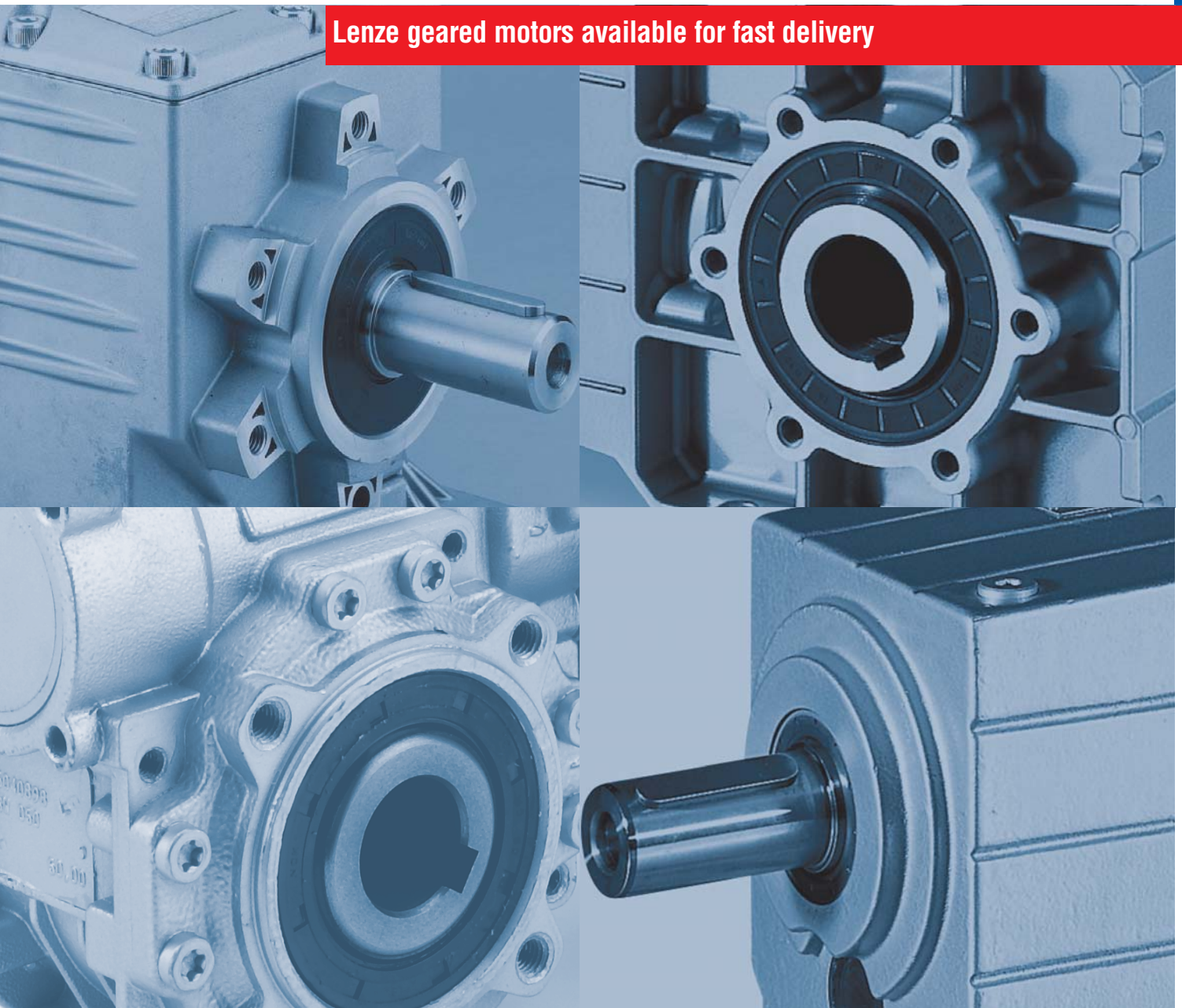


StockGears

Geared motors 90W-7.5kW



Lenze geared motors available for fast delivery



Lenze

ideas in motion

StockGears

The popular range of Lenze geared motors available for fast delivery

Lenze Group

Specialists in drive technology and drive-based automation, Lenze are an international group with headquarters near Hannover, Germany. More than 3000 people are employed and the expanding group turnover is about £320 million. Exceptional focus and stability is achieved through family ownership. Market strengths in areas such as packaging, assembly, mechanical handling, enable in-depth knowledge to be passed onto our customers.

Lenze Quality

Quality of products and service is of great importance at Lenze. As well as working with the standard DIN ISO9001:2000, Lenze are the only European drive technology specialist to receive the Ford Q1 award for excellence in systems and performance. We aim to be a reliable partner whose customers achieve the greatest possible productivity from the minimum outlay.



Motors

MultiMount and SW series geared motors accept standard IEC framed motors in B14 face or B5 flange configurations, Motors shown in this catalogue are Lenze 3 phase motors but other motors are possible, for example 1 phase, braked, ATEX and dc. Details are available on request.

Lenze G-motion geared motors feature 'compact' motors where the first gear pinion is part of the motor giving advantages of size, weight and cost. On request G-motion gearboxes can be supplied for IEC framed motors.

Product Availability

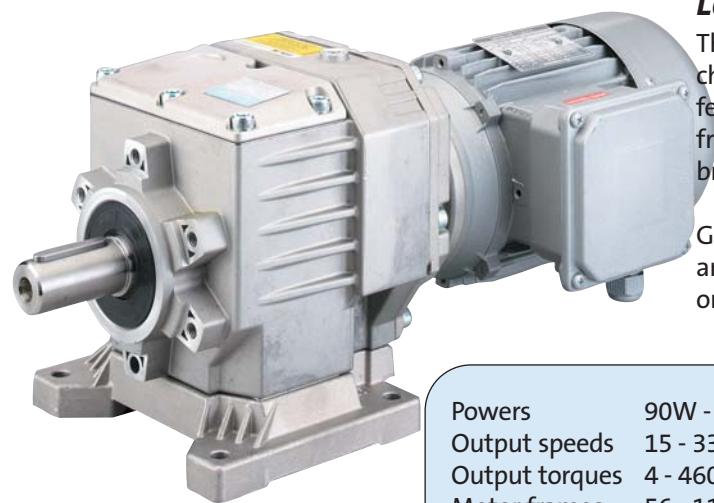
Items in the StockGears range are normally available from stock from immediate despatch or are built from stock parts to your specification.

MultiMount and SW ranges can be either supplied as separate gearboxes and motors (plus accessories) or built to your specification in which case workshop time should be added.

Lenze G-motion geared motors are always built to individual specification and you should normally allow 3 working days for despatch.

Range Overview

Lenze MultiMount

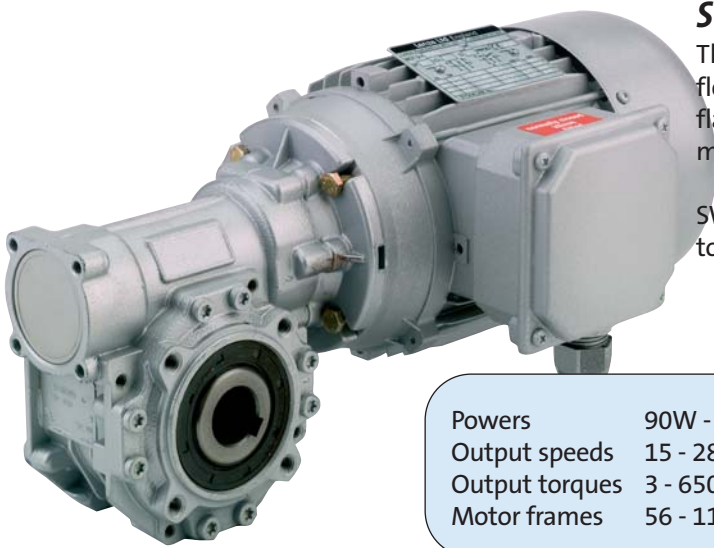


The geared motor with the modular system that lets you choose the configuration and mounting you need. Bolt-on feet and flanges match industry-standard footprints. IEC frame motors mean you can specify 1 or 3 phase, dc, braked or ATEX.

Gearboxes are constructed with aluminium casings that are vacuum impregnated and precision machined, saving on weight and costs

Powers	90W - 2.2kW
Output speeds	15 - 330r/min
Output torques	4 - 460Nm
Motor frames	56 - 112

SW Series worm geared



The SW range represents high value with mounting flexibility. The worm gearboxes have options for shafts, flanges, feet and torque arms. You can choose IEC framed motors that are 1, 3 phase or braked.

SW worm gearboxes are manufactured to a high standard to achieve long life with a design rating of 15000 hours.

Powers	90W - 4kW
Output speeds	15 - 280r/min
Output torques	3 - 650Nm
Motor frames	56 - 112

More Information

StockGears

Our StockGears partners can help with enquiries and questions. They are trained in the Lenze gearbox product range, and they have experience to help with the selection of the optimum gearbox and motor.

www.lenze.co.uk

Fitting and operating instructions are available on the web. For MultiMount and SW ranges see the Downloads/UK Technical Publications section. For G-Motion models use the 'Lenze Download area' and go to Operating instructions/english/gearboxes.

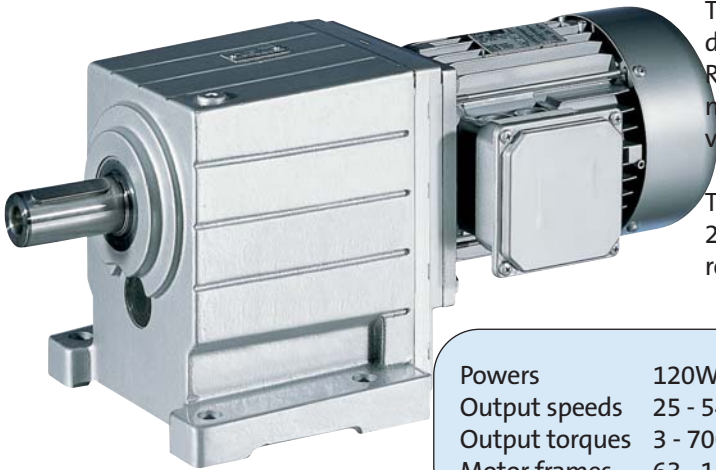
Derating

Electric motors need to be derated for ambient conditions of high temperatures and high altitudes. No derating will be necessary up to 40°C and 1000m above sea level. Operation with inverters below 20Hz will also require a derate.

Lenze G-Motion helical

These G-Motion type GST geared motors have compact dimensions and give you low noise levels and long life. Robust gearboxes are available with foot or B5 flange mounting. Modular motors are 3 phase with a wide voltage range and options of brakes and blowers.

The full GST range extends to 45kW with outputs 2-950r/min and torques to 7100Nm. Details available on request.

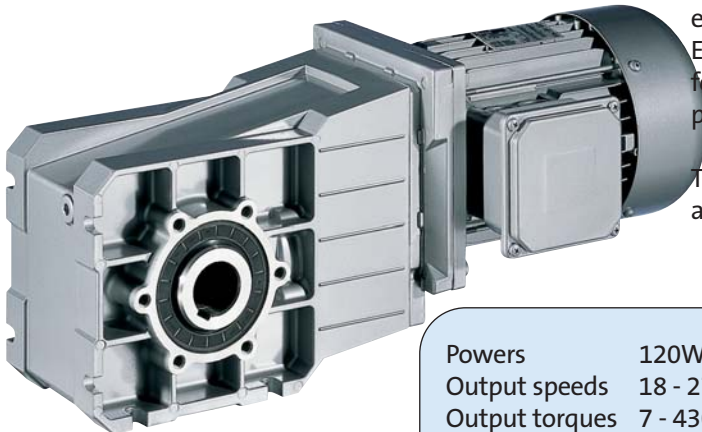


Powers	120W - 7.5kW
Output speeds	25 - 540r/min
Output torques	3 - 700Nm
Motor frames	63 - 132

Lenze G-Motion bevel

High efficiency GKR bevel geared motors bring energy efficiency and compact dimensions to right angle drives. Efficiency levels are 96% and the gearboxes have options for hollow or male shafts. As for the GST range, modular 3 phase motors can be supplied with brakes and blowers.

The full GKR range runs from 60W to 7.5kW. Details available on request.



Powers	120W - 5.5kW
Output speeds	18 - 270r/min
Output torques	7 - 430Nm
Motor frames	63 - 112

Other G-Motion geared motors (the range extends to 45kW)



shaft mounted helical gearboxes available for powers 0.12 to 45kW and output torques up to 13800Nm.



Helical worm geared motors up to 15kW and 1560Nm, and helical bevel geared motors with high efficiency up to 45kW and 14400Nm.



ATEX compliant geared motors: - all Lenze G-Motion ranges up to 45kW can be supplied to suit ATEX Zones 1, 21, 2 or 22.

Full information available on request.

Contents

Range overview, comparison of features	inside front cover
MultiMount aluminium helical geared motors, 90W - 2.2kW	pages 6-13
SW worm geared motors, 90W - 4kW	pages 14-19
Lenze G-Motion helical motors, 120W - 7.5kW	pages 20-29
Lenze G-Motion bevel geared motors 120W - 5.5kW	pages 30-37



Variable speed options

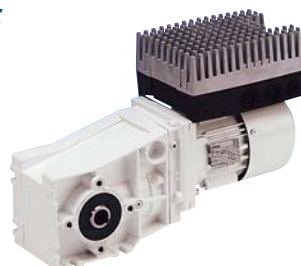
smd frequency inverters



Simple, easy to handle inverters that are compact and economical

- 0.25-2.2kW 1 phase, 0.37-22kW 3 phase
- pluggable EPM memory chip for easy set-up
- compact dimensions save panel space
- simple and easy to use
- integrated RFI filter (1 phase models)
- ideal for simple and low cost variable speed control

8200 motec



Terminal box inverters with IP65 enclosure also suiting wall mounting

- 0.25-0.37kW 1 phase, 0.55-7.5kW 3 phase
- mounts on motor or on wall
- no panel space required
- full range of fieldbus options
- integrated RFI filter
- spur or loop-through mains cabling
- easy and cost saving installation

Information on these and other options is available on request.

MultiMount geared motors

Modular system

The modular design of MultiMount & gearboxes allows maximum adaptability. On the input side are 1 phase, 3 phase and brake motors with variable speed options. Gearboxes can be mounted with the underside fixing holes, optional feet or output flanges.

NEW

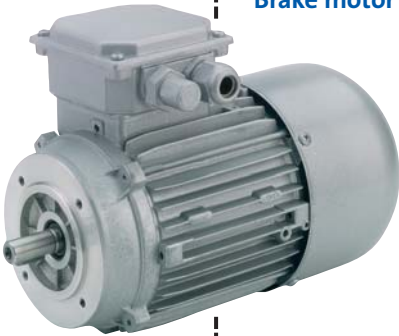
Variable speed

smd

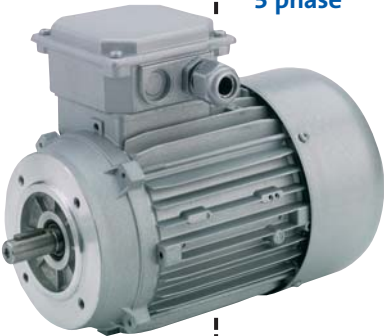
motec



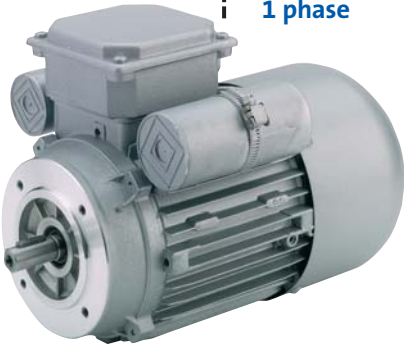
Brake motor



3 phase



1 phase



2 stage



underside fixings

3 stage



underside fixings

Alternative feet



Output flange
(optional)

MultiMount geared motors

90W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
6.0	132.5	1.1	135.69	403A	M63a6B5
10.9	77.6	1.9	126.40	403A	M56b4B14
16.2	49.5	3.0	50.64	403A	M63a6B5
21.4	37.4	4.0	38.40	403A	M63a6B5
27.3	31.1	4.8	50.64	403A	M56b4B14

120W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
7.7	151	2.2	180.40	503A	M63b4B5
10.2	113	1.3	135.69	403A	M63b4B5
14.4	81	1.8	96.85	403A	M63b4B5
19.6	59.4	2.5	70.95	403A	M63b4B5
23.4	48.5	2.0	37.69	302A	M63b6B5
27.9	43.0	2.2	49.76	302A	M63b4B5
36.2	32.0	5.3	38.40	403A	M63b4B5
36.9	32.6	3.1	37.69	302A	M63b4B5
48.1	25.0	4.6	28.88	302A	M63b4B5
58.3	19.4	5.6	15.10	302A	M63b6B5
65.7	18.3	6.3	21.15	302A	M63b4B5
74.0	16.2	6.8	18.78	302A	M63b4B5
92.1	13.1	8.3	15.10	302A	M63b4B5
121	9.9	11.3	11.42	302A	M63b4B5
141	8.5	11.4	9.85	302A	M63b4B5
179	6.7	12.5	7.74	302A	M63b4B5
193	6.2	11.5	7.20	302A	M63b4B5
255	4.7	10.3	5.45	302A	M63b4B5

180W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
4.99	332	1.0	180.40	503A	M71a6B5
7.7	216	1.5	180.40	503A	M63b4B5
10.2	164	2.0	136.62	503A	M63b4B5
14.4	116	1.3	96.85	403A	M63b4B5
19.7	85.1	1.8	70.95	403A	M63b4B5
23.9	71.6	1.4	37.69	302A	M71a6B5
28.1	61.6	1.6	49.76	302A	M63b4B5
31.2	54.9	2.1	28.88	302A	M71a6B5
37.1	46.7	2.2	37.69	302A	M63b4B5
42.6	40.2	2.8	21.15	302A	M71a6B5
48.5	35.8	3.1	28.88	302A	M63b4B5
59.6	28.7	4.0	15.10	302A	M71a6B5
66.1	26.2	4.3	21.15	302A	M63b4B5
74.5	23.3	4.6	18.78	302A	M63b4B5
92.7	18.7	6.1	15.10	302A	M63b4B5
122	14.1	8.2	11.42	302A	M63b4B5
142	12.2	7.8	9.85	302A	M63b4B5
181	9.6	8.3	7.74	302A	M63b4B5
194	8.9	7.9	7.20	302A	M63b4B5
257	6.8	7.4	5.45	302A	M63b4B5

0.25W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
7.8	288	1.2	180.40	503A	M71a4B5
10.2	219	1.6	136.62	503A	M71a4B5
14.5	155	1.0	96.85	403A	M71a4B14
19.7	114	1.4	70.95	403A	M71a4B14
27.6	81	2.0	50.64	403A	M71a4B14
28.1	80	1.2	49.76	302A	M71a4B14
30.6	76.5	2.1	29.40	402A	M71b6B14
34.2	69.7	2.0	26.30	402A	M71b6B5
39.0	59	1.8	35.91	302A	M71a4B14
42.6	56.0	2.0	21.15	302A	M71b6B14
48.5	47	2.4	28.88	302A	M71a4B14
59.6	40.0	2.8	15.10	302A	M71b6B14
66	34.5	3.3	21.15	302A	M71a4B14
74.5	30.7	3.5	18.78	302A	M71a4B14
93	24.6	4.6	15.10	302A	M71a4B14
123	18.6	6.2	11.42	302A	M71a4B14
142	16.1	5.9	9.85	302A	M71a4B14
181	12.6	6.3	7.74	302A	M71a4B14
225	10.2	6.9	6.23	302A	M71a4B14
257	8.9	5.6	5.45	302A	M71a4B14

0.37kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
7.3	459	1.1	126.65	603A	M80a6B5
10.2	321	1.0	136.62	503A	M71a4B5
15.1	228	1.1	60.90	502A	M80a6B14
22.7	152	1.9	40.50	502A	M80a6B14
27.6	119	1.3	50.64	403A	M71b4B14
35.0	98.5	1.4	26.30	402A	M80a6B14
39.1	87.4	3.7	35.58	502A	M71b4B5
43.5	79.2	1.4	21.15	302A	M80a6B14
48.1	71.0	1.6	28.88	302A	M71b4B14
59.9	57.6	2.8	15.37	402A	M80a6B14
65.7	52.0	2.2	21.15	302A	M71b4B14
74.0	46.2	2.3	18.78	302A	M71b4B14
92.1	37.1	3.1	15.10	302A	M71b4B14
122	28.1	4.0	11.42	302A	M71b4B14
141	24.2	3.9	9.85	302A	M71b4B14
180	19.0	4.2	7.74	302A	M71b4B14
223	15.3	4.6	6.23	302A	M71b4B14
325	10.5	4.8	4.28	302A	M71b4B14

0.55W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
11.1	448	1.1	126.65	603A	M80a4B5
15.1	327	1.2	60.90	602A	M80b6B5
18.4	271	1.3	76.69	503A	M80a4B14
23.2	222	1.1	60.90	502A	M80a4B14
25.8	193	1.8	54.73	503A	M80a4B14
34.8	148	2.0	40.50	502A	M80a4B14
42.7	116	1.4	21.54	402A	M80b6B14
45.8	108	3.0	20.10	502A	M80b6B14
53.6	95.9	1.4	26.30	402A	M80a4B14
65.5	78.6	2.0	21.54	402A	M80a4B14
75.1	68.5	1.6	18.78	302A	M80a4B14
93.4	55.1	2.0	15.10	302A	M80a4B14
124	41.7	2.7	11.42	302A	M80a4B14
143	35.9	2.6	9.85	302A	M80a4B14
182	28.2	2.8	7.74	302A	M80a4B14
226	22.7	3.1	6.23	302A	M80a4B14
329	15.6	3.2	4.28	302A	M80a4B14

The new MultiMount range comprises a modular system of aluminium gearboxes that accept standard IEC framed motors.

