

# Overrunning Applications

## CSK..P, CSK..PP

### Overrunning, Indexing, Backstopping Bearing Envelope (62 Series) Design, Sprag Clutches

#### CSK..P

CSK..P has the same construction and outside dimensions as type CSK, but has a keyway on the inner race.

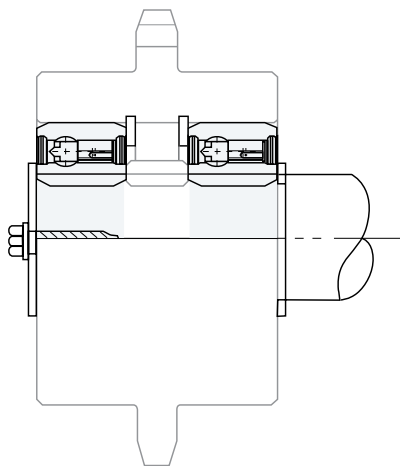
These clutches can be mounted on a shaft with recommended k6 tolerance and the outer race must be pressed into a rigid housing with a recommended N6 tolerance. The resulting housing and shaft diameters must be checked to ensure that the bearing has adequate radial clearances.

#### CSK..PP

CSK..PP features a keyway on both the inner and outer race. The recommended mounting tolerances are k6 on the shaft and K6 in the rigid housing. A h6 tolerance on the shaft or H6 in the housing are also acceptable for a light press fit assembly. Always check to ensure that the bearing has adequate radial clearances.

Operating temperature: 21 to 140°F (-6 to 60°C). Special greases are available for operating temperatures: -40 to 212°F (-40 to 100°C)

#### Typical Mounting Arrangement



The Model CSK..P clutches must be secured to the shaft by customer supplied snap ring, set collar, spacer, etc. The outer race is secured with a press fit to a N6 tolerance. The Model CSK..PP clutches have a keyseat on both races and must be secured by customer supplied snap ring, set collar, spacer, etc.



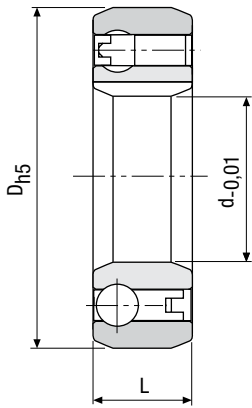
#### Specifications

Model	Size	Bearing Series	Torque Capacity** lb.ft. (Nm)	Max. Overrunning Speed RPM	Resistance after run-in lb.in. (Ncm)	Lubrication	Shipping Weight lb. (kg)
CSK..P/CSK..PP	12*	6201	8.9 (12)	10,000	0.06 (0.7)	Grease	0.08 (0.04)
	15	6202	14.7 (20)	8,400	0.08 (0.9)	Grease	0.13 (0.06)
	17	6203	30 (40)	7,350	0.09 (1.1)	Grease	0.15 (0.07)
	20	6204	50 (68)	6,000	0.12 (1.3)	Grease	0.24 (0.11)
	25	6205	77 (105)	5,200	0.18 (2)	Grease	0.31 (0.14)
	30	6206	133 (180)	4,200	0.39 (4.4)	Grease	0.46 (0.21)
	35	6207	177 (240)	3,600	0.51 (5.8)	Grease	0.66 (0.3)
CSK..P-2RS	40	—	284 (385)	3,000	0.62 (7)	Grease	1.10 (0.5)
	12	—	8.9 (12)	10,000	0.26 (3)	Grease	0.11 (0.05)
	15	—	14.7 (20)	8,400	0.35 (4)	Grease	0.15 (0.07)
	17	—	30 (40)	7,350	0.49 (5.6)	Grease	0.20 (0.09)
	20	—	50 (68)	6,000	0.53 (6)	Grease	0.33 (0.15)
	25	—	77 (105)	5,200	0.53 (6)	Grease	0.4 (0.18)
	30	—	133 (180)	4,200	0.66 (7.5)	Grease	0.6 (0.27)
CSK..PP-2RS	35	—	177 (240)	3,600	0.72 (8.2)	Grease	0.9 (0.4)
	40	—	284 (385)	3,000	0.88 (10)	Grease	1.3 (0.6)
CSK..PP-2RS	30	—	133 (180)	4,200	0.85 (7.5)	Grease	0.6 (0.27)

