8GF60-140 premium

Technical data

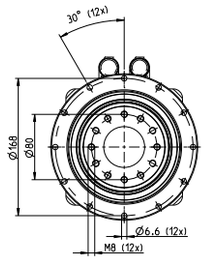
	8GF60-140hh004klmm	8GF60-140hh005klmm	8GF60-140hh008klmm	8GF60-140hh010klmm	8GF60-140hh016klmm	8GF60-140hh020klmm	8GF60-140hh025klmm	8GF60-140hh032klmm	8GF60-140hh040klmm	8GF60-140hh050klmm	8GF60-140hh064klmm	8GF60-140hh100klmm
Gearbox												
Number of gear stages	1	1	1	1	2	2	2	2	2	2	2	2
Gear ratio i	4	5	8	10	16	20	25	32	40	50	64	100
Nominal output torque T_{2N} [Nm]	600	750	450	305	1000	1000	900	600	750	620	450	305
Max. output torque T_{2max} [Nm]	960	1200	720	488	1600	1600	1440	960	1200	992	720	488
E-stop torque T_{2stop} [Nm]	1300	1500	1000	750	2000	2000	1800	1500	1500	1500	1000	750
Idle torque [Nm] at 20°C and 3000 rpm	9.35	6.35	3.3	2.55	2.95	2.05	1.85	1.1	1	0.85	0.85	0.75
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	850	950	1650	2050	1700	2100	2500	3500	3500	3500	3500	3500
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	650	700	1350	1800	1200	1450	1800	2850	2950	3500	3500	3500
Max. drive speed n_{1max} [rpm]	6500											
Max. backlash J_t [arcmin]	3	3	3	3	5	5	5	5	5	5	5	5
Reduced backlash J_t [arcmin] less than	1											
Torsional rigidity C_{t21} [Nm/arcmin]	200	200	200	200	180	180	180	180	180	180	180	180
Tilting rigidity C_{2K} [Nm/arcmin]	880											
Max. breakdown torque M_{2Kmax} [Nm]	1219											
Max. radial force Fr_{max} [N] for 30,000 h	11000											
Max. radial force Fr_{max} [N] for 20,000 h	12000											
Max. axial force Fa_{max} [N] for 30,000 h	7500											
Max. axial force Fa_{max} [N] for 20,000 h	8500											
Operating noise L_{PA} [dB(A)]	70											
Efficiency at full load ŋ [%]	98	98	98	98	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]	13	13	13	13	16	16	16	16	16	16	16	16
Moment of inertia J_1 [kgcm^2]	11.78	9.7	7.71	7.4	6.73	6.51	5	6.31	4.82	3.08	3.11	2.67

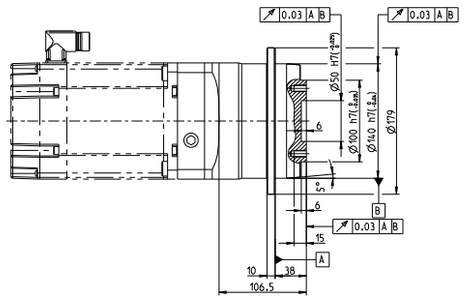
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

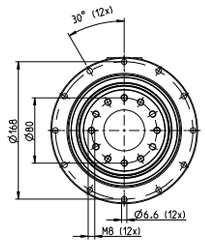
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

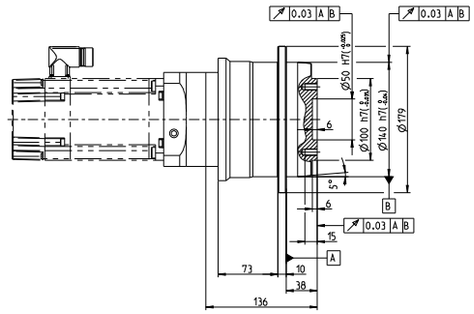
1-stage gear





2-stage gear





Adapter flange - Overview of dimensions

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

8GF60-140	8LSA3	8LSA/ C4	8LSA/ C5	8LSA/ C6	8LSA/ C7(3-5)	8LSA/ C7(6-8)	8LVA3	8JSA4	8JSA5	8JSA6	8JSA7	8LSN4	8LSN5	80MPH
One-stage														
Flange length L [mm]	---	50.5	50.5	50.5	60.5	88.5	---	---	50.5	60.5	88.5	50.5	50.5	---
Flange diameter Q [mm]	---	142	142	190	190	190	---	---	142	142	190	142	142	---
Two-stage														
Flange length L [mm]	51.5	51.5	61.5	61.5	71.4	---	51.5	51.5	61.5	71.4	---	51.5	61.5	51.5
Flange diameter Q [mm]	115	115	142	190	190	---	115	115	115	142	---	120	142	115