8GP70-090 premium

Technical data

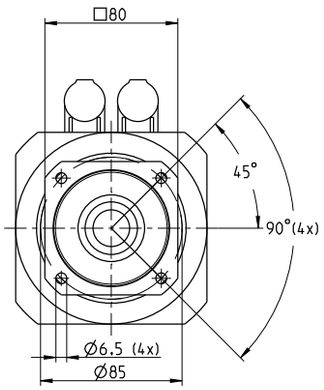
	8GP70-090hh003klmm	8GP70-090hh004klmm	8GP70-090hh005klmm	8GP70-090hh007klmm	8GP70-090hh010klmm	8GP70-090hh012klmm	8GP70-090hh015klmm	8GP70-090hh016klmm	8GP70-090hh020klmm	8GP70-090hh025klmm	8GP70-090hh035klmm	8GP70-090hh040klmm	8GP70-090hh050klmm	8GP70-090hh070klmm	8GP70-090hh100klmm
Gearbox															
Number of gear stages	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
Gear ratio i	3	4	5	7	10	12	15	16	20	25	35	40	50	70	100
Nominal output torque T_{2N} [Nm]	54	80	80	78	59	54	54	80	80	80	80	80	80	78	59
Max. output torque T_{2max} [Nm]	86	128	128	125	94	86	86	128	128	128	128	128	128	125	94
E-stop torque T_{2stop} [Nm]	210	280	280	175	200	220	220	300	300	300	300	300	300	175	200
Idle torque [Nm] at 20°C and 3000 rpm	1.25	1.1	0.8	0.55	0.4	0.55	0.45	0.55	0.45	0.4	0.3	0.25	0.25	0.25	0.25
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	2700	3050	3700	4000	4000	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	2550	2850	3400	4000	4000	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Max. drive speed n_{1max} [rpm]	10000														
Max. backlash J_t [arcmin]	3	3	3	3	3	5	5	5	5	5	5	5	5	5	5
Reduced backlash J_t [arcmin] less than	1														
Torsional rigidity C_{t21} [Nm/arcmin]	11														
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force Fr_{max} [N] for 30,000 h	4800														
Max. radial force Fr_{max} [N] for 20,000 h	5500														
Max. axial force Fa_{max} [N] for 30,000 h	5700														
Max. axial force Fa_{max} [N] for 20,000 h	6400														
Operating noise L_{PA} [dB(A)]	64	58	58	58	58	58	58	58	58	58	58	58	58	58	58
Efficiency at full load ŋ [%]	98	98	98	98	98	95	95	95	95	95	95	95	95	95	95
Min. operating temperature $B_{Tempmin}$ [°C]	-25														
Max. operating temperature $B_{Tempmax}$ [°C]	90														
Mounting orientation	Any														
Protection	IP65														
Weight m [kg]	3.3	3.3	3.3	3.3	3.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Moment of inertia J_1 [kgcm^2]	0.805	0.556	0.436	0.351	0.307	0.206	0.172	0.19	0.162	0.157	0.135	0.125	0.124	0.123	0.123

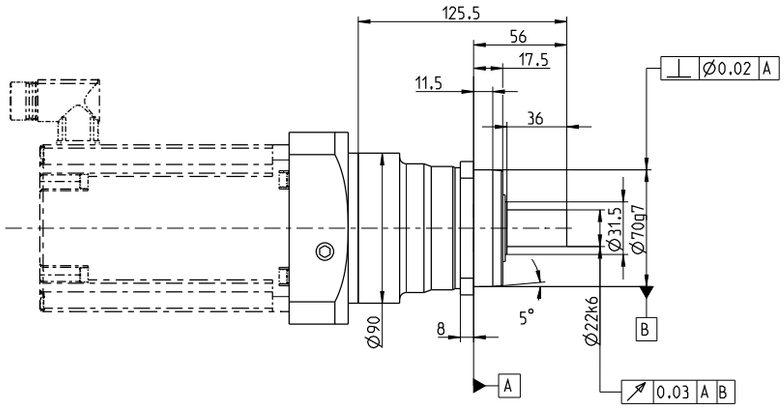
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!
NOTE – E-stop torque: Approved for 1000x

NOTE – Axial / radial force: With reference to the middle of the output shaft; the entries refer to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C

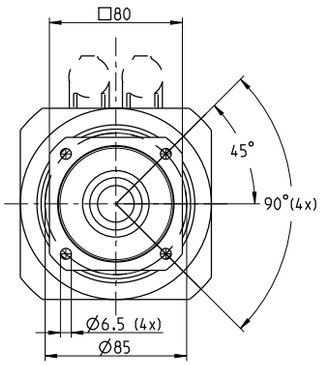
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

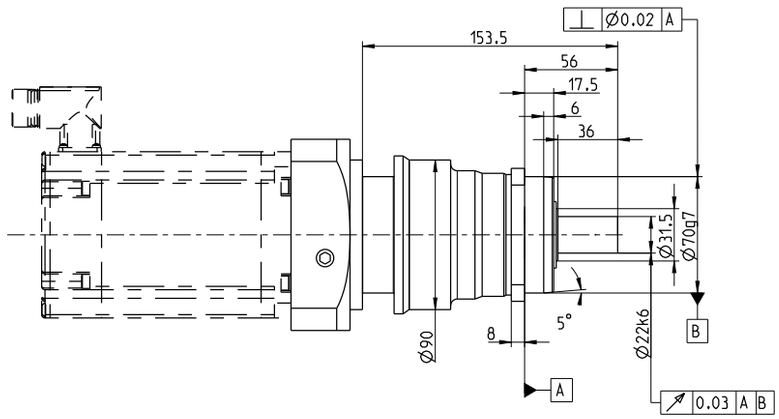
1-stage gear





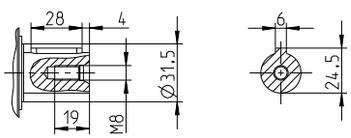
2-stage gear





Alternative drive shaft options

Keyway in accordance with DIN-6885-T1



Adapter flange - Overview of dimensions

The flange length L completes the diagram for determining the gearbox length.

8GP70-090	8LSA2	8LSA3	8LSA/C4	8LVA2	8LVA3	8JSA2	8JSA3	8JSA4	8JSA5	8LSN4	80MPH
One-stage											
Flange length L [mm]	---	31.6	41.6	31.6	41.6	---	31.6	41.6	51.7	41.6	41.6
Flange diameter Q [mm]	---	90	115	90	90	---	90	90	115	115	90
Two-stage											
Flange length L [mm]	32.5	32.5	42.8	32.5	42.8	25.5	32.5	42.8	---	42.8	42.5
Flange diameter Q [mm]	70	90	115	70	90	70	70	90	---	115	90