

Types CKKN, CKKNN, & CSKN Sprag Clutches



Clutch types CKKN and CSKN-RS have keyways on the inner races to enable optional fitting with a key instead of press-fit to the shaft. The outer is still fitted into the housing with a heavy press fit, the bearing clearance being modified to allow for one race only having the heavy press-fit.

Clutch types CKKNN have a keyway on the outer race as well as the inner, to allow assembly of the clutches with only a light interference fit.

These clutches have the same build as the CKK series, with a high performance sprag assembly combined with a deep groove bearing, to provide a compact, high torque, but low cost freewheel, suitable for both overrun and backstop applications. The lack of press-fit makes them unsuitable for accurate indexing.

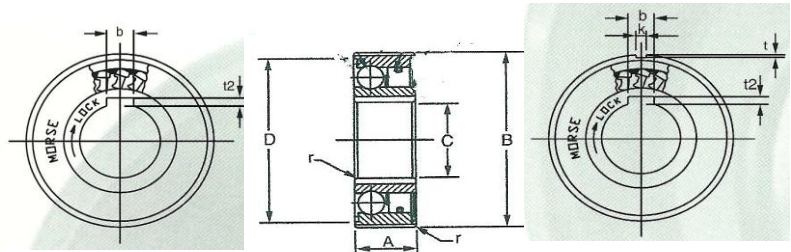
Clutches with an RS suffix include a rubber seal in the bore of the retainers to provide complete sealing. Type CSKN-RS are constructed with wider races to enable the use of a full rubber seal for best protection.



