



NEEDLE ROLLER BEARINGS

STUD-TYPE TRACK ROLLERS

CRSB SERIES

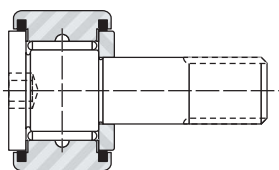
INCH SERIES

- Non-separable, sealed unit with outer ring, full complement of needle rollers, stud seals, self-lubricating resin internal thrust washers and stud-fastened retaining washer.
- Seals help retain lubricant and exclude foreign matter (CRS Series).
- Hexagonal wrench socket in stud head for mounting.
- Re-lubrication via axially drilled hole through stud with cross-drilled holes in stud raceway and shank.
- Recessed axial hole accepts standard nominal inch drive-type grease lubrication fitting.
- Lubrication fitting plugs furnished to close off unused holes.
- Tolerance limits for outer diameters of stud and outer ring refer to "single mean diameter."
- A close fit between stud and hole required for mounting.
- Bore dimensions given below result in varying fit (0.025 mm tight to 0.013 mm loose [0.0010 in. tight to 0.0005 in. loose]).
- Retaining washer should be firmly backed up by flat housing shoulder (perpendicular to the stud axis).
- Shoulder diameter should be at least same size as minimum clamping diameter listed.
- May be mounted with two thin lock nuts, or nut and lock washer.

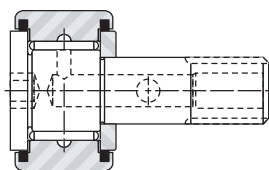
Outer Dia.	d ₁	D	C	B ₂	B ₃	G ₁	d ₄	d ₂	d ₃	G	Bearing Designation
	+0.25 +0.0010 -0 -0.0000	+0 +0.000 -0.025 -0.001	+0 +0.000 -0.13 -0.005	(nom.)		Min.				UNF	
in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	
1/2	4.826 0.1900	12.70 0.500	8.74 0.344	12.70 0.500	—	6.35 0.250	—	—	—	10-32	CRSB-8
1/2	4.826 0.1900	12.70 0.500	9.53 0.375	15.88 0.625	—	6.35 0.250	—	—	—	10-32	CRSB-8-1
5/8	6.350 0.2500	15.88 0.625	10.31 0.406	15.88 0.625	—	7.92 0.312	—	—	—	1/4-28	CRSB-10
5/8	6.350 0.2500	15.88 0.625	11.13 0.438	19.05 0.750	—	7.92 0.312	—	—	—	1/4-28	CRSB-10-1
3/4	9.525 0.3750	19.05 0.750	12.70 0.500	22.23 0.875	6.35 0.250	9.53 0.375	—	4.78 0.188	2.39 0.094	3/8-24	CRSB-12
7/8	9.525 0.3750	22.23 0.875	12.70 0.500	22.23 0.875	6.35 0.250	9.53 0.375	—	4.78 0.188	2.39 0.094	3/8-24	CRSB-14
1	11.113 0.4375	25.40 1.000	15.88 0.625	25.40 1.000	6.35 0.250	12.70 0.500	—	4.78 0.188	2.39 0.094	7/16-20	CRSB-16
1 1/8	11.113 0.4375	28.58 1.125	15.88 0.625	25.40 1.000	6.35 0.250	12.70 0.500	—	4.78 0.188	2.39 0.094	7/16-20	CRSB-18
1 1/4	12.700 0.5000	31.75 1.250	19.05 0.750	31.75 1.250	7.92 0.312	15.88 0.625	—	4.78 0.188	2.39 0.094	1/2-20	CRSB-20
1 3/8	12.700 0.5000	34.93 1.375	19.05 0.750	31.75 1.250	7.92 0.312	15.88 0.625	—	4.78 0.188	2.39 0.094	1/2-20	CRSB-22
1 1/2	15.875 0.6250	38.10 1.500	22.23 0.875	38.10 1.500	9.53 0.375	19.05 0.750	—	4.78 0.188	2.39 0.094	5/8-18	CRSB-24
1 5/8	15.875 0.6250	41.28 1.625	22.23 0.875	38.10 1.500	9.53 0.375	19.05 0.750	—	4.78 0.188	2.39 0.094	5/8-18	CRSB-26
1 3/4	19.050 0.7500	44.45 1.750	25.40 1.000	44.45 1.750	11.13 0.438	22.23 0.875	—	4.78 0.188	2.39 0.094	3/4-16	CRSB-28

