



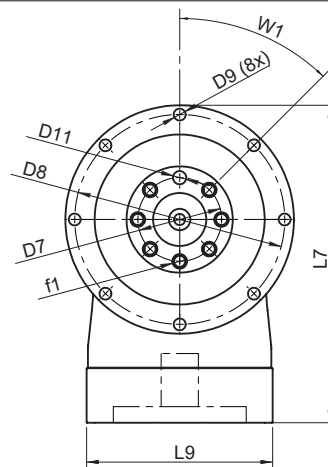
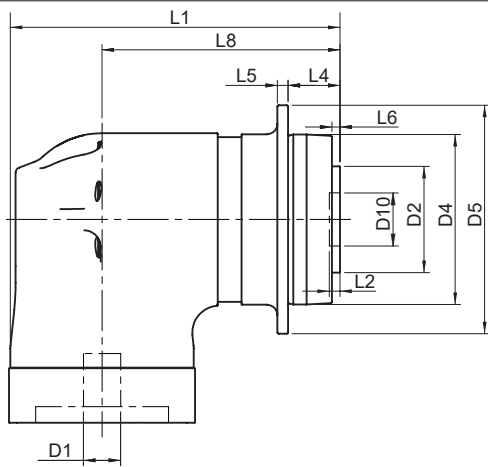
EPR SERIES - EPR-F



EPR-F Series		64	90	110	
All Ratios Available		1-Stage Planetary: 3, 4, 5, 7, 10 2-Stage Planetary: 12, 16, 20, 25, 35, 40, 50, 70, 100 3-Stage Planetary: 120, 160, 200, 250, 350, 490, 700, 1000			
Nominal Output Torque (T_{2n})	Nm (lb-in)	3:1	16 (142)	33 (292)	82 (726)
		4, 5, 7:1	22 (195)	45 (398)	101 (894)
		10, 100, 1000:1	14 (124)	34 (301)	90 (797)
		all other ratios	30 (266)	71 (628)	149 (1319)
Max Acceleration Output Torque (T_{2B})	Nm (lb-in)	3:1	30 (266)	57 (504)	148 (1310)
		4, 5, 7:1	37 (327)	84 (743)	168 (1487)
		10, 100, 1000:1	21 (186)	65 (575)	155 (1372)
		all other ratios	37 (327)	89 (788)	181 (1602)
Emergency Output Torque (T_{2not})	Nm (lb-in)	3:1	72 (637)	160 (1416)	200 (1770)
		4, 5, 7:1	84 (743)	216 (1912)	480 (4248)
		10, 100, 1000:1	62 (549)	160 (1416)	410 (3629)
		all other ratios	84 (743)	216 (1912)	480 (4248)
Nominal Speed (n_{1n})	RPM	-	3300	2900	2400
Max Speed (n_{1max})	RPM	-	6000	6000	5000
Standard Output Backlash* (j)	arcmin	1-stage	≤12	≤12	≤10
		2-stage	≤14	≤14	≤12
		3-stage	≤15	≤15	≤12
Allowable Radial Load (F_{rad}) ¹⁾	N (lbs)	-	1200 (270)	2000 (450)	3100 (697)
Allowable Axial Load (F_{axial})	N (lbs)	-	1100 (247)	2500 (562)	3900 (877)
Torsional Stiffness* (C_{t21})	Nm/arcmin (lb-in/arcmin)	10,100,1000	2.8 (25)	5.4 (48)	10 (89)
		7,70,700	3.2 (28)	6.8 (60)	16 (142)
		all other ratios	3.9 (35)	9.1 (81)	19 (168)
Weight (m)	kg (lbs)	1-stage	3.0 (6.6)	5.6 (12)	15 (33)
		2-stage	3.3 (7.3)	6.4 (14)	17 (37)
		3-stage	3.6 (7.9)	7.2 (16)	19 (42)
Noise Level (L_{pA})	dB(A)	-	< 75	< 78	< 78
Mass Moment of Inertia (J_1)	kg cm ² (lb-in ²)	3:1	1.11 (0.38)	5.8 (2.0)	24 (8.2)
		4:1, 12:1, 16:1	1.00 (0.34)	5.5 (1.9)	22 (7.5)
		5:1, 20:1, 25:1	0.98 (0.33)	5.2 (1.8)	20 (6.8)
		7:1, 35:1	0.89 (0.30)	5.1 (1.7)	19 (6.5)
		10:1, 40:1 - 100:1	0.88 (0.30)	5.1 (1.7)	19 (6.5)
		120:1 - 1000:1	0.88 (0.30)	5.1 (1.7)	19 (6.5)
Efficiency at Load	1-stage: 92% 2-stage: 90% 3-stage: 88%				
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

