

BEARING NOMINAL NAME

The nominal name of the bearing is a code used to indicate the form, size, accuracy, and internal structure of the bearing.

STRUCTURAL FEATURES

The structure of cross roller bearing for strainwave drive is that the outer ring is the two-piece separation type, the inner ring is the one-piece type, and the design is the full roller type. The roller is in linear contact on the 90° V-shaped full groove rolling surface. The elastic deformation caused by the load is very small, so a single cross roller bearing can withstand axial load, radial load, torque and load from all directions. At the same time, the outer ring is two separate structures, which are fixed together through bolts to avoid separation during installation or transportation. The operation is simple and easy.

BEARING'S COOPERATION

When the bearing needs to bear composite load and impact load, in order to ensure rotation accuracy and rigidity, interference fit should be avoided for CC0 clearance fit or only extremely small interference fits are used for CC0 clearance fit to avoid excessive preloading.

LUBRICATION

High-quality lithium soap based grease has been sealed in the all new cross roller bearing, so it can be directly installed and used after being unsealed. However, compared with the general ball bearing, it has less internal residual space volume and is in a strict roller rolling contact, so it is necessary to replenish the grease regularly.

CAUTIONS

If this cross roller bearing is two-piece outer ring, it is combined through special rivets or bolts, and cannot be separated after fixing. It can be used directly with the reducer. If you disassemble it by yourself and generate stagger joint, it will have a great impact on the rotating performance, so do not disassemble the bearing.

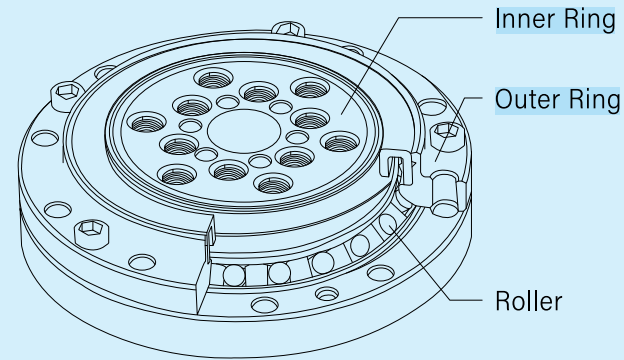


Figure1-1: Cross Roller Bearing Structure Drawing

It shows that the cross roller bearing for strainwave drive is composed of inner ring, outer ring, roller, oil seal and oil ring. The inner and outer ring have been processed with mounting holes, and do not need to fix flange or support seat, which is easy to install. With high rigidity, high rotation accuracy and composite bearing capacity, the bearing is best suited for the strainwave drive of home or industrial robot arm.

