

"M" Series Sprag Clutches



Fully sealed, bearing supported, high torque
Sprag Clutch Assemblies with Metric and Imperial Bores.

"M" series sprag clutches use precision cams made of high chrome alloy steel, hardened and honed for accurate shape. A unique finishing process ensures smooth cam surface providing uniform contact with both races for even load distribution and prolonged clutch life. High capacity bearings are used to accommodate radial and axial loads. The clutches are designed to mount directly on through shafts; the torque being transmitted by a matching key provided with each stock bore; the outer race has a precision ground diameter with tapped holes on each face to enable the fitting of gears, sprockets, pulleys, etc.



Four types of clutch are offered:

MG Series - Standard clutch for general overrunning, backstop and index applications, standard oil lubricated with option of grease.

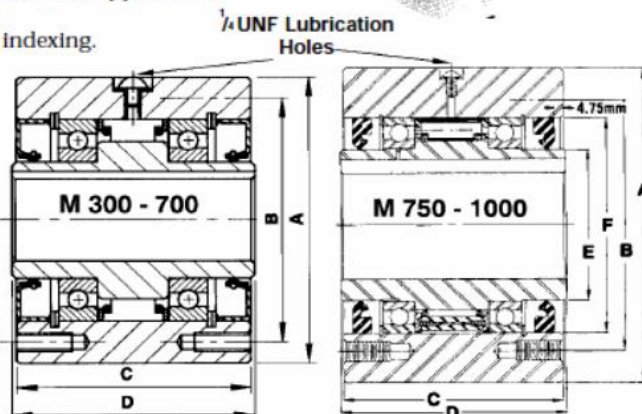
MI Series - Has special sprag assembly designed for high speed indexing. Always oil filled for optimum performance.

MO Series - Fitted with labyrinth seals for minimal drag on higher speed overrun and backstop applications. Always grease lubricated.

MR Series - Utilises a special sprag cage arrangement to allow high speed overrunning of the outer race. Oil lubricated clutch suitable as a higher torque alternative to Roller Ramp clutches.

Vertical Shafts - Clutches suitable for vertical shafting can be supplied - contact Cross & Morse sales office for technical advice.

High Speed/Temperature Operation - Clutches can be provided with a patented venting system for applications subject to high temperature variation or overrunning at high speed.



Dimensions

Clutch Model Number	Torque Capacity Nm	Max Overrun Speed RPM		Nominal Overrun Drag Nm	Std. Bore & Key Sizes (1)				Dimensions in mm						No. of Tapped Holes	Thread Size U.N.F.	Usable Thread Depth mm	Approx Weight kg
					Imperial		Metric											
					Inner (1)	Outer	Bore ins (1)	Key	Bore mm (2)	Key	A	B	C	D				
MG 300 MI 300 MO 300	373	2900 - 3600	800 - 800	0.23	1/2 5/8, 3/4	1/8x1/8 3/16x3/16	15 19	5x5 6x6	76.20 76.15	66.7	60.3	63.5	28.6	-	4	1/4-28	13	1.8
MG 400 MI 400 MO 400	542	2700 - 3600	800 - 800	0.28	5/8, 3/4, 7/8	3/16x3/16	18,19 20,22	6x6 6x6	88.90 88.85	73.0	66.7	69.9	31.7	-	4	5/16-24	16	2.7
MG 500 MI 500 MO 500 MR 500	1592	2400 - 3000 750	750 - 750 2400	0.52	7/8, 1 1 1/8, 1 1/4 15/16	1/4x1/4 1/4x1/4 1/4x7/32	24,25 28,30 32	8x7 8x7 10x8	107.95 107.90	92.1	85.7	88.9	44.4	-	4	5/16-24	16	5.0
MG 600 MI 600 MO 600 MR 600	3050	1800 - 2400 400	700 - 700 2100	0.85	1 1/4 1 3/8 1 1/2, 15/8, 13/4	1/4x1/4 5/16x5/16 3/8x3/8	35,38 40,42 45,48,50	10x8 12x8 14x9	136.53 136.47	120.7	92.9	95.3	69.8	-	6	5/16-24	16	8.6
MG 700 MI 700 MO 700 MR 700	6780	1200 - 2000 400	400 - 400 1750	1.76	2, 2 1/4, 2 7/16 2 1/2, 2 3/4 2 15/16, 3 3 1/4	1/2x1/2 5/8x5/8 5/8x7/16 5/8x7/16	45,50 60,65 70,75 80	14x9 18x11 20x12 22x9	180.98 180.92	158.8	123.8	127	101.6	-	8	3/8-24	19	19.5
MG 750 MR 750 MI 750	9500	1800 525 -	600 2600 -	3.4	2 7/16, 2 1/2, 2 3/4 2 15/16, 3 3 1/4 3 7/16	5/8x5/8 3/4x3/4 3/4x5/8 3/4x9/16	70 75 80 85	20x12 20x12 22x14 22x14	222.25 222.20	177.8	149.2	152.4	108.0	152.4	8	1/2-20	25	38
MG 800 MR 800 MI 800	17625	1300 475 -	475 2100 -	5.4	3, 3 1/4 3 7/16, 3 1/2, 3 3/4 3 15/16, 4 4 1/4 4 7/16	3/4x3/4 7/8x7/8 1x1 1x7/8 1x3/4	85 90 100 110	22x14 25x14 28x16 28x16	254.00 253.95	227.0	149.2	152.4	139.7	190.5	8	1/2-20	25	48
MG 900 MR 900 MI 900	24400	1200 400 -	400 1850 -	6.8	4, 4 1/4, 4 7/16 4 1/2, 4 3/4 4 15/16, 5 5 1/4, 5 7/16	1x1 1x1 1x7/8 1x1/2	100 110 120 130	28x16 28x16 32x18 32x18	304.80 304.72	247.6	156.7	161.9	165.1	222.2	10	5/8-18	32	72
MG1000 MR1000	33900	1200 325 -	325 1600 -	8.2	5, 5 1/4, 5 7/16, 5 1/2 5 3/4, 5 15/16, 6 6 1/4, 6 7/16	1 1/4x1 1/4 1 1/4x1 1/16 1 1/4x1	130 150 160	32x18 36x20 40x22	381.00 380.92	298.5	171.4	177.8	196.8	266.7	12	5/8-18	32	115

(1) Std. bores clutches normally available 24 hour despatch. Other bore sizes can be supplied to order. Clutches shipped with key.

(2) Mounting holes equally spaced except 700& 750 which have 6 equi-spaced plus two 30° from equi-spaced holes 180° apart.

(3) Bores to H7 tolerance except Imperial bores on MG 750-1000 which are to M7 tolerance.

(4) This also maximum drive speed MR series clutches.

Note: All oil filled clutches must be lubricated prior to operation.