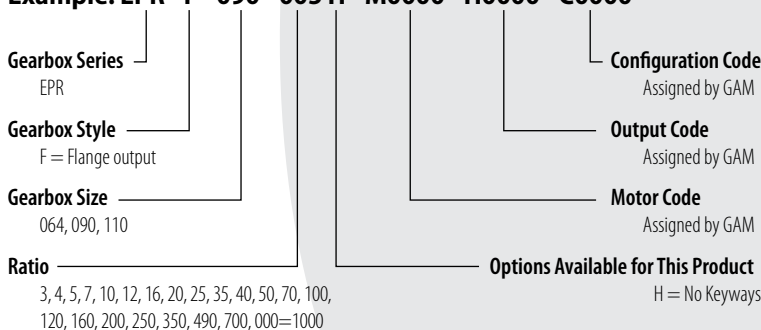


EPR-F Series		64		90		110	
		mm	(in)	mm	(in)	mm	(in)
D1 _{max standard}	motor shaft diameter	14	(0.551)	19	(0.748)	24	(0.945)
D2 h7	output flange diameter	40	(1.575)	63	(2.480)	80	(3.150)
D4 h7	pilot diameter	64	(2.520)	90	(3.543)	110	(4.331)
D5	flange diameter	86	(3.386)	118	(4.646)	145	(5.709)
D7	inner bolt circle	31.5	(1.240)	50	(1.968)	63	(2.480)
D8	outer bolt circle	79	(3.110)	109	(4.291)	135	(5.315)
D9	mounting hole diameter (8x)	4.5	(0.177)	5.5	(0.217)	5.5	(0.217)
D10 H7	flange pilot	20	(0.787)	31.5	(1.240)	40	(1.575)
D11 H7	dowel diameter	5	(0.197)	6	(0.236)	6	(0.236)
f1	flange tap	(7) M5x10		(7) M6x12		(15) M6x12	
L1 (1-stage)*	gearbox Length	124.5	(4.902)	169	(6.654)	238.5	(9.390)
L1 (2-stage)*		146.5	(5.768)	202	(7.953)	279.5	(11.004)
L1 (3-stage)*		168.5	(6.634)	235	(9.252)	320.5	(12.618)
L2	flange pilot depth	4	(0.157)	6	(0.236)	6	(0.236)
L4	output length	19.5	(0.768)	30	(1.181)	29	(1.142)
L5	flange thickness	4	(0.157)	7	(0.276)	8	(0.315)
L6	output flange length	3	(0.118)	6	(0.236)	6	(0.236)
W1	output flange thread angle	45°		45°		22.5°	
L7**	gearbox height	119.5	(4.705)	170	(6.693)	197	(7.756)
L8 (1-stage)	length to input centerline	89.5	(3.524)	122	(4.803)	178.5	(7.028)
L8 (2-stage)		111.5	(4.390)	155	(6.102)	219.5	(8.642)
L8 (3-stage)		133.5	(5.256)	188	(7.402)	260.5	(10.256)
L9**	adapter size	70	(2.756)	90	(3.543)	120	(4.724)

* depending on the motor, value can vary

TYPE CODES FOR EPR SERIES (EPR-F)

Example: EPR - F - 090 - 005 H - M0000 - H0000 - C0000



Tolerances (mm)			
Over	To (incl.)	h7	H7
6	10	0 -0.015	+0.015 0
10	18	0 -0.018	+0.018 0
18	30	0 -0.021	+0.021 0
30	50	0 -0.025	+0.025 0
50	80	0 -0.030	+0.030 0
80	120	0 -0.035	+0.035 0
120	180	0 -0.040	+0.040 0