L-force catalogue

Automation systems
Drive solutions

Controls
Inverters
Motors
Gearboxes
Engineering tools

Motors: MF three-phase AC motors, **Gearboxes:** Helical 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 easy principle to meet the ever more specialised customer requirements in the field of machine building 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.

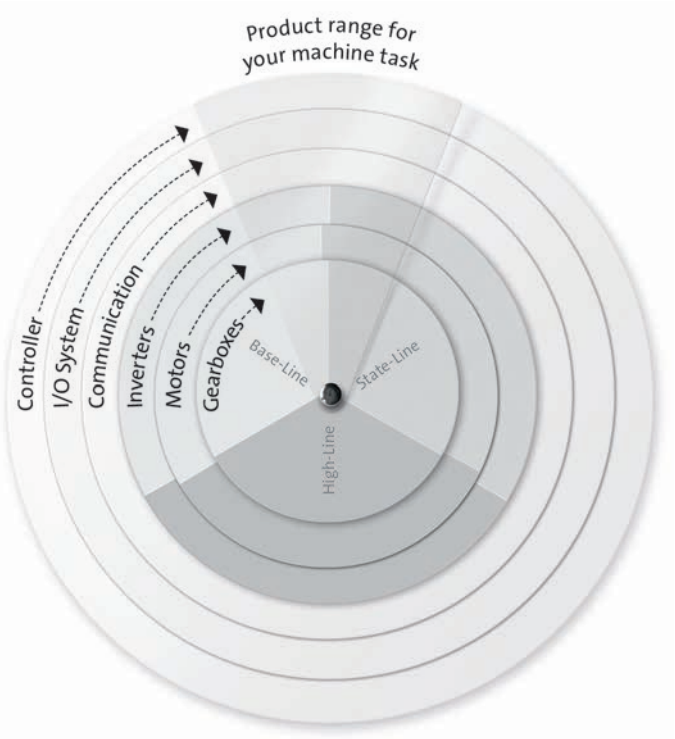
A matter of principle: the right products for every application.

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.

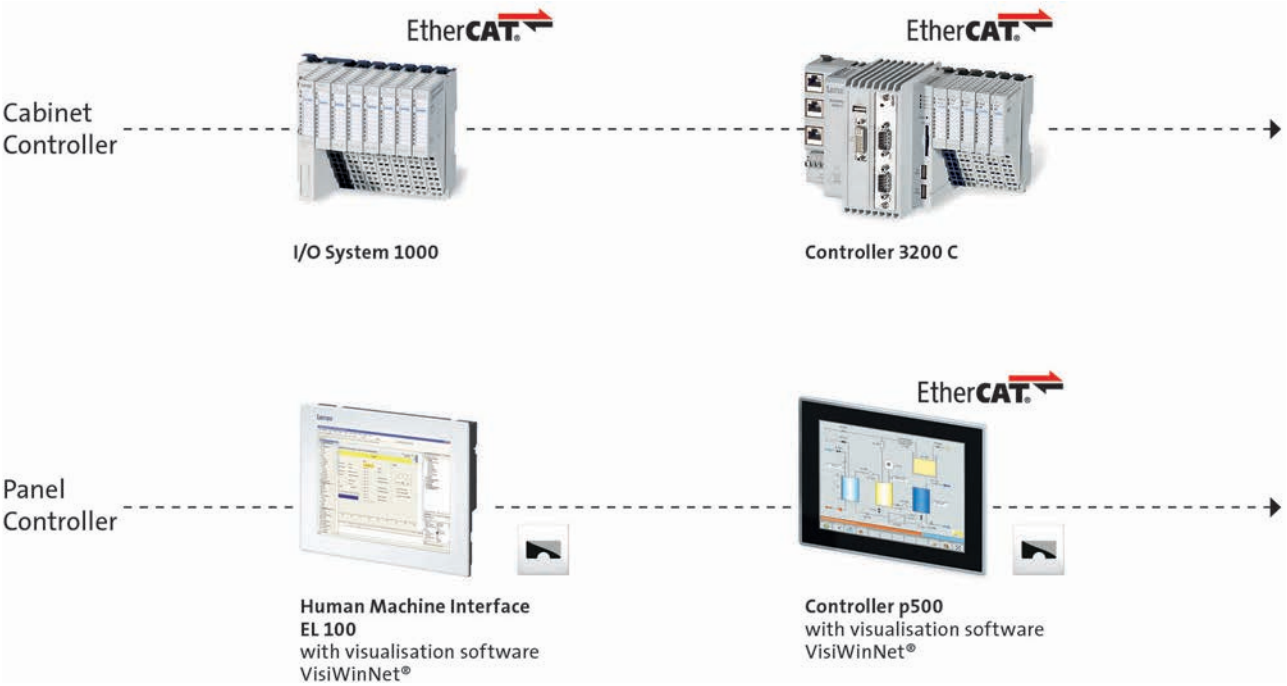
Powerful products with a major impact:
- Easy handling
- High quality and durability
- Reliable technologies in tune with the latest developments

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!

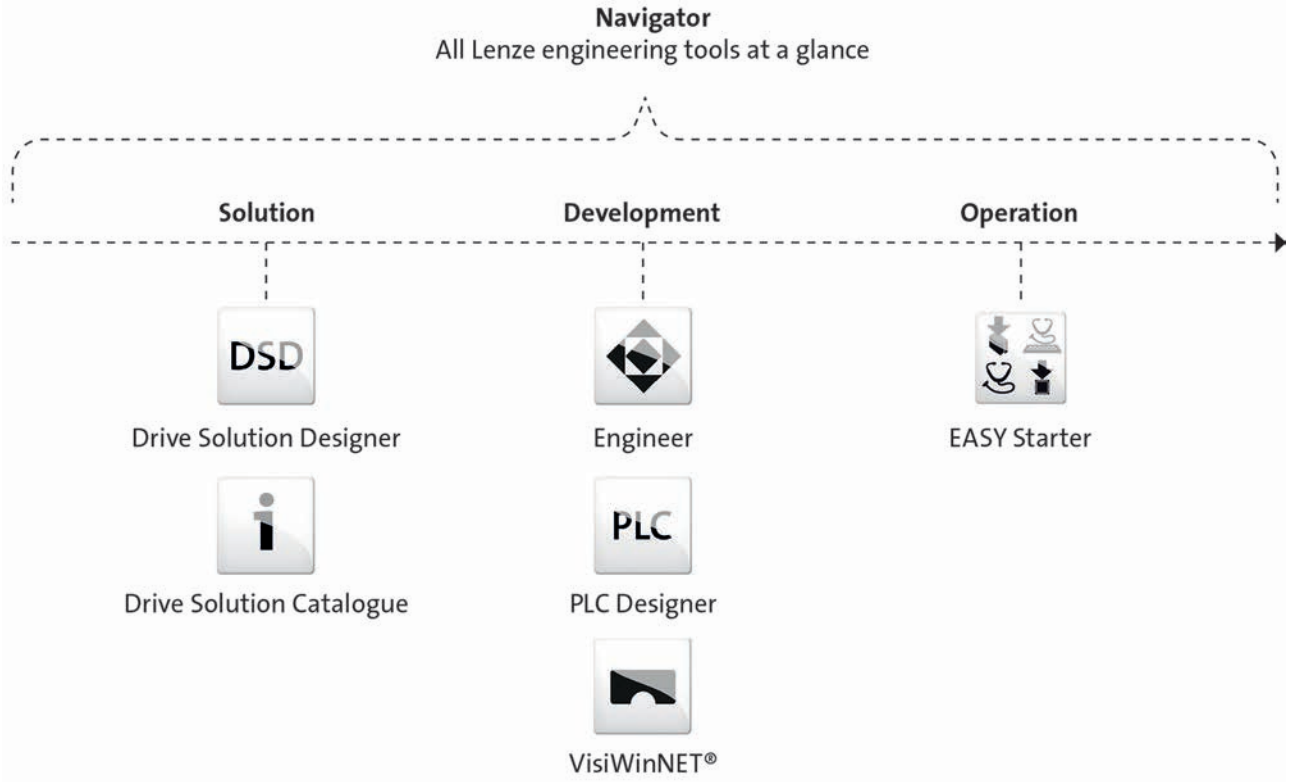


L-force product portfolio

Controls

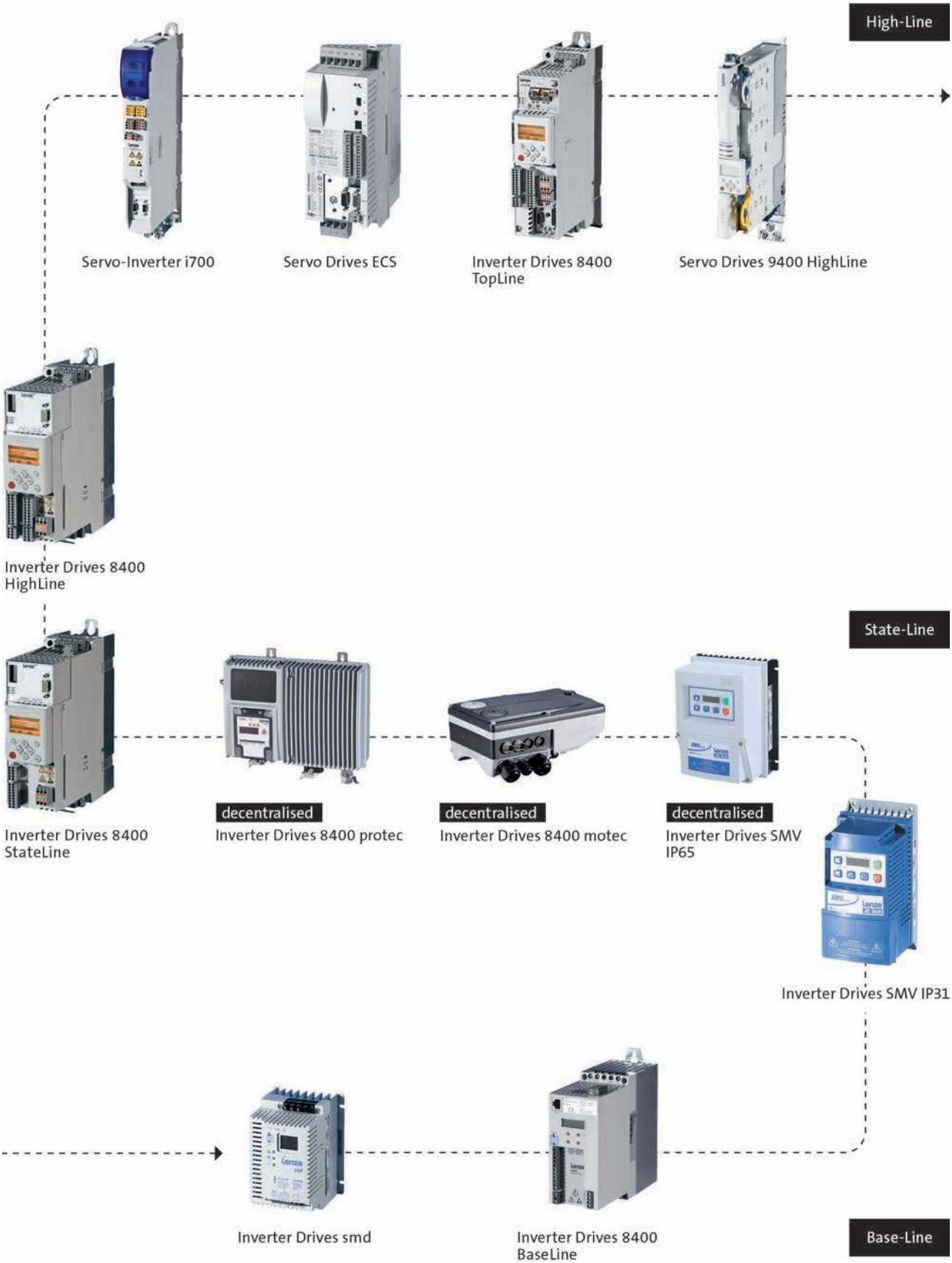


Engineering tools



L-force product portfolio

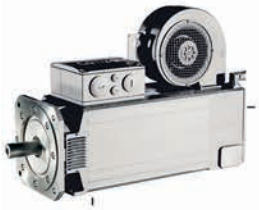
Inverters



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

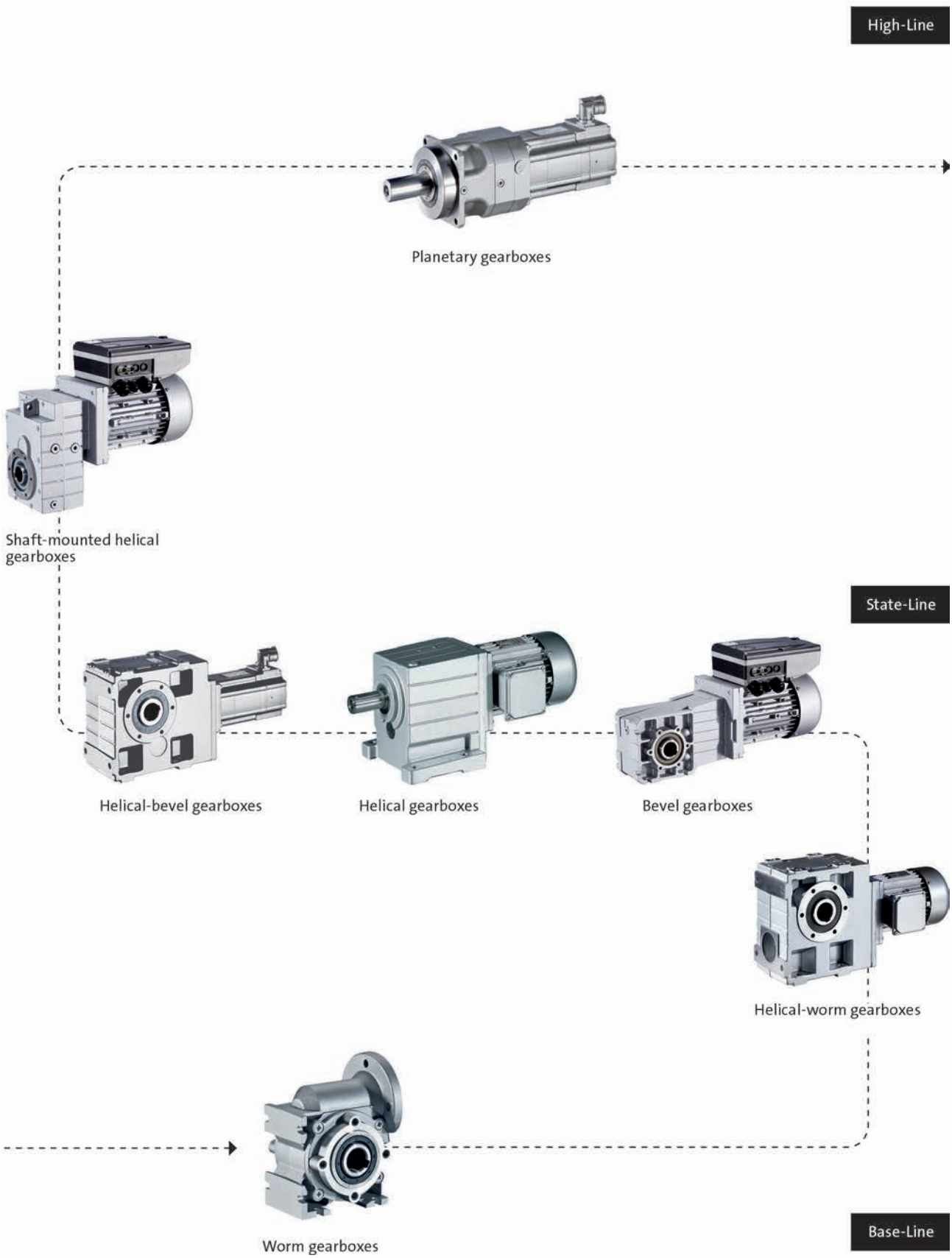
MD three-phase AC motors

Basic MD/MH three-phase AC motors

Base-Line

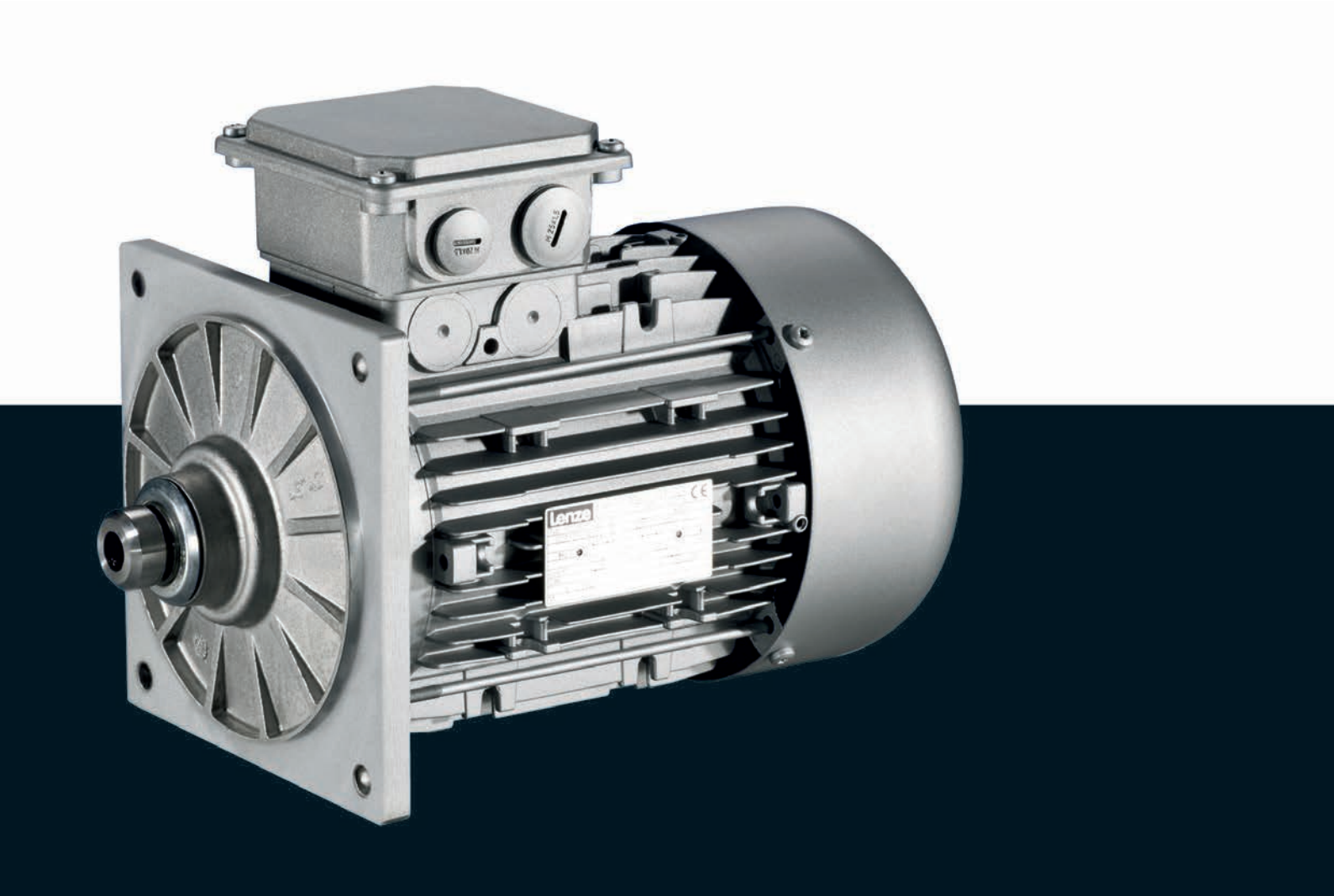
L-force product portfolio

Gearboxes



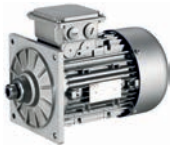
MF three-phase AC motors

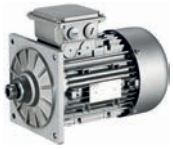
0.55 ... 22 kW



MF three-phase AC motors

Contents





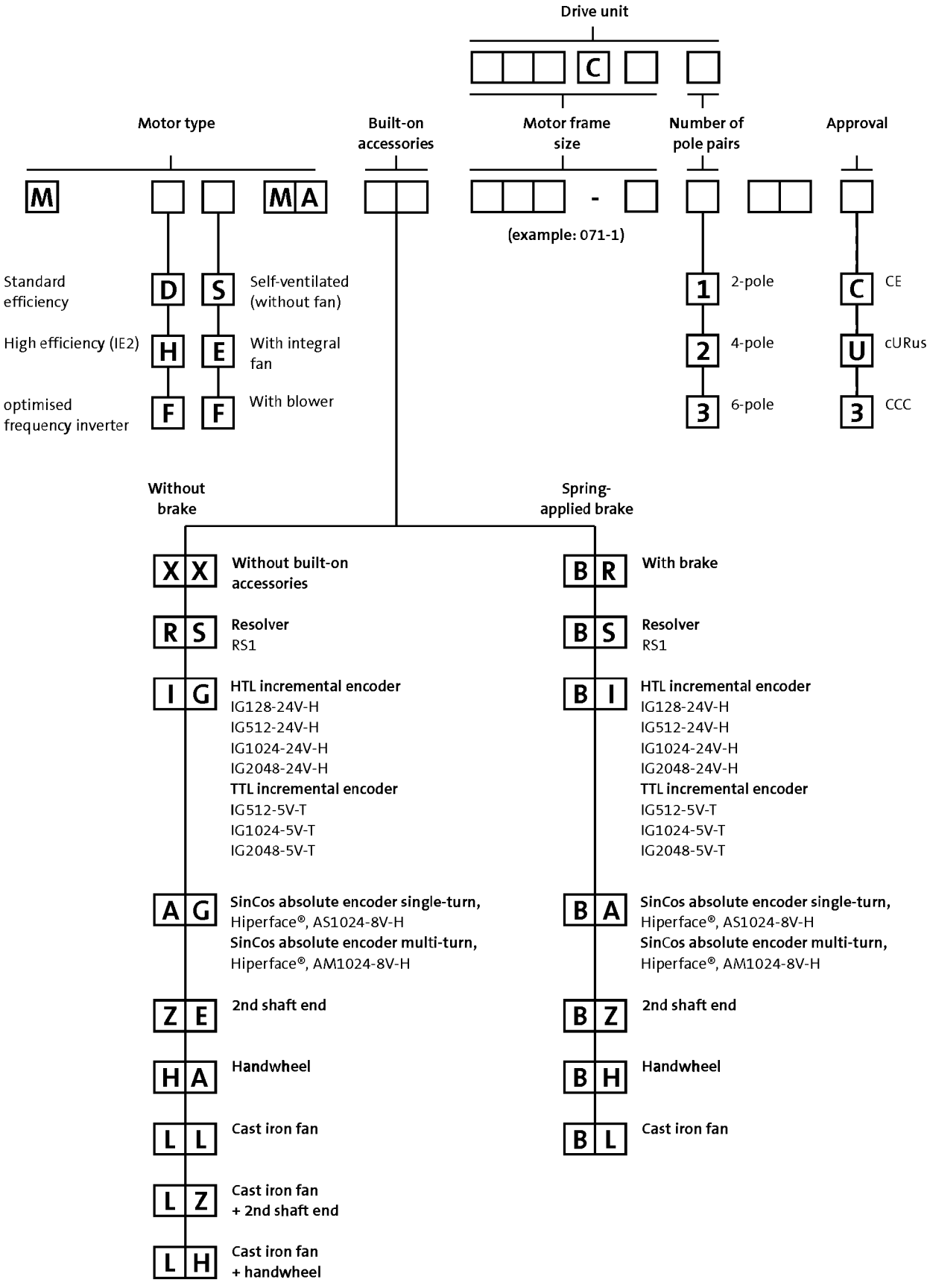
List of abbreviations

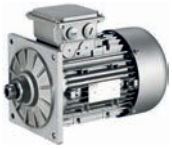
$\eta_{100\,\%}$	[%]	Efficiency
$\eta_{75\,\%}$	[%]	Efficiency
$\eta_{50\,\%}$	[%]	Efficiency
cos φ		Power factor
I_N	[A]	Rated current
I_{max}	[A]	Max. current consumption
J	[kgcm²]	Moment of inertia
m	[kg]	Mass
M_a	[Nm]	Starting torque
M_b	[Nm]	Stalling torque
M_{max}	[Nm]	Max. torque
M_N	[Nm]	Rated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

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

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

Product key

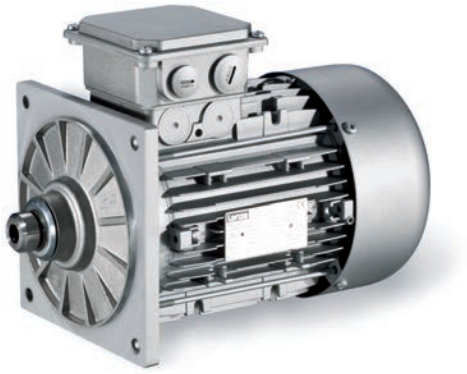

Drive unit
C
Motor type
Built-on accessories
Motor frame size
Number of pole pairs
Approval
M
M A
-
(example: 071-1)
Standard efficiency
D
S
Self-ventilated (without fan)
High efficiency (IE2)
H
E
With integral fan
optimised frequency inverter
F
F
With blower
1
2-pole
2
4-pole
3
6-pole
C
CE
U
cURus
3
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 MF three-phase AC motors are available in a power range from 0.55 to 22 kW and have been fully optimised for inverter operation.

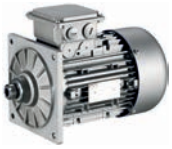
The benefits for you:
- Up to sizes smaller than standard three-phase AC motors
- The motors exceed the minimum efficiency levels of efficiency class IE2
- Large speed setting range: 1:24 (without field weakening)
- Dynamic thanks to a low moment of inertia

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 Incremental encoder Absolute value encoder (multi-turn)			
Temperature 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				
	Primed Not coated Paint in various corrosion-protection designs in accordance with RAL colours			
Further options				
	Protection cover	Protection cover 2nd shaft end		



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 Incremental encoder Absolute value encoder (multi-turn)		
Temperature 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	Terminal box HAN modular connector
Brake connection	Terminal box ICN connector HAN modular connector HAN10E connector	Terminal box	Terminal box 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	Terminal box 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			
	Primed Not coated Paint in various corrosion-protection designs in accordance with RAL colours		
Further options			
	Protection cover 2nd shaft end		

Functions and features

Surface and corrosion protection

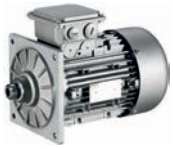
For optimum protection of three-phase AC motors against ambient conditions, the surface and corrosion protection system (OKS) offers tailor-made solutions.

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	• 1K 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) Optional measures: • Motor recesses sealed off (on request) • 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)

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)		1K priming coat	
OKS-S (small)	C1	2K-PUR top coat	Standard: RAL 7012 Optional: RAL Classic
OKS-M (medium)	C2	1K priming coat 2K-PUR top coat	
OKS-L (high)	C3	2K-EP priming coat 2K-PUR top coat	



Motor – inverter assignment

Rated frequency 120 Hz

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

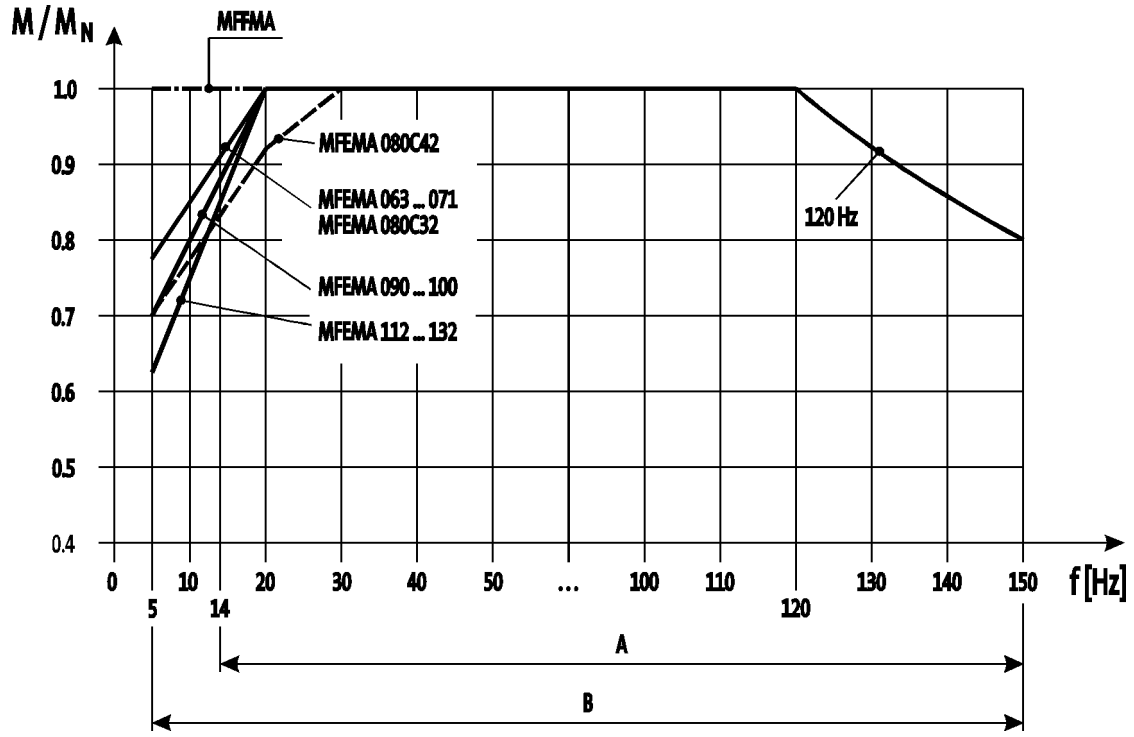
Rated power	Product key		
	Motor	Inverter	
P_N			
[kW]			
0.55	MF□□□□□063-32	E84DVB□5514S□□□2□	E84AV□□□5514□□0
0.75	MF□□□□□063-42	E84DVB□7514S□□□2□	E84AV□□□7514□□0
1.10	MF□□□□□071-32	E84DVB□1124S□□□2□	E84AV□□□1124□□0
1.50	MF□□□□□071-42	E84DVB□1524S□□□2□	E84AV□□□1524□□0
2.20	MF□□□□□080-32	E84DVB□2224S□□□2□	E84AV□□□2224□□0
3.00	MF□□□□□080-42	E84DVB□3024S□□□2□	E84AV□□□3024□□0
4.00	MF□□□□□090-32	E84DVB□4024S□□□2□	E84AV□□□4024□□0
5.50	MF□□□□□100-12	E84DVB□5524S□□□2□	E84AV□□□5524□□0
7.50	MF□□□□□100-32	E84DVB□7524S□□□2□	E84AV□□□7524□□0
11.0	MF□□□□□112-22		E84AV□□□1134□□0
15.0	MF□□□□□132-12		E84AV□□□1534□□0
18.5	MF□□□□□132-22		E84AV□□□1834□□0
22.0	MF□□□□□132-32		E84AV□□□2234□□0

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"

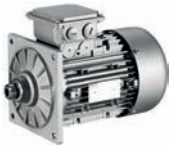
5.7

► 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

Degree of protection			
EN 60529			IP55
Approval			
Class			cURus 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

Rated data for 120 Hz

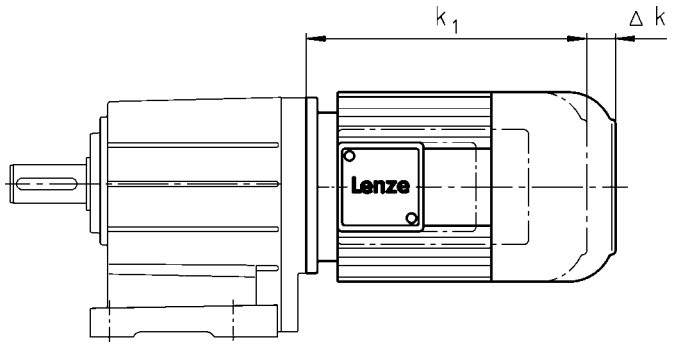
4-pole motors

	P_N	n_N	$U_{N,\Delta}$	$I_{N,\Delta}$	$U_{N,Y}$	$I_{N,Y}$
			± 10 %		± 10 %	
	[kW]	[r/min]	[V]	[A]	[V]	[A]
MF□□□□□063-32	0.55	3440	200	3.20	345	1.80
MF□□□□□063-42	0.75	3400	210	4.00	370	2.30
MF□□□□□071-32	1.10	3490	200	5.50	345	3.20
MF□□□□□071-42	1.50	3450	205	6.80	360	3.90
MF□□□□□080-32	2.20	3500	200	9.10	345	5.30
MF□□□□□080-42	3.00	3480	210	11.4	370	6.60
MF□□□□□090-32	4.00	3480			370	8.50
MF□□□□□100-12	5.50	3525			340	12.9
MF□□□□□100-32	7.50	3515			375	15.9
MF□□□□□112-22	11.0	3530			370	23.5
MF□□□□□132-12	15.0	3560			370	31.2
MF□□□□□132-22	18.5	3560			360	39.0
MF□□□□□132-32	22.0	3550			380	44.5

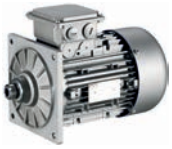
	M_N	M_{max}	cos φ	$\eta_{75\,\%}$	$\eta_{100\,\%}$	J [1)]	m [1)]
	[Nm]	[Nm]		[%]	[%]	[kgcm²]	[kg]
MF□□□□□063-32	1.53	6.00	0.68	75.0	75.0	3.70	4.40
MF□□□□□063-42	2.11	8.00	0.69	79.6	79.6	3.70	4.40
MF□□□□□071-32	3.01	12.0	0.77	81.4	81.4	12.8	6.40
MF□□□□□071-42	4.15	16.0	0.80	82.8	82.8	12.8	6.40
MF□□□□□080-32	6.00	24.0	0.86	84.3	84.3	28.0	11.0
MF□□□□□080-42	8.20	32.0	0.86	85.5	85.5	28.0	11.0
MF□□□□□090-32	10.9	44.0	0.85	87.0	86.6	32.0	18.0
MF□□□□□100-12	14.9	60.0	0.81	87.9	87.7	61.0	26.5
MF□□□□□100-32	20.3	80.0	0.81	88.9	88.7	61.0	26.5
MF□□□□□112-22	29.7	120	0.78	89.8	89.8	107	38.0
MF□□□□□132-12	40.3	160	0.84	88.9	90.6	336	66.0
MF□□□□□132-22	49.6	200	0.84	89.9	91.2	336	66.0
MF□□□□□132-32	59.2	240	0.83	90.5	91.6	336	66.0

[1)] Without accessories

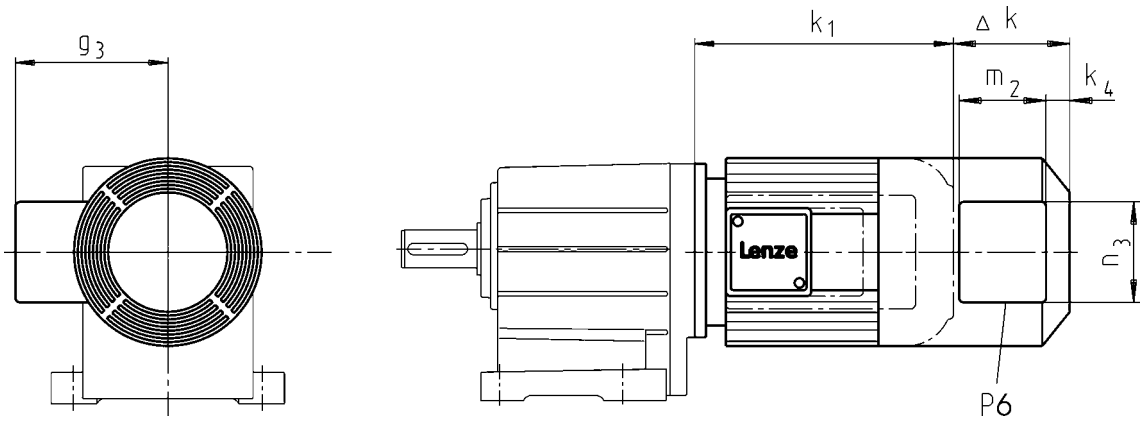
Dimensions, self-ventilated (4-pole)



	Motor type			
	MFEMAXX	MFEMABR	MFEMABS MFEMABI MFEMABA	MFEMARS MFEMAIG MFEMAAG
Motor frame size				
	Δ k	Δ k	Δ k	Δ k
	[mm]	[mm]	[mm]	[mm]
063-32 063-42	0	40	103	56
071-32 071-42		52	96	52
080-32 080-42		73	111	111
090-32		68	105	87
100-12 100-32		76	101	81
112-22		90	120	80
132-12 132-22 132-32		110	125	103

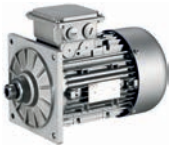


Dimensions, forced ventilated (4-pole)



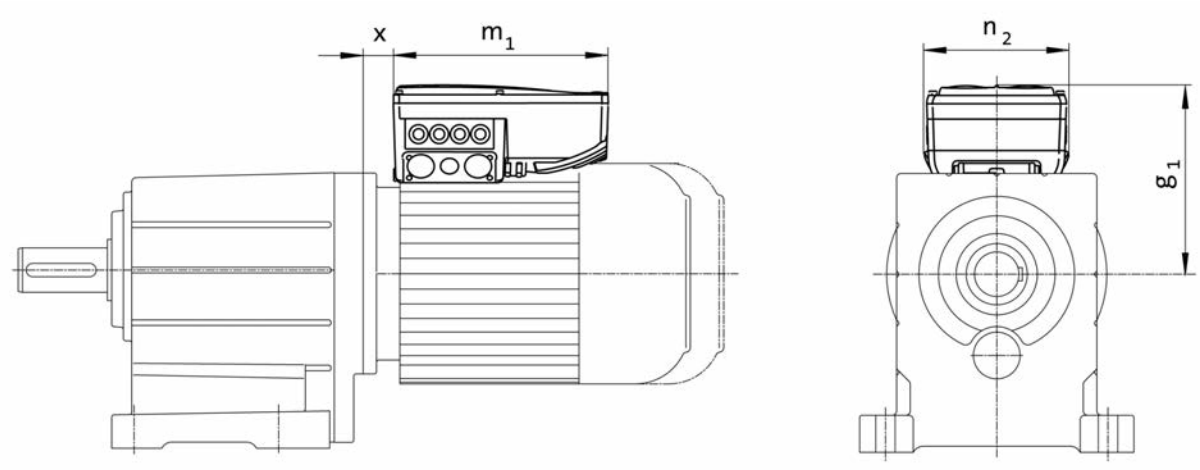
Motor type									
	MFFMAXX	MFFMABR	MFFMABS MFFMABI MFFMABA	MFFMARS MFFMAIG MFFMAAG					

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]
063-32 063-42	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	102	183	183	183		162			
132-12 132-22 132-32	115	202	202	202	32	182			



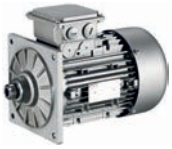
Dimensions, 8400 motec inverter

Rated frequency 120 Hz



Product key					
Motor	Inverter				
		$g_{1,\ 120Hz}$	$m_{1,\ 120Hz}$	$n_{2,\ 120Hz}$	x_{120Hz}
		[mm]	[mm]	[mm]	[mm]
MF□□□□□063-32	E84DVB□5514S□□□2□	154	241	161	18.8
MF□□□□□063-42	E84DVB□7514S□□□2□				
MF□□□□□071-32	E84DVB□1124S□□□2□	163			21.0
MF□□□□□071-42	E84DVB□1524S□□□2□				
MF□□□□□080-32	E84DVB□2224S□□□2□	201	260	176	24.5
MF□□□□□080-42	E84DVB□3024S□□□2□				
MF□□□□□090-32	E84DVB□4024S□□□2□	261	325	195	16.0
MF□□□□□100-12	E84DVB□5524S□□□2□	272			17.1
MF□□□□□100-32	E84DVB□7524S□□□2□				

5.7



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

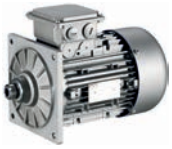
Enclosure
- Without manual release IP55
- With manual release IP54

Friction lining
- Non-asbestos, low wearing

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

Motor – brake assignment

Design	Standard		LongLife	
Motor frame size	Size	Rated torque	Size	Rated torque
	Brake		Brake	
		M_k		M_k
		[Nm]		[Nm]
063-32 063-42	06 06	2.50 4.00	06	4.00
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
080-32	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

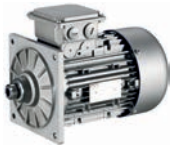


Spring-applied brake

Motor – brake assignment

Design				
	Standard		LongLife	
Motor frame size	**Size**	**Rated torque**	**Size**	**Rated torque**
	Brake		Brake	
		M_k		M_k
		[Nm]		[Nm]
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	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		

5.7



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

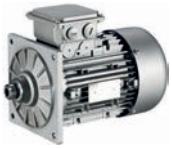
If the brake is not directly supplied with DC voltage, a rectifier is required. This is included in the scope of supply and is located in the terminal box of the motor. The rectifier converts the AC voltage of the connection into DC voltage. The following rectifiers are available:

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



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

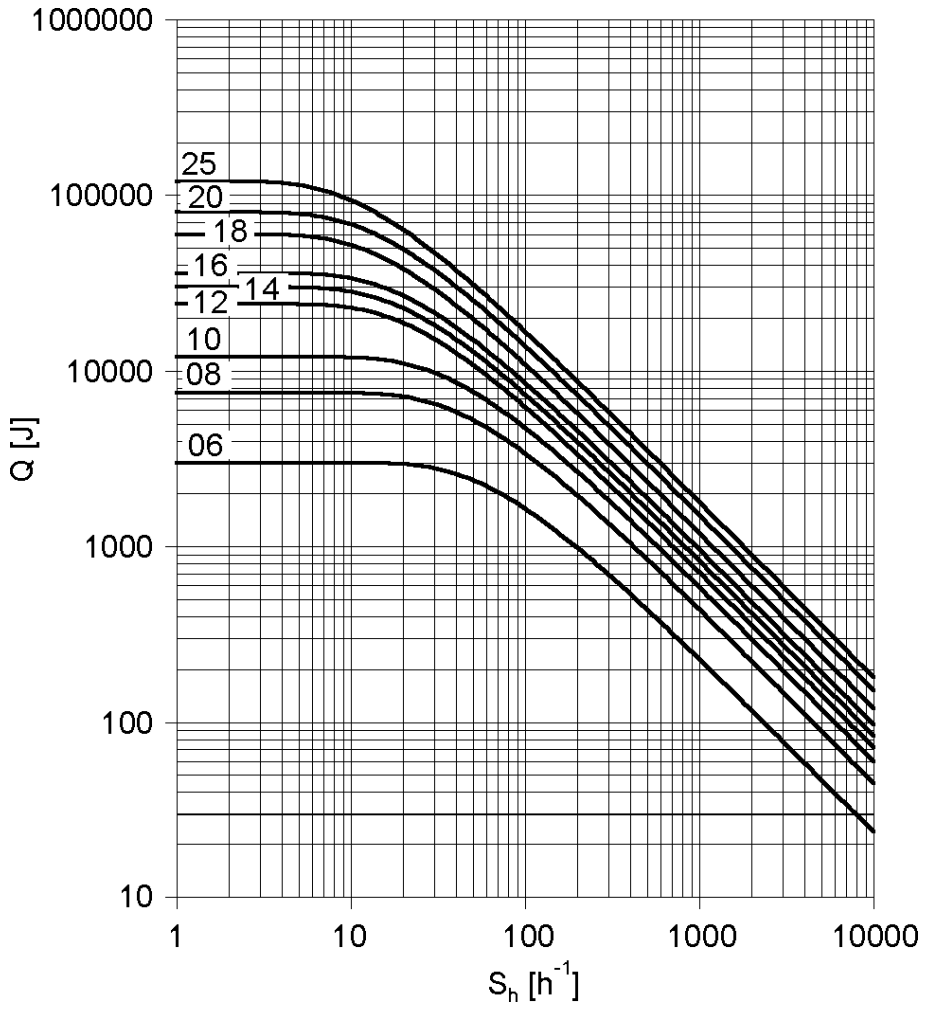
Supply voltages:
- AC 230 V
- AC 400 V

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:

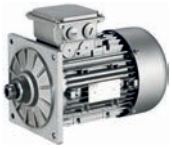
- **Short-time overexcitation of the brake coil**
  Activating the brake coil for the overexcitation time $t_{ü}$ with twice the rated voltage allows the disengagement time to be reduced. The brake opens more quickly and wear on the friction lining is reduced.
  These features make this activation version 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

Permissible friction energy



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



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
Coil power											
	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

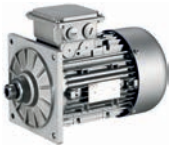
► Activation via half-wave or bridge rectifier

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
Coil power											
	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
Coil power												
	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

5.7

[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

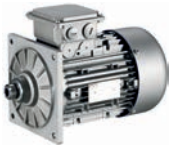
Rated data with increased braking torque

► 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

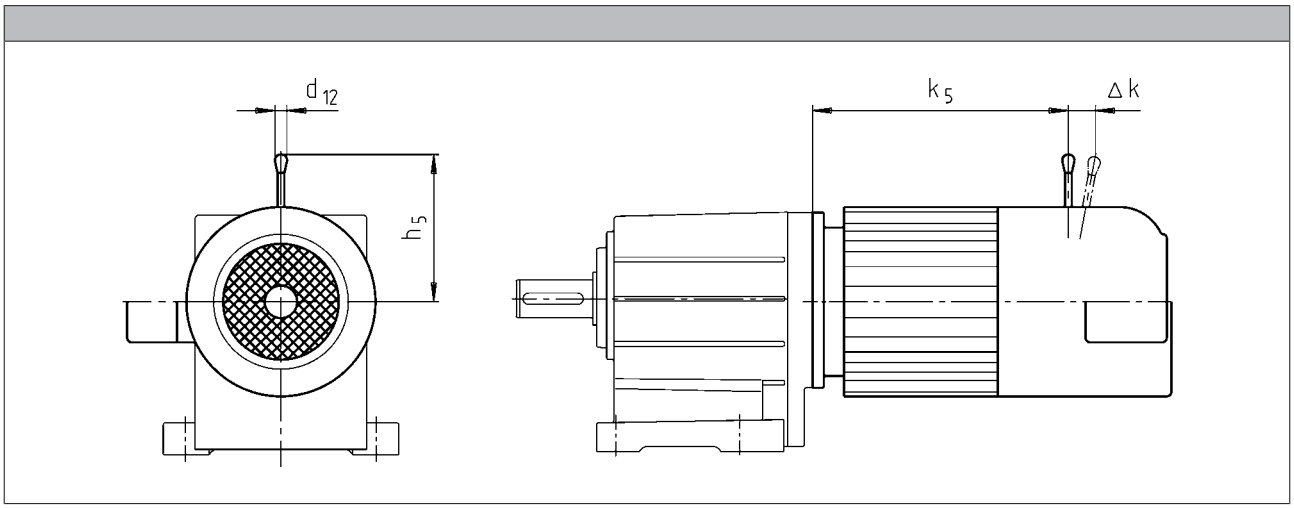
Design			Over-excitation									
Size												
			10	12	14	16		18	20		25	
Friction energy												
	Q_{BW}	[MJ]	264	706	761	966		1542	2322		3522	
Overexcitation time												
	$t_{ü}$	[ms]	300			1300						
Min. rest time												
	t	[ms]	900			3900						
Delay time												
Engaging	t_{11}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

Manual release lever



Motor frame size	Size				
	Brake				
		k_5	Δ k	h_5	d_{12}
		[mm]	[mm]	[mm]	[mm]
063-32 063-42	06	173	29	107	13.0
071-32 071-42	06 08	186 187	29 27	107 116	13.0 13.0
080-32 080-42	06 08	207 218	29 27	107 116	13.0 13.0
090-32	08 10	245 256	27 28	116 132	13.0 13.0
100-12 100-32	10 12	294 296	28 37	132 161	13.0 13.0
112-22	12 14	292 296	37 41	161 195	13.0 24.0
132-12 132-22 132-32	14 16	373 373	41 55	195 240	24.0 24.0

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

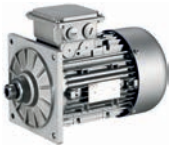
- HAN connector with connection in position 1
- Inverter motec
- Terminal box of motor sizes 071, 080, 090 for brake and retracting (M□□MA BR/BS/BA/BI)

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)

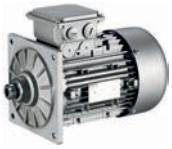
Servo-Inverters
- Servo Drives 9400 (E94A)
- 9300 servo inverters (EVS93)
- Servo Drives ECS

Blower

► 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	



Blower

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

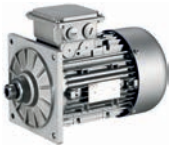
► The thermal sensors are integrated in the windings. The use of an additional motor protection switch is recommended.

