

KEB Gear units & Motors - 50Hz 2023

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Introduction

Type designation

The type designation for geared motors describes the construction of the unit starting from the output side.

Gear unit

K	4	3	C V
Gear Type	Size	Number of stages	Options
G–Helical gear unit			A – Foot mounted version C – Flange mounted version E – Foot-flange mounted version
F–Shaft Mounted Helical Gear unit			A – Shaft mounted version B – Shaft mounted version C – Flange mounted version D – Shaft mounted version + side areas E – Flange mounted version + side areas S – Hollow shaft with shrink disc V – Output shaft with key Z – Splined hollow shaft G - Rubber elements
S–Helical worm gear unit K–Helical bevel gear unit			A – Foot mounted version B – Shaft mounted version C – Flange mounted version D – Shaft mounted version + foot area E – Flange mounted version + foot area S – Hollow shaft with shrink disc V – Output shaft with key Z – Splined hollow shaft T1 – Torque arm

Double gearbox

F43	G12	C V
Gear unit 1	Gear unit 2	Options Gear unit 1

Gearbox input

-W2	Free input shaft, Size 2
-W3F	Free input shaft and Flange, Size 3
-M IEC112	adapter for IEC-motors, Frame size 112
-M NEMA180	adapter for Nema-motors, Frame size 180
-M S90/1	adapter for Servo-motors, Frame size 90/1

Three phase motor

DM	90SD	4	F TW
Range	Frame size	Number of poles	Options
			B - Brake B MB – Brake with hand release F - Forced ventilation I - Incremental encoder EAM – Absolute encoder multiturn TW – PTC thermistor sensor TS - Thermorelay (closed)

Servo motor

TA	43	V30	ER TW
Range	Frame size	Type of motor winding	Options
			B.. - Brake Z – Additional inertia ER – Resolver EN.. – Absolute encoder F - Forced ventilation TW – PTC thermistor sensor PT – PT1000 sensor

Example

G23C DM80GD4 B TW

G12A –M IEC71

S32G12AV DM63K4

K43BT1 TA51 V30 ER TW

DM80G6

TA42 VD0 EN01 TW

F63 -W5

For full identification of geared motors, additional information has to be added to the type designation.

Product description

Values of the selection tables

P _n	Nominal power of the motor
T ₂	Nominal output torque of the geared motor (Mounting position M1)
n ₁	Input speed of the gear unit
n ₂	Output speed of the gear unit related to the nominal speed of the motor or the given input speed of the gearbox
c _G	Gear coefficient
i	Ratio of gear unit
i _s	Ratio of the worm gear stage
~kg	approximate weight of the geared motor at mounting position M1
T _{2max}	Maximum permissible continuous output torque of the gear unit for c _G =1
T _{1max}	Maximum permissible continuous input torque of the gear unit or of the input component of the gear unit
P _{1max}	Maximum permissible continuous input power of the gear unit for c _G =1
J _g	Inertia Gear unit (applied to input shaft of gearbox)
J _{ad}	Inertia Motor adapter
η	Efficiency

Selection table Gear units

i	n ₂ [1/min]	T _{2max} [Nm]	P _{1max} [kW]
n ₁ =1400 1/min			

G52

31.19	45	1130	5.3
28.45	49	1120	5.8
26.17	53	1330	7.4

Please consider T_{2max} and P_{1max} of gearbox when combining the drive.
For drives with motor adapter or free input shaft, additional consider T_{1max}.

Selection table Helical worm gear units

S12

i	i _s	n ₁ =3400 1/min				n ₁ =2800 1/min				n ₁ =1700 1/min				n ₁ =1400 1/min			
		n ₂ [1/min]	T _{2max} [Nm]	P _{1max} [kW]	η	n ₂ [1/min]	T _{2max} [Nm]	P _{1max} [kW]	η	n ₂ [1/min]	T _{2max} [Nm]	P _{1max} [kW]	η	n ₂ [1/min]	T _{2max} [Nm]	P _{1max} [kW]	η
168.00	1/40	20	151	0.49	0.66	17	156	0.43	0.64	10	168	0.30	0.59	8.3	171	0.26	0.57
143.53	1/40	24	146	0.54	0.67	20	152	0.47	0.65	12	164	0.33	0.61	9.8	168	0.29	0.59

With new helical-worm gear units the tooth flanks are not completely smoothed down. The efficiency is lower than after the running in process.
For a two start worm the decrease is about 6%. The running-in process is essentially concluded after 24 hours. The rated efficiencies are achieved if:

- the gear unit has been run in completely,
- the gear unit has reached the nominal operating temperature,
- the recommended lubricant is used,
- the gear unit is working with rated load.

Selection table Geared motors

Type	n ₂ [1/min]	T ₂ [Nm]	c _G	i	~kg
------	------------------------	---------------------	----------------	---	-----

3.0 kW

K63A DM100LF4					107
10	2840	0.90		144.48	
11	2580	1.00		130.99	
12	2350	1.10		119.50	

The selection table contains standard geared motors with

- Three phase motor DM/DA, 4 pole, P_n=0.12..45kW
- Ratio of gear unit i<500
- Gear coefficient c_G<2.5 (DM63..DM80 c_G<2.0)

Additional geared motors can be combined with help of corresponding selection table for gearboxes.

Efficiency of gearbox

The efficiency of the gear unit for helical gear units G, shaft mounted helical gear units F and helical bevel gear units K depends on the number of gear stages, 2-stage (0.96) and 3-stage (0.94).

The efficiency of helical worm gear units S depends on the ratio of the worm gear stage, the input speed into the gear unit and the temperature of the gear unit.

The efficiency of helical worm gear units S is shown in the selection table for gear units.

The efficiency of helical worm gear units S for back driving is significantly lower than the normal efficiency. In certain cases the worm gear unit can be self-locking.

At certain mounting positions the gearbox is completely filled with lubricant. At high input speed mixing losses can reduce the efficiency of the gear unit.

Dimension sheet notes

If not stated differently in the dimension sheet, the following tolerances are used:

Tolerance of shaft height <250mm: -0.5mm >250mm: -1mm

Tolerance of shaft diameter ≤50mm: ISO k6 >50mm: ISO m6

Flanges - Tolerance of spigot ≤230mm: ISO j6 >230mm: ISO h6

Coating and Corrosion Protection

execution	is oriented towards corrosivity category (EN ISO 12944)	typical ambient conditions	Example
normal indoor installation	C1 - insignificant	Inside of buildings, neutral atmosphere	Transport systems in factories, Logistic areas, Tool or textile machines
P1 Outdoor installation, Covered	C2 - low	Outdoor installation with low contamination, e.g. with roof, Not heated buildings with possible condensation	Sawmills, Trimming lines, Agitators
P2 Outdoor installation	C3 - moderate	Environments with high humidity and moderate contamination, Outdoor installations with direct weathering	Facade cleaning systems, Cableways, Gravel plants
P3 Outdoor installation, Wet conditions	C4 - strong	Environments with high humidity and occasional severe atmospheric or chemical contamination	Wastewater treatment plants, Mining equipment

- 1) Standard color RAL7031 bluegrey
Different colors on request.

For the operation of the geared motors under corrosive environment the following additional options are available:

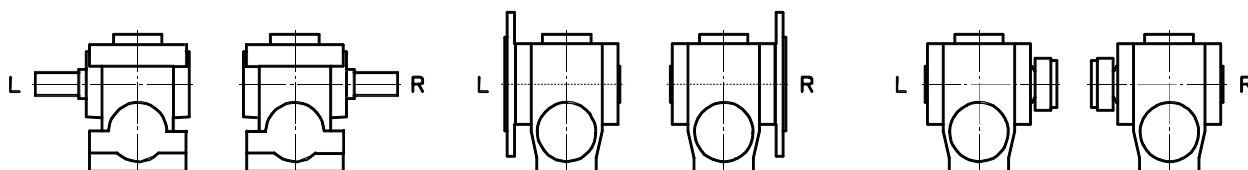
Dust- and water protection IP65 for normal and braked motors

Output shaft / hollow shaft from stainless steel

Viton seals

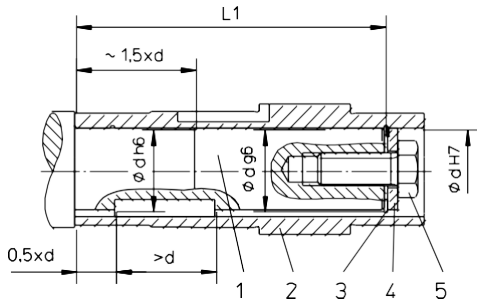
Mounting face

For helical-worm and helical bevel geared motors with flange, with solid shaft or with shrink disk the position of mounting face has to be specified.

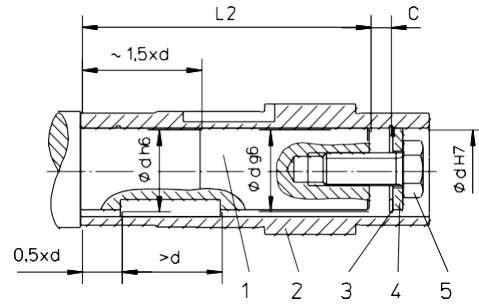


Example: Mounting face R

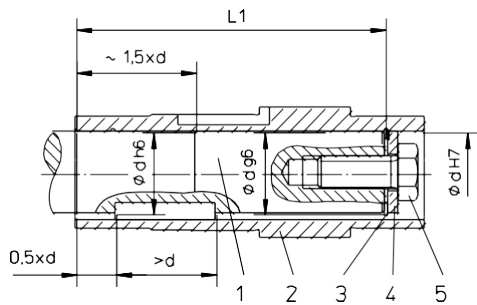
Assembly / Disassembly notes when using gear units with hollow shaft



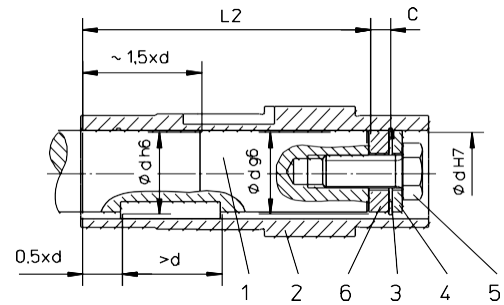
Assembly on shaft with shoulder
Length of customers shaft: L1-1mm



Assembly on shaft with shoulder
Disassembly with turn safe nut possible
Length of customers shaft: L2



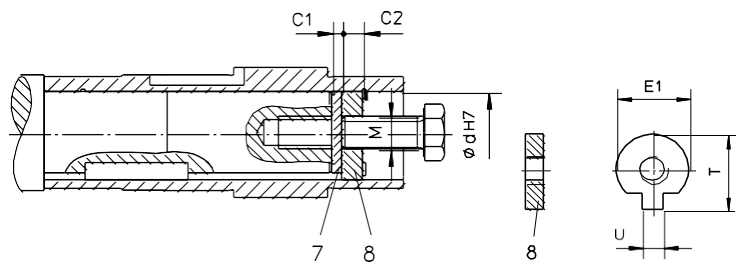
Assembly on shaft without shoulder
Length of customers shaft: L1



Assembly on shaft without shoulder
Disassembly with turn safe nut possible
Length of customers shaft: L2

Gear unit	d	L1	L2	C	C1	C2	E1	M	T	U
S0	20	76	64	12	5	6	19.7	M6	22.5	5.5
K0	20	91	79	12	5	6	19.7	M6	22.5	5.5
S1, F2, K1, K2	25	105	89	16	5	10	24.7	M10	28	7.5
S2, F3, K3	30	132	116	16	5	10	29.7	M10	33	7.5
S2, F3, K3	35	132	116	16	5	10	34.7	M12	38	9.5
S3, F4, K4	40	155	137	18	5	12	39.7	M16	43	11.5
S4, F5, K5	50	185	167	18	5	12	49.7	M16	53.5	13.5
F6, K6	60	210	188	22	5	16	59.7	M20	64	17.5
F7, K7	70	270	248	22	5	16	69.7	M20	74.5	19.5
F8, K8	90	315	289	26	5	20	89.7	M24	95	24.5
K9	100	375	349	26	5	20	99.7	M24	106	27.5

- 1 Customer's shaft
- 2 Hollow shaft
- 3 Circlip DIN472
- 4 Washer
- 5 Screw DIN933
- 6 Spacer
- 7 Washer
- 8 Nut with tang



Drive selection

Selection conditions

The following conditions must be considered in the selection of the geared motor:

$T_2 \geq TA$	T_2	[Nm]	Torque of geared motor (see selection table)
$cG \geq f_B$	TA	[Nm]	Counter-torque of driven machine
	cG		Gear coefficient (see selection table)
	f_B		Application factor of driven machine

Further, the selection of the gearmotor is influenced by the following factors:

- Duty cycle of the motor
- Application of forces on the output shaft
- Ambient temperature and altitude
- Environment conditions

Please consult the manufacturer in the case of complicated drive applications.

Application factor f_B

The service factor of the driven machine is given from the shock grade, the average operating time / day and the number of switches per hour. The shock grade is given from the mass acceleration factor of the driven machine.

$$F_J = \frac{J_{red}}{J_{mot}}$$

F_J	Mass acceleration factor
J_{red}	All external inertias corrected to motor input
J_{mot}	Inertia (Motor)

Shock grade	FJ	Operating time hours/day	Operations per hour			
			< 10	10 ... 100	100 ... 200	> 200
I - uniform	0 ... 0.2	< 8	0.8	1.0	1.2	1.3
		8 ... 16	1.0	1.2	1.3	1.4
		16 ... 24	1.2	1.3	1.4	1.5
II - moderate shocks	0.2 ... 3	< 8	1.1	1.3	1.4	1.5
		8 ... 16	1.3	1.4	1.5	1.7
		16 ... 24	1.5	1.6	1.7	1.8
III - severe shocks	3 ... 10	< 8	1.4	1.6	1.7	1.8
		8 ... 16	1.6	1.7	1.8	2.0
		16 ... 24	1.8	1.9	2.0	2.1

Radial force on gear output shaft

$$F_R = \frac{M_{ab} \cdot 2000}{d_0} \cdot f_z$$

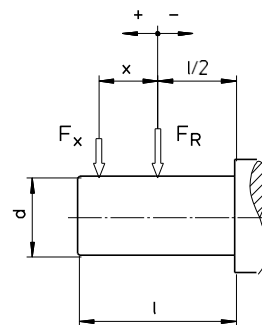
Transmission element	f_z	Remarks	F_R	[N]	Radial force on gear output shaft
Gears	1.1	< 17 teeth	M_{ab}	[Nm]	Torque of geared motor (see selection table)
Sprockets	1.4	< 13 teeth	d_0	[mm]	Effective diameter of fitted drive element
V-belt pulleys	1.7	Influence of initial pretensioning force	f_z		Incremental factor (see table)
Flat belt pulleys	2.5	Influence of initial pretensioning force			

The radial force determined must not exceed the permissible radial force for the gear unit.

Permissible Radial Forces for the Output Shaft

If there are radial loads on the output shaft, they should be compared with the permissible values for radial forces.

The values in the table for the permissible radial forces apply under the following conditions
 gear unit with solid output shaft, normal shaft ends
 constant load in continuous operation
 radial load on the middle of the output shaft in the case of worst load direction
 - no axial forces



If the radial force is not applied to the middle of the shaft, use the following formula for the conversion of the permissible radial force:

$$F_{Rx1} = F_{R1} \cdot \frac{1}{1 + \frac{x}{K_1}}$$

$$F_{Rx2} = F_{R2} \cdot \frac{1}{1 + \frac{x}{K_2}}$$

$$F_{Rxp} = \min(F_{Rx1}, F_{Rx2})$$

F_{R1}	[N]	permissible radial force for bearing lifetime application at middle of output shaft (table)
F_{R2}	[N]	permissible radial force for shaft strength application at middle of output shaft (table)
K_1, K_2	[mm]	Constant (table)
x	[mm]	Distance (subject to sign, see sketch)
F_{Rx1}	[N]	permissible radial force for bearing lifetime application at point x
F_{Rx2}	[N]	permissible radial force for shaft strength application at point x
F_{Rxp}	[N]	total value of permissible radial force application at point x

Gear unit	Output shaft dxl [mm]	K1 [mm]	K2 [mm]	FR2 [N]	FR1 [N]							
					<16 1/min	<25 1/min	<40 1/min	<63 1/min	<100 1/min	<160 1/min	<250 1/min	<400 1/min
G0	20x40	81.5	32.5	2540	2850	2430	1950	1630	1460	1200	1080	950
G1	20x40	90	20	4030	4450	3600	3040	2420	2020	1770	1600	1440
G2	25x50	110.5	25	5900	6000	4920	4180	3410	2860	2440	2240	2040
G3	30x60	132	30	7050	10400	8650	7100	5800	4700	4300	3900	3550
G3	35x70	137	54.5	6760	10000	8330	6840	5600	4530	4140	3760	3420
G4	40x80	159	60.5	11500	16500	13600	11300	9400	7950	6650	6050	5500
G5	50x100	191.5	73.5	17600	21200	17900	14700	12800	10200	9000	8150	7450
G6	60x120	218.5	83.5	24000	27400	22500	19200	16300	14000	12600	11400	10300
G7	75x140	287	97.5	30700	36100	31900	22200	20700	19600	18200	16300	14700
G8	90x170	347.5	117	50000	101000	84500	70000	62000	60500	56000	51000	
G9	110x210	410	140	63000	179000	150000	128000	119000	112000	100000	89000	
F2	25x50	131	25	5830	6250	5300	4100	3450	3250	3050	2700	2350
F3	30x60	161	30	8000	9600	8050	6250	5150	4350	4250	3900	3600
F3	35x70	166	80	7960	9300	7800	6050	5000	4200	4150	3800	3500
F4	40x80	193.5	40	12700	10100	8000	6250	5800	3900	4200	4000	3800
F5	50x100	234.5	50	18200	15100	12100	9350	7300	5500	5750	5850	5650
F6	60x120	256	60	26200	15700	12800	9350	7750	5350	6550	6700	6700
F7	75x140	313	70	41700	50300	41600	34200	29600	28600	27200	24900	22800
F8	90x170	372.5	85	61000	64700	55700	45500	40500	39700	36700	33600	
S02A	20x40	91	20	4030	5370	4410	3750	3100	2380	2080	1910	
S02C	20x40	109	20	4030	4490	3680	3130	2590	1980	1740	1590	
S1	25x50	128	25	5830	6400	5470	4170	3430	2510	2470	2230	
S2	30x60	161	30	8000	10500	8060	6700	5730	3170	3530	3230	
S2	35x70	166	80	7960	10200	7820	6500	5560	3080	3430	3130	
S3	40x80	193.5	40	12700	11800	10400	7950	6150	5450	5200	5000	
S4	50x100	234.5	50	18200	16900	15100	10500	8900	8250	7950	7650	
K0D	20x40	105.5	20	4180	4690	3870	3230	2710	2500	1850	1690	1550
K0E	20x40	124	20	4180	3990	3300	2740	2300	2130	1580	1430	1320
K1D	25x50	124	25	6020	6020	4960	4230	3380	2530	2220	2030	1950
K1E	25x50	144	25	6020	5180	4270	3640	2910	2180	1910	1750	1680
K2	25x50	131	25	5830	6200	5200	4300	3350	3100	2820	2600	2530
K3	30x60	161	30	8000	9650	7800	6600	5150	4050	3800	3750	3650
K3	35x70	166	80	7960	9350	7550	6400	5000	3900	3700	3650	3550
K4	40x80	193.5	40	12700	10500	8200	6400	4700	3950	3750	3600	3600
K5	50x100	234.5	50	18200	15200	12100	9400	7800	4900	5050	5350	5350
K6	60x120	256	60	26200	15800	12100	8500	5800	4700	5100	5750	
K7	75x140	313	70	41700	49100	42600	36700	33200	27200	25400	24500	
K8	90x170	372.5	85	61000	65700	55200	46700	41000	38900	35600	34900	
K9	110x210	444.5	105	77300	87200	73300	62800	57300	55100	49300	48100	

The radial force determined from the application must not exceed the permissible radial force for the gear unit.

In certain conditions, the gear unit is able to accept higher radial forces.

If no radial force is applied, the permissible axial force for the gear unit is 50% of the calculated permissible radial force.

If the radial forces found for a special drive application are higher than the values in the table, or if radial and axial forces are acting at the same time, consultation with the manufacturer is necessary.

Mounting position

Helical gear units G

M1

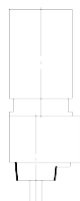
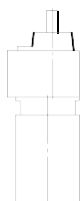
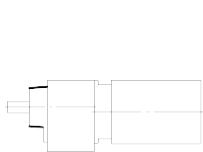
M2

M3

M4

M5

M6



Shaft mounted helical gear units F

M1

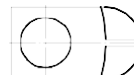
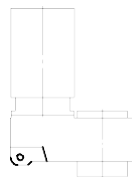
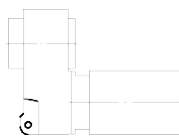
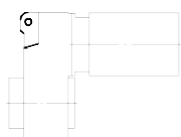
M2

M3

M4

M5

M6



Helical worm gear units S

M1

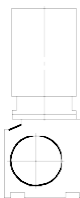
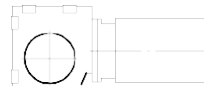
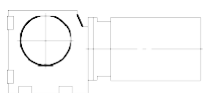
M2

M3

M4

M5

M6



Helical bevel gear units K

M1

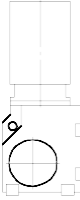
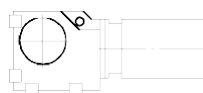
M2

M3

M4

M5

M6



Lubrication

The geared motors are supplied oil filled for the mounting position and ambient temperature of the order.
If the gear unit is to be used in a different mounting position as given on the nameplate, the quantity of lubricant has to be adjusted.

Type of lubricant	Designation	Gear unit	Area of use	
			θ [°C]	1) 2)
Mineraloil	CLP VG220	G,F,K	-10... +40	O O
		S	-20... +20	O O
	CLP VG680	S	0... +40	O O
Synthetic oil – PG	CLP PG VG460	G,F,K	-20... +80	+ +
		S	-20... +80	++ +
Synthetic oil – HC	CLP HC VG220	G,F,K,S	-40... +60	+ ++
Synthetic oil Food grade	CLP HC VG220 USDA-H1	G,F,K,S	-20... +40	+ +

θ Ambient temperature

1) Load capacity

2) Resistance to ageing

O=normal, +=high, ++=very high

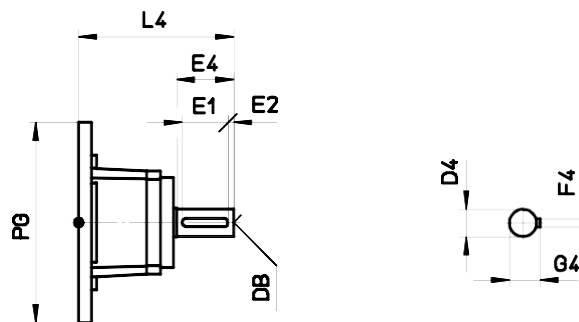
O=normal, +=high, ++=very high

Quantities of lubricant [l]

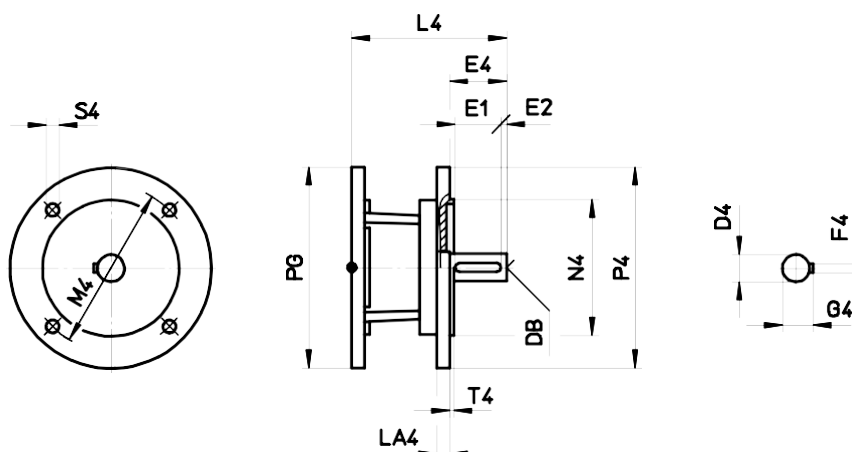
Mounting position Gear unit	M1	M2	M3	M4	M5	M6
G0	0.15	0.4	0.3	0.35	0.25	0.25
G1	0.15	0.65	0.55	0.65	0.4	0.4
G2	0.25	0.95	0.7	0.85	0.55	0.55
G3	0.35	1.6	1.2	1.6	0.9	0.9
G4	0.5	2.7	1.9	2.6	1.7	1.7
G5	1.1	5.2	4.1	4.8	3.1	3.1
G6	1.9	8.8	8.1	8.2	7.0	7.0
G7	3.0	14.5	13.4	12.7	12.2	12.2
G8	4.8	23.2	22.2	21.5	21.0	21.0
G9	8.1	38.2	28.5	37.0	22.0	20.7
F2	0.75	1.1	0.6	1.0	0.7	0.65
F3	1.5	2.1	1.2	1.7	1.4	1.3
F4	2.7	3.5	1.9	3.0	2.3	2.1
F5	4.6	6.4	3.6	5.9	4.1	4.0
F6	7.6	11.5	6.2	10.4	7.7	6.2
F7	11.4	18.0	9.8	16.6	10.8	10.5
F8	19.9	30.1	17.4	29.8	17.4	17.1
K0	0.1	0.4	0.3	0.55	0.35	0.3
K1	0.2	0.6	0.4	0.95	0.55	0.5
K2	0.3	0.7	0.8	1.0	0.75	0.75
K3	0.55	1.1	1.3	1.9	1.4	1.4
K4	1.0	1.8	2.9	3.2	2.5	2.5
K5	1.9	3.4	5	6.5	4.6	4.6
K6	3.1	5.7	7.6	10.5	7.1	7.1
K7	4.7	9.7	11.3	18.5	13.1	13.1
K8	7.5	14.5	18.0	28.0	20.5	20.5
K9	12.0	22.6	30.7	46.7	35.8	35.8
S0	0.1	0.35	0.25	0.35	0.25	0.25
S1	0.25	0.7	0.45	0.85	0.55	0.55
S2	0.5	1.2	0.85	1.7	1.0	1.0
S3	0.8	2.0	1.6	3.0	1.8	1.8
S4	1.4	3.5	2.8	5.1	3.0	3.0

Free input shaft -W

-W

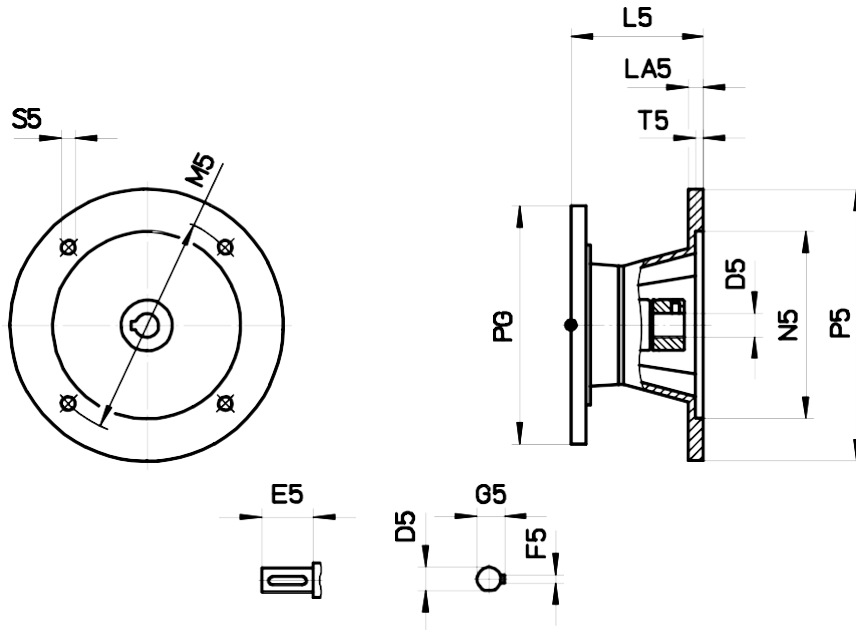


-WF



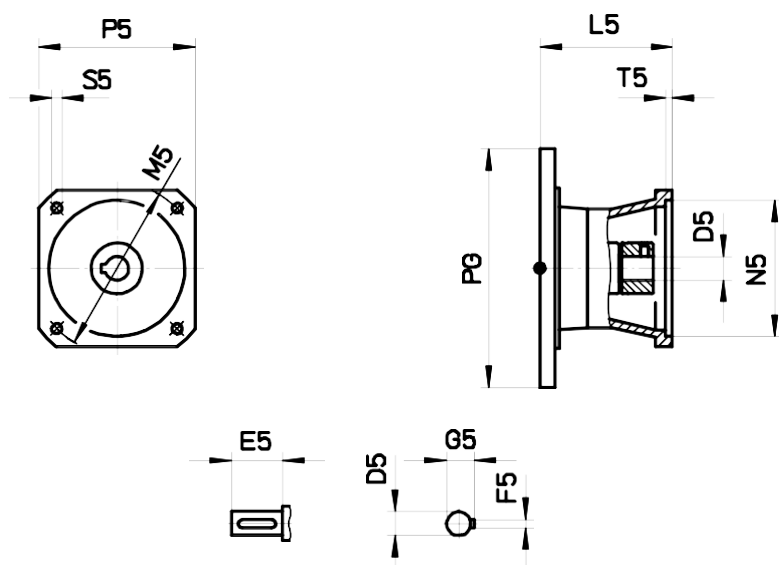
Adapter	-W1	-W2	-W3	-W4	-W5	-W6		
T1max [Nm]	4	12	30	60	180	300		
D4	14	19	28	38	48	55		
DB	M5	M6	M10	M12	M16	M20		
E1	22	32	50	70	100	100		
E2	4	4	5	5	5	5		
E4	30	40	60	80	110	110		
F4	5	6	8	10	14	16		
G4	16	21.5	31	41	51.5	59		
LA4	8	9	9	10	12	13		
M4	100	115	130	165	265	300		
N4	80	95	110	130	230	250		
P4	120	140	160	200	300	350		
S4	6.6	9	9	11	14	17.5		
T4	3	3	3.5	3.5	4	5		
							PG	Gear unit
L4	79.5						105	G0, S0, K0
	78.5	113.5					120	G1, S1, F2, K1, K2
	75.5	108.5	153.5				140	G2, S2, F3, K3
	75	110	154	192.5			160	G3, S3, F4, K4
	71.5	106.5	149.5	189			200	G4, S4, F5, K5
		101.5	146	185.5	243.5		250	G5, F6, K6
			139	178.5	237.5	259	300	G6, F7, K7
			132	170.5	230	253.5	350	G7, F8, K8
				154	215	236.5	400	G8, K9
						224	450	G9

Motor adapter -M IEC



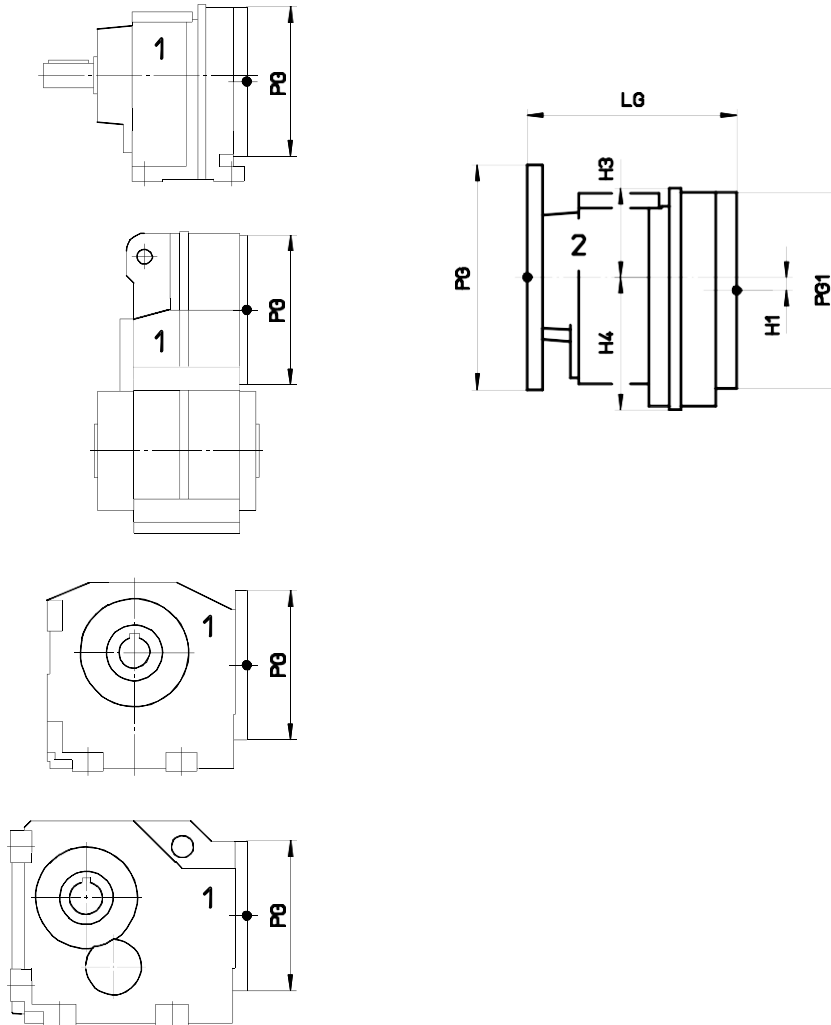
Adapter -M	IEC63	IEC71	IEC80	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200	IEC225			
T1max [Nm]	4	4	8	12	21	30	60	120	180	300	300			
Jad [kgcm ²]	0.1	0.1	0.69	0.69	2.3	2.3	7.7	54.3	54.3	128	128			
D5	11	14	19	24	28	28	38	42	48	55	60			
E5	23	30	40	50	60	60	80	110	110	110	140			
F5	4	5	6	8	8	8	10	12	14	16	18			
G5	12.5	16	21.5	27	31	31	41	45	51.5	59	64			
LA5	12	12	15	15	18	18	18	24	24	26	26			
M5	115	130	165	165	215	215	265	300	300	350	400			
N5	95	110	130	130	180	180	230	250	250	300	350			
P5	140	160	200	200	250	250	300	350	350	400	450			
S5	M8	M8	M10	M10	M12	M12	M12	M16	M16	M16	M16			
T5	4	4.5	4.5	4.5	5	5	5	6	6	14	14	PG	Gear unit	
L5	75	82										105	G0, S0, K0	
	74	81	118	128								120	G1, S1, F2, K1, K2	
	71	78	113	123	156.5	156.5						140	G2, S2, F3, K3	
	70.5	77.5	114.5	124.5	157	157	196					160	G3, S3, F4, K4	
	67	74	111	121	152.5	152.5	192.5					200	G4, S4, F5, K5	
			106	116	149	149	189	249	249				250	G5, F6, K6
					142	142	182	243	243				300	G6, F7, K7
					135	135	174	235.5	235.5	221	221	350	G7, F8, K8	
								157.5	223.5	223.5	204	204	400	G8, K9
										191.5	191.5	450	G9	

Motor adapter -M S



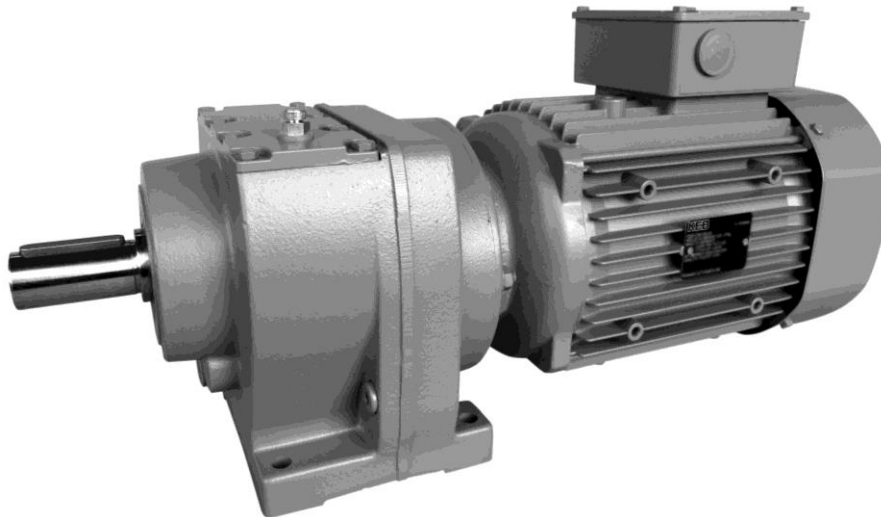
Adapter -M	S70/1	S70/2	S90/1	S90/2	S110/1	S110/2	S140/1	S140/2	S140/3	S190/1	S190/2	S190/6	PG Gear unit	
T1max [Nm]	4	4	8	8	12	12	30	30	30	60	60	60		
Jad [kgcm ²]	0.1	0.1	0.69	0.69	0.69	0.69	2.3	2.3	2.3	7.7	7.7	7.7		
D5	11	14	14	19	19	19	24	24	28	32	32	38		
E5	23	30	30	40	40	40	50	50	60	58	58	80		
F5	4	5	5	6	6	6	8	8	8	10	10	10		
G5	12.5	16	16	21.5	21.5	21.5	27	27	31	35	35	41		
M5	75	75	100	100	115	130	165	130	165	215	165	215		
N5	60	60	80	80	95	95	130	110	130	180	130	180		
P5	70	70	92	92	110	110	140	140	140	190	190	190		
S5	M5	M5	M6	M6	M8	M8	M10	M8	M10	M12	M10	M12		
T5	3.5	3.5	4	4	4	4	4.5	4.5	4.5	5	4.5	5		
L5	75	82											105	G0, S0, K0
	74	81	108	118	118	118							120	G1, S1, F2, K1, K2
	71	78	103	113	113	113	146.5	146.5	156.5				140	G2, S2, F3, K3
	70.5	77.5	104.5	114.5	114.5	114.5	147	147	157	174	174	196	160	G3, S3, F4, K4
	67	74	101	111	111	111	142.5	142.5	152.5	170.5	170.5	192.5	200	G4, S4, F5, K5
			96	106	106	106	139	139	149	167	167	189	250	G5, F6, K6
							132	132	142	160	160	182	300	G6, F7, K7
							125	125	135	152	152	174	350	G7, F8, K8
									135.5	135.5	157.5	400	G8, K9	

Double gearbox - Dimensions

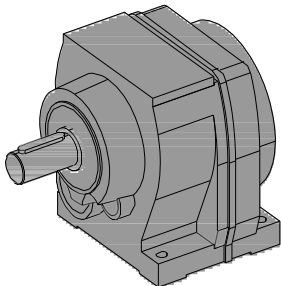


Gear unit 1	Gear unit 2	H1	H3	H4	LG	PG	PG1
G1, S1, F2, K1, K2	G0	7	47.5	71	111.5	120	105
G2, S2, F3, K3	G1	5	57.5	85	123	140	120
G3, S3, F4, K4	G1	5	57.5	85	123	160	120
G4, S4, F5, K5	G2	11	62.5	100.5	145	200	140
G5, F6, K6	G2	11	62.5	100.5	142.5	250	140
G6, F7, K7	G3	11	72.5	120	173	300	160
G7, K8, F8	G3	11	72.5	120	168	350	160
G8, K9	G4	16	88	144.5	201	400	200
G9	G4	16	88	144.5	189	450	200

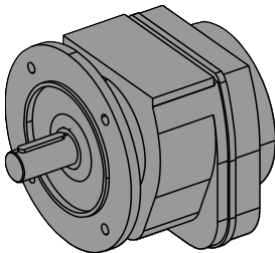
Helical gear units G



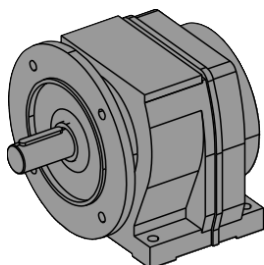
Type of construction



Foot mounted version
Example: G02A



Flange mounted version
Example: G33C



Foot-flange mounted version
Example: G22E

Selection table - Gear units

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G03

72.52	19	60	0.12
61.26	23	60	0.14
52.38	27	60	0.17
45.19	31	60	0.19
39.24	36	60	0.22
34.25	41	60	0.26
29.57	47	60	0.30
25.51	55	60	0.34
22.15	63	60	0.40
19.33	72	60	0.45

G02

16.97	82	60	0.52
14.34	98	60	0.61
12.26	114	60	0.72
10.58	132	60	0.83
9.18	152	60	0.96
8.02	175	60	1.10
7.02	199	60	1.25
6.04	232	59	1.30
5.21	269	56	1.30
4.52	310	53	1.30
3.95	355	49	1.30
3.46	405	47	1.30

G13G03

6085.3	0.23	117	<0.05
5140.9	0.27	117	<0.05
4395.3	0.32	117	<0.05
3791.8	0.37	117	<0.05
3293.2	0.43	117	<0.05
2874.3	0.49	117	<0.05
2481.0	0.56	117	<0.05
2140.3	0.65	117	<0.05
1858.8	0.75	117	<0.05
1622.4	0.86	117	<0.05

G13G02

1424.2	0.98	117	<0.05
1203.2	1.2	117	<0.05
1028.7	1.4	117	<0.05
887.43	1.6	117	<0.05
770.74	1.8	117	<0.05
672.72	2.1	117	<0.05
589.22	2.4	117	<0.05
506.43	2.8	117	<0.05
436.89	3.2	117	<0.05
379.44	3.7	117	<0.05
331.18	4.2	117	0.05
290.08	4.8	117	0.06
251.28	5.6	117	0.07
219.23	6.4	117	0.08
192.31	7.3	117	0.09
169.38	8.3	117	0.10
145.94	9.6	117	0.12
127.83	11	117	0.13

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G13

115.34	12	117	0.15
97.78	14	117	0.18
83.91	17	117	0.20
72.69	19	117	0.24
63.42	22	117	0.27
55.63	25	117	0.31
49.00	29	117	0.35
43.09	32	117	0.40
36.98	38	117	0.46
32.03	44	117	0.54
27.95	50	117	0.61
24.52	57	117	0.70
21.59	65	117	0.79

G12

24.88	56	117	0.69
21.25	66	117	0.81
18.39	76	117	0.93
16.08	87	117	1.07
14.16	99	117	1.21
12.56	111	117	1.37
11.19	125	117	1.53
10.04	139	112	1.63
8.77	160	106	1.77
7.68	182	100	1.91
7.06	198	97	2.01
6.22	225	92	2.17
5.51	254	87	2.31
4.91	285	83	2.48
4.41	318	79	2.60
3.85	364	74	2.60
3.37	415	69	2.60

G23G13

10074	0.14	235	<0.05
8540.3	0.16	235	<0.05
7329.5	0.19	235	<0.05
6349.2	0.22	235	<0.05
5539.5	0.25	235	<0.05
4859.3	0.29	235	<0.05
4279.9	0.33	235	<0.05
3763.4	0.37	235	<0.05
3229.8	0.43	235	<0.05
2797.9	0.50	235	<0.05
2441.1	0.57	235	<0.05
2164.1	0.65	235	<0.05

G22G13

1960.4	0.71	235	<0.05
1661.9	0.84	235	<0.05
1426.3	0.98	235	<0.05
1235.5	1.1	235	<0.05
1078.0	1.3	235	<0.05
945.59	1.5	235	<0.05
832.84	1.7	235	<0.05
732.34	1.9	235	<0.05
628.51	2.2	235	0.05
544.45	2.6	235	0.06
475.02	2.9	235	0.07

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G22G12

422.82	3.3	235	0.08
361.24	3.9	235	0.09
312.61	4.5	235	0.11
273.25	5.1	235	0.13
240.74	5.8	235	0.14
213.43	6.6	235	0.16
190.16	7.4	235	0.18
170.71	8.2	235	0.20

G23

153.41	9.1	235	0.22
131.06	11	235	0.26
113.42	12	235	0.30
99.14	14	235	0.34
87.34	16	235	0.39
77.43	18	235	0.44
69.48	20	235	0.49
60.74	23	235	0.56
53.51	26	235	0.64
47.44	30	235	0.72
41.53	34	235	0.82
36.59	38	235	0.93
32.44	43	235	1.05
28.90	48	235	1.18
25.95	54	235	1.32
22.65	62	230	1.49
19.83	71	235	1.72

G22

29.22	48	235	1.17
25.09	56	235	1.36
21.82	64	235	1.57
19.18	73	235	1.78
17.00	82	235	2.01
15.16	92	235	2.25
13.60	103	235	2.51
12.36	113	235	2.76
10.90	128	235	3.13
9.65	145	230	3.49
8.64	162	220	3.73
7.52	186	210	4.10
7.04	199	167	3.48
6.31	222	164	3.81
5.74	244	197	5.0
5.06	277	183	5.2
4.48	312	169	5.2
4.01	349	157	5.2
3.49	401	142	5.2

G33G13

11893	0.12	480	<0.05
10082	0.14	480	<0.05
8652.7	0.16	480	<0.05
7495.5	0.19	480	<0.05
6539.6	0.21	480	<0.05
5736.6	0.24	480	<0.05
5052.5	0.28	480	<0.05
4442.9	0.32	480	<0.05
3813.0	0.37	480	<0.05
3303.0	0.42	480	<0.05
2881.8	0.49	480	<0.05

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G33G12

2565.1	0.55	480	<0.05
2191.5	0.64	480	<0.05
1896.5	0.74	480	<0.05
1657.7	0.84	480	<0.05
1460.5	0.96	480	<0.05
1294.8	1.1	480	0.05
1153.6	1.2	480	0.06
1035.6	1.4	480	0.07
903.90	1.5	480	0.08
791.71	1.8	480	0.09
727.68	1.9	480	0.10
641.09	2.2	480	0.11
568.36	2.5	480	0.12
506.40	2.8	480	0.14
454.59	3.1	480	0.16
396.78	3.5	480	0.18
347.53	4.0	480	0.20
310.04	4.5	480	0.23
278.10	5.0	480	0.25
252.75	5.5	480	0.28
222.84	6.3	480	0.32
197.36	7.1	480	0.36

G33

177.27	7.9	480	0.40
152.19	9.2	480	0.46
132.39	11	480	0.53
116.36	12	480	0.61
103.11	14	480	0.69
91.99	15	480	0.77
82.51	17	480	0.86
74.99	19	480	0.94
66.12	21	480	1.07
58.56	24	480	1.21
51.70	27	480	1.37
45.82	31	480	1.54
40.87	34	480	1.73
36.66	38	475	1.90
33.32	42	460	2.02
29.38	48	440	2.20
26.02	54	420	2.37
23.28	60	405	2.55
20.27	69	385	2.79

G32

25.67	55	480	2.75
22.92	61	480	3.08
20.61	68	480	3.43
18.65	75	480	3.79
17.00	82	480	4.16
15.16	92	480	4.66
13.60	103	480	5.2
12.34	113	480	5.7
10.93	128	470	6.3
9.92	141	285	4.18
9.63	145	440	6.7
8.43	166	415	7.0
7.40	189	390	7.0
7.30	192	330	6.6
6.54	214	320	7.0
5.94	236	325	7.0
5.26	266	305	7.0
4.63	302	290	7.0
4.06	345	275	7.0
3.56	393	260	7.0

Selection table - Gear units

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G43G23

12756	0.11	875	<0.05
10898	0.13	875	<0.05
9431.2	0.15	875	<0.05
8243.8	0.17	875	<0.05
7262.8	0.19	875	<0.05
6438.8	0.22	875	<0.05
5777.7	0.24	875	<0.05
5050.2	0.28	875	<0.05
4449.3	0.31	875	<0.05
3944.5	0.35	875	<0.05
3453.5	0.41	875	<0.05
3042.5	0.46	875	<0.05
2697.3	0.52	875	<0.05

G43G22

2429.7	0.58	875	0.05
2085.9	0.67	875	0.06
1814.5	0.77	875	0.07
1594.8	0.88	875	0.08
1413.3	0.99	875	0.09
1260.8	1.1	875	0.10
1131.0	1.2	875	0.11
1027.9	1.4	875	0.12
906.23	1.5	875	0.14
802.62	1.7	875	0.16
719.94	1.9	875	0.18
653.17	2.1	875	0.20
585.39	2.4	875	0.22
525.09	2.7	875	0.24
477.22	2.9	875	0.27
420.75	3.3	875	0.30
372.64	3.8	875	0.34
334.26	4.2	875	0.38
303.26	4.6	875	0.42
268.73	5.2	875	0.48
240.42	5.8	875	0.53

G43

210.05	6.7	875	0.61
181.51	7.7	875	0.71
158.99	8.8	875	0.81
140.75	9.9	875	0.91
125.69	11	875	1.02
113.03	12	875	1.13
102.26	14	875	1.25
93.21	15	875	1.38
83.15	17	875	1.54
74.59	19	875	1.72
67.67	21	875	1.90
59.97	23	875	2.14
56.95	25	875	2.25
51.52	27	875	2.49
46.96	30	875	2.73
41.89	33	875	3.06
37.58	37	875	3.41
34.09	41	875	3.76
30.21	46	875	4.25
26.59	53	860	4.74
23.29	60	800	5.0
20.45	68	735	5.3

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G42

26.83	52	875	4.78
24.23	58	865	5.2
22.01	64	850	5.7
20.12	70	860	6.3
18.06	78	875	7.1
16.30	86	845	7.6
15.00	93	815	8.0
13.41	104	805	8.8
11.90	118	760	9.4
10.55	133	725	10.1
9.39	149	680	10.6
8.04	174	635	11.0
7.09	197	600	11.0
6.82	205	470	10.1
6.05	231	455	11.0
5.36	261	440	11.0
4.77	293	425	11.0
4.09	342	405	11.0
3.61	388	385	11.0

G53G23

13862	0.10	1630	<0.05
11843	0.12	1630	<0.05
10249	0.14	1630	<0.05
8958.3	0.16	1630	<0.05
7892.3	0.18	1630	<0.05
6996.9	0.20	1630	<0.05
6278.4	0.22	1630	<0.05
5487.9	0.26	1630	<0.05
4834.9	0.29	1630	<0.05
4286.4	0.33	1630	0.06
3752.8	0.37	1630	0.06
3306.2	0.42	1630	0.07
2931.1	0.48	1630	0.08

G53G22

2640.3	0.53	1630	0.09
2266.7	0.62	1630	0.11
1971.8	0.71	1630	0.12
1733.0	0.81	1630	0.14
1535.8	0.91	1630	0.16
1370.1	1.0	1630	0.17
1229.0	1.1	1630	0.19
1116.9	1.3	1630	0.21
984.77	1.4	1630	0.24
872.18	1.6	1630	0.27
802.80	1.7	1630	0.30
717.52	2.0	1630	0.33
636.13	2.2	1630	0.38
570.60	2.5	1630	0.42
518.58	2.7	1630	0.46
457.21	3.1	1630	0.52
404.94	3.5	1630	0.59
372.73	3.8	1630	0.64
333.14	4.2	1630	0.72
295.82	4.7	1630	0.81
262.14	5.3	1630	0.91
229.46	6.1	1630	1.04
207.08	6.8	1630	1.15
190.61	7.3	1630	1.25

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G53

186.77	7.5	1630	1.28
165.96	8.4	1630	1.44
148.78	9.4	1630	1.60
134.34	10	1630	1.78
122.04	11	1630	1.96
111.58	13	1630	2.14
100.12	14	1630	2.38
90.36	15	1630	2.64
83.17	17	1630	2.87
74.34	19	1630	3.21
66.01	21	1630	3.62
58.49	24	1630	4.08
51.20	27	1630	4.66
46.21	30	1630	5.2
42.53	33	1630	5.6
38.01	37	1630	6.3
33.76	41	1630	7.1
29.91	47	1560	7.6
26.62	53	1500	8.3
22.80	61	1430	9.2
20.11	70	1350	9.8

G52

31.19	45	1130	5.3
28.45	49	1120	5.8
26.17	53	1330	7.4
23.62	59	1310	8.1
21.45	65	1290	8.8
19.83	71	1390	10.3
17.86	78	1430	11.7
16.01	87	1360	12.5
14.33	98	1330	13.6
12.90	109	1260	14.3
11.25	124	1190	15.5
10.08	139	1140	16.6
8.94	157	1070	17.5
7.86	178	1000	18.5
7.02	199	1040	18.5
6.32	221	1010	18.5
5.51	254	1190	18.5
4.94	283	1150	18.5
4.38	319	1420	18.5
3.85	364	1370	18.5

G63G33

14755	0.095	2800	<0.05
12667	0.11	2800	<0.05
11019	0.13	2800	<0.05
9684.6	0.14	2800	<0.05
8582.4	0.16	2800	<0.05
7656.6	0.18	2800	0.05
6867.9	0.20	2800	0.06
6241.8	0.22	2800	0.07
5503.1	0.25	2800	0.07
4874.0	0.29	2800	0.08
4386.6	0.32	2800	0.09
3827.0	0.37	2800	0.11
3402.1	0.41	2800	0.12
3051.7	0.46	2800	0.13
2773.5	0.50	2800	0.15
2445.3	0.57	2800	0.17

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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G63G32

2136.3	0.66	2800	0.19
1907.7	0.73	2800	0.22
1715.6	0.82	2800	0.24
1552.0	0.90	2800	0.26
1414.7	0.99	2800	0.29
1262.1	1.1	2800	0.33
1132.1	1.2	2800	0.36
1018.9	1.4	2800	0.40
888.88	1.6	2800	0.46
796.35	1.8	2800	0.52
686.91	2.0	2800	0.60
612.80	2.3	2800	0.67
549.68	2.5	2800	0.75
494.71	2.8	2800	0.83
431.60	3.2	2800	0.95
386.67	3.6	2800	1.06
343.00	4.1	2800	1.20
301.31	4.6	2800	1.36
271.16	5.2	2800	1.51
237.47	5.9	2800	1.73

G63

221.95	6.3	2800	1.85
199.76	7.0	2800	2.05
181.12	7.7	2800	2.27
165.23	8.5	2800	2.48
151.99	9.2	2800	2.70
137.17	10	2800	2.99
124.54	11	2800	3.30
115.14	12	2800	3.57
103.72	13	2800	3.96
92.94	15	2800	4.42
83.23	17	2800	4.93
74.91	19	2800	5.5
65.35	21	2800	6.3
58.55	24	2800	7.0
51.94	27	2690	7.6
45.13	31	2520	8.2
40.41	35	2450	8.9
36.37	38	2350	9.5
31.73	44	2240	10.3
28.43	49	2160	11.1
25.22	56	2080	12.1
22.15	63	1990	13.2

G62

31.16	45	2040	9.6
28.42	49	2020	10.4
26.36	53	2120	11.8
23.88	59	2200	13.5
21.72	64	2110	14.2
19.60	71	2100	15.7
17.78	79	2010	16.6
15.40	91	1930	18.4
13.94	100	1860	19.6
12.65	111	1780	20.6
11.28	124	1690	22.0
9.57	146	1570	22.0
8.16	171	1460	22.0
7.47	187	1720	22.0
6.76	207	1680	22.0
6.13	228	2260	22.0
5.47	256	2260	22.0
4.64	302	2170	22.0
3.96	354	2040	22.0

i	n2 [1/min]	T2max [Nm]	P1max [kW]
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G73G33

19566	0.072	4880	<0.05
16797	0.083	4880	<0.05
14612	0.096	4880	<0.05
12842	0.11	4880	0.06
11381	0.12	4880	0.06
10153	0.14	4880	0.07
9107.3	0.15	4880	0.08
8277.0	0.17	4880	0.09
7297.6	0.19	4880	0.10
6463.2	0.22	4880	0.11
5863.6	0.24	4880	0.12
5079.2	0.28	4880	0.14
4511.4	0.31	4880	0.16
4046.7	0.35	4880	0.18
3677.8	0.38	4880	0.19
3242.6	0.43	4880	0.22

G73G32

2832.9	0.49	4880	0.25
2529.7	0.55	4880	0.28
2275.0	0.62	4880	0.31
2058.1	0.68	4880	0.35
1876.0	0.75	4880	0.38
1673.6	0.84	4880	0.43
1501.2	0.93	4880	0.48
1361.9	1.0	4880	0.53
1179.7	1.2	4880	0.61
1067.4	1.3	4880	0.67
969.05	1.4	4880	0.74
864.03	1.6	4880	0.83
805.28	1.7	4880	0.89
722.33	1.9	4880	0.99
655.31	2.1	4880	1.09
567.65	2.5	4880	1.26
513.62	2.7	4880	1.39
466.28	3.0	4880	1.54
415.75	3.4	4880	1.72
351.79	4.0	4880	2.04
318.30	4.4	4880	2.25
288.96	4.8	4880	2.48
257.65	5.4	4880	2.78

G73

250.97	5.6	4880	2.85
228.26	6.1	4880	3.14
208.90	6.7	4880	3.43
193.61	7.2	4880	3.70
175.48	8.0	4880	4.08
160.04	8.7	4880	4.47
148.43	9.4	4880	4.82
134.48	10	4880	5.3
122.32	11	4880	5.9
110.37	13	4880	6.5
100.13	14	4880	7.2
86.74	16	4880	8.3
78.48	18	4880	9.1
71.25	20	4880	10.1
63.53	22	4880	11.3
53.88	26	4880	13.3
47.41	30	4880	15.1
41.07	34	4800	17.1
37.16	38	4640	18.3
33.74	41	4510	19.6
30.08	47	4360	21.2
25.51	55	4150	23.8
21.77	64	3960	26.7

i	n2 [1/min]	T2max [Nm]	P1max [kW]
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G72

