

SHELL TYPE NEEDLE ROLLER BEARINGS

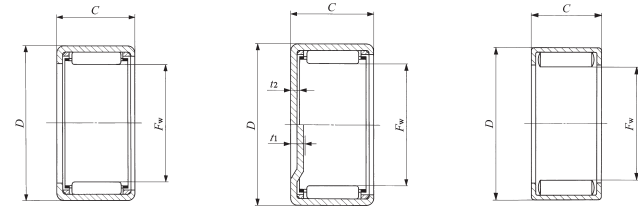
Inch Series



Shaft dia. 20.638 – 22.225mm

Shaft dia. mm (inch)	Identification number									
	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Grease retained	Mass (Ref.) g
20.638 ($\frac{13}{16}$)	BA 136 Z	10.7	BAM 136	12.6	—	—	—	—	—	—
	BA 138 Z	14.5	BAM 138	16.4	—	—	—	—	—	—
	BA 1310 Z	18.2	BAM 1310	20	—	—	—	—	—	—
	BA 1312 Z	22	BAM 1312	23.5	—	—	—	—	—	—
	BA 1314 Z	25	BAM 1314	27	—	—	—	—	—	—
	BA 1316 Z	28.5	BAM 1316	30.5	—	—	—	—	—	—
	BA 1320 Z	35.5	BAM 1320	37.5	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	YB 136	14.1
	—	—	—	—	—	—	—	—	YB 138	19.1
	—	—	—	—	BHA 138 Z	20	BHAM 138	22.5	—	—
	—	—	—	—	BHA 1310 Z	23.5	BHAM 1310	25.5	—	—
	—	—	—	—	BHA 1312 Z	28.5	BHAM 1312	30.5	—	—
	—	—	—	—	—	—	—	—	YBH 1310	30.5
	—	—	—	—	—	—	—	—	YBH 1312	37
22.225 ($\frac{7}{8}$)	BA 146 Z	11.5	BAM 146	13.8	—	—	—	—	—	—
	BA 148 Z	15.6	BAM 148	17.8	—	—	—	—	—	—
	BA 1412 Z	23.5	BAM 1412	26	—	—	—	—	—	—
	BA 1414 Z	27	BAM 1414	29.5	—	—	—	—	—	—
	BA 1416 Z	31	BAM 1416	33.5	—	—	—	—	—	—
	BA 1418 Z	34.5	BAM 1418	37	—	—	—	—	—	—
	BA 1422 Z	42.5	BAM 1422	44.5	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	YB 148	20.5
	—	—	—	—	—	—	—	—	YB 1412	31
	—	—	—	—	—	—	—	—	YB 1416	41.5
	—	—	—	—	BHA 1410 Z	25	BHAM 1410	27.5	—	—
	—	—	—	—	BHA 1412 Z	30	BHAM 1412	32.5	—	—
	—	—	—	—	BHA 1416 Z	39.5	BHAM 1416	42	—	—
	—	—	—	—	—	—	—	—	YBH 1412	39

Note(1) Allowable rotational speed applies to oil lubrication. For grease lubrication, a maximum of 60% of this value is allowable.
 Remark Shell Type Grease Retained Full Complement Needle Roller Bearings are provided with prepacked grease. Standard type and closed end type bearings are not provided with prepacked grease, so perform proper lubrication when using these types of bearings.



