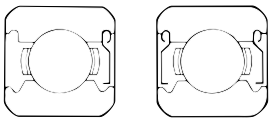
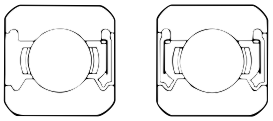
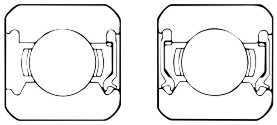
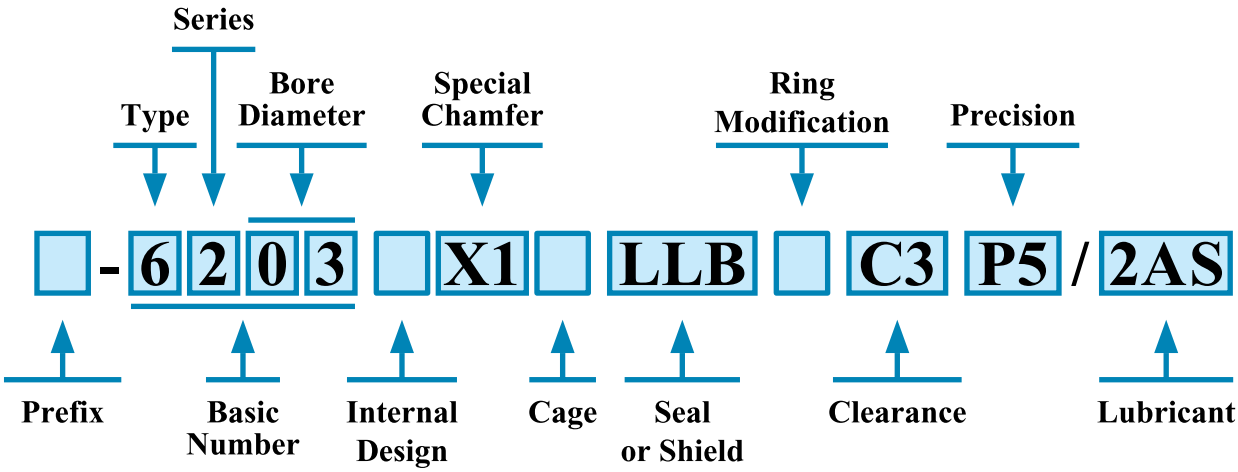
RADIAL BALL BEARING NUMBERING SYSTEM

SEAL STRUCTURE AND TYPE DESIGNATION	FEATURES
 Z ZZ	The sealed V-slot around the inner ring creates an air and/or grease pocket which increases the labyrinth effect. This is a non-contact, low-friction torque type bearing assembly, which can be used effectively for general protection.
 LB LLB	Both sides of the seal edge have a circular concaved surface which creates several narrow-wide gaps along the V-shaped groove of the inner ring's sealed surface. The unique design ensures a perfect labyrinth effect. This non-contact, low friction bearing assembly requires very little torque and is highly resistant to dust build-up.
 LU LLU	The seal edge forms a double-lip. The inner lip touches the V-slot side of the inner ring's seal surface. There is a slight gap between the inner ring and the outer lip which produces the labyrinth effect. Even if friction causes the inner lip to wear, the outer lip constricts around the inner ring to compensate, and thus constantly preserving the perfect sealing effect. Due to the fact that it is a contact type seal bearing, the torque will be a little greater but the seal will provide the optimum protection from dust penetration.



1. PREFIX
   - TS2: Heat stabilization for up to 320˚ F (160˚ C)
   - TS3: Heat stabilization for up to 390˚ F (200˚ C)
   - TS4: Heat stabilization for up to 480˚ F (250˚ C)

2. TYPE
   - 6: Single row deep groove ball bearings
   - 8, WC8: Single row deep groove ball bearings
   - BL: Maximum capacity
   - DE & DF: Special double row ball bearings
   - SC & SX: Special single row ball bearings
   - R: Inch series
   - TMB: Thermal mechanical bearing

3. INTERNAL DESIGN
   - A: Internal redesign, from A onward
   - U: Universal seal groove for open bearings

4. CHAMFER
   - Xn: Special chamfer, from 1 onward (X1, X2 . . .)

5. CAGE
   - No Symbol: Pressed steel cage
   - J: Pressed steel cage
   - T1: Phenolic cage
   - T2: Nylon cage
   - L1: Machined brass cage

6. SEAL OR SHIELD
   - No Symbol: Open Type
   - LB, LLB: Non-contact rubber seal
   - LU, LLU: Double-lip contact rubber seal
   - LH,LLH: Light contact rubber seal
   - LUA,LLUA: Polyacrylic rubber seal
   - LUA1,LLUA1: Fluorocarbon rubber seal
   - Z, ZZ: Shield
   - Z1, ZZ1: Stainless steel shield
   - ZA, ZZA: Removable shield

7. RING MODIFICATION
   - N: Snap ring groove on outer ring, but without snap ring
   - NR: Snap ring groove on outer ring, snap ring included
   - /X.XX: Special bore, XX.XX in mm; Ex. 5/16" bore, /7.938
   - /XX.X: Special O.D., size XX.X in mm

8. INTERNAL CLEARANCE
   - C1: Radial clearance less than C2
   - C2: Radial clearance less than normal
   - C3: Radial clearance greater than normal
   - C4: Radial clearance greater than C3
   - C5: Radial clearance greater than C4
   - CSXX: Special radial clearance; XX is mean value in 0.001 mm units

9. TOLERANCE
   - P6: ISO class 6 (equivalent to ABEC 3)
   - P5: ISO class 5 (equivalent to ABEC 5)
   - P4: ISO class 4 (equivalent to ABEC 7)
   - PXn: Special tolerance, from 1 onward (PX1, PX2 . . .)
   - Vn: Special requirement, from 1 onward (V1, V2 . . .)

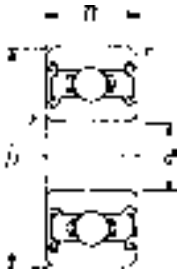
10. PRELUBRICANT (Typical)
   - 1E: Exxon Andok C grease
   - 1W: Anderson Oil Winsor Lube L-245X, MIL-L-6085A
   - 2AS: Shell Alvania #2 grease, MIL-G-18709A
   - 2E: Exxon Unirex N3
   - 3AS: Shell Oil Alvania #3 grease
   - 5C: Chevron SRI #2 grease, MIL-G-3545C
   - 5K: Kyodo Yushi Multemp SRL
   - 5S: Shell Aeroshell #7 grease, MIL-G-23827A
   - 9B: Mobil 28, MIL-G-81322
   - L627: Exxon Polyrex EM

SINGLE ROW RADIAL BALL BEARINGS

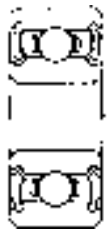
Units: **INCHES**

SERIES R

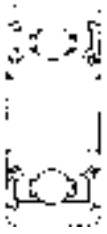
Bearing No.	Bore d	O.D. D	Width B	Fillet Radius (min.) r	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_o	Weight (lbs) Open Type	Limiting Speed (rpm) Grease	Limiting Speed (rpm) Oil
RA3	**.1875**	**.5000**	**.1960**	**0.012**	**295**	**110**	**.006**	**41,000**	**48,000**
R4	**.2500**	**.6250**	**.1960**	**0.012**	**335**	**139**	**.010**	**36,000**	**43,000**
RA4	**.2500**	**.7500**	**.2812**	**0.016**	**525**	**199**	**.017**	**34,000**	**40,000**
R6	**.3750**	**.8750**	**.2812**	**0.016**	**745**	**315**	**.029**	**31,000**	**37,000**
R8	**.5000**	**1.1250**	**.3125**	**0.016**	**1,150**	**540**	**.040**	**26,000**	**30,000**
R10	**.6250**	**1.3750**	**.3437**	**0.031**	**1,350**	**735**	**.067**	**20,000**	**24,000**
R12	**.7500**	**1.6250**	**.4375**	**0.031**	**1,780**	**1,000**	**.100**	**18,000**	**21,000**
R14	**.8750**	**1.8750**	**.5000**	**0.031**	**2,270**	**1,300**	**.159**	**15,000**	**18,000**
R16	**1.0000**	**2.0000**	**.5000**	**0.031**	**2,260**	**1,340**	**.178**	**14,000**	**16,000**
R18	**1.1250**	**2.1250**	**.5000**	**0.031**	**2,970**	**1,860**	**.194**	**13,000**	**15,000**
R20	**1.2500**	**2.2500**	**.5000**	**0.031**	**2,650**	**1,810**	**.200**	**12,000**	**14,000**



Double Shielded
ZZ



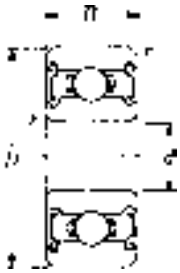
Double Sealed
LLB
(Non-contact Type)



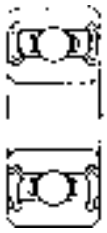
Double Sealed
LLU
(Contact Type)

NTN
SERIES
600

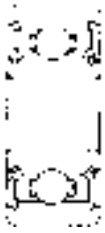
Units: INCHES
Millimeters



Double Shielded
ZZ



Double Sealed
LLB
(Non-contact Type)



Double Sealed
LLU
(Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

Bearing No.	Bore d	O.D. D	Width B	Fillet Radius r	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_o	Weight (lbs)	Limiting Speed Grease	Limiting Speed Oil	Limiting Speed LLU
605	.1969 5	.5512 14	.1969 5	.008 .2	299	114	.008	39,000	46,000	—
606	.2362 6	.6693 17	.2362 6	.012 .3	495	195	.013	35,000	42,000	—
607	.2756 7	.7480 19	.2362 6	.012 .3	505	205	.018	34,000	40,000	28,000
608	.3150 8	.8661 22	.2756 7	.012 .3	750	315	.026	32,000	37,000	23,000
609	.3543 9	.9449 24	.2756 7	.012 .3	765	325	.031	31,000	36,000	22,000
623	.1181 3	.3937 10	.1575 4	.006 .15	144	50	.004	50,000	58,000	—
624	.1575 4	.5118 13	.1969 5	.008 .2	295	110	.007	42,000	49,000	—
625	.1969 5	.6299 16	.1969 5	.012 .3	395	153	.011	37,000	44,000	—
626	.2362 6	.7480 19	.2362 6	.012 .3	525	199	.018	34,000	40,000	30,000
627	.2756 7	.8661 22	.2756 7	.012 .3	750	315	.029	32,000	37,000	23,000
628	.3150 8	.9449 24	.3150 8	.012 .6	900	355	.037	31,000	36,000	24,000
629	.3543 9	1.0236 26	.3150 8	.024 .6	1,030	440	.044	30,000	35,000	21,000
634	.1575 4	.6299 16	.1969 5	.012 .3	395	153	.011	37,000	44,000	—
635	.1969 5	.7480 19	.2362 6	.012 .3	525	199	.018	34,000	40,000	30,000

SINGLE ROW RADIAL BALL BEARINGS

Units: **INCHES**
Millimeters

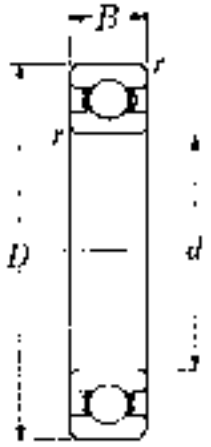
SERIES 69

Bearing No.	Bore d	O.D. D	Width B	Fillet Radius r	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)	Limiting Speed (RPM) Grease	Limiting Speed (RPM) Oil
6900	**.3937** 10	**.8661** 22	**.2362** 6	**.012** .3	605	285	.020	30,000	36,000
6901	**.4724** 12	**.9449** 24	**.2362** 6	**.012** .3	650	330	.024	27,000	32,000
6902B	**.5906** 15	**1.1024** 28	**.2756** 7	**.012** .3	920	460	.035	24,000	28,000
6903	**.6693** 17	**1.1811** 30	**.2756** 7	**.012** .3	1,050	580	.040	22,000	26,000
6904	**.7874** 20	**1.4567** 37	**.3543** 9	**.012** .3	1,430	825	.079	19,000	23,000
6905	**.9843** 25	**1.6535** 42	**.3543** 9	**.012** .3	1,580	1,020	.093	16,000	19,000
6906	**1.1811** 30	**1.8504** 47	**.3543** 9	**.012** .3	1,630	1,130	.106	14,000	17,000
6907A	**1.3780** 35	**2.1654** 55	**.3937** 10	**.024** .6	2,510	1,670	.163	12,000	15,000
6908A	**1.5748** 40	**2.4409** 62	**.4724** 12	**.024** .6	3,250	2,300	.243	11,000	13,000
6909A	**1.7717** 45	**2.6772** 68	**.4724** 12	**.024** .6	3,400	2,530	.282	9,800	12,000
6910B	**1.9685** 50	**2.8346** 72	**.4724** 12	**.024** .6	3,500	2,750	.291	8,900	11,000
6911	**2.1654** 55	**3.1496** 80	**.5118** 13	**.039** 1.0	3,600	2,980	.397	8,200	9,600
6912	**2.3622** 60	**3.3465** 85	**.5118** 13	**.039** 1.0	3,700	3,200	.425	7,600	8,900
6913	**2.5591** 65	**3.5433** 90	**.5118** 13	**.039** 1.0	3,900	3,600	.454	7,000	8,200
6914	**2.7559** 70	**3.9370** 100	**.6299** 16	**.039** 1.0	5,350	4,750	.736	6,500	7,700
6915	**2.9528** 75	**4.1339** 105	**.6299** 16	**.039** 1.0	5,500	5,100	.778	6,100	7,200
6916	**3.1496** 80	**4.3307** 110	**.6299** 16	**.039** 1.0	5,600	5,400	.822	5,700	6,700
6917	**3.3465** 85	**4.7244** 120	**.7087** 18	**.043** 1.1	7,200	6,650	1.18	5,400	6,300
6918	**3.5433** 90	**4.9213** 125	**.7087** 18	**.043** 1.1	7,400	7,100	1.22	5,100	6,000
6919	**3.7402** 95	**5.1181** 130	**.7087** 18	**.043** 1.1	7,550	7,550	1.28	4,800	5,700
6920	**3.9370** 100	**5.5118** 140	**.7874** 20	**.043** 1.1	9,250	8,900	1.73	4,500	5,300
6921	**4.1339** 105	**5.7087** 145	**.7874** 20	**.043** 1.1	9,550	9,450	1.80	4,300	5,100
6922	**4.3307** 110	**5.9055** 150	**.7874** 20	**.043** 1.1	9,800	10,000	1.87	4,100	4,800
6924	**4.7244** 120	**6.4961** 165	**.8661** 22	**.043** 1.1	11,900	12,200	2.54	3,800	4,400

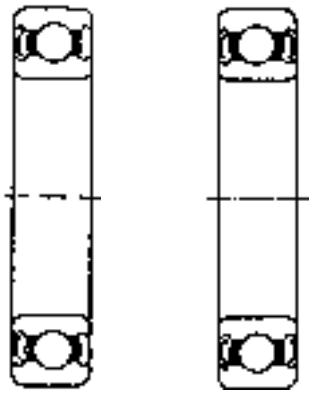
NTN

SERIES 60

Units: **INCHES**
Millimeters

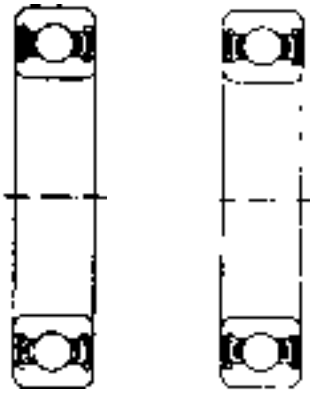


Open Type
60



Single Shielded 60Z

Double Shielded 60ZZ



Double Sealed 60LLU
(Contact Type)