26.11	54	4130	23.2
23.65	59	4160	25.8
21.55	65	3970	27.0
18.87	74	3910	30.0
17.17	82	3730	30.0
15.46	91	3540	30.0
13.88	101	3360	30.0
11.91	118	3130	30.0
10.29	136	2930	30.0
9.15	153	2440	30.0
8.95	156	2740	30.0
8.32	168	2390	30.0
7.50	187	3190	30.0
6.73	208	3100	30.0
5.77	242	2960	30.0
4.99	280	2820	30.0
4.34	323	2670	30.0

G83G43

19895	0.070	8900	0.07
17193	0.081	8900	0.08
15059	0.093	8900	0.09
13332	0.11	8900	0.10
11905	0.12	8900	0.11
10707	0.13	8900	0.12
9685.6	0.14	8900	0.13
8828.6	0.16	8900	0.15
7876.1	0.18	8900	0.17
7064.8	0.20	8900	0.18
6426.4	0.22	8900	0.20
5788.3	0.24	8900	0.23
5393.9	0.26	8900	0.24
4879.5	0.29	8900	0.27
4447.7	0.31	8900	0.29
3967.9	0.35	8900	0.33
3559.2	0.39	8900	0.37
3237.5	0.43	8900	0.40
2916.1	0.48	8900	0.45

G83G42

2541.6	0.55	8900	0.51
2294.9	0.61	8900	0.57
2084.8	0.67	8900	0.63
1906.2	0.73	8900	0.68
1710.4	0.82	8900	0.76
1543.6	0.91	8900	0.85
1404.1	1.00	8900	0.93
1264.7	1.1	8900	1.03
1135.5	1.2	8900	1.15
974.05	1.4	8900	1.34
841.95	1.7	8900	1.55
731.87	1.9	8900	1.78
645.52	2.2	8900	2.02
573.21	2.4	8900	2.28
507.95	2.8	8900	2.57
462.05	3.0	8900	2.82
416.17	3.4	8900	3.13
373.66	3.7	8900	3.49
320.53	4.4	8900	4.07
285.24	4.9	8900	4.57
244.36	5.7	8900	5.3
215.53	6.5	8900	6.1

i	n2 [1/min]	T2max [Nm]	P1max [kW]
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G83

186.96	7.5	8900	7.0
170.93	8.2	8900	7.6
158.00	8.9	8900	8.3
143.59	9.8	8900	9.1
131.06	11	8900	10.0
118.71	12	8900	11.0
108.13	13	8900	12.1
94.72	15	8900	13.8
86.16	16	8900	15.1
77.61	18	8900	16.8
69.68	20	8900	18.7
59.77	23	8900	21.8
51.67	27	8900	25.2
44.91	31	8900	29.0
38.61	36	8590	32.6
34.66	40	8310	35.1
29.74	47	7940	39.1
25.70	54	7600	43.3
22.34	63	7290	45.0

G82

18.81	74	6040	45.0
17.01	82	5920	45.0
14.76	95	5640	45.0
12.91	108	5440	45.0
11.37	123	5250	45.0
9.79	143	4560	45.0
8.85	158	4360	45.0
7.68	182	4100	45.0
6.72	208	3870	45.0
5.92	236	3650	45.0
5.06	277	3850	45.0
4.40	318	3690	45.0

G93G43

22255	0.063	13600	0.09
19232	0.073	13600	0.10
16845	0.083	13600	0.12
14913	0.094	13600	0.13
13317	0.11	13600	0.15
11976	0.12	13600	0.17
10834	0.13	13600	0.18
9875.6	0.14	13600	0.20
8810.2	0.16	13600	0.23
7902.7	0.18	13600	0.25
7223.9	0.19	13600	0.28
6595.1	0.21	13600	0.30
6033.5	0.23	13600	0.33
5458.2	0.26	13600	0.37
4975.2	0.28	13600	0.40
4438.5	0.32	13600	0.45
3981.3	0.35	13600	0.50
3639.3	0.38	13600	0.55
3322.5	0.42	13600	0.60
3004.0	0.47	13600	0.66

i	n2 [1/min]	T2max [Nm]	P1max [kW]
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G93G42

2843.0	0.49	13600	0.70
2567.1	0.55	13600	0.78
2332.1	0.60	13600	0.86
2132.2	0.66	13600	0.94
1913.2	0.73	13600	1.04
1726.6	0.81	13600	1.16
1578.3	0.89	13600	1.26
1441.0	0.97	13600	1.38
1302.8	1.1	13600	1.53
1130.2	1.2	13600	1.77
988.90	1.4	13600	2.02
871.17	1.6	10800	1.82
803.56	1.7	13600	2.48
722.07	1.9	13600	2.76
641.18	2.2	13600	3.11
568.19	2.5	13600	3.51
519.38	2.7	13600	3.84
474.18	3.0	13600	4.21
428.72	3.3	13600	4.65
371.90	3.8	13600	5.4
325.42	4.3	13600	6.1
288.28	4.9	13600	6.9
250.07	5.6	13600	8.0
218.81	6.4	13600	9.1
192.77	7.3	13600	10.4
177.81	7.9	10000	8.2

G93

157.04	8.9	13600	12.7
144.12	9.7	13600	13.8
131.03	11	13600	15.2
119.82	12	13600	16.7
105.95	13	13600	18.8
96.85	14	13600	20.6
88.42	16	13600	22.6
79.95	18	13600	25.0
69.35	20	13600	28.8
60.68	23	13600	32.9
53.46	26	13600	37.3
49.31	28	13600	40.5
45.02	31	13600	44.3
40.70	34	13600	49.0
35.31	40	13600	56.5
30.89	45	13500	64.1
27.22	51	13000	70.0
23.27	60	12300	77.5
20.23	69	11700	84.8

G92

17.34	81	11600	90.0
15.26	92	11100	90.0
13.53	104	10600	90.0
11.74	119	10200	90.0
10.30	136	9760	90.0
9.15	153	6610	90.0
8.05	174	6350	90.0
7.14	196	6120	90.0
6.19	226	5850	90.0
5.43	258	5620	90.0

Selection table - Geared motors

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.12 kW					
G33G12A DM63K4					25
3.0	360	1.35	454.59		
3.5	315	1.50	396.78		
4.0	275	1.75	347.53		
4.5	245	1.95	310.04		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.18 kW					
G22G12A DM63G4					19
5.7	295	0.80	240.74		
6.5	260	0.90	213.43		
7.3	230	1.00	190.16		
8.1	210	1.10	170.71		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G23A DM63G4					14
9.0	191	1.20	153.41		
11	163	1.45	131.06		
12	141	1.65	113.42		
14	123	1.90	99.14		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G13A DM63G4					10
12	144	0.80	115.34		
14	122	0.95	97.78		
16	105	1.10	83.91		
19	91	1.30	72.69		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G03A DM63K4					8
23	76	0.80	61.26		
26	65	0.90	52.38		
31	56	1.05	45.19		
35	49	1.25	39.24		
40	43	1.40	34.25		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G02A DM63K4					8
19	60	1.00	72.52		
23	51	1.20	61.26		
26	43	1.40	52.38		
31	38	1.60	45.19		
35	33	1.85	39.24		
40	28	2.1	34.25		
47	25	2.4	29.57		
54	21	2.8	25.51		
62	18	3.3	22.15		
71	16	3.7	19.33		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.18 kW					
G43G22A DM63G4					39
2.9	570	1.55	477.22		
3.3	505	1.75	420.75		
3.7	445	1.95	372.64		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G33G12A DM63G4					25
3.0	545	0.90	454.59		
3.5	475	1.00	396.78		
4.0	415	1.15	347.53		
4.5	370	1.30	310.04		
5.0	335	1.45	278.10		
5.5	300	1.60	252.75		
6.2	265	1.80	222.84		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G23A DM63G4					14
9.0	191	1.20	153.41		
11	163	1.45	131.06		
12	141	1.65	113.42		
14	123	1.90	99.14		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G13A DM63G4					10
12	144	0.80	115.34		
14	122	0.95	97.78		
16	105	1.10	83.91		
19	91	1.30	72.69		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G03A DM63G4					8
23	76	0.80	61.26		
26	65	0.90	52.38		
31	56	1.05	45.19		
35	49	1.25	39.24		
40	43	1.40	34.25		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G02A DM63K4					8
19	60	1.00	72.52		
23	51	1.20	61.26		
26	43	1.40	52.38		
31	38	1.60	45.19		
35	33	1.85	39.24		
40	28	2.1	34.25		
47	25	2.4	29.57		
54	21	2.8	25.51		
62	18	3.3	22.15		
71	16	3.7	19.33		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G02A DM63K4					8
19	60	1.00	72.52		
23	51	1.20	61.26		
26	43	1.40	52.38		
31	38	1.60	45.19		
35	33	1.85	39.24		
40	28	2.1	34.25		
47	25	2.4	29.57		
54	21	2.8	25.51		
62	18	3.3	22.15		
71	16	3.7	19.33		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G43G22A DM71K4					40
3.0	775	1.15	477.22		
3.4	685	1.30	420.75		
3.8	605	1.45	372.64		
4.2	545	1.60	334.26		
4.6	495	1.80	303.26		
5.2	435	2.0	268.73		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G33G12A DM71K4					26
4.1	565	0.85	347.53		
4.5	505	0.95	310.04		
5.1	450	1.05	278.10		
5.6	410	1.15	252.75		
6.3	360	1.35	222.84		
7.1	320	1.50	197.36		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G33A DM71K4					21
8.0	300	1.60	177.27		
9.3	260	1.85	152.19		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G22G12A DM71K4					20
8.3	285	0.80	170.71		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.25 kW					
G23A DM71K4					14
9.2	260	0.90	153.41		
11	220	1.05	131.06		
12	192	1.20	113.42		
14	168	1.40	99.14		
16	148	1.60	87.34		
18	131	1.80	77.43		
20	118	2.00	69.48		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G13A DM71K4					11
17	142	0.80	83.91		
19	123	0.95	72.69		
22	107	1.10	63.42		
25	94	1.25	55.63		
29	83	1.40	49.00		
33	73	1.60	43.09		
38	63	1.85	36.98		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G03A DM71K4					9
31	77	0.80	45.19		
36	66	0.90	39.24		
41	58	1.05	34.25		
48	50	1.20	29.57		
55	43	1.40	25.51		
64	38	1.60	22.15		
73	33	1.85	19.33		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G02A DM71K4					9
83	29	2.1	16.97		
98	24	2.5	14.34		
115	21	2.9	12.26		
133	18	3.4	10.58		
154	16	3.9	9.18		
176	14	4.4	8.02		
201	12	5.0	7.02		
234	10	5.8	6.04		
271	8.8	6.4	5.21		
312	7.7	6.9	4.52		
357	6.7	7.3	3.95		
408	5.9	8.0	3.46		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G53G22A DM71G4					62
3.1	1100	1.50	457.21		
3.5	975	1.65	404.94		
3.8	895	1.80	372.73		
4.2	800	2.0	333.14		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G43G22A DM71G4					41
3.4	1010	0.85	420.75		
3.8	895	1.00	372.64		
4.2	805	1.10	334.26		
4.6	730	1.20	303.26		
5.2	645	1.35	268.73		
5.9	580	1.50	240.42		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G43A DM71G4					32
6.7	525	1.65	210.05		
7.8	455	1.90	181.51		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G33G12A DM71G4					27
5.6	610	0.80	252.75		
6.3	535	0.90	222.84		
7.1	475	1.00	197.36		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
0.37 kW					
G33A DM71G4					21
8.0	445	1			

Type
n2 [1/min] T2 [Nm] cG i ~kg

0.55 kW

G33A DM80K4	23
11	495 0.95 132.39
12	435 1.10 116.36
14	385 1.25 103.11
15	345 1.40 91.99
17	310 1.55 82.51
19	280 1.70 74.99
21	245 1.95 66.12

G23A DM80K4	17
20	260 0.90 69.48
23	225 1.05 60.74
26	200 1.15 53.51
30	177 1.30 47.44
34	155 1.50 41.53
38	137 1.70 36.59
43	121 1.90 32.44

G13A DM80K4	14
38	138 0.85 36.98
44	120 1.00 32.03
50	104 1.10 27.95
57	92 1.30 24.52
65	81 1.45 21.59

G12A DM80K4	13
76	69 1.70 18.39
87	60 1.95 16.08

G03A DM80K4	12
73	72 0.85 19.33

G02A DM80K4	12
115	46 1.30 12.26
133	40 1.50 10.58
153	34 1.75 9.18
175	30 2.0 8.02
200	26 2.3 7.02
233	23 2.6 6.04
270	19 2.9 5.21
311	17 3.1 4.52
356	15 3.3 3.95
406	13 3.6 3.46

0.75 kW

G73G32A DM80GD4	158
3.1	2250 2.2 466.28
3.4	2010 2.4 415.75

G63G32A DM80GD4	106
2.9	2390 1.15 494.71
3.3	2080 1.35 431.60
3.7	1870 1.50 386.67
4.2	1660 1.70 343.00
4.7	1450 1.95 301.31

G63A DM80GD4	92
6.4	1120 2.5 221.95

G53G22A DM80GD4	70
3.5	1950 0.85 404.94
3.8	1800 0.90 372.73
4.3	1610 1.00 333.14
4.8	1430 1.15 295.82
5.4	1260 1.30 262.14
6.2	1110 1.45 229.46
6.9	1000 1.65 207.08
7.5	920 1.75 190.61

G53A DM80GD4	63
7.6	940 1.75 186.77
8.6	835 1.95 165.96
9.6	750 2.2 148.78
11	675 2.4 134.34

Type
n2 [1/min] T2 [Nm] cG i ~kg

0.75 kW

G43A DM80GD4	41
9.0	800 1.10 158.99
10	705 1.25 140.75
11	630 1.40 125.69
13	570 1.55 113.03
14	515 1.70 102.26
15	470 1.85 93.21
17	420 2.1 83.15
19	375 2.3 74.59

G33A DM80GD4	30
12	585 0.80 116.36
14	520 0.95 103.11
15	460 1.05 91.99
17	415 1.15 82.51
19	375 1.30 74.99
22	330 1.45 66.12
24	295 1.65 58.56
28	260 1.85 51.70
31	230 2.1 45.82
35	205 2.3 40.87

G23A DM80GD4	24
27	270 0.85 53.51
30	240 1.00 47.44
34	210 1.10 41.53
39	184 1.25 36.59
44	163 1.45 32.44
49	145 1.60 28.90
55	130 1.80 25.95
63	114 2.0 22.65
72	100 2.3 19.83

G22A DM80GD4	24
65	110 2.1 21.82
74	96 2.4 19.18

G13A DM80GD4	21
51	140 0.85 27.95
58	123 0.95 24.52
66	109 1.10 21.59

G12A DM80GD4	20
77	92 1.25 18.39
89	81 1.45 16.08
101	71 1.65 14.16
113	63 1.85 12.56
127	56 2.1 11.19
142	50 2.2 10.04
163	44 2.4 8.77
186	39 2.6 7.68
202	35 2.7 7.06
229	31 2.9 6.22
259	28 3.1 5.51
290	25 3.4 4.91
323	22 3.6 4.41
370	19 3.8 3.85
423	17 4.1 3.37

G02A DM80GD4	19
116	62 0.95 12.26
135	53 1.15 10.58
155	46 1.30 9.18
178	40 1.50 8.02
203	35 1.70 7.02
236	30 1.95 6.04
274	26 2.1 5.21
315	23 2.3 4.52
361	20 2.5 3.95

Type
n2 [1/min] T2 [Nm] cG i ~kg

1.1 kW

G73G32A DM90SD4	165
3.1	3250 1.50 466.28
3.5	2900 1.70 415.75
4.1	2460 2.00 351.79
4.5	2220 2.2 318.30
5.0	2020 2.4 288.96

G63G32A DM90SD4	113
2.9	3450 0.80 494.71
3.3	3010 0.95 431.60
3.7	2700 1.05 386.67
4.2	2390 1.15 343.00
4.8	2100 1.35 301.31
5.3	1890 1.50 271.16
6.1	1660 1.70 237.47

G63A DM90SD4	99
6.5	1610 1.75 221.95
7.2	1450 1.95 199.76
8.0	1320 2.1 181.12
8.7	1200 2.3 165.23
9.5	1100 2.5 151.99

G53G22A DM90SD4	77
4.9	2060 0.80 295.82
5.5	1830 0.90 262.14
6.3	1600 1.00 229.46
7.0	1450 1.15 207.08
7.6	1330 1.20 190.61

G53A DM90SD4	69
8.7	1210 1.35 165.96
9.7	1080 1.50 148.78
11	975 1.65 134.34
12	885 1.85 122.04
13	810 2.0 111.58
14	730 2.2 100.12
16	655 2.5 90.36

G43A DM90SD4	48
10	1020 0.85 140.75
11	915 0.95 125.69
13	820 1.05 113.03
14	745 1.20 102.26
16	680 1.30 93.21
17	605 1.45 83.15
19	540 1.60 74.59
21	490 1.80 67.67
24	435 2.0 59.97
25	415 2.1 56.95
28	375 2.3 51.52

G33A DM90SD4	37
18	600 0.80 82.51
19	545 0.90 74.99
22	480 1.00 66.12
25	425 1.15 58.56
28	375 1.30 51.70
32	335 1.45 45.82
35	295 1.60 40.87
39	265 1.80 36.66
43	240 1.90 33.32
49	215 2.1 29.38
56	189 2.2 26.02
62	169 2.4 23.28

G23A DM90SD4	31
39	265 0.90 36.59
45	235 1.00 32.44
50	210 1.10 28.90
56	189 1.25 25.95
64	165 1.40 22.65
73	144 1.60 19.83

Type
n2 [1/min] T2 [Nm] cG i ~kg

1.1 kW

G22A DM90SD4	31
75	139 1.65 19.18
85	124 1.90 17.00
95	110 2.1 15.16
106	99 2.4 13.60
117	90 2.6 12.36
133	79 2.9 10.90
150	70 3.3 9.65
167	63 3.5 8.64
192	55 3.8 7.52
205	51 3.3 7.04
229	46 3.6 6.31
252	42 4.7 5.74
286	37 5.0 5.06
322	33 5.2 4.48
360	29 5.4 4.01
414	25 5.6 3.49

G12A DM90SD4	27
90	117 1.00 16.08
102	103 1.15 14.16
115	91 1.30 12.56
129	81 1.45 11.19
144	73 1.55 10.04
165	64 1.65 8.77
188	56 1.80 7.68
205	51 1.90 7.06
232	45 2.0 6.22
262	40 2.2 5.51
294	36 2.3 4.91
328	32 2.5 4.41

G83G42A DM90LB4	246
3.1	4370 2.0 462.05
3.5	3930 2.3 416.17
3.9	3530 2.5 373.66

1.5 kW

G73G32A DM90LB4	164
3.1	4410 1.10 466.28
3.5	3930 1.25 415.75
4.1	3320 1.45 351.79
4.6	3010 1.60 318.30
5.0	2730 1.80 288.96
5.6	2440 2.0 257.65

G73A DM90LB4	149
5.8	2470 2.00 250.97
6.4	2250 2.2 228.26
7.0	2060 2.4 208.90

G63G32A DM90LB4	113
4.2	3240 0.85 343.00
4.8	2850 1.00 301.31
5.4	2560 1.10 271.16
6.1	2240 1.25 237.47

G63A DM90LB4	99
6.6	2190 1.30 221.95
7.3	1970 1.40 199.76
8.0	1780 1.55 181.12
8.8	1630 1.70 165.23
9.6	1500 1.85 151.99
11	1350 2.1 137.17
12	1230 2.3 124.54
13	1130 2.5 115.14

G53G22A DM90LB4	77
7.0	1960 0.85 207.08
7.6	1800 0.90 190.61

Selection table - Geared motors

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
1.5 kW					
G53A DM90LB4					69
8.8	1630	1.00	165.96		
9.8	1460	1.10	148.78		
11	1320	1.25	134.34		
12	1200	1.35	122.04		
13	1100	1.50	111.58		
15	985	1.65	100.12		
16	890	1.85	90.36		
17	820	2.00	83.17		
20	730	2.2	74.34		
22	650	2.5	66.01		
G43A DM90LB4					48
13	1110	0.80	113.03		
14	1010	0.85	102.26		
16	920	0.95	93.21		
17	820	1.05	83.15		
20	735	1.20	74.59		
22	665	1.30	67.67		
24	590	1.50	59.97		
26	560	1.55	56.95		
28	505	1.75	51.52		
31	460	1.90	46.96		
35	410	2.1	41.89		
39	370	2.4	37.58		
G33A DM90LB4					37
25	575	0.85	58.56		
28	510	0.95	51.70		
32	450	1.05	45.82		
36	400	1.20	40.87		
40	360	1.30	36.66		
44	330	1.40	33.32		
50	290	1.50	29.38		
56	255	1.65	26.02		
62	230	1.75	23.28		
72	200	1.95	20.27		
G32A DM90LB4					37
57	255	1.90	25.67		
63	225	2.1	22.92		
71	205	2.4	20.61		
G23A DM90LB4					31
50	285	0.80	28.90		
56	255	0.90	25.95		
64	225	1.05	22.65		
73	195	1.20	19.83		
G22A DM90LB4					31
76	189	1.25	19.18		
86	167	1.40	17.00		
96	149	1.55	15.16		
107	134	1.75	13.60		
118	122	1.90	12.36		
134	107	2.2	10.90		
151	95	2.4	9.65		
168	85	2.6	8.64		
194	74	2.8	7.52		
207	69	2.4	7.04		
230	62	2.6	6.31		
254	57	3.5	5.74		
288	50	3.7	5.06		
325	44	3.8	4.48		
363	39	4.0	4.01		
417	34	4.1	3.49		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
1.5 kW					
G12A DM90LB4					27
103	139	0.85	14.16		
116	124	0.95	12.56		
130	110	1.05	11.19		
145	99	1.15	10.04		
166	86	1.25	8.77		
190	76	1.30	7.68		
206	69	1.40	7.06		
234	61	1.50	6.22		
264	54	1.60	5.51		
296	48	1.70	4.91		
330	43	1.80	4.41		
378	38	1.95	3.85		
432	33	2.1	3.37		
2.2 kW					
G93G42A DM100LA4					364
3.1	6550	2.1	474.18		
3.4	5920	2.3	428.72		
G83G42A DM100LA4					258
3.2	6380	1.40	462.05		
3.5	5750	1.55	416.17		
3.9	5160	1.70	373.66		
4.6	4430	2.0	320.53		
5.1	3940	2.3	285.24		
G73G32A DM100LA4					176
3.5	5740	0.85	415.75		
4.2	4860	1.00	351.79		
4.6	4400	1.10	318.30		
5.1	3990	1.20	288.96		
5.7	3560	1.35	257.65		
G73A DM100LA4					161
5.8	3610	1.35	250.97		
6.4	3280	1.50	228.26		
7.0	3010	1.60	208.90		
7.5	2790	1.75	193.61		
8.3	2530	1.95	175.48		
9.1	2300	2.1	160.04		
9.8	2140	2.3	148.43		
11	1940	2.5	134.48		
G63G32A DM100LA4					125
6.1	3280	0.85	237.47		
G63A DM100LA4					110
7.3	2870	0.95	199.76		
8.1	2610	1.05	181.12		
8.8	2380	1.20	165.23		
9.6	2190	1.30	151.99		
11	1970	1.40	137.17		
12	1790	1.55	124.54		
13	1660	1.70	115.14		
14	1490	1.90	103.72		
16	1340	2.1	92.94		
18	1200	2.3	83.23		
G53A DM100LA4					81
11	1930	0.85	134.34		
12	1760	0.95	122.04		
13	1610	1.00	111.58		
15	1440	1.15	100.12		
16	1300	1.25	90.36		
18	1200	1.35	83.17		
20	1070	1.50	74.34		
22	950	1.70	66.01		
25	840	1.95	58.49		
29	735	2.2	51.20		
32	665	2.4	46.21		
G52A DM100LA4					79
47	450	2.5	31.19		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
2.2 kW					
G43A DM100LA4					60
20	1070	0.80	74.59		
22	975	0.90	67.67		
24	865	1.00	59.97		
26	820	1.05	56.95		
28	740	1.20	51.52		
31	675	1.30	46.96		
35	605	1.45	41.89		
39	540	1.60	37.58		
43	490	1.80	34.09		
48	435	2.0	30.21		
55	385	2.2	26.59		
63	335	2.4	23.29		
71	295	2.5	20.45		
G42A DM100LA4					60
54	385	2.3	26.83		
60	350	2.5	24.23		
G33A DM100LA4					49
36	590	0.80	40.87		
40	530	0.90	36.66		
44	480	0.95	33.32		
50	425	1.05	29.38		
56	375	1.10	26.02		
63	335	1.20	23.28		
72	290	1.30	20.27		
G32A DM100LA4					49
64	330	1.45	22.92		
71	295	1.60	20.61		
78	270	1.80	18.65		
86	245	1.95	17.00		
96	220	2.2	15.16		
107	196	2.5	13.60		
118	178	2.7	12.34		
134	157	3.0	10.93		
147	143	2.00	9.92		
152	139	3.2	9.63		
173	121	3.4	8.43		
197	107	3.7	7.40		
200	105	3.1	7.30		
223	94	3.4	6.54		
246	85	3.8	5.94		
277	76	4.0	5.26		
315	67	4.4	4.63		
360	58	4.7	4.06		
410	51	5.1	3.56		
G22A DM100LA4					43
86	245	0.95	17.00		
96	220	1.05	15.16		
107	196	1.20	13.60		
118	178	1.30	12.36		
134	157	1.50	10.90		
151	139	1.65	9.65		
169	124	1.75	8.64		
194	108	1.95	7.52		
207	101	1.65	7.04		
231	91	1.80	6.31		
254	83	2.4	5.74		
289	73	2.5	5.06		
G12A DM100LA4					39
167	126	0.85	8.77		
190	110	0.90	7.68		
235	89	1.05	6.22		
265	79	1.10	5.51		
297	71	1.15	4.91		
331	63	1.25	4.41		
379	55	1.35	3.85		
433	49	1.40	3.37		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
3.0 kW					
G93G42A DM100LF4					367
3.1	8960	1.50	474.18		
3.4	8100	1.70	428.72		
3.9	7030	1.95	371.90		
4.5	6150	2.2	325.42		
G83G42A DM100LF4					261
3.1	8730	1.00	462.05		
3.5	7870	1.15	416.17		
3.9	7060	1.25	373.66		
4.5	6060	1.45	320.53		
5.1	5390	1.65	285.24		
G73G32A DM100LF4					181
4.6	6020	0.80	318.30		
5.0	5460	0.90	288.96		
5.6	4870	1.00	257.65		
G73A DM100LF4					166
5.8	4940	1.00	250.97		
6.4	4490	1.10	228.26		
7.0	4110	1.20	208.90		
7.5	3810	1.30	193.61		
8.3	3460	1.40	175.48		
9.1	3150	1.55	160.04		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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3.0 kW

G42A DM100LF4					64
54	530	1.65	26.83		
60	475	1.80	24.23		
66	435	1.95	22.01		
72	395	2.2	20.12		
81	355	2.5	18.06		

G33A DM100LF4					54
56	510	0.80	26.02		
62	460	0.90	23.28		
72	400	0.95	20.27		

G32A DM100LF4					54
63	450	1.05	22.92		
71	405	1.20	20.61		
78	365	1.30	18.65		
86	335	1.45	17.00		
96	300	1.60	15.16		
107	270	1.80	13.60		
118	245	2.00	12.34		
133	215	2.2	10.93		
147	195	1.45	9.92		
151	190	2.3	9.63		
173	166	2.5	8.43		
197	146	2.7	7.40		
199	144	2.3	7.30		
222	129	2.5	6.54		
245	117	2.8	5.94		
277	104	2.9	5.26		
314	91	3.2	4.63		
359	80	3.4	4.06		
408	70	3.7	3.56		

G22A DM100LF4					47
96	300	0.80	15.16		
107	270	0.85	13.60		
118	245	0.95	12.36		
134	215	1.10	10.90		
151	190	1.20	9.65		
168	170	1.30	8.64		
194	148	1.40	7.52		
207	139	1.20	7.04		
230	124	1.30	6.31		
254	113	1.75	5.74		
288	100	1.85	5.06		
325	88	1.90	4.48		
363	79	2.00	4.01		
417	69	2.1	3.49		

4.0 kW

G93G42A DM112MB4					368
3.1	11900	1.15	474.18		
3.4	10800	1.25	428.72		
3.9	9340	1.45	371.90		
4.5	8170	1.65	325.42		

G83G42A DM112MB4					261
3.5	10500	0.85	416.17		
3.9	9390	0.95	373.66		
4.6	8050	1.10	320.53		
5.1	7160	1.25	285.24		

G73A DM112MB4					166
6.4	5970	0.80	228.26		
7.0	5470	0.90	208.90		
7.5	5070	0.95	193.61		
8.3	4590	1.05	175.48		
9.1	4190	1.15	160.04		
9.8	3880	1.25	148.43		
11	3520	1.40	134.48		
12	3200	1.55	122.32		
13	2890	1.70	110.37		
15	2620	1.85	100.13		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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4.0 kW

G63A DM112MB4					115
11	3590	0.80	137.17		
12	3260	0.85	124.54		
13	3010	0.95	115.14		
14	2710	1.05	103.72		
16	2430	1.15	92.94		
18	2180	1.30	83.23		
19	1960	1.45	74.91		
32	1180	2.1	45.13		
36	1060	2.3	40.41		
40	950	2.5	36.37		

G62A DM112MB4					113
47	815	2.5	31.16		

G53A DM112MB4					85
20	1940	0.85	74.34		
22	1730	0.95	66.01		
25	1530	1.05	58.49		
29	1340	1.20	51.20		
32	1210	1.35	46.21		
34	1110	1.45	42.53		
38	995	1.65	38.01		
43	885	1.85	33.76		
49	785	2.00	29.91		
55	695	2.2	26.62		

G52A DM112MB4					83
47	815	1.40	31.19		
51	745	1.50	28.45		
56	685	1.95	26.17		
62	620	2.1	23.62		
68	560	2.3	21.45		

G43A DM112MB4					65
35	1100	0.80	41.89		
39	985	0.90	37.58		
43	890	1.00	34.09		
48	790	1.10	30.21		
55	695	1.25	26.59		
63	610	1.30	23.29		
71	535	1.35	20.45		

G42A DM112MB4					64
60	635	1.35	24.23		
66	575	1.50	22.01		
73	525	1.65	20.12		
81	470	1.85	18.06		
90	425	2.00	16.30		
97	390	2.1	15.00		
109	350	2.3	13.41		
123	310	2.4	11.90		

G32A DM112MB4					54
71	540	0.90	20.61		
78	490	1.00	18.65		
86	445	1.10	17.00		
96	395	1.20	15.16		
107	355	1.35	13.60		
118	325	1.50	12.34		
134	285	1.65	10.93		
147	260	1.10	9.92		
152	250	1.75	9.63		
173	220	1.90	8.43		
197	194	2.0	7.40		
200	191	1.70	7.30		
223	171	1.85	6.54		
246	155	2.1	5.94		
277	138	2.2	5.26		
315	121	2.4	4.63		
360	106	2.6	4.06		
410	93	2.8	3.56		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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4.0 kW

G22A DM112MB4					47
134	285	0.80	10.90		
151	255	0.90	9.65		
169	225	0.95	8.64		
194	197	1.05	7.52		
207	184	0.90	7.04		
231	165	1.00	6.31		
254	150	1.30	5.74		
289	132	1.40	5.06		
326	117	1.45	4.48		
364	105	1.50	4.01		
418	91	1.55	3.49		

5.5 kW

G93G42A DM132SB4					457
3.1	16300	0.85	474.18		
3.4	14700	0.95	428.72		
4.0	12800	1.05	371.90		
4.5	11200	1.20	325.42		
5.1	9890	1.40	288.28		
5.9	8580	1.60	250.07		
6.7	7510	1.80	218.81		
7.6	6610	2.1	192.77		
8.3	6100	1.65	177.81		

G83G42A DM132SB4					324
4.6	11000	0.80	320.53		
5.2	9780	0.90	285.24		
6.0	8380	1.05	244.36		
6.8	7390	1.20	215.53		

G83A DM132SB4					308
7.9	6680	1.35	186.96		
8.6	6110	1.45	170.93		
9.3	5650	1.60	158.00		
10	5130	1.75	143.59		
11	4680	1.90	131.06		
12	4240	2.1	118.71		
14	3860	2.3	108.13		

G73A DM132SB4					233
8.4	6270	0.80	175.48		
9.2	5720	0.85	160.04		
9.9	5300	0.90	148.43		
11	4810	1.00	134.48		
12	4370	1.10	122.32		
13	3940	1.25	110.37		
15	3580	1.35	100.13		
17	3100	1.60	86.74		
19	2800	1.75	78.48		
21	2550	1.90	71.25		
23	2270	2.2	63.53		
27	1930	2.5	53.88		

G63A DM132SB4					177
16	3320	0.85	92.94		
18	2970	0.95	83.23		
20	2680	1.05	74.91		
22	2340	1.20	65.35		
25	2090	1.35	58.55		
28	1860	1.45	51.94		
33	1610	1.55	45.13		
36	1440	1.70	40.41		
40	1300	1.80	36.37		
46	1130	2.00	31.73		
52	1020	2.1	28.43		
58	900	2.3	25.22		
66	790	2.5	22.15		

G62A DM132SB4					169
47	1110	1.85	31.16		
52					

Selection table - Geared motors

Type
n2 [1/min] T2 [Nm] cG i -kg

7.5 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
G83A DM132MB4					308
7.9	9110	1.00	186.96		
8.6	8330	1.05	170.93		
9.3	7700	1.15	158.00		
10	7000	1.25	143.59		
11	6390	1.40	131.06		
12	5780	1.55	118.71		
14	5270	1.70	108.13		
16	4620	1.95	94.72		
17	4200	2.1	86.16		
19	3780	2.4	77.61		

G73A DM132MB4 233

12	5960	0.80	122.32		
13	5380	0.90	110.37		
15	4880	1.00	100.13		
17	4230	1.15	86.74		
19	3820	1.30	78.48		
21	3470	1.40	71.25		
23	3100	1.60	63.53		
27	2630	1.85	53.88		
31	2310	2.1	47.41		
36	2000	2.4	41.07		

G63A DM132MB4 177

22	3180	0.90	65.35		
25	2850	1.00	58.55		
28	2530	1.05	51.94		
33	2200	1.15	45.13		
36	1970	1.25	40.41		
40	1770	1.35	36.37		
46	1550	1.45	31.73		
52	1390	1.55	28.43		
58	1230	1.70	25.22		
66	1080	1.85	22.15		

G62A DM132MB4 169

47	1520	1.35	31.16		
52	1380	1.45	28.42		
56	1280	1.65	26.36		
62	1160	1.90	23.88		
68	1060	2.00	21.72		
75	955	2.2	19.60		
83	865	2.3	17.78		

G53A DM132MB4 147

35	2070	0.80	42.53		
39	1850	0.90	38.01		
44	1640	1.00	33.76		
49	1460	1.05	29.91		
55	1300	1.15	26.62		
64	1110	1.30	22.80		
73	980	1.40	20.11		

G52A DM132MB4 143

62	1150	1.15	23.62		
69	1040	1.25	21.45		
74	965	1.45	19.83		
82	870	1.65	17.86		
92	780	1.75	16.01		
103	700	1.90	14.33		
114	630	2.0	12.90		
131	550	2.2	11.25		
146	490	2.3	10.08		
164	435	2.5	8.94		

Type
n2 [1/min] T2 [Nm] cG i -kg

7.5 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
G42A DM132MB4					121
81	880	1.00	18.06		
90	795	1.05	16.30		
98	730	1.10	15.00		
110	655	1.25	13.41		
123	580	1.30	11.90		
139	515	1.40	10.55		
157	455	1.50	9.39		
183	390	1.60	8.04		
207	345	1.75	7.09		
216	330	1.40	6.82		

243 295 1.55 6.05

274	260	1.70	5.36		
308	235	1.85	4.77		
360	199	2.0	4.09		
408	176	2.2	3.61		

11.0 kW

G93G42A DA160MB4 463

5.9	17200	0.80	250.07		
6.7	15100	0.90	218.81		
7.6	13300	1.05	192.77		
8.2	12200	0.80	177.81		

G93A DA160MB4 446

9.3	11300	1.20	157.04		
10	10300	1.30	144.12		
11	9400	1.45	131.03		
12	8590	1.60	119.82		
14	7600	1.80	105.95		
15	6940	1.95	96.85		
17	6340	2.1	88.42		
18	5730	2.4	79.95		

G83A DA160MB4 313

10	10300	0.85	143.59		
11	9400	0.95	131.06		
12	8510	1.05	118.71		
14	7750	1.15	108.13		
15	6790	1.30	94.72		
17	6180	1.45	86.16		
19	5560	1.60	77.61		
21	5000	1.80	69.68		
25	4290	2.1	59.77		
28	3700	2.4	51.67		

G73A DA160MB4 238

17	6220	0.80	86.74		
19	5630	0.85	78.48		
21	5110	0.95	71.25		
23	4560	1.05	63.53		
27	3860	1.25	53.88		
31	3400	1.45	47.41		
36	2950	1.65	41.07		
39	2660	1.75	37.16		
43	2420	1.85	33.74		
49	2160	2.0	30.08		
57	1830	2.3	25.51		
67	1560	2.5	21.77		

G72A DA160MB4 226

56	1870	2.2	26.11		
62	1700	2.5	23.65		

G63A DA160MB4 183

32	3240	0.80	45.13		
36	2900	0.85	40.41		
40	2610	0.90	36.37		
46	2280	1.00	31.73		
52	2040	1.05	28.43		
58	1810	1.15	25.22		
66	1590	1.25	22.15		

Type
n2 [1/min] T2 [Nm] cG i -kg

11.0 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
G62A DA160MB4					175
61	1710	1.30	23.88		
67	1560	1.35	21.72		
75	1410	1.50	19.60		
82	1270	1.60	17.78		
95	1100	1.75	15.40		
105	1000	1.85	13.94		
116	905	1.95	12.65		
130	810	2.1	11.28		
153	685	2.3	9.57		
179	585	2.5	8.16		

G53A DA160MB4 154

55	1910	0.80	26.62		
64	1640	0.85	22.80		
73	1440	0.95	20.11		

G52A DA160MB4 150

82	1280	1.10	17.86		
92	1150	1.20	16.01		
102	1030	1.30	14.33		
114	925	1.35	12.90		
130	805	1.45	11.25		
145	725	1.60	10.08		
164	640	1.65	8.94		
186	565	1.75	7.86		
209	505	2.1	7.02		
232	455	2.2	6.32		

G42A DA160MB4 128

109	960	0.85	13.41		
123	855	0.90	11.90		
139	755	0.95	10.55		
156	675	1.00	9.39		
182	575	1.10	8.04		
207	510	1.20	7.09		
215	490	0.95	6.82		
242	435	1.05	6.05		
273	385	1.15	5.36		
307	340	1.25	4.77		
358	295	1.40	4.09		
406	260	1.50	3.61		

15.0 kW

G93A DA160LB4 413

9.3	15400	0.90	157.04		
10	14100	0.95	144.12		
11	12800	1.05	131.03		
12	11700	1.15	119.82		
14	10400	1.30	105.95		
15	9470	1.45	96.85		
17	8650	1.55	88.42		
18	7820	1.75	79.95		
21	6780	2.0	69.35		
24	5930	2.3	60.68		

G83A DA160LB4 307

14	10600	0.85	108.13		
15	9260	0.95	94.72		
17	8420	1.05	86.16		
19	7590	1.15	77.61		
21	6810	1.30	69.68		
25	5840	1.50	59.77		
28	5050	1.75	51.67		
38	3780	2.3	38.61		
42	3390	2.5	34.66		

Type
n2 [1/min] T2 [Nm] cG i -kg

15.0 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
G73A DA160LB4					236
23	6210	0.80	63.53		
27	5270	0.95	53.88		
31	4640	1.05	47.41		
36	4020	1.20	41.07		
39	3630	1.30	37.16		
43	3300	1.35	33.74		

Type n2 [1/min] T2 [Nm] cG i ~kg

18.5 kW

G83A DA180MD4 357				
15	11400	0.80	94.72	
17	10400	0.85	86.16	
19	9360	0.95	77.61	
21	8400	1.05	69.68	
25	7210	1.25	59.77	
28	6230	1.45	51.67	
33	5420	1.65	44.91	
38	4660	1.85	38.61	
42	4180	2.00	34.66	
49	3590	2.2	29.74	
57	3100	2.5	25.70	

G73A DA180MD4 286				
31	5720	0.85	47.41	
36	4950	0.95	41.07	
39	4480	1.05	37.16	
43	4070	1.10	33.74	
49	3630	1.20	30.08	
57	3080	1.35	25.51	
67	2630	1.50	21.77	

G72A DA180MD4 283				
62	2850	1.45	23.65	
68	2600	1.55	21.55	
78	2280	1.70	18.87	
85	2070	1.80	17.17	
95	1860	1.90	15.46	
106	1670	2.0	13.88	
123	1440	2.2	11.91	
142	1240	2.4	10.29	
160	1100	2.2	9.15	
164	1080	2.5	8.95	
176	1000	2.4	8.32	

G62A DA180MD4 235				
75	2360	0.90	19.60	
82	2140	0.95	17.78	
95	1860	1.05	15.40	
105	1680	1.10	13.94	
116	1530	1.15	12.65	
130	1360	1.25	11.28	
153	1150	1.35	9.57	
179	985	1.50	8.16	
196	900	1.90	7.47	
217	815	2.1	6.76	

G52A DA180MD4 206				
114	1560	0.80	12.90	
130	1360	0.90	11.25	
145	1220	0.95	10.08	
164	1080	1.00	8.94	
186	950	1.05	7.86	
209	845	1.25	7.02	
232	760	1.35	6.32	
266	665	1.80	5.51	
297	595	1.95	4.94	
334	530	2.7	4.38	
381	465	3.0	3.85	

22.0 kW

G93A DA180LB4 463				
12	17200	0.80	119.82	
14	15200	0.90	105.95	
15	13900	1.00	96.85	
17	12700	1.05	88.42	
18	11500	1.20	79.95	
21	9950	1.35	69.35	
24	8700	1.55	60.68	
27	7670	1.80	53.46	
30	7070	1.90	49.31	
33	6460	2.1	45.02	
36	5840	2.3	40.70	

Type n2 [1/min] T2 [Nm] cG i ~kg

22.0 kW

G83A DA180LB4 356				
19	11100	0.80	77.61	
21	9990	0.90	69.68	
25	8570	1.05	59.77	
28	7410	1.20	51.67	
33	6440	1.40	44.91	
38	5540	1.55	38.61	
42	4970	1.65	34.66	
49	4260	1.85	29.74	
57	3690	2.1	25.70	
66	3200	2.3	22.34	

G82A DA180LB4 352				
78	2700	2.2	18.81	
86	2440	2.4	17.01	

G73A DA180LB4 286				
36	5890	0.80	41.07	
39	5330	0.85	37.16	
43	4840	0.95	33.74	
49	4310	1.00	30.08	
57	3660	1.15	25.51	
67	3120	1.25	21.77	

G72A DA180LB4 283				
62	3390	1.25	23.65	
68	3090	1.30	21.55	
78	2710	1.45	18.87	
85	2460	1.50	17.17	
95	2220	1.60	15.46	
106	1990	1.70	13.88	
123	1710	1.85	11.91	
142	1480	2.00	10.29	
160	1310	1.85	9.15	
164	1280	2.1	8.95	
176	1190	2.0	8.32	

G62A DA180LB4 235				
82	2550	0.80	17.78	
95	2210	0.85	15.40	
105	2000	0.95	13.94	
116	1810	1.00	12.65	
130	1620	1.05	11.28	
153	1370	1.15	9.57	
179	1170	1.25	8.16	
196	1070	1.60	7.47	
217	970	1.75	6.76	
239	880	2.6	6.13	
268	785	2.9	5.47	
316	665	3.3	4.64	
370	570	3.6	3.96	

30.0 kW

G93A DA200LB4 565				
17	17100	0.80	88.42	
19	15500	0.90	79.95	
21	13400	1.00	69.35	
24	11700	1.15	60.68	
28	10300	1.30	53.46	
30	9550	1.45	49.31	
33	8710	1.55	45.02	
36	7880	1.75	40.70	
42	6830	2.00	35.31	
48	5980	2.3	30.89	
54	5270	2.5	27.22	

G83A DA200LB4 432				
29	10000	0.90	51.67	
33	8690	1.00	44.91	
38	7470	1.15	38.61	
43	6710	1.25	34.66	
50	5760	1.40	29.74	
58	4980	1.55	25.70	
66	4320	1.70	22.34	

Type n2 [1/min] T2 [Nm] cG i ~kg

30.0 kW

G82A DA200LB4 414				
79	3640	1.65	18.81	
87	3290	1.80	17.01	
100	2860	1.95	14.76	
115	2500	2.2	12.91	
130	2200	2.4	11.37	
151	1900	2.4	9.79	

G73A DA200LB4 356				
58	4940	0.85	25.51	
68	4210	0.95	21.77	

G72A DA200LB4 344				
78	3650	1.05	18.87	
86	3320	1.10	17.17	
96	2990	1.20	15.46	
107	2690	1.25	13.88	
124	2310	1.35	11.91	
144	1990	1.45	10.29	
162	1770	1.40	9.15	
165	1730	1.60	8.95	
178	1610	1.50	8.32	
197	1450	2.2	7.50	
220	1300	2.4	6.73	
256	1120	2.6	5.77	
297	965	2.9	4.99	
341	840	3.2	4.34	

37.0 kW

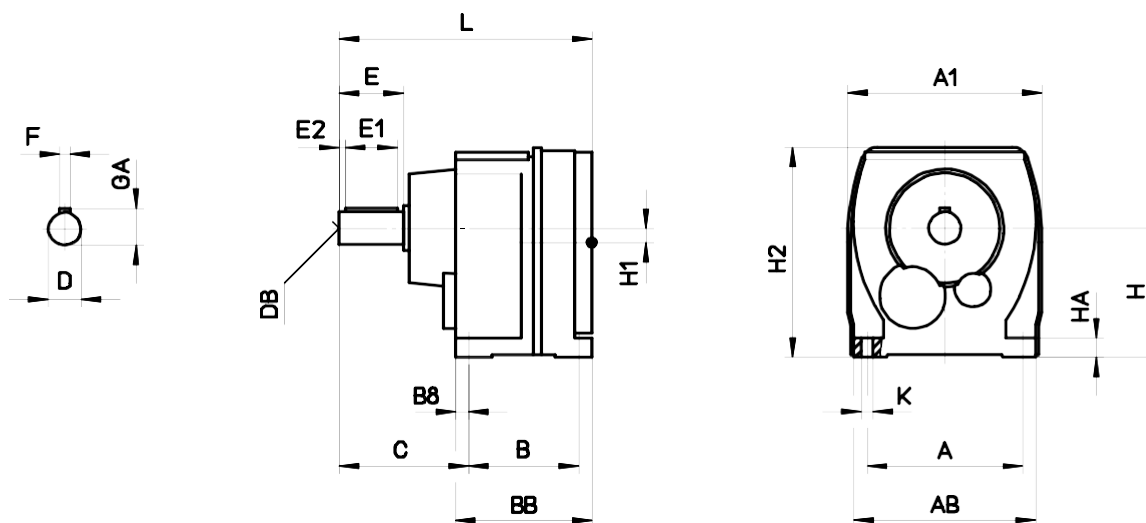
G93A DA225SD4 680				
21	16600	0.80	69.35	
24	14500	0.95	60.68	
28	12800	1.05	53.46	
30	11800	1.15	49.31	
33	10800	1.25	45.02	
36	9750	1.40	40.70	
42	8460	1.60	35.31	
48	7400	1.80	30.89	
54	6520	2.00	27.22	
63	5570	2.2	23.27	
73	4850	2.4	20.23	

G83A DA225SD4 547				
33	10800	0.85	44.91	
38	9250	0.95	38.61	
43	8300	1.00	34.66	
50	7120	1.10	29.74	
57	6160	1.25	25.70	
66	5350	1.35	22.34	

G82A DA225SD4 529				
78	4510	1.35	18.81	
87	4070	1.45	17.01	
100	3530	1.60	14.76	
114	3090	1.75	12.91	
130	2720	1.95	11.37	
151	2350	1.95	9.79	
167	2120	2.1	8.85	
192	1840	2.2	7.68	
219	1610	2.4	6.72	
249	1420	2.6	5.92	
291	1210	3.2	5.06	
335	1050	3.5	4.40	

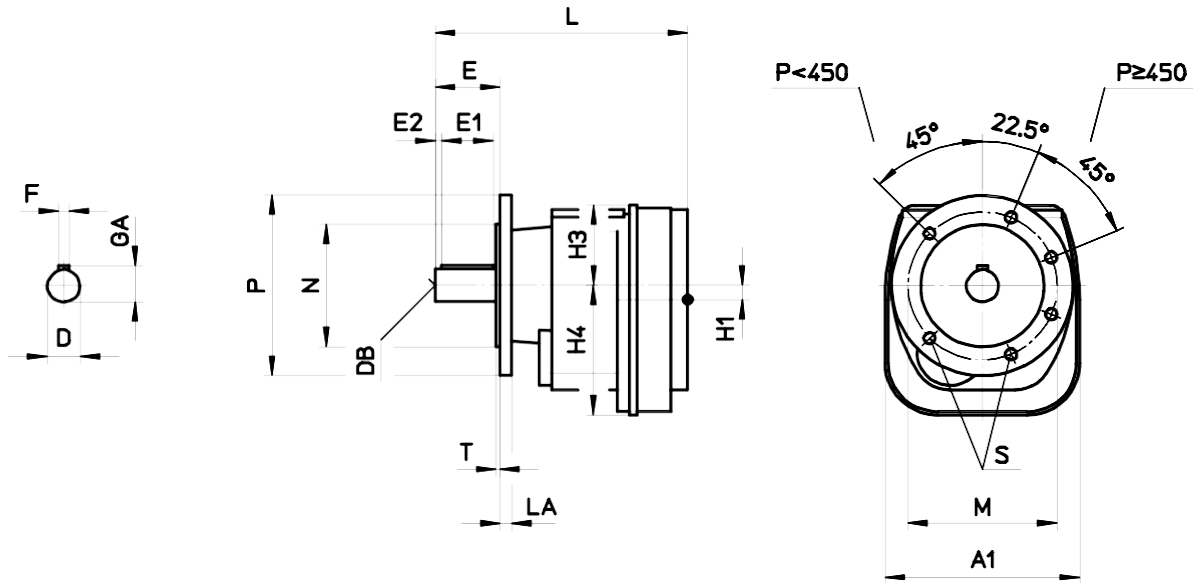
Dimensions

A - Foot mounted version



	A	AB	A1	B	BB	B8	C	H	HA	H1	H2	K	L	D	DB	E	E1	E2	F	GA
G0	90	105	109	70	90	12.5	80	70-0.5	10	7	117.5	Ø6.6	151.5	Ø20k6	M6	40	32	4	6	22.5
G1	100	120	125	70	90	10	81	85-0.5	12	5	142.5	Ø6.6	163	Ø20k6	M6	40	32	4	6	22.5
G2	120	140	150	85	105	10	100	100-0.5	18	11	162.5	Ø9	195	Ø25k6	M10	50	40	5	8	28
G3	135	160	177	110	135	12.5	116.5 126.5	120-0.5	24	11	192.5	Ø11	234 244	Ø30k6 Ø35k6	M10 M12	60 70	50 60	5 5	8 10	33 38
G4	170	200	208	135	165	15	146	145-0.5	30	16	233	Ø13.5	281	Ø40k6	M16	80	70	5	12	43
G5	215	250	259	170	205	17.5	181	180-0.5	35	20	289.5	Ø17.5	335	Ø50k6	M16	100	80	10	14	53.5
G6	255	300	309	200	245	23	207	220-0.5	45	20	354.5	Ø22	392	Ø60m6	M20	120	100	10	18	64
G7	290	350	360	280	330	25	239	250-1	55	28.5	401.5	Ø26	485	Ø75m6	M20	140	125	7.5	20	79.5
G8	330	400	412	330	395	32.5	290	290-1	65	32	464	Ø33	585.5	Ø90m6	M24	170	140	15	25	95
G9	390	460	466	400	480	40	335	340-1	75	39	534	Ø39	695	Ø110m6	M24	210	180	15	28	116

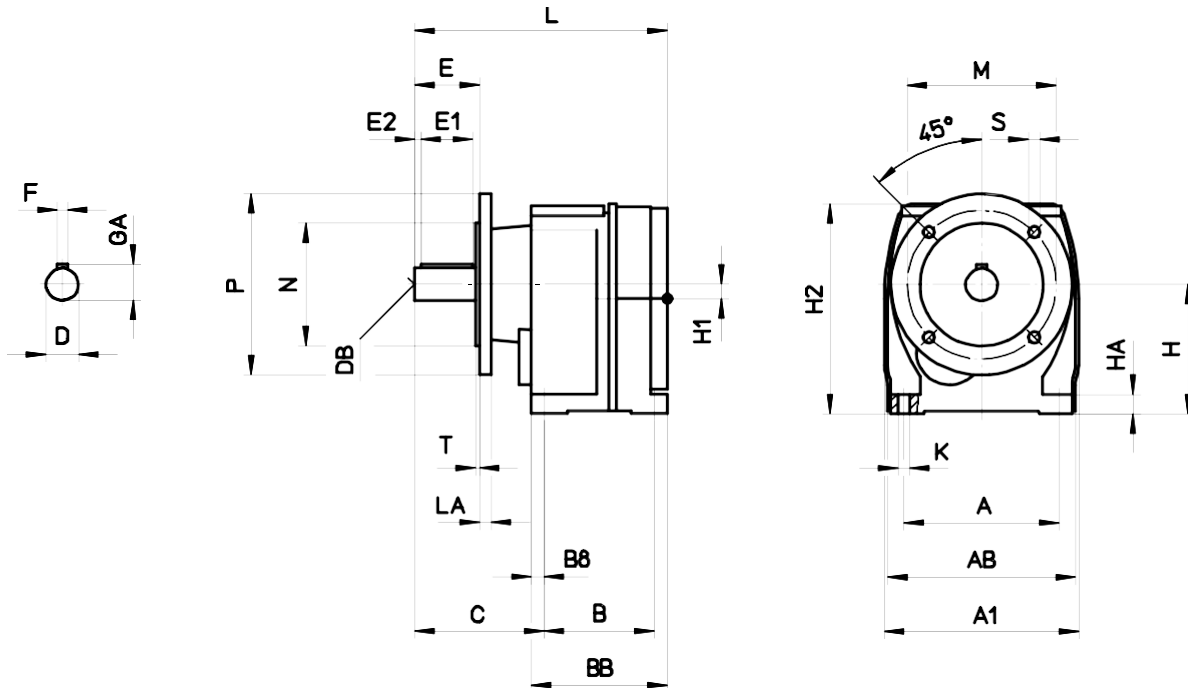
C - Flange mounted version



	A1	H1	L	H3	H4	D	DB	E	E1	E2	F	GA
G0	109	7	151.5	47.5	71	Ø20k6	M6	40	32	4	6	22.5
G1	125	5	163	57.5	85	Ø20k6	M6	40	32	4	6	22.5
G2	150	11	195	62.5	100.5	Ø25k6	M10	50	40	5	8	28
G3	177	11	234	72.5	120	Ø30k6 Ø35k6	M10 M12	60 70	50 60	5 5	8 10	33 38
G4	208	16	281	88	144.5	Ø40k6	M16	80	70	5	12	43
G5	259	20	335	109.5	179	Ø50k6	M16	100	80	10	14	53.5
G6	309	20	392	134.5	218.5	Ø60m6	M20	120	100	10	18	64
G7	360	28.5	485	151.5	248.5	Ø75m6	M20	140	125	7.5	20	79.5
G8	412	32	585.5	174	289	Ø90m6	M24	170	140	15	25	95
G9	466	39	695	194	338.5	Ø110m6	M24	210	180	15	28	116

	M	N	P	LA	T	S
G0	Ø100	Ø80 j6	Ø120	8	3	Ø6.6
G1	Ø100	Ø80 j6	Ø120	8	3	Ø6.6
	Ø115	Ø95 j6	Ø140	9	3	Ø9
G2	Ø115	Ø95 j6	Ø140	9	3	Ø9
	Ø130	Ø110 j6	Ø160	9	3.5	Ø9
G3	Ø130	Ø110 j6	Ø160	9	3.5	Ø9
	Ø165	Ø130 j6	Ø200	10	3.5	Ø11
G4	Ø165	Ø130 j6	Ø200	10	3.5	Ø11
G5	Ø215	Ø180 j6	Ø250	11	4	Ø13.5
G6	Ø265	Ø230 j6	Ø300	12	4	Ø13.5
G7	Ø300	Ø250 h6	Ø350	13	5	Ø17.5
G8	Ø400	Ø350 h6	Ø450	16	5	Ø17.5
G9	Ø400	Ø350 h6	Ø450	16	5	Ø17.5

E - Foot-flange mounted version



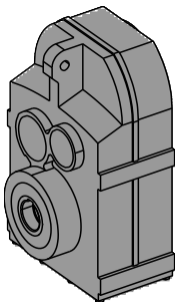
	A	AB	A1	B	BB	B8	C	H	HA	H1	H2	K	L	D	DB	E	E1	E2	F	GA
G0	90	105	109	70	90	12.5	80	70-0.5	10	7	117.5	Ø6.6	151.5	Ø20k6	M6	40	32	4	6	22.5
G1	100	120	125	70	90	10	81	85-0.5	12	5	142.5	Ø6.6	163	Ø20k6	M6	40	32	4	6	22.5
G2	120	140	150	85	105	10	100	100-0.5	18	11	162.5	Ø9	195	Ø25k6	M10	50	40	5	8	28
G3	135	160	177	110	135	12.5	116.5 126.5	120-0.5	24	11	192.5	Ø11	234 244	Ø30k6 Ø35k6	M10 M12	60 70	50 60	5 5	8 10	33 38
G4	170	200	208	135	165	15	146	145-0.5	30	16	233	Ø13.5	281	Ø40k6	M16	80	70	5	12	43
G5	215	250	259	170	205	17.5	181	180-0.5	35	20	289.5	Ø17.5	335	Ø50k6	M16	100	80	10	14	53.5