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

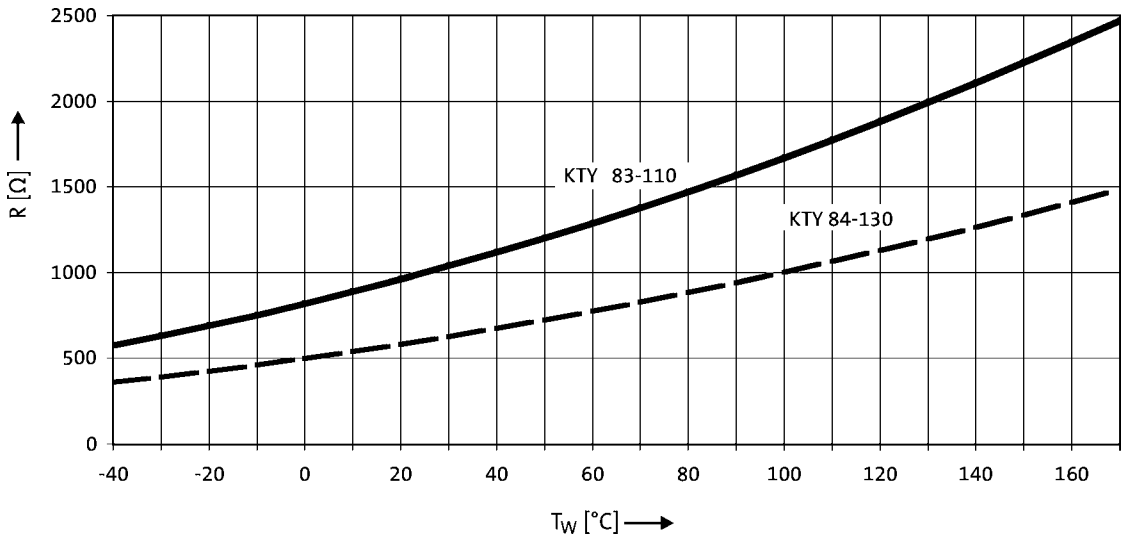


Temperature monitoring

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.

5.7

Terminal box

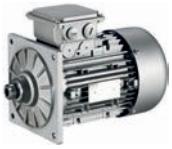
The MF three-phase AC motors are designed specifically for inverter operation. With a base frequency of 120Hz, the rated voltage has been specified at approximately 200 V in delta connection (up to 2.2 kW) and approximately 350V in star configurations.

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
Motor frame size			
	Terminal box		
063-32 063-42	KK1	KK2	
071-32 071-42	KK1	KK2	KK2
080-32 080-42	KK1	KK2	KK2
090-32	KK1	KK2	KK2
100-12 100-32	KK1	KK2	KK2
112-22	KK1	KK2	KK2
132-12 132-22 132-32	KK1	KK3	KK3

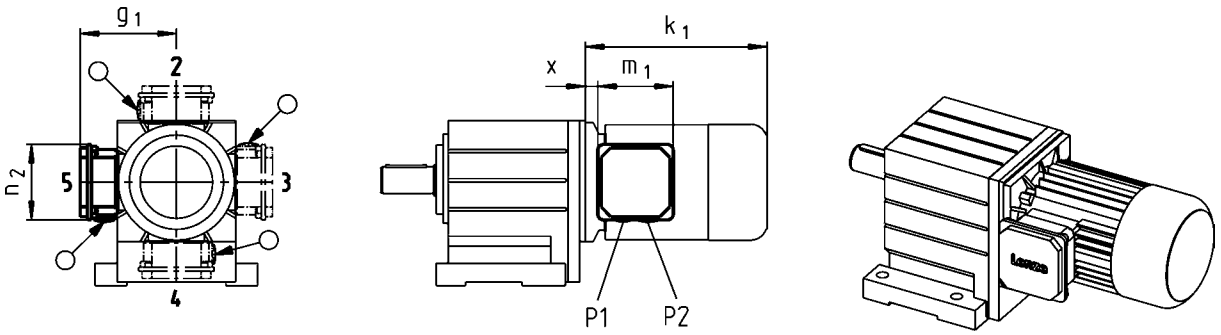
Motor type	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MABZ
Motor frame size			
	Terminal box		
063-32 063-42	KK2	KK3	
071-32 071-42	KK2	KK3	KK2
080-32 080-42	KK2	KK3	KK2
090-32	KK2	KK3	KK2
100-12 100-32	KK2	KK3	KK2
112-22	KK2	KK3	KK2
132-12 132-22 132-32	KK3	KK3	KK3



Terminal box

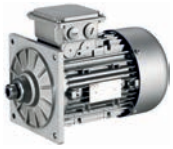
Dimensions of KK1

- ► 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

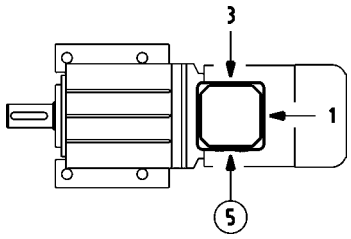
[1)] UL/CSA approval: cURus



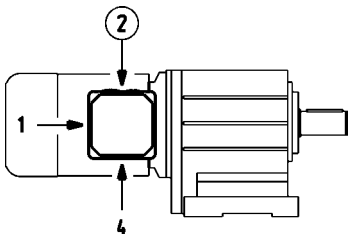
Terminal box

Cable entry position when using KK1

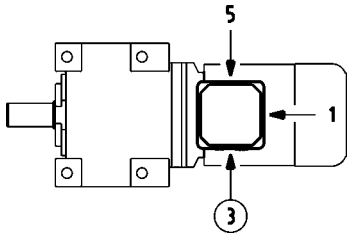
Terminal box in position 2



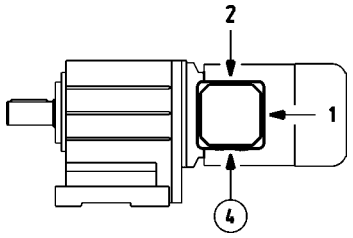
Terminal box in position 3

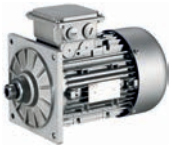


Terminal box in position 4



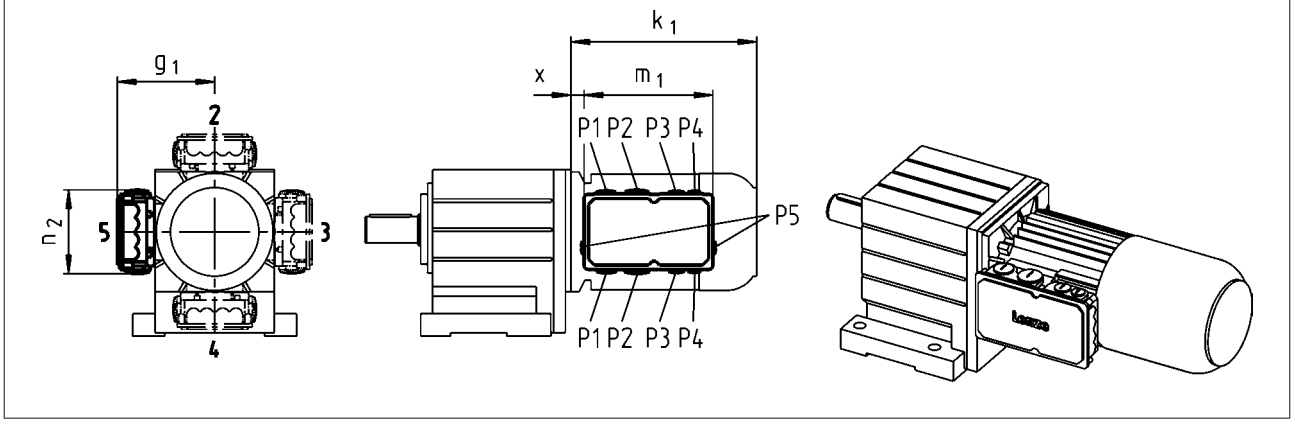
Terminal box in position 5





Terminal box

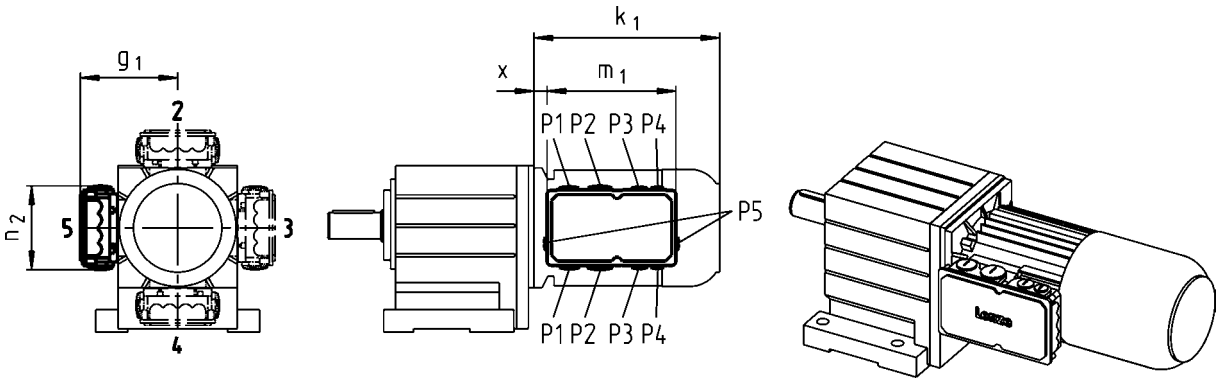
Dimensions of KK2



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				

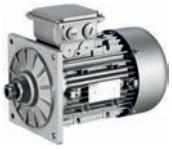
Terminal box

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.

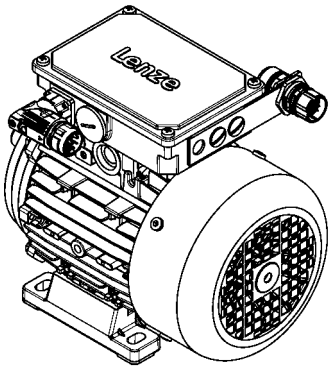


Connectors

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

ICN connector

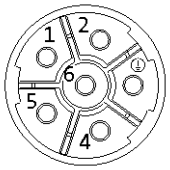
A connector is used for power, brake and temperature monitoring. The connections to the feedback system and the blower each employ a separate connector.



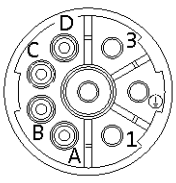
Connection for power, brake and temperature monitoring

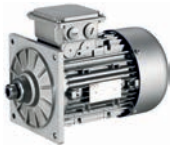
The connectors can be rotated through 270° and are fitted with a bayonet catch for SpeedTec connectors. As this connector is also compatible with conventional union nuts, existing mating connectors can continue to be used without difficulty. The motor connection is determined in the terminal box and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

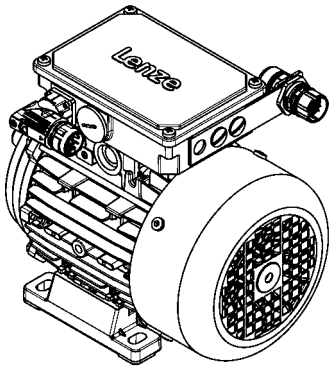
Pin assignment			
Contact	Designation	Meaning	
1	U	Phase U power	
PE	PE	PE conductor	
3	V	Phase V power	
4	W	Phase W power	
A	TB1 / TP1 / R1	Thermal sensor: TKO/PTC/ +KTY	
B	TB2 / TP2 / R2	Thermal sensor: TKO/PTC/-KTY	
C	BD1 / BA1	Brake +/AC	
D	BD2 / BA2	Brake /AC	



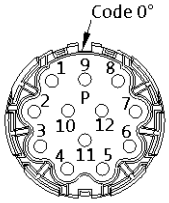
ICN connector

Feedback connection

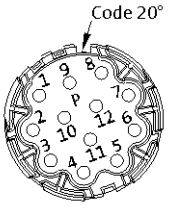
All encoder systems (apart from IG128-24V-H) are also available with an ICN connector fixed to the motor terminal box for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing mating connectors can therefore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

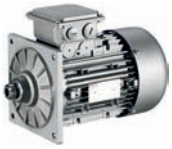


► Resolver

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: 4-pole / 6-pole motors

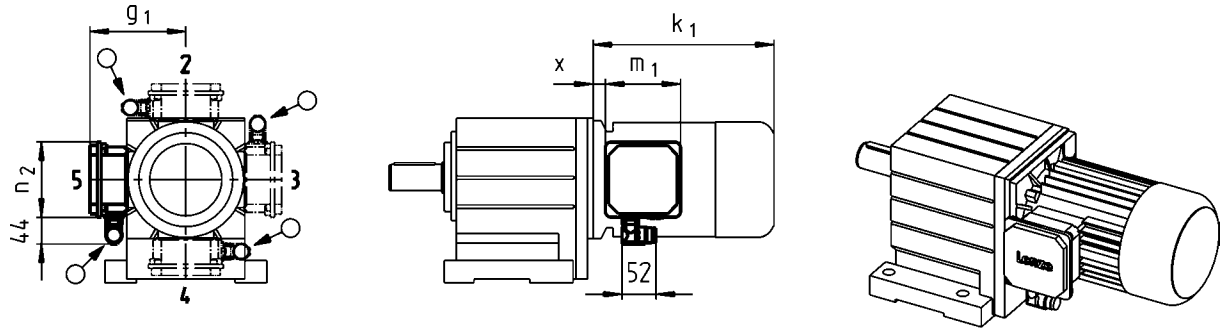
Motor type	M□□MAXX	M□□MARS M□□MAIG M□□MAAG	M□□MAZE
Motor frame size			
	Terminal box		
063-32 063-42	KK1	KK2	
071-32 071-42	KK1	KK2	KK2
080-32 080-42	KK1	KK2	KK2
090-32	KK1	KK2	KK2
100-12 100-32	KK1	KK2	KK2

Motor type	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MABZ
Motor frame size			
	Terminal box		
063-32 063-42	KK2	KK3	
071-32 071-42	KK2	KK3	KK2
080-32 080-42	KK2	KK3	KK2
090-32	KK2	KK3	KK2
100-12 100-32	KK2	KK3	KK2

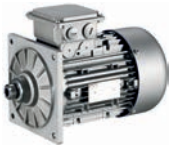
ICN connector

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.



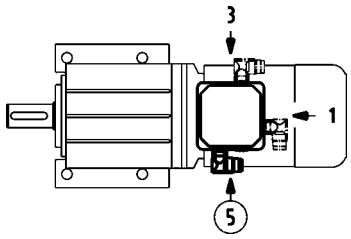
Size				
Motor				
	x	g_1	m_1	n_2
	[mm]	[mm]	[mm]	[mm]
063	12	117	93.0	93.0
071	15	126		
080	14	150	115	115
090	19	157		
100	20	166		
112	22	176		
132	33	195	122	122



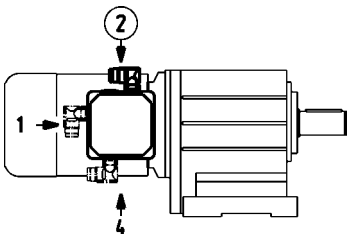
ICN connector

Connector position when using KK1

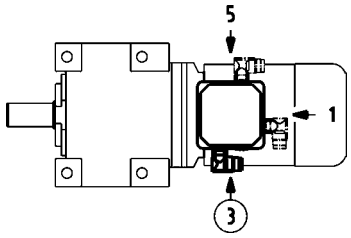
Terminal box in position 2



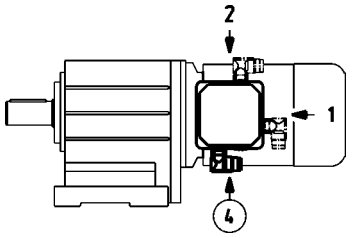
Terminal box in position 3



Terminal box in position 4



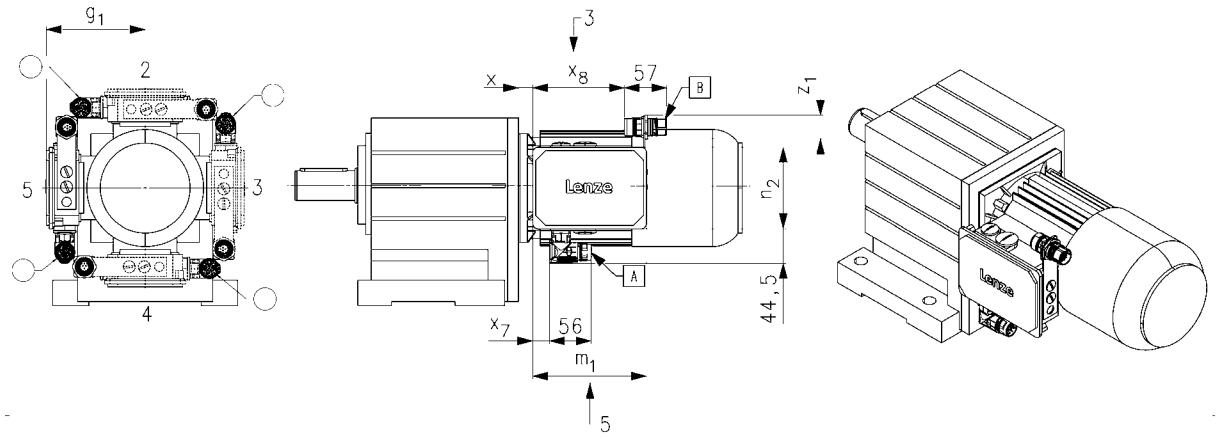
Terminal box in position 5



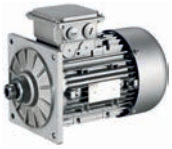
ICN connector

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.



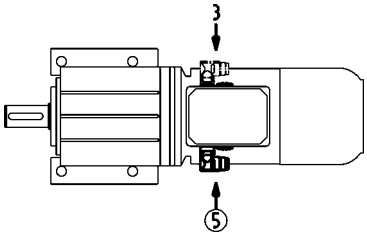
Size							
Motor							
	x	g_1	m_1	n_2	x_7	x_8	$z_{1, max}$
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063	13	107	136	103	16	109	43
071	15	118					
080	17	132	152	121	23	125	41
090	22	137					
100	23	147					
112	25	158					
132	38	187	195	125		166	71



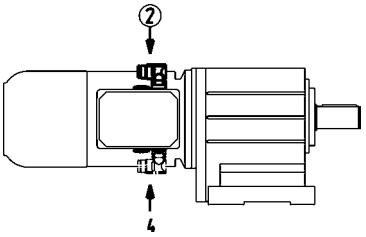
ICN connector

Connector position when using KK2/KK3

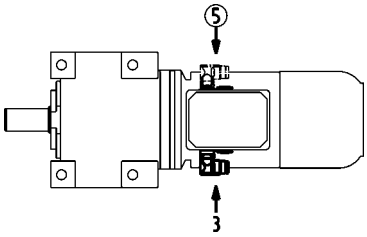
Terminal box in position 2



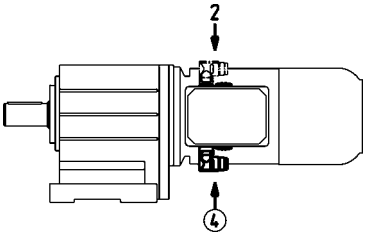
Terminal box in position 3

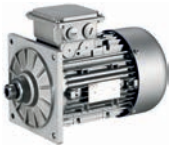


Terminal box in position 4



Terminal box in position 5

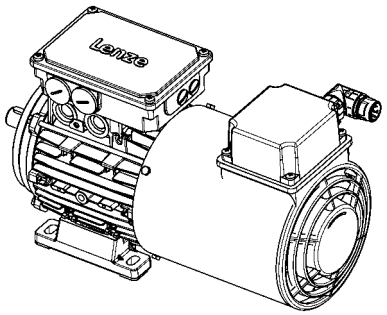




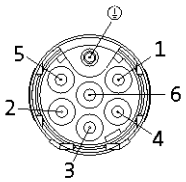
ICN connector

Blower connection

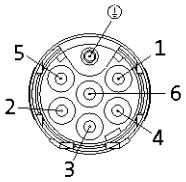
The blower is also optionally available with an ICN connector fixed to the terminal box of the blower for exceptionally fast commissioning. The connectors are fitted with a bayonet fixing, which is also compatible with conventional union nuts. Existing counter plugs can therefore continue to be used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

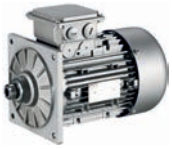


► Blower 1-ph

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

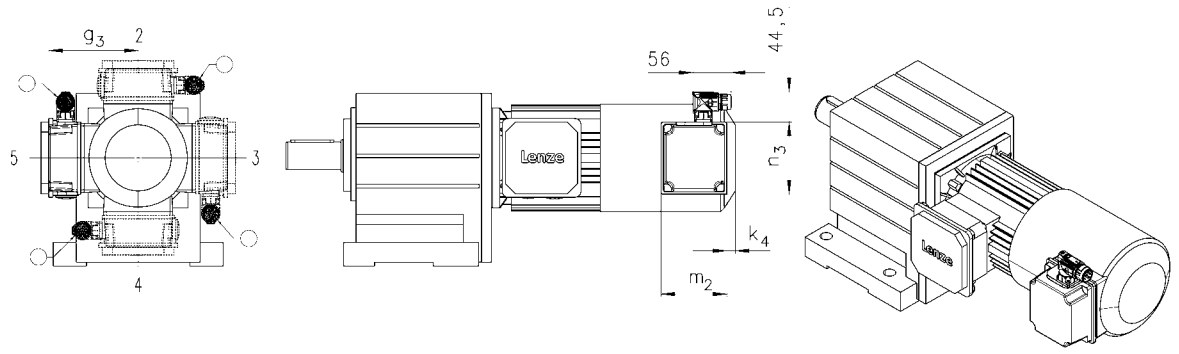
► Blower 3-ph

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	



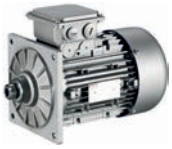
ICN connector

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				

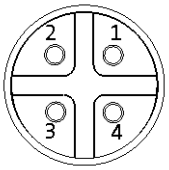
► In addition, the cover of the blower terminal box (including connectors) can be rotated progressively through 90° if necessary.

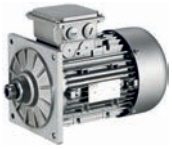


M12 connector

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.

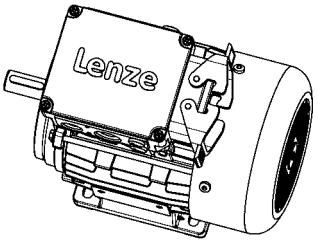
Pin assignment			
Contact	Designation	Meaning	
1	$+U_B$	Supply +	
2	B	Track B	
3	GND	Mass	
4	A	Track A	

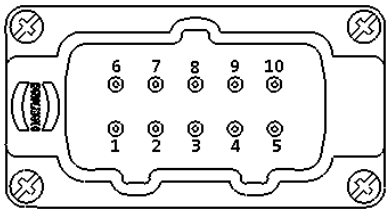


HAN connector

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.

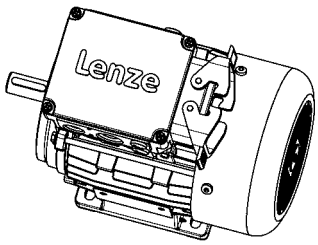


Pin assignment		
Contact	Meaning	
1	Terminal board: U1	
2	Terminal board: V1	
3	Terminal board: W1	
4	Brake +/AC	
5	Brake -/AC	
6	Terminal board: W2	
7	Terminal board: U2	
8	Terminal board: V2	
9	Thermal sensor: +KTY/PTC/TKO	
10	Thermal sensor: KTY/PTC/TKO	

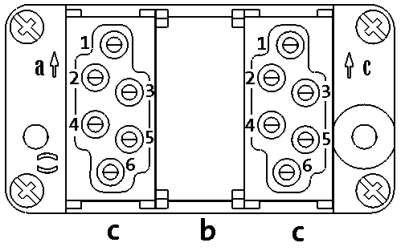
HAN connector

Modular

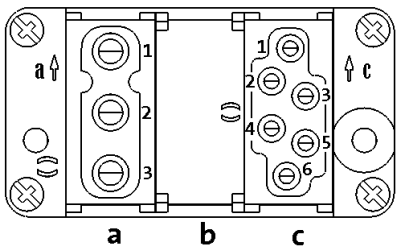
The connector is available with two different power modules (16 A or 40 A), depending on the rated motor current. The motor connection is determined in the terminal box and must be checked before commissioning.

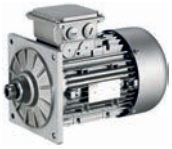


► HAN modular 16 A

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

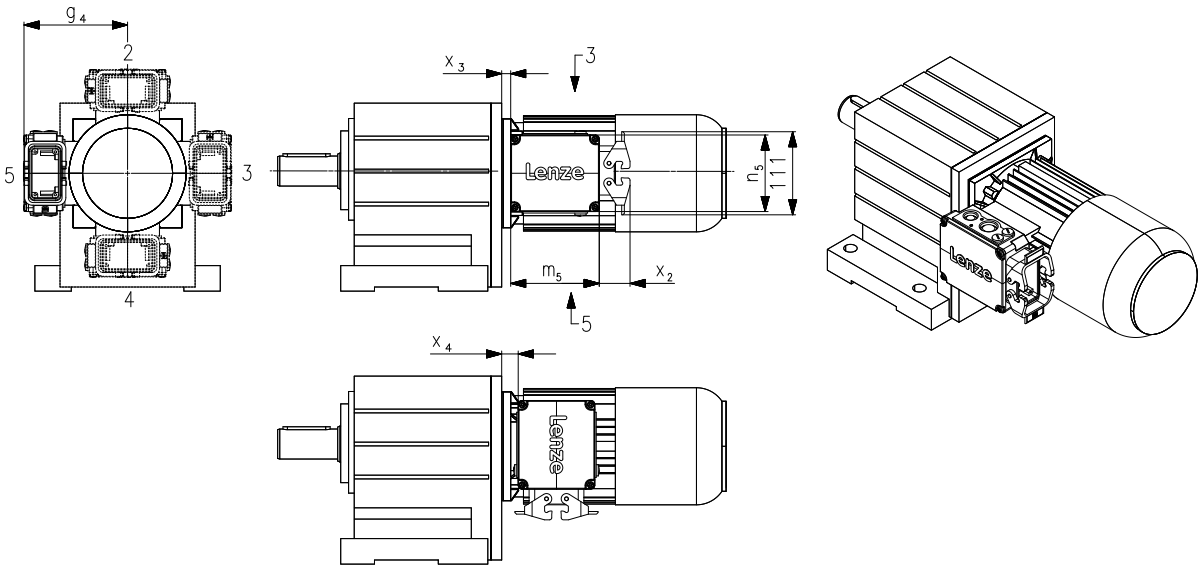
Motor type	M□□MAXX M□□MABR	M□□MAZE M□□MABZ
Motor frame size		
	Terminal box with HAN connector	
063-32 063-42	HAN-10E HAN modular	
071-32 071-42	HAN-10E HAN modular	HAN-10E HAN modular
080-32 080-42	HAN-10E HAN modular	HAN-10E HAN modular
090-32	HAN-10E HAN modular	HAN-10E HAN modular
100-12 100-32	HAN-10E HAN modular	HAN-10E HAN modular
112-22		
132-12 132-22 132-32	HAN modular	HAN modular

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

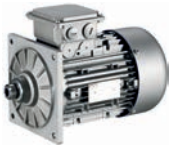
HAN connector

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.



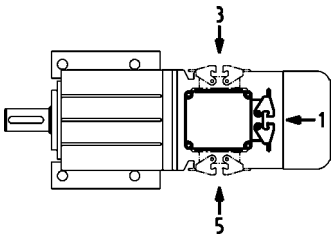
Size			
Motor			
	g_4	x_3	x_4
	[mm]	[mm]	[mm]
063	120	5.00	6.00
071	129	7.00	8.00
080	138	11.0	19.0
090	143	15.0	23.0
100	154	16.0	24.0
112	164	13.5	21.5
132	233	34.5	4.50
160	248	39.0	9.00



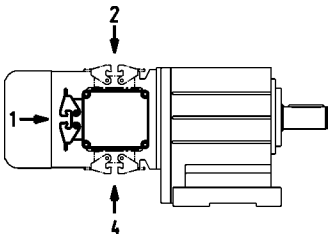
HAN connector

Position of connector

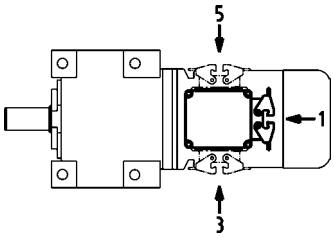
Connector in position 2



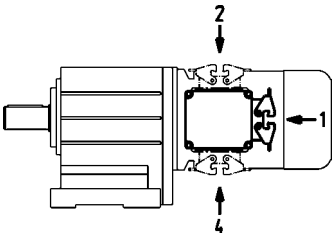
Connector in position 3



Connector in position 4

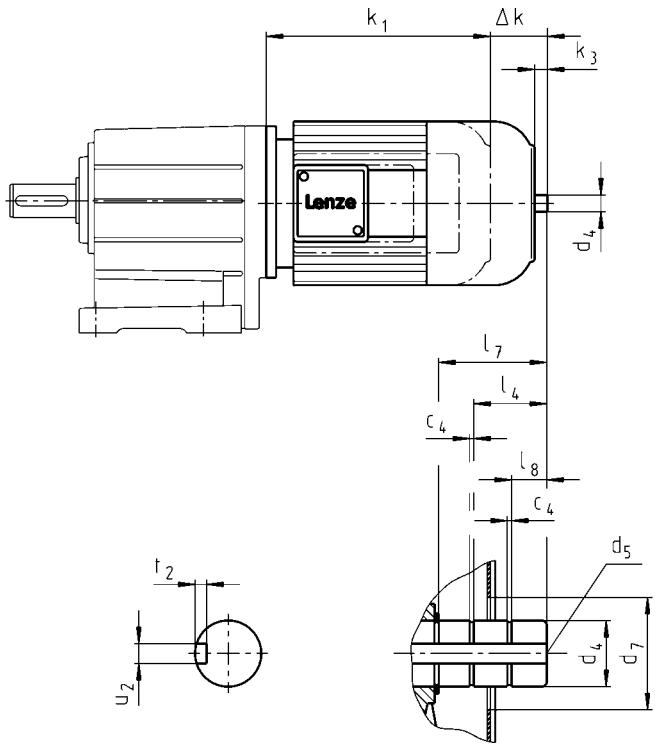


Connector in position 5



2nd shaft end

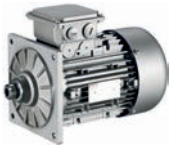
Dimensions, self-ventilated (4/6-pole)



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

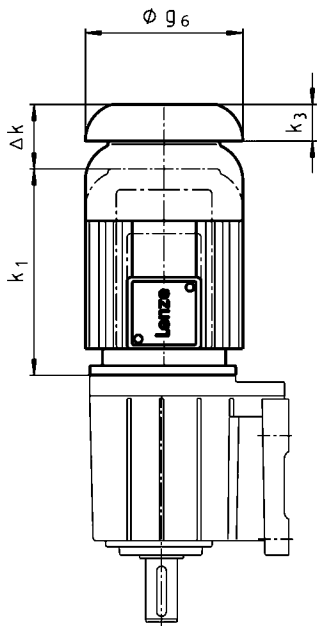
Motor frame size												
	Δk	k_3	c_4	d_4	d_4	d_5	d_7	l_4	l_7	l_8	u_2	t_2
				h6	j6							
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
071-32 071-42	47	11.0	1.10	14.0		M5	34.0		19.0	3.00	5.00	3.00
080-32 080-42	68	9.00	1.10	14.0		M5	34.0		19.0	4.50	5.00	3.00
090-32	57	9.00	1.10	14.0		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	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 (4/6-pole)

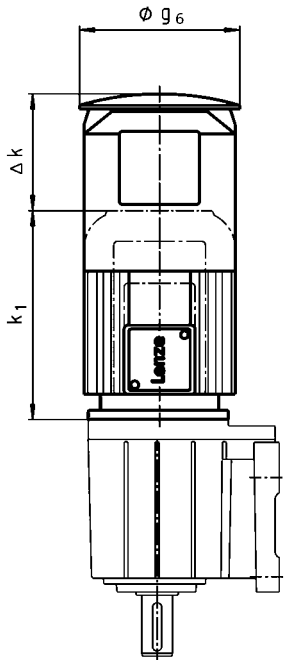


	Motor type					
	M□□MAXX	M□□MABR	M□□MABS M□□MABI M□□MABA	M□□MARS M□□MAIG M□□MAAG		

Motor frame size						
	Δ k	Δ k	Δ k	Δ k	k_3	g_6
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
063-32 063-42	26	66	129	82	11.0	123
071-32 071-42	26	78	122	78	12.0	138
080-32 080-42	26	99	137	127	16.0	156
090-32	26	94	131	113	15.0	176
100-12 100-32	31	107	132	112	17.0	194
112-22	31	121	151	111	18.0	218
132-12 132-22 132-32	31	141	156	134	20.0	257

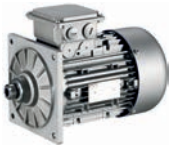
Protection cover

Dimensions, forced ventilated (4/6-pole)



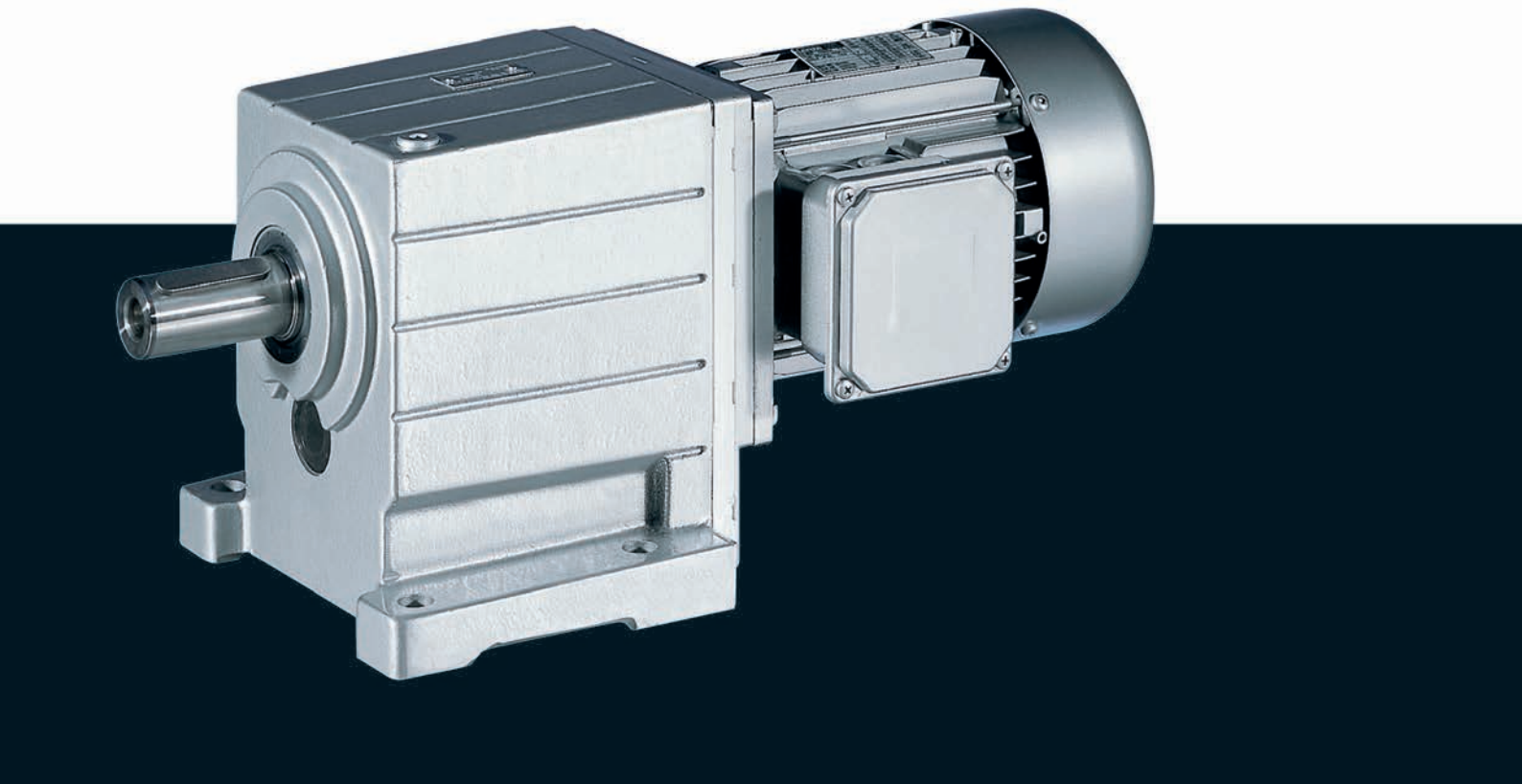
	Motor type			
	M□□MAXX	M□□MABR M□□MABS M□□MABI	M□□MARS M□□MAIG M□□MAAG	

Motor frame size				
	Δ k	Δ k	Δ k	g_6
	[mm]	[mm]	[mm]	[mm]
063-32 063-42	169	209	169	133
071-32 071-42	165	202	165	150
080-32 080-42	168	224	168	170
090-32	157	210	157	188
100-12 100-32	137	198	137	210
112-22	135	216	216	249
132-12 132-22 132-32	140	226	226	300