Double Sealed 60LLB
(Non-Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
6000	**.3937**	**1.0236**	**.3150**	**.012**	**—**	**1,030**	**440**	**.042**
	10	26	8	.3	—			
6001	**.4724**	**1.1024**	**.3150**	**.012**	**—**	**1,150**	**540**	**.049**
	12	28	8	.3	—			
6002	**.5906**	**1.2598**	**.3543**	**.012**	**—**	**1,260**	**635**	**.066**
	15	32	9	.3	—			
6003	**.6693**	**1.3780**	**.3937**	**.012**	**—**	**1,530**	**755**	**.086**
	17	35	10	.3	—			
6004	**.7874**	**1.6535**	**.4724**	**.024**	**.020**	**2,110**	**1,140**	**.152**
	20	42	12	.6	.5			
60/22	**.8661**	**1.7323**	**.4724**	**.024**	**.020**	**2,110**	**1,150**	**.163**
	22	44	12	.6	.5			
6005	**.9843**	**1.8504**	**.4724**	**.024**	**.020**	**2,260**	**1,320**	**.176**
	25	47	12	.6	.5			
60/28	**1.1024**	**2.0472**	**.4724**	**.024**	**.020**	**2,800**	**1,660**	**.216**
	28	52	12	.6	.5			
6006	**1.1811**	**2.1654**	**.5118**	**.039**	**.020**	**2,970**	**1,860**	**.256**
	30	55	13	1.0	.5			
60/32A	**1.2598**	**2.2835**	**.5118**	**.039**	**.020**	**3,400**	**2,060**	**.284**
	32	58	13	1.0	.5			
6007	**1.3780**	**2.4409**	**.5512**	**.039**	**.020**	**3,600**	**2,310**	**.342**
	35	62	14	1.0	.5			
6008	**1.5748**	**2.6772**	**.5906**	**.039**	**.020**	**3,150**	**2,590**	**.423**
	40	68	15	1.0	.5			
6009	**1.7717**	**2.9528**	**.6299**	**.039**	**.020**	**4,700**	**3,400**	**.540**
	45	75	16	1.0	.5			
6010	**1.9685**	**3.1496**	**.6299**	**.039**	**.020**	**4,900**	**3,750**	**.575**
	50	80	16	1.0	.5			
6011	**2.1654**	**3.5433**	**.7087**	**.043**	**.020**	**6,350**	**4,800**	**.849**
	55	90	18	1.1	.5			
6012	**2.3622**	**3.7402**	**.7087**	**.043**	**.020**	**6,600**	**5,200**	**.915**
	60	95	18	1.1	.5			
6013	**2.5591**	**3.9370**	**.7087**	**.043**	**.020**	**6,850**	**5,650**	**.959**
	65	100	18	1.1	.5			
6014	**2.7559**	**4.3307**	**.7874**	**.043**	**.020**	**8,550**	**6,950**	**1.33**
	70	110	20	1.1	.5			
6015	**2.9528**	**4.5276**	**.7874**	**.043**	**.020**	**8,900**	**7,550**	**1.41**
	75	115	20	1.1	.5			
6016	**3.1496**	**4.9213**	**.8661**	**.043**	**.020**	**10,700**	**8,950**	**1.87**
	80	125	22	1.1	.5			
6017	**3.3465**	**5.1181**	**.8661**	**.043**	**.020**	**11,100**	**9,700**	**1.96**
	85	130	22	1.1	.5			
6018	**3.5433**	**5.5118**	**.9449**	**.059**	**.020**	**13,100**	**11,200**	**2.56**
	90	140	24	1.5	.5			
6019	**3.7402**	**5.7087**	**.9449**	**.059**	**.020**	**13,600**	**12,100**	**2.67**
	95	145	24	1.5	.5			
6020	**3.9370**	**5.9055**	**.9449**	**.059**	**.020**	**13,500**	**12,200**	**2.76**
	100	150	24	1.5	.5			
6021	**4.1339**	**6.2992**	**1.0236**	**.079**	**.020**	**16,300**	**14,800**	**3.51**
	105	160	26	2.0	.5			
6022	**4.3307**	**6.6929**	**1.1024**	**.079**	**.020**	**18,400**	**16,400**	**4.32**
	110	170	28	2.0	.5			
6024	**4.7244**	**7.0866**	**1.1024**	**.079**	**—**	**19,100**	**17,800**	**4.56**
	120	180	28	2.0	—			
6026	**5.1181**	**7.8740**	**1.2992**	**.079**	**—**	**23,900**	**22,700**	**6.97**
	130	200	33	2.0	—			
6028	**5.5118**	**8.2677**	**1.2992**	**.079**	**—**	**24,700**	**24,400**	**7.39**
	140	210	33	2.0	—			
6030	**5.9055**	**8.8583**	**1.3780**	**.083**	**—**	**28,300**	**28,300**	**8.99**
	150	225	35	2.1	—			
6032	**6.2992**	**9.4488**	**1.4961**	**.083**	**—**	**32,000**	**32,500**	**11.1**
	160	240	38	2.1	—			
6034	**6.6929**	**10.2362**	**1.6535**	**.083**	**—**	**38,000**	**38,500**	**17.5**
	170	260	42	2.1	—			
6036	**7.0866**	**11.0236**	**1.8110**	**.083**	**—**	**42,500**	**44,500**	**22.7**
	180	280	46	2.1	—			
6038	**7.4803**	**11.4173**	**1.8110**	**.083**	**—**	**44,000**	**48,500**	**23.8**
	190	290	46	2.1	—			
6040	**7.8740**	**12.2047**	**2.0079**	**.083**	**—**	**49,000**	**54,500**	**30.6**
	200	310	51	2.1	—			

Continued on Page 22

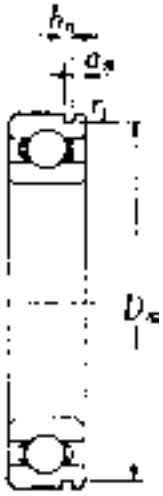
SINGLE ROW RADIAL BALL BEARINGS

Units: **INCHES**
Millimeters

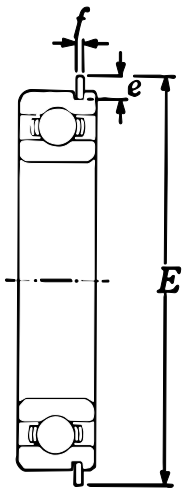
SERIES 60

Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f (max)	e	Grease	Oil	LU, LLU	
—	—	—	—	—	—	29,000	34,000	21,000	00
—	—	—	—	—	—				
—	—	—	—	—	—	26,000	30,000	18,000	01
—	—	—	—	—	—				
—	—	—	—	—	—	22,000	26,000	15,000	02
—	—	—	—	—	—				
—	—	—	—	—	—	20,000	24,000	14,000	03
—	—	—	—	—	—				
1.565	.081	.065	1.82	.042	.125	18,000	21,000	11,000	04
39.75	2.06	1.65	46.3	1.07	3.17				
1.644	.081	.053	1.90	.044	.129	17,000	20,000	10,000	/22
41.75	2.06	1.35	48.3	1.12	3.28				
1.756	.081	.065	2.07	.042	.156	15,000	18,000	9,400	05
44.60	2.06	1.65	52.7	1.07	3.96				
1.958	.081	.053	2.28	.044	.161	14,000	16,000	8,400	/28
49.73	2.06	1.35	57.9	1.12	4.09				
2.071	.082	.065	2.39	.042	.156	13,000	15,000	7,700	06
52.60	2.08	1.65	60.7	1.07	3.96				
2.189	.082	.053	2.51	.044	.159	12,000	15,000	7,200	/32
55.60	2.08	1.35	63.7	1.12	4.05				
2.347	.082	.087	2.67	.065	.156	12,000	14,000	6,800	07
59.61	2.08	2.21	67.7	1.65	3.96				
2.552	.098	.087	2.94	.065	.188	10,000	12,000	6,100	08
64.82	2.49	2.21	74.6	1.65	4.78				
2.828	.098	.087	3.21	.065	.188	9,200	11,000	5,400	09
71.83	2.49	2.21	81.6	1.65	4.78				
3.024	.098	.087	3.41	.065	.188	8,400	9,800	5,000	10
76.81	2.49	2.21	86.6	1.65	4.78				
3.417	.113	.118	3.80	.095	.188	7,700	9,000	4,500	11
86.79	2.87	3.00	96.5	2.41	4.78				
3.615	.113	.118	4.00	.095	.188	7,000	8,300	4,100	12
91.82	2.87	3.00	101.6	2.41	4.78				
3.811	.113	.118	4.19	.095	.188	6,500	7,700	3,900	13
96.80	2.87	3.00	106.5	2.41	4.78				
4.205	.113	.118	4.59	.095	.188	6,100	7,100	3,600	14
106.81	2.87	3.00	116.6	2.41	4.78				
4.402	.113	.118	4.79	.095	.188	5,700	6,700	3,300	15
111.81	2.87	3.00	121.6	2.41	4.78				
4.733	.113	.134	5.30	.109	.281	5,300	6,200	3,100	16
120.22	2.87	3.40	134.7	2.77	7.14				
4.930	.113	.134	5.50	.109	.281	5,000	5,900	2,900	17
125.22	2.87	3.40	139.7	2.77	7.14				
5.324	.146	.134	5.89	.109	.281	4,700	5,600	2,800	18
135.23	3.71	3.40	149.7	2.77	7.14				
5.521	.146	.134	6.09	.109	.281	4,500	5,300	2,600	19
140.23	3.71	3.40	154.7	2.77	7.1				
5.718	.146	.134	6.29	.109	.281	4,200	5,000	2,600	20
145.24	3.71	3.40	159.7	2.77	7.14				
6.111	.146	.134	6.68	.109	.281	4,000	4,700	2,400	21
155.22	3.71	3.40	169.7	2.77	7.14				
6.443	.146	.150	7.20	.120	.375	3,800	4,500	2,300	22
163.65	3.71	3.81	182.9	3.05	9.53				
—	—	—	—	—	—	3,500	4,100	2,100	24
—	—	—	—	—	—				
—	—	—	—	—	—	3,200	3,800	1,900	26
—	—	—	—	—	—				
—	—	—	—	—	—	3,000	3,500	1,800	28
—	—	—	—	—	—				
—	—	—	—	—	—	2,800	3,200	1,700	30
—	—	—	—	—	—				
—	—	—	—	—	—	2,600	3,000	1,600	32
—	—	—	—	—	—				
—	—	—	—	—	—	2,400	2,800	—	34
—	—	—	—	—	—				
—	—	—	—	—	—	2,300	2,700	—	36
—	—	—	—	—	—				
—	—	—	—	—	—	2,100	2,500	—	38
—	—	—	—	—	—				
—	—	—	—	—	—	2,000	2,400	—	40
—	—	—	—	—	—				

Continued on Page 23



With Snap Ring Groove 60N

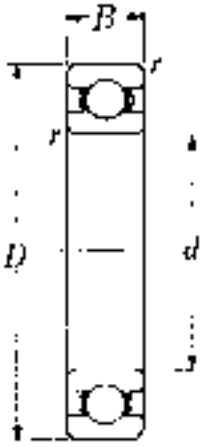


With Snap Ring 60NR

Single Shielded With Snap Ring 60ZNR

SERIES 60

Units: **INCHES**
Millimeters



Open Type
60

SINGLE ROW RADIAL BALL BEARINGS

Bearing No.	Bore *d*	O.D. *D*	Width *B*	Fillet Radii *r*	Fillet Radii *r_1*	Basic Load Ratings (lbs) Dynamic *C*	Basic Load Ratings (lbs) Static *C_0*	Weight (lbs)
6044	**8.66** 220	**13.39** 340	**2.205** 56	**.118** 3.0	—	**54,500**	**65,000**	**34.6**
6048	**9.45** 240	**14.17** 360	**1.102** 28	**.118** 3.0	—	**56,000**	**70,000**	**37.0**
6052	**10.24** 260	**15.75** 400	**2.559** 65	**.157** 4.0	—	**65,500**	**84,500**	**55.1**
6056	**11.02** 280	**16.54** 420	**2.559** 65	**.157** 4.0	—	**73,000**	**95,000**	**68.3**
6060	**11.81** 300	**18.11** 460	**2.913** 74	**.157** 4.0	—	**80,000**	**108,000**	**96.6**
6064	**12.60** 320	**18.90** 480	**2.913** 74	**.157** 4.0	—	**83,500**	**119,000**	**102**
6068	**13.39** 340	**20.47** 520	**3.228** 82	**.197** 5.0	—	**94,000**	**137,000**	**136**
6072	**14.17** 360	**21.26** 540	**3.228** 82	**.197** 5.0	—	**98,500**	**150,000**	**143**
6076	**14.96** 380	**22.05** 560	**3.228** 82	**.197** 5.0	—	**103,000**	**163,000**	**149**
6080	**15.75** 400	**23.62** 600	**3.543** 90	**.197** 5.0	—	**114,000**	**185,000**	**193**
6084	**16.54** 420	**24.41** 620	**3.543** 90	**.197** 5.0	—	**119,000**	**201,000**	**201**

SINGLE ROW RADIAL BALL BEARINGS

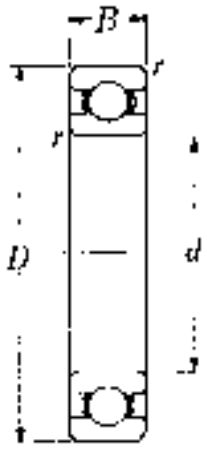
Units: **INCHES**
Millimeters

SERIES 60

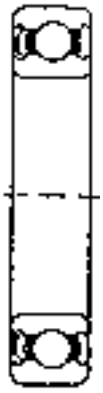
Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f (max)	e	Grease	Oil	LU, LLU	
—	—	—	—	—	—	1,800	2,200	—	44
—	—	—	—	—	—	1,700	2,000	—	48
—	—	—	—	—	—	1,500	1,800	—	52
—	—	—	—	—	—	1,400	1,600	—	56
—	—	—	—	—	—	1,300	1,500	—	60
—	—	—	—	—	—	1,200	1,400	—	64
—	—	—	—	—	—	1,100	1,300	—	68
—	—	—	—	—	—	1,100	1,200	—	72
—	—	—	—	—	—	990	1,200	—	76
—	—	—	—	—	—	930	1,100	—	80
—	—	—	—	—	—	880	1,000	—	84

SERIES 62

Units: **INCHES**
Millimeters



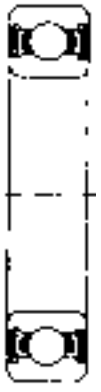
Open Type
62



Single
Shielded
62Z

Double
Shielded
62ZZ

Double
Sealed
62LLU
(Contact Type)



