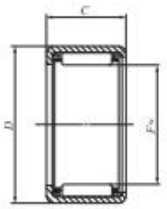
SORUPACHAI

IKO

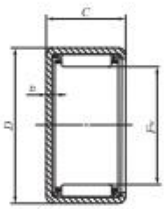
SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





BA ··· Z BHA ··· Z



BAM BHAM



YB

Shaft dia. 3.969 — 9.525mm

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	Boundary dimensions mm(inch): F_w	D	C	t_2 Max.	Standard mounting dimensions mm: Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(1) min⁻¹	Assembled inner ring
3.969 (5/32)	—	—	—	—	—	—	—	—	YB 2.5 2.5	0.64	3.969 (5/32)	7.144 (9/32)	3.96(.156)	—	3.969	3.961	7.152	7.137	1 350	1 220	40 000	—
	—	—	—	—	—	—	—	—	YB 2.5 4	0.96	3.969 (5/32)	7.144 (9/32)	6.35(.250)	—					2 320	2 440	40 000	—
4.762 (3/16)	—	—	—	—	—	—	—	—	YB 34	1.6	4.762 (3/16)	8.731 (11/32)	6.35(.250)	—	4.762	4.754	8.739	8.724	2 770	2 700	30 000	—
6.350 (1/4)	BA 44	2.1	—	—	—	—	—	—	—	—	6.350 (1/4)	11.112 (7/16)	6.35(.250)	1	6.350	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(.312)	1					1 510	1 120	55 000	—
	BA 47 Z	3.5	BAM 47	3.7	—	—	—	—	—	—	6.350 (1/4)	11.112 (7/16)	11.13(.438)	1					2 650	2 310	55 000	—
	—	—	—	—	—	—	—	—	YB 45	3.2	6.350 (1/4)	11.112 (7/16)	7.92(.312)	—					4 450	4 870	25 000	—
	—	—	—	—	—	—	—	—	YB 47	4.6	6.350 (1/4)	11.112 (7/16)	11.13(.438)	—					6 320	7 650	25 000	—
7.938 (5/16)	BA 55 Z	3	BAM 55	3.3	—	—	—	—	—	—	7.938 (5/16)	12.700 (1/2)	7.92(.312)	1	7.938	7.929	12.710	12.692	1 880	1 560	45 000	—
	BA 56 Z	3.6	BAM 56	3.9	—	—	—	—	—	—	7.938 (5/16)	12.700 (1/2)	9.52(.375)	1					2 620	2 390	45 000	—
	BA 57 Z	4.3	BAM 57	4.6	—	—	—	—	—	—	7.938 (5/16)	12.700 (1/2)	11.13(.438)	1					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(.562)	1					4 190	4 360	45 000	—
	—	—	—	—	—	—	—	—	YB 55	3.8	7.938 (5/16)	12.700 (1/2)	7.92(.312)	—					5 110	6 090	20 000	—
	—	—	—	—	BHA 57 Z	6.3	BHAM 57	6.6	—	—	7.938 (5/16)	14.288 (9/16)	11.13(.438)	1.3	7.938	7.929	14.298	14.280	4 150	3 730	45 000	—
9.525 (3/8)	BA 65 Z	3.5	BAM 65	3.9	—	—	—	—	—	—	9.525 (3/8)	14.288 (9/16)	7.92(.312)	1	9.525	9.516	14.298	14.280	2 220	2 010	40 000	—
	BA 66 Z	4.2	BAM 66	4.6	—	—	—	—	—	—	9.525 (3/8)	14.288 (9/16)	9.52(.375)	1					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(.500)	1					4 190	4 560	40 000	—
	BA 69 Z	6.3	BAM 69	6.7	—	—	—	—	—	—	9.525 (3/8)	14.288 (9/16)	14.27(.562)	1					4 940	5 630	40 000	—
	BA 610 Z	7	BAM 610	7.4	—	—	—	—	—	—	9.525 (3/8)	14.288 (9/16)	15.88(.625)	1					5 660	6 700	40 000	—
	—	—	—	—	—	—	—	—	YB 64	3.4	9.525 (3/8)	14.288 (9/16)	6.35(.250)	—					4 470	5 360	16 000	—
	—	—	—	—	—	—	—	—	YB 66	5.3	9.525 (3/8)	14.288 (9/16)	9.52(.375)	—	9.525	9.516	14.298	14.280	6 920	9 410	16 000	—
	—	—	—	—	—	—	—	—	YB 68	7.2	9.525 (3/8)	14.288 (9/16)	12.70(.500)	—					9 210	13 600	16 000	—
	—	—	—	—	—	—	—	—	YB 610	9.1	9.525 (3/8)	14.288 (9/16)	15.88(.625)	—					11 300	17 800	16 000	—
	—	—	—	—	BHA 68 Z	8.2	BHAM 68	8.6	—	—	9.525 (3/8)	15.875 (5/8)	12.70(.500)	1.3	9.525	9.516	15.885	15.867	4 880	4 740	40 000	—

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.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

