

gearbox



- low backlash
- high output torque
- high efficiency (96%)
- low noise
- mountable on stepper motor (NEMA-standard)

part number

GEA - 60 - 3 - 60 - ST - 063

shaft diameter (motor)	
063	6,35mm
080	8,00mm
140	14,00mm

motor type	
ST	stepper motor

flange dimension	
60	60mm
90	90mm

reduction ratio	
3	i = 3
5	i = 5
10	i = 10
15	i = 15

size	
60	size 60

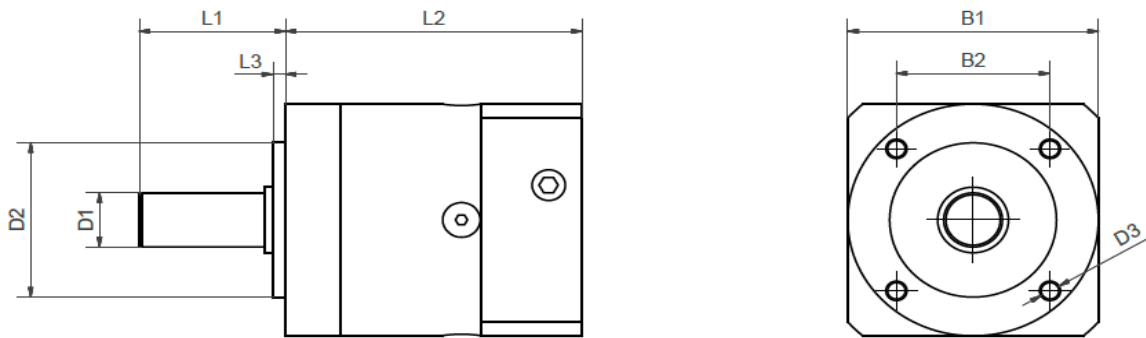
product group	
GEA	gear

technical data		
general data		
life time	[h]	30.000
seal		material NBR (Nitrile Butadiene Rubber) temperature-resistant from -30 °C to +120 °C
protection class		IP54 (sure-seal bearing)
lubricating		maintenance-free
permissible operating temperature	[°C]	-25 / +90
operation mode		S1
max. permitted motor weight, static	[kg]	3,5
max. axial load in relation to midpoint of the shaft	[N]	450
max. radial load in relation to midpoint of the shaft	[N]	340
max. torque of the clamp screw on the motor shaft	[Nm]	4,5
Key DIN 6885-1	[mm]	5x5x25
Shaft inner diameter	[mm]	M5x12,5

reduction dependent data									
flange dimension		60 (NEMA23,23XL)				90 (NEMA34)			
reduction ratio		3	5	10	15	3	5	10	15
nominal torque	[Nm]	28	40	15	44	28	40	15	44
emergency off torque (permitted 1000 times at gearbox output)	[Nm]	66	80	30	88	66	80	30	88
max. torsional backlash / output shaft	[arcmin]	<12	<12	<12	<15	<10	<10	<12	<15
degree of efficiency at permanent output torque	[%]	96	96	96	94	96	96	96	94
max. input speed: at operating temperature -10°C / +90°C	[U/min]	4200	4500	4500	4500	4500	4500	4500	4500
mass inertia	[kgcm ²]	0,135	0,078	0,064	0,077	0,135	0,078	0,064	0,077
idle torque	[Nm]	0,05	0,03	0,02	0,02	0,05	0,03	0,02	0,02
weight with standard flange	[kg]	0,88	0,89	0,9	1,05	1,35	1,37	1,4	1,55
operating noise at 3000U/min without load at distance of 1m	[dB]	58	58	58	58	58	58	58	58

material	
input flange	aluminium - untreated
box	steel - black
output flange	aluminium - untreated

dimension
GEA-60-...



type	B1 [mm]	B2 [mm]	D1 Ø [mm] h7	D2 Ø [mm] h7	D3 Ø [mm]	L1 [mm]	L2 [mm]	L3 [mm]
GEA-60-3-60-ST-063 (NEMA23)	60,0	36,7	14,0	40,0	M5	35,0	71,0	3,0
GEA-60-3-60-ST-080 (NEMA23XL)	60,0	36,7	14,0	40,0	M5	35,0	71,0	3,0
GEA-60-3-90-ST-140 (NEMA34)	90,0	36,7	14,0	40,0	M5	35,0	86,0	3,0
GEA-60-5-60-ST-063 (NEMA23)	60,0	36,7	14,0	40,0	M5	35,0	71,0	3,0
GEA-60-5-60-ST-080 (NEMA23XL)	60,0	36,7	14,0	40,0	M5	35,0	71,0	3,0
GEA-60-5-90-ST-140 (NEMA34)	90,0	36,7	14,0	40,0	M5	35,0	86,0	3,0
GEA-60-10-60-ST-063 (NEMA23)	60,0	36,7	14,0	40,0	M5	35,0	71,0	3,0
GEA-60-10-60-ST-080 (NEMA23XL)	60,0	36,7	14,0	40,0	M5	35,0	71,0	3,0
GEA-60-10-90-ST-140 (NEMA34)	90,0	36,7	14,0	40,0	M5	35,0	86,0	3,0
GEA-60-15-60-ST-063 (NEMA23)	60,0	36,7	14,0	40,0	M5	35,0	84,0	3,0
GEA-60-15-60-ST-080 (NEMA23XL)	60,0	36,7	14,0	40,0	M5	35,0	84,0	3,0
GEA-60-15-90-ST-140 (NEMA34)	90,0	36,7	14,0	40,0	M5	35,0	99,0	3,0