

# 8GA55-090 - Technical data

Model number	8GA55-090h-h003klmm	8GA55-090h-h004klmm	8GA55-090h-h005klmm	8GA55-090h-h007klmm	8GA55-090h-h008klmm	8GA55-090h-h009klmm
<b>Gearbox</b>						
Number of gear stages	1					2
Gear ratio i	3	4	5	7	8	9
Nominal output torque $T_{2N}$ [Nm]	40	53	67	65	50	130
Max. output torque $T_{2max}$ [Nm]	64	85	107	104	80	208
Emergency stop torque $T_{zstop}$ [Nm]	180	240	220	178	190	260
Idle torque [Nm] at 20°C and 3000 rpm	0.4	0.3	0.6	0.45	0.3	
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% $T_{2N}$ and S1	2800	3000	3200	4000		2900
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% $T_{2N}$ and S1	2200	2300	2400	3300	3500	2000
Max. drive speed $n_{1max}$ [rpm]	7000					
Max. backlash $J_i$ [arcmin]	13					15
Torsional rigidity $C_{t21}$ [Nm/arcmin]	27.3	27.8	26.8	24.9	22.9	27.3
Max. radial force $F_{rmax}$ [N] for 30,000 h	1200					
Max. radial force $F_{rmax}$ [N] for 20,000 h	1400					
Max. axial force $F_{amax}$ [N] for 30,000 h	3000					
Max. axial force $F_{amax}$ [N] for 20,000 h	3000					
Operating noise $L_{pA}$ [dB(A)]	73					
Efficiency at full load $\eta$ [%]	94				93	
Min. operating temperature $B_{Tempmin}$ [°C]	-25					
Max. operating temperature $B_{Tempmax}$ [°C]	90					
Mounting orientation	Any					
Degree of protection	IP54					
Weight m [kg]	4.95					5.45
Moment of inertia $J_1$ [kgcm <sup>2</sup> ]	1.783	1.314	1.16	1.025	0.994	1.286

**Note regarding output torque / max. output torque:** Refers to output shaft speed  $n_2 = 100$  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 permitted for 30,000 revolutions!

**NOTE regarding emergency switch-off torque:** 1000 times permitted

**Note regarding axial/radial force:** Refers to the center of the output shaft (or front face of the flange output shaft). Refers to output shaft speed  $n_2 = 100$  rpm and application factor  $K_A = 1$  as well as S1 operating mode for electrical machines and  $T = 30^\circ\text{C}$ .

**Note regarding running noise:** Sound pressure level at 1 m distance at output speed  $n_1 = 3000$  rpm without load,  $i = 5$

**Note regarding operating temperature:** Refers to the middle of the housing surface

**Note regarding weight:** Planetary gearbox including universal flange (specific weight upon request)

## 8GA55-090 - Technical data

Model number	8GA55-090h-h010klmm	8GA55-090h-h012klmm	8GA55-090h-h015klmm	8GA55-090h-h016klmm	8GA55-090h-h020klmm	8GA55-090h-h025klmm
<b>Gearbox</b>						
Number of gear stages	1		2			
Gear ratio i	10	12	15	16	20	25
Nominal output torque $T_{2N}$ [Nm]	38	120	110	120		110
Max. output torque $T_{2max}$ [Nm]	61	192	176	192		176
Emergency stop torque $T_{2stop}$ [Nm]	170	240	220	240		220
Idle torque [Nm] at 20°C and 3000 rpm	0.35	0.65	0.45	0.25	0.4	1
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% $T_{2N}$ and S1	4000	3400	3800		4000	
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% $T_{2N}$ and S1	4000	2400	2900	2800	3300	3700
Max. drive speed $n_{1max}$ [rpm]	7000					
Max. backlash $J_i$ [arcmin]	13	15				
Torsional rigidity $C_{i21}$ [Nm/arcmin]	21	27.3		27.8		26.8
Max. radial force $F_{rmax}$ [N] for 30,000 h				1200		
Max. radial force $F_{rmax}$ [N] for 20,000 h				1400		
Max. axial force $F_{amax}$ [N] for 30,000 h				3000		
Max. axial force $F_{amax}$ [N] for 20,000 h				3000		
Operating noise $L_{PA}$ [dB(A)]				73		
Efficiency at full load $\eta$ [%]	92	93	92		91	
Min. operating temperature $B_{Tempmin}$ [°C]				-25		
Max. operating temperature $B_{Tempmax}$ [°C]				90		
Mounting orientation				Any		
Degree of protection				IP54		
Weight m [kg]	4.95			5.45		
Moment of inertia $J_1$ [kgcm <sup>2</sup> ]	0.957	1.243	1.226	1.015	0.968	0.962

**Note regarding output torque / max. output torque:** Refers to output shaft speed  $n_2 = 100$  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 permitted for 30,000 revolutions!