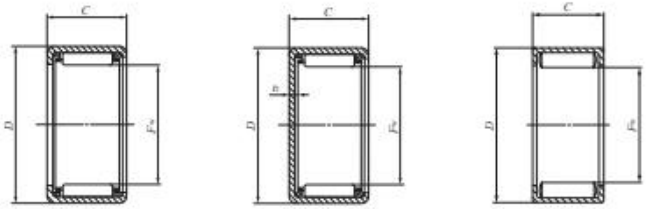
SORUPACHAI

IKO

SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





BA ··· Z BHA ··· Z

BAM BHAM

YB YBH

Shaft dia. 11.112 — 12.700mm

Shaft dia. mm (inch)	Identification number										Boundary dimensions mm(inch)				Standard mounting dimensions mm				Basic dynamic load rating	Basic static load rating	Allowable rotational speed(1)	Assembled inner ring
	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Grease retained	Mass (Ref.) g	F_w	D	C	t_2 Max.	Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	C N	C_0 N	min⁻¹	
11.112 (7/16)	BA 76 Z	4.8	BAM 76	5.3	—	—	—	—	—	—	11.112 (7/16)	15.875 (5/8)	9.52(.375)	1	11.112	11.101	15.885	15.867	3 290	3 470	35 000	—
	BA 77 Z	5.6	BAM 77	6.2	—	—	—	—	—	—	11.112 (7/16)	15.875 (5/8)	11.13(.438)	1					4 150	4 680	35 000	—
	BA 78 Z	6.4	BAM 78	7	—	—	—	—	—	—	11.112 (7/16)	15.875 (5/8)	12.70(.500)	1					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(.625)	1					6 020	7 550	35 000	—
	—	—	—	—	—	—	—	—	YB 78	8.2	11.112 (7/16)	15.875 (5/8)	12.70(.500)	—					10 100	15 900	14 000	—
	—	—	—	—	BHA 78 Z	9.3	BHAM 78	10	—	—	11.112 (7/16)	17.462 (11/16)	12.70(.500)	1.3	11.112	11.101	17.472	17.454	5 680	5 970	35 000	—
	—	—	—	—	—	—	—	—	YBH 78	10.5	11.112 (7/16)	17.462 (11/16)	12.70(.500)	—					12 500	15 800	14 000	—
12.700 (1/2)	BA 85 Z	4.4	BAM 85	5.2	—	—	—	—	—	—	12.700 (1/2)	17.462 (11/16)	7.92(.312)	1	12.700	12.689	17.472	17.454	2 490	2 510	30 000	—
	BA 86 Z	5.3	BAM 86	6.1	—	—	—	—	—	—	12.700 (1/2)	17.462 (11/16)	9.52(.375)	1					3 470	3 850	30 000	—
	BA 87 Z	6.3	BAM 87	7	—	—	—	—	—	—	12.700 (1/2)	17.462 (11/16)	11.13(.438)	1					4 380	5 190	30 000	—
	BA 88 Z	7.2	BAM 88	7.9	—	—	—	—	—	—	12.700 (1/2)	17.462 (11/16)	12.70(.500)	1					4 710	5 700	30 000	IRB 58
	BA 810 Z	8.9	BAM 810	9.6	—	—	—	—	—	—	12.700 (1/2)	17.462 (11/16)	15.88(.625)	1					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(.750)	1					7 840	11 000	30 000	—
	—	—	—	—	—	—	—	—	YB 84	4.3	12.700 (1/2)	17.462 (11/16)	6.35(.250)	—	12.700	12.689	17.472	17.454	5 260	7 150	12 000	—
	—	—	—	—	—	—	—	—	YB 86	6.7	12.700 (1/2)	17.462 (11/16)	9.52(.375)	—					8 150	12 600	12 000	—
	—	—	—	—	—	—	—	—	YB 87	7.9	12.700 (1/2)	17.462 (11/16)	11.13(.438)	—					9 530	15 300	12 000	—
	—	—	—	—	—	—	—	—	YB 88	9.1	12.700 (1/2)	17.462 (11/16)	12.70(.500)	—					10 800	18 100	12 000	IRB 58
	—	—	—	—	—	—	—	—	YB 810	11.5	12.700 (1/2)	17.462 (11/16)	15.88(.625)	—					13 400	23 700	12 000	—
	—	—	—	—	—	—	—	—	YB 812	13.9	12.700 (1/2)	17.462 (11/16)	19.05(.750)	—					15 800	29 300	12 000	—
	—	—	—	—	BHA 87 Z	9.1	BHAM 87	9.9	—	—	12.700 (1/2)	19.050 (3/4)	11.13(.438)	1.3	12.700	12.689	19.062	19.041	5 670	6 120	30 000	—
	—	—	—	—	BHA 88 Z	10.4	BHAM 88	11.3	—	—	12.700 (1/2)	19.050 (3/4)	12.70(.500)	1.3					6 040	6 650	30 000	IRB 58
	—	—	—	—	BHA 810 Z	12.5	BHAM 810	13.3	—	—	12.700 (1/2)	19.050 (3/4)	15.88(.625)	1.3					8 830	10 900	30 000	—
	—	—	—	—	BHA 812 Z	15	BHAM 812	15.8	—	—	12.700 (1/2)	19.050 (3/4)	19.05(.750)	1.3					11 100	14 500	30 000	—
	—	—	—	—	—	—	—	—	YBH 810	16	12.700 (1/2)	19.050 (3/4)	15.88(.625)	—					16 300	23 500	12 000	—

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.

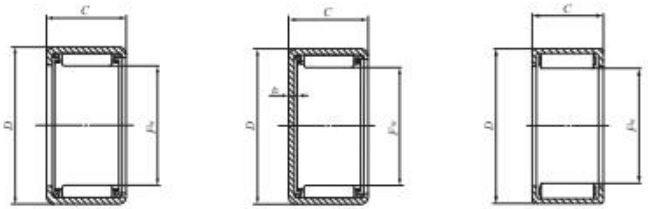
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

SORUPACHAI

SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





BA ··· Z BHA ··· Z | BAM BHAM | YB YBH

Shaft dia. 14.288 — 15.875mm

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	Boundary dimensions mm(inch): F_w	D	C	t_2 Max.	Standard mounting dimensions mm: Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(1) min⁻¹	Assembled inner ring
14.288 (9/16)	BA 95 Z	4.9	BAM 95	5.8	—	—	—	—	—	—	14.288 (9/16)	19.050 (3/4)	7.92(.312)	1.3					2 760	2 970	30 000	—
	BA 96 Z	5.9	BAM 96	6.8	—	—	—	—	—	—	14.288 (9/16)	19.050 (3/4)	9.52(.375)	1.3					3 850	4 560	30 000	—
	BA 97 Z	6.9	BAM 97	7.8	—	—	—	—	—	—	14.288 (9/16)	19.050 (3/4)	11.13(.438)	1.3					4 860	6 140	30 000	—
	BA 98 Z	7.9	BAM 98	8.9	—	—	—	—	—	—	14.288 (9/16)	19.050 (3/4)	12.70(.500)	1.3					5 220	6 740	30 000	IRB 68
	BA 910 Z	9.9	BAM 910	10.8	—	—	—	—	—	—	14.288 (9/16)	19.050 (3/4)	15.88(.625)	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)	19.050 (3/4)	19.05(.750)	1.3					8 690	13 000	30 000	IRB 612
	—	—	—	—	—	—	—	—	YB 98	10.1	14.288 (9/16)	19.050 (3/4)	12.70(.500)	—					11 600	20 400	11 000	IRB 68
	—	—	—	—	—	—	—	—	YB 910	12.7	14.288 (9/16)	19.050 (3/4)	15.88(.625)	—					14 300	26 700	11 000	—
	—	—	—	—	—	—	—	—	YB 912	15.4	14.288 (9/16)	19.050 (3/4)	19.05(.750)	—					16 800	33 000	11 000	IRB 612
	—	—	—	—	BHA 98 Z	11.4	BHAM 98	12.5	—	—	14.288 (9/16)	20.638 (13/16)	12.70(.500)	1.3					6 380	7 330	30 000	IRB 68
	—	—	—	—	BHA 910 Z	13.6	BHAM 910	14.7	—	—	14.288 (9/16)	20.638 (13/16)	15.88(.625)	1.3	14.288	14.277	20.650	20.629	9 280	11 900	30 000	—
	—	—	—	—	BHA 912 Z	16.3	BHAM 912	17.4	—	—	14.288 (9/16)	20.638 (13/16)	19.05(.750)	1.3					11 600	15 900	30 000	IRB 612
15.875 (5/8)	BA 105 Z	5.3	BAM 105	6.5	—	—	—	—	—	—	15.875 (5/8)	20.638 (13/16)	7.92(.312)	1.3					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(.438)	1.3					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(.500)	1.3					5 420	7 310	25 000	IRB 68-1
	BA 1010 Z	10.8	BAM 1010	12	—	—	—	—	—	—	15.875 (5/8)	20.638 (13/16)	15.88(.625)	1.3					7 320	10 700	25 000	—
	BA 1012 Z	12.9	BAM 1012	14	—	—	—	—	—	—	15.875 (5/8)	20.638 (13/16)	19.05(.750)	1.3	15.875	15.864	20.650	20.629	9 020	14 100	25 000	IRB 612-1
	BA 1014 Z	15.1	BAM 1014	16.2	—	—	—	—	—	—	15.875 (5/8)	20.638 (13/16)	22.22(.875)	1.3					10 700	17 500	25 000	IRB 714
	BA 1016 Z	17.3	BAM 1016	18.4	—	—	—	—	—	—	15.875 (5/8)	20.638 (13/16)	25.40(1.000)	1.3					12 300	20 800	25 000	IRB 716
	—	—	—	—	—	—	—	—	YB 105	6.7	15.875 (5/8)	20.638 (13/16)	7.92(.312)	—					7 580	12 200	9 500	—
	—	—	—	—	—	—	—	—	YB 108	11	15.875 (5/8)	20.638 (13/16)	12.70(.500)	—					12 300	22 700	9 500	IRB 68-1
	—	—	—	—	—	—	—	—	YB 1012	16.9	15.875 (5/8)	20.638 (13/16)	19.05(.750)	—					17 800	36 600	9 500	IRB 612-1
	—	—	—	—	BHA 108 Z	12.6	BHAM 108	13.9	—	—	15.875 (5/8)	22.225 (7/8)	12.70(.500)	1.3					6 680	8 020	25 000	IRB 68-1
	—	—	—	—	BHA 1010 Z	14.9	BHAM 1010	16.2	—	—	15.875 (5/8)	22.225 (7/8)	15.88(.625)	1.3					10 200	13 800	25 000	—
	—	—	—	—	BHA 1012 Z	18	BHAM 1012	19.3	—	—	15.875 (5/8)	22.225 (7/8)	19.05(.750)	1.3	15.875	15.864	22.237	22.216	12 700	18 500	25 000	IRB 612-1
	—	—	—	—	BHA 1016 Z	24	BHAM 1016	25	—	—	15.875 (5/8)	22.225 (7/8)	25.40(1.000)	1.3					17 400	27 600	25 000	IRB 716
	—	—	—	—	—	—	—	—	YBH 108	15.3	15.875 (5/8)	22.225 (7/8)	12.70(.500)	—					15 000	22 400	9 500	IRB 68-1