GST helical gearbox

0.55 ... 22 kW



GST helical gearbox

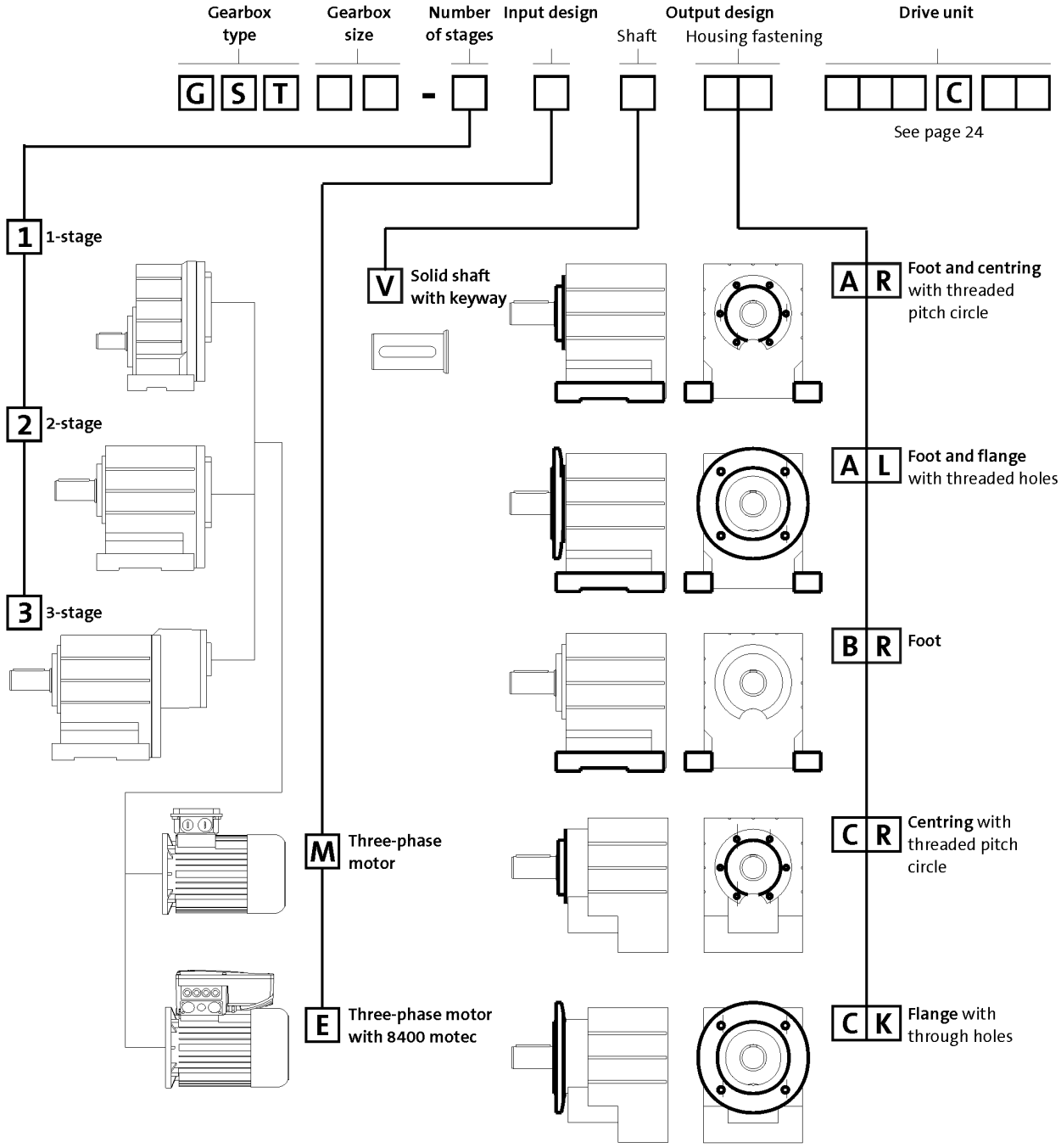
Contents

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

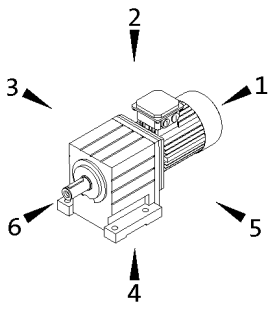
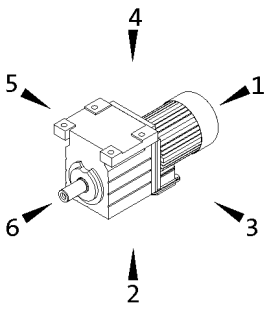
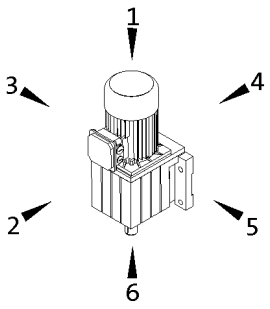
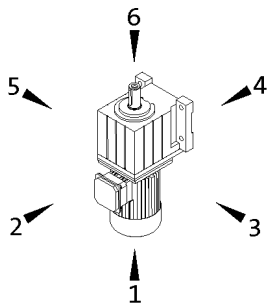
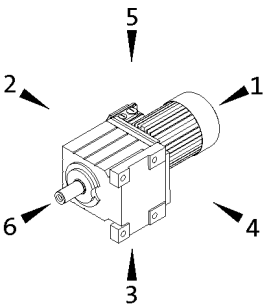
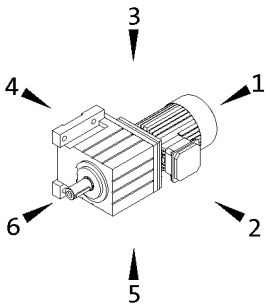


	Output design		
	V	K	L
	d x l [mm]	Øa2 [mm]	Øa2 [mm]
GST03-2	14x28	120/140/160	
	20x40	120/140/160	
GST04-1	16x32	120/140/160	
GST04-2	20x40	120/140/160	120/140
GST05-1	20x40	120/140/160/200	
GST05-2/3	25x50	120/140/160/200	120/140/160
GST06-1	25x50	160/200	

	Output design		
	V	K	L
	d x l [mm]	Øa2 [mm]	Øa2 [mm]
GST06-2/3	30x60	160/200	160/200
GST07-1	30x60	200/250	
GST07-2/3	40x80	200/250	200/250
GST09-1	40x80	250/300	
GST09-2/3	50x100	250/300	250/300
GST11-2/3	60x120	300/350	300/350
GST14-2/3	80x160	350/400	350/400

Product key

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

A	B	C
		
D	**E**	**F**
		

Terminal box / motec: 2, 3, 4, 5

Gearbox designs

Basic versions	
Motor efficiency	Standard efficiency Increased efficiency (IE2)
Surface and corrosion protection	No OKS (unpainted, aluminium housing) for GST03 OKS-G (primer: grey) OKS-S (paint: RAL 7012)
Lubricant	CLP 460 (mineral)
Ventilation	Oil control plugs for GST05 ... 14 Breather elements for GST06 ... 14

Options	
Surface and corrosion protection	OKS-G (primer: grey) for GST03-2 OKS-S (special paint according to RAL) OKS-M (special paint according to RAL) OKS-L (special paint according to RAL)
Lubricant	CLP HC 320 (synthetic) CLP HC 220 USDA H1 (synthetic)
Shaft sealing rings	Driven shaft: Viton
Bearings	Driven shaft: reinforced for GST04 ... 09-2/3
Ventilation	Breather elements for GST05 Compensation reservoir for GST09 ... 14-2 in mounting position C
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 a low-noise operation and low backlash. The gearboxes have a compact and hence space-saving construction.

Robust design with high efficiency

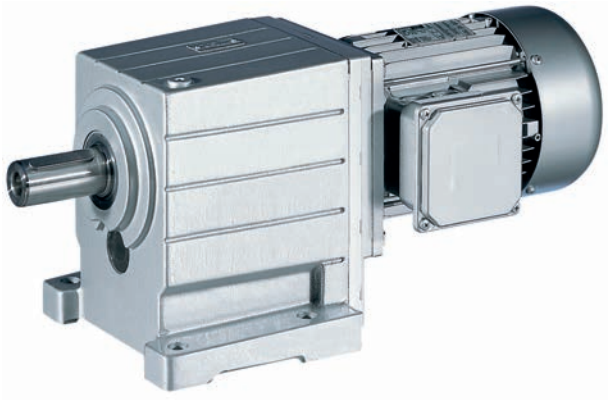
Together with three-phase AC motors, our helical gearboxes form a compact and powerful drive unit. They are rugged in design and feature high permissible radial forces, closely stepped speed reduction ratios and minimum backlash. The gearboxes are available as 1 and 2 and 3-stage versions with a torque of up to 5,920 Nm and a ratio of up to i= 435.

Inverters for motor-proximity installation

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

Designs

- 1-stage, 2-stage and 3-stage gearboxes
- Solid shaft with keyway
- Foot or flange mounting
- With MF three-phase AC motors (inverter-optimised) power range 0.55 ... 22 kW



Helical geared motor GST07-2M VBR 100-32

Functions and features

Gearbox type	GST
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	
Tolerance	
Material	
Toothed parts	
Design	Optimised tooth flanks and profile geometry Ground tooth flanks
Material	Case-hardened steel
Shaft-hub joint	
	1st stage/prestage/helical (bevel) gearbox: Friction-type connection Output stage (= 2nd, 3rd or 4th stage): Friction-type or positive-fit connection
Shaft sealing rings	
Design	With dust lip
Material	NB / FP
Bearing	
Design	Ball bearing / tapered-roller bearing depending on size and design
Lubricants	
Standard	DIN 51502
Quantities	corresponding to mounting position (see operating instructions)
Mechanical efficiency	
1-stage gearboxes [$\eta_{c=1}$]	0.98
2-stage gearboxes [$\eta_{c=1}$]	0.97
3-stage gearboxes [$\eta_{c=1}$]	0.95
4-stage gearboxes [$\eta_{c=1}$]	
Notes	

Functions and features

Lubricants

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

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

Lubricant table

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

► Please contact your Lenze office if you are operating in areas with < -20 °C bzw. >ambient temperatures +40°C.

Functions and features

Surface and corrosion protection

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

Various surface coatings combined with other protective measures ensure that the geared motors operate reliably even at high air humidity, in outdoor installation 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

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

Functions and features

Ventilation

Gearboxes without ventilation
No ventilation measures are required for gearboxes GST03 ... 04.

Gearboxes that may optionally be equipped with ventilation
Special measures are not usually required when using gearbox GST05. In borderline cases, e.g. at input speeds > 2000 r/min, we recommend the use of breather elements which we can supply if required.

Gearboxes with ventilation
Gearboxes GST06...14 are supplied with breather elements as standard.

Special measures for mounting position C (motor on top)
We recommend that an oil compensation reservoir is always used with gearbox sizes G□□09...14 in this mounting position. This reservoir can be purchased as an option. For illustrations and measures see accessories chapter.

It is not required at higher ratios or low input speeds. Please contact Lenze in this event.

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

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

Gearbox type	Gearbox size	Ratio i
GST helical gearbox	07, 09, 11, 14	≤ 10

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

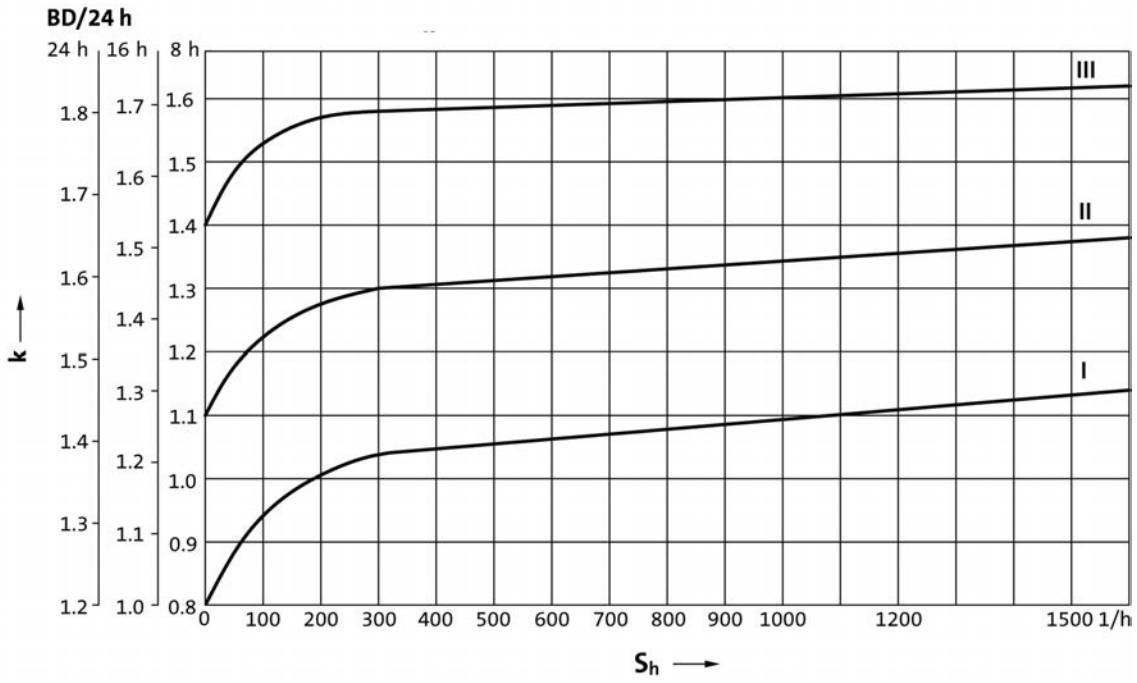
Load capacity and application factor

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



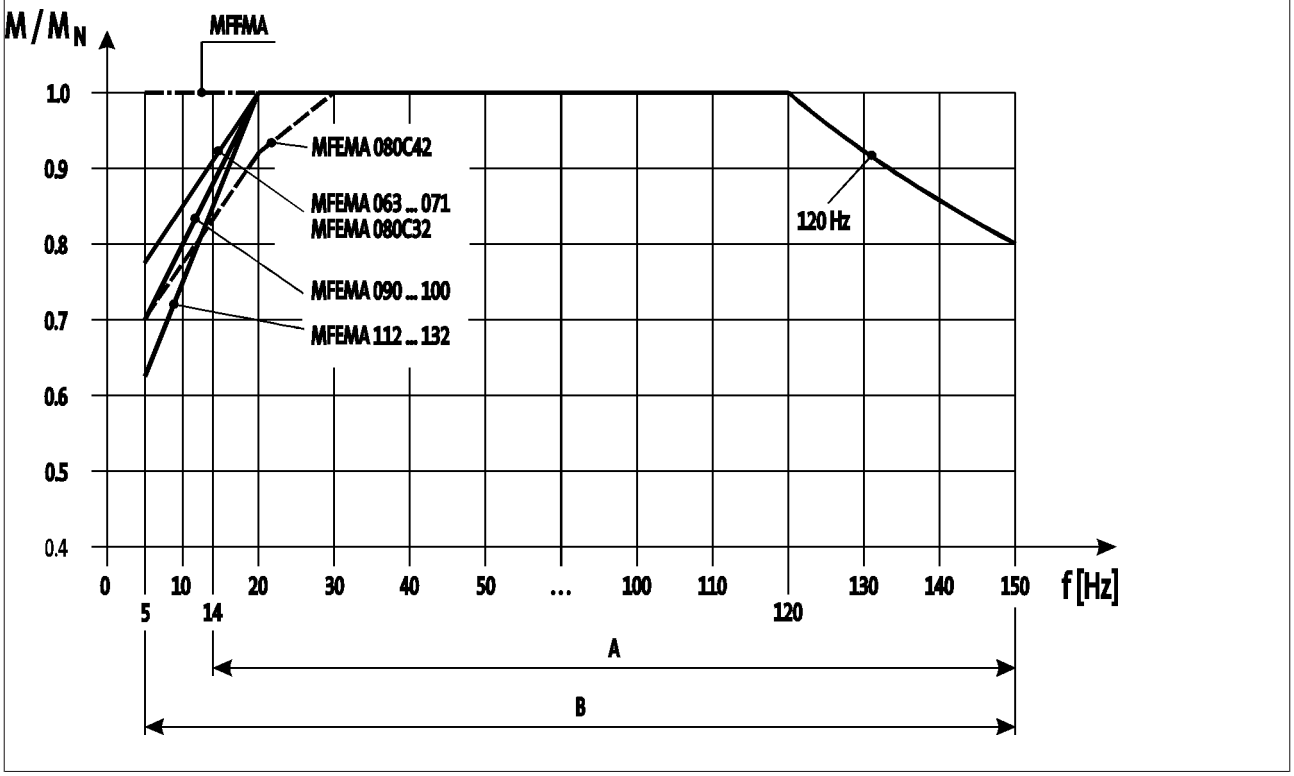
6.4

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).

6.4

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

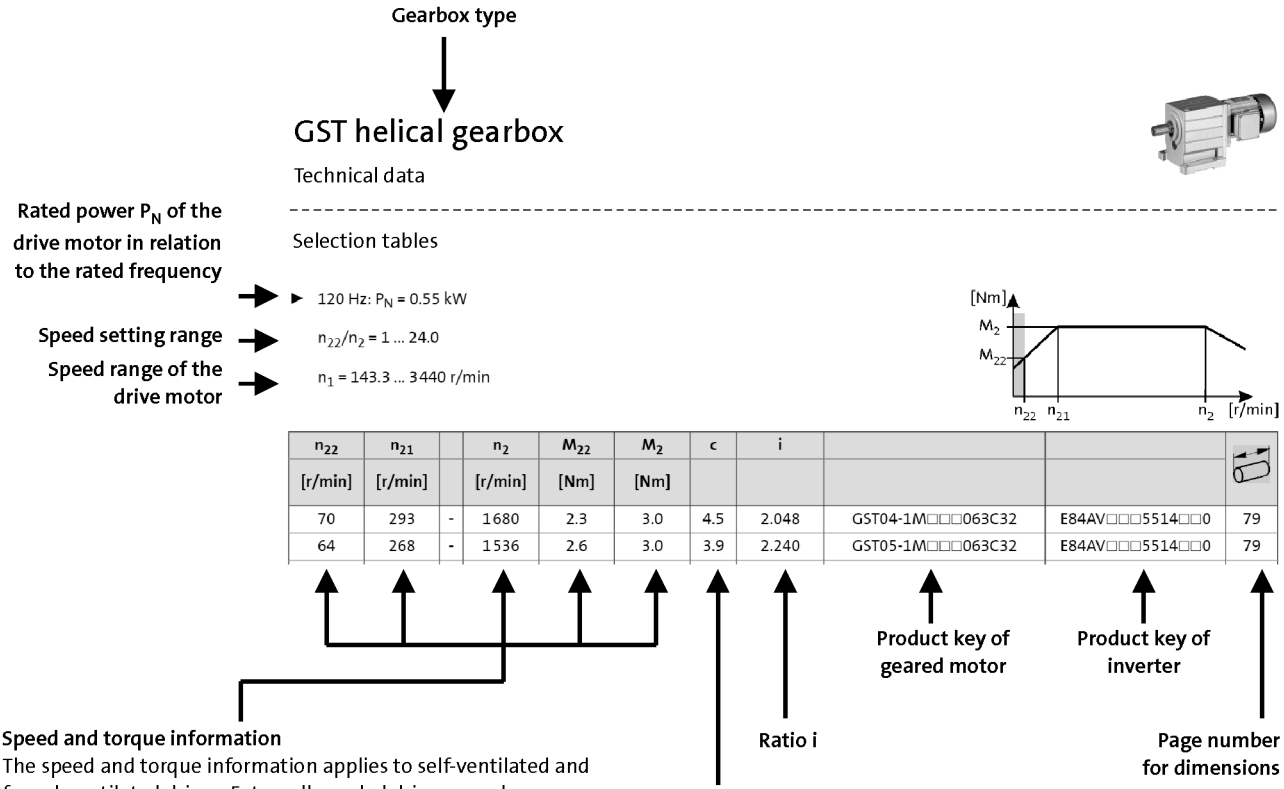
The Drive Solution Designer helps you to carry out a fast and high-quality drive dimensioning.
The software includes well-founded and proven knowledge on drive applications and electro-mechanical drive components.

Please contact your Lenze sales office.

Dimensioning

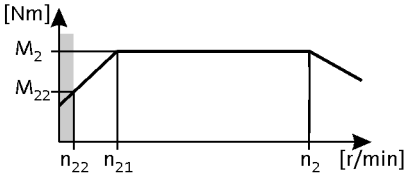
Notes on the selection tables

The selection tables shown the available combinations of gearbox type, number of stages, ratio and motor. The following legend indicates the structure of the selection tables.



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

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



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

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

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

6.4

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 data such as delivery date and delivery address

Ordering procedure
Please use the ordering information checklist to ensure that you provide all the order 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

6.4

Helical geared motors

Customer No. ☐☐☐☐☐☐☐☐

Job No. ☐☐☐☐☐☐☐☐☐☐

Page __

Quantity ☐

Efficiency class ☐ Standard efficiency ☐ High efficiency (IE2)

Rated frequency ☐ 50 Hz ☐ 60 Hz ☐ 87 Hz

Ratio i ☐

GST ☐☐ – ☐ 1 / 2 / 3 ☐ M / E ☐ V ☐ A / B / C ☐ R / K / L

Motor frame size ☐☐☐C☐☐

Solid shaft d = (only with GST03) ☐ mm

Flange a_2 = ☐ mm

Mounting position A ☐ B ☐ C ☐ D ☐ E ☐ F ☐

Position of system blocks Terminal box 2 ☐ 3 ☐ 4 ☐ 5 ☐

Surface and corrosion protection

GST03 ☐ Without OKS (unpainted)

GST04 ... 14 ☐ OKS-S colour: RAL 7012 ☐ OKS-G (primed)

Options

Special lubricants

☐ CLP HC 320 (synthetic)

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

Surface and corrosion protection

☐ OKS-S (small)

☐ OKS-M (medium) RAL ☐

☐ OKS-L (high)

☐ OKS-G (primed) only with GST03

Output shaft bearing

☐ Reinforced bearing for GST04 ... 09-2

Shaft sealing rings

☐ Viton

Breathing

☐ Breather elements for GST05

☐ Compensation reservoir in mounting position for GST 09 ... 14-2

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)

6.4

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)

6.4

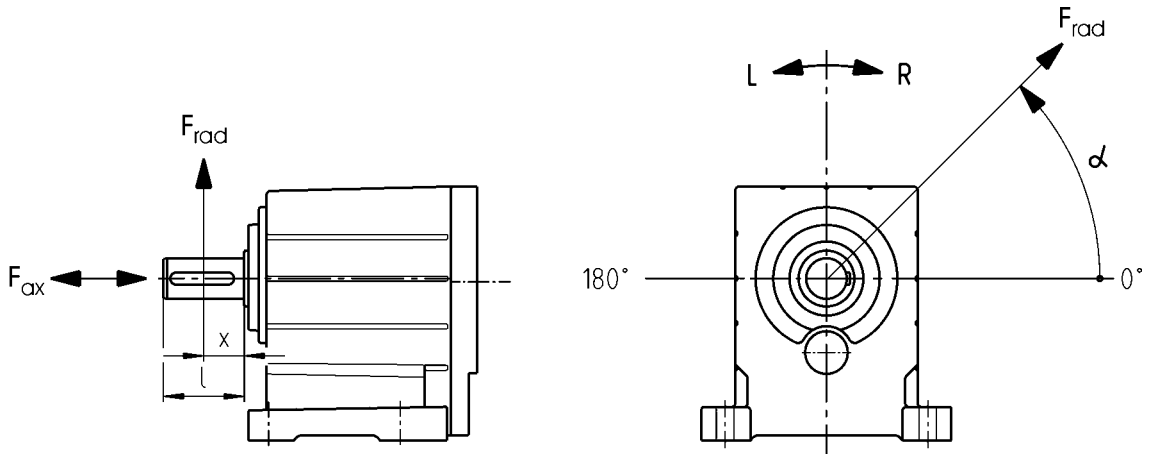
Permissible radial and axial forces at output

Permissible radial force
$F_{rad,per} = \min(f_w \times f_\alpha \times F_{rad,max}$; $f_w \times F_{rad,max}$ at $n_2 \leq 50$ r/min)

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

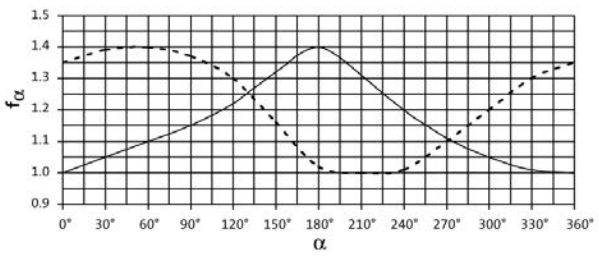
If F_{rad} **and** $F_{ax} \neq 0$, please contact Lenze.

Application of forces

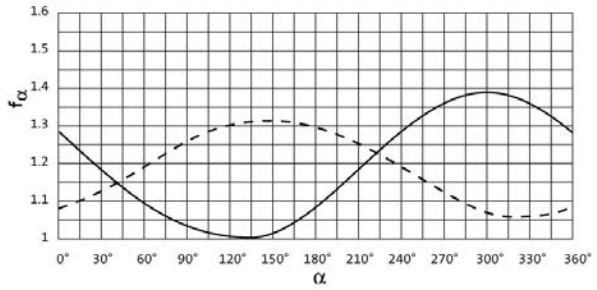


Effective direction factor f_α at output shaft

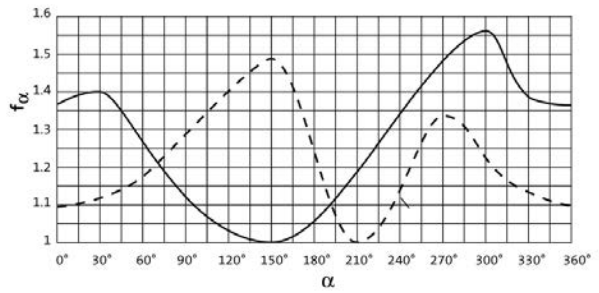
GST03-2



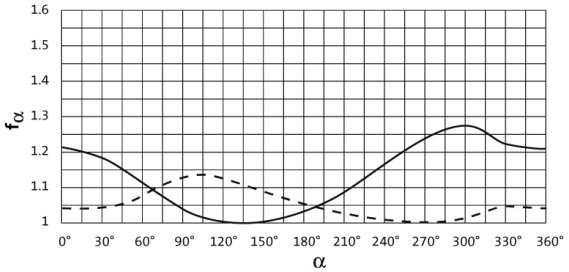
GST04...09-1



GST04...09-2, 3



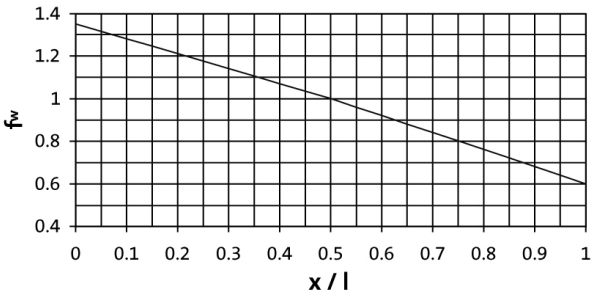
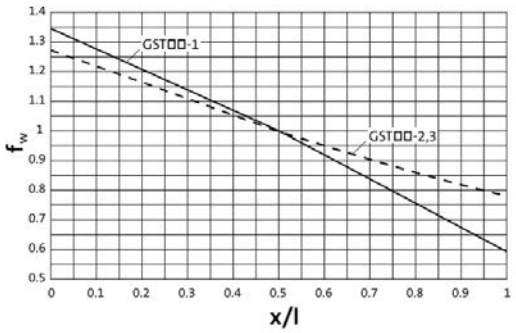
GST11...14-2, 3



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

Permissible radial and axial forces at output

Additional load factor f_w at output shaft

GST03-2	GST04...09-1, 2, 3
	

GST□□-1

Size	n_2 [r/min]								
Gearbox	2500	1600	1000	600	400	200	125	80	≤50

	Max. radial force, Solid 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]
GST04	100	180	440	600	850	1050	1050	1050	1050
GST05	100	250	550	750	1400	2000	2300	2300	2300
GST06	200	600	800	800	1100	2200	2900	3500	3500
GST07	700	1000	1200	1300	1900	3000	3900	4700	5300
GST09	1750	2200	2500	2500	3500	6200	7900	9000	9500

	Max. axial force, Solid 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]
GST04	600	800	1000	1300	1400	1400	1400	1400	1400
GST05	800	1100	1400	2000	2000	2000	2000	2000	2000
GST06	900	1200	1500	2000	2500	2500	2500	2500	2500
GST07	1200	1600	2000	2700	3300	3700	3700	3700	3700
GST09	2500	3400	4300	5700	6800	7000	7000	7000	7000

6.4

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

Permissible radial and axial forces at output

GST□□-2 / 3 with standard bearings

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

	Max. radial force, Solid shaft									
	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GST03	100	300	630	710	800	920	1100	1400	1500	1500
GST04	730	950	1250	1450	1700	2100	2500	2650	2650	2650
GST05	1150	1500	1950	2200	2600	3000	3500	3800	3900	3900
GST06	140	750	2350	2600	3100	3600	4300	4350	4350	4350
GST07	140	2050	3400	3800	4500	5400	6400	7600	9100	9500
GST09	1500	1950	6800	7600	9400	11500	11500	11500	11500	11500
GST11	11500	14400	17000	19000	21000	21000	21000	21000	21000	21000
GST14	16600	20700	24000	27000	31000	36000	39000	40000	40000	40000

	Max. axial force, Solid shaft									
	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GST03	300	400	600	700	800	900	1000	1000	1000	1000
GST04	600	800	1100	1300	1650	2000	2000	2000	2000	2000
GST05	1200	1600	2000	2300	2650	3100	3600	3600	3600	3600
GST06	500	600	850	900	1250	1800	2600	3600	4800	4800
GST07	1100	1500	1900	2200	2900	3900	5300	7000	7000	7000
GST09	1300	1800	2300	2800	4000	5600	8100	11000	12000	12000
GST11	5700	7600	9500	10000	11000	14000	16000	16000	16000	16000
GST14	9000	12000	15000	16000	18000	20000	20000	20000	20000	20000

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

Permissible radial and axial forces at output

GST□□-2 / 3 with reinforced bearing

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

	Max. radial force, Solid shaft (reinforced bearings))									
	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$	$F_{rad,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GST04	1900	2350	2850	3150	3550	3750	3750	3750	3750	3750
GST05	3350	3950	4900	5400	5400	5400	5400	5400	5400	5400
GST06	4250	5100	6300	7000	7700	7700	7700	7700	7700	7700
GST07	5650	6850	8500	9500	10500	12500	13000	13000	13000	13000
GST09	11300	14000	16500	17000	17000	17000	17000	17000	17000	17000

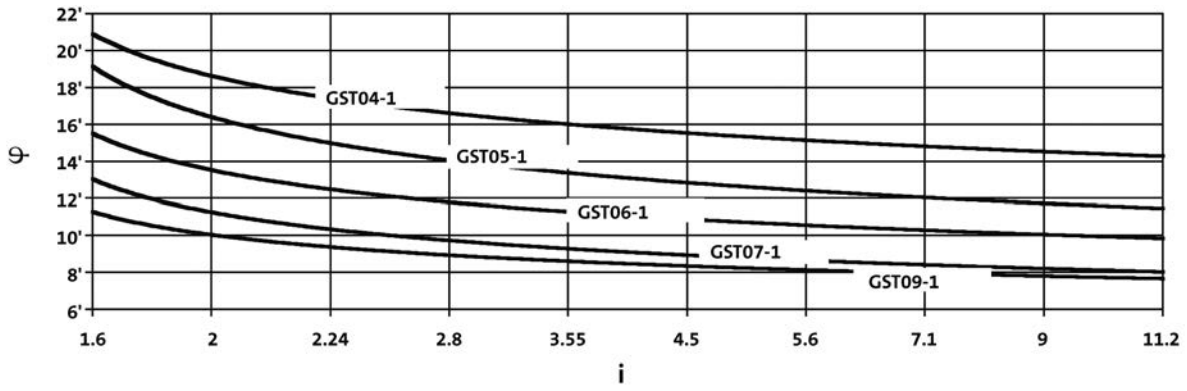
	Max. axial force, Solid shaft (reinforced bearings))									
	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$	$F_{ax,max}$
	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
GST04	1000	1300	1700	1900	2200	2500	2500	2500	2500	2500
GST05	2100	2800	3600	3900	4300	4500	4500	4500	4500	4500
GST06	2100	2800	3500	3600	4200	4900	5700	5700	5700	5700
GST07	3300	4400	5500	6100	7100	8300	9000	9000	9000	9000
GST09	4800	6400	8000	9000	10500	12500	14000	14000	14000	14000

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

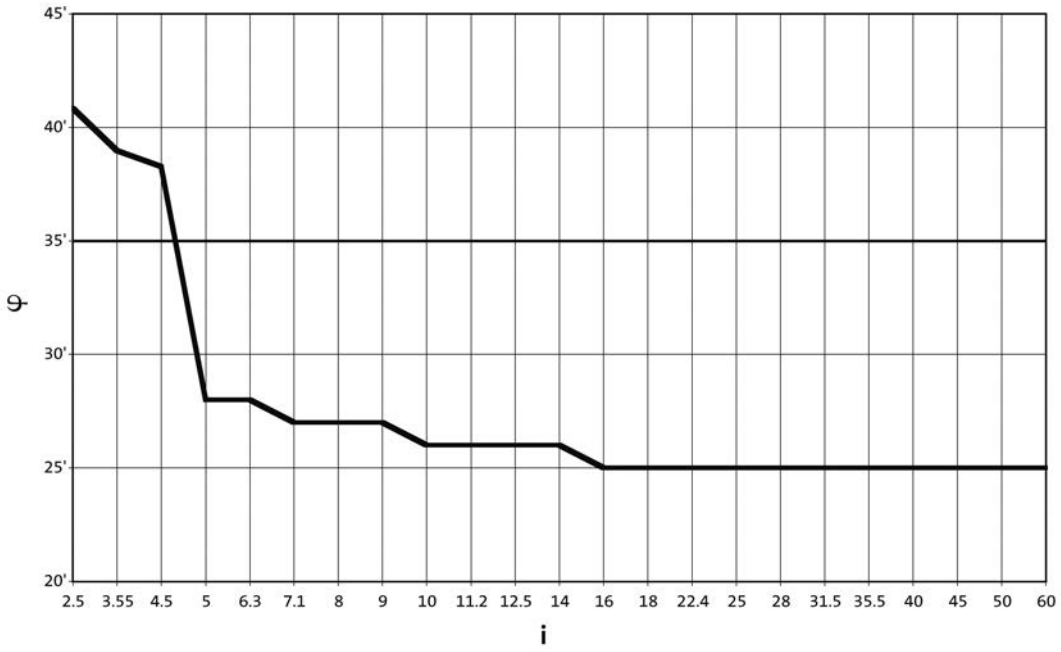
Output backlash in angular minutes

► Backlash φ depending on ratio i

GST04...09-1



GST03-2

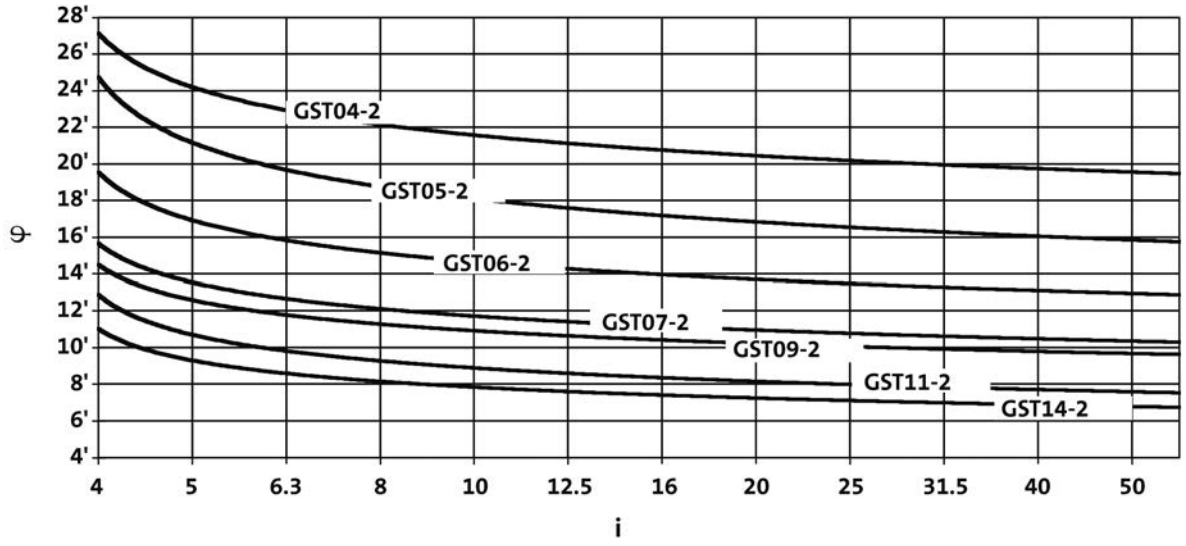


6.4

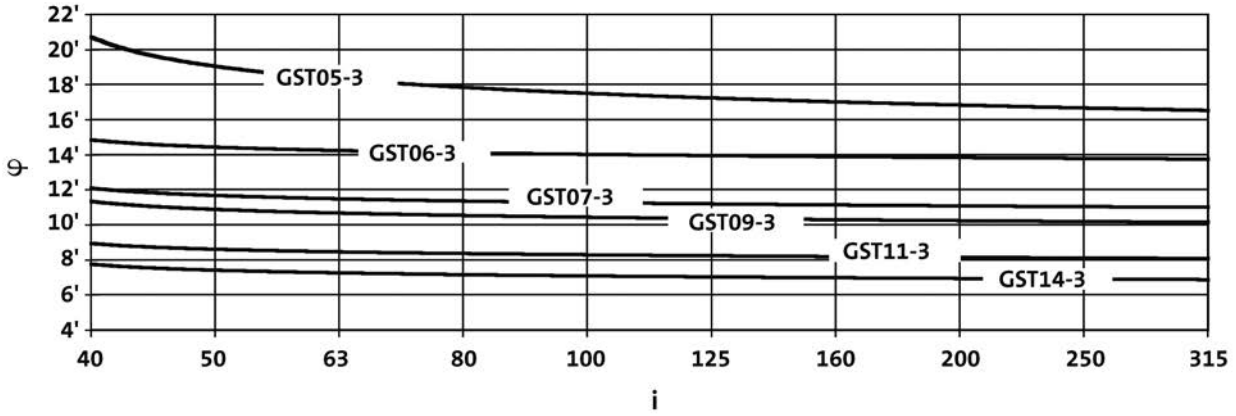
Output backlash in angular minutes

► Backlash φ depending on ratio i

GST04...14-2



GST05...14-3



6.4

Moments of inertia

GST□□-1

► Moment of inertia (J) depending on ratio i

Gearbox			GST04
1.600	J	[kgcm²]	0.267
2.048	J	[kgcm²]	0.194
2.240	J	[kgcm²]	0.172
2.857	J	[kgcm²]	0.126
3.500	J	[kgcm²]	0.099
4.400	J	[kgcm²]	0.067
5.667	J	[kgcm²]	0.047
7.182	J	[kgcm²]	0.031
9.000	J	[kgcm²]	0.022
11.857	J	[kgcm²]	0.013

Gearbox			GST05
1.600	J	[kgcm²]	0.760
2.048	J	[kgcm²]	0.549
2.240	J	[kgcm²]	0.480
2.857	J	[kgcm²]	0.354
3.500	J	[kgcm²]	0.272
4.556	J	[kgcm²]	0.175
5.667	J	[kgcm²]	0.129
7.333	J	[kgcm²]	0.062
8.900	J	[kgcm²]	0.060
11.375	J	[kgcm²]	0.039

Gearbox			GST06
1.600	J	[kgcm²]	2.010
2.048	J	[kgcm²]	1.460
2.240	J	[kgcm²]	1.270
2.857	J	[kgcm²]	0.969
3.500	J	[kgcm²]	0.736
4.556	J	[kgcm²]	0.481
5.667	J	[kgcm²]	0.359
7.333	J	[kgcm²]	0.226
8.900	J	[kgcm²]	0.167
11.250	J	[kgcm²]	0.109

Gearbox			GST07
1.625	J	[kgcm²]	6.120
2.000	J	[kgcm²]	4.780
2.240	J	[kgcm²]	4.020
2.857	J	[kgcm²]	2.690
3.500	J	[kgcm²]	2.150
4.556	J	[kgcm²]	1.370
5.583	J	[kgcm²]	1.050
7.333	J	[kgcm²]	0.664
8.900	J	[kgcm²]	0.494
11.250	J	[kgcm²]	0.320

Gearbox			GST09
1.560	J	[kgcm²]	22.200
2.048	J	[kgcm²]	15.600
2.333	J	[kgcm²]	12.200
2.810	J	[kgcm²]	9.580
3.444	J	[kgcm²]	7.300
4.667	J	[kgcm²]	4.600
5.667	J	[kgcm²]	3.510
7.333	J	[kgcm²]	2.260
8.900	J	[kgcm²]	1.660
11.250	J	[kgcm²]	1.110

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

Moments of inertia

GST□□-2

► Moment of inertia (J) depending on ratio i

Gearbox			GST03
2.597	J	[kgcm²]	0.260
3.413	J	[kgcm²]	0.169
4.368	J	[kgcm²]	0.117
5.312	J	[kgcm²]	0.179
5.965	J	[kgcm²]	0.173
6.982	J	[kgcm²]	0.122
7.840	J	[kgcm²]	0.119
8.935	J	[kgcm²]	0.089
10.033	J	[kgcm²]	0.086
11.429	J	[kgcm²]	0.059
12.833	J	[kgcm²]	0.057
14.836	J	[kgcm²]	0.041
16.660	J	[kgcm²]	0.040
19.013	J	[kgcm²]	0.028
21.350	J	[kgcm²]	0.027
24.595	J	[kgcm²]	0.019
27.618	J	[kgcm²]	0.019
32.000	J	[kgcm²]	0.012
35.933	J	[kgcm²]	0.012
41.455	J	[kgcm²]	0.008
46.550	J	[kgcm²]	0.008
52.909	J	[kgcm²]	0.005
59.413	J	[kgcm²]	0.005

Gearbox			GST04
2.956	J	[kgcm²]	0.337
3.333	J	[kgcm²]	0.324
4.053	J	[kgcm²]	0.312
4.571	J	[kgcm²]	0.300
5.187	J	[kgcm²]	0.222
5.850	J	[kgcm²]	0.215
6.400	J	[kgcm²]	0.189
7.040	J	[kgcm²]	0.264
8.000	J	[kgcm²]	0.257
9.010	J	[kgcm²]	0.193
9.856	J	[kgcm²]	0.170
11.200	J	[kgcm²]	0.166
12.571	J	[kgcm²]	0.126
14.286	J	[kgcm²]	0.123
15.400	J	[kgcm²]	0.098
17.500	J	[kgcm²]	0.097
19.360	J	[kgcm²]	0.063
22.000	J	[kgcm²]	0.062
24.933	J	[kgcm²]	0.044
28.333	J	[kgcm²]	0.043
31.600	J	[kgcm²]	0.030
35.909	J	[kgcm²]	0.030
39.600	J	[kgcm²]	0.021
45.000	J	[kgcm²]	0.021
52.171	J	[kgcm²]	0.013
59.286	J	[kgcm²]	0.013

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

Moments of inertia

GST□□-2

► Moment of inertia (J) depending on ratio i

Gearbox			GST05
2.956	J	[kgcm²]	0.986
3.333	J	[kgcm²]	0.944
4.053	J	[kgcm²]	0.903
4.571	J	[kgcm²]	0.864
5.187	J	[kgcm²]	0.637
5.850	J	[kgcm²]	0.613
6.400	J	[kgcm²]	0.533
7.238	J	[kgcm²]	0.400
8.163	J	[kgcm²]	0.388
9.010	J	[kgcm²]	0.543
10.000	J	[kgcm²]	0.300
11.200	J	[kgcm²]	0.462
13.016	J	[kgcm²]	0.178
14.356	J	[kgcm²]	0.131
16.190	J	[kgcm²]	0.128
17.500	J	[kgcm²]	0.271
20.044	J	[kgcm²]	0.164
22.778	J	[kgcm²]	0.161
24.933	J	[kgcm²]	0.119
28.333	J	[kgcm²]	0.117
32.267	J	[kgcm²]	0.079
36.667	J	[kgcm²]	0.078
39.160	J	[kgcm²]	0.058
44.500	J	[kgcm²]	0.057
50.050	J	[kgcm²]	0.039
56.875	J	[kgcm²]	0.038