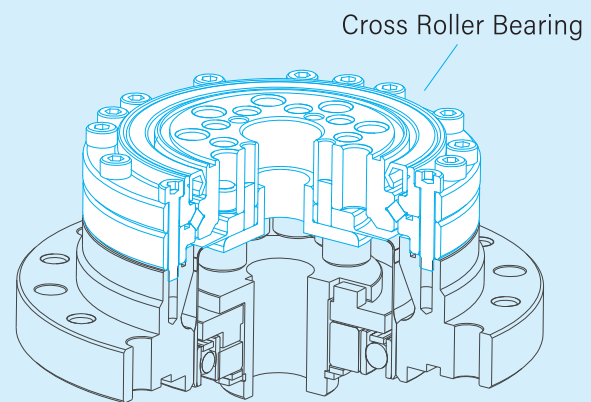
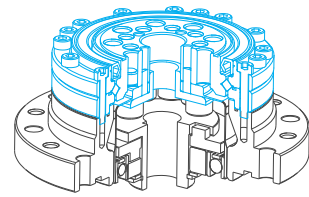
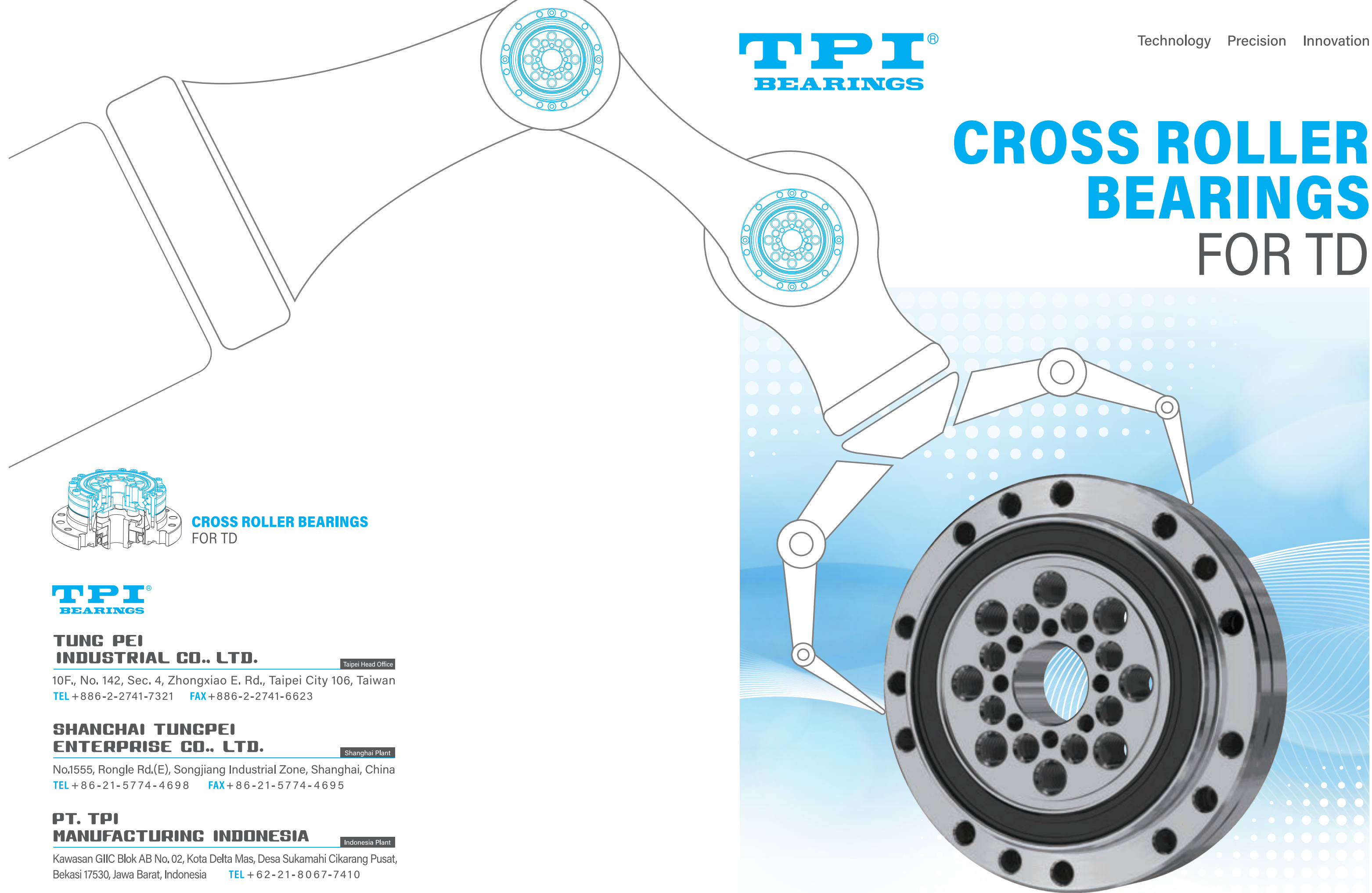


Figure 1-2: Assembly Schematic

It shows the assembly schematic of cross roller bearing and strainwave drive, and the product is widely applied to precision robots, robotic arms, precision machine tools and instruments.



