

2 Helical geared motors

C

2.1 Overview

Compact helical geared motors

Features

Power density	★★★★☆
Backlash	★★★★☆
Price category	€
Shaft load	★★★★☆
Smooth operation	★★★★☆
Torsional stiffness	★★★★☆
Mass moment of inertia	★★★★★
Helical gearing	✓
Maintenance-free (C0 – C5)	✓
FKM seal ring at the input	✓
Reinforced output bearing	✓ (on request)

Key: ★★★★★ good | ★★★★★ excellent
 € Economy | €€€€€ Premium

Technical data

P_N	0.12 – 45 kW
i	2 – 274
M_{2N}	2.5 – 8557 Nm
η_{get}	≤ 97 %

2.2 Selection tables

The technical data specified in the selection tables applies to:

- Installation altitudes up to 1000 m above sea level
- Surrounding temperatures from 0 °C to 40 °C
- Drives with self-ventilated motors
- Weight specification for mounting position EL1, housing design N

Calculate the technical data for geared motors with low output speed at <http://products.stoeber.de>.

Asynchronous geared motors are ideal for operation on a drive controller (87 Hz). More information can be found in Chapter [▶ 6.6](#)

An explanation of the formula symbols can be found in the Chapter [▶ 14.1](#).

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 0,12 kW, P_N (87 Hz) = 0,21 kW									
7.5	0.81	13	0.81	148	C103_1840 D063K04	18.6	183.7	2021/11	1.9
10	1.1	17	1.1	110	C103_1370 D063K04	18.6	137.3	10575/77	2.0
12	1.3	21	1.3	89	C103_1110 D063K04	18.6	111.1	1222/11	2.0
15	1.6	26	1.6	74	C103_0920 D063K04	18.6	92.13	16215/176	2.0
17	1.8	29	1.8	66	C103_0820 D063K04	18.6	81.64	31349/384	2.0
20	1.1	34	1.1	57	C002_0700 D063K04	10.8	69.88	559/8	1.9
22	1.2	38	1.2	51	C002_0620 D063K04	10.8	62.35	1247/20	1.9
24	1.3	42	1.3	46	C002_0560 D063K04	10.8	55.97	2015/36	1.9
27	1.5	48	1.5	41	C002_0500 D063K04	10.8	49.94	899/18	1.9
29	1.6	51	1.6	38	C002_0470 D063K04	10.8	46.82	7865/168	1.9
29	2.4	51	2.4	38	C102_0470 D063K04	15.7	46.91	516/11	2.0
33	1.8	57	1.8	34	C002_0420 D063K04	10.8	41.77	3509/84	1.9
33	2.4	57	2.4	34	C102_0420 D063K04	15.7	41.57	1247/30	2.0
39	2.1	68	2.1	29	C002_0350 D063K04	10.8	35.03	1261/36	1.9
44	2.4	76	2.4	25	C002_0310 D063K04	10.8	31.26	2813/90	1.9
49	2.6	85	2.6	23	C002_0280 D063K04	10.8	27.99	2015/72	2.0
55	2.8	95	2.8	20	C002_0250 D063K04	10.8	24.97	899/36	2.0
59	3.2	102	3.2	19	C002_0230 D063K04	10.8	23.21	325/14	2.0
66	3.2	115	3.2	17	C002_0210 D063K04	10.8	20.71	145/7	2.0
78	3.3	135	3.3	14	C002_0175 D063K04	10.8	17.53	3575/204	2.0
88	3.3	152	3.3	13	C002_0155 D063K04	10.8	15.64	1595/102	2.0
97	3.3	168	3.3	11	C002_0140 D063K04	10.8	14.08	169/12	2.1
109	3.3	189	3.3	10	C002_0125 D063K04	10.8	12.57	377/30	2.1
148	3.3	257	3.3	7.5	C002_0092 D063K04	10.8	9.228	1495/162	2.2
166	3.3	288	3.3	6.7	C002_0082 D063K04	10.8	8.235	667/81	2.2
178	3.2	308	3.2	6.3	C002_0077 D063K04	10.8	7.714	54/7	2.0
217	3.3	377	3.3	5.1	C002_0063 D063K04	10.8	6.300	2035/323	2.0
235	3.3	407	3.3	4.7	C002_0058 D063K04	10.8	5.824	99/17	2.0
271	3.3	469	3.3	4.1	C002_0051 D063K04	10.8	5.063	481/95	2.1
293	3.3	507	3.3	3.8	C002_0047 D063K04	10.8	4.680	117/25	2.1
413	3.3	715	3.3	2.7	C002_0033 D063K04	10.8	3.318	1702/513	2.3
447	3.3	774	3.3	2.5	C002_0031 D063K04	10.8	3.067	46/15	2.3
P_N (50 Hz) = 0,18 kW, P_N (87 Hz) = 0,31 kW									
5.0	1.1	8.6	1.1	330	C303_2740 D063M04	29.4	273.7	26273/96	2.5
6.2	1.3	11	1.3	265	C303_2200 D063M04	29.4	219.9	58045/264	2.5
7.4	0.91	13	0.91	221	C203_1830 D063M04	25.0	183.4	99029/540	2.5
7.4	1.6	13	1.6	220	C303_1830 D063M04	29.4	182.8	1645/9	2.5
9.9	1.2	17	1.2	166	C203_1380 D063M04	25.0	137.8	16121/117	2.5
12	0.90	21	0.90	134	C103_1110 D063M04	19.0	111.1	1222/11	2.5
12	1.5	21	1.5	133	C203_1110 D063M04	25.0	110.6	191149/1728	2.5
15	1.1	26	1.1	111	C103_0920 D063M04	19.0	92.13	16215/176	2.5
15	1.8	25	1.8	111	C203_0920 D063M04	25.0	92.40	29939/324	2.5
17	1.2	29	1.2	98	C103_0820 D063M04	19.0	81.64	31349/384	2.5
17	2.0	29	2.0	97	C203_0810 D063M04	25.0	80.62	11609/144	2.5
24	0.88	42	0.88	68	C002_0560 D063M04	11.2	55.97	2015/36	2.4
27	0.98	47	0.98	61	C002_0500 D063M04	11.2	49.94	899/18	2.4
29	1.0	50	1.0	57	C002_0470 D063M04	11.2	46.82	7865/168	2.4
29	1.6	50	1.6	57	C102_0470 D063M04	16.1	46.91	516/11	2.5
33	1.2	56	1.2	51	C002_0420 D063M04	11.2	41.77	3509/84	2.4
33	1.6	57	1.6	51	C102_0420 D063M04	16.1	41.57	1247/30	2.5

2.2 Selection tables 2 C helical geared motors

n ₂ 50 Hz [rpm]	S 50 Hz	n ₂ 87 Hz [rpm]	S 87 Hz	M _{2N} [Nm]	Type	m [kg]	i	i _{exakt}	J ₁ [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 0,18 kW, P_N (87 Hz) = 0,31 kW									
39	1.4	67	1.4	43	C002_0350 D063M04	11.2	35.03	1261/36	2.4
44	1.6	75	1.6	38	C002_0310 D063M04	11.2	31.26	2813/90	2.4
49	1.8	84	1.8	34	C002_0280 D063M04	11.2	27.99	2015/72	2.5
54	1.9	94	1.9	31	C002_0250 D063M04	11.2	24.97	899/36	2.5
59	2.1	101	2.1	28	C002_0230 D063M04	11.2	23.21	325/14	2.5
66	2.2	114	2.2	25	C002_0210 D063M04	11.2	20.71	145/7	2.5
78	2.2	134	2.2	21	C002_0175 D063M04	11.2	17.53	3575/204	2.5
87	2.2	151	2.2	19	C002_0155 D063M04	11.2	15.64	1595/102	2.5
97	2.2	167	2.2	17	C002_0140 D063M04	11.2	14.08	169/12	2.6
108	2.2	187	2.2	15	C002_0125 D063M04	11.2	12.57	377/30	2.6
147	2.2	255	2.2	11	C002_0092 D063M04	11.2	9.228	1495/162	2.7
165	2.2	286	2.2	10	C002_0082 D063M04	11.2	8.235	667/81	2.7
176	2.2	305	2.2	9.4	C002_0077 D063M04	11.2	7.714	54/7	2.5
216	2.2	374	2.2	7.7	C002_0063 D063M04	11.2	6.300	2035/323	2.5
234	2.2	404	2.2	7.1	C002_0058 D063M04	11.2	5.824	99/17	2.5
269	2.2	465	2.2	6.2	C002_0051 D063M04	11.2	5.063	481/95	2.6
291	2.2	503	2.2	5.7	C002_0047 D063M04	11.2	4.680	117/25	2.6
410	2.2	710	2.2	4.1	C002_0033 D063M04	11.2	3.318	1702/513	2.8
443	2.2	768	2.2	3.7	C002_0031 D063M04	11.2	3.067	46/15	2.8
P_N (50 Hz) = 0,25 kW, P_N (87 Hz) = 0,43 kW									
6.3	0.97	11	0.97	362	C303_2200 D071K04	31.0	219.9	58045/264	4.1
7.6	1.2	13	1.2	301	C303_1830 D071K04	31.0	182.8	1645/9	4.1
10	0.88	17	0.88	227	C203_1380 D071K04	26.6	137.8	16121/117	4.1
10	1.6	17	1.6	226	C303_1370 D071K04	31.0	137.2	59267/432	4.1
13	1.1	22	1.1	182	C203_1110 D071K04	26.6	110.6	191149/1728	4.1
13	1.9	22	1.9	180	C303_1100 D071K04	31.0	109.6	94705/864	4.1
15	1.3	26	1.3	152	C203_0920 D071K04	26.6	92.40	29939/324	4.1
15	2.3	26	2.3	151	C303_0920 D071K04	31.0	91.93	39715/432	4.1
17	0.89	29	0.89	134	C103_0820 D071K04	20.6	81.64	31349/384	4.1
17	1.5	30	1.5	133	C203_0810 D071K04	26.6	80.62	11609/144	4.1
17	2.6	29	2.6	134	C303_0810 D071K04	31.0	81.47	1222/15	4.1
20	1.0	34	1.0	118	C102_0700 D071K04	17.7	70.46	775/11	4.0
20	1.7	34	1.7	117	C202_0700 D071K04	21.7	70.32	7595/108	4.1
22	1.1	38	1.1	104	C102_0620 D071K04	17.7	62.43	4495/72	4.0
23	1.8	39	1.8	102	C202_0610 D071K04	21.7	61.35	2945/48	4.1
25	1.3	43	1.3	94	C102_0560 D071K04	17.7	56.36	620/11	4.0
28	1.4	48	1.4	83	C102_0500 D071K04	17.7	49.94	899/18	4.0
30	1.5	51	1.5	78	C102_0470 D071K04	17.7	46.91	516/11	4.1
33	0.86	57	0.86	70	C002_0420 D071K04	12.8	41.77	3509/84	4.0
33	1.7	58	1.7	69	C102_0420 D071K04	17.7	41.57	1247/30	4.1
40	1.0	68	1.0	58	C002_0350 D071K04	12.8	35.03	1261/36	4.0
39	2.1	68	2.1	59	C102_0350 D071K04	17.7	35.07	2700/77	4.1
44	1.2	77	1.2	52	C002_0310 D071K04	12.8	31.26	2813/90	4.0
45	2.3	77	2.3	52	C102_0310 D071K04	17.7	31.07	435/14	4.1
49	1.3	86	1.3	47	C002_0280 D071K04	12.8	27.99	2015/72	4.1
55	1.4	96	1.4	42	C002_0250 D071K04	12.8	24.97	899/36	4.1
59	3.1	102	3.1	39	C102_0240 D071K04	17.7	23.52	1035/44	4.2
60	1.5	103	1.5	39	C002_0230 D071K04	12.8	23.21	325/14	4.1
67	1.7	116	1.7	35	C002_0210 D071K04	12.8	20.71	145/7	4.1
66	3.5	115	3.5	35	C102_0210 D071K04	17.7	20.84	667/32	4.2
79	2.1	137	2.1	29	C002_0175 D071K04	12.8	17.53	3575/204	4.1
89	2.3	153	2.3	26	C002_0155 D071K04	12.8	15.64	1595/102	4.1
98	2.6	170	2.6	23	C002_0140 D071K04	12.8	14.08	169/12	4.2
110	2.9	191	2.9	21	C002_0125 D071K04	12.8	12.57	377/30	4.2
120	3.1	208	3.1	19	C002_0115 D071K04	12.8	11.54	3185/276	4.2
135	3.5	233	3.5	17	C002_0105 D071K04	12.8	10.30	1421/138	4.2
150	3.5	260	3.5	15	C002_0092 D071K04	12.8	9.228	1495/162	4.3
168	3.5	291	3.5	14	C002_0082 D071K04	12.8	8.235	667/81	4.3
178	3.5	308	3.5	13	C102_0078 D071K04	17.7	7.796	3243/416	4.2
180	3.3	311	3.3	13	C002_0077 D071K04	12.8	7.714	54/7	4.1
220	3.5	381	3.5	11	C002_0063 D071K04	12.8	6.300	2035/323	4.1
236	3.5	408	3.5	9.8	C102_0059 D071K04	17.7	5.875	47/8	4.4
238	3.5	412	3.5	9.7	C002_0058 D071K04	12.8	5.824	99/17	4.1
274	3.5	474	3.5	8.4	C002_0051 D071K04	12.8	5.063	481/95	4.2
296	3.5	513	3.5	7.8	C002_0047 D071K04	12.8	4.680	117/25	4.2

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 0,25 kW, P_N (87 Hz) = 0,43 kW									
331	3.5	573	3.5	7.0	C102_0042 D071K04	17.7	4.189	377/90	4.7
334	3.5	578	3.5	6.9	C002_0041 D071K04	12.8	4.149	1813/437	4.3
357	3.5	618	3.5	6.5	C102_0039 D071K04	17.7	3.883	1363/351	4.7
361	3.5	626	3.5	6.4	C002_0038 D071K04	12.8	3.835	441/115	4.3
417	3.5	723	3.5	5.5	C002_0033 D071K04	12.8	3.318	1702/513	4.4
452	3.5	782	3.5	5.1	C002_0031 D071K04	12.8	3.067	46/15	4.4
694	3.5	1201	3.5	3.3	C002_0020 D071K04	12.8	1.997	1480/741	4.7
844	3.3	–	–	2.7	C002_0033 D063M02	11.2	3.318	1702/513	1.9
913	3.3	–	–	2.5	C002_0031 D063M02	11.2	3.067	46/15	1.9
P_N (50 Hz) = 0,37 kW, P_N (87 Hz) = 0,64 kW									
10	1.0	17	1.0	338	C303_1370 D071L04	32.0	137.2	59267/432	5.1
12	1.3	22	1.3	270	C303_1100 D071L04	32.0	109.6	94705/864	5.1
15	0.88	26	0.88	228	C203_0920 D071L04	27.6	92.40	29939/324	5.1
15	1.5	26	1.5	227	C303_0920 D071L04	32.0	91.93	39715/432	5.1
17	1.0	29	1.0	199	C203_0810 D071L04	27.6	80.62	11609/144	5.1
17	1.7	29	1.7	201	C303_0810 D071L04	32.0	81.47	1222/15	5.1
19	1.1	34	1.1	176	C202_0700 D071L04	22.7	70.32	7595/108	5.1
22	1.2	39	1.2	154	C202_0610 D071L04	22.7	61.35	2945/48	5.1
24	0.85	42	0.85	141	C102_0560 D071L04	18.7	56.36	620/11	5.0
27	0.96	48	0.96	125	C102_0500 D071L04	18.7	49.94	899/18	5.0
29	1.0	51	1.0	117	C102_0470 D071L04	18.7	46.91	516/11	5.1
33	1.2	57	1.2	104	C102_0420 D071L04	18.7	41.57	1247/30	5.1
39	1.4	68	1.4	88	C102_0350 D071L04	18.7	35.07	2700/77	5.1
44	1.5	76	1.5	78	C102_0310 D071L04	18.7	31.07	435/14	5.1
49	0.86	85	0.86	70	C002_0280 D071L04	13.8	27.99	2015/72	5.1
55	0.96	95	0.96	62	C002_0250 D071L04	13.8	24.97	899/36	5.1
58	2.0	101	2.0	59	C102_0240 D071L04	18.7	23.52	1035/44	5.2
59	1.0	102	1.0	58	C002_0230 D071L04	13.8	23.21	325/14	5.1
66	1.2	115	1.2	52	C002_0210 D071L04	13.8	20.71	145/7	5.1
66	2.3	114	2.3	52	C102_0210 D071L04	18.7	20.84	667/32	5.2
78	1.4	135	1.4	44	C002_0175 D071L04	13.8	17.53	3575/204	5.1
77	2.3	134	2.3	44	C102_0175 D071L04	18.7	17.73	195/11	5.3
88	1.5	152	1.5	39	C002_0155 D071L04	13.8	15.64	1595/102	5.1
87	2.3	151	2.3	39	C102_0155 D071L04	18.7	15.71	377/24	5.3
97	1.7	168	1.7	35	C002_0140 D071L04	13.8	14.08	169/12	5.2
109	1.9	189	1.9	31	C002_0125 D071L04	13.8	12.57	377/30	5.2
119	2.1	206	2.1	29	C002_0115 D071L04	13.8	11.54	3185/276	5.2
133	2.3	230	2.3	26	C002_0105 D071L04	13.8	10.30	1421/138	5.2
148	2.3	257	2.3	23	C002_0092 D071L04	13.8	9.228	1495/162	5.3
166	2.3	288	2.3	21	C002_0082 D071L04	13.8	8.235	667/81	5.3
176	2.3	304	2.3	20	C102_0078 D071L04	18.7	7.796	3243/416	5.2
178	2.2	308	2.2	19	C002_0077 D071L04	13.8	7.714	54/7	5.1
217	2.3	377	2.3	16	C002_0063 D071L04	13.8	6.300	2035/323	5.1
233	2.3	404	2.3	15	C102_0059 D071L04	18.7	5.875	47/8	5.4
235	2.3	407	2.3	15	C002_0058 D071L04	13.8	5.824	99/17	5.1
271	2.3	469	2.3	13	C002_0051 D071L04	13.8	5.063	481/95	5.2
293	2.3	507	2.3	12	C002_0047 D071L04	13.8	4.680	117/25	5.2
327	2.3	566	2.3	10	C102_0042 D071L04	18.7	4.189	377/90	5.7
330	2.3	572	2.3	10	C002_0041 D071L04	13.8	4.149	1813/437	5.3
353	2.3	611	2.3	9.7	C102_0039 D071L04	18.7	3.883	1363/351	5.7
357	2.3	619	2.3	9.6	C002_0038 D071L04	13.8	3.835	441/115	5.3
413	2.3	715	2.3	8.3	C002_0033 D071L04	13.8	3.318	1702/513	5.4
447	2.3	774	2.3	7.7	C002_0031 D071L04	13.8	3.067	46/15	5.4
686	2.3	1188	2.3	5.0	C002_0020 D071L04	13.8	1.997	1480/741	5.7
716	4.7	–	–	4.8	C102_0039 D071K02	17.6	3.883	1363/351	3.2
725	4.7	–	–	4.7	C002_0038 D071K02	12.7	3.835	441/115	2.8
838	4.7	–	–	4.1	C002_0033 D071K02	12.7	3.318	1702/513	2.9
906	4.7	–	–	3.8	C002_0031 D071K02	12.7	3.067	46/15	2.9
1392	4.7	–	–	2.5	C002_0020 D071K02	12.7	1.997	1480/741	3.2
P_N (50 Hz) = 0,55 kW, P_N (87 Hz) = 0,95 kW									
5.2	0.83	9.0	0.83	970	C503_2710 D080K04	56.3	270.5	58435/216	8.9
5.3	1.4	9.1	1.4	955	C613_2660 D080K04	76.1	266.4	7192/27	8.9
6.5	1.0	11	1.0	774	C503_2160 D080K04	56.3	215.9	1943/9	8.9
6.6	1.7	11	1.7	764	C613_2130 D080K04	76.1	213.1	28768/135	9.0
7.8	1.2	13	1.2	648	C503_1810 D080K04	56.3	180.6	8671/48	8.9

2.2 Selection tables 2 C helical geared motors

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 0,55 kW, P_N (87 Hz) = 0,95 kW									
7.8	0.85	13	0.85	647	C403_1800 D080K04	45.3	180.4	1624/9	8.9
8.0	2.1	14	2.1	628	C613_1750 D080K04	76.1	175.3	7888/45	9.0
10	1.1	18	1.1	483	C403_1350 D080K04	45.3	134.6	1885/14	8.9
10	1.6	18	1.6	485	C503_1350 D080K04	56.3	135.3	406/3	9.0
10	2.3	18	2.3	483	C613_1350 D080K04	76.1	134.8	15776/117	9.1
13	2.1	22	2.1	390	C503_1090 D080K04	56.3	108.6	31291/288	9.0
13	0.90	22	0.90	388	C303_1080 D080K04	34.8	108.2	11687/108	8.9
13	1.4	23	1.4	386	C403_1080 D080K04	45.3	107.7	754/7	9.0
13	2.3	23	2.3	380	C613_1060 D080K04	76.1	106.1	3712/35	9.2
15	1.1	27	1.1	325	C303_0910 D080K04	34.8	90.76	4901/54	8.9
16	1.7	27	1.7	324	C403_0900 D080K04	45.3	90.32	8671/96	9.0
16	2.3	27	2.3	324	C503_0900 D080K04	56.3	90.32	8671/96	9.1
17	1.9	30	1.9	290	C403_0810 D080K04	45.3	80.81	42021/520	9.0
17	2.3	30	2.3	289	C503_0810 D080K04	56.3	80.60	19343/240	9.1
17	1.2	30	1.2	288	C303_0800 D080K04	34.8	80.43	6032/75	8.9
18	2.3	32	2.3	272	C613_0760 D080K04	76.1	75.81	5307/70	9.2
20	1.4	35	1.4	254	C302_0700 D080K04	30.6	69.88	559/8	8.8
23	1.5	39	1.5	225	C302_0620 D080K04	30.6	61.92	1548/25	8.8
25	0.97	43	0.97	205	C202_0560 D080K04	25.5	56.42	1862/33	8.8
28	1.1	49	1.1	179	C202_0490 D080K04	25.5	49.23	1083/22	8.8
30	1.2	52	1.2	170	C202_0470 D080K04	25.5	46.82	2107/45	8.8
30	2.1	52	2.1	170	C302_0470 D080K04	30.6	46.67	140/3	8.9
34	1.3	59	1.3	149	C202_0410 D080K04	25.5	40.85	817/20	8.8
34	2.3	59	2.3	150	C302_0410 D080K04	30.6	41.35	2688/65	8.9
40	0.94	69	0.94	128	C102_0350 D080K04	21.5	35.07	2700/77	8.8
40	1.6	69	1.6	128	C202_0350 D080K04	25.5	35.18	1372/39	8.9
45	1.1	78	1.1	113	C102_0310 D080K04	21.5	31.07	435/14	8.8
46	1.8	79	1.8	112	C202_0310 D080K04	25.5	30.69	399/13	8.9
49	1.2	85	1.2	103	C102_0280 D080K04	21.5	28.36	312/11	8.9
50	1.9	86	1.9	103	C202_0280 D080K04	25.5	28.24	4067/144	9.0
50	3.2	87	3.2	102	C302_0280 D080K04	30.6	27.99	2015/72	9.2
56	1.3	96	1.3	91	C102_0250 D080K04	21.5	25.13	377/15	8.9
57	2.2	98	2.2	90	C202_0250 D080K04	25.5	24.64	1577/64	9.0
60	1.4	103	1.4	86	C102_0240 D080K04	21.5	23.52	1035/44	8.9
59	2.3	103	2.3	86	C202_0240 D080K04	25.5	23.59	637/27	9.1
67	1.6	116	1.6	76	C102_0210 D080K04	21.5	20.84	667/32	8.9
68	2.7	118	2.7	75	C202_0210 D080K04	25.5	20.58	247/12	9.1
80	0.94	138	0.94	64	C002_0175 D080K04	16.6	17.53	3575/204	8.8
79	1.9	137	1.9	64	C102_0175 D080K04	21.5	17.73	195/11	9.0
80	3.1	138	3.1	64	C202_0175 D080K04	25.5	17.52	3626/207	9.3
90	1.1	155	1.1	57	C002_0155 D080K04	16.6	15.64	1595/102	8.8
89	2.1	154	2.1	57	C102_0155 D080K04	21.5	15.71	377/24	9.0
99	1.2	172	1.2	51	C002_0140 D080K04	16.6	14.08	169/12	8.9
100	2.3	173	2.3	51	C102_0140 D080K04	21.5	14.06	2010/143	9.1
111	1.3	193	1.3	46	C002_0125 D080K04	16.6	12.57	377/30	8.9
112	2.6	195	2.6	45	C102_0125 D080K04	21.5	12.46	1943/156	9.1
121	1.4	210	1.4	42	C002_0115 D080K04	16.6	11.54	3185/276	8.9
119	2.8	207	2.8	43	C102_0115 D080K04	21.5	11.72	1160/99	9.2
136	1.6	235	1.6	37	C002_0105 D080K04	16.6	10.30	1421/138	8.9
135	3.2	234	3.2	38	C102_0105 D080K04	21.5	10.38	841/81	9.2
150	3.2	260	3.2	34	C102_0093 D080K04	21.5	9.326	3180/341	9.4
152	1.8	263	1.7	34	C002_0092 D080K04	16.6	9.228	1495/162	9.0
169	3.2	293	3.2	30	C102_0083 D080K04	21.5	8.263	1537/186	9.4
170	2.0	294	1.9	30	C002_0082 D080K04	16.6	8.235	667/81	9.0
180	3.2	311	3.2	28	C102_0078 D080K04	21.5	7.796	3243/416	8.9
181	1.9	314	1.7	28	C002_0077 D080K04	16.6	7.714	54/7	8.8
222	2.2	385	1.9	23	C002_0063 D080K04	16.6	6.300	2035/323	8.8
238	3.2	413	3.2	21	C102_0059 D080K04	21.5	5.875	47/8	9.1
240	2.3	416	2.0	21	C002_0058 D080K04	16.6	5.824	99/17	8.8
277	2.6	479	2.2	18	C002_0051 D080K04	16.6	5.063	481/95	8.9
279	3.2	483	3.2	18	C102_0050 D080K04	21.5	5.025	201/40	9.2
299	2.7	518	2.3	17	C002_0047 D080K04	16.6	4.680	117/25	8.9
334	3.2	579	3.2	15	C102_0042 D080K04	21.5	4.189	377/90	9.4
337	2.9	584	2.5	15	C002_0041 D080K04	16.6	4.149	1813/437	9.0
361	3.2	624	3.2	14	C102_0039 D080K04	21.5	3.883	1363/351	9.4