Gearbox			GST06
3.033	J	[kgcm²]	2.720
3.333	J	[kgcm²]	2.610
4.160	J	[kgcm²]	2.510
4.571	J	[kgcm²]	2.410
5.324	J	[kgcm²]	1.760
5.850	J	[kgcm²]	1.710
6.400	J	[kgcm²]	1.470
7.040	J	[kgcm²]	2.070
8.163	J	[kgcm²]	1.060
9.010	J	[kgcm²]	1.500
10.000	J	[kgcm²]	0.820
11.200	J	[kgcm²]	1.260
12.571	J	[kgcm²]	0.955
14.286	J	[kgcm²]	0.932
15.400	J	[kgcm²]	0.748
17.500	J	[kgcm²]	0.733
20.044	J	[kgcm²]	0.457
22.778	J	[kgcm²]	0.450
24.933	J	[kgcm²]	0.332
28.333	J	[kgcm²]	0.326
32.267	J	[kgcm²]	0.221
36.667	J	[kgcm²]	0.218
39.160	J	[kgcm²]	0.162
44.500	J	[kgcm²]	0.160
49.500	J	[kgcm²]	0.110
56.250	J	[kgcm²]	0.108

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

Moments of inertia

GST□□-2

► Moment of inertia (J) depending on ratio i

Gearbox			GST07
3.048	J	[kgcm²]	8.200
3.350	J	[kgcm²]	7.920
4.225	J	[kgcm²]	7.650
4.643	J	[kgcm²]	7.390
5.200	J	[kgcm²]	5.640
5.714	J	[kgcm²]	5.460
6.400	J	[kgcm²]	4.490
7.150	J	[kgcm²]	6.270
8.125	J	[kgcm²]	6.040
8.800	J	[kgcm²]	4.730
9.856	J	[kgcm²]	3.900
11.200	J	[kgcm²]	3.780
12.571	J	[kgcm²]	2.860
14.286	J	[kgcm²]	2.790
15.400	J	[kgcm²]	2.260
17.500	J	[kgcm²]	2.210
20.044	J	[kgcm²]	1.380
22.778	J	[kgcm²]	1.350
24.567	J	[kgcm²]	1.020
27.917	J	[kgcm²]	1.010
32.267	J	[kgcm²]	0.664
36.667	J	[kgcm²]	0.653
39.160	J	[kgcm²]	0.487
44.500	J	[kgcm²]	0.479
49.500	J	[kgcm²]	0.330
56.250	J	[kgcm²]	0.325

Gearbox			GST09
4.056	J	[kgcm²]	27.000
4.457	J	[kgcm²]	25.900
5.324	J	[kgcm²]	18.100
5.850	J	[kgcm²]	17.500
6.667	J	[kgcm²]	14.200
7.305	J	[kgcm²]	11.300
8.027	J	[kgcm²]	11.000
9.010	J	[kgcm²]	15.200
10.267	J	[kgcm²]	12.400
11.667	J	[kgcm²]	12.100
12.362	J	[kgcm²]	9.790
14.048	J	[kgcm²]	9.530
15.156	J	[kgcm²]	7.650
17.222	J	[kgcm²]	7.490
20.533	J	[kgcm²]	4.500
23.333	J	[kgcm²]	4.410
24.933	J	[kgcm²]	3.380
28.333	J	[kgcm²]	3.320
32.267	J	[kgcm²]	2.250
36.667	J	[kgcm²]	2.210
39.160	J	[kgcm²]	1.640
44.500	J	[kgcm²]	1.620
49.500	J	[kgcm²]	1.120
56.250	J	[kgcm²]	1.100

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

Moments of inertia

GST□□-2

► Moment of inertia (J) depending on ratio i

Gearbox			GST11
4.056	J	[kgcm²]	82.200
4.457	J	[kgcm²]	79.000
5.324	J	[kgcm²]	55.400
5.850	J	[kgcm²]	53.500
6.400	J	[kgcm²]	45.700
6.864	J	[kgcm²]	67.500
7.800	J	[kgcm²]	65.100
9.010	J	[kgcm²]	46.800
9.856	J	[kgcm²]	40.200
11.200	J	[kgcm²]	39.000
12.571	J	[kgcm²]	29.400
14.286	J	[kgcm²]	28.700
15.400	J	[kgcm²]	23.000
17.500	J	[kgcm²]	22.500
20.289	J	[kgcm²]	14.300
23.056	J	[kgcm²]	14.100
24.933	J	[kgcm²]	10.600
28.333	J	[kgcm²]	10.400
32.267	J	[kgcm²]	7.040
36.667	J	[kgcm²]	6.930
39.160	J	[kgcm²]	5.150
44.500	J	[kgcm²]	5.080
49.500	J	[kgcm²]	3.520
56.250	J	[kgcm²]	3.440

Gearbox			GST14
4.225	J	[kgcm²]	226.000
4.643	J	[kgcm²]	216.000
5.200	J	[kgcm²]	168.000
5.714	J	[kgcm²]	161.000
6.286	J	[kgcm²]	141.000
7.150	J	[kgcm²]	183.000
8.027	J	[kgcm²]	100.000
8.800	J	[kgcm²]	139.000
9.841	J	[kgcm²]	75.100
11.000	J	[kgcm²]	119.000
12.362	J	[kgcm²]	89.000
14.048	J	[kgcm²]	86.600
15.156	J	[kgcm²]	67.600
17.222	J	[kgcm²]	66.000
20.044	J	[kgcm²]	45.800
22.778	J	[kgcm²]	44.900
24.567	J	[kgcm²]	33.200
27.917	J	[kgcm²]	32.600
32.267	J	[kgcm²]	21.500
36.667	J	[kgcm²]	21.200
39.160	J	[kgcm²]	15.700
44.500	J	[kgcm²]	15.500
49.500	J	[kgcm²]	10.600
56.250	J	[kgcm²]	10.500

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

Moments of inertia

GST□□-3

► Moment of inertia (J) depending on ratio i

Gearbox			GST05
36.267	J	[kgcm²]	0.195
46.259	J	[kgcm²]	0.141
56.667	J	[kgcm²]	0.108
63.467	J	[kgcm²]	0.192
71.238	J	[kgcm²]	0.073
80.952	J	[kgcm²]	0.139
91.746	J	[kgcm²]	0.050
99.167	J	[kgcm²]	0.107
116.277	J	[kgcm²]	0.033
124.667	J	[kgcm²]	0.072
145.714	J	[kgcm²]	0.023
160.556	J	[kgcm²]	0.050
179.067	J	[kgcm²]	0.033
191.973	J	[kgcm²]	0.014
224.400	J	[kgcm²]	0.023
255.000	J	[kgcm²]	0.023
295.638	J	[kgcm²]	0.014
335.952	J	[kgcm²]	0.014

Gearbox			GST06
39.200	J	[kgcm²]	0.362
44.000	J	[kgcm²]	0.195
51.022	J	[kgcm²]	0.320
53.900	J	[kgcm²]	0.178
67.760	J	[kgcm²]	0.114
70.156	J	[kgcm²]	0.160
80.952	J	[kgcm²]	0.203
87.267	J	[kgcm²]	0.150
99.167	J	[kgcm²]	0.150
109.707	J	[kgcm²]	0.096
124.667	J	[kgcm²]	0.096
141.289	J	[kgcm²]	0.063
160.556	J	[kgcm²]	0.063
179.067	J	[kgcm²]	0.043
203.485	J	[kgcm²]	0.042
231.733	J	[kgcm²]	0.040
255.000	J	[kgcm²]	0.029
290.400	J	[kgcm²]	0.027
330.000	J	[kgcm²]	0.027
382.590	J	[kgcm²]	0.026
434.762	J	[kgcm²]	0.025

Gearbox			GST07
39.200	J	[kgcm²]	0.974
44.000	J	[kgcm²]	0.534
51.022	J	[kgcm²]	0.843
53.900	J	[kgcm²]	0.484
65.079	J	[kgcm²]	0.313
70.156	J	[kgcm²]	0.431
79.762	J	[kgcm²]	0.536
85.983	J	[kgcm²]	0.400
97.708	J	[kgcm²]	0.399
111.915	J	[kgcm²]	0.238
127.176	J	[kgcm²]	0.237
139.211	J	[kgcm²]	0.166
158.194	J	[kgcm²]	0.166
180.156	J	[kgcm²]	0.108
204.722	J	[kgcm²]	0.107
236.622	J	[kgcm²]	0.101
248.458	J	[kgcm²]	0.077
268.889	J	[kgcm²]	0.101
326.333	J	[kgcm²]	0.073
367.033	J	[kgcm²]	0.094
417.083	J	[kgcm²]	0.067

Gearbox			GST09
40.136	J	[kgcm²]	2.140
43.267	J	[kgcm²]	1.550
49.167	J	[kgcm²]	1.530
53.044	J	[kgcm²]	1.380
60.278	J	[kgcm²]	1.370
71.867	J	[kgcm²]	1.170
81.667	J	[kgcm²]	1.160
93.541	J	[kgcm²]	0.706
99.167	J	[kgcm²]	1.070
113.585	J	[kgcm²]	0.652
129.074	J	[kgcm²]	0.649
141.289	J	[kgcm²]	0.458
160.556	J	[kgcm²]	0.456
182.844	J	[kgcm²]	0.297
207.778	J	[kgcm²]	0.295
236.622	J	[kgcm²]	0.275
252.167	J	[kgcm²]	0.212
268.889	J	[kgcm²]	0.275
326.333	J	[kgcm²]	0.198
363.000	J	[kgcm²]	0.255
412.500	J	[kgcm²]	0.183

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

Moments of inertia

GST□□-3

► Moment of inertia (J) depending on ratio i

Gearbox			GST11
40.816	J	[kgcm²]	6.360
44.000	J	[kgcm²]	5.660
50.000	J	[kgcm²]	5.600
57.968	J	[kgcm²]	4.770
61.250	J	[kgcm²]	4.080
71.011	J	[kgcm²]	3.520
80.694	J	[kgcm²]	3.500
87.267	J	[kgcm²]	3.220
99.167	J	[kgcm²]	3.200
112.933	J	[kgcm²]	2.930
129.074	J	[kgcm²]	1.940
146.993	J	[kgcm²]	1.770
158.194	J	[kgcm²]	1.400
180.156	J	[kgcm²]	1.290
207.778	J	[kgcm²]	0.880
236.622	J	[kgcm²]	0.818
252.167	J	[kgcm²]	0.633
268.889	J	[kgcm²]	0.816
326.333	J	[kgcm²]	0.589
363.000	J	[kgcm²]	0.756
412.500	J	[kgcm²]	0.545

Gearbox			GST14
40.185	J	[kgcm²]	24.400
42.580	J	[kgcm²]	18.300
48.386	J	[kgcm²]	18.100
53.148	J	[kgcm²]	20.500
59.321	J	[kgcm²]	13.200
69.042	J	[kgcm²]	11.500
78.457	J	[kgcm²]	11.400
93.541	J	[kgcm²]	6.570
96.157	J	[kgcm²]	10.400
106.296	J	[kgcm²]	6.520
130.278	J	[kgcm²]	6.000
139.211	J	[kgcm²]	4.420
158.194	J	[kgcm²]	4.400
171.111	J	[kgcm²]	5.490
204.722	J	[kgcm²]	2.860
236.622	J	[kgcm²]	2.650
248.458	J	[kgcm²]	2.060
268.889	J	[kgcm²]	2.650
326.333	J	[kgcm²]	1.920
363.000	J	[kgcm²]	2.450
412.500	J	[kgcm²]	1.780

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

Weights

GST□□-1M VBR

			063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12 100C32	112C22	132C12 132C22	132C32
GST04	m	[kg]	8	10	16					
GST05	m	[kg]	12	14	19	27	35			
GST06	m	[kg]	16	18	23	31	40	53		
GST07	m	[kg]			33	41	49	62	92	
GST09	m	[kg]				55	64	76	107	

GST□□-1M VCR

			063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12 100C32	112C22	132C12 132C22	132C32
GST04	m	[kg]	8	10	15					
GST05	m	[kg]	11	13	18	26	34			
GST06	m	[kg]	15	17	21	30	38	51		
GST07	m	[kg]			29	38	46	59	89	
GST09	m	[kg]				51	59	72	102	

► 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

GST□□-1M VCK

			063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12 100C32	112C22	132C12 132C22	132C32
GST04	m	[kg]	9	11	16					
GST05	m	[kg]	13	15	19	27	36			
GST06	m	[kg]	18	20	24	33	41	54		
GST07	m	[kg]			33	42	50	63	93	
GST09	m	[kg]				58	66	79	109	

► 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

GST□□-2M VAR / VBR

			063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST03	m	[kg]	6							
GST04	m	[kg]	10	12	18					
GST05	m	[kg]	16	18	22	30	39			
GST06	m	[kg]	23	25	29	38	46		59	
GST07	m	[kg]			45	53	61		74	104
GST09	m	[kg]				80	88		101	131
GST11	m	[kg]					134		146	176
GST14	m	[kg]							238	265

GST□□-2M VCR

			063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST03	m	[kg]	6							
GST04	m	[kg]	10	12	17					
GST05	m	[kg]	14	16	21	29	37			
GST06	m	[kg]	20	22	27	35	44		57	
GST07	m	[kg]			40	48	57		70	100
GST09	m	[kg]				71	80		92	123
GST11	m	[kg]					120		131	161
GST14	m	[kg]							210	237

► 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

GST□□-2M VCK

			063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST03	m	[kg]	7							
GST04	m	[kg]	11	13	18					
GST05	m	[kg]	16	18	22	30	39			
GST06	m	[kg]	23	25	30	38	47		60	
GST07	m	[kg]			44	52	61		74	104
GST09	m	[kg]				78	87		99	130
GST11	m	[kg]					130		142	171
GST14	m	[kg]							226	253

GST□□-2M VAL

			063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST04	m	[kg]	11	13	19					
GST05	m	[kg]	17	19	24	32	40			
GST06	m	[kg]	26	28	32	41	49		62	
GST07	m	[kg]			49	57	65		78	108
GST09	m	[kg]				87	95		108	138
GST11	m	[kg]					145		157	186
GST14	m	[kg]							254	281

► 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

GST□□-3M VAR / VBR

			063C32 063C42	071C32	071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST05	m	[kg]	16	19							
GST06	m	[kg]	26	29		34					
GST07	m	[kg]	46	48		53	61	69			
GST09	m	[kg]	78	80		85	93	101		114	
GST11	m	[kg]				139	147	156		169	198
GST14	m	[kg]					253	262		274	305

GST□□-3M VCR

			063C32 063C42	071C32	071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST05	m	[kg]	15	17							
GST06	m	[kg]	24	26		31					
GST07	m	[kg]	41	44		48	56	65			
GST09	m	[kg]	69	71		76	84	93		106	
GST11	m	[kg]				124	132	141		154	183
GST14	m	[kg]					225	234		246	277

► 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

GST□□-3M VCK

			063C32 063C42	071C32	071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST05	m	[kg]	16	19							
GST06	m	[kg]	27	29		34					
GST07	m	[kg]	45	48		52	60	69			
GST09	m	[kg]	76	78		83	91	100		113	
GST11	m	[kg]				135	143	151		164	194
GST14	m	[kg]					241	249		262	292

GST□□-3M VAL

			063C32 063C42	071C32	071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
GST05	m	[kg]	18	20							
GST06	m	[kg]	29	32		37					
GST07	m	[kg]	50	52		57	65	73			
GST09	m	[kg]	85	87		92	100	108		121	
GST11	m	[kg]				150	158	166		179	209
GST14	m	[kg]					269	277		290	320

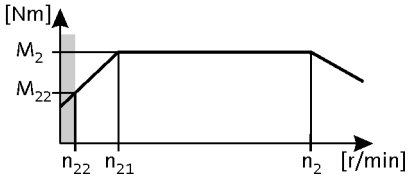
► Weights with oil filling for mounting position A; all values are approximate.
The weights relate to the basic version. Bear in mind that additional weights may be needed (e.g. for motor options).

Selection tables

► 120 Hz: P_N = 0.55 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 143.3 ... 3440 r/min



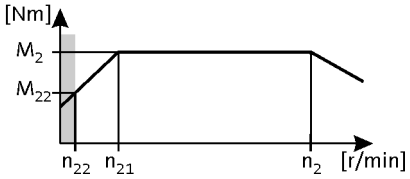
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
70	293	-	1680	2.3	3.0	4.5	2.048	GST04-1M□□□063C32	E84AV□□□5514□□0	78
64	268	-	1536	2.6	3.0	3.9	2.240	GST05-1M□□□063C32	E84AV□□□5514□□0	78
50	210	-	1204	3.3	4.0	4.1	2.857	GST04-1M□□□063C32	E84AV□□□5514□□0	78
41	171	-	983	4.0	5.0	3.6	3.500	GST04-1M□□□063C32	E84AV□□□5514□□0	78
33	137	-	788	4.9	7.0	2.5	4.368	GST03-2M□□□063C32	E84AV□□□5514□□0	84
33	136	-	782	5.0	7.0	2.9	4.400	GST04-1M□□□063C32	E84AV□□□5514□□0	78
28	116	-	663	5.8	8.0	4.5	5.187	GST04-2M□□□063C32	E84AV□□□5514□□0	84
25	106	-	607	6.5	9.0	2.2	5.667	GST04-1M□□□063C32	E84AV□□□5514□□0	78
25	106	-	607	6.5	9.0	3.2	5.667	GST05-1M□□□063C32	E84AV□□□5514□□0	78
22	94	-	538	7.2	10	3.9	6.400	GST05-2M□□□063C32	E84AV□□□5514□□0	84
20	84	-	479	8.2	11	1.8	7.182	GST04-1M□□□063C32	E84AV□□□5514□□0	78
20	82	-	469	8.4	11	2.8	7.333	GST05-1M□□□063C32	E84AV□□□5514□□0	78
20	82	-	469	8.4	11	3.2	7.333	GST06-1M□□□063C32	E84AV□□□5514□□0	78
18	74	-	421	9.2	12	4.5	8.163	GST05-2M□□□063C32	E84AV□□□5514□□0	84
16	67	-	387	10	13	2.4	8.900	GST05-1M□□□063C32	E84AV□□□5514□□0	78
16	67	-	387	10	13	2.8	8.900	GST06-1M□□□063C32	E84AV□□□5514□□0	78
16	67	-	385	10	13	1.9	8.935	GST03-2M□□□063C32	E84AV□□□5514□□0	84
16	67	-	382	10	14	1.0	9.000	GST04-1M□□□063C32	E84AV□□□5514□□0	78
15	61	-	349	11	15	3.4	9.856	GST04-2M□□□063C32	E84AV□□□5514□□0	84
14	60	-	343	11	15	1.8	10.033	GST03-2M□□□063C32	E84AV□□□5514□□0	84
13	54	-	307	13	17	2.7	11.200	GST04-2M□□□063C32	E84AV□□□5514□□0	84
13	53	-	306	13	17	2.2	11.250	GST06-1M□□□063C32	E84AV□□□5514□□0	78
13	53	-	302	13	17	1.2	11.375	GST05-1M□□□063C32	E84AV□□□5514□□0	78
13	53	-	301	13	17	1.6	11.429	GST03-2M□□□063C32	E84AV□□□5514□□0	84
11	48	-	274	14	19	2.8	12.571	GST04-2M□□□063C32	E84AV□□□5514□□0	84
11	47	-	268	14	19	1.5	12.833	GST03-2M□□□063C32	E84AV□□□5514□□0	84
10	42	-	241	16	21	2.2	14.286	GST04-2M□□□063C32	E84AV□□□5514□□0	84
10	42	-	240	16	21	3.2	14.356	GST05-2M□□□063C32	E84AV□□□5514□□0	84
9.7	40	-	232	17	22	1.3	14.836	GST03-2M□□□063C32	E84AV□□□5514□□0	84
9.3	39	-	223	17	23	2.6	15.400	GST04-2M□□□063C32	E84AV□□□5514□□0	84
8.6	36	-	207	19	25	1.4	16.660	GST03-2M□□□063C32	E84AV□□□5514□□0	84
8.2	34	-	197	20	26	2.1	17.500	GST04-2M□□□063C32	E84AV□□□5514□□0	84
7.5	32	-	181	21	28	1.3	19.013	GST03-2M□□□063C32	E84AV□□□5514□□0	84
7.4	31	-	178	22	29	2.1	19.360	GST04-2M□□□063C32	E84AV□□□5514□□0	84
6.7	28	-	161	24	32	1.2	21.350	GST03-2M□□□063C32	E84AV□□□5514□□0	84
6.5	27	-	156	25	33	1.6	22.000	GST04-2M□□□063C32	E84AV□□□5514□□0	84
5.8	24	-	140	28	36	1.1	24.595	GST03-2M□□□063C32	E84AV□□□5514□□0	84
5.8	24	-	138	28	37	1.7	24.933	GST04-2M□□□063C32	E84AV□□□5514□□0	84
5.2	22	-	125	31	41	0.9	27.618	GST03-2M□□□063C32	E84AV□□□5514□□0	84
5.1	21	-	121	32	42	1.3	28.333	GST04-2M□□□063C32	E84AV□□□5514□□0	84
5.1	21	-	121	32	42	3.0	28.333	GST05-2M□□□063C32	E84AV□□□5514□□0	84

Selection tables

► 120 Hz: P_N = 0.55 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 143.3 ... 3440 r/min



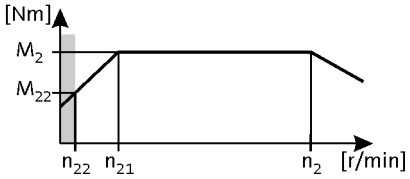
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
4.5	19	-	109	35	47	1.3	31.600	GST04-2M□□□063C32	E84AV□□□5514□□0	84
4.4	19	-	107	36	48	3.0	32.267	GST05-2M□□□063C32	E84AV□□□5514□□0	84
4.0	17	-	96	40	53	1.0	35.909	GST04-2M□□□063C32	E84AV□□□5514□□0	84
4.0	17	-	95	40	53	2.2	36.267	GST05-3M□□□063C32	E84AV□□□5514□□0	90
3.9	16	-	94	41	54	2.3	36.667	GST05-2M□□□063C32	E84AV□□□5514□□0	84
3.7	15	-	88	44	58	2.5	39.160	GST05-2M□□□063C32	E84AV□□□5514□□0	84
3.7	15	-	88	44	58	3.1	39.160	GST06-2M□□□063C32	E84AV□□□5514□□0	84
3.6	15	-	87	44	59	1.1	39.600	GST04-2M□□□063C32	E84AV□□□5514□□0	84
3.2	14	-	77	50	66	2.2	44.500	GST05-2M□□□063C32	E84AV□□□5514□□0	84
3.2	13	-	76	51	67	0.9	45.000	GST04-2M□□□063C32	E84AV□□□5514□□0	84
3.1	13	-	74	51	68	2.1	46.259	GST05-3M□□□063C32	E84AV□□□5514□□0	90
2.9	12	-	70	56	73	2.8	49.500	GST06-2M□□□063C32	E84AV□□□5514□□0	84
2.9	12	-	69	56	74	1.5	50.050	GST05-2M□□□063C32	E84AV□□□5514□□0	84
2.5	11	-	61	64	84	1.5	56.875	GST05-2M□□□063C32	E84AV□□□5514□□0	84
2.5	11	-	61	63	83	1.8	56.667	GST05-3M□□□063C32	E84AV□□□5514□□0	90
2.6	11	-	61	63	83	2.8	56.250	GST06-2M□□□063C32	E84AV□□□5514□□0	84
2.3	9.5	-	54	70	93	1.5	63.467	GST05-3M□□□063C32	E84AV□□□5514□□0	90
2.0	8.4	-	48	79	104	1.5	71.238	GST05-3M□□□063C32	E84AV□□□5514□□0	90
1.8	7.4	-	43	89	118	1.2	80.952	GST05-3M□□□063C32	E84AV□□□5514□□0	90
1.8	7.4	-	43	89	118	2.7	80.952	GST06-3M□□□063C32	E84AV□□□5514□□0	90
1.6	6.9	-	39	96	127	2.8	87.267	GST06-3M□□□063C32	E84AV□□□5514□□0	90
1.6	6.5	-	38	101	134	1.2	91.746	GST05-3M□□□063C32	E84AV□□□5514□□0	90
1.5	6.1	-	35	110	145	1.0	99.167	GST05-3M□□□063C32	E84AV□□□5514□□0	90
1.5	6.1	-	35	110	145	2.2	99.167	GST06-3M□□□063C32	E84AV□□□5514□□0	90
1.3	5.5	-	31	121	160	2.2	109.707	GST06-3M□□□063C32	E84AV□□□5514□□0	90
1.2	5.2	-	30	128	170	1.0	116.277	GST05-3M□□□063C32	E84AV□□□5514□□0	90
1.2	4.8	-	28	138	182	1.8	124.667	GST06-3M□□□063C32	E84AV□□□5514□□0	90
1.0	4.3	-	24	156	206	1.7	141.289	GST06-3M□□□063C32	E84AV□□□5514□□0	90
0.9	3.8	-	22	175	231	2.9	158.194	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.9	3.7	-	21	177	234	1.4	160.556	GST06-3M□□□063C32	E84AV□□□5514□□0	90
0.8	3.4	-	19	198	261	1.4	179.067	GST06-3M□□□063C32	E84AV□□□5514□□0	90
0.8	3.3	-	19	199	263	2.6	180.156	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.7	3.0	-	17	225	297	1.1	203.485	GST06-3M□□□063C32	E84AV□□□5514□□0	90
0.7	2.9	-	17	226	299	2.3	204.722	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.6	2.6	-	15	256	338	1.1	231.733	GST06-3M□□□063C32	E84AV□□□5514□□0	90
0.6	2.5	-	15	261	345	2.0	236.622	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.6	2.4	-	14	274	363	1.9	248.458	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.5	2.2	-	13	297	392	1.7	268.889	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.4	1.8	-	11	360	476	1.4	326.333	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.4	1.7	-	9.5	401	530	2.8	363.000	GST09-3M□□□063C32	E84AV□□□5514□□0	90
0.4	1.6	-	9.4	405	536	1.3	367.033	GST07-3M□□□063C32	E84AV□□□5514□□0	90

Selection tables

► 120 Hz: P_N = 0.55 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 143.3 ... 3440 r/min



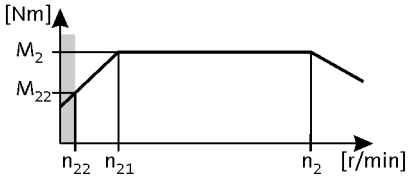
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
0.3	1.4	-	8.3	461	609	1.1	417.083	GST07-3M□□□063C32	E84AV□□□5514□□0	90
0.4	1.5	-	8.3	456	602	2.6	412.500	GST09-3M□□□063C32	E84AV□□□5514□□0	90

Selection tables

► 120 Hz: P_N = 0.75 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 141.7 ... 3400 r/min



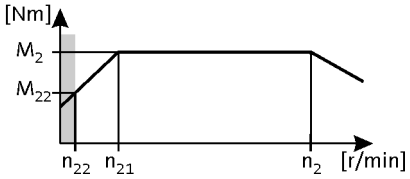
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
69	293	-	1661	3.2	4.0	3.3	2.048	GST04-1M□□□063C42	E84AV□□□7514□□0	78
63	268	-	1518	3.5	5.0	2.9	2.240	GST05-1M□□□063C42	E84AV□□□7514□□0	78
50	210	-	1190	4.4	6.0	3.0	2.857	GST04-1M□□□063C42	E84AV□□□7514□□0	78
41	171	-	971	5.4	7.0	2.6	3.500	GST04-1M□□□063C42	E84AV□□□7514□□0	78
32	137	-	778	6.7	9.0	1.8	4.368	GST03-2M□□□063C42	E84AV□□□7514□□0	84
32	136	-	773	6.8	9.0	2.1	4.400	GST04-1M□□□063C42	E84AV□□□7514□□0	78
31	132	-	746	7.1	10	2.7	4.556	GST05-1M□□□063C42	E84AV□□□7514□□0	78
27	116	-	655	7.9	11	3.3	5.187	GST04-2M□□□063C42	E84AV□□□7514□□0	84
25	106	-	600	8.8	12	1.6	5.667	GST04-1M□□□063C42	E84AV□□□7514□□0	78
25	106	-	600	8.8	12	2.3	5.667	GST05-1M□□□063C42	E84AV□□□7514□□0	78
22	94	-	531	9.8	13	2.9	6.400	GST05-2M□□□063C42	E84AV□□□7514□□0	84
22	94	-	531	9.8	13	3.2	6.400	GST04-2M□□□063C42	E84AV□□□7514□□0	84
20	84	-	473	11	15	1.3	7.182	GST04-1M□□□063C42	E84AV□□□7514□□0	78
19	82	-	464	11	15	2.1	7.333	GST05-1M□□□063C42	E84AV□□□7514□□0	78
19	82	-	464	11	15	2.3	7.333	GST06-1M□□□063C42	E84AV□□□7514□□0	78
17	74	-	417	13	17	3.3	8.163	GST05-2M□□□063C42	E84AV□□□7514□□0	84
16	67	-	382	14	19	1.7	8.900	GST05-1M□□□063C42	E84AV□□□7514□□0	78
16	67	-	382	14	19	2.0	8.900	GST06-1M□□□063C42	E84AV□□□7514□□0	78
16	67	-	381	14	18	1.4	8.935	GST03-2M□□□063C42	E84AV□□□7514□□0	84
16	67	-	377	14	18	2.6	9.010	GST04-2M□□□063C42	E84AV□□□7514□□0	84
14	61	-	345	15	20	2.4	9.856	GST04-2M□□□063C42	E84AV□□□7514□□0	84
14	60	-	339	15	21	1.3	10.033	GST03-2M□□□063C42	E84AV□□□7514□□0	84
13	54	-	304	17	23	2.0	11.200	GST04-2M□□□063C42	E84AV□□□7514□□0	84
13	54	-	304	17	23	2.9	11.200	GST05-2M□□□063C42	E84AV□□□7514□□0	84
13	53	-	302	18	23	1.6	11.250	GST06-1M□□□063C42	E84AV□□□7514□□0	78
12	53	-	298	18	23	1.2	11.429	GST03-2M□□□063C42	E84AV□□□7514□□0	84
11	48	-	271	19	26	2.0	12.571	GST04-2M□□□063C42	E84AV□□□7514□□0	84
11	47	-	265	20	26	1.1	12.833	GST03-2M□□□063C42	E84AV□□□7514□□0	84
11	46	-	261	20	27	2.7	13.016	GST05-2M□□□063C42	E84AV□□□7514□□0	84
9.9	42	-	238	22	29	1.6	14.286	GST04-2M□□□063C42	E84AV□□□7514□□0	84
9.9	42	-	237	22	29	2.3	14.356	GST05-2M□□□063C42	E84AV□□□7514□□0	84
9.6	40	-	229	23	30	1.0	14.836	GST03-2M□□□063C42	E84AV□□□7514□□0	84
9.2	39	-	221	24	32	1.9	15.400	GST04-2M□□□063C42	E84AV□□□7514□□0	84
8.8	37	-	210	25	33	2.6	16.190	GST05-2M□□□063C42	E84AV□□□7514□□0	84
8.5	36	-	204	26	34	1.0	16.660	GST03-2M□□□063C42	E84AV□□□7514□□0	84
8.1	34	-	194	27	36	1.5	17.500	GST04-2M□□□063C42	E84AV□□□7514□□0	84
7.5	32	-	179	29	39	0.9	19.013	GST03-2M□□□063C42	E84AV□□□7514□□0	84
7.3	31	-	176	30	40	1.5	19.360	GST04-2M□□□063C42	E84AV□□□7514□□0	84
7.1	30	-	170	31	41	3.1	20.044	GST05-2M□□□063C42	E84AV□□□7514□□0	84
6.4	27	-	155	34	45	1.2	22.000	GST04-2M□□□063C42	E84AV□□□7514□□0	84
6.2	26	-	149	35	47	2.7	22.778	GST05-2M□□□063C42	E84AV□□□7514□□0	84

Selection tables

► 120 Hz: P_N = 0.75 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 141.7 ... 3400 r/min



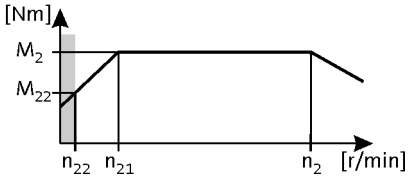
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
5.7	24	-	136	38	51	1.2	24.933	GST04-2M□□□063C42	E84AV□□□7514□□0	84
5.7	24	-	136	38	51	2.6	24.933	GST05-2M□□□063C42	E84AV□□□7514□□0	84
5.0	21	-	120	43	58	0.9	28.333	GST04-2M□□□063C42	E84AV□□□7514□□0	84
5.0	21	-	120	43	58	2.2	28.333	GST05-2M□□□063C42	E84AV□□□7514□□0	84
4.5	19	-	108	48	65	1.0	31.600	GST04-2M□□□063C42	E84AV□□□7514□□0	84
4.4	19	-	105	49	66	2.2	32.267	GST05-2M□□□063C42	E84AV□□□7514□□0	84
4.4	19	-	105	49	66	2.6	32.267	GST06-2M□□□063C42	E84AV□□□7514□□0	84
3.9	17	-	94	55	73	1.6	36.267	GST05-3M□□□063C42	E84AV□□□7514□□0	90
3.9	16	-	93	56	75	1.7	36.667	GST05-2M□□□063C42	E84AV□□□7514□□0	84
3.9	16	-	93	56	75	2.6	36.667	GST06-2M□□□063C42	E84AV□□□7514□□0	84
3.6	15	-	87	60	80	1.8	39.160	GST05-2M□□□063C42	E84AV□□□7514□□0	84
3.6	15	-	87	60	80	2.3	39.160	GST06-2M□□□063C42	E84AV□□□7514□□0	84
3.2	14	-	76	68	91	1.6	44.500	GST05-2M□□□063C42	E84AV□□□7514□□0	84
3.2	14	-	76	68	91	2.5	44.500	GST06-2M□□□063C42	E84AV□□□7514□□0	84
3.1	13	-	74	70	93	1.5	46.259	GST05-3M□□□063C42	E84AV□□□7514□□0	90
2.9	12	-	69	76	101	2.0	49.500	GST06-2M□□□063C42	E84AV□□□7514□□0	84
2.8	12	-	68	77	102	1.1	50.050	GST05-2M□□□063C42	E84AV□□□7514□□0	84
2.8	12	-	67	77	103	3.0	51.022	GST06-3M□□□063C42	E84AV□□□7514□□0	90
2.6	11	-	63	81	109	3.1	53.900	GST06-3M□□□063C42	E84AV□□□7514□□0	90
2.5	11	-	60	87	116	1.1	56.875	GST05-2M□□□063C42	E84AV□□□7514□□0	84
2.5	11	-	60	85	114	1.3	56.667	GST05-3M□□□063C42	E84AV□□□7514□□0	90
2.5	11	-	60	86	115	2.0	56.250	GST06-2M□□□063C42	E84AV□□□7514□□0	84
2.2	9.5	-	54	96	128	1.1	63.467	GST05-3M□□□063C42	E84AV□□□7514□□0	90
2.1	8.9	-	50	102	136	2.6	67.760	GST06-3M□□□063C42	E84AV□□□7514□□0	90
2.0	8.6	-	49	106	141	2.4	70.156	GST06-3M□□□063C42	E84AV□□□7514□□0	90
2.0	8.4	-	48	107	143	1.1	71.238	GST05-3M□□□063C42	E84AV□□□7514□□0	90
1.8	7.4	-	42	122	163	2.0	80.952	GST06-3M□□□063C42	E84AV□□□7514□□0	90
1.6	6.9	-	39	131	176	2.0	87.267	GST06-3M□□□063C42	E84AV□□□7514□□0	90
1.4	6.1	-	34	149	200	1.6	99.167	GST06-3M□□□063C42	E84AV□□□7514□□0	90
1.3	5.5	-	31	165	221	1.6	109.707	GST06-3M□□□063C42	E84AV□□□7514□□0	90
1.3	5.4	-	30	169	225	3.0	111.915	GST07-3M□□□063C42	E84AV□□□7514□□0	90
1.1	4.8	-	27	188	251	1.3	124.667	GST06-3M□□□063C42	E84AV□□□7514□□0	90
1.1	4.7	-	27	192	256	2.7	127.176	GST07-3M□□□063C42	E84AV□□□7514□□0	90
1.0	4.3	-	24	213	284	1.3	141.289	GST06-3M□□□063C42	E84AV□□□7514□□0	90
1.0	4.3	-	24	210	280	2.4	139.211	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.9	3.8	-	22	238	319	2.1	158.194	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.9	3.7	-	21	242	323	1.0	160.556	GST06-3M□□□063C42	E84AV□□□7514□□0	90
0.8	3.4	-	19	270	361	1.0	179.067	GST06-3M□□□063C42	E84AV□□□7514□□0	90
0.8	3.3	-	19	271	363	1.9	180.156	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.8	3.3	-	19	275	368	2.9	182.844	GST09-3M□□□063C42	E84AV□□□7514□□0	90
0.7	2.9	-	17	308	412	1.7	204.722	GST07-3M□□□063C42	E84AV□□□7514□□0	90

Selection tables

► 120 Hz: P_N = 0.75 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 141.7 ... 3400 r/min



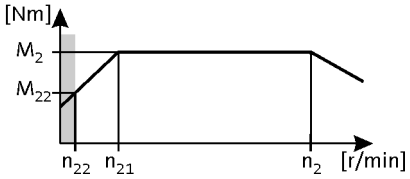
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
0.7	2.9	-	16	313	418	2.9	207.778	GST09-3M□□□063C42	E84AV□□□7514□□0	90
0.6	2.5	-	14	356	476	1.4	236.622	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.6	2.4	-	14	374	500	1.4	248.458	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.6	2.4	-	14	380	508	2.5	252.167	GST09-3M□□□063C42	E84AV□□□7514□□0	90
0.6	2.5	-	14	356	476	2.9	236.622	GST09-3M□□□063C42	E84AV□□□7514□□0	90
0.5	2.2	-	13	405	541	1.3	268.889	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.5	2.2	-	13	405	541	2.9	268.889	GST09-3M□□□063C42	E84AV□□□7514□□0	90
0.4	1.8	-	10	491	657	1.0	326.333	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.4	1.8	-	10	491	657	2.4	326.333	GST09-3M□□□063C42	E84AV□□□7514□□0	90
0.4	1.7	-	9.4	547	731	2.0	363.000	GST09-3M□□□063C42	E84AV□□□7514□□0	90
0.4	1.6	-	9.3	553	739	0.9	367.033	GST07-3M□□□063C42	E84AV□□□7514□□0	90
0.3	1.5	-	8.2	621	830	1.9	412.500	GST09-3M□□□063C42	E84AV□□□7514□□0	90

Selection tables

► 120 Hz: P_N = 1.10 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.4 ... 3490 r/min



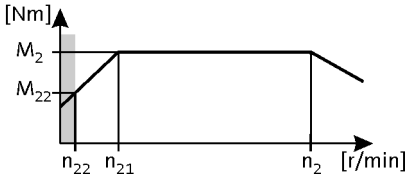
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
71	293	-	1704	4.7	6.0	2.8	2.048	GST04-1M□□□071C32	E84AV□□□1124□□0	78
65	268	-	1558	5.1	7.0	2.8	2.240	GST04-1M□□□071C32	E84AV□□□1124□□0	78
51	210	-	1222	6.5	9.0	2.2	2.857	GST04-1M□□□071C32	E84AV□□□1124□□0	78
42	171	-	997	8.0	10	1.8	3.500	GST04-1M□□□071C32	E84AV□□□1124□□0	78
33	136	-	793	10	13	1.4	4.400	GST04-1M□□□071C32	E84AV□□□1124□□0	78
32	132	-	766	10	14	3.0	4.556	GST05-1M□□□071C32	E84AV□□□1124□□0	78
28	116	-	673	12	15	2.5	5.187	GST04-2M□□□071C32	E84AV□□□1124□□0	84
26	106	-	616	13	17	1.1	5.667	GST04-1M□□□071C32	E84AV□□□1124□□0	78
26	106	-	616	13	17	2.4	5.667	GST05-1M□□□071C32	E84AV□□□1124□□0	78
26	106	-	616	13	17	3.0	5.667	GST06-1M□□□071C32	E84AV□□□1124□□0	78
25	103	-	597	13	17	2.4	5.850	GST04-2M□□□071C32	E84AV□□□1124□□0	84
23	94	-	545	14	19	2.2	6.400	GST04-2M□□□071C32	E84AV□□□1124□□0	84
20	82	-	476	17	22	1.6	7.333	GST05-1M□□□071C32	E84AV□□□1124□□0	78
20	82	-	476	17	22	2.7	7.333	GST06-1M□□□071C32	E84AV□□□1124□□0	78
18	74	-	428	18	24	3.6	8.163	GST05-2M□□□071C32	E84AV□□□1124□□0	84
16	67	-	392	20	26	1.2	8.900	GST05-1M□□□071C32	E84AV□□□1124□□0	78
16	67	-	392	20	26	2.2	8.900	GST06-1M□□□071C32	E84AV□□□1124□□0	78
16	67	-	387	20	26	1.8	9.010	GST04-2M□□□071C32	E84AV□□□1124□□0	84
15	61	-	354	22	29	1.7	9.856	GST04-2M□□□071C32	E84AV□□□1124□□0	84
15	60	-	349	22	29	3.2	10.000	GST05-2M□□□071C32	E84AV□□□1124□□0	84
13	54	-	312	25	33	1.4	11.200	GST04-2M□□□071C32	E84AV□□□1124□□0	84
13	54	-	312	25	33	2.9	11.200	GST05-2M□□□071C32	E84AV□□□1124□□0	84
13	53	-	310	26	33	1.3	11.250	GST06-1M□□□071C32	E84AV□□□1124□□0	78
12	48	-	278	28	37	1.4	12.571	GST04-2M□□□071C32	E84AV□□□1124□□0	84
11	46	-	268	29	38	2.7	13.016	GST05-2M□□□071C32	E84AV□□□1124□□0	84
10	42	-	244	32	42	1.1	14.286	GST04-2M□□□071C32	E84AV□□□1124□□0	84
10	42	-	243	32	42	2.5	14.356	GST05-2M□□□071C32	E84AV□□□1124□□0	84
9.4	39	-	227	35	45	1.3	15.400	GST04-2M□□□071C32	E84AV□□□1124□□0	84
9.0	37	-	216	36	47	2.7	16.190	GST05-2M□□□071C32	E84AV□□□1124□□0	84
8.3	34	-	199	39	51	1.0	17.500	GST04-2M□□□071C32	E84AV□□□1124□□0	84
8.3	34	-	199	39	51	2.4	17.500	GST05-2M□□□071C32	E84AV□□□1124□□0	84
7.5	31	-	180	43	57	1.1	19.360	GST04-2M□□□071C32	E84AV□□□1124□□0	84
7.3	30	-	174	45	59	2.3	20.044	GST05-2M□□□071C32	E84AV□□□1124□□0	84
6.4	26	-	153	51	67	1.9	22.778	GST05-2M□□□071C32	E84AV□□□1124□□0	84
5.8	24	-	140	56	73	1.9	24.933	GST05-2M□□□071C32	E84AV□□□1124□□0	84
5.1	21	-	123	64	83	1.5	28.333	GST05-2M□□□071C32	E84AV□□□1124□□0	84
4.5	19	-	108	72	94	1.5	32.267	GST05-2M□□□071C32	E84AV□□□1124□□0	84
4.5	19	-	108	72	94	3.1	32.267	GST06-2M□□□071C32	E84AV□□□1124□□0	84
4.0	17	-	96	80	104	1.1	36.267	GST05-3M□□□071C32	E84AV□□□1124□□0	90
4.0	16	-	95	82	107	1.2	36.667	GST05-2M□□□071C32	E84AV□□□1124□□0	84
4.0	16	-	95	82	107	2.6	36.667	GST06-2M□□□071C32	E84AV□□□1124□□0	84

