



## Overrunning, Backstopping External Bearing Support Required, Centrifugal Throwout (C/T) Sprag Clutches



Model RSCI is a centrifugal throwout sprag type overrunning clutch with the inner race rotating. Only the inner race is designed for overrunning.

The RSCI is not a self-supported design. Bearings must be provided to ensure concentricity of the inner and outer races and to support axial and radial loads. Concentricity and run-out limits must be observed.

Primarily designed as a backstop, this model can also be used as an overrunning clutch in creep drives, where the overrunning speed is high, but the driving speed is low, and does not exceed the maximum driving speed shown in the table.

When used as a backstop, it must be checked that the overrunning speed will not go below the sprag lift-off speed given in the specifications table.

The model RSCI has a special sprag design that will work with all types of lubricants including those with EP additives. This sprag design feature allows for clutch usage inside gearboxes without separate lubrication.

If lubricants with EP additives are used, the concentricity tolerance should be reduced by one half.

An oil mist is generally sufficient. Grease lubrication may be acceptable if the unit operates mostly in the overrunning condition, as in electric motors.

Centering of the outer race must be based on the inner race bore, not the sprag cage.

Optional F8 cover must be ordered separately.

For bolt tightening torque values, see page 126.

### Specifications

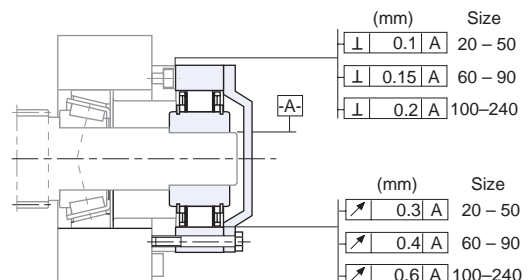
Size	Torque Capacity lb.ft. (Nm)	Speeds			Shipping Weight lb. (kg)
		Max. Drive	Sprag Lift-off	Max. RPM Inner Race Overrunning	
20	156 (212)	380	875	14,500	3.31 (1.5)
25	235 (319)	355	825	14,300	3.53 (1.6)
30	277 (375)	350	780	11,400	3.97 (1.8)
35	406 (550)	320	740	10,500	4.63 (2.1)
40	590 (800)	315	720	7,600	5.95 (2.7)
45	673 (912)	285	665	6,600	6.39 (2.9)
50	1,033 (1400)	265	610	6,100	9.48 (4.3)
60	1,734 (2350)	200	490	5,300	14.33 (6.5)
70	2,250 (3050)	210	480	4,100	18.96 (8.6)
80	3,321 (4500)	190	450	3,600	27.56 (12.5)
90	3,595 (5600)	180	420	2,700	38.37 (17.4)
100	7,749 (10500)	200	455	2,700	62.0 (28)
130	11,623 (15750)	180	415	2,400	77.18 (35)
180	23,247 (31500)	160	365	1,300	134 (61)
180-II	46,494 (63000)	160	365	1,300	260 (118)
220	34,133 (42,500)	140	325	1,100	194.04 (88)
220-II	70,849 (85,000)	140	325	1,100	368 (167)

### Notes:

Keyway to DIN 6885.1

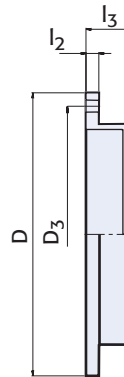
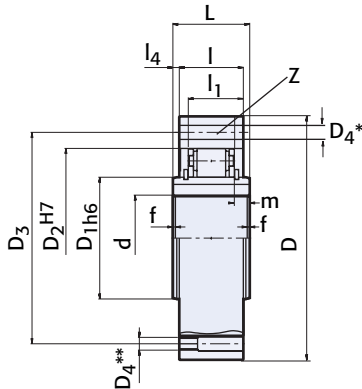
### Typical Mounting Arrangement

The Model RSCI must be mounted next to a bearing to provide the inner race to outer race concentricity and support any radial or axial loads. This clutch must be enclosed and coated with a film of grease or oil mist.



RSCI 20-220

F8



Dimensions inches (mm)

