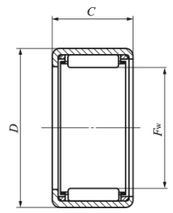
JAPANESE BEARINGS
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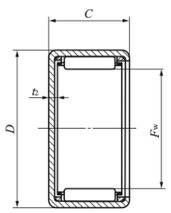
Needle Roller Bearings
Shell Type - Imperial

BA Series w/Oil Hole

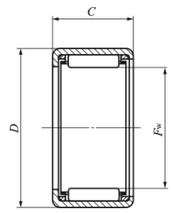
BA Series w/Oil Hole



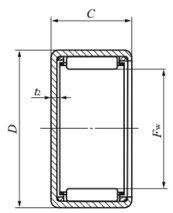
BA ... Z BHA ... Z



BAM BHAM



BA ... Z BHA ... Z



BAM BHAM

Shaft dia. mm (in)	Identification number				Boundary dimensions (mm) (inch)				Standard mounting dimensions (mm)				Basic dynamic load rating C	Basic static load rating CO	Allowable rotational speed (1)	Assembled inner ring
									Shaft dia. h6		J7					
	Standard	Mass g	Closed end*	Mass g	Fw	D	C	t2 Max.	Max	Min.	Max.	Min.	N	N	rpm	
6.350 (1/4)	BA 44	2.1	-	-	6.350 (1/4)	11.112 (7/16)	6.35(1/4)	1	6.35	6.341	11.122	11.104	1 770	1 390	55 000	-
	BA 45 Z	2.5	BAM 45	2.7	6.350 (1/4)	11.112 (7/16)	7.92 (1/32)	1	6.35	6.341	11.122	11.104	1 510	1 120	55 000	-
7.938 (5/16)	BA 57 Z	4.3	BAM 57	4.6	7.938 (5/16)	12.700 (1/ 2)	11.13 (7/16)	1	7.938	7.929	12.71	12.692	3 310	3 220	45 000	-
	BA 59 Z	5.4	BAM 59	5.7	7.938 (5/16)	12.700 (1/ 2)	14.27 (9/16)	1	7.938	7.929	12.71	12.692	4 190	4 360	45 000	-
9.525 (3/8)	BA 610 Z	7	BAM 610	7.4	9.525 (3/8)	14.288 (9/16)	15.88 (5/8)	1	9.525	9.516	14.298	14.28	5 660	6 700	40 000	-
	BA 66 Z	4.2	BAM 66	4.6	9.525 (3/8)	14.288 (9/16)	9.52 (3/8)	1	9.525	9.516	14.298	14.28	3 090	3 080	40 000	-
	BA 68 Z	5.7	BAM 68	6.1	9.525 (3/8)	14.288 (9/16)	12.70 (1/2)	1	9.525	9.516	14.298	14.28	4 190	4 560	40 000	-
11.112 (7/16)	BA 77 Z	5.6	BAM 77	6.2	11.112 (7/16)	15.875 (5/ 8)	11.13 (7/16)	1	11.112	11.101	15.885	15.867	4 150	4 680	35 000	-
	BA 78 Z	6.4	BAM 78	7	11.112 (7/16)	15.875 (5/ 8)	12.70 (1/2)	1	11.112	11.101	15.885	15.867	4 460	5 130	35 000	-
	BA 710 Z	7.9	BAM 710	8.5	11.112 (7/16)	15.875 (5/ 8)	15.88 (5/8)	1	11.112	11.101	15.885	15.867	6 020	7 550	35 000	-
	BA 88 Z	7.2	BAM 88	7.9	12.700 (1/2)	17.462 (11/16)	12.70 (1/2)	1	12.7	12.689	17.472	17.454	4 710	5 700	30 000	IRB 58
12.700 (1/2)	BA 810 Z	8.9	BAM 810	9.6	12.700 (1/2)	17.462 (11/16)	15.88 (5/8)	1	12.7	12.689	17.472	17.454	6 350	8 380	30 000	-
	BA 812 Z	10.6	BAM 812	11.3	12.700 (1/2)	17.462 (11/16)	19.05 (3/4)	1	12.7	12.689	17.472	17.454	7 840	11 000	30 000	-
14.288 (9/16)	BA 910 Z	9.9	BAM 910	10.8	14.288 (9/16)	19.05 (3/4)	15.88 (5/8)	1.3	14.288	14.277	19.062	19.041	7 050	9 910	30 000	-
	BA 912 Z	11.7	BAM 912	12.6	14.288 (9/16)	19.05 (3/4)	19.05 (3/4)	1.3	14.288	14.277	19.062	19.041	8 690	13 000	30 000	IRB 612
