



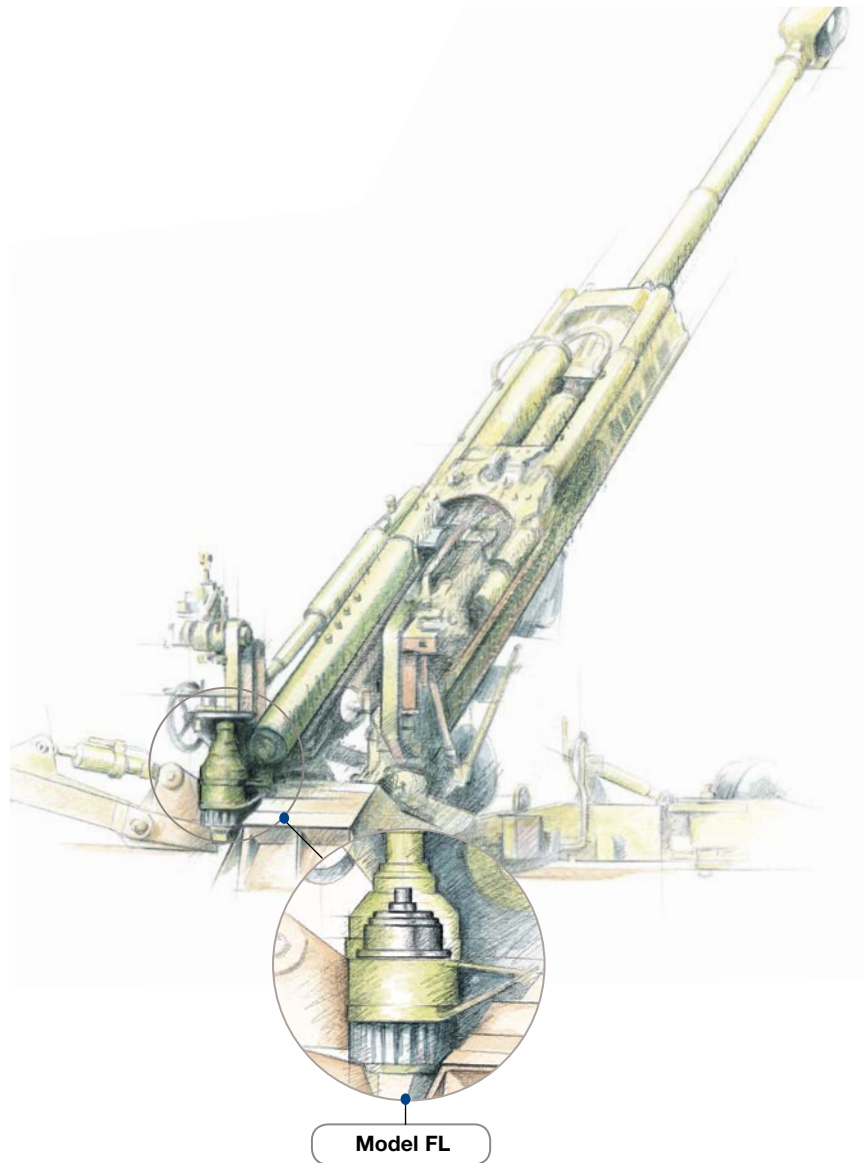
Artillery and Tank Applications



Bi-Directional Backstopping

Form-Lock (FL) bi-directional clutches are used on gun turret drive systems for military tanks and artillery systems. These clutches, also known as "No-Backs", provide the holding brake and allow for manual positioning of the elevation and azimuth drives. The clutch is used to smoothly and quickly position a turret or gun barrel in the presence of the overhauling forces of gravity, providing precise movements that only a Form-Lock can.

Additional uses include winch drives and in combination with ball screws to smoothly raise and lower large critical loads.



For Technical Assistance Call

800-927-3262

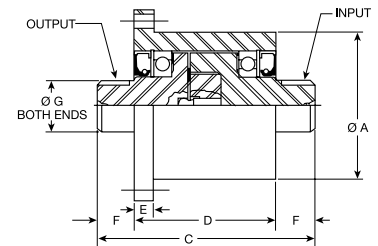
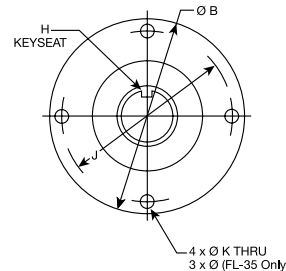
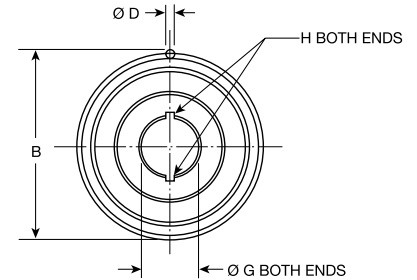
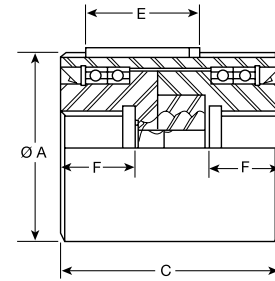
 **Formsprag Clutch®**
Altra Industrial Motion