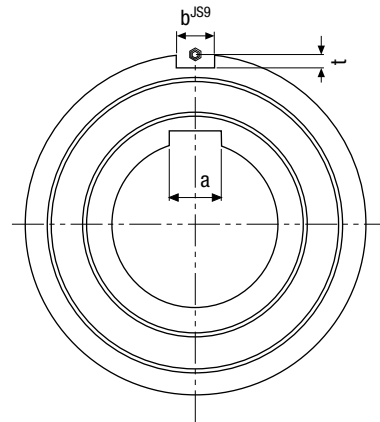
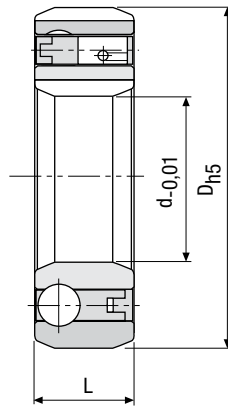
\* Only available in -P design.

\*\* Clutch torque ratings are based upon 1 million load cycles, standard for the North American Market.

### CSK..P



### CSK..PP



### Dimensions inches (mm)

Size	D <sub>h5</sub> in. (mm)	L in. (mm)	b in. (mm)	t in. (mm)	Bearing Loads	
					Dynamic lb. (kN)	Static lb. (kN)
12*	1.25 (32)	0.39 (10)	—	—	1,372 (6.1)	623.2 (2.77)
15	1.38 (35)	0.43 (11)	.08 (2)	.02 (0.6)	1,665 (7.4)	769.5 (3.42)
17	1.57 (40)	0.47 (12)	.08 (2)	.04 (1.0)	1,777.5 (7.9)	855 (3.8)
20	1.85 (47)	0.55 (14)	.12 (3)	.06 (1.5)	2,115 (9.4)	1,003.5 (4.46)
25	2.05 (52)	0.59 (15)	.24 (6)	.08 (2.0)	2,407.5 (10.7)	1,228.5 (5.46)
30	2.44 (62)	0.63 (16)	.24 (6)	.08 (2.0)	2,632.5 (11.7)	1,451.25 (6.45)
35	2.83 (72)	0.67 (17)	.31 (8)	.10 (2.5)	2,835 (12.6)	1,638 (7.28)
40	3.15 (80)	0.87 (22)	.39 (10)	.12 (3.0)	3,496.5 (15.54)	2,756.25 (12.25)
12	1.25 (32)	0.55 (14)	—	—	1,372 (6.1)	623.2 (2.77)
15	1.38 (35)	0.62 (16)	—	—	1,665 (7.4)	769.5 (3.42)
17	1.57 (40)	0.67 (17)	—	—	1,777.5 (7.9)	855 (3.8)
20	1.85 (47)	0.75 (19)	—	—	2,115 (9.4)	1,003.5 (4.46)
25	2.04 (52)	0.78 (20)	—	—	2,407.5 (10.7)	1,228.5 (5.46)
30	2.44 (62)	0.82 (21)	—	—	2,632.5 (11.7)	1,451.25 (6.45)
35	2.83 (72)	0.87 (22)	—	—	2,834 (12.6)	1,638 (7.28)
40	3.15 (80)	1.06 (27)	—	—	3,486 (15.5)	2,756 (12.25)

\* Only available in -P design.

### Bore sizes and keyseats inches (mm)

Size	d Bore Size	a Keyseat*
12	0.47 (12)	(4 X 1.8)
15	0.59 (15)	(5 X 1.2)
17	0.67 (17)	(5 X 1.2)
20	0.79 (20)	(6 X 1.6)
25	0.98 (25)	(8 X 2)
30	1.18 (30)	(8 X 2)
35	1.38 (35)	(10 X 2.4)
40	1.57 (40)	(12 X 3.3)

\* For keyseat sizes CSK 15–35 use DIN 6885.3.  
For size 40 use DIN 6885.1 table on page 127.