15.875 (5/8)	BA 1010 Z	10.8	BAM 1010	12	15.875 (5/8)	20.638 (13/16)	15.88 (5/8)	1.3	15.875	15.864	20.65	20.629	9 020	14 100	25 000	IRB 612-1
	BA 1012 Z	12.9	BAM 1012	14	15.875 (5/8)	20.638 (13/16)	19.05 (3/4)	1.3	15.875	15.864	20.65	20.629	10 700	17 500	25 000	IRB 714
	BA 1014 Z	15.1	BAM 1014	16.2	15.875 (5/8)	20.638 (13/16)	22.22 (7/8)	1.3	15.875	15.864	20.65	20.629	12 300	20 800	25 000	IRB 716
	BA 1016 Z	17.3	BAM 1016	18.4	15.875 (5/8)	20.638 (13/16)	25.4 (1)	1.3	15.875	15.864	20.65	20.629	7 580	12 200	9 500	-
	BA 105 Z	5.3	BAM 105	6.5	15.875 (5/8)	20.638 (13/16)	7.92 (5/16)	1.3	15.875	15.864	20.65	20.629	2 870	3 220	25 000	-
	BA 107 Z	7.6	BAM 107	8.7	15.875 (5/8)	20.638 (13/16)	11.13 (7/16)	1.3	15.875	15.864	20.65	20.629	5 040	6 660	25 000	-
	BA 108 Z	8.7	BAM 108	9.9	15.875 (5/8)	20.638 (13/16)	12.70 (1/2)	1.3	15.875	15.864	20.65	20.629	5 420	7 310	25 000	IRB 68-1
17.462 (11/16)	BA 1110 Z	11.8	BAM 1110	13.2	17.462 (11/16)	22.225 (7/ 8)	15.88 (5/8)	1.3	17.462	17.451	22.237	22.216	8 280	13 000	25 000	-
	BA 1112 Z	14	BAM 1112	15.4	17.462 (11/16)	22.225 (7/ 8)	19.05 (3/4)	1.3	17.462	17.451	22.237	22.216	10 200	17 000	25 000	IRB 812
19.050 (3/4)	BA 1212 Z	20.5	BAM 1212	22	19.050 (3/4)	25.400 (1)	19.05 (3/4)	1.3	19.05	19.037	25.412	25.391	11 900	17 700	20 000	IRB 812-1
	BA 1214 Z	23.5	BAM 1214	25	19.050 (3/4)	25.400 (1)	22.22 (7/8)	1.3	19.05	19.037	25.412	25.391	14 200	22 200	20 000	IRB 814-1
	BA 1216 Z	27	BAM 1216	28.5	19.050 (3/4)	25.400 (1)	25.40 (1)	1.3	19.05	19.037	25.412	25.391	16 300	26 500	20 000	IRB 816-1
	BA 126 Z	10	BAM 126	11.7	19.050 (3/4)	25.400 (1)	9.52 (3/8)	1.3	19.05	19.037	25.412	25.391	5 040	5 850	20 000	-
	BA 128 Z	13.5	BAM 128	15.2	19.050 (3/4)	25.400 (1)	12.70 (1/2)	1.3	19.05	19.037	25.412	25.391	6 910	8 780	20 000	IRB 88-1
20.638 (13/16)	BA 1314 Z	25	BAM 1314	27	20.638 (13/16)	26.988 1 (1/16)	22.22 (7/8)	1.3	20.638	20.625	27	26.979	14 700	23 800	19 000	IRB 914
	BA 1316 Z	28.5	BAM 1316	30.5	20.638 (13/16)	26.988 1 (1/16)	25.40 (1)	1.3	20.638	20.625	27	26.979	16 900	28 500	19 000	IRB 916
22.225 (7/8)	BA 148 Z	15.6	BAM 148	17.8	22.225 (7/ 8)	28.575 (1 1/ 8)	12.70 (1/2)	2.8	22.225	22.212	28.587	28.566	7 440	10 100	18 000	IRB 108
	BA 1412 Z	23.5	BAM 1412	26	22.225 (7/ 8)	28.575 (1 1/ 8)	19.05 (3/4)	2.8	22.225	22.212	28.587	28.566	12 800	20 400	18 000	IRB 1012

*Not a stocked range although available on request

Note. (1) Allowable rotational speed applied to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.

