8GA45-121

Technical data

	8GA45-121hh003klmm	8GA45-121hh004klmm	8GA45-121hh005klmm	8GA45-121hh008klmm	8GA45-121hh010klmm	8GA45-121hh009klmm	8GA45-121hh012klmm	8GA45-121hh015klmm	8GA45-121hh016klmm	8GA45-121hh020klmm	8GA45-121hh025klmm	8GA45-121hh032klmm	8GA45-121hh040klmm	8GA45-121hh064klmm	8GA45-121hh100klmm
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]	80	105	130	120	95	210	260	230	260		230	260	230	120	95
Max. output torque T_{2max} [Nm][1]	128	168	208	192	152	336	416	368	416		368	416	368	192	152
Emergency stop torque T_{2estop} [Nm][2]	160	210	260	240	190	420	520	460	520		460	520	460	240	190
No load running torque at 20°C and 3,000 [min^{-1}] [Nm]	0.8	0.7		0.6						0.5					
Max. average input speed at 50% T_{2N} and S1 $n_{1N50\%}$ [min^{-1}]	3500					3450	3500								
Max. average input speed at 100% T_{2N} and S1 $n_{1N100\%}$ [min^{-1}]	2200	2150		3300		2050	2150	2800	2650	3050	3500				
Max. input speed n_{1max} [min^{-1}]	6500														
Max. backlash j_t [arcmin]	<12					<16									
Reduced backlash j_t [arcmin]	-														
Torsional rigidity C_{t21} [Nm/arcmin]	10					13									
Tilting rigidity C_{2K} [Nm/arcmin]	-														
Max. tilting moment M_{2KMax} [Nm]	-														
Max. radial force for 30,000 h Fr_{max} [N][3]	2400														
Max. radial force for 20,000 h Fr_{max} [N][3]	2950														
Max. axial force for 30,000 h Fa_{max} [N][3]	2100														
Max. axial force for 20,000 h Fa_{max} [N][3]	2500														
Running noise L_{PA} [dB(A)][4]	75														
Efficiency at full load η [%]	94					92									
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]	12.6					14.6									
Moment of inertia J_1 [$Kgcm^2$]	5.75	3.91	3.35	2.89	2.85	5.73	5.6	5.53	3.83	3.28	3.26	2.84			

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

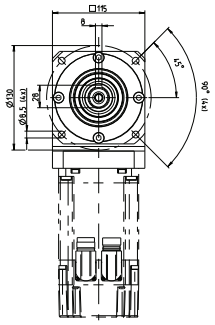
[2] Approved for 1000x

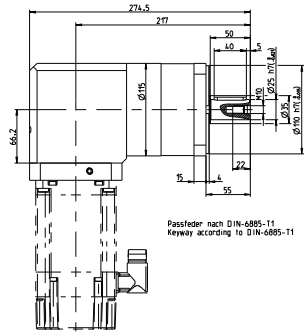
[3] With reference to the middle of the output shaft; the entries refer to an output shaft speed of n_2=100min^{-1} and application factor K_A=1 as well as S1 operating mode for electrical machines and T=30°C

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

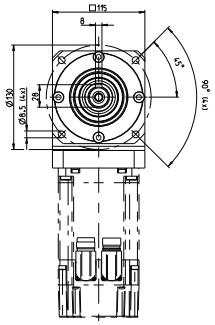
[5] With reference to the middle of the housing surface

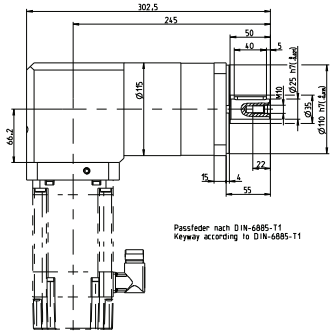
1 stage gearboxes





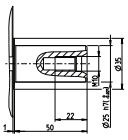
2 stage gearboxes





Alternative output shaft options

Smooth shaft



8GA45-121

Technical data

	8GA45-121hh060klmm	8GA45-121hh080klmm	8GA45-121hh120klmm	8GA45-121hh160klmm	8GA45-121hh200klmm	8GA45-121hh256klmm	8GA45-121hh320klmm	8GA45-121hh512klmm
Gearboxes								
Number of stages	3							
Ratio i	60	80	120	160	200	256	320	512
Nominal output torque T_{2N} [Nm][1)]	260		230	260	230	260	230	120
Max. output torque T_{2max} [Nm][1)]	416		368	416	368	416	368	192
Emergency stop torque T_{2estop} [Nm][2)]	520		460	520	460	520	460	240
No load running torque at 20°C and 3,000 [min^{-1}] [Nm]	0.5							
Max. average input speed at 50% T_{2N} and S1 $n_{1N50\%}$ [min^{-1}]	3500							
Max. average input speed at 100% T_{2N} and S1 $n_{1N100\%}$ [min^{-1}]	3500							
Max. input speed n_{1max} [min^{-1}]	6500							
Max. backlash j_t [arcmin]	<18							
Reduced backlash j_t [arcmin]	-							
Torsional rigidity C_{t21} [Nm/arcmin]	12							
Tilting rigidity C_{2K} [Nm/arcmin]	-							
Max. tilting moment M_{2KMax} [Nm]	-							
Max. radial force for 30,000 h Fr_{max} [N][3)]	2400							
Max. radial force for 20,000 h Fr_{max} [N][3)]	2950							
Max. axial force for 30,000 h Fa_{max} [N][3)]	2100							
Max. axial force for 20,000 h Fa_{max} [N][3)]	2500							
Running noise L_{PA} [dB(A)][4)]	75							
Efficiency at full load η [%]	88							
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]	16.6							
Moment of inertia J_1 [$Kgcm^2$]	5.62	3.28	5.47	2.84				

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

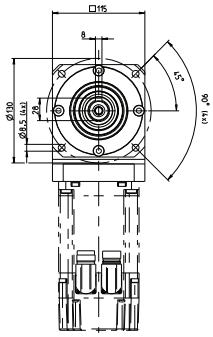
[2)] Approved for 1000x

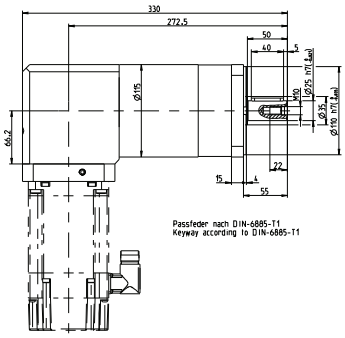
[3)] With reference to the middle of the output shaft; the entries refer to an output shaft speed of n_2=100min^{-1} and application factor K_A=1 as well as S1 operating mode for electrical machines and T=30°C

[4)] Noise level at a distance of 1 m; measured at a drive speed of n_1=3000min^{-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