

# 8GP50-155 standard

## Technical data



8GP50-155hh004klmm

8GP50-155hh005klmm

8GP50-155hh010klmm

8GP50-155hh016klmm

8GP50-155hh020klmm

8GP50-155hh025klmm

8GP50-155hh040klmm

8GP50-155hh050klmm

8GP50-155hh100klmm

### Gearbox

Number of gear stages	1	1	1	2	2	2	2	2	2
Gear ratio $i$	4	5	10	16	20	25	40	50	100
Nominal output torque $T_{2N}$ [Nm]	460	445	210	460	460	445	460	445	210
Max. output torque $T_{2max}$ [Nm]	736	712	336	736	736	712	736	712	336
E-stop torque $T_{2stop}$ [Nm]	920	890	420	920	920	890	920	890	420
Idle torque [Nm] at 20°C and 3000 rpm	0.6	0.5	0.45	1.15	1.45	1.1	0.65	0.6	0.65
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% $T_{2N}$ and S1	1800	2150	3000	2900	3000	3000	3000	3000	3000
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% $T_{2N}$ and S1	1100	1350	3000	2050	2400	2800	3000	3000	3000
Max. drive speed $n_{1max}$ [rpm]	5500								
Max. backlash $J_1$ [arcmin]	8	8	8	12	12	12	12	12	12
Reduced backlash $J_1$ [arcmin] less than	0								
Torsional rigidity $C_{t21}$ [Nm/arcmin]	38	38	38	41	41	41	41	41	41
Tilting rigidity $C_{2K}$ [Nm/arcmin]	0								
Max. breakdown torque $M_{2Kmax}$ [Nm]	0								
Max. radial force $F_{rmax}$ [N] for 30,000 h	4600								
Max. radial force $F_{rmax}$ [N] for 20,000 h	5200								
Max. axial force $F_{amax}$ [N] for 30,000 h	6000								
Max. axial force $F_{amax}$ [N] for 20,000 h	7000								
Operating noise $L_{PA}$ [dB(A)]	70								
Efficiency at full load $\eta$ [%]	96	96	96	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]	16.5	16.5	16.5	20.5	20.5	20.5	20.5	20.5	20.5
Moment of inertia $J_1$ [kgcm <sup>2</sup> ]	7.073	6.046	4.663	6.156	5.194	5.147	4.454	4.442	4.442

**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

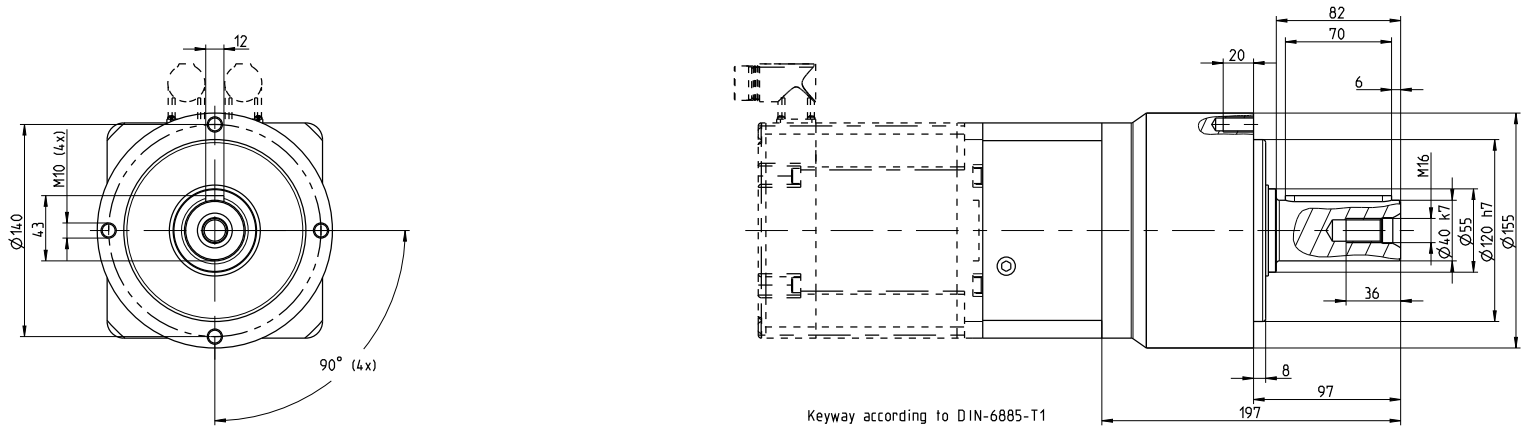
**NOTE – Axial / radial force:** With reference to the middle of the output shaft; the entries refer to an output shaft speed of  $n_2 = 100$  rpm and application factor  $K_A = 1$  as well as S1 operating mode for electrical machines and  $T = 30^\circ\text{C}$