BOOK 7: PREMIUM BEARINGS
7.4 PREMIUM JAPANESE BEARINGS

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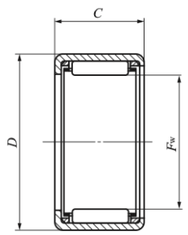
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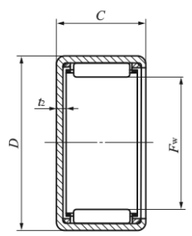
Needle Roller Bearings
Shell Type - Imperial

BA Series w/Oil Hole

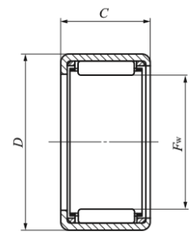
BA Series w/Oil Hole



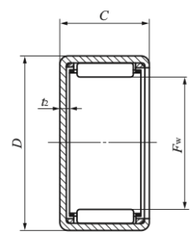
BA ··· Z BHA ··· Z



BAM BHAM



BA ··· Z BHA ··· Z



BAM BHAM

Shaft dia. mm (in)	Identification number				Boundary dimensions (mm) (inch)				Standard mounting dimensions (mm)				Basic dynamic load rating C	Basic static load rating C0	Allowable rotational speed (1)	Assembled inner ring
									Shaft dia. h6		J7					
	Standard	Mass g	Closed end*	Mass g	Fw	D	C	t2 Max.	Max	Min.	Max.	Min.	N	N	rpm	
25.4 (1)	BA 1612 Z	26.5	BAM 1612	29.5	25.400 (1)	31.750 (1 1/ 4)	19.05 (3/4)	2.8	25.4	25.387	31.764	31.739	14 200	24 300	15 000	IRB 1212
	BA 1614 Z	31	BAM 1614	33.5	25.400 (1)	31.750 (1 1/ 4)	22.22 (7/8)	2.8	25.4	25.387	31.764	31.739	16 900	30 400	15 000	IRB 1214
	BA 1616 Z	35.5	BAM 1616	38	25.400 (1)	31.750 (1 1/ 4)	25.40 (1)	2.8	25.4	25.387	31.764	31.739	19 400	36 300	15 000	IRB 1216
	BA 1620 Z	44	BAM 1620	46.5	25.400 (1)	31.750 (1 1/ 4)	31.75 (1 1/4)	2.8	25.4	25.387	31.764	31.739	24 400	48 500	15 000	IRB 1220
26.988 (1 1/16)	BA 1710 Z	23.5	BAM 1710	26.5	26.988 (1 1/16)	33.338 (1 5/16)	15.88 (5/8)	2.8	26.988	26.975	33.352	33.327	11 600	19 200	14 000	-
28.575 (1 1/8)	BA 188 Z	19.5	BAM 188	23	28.575 (1 1/ 8)	34.925 (1 3/ 8)	12.70 (1/2)	2.8	28.575	28.562	34.939	34.914	8 680	13 400	13 000	IRB 148
	BA 1812 Z	29.5	BAM 1812	33	28.575 (1 1/ 8)	34.925 (1 3/ 8)	19.05 (3/4)	2.8	28.575	28.562	34.939	34.914	15 000	26 900	13 000	IRB 1412
	BA 1816 Z	39	BAM 1816	42.5	28.575 (1 1/ 8)	34.925 (1 3/ 8)	25.40 (1)	2.8	28.575	28.562	34.939	34.914	20 500	40 300	13 000	IRB 1416
30.162 (1 3/16)	BA 1916 Z	52	BAM 1916	57	30.162 (1 3/16)	38.100 (1 1/ 2)	25.40 (1)	2.8	30.162	30.146	38.114	38.089	25 800	45 300	12 000	-
31.750 (1 1/4)	BA 2010 Z	27	BAM 2010	31.5	31.750 (1 1/ 4)	38.100 (1 1/ 2)	15.88 (5/8)	2.8	31.75	31.734	38.114	38.089	12 500	22 200	12 000	IRB 1610
	BA 2012 Z	32.5	BAM 2012	37	31.750 (1 1/ 4)	38.100 (1 1/ 2)	19.05 (3/4)	2.8	31.75	31.734	38.114	38.089	15 700	29 600	12 000	IRB 1612
	BA 2016 Z	43	BAM 2016	47.5	31.750 (1 1/ 4)	38.100 (1 1/ 2)	25.40 (1)	2.8	31.75	31.734	38.114	38.089	21 500	44 300	12 000	IRB 1616
	BA 2020 Z	53.5	BAM 2020	58	31.750 (1 1/ 4)	38.100 (1 1/ 2)	31.75 (1 1/4)	2.8	31.75	31.734	38.114	38.089	26 900	59 200	12 000	IRB 1620
33.338 (1 5/16)	BA 2110 Z	35.5	BAM 2110	41.5	33.338 (1 5/16)	41.275 (1 5/ 8)	15.88 (5/8)	2.8	33.338	33.322	41.289	41.264	15 400	23 900	11 000	IRB 1610-1