Selection tables

► 120 Hz: P_N = 1.10 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.4 ... 3490 r/min



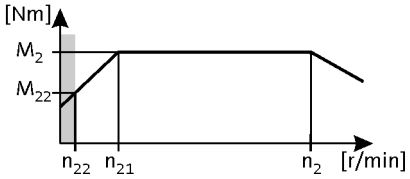
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
3.7	15	-	89	88	114	1.2	39.160	GST05-2M□□□071C32	E84AV□□□1124□□0	84
3.7	15	-	89	87	113	2.4	39.200	GST06-3M□□□071C32	E84AV□□□1124□□0	90
3.7	15	-	89	88	114	2.5	39.160	GST06-2M□□□071C32	E84AV□□□1124□□0	84
3.3	14	-	79	97	127	2.5	44.000	GST06-3M□□□071C32	E84AV□□□1124□□0	90
3.3	14	-	78	100	130	1.1	44.500	GST05-2M□□□071C32	E84AV□□□1124□□0	84
3.3	14	-	78	100	130	2.4	44.500	GST06-2M□□□071C32	E84AV□□□1124□□0	84
3.1	13	-	75	102	133	1.0	46.259	GST05-3M□□□071C32	E84AV□□□1124□□0	90
2.9	12	-	71	111	145	1.6	49.500	GST06-2M□□□071C32	E84AV□□□1124□□0	84
2.9	12	-	68	113	147	2.1	51.022	GST06-3M□□□071C32	E84AV□□□1124□□0	90
2.7	11	-	65	119	155	2.1	53.900	GST06-3M□□□071C32	E84AV□□□1124□□0	90
2.6	11	-	62	125	163	0.9	56.667	GST05-3M□□□071C32	E84AV□□□1124□□0	90
2.6	11	-	62	126	164	1.6	56.250	GST06-2M□□□071C32	E84AV□□□1124□□0	84
2.2	8.9	-	52	150	195	1.8	67.760	GST06-3M□□□071C32	E84AV□□□1124□□0	90
2.1	8.6	-	50	155	202	1.7	70.156	GST06-3M□□□071C32	E84AV□□□1124□□0	90
1.8	7.5	-	44	176	229	2.9	79.762	GST07-3M□□□071C32	E84AV□□□1124□□0	90
1.8	7.4	-	43	179	233	1.4	80.952	GST06-3M□□□071C32	E84AV□□□1124□□0	90
1.7	7.0	-	41	190	247	2.7	85.983	GST07-3M□□□071C32	E84AV□□□1124□□0	90
1.7	6.9	-	40	193	251	1.4	87.267	GST06-3M□□□071C32	E84AV□□□1124□□0	90
1.5	6.1	-	36	216	281	2.4	97.708	GST07-3M□□□071C32	E84AV□□□1124□□0	90
1.5	6.1	-	35	219	285	1.1	99.167	GST06-3M□□□071C32	E84AV□□□1124□□0	90
1.3	5.5	-	32	242	316	1.1	109.707	GST06-3M□□□071C32	E84AV□□□1124□□0	90
1.3	5.4	-	31	247	322	2.1	111.915	GST07-3M□□□071C32	E84AV□□□1124□□0	90
1.1	4.7	-	27	281	366	1.8	127.176	GST07-3M□□□071C32	E84AV□□□1124□□0	90
1.0	4.3	-	25	308	400	1.7	139.211	GST07-3M□□□071C32	E84AV□□□1124□□0	90
0.9	3.8	-	22	349	455	1.5	158.194	GST07-3M□□□071C32	E84AV□□□1124□□0	90
0.8	3.3	-	19	398	518	1.3	180.156	GST07-3M□□□071C32	E84AV□□□1124□□0	90
0.8	3.3	-	19	404	526	2.9	182.844	GST09-3M□□□071C32	E84AV□□□1124□□0	90
0.7	2.9	-	17	452	589	1.1	204.722	GST07-3M□□□071C32	E84AV□□□1124□□0	90
0.7	2.9	-	17	459	598	2.6	207.778	GST09-3M□□□071C32	E84AV□□□1124□□0	90
0.6	2.5	-	15	523	681	1.0	236.622	GST07-3M□□□071C32	E84AV□□□1124□□0	90
0.6	2.5	-	15	523	681	2.3	236.622	GST09-3M□□□071C32	E84AV□□□1124□□0	90
0.6	2.4	-	14	549	715	0.9	248.458	GST07-3M□□□071C32	E84AV□□□1124□□0	90
0.6	2.4	-	14	557	725	2.1	252.167	GST09-3M□□□071C32	E84AV□□□1124□□0	90
0.5	2.2	-	13	594	773	2.0	268.889	GST09-3M□□□071C32	E84AV□□□1124□□0	90
0.5	1.8	-	11	721	939	1.6	326.333	GST09-3M□□□071C32	E84AV□□□1124□□0	90
0.4	1.7	-	9.6	802	1044	1.5	363.000	GST09-3M□□□071C32	E84AV□□□1124□□0	90
0.4	1.5	-	8.5	911	1187	1.3	412.500	GST09-3M□□□071C32	E84AV□□□1124□□0	90

Selection tables

► 120 Hz: P_N = 1.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 143.8 ... 3450 r/min



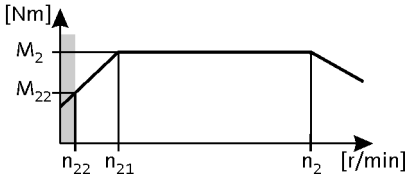
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
70	293	-	1685	6.4	8.0	2.1	2.048	GST04-1M□□□071C42	E84AV□□□1524□□0	78
70	293	-	1685	6.4	8.0	3.1	2.048	GST05-1M□□□071C42	E84AV□□□1524□□0	78
64	268	-	1540	7.0	9.0	2.0	2.240	GST04-1M□□□071C42	E84AV□□□1524□□0	78
64	268	-	1540	7.0	9.0	3.1	2.240	GST05-1M□□□071C42	E84AV□□□1524□□0	78
50	210	-	1208	8.9	12	1.6	2.857	GST04-1M□□□071C42	E84AV□□□1524□□0	78
50	210	-	1208	8.9	12	2.9	2.857	GST05-1M□□□071C42	E84AV□□□1524□□0	78
50	210	-	1208	8.9	12	3.1	2.857	GST06-1M□□□071C42	E84AV□□□1524□□0	78
41	171	-	986	11	14	1.3	3.500	GST04-1M□□□071C42	E84AV□□□1524□□0	78
41	171	-	986	11	14	2.6	3.500	GST05-1M□□□071C42	E84AV□□□1524□□0	78
33	136	-	784	14	18	1.1	4.400	GST04-1M□□□071C42	E84AV□□□1524□□0	78
32	132	-	757	14	19	2.2	4.556	GST05-1M□□□071C42	E84AV□□□1524□□0	78
32	132	-	757	14	19	2.6	4.556	GST06-1M□□□071C42	E84AV□□□1524□□0	78
28	116	-	665	16	21	1.8	5.187	GST04-2M□□□071C42	E84AV□□□1524□□0	84
28	116	-	665	16	21	3.1	5.187	GST05-2M□□□071C42	E84AV□□□1524□□0	84
25	106	-	609	18	23	1.8	5.667	GST05-1M□□□071C42	E84AV□□□1524□□0	78
25	106	-	609	18	23	2.2	5.667	GST06-1M□□□071C42	E84AV□□□1524□□0	78
25	103	-	590	18	24	1.7	5.850	GST04-2M□□□071C42	E84AV□□□1524□□0	84
25	103	-	590	18	24	3.1	5.850	GST05-2M□□□071C42	E84AV□□□1524□□0	84
23	94	-	539	20	26	1.6	6.400	GST04-2M□□□071C42	E84AV□□□1524□□0	84
23	94	-	539	20	26	3.1	6.400	GST05-2M□□□071C42	E84AV□□□1524□□0	84
20	83	-	477	22	29	2.8	7.238	GST05-2M□□□071C42	E84AV□□□1524□□0	84
20	82	-	471	23	30	1.2	7.333	GST05-1M□□□071C42	E84AV□□□1524□□0	78
20	82	-	471	23	30	2.0	7.333	GST06-1M□□□071C42	E84AV□□□1524□□0	78
18	74	-	423	25	33	2.7	8.163	GST05-2M□□□071C42	E84AV□□□1524□□0	84
18	74	-	423	25	33	3.1	8.163	GST06-2M□□□071C42	E84AV□□□1524□□0	84
16	67	-	388	28	36	1.6	8.900	GST06-1M□□□071C42	E84AV□□□1524□□0	78
16	67	-	383	28	36	1.3	9.010	GST04-2M□□□071C42	E84AV□□□1524□□0	84
16	67	-	383	28	36	2.5	9.010	GST05-2M□□□071C42	E84AV□□□1524□□0	84
15	61	-	350	30	40	1.2	9.856	GST04-2M□□□071C42	E84AV□□□1524□□0	84
14	60	-	345	31	40	2.3	10.000	GST05-2M□□□071C42	E84AV□□□1524□□0	84
13	54	-	308	34	45	1.0	11.200	GST04-2M□□□071C42	E84AV□□□1524□□0	84
13	54	-	308	34	45	2.1	11.200	GST05-2M□□□071C42	E84AV□□□1524□□0	84
13	53	-	307	35	46	0.9	11.250	GST06-1M□□□071C42	E84AV□□□1524□□0	78
11	48	-	274	38	51	1.0	12.571	GST04-2M□□□071C42	E84AV□□□1524□□0	84
11	48	-	274	38	51	3.1	12.571	GST06-2M□□□071C42	E84AV□□□1524□□0	84
11	46	-	265	40	52	2.0	13.016	GST05-2M□□□071C42	E84AV□□□1524□□0	84
10	42	-	242	44	58	3.1	14.286	GST06-2M□□□071C42	E84AV□□□1524□□0	84
10	42	-	240	44	58	1.8	14.356	GST05-2M□□□071C42	E84AV□□□1524□□0	84
9.3	39	-	224	47	62	1.0	15.400	GST04-2M□□□071C42	E84AV□□□1524□□0	84
8.9	37	-	213	50	65	2.0	16.190	GST05-2M□□□071C42	E84AV□□□1524□□0	84
8.2	34	-	197	54	71	1.7	17.500	GST05-2M□□□071C42	E84AV□□□1524□□0	84

Selection tables

► 120 Hz: P_N = 1.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 143.8 ... 3450 r/min



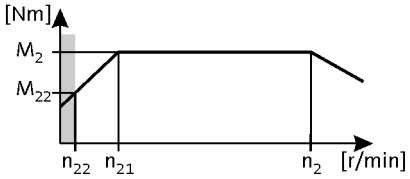
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
7.2	30	-	172	61	81	1.7	20.044	GST05-2M□□□071C42	E84AV□□□1524□□0	84
7.2	30	-	172	61	81	2.9	20.044	GST06-2M□□□071C42	E84AV□□□1524□□0	84
6.3	26	-	152	70	92	1.4	22.778	GST05-2M□□□071C42	E84AV□□□1524□□0	84
6.3	26	-	152	70	92	2.9	22.778	GST06-2M□□□071C42	E84AV□□□1524□□0	84
5.8	24	-	138	76	100	1.4	24.933	GST05-2M□□□071C42	E84AV□□□1524□□0	84
5.8	24	-	138	76	100	2.4	24.933	GST06-2M□□□071C42	E84AV□□□1524□□0	84
5.1	21	-	122	87	114	1.1	28.333	GST05-2M□□□071C42	E84AV□□□1524□□0	84
5.1	21	-	122	87	114	2.4	28.333	GST06-2M□□□071C42	E84AV□□□1524□□0	84
4.5	19	-	107	99	130	1.1	32.267	GST05-2M□□□071C42	E84AV□□□1524□□0	84
4.5	19	-	107	99	130	2.2	32.267	GST06-2M□□□071C42	E84AV□□□1524□□0	84
3.9	16	-	94	112	148	1.9	36.667	GST06-2M□□□071C42	E84AV□□□1524□□0	84
3.7	15	-	88	120	158	0.9	39.160	GST05-2M□□□071C42	E84AV□□□1524□□0	84
3.7	15	-	88	120	158	1.8	39.160	GST06-2M□□□071C42	E84AV□□□1524□□0	84
3.7	15	-	88	118	156	1.8	39.200	GST06-3M□□□071C42	E84AV□□□1524□□0	90
3.2	14	-	78	136	179	1.7	44.500	GST06-2M□□□071C42	E84AV□□□1524□□0	84
3.3	14	-	78	133	175	1.8	44.000	GST06-3M□□□071C42	E84AV□□□1524□□0	90
3.3	14	-	78	133	175	3.2	44.000	GST07-3M□□□071C42	E84AV□□□1524□□0	90
2.9	12	-	70	151	199	1.2	49.500	GST06-2M□□□071C42	E84AV□□□1524□□0	84
2.8	12	-	68	154	202	1.5	51.022	GST06-3M□□□071C42	E84AV□□□1524□□0	90
2.7	11	-	64	162	214	1.6	53.900	GST06-3M□□□071C42	E84AV□□□1524□□0	90
2.7	11	-	64	162	214	3.2	53.900	GST07-3M□□□071C42	E84AV□□□1524□□0	90
2.6	11	-	61	172	227	1.2	56.250	GST06-2M□□□071C42	E84AV□□□1524□□0	84
2.2	9.2	-	53	196	258	2.6	65.079	GST07-3M□□□071C42	E84AV□□□1524□□0	90
2.1	8.9	-	51	204	269	1.3	67.760	GST06-3M□□□071C42	E84AV□□□1524□□0	90
2.1	8.6	-	49	211	278	1.2	70.156	GST06-3M□□□071C42	E84AV□□□1524□□0	90
2.1	8.6	-	49	211	278	2.4	70.156	GST07-3M□□□071C42	E84AV□□□1524□□0	90
1.8	7.4	-	43	244	321	1.0	80.952	GST06-3M□□□071C42	E84AV□□□1524□□0	90
1.8	7.5	-	43	240	317	2.1	79.762	GST07-3M□□□071C42	E84AV□□□1524□□0	90
1.7	6.9	-	40	263	346	1.0	87.267	GST06-3M□□□071C42	E84AV□□□1524□□0	90
1.7	7.0	-	40	259	341	2.0	85.983	GST07-3M□□□071C42	E84AV□□□1524□□0	90
1.5	6.4	-	37	282	371	3.2	93.541	GST09-3M□□□071C42	E84AV□□□1524□□0	90
1.5	6.1	-	35	294	388	1.7	97.708	GST07-3M□□□071C42	E84AV□□□1524□□0	90
1.3	5.4	-	31	337	444	1.5	111.915	GST07-3M□□□071C42	E84AV□□□1524□□0	90
1.3	5.3	-	30	342	451	3.2	113.585	GST09-3M□□□071C42	E84AV□□□1524□□0	90
1.1	4.7	-	27	383	505	1.3	127.176	GST07-3M□□□071C42	E84AV□□□1524□□0	90
1.1	4.7	-	27	389	512	3.0	129.074	GST09-3M□□□071C42	E84AV□□□1524□□0	90
1.0	4.3	-	25	419	552	1.2	139.211	GST07-3M□□□071C42	E84AV□□□1524□□0	90
1.0	4.3	-	24	426	561	2.7	141.289	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.9	3.8	-	22	476	628	1.1	158.194	GST07-3M□□□071C42	E84AV□□□1524□□0	90
0.9	3.7	-	22	484	637	2.4	160.556	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.8	3.3	-	19	543	715	0.9	180.156	GST07-3M□□□071C42	E84AV□□□1524□□0	90

Selection tables

► 120 Hz: P_N = 1.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 143.8 ... 3450 r/min



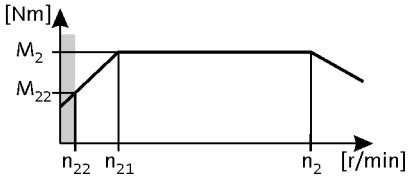
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
0.8	3.3	-	19	551	726	2.1	182.844	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.7	2.9	-	17	626	824	1.9	207.778	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.6	2.5	-	15	713	939	1.6	236.622	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.6	2.4	-	14	760	1001	1.5	252.167	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.5	2.2	-	13	810	1067	1.5	268.889	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.4	1.8	-	11	983	1295	1.2	326.333	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.4	1.7	-	9.5	1093	1440	1.1	363.000	GST09-3M□□□071C42	E84AV□□□1524□□0	90
0.4	1.5	-	8.4	1242	1637	0.9	412.500	GST09-3M□□□071C42	E84AV□□□1524□□0	90

Selection tables

► 120 Hz: P_N = 2.20 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.8 ... 3500 r/min



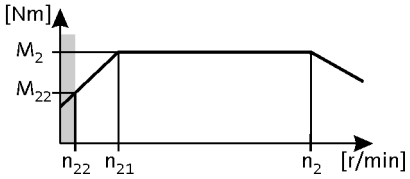
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
71	293	-	1709	9.1	12	1.4	2.048	GST04-1M□□□080C32	E84AV□□□2224□□0	78
65	268	-	1563	9.9	13	1.4	2.240	GST04-1M□□□080C32	E84AV□□□2224□□0	78
65	268	-	1563	9.9	13	3.0	2.240	GST05-1M□□□080C32	E84AV□□□2224□□0	78
51	210	-	1225	13	17	1.1	2.857	GST04-1M□□□080C32	E84AV□□□2224□□0	78
51	210	-	1225	13	17	2.4	2.857	GST05-1M□□□080C32	E84AV□□□2224□□0	78
42	171	-	1000	16	21	0.9	3.500	GST04-1M□□□080C32	E84AV□□□2224□□0	78
42	171	-	1000	16	21	2.0	3.500	GST05-1M□□□080C32	E84AV□□□2224□□0	78
32	132	-	768	20	27	1.5	4.556	GST05-1M□□□080C32	E84AV□□□2224□□0	78
32	132	-	768	20	27	2.9	4.556	GST06-1M□□□080C32	E84AV□□□2224□□0	78
28	116	-	675	23	30	1.2	5.187	GST04-2M□□□080C32	E84AV□□□2224□□0	84
28	116	-	675	23	30	2.2	5.187	GST05-2M□□□080C32	E84AV□□□2224□□0	84
26	108	-	627	25	33	2.9	5.583	GST07-1M□□□080C32	E84AV□□□2224□□0	78
26	106	-	618	25	34	1.2	5.667	GST05-1M□□□080C32	E84AV□□□2224□□0	78
26	106	-	618	25	34	2.4	5.667	GST06-1M□□□080C32	E84AV□□□2224□□0	78
25	103	-	598	26	34	1.2	5.850	GST04-2M□□□080C32	E84AV□□□2224□□0	84
25	103	-	598	26	34	2.2	5.850	GST05-2M□□□080C32	E84AV□□□2224□□0	84
23	94	-	547	28	37	1.1	6.400	GST04-2M□□□080C32	E84AV□□□2224□□0	84
23	94	-	547	28	37	2.1	6.400	GST05-2M□□□080C32	E84AV□□□2224□□0	84
20	83	-	484	32	42	1.9	7.238	GST05-2M□□□080C32	E84AV□□□2224□□0	84
20	82	-	477	33	43	1.7	7.333	GST06-1M□□□080C32	E84AV□□□2224□□0	78
20	82	-	477	33	43	2.7	7.333	GST07-1M□□□080C32	E84AV□□□2224□□0	78
18	74	-	429	36	48	1.8	8.163	GST05-2M□□□080C32	E84AV□□□2224□□0	84
16	67	-	393	39	53	1.2	8.900	GST06-1M□□□080C32	E84AV□□□2224□□0	78
16	67	-	393	39	53	2.2	8.900	GST07-1M□□□080C32	E84AV□□□2224□□0	78
16	67	-	389	39	53	0.9	9.010	GST04-2M□□□080C32	E84AV□□□2224□□0	84
16	67	-	389	39	53	1.7	9.010	GST05-2M□□□080C32	E84AV□□□2224□□0	84
15	60	-	350	44	58	1.6	10.000	GST05-2M□□□080C32	E84AV□□□2224□□0	84
13	54	-	313	49	65	1.5	11.200	GST05-2M□□□080C32	E84AV□□□2224□□0	84
13	54	-	313	49	65	3.2	11.200	GST06-2M□□□080C32	E84AV□□□2224□□0	84
13	53	-	311	50	67	1.3	11.250	GST07-1M□□□080C32	E84AV□□□2224□□0	78
12	48	-	278	55	73	3.0	12.571	GST06-2M□□□080C32	E84AV□□□2224□□0	84
11	46	-	269	57	76	1.4	13.016	GST05-2M□□□080C32	E84AV□□□2224□□0	84
10	42	-	245	62	83	2.8	14.286	GST06-2M□□□080C32	E84AV□□□2224□□0	84
10	42	-	244	63	84	1.3	14.356	GST05-2M□□□080C32	E84AV□□□2224□□0	84
9.5	39	-	227	67	90	3.0	15.400	GST06-2M□□□080C32	E84AV□□□2224□□0	84
9.0	37	-	216	71	94	1.3	16.190	GST05-2M□□□080C32	E84AV□□□2224□□0	84
8.3	34	-	200	76	102	1.2	17.500	GST05-2M□□□080C32	E84AV□□□2224□□0	84
8.3	34	-	200	76	102	2.6	17.500	GST06-2M□□□080C32	E84AV□□□2224□□0	84
7.3	30	-	175	88	117	1.2	20.044	GST05-2M□□□080C32	E84AV□□□2224□□0	84
7.3	30	-	175	88	117	2.6	20.044	GST06-2M□□□080C32	E84AV□□□2224□□0	84
6.4	26	-	154	99	133	0.9	22.778	GST05-2M□□□080C32	E84AV□□□2224□□0	84

Selection tables

► 120 Hz: P_N = 2.20 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.8 ... 3500 r/min



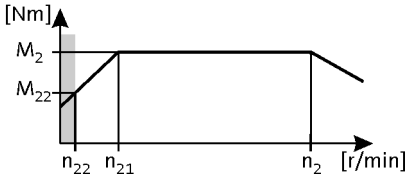
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
6.4	26	-	154	99	133	2.0	22.778	GST06-2M□□□080C32	E84AV□□□2224□□0	84
5.9	24	-	140	109	145	1.0	24.933	GST05-2M□□□080C32	E84AV□□□2224□□0	84
5.9	24	-	140	109	145	2.1	24.933	GST06-2M□□□080C32	E84AV□□□2224□□0	84
5.2	21	-	124	124	165	1.6	28.333	GST06-2M□□□080C32	E84AV□□□2224□□0	84
4.5	19	-	109	141	188	1.7	32.267	GST06-2M□□□080C32	E84AV□□□2224□□0	84
4.5	19	-	109	141	188	3.1	32.267	GST07-2M□□□080C32	E84AV□□□2224□□0	84
4.0	16	-	96	160	214	1.3	36.667	GST06-2M□□□080C32	E84AV□□□2224□□0	84
4.0	16	-	96	160	214	2.8	36.667	GST07-2M□□□080C32	E84AV□□□2224□□0	84
3.7	15	-	89	169	225	1.2	39.200	GST06-3M□□□080C32	E84AV□□□2224□□0	90
3.7	15	-	89	171	228	1.4	39.160	GST06-2M□□□080C32	E84AV□□□2224□□0	84
3.7	15	-	89	171	228	2.4	39.160	GST07-2M□□□080C32	E84AV□□□2224□□0	84
3.7	15	-	89	169	225	2.6	39.200	GST07-3M□□□080C32	E84AV□□□2224□□0	90
3.3	14	-	80	189	252	1.3	44.000	GST06-3M□□□080C32	E84AV□□□2224□□0	90
3.3	14	-	80	189	252	2.7	44.000	GST07-3M□□□080C32	E84AV□□□2224□□0	90
3.3	14	-	79	194	259	1.2	44.500	GST06-2M□□□080C32	E84AV□□□2224□□0	84
3.3	14	-	79	194	259	2.6	44.500	GST07-2M□□□080C32	E84AV□□□2224□□0	84
3.0	12	-	71	216	288	1.6	49.500	GST07-2M□□□080C32	E84AV□□□2224□□0	84
2.9	12	-	69	219	293	1.1	51.022	GST06-3M□□□080C32	E84AV□□□2224□□0	90
2.9	12	-	69	219	293	2.3	51.022	GST07-3M□□□080C32	E84AV□□□2224□□0	90
2.7	11	-	65	232	309	1.1	53.900	GST06-3M□□□080C32	E84AV□□□2224□□0	90
2.7	11	-	65	232	309	2.2	53.900	GST07-3M□□□080C32	E84AV□□□2224□□0	90
2.6	11	-	62	246	328	1.6	56.250	GST07-2M□□□080C32	E84AV□□□2224□□0	84
2.2	9.2	-	54	280	373	1.8	65.079	GST07-3M□□□080C32	E84AV□□□2224□□0	90
2.1	8.6	-	50	302	403	1.7	70.156	GST07-3M□□□080C32	E84AV□□□2224□□0	90
1.8	7.5	-	44	343	458	1.5	79.762	GST07-3M□□□080C32	E84AV□□□2224□□0	90
1.8	7.4	-	43	351	469	3.2	81.667	GST09-3M□□□080C32	E84AV□□□2224□□0	90
1.7	7.0	-	41	370	493	1.4	85.983	GST07-3M□□□080C32	E84AV□□□2224□□0	90
1.6	6.4	-	37	402	537	2.9	93.541	GST09-3M□□□080C32	E84AV□□□2224□□0	90
1.5	6.1	-	36	420	561	1.2	97.708	GST07-3M□□□080C32	E84AV□□□2224□□0	90
1.5	6.1	-	35	427	569	2.7	99.167	GST09-3M□□□080C32	E84AV□□□2224□□0	90
1.3	5.4	-	31	481	642	1.0	111.915	GST07-3M□□□080C32	E84AV□□□2224□□0	90
1.3	5.3	-	31	489	652	2.4	113.585	GST09-3M□□□080C32	E84AV□□□2224□□0	90
1.2	4.7	-	28	547	730	0.9	127.176	GST07-3M□□□080C32	E84AV□□□2224□□0	90
1.1	4.7	-	27	555	741	2.1	129.074	GST09-3M□□□080C32	E84AV□□□2224□□0	90
1.0	4.3	-	25	608	811	1.9	141.289	GST09-3M□□□080C32	E84AV□□□2224□□0	90
1.0	4.1	-	24	632	843	3.0	146.993	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.9	3.7	-	22	691	921	1.7	160.556	GST09-3M□□□080C32	E84AV□□□2224□□0	90
0.9	3.8	-	22	680	908	2.9	158.194	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.8	3.3	-	19	786	1049	1.5	182.844	GST09-3M□□□080C32	E84AV□□□2224□□0	90
0.8	3.3	-	19	775	1034	2.5	180.156	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.7	2.9	-	17	894	1192	1.3	207.778	GST09-3M□□□080C32	E84AV□□□2224□□0	90

Selection tables

► 120 Hz: P_N = 2.20 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.8 ... 3500 r/min



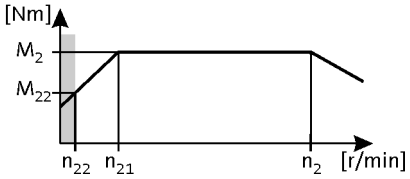
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
0.7	2.9	-	17	894	1192	2.2	207.778	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.6	2.5	-	15	1018	1357	1.1	236.622	GST09-3M□□□080C32	E84AV□□□2224□□0	90
0.6	2.5	-	15	1018	1357	1.9	236.622	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.6	2.4	-	14	1084	1447	1.1	252.167	GST09-3M□□□080C32	E84AV□□□2224□□0	90
0.6	2.4	-	14	1084	1447	1.8	252.167	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.5	2.2	-	13	1156	1543	1.0	268.889	GST09-3M□□□080C32	E84AV□□□2224□□0	90
0.5	2.2	-	13	1156	1543	1.8	268.889	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.5	1.8	-	11	1403	1872	1.4	326.333	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.4	1.7	-	9.6	1561	2082	1.2	363.000	GST11-3M□□□080C32	E84AV□□□2224□□0	90
0.4	1.5	-	8.5	1774	2366	1.1	412.500	GST11-3M□□□080C32	E84AV□□□2224□□0	90

Selection tables

► 120 Hz: P_N = 3.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.0 ... 3480 r/min



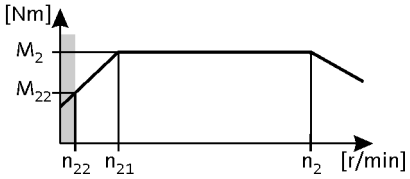
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
71	440	-	1700	13	17	1.0	2.048	GST04-1M□□□080C42	E84AV□□□3024□□0	78
71	440	-	1700	13	17	2.4	2.048	GST05-1M□□□080C42	E84AV□□□3024□□0	78
71	440	-	1700	13	17	3.1	2.048	GST06-1M□□□080C42	E84AV□□□3024□□0	78
65	402	-	1554	14	18	1.0	2.240	GST04-1M□□□080C42	E84AV□□□3024□□0	78
65	402	-	1554	14	18	2.2	2.240	GST05-1M□□□080C42	E84AV□□□3024□□0	78
65	402	-	1554	14	18	3.1	2.240	GST06-1M□□□080C42	E84AV□□□3024□□0	78
51	315	-	1218	17	23	1.7	2.857	GST05-1M□□□080C42	E84AV□□□3024□□0	78
51	315	-	1218	17	23	2.9	2.857	GST06-1M□□□080C42	E84AV□□□3024□□0	78
51	315	-	1218	17	23	3.1	2.857	GST07-1M□□□080C42	E84AV□□□3024□□0	78
41	257	-	994	21	28	1.4	3.500	GST05-1M□□□080C42	E84AV□□□3024□□0	78
41	257	-	994	21	28	2.6	3.500	GST06-1M□□□080C42	E84AV□□□3024□□0	78
32	198	-	764	28	37	1.1	4.556	GST05-1M□□□080C42	E84AV□□□3024□□0	78
32	198	-	764	28	37	2.1	4.556	GST06-1M□□□080C42	E84AV□□□3024□□0	78
32	198	-	764	28	37	2.6	4.556	GST07-1M□□□080C42	E84AV□□□3024□□0	78
28	174	-	671	31	41	0.9	5.187	GST04-2M□□□080C42	E84AV□□□3024□□0	84
28	174	-	671	31	41	1.6	5.187	GST05-2M□□□080C42	E84AV□□□3024□□0	84
27	169	-	654	32	43	3.1	5.324	GST06-2M□□□080C42	E84AV□□□3024□□0	84
26	161	-	623	34	45	2.1	5.583	GST07-1M□□□080C42	E84AV□□□3024□□0	78
26	159	-	614	35	46	1.7	5.667	GST06-1M□□□080C42	E84AV□□□3024□□0	78
25	154	-	595	35	47	1.6	5.850	GST05-2M□□□080C42	E84AV□□□3024□□0	84
25	154	-	595	35	47	3.1	5.850	GST06-2M□□□080C42	E84AV□□□3024□□0	84
23	141	-	544	38	51	1.5	6.400	GST05-2M□□□080C42	E84AV□□□3024□□0	84
23	141	-	544	38	51	3.1	6.400	GST06-2M□□□080C42	E84AV□□□3024□□0	84
20	124	-	481	43	58	1.4	7.238	GST05-2M□□□080C42	E84AV□□□3024□□0	84
20	123	-	475	45	60	1.3	7.333	GST06-1M□□□080C42	E84AV□□□3024□□0	78
20	123	-	475	45	60	2.0	7.333	GST07-1M□□□080C42	E84AV□□□3024□□0	78
18	110	-	426	49	65	1.3	8.163	GST05-2M□□□080C42	E84AV□□□3024□□0	84
18	110	-	426	49	65	2.9	8.163	GST06-2M□□□080C42	E84AV□□□3024□□0	84
16	101	-	391	54	72	1.6	8.900	GST07-1M□□□080C42	E84AV□□□3024□□0	78
16	100	-	386	54	72	1.2	9.010	GST05-2M□□□080C42	E84AV□□□3024□□0	84
16	100	-	386	54	72	2.7	9.010	GST06-2M□□□080C42	E84AV□□□3024□□0	84
15	90	-	348	60	80	1.2	10.000	GST05-2M□□□080C42	E84AV□□□3024□□0	84
15	90	-	348	60	80	2.5	10.000	GST06-2M□□□080C42	E84AV□□□3024□□0	84
13	80	-	311	67	90	1.1	11.200	GST05-2M□□□080C42	E84AV□□□3024□□0	84
13	80	-	311	67	90	2.4	11.200	GST06-2M□□□080C42	E84AV□□□3024□□0	84
13	80	-	309	68	91	0.9	11.250	GST07-1M□□□080C42	E84AV□□□3024□□0	78
12	72	-	277	75	100	2.2	12.571	GST06-2M□□□080C42	E84AV□□□3024□□0	84
12	72	-	277	75	100	3.1	12.571	GST07-2M□□□080C42	E84AV□□□3024□□0	84
11	69	-	267	78	104	1.0	13.016	GST05-2M□□□080C42	E84AV□□□3024□□0	84
10	63	-	244	86	114	2.0	14.286	GST06-2M□□□080C42	E84AV□□□3024□□0	84
10	63	-	244	86	114	3.1	14.286	GST07-2M□□□080C42	E84AV□□□3024□□0	84

Selection tables

► 120 Hz: P_N = 3.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.0 ... 3480 r/min



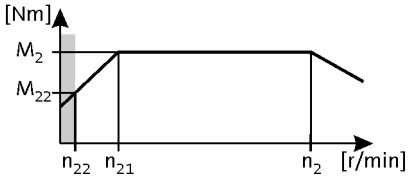
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
10	63	-	242	86	115	0.9	14.356	GST05-2M□□□080C42	E84AV□□□3024□□0	84
9.4	58	-	226	92	123	2.2	15.400	GST06-2M□□□080C42	E84AV□□□3024□□0	84
9.0	56	-	215	97	129	1.0	16.190	GST05-2M□□□080C42	E84AV□□□3024□□0	84
8.3	51	-	199	105	140	1.9	17.500	GST06-2M□□□080C42	E84AV□□□3024□□0	84
7.2	45	-	174	120	160	1.9	20.044	GST06-2M□□□080C42	E84AV□□□3024□□0	84
7.2	45	-	174	120	160	2.9	20.044	GST07-2M□□□080C42	E84AV□□□3024□□0	84
6.4	40	-	153	137	182	1.5	22.778	GST06-2M□□□080C42	E84AV□□□3024□□0	84
6.4	40	-	153	137	182	2.9	22.778	GST07-2M□□□080C42	E84AV□□□3024□□0	84
5.9	37	-	142	147	196	2.4	24.567	GST07-2M□□□080C42	E84AV□□□3024□□0	84
5.8	36	-	140	149	199	1.6	24.933	GST06-2M□□□080C42	E84AV□□□3024□□0	84
5.2	32	-	125	167	223	2.4	27.917	GST07-2M□□□080C42	E84AV□□□3024□□0	84
5.1	32	-	123	170	226	1.2	28.333	GST06-2M□□□080C42	E84AV□□□3024□□0	84
4.5	28	-	108	193	258	1.2	32.267	GST06-2M□□□080C42	E84AV□□□3024□□0	84
4.5	28	-	108	193	258	2.3	32.267	GST07-2M□□□080C42	E84AV□□□3024□□0	84
4.0	25	-	95	220	293	0.9	36.667	GST06-2M□□□080C42	E84AV□□□3024□□0	84
4.0	25	-	95	220	293	2.1	36.667	GST07-2M□□□080C42	E84AV□□□3024□□0	84
3.7	23	-	89	235	313	1.0	39.160	GST06-2M□□□080C42	E84AV□□□3024□□0	84
3.7	23	-	89	235	313	1.8	39.160	GST07-2M□□□080C42	E84AV□□□3024□□0	84
3.7	23	-	89	231	308	1.9	39.200	GST07-3M□□□080C42	E84AV□□□3024□□0	90
3.3	21	-	79	260	346	0.9	44.000	GST06-3M□□□080C42	E84AV□□□3024□□0	90
3.3	21	-	79	260	346	1.9	44.000	GST07-3M□□□080C42	E84AV□□□3024□□0	90
3.3	20	-	78	267	355	1.9	44.500	GST07-2M□□□080C42	E84AV□□□3024□□0	84
2.9	18	-	70	297	395	1.2	49.500	GST07-2M□□□080C42	E84AV□□□3024□□0	84
2.8	18	-	68	301	401	1.7	51.022	GST07-3M□□□080C42	E84AV□□□3024□□0	90
2.7	17	-	66	313	417	3.1	53.044	GST09-3M□□□080C42	E84AV□□□3024□□0	90
2.7	17	-	65	318	424	1.6	53.900	GST07-3M□□□080C42	E84AV□□□3024□□0	90
2.6	16	-	62	337	449	1.2	56.250	GST07-2M□□□080C42	E84AV□□□3024□□0	84
2.4	15	-	58	356	474	3.1	60.278	GST09-3M□□□080C42	E84AV□□□3024□□0	90
2.2	14	-	54	384	512	1.3	65.079	GST07-3M□□□080C42	E84AV□□□3024□□0	90
2.1	13	-	50	414	552	1.2	70.156	GST07-3M□□□080C42	E84AV□□□3024□□0	90
2.0	13	-	48	424	565	2.5	71.867	GST09-3M□□□080C42	E84AV□□□3024□□0	90
1.8	11	-	44	471	628	1.1	79.762	GST07-3M□□□080C42	E84AV□□□3024□□0	90
1.8	11	-	43	482	643	2.3	81.667	GST09-3M□□□080C42	E84AV□□□3024□□0	90
1.7	11	-	41	507	677	1.0	85.983	GST07-3M□□□080C42	E84AV□□□3024□□0	90
1.6	9.6	-	37	552	736	2.1	93.541	GST09-3M□□□080C42	E84AV□□□3024□□0	90
1.5	9.1	-	35	585	780	1.9	99.167	GST09-3M□□□080C42	E84AV□□□3024□□0	90
1.3	7.9	-	31	670	894	1.7	113.585	GST09-3M□□□080C42	E84AV□□□3024□□0	90
1.1	7.0	-	27	762	1016	1.5	129.074	GST09-3M□□□080C42	E84AV□□□3024□□0	90
1.1	7.0	-	27	762	1016	2.6	129.074	GST11-3M□□□080C42	E84AV□□□3024□□0	90
1.0	6.4	-	25	834	1112	1.4	141.289	GST09-3M□□□080C42	E84AV□□□3024□□0	90
1.0	6.1	-	24	867	1157	2.2	146.993	GST11-3M□□□080C42	E84AV□□□3024□□0	90

Selection tables

► 120 Hz: P_N = 3.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.0 ... 3480 r/min



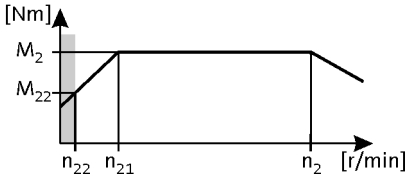
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
0.9	5.6	-	22	947	1263	1.2	160.556	GST09-3M□□□080C42	E84AV□□□3024□□0	90
0.9	5.7	-	22	934	1245	2.1	158.194	GST11-3M□□□080C42	E84AV□□□3024□□0	90
0.8	4.9	-	19	1079	1439	1.1	182.844	GST09-3M□□□080C42	E84AV□□□3024□□0	90
0.8	5.0	-	19	1063	1417	1.8	180.156	GST11-3M□□□080C42	E84AV□□□3024□□0	90
0.7	4.3	-	17	1226	1635	0.9	207.778	GST09-3M□□□080C42	E84AV□□□3024□□0	90
0.7	4.3	-	17	1226	1635	1.6	207.778	GST11-3M□□□080C42	E84AV□□□3024□□0	90
0.6	3.8	-	15	1396	1862	1.4	236.622	GST11-3M□□□080C42	E84AV□□□3024□□0	90
0.6	3.6	-	14	1488	1984	1.3	252.167	GST11-3M□□□080C42	E84AV□□□3024□□0	90
0.5	3.4	-	13	1587	2116	1.3	268.889	GST11-3M□□□080C42	E84AV□□□3024□□0	90
0.4	2.8	-	11	1926	2568	1.1	326.333	GST11-3M□□□080C42	E84AV□□□3024□□0	90

Selection tables

► 120 Hz: P_N = 4.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.0 ... 3480 r/min



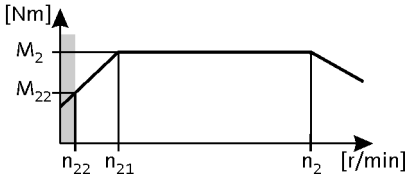
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
71	293	-	1700	16	22	1.8	2.048	GST05-1M□□□090C32	E84AV□□□4024□□0	78
71	293	-	1700	16	22	2.5	2.048	GST06-1M□□□090C32	E84AV□□□4024□□0	78
65	268	-	1554	17	24	1.7	2.240	GST05-1M□□□090C32	E84AV□□□4024□□0	78
65	268	-	1554	17	24	2.4	2.240	GST06-1M□□□090C32	E84AV□□□4024□□0	78
51	210	-	1218	22	31	1.3	2.857	GST05-1M□□□090C32	E84AV□□□4024□□0	78
51	210	-	1218	22	31	2.3	2.857	GST06-1M□□□090C32	E84AV□□□4024□□0	78
51	210	-	1218	22	31	2.9	2.857	GST07-1M□□□090C32	E84AV□□□4024□□0	78
41	171	-	994	27	38	1.1	3.500	GST05-1M□□□090C32	E84AV□□□4024□□0	78
41	171	-	994	27	38	2.1	3.500	GST06-1M□□□090C32	E84AV□□□4024□□0	78
32	132	-	764	35	49	1.6	4.556	GST06-1M□□□090C32	E84AV□□□4024□□0	78
32	132	-	764	35	49	2.4	4.556	GST07-1M□□□090C32	E84AV□□□4024□□0	78
28	116	-	671	39	55	1.2	5.187	GST05-2M□□□090C32	E84AV□□□4024□□0	84
27	113	-	654	40	57	2.8	5.324	GST06-2M□□□090C32	E84AV□□□4024□□0	84
26	108	-	623	42	60	2.0	5.583	GST07-1M□□□090C32	E84AV□□□4024□□0	78
26	106	-	614	43	61	1.3	5.667	GST06-1M□□□090C32	E84AV□□□4024□□0	78
25	103	-	595	44	62	1.2	5.850	GST05-2M□□□090C32	E84AV□□□4024□□0	84
25	103	-	595	44	62	2.7	5.850	GST06-2M□□□090C32	E84AV□□□4024□□0	84
23	94	-	544	48	68	1.2	6.400	GST05-2M□□□090C32	E84AV□□□4024□□0	84
23	94	-	544	48	68	2.5	6.400	GST06-2M□□□090C32	E84AV□□□4024□□0	84
20	83	-	481	54	77	1.1	7.238	GST05-2M□□□090C32	E84AV□□□4024□□0	84
20	82	-	475	56	79	1.0	7.333	GST06-1M□□□090C32	E84AV□□□4024□□0	78
20	82	-	475	56	79	1.7	7.333	GST07-1M□□□090C32	E84AV□□□4024□□0	78
20	82	-	475	56	79	2.0	7.333	GST09-1M□□□090C32	E84AV□□□4024□□0	78
18	74	-	426	61	87	1.0	8.163	GST05-2M□□□090C32	E84AV□□□4024□□0	84
18	74	-	426	61	87	2.2	8.163	GST06-2M□□□090C32	E84AV□□□4024□□0	84
16	67	-	391	67	96	1.4	8.900	GST07-1M□□□090C32	E84AV□□□4024□□0	78
16	67	-	391	67	96	1.8	8.900	GST09-1M□□□090C32	E84AV□□□4024□□0	78
16	67	-	386	67	96	0.9	9.010	GST05-2M□□□090C32	E84AV□□□4024□□0	84
16	67	-	386	67	96	2.1	9.010	GST06-2M□□□090C32	E84AV□□□4024□□0	84
15	60	-	348	75	107	1.9	10.000	GST06-2M□□□090C32	E84AV□□□4024□□0	84
13	54	-	311	84	119	1.8	11.200	GST06-2M□□□090C32	E84AV□□□4024□□0	84
13	53	-	309	85	122	1.4	11.250	GST09-1M□□□090C32	E84AV□□□4024□□0	78
12	48	-	277	94	134	1.7	12.571	GST06-2M□□□090C32	E84AV□□□4024□□0	84
12	48	-	277	94	134	2.9	12.571	GST07-2M□□□090C32	E84AV□□□4024□□0	84
10	42	-	244	107	152	1.5	14.286	GST06-2M□□□090C32	E84AV□□□4024□□0	84
10	42	-	244	107	152	2.9	14.286	GST07-2M□□□090C32	E84AV□□□4024□□0	84
9.4	39	-	226	115	164	1.7	15.400	GST06-2M□□□090C32	E84AV□□□4024□□0	84
8.3	34	-	199	131	186	1.4	17.500	GST06-2M□□□090C32	E84AV□□□4024□□0	84
7.2	30	-	174	149	214	1.4	20.044	GST06-2M□□□090C32	E84AV□□□4024□□0	84
7.2	30	-	174	149	214	2.8	20.044	GST07-2M□□□090C32	E84AV□□□4024□□0	84
6.4	26	-	153	170	243	1.1	22.778	GST06-2M□□□090C32	E84AV□□□4024□□0	84

