8GF40-090 standard

Technical data

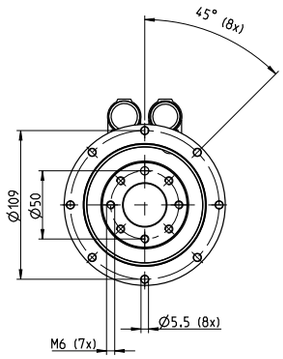
	8GF40-090hh003klmm	8GF40-090hh004klmm	8GF40-090hh005klmm	8GF40-090hh008klmm	8GF40-090hh010klmm	8GF40-090hh009klmm	8GF40-090hh012klmm	8GF40-090hh015klmm	8GF40-090hh016klmm	8GF40-090hh020klmm	8GF40-090hh025klmm	8GF40-090hh032klmm	8GF40-090hh040klmm	8GF40-090hh064klmm	8GF40-090hh100klmm
Gearbox															
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	8	10	9	12	15	16	20	25	32	40	64	100
Nominal output torque T_{2N} [Nm]	85	115	110	50	38	130	120	110	120	120	110	120	110	50	38
Max. output torque T_{2max} [Nm]	136	184	176	80	61	208	192	176	192	192	176	192	176	80	61
E-stop torque T_{2stop} [Nm]	180	240	220	190	200	260	240	220	240	240	220	240	220	190	200
Idle torque [Nm] at 20°C and 3000 rpm	0.6	0.5	0.4	0.25	0.25	0.3	0.3	0.25	0.3	0.25	0.25	0.2	0.2	0.2	0.15
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	2800	3000	3550	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	2100	2100	2500	4000	4000	2800	3450	4000	4000	4000	4000	4000	4000	4000	4000
Max. drive speed n_{1max} [rpm]	7000														
Max. backlash J_t [arcmin]	7	7	7	7	7	9	9	9	9	9	9	9	9	9	9
Reduced backlash J_t [arcmin] less than	0														
Torsional rigidity C_{t21} [Nm/arcmin]	34	34	34	34	34	25	25	25	25	25	25	25	25	25	25
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force Fr_{max} [N] for 30,000 h	1200														
Max. radial force Fr_{max} [N] for 20,000 h	1400														
Max. axial force Fa_{max} [N] for 30,000 h	3000														
Max. axial force Fa_{max} [N] for 20,000 h	3000														
Operating noise L_{PA} [dB(A)]	60														
Efficiency at full load ŋ [%]	96	96	96	96	96	94	94	94	94	94	94	94	94	94	94
Min. operating temperature $B_{Tempmin}$ [°C]	-25														
Max. operating temperature $B_{Tempmax}$ [°C]	90														
Mounting orientation	Any														
Protection	IP54														
Weight m [kg]	2.9	2.9	2.9	2.9	2.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Moment of inertia J_1 [kgcm^2]	1.01	0.67	0.53	0.41	0.39	0.79	0.75	0.73	0.54	0.45	0.44	0.46	0.46	0.45	0.43

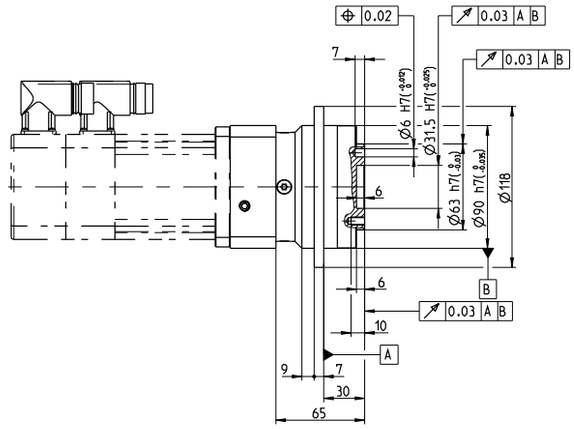
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

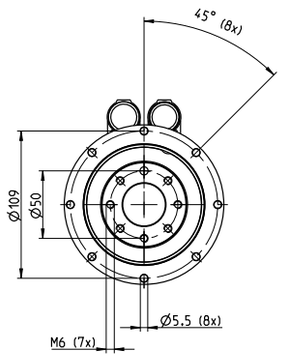
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

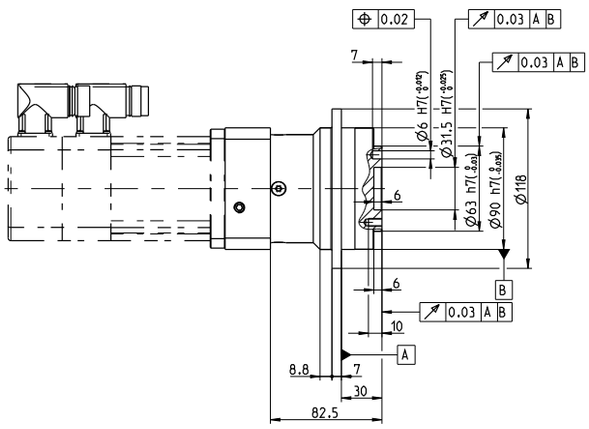
1-stage gear





2-stage gear





Adapter flange - Overview of dimensions

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

8GP40-080	8LSA3	8LSA/C4	8LVA2	8LVA3	8JSA3	8JSA4	8JSA5	8LSN4	80MPH
Flange length L [mm]	33.5	43.5	33.5	43.5	33.5	43.5	53.5	43.5	35.5
Flange diameter Q [mm]	90	100	80	80	80	90	115	115	90