



EPL SERIES - EPL-X (NEMA)

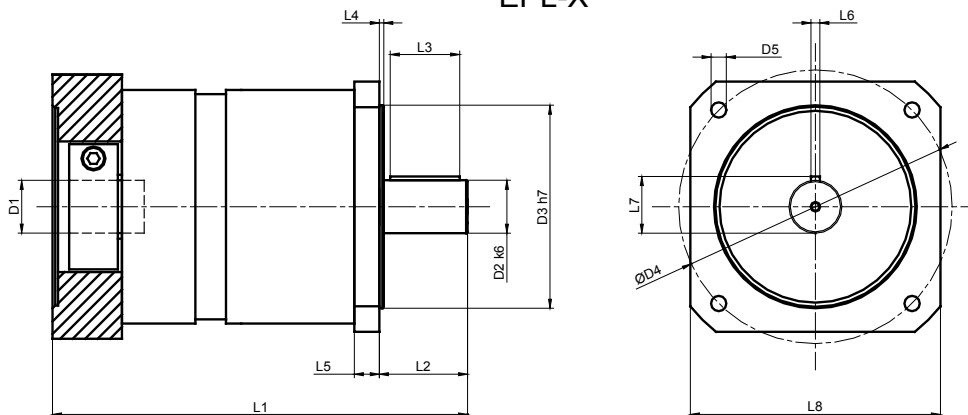


EPL-X (NEMA) Series		17	23	34	42	56	
Stock Ratios		N/A	3, 5, 7, 10, 25, 50, 100		N/A	N/A	
All Ratios Available		1-stage: 3, 4, 5, 7, 10 2-stage: 12, 16, 20, 25, 35, 40, 50, 70, 100 3-stage: 120, 160, 200, 250, 350, 490, 700, 1000					
Nominal Output Torque (T _{2n})	Nm (lb-in)	3:1	5 (44)	20 (177)	40 (354)	100 (885)	100 (885)
		4, 5, 7:1	6.5 (58)	26 (230)	54 (478)	120 (1062)	120 (1062)
		10, 100, 1000:1	5 (44)	16 (142)	40 (354)	105 (929)	105 (929)
		12:1	14 (124)	36 (319)	80 (708)	170 (1505)	170 (1505)
		all other ratios	16 (142)	42 (372)	100 (885)	210 (1859)	210 (1859)
Max Accel. Torque (T _{2B})	Nm (lb-in)	3:1	10 (89)	36 (319)	70 (620)	180 (1593)	180 (1593)
		4, 5, 7:1	13 (115)	44 (389)	100 (885)	200 (1770)	200 (1770)
		10, 100, 1000:1	10 (89)	24 (212)	75 (664)	180 (1593)	180 (1593)
		12:1	17.5 (155)	45 (398)	100 (885)	215 (1903)	215 (1903)
		all other ratios	20 (177)	52 (460)	125 (1106)	255 (2257)	255 (2257)
Emergency Output Torque (T _{2not})	Nm (lb-in)	3:1	20 (177)	72 (637)	160 (1416)	200 (1770)	200 (1770)
		4, 5, 7:1	26 (230)	84 (743)	216 (1912)	480 (4248)	480 (4248)
		10, 100, 1000:1	20 (177)	62 (549)	160 (1416)	410 (3629)	410 (3629)
		12:1	28 (248)	72 (637)	160 (1416)	400 (3540)	400 (3540)
		all other ratios	32 (283)	84 (743)	216 (1912)	480 (4248)	480 (4248)
Nominal Speed (n _{1n})	RPM	-	3500	3500	3000	2500	2500
Max Input Speed (n _{1max})		6000	6000	6000	5000	5000	
Standard Output Backlash* (j)	arcmin	1-stage	< 20	< 10	< 10	< 8	< 8
		2-stage	< 24	< 14	< 14	< 12	< 12
		3-stage	< 30	< 18	< 18	< 16	< 16
Allowable Radial Load (F _{rad}) ¹⁾	N (lbs)	-	375 (84)	450 (101)	900 (203)	2175 (489)	2175 (489)
Allowable Axial Load (F _{axial})	N (lbs)	-	300 (68)	420 (95)	650 (146)	1375 (309)	1375 (309)
Torsional Stiffness* (C _{t21})	Nm/arcmin (lb-in/arcmin)	10,100,1000	Contact GAM	1.3 (11.5)	3.4 (30.1)	8.3 (73.5)	8.3 (73.5)
		7,70,700	Contact GAM	1.7 (15)	4.8 (42.5)	13.6 (120.4)	13.6 (120.4)
		all other ratios	Contact GAM	2.4 (21.2)	7.1 (62.8)	17.2 (152.2)	17.2 (152.2)
Weight (m)	kg (lbs)	1-stage	0.4 (0.88)	1.0 (2.2)	2.3 (5.1)	5.8 (12.8)	5.8 (12.8)
		2-stage	0.5 (1.1)	1.3 (2.9)	3.1 (6.8)	7.9 (17.4)	7.9 (17.4)
		3-stage	0.6 (1.32)	1.6 (3.5)	3.9 (8.6)	10.0 (22.1)	10.0 (22.1)
Noise Level (L _{pa})	dB(A)	-	< 60	< 66	< 68	< 70	< 70
Mass Moment of Inertia (J ₁)	kg cm ² (lb-in ²)	3:1	0.0144 (0.005)	0.45 (0.154)	1.37 (0.468)	6.54 (2.235)	6.54 (2.235)
		4:1, 12:1, 16:1	0.0096 (0.003)	0.38 (0.130)	1.14 (0.390)	4.8 (1.640)	4.8 (1.640)
		5:1, 20:1, 25:1	0.0096 (0.003)	0.36 (0.123)	1.05 (0.359)	4.05 (1.384)	4.05 (1.384)
		7:1, 35:1	0.0152 (0.005)	0.35 (0.120)	0.97 (0.331)	3.4 (1.162)	3.4 (1.162)
		10:1, 40:1 - 100:1	0.0078 (0.003)	0.34 (0.116)	0.93 (0.318)	3.1 (1.059)	3.1 (1.059)
		120:1 - 1000:1	0.0078 (0.003)	0.34 (0.116)	0.93 (0.318)	3.12 (1.066)	3.12 (1.066)
Efficiency at Load	1-stage: 94% 2-stage: 92% 3-stage: 90%						
Service Life	> 30,000 hours						
Lubrication	Mineral Grease EPO						
Protection Rating	IP 64						
Operating Temperature Range	-20°C to 90°C						

