

8GP45-089

Technical data



8GP45-089hh003klmm

8GP45-089hh004klmm

8GP45-089hh005klmm

8GP45-089hh008klmm

8GP45-089hh010klmm

8GP45-089hh009klmm

8GP45-089hh012klmm

8GP45-089hh015klmm

8GP45-089hh016klmm

8GP45-089hh020klmm

8GP45-089hh025klmm

8GP45-089hh032klmm

8GP45-089hh040klmm

8GP45-089hh064klmm

8GP45-089hh100klmm

Gearboxes

Number of stages					1					2									
Ratio i	3	4	5	8	10	9	12	15	16	20	25	32	40	64	100				
Nominal output torque T _{2N} [Nm] ¹⁾	85	115	110	50	38	130	120	110	120		110	120	110	50	38				
Max. output torque T _{2max} [Nm] ¹⁾	136	184	176	80	61	208	192	176	192		176	192	176	80	61				
Emergency stop torque T _{2estop} [Nm] ²⁾	170	230	220	100	76	260	240	220	240		220	240	220	100	76				
No load running torque at 20°C and 3,000 [min ⁻¹] [Nm]	0.4	0.3			0.2														
Max. average input speed at 50% T _{2N} and S1 n _{1N50%} [min ⁻¹]	3350	3250	3900	4000															
Max. average input speed at 100% T _{2N} and S1 n _{1N100%} [min ⁻¹]	2200	2000	2450	4000		2600	3350	4000											
Max. input speed n _{1max} [min ⁻¹]	7000																		
Max. backlash j _{lt} [arcmin]	<8					<12													
Reduced backlash j _{lt} [arcmin]									-										
Torsional rigidity C _{t21} [Nm/arcmin]	6					6.5													
Tilting rigidity C _{2K} [Nm/arcmin]									-										
Max. tilting moment M _{2KMax} [Nm]									-										
Max. radial force for 30,000 h Fr _{max} [N] ³⁾									1700										
Max. radial force for 20,000 h Fr _{max} [N] ³⁾									2050										
Max. axial force for 30,000 h Fa _{max} [N] ³⁾									2000										
Max. axial force for 20,000 h Fa _{max} [N] ³⁾									2500										
Running noise L _{PA} [dB(A)] ⁴⁾									60										
Efficiency at full load η [%]	96					94													
Min. operating temperature B _{Tempmin} [°C] ⁵⁾									-25										
Max. operating temperature B _{Tempmax} [°C] ⁵⁾									90										
Mounting orientation									Any										
Protection class									IP 54										
Weight m [Kg]	3.2					3.7													
Moment of inertia J ₁ [Kgcm ²]	0.77	0.52	0.45	0.39		0.74	0.72	0.71	0.5	0.44		0.39							

¹⁾ The entries refer to an output shaft speed of $n_2=100\text{min}^{-1}$ and application factor $K_A=1$ as well as S1 operating mode for electrical machines and $T=30^\circ\text{C}$; depending on the respective motor shaft diameter

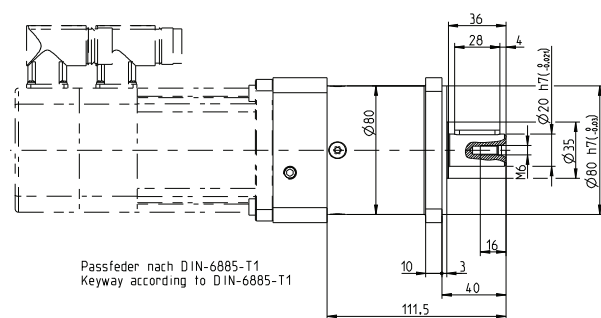
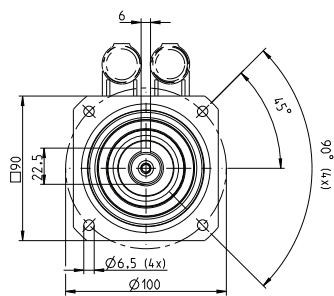
²⁾ Approved for 1000x

³⁾ With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2=100\text{min}^{-1}$ and application factor $K_A=1$ as well as S1 operating mode for electrical machines and $T=30^\circ\text{C}$

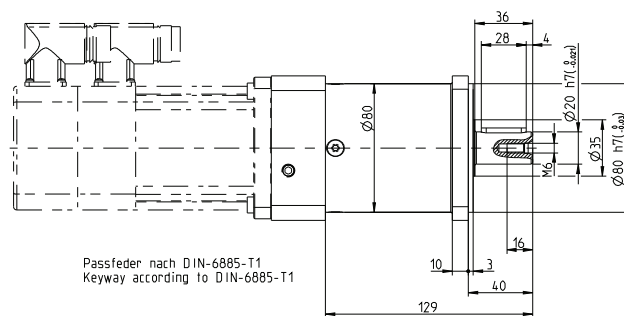
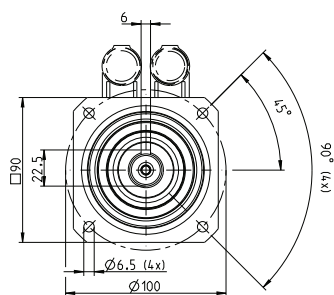
⁴⁾ Noise level at a distance of 1 m; measured at a drive speed of $n_1=3000\text{min}^{-1}$ without a load; $i=5$