34.925 (1 3/8)	BA 228 Z	23.5	BAM 228	29	34.925 (1 3/ 8)	41.275 (1 5/ 8)	12.70 (1/2)	2.8	34.925	34.909	41.289	41.264	9 770	16 600	10 000	IRB 188
	BA 2212 Z	35.5	BAM 2212	41	34.925 (1 3/ 8)	41.275 (1 5/ 8)	19.05 (3/4)	2.8	34.925	34.909	41.289	41.264	16 900	33 500	10 000	IRB 1812
	BA 2216 Z	47.5	BAM 2216	53	34.925 (1 3/ 8)	41.275 (1 5/ 8)	25.40 (1)	2.8	34.925	34.909	41.289	41.264	23 100	50 200	10 000	IRB 1816
	BA 2220 Z	59	BAM 2220	64	34.925 (1 3/ 8)	41.275 (1 5/ 8)	31.75 (1 1/4)	2.8	34.925	34.909	41.289	41.264	28 900	67 100	10 000	IRB 1820
38.100 (1 1/2)	BA 248 Z	38.5	BAM 248	47.5	38.100 (1 1/2)	47.625 (1 7/ 8)	12.70 (1/2)	2.8	38.1	38.084	47.639	47.614	12 900	17 900	9 000	-
	BA 2414 Z	69	BAM 2414	78	38.100 (1 1/2)	47.625 (1 7/ 8)	22.22 (7/8)	2.8	38.1	38.084	47.639	47.614	26 700	45 600	9 000	IRB 2014
	BA 2416 Z	79	BAM 2416	88	38.100 (1 1/2)	47.625 (1 7/ 8)	25.40 (1)	2.8	38.1	38.084	47.639	47.614	31 100	55 400	9 000	IRB 2016
	BA 2420 Z	97.5	BAM 2420	106	38.100 (1 1/2)	47.625 (1 7/ 8)	31.75 (1 1/4)	2.8	38.1	38.084	47.639	47.614	39 000	74 200	9 000	IRB 2020
41.275 (1 5/8)	BA 2610 Z	52	BAM 2610	62.5	41.275 (1 5/ 8)	50.800 (2)	15.88 (5/8)	2.8	41.275	41.259	50.818	50.788	18 900	30 000	8 000	IRB 2210
	BA 2620 Z	105	BAM 2620	115	41.275 (1 5/ 8)	50.800 (2)	31.75 (1 1/4)	2.8	41.275	41.259	50.818	50.788	41 400	82 100	8 000	IRB 2220
44.450 (1 3/4)	BA 2816 Z	91	BAM 2816	103	44.450 (1 3/4)	53.975 (2 1/ 8)	25.40 (1)	2.8	44.45	44.434	53.993	53.963	34 800	67 400	7 500	IRB 2416
	BA 2820 Z	112	BAM 2820	125	44.450 (1 3/4)	53.975 (2 1/ 8)	31.75 (1 1/4)	2.8	44.45	44.434	53.993	53.963	43 600	90 200	7 500	-
	BA 2824 Z	136	BAM 2824	148	44.450 (1 3/4)	53.975 (2 1/ 8)	38.10 (1 1/2)	2.8	44.45	44.434	53.993	53.963	52 000	113 000	7 500	IRB 2424
47.625 (1 7/8)	BA 3010 Z	60	BAM 3010	74	47.625 (1 7/8)	57.150 (2 1/ 4)	15.88 (5/8)	2.8	47.625	47.609	57.168	57.138	20 300	34 500	7 000	IRB 2410-1
	BA 3012 Z	72.5	BAM 3012	86.5	47.625 (1 7/8)	57.150 (2 1/ 4)	19.05 (3/4)	2.8	47.625	47.609	57.168	57.138	25 700	46 700	7 000	-
	BA 3016 Z	97.5	BAM 3016	112	47.625 (1 7/8)	57.150 (2 1/ 4)	25.40 (1)	2.8	47.625	47.609	57.168	57.138	35 400	70 600	7 000	-
50.80 (2)	BA 3220 Z	128	BAM 3220	144	50.800 (2)	60.325 (2 3/8)	31.75 (1 1/4)	2.8	50.800	50.781	60.434	60.313	46 600	102 000	6 000	IRB 2720
88.9 (3 1/2)	BA 5612	-	-	-	88.9 (3 1/2)	101.6 (4)	19.05 (3/4)	-	-	-	-	-	-	-	-	-

*Not a stocked range although available on request

Note. (1) Allowable rotational speed applied to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.

BOOK 7: PREMIUM BEARINGS
7.4 PREMIUM JAPANESE BEARINGS

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