Double
Sealed
62LLB
(Non-Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
6200	**.3937**	**1.1811**	**.3543**	**.024**	**.020**	**1,150**	**540**	**.071**
	10	30	9	.6	.5			
6201	**.4724**	**1.2598**	**.3937**	**.024**	**.020**	**1,370**	**615**	**.082**
	12	32	10	.6	.5			
6201/12.69	**.4996**	**1.2598**	**.3937**	**.024**	**.020**	**1,370**	**615**	**.082**
	12.69	32	10	.6	.5			
6201/12.695	**.4998**	**1.2598**	**.3937**	**.024**	**.020**	**1,370**	**615**	**.082**
	12.695	32	10	.6	.5			
6201/12.7	**.5000**	**1.2598**	**.3937**	**.024**	**.020**	**1,370**	**615**	**.082**
	12.7	32	10	.6	.5			
6201/13	**.5118**	**1.2598**	**.3937**	**.024**	**.020**	**1,370**	**615**	**.082**
	13	32	10	.6	.5			
6202	**.5906**	**1.3780**	**.4331**	**.024**	**—**	**1,740**	**805**	**.099**
	15	35	11	.6	—			
6202/12.71	**.5004**	**1.3780**	**.4331**	**.024**	**—**	**1,740**	**805**	**.099**
	12.71	35	11	.6	—			
6202/15.875	**.6250**	**1.3780**	**.4331**	**.024**	**—**	**1,740**	**805**	**.099**
	15.875	35	11	.6	—			
6202/16	**.6299**	**1.3780**	**.4331**	**.024**	**—**	**1,740**	**805**	**.099**
	16	35	11	.6	—			
6203	**.6693**	**1.5748**	**.4724**	**.024**	**.020**	**2,160**	**1,030**	**.143**
	17	40	12	.6	.5			
6203/12.7	**.5000**	**1.5748**	**.4724**	**.024**	**.020**	**2,160**	**1,030**	**.143**
	12.7	40	12	.6	.5			
6203/15.875	**.6250**	**1.5748**	**.4724**	**.024**	**.020**	**2,160**	**1,030**	**.143**
	15.875	40	12	.6	.5			
6203/16	**.6299**	**1.5748**	**.4724**	**.024**	**.020**	**2,160**	**1,030**	**.143**
	16	40	12	.6	.5			
6203/19.05	**.7500**	**1.5748**	**.4724**	**.024**	**.020**	**2,160**	**1,030**	**.143**
	19.05	40	12	.6	.5			
6204	**.7874**	**1.8504**	**.5512**	**.039**	**.020**	**2,890**	**1,500**	**.234**
	20	47	14	1	.5			
62/22	**.8661**	**1.9685**	**.5512**	**.039**	**.020**	**2,900**	**1,530**	**.258**
	22	50	14	1	.5			
6205	**.9843**	**2.0472**	**.5906**	**.039**	**.020**	**3,150**	**1,770**	**.282**
	25	52	15	1	.5			
6205/25.4	**1.0000**	**2.0472**	**.5906**	**.039**	**.020**	**3,150**	**1,770**	**.282**
	25.4	52	15	1	.5			
62/28	**1.1024**	**2.2835**	**.6299**	**.039**	**.020**	**4,000**	**2,190**	**.377**
	28	58	16	1	.5			
6206	**1.1811**	**2.4409**	**.6299**	**.039**	**.020**	**4,400**	**2,540**	**.439**
	30	62	16	1	.5			
62/32	**1.2598**	**2.5591**	**.6693**	**.039**	**.020**	**4,650**	**2,610**	**.498**
	32	65	17	1	.5			
6207	**1.3780**	**2.8346**	**.6693**	**.043**	**.020**	**5,750**	**3,450**	**.635**
	35	72	17	1.1	.5			
6208	**1.5748**	**3.1496**	**.7087**	**.043**	**.020**	**6,550**	**4,000**	**.807**
	40	80	18	1.1	.5			
6209	**1.7717**	**3.3465**	**.7480**	**.043**	**.020**	**7,350**	**4,600**	**.897**
	45	85	19	1.1	.5			
6210	**1.9685**	**3.5433**	**.7874**	**.043**	**.020**	**7,900**	**5,200**	**1.02**
	50	90	20	1.1	.5			
6211	**2.1654**	**3.9370**	**.8268**	**.059**	**.020**	**9,750**	**6,550**	**1.34**
	55	100	21	1.5	.5			
6212	**2.3622**	**4.3307**	**.8661**	**.059**	**.020**	**11,800**	**8,150**	**1.73**
	60	110	22	1.5	.5			
6213	**2.5591**	**4.7244**	**.9055**	**.059**	**.020**	**12,900**	**9,000**	**2.18**
	65	120	23	1.5	.5			
6214	**2.7559**	**4.9213**	**.9449**	**.059**	**.020**	**14,000**	**9,900**	**2.36**
	70	125	24	1.5	.5			
6215	**2.9528**	**5.1181**	**.9843**	**.059**	**.020**	**14,900**	**11,100**	**2.60**
	75	130	25	1.5	.5			
6216	**3.1496**	**5.5118**	**1.0236**	**.079**	**.020**	**16,500**	**11,900**	**3.09**
	80	140	26	2.0	.5			
6217	**3.3465**	**5.9055**	**1.1024**	**.079**	**.020**	**18,700**	**14,300**	**3.95**
	85	150	28	2.0	.5			
6218	**3.5433**	**6.2992**	**1.1811**	**.079**	**.020**	**21,600**	**16,100**	**4.74**
	90	160	30	2.0	.5			
6219	**3.7402**	**6.6929**	**1.2598**	**.083**	**.020**	**24,500**	**18,400**	**5.78**
	95	170	32	2.1	.5			
6220	**3.9370**	**7.0866**	**1.3386**	**.083**	**.012**	**27,500**	**20,900**	**6.92**
	100	180	34	2.1	.5			

Continued on Page 26

Units: **INCHES** Millimeters

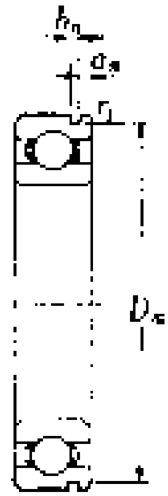
NTN

SERIES 62

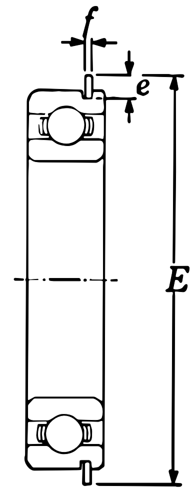
SINGLE ROW RADIAL BALL BEARINGS

Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f	e	Grease	Oil	LLU	
1.109	**.081**	**.065**	**1.37**	**.042**	**.125**	25,000	30,000	18,000	00
28.17	2.06	1.65	34.7	1.07	3.17				
1.187	**.081**	**.065**	**1.44**	**.042**	**.125**	22,000	26,000	16,000	01
30.15	2.06	1.65	36.7	1.07	3.17				
1.187	**.081**	**.065**	**1.44**	**.042**	**.125**	22,000	26,000	16,000	01
30.15	2.06	1.65	36.7	1.07	3.17				
1.187	**.081**	**.065**	**1.44**	**.042**	**.125**	22,000	26,000	16,000	01
30.15	2.06	1.65	36.7	1.07	3.17				
1.187	**.081**	**.065**	**1.44**	**.042**	**.125**	22,000	26,000	16,000	01
30.15	2.06	1.65	36.7	1.07	3.17				
1.187	**.081**	**.065**	**1.44**	**.042**	**.125**	22,000	26,000	16,000	01
30.15	2.06	1.65	36.7	1.07	3.17				
1.306	**.081**	**.065**	**1.56**	**.042**	**.125**	19,000	23,000	15,000	02
33.17	2.06	1.65	39.7	1.07	3.17				
1.306	**.081**	**.065**	**1.56**	**.042**	**.125**	19,000	23,000	15,000	02
33.17	2.06	1.65	39.7	1.07	3.17				
1.306	**.081**	**.065**	**1.56**	**.042**	**.125**	19,000	23,000	15,000	02
33.17	2.06	1.65	39.7	1.07	3.17				
1.306	**.081**	**.065**	**1.56**	**.042**	**.125**	19,000	23,000	15,000	02
33.17	2.06	1.65	39.7	1.07	3.17				
1.500	**.081**	**.065**	**1.76**	**.042**	**.125**	18,000	21,000	12,000	03
38.10	2.06	1.65	44.6	1.07	3.17				
1.500	**.081**	**.065**	**1.76**	**.042**	**.125**	18,000	21,000	12,000	03
38.10	2.06	1.65	44.6	1.07	3.17				
1.500	**.081**	**.065**	**1.76**	**.042**	**.125**	18,000	21,000	12,000	03
38.10	2.06	1.65	44.6	1.07	3.17				
1.500	**.081**	**.065**	**1.76**	**.042**	**.125**	18,000	21,000	12,000	03
38.10	2.06	1.65	44.6	1.07	3.17				
1.500	**.081**	**.065**	**1.76**	**.042**	**.125**	18,000	21,000	12,000	03
38.10	2.06	1.65	44.6	1.07	3.17				
1.756	**.097**	**.065**	**2.07**	**.042**	**.156**	16,000	18,000	10,000	04
44.60	2.46	1.65	52.7	1.07	3.96				
1.874	**.097**	**.065**	**2.19**	**.042**	**.156**	14,000	17,000	9,700	/22
47.60	2.46	1.65	55.7	1.07	3.96				
1.958	**.097**	**.065**	**2.28**	**.042**	**.156**	13,000	15,000	8,900	05
49.73	2.46	1.65	57.9	1.07	3.96				
1.958	**.097**	**.065**	**2.28**	**.042**	**.156**	13,000	15,000	8,900	05
49.73	2.46	1.65	57.9	1.07	3.96				
2.189	**.097**	**.065**	**2.51**	**.042**	**.156**	12,000	14,000	8,100	/28
55.60	2.46	1.65	63.7	1.07	3.96				
2.347	**.129**	**.087**	**2.67**	**.065**	**.156**	11,000	13,000	7,300	06
59.61	3.28	2.21	67.7	1.65	3.96				
2.465	**.129**	**.087**	**2.78**	**.065**	**.156**	11,000	12,000	7,100	/32
62.61	3.28	2.21	70.7	1.65	3.96				
2.709	**.129**	**.087**	**3.09**	**.065**	**.188**	9,800	11,000	6,300	07
68.81	3.28	2.21	78.6	1.65	4.77				
3.024	**.129**	**.087**	**3.41**	**.065**	**.188**	8,700	10,000	5,600	08
76.81	3.28	2.21	86.6	1.65	4.77				
3.221	**.129**	**.087**	**3.61**	**.065**	**.188**	7,800	9,200	5,200	09
81.81	3.28	2.21	91.6	1.65	4.77				
3.417	**.129**	**.118**	**3.80**	**.095**	**.188**	7,100	8,300	4,700	10
86.79	3.28	3.00	96.5	2.41	4.77				
3.811	**.129**	**.118**	**4.19**	**.095**	**.188**	6,400	7,600	4,300	11
96.80	3.28	3.00	106.5	2.41	4.77				
4.205	**.129**	**.118**	**4.59**	**.095**	**.188**	6,000	7,000	3,800	12
106.81	3.28	3.00	116.6	2.41	4.77				
4.536	**.160**	**.134**	**5.11**	**.109**	**.281**	5,500	6,500	3,600	13
115.21	4.06	3.40	129.7	2.77	7.13				
4.733	**.160**	**.134**	**5.30**	**.109**	**.281**	5,100	6,000	3,400	14
120.22	4.06	3.40	134.7	2.77	7.13				
4.930	**.160**	**.134**	**5.50**	**.109**	**.281**	4,800	5,600	3,200	15
125.22	4.06	3.40	139.7	2.77	7.13				
5.324	**.193**	**.134**	**5.89**	**.109**	**.281**	4,500	5,300	3,000	16
135.23	4.90	3.40	149.7	2.77	7.13				
5.718	**.193**	**.134**	**6.29**	**.109**	**.281**	4,200	5,000	2,800	17
145.24	4.90	3.40	159.7	2.77	7.13				
6.111	**.193**	**.134**	**6.68**	**.109**	**.281**	4,000	4,700	2,600	18
155.22	4.90	3.40	169.7	2.77	7.13				
6.443	**.224**	**.150**	**7.20**	**.120**	**.375**	3,700	4,400	2,500	19
163.65	5.69	3.81	182.9	3.05	9.52				
6.837	**.224**	**.150**	**7.59**	**.120**	**.375**	3,500	4,200	2,300	20
173.66	5.69	3.81	192.9	3.05	9.52				

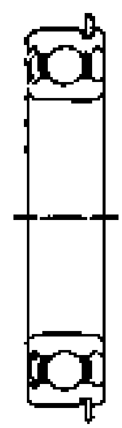
Continued on Page 27



With Snap Ring Groove 62N



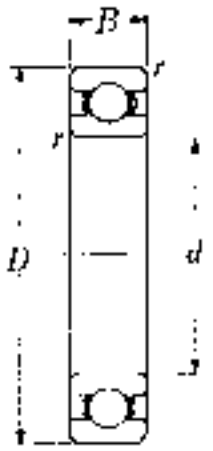
With Snap Ring 62NR



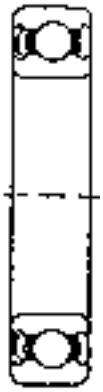
Single Shielded With Snap Ring 62ZNR

SERIES 62

Units: **INCHES**
Millimeters



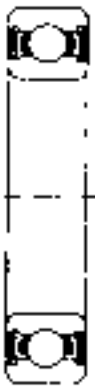
Open Type
62



Single
Shielded
62Z

Double
Shielded
62ZZ

Double
Sealed
62LLU
(Contact Type)



Double
Sealed
62LLB
(Non-Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

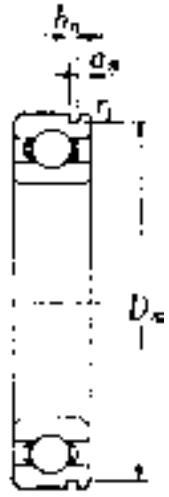
Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
6221	**4.1339** 105	**7.4803** 190	**1.4173** 36	**.083** 2.1	**.020** .5	**29,900**	**23,500**	**8.16**
6222	**4.3307** 110	**7.8740** 200	**1.4961** 38	**.083** 2.1	**.020** .5	**32,500**	**26,300**	**9.61**
6224	**4.7244** 120	**8.4646** 215	**1.5748** 40	**.083** 2.1	**—** —	**35,000**	**29,500**	**11.4**
6226	**5.1181** 130	**9.0551** 230	**1.5748** 40	**.118** 3.0	**—** —	**37,500**	**33,000**	**12.8**
6228	**5.5118** 140	**9.8425** 250	**1.6535** 42	**.118** 3.0	**—** —	**37,500**	**33,500**	**16.5**
6230	**5.9055** 150	**10.6299** 270	**1.7717** 45	**.118** 3.0	**—** —	**39,500**	**37,500**	**20.7**
6232	**6.2992** 160	**11.4173** 290	**1.8898** 48	**.118** 3.0	**—** —	**41,500**	**42,000**	**31.5**
6234	**6.6929** 170	**12.2047** 310	**2.0472** 52	**.157** 4.0	**—** —	**47,500**	**50,000**	**38.6**
6236	**7.0866** 180	**12.5984** 320	**2.0472** 52	**.157** 4.0	**—** —	**51,000**	**54,000**	**40.3**
6238	**7.4803** 190	**13.3858** 340	**2.1654** 55	**.157** 4.0	**—** —	**57,500**	**63,500**	**50.7**
6240	**7.8740** 200	**14.1732** 360	**2.2835** 58	**.157** 4.0	**—** —	**60,800**	**70,000**	**62.2**
6244	**8.6614** 220	**15.7480** 400	**2.5590** 65	**.157** 4.0	**—** —	**67,000**	**81,500**	**66.6**

SINGLE ROW RADIAL BALL BEARINGS

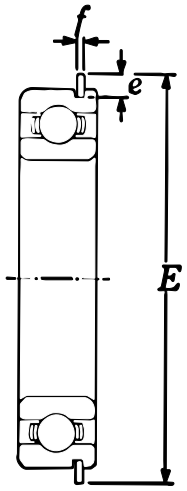
Units: **INCHES**
Millimeters

SERIES 62

Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f (max)	e	Grease	Oil	LU, LLU	
7.230 183.64	**.224** 5.69	**.150** 3.81	**7.99** 202.9	**.120** 3.05	**.375** 9.52	**3,400**	**4,000**	**2,300**	**21**
7.624 193.65	**.224** 5.69	**.150** 3.81	**8.38** 212.9	**.120** 3.05	**.375** 9.52	**3,200**	**3,800**	**2,200**	**22**
—	—	—	—	—	—	**2,900**	**3,400**	**2,000**	**24**
—	—	—	—	—	—	**2,300**	**2,700**	—	**26**
—	—	—	—	—	—	**2,100**	**2,500**	—	**28**
—	—	—	—	—	—	**2,000**	**2,400**	—	**30**
—	—	—	—	—	—	**1,900**	**2,200**	—	**32**
—	—	—	—	—	—	**1,800**	**2,100**	—	**34**
—	—	—	—	—	—	**1,700**	**1,800**	—	**36**
—	—	—	—	—	—	**1,800**	**2,100**	—	**38**
—	—	—	—	—	—	**1,700**	**2,000**	—	**40**
—	—	—	—	—	—	**1,500**	**1,800**	—	**44**



With Snap Ring Groove
62N

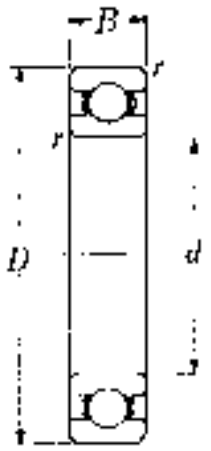


With Snap Ring
62NR

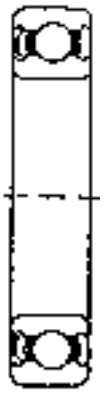
Single Shielded With Snap Ring
62ZNR

SERIES 63

Units: **INCHES**
Millimeters



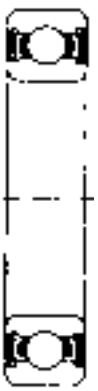
Open Type
63



Single
Shielded
63Z

Double
Shielded
63ZZ

Double
Sealed
63LLU
(Contact Type)



