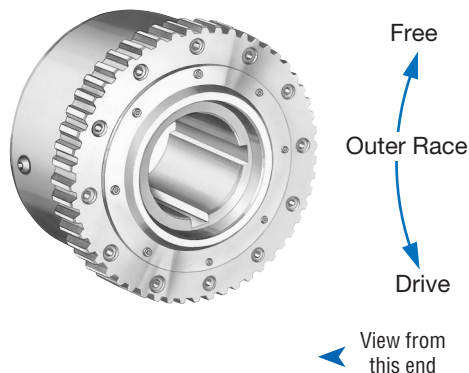


Overrunning, Backstopping Ball Bearing Supported Sprag, High Torque Drawworks Clutches



Left Hand rotation shown.
(Right Hand opposite.)

Specify direction of rotation when ordering.

Drawworks clutches are designed for use with Hydromatic® brakes on drilling rigs. They are available over a range of torque capacities and provide reliable performance in original equipment or as a replacement for type C2 and type A clutches.

Model FSD-27 Sprag

Use with Hydromatic brakes having 6" or smaller shafts.

- Interchangeable with National Supply Company's model 703250-C2

Model FSD-65 Sprag

Use with Hydromatic brakes having 7.5" shafts.

- Directly interchangeable with other type A clutches

Model FSD-125 Sprag

Use with Hydromatic brakes having 7.5" shafts, can be substituted for type A clutches.

- For use with type A spider and sleeve

Model FSD-300 Sprag

Use with Hydromatic brakes having 9" shafts.

- Provides five times the torque capacity than type A clutches

The Model HBG series are designed for use on Hydro-dynamic Brakes on drilling rigs, using Ramp & Roller Technology which offers better availability.

Model HBG-27MA Ramp & Roller

Use with Hydromatic brakes having 6.5" or smaller straight or tapered shafts.

- Interchangeable with National type C clutches

Model HBG-63MA Ramp & Roller

Use with Hydromatic brakes having 7.5" straight and tapered shafts.

- Interchangeable with National type A clutches

Model HBG-135MA Ramp & Roller

Use with Hydromatic brakes having 7.5" tapered and larger shafts.

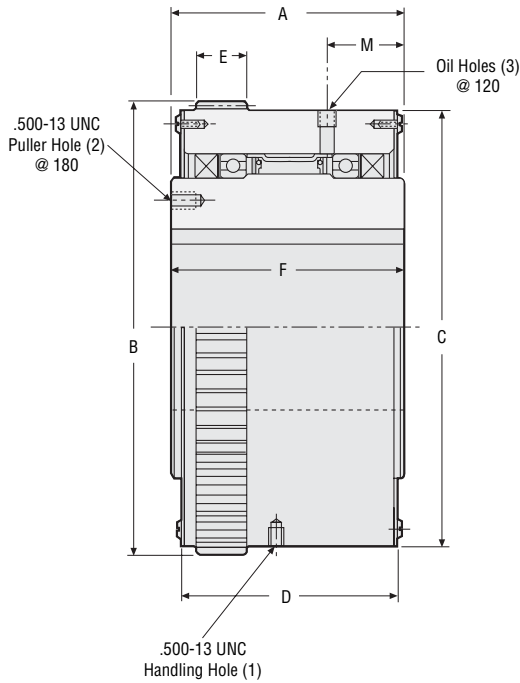
- Interchangeable with National Type D-1

FSD and HBG clutches are shipped from the factory with Automatic Transmission fluid (ATF).