**NOTE regarding emergency switch-off torque:** 1000 times permitted

**Note regarding axial/radial force:** Refers to the center of the output shaft (or front face of the flange output shaft). Refers to output shaft speed  $n_2 = 100$  rpm and application factor  $K_A = 1$  as well as S1 operating mode for electrical machines and  $T = 30^\circ\text{C}$ .

**Note regarding running noise:** Sound pressure level at 1 m distance at output speed  $n_1 = 3000$  rpm without load,  $i = 5$

**Note regarding operating temperature:** Refers to the middle of the housing surface

**Note regarding weight:** Planetary gearbox including universal flange (specific weight upon request)

Model number	8GA55-090hh032klmm	8GA55-090hh040klmm	8GA55-090hh064klmm	8GA55-090hh100klmm
<b>Gearbox</b>				
Number of gear stages	2			
Gear ratio i	32	40	64	100
Nominal output torque $T_{2N}$ [Nm]	120	110	50	38
Max. output torque $T_{2max}$ [Nm]	192	176	80	61
Emergency stop torque $T_{2stop}$ [Nm]	240	220	190	200
Idle torque [Nm] at 20°C and 3000 rpm	0.25			
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% $T_{2N}$ and S1	4000			
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% $T_{2N}$ and S1	4000			
Max. drive speed $n_{1max}$ [rpm]	7000			
Max. backlash $J_i$ [arcmin]	15			
Torsional rigidity $C_{i21}$ [Nm/arcmin]	24.4	23.9	22.4	21.5
Max. radial force $F_{rmax}$ [N] for 30,000 h	1200			
Max. radial force $F_{rmax}$ [N] for 20,000 h	1400			
Max. axial force $F_{amax}$ [N] for 30,000 h	3000			
Max. axial force $F_{amax}$ [N] for 20,000 h	3000			
Operating noise $L_{PA}$ [dB(A)]	73			
Efficiency at full load $\eta$ [%]	91	89	79	68
Min. operating temperature $B_{Tempmin}$ [°C]	-25			
Max. operating temperature $B_{Tempmax}$ [°C]	90			
Mounting orientation	Any			
Degree of protection	IP54			
Weight m [kg]	5.45			
Moment of inertia $J_1$ [kgcm <sup>2</sup> ]	0.921	0.919	0.918	0.909

**Note regarding output torque / max. output torque:** Refers to output shaft speed  $n_2 = 100$  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 permitted for 30,000 revolutions!

**NOTE regarding emergency switch-off torque:** 1000 times permitted

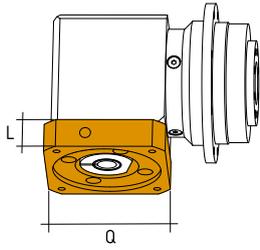
**Note regarding axial/radial force:** Refers to the center of the output shaft (or front face of the flange output shaft). Refers to output shaft speed  $n_2 = 100$  rpm and application factor  $K_A = 1$  as well as S1 operating mode for electrical machines and  $T = 30^\circ\text{C}$ .

**Note regarding running noise:** Sound pressure level at 1 m distance at output speed  $n_1 = 3000$  rpm without load,  $i = 5$

**Note regarding operating temperature:** Refers to the middle of the housing surface

**Note regarding weight:** Planetary gearbox including universal flange (specific weight upon request)



**Adapter flange 8GA55-090**

The gearbox is fastened to the motor's output side using adapter plates tailored precisely to the respective motor.

Dimensions	8LSAA	8LSA3	8LSA4	8LSC4	8LVA2	8LVA3	8JSA3	8JSA4	8LSN4	80MPH
Flange length L [mm]	21.5	21.5	31.5	31.5	21.5	31.5	21.5	31.5	31.5	23.5
Flange diameter Q [mm]	80	90	100	100	80	80	80	90	115	90