⁵⁾ With reference to the middle of the housing surface

1 stage gearboxes

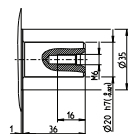


2 stage gearboxes



Alternative output shaft options

Smooth shaft



8GP45-089

Technical data



8GP45-089hh060k1mm

8GP45-089hh080k1mm

8GP45-089hh120k1mm

8GP45-089hh160k1mm

8GP45-089hh200k1mm

8GP45-089hh256k1mm

8GP45-089hh320k1mm

8GP45-089hh512k1mm

Gearboxes

Number of stages	3							
Ratio i	60	80	120	160	200	256	320	512
Nominal output torque T_{2N} [Nm] ¹⁾	110	120	110	120	110	120	110	50
Max. output torque T_{2max} [Nm] ¹⁾	176	192	176	192	176	192	176	80
Emergency stop torque T_{2estop} [Nm] ²⁾	220	240	220	240	220	240	220	100
No load running torque at 20°C and 3,000 [min ⁻¹] [Nm]	0.2							
Max. average input speed at 50% T_{2N} and S1 $n_{1N50\%}$ [min ⁻¹]	4000							
Max. average input speed at 100% T_{2N} and S1 $n_{1N100\%}$ [min ⁻¹]	4000							
Max. input speed n_{1max} [min ⁻¹]	7000							
Max. backlash j_t [arcmin]	<14							
Reduced backlash j_r [arcmin]	-							
Torsional rigidity C_{t21} [Nm/arcmin]	6.3							
Tilting rigidity C_{2K} [Nm/arcmin]	-							
Max. tilting moment M_{2KMax} [Nm]	-							
Max. radial force for 30,000 h F_{rmax} [N] ³⁾	1700							
Max. radial force for 20,000 h F_{rmax} [N] ³⁾	2050							
Max. axial force for 30,000 h F_{amax} [N] ³⁾	2000							
Max. axial force for 20,000 h F_{amax} [N] ³⁾	2500							
Running noise L_{PA} [dB(A)] ⁴⁾	60							
Efficiency at full load η [%]	90							
Min. operating temperature $B_{Tempmin}$ [°C] ⁵⁾	-25							
Max. operating temperature $B_{Tempmax}$ [°C] ⁵⁾	90							
Mounting orientation	Any							
Protection class	IP 54							
Weight m [Kg]	4.2							
Moment of inertia J_1 [Kgcmm ²]	0.51	0.5	0.7	0.39				

¹⁾ The entries refer to an output shaft speed of $n_2=100\text{min}^{-1}$ and application factor $K_A=1$ as well as S1 operating mode for electrical machines and $T=30^\circ\text{C}$; depending on the respective motor shaft diameter

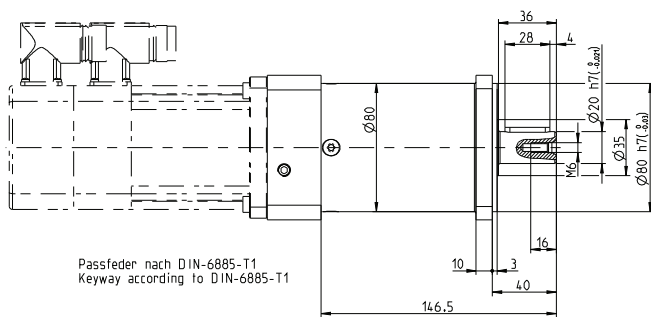
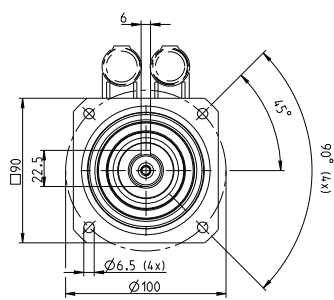
²⁾ Approved for 1000x

³⁾ With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2=100\text{min}^{-1}$ and application factor $K_A=1$ as well as S1 operating mode for electrical machines and $T=30^\circ\text{C}$

⁴⁾ Noise level at a distance of 1 m; measured at a drive speed of $n_1=3000\text{min}^{-1}$ without a load; $i=5$

⁵⁾ With reference to the middle of the housing surface

3 stage gearboxes



Alternative output shaft options

Smooth shaft

