

8GP70-070 premium

Technical data



8GP70-070hh003klmm
 8GP70-070hh004klmm
 8GP70-070hh005klmm
 8GP70-070hh007klmm
 8GP70-070hh010klmm
 8GP70-070hh012klmm
 8GP70-070hh015klmm
 8GP70-070hh016klmm
 8GP70-070hh020klmm
 8GP70-070hh025klmm
 8GP70-070hh035klmm
 8GP70-070hh040klmm
 8GP70-070hh050klmm
 8GP70-070hh070klmm
 8GP70-070hh100klmm

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	7	10	12	15	16	20	25	35	40	50	70	100
Nominal output torque T_{2N} [Nm]	29	39	40	37	28	29	29	39	39	40	40	39	40	37	28
Max. output torque T_{2max} [Nm]	46	62	64	59	45	46	46	62	62	64	64	62	64	59	45
E-stop torque T_{2stop} [Nm]	90	120	130	80	90	135	135	150	150	150	150	150	150	80	80
Idle torque [Nm] at 20°C and 3000 rpm	0.65	0.45	0.35	0.25	0.2	0.45	0.3	0.4	0.3	0.3	0.2	0.15	0.15	0.15	0.15
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	3000	3700	4400	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	2850	3400	4050	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Max. drive speed n_{1max} [rpm]	14000														
Max. backlash J_1 [arcmin]	3	3	3	3	3	5	5	5	5	5	5	5	5	5	5
Reduced backlash J_1 [arcmin] less than	2														
Torsional rigidity C_{t21} [Nm/arcmin]	5														
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force Fr_{max} [N] for 30,000 h	3200														
Max. radial force Fr_{max} [N] for 20,000 h	3200														
Max. axial force Fa_{max} [N] for 30,000 h	3900														
Max. axial force Fa_{max} [N] for 20,000 h	4400														
Operating noise L_{PA} [dB(A)]	63	57	57	57	57	57	57	57	57	57	57	57	57	57	57
Efficiency at full load η [%]	98	98	98	98	98	95	95	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]	1.9	1.9	1.9	1.9	1.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Moment of inertia J_1 [kgcm ²]	0.273	0.191	0.163	0.137	0.125	0.18	0.156	0.175	0.152	0.151	0.131	0.123	0.122	0.122	0.122

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

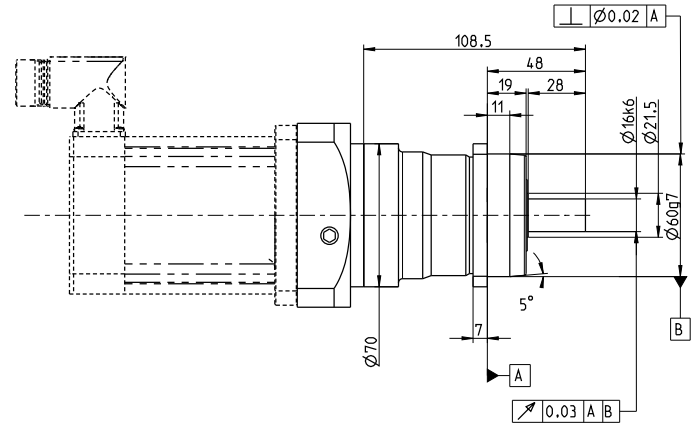
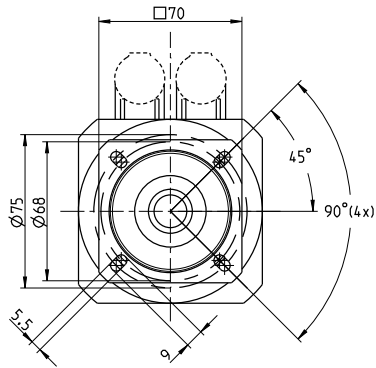
NOTE – Axial / radial force: With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2 = 100$ rpm and application factor $K_A = 1$ as well as S1 operating mode for electrical machines and $T = 30^\circ\text{C}$

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

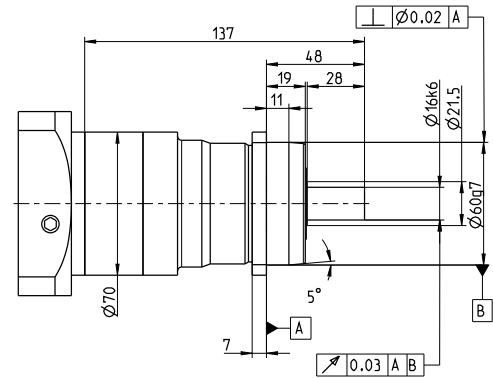
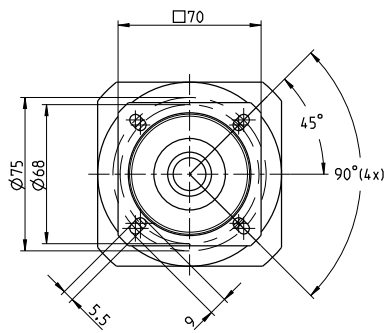
NOTE – Operating temperature: With reference to the middle of the housing surface

NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

1-stage gear

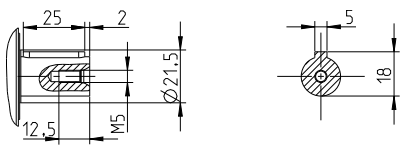


2-stage gear



Alternative drive shaft options

Keyway in accordance with DIN-6885-T1



Adapter flange - Overview of dimensions

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

8GP70-070	8LSA2	8LSA3	8LVA2	8LVA3	8JSA2	8JSA3	8JSA4	80MPH
One-stage								
Flange length L [mm]	32.5	32.5	32.5	42.8	25.5	32.5	42.8	42.5
Flange diameter Q [mm]	70	90	70	90	70	70	90	90
Two-stage								
Flange length L [mm]	32.5	32.5	32.5	42.8	25.5	32.5	42.8	42.5
Flange diameter Q [mm]	70	90	70	90	70	70	90	90