	M	N	P	LA	T	S
G	Ø10	Ø80 j6	Ø120	8	3	Ø6.6
G1	Ø100	Ø80 j6	Ø120	8	3	Ø6.6
	Ø11	Ø95 j6	Ø140	9	3	Ø9
G2	Ø115	Ø95 j6	Ø140	9	3	Ø9
	Ø13	Ø110 j6	Ø160	9	3.5	Ø9
G3	Ø130	Ø110 j6	Ø160	9	3.5	Ø9
	Ø16	Ø130 j6	Ø200	10	3.5	Ø11
G	Ø16	Ø130 j6	Ø200	10	3.5	Ø11
G	Ø21	Ø180 j6	Ø250	11	4	Ø13.5

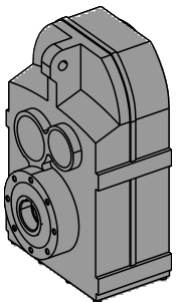
Shaft mounted helical gear units F



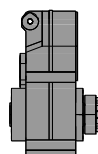
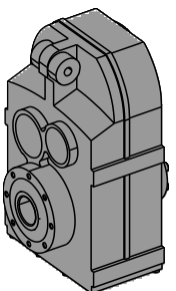
Type of construction



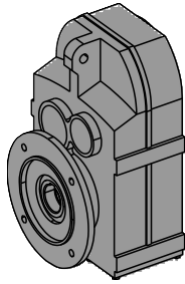
Shaft mounted version
Hollow shaft with keyway
Example: F42**A**



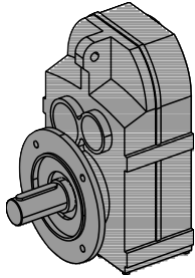
Shaft mounted version
Hollow shaft with keyway
Example: F53**B**



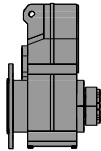
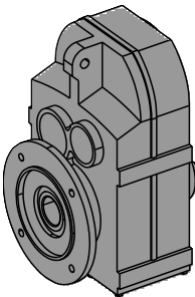
Shaft mounted version
Hollow shaft with shrink disc
Rubber elements
Example: F32**BSG**



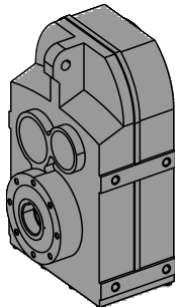
Flange mounted version
Hollow shaft with keyway
Example: **F33C**



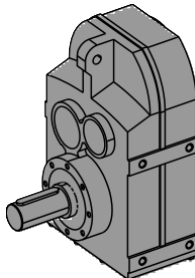
Flange mounted version
Output shaft with key
Example: **F42CV**



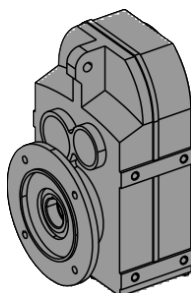
Flange mounted version
Hollow shaft with shrink disc
Example: **F52CS**



Shaft mounted version + side areas
Hollow shaft with keyway
Example: **F43D**



Shaft mounted version + side areas
Output shaft with key
Example: **F32DV**



Flange mounted version + side areas
Hollow shaft with keyway
Example: **F42E**

Selection table - Gear units

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F23G03			
9125.4	0.15	245	<0.05
7709.2	0.18	245	<0.05
6591.1	0.21	245	<0.05
5686.0	0.25	245	<0.05
4938.4	0.28	245	<0.05
4310.3	0.32	245	<0.05
3720.4	0.38	245	<0.05
3209.5	0.44	245	<0.05
2787.5	0.50	245	<0.05
2433.0	0.58	245	<0.05

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F23G02			
2135.7	0.66	245	<0.05
1804.3	0.78	245	<0.05
1542.6	0.91	245	<0.05
1330.8	1.1	245	<0.05
1155.8	1.2	245	<0.05
1008.8	1.4	245	<0.05
883.58	1.6	245	<0.05
759.44	1.8	245	<0.05
655.15	2.1	245	0.05
569.00	2.5	245	0.06
496.64	2.8	245	0.07
434.99	3.2	245	0.08
380.22	3.7	245	0.09
334.98	4.2	245	0.11
296.97	4.7	245	0.12
266.48	5.3	245	0.13
232.93	6.0	245	0.15
205.21	6.8	245	0.18
181.93	7.7	245	0.20

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F23			
170.20	8.2	245	0.21
145.41	9.6	245	0.25
125.84	11	245	0.29
109.99	13	245	0.33
96.90	14	245	0.37
85.91	16	245	0.42
77.09	18	245	0.47
67.38	21	245	0.53
59.37	24	245	0.61
52.63	27	245	0.68
46.08	30	245	0.78
40.60	34	245	0.88
35.99	39	245	1.00
32.07	44	245	1.12
28.79	49	245	1.25
25.12	56	245	1.43
22.01	64	230	1.53

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F22			
32.42	43	245	1.11
27.83	50	245	1.29
24.21	58	245	1.48
21.28	66	245	1.69
18.86	74	245	1.90
16.82	83	245	2.13
15.09	93	240	2.33
13.71	102	235	2.51
12.09	116	225	2.73
10.71	131	215	2.94
9.58	146	205	3.14
8.34	168	193	3.39
7.62	184	165	3.17
6.80	206	160	3.45
6.10	230	150	3.61
5.54	253	142	3.76
4.89	287	132	3.96
4.33	324	122	4.13
3.87	362	114	4.32
3.37	415	104	4.52

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F33G13			
12764	0.11	470	<0.05
10821	0.13	470	<0.05
9286.8	0.15	470	<0.05
8044.8	0.17	470	<0.05
7018.8	0.20	470	<0.05
6157.0	0.23	470	<0.05
5422.8	0.26	470	<0.05
4768.5	0.29	470	<0.05
4092.4	0.34	470	<0.05
3545.1	0.39	470	<0.05
3092.9	0.45	470	<0.05

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F33G12			
2753.1	0.51	470	<0.05
2352.1	0.60	470	<0.05
2035.5	0.69	470	<0.05
1779.2	0.79	470	<0.05
1567.5	0.89	470	<0.05
1389.7	1.0	470	<0.05
1238.2	1.1	470	0.06
1111.5	1.3	470	0.06
970.15	1.4	470	0.07
849.73	1.6	470	0.08
781.01	1.8	470	0.09
688.08	2.0	470	0.10
610.01	2.3	470	0.11
543.51	2.6	470	0.13
487.91	2.9	470	0.14
425.86	3.3	470	0.16
373.00	3.8	470	0.19
332.76	4.2	470	0.21
298.48	4.7	470	0.23
271.27	5.2	470	0.25
239.17	5.9	470	0.29
211.83	6.6	470	0.33

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F33			
190.26	7.4	470	0.36
163.34	8.6	470	0.42
142.09	9.9	470	0.49
124.88	11	470	0.55
110.67	13	470	0.62
98.73	14	470	0.70
88.56	16	470	0.78
80.49	17	470	0.86
70.96	20	470	0.97
62.85	22	470	1.10
56.24	25	470	1.23
49.17	28	470	1.40
43.87	32	470	1.57
39.35	36	470	1.75
35.76	39	470	1.93
31.53	44	470	2.19
27.93	50	470	2.47
24.99	56	470	2.76
21.75	64	465	3.13

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F32			
27.55	51	470	2.51
24.60	57	470	2.81
22.12	63	470	3.12
20.01	70	465	3.41
18.24	77	450	3.62
16.27	86	435	3.92
14.60	96	425	4.27
13.24	106	415	4.59
11.74	119	400	5.00
10.33	136	385	5.5
9.05	155	375	6.1
8.50	165	245	4.23
7.95	176	360	6.6
7.58	185	235	4.54
6.80	206	225	4.85
6.17	227	215	5.1
5.47	256	205	5.5
4.81	291	192	5.8
4.21	332	181	6.3
3.70	378	170	6.7

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F43G13			
16236	0.086	885	<0.05
13764	0.10	885	<0.05
11813	0.12	885	<0.05
10233	0.14	885	<0.05
8927.9	0.16	885	<0.05
7831.6	0.18	885	<0.05
6897.8	0.20	885	<0.05
6065.5	0.23	885	<0.05
5205.5	0.27	885	<0.05
4509.3	0.31	885	<0.05
3934.2	0.36	885	<0.05

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F43G12			
3501.9	0.40	885	<0.05
2991.9	0.47	885	<0.05
2589.2	0.54	885	<0.05
2263.2	0.62	885	0.06
1993.9	0.70	885	0.06
1767.6	0.79	885	0.07
1574.9	0.89	885	0.08
1413.8	0.99	885	0.09
1234.0	1.1	885	0.10
1080.8	1.3	885	0.12
993.44	1.4	885	0.13
875.23	1.6	885	0.15
775.93	1.8	885	0.17
691.34	2.0	885	0.19
620.62	2.3	885	0.21
541.69	2.6	885	0.24
474.45	3.0	885	0.27
426.68	3.3	885	0.30
386.00	3.6	885	0.34
351.84	4.0	885	0.37
313.88	4.5	885	0.41
281.55	5.0	885	0.46
255.44	5.5	885	0.51
226.36	6.2	885	0.57
199.24	7.0	885	0.65

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
F43			
235.25	6.0	885	0.55
203.29	6.9	885	0.64
178.07	7.9	885	0.73
157.64	8.9	885	0.82
140.77	9.9	885	0.92
126.60	11	885	1.02
114.53	12	885	1.13
104.39	13	885	1.24
93.13	15	885	1.39
83.54	17	885	1.55
75.79	18	885	1.71
67.16	21	885	1.93
59.12	24	885	2.19
51.77	27	885	2.50
46.92	30	885	2.76
42.08	33	885	3.08
38.18	37	885	3.39
33.83	41	885	3.83
29.78	47	885	4.35
26.08	54	850	4.78
22.91	61	785	5.0

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F42

30.05	47	885	4.31
27.14	52	885	4.77
24.65	57	885	5.3
22.54	62	885	5.7
20.22	69	885	6.4
18.25	77	885	7.1
16.80	83	885	7.5
15.02	93	885	7.5
13.33	105	885	7.5
11.82	118	885	7.5
10.51	133	885	7.5
9.01	155	885	7.5
7.94	176	885	7.5
7.36	190	440	7.5
6.77	207	570	7.5
6.05	231	555	7.5
5.38	260	565	7.5
4.76	294	535	7.5
4.24	330	505	7.5
3.63	385	470	7.5
3.20	437	440	7.5

F53G23

16911	0.083	1580	<0.05
14448	0.097	1580	<0.05
12503	0.11	1580	<0.05
10929	0.13	1580	<0.05
9628.5	0.15	1580	<0.05
8536.1	0.16	1580	<0.05
7659.6	0.18	1580	<0.05
6695.2	0.21	1580	<0.05
5898.5	0.24	1580	<0.05
5229.3	0.27	1580	<0.05
4578.3	0.31	1580	0.05
4033.5	0.35	1580	0.06
3575.9	0.39	1580	0.06

F53G22

3221.2	0.43	1580	0.07
2765.4	0.51	1580	0.08
2405.6	0.58	1580	0.10
2114.3	0.66	1580	0.11
1873.6	0.75	1580	0.12
1671.5	0.84	1580	0.14
1499.3	0.93	1580	0.15
1362.7	1.0	1580	0.17
1201.4	1.2	1580	0.19
1064.0	1.3	1580	0.22
960.29	1.5	1580	0.24
883.90	1.6	1580	0.26
776.06	1.8	1580	0.30
696.12	2.0	1580	0.33
632.66	2.2	1580	0.37
557.80	2.5	1580	0.42
494.02	2.8	1580	0.47
445.85	3.1	1580	0.52
410.38	3.4	1580	0.57
366.79	3.8	1580	0.63
325.70	4.3	1580	0.71
288.62	4.9	1580	0.80
252.64	5.5	1580	0.92
228.00	6.1	1580	1.02
209.86	6.7	1580	1.11
196.76	7.1	1580	1.18

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F53

205.64	6.8	1580	1.13
182.73	7.7	1580	1.27
163.81	8.5	1580	1.42
147.91	9.5	1580	1.57
134.37	10	1580	1.73
122.86	11	1580	1.89
110.24	13	1580	2.11
99.49	14	1580	2.33
91.57	15	1580	2.54
81.85	17	1580	2.84
72.68	19	1580	3.20
64.40	22	1580	3.61
56.37	25	1580	4.12
50.88	28	1580	4.56
46.83	30	1580	4.96
41.85	33	1580	5.5
37.17	38	1580	6.2
32.93	43	1580	7.1
29.31	48	1580	7.9
25.11	56	1580	9.2
22.15	63	1480	9.8

F52

34.34	41	1460	6.2
31.33	45	1450	6.8
28.82	49	1580	8.1
26.01	54	1580	8.9
23.61	59	1580	9.8
21.83	64	1580	10.6
19.67	71	1580	11.8
17.62	79	1580	13.2
15.78	89	1580	14.7
14.20	99	1580	15.0
12.39	113	1580	15.0
11.10	126	1530	15.0
9.85	142	1480	15.0
8.65	162	1430	15.0
7.74	181	910	15.0
6.94	202	870	15.0
6.24	224	835	15.0
5.45	257	785	15.0
4.88	287	750	15.0
4.33	323	710	15.0
3.80	368	665	15.0

F63G23

20876	0.067	2800	<0.05
17836	0.078	2800	<0.05
15435	0.091	2800	<0.05
13492	0.10	2800	<0.05
11886	0.12	2800	<0.05
10538	0.13	2800	<0.05
9455.6	0.15	2800	<0.05
8265.1	0.17	2800	<0.05
7281.6	0.19	2800	0.06
6455.5	0.22	2800	0.06
5651.9	0.25	2800	0.07
4979.3	0.28	2800	0.08
4414.4	0.32	2800	0.09

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F63G22

3976.5	0.35	2800	0.10
3413.8	0.41	2800	0.12
2969.6	0.47	2800	0.14
2610.0	0.54	2800	0.16
2313.0	0.61	2800	0.18
2063.5	0.68	2800	0.20
1850.9	0.76	2800	0.22
1682.2	0.83	2800	0.24
1483.1	0.94	2800	0.28
1313.5	1.1	2800	0.31
1214.4	1.2	2800	0.34
1094.0	1.3	2800	0.38
958.03	1.5	2800	0.43
859.35	1.6	2800	0.48
781.01	1.8	2800	0.53
688.59	2.0	2800	0.60
609.86	2.3	2800	0.67
563.82	2.5	2800	0.73
507.91	2.8	2800	0.81
455.13	3.1	2800	0.90
407.58	3.4	2800	1.01
366.82	3.8	2800	1.12
320.02	4.4	2800	1.28
286.71	4.9	2800	1.43
254.33	5.5	2800	1.62

F63

242.53	5.8	2800	1.69
218.27	6.4	2800	1.88
197.90	7.1	2800	2.08
180.55	7.8	2800	2.28
166.08	8.4	2800	2.47
149.88	9.3	2800	2.74
136.08	10	2800	3.02
125.81	11	2800	3.27
113.33	12	2800	3.63
101.56	14	2800	4.05
90.95	15	2800	4.52
81.85	17	2800	5.0
71.41	20	2800	5.8
63.98	22	2800	6.4
56.75	25	2800	7.2
49.31	28	2800	8.3
44.16	32	2800	9.3
39.74	35	2800	10.3
34.67	40	2800	11.9
31.06	45	2780	13.1
27.56	51	2590	13.8
24.21	58	2390	14.5

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F62

34.05	41	2550	11.0
31.05	45	2520	11.9
28.80	49	2800	14.3
26.09	54	2800	15.7
23.73	59	2800	17.3
21.42	65	2800	19.2
19.43	72	2760	20.8
16.83	83	2650	22.0
15.23	92	2580	22.0
13.82	101	2510	22.0
12.33	114	2430	22.0
10.45	134	2320	22.0
8.92	157	2220	22.0
7.70	182	1440	22.0
6.97	201	1400	22.0
6.33	221	1340	22.0
5.64	248	1280	22.0
4.78	293	1190	22.0
4.08	343	1100	22.0

F73G33

21379	0.065	4880	<0.05
18354	0.076	4880	<0.05
15966	0.088	4880	<0.05
14033	0.100	4880	0.05
12436	0.11	4880	0.06
11094	0.13	4880	0.06
9951.3	0.14	4880	0.07
9044.1	0.15	4880	0.08
7973.9	0.18	4880	0.09
7062.2	0.20	4880	0.10
6407.0	0.22	4880	0.11
5550.0	0.25	4880	0.13
4929.5	0.28	4880	0.15
4421.8	0.32	4880	0.16
4018.7	0.35	4880	0.18
3543.1	0.40	4880	0.20

F73G32

3095.5	0.45	4880	0.23
2764.2	0.51	4880	0.26
2485.9	0.56	4880	0.29
2248.8	0.62	4880	0.32
2049.8	0.68	4880	0.35
1828.7	0.77	4880	0.39
1640.3	0.85	4880	0.44
1488.1	0.94	4880	0.48
1289.1	1.1	4880	0.55
1166.4	1.2	4880	0.61
1058.9	1.3	4880	0.68
944.12	1.5	4880	0.76
879.92	1.6	4880	0.81
789.28	1.8	4880	0.91
716.05	2.0	4880	1.00
620.27	2.3	4880	1.15
561.22	2.5	4880	1.27
509.49	2.7	4880	1.40
454.28	3.1	4880	1.57
385.26	3.6	4880	1.86
347.80	4.0	4880	2.06
315.75	4.4	4880	2.26
281.53	5.0	4880	2.54
238.76	5.9	4880	2.99

Selection table - Gear units

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F73

274.23	5.1	4880	2.61
249.41	5.6	4880	2.87
228.27	6.1	4880	3.13
211.55	6.6	4880	3.38
191.74	7.3	4880	3.73
174.87	8.0	4880	4.09
162.19	8.6	4880	4.41
146.94	9.5	4880	4.87
133.66	10	4880	5.3
120.60	12	4880	5.9
109.41	13	4880	6.5
94.78	15	4880	7.5
85.76	16	4880	8.3
77.85	18	4880	9.2
69.41	20	4880	10.3
58.87	24	4880	12.1
51.81	27	4880	13.8
44.88	31	4880	15.9
40.61	34	4810	17.4
36.86	38	4630	18.4
32.87	43	4410	19.7
27.88	50	4100	21.6
23.79	59	3810	23.5

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F72

28.53	49	4430	22.8
25.85	54	4300	24.4
23.54	59	4190	26.1
20.62	68	4030	28.6
18.76	75	3920	30.0
16.90	83	3800	30.0
15.17	92	3690	30.0
13.01	108	3530	30.0
11.25	124	3390	30.0
9.78	143	3260	30.0
9.11	154	2240	30.0
8.29	169	2160	30.0
7.46	188	2070	30.0
6.70	209	1980	30.0
5.75	244	1860	30.0
4.97	282	1740	30.0
4.32	324	1630	30.0

F83G33

22582	0.062	8900	0.06
19387	0.072	8900	0.07
16864	0.083	8900	0.08
14822	0.094	8900	0.09
13135	0.11	8900	0.10
11718	0.12	8900	0.11
10511	0.13	8900	0.12
9552.8	0.15	8900	0.14
8422.4	0.17	8900	0.15
7459.4	0.19	8900	0.17
6586.0	0.21	8900	0.20
5836.4	0.24	8900	0.22
5206.8	0.27	8900	0.25
4670.4	0.30	8900	0.28
4244.7	0.33	8900	0.31
3742.4	0.37	8900	0.35

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F83G32

3269.6	0.43	8900	0.40
2919.6	0.48	8900	0.45
2625.7	0.53	8900	0.50
2375.3	0.59	8900	0.55
2165.1	0.65	8900	0.60
1931.5	0.72	8900	0.68
1732.6	0.81	8900	0.75
1578.2	0.89	8900	0.83
1382.4	1.0	8900	0.94
1257.5	1.1	8900	1.04
1132.6	1.2	8900	1.15
1016.9	1.4	8900	1.28
929.40	1.5	8900	1.40
833.66	1.7	8900	1.57
756.35	1.9	8900	1.73
670.24	2.1	8900	1.95
589.95	2.4	8900	2.21
516.64	2.7	8900	2.53
470.60	3.0	8900	2.77
412.22	3.4	8900	3.17
374.97	3.7	8900	3.48
337.74	4.1	8900	3.86
303.24	4.6	8900	4.30
260.13	5.4	8900	5.0
228.49	6.1	8900	5.7

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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F83

200.61	7.0	8900	6.5
183.42	7.6	8900	7.1
169.54	8.3	8900	7.7
154.08	9.1	8900	8.5
140.63	10.0	8900	9.3
127.39	11	8900	10.2
116.03	12	8900	11.2
101.64	14	8900	12.8
92.45	15	8900	14.1
83.27	17	8900	15.7
74.77	19	8900	17.5
64.14	22	8900	20.3
55.44	25	8900	23.5
48.19	29	8850	26.9
41.43	34	8540	30.2
37.20	38	8260	32.6
31.91	44	7890	36.3
27.58	51	7550	40.1
23.97	58	7240	44.3

F82

20.19	69	6480	45.0
18.25	77	6290	45.0
15.83	88	6040	45.0
13.85	101	5810	45.0
12.20	115	5600	45.0
10.08	139	3790	45.0
9.11	154	3650	45.0
7.90	177	3450	45.0
6.92	202	3270	45.0
6.09	230	3100	45.0

Selection table - Geared motors

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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0.12 kW

F33G12A DM63K4	26
2.8	390 1.20 487.91
3.2	340 1.40 425.86
3.7	295 1.60 373.00
4.1	265 1.80 332.76
4.6	240 2.00 298.48

F23G02A DM63K4	18
3.6	305 0.80 380.22
4.1	265 0.90 334.98
4.6	235 1.05 296.97
5.2	210 1.15 266.48
5.9	186 1.30 232.93
6.7	164 1.50 205.21
7.6	145 1.70 181.93

F23A DM63K4	14
8.1	141 1.75 170.20
9.5	121 2.0 145.41
11	104 2.3 125.84
13	91 2.7 109.99
14	80 3.0 96.90
16	71 3.4 85.91
18	64 3.8 77.09
20	56 4.4 67.38
23	49 5.0 59.37
26	44 5.6 52.63
30	38 6.4 46.08
34	34 7.3 40.60
38	30 8.2 35.99
43	27 9.2 32.07
48	24 10 28.79
55	21 12 25.12
63	18 13 22.01

F22A DM63K4	14
43	27 9.1 32.42
50	23 11 27.83
57	20 12 24.21
65	18 14 21.28
73	16 16 18.86
82	14 18 16.82
91	13 19 15.09
101	11 21 13.71
114	10 22 12.09
129	8.9 24 10.71
181	6.3 26 7.62
203	5.6 28 6.80
226	5.1 30 6.10
249	4.6 31 5.54
282	4.1 33 4.89
319	3.6 34 4.33

0.18 kW

F43G12A DM63G4	37
2.9	565 1.55 474.45
3.2	510 1.75 426.68
3.6	460 1.90 386.00

F33G12A DM63G4	26
2.8	585 0.80 487.91
3.2	510 0.90 425.86
3.7	445 1.05 373.00
4.1	400 1.20 332.76
4.6	355 1.30 298.48
5.1	325 1.45 271.27
5.8	285 1.65 239.17
6.5	255 1.85 211.83

F33A DM63G4	21
7.3	235 2.00 190.26

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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0.18 kW

F23G02A DM63G4	18
5.9	280 0.90 232.93
6.7	245 1.00 205.21
7.6	220 1.15 181.93

F23A DM63G4	15
8.1	210 1.15 170.20
9.5	181 1.35 145.41
11	157 1.55 125.84
13	137 1.80 109.99
14	121 2.0 96.90
16	107 2.3 85.91
18	96 2.6 77.09
20	84 2.9 67.38
23	74 3.3 59.37
26	66 3.7 52.63
30	57 4.3 46.08
34	51 4.8 40.60
38	45 5.5 35.99
43	40 6.1 32.07
48	36 6.8 28.79
55	31 7.8 25.12
63	27 8.4 22.01

F22A DM63G4	15
43	40 6.1 32.42
50	35 7.1 27.83
57	30 8.1 24.21
65	27 9.2 21.28
73	23 10 18.86
82	21 12 16.82
91	19 13 15.09
101	17 14 13.71
114	15 15 12.09
129	13 16 10.71
181	9.5 17 7.62
203	8.5 19 6.80
226	7.6 20 6.10
249	6.9 21 5.54
282	6.1 22 4.89
319	5.4 23 4.33

0.25 kW

F53G22A DM71K4	63
2.9	805 1.95 494.02

F43G12A DM71K4	38
3.0	770 1.15 474.45
3.3	695 1.25 426.68
3.7	625 1.40 386.00
4.0	570 1.55 351.84
4.5	510 1.75 313.88
5.0	460 1.95 281.55

F33G12A DM71K4	27
3.8	605 0.80 373.00
4.2	540 0.85 332.76
4.7	485 0.95 298.48
5.2	440 1.05 271.27
5.9	390 1.20 239.17
6.7	345 1.35 211.83

F33A DM71K4	22
7.4	320 1.45 190.26
8.6	275 1.70 163.34
9.9	240 1.95 142.09

F23G02A DM71K4	19
7.8	295 0.85 181.93

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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0.25 kW

F23A DM71K4	16
8.3	290 0.85 170.20
9.7	245 1.00 145.41
11	215 1.15 125.84
13	186 1.30 109.99
15	164 1.50 96.90
16	145 1.70 85.91
18	131 1.90 77.09
21	114 2.1 67.38
24	101 2.4 59.37
27	89 2.7 52.63
31	78 3.1 46.08
35	69 3.6 40.60
39	61 4.0 35.99
44	54 4.5 32.07
49	49 5.0 28.79
56	43 5.8 25.12
64	37 6.2 22.01

F22A DM71K4	16
43	55 4.5 32.42
51	47 5.2 27.83
58	41 6.0 24.21
66	36 6.8 21.28
75	32 7.7 18.86
84	28 8.6 16.82
93	26 9.4 15.09
103	23 10 13.71
117	20 11 12.09
132	18 12 10.71
185	13 13 7.62
207	12 14 6.80
231	10 15 6.10
254	9.4 15 5.54
289	8.3 16 4.89
326	7.3 17 4.33

0.37 kW

F53G22A DM71G4	63
2.9	1190 1.35 494.02
3.2	1070 1.50 445.85
3.4	985 1.60 410.38
3.8	880 1.80 366.79
4.3	785 2.0 325.70

F43G12A DM71G4	39
3.3	1030 0.85 426.68
3.7	930 0.95 386.00
4.0	845 1.05 351.84
4.5	755 1.15 313.88
5.0	675 1.30 281.55
5.5	615 1.45 255.44
6.2	545 1.60 226.36
7.1	480 1.85 199.24

F43A DM71G4	34
6.0	590 1.50 235.25
6.9	510 1.75 203.29
7.9	445 2.00 178.07

F33G12A DM71G4	28
5.9	575 0.80 239.17
6.7	510 0.90 211.83

F33A DM71G4	23
7.4	475 1.00 190.26
8.6	410 1.15 163.34
9.9	355 1.30 142.09
11	315 1.50 124.88
13	275 1.70 110.67
14	245 1.90 98.73

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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0.37 kW

F23A DM71G4	17
11	315 0.80 125.84
13	275 0.90 109.99
15	245 1.00 96.90
16	215 1.15 85.91
18	193 1.25 77.09
21	169 1.45 67.38
24	149 1.65 59.37
27	132 1.85 52.63
31	115 2.1 46.08
35	102 2.4 40.60
39	90 2.7 35.99
44	80 3.0 32.07
49	72 3.4 28.79
56	63 3.9 25.12
64	55 4.2 22.01

F22A DM71G4	16
43	81 3.0 32.42
51	70 3.5 27.83
58	61 4.0 24.21
66	53 4.6 21.28
75	47 5.2 18.86
84	42 5.8 16.82
93	38 6.3 15.09
103	34 6.8 13.71
117	30 7.4 12.09
132	27 8.0 10.71
185	19 8.6 7.62
207	17 9.4 6.80
231	15 9.8 6.10
254	14 10 5.54
289	12 11 4.89
326	11 11 4.33

0.55 kW

F63G22A DM80K4	97
3.1	1630 1.70 455.13
3.4	1460 1.90 407.58

F53G22A DM80K4	65
2.8	1770 0.90 494.02
3.2	1600 1.00 445.85
3.4	1470 1.10 410.38
3.8	1320 1.20 366.79
4.3	1170 1.35 325.70
4.9	1040 1.55 288.62
5.6	905 1.75 252.64
6.2	820 1.95 228.00

F43G12A DM80K4	41
4.5	1130 0.80 313.88
5.0	1010 0.85 281.55
5.5	915 0.95 255.44
6.2	810 1.10 226.36
7.1	715 1.25 199.24

F43A DM80K4	35
7.9	665 1.35 178.07
8.9	590 1.50 157.64
10.0	525 1.70 140.77
11	475 1.85 126.60

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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11.0 kW

F73A DA160MB4					251
17	6150	0.80			85.76
19	5580	0.85			77.85
21	4980	1.00			69.41
25	4220	1.15			58.87
28	3720	1.30			51.81
33	3220	1.50			44.88
36	2910	1.65			40.61
40	2640	1.75			36.86
45	2360	1.85			32.87
53	2000	2.1			27.88
62	1710	2.2			23.79

F72A DA160MB4					239
51	2050	2.2			28.53
57	1850	2.3			25.85
62	1690	2.5			23.54

F63A DA160MB4					192
30	3540	0.80			49.31
33	3170	0.90			44.16
37	2850	1.00			39.74
42	2490	1.15			34.67
47	2230	1.25			31.06
53	1980	1.30			27.56
61	1740	1.40			24.21

F62A DA160MB4					184
56	1870	1.50			26.09
62	1700	1.65			23.73
68	1540	1.85			21.42
75	1390	2.00			19.43
87	1210	2.2			16.83
96	1090	2.4			15.23
106	990	2.5			13.82

F53A DA160MB4					160
58	1800	0.90			25.11
66	1590	0.95			22.15

F52A DA160MB4					156
74	1410	1.10			19.67
83	1260	1.25			17.62
93	1130	1.40			15.78
103	1020	1.55			14.20
118	890	1.80			12.39
132	795	1.90			11.10
149	705	2.1			9.85
169	620	2.3			8.65
189	555	1.65			7.74
211	495	1.75			6.94
235	450	1.85			6.24
269	390	2.0			5.45
300	350	2.1			4.88
339	310	2.3			4.33
385	275	2.4			3.80

15.0 kW

F83A DA160LB4					319
13	11300	0.80			116.03
14	9940	0.90			101.64
16	9040	1.00			92.45
18	8140	1.10			83.27
20	7310	1.20			74.77
23	6270	1.40			64.14
26	5420	1.65			55.44
35	4050	2.1			41.43
39	3640	2.3			37.20
46	3120	2.5			31.91

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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15.0 kW

F73A DA160LB4					238
25	5760	0.85			58.87
28	5070	0.95			51.81
33	4390	1.10			44.88
36	3970	1.20			40.61
40	3600	1.30			36.86
45	3210	1.35			32.87
53	2730	1.50			27.88
62	2330	1.65			23.79

F72A DA160LB4					235
51	2790	1.60			28.53
57	2530	1.70			25.85
62	2300	1.80			23.54
71	2020	2.00			20.62
78	1830	2.1			18.76
87	1650	2.3			16.90
97	1480	2.5			15.17
161	890	2.5			9.11

F63A DA160LB4					190
42	3390	0.85			34.67
47	3040	0.90			31.06
53	2690	0.95			27.56
61	2370	1.00			24.21

F62A DA160LB4					188
56	2550	1.10			26.09
62	2320	1.20			23.73
68	2090	1.35			21.42
75	1900	1.45			19.43
87	1650	1.60			16.83
96	1490	1.75			15.23
106	1350	1.85			13.82
119	1210	2.0			12.33
140	1020	2.3			10.45
190	755	1.90			7.70
210	680	2.1			6.97
232	620	2.2			6.33
260	550	2.3			5.64

F52A DA160LB4					157
74	1920	0.80			19.67
83	1720	0.90			17.62
93	1540	1.05			15.78
103	1390	1.15			14.20
118	1210	1.30			12.39
132	1090	1.40			11.10
149	965	1.55			9.85
169	845	1.70			8.65
189	755	1.20			7.74
211	680	1.30			6.94
235	610	1.35			6.24
269	530	1.45			5.45
300	475	1.55			4.88
339	425	1.70			4.33
385	370	1.80			3.80

18.5 kW

F83A DA180MD4					369
16	11100	0.80			92.45
18	10000	0.90			83.27
20	9020	1.00			74.77
23	7730	1.15			64.14
26	6690	1.35			55.44
30	5810	1.50			48.19
35	5000	1.70			41.43
39	4490	1.85			37.20
46	3850	2.1			31.91
53	3330	2.3			27.58
61	2890	2.5			23.97

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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18.5 kW

F73A DA180MD4					288
28	6250	0.80			51.81
33	5410	0.90			44.88
36	4900	1.00			40.61
40	4450	1.05			36.86
45	3960	1.10			32.87
53	3360	1.20			27.88
62	2870	1.35			23.79

F72A DA180MD4					285
57	3120	1.40			25.85
62	2840	1.50			23.54
71	2490	1.60			20.62
78	2260	1.75			18.76
87	2040	1.85			16.90
97	1830	2.0			15.17
113	1570	2.2			13.01
130	1360	2.5			11.25
161	1100	2.0			9.11
177	1000	2.2			8.29
196	900	2.3			7.46
219	810	2.4			6.70

F63A DA180MD4					241
53	3320	0.80			27.56
61	2920	0.80			24.21

F62A DA180MD4					238
68	2580	1.10			21.42
75	2340	1.20			19.43
87	2030	1.30			16.83
96	1840	1.40			15.23
106	1670	1.50			13.82
119	1490	1.65			12.33
140	1260	1.85			10.45
164	1080	2.1			8.92
190	930	1.55			7.70
210	840	1.65			6.97
232	765	1.75			6.33
260	680	1.90			5.64
306	575	2.1			4.78
359	490	2.2			4.08

22.0 kW

F83A DA180LB4					368
20	10700	0.85			74.77
23	9200	0.95			64.14
26	7950	1.10			55.44
30	6910	1.30			48.19
35	5940	1.45			41.43
39	5330	1.55			37.20
46	4580	1.70			31.91
53	3960	1.90			27.58
61	3440	2.1			23.97

F82A DA180LB4					362
73	2900	2.2			20.19
80	2620	2.4			18.25

F73A DA180LB4					288
36	5820	0.85			40.61
40	5290	0.90			36.86
45	4710	0.95			32.87
53	4000	1.05			27.88
62	3410	1.10			23.79

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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22.0 kW

F72A DA180LB4					285
57	3710	1.15			25.85
62	3380	1.25			23.54
71	2960	1.35			20.62
78	2690	1.45			18.76
87	2420	1.55			16.90
97	2180	1.70			15.17
113	1870	1.90			13.01
130	1610	2.1			11.25
150	1400	2.3			9.78
161	1310	1.70			9.11
177	1190	1.80			8.29
196	1070	1.95			7.46
219	960	2.1			6.70
255	825	2.3			5.75
295	715	2.4			4.97

F62A DA180LB4					238
68	3070	0.90			21.42
75	2790	1.00			19.43
87	2410	1.10			16.83
96	2180	1.20			15.23
106	1980	1.25			13.82
119	1770	1.35			12.33
140	1500	1.55			10.45
164	1280	1.75			8.92
190	1100	1.30			7.70
210	1000	1.40			6.97
232	905	1.50			6.33
260	810	1.60			5.64
306	685	1.75			4.78
359	585	1.90			4.08

Selection table - Geared motors

Type				~kg
n2 [1/min]	T2 [Nm]	cG	i	

37.0 kW

F83A DA225SD4				580
36	9920	0.85	41.43	
40	8910	0.95	37.20	
46	7640	1.05	31.91	
53	6610	1.15	27.58	
62	5740	1.25	23.97	

F82A DA225SD4				562
73	4840	1.35	20.19	
81	4370	1.45	18.25	
93	3790	1.60	15.83	
106	3320	1.75	13.85	
121	2920	1.90	12.20	
146	2410	1.55	10.08	
162	2180	1.65	9.11	
187	1890	1.80	7.90	
213	1660	1.95	6.92	
242	1460	2.1	6.09	

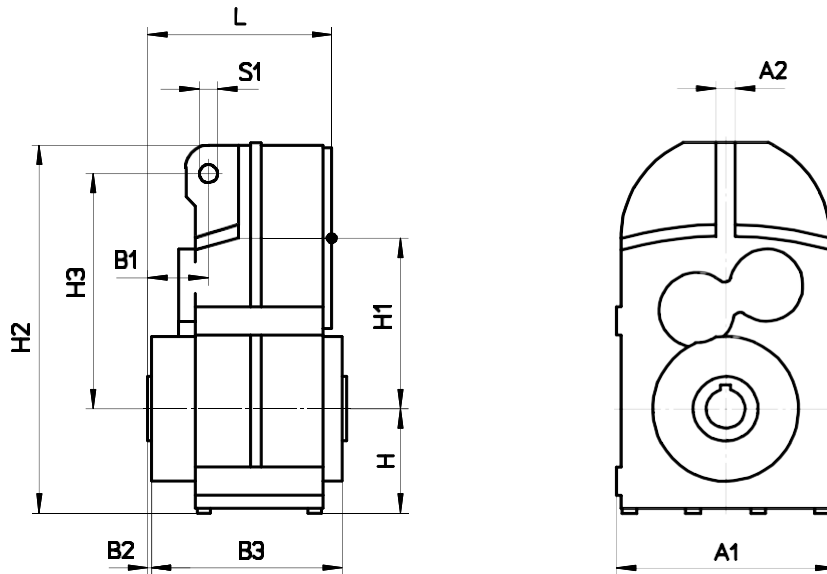
45.0 kW

F83A DA225MD4				686
46	9300	0.85	31.91	
53	8040	0.95	27.58	
62	6980	1.05	23.97	

F82A DA225MD4				668
73	5880	1.10	20.19	
81	5320	1.20	18.25	
93	4610	1.30	15.83	
106	4040	1.45	13.85	
121	3560	1.55	12.20	
146	2940	1.30	10.08	
162	2650	1.35	9.11	
187	2300	1.50	7.90	
213	2020	1.60	6.92	
242	1780	1.75	6.09	

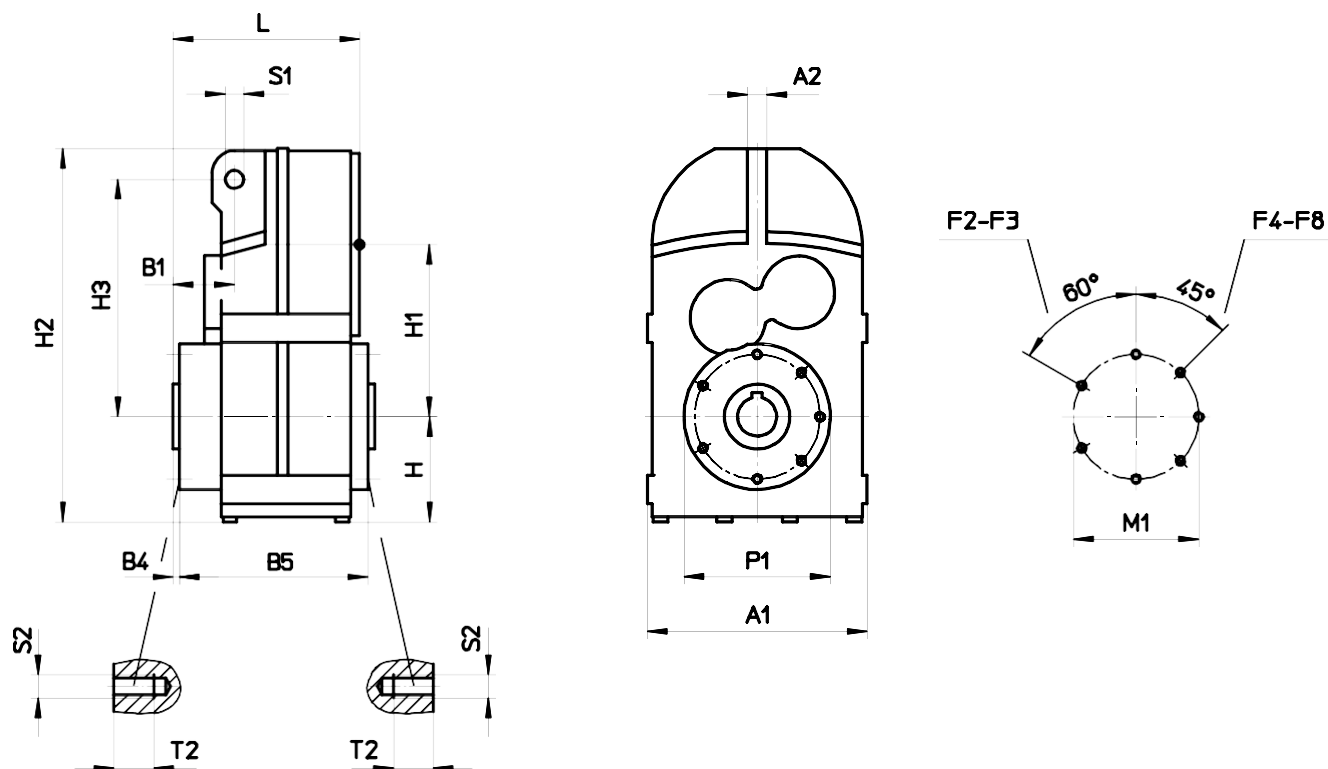
Dimensions

A - Shaft mounted version



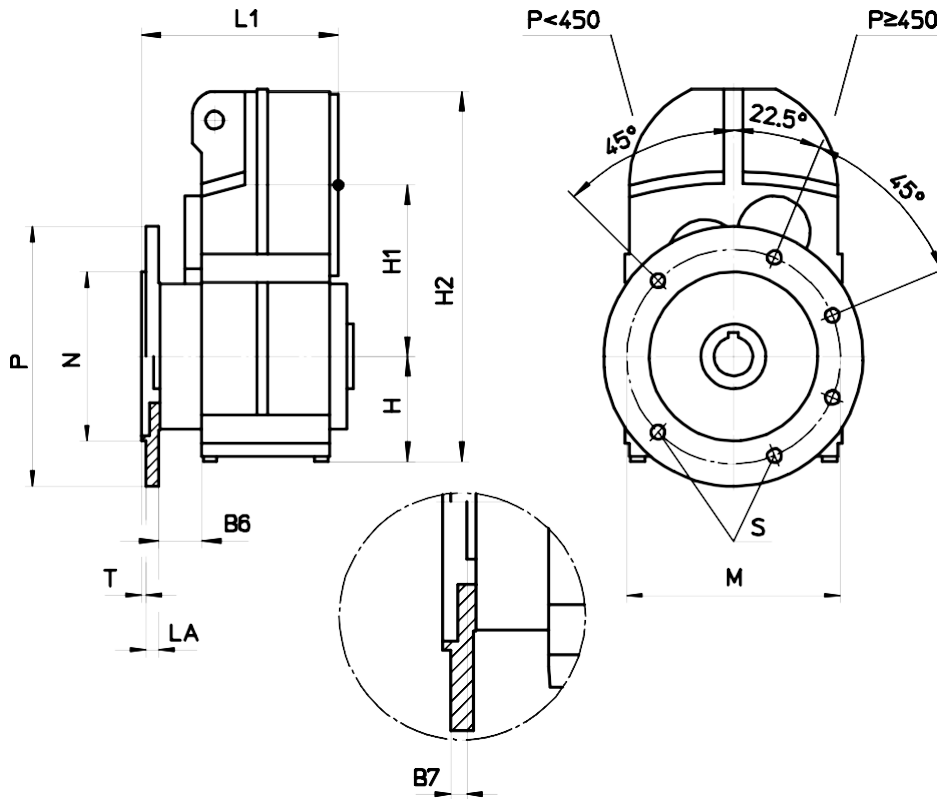
	A1	A2	B1	B2	B3	H	H1	H2	H3	L	S1
F2	150	12	40	1	119	70.5	110	243	156	109	Ø14
F3	168	15	45	1	148	81	132	286.5	182	140.5	Ø14
F4	210	20	47.5	1.5	172	98.5	159	341	217	158.5	Ø14
F5	263	25	53	1.5	207	120.5	196	421	270	184	Ø22
F6	313	30	62	2.5	235	144.5	234	508	328	215	Ø22
F7	367	35	76	3.5	293	171.5	273	599.5	382	250.5	Ø26
F8	417	40	93	3.5	343	191.5	324	696.5	458	301	Ø26

B - Shaft mounted version



	A1	A2	B1	B4	B5	H	H1	H2	H3	L	S1	M1	P1	S2	T2
F2	150	12	40	2	116	70.5	110	243	156	109	Ø14	87	99	M6	9
F3	168	15	45	3	144	81	132	286.5	182	140.5	Ø14	96	112	M8	12
F4	210	20	47.5	3.5	168	98.5	159	341	217	158.5	Ø14	106	122	M8	12
F5	263	25	53	4	202	120.5	196	421	270	184	Ø22	130	150	M10	15
F6	313	30	62	5	230	144.5	234	508	328	215	Ø22	154	178	M12	18
F7	367	35	76	6	288	171.5	273	599.5	382	250.5	Ø26	182	214	M16	24
F8	417	40	93	6	338	191.5	324	696.5	458	301	Ø26	220	260	M20	30

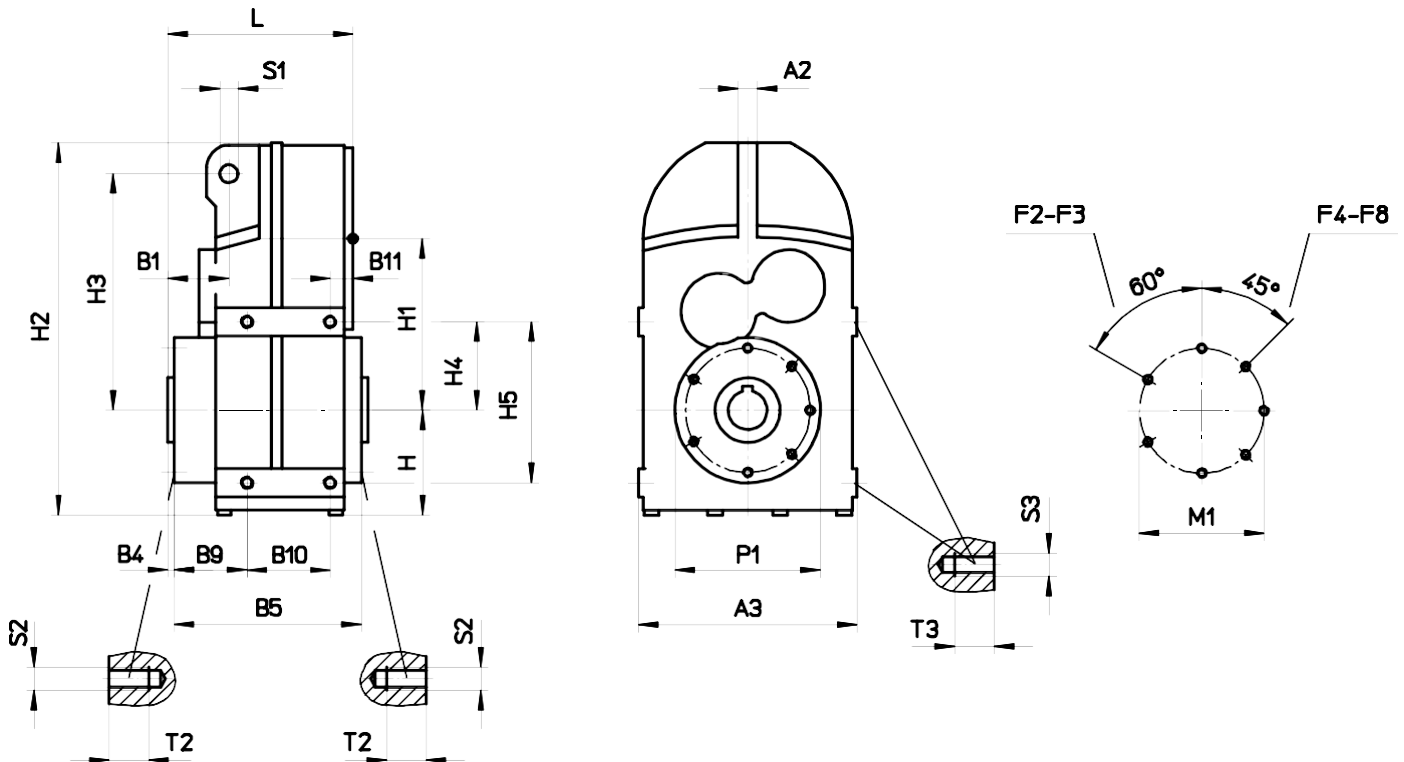
C - Flange mounted version



	B6	B7	H	H1	H2	L1
F2	26	10	70.5	110	243	122.5
F3	33	8	81	132	286.5	152
F4	34	7.5	98.5	159	341	169.5
F5	42	8	120.5	196	421	196
F6	46	8	144.5	234	508	227
F7	55.5	10	171.5	273	599.5	265.5
F8	60	15	191.5	324	696.5	321

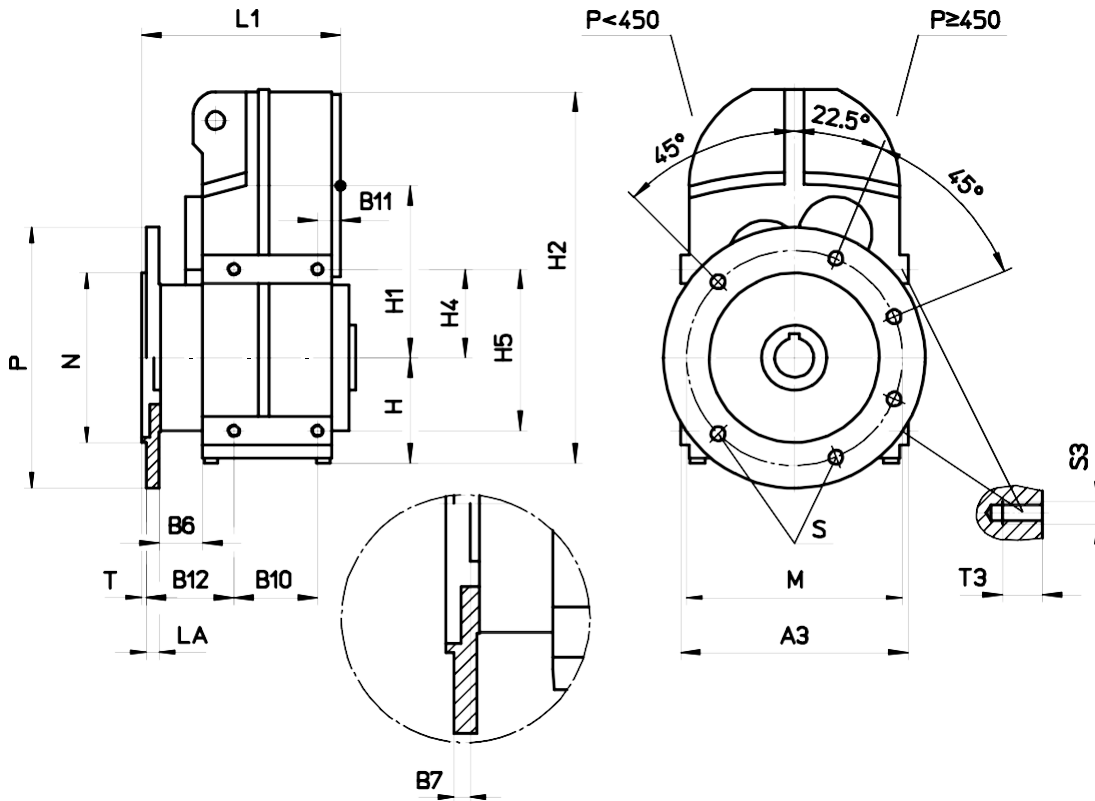
	M	N	P	LA	T	S
F	Ø13	Ø110 j6	Ø160	9	3.5	Ø9
	Ø130	Ø110 j6	Ø160	9	3.5	Ø9
F3	Ø16	Ø130 j6	Ø200	10	3.5	Ø11
	Ø165	Ø130 j6	Ø200	10	3.5	Ø11
F4	Ø21	Ø180 j6	Ø250	11	4	Ø13.5
	Ø215	Ø180 j6	Ø250	11	4	Ø13.5
F5	Ø26	Ø230 j6	Ø300	12	4	Ø13.5
	Ø265	Ø230 j6	Ø300	12	4	Ø13.5
F6	Ø30	Ø250 h6	Ø350	13	5	Ø17.5
	Ø300	Ø250 h6	Ø350	13	5	Ø17.5
F7	Ø40	Ø350 h6	Ø450	16	5	Ø17.5
F	Ø40	Ø350 h6	Ø450	16	5	Ø17.5

D - Shaft mounted version + side areas



	A2	A3	B1	B4	B5	B9	B10	B11	H	H1	H2	H3	H4	H5	L	S1	M1	P1	S2	T2	S3	T3
F2	12	146	40	2	116	31	64	12	70.5	110	243	156	55	100	109	Ø14	87	99	M6	9	M8	12
F3	15	164	45	3	144	56	64	17.5	81	132	286.5	182	68	124	140.5	Ø14	96	112	M8	12	M10	15
F4	20	206	47.5	3.5	168	57	80	18	98.5	159	341	217	87	158	158.5	Ø14	106	122	M8	12	M12	18
F5	25	258	53	4	202	60	104	16	120.5	196	421	270	112	202	184	Ø22	130	150	M10	15	M12	18
F6	30	308	62	5	230	70	120	20	144.5	234	508	328	134	244	215	Ø22	154	178	M12	18	M16	24
F7	35	362	76	6	288	75.5	145	24	171.5	273	599.5	382	245	370	250.5	Ø26	182	214	M16	24	M20	30
F8	40	412	93	6	338	81	185	29	191.5	324	696.5	458	298	440	301	Ø26	220	260	M20	30	M24	36

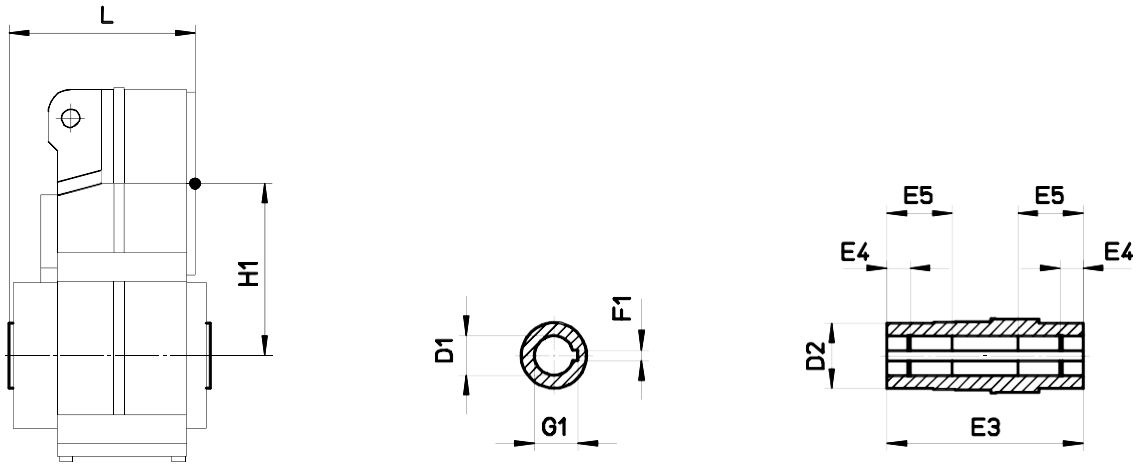
E - Flange mounted version + side areas



	A3	B6	B7	B10	B11	B12	H	H1	H2	H4	H5	L1	S3	T3
F2	146	26	10	64	12	43	70.5	110	243	55	100	122.5	M8	12
F3	164	33	8	64	17.5	67	81	132	286.5	68	124	152	M10	15
F4	206	34	7.5	80	18	68	98.5	159	341	87	158	169.5	M12	18
F5	258	42	8	104	16	72	120.5	196	421	112	202	196	M12	18
F6	308	46	8	120	20	83	144.5	234	508	134	244	227	M16	24
F7	362	55.5	10	145	24	91.5	171.5	273	599.5	245	370	265.5	M20	30
F8	412	60	15	185	29	102	191.5	324	696.5	298	440	321	M24	36

