



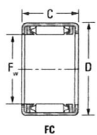
NEEDLE ROLLER BEARINGS

DRAWN CUP ROLLER CLUTCHES METRIC SERIES

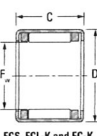
- For proper application, separate bearings are suggested (adjacent to clutch) to carry radial loads and assure concentricity between shaft and housing.
- The clutch engages when housing is rotated relative to the shaft in direction of arrow marking (← LOCK), as labeled on cup.
- Proper inspection requires use of ring gage and bore plug gage(s). See the inspection section on page B-3-9.
- Full details on installation are given on page B-3-8.
- Shaft raceway and housing bore diameters that are necessary for proper mounting and operation are listed on the opposite page.
- Types FC, FCS, FC-K and FCL-K clutches have stainless steel springs inserted in molded cage to position rollers for lockup.



The mounted clutch engages when the housing is rotated relative to the shaft in the direction of the arrow marking (← LOCK) stamped on the cup.



FC



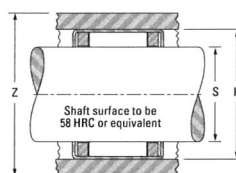
FCS, FCL-K and FC-K

Shaft Diameter mm in	F _u mm in	D mm in	C mm in	Clutch Designation	Torque Rating N-m lbf-in	Minimum O.D. of Shaft Housing for Rated Torque mm in	Overrun Limiting Speed Rating for Rotating Shaft ¹ mm in	Sustained Drawn Cup Bearing ²
4 0.1575	4 0.1575	8 0.3150	6 0.2362	FC-4-K	0.349 3.09	11 0.433	26000	HK3400
6 0.2362	6 0.2362	10 0.3937	12 0.472	FCS-6	2.15 19.0	14 0.551	22000	HK2000
6 0.2362	6 0.2362	10 0.3937	12 0.472	FC-6	2.63 23.3	14 0.551	22000	HK3000
8 0.3150	8 0.3150	12 0.4724	12 0.472	FCL-8-K	3.39 30.0	17 0.669	21000	HK2500
8 0.3150	8 0.3150	14 0.5512	12 0.472	FC-8	4.42 39.1	20 0.787	21000	—
10 0.3937	10 0.3937	14 0.5512	12 0.472	FCL-10-K	4.60 40.7	20 0.787	19000	HK1800
10 0.3937	10 0.3937	16 0.6350	12 0.472	FC-10	5.82 51.5	25 0.984	19000	—
12 0.4724	12 0.4724	18 0.7087	16 0.635	FC-12	14.0 124	27 1.063	18000	HK1200
16 0.6299	16 0.6299	22 0.8661	16 0.635	FC-16	21.7 192	31 1.22	14000	HK1600
20 0.7874	20 0.7874	28 1.0236	20 0.830	FC-20	32.6 289	38 1.496	11000	HK2000
25 0.9843	25 0.9843	32 1.2598	20 0.787	FC-25	71.0 628	46 1.811	8900	HK2500
30 1.1811	30 1.1811	37 1.4567	20 0.787	FC-30	96.1 837	51 2.008	7300	HK3000
35 1.2780	35 1.2780	42 1.6535	20 0.787	FCS-35	103.0 947	56 2.205	6100	HK3500

¹ Indicates the number of relative rotations allowed when the shaft idles.

² See pages B-2-14 to B-2-25 for suitable bearing types and sizes.

Drawn Cup Roller Clutches



Bearing			Mounting						Approx. Wt.
			Shaft Raceway Diameter			Housing Bore			
						H			
Ring Gage	Clutch Locking Plug	Clutch Drawbar Plug	S		H		kg	lbs	
			Min.	Max.	Min.	Max.			
7.984 0.3143	3.980 0.1567	4.004 0.1576	4.000 0.1575	3.995 0.1573	7.993 0.3147	7.984 0.3143	0.001 0.002		
9.984 0.3931	5.980 0.2354	6.004 0.2364	6.000 0.2362	5.995 0.2360	9.993 0.3934	9.984 0.3931	0.003 0.007		
9.984 0.3931	5.980 0.2354	6.004 0.2364	6.000 0.2362	5.995 0.2360	9.993 0.3934	9.984 0.3931	0.004 0.009		
11.980 0.4717	7.976 0.3142	8.005 0.3152	8.000 0.3150	7.994 0.3147	11.991 0.4721	11.980 0.4717	0.003 0.007		
13.980 0.5504	7.976 0.3142	8.005 0.3152	8.000 0.3150	7.994 0.3147	13.991 0.5508	13.980 0.5504	0.007 0.015		
13.980 0.5504	9.976 0.3928	10.005 0.3936	10.000 0.3933	9.994 0.3928	13.991 0.5508	13.980 0.5504	0.004 0.009		
15.980 0.6291	9.976 0.3928	10.005 0.3936	10.000 0.3933	9.994 0.3928	15.991 0.6296	15.980 0.6291	0.009 0.020		
17.980 0.7077	11.974 0.4714	12.006 0.4722	12.000 0.4719	11.992 0.4714	17.991 0.7078	17.980 0.7077	0.012 0.026		
21.976 0.8652	15.972 0.6290	16.006 0.6302	16.000 0.6297	15.992 0.6296	21.980 0.8657	21.976 0.8652	0.018 0.040		
25.976 1.0227	19.970 0.7862	20.002 0.7877	20.000 0.7874	19.991 0.7870	25.980 1.0222	25.976 1.0227	0.021 0.046		
31.972 1.2587	24.967 0.9820	25.007 0.9846	25.000 0.9843	24.991 0.9839	31.988 1.2584	31.972 1.2587	0.034 0.075		
36.972 1.4555	29.967 1.1758	30.007 1.1814	30.000 1.1811	29.991 1.1807	36.988 1.4562	36.972 1.4555	0.042 0.093		
43.972 1.6524	34.964 1.3763	35.009 1.3783	35.000 1.3780	34.989 1.3775	43.988 1.6531	43.972 1.6524	0.048 0.106		