CKKN & CKKN-RS

CSKN-RS

CKKNN & CKKNN-RS



Dimensions

| Clutch Size | Torque* Capacity Nm | Drag Torque Ncms | Overrun Speed | | Dimensions mm | | | | | | | Equivalent Bearing Ref. | Bearing Capacity | | Approx. Weight gms |
|---------------|---------------------|------------------|----------------|----------------|---------------|----|----|----|-----|------|-----|-------------------------|------------------|----------|--------------------|
| | | | Inner Race rpm | Outer Race rpm | C | B | A | b | t2 | k | t | | Dynamic N | Static N | |
| CKKN 15 | 29.0 | 1.0 | 3,600 | 2,000 | 15 | 35 | 11 | 5 | 1.2 | - | - | 6202 | 5950 | 3230 | 50 |
| CKKN 17 | 43.0 | 1.0 | 3,500 | 1,900 | 17 | 40 | 12 | 5 | 1.2 | - | - | 6203 | 7000 | 3700 | 80 |
| CKKN 20 | 61.0 | 1.4 | 3,000 | 1,600 | 20 | 47 | 14 | 6 | 1.6 | - | - | 6204 | 8500 | 4900 | 120 |
| CKKN 25 | 78.0 | 1.7 | 2,500 | 1,400 | 25 | 52 | 15 | 8 | 1.5 | - | - | 6205 | 10700 | 6300 | 150 |
| CKKN 30 | 140.0 | 3.0 | 2,000 | 1,100 | 30 | 62 | 16 | 8 | 2.0 | - | - | 6206 | 11900 | 7900 | 230 |
| CKKN 35 | 173.0 | 3.4 | 1,800 | 1,000 | 35 | 72 | 17 | 10 | 2.4 | - | - | 6207 | 13500 | 9700 | 320 |
| CKKN 40 | 260.0 | 4.0 | 1,800 | 900 | 40 | 80 | 22 | 12 | 3.3 | - | - | - | 14500 | 11700 | 400 |
| CKKNN 15 | 29.0 | 1.0 | 3,600 | 2,000 | 15 | 35 | 11 | 5 | 1.2 | 2.0 | 0.6 | 6202 | 5950 | 3230 | 50 |
| CKKNN 17 | 43.0 | 1.0 | 3,500 | 1,900 | 17 | 40 | 12 | 5 | 1.2 | 2.0 | 1.0 | 6203 | 7000 | 3700 | 80 |
| CKKNN 20 | 61.0 | 1.4 | 3,000 | 1,600 | 20 | 47 | 14 | 6 | 1.6 | 3.0 | 1.5 | 6204 | 8500 | 4900 | 120 |
| CKKNN 25 | 78.0 | 1.7 | 2,500 | 1,400 | 25 | 52 | 15 | 8 | 1.5 | 6.0 | 2.0 | 6205 | 10700 | 6300 | 150 |
| CKKNN 30 | 140.0 | 3.0 | 2,000 | 1,100 | 30 | 62 | 16 | 8 | 2.0 | 6.0 | 2.0 | 6206 | 11900 | 7900 | 230 |
| CKKNN 35 | 173.0 | 3.4 | 1,800 | 1,000 | 35 | 72 | 17 | 10 | 2.4 | 8.0 | 2.5 | 6207 | 13500 | 9700 | 320 |
| CKKNN 40 | 260.0 | 4.0 | 1,800 | 900 | 40 | 80 | 22 | 12 | 3.3 | 10.0 | 3.0 | - | 14500 | 11700 | 400 |
| CKKN 17RS (t) | 37.0 | 4.5 | 3,700 | 2,000 | 17 | 40 | 12 | 5 | 1.2 | - | - | 6203 | 6550 | 3170 | 70 |
| CKKN 20RS | 52.0 | 4.8 | 3,200 | 1,650 | 20 | 47 | 14 | 6 | 1.6 | - | - | 6204 | 7320 | 3870 | 110 |
| CKKN 25RS | 87.0 | 5.6 | 2,800 | 1,500 | 25 | 52 | 15 | 8 | 2.0 | - | - | 6205 | 7980 | 4570 | 140 |
| CKKN 30RS | 123.0 | 6.2 | 2,400 | 1,250 | 30 | 62 | 16 | 8 | 2.0 | - | - | 6206 | 8450 | 5290 | 210 |
| CKKN 35RS | 188.0 | 8.5 | 1,900 | 1,000 | 35 | 72 | 17 | 10 | 3.3 | - | - | 6207 | 9300 | 6700 | 300 |
| CKKN 40RS | 290.0 | 9.5 | 1,900 | 1,000 | 40 | 80 | 18 | 12 | 3.3 | - | - | 6208 | 9300 | 6700 | 450 |
| CKKNN 20RS | 52.0 | 4.8 | 3,200 | 1,650 | 20 | 47 | 14 | 6 | 1.6 | 3.0 | 1.5 | 6204 | 7320 | 3870 | 110 |
| CKKNN 25RS | 87.0 | 5.6 | 2,800 | 1,500 | 25 | 52 | 15 | 8 | 2.0 | 6.0 | 2.0 | 6205 | 7980 | 4570 | 140 |
| CKKNN 30RS | 123.0 | 6.2 | 2,400 | 1,250 | 30 | 62 | 16 | 8 | 2.0 | 6.0 | 2.0 | 6206 | 8450 | 5290 | 210 |
| CKKNN 40RS | 290.0 | 9.5 | 1,900 | 1,000 | 40 | 80 | 18 | 12 | 3.3 | 10.0 | 3.0 | 6208 | 9300 | 6700 | 450 |
| CSKN 15RS | 29.0 | 4.0 | 3,600 | 2,000 | 15 | 35 | 16 | 5 | 1.2 | - | - | - | 5950 | 3230 | 70 |
| CSKN 17RS | 43.0 | 5.0 | 3,500 | 1,900 | 17 | 40 | 17 | 5 | 1.2 | - | - | - | 7000 | 3700 | 100 |
| CSKN 20RS | 61.0 | 5.5 | 3,000 | 1,600 | 20 | 47 | 19 | 6 | 1.6 | - | - | - | 8500 | 4900 | 150 |
| CSKN 25RS | 78.0 | 5.5 | 2,500 | 1,400 | 25 | 52 | 20 | 8 | 1.5 | - | - | - | 10700 | 6300 | 200 |
| CSKN 30RS | 140.0 | 5.8 | 2,000 | 1,100 | 30 | 62 | 21 | 8 | 2.0 | - | - | - | 11900 | 7900 | 280 |
| CSKN 35RS | 173.0 | 8.2 | 1,800 | 1,000 | 35 | 72 | 22 | 10 | 2.4 | - | - | - | 13500 | 9700 | 410 |
| CSKN 40RS | 260.0 | 10.0 | 1,800 | 900 | 40 | 80 | 27 | 12 | 3.3 | - | - | - | 14500 | 11700 | 600 |

*Nominal Torque - Max. Torque = 1.8 x for max 50,000 cycles
t CKKN17RS has seal on clutch side only.

When viewing seal clutch inner overruns counter-clockwise.

Clutch races without keyways should be fitted with heavy press fit, recommended N6 Housing tolerance. For keyed races recommended limits are K6 for Housing and g6 for Shaft.

Operating temperature range -40°C to 50°C, can be exceeded up to 100°C if additional sealing or oil lubrication system used.