CROSS ROLLER BEARINGS FOR TD



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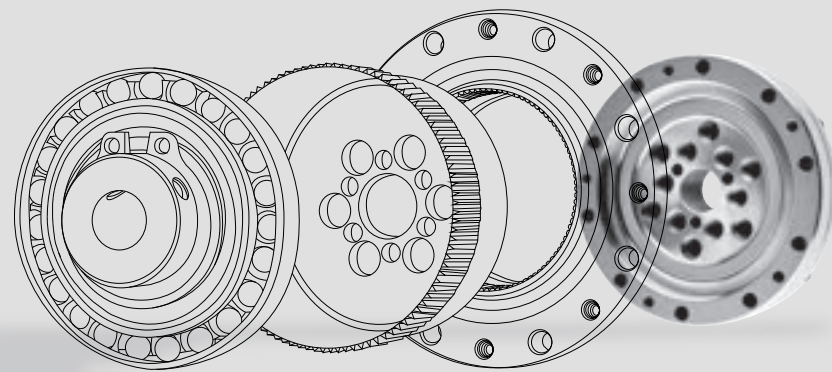
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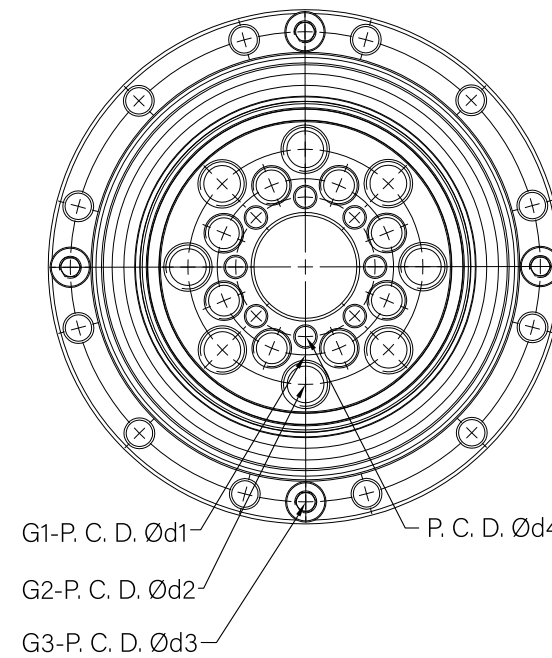
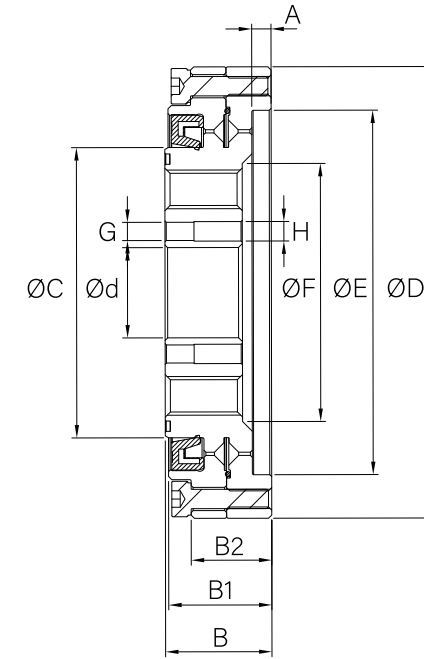


CRA series

| Bearing type | Boundary Dimensions | | | | | | | | | | |
|--------------|---------------------|-----|------|------|------|------|-----|------|------|--------|------|
| | d | A | B | B1 | B2 | C | D | E | F | G | H |
| CRA1116 | 11 | 2.5 | 16.5 | 16 | 12 | 42.5 | 55 | 41.8 | 28 | 6-Ø2.3 | Ø2.5 |
| CRA1016 | 10 | 2.7 | 16.5 | 16 | 12 | 49.5 | 62 | 49 | 34.3 | 6-Ø2.8 | Ø3 |
| CRA1416 | 14 | 3 | 16.5 | 16 | 12.5 | 58 | 70 | 56.5 | 40 | 8-Ø2.8 | Ø3 |
| CRA2018 | 20 | 2 | 18.5 | 18 | 14 | 73 | 85 | 68 | 52 | 8-Ø2.8 | Ø3 |
| CRA2621 | 26 | 3 | 22.5 | 21.5 | 17 | 96 | 112 | 90 | 66.8 | 4-Ø4.8 | Ø5 |

