

Crossed Roller Bearings **CRB Series**

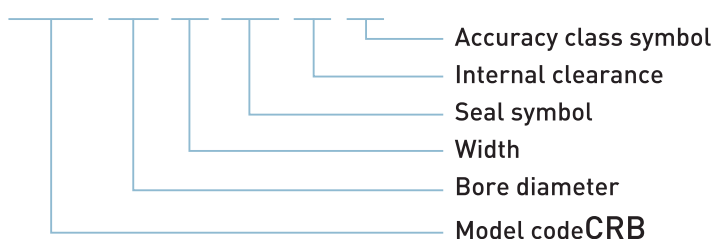


• Features

1. Smooth rotation.
2. High rigidity and high load capacity.
3. Space saving.
4. Taking loads from any direction at the same time.
5. Easy handling.
6. Many kinds of specifications for your best choice.

• Specification of the bearing

CRBA 150 25 WW C8 P5



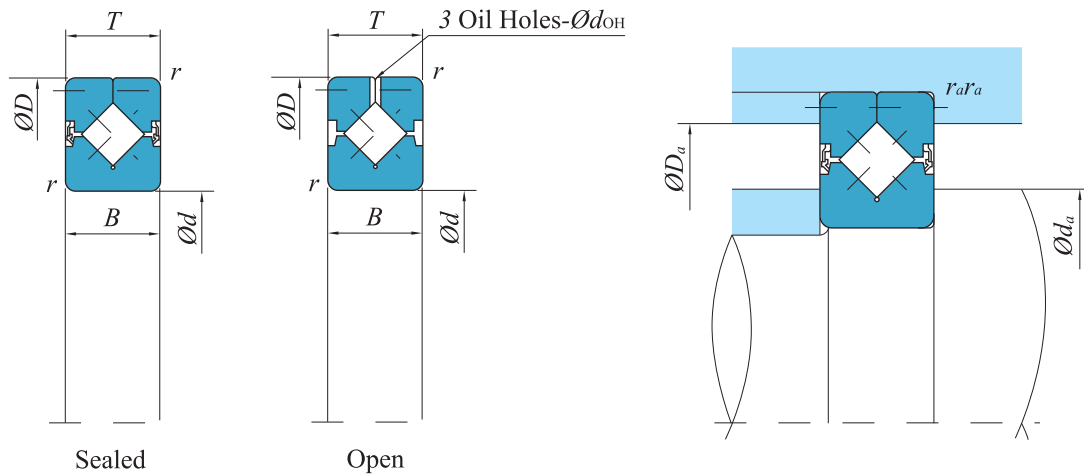
WW C8 P51.

CRB : Model code of bearing. CRB stands for crossed roller bearing.

comprises two types, which could be represented as A or B. A is the outer ring division form. B is the inner ring division form.

2. : Bore diameter of bearing (unit: mm). For example, 080 represents the bore diameter in 80 mm, 100 represents the bore diameter in 100 mm.
3. $\Delta\Delta$: Width of bearing (unit: mm).
4. WW: Seal symbol. WW signifies Seal on both sides; NN signifies Open type with no seal.
5. C8: Axial internal clearance. C1: Positive clearance, C8: Negative clearance.
6. P5: Accuracy class symbol contains Class Normal (P0) and Class 5 (P5).