Industry standard dimensions for shaft height and footprint

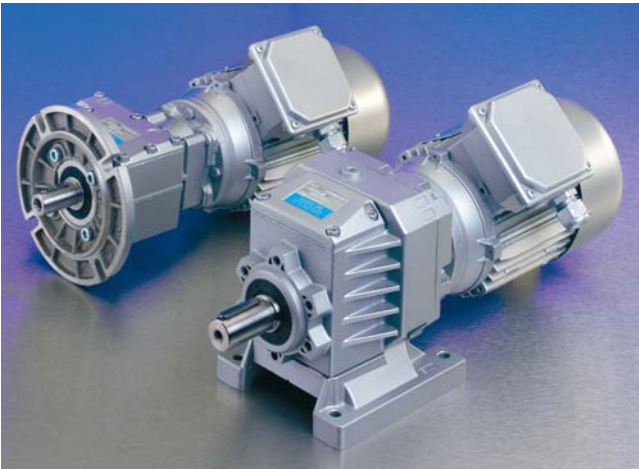
IEC standard inputs & outputs

Optional bolt on feet & flanges

Gears hardened & ground for low noise & long life

Low weight

Economical & available from stock



Motors

Photographs and dimension pages show Lenze 3 phase motors at 4 and 6 pole speeds. Mountings are as below:

Gearbox size	Motor frame size					
	56	63	71	80	90	100/112
302		B5Ø160	B14c105*	B14c120*	B14C140	-
402		B5Ø160	B14c105*	B14c120*	B14c140	B14C160
403	B14c80	B5Ø160	B14c105	-	-	-
502		-	B5Ø160	B14c120	B14c140	B14C160
503		B5Ø160	B5Ø160	B14c120*	B14c140	-
602		-	B5Ø160	B5Ø200	B5Ø200	B14c160
603		B5Ø160	B5Ø160	B5Ø200	B5Ø200	-

* when using motors with 4 holes, terminal box positions are at 45° to horizontal.

Other motors with IEC frame dimensions can be used, for example 1phase, brake motors, ATEX flameproof and dc.

Variable speed operation

Lenze inverters allow speed variation over a range of about 3:1 (up to 10:1 if the motor is fitted with a blower).

- smd inverters, simple and low cost, only needs single phase supply
- motec terminal box inverters for a complete IP55 variable speed package.

Lubrication

Gearboxes are filled with synthetic oil and sealed for life, also fitted with sealed for life bearings. They can be mounted in any position. A removable inspection cover is available for periodic maintenance.

Efficiency

Highly efficient ground helical gears save energy and achieve efficiency levels of 96-97%.

Service factors

Find the application service factor from the table:

Starts/hour	Type of load	Operating hours/day		
		3	10	24
≤10	Uniform	0.8	1.0	1.25
	Moderate	1.0	1.25	1.5
	Heavy	1.25	1.5	1.75
>10	Uniform	1.0	1.25	1.5
	Moderate	1.25	1.5	1.75
	Heavy	1.5	1.75	2.15

For reversing applications increase the service factor by 15%.

Ordering specification and example

Quantity

Output speed r/min

Gearbox type

Gearbox options - feet type

(see dimension pages) - output flange diameter

Motor type (3 phase, 1 phase, 3 phase braked.....)

Motor frame and mounting

Motor power

2 off

30.6 r/min

402

B2

200mm

3 phase

M71a4 B14c105

0.25kW

Gearboxes, options and motors are normally shipped dissassembled.

MultiMount geared motors

0.75kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
13.6	486	1.0	104.68	603A	M80b4B5
18.5	365	1.4	76.69	603A	M80b4B5
23.2	292	1.4	60.90	602A	M80b4B5
26.0	254	1.4	54.73	503A	M80b4B14
31.6	288	1.5	29.41	602A	M90s6B5
35.1	194	1.5	40.50	502A	M80b4B14
39.9	171	1.9	35.58	502A	M80b4B14
46.3	148	2.2	20.10	502A	M90s6B14
54.0	126	1.1	26.30	402A	M80b4B14
60.5	112	1.4	15.37	402A	M90s6B14
65.9	103	1.4	21.54	402A	M80b4B14
70.7	96.5	3.1	20.10	502A	M80b4B14
94.0	72.5	1.6	15.10	302A	M80b4B14
124	54.8	2.1	11.42	302A	M80b4B14
144	47.3	2.0	9.85	302A	M80b4B14
184	37.2	1.7	7.74	302A	M80b4B14
228	29.9	2.3	6.23	302A	M80b4B14
332	20.5	2.4	4.28	302A	M80b4B14

1.8kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
39.3	427	1.2	35.58	602A	M90m4B5
47.6	353	1.2	29.41	602A	M90m4B5
56.9	299	1.6	24.61	602A	M90m4B5
69.7	241	1.3	20.10	502A	M90m4B14
84.2	199	1.8	16.62	502A	M90m4B14
139	121	1.2	10.06	402A	M90m4B14
148	113	3.1	9.45	502A	M90m4B14
191	88.0	1.4	7.33	402A	M90m4B14
206	81.6	3.7	6.81	502A	M90m4B14
252	66.6	1.5	5.55	402A	M90m4B14

1.1kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
23.0	438	1.0	60.90	602A	M90s4B5
25.6	382	1.3	54.73	603A	M90s4B5
31.3	325	1.3	29.41	602A	M90b6B5
34.6	292	1.0	40.50	502A	M90s4B14
45.8	222	1.5	20.10	502A	M90b6B5
47.6	212	2.1	29.41	602A	M90s4B14
56.0	180	1.4	24.98	502A	M90s4B14
65.0	155	1.0	21.54	402A	M90s4B14
69.7	145	2.2	20.10	502A	M90s4B14
91.1	111	1.4	15.37	402A	M90s4B14
139	72.4	2.1	10.06	402A	M90s4B14
191	52.8	2.3	7.33	402A	M90s4B14
252	40.0	2.5	5.55	402A	M90s4B14

2.2kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
57.2	356	1.1	24.98	602A	M100a4B14
71.1	287	1.1	20.10	502A	M100a4B14
86.0	237	1.5	16.62	502A	M100a4B14
99.5	207	1.7	9.45	502A	M112a6B14
138	149	2.0	6.81	502A	M112a6B14
151	135	2.3	9.45	502A	M100a4B14
195	105	1.1	7.33	402A	M100a4B14
210	97.3	3.1	6.81	502A	M100a4B14
257	79.4	1.3	5.55	402A	M100a4B14

1.5kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox Type	Motor type no
31.7	424	1.0	44.23	602A	M90l4B5
37.0	382	1.0	24.98	602A	M100a6B14
39.4	341	1.5	35.58	602A	M90l4B5
47.6	282	1.6	29.41	602A	M90l4B5
56.0	240	1.0	24.98	502A	M90l4B14
56.2	240	1.7	24.98	602A	M90l4B5
70.0	193	1.7	20.10	502A	M90l4B14
84.2	160	2.2	16.62	502A	M90l4B14
91.1	148	1.1	15.37	402A	M90l4B14
139	96.6	1.5	10.06	402A	M90l4B14
191	70.4	1.7	7.33	402A	M90l4B14
206	68.0	4.4	6.81	502A	M90l4B14
252	53.3	2.3	5.55	402A	M90l4B14

Motor type numbers

Example
1.1kW motor

M90s

4

B14

IEC frame size
e.g. M80b
M90s
M90m
M90l
M100a

Mounting
B14 face or
B5 flange

Number of poles
2 = 3000 r/min
4 = 1500 r/min
6 = 1000 r/min

Motor type numbers and mountings

Power	Motor
90W	63a6B5ø140 56b4B14c180
120W	63b4B5ø140
180W	71a6B5ø160 63b4B5ø140

Power	Motor
0.25kW	M71a4B5ø160 M71a4B14c105 M71b6B14c105 M71b6B5ø160
0.37kW	M71b4B5ø160 M71b4B14c105 M80a6B5ø200 M80a6B14c120

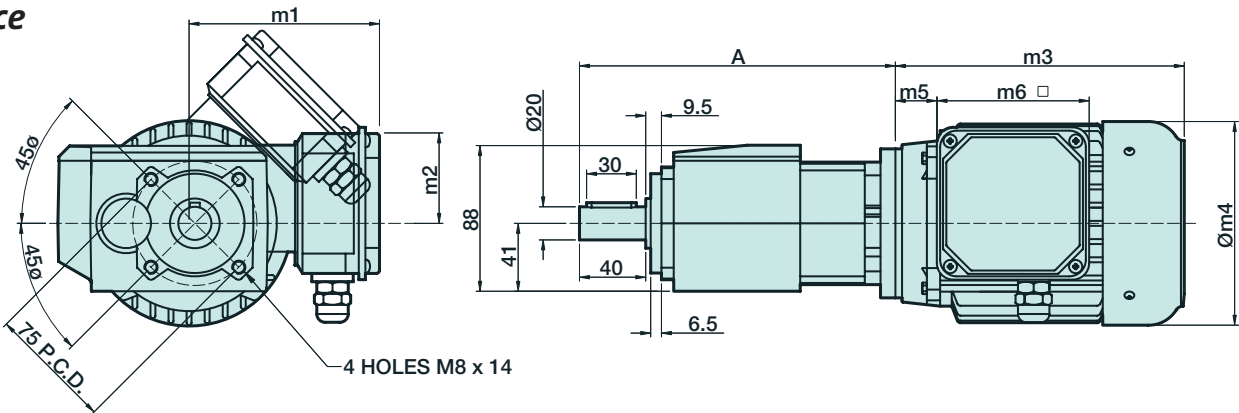
Power	Motor
0.55kW	M80a4B5ø200 M80a4B14øc120 M80b6B14øc120 M80b6B5ø200
0.75kW	M80b4B5ø200 M80b4B14c120 M90s6B5ø200 M90s6B14c140

Power	Motor
1.1kW	M90s4B5ø200 M90s4B14c140 M90b6B5ø200
1.5kW	M90l4B5ø200 M90l4B14c140 M100a6B14c160
1.8kW	M90m4B5ø200 M90m4B14c140
2.2kW	M100a4B14c160 M112a6B14c160

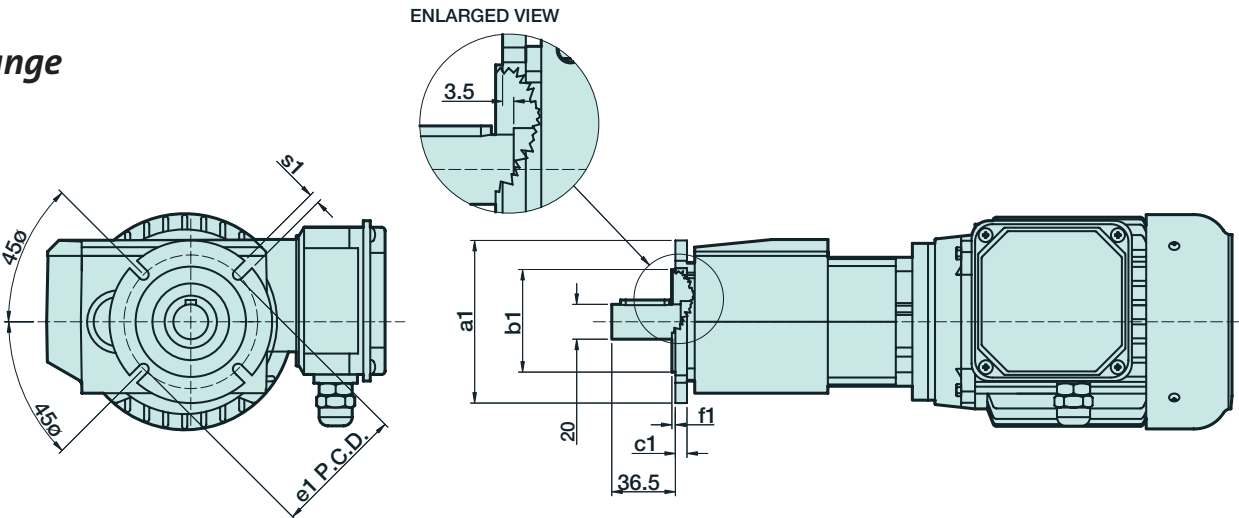
MultiMount geared motors

Dimensions 302

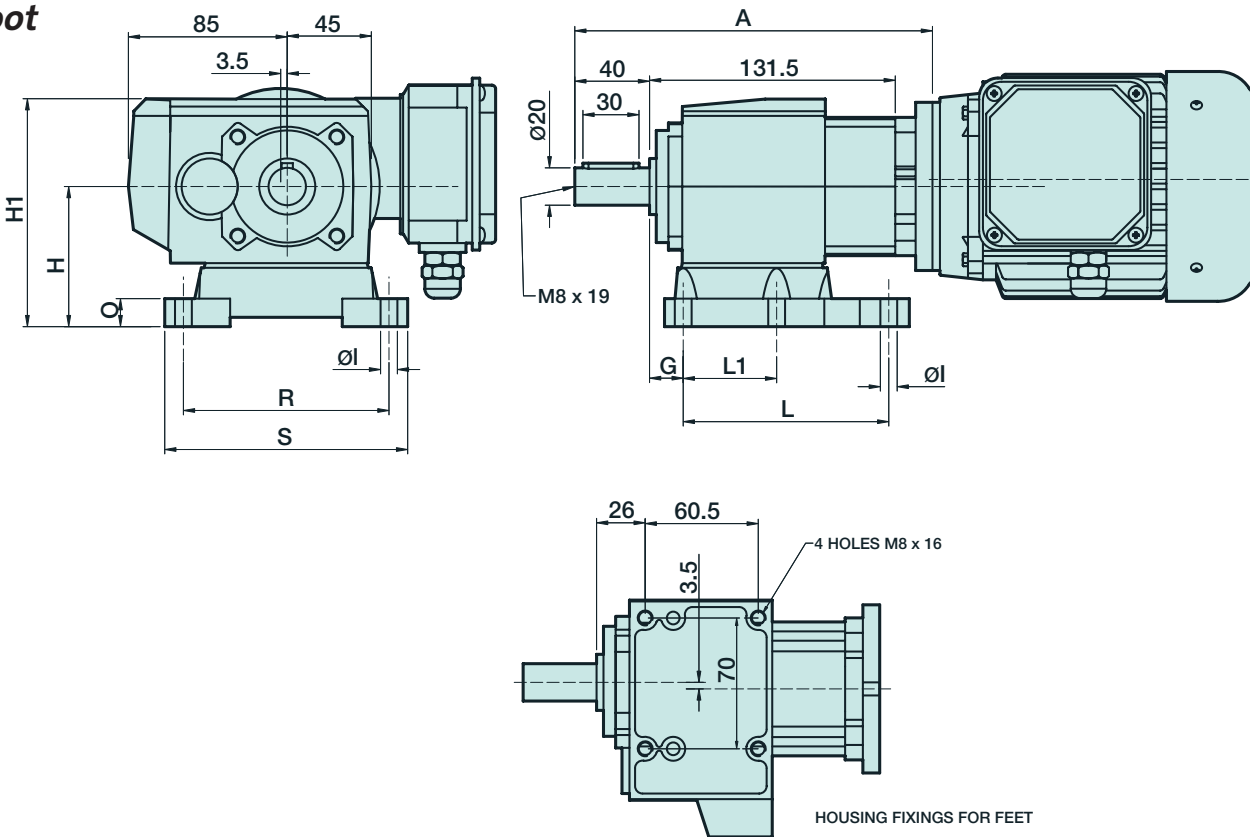
Face



Flange



Foot



MultiMount geared motors

Dimensions 302

Gearbox			Motor						
Input	A	Weight kg	Motor						Weight kg
			m1	m2	m3 ²⁾	m4	m5	m6	
63B5Ø160	191.5	3.6	115	58	202	130	25	92	4.8
71B14c105 ¹⁾	189.5	3.6	124	52	220	145	25	92	6.3
80B14c120 ¹⁾	190.5	3.6	145	60	255	175	30	108	11.0

- 1) when using motors with 4 holes, terminal box positions are at 45° to the horizontal
2) standard 3 phase motor

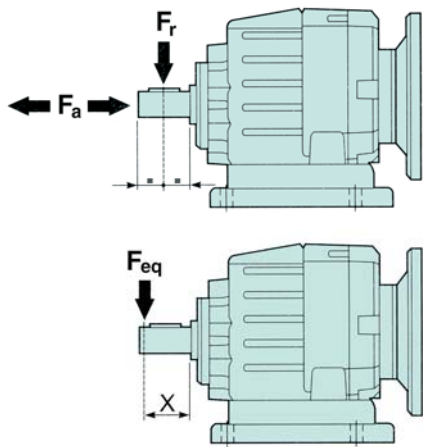
Output Flange						
a1	b1	c1	e1	f1	s1	Weight kg
120 ³⁾	80	11.5	100	3	9	0.2
140	95	11.5	115	3	9	0.3
160	110	11.5	130	3.5	9	0.4
200	130	11.5	165	3.5	11	0.6

- 3) output connection slots s1 are on horizontal and vertical axes

Feet										
Code	Market ref	G	H	H1	ØI	L	L1	O	R	S
B1	102	18	85	125	9	87	50	15	110	130
S1	17-32	18	75	115.5	11	110	50	15	110	130

Radial & axial loads

Permissible radial & axial loads are listed. Maximum radial load is based on the axial load being zero, and vice versa. If significant axial & radial loads are present simultaneously, refer the data to our geared motor engineers. On request, models with re-inforced bearings may be available.

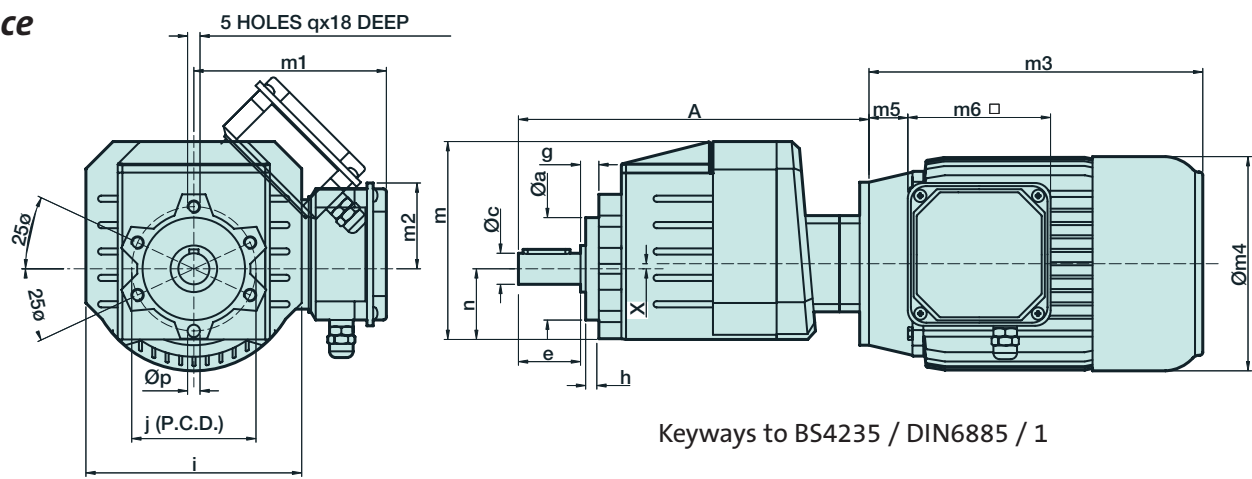


n ² [min ⁻¹]	302A		402A 403A		502A 503A		602A 603A	
	F _a [N]	F _r [N]	F _a [N]	F _r [N]	F _a [N]	F _r [N]	F _a [N]	F _r [N]
300	140	700	310	1550	460	2300	560	2800
250	151	756	330	1650	480	2400	600	3000
200	185	924	360	1800	520	2600	640	3200
140	246	1320	406	2030	600	3000	740	3700
120	270	1350	448	2240	620	3100	760	3800
85	300	1500	480	2400	700	3500	840	4000
70	340	1700	540	2700	780	3900	890	4200
40	380	1900	600	3000	900	4500	1160	5800
15	-	-	600	3000	1000	5000	1300	6500
F _{eq} =	$F_R \bullet \frac{35.7}{x+20.7}$		$F_R \bullet \frac{46}{x+21}$		$F_R \bullet \frac{54}{x+24}$		$F_R \bullet \frac{60.5}{x+25.5}$	