BA...Z BHA...Z

BAM BHAM
 $t_1 (F_w \geq 22.225)$
 $t_2 (F_w \leq 20.638)$

YB YBH

Boundary dimensions mm(inch)				Standard mounting dimensions mm				Basic dynamic load rating N	Basic static load rating N	Allowable rotational speed(1) rpm	Assembled inner ring
F_w	D	C	$\frac{t_1}{t_2}$ Max.	Shaft dia. h6		Housing bore dia. J7					
				Max.	Min.	Max.	Min.				
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	9.52 (.375)	1.3	20.638	20.625	27.000	26.979	5 230	6 300	19 000	—
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	12.70 (.500)	1.3	—	—	—	—	7 170	9 450	19 000	IRB 98
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	15.88 (.625)	1.3	—	—	—	—	9 870	14 200	19 000	IRB 910
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	19.05 (.750)	1.3	—	—	—	—	12 400	19 000	19 000	IRB 912
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	22.22 (.875)	1.3	—	—	—	—	14 700	23 800	19 000	IRB 914
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	25.40 (1.000)	1.3	—	—	—	—	16 900	28 500	19 000	IRB 916
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	31.75 (1.250)	1.3	—	—	—	—	21 200	38 100	19 000	IRB 920
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	9.52 (.375)	—	—	—	—	—	13 000	20 100	7 500	—
20.638 ($\frac{13}{16}$)	26.988 (1 $\frac{1}{8}$)	12.70 (.500)	—	—	—	—	—	17 400	29 200	7 500	IRB 98
20.638 ($\frac{13}{16}$)	28.575 (1 $\frac{1}{4}$)	12.70 (.500)	1.3	20.638	20.625	28.587	28.566	9 500	11 200	19 000	IRB 98
20.638 ($\frac{13}{16}$)	28.575 (1 $\frac{1}{4}$)	15.88 (.625)	1.3	—	—	—	—	13 800	18 200	19 000	IRB 910
20.638 ($\frac{13}{16}$)	28.575 (1 $\frac{1}{4}$)	19.05 (.750)	1.3	—	—	—	—	17 300	24 400	19 000	IRB 912
20.638 ($\frac{13}{16}$)	28.575 (1 $\frac{1}{4}$)	15.88 (.625)	—	—	—	—	—	22 900	36 300	7 500	IRB 910
20.638 ($\frac{13}{16}$)	28.575 (1 $\frac{1}{4}$)	19.05 (.750)	—	—	—	—	—	27 200	45 300	7 500	IRB 912
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	9.52 (.375)	2.8	—	—	—	—	5 430	6 740	18 000	IRB 106
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	12.70 (.500)	2.8	—	—	—	—	7 440	10 100	18 000	IRB 108
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	19.05 (.750)	2.8	—	—	—	—	12 800	20 400	18 000	IRB 1012
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	22.22 (.875)	2.8	—	—	—	—	15 300	25 500	18 000	IRB 1014
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	25.40 (1.000)	2.8	22.225	22.212	28.587	28.566	17 600	30 500	18 000	IRB 1016
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	28.58 (1.125)	2.8	—	—	—	—	19 800	35 600	18 000	—
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	34.92 (1.375)	2.8	—	—	—	—	24 100	45 700	18 000	IRB 1022
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	12.70 (.500)	—	—	—	—	—	18 100	31 400	7 000	IRB 108
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	19.05 (.750)	—	—	—	—	—	26 300	50 700	7 000	IRB 1012
22.225 ($\frac{7}{8}$)	28.575 (1 $\frac{1}{4}$)	25.40 (1.000)	—	—	—	—	—	33 800	70 200	7 000	IRB 1016
22.225 ($\frac{7}{8}$)	30.162 (1 $\frac{1}{4}$)	15.88 (.625)	3.4	—	—	—	—	14 300	19 500	18 000	—
22.225 ($\frac{7}{8}$)	30.162 (1 $\frac{1}{4}$)	19.05 (.750)	3.4	22.225	22.212	30.176	30.151	18 000	26 100	18 000	IRB 1012
22.225 ($\frac{7}{8}$)	30.162 (1 $\frac{1}{4}$)	25.40 (1.000)	3.4	—	—	—	—	23 600	36 900	18 000	IRB 1016
22.225 ($\frac{7}{8}$)	30.162 (1 $\frac{1}{4}$)	19.05 (.750)	—	—	—	—	—	28 200	49 000	7 000	IRB 1012