46	91	3.2		56	74	3.6	20.417	GSS05-2M □□□080C33	102
	42	107	1.7		51	87	2.0	22.143	GSS04-2M □□□080C33	102
	42	108	3.2		51	88	4.0	22.143	GSS05-2M □□□080C33	102
	38	111	1.6		46	91	2.0	24.800	GSS04-2M □□□080C33	102
	34	130	1.4		42	106	1.7	27.125	GSS04-2M □□□080C33	102
	34	133	2.7		42	108	3.2	27.125	GSS05-2M □□□080C33	102
	29	141	1.3		36	116	1.5	31.738	GSS04-2M □□□080C33	102
	29	145	2.4		36	118	2.8	31.738	GSS05-2M □□□080C33	102
	27	162	1.1		33	133	1.3	34.100	GSS04-2M □□□080C33	102
	26	174	2.0		32	142	2.5	35.306	GSS05-2M □□□080C33	102
	26	169	3.1		32	138	3.8	35.306	GSS06-2M □□□080C33	102
	24	169	1.1		29	139	1.3	39.200	GSS04-2M □□□080C33	102
	24	177	2.0		29	144	2.4	39.200	GSS05-2M □□□080C33	102
	21	207	0.9		26	170	1.1	43.917	GSS04-2M □□□080C33	102
	21	215	1.7		26	176	2.0	43.917	GSS05-2M □□□080C33	102
	21	210	2.6		26	171	3.2	43.917	GSS06-2M □□□080C33	102
	19	213	0.8		23	175	1.0	50.000	GSS04-2M □□□080C33	102
	19	227	1.6		23	185	1.9	50.000	GSS05-2M □□□080C33	102
	19	220	3.2		23	179	3.9	50.000	GSS06-2M □□□080C33	102
	17	250	1.4		21	204	1.8	54.250	GSS05-2M □□□080C33	102
	15	277	1.3		19	227	1.6	61.250	GSS05-2M □□□080C33	102
	13	323	1.1		16	265	1.4	70.611	GSS05-2M □□□080C33	102
	13	310	2.3		16	254	2.8	70.611	GSS06-2M □□□080C33	102
	12	357	1.0		14	294	1.2	79.722	GSS05-2M □□□080C33	102
	12	346	2.1		14	284	2.5	79.722	GSS06-2M □□□080C33	102
	11	397	0.9		13	328	1.1	87.833	GSS05-2M □□□080C33	102
	11	383	1.9		13	314	2.3	87.833	GSS06-2M □□□080C33	102
	9.4	438	0.8		11	362	1.0	99.167	GSS05-2M □□□080C33	102
	9.4	427	1.7		11	351	2.0	99.167	GSS06-2M □□□080C33	102
	8.2	490	1.5		10	403	1.8	113.667	GSS06-2M □□□080C33	102

Selection tables

50 Hz, 60 Hz: P_N = 0.55 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			
	8.2	506	2.4		10	414	2.9	113.667	GSS07-2M □□□080C33	102
	7.3	518	1.4		9.0	426	1.7	126.531	GSS06-3M □□□080C33	110
	7.3	532	2.3		9.0	439	2.8	126.531	GSS07-3M □□□080C33	110
	7.2	545	1.3		8.9	449	1.6	128.333	GSS06-2M □□□080C33	102
	7.2	563	2.2		8.9	461	2.7	128.333	GSS07-2M □□□080C33	102
	6.7	590	1.2		8.3	485	1.5	137.950	GSS06-2M □□□080C33	102
	6.7	607	2.0		8.3	499	2.5	137.950	GSS07-2M □□□080C33	102
	6.5	578	1.2		8.0	475	1.5	142.857	GSS06-3M □□□080C33	110
	6.5	594	2.1		8.0	487	2.5	142.857	GSS07-3M □□□080C33	110
	6.0	630	1.1		7.4	518	1.4	155.000	GSS06-3M □□□080C33	110
	6.0	649	1.9		7.4	531	2.3	155.000	GSS07-3M □□□080C33	110
	6.0	656	1.1		7.3	540	1.3	155.750	GSS06-2M □□□080C33	102
	6.0	676	1.8		7.3	557	2.2	155.750	GSS07-2M □□□080C33	102
	5.3	737	1.0		6.5	608	1.2	174.375	GSS06-2M □□□080C33	102
	5.3	763	1.6		6.5	625	2.0	174.375	GSS07-2M □□□080C33	102
	5.3	699	1.0		6.5	577	1.2	175.000	GSS06-3M □□□080C33	110
	5.3	722	1.7		6.5	593	2.1	175.000	GSS07-3M □□□080C33	110
	4.8	780	0.9		5.9	645	1.1	194.857	GSS06-3M □□□080C33	110
	4.7	816	0.9		5.8	675	1.1	196.875	GSS06-2M □□□080C33	102
	4.7	848	1.5		5.8	696	1.8	196.875	GSS07-2M □□□080C33	102
	4.6	837	1.5		5.7	687	1.8	201.746	GSS07-3M □□□080C33	110
	4.2	863	0.8		5.2	716	1.0	220.000	GSS06-3M □□□080C33	110
	4.1	930	1.3		5.0	764	1.6	227.778	GSS07-3M □□□080C33	110
	3.8	1014	1.2		4.6	836	1.5	247.139	GSS07-3M □□□080C33	110
	3.3	1125	1.1		4.1	928	1.3	279.028	GSS07-3M □□□080C33	110
	2.9	1294	1.0		3.5	1071	1.2	321.673	GSS07-3M □□□080C33	110
	2.6	1433	0.9		3.1	1187	1.1	363.179	GSS07-3M □□□080C33	110
	2.4	1558	0.8		2.9	1291	1.0	394.245	GSS07-3M □□□080C33	110

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			
	482	13	5.5		599	10	5.2	5.639	GSS04-2M □□□080C11	102
	352	17	5.9		437	14	6.0	7.733	GSS04-2M □□□080C11	102
	301	20	5.7		374	16	6.2	9.042	GSS04-2M □□□080C11	102
	251	24	5.7		312	20	6.1	10.827	GSS04-2M □□□080C11	102
	219	28	4.7		273	22	5.4	12.400	GSS04-2M □□□080C11	102
	197	32	4.8		245	25	5.6	13.810	GSS04-2M □□□080C11	102
	171	36	3.9		213	29	4.6	15.869	GSS04-2M □□□080C11	102
	157	39	3.7		195	31	4.3	17.360	GSS04-2M □□□080C11	102
	133	42	2.8		166	34	3.2	20.417	GSS04-2M □□□080C11	102
	123	50	3.2		153	40	3.7	22.143	GSS04-2M □□□080C11	102
	110	53	2.5		136	42	2.9	24.800	GSS04-2M □□□080C11	102
	100	62	2.8		125	49	3.2	27.125	GSS04-2M □□□080C11	102
	86	67	2.1		106	54	2.5	31.738	GSS04-2M □□□080C11	102
	80	77	2.3		99	62	2.8	34.100	GSS04-2M □□□080C11	102
	69	82	1.8		86	66	2.1	39.200	GSS04-2M □□□080C11	102
	69	81	3.0		86	65	3.5	39.200	GSS05-2M □□□080C11	102
	62	100	1.8		77	80	2.2	43.917	GSS04-2M □□□080C11	102
	62	100	3.2		77	80	3.8	43.917	GSS05-2M □□□080C11	102
	54	104	1.6		68	84	1.8	50.000	GSS04-2M □□□080C11	102
	54	104	2.6		68	83	3.0	50.000	GSS05-2M □□□080C11	102
	50	115	1.5		62	93	1.8	54.250	GSS04-2M □□□080C11	102
	50	116	2.4		62	93	2.8	54.250	GSS05-2M □□□080C11	102
	44	126	1.4		55	102	1.6	61.250	GSS04-2M □□□080C11	102
	44	128	2.2		55	103	2.6	61.250	GSS05-2M □□□080C11	102
	40	143	1.3		50	116	1.5	68.200	GSS04-2M □□□080C11	102
	39	151	2.1		48	121	2.4	70.611	GSS05-2M □□□080C11	102
	35	158	1.1		44	128	1.4	77.000	GSS04-2M □□□080C11	102
	34	168	1.9		42	135	2.2	79.722	GSS05-2M □□□080C11	102
	31	184	1.0		38	148	1.2	87.833	GSS04-2M □□□080C11	102
	31	189	1.8		38	151	2.1	87.833	GSS05-2M □□□080C11	102
	27	202	0.9		34	164	1.1	99.167	GSS04-2M □□□080C11	102
	27	210	1.7		34	168	1.9	99.167	GSS05-2M □□□080C11	102
	27	207	3.2		34	166	3.8	99.167	GSS06-2M □□□080C11	102
	24	246	1.5		30	197	1.8	113.667	GSS05-2M □□□080C11	102
	24	239	2.9		30	192	3.5	113.667	GSS06-2M □□□080C11	102
	22	285	1.0		27	231	1.2	125.476	GSS05-3M □□□080C11	110
	21	253	2.8		27	204	3.3	126.531	GSS06-3M □□□080C11	110
	21	273	1.3		26	219	1.6	128.333	GSS05-2M □□□080C11	102
	21	267	2.6		26	215	3.2	128.333	GSS06-2M □□□080C11	102
	20	298	1.2		25	240	1.5	137.950	GSS05-2M □□□080C11	102

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			
	20	289	2.4		25	233	3.0	137.950	GSS06-2M □□□080C11	102
	19	282	2.5		24	228	3.0	142.857	GSS06-3M □□□080C11	110
	18	347	0.9		22	281	1.0	153.708	GSS05-3M □□□080C11	110
	18	309	2.3		22	249	2.8	155.000	GSS06-3M □□□080C11	110
	17	332	1.1		22	266	1.3	155.750	GSS05-2M □□□080C11	102
	17	323	2.2		22	260	2.7	155.750	GSS06-2M □□□080C11	102
	16	363	2.0		19	293	2.4	174.375	GSS06-2M □□□080C11	102
	16	344	2.1		19	278	2.5	175.000	GSS06-3M □□□080C11	110
	14	385	1.8		17	312	2.3	194.857	GSS06-3M □□□080C11	110
	14	405	1.8		17	327	2.2	196.875	GSS06-2M □□□080C11	102
	14	413	3.0		17	332	3.6	196.875	GSS07-2M □□□080C11	102
	13	406	3.0		17	326	3.7	201.746	GSS07-3M □□□080C11	110
	12	430	1.7		15	347	2.0	220.000	GSS06-3M □□□080C11	110
	12	454	2.7		15	366	3.3	227.778	GSS07-3M □□□080C11	110
	11	469	1.5		14	379	1.9	238.700	GSS06-3M □□□080C11	110
	11	497	2.5		14	399	3.1	247.139	GSS07-3M □□□080C11	110
	10	520	1.4		13	423	1.7	269.500	GSS06-3M □□□080C11	110
	9.7	553	2.2		12	447	2.7	279.028	GSS07-3M □□□080C11	110
	8.8	602	1.2		11	489	1.5	310.689	GSS06-3M □□□080C11	110
	8.5	645	1.9		11	519	2.4	321.673	GSS07-3M □□□080C11	110
	7.8	671	1.1		9.6	542	1.3	350.778	GSS06-3M □□□080C11	110
	7.5	715	1.7		9.3	578	2.1	363.179	GSS07-3M □□□080C11	110
	7.0	742	1.0		8.7	601	1.2	386.467	GSS06-3M □□□080C11	110
	6.9	779	1.6		8.6	635	1.9	394.245	GSS07-3M □□□080C11	110
	6.2	827	0.9		7.7	670	1.1	436.333	GSS06-3M □□□080C11	110
	6.1	868	1.4		7.6	704	1.8	445.116	GSS07-3M □□□080C11	110
	5.5	962	1.3		6.9	778	1.6	490.403	GSS07-3M □□□080C11	110
	4.9	1070	1.2		6.1	867	1.4	553.681	GSS07-3M □□□080C11	110
	4.3	1232	1.0		5.3	999	1.2	634.639	GSS07-3M □□□080C11	110
	3.8	1367	0.9		4.7	1110	1.1	716.528	GSS07-3M □□□080C11	110

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			
	250	25	4.2		303	20	5.1	5.639	GSS04-2M □□□080C32	102
	182	34	4.2		221	28	5.1	7.733	GSS04-2M □□□080C32	102
	156	39	3.8		189	32	4.4	9.042	GSS04-2M □□□080C32	102
	143	45	3.5		173	36	4.3	9.897	GSS04-2M □□□080C32	102
	130	49	3.2		158	40	3.9	10.827	GSS04-2M □□□080C32	102
	114	54	3.1		138	44	3.5	12.400	GSS04-2M □□□080C32	102
	102	63	2.5		124	51	3.1	13.810	GSS04-2M □□□080C32	102
	89	69	2.5		108	57	3.0	15.869	GSS04-2M □□□080C32	102
	81	76	2.3		99	62	2.8	17.360	GSS04-2M □□□080C32	102
	69	82	1.9		84	67	2.1	20.417	GSS04-2M □□□080C32	102
	69	81	3.0		84	66	3.5	20.417	GSS05-2M □□□080C32	102
	64	97	1.8		77	79	2.2	22.143	GSS04-2M □□□080C32	102
	57	101	1.7		69	83	1.9	24.800	GSS04-2M □□□080C32	102
	52	118	1.5		63	97	1.8	27.125	GSS04-2M □□□080C32	102
	52	120	2.9		63	98	3.4	27.125	GSS05-2M □□□080C32	102
	44	129	1.4		54	106	1.6	31.738	GSS04-2M □□□080C32	102
	44	131	2.3		54	107	2.6	31.738	GSS05-2M □□□080C32	102
	41	148	1.2		50	122	1.5	34.100	GSS04-2M □□□080C32	102
	40	157	2.3		48	128	2.8	35.306	GSS05-2M □□□080C32	102
	36	155	1.2		44	128	1.4	39.200	GSS04-2M □□□080C32	102
	36	159	2.0		44	130	2.3	39.200	GSS05-2M □□□080C32	102
	32	190	0.9		39	156	1.1	43.917	GSS04-2M □□□080C32	102
	32	196	1.8		39	160	2.2	43.917	GSS05-2M □□□080C32	102
	32	191	2.9		39	156	3.5	43.917	GSS06-2M □□□080C32	102
	28	196	0.9		34	162	1.1	50.000	GSS04-2M □□□080C32	102
	28	204	1.7		34	167	2.0	50.000	GSS05-2M □□□080C32	102
	26	217	0.8		32	179	1.0	54.250	GSS04-2M □□□080C32	102
	26	226	1.6		32	184	1.9	54.250	GSS05-2M □□□080C32	102
	23	251	1.4		28	205	1.7	61.250	GSS05-2M □□□080C32	102
	20	294	1.2		24	241	1.5	70.611	GSS05-2M □□□080C32	102
	20	285	2.5		24	234	3.0	70.611	GSS06-2M □□□080C32	102
	18	328	1.1		21	268	1.3	79.722	GSS05-2M □□□080C32	102
	18	318	2.2		21	262	2.7	79.722	GSS06-2M □□□080C32	102
	16	365	1.0		20	300	1.2	87.833	GSS05-2M □□□080C32	102
	16	352	2.0		20	290	2.4	87.833	GSS06-2M □□□080C32	102
	14	405	0.9		17	334	1.1	99.167	GSS05-2M □□□080C32	102
	14	393	1.8		17	324	2.2	99.167	GSS06-2M □□□080C32	102
	12	451	1.6		15	372	1.9	113.667	GSS06-2M □□□080C32	102
	12	462	2.7		15	379	3.2	113.667	GSS07-2M □□□080C32	102
	11	478	1.5		14	394	1.8	126.531	GSS06-3M □□□080C32	110

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			
	11	490	2.5		14	402	3.0	126.531	GSS07-3M □□□080C32	110
	11	503	1.4		13	415	1.7	128.333	GSS06-2M □□□080C32	102
	11	515	2.4		13	424	2.9	128.333	GSS07-2M □□□080C32	102
	10	544	1.3		12	449	1.6	137.950	GSS06-2M □□□080C32	102
	10	560	2.2		12	459	2.7	137.950	GSS07-2M □□□080C32	102
	9.9	530	1.4		12	439	1.6	142.857	GSS06-3M □□□080C32	110
	9.9	546	2.3		12	449	2.7	142.857	GSS07-3M □□□080C32	110
	9.1	579	1.2		11	479	1.5	155.000	GSS06-3M □□□080C32	110
	9.1	599	2.1		11	492	2.5	155.000	GSS07-3M □□□080C32	110
	9.1	605	1.2		11	500	1.4	155.750	GSS06-2M □□□080C32	102
	9.1	623	2.0		11	512	2.4	155.750	GSS07-2M □□□080C32	102
	8.1	679	1.1		9.8	561	1.3	174.375	GSS06-2M □□□080C32	102
	8.1	701	1.8		9.8	579	2.1	174.375	GSS07-2M □□□080C32	102
	8.1	645	1.1		9.8	532	1.3	175.000	GSS06-3M □□□080C32	110
	8.1	664	1.9		9.8	547	2.2	175.000	GSS07-3M □□□080C32	110
	7.2	722	1.0		8.8	595	1.2	194.857	GSS06-3M □□□080C32	110
	7.2	755	1.0		8.7	625	1.1	196.875	GSS06-2M □□□080C32	102
	7.2	782	1.6		8.7	644	1.9	196.875	GSS07-2M □□□080C32	102
	7.0	768	1.6		8.5	636	1.9	201.746	GSS07-3M □□□080C32	110
	6.4	803	0.9		7.8	664	1.1	220.000	GSS06-3M □□□080C32	110
	6.2	855	1.5		7.5	707	1.8	227.778	GSS07-3M □□□080C32	110
	5.9	876	0.8		7.2	724	1.0	238.700	GSS06-3M □□□080C32	110
	5.7	935	1.3		6.9	770	1.6	247.139	GSS07-3M □□□080C32	110
	5.1	1039	1.2		6.1	858	1.4	279.028	GSS07-3M □□□080C32	110
	4.4	1203	1.0		5.3	994	1.3	321.673	GSS07-3M □□□080C32	110
	3.9	1335	0.9		4.7	1105	1.1	363.179	GSS07-3M □□□080C32	110
	3.6	1455	0.9		4.3	1207	1.0	394.245	GSS07-3M □□□080C32	110

Selection tables

50 Hz, 60 Hz: P_N = 1.1 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			
	482	19	3.8		598	15	3.5	5.639	GSS04-2M □□□080C31	102
	352	26	4.0		436	21	4.1	7.733	GSS04-2M □□□080C31	102
	301	30	3.9		373	24	4.2	9.042	GSS04-2M □□□080C31	102
	275	33	4.1		341	27	4.2	9.897	GSS04-2M □□□080C31	102
	251	37	3.9		311	29	4.1	10.827	GSS04-2M □□□080C31	102
	219	41	3.2		272	33	3.7	12.400	GSS04-2M □□□080C31	102
	197	47	3.3		244	38	3.8	13.810	GSS04-2M □□□080C31	102
	171	53	2.7		212	43	3.1	15.869	GSS04-2M □□□080C31	102
	157	58	2.5		194	47	3.0	17.360	GSS04-2M □□□080C31	102
	133	63	1.9		165	50	2.2	20.417	GSS04-2M □□□080C31	102
	133	60	2.8		165	48	2.9	20.417	GSS05-2M □□□080C31	102
	123	74	2.2		152	60	2.5	22.143	GSS04-2M □□□080C31	102
	110	78	1.7		136	63	2.0	24.800	GSS04-2M □□□080C31	102
	100	91	1.9		124	74	2.2	27.125	GSS04-2M □□□080C31	102
	100	91	3.1		124	73	3.6	27.125	GSS05-2M □□□080C31	102
	86	100	1.5		106	81	1.7	31.738	GSS04-2M □□□080C31	102
	86	99	2.3		106	79	2.7	31.738	GSS05-2M □□□080C31	102
	80	115	1.6		99	92	1.9	34.100	GSS04-2M □□□080C31	102
	77	119	2.6		95	96	3.0	35.306	GSS05-2M □□□080C31	102
	69	121	1.2		86	97	1.4	39.200	GSS04-2M □□□080C31	102
	69	120	2.0		86	96	2.4	39.200	GSS05-2M □□□080C31	102
	62	147	1.2		77	119	1.5	43.917	GSS04-2M □□□080C31	102
	62	149	2.2		77	119	2.6	43.917	GSS05-2M □□□080C31	102
	54	153	1.1		67	124	1.2	50.000	GSS04-2M □□□080C31	102
	54	155	1.7		67	124	2.0	50.000	GSS05-2M □□□080C31	102
	50	169	1.0		62	137	1.2	54.250	GSS04-2M □□□080C31	102
	50	171	1.7		62	138	1.9	54.250	GSS05-2M □□□080C31	102
	44	186	0.9		55	151	1.1	61.250	GSS04-2M □□□080C31	102
	44	190	1.5		55	153	1.8	61.250	GSS05-2M □□□080C31	102
	40	211	0.9		49	171	1.0	68.200	GSS04-2M □□□080C31	102
	39	224	1.4		48	180	1.6	70.611	GSS05-2M □□□080C31	102
	39	221	2.8		48	178	3.2	70.611	GSS06-2M □□□080C31	102
	34	248	1.3		42	200	1.5	79.722	GSS05-2M □□□080C31	102
	34	247	2.5		42	199	2.9	79.722	GSS06-2M □□□080C31	102
	31	279	1.2		38	225	1.4	87.833	GSS05-2M □□□080C31	102
	31	274	2.4		38	221	2.8	87.833	GSS06-2M □□□080C31	102
	27	310	1.1		34	249	1.3	99.167	GSS05-2M □□□080C31	102
	27	307	2.2		34	248	2.6	99.167	GSS06-2M □□□080C31	102
	24	362	1.0		30	291	1.2	113.667	GSS05-2M □□□080C31	102
	24	354	2.0		30	286	2.4	113.667	GSS06-2M □□□080C31	102

Selection tables

50 Hz, 60 Hz: P_N = 1.1 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			
	21	375	1.9		27	304	2.3	126.531	GSS06-3M □□□080C31	110
	21	379	3.2		27	305	3.9	126.531	GSS07-3M □□□080C31	110
	21	402	0.9		26	324	1.1	128.333	GSS05-2M □□□080C31	102
	21	396	1.8		26	320	2.2	128.333	GSS06-2M □□□080C31	102
	21	401	3.0		26	323	3.7	128.333	GSS07-2M □□□080C31	102
	20	439	0.8		24	355	1.0	137.950	GSS05-2M □□□080C31	102
	20	428	1.7		24	346	2.1	137.950	GSS06-2M □□□080C31	102
	20	434	2.8		24	350	3.5	137.950	GSS07-2M □□□080C31	102
	19	418	1.7		24	339	2.1	142.857	GSS06-3M □□□080C31	110
	19	426	2.9		24	343	3.5	142.857	GSS07-3M □□□080C31	110
	18	457	1.6		22	370	1.9	155.000	GSS06-3M □□□080C31	110
	18	464	2.6		22	374	3.2	155.000	GSS07-3M □□□080C31	110
	17	477	1.5		22	387	1.8	155.750	GSS06-2M □□□080C31	102
	17	486	2.5		22	392	3.1	155.750	GSS07-2M □□□080C31	102
	16	536	1.3		19	435	1.6	174.375	GSS06-2M □□□080C31	102
	16	547	2.3		19	442	2.8	174.375	GSS07-2M □□□080C31	102
	16	509	1.4		19	413	1.7	175.000	GSS06-3M □□□080C31	110
	16	521	2.4		19	421	2.9	175.000	GSS07-3M □□□080C31	110
	14	569	1.3		17	463	1.5	194.857	GSS06-3M □□□080C31	110
	14	598	1.2		17	486	1.5	196.875	GSS06-2M □□□080C31	102
	14	612	2.0		17	495	2.5	196.875	GSS07-2M □□□080C31	102
	13	602	2.0		17	487	2.5	201.746	GSS07-3M □□□080C31	110
	12	634	1.1		15	515	1.4	220.000	GSS06-3M □□□080C31	110
	12	673	1.8		15	546	2.3	227.778	GSS07-3M □□□080C31	110
	11	692	1.0		14	562	1.3	238.700	GSS06-3M □□□080C31	110
	11	736	1.7		14	595	2.1	247.139	GSS07-3M □□□080C31	110
	10	768	0.9		13	626	1.1	269.500	GSS06-3M □□□080C31	110
	9.7	819	1.5		12	665	1.9	279.028	GSS07-3M □□□080C31	110
	8.8	887	0.8		11	724	1.0	310.689	GSS06-3M □□□080C31	110
	8.5	953	1.3		10	771	1.6	321.673	GSS07-3M □□□080C31	110
	7.5	1055	1.2		9.3	857	1.4	363.179	GSS07-3M □□□080C31	110
	6.9	1150	1.1		8.5	941	1.3	394.245	GSS07-3M □□□080C31	110
	6.1	1280	1.0		7.6	1043	1.2	445.116	GSS07-3M □□□080C31	110
	5.5	1419	0.9		6.9	1152	1.1	490.403	GSS07-3M □□□080C31	110

Selection tables

50 Hz, 60 Hz: P_N = 1.1 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			
	247	37	3.9		300	30	4.2	5.639	GSS04-2M □□□080C42	102
	180	52	3.0		219	42	3.6	7.733	GSS04-2M □□□080C42	102
	154	59	2.6		187	48	2.9	9.042	GSS04-2M □□□080C42	102
	140	67	2.4		171	54	2.9	9.897	GSS04-2M □□□080C42	102
	128	74	2.2		156	60	2.6	10.827	GSS04-2M □□□080C42	102
	112	81	2.1		136	66	2.4	12.400	GSS04-2M □□□080C42	102
	101	95	1.7		122	77	2.1	13.810	GSS04-2M □□□080C42	102
	101	94	2.9		122	76	3.5	13.810	GSS05-2M □□□080C42	102
	88	104	1.7		107	85	2.0	15.869	GSS04-2M □□□080C42	102
	88	104	2.8		107	85	3.3	15.869	GSS05-2M □□□080C42	102
	80	114	1.6		97	93	1.9	17.360	GSS04-2M □□□080C42	102
	80	114	2.7		97	93	3.1	17.360	GSS05-2M □□□080C42	102
	68	123	1.2		83	100	1.4	20.417	GSS04-2M □□□080C42	102
	68	123	2.0		83	99	2.3	20.417	GSS05-2M □□□080C42	102
	63	145	1.2		76	118	1.5	22.143	GSS04-2M □□□080C42	102
	63	146	2.3		76	119	2.6	22.143	GSS05-2M □□□080C42	102
	56	152	1.1		68	124	1.3	24.800	GSS04-2M □□□080C42	102
	56	153	1.8		68	124	2.1	24.800	GSS05-2M □□□080C42	102
	51	177	1.0		62	145	1.2	27.125	GSS04-2M □□□080C42	102
	51	180	2.0		62	146	2.3	27.125	GSS05-2M □□□080C42	102
	44	192	0.9		53	158	1.1	31.738	GSS04-2M □□□080C42	102
	44	196	1.5		53	160	1.8	31.738	GSS05-2M □□□080C42	102
	44	194	3.1		53	158	3.5	31.738	GSS06-2M □□□080C42	102
	39	235	1.5		48	191	1.9	35.306	GSS05-2M □□□080C42	102
	39	229	3.1		48	186	3.7	35.306	GSS06-2M □□□080C42	102
	36	239	1.3		43	194	1.5	39.200	GSS05-2M □□□080C42	102
	36	238	2.6		43	194	3.0	39.200	GSS06-2M □□□080C42	102
	32	283	3.1		39	230	3.8	43.271	GSS07-2M □□□080C42	102
	32	293	1.2		39	239	1.5	43.917	GSS05-2M □□□080C42	102
	32	285	2.5		39	232	3.0	43.917	GSS06-2M □□□080C42	102
	28	305	1.2		34	248	1.3	50.000	GSS05-2M □□□080C42	102
	28	303	2.3		34	247	2.6	50.000	GSS06-2M □□□080C42	102
	26	338	1.1		31	275	1.3	54.250	GSS05-2M □□□080C42	102
	26	331	2.1		31	270	2.5	54.250	GSS06-2M □□□080C42	102
	23	375	1.0		28	305	1.2	61.250	GSS05-2M □□□080C42	102
	23	370	1.9		28	302	2.3	61.250	GSS06-2M □□□080C42	102
	20	439	0.8		24	358	1.0	70.611	GSS05-2M □□□080C42	102
	20	428	1.7		24	350	2.0	70.611	GSS06-2M □□□080C42	102
	20	434	2.8		24	354	3.4	70.611	GSS07-2M □□□080C42	102
	17	477	1.5		21	391	1.8	79.722	GSS06-2M □□□080C42	102