Selection tables

► 120 Hz: P_N = 4.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.0 ... 3480 r/min



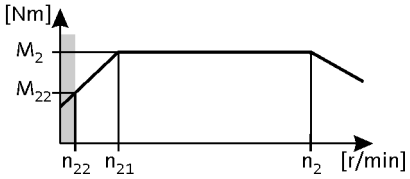
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
6.4	26	-	153	170	243	2.4	22.778	GST07-2M□□□090C32	E84AV□□□4024□□0	84
5.9	24	-	142	183	262	2.3	24.567	GST07-2M□□□090C32	E84AV□□□4024□□0	84
5.8	24	-	140	186	266	1.2	24.933	GST06-2M□□□090C32	E84AV□□□4024□□0	84
5.2	22	-	125	208	297	2.0	27.917	GST07-2M□□□090C32	E84AV□□□4024□□0	84
5.1	21	-	123	211	302	0.9	28.333	GST06-2M□□□090C32	E84AV□□□4024□□0	84
4.5	19	-	108	241	344	0.9	32.267	GST06-2M□□□090C32	E84AV□□□4024□□0	84
4.5	19	-	108	241	344	1.8	32.267	GST07-2M□□□090C32	E84AV□□□4024□□0	84
4.5	19	-	108	241	344	2.3	32.267	GST09-2M□□□090C32	E84AV□□□4024□□0	84
4.0	16	-	95	273	391	1.5	36.667	GST07-2M□□□090C32	E84AV□□□4024□□0	84
4.0	16	-	95	273	391	2.3	36.667	GST09-2M□□□090C32	E84AV□□□4024□□0	84
3.7	15	-	89	288	411	1.4	39.200	GST07-3M□□□090C32	E84AV□□□4024□□0	90
3.7	15	-	89	292	417	1.5	39.160	GST07-2M□□□090C32	E84AV□□□4024□□0	84
3.7	15	-	89	292	417	2.0	39.160	GST09-2M□□□090C32	E84AV□□□4024□□0	84
3.6	15	-	87	295	421	2.7	40.136	GST09-3M□□□090C32	E84AV□□□4024□□0	90
3.4	14	-	80	318	454	2.7	43.267	GST09-3M□□□090C32	E84AV□□□4024□□0	90
3.3	14	-	79	323	462	1.5	44.000	GST07-3M□□□090C32	E84AV□□□4024□□0	90
3.3	14	-	78	332	474	1.4	44.500	GST07-2M□□□090C32	E84AV□□□4024□□0	84
3.3	14	-	78	332	474	2.2	44.500	GST09-2M□□□090C32	E84AV□□□4024□□0	84
3.0	12	-	71	361	516	2.7	49.167	GST09-3M□□□090C32	E84AV□□□4024□□0	90
2.9	12	-	70	369	527	1.1	49.500	GST07-2M□□□090C32	E84AV□□□4024□□0	84
2.9	12	-	70	369	527	1.7	49.500	GST09-2M□□□090C32	E84AV□□□4024□□0	84
2.8	12	-	68	375	535	1.2	51.022	GST07-3M□□□090C32	E84AV□□□4024□□0	90
2.7	11	-	66	390	557	2.4	53.044	GST09-3M□□□090C32	E84AV□□□4024□□0	90
2.7	11	-	65	396	565	1.2	53.900	GST07-3M□□□090C32	E84AV□□□4024□□0	90
2.6	11	-	62	419	599	1.1	56.250	GST07-2M□□□090C32	E84AV□□□4024□□0	84
2.6	11	-	62	419	599	1.7	56.250	GST09-2M□□□090C32	E84AV□□□4024□□0	84
2.4	10	-	58	443	632	2.4	60.278	GST09-3M□□□090C32	E84AV□□□4024□□0	90
2.2	9.2	-	54	478	683	1.0	65.079	GST07-3M□□□090C32	E84AV□□□4024□□0	90
2.1	8.6	-	50	515	736	0.9	70.156	GST07-3M□□□090C32	E84AV□□□4024□□0	90
2.0	8.4	-	48	528	754	1.9	71.867	GST09-3M□□□090C32	E84AV□□□4024□□0	90
1.8	7.4	-	43	600	857	1.8	81.667	GST09-3M□□□090C32	E84AV□□□4024□□0	90
1.6	6.4	-	37	687	981	1.6	93.541	GST09-3M□□□090C32	E84AV□□□4024□□0	90
1.5	6.1	-	35	728	1040	1.5	99.167	GST09-3M□□□090C32	E84AV□□□4024□□0	90
1.3	5.3	-	31	834	1192	1.3	113.585	GST09-3M□□□090C32	E84AV□□□4024□□0	90
1.1	4.7	-	27	948	1354	1.1	129.074	GST09-3M□□□090C32	E84AV□□□4024□□0	90
1.1	4.7	-	27	948	1354	2.0	129.074	GST11-3M□□□090C32	E84AV□□□4024□□0	90
1.0	4.3	-	25	1038	1482	1.0	141.289	GST09-3M□□□090C32	E84AV□□□4024□□0	90
1.0	4.1	-	24	1079	1542	1.7	146.993	GST11-3M□□□090C32	E84AV□□□4024□□0	90
0.9	3.7	-	22	1179	1684	0.9	160.556	GST09-3M□□□090C32	E84AV□□□4024□□0	90
0.9	3.8	-	22	1162	1660	1.6	158.194	GST11-3M□□□090C32	E84AV□□□4024□□0	90
0.8	3.3	-	19	1323	1890	1.4	180.156	GST11-3M□□□090C32	E84AV□□□4024□□0	90

Selection tables

► 120 Hz: P_N = 4.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 145.0 ... 3480 r/min



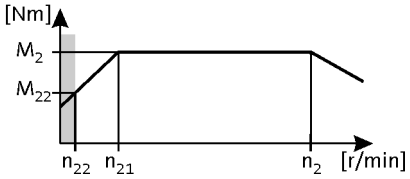
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
0.7	2.9	-	17	1526	2180	1.2	207.778	GST11-3M□□□090C32	E84AV□□□4024□□0	90
0.7	2.9	-	17	1503	2148	2.5	204.722	GST14-3M□□□090C32	E84AV□□□4024□□0	90
0.6	2.5	-	15	1738	2482	1.0	236.622	GST11-3M□□□090C32	E84AV□□□4024□□0	90
0.6	2.5	-	15	1738	2482	2.2	236.622	GST14-3M□□□090C32	E84AV□□□4024□□0	90
0.6	2.4	-	14	1852	2645	1.0	252.167	GST11-3M□□□090C32	E84AV□□□4024□□0	90
0.6	2.4	-	14	1825	2606	2.2	248.458	GST14-3M□□□090C32	E84AV□□□4024□□0	90
0.5	2.2	-	13	1975	2821	1.0	268.889	GST11-3M□□□090C32	E84AV□□□4024□□0	90
0.5	2.2	-	13	1975	2821	2.0	268.889	GST14-3M□□□090C32	E84AV□□□4024□□0	90
0.4	1.8	-	11	2396	3423	1.6	326.333	GST14-3M□□□090C32	E84AV□□□4024□□0	90
0.4	1.7	-	9.6	2666	3808	1.4	363.000	GST14-3M□□□090C32	E84AV□□□4024□□0	90
0.4	1.5	-	8.4	3029	4327	1.3	412.500	GST14-3M□□□090C32	E84AV□□□4024□□0	90

Selection tables

► 120 Hz: P_N = 5.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 146.9 ... 3525 r/min



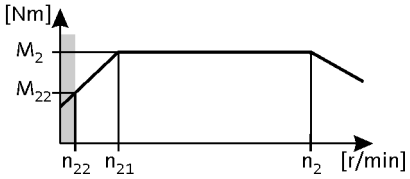
n_{22}	n_{21}		n_2	M_{22}	M_2	c	i			
[r/min]	[r/min]		[r/min]	[Nm]	[Nm]					
73	300	-	1763	21	29	3.2	2.000	GST07-1M□□□100C12	E84AV□□□5524□□0	78
72	293	-	1722	21	30	1.3	2.048	GST05-1M□□□100C12	E84AV□□□5524□□0	78
72	293	-	1722	21	30	1.8	2.048	GST06-1M□□□100C12	E84AV□□□5524□□0	78
66	268	-	1574	23	33	1.2	2.240	GST05-1M□□□100C12	E84AV□□□5524□□0	78
66	268	-	1574	23	33	1.8	2.240	GST06-1M□□□100C12	E84AV□□□5524□□0	78
66	268	-	1574	23	33	3.1	2.240	GST07-1M□□□100C12	E84AV□□□5524□□0	78
51	210	-	1234	29	42	1.0	2.857	GST05-1M□□□100C12	E84AV□□□5524□□0	78
51	210	-	1234	29	42	1.7	2.857	GST06-1M□□□100C12	E84AV□□□5524□□0	78
51	210	-	1234	29	42	2.8	2.857	GST07-1M□□□100C12	E84AV□□□5524□□0	78
42	171	-	1007	36	51	1.5	3.500	GST06-1M□□□100C12	E84AV□□□5524□□0	78
42	171	-	1007	36	51	2.5	3.500	GST07-1M□□□100C12	E84AV□□□5524□□0	78
32	132	-	774	47	67	1.2	4.556	GST06-1M□□□100C12	E84AV□□□5524□□0	78
32	132	-	774	47	67	2.1	4.556	GST07-1M□□□100C12	E84AV□□□5524□□0	78
32	129	-	755	48	69	3.0	4.667	GST09-1M□□□100C12	E84AV□□□5524□□0	78
28	116	-	680	53	75	0.9	5.187	GST05-2M□□□100C12	E84AV□□□5524□□0	84
28	113	-	662	54	77	2.0	5.324	GST06-2M□□□100C12	E84AV□□□5524□□0	84
26	108	-	631	57	82	1.8	5.583	GST07-1M□□□100C12	E84AV□□□5524□□0	78
26	106	-	622	58	83	1.0	5.667	GST06-1M□□□100C12	E84AV□□□5524□□0	78
26	106	-	622	58	83	2.5	5.667	GST09-1M□□□100C12	E84AV□□□5524□□0	78
25	103	-	603	59	85	0.9	5.850	GST05-2M□□□100C12	E84AV□□□5524□□0	84
25	103	-	603	59	85	2.0	5.850	GST06-2M□□□100C12	E84AV□□□5524□□0	84
23	94	-	551	65	93	1.9	6.400	GST06-2M□□□100C12	E84AV□□□5524□□0	84
20	82	-	481	75	108	1.4	7.333	GST07-1M□□□100C12	E84AV□□□5524□□0	78
20	82	-	481	75	108	2.0	7.333	GST09-1M□□□100C12	E84AV□□□5524□□0	78
18	74	-	432	83	118	1.6	8.163	GST06-2M□□□100C12	E84AV□□□5524□□0	84
17	68	-	401	89	127	3.1	8.800	GST07-2M□□□100C12	E84AV□□□5524□□0	84
17	67	-	396	91	131	1.1	8.900	GST07-1M□□□100C12	E84AV□□□5524□□0	78
17	67	-	396	91	131	1.7	8.900	GST09-1M□□□100C12	E84AV□□□5524□□0	78
16	67	-	391	91	130	1.5	9.010	GST06-2M□□□100C12	E84AV□□□5524□□0	84
15	61	-	358	100	143	2.9	9.856	GST07-2M□□□100C12	E84AV□□□5524□□0	84
15	60	-	353	101	145	1.4	10.000	GST06-2M□□□100C12	E84AV□□□5524□□0	84
13	54	-	315	113	162	1.3	11.200	GST06-2M□□□100C12	E84AV□□□5524□□0	84
13	54	-	315	113	162	2.8	11.200	GST07-2M□□□100C12	E84AV□□□5524□□0	84
13	53	-	313	116	165	1.3	11.250	GST09-1M□□□100C12	E84AV□□□5524□□0	78
12	48	-	280	127	182	1.2	12.571	GST06-2M□□□100C12	E84AV□□□5524□□0	84
12	48	-	280	127	182	2.5	12.571	GST07-2M□□□100C12	E84AV□□□5524□□0	84
10	42	-	247	145	207	1.1	14.286	GST06-2M□□□100C12	E84AV□□□5524□□0	84
10	42	-	247	145	207	2.3	14.286	GST07-2M□□□100C12	E84AV□□□5524□□0	84
9.5	39	-	229	156	223	1.2	15.400	GST06-2M□□□100C12	E84AV□□□5524□□0	84
9.5	39	-	229	156	223	2.5	15.400	GST07-2M□□□100C12	E84AV□□□5524□□0	84
8.4	34	-	201	177	253	1.1	17.500	GST06-2M□□□100C12	E84AV□□□5524□□0	84

Selection tables

► 120 Hz: P_N = 5.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 146.9 ... 3525 r/min



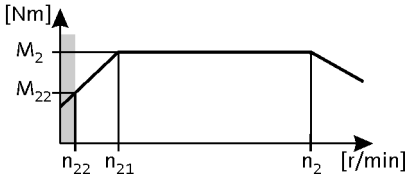
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
8.4	34	-	201	177	253	2.3	17.500	GST07-2M□□□100C12	E84AV□□□5524□□0	84
7.3	30	-	176	203	290	1.0	20.044	GST06-2M□□□100C12	E84AV□□□5524□□0	84
7.3	30	-	176	203	290	2.0	20.044	GST07-2M□□□100C12	E84AV□□□5524□□0	84
6.5	26	-	155	231	329	1.8	22.778	GST07-2M□□□100C12	E84AV□□□5524□□0	84
6.0	24	-	144	249	355	1.7	24.567	GST07-2M□□□100C12	E84AV□□□5524□□0	84
5.9	24	-	141	252	361	2.9	24.933	GST09-2M□□□100C12	E84AV□□□5524□□0	84
5.3	22	-	126	283	404	1.5	27.917	GST07-2M□□□100C12	E84AV□□□5524□□0	84
5.2	21	-	124	287	410	2.9	28.333	GST09-2M□□□100C12	E84AV□□□5524□□0	84
4.6	19	-	109	327	467	1.3	32.267	GST07-2M□□□100C12	E84AV□□□5524□□0	84
4.6	19	-	109	327	467	2.3	32.267	GST09-2M□□□100C12	E84AV□□□5524□□0	84
4.6	19	-	109	327	467	2.9	32.267	GST11-2M□□□100C12	E84AV□□□5524□□0	84
4.0	16	-	96	371	530	1.1	36.667	GST07-2M□□□100C12	E84AV□□□5524□□0	84
4.0	16	-	96	371	530	2.3	36.667	GST09-2M□□□100C12	E84AV□□□5524□□0	84
4.0	16	-	96	371	530	2.9	36.667	GST11-2M□□□100C12	E84AV□□□5524□□0	84
3.8	15	-	90	391	558	1.1	39.200	GST07-3M□□□100C12	E84AV□□□5524□□0	90
3.8	15	-	90	396	566	1.1	39.160	GST07-2M□□□100C12	E84AV□□□5524□□0	84
3.8	15	-	90	396	566	1.9	39.160	GST09-2M□□□100C12	E84AV□□□5524□□0	84
3.8	15	-	90	396	566	2.4	39.160	GST11-2M□□□100C12	E84AV□□□5524□□0	84
3.7	15	-	88	400	572	2.0	40.136	GST09-3M□□□100C12	E84AV□□□5524□□0	90
3.4	14	-	82	431	616	2.0	43.267	GST09-3M□□□100C12	E84AV□□□5524□□0	90
3.3	14	-	80	439	627	1.1	44.000	GST07-3M□□□100C12	E84AV□□□5524□□0	90
3.3	14	-	79	450	643	1.0	44.500	GST07-2M□□□100C12	E84AV□□□5524□□0	84
3.3	14	-	79	450	643	2.1	44.500	GST09-2M□□□100C12	E84AV□□□5524□□0	84
3.3	14	-	79	450	643	2.7	44.500	GST11-2M□□□100C12	E84AV□□□5524□□0	84
3.0	12	-	72	490	700	2.0	49.167	GST09-3M□□□100C12	E84AV□□□5524□□0	90
3.0	12	-	71	501	716	1.7	49.500	GST09-2M□□□100C12	E84AV□□□5524□□0	84
3.0	12	-	71	501	716	2.2	49.500	GST11-2M□□□100C12	E84AV□□□5524□□0	84
2.9	12	-	69	509	727	0.9	51.022	GST07-3M□□□100C12	E84AV□□□5524□□0	90
2.8	11	-	67	529	755	1.7	53.044	GST09-3M□□□100C12	E84AV□□□5524□□0	90
2.6	11	-	63	569	813	1.7	56.250	GST09-2M□□□100C12	E84AV□□□5524□□0	84
2.6	11	-	63	569	813	2.2	56.250	GST11-2M□□□100C12	E84AV□□□5524□□0	84
2.5	10	-	61	578	826	3.0	57.968	GST11-3M□□□100C12	E84AV□□□5524□□0	90
2.4	10	-	59	601	858	1.7	60.278	GST09-3M□□□100C12	E84AV□□□5524□□0	90
2.4	9.8	-	58	611	872	3.0	61.250	GST11-3M□□□100C12	E84AV□□□5524□□0	90
2.1	8.5	-	50	708	1011	2.5	71.011	GST11-3M□□□100C12	E84AV□□□5524□□0	90
2.0	8.4	-	49	716	1023	1.4	71.867	GST09-3M□□□100C12	E84AV□□□5524□□0	90
1.8	7.4	-	44	804	1149	2.3	80.694	GST11-3M□□□100C12	E84AV□□□5524□□0	90
1.8	7.4	-	43	814	1163	1.3	81.667	GST09-3M□□□100C12	E84AV□□□5524□□0	90
1.7	6.9	-	40	870	1243	2.0	87.267	GST11-3M□□□100C12	E84AV□□□5524□□0	90
1.6	6.4	-	38	932	1332	1.1	93.541	GST09-3M□□□100C12	E84AV□□□5524□□0	90
1.5	6.1	-	36	989	1412	1.1	99.167	GST09-3M□□□100C12	E84AV□□□5524□□0	90

Selection tables

► 120 Hz: P_N = 5.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 146.9 ... 3525 r/min



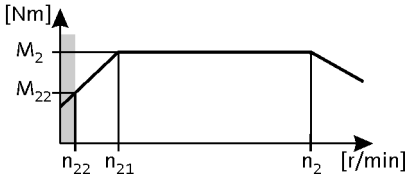
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
1.5	6.1	-	36	989	1412	1.9	99.167	GST11-3M□□□100C12	E84AV□□□5524□□0	90
1.3	5.3	-	31	1132	1618	0.9	113.585	GST09-3M□□□100C12	E84AV□□□5524□□0	90
1.3	5.3	-	31	1126	1608	1.6	112.933	GST11-3M□□□100C12	E84AV□□□5524□□0	90
1.1	4.7	-	27	1287	1838	1.4	129.074	GST11-3M□□□100C12	E84AV□□□5524□□0	90
1.1	4.6	-	27	1299	1855	3.0	130.278	GST14-3M□□□100C12	E84AV□□□5524□□0	90
1.1	4.3	-	25	1388	1982	2.7	139.211	GST14-3M□□□100C12	E84AV□□□5524□□0	90
1.0	4.1	-	24	1465	2093	1.2	146.993	GST11-3M□□□100C12	E84AV□□□5524□□0	90
0.9	3.8	-	22	1577	2253	1.2	158.194	GST11-3M□□□100C12	E84AV□□□5524□□0	90
0.9	3.8	-	22	1577	2253	2.5	158.194	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.9	3.5	-	21	1706	2437	2.3	171.111	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.8	3.3	-	20	1796	2565	1.0	180.156	GST11-3M□□□100C12	E84AV□□□5524□□0	90
0.7	2.9	-	17	2071	2959	0.9	207.778	GST11-3M□□□100C12	E84AV□□□5524□□0	90
0.7	2.9	-	17	2041	2915	1.9	204.722	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.6	2.5	-	15	2359	3370	1.6	236.622	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.6	2.4	-	14	2477	3538	1.6	248.458	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.6	2.2	-	13	2680	3829	1.5	268.889	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.5	1.8	-	11	3253	4647	1.2	326.333	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.4	1.7	-	9.7	3618	5169	1.1	363.000	GST14-3M□□□100C12	E84AV□□□5524□□0	90
0.4	1.5	-	8.6	4112	5874	1.0	412.500	GST14-3M□□□100C12	E84AV□□□5524□□0	90

Selection tables

► 120 Hz: P_N = 7.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 146.5 ... 3515 r/min



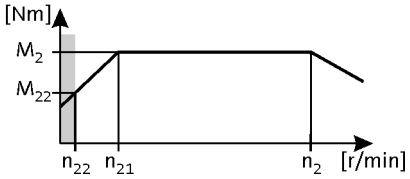
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
73	300	-	1758	28	40	2.3	2.000	GST07-1M□□□100C32	E84AV□□□7524□□0	78
72	293	-	1717	29	41	1.0	2.048	GST05-1M□□□100C32	E84AV□□□7524□□0	78
72	293	-	1717	29	41	1.3	2.048	GST06-1M□□□100C32	E84AV□□□7524□□0	78
65	268	-	1569	32	45	1.3	2.240	GST06-1M□□□100C32	E84AV□□□7524□□0	78
65	268	-	1569	32	45	2.3	2.240	GST07-1M□□□100C32	E84AV□□□7524□□0	78
52	214	-	1251	40	56	3.1	2.810	GST09-1M□□□100C32	E84AV□□□7524□□0	78
51	210	-	1230	40	57	1.2	2.857	GST06-1M□□□100C32	E84AV□□□7524□□0	78
51	210	-	1230	40	57	2.1	2.857	GST07-1M□□□100C32	E84AV□□□7524□□0	78
42	171	-	1004	49	70	1.1	3.500	GST06-1M□□□100C32	E84AV□□□7524□□0	78
42	171	-	1004	49	70	1.8	3.500	GST07-1M□□□100C32	E84AV□□□7524□□0	78
32	132	-	772	64	91	1.5	4.556	GST07-1M□□□100C32	E84AV□□□7524□□0	78
31	129	-	753	66	94	2.2	4.667	GST09-1M□□□100C32	E84AV□□□7524□□0	78
28	115	-	676	72	103	3.1	5.200	GST07-2M□□□100C32	E84AV□□□7524□□0	84
28	113	-	660	74	105	1.5	5.324	GST06-2M□□□100C32	E84AV□□□7524□□0	84
26	108	-	630	78	112	1.3	5.583	GST07-1M□□□100C32	E84AV□□□7524□□0	78
26	106	-	620	80	114	1.9	5.667	GST09-1M□□□100C32	E84AV□□□7524□□0	78
26	105	-	615	79	113	3.0	5.714	GST07-2M□□□100C32	E84AV□□□7524□□0	84
25	103	-	601	81	116	1.4	5.850	GST06-2M□□□100C32	E84AV□□□7524□□0	84
23	94	-	549	89	127	1.4	6.400	GST06-2M□□□100C32	E84AV□□□7524□□0	84
23	94	-	549	89	127	2.8	6.400	GST07-2M□□□100C32	E84AV□□□7524□□0	84
20	82	-	481	101	144	3.1	7.305	GST09-2M□□□100C32	E84AV□□□7524□□0	84
20	82	-	479	103	147	1.0	7.333	GST07-1M□□□100C32	E84AV□□□7524□□0	78
20	82	-	479	103	147	1.5	7.333	GST09-1M□□□100C32	E84AV□□□7524□□0	78
18	75	-	438	111	159	3.1	8.027	GST09-2M□□□100C32	E84AV□□□7524□□0	84
18	74	-	431	113	161	1.2	8.163	GST06-2M□□□100C32	E84AV□□□7524□□0	84
17	68	-	399	122	174	2.3	8.800	GST07-2M□□□100C32	E84AV□□□7524□□0	84
17	67	-	395	125	179	1.2	8.900	GST09-1M□□□100C32	E84AV□□□7524□□0	78
16	67	-	390	125	178	1.1	9.010	GST06-2M□□□100C32	E84AV□□□7524□□0	84
15	61	-	357	136	195	2.1	9.856	GST07-2M□□□100C32	E84AV□□□7524□□0	84
15	60	-	352	138	198	1.0	10.000	GST06-2M□□□100C32	E84AV□□□7524□□0	84
13	54	-	314	155	221	1.0	11.200	GST06-2M□□□100C32	E84AV□□□7524□□0	84
13	54	-	314	155	221	2.0	11.200	GST07-2M□□□100C32	E84AV□□□7524□□0	84
13	53	-	312	158	226	1.0	11.250	GST09-1M□□□100C32	E84AV□□□7524□□0	78
12	49	-	284	171	244	3.1	12.362	GST09-2M□□□100C32	E84AV□□□7524□□0	84
12	48	-	280	174	249	1.8	12.571	GST07-2M□□□100C32	E84AV□□□7524□□0	84
10	43	-	250	194	278	3.1	14.048	GST09-2M□□□100C32	E84AV□□□7524□□0	84
10	42	-	246	198	282	1.7	14.286	GST07-2M□□□100C32	E84AV□□□7524□□0	84
9.5	39	-	228	213	305	1.8	15.400	GST07-2M□□□100C32	E84AV□□□7524□□0	84
8.4	34	-	201	242	346	1.7	17.500	GST07-2M□□□100C32	E84AV□□□7524□□0	84
7.3	30	-	175	277	396	1.5	20.044	GST07-2M□□□100C32	E84AV□□□7524□□0	84
7.1	29	-	171	284	406	2.5	20.533	GST09-2M□□□100C32	E84AV□□□7524□□0	84

Selection tables

► 120 Hz: P_N = 7.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 146.5 ... 3515 r/min



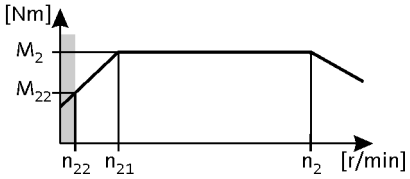
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
6.4	26	-	154	315	450	1.3	22.778	GST07-2M□□□100C32	E84AV□□□7524□□0	84
6.3	26	-	151	323	461	2.5	23.333	GST09-2M□□□100C32	E84AV□□□7524□□0	84
6.0	24	-	143	340	486	1.2	24.567	GST07-2M□□□100C32	E84AV□□□7524□□0	84
5.9	24	-	141	345	493	2.1	24.933	GST09-2M□□□100C32	E84AV□□□7524□□0	84
5.3	22	-	126	386	552	1.1	27.917	GST07-2M□□□100C32	E84AV□□□7524□□0	84
5.2	21	-	124	392	560	2.1	28.333	GST09-2M□□□100C32	E84AV□□□7524□□0	84
4.5	19	-	109	447	638	0.9	32.267	GST07-2M□□□100C32	E84AV□□□7524□□0	84
4.5	19	-	109	447	638	1.7	32.267	GST09-2M□□□100C32	E84AV□□□7524□□0	84
4.5	19	-	109	447	638	2.1	32.267	GST11-2M□□□100C32	E84AV□□□7524□□0	84
4.0	16	-	96	507	725	1.7	36.667	GST09-2M□□□100C32	E84AV□□□7524□□0	84
4.0	16	-	96	507	725	2.1	36.667	GST11-2M□□□100C32	E84AV□□□7524□□0	84
3.7	15	-	90	542	774	1.4	39.160	GST09-2M□□□100C32	E84AV□□□7524□□0	84
3.7	15	-	90	542	774	1.8	39.160	GST11-2M□□□100C32	E84AV□□□7524□□0	84
3.7	15	-	88	547	782	1.5	40.136	GST09-3M□□□100C32	E84AV□□□7524□□0	90
3.6	15	-	86	556	795	2.7	40.816	GST11-3M□□□100C32	E84AV□□□7524□□0	90
3.4	14	-	81	590	843	1.5	43.267	GST09-3M□□□100C32	E84AV□□□7524□□0	90
3.3	14	-	80	600	857	2.7	44.000	GST11-3M□□□100C32	E84AV□□□7524□□0	90
3.3	14	-	79	616	880	1.6	44.500	GST09-2M□□□100C32	E84AV□□□7524□□0	84
3.3	14	-	79	616	880	2.0	44.500	GST11-2M□□□100C32	E84AV□□□7524□□0	84
3.0	12	-	72	670	958	1.5	49.167	GST09-3M□□□100C32	E84AV□□□7524□□0	90
3.0	12	-	71	685	979	1.2	49.500	GST09-2M□□□100C32	E84AV□□□7524□□0	84
3.0	12	-	71	685	979	1.6	49.500	GST11-2M□□□100C32	E84AV□□□7524□□0	84
2.9	12	-	70	682	974	2.7	50.000	GST11-3M□□□100C32	E84AV□□□7524□□0	90
2.8	11	-	66	723	1033	1.3	53.044	GST09-3M□□□100C32	E84AV□□□7524□□0	90
2.6	11	-	63	779	1112	1.2	56.250	GST09-2M□□□100C32	E84AV□□□7524□□0	84
2.6	11	-	63	779	1112	1.6	56.250	GST11-2M□□□100C32	E84AV□□□7524□□0	84
2.5	10	-	61	790	1129	2.2	57.968	GST11-3M□□□100C32	E84AV□□□7524□□0	90
2.4	10	-	58	822	1174	1.3	60.278	GST09-3M□□□100C32	E84AV□□□7524□□0	90
2.4	9.8	-	57	835	1193	2.2	61.250	GST11-3M□□□100C32	E84AV□□□7524□□0	90
2.1	8.5	-	50	968	1383	1.8	71.011	GST11-3M□□□100C32	E84AV□□□7524□□0	90
2.0	8.4	-	49	980	1400	1.0	71.867	GST09-3M□□□100C32	E84AV□□□7524□□0	90
1.8	7.4	-	44	1100	1571	1.7	80.694	GST11-3M□□□100C32	E84AV□□□7524□□0	90
1.8	7.4	-	43	1113	1590	0.9	81.667	GST09-3M□□□100C32	E84AV□□□7524□□0	90
1.7	6.9	-	40	1190	1699	1.5	87.267	GST11-3M□□□100C32	E84AV□□□7524□□0	90
1.6	6.4	-	38	1275	1822	2.7	93.541	GST14-3M□□□100C32	E84AV□□□7524□□0	90
1.5	6.1	-	35	1352	1931	1.4	99.167	GST11-3M□□□100C32	E84AV□□□7524□□0	90
1.4	5.6	-	33	1449	2070	2.7	106.296	GST14-3M□□□100C32	E84AV□□□7524□□0	90
1.3	5.3	-	31	1540	2199	1.2	112.933	GST11-3M□□□100C32	E84AV□□□7524□□0	90
1.1	4.7	-	27	1760	2514	1.1	129.074	GST11-3M□□□100C32	E84AV□□□7524□□0	90
1.1	4.6	-	27	1776	2537	2.2	130.278	GST14-3M□□□100C32	E84AV□□□7524□□0	90
1.1	4.3	-	25	1898	2711	2.0	139.211	GST14-3M□□□100C32	E84AV□□□7524□□0	90

Selection tables

► 120 Hz: P_N = 7.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 146.5 ... 3515 r/min



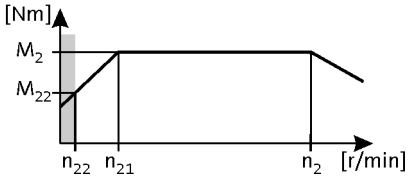
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
0.9	3.8	-	22	2156	3081	1.8	158.194	GST14-3M□□□100C32	E84AV□□□7524□□0	90
0.9	3.5	-	21	2333	3332	1.7	171.111	GST14-3M□□□100C32	E84AV□□□7524□□0	90
0.7	2.9	-	17	2791	3987	1.4	204.722	GST14-3M□□□100C32	E84AV□□□7524□□0	90
0.6	2.5	-	15	3226	4608	1.2	236.622	GST14-3M□□□100C32	E84AV□□□7524□□0	90
0.6	2.4	-	14	3387	4838	1.2	248.458	GST14-3M□□□100C32	E84AV□□□7524□□0	90
0.5	2.2	-	13	3665	5236	1.1	268.889	GST14-3M□□□100C32	E84AV□□□7524□□0	90

Selection tables

► 120 Hz: P_N = 11.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 147.1 ... 3530 r/min



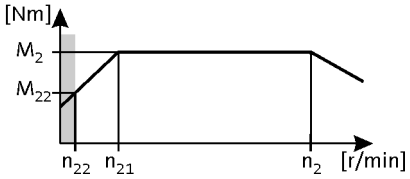
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
74	300	-	1765	38	59	1.6	2.000	GST07-1M□□□112C22	E84AV□□□1134□□0	78
72	293	-	1724	38	60	0.9	2.048	GST06-1M□□□112C22	E84AV□□□1134□□0	78
72	293	-	1724	38	60	3.2	2.048	GST09-1M□□□112C22	E84AV□□□1134□□0	78
66	268	-	1576	42	66	1.5	2.240	GST07-1M□□□112C22	E84AV□□□1134□□0	78
63	257	-	1513	44	68	2.9	2.333	GST09-1M□□□112C22	E84AV□□□1134□□0	78
52	214	-	1256	53	82	2.5	2.810	GST09-1M□□□112C22	E84AV□□□1134□□0	78
52	210	-	1236	54	84	1.4	2.857	GST07-1M□□□112C22	E84AV□□□1134□□0	78
43	174	-	1025	65	101	2.2	3.444	GST09-1M□□□112C22	E84AV□□□1134□□0	78
42	171	-	1009	66	103	1.3	3.500	GST07-1M□□□112C22	E84AV□□□1134□□0	78
32	132	-	775	86	134	1.0	4.556	GST07-1M□□□112C22	E84AV□□□1134□□0	78
32	129	-	756	88	137	1.7	4.667	GST09-1M□□□112C22	E84AV□□□1134□□0	78
28	115	-	679	96	150	2.1	5.200	GST07-2M□□□112C22	E84AV□□□1134□□0	84
28	113	-	663	98	154	1.0	5.324	GST06-2M□□□112C22	E84AV□□□1134□□0	84
28	113	-	663	98	154	3.2	5.324	GST09-2M□□□112C22	E84AV□□□1134□□0	84
26	108	-	632	105	164	0.9	5.583	GST07-1M□□□112C22	E84AV□□□1134□□0	78
26	106	-	623	106	166	1.5	5.667	GST09-1M□□□112C22	E84AV□□□1134□□0	78
26	105	-	618	106	165	2.0	5.714	GST07-2M□□□112C22	E84AV□□□1134□□0	84
25	103	-	603	108	169	1.0	5.850	GST06-2M□□□112C22	E84AV□□□1134□□0	84
25	103	-	603	108	169	3.2	5.850	GST09-2M□□□112C22	E84AV□□□1134□□0	84
23	94	-	552	118	185	0.9	6.400	GST06-2M□□□112C22	E84AV□□□1134□□0	84
23	94	-	552	118	185	1.9	6.400	GST07-2M□□□112C22	E84AV□□□1134□□0	84
22	90	-	530	123	193	2.9	6.667	GST09-2M□□□112C22	E84AV□□□1134□□0	84
20	82	-	483	135	211	2.5	7.305	GST09-2M□□□112C22	E84AV□□□1134□□0	84
20	82	-	481	138	215	1.2	7.333	GST09-1M□□□112C22	E84AV□□□1134□□0	78
18	75	-	440	148	232	2.5	8.027	GST09-2M□□□112C22	E84AV□□□1134□□0	84
17	68	-	401	163	254	1.6	8.800	GST07-2M□□□112C22	E84AV□□□1134□□0	84
17	67	-	397	167	261	1.0	8.900	GST09-1M□□□112C22	E84AV□□□1134□□0	78
16	67	-	392	167	260	3.2	9.010	GST09-2M□□□112C22	E84AV□□□1134□□0	84
15	61	-	358	182	285	1.5	9.856	GST07-2M□□□112C22	E84AV□□□1134□□0	84
14	58	-	344	190	296	2.9	10.267	GST09-2M□□□112C22	E84AV□□□1134□□0	84
13	54	-	315	207	323	1.4	11.200	GST07-2M□□□112C22	E84AV□□□1134□□0	84
13	51	-	303	216	337	2.7	11.667	GST09-2M□□□112C22	E84AV□□□1134□□0	84
12	49	-	286	228	357	2.5	12.362	GST09-2M□□□112C22	E84AV□□□1134□□0	84
12	48	-	281	232	363	1.2	12.571	GST07-2M□□□112C22	E84AV□□□1134□□0	84
12	48	-	281	232	363	3.1	12.571	GST11-2M□□□112C22	E84AV□□□1134□□0	84
11	43	-	251	260	406	2.4	14.048	GST09-2M□□□112C22	E84AV□□□1134□□0	84
10	42	-	247	264	413	1.2	14.286	GST07-2M□□□112C22	E84AV□□□1134□□0	84
10	42	-	247	264	413	3.1	14.286	GST11-2M□□□112C22	E84AV□□□1134□□0	84
9.7	40	-	233	280	438	2.5	15.156	GST09-2M□□□112C22	E84AV□□□1134□□0	84
9.6	39	-	229	285	445	1.2	15.400	GST07-2M□□□112C22	E84AV□□□1134□□0	84
8.5	35	-	205	318	497	2.4	17.222	GST09-2M□□□112C22	E84AV□□□1134□□0	84

Selection tables

► 120 Hz: P_N = 11.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 147.1 ... 3530 r/min



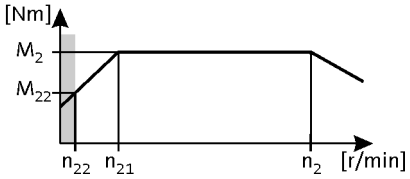
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
8.4	34	-	202	323	505	1.1	17.500	GST07-2M□□□112C22	E84AV□□□1134□□0	84
7.3	30	-	176	370	579	1.0	20.044	GST07-2M□□□112C22	E84AV□□□1134□□0	84
7.3	30	-	174	375	586	2.5	20.289	GST11-2M□□□112C22	E84AV□□□1134□□0	84
7.2	29	-	172	379	593	1.9	20.533	GST09-2M□□□112C22	E84AV□□□1134□□0	84
6.4	26	-	153	426	666	2.5	23.056	GST11-2M□□□112C22	E84AV□□□1134□□0	84
6.3	26	-	151	431	674	1.9	23.333	GST09-2M□□□112C22	E84AV□□□1134□□0	84
5.9	24	-	142	461	720	1.7	24.933	GST09-2M□□□112C22	E84AV□□□1134□□0	84
5.9	24	-	142	461	720	2.1	24.933	GST11-2M□□□112C22	E84AV□□□1134□□0	84
5.2	21	-	125	524	818	1.6	28.333	GST09-2M□□□112C22	E84AV□□□1134□□0	84
5.2	21	-	125	524	818	2.1	28.333	GST11-2M□□□112C22	E84AV□□□1134□□0	84
4.6	19	-	109	596	932	1.3	32.267	GST09-2M□□□112C22	E84AV□□□1134□□0	84
4.6	19	-	109	596	932	1.6	32.267	GST11-2M□□□112C22	E84AV□□□1134□□0	84
4.6	19	-	109	596	932	2.0	32.267	GST14-2M□□□112C22	E84AV□□□1134□□0	84
4.0	16	-	96	678	1059	1.2	36.667	GST09-2M□□□112C22	E84AV□□□1134□□0	84
4.0	16	-	96	678	1059	1.6	36.667	GST11-2M□□□112C22	E84AV□□□1134□□0	84
4.0	16	-	96	678	1059	2.0	36.667	GST14-2M□□□112C22	E84AV□□□1134□□0	84
3.8	15	-	90	724	1131	1.1	39.160	GST09-2M□□□112C22	E84AV□□□1134□□0	84
3.8	15	-	90	724	1131	1.4	39.160	GST11-2M□□□112C22	E84AV□□□1134□□0	84
3.8	15	-	90	724	1131	1.7	39.160	GST14-2M□□□112C22	E84AV□□□1134□□0	84
3.7	15	-	88	731	1142	1.0	40.136	GST09-3M□□□112C22	E84AV□□□1134□□0	90
3.6	15	-	87	743	1161	1.9	40.816	GST11-3M□□□112C22	E84AV□□□1134□□0	90
3.5	14	-	83	775	1211	3.2	42.580	GST14-3M□□□112C22	E84AV□□□1134□□0	90
3.4	14	-	82	788	1231	1.0	43.267	GST09-3M□□□112C22	E84AV□□□1134□□0	90
3.3	14	-	80	801	1251	1.8	44.000	GST11-3M□□□112C22	E84AV□□□1134□□0	90
3.3	14	-	79	822	1285	1.1	44.500	GST09-2M□□□112C22	E84AV□□□1134□□0	84
3.3	14	-	79	822	1285	1.5	44.500	GST11-2M□□□112C22	E84AV□□□1134□□0	84
3.3	14	-	79	822	1285	1.9	44.500	GST14-2M□□□112C22	E84AV□□□1134□□0	84
3.0	12	-	73	881	1376	3.2	48.386	GST14-3M□□□112C22	E84AV□□□1134□□0	90
3.0	12	-	72	895	1398	1.0	49.167	GST09-3M□□□112C22	E84AV□□□1134□□0	90
3.0	12	-	71	915	1429	1.2	49.500	GST11-2M□□□112C22	E84AV□□□1134□□0	84
3.0	12	-	71	915	1429	1.5	49.500	GST14-2M□□□112C22	E84AV□□□1134□□0	84
2.9	12	-	71	910	1422	1.8	50.000	GST11-3M□□□112C22	E84AV□□□1134□□0	90
2.8	11	-	66	967	1512	3.0	53.148	GST14-3M□□□112C22	E84AV□□□1134□□0	90
2.6	11	-	63	1039	1624	1.2	56.250	GST11-2M□□□112C22	E84AV□□□1134□□0	84
2.6	11	-	63	1039	1624	1.5	56.250	GST14-2M□□□112C22	E84AV□□□1134□□0	84
2.5	10	-	61	1055	1649	1.5	57.968	GST11-3M□□□112C22	E84AV□□□1134□□0	90
2.5	10	-	60	1080	1687	2.7	59.321	GST14-3M□□□112C22	E84AV□□□1134□□0	90
2.4	9.8	-	58	1115	1742	1.5	61.250	GST11-3M□□□112C22	E84AV□□□1134□□0	90
2.1	8.7	-	51	1257	1964	2.4	69.042	GST14-3M□□□112C22	E84AV□□□1134□□0	90
2.1	8.5	-	50	1293	2020	1.2	71.011	GST11-3M□□□112C22	E84AV□□□1134□□0	90
1.9	7.7	-	45	1428	2231	2.4	78.457	GST14-3M□□□112C22	E84AV□□□1134□□0	90