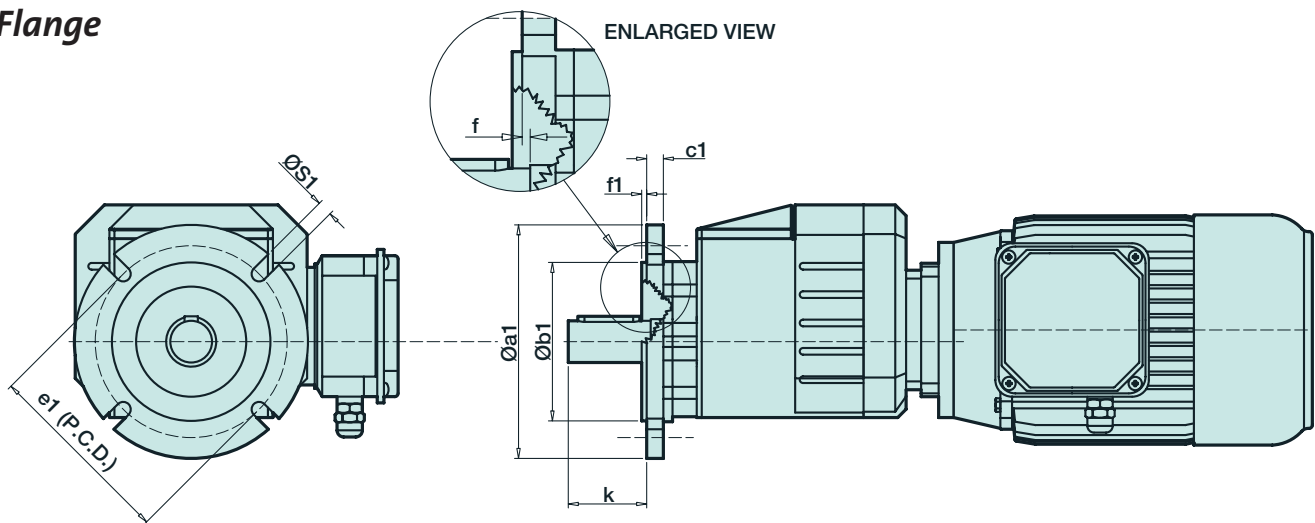
MultiMount geared motors

Dimensions 402, 502, 602
403, 503, 603

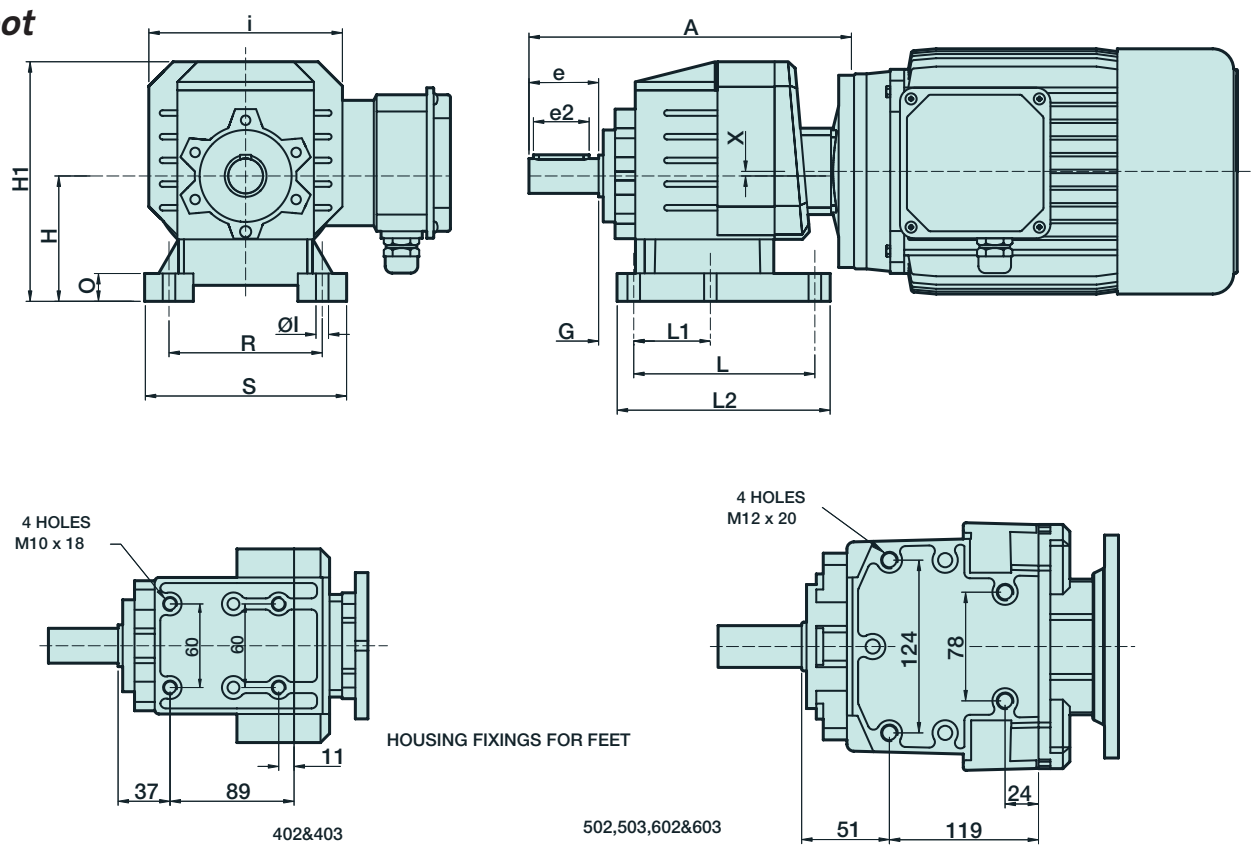
Face



Flange



Foot



MultiMount geared motors

Dimensions 402, 502, 602

403, 503, 603

Gearbox														
	a	c	e	e2	f	g	h	i	j	k	m	n	p	q
	h8													
402,403	66	25	50	40	3	11.5	8.2	139	80	47	127	45.5	8	M8
502, 503	106	30	60	50	2.5	15.5	12	178	123	57.5	171	69.5	10	M10
602, 603	106	35	70	60	2.5	15.5	12	202	123	67.5	173	69.5	10	M10

Gearbox		
	Offset X	Weight kg
402	7	5.7
403	3.2	6.1
502	5.3	11.7
503	15	11.9
602	21.8	14.1
603	15.5	14.3

Motors shown are our standard of Lenze 3 phase with IEC frame dimensions. Exact dimensions around terminal boxes may vary. Other motors are possible on request, e.g. 1 phase, braked, dc.

Gearbox							Motor ²⁾						
Input	Length A												Weight kg
	402	403	502	503	602	603	m1	m2	m3	m4	m5	m6	
56B14c80	-	237	-	-	-	-	110	58	167	110	30	80	3.9
63B5Ø160	231	233	-	297	-	325	115	58	202	130	25	92	4.8
71B14c105	229 ¹⁾	232	-	-	-	-	124	52	220	145	25	92	6.3
71B5Ø160	-	-	286	295	314	232							
80B14c120	230 ¹⁾	-	286	296	-	-	145	60	255	175	30	108	11.0
80B5Ø200	-	-	-	-	316	325							
90B14c140	231	-	286	297	-	-	155	60	290	195	33	108	15.2
90B5Ø200	-	-	-	-	316	325							
100B14c160	245.5	-	297	-	322	-	180	60	325	215	40	108	23.5
112B14c160	-	-	297	-	-	-	190	60	340	240	45	114	29.5

- 1) when using motors with 4 holes, terminal box positions are at 45° to the horizontal
- 2) standard 3 phase motor

Output flange							
							Weight kg
	a1	b1	c1	e1	f1	s1	
402	120	80	11.5	100	3	9	0.2
	140	95	11.5	115	3	9	0.3
403	502,3	160	110	11.5	130	3.5	0.4
	602,3	200	130	11.5	165	3.5	0.6
		250	180	15.5	215	4	1.2

Feet												
	Code	Market ref	G	H	H1	I	L	L1	L2	O	R	S
402, 3	B2	202/3	18	100	182	11	107.5	60	136	17	130	155
	H2	022-223	25	100	182	9	115	-	139	20	110	145
	M1	42/3	25	80	162	9	85	-	130	15	110-120	145
502, 3	B3	302/3	18	110	212	11	130	-	156	20	160	190
	B4	30/35	20	130	232	14	149.5	-	186	18	180	216
	M2	52/3	30	110	212	11	100	-	140	18	135-150	190
	S4	47-57	30	115	217	13.5	165	-	197	24	135	170
602,3	B4	402/3	20	130	233	14	149.5	-	186	18	180	216
	M3	62/3	35	120	223	14	110	-	150	20	170-185	230
	S4	47-57	30	135	218	13.5	165	-	197	24	135	170

A range of worm gearboxes with optional outputs and mountings that accepts IEC standard motors with B14 mounting.

- 7 sizes of gearbox for torques up to 647Nm
- Output speeds from 15 to 280 r/min
- High torques from quality gearbox construction
- Long life with design rating of 15000 hours
- Single phase models with high starting torques
- Three phase with standard or braked motors

Other features

- smooth casing in aluminium minimises dirt traps
- maintenance-free, filled for life with synthetic oil AGIP TELIUM VSF (equivalent Shell TIVELA SC320)
- mount in any position (but see comment on page 15)
- hollow shaft mounting, optional torque arm, output flange, or feet (options supplied loose with fasteners)
- single- and double-ended shafts available, also hollow shaft end cover.

Motors

Motor details can vary. Photographs and dimensions are shown with Lenze 3 phase motors. Other motors with IEC frame dimensions can be used, for example 1 phase, brake motors, dc motors and flameproof.

Service factors

- SW gearboxes are rated 15,000 hours operation with service factor = 1. On request we can calculate life for different loads.
- service factors to suit different applications can be calculated from tables below:

Type of load	hours running per day			
	<2	2-8	9-16	>16
Uniform	0.8	1	1.25	1.5
Medium shock	1	1.25	1.5	1.8
Heavy shock	1.25	1.5	2	2.4

	number of starts per hours				
	<10	10-30	31-60	61-120	>120
	1	1.15	1.2	1.3	1.5



Inverter variable speed



SW geared motors can be supplied with matching inverters for operation over a speed range of about 3:1 (up to 10:1 if motor is fitted with a blower).

- smd inverters, simple and low cost, only needs 1 phase supply.
- motec terminal box inverter for a complete variable speed package.

Gearbox efficiency

- running efficiencies are achieved after a short period or running-in
- typical efficiency figures vary with the gear ratio
 - i = 5 - 10 $\eta \geq 80\%$
 - i = 15 - 40 $\eta = 60 - 80\%$
 - i = 50 - 60 $\eta = 50 - 70\%$

smaller sizes have efficiencies to the lower end of the bands.

More accurate data is available on request.

- starting efficiencies are lower by about 25%, i.e. 80% efficiency becomes 55%

Ordering specification and example

Quantity

Output speed r/min

Gearbox type

Type number for gearbox options
(feet, shafts, flanges, torque arm, cover)

Motor type (3 phase, 1 phase, 3 phase braked, or other)

Motor frame and mounting *

Motor power

* see page 9 for B14 diameters

5 off

47

SW40/T/30/71-18

feet 13012273

double shaft 13012417

3 phased braked

M71a4B14

0.25kW

SW aluminium worm geared motors

90W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
280	2.7	6.7	5	SW30/T/5/56-14	M56b4B14
187	3.9	4.6	7.5	SW30/T/7.5/56-14	M56b4B14
140	5.0	3.6	10	SW30/T/10/56-14	M56b4B14
94	7.1	2.5	15	SW30/T/15/56-14	M56b4B14
70	9.0	2.0	20	SW30/T/20/56-14	M56b4B14
56	10	2.0	25	SW30/T/25/56-14	M56b4B14
47	12	1.7	30	SW30/T/30/56-14	M56b4B14
35	14	1.2	40	SW30/T/40/56-14	M56b4B14
30	17	1.2	30	SW30/T/30/63-14	M63a6B14
30	17	1.2	30	SW40/T/30/63-18	M63a6B14
22	21	1.0	40	SW30/T/40/63-14	M63a6B14
22	24	1.9	40	SW40/T/40/63-18	M63a6B14
18	27	1.5	50	SW40/T50/63-18	M63a6B14
15	31	1.3	60	SW40/T/60/63-18	M63a6B14

130W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
280	4	5.1	5	SW30/T/5/63-14	M63b4B14
187	5	3.4	7.5	SW30/T/7.5/63-14	M63b4B14
140	7	2.7	10	SW30/T/10/63-14	M63b4B14
94	9	1.9	15	SW30/T/15/63-14	M63b4B14
70	12	1.5	20	SW30/T/20/63-14	M63b4B14
56	14	1.5	25	SW30/T/25/63-14	M63b4B14
47	16	1.3	30	SW30/T/30/63-14	M63b4B14
47	17	2.6	30	SW40/T/30/63-18	M63b4B14
35	21	1.9	40	SW40/T/40/63-18	M63b4B14
28	25	1.5	50	SW40/T/50/63-18	M63b4B14
23	28	1.3	60	SW40/T/60/63-18	M63b4B14
23	29	2.3	60	SW50/T/60/63-25	M63b4B14
15	42	1.7	60	SW50/T/60/63-25	M63b6B14

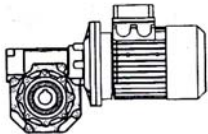
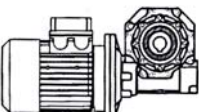
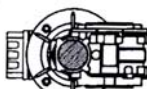
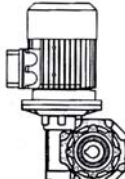
180W					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
280	5	3.4	5	SW30/T/5/63-14	M63b4B14
187	8	2.3	7.5	SW30/T/7.5/63-14	M63b4B14
140	10	1.8	10	SW30/T/10/63-14	M63b4B14
94	14	1.3	15	SW30/T/15/63-14	M63b4B14
70	18	1.0	20	SW30/T/20/63-14	M63b4B14
70	19	2.0	20	SW40/T/20/63-18	M63b4B14
56	21	1.0	25	SW30/T/25/63-14	M63b4B14
56	23	1.7	25	SW40/T/25/63-18	M63b4B14
47	26	1.7	30	SW40/T/30/63-14	M63b4B14
35	32	1.3	40	SW40/T/40/63-18	M63b4B14
28	38	1.0	50	SW40/T/50/63-18	M63b4B14
28	39	1.9	50	SW50/T/50/63-25	M63b4B14
24	43	1.6	60	SW50/T/60/63-25	M63b4B14
18	56	1.4	50	SW50/T/50/71-25	M71a6B14
15	56	1.1	60	SW50/T/60/71-25	M71a6B14

0.25kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
280	8	4.5	5	SW40/T/5/71-18	M71a4B14
187	11	3.6	7.5	SW40/T/7.5/71-18	M71a4B14
140	14	2.8	10	SW40/T/10/71-18	M71a4B14
94	21	1.9	15	SW40/T/15/71-18	M71a4B14
70	27	1.5	20	SW40/T/20/71-18	M71a4B14
56	32	1.2	25	SW40/T/25/71-18	M71a4B14
56	32	2.2	25	SW50/T/25/71-25	M71a4B14
47	36	1.3	30	SW40/T/30/71-18	M71a4B14
47	37	2.3	30	SW50/T/30/71-25	M71a4B14
35	46	1.7	40	SW50/T/40/71-25	M71a4B14
28	54	1.4	50	SW50/T/50/71-25	M71a4B14
24	60	1.1	60	SW50/T/60/71-25	M71a4B14
24	63	2.0	60	SW63/T/60/71-25	M71a4B14

0.37kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
280	11	3.0	5	SW40/T/5/71-18	M71b4B14
187	16	2.4	7.5	SW40/T/7.5/71-18	M71b4B14
140	21	1.9	10	SW40/T/10/71-18	M71b4B14
94	31	1.3	15	SW40/T/15/71-18	M71b4B14
94	31	2.4	15	SW50/T/15/71-25	M71b4B14
70	39	1.0	20	SW40/T/20/71-25	M71b4B14
70	40	1.8	20	SW50/T/20/71-25	M71b4B14
56	48	1.5	25	SW50/T/25/71-25	M71b4B14
47	55	1.5	30	SW50/T/30/71-25	M71b4B14
35	68	1.1	40	SW50/T/40/71-25	M71b4B14
35	71	2.1	40	SW63/T/40/71-25	M71b4B14
28	83	1.6	50	SW63/T/50/71-25	M71b4B14
24	94	1.4	60	SW63/T/60/71-25	M71b4B14
18	120	1.2	50	SW63/T/50/80-25	M80a6B14
15	137	1.0	60	SW63/T/60/80-25	M80a6B14
15	144	1.5	60	SW75/T/60/80-28	M80a6B14

0.55kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
280	17	3.7	5	SW50/T/5/80-25	M80a4B14
187	25	2.9	7.5	SW50/T/7.5/80-25	M80a4B14
140	32	2.2	10	SW50/T/10/80-25	M80a4B14
94	46	1.6	15	SW50/T/15/80-25	M80a4B14
70	59	1.2	20	SW50/T/20/80-25	M80a4B14
70	61	2.2	20	SW63/T/20/80-25	M80a4B14
56	71	1.0	25	SW50/T/25/80-25	M80a4B14
56	73	1.8	25	SW63/T/25/80-25	M80a4B14
47	81	1.0	30	SW50/T/30/80-25	M80a4B14
47	83	1.9	30	SW63/T/30/80-25	M80a4B14
35	105	1.4	40	SW63/T/40/80-25	M80a4B14
28	124	1.1	50	SW63/T/50/80-25	M80a4B14
28	129	1.6	50	SW75/T/50/80-28	M80a4B14
23	146	1.4	60	SW75/T/60/80-28	M80a4B14
15	224	1.6	60	SW90/T/60/80-35	M80b6B14

Mounting & lubrication

B3	B8	B6	B7	V5	V6
					

Gearboxes are filled and sealed for life suiting all mounting positions except sizes 90 & 105 in positions V5 and V6. In this case ask for an adjustment of oil fill.

SW aluminium worm geared motors

0.75kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
280	23	2.7	5	SW50/T/5/80-25	M80b4B14
187	34	2.1	7.5	SW50/T/7.5/80-25	M80b4B14
140	44	1.6	10	SW50/T/10/80-25	M80b4B14
94	63	1.2	15	SW50/T/15/80-25	M80b4B14
94	64	2.2	15	SW63/T/15/80-25	M80b4B14
70	83	1.6	20	SW63/T/20/80-25	M80b4B14
56	100	1.3	25	SW63/T/25/80-25	M80b4B14
56	102	2.0	25	SW75/T/25/80-28	M80b4B14
47	114	1.4	30	SW63/T/30/80-25	M80b4B14
47	117	2.0	30	SW75/T/30/80-28	M80b4B14
35	143	1.0	40	SW63/T/40/80-25	M80b4B14
35	147	1.5	40	SW75/T/40/80-28	M80b4B14
28	177	1.2	50	SW75/T/50/80-28	M80b4B14
28	184	1.8	50	SW90/T/50/80-35	M80b4B14
23	200	1.0	60	SW75/T/60/80-28	M80b4B14
23	212	1.5	60	SW90/T/60/80-35	M80b4B14
15	306	1.1	60	SW90/T/60/90-35	M90s6B14

1.1kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
187	50	2.6	7.5	SW63/T/7.5/90-25	M90s4B14
140	65	2.0	10	SW63/T/10/90-25	M90s4B14
94	93	1.5	15	SW63/T/15/90-25	M90s4B14
70	122	1.1	20	SW63/T/20/90-25	M90s4B14
70	123	1.7	20	SW75/T/20/90-28	M90s4B14
56	150	1.3	25	SW75/T/25/90-28	M90s4B14
47	167	1.0	30	SW63/T/30/90-25	M90s4B14
47	171	1.3	30	SW75/T/30/90-28	M90s4B14
35	216	1.0	40	SW75/T/40/90-28	M90s4B14
35	225	1.6	40	SW90/T/40/90-35	M90s4B14
28	270	1.3	50	SW90/T/50/90-35	M90s4B14
23	311	1.0	60	SW90/T/60/90-35	M90s4B14
18	397	1.0	50	SW90/T/50/90-35	M90l6B14

1.5kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
187	68	1.9	7.5	SW63/T/7.5/90-25	M90l4B14
140	89	1.5	10	SW63/T/10/90-25	M90l4B14
94	127	1.1	15	SW63/T/15/90-25	M90l4B14
94	130	1.5	15	SW75/T/15/90-28	M90l4B14
70	168	1.3	20	SW75/T/20/90-28	M90l4B14
70	172	2.1	20	SW90/T/20/90-35	M90l4B14
56	205	1.0	25	SW75/T/25/90-28	M90l4B14
56	210	1.6	25	SW90/T/25/90-35	M90l4B14
47	233	1.0	30	SW75/T/30/90-28	M90l4B14
47	239	1.7	30	SW90/T/30/90-35	M90l4B14
35	307	1.2	40	SW90/T/40/90-35	M90l4B14
23	358	1.3	40	SW90/T/40/90-35	M100a6B14

1.8kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
187	81	1.6	7.5	SW63/T/7.5/90-25	M90l4B14
140	107	1.2	10	SW63/T/10/90-25	M90l4B14
140	108	1.8	10	SW75/T/10/90-28	M90l4B14
93	157	1.3	15	SW75/T/15/90-28	M90l4B14
70	201	1.0	20	SW75/T/20/90-28	M90l4B14
70	206	1.7	20	SW90/T/20/90-35	M90l4B14
56	252	1.4	25	SW90/T/25/90-35	M90l4B14
47	287	1.4	30	SW90/T/30/90-35	M90l4B14
35	368	1.0	40	SW90/T/40/90-35	M90l4B14

2.2kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
187	100	1.8	7.5	SW75/T/7.5/100-28	M100a4B14
140	132	1.5	10	SW75/T/10/100-28	M100a4B14
93	191	1.0	15	SW75/T/15/100-28	M100a4B14
93	194	1.9	15	SW90/T/15/100-35	M100a4B14
70	252	1.4	20	SW90/T/20/100-35	M100a4B14
56	308	1.1	25	SW90/T/25/100-35	M100a4B14
56	315	1.9	25	SW105/T/25/100-42	M100a4B14
47	351	1.2	30	SW90/T/30/100-35	M100a4B14
47	356	1.8	30	SW105/T/30/100-42	M100a4B14
35	468	1.3	40	SW105/T/40/100-42	M100a4B14
28	563	1.1	50	SW105/T/50/100-42	M100a4B14