Double
Sealed
63LLB
(Non-Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

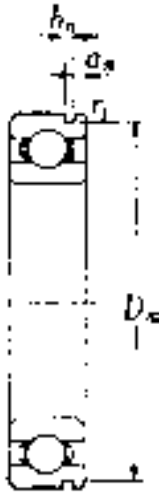
Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
6300	**.3937**	**1.3780**	**.4331**	**.024**	**.020**	**1,840**	**785**	**.117**
	10	35	11	.6	.5			
6301	**.4724**	**1.4567**	**.4724**	**.039**	**.020**	**2,180**	**940**	**.132**
	12	37	12	1.0	.5			
6302	**.5906**	**1.6535**	**.5118**	**.039**	**.020**	**2,570**	**1,220**	**.181**
	15	42	13	1.0	.5			
6303	**.6693**	**1.8504**	**.5512**	**.039**	**.020**	**3,050**	**1,470**	**.254**
	17	47	14	1.0	.5			
6304	**.7874**	**2.0472**	**.5906**	**.043**	**.020**	**3,600**	**1,770**	**.317**
	20	52	15	1.1	.5			
63/22	**.8661**	**2.2047**	**.6299**	**.043**	**.020**	**4,150**	**2,080**	**.388**
	22	56	16	1.1	.5			
6305	**.9843**	**2.4409**	**.6693**	**.043**	**.020**	**4,750**	**2,460**	**.511**
	25	62	17	1.1	.5			
63/28	**1.1024**	**2.6772**	**.7087**	**.043**	**.020**	**6,000**	**3,150**	**.633**
	28	68	18	1.1	.5			
6306	**1.1811**	**2.8346**	**.7480**	**.043**	**.020**	**6,000**	**3,400**	**.763**
	30	72	19	1.1	.5			
63/32	**1.2598**	**2.9528**	**.7874**	**.043**	**.020**	**6,700**	**3,800**	**.842**
	32	75	20	1.1	.5			
6307	**1.3780**	**3.1496**	**.8268**	**.059**	**.020**	**7,500**	**4,300**	**1.01**
	35	80	21	1.5	.5			
6308	**1.5748**	**3.5433**	**.9055**	**.059**	**.020**	**9,150**	**5,400**	**1.40**
	40	90	23	1.5	.5			
6309	**1.7717**	**3.9370**	**.9843**	**.059**	**.020**	**11,900**	**7,200**	**1.84**
	45	100	25	1.5	.5			
6310	**1.9685**	**4.3307**	**1.0630**	**.079**	**.020**	**13,900**	**8,600**	**2.36**
	50	110	27	2.0	.5			
6311	**2.1654**	**4.7244**	**1.1417**	**.079**	**.020**	**16,100**	**10,100**	**3.02**
	55	120	29	2.0	.5			
6312	**2.3622**	**5.1181**	**1.2205**	**.083**	**.020**	**18,400**	**11,700**	**3.75**
	60	130	31	2.1	.5			
6313	**2.5591**	**5.5118**	**1.2992**	**.083**	**.020**	**20,800**	**13,400**	**4.59**
	65	140	33	2.1	.5			
6314	**2.7559**	**5.9055**	**1.3780**	**.083**	**.020**	**23,400**	**15,300**	**5.56**
	70	150	35	2.1	.5			
6315	**2.9528**	**6.2992**	**1.4567**	**.083**	**.020**	**25,500**	**17,400**	**6.66**
	75	160	37	2.1	.5			
6316	**3.1496**	**6.6929**	**1.5354**	**.083**	**.020**	**27,600**	**19,500**	**7.91**
	80	170	39	2.1	.5			
6317	**3.3465**	**7.0866**	**1.6142**	**.118**	**.020**	**29,800**	**21,800**	**9.33**
	85	180	41	3.0	.5			
6318	**3.5433**	**7.4803**	**1.6929**	**.118**	**.020**	**32,000**	**24,100**	**10.8**
	90	190	43	3.0	.5			
6319	**3.7402**	**7.8740**	**1.7717**	**.118**	**.020**	**34,500**	**26,600**	**12.5**
	95	200	45	3.0	.5			
6320	**3.9370**	**8.4646**	**1.8504**	**.118**	**—**	**39,000**	**31,500**	**15.4**
	100	215	47	3.0	—			
6321	**4.1339**	**8.8583**	**1.9291**	**.118**	**—**	**41,500**	**34,500**	**17.7**
	105	225	49	3.0	—			
6322	**4.3307**	**9.4488**	**1.9685**	**.118**	**—**	**46,000**	**40,500**	**21.0**
	110	240	50	3.0	—			
6324	**4.7244**	**10.2362**	**2.1654**	**.118**	**—**	**46,500**	**41,500**	**27.3**
	120	260	55	3.0	—			
6326	**5.1181**	**11.0236**	**2.2835**	**.157**	**—**	**51,500**	**48,000**	**33.3**
	130	280	58	4.0	—			
6328	**5.5118**	**11.8110**	**2.4409**	**.157**	**—**	**57,000**	**55,500**	**40.8**
	140	300	62	4.0	—			
6330	**5.9055**	**12.5984**	**2.5591**	**.157**	**—**	**61,500**	**63,500**	**57.8**
	150	320	65	4.0	—			
6332	**6.2992**	**13.3858**	**2.6772**	**.157**	**—**	**62,500**	**64,500**	**63.9**
	160	340	68	4.0	—			
6334	**6.6929**	**14.1732**	**2.8346**	**.157**	**—**	**73,500**	**80,000**	**76.1**
	170	360	72	4.0	—			
6336	**7.0866**	**14.9606**	**2.9528**	**.157**	**—**	**79,500**	**91,500**	**93.5**
	180	380	75	4.0	—			
6338	**7.4803**	**15.7480**	**3.0709**	**.197**	**—**	**79,500**	**93,000**	**108**
	190	400	78	5.0	—			
6340	**7.8740**	**16.5354**	**3.1496**	**.197**	**—**	**92,000**	**113,000**	**122**
	200	420	80	5.0	—			
6344	**8.6614**	**18.1102**	**3.4650**	**.157**	**—**	**92,500**	**116,000**	**134**
	220	460	88	4.0	—			

SINGLE ROW RADIAL BALL BEARINGS

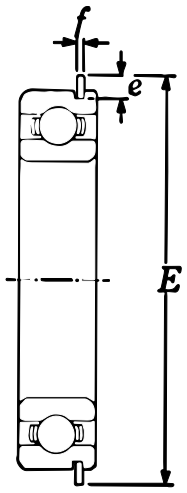
Units: **INCHES**
Millimeters

NTN
SERIES 63

Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f (max)	e	Grease	Oil	LU, LLU	
1.306	**.081**	**.065**	**1.56**	**.042**	**.125**	**23,000**	**27,000**	**16,000**	**00**
33.17	2.06	1.65	39.7	1.07	3.18				
1.369	**.081**	**.065**	**1.63**	**.042**	**.125**	**20,000**	**24,000**	**15,000**	**01**
34.77	2.06	1.65	41.3	1.07	3.18				
1.565	**.081**	**.065**	**1.82**	**.042**	**.125**	**17,000**	**21,000**	**12,000**	**02**
39.75	2.06	1.65	46.3	1.07	3.18				
1.756	**.097**	**.065**	**2.07**	**.042**	**.156**	**16,000**	**19,000**	**11,000**	**03**
44.60	2.46	1.65	52.7	1.07	3.96				
1.958	**.097**	**.065**	**2.28**	**.042**	**.156**	**14,000**	**17,000**	**10,000**	**04**
49.73	2.46	1.65	57.9	1.07	3.96				
2.110	**.097**	**.065**	**2.43**	**.042**	**.156**	**13,000**	**15,000**	**9,200**	**/22**
53.59	2.46	1.65	61.7	1.07	3.96				
2.347	**.129**	**.087**	**2.67**	**.065**	**.156**	**12,000**	**14,000**	**8,100**	**05**
59.61	3.28	2.20	67.7	1.65	3.96				
2.552	**.129**	**.087**	**2.94**	**.065**	**.188**	**11,000**	**13,000**	**7,400**	**/28**
64.82	3.28	2.20	74.6	1.65	4.77				
2.709	**.129**	**.087**	**3.09**	**.065**	**.188**	**10,000**	**12,000**	**6,600**	**06**
68.81	3.28	2.20	78.6	1.65	4.77				
2.828	**.129**	**.087**	**3.21**	**.065**	**.188**	**9,500**	**11,000**	**6,500**	**/32**
71.83	3.28	2.20	81.6	1.65	4.77				
3.024	**.129**	**.087**	**3.41**	**.065**	**.188**	**8,800**	**10,000**	**6,000**	**07**
76.81	3.28	2.20	86.6	1.65	4.77				
3.417	**.129**	**.118**	**3.80**	**.095**	**.188**	**7,800**	**9,200**	**5,300**	**08**
86.79	3.28	3.00	96.5	2.41	4.77				
3.811	**.129**	**.118**	**4.19**	**.095**	**.188**	**7,000**	**8,200**	**4,700**	**09**
96.80	3.28	3.00	106.5	2.41	4.77				
4.205	**.129**	**.118**	**4.59**	**.095**	**.188**	**6,400**	**7,500**	**4,200**	**10**
106.81	3.28	3.00	116.6	2.41	4.77				
4.536	**.160**	**.134**	**5.11**	**.109**	**.281**	**5,800**	**6,800**	**3,900**	**11**
115.21	4.06	3.40	129.7	2.77	7.13				
4.930	**.160**	**.134**	**5.50**	**.109**	**.281**	**5,400**	**6,300**	**3,600**	**12**
125.22	4.06	3.40	139.7	2.77	7.13				
5.324	**.193**	**.134**	**5.89**	**.109**	**.281**	**4,900**	**5,800**	**3,300**	**13**
135.23	4.90	3.40	149.7	2.77	7.13				
5.718	**.193**	**.134**	**6.29**	**.109**	**.281**	**4,600**	**5,400**	**3,100**	**14**
145.24	4.90	3.40	159.7	2.77	7.13				
6.111	**.193**	**.134**	**6.68**	**.109**	**.281**	**4,300**	**5,000**	**2,900**	**15**
155.22	4.90	3.40	169.7	2.77	7.13				
6.443	**.224**	**.150**	**7.20**	**.120**	**.375**	**4,000**	**4,700**	**2,700**	**16**
163.65	5.69	3.80	182.9	3.05	9.52				
6.837	**.224**	**.150**	**7.59**	**.120**	**.375**	**3,800**	**4,500**	**2,600**	**17**
173.66	5.69	3.80	192.9	3.05	9.52				
7.230	**.224**	**.150**	**7.99**	**.120**	**.375**	**3,600**	**4,200**	**2,400**	**18**
183.64	5.69	3.80	202.9	3.05	9.52				
7.624	**.224**	**.150**	**8.38**	**.120**	**.375**	**3,300**	**3,900**	**2,300**	**19**
193.65	5.69	3.80	212.9	3.05	9.52				
—	—	—	—	—	—	**3,200**	**3,700**	**2,200**	**20**
—	—	—	—	—	—	**3,000**	**3,600**	**2,100**	**21**
—	—	—	—	—	—	**2,900**	**3,400**	**1,900**	**22**
—	—	—	—	—	—	**2,600**	**3,100**	—	**24**
—	—	—	—	—	—	**2,400**	**2,800**	—	**26**
—	—	—	—	—	—	**2,200**	**2,600**	—	**28**
—	—	—	—	—	—	**2,100**	**2,400**	—	**30**
—	—	—	—	—	—	**1,900**	**2,300**	—	**32**
—	—	—	—	—	—	**1,800**	**2,100**	—	**34**
—	—	—	—	—	—	**1,700**	**2,000**	—	**36**
—	—	—	—	—	—	**1,600**	**1,900**	—	**38**
—	—	—	—	—	—	**1,500**	**1,800**	—	**40**
—	—	—	—	—	—	**1,400**	**1,600**	—	**44**



With Snap Ring Groove 63N



With Snap Ring 63NR

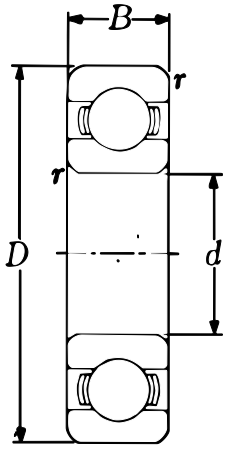
Single Shielded With Snap Ring 63ZNR

SERIES 64

Units: **INCHES**
Millimeters

SINGLE ROW RADIAL BALL BEARINGS

Bearing Number	Bore d	O. D. D	Width B	Fillet Radius r	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)	Limiting Speed (RPM) Grease	Limiting Speed (RPM) Oil	Limiting Speed (RPM) LU,LLU	Bore Dia. No.
6403	.6693 17	2.4409 62	.6693 17	.043 1.1	5,100	2,420	.595	14,000	16,000	9,500	03
6404	.7874 20	2.8346 72	.7480 19	.043 1.1	6,400	3,150	.882	12,000	14,000	8,000	04
6405	.9843 25	3.1496 80	.8268 21	.059 1.5	7,800	3,950	1.17	10,000	12,000	6,900	05
6406	1.1811 30	3.5433 90	.9055 23	.059 1.5	9,750	5,350	1.62	8,800	10,000	5,800	06
6407	1.3780 35	3.9370 100	.9843 25	.059 1.5	12,400	7,000	2.10	7,800	9,100	5,100	07
6408	1.5748 40	4.3307 110	1.0630 27	.079 2.0	14,300	8,200	2.71	7,000	8,200	4,700	08
6409	1.7717 45	4.7244 120	1.1417 29	.079 2.0	17,300	10,100	3.37	6,300	7,400	4,300	09
6410	1.9685 50	5.1181 130	1.2205 31	.083 2.1	18,700	11,100	4.14	5,700	6,700	—	10
6411	2.1654 55	5.5118 140	1.2992 33	.083 2.1	20,000	12,100	5.05	5,200	6,100	—	11
6412	2.3622 60	5.9055 150	1.3780 35	.083 2.1	22,900	14,400	6.11	4,800	5,700	—	12
6413	2.5591 65	6.2992 160	1.4567 37	.083 2.1	24,900	16,200	7.28	4,400	5,200	—	13
6414	2.7559 70	7.0866 180	1.6535 42	.118 3.0	28,800	20,100	10.6	4,100	4,800	—	14
6415	2.9528 75	7.4803 190	1.7717 45	.118 3.0	31,000	22,300	12.6	3,800	4,500	—	15
6416	3.1496 80	7.8740 200	1.8898 48	.118 3.0	37,000	28,200	14.9	3,600	4,200	—	16
6417	3.3465 85	8.2677 210	2.0472 52	.157 4.0	37,000	28,700	17.5	3,400	4,000	—	17
6418	3.5433 90	8.8583 225	2.1260 54	.157 4.0	41,500	33,500	25.1	3,200	3,800	—	18
6419	3.7402 95	9.4488 240	2.1654 55	.157 4.0	42,000	34,500	29.5	3,000	3,500	—	19
6420	3.9370 100	9.8425 250	2.2835 58	.157 4.0	46,000	39,500	33.1	2,900	3,400	—	20
6421	4.1339 105	10.2362 260	2.3622 60	.157 4.0	46,500	40,000	37.0	2,700	3,200	—	21
6422	4.3307 110	11.0236 280	2.5591 65	.157 4.0	55,500	51,000	47.0	2,600	3,000	—	22
6424	4.7244 120	12.2047 310	2.8346 72	.197 5.0	65,500	64,500	63.9	2,300	2,800	—	24
6426	5.1181 130	13.3858 340	3.0709 78	.197 5.0	68,000	67,000	83.8	2,200	2,500	—	26



Open Type
64

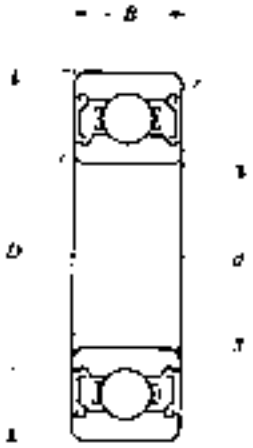
Double Sealed
64LLB
(Contact Type)

