8GP40-060 standard

Technical data

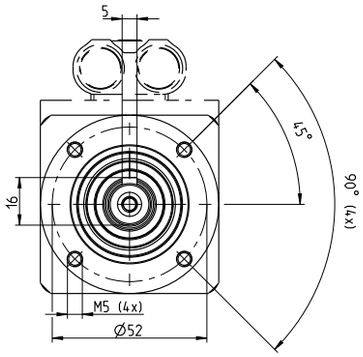
	8GP40-060hh003klmm	8GP40-060hh004klmm	8GP40-060hh005klmm	8GP40-060hh008klmm	8GP40-060hh010klmm	8GP40-060hh009klmm	8GP40-060hh012klmm	8GP40-060hh015klmm	8GP40-060hh016klmm	8GP40-060hh020klmm	8GP40-060hh025klmm	8GP40-060hh032klmm	8GP40-060hh040klmm	8GP40-060hh064klmm	8GP40-060hh100klmm
Gearbox															
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	8	10	9	12	15	16	20	25	32	40	64	100
Nominal output torque T_{2N} [Nm]	28	38	40	18	15	44	44	44	44	44	40	44	40	18	15
Max. output torque T_{2max} [Nm]	45	61	64	29	24	70	70	70	70	70	64	70	64	29	24
E-stop torque T_{2stop} [Nm]	66	88	80	80	80	88	88	88	88	88	80	88	80	80	80
Idle torque [Nm] at 20°C and 3000 rpm	0.15	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	4500														
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	4500														
Max. drive speed n_{1max} [rpm]	13000														
Max. backlash J_t [arcmin]	10	10	10	10	10	12	12	12	12	12	12	12	12	12	12
Reduced backlash J_t [arcmin] less than	0														
Torsional rigidity C_{t21} [Nm/arcmin]	2.3	2.3	2.3	2.3	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force Fr_{max} [N] for 30,000 h	340														
Max. radial force Fr_{max} [N] for 20,000 h	400														
Max. axial force Fa_{max} [N] for 30,000 h	450														
Max. axial force Fa_{max} [N] for 20,000 h	500														
Operating noise L_{PA} [dB(A)]	58														
Efficiency at full load ŋ [%]	96	96	96	96	96	94	94	94	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	IP54														
Weight m [kg]	0.9	0.9	0.9	0.9	0.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Moment of inertia J_1 [kgcm^2]	0.135	0.093	0.078	0.065	0.064	0.131	0.127	0.077	0.088	0.075	0.075	0.064	0.064	0.064	0.064

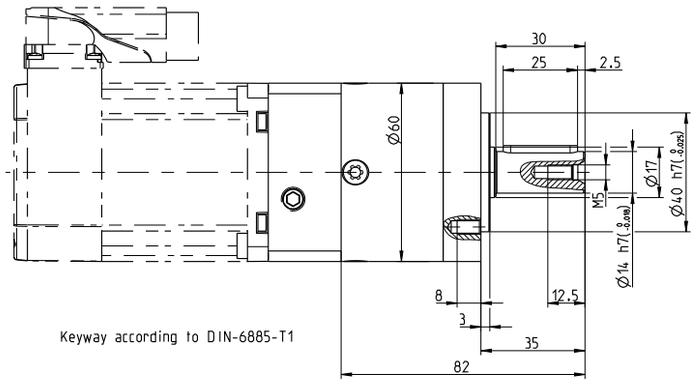
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

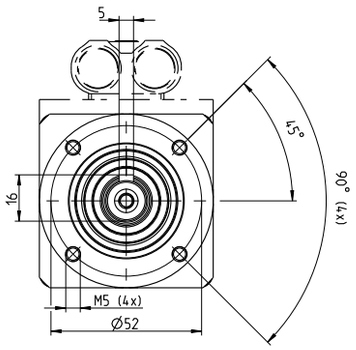
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