Selection tables

► 120 Hz: P_N = 11.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 147.1 ... 3530 r/min



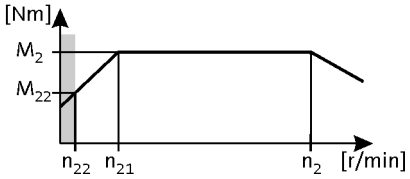
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
1.8	7.4	-	44	1469	2295	1.2	80.694	GST11-3M□□□112C22	E84AV□□□1134□□0	90
1.7	6.9	-	41	1588	2482	1.0	87.267	GST11-3M□□□112C22	E84AV□□□1134□□0	90
1.6	6.4	-	38	1703	2660	2.0	93.541	GST14-3M□□□112C22	E84AV□□□1134□□0	90
1.5	6.2	-	37	1750	2735	2.0	96.157	GST14-3M□□□112C22	E84AV□□□1134□□0	90
1.5	6.1	-	36	1805	2820	0.9	99.167	GST11-3M□□□112C22	E84AV□□□1134□□0	90
1.4	5.6	-	33	1935	3023	1.9	106.296	GST14-3M□□□112C22	E84AV□□□1134□□0	90
1.1	4.6	-	27	2371	3705	1.5	130.278	GST14-3M□□□112C22	E84AV□□□1134□□0	90
1.1	4.3	-	25	2534	3959	1.4	139.211	GST14-3M□□□112C22	E84AV□□□1134□□0	90
0.9	3.8	-	22	2879	4499	1.2	158.194	GST14-3M□□□112C22	E84AV□□□1134□□0	90
0.9	3.5	-	21	3115	4866	1.2	171.111	GST14-3M□□□112C22	E84AV□□□1134□□0	90
0.7	2.9	-	17	3726	5822	1.0	204.722	GST14-3M□□□112C22	E84AV□□□1134□□0	90

Selection tables

► 120 Hz: P_N = 15.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 148.3 ... 3560 r/min



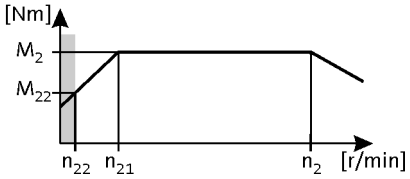
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
74	300	-	1780	51	79	1.2	2.000	GST07-1M□□□132C12	E84AV□□□1534□□0	78
72	293	-	1739	52	81	3.1	2.048	GST09-1M□□□132C12	E84AV□□□1534□□0	78
66	268	-	1589	57	89	1.1	2.240	GST07-1M□□□132C12	E84AV□□□1534□□0	78
64	257	-	1526	59	93	3.0	2.333	GST09-1M□□□132C12	E84AV□□□1534□□0	78
53	214	-	1267	71	111	2.8	2.810	GST09-1M□□□132C12	E84AV□□□1534□□0	78
52	210	-	1246	73	113	1.1	2.857	GST07-1M□□□132C12	E84AV□□□1534□□0	78
43	174	-	1034	87	137	2.4	3.444	GST09-1M□□□132C12	E84AV□□□1534□□0	78
42	171	-	1017	89	139	0.9	3.500	GST07-1M□□□132C12	E84AV□□□1534□□0	78
32	129	-	763	118	185	1.5	4.667	GST09-1M□□□132C12	E84AV□□□1534□□0	78
29	115	-	685	130	203	1.6	5.200	GST07-2M□□□132C12	E84AV□□□1534□□0	84
26	106	-	628	144	225	1.6	5.667	GST09-1M□□□132C12	E84AV□□□1534□□0	78
26	105	-	623	143	223	1.5	5.714	GST07-2M□□□132C12	E84AV□□□1534□□0	84
23	94	-	556	160	250	1.4	6.400	GST07-2M□□□132C12	E84AV□□□1534□□0	84
22	90	-	534	167	260	3.1	6.667	GST09-2M□□□132C12	E84AV□□□1534□□0	84
20	82	-	487	183	285	2.9	7.305	GST09-2M□□□132C12	E84AV□□□1534□□0	84
19	75	-	444	201	313	2.7	8.027	GST09-2M□□□132C12	E84AV□□□1534□□0	84
17	68	-	405	220	344	1.2	8.800	GST07-2M□□□132C12	E84AV□□□1534□□0	84
17	67	-	395	225	352	2.4	9.010	GST09-2M□□□132C12	E84AV□□□1534□□0	84
15	61	-	361	246	385	1.1	9.856	GST07-2M□□□132C12	E84AV□□□1534□□0	84
14	58	-	347	257	401	2.2	10.267	GST09-2M□□□132C12	E84AV□□□1534□□0	84
13	54	-	318	280	437	1.0	11.200	GST07-2M□□□132C12	E84AV□□□1534□□0	84
13	51	-	305	292	456	2.0	11.667	GST09-2M□□□132C12	E84AV□□□1534□□0	84
12	49	-	288	309	483	1.9	12.362	GST09-2M□□□132C12	E84AV□□□1534□□0	84
12	48	-	283	314	491	0.9	12.571	GST07-2M□□□132C12	E84AV□□□1534□□0	84
11	43	-	253	351	548	1.8	14.048	GST09-2M□□□132C12	E84AV□□□1534□□0	84
9.8	40	-	235	379	592	1.9	15.156	GST09-2M□□□132C12	E84AV□□□1534□□0	84
9.6	39	-	231	385	601	0.9	15.400	GST07-2M□□□132C12	E84AV□□□1534□□0	84
8.6	35	-	207	430	672	1.7	17.222	GST09-2M□□□132C12	E84AV□□□1534□□0	84
7.3	30	-	176	507	792	3.0	20.289	GST11-2M□□□132C12	E84AV□□□1534□□0	84
7.2	29	-	173	513	802	1.6	20.533	GST09-2M□□□132C12	E84AV□□□1534□□0	84
6.4	26	-	154	576	900	2.8	23.056	GST11-2M□□□132C12	E84AV□□□1534□□0	84
6.4	26	-	153	583	911	1.4	23.333	GST09-2M□□□132C12	E84AV□□□1534□□0	84
6.0	24	-	143	623	973	1.4	24.933	GST09-2M□□□132C12	E84AV□□□1534□□0	84
6.0	24	-	143	623	973	2.4	24.933	GST11-2M□□□132C12	E84AV□□□1534□□0	84
5.2	21	-	126	708	1106	1.2	28.333	GST09-2M□□□132C12	E84AV□□□1534□□0	84
5.2	21	-	126	708	1106	2.3	28.333	GST11-2M□□□132C12	E84AV□□□1534□□0	84
4.6	19	-	110	806	1260	1.9	32.267	GST11-2M□□□132C12	E84AV□□□1534□□0	84
4.6	19	-	110	806	1260	3.2	32.267	GST14-2M□□□132C12	E84AV□□□1534□□0	84
4.1	16	-	97	916	1432	1.7	36.667	GST11-2M□□□132C12	E84AV□□□1534□□0	84
4.1	16	-	97	916	1432	3.2	36.667	GST14-2M□□□132C12	E84AV□□□1534□□0	84
3.8	15	-	91	979	1529	1.6	39.160	GST11-2M□□□132C12	E84AV□□□1534□□0	84

Selection tables

► 120 Hz: P_N = 15.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 148.3 ... 3560 r/min



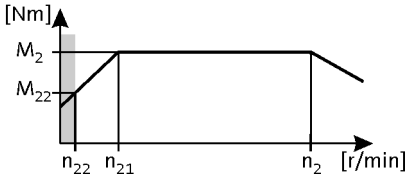
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
3.8	15	-	91	979	1529	2.7	39.160	GST14-2M□□□132C12	E84AV□□□1534□□0	84
3.7	15	-	89	989	1545	2.5	40.185	GST14-3M□□□132C12	E84AV□□□1534□□0	90
3.6	15	-	87	1005	1570	1.4	40.816	GST11-3M□□□132C12	E84AV□□□1534□□0	90
3.5	14	-	84	1048	1637	2.5	42.580	GST14-3M□□□132C12	E84AV□□□1534□□0	90
3.4	14	-	81	1083	1692	1.3	44.000	GST11-3M□□□132C12	E84AV□□□1534□□0	90
3.3	14	-	80	1112	1737	1.6	44.500	GST11-2M□□□132C12	E84AV□□□1534□□0	84
3.3	14	-	80	1112	1737	3.0	44.500	GST14-2M□□□132C12	E84AV□□□1534□□0	84
3.1	12	-	74	1191	1861	2.5	48.386	GST14-3M□□□132C12	E84AV□□□1534□□0	90
3.0	12	-	72	1237	1933	2.1	49.500	GST14-2M□□□132C12	E84AV□□□1534□□0	84
3.0	12	-	71	1231	1923	1.3	50.000	GST11-3M□□□132C12	E84AV□□□1534□□0	90
2.8	11	-	67	1308	2044	2.2	53.148	GST14-3M□□□132C12	E84AV□□□1534□□0	90
2.6	11	-	63	1406	2196	2.1	56.250	GST14-2M□□□132C12	E84AV□□□1534□□0	84
2.6	10	-	61	1427	2229	1.1	57.968	GST11-3M□□□132C12	E84AV□□□1534□□0	90
2.5	10	-	60	1460	2281	2.2	59.321	GST14-3M□□□132C12	E84AV□□□1534□□0	90
2.4	9.8	-	58	1507	2355	1.1	61.250	GST11-3M□□□132C12	E84AV□□□1534□□0	90
2.2	8.7	-	52	1699	2655	1.7	69.042	GST14-3M□□□132C12	E84AV□□□1534□□0	90
2.1	8.5	-	50	1748	2731	0.9	71.011	GST11-3M□□□132C12	E84AV□□□1534□□0	90
1.9	7.7	-	45	1931	3017	1.7	78.457	GST14-3M□□□132C12	E84AV□□□1534□□0	90
1.6	6.4	-	38	2302	3597	1.5	93.541	GST14-3M□□□132C12	E84AV□□□1534□□0	90
1.5	6.2	-	37	2367	3698	1.5	96.157	GST14-3M□□□132C12	E84AV□□□1534□□0	90
1.4	5.6	-	34	2616	4088	1.4	106.296	GST14-3M□□□132C12	E84AV□□□1534□□0	90
1.1	4.6	-	27	3206	5010	1.1	130.278	GST14-3M□□□132C12	E84AV□□□1534□□0	90
1.1	4.3	-	26	3426	5353	1.0	139.211	GST14-3M□□□132C12	E84AV□□□1534□□0	90
0.9	3.8	-	23	3893	6083	0.9	158.194	GST14-3M□□□132C12	E84AV□□□1534□□0	90

Selection tables

► 120 Hz: P_N = 18.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 148.3 ... 3560 r/min



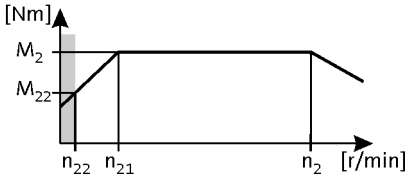
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
74	300	-	1780	63	98	0.9	2.000	GST07-1M□□□132C22	E84AV□□□1834□□0	78
72	293	-	1739	64	100	2.5	2.048	GST09-1M□□□132C22	E84AV□□□1834□□0	78
66	268	-	1589	70	110	0.9	2.240	GST07-1M□□□132C22	E84AV□□□1834□□0	78
64	257	-	1526	73	114	2.4	2.333	GST09-1M□□□132C22	E84AV□□□1834□□0	78
53	214	-	1267	88	137	2.3	2.810	GST09-1M□□□132C22	E84AV□□□1834□□0	78
43	174	-	1034	108	168	2.0	3.444	GST09-1M□□□132C22	E84AV□□□1834□□0	78
32	129	-	763	146	228	1.2	4.667	GST09-1M□□□132C22	E84AV□□□1834□□0	78
29	115	-	685	160	250	1.3	5.200	GST07-2M□□□132C22	E84AV□□□1834□□0	84
28	113	-	669	164	256	2.9	5.324	GST09-2M□□□132C22	E84AV□□□1834□□0	84
26	106	-	628	177	277	1.3	5.667	GST09-1M□□□132C22	E84AV□□□1834□□0	78
26	105	-	623	176	275	1.2	5.714	GST07-2M□□□132C22	E84AV□□□1834□□0	84
25	103	-	609	180	282	2.7	5.850	GST09-2M□□□132C22	E84AV□□□1834□□0	84
23	94	-	556	197	308	1.1	6.400	GST07-2M□□□132C22	E84AV□□□1834□□0	84
22	90	-	534	205	321	2.5	6.667	GST09-2M□□□132C22	E84AV□□□1834□□0	84
20	82	-	487	225	352	2.4	7.305	GST09-2M□□□132C22	E84AV□□□1834□□0	84
19	75	-	444	247	387	2.2	8.027	GST09-2M□□□132C22	E84AV□□□1834□□0	84
17	68	-	405	271	424	0.9	8.800	GST07-2M□□□132C22	E84AV□□□1834□□0	84
17	67	-	395	278	434	1.9	9.010	GST09-2M□□□132C22	E84AV□□□1834□□0	84
14	58	-	347	316	494	1.8	10.267	GST09-2M□□□132C22	E84AV□□□1834□□0	84
13	51	-	305	360	562	1.6	11.667	GST09-2M□□□132C22	E84AV□□□1834□□0	84
12	49	-	288	381	595	1.6	12.362	GST09-2M□□□132C22	E84AV□□□1834□□0	84
12	48	-	283	387	605	3.1	12.571	GST11-2M□□□132C22	E84AV□□□1834□□0	84
11	43	-	253	433	676	1.4	14.048	GST09-2M□□□132C22	E84AV□□□1834□□0	84
10	42	-	249	440	688	2.8	14.286	GST11-2M□□□132C22	E84AV□□□1834□□0	84
9.8	40	-	235	467	730	1.6	15.156	GST09-2M□□□132C22	E84AV□□□1834□□0	84
9.6	39	-	231	475	742	3.1	15.400	GST11-2M□□□132C22	E84AV□□□1834□□0	84
8.6	35	-	207	531	829	1.4	17.222	GST09-2M□□□132C22	E84AV□□□1834□□0	84
8.5	34	-	203	539	843	2.8	17.500	GST11-2M□□□132C22	E84AV□□□1834□□0	84
7.3	30	-	176	625	977	2.4	20.289	GST11-2M□□□132C22	E84AV□□□1834□□0	84
7.2	29	-	173	633	989	1.3	20.533	GST09-2M□□□132C22	E84AV□□□1834□□0	84
6.4	26	-	154	711	1110	2.2	23.056	GST11-2M□□□132C22	E84AV□□□1834□□0	84
6.4	26	-	153	719	1124	1.1	23.333	GST09-2M□□□132C22	E84AV□□□1834□□0	84
6.0	24	-	145	757	1183	3.2	24.567	GST14-2M□□□132C22	E84AV□□□1834□□0	84
6.0	24	-	143	768	1201	1.1	24.933	GST09-2M□□□132C22	E84AV□□□1834□□0	84
6.0	24	-	143	768	1201	2.0	24.933	GST11-2M□□□132C22	E84AV□□□1834□□0	84
5.3	22	-	128	860	1344	3.2	27.917	GST14-2M□□□132C22	E84AV□□□1834□□0	84
5.2	21	-	126	873	1364	0.9	28.333	GST09-2M□□□132C22	E84AV□□□1834□□0	84
5.2	21	-	126	873	1364	1.8	28.333	GST11-2M□□□132C22	E84AV□□□1834□□0	84
4.6	19	-	110	994	1554	1.5	32.267	GST11-2M□□□132C22	E84AV□□□1834□□0	84
4.6	19	-	110	994	1554	2.6	32.267	GST14-2M□□□132C22	E84AV□□□1834□□0	84
4.1	16	-	97	1130	1766	1.4	36.667	GST11-2M□□□132C22	E84AV□□□1834□□0	84

Selection tables

► 120 Hz: P_N = 18.50 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 148.3 ... 3560 r/min



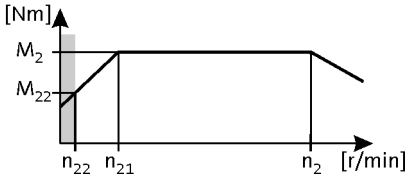
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
4.1	16	-	97	1130	1766	2.6	36.667	GST14-2M□□□132C22	E84AV□□□1834□□0	84
3.8	15	-	91	1207	1886	1.3	39.160	GST11-2M□□□132C22	E84AV□□□1834□□0	84
3.8	15	-	91	1207	1886	2.2	39.160	GST14-2M□□□132C22	E84AV□□□1834□□0	84
3.7	15	-	89	1220	1906	2.0	40.185	GST14-3M□□□132C22	E84AV□□□1834□□0	90
3.6	15	-	87	1239	1936	1.1	40.816	GST11-3M□□□132C22	E84AV□□□1834□□0	90
3.5	14	-	84	1293	2020	2.0	42.580	GST14-3M□□□132C22	E84AV□□□1834□□0	90
3.4	14	-	81	1336	2087	1.1	44.000	GST11-3M□□□132C22	E84AV□□□1834□□0	90
3.3	14	-	80	1371	2143	1.3	44.500	GST11-2M□□□132C22	E84AV□□□1834□□0	84
3.3	14	-	80	1371	2143	2.4	44.500	GST14-2M□□□132C22	E84AV□□□1834□□0	84
3.1	12	-	74	1469	2295	2.0	48.386	GST14-3M□□□132C22	E84AV□□□1834□□0	90
3.0	12	-	72	1525	2383	1.7	49.500	GST14-2M□□□132C22	E84AV□□□1834□□0	84
3.0	12	-	71	1518	2371	1.1	50.000	GST11-3M□□□132C22	E84AV□□□1834□□0	90
2.8	11	-	67	1613	2521	1.8	53.148	GST14-3M□□□132C22	E84AV□□□1834□□0	90
2.6	11	-	63	1733	2708	1.7	56.250	GST14-2M□□□132C22	E84AV□□□1834□□0	84
2.5	10	-	60	1801	2814	1.8	59.321	GST14-3M□□□132C22	E84AV□□□1834□□0	90
2.2	8.7	-	52	2096	3275	1.4	69.042	GST14-3M□□□132C22	E84AV□□□1834□□0	90
1.9	7.7	-	45	2382	3721	1.4	78.457	GST14-3M□□□132C22	E84AV□□□1834□□0	90
1.6	6.4	-	38	2839	4436	1.2	93.541	GST14-3M□□□132C22	E84AV□□□1834□□0	90
1.5	6.2	-	37	2919	4561	1.2	96.157	GST14-3M□□□132C22	E84AV□□□1834□□0	90
1.4	5.6	-	34	3227	5041	1.1	106.296	GST14-3M□□□132C22	E84AV□□□1834□□0	90
1.1	4.6	-	27	3954	6179	0.9	130.278	GST14-3M□□□132C22	E84AV□□□1834□□0	90

Selection tables

► 120 Hz: P_N = 22.00 kW

n_{22}/n_2 = 1 ... 24.0

n_1 = 147.9 ... 3550 r/min



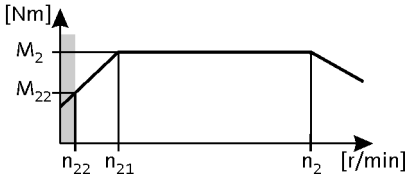
n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
72	293	-	1734	76	119	2.1	2.048	GST09-1M□□□132C32	E84AV□□□2234□□0	78
63	257	-	1521	87	136	2.0	2.333	GST09-1M□□□132C32	E84AV□□□2234□□0	78
53	214	-	1264	105	164	1.9	2.810	GST09-1M□□□132C32	E84AV□□□2234□□0	78
43	174	-	1031	129	201	1.7	3.444	GST09-1M□□□132C32	E84AV□□□2234□□0	78
32	129	-	761	174	272	1.0	4.667	GST09-1M□□□132C32	E84AV□□□2234□□0	78
28	115	-	683	191	299	1.1	5.200	GST07-2M□□□132C32	E84AV□□□2234□□0	84
28	113	-	667	196	306	2.4	5.324	GST09-2M□□□132C32	E84AV□□□2234□□0	84
26	106	-	627	211	330	1.1	5.667	GST09-1M□□□132C32	E84AV□□□2234□□0	78
26	105	-	621	210	328	1.0	5.714	GST07-2M□□□132C32	E84AV□□□2234□□0	84
25	103	-	607	215	336	2.3	5.850	GST09-2M□□□132C32	E84AV□□□2234□□0	84
23	94	-	555	235	368	0.9	6.400	GST07-2M□□□132C32	E84AV□□□2234□□0	84
23	94	-	555	235	368	3.2	6.400	GST11-2M□□□132C32	E84AV□□□2234□□0	84
22	90	-	533	245	383	2.1	6.667	GST09-2M□□□132C32	E84AV□□□2234□□0	84
20	82	-	486	268	419	2.0	7.305	GST09-2M□□□132C32	E84AV□□□2234□□0	84
18	75	-	442	295	461	1.8	8.027	GST09-2M□□□132C32	E84AV□□□2234□□0	84
16	67	-	394	331	517	1.6	9.010	GST09-2M□□□132C32	E84AV□□□2234□□0	84
15	61	-	360	362	566	3.1	9.856	GST11-2M□□□132C32	E84AV□□□2234□□0	84
14	58	-	346	377	590	1.5	10.267	GST09-2M□□□132C32	E84AV□□□2234□□0	84
13	54	-	317	412	643	2.8	11.200	GST11-2M□□□132C32	E84AV□□□2234□□0	84
13	51	-	304	429	670	1.4	11.667	GST09-2M□□□132C32	E84AV□□□2234□□0	84
12	49	-	287	454	710	1.3	12.362	GST09-2M□□□132C32	E84AV□□□2234□□0	84
12	48	-	282	462	722	2.6	12.571	GST11-2M□□□132C32	E84AV□□□2234□□0	84
11	43	-	253	516	807	1.2	14.048	GST09-2M□□□132C32	E84AV□□□2234□□0	84
10	42	-	249	525	820	2.4	14.286	GST11-2M□□□132C32	E84AV□□□2234□□0	84
9.8	40	-	234	557	870	1.3	15.156	GST09-2M□□□132C32	E84AV□□□2234□□0	84
9.6	39	-	231	566	884	2.6	15.400	GST11-2M□□□132C32	E84AV□□□2234□□0	84
8.6	35	-	206	633	989	1.2	17.222	GST09-2M□□□132C32	E84AV□□□2234□□0	84
8.5	34	-	203	643	1005	2.3	17.500	GST11-2M□□□132C32	E84AV□□□2234□□0	84
7.4	30	-	177	737	1151	2.9	20.044	GST14-2M□□□132C32	E84AV□□□2234□□0	84
7.3	30	-	175	746	1165	2.0	20.289	GST11-2M□□□132C32	E84AV□□□2234□□0	84
7.2	29	-	173	755	1179	1.1	20.533	GST09-2M□□□132C32	E84AV□□□2234□□0	84
6.5	26	-	156	837	1308	2.9	22.778	GST14-2M□□□132C32	E84AV□□□2234□□0	84
6.4	26	-	154	847	1324	1.9	23.056	GST11-2M□□□132C32	E84AV□□□2234□□0	84
6.3	26	-	152	858	1340	1.0	23.333	GST09-2M□□□132C32	E84AV□□□2234□□0	84
6.0	24	-	145	903	1411	2.7	24.567	GST14-2M□□□132C32	E84AV□□□2234□□0	84
5.9	24	-	142	916	1432	0.9	24.933	GST09-2M□□□132C32	E84AV□□□2234□□0	84
5.9	24	-	142	916	1432	1.7	24.933	GST11-2M□□□132C32	E84AV□□□2234□□0	84
5.3	22	-	127	1026	1603	2.7	27.917	GST14-2M□□□132C32	E84AV□□□2234□□0	84
5.2	21	-	125	1041	1627	1.5	28.333	GST11-2M□□□132C32	E84AV□□□2234□□0	84
4.6	19	-	110	1186	1853	1.3	32.267	GST11-2M□□□132C32	E84AV□□□2234□□0	84
4.6	19	-	110	1186	1853	2.2	32.267	GST14-2M□□□132C32	E84AV□□□2234□□0	84

Selection tables

► 120 Hz: P_N = 22.00 kW

n_{22}/n_2 = 1 ... 24.0

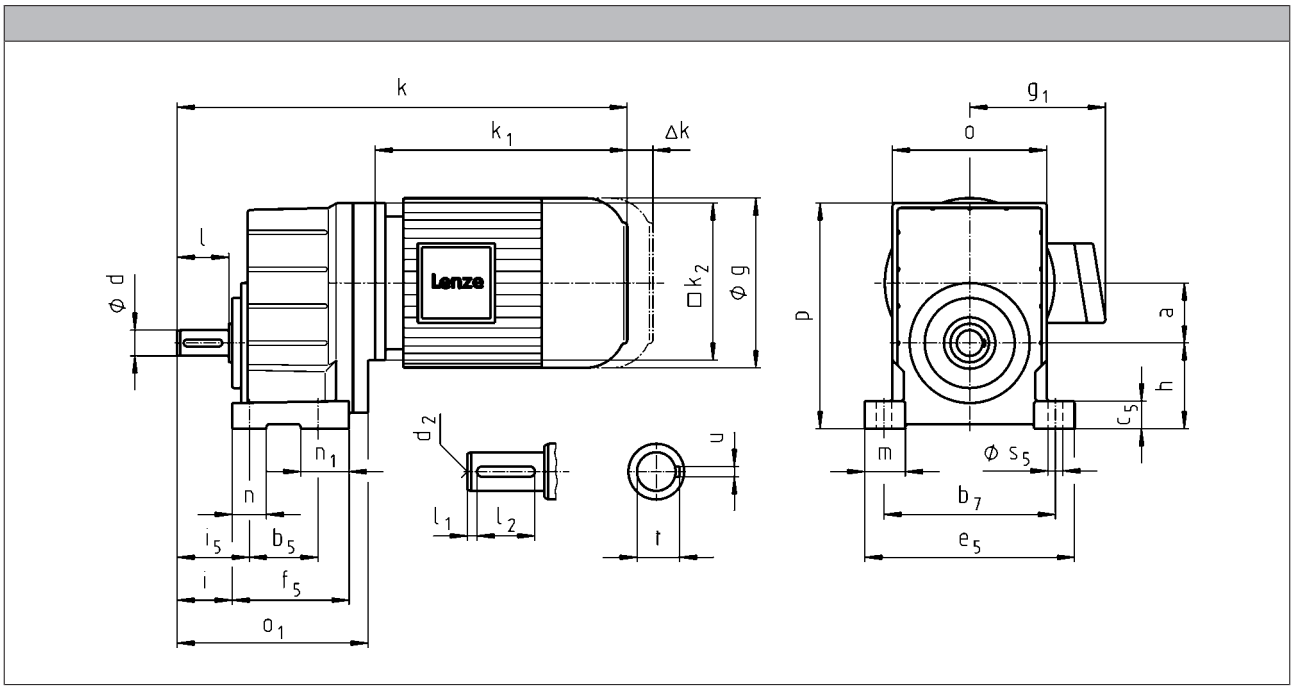
n_1 = 147.9 ... 3550 r/min



n_{22} [r/min]	n_{21} [r/min]		n_2 [r/min]	M_{22} [Nm]	M_2 [Nm]	c	i			
4.0	16	-	97	1348	2105	1.2	36.667	GST11-2M□□□132C32	E84AV□□□2234□□0	84
4.0	16	-	97	1348	2105	2.2	36.667	GST14-2M□□□132C32	E84AV□□□2234□□0	84
3.8	15	-	91	1439	2249	1.1	39.160	GST11-2M□□□132C32	E84AV□□□2234□□0	84
3.8	15	-	91	1439	2249	1.8	39.160	GST14-2M□□□132C32	E84AV□□□2234□□0	84
3.7	15	-	88	1455	2273	1.7	40.185	GST14-3M□□□132C32	E84AV□□□2234□□0	90
3.6	15	-	87	1478	2309	0.9	40.816	GST11-3M□□□132C32	E84AV□□□2234□□0	90
3.5	14	-	83	1541	2408	1.7	42.580	GST14-3M□□□132C32	E84AV□□□2234□□0	90
3.4	14	-	81	1593	2489	0.9	44.000	GST11-3M□□□132C32	E84AV□□□2234□□0	90
3.3	14	-	80	1635	2555	1.1	44.500	GST11-2M□□□132C32	E84AV□□□2234□□0	84
3.3	14	-	80	1635	2555	2.0	44.500	GST14-2M□□□132C32	E84AV□□□2234□□0	84
3.1	12	-	73	1752	2737	1.7	48.386	GST14-3M□□□132C32	E84AV□□□2234□□0	90
3.0	12	-	72	1819	2842	1.4	49.500	GST14-2M□□□132C32	E84AV□□□2234□□0	84
3.0	12	-	71	1810	2828	0.9	50.000	GST11-3M□□□132C32	E84AV□□□2234□□0	90
2.8	11	-	67	1924	3006	1.5	53.148	GST14-3M□□□132C32	E84AV□□□2234□□0	90
2.6	11	-	63	2067	3230	1.4	56.250	GST14-2M□□□132C32	E84AV□□□2234□□0	84
2.5	10	-	60	2147	3355	1.5	59.321	GST14-3M□□□132C32	E84AV□□□2234□□0	90
2.1	8.7	-	51	2499	3905	1.2	69.042	GST14-3M□□□132C32	E84AV□□□2234□□0	90
1.9	7.7	-	45	2840	4438	1.2	78.457	GST14-3M□□□132C32	E84AV□□□2234□□0	90
1.6	6.4	-	38	3386	5291	1.0	93.541	GST14-3M□□□132C32	E84AV□□□2234□□0	90
1.5	6.2	-	37	3481	5439	1.0	96.157	GST14-3M□□□132C32	E84AV□□□2234□□0	90
1.4	5.6	-	33	3848	6012	0.9	106.296	GST14-3M□□□132C32	E84AV□□□2234□□0	90

Dimensions

GST□□-1M VBR



GST helical gearbox

Technical data

		063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12 100C32	112C22	132C12 132C22	132C32
g		123	139	156	176	194	218	258	
g_1	MFEMAXX	100	109	150	157	166	176	195	
	MFEMABR	107	118	132	137	147	158	187	
k_1	MFEMAXX	187	207	224.5	274	324	319	403	
k_2		120		145	180		222	265	
Δ k	MFEMABR	40	52	73	68	76	90	109.5	
	MFFMAXX	128				109	102	115	
	MFFMABR	170	165	183	181	170	183	201.5	
		k							
GST04		331	351	373					
GST05		352	372	394	454	504			
GST06		375	395	417	477	527	528		
GST07				446	506	556	557	649	
GST09					549	599	600	692	

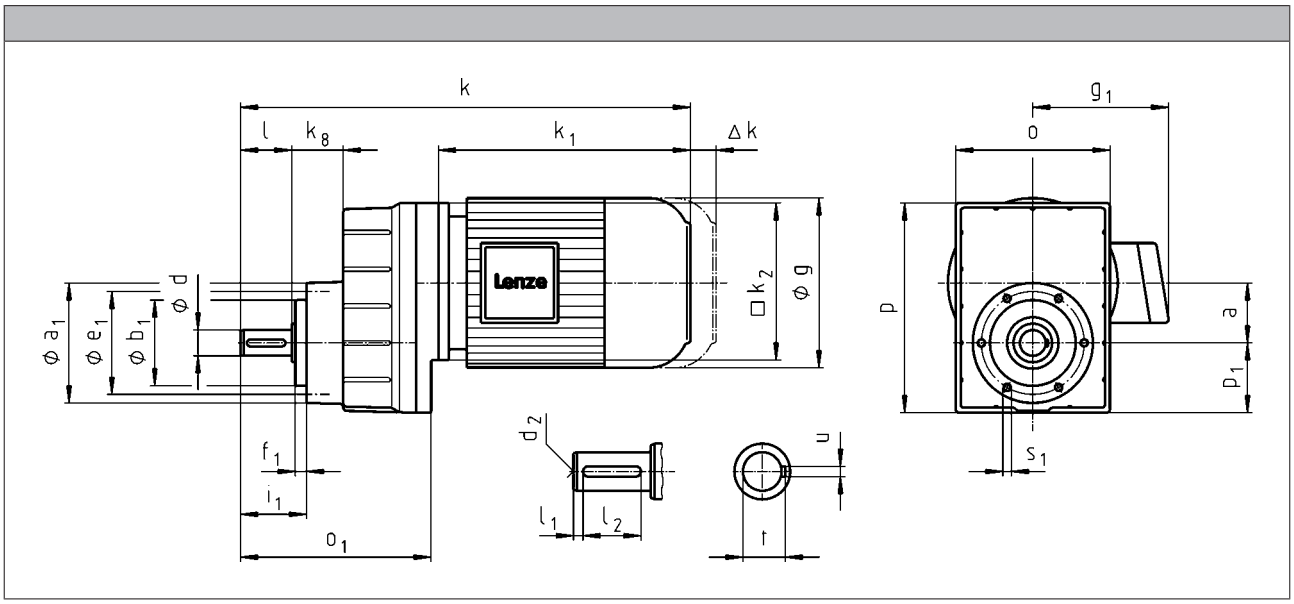
	a	h[1)]	o[1)]	p[1)]
GST04	36	50	100	138
GST05	45	63	115	168
GST06	56	80	145	211
GST07	70	100	180	264
GST09	89	125	222	329

	d	d_2	l	l_1	l_2	u	t	i	i_5	o_1	b_5	b_7	c_5	e_5	f_5	m	n	n_1	s_5
	k6																		
GST04	16	M5	32	6	20	5	18	35	45	134	55	105	17	128	80	24	20	25	9
GST05	20	M6	40	6	28	6	22.5	43	56	165	70	125	22	154	99	32	26	29	11
GST06	25	M10	50	4	40	8	28	53	68	191	72	160	27	194	115	37	30	43	13.5
GST07	30	M10	60	7.5	45	8	33	64	84	223	80	200	35	245	137	48	40	57	18
GST09	40	M16	80	8.5	63	12	43	84	107	271	105	245	43	296	161	51	45	56	18

[1)] k_2 !

Dimensions

GST□□-1M VCR



GST helical gearbox

Technical data

		063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12 100C32	112C22	132C12 132C22	132C32
g		123	139	156	176	194	218	258	
g_1	MFEMAXX	100	109	150	157	166	176	195	
	MFEMABR	107	118	132	137	147	158	187	
k_1	MFEMAXX	187	207	224.5	274	324	319	403	
k_2		120		145	180		222	265	
Δ k	MFEMABR	40	52	73	68	76	90	109.5	
	MFFMAXX	128				109	102	115	
	MFFMABR	170	165	183	181	170	183	201.5	
		k							
GST04		331	351	373					
GST05		352	372	394	454	504			
GST06		375	395	417	477	527	528		
GST07				446	506	556	557	649	
GST09					549	599	600	692	

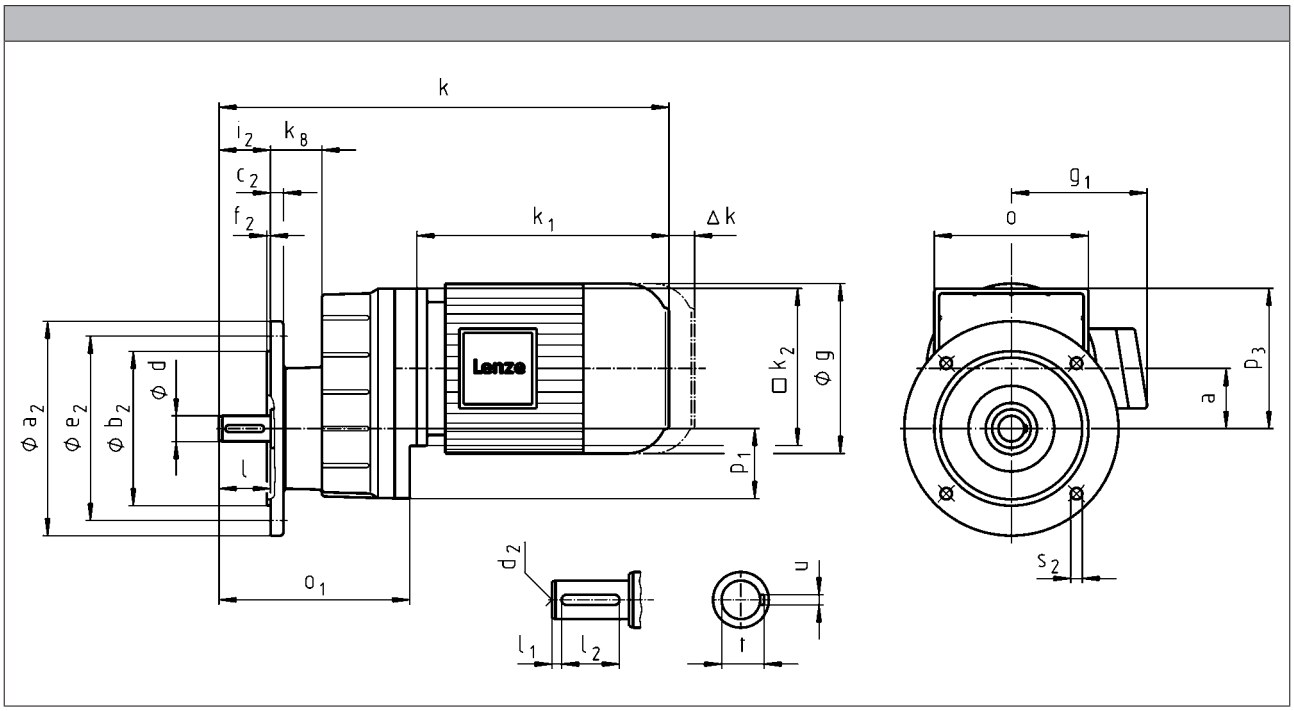
	a	k_8	o[1)]	p[1)]	p_1
GST04	36	35	100	129	41
GST05	45	43	115	156	51
GST06	56	48	145	194	63
GST07	70	60	180	245	82
GST09	89	74	222	304	101

	d	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			
GST04	16	M5	32	6	20	5	18	43	134	72	48	61	8	M5x10
GST05	20	M6	40	6	28	6	22.5	52	165	88	58	74	9	M6x10
GST06	25	M10	50	4	40	8	28	64	191	109	70	90	11	M8x14
GST07	30	M10	60	7.5	45	8	33	77	223	140	100	120	13	M10x18
GST09	40	M16	80	8.5	63	12	43	100	271	174	120	145	15	M12x20

[1)] k_2 !

Dimensions

GST□□-1M VCK



GST helical gearbox

Technical data

		063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12 100C32	112C22	132C12 132C22	132C32
g		123	139	156	176	194	218	258	
g_1	MFEMAXX	100	109	150	157	166	176	195	
	MFEMABR	107	118	132	137	147	158	187	
k_1	MFEMAXX	187	207	224.5	274	324	319	403	
k_2		120		145	180		222	265	
Δ k	MFEMABR	40	52	73	68	76	90	109.5	
	MFFMAXX	128				109	102	115	
	MFFMABR	170	165	183	181	170	183	201.5	
		k							
	GST04	331	351	373					
	GST05	352	372	394	454	504			
	GST06	375	395	417	477	527	528		
	GST07			446	506	556	557	649	
	GST09				549	599	600	692	

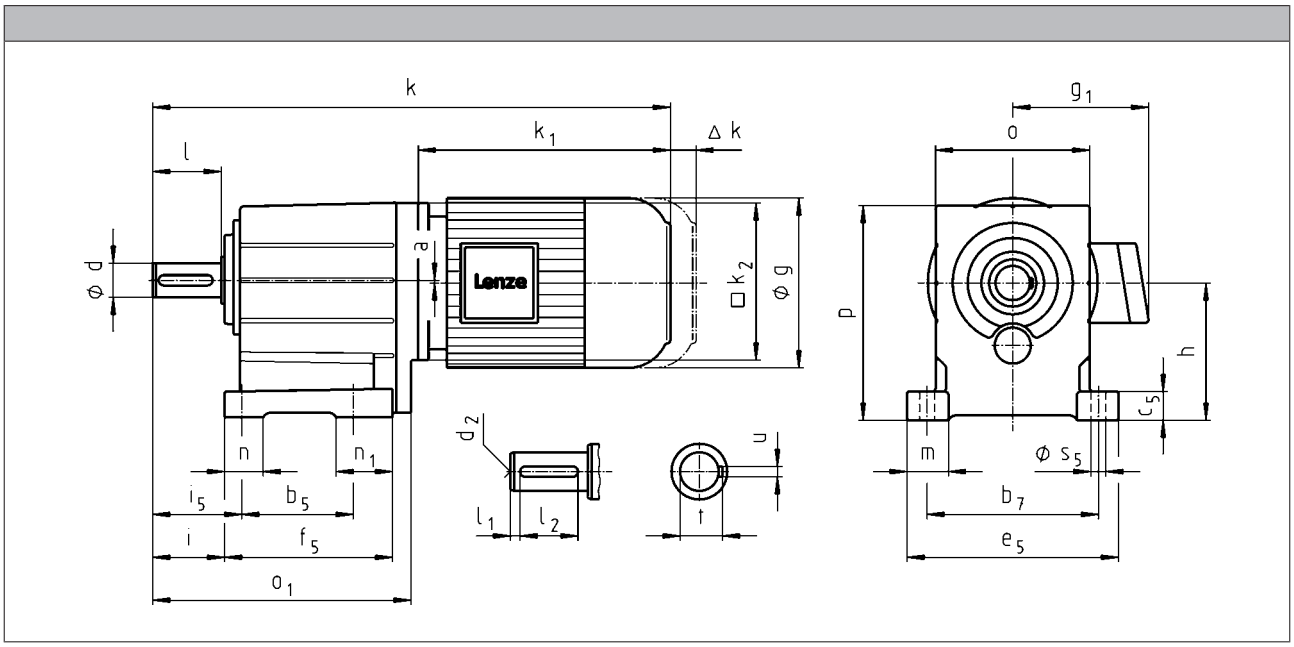
	a	**k_8**	**o**[1)]	**p_1**	**p_3**[1)]
GST04	36	35	100	41	88
GST05	45	43	115	51	105
GST06	56	48	145	63	131
GST07	70	60	180	82	164
GST09	89	74	222	101	204

	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				
GST04	16	M5	32	6	20	5	18	32	134	120 140 160	80 95 110	10 10 10	100 115 130	3 3 3.5	7 9 9
GST05	20	M6	40	6	28	6	22.5	40	165	120 140 160 200	80 95 110 130	10 10 10 12	100 115 130 165	3 3 3.5 3.5	7 9 9 11
GST06	25	M10	50	4	40	8	28	50	191	160 200	110 130	12 12	130 165	3.5 3.5	9 11
GST07	30	M10	60	7.5	45	8	33	60	223	200 250	130 180	14 15	165 215	3.5 4	11 13.5
GST09	40	M16	80	8.5	63	12	43	80	271	250 300	180 230	16 18	215 265	4 4	13.5 13.5

[1)] k_2 !