⁽¹⁾ UNS instead of UNF threads.

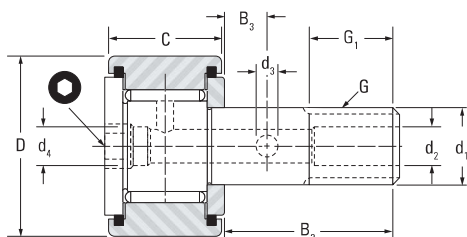
 For hexagonal wrench sizes, see page B-258.



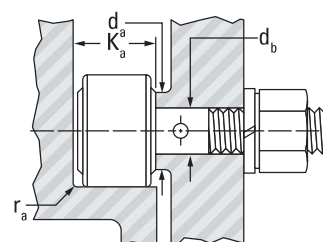
CRSB -8 to -10-1



CRSB -24 to -44



**CRSB -12 to -22
CRSB -48 to -64**



NOTE

Clamping torque is based on lubricated threads. If threads are dry, the torque values listed below may be doubled.

Load Ratings					Speed Rating Grease	Mounting Dimensions				Clamping Torque	Approx. Wt.
As a Bearing		As a Track Roller				d _b	r _{as} max	K _a	d _a		
Dynamic	Static	Dynamic		Static		Bore Dia. for Stud	Max.	Min.	Min.		
C	C ₀	C _w	F _r perm	F _{0r} perm		+0.013 +0.0005 -0 -0.0000					
kN lbf.		kN lbf.			min ⁻¹	mm in.	mm in.	mm in.	mm in.	N-m lb-in.	kg lbs.
4.44 999	4.94 1110	3.01 677	1.04 233	2.49 560	7000	4.826 0.1900	0.25 0.010	10.4 0.41	7.54 0.297	1.69 15	0.010 0.022
4.98 1120	5.69 1280	3.38 759	1.21 272	2.90 652	7000	4.826 0.1900	0.25 0.010	11.2 0.44	7.54 0.297	1.69 15	0.010 0.023
6.05 1360	7.87 1770	4.37 982	2.26 508	5.43 1220	5500	6.350 0.2500	0.38 0.015	11.9 0.47	9.12 0.359	3.95 35	0.019 0.041
6.58 1480	8.76 1970	4.76 1070	2.53 569	6.09 1370	5500	6.350 0.2500	0.38 0.015	12.7 0.50	9.12 0.359	3.95 35	0.020 0.045
10.4 2330	15.2 3410	6.45 1450	2.88 647	6.89 1550	3900	9.525 0.3750	0.38 0.015	14.2 0.56	12.70 0.500	10.73 95	0.034 0.076
10.4 2330	15.2 3410	7.56 1700	4.80 1080	11.5 2590	3900	9.525 0.3750	0.38 0.015	17.5 0.69	12.70 0.500	10.73 95	0.044 0.097
13.3 2980	22.3 5010	8.94 2010	6.05 1360	14.5 3260	3000	11.113 0.4375	0.76 0.030	17.5 0.69	16.28 0.641	28.25 250	0.073 0.161
13.3 2980	22.3 5010	9.88 2220	8.67 1950	18.3 4120	3000	11.113 0.4375	0.76 0.030	20.6 0.81	16.28 0.641	28.25 250	0.089 0.197
23.3 5240	30.3 6810	16.1 3620	7.43 1670	17.8 4010	2600	12.700 0.5000	0.76 0.030	20.6 0.81	19.43 0.765	39.54 350	0.137 0.301
23.30 5240	30.3 6810	17.7 3980	10.5 2350	25.1 5650	2600	12.700 0.5000	0.76 0.030	23.9 0.94	19.03 0.765	39.54 350	0.161 0.354
28.4 6380	40.8 9160	20.1 4520	10.9 2440	26.0 5850	2300	15.875 0.6250	0.76 0.030	23.9 0.94	22.63 0.891	73.44 650	0.354 0.528
28.4 6380	40.8 9160	21.5 4840	14.1 3170	33.8 7610	2300	15.875 0.6250	0.76 0.030	26.9 1.06	22.63 0.891	73.44 650	0.274 0.605
35.8 8040	56.94 12800	25.9 5830	17.7 3980	42.5 9560	1900	19.050 0.7500	1.02 0.040	26.9 1.06	26.59 1.047	141.23 1250	0.385 0.848

