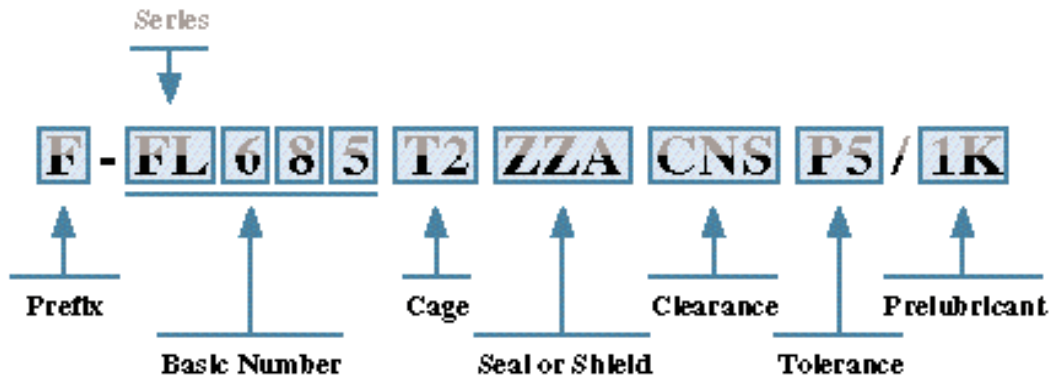




Open Type	Single Shield Type	Double Shield Type	Open Type	Flanged Outer Ring Single Shield Type	Double Shield Type
67 68 69 60 62 63 R(A)	W(A)67ZA W68Z(A) (W)69Z(A) (W)60Z(A) 62Z 63Z R(A)-Z(A)	W(A)67ZZA W68ZZ(A) (W)69ZZ(A) (W)60ZZ(A) 62ZZ 63ZZ R(A)-ZZ(A)	FL67 FL68 FL69 FL60 FL62 FL63 FLR(A)	FL(A)W(A)67ZA FLW68Z(A) FL(W)69Z(A) FL(W)60Z(A) FL62Z FL63Z FLR(A)-Z(A)	FL(A)W(A)67ZZA FLW68ZZ(A) FL(W)69ZZ(A) FL(W)60ZZ(A) FL62ZZ FL63ZZ FLR(A)-ZZ(A)
RW	R(A)W-ZA	R(A)W-ZZA	FLRW	FLR(A)W-ZA	FLR(A)W-ZZA



1. PREFIX

No Symbol: High carbon chrome bearing steel (equivalent to AISI E52100)
 F: Martensitic stainless steel (equivalent to AISI 440C)
 N: Beryllium copper

2. SERIES

67, 68: Metric series
 69, 60: Metric series
 62, 63: Metric series
 R: Inch series
 W: Wider than standard width (sealed type)
 WA: Non-standard sizes
 RA: Wider than standard width of inch series (open and sealed types)
 FL: Flanged outer ring
 FLA: Flanged outer ring, provided non-standard flange dimensions

3. CAGE

No Symbol: Pressed steel cage
 J1: Pressed stainless steel cage
 T1: Phenolic resin cage
 T2: Nylon cage
 T3: Rulon machined cage
 V: Cageless type

4. SEAL OR SHIELD

No symbol: Open Type
 Z, ZZ: Steel shield(s)
 ZA, ZZA: Removable steel shield(s)
 ZA1, ZZA1: Removable stainless steel shield(s)
 Z1, ZZ1: Stainless steel shield(s)
 LB, LLB: Non-contact type rubber seal(s)
 LF, LLF: Non-contact rubber seal(s)
 LU, LLU: Contact type rubber seal(s)
 SA, SSA: Non-contact nylon seal(s)

5. INTERNAL CLEARANCE

No Symbol: Normal clearance
 C2: Clearance less than normal
 C3: Clearance greater than normal
 C4: Clearance greater than C3
 C2S: Low group of C2 clearance
 CNS: Low group of normal clearance
 CNM: Medium group of normal clearance
 CNL: High group of normal clearance
 C3S: Low group of C3 clearance
 C3M: Medium group of C3 clearance
 C3L: High group of C3