Dimensions

GST□□-2M VBR



		063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
g		123	139	156	176	194		218	258
g_1	MFEMAXX	100	109	150	157	166		176	195
	MFEMABR	107	118	132	137	147		158	187
k_1	MFEMAXX	187	207	224.5	274	324		319	403
k_2		120		145	180			222	265
Δ k	MFEMABR	40	52	73	68	76		90	109.5
	MFFMAXX	128				109		102	115
	MFFMABR	170	165	183	181	170		183	201.5
		k							
GST03		329							
GST04		371	391	413					
GST05		401	421	443	503	553			
GST06		427	447	469	529	579		580	
GST07				525	585	635		636	728
GST09					648	698		699	791
GST11						755		756	848
GST14								846	938

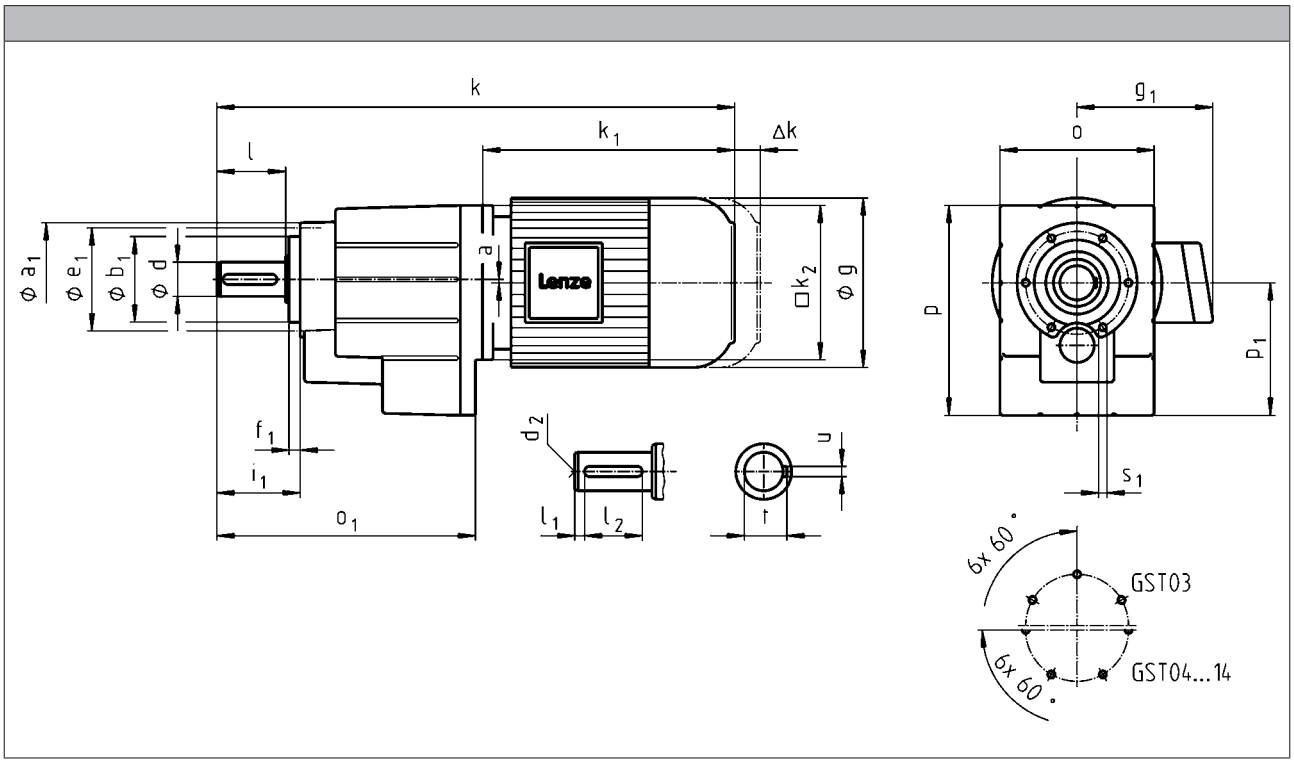
	a	h[1)]	o[1)]	p[1)]
GST03	2	65	90	101
GST04	0	80	100	132
GST05	1	100	115	158.5
GST06	2	125	145	198
GST07	3	160	180	251
GST09	4	200	222	311
GST11	4	250	270	385
GST14	6	315	328	479

	d k6	d m6	d_2	l	l_1	l_2	u	t	i	i_5	o_1	b_5	b_7	c_5	e_5	f_5	m	n	n_1	s_5
GST03	14 20		M5 M6	28 40	4 5	20 28	5 6	16 22.5	34 46	40 52	127 139	60	91	11	105	84	20			6.6
GST04	20		M6	40	5	28	6	22.5	43	53	174	76	105	18	129	112	24.5	20	36	9
GST05	25		M10	50	4	40	8	28	53	66	214	90	125	23	155	139	32.5	26	49	11
GST06	30		M10	60	6	45	8	33	64	79	243	106	160	28	196	157	38	35	52	13.5
GST07	40		M16	80	7	63	12	43	84	104	302	130	200	34	247	196	48.5	45	66	18
GST09	50		M16	100	8	80	14	53.5	105	127.5	370	165	245	44	298	239	54	48	74	18
GST11		60	M20	120	8	100	18	64	125	155	433	200	300	54	368	280	69	65	80	22
GST14		80	M20	160	15	125	22	85	165	200	533	250	380	65	460	340	85	85	91	26

[1)] k_2 !

Dimensions

GST□□-2M VCR



		063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
g		123	139	156	176	194		218	258
g_1	MFEMAXX	100	109	150	157	166		176	195
	MFEMABR	107	118	132	137	147		158	187
k_1	MFEMAXX	187	207	224.5	274	324		319	403
k_2		120		145	180			222	265
Δ k	MFEMABR	40	52	73	68	76		90	109.5
	MFFMAXX	128				109		102	115
	MFFMABR	170	165	183	181	170		183	201.5
		k							
GST03		329							
GST04		371	391	413					
GST05		401	421	443	503	553			
GST06		427	447	469	529	579		580	
GST07				525	585	635		636	728
GST09					648	698		699	791
GST11						755		756	848
GST14								846	938

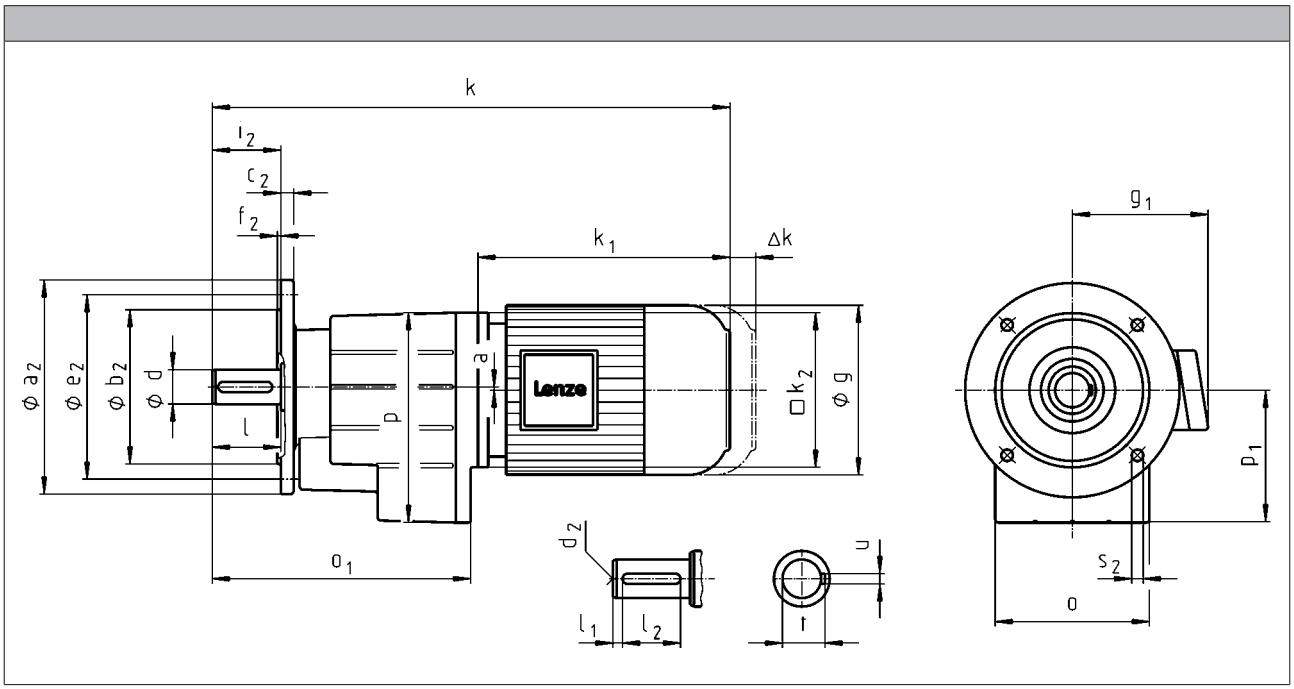
	a	o[1)]	p[1)]	p_1
GST03	2	90	100	64
GST04	0	100	129	77
GST05	1	115	156	98
GST06	2	145	194	121
GST07	3	180	245	155
GST09	4	222	304	194
GST11	4	270	378	243
GST14	6	328	470	306

	d k6	d m6	d_2	l	l_1	l_2	u	t	i_1	o_1	a_1	b_1 h7	e_1	f_1	s_1
GST03	14 20		M5 M6	28 40	4 5	20 28	5 6	16 22.5	39 51	127 139	71	48	61	8	M5x10
GST04	20		M6	40	5	28	6	22.5	51	174	72	48	61	8	M5x10
GST05	25		M10	50	4	40	8	28	62	214	88	58	74	9	M6x12
GST06	30		M10	60	6	45	8	33	74	243	109	70	90	10	M8x14
GST07	40		M16	80	7	63	12	43	97	302	140	100	120	13	M10x18
GST09	50		M16	100	8	80	14	53.5	120	370	174	120	145	15	M12x20
GST11		60	M20	120	8	100	18	64	143	433	215	150	185	18	M16x26
GST14		80	M20	160	15	125	22	85	187	533	265	195	230	22	M20x34

[1)] k_2 !

Dimensions

GST□□-2M VCK



		063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12	100C32	112C22	132C12 132C22 132C32
g		123	139	156	176	194		218	258
g_1	MFEMAXX	100	109	150	157	166		176	195
	MFEMABR	107	118	132	137	147		158	187
k_1	MFEMAXX	187	207	224.5	274	324		319	403
k_2		120		145	180			222	265
Δ k	MFEMABR	40	52	73	68	76		90	109.5
	MFFMAXX	128				109		102	115
	MFFMABR	170	165	183	181	170		183	201.5
		k							
GST03		329							
GST04		371	391	413					
GST05		401	421	443	503	553			
GST06		427	447	469	529	579		580	
GST07				525	585	635		636	728
GST09					648	698		699	791
GST11						755		756	848
GST14								846	938

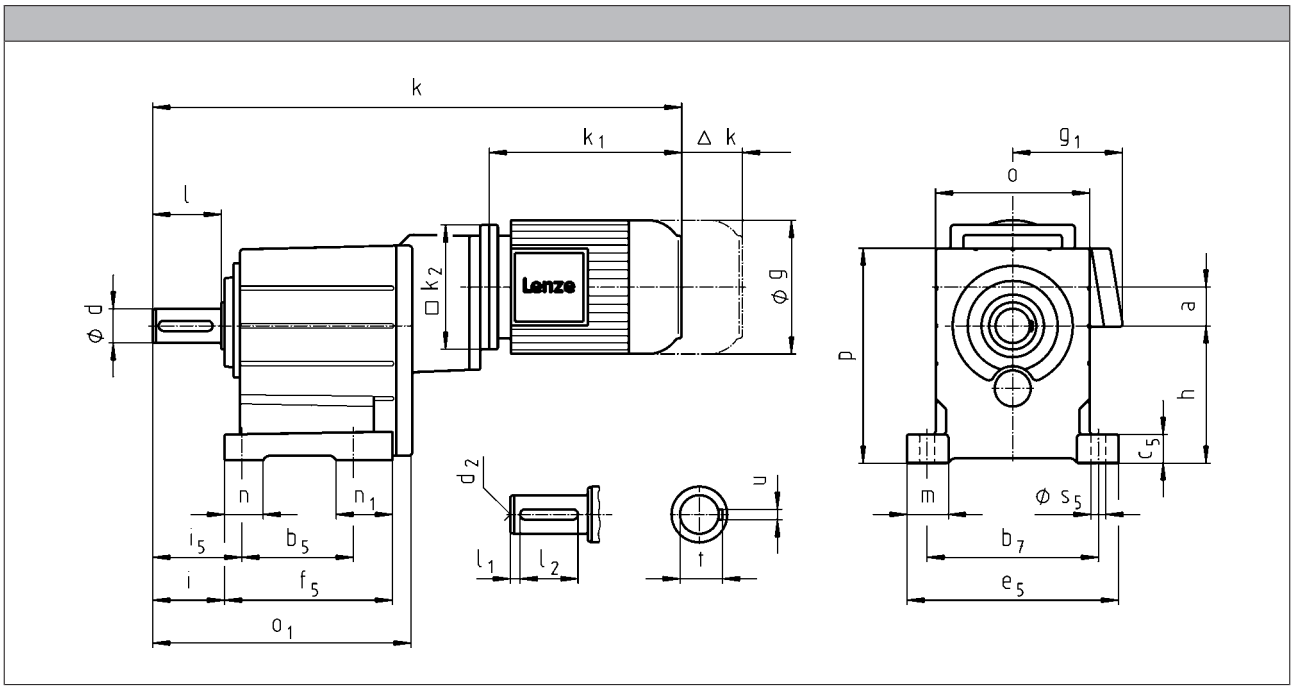
	a	o[1)]	p[1)]	p_1
GST03	2	90	100	64
GST04	0	100	129	77
GST05	1	115	156	98
GST06	2	145	194	121
GST07	3	180	245	155
GST09	4	222	304	194
GST11	4	270	378	243
GST14	6	328	470	306

	d	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	m6										j7				
GST03	14 20		M5 M6	28 40	4 5	20 28	5 6	16 22.5	28 40	127 139	120 140 160	80 95 110	10 10 10	100 115 130	3 3 3.5	7 9 9
GST04	20		M6	40	5	28	6	22.5	40	174	120 140 160	80 95 110	10 10 10	100 115 130	3 3 3.5	7 9 9
GST05	25		M10	50	4	40	8	28	50	214	120 140 160 200	80 95 110 130	10 10 10 12	100 115 130 165	3 3 3.5 3.5	7 9 9 11
GST06	30		M10	60	6	45	8	33	60	243	160 200	110 130	12 12	130 165	3.5 3.5	9 11
GST07	40		M16	80	7	63	12	43	80	302	200 250	130 180	14 15	165 215	3.5 4	11 13.5
GST09	50		M16	100	8	80	14	53.5	100	370	250 300	180 230	16 18	215 265	4 4	13.5 13.5
GST11		60	M20	120	8	100	18	64	120	433	300 350	230 250	18 20	265 300	4 5	14 18
GST14		80	M20	160	15	125	22	85	160	533	350 400	250 300	22 24	300 350	5 5	18 18

[1)] k_2 !

Dimensions

GST□□-3M VBR



		063C32 063C42	071C32	071C42	080C32 080C42
g		123	139		156
g_1	MFEMAXX	100	109		150
	MFEMABR	107	118		132
k_1	MFEMAXX	187	207		224.5
k_2		120			145
Δ k	MFEMABR	40	52		73
	MFFMAXX	128			
	MFFMABR	170	165		183
		k			
GST05		477	497		
GST06		520	540		563
GST07		587	607		630
GST09		668	688		711
GST11					787

GST helical gearbox

Technical data

		090C32	100C12	100C32	112C22	132C12 132C22 132C32
g		176	194		218	258
g_1	MFEMAXX	157	166		176	195
	MFEMABR	137	147		158	187
k_1	MFEMAXX	274	324		319	403
k_2		180			222	265
Δ k	MFEMABR	68	76		90	109.5
	MFFMAXX	128	109		102	115
	MFFMABR	181	170		183	201.5
		k				
GST07		689	739			
GST09		770	820		821	
GST11		846	896		897	989
GST14		970	1020		1021	1113

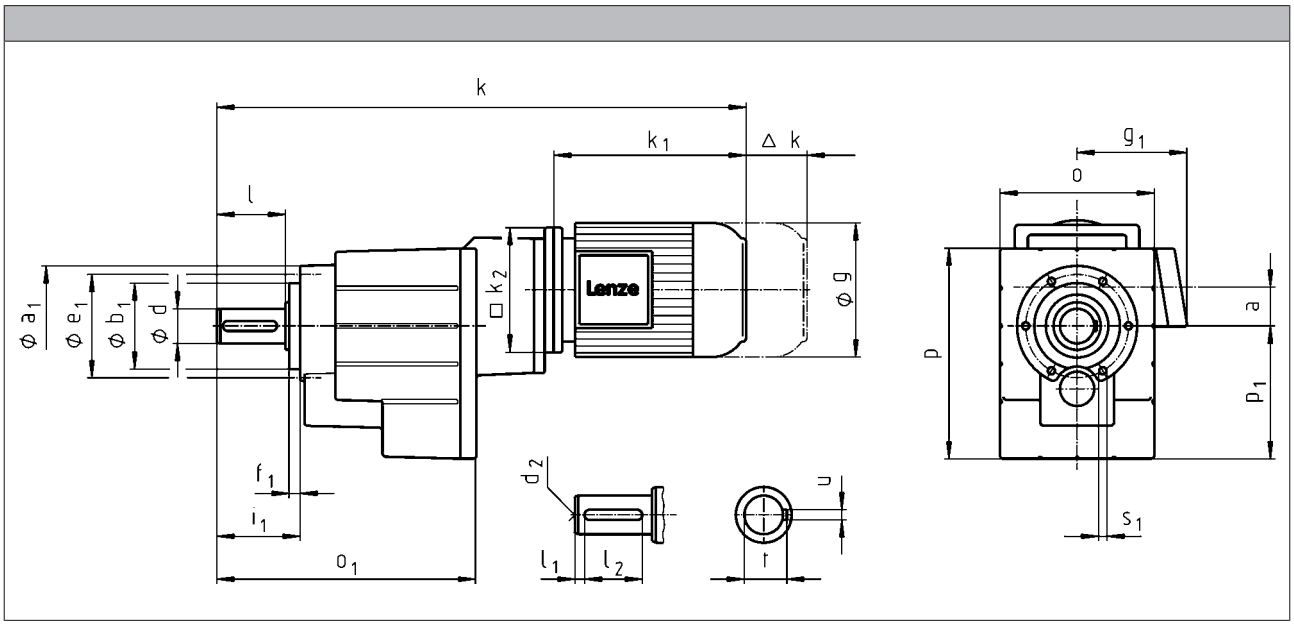
	a	h	o[1)]	p[1)]
GST05	35	100	115	158.5
GST06	34	125	145	198
GST07	42	160	180	251
GST09	52	200	222	311
GST11	66	250	270	385
GST14	83	315	328	479

	d	d	d_2	l	l_1	l_2	u	t	i	i_5	o_1	b_5	b_7	c_5	e_5	f_5	m	n	n_1	s_5
	k6	m6																		
GST05	25		M10	50	4	40	8	28	53	66	208	90	125	23	155	139	32.5	26	49	11
GST06	30		M10	60	6	45	8	33	64	79	240	106	160	28	196	157	38	35	52	13.5
GST07	40		M16	80	7	63	12	43	84	104	302	130	200	34	247	196	48.5	45	66	18
GST09	50		M16	100	8	80	14	53.5	105	127.5	370	165	245	44	298	239	54	48	74	18
GST11		60	M20	120	8	100	18	64	125	155	433	200	300	54	368	280	69	65	80	22
GST14		80	M20	160	15	125	22	85	165	200	533	250	380	65	460	340	85	85	91	26

[1)] k_2 !

Dimensions

GST□□-3M VCR



		063C32 063C42	071C32	071C42	080C32 080C42
g		123	139		156
g_1	MFEMAXX	100	109		150
	MFEMABR	107	118		132
k_1	MFEMAXX	187	207		224.5
k_2		120			145
Δ k	MFEMABR	40	52		73
	MFFMAXX	128			
	MFFMABR	170	165		183
		k			
GST05		477	497		
GST06		520	540		563
GST07		587	607		630
GST09		668	688		711
GST11					787

		090C32	100C12	100C32	112C22	132C12 132C22 132C32
g		176	194		218	258
g_1	MFEMAXX	157	166		176	195
	MFEMABR	137	147		158	187
k_1	MFEMAXX	274	324		319	403
k_2		180			222	265
Δ k	MFEMABR	68	76		90	109.5
	MFFMAXX	128	109		102	115
	MFFMABR	181	170		183	201.5
		k				
GST07		689	739			
GST09		770	820		821	
GST11		846	896		897	989
GST14		970	1020		1021	1113

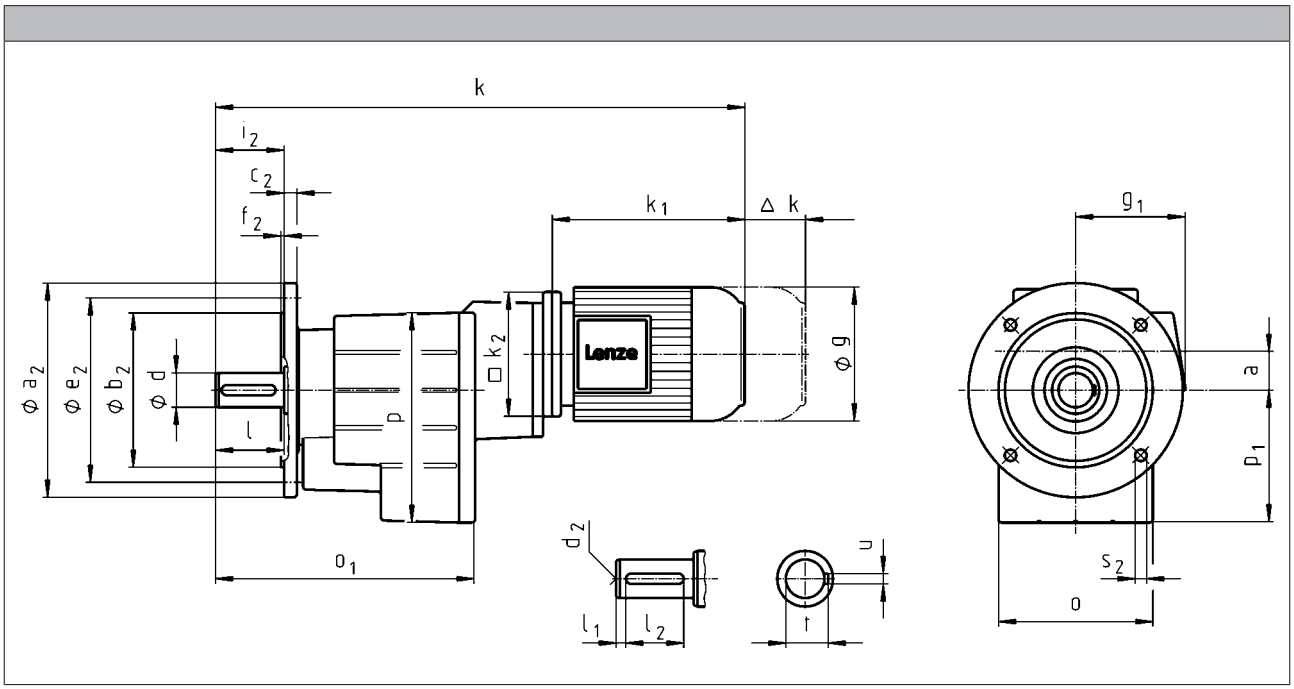
	a	o[1)]	p[1)]	p_1
GST05	35	115	156	98
GST06	34	145	194	121
GST07	42	180	245	155
GST09	52	222	304	194
GST11	66	270	378	243
GST14	83	328	470	306

	d	d	d_2	l	l_1	l_2	u	t	i_1	o_1	a_1	b_1	e_1	f_1	s_1
	k6	m6										h7			
GST05	25		M10	50	4	40	8	28	62	208	88	58	74	9	M6x12
GST06	30		M10	60	6	45	8	33	74	240	109	70	90	10	M8x14
GST07	40		M16	80	7	63	12	43	97	302	140	100	120	13	M10x18
GST09	50		M16	100	8	80	14	53.5	120	370	174	120	145	15	M12x20
GST11		60	M20	120	8	100	18	64	143	433	215	150	185	18	M16x26
GST14		80	M20	160	15	125	22	85	187	533	265	195	230	22	M20x34

[1)] k_2 !

Dimensions

GST□□-3M VCK



		063C32 063C42	071C32	071C42	080C32 080C42
g		123	139		156
g_1	MFEMAXX	100	109		150
	MFEMABR	107	118		132
k_1	MFEMAXX	187	207		224.5
k_2		120			145
Δ k	MFEMABR	40	52		73
	MFFMAXX	128			
	MFFMABR	170	165		183
		k			
GST05		477	497		
GST06		520	540		563
GST07		587	607		630
GST09		668	688		711
GST11					787

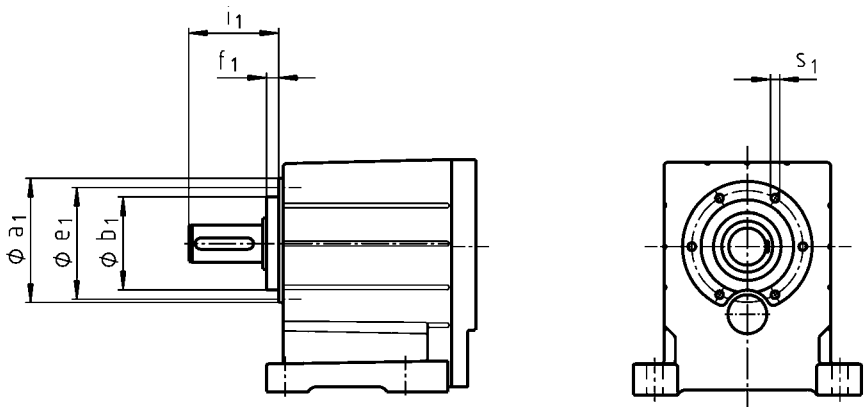
		090C32	100C12	100C32	112C22	132C12 132C22 132C32
g		176	194		218	258
g_1	MFEMAXX	157	166		176	195
	MFEMABR	137	147		158	187
k_1	MFEMAXX	274	324		319	403
k_2		180			222	265
Δ k	MFEMABR	68	76		90	109.5
	MFFMAXX	128	109		102	115
	MFFMABR	181	170		183	201.5
		k				
GST07		689	739			
GST09		770	820		821	
GST11		846	896		897	989
GST14		970	1020		1021	1113

	a	o[1)]	p[1)]	p_1
GST05	35	115	156	98
GST06	34	145	194	121
GST07	42	180	245	155
GST09	52	222	304	194
GST11	66	270	378	243
GST14	83	328	470	306

	d	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	m6										j7				
GST05	25		M10	50	4	40	8	28	50	208	120 140 160 200	80 95 110 130	10 10 10 12	100 115 130 165	3 3 3.5 3.5	7 9 9 11
GST06	30		M10	60	6	45	8	33	60	240	160 200	110 130	12 12	130 165	3.5 3.5	9 11
GST07	40		M16	80	7	63	12	43	80	302	200 250	130 180	14 15	165 215	3.5 4	11 13.5
GST09	50		M16	100	8	80	14	53.5	100	370	250 300	180 230	16 18	215 265	4 4	13.5 13.5
GST11		60	M20	120	8	100	18	64	120	433	300 350	230 250	18 20	265 300	4 5	14 18
GST14		80	M20	160	15	125	22	85	160	533	350 400	250 300	22 24	300 350	5 5	18 18

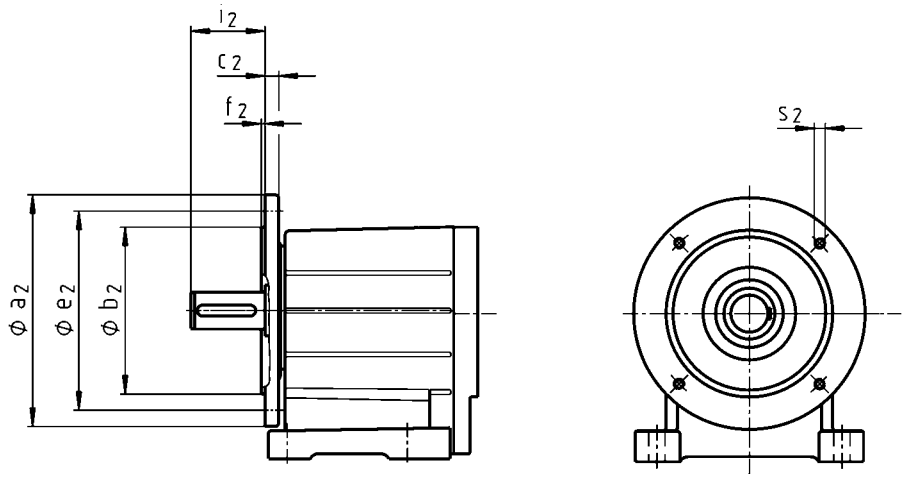
[1)] k_2 !

GST□□-2/3M VAR



	a_1	b_1	e_1	f_1	i_1	s_1
		h7				
GST04	72	48	61	8.0	51.0	M5x10
GST05	88	58	74	9.0	62.0	M6x12
GST06	109	70	90	10.0	74.0	M8x14
GST07	140	100	120	13.0	97.0	M10x18
GST09	174	120	145	15.0	120.0	M12x20
GST11	215	150	185	18.0	143.0	M16x26
GST14	265	195	230	22.0	187.0	M20x34

GST□□-2/3M VAL

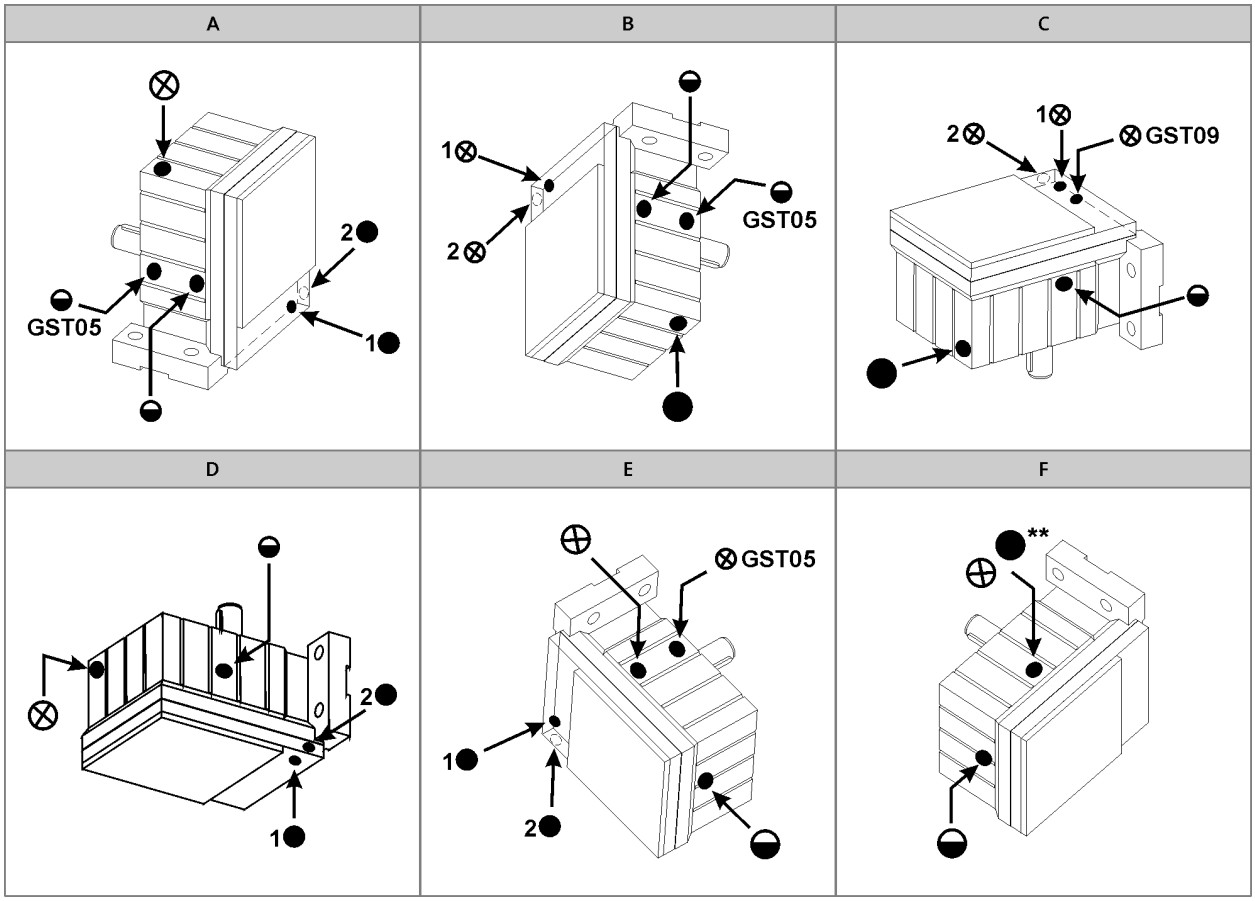


	a_2	b_2	c_2	e_2	f_2	i_2	s_2
		j7					
GST04	120 140	80 95	10 10	100 115	3.0 3.0	40	M6 M8
GST05	120 140 160	80 95 110	10 10 10	100 115 130	3.0 3.0 3.5	50	M6 M8 M8
GST06	160 200	110 130	12 12	130 165	3.5 3.5	60	M8 M10
GST07	200 250	130 180	14 15	165 215	3.5 4.0	80	M10 M12
GST09	250 300	180 230	16 18	215 265	4.0 4.0	100	M12 M12
GST11	300 350	230 250	18 20	265 300	4.0 5.0	120	M12 M16
GST14	350 400	250 300	22 24	300 350	5.0 5.0	160	M16 M16

Ventilations

Position of ventilation, sealing elements and oil level check

GST05...09-1



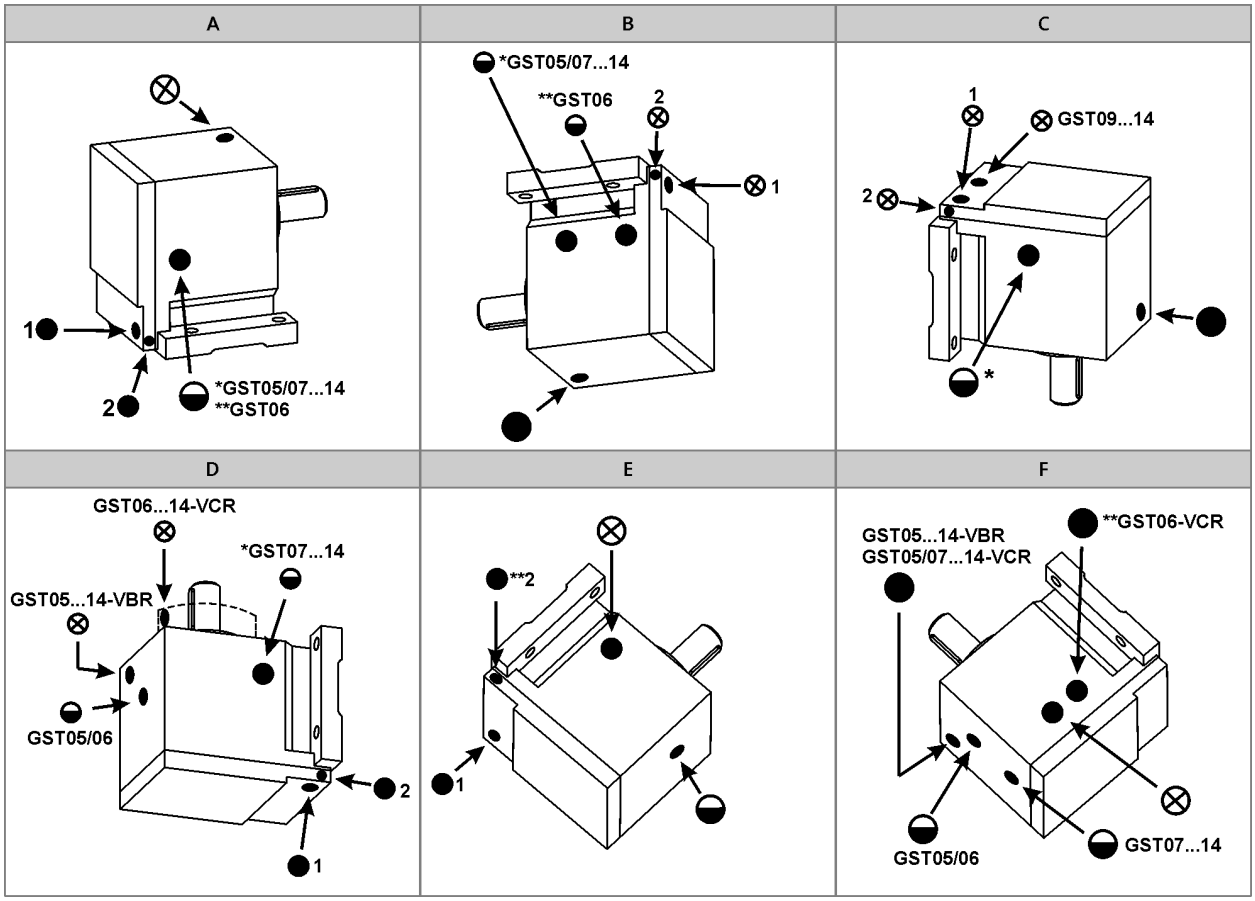
A ... F Mounting position
⊗ Ventilation / Oil filler plug
● Oil drain plug
◒ Oil control plug
* On both sides
** On opposite side

Item 1 standard
Item 2 only with:
- GST05-1M V□□ 090C□□
- GST05-1M V□□ 100C□□
- GST06-1M V□□ 112C□□
- GST07-1M V□□ 160C□□

Ventilations

Position of ventilation, sealing elements and oil level check

GST05...14-2



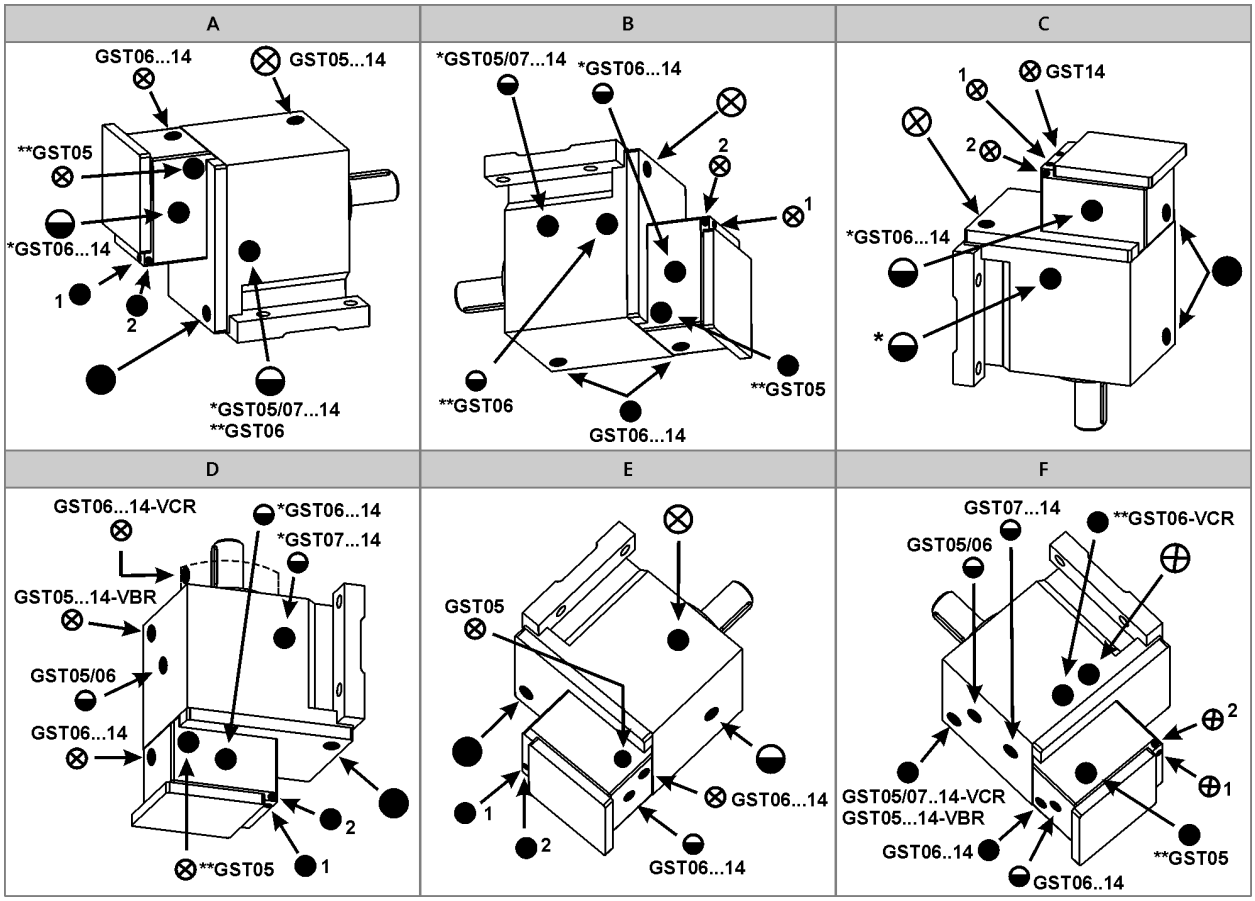
A ... F Mounting position
⊗ Ventilation / Oil filler plug
● Oil drain plug
◒ Oil control plug
* On both sides
** On opposite side

Item 1 standard
Item 2 only with:
- GST05-2M V□□ 090C□□
- GST05-2M V□□ 100C□□
- GST06-2M V□□ 112C□□
- GST07-2M V□□ 160C□□

Ventilations

Position of ventilation, sealing elements and oil level check

GST05...14-3



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

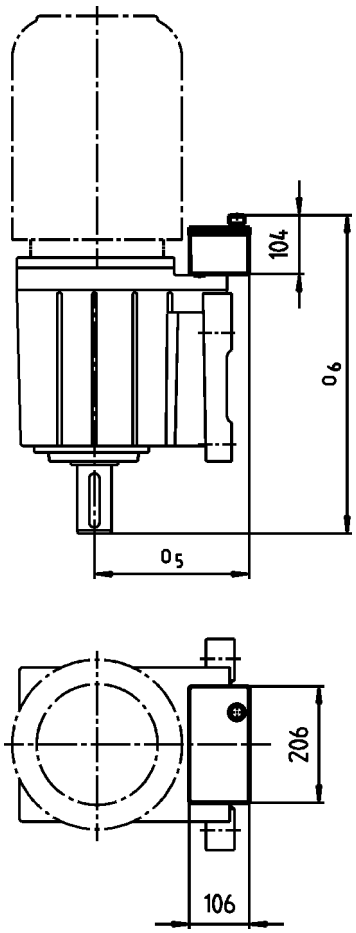
Item 1 standard
Item 2 only with:
- GST07-3M V□□ 090C□□
- GST07-3M V□□ 100C□□
- GST09-3M V□□ 112C□□

6.4

Ventilations

Compensation reservoir for mounting position C

GST□□-2



Motor	090 100		112		132		160 180 225	
	o_5	o_6	o_5	o_6	o_5	o_6	o_5	o_6
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
GST09	206	477	226	477	245	477	260	477
GST11	208	536	230	540	254	540	268	540
GST14			252	640	282	640	282	640

► Terminal box position 4 not permitted.

Web version

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