Size	D	D <sub>1H6</sub>	D <sub>2H7</sub>	D <sub>3</sub>	D <sub>4</sub>	Z # of holes	L	l	l <sub>1</sub>	l <sub>4</sub>	f x 45°	d <sub>min.</sub>	m	t <sub>min.</sub>	l <sub>2</sub>	l <sub>3</sub>
20	3.54 (90)	1.42 (36)	2.60 (66)	3.07 (78)	M6	6	1.38 (35)	1.38 (35)	0.98 (25)	0	0.03 (0.8)	2.05 (52)	0.20 (5)	0.04 (1)	0.31 (8)	0.63 (16)
25	3.74 (95)	1.57 (40)	2.76 (70)	3.23 (82)	M6	6	1.38 (35)	1.38 (35)	0.98 (25)	0	0.04 (1)	2.20 (56)	0.20 (5)	0.04 (1)	0.31 (8)	0.63 (16)
30	3.94 (100)	1.77 (45)	2.95 (75)	3.43 (87)	M6	6	1.38 (35)	1.38 (35)	0.98 (25)	0	0.06 (1.5)	2.44 (62)	0.20 (5)	0.04 (1)	0.31 (8)	0.63 (16)
35	4.33 (110)	1.97 (50)	3.15 (80)	3.78 (96)	M6	8	1.38 (35)	1.38 (35)	0.98 (25)	0	0.06 (1.5)	2.60 (66)	0.20 (5)	0.04 (1)	0.31 (8)	0.63 (16)
40	4.92 (125)	2.36 (60)	3.54 (90)	4.25 (108)	M8	8	1.38 (35)	1.38 (35)	0.98 (25)	0	0.06 (1.5)	2.99 (76)	0.20 (5)	0.04 (1)	0.39 (10)	0.83 (21)
45	5.12 (130)	2.56 (65)	3.74 (95)	4.41 (112)	M8	8	1.38 (35)	1.38 (35)	0.98 (25)	0	0.06 (1.5)	3.23 (82)	0.20 (5)	0.04 (1)	0.39 (10)	0.83 (21)
50	5.91 (150)	3.15 (80)	4.33 (110)	5.20 (132)	M8	8	1.57 (40)	1.57 (40)	0.98 (25)	0	0.06 (1.5)	3.94 (100)	0.30 (7.5)	0.04 (1)	0.39 (10)	0.83 (21)
60	6.89 (175)	3.35 (85)	4.92 (125)	6.10 (155)	M10	8	2.36 (60)	1.97 (50)	1.42 (36)	0.20 (5)	0.08 (2)	4.33 (110)	0.47 (12)	0.08 (2)	0.47 (12)	1.38 (35)
70	7.48 (190)	3.74 (100)	5.51 (140)	6.50 (165)	M10	12	2.36 (60)	1.97 (50)	1.42 (36)	0.20 (5)	0.08 (2)	4.72 (120)	0.47 (12)	0.08 (2)	0.47 (12)	1.38 (35)
80	8.27 (210)	4.53 (120)	6.30 (160)	7.28 (185)	M10	12	2.76 (70)	2.36 (60)	1.42 (36)	0.20 (5)	0.08 (2)	5.51 (140)	0.67 (17)	0.12 (3)	0.47 (12)	1.38 (35)
90	9.06 (230)	5.51 (140)	7.09 (180)	8.11 (206)	M12	12	3.15 (80)	2.76 (70)	1.42 (36)	0.20 (5)	0.10 (2.5)	6.30 (160)	0.87 (22)	0.12 (3)	0.47 (12)	1.38 (35)
100	11.42 (290)	5.51 (140)	8.27 (210)	10.15 (258)	M16	12	3.54 (90)	3.15 (80)	2.07 (52.6)	0.20 (5)	0.10 (2.5)	7.09 (180)	0.73 (18.6)	0.12 (3)	0.59 (15)	1.46 (37)
130	12.68 (322)	6.69 (170)	9.45 (240)	10.94 (278)	M16	12	3.54 (90)	3.15 (80)	2.07 (52.6)	0.20 (5)	0.12 (3)	8.27 (210)	0.73 (18.6)	0.12 (3)	0.59 (15)	1.46 (37)
180	16.22 (412)	—	12.20 (310)	14.17 (360)	M20	12	3.54 (90)	3.15 (80)	2.07 (52.6)	0.20 (5)	0.14 (3.5)	11.02 (280)	0.73 (18.6)	0.12 (3)	0.71 (18)	1.73 (44)
180-11	16.22 (412)	—	12.20 (310)	14.17 (360)	M20	24	6.30 (160)	3.15 (80)	4.64 (118)	0	0.14 (3.5)	11.81 (280)	0.83 (21)	0.12 (3)	0.71 (18)	1.73 (44)
220	18.50 (470)	—	14.17 (360)	16.14 (410)	M20	16	4.13 (105)	3.15 (80)	2.31 (58.6)	0.20 (5)	0.16 (4)	12.99 (330)	0.77 (19.5)	0.12 (3)	0.71 (18)	2.64 (67)
220-11	18.89 (480)	—	14.17 (360)	16.14 (410)	M24	18	6.30 (160)	6.30 (160)	5.12 (130)	0	0.16 (4)	14.17 (330)	0.59 (15)	0.12 (3)	0.71 (18)	2.64 (67)

Bore sizes and keyseats inches (mm)

Size	d <sup>H7</sup> Bore Size	Keyseat*
20	0.79 (20)	(6 X 2.8)
25	0.98 (25)	(8 X 3.3)
30	1.18 (30)	(8 X 3.3)
35	1.38 (35)	(10 X 3.3)
40	1.57 (40)	(12 X 3.3)
45	1.77 (45)	(14 X 3.8)
50	1.97 (50)	(14 X 3.8)
60	2.36 (60)	(18 X 4.4)
70	2.76 (70)	(20 X 4.9)
80	3.15 (80)	(22 X 5.4)
90	3.54 (90)	(25 X 5.4)
100	3.94 (100)	(28 X 6.4)
130	5.12 (130)	(32 X 7.4)
180	7.09 (180)	—
220	8.66 (220)	—

Note:

F8 cover must be ordered separately.

\* Clearance mounting holes for listed bolt sizes.

\*\* Two extra tapped removal holes @ 180°.

\* For keyseat sizes see DIN 6885.1 table on page 123.