6. TOLERANCE

No Symbol: ISO class 0 (equivalent to ABEC 1)
 P6: ISO class 6 (equivalent to ABEC 3)
 P5: ISO class 5 (equivalent to ABEC 5)
 P4: ISO class 4 (equivalent to ABEC 7)
 P2: ISO class 2 (equivalent to ABEC 9)
 P5A: ISO class 5A
 P4A: ISO class 4A
 PS5: NTN PS class 5
 PS4: NTN PS class 4
 PX1: Special tolerance

7. PRELUBRICANT





1K: Kyodo Yushi Multemp PS No. 2
 2A: Shell Alvania 2
 1E: Exxon Andok C
 3E: Exxon Beacon 325
 6K: Klüber Isoflex Super LDS18
 5C: Chevron SRI2
 5K: Kyodo Yushi Multemp SRL
 1W: Anderson Oil Winsor Lube L245X (oil)

10. SPECIAL SPECIFICATION

V1...Vn



Units: INCHES

MICRO BEARING (INCH SERIES)															
OPEN TYPE					DOUBLE SHIELD TYPE										
															
					Flanged Outer Ring						Flanged Outer Ring				
Bearing No.	Boundary Dimensions				Bearing No.	Flange Dimensions		Bearing No.	Width	Bearing No.	Flange Dimensions		Basic Load Ratings (lbs)		
	Bore	O.D.	Width	Minimum Chamfer		O.D.	Width				O.D.	Width	Dynamic C	Static C ₀	
R01	.0400	.1250	.0469	.003	—	—	—	—	—	—	—	—	22	6	
R0	.0469	.1562	.0625	.005	FLR0	.203	.013	RA0ZZA	.0937	FLRA0ZZA	.203	.031	36	10	
R1	.0550	.1875	.0781	.005	FLR1	.234	.023	RA1ZZA	.1094	FLRA1ZZA	.234	.031	42	13	
R1-4	.0781	.2500	.0937	.005	FLR1-4	.296	.023	RA1-4ZZA	.1406	FLRA1-4ZZA	.296	.031	63	20	
R133	.0937	.1875	.0625	.005	FLR133	.234	.018	RA133ZZA	.0937	FLRA133ZZA	.234	.031	28	9.5	
R1-5	.0937	.3125	.1094	.005	FLR1-5	.359	.023	RA1-5ZZA	.1406	FLRA1-5ZZA	.359	.031	96	34	
R144	.1250	.2500	.0937	.005	FLR144	.296	.023	RA144ZZA	.1094	FLRA144ZZA	.296	.031	64	22	
R2-5	.1250	.3125	.1094	.005	FLR2-5	.359	.023	RA2-5ZZA	.1406	FLRA2-5ZZA	.359	.031	126	40	
R2-6	.1250	.3750	.1094	.005	—	—	—	RA2-6ZZA	.1406	—	—	—	144	50	
R2	.1250	.3750	.1562	.012	FLR2	.440	.030	R2ZZA	.1562	FLR2ZZA	.440	.030	144	50	
RA2	.1250	.5000	.1719	.012	—	—	—	RA2ZZ	.1719	—	—	—	258	89	
R155	.1562	.3125	.1094	.005	FLR155	.359	.023	RA155ZZA	.1250	FLRA155ZZA	.359	.036	76	30	
R156	.1875	.3125	.1094	.005	FLR156	.359	.023	RA156ZZA	.1250	FLRA156ZZA	.359	.036	89	32	
R166	.1875	.3750	.1250	.005	FLR166	.422	.023	R166ZZA	.1250	FLAR166ZZA	.422	.031	160	60	
R3	.1875	.5000	.1562	.012	—	—	—	—	—	—	—	—	295	110	
RA3	.1875	.5000	.1960	.012	FLRA3	.565	.042	RA3ZZ	.1960	FLRA3ZZ	.565	.042	295	110	
R168	.2500	.3750	.1250	.005	FLR168	.422	.023	R168ZZA	.1250	FLAR168ZZA	.422	.036	60	31	
R188	.2500	.5000	.1250	.005	FLR188	.547	.023	RA188ZZA	.1875	FLAR188ZZA	.547	.045	186	84	
R4	.2500	.6250	.1960	.012	FLR4	.690	.042	R4ZZ	.1960	FLR4ZZ	.690	.042	335	139	
EE2	.2500	.7500	.2188	.016	—	—	—	RA4ZZ	.2812	—	—	—	—	—	

Bearing numbers listed above are for bearings made of high carbon chrome bearing steel; bearings made of stainless steel (equivalent to AISI 440 C) are also available upon request, for which "F" should be prefixed to the bearing numbers.