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.

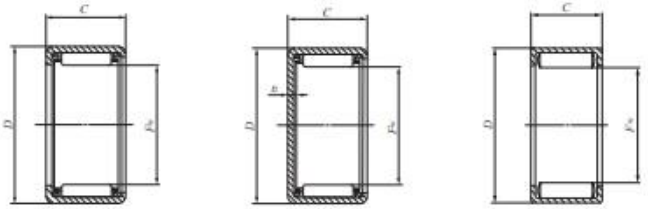
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

SORUPACHAI

SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





BA ··· Z BHA ··· Z | BAM BHAM | YB

Shaft dia. 17.462 — 19.050mm

Shaft dia. mm (inch)	Identification number										Boundary dimensions mm(inch)				Standard mounting dimensions mm				Basic dynamic load rating	Basic static load rating	Allowable rotational speed(1)	Assembled inner ring
	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Grease retained	Mass (Ref.) g	F_w	D	C	f_2 Max.	Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	C N	C_0 N	min⁻¹	
17.462 (11/16)	BA 116 Z	7	BAM 116	8.4	—	—	—	—	—	—	17.462 (11/16)	22.225 (7/8)	9.52 (.375)	1.3					4 530	5 980	25 000	IRB 86
	BA 118 Z	9.5	BAM 118	10.8	—	—	—	—	—	—	17.462 (11/16)	22.225 (7/8)	12.70 (.500)	1.3					6 140	8 850	25 000	IRB 88
	BA 1110 Z	11.8	BAM 1110	13.2	—	—	—	—	—	—	17.462 (11/16)	22.225 (7/8)	15.88 (.625)	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 (.750)	1.3					10 200	17 000	25 000	IRB 812
	—	—	—	—	—	—	—	—	YB 1112	18.3	17.462 (11/16)	22.225 (7/8)	19.05 (.750)	—					18 700	40 300	8 500	IRB 812
	—	—	—	—	BHA 117 Z	11.9	BHAM 117	13.5	—	—	17.462 (11/16)	23.812 (15/16)	11.13 (.438)	1.3					6 860	8 530	25 000	—
	—	—	—	—	BHA 118 Z	13.7	BHAM 118	15.3	—	—	17.462 (11/16)	23.812 (15/16)	12.70 (.500)	1.3					7 320	9 270	25 000	IRB 88
	—	—	—	—	BHA 1110 Z	16	BHAM 1110	17.6	—	—	17.462 (11/16)	23.812 (15/16)	15.88 (.625)	1.3	17.462	17.451	23.824	23.803	10 500	14 900	25 000	—
	—	—	—	—	BHA 1112 Z	19.3	BHAM 1112	21	—	—	17.462 (11/16)	23.812 (15/16)	19.05 (.750)	1.3					13 200	19 900	25 000	IRB 812
19.050 (3/4)	BA 126 Z	10	BAM 126	11.7	—	—	—	—	—	—	19.050 (3/4)	25.400 (1)	9.52 (.375)	1.3					5 040	5 850	20 000	—
	BA 128 Z	13.5	BAM 128	15.2	—	—	—	—	—	—	19.050 (3/4)	25.400 (1)	12.70 (.500)	1.3					6 910	8 780	20 000	IRB 88-1
	BA 1210 Z	17	BAM 1210	18.6	—	—	—	—	—	—	19.050 (3/4)	25.400 (1)	15.88 (.625)	1.3					9 500	13 200	20 000	IRB 810-1
	BA 1212 Z	20.5	BAM 1212	22	—	—	—	—	—	—	19.050 (3/4)	25.400 (1)	19.05 (.750)	1.3	19.050	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 (.875)	1.3					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 (1.000)	1.3					16 300	26 500	20 000	IRB 816-1
	—	—	—	—	—	—	—	—	YB 124	8.5	19.050 (3/4)	25.400 (1)	6.35 (.250)	—					7 820	10 200	8 000	—
	—	—	—	—	—	—	—	—	YB 128	17.8	19.050 (3/4)	25.400 (1)	12.70 (.500)	—					16 600	26 900	8 000	IRB 88-1
	—	—	—	—	—	—	—	—	YB 1210	22.5	19.050 (3/4)	25.400 (1)	15.88 (.625)	—	19.050	19.037	25.412	25.391	20 500	35 300	8 000	IRB 810-1
	—	—	—	—	—	—	—	—	YB 1212	27	19.050 (3/4)	25.400 (1)	19.05 (.750)	—					24 100	43 400	8 000	IRB 812-1
	—	—	—	—	BHA 1212 Z	26.5	BHAM 1212	28.5	—	—	19.050 (3/4)	26.988 (1 1/16)	19.05 (.750)	1.3	19.050	19.037	27.000	26.979	16 600	22 600	20 000	IRB 812-1

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.