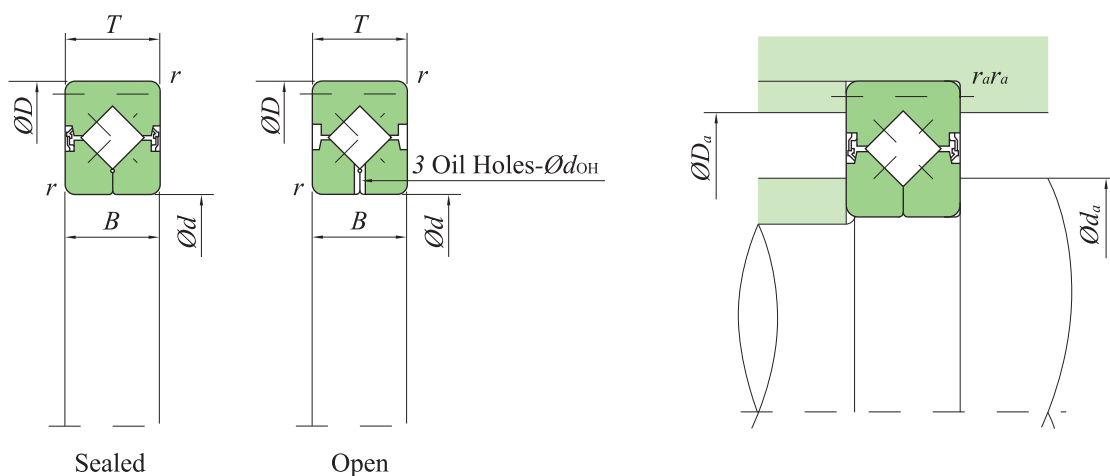
• Bearing table



Dimensions (mm)			Bearing No.	Oil hole d_{OH} (mm)	Basic load ratings(N)		Abutment and fillet dimensions (mm)				
d	D	B, T			C	$C_0 d_a D_a r_{a \min}$		max	min	max	max
50	80	13	CRBA05013	2	17380	12750	56.5	57.5	70	71	0.6
60	90	13	CRBA06013	2	19020	14880	67	68	80	81	0.6
70	100	13	CRBA07013	2	20470	17010	77	78	90	91	0.6
80	110	13	CRBA08013	2	21850	19130	87	88	100	101	0.6
80	120	16	CRBA08016	2.5	27210	23260	92	94	106	108	0.6
90	130	16	CRBA09016	2.5	28570	25440	102	104	116	118	1
90	140	20	CRBA09020	2.5	34950	30490	107	109	121	123	1
100	140	16	CRBA10016	2.5	30400	28350	112	114	126	128	1
100	150	20	CRBA10020	2.5	36690	33350	117	119	131	133	1
110	160	20	CRBA11020	2.5	38470	36210	127	129	141	143	1
120	150	16	CRBA12016	2.5	26220	27100	127	128	140	141	1
120	170	20	CRBA12020	2.5	40100	39070	137	139	151	153	1.5
120	180	25	CRBA12025	2.5	54990	50880	140	144	156	160	1.5
130	190	25	CRBA13025	2.5	56600	53880	150	154	166	170	1.5
140	200	25	CRBA14025	2.5	59540	58370	160	164	176	180	1.5
150	180	13	CRBA15013	2.5	29490	33480	157	158	170	171	1.5
150	210	25	CRBA15025	2.5	60860	61360	170	174	186	190	1.5
160	220	25	CRBA16025	2.5	62320	64350	180	184	196	200	1.5
170	220	20	CRBA17020	2.5	46900	52410	187	189	201	203	1.5
180	240	25	CRBA18025	2.5	66450	71840	200	204	216	220	1.5
200	260	25	CRBA26025	2.5	70250	79320	219	223	237	241	2
220	280	25	CRBA16025	2.5	72480	85300	239	243	257	261	2

Note: The basic load ratings refer to ISO76 / ISO281. **1. CRBA (seal and open types), the bore diameter 50 ~ 220 mm**