Selection tables

50 Hz, 60 Hz: P_N = 1.1 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			
	17	487	2.5		21	397	3.1	79.722	GSS07-2M □□□080C42	102
	16	531	2.3		20	433	2.8	86.542	GSS07-2M □□□080C42	102
	16	528	1.4		19	433	1.6	87.833	GSS06-2M □□□080C42	102
	14	594	2.1		17	486	2.5	97.708	GSS07-2M □□□080C42	102
	14	589	1.2		17	483	1.5	99.167	GSS06-2M □□□080C42	102
	12	676	1.1		15	555	1.3	113.667	GSS06-2M □□□080C42	102
	12	694	1.8		15	567	2.2	113.667	GSS07-2M □□□080C42	102
	11	716	1.0		13	588	1.2	126.531	GSS06-3M □□□080C42	110
	11	736	1.7		13	602	2.1	126.531	GSS07-3M □□□080C42	110
	11	753	1.0		13	619	1.2	128.333	GSS06-2M □□□080C42	102
	11	774	1.6		13	634	1.9	128.333	GSS07-2M □□□080C42	102
	10	814	0.9		12	668	1.1	137.950	GSS06-2M □□□080C42	102
	10	840	1.5		12	686	1.8	137.950	GSS07-2M □□□080C42	102
	9.7	793	0.9		12	655	1.1	142.857	GSS06-3M □□□080C42	110
	9.7	819	1.5		12	672	1.8	142.857	GSS07-3M □□□080C42	110
	9.0	866	0.8		11	714	1.0	155.000	GSS06-3M □□□080C42	110
	9.0	899	1.4		11	735	1.7	155.000	GSS07-3M □□□080C42	110
	8.9	934	1.3		11	766	1.6	155.750	GSS07-2M □□□080C42	102
	8.0	1050	1.2		9.7	864	1.4	174.375	GSS07-2M □□□080C42	102
	7.9	996	1.3		9.7	817	1.5	175.000	GSS07-3M □□□080C42	110
	7.1	1170	1.1		8.6	960	1.3	196.875	GSS07-2M □□□080C42	102
	6.9	1150	1.1		8.4	949	1.3	201.746	GSS07-3M □□□080C42	110
	6.1	1280	1.0		7.4	1054	1.2	227.778	GSS07-3M □□□080C42	110
	5.6	1398	0.9		6.8	1147	1.1	247.139	GSS07-3M □□□080C42	110
	5.0	1554	0.8		6.1	1277	1.0	279.028	GSS07-3M □□□080C42	110

Selection tables

50 Hz, 60 Hz: P_N = 1.5 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			
	481	26	2.7		587	21	2.5	5.639	GSS04-2M □□□090C11	102
	350	36	2.9		428	29	2.9	7.733	GSS04-2M □□□090C11	102
	300	42	2.8		366	34	3.1	9.042	GSS04-2M □□□090C11	102
	274	46	3.0		334	38	3.0	9.897	GSS04-2M □□□090C11	102
	250	51	2.8		306	41	3.0	10.827	GSS04-2M □□□090C11	102
	219	57	2.3		267	47	2.7	12.400	GSS04-2M □□□090C11	102
	196	65	2.4		240	53	2.8	13.810	GSS04-2M □□□090C11	102
	171	73	2.0		209	60	2.3	15.869	GSS04-2M □□□090C11	102
	171	72	3.2		209	59	3.7	15.869	GSS05-2M □□□090C11	102
	156	80	1.9		191	66	2.1	17.360	GSS04-2M □□□090C11	102
	156	79	3.0		191	65	3.5	17.360	GSS05-2M □□□090C11	102
	133	86	1.4		162	70	1.6	20.417	GSS04-2M □□□090C11	102
	133	84	2.1		162	67	2.1	20.417	GSS05-2M □□□090C11	102
	122	102	1.6		149	84	1.8	22.143	GSS04-2M □□□090C11	102
	122	102	2.6		149	83	2.9	22.143	GSS05-2M □□□090C11	102
	109	107	1.2		133	88	1.4	24.800	GSS04-2M □□□090C11	102
	109	105	2.0		133	85	2.3	24.800	GSS05-2M □□□090C11	102
	100	125	1.4		122	103	1.6	27.125	GSS04-2M □□□090C11	102
	100	125	2.2		122	102	2.6	27.125	GSS05-2M □□□090C11	102
	85	137	1.1		104	112	1.2	31.738	GSS04-2M □□□090C11	102
	85	136	1.7		104	111	2.0	31.738	GSS05-2M □□□090C11	102
	85	138	3.0		104	113	3.2	31.738	GSS06-2M □□□090C11	102
	77	164	1.9		94	134	2.1	35.306	GSS05-2M □□□090C11	102
	69	166	0.9		84	136	1.0	39.200	GSS04-2M □□□090C11	102
	69	166	1.5		84	135	1.7	39.200	GSS05-2M □□□090C11	102
	69	168	2.8		84	138	3.0	39.200	GSS06-2M □□□090C11	102
	62	205	1.6		75	167	1.9	43.917	GSS05-2M □□□090C11	102
	62	201	3.2		75	164	3.7	43.917	GSS06-2M □□□090C11	102
	54	213	1.3		66	173	1.5	50.000	GSS05-2M □□□090C11	102
	54	215	2.5		66	176	2.8	50.000	GSS06-2M □□□090C11	102
	50	236	1.2		61	192	1.4	54.250	GSS05-2M □□□090C11	102
	50	235	2.4		61	192	2.7	54.250	GSS06-2M □□□090C11	102
	44	261	1.1		54	213	1.3	61.250	GSS05-2M □□□090C11	102
	44	263	2.2		54	215	2.5	61.250	GSS06-2M □□□090C11	102
	38	308	1.0		47	251	1.2	70.611	GSS05-2M □□□090C11	102
	38	305	2.0		47	249	2.3	70.611	GSS06-2M □□□090C11	102
	34	341	0.9		42	279	1.1	79.722	GSS05-2M □□□090C11	102
	34	341	1.9		42	280	2.1	79.722	GSS06-2M □□□090C11	102
	31	376	3.2		38	307	3.7	86.542	GSS07-2M □□□090C11	102
	31	383	0.9		38	313	1.0	87.833	GSS05-2M □□□090C11	102

Selection tables

50 Hz, 60 Hz: P_N = 1.5 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			
	31	379	1.8		38	310	2.0	87.833	GSS06-2M □□□090C11	102
	28	422	2.9		34	345	3.3	97.708	GSS07-2M □□□090C11	102
	27	425	0.8		33	348	0.9	99.167	GSS05-2M □□□090C11	102
	27	423	1.6		33	347	1.8	99.167	GSS06-2M □□□090C11	102
	24	488	1.5		29	401	1.7	113.667	GSS06-2M □□□090C11	102
	24	494	2.5		29	405	3.0	113.667	GSS07-2M □□□090C11	102
	21	517	1.4		26	425	1.6	126.531	GSS06-3M □□□090C11	110
	21	525	2.3		26	430	2.8	126.531	GSS07-3M □□□090C11	110
	21	545	1.3		26	448	1.6	128.333	GSS06-2M □□□090C11	102
	21	554	2.2		26	454	2.7	128.333	GSS07-2M □□□090C11	102
	20	588	1.2		24	484	1.5	137.950	GSS06-2M □□□090C11	102
	20	599	2.1		24	491	2.5	137.950	GSS07-2M □□□090C11	102
	19	576	1.2		23	475	1.5	142.857	GSS06-3M □□□090C11	110
	19	589	2.1		23	482	2.5	142.857	GSS07-3M □□□090C11	110
	17	629	1.1		21	518	1.4	155.000	GSS06-3M □□□090C11	110
	17	641	1.9		21	526	2.3	155.000	GSS07-3M □□□090C11	110
	17	657	1.1		21	541	1.3	155.750	GSS06-2M □□□090C11	102
	17	671	1.8		21	551	2.2	155.750	GSS07-2M □□□090C11	102
	16	754	1.6		19	619	2.0	174.375	GSS07-2M □□□090C11	102
	15	700	1.0		19	577	1.2	175.000	GSS06-3M □□□090C11	110
	15	718	1.7		19	590	2.1	175.000	GSS07-3M □□□090C11	110
	14	843	1.5		17	694	1.8	196.875	GSS07-2M □□□090C11	102
	13	830	1.5		16	682	1.8	201.746	GSS07-3M □□□090C11	110
	12	927	1.3		15	764	1.6	227.778	GSS07-3M □□□090C11	110
	11	1013	1.2		13	832	1.5	247.139	GSS07-3M □□□090C11	110
	9.7	1127	1.1		12	929	1.3	279.028	GSS07-3M □□□090C11	110
	8.4	1311	1.0		10	1077	1.2	321.673	GSS07-3M □□□090C11	110
	7.5	1451	0.9		9.1	1196	1.0	363.179	GSS07-3M □□□090C11	110

Selection tables

50 Hz, 60 Hz: P_N = 1.5 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			
	247	51	2.9		301	41	3.1	5.639	GSS04-2M □□□090C32	102
	180	70	2.2		219	57	2.7	7.733	GSS04-2M □□□090C32	102
	154	80	1.9		188	66	2.2	9.042	GSS04-2M □□□090C32	102
	154	79	3.1		188	65	3.5	9.042	GSS05-2M □□□090C32	102
	141	91	1.8		171	74	2.1	9.897	GSS04-2M □□□090C32	102
	141	90	2.9		171	73	3.6	9.897	GSS05-2M □□□090C32	102
	129	100	1.6		157	81	2.0	10.827	GSS04-2M □□□090C32	102
	129	99	2.7		157	80	3.3	10.827	GSS05-2M □□□090C32	102
	113	110	1.5		137	90	1.8	12.400	GSS04-2M □□□090C32	102
	113	110	2.5		137	90	2.9	12.400	GSS05-2M □□□090C32	102
	101	128	1.3		123	104	1.5	13.810	GSS04-2M □□□090C32	102
	101	127	2.1		123	104	2.6	13.810	GSS05-2M □□□090C32	102
	88	141	1.3		107	116	1.5	15.869	GSS04-2M □□□090C32	102
	88	141	2.1		107	115	2.4	15.869	GSS05-2M □□□090C32	102
	80	154	1.2		98	126	1.4	17.360	GSS04-2M □□□090C32	102
	80	155	2.0		98	126	2.3	17.360	GSS05-2M □□□090C32	102
	68	166	0.9		83	136	1.1	20.417	GSS04-2M □□□090C32	102
	68	166	1.5		83	135	1.7	20.417	GSS05-2M □□□090C32	102
	63	196	0.9		77	161	1.1	22.143	GSS04-2M □□□090C32	102
	63	198	1.7		77	162	1.9	22.143	GSS05-2M □□□090C32	102
	56	205	0.8		69	168	1.0	24.800	GSS04-2M □□□090C32	102
	56	207	1.3		68	169	1.5	24.800	GSS05-2M □□□090C32	102
	51	243	1.5		63	199	1.7	27.125	GSS05-2M □□□090C32	102
	51	239	2.9		63	195	3.4	27.125	GSS06-2M □□□090C32	102
	44	265	1.1		53	217	1.3	31.738	GSS05-2M □□□090C32	102
	44	263	2.3		53	216	2.6	31.738	GSS06-2M □□□090C32	102
	40	318	1.1		48	260	1.4	35.306	GSS05-2M □□□090C32	102
	40	311	2.3		48	255	2.8	35.306	GSS06-2M □□□090C32	102
	36	322	1.0		43	264	1.1	39.200	GSS05-2M □□□090C32	102
	36	322	2.0		43	265	2.2	39.200	GSS06-2M □□□090C32	102
	32	382	2.9		39	312	3.5	43.271	GSS07-2M □□□090C32	102
	32	396	0.9		39	324	1.1	43.917	GSS05-2M □□□090C32	102
	32	386	1.8		39	317	2.2	43.917	GSS06-2M □□□090C32	102
	28	412	0.9		34	337	1.0	50.000	GSS05-2M □□□090C32	102
	28	410	1.7		34	337	1.9	50.000	GSS06-2M □□□090C32	102
	28	414	2.9		34	339	3.4	50.000	GSS07-2M □□□090C32	102
	26	447	1.6		31	368	1.9	54.250	GSS06-2M □□□090C32	102
	23	500	1.4		28	411	1.7	61.250	GSS06-2M □□□090C32	102
	20	578	1.2		24	476	1.5	70.611	GSS06-2M □□□090C32	102
	20	588	2.1		24	483	2.5	70.611	GSS07-2M □□□090C32	102

Selection tables

50 Hz, 60 Hz: P_N = 1.5 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			
	18	645	1.1		21	532	1.3	79.722	GSS06-2M □□□090C32	102
	18	659	1.9		21	542	2.3	79.722	GSS07-2M □□□090C32	102
	16	719	1.7		20	591	2.1	86.542	GSS07-2M □□□090C32	102
	16	713	1.0		19	589	1.2	87.833	GSS06-2M □□□090C32	102
	14	804	1.5		17	662	1.9	97.708	GSS07-2M □□□090C32	102
	14	794	0.9		17	657	1.1	99.167	GSS06-2M □□□090C32	102
	12	938	1.3		15	772	1.6	113.667	GSS07-2M □□□090C32	102
	11	995	1.3		13	819	1.5	126.531	GSS07-3M □□□090C32	110
	11	1046	1.2		13	863	1.4	128.333	GSS07-2M □□□090C32	102
	10	1134	1.1		12	933	1.3	137.950	GSS07-2M □□□090C32	102
	9.8	1107	1.1		12	914	1.4	142.857	GSS07-3M □□□090C32	110
	9.0	1214	1.0		11	999	1.2	155.000	GSS07-3M □□□090C32	110
	9.0	1260	1.0		11	1040	1.2	155.750	GSS07-2M □□□090C32	102
	8.0	1417	0.9		9.7	1174	1.1	174.375	GSS07-2M □□□090C32	102
	8.0	1345	0.9		9.7	1111	1.1	175.000	GSS07-3M □□□090C32	110
	7.0	1551	0.8		8.5	1289	1.0	201.746	GSS07-3M □□□090C32	110

Selection tables

50 Hz, 60 Hz: P_N = 2.2 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			
	484	38	1.9		589	31	1.7	5.639	GSS04-2M □□□090C31	102
	353	53	2.0		429	43	2.0	7.733	GSS04-2M □□□090C31	102
	353	53	3.2		429	43	3.4	7.733	GSS05-2M □□□090C31	102
	302	61	1.9		367	50	2.1	9.042	GSS04-2M □□□090C31	102
	302	60	2.7		367	48	2.6	9.042	GSS05-2M □□□090C31	102
	276	68	2.1		335	56	2.1	9.897	GSS04-2M □□□090C31	102
	276	68	2.9		335	55	3.1	9.897	GSS05-2M □□□090C31	102
	252	75	1.9		307	61	2.0	10.827	GSS04-2M □□□090C31	102
	252	74	2.9		307	61	3.1	10.827	GSS05-2M □□□090C31	102
	220	84	1.6		268	69	1.8	12.400	GSS04-2M □□□090C31	102
	220	83	2.6		268	67	2.7	12.400	GSS05-2M □□□090C31	102
	198	96	1.6		240	78	1.9	13.810	GSS04-2M □□□090C31	102
	198	95	2.7		240	78	2.8	13.810	GSS05-2M □□□090C31	102
	172	108	1.3		209	89	1.5	15.869	GSS04-2M □□□090C31	102
	172	107	2.2		209	87	2.5	15.869	GSS05-2M □□□090C31	102
	157	118	1.3		191	97	1.5	17.360	GSS04-2M □□□090C31	102
	157	117	2.1		191	96	2.4	17.360	GSS05-2M □□□090C31	102
	134	126	0.9		163	104	1.1	20.417	GSS04-2M □□□090C31	102
	134	123	1.4		163	99	1.4	20.417	GSS05-2M □□□090C31	102
	123	150	1.1		150	124	1.2	22.143	GSS04-2M □□□090C31	102
	123	150	1.8		150	123	2.0	22.143	GSS05-2M □□□090C31	102
	123	149	3.2		150	123	3.4	22.143	GSS06-2M □□□090C31	102
	110	157	0.9		134	129	1.0	24.800	GSS04-2M □□□090C31	102
	110	155	1.4		134	126	1.6	24.800	GSS05-2M □□□090C31	102
	101	183	0.9		122	151	1.1	27.125	GSS04-2M □□□090C31	102
	101	184	1.5		122	151	1.8	27.125	GSS05-2M □□□090C31	102
	101	183	3.0		122	150	3.2	27.125	GSS06-2M □□□090C31	102
	86	200	1.2		105	163	1.3	31.738	GSS05-2M □□□090C31	102
	86	202	2.0		105	167	2.2	31.738	GSS06-2M □□□090C31	102
	77	240	1.3		94	197	1.5	35.306	GSS05-2M □□□090C31	102
	77	238	2.6		94	196	2.9	35.306	GSS06-2M □□□090C31	102
	70	243	1.0		85	198	1.2	39.200	GSS05-2M □□□090C31	102
	70	248	1.9		85	204	2.0	39.200	GSS06-2M □□□090C31	102
	62	300	1.1		76	246	1.3	43.917	GSS05-2M □□□090C31	102
	62	296	2.2		76	243	2.5	43.917	GSS06-2M □□□090C31	102
	55	311	0.9		66	255	1.0	50.000	GSS05-2M □□□090C31	102
	55	315	1.7		66	260	1.9	50.000	GSS06-2M □□□090C31	102
	55	318	2.7		66	261	2.9	50.000	GSS07-2M □□□090C31	102
	50	345	0.8		61	283	1.0	54.250	GSS05-2M □□□090C31	102
	50	345	1.7		61	284	1.9	54.250	GSS06-2M □□□090C31	102

Selection tables

50 Hz, 60 Hz: P_N = 2.2 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			
	45	386	1.5		54	318	1.7	61.250	GSS06-2M □□□090C31	102
	39	447	1.4		47	368	1.6	70.611	GSS06-2M □□□090C31	102
	39	452	2.5		47	372	2.7	70.611	GSS07-2M □□□090C31	102
	34	500	1.3		42	412	1.4	79.722	GSS06-2M □□□090C31	102
	34	507	2.3		42	416	2.6	79.722	GSS07-2M □□□090C31	102
	32	554	2.2		38	456	2.5	86.542	GSS07-2M □□□090C31	102
	31	555	1.2		38	457	1.4	87.833	GSS06-2M □□□090C31	102
	28	620	2.0		34	510	2.3	97.708	GSS07-2M □□□090C31	102
	28	620	1.1		33	511	1.3	99.167	GSS06-2M □□□090C31	102
	24	714	1.0		29	590	1.2	113.667	GSS06-2M □□□090C31	102
	24	727	1.7		29	598	2.1	113.667	GSS07-2M □□□090C31	102
	22	757	1.0		26	625	1.1	126.531	GSS06-3M □□□090C31	110
	22	771	1.6		26	635	1.9	126.531	GSS07-3M □□□090C31	110
	21	797	0.9		26	659	1.1	128.333	GSS06-2M □□□090C31	102
	21	814	1.5		26	670	1.8	128.333	GSS07-2M □□□090C31	102
	20	861	0.8		24	712	1.0	137.950	GSS06-2M □□□090C31	102
	20	879	1.4		24	725	1.7	137.950	GSS07-2M □□□090C31	102
	19	843	0.9		23	698	1.0	142.857	GSS06-3M □□□090C31	110
	19	864	1.4		23	711	1.7	142.857	GSS07-3M □□□090C31	110
	18	940	1.3		21	776	1.6	155.000	GSS07-3M □□□090C31	110
	18	984	1.3		21	812	1.5	155.750	GSS07-2M □□□090C31	102
	16	1104	1.1		19	912	1.4	174.375	GSS07-2M □□□090C31	102
	16	1053	1.2		19	870	1.4	175.000	GSS07-3M □□□090C31	110
	14	1235	1.0		17	1021	1.2	196.875	GSS07-2M □□□090C31	102
	14	1216	1.0		16	1004	1.2	201.746	GSS07-3M □□□090C31	110
	12	1357	0.9		15	1124	1.1	227.778	GSS07-3M □□□090C31	110
	11	1481	0.8		13	1224	1.0	247.139	GSS07-3M □□□090C31	110

Selection tables

50 Hz, 60 Hz: P_N = 2.2 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			
	255	73	3.0		309	60	3.2	5.639	GSS05-2M □□□100C12	102
	186	101	2.6		225	83	2.9	7.733	GSS05-2M □□□100C12	102
	159	115	2.1		192	95	2.4	9.042	GSS05-2M □□□100C12	102
	146	131	2.1		176	107	2.5	9.897	GSS05-2M □□□100C12	102
	133	143	1.9		161	118	2.3	10.827	GSS05-2M □□□100C12	102
	116	159	1.7		140	131	2.0	12.400	GSS05-2M □□□100C12	102
	116	158	3.2		140	130	3.4	12.400	GSS06-2M □□□100C12	102
	104	184	1.5		126	151	1.8	13.810	GSS05-2M □□□100C12	102
	101	189	2.7		122	155	3.3	14.286	GSS06-2M □□□100C12	102
	91	204	1.5		110	168	1.7	15.869	GSS05-2M □□□100C12	102
	91	202	2.9		110	167	3.2	15.869	GSS06-2M □□□100C12	102
	83	224	1.4		100	184	1.6	17.360	GSS05-2M □□□100C12	102
	83	222	2.8		100	183	3.1	17.360	GSS06-2M □□□100C12	102
	71	240	1.1		85	197	1.2	20.417	GSS05-2M □□□100C12	102
	71	244	2.0		85	202	2.1	20.417	GSS06-2M □□□100C12	102
	65	286	1.2		79	236	1.3	22.143	GSS05-2M □□□100C12	102
	65	282	2.3		79	233	2.7	22.143	GSS06-2M □□□100C12	102
	58	298	0.9		70	245	1.1	24.800	GSS05-2M □□□100C12	102
	58	298	1.9		70	247	2.0	24.800	GSS06-2M □□□100C12	102
	53	351	1.0		64	289	1.2	27.125	GSS05-2M □□□100C12	102
	53	346	2.0		64	285	2.3	27.125	GSS06-2M □□□100C12	102
	47	376	2.8		56	310	2.9	31.000	GSS07-2M □□□100C12	102
	45	383	0.8		55	315	0.9	31.738	GSS05-2M □□□100C12	102
	45	381	1.6		55	315	1.8	31.738	GSS06-2M □□□100C12	102
	41	450	1.6		49	372	1.9	35.306	GSS06-2M □□□100C12	102
	41	450	2.7		49	371	3.3	35.306	GSS07-2M □□□100C12	102
	37	466	1.4		44	386	1.5	39.200	GSS06-2M □□□100C12	102
	37	472	2.4		44	389	2.7	39.200	GSS07-2M □□□100C12	102
	33	552	2.2		40	456	2.7	43.271	GSS07-2M □□□100C12	102
	33	558	1.3		40	462	1.5	43.917	GSS06-2M □□□100C12	102
	29	592	1.2		35	490	1.3	50.000	GSS06-2M □□□100C12	102
	29	601	2.1		35	496	2.4	50.000	GSS07-2M □□□100C12	102
	27	646	1.1		32	535	1.3	54.250	GSS06-2M □□□100C12	102
	27	657	1.9		32	543	2.3	54.250	GSS07-2M □□□100C12	102
	24	722	1.0		28	598	1.2	61.250	GSS06-2M □□□100C12	102
	24	736	1.7		28	608	2.0	61.250	GSS07-2M □□□100C12	102
	20	834	0.9		25	693	1.0	70.611	GSS06-2M □□□100C12	102
	20	851	1.5		25	705	1.8	70.611	GSS07-2M □□□100C12	102
	18	954	1.3		22	790	1.6	79.722	GSS07-2M □□□100C12	102
	17	1038	1.2		20	861	1.4	86.542	GSS07-2M □□□100C12	102

Selection tables

50 Hz, 60 Hz: P_N = 2.2 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			
	15	1161	1.1		18	964	1.3	97.708	GSS07-2M □□□100C12	102
	13	1354	0.9		15	1123	1.1	113.667	GSS07-2M □□□100C12	102
	11	1436	0.9		14	1190	1.0	126.531	GSS07-3M □□□100C12	110
	11	1509	0.8		14	1254	1.0	128.333	GSS07-2M □□□100C12	102

Selection tables

50 Hz, 60 Hz: P_N = 3.0 kW

n_N	2890 r/min				3510 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			
	513	49	2.7		622	40	2.9	5.639	GSS05-2M □□□100C31	102
	374	68	2.5		454	56	2.6	7.733	GSS05-2M □□□100C31	102
	320	77	2.1		388	63	2.0	9.042	GSS05-2M □□□100C31	102
	320	79	3.2		388	64	3.4	9.042	GSS06-2M □□□100C31	102
	292	88	2.3		355	72	2.4	9.897	GSS05-2M □□□100C31	102
	267	96	2.2		324	79	2.4	10.827	GSS05-2M □□□100C31	102
	233	107	2.0		283	88	2.1	12.400	GSS05-2M □□□100C31	102
	233	108	2.9		283	89	3.1	12.400	GSS06-2M □□□100C31	102
	209	124	2.1		254	101	2.2	13.810	GSS05-2M □□□100C31	102
	182	138	1.7		221	113	1.9	15.869	GSS05-2M □□□100C31	102
	182	139	2.7		221	114	2.9	15.869	GSS06-2M □□□100C31	102
	166	151	1.6		202	124	1.8	17.360	GSS05-2M □□□100C31	102
	166	152	2.6		202	125	2.8	17.360	GSS06-2M □□□100C31	102
	142	159	1.1		172	128	1.1	20.417	GSS05-2M □□□100C31	102
	142	166	1.8		172	136	1.9	20.417	GSS06-2M □□□100C31	102
	131	194	1.4		159	159	1.6	22.143	GSS05-2M □□□100C31	102
	131	194	2.5		159	159	2.6	22.143	GSS06-2M □□□100C31	102
	117	200	1.1		142	163	1.2	24.800	GSS05-2M □□□100C31	102
	117	205	1.7		142	169	1.8	24.800	GSS06-2M □□□100C31	102
	107	238	1.2		129	196	1.4	27.125	GSS05-2M □□□100C31	102
	107	237	2.3		129	195	2.5	27.125	GSS06-2M □□□100C31	102
	93	258	2.4		113	212	2.6	31.000	GSS07-2M □□□100C31	102
	91	258	0.9		111	211	1.0	31.738	GSS05-2M □□□100C31	102
	91	262	1.6		111	216	1.7	31.738	GSS06-2M □□□100C31	102
	82	309	2.0		99	254	2.3	35.306	GSS06-2M □□□100C31	102
	82	308	3.2		99	253	3.4	35.306	GSS07-2M □□□100C31	102
	74	321	1.5		90	264	1.6	39.200	GSS06-2M □□□100C31	102
	74	324	2.3		90	266	2.4	39.200	GSS07-2M □□□100C31	102
	67	376	3.1		81	310	3.3	43.271	GSS07-2M □□□100C31	102
	66	383	1.7		80	316	2.0	43.917	GSS06-2M □□□100C31	102
	58	408	1.3		70	336	1.5	50.000	GSS06-2M □□□100C31	102
	58	413	2.1		70	340	2.2	50.000	GSS07-2M □□□100C31	102
	53	446	1.3		65	368	1.5	54.250	GSS06-2M □□□100C31	102
	53	451	2.1		65	372	2.2	54.250	GSS07-2M □□□100C31	102
	47	499	1.2		57	412	1.3	61.250	GSS06-2M □□□100C31	102
	47	505	2.0		57	416	2.1	61.250	GSS07-2M □□□100C31	102
	41	578	1.1		50	477	1.2	70.611	GSS06-2M □□□100C31	102
	41	587	2.0		50	483	2.1	70.611	GSS07-2M □□□100C31	102
	36	646	1.0		44	534	1.1	79.722	GSS06-2M □□□100C31	102
	36	657	1.8		44	541	2.0	79.722	GSS07-2M □□□100C31	102

