

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.

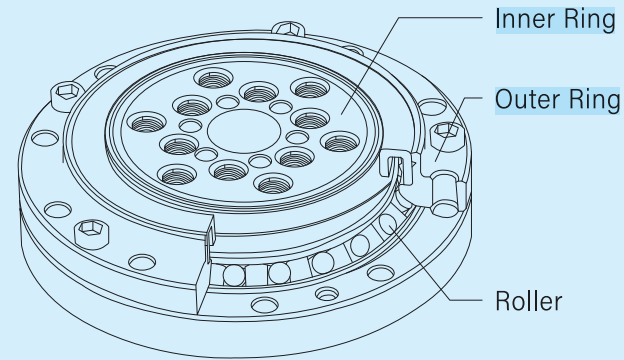


Figure1-1: Cross Roller Bearing Structure Drawing

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.

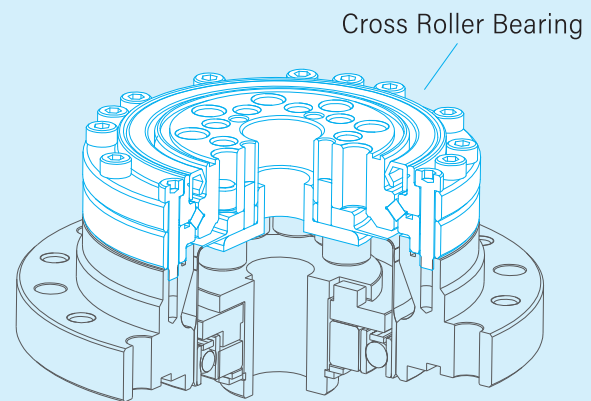
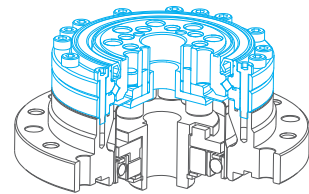
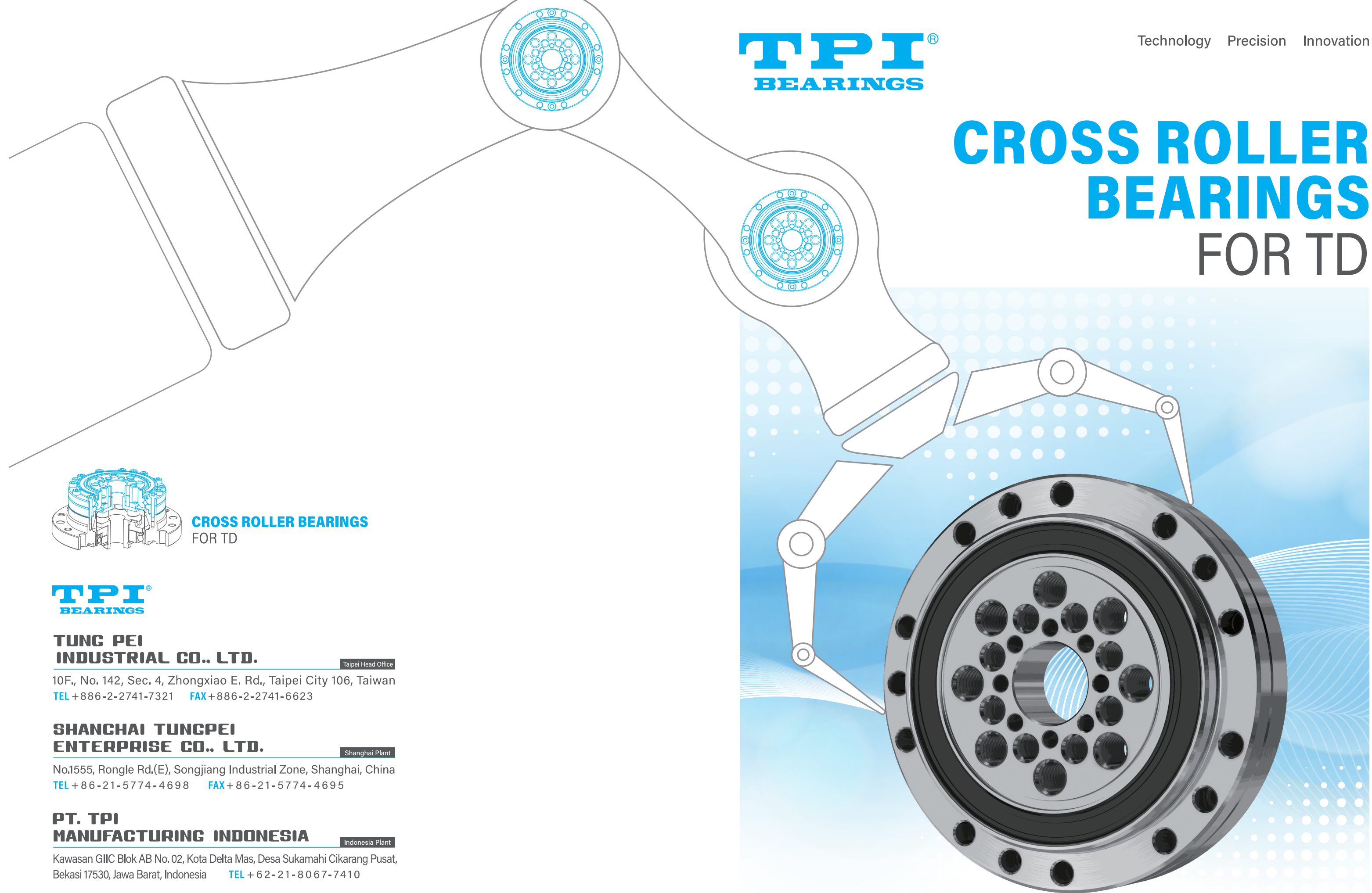