Units: INCH



Open Type



Flanged Outer Ring

MICRO BEARING (INCH SERIES, WIDE INNER RING)

Bearing No.	Boundary Dimensions					Bearing No.	Flange Dimensions		Basic Load Ratings (lbs)	
	Bore	O.D.	Inner Ring Width	Outer Ring Width	Minimum Chamfer		O.D.	Width	Dynamic C	Static C ₀
RW0	.0469	.1562	.0937	.0625	.005	FLRW0	.203	.013	36	10
RW1	.0550	.1875	.1094	.0781	.005	FLRW1	.234	.023	42	13
RW1-4	.0781	.2500	.1250	.0937	.005	FLRW1-4	.296	.023	63	20
RW133	.0937	.1875	.0937	.0625	.005	FLRW133	.234	.018	28	9.5
RW1-5	.0937	.3125	.1406	.1094	.005	FLRW1-5	.359	.023	96	34
RW144	.1250	.2500	.1250	.0937	.005	FLRW144	.296	.023	64	22
RW2-5	.1250	.3125	.1406	.1094	.005	FLRW2-5	.359	.023	126	41
RW2-6	.1250	.3750	.1406	.1094	.005	FLRW2-6	.422	.023	144	51
RW2	.1250	.3750	.1875	.1562	.012	FLRW2	.440	.030	144	51
RW155	.1562	.3125	.1406	.1094	.005	FLRW155	.359	.023	76	30
RW156	.1875	.3125	.1406	.1094	.005	FLRW156	.359	.023	89	32
RW166	.1875	.3750	.1562	.1250	.005	FLRW166	.422	.023	160	60
RW168	.2500	.3750	.1562	.1250	.005	FLRW168	.422	.023	60	31
RW188	.2500	.5000	.1562	.1250	.005	FLRW188	.547	.023	186	84



Double Shielded



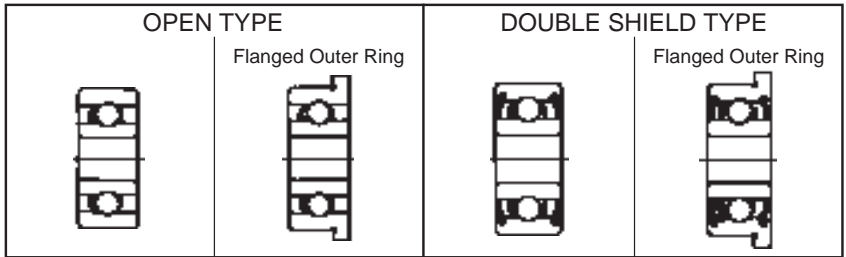
Flanged, Double Shielded

MICRO BEARING (INCH SERIES, WIDE OUTER RING, DOUBLE SHIELDED)

Bearing No.	Boundary Dimensions		Bearing No.	Flange Dimensions		Basic Load Ratings (lbs)	
	Inner Ring Width	Outer Ring Width		O.D.	Width	Dynamic C	Static C ₀
RAW0ZZA	.1250	.0937	FLRAW0ZZA	.203	.031	36	10
RAW1ZZA	.1406	.1094	FLRAW1ZZA	.234	.031	42	13
RAW1-4ZZA	.1719	.1406	FLRAW1-4ZZA	.296	.031	63	20
RAW133ZZA	.1250	.0937	FLRAW133ZZA	.234	.031	28	9.5
RAW1-5ZZA	.1719	.1406	FLRAW1-5ZZA	.359	.031	96	34
RAW144ZZA	.1406	.1094	FLRAW144ZZA	.296	.031	64	22
RAW2-5ZZA	.1719	.1406	FLRAW2-5ZZA	.359	.031	126	41
RAW2-6ZZA	.1719	.1406	FLRAW2-6ZZA	.422	.031	144	51
RW2ZZA	.1875	.1562	FLRW2ZZA	.440	.030	144	51
RAW155ZZA	.1562	.1250	FLRAW155ZZA	.359	.036	76	30
RAW156ZZA	.1562	.1250	FLRAW156ZZA	.359	.036	89	32
RW166ZZA	.1562	.1250	FLRAW166ZZA	.422	.031	160	60
RW168ZZA	.1562	.1250	FLRAW168ZZA	.422	.036	60	31
RAW188ZZA	.2188	.1875	FLRAW188ZZA	.547	.045	186	84

① Bore and Outer Diameter (O.D.) are the same as for RW and FLRW in the upper table.

