

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



CSK

Type CSK is a sprag type clutch integrated into a 62 Series ball bearing (except sizes 8 and 40). It is bearing supported, shipped grease lubricated and protected against dust larger than .012" (.3mm) diameter. The use of additional "nylos" type seals is recommended especially when the working temperature exceeds 122°F (50°C).

Oil bath lubrication is also possible if the original grease is first flushed out using a suitable solvent.

Torque transmission is ensured by a press fit assembly into a rigid outer housing with a recommended N6 tolerance and onto a shaft with a recommended n6 tolerance. The resulting housing and shaft diameters must be checked to ensure that the bearing has adequate radial clearances. The initial bearing radial clearance is set at C5, and is reduced if using the press fit as specified.

One race may be glued. If both races are to be glued, performance will be reduced or a C3 bearing clearance will be necessary.

Operating temperature range: -4°F (-20°C) to 212°F (+100°C). Peaks up to 248°F (+120°C) are acceptable for short periods.

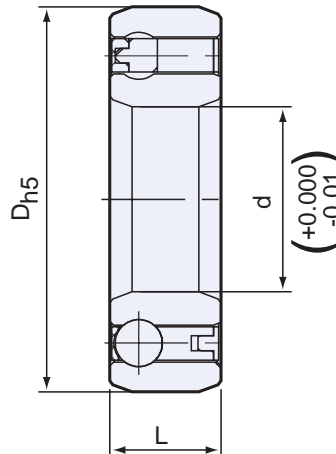
CSK..2RS

CSK..2RS clutches are .197" (5mm) wider than a standard 62 Series bearing, as they are equipped with lip seals for washdown applications.

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 | 8 | | 2.6 (3.5) | 15,000 | 0.44 (0.5) | Grease | 0.03 (0.015) |
| | 12 | 6201 | 8.8 (12) | 10,000 | 0.62 (0.7) | Grease | 0.09 (0.04) |
| | 15 | 6202 | 14.7 (20) | 8,400 | 0.80 (0.9) | Grease | 0.13 (0.06) |
| | 17 | 6203 | 30 (40) | 7,350 | 0.97 (1.1) | Grease | 0.15 (0.07) |
| | 20 | 6204 | 50 (68) | 6,000 | 1.15 (1.3) | Grease | 0.24 (0.11) |
| | 25 | 6205 | 77 (105) | 5,200 | 1.77 (2) | Grease | 0.31 (0.14) |
| | 30 | 6206 | 133 (180) | 4,200 | 3.89 (4.4) | Grease | 0.46 (0.21) |
| | 35 | 6207 | 177 (240) | 3,600 | 5.13 (5.8) | Grease | 0.66 (0.3) |
| | 40 | | 284 (385) | 3,000 | 6.20 (7) | Grease | 1.10 (0.5) |
| | 8* | | 2.6 (3.5) | 15,000 | 0.71 (0.8) | Grease | 0.03 (0.015) |
| CSK..2RS | 12 | | 8.8 (12) | 10,000 | 2.66 (3) | Grease | 0.11 (0.05) |
| | 15 | | 14.7 (20) | 8,400 | 3.54 (4) | Grease | 0.15 (0.07) |
| | 17 | | 30 (40) | 7,350 | 4.96 (5.6) | Grease | 0.20 (0.09) |
| | 20 | | 50 (68) | 6,000 | 5.31 (6) | Grease | 0.32 (0.145) |
| | 25 | | 77 (105) | 5,200 | 5.31 (6) | Grease | 0.39 (0.175) |
| | 30 | | 133 (180) | 4,200 | 6.64 (7.5) | Grease | 0.60 (0.27) |
| | 35 | | 177 (240) | 3,600 | 7.26 (8.2) | Grease | 0.88 (0.4) |
| | 40 | | 284 (385) | 3,000 | 8.85 (10) | Grease | 1.32 (0.6) |

* Only one lip seal on ball bearing side.



Dimensions inches (mm)

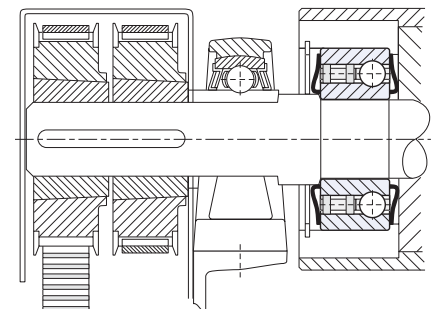
| Model | Size | D _{h5} in. (mm) | L in. (mm) | Bearing Loads | |
|-------|----------|--------------------------------|------------------|------------------------|-----------------------|
| | | | | Dynamic lb. (kN) | Static lb. (kN) |
| CSK | 8 | 0.87 (22) | 0.35 (9) | 738 (3.28) | 193.5 (0.86) |
| | 12 | 1.26 (32) | 0.39 (10) | 1372.5 (6.1) | 623.25 (2.77) |
| | 15 | 1.38 (35) | 0.43 (11) | 1665 (7.4) | 769.5 (3.42) |
| | 17 | 1.57 (40) | 0.47 (12) | 1777.5 (7.9) | 855 (3.8) |
| | 20 | 1.85 (47) | 0.55 (14) | 2115 (9.4) | 1003.5 (4.46) |
| | 25 | 2.05 (52) | 0.59 (15) | 2407.5 (10.7) | 1228.5 (5.46) |
| | 30 | 2.44 (62) | 0.63 (16) | 2632.5 (11.7) | 1451.25 (6.45) |
| | 35 | 2.83 (72) | 0.67 (17) | 2835 (12.6) | 1638 (7.28) |
| | 40 | 3.15 (80) | 0.87 (22) | 3496.5 (15.54) | 2756.25 (12.25) |
| | CSK..2RS | 8* | 0.87 (22) | 0.35 (9) | 738 (3.28) |
| 12 | | 1.26 (32) | 0.55 (14) | 1372.5 (6.1) | 623.25 (2.77) |
| 15 | | 1.38 (35) | 0.63 (16) | 1665 (7.4) | 769.5 (3.42) |
| 17 | | 1.57 (40) | 0.67 (17) | 1777.5 (7.9) | 855 (3.8) |
| 20 | | 1.85 (47) | 0.75 (19) | 2115 (9.4) | 1003.5 (4.46) |
| 25 | | 2.05 (52) | 0.79 (20) | 2407.5 (10.7) | 1228.5 (5.46) |
| 30 | | 2.44 (62) | 0.83 (21) | 2632.5 (11.7) | 1451.25 (6.45) |
| 35 | | 2.83 (72) | 0.87 (22) | 2835 (12.6) | 1638 (7.28) |
| 40 | | 3.15 (80) | 1.06 (27) | 3496.5 (15.54) | 2756.25 (12.25) |

* Only one lip seal on ball bearing side.

Bore sizes and keyseats inches (mm)

| Size | d Bore Size | Keyseat |
|------|----------------|---------|
| 8 | 0.31 (8) | None |
| 12 | 0.47 (12) | None |
| 15 | 0.59 (15) | None |
| 17 | 0.67 (17) | None |
| 20 | 0.79 (20) | None |
| 25 | 0.98 (25) | None |
| 30 | 1.18 (30) | None |
| 35 | 1.38 (35) | None |
| 40 | 1.57 (40) | None |

Typical Mounting Arrangement



The Model CSK clutches must be mounted with a press fit on both the outer and inner races. The shaft diameter tolerance must be held to a n6. The bore of the housing for the outer race should be a N6 tolerance.