Selection tables

50 Hz, 60 Hz: P_N = 3.0 kW

n_N	2890 r/min				3510 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	718	1.7		41	592	2.0	86.542	GSS07-2M □□□100C31	102
	33	717	0.9		40	592	1.1	87.833	GSS06-2M □□□100C31	102
	30	804	1.5		36	662	1.8	97.708	GSS07-2M □□□100C31	102
	29	801	0.9		35	662	1.0	99.167	GSS06-2M □□□100C31	102
	25	940	1.3		31	776	1.6	113.667	GSS07-2M □□□100C31	102
	23	997	1.2		28	824	1.5	126.531	GSS07-3M □□□100C31	110
	23	1053	1.2		27	868	1.4	128.333	GSS07-2M □□□100C31	102
	21	1136	1.1		25	939	1.3	137.950	GSS07-2M □□□100C31	102
	20	1117	1.1		25	922	1.3	142.857	GSS07-3M □□□100C31	110
	19	1215	1.0		23	1005	1.2	155.000	GSS07-3M □□□100C31	110
	19	1272	1.0		23	1052	1.2	155.750	GSS07-2M □□□100C31	102
	17	1361	0.9		20	1126	1.1	175.000	GSS07-3M □□□100C31	110

Selection tables

50 Hz, 60 Hz: P_N = 3.0 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			
	254	102	2.2		307	83	2.3	5.639	GSS05-2M □□□100C32	102
	185	140	1.9		224	115	2.1	7.733	GSS05-2M □□□100C32	102
	158	159	1.6		191	130	1.8	9.042	GSS05-2M □□□100C32	102
	158	160	2.6		191	131	2.7	9.042	GSS06-2M □□□100C32	102
	145	181	1.5		175	148	1.8	9.897	GSS05-2M □□□100C32	102
	140	185	2.8		169	151	3.3	10.238	GSS06-2M □□□100C32	102
	132	198	1.4		160	162	1.7	10.827	GSS05-2M □□□100C32	102
	128	203	2.5		155	166	3.1	11.200	GSS06-2M □□□100C32	102
	115	220	1.3		140	180	1.4	12.400	GSS05-2M □□□100C32	102
	115	219	2.4		140	180	2.5	12.400	GSS06-2M □□□100C32	102
	104	254	1.1		125	208	1.3	13.810	GSS05-2M □□□100C32	102
	100	261	2.0		121	214	2.4	14.286	GSS06-2M □□□100C32	102
	90	282	1.1		109	231	1.2	15.869	GSS05-2M □□□100C32	102
	90	281	2.1		109	230	2.3	15.869	GSS06-2M □□□100C32	102
	82	309	1.0		100	253	1.2	17.360	GSS05-2M □□□100C32	102
	82	307	2.0		100	252	2.3	17.360	GSS06-2M □□□100C32	102
	82	306	3.2		100	251	3.4	17.360	GSS07-2M □□□100C32	102
	70	337	1.4		85	278	1.5	20.417	GSS06-2M □□□100C32	102
	65	394	0.9		78	324	1.0	22.143	GSS05-2M □□□100C32	102
	65	391	1.7		78	321	2.0	22.143	GSS06-2M □□□100C32	102
	65	389	3.0		78	320	3.2	22.143	GSS07-2M □□□100C32	102
	58	412	1.4		70	339	1.5	24.800	GSS06-2M □□□100C32	102
	53	478	1.5		64	393	1.7	27.125	GSS06-2M □□□100C32	102
	53	478	2.6		64	392	3.1	27.125	GSS07-2M □□□100C32	102
	46	521	2.0		56	428	2.1	31.000	GSS07-2M □□□100C32	102
	45	525	1.2		55	433	1.3	31.738	GSS06-2M □□□100C32	102
	41	621	1.2		49	511	1.4	35.306	GSS06-2M □□□100C32	102
	41	624	2.0		49	512	2.4	35.306	GSS07-2M □□□100C32	102
	37	643	1.0		44	530	1.1	39.200	GSS06-2M □□□100C32	102
	37	653	1.8		44	536	2.0	39.200	GSS07-2M □□□100C32	102
	33	764	1.6		40	628	2.0	43.271	GSS07-2M □□□100C32	102
	33	770	0.9		39	635	1.1	43.917	GSS06-2M □□□100C32	102
	29	816	0.8		35	673	1.0	50.000	GSS06-2M □□□100C32	102
	29	831	1.5		35	684	1.7	50.000	GSS07-2M □□□100C32	102
	26	891	0.8		32	735	0.9	54.250	GSS06-2M □□□100C32	102
	26	908	1.4		32	748	1.7	54.250	GSS07-2M □□□100C32	102
	23	1016	1.2		28	836	1.5	61.250	GSS07-2M □□□100C32	102
	20	1175	1.1		25	969	1.3	70.611	GSS07-2M □□□100C32	102
	18	1315	1.0		22	1086	1.1	79.722	GSS07-2M □□□100C32	102
	17	1432	0.9		20	1182	1.1	86.542	GSS07-2M □□□100C32	102

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			
	504	68	2.0		610	55	2.1	5.639	GSS05-2M □□□100C41	102
	487	70	2.7		590	58	2.5	5.833	GSS06-2M □□□100C41	102
	367	93	1.8		445	77	1.9	7.733	GSS05-2M □□□100C41	102
	355	96	2.7		430	79	2.7	8.000	GSS06-2M □□□100C41	102
	314	105	1.5		380	86	1.5	9.042	GSS05-2M □□□100C41	102
	314	108	2.3		380	89	2.5	9.042	GSS06-2M □□□100C41	102
	287	120	1.7		348	99	1.8	9.897	GSS05-2M □□□100C41	102
	277	124	2.6		336	102	2.7	10.238	GSS06-2M □□□100C41	102
	262	132	1.6		318	108	1.7	10.827	GSS05-2M □□□100C41	102
	254	136	2.5		307	112	2.7	11.200	GSS06-2M □□□100C41	102
	229	146	1.5		277	120	1.5	12.400	GSS05-2M □□□100C41	102
	229	148	2.1		277	122	2.3	12.400	GSS06-2M □□□100C41	102
	206	169	1.5		249	139	1.6	13.810	GSS05-2M □□□100C41	102
	199	174	2.6		241	143	2.5	14.286	GSS06-2M □□□100C41	102
	183	185	3.0		222	152	3.2	15.500	GSS07-2M □□□100C41	102
	179	188	1.3		217	155	1.4	15.869	GSS05-2M □□□100C41	102
	179	190	2.0		217	157	2.1	15.869	GSS06-2M □□□100C41	102
	164	206	1.2		198	170	1.3	17.360	GSS05-2M □□□100C41	102
	164	208	1.9		198	171	2.1	17.360	GSS06-2M □□□100C41	102
	164	207	2.9		198	171	3.0	17.360	GSS07-2M □□□100C41	102
	139	216	0.8		168	175	0.8	20.417	GSS05-2M □□□100C41	102
	139	227	1.3		168	187	1.4	20.417	GSS06-2M □□□100C41	102
	128	264	1.0		155	217	1.1	22.143	GSS05-2M □□□100C41	102
	128	265	1.8		155	219	1.9	22.143	GSS06-2M □□□100C41	102
	128	264	2.7		155	218	2.9	22.143	GSS07-2M □□□100C41	102
	115	280	1.2		139	231	1.3	24.800	GSS06-2M □□□100C41	102
	105	324	0.9		127	267	1.0	27.125	GSS05-2M □□□100C41	102
	105	324	1.7		127	268	1.8	27.125	GSS06-2M □□□100C41	102
	105	324	2.6		127	267	2.7	27.125	GSS07-2M □□□100C41	102
	92	352	1.8		111	290	1.9	31.000	GSS07-2M □□□100C41	102
	89	358	1.2		108	296	1.2	31.738	GSS06-2M □□□100C41	102
	80	421	1.5		97	348	1.7	35.306	GSS06-2M □□□100C41	102
	80	421	2.4		97	348	2.5	35.306	GSS07-2M □□□100C41	102
	72	437	1.1		88	361	1.2	39.200	GSS06-2M □□□100C41	102
	72	442	1.7		88	365	1.8	39.200	GSS07-2M □□□100C41	102
	66	515	2.3		79	426	2.4	43.271	GSS07-2M □□□100C41	102
	65	523	1.3		78	432	1.4	43.917	GSS06-2M □□□100C41	102
	57	556	1.0		69	460	1.1	50.000	GSS06-2M □□□100C41	102
	57	563	1.6		69	465	1.6	50.000	GSS07-2M □□□100C41	102
	52	607	0.9		63	502	1.1	54.250	GSS06-2M □□□100C41	102

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			
	52	616	1.6		63	509	1.6	54.250	GSS07-2M □□□100C41	102
	46	680	0.9		56	562	1.0	61.250	GSS06-2M □□□100C41	102
	46	689	1.5		56	570	1.6	61.250	GSS07-2M □□□100C41	102
	40	787	0.8		49	651	0.9	70.611	GSS06-2M □□□100C41	102
	40	801	1.4		49	662	1.5	70.611	GSS07-2M □□□100C41	102
	36	896	1.3		43	740	1.5	79.722	GSS07-2M □□□100C41	102
	33	980	1.3		40	810	1.4	86.542	GSS07-2M □□□100C41	102
	29	1096	1.1		35	906	1.3	97.708	GSS07-2M □□□100C41	102
	25	1281	1.0		30	1061	1.2	113.667	GSS07-2M □□□100C41	102
	22	1358	0.9		27	1126	1.1	126.531	GSS07-3M □□□100C41	110
	22	1434	0.9		27	1187	1.1	128.333	GSS07-2M □□□100C41	102
	21	1547	0.8		25	1283	1.0	137.950	GSS07-2M □□□100C41	102
	20	1521	0.8		24	1260	1.0	142.857	GSS07-3M □□□100C41	110

Selection tables

50 Hz, 60 Hz: P_N = 4.0 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			
	249	139	2.5		300	114	2.7	5.833	GSS06-2M □□□112C22	102
	181	191	2.5		219	157	2.4	8.000	GSS06-2M □□□112C22	102
	160	212	2.0		194	175	2.1	9.042	GSS06-2M □□□112C22	102
	160	212	2.9		193	175	3.1	9.086	GSS07-2M □□□112C22	102
	142	245	2.1		171	202	2.5	10.238	GSS06-2M □□□112C22	102
	130	269	1.9		156	221	2.3	11.200	GSS06-2M □□□112C22	102
	130	268	3.2		156	221	3.3	11.200	GSS07-2M □□□112C22	102
	117	290	1.8		141	240	1.9	12.400	GSS06-2M □□□112C22	102
	115	294	2.7		139	243	2.8	12.594	GSS07-2M □□□112C22	102
	102	345	1.5		123	284	1.8	14.286	GSS06-2M □□□112C22	102
	102	344	2.6		123	283	3.1	14.286	GSS07-2M □□□112C22	102
	94	362	2.5		113	299	2.7	15.500	GSS07-2M □□□112C22	102
	91	371	1.6		110	307	1.8	15.869	GSS06-2M □□□112C22	102
	84	406	1.5		101	335	1.7	17.360	GSS06-2M □□□112C22	102
	84	406	2.5		101	335	2.6	17.360	GSS07-2M □□□112C22	102
	71	446	1.1		86	369	1.2	20.417	GSS06-2M □□□112C22	102
	71	453	1.7		85	374	1.8	20.517	GSS07-2M □□□112C22	102
	66	516	1.3		79	427	1.5	22.143	GSS06-2M □□□112C22	102
	66	516	2.3		79	427	2.4	22.143	GSS07-2M □□□112C22	102
	59	544	1.0		71	451	1.1	24.800	GSS06-2M □□□112C22	102
	58	560	1.6		70	463	1.7	25.188	GSS07-2M □□□112C22	102
	54	631	1.1		65	522	1.3	27.125	GSS06-2M □□□112C22	102
	54	633	2.0		65	522	2.3	27.125	GSS07-2M □□□112C22	102
	47	689	1.5		57	569	1.6	31.000	GSS07-2M □□□112C22	102
	46	693	0.9		55	575	1.0	31.738	GSS06-2M □□□112C22	102
	41	825	1.5		50	681	1.8	35.306	GSS07-2M □□□112C22	102
	37	862	1.4		45	713	1.5	39.200	GSS07-2M □□□112C22	102
	34	1009	1.2		40	835	1.5	43.271	GSS07-2M □□□112C22	102
	29	1098	1.1		35	908	1.3	50.000	GSS07-2M □□□112C22	102
	27	1198	1.0		32	993	1.3	54.250	GSS07-2M □□□112C22	102
	24	1341	0.9		29	1110	1.1	61.250	GSS07-2M □□□112C22	102
	21	1549	0.8		25	1286	1.0	70.611	GSS07-2M □□□112C22	102

Selection tables

50 Hz, 60 Hz: P_N = 5.5 kW

n_N	2900 r/min				3510 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			
	497	95	2.0		602	78	1.9	5.833	GSS06-2M □□□112C31	102
	363	131	2.0		439	108	2.0	8.000	GSS06-2M □□□112C31	102
	357	133	3.0		432	109	3.2	8.125	GSS07-2M □□□112C31	102
	321	146	1.7		388	120	1.8	9.042	GSS06-2M □□□112C31	102
	319	146	2.8		386	120	3.0	9.086	GSS07-2M □□□112C31	102
	290	164	2.9		351	135	3.0	10.000	GSS07-2M □□□112C31	102
	283	168	1.9		343	138	2.0	10.238	GSS06-2M □□□112C31	102
	259	184	1.9		313	152	2.0	11.200	GSS06-2M □□□112C31	102
	259	184	2.8		313	152	2.9	11.200	GSS07-2M □□□112C31	102
	234	201	1.6		283	166	1.7	12.400	GSS06-2M □□□112C31	102
	230	203	2.4		279	167	2.6	12.594	GSS07-2M □□□112C31	102
	203	235	1.9		246	194	1.8	14.286	GSS06-2M □□□112C31	102
	203	236	2.6		246	194	2.8	14.286	GSS07-2M □□□112C31	102
	187	251	2.2		226	207	2.4	15.500	GSS07-2M □□□112C31	102
	183	257	1.5		221	212	1.6	15.869	GSS06-2M □□□112C31	102
	167	281	1.4		202	232	1.5	17.360	GSS06-2M □□□112C31	102
	167	281	2.1		202	232	2.3	17.360	GSS07-2M □□□112C31	102
	142	307	1.0		172	253	1.0	20.417	GSS06-2M □□□112C31	102
	141	312	1.6		171	256	1.8	20.517	GSS07-2M □□□112C31	102
	131	358	1.3		159	296	1.4	22.143	GSS06-2M □□□112C31	102
	131	358	2.0		159	296	2.1	22.143	GSS07-2M □□□112C31	102
	117	378	0.9		142	313	1.0	24.800	GSS06-2M □□□112C31	102
	115	387	1.4		139	319	1.6	25.188	GSS07-2M □□□112C31	102
	107	438	1.3		129	362	1.3	27.125	GSS06-2M □□□112C31	102
	107	439	1.9		129	363	2.0	27.125	GSS07-2M □□□112C31	102
	94	477	1.3		113	393	1.4	31.000	GSS07-2M □□□112C31	102
	91	483	0.9		111	400	0.9	31.738	GSS06-2M □□□112C31	102
	82	571	1.8		99	472	1.9	35.306	GSS07-2M □□□112C31	102
	74	590	0.8		90	488	0.9	39.200	GSS06-2M □□□112C31	102
	74	598	1.2		90	494	1.3	39.200	GSS07-2M □□□112C31	102
	67	698	1.7		81	578	1.8	43.271	GSS07-2M □□□112C31	102
	58	762	1.2		70	630	1.2	50.000	GSS07-2M □□□112C31	102
	53	833	1.2		65	690	1.2	54.250	GSS07-2M □□□112C31	102
	47	932	1.1		57	771	1.2	61.250	GSS07-2M □□□112C31	102
	41	1083	1.1		50	896	1.1	70.611	GSS07-2M □□□112C31	102
	36	1211	1.0		44	1002	1.1	79.722	GSS07-2M □□□112C31	102
	34	1324	0.9		41	1096	1.1	86.542	GSS07-2M □□□112C31	102
	30	1480	0.8		36	1226	1.0	97.708	GSS07-2M □□□112C31	102

Selection tables

50 Hz, 60 Hz: P_N = 5.5 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			
	248	193	1.8		299	159	2.0	5.833	GSS06-2M □□□112C32	102
	247	194	2.7		298	159	2.9	5.862	GSS07-2M □□□112C32	102
	181	265	1.8		218	219	1.7	8.000	GSS06-2M □□□112C32	102
	178	270	2.5		215	222	2.7	8.125	GSS07-2M □□□112C32	102
	160	294	1.4		193	243	1.5	9.042	GSS06-2M □□□112C32	102
	159	295	2.1		192	243	2.2	9.086	GSS07-2M □□□112C32	102
	145	333	2.4		175	274	2.5	10.000	GSS07-2M □□□112C32	102
	141	341	1.5		170	280	1.8	10.238	GSS06-2M □□□112C32	102
	129	374	1.4		156	307	1.7	11.200	GSS06-2M □□□112C32	102
	129	373	2.3		156	307	2.4	11.200	GSS07-2M □□□112C32	102
	117	402	1.3		141	332	1.4	12.400	GSS06-2M □□□112C32	102
	115	409	1.9		139	338	2.0	12.594	GSS07-2M □□□112C32	102
	101	479	1.1		122	394	1.3	14.286	GSS06-2M □□□112C32	102
	101	478	1.9		122	393	2.2	14.286	GSS07-2M □□□112C32	102
	93	504	1.8		113	416	1.9	15.500	GSS07-2M □□□112C32	102
	91	514	1.2		110	425	1.3	15.869	GSS06-2M □□□112C32	102
	83	563	1.1		101	465	1.3	17.360	GSS06-2M □□□112C32	102
	83	564	1.8		101	466	1.9	17.360	GSS07-2M □□□112C32	102
	70	628	1.2		85	519	1.3	20.517	GSS07-2M □□□112C32	102
	65	715	0.9		79	591	1.1	22.143	GSS06-2M □□□112C32	102
	65	717	1.7		79	593	1.8	22.143	GSS07-2M □□□112C32	102
	57	777	1.2		69	642	1.2	25.188	GSS07-2M □□□112C32	102
	53	874	0.8		65	723	0.9	27.125	GSS06-2M □□□112C32	102
	53	879	1.4		64	725	1.7	27.125	GSS07-2M □□□112C32	102
	47	955	1.1		56	789	1.2	31.000	GSS07-2M □□□112C32	102
	41	1143	1.1		49	945	1.3	35.306	GSS07-2M □□□112C32	102
	37	1195	1.0		45	988	1.1	39.200	GSS07-2M □□□112C32	102
	33	1397	0.9		40	1156	1.1	43.271	GSS07-2M □□□112C32	102
	29	1520	0.8		35	1258	1.0	50.000	GSS07-2M □□□112C32	102

Selection tables

50 Hz, 60 Hz: P_N = 7.5 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			
	495	131	1.4		600	107	1.4	5.833	GSS06-2M □□□112C41	102
	493	132	2.4		597	108	2.6	5.862	GSS07-2M □□□112C41	102
	361	180	1.5		438	148	1.5	8.000	GSS06-2M □□□112C41	102
	356	184	2.2		431	151	2.4	8.125	GSS07-2M □□□112C41	102
	320	201	1.3		387	165	1.3	9.042	GSS06-2M □□□112C41	102
	318	201	2.0		385	166	2.2	9.086	GSS07-2M □□□112C41	102
	289	227	2.1		350	187	2.2	10.000	GSS07-2M □□□112C41	102
	282	231	1.4		342	190	1.5	10.238	GSS06-2M □□□112C41	102
	258	253	1.4		313	209	1.5	11.200	GSS06-2M □□□112C41	102
	258	254	2.0		313	209	2.2	11.200	GSS07-2M □□□112C41	102
	233	276	1.2		282	227	1.2	12.400	GSS06-2M □□□112C41	102
	229	280	1.7		278	231	1.9	12.594	GSS07-2M □□□112C41	102
	202	324	1.4		245	267	1.3	14.286	GSS06-2M □□□112C41	102
	202	325	1.9		245	268	2.0	14.286	GSS07-2M □□□112C41	102
	186	345	1.6		226	285	1.7	15.500	GSS07-2M □□□112C41	102
	182	353	1.1		221	292	1.1	15.869	GSS06-2M □□□112C41	102
	166	386	1.0		202	319	1.1	17.360	GSS06-2M □□□112C41	102
	166	387	1.6		202	319	1.7	17.360	GSS07-2M □□□112C41	102
	141	428	1.2		171	353	1.3	20.517	GSS07-2M □□□112C41	102
	131	492	1.0		158	407	1.0	22.143	GSS06-2M □□□112C41	102
	131	493	1.5		158	407	1.6	22.143	GSS07-2M □□□112C41	102
	115	531	1.1		139	438	1.2	25.188	GSS07-2M □□□112C41	102
	107	602	0.9		129	498	1.0	27.125	GSS06-2M □□□112C41	102
	107	604	1.4		129	499	1.5	27.125	GSS07-2M □□□112C41	102
	93	655	1.0		113	540	1.0	31.000	GSS07-2M □□□112C41	102
	82	786	1.3		99	649	1.4	35.306	GSS07-2M □□□112C41	102
	74	822	0.9		89	679	1.0	39.200	GSS07-2M □□□112C41	102
	67	960	1.2		81	795	1.3	43.271	GSS07-2M □□□112C41	102
	58	1047	0.8		70	865	0.9	50.000	GSS07-2M □□□112C41	102
	53	1144	0.8		65	947	0.9	54.250	GSS07-2M □□□112C41	102
	47	1280	0.8		57	1059	0.8	61.250	GSS07-2M □□□112C41	102

Selection tables

50 Hz, 60 Hz: P_N = 7.5 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			
	248	264	2.0		299	218	2.1	5.862	GSS07-2M □□□132C22	102
	179	368	1.8		216	303	2.0	8.125	GSS07-2M □□□132C22	102
	160	402	1.6		193	332	1.6	9.086	GSS07-2M □□□132C22	102
	146	454	1.7		176	374	1.8	10.000	GSS07-2M □□□132C22	102
	130	508	1.7		157	420	1.8	11.200	GSS07-2M □□□132C22	102
	116	557	1.4		139	461	1.5	12.594	GSS07-2M □□□132C22	102
	102	650	1.6		123	536	1.7	14.286	GSS07-2M □□□132C22	102
	94	686	1.4		113	567	1.4	15.500	GSS07-2M □□□132C22	102
	84	768	1.3		101	635	1.4	17.360	GSS07-2M □□□132C22	102
	71	854	0.9		86	707	0.9	20.517	GSS07-2M □□□132C22	102
	66	976	1.2		79	808	1.3	22.143	GSS07-2M □□□132C22	102
	58	1056	0.9		70	874	0.9	25.188	GSS07-2M □□□132C22	102
	54	1195	1.0		65	988	1.2	27.125	GSS07-2M □□□132C22	102
	47	1298	0.8		57	1074	0.9	31.000	GSS07-2M □□□132C22	102
	41	1553	0.8		50	1286	1.0	35.306	GSS07-2M □□□132C22	102

Selection tables

50 Hz, 60 Hz: P_N = 9.0 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			
	493	159	2.0		597	131	2.1	5.862	GSS07-2M □□□132C21	102
	356	221	1.8		431	182	2.0	8.125	GSS07-2M □□□132C21	102
	318	242	1.7		385	200	1.9	9.086	GSS07-2M □□□132C21	102
	289	273	1.7		350	225	1.9	10.000	GSS07-2M □□□132C21	102
	258	306	1.7		313	252	1.8	11.200	GSS07-2M □□□132C21	102
	229	337	1.4		278	278	1.6	12.594	GSS07-2M □□□132C21	102
	202	392	1.6		245	323	1.7	14.286	GSS07-2M □□□132C21	102
	186	415	1.3		226	343	1.4	15.500	GSS07-2M □□□132C21	102
	166	465	1.3		202	384	1.4	17.360	GSS07-2M □□□132C21	102
	141	515	1.0		171	424	1.1	20.517	GSS07-2M □□□132C21	102
	131	594	1.2		158	490	1.3	22.143	GSS07-2M □□□132C21	102
	115	639	0.9		139	527	1.0	25.188	GSS07-2M □□□132C21	102
	107	727	1.2		129	600	1.2	27.125	GSS07-2M □□□132C21	102
	93	787	0.8		113	650	0.9	31.000	GSS07-2M □□□132C21	102
	82	945	1.1		99	781	1.1	35.306	GSS07-2M □□□132C21	102

Selection tables

50 Hz, 60 Hz: P_N = 9.2 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			
	247	327	1.6		299	270	1.7	5.862	GSS07-2M □□□132C32	102
	179	454	1.5		215	376	1.6	8.125	GSS07-2M □□□132C32	102
	160	496	1.3		193	411	1.3	9.086	GSS07-2M □□□132C32	102
	145	560	1.4		175	463	1.5	10.000	GSS07-2M □□□132C32	102
	130	628	1.4		156	520	1.5	11.200	GSS07-2M □□□132C32	102
	115	688	1.2		139	570	1.2	12.594	GSS07-2M □□□132C32	102
	102	802	1.3		123	664	1.4	14.286	GSS07-2M □□□132C32	102
	94	846	1.1		113	701	1.2	15.500	GSS07-2M □□□132C32	102
	84	947	1.1		101	786	1.1	17.360	GSS07-2M □□□132C32	102
	66	1204	1.0		79	1000	1.1	22.143	GSS07-2M □□□132C32	102
	54	1474	0.8		65	1222	1.0	27.125	GSS07-2M □□□132C32	102

Selection tables

50 Hz, 60 Hz: P_N = 11.0 kW

n_N	1460 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			
	249	389	1.4		300	320	1.5	5.862	GSS07-2M □□□160C22	102
	180	541	1.3		217	445	1.3	8.125	GSS07-2M □□□160C22	102
	161	591	1.1		194	487	1.1	9.086	GSS07-2M □□□160C22	102
	146	667	1.2		176	549	1.3	10.000	GSS07-2M □□□160C22	102
	130	747	1.2		157	616	1.2	11.200	GSS07-2M □□□160C22	102
	116	819	1.0		140	675	1.0	12.594	GSS07-2M □□□160C22	102
	94	1007	0.9		114	831	1.0	15.500	GSS07-2M □□□160C22	102
	84	1127	0.9		102	930	1.0	17.360	GSS07-2M □□□160C22	102

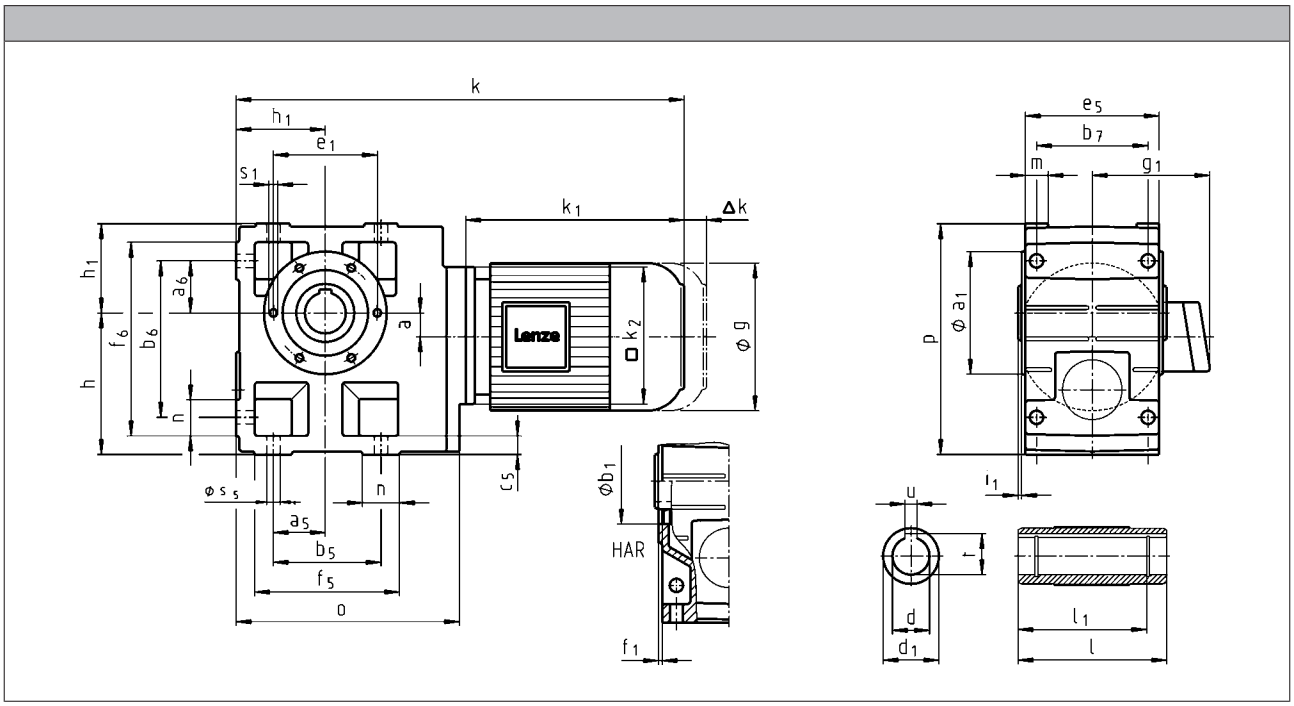
Selection tables

50 Hz, 60 Hz: P_N = 15.0 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			
	249	533	1.0		300	441	1.1	5.862	GSS07-2M □□□160C32	102
	180	740	0.9		217	613	1.0	8.125	GSS07-2M □□□160C32	102
	146	912	0.9		176	756	0.9	10.000	GSS07-2M □□□160C32	102
	130	1022	0.8		157	847	0.9	11.200	GSS07-2M □□□160C32	102