3.0kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
187	137	1.4	7.5	SW75/T/7.5/100-28	M100b4B14
140	180	1.1	10	SW75/T/10/100-28	M100b4B14
140	182	1.7	10	SW75/T/10/100-28	M100b4B14
93	264	1.4	15	SW90/T/15/100-35	M100b4B14
70	344	1.0	20	SW90/T/20/100-35	M100b4B14
70	348	1.6	20	SW105/T/20/100-42	M100b4B14
56	430	1.4	25	SW105/T/25/100-42	M100b4B14
47	485	1.3	30	SW105/T/30/100-42	M100b4B14
35	638	1.0	40	SW105/T/40/100-42	M100b4B14

4.0kW					
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Gearbox type	Motor type no
187	184	1.6	7.5	SW90/T/7.5/11-35	M112a4B14
140	243	1.3	10	SW90/T/10/11-35	M112a4B14
93	352	1.6	15	SW105/T/15/11-42	M112a4B14
70	464	1.2	20	SW105/T/20/11-42	M112a4B14
56	573	1.0	25	SW105/T/25/11-42	M112a4B14
47	647	1.0	30	SW105/T/30/11-42	M112a4B14

Radial loads

- Where belts, sprockets or gears are fitted to the optional gearbox output shafts, consideration of radial loads is required. This depends on the transmitted torque and the type/size of transmission element where:

Radial load = $\frac{2000 \cdot M_2 \cdot fz}{dw}$

where: M_2 = output torque in Nm
 dw = effective diameter of sprocket gear
 fz = factor for type of element

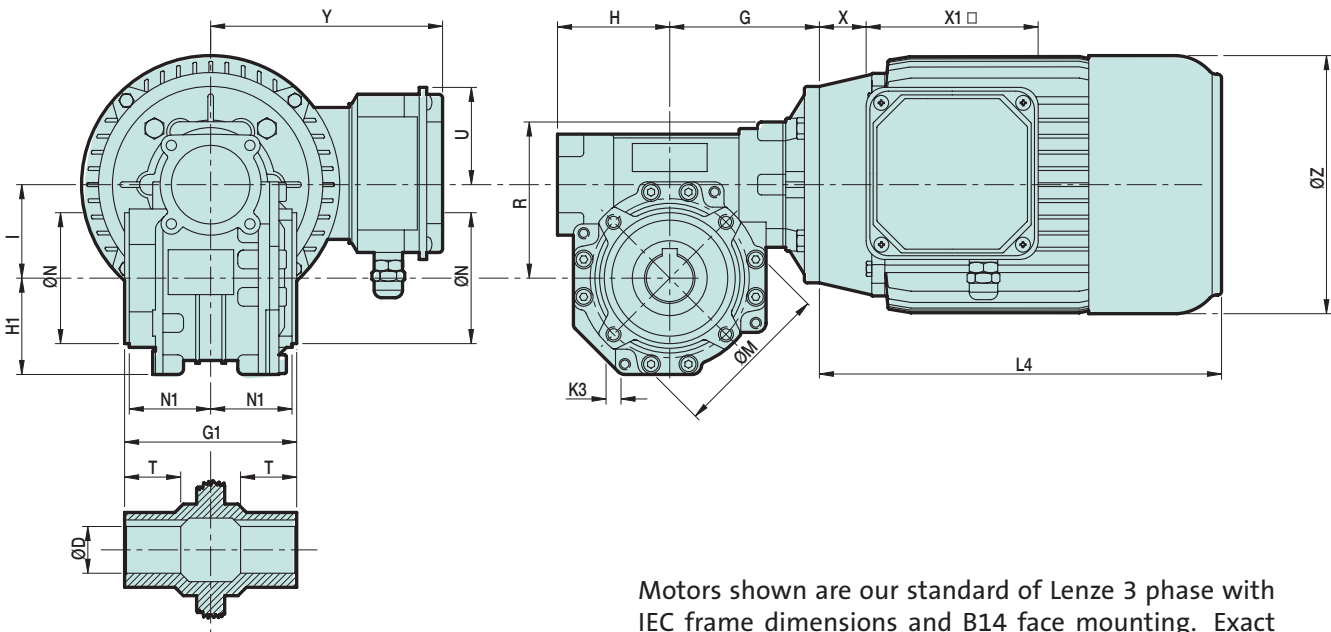
Gears	$fz = 1.1$ V-belts	$fz = 1.7$
Chainwheels	$fz = 1.4$ Flat belts	$fz = 2.5$

Gear ratio	Gearbox size					
	30	40	50	63	75	105
5	597	1149	1577	-	-	-
10	752	1447	1987	2597	3065	3391
20	752	1147	1987	2597	3065	3391
30	1085	2087	2865	3745	4421	4891
50	1286	2475	3397	4440	5241	5799
60	1367	2630	3610	4719	5569	6163

Gearbox radial load capacity in N based on input speed of 1400r/min. Higher speeds reduce load capacity.

- radial load capacities are rated for forces acting halfway along the output shaft. For other positions the capacities should be adjusted.

SW aluminium worm geared motors



Motors shown are our standard of Lenze 3 phase with IEC frame dimensions and B14 face mounting. Exact dimensions around terminal boxes may vary. Other motors are possible on request, eg. 1 phase, braked, dc.

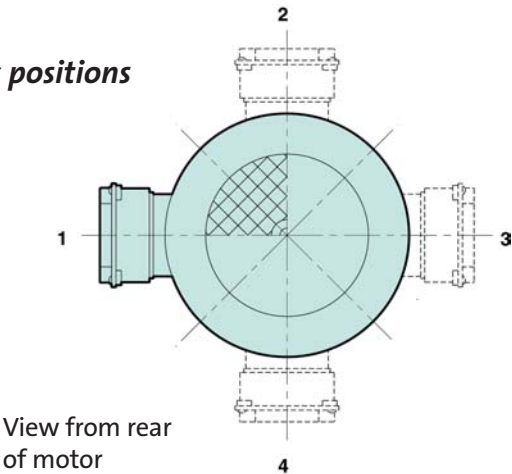
Gearbox size	D H8	G	G1	H	H1	I	K3	M	N h8	N1	R	T	Weight gearbox only
30	14	55	63	40	38	30	M6x11(4)**	65	55	29	57	21	1.1
40	18(19)*	70	78	50	42	40	M6x10(4)	75	60	36.5	70	26	2.1
50	25(24)*	80	92	60	52	50	M8x10(4)	85	70	43.5	84	30	3.0
63	25(28)*	95	112	72	66	63	M8x14(8)	95	80	53	102	36	5.6
75	28(35)*	112.5	120	86	80	75	M8x18(8)	115	95	57	117	40	8.1
90	35(38)*	129.5	140	103	97	90	M10x18(8)	130	110	67	133	45	11.7
105	42	160	155	127.5	115	110	M10x18(8)	165	130	74	166	50	26

* Alternative hollow shaft option, available on request. ** 4 off holes K3 are on vertical and horizontal axes.

Motor frame	L4	U	X	X1	Y	Z	Weight kg motor only
56	167	58	30	80	110	110	3.9
63	202	58	25	92	115	130	4.8
71	220	52	25	92	124	145	6.3
80	255	60	30	108	145	175	11.0
90S	265	60	33	108	155	195	12.0
90L	290	60	33	108	155	195	15.2
100	325	60	40	108	180	215	23.5
112	340	60	45	108	190	240	29.5

Motor terminal box positions

Motors are normally supplied disassembled



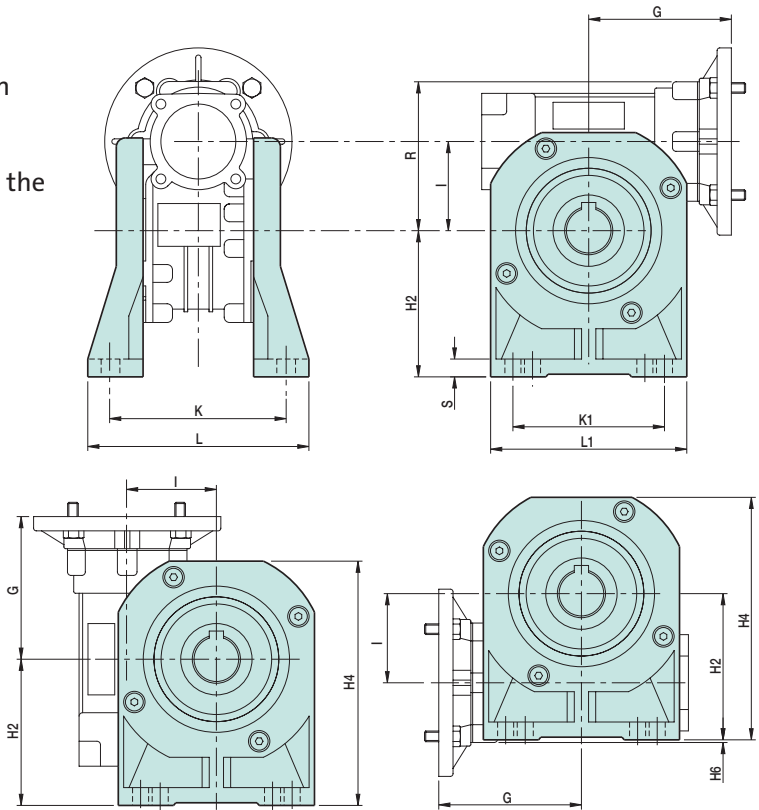
Motor power	Motor frame & mounting
90W	M56b4B14c80 M63a6B14c90
130W	M63b4B14c90 M63b6B14c90
180W	M63b4B14c90 M71a6B14c105
0.25kW	M71a4B14c105
0.37kW	M71b4B14c105 M80a6B14c120
0.55kW	M80a4B14c120 M80b6B14c120
0.75kW	M80b4B14c120 M90s6B14c140
1.1kW	M90s4B14c140 M90s6B14c140
1.5kW	M90l4B14c140 M90a6B14c140
1.8kW	M90l4B14c140
2.2kW	M100a4B14c160
3.0kW	M100b4B14c160
4.0kW	M112a4B14c160

SW aluminium worm geared motors - options

Feet

SW gearbox feet are supplied loose complete with fixing screws.

They can be fitted in any of three positions. With the wormshaft below, note that the gearbox body is sometimes below the feet.

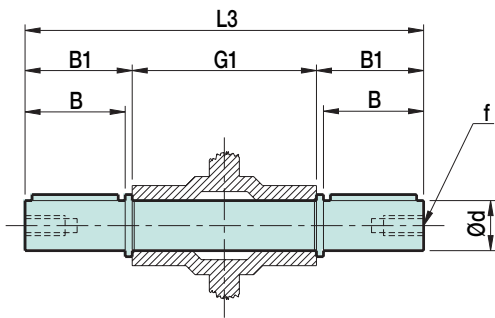
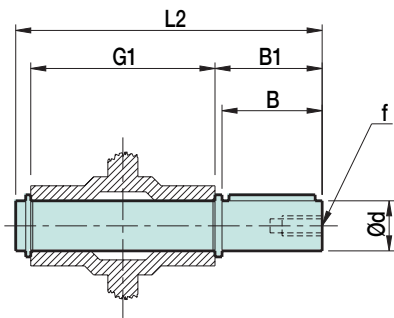


View from rear of motor

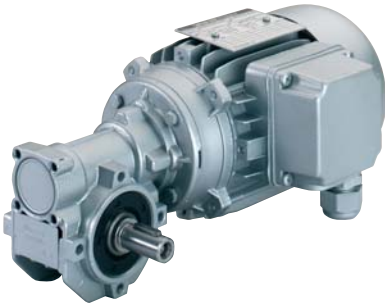
Gearbox size	G	H2	H4	H6	K	K1	I	L	L1	R	S	Type No. for pair of feet
30	55	55	97	1.2	66	50xØ6.5	30	80	80	57	7	13012760
40	70	72	117	-2	81	52xØ8.5	40	98	90	70	9	13012273
50	80	82	137	2	98.5	63xØ8.5	50	124	110	81	10	13012274
63	95	100	170	2	111	95xØ10.5	63	138	140	102	10	13012761
75	112.5	115	196	2	115	120xØ11	75	142	160	117	12	13012762
90	129.5	142	242	-9	146(140)	140xØ11	90	180	200	133	14	13012763
105	160	172	293.5	-6	181(160)	200xØ13	110	208	250	166	20	13012766

Shafts

Single and double male shafts are supplied loose with keys, circlips and washers.



Gearbox size	d	B	B1	G1	f	L2	L3	Type No.	
								single	double
30	14g6	30	32.5	63	M6	102	128	13012732	13012728
40	18h6	40	43	78	M6	128	164	13012733	13012417
50	25h6	50	53.5	92	M10	153	199	13012734	13012714
63	25h6	50	53.5	112	M10	173	219	13012735	13012741
75	28h6	60	63.5	120	M10	192	247	13012736	13012730
90	35h6	80	84.5	140	M12	234	309	13012737	13012719
105	42h6	80	84.5	155	M16	249	324	13012774	13012787

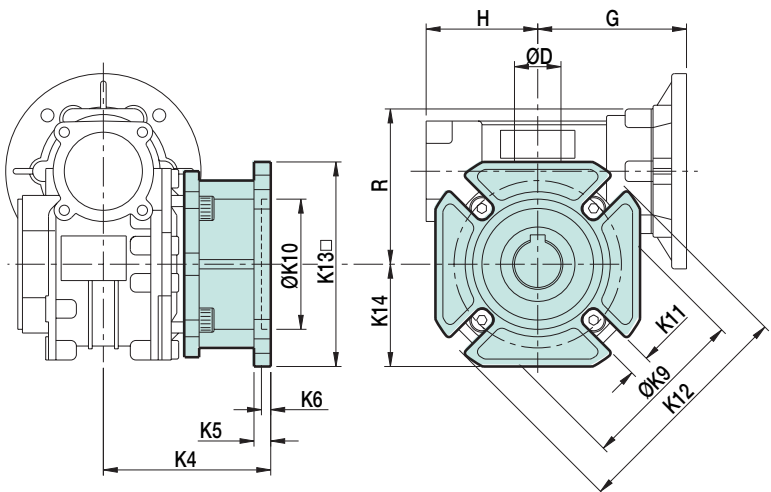


Options are supplied loose with fittings

SW aluminium worm geared motors - options

Flanges

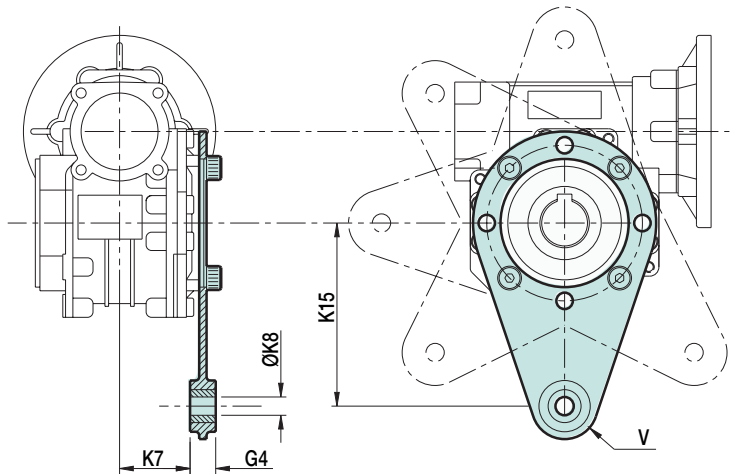
Flanges are supplied loose and can be fitted to either side. Two flange lengths, long and short, are available. See previous pages for additional dimensions.



Gearbox size	K5	K6	K9	K10 H8	K11 (4 off)	K12	K13	K14	Type No.			
									short		long	
30	6	4	68	50	6.5	80	70	35	54.5	13012738	-	-
40	7	4	75	60	9	110	95	47.5	67	13012271	97	13012810
50	9	5	85	70	11	125	110	55	90	13012272	120	13012754
63	10	6	150	115	11	180	142	71	82	13012739	112	13012790
75	13	6	165	130	14	200	170	85	111	13012740	-	-
90	13	6	175	152	14	210	200	100	111	13012775	-	-
105	15	6	230	170	ø14(8off)	230	260	130	131	13012773	-	-

Torque arms

Supplied loose with fixing bolts, the torque arm can be fitted to either side of the gearbox and in any of six positions.

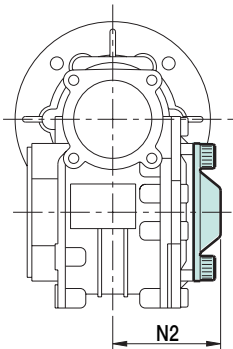


Gearbox size	G4	K7	K8	K15	V	Type No.
30	14	24	8	85	15	13012731
40	14	31.5	10	100	18	13012269
50	14	38.5	10	100	18	13012270
63	14	49	10	150	18	13012729
75	25	47.5	20	200	30	13012752
90	25	57.5	20	200	30	13012721
105	30	62	25	250	35	13012776

Shaft covers

These covers fit either side of the gearbox.

Gearbox size	N2	Type No.
30	38	13012722
40	50	13012723
50	58	13012724
63	69	13012725
75	74	13012726
90	86	13012727
105	94	13012765



G-motion geared motors

The comprehensive G-motion range matches all requirements up to 45kW. Two of the most popular models are included in this catalogue.

- Modular system with wide range of options
- Fast delivery from stock
- 16000 hour maintenance-free operating life
- Energy saving high efficiency up to 97%
- Motors with options such as brakes & blowers
- Compact and space saving



GST



Helical

1, 2 and 3 stage geared motors for powers 60W to 45kW and torques up to 7100Nm.
In this catalogue are 2 stage models 120W-7.5kW.
Other options on request.

GFL



Shaft mounted helical

Hollow shaft helical geared motors from 120W to 45kW with torques up to 13800Nm. There are options of male shafts, flanges and backlash free compression couplings.

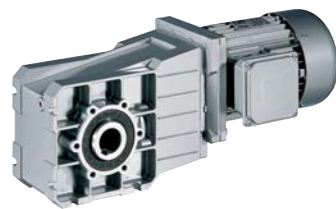
GSS



Helical worm

Robust cast iron helical worm geared motors for powers up to 15kW. Output speeds are 1 to 504 r/min.

GKR



Bevel

Compact and highly efficient geared motors for output speeds 19 to 550 r/min.
In this catalogue are models for 120W-5.5kW.
On request are 2 pole motors and output flanges.

GKS



Helical bevel

High efficiency cast iron geared motors for powers up to 45kW and torques to 14400Nm. Options include shafts, flanges and compression couplings.

ATEX



ATEX for hazardous areas

All models of Lenze G-motion geared motors are available to meet ATEX, zones 1, 21, 2 and 22, powers up to 45kW. More details on request.

Further information on the full G-Motion range is available on request.

Also G-Motion servo geared motors
G-Motion planetary geared motors

G-Motion - ordering

Modularity

G-Motion geared motors are truly modular giving you a wide range of useful options at low costs. They are assembled from stock parts to your specification.

StockGears

The most popular options are listed below and in the ordering specifications.

- spring applied brake for emergency stop and holding, 24 or 205V dc coils, optional manual release lever.
- forced ventilation blower to extend the speed range with inverter operation. Blowers can be connected for 1 or 3 phase supply.
- alternative oil fills for food production equipment, pollution sensitive environments or where ambient temperatures are abnormal.
- alternatives to the standard basalt grey RAL 7012 paint finish are green RAL9005, blue RAL5010, white RAL9018, black RAL9005.

Many more options are possible beyond these shown in this StockGears book. To get more information, discuss your needs with our G-Motion Engineers.

How to order

Provide the details from the tables below together with your order number, quantity and delivery requirements.



G-Motion drives conveyors in bottling plant



G-Motion precisely positions treatment head

Ordering specification and example

'Quantity required'	4		
Gearbox type & size	GKR 04	Spring applied brake	yes
Design	HAR	Brake hand release	no
Motor power/frame size	1.5kW/090C32	Brake coil voltage 205/24Vdc	205
Output speed	40r/min	Blower	yes
Mounting position	A	Non standard oil:	
Terminal box position	2	food compatible	no
Shaft position (GKR□□-VAR only)	-	water pollution class O	no
Non-standard paint finish	no	extended temperature range	no

Other options, details on request

Output flange, diameter mm	-	motec terminal box inverter	✓
2 nd output flange (GKR only)	-	starttec intelligent soft starter	-
2 nd output shaft (GKR only)	-	Handwheel	-
Torque plate (GKR only)	-	NDE shaft extension	-
Torque arm (GKR only)	✓	Rain cover for fan	-
Hollow shaft cover (GKR only)	✓	PTC/KTY thermal protection	✓
Shrink disc connection for hollow shaft	-	Anti-condensation heaters	-
Viton shaft seal	-	CSA certification	-
Reinforced output shaft bearings	-	IP65 enclosure	-
		Encoder TTL/HTL 2048/512 pulse	-

GST helical geared motors

- Robust cast-iron construction with strong feet for low noise and long life
- Compact dimensions
- Standard ‘true geared’ 3 phase motors are compact, with wide voltage range and low backlash
- Alternative foot, flange mountings
- Lubrication and paint colour alternatives possible
- Built to order - fast delivery
- Highly efficient at 96-97%

Materials

Housings are in cast iron (except size 03 in aluminium). Gears are case hardened and ground steel. Output shafts are C45/42CrM04 steel with NB/FP seals.

Lubrication

Standard lubricant is CLP 460 to suit ambient temperatures from 0 to 40°C. Operating life is 16000 hours or three years with operating temperatures between 70 and 80°C. See Fitting/Operating Instructions for oil volumes. Other lubricants available on request.