Continued on next page.



NEEDLE ROLLER BEARINGS

STUD-TYPE TRACK ROLLERS

CRSB SERIES — continued

INCH SERIES

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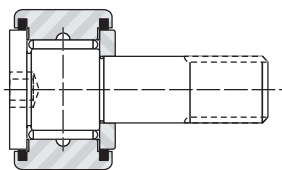
Outer Dia.	d ₁	D	C	B ₂	B ₃	G ₁	d ₄	d ₂	d ₃	G	Bearing Designation
	+0.25 +0.0010 -0 -0.0000	+0 +0.000 -0.025 -0.001	+0 +0.000 -0.13 -0.005	(nom.)		Min.				UNF	
in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.	
1 7/8	19.050 0.7500	47.63 1.875	25.40 1.000	44.45 1.750	11.13 0.438	22.23 0.875	—	4.78 0.188	2.39 0.094	3/4-16	CRSB-30
2	22.225 0.8750	50.80 2.000	31.75 1.250	50.80 2.000	12.70 0.500	25.40 1.000	—	4.78 0.188	3.18 0.125	7/8-14	CRSB-32
2 1/4	22.225 0.8750	57.15 2.250	31.75 1.250	50.80 2.000	12.70 0.500	25.40 1.000	—	4.78 0.188	3.18 0.125	7/8-14	CRSB-36
2 1/2	25.400 1.0000	63.50 2.500	38.10 1.500	57.15 2.250	14.27 0.562	28.58 1.125	—	4.78 0.188	3.18 0.125	1-14 ⁽¹⁾	CRSB-40
2 3/4	25.400 1.0000	69.85 2.750	38.10 1.500	57.15 2.250	14.27 0.562	28.58 1.125	—	4.78 0.188	3.18 0.125	1-14 ⁽¹⁾	CRSB-44
3	31.750 1.2500	76.20 3.000	44.45 1.750	63.50 2.500	15.88 0.625	31.75 1.250	6.35 0.250	6.35 0.250	3.18 0.125	1 1/4-12	CRSB-48
3 1/4	31.750 1.2500	82.55 3.250	44.45 1.750	63.50 2.500	15.88 0.625	31.75 1.250	6.35 0.250	6.35 0.250	3.18 0.125	1 1/4-12	CRSB-52
3 1/2	34.925 1.3750	88.90 3.500	50.80 2.000	69.85 2.750	17.48 0.688	34.93 1.375	6.35 0.250	6.35 0.250	3.18 0.125	1 3/8-12	CRSB-56
4	38.100 1.5000	101.60 4.000	57.15 2.250	88.90 3.500	19.05 0.750	38.10 1.500	6.35 0.250	6.35 0.250	3.18 0.125	1 1/2-12	CRSB-64
5	50.80 2.000	127.0 5.000	69.85 2.750	128.57 5.062	22.352 0.88	65.075 2.562	1/4 NPT	1/4 NPT	4.77 0.188	2-12	CRSB-80
6	63.50 2.500	152.4 6.000	82.55 3.250	152.4 6.000	25.40 1.00	76.2 3.000	1/4 NPT	1/4 NPT	4.77 0.188	2 1/2-12	CRSB-96