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 0,55 kW, P_N (87 Hz) = 0,95 kW									
365	3.1	632	2.6	14	C002_0038 D080K04	16.6	3.835	441/115	9.0
422	3.2	731	2.9	12	C002_0033 D080K04	16.6	3.318	1702/513	9.1
456	3.2	791	3.1	11	C002_0031 D080K04	16.6	3.067	46/15	9.1
506	3.2	876	3.2	10	C002_0028 D080K04	16.6	2.769	36/13	9.1
701	3.2	1214	3.2	7.3	C002_0020 D080K04	16.6	1.997	1480/741	9.4
715	3.2	–	–	7.1	C102_0039 D071L02	18.5	3.883	1363/351	3.9
724	3.2	–	–	7.0	C002_0038 D071L02	13.6	3.835	441/115	3.5
836	3.2	–	–	6.1	C002_0033 D071L02	13.6	3.318	1702/513	3.6
905	3.2	–	–	5.6	C002_0031 D071L02	13.6	3.067	46/15	3.6
1390	3.2	–	–	3.7	C002_0020 D071L02	13.6	1.997	1480/741	3.9
P_N (50 Hz) = 0,75 kW, P_N (87 Hz) = 1,30 kW									
5.4	1.0	9.4	1.0	1273	C613_2660 IE3D080L04	82.5	266.4	7192/27	26
6.8	1.3	12	1.3	1019	C613_2130 IE3D080L04	82.5	213.1	28768/135	26
8.0	0.93	14	0.93	863	C503_1810 IE3D080L04	62.7	180.6	8671/48	26
8.2	1.6	14	1.6	838	C613_1750 IE3D080L04	82.5	175.3	7888/45	26
11	0.86	19	0.86	644	C403_1350 IE3D080L04	51.7	134.6	1885/14	26
11	1.2	18	1.2	647	C503_1350 IE3D080L04	62.7	135.3	406/3	26
11	2.0	19	2.0	645	C613_1350 IE3D080L04	82.5	134.8	15776/117	26
13	1.5	23	1.5	519	C503_1090 IE3D080L04	62.7	108.6	31291/288	26
13	1.1	23	1.1	515	C403_1080 IE3D080L04	51.7	107.7	754/7	26
14	2.5	24	2.5	507	C613_1060 IE3D080L04	82.5	106.1	3712/35	27
16	0.81	28	0.81	434	C303_0910 IE3D080L04	41.2	90.76	4901/54	26
16	1.3	28	1.3	432	C403_0900 IE3D080L04	51.7	90.32	8671/96	26
16	1.9	28	1.9	432	C503_0900 IE3D080L04	62.7	90.32	8671/96	26
18	1.4	31	1.4	386	C403_0810 IE3D080L04	51.7	80.81	42021/520	26
18	2.1	31	2.1	385	C503_0810 IE3D080L04	62.7	80.60	19343/240	26
18	0.91	31	0.91	384	C303_0800 IE3D080L04	41.2	80.43	6032/75	26
19	2.5	33	2.5	362	C613_0760 IE3D080L04	82.5	75.81	5307/70	27
21	1.0	36	1.0	339	C302_0700 IE3D080L04	37.0	69.88	559/8	26
21	1.6	36	1.6	339	C402_0700 IE3D080L04	47.2	69.88	559/8	26
21	2.4	36	2.4	339	C502_0700 IE3D080L04	58.8	69.97	10075/144	26
23	1.7	40	1.7	303	C402_0630 IE3D080L04	47.2	62.52	8127/130	26
23	1.1	40	1.1	300	C302_0620 IE3D080L04	37.0	61.92	1548/25	26
23	2.4	40	2.4	303	C502_0620 IE3D080L04	58.8	62.43	4495/72	26
26	1.3	45	1.3	272	C302_0560 IE3D080L04	37.0	56.14	1235/22	26
26	2.0	45	2.0	272	C402_0560 IE3D080L04	47.2	56.10	9425/168	26
29	1.5	50	1.5	241	C302_0500 IE3D080L04	37.0	49.75	2736/55	26
29	2.3	50	2.3	243	C402_0500 IE3D080L04	47.2	50.19	1305/26	26
29	0.84	51	0.84	239	C202_0490 IE3D080L04	31.9	49.23	1083/22	26
31	0.88	53	0.88	227	C202_0470 IE3D080L04	31.9	46.82	2107/45	26
31	1.5	54	1.5	226	C302_0470 IE3D080L04	37.0	46.67	140/3	26
31	2.4	54	2.4	226	C402_0470 IE3D080L04	47.2	46.67	140/3	27
35	2.7	60	2.7	202	C402_0420 IE3D080L04	47.2	41.75	7056/169	27
35	1.0	61	1.0	198	C202_0410 IE3D080L04	31.9	40.85	817/20	26
35	1.7	61	1.7	201	C302_0410 IE3D080L04	37.0	41.35	2688/65	26
41	1.2	71	1.2	171	C202_0350 IE3D080L04	31.9	35.18	1372/39	26
41	2.1	71	2.1	170	C302_0350 IE3D080L04	37.0	35.03	1261/36	26
47	1.3	82	1.3	149	C202_0310 IE3D080L04	31.9	30.69	399/13	26
47	2.3	81	2.3	151	C302_0310 IE3D080L04	37.0	31.04	776/25	26
51	0.87	88	0.87	138	C102_0280 IE3D080L04	27.9	28.36	312/11	26
51	1.5	89	1.5	137	C202_0280 IE3D080L04	31.9	28.24	4067/144	26
52	2.6	89	2.6	136	C302_0280 IE3D080L04	37.0	27.99	2015/72	27
57	0.98	100	0.98	122	C102_0250 IE3D080L04	27.9	25.13	377/15	26
59	1.7	102	1.7	120	C202_0250 IE3D080L04	31.9	24.64	1577/64	26
58	2.9	101	2.9	120	C302_0250 IE3D080L04	37.0	24.80	124/5	27
61	1.1	106	1.1	114	C102_0240 IE3D080L04	27.9	23.52	1035/44	26
61	1.7	106	1.7	114	C202_0240 IE3D080L04	31.9	23.59	637/27	26
62	3.1	107	3.1	114	C302_0230 IE3D080L04	37.0	23.47	845/36	27
69	1.2	120	1.2	101	C102_0210 IE3D080L04	27.9	20.84	667/32	26
70	2.0	122	2.0	100	C202_0210 IE3D080L04	31.9	20.58	247/12	26
82	1.4	141	1.4	86	C102_0175 IE3D080L04	27.9	17.73	195/11	26
82	2.4	143	2.4	85	C202_0175 IE3D080L04	31.9	17.52	3626/207	27
92	1.6	159	1.6	76	C102_0155 IE3D080L04	27.9	15.71	377/24	26
95	2.7	164	2.7	74	C202_0155 IE3D080L04	31.9	15.28	703/46	27
103	0.88	178	0.88	68	C002_0140 IE3D080L04	23.0	14.08	169/12	26

2.2 Selection tables 2 C helical geared motors

n ₂ 50 Hz [rpm]	S 50 Hz	n ₂ 87 Hz [rpm]	S 87 Hz	M _{2N} [Nm]	Type	m [kg]	i	i _{exakt}	J ₁ [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 0,75 kW, P_N (87 Hz) = 1,30 kW									
103	1.8	178	1.8	68	C102_0140 IE3D080L04	27.9	14.06	2010/143	26
102	2.9	177	2.9	68	C202_0140 IE3D080L04	31.9	14.12	3430/243	27
115	0.98	199	0.98	61	C002_0125 IE3D080L04	23.0	12.57	377/30	26
116	2.0	201	2.0	60	C102_0125 IE3D080L04	27.9	12.46	1943/156	26
117	3.3	203	3.3	60	C202_0125 IE3D080L04	31.9	12.32	665/54	27
123	3.5	213	3.5	57	C202_0120 IE3D080L04	31.9	11.76	294/25	27
125	1.1	217	1.1	56	C002_0115 IE3D080L04	23.0	11.54	3185/276	26
123	2.1	214	2.1	57	C102_0115 IE3D080L04	27.9	11.72	1160/99	27
140	1.2	243	1.2	50	C002_0105 IE3D080L04	23.0	10.30	1421/138	26
139	2.4	241	2.4	50	C102_0105 IE3D080L04	27.9	10.38	841/81	27
155	2.7	268	2.6	45	C102_0093 IE3D080L04	27.9	9.326	3180/341	27
157	1.3	271	1.3	45	C002_0092 IE3D080L04	23.0	9.228	1495/162	26
175	3.0	303	2.8	40	C102_0083 IE3D080L04	27.9	8.263	1537/186	27
175	1.5	304	1.4	40	C002_0082 IE3D080L04	23.0	8.235	667/81	26
185	2.9	321	2.4	38	C102_0078 IE3D080L04	27.9	7.796	3243/416	26
187	1.5	324	1.2	37	C002_0077 IE3D080L04	23.0	7.714	54/7	26
229	1.7	397	1.4	31	C002_0063 IE3D080L04	23.0	6.300	2035/323	26
228	3.3	395	2.8	31	C102_0063 IE3D080L04	27.9	6.338	507/80	26
246	3.5	426	2.9	28	C102_0059 IE3D080L04	27.9	5.875	47/8	26
248	1.8	430	1.5	28	C002_0058 IE3D080L04	23.0	5.824	99/17	26
250	4.8	432	4.5	28	C202_0058 IE3D080L04	31.9	5.791	666/115	27
285	1.9	494	1.6	25	C002_0051 IE3D080L04	23.0	5.063	481/95	26
285	4.8	493	4.8	25	C202_0051 IE3D080L04	31.9	5.072	350/69	27
288	3.9	498	3.3	24	C102_0050 IE3D080L04	27.9	5.025	201/40	27
309	2.0	535	1.7	23	C002_0047 IE3D080L04	23.0	4.680	117/25	26
345	4.4	597	3.7	20	C102_0042 IE3D080L04	27.9	4.189	377/90	27
348	2.2	603	1.9	20	C002_0041 IE3D080L04	23.0	4.149	1813/437	26
372	4.6	645	3.9	19	C102_0039 IE3D080L04	27.9	3.883	1363/351	27
377	2.3	653	2.0	19	C002_0038 IE3D080L04	23.0	3.835	441/115	26
436	2.5	754	2.1	16	C002_0033 IE3D080L04	23.0	3.318	1702/513	26
471	2.7	816	2.3	15	C002_0031 IE3D080L04	23.0	3.067	46/15	26
522	2.9	904	2.4	13	C002_0028 IE3D080L04	23.0	2.769	36/13	26
664	4.8	1150	4.8	11	C102_0022 IE3D080L04	27.9	2.177	468/215	28
724	3.6	1253	3.0	9.7	C002_0020 IE3D080L04	23.0	1.997	1480/741	27
739	7.4	-	-	9.4	C102_0039 IE3D080K02	22.4	3.883	1363/351	7.9
748	3.7	-	-	9.3	C002_0038 IE3D080K02	17.5	3.835	441/115	7.5
865	4.1	-	-	8.0	C002_0033 IE3D080K02	17.5	3.318	1702/513	7.6
936	4.3	-	-	7.4	C002_0031 IE3D080K02	17.5	3.067	46/15	7.6
1036	4.6	-	-	6.7	C002_0028 IE3D080K02	17.5	2.769	36/13	7.6
1318	9.6	-	-	5.3	C102_0022 IE3D080K02	22.4	2.177	468/215	9.0
1437	5.8	-	-	4.8	C002_0020 IE3D080K02	17.5	1.997	1480/741	7.9
P_N (50 Hz) = 1,10 kW, P_N (87 Hz) = 1,91 kW									
6.8	0.87	12	0.87	1487	C613_2130 IE3D090S04	88.0	213.1	28768/135	40
8.2	1.1	14	1.1	1223	C613_1750 IE3D090S04	88.0	175.3	7888/45	40
11	0.85	18	0.85	944	C503_1350 IE3D090S04	68.2	135.3	406/3	40
11	1.4	18	1.4	941	C613_1350 IE3D090S04	88.0	134.8	15776/117	40
13	1.1	23	1.1	758	C503_1090 IE3D090S04	68.2	108.6	31291/288	40
14	1.7	24	1.7	740	C613_1060 IE3D090S04	88.0	106.1	3712/35	41
16	0.87	28	0.87	630	C403_0900 IE3D090S04	57.2	90.32	8671/96	40
16	1.3	28	1.3	630	C503_0900 IE3D090S04	68.2	90.32	8671/96	40
18	0.98	31	0.98	564	C403_0810 IE3D090S04	57.2	80.81	42021/520	40
18	1.4	31	1.4	562	C503_0810 IE3D090S04	68.2	80.60	19343/240	40
19	1.7	33	1.7	529	C613_0760 IE3D090S04	88.0	75.81	5307/70	41
21	1.1	36	1.1	495	C402_0700 IE3D090S04	52.7	69.88	559/8	40
21	1.6	36	1.6	495	C502_0700 IE3D090S04	64.3	69.97	10075/144	40
23	1.1	40	1.1	443	C402_0630 IE3D090S04	52.7	62.52	8127/130	40
23	1.6	40	1.6	442	C502_0620 IE3D090S04	64.3	62.43	4495/72	40
26	0.88	44	0.88	397	C302_0560 IE3D090S04	42.5	56.14	1235/22	40
26	1.4	44	1.4	397	C402_0560 IE3D090S04	52.7	56.10	9425/168	40
26	2.0	45	2.0	395	C502_0560 IE3D090S04	64.3	55.83	335/6	41
29	0.99	50	0.99	352	C302_0500 IE3D090S04	42.5	49.75	2736/55	40
29	1.5	50	1.5	355	C402_0500 IE3D090S04	52.7	50.19	1305/26	40
29	2.3	50	2.3	353	C502_0500 IE3D090S04	64.3	49.82	1943/39	41
31	1.1	53	1.1	330	C302_0470 IE3D090S04	42.5	46.67	140/3	40
31	1.7	53	1.7	330	C402_0470 IE3D090S04	52.7	46.67	140/3	41

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 1,10 kW, P_N (87 Hz) = 1,91 kW									
34	1.9	60	1.9	296	C402_0420 IE3D090S04	52.7	41.75	7056/169	41
35	1.2	60	1.2	293	C302_0410 IE3D090S04	42.5	41.35	2688/65	40
41	0.80	71	0.80	249	C202_0350 IE3D090S04	37.4	35.18	1372/39	40
41	1.4	71	1.4	248	C302_0350 IE3D090S04	42.5	35.03	1261/36	40
41	2.2	72	2.2	247	C402_0350 IE3D090S04	52.7	34.82	975/28	41
47	0.92	81	0.92	217	C202_0310 IE3D090S04	37.4	30.69	399/13	40
46	1.6	80	1.6	220	C302_0310 IE3D090S04	42.5	31.04	776/25	40
46	2.5	80	2.5	221	C402_0310 IE3D090S04	52.7	31.15	405/13	41
51	1.0	88	1.0	200	C202_0280 IE3D090S04	37.4	28.24	4067/144	40
51	1.8	89	1.8	198	C302_0280 IE3D090S04	42.5	27.99	2015/72	41
58	1.1	101	1.1	174	C202_0250 IE3D090S04	37.4	24.64	1577/64	40
58	2.0	101	2.0	176	C302_0250 IE3D090S04	42.5	24.80	124/5	41
61	1.2	106	1.2	167	C202_0240 IE3D090S04	37.4	23.59	637/27	40
61	2.1	106	2.1	166	C302_0230 IE3D090S04	42.5	23.47	845/36	41
69	0.81	120	0.81	148	C102_0210 IE3D090S04	33.4	20.84	667/32	40
70	1.4	121	1.4	146	C202_0210 IE3D090S04	37.4	20.58	247/12	40
69	2.4	120	2.4	147	C302_0210 IE3D090S04	42.5	20.80	104/5	41
81	0.96	141	0.96	126	C102_0175 IE3D090S04	33.4	17.73	195/11	40
82	1.6	142	1.6	124	C202_0175 IE3D090S04	37.4	17.52	3626/207	41
92	1.1	159	1.1	111	C102_0155 IE3D090S04	33.4	15.71	377/24	40
94	1.8	163	1.8	108	C202_0155 IE3D090S04	37.4	15.28	703/46	41
102	1.2	177	1.2	100	C102_0140 IE3D090S04	33.4	14.06	2010/143	40
102	2.0	177	2.0	100	C202_0140 IE3D090S04	37.4	14.12	3430/243	41
116	1.4	200	1.4	88	C102_0125 IE3D090S04	33.4	12.46	1943/156	40
117	2.3	203	2.3	87	C202_0125 IE3D090S04	37.4	12.32	665/54	41
122	2.4	212	2.4	83	C202_0120 IE3D090S04	37.4	11.76	294/25	41
123	1.4	213	1.4	83	C102_0115 IE3D090S04	33.4	11.72	1160/99	41
140	0.82	242	0.82	73	C002_0105 IE3D090S04	28.5	10.30	1421/138	40
139	1.6	240	1.6	74	C102_0105 IE3D090S04	33.4	10.38	841/81	41
140	2.8	243	2.7	73	C202_0105 IE3D090S04	37.4	10.26	513/50	41
154	1.8	267	1.7	66	C102_0093 IE3D090S04	33.4	9.326	3180/341	41
156	0.92	270	0.88	65	C002_0092 IE3D090S04	28.5	9.228	1495/162	40
174	2.1	302	1.9	59	C102_0083 IE3D090S04	33.4	8.263	1537/186	41
175	1.0	303	0.95	58	C002_0082 IE3D090S04	28.5	8.235	667/81	40
185	2.0	320	1.7	55	C102_0078 IE3D090S04	33.4	7.796	3243/416	40
185	3.0	320	2.5	55	C202_0078 IE3D090S04	37.4	7.800	39/5	41
187	1.0	323	0.84	55	C002_0077 IE3D090S04	28.5	7.714	54/7	40
229	1.1	396	0.96	45	C002_0063 IE3D090S04	28.5	6.300	2035/323	40
227	2.3	394	1.9	45	C102_0063 IE3D090S04	33.4	6.338	507/80	40
245	2.4	425	2.0	42	C102_0059 IE3D090S04	33.4	5.875	47/8	40
247	1.2	428	1.0	41	C002_0058 IE3D090S04	28.5	5.824	99/17	40
249	3.3	431	3.1	41	C202_0058 IE3D090S04	37.4	5.791	666/115	41
284	1.3	493	1.1	36	C002_0051 IE3D090S04	28.5	5.063	481/95	40
284	3.3	492	3.3	36	C202_0051 IE3D090S04	37.4	5.072	350/69	41
287	2.6	496	2.2	36	C102_0050 IE3D090S04	33.4	5.025	201/40	41
308	1.4	533	1.2	33	C002_0047 IE3D090S04	28.5	4.680	117/25	40
309	2.8	535	2.4	33	C102_0047 IE3D090S04	33.4	4.658	3149/676	41
344	3.0	595	2.5	30	C102_0042 IE3D090S04	33.4	4.189	377/90	41
347	1.5	601	1.3	29	C002_0041 IE3D090S04	28.5	4.149	1813/437	40
371	3.1	642	2.7	27	C102_0039 IE3D090S04	33.4	3.883	1363/351	41
375	1.6	650	1.3	27	C002_0038 IE3D090S04	28.5	3.835	441/115	40
434	1.7	752	1.5	23	C002_0033 IE3D090S04	28.5	3.318	1702/513	40
432	3.3	748	2.9	24	C102_0033 IE3D090S04	33.4	3.334	2067/620	41
470	1.8	813	1.6	22	C002_0031 IE3D090S04	28.5	3.067	46/15	40
466	3.3	807	3.1	22	C102_0031 IE3D090S04	33.4	3.091	2491/806	41
520	2.0	901	1.7	20	C002_0028 IE3D090S04	28.5	2.769	36/13	40
661	3.3	1146	3.3	15	C102_0022 IE3D090S04	33.4	2.177	468/215	42
721	2.4	1249	2.1	14	C002_0020 IE3D090S04	28.5	1.997	1480/741	41
739	5.0	–	–	14	C102_0039 IE3D080L02	25.9	3.883	1363/351	14
748	2.5	–	–	14	C002_0038 IE3D080L02	21.0	3.835	441/115	13
865	2.8	–	–	12	C002_0033 IE3D080L02	21.0	3.318	1702/513	14
936	2.9	–	–	11	C002_0031 IE3D080L02	21.0	3.067	46/15	14
1036	3.1	–	–	9.9	C002_0028 IE3D080L02	21.0	2.769	36/13	14
1318	6.5	–	–	7.8	C102_0022 IE3D080L02	25.9	2.177	468/215	15
1437	3.9	–	–	7.2	C002_0020 IE3D080L02	21.0	1.997	1480/741	14