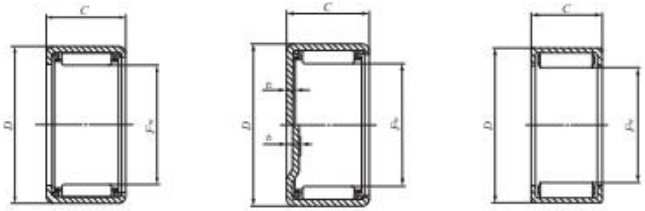
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

SORUPACHAI

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	Boundary dimensions mm(inch): F_w	D	C	t_1 t_2 Max.	Standard mounting dimensions mm: Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(1) min⁻¹	Assembled inner ring
20.638 (13/16)	BA 136 Z	10.7	BAM 136	12.6	—	—	—	—	—	—	20.638 (11/16)	26.988 (1 1/16)	9.52(.375)	1.3					5 230	6 300	19 000	—
	BA 138 Z	14.5	BAM 138	16.4	—	—	—	—	—	—	20.638 (11/16)	26.988 (1 1/16)	12.70(.500)	1.3					7 170	9 450	19 000	IRB 98
	BA 1310 Z	18.2	BAM 1310	20	—	—	—	—	—	—	20.638 (11/16)	26.988 (1 1/16)	15.88(.625)	1.3					9 870	14 200	19 000	IRB 910
	BA 1312 Z	22	BAM 1312	23.5	—	—	—	—	—	—	20.638 (11/16)	26.988 (1 1/16)	19.05(.750)	1.3					12 400	19 000	19 000	IRB 912
	BA 1314 Z	25	BAM 1314	27	—	—	—	—	—	—	20.638 (11/16)	26.988 (1 1/16)	22.22(.875)	1.3	20.638	20.625	27.000	26.979	14 700	23 800	19 000	IRB 914
	BA 1316 Z	28.5	BAM 1316	30.5	—	—	—	—	—	—	20.638 (11/16)	26.988 (1 1/16)	25.40(1.000)	1.3					16 900	28 500	19 000	IRB 916
	BA 1320 Z	35.5	BAM 1320	37.5	—	—	—	—	—	—	20.638 (11/16)	26.988 (1 1/16)	31.75(1.250)	1.3					21 200	38 100	19 000	IRB 920
	—	—	—	—	—	—	—	—	YB 136	14.1	20.638 (11/16)	26.988 (1 1/16)	9.52(.375)	—					13 000	20 100	7 500	—
	—	—	—	—	—	—	—	—	YB 138	19.1	20.638 (11/16)	26.988 (1 1/16)	12.70(.500)	—					17 400	29 200	7 500	IRB 98
	—	—	—	—	BHA 138 Z	20	BHAM 138	22.5	—	—	20.638 (11/16)	28.575 (1 1/8)	12.70(.500)	1.3					9 500	11 200	19 000	IRB 98
	—	—	—	—	BHA 1310 Z	23.5	BHAM 1310	25.5	—	—	20.638 (11/16)	28.575 (1 1/8)	15.88(.625)	1.3					13 800	18 200	19 000	IRB 910
	—	—	—	—	BHA 1312 Z	28.5	BHAM 1312	30.5	—	—	20.638 (11/16)	28.575 (1 1/8)	19.05(.750)	1.3	20.638	20.625	28.587	28.566	17 300	24 400	19 000	IRB 912
	—	—	—	—	—	—	—	—	YBH 1310	30.5	20.638 (11/16)	28.575 (1 1/8)	15.88(.625)	—					22 900	36 300	7 500	IRB 910
	—	—	—	—	—	—	—	—	YBH 1312	37	20.638 (11/16)	28.575 (1 1/8)	19.05(.750)	—					27 200	45 300	7 500	IRB 912
22.225 (7/8)	BA 146 Z	11.5	BAM 146	13.8	—	—	—	—	—	—	22.225 (7/8)	28.575 (1 1/8)	9.52(.375)	2.8					5 430	6 740	18 000	IRB 106
	BA 148 Z	15.6	BAM 148	17.8	—	—	—	—	—	—	22.225 (7/8)	28.575 (1 1/8)	12.70(.500)	2.8					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(.750)	2.8					12 800	20 400	18 000	IRB 1012
	BA 1414 Z	27	BAM 1414	29.5	—	—	—	—	—	—	22.225 (7/8)	28.575 (1 1/8)	22.22(.875)	2.8					15 300	25 500	18 000	IRB 1014
	BA 1416 Z	31	BAM 1416	33.5	—	—	—	—	—	—	22.225 (7/8)	28.575 (1 1/8)	25.40(1.000)	2.8	22.225	22.212	28.587	28.566	17 600	30 500	18 000	IRB 1016
	BA 1418 Z	34.5	BAM 1418	37	—	—	—	—	—	—	22.225 (7/8)	28.575 (1 1/8)	28.58(1.125)	2.8					19 800	35 600	18 000	—
	BA 1422 Z	42.5	BAM 1422	44.5	—	—	—	—	—	—	22.225 (7/8)	28.575 (1 1/8)	34.92(1.375)	2.8					24 100	45 700	18 000	IRB 1022
	—	—	—	—	—	—	—	—	YB 148	20.5	22.225 (7/8)	28.575 (1 1/8)	12.70(.500)	—					18 100	31 400	7 000	IRB 108
	—	—	—	—	—	—	—	—	YB 1412	31	22.225 (7/8)	28.575 (1 1/8)	19.05(.750)	—					26 300	50 700	7 000	IRB 1012
	—	—	—	—	—	—	—	—	YB 1416	41.5	22.225 (7/8)	28.575 (1 1/8)	25.40(1.000)	—					33 800	70 200	7 000	IRB 1016
	—	—	—	—	BHA 1410 Z	25	BHAM 1410	27.5	—	—	22.225 (7/8)	30.162 (1 3/16)	15.88(.625)	3.4					14 300	19 500	18 000	—
	—	—	—	—	BHA 1412 Z	30	BHAM 1412	32.5	—	—	22.225 (7/8)	30.162 (1 3/16)	19.05(.750)	3.4	22.225	22.212	30.176	30.151	18 000	26 100	18 000	IRB 1012
	—	—	—	—	BHA 1416 Z	39.5	BHAM 1416	42	—	—	22.225 (7/8)	30.162 (1 3/16)	25.40(1.000)	3.4					23 600	36 900	18 000	IRB 1016
	—	—	—	—	—	—	—	—	YBH 1412	39	22.225 (7/8)	30.162 (1 3/16)	19.05(.750)	—					28 200	49 000	7 000	IRB 1012

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.