- food compatible oil CLP-H1220, registered USDA-H1
- organic oil CLP-E320 with water pollution class O
- synthetic oil PGLP460 with extended temperature range -30 to +50°C

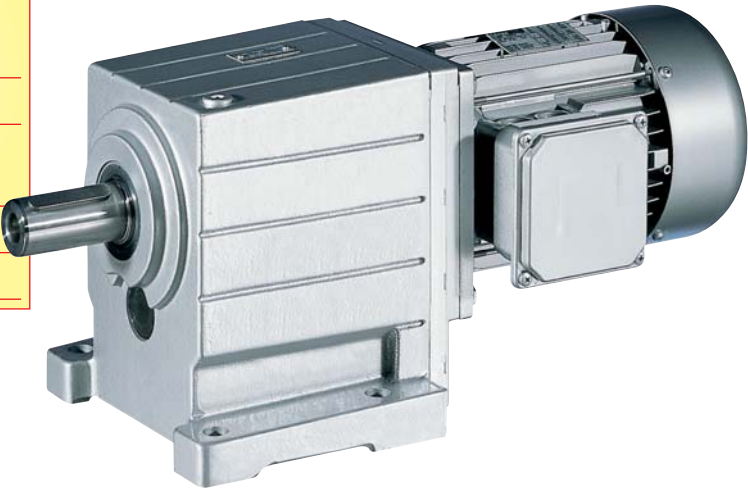
Paint

Standard paint finish is to basalt grey RAL7012. Primer is RAL 7004 signal grey. On request we can also offer five alternative colours.

- jet black RAL 9005
- gentian blue RAL 5010
- reseda green RAL 6011
- papyrus white RAL 9018

Other colours available depending on quantity and surcharges may apply.

The StockDrives range of GST helical geared motors includes 2 stage gearboxes with foot or B5 flange mountings in the power range 120W to 7.5kW.



The full GST range

The full GST range is too extensive to include in this book. Full details of other models are available on request.

Powers	60W to 45kW
Output speeds	2 to 950r/min
Output torques	2 to 7100Nm
Mountings	B3 foot, B5 flange and B14
Other motors	ATEX, 1 phase, servo, dc

Backlash

Backlash measured at the output shaft depends on gearbox size and ratio. Typical values are 12-24 minutes of arc. Detailed information is available on request.

Radial & axial loads

Permissible radial and axial loads are listed in the tables below by gearbox size and output speed. Maximum radial loads are based on the axial load being zero, and visa-versa. If significant axial and radial loads are present simultaneously, refer the data to our geared motor engineers.

For calculation purposes, radial loads act at the mid point of the shaft.

Reinforced bearings

For gearboxes size 04 to 07, reinforced output shaft bearings are available on request, giving an increase of about 1.5 to 2 times the Fr values. Exact data available on request.

Output speed r/min	03		04		05		06		07	
	F _a [N]	F _r [N]	F _a [N]	F _r [N]	F _a [N]	F _r [N]	F _a [N]	F _r [N]	F _a [N]	F _r [N]
400	630	600	1250	1100	1950	2000	2350	850	3400	1900
250	710	700	1450	1300	2200	2300	2600	900	3800	2200
160	800	800	170	1650	1600	1650	3100	1250	4500	2900
100	920	900	2100	2000	3000	3100	3600	1800	5400	3900
63	1100	1000	2500	2000	3500	3600	4300	2600	6400	5300
40	1400	1000	2650	2000	3800	4350	3600	4600	7000	7000
25	1500	1000	2650	2000	3900	3600	4350	4800	9100	7000
<16	1500	1000	2650	2000	3900	3600	4350	4800	9500	7000
F _{rmax}	1500	-	2650	-	3900	-	4350	-	9500	-

120W				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
223	5	5.4	6.400	GST03 - 2M□□□ 063C12
204	5	5.4	6.982	GST03 - 2M□□□ 063C12
182	6	5.2	7.840	GST03 - 2M□□□ 063C12
160	7	4.7	8.935	GST03 - 2M□□□ 063C12
142	8	4.4	10.033	GST03 - 2M□□□ 063C12
125	9	4.0	11.429	GST03 - 2M□□□ 063C12
111	10	3.8	12.833	GST03 - 2M□□□ 063C12
96	12	3.4	14.836	GST03 - 2M□□□ 063C12
86	13	3.2	16.660	GST03 - 2M□□□ 063C12
75	15	2.8	19.013	GST03 - 2M□□□ 063C12
74	15	4.7	19.360	GST04 - 2M□□□ 063C12
67	17	2.7	21.350	GST03 - 2M□□□ 063C12
58	19	2.3	24.595	GST03 - 2M□□□ 063C12
52	22	2.1	27.618	GST03 - 2M□□□ 063C12
45	25	1.8	32.000	GST03 - 2M□□□ 063C12
40	28	1.6	35.933	GST03 - 2M□□□ 063C12
40	28	2.3	35.909	GST04 - 2M□□□ 063C12
34	32	1.4	41.455	GST03 - 2M□□□ 063C12
36	31	2.4	39.600	GST04 - 2M□□□ 063C12
31	36	1.2	46.550	GST03 - 2M□□□ 063C12
32	35	1.9	45.000	GST04 - 2M□□□ 063C12
27	41	1.1	52.909	GST03 - 2M□□□ 063C12
27	41	1.7	52.171	GST04 - 2M□□□ 063C12
24	46	1.0	59.413	GST03 - 2M□□□ 063C12
24	46	1.4	59.286	GST04 - 2M□□□ 063C12

180W				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
526	3	5.7	2.597	GST03 - 2M□□□ 063C32
400	4	4.6	3.413	GST03 - 2M□□□ 063C32
313	5	3.9	4.368	GST03 - 2M□□□ 063C32
257	7	4.1	5.312	GST03 - 2M□□□ 063C32
229	7	3.9	5.965	GST03 - 2M□□□ 063C32
196	9	3.5	6.982	GST03 - 2M□□□ 063C32
174	10	3.3	7.840	GST03 - 2M□□□ 063C32
153	11	3.0	8.935	GST03 - 2M□□□ 063C32
136	12	2.8	10.033	GST03 - 2M□□□ 063C32
119	14	2.5	11.429	GST03 - 2M□□□ 063C32
106	16	2.4	12.833	GST03 - 2M□□□ 063C32
92	18	2.2	14.836	GST03 - 2M□□□ 063C32
82	20	2.0	16.660	GST03 - 2M□□□ 063C32
72	23	1.8	19.013	GST03 - 2M□□□ 063C32
64	26	1.7	21.350	GST03 - 2M□□□ 063C32
62	27	2.3	22.000	GST04 - 2M□□□ 063C32
56	30	1.5	24.595	GST03 - 2M□□□ 063C32
55	31	2.3	24.933	GST04 - 2M□□□ 063C32
49	34	1.3	27.618	GST03 - 2M□□□ 063C32
48	35	1.8	28.333	GST04 - 2M□□□ 063C32
43	39	1.2	32.000	GST03 - 2M□□□ 063C32
43	39	1.9	31.600	GST04 - 2M□□□ 063C32
38	44	1.0	35.933	GST03 - 2M□□□ 063C32
38	44	1.5	35.909	GST04 - 2M□□□ 063C32

180W				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
35	48	1.5	39.600	GST04 - 2M□□□ 063C32
30	55	1.2	45.000	GST04 - 2M□□□ 063C32
26	64	1.1	52.171	GST04 - 2M□□□ 063C32

0.25kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
528	4	4.1	2.597	GST03 - 2M□□□ 063C42
464	5	4.5	2.956	GST04 - 2M□□□ 063C42
401	6	3.3	3.413	GST03 - 2M□□□ 063C42
338	7	4.5	4.053	GST04 - 2M□□□ 063C42
314	7	2.8	4.368	GST03 - 2M□□□ 063C42
258	9	3.0	5.312	GST03 - 2M□□□ 063C42
234	10	5.2	5.850	GST04 - 2M□□□ 063C42
230	10	2.8	5.965	GST03 - 2M□□□ 063C42
196	12	2.5	6.982	GST03 - 2M□□□ 063C42
175	13	2.4	7.840	GST03 - 2M□□□ 063C42
153	15	2.2	8.935	GST03 - 2M□□□ 063C42
137	17	2.0	10.033	GST03 - 2M□□□ 063C42
120	19	1.8	11.429	GST03 - 2M□□□ 063C42
107	22	1.7	12.833	GST03 - 2M□□□ 063C42
92	25	1.6	14.836	GST03 - 2M□□□ 063C42
96	24	2.5	14.286	GST04 - 2M□□□ 063C42
82	28	1.5	16.660	GST03 - 2M□□□ 063C42
72	32	1.3	19.013	GST03 - 2M□□□ 063C42
78	30	2.1	17.500	GST04 - 2M□□□ 063C42
71	33	2.1	19.360	GST04 - 2M□□□ 063C42
64	36	1.2	21.350	GST03 - 2M□□□ 063C42
62	37	1.7	22.000	GST04 - 2M□□□ 063C42
56	42	1.1	24.595	GST03 - 2M□□□ 063C42
55	42	1.7	24.933	GST04 - 2M□□□ 063C42
50	47	1.0	27.618	GST03 - 2M□□□ 063C42
48	48	1.3	28.333	GST04 - 2M□□□ 063C42
48	48	3.1	28.333	GST05 - 2M□□□ 063C42
43	53	1.4	31.600	GST04 - 2M□□□ 063C42
43	55	3.0	32.267	GST05 - 2M□□□ 063C42
38	61	1.1	35.909	GST04 - 2M□□□ 063C42
37	62	2.4	36.667	GST05 - 2M□□□ 063C42
35	67	1.1	39.600	GST04 - 2M□□□ 063C42
35	66	2.5	39.160	GST05 - 2M□□□ 063C42
31	75	2.0	44.500	GST05 - 2M□□□ 063C42
27	85	1.4	50.050	GST05 - 2M□□□ 063C42
28	84	2.6	49.500	GST06 - 2M□□□ 063C42
24	96	1.4	56.875	GST05 - 2M□□□ 063C42
24	95	2.6	56.250	GST06 - 2M□□□ 063C42

0.37kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
543	6	2.8	2.597	GST03 - 2M□□□ 071C32
477	7	4.0	2.956	GST04 - 2M□□□ 071C32
413	8	2.3	3.413	GST03 - 2M□□□ 071C32
348	10	4.0	4.053	GST04 - 2M□□□ 071C32
323	11	2.0	4.368	GST03 - 2M□□□ 071C32

0.37kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
265	13	2.1	5.312	GST03 - 2M□□□ 071C32
241	14	3.7	5.850	GST04 - 2M□□□ 071C32
236	15	2.0	5.965	GST03 - 2M□□□ 071C32
202	17	1.7	6.982	GST03 - 2M□□□ 071C32
180	19	1.7	7.840	GST03 - 2M□□□ 071C32
158	22	1.5	8.935	GST03 - 2M□□□ 071C32
141	24	1.4	10.033	GST03 - 2M□□□ 071C32
143	24	2.7	9.856	GST04 - 2M□□□ 071C32
123	28	1.3	11.429	GST03 - 2M□□□ 071C32
126	27	2.2	11.200	GST04 - 2M□□□ 071C32
110	31	1.2	12.833	GST03 - 2M□□□ 071C32
112	31	2.3	12.571	GST04 - 2M□□□ 071C32
95	36	1.1	14.836	GST03 - 2M□□□ 071C32
99	35	1.8	14.286	GST04 - 2M□□□ 071C32
85	41	1.0	16.660	GST03 - 2M□□□ 071C32
92	37	1.9	15.400	GST04 - 2M□□□ 071C32
81	43	1.5	17.500	GST04 - 2M□□□ 071C32
73	47	1.5	19.360	GST04 - 2M□□□ 071C32
64	54	1.2	22.000	GST04 - 2M□□□ 071C32
62	55	2.6	22.778	GST05 - 2M□□□ 071C32
57	61	1.2	24.933	GST04 - 2M□□□ 071C32
57	61	2.7	24.933	GST05 - 2M□□□ 071C32
50	69	2.1	28.333	GST05 - 2M□□□ 071C32
44	78	2.1	32.267	GST05 - 2M□□□ 071C32
39	89	1.7	36.667	GST05 - 2M□□□ 071C32
36	95	1.7	39.160	GST05 - 2M□□□ 071C32
36	95	2.8	39.160	GST06 - 2M□□□ 071C32
32	108	1.4	44.500	GST05 - 2M□□□ 071C32
32	108	2.8	44.500	GST06 - 2M□□□ 071C32
28	122	1.1	50.050	GST05 - 2M□□□ 071C32
29	120	2.2	49.500	GST06 - 2M□□□ 071C32
25	138	1.1	56.875	GST05 - 2M□□□ 071C32
25	137	2.2	56.250	GST06 - 2M□□□ 071C32

0.55kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
541	9	1.9	2.597	GST03 - 2M□□□ 071C42
475	11	3.6	2.956	GST04 - 2M□□□ 071C42
412	12	1.6	3.413	GST03 - 2M□□□ 071C42
347	15	3.1	4.053	GST04 - 2M□□□ 071C42
322	16	1.3	4.368	GST03 - 2M□□□ 071C42
307	17	2.9	4.571	GST04 - 2M□□□ 071C42
265	19	1.4	5.312	GST03 - 2M□□□ 071C42
271	19	2.7	5.187	GST04 - 2M□□□ 071C42
240	21	2.5	5.850	GST04 - 2M□□□ 071C42
236	22	1.3	5.965	GST03 - 2M□□□ 071C42
220	23	2.4	6.400	GST04 - 2M□□□ 071C42
201	25	1.2	6.982	GST03 - 2M□□□ 071C42
200	26	2.2	7.040	GST04 - 2M□□□ 071C42
179	28	1.1	7.840	GST03 - 2M□□□ 071C42
176	29	2.0	8.000	GST04 - 2M□□□ 071C42
157	32	1.0	8.935	GST03 - 2M□□□ 071C42
156	33	1.9	9.010	GST04 - 2M□□□ 071C42
143	36	1.8	9.856	GST04 - 2M□□□ 071C42

0.55kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
125	41	1.5	11.200	GST04 - 2M□□□ 071C42
125	41	3.1	11.200	GST05 - 2M□□□ 071C42
112	46	1.5	12.571	GST04 - 2M□□□ 071C42
108	47	2.9	13.016	GST05 - 2M□□□ 071C42
98	52	1.2	14.286	GST04 - 2M□□□ 071C42
98	52	2.7	14.356	GST05 - 2M□□□ 071C42
91	56	1.2	15.400	GST04 - 2M□□□ 071C42
87	59	2.5	16.190	GST05 - 2M□□□ 071C42
80	64	1.0	17.500	GST04 - 2M□□□ 071C42
80	64	2.2	17.500	GST05 - 2M□□□ 071C42
73	70	1.0	19.360	GST04 - 2M□□□ 071C42
70	73	2.2	20.044	GST05 - 2M□□□ 071C42
62	83	1.7	22.778	GST05 - 2M□□□ 071C42
56	90	1.8	24.933	GST05 - 2M□□□ 071C42
56	90	3.2	24.933	GST06 - 2M□□□ 071C42
50	103	1.4	28.333	GST05 - 2M□□□ 071C42
50	103	3.1	28.333	GST06 - 2M□□□ 071C42
44	117	1.4	32.267	GST05 - 2M□□□ 071C42
44	117	2.9	32.267	GST06 - 2M□□□ 071C42
38	133	1.1	36.667	GST05 - 2M□□□ 071C42
38	133	2.4	36.667	GST06 - 2M□□□ 071C42
36	142	1.2	39.160	GST05 - 2M□□□ 071C42
36	142	2.4	39.160	GST06 - 2M□□□ 071C42
32	161	2.0	44.500	GST06 - 2M□□□ 071C42
28	180	1.4	49.500	GST06 - 2M□□□ 071C42
25	204	1.4	56.250	GST06 - 2M□□□ 071C42

0.75kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
477	15	2.7	2.956	GST04 - 2M□□□ 080C32
423	16	2.5	3.333	GST04 - 2M□□□ 080C32
348	20	2.3	4.053	GST04 - 2M□□□ 080C32
308	23	2.1	4.571	GST04 - 2M□□□ 080C32
272	26	2.0	5.187	GST04 - 2M□□□ 080C32
241	29	1.8	5.850	GST04 - 2M□□□ 080C32
220	32	1.7	6.400	GST04 - 2M□□□ 080C32
200	35	1.6	7.040	GST04 - 2M□□□ 080C32
176	39	1.5	8.000	GST04 - 2M□□□ 080C32
173	40	2.9	8.163	GST05 - 2M□□□ 080C32
157	44	1.4	9.010	GST04 - 2M□□□ 080C32
157	44	2.7	9.010	GST05 - 2M□□□ 080C32
143	49	1.3	9.856	GST04 - 2M□□□ 080C32
141	49	2.5	10.000	GST05 - 2M□□□ 080C32
126	55	1.1	11.200	GST04 - 2M□□□ 080C32
126	55	2.3	11.200	GST05 - 2M□□□ 080C32
112	62	1.1	12.571	GST04 - 2M□□□ 080C32
108	64	2.1	13.016	GST05 - 2M□□□ 080C32
98	71	2.0	14.356	GST05 - 2M□□□ 080C32
87	80	1.9	16.190	GST05 - 2M□□□ 080C32
81	86	1.6	17.500	GST05 - 2M□□□ 080C32
70	99	1.6	20.044	GST05 - 2M□□□ 080C32
62	112	1.3	22.778	GST05 - 2M□□□ 080C32
62	112	2.8	22.778	GST06 - 2M□□□ 080C32
57	123	1.3	24.933	GST05 - 2M□□□ 080C32
57	123	2.9	24.933	GST06 - 2M□□□ 080C32

0.75kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
50	140	1.1	28.333	GST05 - 2M□□□ 080C32
50	140	2.3	28.333	GST06 - 2M□□□ 080C32
44	159	1.0	32.267	GST05 - 2M□□□ 080C32
44	159	2.3	32.267	GST06 - 2M□□□ 080C32
39	181	1.8	36.667	GST06 - 2M□□□ 080C32
36	193	1.9	39.160	GST06 - 2M□□□ 080C32
36	193	2.5	39.160	GST07 - 2M□□□ 080C32
32	219	1.5	44.500	GST06 - 2M□□□ 080C32
32	219	2.5	44.500	GST07 - 2M□□□ 080C32
29	244	1.1	49.500	GST06 - 2M□□□ 080C32
29	244	2.0	49.500	GST07 - 2M□□□ 080C32
25	277	1.1	56.250	GST06 - 2M□□□ 080C32
25	277	2.0	56.250	GST07 - 2M□□□ 080C32

1.1kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
470	22	1.8	2.956	GST04 - 2M□□□ 080C42
417	24	1.7	3.333	GST04 - 2M□□□ 080C42
343	30	1.5	4.053	GST04 - 2M□□□ 080C42
304	34	1.4	4.571	GST04 - 2M□□□ 080C42
304	34	2.7	4.571	GST05 - 2M□□□ 080C42
268	38	1.3	5.187	GST04 - 2M□□□ 080C42
268	38	2.4	5.187	GST05 - 2M□□□ 080C42
238	43	1.2	5.850	GST04 - 2M□□□ 080C42
238	43	2.4	5.850	GST05 - 2M□□□ 080C42
217	47	1.2	6.400	GST04 - 2M□□□ 080C42
217	47	2.2	6.400	GST05 - 2M□□□ 080C42
197	52	1.1	7.040	GST04 - 2M□□□ 080C42
192	53	2.0	7.238	GST05 - 2M□□□ 080C42
174	59	1.0	8.000	GST04 - 2M□□□ 080C42
170	60	1.9	8.163	GST05 - 2M□□□ 080C42
154	66	0.9	9.010	GST04 - 2M□□□ 080C42
154	66	1.8	9.010	GST05 - 2M□□□ 080C42
139	73	1.7	10.000	GST05 - 2M□□□ 080C42
124	82	1.6	11.200	GST05 - 2M□□□ 080C42
107	95	1.4	13.016	GST05 - 2M□□□ 080C42
111	92	3.2	12.571	GST06 - 2M□□□ 080C42
97	105	1.3	14.356	GST05 - 2M□□□ 080C42
97	105	2.9	14.286	GST06 - 2M□□□ 080C42
86	119	1.3	16.190	GST05 - 2M□□□ 080C42
90	113	2.8	15.400	GST06 - 2M□□□ 080C42
79	128	1.1	17.500	GST05 - 2M□□□ 080C42
79	128	2.4	17.500	GST06 - 2M□□□ 080C42
69	147	1.1	20.044	GST05 - 2M□□□ 080C42
69	147	2.4	20.044	GST06 - 2M□□□ 080C42
61	167	1.9	22.778	GST06 - 2M□□□ 080C42
56	183	2.0	24.933	GST06 - 2M□□□ 080C42
49	208	1.5	28.333	GST06 - 2M□□□ 080C42
50	205	3.1	27.917	GST07 - 2M□□□ 080C42
43	237	1.5	32.267	GST06 - 2M□□□ 080C42
43	237	2.9	32.267	GST07 - 2M□□□ 080C42
38	269	1.2	36.667	GST06 - 2M□□□ 080C42
38	269	2.6	36.667	GST07 - 2M□□□ 080C42
36	287	1.3	39.160	GST06 - 2M□□□ 080C42
36	287	2.3	39.160	GST07 - 2M□□□ 080C42
31	326	1.0	44.500	GST06 - 2M□□□ 080C42
31	326	2.2	44.500	GST07 - 2M□□□ 080C42

