

# 8GF60-090 premium

## Technical data



8GF60-090hh004kimm

8GF60-090hh005kimm

8GF60-090hh008kimm

8GF60-090hh010kimm

8GF60-090hh016kimm

8GF60-090hh020kimm

8GF60-090hh025kimm

8GF60-090hh032kimm

8GF60-090hh040kimm

8GF60-090hh050kimm

8GF60-090hh064kimm

8GF60-090hh100kimm

### 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]	140	140	80	60	150	150	140	150	140	130	80	60
Max. output torque $T_{2max}$ [Nm]	224	224	128	96	240	240	224	240	224	208	128	96
E-stop torque $T_{2stop}$ [Nm]	280	280	200	200	300	300	300	300	300	300	200	200
Idle torque [Nm] at 20°C and 3000 rpm	1.55	1.15	0.65	0.55	0.4	0.35	0.3	0.25	0.25	0.2	0.2	0.25
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% $T_{2N}$ and S1	1750	2100	3350	4000	3850	4450	4500	4500	4500	4500	4500	4500
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% $T_{2N}$ and S1	1350	1650	2850	3600	2950	3450	4000	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)]	65											
Efficiency at full load $\eta$ [%]	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 <sup>2</sup> ]	0.92	0.77	0.63	0.59	0.58	0.56	0.45	0.54	0.43	0.28	0.3	0.26

**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

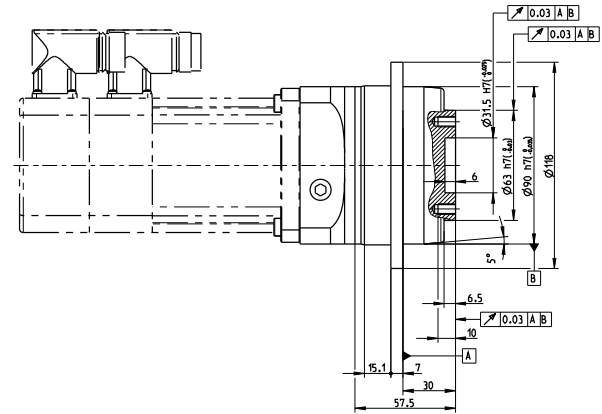
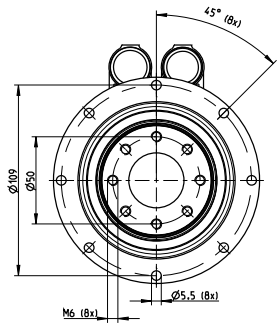
**NOTE – Axial / radial force:** With reference to the middle of the output shaft; the entries refer to an output shaft speed of  $n_2 = 100$  rpm and application factor  $K_A = 1$  as well as S1 operating mode for electrical machines and  $T = 30^\circ\text{C}$

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

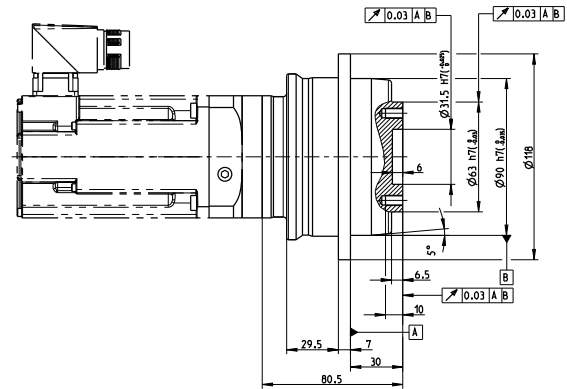
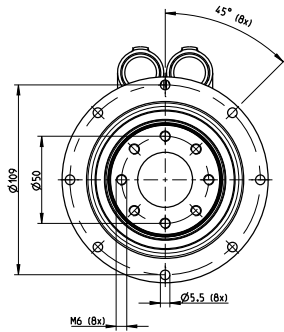
**NOTE – Operating temperature:** With reference to the middle of the housing surface

**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.

8GF60-090	8LSA2	8LSA3	8LSA/C4	8LVA2	8LVA3	8JSA2	8JSA3	8JSA4	8JSA5	8LSN4	80MPH
<b>One-stage</b>											
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
<b>Two-stage</b>											
Flange length L [mm]	37.5	37.5	48	37.5	48	30.5	37.5	48	---	48	47.5
Flange diameter Q [mm]	70	90	115	70	90	70	70	90	---	115	90