• Bearing table



Dimensions (mm)			Bearing No.	Oil hole d_{OH} (mm)	Basic load ratings (N)		Abutment and fillet dimensions (mm)				
d	D	B, T			C	$C_0 d_a D_a r_a$	min	max	min	max	max
50	80	13	CRBB 05013	2	17380	12750	56.5	57.5	70	71	0.6
60	90	13	CRBB 06013	2	19020	14880	67	68	80	81	0.6
70	100	13	CRBB 07013	2	20470	17010	77	78	90	91	0.6
80	110	13	CRBB 08013	2	21850	19130	87	88	100	101	0.6
80	120	16	CRBB 08016	2.5	27210	23260	92	94	106	108	0.6
90	130	16	CRBB 09016	2.5	28570	25440	102	104	116	118	1
90	140	20	CRBB 09020	2.5	34950	30490	107	109	121	123	1
100	140	16	CRBB 10016	2.5	30400	28350	112	114	126	128	1
100	150	20	CRBB 10020	2.5	36690	33350	117	119	131	133	1
110	160	20	CRBB 11020	2.5	38470	36210	127	129	141	143	1
120	150	16	CRBB 12016	2.5	26220	27100	127	128	140	141	1
120	170	20	CRBB 12020	2.5	40100	39070	137	139	151	153	1.5
120	180	25	CRBB 12025	2.5	54990	50880	140	144	156	160	1.5
130	190	25	CRBB 13025	2.5	56600	53880	150	154	166	170	1.5
140	200	25	CRBB 14025	2.5	59540	58370	160	164	176	180	1.5
150	180	13	CRBB 15013	2.5	29490	33480	157	158	170	171	1.5
150	210	25	CRBB 15025	2.5	60860	61360	170	174	186	190	1.5
160	220	25	CRBB 16025	2.5	62320	64350	180	184	196	200	1.5
170	220	20	CRBB 17020	2.5	46900	52410	187	189	201	203	1.5
180	240	25	CRBB 18025	2.5	66450	71840	200	204	216	220	1.5
200	260	25	CRBB 26025	2.5	70250	79320	219	223	237	241	2
220	280	25	CRBB 16025	2.5	72480	85300	239	243	257	261	2

Note: The basic load ratings refer to ISO76 / ISO281. **2. CRBB (seal and open types), the bore diameter 50 ~ 220 mm**

• Accuracy

1. Tolerances for inner ring of crossed roller bearings

unit : μm

Nominal bore diameter d (mm)		Bore diameter deviation ?d _{mp}				Deviation of inner (or outer) ring width ?B _s , ?T _s		Radial run out of inner ring, K _{ia} n		Inner ring face run out with raceway, S _{ia}
		Class Norma1		Class 5				Class Normal	Class 5	
over	include	high	low	high	low	high	low	max	max	max
18	30	0	-10	0	-6	0	-120	13	4	8
30	50	0	-12	0	-8	0	-120	15	5	8
50	80	0	-15	0	-9	0	-150	20	5	8
80	120	0	-20	0	-10	0	-200	25	6	9
120	180	0	-25	0	-13	0	-250	30	8	10
180	250	0	-30	0	-15	0	-300	40	10	13
250	315	0	-35	0	-18	0	-350	50	13	15

Note: Regarding tolerance high than Class 5, please contact HIWIN.

2 Tolerances for outer ring of crossed roller bearings

unit : μm

Nominal bore diameter D (mm)		Outside diameter deviation ΔD_{mp}				Radial run out of outer ring, K_{ea}		Outer ring face run out with raceway, S_{ea}	
		Class Normal		Class 5		Class Normal	Class 5	Class 5	
over	include	high	low	high	low	max	max	max	
18	30	0	-11	0	-7	20	7	8	
30	50	0	-13	0	-9	25	8	10	
50	80	0	-15	0	-10	35	10	11	
80	120	0	-18	0	-11	40	11	13	
120	180	0	-25	0	-13	45	13	14	
180	250	0	-30	0	-15	50	15	15	
250	315	0	-35	0	-18	60	18	18	

Note: Regarding tolerance high than Class 5, please contact HIWIN.

• Axial internal clearance

unit : μm

Nominal bore diameter, d (mm)		Clearance			
		C8		C1	
over	include	min	max	min	max
30	50	-10	0	5	15
50	65	-10	0	5	20
65	80	-10	0	10	25
80	100	-10	0	10	30
100	120	-15	0	10	30
120	140	-15	0	10	35
140	160	-15	0	10	35
160	180	-15	0	10	40
180	200	-15	0	15	45
200	225	-20	0	15	50
225	250	-20	0	15	50
250	280	-20	0	20	55

Note: The C8 clearance (negative clearance) is available in tolerance Class 5 and higher.

The specifications in this catalog are subject to change without notification.



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