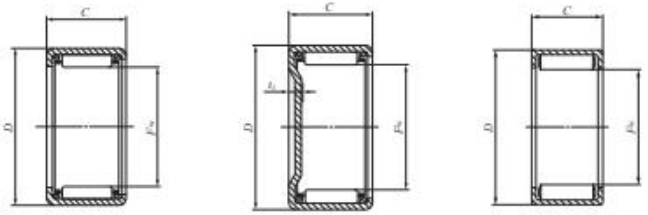
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

SORUPACHAI

SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





BA ··· Z BHA ··· Z BAM BHAM YB YBH

Shaft dia. 23.812 — 26.988mm

Shaft dia. mm (inch)	Identification number										Boundary dimensions mm(inch)				Standard mounting dimensions mm				Basic dynamic load rating	Basic static load rating	Allowable rotational speed(1)	Assembled inner ring
	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Grease retained	Mass (Ref.) g	F_w	D	C	t_1 Max.	Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	C N	C_0 N	min⁻¹	
23.812 (15/16)	BA 158 Z	16.5	BAM 158	19	—	—	—	—	—	—	23.812 (15/16)	30.162 (1 3/16)	12.70(.500)	2.8					8 000	11 400	16 000	—
	BA 1510 Z	20.5	BAM 1510	23	—	—	—	—	—	—	23.812 (15/16)	30.162 (1 3/16)	15.88(.625)	2.8	23.812	23.799	30.176	30.151	11 000	17 100	16 000	IRB 1110
	BA 1516 Z	33	BAM 1516	35.5	—	—	—	—	—	—	23.812 (15/16)	30.162 (1 3/16)	25.40(1.000)	2.8					18 900	34 300	16 000	IRB 1116
25.400 (1)	BA 166 Z	13.1	BAM 166	16	—	—	—	—	—	—	25.400 (1)	31.750 (1 1/4)	9.52(.375)	2.8					6 010	8 020	15 000	—
	BA 167 Z	15.4	BAM 167	18.3	—	—	—	—	—	—	25.400 (1)	31.750 (1 1/4)	11.13(.438)	2.8					7 720	11 100	15 000	—
	BA 168 Z	17.7	BAM 168	20.5	—	—	—	—	—	—	25.400 (1)	31.750 (1 1/4)	12.70(.500)	2.8					8 240	12 000	15 000	IRB 128
	BA 1610 Z	22	BAM 1610	25	—	—	—	—	—	—	25.400 (1)	31.750 (1 1/4)	15.88(.625)	2.8					11 300	18 100	15 000	—
	BA 1612 Z	26.5	BAM 1612	29.5	—	—	—	—	—	—	25.400 (1)	31.750 (1 1/4)	19.05(.750)	2.8					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(.875)	2.8	25.400	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(1.000)	2.8					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(1.250)	2.8					24 400	48 500	15 000	IRB 1220
	—	—	—	—	—	—	—	—	YB 168	23	25.400 (1)	31.750 (1 1/4)	12.70(.500)	—					19 400	36 000	6 000	IRB 128
	—	—	—	—	—	—	—	—	YB 1612	34.5	25.400 (1)	31.750 (1 1/4)	19.05(.750)	—					28 200	58 000	6 000	IRB 1212
	—	—	—	—	—	—	—	—	YB 1616	46.5	25.400 (1)	31.750 (1 1/4)	25.40(1.000)	—					36 300	80 300	6 000	IRB 1216
	—	—	—	—	BHA 168 Z	24	BHAM 168	27	—	—	25.400 (1)	33.338 (1 5/16)	12.70(.500)	3.4					10 200	13 100	15 000	IRB 128
	—	—	—	—	BHA 1610 Z	28	BHAM 1610	31	—	—	25.400 (1)	33.338 (1 5/16)	15.88(.625)	3.4					15 300	22 100	15 000	—
	—	—	—	—	BHA 1612 Z	33.5	BHAM 1612	37	—	—	25.400 (1)	33.338 (1 5/16)	19.05(.750)	3.4					19 300	29 700	15 000	IRB 1212
	—	—	—	—	BHA 1614 Z	39.5	BHAM 1614	42.5	—	—	25.400 (1)	33.338 (1 5/16)	22.22(.875)	3.4					23 000	37 200	15 000	IRB 1214
	—	—	—	—	BHA 1616 Z	45	BHAM 1616	48	—	—	25.400 (1)	33.338 (1 5/16)	25.40(1.000)	3.4	25.400	25.387	33.352	33.327	26 400	44 500	15 000	IRB 1216
	—	—	—	—	BHA 1620 Z	56.5	BHAM 1620	59.5	—	—	25.400 (1)	33.338 (1 5/16)	31.75(1.250)	3.4					33 200	59 600	15 000	IRB 1220
	—	—	—	—	BHA 1624 Z	67.5	BHAM 1624	71	—	—	25.400 (1)	33.338 (1 5/16)	38.10(1.500)	3.4					39 400	74 400	15 000	—
	—	—	—	—	—	—	—	—	YBH 168	29	25.400 (1)	33.338 (1 5/16)	12.70(.500)	—					20 900	34 100	6 000	IRB 128
	—	—	—	—	—	—	—	—	YBH 1612	44.5	25.400 (1)	33.338 (1 5/16)	19.05(.750)	—					30 700	56 100	6 000	IRB 1212
	—	—	—	—	—	—	—	—	YBH 1616	59.5	25.400 (1)	33.338 (1 5/16)	25.40(1.000)	—					39 900	78 400	6 000	IRB 1216
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(.625)	2.8	26.988	26.975	33.352	33.327	11 600	19 200	14 000	—
	BA 1716 Z	37	BAM 1716	40.5	—	—	—	—	—	—	26.988 (1 1/16)	33.338 (1 5/16)	25.40(1.000)	2.8					20 000	38 300	14 000	—

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.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

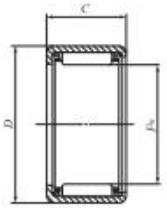
SORUPACHAI

IKO

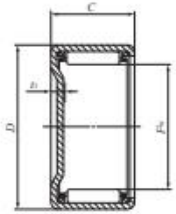
SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series