Model FL

Dimensions Inches (mm)

Model No.	Torque in.-lb. (Nm)	A	B	C	D	E	F	G	H Woodruff Key	Wt. lbs. (Kg)
FL-47A	310 (35)	1.8504 (47 h6)	1.8971 (48.19)	2.438 (61.93)	.0937 (2.38)	1.25 (31.75)	.835 (21.21)	.5635 (14.3 H6)	405	1.5 (.68)
FL-52A	400 (45)	2.0472 (52 h6)	2.0941 (53.19)	2.620 (66.55)	.0937 (2.38)	1.25 (31.75)	.890 (22.61)	.625 (15.9 H6)	405	1.9 (.86)
FL-62A	800 (90)	2.4409 (62 h6)	2.5034 (63.59)	2.870 (72.90)	.1250 (3.18)	1.50 (38.1)	.937 (23.80)	.750 (19.05 H6)	406	3.0 (1.36)
FL-72A	1325 (150)	2.8441 (72 h6)	2.8971 (73.59)	3.245 (82.42)	.1250 (3.18)	1.75 (44.45)	1.045 (26.54)	.875 (22.23 H6)	507	4.6 (2.1)
FL-80A	2200 (249)	3.1496 (80 h6)	3.2277 (81.98)	3.620 (91.95)	.1562 (3.97)	2.00 (50.8)	1.156 (29.36)	1.000 (25.4 H7)	608	6.3 (2.86)
FL-90A	2650 (300)	3.5433 (90 h6)	3.6214 (91.98)	3.870 (98.30)	.1562 (3.97)	2.25 (57.15)	1.189 (30.20)	1.125 (28.58 H7)	609	8.5 (3.86)
FL-110A	4425 (500)	4.3297 (110 h6)	4.4244 (112.38)	4.495 (114.17)	.1876 (4.77)	2.25 (57.15)	1.322 (33.58)	1.375 (34.92 H7)	810	14.8 (6.7)



For additional information, contact Formsprag Clutch.

Dimensions Inches (mm)

Model No.	Torque in.-lb. (Nm)	A	A	B	C	D	E	F	G	G	H	J	K	Wt. lbs. (Kg)
FL-35	100 (11.5)	1.388 (35.26)	1.378 (35.00)	2.00 (50.8)	2.35 (59.7)	1.35 (34.3)	.13 (3.3)	.50 (12.7)	.3745 (9.51 h8)	.3740	.094 dia (2.39) pin hole	1.750 (44.45)	.141 (3.58)	.5 (.24)
FL-42	250 (28.5)	1.663 (42.24)	1.653 (42.00)	2.50 (63.5)	3.00 (76.2)	2.00 (50.8)	.25 (6.4)	.50 (12.7)	.500 (12.7 h8)	.499	.125 x .06 (3.18 x 1.52)	2.125 (53.98)	.190 (4.83)	1.2 (.54)
FL-55	600 (68)	2.175 (55.25)	2.165 (55.00)	2.88 (73.2)	3.31 (84.1)	2.31 (58.7)	.36 (9.1)	.50 (12.7)	.500 (12.7 h8)	.499	.125 x .06 (3.18 x 1.52)	2.560 (65.02)	.219 (5.56)	2.2 (1.01)
FL-75	1200 (136)	2.963 (75.26)	2.953 (75.00)	3.88 (98.6)	4.34 (110.2)	2.84 (72.1)	.40 (10.2)	.75 (19.1)	1.000 (25.4 h8)	.999	.187 x .09 (4.75 x 2.3)	3.380 (85.85)	.250 (6.35)	5.2 (2.36)
FL-90	2400 (271)	3.553 (90.25)	3.543 (90.00)	4.50 (114.3)	4.98 (126.5)	2.98 (75.7)	.44 (11.2)	1.00 (25.4)	1.125 (28.58 h6)	1.124	.250 x 1.3 (6.35 x 3.3)	4.000 (101.60)	.281 (7.14)	7.9 (3.57)
FL-115	4800 (542)	4.538 (115.27)	4.528 (115.00)	6.00 (152.4)	5.31 (134.9)	3.31 (84.1)	.50 (12.7)	1.00 (25.4)	1.250 (31.75 h6)	1.249	.250 x .13 (6.35 x 3.3)	5.250 (133.35)	.312 (7.92)	14.3 (6.47)