8GA60-090 premium

Technical data

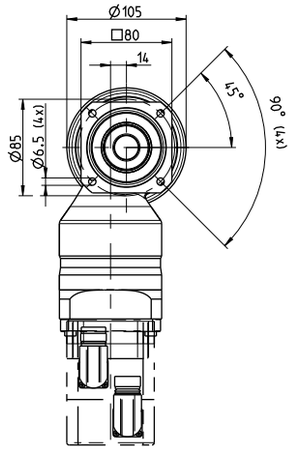
	8GA60-090hh004klmm	8GA60-090hh005klmm	8GA60-090hh008klmm	8GA60-090hh010klmm	8GA60-090hh016klmm	8GA60-090hh020klmm	8GA60-090hh025klmm	8GA60-090hh032klmm	8GA60-090hh040klmm	8GA60-090hh064klmm	8GA60-090hh100klmm
Gearbox											
Number of gear stages	1	1	1	1	2	2	2	2	2	2	2
Gear ratio i	4	5	8	10	16	20	25	32	40	64	100
Nominal output torque T_{2N} [Nm]	90	75	50	40	150	150	140	108	135	80	60
Max. output torque T_{2max} [Nm]	144	120	80	64	240	240	224	172	216	128	96
E-stop torque T_{2stop} [Nm]	200	200	150	150	300	300	300	300	300	200	200
Idle torque [Nm] at 20°C and 3000 rpm	2.3	2.1	1.9	1.8	1.25	0.95	0.9	1.25	1.25	0.8	0.75
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	1650	1900	2250	2400	1800	2100	2250	2300	2300	2950	3100
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	1300	1550	2000	2200	1400	1600	1850	2000	2000	2750	3000
Max. drive speed n_{1max} [rpm]	14000	14000	14000	14000	16000	16000	16000	16000	16000	16000	16000
Max. backlash J_t [arcmin]	5	5	5	5	7	7	7	7	7	7	7
Reduced backlash J_t [arcmin] less than						0					
Torsional rigidity C_{t21} [Nm/arcmin]	6.6	6.6	6.6	6.6	11	11	11	11	11	11	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	5200	5200	5200	5200	4800	4800	4800	4800	4800	4800	4800
Max. radial force Fr_{max} [N] for 20,000 h	5200	5200	5200	5200	5500	5500	5500	5500	5500	5500	5500
Max. axial force Fa_{max} [N] for 30,000 h	5200	5200	5200	5200	5700	5700	5700	5700	5700	5700	5700
Max. axial force Fa_{max} [N] for 20,000 h	5900	5900	5900	5900	6400	6400	6400	6400	6400	6400	6400
Operating noise L_{PA} [dB(A)]						67					
Efficiency at full load ŋ [%]	96	96	96	96	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						IP65					
Weight m [kg]	5	5	5	5	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Moment of inertia J_1 [kgcm^2]	1.331	1.168	1.004	0.966	0.642	0.593	0.591	0.529	0.528	0.528	0.514

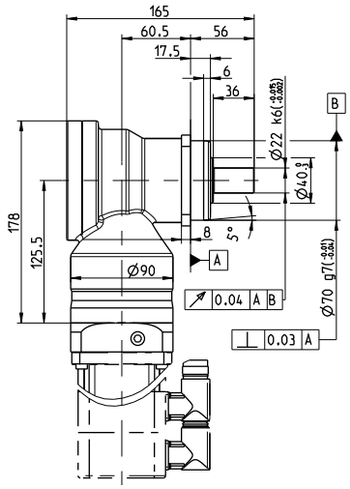
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

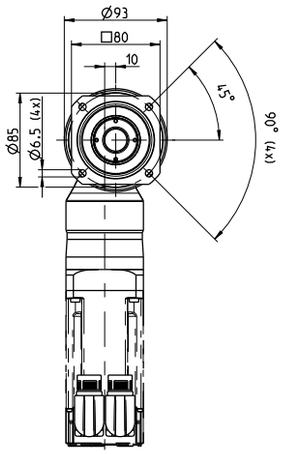
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

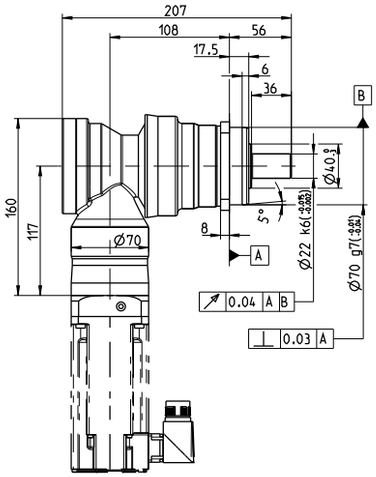
1-stage gear





2-stage gear





Adapter flange - Overview of dimensions

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

8GA60-090	8LSA2	8LSA3	8LSA/C4	8LVA2	8LVA3	8JSA2	8JSA3	8JSA4	8JSA5	8LSN4	80MPH
One-stage											
Flange length L[mm]	---	25.5	35.5	25.5	35.5	---	25.5	35.5	37.5	35.5	35.5
Flange diameter Q [mm]	---	90	115	90	90	---	90	90	115	115	90
Two-stage											
Flange length L [mm]	26.1	26.1	35.5	26.1	35.5	19.1	26.1	35.5	---	35.5	28
Flange diameter Q [mm]	70	90	115	70	90	70	70	90	---	115	90