Double
Shielded
64ZZ

SINGLE ROW RADIAL BALL BEARINGS

Units: **INCHES**
Millimeters

NTN
SERIES
632
633
CARTRIDGE TYPE



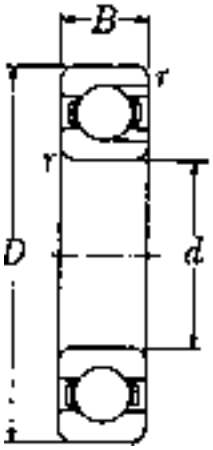
Bearing No.	Bore d	O.D. D	Width B	Fillet Radius r	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_o	Weight (lbs)
63204ZZ	**.7874**	**1.8504**	**.8110**	**.039**	**2,870**	**1,500**	**.34**
	20	47	20.6	1.0			
63205ZZ	**.9843**	**2.0472**	**.8110**	**.039**	**3,150**	**1,770**	**.39**
	25	52	20.6	1.0			
63206ZZ	**1.1811**	**2.4409**	**.9370**	**.039**	**4,400**	**2,540**	**.63**
	30	62	23.8	1.0			
63207ZZ	**1.3780**	**2.8346**	**1.0630**	**.043**	**5,750**	**3,450**	**.96**
	35	72	27.0	1.1			
63208ZZ	**1.5748**	**3.1496**	**1.1890**	**.043**	**6,550**	**4,000**	**1.28**
	40	80	30.2	1.1			
63209ZZ	**1.7717**	**3.3465**	**1.1890**	**.043**	**7,350**	**4,600**	**1.37**
	45	85	30.2	1.1			
63210ZZ	**1.9685**	**3.5433**	**1.1890**	**.043**	**7,900**	**5,200**	**1.45**
	50	90	30.2	1.1			
63211ZZ	**2.1654**	**3.9370**	**1.3110**	**.059**	**9,750**	**6,550**	**2.04**
	55	100	33.3	1.5			
63212ZZ	**2.3622**	**4.3307**	**1.4370**	**.059**	**11,800**	**8,150**	**2.80**
	60	110	36.5	1.5			
63304ZZ	**.7874**	**2.0472**	**.8740**	**.043**	**3,600**	**1,770**	**.48**
	20	52	22.2	1.1			
63305ZZ	**.9843**	**2.4409**	**1.0000**	**.043**	**4,750**	**2,460**	**.78**
	25	62	25.4	1.1			
63306ZZ	**1.1811**	**2.8346**	**1.1890**	**.043**	**6,000**	**3,400**	**1.13**
	30	72	30.2	1.1			
63307ZZ	**1.3780**	**3.1496**	**1.3740**	**.059**	**7,500**	**4,300**	**1.64**
	35	80	34.9	1.5			
63308ZZ	**1.5748**	**3.5433**	**1.4370**	**.059**	**9,150**	**5,400**	**2.06**
	40	90	36.5	1.5			
63309ZZ	**1.7717**	**3.9370**	**1.5630**	**.059**	**11,900**	**7,200**	**3.00**
	45	100	39.7	1.5			
63310ZZ	**1.9685**	**4.3307**	**1.7480**	**.079**	**13,900**	**8,600**	**3.75**
	50	110	44.4	2.0			
63311ZZ	**2.1654**	**4.7244**	**1.9370**	**.079**	**16,100**	**10,100**	**5.12**
	55	120	49.2	2.0			
63312ZZ	**2.3622**	**5.1181**	**2.1260**	**.083**	**18,400**	**11,700**	**6.50**
	60	130	54.0	2.1			
63313ZZ	**2.5591**	**5.5118**	**2.3110**	**.083**	**20,800**	**13,400**	**8.17**
	65	140	58.7	2.1			
63314ZZ	**2.7559**	**5.9055**	**2.5000**	**.083**	**23,400**	**15,300**	**10.5**
	70	150	63.5	2.1			
63315ZZ	**2.9528**	**6.2992**	**2.6890**	**.083**	**25,500**	**17,400**	**12.5**
	75	160	68.3	2.1			
63316ZZ	**3.1496**	**6.6929**	**2.6890**	**.083**	**27,600**	**19,500**	**14.1**
	80	170	68.3	2.1			
63317ZZ	**3.3465**	**7.0866**	**2.8740**	**.118**	**29,800**	**21,800**	**16.9**
	85	180	73.0	3.0			
63318ZZ	**3.5433**	**7.4803**	**2.8740**	**.118**	**32,000**	**24,100**	**18.7**
	90	190	73.0	3.0			
63320ZZ	**3.9370**	**8.4646**	**3.2500**	**.118**	**39,000**	**31,500**	**26.72**
	100	215	82.55	3.0			

NTN

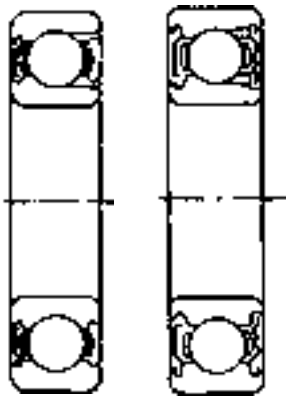
SERIES BL2

Maximum Type

Units: **INCHES**
Millimeters



Open Type



Single Shielded Z

Double Shielded ZZ

SINGLE ROW RADIAL BALL BEARINGS

Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
BL205	**.9843** 25	**2.0472** 52	**.5906** 15	**.039** 1	**.020** .5	**3,800**	**2,360**	**.312**
BL2/28	**1.1024** 28	**2.2835** 58	**.6299** 16	**.039** 1	**.020** .5	**5,250**	**3,300**	**.420**
BL206	**1.1811** 30	**2.4409** 62	**.6299** 16	**.039** 1	**.020** .5	**5,600**	**3,650**	**.471**
BL2/32	**1.2598** 32	**2.5591** 65	**.6693** 17	**.039** 1	**.020** .5	**6,100**	**3,900**	**.540**
BL207	**1.3780** 35	**2.8346** 72	**.6693** 17	**.043** 1.1	**.020** .5	**7,400**	**4,950**	**.700**
BL208	**1.5748** 40	**3.1496** 80	**.7087** 18	**.043** 1.1	**.020** .5	**8,800**	**6,250**	**.880**
BL209	**1.7717** 45	**3.3465** 85	**.7480** 19	**.043** 1.1	**.020** .5	**9,900**	**7,150**	**1.00**
BL210	**1.9685** 50	**3.5433** 90	**.7874** 20	**.043** 1.1	**.020** .5	**10,300**	**7,850**	**1.10**
BL211	**2.1654** 55	**3.9370** 100	**.8268** 21	**.059** 1.5	**.020** .5	**12,800**	**9,850**	**1.50**
BL212	**2.3622** 60	**4.3307** 110	**.8661** 22	**.059** 1.5	**.020** .5	**15,500**	**12,200**	**1.90**
BL213	**2.5591** 65	**4.7244** 120	**.9055** 23	**.059** 1.5	**.020** .5	**16,900**	**13,500**	**2.40**
BL214	**2.7559** 70	**4.9213** 125	**.9449** 24	**.059** 1.5	**.020** .5	**18,300**	**14,900**	**2.60**
BL215	**2.9528** 75	**5.1181** 130	**.9843** 25	**.059** 1.5	**.020** .5	**19,100**	**16,100**	**2.79**
BL216	**3.1496** 80	**5.5118** 140	**1.0236** 26	**.079** 2.0	**.020** .5	**22,400**	**19,100**	**3.50**
BL217	**3.3465** 85	**5.9055** 150	**1.1024** 28	**.079** 2.0	**.020** .5	**24,000**	**20,800**	**4.49**
BL218	**3.5433** 90	**6.2992** 160	**1.1811** 30	**.079** 2.0	**.020** .5	**29,500**	**25,700**	**5.50**
BL219	**3.7402** 95	**6.6929** 170	**1.2598** 32	**.079** 2.0	**.020** .5	**32,000**	**27,600**	**6.82**
BL220	**3.9370** 100	**7.0866** 180	**1.3386** 34	**.079** 2.0	**.020** .5	**36,000**	**31,500**	**8.03**
BL221	**4.1339** 105	**7.4803** 190	**1.4173** 36	**.079** 2.0	**.020** .5	**39,000**	**35,500**	**9.72**
BL222	**4.3307** 110	**7.8740** 200	**1.4961** 38	**.079** 2.0	**.020** .5	**42,500**	**39,500**	**11.3**

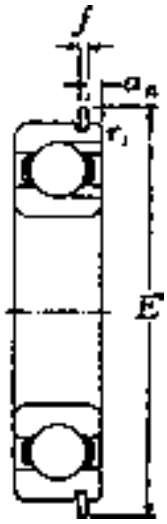
SINGLE ROW RADIAL BALL BEARINGS

Units: **INCHES**
Millimeters

NTN
SERIES BL2

Maximum Type

Snap Ring Dimensions			Limiting Speed (RPM)		Bore Diameter No.
a_n (max)	E (max)	f	Grease	Oil	
.097	**2.28**	**.042**	**12,000**	**14,000**	**05**
2.46	57.9	1.07			
.097	**2.51**	**.042**	**11,000**	**13,000**	**/28**
2.46	63.7	1.07			
.129	**2.67**	**.065**	**10,000**	**12,000**	**06**
3.28	67.7	1.65			
.129	**2.78**	**.065**	**9,500**	**11,000**	**/32**
3.28	70.7	1.65			
.129	**3.09**	**.065**	**8,800**	**10,000**	**07**
3.28	78.6	1.65			
.129	**3.41**	**.065**	**7,800**	**9,200**	**08**
3.28	86.6	1.65			
.129	**3.61**	**.065**	**7,000**	**8,200**	**09**
3.28	91.6	1.65			
.129	**3.80**	**.095**	**6,400**	**7,500**	**10**
3.28	96.5	2.41			
.129	**4.19**	**.095**	**5,800**	**6,800**	**11**
3.28	106.5	2.41			
.129	**4.59**	**.095**	**5,400**	**6,300**	**12**
3.28	116.6	2.41			
.160	**5.11**	**.109**	**4,900**	**5,800**	**13**
4.06	129.7	2.77			
.160	**5.30**	**.109**	**4,600**	**5,400**	**14**
4.06	134.7	2.77			
.160	**5.50**	**.109**	**4,300**	**5,000**	**15**
4.06	139.7	2.77			
.193	**5.89**	**.109**	**4,000**	**4,700**	**16**
4.90	149.7	2.77			
.193	**6.29**	**.109**	**3,800**	**4,400**	**17**
4.90	159.7	2.77			
.193	**6.68**	**.109**	**3,600**	**4,200**	**18**
4.90	169.7	2.77			
.224	**7.20**	**.120**	**3,400**	**3,900**	**18**
5.69	182.9	3.05			
.224	**7.59**	**.120**	**3,200**	**3,700**	**20**
5.69	192.9	3.05			
.224	**7.99**	**.120**	**3,000**	**3,600**	**21**
5.69	202.9	3.05			
.224	**8.38**	**.120**	**2,900**	**3,400**	**22**
5.69	212.9	3.05			



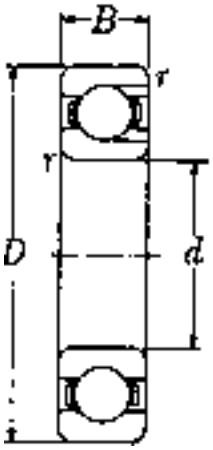
With Snap Ring
NR

Single Shielded With Snap Ring
ZNR

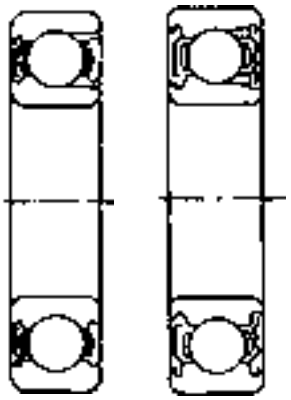
SERIES BL3

Maximum Type

Units: **INCHES**
Millimeters



Open Type



Single Shielded Z

Double Shielded ZZ

SINGLE ROW RADIAL BALL BEARINGS

Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
BL304	**.7874** 20	**2.0472** 52	**.5906** 15	**.043** 1.1	**.020** .5	**4,550**	**2,530**	**.359**
BL3/22	**.8661** 22	**2.2047** 56	**.6299** 16	**.043** 1.1	**.020** .5	**5,250**	**2,980**	**.440**
BL305	**.9843** 25	**2.4409** 62	**.6693** 17	**.043** 1.1	**.020** .5	**6,050**	**3,500**	**.568**
BL3/28	**1.1024** 28	**2.6772** 68	**.7087** 18	**.043** 1.1	**.020** .5	**7,600**	**4,500**	**.720**
BL306	**1.1811** 30	**2.8346** 72	**.7480** 19	**.043** 1.1	**.020** .5	**7,400**	**4,650**	**.858**
BL3/32	**1.2598** 32	**2.9528** 75	**.7874** 20	**.043** 1.1	**.020** .5	**8,300**	**5,250**	**.960**
BL307	**1.3780** 35	**3.1496** 80	**.8268** 21	**.059** 1.5	**.020** .5	**9,800**	**6,450**	**1.10**
BL308	**1.5748** 40	**3.5433** 90	**.9055** 23	**.059** 1.5	**.020** .5	**12,300**	**8,050**	**1.50**
BL309	**1.7717** 45	**3.9370** 100	**.9843** 25	**.059** 1.5	**.020** .5	**14,700**	**9,900**	**2.10**
BL310	**1.9685** 50	**4.3307** 110	**1.0630** 27	**.079** 2.0	**.020** .5	**17,200**	**11,800**	**2.68**
BL311	**2.1654** 55	**4.7244** 120	**1.1417** 29	**.079** 2.0	**.020** .5	**21,100**	**15,200**	**3.41**
BL312	**2.3622** 60	**5.1181** 130	**1.2205** 31	**.079** 2.0	**.020** .5	**24,100**	**17,600**	**4.22**
BL313	**2.5591** 65	**5.5118** 140	**1.2992** 33	**.079** 2.0	**.020** .5	**27,300**	**20,200**	**5.19**
BL314	**2.7559** 70	**5.9055** 150	**1.3780** 35	**.079** 2.0	**.020** .5	**30,500**	**23,000**	**6.49**
BL315	**2.9528** 75	**6.2992** 160	**1.4567** 37	**.079** 2.0	**.020** .5	**33,500**	**26,000**	**7.92**
BL316	**3.1496** 80	**6.6929** 170	**1.5354** 39	**.079** 2.0	**.020** .5	**36,000**	**29,200**	**8.69**
BL317	**3.3465** 85	**7.0866** 180	**1.6142** 41	**.118** 3.0	**.020** .5	**39,000**	**32,500**	**10.3**
BL318	**3.5433** 90	**7.4803** 190	**1.6929** 43	**.118** 3.0	**.020** .5	**42,000**	**36,000**	**13.0**
BL319	**3.7402** 95	**7.8740** 200	**1.7717** 45	**.118** 3.0	**.020** .5	**45,000**	**40,000**	**15.0**
BL320	**3.9370** 100	**8.4646** 215	**1.8504** 47	**.118** 3.0	**—** —	**51,000**	**47,500**	**18.3**
BL321	**4.1339** 105	**8.8583** 225	**1.9291** 49	**.118** 3.0	**—** —	**54,000**	**52,000**	**20.8**
BL322	**4.3307** 110	**9.4488** 240	**1.9685** 50	**.118** 3.0	**—** —	**60,500**	**60,500**	**24.3**

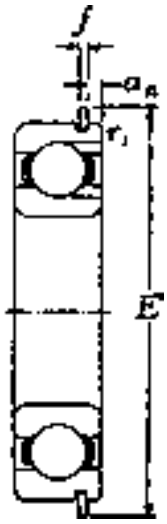
SINGLE ROW RADIAL BALL BEARINGS

Units: **INCHES**
Millimeters

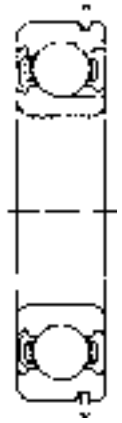
NTN
SERIES BL3

Maximum Type

Snap Ring Dimensions			Limiting Speed (RPM)		Bore Diameter No.
a_n (max)	E (max)	f	Grease	Oil	
.097	2.28	.042	13,000	15,000	04
2.46	57.9	1.07			
.097	2.43	.042	12,000	14,000	/22
2.46	61.7	1.07			
.129	2.67	.065	11,000	12,000	05
3.28	67.7	1.65			
.129	2.94	.065	9,600	11,000	/28
3.28	74.6	1.65			
.129	3.09	.065	9,000	11,000	06
3.28	78.6	1.65			
.129	3.21	.065	8,600	10,000	/32
3.28	81.6	1.65			
.129	3.41	.065	7,900	9,300	07
3.28	86.6	1.65			
.129	3.80	.095	7,000	8,200	08
3.28	96.5	2.41			
.129	4.19	.095	6,300	7,400	09
3.28	106.5	2.41			
.129	4.59	.095	5,700	6,700	10
3.28	116.6	2.41			
.160	5.11	.109	5,200	6,100	11
4.06	129.7	2.77			
.160	5.50	.109	4,800	5,700	12
4.06	139.7	2.77			
.193	5.89	.109	4,400	5,200	13
4.90	149.7	2.77			
.193	6.29	.109	4,100	4,800	14
4.90	159.7	2.77			
.193	6.68	.109	3,800	4,500	15
4.90	169.7	2.77			
.224	7.20	.120	3,600	4,200	16
5.69	182.9	3.05			
.224	7.59	.120	3,400	4,000	17
5.69	192.9	3.05			
.224	7.99	.120	3,200	3,800	18
5.69	202.9	3.05			
.224	8.38	.120	3,000	3,500	19
5.69	212.9	3.05			
—	—	—	2,900	3,400	20
—	—	—			
—	—	—	2,700	3,200	21
—	—	—			
—	—	—	2,600	3,100	22
—	—	—			