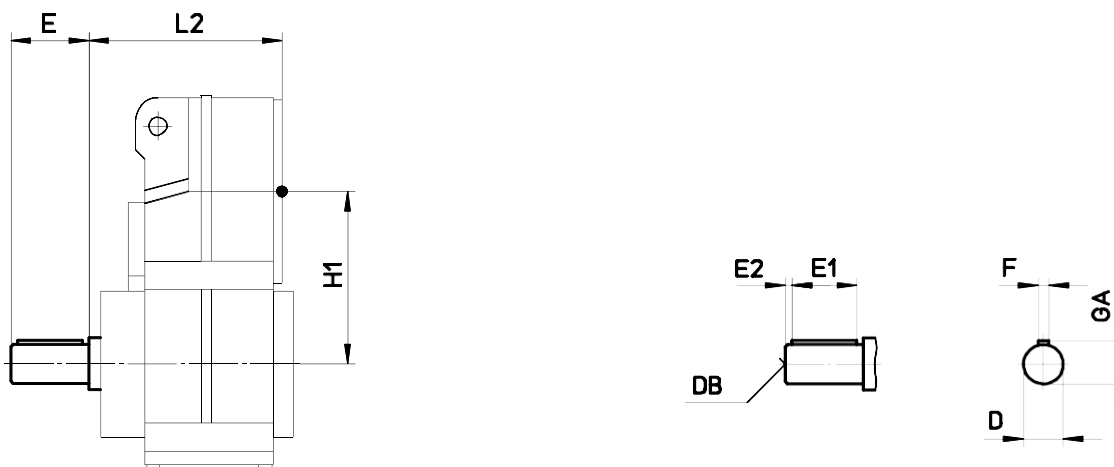
	M	N	P	LA	T	S
F	Ø13	Ø110 j6	Ø160	9	3.5	Ø9
F3	Ø130	Ø110 j6	Ø160	9	3.5	Ø9
	Ø16	Ø130 j6	Ø200	10	3.5	Ø11
	Ø165	Ø130 j6	Ø200	10	3.5	Ø11
F4	Ø21	Ø180 j6	Ø250	11	4	Ø13.5
	Ø215	Ø180 j6	Ø250	11	4	Ø13.5
F5	Ø26	Ø230 j6	Ø300	12	4	Ø13.5
	Ø265	Ø230 j6	Ø300	12	4	Ø13.5
F6	Ø30	Ø250 h6	Ø350	13	5	Ø17.5
	Ø300	Ø250 h6	Ø350	13	5	Ø17.5
F7	Ø40	Ø350 h6	Ø450	16	5	Ø17.5
F	Ø40	Ø350 h6	Ø450	16	5	Ø17.5

Hollow shaft with keyway



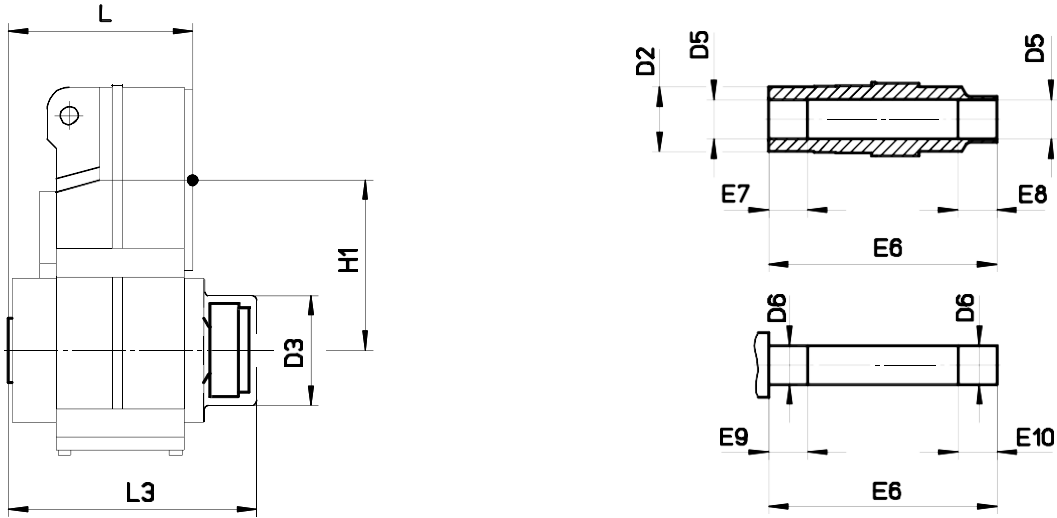
	D1	D2	E3	E4	E5	F1	G1	H1	L
F2	Ø25H7	45	120	15	-	8	28.3	110	109
F3	Ø30H7 Ø35H7	50	150	18	-	8 10	33.3 38.3	132	140.5
F4	Ø40H7	55	175	20	-	12	43.3	159	158.5
F5	Ø50H7	70	210	25	70	14	53.8	196	184
F6	Ø60H7	85	240	30	80	18	64.4	234	215
F7	Ø70H7	100	300	30	100	20	74.9	273	250.5
F8	Ø90H7	120	350	35	120	25	95.4	324	301

V - Output shaft with key



	D	DB	E	E1	E2	F	GA	H1	L2
F2	Ø25k6	M10	50	40	5	8	28	110	119
F3	Ø30k6 Ø35k6	M10 M12	60 70	50 60	5	8 10	33 38	132	148.5
F4	Ø40k6	M16	80	70	5	12	43	159	166
F5	Ø50k6	M16	100	80	10	14	53.5	196	192
F6	Ø60m6	M20	120	100	10	18	64	234	223
F7	Ø75m6	M20	140	125	7.5	20	79.5	273	260.5
F8	Ø90m6	M24	170	140	15	25	95	324	316

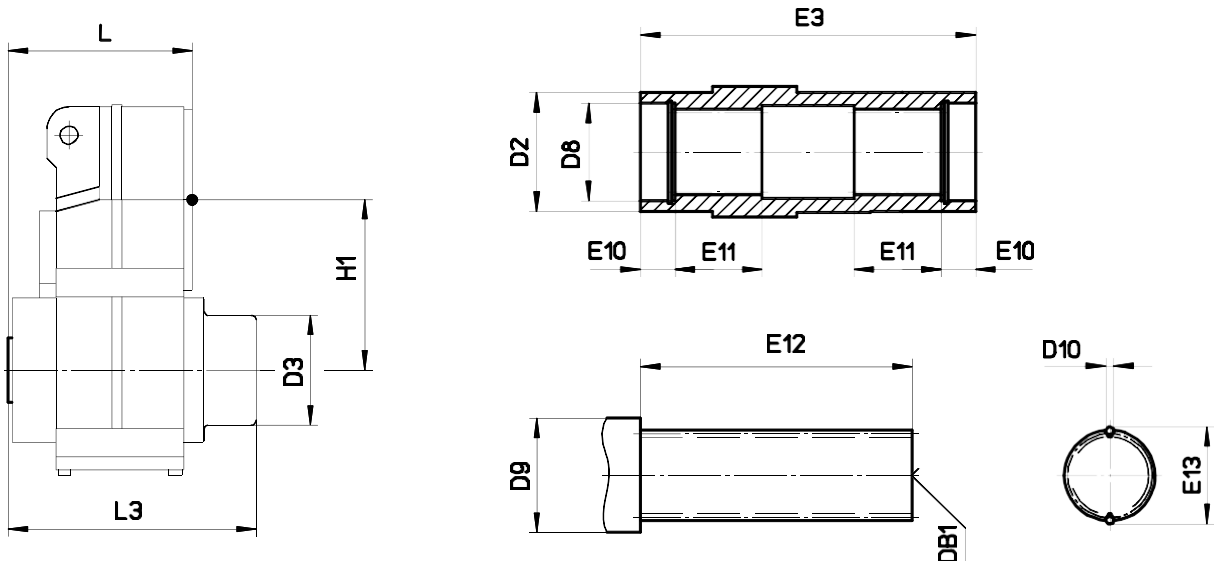
S - Hollow shaft with shrink disc



	*)	D2	D3	D5	D6	E6	E7	E8	E9	E10	H1	L	L3
F2	DM80 (DM100)	45	77	Ø25H7	Ø25h6	143	25	25	27	27	110	109	158
F3	DM100 (DM112)	50	86	Ø30H7 Ø35H7	Ø30h6 Ø35h6	176	20	30	22	32	132	140.5	188
F4	DM112 (DM132)	55	96	Ø40H7	Ø40h6	202	20	40	22	42	159	158.5	214.5
F5	DM132	70	117	Ø50H7	Ø50h6	242	30	50	32	52	196	184	255
F6	DA180	85	148	Ø60H7	Ø60h6	274	40	60	42	62	234	215	292
F7	DA200	100	180	Ø70H7	Ø70h6	343	50	70	52	72	273	250.5	359
F8	DA225	120	225	Ø95H7	Ø95h6	402	60	80	62	82	324	301	422

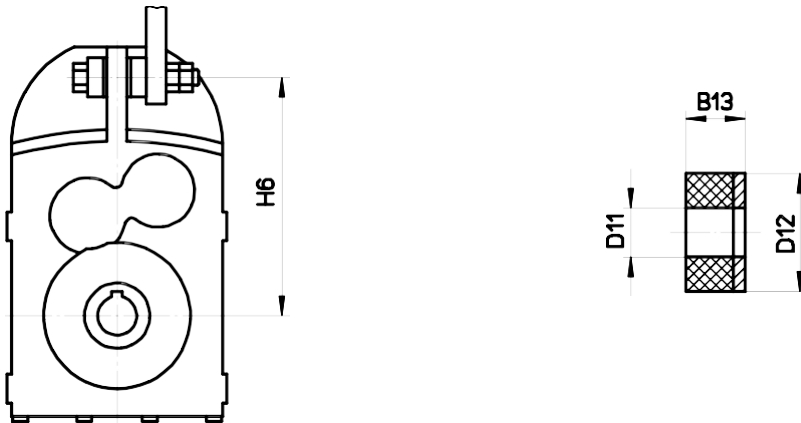
*) largest possible motor size (without protection cover)

Z - Splined hollow shaft



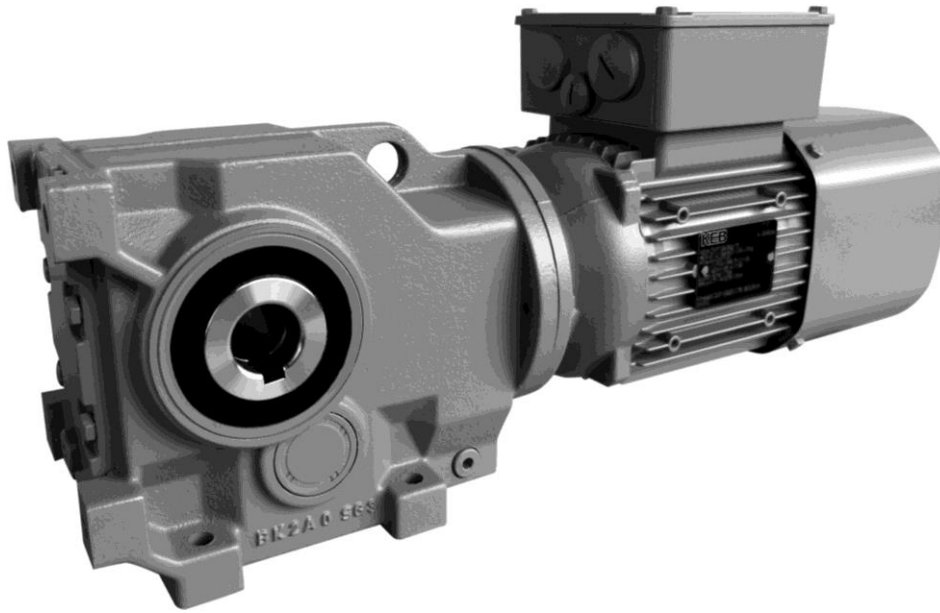
	DIN5480	D2	D3	D8	D9	D10	DB1	E3	E10	E11	E12	E13	H1	L	L3
F2	30x1.25x30x22	45	77	35	40	2.75	M10	120	18	25	88	33.05 _{-0.04}	110	109	157
F3	35x2x30x16	50	86	40	46	4	M12	150	18	32	118	38.94 _{-0.04}	132	140.5	188
F4	40x2x30x18	55	96	42	50	4.5	M16	175	23	42	140	45.08 _{-0.04}	159	158.5	214.5
F5	50x2x30x24	70	117	52	62	4	M16	210	23	52	174	54.16 _{-0.05}	196	184	255
F6	65x2x30x31	85	148	70	82	4	M20	240	25	62	195	68.99 _{-0.06}	234	215	292
F7	70x2x30x34	100	180	72	85	4	M20	300	25	72	255	74.18 _{-0.06}	273	250.5	359
F8	85x3x30x27	120	225	90	105	6	M20	350	27	88	298	91.02 _{-0.06}	324	301	422

G - Rubber elements

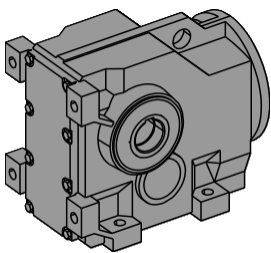


Gear unit	B13	D11	D12	H6
F2	15	12.5	30	156
F3	15	12.5	30	182
F4	20	12.5	40	217
F5	30	21	50	270
F6	30	21	60	328
F7	40	25	80	382
F8	40	25	80	458

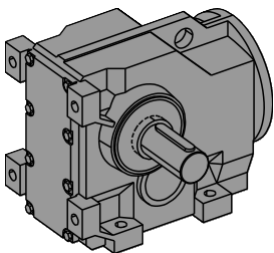
Helical bevel gear units K



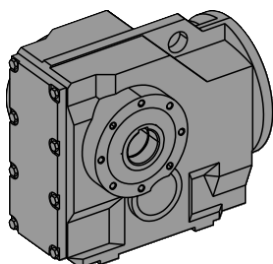
Type of construction



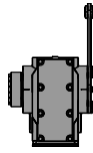
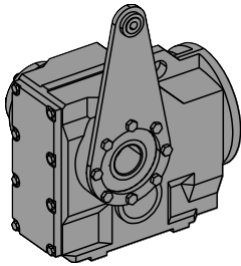
Foot mounted version
Hollow shaft with keyway
Example: K43A



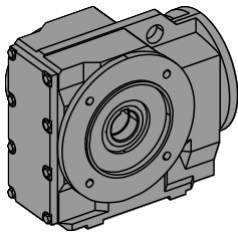
Foot mounted version
Output shaft with key
Example: K33AV



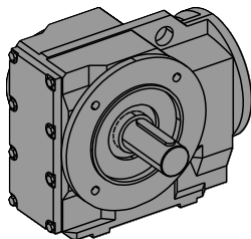
Shaft mounted version
Hollow shaft with keyway
Example: K53B



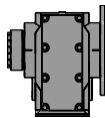
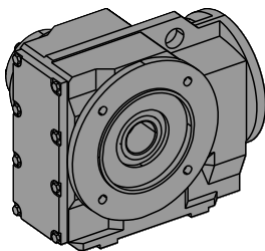
Shaft mounted version
Hollow shaft with shrink disc
Torque arm T1
Example: **K53BT1S**



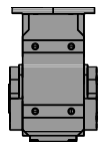
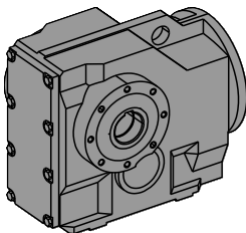
Flange mounted version
Hollow shaft with keyway
Example: **K43C**



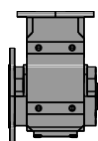
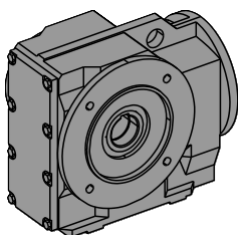
Flange mounted version
Output shaft with key
Example: **K33CV**



Flange mounted version
Hollow shaft with shrink disc
Example: **K43CS**



Shaft mounted version + foot area
Hollow shaft with keyway
Example: **K53D**



Flange mounted version + foot area
Hollow shaft with keyway
Example: **K33E**

Selection table - Gear units

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
K02			
44.20	32	58	0.19
37.47	37	58	0.23
32.16	44	58	0.26
27.86	50	56	0.29
24.30	58	53	0.32
21.32	66	51	0.35
18.78	75	49	0.38
16.58	84	50	0.44
14.05	100	48	0.50
12.06	116	45	0.55
10.45	134	43	0.60
9.11	154	41	0.66
8.00	175	40	0.73
7.04	199	38	0.79
6.10	229	41	0.99
5.29	265	39	1.08
4.61	304	38	1.21
4.05	346	36	1.30
3.56	393	35	1.30

i	n2 [1/min]	T2max [Nm]	P1max [kW]
K12G03			
3959.5	0.35	110	<0.05
3345.0	0.42	110	<0.05
2859.9	0.49	110	<0.05
2467.1	0.57	110	<0.05
2142.7	0.65	110	<0.05
1870.2	0.75	110	<0.05
1614.3	0.87	110	<0.05
1392.6	1.0	110	<0.05
1209.5	1.2	110	<0.05
1055.7	1.3	110	<0.05

i	n2 [1/min]	T2max [Nm]	P1max [kW]
K12G02			
926.68	1.5	110	<0.05
782.87	1.8	110	<0.05
669.33	2.1	110	<0.05
577.42	2.4	110	<0.05
501.49	2.8	110	<0.05
437.71	3.2	110	<0.05
383.38	3.7	110	<0.05
329.52	4.2	110	<0.05
284.27	4.9	110	0.06
246.89	5.7	110	0.07
215.49	6.5	110	0.07
188.74	7.4	110	0.09
161.25	8.7	110	0.10
139.55	10	110	0.12
121.98	11	110	0.13
107.46	13	110	0.15
95.27	15	110	0.17
84.88	16	110	0.19
76.20	18	110	0.21
66.51	21	100	0.22
58.25	24	88	0.22

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
K12			
54.60	26	110	0.30
46.65	30	110	0.35
40.37	35	110	0.40
35.29	40	110	0.46
31.09	45	110	0.52
27.56	51	107	0.57
24.56	57	103	0.61
22.04	64	100	0.67
19.24	73	97	0.74
16.85	83	93	0.81
15.08	93	109	1.06
13.29	105	105	1.16
11.78	119	102	1.27
10.49	133	98	1.37
9.42	149	95	1.48
8.22	170	92	1.64
7.20	194	88	1.79
6.24	224	112	2.60
5.54	253	109	2.60
4.93	284	106	2.60
4.43	316	103	2.60
3.86	362	100	2.60
3.38	414	97	2.60

i	n2 [1/min]	T2max [Nm]	P1max [kW]
K23G03			
5483.4	0.26	205	<0.05
4632.4	0.30	205	<0.05
3960.6	0.35	205	<0.05
3416.7	0.41	205	<0.05
2967.4	0.47	205	<0.05
2590.0	0.54	205	<0.05
2235.6	0.63	205	<0.05
1928.6	0.73	205	<0.05
1675.0	0.84	205	<0.05
1462.0	0.96	205	<0.05

i	n2 [1/min]	T2max [Nm]	P1max [kW]
K23G02			
1283.3	1.1	205	<0.05
1084.2	1.3	205	<0.05
926.94	1.5	205	<0.05
799.65	1.8	205	<0.05
694.50	2.0	205	<0.05
606.18	2.3	205	<0.05
530.94	2.6	205	0.06
456.34	3.1	205	0.07
393.68	3.6	205	0.08
341.91	4.1	205	0.09
298.43	4.7	205	0.10
261.38	5.4	205	0.11
228.47	6.1	205	0.13
201.29	7.0	205	0.15
178.45	7.8	205	0.17
159.00	8.8	205	0.19
142.73	9.8	205	0.21
124.58	11	205	0.24
109.11	13	205	0.27

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
K23			
102.27	14	205	0.29
87.38	16	205	0.34
75.61	19	205	0.40
66.09	21	205	0.45
58.23	24	205	0.51
51.62	27	205	0.58
46.00	30	205	0.65
41.29	34	205	0.72
36.04	39	205	0.83
31.57	44	205	0.95
26.14	54	205	1.14
22.85	61	205	1.31
20.13	70	205	1.49
17.84	78	205	1.68
15.90	88	205	1.88
14.27	98	205	2.10
12.46	112	205	2.40
10.91	128	205	2.74
9.34	150	161	2.53
8.28	169	161	2.85
7.38	190	161	3.20
6.63	211	161	3.56
5.78	242	161	4.08
5.07	276	161	4.66

i	n2 [1/min]	T2max [Nm]	P1max [kW]
K33G13			
8059.3	0.17	400	<0.05
6832.3	0.20	400	<0.05
5863.6	0.24	400	<0.05
5079.4	0.28	400	<0.05
4431.6	0.32	400	<0.05
3887.4	0.36	400	<0.05
3423.9	0.41	400	<0.05
3010.7	0.47	400	<0.05
2583.9	0.54	400	<0.05
2238.3	0.63	400	<0.05
1952.8	0.72	400	<0.05

i	n2 [1/min]	T2max [Nm]	P1max [kW]
K33G12			
1738.3	0.81	400	<0.05
1485.1	0.94	400	<0.05
1285.2	1.1	400	<0.05
1123.4	1.2	400	0.05
989.70	1.4	400	0.06
877.42	1.6	400	0.07
781.77	1.8	400	0.07
701.79	2.0	400	0.08
612.54	2.3	400	0.10
536.51	2.6	400	0.11
493.12	2.8	400	0.12
434.44	3.2	400	0.13
385.15	3.6	400	0.15
343.16	4.1	400	0.17
308.06	4.5	400	0.19
268.88	5.2	400	0.22
235.51	5.9	400	0.25
210.10	6.7	400	0.28
188.46	7.4	400	0.31
171.28	8.2	400	0.34
151.01	9.3	400	0.39
133.74	10	400	0.44
119.69	12	400	0.49
104.17	13	400	0.56

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
K33			
120.13	12	400	0.49
103.13	14	400	0.57
89.71	16	400	0.65
78.85	18	400	0.74
69.88	20	400	0.84
62.34	22	400	0.94
55.92	25	400	1.05
50.82	28	400	1.15
44.80	31	400	1.31
39.68	35	400	1.47
35.51	39	400	1.65
30.91	45	400	1.89
27.26	51	400	2.15
24.15	58	400	2.42
21.55	65	400	2.71
19.33	72	400	3.03
17.57	80	400	3.33
15.49	90	400	3.78
13.72	102	400	4.26
12.27	114	390	4.66
10.68	131	375	5.1
9.30	151	240	3.80
8.45	166	300	5.2
7.45	188	285	5.6
6.60	212	275	6.1
5.91	237	300	7.0
5.14	272	290	7.0

i	n2 [1/min]	T2max [Nm]	P1max [kW]
K43G13			
10485	0.13	745	<0.05
8888.4	0.16	745	<0.05
7628.2	0.18	745	<0.05
6608.0	0.21	745	<0.05
5765.3	0.24	745	<0.05
5057.3	0.28	745	<0.05
4454.3	0.31	745	<0.05
3916.8	0.36	745	<0.05
3361.5	0.42	745	<0.05
2911.9	0.48	745	<0.05
2540.6	0.55	745	<0.05

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K43G12

2261.4	0.62	745	<0.05
1932.0	0.72	745	0.06
1672.0	0.84	745	0.07
1461.5	0.96	745	0.07
1287.6	1.1	745	0.08
1141.5	1.2	745	0.10
1017.0	1.4	745	0.11
912.99	1.5	745	0.12
796.88	1.8	745	0.14
697.97	2.0	745	0.16
641.52	2.2	745	0.17
565.19	2.5	745	0.19
501.06	2.8	745	0.22
446.44	3.1	745	0.24
400.77	3.5	745	0.27
349.80	4.0	745	0.31
306.38	4.6	745	0.36
275.54	5.1	745	0.40
249.26	5.6	745	0.44
227.20	6.2	745	0.48
202.69	6.9	745	0.54
181.81	7.7	745	0.60
164.95	8.5	745	0.66
146.17	9.6	745	0.75
128.66	11	745	0.85

K43

151.92	9.2	745	0.72
131.28	11	745	0.83
114.99	12	745	0.95
101.80	14	745	1.07
90.90	15	745	1.20
81.75	17	745	1.33
73.96	19	745	1.47
67.41	21	745	1.62
60.14	23	745	1.81
53.94	26	745	2.02
48.94	29	745	2.23
43.37	32	745	2.51
38.17	37	745	2.85
33.43	42	745	3.26
29.37	48	745	3.71
25.56	55	745	4.26
23.30	60	745	4.67
20.79	67	745	5.2
18.65	75	745	5.8
16.92	83	745	6.4
14.99	93	745	7.3
13.20	106	745	7.5
11.56	121	745	7.5
10.15	138	745	7.5
8.60	163	565	7.5
7.62	184	550	7.5
6.71	209	580	7.5
5.87	238	550	7.5
5.16	271	520	7.5

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K53G23

11426	0.12	1430	<0.05
9761.9	0.14	1430	<0.05
8447.9	0.17	1430	<0.05
7384.3	0.19	1430	<0.05
6505.6	0.22	1430	<0.05
5767.5	0.24	1430	<0.05
5175.3	0.27	1430	<0.05
4523.7	0.31	1430	<0.05
3985.4	0.35	1430	0.05
3533.2	0.40	1430	0.06
3093.4	0.45	1430	0.07
2725.3	0.51	1430	0.08
2416.1	0.58	1430	0.09

K53G22

2176.4	0.64	1430	0.10
1868.5	0.75	1430	0.11
1625.3	0.86	1430	0.13
1428.5	0.98	1430	0.15
1266.0	1.1	1430	0.17
1129.4	1.2	1430	0.19
1013.0	1.4	1430	0.21
920.69	1.5	1430	0.23
811.74	1.7	1430	0.26
718.94	1.9	1430	0.29
648.83	2.2	1430	0.32
597.22	2.3	1430	0.35
524.36	2.7	1430	0.40
470.34	3.0	1430	0.45
427.46	3.3	1430	0.49
376.88	3.7	1430	0.56
333.79	4.2	1430	0.63
301.24	4.6	1430	0.69
277.28	5.0	1430	0.75
247.82	5.6	1430	0.84
220.06	6.4	1430	0.95
195.01	7.2	1430	1.07
173.54	8.1	1430	1.21
148.66	9.4	1430	1.41
135.16	10	1430	1.55

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K53

138.94	10	1430	1.51
123.46	11	1430	1.70
110.68	13	1430	1.89
99.94	14	1430	2.09
90.79	15	1430	2.31
83.01	17	1430	2.52
74.48	19	1430	2.81
67.22	21	1430	3.11
61.87	23	1430	3.38
55.30	25	1430	3.79
49.10	29	1430	4.26
43.51	32	1430	4.81
38.72	36	1430	5.4
33.17	42	1430	6.3
29.56	47	1430	7.1
26.68	52	1430	7.8
24.56	57	1430	8.5
21.95	64	1430	9.5
19.49	72	1420	10.7
17.27	81	1370	11.6
15.37	91	1320	12.6
13.17	106	1260	14.0
11.61	121	1220	15.0
10.75	130	985	13.4
9.55	147	985	15.0
8.46	165	985	15.0
7.53	186	985	15.0
6.45	217	960	15.0
5.69	246	925	15.0

K63G23

13818	0.10	2550	<0.05
11805	0.12	2550	<0.05
10216	0.14	2550	<0.05
8930.1	0.16	2550	<0.05
7867.5	0.18	2550	<0.05
6974.9	0.20	2550	0.05
6258.7	0.22	2550	0.06
5470.7	0.26	2550	0.07
4819.7	0.29	2550	0.08
4272.9	0.33	2550	0.09
3741.0	0.37	2550	0.10
3295.8	0.42	2550	0.11
2921.9	0.48	2550	0.13

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K63G22

2632.0	0.53	2550	0.14
2259.6	0.62	2550	0.17
1965.6	0.71	2550	0.19
1727.6	0.81	2550	0.22
1531.0	0.91	2550	0.24
1365.8	1.0	2550	0.27
1225.1	1.1	2550	0.31
1113.4	1.3	2550	0.34
981.68	1.4	2550	0.38
869.44	1.6	2550	0.43
803.80	1.7	2550	0.47
724.09	1.9	2550	0.52
634.13	2.2	2550	0.59
568.80	2.5	2550	0.66
516.95	2.7	2550	0.72
455.78	3.1	2550	0.82
403.67	3.5	2550	0.93
373.19	3.8	2550	1.00
336.18	4.2	2550	1.11
301.25	4.6	2550	1.24
269.78	5.2	2550	1.39
242.80	5.8	2550	1.54
211.83	6.6	2550	1.77
189.77	7.4	2550	1.97

K63

160.53	8.7	2550	2.33
144.48	9.7	2550	2.59
130.99	11	2550	2.86
119.50	12	2550	3.13
109.93	13	2550	3.40
99.21	14	2550	3.77
90.07	16	2550	4.15
83.27	17	2550	4.49
75.02	19	2550	4.99
67.22	21	2550	5.6
60.20	23	2550	6.2
54.18	26	2550	6.9
47.27	30	2550	7.9
42.35	33	2550	8.8
37.56	37	2550	10.0
33.00	42	2490	11.1
29.77	47	2550	12.6
26.68	52	2550	14.0
23.89	59	2470	15.2
21.50	65	2390	16.3
18.76	75	2300	18.0
16.81	83	2220	19.4
14.91	94	2140	21.0
13.10	107	2060	22.0
11.58	121	1700	21.5
10.43	134	1670	22.0
9.10	154	1700	22.0
8.15	172	1700	22.0
7.23	194	1640	22.0
6.35	220	1570	22.0

Selection table - Gear units

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K73G33

14283	0.098	4330	<0.05
12262	0.11	4330	0.05
10667	0.13	4330	0.06
9375.1	0.15	4330	0.07
8308.2	0.17	4330	0.08
7411.9	0.19	4330	0.09
6648.4	0.21	4330	0.10
6042.3	0.23	4330	0.11
5327.3	0.26	4330	0.12
4718.2	0.30	4330	0.13
4280.5	0.33	4330	0.15
3707.9	0.38	4330	0.17
3293.4	0.43	4330	0.19
2954.1	0.47	4330	0.21
2684.8	0.52	4330	0.24
2367.1	0.59	4330	0.27

K73G32

2068.0	0.68	4330	0.31
1846.7	0.76	4330	0.34
1660.8	0.84	4330	0.38
1502.4	0.93	4330	0.42
1369.5	1.0	4330	0.46
1221.7	1.1	4330	0.52
1095.9	1.3	4330	0.58
994.22	1.4	4330	0.64
861.22	1.6	4330	0.74
779.24	1.8	4330	0.81
707.41	2.0	4330	0.90
630.75	2.2	4330	1.01
587.86	2.4	4330	1.08
527.31	2.7	4330	1.20
478.39	2.9	4330	1.33
414.39	3.4	4330	1.53
374.95	3.7	4330	1.69
340.39	4.1	4330	1.86
303.50	4.6	4330	2.09
256.81	5.5	4330	2.47
232.36	6.0	4330	2.73
210.95	6.6	4330	3.01
188.09	7.4	4330	3.37

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K73

183.21	7.6	4330	3.46
166.63	8.4	4330	3.81
152.50	9.2	4330	4.16
141.34	9.9	4330	4.49
128.10	11	4330	4.95
116.83	12	4330	5.4
108.36	13	4330	5.9
98.17	14	4330	6.5
89.29	16	4330	7.1
80.57	17	4330	7.9
73.10	19	4330	8.7
63.32	22	4330	10.0
57.29	24	4330	11.1
52.01	27	4330	12.2
46.38	30	4330	13.7
43.99	32	4330	14.4
40.01	35	4330	15.9
36.10	39	4330	17.6
32.75	43	4330	19.4
28.37	49	4330	22.4
25.67	55	4330	24.7
23.31	60	4330	27.2
20.78	67	4330	30.0
17.62	79	4330	30.0
15.04	93	4160	30.0
13.76	102	3100	30.0
12.45	112	3090	30.0
11.30	124	3100	30.0
10.08	139	3100	30.0
8.54	164	3100	30.0
7.29	192	3100	30.0

K83G33

16285	0.086	7960	0.07
13981	0.10	7960	0.08
12162	0.12	7960	0.10
10689	0.13	7960	0.11
9472.7	0.15	7960	0.12
8450.8	0.17	7960	0.14
7580.3	0.18	7960	0.15
6889.3	0.20	7960	0.17
6074.0	0.23	7960	0.19
5379.6	0.26	7960	0.22
4900.2	0.29	7960	0.24
4292.3	0.33	7960	0.27
3755.0	0.37	7960	0.31
3368.2	0.42	7960	0.35
3061.2	0.46	7960	0.38
2698.9	0.52	7960	0.43

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K83G32

2357.9	0.59	7960	0.49
2105.6	0.66	7960	0.55
1893.6	0.74	7960	0.62
1713.0	0.82	7960	0.68
1561.4	0.90	7960	0.75
1393.0	1.0	7960	0.84
1249.5	1.1	7960	0.93
1138.2	1.2	7960	1.02
996.96	1.4	7960	1.17
906.86	1.5	7960	1.29
816.82	1.7	7960	1.43
774.35	1.8	7960	1.51
705.34	2.0	7960	1.65
617.84	2.3	7960	1.89
545.46	2.6	7960	2.14
483.36	2.9	7960	2.41
425.46	3.3	7960	2.74
372.59	3.8	7960	3.13
327.28	4.3	7960	3.56
298.11	4.7	7960	3.91
261.13	5.4	7960	4.47
237.53	5.9	7960	4.91
213.95	6.5	7960	5.5
192.10	7.3	7960	6.1
187.60	7.5	7680	6.0
164.78	8.5	7060	6.3

K83

144.68	9.7	7960	8.1
132.28	11	7960	8.8
122.27	11	7960	9.5
111.12	13	7960	10.5
101.42	14	7960	11.5
91.87	15	7960	12.7
83.68	17	7960	13.9
73.30	19	7960	15.9
66.68	21	7960	17.5
60.06	23	7960	19.4
53.92	26	7960	21.6
46.25	30	7960	25.2
39.98	35	7960	29.2
34.75	40	7960	33.6
32.84	43	7960	35.5
29.88	47	7960	39.0
26.91	52	7960	43.3
24.16	58	7960	45.0
20.73	68	7740	45.0
17.91	78	7400	45.0
15.57	90	7100	45.0
14.01	100	4850	45.0
12.58	111	4850	45.0
10.79	130	4850	45.0
9.32	150	4850	45.0
8.11	173	4850	45.0

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K93G43

19466	0.072	12300	0.09
16822	0.083	12300	0.11
14735	0.095	12300	0.12
13045	0.11	12300	0.14
11648	0.12	12300	0.15
10476	0.13	12300	0.17
9476.8	0.15	12300	0.19
8638.2	0.16	12300	0.21
7706.3	0.18	12300	0.23
6912.5	0.20	12300	0.26
6318.8	0.22	12300	0.28
5768.8	0.24	12300	0.31
5277.6	0.27	12300	0.34
4774.3	0.29	12300	0.38
4351.8	0.32	12300	0.41
3882.4	0.36	12300	0.46
3482.4	0.40	12300	0.52
3183.3	0.44	12300	0.56
2906.2	0.48	12300	0.62
2627.7	0.53	12300	0.68

K93G42

2486.8	0.56	12300	0.72
2245.4	0.62	12300	0.80
2039.9	0.69	12300	0.88
1865.1	0.75	12300	0.96
1673.5	0.84	12300	1.07
1510.3	0.93	12300	1.19
1380.6	1.0	12300	1.30
1260.4	1.1	12300	1.42
1139.6	1.2	12300	1.58
988.56	1.4	12300	1.82
864.99	1.6	12300	2.08
762.02	1.8	12300	2.36
651.55	2.1	12300	2.76
631.60	2.2	12300	2.84
560.85	2.5	12300	3.20
497.00	2.8	12300	3.61
454.31	3.1	12300	3.95
414.77	3.4	12300	4.33
375.01	3.7	12300	4.79
325.31	4.3	12300	5.5
284.64	4.9	12300	6.3
252.16	5.6	12300	7.1
218.74	6.4	12300	8.2
191.40	7.3	12300	9.4
168.61	8.3	12300	10.7
144.17	9.7	12300	11.0

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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K93

137.36	10	12300	13.1
126.06	11	12300	14.2
114.62	12	12300	15.7
104.80	13	12300	17.1
92.68	15	12300	19.4
84.72	17	12300	21.2
77.34	18	12300	23.2
69.93	20	12300	25.7
60.66	23	12300	29.6
53.08	26	12300	33.8
46.76	30	12300	38.4
39.98	35	12300	44.9
34.75	40	12300	51.7
31.33	45	12300	57.3
27.18	52	12300	66.1
23.78	59	12300	75.5
20.95	67	12300	85.7
17.91	78	12300	90.0
15.57	90	12300	90.0
14.34	98	7320	74.8
12.55	112	7320	85.5
11.06	127	7320	90.0
9.45	148	7320	90.0
8.22	170	7320	90.0

Selection table - Geared motors

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
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0.12 kW

K33G12A DM63K4					24
2.8	395	1.00	493.12		
3.2	345	1.15	434.44		
3.6	305	1.30	385.15		
4.0	275	1.45	343.16		
4.5	245	1.60	308.06		
5.1	215	1.85	268.88		

K23G02A DM63K4					17
4.6	240	0.85	298.43		
5.3	210	1.00	261.38		
6.0	182	1.10	228.47		
6.9	160	1.25	201.29		
7.7	142	1.45	178.45		
8.7	127	1.60	159.00		
9.7	114	1.80	142.73		

K12G02A DM63K4					13
8.6	122	0.90	161.25		
9.9	105	1.05	139.55		
11	92	1.20	121.98		
13	81	1.35	107.46		
14	72	1.55	95.27		
16	64	1.70	84.88		
18	58	1.90	76.20		
21	50	2.00	66.51		
24	44	2.00	58.25		

K02A DM63K4					7
31	33	1.75	44.20		
37	28	2.0	37.47		
43	24	2.4	32.16		
50	21	2.7	27.86		
57	18	2.9	24.30		
65	16	3.2	21.32		
73	14	3.5	18.78		
83	13	3.9	16.58		
98	11	4.4	14.05		
114	9.3	4.8	12.06		
132	8.1	5.3	10.45		
151	7.0	5.8	9.11		
173	6.2	6.5	8.00		
196	5.4	7.0	7.04		
226	4.8	8.5	6.10		
261	4.2	9.4	5.29		
299	3.6	10	4.61		
341	3.2	11	4.05		
387	2.8	12	3.56		

0.18 kW

K43G12A DM63G4					32
3.1	535	1.40	446.44		
3.4	480	1.55	400.77		
3.9	420	1.80	349.80		
4.5	365	2.0	306.38		

K33G12A DM63G4					24
3.6	460	0.85	385.15		
4.0	410	0.95	343.16		
4.5	370	1.10	308.06		
5.1	320	1.25	268.88		
5.9	280	1.40	235.51		
6.6	250	1.60	210.10		
7.3	225	1.75	188.46		
8.1	205	1.95	171.28		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
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0.18 kW

K23G02A DM63G4					17
6.9	240	0.85	201.29		
7.7	215	0.95	178.45		
8.7	190	1.05	159.00		
9.7	171	1.20	142.73		
11	149	1.35	124.58		
13	130	1.55	109.11		

K23A DM63G4					14
13	127	1.60	102.27		
16	109	1.85	87.38		

K12G02A DM63G4					13
11	138	0.80	121.98		
13	122	0.90	107.46		
14	108	1.00	95.27		
16	96	1.15	84.88		
18	86	1.25	76.20		
21	75	1.35	66.51		
24	66	1.35	58.25		

K12A DM63G4					10
25	62	1.80	54.60		

K02A DM63G4					8
31	50	1.15	44.20		
37	42	1.35	37.47		
43	36	1.60	32.16		
50	32	1.75	27.86		
57	28	1.90	24.30		
65	24	2.1	21.32		
73	21	2.3	18.78		
83	19	2.6	16.58		
98	16	2.9	14.05		
114	14	3.2	12.06		
132	12	3.6	10.45		
151	11	3.9	9.11		
173	9.3	4.3	8.00		
196	8.2	4.7	7.04		
226	7.2	5.7	6.10		
261	6.3	6.2	5.29		
299	5.5	7.0	4.61		
341	4.8	7.5	4.05		
387	4.2	8.3	3.56		

0.25 kW

K53G22A DM71K4					56
3.0	765	1.85	470.34		

K43G12A DM71K4					33
3.2	725	1.00	446.44		
3.5	650	1.15	400.77		
4.0	570	1.30	349.80		
4.6	500	1.50	306.38		
5.1	450	1.65	275.54		
5.7	405	1.85	249.26		
6.2	370	2.0	227.20		

K33G12A DM71K4					25
4.6	500	0.80	308.06		
5.2	435	0.90	268.88		
6.0	385	1.05	235.51		
6.7	340	1.15	210.10		
7.5	305	1.30	188.46		
8.2	280	1.45	171.28		
9.3	245	1.65	151.01		
11	215	1.85	133.74		

K33A DM71K4					20
12	205	1.95	120.13		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
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0.25 kW

K23G02A DM71K4					18
8.9	260	0.80	159.00		
9.9	230	0.90	142.73		
11	205	1.00	124.58		
13	177	1.15	109.11		

K23A DM71K4					15
14	173	1.20	102.27		
16	148	1.40	87.38		
19	128	1.60	75.61		
21	112	1.80	66.09		

K12G02A DM71K4					14
17	131	0.85	84.88		
19	117	0.95	76.20		
21	102	1.00	66.51		
24	90	1.00	58.25		

K12A DM71K4					11
26	84	1.30	54.60		
30	72	1.55	46.65		
35	62	1.75	40.37		
40	54	2.0	35.29		

K02A DM71K4					9
32	68	0.85	44.20		
38	58	1.00	37.47		
44	50	1.15	32.16		
51	43	1.30	27.86		
58	37	1.40	24.30		
66	33	1.55	21.32		
75	29	1.70	18.78		
85	26	1.90	16.58		
100	22	2.2	14.05		
117	19	2.4	12.06		
135	16	2.6	10.45		
155	14	2.9	9.11		
176	13	3.2	8.00		
200	11	3.4	7.04		
231	9.8	4.2	6.10		
267	8.5	4.6	5.29		
306	7.4	5.1	4.61		
349	6.5	5.5	4.05		
396	5.7	6.1	3.56		

0.37 kW

K53G22A DM71G4					56
3.0	1130	1.25	470.34		
3.3	1030	1.40	427.46		
3.7	905	1.55	376.88		
4.2	805	1.80	333.79		
4.7	725	1.95	301.24		

K43G12A DM71G4					34
4.0	840	0.90	349.80		
4.6	735	1.00	306.38		
5.1	665	1.10	275.54		
5.7	600	1.25	249.26		
6.2	545	1.35	227.20		
7.0	490	1.50	202.69		
7.8	435	1.70	181.81		
8.5	395	1.85	164.95		

K43A DM71G4					29
9.3	380	1.95	151.92		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
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0.37 kW

K33G12A DM71G4					26
6.7	505	0.80	210.10		
7.5	455	0.90	188.46		
8.2	410	0.95	171.28		
9.3	365	1.10	151.01		
11	320	1.25	133.74		
12	290	1.40	119.69		
14	250	1.60	104.17		

K33A DM71G4					20
12	300	1.35	120.13		
14	260	1.55	103.13		
16	225	1.75	89.71		
18	198	2.0	78.85		</

Type
n2 [1/min] T2 [Nm] cG i ~kg

0.55 kW

K43G12A DM80K4	36
5.6	895 0.85 249.26
6.2	815 0.90 227.20
6.9	725 1.00 202.69
7.7	655 1.15 181.81
8.5	590 1.25 164.95
9.6	525 1.40 146.17
11	460 1.60 128.66

K43A DM80K4	30
12	430 1.75 114.99
14	380 1.95 101.80

K33G12A DM80K4	28
11	480 0.85 133.74
12	430 0.95 119.69
13	375 1.05 104.17

K33A DM80K4	22
16	335 1.20 89.71
18	295 1.35 78.85
20	260 1.55 69.88
23	235 1.70 62.34
25	210 1.90 55.92

K23A DM80K4	17
21	245 0.85 66.09
24	220 0.95 58.23
27	193 1.05 51.62
31	172 1.20 46.00
34	154 1.30 41.29
39	135 1.50 36.04
45	118 1.75 31.57

K12A DM80K4	13
35	137 0.80 40.37
40	120 0.90 35.29
45	106 1.05 31.09
51	94 1.15 27.56
57	84 1.25 24.56
64	75 1.35 22.04
73	65 1.50 19.24
83	57 1.60 16.85

K02A DM80K4	11
117	42 1.05 12.06
134	36 1.20 10.45
154	32 1.30 9.11
176	28 1.45 8.00
200	24 1.55 7.04
230	22 1.90 6.10
266	19 2.1 5.29
305	16 2.3 4.61
347	14 2.5 4.05
394	13 2.8 3.56

0.75 kW

K73G32A DM80GD4	142
3.0	2310 1.85 478.39
3.4	2000 2.2 414.39
3.8	1810 2.4 374.95

K63G22A DM80GD4	92
3.1	2200 1.15 455.78
3.5	1950 1.30 403.67
3.8	1800 1.40 373.19
4.2	1620 1.55 336.18
4.7	1450 1.75 301.25
5.3	1300 1.95 269.78
5.9	1170 2.2 242.80
6.7	1020 2.5 211.83

Type
n2 [1/min] T2 [Nm] cG i ~kg

0.75 kW

K53G22A DM80GD4	65
3.8	1820 0.80 376.88
4.3	1610 0.90 333.79
4.7	1450 1.00 301.24
5.1	1340 1.05 277.28
5.8	1200 1.20 247.82
6.5	1060 1.35 220.06
7.3	940 1.50 195.01
8.2	835 1.70 173.54
9.6	715 2.00 148.66

K53A DM80GD4	56
10	700 2.0 138.94
12	620 2.3 123.46

K43G12A DM80GD4	43
7.8	875 0.85 181.81
8.6	795 0.95 164.95
9.7	705 1.05 146.17
11	620 1.20 128.66

K43A DM80GD4	37
12	580 1.30 114.99
14	510 1.45 101.80
16	455 1.65 90.90
17	410 1.80 81.75
19	370 2.00 73.96
21	340 2.2 67.41
24	300 2.5 60.14

K33G12A DM80GD4	35
14	505 0.80 104.17

K33A DM80GD4	29
16	450 0.90 89.71
18	395 1.00 78.85
20	350 1.15 69.88
23	315 1.25 62.34
25	280 1.40 55.92
28	255 1.55 50.82
32	225 1.75 44.80
36	199 2.0 39.68

K23A DM80GD4	24
28	260 0.80 51.62
31	230 0.90 46.00
35	210 1.00 41.29
40	181 1.15 36.04
45	159 1.30 31.57
55	131 1.55 26.14
62	115 1.80 22.85
71	101 2.0 20.13
80	90 2.3 17.84

K12A DM80GD4	20
52	126 0.85 27.56
58	112 0.90 24.56
65	101 1.00 22.04
74	88 1.10 19.24
85	77 1.20 16.85
95	70 1.55 15.08
107	62 1.70 13.29
121	55 1.85 11.78
136	49 2.00 10.49
151	44 2.2 9.42
173	38 2.4 8.22
198	34 2.6 7.20
228	30 3.8 6.24
257	26 4.1 5.54
289	24 4.5 4.93
322	21 4.9 4.43
369	18 5.4 3.86
421	16 6.0 3.38

Type
n2 [1/min] T2 [Nm] cG i ~kg

0.75 kW

K02A DM80GD4	18
118	56 0.80 12.06
136	49 0.90 10.45
156	43 0.95 9.11
178	37 1.05 8.00
202	33 1.15 7.04
234	29 1.40 6.10
270	25 1.55 5.29
309	22 1.75 4.61
352	19 1.85 4.05
400	17 2.1 3.56

1.1 kW

K83G32A DM90SD4	213
3.0	3370 2.4 483.36

K73G32A DM90SD4	149
3.0	3340 1.30 478.39
3.5	2890 1.50 414.39
3.9	2620 1.65 374.95
4.2	2380 1.80 340.39
4.8	2120 2.0 303.50
5.6	1790 2.4 256.81

K63G22A DM90SD4	99
3.2	3180 0.80 455.78
3.6	2820 0.90 403.67
3.9	2600 1.00 373.19
4.3	2350 1.10 336.18
4.8	2100 1.20 301.25
5.4	1880 1.35 269.78
6.0	1690 1.50 242.80
6.8	1480 1.75 211.83
7.6	1320 1.95 189.77

K63A DM90SD4	90
9.0	1170 2.2 160.53
10	1050 2.4 144.48

K53G22A DM90SD4	72
5.8	1730 0.85 247.82
6.6	1540 0.95 220.06
7.4	1360 1.05 195.01
8.3	1210 1.20 173.54
9.7	1040 1.40 148.66
11	945 1.50 135.16

K53A DM90SD4	64
12	900 1.60 123.46
13	805 1.75 110.68
14	725 1.95 99.94
16	660 2.2 90.79
17	605 2.4 83.01

K43G12A DM90SD4	50
11	900 0.85 128.66

K43A DM90SD4	44
14	740 1.00 101.80
16	660 1.10 90.90
18	595 1.25 81.75
20	540 1.40 73.96
21	490 1.50 67.41
24	435 1.70 60.14
27	390 1.90 53.94
30	355 2.1 48.94
33	315 2.4 43.37

Type
n2 [1/min] T2 [Nm] cG i ~kg

1.1 kW

K33A DM90SD4	36
21	510 0.80 69.88
23	455 0.90 62.34
26	405 1.00 55.92
28	370 1.10 50.82
32	325 1.20 44.80
36	290 1.40 39.68
41	260 1.55 35.51
47	225 1.80 30.91
53	198 2.0 27.26
60	176 2.3 24.15

K23A DM90SD4	31
40	260 0.80 36.04
46	230 0.90 31.57
63	166 1.25 22.85
72	146 1.40 20.13
81	130 1.55 17.84
91	116 1.75 15.90
101	104 1.95 14.27
116	91 2.3 12.46
132	79 2.6 10.91
155	68 2.4 9.34
174	60 2.7 8.28
196	54 3.0 7.38
218	48 3.3 6.63
250	42 3.8 5.78
285	37 4.4 5.07

K12A DM90SD4	27
86	111 0.85 16.85
96	102 1.05 15.08
109	90 1.15 13.29
123	80 1.30 11.78
138	71 1.40 10.49
153	64 1.50 9.42
176	56 1.65 8.22
201	49 1.80 7.20

1.5 kW

K83G32A DM90LB4	212
3.0	4570 1.75 483.36
3.4	4020 2.00 425.46
3.9	3520 2.3 372.59

K73G32A DM90LB4	148
3.0	4520 0.95 478.39
3.5	3920 1.10 414.39
3.9	3540 1.20 374.95
4.3	3220 1.35 340.39
4.8	2870 1.50 303.50
5.7	2430 1.80 256.81
6.3	2200 1.95 232.36
6.9	1990 2.2 210.95
7.7	1780 2.4 188.09

K73A DM90LB4	134
7.9	1800 2.4 183.21

K63G22A DM90LB4	99
4.3	3180 0.80 336.18
4.8	2850 0.90 301.25
5.4	2550 1.00 269.78
6.0	2290 1.10 242.80
6.9	2000 1.25 211.83
7.7	1790 1.40 189.77

K63A DM90LB4	90
9.1	1580 1.60 160.53
10	1420 1.80 144.48
11	1290 2.00 130.99
12	1180 2.2 119.50
13	1080 2.4 109.93

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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1.5 kW

K53G22A DM90LB4					72
8.4	1640	0.85	173.54		
9.8	1410	1.00	148.66		
11	1280	1.10	135.16		

K53A DM90LB4					64
12	1220	1.15	123.46		
13	1090	1.30	110.68		
15	985	1.45	99.94		
16	895	1.60	90.79		
18	815	1.75	83.01		
20	735	1.95	74.48		
22	660	2.2	67.22		
24	610	2.3	61.87		

K43A DM90LB4					44
16	895	0.85	90.90		
18	805	0.90	81.75		
20	730	1.00	73.96		
22	665	1.10	67.41		
24	590	1.25	60.14		
27	530	1.40	53.94		
30	480	1.55	48.94		
34	425	1.75	43.37		
38	375	2.00	38.17		
44	330	2.3	33.43		

K33A DM90LB4					36
29	500	0.80	50.82		
32	440	0.90	44.80		
37	390	1.00	39.68		
41	350	1.15	35.51		
47	305	1.30	30.91		
53	270	1.50	27.26		
60	240	1.70	24.15		
68	210	1.90	21.55		
75	190	2.1	19.33		
83	173	2.3	17.57		

K23A DM90LB4					31
64	225	0.90	22.85		
72	198	1.05	20.13		
82	176	1.15	17.84		
92	157	1.30	15.90		
102	141	1.45	14.27		
117	123	1.65	12.46		
133	107	1.90	10.91		
156	92	1.75	9.34		
176	82	1.95	8.28		
197	73	2.2	7.38		
220	65	2.5	6.63		
252	57	2.8	5.78		
287	50	3.2	5.07		

K12A DM90LB4					27
96	138	0.80	15.08		
110	122	0.85	13.29		
124	108	0.95	11.78		
139	96	1.00	10.49		
154	86	1.10	9.42		
177	75	1.20	8.22		
202	66	1.35	7.20		
233	58	1.90	6.24		
263	52	2.1	5.54		
295	46	2.3	4.93		
329	41	2.5	4.43		

2.2 kW

K93G42A DM100LA4					335
2.9	6870	1.80	497.00		
3.2	6280	1.95	454.31		
3.5	5730	2.1	414.77		
3.9	5180	2.4	375.01		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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2.2 kW

K83G32A DM100LA4					225
3.0	6680	1.20	483.36		
3.4	5880	1.35	425.46		
3.9	5150	1.55	372.59		
4.5	4520	1.75	327.28		
4.9	4120	1.95	298.11		
5.6	3610	2.2	261.13		
6.1	3280	2.4	237.53		

K73G32A DM100LA4					160
3.9	5180	0.85	374.95		
4.3	4700	0.90	340.39		
4.8	4190	1.05	303.50		
5.7	3550	1.20	256.81		
6.3	3210	1.35	232.36		
6.9	2910	1.50	210.95		
7.8	2600	1.65	188.09		

K73A DM100LA4					146
8.0	2640	1.65	183.21		
8.8	2400	1.80	166.63		
9.6	2190	1.95	152.50		
10	2030	2.1	141.34		
11	1840	2.3	128.10		

K63G22A DM100LA4					111
6.9	2930	0.85	211.83		
7.7	2620	0.95	189.77		

K63A DM100LA4					102
10	2080	1.25	144.48		
11	1890	1.35	130.99		
12	1720	1.50	119.50		
13	1580	1.60	109.93		
15	1430	1.80	99.21		
16	1300	1.95	90.07		
18	1200	2.1	83.27		
19	1080	2.4	75.02		

K53A DM100LA4					76
13	1590	0.90	110.68		
15	1440	1.00	99.94		
16	1310	1.10	90.79		
18	1190	1.20	83.01		
20	1070	1.35	74.48		
22	965	1.50	67.22		
24	890	1.60	61.87		
26	795	1.80	55.30		
30	705	2.0	49.10		
34	625	2.3	43.51		

K43A DM100LA4					56
24	865	0.85	60.14		
27	775	0.95	53.94		
30	705	1.05	48.94		
34	625	1.20	43.37		
38	550	1.35	38.17		
44	480	1.55	33.43		
50	425	1.75	29.37		
57	370	2.0	25.56		
63	335	2.2	23.30		
70	300	2.5	20.79		

K33A DM100LA4					39
178	110	0.85	8.22		
203	96	0.90	7.20		
234	85	1.30	6.24		
264	76	1.45	5.54		
296	67	1.55	4.93		
330	61	1.70	4.43		
378	53	1.90	3.86		
431	46	2.1	3.38		

K23A DM100LA4					43
82	255	0.80	17.84		
92	230	0.90	15.90		
102	205	1.00	14.27		
117	179	1.15	12.46		
134	157	1.30	10.91		
156	134	1.20	9.34		
176	119	1.35	8.28		
198	106	1.50	7.38		
220	95	1.70	6.63		
252	83	1.95	5.78		
288	73	2.2	5.07		

K12A DM100LA4					39
178	110	0.85	8.22		
203	96	0.90	7.20		
234	85	1.30	6.24		
264	76	1.45	5.54		
296	67	1.55	4.93		
330	61	1.70	4.43		
378	53	1.90	3.86		
431	46	2.1	3.38		

K93G42A DM100LF4					338
2.9	9390	1.30	497.00		
3.2	8590	1.45	454.31		
3.5	7840	1.55	414.77		
3.9	7090	1.75	375.01		
4.5	6150	2.00	325.31		
5.1	5380	2.3	284.64		

K83G32A DM100LF4					228
3.0	9140	0.85	483.36		
3.4	8040	1.00	425.46		
3.9	7040	1.15	372.59		
4.4	6190	1.30	327.28		
4.9	5640	1.40	298.11		
5.6	4940	1.60	261.13		
6.1	4490	1.75	237.53		
6.8	4040	1.95	213.95		
7.6	3630	2.2	192.10		
7.8	3550	2.2	187.60		
8.8	3110	2.3	164.78		

K73G32A DM100LF4					164
5.7	4850	0.90	256.81		
6.3	4390	1.00	232.36		
6.9	3990	1.10	210.95		
7.7	3560	1.20	188.09		

K73A DM100LF4					151
7.9	3610	1.20	183.21		
8.7	3280	1.30	166.63		
9.5	3000	1.45	152.50		
10	2780	1.55	141.34		
11	2520	1.70	128.10		
12	2300	1.90	116.83		
13	2130	2.0	108.36		
15	1930	2.2	98.17		
16	1760	2.5	89.29		

K63A DM100LF4					107
10	2840	0.90	144.48		
11	2580	1.00	130.99		
12	2350	1.10	119.50		
13	2160	1.20	109.93		
15	1950	1.30	99.21		
16	1770	1.45	90.07		
17	1640	1.55	83.27		
19	1480	1.75	75.02		
22	1320	1.95	67.22		
24	1190	2.2	60.20		
27	1070	2.4	54.18		

K53A DM10

Type
n2 [1/min] T2 [Nm] cG i ~kg

4.0 kW

K93G42A DM112MB4	338		
2.9	12500	1.00	497.00
3.2	11400	1.05	454.31
3.5	10400	1.20	414.77
3.9	9420	1.30	375.01
4.5	8170	1.50	325.31
5.1	7150	1.70	284.64

K83G32A DM112MB4	228		
3.9	9360	0.85	372.59
4.5	8220	0.95	327.28
4.9	7490	1.05	298.11
5.6	6560	1.20	261.13
6.1	5970	1.35	237.53
6.8	5370	1.50	213.95
7.6	4830	1.65	192.10
7.8	4710	1.65	187.60
8.9	4140	1.70	164.78

K83A DM112MB4	213		
10	3790	2.1	144.68
11	3460	2.3	132.28
12	3200	2.5	122.27

K73G32A DM112MB4	164		
6.9	5300	0.80	210.95
7.8	4720	0.90	188.09

K73A DM112MB4	151		
8.8	4360	1.00	166.63
9.6	3990	1.10	152.50
10	3700	1.15	141.34
11	3350	1.30	128.10
12	3060	1.40	116.83
13	2840	1.55	108.36
15	2570	1.70	98.17
16	2340	1.85	89.29
18	2110	2.1	80.57
20	1910	2.3	73.10

K63A DM112MB4	106		
12	3130	0.80	119.50
13	2880	0.90	109.93
15	2600	1.00	99.21
16	2360	1.10	90.07
18	2180	1.15	83.27
19	1960	1.30	75.02
22	1760	1.45	67.22
24	1580	1.60	60.20
27	1420	1.80	54.18

K53A DM112MB4	80		
22	1760	0.80	67.22
24	1620	0.90	61.87
26	1450	1.00	55.30
30	1280	1.10	49.10
34	1140	1.25	43.51
38	1010	1.40	38.72
49	775	1.85	29.56
55	700	2.0	26.68
59	640	2.2	24.56
67	575	2.5	21.95

K43A DM112MB4	61		
44	875	0.85	33.43
50	770	0.95	29.37
57	670	1.10	25.56
63	610	1.20	23.30
70	545	1.35	20.79
78	490	1.50	18.65
86	445	1.70	16.92
97	390	1.90	14.99
111	345	2.2	13.20
126	300	2.5	11.56
170	225	2.5	8.60

Type
n2 [1/min] T2 [Nm] cG i ~kg

4.0 kW

K33A DM112MB4	53		
76	505	0.80	19.33
83	460	0.85	17.57
94	405	1.00	15.49
106	360	1.10	13.72
119	320	1.20	12.27
137	280	1.35	10.68
157	245	1.00	9.30
173	220	1.35	8.45
196	195	1.45	7.45
221	173	1.60	6.60
247	155	1.95	5.91
284	134	2.2	5.14

K23A DM112MB4	47		
198	193	0.85	7.38
220	173	0.95	6.63
252	151	1.05	5.78
288	133	1.20	5.07

5.5 kW

K93G42A DM132SB4	407		
3.2	15600	0.80	454.31
3.5	14200	0.85	414.77
3.9	12900	0.95	375.01
4.5	11200	1.10	325.31
5.2	9760	1.25	284.64
5.8	8650	1.40	252.16
6.7	7500	1.65	218.74
7.7	6570	1.85	191.40
8.7	5780	2.1	168.61
10	4950	2.5	144.17

K93A DM132SB4	392		
11	4910	2.5	137.36

K83G32A DM132SB4	298		
4.9	10200	0.80	298.11
5.6	8960	0.90	261.13
6.2	8150	1.00	237.53
6.9	7340	1.10	213.95
7.7	6590	1.20	192.10
7.8	6430	1.20	187.60
8.9	5650	1.25	164.78

K83A DM132SB4	293		
10	5170	1.55	144.68
11	4730	1.70	132.28
12	4370	1.80	122.27
13	3970	2.0	111.12
14	3620	2.2	101.42
16	3280	2.4	91.87

K73A DM132SB4	219		
11	4580	0.95	128.10
13	4170	1.05	116.83
14	3870	1.10	108.36
15	3510	1.25	98.17
16	3190	1.35	89.29
18	2880	1.50	80.57
20	2610	1.65	73.10
23	2260	1.90	63.32
26	2050	2.1	57.29
28	1860	2.3	52.01

Type
n2 [1/min] T2 [Nm] cG i ~kg

5.5 kW

K63A DM132SB4	168		
16	3220	0.80	90.07
18	2980	0.85	83.27
20	2680	0.95	75.02
22	2400	1.05	67.22
24	2150	1.20	60.20
27	1940	1.30	54.18
31	1690	1.50	47.27
35	1510	1.70	42.35
39	1340	1.90	37.56
45	1180	2.1	33.00
49	1060	2.4	29.77

K53A DM132SB4	142		
30	1750	0.80	49.10
34	1550	0.90	43.51
38	1380	1.05	38.72
44	1190	1.20	33.17
50	1060	1.35	29.56
55	955	1.50	26.68
60	875	1.65	24.56
67	785	1.80	21.95
75	695	2.0	19.49
85	615	2.2	17.27
96	550	2.4	15.37

K43A DM132SB4	123		
71	745	1.00	20.79
79	665	1.10	18.65
87	605	1.25	16.92
98	535	1.40	14.99
111	470	1.60	13.20
127	415	1.80	11.56
145	365	2.0	10.15
171	305	1.85	8.60
193	270	2.0	7.62
219	240	2.4	6.71
250	210	2.6	5.87
285	184	2.8	5.16

7.5 kW

K93G42A DM132MB4	407		
4.5	15200	0.80	325.31
5.2	13300	0.90	284.64
5.8	11800	1.05	252.16
6.7	10200	1.20	218.74
7.7	8950	1.35	191.40
8.7	7890	1.55	168.61
10	6740	1.80	144.17

K93A DM132MB4	392		
11	6690	1.85	137.36
12	6140	2.00	126.06
13	5580	2.2	114.62
14	5110	2.4	104.80

K83A DM132MB4	293		
10	7050	1.15	144.68
11	6450	1.25	132.28
12	5960	1.35	122.27
13	5410	1.45	111.12
14	4940	1.60	101.42
16	4480	1.80	91.87
18	4080	1.95	83.68
20	3570	2.2	73.30
22	3250	2.4	66.68

Type
n2 [1/min] T2 [Nm] cG i ~kg

7.5 kW

K73A DM132MB4	219		
14	5280	0.80	108.36
15	4780	0.90	98.17
16	4350	1.00	89.29
18	3930	1.10	80.57
20	3560	1.20	73.10
23	3090	1.40	63.32
26	2790	1.55	57.29
28	2530	1.70	52.01
32	2260	1.90	46.38
33	2140	2.0	43.99
37	1950	2.2	40.01
41	1760	2.5	36.10

K63A DM132MB4	168		
22	3280	0.80	67.22
24	2930	0.85	60.20
27	2640	0.95	54.18
31	2300	1.10	47.27
35	2060	1.25	42.35
39	1830	1.40	37.56
45	1610	1.55	33.00
49	1450	1.75	29.77
55	1300	1.95	26.68
62	1160	2.1	23.89
68	1050	2.3	21.50
78	915	2.5	18.76

K53A DM132MB4	142		
44	1620	0.90	33.17
50	1440	1.00	29.56
55	1300	1.10	26.68
60	1200	1.20	24.56
67	1070	1.35	21.95
75	950	1.50	19.49
85	840	1.65	17.27
96	750	1.75	15.37
112	640	1.95	13.17
127	565	2.2	11.61
137	525	1.90	10.75
154	465	2.1	9.55
174	410	2.4	8.46

K43A DM132MB4	123		
79	910	0.80	18.65
87	825	0.90	16.92
98	730	1.00	14.99
111	645	1.15	13.20
127	565	1.30	11.56
145	495	1.50	10.15
171	420	1.35	8.60
193	370	1.50	7.62
219	325	1.75	6.71
250	285	1.95	5.87
285	250	2.1	5.16

11.0 kW

K93G42A DA160MB4	414		
6.7	15100	0.80	218.74
7.7	13200	0.95	191.40
8.7	11600	1.05	168.61
10	9920	1.25	144.17
K93A DA160MB4	397		
11	9850	1.25	137.36
12	9040	1.35	126.06
13	8220	1.50	114.62
14	7520	1.65	104.80
16	6650	1.85	92.68
17	6070	2.0	84.72
19	5550	2.2	77.34
21	5010	2.4	69.93

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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11.0 kW

K83A DA160MB4					298
13	7970	1.00	111.12		
14	7270	1.10	101.42		
16	6590	1.20	91.87		
18	6000	1.35	83.68		
20	5260	1.50	73.30		
22	4780	1.65	66.68		
24	4310	1.85	60.06		
27	3870	2.1	53.92		
32	3320	2.4	46.25		

K73A DA160MB4					225
20	5240	0.85	73.10		
23	4540	0.95	63.32		
26	4110	1.05	57.29		
28	3730	1.15	52.01		
32	3330	1.30	46.38		
33	3150	1.35	43.99		
37	2870	1.50	40.01		
41	2590	1.65	36.10		
45	2350	1.85	32.75		
52	2030	2.1	28.37		
57	1840	2.4	25.67		

K63A DA160MB4					175
35	3040	0.85	42.35		
39	2690	0.95	37.56		
44	2370	1.05	33.00		
49	2130	1.20	29.77		
55	1910	1.35	26.68		
61	1710	1.45	23.89		
68	1540	1.55	21.50		
78	1350	1.70	18.76		
87	1210	1.85	16.81		
98	1070	2.0	14.91		
112	940	2.2	13.10		
126	830	2.0	11.58		
141	750	2.2	10.43		

K53A DA160MB4					149
67	1570	0.90	21.95		
75	1400	1.00	19.49		
85	1240	1.10	17.27		
95	1100	1.20	15.37		
111	945	1.35	13.17		
126	835	1.45	11.61		
136	770	1.30	10.75		
153	685	1.45	9.55		
173	605	1.60	8.46		
195	540	1.85	7.53		
227	465	2.1	6.45		
257	410	2.3	5.69		

15.0 kW

K93A DA160LB4					385
11	13400	0.90	137.36		
12	12300	1.00	126.06		
13	11200	1.10	114.62		
14	10200	1.20	104.80		
16	9060	1.35	92.68		
17	8280	1.50	84.72		
19	7560	1.60	77.34		
21	6840	1.80	69.93		
24	5930	2.1	60.66		
28	5190	2.4	53.08		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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15.0 kW

K83A DA160LB4					284
14	9920	0.80	101.42		
16	8980	0.90	91.87		
18	8180	0.95	83.68		
20	7170	1.10	73.30		
22	6520	1.20	66.68		
24	5870	1.35	60.06		
27	5270	1.50	53.92		
32	4520	1.75	46.25		
37	3910	2.0	39.98		
45	3210	2.5	32.84		

K73A DA160LB4					221
28	5090	0.85	52.01		
32	4530	0.95	46.38		
33	4300	1.00	43.99		
37	3910	1.10	40.01		
41	3530	1.25	36.10		
45	3200	1.35	32.75		
52	2770	1.55	28.37		
57	2510	1.70	25.67		
63	2280	1.90	23.31		
71	2030	2.1	20.78		
83	1720	2.5	17.62		
106	1350	2.3	13.76		
118	1220	2.5	12.45		

K63A DA160LB4					177
49	2910	0.90	29.77		
55	2610	1.00	26.68		
61	2340	1.05	23.89		
68	2100	1.15	21.50		
78	1830	1.25	18.76		
87	1640	1.35	16.81		
98	1460	1.45	14.91		
112	1280	1.60	13.10		
126	1130	1.50	11.58		
141	1020	1.65	10.43		
161	890	1.90	9.10		
180	795	2.1	8.15		
203	705	2.3	7.23		
231	620	2.5	6.35		

K53A DA160LB4					151
85	1690	0.80	17.27		
95	1500	0.90	15.37		
111	1290	1.00	13.17		
126	1140	1.05	11.61		
136	1050	0.95	10.75		
153	935	1.05	9.55		
173	825	1.20	8.46		
195	735	1.35	7.53		
227	630	1.50	6.45		
257	555	1.65	5.69		

18.5 kW

K93A DA180MD4					434
13	13800	0.90	114.62		
14	12600	0.95	104.80		
16	11200	1.10	92.68		
17	10200	1.20	84.72		
19	9330	1.30	77.34		
21	8430	1.45	69.93		
24	7320	1.65	60.66		
28	6400	1.90	53.08		
31	5640	2.2	46.76		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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18.5 kW

K83A DA180MD4					334
18	10100	0.80	83.68		
20	8840	0.90	73.30		
22	8040	1.00	66.68		
24	7240	1.10	60.06		
27	6500	1.20	53.92		
32	5580	1.45	46.25		
37	4820	1.65	39.98		
42	4190	1.90	34.75		
45	3960	2.0	32.84		
49	3600	2.2	29.88		
54	3250	2.5	26.91		

K73A DA180MD4					272
41	4350	1.00	36.10		
45	3950	1.10	32.75		
52	3420	1.25	28.37		
57	3100	1.40	25.67		
63	2810	1.55	23.31		
71	2510	1.75	20.78		
83	2130	2.0	17.62		
97	1810	2.3	15.04		
106	1660	1.85	13.76		
118	1500	2.1	12.45		
130	1360	2.3	11.30		

K63A DA180MD4					228
61	2880	0.85	23.89		
68	2590	0.90	21.50		
78	2260	1.00	18.76		
87	2030	1.10	16.81		
98	1800	1.20	14.91		
112	1580	1.30	13.10		
126	1400	1.20	11.58		
141	1260	1.35	10.43		
161	1100	1.55	9.10		
180	985	1.75	8.15		
203	870	1.90	7.23		
231	765	2.1	6.35		

22.0 kW

K93A DA180LB4					434
14	15000	0.80	104.80		
16	13300	0.90	92.68		
17	12100	1.00	84.72		
19	11100	1.10	77.34		
21	10000	1.20	69.93		
24	8700	1.40	60.66		
28	7610	1.60	53.08		
31	6710	1.85	46.76		

K83A DA180LB4					334
22	9560	0.85	66.68		
24	8610	0.90	60.06		
27	7730	1.05	53.92		
32	6630	1.20	46.25		
37	5730	1.40	39.98		
42	4980	1.60	34.75		
45	4710	1.70	32.84		
49	4280	1.85	29.88		
54	3860	2.1	26.91		
61	3470	2.3	24.16		
105	2010	2.4	14.01		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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22.0 kW

K73A DA180LB4					272
41	5180	0.85	36.10		
45	4700	0.90	32.75		
52	4070	1.05	28.37		
57	3680	1.20	25.67		
63	3340	1.30	23.31		
71	2980	1.45	20.78		
83	2530	1.70	17.62		
97	2160	1.95	15.04		
106	1970	1.55	13.76		
118	1790	1.75	12.45		
130	1620	1.90	11.30		
145	1440	2.1	10.08		
171	1230	2.5	8.54		

K63A DA180LB4					228
68	3080	0.80	21.50		
78	2690	0.85	18.76		
87	2410	0.90	16.81		
98	2140	1.00	14.91		
112	1880	1.10	13.10		
126	1660	1.00	11.58		
141	1500	1.10	10.43		
161	1300	1.30	9.10		
180	1170	1.45	8.15		
203	1040	1.60	7.23		
231	910	1.70	6.35		

30.0 kW

K93A DA200LB4					515
19	15000	0.80	77.34		
21	13500	0.90	69.93		
24	11700	1.05	60.66		
28	10300	1.20	53.08		
32	9050	1.35	46.76		
37	7740	1.60	39.98		
43	6730	1.80	34.75		
47	6070	2.0	31.33		
54	5260	2.3	27.18		

K83A DA200LB4					416
32	8950	0.90	46.25		
37	7740	1.05	39.98		
43	6730	1.20	34.75		
45	6360	1.25	32.84		
50	5780	1.40			

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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37.0 kW

K93A DA225SD4					630
24	14500	0.85	60.66		
28	12700	0.95	53.08		
32	11200	1.10	46.76		
37	9580	1.30	39.98		
42	8330	1.45	34.75		
47	7510	1.65	31.33		
54	6510	1.90	27.18		
62	5700	2.2	23.78		
70	5020	2.4	20.95		
103	3440	2.1	14.34		
118	3010	2.4	12.55		

K83A DA225SD4					531
37	9580	0.85	39.98		
42	8330	0.95	34.75		
45	7870	1.00	32.84		
49	7160	1.10	29.88		
55	6450	1.25	26.91		
61	5790	1.35	24.16		
71	4970	1.55	20.73		
82	4290	1.70	17.91		
95	3730	1.90	15.57		
105	3360	1.45	14.01		
117	3010	1.60	12.58		
137	2580	1.90	10.79		
158	2230	2.2	9.32		
182	1940	2.5	8.11		

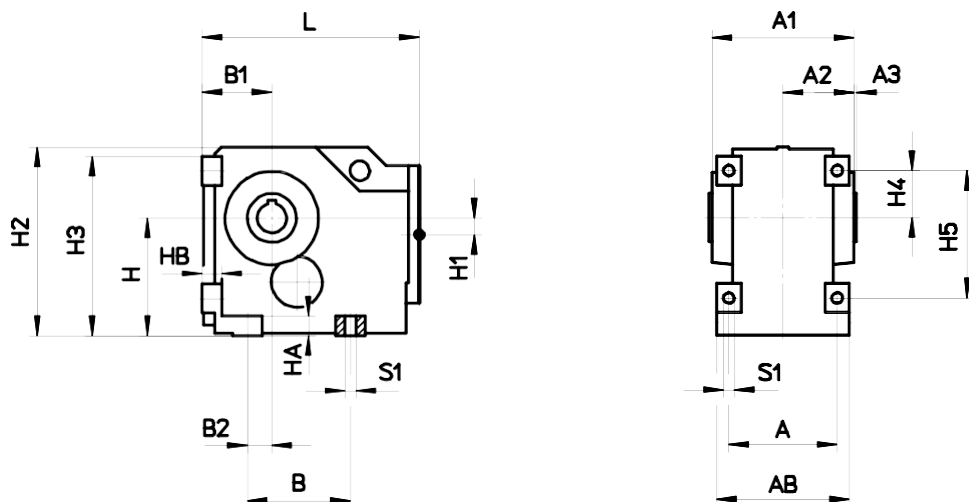
45.0 kW

K93A DA225MD4					737
28	15500	0.80	53.08		
32	13600	0.90	46.76		
37	11600	1.05	39.98		
42	10100	1.20	34.75		
47	9130	1.35	31.33		
54	7920	1.55	27.18		
62	6930	1.75	23.78		
70	6100	2.0	20.95		
82	5220	2.3	17.91		
103	4180	1.75	14.34		
118	3660	2.0	12.55		
133	3220	2.3	11.06		

K83A DA225MD4					637
42	10100	0.80	34.75		
45	9570	0.85	32.84		
49	8700	0.90	29.88		
55	7840	1.00	26.91		
61	7040	1.15	24.16		
71	6040	1.30	20.73		
82	5220	1.40	17.91		
95	4540	1.55	15.57		
105	4080	1.20	14.01		
117	3660	1.30	12.58		
137	3140	1.55	10.79		
158	2720	1.80	9.32		
182	2360	2.1	8.11		

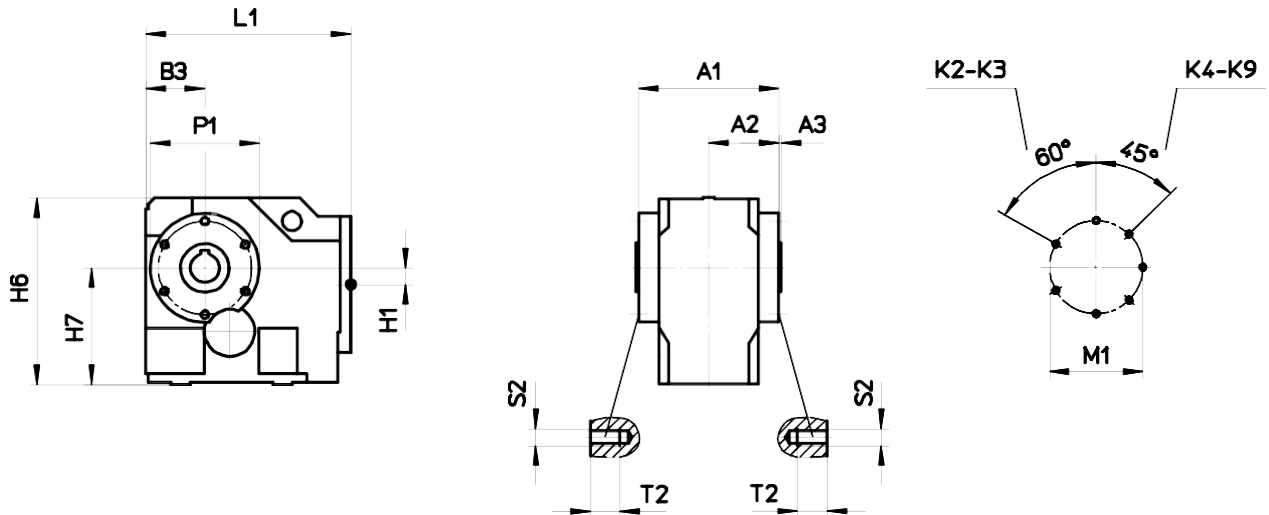
Dimensions

A - Foot mounted version



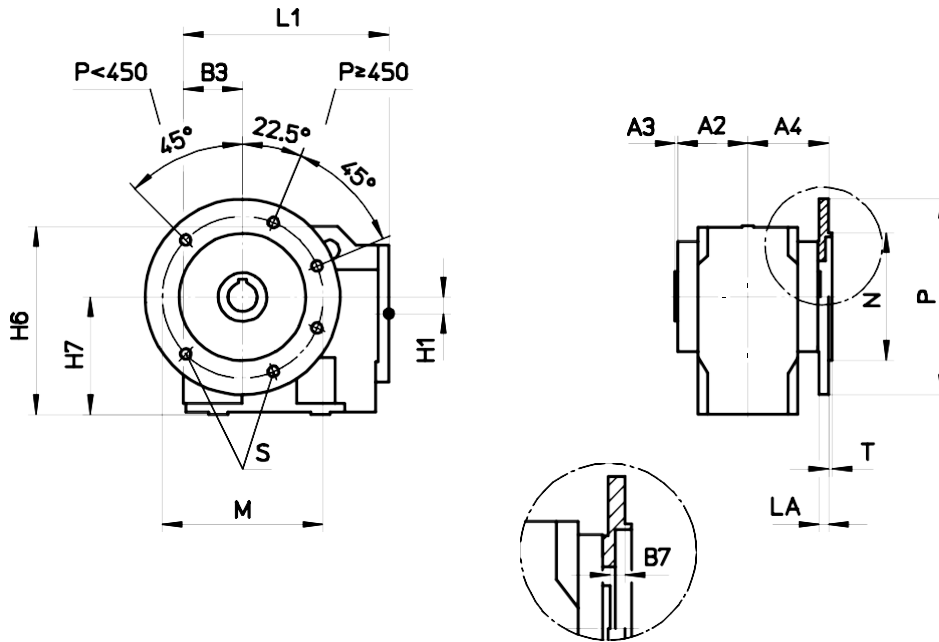
	A	AB	A1	A2	A3	B	B1	B2	H	HA	HB	H1	H2	H3	H4	H5	L	S1
K2	90	110	116	58	2	90	65-0.5	25	100-0.5	20	20	12	163.5	160.5	48	110	192	Ø9
K3	110	135	144	72	3	105	75-0.5	25	120-0.5	20	20	17	192	183	48	130	225	Ø11
K4	125	155	168	84	3.5	125	90-0.5	25	145-0.5	25	25	18	230	223	58	150	266	Ø13.5
K5	150	190	202	101	4	160	110-0.5	40	180-0.5	30	30	23.5	283.5	274.5	72	190	322	Ø17.5
K6	175	220	230	115	5	200	130-0.5	49	220-0.5	35	35	29	344.5	334.5	87	230	370	Ø22
K7	220	280	288	144	6	240	150-0.5	75	250-1	40	40	31	398.5	396	120	280	430	Ø26
K8	270	330	338	169	6	270	180-0.5	70	290-1	45	45	39	463	447.5	120	310	510	Ø33
K9	300	370	398	199	6	320	200-0.5	90	340-1	50	50	42	537	525	140	360	578	Ø39

B - Shaft mounted version



	A1	A2	A3	B3	H1	H6	H7	L1	M1	P1	S2	T2
K2	116	58	2	61	12	165.5	102	188	87	99	M6	9
K3	144	72	3	70.5	17	194	122	220.5	96	112	M8	12
K4	168	84	3.5	85	18	232	147	261	106	122	M8	12
K5	202	101	4	106.5	23.5	286	182.5	318.5	130	150	M10	15
K6	230	115	5	126	29	347	222.5	366	154	178	M12	18
K7	288	144	6	146	31	398.5	250	426	182	214	M16	24
K8	338	169	6	171.5	39	463	290	501.5	220	260	M20	30
K9	398	199	6	193.5	42	537	340	571.5	258	306	M24	36

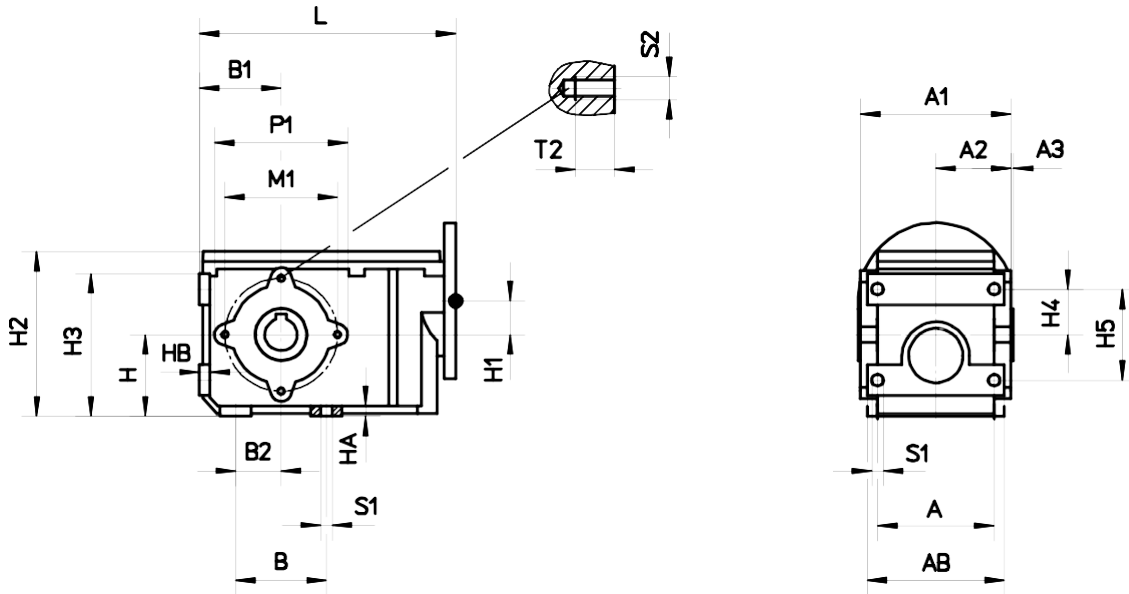
C - Flange mounted version



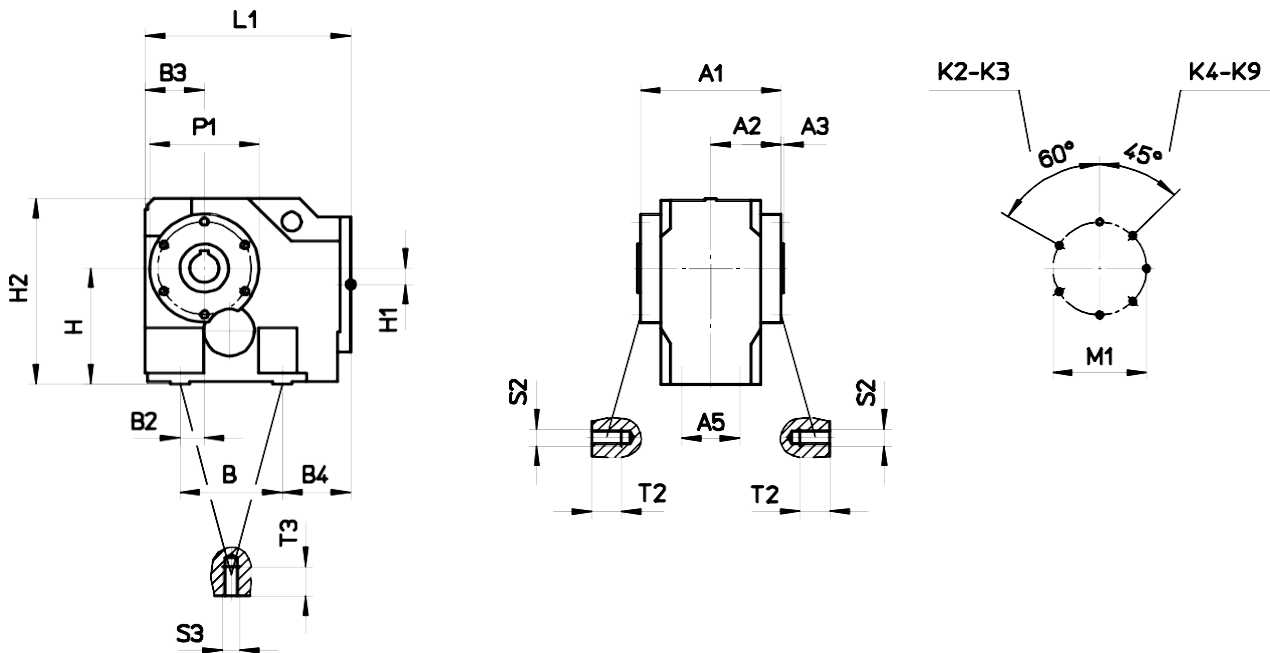
	A2	A3	A4	B3	B7	H1	H6	H7	L1
K2	58	2	70	61	10	12	165.5	102	188
K3	72	3	83	70.5	8	17	194	122	220.5
K4	84	3.5	95	85	7.5	18	232	147	261
K5	101	4	113	106.5	8	23.5	286	182.5	318.5
K6	115	5	128	126	8	29	347	222.5	366
K7	144	6	160	146	10	31	398.5	250	426
K8	169	6	190	171.5	15	39	463	290	501.5
K9	199	6	222	193.5	17	42	537	340	571.5

	M	N	P	LA	T	S
K	Ø13	Ø110 j6	Ø160	9	3.5	Ø9
	Ø130	Ø110 j6	Ø160	9	3.5	Ø9
K3	Ø16	Ø130 j6	Ø200	10	3.5	Ø11
	Ø165	Ø130 j6	Ø200	10	3.5	Ø11
K4	Ø21	Ø180 j6	Ø250	11	4	Ø13.5
	Ø215	Ø180 j6	Ø250	11	4	Ø13.5
K5	Ø26	Ø230 j6	Ø300	12	4	Ø13.5
	Ø265	Ø230 j6	Ø300	12	4	Ø13.5
K6	Ø30	Ø250 h6	Ø350	13	5	Ø17.5
	Ø300	Ø250 h6	Ø350	13	5	Ø17.5
K7	Ø40	Ø350 h6	Ø450	16	5	Ø17.5
K	Ø40	Ø350 h6	Ø450	16	5	Ø17.5
	Ø400	Ø350 h6	Ø450	16	5	Ø17.5
K9	Ø50	Ø450 h6	Ø550	18	5	Ø17.5

D - Shaft mounted version + foot area

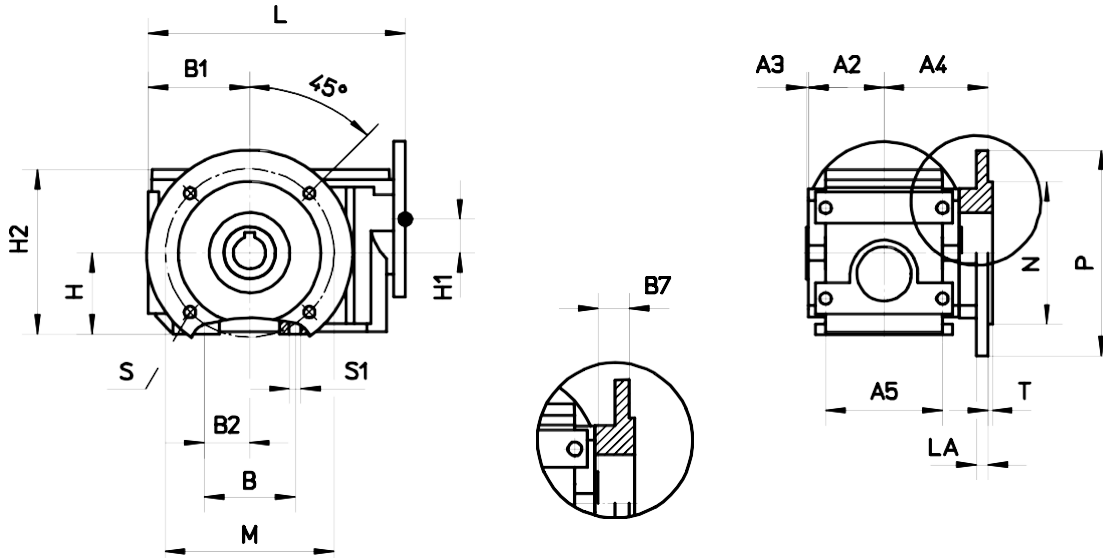


	A	AB	A1	A2	A3	B	B1	B2	H	H1	H2	H3	H4	H5	HA	HB	L	M1	P1	S1	S2	T2
K0	80	95	102	51	1.5	60	50	30	50	23.7	108.5	89	30	60	7	7	165	74	88	Ø6.6	M6	9
K1	90	106	116	58	2	70	63	35	63	26	128	108	35	70	8	8	198	87	103	Ø9	M6	9

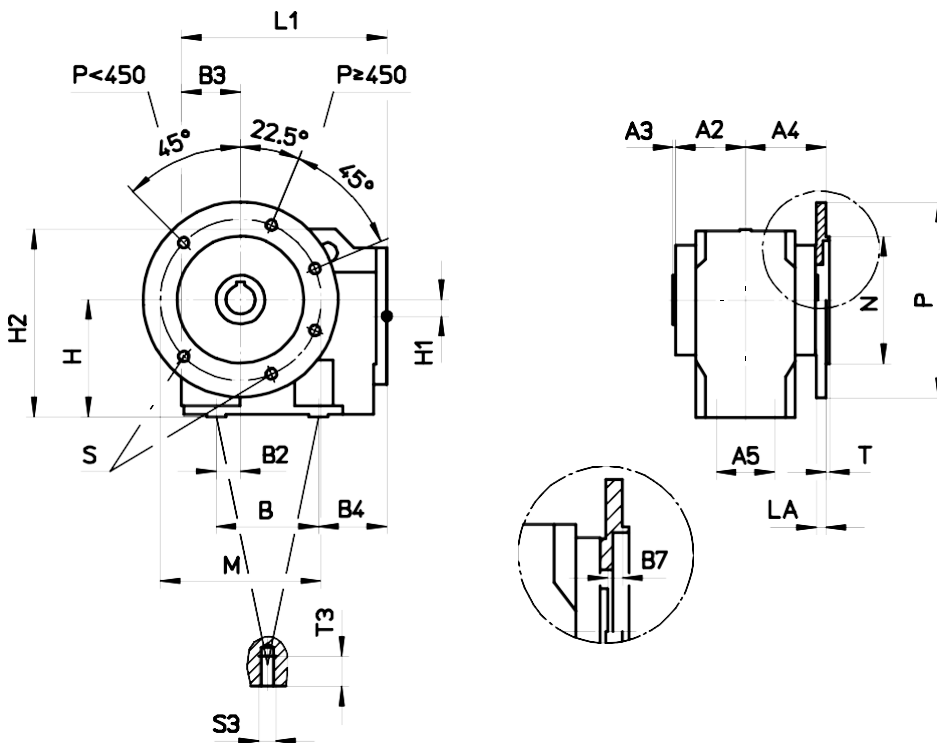


	A1	A2	A3	A5	B	B2	B3	B4	H	H1	H2	L1	M1	P1	S2	T2	S3	T3
K2	116	58	2	50	90	25	61	62	100	12	163.5	188	87	99	M6	9	M8	12
K3	144	72	3	60	105	25	70.5	70	120	17	192	220.5	96	112	M8	12	M10	15
K4	168	84	3.5	70	125	25	85	76	145	18	230	261	106	122	M8	12	M12	18
K5	202	101	4	80	160	40	106.5	92	180	23.5	283.5	318.5	130	150	M10	15	M16	24
K6	230	115	5	95	200	49	126	89	220	29	344.5	366	154	178	M12	18	M16	24
K7	288	144	6	125	240	75	146	115	250	31	398.5	426	182	214	M16	24	M20	30
K8	338	169	6	150	270	70	171.5	130	290	39	463	501.5	220	260	M20	30	M24	36
K9	398	199	6	160	320	90	193.5	148	340	42	537	571.5	258	306	M24	36	M30	45

E - Flange mounted version + foot area

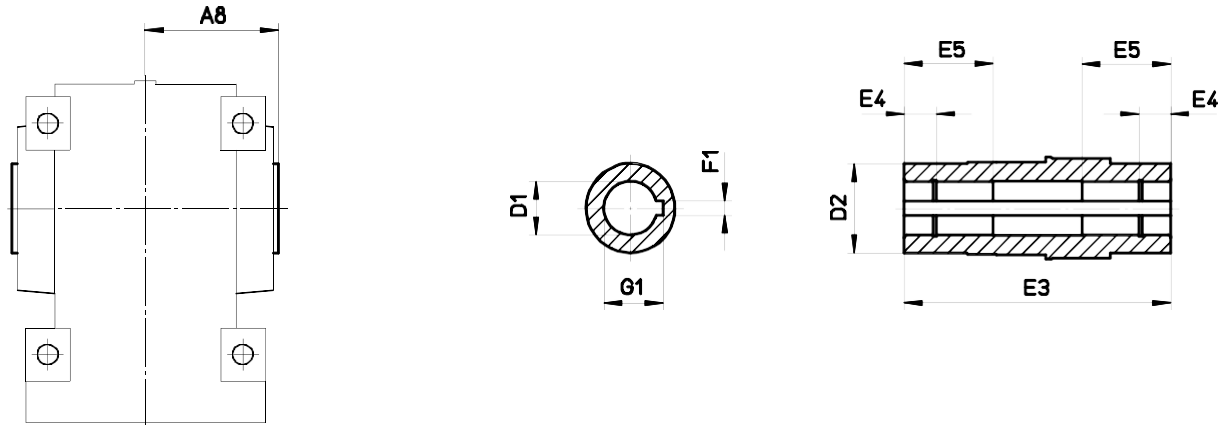


	A2	A3	A4	A5	B	B1	B2	B7	H	H1	H2	L	LA	M	N	P	T	S	S1
K0	51	1.5	71	80	60	50	30	18.5	50	23.7	108.5	165	8	Ø100	Ø80 j6	Ø120	3	Ø6.6	Ø6.6
K1	58	2	80	90	70	63	35	20	63	26	128	198	9	Ø130	Ø110 j6	Ø160	3.5	Ø9	Ø9



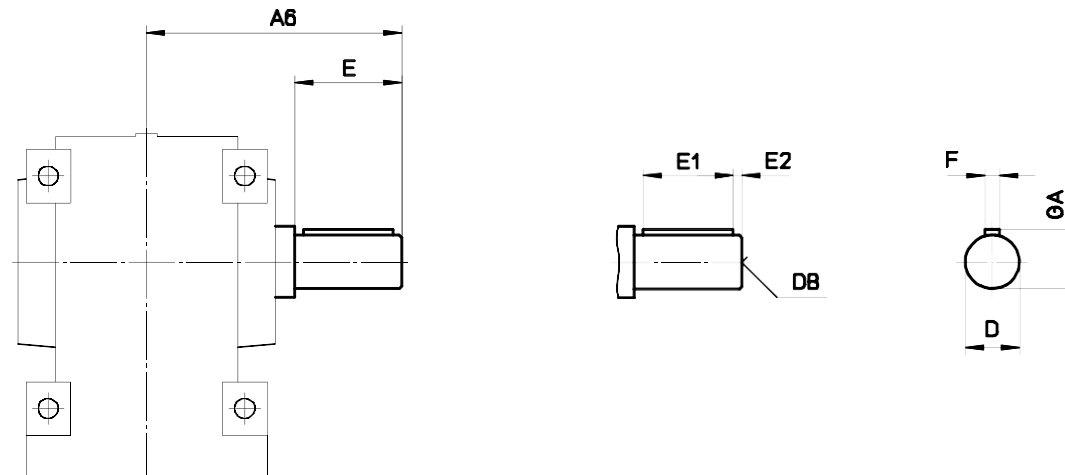
	A2	A3	A4	A5	B	B2	B3	B4	B7	H	H1	H2	L1	LA	M	N	P	T	T3	S	S3
K2	58	2	70	50	90	25	61	62	10	100	12	163.5	188	9	Ø130	Ø110 j6	Ø160	3.5	12	Ø9	M8
K3	72	3	83	60	105	25	70.5	70	8	120	17	192	220.5	10	Ø165	Ø130 j6	Ø200	3.5	15	Ø11	M10
K4	84	3.5	95	70	125	25	85	76	7.5	145	18	230	261	10	Ø165	Ø130 j6	Ø200	3.5	18	Ø11	M12
K5	101	4	113	80	160	40	106.5	92	8	180	23.5	283.5	318.5	11	Ø215	Ø180 j6	Ø250	4	24	Ø13.5	M16
K6	115	5	128	95	200	49	126	89	8	220	29	344.5	366	12	Ø265	Ø230 j6	Ø300	4	24	Ø13.5	M16
K7	144	6	160	125	240	75	146	115	10	250	31	398.5	426	13	Ø300	Ø250 h6	Ø350	5	30	Ø17.5	M20
K8	169	6	190	150	270	70	171.5	130	15	290	39	463	501.5	16	Ø400	Ø350 h6	Ø450	5	36	Ø17.5	M24
K9	199	6	222	160	320	90	193.5	148	17	340	42	537	571.5	16	Ø400	Ø350 h6	Ø450	5	45	Ø17.5	M30

Hollow shaft with keyway



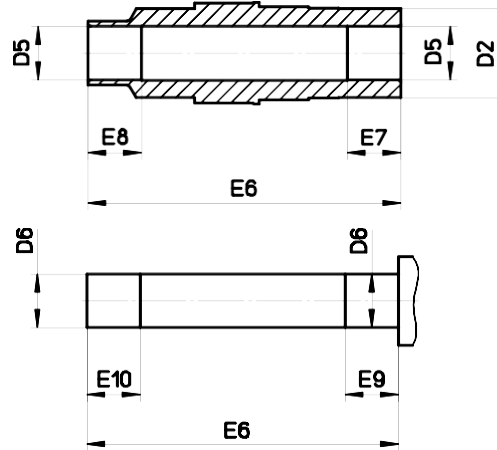
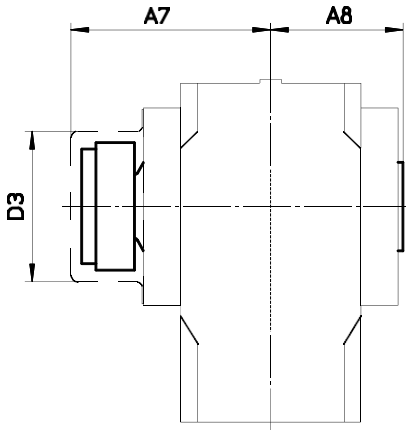
	A8	D1	D2	E3	E4	E5	F1	G1
K0	52.5	Ø20H7	30	105	14	-	6	22.8
K1	60	Ø25H7	40	120	15	-	8	28.3
K2	60	Ø25H7	45	120	15	-	8	28.3
K3	75	Ø30H7 Ø35H7	50	150	18	-	8 10	33.3 38.3
K4	87.5	Ø40H7	55	175	20	-	12	43.3
K5	105	Ø50H7	70	210	25	70	14	53.8
K6	120	Ø60H7	85	240	30	80	18	64.4
K7	150	Ø70H7	100	300	30	100	20	74.9
K8	175	Ø90H7	120	350	35	120	25	95.4
K9	205	Ø100H7	140	410	35	140	28	106.4

V - Output shaft with key



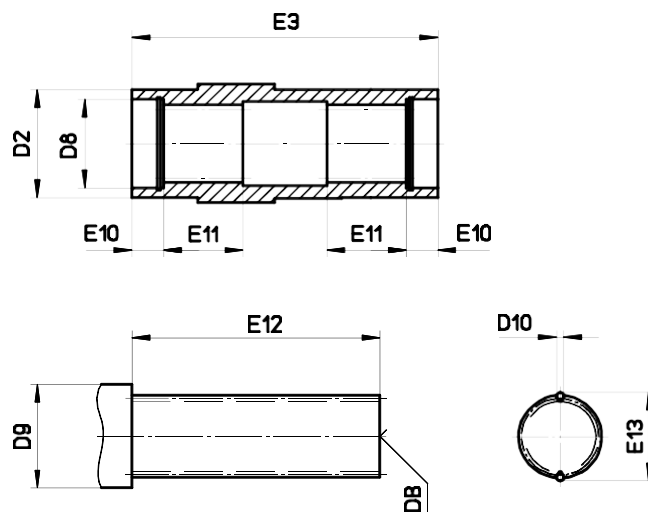
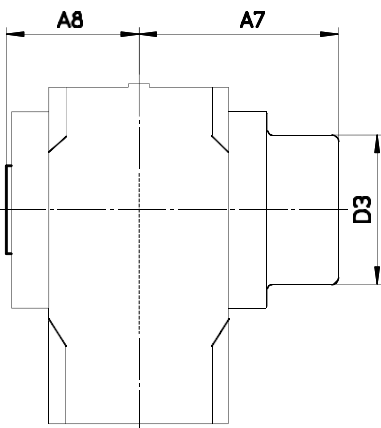
	A6	D	DB	E	E1	E2	F	GA
K02D	92.5	Ø20k6	M6	40	32	4	6	22.5
K02E	111	Ø20k6	M6	40	32	4	6	22.5
K12D	110	Ø25k6	M10	50	40	5	8	28
K12E	130	Ø25k6	M10	50	40	5	8	28
K2	120	Ø25k6	M10	50	40	5	8	28
K3	143	Ø30k6	M10	60	50	5	8	33
	153	Ø35k6	M12	70	60	5	10	38
K4	175	Ø40k6	M16	80	70	5	12	43
K5	213	Ø50k6	M16	100	80	10	14	53.5
K6	248	Ø60m6	M20	120	100	10	18	64
K7	300	Ø75m6	M20	140	125	7.5	20	79.5
K8	360	Ø90m6	M24	170	140	15	25	95
K9	432	Ø110m6	M24	210	180	15	28	116

S - Hollow shaft with shrink disc



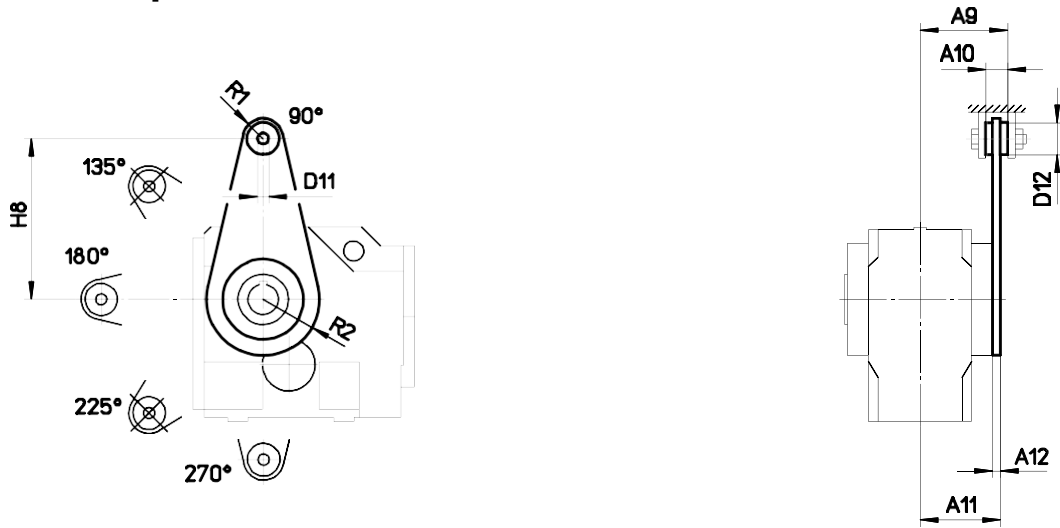
	A7	A8	D2	D3	D5	D6	E6	E7	E8	E9	E10
K0	86	52.5	30	64	Ø20H7	Ø20h6	126	25	25	27	27
K1	98	60	40	77	Ø25H7	Ø25h6	143	25	25	27	27
K2	98	60	45	77	Ø25H7	Ø25h6	143	25	25	27	27
K3	113	75	50	86	Ø30H7 Ø35H7	Ø30h6 Ø35h6	176	20	30	22	32
K4	127	87.5	55	96	Ø40H7	Ø40h6	202	20	40	22	42
K5	150	105	70	117	Ø50H7	Ø50h6	242	30	50	32	52
K6	172	120	85	148	Ø60H7	Ø60h6	274	40	60	42	62
K7	209	150	100	180	Ø70H7	Ø70h6	343	50	70	52	72
K8	247	175	120	225	Ø95H7	Ø95h6	402	60	80	62	82
K9	288	205	140	242	Ø110H7	Ø110h6	473	70	100	72	102

Z - Splined hollow shaft



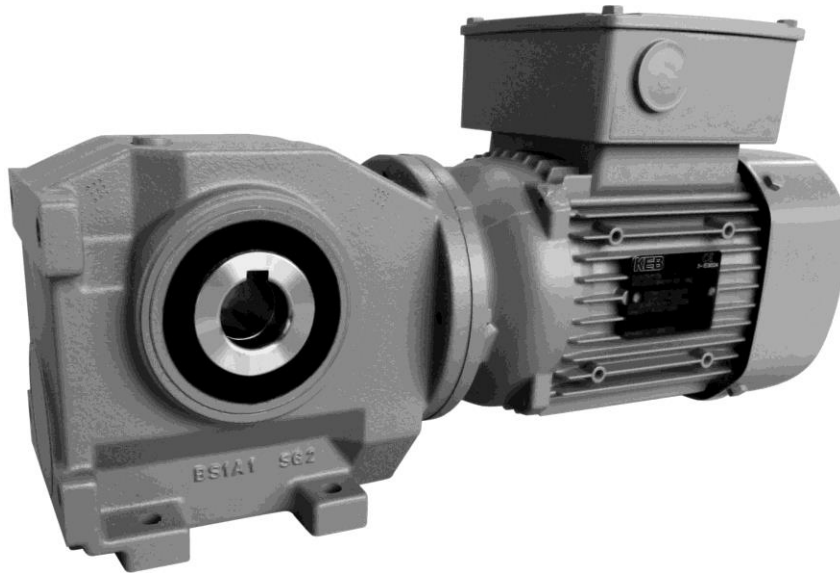
	DIN5480	A7	A8	D2	D3	D8	D9	D10	E3	E10	E11	E12	E13	DB
K2	30x1.25x30x22	97	60	45	77	35	40	2.75	120	18	25	88	33.05 -0.04	M10
K3	35x2x30x16	113	75	50	86	40	46	4	150	18	32	118	38.94 -0.04	M12
K4	40x2x30x18	127	87.5	55	96	42	50	4.5	175	23	42	140	45.08 -0.04	M16
K5	50x2x30x24	150	105	70	117	52	62	4	210	23	52	174	54.16 -0.05	M16
K6	65x2x30x31	172	120	85	148	70	82	4	240	25	62	195	68.99 -0.06	M20
K7	70x2x30x34	209	150	100	180	72	85	4	300	25	72	255	74.18 -0.06	M20
K8	85x3x30x27	247	175	120	225	90	105	6	350	27	88	298	91.02 -0.06	M20

T1 - Torque arm

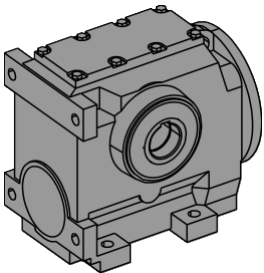


	A9	A10	A11	A12	D11	D12	H8	R1	R2
K0	60.5	15	55	4	11	32	100	20	43
K1	68.5	15	64	6	11	32	130	20	49.5
K2	68.5	15	64	6	11	32	130	20	49.5
K3	87	22	80	8	11	32	160	20	56
K4	99	22	92	8	11	32	200	23	61
K5	121	32	109	8	17	40	250	30	75
K6	155.5	66	130	15	16	32	300	30	89
K7	202	96	164	20	24	42	350	36	107
K8	229.5	96	194	25	24	42	450	36	130
K9	281.5	135	229	30	38	64	550	56	153

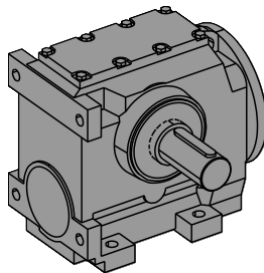
Helical worm gear units S



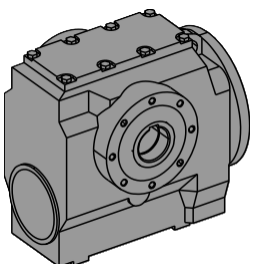
Type of construction



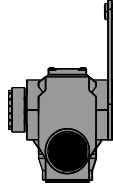
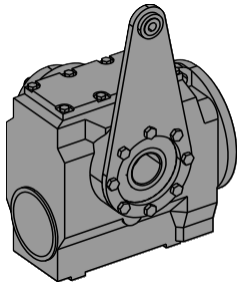
Foot mounted version
Hollow shaft with keyway
Example: S32**A**



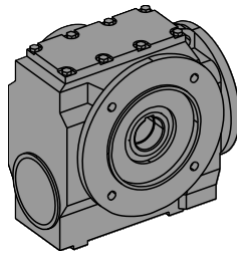
Foot mounted version
Output shaft with key
Example: S12**AV**



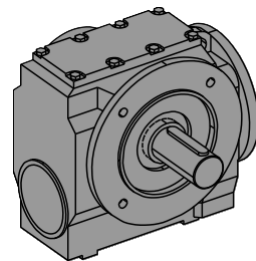
Shaft mounted version
Hollow shaft with keyway
Example: S22**B**



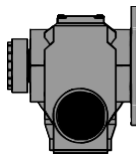
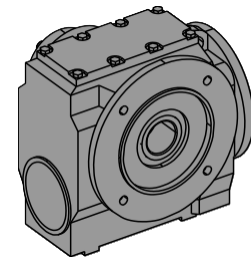
Shaft mounted version
Hollow shaft with shrink disc
Torque arm T1
Example: S22**BT1S**



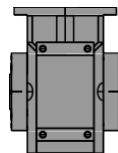
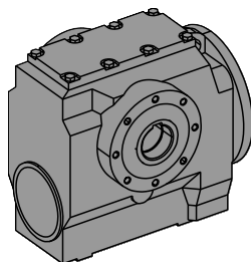
Flange mounted version
Hollow shaft with keyway
Example: S22**C**



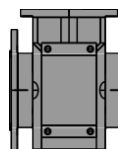
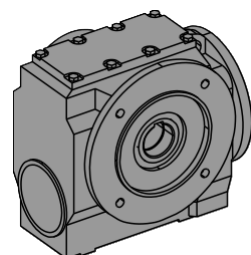
Flange mounted version
Output shaft with key
Example: S12**CV**



Flange mounted version
Hollow shaft with shrink disc
Example: S32**CS**



Shaft mounted version + foot area
Hollow shaft with keyway
Example: S22**D**



Flange mounted version + foot area
Hollow shaft with keyway
Example: S32**E**

Selection table - Gear units

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
S02			
189.00	7.4	58	0.10
159.35	8.8	58	0.11
135.95	10	57	0.12
117.00	12	56	0.14
101.35	14	55	0.15
88.20	16	53	0.16
77.00	18	52	0.18
69.00	20	69	0.21
58.18	24	67	0.24
49.63	28	66	0.27
42.71	33	64	0.30
37.00	38	62	0.34
32.20	43	60	0.37
28.11	50	58	0.41
25.00	56	63	0.44
21.08	66	61	0.50
17.98	78	59	0.56
15.48	90	57	0.63
13.41	104	55	0.70
12.50	112	67	0.87
11.67	120	53	0.77
10.54	133	65	1.00
10.19	137	51	0.85
8.99	156	63	1.13
7.74	181	61	1.25
6.70	209	59	1.30
5.83	240	57	1.30
5.09	275	55	1.30

i	n2 [1/min]	T2max [Nm]	P1max [kW]
S12G03			
9007.5	0.16	188	<0.05
7609.6	0.18	188	<0.05
6505.9	0.22	188	<0.05
5612.6	0.25	188	<0.05
4874.5	0.29	188	<0.05
4254.6	0.33	188	<0.05
3672.3	0.38	188	<0.05
3168.0	0.44	188	<0.05
2751.5	0.51	187	<0.05
2401.5	0.58	187	<0.05

i	n2 [1/min]	T2max [Nm]	P1max [kW]
S12G02			
2108.1	0.66	187	<0.05
1781.0	0.79	187	<0.05
1522.7	0.92	186	<0.05
1313.6	1.1	186	<0.05
1140.8	1.2	186	0.05
995.75	1.4	185	0.06
872.16	1.6	185	0.07
749.62	1.9	184	0.08
646.68	2.2	184	0.09
561.65	2.5	183	0.10
490.22	2.9	182	0.11
429.37	3.3	181	0.12
375.31	3.7	180	0.14
330.65	4.2	179	0.15
293.14	4.8	178	0.17
261.18	5.4	177	0.18
234.46	6.0	176	0.20
204.64	6.8	174	0.22
179.24	7.8	172	0.25

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
S12			
168.00	8.3	171	0.26
143.53	9.8	168	0.29
124.21	11	165	0.32
108.57	13	162	0.35
95.65	15	160	0.39
84.80	17	157	0.42
75.56	19	153	0.46
67.83	21	150	0.49
60.90	23	166	0.52
59.20	24	146	0.54
52.03	27	163	0.59
51.85	27	141	0.59
45.03	31	160	0.66
39.36	36	156	0.73
34.67	40	153	0.80
30.74	46	150	0.88
27.39	51	146	0.96
24.59	57	143	1.04
22.68	62	152	1.12
21.46	65	138	1.14
19.38	72	149	1.27
18.80	74	133	1.25
16.77	83	146	1.43
14.66	96	142	1.58
12.91	108	139	1.75
11.45	122	136	1.92
10.20	137	132	2.09
9.16	153	129	2.26
7.99	175	124	2.48
7.00	200	120	2.60

i	n2 [1/min]	T2max [Nm]	P1max [kW]
S22G13			
13901	0.10	340	<0.05
11784	0.12	340	<0.05
10114	0.14	340	<0.05
8761.0	0.16	340	<0.05
7643.7	0.18	340	<0.05
6705.1	0.21	340	<0.05
5905.6	0.24	340	<0.05
5193.0	0.27	340	<0.05
4456.7	0.31	340	<0.05
3860.7	0.36	340	<0.05
3368.3	0.42	340	<0.05

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
S22G12			
2998.2	0.47	340	<0.05
2561.5	0.55	340	<0.05
2216.7	0.63	340	<0.05
1937.6	0.72	340	0.05
1707.1	0.82	340	0.06
1513.4	0.93	335	0.07
1348.4	1.0	335	0.07
1210.5	1.2	335	0.08
1056.5	1.3	335	0.09
925.37	1.5	335	0.10
850.54	1.6	335	0.11
749.33	1.9	335	0.12
664.32	2.1	330	0.14
591.90	2.4	330	0.15
531.34	2.6	330	0.17
463.77	3.0	330	0.19
406.20	3.4	325	0.21
362.38	3.9	325	0.23
325.05	4.3	325	0.25
295.42	4.7	320	0.27
260.46	5.4	320	0.30
230.68	6.1	315	0.34
206.44	6.8	315	0.37
179.67	7.8	310	0.41

i	n2 [1/min]	T2max [Nm]	P1max [kW]
S22			
207.20	6.8	315	0.37
177.88	7.9	310	0.41
154.74	9.0	305	0.46
136.00	10	300	0.50
120.52	12	295	0.54
107.52	13	295	0.59
96.44	15	290	0.64
87.65	16	285	0.69
77.28	18	275	0.75
71.53	20	305	0.81
68.44	20	270	0.82
61.41	23	295	0.91
61.25	23	265	0.88
53.42	26	290	1.01
53.31	26	255	0.97
46.95	30	285	1.11
41.61	34	280	1.20
37.12	38	275	1.31
33.30	42	265	1.42
30.26	46	260	1.51
26.68	52	250	1.65
26.64	53	295	1.85
23.63	59	245	1.79
22.87	61	290	2.10
21.15	66	235	1.93
19.89	70	285	2.34
18.40	76	225	2.12
17.49	80	280	2.59
15.50	90	270	2.83
13.82	101	265	3.09
12.40	113	260	3.35
11.27	124	255	3.59
9.94	141	245	3.91
8.80	159	235	4.26
7.88	178	230	4.58
6.85	204	220	5.0

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
S32G13			
18745	0.075	665	<0.05
15891	0.088	665	<0.05
13638	0.10	665	<0.05
11814	0.12	665	<0.05
10307	0.14	665	<0.05
9041.7	0.15	665	<0.05
7963.6	0.18	665	<0.05
7002.7	0.20	665	<0.05
6009.8	0.23	665	<0.05
5206.1	0.27	665	<0.05
4542.1	0.31	660	<0.05

i	n2 [1/min]	T2max [Nm]	P1max [kW]
S32G12			
4043.0	0.35	660	<0.05
3454.1	0.41	660	0.06
2989.2	0.47	660	0.07
2612.8	0.54	660	0.08
2301.9	0.61	660	0.09
2040.8	0.69	660	0.10
1818.3	0.77	655	0.11
1632.3	0.86	655	0.12
1424.7	0.98	655	0.13
1247.9	1.1	655	0.15
1146.9	1.2	650	0.16
1010.5	1.4	650	0.18
895.82	1.6	650	0.20
798.16	1.8	645	0.22
716.51	2.0	645	0.25
625.38	2.2	640	0.28
547.76	2.6	635	0.31
492.61	2.8	635	0.33
445.64	3.1	630	0.36
406.20	3.4	625	0.39
362.38	3.9	625	0.42
325.05	4.3	620	0.47
294.91	4.7	615	0.51
261.33	5.4	610	0.56
230.03	6.1	600	0.62

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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S32

271.60	5.2	610	0.54
234.71	6.0	605	0.61
205.58	6.8	595	0.68
182.00	7.7	585	0.74
162.52	8.6	580	0.80
146.16	9.6	570	0.86
132.22	11	560	0.92
120.52	12	550	0.98
107.52	13	540	1.06
96.44	15	530	1.14
87.50	16	515	1.22
77.54	18	500	1.32
68.25	21	485	1.43
59.77	23	465	1.55
52.50	27	450	1.69
52.21	27	635	2.12
46.22	30	625	2.33
41.28	34	615	2.54
37.12	38	600	2.75
33.58	42	590	2.95
30.61	46	575	3.14
27.31	51	560	3.42
24.49	57	545	3.70
22.22	63	535	3.96
19.69	71	515	4.29
17.33	81	495	4.68
15.18	92	470	5.1
13.33	105	450	5.5

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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S42G23

20360	0.069	1530	<0.05
17395	0.080	1530	<0.05
15053	0.093	1530	<0.05
13158	0.11	1530	<0.05
11592	0.12	1530	<0.05
10277	0.14	1530	<0.05
9221.9	0.15	1530	0.05
8060.8	0.17	1530	0.06
7101.6	0.20	1530	0.07
6295.9	0.22	1530	0.08
5512.1	0.25	1530	0.09
4856.2	0.29	1520	0.10
4305.3	0.33	1520	0.11

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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S42G22

3878.1	0.36	1520	0.12
3329.4	0.42	1520	0.14
2896.2	0.48	1520	0.16
2545.5	0.55	1510	0.18
2255.8	0.62	1510	0.20
2012.4	0.70	1510	0.22
1805.1	0.78	1510	0.24
1640.6	0.85	1500	0.27
1446.4	0.97	1500	0.30
1281.1	1.1	1500	0.33
1156.1	1.2	1490	0.37
1064.2	1.3	1490	0.39
934.35	1.5	1480	0.44
838.10	1.7	1470	0.48
761.70	1.8	1470	0.52
671.56	2.1	1460	0.58
594.78	2.4	1450	0.64
536.78	2.6	1440	0.69
494.08	2.8	1430	0.73
441.60	3.2	1420	0.79
392.13	3.6	1410	0.86
384.81	3.6	1410	0.88
347.49	4.0	1390	0.96
343.94	4.1	1390	0.96
309.22	4.5	1380	1.05
305.41	4.6	1380	1.06
270.64	5.2	1360	1.17
264.91	5.3	1360	1.19
240.84	5.8	1350	1.29

i	n2 [1/min] n1=1400 1/min	T2max [Nm]	P1max [kW]
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S42

247.58	5.7	1350	1.26
220.00	6.4	1330	1.38
197.22	7.1	1310	1.49
178.08	7.9	1290	1.60
161.78	8.7	1270	1.71
147.91	9.5	1250	1.81
132.72	11	1220	1.93
119.78	12	1180	2.05
110.25	13	1160	2.16
98.54	14	1130	2.33
87.50	16	1090	2.51
77.54	18	1050	2.68
69.00	20	1000	2.84
59.37	24	1260	3.59
59.11	24	920	3.00
53.22	26	1390	4.38
52.14	27	915	3.37
48.05	29	1360	4.74
43.65	32	1320	5.0
39.91	35	1250	5.2
35.81	39	1250	5.7
32.32	43	1200	6.1
29.75	47	1140	6.2
26.59	53	1140	7.0
23.61	59	1080	7.4
20.92	67	1010	7.5
18.62	75	950	7.5
15.95	88	885	7.5
14.07	100	820	7.5

S02

i	is	n1=3400 1/min				n1=2800 1/min				n1=1700 1/min				n1=1400 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
189.00	1/63	18	52	0.18	0.55	15	54	0.16	0.53	9.0	57	0.11	0.49	7.4	58	0.10	0.47
159.35	1/63	21	50	0.20	0.57	18	52	0.17	0.55	11	57	0.13	0.50	8.8	58	0.11	0.49
135.95	1/63	25	48	0.22	0.58	21	51	0.19	0.56	13	56	0.14	0.51	10	57	0.12	0.50
117.00	1/63	29	46	0.24	0.59	24	49	0.21	0.58	15	54	0.16	0.53	12	56	0.14	0.51
101.35	1/63	34	44	0.26	0.60	28	47	0.23	0.59	17	53	0.17	0.54	14	55	0.15	0.52
88.20	1/63	39	42	0.28	0.61	32	45	0.25	0.60	19	51	0.19	0.56	16	53	0.16	0.54
77.00	1/63	44	40	0.30	0.62	36	43	0.27	0.61	22	50	0.20	0.57	18	52	0.18	0.55
69.00	1/23	49	58	0.40	0.75	41	61	0.35	0.73	25	67	0.25	0.70	20	69	0.21	0.68
58.18	1/23	58	56	0.45	0.76	48	59	0.40	0.75	29	65	0.28	0.71	24	67	0.24	0.70
49.63	1/23	69	53	0.49	0.77	56	56	0.44	0.76	34	63	0.31	0.72	28	66	0.27	0.71
42.71	1/23	80	51	0.54	0.78	66	54	0.48	0.77	40	61	0.35	0.73	33	64	0.30	0.72
37.00	1/23	92	48	0.58	0.79	76	52	0.52	0.78	46	59	0.38	0.74	38	62	0.34	0.73
32.20	1/23	106	46	0.63	0.79	87	49	0.56	0.79	53	57	0.42	0.75	43	60	0.37	0.74
28.11	1/23	121	43	0.68	0.80	100	47	0.61	0.79	60	55	0.46	0.76	50	58	0.41	0.75
25.00	3/25	136	51	0.75	0.87	112	54	0.73	0.87	68	61	0.51	0.85	56	63	0.44	0.83
21.08	3/25	161	49	0.75	0.88	133	52	0.75	0.87	81	59	0.58	0.85	66	61	0.50	0.84
17.98	3/25	189	46	0.75	0.88	156	49	0.75	0.88	95	56	0.65	0.86	78	59	0.56	0.85
15.48	3/25	220	44	0.75	0.89	181	47	0.75	0.88	110	54	0.72	0.87	90	57	0.63	0.86
13.41	3/25	254	41	0.75	0.89	209	45	0.75	0.88	127	52	0.75	0.87	104	55	0.70	0.86
12.50	6/25	272	55	0.75	0.92	224	58	0.75	0.92	136	65	0.75	0.91	112	67	0.75	0.90
11.67	3/25	291	39	0.75	0.89	240	42	0.75	0.89	146	50	0.75	0.87	120	53	0.75	0.87
10.54	6/25	323	52	0.75	0.93	266	56	0.75	0.92	161	63	0.75	0.91	133	65	0.75	0.90
10.19	3/25	334	37	0.75	0.90	275	40	0.75	0.89	167	48	0.75	0.88	137	51	0.75	0.87
8.99	6/25	378	49	0.75	0.93	311	53	0.75	0.93	189	60	0.75	0.92	156	63	0.75	0.91
7.74	6/25	439	47	0.75	0.94	362	50	0.75	0.93	220	58	0.75	0.92	181	61	0.75	0.92
6.70	6/25	507	44	0.75	0.94	418	48	0.75	0.93	254	56	0.75	0.92	209	59	0.75	0.92
5.83	6/25	583	42	0.75	0.94	480	45	0.75	0.94	291	54	0.75	0.92	240	57	0.75	0.92
5.09	6/25	668	39	0.75	0.94	550	43	0.75	0.94	334	52	0.75	0.93	275	55	0.75	0.92

S02

i	is	n1=900 1/min				n1=700 1/min				n1=500 1/min				n1=10 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
189.00	1/63	4.8	61	0.07	0.43	3.7	62	0.06	0.41	2.6	63	<0.05	0.39	0.053	65	<0.05	0.32
159.35	1/63	5.6	60	0.08	0.44	4.4	61	0.07	0.42	3.1	62	0.05	0.40	0.063	65	<0.05	0.32
135.95	1/63	6.6	59	0.09	0.46	5.1	61	0.08	0.43	3.7	62	0.06	0.41	0.074	65	<0.05	0.32
117.00	1/63	7.7	58	0.10	0.48	6.0	60	0.08	0.45	4.3	61	0.07	0.42	0.085	65	<0.05	0.32
101.35	1/63	8.9	58	0.11	0.49	6.9	59	0.09	0.46	4.9	61	0.07	0.43	0.099	65	<0.05	0.32
88.20	1/63	10	57	0.12	0.50	7.9	58	0.10	0.48	5.7	60	0.08	0.44	0.11	65	<0.05	0.32
77.00	1/63	12	56	0.14	0.51	9.1	57	0.11	0.49	6.5	59	0.09	0.46	0.13	65	<0.05	0.32
69.00	1/23	13	72	0.15	0.64	10	73	0.13	0.62	7.2	75	0.09	0.60	0.14	78	<0.05	0.51
58.18	1/23	15	71	0.18	0.65	12	72	0.14	0.63	8.6	74	0.11	0.61	0.17	78	<0.05	0.51
49.63	1/23	18	70	0.20	0.67	14	72	0.16	0.64	10	73	0.12	0.62	0.20	78	<0.05	0.51
42.71	1/23	21	68	0.22	0.69	16	70	0.18	0.66	12	73	0.14	0.63	0.23	78	<0.05	0.51
37.00	1/23	24	67	0.24	0.70	19	69	0.20	0.67	14	72	0.16	0.64	0.27	78	<0.05	0.51
32.20	1/23	28	66	0.27	0.71	22	68	0.22	0.69	16	71	0.18	0.65	0.31	78	<0.05	0.51
28.11	1/23	32	64	0.30	0.72	25	67	0.25	0.70	18	70	0.20	0.67	0.36	78	<0.05	0.51
25.00	3/25	36	66	0.31	0.80	28	67	0.25	0.79	20	69	0.19	0.77	0.40	72	<0.05	0.69
21.08	3/25	43	65	0.36	0.81	33	66	0.29	0.80	24	68	0.22	0.78	0.47	72	<0.05	0.69
17.98	3/25	50	64	0.41	0.82	39	66	0.33	0.80	28	67	0.25	0.79	0.56	72	<0.05	0.69
15.48	3/25	58	62	0.45	0.84	45	64	0.37	0.82	32	67	0.28	0.79	0.65	72	<0.05	0.69
13.41	3/25	67	61	0.51	0.84	52	63	0.42	0.83	37	66	0.32	0.80	0.75	72	<0.05	0.69
12.50	6/25	72	71	0.61	0.88	56	72	0.49	0.87	40	74	0.36	0.86	0.80	77	<0.05	0.80
11.67	3/25	77	59	0.56	0.85	60	62	0.46	0.84	43	65	0.36	0.81	0.86	72	<0.05	0.69
10.54	6/25	85	69	0.70	0.88	66	71	0.57	0.87	47	73	0.42	0.87	0.95	77	<0.05	0.80
10.19	3/25	88	57	0.62	0.86	69	61	0.52	0.85	49	64	0.40	0.82	0.98	72	<0.05	0.69
8.99	6/25	100	68	0.75	0.89	78	70	0.65	0.88	56	72	0.48	0.87	1.1	77	<0.05	0.80
7.74	6/25	116	66	0.75	0.90	90	69	0.74	0.89	65	71	0.55	0.87	1.3	77	<0.05	0.80
6.70	6/25	134	65	0.75	0.90	104	67	0.75	0.89	75	70	0.63	0.88	1.5	77	<0.05	0.80
5.83	6/25	154	63	0.75	0.91	120	66	0.75	0.90	86	69	0.70	0.88	1.7	77	<0.05	0.80
5.09	6/25	177	61	0.75	0.92	137	65	0.75	0.91	98	68	0.75	0.89	2.0	77	<0.05	0.80

S12

i	is	n1=3400 1/min				n1=2800 1/min				n1=1700 1/min				n1=1400 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
168.00	1/40	20	151	0.49	0.66	17	156	0.43	0.64	10	168	0.30	0.59	8.3	171	0.26	0.57
143.53	1/40	24	146	0.54	0.67	20	152	0.47	0.65	12	164	0.33	0.61	9.8	168	0.29	0.59
124.21	1/40	27	141	0.59	0.68	23	148	0.52	0.67	14	161	0.37	0.63	11	165	0.32	0.61
108.57	1/40	31	136	0.65	0.69	26	143	0.57	0.68	16	158	0.41	0.64	13	162	0.35	0.62
95.65	1/40	36	131	0.70	0.70	29	139	0.62	0.69	18	155	0.45	0.65	15	160	0.39	0.63
84.80	1/40	40	126	0.75	0.70	33	134	0.67	0.69	20	151	0.48	0.66	17	157	0.42	0.64
75.56	1/40	45	121	0.80	0.71	37	129	0.71	0.70	23	148	0.52	0.67	19	153	0.46	0.65
67.83	1/40	50	116	0.84	0.72	41	124	0.76	0.71	25	144	0.56	0.68	21	150	0.49	0.66
60.90	2/29	56	144	1.02	0.82	46	150	0.89	0.81	28	162	0.61	0.78	23	166	0.52	0.76
59.20	1/40	57	110	0.91	0.73	47	119	0.82	0.72	29	139	0.61	0.69	24	146	0.54	0.67
52.03	2/29	65	138	1.14	0.83	54	145	0.99	0.82	33	158	0.68	0.79	27	163	0.59	0.77
51.85	1/40	66	104	0.98	0.73	54	113	0.88	0.72	33	134	0.66	0.69	27	141	0.59	0.68
45.03	2/29	76	133	1.26	0.83	62	140	1.10	0.83	38	155	0.76	0.80	31	160	0.66	0.79
39.36	2/29	86	128	1.38	0.84	71	135	1.21	0.83	43	151	0.85	0.81	36	156	0.73	0.80
34.67	2/29	98	123	1.49	0.85	81	131	1.32	0.84	49	148	0.93	0.82	40	153	0.80	0.81
30.74	2/29	111	117	1.50	0.85	91	126	1.42	0.84	55	144	1.01	0.82	46	150	0.88	0.81
27.39	2/29	124	112	1.50	0.86	102	121	1.50	0.85	62	140	1.10	0.83	51	146	0.96	0.82
24.59	2/29	138	107	1.50	0.86	114	116	1.50	0.85	69	136	1.19	0.83	57	143	1.04	0.82
22.68	5/27	150	130	1.50	0.91	123	136	1.50	0.91	75	148	1.31	0.89	62	152	1.12	0.88
21.46	2/29	158	101	1.50	0.86	130	110	1.50	0.86	79	131	1.30	0.84	65	138	1.14	0.83
19.38	5/27	175	124	1.50	0.92	145	131	1.50	0.91	88	144	1.48	0.90	72	149	1.27	0.88
18.80	2/29	181	95	1.50	0.87	149	104	1.50	0.86	90	126	1.42	0.84	74	133	1.25	0.83
16.77	5/27	203	119	1.50	0.92	167	126	1.50	0.92	101	141	1.50	0.90	83	146	1.43	0.89
14.66	5/27	232	114	1.50	0.93	191	121	1.50	0.92	116	137	1.50	0.91	96	142	1.50	0.90
12.91	5/27	263	109	1.50	0.93	217	117	1.50	0.92	132	134	1.50	0.91	108	139	1.50	0.90
11.45	5/27	297	105	1.50	0.93	245	112	1.50	0.93	148	130	1.50	0.91	122	136	1.50	0.91
10.20	5/27	333	100	1.50	0.93	275	108	1.50	0.93	167	126	1.50	0.92	137	132	1.50	0.91
9.16	5/27	371	95	1.50	0.93	306	103	1.50	0.93	186	122	1.50	0.92	153	129	1.50	0.91
7.99	5/27	425	90	1.50	0.93	350	98	1.50	0.93	213	118	1.50	0.92	175	124	1.50	0.92
7.00	5/27	486	84	1.50	0.94	400	92	1.50	0.93	243	113	1.50	0.93	200	120	1.50	0.92

S12

i	is	n1=900 1/min				n1=700 1/min				n1=500 1/min				n1=10 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
168.00	1/40	5.4	177	0.18	0.54	4.2	179	0.15	0.52	3.0	182	0.11	0.50	0.060	188	<0.05	0.42
143.53	1/40	6.3	175	0.21	0.55	4.9	178	0.17	0.53	3.5	181	0.13	0.51	0.070	188	<0.05	0.42
124.21	1/40	7.2	173	0.23	0.56	5.6	176	0.19	0.54	4.0	179	0.14	0.52	0.081	188	<0.05	0.42
108.57	1/40	8.3	171	0.26	0.57	6.4	175	0.21	0.55	4.6	178	0.16	0.53	0.092	188	<0.05	0.42
95.65	1/40	9.4	169	0.28	0.58	7.3	173	0.24	0.56	5.2	177	0.18	0.54	0.10	188	<0.05	0.42
84.80	1/40	11	167	0.31	0.60	8.3	171	0.26	0.57	5.9	176	0.20	0.54	0.12	188	<0.05	0.42
75.56	1/40	12	164	0.33	0.61	9.3	169	0.28	0.58	6.6	174	0.22	0.55	0.13	188	<0.05	0.42
67.83	1/40	13	162	0.36	0.62	10	167	0.30	0.60	7.4	173	0.24	0.56	0.15	188	<0.05	0.42
60.90	2/29	15	173	0.36	0.73	11	175	0.29	0.72	8.2	178	0.22	0.70	0.16	185	<0.05	0.63
59.20	1/40	15	159	0.40	0.63	12	164	0.33	0.61	8.4	171	0.26	0.57	0.17	188	<0.05	0.42
52.03	2/29	17	171	0.42	0.74	13	174	0.33	0.73	9.6	177	0.25	0.71	0.19	185	<0.05	0.63
51.85	1/40	17	155	0.44	0.64	14	161	0.37	0.62	9.6	169	0.29	0.59	0.19	188	<0.05	0.42
45.03	2/29	20	168	0.47	0.75	16	172	0.38	0.74	11	175	0.28	0.72	0.22	185	<0.05	0.63
39.36	2/29	23	166	0.52	0.76	18	170	0.43	0.74	13	174	0.32	0.73	0.25	185	<0.05	0.63
34.67	2/29	26	164	0.58	0.77	20	168	0.47	0.75	14	173	0.36	0.73	0.29	185	<0.05	0.63
30.74	2/29	29	161	0.63	0.78	23	166	0.52	0.76	16	171	0.39	0.74	0.33	185	<0.05	0.63
27.39	2/29	33	158	0.69	0.79	26	164	0.57	0.77	18	170	0.43	0.75	0.37	185	<0.05	0.63
24.59	2/29	37	156	0.74	0.80	28	162	0.62	0.78	20	168	0.48	0.75	0.41	185	<0.05	0.63
22.68	5/27	40	159	0.77	0.86	31	161	0.61	0.85	22	164	0.45	0.84	0.44	171	<0.05	0.79
21.46	2/29	42	152	0.83	0.81	33	158	0.68	0.79	23	166	0.53	0.76	0.47	185	<0.05	0.63
19.38	5/27	46	157	0.88	0.86	36	160	0.70	0.86	26	163	0.52	0.85	0.52	171	<0.05	0.79
18.80	2/29	48	148	0.91	0.82	37	155	0.75	0.80	27	163	0.59	0.77	0.53	185	<0.05	0.63
16.77	5/27	54	154	1.00	0.87	42	158	0.80	0.86	30	161	0.59	0.85	0.60	171	<0.05	0.79
14.66	5/27	61	152	1.12	0.88	48	156	0.90	0.87	34	160	0.67	0.85	0.68	171	<0.05	0.79
12.91	5/27	70	150	1.24	0.88	54	154	1.01	0.87	39	159	0.75	0.86	0.77	171	<0.05	0.79
11.45	5/27	79	147	1.36	0.89	61	152	1.11	0.88	44	157	0.83	0.86	0.87	171	<0.05	0.79
10.20	5/27	88	144	1.49	0.90	69	150	1.22	0.88	49	156	0.92	0.87	0.98	171	<0.05	0.79
9.16	5/27	98	142	1.50	0.90	76	148	1.33	0.89	55	154	1.01	0.87	1.1	171	<0.05	0.79
7.99	5/27	113	138	1.50	0.90	88	144	1.48	0.90	63	152	1.13	0.88	1.3	171	<0.05	0.79
7.00	5/27	129	134	1.50	0.91	100	141	1.50	0.90	71	149	1.26	0.88	1.4	171	<0.05	0.79

S22

i	is	n1=3400 1/min				n1=2800 1/min				n1=1700 1/min				n1=1400 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
207.20	1/42	16	280	0.70	0.69	14	290	0.61	0.68	8.2	310	0.42	0.63	6.8	315	0.37	0.61
177.88	1/42	19	275	0.78	0.70	16	285	0.68	0.69	9.6	305	0.47	0.64	7.9	310	0.41	0.62
154.74	1/42	22	265	0.86	0.71	18	275	0.75	0.70	11	300	0.52	0.66	9.0	305	0.46	0.64
136.00	1/42	25	260	0.94	0.72	21	270	0.82	0.71	13	295	0.57	0.67	10	300	0.50	0.65
120.52	1/42	28	250	1.02	0.73	23	265	0.89	0.72	14	290	0.63	0.68	12	295	0.54	0.67
107.52	1/42	32	245	1.09	0.74	26	255	0.96	0.73	16	285	0.68	0.69	13	295	0.59	0.68
96.44	1/42	35	235	1.16	0.75	29	250	1.04	0.73	18	280	0.74	0.70	15	290	0.64	0.68
87.65	1/42	39	230	1.23	0.75	32	245	1.10	0.74	19	275	0.79	0.71	16	285	0.69	0.69
77.28	1/42	44	220	1.33	0.76	36	235	1.18	0.75	22	265	0.86	0.71	18	275	0.75	0.70
71.53	2/29	48	260	1.54	0.84	39	270	1.34	0.83	24	295	0.94	0.78	20	305	0.81	0.77
68.44	1/42	50	210	1.43	0.76	41	225	1.27	0.75	25	260	0.93	0.72	20	270	0.82	0.71
61.41	2/29	55	250	1.71	0.84	46	260	1.50	0.83	28	290	1.05	0.80	23	295	0.91	0.78
61.25	1/42	56	200	1.52	0.77	46	215	1.36	0.76	28	255	1.01	0.73	23	265	0.88	0.72
53.42	2/29	64	240	1.88	0.85	52	250	1.65	0.84	32	280	1.16	0.81	26	290	1.01	0.79
53.31	1/42	64	190	1.64	0.77	53	205	1.48	0.76	32	245	1.10	0.74	26	255	0.97	0.73
46.95	2/29	72	230	2.05	0.85	60	245	1.80	0.84	36	275	1.27	0.82	30	285	1.11	0.80
41.61	2/29	82	220	2.22	0.85	67	235	1.95	0.85	41	270	1.39	0.83	34	280	1.20	0.82
37.12	2/29	92	215	2.38	0.86	75	225	2.11	0.85	46	260	1.50	0.83	38	275	1.31	0.82
33.30	2/29	102	205	2.53	0.86	84	220	2.26	0.85	51	255	1.62	0.84	42	265	1.42	0.83
30.26	2/29	112	196	2.67	0.86	93	210	2.40	0.86	56	250	1.73	0.84	46	260	1.51	0.83
26.68	2/29	127	185	2.84	0.87	105	200	2.57	0.86	64	240	1.88	0.85	52	250	1.65	0.84
26.64	5/27	128	250	3.00	0.92	105	265	3.00	0.91	64	290	2.17	0.89	53	295	1.85	0.89
23.63	2/29	144	174	3.00	0.87	118	191	2.74	0.86	72	230	2.04	0.85	59	245	1.79	0.84
22.87	5/27	149	240	3.00	0.92	122	255	3.00	0.92	74	280	2.45	0.90	61	290	2.10	0.89
21.15	2/29	161	166	3.00	0.87	132	181	2.89	0.87	80	225	2.20	0.85	66	235	1.93	0.85
19.89	5/27	171	230	3.00	0.93	141	245	3.00	0.92	85	275	2.72	0.91	70	285	2.34	0.90
18.40	2/29	185	154	3.00	0.88	152	170	3.00	0.87	92	210	2.39	0.86	76	225	2.12	0.85
17.49	5/27	194	220	3.00	0.93	160	235	3.00	0.92	97	270	2.99	0.91	80	280	2.59	0.90
15.50	5/27	219	215	3.00	0.93	181	225	3.00	0.93	110	260	3.00	0.91	90	270	2.83	0.91
13.82	5/27	246	205	3.00	0.94	203	220	3.00	0.93	123	255	3.00	0.92	101	265	3.00	0.91
12.40	5/27	274	194	3.00	0.94	226	210	3.00	0.93	137	245	3.00	0.92	113	260	3.00	0.91
11.27	5/27	302	187	3.00	0.94	248	205	3.00	0.94	151	240	3.00	0.92	124	255	3.00	0.92
9.94	5/27	342	176	3.0	0.94	282	192	3.0	0.94	171	231	3.0	0.93	141	244	3.0	0.92
8.80	5/27	386	166	3.0	0.94	318	183	3.0	0.94	193	222	3.0	0.93	159	236	3.0	0.92
7.88	5/27	432	158	3.0	0.94	356	173	3.0	0.94	216	214	3.0	0.93	178	228	3.0	0.93
6.85	5/27	496	146	3.0	0.94	409	162	3.0	0.94	248	203	3.0	0.94	204	218	3.0	0.93

S22

i	is	n1=900 1/min				n1=700 1/min				n1=500 1/min				n1=10 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
207.20	1/42	4.3	325	0.25	0.58	3.4	325	0.20	0.56	2.4	330	0.16	0.54	0.048	340	<0.05	0.48
177.88	1/42	5.1	320	0.29	0.59	3.9	325	0.23	0.57	2.8	330	0.18	0.55	0.056	340	<0.05	0.48
154.74	1/42	5.8	320	0.32	0.60	4.5	325	0.26	0.58	3.2	325	0.20	0.56	0.065	340	<0.05	0.48
136.00	1/42	6.6	315	0.36	0.61	5.1	320	0.29	0.59	3.7	325	0.22	0.57	0.074	340	<0.05	0.48
120.52	1/42	7.5	310	0.40	0.62	5.8	320	0.32	0.60	4.1	325	0.24	0.58	0.083	340	<0.05	0.48
107.52	1/42	8.4	310	0.43	0.63	6.5	315	0.36	0.61	4.7	320	0.27	0.58	0.093	340	<0.05	0.48
96.44	1/42	9.3	305	0.47	0.64	7.3	315	0.39	0.61	5.2	320	0.29	0.59	0.10	340	<0.05	0.48
87.65	1/42	10	300	0.50	0.65	8.0	310	0.42	0.62	5.7	320	0.32	0.60	0.11	340	<0.05	0.48
77.28	1/42	12	295	0.54	0.67	9.1	305	0.46	0.64	6.5	315	0.35	0.60	0.13	340	<0.05	0.48
71.53	2/29	13	315	0.56	0.75	9.8	320	0.45	0.73	7.0	325	0.34	0.71	0.14	340	<0.05	0.64
68.44	1/42	13	290	0.59	0.68	10	300	0.50	0.65	7.3	315	0.39	0.61	0.15	340	<0.05	0.48
61.41	2/29	15	310	0.63	0.75	11	315	0.51	0.74	8.1	325	0.38	0.72	0.16	340	<0.05	0.64
61.25	1/42	15	290	0.65	0.68	11	300	0.54	0.66	8.2	310	0.42	0.63	0.16	340	<0.05	0.48
53.42	2/29	17	310	0.71	0.76	13	315	0.58	0.75	9.4	320	0.43	0.73	0.19	340	<0.05	0.64
53.31	1/42	17	280	0.71	0.70	13	290	0.59	0.68	9.4	305	0.47	0.64	0.19	340	<0.05	0.48
46.95	2/29	19	305	0.79	0.77	15	310	0.64	0.76	11	320	0.48	0.74	0.21	340	<0.05	0.64
41.61	2/29	22	300	0.87	0.78	17	310	0.71	0.76	12	315	0.53	0.75	0.24	340	<0.05	0.64
37.12	2/29	24	295	0.95	0.79	19	305	0.78	0.77	13	315	0.59	0.75	0.27	340	<0.05	0.64
33.30	2/29	27	290	1.03	0.80	21	300	0.85	0.78	15	310	0.65	0.76	0.30	340	<0.05	0.64
30.26	2/29	30	285	1.10	0.80	23	295	0.92	0.78	17	310	0.70	0.76	0.33	340	<0.05	0.64
26.68	2/29	34	280	1.20	0.82	26	290	1.01	0.79	19	305	0.78	0.77	0.37	340	<0.05	0.64
26.64	5/27	34	310	1.25	0.87	26	315	1.00	0.87	19	305	0.71	0.84	0.38	285	<0.05	0.79
23.63	2/29	38	270	1.32	0.82	30	285	1.10	0.80	21	300	0.86	0.78	0.42	340	<0.05	0.64
22.87	5/27	39	305	1.44	0.88	31	305	1.13	0.87	22	300	0.81	0.85	0.44	280	<0.05	0.79
21.15	2/29	43	265	1.43	0.83	33	280	1.19	0.82	24	295	0.93	0.78	0.47	340	<0.05	0.64
19.89	5/27	45	300	1.63	0.88	35	305	1.28	0.87	25	300	0.92	0.86	0.50	275	<0.05	0.79
18.40	2/29	49	255	1.57	0.84	38	270	1.31	0.82	27	290	1.04	0.80	0.54	340	<0.05	0.64
17.49	5/27	51	300	1.82	0.88	40	300	1.43	0.88	29	295	1.02	0.87	0.57	270	<0.05	0.79
15.50	5/27	58	295	2.01	0.89	45	295	1.59	0.88	32	295	1.14	0.87	0.65	265	<0.05	0.79
13.82	5/27	65	290	2.20	0.89	51	290	1.74	0.88	36	285	1.24	0.88	0.72	260	<0.05	0.79
12.40	5/27	73	285	2.40	0.90	56	285	1.90	0.89	40	285	1.36	0.88	0.81	255	<0.05	0.79
11.27	5/27	80	280	2.58	0.90	62	290	2.12	0.89	44	305	1.60	0.88	0.89	315	<0.05	0.79
9.94	5/27	91	270	2.83	0.91	70	285	2.35	0.90	50	300	1.78	0.88	1.0	300	<0.05	0.79
8.80	5/27	102	265	3.00	0.91	80	280	2.58	0.90	57	295	1.97	0.89	1.1	290	<0.05	0.79
7.88	5/27	114	260	3.00	0.91	89	275	2.79	0.91	63	290	2.16	0.89	1.3	335	0.06	0.79
6.85	5/27	131	250	3.00	0.92	102	265	3.00	0.91	73	285	2.41	0.90	1.5	320	0.06	0.79

S32

i	is	n1=3400 1/min				n1=2800 1/min				n1=1700 1/min				n1=1400 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
271.60	1/42	13	545	1.03	0.69	10	565	0.91	0.67	6.3	600	0.63	0.62	5.2	610	0.54	0.61
234.71	1/42	14	530	1.14	0.70	12	550	0.99	0.69	7.2	590	0.71	0.63	6.0	605	0.61	0.62
205.58	1/42	17	515	1.25	0.71	14	535	1.09	0.70	8.3	580	0.78	0.65	6.8	595	0.68	0.63
182.00	1/42	19	500	1.35	0.72	15	520	1.19	0.71	9.3	570	0.85	0.66	7.7	585	0.74	0.64
162.52	1/42	21	485	1.45	0.73	17	510	1.28	0.72	10	560	0.91	0.67	8.6	580	0.80	0.65
146.16	1/42	23	470	1.55	0.74	19	495	1.37	0.72	12	550	0.98	0.69	9.6	570	0.86	0.66
132.22	1/42	26	455	1.65	0.74	21	480	1.46	0.73	13	540	1.05	0.69	11	560	0.92	0.67
120.52	1/42	28	440	1.75	0.75	23	470	1.54	0.74	14	530	1.12	0.70	12	550	0.98	0.69
107.52	1/42	32	425	1.87	0.75	26	455	1.66	0.74	16	520	1.21	0.71	13	540	1.06	0.70
96.44	1/42	35	405	1.98	0.76	29	440	1.78	0.75	18	505	1.30	0.72	15	530	1.14	0.70
87.50	1/42	39	390	2.08	0.77	32	425	1.88	0.75	19	495	1.38	0.73	16	515	1.22	0.71
77.54	1/42	44	375	2.21	0.77	36	400	2.00	0.76	22	475	1.49	0.73	18	500	1.32	0.72
68.25	1/42	50	350	2.35	0.78	41	385	2.14	0.77	25	460	1.62	0.74	21	485	1.43	0.73
59.77	1/42	57	330	2.52	0.78	47	360	2.27	0.78	28	440	1.76	0.75	23	465	1.55	0.74
52.50	1/42	65	310	2.66	0.79	53	340	2.44	0.78	32	420	1.89	0.75	27	450	1.69	0.74
52.21	3/32	65	530	4.00	0.89	54	555	3.53	0.88	33	615	2.47	0.85	27	635	2.12	0.84
46.22	3/32	74	510	4.00	0.89	61	540	3.86	0.89	37	605	2.70	0.86	30	625	2.33	0.85
41.28	3/32	82	490	4.00	0.90	68	520	4.00	0.89	41	590	2.93	0.87	34	615	2.54	0.86
37.12	3/32	92	475	4.00	0.90	75	505	4.00	0.89	46	575	3.14	0.88	38	600	2.75	0.86
33.58	3/32	101	455	4.00	0.90	83	490	4.00	0.90	51	565	3.38	0.88	42	590	2.95	0.87
30.61	3/32	111	440	4.00	0.90	91	475	4.00	0.90	56	550	3.63	0.88	46	575	3.14	0.88
27.31	3/32	125	420	4.00	0.91	103	455	4.00	0.90	62	535	3.93	0.89	51	560	3.42	0.88
24.49	3/32	139	400	4.00	0.91	114	435	4.00	0.90	69	515	4.00	0.89	57	545	3.70	0.88
22.22	3/32	153	385	4.00	0.91	126	420	4.00	0.91	77	505	4.00	0.89	63	535	3.96	0.89
19.69	3/32	173	360	4.00	0.92	142	395	4.00	0.91	86	485	4.00	0.90	71	515	4.00	0.89
17.33	3/32	196	335	4.00	0.92	162	375	4.00	0.91	98	460	4.00	0.90	81	495	4.00	0.89
15.18	3/32	224	315	4.00	0.92	184	345	4.00	0.92	112	440	4.00	0.90	92	470	4.00	0.90
13.33	3/32	255	290	4.00	0.92	210	325	4.00	0.92	128	415	4.00	0.91	105	450	4.00	0.90

S32

i	is	n1=900 1/min				n1=700 1/min				n1=500 1/min				n1=10 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
271.60	1/42	3.3	630	0.38	0.58	2.6	635	0.31	0.56	1.8	645	0.23	0.53	0.037	665	<0.05	0.48
234.71	1/42	3.8	625	0.42	0.59	3.0	635	0.35	0.57	2.1	640	0.26	0.54	0.043	665	<0.05	0.48
205.58	1/42	4.4	620	0.47	0.60	3.4	630	0.38	0.58	2.4	640	0.29	0.55	0.049	665	<0.05	0.48
182.00	1/42	4.9	615	0.52	0.61	3.8	625	0.42	0.59	2.7	635	0.32	0.56	0.055	665	<0.05	0.48
162.52	1/42	5.5	610	0.57	0.61	4.3	620	0.47	0.60	3.1	630	0.35	0.57	0.062	665	<0.05	0.48
146.16	1/42	6.2	600	0.62	0.62	4.8	615	0.51	0.60	3.4	630	0.38	0.59	0.068	665	<0.05	0.48
132.22	1/42	6.8	595	0.68	0.63	5.3	610	0.55	0.61	3.8	625	0.42	0.59	0.076	665	<0.05	0.48
120.52	1/42	7.5	590	0.72	0.64	5.8	605	0.60	0.62	4.1	620	0.45	0.60	0.083	665	<0.05	0.48
107.52	1/42	8.4	580	0.79	0.65	6.5	600	0.65	0.63	4.7	615	0.50	0.60	0.093	665	<0.05	0.48
96.44	1/42	9.3	570	0.85	0.66	7.3	590	0.71	0.63	5.2	610	0.54	0.61	0.10	665	<0.05	0.48
87.50	1/42	10	565	0.90	0.67	8.0	585	0.76	0.64	5.7	605	0.59	0.62	0.11	665	<0.05	0.48
77.54	1/42	12	550	0.98	0.69	9.0	575	0.83	0.66	6.4	600	0.65	0.62	0.13	665	<0.05	0.48
68.25	1/42	13	540	1.07	0.70	10	565	0.90	0.67	7.3	590	0.71	0.64	0.15	665	<0.05	0.48
59.77	1/42	15	525	1.17	0.71	12	550	0.98	0.69	8.4	580	0.79	0.65	0.17	665	<0.05	0.48
52.50	1/42	17	510	1.27	0.72	13	535	1.08	0.70	9.5	570	0.86	0.66	0.19	665	<0.05	0.48
52.21	3/32	17	665	1.46	0.83	13	680	1.17	0.82	9.6	695	0.88	0.79	0.19	730	<0.05	0.73
46.22	3/32	19	660	1.62	0.83	15	675	1.30	0.82	11	690	0.98	0.80	0.22	730	<0.05	0.73
41.28	3/32	22	650	1.78	0.83	17	665	1.43	0.83	12	685	1.08	0.81	0.24	730	<0.05	0.73
37.12	3/32	24	645	1.95	0.84	19	660	1.57	0.83	13	680	1.17	0.82	0.27	730	<0.05	0.73
33.58	3/32	27	635	2.12	0.84	21	655	1.72	0.83	15	675	1.28	0.82	0.30	730	<0.05	0.73
30.61	3/32	29	625	2.28	0.85	23	650	1.86	0.84	16	670	1.39	0.82	0.33	730	<0.05	0.73
27.31	3/32	33	615	2.49	0.85	26	640	2.04	0.84	18	665	1.53	0.83	0.37	730	<0.05	0.73
24.49	3/32	37	605	2.70	0.86	29	630	2.23	0.85	20	655	1.69	0.83	0.41	730	<0.05	0.73
22.22	3/32	41	590	2.89	0.87	32	620	2.40	0.85	23	650	1.83	0.84	0.45	730	<0.05	0.73
19.69	3/32	46	575	3.14	0.88	36	610	2.63	0.86	25	640	2.02	0.84	0.51	730	0.05	0.73
17.33	3/32	52	560	3.45	0.88	40	595	2.89	0.87	29	630	2.24	0.85	0.58	730	0.06	0.73
15.18	3/32	59	540	3.80	0.89	46	575	3.16	0.88	33	615	2.49	0.85	0.66	730	0.07	0.73
13.33	3/32	68	520	4.00	0.89	53	560	3.48	0.88	38	600	2.74	0.86	0.75	730	0.08	0.73

S42

i	is	n1=3400 1/min				n1=2800 1/min				n1=1700 1/min				n1=1400 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
247.58	1/42	14	1140	2.28	0.72	11	1190	2.01	0.70	6.9	1320	1.46	0.65	5.7	1350	1.26	0.64
220.00	1/42	15	1100	2.46	0.73	13	1160	2.17	0.71	7.7	1290	1.59	0.66	6.4	1330	1.38	0.64
197.22	1/42	17	1070	2.62	0.74	14	1130	2.33	0.72	8.6	1270	1.71	0.67	7.1	1310	1.49	0.65
178.08	1/42	19	1030	2.78	0.74	16	1100	2.48	0.73	9.5	1240	1.82	0.68	7.9	1290	1.60	0.66
161.78	1/42	21	1000	2.94	0.75	17	1070	2.62	0.74	11	1220	1.93	0.69	8.7	1270	1.71	0.67
147.91	1/42	23	970	3.08	0.76	19	1040	2.76	0.74	11	1190	2.03	0.71	9.5	1250	1.81	0.68
132.72	1/42	26	935	3.28	0.76	21	1000	2.95	0.75	13	1160	2.18	0.71	11	1220	1.93	0.69
119.78	1/42	28	900	3.48	0.77	23	965	3.11	0.76	14	1130	2.33	0.72	12	1180	2.05	0.71
110.25	1/42	31	865	3.62	0.77	25	935	3.26	0.76	15	1110	2.45	0.73	13	1160	2.16	0.71
98.54	1/42	35	820	3.81	0.78	28	895	3.48	0.77	17	1070	2.62	0.74	14	1130	2.33	0.72
87.50	1/42	39	775	4.03	0.78	32	850	3.69	0.77	19	1030	2.81	0.75	16	1090	2.51	0.73
77.54	1/42	44	730	4.25	0.79	36	800	3.88	0.78	22	985	3.01	0.75	18	1050	2.68	0.74
69.00	1/42	49	685	4.46	0.79	41	760	4.11	0.78	25	945	3.20	0.76	20	1000	2.84	0.75
59.37	3/34	57	1150	7.5	0.91	47	1220	6.7	0.90	29	1260	4.32	0.87	24	1260	3.59	0.87
59.11	1/42	58	630	4.79	0.79	47	695	4.37	0.79	29	895	3.50	0.77	24	920	3.00	0.76
53.22	3/34	64	1110	7.5	0.91	53	1180	7.2	0.90	32	1340	5.1	0.88	26	1390	4.38	0.87
52.14	1/42	65	585	4.99	0.80	54	655	4.65	0.79	33	845	3.72	0.77	27	915	3.37	0.77
48.05	3/34	71	1070	7.5	0.91	58	1150	7.5	0.91	35	1310	5.5	0.89	29	1360	4.74	0.88
43.65	3/34	78	1040	7.5	0.91	64	1110	7.5	0.91	39	1280	5.8	0.89	32	1320	5.0	0.88
39.91	3/34	85	1000	7.5	0.91	70	1080	7.5	0.91	43	1250	6.2	0.90	35	1250	5.2	0.89
35.81	3/34	95	960	7.5	0.91	78	1040	7.5	0.91	47	1210	6.7	0.90	39	1250	5.7	0.89
32.32	3/34	105	925	7.5	0.91	87	995	7.5	0.91	53	1180	7.2	0.90	43	1200	6.1	0.90
29.75	3/34	114	890	7.5	0.92	94	965	7.5	0.91	57	1140	7.5	0.91	47	1140	6.2	0.90
26.59	3/34	128	840	7.5	0.92	105	925	7.5	0.91	64	1110	7.5	0.91	53	1140	7.0	0.90
23.61	3/34	144	790	7.5	0.92	119	875	7.5	0.92	72	1070	7.5	0.91	59	1080	7.4	0.91
20.92	3/34	163	740	7.5	0.93	134	820	7.5	0.92	81	1010	7.5	0.91	67	1010	7.5	0.91
18.62	3/34	183	695	7.5	0.93	150	775	7.5	0.92	91	950	7.5	0.91	75	950	7.5	0.91
15.95	3/34	213	640	7.5	0.93	176	705	7.5	0.93	107	885	7.5	0.91	88	885	7.5	0.91

S42

i	is	n1=900 1/min				n1=700 1/min				n1=500 1/min				n1=10 1/min			
		n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η	n2 [1/min]	T2max [Nm]	P1max [kW]	η
247.58	1/42	3.6	1410	0.88	0.61	2.8	1430	0.73	0.58	2.0	1460	0.56	0.55	0.040	1530	<0.05	0.48
220.00	1/42	4.1	1390	0.97	0.62	3.2	1420	0.80	0.59	2.3	1450	0.62	0.56	0.045	1530	<0.05	0.48
197.22	1/42	4.6	1380	1.06	0.62	3.5	1410	0.86	0.61	2.5	1440	0.67	0.57	0.051	1530	<0.05	0.48
178.08	1/42	5.1	1370	1.15	0.63	3.9	1400	0.94	0.61	2.8	1430	0.73	0.58	0.056	1530	<0.05	0.48
161.78	1/42	5.6	1350	1.24	0.63	4.3	1390	1.01	0.62	3.1	1420	0.78	0.59	0.062	1530	<0.05	0.48
147.91	1/42	6.1	1340	1.33	0.64	4.7	1380	1.09	0.62	3.4	1410	0.83	0.60	0.068	1530	<0.05	0.48
132.72	1/42	6.8	1320	1.44	0.65	5.3	1360	1.19	0.63	3.8	1400	0.90	0.61	0.075	1530	<0.05	0.48
119.78	1/42	7.5	1300	1.55	0.66	5.8	1340	1.29	0.64	4.2	1390	0.98	0.62	0.083	1530	<0.05	0.48
110.25	1/42	8.2	1280	1.65	0.67	6.3	1330	1.38	0.64	4.5	1380	1.05	0.62	0.091	1530	<0.05	0.48
98.54	1/42	9.1	1250	1.77	0.68	7.1	1310	1.49	0.65	5.1	1370	1.16	0.63	0.10	1530	<0.05	0.48
87.50	1/42	10	1220	1.91	0.69	8.0	1290	1.62	0.66	5.7	1350	1.27	0.64	0.11	1530	<0.05	0.48
77.54	1/42	12	1190	2.04	0.71	9.0	1260	1.76	0.68	6.4	1330	1.39	0.64	0.13	1530	<0.05	0.48
69.00	1/42	13	1000	1.91	0.72	10	1000	1.54	0.69	7.2	1000	1.16	0.65	0.14	1000	<0.05	0.48
59.37	3/34	15	1260	2.34	0.85	12	1260	1.85	0.84	8.4	1260	1.36	0.81	0.17	1260	<0.05	0.76
59.11	1/42	15	920	2.02	0.73	12	920	1.61	0.71	8.5	920	1.22	0.67	0.17	920	<0.05	0.48
53.22	3/34	17	1460	3.03	0.86	13	1470	2.39	0.85	9.4	1430	1.71	0.82	0.19	1320	<0.05	0.76
52.14	1/42	17	1070	2.62	0.74	13	1150	2.25	0.72	9.6	1240	1.83	0.68	0.19	1530	0.06	0.48
48.05	3/34	19	1450	3.31	0.86	15	1460	2.61	0.85	10	1420	1.86	0.83	0.21	1300	<0.05	0.76
43.65	3/34	21	1320	3.31	0.86	16	1320	2.59	0.85	11	1320	1.89	0.84	0.23	1280	<0.05	0.76
39.91	3/34	23	1250	3.41	0.87	18	1250	2.68	0.86	13	1250	1.94	0.84	0.25	1250	<0.05	0.76
35.81	3/34	25	1250	3.78	0.87	20	1250	2.97	0.86	14	1250	2.15	0.85	0.28	1250	<0.05	0.76
32.32	3/34	28	1200	4.00	0.87	22	1200	3.15	0.86	15	1200	2.28	0.85	0.31	1200	0.05	0.76
29.75	3/34	30	1140	4.12	0.88	24	1140	3.24	0.87	17	1140	2.34	0.86	0.34	1140	0.05	0.76
26.59	3/34	34	1140	4.57	0.88	26	1140	3.61	0.87	19	1140	2.61	0.86	0.38	1140	0.06	0.76
23.61	3/34	38	1080	4.84	0.89	30	1080	3.82	0.88	21	1080	2.78	0.86	0.42	1080	0.06	0.76
20.92	3/34	43	1010	5.1	0.90	33	1010	4.01	0.88	24	1010	2.91	0.87	0.48	1010	0.07	0.76
18.62	3/34	48	950	5.3	0.90	38	950	4.20	0.89	27	950	3.06	0.87	0.54	950	0.07	0.76
15.95	3/34	56	885	5.8	0.91	44	885	4.52	0.90	31	885	3.30	0.88	0.63	885	0.08	0.76

Selection table - Geared motors

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
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0.12 kW

S22G12A DM63K4					22
3.0	215	1.55	463.77		
3.4	191	1.70	406.20		
3.8	172	1.90	362.38		

S12G02A DM63K4					15
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2.8	200	0.90	490.22		
3.2	180	1.00	429.37		
3.7	161	1.10	375.31		
4.2	144	1.25	330.65		
4.7	129	1.40	293.14		
5.3	117	1.50	261.18		
5.9	106	1.65	234.46		
6.7	94	1.85	204.64		

S02A DM63K4					8
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7.3	74	0.80	189.00		
8.7	64	0.90	159.35		
10	56	1.00	135.95		
12	49	1.15	117.00		
14	44	1.25	101.35		
16	39	1.35	88.20		
18	35	1.50	77.00		
20	39	1.75	69.00		
24	34	2.0	58.18		
28	29	2.3	49.63		
32	26	2.5	42.71		
37	22	2.8	37.00		
43	20	3.0	32.20		
49	17	3.3	28.11		
55	17	3.6	25.00		
65	15	4.1	21.08		
77	13	4.7	17.98		
89	11	5.2	15.48		
103	9.6	5.7	13.41		
110	9.3	7.2	12.50		
118	8.4	6.3	11.67		
131	7.9	8.2	10.54		
135	7.4	7.0	10.19		
153	6.8	9.3	8.99		
178	5.9	10	7.74		
206	5.1	12	6.70		
237	4.5	13	5.83		
271	3.9	14	5.09		

0.18 kW

S32G12A DM63G4					30
2.8	345	1.85	492.61		
3.1	320	2.00	445.64		

S22G12A DM63G4					22
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3.0	320	1.05	463.77		
3.4	285	1.15	406.20		
3.8	260	1.25	362.38		
4.2	235	1.40	325.05		
4.7	215	1.50	295.42		
5.3	192	1.65	260.46		
6.0	172	1.85	230.68		
6.7	156	2.0	206.44		

S22A DM63G4					17
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6.7	157	2.0	207.20		
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S12G02A DM63G4					16
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4.2	215	0.85	330.65		
4.7	194	0.90	293.14		
5.3	175	1.00	261.18		
5.9	159	1.10	234.46		
6.7	141	1.25	204.64		
7.7	126	1.35	179.24		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
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0.18 kW

S12A DM63G4					12
8.2	119	1.45	168.00		
9.6	105	1.60	143.53		
11	93	1.75	124.21		
13	84	1.95	108.57		

S02A DM63G4					8
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14	66	0.85	101.35		
16	59	0.90	88.20		
18	53	1.00	77.00		
20	58	1.20	69.00		
24	50	1.35	58.18		
28	44	1.50	49.63		
32	38	1.70	42.71		
37	34	1.85	37.00		
43	30	2.0	32.20		
49	26	2.2	28.11		
55	26	2.4	25.00		
65	22	2.8	21.08		
77	19	3.1	17.98		
89	17	3.4	15.48		
103	14	3.8	13.41		
110	14	4.8	12.50		
118	13	4.2	11.67		
131	12	5.5	10.54		
135	11	4.6	10.19		
153	10	6.2	8.99		
178	8.9	6.9	7.74		
206	7.7	7.7	6.70		
237	6.7	8.6	5.83		
271	5.9	9.4	5.09		

0.25 kW

S32G12A DM71K4					31
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2.9	475	1.35	492.61		
3.2	435	1.45	445.64		
3.5	405	1.55	406.20		
3.9	365	1.70	362.38		
4.3	330	1.90	325.05		
4.8	300	2.0	294.91		

S22G12A DM71K4					23
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3.5	390	0.85	406.20		
3.9	350	0.90	362.38		
4.3	320	1.00	325.05		
4.8	290	1.10	295.42		
5.4	260	1.20	260.46		
6.1	235	1.35	230.68		
6.8	215	1.50	206.44		
7.8	189	1.65	179.67		

S22A DM71K4					18
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6.8	215	1.45	207.20		
7.9	187	1.65	177.88		
9.1	167	1.85	154.74		
10	150	2.0	136.00		

S12G02A DM71K4					17
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6.0	215	0.80	234.46		
6.9	193	0.90	204.64		
7.9	172	1.00	179.24		

S12A DM71K4					13
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8.4	163	1.05	168.00		
9.8	143	1.15	143.53		
11	128	1.30	124.21		
13	114	1.40	108.57		
15	102	1.55	95.65		
17	92	1.70	84.80		
19	83	1.85	75.56		
21	76	2.00	67.83		

Type	n2 [1/min]	T2 [Nm]	cG	i	-kg
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0.25 kW

S02A DM71K4					9
20	80	0.85	69.00		
24	69	1.00	58.18		
28	60	1.10	49.63		
33	52	1.20	42.71		
38	46	1.35	37.00		
44	40	1.50	32.20		
50	36	1.65	28.11		
56	35	1.75	25.00		
67	30	2.0	21.08		
78	26	2.3	17.98		
91	23	2.5	15.48		
105	20	2.8	13.41		
113	19	3.5	12.50		
121	17	3.1	11.67		
134	16	4.0	10.54		
138	15	3.4	10.19		
157	14	4.5	8.99		
182	12	5.0	7.74		
210	10	5.6	6.70		
242	9.1	6.3	5.83		
277	8.0	6.9	5.09		

S02A DM71K4					9
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20	80	0.85	69.00		
24	69	1.00	58.18		
28	60	1.10	49.63		
33	52	1.20	42.71		
38	46	1.35	37.00		
44	40	1.50	32.20		
50	36	1.65	28.11		
56	35	1.75	25.00		
67	30	2.0	21.08		
78	26	2.3	17.98		
91	23	2.5	15.48		
105	20	2.8	13.41		
113	19	3.5	12.50		
121	17	3.1	11.67		
134	16	4.0	10.54		
138	15	3.4	10.19		
157	14	4.5	8.99		
182	12	5.0	7.74		
210	10	5.6	6.70		
242	9.1	6.3	5.83		
277	8.0	6.9	5.09		

0.37 kW

S42G22A DM71G4					51
2.9	720	2.00	494.08		

S32G12A DM71G4					32
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2.9	700	0.90	492.61		
3.2	645	1.00	445.64		
3.5	595	1.05	406.20		
3.9	540	1.15	362.38		
4.3	490	1.25	325.05		
4.8	445	1.40	294.91		
5.4	400	1.50	261.33		
6.1	360	1.70	230.03		

S32A DM71G4					26
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5.2	415	1.45	271.60		
6.0	365	1.65	234.71		
6.9	325	1.85	205.58		
7.7					

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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0.55 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S12A DM80K4					16
19	183	0.85	75.56		
21	167	0.90	67.83		
24	149	1.00	59.20		
27	132	1.05	51.85		
31	133	1.20	45.03		
36	118	1.30	39.36		
41	105	1.45	34.67		
46	93	1.60	30.74		
51	84	1.75	27.39		
57	76	1.90	24.59		
S02A DM80K4					12
78	57	1.05	17.98		
91	50	1.15	15.48		
105	43	1.25	13.41		
120	38	1.40	11.67		
138	33	1.55	10.19		
156	31	2.1	8.99		
182	27	2.3	7.74		
210	23	2.6	6.70		
241	20	2.8	5.83		
276	18	3.1	5.09		

0.75 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42G22A DM80GD4					59
2.9	1450	1.00	494.08		
3.2	1320	1.05	441.60		
3.6	1200	1.15	392.13		
4.1	1080	1.30	347.49		
4.6	965	1.40	309.22		
5.4	840	1.60	264.91		
S42A DM80GD4					50
5.8	790	1.70	247.58		
6.5	715	1.85	220.00		
7.2	650	2.0	197.22		
8.0	595	2.2	178.08		
8.8	545	2.3	161.78		
9.6	510	2.4	147.91		
S32G12A DM80GD4					41
6.2	720	0.85	230.03		
S32A DM80GD4					35
6.9	650	0.90	205.58		
7.8	585	1.00	182.00		
8.8	535	1.10	162.52		
9.7	490	1.15	146.16		
11	450	1.25	132.22		
12	415	1.30	120.52		
13	375	1.45	107.52		
15	340	1.55	96.44		
S22A DM80GD4					28
13	365	0.80	107.52		
15	330	0.85	96.44		
16	305	0.95	87.65		
18	275	1.00	77.28		
21	245	1.10	68.44		
27	215	1.35	53.42		
30	190	1.50	46.95		
34	171	1.60	41.61		
38	154	1.75	37.12		
43	139	1.90	33.30		
47	127	2.0	30.26		
53	113	2.2	26.68		
60	100	2.4	23.63		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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0.75 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S12A DM80GD4					23
27	178	0.80	51.85		
32	179	0.90	45.03		
36	159	1.00	39.36		
41	141	1.10	34.67		
46	126	1.20	30.74		
52	113	1.30	27.39		
58	102	1.40	24.59		
66	89	1.55	21.46		
76	79	1.70	18.80		
85	75	1.95	16.77		
97	66	2.1	14.66		
110	59	2.4	12.91		
124	52	2.6	11.45		
140	47	2.8	10.20		
156	42	3.1	9.16		
178	37	3.3	7.99		
204	32	3.7	7.00		
S02A DM80GD4					19
92	67	0.85	15.48		
106	58	0.95	13.41		
122	51	1.05	11.67		
140	45	1.15	10.19		
158	41	1.50	8.99		
184	36	1.70	7.74		
213	31	1.90	6.70		
244	27	2.1	5.83		
280	24	2.3	5.09		

1.1 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42G22A DM90SD4					66
3.7	1740	0.80	392.13		
3.8	1710	0.80	384.81		
4.2	1560	0.90	347.49		
4.2	1540	0.90	343.94		
4.7	1400	1.00	309.22		
4.7	1390	1.00	305.41		
5.3	1240	1.10	270.64		
5.5	1220	1.10	264.91		
6.0	1120	1.20	240.84		
S42A DM90SD4					58
6.6	1030	1.30	220.00		
7.3	940	1.40	197.22		
8.1	860	1.50	178.08		
8.9	795	1.60	161.78		
9.8	735	1.70	147.91		
11	675	1.80	132.72		
12	620	1.90	119.78		
13	575	2.0	110.25		
15	520	2.2	98.54		
17	465	2.3	87.50		
19	420	2.5	77.54		
S32A DM90SD4					42
9.9	705	0.80	146.16		
11	650	0.85	132.22		
12	605	0.90	120.52		
13	545	1.00	107.52		
15	495	1.05	96.44		
17	455	1.15	87.50		
19	405	1.20	77.54		
21	365	1.35	68.25		
24	320	1.45	59.77		
31	285	2.2	46.22		
35	260	2.4	41.28		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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1.1 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S22A DM90SD4					34
24	320	0.80	61.25		
27	280	0.90	53.31		
31	275	1.05	46.95		
35	250	1.10	41.61		
39	225	1.20	37.12		
43	200	1.30	33.30		
48	184	1.40	30.26		
54	163	1.55	26.68		
61	145	1.65	23.63		
68	131	1.80	21.15		
79	114	1.95	18.40		
83	115	2.4	17.49		
93	103	2.6	15.50		
105	92	2.9	13.82		
117	82	3.1	12.40		
128	75	3.3	11.27		
145	67	3.6	9.94		
164	59	4.0	8.80		
183	53	4.2	7.88		
211	46	4.7	6.85		
S12A DM90SD4					30
47	182	0.80	30.74		
53	163	0.90	27.39		
59	147	0.95	24.59		
67	129	1.05	21.46		
77	114	1.15	18.80		
99	96	1.45	14.66		
112	85	1.65	12.91		
126	76	1.80	11.45		
142	68	1.95	10.20		
158	61	2.1	9.16		
181	53	2.3	7.99		
206	47	2.5	7.00		

1.5 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42G22A DM90LB4					66
5.4	1680	0.80	270.64		
5.5	1650	0.80	264.91		
6.0	1520	0.90	240.84		
S42A DM90LB4					58
6.6	1400	0.95	220.00		
7.4	1270	1.00	197.22		
8.2	1170	1.10	178.08		
9.0	1080	1.15	161.78		
9.8	1000	1.25	147.91		
11	915	1.30	132.72		
12	840	1.40	119.78		
13	780	1.50	110.25		
15	705	1.60	98.54		
17	630	1.70	87.50		
19	565	1.85	77.54		
25	505	2.5	59.37		
S32A DM90LB4					42
15	670	0.80	96.44		
17	615	0.85	87.50		
19	550	0.90	77.54		
21	490	1.00	68.25		
24	435	1.05	59.77		
31	390	1.60	46.22		
35	350	1.75	41.28		
39	315	1.90	37.12		
43	290	2.0	33.58		
48	265	2.2	30.61		
53	235	2.3	27.31		
59	215	2.5	24.49		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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1.5 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S22A DM90LB4					35
35	335	0.80	41.61		
39	300	0.90	37.12		
44	270	0.95	33.30		
48	250	1.05	30.26		
55	220	1.15	26.68		
62	197	1.25	23.63		
69	177	1.30	21.15		
79	155	1.45	18.40		
83	156	1.80	17.49		
94	139	1.95	15.50		
105	124	2.1	13.82		
117	112	2.3	12.40		
129	102	2.5	11.27		
146	90	2.7	9.94		
165	80	2.9	8.80		
185	72	3.1	7.88		
212	63	3.4	6.85		
S12A DM90LB4					30
68	175	0.80	21.46		
77	155	0.85	18.80		
99	130	1.10	14.66		
113	115	1.20	12.91		
127	102	1.30	11.45		
143	91	1.45	10.20		
159	82	1.55	9.16		
182	72	1.70	7.99		
208	64	1.85	7.00		

2.2 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42A DM100LA4					70
9.0	1570	0.80	161.78		
9.9	1460	0.85	147.91		
11	1340	0.90	132.72		
12	1230	0.95	119.78		
13	1140	1.00	110.25		
15	1030	1.10	98.54		
17	925	1.15	87.50		
19	830	1.25	77.54		
21	745	1.35	69.00		
27	670	2.1	53.22		
30	605	2.2	48.05		
33	555	2.4	43.65		
37	510	2.5	39.91		

Selection table - Geared motors

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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2.2 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S12A DM100LA4					42
113	168	0.80	12.91		
128	150	0.90	11.45		
143	134	1.00	10.20		
159	120	1.05	9.16		
183	106	1.15	7.99		
209	93	1.25	7.00		

3.0 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42A DM100LF4					74
15	1410	0.80	98.54		
17	1260	0.85	87.50		
19	1130	0.90	77.54		
21	1020	1.00	69.00		
27	915	1.50	53.22		
30	830	1.65	48.05		
33	760	1.75	43.65		
36	700	1.80	39.91		
41	630	2.00	35.81		
45	575	2.1	32.32		
49	530	2.2	29.75		
55	475	2.4	26.59		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S32A DM100LF4					59
35	700	0.85	41.28		
39	635	0.95	37.12		
43	580	1.00	33.58		
48	530	1.10	30.61		
53	475	1.15	27.31		
59	425	1.25	24.49		
65	390	1.35	22.22		
74	345	1.45	19.69		
84	305	1.60	17.33		
96	270	1.75	15.18		
109	235	1.90	13.33		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S22A DM100LF4					51
94	280	0.95	15.50		
105	250	1.05	13.82		
117	225	1.15	12.40		
129	205	1.25	11.27		
146	180	1.35	9.94		
165	160	1.45	8.80		
185	144	1.55	7.88		
212	126	1.70	6.85		

4.0 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42A DM112MB4					75
30	1100	1.20	48.05		
33	1010	1.30	43.65		
37	925	1.35	39.91		
41	840	1.50	35.81		
45	760	1.60	32.32		
49	700	1.60	29.75		
55	630	1.80	26.59		
62	560	1.95	23.61		
70	500	2.0	20.92		
78	445	2.1	18.62		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S32A DM112MB4					59
48	705	0.80	30.61		
53	630	0.90	27.31		
60	565	0.95	24.49		
66	515	1.00	22.22		
74	460	1.10	19.69		
84	405	1.20	17.33		
96	360	1.30	15.18		
110	315	1.40	13.33		

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
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4.0 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S22A DM112MB4					51
106	330	0.80	13.82		
118	295	0.85	12.40		
130	270	0.90	11.27		
147	240	1.00	9.94		
166	215	1.10	8.80		
185	192	1.15	7.88		
213	167	1.30	6.85		

5.5 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42A DM132SB4					138
41	1150	1.10	35.81		
45	1040	1.15	32.32		
49	960	1.20	29.75		
55	860	1.35	26.59		
62	765	1.40	23.61		
70	680	1.50	20.92		
79	605	1.55	18.62		
92	520	1.70	15.95		
104	460	1.80	14.07		

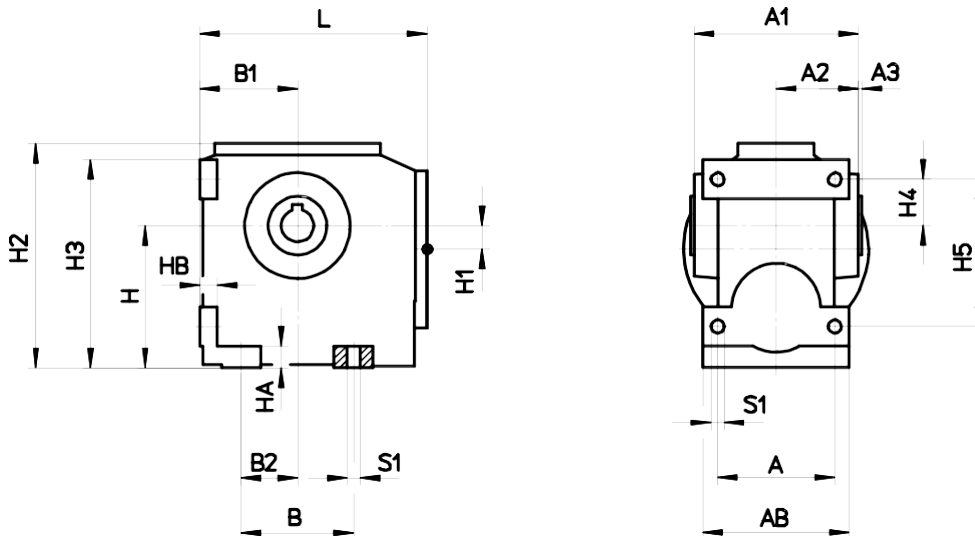
Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S32A DM132SB4					121
75	630	0.80	19.69		
85	555	0.90	17.33		
97	490	0.95	15.18		
110	430	1.05	13.33		

7.5 kW

Type	n2 [1/min]	T2 [Nm]	cG	i	~kg
S42A DM132MB4					138
41	1560	0.80	35.81		
45	1420	0.85	32.32		
49	1310	0.85	29.75		
55	1170	0.95	26.59		
62	1040	1.05	23.61		
70	930	1.10	20.92		
79	825	1.15	18.62		
92	710	1.25	15.95		
104	625	1.30	14.07		

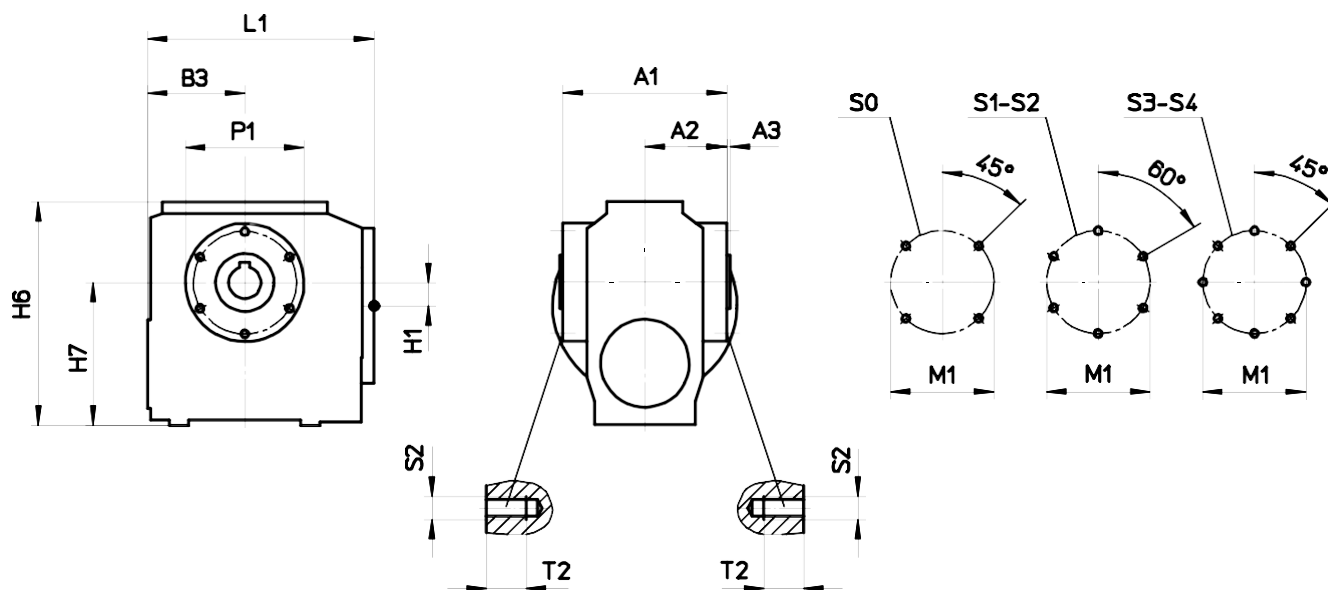
Dimensions

A - Foot mounted version



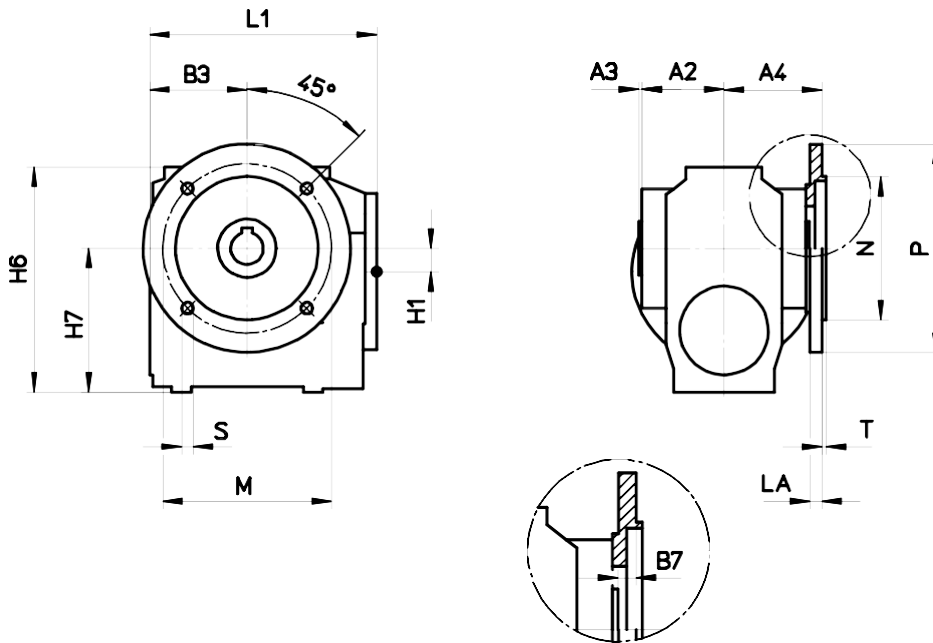
	A	AB	A1	A2	A3	B	B1	B2	H	HA	HB	H1	H2	H3	H4	H5	L	S1
S0	50	63	86	43	2	60	52-0.5	30	70-0.5	9	9	7.5	113	106.5	29	86	126	M6
S1	90	110	116	58	2	75	70-0.5	37.5	95-0.5	15	12	10	151.5	137.5	30	95	160	Ø9
S2	110	135	144	72	3	90	85-0.5	45	120-0.5	18	15	18	191	175	40	120	191	Ø11
S3	120	150	168	84	3.5	115	100-0.5	57.5	145-0.5	22	18	24	229.5	212	47	150	233	Ø13.5
S4	150	185	202	101	4	135	125-0.5	70	180-0.5	25	22	35	280	259.5	57	180	280	Ø17.5

B - Shaft mounted version



	A1	A2	A3	B3	H1	H6	H7	L1	M1	P1	S2	T2
S0	86	43	2	52	7.5	113.5	70.5	126	74	86	M6	9
S1	116	58	2	69	10	153.5	97	159	87	99	M6	9
S2	144	72	3	85	18	193	122	191	96	112	M8	12
S3	168	84	3.5	100	24	231.5	147	233	106	122	M8	12
S4	202	101	4	125	35	282	182	280	130	150	M10	15

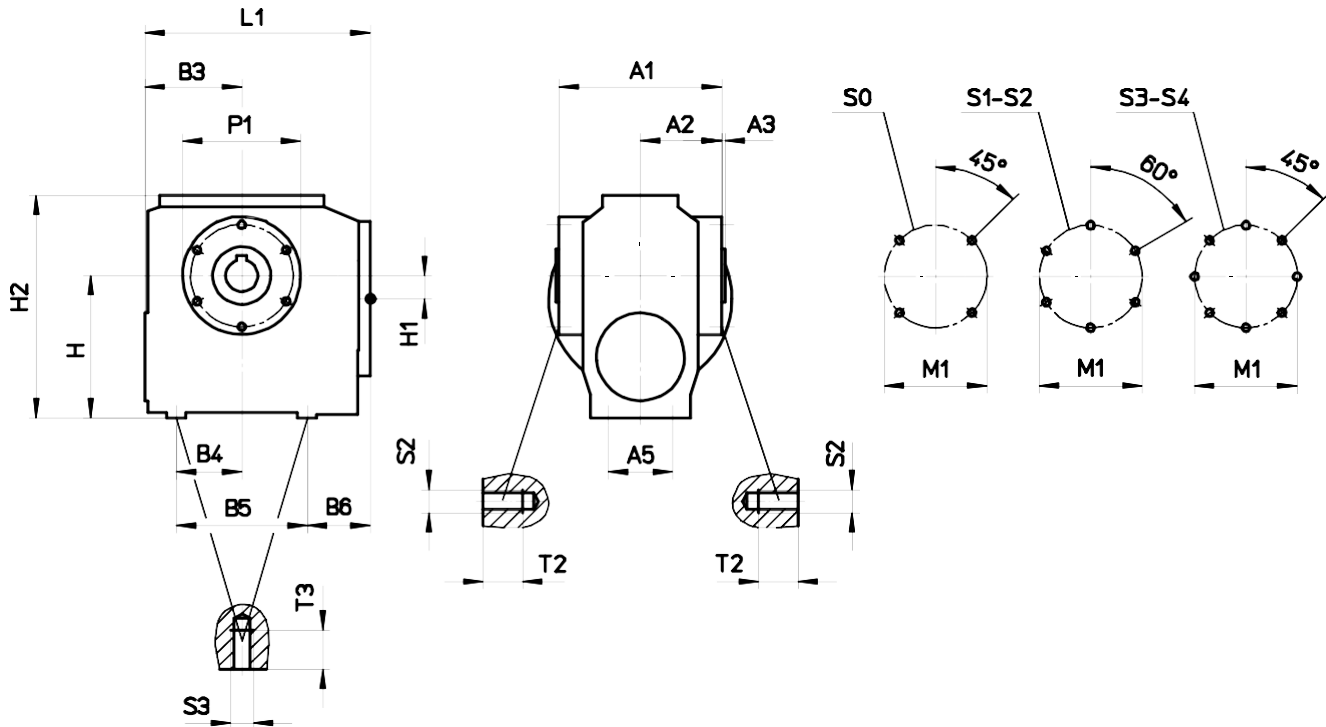
C - Flange mounted version



	A2	A3	A4	B3	B7	H1	H6	H7	L1
S0	43	2	63	52	18	7.5	113.5	70.5	126
S1	58	2	70	69	10	10	153.5	97	159
S2	72	3	83	85	8	18	193	122	191
S3	84	3.5	95	100	7.5	24	231.5	147	233
S4	101	4	113	125	8	35	282	182	280

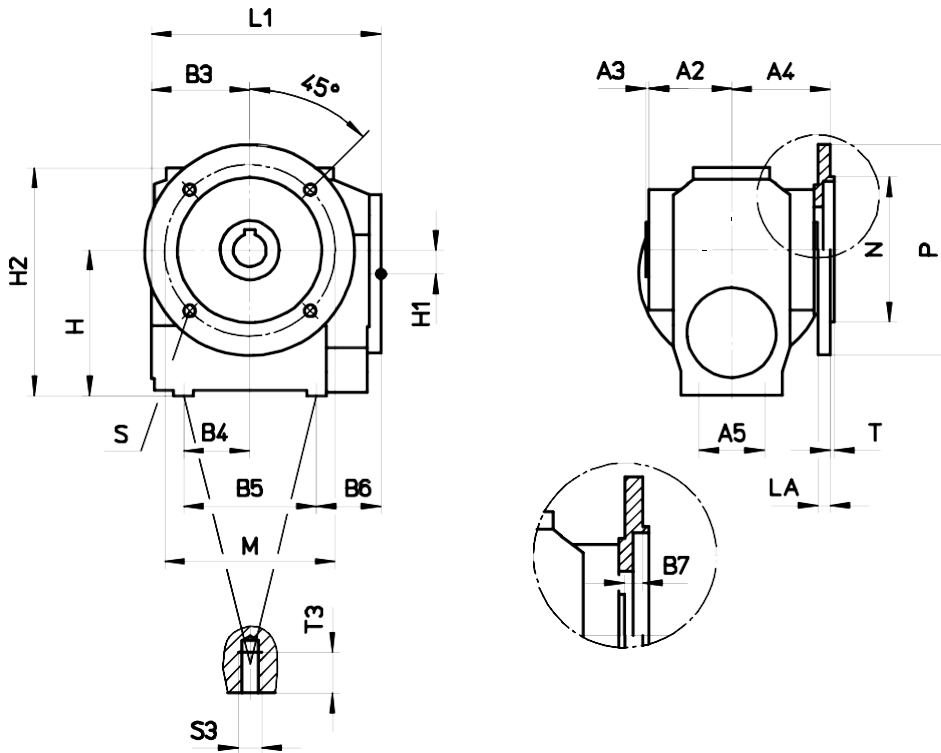
	M	N	P	LA	T	S
S	Ø100	Ø80 j6	Ø120	8	3	Ø6.6
S	Ø13	Ø110 j	Ø160	9	3.5	Ø9
S2	Ø13	Ø110 j	Ø160	9	3.5	Ø9
S2	Ø16	Ø130 j	Ø20	10	3.5	Ø11
S3	Ø16	Ø130 j	Ø20	10	3.5	Ø11
S3	Ø21	Ø180 j	Ø25	11	4	Ø13.5
S4	Ø21	Ø180 j	Ø25	11	4	Ø13.5
S4	Ø26	Ø230 j	Ø30	12	4	Ø13.5

D - Shaft mounted version + foot area



	A1	A2	A3	A5	B3	B4	B5	B6	H	H1	H2	L1	M1	P1	S2	T2	S3	T3
S1	116	58	2	50	69	46	82	54	95	10	151.5	159	87	99	M6	9	M8	12
S2	144	72	3	65	85	58	110	54	120	18	191	191	96	112	M8	12	M8	12
S3	168	84	3.5	70	100	67.5	135	65.5	145	24	229.5	233	106	122	M8	12	M10	15
S4	202	101	4	80	125	87.5	175	67.5	180	35	280	280	130	150	M10	15	M16	24

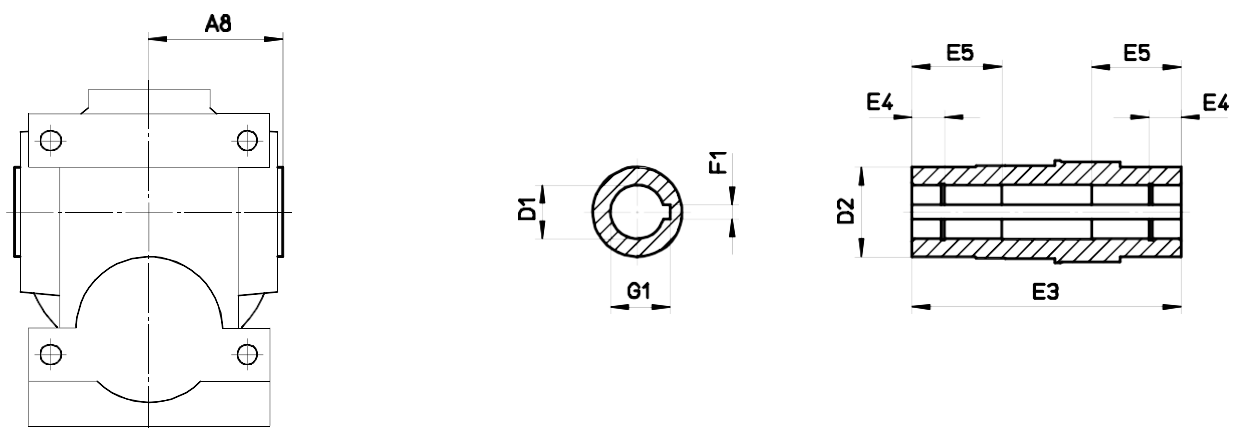
E - Flange mounted version + foot area



	A2	A3	A4	A5	B3	B4	B5	B6	B7	H	H1	H2	L1	S3	T3
S1	58	2	70	50	69	46	82	54	10	95	10	151.5	159	M8	12
S2	72	3	83	65	85	58	110	54	8	120	18	191	191	M8	12
S3	84	3.5	95	70	100	67.5	135	65.5	7.5	145	24	229.5	233	M10	15
S4	101	4	113	80	125	87.5	175	67.5	8	180	35	280	280	M16	24

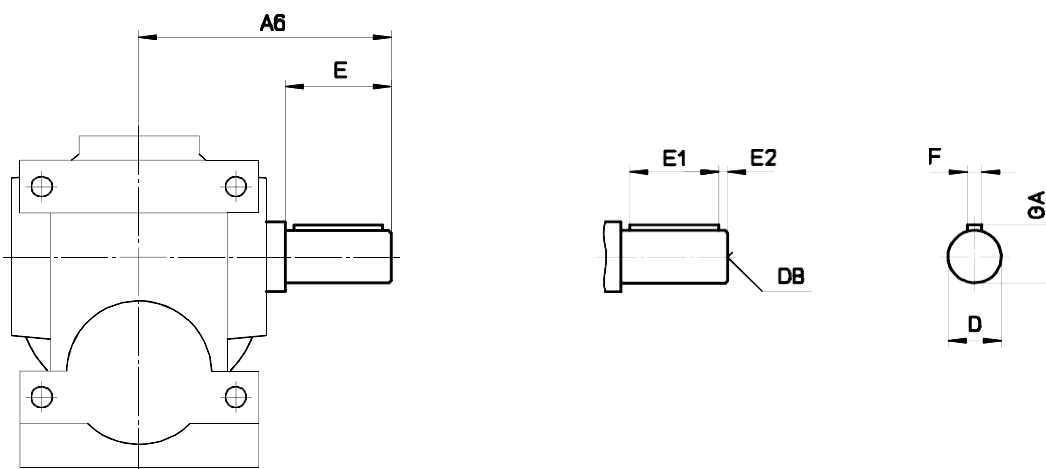
	M	N	P	LA	T	S
S1	Ø13	Ø110 j	Ø160	9	3.5	Ø9
S2	Ø13	Ø110 j	Ø160	9	3.5	Ø9
	Ø16	Ø130 j	Ø20	10	3.5	Ø11
S3	Ø16	Ø130 j	Ø20	10	3.5	Ø11
	Ø21	Ø180 j	Ø25	11	4	Ø13.5
S4	Ø21	Ø180 j	Ø25	11	4	Ø13.5
	Ø26	Ø230 j	Ø30	12	4	Ø13.5

Hollow shaft with keyway



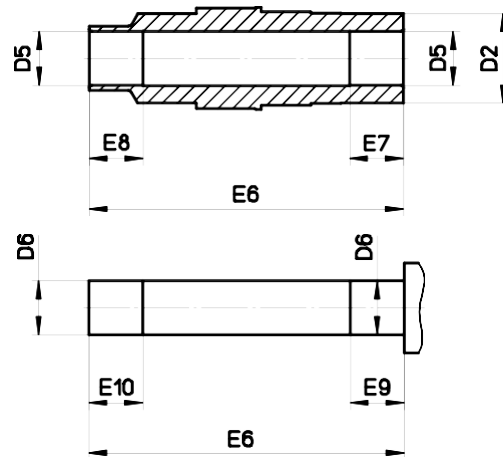
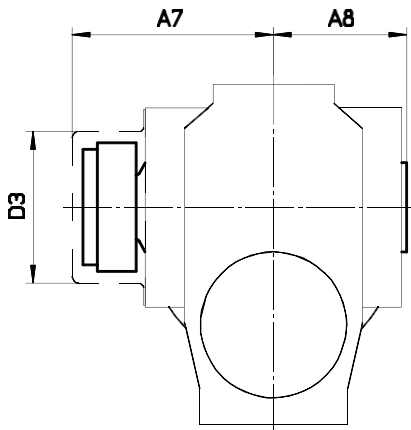
	A8	D1	D2	E3	E4	E5	F1	G1
S0	45	Ø20H7	35	90	14	-	6	22.8
S1	60	Ø25H7	45	120	15	-	8	28.3
S2	75	Ø30H7 Ø35H7	50	150	18	-	8 10	33.3 38.3
S3	87.5	Ø40H7	55	175	20	-	12	43.3
S4	105	Ø50H7	70	210	25	70	14	53.8

V - Output shaft with key



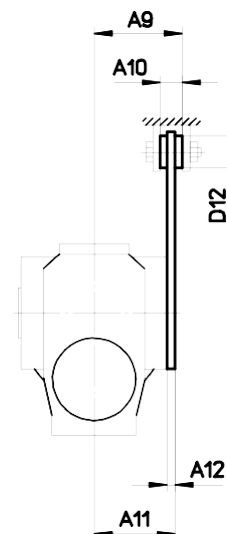
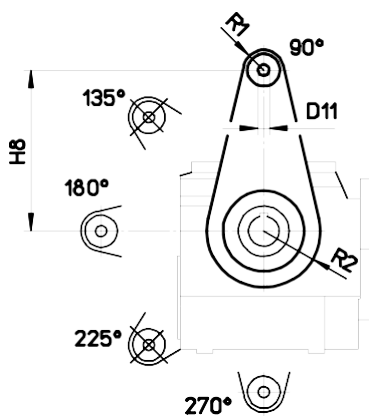
	A6	D	DB	E	E1	E2	F	GA
S02A	85	Ø20k6	M6	40	32	4	6	22.5
S02C	103	Ø20k6	M6	40	32	4	6	22.5
S1	120	Ø25k6	M10	50	40	5	8	28
S2	143 153	Ø30k6 Ø35k6	M10 M12	60 70	50 60	5	8 10	33 38
S3	175	Ø40k6	M16	80	70	5	12	43
S4	213	Ø50k6	M16	100	80	10	14	53.5

S - Hollow shaft with shrink disc



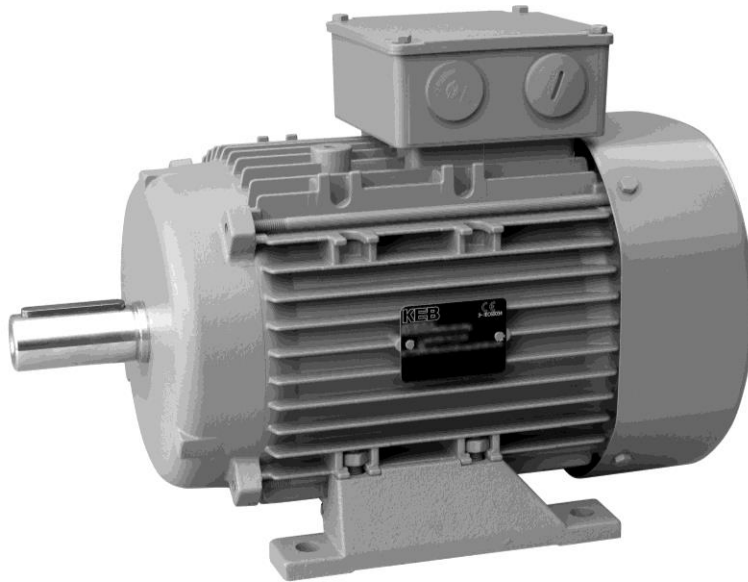
	A7	A8	D2	D3	D5	D6	E6	E7	E8	E9	E10
S1	98	60	45	77	Ø25H7	Ø25h6	143	25	25	27	27
S2	113	75	50	86	Ø30H7 Ø35H7	Ø30h6 Ø35h6	176	20	30	22	32
S3	127	87.5	55	96	Ø40H7	Ø40h6	202	20	40	22	42
S4	150	105	70	117	Ø50H7	Ø50h6	242	30	50	32	52

T1 - Torque arm

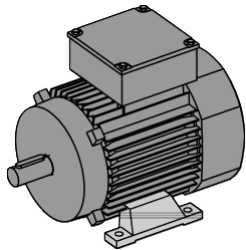


	A9	A10	A11	A12	D11	D12	H8	R1	R2
S0	52.5	15	47	4	11	32	100	20	43
S1	68.5	15	64	6	11	32	130	20	49.5
S2	87	22	80	8	11	32	160	20	56
S3	99	22	92	8	11	32	200	23	61
S4	121	32	109	8	17	40	250	30	75

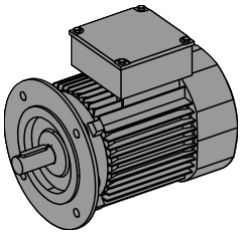
Three phase motors



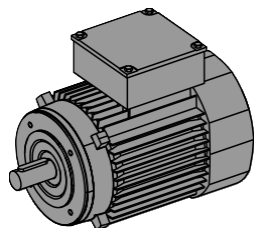
Type of construction



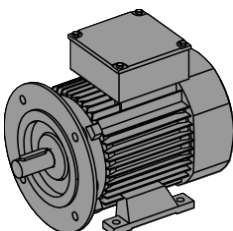
Foot mounted version B3
Example: DM90LB4 – B3



Flange mounted version B5
Example: DM132MB4 – B5



Flange mounted version B14
Example: DM71G4 – B14K



Foot-flange mounted version B3/B5
Example: DM112MB4 – B3/B5

Technical characteristics

The motors correspond to the following standards:

- DIN EN 60034 Rotating electrical machines, rating and performance.
- IEC60072 Totally enclosed fan-cooled motors with squirrel cage, fixing dimensions and allocation of rating.
- DIN42948 Mounting flanges for electrical machines

- Number of poles: 2 pole, 4 pole, 6 pole, 8 pole, 4/2 pole, 8/2 pole

- Protection standard IP54

- Insulation class 155

- Voltage/Frequency

Δ/Y 230/400V 50Hz 1)

Δ/Y 230/400V 50Hz // Y 460V 60Hz 1)

Δ/Y 400/690 V 50 Hz

Δ/Y 400/690 V 50 Hz // Δ 460V 60Hz

Δ/Y 290/500 V 50Hz (DM63..DM112)

Δ 500V 50Hz (DM132..DA225)

200V 50Hz

400V 87Hz (inverter duty) 1)

1) Standard voltages

Different voltages and frequencies are available.

Options:

- UL-Version, UKCA-Version, CCC-Version

- EE-Version, CEL-Version

- Dust- and water protection IP65

More Motor Options:

- Explosion proof motor in accordance with ATEX, for use in zone 1, 2, 21, or 22

- Flame proof Motor EExd

- motors with noise reduced brake or with double brake

- Backstop RS

- Torque motor

- Integrated Frequency Inverter MU

Motor Power Pn

The values given in the tables are valid for the following conditions:

- Duty cycle S1

- Maximum ambient temperature +40°C

- Installation altitude up to 1000m above mean sea level

The available motor power for different conditions is calculated as follows: $P = P_n \cdot f_s \cdot f_t \cdot f_h$

Factor fs for different duty type

Duty type		fs
S1	Continuous duty. Operation with constant load. The motor reaches the thermal equilibrium.	1.0
S2-10min	Short term duty. Operation with constant load followed by a stop. During the stop the motor returns to the ambient temperature. Described by the duration of the load period in min.	1.4
S2-30min		1.25
S2-60min		1.1
S3-15%	Intermittent periodic duty. Operation with a sequence of identical cycles including a time of operation with constant load and a stop. Described by the cyclic duration factor in %.	1.4
S3-25%		1.3
S3-40%		1.2
S3-60%		1.1
S4 .. S10	Intermittent periodic duty. The start or stop phase of the motor is effecting the temperature raise. More data of the duty cycle are necessary.	On request

Factor ft for different ambient temperature θ

θ ≤ 40°C

ft=1.0

40°C < θ ≤ 50°C

ft=0.87

50°C < θ ≤ 60°C

ft=0.75

Factor fh for different altitude h

h ≤ 1000m

fh=1.0

1000m < h ≤ 2000m

fh=0.9

2000m < h ≤ 3000m

fh=0.8

3000m < h ≤ 4000m

4000m < h ≤ 5000m

fh=0.7

fh=0.6

Permissible Radial Forces for the Output Shaft

Motor	Output shaft d _{xl} [mm]	K1 [mm]	FR1 [N]			
			3000 1/min	1500 1/min	1000 1/min	750 1/min
DM63	11x23	155.5	430	540	620	680
DM71	14x30	176	420	530	610	670
DM80	19x40	200	700	880	1010	1110
DM90	24x50	217	750	950	1080	1190
DM100	28x60	275	1050	1330	1520	1670
DM112	28x60	286	1520	1920	2190	2410
DM132	38x80	368.5	1670	2100	2410	2650
DA160	42x110	495	1790	2250	2580	2840
DA180	48x110	495	1870	2360	2060	2970
DA200	55x110	590.5	2820	3550	4070	4480
DA225	60x140	665.5	4910	6190	7090	7800

For selection condition formulas, see page 6/7

Selection table

Three phase motors 4 pole 400V 50Hz

Motor	Pn [kW]	n1 [1/min]	In (400V)	cos φ		η -Pn [%]	η -3/4 Pn [%]	η -1/2 Pn [%]	Ma/Mn	Ia/In	Mk/Mn	Jm [kgcm ²]	~kg	Brake
DM63K4	0.12	1380	0.47	0.61	IE2	59.1	59.6	53.6	2.1	3	2.4	2.1	4.5	B02
DM63G4	0.18	1380	0.55	0.70	IE2	64.7	64.8	60.3	2.4	3.4	2.4	2.8	5.1	B02
DM71K4	0.25	1410	0.79	0.64	IE2	68.5	68.4	63.9	2.5	4.3	2.9	5.6	6.4	B02
DM71G4	0.37	1410	1	0.71	IE2	72.7	74.5	72.1	2.5	4.6	2.8	7.3	7.2	B02
DM80K4	0.55	1405	1.46	0.70	IE2	77.1	77.4	74.7	2.5	4.6	2.8	12.8	9.4	B03/B02
DM80GD4	0.75	1425	1.69	0.74	IE3	82.5	81.4	77.5	3.9	8.4	4.6	31.3	16.6	B03
DM90SD4	1.1	1445	2.35	0.79	IE3	84.1	83.2	79.9	3.4	8.6	4	50	24	B04
DM90LB4	1.5	1455	3.35	0.76	IE3	85.3	83.9	80.8	3.7	8.1	4.3	50	24	B04
DM100LA4	2.2	1460	4.45	0.82	IE3	86.7	86.4	84.8	3	8.4	4.1	119	36	B05
DM100LF4	3	1455	6.6	0.73	IE3	87.7	87.1	84.7	3.4	8.5	4.6	152	42	B05
DM112MB4	4	1460	8.9	0.73	IE3	88.6	88.3	86.2	3.3	7.7	4.1	152	42	B06/B05
DM132SB4	5.5	1470	11.2	0.79	IE3	89.6	89.4	87.8	4.1	9.6	4.7	370	95	B06
DM132MB4	7.5	1470	15.5	0.78	IE3	90.4	90.1	88.7	4	9.3	4.7	370	95	B07/B06
DA160MB4	11	1465	19.7	0.88	IE3	91.4	91.8	91.5	2.5	8.3	3.4	690	100	B08
DA160LB4	15	1465	27.5	0.85	IE3	92.1	92.6	92.4	2.6	8.5	3.6	810	111	B09/B08
DA180MD4	18.5	1465	34	0.85	IE3	92.6	92.5	92.0	2.9	8.9	3.6	2500	179	B09
DA180LB4	22	1465	40.5	0.84	IE3	93.0	92.3	92.8	2.9	8.3	3.4	2500	179	B09
DA200LB4	30	1480	54	0.86	IE3	93.6	93.7	93.5	3.1	8.9	3.5	2900	215	B10/B09
DA225SD4	37	1475	65.7	0.87	IE3	93.9	94.5	94.1	2.8	8.8	3.3	3750	330	B10
DA225MD4	45	1475	82.1	0.84	IE3	94.2	94.8	94.8	3.9	8.4	2.9	4400	430	B10

Pn	Nominal power
n1	Nominal speed
In	Nominal current
cos φ	Power factor
η	Efficiency
Ma/Mn	Relative starting torque
Ia/In	Relative starting current
Mk/Mn	Relative pull-out torque
Jm	Inertia

Motor options

B - Brake COMBISTOP

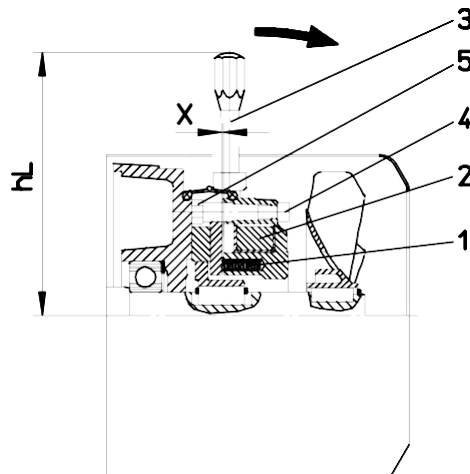
- spring-set twin-disc safety brake
- Protection standard: IP54
- connection via contacts in terminal box
- adjustment provision for wear of friction linings without dismantling
- torque reduction possible
- Standard voltages: 230VAC, 400VAC, 24VDC

Options:

- Manual brake release MB
- Dust- and water protection IP65

Mode of Operation

The brake is released by direct-current excitation of the brake coil (2) or by a manual release unit MB (3) which can be attached as an option. Braking is achieved in power off condition by means of spring force (1). The adjusting screws (5) are used to adjust the nominal air gap (X) in case of wear.



Technical data

Brake	Mbr [Nm]	Mbred [Nm]	JB [kgcm ²]	P20 [W]	t2 [ms]	t11~ [ms]	t11= [ms]	WR0.1 [J*10 ⁶]	WRmax [J*10 ³]	X [mm]	Xn [mm]	hL [mm]	~kg
B02	5	2.5 / 2	0.3	25	40	70	10	7.5	5.3	0.2	0.4	106	1.4
B03	10	7.5	0.7	30	55	100	15	12.5	7.5	0.2	0.5	114	2.0
B04	20	15	1.4	30	90	180	25	19.1	18	0.2	0.6	128	3.6
B05	36	27	3.5	48	110	220	25	28.0	28	0.2	0.6	168	5.7
B06	70	53	5.6	62	240	260	25	28.8	38	0.3	1.0	176	9.1
B07	100		16	65	220	400	40	35.7	49	0.3	1.0	225	15
B08	150		30	75	320	700	50	44.2	56	0.4	1.2	235	24
B09	250	188	75	80	350	900	60	69.0	78	0.4	1.2	256	34
B10	500	375	210	130	400	1400	100	80.0	100	0.5	1.5	335	49

Mbr	Static braking torque after completed run-in phase
Mbred	possible reduced brake torques
JB	Inertia
P20	Excitation rating at 20°C
t2	Release time, time from connecting the current to the beginning of torque decrease
t11~	Engagement delay time for AC side switching (Fig. 1,3) Time from disconnecting the current to the raise of the torque
t11=	Engagement delay time for DC side switching (Fig. 2) Time from disconnecting the current to the raise of the torque
WR0.1	friction work until 0.1mm abrasion
WRmax	permissible friction work for emergency stop from 3000 1/min (B08..B10 - 1500 1/min)
X	Nominal air gap
Xn	Air gap, at which a readjustment is recommended

The specified switching times apply to nominal clearance and nominal torque. It relates to average values and depends on the type of rectification and coil temperature.

Electrical Connection

Figure 1: AC side switching

- The brake is switched independent from the motor voltage, Engagement delay time $t_{11\sim}$
- Suitable for operation with frequency inverter

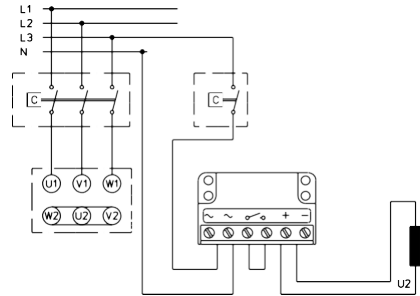


Figure 2: DC side switching

- The switching of the brake on AC and DC side leads to faster Engagement delay times $t_{11\sim}$.

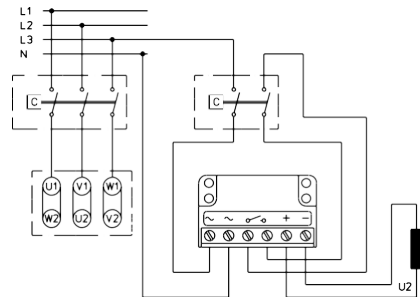
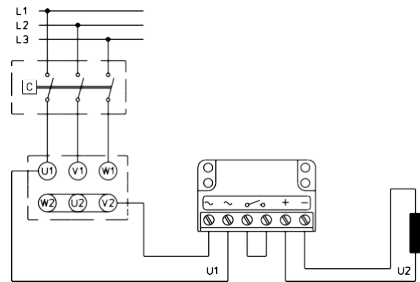


Figure 3: Brake ready for connection

- Voltage supply from motor terminal board.
- The brake is switched together with the motor voltage, Engagement delay time $t_{11\sim}$
- In comparison to Figure 1 the connection to the brake is made within the motor terminal box
- Not suitable for frequency inverter operation and for pole changing motors

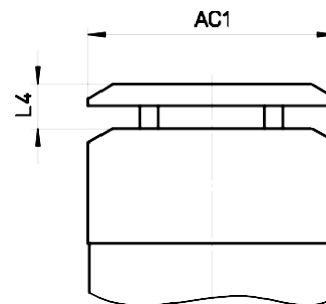


Protection cowl

The protection cowl prevents the penetration of foreign objects or liquids when the motor is mounted in vertical position.

Motor	L4	AC1
DM63..DM80	26	122
DM90..DM112	30	176
DM132	42	230
DA160..DA225	43	240/338 1)

1) Dimension for forced ventilation

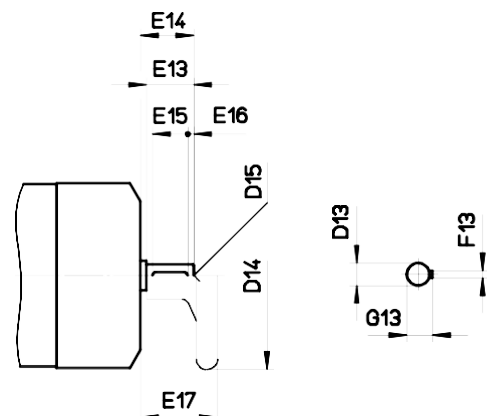


Second shaft end WE and handwheel

The second shaft end can be used for fixing a handwheel or for radial force free transmission of the motor torque.

If radial forces apply to the second shaft end, please consult the manufacturer.

	D13	D14	D15	E13	E14	E15	E16	E17	F13	G13
DM63										
DM71	11	100	M4	23	28	16	3.5	44	4	12.5
DM80										
DM90	14	160	M5	30	35	22	4	44	5	16
DM100										
DM112										
DM132	19	160	M6	40	45	32	4	54	6	21.5
DA160										
DA180	38	250	M12	80	90	70	5	98.5	10	41
DA200										
DA225										



F - Forced ventilation

- Motors: DM71..DM225
- Standard voltages: 3~ 400V 50Hz/460V 60Hz, 3~ 230V 50/60Hz, 1~ 230V 50/60Hz
- connection via contacts in terminal box
- Protection standard IP65

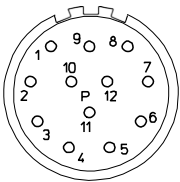
Motor protection

The following motor protection can be supplied:

- TW - PTC thermistor sensor
- TS - Thermorelay (closed)
- KTY - KTY sensor
- PT1000 - PT1000 sensor

I - Incremental encoder

- Signals: A, /A, B, /B, 0, /0
- Current consumption: 40mA / max. 90mA
- Permissible load / channel: ± 20 mA
- Protection standard: IP65
- ENCODER 5V TTL
Pulses/Rev.: 2500 or 1024 or selectable from 10, 25, 50, 60, 100, 200, 250, 500, 512, 1000, 1200, 2000, 2048, 4000, 4096, 5000
Interface: RS422, TTL
Supply voltage: 5VDC ± 5%
- ENCODER 10-30V HTL
Pulses/Rev.: 2500 or 1024 or selectable from 10, 25, 50, 60, 100, 200, 250, 500, 512, 1000, 1200, 2000, 2048, 4000, 4096, 5000
Interface: HTL
Supply voltage: 10-30VDC
- The encoder is mounted under the motor fan cowl for added protection

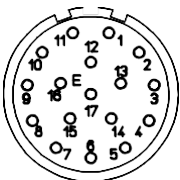


Signal connector 12pole, Counterplug optional

Pin	10	12	5	6	8	1	3	4
Signal	0V	+V	A	/A	B	/B	0	/0

EAM - Absolute encoder multiturn

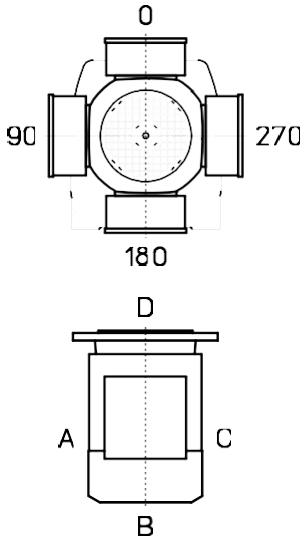
- Resolution singleturn: 19bit
- Resolution multiturn: 12bit (4096 rev)
- Code type: BiSS, binary code
- Supply voltage: 5VDC ± 5%
- Current consumption: max. 80mA
- Permissible load / channel: ± 20 mA
- Protection standard: IP65
- The encoder is mounted under the motor fan cowl for added protection



Signal connector 17pole, Counterplug optional

Pin	10	7	8	9	14	17	1	2
Signal	0V	+V	clock	/clock	data	/data	set	dir

Position of terminal box



Example: 270C is for terminal box at 270
Cable lead in C

The position of other motor options (manual brake release, connection of forced ventilation, connection of encoder) is specified with the same method, independently, if different from position of terminal box.

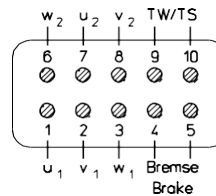
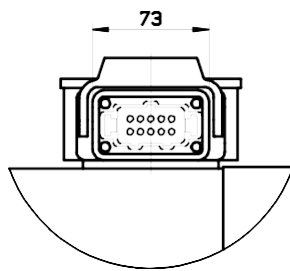
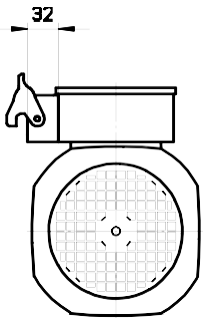
Example: 90A, Manual brake release 270

Cable lead in

	normal	TW	B F	B + TW B + F F + TW	B + TW + F
DM63..DM112	1xM25	2xM25	2xM25	2xM25+1xM16	1xM25+3xM16
DM132	2xM32	2xM32+1xM16	2xM32	2xM32+1xM16	2xM32+1xM16
DA160..DA180	2xM40	2xM40+1xM16	2xM40	2xM40+1xM16	2xM40+1xM16
DA200..DA225	2xM50	2xM50+1xM16	2xM50	2xM50+1xM16	2xM50+1xM16

B Brake
TW Motor protection TW, TS, KTY or PT
F Forced ventilation

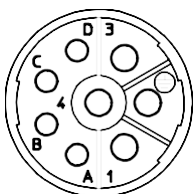
Plug connector HAN 10ES



System: HAN 10ES (Harting)
U_{max}=500VAC, I_{max} = 16A

Plug connector M23

Motors: DM63..DM112

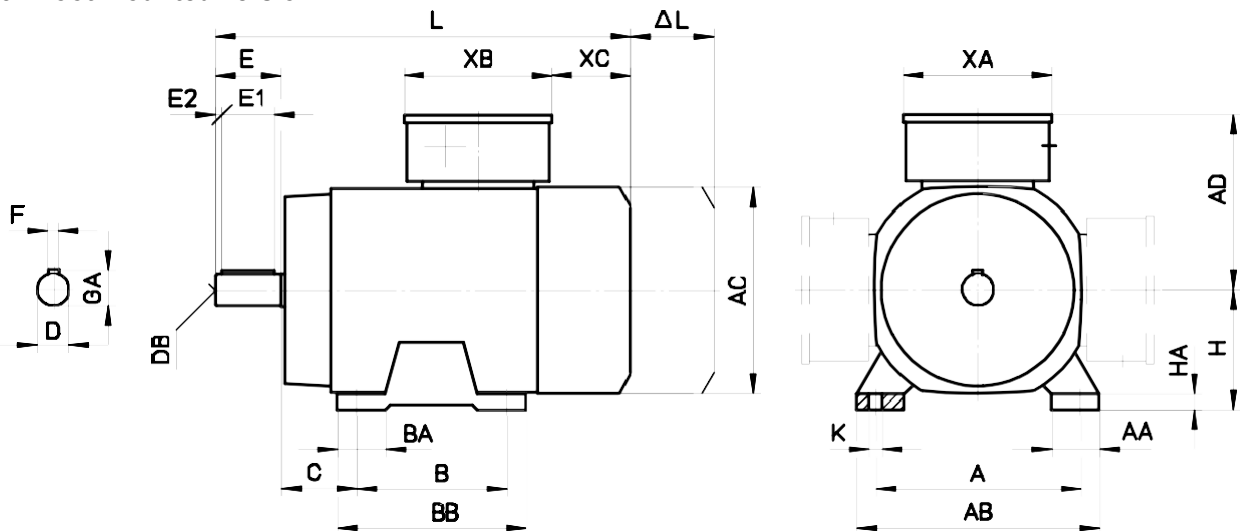


Power connector Size 1, 8pole, Counterplug optional
Brake: U_{max}=250V

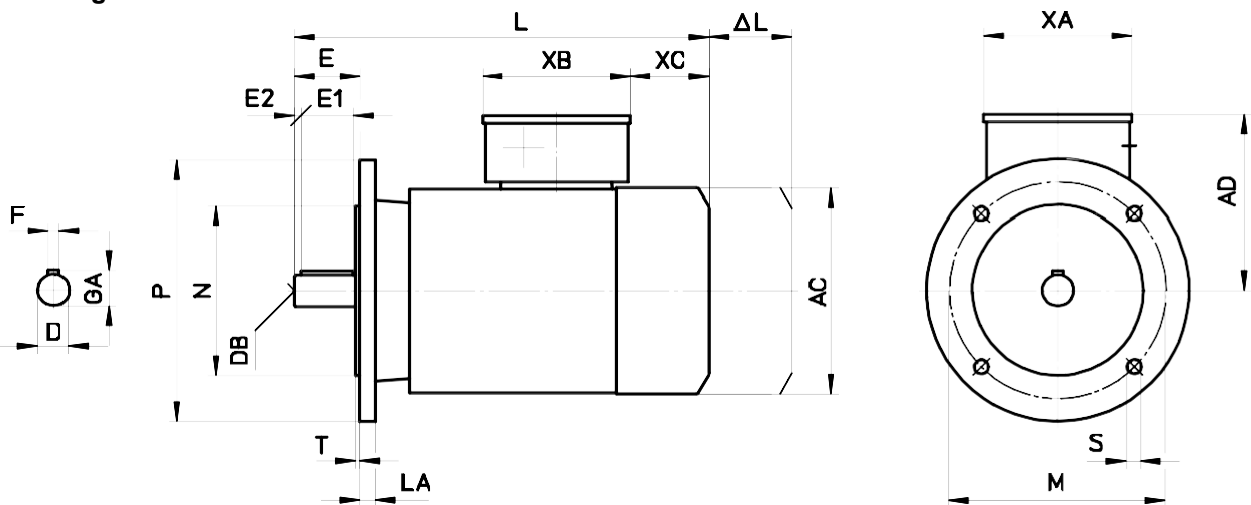
Pin	1	2	3	4	A	B	C	D
Signal	U	PE	W	V	Brake +	Brake -	TW	TW

Dimensions

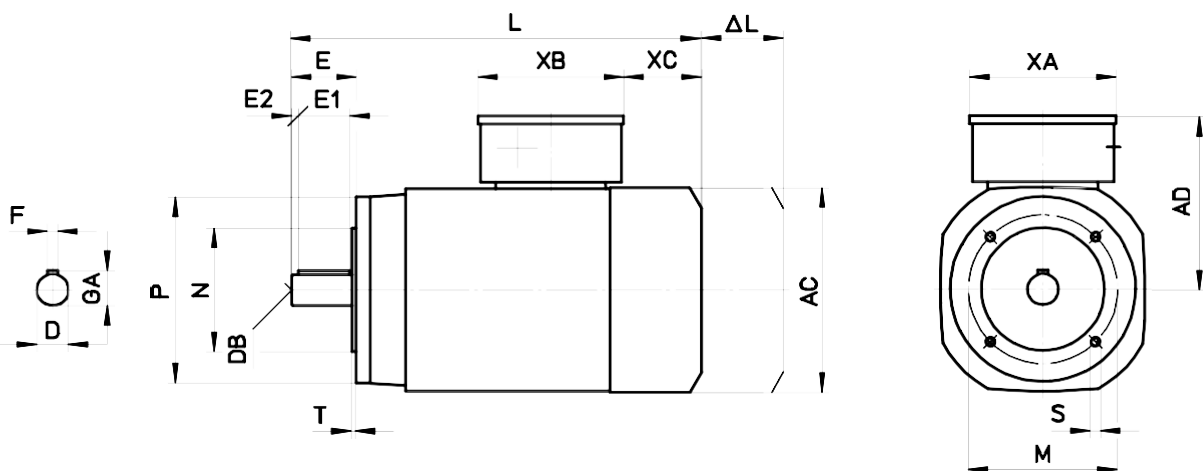
B3 - Foot mounted version



B5 - Flange mounted version



B14 - Flange mounted version



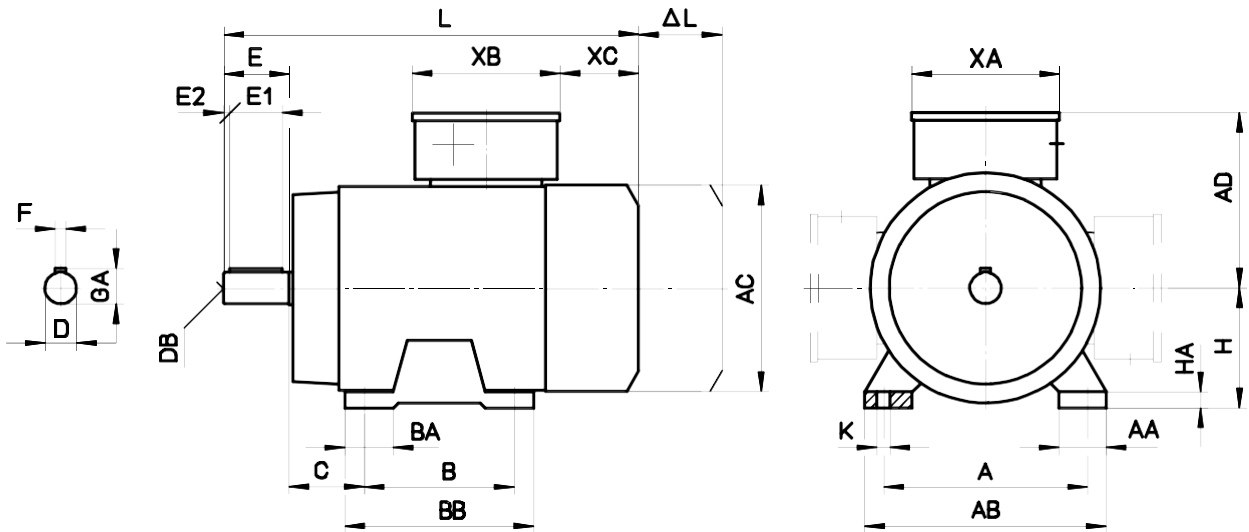
Dimensions

	DM63	DM71	DM80GB	DM90SB	DM90SD4 DM90LB4	DM100LA4 DM100LE4	DM112MB4	DM32SB4 DM132MB4
B3								
A		112	125	140	140	160	190	216
AA		26.5	25	25	27.5	29	30	57.5
AB		136	150	165	170	190	220	262
B		90	100	100	125	140	140	140 178
BA		22	25	27.5	27.5	42	40.5	42
BB		108	120	150	150	170	175	217
C		45	50	56	56	63	70	89
H		71	80	90	90	100	112	132
HA		6	8	10	8	8	10	18
K		Ø7	Ø10	Ø10	Ø10	Ø12	Ø12	Ø12
B5								
LA		10	10	10	10	11	11	12
M		Ø130	Ø165	Ø165	Ø165	Ø215	Ø215	Ø265
N		Ø110	Ø130	Ø130	Ø130	Ø180	Ø180	Ø230
P		Ø160	Ø200	Ø200	Ø200	Ø250	Ø250	Ø300
S		Ø10	Ø11	Ø11	Ø11	Ø14	Ø14	Ø14
T		3.5	3.5	3.5	3.5	4	4	4
B14G								
M		Ø115	Ø130	Ø130	Ø130	Ø165	Ø165	
N		Ø95	Ø110	Ø110	Ø110	Ø130	Ø130	
P		Ø140	Ø160	Ø160	Ø160	Ø200	Ø200	
S		M8	M8	M8	M8	M10	M10	
T		3	3.5	3.5	3.5	3.5	3.5	
B14K								
M	Ø75	Ø85	Ø100	Ø115	Ø115	Ø130	Ø130	
N	Ø60	Ø70	Ø80	Ø95	Ø95	Ø110	Ø110	
P	Ø90	Ø105	Ø120	Ø140	Ø140	Ø160	Ø160	
S	M5	M6	M6	M8	M8	M8	M8	
T	2.5	2.5	3	3	3	3.5	3.5	
D								
D	11k6	14k6	19k6	24k6	24k6	28k6	28k6	38k6
DB	M4	M5	M6	M8	M8	M10	M10	M12
E	23	30	40	50	50	60	60	80
E1	16	22	32	40	40	50	50	70
E2	3.5	4	4	5	5	5	5	5
F	4	5	6	8	8	8	8	10
GA	12.5	16	21.5	27	27	31	31	41
AC								
AC	110	124	140	158	178	198	198	257.5
AD	113.5	122	129	136.5	145.5	155.5	155.5	197.5
XA	113	113	113	113	113	113	113	124
XB	113	113	113	113	113	113	113	124
XC	45.5	56.5	54	60	73	72.5	72.5	110.5
L	210.5	238.5	268	317	351	374	399	574.5
ΔL								
B	59	57	66	74	79	86	86	63
RS	0	0	0	0	0	0	0	0
I	56	56	56	56	56	56	56	96
EAM	84	89	97	107	121	126	126	96
F		90	93	98	106	113	113	108
B I	115	113	122	130	135	142	142	159
B EAM	143	146	163	181	200	212	212	159
B F		135	143	170	187	199	199	230.5
F I		168	143	140	139	149	149	230.5
F EAM		168	170	170	187	199	199	230.5
B F I		183	190	194	214	226	226	230.5
B F EAM		213	222	236	247	262	262	230.5

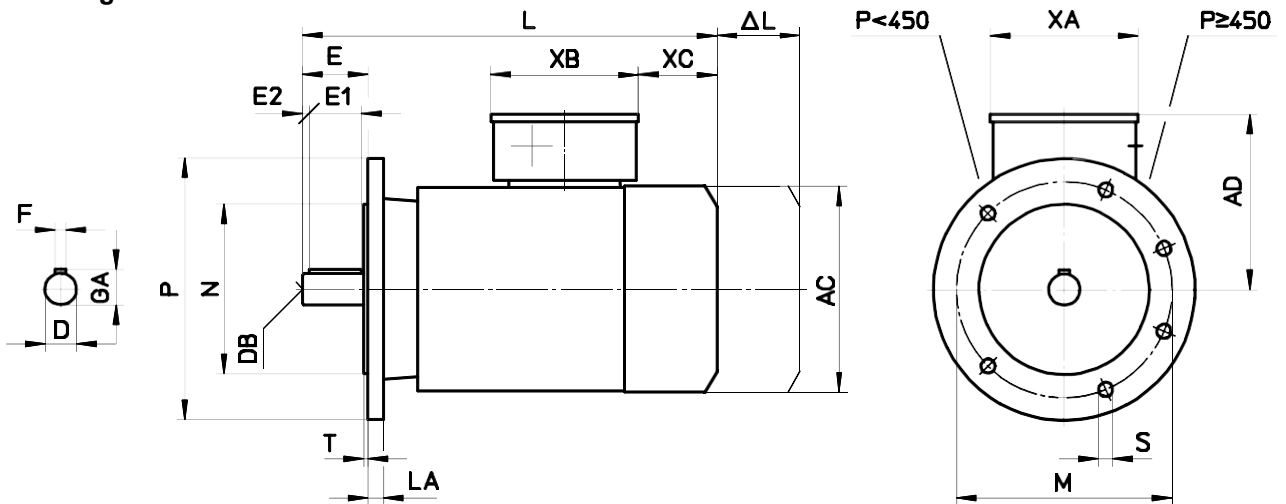
B Brake
I Incremental encoder
F Forced ventilation

RS Backstop
EAM Absolute encoder multiturm

B3 - Foot mounted version



B5 - Flange mounted version

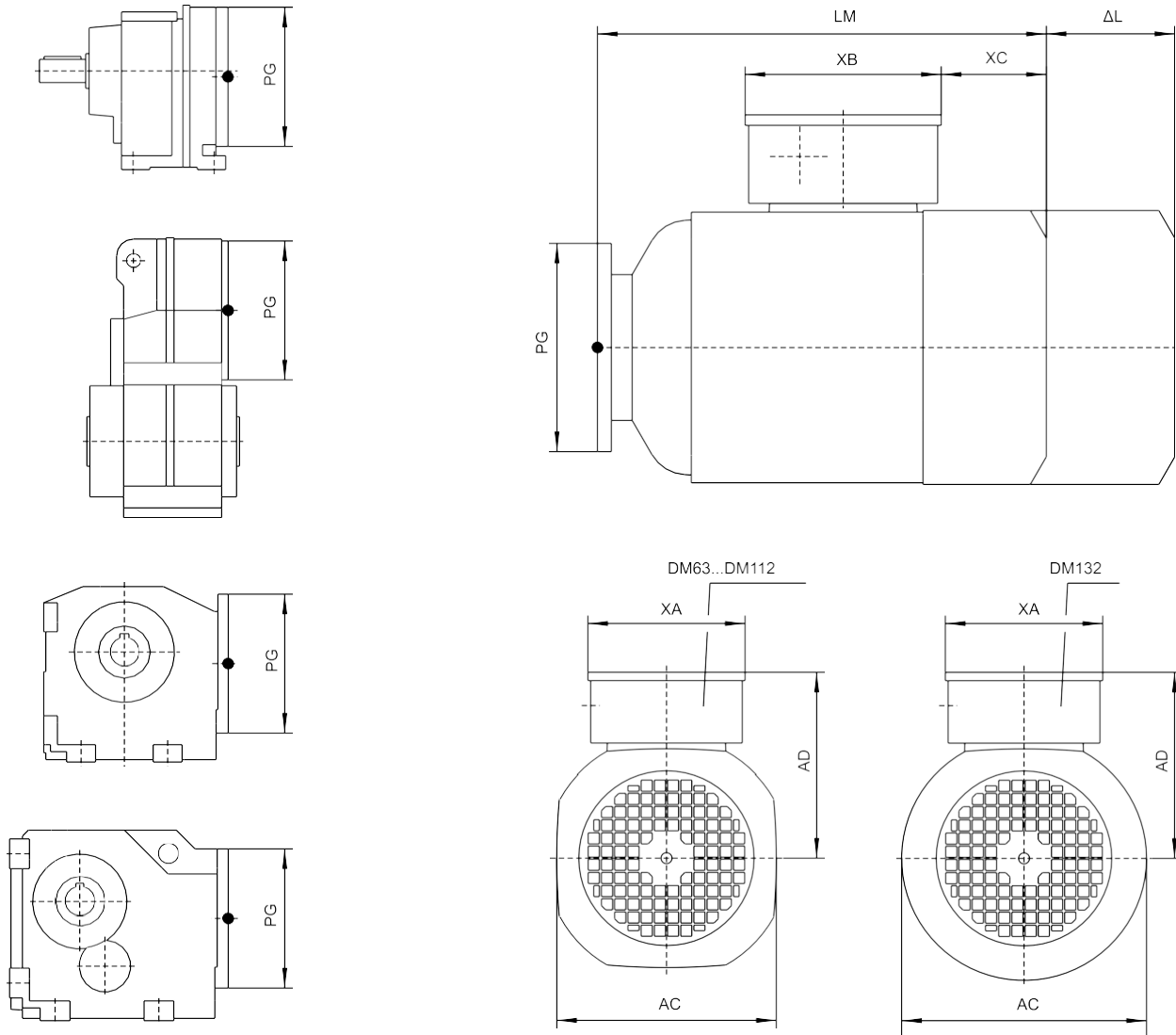


Dimensions

	DA160MB4 DA160LB4	DA180MD4 DA180LB4	DA200LB4	DA225SD4	DA225MD4
B3					
A	254	279	318	356	356
AA	69	74	100	108	87
AB	320	352	403	440	440
B	210 254	241 279	305	286	311
BA	62	75	95	70	70
BB	260 304	300 340	380	341	366
C	108	121	133	149	149
H	160	180	200	225	225
HA	22	20	27	35	35
K	Ø14	Ø14	Ø18	Ø18	Ø18
B5					
LA	13	13	15	16	16
M	Ø300	Ø300	Ø350	Ø400	Ø400
N	Ø250	Ø250	Ø300	Ø350	Ø350
P	Ø350	Ø350	Ø400	Ø450	Ø450
S	Ø18	Ø18	Ø18	Ø18	Ø18.5
T	5	5	5	5	5
D	42k6	48k6	55m6	60m6	60m6
DB	M16	M16	M20	M20	M20
E	110	110	110	140	140
E1	100	100	100	125	125
E2	5	5	5	7.5	7.5
F	12	14	16	18	18
GA	45	51.5	59	64	64
AC	311	356	356	356	433
AD	250	291	291	299	338
XA	140	226	226	226	226
XB	140	226	226	226	226
XC	107.5	204.5	298.5	328.5	237
L	627	688	807	897	807
ΔL					
B	120	185	116	116	121
RS	120	185	116	116	-
I	96	96	96	96	95
EAM	96	96	96	96	95
F	120	363	294	294	121
B I	216	281	212	212	216
B EAM	216	281	212	212	216
B F	314	363	294	294	303
F I	314	363	294	294	303
F EAM	314	363	294	294	303
B F I	314	363	294	294	303
B F EAM	314	363	294	294	303

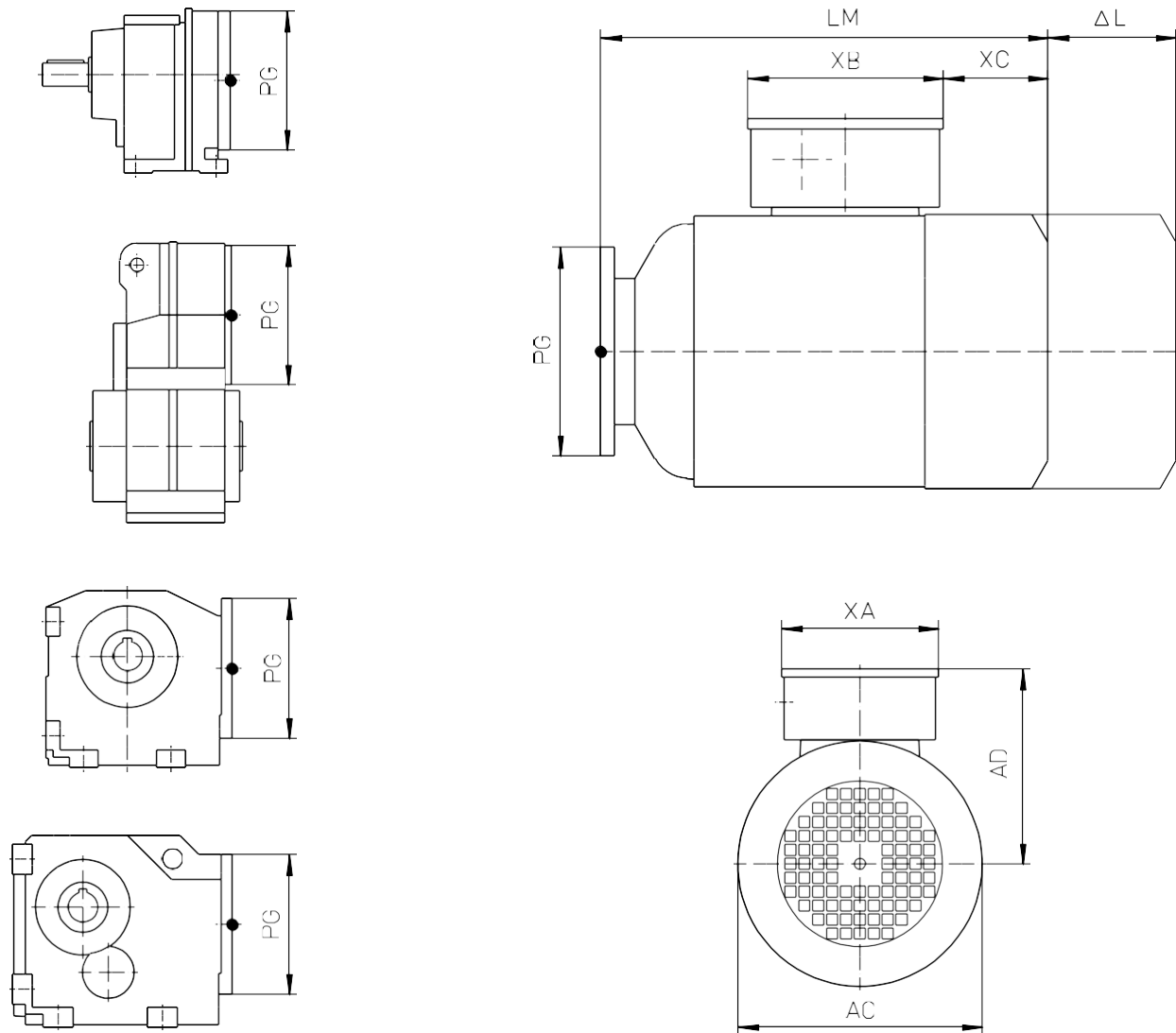
B Brake
I Incremental encoder
F Forced ventilation

RS Backstop
EAM Absolute encoder multiturn



	DM63	DM71	DM80	DM80GD4	DM90SD4 DM90LB4	DM100LA4	DM100LF4 DM112MB4	DM132SB4 DM132MB4		
AC	110	124	140	158	178	198	198	257.5		
AD	113.5	122	129	136.5	145.5	155.5	155.5	197.5		
XA	113	113	113	113	113	113	113	124		
XB	113	113	113	113	113	113	113	124		
XC	45.5	56.5	54	60	73	72.5	72.5	110.5		
LM	202	224.5	245.5						PG	Gear unit
	201	224.5	244.5	283	320				105	G0,S0,K0
	198	220.5	241.5	278	314.5	334.5	359.5		120	G1,S1,F2,K1,K2
	198.5	220	242	278.5	314.5	333.5	358.5	536	140	G2,S2,F3,K3
		216.5	237.5	276	309.5	329	354	532.5	160	G3,S3,F4,K4
			232.5	271	303.5	324	349	529	200	G4,S4,F5,K5
				264	299.5	317	342	522	250	G5,F6,K6
					294.5	312	337	514	300	G6,F7,K7
								497.5	350	G7,F8,K8
									400	G8,K9

Dimensions

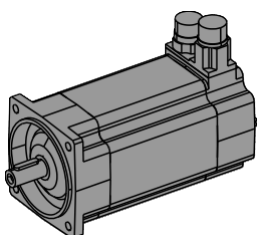


	DA160MB4 DA160LB4	DA180MD4 DA180LB4	DA200LB4	DA225SD4	DA225MD4		
AC	311	356	356	356	433		
AD	250	291	291	299	338		
XA	140	226	226	226	226		
XB	140	226	226	226	226		
XC	107.5	204.5	298.5	328.5	237		
LM						PG	Gear unit
						160	G3,S3,F4,K4
	562.5					200	G4,S4,F5,K5
	555	589	708			250	G5,F6,K6
	549	583	702			300	G6,F7,K7
	545	577.5	696.5	756.5	687.5	350	G7,F8,K8
	526.5	560.5	679.5	739.5	670.5	400	G8,K9
514.5	548	667	727	658	450	G9	

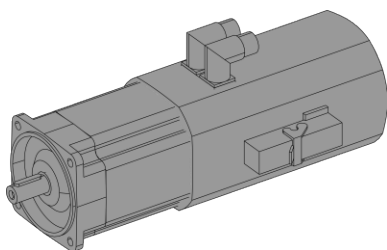
Servo motors TA



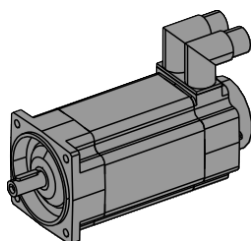
Type of construction



Encoder system ER
Resolver
Plug connector radial
Example: TA2S VD0 ER TW



Encoder system ER
Resolver
Right angle plug connector, turnable
Forced ventilation
Example: TA52 V30 ER TW F



Encoder system EN05
Absolute encoder multiturn HIPERFACE
Right angle plug connector, turnable
Example: TA41 V40 EN05 TW

Technical characteristics

AC servo-motor, suitable for KEB frequency inverter

Standard version:

- Protection standard IP54
- Insulation class 155
- PTC thermistor sensor
- Nominal voltage $U_n=400V$ or $U_n=230V$
- Number of poles: 6-pole

Options:

- UL-Version
- Dust- and water protection IP65

The motors correspond to the following standards:

DIN EN 60034

Rotating electrical machines, rating and performance.

DIN 42948

Mounting flanges for electrical machines

Product Overview

Servo motor with Self cooling

Motor	M0 [Nm]	Mmax [Nm]	Mn [Nm]				
			1500 1/min	2000 1/min	3000 1/min	4500 1/min	6000 1/min
TA1S	0.5	1.5				0.49	0.48
TA1M	1	3				0.99	0.98
TA2S	1.4	4.2				1.39	1.38
TA2M	2.4	7.2				2.2	2
TA2L	3.3	9.9				3	2.6
TA3S	2.9	8.7			2.6	2.45	2.25
TA3M	4.95	14.85			4.5	4	3.3
TA3L	6.8	20.4			5.7	4.7	
TA41	6.9	20.7		6.6	6.3	5.7	
TA42	9.2	27.6		8.6	8.1	7.1	
TA43	11.7	35.1		10.8	10.1	8.6	
TA51	11.5	34.5		10.8	10.2	9	
TA52	16.1	48.3		14.7	13.5	11.3	
TA53	20	60		17.7	16.1	10.4	
TA61	34.5	103.5	31.5	30	26		
TA62	50	150	44	41	33		
TA63	64	192	55	50	37		

Servo motor with Forced ventilation

Motor	M0 [Nm]	Mmax [Nm]	Mn [Nm]				
			1500 1/min	2000 1/min	3000 1/min	4500 1/min	6000 1/min
TA41F	10.35	20.7		9.9	9.45	8.55	
TA42F	13.8	27.6		12.9	12.15	10.65	
TA43F	17.55	35.1		16.2	15.15	12.9	
TA51F	16	34.5		15	14	12.5	
TA52F	22	48.3		20	18	15.4	
TA53F	30	60		27	24	15.5	
TA61F	48	103.5	43.5	41.5	36		
TA62F	70	150	61	57	46		
TA63F	90	192	82	75	55		

M0 Stall torque
Mmax Maximum torque
Mn Nominal torque S1

Options

	TA1	TA2	TA3	TA4	TA5	TA6
Flange	□58/Ø63/Ø40	□75/Ø75/Ø60	□90/Ø100/Ø80	□116/Ø130/Ø110 □116/Ø115/Ø95	□145/Ø165/Ø130	□188/Ø215/Ø180
Output shaft						
with Key	Ø9x20	Ø11x23 Ø14x30	Ø14x30 Ø19x40	Ø19x40 Ø24x50	Ø24x50 Ø32x58	Ø32x58 Ø38x80
without Key	Ø9x20	Ø11x23 Ø14x30	Ø14x30 Ø19x40	Ø19x40 Ø24x50	Ø24x50 Ø32x58	Ø32x58 Ø38x80
Motor connection						
Right angle plug connector, turnable	M23	M23	M23	M23	M23	M40
Plug connector radial	M23	M23	M23	M23	M23	M40
terminal box 1xM32+2xM16				x	x	x
Brake	BP03 2Nm	BP03 2Nm	BP05 4.5Nm	BP06 9Nm	BP07 18Nm	BF05 70Nm
			BF02 7Nm	BF03 16Nm	BF04 36Nm	
Additional inertia	-	-	x	x	x	x
Encoder system						
ER – Resolver	x	x	x	x	x	x
EN01 – Absolute encoder multiturn BiSS-C	x	x	x	x	x	x
EN02 – Absolute encoder singleturn BiSS-C	x	x	x	x	x	x
EN05 – Absolute encoder multiturn Hiperface	x	x	x	x	x	x
EN06 – Absolute encoder singleturn Hiperface	x	x	x	x	x	x
without encoder	x	x	x	x	x	x
Encoder system functional safety						
ER FS01 → ER + SIL2/PLd	x	x	x	x	x	x
EN05 FS02 → EN05 + SIL2/PLd	x	x	x	x	x	x
EN06 FS02 → EN06 SIL2/PLd	x	x	x	x	x	x
Forced ventilation	-	-	-	x	x	x
UL-Version	x	x	x	x	x	x
Dust- and water protection IP65	x	x	x	x	x	x
external ground screw	x	x	x	x	x	x
condensation drain hole	x	x	x	x	x	x

Nominal torque Mn

The values given in the tables are valid for the following conditions:

- Duty cycle S1
- Maximum ambient temperature +40°C
reduced motor torque at ambient temperature 40°C < θ ≤ 80°C: $M_{th} = M_n \cdot \left(\frac{145^\circ\text{C} - \theta}{105^\circ\text{C}} \right)$
- Installation altitude up to 1000m above mean sea level

selection conditions at periodical load

$$M_a = \sqrt{\frac{1}{t} \cdot \sum_i M_{ai}^2 \cdot t_i} \leq M_n$$

$$M_{amax} = \max(M_{ai}) \leq M_{max}$$

Mn	[Nm]	Nominal torque Servo motor
Mmax	[Nm]	Maximum torque Servo motor
Ma	[Nm]	Actual average load torque
Mamax	[Nm]	Maximum load torque
Mai	[Nm]	Load torque of cycle i
ti	[s]	Duration of cycle i
t	[s]	Total time $t = \sum_i t_i$

Permissible Radial Forces for the Output Shaft

Motor	Output shaft dxl [mm]	K1 [mm]	FR1 [N]				
			1500 1/min	2000 1/min	3000 1/min	4500 1/min	6000 1/min
TA1S	9x20	111	430	390	340	295	270
TA1M	9x20	141	455	410	360	315	285
TA2S	14x30	134.5	470	425	370	325	295
TA2M	14x30	174.5	500	455	395	345	310
TA2L	14x30	214.5	515	470	410	355	320
TA3S	19x40	153	775	700	610	535	485
TA3M	19x40	203	830	750	660	570	520
TA3L	19x40	253	860	780	680	595	540
TA41	24x50	221.5	890	810	710	610	560
TA42	24x50	256.5	920	830	720	630	570
TA43	24x50	291.5	930	850	740	640	580
TA51	32x58	241.5	1620	1460	1280	1110	1010
TA52	32x58	276.5	1660	1500	1310	1140	1030
TA53	32x58	311.5	1690	1530	1330	1160	1050
TA61	38x80	340.5	2550	2310	2010	1750	1580
TA62	38x80	410.5	2630	2380	2060	1790	1620
TA63	38x80	480.5	2670	2420	2090	1810	1640

For selection condition formulas, see page 6/7

Bearing Types Used (Standard version)

Servo motor	D - Bearing	ND - Bearing
TA1	6201-2Z	6000-2Z
TA2	6202-2Z	6000-2Z
TA3	6204-2Z	6201-2Z
TA4	6205-2Z	6203-2Z
TA5	6207-2Z	6204-2Z
TA6	6308-2Z	6206-2Z

Selection table

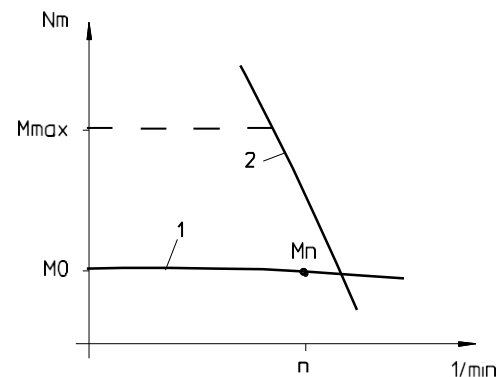
Servo motor with Self cooling

Motor	M0 [Nm]	Mn [Nm]	Mmax [Nm]	~kg	Jm [kgcm ²]	400V						230V					
						V	I0 [A]	Imax [A]	R_u-v [Ω]	L_u-v [mH]	kEpk [mV ² min]	V	I0 [A]	Imax [A]	R_u-v [Ω]	L_u-v [mH]	kEpk [mV ² min]
1500 1/min																	
TA61	34.5	31.5	103.5	33	77.71	V10	11.1	33.5	2.323	19.643	278.64	VA0	21.5	65	0.635	5.417	145.43
TA62	50	44	150	44	113.71	V10	16.4	49	1.2	12.32	273.51	VA0	31	93	0.345	3.478	145.89
TA63	64	55	192	54	149.7	V10	21.5	65	0.783	8.51	267.65	VA0	39.5	119	0.232	2.578	145.9
2000 1/min																	
TA41	6.9	6.6	20.7	7.5	5.65	V20	3.15	9.4	13.812	43.418	198.16	VB0	6.2	18.6	3.601	8.499	100.46
TA42	9.2	8.6	27.6	10.3	8.15	V20	4	12	8.388	28.562	205.81	VB0	8	24	2.096	5.905	102.86
TA43	11.7	10.8	35.1	13	10.65	V20	5	15	5.554	20.336	209.53	VB0	10.4	31	1.309	4.79	101.12
TA51	11.5	10.8	34.5	13.3	14.9	V20	5	15	7.336	31.114	205.42	VB0	11	33	1.521	6.279	93.88
TA52	16.1	14.7	48.3	16.7	21.53	V20	6.9	20.5	4.114	21.148	210.74	VB0	15.8	47.5	0.828	3.979	91.4
TA53	20	17.7	60	21	28.15	V20	8.7	26	2.553	14.876	206.64	VB0	19.2	58	0.513	3.091	93.84
TA61	34.5	30	103.5	33	77.71	V20	15.1	45.5	1.259	10.949	206.2	VB0	30	91	0.31475	2.737	103.1
TA62	50	41	150	44	113.71	V20	22.5	68	0.649	6.187	200.37	VB0	45	135	0.16225	1.547	100.185
TA63	64	50	192	54	149.7	V20	29.5	89	0.413	4.619	194.54	VB0	59	177	0.10325	1.155	97.27
3000 1/min																	
TA3S	2.9	2.6	8.7	3.7	1.13	V30	1.81	5.4	24.755	59.82	141.33	VCO	3.45	10.4	6.606	16.64	73.99
TA3M	4.95	4.5	14.85	5	1.95	V30	3	9	11.606	28.1	144.769	VCO	5.8	17.3	3.105	7.75	75.737
TA3L	6.8	5.7	20.4	6.3	2.76	V30	4	12	7.04	20	149.596	VCO	8	24	1.826	4.86	76.236
TA41	6.9	6.3	20.7	7.5	5.65	V30	4.45	13.3	6.995	21.248	139.96	VCO	9.1	27.5	1.674	4.996	68.26
TA42	9.2	8.1	27.6	10.3	8.15	V30	5.9	17.7	3.727	13.344	140.55	VCO	11.8	35.5	0.955	3.14	70.28
TA43	11.7	10.1	35.1	13	10.65	V30	7.3	22	2.611	10.404	144.54	VCO	14.6	44	0.654	2.183	72.25
TA51	11.5	10.2	34.5	13.3	14.9	V30	7.4	22	3.441	15.411	140.06	VCO	14.8	44.5	0.86025	3.853	70.03
TA52	16.1	13.5	48.3	16.7	21.53	V30	10.3	31	1.815	9.308	140.47	VCO	20.5	62	0.45375	2.327	70.235
TA53	20	16.1	60	21	28.15	V30	12.8	38.5	1.279	6.687	140.83	VCO	26.5	80	0.259	1.445	68.23
TA61	34.5	26	103.5	33	77.71	V30	21.5	65	0.635	5.417	145.43	VCO	43	129	0.15875	1.354	72.715
TA62	50	33	150	44	113.71	V30	31	93	0.345	3.478	145.89	VCO	62	186	0.08625	0.87	72.945
TA63	64	37	192	54	149.7	V30	39.5	119	0.232	2.578	145.9	VCO	62	186	0.08625	0.87	72.945
4500 1/min																	
TA1S	0.5	0.49	1.5	1.5	0.136	V40	0.62	1.86	138.339	113.2	81.911	VDO	1.13	3.4	39.952	28.8	41.599
TA1M	1	0.99	3	1.9	0.2	V40	1	3	73.082	57	90.686	VDO	1.99	6	17.055	14.58	45.795
TA2S	1.4	1.39	4.2	2.2	0.391	V40	1.29	3.85	40.535	59.4	97.828	VDO	2.6	7.8	10.715	13.59	48.256
TA2M	2.4	2.2	7.2	2.9	0.66	V40	2.15	6.4	18.504	26.6	99.123	VDO	4.3	12.9	4.37	6.53	49.703
TA2L	3.3	3	9.9	3.6	0.927	V40	2.95	8.9	10.846	19.07	99.241	VDO	5.8	17.4	2.635	4.5	51.103
TA3S	2.9	2.45	8.7	3.7	1.13	V40	2.65	8	11.083	29.3	98.13	VDO	5.3	15.9	2.781	6.397	49.225
TA3M	4.95	4	14.85	5	1.95	V40	4.45	13.3	4.965	12.84	100.189	VDO	9.1	27.5	1.292	3.08	48.689
TA3L	6.8	4.7	20.4	6.3	2.76	V40	6.2	18.5	2.885	8.27	100.264	VDO	12.3	37	0.773	2.05	50.025
TA41	6.9	5.7	20.7	7.5	5.65	V40	6.5	19.5	3.165	10.217	95.05	VDO	13.3	40	0.76	1.835	46.73
TA42	9.2	7.1	27.6	10.3	8.15	V40	8.5	25.5	1.766	6.237	97.35	VDO	17	51	0.446	1.324	48.68
TA43	11.7	8.6	35.1	13	10.65	V40	11.2	33.5	1.12	4.368	93.94	VDO	24.5	74	0.233	0.804	43.36
TA51	11.5	9	34.5	13.3	14.9	V40	11	33	1.521	6.279	93.88	VDO	22	66	0.38025	1.57	46.94
TA52	16.1	11.3	48.3	16.7	21.53	V40	15.8	47.5	0.828	3.979	91.4	VDO	31.5	95	0.207	0.995	45.7
TA53	20	10.4	60	21	28.15	V40	19.2	58	0.513	3.091	93.84	VDO	38.5	115	0.12825	0.773	46.92
6000 1/min																	
TA1S	0.5	0.48	1.5	1.5	0.136	V60	0.72	2.15	103.019	67.5	64.433	VFO	1.27	3.8	23.458	18.32	33.264
TA1M	1	0.98	3	1.9	0.2	V60	1.26	3.8	43.072	34.9	70.757	VFO	2.75	8.3	11.423	8.9	35.227
TA2S	1.4	1.38	4.2	2.2	0.391	V60	1.75	5.3	23.385	30.4	73.406	VFO	3.5	10.5	5.842	7.64	37.076
TA2M	2.4	2	7.2	2.9	0.66	V60	2.8	8.5	9.997	15.28	76.021	VFO	5.8	17.4	2.214	4.3	38.174
TA2L	3.3	2.6	9.9	3.6	0.927	V60	3.95	11.9	5.451	9.91	76.575	VFO	7.7	23	1.484	2.57	39.25
TA3S	2.9	2.25	8.7	3.7	1.13	V60	3.5	10.6	6.606	16.64	73.99	VFO	7.2	21.5	1.769	3.59	35.166
TA3M	4.95	3.3	14.85	5	1.95	V60	6	18	3.105	7.75	75.737	VFO	12.2	36.5	0.836	1.773	37.591

Servo motor with Forced ventilation

Motor	M0 [Nm]	Mn [Nm]	Mmax [Nm]	~kg	Jm [kgcm²]	400V						230V					
						V	I0 [A]	Imax [A]	R_u-v [Ω]	L_u-v [mH]	kEpk [mV*min]	V	I0 [A]	Imax [A]	R_u-v [Ω]	L_u-v [mH]	kEpk [mV*min]
1500 1/min																	
TA61 F	48	43.5	103.5	36	77.71	V10	15.4	33	2.323	19.643	278.64	VA0	30	65	0.635	5.417	145.43
TA62 F	70	61	150	47	113.71	V10	23	49.5	1.2	12.32	273.51	VA0	43.5	93	0.345	3.478	145.89
TA63 F	90	82	192	57	149.7	V10	30	64	0.783	8.51	267.65	VA0	55	117	0.232	2.578	145.9
2000 1/min																	
TA41 F	10.35	9.9	20.7	10.5	5.65	V20	4.7	9.4	13.812	43.418	198.16	VB0	9.3	18.6	3.601	8.499	100.46
TA42 F	13.8	12.9	27.6	13.3	8.15	V20	6	12	8.388	28.562	205.81	VB0	12	24	2.096	5.905	102.86
TA43 F	17.55	16.2	35.1	16	10.65	V20	7.5	15	5.554	20.336	209.53	VB0	15.6	31	1.309	4.79	101.12
TA51 F	16	15	34.5	16.3	14.9	V20	7	15.1	7.336	31.114	205.42	VB0	15.3	33	1.521	6.279	93.88
TA52 F	22	20	48.3	19.7	21.53	V20	9.4	20.5	4.114	21.148	210.74	VB0	21.5	47	0.828	3.979	91.4
TA53 F	30	27	60	24	28.15	V20	13.1	26	2.553	14.876	206.64	VB0	29	58	0.513	3.091	93.84
TA61 F	48	41.5	103.5	36	77.71	V20	21	45.5	1.259	10.949	206.2	VB0	42	91	0.31475	2.737	103.1
TA62 F	70	57	150	47	113.71	V20	31.5	68	0.649	6.187	200.37	VB0	63	135	0.16225	1.547	100.185
TA63 F	90	75	192	57	149.7	V20	41.5	89	0.413	4.619	194.54						
3000 1/min																	
TA41 F	10.35	9.45	20.7	10.5	5.65	V30	6.7	13.4	6.995	21.248	139.96	VC0	13.6	27.5	1.674	4.996	68.26
TA42 F	13.8	12.15	27.6	13.3	8.15	V30	8.8	17.7	3.727	13.344	140.55	VC0	17.7	35.5	0.955	3.14	70.28
TA43 F	17.55	15.15	35.1	16	10.65	V30	11	22	2.611	10.404	144.54	VC0	22	44	0.654	2.183	72.25
TA51 F	16	14	34.5	16.3	14.9	V30	10.3	22	3.441	15.411	140.06	VC0	20.5	44.5	0.86025	3.853	70.03
TA52 F	22	18	48.3	19.7	21.53	V30	14.1	31	1.815	9.308	140.47	VC0	28	62	0.45375	2.327	70.235
TA53 F	30	24	60	24	28.15	V30	19.2	38.5	1.279	6.687	140.83	VC0	40	80	0.259	1.445	68.23
TA61 F	48	36	103.5	36	77.71	V30	30	65	0.635	5.417	145.43	VC0	60	129	0.15875	1.354	72.715
TA62 F	70	46	150	47	113.71	V30	43.5	93	0.345	3.478	145.89						
TA63 F	90	55	192	57	149.7	V30	55	117	0.232	2.578	145.9						
4500 1/min																	
TA41 F	10.35	8.55	20.7	10.5	5.65	V40	9.8	19.5	3.165	10.217	95.05	VD0	20	40	0.76	1.835	46.73
TA42 F	13.8	10.65	27.6	13.3	8.15	V40	12.8	25.5	1.766	6.237	97.35	VD0	25.5	51	0.446	1.324	48.68
TA43 F	17.55	12.9	35.1	16	10.65	V40	16.8	33.5	1.12	4.368	93.94	VD0	37	74	0.233	0.804	43.36
TA51 F	16	12.5	34.5	16.3	14.9	V40	15.3	33	1.521	6.279	93.88	VD0	30.5	66	0.38025	1.57	46.94
TA52 F	22	15.4	48.3	19.7	21.53	V40	21.5	47	0.828	3.979	91.4	VD0	43	94	0.207	0.995	45.7
TA53 F	30	15.5	60	24	28.15	V40	29	58	0.513	3.091	93.84	VD0	58	115	0.12825	0.773	46.92

- n Nominal speed
- M0 Stall torque
- Mn Nominal torque S1
- Mmax Maximum torque
- ~kg Weight
- Jm Inertia
- V Type of motor winding
- I0 Current at stall torque
- R_u-v Winding resistance
- L_u-v Winding inductance
- kEpk Voltage constant, Peak value
mV*min = V/(1000 1/min)
- Effektive value $kE = kEpk / \sqrt{2}$
- nmax Maximum speed
 n ≤ 2000 1/min → nmax = 3000 1/min
 n = 3000 1/min → nmax = 4500 1/min
 n ≤ 6000 1/min → nmax = 6000 1/min



1 - Characteristic curve for S1-duty cycle
 2 - Voltage limit curve 400V or 230V

Rating plate (Example)

KEB Antriebstechnik GmbH
 08289 Schneeberg
 Germany

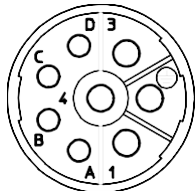
IEC60034

TA3M V30 ER TW 3-PM servo motor
 {serial-no} 5kg

Pn=1.41kW IP54 Th.Cl.155
 Un=400V In=2.75A Mn=4.5Nm
 nn=3000 1/min fn=150Hz M0=4.95Nm Mmax=14.85Nm
 kEpk=144.8mV*min R=11.606Ω L=28.10mH

Electrical Connection

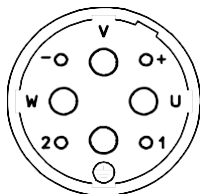
Motor TA2..TA5



Power connector Size 1, 8pole, Counterplug optional

Pin	1	⊖	3	4	A	B	C	D
Signal	U	PE	W	V	Brake +	Brake -	TW	TW

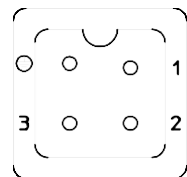
Motor TA6



Power connector Size 1.5, 8pole, Counterplug optional

Pin	U	V	W	⊖	+	-	1	2
Signal	U	V	W	PE	Brake +	Brake -	TW	TW

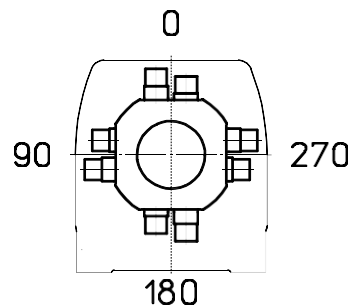
F – Forced ventilation



Power connector 4pole, Counterplug included
Voltage/Frequency: 3 ~ 400V 50Hz
Rated current of forced ventilation: 0.14A

Pin	1	2	3	⊖
Signal	U	V	W	PE

Position of motor connection for geared motors



Example: Motor connection 90, Plug connector radial

Motor options

Brake COMBIPERM

- Permanent magnet holding brake with emergency-stop-function
- Standard voltages: 24VDC
- Insulation class: F

Connection with power connector

Motor	Brake	Mbr [Nm]	JB [kgcm ²]	P20 [W]	~kg
TA1	BP03	2	0.068	11	0.2
TA2	BP03	2	0.068	11	0.2
TA3	BP05	4.5	0.18	12	0.4
TA4	BP06	9	0.54	18	0.6
TA5	BP07	18	1.66	24	1.0

Brake COMBISTOP

- spring-set twin-disc safety brake
- Standard voltages: 24VDC
- Insulation class: F

Connection with power connector

Motor	Brake	Mbr [Nm]	JB [kgcm ²]	P20 [W]	~kg
TA3	BF02	7	0.3	18	1.5
TA4	BF03	16	0.7	20	2.5
TA5	BF04	36	1.4	25	4.8
TA6	BF05	70	3.5	30	8.3

Mbr Static braking torque after completed run-in phase (20°C)

JB Inertia

P20 Excitation rating at 20°C

t2 Release time, time from connecting the current to the beginning of torque decrease

t1= Engaging time: Time from disconnecting of current until the rated torque is attained

t11= Engaging delay time: Time from disconnecting of current until the torque rises

WR0.1 friction work until 0.1mm abrasion

WRmax permissible friction work for emergency stop from 3000 1/min

The specified switching times apply to nominal clearance and nominal torque. It relates to average values and depends on the type of rectification and coil temperature.

Additional inertia

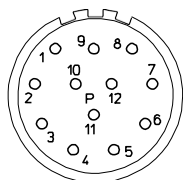
To improve the control characteristics of the servo system with high external masses, the servomotors TA can be equipped with an additional inertia.

Motor	Jz [kgcm ²]
TA3S, TA3M	2.6
TA41, TA42	11
TA51, TA52	28
TA61, TA62	130

Encoder system

ER – Resolver

- Type: BRX 2-pole
- Voltage: 7VAC
- Frequency: 10kHz
- Transformation factor: $0.5 \pm 5\%$
- Encoder system position:
+ → U, - → V
Rotor 330° - electrical offset $15^\circ = 315^\circ$
KEB: 57344

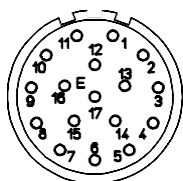


Signal connector 12pole, Counterplug optional

Pin	1	2	5	7	10	11
Signal	/sin	/cos	/sin-ref	sin-ref	sin	cos

EN01 - Absolute encoder multiturn, BiSS-C EN02 – Absolute encoder singleturn, BiSS-C

- Resolution singleturn: 19bit
- Resolution multiturn (EN01): 12bit (4096 rev)
- Code type: BiSS, binary code
- Supply voltage: 5VDC $\pm 5\%$
- Current consumption: max. 50mA singleturn / 100mA multiturn
- Permissible load / channel: ± 20 mA
- Encoder system position KEB: 0

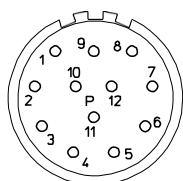


Signal connector 17pole, Counterplug optional

Pin	10	7	8	9	14	17
Signal	0V	+V	clock	/clock	data	/data

EN05 - Absolute encoder multiturn, HIPERFACE EN06 - Absolute encoder singleturn, HIPERFACE

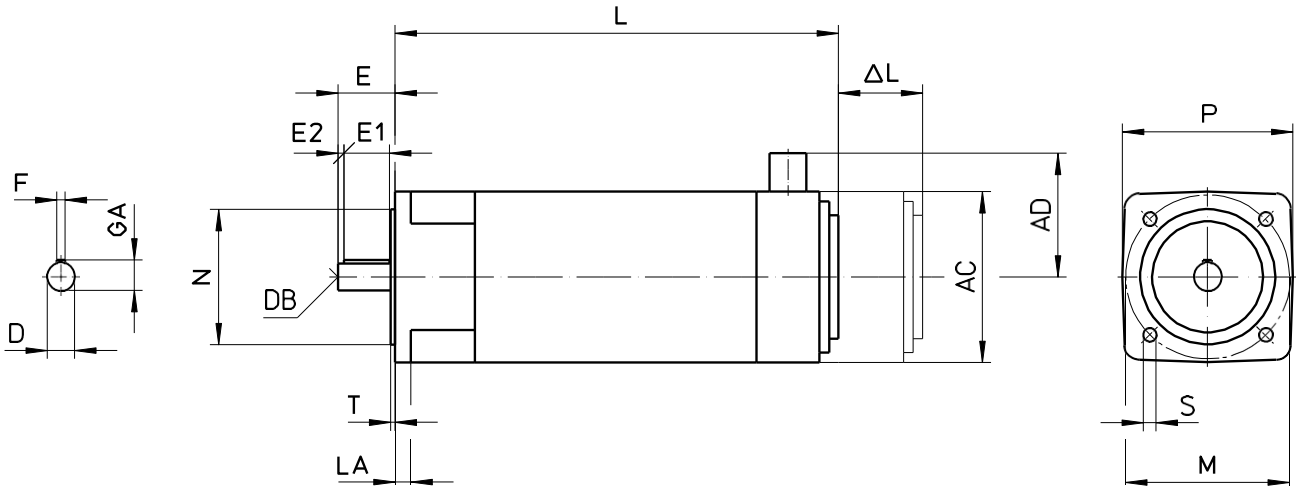
- Resolution singleturn: 12bit
- Resolution multiturn (EN05): 12bit (4096 rev)
- Code type: HIPERFACE
- Sin/Cos-periods: 128ppr 1Vpp
- Supply voltage: 7..12VDC (recommended: 8VDC)
- Current consumption: max. 60mA
- Permissible load / channel: ± 20 mA
- Encoder system position KEB: 11000



Signal connector 12pole, Counterplug optional

Pin	4	5	6	7	8	9	10	11
Signal	/sin	/cos	data	/data	sin	cos	+V	0V

Dimensions



	TA1	TA2	TA3	TA4	TA5	TA6
LA	7	8	8	9	12	14
M	Ø63	Ø75	Ø100	Ø130/Ø115	Ø165	Ø215
N	Ø40	Ø60	Ø80	Ø110/Ø95	Ø130	Ø180
P	58	75	90	116/116	145	188
S	5.5	5.5	6.8	9	11	14
T	2.5	2.5	3	3	3.5	4

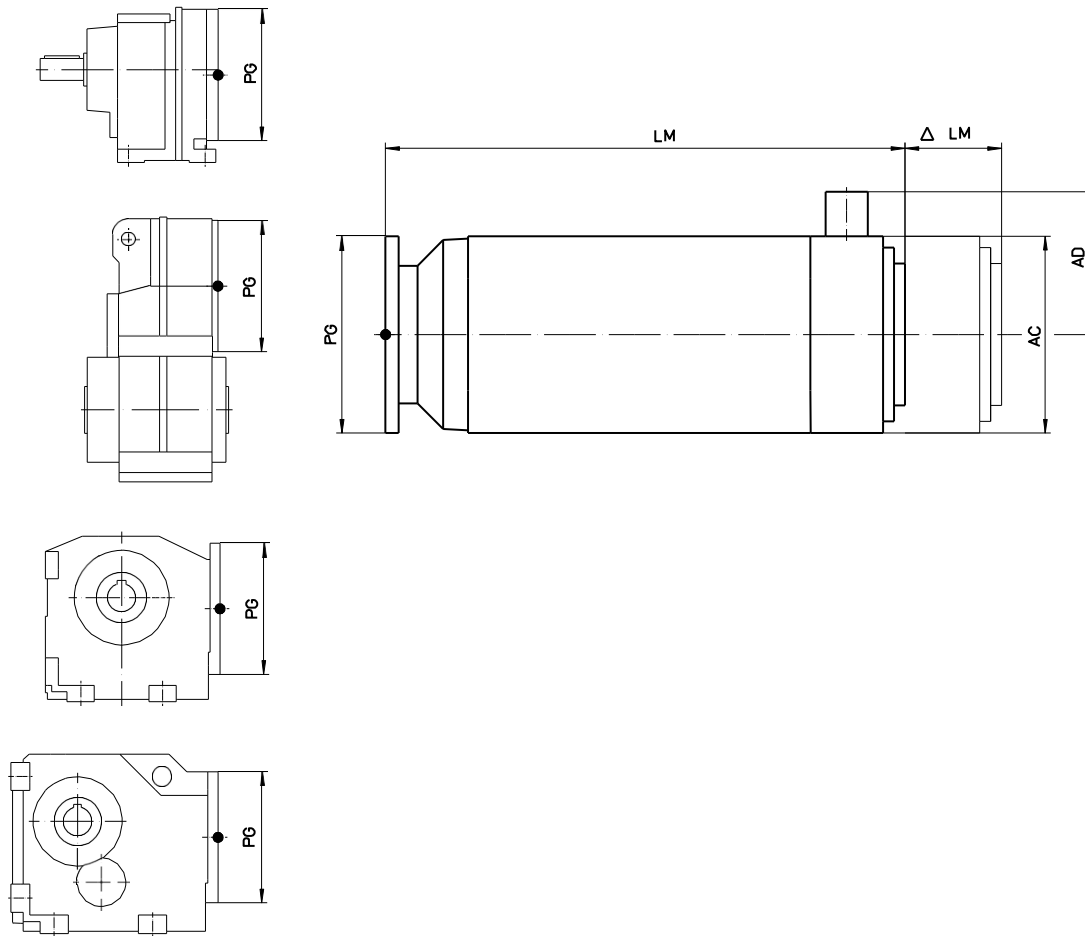
D	Ø9k6	Ø11k6/Ø14k6	Ø14k6/Ø19k6	Ø19k6/Ø24k6	Ø24k6/Ø32k6	Ø32k6/Ø38k6
DB	M3	M4/M5	M5/M6	M6/M8	M8/M12	M12/M12
E	20	23/30	30/40	40/50	50/58	58/80
E1	14	16/22	22/32	32/40	40/50	50/70
E2	3	3.5/4	4	4/5	5/4	4/5
F	3	4/5	5/6	6/8	8/10	10/10
GA	10.2	12.5/16	16/21.5	21.5/27	27/35	35/41

AC	58	75	90	116	145 F:158	185 F:198
AD	73	80	88	102	115.5	158
L	TA1S:134 TA1M:164	TA2S:153 TA2M:193 TA2L:253	TA3S:166 TA3M:216 TA3L:263	TA41:232 TA42:267 TA43:302	TA51:252 TA52:287 TA53:322	TA61:343 TA62:413 TA63:483

ΔL						
B_	35	25	50	45	55	60
EN_	27	27	27	27	27	27
B_EN_	62	52	77	72	82	87
F					156	163.5
B_F					211	223.5
B_F EN_					211	223.5

ER Resolver or without encoder: $\Delta L=0$
 B_ Brake BP or BF
 EN_ Absolute encoder EN..
 F Forced ventilation

Dimensions



	TA1S/M	TA2S/M/L	TA3S/M/L	TA41/TA42/TA43	TA51/TA52/TA53	TA61/TA62/TA63
AC	58	75	90	116	145 F:158	185 F:198
AD	73	80	88	102	115.5	158

LM							PG	Gear unit
	123/153	138.5/178.5/218.5	162/212/262				105	G0,S0,K0
		137.5/177.5/217.5	161/211/261	235.5/270.5/305.5			120	G1,S1,F2,K1,K2
			158/208/258	230.5/265.5/300.5	257/292/327		140	G2,S2,F3,K3
			158.5/208.5/258.5	231/266/301	257/292/327	356/426/496	160	G3,S3,F4,K4
				228.5/263.5/298.5	252.5/287.5/322.5	351.5/421.5/491.5	200	G4,S4,F5,K5
					247.5/282.5/317.5	346.5/416.5/486.5	250	G5,F6,K6
					240.5/275.5/310.5	339.5/409.5/479.5	300	G6,F7,K7
						334.5/404.5/474.5	350	G7,F8,K8

ΔL						
B_	35	25	50	45	55	60
Z_			50	45	55	60
EN_	27	27	27	27	27	27
Z EN_			77	72	82	87
B_ EN_	62	52	77	72	82	87
B_ Z EN_			100	80	90	130
F				156	156	163.5
Z F				201	211	223.5
B_ F				201	211	223.5
B_ Z F				236	246	293.5
B_ EN_ F				201	211	223.5
B_ Z EN_ F				236	246	293.5

ER Resolver or without encoder: ΔL=0
 B_ Brake BP or BF
 Z_ Additional inertia
 EN_ Absolute encoder EN..
 F Forced ventilation