1.1kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
28	363	1.4	49.500	GST07 - 2M□□□ 080C42
25	412	1.4	56.250	GST07 - 2M□□□ 080C42

1.5kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
470	30	1.3	2.956	GST04 - 2M□□□ 090C32
470	30	2.1	2.956	GST05 - 2M□□□ 090C32
417	33	1.3	3.333	GST04 - 2M□□□ 090C32
417	33	2.3	3.333	GST05 - 2M□□□ 090C32
343	41	1.1	4.053	GST04 - 2M□□□ 090C32
343	41	2.0	4.053	GST05 - 2M□□□ 090C32
304	46	1.1	4.571	GST04 - 2M□□□ 090C32
304	46	2.0	4.571	GST05 - 2M□□□ 090C32
268	52	1.0	5.187	GST04 - 2M□□□ 090C32
268	52	1.7	5.187	GST05 - 2M□□□ 090C32
238	59	1.7	5.850	GST05 - 2M□□□ 090C32
217	64	1.6	6.400	GST05 - 2M□□□ 090C32
192	72	1.5	7.238	GST05 - 2M□□□ 090C32
170	82	1.4	8.163	GST05 - 2M□□□ 090C32
170	82	3.1	8.163	GST06 - 2M□□□ 090C32
154	90	1.3	9.010	GST05 - 2M□□□ 090C32
154	90	2.9	9.010	GST06 - 2M□□□ 090C32
139	100	1.2	10.000	GST05 - 2M□□□ 090C32
139	100	2.7	10.000	GST06 - 2M□□□ 090C32
124	112	1.1	11.200	GST05 - 2M□□□ 090C32
124	112	2.5	11.200	GST06 - 2M□□□ 090C32
107	130	1.1	13.016	GST05 - 2M□□□ 090C32
111	126	2.3	12.571	GST06 - 2M□□□ 090C32
97	144	1.0	14.356	GST05 - 2M□□□ 090C32
97	143	2.1	14.286	GST06 - 2M□□□ 090C32
90	154	2.1	15.400	GST06 - 2M□□□ 090C32
79	175	1.8	17.500	GST06 - 2M□□□ 090C32
69	200	1.7	20.044	GST06 - 2M□□□ 090C32
61	228	1.4	22.778	GST06 - 2M□□□ 090C32
61	228	3.0	22.778	GST07 - 2M□□□ 090C32
56	249	1.4	24.933	GST06 - 2M□□□ 090C32
57	246	2.8	24.567	GST07 - 2M□□□ 090C32
49	283	1.1	28.333	GST06 - 2M□□□ 090C32
50	279	2.5	27.917	GST07 - 2M□□□ 090C32
43	323	1.1	32.267	GST06 - 2M□□□ 090C32
43	323	2.2	32.267	GST07 - 2M□□□ 090C32
38	367	1.9	36.667	GST07 - 2M□□□ 090C32
36	392	1.8	39.160	GST07 - 2M□□□ 090C32
31	445	1.6	44.500	GST07 - 2M□□□ 090C32
28	495	1.2	49.500	GST07 - 2M□□□ 090C32

2.2kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
487	42	1.5	2.956	GST05 - 2M□□□ 100C12
432	47	1.7	3.333	GST05 - 2M□□□ 100C12
355	57	1.4	4.053	GST05 - 2M□□□ 100C12
346	59	3.2	4.160	GST06 - 2M□□□ 100C12
315	65	1.4	4.571	GST05 - 2M□□□ 100C12
315	65	3.1	4.571	GST06 - 2M□□□ 100C12

2.2kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
278	73	1.2	5.187	GST05 - 2M□□□ 100C12
271	75	2.8	5.324	GST06 - 2M□□□ 100C12
278	73	1.2	5.187	GST05 - 2M□□□ 100C12
271	75	2.8	5.324	GST06 - 2M□□□ 100C12
225	91	1.2	6.400	GST05 - 2M□□□ 100C12
225	91	2.5	6.400	GST06 - 2M□□□ 100C12
199	103	1.1	7.238	GST05 - 2M□□□ 100C12
205	100	2.4	7.040	GST06 - 2M□□□ 100C12
176	116	1.0	8.163	GST05 - 2M□□□ 100C12
176	116	2.2	8.163	GST06 - 2M□□□ 100C12
160	128	2.0	9.010	GST06 - 2M□□□ 100C12
144	142	1.9	10.000	GST06 - 2M□□□ 100C12
129	159	1.8	11.200	GST06 - 2M□□□ 100C12
115	178	1.7	12.571	GST06 - 2M□□□ 100C12
101	202	1.5	14.286	GST06 - 2M□□□ 100C12
101	202	3.2	14.286	GST07 - 2M□□□ 100C12
94	218	1.5	15.400	GST06 - 2M□□□ 100C12
94	218	3.0	15.400	GST07 - 2M□□□ 100C12
82	248	1.3	17.500	GST06 - 2M□□□ 100C12
82	248	2.7	17.500	GST07 - 2M□□□ 100C12
72	284	1.2	20.044	GST06 - 2M□□□ 100C12
72	284	2.4	20.044	GST07 - 2M□□□ 100C12
63	322	1.0	22.778	GST06 - 2M□□□ 100C12
63	322	2.1	22.778	GST07 - 2M□□□ 100C12
58	353	1.0	24.933	GST06 - 2M□□□ 100C12
59	348	2.0	24.567	GST07 - 2M□□□ 100C12
52	395	1.7	27.917	GST07 - 2M□□□ 100C12
45	457	1.5	32.267	GST07 - 2M□□□ 100C12
39	519	1.4	36.667	GST07 - 2M□□□ 100C12
37	554	1.3	39.160	GST07 - 2M□□□ 100C12
32	630	1.1	44.500	GST07 - 2M□□□ 100C12

3.0kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
484	57	1.1	2.956	GST05 - 2M□□□ 100C32
471	59	2.8	3.033	GST06 - 2M□□□ 100C32
429	65	1.2	3.333	GST05 - 2M□□□ 100C32
429	65	2.7	3.333	GST06 - 2M□□□ 100C32
353	79	1.0	4.053	GST05 - 2M□□□ 100C32
344	81	2.4	4.160	GST06 - 2M□□□ 100C32
313	89	1.0	4.571	GST05 - 2M□□□ 100C32
313	89	2.2	4.571	GST06 - 2M□□□ 100C32
269	104	2.0	5.324	GST06 - 2M□□□ 100C32
244	114	2.0	5.850	GST06 - 2M□□□ 100C32
223	124	1.8	6.400	GST06 - 2M□□□ 100C32
203	137	1.7	7.040	GST06 - 2M□□□ 100C32
175	159	1.6	8.163	GST06 - 2M□□□ 100C32
159	175	1.5	9.010	GST06 - 2M□□□ 100C32
163	171	3.1	8.800	GST07 - 2M□□□ 100C32
143	194	1.4	10.000	GST06 - 2M□□□ 100C32
145	192	2.9	9.856	GST07 - 2M□□□ 100C32
128	218	1.3	11.200	GST06 - 2M□□□ 100C32
128	218	2.7	11.200	GST07 - 2M□□□ 100C32
114	244	1.2	12.571	GST06 - 2M□□□ 100C32

3.0kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
114	244	2.5	12.571	GST07 - 2M□□□ 100C32
100	278	1.1	14.286	GST06 - 2M□□□ 100C32
100	278	2.3	14.286	GST07 - 2M□□□ 100C32
93	299	1.1	15.400	GST06 - 2M□□□ 100C32
93	299	2.2	15.400	GST07 - 2M□□□ 100C32
82	340	2.0	17.500	GST07 - 2M□□□ 100C32
71	390	0.9	20.044	GST06 - 2M□□□ 100C32
71	390	1.8	20.044	GST07 - 2M□□□ 100C32
63	443	1.5	22.778	GST07 - 2M□□□ 100C32
58	478	1.5	24.567	GST07 - 2M□□□ 100C32
51	543	1.3	27.917	GST07 - 2M□□□ 100C32
51	551	2.5	28.333	GST09 - 2M□□□ 100C32
44	627	1.1	32.267	GST07 - 2M□□□ 100C32
39	713	1.0	36.667	GST07 - 2M□□□ 100C32

4.0kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
478	78	2.1	3.033	GST06 - 2M□□□ 112C22
435	85	2.0	3.333	GST06 - 2M□□□ 112C22
349	106	1.8	4.160	GST06 - 2M□□□ 112C22
317	117	1.7	4.571	GST06 - 2M□□□ 112C22
272	136	1.5	5.324	GST06 - 2M□□□ 112C22
279	133	3.2	5.200	GST07 - 2M□□□ 112C22
248	150	1.5	5.850	GST06 - 2M□□□ 112C22
254	146	3.1	5.714	GST07 - 2M□□□ 112C22
227	164	1.4	6.400	GST06 - 2M□□□ 112C22
227	164	2.8	6.400	GST07 - 2M□□□ 112C22
206	180	1.3	7.040	GST06 - 2M□□□ 112C22
203	183	2.7	7.150	GST07 - 2M□□□ 112C22
178	209	1.2	8.163	GST06 - 2M□□□ 112C22
179	208	2.6	8.125	GST07 - 2M□□□ 112C22
161	230	1.1	9.010	GST06 - 2M□□□ 112C22
165	225	2.3	8.800	GST07 - 2M□□□ 112C22
145	256	1.1	10.000	GST06 - 2M□□□ 112C22
147	252	2.2	9.856	GST07 - 2M□□□ 112C22
130	286	1.0	11.200	GST06 - 2M□□□ 112C22
130	286	2.1	11.200	GST07 - 2M□□□ 112C22
115	321	1.9	12.571	GST07 - 2M□□□ 112C22
102	365	1.8	14.286	GST07 - 2M□□□ 112C22
94	394	1.6	15.400	GST07 - 2M□□□ 112C22
83	447	1.5	17.500	GST07 - 2M□□□ 112C22
72	512	1.4	20.044	GST07 - 2M□□□ 112C22
64	582	1.2	22.778	GST07 - 2M□□□ 112C22
59	628	1.1	24.567	GST07 - 2M□□□ 112C22
52	714	1.0	27.917	GST07 - 2M□□□ 112C22

5.5kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
476	107	1.6	3.033	GST06 - 2M□□□ 112C32
474	108	3.0	3.048	GST07 - 2M□□□ 112C32
434	118	1.5	3.333	GST06 - 2M□□□ 112C32
431	118	3.0	3.350	GST07 - 2M□□□ 112C32
347	147	1.3	4.160	GST06 - 2M□□□ 112C32
342	149	2.7	4.225	GST07 - 2M□□□ 112C32
316	161	1.2	4.571	GST06 - 2M□□□ 112C32
311	164	2.5	4.643	GST07 - 2M□□□ 112C32
271	188	1.1	5.324	GST06 - 2M□□□ 112C32
278	183	2.3	5.200	GST07 - 2M□□□ 112C32
247	206	1.1	5.850	GST06 - 2M□□□ 112C32
253	202	2.2	5.714	GST07 - 2M□□□ 112C32
226	226	1.0	6.400	GST06 - 2M□□□ 112C32
226	226	2.1	6.400	GST07 - 2M□□□ 112C32
205	248	1.0	7.040	GST06 - 2M□□□ 112C32
202	252	1.9	7.150	GST07 - 2M□□□ 112C32
178	287	1.9	8.125	GST07 - 2M□□□ 112C32
164	310	1.7	8.800	GST07 - 2M□□□ 112C32
147	348	1.6	9.856	GST07 - 2M□□□ 112C32
129	395	1.5	11.200	GST07 - 2M□□□ 112C32
115	443	1.4	12.571	GST07 - 2M□□□ 112C32
101	504	1.3	14.286	GST07 - 2M□□□ 112C32
94	543	1.2	15.400	GST07 - 2M□□□ 112C32
83	617	1.1	17.500	GST07 - 2M□□□ 112C32
72	707	1.0	20.044	GST07 - 2M□□□ 112C32

7.5kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
477	146	2.4	3.048	GST07 - 2M□□□ 132C22
434	160	2.3	3.350	GST07 - 2M□□□ 132C22
344	202	2.0	4.225	GST07 - 2M□□□ 132C22
313	222	1.9	4.643	GST07 - 2M□□□ 132C22
280	248	1.7	5.200	GST07 - 2M□□□ 132C22
255	273	1.6	5.714	GST07 - 2M□□□ 132C22
227	306	1.5	6.400	GST07 - 2M□□□ 132C22
204	342	1.4	7.150	GST07 - 2M□□□ 132C22
179	388	1.4	8.125	GST07 - 2M□□□ 132C22
165	420	1.3	8.800	GST07 - 2M□□□ 132C22
148	471	1.2	9.856	GST07 - 2M□□□ 132C22
130	535	1.1	11.200	GST07 - 2M□□□ 132C22
116	600	1.0	12.571	GST07 - 2M□□□ 132C22

ATEX



ATEX for hazardous areas

All models of Lenze G-motion geared motors are available to meet ATEX, zones 1, 21, 2 and 22, powers up to 45kW. More details on request.

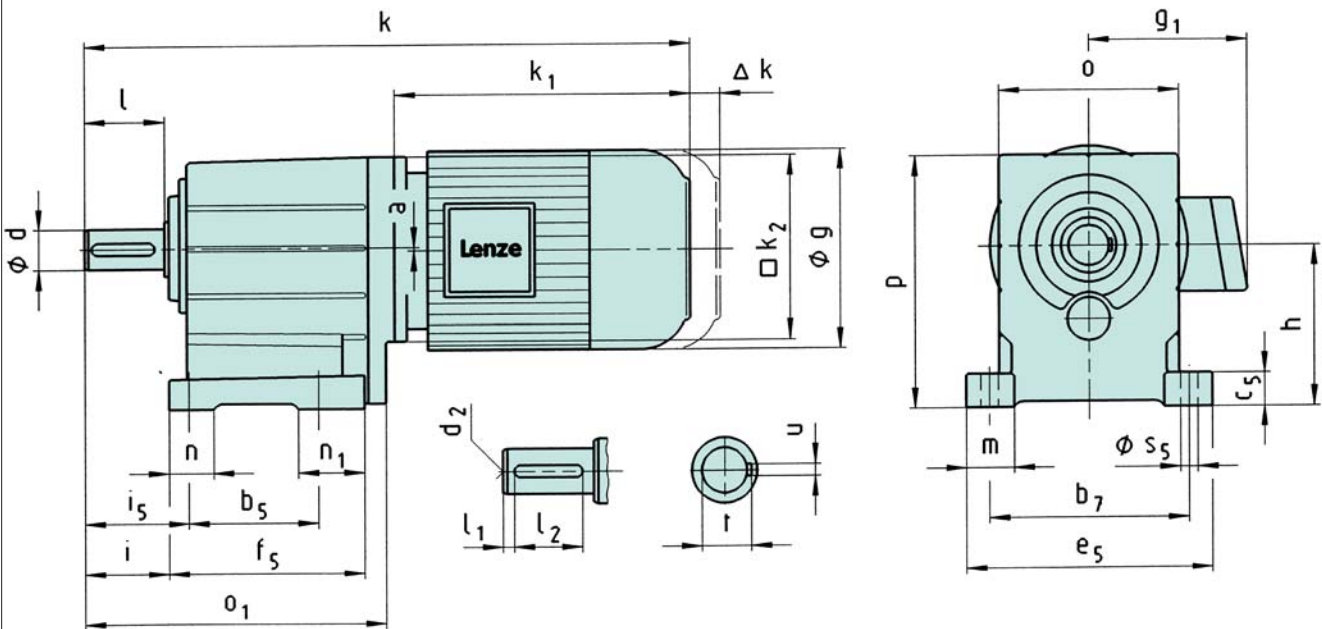
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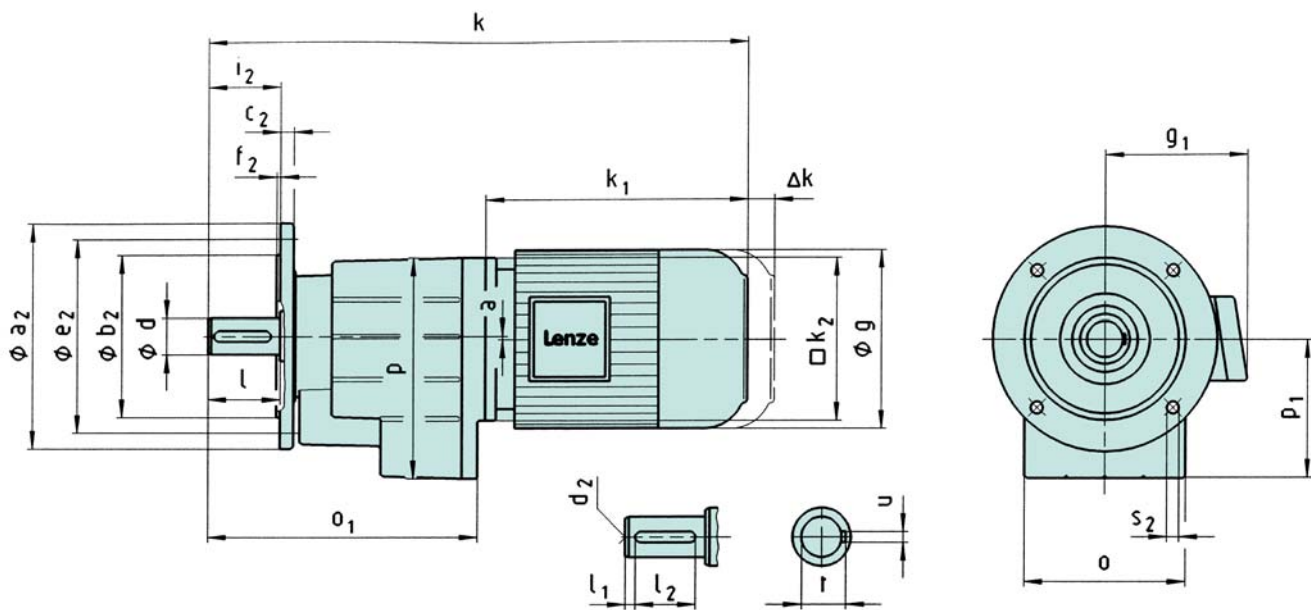
Shaft mounted helical

Hollow shaft helical geared motors from 120W to 45kW with torques up to 13800Nm. There are options of male shafts, flanges and backlash free compression couplings.

GST □□ - 2M VBR B3 foot mounting



GST □□ - 2M VCK B5 flange mounting



Terminal box and mounting positions

Terminal box: 2,3,4,5

Mounting positions : A,B,C,D,E,F

A	B	C	D	E	F

GST dimensions

Geared motor						Motor frame size							
GST □□ - 2 M VBR						063C12 063C32 063C42	071C32 071C42	080C32 080C42	090C32	100C12 100C32	112C22	112C32	132C22
Motor	g					123	138	156	176	196	220		261
	g ₁	Without option				100	109	141	146	157	167		195
		Brake motor				107	116	130	135	146	156		195
	k ₁					188	207	225	276	309	319	363	404
	k ₂	From gearbox size 04				120	120	145	180	180	222		265
	Δ k	Brake				40	52	73	70	79	90		109
		Separate fan				130	128	128	127		109	102	115
		Separate fan + brake				170	165	184	180	170	183		201
Gearbox size		Gearbox				Total length							
	o ¹⁾	o ₁	p ¹⁾	h ¹⁾	a	k							
03	90	127*	101	65	2	317*	338*						
		139				329	350						
04	100	174	132	80	0	371	391	413	474				
05	115	214	159	100	1	401	421	443	504	538			
06	145	243	198	125	2	427	447	469	530	564	580	624	
07	180	302	251	160	3			525	586	620	636	680	728

Gearbox size	Solid shaft							Foot										
	d	l	l ₁	l ₂	d ₂	u	t	b ₅	b ₇	c ₅	e ₅	f ₅	i	i ₅	m	n	n ₁	s ₅
03	14	28	4	20	M5	5	16	60	91	11	105	84	34	40	20	–	–	6.6
	20	40	5	28	M6	6	22.5						46	52				
04	20	40	5	28	M6	6	22.5	76	105	18	129	112	43	53	24.5	20	36	9
05	25	50	4	40	M10	8	28	90	125	23	155	139	53	66	32.5	26	49	11
06	30	60	6	45	M10	8	33	106	160	28	196	157	64	79	38	35	52	13.5
07	40	80	7	63	M16	12	43	130	200	34	247	196	84	104	48.5	45	66	18

GST □□ - 2M VCK							Motor dimensions and other dimensions as for type VBR							
Gearbox size	Gearbox						Gearbox size	Output flange						
	o ¹⁾	o ₁	p ¹⁾	h ¹⁾	a			a ₂	b ₂ j7	c ₂	e ₂	f ₂	i ₂	s ₂ 4x90°
03	90	127*	101	65	2		03	120	80	10	100	3	28	7
		139						140	95		115	3		9
04	100	174	132	80	0		04	120	80	10	100	3	40	7
								140	95		115	3		9
05	115	214	159	100	1		05	120	80	10	100	3	50	7
								140	95		115	3		9
06	145	243	198	125	2		06	160	110	12	130	3.5	60	9
								200	130		165	3.5		11
07	180	302	251	160	3		07	160	110	12	130	3.5	80	9
								200	130		165	3.5		11
07	180	302	251	160	3		07	200	130	14	165	3.5	80	11
								250	180		215	4		14

Dimensions in [mm] d ≤ 50 mm: k₆ * With solid shaft d=14 ¹⁾ Observe dimension k₂. With gearbox size 03 and motor frame size 071, dimension g/2 > h-a
d > 50 mm: m₆ With gearbox size 04 and motor frame size 090, dimension is k₂/2 > h-a

Weights of geared motors

Gearbox size	GST □□ - 2M VBR								GST □□ - 2M VCK							
	Motor frame size								Motor frame size							
	063	071	080	090	100	112	132		063	071	080	090	100	112	132	
						C22/-31	C32/-41							C22/-31	C32/-41	
03	6	8							7	9						
04	10	13	17	24					11	13	18	24				
05	15	18	22	29	36				16	18	23	30	37			
06	23	25	29	37	44	56	62		23	25	30	37	44	57	63	
07			45	52	59	71	77	104			45	52	59	72	78	104

- Aluminium alloy gearbox and motor
- Energy saving 96% efficiency
- Capable of being backdriven
- Hollow output shaft with optional backlash-free compression coupling
- Alternative single or double male shafts
- Optional output flanges
- 16000 hour maintenance-free life
- Compact dimensions
- Wide supply voltage

Materials

Gearbox housings and motor frames are aluminium. Gears are case hardened and ground steel. Output shafts are C45/42CrM04 steel with NB/FP Seals.