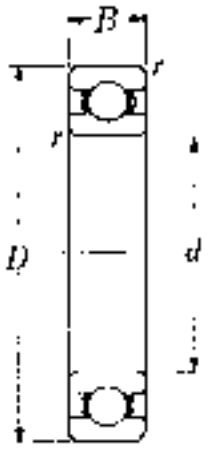
With Snap Ring
NR



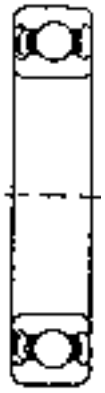
Single Shielded With Snap Ring
ZNR

SERIES TMB2

Units: **INCHES**
Millimeters



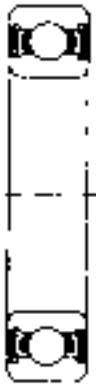
Open Type
TMB2



Single
Shielded
TMB2Z

Double
Shielded
TMB2ZZ

Double
Sealed
TMB2LLU
(Contact Type)



Double
Sealed
TMB2LLB
(Non-Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

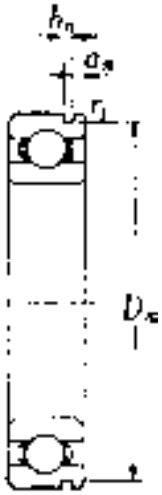
Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
TMB200	**.3937**	**1.1811**	**.3543**	**.024**	**.020**	**1,150**	**540**	**.071**
	10	30	9	.6	.5			
TMB204	**.7874**	**1.8504**	**.5512**	**.039**	**.020**	**2,890**	**1,500**	**.234**
	20	47	14	1	.5			
TMB2/22	**.8661**	**1.9685**	**.5512**	**.039**	**.020**	**2,900**	**1,530**	**.258**
	22	50	14	1	.5			
TMB2/28	**1.1024**	**2.2835**	**.6299**	**.039**	**.020**	**4,000**	**2,190**	**.377**
	28	58	16	1	.5			
TMB206	**1.1811**	**2.4409**	**.6299**	**.039**	**.020**	**4,400**	**2,540**	**.439**
	30	62	16	1	.5			
TMB2/32	**1.2598**	**2.5591**	**.6693**	**.039**	**.020**	**4,650**	**2,610**	**.498**
	32	65	17	1	.5			
TMB207	**1.3780**	**2.8346**	**.6693**	**.043**	**.020**	**5,750**	**3,450**	**.635**
	35	72	17	1.1	.5			
TMB208	**1.5748**	**3.1496**	**.7087**	**.043**	**.020**	**6,550**	**4,000**	**.807**
	40	80	18	1.1	.5			
TMB209	**1.7717**	**3.3465**	**.7480**	**.043**	**.020**	**7,350**	**4,600**	**.897**
	45	85	19	1.1	.5			
TMB210	**1.9685**	**3.5433**	**.7874**	**.043**	**.020**	**7,900**	**5,200**	**1.02**
	50	90	20	1.1	.5			
TMB211	**2.1654**	**3.9370**	**.8268**	**.059**	**.020**	**9,750**	**6,550**	**1.34**
	55	100	21	1.5	.5			
TMB212	**2.3622**	**4.3307**	**.8661**	**.059**	**.020**	**11,800**	**8,150**	**1.73**
	60	110	22	1.5	.5			
TMB213	**2.5591**	**4.7244**	**.9055**	**.059**	**.020**	**12,900**	**9,000**	**2.18**
	65	120	23	1.5	.5			
TMB214	**2.7559**	**4.9213**	**.9449**	**.059**	**.020**	**14,000**	**9,900**	**2.36**
	70	125	24	1.5	.5			
TMB215	**2.9528**	**5.1181**	**.9843**	**.059**	**.020**	**14,900**	**11,100**	**2.60**
	75	130	25	1.5	.5			
TMB216	**3.1496**	**5.5118**	**1.0236**	**.079**	**.020**	**16,500**	**11,900**	**3.09**
	80	140	26	2.0	.5			
TMB217	**3.3465**	**5.9055**	**1.1024**	**.079**	**.020**	**18,700**	**14,300**	**3.95**
	85	150	28	2.0	.5			
TMB218	**3.5433**	**6.2992**	**1.1811**	**.079**	**.020**	**21,600**	**16,100**	**4.74**
	90	160	30	2.0	.5			
TMB219	**3.7402**	**6.6929**	**1.2598**	**.079**	**.020**	**24,500**	**18,400**	**5.78**
	95	170	32	2.0	.5			
TMB220	**3.9370**	**7.0866**	**1.3386**	**.079**	**.020**	**27,500**	**20,900**	**6.92**
	100	180	34	2.0	.5			

SINGLE ROW RADIAL BALL BEARINGS

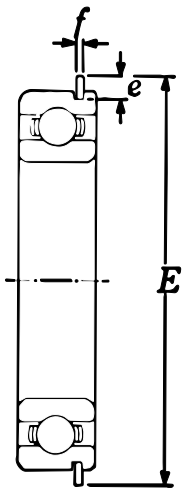
Units: **INCHES**
Millimeters

SERIES TMB2

Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f	e	Grease	Oil	LLU	
1.109	**.081**	**.065**	**1.37**	**.042**	**.125**	**25,000**	**30,000**	**18,000**	**00**
28.17	2.06	1.65	34.7	1.07	3.17				
1.756	**.097**	**.065**	**2.07**	**.042**	**.156**	**16,000**	**18,000**	**10,000**	**04**
44.60	2.46	1.65	52.7	1.07	3.96				
1.874	**.097**	**.065**	**2.19**	**.042**	**.156**	**14,000**	**17,000**	**9,700**	**/22**
47.60	2.46	1.65	55.7	1.07	3.96				
2.189	**.097**	**.065**	**2.51**	**.042**	**.156**	**12,000**	**14,000**	**8,100**	**/28**
55.60	2.46	1.65	63.7	1.07	3.96				
2.347	**.129**	**.087**	**2.67**	**.065**	**.156**	**11,000**	**13,000**	**7,300**	**06**
59.61	3.28	2.21	67.7	1.65	3.96				
2.465	**.129**	**.087**	**2.78**	**.065**	**.156**	**11,000**	**12,000**	**7,100**	**/32**
62.61	3.28	2.21	70.7	1.65	3.96				
2.709	**.129**	**.087**	**3.09**	**.065**	**.188**	**9,800**	**11,000**	**6,300**	**07**
68.81	3.28	2.21	78.6	1.65	4.77				
3.024	**.129**	**.087**	**3.41**	**.065**	**.188**	**8,700**	**10,000**	**5,600**	**08**
76.81	3.28	2.21	86.6	1.65	4.77				
3.221	**.129**	**.087**	**3.61**	**.065**	**.188**	**7,800**	**9,200**	**5,200**	**09**
81.81	3.28	2.21	91.6	1.65	4.77				
3.417	**.129**	**.118**	**3.80**	**.095**	**.188**	**7,100**	**8,300**	**4,700**	**10**
86.79	3.28	3.00	96.5	2.41	4.77				
3.811	**.129**	**.118**	**4.19**	**.095**	**.188**	**6,400**	**7,600**	**4,300**	**11**
96.80	3.28	3.00	106.5	2.41	4.77				
4.205	**.129**	**.118**	**4.59**	**.095**	**.188**	**6,000**	**7,000**	**3,800**	**12**
106.81	3.28	3.00	116.6	2.41	4.77				
4.536	**.160**	**.134**	**5.11**	**.109**	**.281**	**5,500**	**6,500**	**3,600**	**13**
115.21	4.06	3.40	129.7	2.77	7.13				
4.733	**.160**	**.134**	**5.30**	**.109**	**.281**	**5,100**	**6,000**	**3,400**	**14**
120.22	4.06	3.40	134.7	2.77	7.13				
4.930	**.160**	**.134**	**5.50**	**.109**	**.281**	**4,800**	**5,600**	**3,200**	**15**
125.22	4.06	3.40	139.7	2.77	7.13				
5.324	**.193**	**.134**	**5.89**	**.109**	**.281**	**4,500**	**5,300**	**3,000**	**16**
135.23	4.90	3.40	149.7	2.77	7.13				
5.718	**.193**	**.134**	**6.29**	**.109**	**.281**	**4,200**	**5,000**	**2,800**	**17**
145.24	4.90	3.40	159.7	2.77	7.13				
6.111	**.193**	**.134**	**6.68**	**.109**	**.281**	**4,000**	**4,700**	**2,600**	**18**
155.22	4.90	3.40	169.7	2.77	7.13				
6.443	**.224**	**.150**	**7.20**	**.120**	**.375**	**3,700**	**4,400**	**2,500**	**19**
163.65	5.69	3.81	182.9	3.05	9.52				
6.837	**.224**	**.150**	**7.59**	**.120**	**.375**	**3,500**	**4,200**	**2,300**	**20**
173.66	5.69	3.81	192.9	3.05	9.52				



With Snap Ring Groove TMB2N

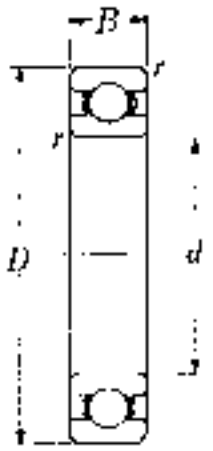


With Snap Ring TMB2NR

Single Shielded With Snap Ring TMB2ZNR

SERIES TMB2

Units: **INCHES**
Millimeters

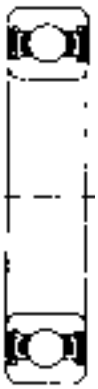


Open Type
TMB2

Single
Shielded
TMB2Z

Double
Shielded
TMB2ZZ

Double
Sealed
TMB2LLU
(Contact Type)



Double
Sealed
TMB2LLB
(Non-Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

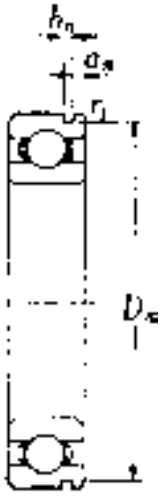
Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
TMB221	**4.1339**	**7.4803**	**1.4173**	**.083**	**.020**	**29,900**	**23,500**	**8.16**
	105	190	36	2.1	.5			
TMB222	**4.3307**	**7.8740**	**1.4961**	**.083**	**.020**	**32,500**	**26,300**	**9.61**
	110	200	38	2.1	.5			
TMB224	**4.7244**	**8.4646**	**1.5748**	**.083**	**—**	**35,000**	**29,500**	**11.4**
	120	215	40	2.1	—			
TMB226	**5.1181**	**9.0551**	**1.5748**	**.118**	**—**	**37,500**	**33,000**	**12.8**
	130	230	40	3.0	—			
TMB228	**5.5118**	**9.8425**	**1.6535**	**.118**	**—**	**37,500**	**33,500**	**16.5**
	140	250	42	3.0	—			
TMB230	**5.9055**	**10.6299**	**1.7717**	**.118**	**—**	**39,500**	**37,500**	**20.7**
	150	270	45	—	—			
TMB232	**6.2992**	**11.4173**	**1.8898**	**.118**	**—**	**41,500**	**42,000**	**31.5**
	160	290	48	—	—			
TMB234	**6.6929**	**12.2047**	**2.0472**	**.197**	**—**	**47,500**	**50,000**	**38.6**
	170	310	52	4.0	—			
TMB236	**7.0866**	**12.5984**	**2.0472**	**.197**	**—**	**51,000**	**54,000**	**40.3**
	180	320	52	4.0	—			
TMB238	**7.4803**	**13.3858**	**2.1654**	**.197**	**—**	**57,500**	**63,500**	**50.7**
	190	340	55	4.0	—			
TMB240	**7.8740**	**14.1732**	**2.2835**	**.197**	**—**	**60,800**	**70,000**	**62.2**
	200	360	58	4.0	—			
TMB244	**8.6614**	**15.7480**	**2.5590**	**.197**	**—**	**67,000**	**81,500**	**66.6**
	220	400	65	4.0	—			

SINGLE ROW RADIAL BALL BEARINGS

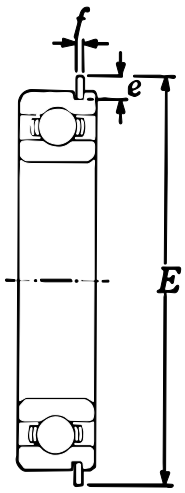
Units: **INCHES**
Millimeters

SERIES TMB2

Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f (max)	e	Grease	Oil	LU, LLU	
7.230 183.64	**.224** 5.69	**.150** 3.81	**7.99** 202.9	**.120** 3.05	**.375** 9.52	**3,400**	**4,000**	**2,300**	**21**
7.624 193.65	**.224** 5.69	**.150** 3.81	**8.38** 212.9	**.120** 3.05	**.375** 9.52	**3,200**	**3,800**	**2,200**	**22**
—	—	—	—	—	—	**2,900**	**3,400**	**2,000**	**24**
—	—	—	—	—	—	**2,300**	**2,700**	—	**26**
—	—	—	—	—	—	**2,100**	**2,500**	—	**28**
—	—	—	—	—	—	**2,000**	**2,400**	—	**30**
—	—	—	—	—	—	**1,900**	**2,200**	—	**32**
—	—	—	—	—	—	**1,800**	**2,100**	—	**34**
—	—	—	—	—	—	**1,700**	**1,800**	—	**36**
—	—	—	—	—	—	**1,800**	**2,100**	—	**38**
—	—	—	—	—	—	**1,700**	**2,000**	—	**40**
—	—	—	—	—	—	**1,500**	**1,800**	—	**44**



With Snap Ring Groove TMB2N

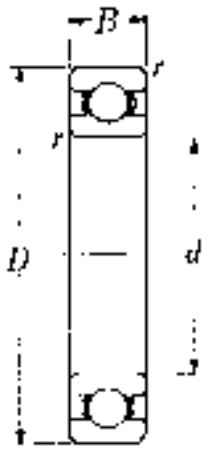


With Snap Ring TMB2NR

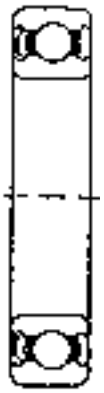
Single Shielded With Snap Ring TMB2ZNR

SERIES TMB3

Units: **INCHES**
Millimeters



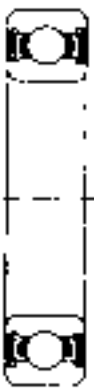
Open Type
TMB3



Single
Shielded
TMB3Z

Double
Shielded
TMB3ZZ

Double
Sealed
TMB3LLU
(Contact Type)



Double
Sealed
TMB3LLB
(Non-Contact Type)