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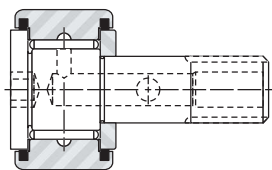
Furnished with lubrication hole in head end of stud and lubrication fitting installed below bottom of hex wrench socket.



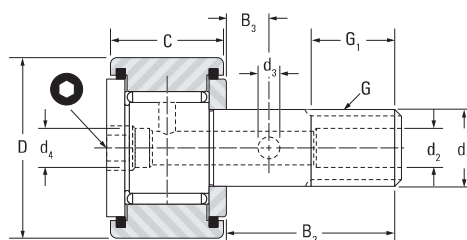
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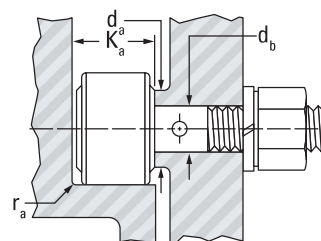
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C	C ₀	C _w	F _r perm	F _{0r} perm		+0.013 +0.0005 -0 -0.0000					
kN lbf.		kN lbf.			min ⁻¹	mm in.	mm in.	mm in.	mm in.	N-m lb-in.	kg lbs.
35.8 8040	56.94 12800	27.4 6150	22.0 4940	49.4 11100	1900	19.050 0.7500	1.02 0.040	33.8 1.33	26.59 1.047	84.74 750	0.430 0.947
43.5 9770	76.06 17100	31.8 7160	26.0 5850	60.5 13600	1700	22.225 0.8750	1.27 0.050	33.8 1.33	30.56 1.203	101.69 900	0.621 1.370
43.5 9770	76.06 17100	34.6 7770	36.7 8250	71.2 16000	1700	22.225 0.8750	1.27 0.050	40.1 1.58	30.56 1.203	101.69 900	0.757 1.670
58.7 13200	118.32 26600	44.5 10000	51.6 11600	101 22700	1400	25.400 1.0000	2.29 0.090	40.1 1.58	34.93 1.375	152.53 1350	1.134 2.500
58.7 13200	118.32 26600	47.2 10600	66.7 15000	113 25500	1400	25.400 1.0000	2.29 0.090	44.5 1.75	34.93 1.375	152.53 1350	1.329 2.930
74.7 16800	178.82 40200	51.6 11600	64.0 14400	127 28600	990	31.750 1.2500	2.29 0.090	46.5 1.83	44.45 1.750	231.62 2050	1.905 4.200
74.7 16800	178.82 40200	54.7 12300	80.1 18000	143 32100	990	31.750 1.2500	2.29 0.090	46.5 1.83	44.45 1.750	231.62 2050	2.182 4.810
110.8 24900	226.86 51000	82.3 18500	89.8 20200	187 42000	950	34.925 1.3750	2.29 0.090	52.8 2.08	48.82 1.922	282.46 2500	2.912 6.420
138.3 31100	321.16 72200	99.2 22300	121 27200	245 55000	780	38.100 1.5000	2.29 0.090	59.2 2.33	57.94 2.281	338.95 3000	4.291 9.460
211.0 47,300	485.0 109000	152.0 34200	193.0 43400	385.0 86600	620	50.800 2,000	3.18 0.125	73.15 2.88	73.03 2.875	564.9 5000	8.89 19.60
285.0 64100	576.0 130000	209.0 47100	238.0 53600	473.0 106000	520	63500 2,500	3.18 0.125	85.85 3.38	85.73 3.375	564.9 5000	14.86 32.76