Lubrication

Standard lubricant is CLP 460 to suit ambient temperatures from 0 to 40°C. Life is 16000 hours or three years with operating temperatures between 70 and 80°C. See Fitting/Operating Instructions for oil volumes. Other lubricants available on request.

- food compatible oil CLP-H1220, registered USDA-H1
- organic oil CLP-E320 with water pollution class O
- synthetic oil PGLP460 with extended temperature range -30 to +50°C

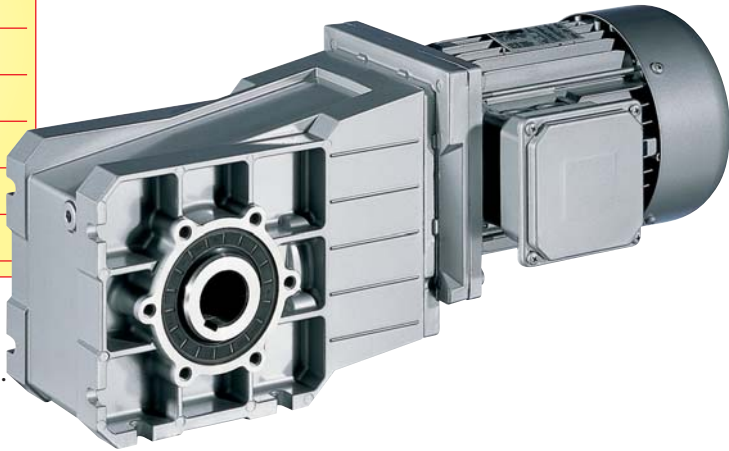
Paint

GKR aluminium gearboxes are normally supplied unpainted. Motor paint finish is basalt grey RAL7012. Primer is RAL 7004. signal grey. On request we can also offer five alternative colours.

- deep black RAL 9005
- gentian blue RAL 5010
- reseda green RAL 6011
- papyrus white RAL 9018

Other colours available depending on quantity and surcharges may apply.

The StockGears range covers GKR gearboxes with 4 pole motors frame sizes 63-112 frame and hollow shaft or male shaft outputs.



The full GKR range

The full GKR range includes gearboxes with output flanges or backlash free compression couplings. Motors with 2 and 6 pole speeds extend the output range.

Powers	60W to 5.5kW
Output speeds	11 to 840r/min
Output torques	7 to 430Nm
Other motors	ATEX, 1 phase, servo, dc

Backlash

Backlash measured in minutes of arc at output shaft varies a little by size of gearbox. Typical values are 18-19 for size 03, 13 to 14 for size 04, 11-12 for size 05 and 10-11 for size 06. Details on request.

Radial & axial loads

Permissible radial and axial loads are listed below. Consult us if both axial and radial loads are present simultaneously. For calculation purposes, radial loads act at the hollow shaft end face or the mid-point of the male shaft.

Values given are for hollow shaft gearboxes type HAR. For male shaft gearboxes type VAR, the values for F_r should be derated by 20%. Values for F_a are unchanged.

Output speed r/min	03		04		05		06	
	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]
400	2200	1000	2550	1275	3800	1900	5000	2500
250	2500	1100	3000	1500	4500	2200	5200	2600
160	2800	1250	3300	1650	5100	2500	5500	2750
100	3000	1400	3600	1800	6200	3100	7000	3500
63	3000	1400	3600	1800	7400	3700	9000	4500
40	3000	1400	3600	1800	7800	3900	10000	5000
25	3000	1400	3600	1800	7800	3900	10000	5000
<16	3000	1400	3600	1800	7800	3900	10000	5000
F_{rmax}	3000	-	3600	-	7800	-	10000	-

120W				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
136	8	5.6	10.466	GKR03 - 2M□□□ 063C12
122	9	5.1	11.640	GKR03 - 2M□□□ 063C12
112	10	5.0	12.698	GKR04 - 2M□□□ 063C12
107	10	4.4	13.386	GKR03 - 2M□□□ 063C12
94	12	3.9	15.111	GKR03 - 2M□□□ 063C12
82	13	3.4	17.378	GKR03 - 2M□□□ 063C12
74	15	3.0	19.365	GKR03 - 2M□□□ 063C12
64	17	2.6	22.270	GKR03 - 2M□□□ 063C12
57	19	2.4	25.051	GKR03 - 2M□□□ 063C12
50	22	2.0	28.808	GKR03 - 2M□□□ 063C12
44	25	1.8	32.593	GKR03 - 2M□□□ 063C12
38	29	1.6	37.481	GKR03 - 2M□□□ 063C12
34	32	1.4	42.222	GKR03 - 2M□□□ 063C12
36	31	2.9	40.000	GKR04 - 2M□□□ 063C12
31	35	2.6	46.000	GKR04 - 2M□□□ 063C12
29	37	1.2	48.556	GKR03 - 2M□□□ 063C12
27	40	1.7	52.698	GKR04 - 2M□□□ 063C12
26	41	1.1	53.889	GKR03 - 2M□□□ 063C12
24	46	1.7	60.603	GKR04 - 2M□□□ 063C12
23	47	1.0	61.972	GKR03 - 2M□□□ 063C12

180W				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
219	7	5.4	6.222	GKR03 - 2M□□□ 063C32
192	9	5.1	7.111	GKR03 - 2M□□□ 063C32
167	10	4.5	8.178	GKR03 - 2M□□□ 063C32
150	11	4.1	9.101	GKR03 - 2M□□□ 063C32
130	13	3.6	10.466	GKR03 - 2M□□□ 063C32
117	14	3.2	11.640	GKR03 - 2M□□□ 063C32
108	15	3.2	12.698	GKR04 - 2M□□□ 063C32
102	16	2.8	13.386	GKR03 - 2M□□□ 063C32
94	18	3.2	14.603	GKR04 - 2M□□□ 063C32
90	18	2.5	15.111	GKR03 - 2M□□□ 063C32
79	21	2.2	17.378	GKR03 - 2M□□□ 063C32
71	23	1.9	19.365	GKR03 - 2M□□□ 063C32
61	27	1.7	22.270	GKR03 - 2M□□□ 063C32
55	30	1.5	25.051	GKR03 - 2M□□□ 063C32
54	30	2.9	25.185	GKR04 - 2M□□□ 063C32
47	35	1.3	28.808	GKR03 - 2M□□□ 063C32
47	35	2.6	28.963	GKR04 - 2M□□□ 063C32
42	39	1.2	32.593	GKR03 - 2M□□□ 063C32
43	38	2.4	31.919	GKR04 - 2M□□□ 063C32
36	45	1.0	37.481	GKR03 - 2M□□□ 063C32
37	44	2.0	36.707	GKR04 - 2M□□□ 063C32
34	48	1.9	40.000	GKR04 - 2M□□□ 063C32
30	55	1.6	46.000	GKR04 - 2M□□□ 063C32
26	63	1.1	52.698	GKR04 - 2M□□□ 063C32
23	73	1.1	60.603	GKR04 - 2M□□□ 063C32

0.25kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
264	9	4.5	5.185	GKR04 - 2M□□□ 063C42
253	9	4.4	5.411	GKR03 - 2M□□□ 063C42
220	10	3.9	6.222	GKR03 - 2M□□□ 063C42
193	12	3.7	7.111	GKR03 - 2M□□□ 063C42
168	14	3.3	8.178	GKR03 - 2M□□□ 063C42
151	15	3.0	9.101	GKR03 - 2M□□□ 063C42
131	17	2.6	10.466	GKR03 - 2M□□□ 063C42
118	19	2.3	11.640	GKR03 - 2M□□□ 063C42
108	21	4.3	12.698	GKR04 - 2M□□□ 063C42
104	22	4.5	13.216	GKR05 - 2M□□□ 063C42
102	22	2.0	13.386	GKR03 - 2M□□□ 063C42
91	25	4.5	15.008	GKR05 - 2M□□□ 063C42
91	25	1.8	15.111	GKR03 - 2M□□□ 063C42
79	29	1.6	17.378	GKR03 - 2M□□□ 063C42
77	30	3.0	17.889	GKR04 - 2M□□□ 063C42
71	32	1.4	19.365	GKR03 - 2M□□□ 063C42
70	32	2.8	19.556	GKR04 - 2M□□□ 063C42
62	37	1.2	22.270	GKR03 - 2M□□□ 063C42
61	37	2.4	22.489	GKR04 - 2M□□□ 063C42
55	42	1.1	25.051	GKR03 - 2M□□□ 063C42
54	42	2.2	25.185	GKR04 - 2M□□□ 063C42
47	48	1.9	28.963	GKR04 - 2M□□□ 063C42
45	51	4.3	30.522	GKR05 - 2M□□□ 063C42
43	53	1.7	31.919	GKR04 - 2M□□□ 063C42
37	61	1.5	36.707	GKR04 - 2M□□□ 063C42
34	66	1.2	40.000	GKR04 - 2M□□□ 063C42
30	76	1.2	46.000	GKR04 - 2M□□□ 063C42
28	81	3.0	49.133	GKR05 - 2M□□□ 063C42
28	82	3.2	49.444	GKR06 - 2M□□□ 063C42
26	87	2.8	52.510	GKR05 - 2M□□□ 063C42
25	90	3.2	54.513	GKR06 - 2M□□□ 063C42
23	99	2.4	59.630	GKR05 - 2M□□□ 063C42
22	104	2.6	62.500	GKR06 - 2M□□□ 063C42
20	111	1.4	67.113	GKR05 - 2M□□□ 063C42
20	114	2.6	68.906	GKR06 - 2M□□□ 063C42
18	126	1.4	76.213	GKR05 - 2M□□□ 063C42

0.37kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
272	12	4.0	5.185	GKR04 - 2M□□□ 071C32
261	13	3.1	5.411	GKR03 - 2M□□□ 071C32
227	15	2.7	6.222	GKR03 - 2M□□□ 071C32
198	17	2.5	7.111	GKR03 - 2M□□□ 071C32
172	20	2.3	8.178	GKR03 - 2M□□□ 071C32
155	22	2.1	9.101	GKR03 - 2M□□□ 071C32
135	25	1.8	10.466	GKR03 - 2M□□□ 071C32
121	28	1.6	11.640	GKR03 - 2M□□□ 071C32
111	30	3.0	12.698	GKR04 - 2M□□□ 071C32
107	32	4.0	13.216	GKR05 - 2M□□□ 071C32
105	32	1.4	13.386	GKR03 - 2M□□□ 071C32
97	35	2.6	14.603	GKR04 - 2M□□□ 071C32

0.37kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
94	36	4.0	15.008	GKR05 - 2M□□□ 071C32
93	36	1.3	15.111	GKR03 - 2M□□□ 071C32
91	37	2.4	15.556	GKR04 - 2M□□□ 071C32
81	41	1.1	17.378	GKR03 - 2M□□□ 071C32
79	43	2.1	17.889	GKR04 - 2M□□□ 071C32
73	46	1.0	19.365	GKR03 - 2M□□□ 071C32
72	47	1.9	19.556	GKR04 - 2M□□□ 071C32
63	54	1.7	22.489	GKR04 - 2M□□□ 071C32
56	60	1.5	25.185	GKR04 - 2M□□□ 071C32
49	69	1.3	28.963	GKR04 - 2M□□□ 071C32
46	73	3.3	30.522	GKR05 - 2M□□□ 071C32
44	76	1.2	31.919	GKR04 - 2M□□□ 071C32
38	87	1.0	36.707	GKR04 - 2M□□□ 071C32
42	80	3.0	33.433	GKR05 - 2M□□□ 071C32
37	90	2.7	37.967	GKR05 - 2M□□□ 071C32
35	97	3.2	40.741	GKR06 - 2M□□□ 071C32
33	103	2.3	43.267	GKR05 - 2M□□□ 071C32
31	107	3.2	44.917	GKR06 - 2M□□□ 071C32
29	117	2.1	49.133	GKR05 - 2M□□□ 071C32
29	118	2.8	49.444	GKR06 - 2M□□□ 071C32
27	125	1.9	52.510	GKR05 - 2M□□□ 071C32
26	130	2.8	54.513	GKR06 - 2M□□□ 071C32
24	142	1.7	59.630	GKR05 - 2M□□□ 071C32
23	149	2.2	62.500	GKR06 - 2M□□□ 071C32
21	160	1.1	67.113	GKR05 - 2M□□□ 071C32
21	164	2.2	68.906	GKR06 - 2M□□□ 071C32
19	181	1.1	76.213	GKR05 - 2M□□□ 071C32

0.55kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
271	18	3.7	5.185	GKR04 - 2M□□□ 071C42
260	19	2.0	5.411	GKR03 - 2M□□□ 071C42
226	22	1.8	6.222	GKR03 - 2M□□□ 071C42
198	25	1.7	7.111	GKR03 - 2M□□□ 071C42
198	25	3.1	7.111	GKR04 - 2M□□□ 071C42
172	29	1.5	8.178	GKR03 - 2M□□□ 071C42
172	29	2.8	8.178	GKR04 - 2M□□□ 071C42
154	32	1.4	9.101	GKR03 - 2M□□□ 071C42
154	32	2.6	9.101	GKR04 - 2M□□□ 071C42
134	37	1.2	10.466	GKR03 - 2M□□□ 071C42
134	37	2.4	10.466	GKR04 - 2M□□□ 071C42
121	41	1.1	11.640	GKR03 - 2M□□□ 071C42
123	41	2.2	11.449	GKR04 - 2M□□□ 071C42
111	45	2.0	12.698	GKR04 - 2M□□□ 071C42
106	47	4.5	13.216	GKR05 - 2M□□□ 071C42
96	52	1.7	14.603	GKR04 - 2M□□□ 071C42
94	53	4.2	15.008	GKR05 - 2M□□□ 071C42
90	55	1.6	15.556	GKR04 - 2M□□□ 071C42
79	64	1.4	17.889	GKR04 - 2M□□□ 071C42
72	69	1.3	19.556	GKR04 - 2M□□□ 071C42
63	80	1.1	22.489	GKR04 - 2M□□□ 071C42

0.55kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
60	83	2.9	23.450	GKR05 - 2M□□□ 071C42
56	89	1.0	25.185	GKR04 - 2M□□□ 071C42
52	96	2.5	26.878	GKR05 - 2M□□□ 071C42
46	108	2.2	30.522	GKR05 - 2M□□□ 071C42
45	112	3.2	31.481	GKR06 - 2M□□□ 071C42
42	119	2.0	33.433	GKR05 - 2M□□□ 071C42
41	123	3.2	34.708	GKR06 - 2M□□□ 071C42
37	135	1.8	37.967	GKR05 - 2M□□□ 071C42
35	145	2.9	40.741	GKR06 - 2M□□□ 071C42
33	154	1.6	43.267	GKR05 - 2M□□□ 071C42
31	160	2.8	44.917	GKR06 - 2M□□□ 071C42
29	175	1.4	49.133	GKR05 - 2M□□□ 071C42
28	176	2.4	49.444	GKR06 - 2M□□□ 071C42
27	187	1.3	52.510	GKR05 - 2M□□□ 071C42
26	194	2.3	54.513	GKR06 - 2M□□□ 071C42
24	212	1.1	59.630	GKR05 - 2M□□□ 071C42
23	222	1.4	62.500	GKR06 - 2M□□□ 071C42
20	245	1.4	68.906	GKR06 - 2M□□□ 071C42

0.75kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
272	25	2.8	5.185	GKR04 - 2M□□□ 080C32
237	29	2.5	5.963	GKR04 - 2M□□□ 080C32
225	30	4.1	6.257	GKR05 - 2M□□□ 080C32
198	34	2.3	7.111	GKR04 - 2M□□□ 080C32
172	40	2.1	8.178	GKR04 - 2M□□□ 080C32
155	44	1.9	9.101	GKR04 - 2M□□□ 080C32
135	51	1.8	10.466	GKR04 - 2M□□□ 080C32
123	55	1.6	11.449	GKR04 - 2M□□□ 080C32
111	61	1.5	12.698	GKR04 - 2M□□□ 080C32
107	64	3.4	13.216	GKR05 - 2M□□□ 080C32
97	71	1.3	14.603	GKR04 - 2M□□□ 080C32
94	72	3.1	15.008	GKR05 - 2M□□□ 080C32
91	75	1.2	15.556	GKR04 - 2M□□□ 080C32
84	81	3.0	16.857	GKR05 - 2M□□□ 080C32
79	86	1.0	17.889	GKR04 - 2M□□□ 080C32
74	92	2.6	19.143	GKR05 - 2M□□□ 080C32
72	94	1.0	19.556	GKR04 - 2M□□□ 080C32
68	100	2.4	20.650	GKR05 - 2M□□□ 080C32
60	113	2.1	23.450	GKR05 - 2M□□□ 080C32
53	130	1.9	26.878	GKR05 - 2M□□□ 080C32
51	135	3.3	27.903	GKR06 - 2M□□□ 080C32
46	147	1.6	30.522	GKR05 - 2M□□□ 080C32
45	152	2.9	31.481	GKR06 - 2M□□□ 080C32
42	161	1.5	33.433	GKR05 - 2M□□□ 080C32
41	168	2.7	34.708	GKR06 - 2M□□□ 080C32
37	183	1.3	37.967	GKR05 - 2M□□□ 080C32
35	197	2.3	40.741	GKR06 - 2M□□□ 080C32
33	209	1.1	43.267	GKR05 - 2M□□□ 080C32
31	217	2.1	44.917	GKR06 - 2M□□□ 080C32

0.75kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
29	237	1.0	49.133	GKR05 - 2M□□□ 080C32
29	239	1.9	49.444	GKR06 - 2M□□□ 080C32
26	263	1.7	54.513	GKR06 - 2M□□□ 080C32
23	302	1.3	62.500	GKR06 - 2M□□□ 080C32
21	333	1.3	68.906	GKR06 - 2M□□□ 080C32

1.1kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
390	26	4.5	3.565	GKR05 - 2M□□□ 080C42
268	37	1.8	5.185	GKR04 - 2M□□□ 080C42
233	43	1.7	5.963	GKR04 - 2M□□□ 080C42
222	45	3.5	6.257	GKR05 - 2M□□□ 080C42
196	51	1.5	7.111	GKR04 - 2M□□□ 080C42
170	59	1.4	8.178	GKR04 - 2M□□□ 080C42
153	65	1.3	9.101	GKR04 - 2M□□□ 080C42
147	68	2.8	9.440	GKR05 - 2M□□□ 080C42
133	75	1.2	10.466	GKR04 - 2M□□□ 080C42
130	77	2.6	10.720	GKR05 - 2M□□□ 080C42
121	82	1.1	11.449	GKR04 - 2M□□□ 080C42
110	91	1.0	12.698	GKR04 - 2M□□□ 080C42
115	87	2.4	12.081	GKR05 - 2M□□□ 080C42
105	95	2.3	13.216	GKR05 - 2M□□□ 080C42
101	99	2.2	13.719	GKR05 - 2M□□□ 080C42
93	108	2.1	15.008	GKR05 - 2M□□□ 080C42
83	121	2.0	16.857	GKR05 - 2M□□□ 080C42
73	137	1.7	19.143	GKR05 - 2M□□□ 080C42
67	148	1.6	20.650	GKR05 - 2M□□□ 080C42
72	140	3.2	19.444	GKR06 - 2M□□□ 080C42
59	168	1.4	23.450	GKR05 - 2M□□□ 080C42
65	154	2.9	21.438	GKR06 - 2M□□□ 080C42
52	193	1.2	26.878	GKR05 - 2M□□□ 080C42
55	182	2.5	25.309	GKR06 - 2M□□□ 080C42
50	200	2.2	27.903	GKR06 - 2M□□□ 080C42
46	219	1.1	30.522	GKR05 - 2M□□□ 080C42
44	226	2.0	31.481	GKR06 - 2M□□□ 080C42
42	240	1.0	33.433	GKR05 - 2M□□□ 080C42
40	249	1.8	34.708	GKR06 - 2M□□□ 080C42
34	293	1.5	40.741	GKR06 - 2M□□□ 080C42
31	323	1.4	44.917	GKR06 - 2M□□□ 080C42
28	355	1.3	49.444	GKR06 - 2M□□□ 080C42
26	391	1.2	54.513	GKR06 - 2M□□□ 080C42

