

8GP70-190 premium

Technical data



8GP70-190hh003klmm
 8GP70-190hh004klmm
 8GP70-190hh005klmm
 8GP70-190hh007klmm
 8GP70-190hh010klmm
 8GP70-190hh012klmm
 8GP70-190hh015klmm
 8GP70-190hh016klmm
 8GP70-190hh020klmm
 8GP70-190hh025klmm
 8GP70-190hh035klmm
 8GP70-190hh040klmm
 8GP70-190hh050klmm
 8GP70-190hh070klmm
 8GP70-190hh100klmm

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]	845	950	950	900	750	845	845	950	950	950	950	950	950	900	750
Max. output torque T_{2max} [Nm]	1352	1520	1520	1440	1200	1352	1352	1520	1520	1520	1520	1520	1520	1440	1200
E-stop torque T_{2stop} [Nm]	2400	3200	3200	3200	1700	2400	2400	3200	3200	3200	3200	3200	3200	3200	1700
Idle torque [Nm] at 20°C and 3000 rpm	20.3	16	10.6	6.5	4.3	7.3	5.05	6.85	4.7	4.3	2.75	2.05	1.9	1.8	1.75
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	750	900	1100	1450	1900	1550	1900	1650	2050	2200	2800	3000	3000	3000	3000
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	700	800	950	1300	1700	1350	1650	1500	1800	2000	2550	2950	3000	3000	3000
Max. drive speed n_{1max} [rpm]	6000	6000	6000	6000	6000	6500	6500	6500	6500	6500	6500	6500	6500	6500	6500
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]	160														
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force F_{rmax} [N] for 30,000 h	17500														
Max. radial force F_{rmax} [N] for 20,000 h	20000														
Max. axial force F_{amax} [N] for 30,000 h	18500														
Max. axial force F_{amax} [N] for 20,000 h	19000														
Operating noise L_{PA} [dB(A)]	73	68	68	68	68	68	68	68	68	68	68	68	68	68	68
Efficiency at full load η [%]	98	98	98	98	98	98	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]	36	36	36	36	36	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7
Moment of inertia J_1 [kgcm ²]	55.597	37.914	31.551	26.275	23.525	11.594	9.668	10.422	8.918	8.663	7.529	7.011	6.948	6.898	6.898

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

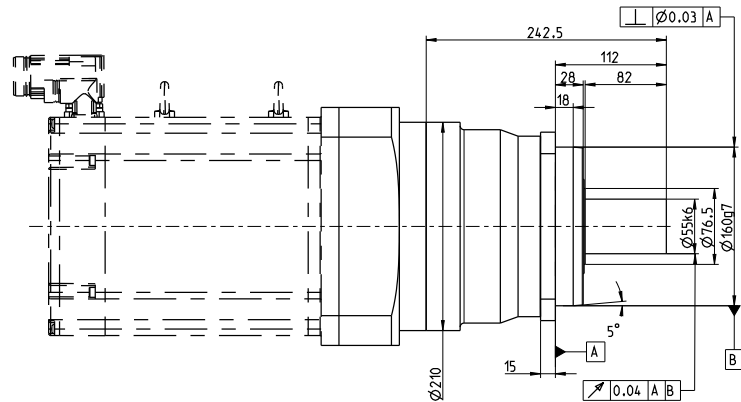
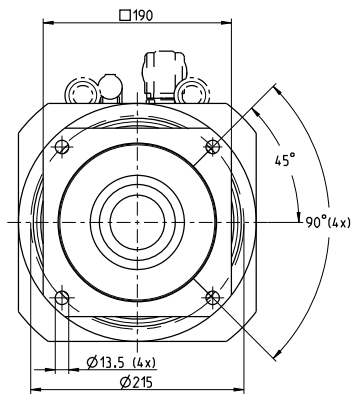
NOTE – Axial / radial force: With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2 = 100$ rpm and application factor $K_A = 1$ as well as S1 operating mode for electrical machines and $T = 30^\circ\text{C}$

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

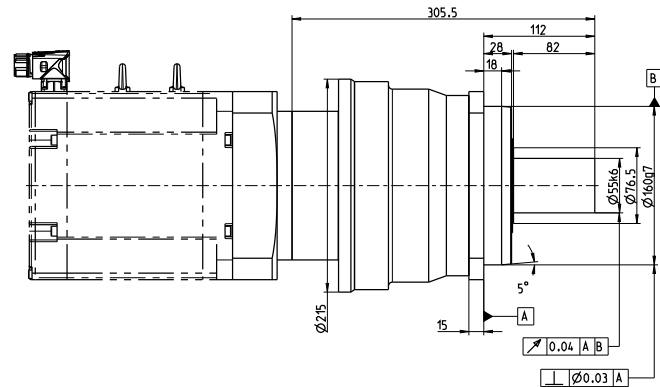
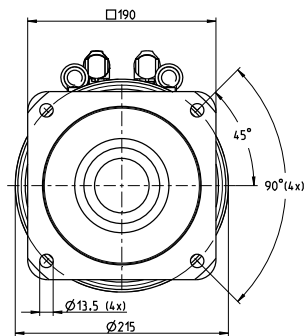
NOTE – Operating temperature: With reference to the middle of the housing surface

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

1-stage gear

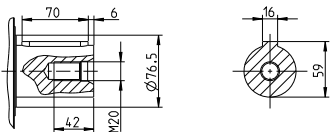


2-stage gear



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.

8GP70-190	8LSA/C4	8LSA/C5	8LSA/C6	8LSA/C7(3-5)	8LSA/C7(6-8)	8LSA/C83/84	8LSA/C85/86	8JSA5	8JSA6	8JSA7	8LSN4	8LSN5
One-stage												
Flange length L [mm]	---	68	68	68	88	88	118	68	68	88	---	68
Flange diameter Q [mm]	---	210	210	210	210	240	240	210	210	210	---	210
Two-stage												
Flange length L [mm]	50.5	50.5	50.5	60.5	82	82	112	50.5	60.5	82	50.5	50.5
Flange diameter Q [mm]	152	150	210	210	210	240	240	150	150	210	150	150