Dimensions

GSS□□-2M H□R



		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31 080C32 080C33 080C42	090C11 090C31
g		123		139		156	176
g_1	MDEMAXX	100		109		150	157
	MDEMABR	107		118		132	137
k_1	MDEMAXX	187		207		224.5	274
k_2		120				145	180
Δ k	MDEMABR	40		52		73	68
	MDFMAXX	128					
	MDFMABR	170		165		183	181
		k					
	GSS04	377		397		420	479
	GSS05		399	419		441	501
	GSS06		439		459	481	541
	GSS07					524	584

GSS helical-worm gearboxes

Technical data

		090C32	100C12 100C31 100C32 100C41	112C22 112C31	112C32 112C41	132C12 132C21 132C22 132C32	160C22	160C32
g		176	194	218		258	310	
g_1	MDEMAXX	157	166	176		195	210	
	MDEMABR	137	147	158		187	210	
k_1	MDEMAXX	248	309	319	363	403	457.5	501.5
k_2		180		222		265	300	
Δ k	MDEMABR	68	76	90		109.5	105	
	MDFMAXX	128	109	102		115	149	
	MDFMABR	181	170	183		201.5	179	
		k						
	GSS04	453						
	GSS05	475	536					
	GSS06	515	576	592	636			
	GSS07	558	619	635	679	727	786	830

	a	h[1)]	h_1	o	p[1)]
GSS04	20	100	71	181	171
GSS05	23	125	80	212	205
GSS06	26	150	100	255	250
GSS07	33	190	120	305	310

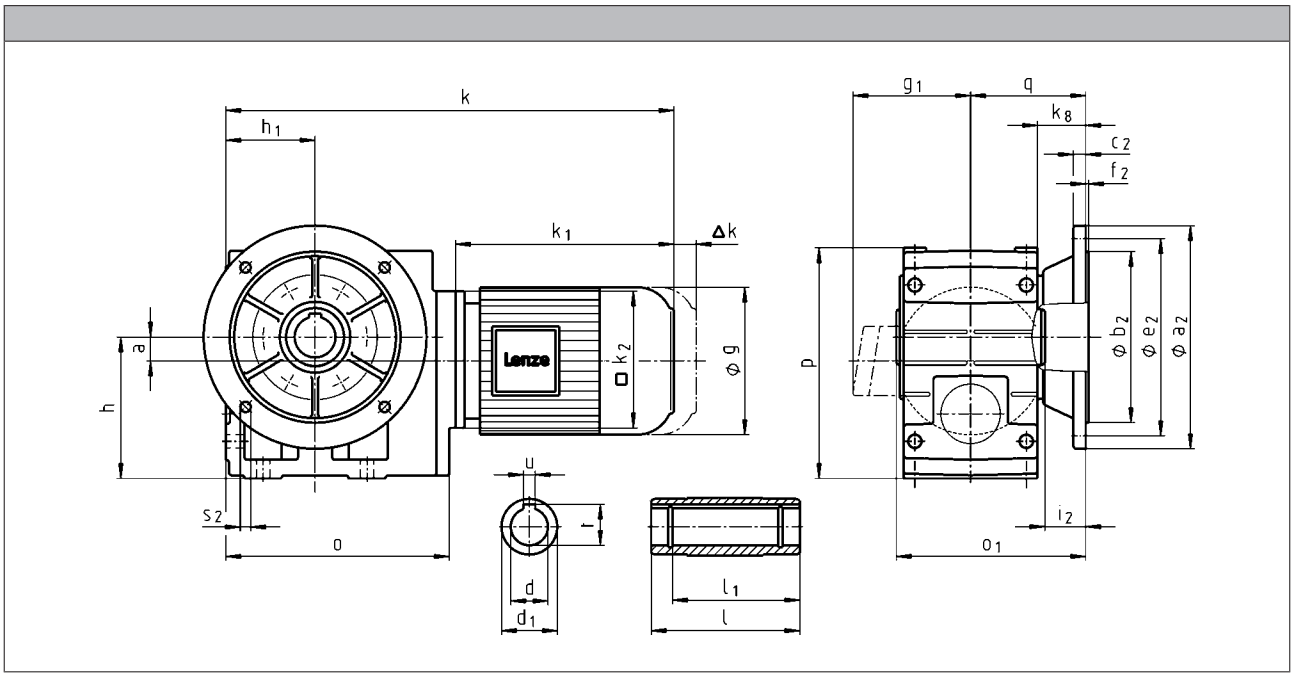
	d	d_1	l[1)]	l_1	u	t	i_1	a_1	b_1	e_1	f_1	s_1
	H7				JS9	+0,2			H7			
GSS04	25 30	45 45	115 115	100 100	8 8	28.3 33.3	2.5 2.5	104	75	90	3	M6x12
GSS05	30 35	50 50	140 140	124 124	8 10	33.3 38.3	4 4	118	80	100	4	M8x15
GSS06	40 45	65 65	160 160	140 140	12 14	43.3 48.8	5 5	140	100	120	4	M10x16
GSS07	50 55	75 75	200 200	175 175	14 16	53.8 59.3	5 5	165	115	140	5	M12x18

	a_5	a_6	b_5	b_6	b_7	c_5	e_5	f_5	f_6	m	n	s_5
GSS04	45	45	90	119	85	14	100	112	141	20	22	9
GSS05	47.5	47.5	95	140	105	17	115	124	169	21	29	11
GSS06	60	60	120	170	120	20	145	156	206	23	36	14
GSS07	70	70	140	210	150	25	180	185	255	28	45	18

[1)] k_2 !

Dimensions

GSS□□-2M HAK



		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31 080C32 080C33 080C42	090C11 090C31
g		123		139		156	176
g_1	MDEMAXX	100		109		150	157
	MDEMABR	107		118		132	137
k_1	MDEMAXX	187		207		224.5	274
k_2		120				145	180
Δ k	MDEMABR	40		52		73	68
	MDFMAXX	128					
	MDFMABR	170		165		183	181
		k					
GSS04		377		397		420	479
GSS05			399	419		441	501
GSS06			439		459	481	541
GSS07						524	584

GSS helical-worm gearboxes

Technical data

		090C32	100C12 100C31 100C32 100C41	112C22 112C31	112C32 112C41	132C12 132C21 132C22 132C32	160C22	160C32
g		176	194	218		258	310	
g_1	MDEMAXX	157	166	176		195	210	
	MDEMABR	137	147	158		187	210	
k_1	MDEMAXX	248	309	319	363	403	457.5	501.5
k_2		180		222		265	300	
Δ k	MDEMABR	68	76	90		109.5	105	
	MDFMAXX	128	109	102		115	149	
	MDFMABR	181	170	183		201.5	179	
		k						
	GSS04	453						
	GSS05	475	536					
	GSS06	515	576	592	636			
	GSS07	558	619	635	679	727	786	830

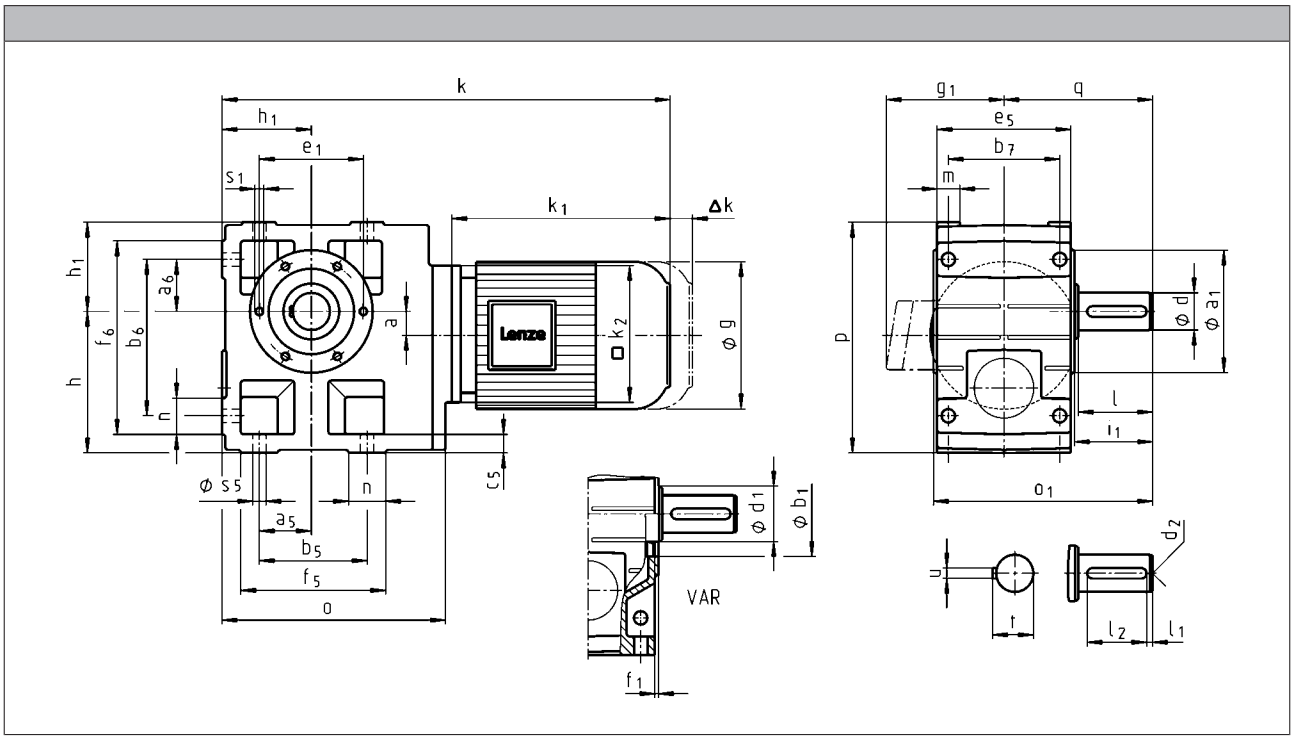
	a	h[1)]	h_1	k_8	o	p[1)]	q
GSS04	20	100	71	41	181	171	91
GSS05	23	125	80	40	212	205	103.5
GSS06	26	150	100	49	255	250	121.5
GSS07	33	190	120	65.5	305	310	155.5

	d	d_1	l	l_1	u	t	i_2	o_1[1)]	a_2	b_2	c_2	e_2	f_2	s_2
	H7				JS9	+0,2				j7				
GSS04	25 30	45 45	115 115	100 100	8 8	28.3 33.3	33.5 33.5	148.5 148.5	160	110	10	130	3.5	4 x 9
GSS05	30 35	50 50	140 140	124 124	8 10	33.3 38.3	33 33	173.5 173.5	200	130	12	165	4	4 x 11
GSS06	40 45	65 65	160 160	140 140	12 14	43.3 48.8	42 41	201.5 201.5	200 250	130 180	12 15	165 215	3.5 4	4 x 11 4 x 14
GSS07	50 55	75 75	200 200	175 175	14 16	53.8 59.3	55 55	255.5 255.5	250 300	180 230	15 17	215 265	4 4	4 x 14 4 x 14

[1)] k_2 !

Dimensions

GSS□□-2M V□R



		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31 080C32 080C33 080C42	090C11 090C31
g		123		139		156	176
g_1	MDEMAXX	100		109		150	157
	MDEMABR	107		118		132	137
k_1	MDEMAXX	187		207		224.5	274
k_2		120				145	180
Δ k	MDEMABR	40		52		73	68
	MDFMAXX	128					
	MDFMABR	170		165		183	181
		k					
	GSS04	377		397		420	479
	GSS05		399	419		441	501
	GSS06		439		459	481	541
	GSS07					524	584

		090C32	100C12 100C31 100C32 100C41	112C22 112C31	112C32 112C41	132C12 132C21 132C22 132C32	160C22	160C32
g		176	194	218		258	310	
g_1	MDEMAXX	157	166	176		195	210	
	MDEMABR	137	147	158		187	210	
k_1	MDEMAXX	248	309	319	363	403	457.5	501.5
k_2		180		222		265	300	
Δ k	MDEMABR	68	76	90		109.5	105	
	MDFMAXX	128	109	102		115	149	
	MDFMABR	181	170	183		201.5	179	
		k						
	GSS04	453						
	GSS05	475	536					
	GSS06	515	576	592	636			
	GSS07	558	619	635	679	727	786	830

	a	h[1)]	h_1	o	p[1)]	q
GSS04	20	100	71	181	171	107.5
GSS05	23	125	80	212	205	130
GSS06	26	150	100	255	250	160
GSS07	33	190	120	305	310	200

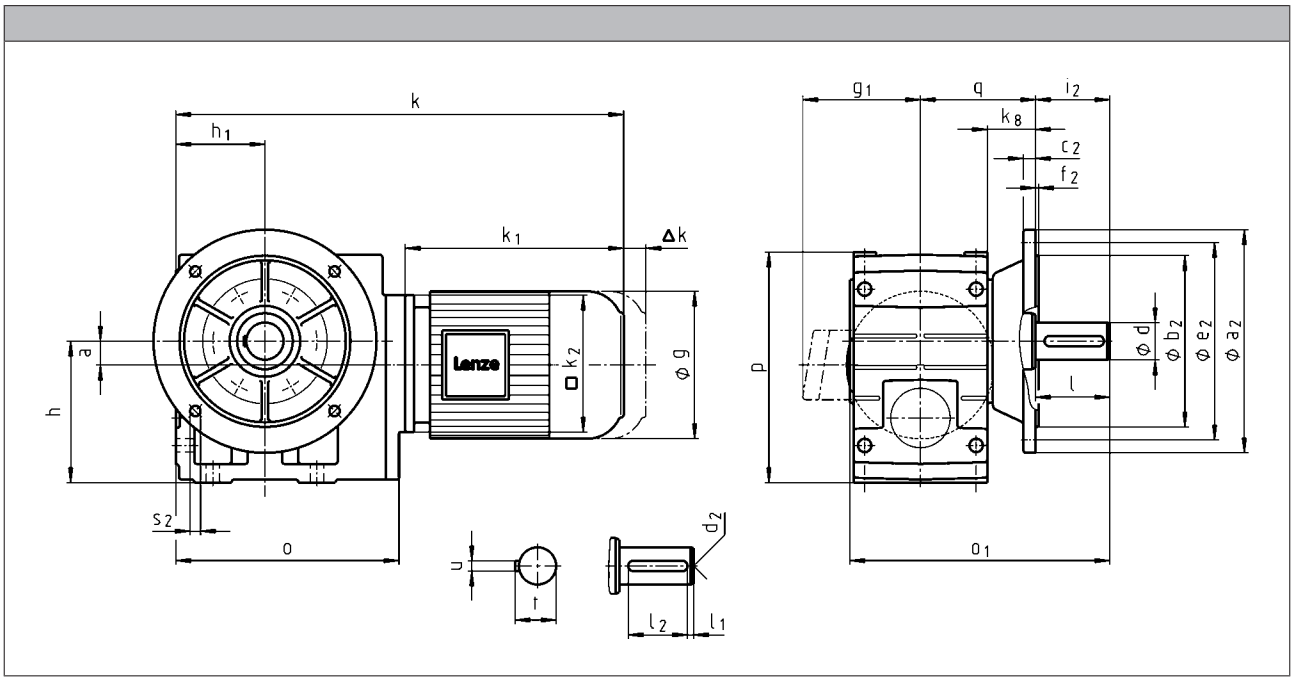
	d	d_1	d_2	l	l_1	l_2	u	t	i_1	o_1[1)]	a_1	b_1	e_1	f_1	s_1
	k6											H7			
GSS04	25	45	M10	50	6	40	8	28	52.5	162.5	104	75	90	3	M6x12
GSS05	30	45	M10	60	6	45	8	33	64	196.5	118	80	100	4	M8x15
GSS06	40	65	M16	80	7	63	12	43	85	235.5	140	100	120	4	M10x16
GSS07	50	75	M16	100	8	80	14	53.5	105	295.5	165	115	140	5	M12x18

	a_5	a_6	b_5	b_6	b_7	c_5	e_5	f_5	f_6	m	n	s_5
GSS04	45	45	90	119	85	14	100	112	141	20	22	9
GSS05	47.5	47.5	95	140	105	17	115	124	169	21	29	11
GSS06	60	60	120	170	120	20	145	156	206	23	36	14
GSS07	70	70	140	210	150	25	180	185	255	28	45	18

[1)] k_2 !

Dimensions

GSS□□-2M VAK



		063C11 063C12 063C31 063C32	063C42	071C11	071C13 071C31 071C32 071C33 071C42	080C11 080C13 080C31 080C32 080C33 080C42	090C11 090C31
g		123		139		156	176
g_1	MDEMAXX	100		109		150	157
	MDEMABR	107		118		132	137
k_1	MDEMAXX	187		207		224.5	274
k_2		120				145	180
Δ k	MDEMABR	40		52		73	68
	MDFMAXX			128			
	MDFMABR	170		165		183	181
		k					
GSS04		377		397		420	479
GSS05			399	419		441	501
GSS06			439		459	481	541
GSS07						524	584

		090C32	100C12 100C31 100C32 100C41	112C22 112C31	112C32 112C41	132C12 132C21 132C22 132C32	160C22	160C32
g		176	194	218		258	310	
g_1	MDEMAXX	157	166	176		195	210	
	MDEMABR	137	147	158		187	210	
k_1	MDEMAXX	248	309	319	363	403	457.5	501.5
k_2		180		222		265	300	
Δ k	MDEMABR	68	76	90		109.5	105	
	MDFMAXX	128	109	102		115	149	
	MDFMABR	181	170	183		201.5	179	
		k						
	GSS04	453						
	GSS05	475	536					
	GSS06	515	576	592	636			
	GSS07	558	619	635	679	727	786	830

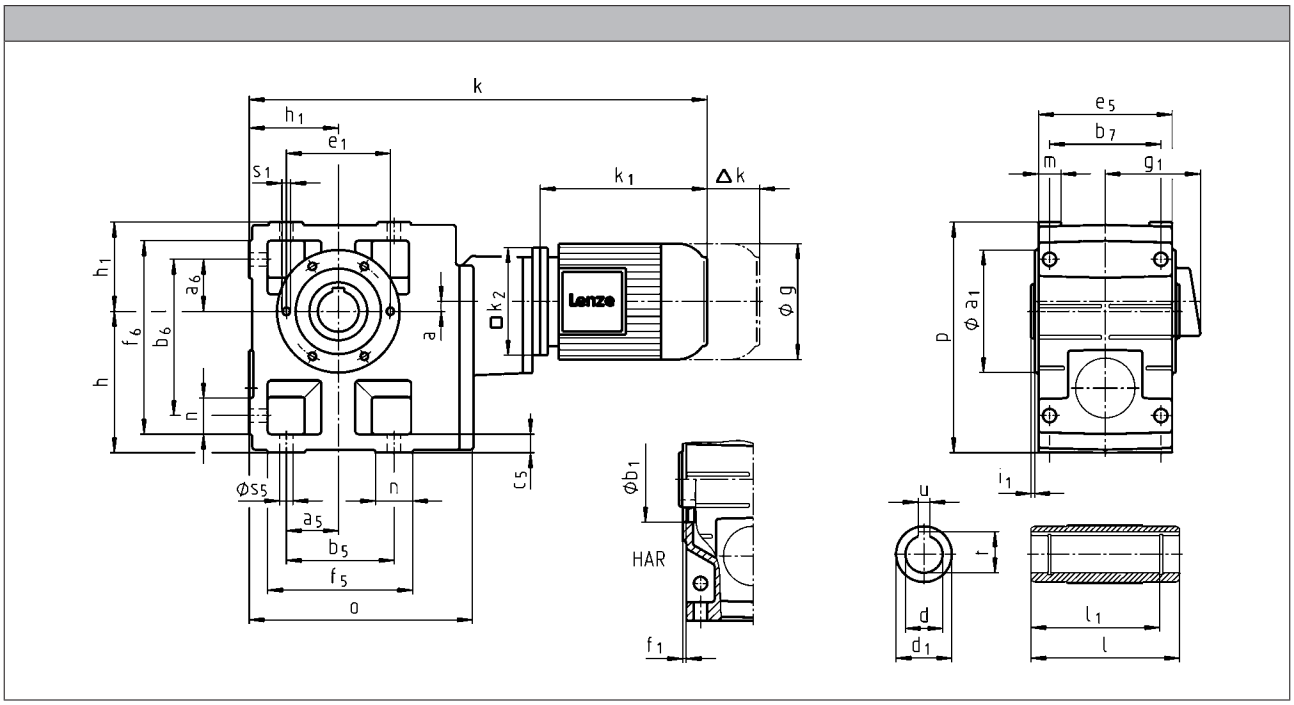
	a	h[1)]	h_1	k_8	o	p[1)]	q
GSS04	20	100	71	41	181	171	91
GSS05	23	125	80	40	212	205	103.5
GSS06	26	150	100	49	255	250	121.5
GSS07	33	190	120	65.5	305	310	155.5

	d	d_2	l	l_1	l_2	u	t	i_2	o_1[1)]	a_2	b_2	c_2	e_2	f_2	s_2
	k6										j7				
GSS04	25	M10	50	6	40	8	28	50	195.5	160	110	10	130	3.5	4 x 9
GSS05	30	M10	60	6	45	8	33	60	229.5	200	130	12	165	4	4 x 11
GSS06	40	M16	80	7	63	12	43	80	276.5	250	180	15	215	4	4 x 14
GSS07	50	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

[1)] k_2 !

Dimensions

GSS□□-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 100C41
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							
GSS05		475		495	518				
GSS06		532		552	575		634		
GSS07			586	606	629		688	662	723

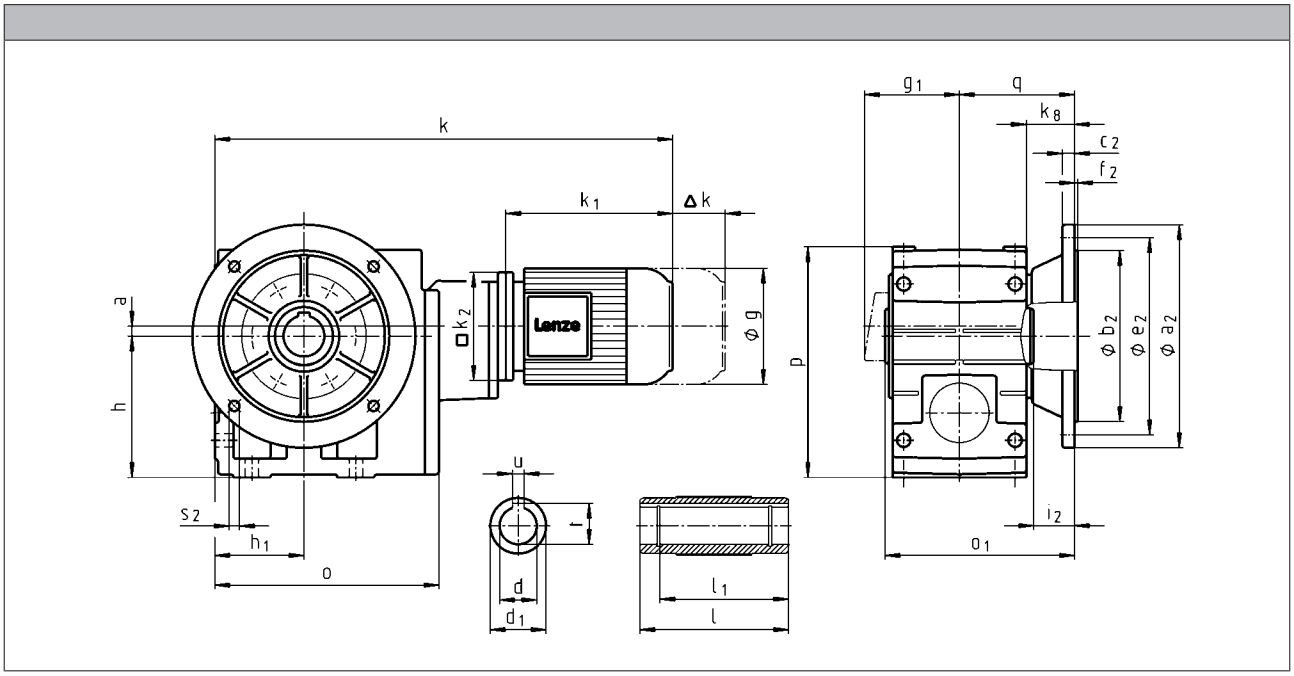
	a	h	h_1	o	p
GSS05	13	125	80	209	205
GSS06	10	150	100	252	250
GSS07	12	190	120	299	310

	d	d_1	l	l_1	u	t	i_1	a_1	b_1	e_1	f_1	s_1
	H7				JS9	+0,2			H7			
GSS05	30 35	50 50	140 140	124 124	8 10	33.3 38.3	4 4	118	80	100	4	M8x15
GSS06	40 45	65 65	160 160	140 140	12 14	43.3 48.8	5 5	140	100	120	4	M10x16
GSS07	50 55	75 75	200 200	175 175	14 16	53.8 59.3	5 5	165	115	140	5	M12x18

	a_5	a_6	b_5	b_6	b_7	c_5	e_5	f_5	f_6	m	n	s_5
GSS05	47.5	47.5	95	140	105	17	115	124	169	21	29	11
GSS06	60	60	120	170	120	20	145	156	206	23	36	14
GSS07	70	70	140	210	150	25	180	185	255	28	45	18

Dimensions

GSS□□-3M HAK



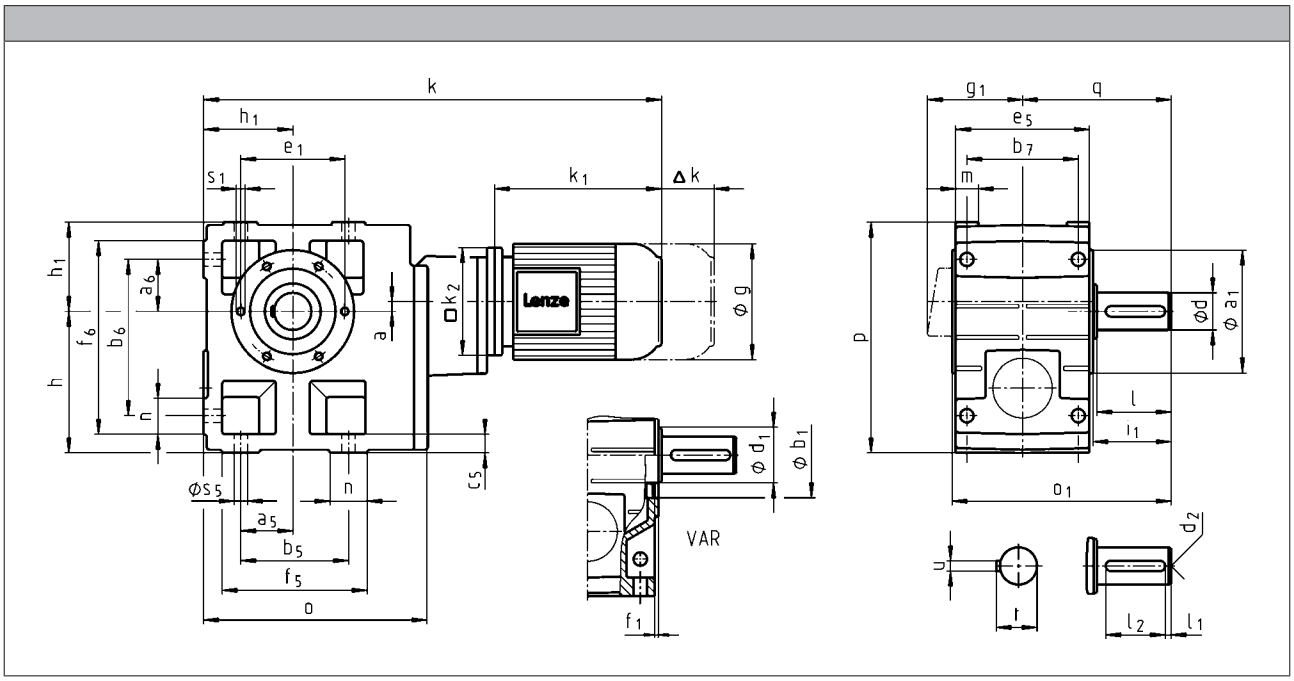
		063C11 063C12 063C31 063C32	063C42	071C11 071C13 071C31 071C32 071C33 071C42	080C11 080C13	080C31 080C32 080C33 080C42	090C11 090C31	090C32	100C12 100C31 100C41
g		123		139	156		176		194
g_1	MDEMAXX	100		109	150		157		166
	MDEMABR	107		118	132		137		147
k_1	MDEMAXX	187		207	224.5		274	248	309
k_2		120			145		180		
Δ k	MDEMABR	40		52	73		68		76
	MDFMAXX	128							109
	MDFMABR	170		165	183		181		170
		k							
GSS05		475		495	518				
GSS06		532		552	575		634		
GSS07			586	606	629		688	662	723

	a	h	h_1	k_8	o	p	q
GSS05	13	125	80	40	209	205	103.5
GSS06	10	150	100	49	252	250	121.5
GSS07	12	190	120	65.5	299	310	155.5

