

8GP70-115 premium

Technical data



8GP70-115hh003kimm
 8GP70-115hh004kimm
 8GP70-115hh005kimm
 8GP70-115hh007kimm
 8GP70-115hh010kimm
 8GP70-115hh012kimm
 8GP70-115hh015kimm
 8GP70-115hh016kimm
 8GP70-115hh020kimm
 8GP70-115hh025kimm
 8GP70-115hh035kimm
 8GP70-115hh040kimm
 8GP70-115hh050kimm
 8GP70-115hh070kimm
 8GP70-115hh100kimm

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]	135	180	175	175	140	135	135	180	180	175	175	180	175	175	140
Max. output torque T_{2max} [Nm]	216	288	280	280	224	216	216	288	288	280	280	288	280	280	224
E-stop torque T_{2stop} [Nm]	490	650	650	340	480	500	500	650	650	650	650	650	650	340	480
Idle torque [Nm] at 20°C and 3000 rpm	2.65	2.5	1.7	1.1	0.75	1.35	0.95	1.3	0.95	0.9	0.6	0.5	0.45	0.45	0.4
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	2000	2250	2750	3500	3500	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	1900	2050	2500	3250	3500	3800	4000	3950	4000	4000	4000	4000	4000	4000	4000
Max. drive speed n_{1max} [rpm]	8500														
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	1														
Torsional rigidity C_{t21} [Nm/arcmin]	28														
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force F_{rmax} [N] for 30,000 h	5400														
Max. radial force F_{rmax} [N] for 20,000 h	6000														
Max. axial force F_{amax} [N] for 30,000 h	7000														
Max. axial force F_{amax} [N] for 20,000 h	8000														
Operating noise L_{PA} [dB(A)]	69	63	63	63	63	63	63	63	63	63	63	63	63	63	63
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]	6.9	6.9	6.9	6.9	6.9	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
Moment of inertia J_1 [kgcm ²]	2.479	1.547	1.175	0.956	0.82	0.622	0.479	0.564	0.442	0.427	0.347	0.309	0.305	0.303	0.302

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

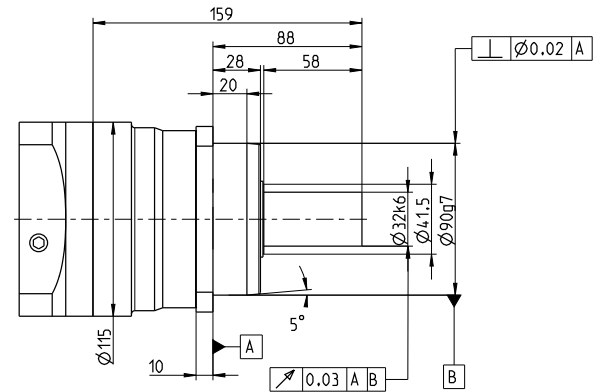
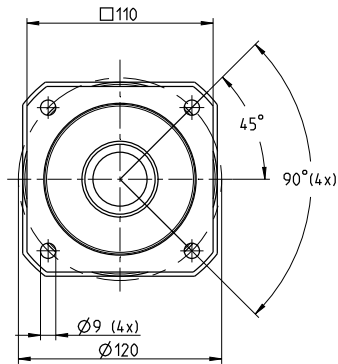
NOTE – Axial / radial force: With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2 = 100$ rpm and application factor $K_A = 1$ as well as S1 operating mode for electrical machines and $T = 30^\circ\text{C}$

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

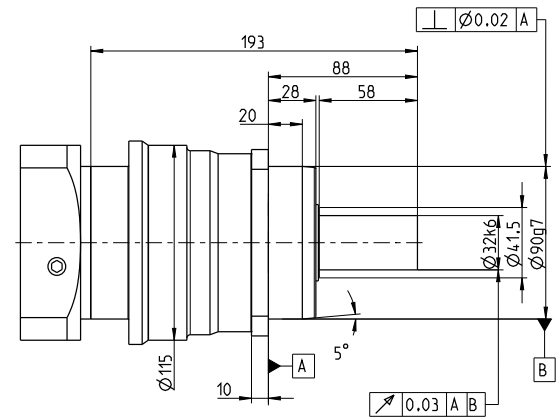
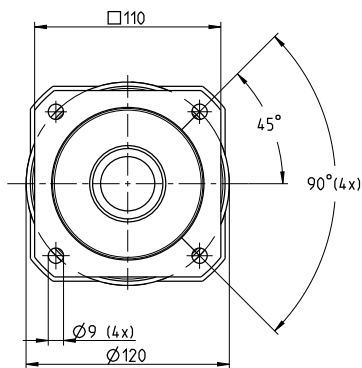
NOTE – Operating temperature: With reference to the middle of the housing surface

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

1-stage gear

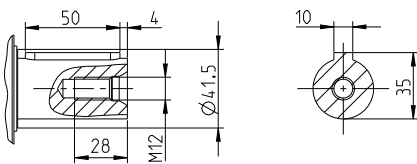


2-stage gear



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.

8GP70-115	8LSA3	8LSA4	8LSA5	8LVA2	8LVA3	8JSA3	8JSA4	8JSA5	8JSA6	8LSN4	8LSN5	80MPH
One-stage												
Flange length L [mm]	43.4	43.4	53.4	---	43.4	---	43.4	53.4	64.5	43.4	53.4	43.4
Flange diameter Q [mm]	115	115	142	---	115	---	115	115	150	120	142	115
Two-stage												
Flange length L [mm]	31.6	41.6	51.7	31.6	41.6	31.6	41.6	51.7	---	41.6	51.7	41.6
Flange diameter Q [mm]	90	115	142	90	90	90	90	115	---	115	142	90