| Bearing type | Abutment and Dimensions | | | | | | |
|--------------|-------------------------|------|----|-------|-----|---------|----|
| | d1 | G1 | d2 | G2 | d3 | G3 | d4 |
| CRA1116 | 17 | 6-M4 | 23 | 6-M4 | 49 | 8-Ø3.6 | 15 |
| CRA1016 | 19 | 6-M5 | 27 | 6-M5 | 56 | 10-Ø3.6 | 15 |
| CRA1416 | 24 | 8-M5 | 32 | 8-M6 | 64 | 12-Ø3.6 | 19 |
| CRA2018 | 30 | 8-M6 | 42 | 8-M8 | 79 | 16-Ø3.6 | 26 |
| CRA2621 | 40 | 8-M8 | 55 | 8-M10 | 104 | 16-Ø4.6 | 34 |

| Bearing type | Basic Load Ratings | | Permissible Moment | Moment Rigidity |
|--------------|---------------------|----------------------|---------------------|-----------------------------|
| | Dyn. | Stat. | | |
| | C _r (kN) | C _{or} (kN) | M _c (Nm) | K (×10 ⁴ Nm/rad) |
| CRA1116 | 4.23 | 5.46 | 36.9 | 4.38 |
| CRA1016 | 4.76 | 6.79 | 57.6 | 7.75 |
| CRA1416 | 5.2 | 8.1 | 81.9 | 12.8 |
| CRA2018 | 8.64 | 13.59 | 140.4 | 24.2 |
| CRA2621 | 13.5 | 22.5 | 281.7 | 53.9 |



CRC series

| Bearing type | Boundary Dimensions | | | | |
|--------------|---------------------|----|------|------|-----|
| | d1 | d2 | B | B1 | D |
| CRC3815 | 36 | 38 | 15.1 | 14.1 | 70 |
| CRC4717 | 45.5 | 47 | 17 | 16 | 80 |
| CRC5418 | - | 54 | 18.5 | 17.5 | 90 |
| CRC6720 | 66 | 68 | 20.7 | 19.7 | 110 |
| CRC8824 | 84 | 88 | 24.4 | 23.4 | 142 |

| Bearing type | Abutment and Dimensions | | | | | |
|--------------|-------------------------|-----|-------|-----|------|------|
| | A1 | C1 | A2 | C2 | A3 | A4 |
| CRC3815 | 8-Ø3.5 | 64 | 12-M3 | 44 | - | 2-M3 |
| CRC4717 | 12-Ø3.5 | 74 | 20-M3 | 54 | - | 4-M3 |
| CRC5418 | 12-Ø3.5 | 84 | 16-M3 | 62 | 4-M3 | 4-M3 |
| CRC6720 | 12-Ø4.5 | 102 | 16-M4 | 77 | 4-M3 | 4-M3 |
| CRC8824 | 12-Ø5.5 | 132 | 16-M5 | 100 | 8-M4 | 4-M4 |

| Bearing type | Basic Load Ratings | | Permissible Moment | Moment Rigidity |
|--------------|---------------------|----------------------|---------------------|-----------------------------|
| | Dyn. | Stat. | | |
| | C _r (kN) | C _{or} (kN) | M _c (Nm) | K (×10 ⁴ Nm/rad) |
| CRC3815 | 5.22 | 7.74 | 66.6 | 8.5 |
| CRC4717 | 9.36 | 14.67 | 111.6 | 15.4 |
| CRC5418 | 13.14 | 19.8 | 168.3 | 25.2 |
| CRC6720 | 19.62 | 32.22 | 232.2 | 39.2 |
| CRC8824 | 34.38 | 58.86 | 522 | 100 |