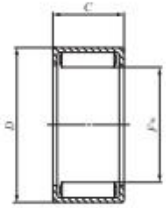




BA ··· Z BHA ··· Z



BAM BHAM



YB

Shaft dia. 28.575 — 30.162mm

Shaft dia. mm (inch)	Identification number										Boundary dimensions mm(inch)				Standard mounting dimensions mm				Basic dynamic load rating	Basic static load rating	Allowable rotational speed(1)	Assembled inner ring
	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Grease retained	Mass (Ref.) g	F_w	D	C	f_1 Max.	Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	C N	C_0 N	min⁻¹	
28.575 (1 1/8)	BA 186 Z	14.5	BAM 186	18.1	—	—	—	—	—	—	28.575 (1 1/8)	34.925 (1 3/8)	9.52(.375)	2.8	28.575	28.562	34.939	34.914	6 330	8 910	13 000	—
	BA 188 Z	19.5	BAM 188	23	—	—	—	—	—	—	28.575 (1 1/8)	34.925 (1 3/8)	12.70(.500)	2.8					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(.750)	2.8					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(1.000)	2.8					20 500	40 300	13 000	IRB 1416
	BA 1820 Z	48.5	BAM 1820	52	—	—	—	—	—	—	28.575 (1 1/8)	34.925 (1 3/8)	31.75(1.250)	2.8					25 700	53 900	13 000	IRB 1420
	—	—	—	—	—	—	—	—	YB 188	25.5	28.575 (1 1/8)	34.925 (1 3/8)	12.70(.500)	—					20 700	40 500	5 500	IRB 148
	—	—	—	—	—	—	—	—	YB 1812	38.5	28.575 (1 1/8)	34.925 (1 3/8)	19.05(.750)	—					30 000	65 300	5 500	IRB 1412
	—	—	—	—	—	—	—	—	YB 1816	51.5	28.575 (1 1/8)	34.925 (1 3/8)	25.40(1.000)	—					38 700	90 400	5 500	IRB 1416
	—	—	—	—	BHA 1812 Z	45	BHAM 1812	49	—	—	28.575 (1 1/8)	38.100 (1 1/2)	19.05(.750)	3.4	28.575	28.562	38.114	38.089	22 500	32 200	13 000	IRB 1412
	—	—	—	—	BHA 1816 Z	60	BHAM 1816	64	—	—	28.575 (1 1/8)	38.100 (1 1/2)	25.40(1.000)	3.4					30 900	48 600	13 000	IRB 1416
	—	—	—	—	BHA 1818 Z	67.5	BHAM 1818	71.5	—	—	28.575 (1 1/8)	38.100 (1 1/2)	28.58(1.125)	3.4					34 900	56 600	13 000	—
	—	—	—	—	BHA 1820 Z	73.5	BHAM 1820	78	—	—	28.575 (1 1/8)	38.100 (1 1/2)	31.75(1.250)	3.4					37 100	61 100	13 000	IRB 1420
30.162 (1 3/16)	BA 1910 Z	32.5	BAM 1910	37.5	—	—	—	—	—	—	30.162 (1 3/16)	38.100 (1 1/2)	15.88(.625)	2.8	30.162	30.146	38.114	38.089	15 000	22 500	12 000	—
	BA 1916 Z	52	BAM 1916	57	—	—	—	—	—	—	30.162 (1 3/16)	38.100 (1 1/2)	25.40(1.000)	2.8					25 800	45 300	12 000	—
	—	—	—	—	—	—	—	—	YB 1910	42.5	30.162 (1 3/16)	38.100 (1 1/2)	15.88(.625)	—					28 400	53 600	5 000	—

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.

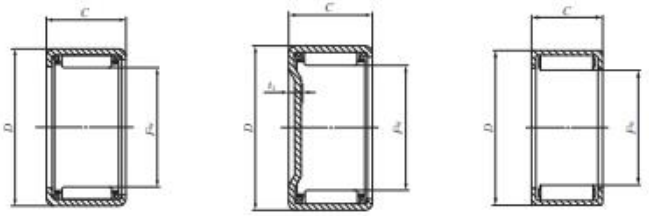
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

SORUPACHAI

SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





BA ··· Z BHA ··· Z BAM BHAM YB

Shaft dia. 31.750 — 33.338mm

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	Boundary dimensions mm(inch): F_w	D	C	t_1 Max.	Standard mounting dimensions mm: Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(1) min⁻¹	Assembled inner ring
31.750 (1 1/4)	BA 208 Z	21.5	BAM 208	26	—	—	—	—	—	—	31.750 (1 1/4)	38.100 (1 1/2)	12.70(.500)	2.8	31.750	31.734	38.114	38.089	9 100	14 700	12 000	IRB 168
	BA 2010 Z	27	BAM 2010	31.5	—	—	—	—	—	—	31.750 (1 1/4)	38.100 (1 1/2)	15.88(.625)	2.8					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(.750)	2.8					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(1.000)	2.8					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(1.250)	2.8					26 900	59 200	12 000	IRB 1620
	—	—	—	—	—	—	—	—	YB 2010	35	31.750 (1 1/4)	38.100 (1 1/2)	15.88(.625)	—					27 000	59 000	4 500	IRB 1610
	—	—	—	—	—	—	—	—	YB 2012	42.5	31.750 (1 1/4)	38.100 (1 1/2)	19.05(.750)	—					31 800	72 500	4 500	IRB 1612
	—	—	—	—	—	—	—	—	YB 2016	57	31.750 (1 1/4)	38.100 (1 1/2)	25.40(1.000)	—	31.750	31.734	38.114	38.089	40 900	100 000	4 500	IRB 1616
	—	—	—	—	—	—	—	—	YB 2018	64	31.750 (1 1/4)	38.100 (1 1/2)	28.58(1.125)	—					45 300	114 000	4 500	—
	—	—	—	—	—	—	—	—	YB 2020	68	31.750 (1 1/4)	38.100 (1 1/2)	31.75(1.250)	—					49 400	128 000	4 500	IRB 1620
	—	—	—	—	BHA 208 Z	34.5	BHAM 208	40	—	—	31.750 (1 1/4)	41.275 (1 5/8)	12.70(.500)	3.4					13 700	17 600	12 000	IRB 168
	—	—	—	—	BHA 2012 Z	49.5	BHAM 2012	54.5	—	—	31.750 (1 1/4)	41.275 (1 5/8)	19.05(.750)	3.4					24 100	36 400	12 000	IRB 1612
	—	—	—	—	BHA 2016 Z	66	BHAM 2016	71	—	—	31.750 (1 1/4)	41.275 (1 5/8)	25.40(1.000)	3.4	31.750	31.734	41.289	41.264	33 200	55 000	12 000	IRB 1616
	—	—	—	—	BHA 2020 Z	81.5	BHAM 2020	86.5	—	—	31.750 (1 1/4)	41.275 (1 5/8)	31.75(1.250)	3.4					40 000	69 600	12 000	IRB 1620
33.338 (1 5/16)	BA 218 Z	28.5	BAM 218	35	—	—	—	—	—	—	33.338 (1 5/16)	41.275 (1 5/8)	12.70(.500)	2.8					11 100	15 800	11 000	IRB 168-1
	BA 2110 Z	35.5	BAM 2110	41.5	—	—	—	—	—	—	33.338 (1 5/16)	41.275 (1 5/8)	15.88(.625)	2.8	33.338	33.322	41.289	41.264	15 400	23 900	11 000	IRB 1610-1
	BA 2112 Z	43	BAM 2112	49	—	—	—	—	—	—	33.338 (1 5/16)	41.275 (1 5/8)	19.05(.750)	2.8					19 300	32 100	11 000	IRB 1612-1

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.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

