8GP60-090 premium

Technical data

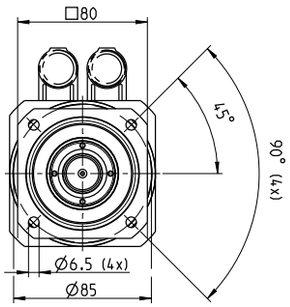
	8GP60-090hh003klmm	8GP60-090hh004klmm	8GP60-090hh005klmm	8GP60-090hh008klmm	8GP60-090hh010klmm	8GP60-090hh012klmm	8GP60-090hh015klmm	8GP60-090hh016klmm	8GP60-090hh020klmm	8GP60-090hh025klmm	8GP60-090hh032klmm	8GP60-090hh040klmm	8GP60-090hh064klmm	8GP60-090hh100klmm
Gearbox														
Number of gear stages	1	1	1	1	1	2	2	2	2	2	2	2	2	2
Gear ratio i	3	4	5	8	10	12	15	16	20	25	32	40	64	100
Nominal output torque T_{2N} [Nm]	100	140	140	80	60	110	110	150	150	140	150	140	80	60
Max. output torque T_{2max} [Nm]	160	224	224	128	96	176	176	240	240	224	240	224	128	96
E-stop torque T_{2stop} [Nm]	210	280	280	200	200	220	220	300	300	300	300	300	200	200
Idle torque [Nm] at 20°C and 3000 rpm	1.15	1	0.75	0.5	0.4	0.7	0.55	0.7	0.5	0.5	0.35	0.35	0.35	0.3
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	1950	2100	2500	3950	4000	3400	4000	3550	4000	4000	4000	4000	4000	4000
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	1550	1600	1900	3350	4000	2750	3300	2850	3400	3850	4000	4000	4000	4000
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
Reduced backlash J_t [arcmin] less than	1													
Torsional rigidity C_{t21} [Nm/arcmin]	9	9	9	9	9	10	10	10	10	10	10	10	10	10
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)]	60													
Efficiency at full load ŋ [%]	98	98	98	98	98	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	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Moment of inertia J_1 [kgcm^2]	1.01	0.78	0.68	0.59	0.57	1.02	0.95	0.89	0.82	0.76	0.77	0.7	0.63	0.59

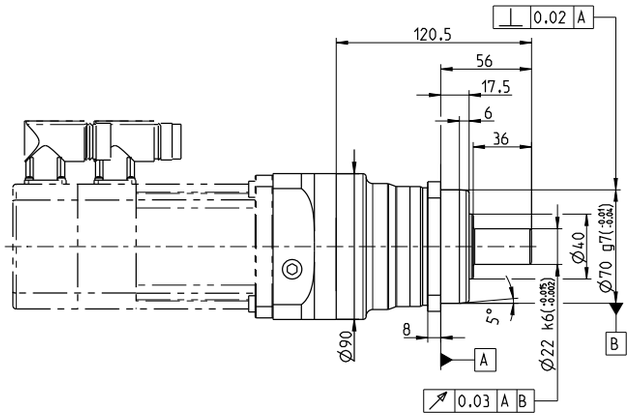
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

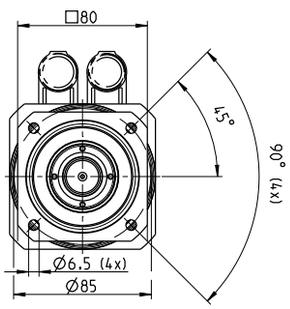
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

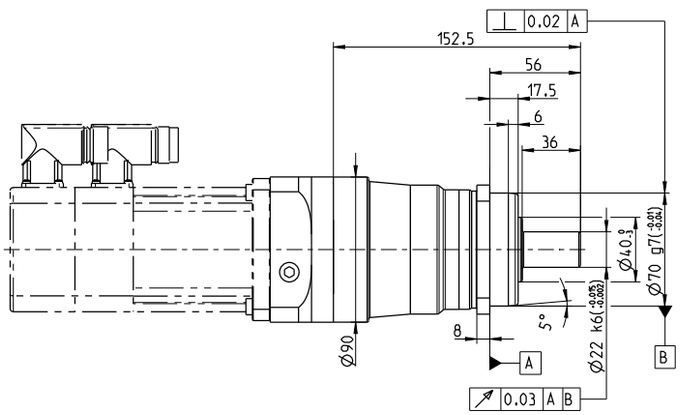
1-stage gear





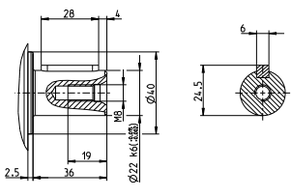
2-stage gear



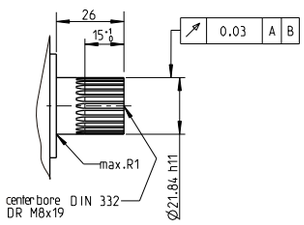


Alternative drive shaft options

Shaft keys according to DIN 6885 form A



Spline shaft according to DIN 5480 - W 22 x 1.25 x 30 x 16 x 6 m



Adapter flange - Overview of dimensions

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

8GP60-090	8LSA3	8LSA/C4	8LVA2	8LVA3	8JSA3	8JSA4	8JSA5	8LSN4	80MPH
Flange length L [mm]	38.8	48.8	38.8	48.8	38.8	48.8	58.9	48.8	38.8
Flange diameter Q [mm]	90	115	90	90	90	90	115	115	90