2.2 Selection tables 2 C helical geared motors

n ₂ 50 Hz [rpm]	S 50 Hz	n ₂ 87 Hz [rpm]	S 87 Hz	M _{2N} [Nm]	Type	m [kg]	i	i _{exakt}	J ₁ [10 ⁻⁴ kgm ²]
P _N (50 Hz) = 1,50 kW, P _N (87 Hz) = 2,60 kW									
11	1.0	19	1.0	1276	C613_1350 IE3D090L04	93.5	134.8	15776/117	45
14	1.3	24	1.3	1004	C613_1060 IE3D090L04	93.5	106.1	3712/35	46
16	0.94	28	0.94	855	C503_0900 IE3D090L04	73.7	90.32	8671/96	45
18	1.0	31	1.0	763	C503_0810 IE3D090L04	73.7	80.60	19343/240	45
19	1.3	33	1.3	718	C613_0760 IE3D090L04	93.5	75.81	5307/70	46
21	0.82	36	0.82	671	C402_0700 IE3D090L04	58.2	69.88	559/8	45
21	1.2	36	1.2	672	C502_0700 IE3D090L04	69.8	69.97	10075/144	45
23	0.84	40	0.84	600	C402_0630 IE3D090L04	58.2	62.52	8127/130	45
23	1.2	40	1.2	600	C502_0620 IE3D090L04	69.8	62.43	4495/72	45
26	1.0	45	1.0	539	C402_0560 IE3D090L04	58.2	56.10	9425/168	45
26	1.5	45	1.5	536	C502_0560 IE3D090L04	69.8	55.83	335/6	46
29	1.1	50	1.1	482	C402_0500 IE3D090L04	58.2	50.19	1305/26	45
29	1.7	50	1.7	478	C502_0500 IE3D090L04	69.8	49.82	1943/39	46
31	1.2	54	1.2	448	C402_0470 IE3D090L04	58.2	46.67	140/3	46
35	1.4	60	1.4	401	C402_0420 IE3D090L04	58.2	41.75	7056/169	46
35	0.88	61	0.88	397	C302_0410 IE3D090L04	48.0	41.35	2688/65	45
41	1.0	71	1.0	336	C302_0350 IE3D090L04	48.0	35.03	1261/36	45
41	1.6	72	1.6	334	C402_0350 IE3D090L04	58.2	34.82	975/28	46
47	1.2	81	1.2	298	C302_0310 IE3D090L04	48.0	31.04	776/25	45
46	1.8	80	1.8	299	C402_0310 IE3D090L04	58.2	31.15	405/13	46
52	1.3	89	1.3	269	C302_0280 IE3D090L04	48.0	27.99	2015/72	46
59	0.85	102	0.85	237	C202_0250 IE3D090L04	42.9	24.64	1577/64	45
58	1.5	101	1.5	238	C302_0250 IE3D090L04	48.0	24.80	124/5	46
61	0.88	106	0.88	227	C202_0240 IE3D090L04	42.9	23.59	637/27	45
62	1.6	107	1.6	225	C302_0230 IE3D090L04	48.0	23.47	845/36	46
70	1.0	122	1.0	198	C202_0210 IE3D090L04	42.9	20.58	247/12	45
69	1.8	120	1.8	200	C302_0210 IE3D090L04	48.0	20.80	104/5	46
82	1.2	143	1.2	168	C202_0175 IE3D090L04	42.9	17.52	3626/207	46
95	1.4	164	1.4	147	C202_0155 IE3D090L04	42.9	15.28	703/46	46
103	0.89	178	0.89	135	C102_0140 IE3D090L04	38.9	14.06	2010/143	45
102	1.5	177	1.5	136	C202_0140 IE3D090L04	42.9	14.12	3430/243	46
116	1.0	201	1.0	120	C102_0125 IE3D090L04	38.9	12.46	1943/156	45
117	1.7	203	1.7	118	C202_0125 IE3D090L04	42.9	12.32	665/54	46
123	1.8	213	1.8	113	C202_0120 IE3D090L04	42.9	11.76	294/25	46
123	1.1	214	1.1	113	C102_0115 IE3D090L04	38.9	11.72	1160/99	46
139	1.2	241	1.2	100	C102_0105 IE3D090L04	38.9	10.38	841/81	46
141	2.0	244	2.0	99	C202_0105 IE3D090L04	42.9	10.26	513/50	46
155	1.3	268	1.3	90	C102_0093 IE3D090L04	38.9	9.326	3180/341	46
175	1.5	303	1.4	79	C102_0083 IE3D090L04	38.9	8.263	1537/186	46
185	1.5	321	1.2	75	C102_0078 IE3D090L04	38.9	7.796	3243/416	45
185	2.2	321	1.9	75	C202_0078 IE3D090L04	42.9	7.800	39/5	46
229	0.84	-	-	60	C002_0063 IE3D090L04	34.0	6.300	2035/323	45
228	1.7	395	1.4	61	C102_0063 IE3D090L04	38.9	6.338	507/80	45
230	2.4	398	2.2	60	C202_0063 IE3D090L04	42.9	6.295	3330/529	46
246	1.8	426	1.5	56	C102_0059 IE3D090L04	38.9	5.875	47/8	45
248	0.89	-	-	56	C002_0058 IE3D090L04	34.0	5.824	99/17	45
250	2.4	432	2.3	56	C202_0058 IE3D090L04	42.9	5.791	666/115	46
285	0.97	494	0.82	49	C002_0051 IE3D090L04	34.0	5.063	481/95	45
285	2.4	493	2.4	49	C202_0051 IE3D090L04	42.9	5.072	350/69	46
288	2.0	498	1.6	48	C102_0050 IE3D090L04	38.9	5.025	201/40	46
309	1.0	535	0.86	45	C002_0047 IE3D090L04	34.0	4.680	117/25	45
310	2.1	537	1.7	45	C102_0047 IE3D090L04	38.9	4.658	3149/676	46
345	2.2	597	1.9	40	C102_0042 IE3D090L04	38.9	4.189	377/90	46
348	1.1	603	0.94	40	C002_0041 IE3D090L04	34.0	4.149	1813/437	45
372	2.3	645	2.0	37	C102_0039 IE3D090L04	38.9	3.883	1363/351	46
377	1.2	653	0.99	37	C002_0038 IE3D090L04	34.0	3.835	441/115	45
436	1.3	754	1.1	32	C002_0033 IE3D090L04	34.0	3.318	1702/513	45
433	2.4	751	2.2	32	C102_0033 IE3D090L04	38.9	3.334	2067/620	46
471	1.4	816	1.1	29	C002_0031 IE3D090L04	34.0	3.067	46/15	45
467	2.4	810	2.3	30	C102_0031 IE3D090L04	38.9	3.091	2491/806	46
522	1.5	904	1.2	27	C002_0028 IE3D090L04	34.0	2.769	36/13	45
664	2.4	1150	2.4	21	C102_0022 IE3D090L04	38.9	2.177	468/215	47
724	1.8	1253	1.5	19	C002_0020 IE3D090L04	34.0	1.997	1480/741	46
716	2.4	1240	2.4	19	C102_0020 IE3D090L04	38.9	2.018	1128/559	47
747	3.8	-	-	18	C102_0039 IE3D090S02	29.9	3.883	1363/351	18

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 1,50 kW, P_N (87 Hz) = 2,60 kW									
756	1.9	–	–	18	C002_0038 IE3D090S02	25.0	3.835	441/115	17
874	2.1	–	–	16	C002_0033 IE3D090S02	25.0	3.318	1702/513	17
946	2.2	–	–	15	C002_0031 IE3D090S02	25.0	3.067	46/15	17
1047	2.4	–	–	13	C002_0028 IE3D090S02	25.0	2.769	36/13	17
1332	4.9	–	–	10	C102_0022 IE3D090S02	29.9	2.177	468/215	19
1452	2.9	–	–	9.5	C002_0020 IE3D090S02	25.0	1.997	1480/741	18
P_N (50 Hz) = 2,20 kW, P_N (87 Hz) = 3,81 kW									
5.4	0.97	9.3	0.97	3714	C813_2700 IE3D100K04	200.5	269.8	7285/27	91
6.9	1.2	12	1.2	2920	C813_2120 IE3D100K04	200.5	212.1	8272/39	91
8.2	1.5	14	1.4	2455	C813_1780 IE3D100K04	200.5	178.4	6956/39	91
11	1.9	18	1.7	1905	C813_1380 IE3D100K04	200.5	138.4	2491/18	92
11	1.1	18	1.1	1891	C713_1370 IE3D100K04	141.5	137.3	10575/77	91
11	1.3	19	1.1	1822	C713_1320 IE3D100K04	141.5	132.4	33887/256	91
11	0.83	20	0.83	1747	C613_1270 IE3D100K04	101.5	126.9	48739/384	91
14	2.2	23	2.1	1481	C813_1080 IE3D100K04	200.5	107.6	4841/45	92
14	0.88	23	0.88	1479	C613_1070 IE3D100K04	101.5	107.4	752/7	91
15	1.7	25	1.5	1365	C713_0990 IE3D100K04	141.5	99.14	6345/64	91
15	1.1	26	1.1	1344	C613_0980 IE3D100K04	101.5	97.63	243695/2496	91
16	2.2	28	2.2	1250	C813_0910 IE3D100K04	200.5	90.82	18800/207	93
16	1.1	28	1.1	1222	C613_0890 IE3D100K04	101.5	88.78	799/9	91
18	2.0	31	1.7	1115	C713_0810 IE3D100K04	141.5	80.97	20727/256	91
18	2.2	32	2.1	1092	C813_0790 IE3D100K04	200.5	79.34	285619/3600	92
19	1.4	33	1.4	1057	C613_0770 IE3D100K04	101.5	76.80	8601/112	91
21	2.1	36	2.1	971	C712_0700 IE3D100K04	128.4	69.55	765/11	92
21	1.4	37	1.4	962	C612_0690 IE3D100K04	93.1	68.89	620/9	91
23	1.7	40	1.7	874	C613_0630 IE3D100K04	101.5	63.46	48739/768	91
26	2.4	44	2.4	794	C712_0570 IE3D100K04	128.4	56.82	625/11	93
26	1.0	45	1.0	780	C502_0560 IE3D100K04	77.8	55.83	335/6	91
26	1.7	46	1.7	770	C612_0550 IE3D100K04	93.1	55.11	496/9	92
29	1.2	51	1.2	696	C502_0500 IE3D100K04	77.8	49.82	1943/39	91
30	2.1	51	2.0	678	C613_0490 IE3D100K04	101.5	49.28	31537/640	91
31	0.84	54	0.84	652	C402_0470 IE3D100K04	66.2	46.67	140/3	91
31	1.2	54	1.2	653	C502_0470 IE3D100K04	77.8	46.72	1495/32	91
32	2.1	56	2.1	633	C612_0450 IE3D100K04	93.1	45.33	136/3	92
35	0.94	60	0.94	583	C402_0420 IE3D100K04	66.2	41.75	7056/169	91
35	1.4	60	1.4	582	C502_0420 IE3D100K04	77.8	41.69	667/16	91
35	2.4	61	2.4	573	C712_0410 IE3D100K04	128.4	41.02	2625/64	93
37	2.2	64	2.2	550	C612_0390 IE3D100K04	93.1	39.40	1891/48	92
42	1.1	72	1.1	486	C402_0350 IE3D100K04	66.2	34.82	975/28	91
42	1.6	72	1.6	489	C502_0350 IE3D100K04	77.8	35.00	35/1	92
42	2.7	72	2.7	487	C612_0350 IE3D100K04	93.1	34.87	1360/39	94
45	2.5	78	2.5	453	C612_0320 IE3D100K04	93.1	32.41	1037/32	92
47	0.81	81	0.81	434	C302_0310 IE3D100K04	56.0	31.04	776/25	90
47	1.3	81	1.3	435	C402_0310 IE3D100K04	66.2	31.15	405/13	91
47	1.8	81	1.8	436	C502_0310 IE3D100K04	77.8	31.23	406/13	92
52	0.90	90	0.90	391	C302_0280 IE3D100K04	56.0	27.99	2015/72	91
52	1.4	90	1.4	389	C402_0280 IE3D100K04	66.2	27.86	195/7	91
52	2.0	90	2.0	392	C502_0280 IE3D100K04	77.8	28.10	5395/192	92
53	3.3	92	3.3	383	C612_0270 IE3D100K04	93.1	27.43	192/7	95
59	1.0	102	1.0	346	C302_0250 IE3D100K04	56.0	24.80	124/5	91
58	1.6	101	1.6	348	C402_0250 IE3D100K04	66.2	24.92	324/13	91
58	2.3	101	2.3	350	C502_0250 IE3D100K04	77.8	25.07	2407/96	92
62	1.1	107	1.1	328	C302_0230 IE3D100K04	56.0	23.47	845/36	91
62	1.7	108	1.7	326	C402_0230 IE3D100K04	66.2	23.36	1495/64	92
62	2.5	108	2.5	326	C502_0230 IE3D100K04	77.8	23.36	1495/64	93
70	1.2	121	1.2	291	C302_0210 IE3D100K04	56.0	20.80	104/5	91
70	1.9	121	1.9	292	C402_0210 IE3D100K04	66.2	20.90	4347/208	92
70	2.7	121	2.7	291	C502_0210 IE3D100K04	77.8	20.84	667/32	93
74	3.3	129	3.3	274	C612_0195 IE3D100K04	93.1	19.61	549/28	95
83	0.82	144	0.82	245	C202_0175 IE3D100K04	50.9	17.52	3626/207	91
83	1.4	144	1.4	245	C302_0175 IE3D100K04	56.0	17.54	1105/63	91
83	2.2	143	2.2	246	C402_0175 IE3D100K04	66.2	17.60	845/48	92
92	2.5	160	2.5	220	C402_0160 IE3D100K04	66.2	15.75	63/4	93
95	0.94	165	0.94	213	C202_0155 IE3D100K04	50.9	15.28	703/46	91
94	1.6	162	1.6	217	C302_0155 IE3D100K04	56.0	15.54	544/35	91

2.2 Selection tables 2 C helical geared motors

n ₂ 50 Hz [rpm]	S 50 Hz	n ₂ 87 Hz [rpm]	S 87 Hz	M _{2N} [Nm]	Type	m [kg]	i	i _{exakt}	J ₁ [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 2,20 kW, P_N (87 Hz) = 3,81 kW									
103	1.0	179	1.0	197	C202_0140 IE3D100K04	50.9	14.12	3430/243	91
104	1.8	180	1.7	195	C302_0140 IE3D100K04	56.0	13.99	2015/144	91
104	2.8	180	2.8	195	C402_0140 IE3D100K04	66.2	13.99	2015/144	93
118	1.2	205	1.2	172	C202_0125 IE3D100K04	50.9	12.32	665/54	91
117	2.0	203	1.9	173	C302_0125 IE3D100K04	56.0	12.40	62/5	92
124	1.2	214	1.2	164	C202_0120 IE3D100K04	50.9	11.76	294/25	91
125	2.2	217	2.0	162	C302_0115 IE3D100K04	56.0	11.61	325/28	92
140	0.83	243	0.82	145	C102_0105 IE3D100K04	46.9	10.38	841/81	91
142	1.4	246	1.4	143	C202_0105 IE3D100K04	50.9	10.26	513/50	91
141	2.4	245	2.1	144	C302_0105 IE3D100K04	56.0	10.29	72/7	92
155	1.5	268	1.4	131	C202_0094 IE3D100K04	50.9	9.387	2450/261	91
156	0.92	270	0.88	130	C102_0093 IE3D100K04	46.9	9.326	3180/341	91
156	2.7	271	2.3	130	C302_0093 IE3D100K04	56.0	9.310	3575/384	93
176	1.0	305	0.96	115	C102_0083 IE3D100K04	46.9	8.263	1537/186	91
176	2.9	305	2.4	115	C302_0083 IE3D100K04	56.0	8.250	33/4	93
178	1.7	308	1.6	114	C202_0082 IE3D100K04	50.9	8.190	475/58	92
187	1.0	323	0.84	109	C102_0078 IE3D100K04	46.9	7.796	3243/416	90
187	1.5	323	1.3	109	C202_0078 IE3D100K04	50.9	7.800	39/5	91
186	2.5	321	2.1	110	C302_0078 IE3D100K04	56.0	7.841	494/63	91
230	1.2	398	0.97	89	C102_0063 IE3D100K04	46.9	6.338	507/80	90
231	1.8	400	1.5	88	C202_0063 IE3D100K04	50.9	6.295	3330/529	91
230	2.9	399	2.4	88	C302_0063 IE3D100K04	56.0	6.314	221/35	91
248	1.2	429	1.0	82	C102_0059 IE3D100K04	46.9	5.875	47/8	90
248	3.0	430	2.5	82	C302_0059 IE3D100K04	56.0	5.859	2584/441	91
251	1.9	435	1.6	81	C202_0058 IE3D100K04	50.9	5.791	666/115	91
287	2.0	497	1.7	71	C202_0051 IE3D100K04	50.9	5.072	350/69	91
290	1.3	502	1.1	70	C102_0050 IE3D100K04	46.9	5.025	201/40	91
289	3.4	500	2.8	70	C302_0050 IE3D100K04	56.0	5.038	403/80	92
312	1.4	541	1.2	65	C102_0047 IE3D100K04	46.9	4.658	3149/676	91
312	2.2	540	1.8	65	C202_0047 IE3D100K04	50.9	4.667	14/3	91
314	4.2	544	4.2	65	C502_0046 IE3D100K04	77.8	4.629	162/35	98
347	1.5	602	1.3	59	C102_0042 IE3D100K04	46.9	4.189	377/90	91
344	2.3	596	1.9	59	C202_0042 IE3D100K04	50.9	4.226	486/115	91
375	1.6	649	1.3	54	C102_0039 IE3D100K04	46.9	3.883	1363/351	91
374	2.4	648	2.0	54	C202_0039 IE3D100K04	50.9	3.888	486/125	91
431	2.7	747	2.2	47	C202_0034 IE3D100K04	50.9	3.373	2250/667	92
436	1.8	756	1.5	47	C102_0033 IE3D100K04	46.9	3.334	2067/620	91
471	1.9	815	1.6	43	C102_0031 IE3D100K04	46.9	3.091	2491/806	91
469	2.8	812	2.4	43	C202_0031 IE3D100K04	50.9	3.103	90/29	92
541	3.1	937	2.6	38	C202_0027 IE3D100K04	50.9	2.690	495/184	93
564	2.1	976	1.8	36	C102_0026 IE3D100K04	46.9	2.582	1911/740	91
588	3.3	1018	2.8	35	C202_0025 IE3D100K04	50.9	2.475	99/40	93
608	2.2	1053	1.9	33	C102_0024 IE3D100K04	46.9	2.394	2303/962	91
668	2.3	1158	2.0	30	C102_0022 IE3D100K04	46.9	2.177	468/215	92
721	2.5	1249	2.1	28	C102_0020 IE3D100K04	46.9	2.018	1128/559	92
742	2.5	-	-	27	C102_0039 IE3D090L02	34.4	3.883	1363/351	28
751	1.3	-	-	27	C002_0038 IE3D090L02	29.5	3.835	441/115	28
868	1.4	-	-	23	C002_0033 IE3D090L02	29.5	3.318	1702/513	28
864	2.8	-	-	24	C102_0033 IE3D090L02	34.4	3.334	2067/620	28
939	1.5	-	-	22	C002_0031 IE3D090L02	29.5	3.067	46/15	28
932	2.9	-	-	22	C102_0031 IE3D090L02	34.4	3.091	2491/806	29
1040	1.6	-	-	20	C002_0028 IE3D090L02	29.5	2.769	36/13	28
1323	3.3	-	-	15	C102_0022 IE3D090L02	34.4	2.177	468/215	29
1442	2.0	-	-	14	C002_0020 IE3D090L02	29.5	1.997	1480/741	28
1427	3.3	-	-	14	C102_0020 IE3D090L02	34.4	2.018	1128/559	29
P_N (50 Hz) = 3,00 kW, P_N (87 Hz) = 5,20 kW									
6.9	0.90	12	0.88	3995	C813_2120 IE3D100L04	209.5	212.1	8272/39	111
8.2	1.1	14	1.0	3359	C813_1780 IE3D100L04	209.5	178.4	6956/39	111
11	1.4	18	1.2	2606	C813_1380 IE3D100L04	209.5	138.4	2491/18	112
11	0.96	19	0.84	2493	C713_1320 IE3D100L04	150.5	132.4	33887/256	111
14	1.6	23	1.5	2026	C813_1080 IE3D100L04	209.5	107.6	4841/45	112
15	1.3	25	1.1	1867	C713_0990 IE3D100L04	150.5	99.14	6345/64	111
16	1.6	28	1.6	1710	C813_0910 IE3D100L04	209.5	90.82	18800/207	113
18	1.5	31	1.2	1525	C713_0810 IE3D100L04	150.5	80.97	20727/256	111
18	1.6	32	1.5	1494	C813_0790 IE3D100L04	209.5	79.34	285619/3600	112

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 3,00 kW, P_N (87 Hz) = 5,20 kW									
19	1.0	33	1.0	1446	C613_0770 IE3D100L04	110.5	76.80	8601/112	111
21	1.5	36	1.5	1329	C712_0700 IE3D100L04	137.4	69.55	765/11	112
21	0.99	37	0.99	1316	C612_0690 IE3D100L04	102.1	68.89	620/9	111
23	1.2	40	1.2	1195	C613_0630 IE3D100L04	110.5	63.46	48739/768	111
26	1.8	44	1.8	1086	C712_0570 IE3D100L04	137.4	56.82	625/11	113
26	1.2	46	1.2	1053	C612_0550 IE3D100L04	102.1	55.11	496/9	112
29	0.84	51	0.84	952	C502_0500 IE3D100L04	86.8	49.82	1943/39	111
30	1.6	51	1.5	928	C613_0490 IE3D100L04	110.5	49.28	31537/640	111
31	0.90	54	0.90	893	C502_0470 IE3D100L04	86.8	46.72	1495/32	111
32	1.5	56	1.5	866	C612_0450 IE3D100L04	102.1	45.33	136/3	112
35	1.0	60	1.0	797	C502_0420 IE3D100L04	86.8	41.69	667/16	111
35	1.8	61	1.8	784	C712_0410 IE3D100L04	137.4	41.02	2625/64	113
37	1.6	64	1.6	753	C612_0390 IE3D100L04	102.1	39.40	1891/48	112
42	0.83	72	0.83	665	C402_0350 IE3D100L04	75.2	34.82	975/28	111
42	1.2	72	1.2	669	C502_0350 IE3D100L04	86.8	35.00	35/1	112
42	2.0	72	2.0	666	C612_0350 IE3D100L04	102.1	34.87	1360/39	114
41	2.3	72	2.3	670	C712_0350 IE3D100L04	137.4	35.07	2700/77	118
45	1.9	78	1.9	619	C612_0320 IE3D100L04	102.1	32.41	1037/32	112
47	0.92	81	0.92	595	C402_0310 IE3D100L04	75.2	31.15	405/13	111
47	1.3	81	1.3	597	C502_0310 IE3D100L04	86.8	31.23	406/13	112
52	1.0	90	1.0	532	C402_0280 IE3D100L04	75.2	27.86	195/7	111
52	1.5	90	1.5	537	C502_0280 IE3D100L04	86.8	28.10	5395/192	112
53	2.4	92	2.4	524	C612_0270 IE3D100L04	102.1	27.43	192/7	115
58	1.2	101	1.2	476	C402_0250 IE3D100L04	75.2	24.92	324/13	111
58	1.7	101	1.7	479	C502_0250 IE3D100L04	86.8	25.07	2407/96	112
58	2.1	101	2.1	476	C612_0250 IE3D100L04	102.1	24.93	5185/208	114
62	1.2	108	1.2	446	C402_0230 IE3D100L04	75.2	23.36	1495/64	112
62	1.8	108	1.8	446	C502_0230 IE3D100L04	86.8	23.36	1495/64	113
70	0.88	121	0.88	397	C302_0210 IE3D100L04	65.0	20.80	104/5	111
70	1.4	121	1.4	399	C402_0210 IE3D100L04	75.2	20.90	4347/208	112
70	2.0	121	2.0	398	C502_0210 IE3D100L04	86.8	20.84	667/32	113
74	2.4	129	2.4	375	C612_0195 IE3D100L04	102.1	19.61	549/28	115
83	1.0	144	1.0	335	C302_0175 IE3D100L04	65.0	17.54	1105/63	111
83	1.6	143	1.6	336	C402_0175 IE3D100L04	75.2	17.60	845/48	112
92	1.8	160	1.8	301	C402_0160 IE3D100L04	75.2	15.75	63/4	113
94	1.2	162	1.2	297	C302_0155 IE3D100L04	65.0	15.54	544/35	111
104	1.3	180	1.3	267	C302_0140 IE3D100L04	65.0	13.99	2015/144	111
104	2.1	180	2.1	267	C402_0140 IE3D100L04	75.2	13.99	2015/144	113
118	0.85	205	0.85	235	C202_0125 IE3D100L04	59.9	12.32	665/54	111
117	1.5	203	1.4	237	C302_0125 IE3D100L04	65.0	12.40	62/5	112
116	2.3	201	2.3	239	C402_0125 IE3D100L04	75.2	12.52	651/52	113
124	0.89	214	0.89	225	C202_0120 IE3D100L04	59.9	11.76	294/25	111
125	1.6	217	1.4	222	C302_0115 IE3D100L04	65.0	11.61	325/28	112
125	2.5	217	2.4	222	C402_0115 IE3D100L04	75.2	11.64	1885/162	114
142	1.0	246	1.0	196	C202_0105 IE3D100L04	59.9	10.26	513/50	111
141	1.8	245	1.5	197	C302_0105 IE3D100L04	65.0	10.29	72/7	112
140	2.8	242	2.6	199	C402_0105 IE3D100L04	75.2	10.41	406/39	114
155	1.1	268	1.1	179	C202_0094 IE3D100L04	59.9	9.387	2450/261	111
156	2.0	271	1.7	178	C302_0093 IE3D100L04	65.0	9.310	3575/384	113
176	2.1	305	1.8	158	C302_0083 IE3D100L04	65.0	8.250	33/4	113
178	1.3	308	1.2	157	C202_0082 IE3D100L04	59.9	8.190	475/58	112
187	1.1	323	0.94	149	C202_0078 IE3D100L04	59.9	7.800	39/5	111
186	1.8	321	1.5	150	C302_0078 IE3D100L04	65.0	7.841	494/63	111
186	2.4	322	2.2	149	C402_0078 IE3D100L04	75.2	7.816	2001/256	112
230	0.84	-	-	121	C102_0063 IE3D100L04	55.9	6.338	507/80	110
231	1.3	400	1.1	120	C202_0063 IE3D100L04	59.9	6.295	3330/529	111
230	2.1	399	1.8	121	C302_0063 IE3D100L04	65.0	6.314	221/35	111
248	0.88	-	-	112	C102_0059 IE3D100L04	55.9	5.875	47/8	110
248	2.2	430	1.9	112	C302_0059 IE3D100L04	65.0	5.859	2584/441	111
251	1.4	435	1.1	111	C202_0058 IE3D100L04	59.9	5.791	666/115	111
287	1.5	497	1.3	97	C202_0051 IE3D100L04	59.9	5.072	350/69	111
290	0.98	502	0.83	96	C102_0050 IE3D100L04	55.9	5.025	201/40	111
289	2.4	500	2.1	96	C302_0050 IE3D100L04	65.0	5.038	403/80	112
312	1.0	541	0.87	89	C102_0047 IE3D100L04	55.9	4.658	3149/676	111
312	1.6	540	1.3	89	C202_0047 IE3D100L04	59.9	4.667	14/3	111