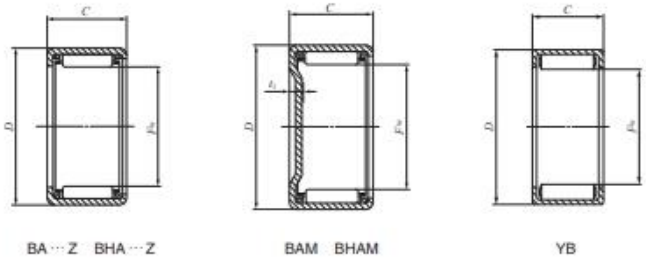
SORUPACHAI

IKO

SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





BA ··· Z BHA ··· Z | BAM BHAM | YB

Shaft dia. 34.925 — 38.100mm

Shaft dia. mm (inch)	Identification number										Boundary dimensions mm(inch)				Standard mounting dimensions mm				Basic dynamic load rating	Basic static load rating	Allowable rotational speed(1)	Assembled inner ring
	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Standard	Mass (Ref.) g	Closed end	Mass (Ref.) g	Grease retained	Mass (Ref.) g	F_w	D	C	t_1 Max.	Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	C N	C_0 N	min⁻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(.500)	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(.750)	2.8					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(1.000)	2.8					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(1.250)	2.8					28 900	67 100	10 000	IRB 1820
	—	—	—	—	—	—	—	—	YB 228	30.5	34.925 (1 3/8)	41.275 (1 5/8)	12.70(.500)	—					23 000	49 500	4 500	IRB 188
	—	—	—	—	—	—	—	—	YB 2212	46	34.925 (1 3/8)	41.275 (1 5/8)	19.05(.750)	—					33 400	79 800	4 500	IRB 1812
	—	—	—	—	—	—	—	—	YB 2220	77.5	34.925 (1 3/8)	41.275 (1 5/8)	31.75(1.250)	—					52 000	141 000	4 500	IRB 1820
	—	—	—	—	BHA 228 Z	37	BHAM 228	43	—	—	34.925 (1 3/8)	44.450 (1 3/4)	12.70(.500)	3.4					14 100	18 800	10 000	IRB 188
	—	—	—	—	BHA 2210 Z	44	BHAM 2210	50	—	—	34.925 (1 3/8)	44.450 (1 3/4)	15.88(.625)	3.4					19 700	28 800	10 000	—
	—	—	—	—	BHA 2212 Z	53	BHAM 2212	59	—	—	34.925 (1 3/8)	44.450 (1 3/4)	19.05(.750)	3.4	34.925	34.909	44.464	44.439	24 800	38 800	10 000	IRB 1812
	—	—	—	—	BHA 2216 Z	71	BHAM 2216	77	—	—	34.925 (1 3/8)	44.450 (1 3/4)	25.40(1.000)	3.4					34 100	58 400	10 000	IRB 1816
	—	—	—	—	BHA 2220 Z	87	BHAM 2220	98.5	—	—	34.925 (1 3/8)	44.450 (1 3/4)	31.75(1.250)	3.4					41 200	74 200	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(.500)	2.8	38.100	38.084	47.639	47.614	12 900	17 900	9 000	—
	BA 2410 Z	48.5	BAM 2410	57.5	—	—	—	—	—	—	38.100 (1 1/2)	47.625 (1 7/8)	15.88(.625)	2.8					17 800	27 100	9 000	IRB 2010
	BA 2412 Z	58.5	BAM 2412	67.5	—	—	—	—	—	—	38.100 (1 1/2)	47.625 (1 7/8)	19.05(.750)	2.8					22 500	36 600	9 000	—
	BA 2414 Z	69	BAM 2414	78	—	—	—	—	—	—	38.100 (1 1/2)	47.625 (1 7/8)	22.22(.875)	2.8					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(1.000)	2.8					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(1.250)	2.8					39 000	74 200	9 000	IRB 2020
	—	—	—	—	—	—	—	—	YB 246	38	38.100 (1 1/2)	47.625 (1 7/8)	9.52(.375)	—					21 000	34 100	4 000	—
	—	—	—	—	—	—	—	—	YB 248	51.5	38.100 (1 1/2)	47.625 (1 7/8)	12.70(.500)	—					28 700	50 900	4 000	—
	—	—	—	—	—	—	—	—	YB 2414	91	38.100 (1 1/2)	47.625 (1 7/8)	22.22(.875)	—	38.100	38.084	47.639	47.614	48 900	101 000	4 000	IRB 2014
	—	—	—	—	—	—	—	—	YB 2416	105	38.100 (1 1/2)	47.625 (1 7/8)	25.40(1.000)	—					55 100	118 000	4 000	IRB 2016
	—	—	—	—	—	—	—	—	YB 2420	131	38.100 (1 1/2)	47.625 (1 7/8)	31.75(1.250)	—					66 800	151 000	4 000	IRB 2020

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.

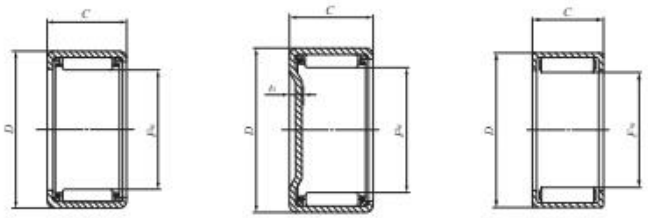
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