	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				
GSS05	30 35	50 50	140 140	124 124	8 10	33.3 38.3	33 33	173.5 173.5	200	130	12	165	4	4 x 11
GSS06	40 45	65 65	160 160	140 140	12 14	43.3 48.8	42 41	201.5 201.5	200 250	130 180	12 15	165 215	3.5 4	4 x 11 4 x 14
GSS07	50 55	75 75	200 200	175 175	14 16	53.8 59.3	55 55	255.5 255.5	250 300	180 230	15 17	215 265	4 4	4 x 14 4 x 14

Dimensions

GSS□□-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 100C41
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							
GSS05		475		495	518				
GSS06		532		552	575		634		
GSS07			586	606	629		688	662	723

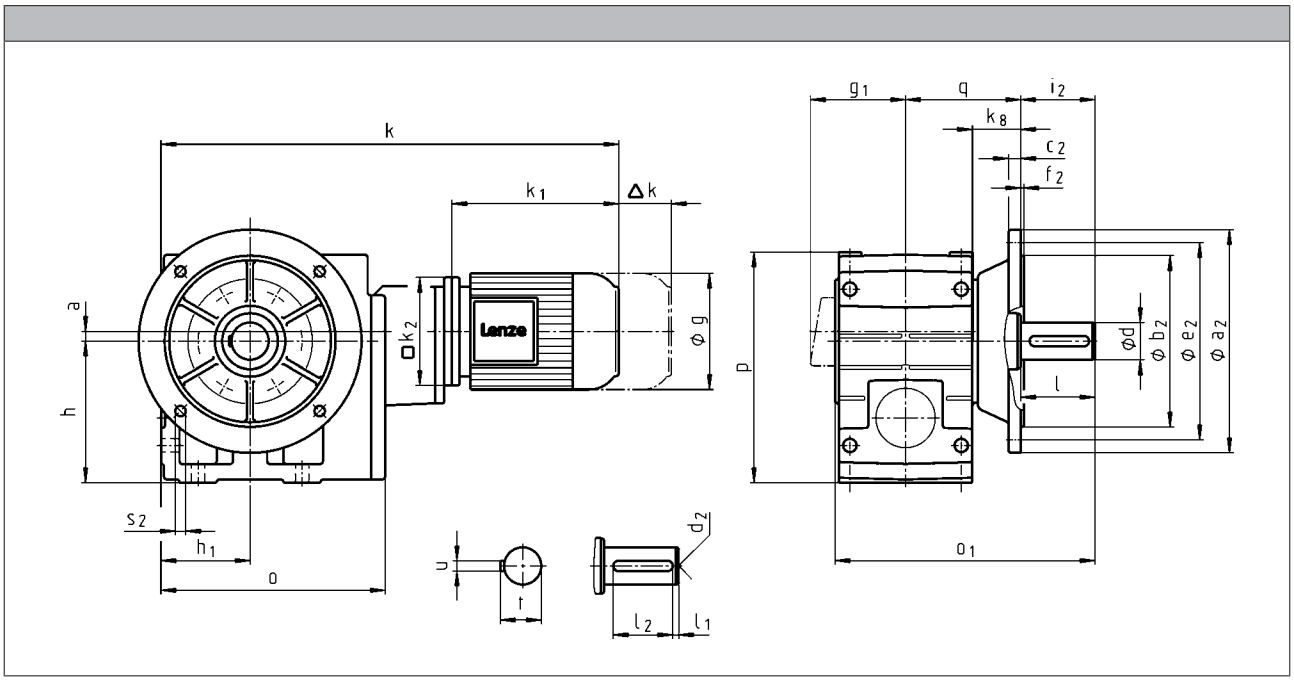
	a	h	h_1	o	p	q
GSS05	13	125	80	209	205	130
GSS06	10	150	100	252	250	160
GSS07	12	190	120	299	310	200

	d	d_1	d_2	l	l_1	l_2	u	t	i_1	o_1	a_1	b_1	e_1	f_1	s_1
	k6											H7			
GSS05	30	45	M10	60	6	45	8	33	64	196.5	118	80	100	4	M8x15
GSS06	40	65	M16	80	7	63	12	43	85	235.5	140	100	120	4	M10x16
GSS07	50	75	M16	100	8	80	14	53.5	105	295.5	165	115	140	5	M12x18

	a_5	a_6	b_5	b_6	b_7	c_5	e_5	f_5	f_6	m	n	s_5
GSS05	47.5	47.5	95	140	105	17	115	124	169	21	29	11
GSS06	60	60	120	170	120	20	145	156	206	23	36	14
GSS07	70	70	140	210	150	25	180	185	255	28	45	18

Dimensions

GSS□□-3M VAK

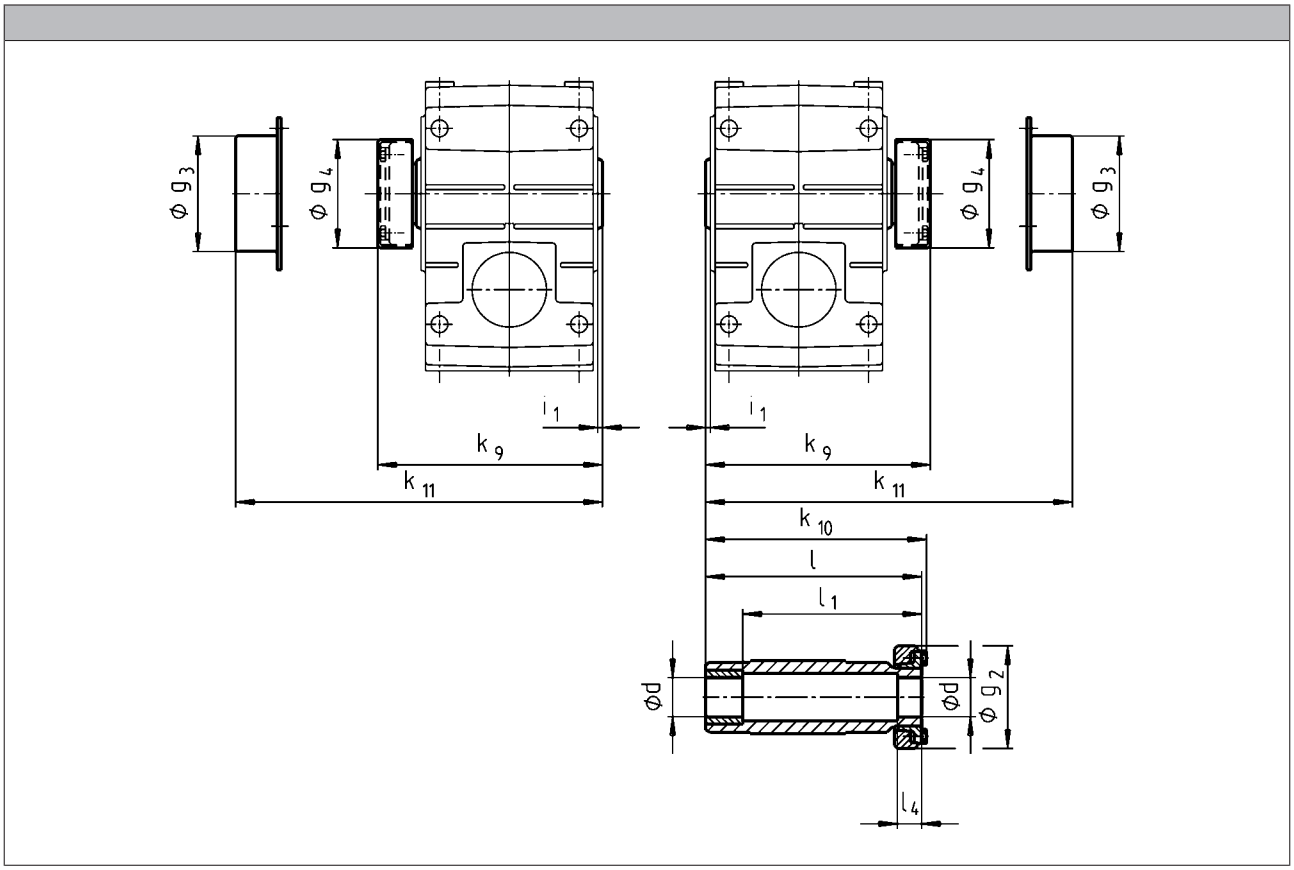


		063C11 063C12 063C31 063C32	063C42	071C11 071C13 071C31 071C32 071C33 071C42	080C11 080C13	080C31 080C32 080C33 080C42	090C11 090C31	090C32	100C12 100C31 100C41
g		123		139	156		176		194
g_1	MDEMAXX	100		109	150		157		166
	MDEMABR	107		118	132		137		147
k_1	MDEMAXX	187		207	224.5		274	248	309
k_2		120			145		180		
Δ k	MDEMABR	40		52	73		68		76
	MDFMAXX	128							109
	MDFMABR	170		165	183		181		170
		k							
GSS05		475		495	518				
GSS06		532		552	575		634		
GSS07			586	606	629		688	662	723

	a	h	h_1	k_8	o	p	q
GSS05	13	125	80	40	209	205	103.5
GSS06	10	150	100	49	252	250	121.5
GSS07	12	190	120	65.5	299	310	155.5

	d	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										j7				
GSS05	30	M10	60	6	45	8	33	60	229.5	200	130	12	165	4	4 x 11
GSS06	40	M16	80	7	63	12	43	80	276.5	250	180	15	215	4	4 x 14
GSS07	50	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

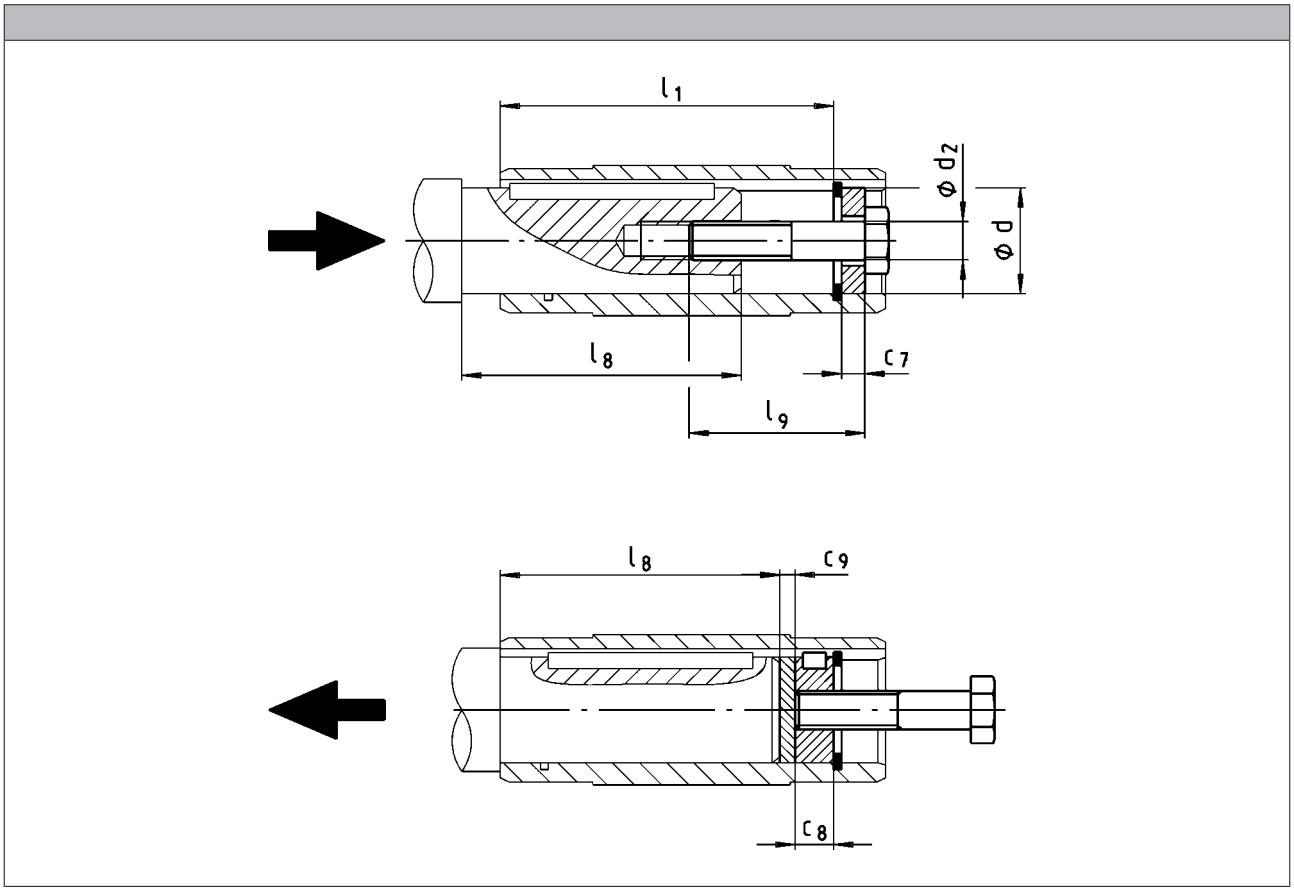
Hollow shaft with shrink disc



	d	g_2	g_3	g_4	i_1	k_9	k_{10}	k_{11}	l	l_1	l_4
	h6										
GSS04	25 30	72	79	76	2.5	150	148	154	142	122	26
GSS05	35	80	90	84	4.0	176	174	179	168	148	28
GSS06	40	90	100	94	5.0	202	200	204	194	164	30
GSS07	50	110	124	116		241	238	244	232	192	26

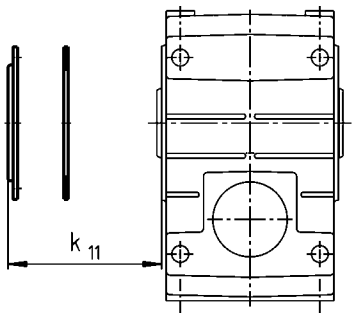
- ► Output flange and hollow shaft with shrink disc (output version SAK) are not possible in the same location. For additional dimensions see output version H□□.
- ► Ensure that the strength of the machine shaft material is adequate in shrink disc designs.
  When using typical steels, e.g. C45, 42CrMo4, 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	c_8	c_9	$l_{8,\,max}$
	H7							
GSS04	25 30	100	M10	40	5	10	3	85
					6			
GSS05	30 35	124						107
			M12	50	7	12		
GSS06	40 45	140	M16	60	8	16	4	118
					9			
GSS07	50 55	175			10		5	148
			M20	80	11	20		

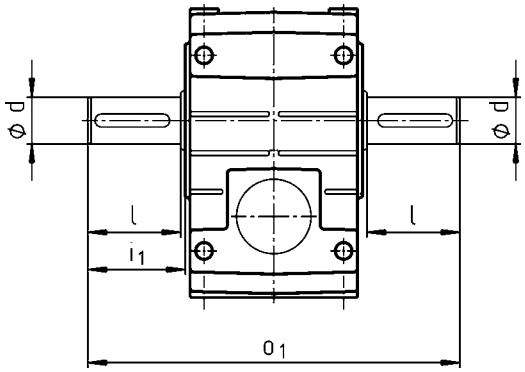
Hoseproof hollow shaft cover



► Cover including gasket

	k_{11}
	[mm]
GSS04	9
GSS05	10
GSS06	11
GSS07	

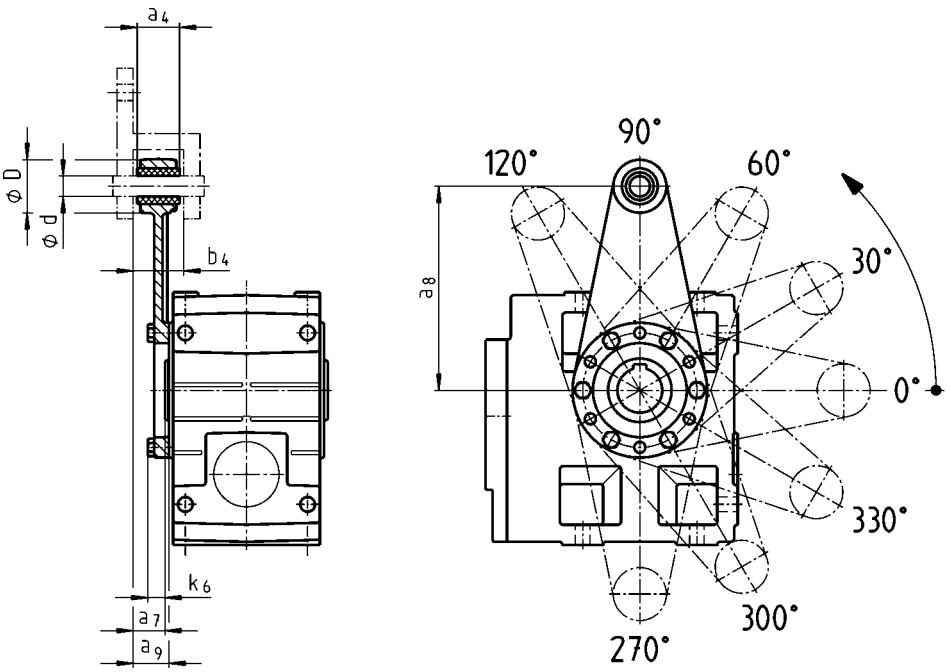
Gearboxes with 2nd output shaft end



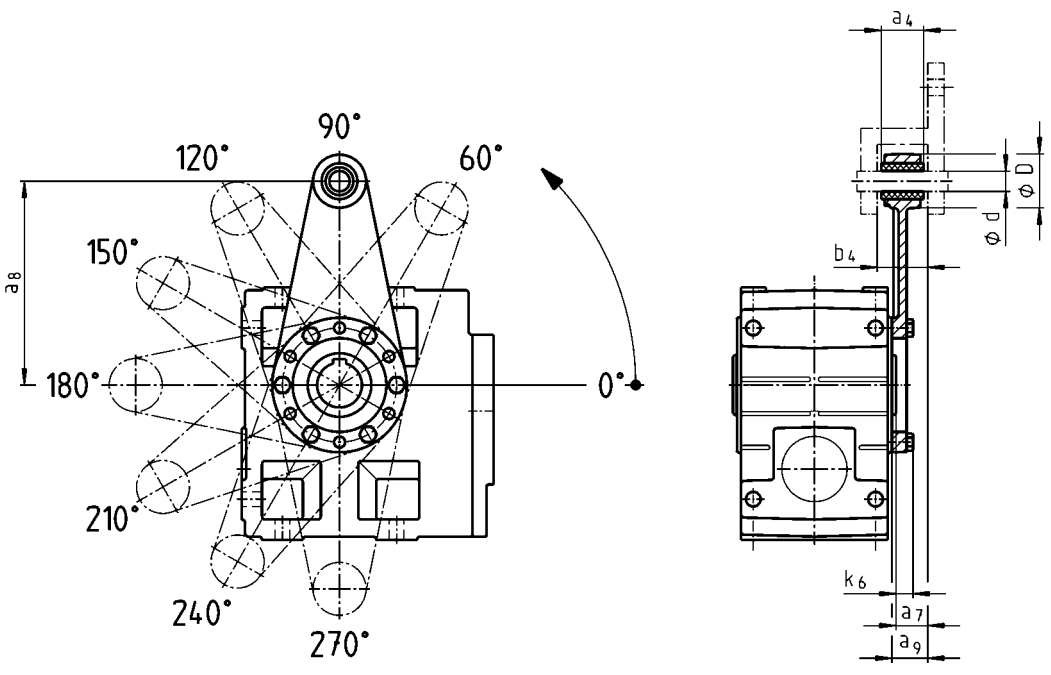
	d	l	i_1	o_1
	k6			
GSS04	25	50	52.5	215
GSS05	30	60	64.0	260
GSS06	40	80	85.0	320
GSS07	50	100	105.0	400

Torque plate on threaded pitch circle

In position 3



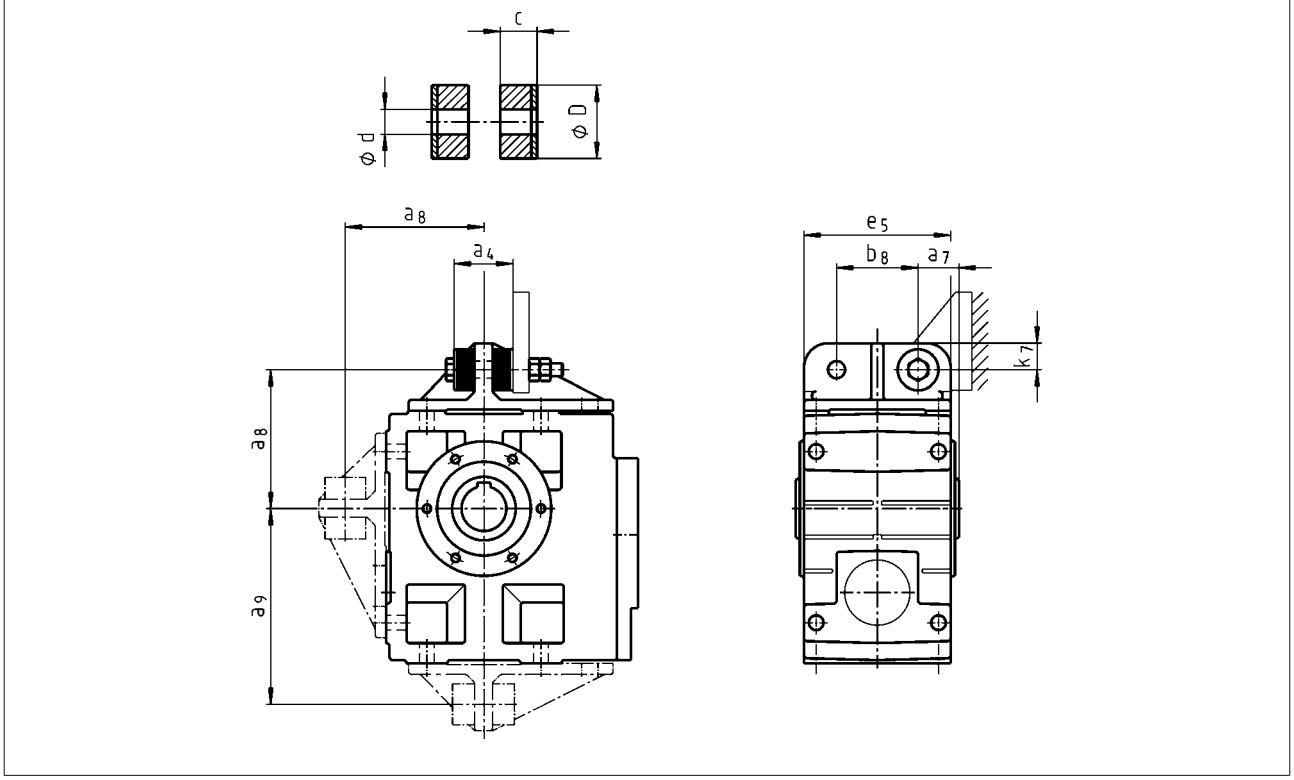
In position 5



	a_4	a_7	a_8	a_9	b_4	d	D	k_6
GSS04	30	24.0	130	26.5	34.5	12	35	16
GSS05	34	23.5	160	27.5	38.5	16	45	15
GSS06	40	28.0	200	33.0	44.5	20	50	18
GSS07	46	32.5	250	37.5	50.5	25	65	21

Torque plate at housing foot

In position 2, 4 or 6

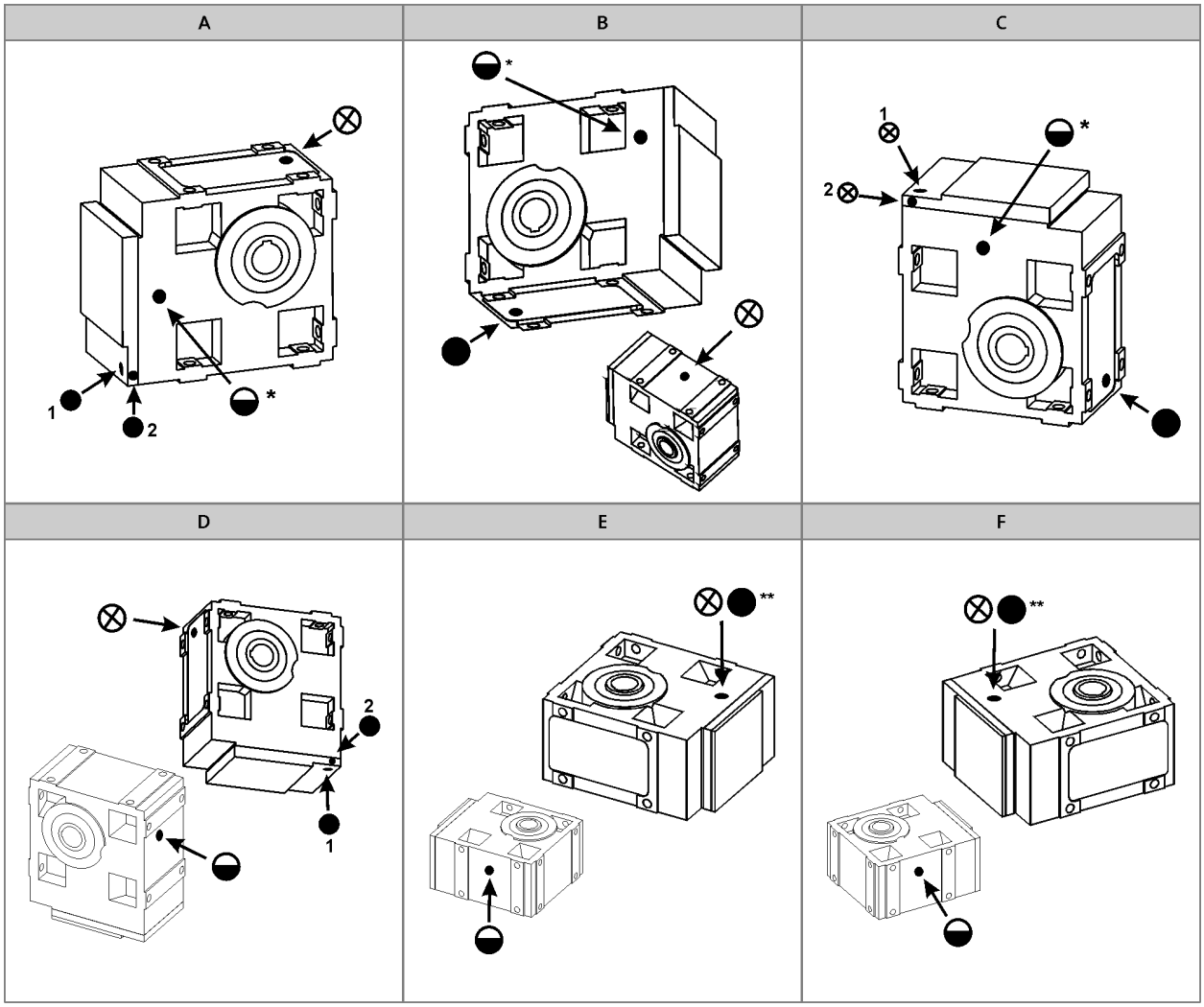


	a_4	a_7	a_8	a_9	b_8	c	d	D	e_5	k_7
GSS04	41	27.5	106	135.0	60	14.5	11	30	100	20
GSS05	45	35.0	115	160.0	70	15.0	13	40	127	25
GSS06	72	40.0	145	195.0	80	27.0	17	50	145	28
GSS07	78	50.0	170	240.0	100	28.0	21	60	180	35

Ventilations

Position of ventilation, sealing elements and oil level check

GSS05...07-2



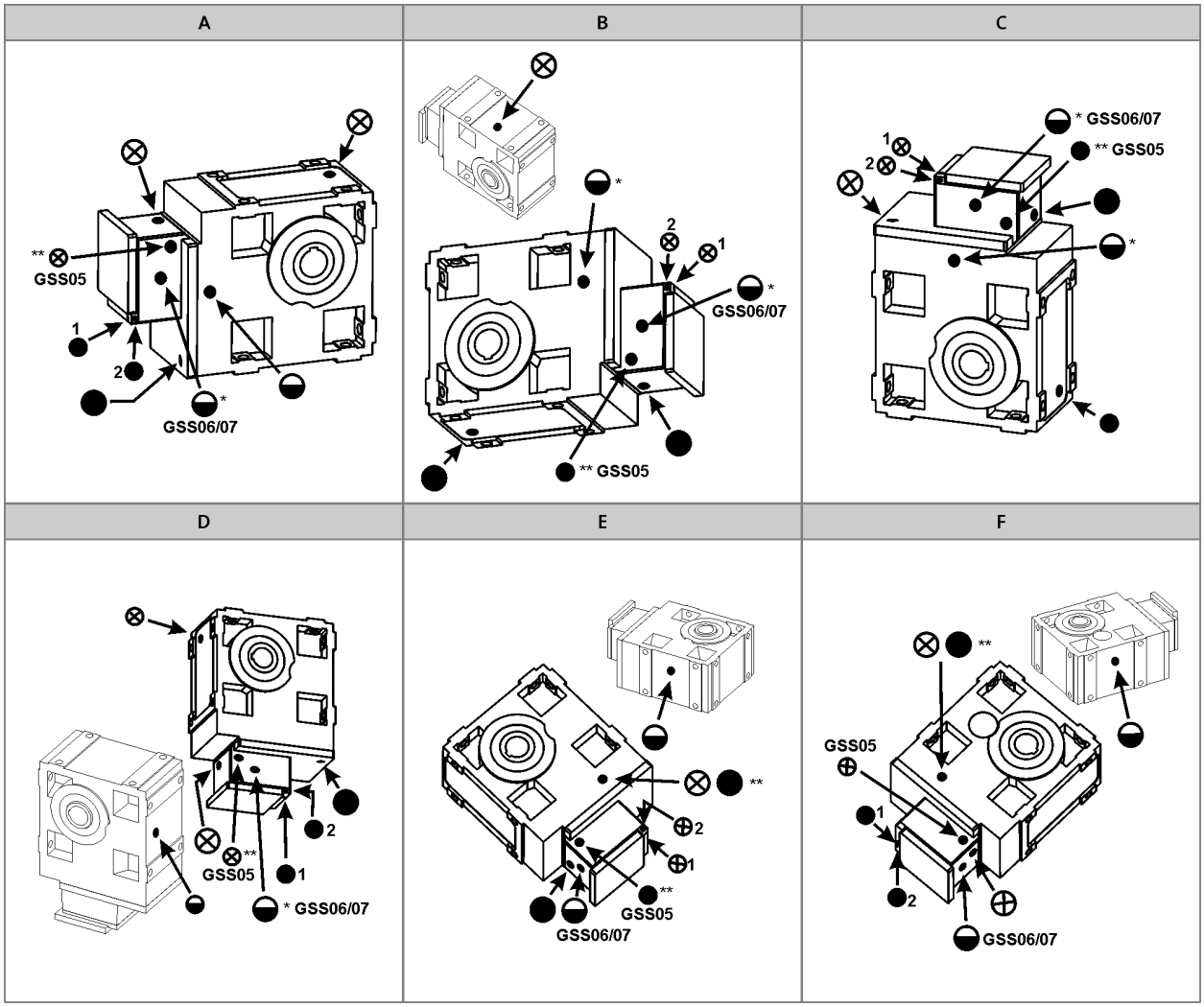
A ... F Mounting position
⊗ Ventilation / Oil filler plug
● Oil drain plug
◒ Oil control plug
* On both sides
** On opposite side

Item 1 standard
Item 2 only with:
- GSS05-2M □□□ 090C□□
- GSS05-2M □□□ 100C□□
- GSS06-2M □□□ 112C□□
- GSS07-2M □□□ 160C□□

Ventilations

Position of ventilation, sealing elements and oil level check

GSS05...07-3

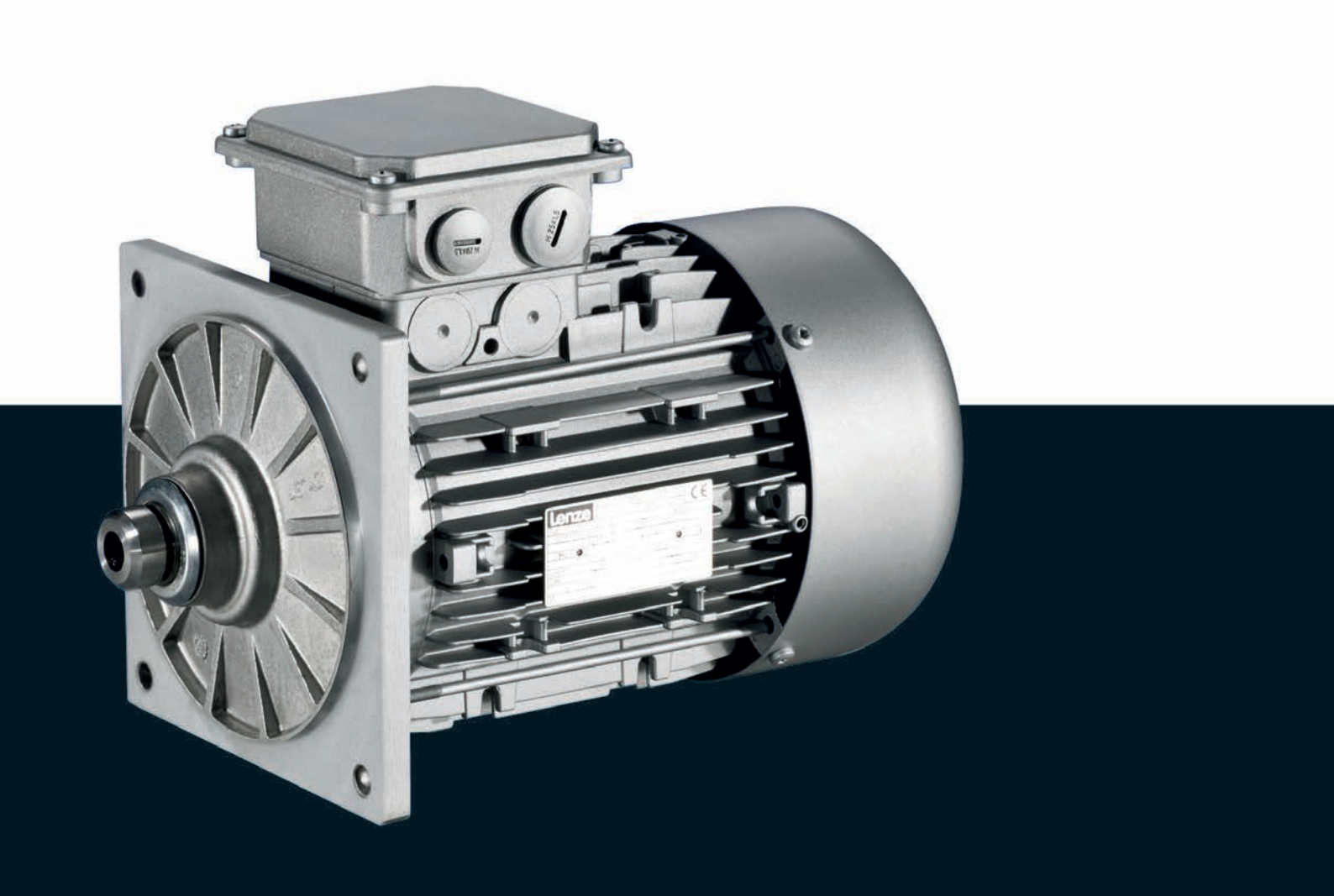


A ... F Mounting position
⊗ Ventilation / Oil filler plug
● Oil drain plug
◒ Oil control plug
* On both sides
** On opposite side

Item 1 standard
Item 2 only on:
- GSS07-3M □□□ 090C□□
- GSS07-3M □□□ 100C□□

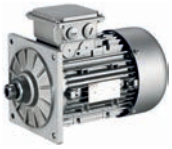
MD three-phase AC motors

0.06 to 45 kW



MD three-phase AC motors

Contents



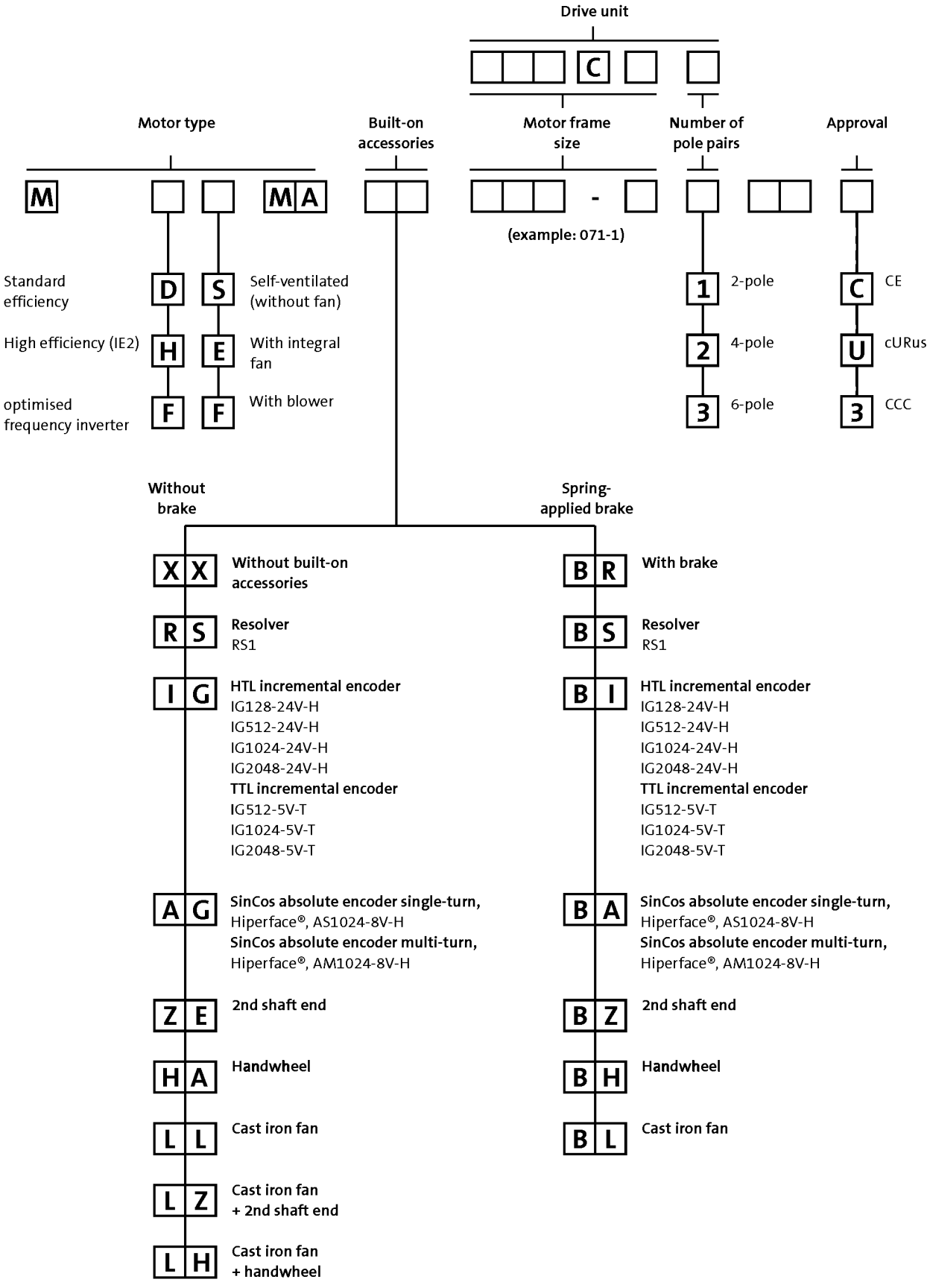
List of abbreviations

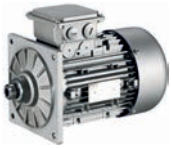
$\eta_{100\,\%}$	[%]	Efficiency
$\eta_{75\,\%}$	[%]	Efficiency
$\eta_{50\,\%}$	[%]	Efficiency
cos ϕ		Power factor
I_N	[A]	Rated current
I_{max}	[A]	Max. current consumption
J	[kgcm²]	Moment of inertia
m	[kg]	Mass
M_a	[Nm]	Starting torque
M_b	[Nm]	Stalling torque
M_{max}	[Nm]	Max. torque
M_N	[Nm]	Rated torque
n_N	[r/min]	Rated speed
P_N	[kW]	Rated power
P_{max}	[kW]	Max. power input

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

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

Product key

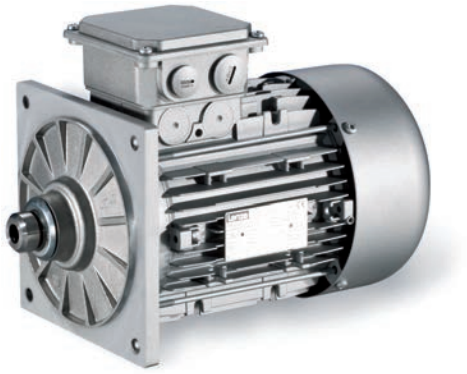

Drive unit
C
Motor type
Built-on accessories
Motor frame size
Number of pole pairs
Approval
M
M A
-
(example: 071-1)
Standard efficiency
D
S
Self-ventilated (without fan)
High efficiency (IE2)
H
E
With integral fan
optimised frequency inverter
F
F
With blower
1
2-pole
2
4-pole
3
6-pole
C
CE
U
cURus
3
CCC
Without brake
Spring-applied brake
X X
Without built-on accessories
R S
Resolver
RS1
I G
HTL incremental encoder
IG128-24V-H
IG512-24V-H
IG1024-24V-H
IG2048-24V-H
TTL incremental encoder
IG512-5V-T
IG1024-5V-T
IG2048-5V-T
A G
SinCos absolute encoder single-turn,
Hiperface®, AS1024-8V-H
SinCos absolute encoder multi-turn,
Hiperface®, AM1024-8V-H
Z E
2nd shaft end
H A
Handwheel
L L
Cast iron fan
L Z
Cast iron fan
+ 2nd shaft end
L H
Cast iron fan
+ handwheel
B R
With brake
B S
Resolver
RS1
B I
HTL incremental encoder
IG128-24V-H
IG512-24V-H
IG1024-24V-H
IG2048-24V-H
TTL incremental encoder
IG512-5V-T
IG1024-5V-T
IG2048-5V-T
B A
SinCos absolute encoder single-turn,
Hiperface®, AS1024-8V-H
SinCos absolute encoder multi-turn,
Hiperface®, AM1024-8V-H
B Z
2nd shaft end
B H
Handwheel
B L
Cast iron fan



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 x 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 UkrSepro 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.

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.

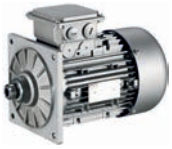
Functions and features

Size			
Motor	100	112	132
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.

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		



Functions and features

Surface and corrosion protection

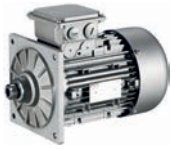
For optimum protection of three-phase AC motors against ambient conditions, the surface and corrosion protection system (OKS) offers tailor-made solutions.

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	Standard: RAL 7012 Optional: RAL Classic
OKS-M (medium)	C2	2K PUR priming coat 2K-PUR top coat	
OKS-L (high)	C3		

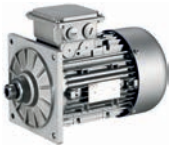


Motor – inverter assignment

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		

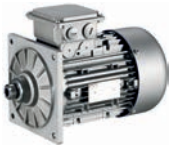


Motor – inverter assignment

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		

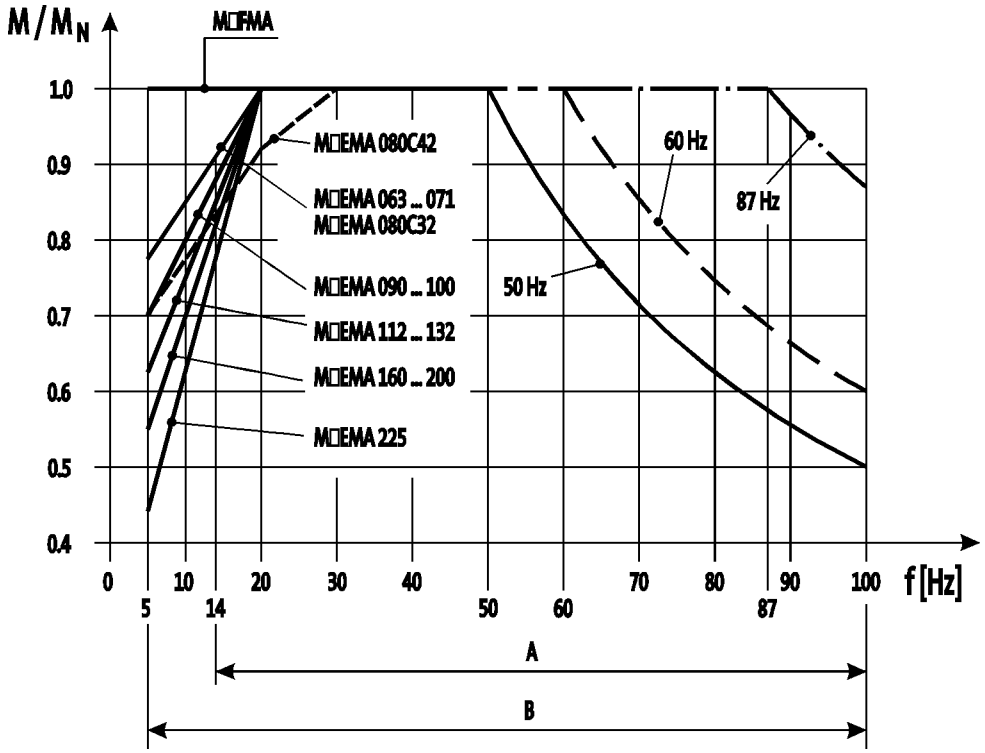


Dimensioning

Torque derating at low motor frequencies

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

Torque characteristics



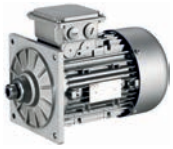
A = Operation with integral fan and brake
B = Operation with integral fan and brake control "Holding current reduction"

► 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.

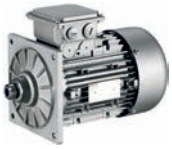


Standards and operating conditions

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

[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".



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
			± 10 %		± 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 ϕ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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.

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
			± 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	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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.

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
			± 10 %		± 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 ϕ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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.

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
			± 10 %		± 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 ϕ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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

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
			± 10 %		± 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 ϕ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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.

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
			± 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	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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.

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
			± 10 %		± 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 ϕ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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.

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
			± 10 %		± 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 ϕ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1]	m [1]
	[Nm]	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[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

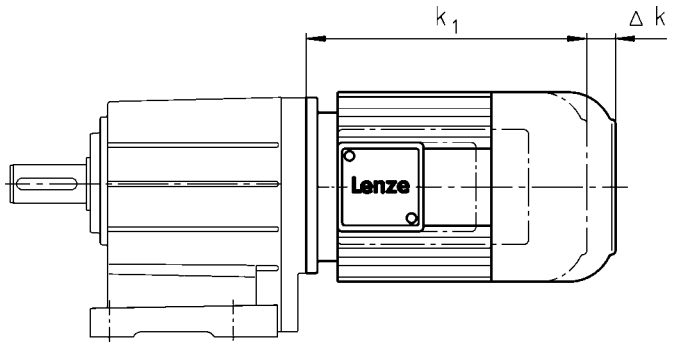
Rated data for 87 Hz

4-pole motors

	P_N	n_N	M_N	M_{max}	$U_{N,\Delta}$	$I_{N,\Delta}$	cos ϕ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1)]	m [1)]
					± 10 %						
	[kW]	[r/min]	[Nm]	[Nm]	[V]	[A]		[%]	[%]	[kgcm²]	[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

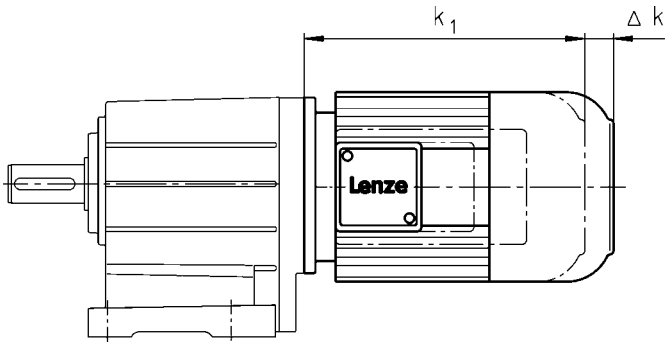
[1)] Without accessories

Dimensions, self-ventilated (2-pole)



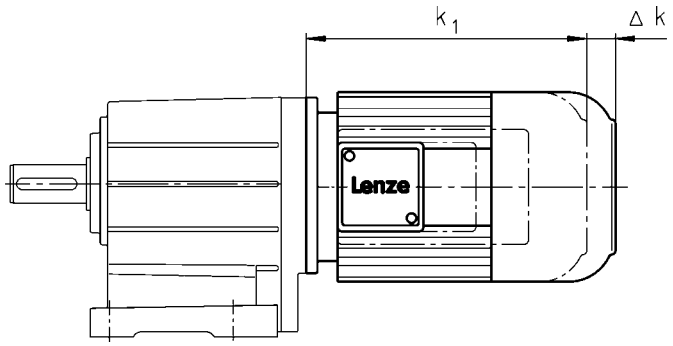
	Motor type			
	MDEMAXX	MDEMABR	MDEMABL	MDEMALL
Motor frame size				
	Δ k	Δ k	Δ k	Δ k
	[mm]	[mm]	[mm]	[mm]
063-11 063-31	0	40		
071-11 071-31		52	52	0
080-11 080-31		73	73	4
090-11 090-31		68	68	0
100-31 100-41		76	76	76
112-31 112-41		90	90	0
132-21		110	110	

Dimensions, self-ventilated (4-pole)



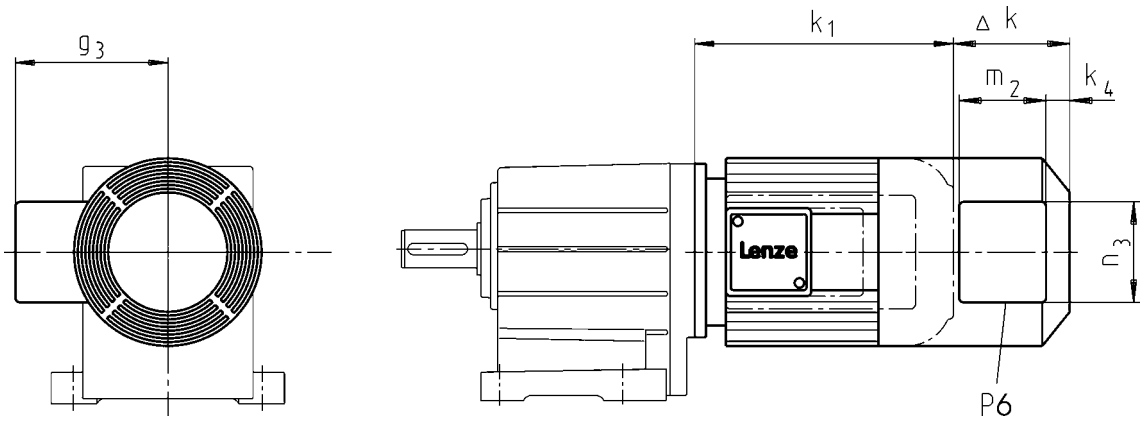
	Motor type					
	MDEMAXX	MDEMABR	MDEMABS MDEMABI MDEMABA	MDEMABL	MDEMARS MDEMAIG MDEMAAG	MDEMALL
Motor frame size						
	Δ k	Δ k	Δ k	Δ k	Δ k	Δ k
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063-02 063-22	0	71	135		71	
063-12 063-32 063-42		40	103		56	
071-32 071-42		52	96	52	52	0
080-32 080-42		73	111	73	111	4
090-32		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						
225-12 225-22			193		80	

Dimensions, self-ventilated (6-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]
071-13 071-33	0	52	96	52	52	0
080-13 080-33		73	111	73	111	4

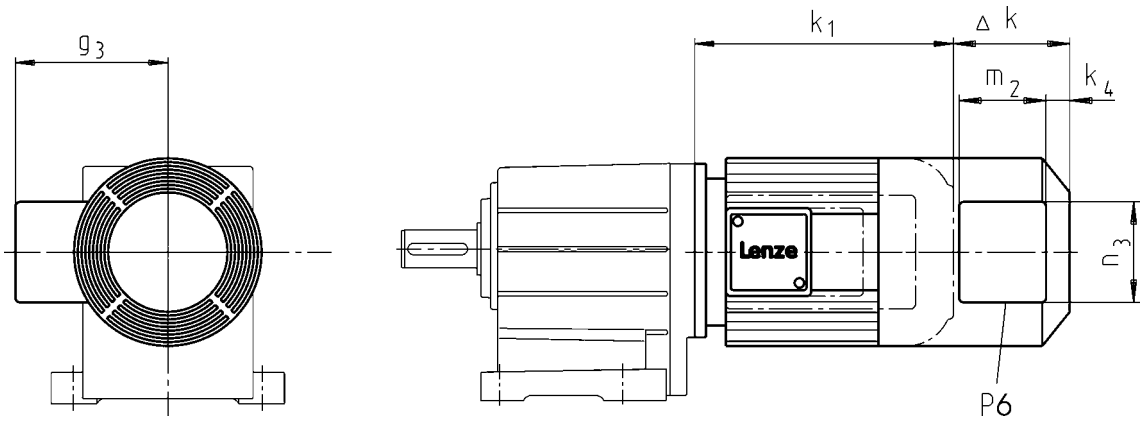
Dimensions, forced ventilated (2-pole)



Motor type							
	MDFMAXX	MDFMABR					

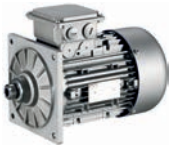
Motor frame size							
	Δ k	Δ k	k_4	g_3	m_2	n_3	P_6
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063-11 063-31	128	170	12	115	95	105	1x M16x1.5
071-11 071-31		165		122			
080-11 080-31		183	13	132	96	106	
090-11 090-31		181	22	141	95	105	
100-31 100-41	109	170		150			
112-31 112-41	102	183		162			
132-21	115	202	32	182			

Dimensions, forced ventilated (4-pole)

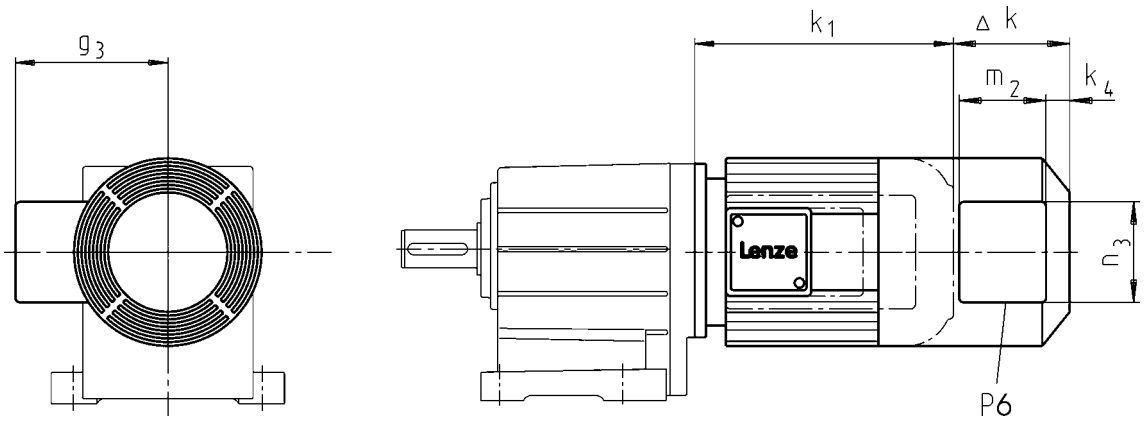


Motor type									
	MDFMAXX	MDFMABR	MDFMABS MDFMABI MDFMABA	MDFMARS MDFMAIG MDFMAAG					

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			
160-22 160-32	149	179	237	224	31	209	96	106	
180-12 180-32		215	275	215					
180-42	155		260						
225-12 225-22	213	213	213	213					



Dimensions, forced ventilated (6-pole)

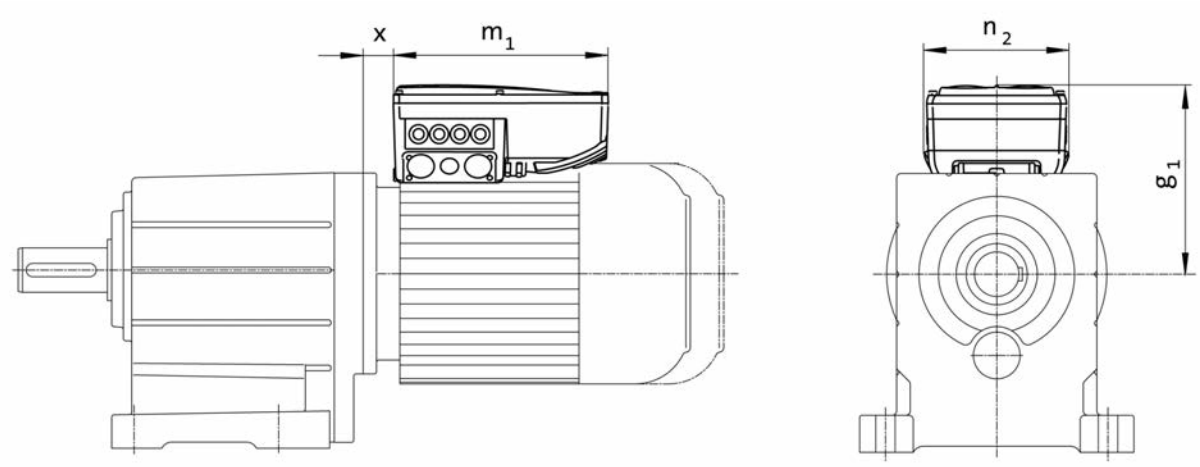


Motor type									
	MDFMAXX	MDFMABR	MDFMABS MDFMABI MDFMABA	MDFMARS MDFMAIG MDFMAAG					

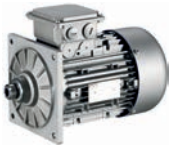
Motor frame size									
	Δ k	Δ k	Δ k	Δ k	k_4	g_3	m_2	n_3	P_6
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
071-13 071-33	128	165	165	128	12	122	95	105	1x M16x1.5
080-13 080-33		183	183		13	132	96	106	

Dimensions, 8400 motec inverter

Rated frequency 50/60 Hz

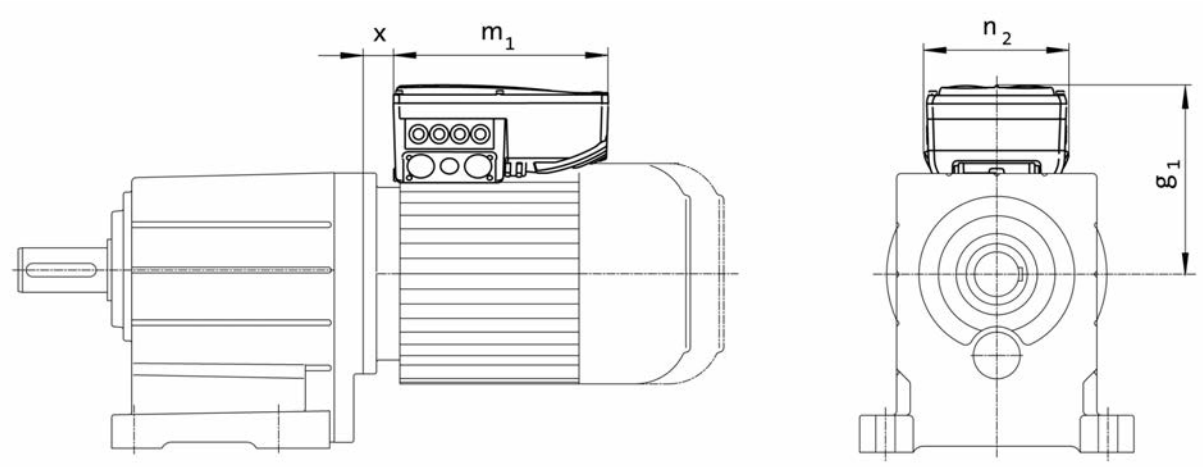


Product key					
Motor	Inverter				
		$g_{1,\ 50Hz}$	$m_{1,\ 50Hz}$	$n_{2,\ 50Hz}$	x_{50Hz}
		[mm]	[mm]	[mm]	[mm]
MD□□□□□071-32	E84DVB□3714S□□□2□	163	241	161	21.0
MD□□□□□071-42	E84DVB□5514S□□□2□				
MD□□□□□080-32	E84DVB□7514S□□□2□	172			25.5
MD□□□□□080-42	E84DVB□1124S□□□2□				
MD□□□□□090-32	E84DVB□1524S□□□2□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



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□				
MD□□□□□□071-32	E84DVB□7514S□□□2□	163			21.0
MD□□□□□□071-42	E84DVB□1124S□□□2□				
MD□□□□□□080-32	E84DVB□1524S□□□2□	172			25.5
MD□□□□□□080-42	E84DVB□2224S□□□2□	201	260	176	24.5
MD□□□□□□090-32	E84DVB□3024S□□□2□	206			27.8
MD□□□□□□100-12	E84DVB□4024S□□□2□	272	325	195	17.1
MD□□□□□□100-32	E84DVB□5524S□□□2□				
MD□□□□□□112-22	E84DVB□7524S□□□2□	282			19.0

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 10^6 repeating switching cycles
  - 1 x 10^6 reversing switching cycles
- **LongLife**
  - 10 x 10^6 repeating switching cycles
  - 15 x 10^6 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

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 08 10 10 10	3.50 8.00 7.00 16.0 23.0	08 10 10	8.00 7.00 16.0
100-12	10 10 12 12	7.00 16.0 14.0 32.0	10 12 12	16.0 14.0 32.0
100-32	10 10 12 12 12	7.00 16.0 14.0 32.0 46.0		
112-22 112-32	12 12 14 14	14.0 32.0 35.0 60.0		
132-12	14 14 16 16	35.0 60.0 60.0 80.0		
132-22 132-32	14 14 16 16 16	35.0 60.0 60.0 80.0 100		
160-22	16 16 18 18	60.0 80.0 80.0 150		
160-32	18 18 18	80.0 150 200		
180-12	18 18 20 20	80.0 150 145 260		
180-32	18 18 20 20 20	80.0 150 145 260 315		
180-42	18 18 20 20 20 20	80.0 150 145 260 315 400		

Spring-applied brake

Assignment of 4-pole motors and brakes

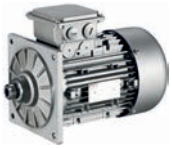
Design	Standard	LongLife

Motor frame size	Size	Rated torque	Size	Rated torque
	Brake		Brake	
		M_k		M_k
		[Nm]		[Nm]
225-12	25 25 25	265 400 490		
225-22	25 25 25 25	265 400 490 600		

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]
063-11 063-31	06 06	2.50 4.00	06 06	2.50 4.00
071-11 071-31	06 06 08	2.50 4.00 3.50	06 08	4.00 3.50
080-11 080-31 090-11	08 08 10	3.50 8.00 7.00	08 10	8.00 7.00
090-31	08 08 10 10	3.50 8.00 7.00 16.0	08 10 10	8.00 7.00 16.0
100-31 100-41	12 12	14.0 32.0	12 12	14.0 32.0
112-31 112-41	12 12 14 14	14.0 32.0 35.0 60.0		
132-21	14 16 14 16	35.0 60.0 60.0 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

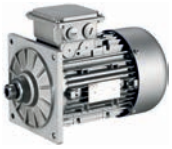
- Ratio of supply voltage to brake coil voltage = 1.11
- Supply voltage
  AC 230 V

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

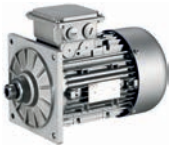
Connection via mains voltage with brake rectifier

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 $t_{ü}$ 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 $t_{ü}$ 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".



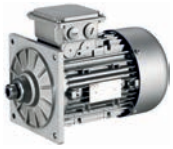
Spring-applied brake

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											
	$S_{hü}$	[1/h]	79.0	50.0	40.0	30.0	28.0	27.0	20.0	19.0	15.0
Moment of inertia											
	J	[kgcm²]	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 %.



Spring-applied brake

Rated data with reduced braking torque

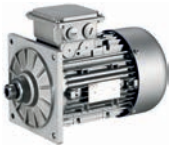
► Activation via half-wave or bridge rectifier

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											
	$t_{ü}$	[ms]	300				1300				
Min. rest time											
	t	[ms]	900				3900				
Delay time											
Engaging	t_{11}	[ms]	12.0	22.0	35.0	49.0	61.0	114	83.0	126	304
Rise time											
Braking torque	t_{12}	[ms]	14.0	16.0	30.0	45.0	37.0	65.0	52.0	269	138
Engagement time											
	t_1	[ms]	26.0	38.0	66.0	93.0	97.0	180	134	395	443
Disengagement time											
	t_2	[ms]	35.0	37.0	57.0	65.0	148	169	230	207	269

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



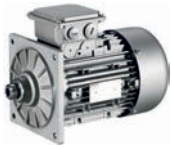
Spring-applied brake

Rated data with standard braking torque

► 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											
	$S_{hü}$	[1/h]	79.0	50.0	40.0	30.0	28.0	27.0	20.0	19.0	15.0
Moment of inertia											
	J	[kgcm²]	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 %.



Spring-applied brake

Rated data with standard braking torque

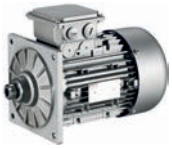
► Activation via half-wave or bridge rectifier

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											
	$t_{ü}$	[ms]	300				1300				
Min. rest time											
	t	[ms]	900				3900				
Delay time											
Engaging	t_{11}	[ms]	16.0	25.0	31.0	48.0	33.0	58.0	80.0	102	154
Rise time											
Braking torque	t_{12}	[ms]	14.0	27.0	21.0	43.0	49.0	64.0	109	157	168
Engagement time											
	t_1	[ms]	30.0	52.0		90.0	82.0	122	189	259	322
Disengagement time											
	t_2	[ms]	45.0	57.0	76.0	115	210	220	270	340	390

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



Spring-applied brake

Rated data with increased braking torque

► 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												
	$S_{hü}$	[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	[kgcm²]	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

Spring-applied brake

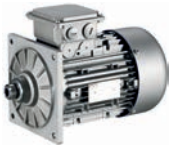
Rated data with increased braking torque

► 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												
	$t_ü$	[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

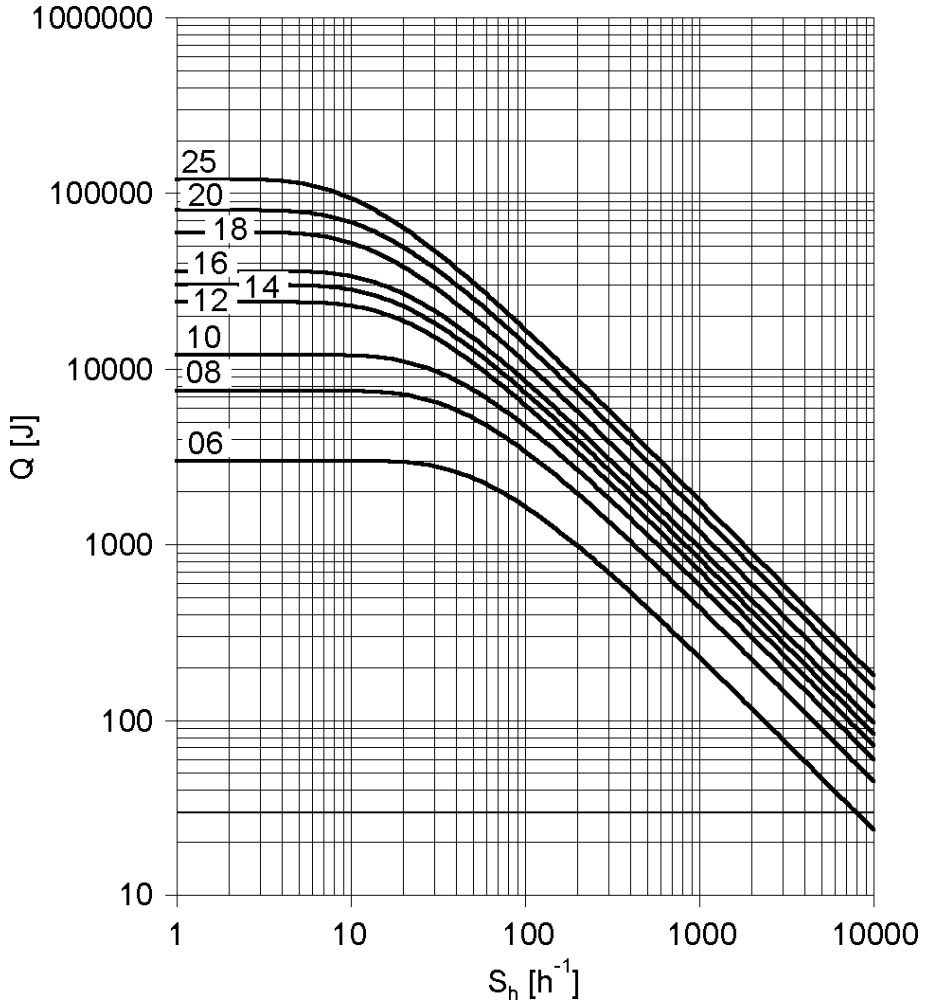
Design			Over-excitation									
Size			10	12	14	16		18	20		25	
Friction energy												
	Q_{BW}	[MJ]	264	706	761	966		1542	2322		3522	
Overexcitation time												
	$t_ü$	[ms]	300			1300						
Min. rest time												
	t	[ms]	900			3900						
Delay time												
Engaging	t_{11}	[ms]	29.0	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

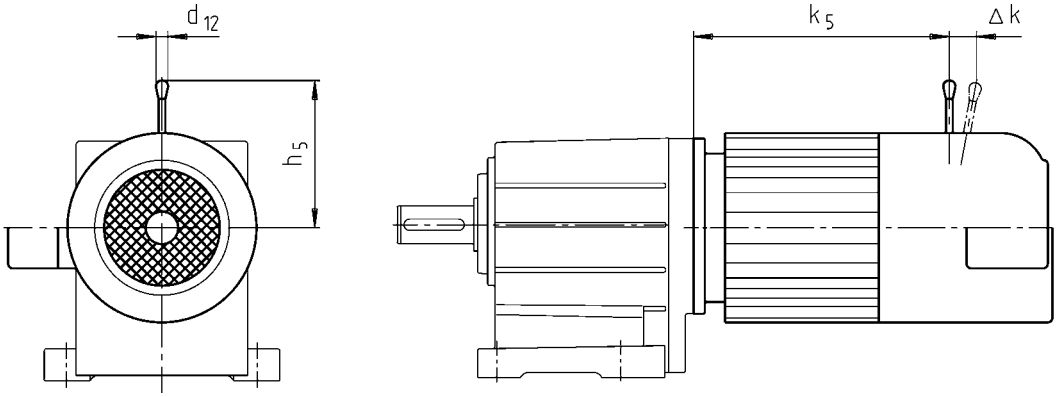
Permissible friction energy



Q =Switching energy per switching cycle
S_h =Operating frequency
Brake size = 06 to 25

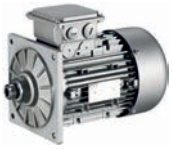
Spring-applied brake

Manual release lever



Motor frame size			Size				
			Brake				
				k_5	Δ k	h_5	d_{12}
				[mm]	[mm]	[mm]	[mm]
	063-02 063-22		06	185	29	107	13.0
063-11 063-31	063-12 063-32 063-42		06	173	29	107	13.0
071-11 071-31	071-32 071-42	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)



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		± 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

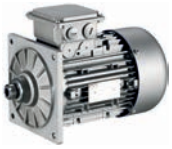
Incremental encoder and SinCos absolute value encoder

► 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



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		
		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	

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		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		Δ	220	332	0.36	0.93	6.20
		Y	380	575		0.56	
180		Δ	220	332		0.93	8.00
		Y	380	575		0.56	
200		Δ	220	332		0.93	
		Y	380	575		0.56	
225		Δ	220	400	0.28	0.76	15.0
		Y	380	575	0.26	0.43	

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
					AC
	T	T_{min}	T_{max}	$I_{in,max}$	$U_{in,max}$
	-5 ... 5				
	[°C]	[°C]	[°C]	[A]	[V]
NC contact	150	90.0	135	2.50	250

PTC thermistor

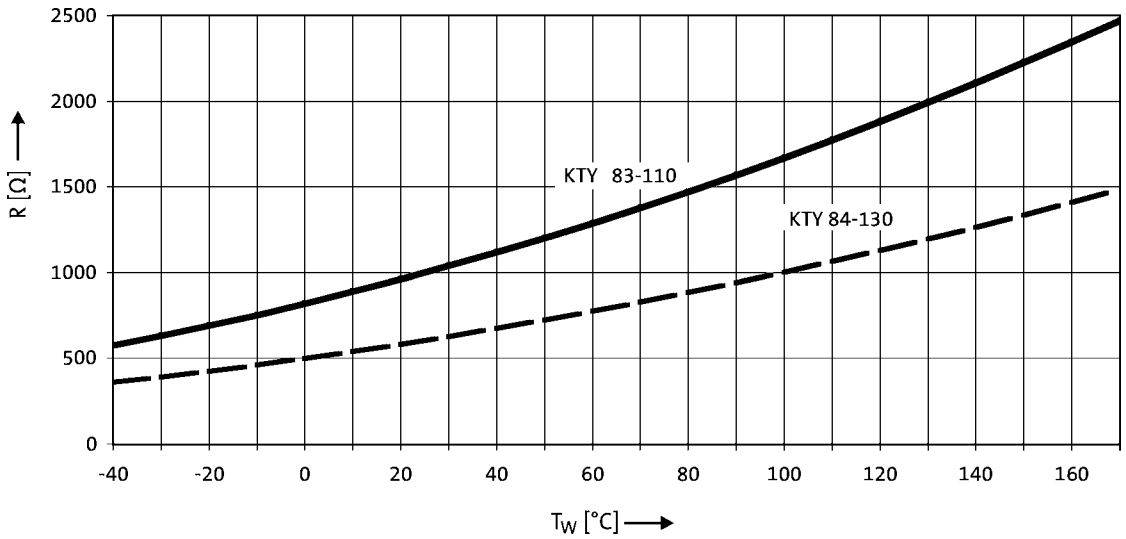
Function	Operating temperature	Rated resistance			Standard
		155 °C	-20 °C	140 °C	
	T	R_N	R_N	R_N	
	-5 ... 5				
	[°C]	[Ω]	[Ω]	[Ω]	
Sudden change in resistance	150	550	30.0	250	DIN 44080 DIN VDE 0660 Part 303

Temperature monitoring

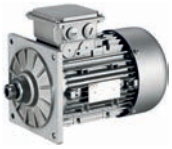
KTY temperature sensor

	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

Variation of resistance



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



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 Δconfiguration 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 Δconfiguration.

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			

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		

Terminal box

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

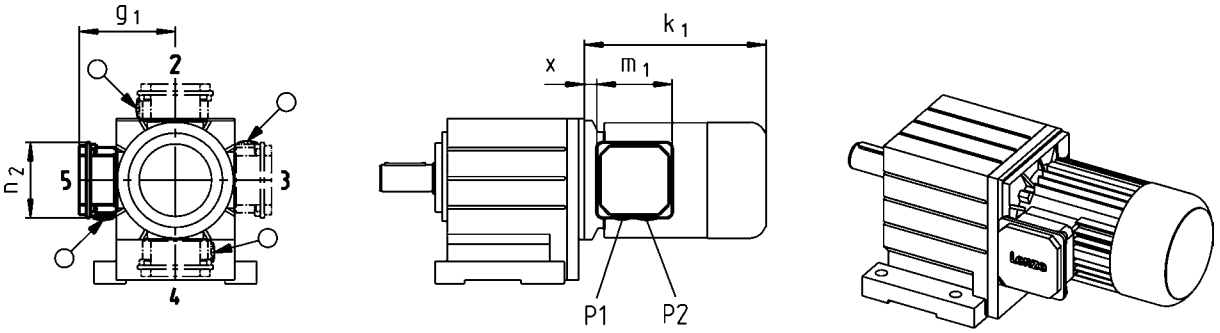
Motor type	M□□MAXX	M□□MAZE	M□□MALL	M□□MALZ
Motor frame size				
	Terminal box			
063-11 063-31	KK1			
071-11 071-31	KK1	KK2	KK1	KK2
080-11 080-31	KK1	KK2	KK1	KK2
090-31 090-11	KK1	KK2	KK1	KK2
100-31 100-41	KK1	KK2	KK1	KK2
112-31 112-41	KK1	KK2	KK1	KK2
132-21	KK1	KK3	KK1	KK3

Motor type	MD□MABR	MD□MABZ	MD□MABL
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

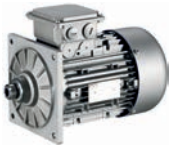
Dimensions of KK1

- ► 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 12 [1)]	100 117 [1)]	75.0 93.0 [1)]	75.0 93.0 [1)]	M16x1.5 M20x1.5 [1)]	M20x1.5 M20x1.5
071	24 15 [1)]	109 126 [1)]				
080	14	150	115	115	M20x1.5	M25x1.5
090	19	157				
100	20	166				
112	22	176				
132	33	195	122	122	M32x1.5	M32x1.5

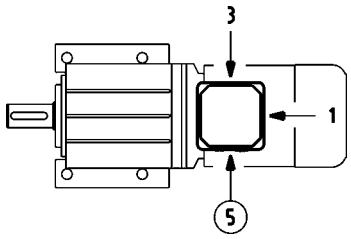
[1)] UL/CSA approval: cURus



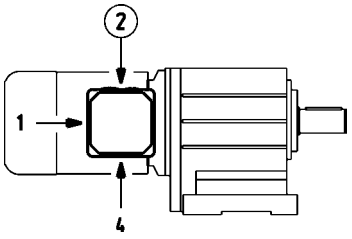
Terminal box

Cable entry position when using KK1

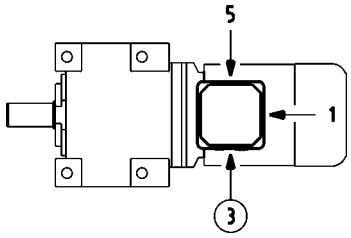
Terminal box in position 2



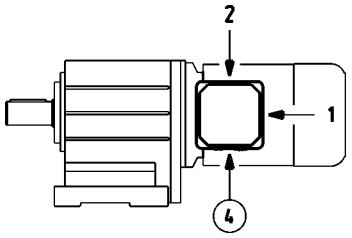
Terminal box in position 3



Terminal box in position 4

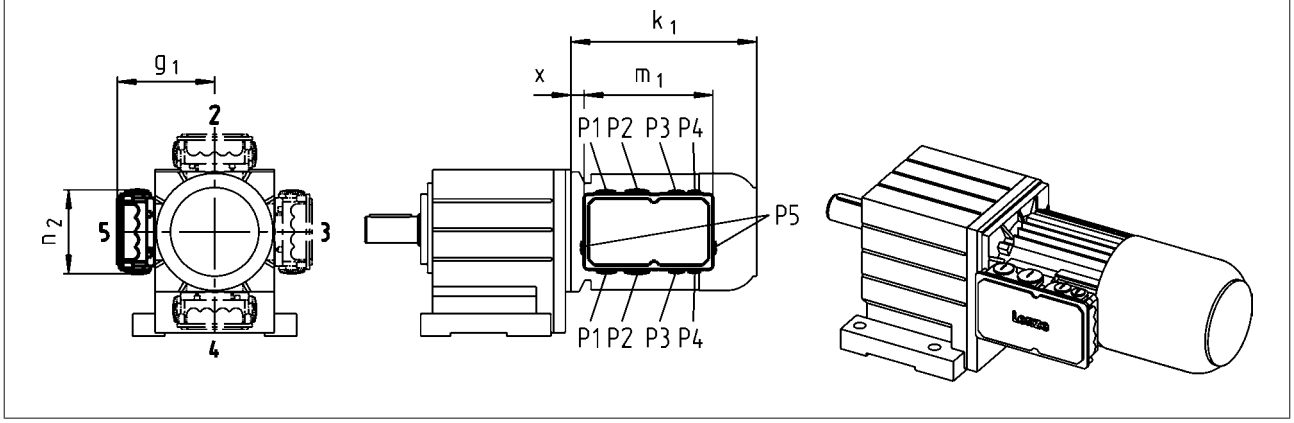


Terminal box in position 5

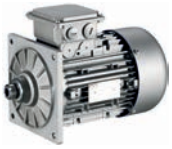


Terminal box

Dimensions of KK2

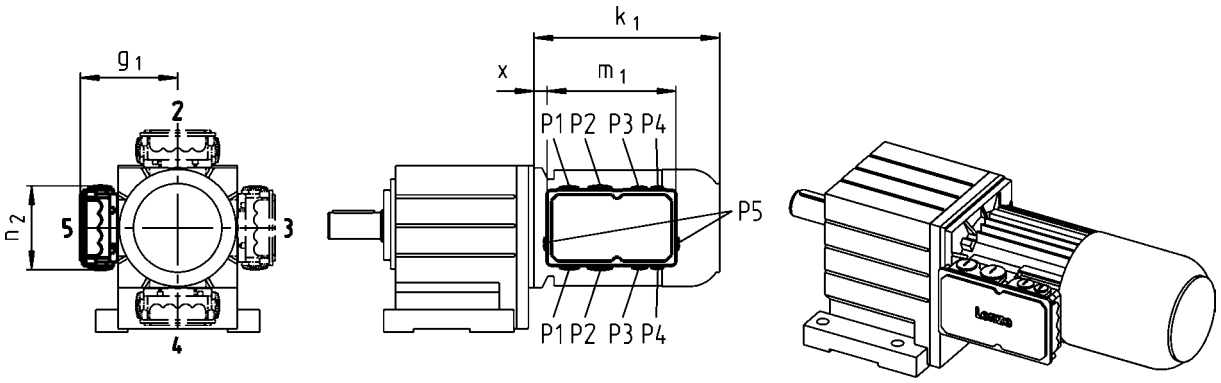


Size						
Motor						
	x	g_1	m_1	n_2	P_1	P_2
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063	13	107	136	103	M16x1.5	M20x1.5
071	15	118				
080	17	132	152	121	M20x1.5	M25x1.5
090	22	137				
100	23	147				
112	25	158				



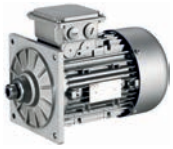
Terminal box

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							
160	35	210	226	127	M50x1.5	M16x1.5		M16x1.5	
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.

