

8GF70-090 premium

Technical data



8GF70-090hh004kimm

8GF70-090hh005kimm

8GF70-090hh007kimm

8GF70-090hh010kimm

8GF70-090hh016kimm

8GF70-090hh020kimm

8GF70-090hh025kimm

8GF70-090hh035kimm

8GF70-090hh040kimm

8GF70-090hh050kimm

8GF70-090hh070kimm

8GF70-090hh100kimm

Gearbox

Number of gear stages	1	1	1	1	2	2	2	2	2	2	2	2
Gear ratio i	4	5	7	10	16	20	25	35	40	50	70	100
Nominal output torque T_{2N} [Nm]	80	80	78	59	80	80	80	80	80	80	78	59
Max. output torque T_{2max} [Nm]	128	128	125	94	128	128	128	128	128	128	125	94
E-stop torque T_{2stop} [Nm]	280	280	175	200	300	300	300	300	300	300	175	200
Idle torque [Nm] at 20°C and 3000 rpm	1.65	1.15	0.75	0.5	0.6	0.45	0.45	0.3	0.25	0.25	0.25	0.25
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	2400	2950	3800	4000	4500	4500	4500	4500	4500	4500	4500	4500
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	2250	2750	3550	4000	4500	4500	4500	4500	4500	4500	4500	4500
Max. drive speed n_{1max} [rpm]	10000											
Max. backlash J_1 [arcmin]	3	3	3	3	5	5	5	5	5	5	5	5
Reduced backlash J_1 [arcmin] less than	1											
Torsional rigidity C_{t21} [Nm/arcmin]	35	35	35	35	30	30	30	30	30	30	30	30
Tilting rigidity C_{2K} [Nm/arcmin]	316											
Max. breakdown torque M_{2Kmax} [Nm]	363											
Max. radial force F_{rmax} [N] for 30,000 h	3900											
Max. radial force F_{rmax} [N] for 20,000 h	4400											
Max. axial force F_{amax} [N] for 30,000 h	7200											
Max. axial force F_{amax} [N] for 20,000 h	8200											
Operating noise L_{PA} [dB(A)]	58											
Efficiency at full load η [%]	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]	3	3	3	3	4	4	4	4	4	4	4	4
Moment of inertia J_1 [kgcm ²]	0.63	0.484	0.376	0.319	0.195	0.165	0.159	0.136	0.126	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 $T = 30^\circ\text{C}$, 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

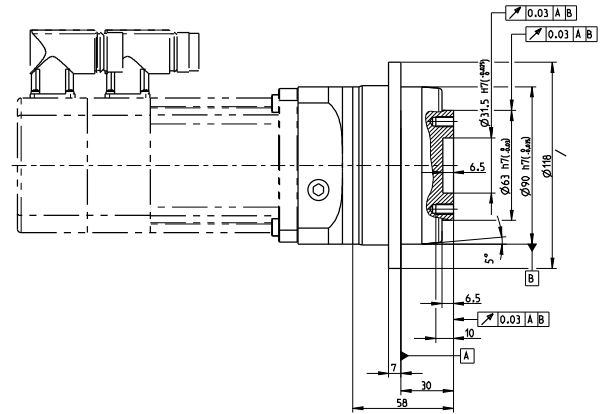
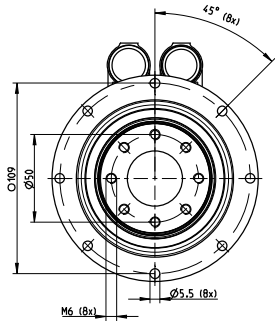
NOTE – Axial / radial force: With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2 = 100$ rpm and application factor $K_A = 1$ as well as S1 operating mode for electrical machines and $T = 30^\circ\text{C}$

NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of $n_1 = 3000$ rpm without a load; $i = 5$

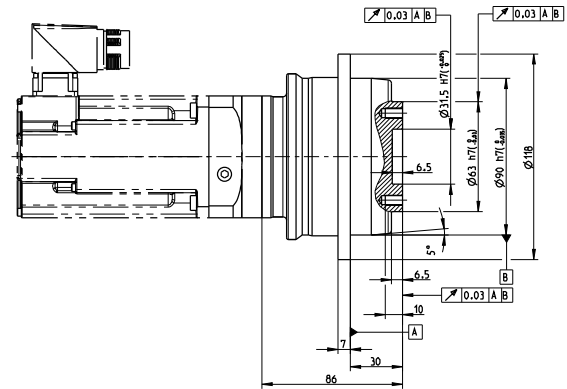
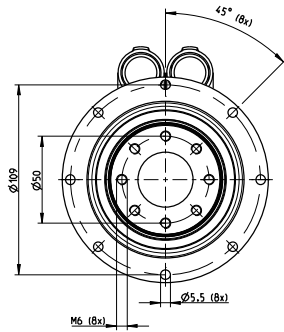
NOTE – Operating temperature: With reference to the middle of the housing surface

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.

8GF70-090	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