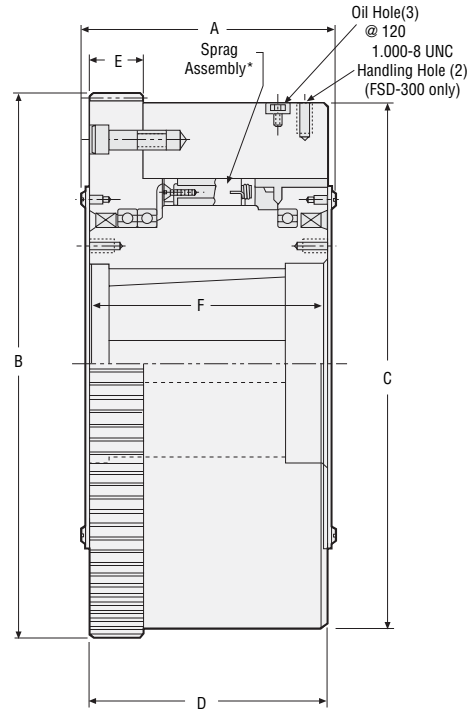
Specifications/spline data

Size	Torque Capacity lb.ft. (Nm)	Resistance after run-in lb.ft. (Nm)	Shipping Weight lb. (kg)	No. of Teeth	Pressure Pitch	Angle	Pitch Diameter in. (mm)	Major Dia. in. (mm)	Minor Dia. in. (mm)
FSD-27	27,000 (36,720)	10 (14)	185 (84)	40	3/6	30°	13.333 (338.66)	13.597/13.592 (345.36/345.23)	12.929 (328.40)
FSD-65	65,000 (88,400)	25 (35)	508 (231)	53	3/6	30°	17.666 (448.72)	17.929/17.915 (455.39/455.04)	17.263 (438.48)
FSD-125	125,000 (170,000)	30 (40)	615 (279.5)	53	3/6	30°	17.666 (448.72)	17.929/17.915 (455.39/455.04)	17.263 (438.48)
FSD-300	300,000 (408,000)	75 (100)	1,650 (750)	110	4/5	20°	27.500 (698.50)	27.900/27.890 (708.66/708.40)	27.000 (685.80)
HBG-27MA	27,000 (36,720)	—	265 (131)	40	3/6	30°	13.333 (338.66)	13.597/13.592 (345.36/345.23)	12.929 (328.40)
HBG-63MA	63,000 (85,680)	—	515 (255)	53	3/6	30°	17.666 (448.72)	17.929/17.915 (455.39/455.04)	17.263 (438.48)
HBG-135 MA	135,000 (183,600)	—	1,100 (544)	68	3/6	30°	22.666 (575.72)	22.929/22.924 (582.40/582.27)	22.217 (564.31)

**FSD-27
HBG-27MA**



**FSD-65, -125, -300
HBG-63MA, - 135MA**



* FSD-125 has two sprag assemblies.

Standard bore sizes and keyseats inches (mm)

Size	Bore Diameter	Taper per ft. (per M)	Keyseat
27	6.00 (152.40)	None	1.25 x .83 (31.70 x 21.08)
63, 65	7.473/7.476 (189.81/189.89)	1.250" (3.175)	1.500/1.503 x .89 (38.10/38.18 x 22.60)
125, 135	7.473/7.476 (189.81/189.89)	1.250" (3.175)	1.500/1.503 x .89 (38.10/38.18 x 22.60)
300	7.473/7.476 (189.81/189.89) 8.9745/8.9775 (227.95/228.03)	1.250" (3.175)	2.500/2.503 x .84 (63.50/63.57 x 21.34)

Dimensions inches (mm)

Size	A	B	C	D	E	F
FSD-27	7.00 (177.80)	13.597/13.592 (345.36/345.23)	12.896/12.866 (327.55/326.79)	6.43 (163.32)	1.50 (38.10)	7.00 (177.80)
FSD-65	10.31 (261.87)	17.929/17.915 (455.39/455.04)	17.230/17.200 (437.64/436.88)	9.81 (249.17)	2.40 (60.96)	9.72 (246.88)
FSD-125	13.13 (333.50)	17.929/17.915 (455.39/455.04)	17.230/17.200 (437.64/436.88)	12.63 (320.80)	2.40 (60.96)	12.49 (317.25)
FSD-300	12.62 (320.54)	27.900/27.890 (708.66/708.40)	26.980/26.960 (685.29/684.78)	12.12 (307.84)	2.69 (68.32)	12.06 (306.32)
HBG-27MA	7.00 (177.80)	13.597/13.592 (345.36/345.23)	13.03 (330.96)	7.00 (177.80)	1.50 (38.10)	7.00 (177.80)
HBG-63MA	8.75 (222.25)	17.929/17.915 (455.39/455.04)	17.34 (440.44)	8.75 (222.25)	1.88 (47.75)	8.75 (222.25)
HBG-135MA	10.00 (254.00)	22.929/22.924 (582.40/582.27)	22.09 (561.09)	10.00 (254.00)	2.50 (63.50)	10.00 (254.00)