SORUPACHAI

SHELL TYPE NEEDLE ROLLER BEARINGS

Inch Series





Shaft dia. 41.275 — 52.388mm

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	Boundary dimensions mm(inch): F_w	D	C	t_1 Max.	Standard mounting dimensions mm: Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(1) min⁻¹	Assembled inner ring
41.275 (1 5/8)	BA 268 Z	41	BAM 268	51.5	—	—	—	—	—	—	41.275 (1 5/8)	50.800 (2)	12.70(.500)	2.8					13 700	19 800	8 000	—
	BA 2610 Z	52	BAM 2610	62.5	—	—	—	—	—	—	41.275 (1 5/8)	50.800 (2)	15.88(.625)	2.8					18 900	30 000	8 000	IRB 2210
	BA 2616 Z	85	BAM 2616	95.5	—	—	—	—	—	—	41.275 (1 5/8)	50.800 (2)	25.40(1.000)	2.8	41.275	41.259	50.818	50.788	33 000	61 400	8 000	—
	BA 2620 Z	105	BAM 2620	115	—	—	—	—	—	—	41.275 (1 5/8)	50.800 (2)	31.75(1.250)	2.8					41 400	82 100	8 000	IRB 2220
	—	—	—	—	—	—	—	—	YB 2610	69	41.275 (1 5/8)	50.800 (2)	15.88(.625)	—					37 000	71 700	3 500	IRB 2210
44.450 (1 3/4)	BA 2812 Z	67.5	BAM 2812	79.5	—	—	—	—	—	—	44.450 (1 3/4)	53.975 (2 1/8)	19.05(.750)	2.8					25 200	44 500	7 500	IRB 2412
	BA 2816 Z	91	BAM 2816	103	—	—	—	—	—	—	44.450 (1 3/4)	53.975 (2 1/8)	25.40(1.000)	2.8					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(1.250)	2.8	44.450	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(1.500)	2.8					52 000	113 000	7 500	IRB 2424
	—	—	—	—	—	—	—	—	YB 2816	119	44.450 (1 3/4)	53.975 (2 1/8)	25.40(1.000)	—					59 500	136 000	3 500	IRB 2416
	—	—	—	—	BHA 2824 Z	195	BHAM 2824	210	—	—	44.450 (1 3/4)	57.150 (2 1/4)	38.10(1.500)	3.4	44.450	44.434	57.168	57.138	72 200	135 000	7 500	IRB 2424
47.625 (1 7/8)	BA 308 Z	47.5	BAM 308	61	—	—	—	—	—	—	47.625 (1 7/8)	57.150 (2 1/4)	12.70(.500)	2.8					14 700	22 800	7 000	IRB 248-1
	BA 3010 Z	60	BAM 3010	74	—	—	—	—	—	—	47.625 (1 7/8)	57.150 (2 1/4)	15.88(.625)	2.8					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(.750)	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(1.000)	2.8					35 400	70 600	7 000	—
	—	—	—	—	—	—	—	—	YB 3012	95	47.625 (1 7/8)	57.150 (2 1/4)	19.05(.750)	—					47 800	105 000	3 000	—
50.800 (2)	BA 328 Z	50	BAM 328	66	—	—	—	—	—	—	50.800 (2)	60.325 (2 3/8)	12.70(.500)	2.8					15 400	24 700	6 000	—
	BA 3216 Z	104	BAM 3216	119	—	—	—	—	—	—	50.800 (2)	60.325 (2 3/8)	25.40(1.000)	2.8					37 100	76 500	6 000	IRB 2616
	BA 3220 Z	128	BAM 3220	144	—	—	—	—	—	—	50.800 (2)	60.325 (2 3/8)	31.75(1.250)	2.8	50.800	50.781	60.343	60.313	46 600	102 000	6 000	IRB 2720
	BA 3224 Z	155	BAM 3224	170	—	—	—	—	—	—	50.800 (2)	60.325 (2 3/8)	38.10(1.500)	2.8					55 500	128 000	6 000	—
	BAW3228Z	180	BAMW3228	196	—	—	—	—	—	—	50.800 (2)	60.325 (2 3/8)	44.45(1.750)	2.8					57 900	136 000	6 000	IRB 2628
	—	—	—	—	—	—	—	—	YB 3216	130	50.800 (2)	60.325 (2 3/8)	25.40(1.000)	—					64 100	156 000	2 500	IRB 2616
52.388 (2 1/16)	—	—	—	—	BHA 3312 Z	104	BHAM 3312	122	—	—	52.388 (2 1/16)	64.294 (2 17/32)	19.05(.750)	3.4					36 400	62 100	6 000	—
	—	—	—	—	BHA 3316 Z	139	BHAM 3316	157	—	—	52.388 (2 1/16)	64.294 (2 17/32)	25.40(1.000)	3.4	52.388	52.369	64.312	64.282	50 600	94 700	6 000	—
	—	—	—	—	BHA 3324 Z	205	BHAM 3324	225	—	—	52.388 (2 1/16)	64.294 (2 17/32)	38.10(1.500)	3.4					73 900	154 000	6 000	—

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

Remarks 1. "W" in the identification number indicates that rolling elements are arranged in double rows.

2. 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.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

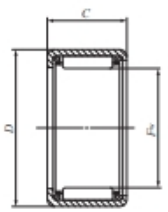
SORUPACHAI

SHELL TYPE NEEDLE ROLLER BEARINGS

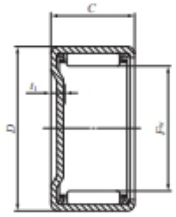
Inch Series







BA···Z



BAM

Shaft dia. 53.975 — 69.850mm

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	Boundary dimensions mm(inch): F_w	D	C	t_1 Max.	Standard mounting dimensions mm: Shaft dia. h6 Max.	Shaft dia. h6 Min.	Housing bore dia. J7 Max.	Housing bore dia. J7 Min.	Basic dynamic load rating C N	Basic static load rating C_0 N	Allowable rotational speed(1) min⁻¹	Assembled inner ring
53.975 (2 1/8)	BA 348 Z	53	BAM 348	70.5	—	—	—	—	—	—	53.975(2 1/8)	63.500(2 1/2)	12.70(.500)	2.8					16 100	26 600	5 500	—
	BA 3416 Z	109	BAM 3416	127	—	—	—	—	—	—	53.975(2 1/8)	63.500(2 1/2)	25.40(1.000)	2.8	53.975	53.956	63.518	63.488	38 700	82 500	5 500	IRB 3016
	BA 3424 Z	162	BAM 3424	180	—	—	—	—	—	—	53.975(2 1/8)	63.500(2 1/2)	38.10(1.500)	2.8					57 900	138 000	5 500	IRB 3024
57.150 (2 1/4)	BA 3612 Z	85.5	BAM 3612	105	—	—	—	—	—	—	57.150(2 1/4)	66.675(2 5/8)	19.05(.750)	2.8					28 500	56 700	5 000	—
	BA 3616 Z	115	BAM 3616	135	—	—	—	—	—	—	57.150(2 1/4)	66.675(2 5/8)	25.40(1.000)	2.8	57.150	57.131	66.693	66.663	39 300	85 700	5 000	—
	BA 3620 Z	143	BAM 3620	163	—	—	—	—	—	—	57.150(2 1/4)	66.675(2 5/8)	31.75(1.250)	2.8					49 400	115 000	5 000	—
	BA 3624 Z	172	BAM 3624	192	—	—	—	—	—	—	57.150(2 1/4)	66.675(2 5/8)	38.10(1.500)	2.8					58 800	144 000	5 000	—
66.675 (2 5/8)	BA 4216 Z	133	BAM 4216	161	—	—	—	—	—	—	66.675(2 5/8)	76.200(3)	25.40(1.000)	2.8	66.675	66.656	76.218	76.188	42 000	97 900	4 000	IRB 3616
69.850 (2 3/4)	BA 4410 Z	85.5	BAM 4410	115	—	—	—	—	—	—	69.850(2 3/4)	79.375(3 1/8)	15.88(.625)	2.8					25 000	50 800	3 500	—
	BA 4412 Z	103	BAM 4412	133	—	—	—	—	—	—	69.850(2 3/4)	79.375(3 1/8)	19.05(.750)	2.8					31 500	68 700	3 500	—
	BA 4416 Z	139	BAM 4416	169	—	—	—	—	—	—	69.850(2 3/4)	79.375(3 1/8)	25.40(1.000)	2.8	69.850	69.831	79.393	79.363	43 500	104 000	3 500	IRB 4016
	BA 4420 Z	173	BAM 4420	205	—	—	—	—	—	—	69.850(2 3/4)	79.375(3 1/8)	31.75(1.250)	2.8					54 600	139 000	3 500	IRB 4020

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.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch