

# 8GA60-070 premium

## Technical data



8GA60-070hh004klmm

8GA60-070hh005klmm

8GA60-070hh008klmm

8GA60-070hh010klmm

8GA60-070hh016klmm

8GA60-070hh020klmm

8GA60-070hh025klmm

8GA60-070hh032klmm

8GA60-070hh040klmm

8GA60-070hh064klmm

8GA60-070hh100klmm

### 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]	45	42	27	22	77	77	65	77	65	40	27
Max. output torque $T_{2max}$ [Nm]	72	67	43	35	123	123	104	123	104	64	43
E-stop torque $T_{2stop}$ [Nm]	100	100	75	75	150	150	150	150	150	80	80
Idle torque [Nm] at 20°C and 3000 rpm	1.5	1.35	1.25	1.2	1	0.9	0.9	0.8	0.8	0.8	0.75
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% $T_{2N}$ and S1	1800	2000	2350	2500	1850	2000	2150	2300	2400	2600	2700
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% $T_{2N}$ and S1	1450	1650	2100	2300	1550	1700	1900	2000	2200	2500	2650
Max. drive speed $n_{1max}$ [rpm]	16000										
Max. backlash $J_1$ [arcmin]	5	5	5	5	7	7	7	7	7	7	7
Reduced backlash $J_1$ [arcmin] less than	0										
Torsional rigidity $C_{t21}$ [Nm/arcmin]	2.4										
Tilting rigidity $C_{2K}$ [Nm/arcmin]	0										
Max. breakdown torque $M_{2Kmax}$ [Nm]	0										
Max. radial force $F_{rmax}$ [N] for 30,000 h	3200										
Max. radial force $F_{rmax}$ [N] for 20,000 h	3200										
Max. axial force $F_{amax}$ [N] for 30,000 h	3700	3700	3700	3700	3900	3900	3900	3900	3900	3900	3900
Max. axial force $F_{amax}$ [N] for 20,000 h	4300	4300	4300	4300	4400	4400	4400	4400	4400	4400	4400
Operating noise $L_{pA}$ [dB(A)]	66										
Efficiency at full load $\eta$ [%]	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]	3	3	3	3	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Moment of inertia $J_1$ [kgcm <sup>2</sup> ]	0.654	0.6	0.532	0.516	0.639	0.591	0.59	0.528	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  $T = 30^\circ\text{C}$ , 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

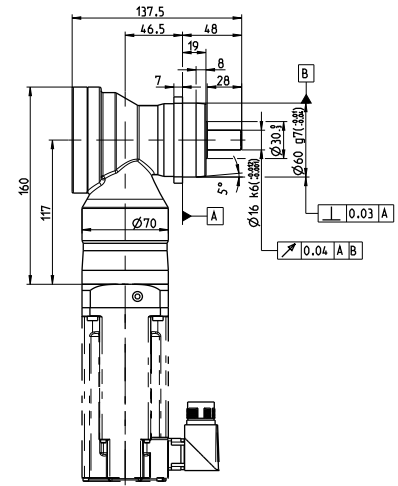
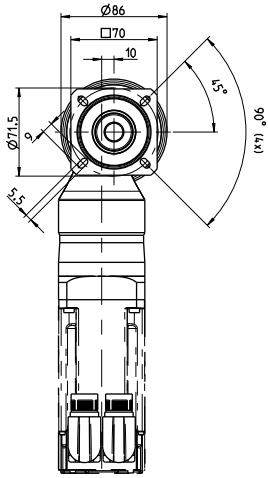
**NOTE – Axial / radial force:** With reference to the middle of the output shaft; the entries refer to an output shaft speed of  $n_2 = 100$  rpm and application factor  $K_A = 1$  as well as S1 operating mode for electrical machines and  $T = 30^\circ\text{C}$

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

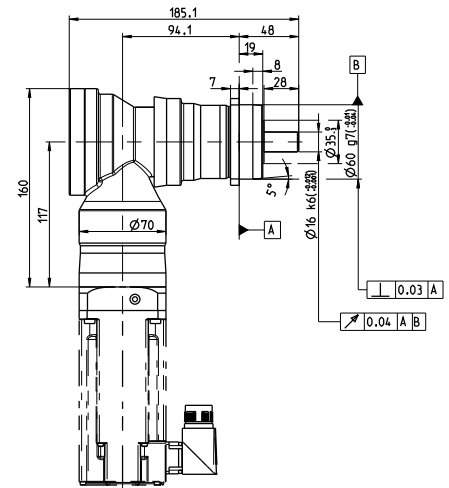
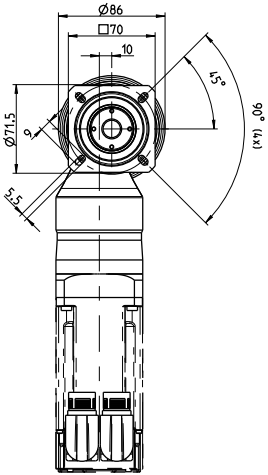
**NOTE – Operating temperature:** With reference to the middle of the housing surface

**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.

8GA60-070	8LSA2	8LSA3	8LVA2	8LVA3	8JSA2	8JSA3	8JSA4	80MPH
Flange length L [mm]	26.1	26.1	26.1	35.5	19.1	26.1	35.5	28
Flange diameter Q [mm]	70	90	70	90	70	70	90	90