SINGLE ROW RADIAL BALL BEARINGS

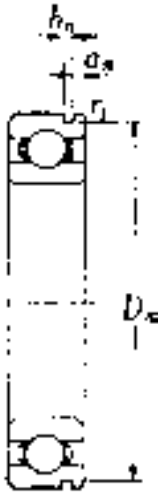
Bearing No.	Bore d	O.D. D	Width B	Fillet Radii r	Fillet Radii r_1	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_0	Weight (lbs)
TMB300	**.3937**	**1.3780**	**.4331**	**.024**	**.020**	**1,840**	**785**	**.117**
	10	35	11	.6	.5			
TMB301	**.4724**	**1.4567**	**.4724**	**.039**	**.020**	**2,180**	**940**	**.132**
	12	37	12	1.0	.5			
TMB302	**.5906**	**1.6535**	**.5118**	**.039**	**.020**	**2,570**	**1,220**	**.181**
	15	42	13	1.0	.5			
TMB303	**.6693**	**1.8504**	**.5512**	**.039**	**.020**	**3,050**	**1,470**	**.254**
	17	47	14	1.0	.5			
TMB304	**.7874**	**2.0472**	**.5906**	**.043**	**.020**	**3,600**	**1,770**	**.317**
	20	52	15	1.1	.5			
TMB3/22	**.8661**	**2.2047**	**.6299**	**—**	**.020**	**4,150**	**2,080**	**.388**
	22	56	16	—	.5			
TMB305	**.9843**	**2.4409**	**.6693**	**.043**	**.020**	**4,750**	**2,460**	**.511**
	25	62	17	1.1	.5			
TMB3/28	**1.1024**	**2.6772**	**.7087**	**.043**	**.020**	**6,000**	**3,150**	**.633**
	28	68	18	1.1	.5			
TMB306	**1.1811**	**2.8346**	**.7480**	**.043**	**.020**	**6,000**	**3,400**	**.763**
	30	72	19	1.1	.5			
TMB3/32	**1.2598**	**2.9528**	**.7874**	**.043**	**.020**	**6,700**	**3,800**	**.842**
	32	75	20	1.1	.5			
TMB307	**1.3780**	**3.1496**	**.8268**	**.059**	**.020**	**7,500**	**4,300**	**1.01**
	35	80	21	1.5	.5			
TMB308	**1.5748**	**3.5433**	**.9055**	**.059**	**.020**	**9,150**	**5,400**	**1.40**
	40	90	23	1.5	.5			
TMB309	**1.7717**	**3.9370**	**.9843**	**.059**	**.020**	**11,900**	**7,200**	**1.84**
	45	100	25	1.5	.5			
TMB310	**1.9685**	**4.3307**	**1.0630**	**.079**	**.020**	**13,900**	**8,600**	**2.36**
	50	110	27	2.0	.5			
TMB311	**2.1654**	**4.7244**	**1.1417**	**.079**	**.020**	**16,100**	**10,100**	**3.02**
	55	120	29	2.0	.5			
TMB312	**2.3622**	**5.1181**	**1.2205**	**.083**	**.020**	**18,400**	**11,700**	**3.75**
	60	130	31	2.1	.5			
TMB313	**2.5591**	**5.5118**	**1.2992**	**.089**	**.020**	**20,800**	**13,400**	**4.59**
	65	140	33	2.1	.5			
TMB314	**2.7559**	**5.9055**	**1.3780**	**.083**	**.020**	**23,400**	**15,300**	**5.56**
	70	150	35	2.1	.5			
TMB315	**2.9528**	**6.2992**	**1.4567**	**.083**	**.020**	**25,500**	**17,400**	**6.66**
	75	160	37	2.1	.5			
TMB316	**3.1496**	**6.6929**	**1.5354**	**.083**	**.020**	**27,600**	**19,500**	**7.91**
	80	170	39	2.1	.5			
TMB317	**3.3465**	**7.0866**	**1.6142**	**.118**	**.020**	**29,800**	**21,800**	**9.33**
	85	180	41	3.0	.5			
TMB318	**3.5433**	**7.4803**	**1.6929**	**.118**	**.020**	**32,000**	**24,100**	**10.8**
	90	190	43	3.0	.5			
TMB319	**3.7402**	**7.8740**	**1.7717**	**.118**	**.020**	**34,500**	**26,600**	**12.5**
	95	200	45	3.0	.5			
TMB320	**3.9370**	**8.4646**	**1.8504**	**.118**	**—**	**39,000**	**31,500**	**15.4**
	100	215	47	3.0	—			
TMB321	**4.1339**	**8.8583**	**1.9291**	**.118**	**—**	**41,500**	**34,500**	**17.7**
	105	225	49	3.0	—			
TMB322	**4.3307**	**9.4488**	**1.9685**	**.118**	**—**	**46,000**	**40,500**	**21.0**
	110	240	50	3.0	—			
TMB324	**4.7244**	**10.2362**	**2.1654**	**.118**	**—**	**46,500**	**41,500**	**27.3**
	120	260	55	3.0	—			
TMB326	**5.1181**	**11.0236**	**2.2835**	**.157**	**—**	**51,500**	**48,000**	**33.3**
	130	280	58	4.0	—			
TMB328	**5.5118**	**11.8110**	**2.4409**	**.157**	**—**	**57,000**	**55,500**	**40.8**
	140	300	62	4.0	—			
TMB330	**5.9055**	**12.5984**	**2.5591**	**.157**	**—**	**61,500**	**63,500**	**57.8**
	150	320	65	4.0	—			
TMB332	**6.2992**	**13.3858**	**2.6772**	**.157**	**—**	**62,500**	**64,500**	**63.9**
	160	340	68	4.0	—			
TMB334	**6.6929**	**14.1732**	**2.8346**	**.157**	**—**	**73,500**	**80,000**	**76.1**
	170	360	72	4.0	—			
TMB336	**7.0866**	**14.9606**	**2.9528**	**.157**	**—**	**79,500**	**91,500**	**93.5**
	180	380	75	4.0	—			
TMB338	**7.4803**	**15.7480**	**3.0709**	**.197**	**—**	**79,500**	**93,000**	**108**
	190	400	78	5.0	—			
TMB340	**7.8740**	**16.5354**	**3.1496**	**.197**	**—**	**92,000**	**113,000**	**122**
	200	420	80	5.0	—			
TMB344	**8.6614**	**18.1102**	**3.4650**	**.197**	**—**	**92,500**	**116,000**	**134**
	220	460	88	5.0	—			

SINGLE ROW RADIAL BALL BEARINGS

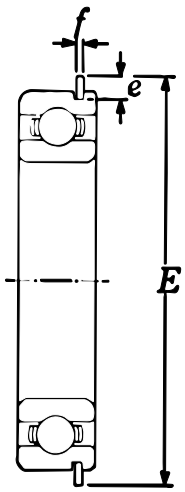
Units: **INCHES**
Millimeters

SERIES TMB3

Snap Ring Groove Dimensions			Snap Ring Dimensions			Limiting Speed (RPM)			Bore Diameter No.
D_n (max)	a_n (max)	b_n (min)	E (max)	f (max)	e	Grease	Oil	LU, LLU	
1.306	**.081**	**.065**	**1.56**	**.042**	**.125**	**23,000**	**27,000**	**16,000**	**00**
33.17	2.06	1.65	39.7	1.07	3.18				
1.369	**.081**	**.065**	**1.63**	**.042**	**.125**	**20,000**	**24,000**	**15,000**	**01**
34.77	2.06	1.65	41.3	1.07	3.18				
1.565	**.081**	**.065**	**1.82**	**.042**	**.125**	**17,000**	**21,000**	**12,000**	**02**
39.75	2.06	1.65	46.3	1.07	3.18				
1.756	**.097**	**.065**	**2.07**	**.042**	**.156**	**16,000**	**19,000**	**11,000**	**03**
44.60	2.46	1.65	52.7	1.07	3.96				
1.958	**.097**	**.065**	**2.28**	**.042**	**.156**	**14,000**	**17,000**	**10,000**	**04**
49.73	2.46	1.65	57.9	1.07	3.96				
2.110	**.097**	**.065**	**2.43**	**.042**	**.156**	**13,000**	**15,000**	**9,200**	**/22**
53.59	2.46	1.65	61.7	1.07	3.96				
2.347	**.129**	**.087**	**2.67**	**.065**	**.156**	**12,000**	**14,000**	**8,100**	**05**
59.61	3.28	2.20	67.7	1.65	3.96				
2.552	**.129**	**.087**	**2.94**	**.065**	**.188**	**11,000**	**13,000**	**7,400**	**/28**
64.82	3.28	2.20	74.6	1.65	4.77				
2.709	**.129**	**.087**	**3.09**	**.065**	**.188**	**10,000**	**12,000**	**6,600**	**06**
68.81	3.28	2.20	78.6	1.65	4.77				
2.828	**.129**	**.087**	**3.21**	**.065**	**.188**	**9,500**	**11,000**	**6,500**	**/32**
71.83	3.28	2.20	81.6	1.65	4.77				
3.024	**.129**	**.087**	**3.41**	**.065**	**.188**	**8,800**	**10,000**	**6,000**	**07**
76.81	3.28	2.20	86.6	1.65	4.77				
3.417	**.129**	**.118**	**3.80**	**.095**	**.188**	**7,800**	**9,200**	**5,300**	**08**
86.79	3.28	3.00	96.5	2.41	4.77				
3.811	**.129**	**.118**	**4.19**	**.095**	**.188**	**7,000**	**8,200**	**4,700**	**09**
96.80	3.28	3.00	106.5	2.41	4.77				
4.205	**.129**	**.118**	**4.59**	**.095**	**.188**	**6,400**	**7,500**	**4,200**	**10**
106.81	3.28	3.00	116.6	2.41	4.77				
4.536	**.160**	**.134**	**5.11**	**.109**	**.281**	**5,800**	**6,800**	**3,900**	**11**
115.21	4.06	3.40	129.7	2.77	7.13				
4.930	**.160**	**.134**	**5.50**	**.109**	**.281**	**5,400**	**6,300**	**3,600**	**12**
125.22	4.06	3.40	139.7	2.77	7.13				
5.324	**.193**	**.134**	**5.89**	**.109**	**.281**	**4,900**	**5,800**	**3,300**	**13**
135.23	4.90	3.40	149.7	2.77	7.13				
5.718	**.193**	**.134**	**6.29**	**.109**	**.281**	**4,600**	**5,400**	**3,100**	**14**
145.24	4.90	3.40	159.7	2.77	7.13				
6.111	**.193**	**.134**	**6.68**	**.109**	**.281**	**4,300**	**5,000**	**2,900**	**15**
155.22	4.90	3.40	169.7	2.77	7.13				
6.443	**.224**	**.150**	**7.20**	**.120**	**.375**	**4,000**	**4,700**	**2,700**	**16**
163.65	5.69	3.80	182.9	3.05	9.52				
6.837	**.224**	**.150**	**7.59**	**.120**	**.375**	**3,800**	**4,500**	**2,600**	**17**
173.66	5.69	3.80	192.9	3.05	9.52				
7.230	**.224**	**.150**	**7.99**	**.120**	**.375**	**3,600**	**4,200**	**2,400**	**18**
183.64	5.69	3.80	202.9	3.05	9.52				
7.624	**.224**	**.150**	**8.38**	**.120**	**.375**	**3,300**	**3,900**	**2,300**	**19**
193.65	5.69	3.80	212.9	3.05	9.52				
—	—	—	—	—	—	**3,200**	**3,700**	**2,200**	**20**
—	—	—	—	—	—	**3,000**	**3,600**	**2,100**	**21**
—	—	—	—	—	—	**2,900**	**3,400**	**1,900**	**22**
—	—	—	—	—	—	**2,600**	**3,100**	—	**24**
—	—	—	—	—	—	**2,400**	**2,800**	—	**26**
—	—	—	—	—	—	**2,200**	**2,600**	—	**28**
—	—	—	—	—	—	**2,100**	**2,400**	—	**30**
—	—	—	—	—	—	**1,900**	**2,300**	—	**32**
—	—	—	—	—	—	**1,800**	**2,100**	—	**34**
—	—	—	—	—	—	**1,700**	**2,000**	—	**36**
—	—	—	—	—	—	**1,600**	**1,900**	—	**38**
—	—	—	—	—	—	**1,500**	**1,800**	—	**40**
—	—	—	—	—	—	**1,400**	**1,600**	—	**44**



With Snap Ring Groove TMB3N

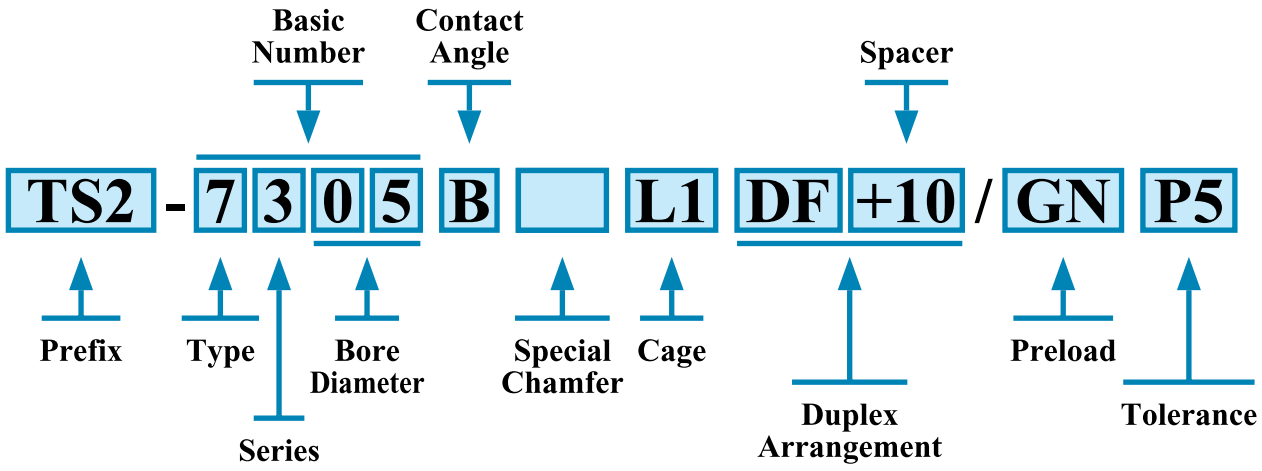


With Snap Ring TMB3NR

Single Shielded With Snap Ring TMB3ZNR

Notes

ANGULAR CONTACT BALL BEARING NUMBERING SYSTEM



1. PREFIX
   - TS2: Heat stabilization for up to 320°F (160°C)
   - TS3: Heat stabilization for up to 390°F (200°C)
   - TS4: Heat stabilization for up to 480°F (250°C)
   - 5S: Ceramic Rolling Elements

2. TYPE
   - 32,33: Double row angular contact ball bearings with filling slot
   - 52,53: Double row angular contact ball bearings without filling slot
   - 70,72,73: Angular contact ball bearings
   - BNT: High speed angular contact ball bearings
   - HSB: High speed angular contact ball bearings
   - SF: Special single row angular contact ball bearings
   - DE & DF: Special double row angular contact ball bearings

3. CONTACT ANGLE
   - No Symbol: Contact Angle 30˚
   - B: Contact angle 40˚
   - C: Contact angle 15˚

4. CHAMFER
   - Xn: Special chamfer, from 1 onward (X1, X2 . . .)

5. CAGE
   - No Symbol: Standard cage
   - J: Pressed steel cage
   - L1: Machined brass cage
   - T1: Phenolic cage
   - T2: Plastic cage, nylon or teflon

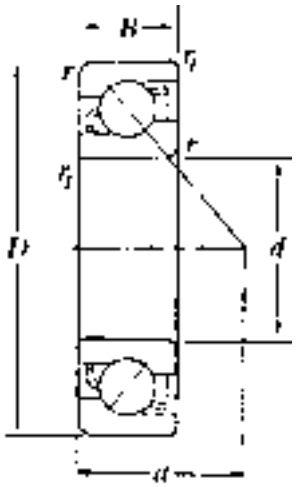
6. DUPLEX ARRANGEMENT
   - DB: Duplex pair, back to back mounting
   - DF: Duplex pair, face to face mounting
   - DT: Duplex pair, tandem mounting
   - G: Single bearings, flush ground universal mount for DB, DF and DT arrangement
   - GD2: Pair of universally mountable bearings
   - +A: Spacer (A is nominal width of spacer in mm)

7. PRELOAD
   - GL: Light preload
   - GN: Normal preload
   - GM: Medium preload
   - GH: Heavy preload
   - Gn: Special preload

8. TOLERANCE
   - P6: ISO class 6 (equivalent to ABEC 3)
   - P5: ISO class 5 (equivalent to ABEC 5)
   - P4: ISO class 4 (equivalent to ABEC 7)
   - PXn: Special Tolerance, from 1 onward (PX1, PX2 ...)