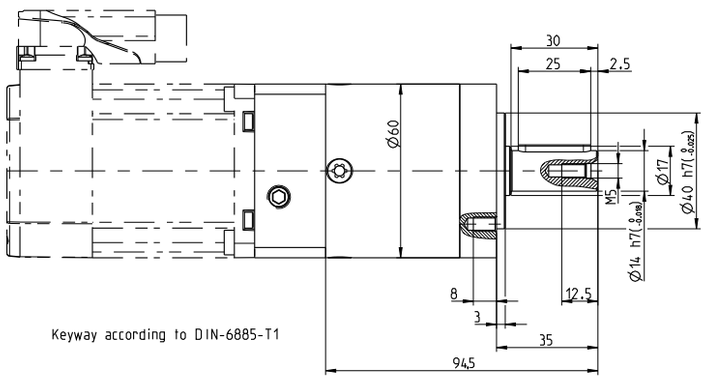
1-stage gear





2-stage gear





Adapter flange - Overview of dimensions

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

8GP40-060	8LSA2	8LSA3	8LVA2	8LVA3	8JSA2	8JSA3	8JSA4	80MPD	80MPF	80MPH
Flange length L [mm]	25.5	31.2	31.1	41.3	24.2	31.2	41.3	24	24	33.2
Flange diameter Q [mm]	60	90	60	80	60	70	90	60	60	90

8GP40-060 standard

Technical data

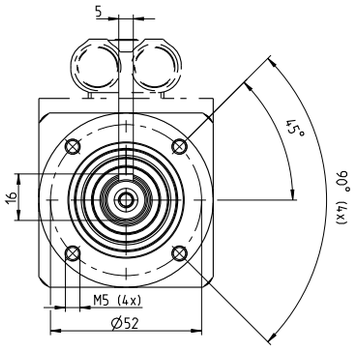
	8GP40-060hh060klmm	8GP40-060hh080klmm	8GP40-060hh120klmm	8GP40-060hh160klmm	8GP40-060hh200klmm	8GP40-060hh256klmm	8GP40-060hh320klmm	8GP40-060hh512klmm
Gearbox								
Number of gear stages	3							
Gear ratio i	60	80	120	160	200	256	320	512
Nominal output torque T_{2N} [Nm]	44	44	44	44	40	44	40	18
Max. output torque T_{2max} [Nm]	70	70	70	70	64	70	64	29
E-stop torque T_{2stop} [Nm]	88	88	88	88	80	88	80	80
Idle torque [Nm] at 20°C and 3000 rpm	0.1							
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	4500							
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	4500							
Max. drive speed n_{1max} [rpm]	13000							
Max. backlash J_t [arcmin]	15							
Reduced backlash J_t [arcmin] less than	0							
Torsional rigidity C_{t21} [Nm/arcmin]	2.5							
Tilting rigidity C_{2K} [Nm/arcmin]	0							
Max. breakdown torque M_{2Kmax} [Nm]	0							
Max. radial force Fr_{max} [N] for 30,000 h	340							
Max. radial force Fr_{max} [N] for 20,000 h	400							
Max. axial force Fa_{max} [N] for 30,000 h	450							
Max. axial force Fa_{max} [N] for 20,000 h	500							
Operating noise L_{PA} [dB(A)]	58							
Efficiency at full load ŋ [%]	90							
Min. operating temperature $B_{Tempmin}$ [°C]	-25							
Max. operating temperature $B_{Tempmax}$ [°C]	90							
Mounting orientation	Any							
Protection	IP54							
Weight m [kg]	1.3							
Moment of inertia J_1 [kgcm^2]	0.076	0.075	0.064	0.064	0.064	0.064	0.064	0.064

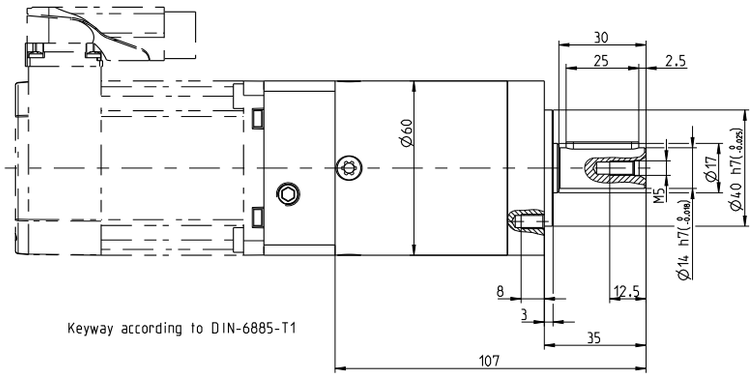
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

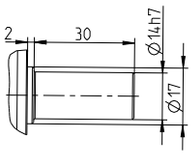
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

3-stage gear





Alternative drive shaft options



Adapter flange - Overview of dimensions

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

8GP40-060	8LSA2	8LSA3	8LVA2	8LVA3	8JSA2	8JSA3	8JSA4	80MPD	80MPF	80MPH
Flange length L [mm]	25.5	31.2	31.1	41.3	24.2	31.2	41.3	24	24	33.2
Flange diameter Q [mm]	60	90	60	80	60	70	90	60	60	90