Figure 1-2: Assembly Schematic

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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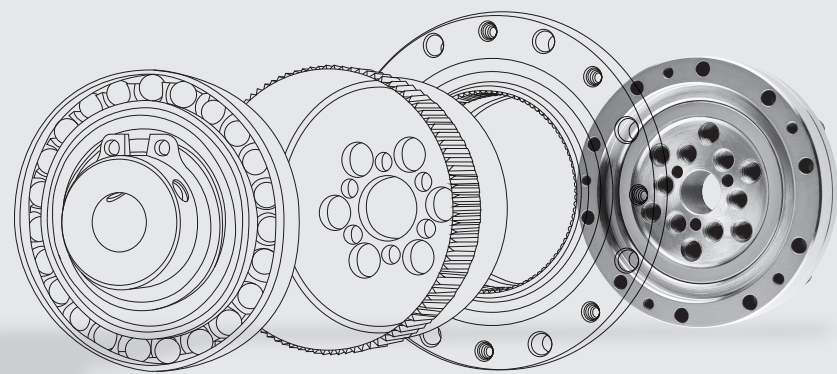
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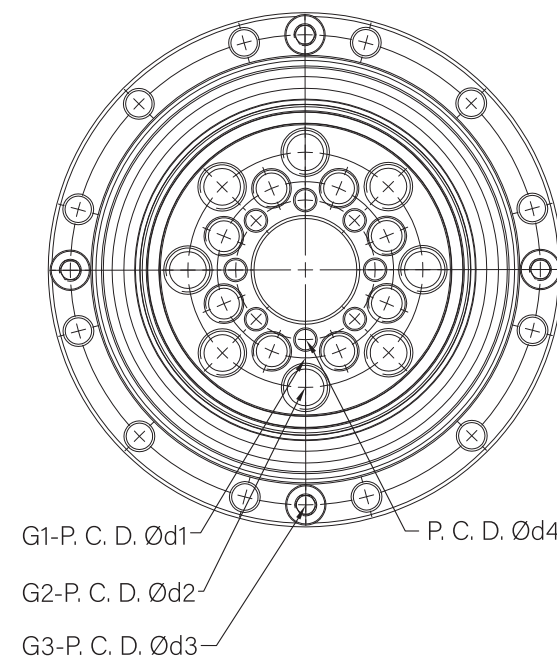
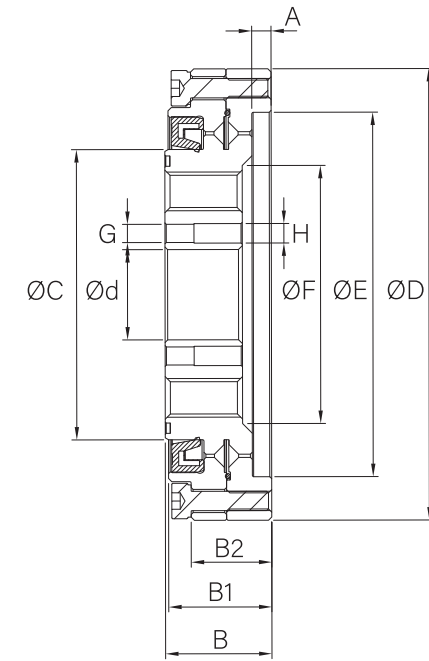


CRA series

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 ($\times 10^4$ 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 ($\times 10^4$ 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