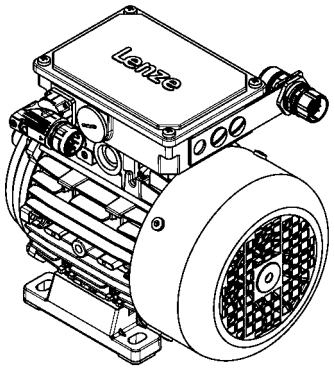


Plug connectors

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

ICN connector

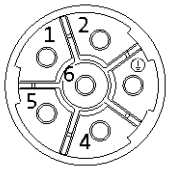
A connector is used for power, brake and temperature monitoring. The connections to the feedback system and the blower each employ a separate connector.



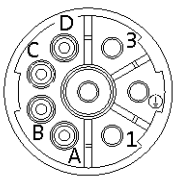
Connection for power, brake and temperature monitoring

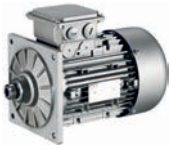
The connectors can be rotated through 270° and are fitted with a bayonet catch for SpeedTec connectors. As this connector is also compatible with conventional union nuts, existing mating connectors can continue to be used without difficulty. The motor connection is determined in the terminal box and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

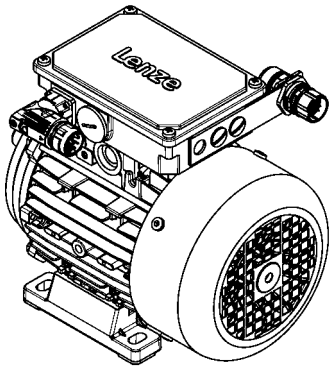
Pin assignment			
Contact	Designation	Meaning	
1	U	Phase U power	
PE	PE	PE conductor	
3	V	Phase V power	
4	W	Phase W power	
A	TB1 / TP1 / R1	Thermal sensor: TKO/PTC/ +KTY	
B	TB2 / TP2 / R2	Thermal sensor: TKO/PTC/-KTY	
C	BD1 / BA1	Brake +/AC	
D	BD2 / BA2	Brake /AC	



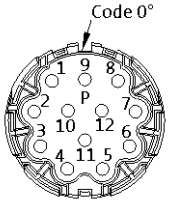
ICN connector

Feedback connection

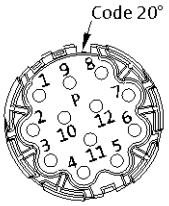
All encoder systems (apart from IG128-24V-H) are also available with an ICN connector fixed to the motor terminal box for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing mating connectors can therefore 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

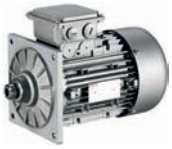
Pin assignment			
Contact	Designation	Meaning	
1	B	Track B/+SIN	
2	A^-	Track A inverse/-COS	
3	A	Track A/+COS	
4	$+U_B$	Supply +	
5	GND	Mass	
6	Z^-	Zero track inverse/-RS485	
7	Z	Zero track/+RS485	
8		Not assigned	
9	B^-	Track B inverse/-SIN	
10		Not assigned	
11	+KTY	KTY temperature sensor	
12	-KTY		

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



ICN connector

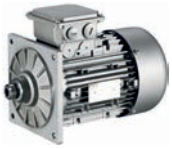
Motor terminal box with ICN connectors - built-on accessories assignment: 4-pole / 6-pole motors

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

ICN connector

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

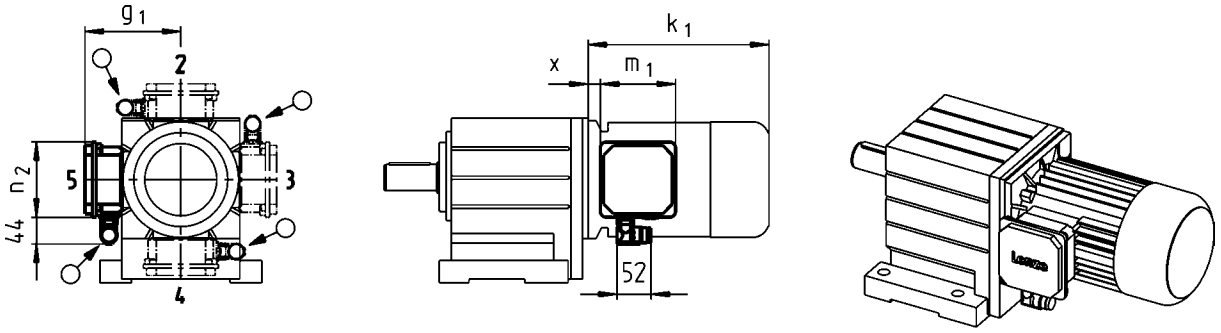
Motor type	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MABZ M□□MABH	M□□MABL
Motor frame size				
	Terminal box with ICN connector			
063-02 063-22	KK2	KK2		
063-12 063-32 063-42	KK2	KK2		
071-32 071-42 071-13 071-33	KK2	KK2	KK2	KK2
080-13 080-32 080-33 080-42	KK2	KK2	KK2	KK2
090-12 090-32	KK2	KK2	KK2	KK2
100-12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



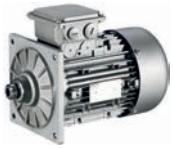
ICN connector

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.



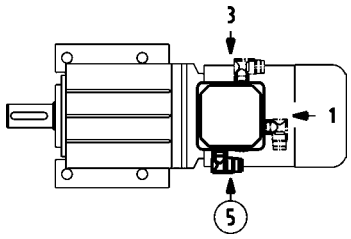
Size				
Motor				
	x	g_1	m_1	n_2
	[mm]	[mm]	[mm]	[mm]
063	12	117	93.0	93.0
071	15	126		
080	14	150	115	115
090	19	157		
100	20	166		
112	22	176		
132	33	195	122	122



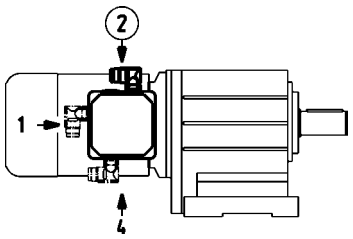
ICN connector

Connector position when using KK1

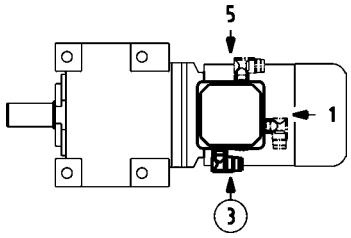
Terminal box in position 2



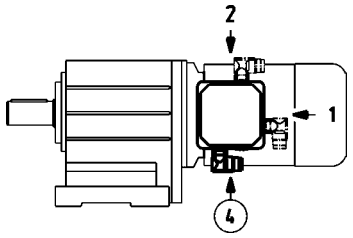
Terminal box in position 3

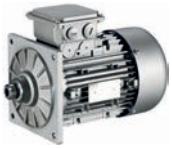


Terminal box in position 4



Terminal box in position 5

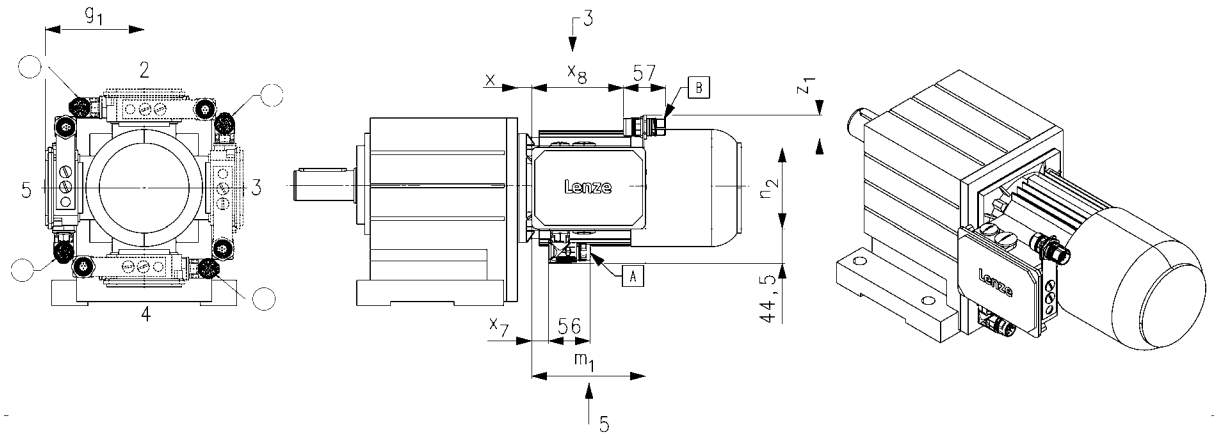




ICN connector

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.

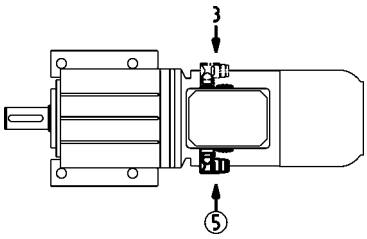


Size							
Motor							
	x	g_1	m_1	n_2	x_7	x_8	$z_{1, max}$
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063	13	107	136	103	16	109	43
071	15	118					
080	17	132	152	121	23	125	41
090	22	137					
100	23	147					
112	25	158					
132	38	187	195	125	27	166	71

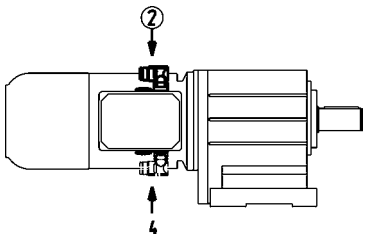
ICN connector

Connector position when using KK2/KK3

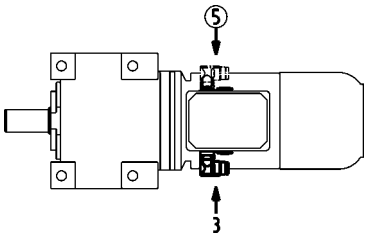
Terminal box in position 2



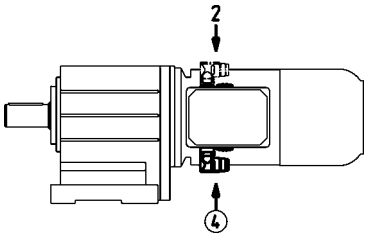
Terminal box in position 3

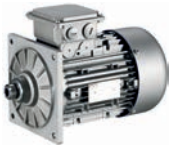


Terminal box in position 4



Terminal box in position 5

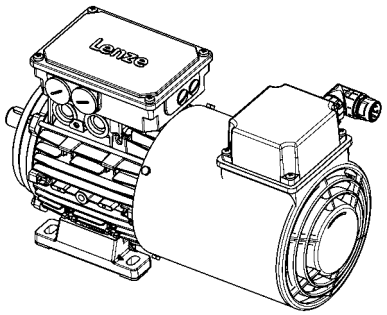




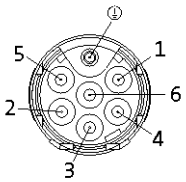
ICN connector

Blower connection

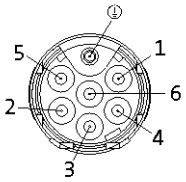
The blower is also optionally available with an ICN connector fixed to the terminal box of the blower for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing counter plugs can therefore continue to be used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



► Blower 1-ph

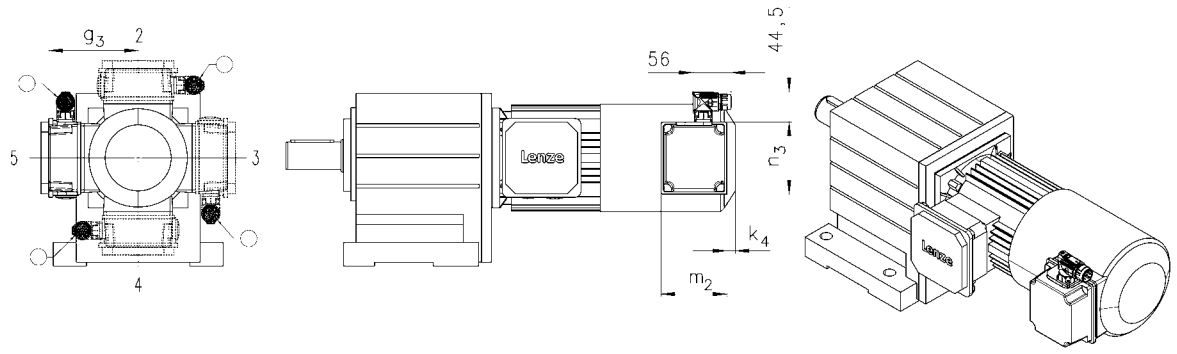
Pin assignment			
Contact	Designation	Meaning	
PE	PE	PE conductor	
1	U1	Fan	
2	U2		
3		Not assigned	
4			
5			
6			

► 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	

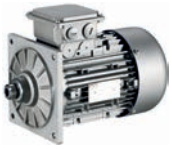
ICN connector

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		
160	31	209	96	106
180				
225				

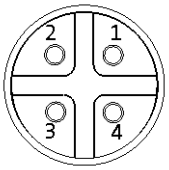
► In addition, the cover of the blower terminal box (including connectors) can be rotated progressively through 90° if necessary.

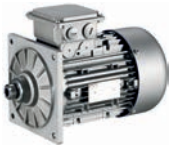


M12 connector

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.

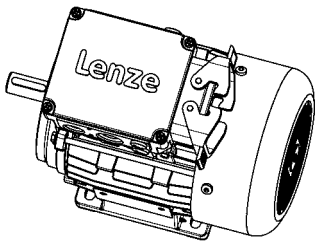
Pin assignment			
Contact	Designation	Meaning	
1	$+U_B$	Supply +	
2	B	Track B	
3	GND	Mass	
4	A	Track A	



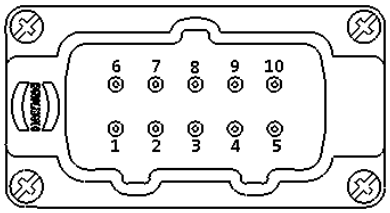
HAN connector

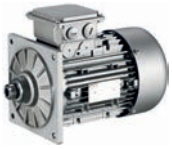
10E

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

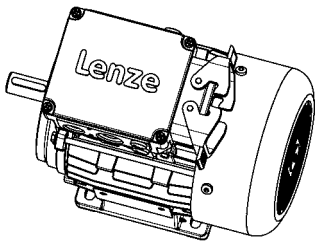




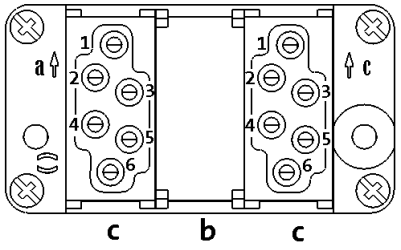
HAN connector

Modular

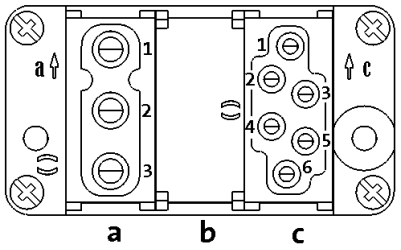
The connector is available with two different power modules (16 A or 40 A), depending on the rated motor current. The motor connection is determined in the terminal box and must be checked before commissioning.



► 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	
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 connector

Motor terminal box with HAN connectors - built-on accessories assignment: 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

HAN connector

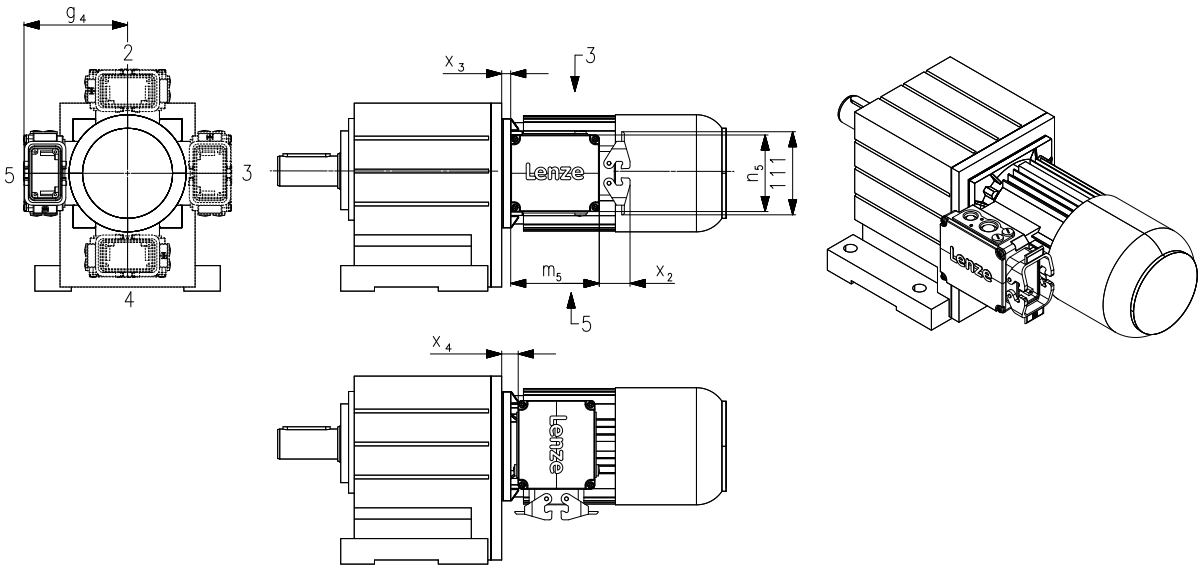
Motor terminal box with HAN connectors - built-on accessories assignment: 4-pole / 6-pole motors

Motor type	M□□MAXX M□□MABR	M□□MAZE M□□MAHA M□□MABZ M□□MABH	M□□MALL M□□MABL	M□□MALZ M□□MALH
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			

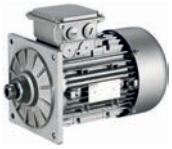
HAN connector

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.



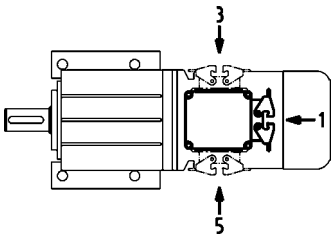
Size			
Motor			
	g_4	x_3	x_4
	[mm]	[mm]	[mm]
063	120	5.00	6.00
071	129	7.00	8.00
080	138	11.0	19.0
090	143	15.0	23.0
100	154	16.0	24.0
112	164	13.5	21.5
132	233	34.5	4.50
160	248	39.0	9.00



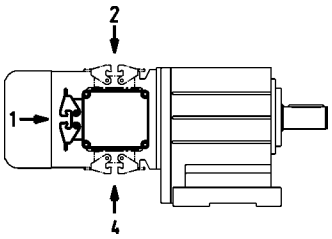
HAN connector

Position of connector

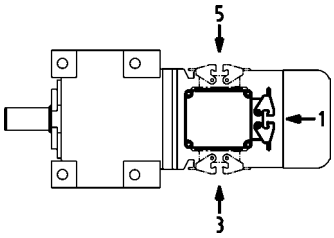
Connector in position 2



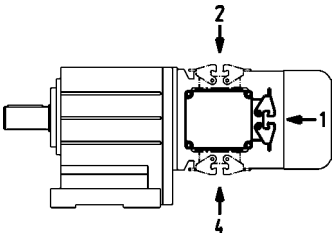
Connector in position 3

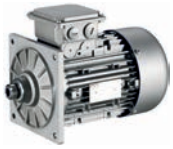


Connector in position 4



Connector in position 5

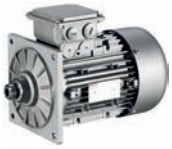




Handwheel

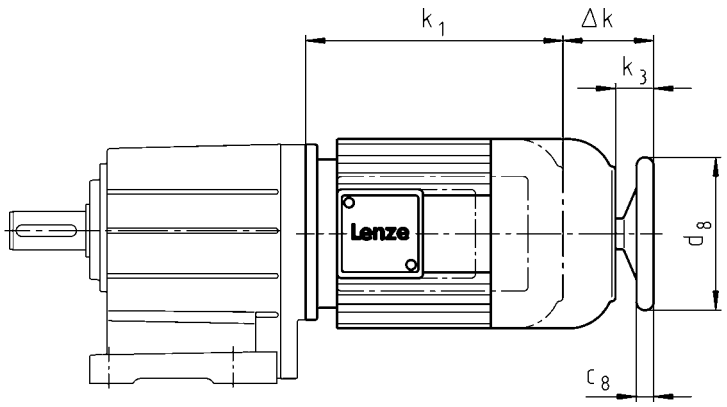
Design	Handwheel made from alloy, smooth wheel surface
Function	Manual operation: • Emergency operation • Setting-up operation for machines/systems
Note	The increased moment of inertia must be taken into account during project planning! For frequent switching operations, in particular if the direction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

Size	Moment of inertia	Mass
Motor	Additional	Additional
	J	m
	[kgcm²]	[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



Handwheel

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



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

Motor frame size				
	Δk	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

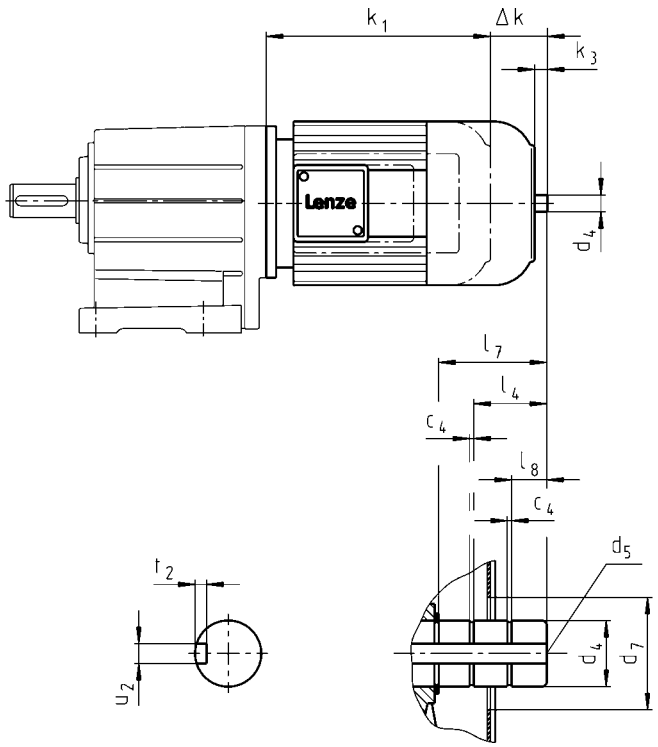
Centrifugal mass

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

	Moment of inertia	**Mass**
Motor frame size	Additional	Additional
	J	m
	[kgcm²]	[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)



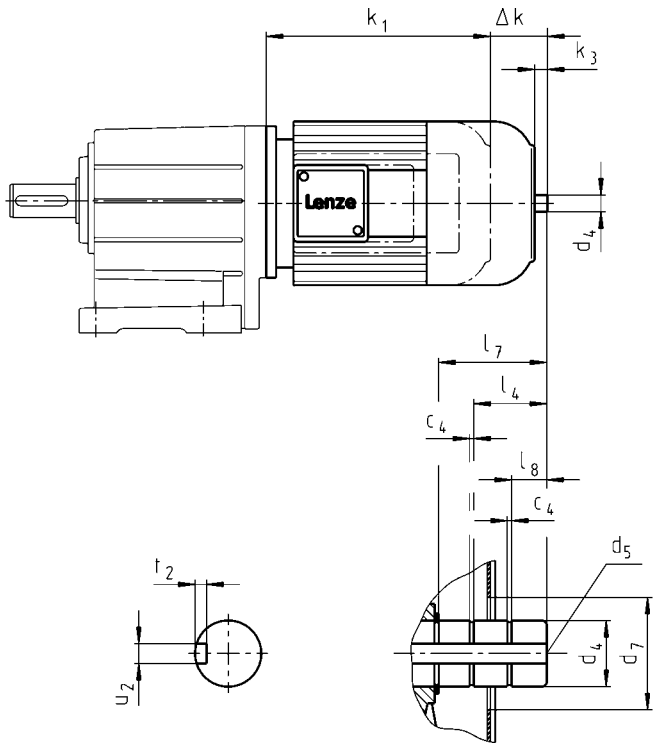
Motor type	
Built-on accessories	M□□MAZE M□□MABZ M□□MALZ

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.

2nd shaft end

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



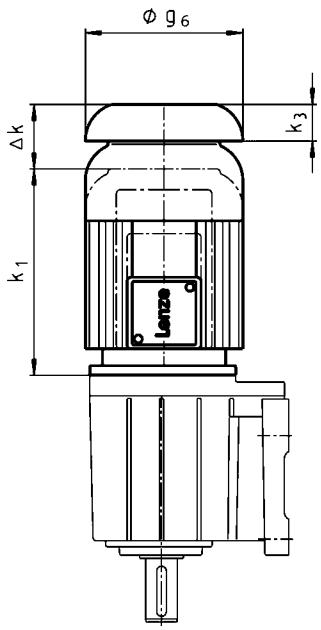
Motor type	
Built-on accessories	M□□MAZE M□□MABZ M□□MALZ

Motor frame size												
	Δk	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]
071-32 071-42 071-13 071-33	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.

Protection cover

Dimensions, self-ventilated (2-pole)

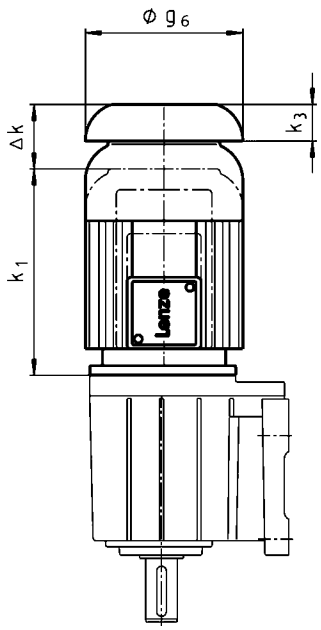


	Motor type					
	M□□MAXX	M□□MABR	M□□MABL	M□□MALL		

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

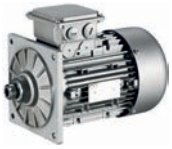
Protection cover

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



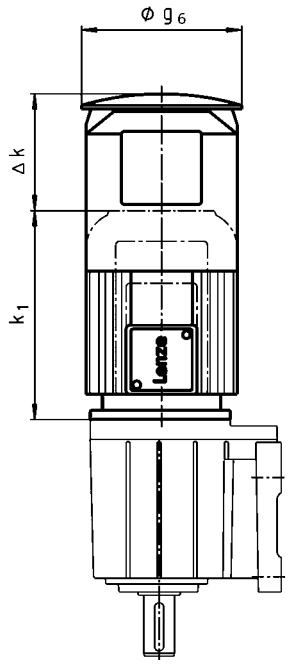
	Motor type							
	M□□MAXX	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MABL	M□□MARS M□□MAIG M□□MAAG	M□□MALL		

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)

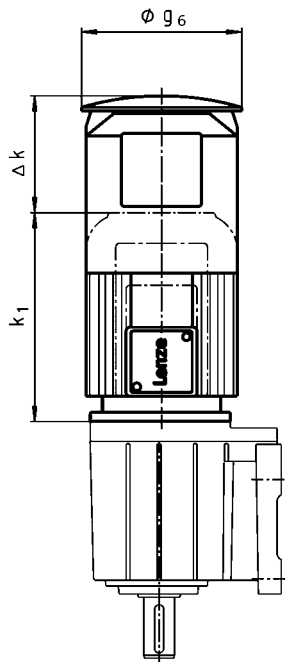


	Motor type		
	M□□MAXX	M□□MABR	

Motor frame size			
	Δ k	Δ k	g_6
	[mm]	[mm]	[mm]
063-11 063-31	169	209	133
071-11 071-31	165	202	150
080-11 080-31	168	224	170
090-11 090-31	157		
100-31 100-41	137	198	210
112-31 112-41	135	216	249
132-21	140	226	300

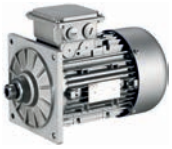
Protection cover

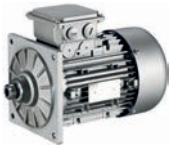
Dimensions, forced ventilated (4/6-pole)

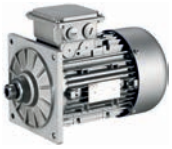


	Motor type			
	M□□MAXX	M□□MABR M□□MABS M□□MABI M□□MABA	M□□MARS M□□MAIG M□□MAAG	

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







Internet version

Lenze SE
Hans-Lenze-Straße 1
D-31855 Aerzen
Phone: +49 (0)5154 82-0
Telefax: +49 (0)5154 82 28 00

www.Lenze.com