1.5kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
390	35	3.9	3.565	GKR05 - 2M□□□ 090C32
268	51	1.4	5.185	GKR04 - 2M□□□ 090C32
284	48	3.1	4.889	GKR05 - 2M□□□ 090C32
233	58	1.2	5.963	GKR04 - 2M□□□ 090C32
222	61	2.5	6.257	GKR05 - 2M□□□ 090C32
196	70	1.1	7.111	GKR04 - 2M□□□ 090C32
202	67	2.7	6.883	GKR05 - 2M□□□ 090C32
170	80	1.0	8.178	GKR04 - 2M□□□ 090C32
178	77	2.4	7.817	GKR05 - 2M□□□ 090C32
147	92	2.1	9.440	GKR05 - 2M□□□ 090C32
130	105	1.9	10.720	GKR05 - 2M□□□ 090C32
115	118	1.8	12.081	GKR05 - 2M□□□ 090C32
105	129	1.7	13.216	GKR05 - 2M□□□ 090C32
101	134	1.6	13.719	GKR05 - 2M□□□ 090C32
101	134	3.2	13.720	GKR06 - 2M□□□ 090C32
93	147	1.5	15.008	GKR05 - 2M□□□ 090C32
83	165	1.5	16.857	GKR05 - 2M□□□ 090C32
88	155	2.9	15.873	GKR06 - 2M□□□ 090C32
73	187	1.3	19.143	GKR05 - 2M□□□ 090C32
79	171	2.6	17.500	GKR06 - 2M□□□ 090C32
67	202	1.2	20.650	GKR05 - 2M□□□ 090C32
72	190	2.4	19.444	GKR06 - 2M□□□ 090C32
59	230	1.0	23.450	GKR05 - 2M□□□ 090C32
65	210	2.1	21.438	GKR06 - 2M□□□ 090C32
55	248	1.8	25.309	GKR06 - 2M□□□ 090C32
50	273	1.6	27.903	GKR06 - 2M□□□ 090C32
44	308	1.5	31.481	GKR06 - 2M□□□ 090C32
40	340	1.3	34.708	GKR06 - 2M□□□ 090C32
34	399	1.1	40.741	GKR06 - 2M□□□ 090C32
31	440	1.0	44.917	GKR06 - 2M□□□ 090C32

2.2kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
404	49	2.8	3.565	GKR05 - 2M□□□ 100C12
295	68	2.2	4.889	GKR05 - 2M□□□ 100C12
230	87	1.8	6.257	GKR05 - 2M□□□ 100C12
209	95	1.9	6.883	GKR05 - 2M□□□ 100C12
184	108	1.7	7.817	GKR05 - 2M□□□ 100C12
153	131	1.5	9.440	GKR05 - 2M□□□ 100C12
134	149	1.4	10.720	GKR05 - 2M□□□ 100C12
147	136	2.8	9.800	GKR06 - 2M□□□ 100C12
127	158	2.8	11.376	GKR06 - 2M□□□ 100C12
119	167	1.2	12.081	GKR05 - 2M□□□ 100C12
116	173	2.6	12.444	GKR06 - 2M□□□ 100C12
109	183	1.2	13.216	GKR05 - 2M□□□ 100C12
105	190	1.1	13.719	GKR05 - 2M□□□ 100C12
105	190	2.2	13.720	GKR06 - 2M□□□ 100C12
96	208	1.1	15.008	GKR05 - 2M□□□ 100C12
85	234	1.0	16.857	GKR05 - 2M□□□ 100C12
91	220	2.0	15.873	GKR06 - 2M□□□ 100C12
82	243	1.9	17.500	GKR06 - 2M□□□ 100C12
74	270	1.7	19.444	GKR06 - 2M□□□ 100C12
67	297	1.5	21.438	GKR06 - 2M□□□ 100C12
57	351	1.3	25.309	GKR06 - 2M□□□ 100C12
52	387	1.2	27.903	GKR06 - 2M□□□ 100C12
46	436	1.0	31.481	GKR06 - 2M□□□ 100C12

3.0kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
401	68	2.0	3.565	GKR05 - 2M□□□ 100C32
417	65	3.1	3.431	GKR06 - 2M□□□ 100C32
293	93	1.6	4.889	GKR05 - 2M□□□ 100C32
304	90	2.8	4.706	GKR06 - 2M□□□ 100C32
229	119	1.3	6.257	GKR05 - 2M□□□ 100C32
237	115	2.4	6.022	GKR06 - 2M□□□ 100C32
221	123	2.8	6.481	GKR06 - 2M□□□ 100C32
208	131	1.4	6.883	GKR05 - 2M□□□ 100C32
200	136	2.6	7.146	GKR06 - 2M□□□ 100C32
183	149	1.3	7.817	GKR05 - 2M□□□ 100C32
152	180	1.1	9.440	GKR05 - 2M□□□ 100C32
161	169	2.4	8.889	GKR06 - 2M□□□ 100C32
133	204	1.0	10.720	GKR05 - 2M□□□ 100C32
146	187	2.1	9.800	GKR06 - 2M□□□ 100C32
126	217	2.0	11.376	GKR06 - 2M□□□ 100C32
115	237	1.9	12.444	GKR06 - 2M□□□ 100C32
104	261	1.6	13.720	GKR06 - 2M□□□ 100C32
90	302	1.5	15.873	GKR06 - 2M□□□ 100C32
82	333	1.4	17.500	GKR06 - 2M□□□ 100C32
74	370	1.2	19.444	GKR06 - 2M□□□ 100C32
67	408	1.1	21.438	GKR06 - 2M□□□ 100C32

4.0kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
423	86	2.3	3.431	GKR06 - 2M□□□ 112C22
308	118	2.1	4.706	GKR06 - 2M□□□ 112C22
241	151	1.9	6.022	GKR06 - 2M□□□ 112C22
224	162	2.2	6.481	GKR06 - 2M□□□ 112C22
203	179	1.9	7.146	GKR06 - 2M□□□ 112C22
163	223	1.8	8.889	GKR06 - 2M□□□ 112C22
148	245	1.6	9.800	GKR06 - 2M□□□ 112C22
128	285	1.5	11.376	GKR06 - 2M□□□ 112C22
117	311	1.4	12.444	GKR06 - 2M□□□ 112C22
106	343	1.2	13.720	GKR06 - 2M□□□ 112C22
91	397	1.1	15.873	GKR06 - 2M□□□ 112C22
83	438	1.0	17.500	GKR06 - 2M□□□ 112C22

5.5kW				
Speed r/min	Torque Nm	Gearbox service factor	Ratio	Helical geared motor
421	119	1.7	3.431	GKR06 - 2M□□□ 112C32
307	163	1.5	4.706	GKR06 - 2M□□□ 112C32
240	208	1.3	6.022	GKR06 - 2M□□□ 112C32
223	224	1.6	6.481	GKR06 - 2M□□□ 112C32
202	247	1.4	7.146	GKR06 - 2M□□□ 112C32
163	307	1.3	8.889	GKR06 - 2M□□□ 112C32
147	338	1.1	9.800	GKR06 - 2M□□□ 112C32
127	393	1.1	11.376	GKR06 - 2M□□□ 112C32
116	430	1.0	12.444	GKR06 - 2M□□□ 112C32

G-motion motors

Lenze G-motion motors feature an integral gearbox adaptor. This gives advantages of reduced length and lower costs. These 3 phase motors are 2, 4 and 6 pole and comply with IEC34-VDE530, DIN57530 and 42677.

Enclosure and protection

Construction to IP55 with class F insulation. Normally closed thermal switches are fitted to the motor windings, 1 up to frame size 80 and thereafter 3. This gives essential protection on inverter drives when running at low speeds without a blower. Radio interference suppression is to EN55011 part A.

Materials

Housing alloy or cast iron with cooling ribs. Terminal box is alloy. Fan cover sheet steel and fan robust plastic.

Duty cycles

Motors are rated for S1 continuous duty according to VDE0530. For intermittent duties S2 to S8 operation at increased power is possible. Speak to our geared motor engineers for uprating factors.

Other motors

Other types of motors such as 1 phase, dc, flameproof, servo can be assembled using the G-motion plug-in gearboxes, details on request.

Inverter operation

Derate the output torque for inverter operation without blower below 20Hz.

Maximum motor speeds

Speed limits are based on gearbox thermal limits

Motor frame size	071-132	160-180	200-225
Maximum speed r/min	4000	3400*	2800*

*for mounting positions C & D, ie vertical, speak to our engineers if >1500 r/min

Torque reduction

Torque derating depending on the motor frame size for self-ventilation and frequency inverter operation



Power derating

Influence of the installation height

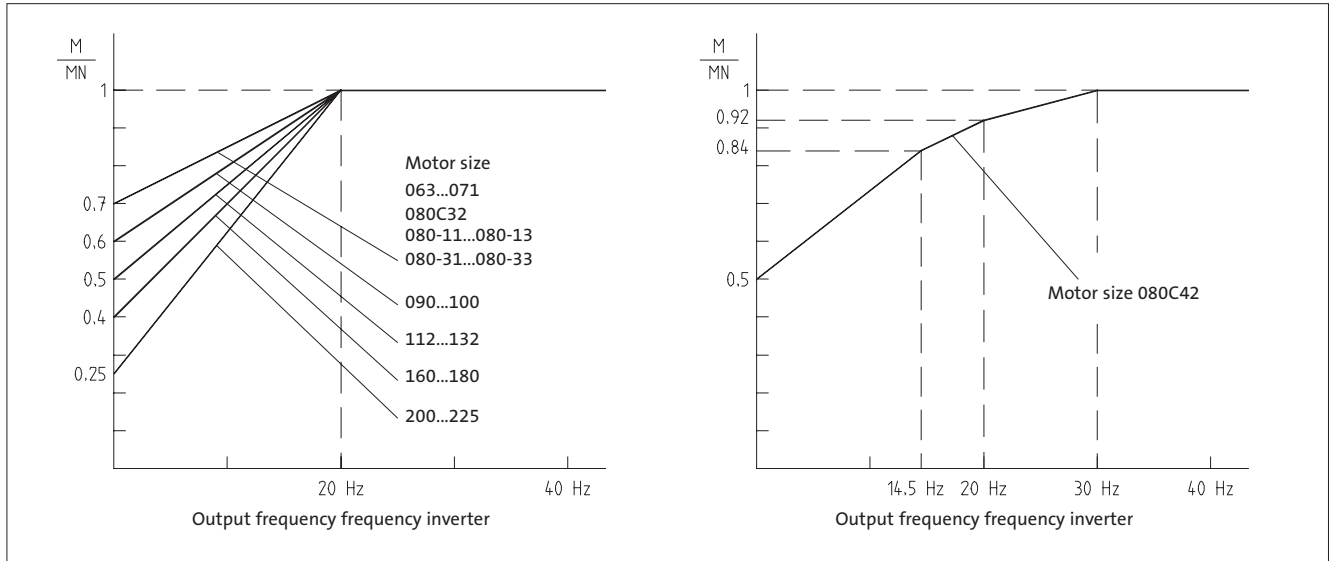
Influence of the installation height a.m.s.l. on the rated power				
H [m]	≤ 1000	2000	3000	4000
$\frac{P_h}{P_{rated}}$	1	0.95	0.90	0.85

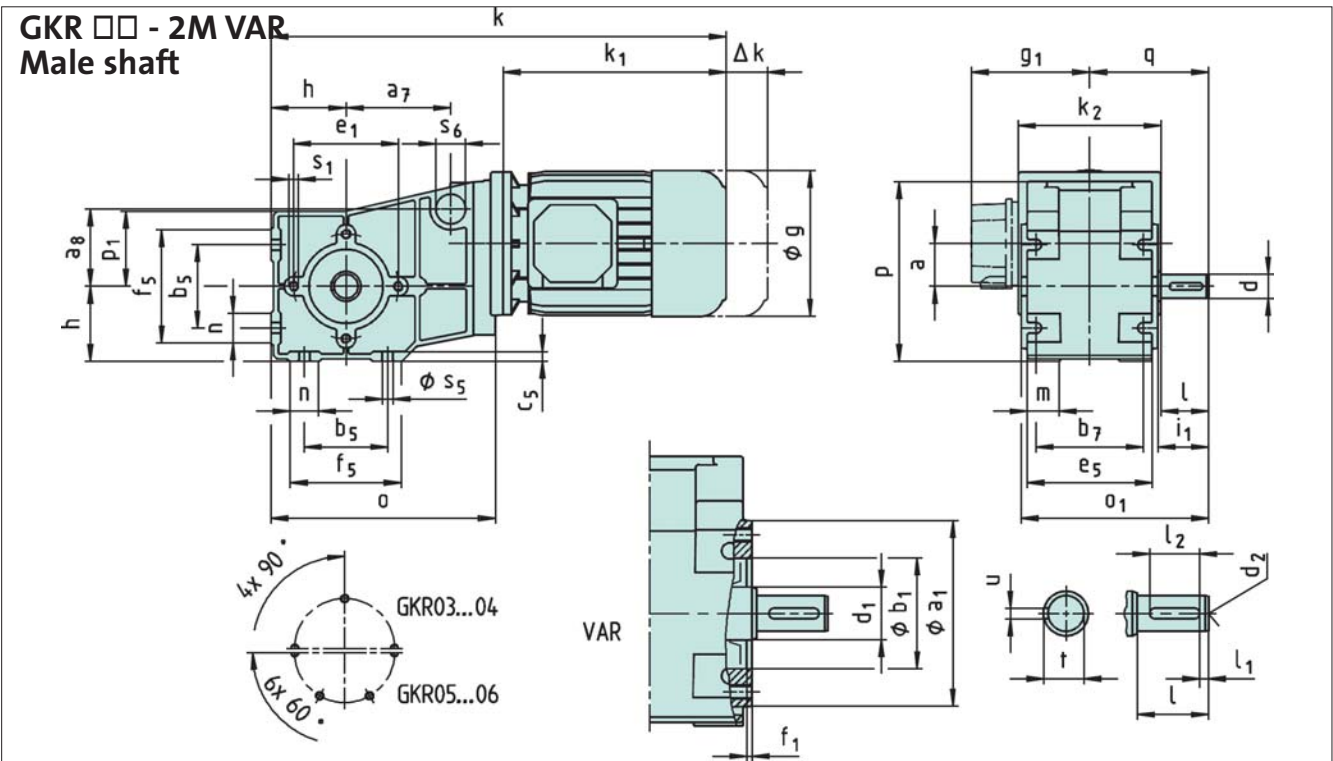
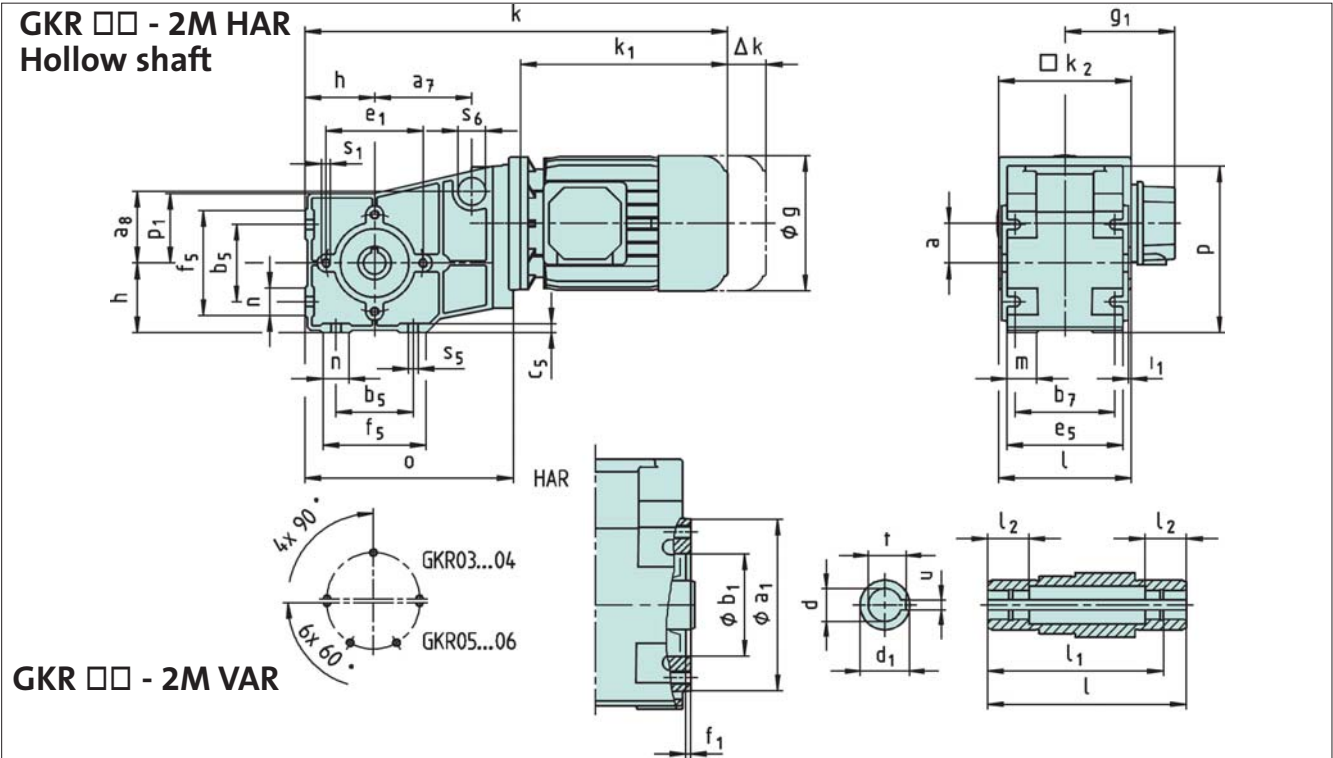
Influence of the ambient temperature during operation

Influence of the ambient temperature T _{amb} on the rated power					
T _{amb} [°C]	≤ 40	45	50	55	60
$\frac{P_{\vartheta}}{P_{rated}}$	1	0.95	0.90	0.85	0.80

Calculation of the power derating

$$P_{red} = \frac{P_h}{P_{rated}} \cdot \frac{P_{\vartheta}}{P_{rated}} \cdot P_{rated}$$





Terminal box and mounting positions

Terminal box: 2,3,4,5		Shaft position: 3,5		Mounting positions: A,B,C,D,E,F	
A	B	C	D	E	F

GKR Dimensions

Geared motor GKR □□ - 2 M HAR								Motor frame size													
								063C12		071C32		080C32		090C32		100C12		112C22		112C32	
								063C32		071C42		080C42				100C32					
								063C42													
Motor	g							123		138		156		176		196		220			
	g ₁		Without option					100		109		141		146		157		167			
			Brake motor					107		116		130		135		146		156			
	k ₁							188		207		225		276		309		319		363	
	k ₂		From gearbox size 04					120		120		145		180		180		222			
	Δ k		Brake					40		52		73		70		79		90			
			Separate fan					130		128		128		127		109		102			
			Separate fan + brake					170		165		184		180		170		183			
Gearbox size	Gearbox							Total length													
	l*	p*	p ₁	a	h	o		k													
03	100	117	48	29	50	142		332	353				486								
04	120	151	63	36	63	189		383	403		425										
05	143	181	82	40	80	251		437	456		479		540		573						
06	170	226	100	51	100	307		488	508		530		591		625		641		685		

Gearbox size	Hollow shaft							Pitch circle					
	d 2) H7	l	d ₁	l ₁	l ₂	u JS9	t 1) +0.1	a ₁	b ₁ J7	e ₁	f ₁	i ₁	s ₁
03	18 20	100	30	86	22	6	20.8 22.8	85	55	70	2.5	2.5	M6x12
04	20 25	120	30 35	106	25	6 8	22.8 27.0	104	62	88	3	2.5	M8x16
05	30 35	143	50	128.5	25	8 10	33.3 38.3	116	80	100	4	4	M8x15
06	40 45	170	65	152	30	12 14	43.3 48.8	140	100	120	4	5	M10x22

Gearbox size	Foot								Torque plate		
	b ₅	b ₇	c ₅	e ₅	f ₅	n	m	s ₅	a ₇	a ₈	s ₆
03	60	75	7	90	80	20	22	6.6	66	39	25x12
04	70	90	8	105	95	25	28	9	88	65	25x17
05	100	100	11	115	138	48	27	9	—		
06	120	125	12	145	164	53	32	11	—		

* Observe dimension k₂

1) If the hollow shaft diameter d=25mm, use a low profile key to DIN 6885/3

2) Only for the range l₂

GKR □□ - 2M VAR		Motor dimensions and other dimensions as for type HAR													
Gearbox size	solid shaft										Pitch circle				
	o ₁ *	q	d	l	d ₁	l ₁	l ₁	d ₁	u	t	a ₁	b ₁	e ₁	f ₁	s ₁
03	138	90	20	40	30	5	28	M6	6	22.5	85	55	70	2.5	42.5
04	158	100	20	40	30	5	28	M6	6	22.5	104	62	88	3	42.5
05	199	131.5	30	60	50	6	45	M10	8	33	116	80	100	4	64
06	235	155	35	70	65	7	56	M12	10	38	140	100	120	4	75

Weights of geared motors

Gearbox	Motor frame size					
	063	071	080	090	100	112
03	7.0	9.3				
04	9.5	12	17	24		
05	15	17	21	28	35	
06	24	26	30	38	45	57

Values in kg

Product Availability



As one of the largest UK suppliers of geared motors, our sales workshop and warehouse team are ready to give fast response.

Items in the StockGears range are normally available from stock for immediate despatch or are built from stock parts to your specification.

MultiMount and SW ranges can be either supplied as separate gearboxes and motors (plus accessories) or built to your specification in which case workshop time should be added.

Lenze G-motion geared motors are always built to individual specification and you should normally allow 3 days for despatch.

Application support



Wide ranging support is available for applications on your site. You choose the elements you need and experienced Lenze Engineers can help you achieve tasks efficiently and faster. Services available include:

- application evaluation & recommendation of solution
- writing of customised software
- commissioning
- training for operators