SERIES 72B

Units: **INCHES**
Millimeters



40°
Contact Angle
72B

SINGLE ROW ANGULAR CONTACT BALL BEARINGS

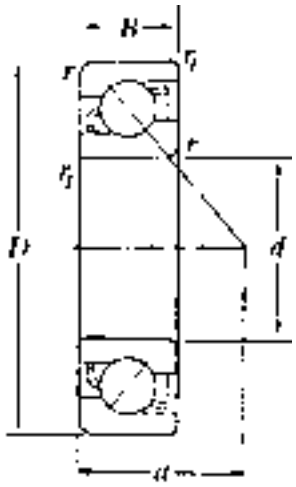
Bearing No.	Bore	O.D.	Width	Fillet Radius		Load Center	Basic Load Ratings (lbs)		Limiting Speeds (rpm)		Weight (lbs)	Limiting Speeds (rpm)	
							Dynamic	*Static*	Grease	Oil		Grease	Oil
	d	*D*	*B*	*r*	*r1*	*a*	*C*	*Co*				*Duplex: DB, DF, DT*	
7200B	0.3937	1.1811	0.3543	0.024	0.012	0.51	1,120	565	24,000	32,000	0.064	19,000	26,000
	10	30	9	0.6	0.3	13							
7201B	0.4724	1.2598	0.3937	0.024	0.012	0.55	1,480	750	21,000	28,000	0.079	17,000	23,000
	12	32	10	0.6	0.3	14							
7202B	0.5906	1.3780	0.4331	0.024	0.012	0.63	1,880	980	18,000	25,000	0.101	15,000	20,000
	15	35	11	0.6	0.3	16							
7203B	0.6693	1.5748	0.4724	0.024	0.012	0.72	2,480	1,370	17,000	22,000	0.146	13,000	18,000
	17	40	12	0.6	0.3	18							
7204B	0.7874	1.8504	0.5512	0.039	0.024	0.85	2,990	1,730	15,000	20,000	0.225	12,000	16,000
	20	47	14	1.0	0.6	21.5							
7205B	0.9843	2.0472	0.5906	0.039	0.024	0.94	3,300	2,120	12,000	16,000	0.284	10,000	13,000
	25	52	15	1.0	0.6	24							
7206B	1.1811	2.4409	0.6299	0.039	0.024	1.08	4,600	3,050	11,000	14,000	0.434	8,600	11,000
	30	62	16	1.0	0.6	27.5							
7207B	1.3780	2.8346	0.6693	0.043	0.024	1.22	6,100	4,150	9,300	12,000	0.633	7,500	10,000
	35	72	17	1.1	0.6	31							
7208B	1.5748	3.1496	0.7087	0.043	0.024	1.34	7,200	5,150	8,300	11,000	0.827	6,700	8,900
	40	80	18	1.1	0.6	34							
7209B	1.7717	3.3465	0.7480	0.043	0.024	1.46	8,100	5,900	7,400	9,900	0.904	6,000	8,000
	45	85	19	1.1	0.6	37							
7210B	1.9685	3.5433	0.7874	0.043	0.024	1.56	8,400	6,450	6,700	9,000	1.03	5,500	7,300
	50	90	20	1.1	0.6	39.5							
7211B	2.1654	3.9370	0.8268	0.059	0.039	1.69	10,400	8,100	6,100	8,200	1.35	5,000	6,600
	55	100	21	1.5	1.0	43							
7212B	2.3622	4.3307	0.8661	0.059	0.039	1.87	12,600	10,000	5,700	7,600	1.72	4,600	6,100
	60	110	22	1.5	1.0	47.5							
7213B	2.5591	4.7244	0.9055	0.059	0.039	1.99	14,300	11,800	5,200	7,000	2.16	4,200	5,600
	65	120	23	1.5	1.0	50.5							
7214B	2.7559	4.9213	0.9449	0.059	0.039	2.09	15,500	13,000	4,900	6,500	2.45	3,900	5,200
	70	125	24	1.5	1.0	53							
7215B	2.9528	5.1181	0.9843	0.059	0.039	2.20	16,000	14,000	4,500	6,000	2.62	3,700	4,900
	75	130	25	1.5	1.0	56							
7216B	3.1496	5.5118	1.0236	0.079	0.039	2.32	18,100	15,600	4,300	5,700	3.13	3,400	4,600
	80	140	26	2	1.0	59							
7217B	3.3465	5.9055	1.1024	0.079	0.039	2.50	20,200	18,100	4,000	5,300	4.01	3,200	4,300
	85	150	28	2	1.0	63.5							
7218B	3.5433	6.2992	1.1811	0.098	0.039	2.66	24,000	21,100	3,800	5,000	4.89	3,100	4,100
	90	160	30	2.5	1.0	67.5							
7219B	3.7402	6.6929	1.2598	0.083	0.059	2.81	27,200	24,200	3,500	4,700	6.00	2,900	3,800
	95	170	32	2.1	1.5	71.5							
7220B	3.9370	7.0866	1.3386	0.083	0.059	2.99	29,300	25,700	3,400	4,500	7.19	2,700	3,600
	100	180	34	2.1	1.5	76							
7221B	4.1339	7.4803	1.4173	0.083	0.059	3.15	32,000	29,000	3,200	4,300	8.53	2,600	3,500
	105	190	36	2.1	1.5	80							
7222B	4.3307	7.8740	1.4961	0.083	0.059	3.31	34,500	32,500	3,000	4,000	10.0	2,500	3,300
	110	200	38	2.1	1.5	84							
7224B	4.7244	8.4646	1.5748	0.083	0.059	3.56	37,000	36,500	2,800	3,700	13.8	2,300	3,000
	120	215	40	2.1	1.5	90.5							
7226B	5.1181	9.0551	1.5748	0.118	0.059	3.76	40,000	40,500	2,500	3,400	15.8	2,100	2,700
	130	230	40	3	1.5	95.5							
7228B	5.5118	9.8425	1.6535	0.118	0.059	4.06	41,000	44,000	2,300	3,100	19.4	1,900	2,500
	140	250	42	3	1.5	103							
7230B	5.9055	10.6299	1.7717	0.118	0.059	4.37	47,000	53,000	2,200	2,900	24.3	1,800	2,400
	150	270	45	3	1.5	111							
7232B	6.2992	11.4173	1.8898	0.118	0.059	4.65	53,500	62,500	2,000	2,700	30.2	1,600	2,200
	160	290	48	3	1.5	118							
7234B	6.6929	12.2047	2.0472	0.157	0.059	5.00	60,000	73,500	1,900	2,500	37.5	1,500	2,100
	170	310	52	4	1.5	127							
7236B	7.0866	12.5984	2.0472	0.157	0.059	5.16	62,000	78,500	1,800	2,400	39.0	1,400	1,900
	180	320	52	4	1.5	131							
7238B	7.4803	13.3858	2.1654	0.157	0.059	5.47	61,500	79,500	1,700	2,200	47.0	1,400	1,800
	190	340	55	4	1.5	139							
7240B	7.8740	14.1732	2.2835	0.157	0.059	5.75	68,500	91,500	1,600	2,100	55.8	1,300	1,700
	200	360	58	4	1.5	146							

SINGLE ROW ANGULAR CONTACT BALL BEARINGS

Units: **INCHES**
Millimeters

NTN
SERIES 73B

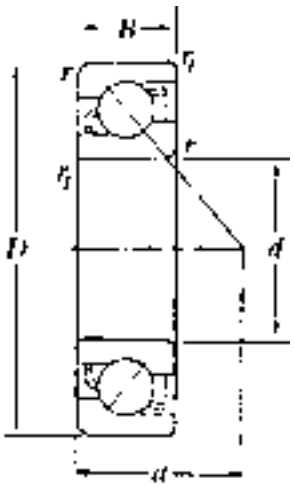
Bearing No.	Bore	O.D.	Width	Fillet Radius		Load Center	Basic Load Ratings (lbs)		Limiting Speeds (rpm)		Weight (lbs)	Limiting Speeds (rpm)	
							Dynamic	*Static*	Grease	Oil		Grease	Oil
	d	*D*	*B*	*r*	*r1*	*a*	*C*	*Co*				*Duplex: DB, DF, DT*	
7300B	0.3937	1.3780	0.4331	0.024	0.020	0.59	2,140	1,040	22,000	29,000	0.090	18,000	24,000
	10	35	11	0.6	0.3	15							
7301B	0.4724	1.4567	0.4724	0.039	0.024	0.6496	2,370	1,110	19,000	26,000	0.099	16,000	21,000
	12	37	12	1	0.6	16.5							
7302B	0.5906	1.6535	0.5118	0.039	0.024	0.7480	2,810	1,500	17,000	22,000	0.126	13,000	18,000
	15	42	13	1	0.6	19							
7303B	0.6693	1.8504	0.5512	0.039	0.024	0.81	3,350	1,800	15,000	20,000	0.240	12,000	16,000
	17	47	14	1	0.6	20.5							
7304B	0.7874	2.0472	0.5906	0.043	0.024	0.89	3,900	2,170	13,000	18,000	0.311	11,000	14,000
	20	52	15	1.1	0.6	22.5							
7305B	0.9843	2.4409	0.6693	0.043	0.024	1.06	5,500	3,300	11,000	15,000	0.516	9,100	12,000
	25	62	17	1.1	0.6	27							
7306B	1.1811	2.8346	0.7480	0.043	0.024	1.24	6,950	4,600	9,600	13,000	0.776	7,700	10,000
	30	72	19	1.1	0.6	31.5							
7307B	1.3780	3.1496	0.8268	0.059	0.039	1.36	8,250	5,450	8,400	11,000	1.03	6,800	9,000
	35	80	21	1.5	1	34.5							
7308B	1.5748	3.5433	0.9055	0.059	0.039	1.54	10,100	6,800	7,400	9,900	1.40	6,000	8,000
	40	90	23	1.5	1	39							
7309B	1.7717	3.9370	0.9843	0.059	0.039	1.69	13,100	9,050	6,600	8,900	1.88	5,400	7,200
	45	100	25	1.5	1	43							
7310B	1.9685	4.3307	1.0630	0.079	0.039	1.85	15,300	10,800	6,000	8,100	2.45	4,900	6,500
	50	110	27	2	1	47							
7311B	2.1654	4.7244	1.1417	0.079	0.039	2.05	17,700	12,800	5,500	7,300	3.13	4,500	5,900
	55	120	29	2	1	52							
7312B	2.3622	5.1181	1.2205	0.083	0.043	2.20	20,200	14,800	5,100	6,800	3.90	4,100	5,500
	60	130	31	2.1	1.1	56							
7313B	2.5591	5.5118	1.2992	0.083	0.043	2.34	22,900	17,000	4,700	6,300	4.72	3,800	5,100
	65	140	33	2.1	1.1	59.5							
7314B	2.7559	5.9055	1.3780	0.083	0.043	2.50	25,700	19,300	4,400	5,800	5.75	3,500	4,700
	70	150	35	2.1	1.1	63.5							
7315B	2.9528	6.2992	1.4567	0.083	0.043	2.68	28,000	21,900	4,100	5,400	6.90	3,300	4,400
	75	160	37	2.1	1.1	68							
7316B	3.1496	6.6929	1.5354	0.083	0.043	2.83	30,500	24,600	3,800	5,100	8.20	3,100	4,100
	80	170	39	2.1	1.1	72							
7317B	3.3465	7.0866	1.6142	0.118	0.043	2.99	32,500	27,400	3,600	4,800	9.77	2,900	3,900
	85	180	41	3	1.1	76							
7318B	3.5433	7.4803	1.6929	0.118	0.043	3.17	35,000	30,500	3,400	4,500	11.4	2,700	3,700
	90	190	43	3	1.1	80.5							
7319B	3.7402	7.8740	1.7717	0.118	0.043	3.33	37,500	33,500	3,200	4,200	13.2	2,600	3,400
	95	200	45	3	1.1	84.5							
7320B	3.9370	8.4646	1.8504	0.118	0.043	3.52	43,000	40,000	3,000	4,000	16.1	2,400	3,300
	100	215	47	3	1.1	89.5							
7321B	4.1339	8.8583	1.9291	0.118	0.043	3.68	45,500	43,500	2,900	3,800	18.4	2,300	3,100
	105	225	49	3	1.1	93.5							
7322B	4.3307	9.4488	1.9685	0.118	0.043	3.90	51,000	51,000	2,700	3,700	21.6	2,200	3,000
	110	240	50	3	1.1	99							
7324B	4.7244	10.2362	2.1654	0.157	0.043	4.21	50,500	52,000	2,500	3,300	32.4	2,000	2,700
	120	260	55	4	1.1	107							
7326B	5.1181	11.0236	2.2835	0.157	0.059	4.53	56,000	60,500	2,300	3,100	38.8	1,900	2,500
	130	280	58	4	1.5	115							
7328B	5.5118	11.8110	2.4409	0.157	0.059	4.84	62,000	69,500	2,100	2,800	47.4	1,700	2,300
	140	300	62	4	1.5	123							
7330B	5.9055	12.5984	2.5591	0.157	0.059	5.16	67,500	79,000	2,000	2,600	55.3	1,600	2,100
	150	320	65	4	1.5	131							
7332B	6.2992	13.3858	2.6772	0.157	0.059	5.47	71,000	87,000	1,800	2,400	65.7	1,500	2,000
	160	340	68	4	1.5	139							
7334B	6.6929	14.1732	2.8346	0.157	0.059	5.79	80,000	100,000	1,700	2,300	77.8	1,400	1,800
	170	360	72	4	1.5	147							
7336B	7.0866	14.9606	2.9528	0.157	0.059	6.10	84,000	110,000	1,600	2,100	90.2	1,300	1,700
	180	380	75	4	1.5	155							
7338B	7.4803	15.7480	3.0709	0.197	0.079	6.42	87,500	120,000	1,500	2,000	104	1,200	1,600
	190	400	78	5	2	163							
7340B	7.8740	16.5354	3.1496	0.197	0.079	6.69	92,000	125,000	1,400	1,900	117	1,200	1,500
	200	420	80	5	2	170							



40°
Contact Angle
73B

SERIES 74B

Units: **INCHES**
Millimeters



40°
Contact Angle
74B

SINGLE ROW ANGULAR CONTACT BALL BEARINGS

Bearing No.	Bore d	O.D. D	Width B	Fillet Radius r	Fillet Radius r_1	Load Center a	Basic Load Ratings (lbs) Dynamic C	Basic Load Ratings (lbs) Static C_o	Weight (lbs)
7404B	**.7874**	**2.8346**	**.7480**	**.043**	**.024**	**1.14**	**6,850**	**3,650**	**1.00**
	20	72	19	1.1	.6	29			
7406B	**1.1811**	**3.5433**	**.9843**	**.039**	**.024**	**1.46**	**9,100**	**5,450**	**1.83**
	30	90	25	1	.6	37			
7407B	**1.3780**	**3.9370**	**.9843**	**.039**	**.024**	**1.61**	**11,600**	**7,350**	**2.45**
	35	100	25	1	.6	41			
7408B	**1.5748**	**4.3307**	**1.0630**	**.059**	**.024**	**1.77**	**13,600**	**8,500**	**3.09**
	40	110	27	1.5	.6	45			
7409B	**1.7717**	**4.7244**	**1.1417**	**.059**	**.024**	**1.95**	**16,800**	**11,100**	**3.94**
	45	120	29	1.5	.6	49.5			
7410B	**1.9685**	**5.1181**	**1.2205**	**.083**	**.043**	**2.11**	**19,100**	**12,800**	**4.87**
	50	130	31	2.1	1.1	53.5			
7411B	**2.1654**	**5.5118**	**1.2992**	**.083**	**.043**	**2.26**	**20,300**	**13,900**	**6.02**
	55	140	33	2.1	1.1	57.5			
7412B	**2.3622**	**5.9055**	**1.3780**	**.083**	**.043**	**2.44**	**22,800**	**15,900**	**7.25**
	60	150	35	2.1	1.1	62			
7413B	**2.5591**	**6.2992**	**1.4567**	**.083**	**.043**	**2.60**	**26,500**	**19,800**	**8.77**
	65	160	37	2.1	1.1	66			
7414B	**2.7559**	**7.0866**	**1.6535**	**.098**	**.043**	**2.89**	**31,000**	**24,900**	**12.7**
	70	180	42	2.5	1.1	73.5			
7415B	**2.9528**	**7.4803**	**1.7717**	**.098**	**.043**	**3.09**	**33,500**	**27,000**	**15.0**
	75	190	45	2.5	1.1	78.5			
7416B	**3.1496**	**7.8740**	**1.8898**	**.098**	**.043**	**3.27**	**35,500**	**29,800**	**17.5**
	80	200	48	2.5	1.1	83			
7417B	**3.3465**	**8.2677**	**2.0472**	**.118**	**.039**	**3.46**	**39,500**	**33,500**	**20.4**
	85	210	52	3	1	88			
7418B	**3.5433**	**8.8583**	**2.1260**	**.118**	**.039**	**3.68**	**45,000**	**44,000**	**24.9**
	90	225	54	3	1	93.5			