2.2 Selection tables 2 C helical geared motors

n ₂ 50 Hz [rpm]	S 50 Hz	n ₂ 87 Hz [rpm]	S 87 Hz	M _{2N} [Nm]	Type	m [kg]	i	i _{exakt}	J ₁ [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 3,00 kW, P_N (87 Hz) = 5,20 kW									
311	2.6	539	2.2	89	C302_0047 IE3D100L04	65.0	4.675	589/126	112
314	3.0	544	3.0	88	C502_0046 IE3D100L04	86.8	4.629	162/35	118
347	1.1	602	0.93	80	C102_0042 IE3D100L04	55.9	4.189	377/90	111
344	1.7	596	1.4	81	C202_0042 IE3D100L04	59.9	4.226	486/115	111
348	2.8	603	2.3	80	C302_0042 IE3D100L04	65.0	4.179	117/28	113
375	1.2	649	0.98	74	C102_0039 IE3D100L04	55.9	3.883	1363/351	111
374	1.8	648	1.5	74	C202_0039 IE3D100L04	59.9	3.888	486/125	111
375	2.9	650	2.5	74	C302_0039 IE3D100L04	65.0	3.878	190/49	113
431	2.0	747	1.6	64	C202_0034 IE3D100L04	59.9	3.373	2250/667	112
434	3.0	752	2.7	64	C302_0034 IE3D100L04	65.0	3.352	429/128	113
436	1.3	756	1.1	64	C102_0033 IE3D100L04	55.9	3.334	2067/620	111
471	1.4	815	1.1	59	C102_0031 IE3D100L04	55.9	3.091	2491/806	111
469	2.1	812	1.7	59	C202_0031 IE3D100L04	59.9	3.103	90/29	112
541	2.3	937	1.9	51	C202_0027 IE3D100L04	59.9	2.690	495/184	113
564	1.5	976	1.3	49	C102_0026 IE3D100L04	55.9	2.582	1911/740	111
588	2.4	1018	2.0	47	C202_0025 IE3D100L04	59.9	2.475	99/40	113
608	1.6	1053	1.4	46	C102_0024 IE3D100L04	55.9	2.394	2303/962	111
668	1.7	1158	1.4	42	C102_0022 IE3D100L04	55.9	2.177	468/215	112
666	2.6	1154	2.2	42	C202_0022 IE3D100L04	59.9	2.184	2160/989	114
721	1.8	1249	1.5	39	C102_0020 IE3D100L04	55.9	2.018	1128/559	112
724	2.8	1254	2.3	38	C202_0020 IE3D100L04	59.9	2.009	432/215	114
752	1.9	-	-	37	C102_0039 IE3D100L02	41.9	3.883	1363/351	46
751	2.9	-	-	37	C202_0039 IE3D100L02	45.9	3.888	486/125	46
866	3.1	-	-	32	C202_0034 IE3D100L02	45.9	3.373	2250/667	47
876	2.1	-	-	32	C102_0033 IE3D100L02	41.9	3.334	2067/620	46
945	2.2	-	-	29	C102_0031 IE3D100L02	41.9	3.091	2491/806	46
1086	3.7	-	-	26	C202_0027 IE3D100L02	45.9	2.690	495/184	48
1131	2.5	-	-	25	C102_0026 IE3D100L02	41.9	2.582	1911/740	46
1180	3.9	-	-	24	C202_0025 IE3D100L02	45.9	2.475	99/40	48
1220	2.6	-	-	23	C102_0024 IE3D100L02	41.9	2.394	2303/962	46
1341	2.8	-	-	21	C102_0022 IE3D100L02	41.9	2.177	468/215	47
1447	2.9	-	-	19	C102_0020 IE3D100L02	41.9	2.018	1128/559	47
P_N (50 Hz) = 4,00 kW, P_N (87 Hz) = 6,93 kW									
8.2	0.81	-	-	4467	C813_1780 IE3D112M04	220.5	178.4	6956/39	171
11	1.0	18	0.92	3466	C813_1380 IE3D112M04	220.5	138.4	2491/18	172
14	1.2	24	1.1	2695	C813_1080 IE3D112M04	220.5	107.6	4841/45	172
15	0.95	-	-	2483	C713_0990 IE3D112M04	161.5	99.14	6345/64	171
16	1.2	28	1.2	2275	C813_0910 IE3D112M04	220.5	90.82	18800/207	173
18	1.1	31	0.92	2028	C713_0810 IE3D112M04	161.5	80.97	20727/256	171
18	1.2	32	1.1	1987	C813_0790 IE3D112M04	220.5	79.34	285619/3600	172
21	1.1	36	1.1	1767	C712_0700 IE3D112M04	148.4	69.55	765/11	172
23	0.91	40	0.91	1590	C613_0630 IE3D112M04	121.5	63.46	48739/768	171
26	1.3	45	1.3	1444	C712_0570 IE3D112M04	148.4	56.82	625/11	173
26	0.93	46	0.93	1401	C612_0550 IE3D112M04	113.1	55.11	496/9	172
30	1.2	51	1.1	1234	C613_0490 IE3D112M04	121.5	49.28	31537/640	171
32	1.1	56	1.1	1152	C612_0450 IE3D112M04	113.1	45.33	136/3	172
36	1.3	62	1.3	1042	C712_0410 IE3D112M04	148.4	41.02	2625/64	173
37	1.2	64	1.2	1001	C612_0390 IE3D112M04	113.1	39.40	1891/48	172
42	0.90	72	0.90	889	C502_0350 IE3D112M04	97.8	35.00	35/1	172
42	1.5	73	1.5	886	C612_0350 IE3D112M04	113.1	34.87	1360/39	174
42	1.8	72	1.8	891	C712_0350 IE3D112M04	148.4	35.07	2700/77	178
45	1.4	78	1.4	824	C612_0320 IE3D112M04	113.1	32.41	1037/32	172
47	1.0	81	1.0	794	C502_0310 IE3D112M04	97.8	31.23	406/13	172
52	1.1	90	1.1	714	C502_0280 IE3D112M04	97.8	28.10	5395/192	172
53	1.8	92	1.8	697	C612_0270 IE3D112M04	113.1	27.43	192/7	175
59	0.87	101	0.87	633	C402_0250 IE3D112M04	86.2	24.92	324/13	171
58	1.3	101	1.3	637	C502_0250 IE3D112M04	97.8	25.07	2407/96	172
59	1.6	101	1.6	634	C612_0250 IE3D112M04	113.1	24.93	5185/208	174
58	1.8	100	1.8	643	C712_0250 IE3D112M04	148.4	25.31	405/16	178
63	0.93	108	0.93	594	C402_0230 IE3D112M04	86.2	23.36	1495/64	172
63	1.3	108	1.3	594	C502_0230 IE3D112M04	97.8	23.36	1495/64	173
70	1.0	121	1.0	531	C402_0210 IE3D112M04	86.2	20.90	4347/208	172
70	1.5	121	1.5	530	C502_0210 IE3D112M04	97.8	20.84	667/32	173
74	1.8	129	1.8	498	C612_0195 IE3D112M04	113.1	19.61	549/28	175
83	1.2	144	1.2	447	C402_0175 IE3D112M04	86.2	17.60	845/48	172

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 4,00 kW, P_N (87 Hz) = 6,93 kW									
93	1.4	161	1.4	400	C402_0160 IE3D112M04	86.2	15.75	63/4	173
94	0.89	163	0.88	395	C302_0155 IE3D112M04	76.0	15.54	544/35	171
104	0.98	181	0.95	356	C302_0140 IE3D112M04	76.0	13.99	2015/144	171
104	1.5	181	1.5	356	C402_0140 IE3D112M04	86.2	13.99	2015/144	173
105	2.3	182	2.3	354	C502_0140 IE3D112M04	97.8	13.93	195/14	176
118	1.1	204	1.0	315	C302_0125 IE3D112M04	76.0	12.40	62/5	172
117	1.7	202	1.7	318	C402_0125 IE3D112M04	86.2	12.52	651/52	173
117	2.3	203	2.3	316	C502_0125 IE3D112M04	97.8	12.43	87/7	176
126	1.2	218	1.1	295	C302_0115 IE3D112M04	76.0	11.61	325/28	172
125	1.9	217	1.8	296	C402_0115 IE3D112M04	86.2	11.64	1885/162	174
142	1.3	246	1.2	261	C302_0105 IE3D112M04	76.0	10.29	72/7	172
140	2.1	243	1.9	265	C402_0105 IE3D112M04	86.2	10.41	406/39	174
156	0.84	–	–	239	C202_0094 IE3D112M04	70.9	9.387	2450/261	171
157	1.5	272	1.2	237	C302_0093 IE3D112M04	76.0	9.310	3575/384	173
177	1.6	307	1.3	210	C302_0083 IE3D112M04	76.0	8.250	33/4	173
178	0.96	309	0.87	208	C202_0082 IE3D112M04	70.9	8.190	475/58	172
187	0.84	–	–	198	C202_0078 IE3D112M04	70.9	7.800	39/5	171
186	1.4	323	1.2	199	C302_0078 IE3D112M04	76.0	7.841	494/63	171
187	1.8	324	1.7	199	C402_0078 IE3D112M04	86.2	7.816	2001/256	172
188	2.0	326	2.0	197	C502_0078 IE3D112M04	97.8	7.763	621/80	174
232	0.97	402	0.82	160	C202_0063 IE3D112M04	70.9	6.295	3330/529	171
231	1.6	401	1.3	160	C302_0063 IE3D112M04	76.0	6.314	221/35	171
249	1.7	432	1.4	149	C302_0059 IE3D112M04	76.0	5.859	2584/441	171
248	2.1	429	2.0	150	C402_0059 IE3D112M04	86.2	5.891	377/64	173
252	1.0	437	0.86	147	C202_0058 IE3D112M04	70.9	5.791	666/115	171
288	1.1	499	0.94	129	C202_0051 IE3D112M04	70.9	5.072	350/69	171
290	1.8	502	1.5	128	C302_0050 IE3D112M04	76.0	5.038	403/80	172
313	1.2	542	0.99	119	C202_0047 IE3D112M04	70.9	4.667	14/3	171
312	1.9	541	1.6	119	C302_0047 IE3D112M04	76.0	4.675	589/126	172
312	2.3	540	2.3	119	C402_0047 IE3D112M04	86.2	4.682	899/192	175
315	2.3	546	2.3	118	C502_0046 IE3D112M04	97.8	4.629	162/35	178
349	0.83	–	–	106	C102_0042 IE3D112M04	66.9	4.189	377/90	171
345	1.3	598	1.1	107	C202_0042 IE3D112M04	70.9	4.226	486/115	171
349	2.1	605	1.8	106	C302_0042 IE3D112M04	76.0	4.179	117/28	173
376	0.88	–	–	99	C102_0039 IE3D112M04	66.9	3.883	1363/351	171
376	1.3	650	1.1	99	C202_0039 IE3D112M04	70.9	3.888	486/125	171
376	2.2	652	1.8	99	C302_0039 IE3D112M04	76.0	3.878	190/49	173
433	1.5	750	1.2	86	C202_0034 IE3D112M04	70.9	3.373	2250/667	172
436	2.3	754	2.0	85	C302_0034 IE3D112M04	76.0	3.352	429/128	173
438	0.97	758	0.82	85	C102_0033 IE3D112M04	66.9	3.334	2067/620	171
472	1.0	818	0.86	79	C102_0031 IE3D112M04	66.9	3.091	2491/806	171
471	1.6	815	1.3	79	C202_0031 IE3D112M04	70.9	3.103	90/29	172
469	2.3	813	2.1	79	C302_0031 IE3D112M04	76.0	3.110	1045/336	174
543	1.7	940	1.4	68	C202_0027 IE3D112M04	70.9	2.690	495/184	173
565	1.2	979	0.97	66	C102_0026 IE3D112M04	66.9	2.582	1911/740	171
590	1.8	1022	1.5	63	C202_0025 IE3D112M04	70.9	2.475	99/40	173
610	1.2	1056	1.0	61	C102_0024 IE3D112M04	66.9	2.394	2303/962	171
671	1.3	1162	1.1	55	C102_0022 IE3D112M04	66.9	2.177	468/215	172
668	2.0	1158	1.7	56	C202_0022 IE3D112M04	70.9	2.184	2160/989	174
723	1.4	1253	1.1	51	C102_0020 IE3D112M04	66.9	2.018	1128/559	172
727	2.1	1259	1.7	51	C202_0020 IE3D112M04	70.9	2.009	432/215	174
752	1.4	–	–	49	C102_0039 IE3D112M02	48.9	3.883	1363/351	56
751	2.1	–	–	49	C202_0039 IE3D112M02	52.9	3.888	486/125	56
866	2.4	–	–	43	C202_0034 IE3D112M02	52.9	3.373	2250/667	57
876	1.6	–	–	42	C102_0033 IE3D112M02	48.9	3.334	2067/620	56
945	1.6	–	–	39	C102_0031 IE3D112M02	48.9	3.091	2491/806	56
941	2.5	–	–	39	C202_0031 IE3D112M02	52.9	3.103	90/29	57
1086	2.7	–	–	34	C202_0027 IE3D112M02	52.9	2.690	495/184	58
1131	1.8	–	–	33	C102_0026 IE3D112M02	48.9	2.582	1911/740	56
1180	2.9	–	–	31	C202_0025 IE3D112M02	52.9	2.475	99/40	58
1220	1.9	–	–	30	C102_0024 IE3D112M02	48.9	2.394	2303/962	56
1341	2.1	–	–	28	C102_0022 IE3D112M02	48.9	2.177	468/215	57
1447	2.2	–	–	26	C102_0020 IE3D112M02	48.9	2.018	1128/559	57

2.2 Selection tables 2 C helical geared motors

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 5,50 kW, P_N (87 Hz) = 9,53 kW									
6.9	0.83	12	0.83	7206	C913_2150 IE3D132S04	361.3	215.4	3015/14	353
8.4	1.0	15	1.0	5892	C913_1760 IE3D132S04	361.3	176.1	34515/196	354
11	0.97	20	0.94	4334	C813_1300 IE3D132S04	254.5	129.5	58941/455	352
13	1.6	23	1.6	3695	C913_1100 IE3D132S04	361.3	110.4	21645/196	356
14	1.0	24	1.0	3545	C813_1060 IE3D132S04	254.5	105.9	3708/35	353
15	1.2	26	1.1	3363	C813_1010 IE3D132S04	254.5	100.5	28143/280	353
17	1.2	29	1.2	2993	C813_0890 IE3D132S04	254.5	89.44	14400/161	354
19	0.90	32	0.90	2668	C713_0800 IE3D132S04	195.5	79.73	5103/64	352
19	1.6	33	1.4	2614	C813_0780 IE3D132S04	254.5	78.13	54693/700	353
19	1.9	33	1.6	2601	C913_0780 IE3D132S04	361.3	77.73	60939/784	356
21	1.5	37	1.5	2339	C812_0690 IE3D132S04	242.0	68.89	620/9	356
22	1.9	39	1.6	2207	C813_0660 IE3D132S04	254.5	65.96	10620/161	354
23	1.1	40	1.1	2160	C713_0650 IE3D132S04	195.5	64.55	4131/64	353
26	1.0	45	1.0	1929	C712_0570 IE3D132S04	182.4	56.82	625/11	353
27	2.0	47	2.0	1839	C812_0540 IE3D132S04	242.0	54.15	704/13	359
29	1.4	50	1.4	1701	C713_0510 IE3D132S04	195.5	50.85	18711/368	353
30	2.3	52	2.0	1645	C813_0490 IE3D132S04	254.5	49.18	49914/1015	355
32	1.3	55	1.3	1589	C712_0470 IE3D132S04	182.4	46.82	515/11	355
33	2.3	56	2.3	1546	C812_0460 IE3D132S04	242.0	45.54	592/13	362
33	0.85	57	0.85	1539	C612_0450 IE3D132S04	147.1	45.33	136/3	352
36	1.5	62	1.5	1392	C712_0410 IE3D132S04	182.4	41.02	2625/64	353
37	2.7	64	2.7	1356	C812_0400 IE3D132S04	242.0	39.94	2596/65	359
42	1.1	74	1.1	1184	C612_0350 IE3D132S04	147.1	34.87	1360/39	354
42	1.7	73	1.7	1190	C712_0350 IE3D132S04	182.4	35.07	2700/77	358
42	3.0	73	3.0	1200	C812_0350 IE3D132S04	242.0	35.33	106/3	368
44	2.1	76	2.1	1147	C712_0340 IE3D132S04	182.4	33.80	2163/64	355
46	1.3	79	1.3	1100	C612_0320 IE3D132S04	147.1	32.41	1037/32	352
52	2.1	90	2.1	972	C712_0290 IE3D132S04	182.4	28.64	315/11	360
53	0.84	91	0.84	954	C502_0280 IE3D132S04	131.8	28.10	5395/192	352
54	1.4	93	1.4	931	C612_0270 IE3D132S04	147.1	27.43	192/7	355
54	3.6	93	3.6	933	C812_0270 IE3D132S04	242.0	27.47	412/15	376
57	3.1	98	3.1	885	C812_0260 IE3D132S04	242.0	26.06	3127/120	368
59	0.94	102	0.94	851	C502_0250 IE3D132S04	131.8	25.07	2407/96	352
59	1.7	103	1.7	846	C612_0250 IE3D132S04	147.1	24.93	5185/208	354
58	2.8	101	2.7	859	C712_0250 IE3D132S04	182.4	25.31	405/16	358
63	1.0	110	1.0	793	C502_0230 IE3D132S04	131.8	23.36	1495/64	353
65	1.7	113	1.7	770	C612_0230 IE3D132S04	147.1	22.67	68/3	357
64	2.5	111	2.5	787	C712_0230 IE3D132S04	182.4	23.18	255/11	364
71	1.1	123	1.1	708	C502_0210 IE3D132S04	131.8	20.84	667/32	353
72	3.2	124	3.1	702	C712_0210 IE3D132S04	182.4	20.67	1323/64	361
73	3.6	127	3.6	688	C812_0200 IE3D132S04	242.0	20.26	6077/300	377
75	2.2	131	2.0	666	C612_0195 IE3D132S04	147.1	19.61	549/28	355
81	3.2	140	3.2	620	C712_0185 IE3D132S04	182.4	18.26	420/23	371
84	0.92	146	0.92	598	C402_0175 IE3D132S04	120.2	17.60	845/48	352
84	1.3	146	1.3	598	C502_0175 IE3D132S04	131.8	17.60	845/48	355
84	2.2	146	2.1	598	C612_0175 IE3D132S04	147.1	17.60	88/5	360
87	3.9	150	3.9	581	C812_0170 IE3D132S04	242.0	17.10	1180/69	385
88	3.8	153	3.6	568	C712_0165 IE3D132S04	182.4	16.73	1071/64	365
94	1.0	163	1.0	535	C402_0160 IE3D132S04	120.2	15.75	63/4	353
91	2.6	158	2.2	550	C612_0160 IE3D132S04	147.1	16.20	1037/64	357
94	1.5	163	1.5	533	C502_0155 IE3D132S04	131.8	15.71	377/24	355
106	1.2	183	1.2	475	C402_0140 IE3D132S04	120.2	13.99	2015/144	353
106	1.7	184	1.7	473	C502_0140 IE3D132S04	131.8	13.93	195/14	356
105	2.7	181	2.4	480	C612_0140 IE3D132S04	147.1	14.15	976/69	364
108	4.3	187	4.1	466	C712_0135 IE3D132S04	182.4	13.73	4380/319	380
112	4.1	194	4.1	448	C712_0130 IE3D132S04	182.4	13.18	4851/368	372
119	0.83	-	-	421	C302_0125 IE3D132S04	110.0	12.40	62/5	352
118	1.3	205	1.3	425	C402_0125 IE3D132S04	120.2	12.52	651/52	353
119	1.9	206	1.9	422	C502_0125 IE3D132S04	131.8	12.43	87/7	356
118	3.1	204	2.6	427	C612_0125 IE3D132S04	147.1	12.58	2013/160	361
128	0.89	-	-	394	C302_0115 IE3D132S04	110.0	11.61	325/28	352
127	1.4	220	1.3	395	C402_0115 IE3D132S04	120.2	11.64	1885/162	354
127	2.0	220	2.0	395	C502_0115 IE3D132S04	131.8	11.64	1885/162	358
144	1.0	249	0.87	349	C302_0105 IE3D132S04	110.0	10.29	72/7	352
142	1.6	246	1.4	353	C402_0105 IE3D132S04	120.2	10.41	406/39	354

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 5,50 kW, P_N (87 Hz) = 9,53 kW									
143	2.3	247	2.2	353	C502_0105 IE3D132S04	131.8	10.38	841/81	358
146	3.6	254	3.0	343	C612_0100 IE3D132S04	147.1	10.11	3721/368	365
149	4.6	259	4.6	337	C712_0099 IE3D132S04	182.4	9.912	4599/464	381
159	1.1	275	0.92	316	C302_0093 IE3D132S04	110.0	9.310	3575/384	353
160	1.7	277	1.6	314	C402_0093 IE3D132S04	120.2	9.261	3445/372	356
160	2.5	277	2.3	314	C502_0093 IE3D132S04	131.8	9.261	3445/372	361
162	3.9	281	3.2	310	C612_0091 IE3D132S04	147.1	9.118	848/93	373
179	1.2	311	1.0	280	C302_0083 IE3D132S04	110.0	8.250	33/4	353
179	2.0	309	1.7	281	C402_0083 IE3D132S04	120.2	8.285	3339/403	356
179	2.9	310	2.5	281	C502_0083 IE3D132S04	131.8	8.263	1537/186	361
181	4.2	313	3.5	278	C612_0082 IE3D132S04	147.1	8.190	1769/216	369
189	1.0	327	0.86	266	C302_0078 IE3D132S04	110.0	7.841	494/63	351
189	1.5	328	1.3	265	C402_0078 IE3D132S04	120.2	7.816	2001/256	352
191	2.3	330	1.9	264	C502_0078 IE3D132S04	131.8	7.763	621/80	354
227	4.6	393	4.1	221	C612_0065 IE3D132S04	147.1	6.518	3233/496	376
234	1.2	406	0.99	214	C302_0063 IE3D132S04	110.0	6.314	221/35	351
253	1.2	438	1.0	199	C302_0059 IE3D132S04	110.0	5.859	2584/441	351
251	1.8	435	1.5	200	C402_0059 IE3D132S04	120.2	5.891	377/64	353
253	2.8	438	2.4	199	C502_0059 IE3D132S04	131.8	5.850	117/20	356
294	1.4	509	1.2	171	C302_0050 IE3D132S04	110.0	5.038	403/80	352
317	1.4	548	1.2	159	C302_0047 IE3D132S04	110.0	4.675	589/126	352
316	2.1	548	1.8	159	C402_0047 IE3D132S04	120.2	4.682	899/192	355
320	3.3	554	2.8	157	C502_0046 IE3D132S04	131.8	4.629	162/35	358
354	1.6	613	1.3	142	C302_0042 IE3D132S04	110.0	4.179	117/28	353
382	1.6	661	1.4	132	C302_0039 IE3D132S04	110.0	3.878	190/49	353
380	2.4	658	2.0	132	C402_0039 IE3D132S04	120.2	3.894	841/216	356
442	1.8	765	1.5	114	C302_0034 IE3D132S04	110.0	3.352	429/128	353
476	1.9	824	1.6	106	C302_0031 IE3D132S04	110.0	3.110	1045/336	354
478	2.8	827	2.3	105	C402_0031 IE3D132S04	120.2	3.099	1537/496	358
547	2.1	948	1.7	92	C302_0027 IE3D132S04	110.0	2.705	1677/620	355
590	2.2	1021	1.8	85	C302_0025 IE3D132S04	110.0	2.510	1634/651	355
680	2.4	1178	2.0	74	C302_0022 IE3D132S04	110.0	2.177	468/215	357
733	2.5	1269	2.1	69	C302_0020 IE3D132S04	110.0	2.020	608/301	357
P_N (50 Hz) = 7,50 kW, P_N (87 Hz) = 12,99 kW									
13	1.2	23	1.1	5173	C913_1100 IE3D132M04	371.3	110.4	21645/196	436
15	0.89	25	0.82	4708	C813_1010 IE3D132M04	264.5	100.5	28143/280	433
16	0.86	29	0.86	4190	C813_0890 IE3D132M04	264.5	89.44	14400/161	434
19	1.1	33	1.0	3660	C813_0780 IE3D132M04	264.5	78.13	54693/700	433
19	1.4	33	1.1	3641	C913_0780 IE3D132M04	371.3	77.73	60939/784	436
21	1.1	37	1.1	3274	C812_0690 IE3D132M04	252.0	68.89	620/9	436
22	1.4	39	1.1	3090	C813_0660 IE3D132M04	264.5	65.96	10620/161	434
27	1.4	47	1.4	2574	C812_0540 IE3D132M04	252.0	54.15	704/13	439
29	1.0	50	1.0	2382	C713_0510 IE3D132M04	205.5	50.85	18711/368	433
30	1.6	52	1.4	2304	C813_0490 IE3D132M04	264.5	49.18	49914/1015	435
32	0.90	55	0.90	2225	C712_0470 IE3D132M04	192.4	46.82	515/11	435
32	1.7	56	1.7	2164	C812_0460 IE3D132M04	252.0	45.54	592/13	442
36	1.1	62	1.1	1949	C712_0410 IE3D132M04	192.4	41.02	2625/64	433
37	1.9	64	1.9	1898	C812_0400 IE3D132M04	252.0	39.94	2596/65	439
42	1.2	73	1.2	1667	C712_0350 IE3D132M04	192.4	35.07	2700/77	438
42	2.1	72	2.1	1679	C812_0350 IE3D132M04	252.0	35.33	106/3	448
44	1.5	76	1.5	1606	C712_0340 IE3D132M04	192.4	33.80	2163/64	435
44	1.9	76	1.9	1596	C812_0340 IE3D132M04	252.0	33.59	2183/65	442
46	0.94	79	0.94	1540	C612_0320 IE3D132M04	157.1	32.41	1037/32	432
52	1.5	89	1.5	1361	C712_0290 IE3D132M04	192.4	28.64	315/11	440
54	1.0	93	1.0	1304	C612_0270 IE3D132M04	157.1	27.43	192/7	435
54	2.6	93	2.6	1306	C812_0270 IE3D132M04	252.0	27.47	412/15	456
57	2.2	98	2.2	1239	C812_0260 IE3D132M04	252.0	26.06	3127/120	448
59	1.2	102	1.2	1185	C612_0250 IE3D132M04	157.1	24.93	5185/208	434
58	2.0	101	1.9	1203	C712_0250 IE3D132M04	192.4	25.31	405/16	438
65	1.2	113	1.2	1077	C612_0230 IE3D132M04	157.1	22.67	68/3	437
64	1.8	110	1.8	1102	C712_0230 IE3D132M04	192.4	23.18	255/11	444
64	2.8	110	2.8	1102	C812_0230 IE3D132M04	252.0	23.19	1600/69	464
71	0.81	123	0.81	991	C502_0210 IE3D132M04	141.8	20.84	667/32	433
71	2.3	124	2.2	983	C712_0210 IE3D132M04	192.4	20.67	1323/64	441
73	2.6	126	2.6	963	C812_0200 IE3D132M04	252.0	20.26	6077/300	457

2.2 Selection tables 2 C helical geared motors

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 7,50 kW, P_N (87 Hz) = 12,99 kW									
75	1.6	130	1.4	932	C612_0195 IE3D132M04	157.1	19.61	549/28	435
81	2.3	140	2.3	868	C712_0185 IE3D132M04	192.4	18.26	420/23	451
84	0.96	145	0.96	837	C502_0175 IE3D132M04	141.8	17.60	845/48	435
84	1.6	145	1.5	837	C612_0175 IE3D132M04	157.1	17.60	88/5	440
85	3.2	148	3.2	822	C812_0175 IE3D132M04	252.0	17.29	1504/87	481
86	2.8	149	2.8	813	C812_0170 IE3D132M04	252.0	17.10	1180/69	465
88	2.7	153	2.6	795	C712_0165 IE3D132M04	192.4	16.73	1071/64	445
91	1.9	158	1.6	770	C612_0160 IE3D132M04	157.1	16.20	1037/64	437
94	1.1	163	1.1	747	C502_0155 IE3D132M04	141.8	15.71	377/24	435
105	0.83	183	0.83	665	C402_0140 IE3D132M04	130.2	13.99	2015/144	433
106	1.2	183	1.2	662	C502_0140 IE3D132M04	141.8	13.93	195/14	436
104	1.9	181	1.7	672	C612_0140 IE3D132M04	157.1	14.15	976/69	444
107	3.1	186	2.9	653	C712_0135 IE3D132M04	192.4	13.73	4380/319	460
112	2.9	194	2.9	627	C712_0130 IE3D132M04	192.4	13.18	4851/368	452
118	0.92	204	0.91	595	C402_0125 IE3D132M04	130.2	12.52	651/52	433
119	1.4	206	1.4	591	C502_0125 IE3D132M04	141.8	12.43	87/7	436
117	2.2	203	1.9	598	C612_0125 IE3D132M04	157.1	12.58	2013/160	441
127	0.99	220	0.96	553	C402_0115 IE3D132M04	130.2	11.64	1885/162	434
127	1.4	220	1.4	553	C502_0115 IE3D132M04	141.8	11.64	1885/162	438
129	2.4	223	2.0	545	C612_0115 IE3D132M04	157.1	11.46	928/81	448
142	1.1	245	1.0	495	C402_0105 IE3D132M04	130.2	10.41	406/39	434
142	1.6	246	1.5	494	C502_0105 IE3D132M04	141.8	10.38	841/81	438
146	2.6	253	2.2	481	C612_0100 IE3D132M04	157.1	10.11	3721/368	445
149	3.3	258	3.3	471	C712_0099 IE3D132M04	192.4	9.912	4599/464	461
159	1.3	276	1.1	440	C402_0093 IE3D132M04	130.2	9.261	3445/372	436
159	1.8	276	1.7	440	C502_0093 IE3D132M04	141.8	9.261	3445/372	441
162	2.8	280	2.3	433	C612_0091 IE3D132M04	157.1	9.118	848/93	453
179	0.86	-	-	392	C302_0083 IE3D132M04	120.0	8.250	33/4	433
178	1.4	308	1.2	394	C402_0083 IE3D132M04	130.2	8.285	3339/403	436
179	2.0	309	1.8	393	C502_0083 IE3D132M04	141.8	8.263	1537/186	441
180	3.0	312	2.5	389	C612_0082 IE3D132M04	157.1	8.190	1769/216	449
189	1.1	327	0.90	371	C402_0078 IE3D132M04	130.2	7.816	2001/256	432
190	1.7	329	1.4	369	C502_0078 IE3D132M04	141.8	7.763	621/80	434
226	3.3	392	2.9	310	C612_0065 IE3D132M04	157.1	6.518	3233/496	456
234	0.85	-	-	300	C302_0063 IE3D132M04	120.0	6.314	221/35	431
252	0.89	-	-	278	C302_0059 IE3D132M04	120.0	5.859	2584/441	431
250	1.3	434	1.1	280	C402_0059 IE3D132M04	130.2	5.891	377/64	433
252	2.0	437	1.7	278	C502_0059 IE3D132M04	141.8	5.850	117/20	436
293	0.98	507	0.82	239	C302_0050 IE3D132M04	120.0	5.038	403/80	432
316	1.0	546	0.87	222	C302_0047 IE3D132M04	120.0	4.675	589/126	432
315	1.5	546	1.3	223	C402_0047 IE3D132M04	130.2	4.682	899/192	435
319	2.3	552	2.0	220	C502_0046 IE3D132M04	141.8	4.629	162/35	438
353	1.1	611	0.93	199	C302_0042 IE3D132M04	120.0	4.179	117/28	433
380	1.2	659	0.98	184	C302_0039 IE3D132M04	120.0	3.878	190/49	433
379	1.7	656	1.4	185	C402_0039 IE3D132M04	130.2	3.894	841/216	436
381	2.6	661	2.2	184	C502_0039 IE3D132M04	141.8	3.867	58/15	441
440	1.3	762	1.1	159	C302_0034 IE3D132M04	120.0	3.352	429/128	433
474	1.4	821	1.1	148	C302_0031 IE3D132M04	120.0	3.110	1045/336	434
476	2.0	824	1.7	147	C402_0031 IE3D132M04	130.2	3.099	1537/496	438
479	3.1	830	2.6	146	C502_0031 IE3D132M04	141.8	3.077	477/155	445
545	1.5	944	1.2	129	C302_0027 IE3D132M04	120.0	2.705	1677/620	435
588	1.6	1018	1.3	119	C302_0025 IE3D132M04	120.0	2.510	1634/651	435
601	2.3	-	-	117	C402_0025 IE3D132M04	130.2	2.456	609/248	442
678	1.7	1174	1.4	103	C302_0022 IE3D132M04	120.0	2.177	468/215	437
730	1.8	1265	1.5	96	C302_0020 IE3D132M04	120.0	2.020	608/301	437
749	2.7	-	-	94	C402_0020 IE3D132M04	130.2	1.968	551/280	447
P_N (50 Hz) = 11,00 kW, P_N (87 Hz) = 19,05 kW									
12	0.82	20	0.82	8557	C913_1260 IE3D160M04	396.3	126.1	183549/1456	785
15	1.0	26	1.0	6748	C913_0990 IE3D160M04	396.3	99.42	20679/208	786
16	0.96	28	0.96	6228	C913_0920 IE3D160M04	396.3	91.76	8075/88	788
19	1.3	32	1.2	5366	C913_0790 IE3D160M04	396.3	79.06	115107/1456	787
21	1.1	37	1.1	4818	C912_0700 IE3D160M04	367.4	69.97	10075/144	793
23	1.6	40	1.4	4384	C913_0650 IE3D160M04	396.3	64.59	295545/4576	788
26	1.2	46	1.2	3845	C912_0560 IE3D160M04	367.4	55.83	335/6	799
27	0.97	47	0.97	3730	C812_0540 IE3D160M04	277.0	54.15	704/13	789

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 11,00 kW, P_N (87 Hz) = 19,05 kW									
32	1.1	56	1.1	3136	C812_0460 IE3D160M04	277.0	45.54	592/13	792
37	1.3	64	1.3	2751	C812_0400 IE3D160M04	277.0	39.94	2596/65	789
38	1.2	65	1.2	2706	C912_0390 IE3D160M04	367.4	39.30	4087/104	800
42	0.83	73	0.83	2415	C712_0350 IE3D160M04	217.4	35.07	2700/77	788
42	1.5	72	1.5	2433	C812_0350 IE3D160M04	277.0	35.33	106/3	798
44	1.0	76	1.0	2328	C712_0340 IE3D160M04	217.4	33.80	2163/64	785
44	1.3	76	1.3	2313	C812_0340 IE3D160M04	277.0	33.59	2183/65	792
52	1.0	89	1.0	1972	C712_0290 IE3D160M04	217.4	28.64	315/11	790
54	1.8	93	1.8	1892	C812_0270 IE3D160M04	277.0	27.47	412/15	806
57	1.5	98	1.5	1795	C812_0260 IE3D160M04	277.0	26.06	3127/120	798
59	0.85	102	0.82	1717	C612_0250 IE3D160M04	182.1	24.93	5185/208	784
58	1.4	101	1.3	1743	C712_0250 IE3D160M04	217.4	25.31	405/16	788
65	0.83	113	0.83	1561	C612_0230 IE3D160M04	182.1	22.67	68/3	787
64	1.3	110	1.3	1597	C712_0230 IE3D160M04	217.4	23.18	255/11	794
64	1.9	110	1.9	1597	C812_0230 IE3D160M04	277.0	23.19	1600/69	814
71	1.6	124	1.5	1424	C712_0210 IE3D160M04	217.4	20.67	1323/64	791
73	1.8	126	1.8	1395	C812_0200 IE3D160M04	277.0	20.26	6077/300	807
75	1.1	130	0.96	1350	C612_0195 IE3D160M04	182.1	19.61	549/28	785
81	1.6	140	1.6	1258	C712_0185 IE3D160M04	217.4	18.26	420/23	801
84	1.1	145	1.0	1212	C612_0175 IE3D160M04	182.1	17.60	88/5	790
85	2.2	148	2.2	1191	C812_0175 IE3D160M04	277.0	17.29	1504/87	831
86	1.9	149	1.9	1178	C812_0170 IE3D160M04	277.0	17.10	1180/69	815
88	1.9	153	1.8	1152	C712_0165 IE3D160M04	217.4	16.73	1071/64	795
91	1.3	158	1.1	1116	C612_0160 IE3D160M04	182.1	16.20	1037/64	787
106	0.83	183	0.83	959	C502_0140 IE3D160M04	166.8	13.93	195/14	786
104	1.3	181	1.2	974	C612_0140 IE3D160M04	182.1	14.15	976/69	794
107	2.1	186	2.0	946	C712_0135 IE3D160M04	217.4	13.73	4380/319	810
112	2.0	194	2.0	908	C712_0130 IE3D160M04	217.4	13.18	4851/368	802
119	0.94	206	0.94	856	C502_0125 IE3D160M04	166.8	12.43	87/7	786
117	1.5	203	1.3	866	C612_0125 IE3D160M04	182.1	12.58	2013/160	791
116	2.2	200	2.2	878	C812_0125 IE3D160M04	277.0	12.75	5546/435	834
127	1.0	220	0.99	801	C502_0115 IE3D160M04	166.8	11.64	1885/162	788
129	1.6	223	1.4	789	C612_0115 IE3D160M04	182.1	11.46	928/81	798
142	1.1	246	1.1	715	C502_0105 IE3D160M04	166.8	10.38	841/81	788
146	1.8	253	1.5	696	C612_0100 IE3D160M04	182.1	10.11	3721/368	795
149	2.3	258	2.3	683	C712_0099 IE3D160M04	217.4	9.912	4599/464	811
159	1.3	276	1.2	638	C502_0093 IE3D160M04	166.8	9.261	3445/372	791
162	1.9	280	1.6	628	C612_0091 IE3D160M04	182.1	9.118	848/93	803
179	1.4	309	1.2	569	C502_0083 IE3D160M04	166.8	8.263	1537/186	791
180	2.1	312	1.7	564	C612_0082 IE3D160M04	182.1	8.190	1769/216	799
190	1.1	329	0.96	535	C502_0078 IE3D160M04	166.8	7.763	621/80	784
226	2.3	392	2.0	449	C612_0065 IE3D160M04	182.1	6.518	3233/496	806
252	1.4	437	1.2	403	C502_0059 IE3D160M04	166.8	5.850	117/20	786
319	1.6	552	1.4	319	C502_0046 IE3D160M04	166.8	4.629	162/35	788
381	1.8	661	1.5	266	C502_0039 IE3D160M04	166.8	3.867	58/15	791
479	2.1	830	1.8	212	C502_0031 IE3D160M04	166.8	3.077	477/155	795
746	2.3	–	–	136	C502_0020 IE3D160M04	166.8	1.976	81/41	810
P_N (50 Hz) = 15,00 kW, P_N (87 Hz) = 25,98 kW									
19	0.97	33	0.91	7256	C913_0790 IE3D160L04	446.3	79.06	115107/1456	1574
21	0.85	37	0.85	6515	C912_0700 IE3D160L04	417.4	69.97	10075/144	1580
23	1.2	40	1.1	5927	C913_0650 IE3D160L04	446.3	64.59	295545/4576	1575
27	0.90	46	0.90	5199	C912_0560 IE3D160L04	417.4	55.83	335/6	1586
33	0.85	57	0.85	4240	C812_0460 IE3D160L04	327.0	45.54	592/13	1579
37	0.99	65	0.99	3719	C812_0400 IE3D160L04	327.0	39.94	2596/65	1576
38	0.90	66	0.90	3659	C912_0390 IE3D160L04	417.4	39.30	4087/104	1587
42	1.1	73	1.1	3290	C812_0350 IE3D160L04	327.0	35.33	106/3	1585
44	0.99	77	0.99	3127	C812_0340 IE3D160L04	327.0	33.59	2183/65	1579
54	1.3	94	1.3	2558	C812_0270 IE3D160L04	327.0	27.47	412/15	1593
57	1.1	99	1.1	2427	C812_0260 IE3D160L04	327.0	26.06	3127/120	1585
59	1.0	102	0.99	2357	C712_0250 IE3D160L04	267.4	25.31	405/16	1575
64	0.93	111	0.93	2159	C712_0230 IE3D160L04	267.4	23.18	255/11	1581
64	1.4	111	1.4	2159	C812_0230 IE3D160L04	327.0	23.19	1600/69	1601
72	1.2	125	1.1	1925	C712_0210 IE3D160L04	267.4	20.67	1323/64	1578
74	1.3	127	1.3	1886	C812_0200 IE3D160L04	327.0	20.26	6077/300	1594
82	1.2	141	1.2	1700	C712_0185 IE3D160L04	267.4	18.26	420/23	1588

2.2 Selection tables 2 C helical geared motors

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 15,00 kW, P_N (87 Hz) = 25,98 kW									
86	1.6	149	1.6	1610	C812_0175 IE3D160L04	327.0	17.29	1504/87	1618
87	1.4	151	1.4	1592	C812_0170 IE3D160L04	327.0	17.10	1180/69	1602
89	1.4	154	1.3	1558	C712_0165 IE3D160L04	267.4	16.73	1071/64	1582
92	0.96	159	0.81	1509	C612_0160 IE3D160L04	232.1	16.20	1037/64	1574
105	0.99	182	0.88	1317	C612_0140 IE3D160L04	232.1	14.15	976/69	1581
109	1.6	188	1.5	1279	C712_0135 IE3D160L04	267.4	13.73	4380/319	1597
113	1.5	196	1.5	1228	C712_0130 IE3D160L04	267.4	13.18	4851/368	1589
118	1.1	205	0.95	1172	C612_0125 IE3D160L04	232.1	12.58	2013/160	1578
117	1.6	202	1.6	1187	C812_0125 IE3D160L04	327.0	12.75	5546/435	1621
130	1.2	225	1.0	1067	C612_0115 IE3D160L04	232.1	11.46	928/81	1585
144	0.83	-	-	967	C502_0105 IE3D160L04	216.8	10.38	841/81	1575
147	1.3	255	1.1	942	C612_0100 IE3D160L04	232.1	10.11	3721/368	1582
150	1.7	260	1.7	923	C712_0099 IE3D160L04	267.4	9.912	4599/464	1598
161	0.93	279	0.85	862	C502_0093 IE3D160L04	216.8	9.261	3445/372	1578
163	1.4	283	1.2	849	C612_0091 IE3D160L04	232.1	9.118	848/93	1590
180	1.0	312	0.92	769	C502_0083 IE3D160L04	216.8	8.263	1537/186	1578
182	1.5	315	1.3	763	C612_0082 IE3D160L04	232.1	8.190	1769/216	1586
192	0.85	-	-	723	C502_0078 IE3D160L04	216.8	7.763	621/80	1571
229	1.7	396	1.5	607	C612_0065 IE3D160L04	232.1	6.518	3233/496	1593
255	1.0	441	0.86	545	C502_0059 IE3D160L04	216.8	5.850	117/20	1573
322	1.2	558	1.0	431	C502_0046 IE3D160L04	216.8	4.629	162/35	1575
385	1.4	667	1.1	360	C502_0039 IE3D160L04	216.8	3.867	58/15	1578
484	1.6	839	1.3	287	C502_0031 IE3D160L04	216.8	3.077	477/155	1582
754	1.7	-	-	184	C502_0020 IE3D160L04	216.8	1.976	81/41	1597
P_N (50 Hz) = 18,50 kW, P_N (87 Hz) = 32,04 kW									
23	0.95	40	0.85	7409	C913_0650 IE3D180M04	481.3	64.59	295545/4576	1688
26	0.92	46	0.92	6499	C912_0560 IE3D180M04	452.4	55.83	335/6	1699
32	1.1	56	1.1	5314	C912_0460 IE3D180M04	452.4	45.66	3835/84	1707
38	1.3	65	1.3	4574	C912_0390 IE3D180M04	452.4	39.30	4087/104	1700
42	0.88	72	0.88	4113	C812_0350 IE3D180M04	362.0	35.33	106/3	1698
44	1.1	76	1.1	3909	C812_0340 IE3D180M04	362.0	33.59	2183/65	1692
46	1.8	80	1.8	3740	C912_0320 IE3D180M04	452.4	32.13	3599/112	1708
52	1.8	89	1.8	3333	C912_0290 IE3D180M04	452.4	28.63	2405/84	1736
54	1.1	93	1.1	3197	C812_0270 IE3D180M04	362.0	27.47	412/15	1706
57	1.4	98	1.3	3033	C812_0260 IE3D180M04	362.0	26.06	3127/120	1698
64	1.3	110	1.3	2699	C812_0230 IE3D180M04	362.0	23.19	1600/69	1714
71	1.0	124	0.91	2406	C712_0210 IE3D180M04	302.4	20.67	1323/64	1691
73	1.8	126	1.5	2358	C812_0200 IE3D180M04	362.0	20.26	6077/300	1707
73	2.4	127	2.4	2346	C912_0200 IE3D180M04	452.4	20.15	2257/112	1740
81	0.94	140	0.94	2126	C712_0185 IE3D180M04	302.4	18.26	420/23	1701
85	1.8	148	1.7	2012	C812_0175 IE3D180M04	362.0	17.29	1504/87	1731
86	2.0	149	1.7	1991	C812_0170 IE3D180M04	362.0	17.10	1180/69	1715
88	1.2	153	1.0	1948	C712_0165 IE3D180M04	302.4	16.73	1071/64	1695
107	2.2	186	1.9	1602	C812_0140 IE3D180M04	362.0	13.76	1280/93	1749
107	1.3	186	1.2	1598	C712_0135 IE3D180M04	302.4	13.73	4380/319	1710
112	1.5	194	1.2	1534	C712_0130 IE3D180M04	302.4	13.18	4851/368	1702
117	0.91	-	-	1464	C612_0125 IE3D180M04	267.1	12.58	2013/160	1691
116	2.4	200	2.0	1484	C812_0125 IE3D180M04	362.0	12.75	5546/435	1734
125	1.5	217	1.3	1369	C712_0120 IE3D180M04	302.4	11.76	1035/88	1716
129	0.97	223	0.82	1334	C612_0115 IE3D180M04	267.1	11.46	928/81	1698
146	1.1	253	0.89	1177	C612_0100 IE3D180M04	267.1	10.11	3721/368	1695
145	2.5	252	2.4	1182	C812_0100 IE3D180M04	362.0	10.15	944/93	1754
149	1.8	258	1.5	1154	C712_0099 IE3D180M04	302.4	9.912	4599/464	1711
162	1.1	280	0.95	1061	C612_0091 IE3D180M04	267.1	9.118	848/93	1703
163	2.5	-	-	1053	C812_0090 IE3D180M04	362.0	9.043	208/23	1801
174	2.0	301	1.6	988	C712_0085 IE3D180M04	302.4	8.490	4347/512	1718
180	1.2	312	1.0	953	C612_0082 IE3D180M04	267.1	8.190	1769/216	1699
200	2.2	-	-	856	C712_0074 IE3D180M04	302.4	7.357	3480/473	1745
207	1.3	-	-	828	C612_0071 IE3D180M04	267.1	7.111	64/9	1712
221	2.5	-	-	776	C812_0067 IE3D180M04	362.0	6.670	767/115	1812
226	1.4	392	1.2	759	C612_0065 IE3D180M04	267.1	6.518	3233/496	1706
252	1.5	-	-	681	C612_0059 IE3D180M04	267.1	5.854	240/41	1721
278	2.5	-	-	618	C712_0053 IE3D180M04	302.4	5.311	1827/344	1751
290	1.7	-	-	592	C612_0051 IE3D180M04	267.1	5.083	61/12	1716
346	2.5	-	-	496	C712_0043 IE3D180M04	302.4	4.259	477/112	1776

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 18,50 kW, P_N (87 Hz) = 32,04 kW									
353	1.9	–	–	487	C612_0042 IE3D180M04	267.1	4.184	2745/656	1727
746	1.7	–	–	230	C502_0020 IE3D180M04	251.8	1.976	81/41	1710
P_N (50 Hz) = 22,00 kW, P_N (87 Hz) = 38,11 kW									
32	0.95	56	0.95	6289	C912_0460 IE3D180L04	482.4	45.66	3835/84	2057
38	1.1	65	1.1	5413	C912_0390 IE3D180L04	482.4	39.30	4087/104	2050
44	0.91	76	0.90	4626	C812_0340 IE3D180L04	392.0	33.59	2183/65	2042
46	1.5	80	1.5	4426	C912_0320 IE3D180L04	482.4	32.13	3599/112	2058
52	1.5	90	1.5	3944	C912_0290 IE3D180L04	482.4	28.63	2405/84	2086
54	0.95	93	0.95	3783	C812_0270 IE3D180L04	392.0	27.47	412/15	2056
57	1.2	98	1.1	3589	C812_0260 IE3D180L04	392.0	26.06	3127/120	2048
64	1.1	111	1.1	3194	C812_0230 IE3D180L04	392.0	23.19	1600/69	2064
72	0.84	–	–	2847	C712_0210 IE3D180L04	332.4	20.67	1323/64	2041
73	1.5	127	1.3	2790	C812_0200 IE3D180L04	392.0	20.26	6077/300	2057
73	2.0	127	2.0	2776	C912_0200 IE3D180L04	482.4	20.15	2257/112	2090
86	1.5	148	1.4	2381	C812_0175 IE3D180L04	392.0	17.29	1504/87	2081
87	1.7	150	1.4	2355	C812_0170 IE3D180L04	392.0	17.10	1180/69	2065
88	1.0	153	0.88	2305	C712_0165 IE3D180L04	332.4	16.73	1071/64	2045
108	1.9	186	1.6	1896	C812_0140 IE3D180L04	392.0	13.76	1280/93	2099
108	1.1	187	1.0	1891	C712_0135 IE3D180L04	332.4	13.73	4380/319	2060
112	1.2	194	1.0	1816	C712_0130 IE3D180L04	332.4	13.18	4851/368	2052
116	2.1	201	1.7	1756	C812_0125 IE3D180L04	392.0	12.75	5546/435	2084
126	1.2	218	1.1	1620	C712_0120 IE3D180L04	332.4	11.76	1035/88	2066
129	0.82	–	–	1578	C612_0115 IE3D180L04	297.1	11.46	928/81	2048
146	0.89	–	–	1393	C612_0100 IE3D180L04	297.1	10.11	3721/368	2045
146	2.1	253	2.0	1398	C812_0100 IE3D180L04	392.0	10.15	944/93	2104
149	1.5	259	1.3	1365	C712_0099 IE3D180L04	332.4	9.912	4599/464	2061
162	0.96	281	0.80	1256	C612_0091 IE3D180L04	297.1	9.118	848/93	2053
164	2.1	–	–	1246	C812_0090 IE3D180L04	392.0	9.043	208/23	2151
174	1.7	302	1.4	1169	C712_0085 IE3D180L04	332.4	8.490	4347/512	2068
181	1.0	313	0.86	1128	C612_0082 IE3D180L04	297.1	8.190	1769/216	2049
201	1.8	–	–	1013	C712_0074 IE3D180L04	332.4	7.357	3480/473	2095
208	1.1	–	–	979	C612_0071 IE3D180L04	297.1	7.111	64/9	2062
222	2.1	–	–	919	C812_0067 IE3D180L04	392.0	6.670	767/115	2162
227	1.2	393	1.0	898	C612_0065 IE3D180L04	297.1	6.518	3233/496	2056
253	1.3	–	–	806	C612_0059 IE3D180L04	297.1	5.854	240/41	2071
279	2.1	–	–	732	C712_0053 IE3D180L04	332.4	5.311	1827/344	2101
291	1.4	–	–	700	C612_0051 IE3D180L04	297.1	5.083	61/12	2066
347	2.1	–	–	587	C712_0043 IE3D180L04	332.4	4.259	477/112	2126
354	1.6	–	–	576	C612_0042 IE3D180L04	297.1	4.184	2745/656	2077
749	1.4	–	–	272	C502_0020 IE3D180L04	281.8	1.976	81/41	2060
P_N (50 Hz) = 30,00 kW, P_N (87 Hz) = 51,96 kW									
41	0.89	–	–	6740	C912_0360 IE3D200L04	569.4	36.01	7345/204	4150
46	1.2	–	–	6016	C912_0320 IE3D200L04	569.4	32.13	3599/112	4138
52	1.1	–	–	5360	C912_0290 IE3D200L04	569.4	28.63	2405/84	4166
59	1.5	–	–	4744	C912_0250 IE3D200L04	569.4	25.34	6893/272	4152
63	1.4	–	–	4379	C912_0230 IE3D200L04	569.4	23.39	6175/264	4187
74	1.9	–	–	3773	C912_0200 IE3D200L04	569.4	20.15	2257/112	4170
84	1.8	–	–	3304	C912_0175 IE3D200L04	569.4	17.65	6565/372	4223
90	2.3	–	–	3082	C912_0165 IE3D200L04	569.4	16.46	5795/352	4192
108	1.4	–	–	2577	C812_0140 IE3D200L04	479.0	13.76	1280/93	4179
120	3.0	–	–	2325	C912_0125 IE3D200L04	569.4	12.42	6161/496	4231
126	2.7	–	–	2204	C912_0120 IE3D200L04	569.4	11.78	1625/138	4302
146	1.8	–	–	1900	C812_0100 IE3D200L04	479.0	10.15	944/93	4184
164	1.9	–	–	1693	C812_0090 IE3D200L04	479.0	9.043	208/23	4231
179	3.3	–	–	1552	C912_0083 IE3D200L04	569.4	8.288	1525/184	4321
223	2.3	–	–	1249	C812_0067 IE3D200L04	479.0	6.670	767/115	4242
351	3.2	–	–	791	C812_0042 IE3D200L04	479.0	4.225	1711/405	4354
P_N (50 Hz) = 37,00 kW, P_N (87 Hz) = 64,09 kW									
46	0.95	–	–	7387	C912_0320 IE3D225S04	609.4	32.13	3599/112	4703
52	0.91	–	–	6582	C912_0290 IE3D225S04	609.4	28.63	2405/84	4731
59	1.2	–	–	5826	C912_0250 IE3D225S04	609.4	25.34	6893/272	4717
64	1.1	–	–	5377	C912_0230 IE3D225S04	609.4	23.39	6175/264	4752
74	1.5	–	–	4633	C912_0200 IE3D225S04	609.4	20.15	2257/112	4735
84	1.5	–	–	4057	C912_0175 IE3D225S04	609.4	17.65	6565/372	4788
91	1.9	–	–	3785	C912_0165 IE3D225S04	609.4	16.46	5795/352	4757

2.2 Selection tables 2 C helical geared motors

n_2 50 Hz [rpm]	S 50 Hz	n_2 87 Hz [rpm]	S 87 Hz	M_{2N} [Nm]	Type	m [kg]	i	i_{exakt}	J_1 [10 ⁻⁴ kgm ²]
P_N (50 Hz) = 37,00 kW, P_N (87 Hz) = 64,09 kW									
120	2.4	–	–	2855	C912_0125 IE3D225S04	609.4	12.42	6161/496	4796
127	2.2	–	–	2707	C912_0120 IE3D225S04	609.4	11.78	1625/138	4867
180	2.7	–	–	1905	C912_0083 IE3D225S04	609.4	8.288	1525/184	4886
P_N (50 Hz) = 45,00 kW, P_N (87 Hz) = 77,94 kW									
58	0.98	–	–	7129	C912_0250 IE3D225M04	692.4	25.34	6893/272	6232
63	0.91	–	–	6580	C912_0230 IE3D225M04	692.4	23.39	6175/264	6267
74	1.2	–	–	5669	C912_0200 IE3D225M04	692.4	20.15	2257/112	6250
84	1.2	–	–	4964	C912_0175 IE3D225M04	692.4	17.65	6565/372	6303
90	1.5	–	–	4631	C912_0165 IE3D225M04	692.4	16.46	5795/352	6272
119	2.0	–	–	3494	C912_0125 IE3D225M04	692.4	12.42	6161/496	6311
126	1.8	–	–	3312	C912_0120 IE3D225M04	692.4	11.78	1625/138	6382
179	2.2	–	–	2331	C912_0083 IE3D225M04	692.4	8.288	1525/184	6401

2.3 Dimensional drawings

In this chapter you can find the dimensions of the geared motors.

There is a dimensional drawing for every possible shaft/housing design, each with the tables for gear unit dimensions, motor dimensions and geared motor dimensions.

Dimensions can exceed the specifications of ISO 2768-mK due to casting tolerances or accumulation of individual tolerances.

We reserve the right to make dimensional changes due to ongoing technical development.

You can download CAD models of our standard drives at <http://cad.stoeber.de>.

Tolerances

Axis height in accordance with DIN 747	Tolerance
Up to 50 mm	-0.4 mm
Up to 250 mm	-0.5 mm
Up to 630 mm	-0.6 mm

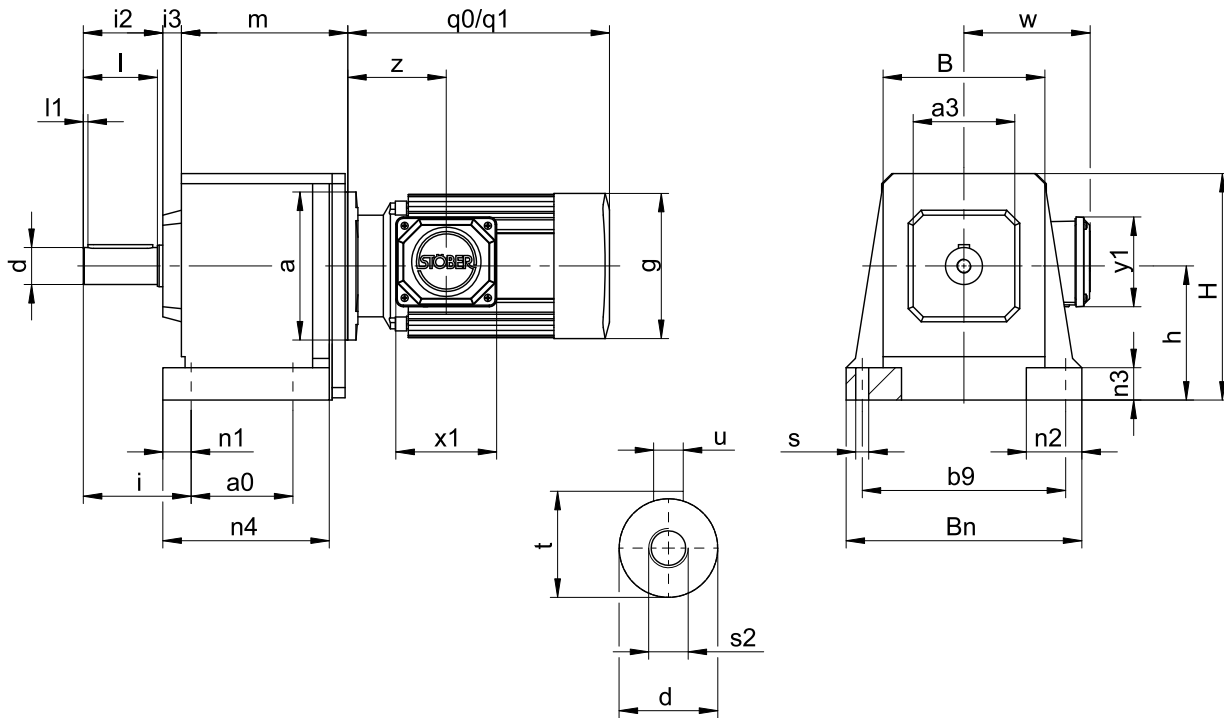
Solid shaft	Tolerance
Shaft \varnothing fit \leq 50 mm	DIN 748-1, ISO k6
Shaft \varnothing fit $>$ 50 mm	DIN 748-1, ISO m6
Feather keys	DIN 6885-1, high form A

Flange	Pilot tolerance
Up to 300 mm	ISO j6
Starting at 350 mm	ISO h6

Centering holes in solid shafts in accordance with DIN 332-2, DR shape

Thread size	M4	M5	M6	M8	M10	M12	M16	M20	M24
Thread depth [mm]	10	12.5	16	19	22	28	36	42	50

2.3.1 Solid shaft design with feather key, N housing design (base)



q_0 Applies to motors without brake.

q_1 Applies to motors with brake.

Options: C0 – C5 also available with solid shaft without feather key; on request starting at C6.

Dimensions of gear units

Type	a0	a3	b9	B	Bn	Ød	h	H	i	i2	i3	l	l1	n1	n2	n3	n4	Øs	s2	t	u
C0	62	60	110	92	132	20 _{k6}	82	144	55	44	13	40	3	11	35	20	95.0	7	M6	22.5	A6×6×32
C1	70	80	150	124	176	25 _{k6}	102	177	67	54	15	50	5	13	42	25	117.5	9	M10	28.0	A8×7×40
C2	85	95	170	138	200	30 _{k6}	115	195	79	65	21	60	5	14	50	30	134.5	11	M10	33.0	A8×7×50
C3	105	95	185	150	215	30 _{k6}	130	215	79	65	20	60	5	14	50	30	153.5	11	M10	33.0	A8×7×50
C4	110	110	220	175	255	40 _{k6}	145	245	105	86	20	80	5	19	60	35	180.0	14	M16	43.0	A12×8×70
C5	130	130	245	192	290	40 _{k6}	170	290	108	86	21	80	5	22	70	40	197.0	18	M16	43.0	A12×8×70
C6	215	177	245	225	300	50 _{k6}	200	315	130	106	47	100	5	25	75	40	265.0	18	M16	53.5	A14×9×90
C7	235	192	300	265	365	60 _{m6}	235	375	163	127	58	120	5	25	90	50	285.0	18	M20	64.0	A18×11×100
C8	300	223	340	310	435	70 _{m6}	290	450	190	148	70	140	5	29	95	55	360.0	22	M20	74.5	A20×12×125
C9	340	277	400	365	510	90 _{m6}	340	530	222	178	78	170	5	34	110	60	410.0	26	M24	95.0	A25×14×140

Dimensions of motors

Type	□g	q0	q1	w	x1	y1	z
D063K04	109	179	231	115	109.0	97.0	81.0
D063M04	109	179	231	115	109.0	97.0	81.0
D063M02	109	179	231	115	109.0	97.0	81.0
D071K04	124	208	260	120	109.0	97.0	94.0
D071K02	124	208	260	120	109.0	97.0	94.0
D071L04	124	208	260	120	109.0	97.0	94.0
D071L02	124	208	260	120	109.0	97.0	94.0
D080K04	139	238	295	128	109.0	97.0	97.0

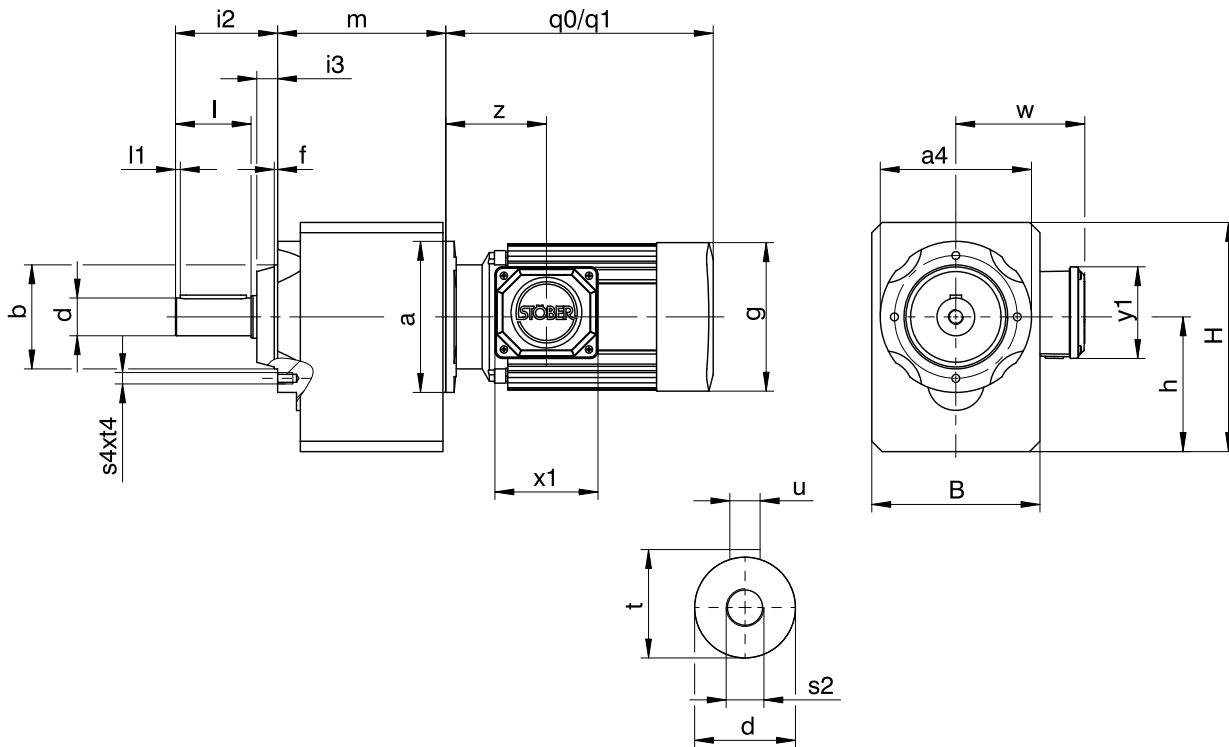
Type	□g	q0	q1	w	x1	y1	z
IE3D080K02	139	238	295	128	109.0	97.0	97.0
IE3D080L04	157	283	351	137	109.0	97.0	107.0
IE3D080L02	157	261	329	137	109.0	97.0	107.0
IE3D090S04	177	310	380	146	120.0	109.0	114.0
IE3D090S02	157	283	351	137	120.0	109.0	107.0
IE3D090L04	177	340	410	146	120.0	109.0	114.0
IE3D090L02	177	310	380	146	120.0	109.0	114.0
IE3D100K04	196	394	481	155	120.0	109.0	120.0
IE3D100L02	196	340	427	155	120.0	109.0	120.0
IE3D100L04	196	444	531	155	120.0	109.0	120.0
IE3D112M02	196	374	461	155	120.0	109.0	120.0
IE3D112M04	217	424	521	178	146.5	156.5	134.0
IE3D132S04	258	476	591	199	146.5	156.5	141.5
IE3D132M04	258	526	641	199	146.5	156.5	141.5
IE3D160M04	313	461	589	242	166.5	193.5	138.0
IE3D160L04	313	549	677	242	166.5	193.5	138.0
IE3D180M04	351	601	748	260	166.5	193.5	178.0
IE3D180L04	351	651	798	260	166.5	193.5	178.0
IE3D200L04	390	729	878	298	207.0	209.0	242.0
IE3D225S04	390	706	855	300	207.0	209.0	169.0
IE3D225M04	440	838	986	324	207.0	209.0	242.0

Dimensions of geared motors

Type	D063		D071		D080	
	a	m	a	m	a	m
C002	∅140	97.5	∅140	97.5	∅160	101.5
C102	∅140	118.0	∅140	118.0	∅160	122.0
C103	∅140	155.0	∅140	155.0	-	-
C202	-	-	∅140	129.0	∅160	133.0
C203	∅140	166.0	∅140	166.0	-	-
C302	-	-	-	-	∅160	152.5
C303	∅140	185.5	∅140	185.5	∅160	195.5
C403	-	-	-	-	∅160	223.0
C503	-	-	-	-	∅160	243.0
C613	-	-	-	-	∅160	222.0

Type	IE3D080		IE3D090		IE3D100		IE3D112		IE3D132		IE3D160		IE3D180		IE3D200		IE3D225	
	a	m	a	m	a	m	a	m	a	m	a	m	a	m	a	m	a	m
C002	∅160	101.5	∅160	101.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C102	∅160	122.0	∅160	122.0	∅200	124.0	∅200	124.0	-	-	-	-	-	-	-	-	-	-
C202	∅160	133.0	∅160	133.0	∅200	135.0	∅200	135.0	-	-	-	-	-	-	-	-	-	-
C302	∅160	152.5	∅160	152.5	∅200	154.5	∅200	154.5	∅250	157.5	-	-	-	-	-	-	-	-
C303	∅160	195.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C402	∅160	180.0	∅160	180.0	∅200	182.0	∅200	182.0	∅250	185.0	-	-	-	-	-	-	-	-
C403	∅160	223.0	∅160	223.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C502	∅160	200.0	∅160	200.0	∅200	202.0	∅200	202.0	∅250	205.0	∅300	219.0	∅300	219.0	-	-	-	-
C503	∅160	243.0	∅160	243.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C612	-	-	-	-	∅200	180.0	∅200	180.0	∅250	183.0	∅300	196.0	∅300	196.0	-	-	-	-
C613	∅160	222.0	∅160	222.0	∅200	242.0	∅200	242.0	-	-	-	-	-	-	-	-	-	-
C712	-	-	-	-	∅200	201.0	∅200	201.0	∅250	203.0	∅300	216.0	∅300	216.0	-	-	-	-
C713	-	-	-	-	∅200	262.0	∅200	262.0	∅250	274.0	-	-	-	-	-	-	-	-
C812	-	-	-	-	-	-	-	-	∅250	237.0	∅300	250.0	∅300	250.0	∅350	273.0	-	-
C813	-	-	-	-	∅200	296.0	∅200	296.0	∅250	308.0	-	-	-	-	-	-	-	-
C912	-	-	-	-	-	-	-	-	-	-	∅300	279.0	∅300	279.0	∅350	302.0	∅400	302.0
C913	-	-	-	-	-	-	-	-	∅250	337.0	∅300	362.0	∅300	362.0	-	-	-	-

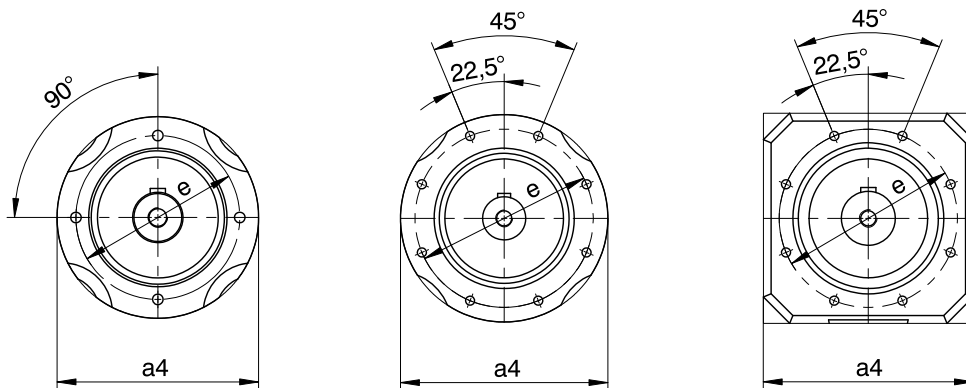
2.3.2 Solid shaft design with feather key, G housing design (pitch circle diameter)



C0-C4

C5

C6-C9



q0 Applies to motors without brake.

q1 Applies to motors with brake.

Options: C0 – C5 also available with solid shaft without feather key; on request starting at C6.

Dimensions of gear units

Type	a4	Øb	B	Ød	Øe	f	h	H	i2	i3	l	l1	s2	s4	t	t4	u
C0	Ø87	55 _{js}	97	20 _{js6}	75	3.0	79.0	141.0	58	14	40	3	M6	M6	22.5	10	A6×6×32
C1	Ø120	80 _{js}	130	25 _{js6}	100	3.0	100.0	175.0	71	17	50	5	M10	M6	28.0	13	A8×7×40
C2	Ø140	95 _{js}	142	30 _{js6}	115	3.0	112.0	192.0	87	22	60	5	M10	M8	33.0	13	A8×7×50
C3	Ø140	95 _{js}	154	30 _{js6}	115	3.0	127.0	212.0	87	22	60	5	M10	M8	33.0	13	A8×7×50
C4	Ø160	110 _{js}	178	40 _{js6}	130	3.5	142.5	242.5	108	22	80	5	M16	M10	43.0	16	A12×8×70
C5	Ø192	130 _{js}	195	40 _{js6}	165	3.5	166.0	286.0	109	23	80	5	M16	M10	43.0	16	A12×8×70
C6	□180	140 _{js}	225	50 _{js6}	165	5.0	195.0	310.0	136	30	100	5	M16	M10	53.5	16	A14×9×90
C7	□195	155 _{js}	265	60 _{js6}	185	8.0	231.0	371.0	164	37	120	5	M20	M12	64.0	19	A18×11×100
C8	□226	185 _{js}	310	70 _{js6}	215	5.0	285.0	445.0	185	37	140	5	M20	M12	74.5	19	A20×12×125
C9	□280	230 _{js}	365	90 _{js6}	265	5.0	334.0	524.0	220	42	170	5	M24	M16	95.0	26	A25×14×140

Dimensions of motors

Type	□g	q0	q1	w	x1	y1	z
D063K04	109	179	231	115	109.0	97.0	81.0
D063M04	109	179	231	115	109.0	97.0	81.0
D063M02	109	179	231	115	109.0	97.0	81.0
D071K04	124	208	260	120	109.0	97.0	94.0
D071K02	124	208	260	120	109.0	97.0	94.0

Type	□g	q0	q1	w	x1	y1	z
D071L04	124	208	260	120	109.0	97.0	94.0
D071L02	124	208	260	120	109.0	97.0	94.0
D080K04	139	238	295	128	109.0	97.0	97.0

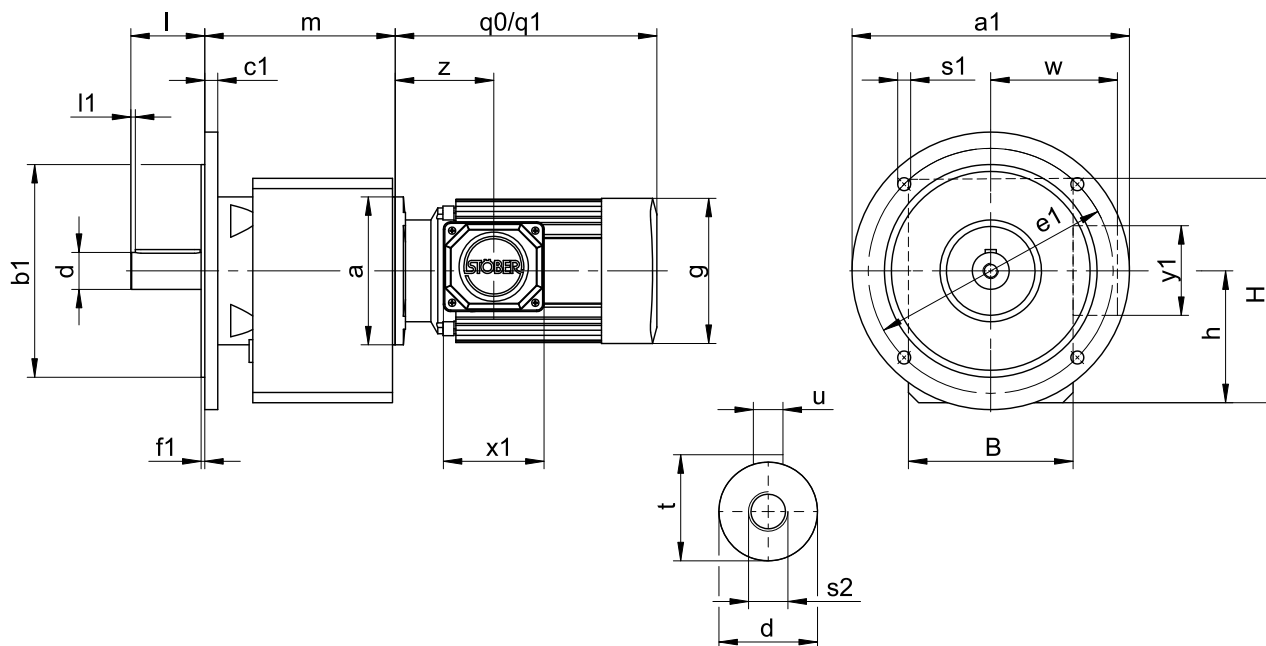
Type	□g	q0	q1	w	x1	y1	z
IE3D080K02	139	238	295	128	109.0	97.0	97.0
IE3D080L04	157	283	351	137	109.0	97.0	107.0
IE3D080L02	157	261	329	137	109.0	97.0	107.0
IE3D090S04	177	310	380	146	120.0	109.0	114.0
IE3D090S02	157	283	351	137	120.0	109.0	107.0
IE3D090L04	177	340	410	146	120.0	109.0	114.0
IE3D090L02	177	310	380	146	120.0	109.0	114.0
IE3D100K04	196	394	481	155	120.0	109.0	120.0
IE3D100L02	196	340	427	155	120.0	109.0	120.0
IE3D100L04	196	444	531	155	120.0	109.0	120.0
IE3D112M02	196	374	461	155	120.0	109.0	120.0
IE3D112M04	217	424	521	178	146.5	156.5	134.0
IE3D132S04	258	476	591	199	146.5	156.5	141.5
IE3D132M04	258	526	641	199	146.5	156.5	141.5
IE3D160M04	313	461	589	242	166.5	193.5	138.0
IE3D160L04	313	549	677	242	166.5	193.5	138.0
IE3D180M04	351	601	748	260	166.5	193.5	178.0
IE3D180L04	351	651	798	260	166.5	193.5	178.0
IE3D200L04	390	729	878	298	207.0	209.0	242.0
IE3D225S04	390	706	855	300	207.0	209.0	169.0
IE3D225M04	440	838	986	324	207.0	209.0	242.0

Dimensions of geared motors

Type	D063		D071		D080	
	a	m	a	m	a	m
C002	∅140	96	∅140	96	∅160	100
C102	∅140	116	∅140	116	∅160	120
C103	∅140	153	∅140	153	-	-
C202	-	-	∅140	128	∅160	132
C203	∅140	165	∅140	165	-	-
C302	-	-	-	-	∅160	151
C303	∅140	184	∅140	184	∅160	194
C403	-	-	-	-	∅160	221
C503	-	-	-	-	∅160	241
C613	-	-	-	-	∅160	239

Type	IE3D080		IE3D090		IE3D100		IE3D112		IE3D132		IE3D160		IE3D180		IE3D200		IE3D225	
	a	m	a	m	a	m	a	m	a	m	a	m	a	m	a	m	a	m
C002	∅160	100	∅160	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C102	∅160	120	∅160	120	∅200	122	∅200	122	-	-	-	-	-	-	-	-	-	-
C202	∅160	132	∅160	132	∅200	134	∅200	134	-	-	-	-	-	-	-	-	-	-
C302	∅160	151	∅160	151	∅200	153	∅200	153	∅250	156	-	-	-	-	-	-	-	-
C303	∅160	194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C402	∅160	178	∅160	178	∅200	180	∅200	180	∅250	183	-	-	-	-	-	-	-	-
C403	∅160	221	∅160	221	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C502	∅160	198	∅160	198	∅200	200	∅200	200	∅250	203	∅300	217	∅300	217	-	-	-	-
C503	∅160	241	∅160	241	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C612	-	-	-	-	∅200	197	∅200	197	∅250	200	∅300	213	∅300	213	-	-	-	-
C613	∅160	239	∅160	239	∅200	259	∅200	259	-	-	-	-	-	-	-	-	-	-
C712	-	-	-	-	∅200	222	∅200	222	∅250	224	∅300	237	∅300	237	-	-	-	-
C713	-	-	-	-	∅200	283	∅200	283	∅250	295	-	-	-	-	-	-	-	-
C812	-	-	-	-	-	-	-	-	∅250	270	∅300	283	∅300	283	∅350	306	-	-
C813	-	-	-	-	∅200	329	∅200	329	∅250	341	-	-	-	-	-	-	-	-
C912	-	-	-	-	-	-	-	-	-	-	∅300	315	∅300	315	∅350	338	∅400	338
C913	-	-	-	-	-	-	-	-	∅250	373	∅300	398	∅300	398	-	-	-	-

2.3.3 Solid shaft design with feather key, F housing design (round flange)



$q0$ Applies to motors without brake.

$q1$ Applies to motors with brake.

Options: C0 – C5 also available with solid shaft without feather key; on request starting at C6.

Dimensions of gear units

Type	$\varnothing a1$	$\varnothing b1$	B	$c1$	$\varnothing d$	$\varnothing e1$	$f1$	h	H	l	l1	$\varnothing s1$	s2	t	u
C0	160	110 _{j6}	97	10	20 _{j6}	130	3.0	79.0	141.0	40	3	9	M6	22.5	A6×6×32
C1	200	130 _{j6}	130	12	25 _{j6}	165	3.5	100.0	175.0	50	5	11	M10	28.0	A8×7×40
C2	200	130 _{j6}	142	12	30 _{j6}	165	3.5	112.0	192.0	60	5	11	M10	33.0	A8×7×50
C3	250	180 _{j6}	154	12	30 _{j6}	215	4.0	127.0	212.0	60	5	14	M10	33.0	A8×7×50
C4	250	180 _{j6}	178	14	40 _{j6}	215	4.0	142.5	242.5	80	5	14	M16	43.0	A12×8×70
C5	300	230 _{j6}	195	16	40 _{j6}	265	4.0	166.0	286.0	80	5	14	M16	43.0	A12×8×70
C6	300	230 _{j6}	225	17	50 _{j6}	265	4.0	195.0	310.0	100	5	14	M16	53.5	A14×9×90
C7	350	250 _{j6}	265	18	60 _{m6}	300	5.0	231.0	371.0	120	5	18	M20	64.0	A18×11×100
C8	400	300 _{j6}	310	20	70 _{m6}	350	5.0	285.0	445.0	140	5	18	M20	74.5	A20×12×125
C9	450	350 _{j6}	365	23	90 _{m6}	400	5.0	334.0	524.0	170	5	18	M24	95.0	A25×14×140

Dimensions of additional round flanges

Type	$\varnothing a1$	$\varnothing b1$	$c1$	$\varnothing e1$	$f1$	$\varnothing s1$
C0	120	80 _{j6}	10	100	3.0	7
C0	140	95 _{j6}	10	115	3.0	9
C1	140	95 _{j6}	8	115	3.5	9
C1	160	110 _{j6}	10	130	3.5	9
C2	160	110 _{j6}	10	130	3.5	9
C2	250	180 _{j6}	12	215	4.0	14
C3	160	110 _{j6}	10	130	3.5	9
C3	200	130 _{j6}	12	165	3.5	11
C4	200	130 _{j6}	14	165	3.5	11
C4	300	230 _{j6}	14	265	4.0	14
C5	250	180 _{j6}	14	215	4.0	14
C8	350	250 _{j6}	18	300	5.0	18
C8	450	350 _{j6}	20	400	5.0	18

Dimensions of motors

Type	$\square g$	$q0$	$q1$	w	$x1$	$y1$	z
D063K04	109	179	231	115	109.0	97.0	81.0
D063M04	109	179	231	115	109.0	97.0	81.0
D063M02	109	179	231	115	109.0	97.0	81.0
D071K04	124	208	260	120	109.0	97.0	94.0
D071K02	124	208	260	120	109.0	97.0	94.0
D071L04	124	208	260	120	109.0	97.0	94.0

Type	□g	q0	q1	w	x1	y1	z
D071L02	124	208	260	120	109.0	97.0	94.0
D080K04	139	238	295	128	109.0	97.0	97.0

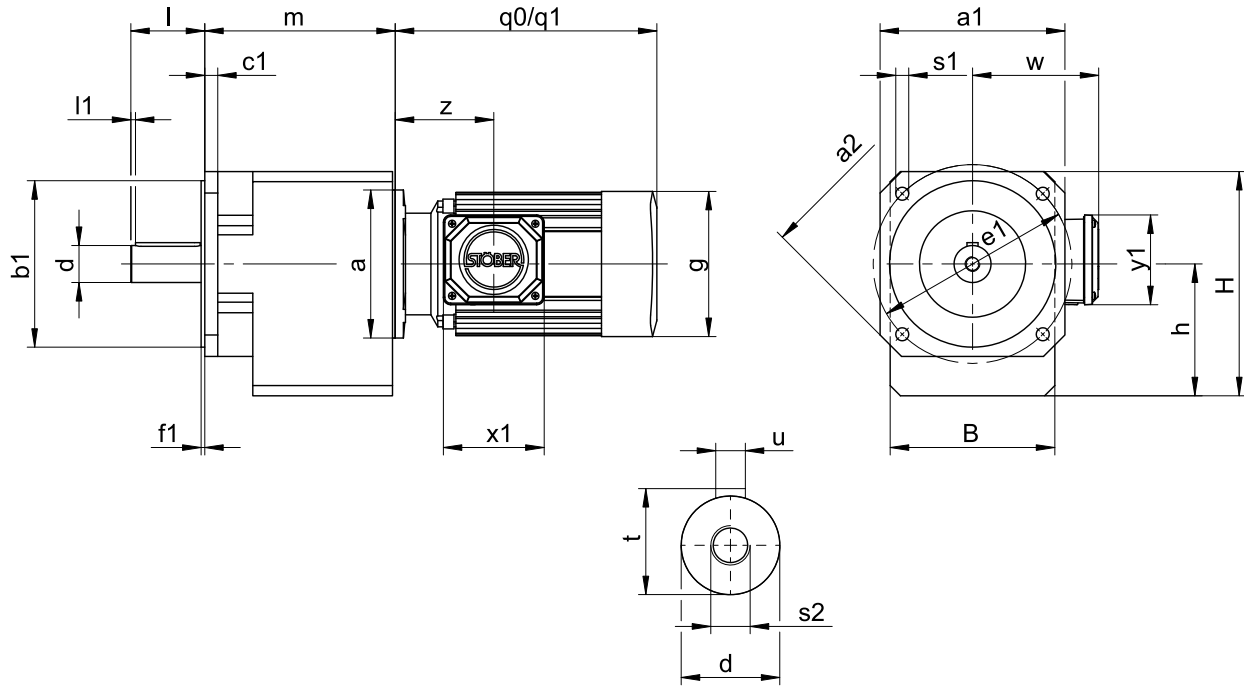
Type	□g	q0	q1	w	x1	y1	z
IE3D080K02	139	238	295	128	109.0	97.0	97.0
IE3D080L04	157	283	351	137	109.0	97.0	107.0
IE3D080L02	157	261	329	137	109.0	97.0	107.0
IE3D090S04	177	310	380	146	120.0	109.0	114.0
IE3D090S02	157	283	351	137	120.0	109.0	107.0
IE3D090L04	177	340	410	146	120.0	109.0	114.0
IE3D090L02	177	310	380	146	120.0	109.0	114.0
IE3D100K04	196	394	481	155	120.0	109.0	120.0
IE3D100L02	196	340	427	155	120.0	109.0	120.0
IE3D100L04	196	444	531	155	120.0	109.0	120.0
IE3D112M02	196	374	461	155	120.0	109.0	120.0
IE3D112M04	217	424	521	178	146.5	156.5	134.0
IE3D132S04	258	476	591	199	146.5	156.5	141.5
IE3D132M04	258	526	641	199	146.5	156.5	141.5
IE3D160M04	313	461	589	242	166.5	193.5	138.0
IE3D160L04	313	549	677	242	166.5	193.5	138.0
IE3D180M04	351	601	748	260	166.5	193.5	178.0
IE3D180L04	351	651	798	260	166.5	193.5	178.0
IE3D200L04	390	729	878	298	207.0	209.0	242.0
IE3D225S04	390	706	855	300	207.0	209.0	169.0
IE3D225M04	440	838	986	324	207.0	209.0	242.0

Dimensions of geared motors

Type	D063		D071		D080	
	a	m	a	m	a	m
C002	∅140	114	∅140	114	∅160	118
C102	∅140	137	∅140	137	∅160	141
C103	∅140	174	∅140	174	-	-
C202	-	-	∅140	155	∅160	159
C203	∅140	192	∅140	192	-	-
C302	-	-	-	-	∅160	178
C303	∅140	211	∅140	211	∅160	221
C403	-	-	-	-	∅160	249
C503	-	-	-	-	∅160	270
C613	-	-	-	-	∅160	275

Type	IE3D080		IE3D090		IE3D100		IE3D112		IE3D132		IE3D160		IE3D180		IE3D200		IE3D225	
	a	m	a	m	a	m	a	m	a	m	a	m	a	m	a	m	a	m
C002	∅160	118	∅160	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C102	∅160	141	∅160	141	∅200	143	∅200	143	-	-	-	-	-	-	-	-	-	-
C202	∅160	159	∅160	159	∅200	161	∅200	161	-	-	-	-	-	-	-	-	-	-
C302	∅160	178	∅160	178	∅200	180	∅200	180	∅250	183	-	-	-	-	-	-	-	-
C303	∅160	221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C402	∅160	206	∅160	206	∅200	208	∅200	208	∅250	211	-	-	-	-	-	-	-	-
C403	∅160	249	∅160	249	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C502	∅160	227	∅160	227	∅200	229	∅200	229	∅250	232	∅300	246	∅300	246	-	-	-	-
C503	∅160	270	∅160	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C612	-	-	-	-	∅200	233	∅200	233	∅250	236	∅300	249	∅300	249	-	-	-	-
C613	∅160	275	∅160	275	∅200	295	∅200	295	-	-	-	-	-	-	-	-	-	-
C712	-	-	-	-	∅200	266	∅200	266	∅250	268	∅300	281	∅300	281	-	-	-	-
C713	-	-	-	-	∅200	327	∅200	327	∅250	339	-	-	-	-	-	-	-	-
C812	-	-	-	-	-	-	-	-	∅250	315	∅300	328	∅300	328	∅350	351	-	-
C813	-	-	-	-	∅200	374	∅200	374	∅250	386	-	-	-	-	-	-	-	-
C912	-	-	-	-	-	-	-	-	-	-	∅300	365	∅300	365	∅350	388	∅400	388
C913	-	-	-	-	-	-	-	-	∅250	423	∅300	448	∅300	448	-	-	-	-

2.3.4 Solid shaft design with feather key, Q housing design (square flange)



q_0 Applies to motors without brake.

q_1 Applies to motors with brake.

Options: C0 – C5 also available with solid shaft without feather key; on request starting at C6.

Dimensions of gear units

Type	$\square a_1$	$\square a_2$	$\varnothing b_1$	B	c_1	$\varnothing d$	$\varnothing e_1$	f1	h	H	l	l1	$\varnothing s_1$	s2	t	u
C0	124	160	110 _{f6}	97	9	20 _{k6}	130	3.0	79.0	141.0	40	3	9	M6	22.5	A6×6×32
C1	145	192	130 _{f6}	130	11	25 _{k6}	165	3.5	100.0	175.0	50	5	11	M10	28.0	A8×7×40
C2	145	192	130 _{f6}	142	11	30 _{k6}	165	3.5	112.0	192.0	60	5	11	M10	33.0	A8×7×50
C3	200	250	180 _{f6}	154	14	30 _{k6}	215	4.0	127.0	212.0	60	5	14	M10	33.0	A8×7×50
C4	200	250	180 _{f6}	178	14	40 _{k6}	215	4.0	142.5	242.5	80	5	14	M16	43.0	A12×8×70

Dimensions of motors

Type	$\square g$	q_0	q_1	w	x_1	y_1	z
D063K04	109	179	231	115	109.0	97.0	81.0
D063M04	109	179	231	115	109.0	97.0	81.0
D063M02	109	179	231	115	109.0	97.0	81.0
D071K04	124	208	260	120	109.0	97.0	94.0
D071K02	124	208	260	120	109.0	97.0	94.0
D071L04	124	208	260	120	109.0	97.0	94.0
D071L02	124	208	260	120	109.0	97.0	94.0
D080K04	139	238	295	128	109.0	97.0	97.0

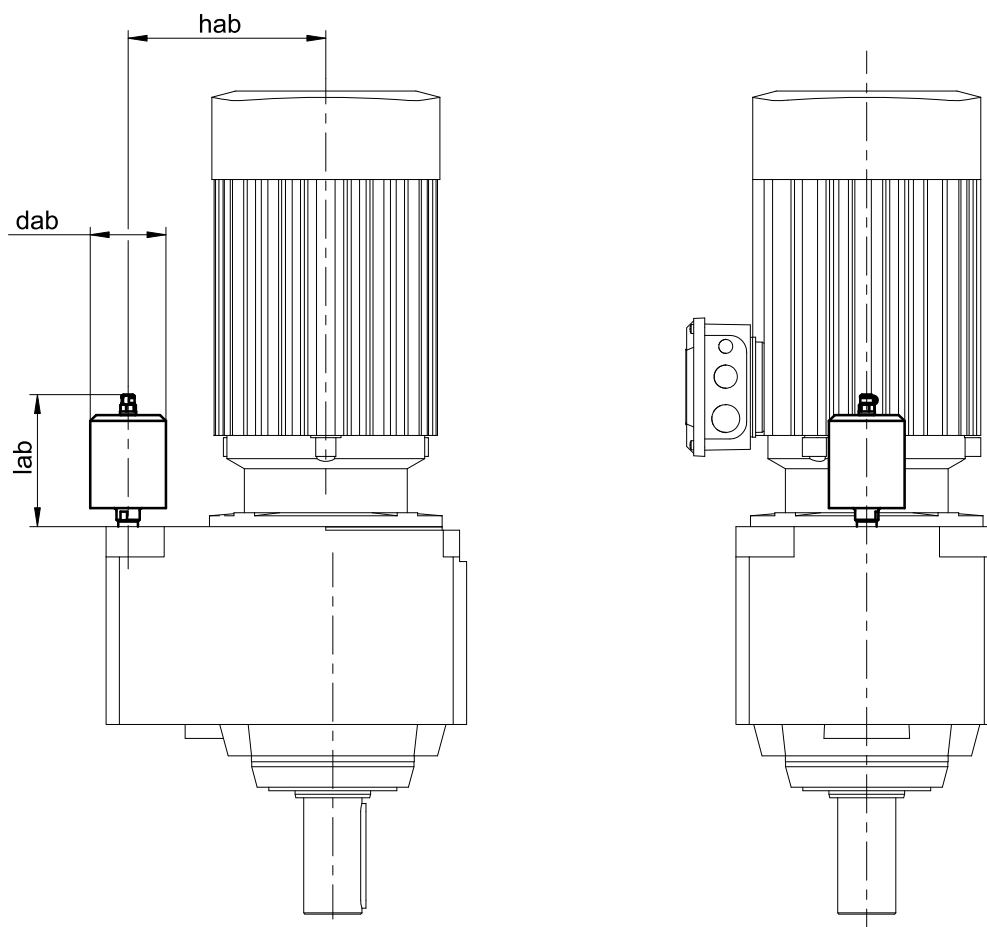
Type	$\square g$	q_0	q_1	w	x_1	y_1	z
IE3D080K02	139	238	295	128	109.0	97.0	97.0
IE3D080L04	157	283	351	137	109.0	97.0	107.0
IE3D080L02	157	261	329	137	109.0	97.0	107.0
IE3D090S04	177	310	380	146	120.0	109.0	114.0
IE3D090S02	157	283	351	137	120.0	109.0	107.0
IE3D090L04	177	340	410	146	120.0	109.0	114.0
IE3D090L02	177	310	380	146	120.0	109.0	114.0
IE3D100K04	196	394	481	155	120.0	109.0	120.0
IE3D100L02	196	340	427	155	120.0	109.0	120.0
IE3D100L04	196	444	531	155	120.0	109.0	120.0
IE3D112M02	196	374	461	155	120.0	109.0	120.0
IE3D112M04	217	424	521	178	146.5	156.5	134.0
IE3D132S04	258	476	591	199	146.5	156.5	141.5
IE3D132M04	258	526	641	199	146.5	156.5	141.5

Dimensions of geared motors

Type	D063		D071		D080	
	a	m	a	m	a	m
C002	∅140	114	∅140	114	∅160	118
C102	∅140	137	∅140	137	∅160	141
C103	∅140	174	∅140	174	–	–
C202	–	–	∅140	155	∅160	159
C203	∅140	192	∅140	192	–	–
C302	–	–	–	–	∅160	178
C303	∅140	211	∅140	211	∅160	221
C403	–	–	–	–	∅160	249

Type	D063		D071		D080		IE3D080		IE3D090		IE3D100		IE3D112		IE3D132	
	a	m	a	m	a	m	a	m	a	m	a	m	a	m	a	m
C002	∅140	114	∅140	114	∅160	118	∅160	118	∅160	118	–	–	–	–	–	–
C102	∅140	137	∅140	137	∅160	141	∅160	141	∅160	141	∅200	143	∅200	143	–	–
C103	∅140	174	∅140	174	–	–	–	–	–	–	–	–	–	–	–	–
C202	–	–	∅140	155	∅160	159	∅160	159	∅160	159	∅200	161	∅200	161	–	–
C203	∅140	192	∅140	192	–	–	–	–	–	–	–	–	–	–	–	–
C302	–	–	–	–	∅160	178	∅160	178	∅160	178	∅200	180	∅200	180	∅250	183
C303	∅140	211	∅140	211	∅160	221	∅160	221	–	–	–	–	–	–	–	–
C402	–	–	–	–	–	–	∅160	206	∅160	206	∅200	208	∅200	208	∅250	211
C403	–	–	–	–	∅160	249	∅160	249	∅160	249	–	–	–	–	–	–

2.3.5 Oil expansion tank



Dimensions

Type	IE3D100			IE3D112			IE3D132			IE3D160			IE3D180			IE3D200		
	dab	hab	lab	dab	hab	lab	dab	hab	lab	dab	hab	lab	dab	hab	lab	dab	hab	lab
C612	65	170	114.5	65	170	114.5	65	170	115.5	65	214	191.5	65	214	191.5	-	-	-
C712	73	205	129.5	73	205	129.5	73	205	129.5	73	205	129.5	73	205	129.5	-	-	-
C812	-	-	-	-	-	-	73	255	129.5	73	255	129.5	73	255	129.5	73	255	129.5
C912	-	-	-	-	-	-	-	-	-	73	305	126.0	73	305	126.0	73	305	112.0

More information can be found in the chapter [▶ 2.6.3](#)

2.4 Type designation

In this chapter, you can find an explanation of the type designation with the associated options.

Additional ordering information not included in the type designation can be found at the end of the chapter.

Sample code

C	2	0	2	N	0280	IE3D080L04
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Explanation

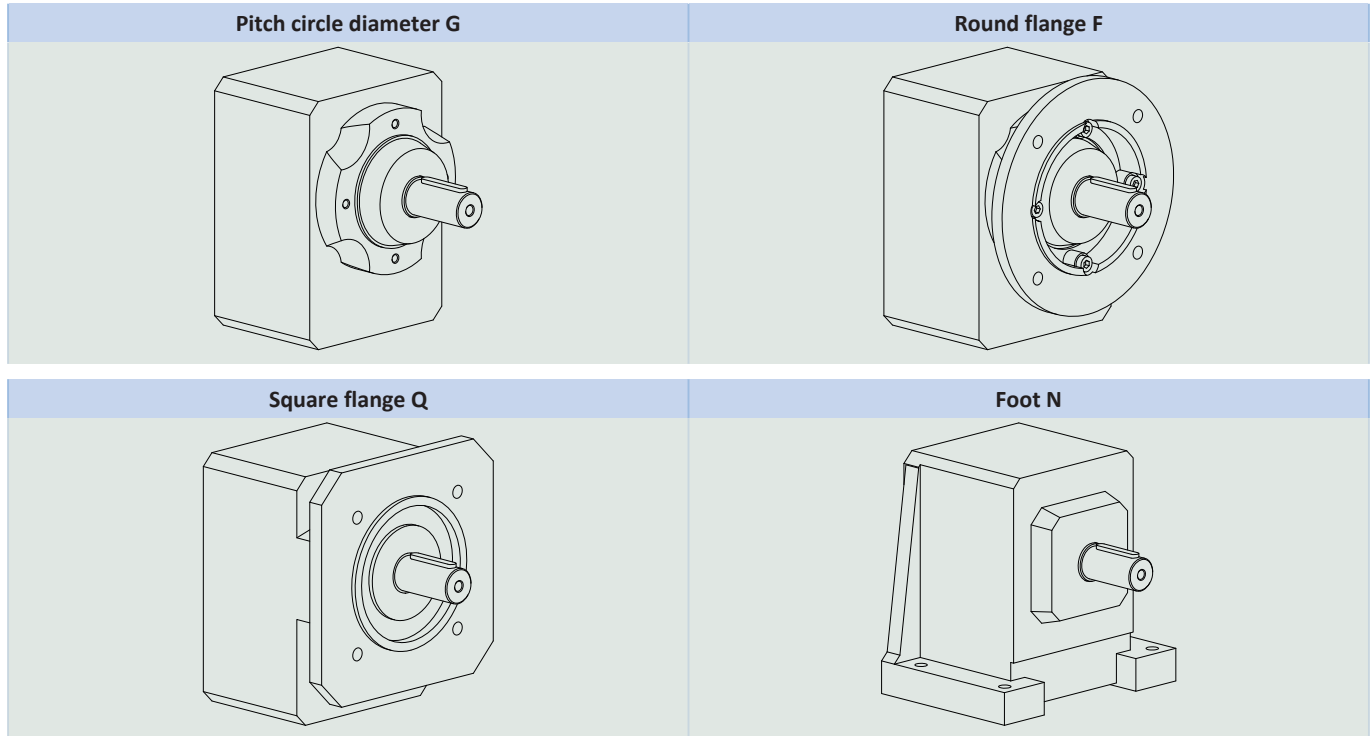
Code	Designation	Design
C	Type	Helical gear unit
2	Size	2 (example)
0	Generation	Generation 0
1		Generation 1
2	Stages	Two-stage
3		Three-stage
G	Housing	Pitch circle diameter
F		Round flange
Q		Square flange
N		Foot
0280	Transmission ratio (i x 10 rounded)	i = 28.24 (example)
IE3D080	Motor	IE3D asynchronous motor
L04		
D080K04		Asynchronous motor

In order to complete the type designation, also specify:

- A detailed type designation of the motor, see the chapter [\[6.4\]](#)
- The mounting position, see Chapter [\[2.5.4\]](#)
- The position of the terminal box, see Chapter [\[2.5.6\]](#)
- Oil expansion tank (recommended for gear units in mounting position EL5), see the chapter [\[2.6.3\]](#)
- Standard or reinforced output bearing

2.5 Product description

2.5.1 Housing design



	G	F	Q	N
C0	✓	✓	✓	✓
C1	✓	✓	✓	✓
C2	✓	✓	✓	✓
C3	✓	✓	✓	✓
C4	✓	✓	✓	✓
C5	✓	✓	–	✓
C6	✓	✓	–	✓
C7	✓	✓	–	✓
C8	✓	✓	–	✓
C9	✓	✓	–	✓

2.5.2 Shaft design

Gear units in sizes C0 – C9 come standard with a solid shaft with feather key.

Gear units in sizes C0 – C5 can be ordered with the option of a solid shaft without feather key. Only upon request starting at size C6.

2.5.3 Installation conditions

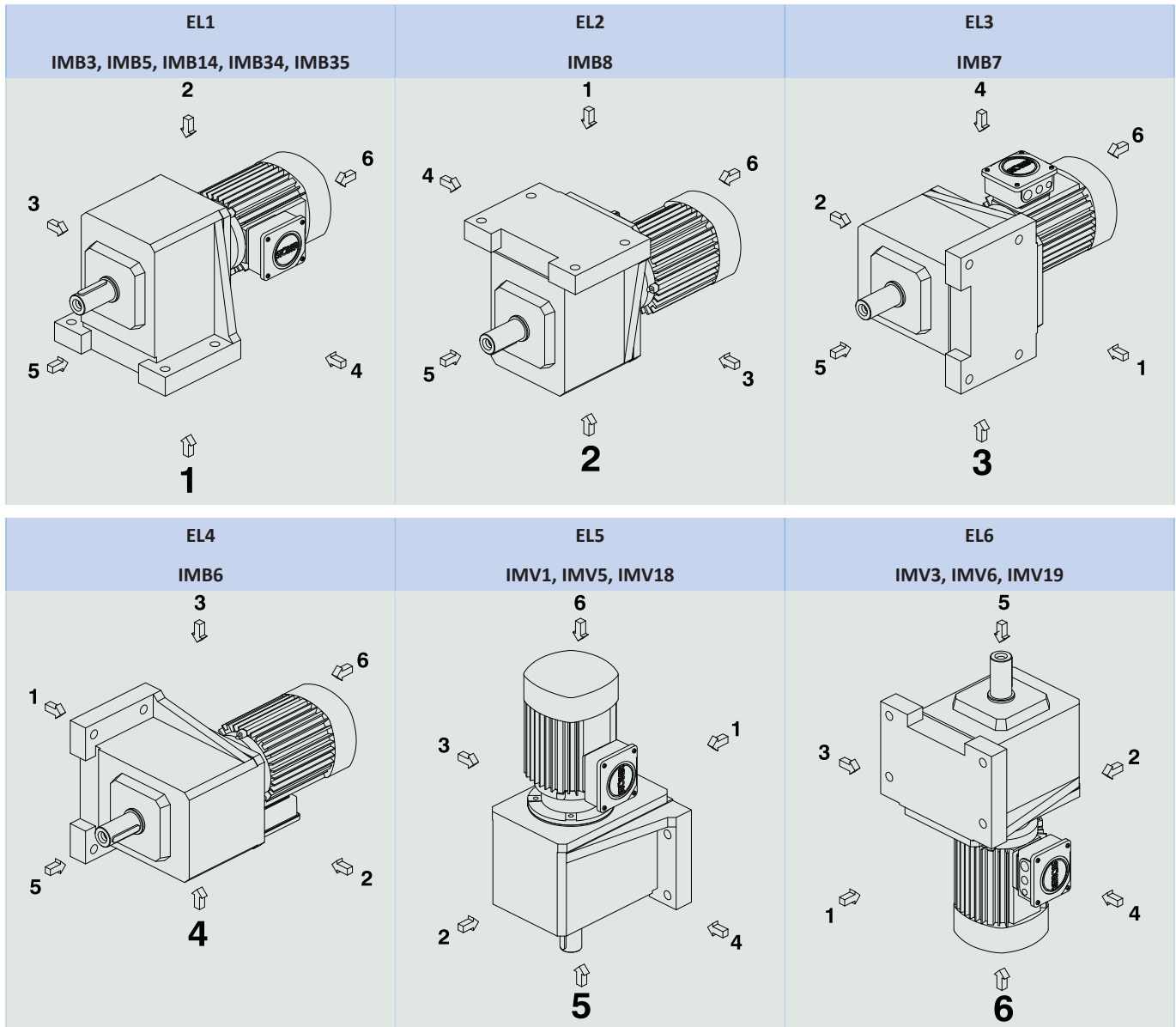
Attaching the gear unit on the machine side using the pitch circle diameter

The specified torques and forces only apply when attaching gear units at the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

2.5.4 Mounting positions

The following table shows the standard mounting positions.

The numbers identify the gear unit sides. The mounting position is defined by the gear side facing downwards.



Since the lubricant filling volume of the gear unit depends on the mounting position, the mounting position must be specified when ordering.

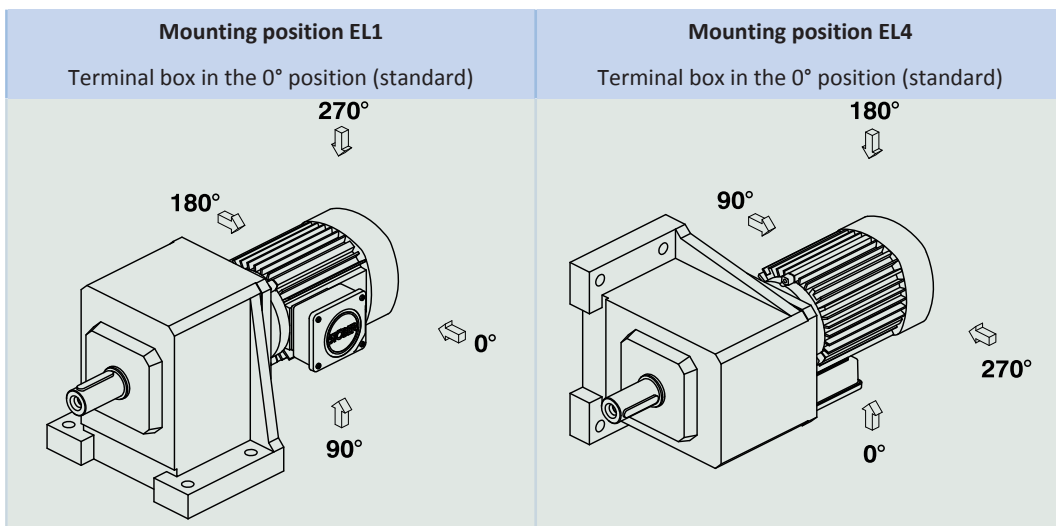
2.5.5 Lubricants

STOBER fills the gear units with the amount and type of lubricant specified on the nameplate. The filling volume and the structure of the gear units depend on the mounting position.

Only install the gear units in the intended mounting position! Reposition the gear units only after consulting STOBER. Otherwise, STOBER assumes no liability for the gear units.

Lubricant filling quantities for gear units, document ID 441871, can be found online at <http://www.stober.de/en/download>. Enter the ID of the documentation in the Search... field.

2.5.6 Position of the terminal box



Indicate variations for your geared motor in the purchase order.

Note that the terminal box position rotates along with the geared motor if the geared motor rotates to another mounting position.

2.5.7 Other product features

Feature	Value
Max. permitted gear unit temperature (on the surface of the gear unit)	≤ 80 °C
Paint	RAL 7035 light gray Optional selection of various RAL colors.
(ATEX) Directive 2014/34/EU	You can get asynchronous motors for use in potentially explosive atmospheres on request.
Protection class	IP56

2.5.8 Losses due to splashing

Increased losses due to splashing can occur in individual cases under certain conditions. These can lead to oil leakage or unacceptably high operating temperatures.

Please coordinate with STOBER to determine a suitable course of action if:

- The surrounding temperature is under -10 °C or over +40 °C
- The gear unit type meets the following conditions:

Type	Mounting position	n _{IN} [rpm]	ED	i
C6, C7	EL5, EL6	> 2500	> 60%, > 20 min	< 10
C8, C9	EL5, EL6	> 2000	> 60%, > 20 min	< 10

2.5.9 Maintenance

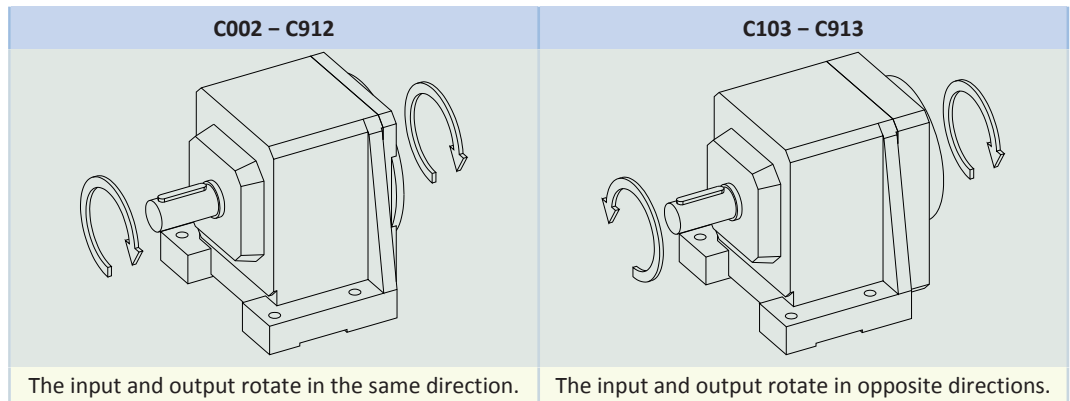
The instructions for maintenance can be found in the operating manual, ID 443027_en, at <http://www.stoerber.de/en/download>. Enter the ID of the documentation in the Search... field.

Ventilation

Air release valves are fitted as a standard feature and independently of installation position for gear unit sizes C6 to C9.

For the position and dimensions of the air release valve, refer to the 3D model at <http://cad.stoerber.de>.

2.5.10 Direction of rotation



The pictures show mounting position EL1.

2.6 Project configuration

Project your drives using the information in this chapter. In doing so, observe the limit conditions in this chapter to ensure a safe design.

An explanation of the formula symbols can be found in Chapter [\[▶ 14.1\]](#)

Determine the following for your application:

- The actual torque M_{2N^*}
- The actual speed n_{2^*}
- The operating mode operating factor fB_{op}
- The run-time operating factor fB_t
- The motor operating factor fB_{mot}
- The duty cycle ED in %

$$ED = \frac{t_{op}}{T} \cdot 100\%$$

For the S4 and S8 operating mode:

- The mass moment of inertia J_{2^*}

$$J_{1^*} = \frac{J_{2^*}}{i^2}$$

Calculate the motor rating necessary for your application:

$$P_{N^*} = \frac{M_{2N^*} \cdot n_{2^*} \cdot fB_{mot}}{9550}$$

Using the determined values and the calculated motor rating, select a suitable drive from the selection table.


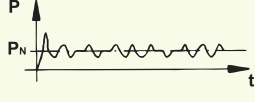

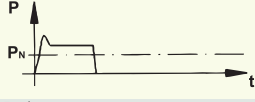
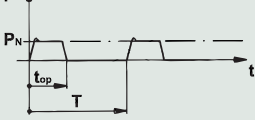
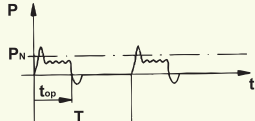
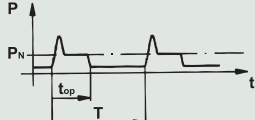
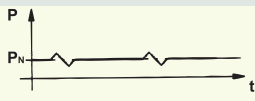
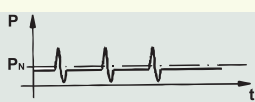
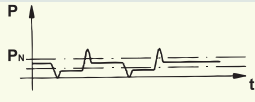
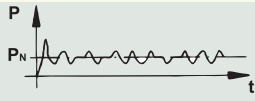
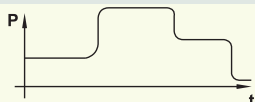
Then check the following conditions:

$$M_{2N^*} \cdot fB_{op} \cdot fB_t < M_{2N} \cdot S$$

$$P_{N^*} < P_N$$

Operating factors

Run time	fB_t
Daily run time ≤ 8 h	1.00
Daily run time ≤ 16 h	1.15
Daily run time ≤ 24 h	1.20

Operating mode	Characteristic output curve	ED	fB _{op}	fB _{mot}
S1 Continuous operation with soft start <ul style="list-style-type: none"> Start time up to 30 s 		100 %	1.00	1.00
S1 Continuous operation with normal start <ul style="list-style-type: none"> Asynchronous motors with direct switch-on or dynamic loading Start time up to 30 s 		100 %	1.25	1.00
S1 Continuous operation with high-load start <ul style="list-style-type: none"> Start time up to 30 s 		100 %	1.25	1.25
S2 brief operation <ul style="list-style-type: none"> Operating time t_{op} ≤ 3 minutes 		≤ 30 %	0.75	0.75
S3 Periodic cyclic operation <ul style="list-style-type: none"> Cycle time T ≤ 10 minutes Cyclic operation with braking motor Low additional flywheel weights J_{1*} < 0,5 · J₁ 		≤ 25 %	0.70	0.70
		≤ 40 %	1.00	1.00
		≤ 60 %	1.25	1.25
S4 Periodic cyclic operation with the effect of the start-up process <ul style="list-style-type: none"> Cycle time T ≤ 10 minutes Cyclic operation with braking motor Larger additional flywheel weights 		40 %	J _{1*} ≤ J ₁ : 1.40 J _{1*} ~ 3 · J ₁ : 1.60	1.40
S6 Uninterrupted periodic operation 	100 %	1.25	1.00	
S6 Uninterrupted periodic operation with short-term loading <ul style="list-style-type: none"> Low speeds Low additional flywheel weights J_{1*} < 0,5 · J₁ 		100 %	1.40	1.00
S6 Uninterrupted periodic operation with impact loading <ul style="list-style-type: none"> High speeds Large additional flywheel weights 		100 %	1.60	1.25
S8 Uninterrupted periodic operation <ul style="list-style-type: none"> With load changes With speed changes 		J _{1*} ≤ J ₁ : 1.40	J _{1*} ≤ J ₁ : 1.25	
		J _{1*} ~ 3 · J ₁ : 1.60	J _{1*} ~ 3 · J ₁ : 1.40	
S9 Non-periodic operation <ul style="list-style-type: none"> With load changes With speed changes 		J _{1*} ≤ J ₁ : 1.40 J _{1*} ~ 3 · J ₁ : 1.60	J _{1*} ≤ J ₁ : 1.25 J _{1*} ~ 3 · J ₁ : 1.40	
S10 Operation with individual constant loads 	100 %	1.00	1.00	

Tab. 1: Operating factors for operating modes S1 to S10

2.6.1 Permitted shaft loads for the output shaft

The values specified in the tables apply to the permitted shaft loads:

- For shaft dimensions in accordance with the catalog
- For output speeds $n_{2m^*} \leq 20$ rpm ($F_{2axN} = F_{2ax20}$; $F_{2radN} = F_{2rad20}$; $M_{2kN} = M_{2k20}$)
- Only if radial forces on the gear unit are stabilized by its pilots for the pitch circle diameter and flange housing design

Permitted shaft loads

Type	z_2 [mm]	F_{2ax20} [N]	F_{2rad20} [N]	M_{2k20} [Nm]
C0	20.0	500	1900	80
C1	30.0	850	3400	190
C2	30.0	1050	4200	260
C3	30.0	1400	5650	350
C4	35.0	2400	9700	750
C5	42.0	3000	11000	900
C6	40.0	4000	16000	1500
C7	45.0	5500	22000	2400
C8	50.0	7500	30000	3700
C9	55.0	9500	37000	5200

For other output speeds, download diagrams at <http://products.stoeber.de>.

The following applies to output speeds $n_{2m^*} > 20$ rpm:

$$F_{2axN} = \frac{F_{2ax20}}{\sqrt[3]{\frac{n_{2m^*}}{20 \text{ rpm}}}} \quad F_{2radN} = \frac{F_{2rad20}}{\sqrt[3]{\frac{n_{2m^*}}{20 \text{ rpm}}}} \quad M_{2kN} = \frac{M_{2k20}}{\sqrt[3]{\frac{n_{2m^*}}{20 \text{ rpm}}}}$$

The values for F_{2ax20} , F_{2rad20} and M_{2k20} can be found in the table "Permitted shaft loads" in this chapter.

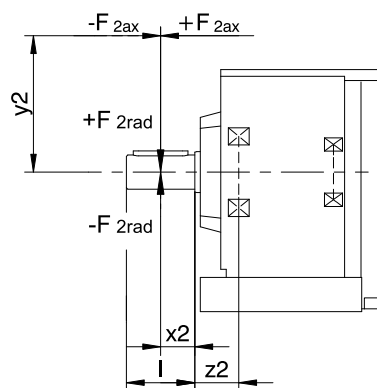


Fig. 1: Force application points

The specified values for F_{2rad20} are based on application of force at the middle of the output shaft: $x_2 = l/2$.

Shaft dimensions can be found in the "Dimensional drawings" chapter.

The following applies to other force application points:

$$M_{2k^*} = \frac{2 \cdot F_{2ax^*} \cdot y_2 + F_{2rad^*} \cdot (x_2 + z_2)}{1000} \leq M_{2kN}$$

$$F_{2rad^*} \leq F_{2radN}$$

$$F_{2ax^*} \leq F_{2axN}$$

For applications with multiple axial and/or radial forces, you must add the forces as vectors.

In the event of EMERGENCY OFF operation (max. 1000 load changes), you can multiply the permitted forces and torques for F_{2ax20} , F_{2rad20} and M_{2k20} by a factor of two.

2.6.2 Radial shaft seal rings

Leak-proofness

Our gear units are equipped with high-quality radial shaft seal rings and checked for leak-proofness. However, a leak cannot be fully ruled out over the length of use of a gear unit. If you use a gear unit with goods incompatible with the lubricant, you must take measures to prevent direct contact with the gear unit lubricant in case of a leak.

2.6.3 Oil expansion tank

The gear units have a higher fill level in mounting position EL5. The oil expansion tank prevents oil from escaping out of the gear unit.

Notes

- We recommend using an oil expansion tank in mounting position EL5 (additional cost) for fast running gear units with an input speed $n_1 > 1750$ rpm and gear ratios $i < 20$.
- It is not possible to use an oil expansion tank if the terminal box is at 90°!
- The oil expansion tank can only be used with certain sizes; see the chapter [\[▶ 2.3.5\]](#)

2.7 Additional documentation

Additional documentation related to the product can be found at <http://www.stoeber.de/en/download>

Enter the ID of the documentation in the Search... field.

Documentation	ID
Operating manual for C/F/K/S gear units and gear motors	443027_en
Lubricant filling quantities for gear units	441871