1) Load applied at center of output shaft @100 RPM

* See page 224 for definitions

EPL-X



EPL-X (NEMA) Series		17		23		34		42		56	
		mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)
D1 _{max standard} *	motor shaft diameter	11	(0.433)	14	(0.551)	19	(0.748)	24	(0.945)	24	(0.945)
D1 _{max available} *	motor shaft diameter	-	(-)	16	(0.63)	24	(0.945)	32	(1.26)	32	(1.26)
D2 k6	output shaft diameter	9.525	(0.375)	12.7	(0.5)	19.050	(0.75)	25	(0.984)	25	(0.984)
D3 h7	pilot diameter	21.97	(0.865)	38.1	(1.5)	73	(2.874)	55.55	(2.187)	114.300	(4.50)
D4	bolt circle	43.8	(1.724)	66.7	(2.626)	98.400	(3.874)	125.7	(4.949)	177.800	(7.000)
D5	mounting holes	3.25	(0.128)	5	(0.197)	5.5	(0.217)	7.1	(0.28)	10.200	(0.402)
L1 1-stage**	gearbox total length	108	(4.252)	111	(4.37)	147	(5.787)	199	(7.835)	199	(7.835)
L1 2-stage**		124	(4.882)	133	(5.236)	180	(7.087)	239	(9.409)	239	(9.409)
L1 3-stage**		139.5	(5.492)	155	(6.102)	213	(8.386)	280	(11.024)	280	(11.024)
L2	shaft length	25.4	(1.000)	25.4	(1.000)	31.8	(1.252)	42	(1.654)	41	(1.614)
L3	key length	-	(-)	19.05	(0.75)	25.4	(1)	38	(1.496)	32	(1.26)
L4	pilot height	1.6	(0.063)	1.6	(0.063)	1.7	(0.067)	2.4	(0.094)	4	(0.157)
L5	flange thickness	4.9	(0.193)	5	(0.197)	10	(0.394)	19	(0.748)	20	(0.7874)
L6	key width	-	(-)	3.175	(0.125)	4.78	(0.188)	8	(0.315)	8	(0.315)
L7	key height / flat height	9.14	(0.36)	14.22	(0.56)	21.290	(0.838)	28	(1.102)	28	(1.102)
L8	flange size	40	(1.575)	65	(2.559)	90	(3.543)	120	(4.724)	145	(5.709)

* for larger motor shaft diameters, please contact GAM **depending on the motor, value can vary *** long motor shafts can be accommodated, but overall gearbox length will grow



Recommended Output Coupling (if necessary)

	KLC-25	KLC-50	KLC-125	KM-270	KM-400
metal bellows	KLC-25	KLC-50	KLC-125	KM-270	KM-400
elastomer	EKM-20	EKM-60	EKM-150	EKM-300	EKM-400

TYPE CODES FOR EPL SERIES (EPL-X (NEMA))

Example: EPL - X - 023 - 005 G - M0000 - H0000 - C0000

Gearbox Series

EPL w/ NEMA output

Gearbox Style

X = NEMA output

Gearbox Size

017, 023, 034, 042, 056

Ratio

3, 4, 5, 7, 10, 12, 16, 20, 25, 35, 40,
50, 70, 100, 120, 160, 200, 250,
350, 490, 700, 000=1000

Configuration Code

Assigned by GAM

Output Code

Assigned by GAM

Motor Code

Assigned by GAM

Options Available for This Product

G = Key on output shaft per DIN6885

Tolerances (mm)

Size	k6	h7
Over 10	+0.012	0
Thru 18	+0.001	-0.018
Over 18	+0.015	0
Thru 30	+0.002	-0.021
Over 30	+0.018	0
Thru 50	+0.002	-0.025
Over 50	+0.021	0
Thru 80	+0.002	-0.030
Over 80	+0.025	0
Thru 120	+0.003	-0.035