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

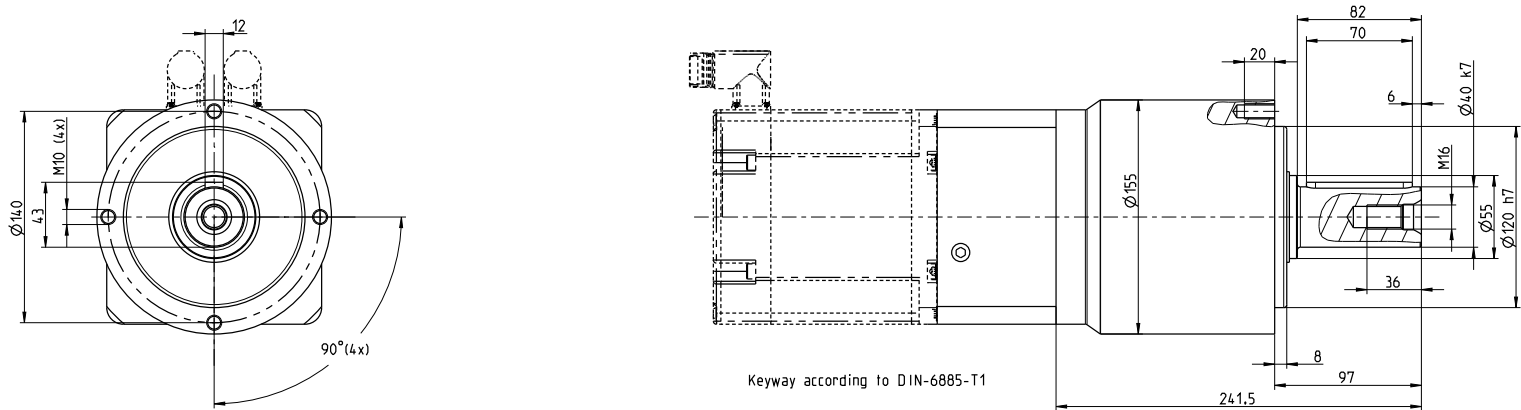
**NOTE – Operating temperature:** With reference to the middle of the housing surface

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

## 1-stage gear

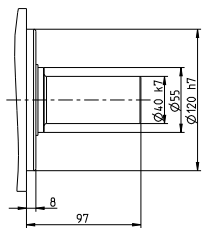


## 2-stage gear



## Alternative drive shaft options

Smooth shaft



## Adapter flange - Overview of dimensions

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

<b>8GP50-155</b>	<b>8LSA/C4</b>	<b>8LSA/C5</b>	<b>8LSA/C6</b>	<b>8LSA/ C7(3-5)</b>	<b>8LSA/ C7(6-8)</b>	<b>8JSA5</b>	<b>8JSA6</b>	<b>8JSA7</b>	<b>8LSN4</b>	<b>8LSN5</b>
Flange length L [mm]	78.5	78.5	88.5	88.5	108.5	78.5	88.5	108.5	78.5	78.5
Flange diameter Q [mm]	142	142	190	190	190	142	142	190	142	142