Bearing numbers listed above are for bearings made of high carbon chrome bearing steel; bearings made of stainless steel (equivalent to AISI 440 C) are also available upon request, for which "F" should be prefixed to the bearing numbers.



Units: Millimeters



MICRO BEARING (METRIC SERIES)														
Bearing No.	Boundary Dimensions				Bearing No.	Flange Dimensions		Bearing No.	Width	Bearing No.	Flange Dimensions		Basic Load Ratings (lbs)	
	Bore	O.D.	Width	Minimum Chamfer		O.D.	Width				O.D.	Width	Dynamic C	Static C ₀
681	1.0	3	1.0	.08	FL681	3.8	.3	W681ZZA	1.5	FLW681ZZA	3.8	.45	18	5
691	1.0	4	1.6	.10	FL691	5.0	.5	W691ZZA	2.3	FLW691ZZA	5.0	.60	35	9.5
68/1.5	1.5	4	1.2	.10	FL68/1.5	5.0	.4	W68/1.5ZZA	2.0	FLW68/1.5ZZA	5.0	.60	23	6
69/1.5	1.5	5	2.0	.15	FL69/1.5	6.5	.6	W69/1.5ZZA	2.6	FLW69/1.5ZZA	6.5	.80	53	15
60/1.5	1.5	6	2.5	.15	FL60/1.5	7.5	.6	W60/1.5ZZA	3.0	FLW60/1.5ZZA	7.5	.80	62	19
672	2.0	4	1.2	.05	—	—	—	W672ZZA	2.0	—	—	—	23	8.5
682	2.0	5	1.5	.10	FL682	6.1	.5	W682ZZA	2.3	FLW682ZZA	6.1	.60	38	11
692	2.0	6	2.3	.15	FL692	7.5	.6	W692ZZA	3.0	FLW692ZZA	7.5	.80	63	20
602	2.0	7	2.8	.15	FL602	8.5	.7	W602ZZA	3.5	FLW602ZZA	8.5	.90	86	28
67/2.5	2.5	5	1.5	.08	—	—	—	W67/2.5ZZA	2.3	—	—	—	34	13
68/2.5	2.5	6	1.8	.15	FL68/2.5	7.1	.5	W68/2.5ZZA	2.6	FLW68/2.5ZZA	7.1	.80	47	16
69/2.5	2.5	7	2.5	.15	FL69/2.5	8.5	.7	W69/2.5ZZA	3.5	FLW69/2.5ZZA	8.5	.90	64	22
60/2.5	2.5	8	2.8	.15	FL60/2.5	9.5	.7	W60/2.5ZZA	4.0	FLW60/2.5ZZA	9.5	.90	123	39
673	3.0	6	2.0	.08	FL673	7.2	.6	WA673ZZA	2.5	FLWA673ZZA	7.2	.60	54	21
683	3.0	7	2.0	.15	FL683	8.1	.5	W683ZZA	3.0	FLW683ZZA	8.1	.80	87	29
693	3.0	8	3.0	.15	FL693	9.5	.7	W693ZZA	4.0	FLW693ZZA	9.5	.90	126	40
603	3.0	9	3.0	.15	FL603	10.5	.7	W603ZZA	5.0	FLW603ZZA	10.5	1.00	142	49
623	3.0	10	4.0	.15	FL623	11.5	1.0	623ZZA	4.0	FL623ZZA	11.5	1.00	144	50
674	4.0	7	2.0	.08	FL674	8.2	.6	WA674ZZA	2.5	FLWA674ZZA	8.2	.60	61	26
684	4.0	9	2.5	.15	FL684	10.3	.6	W684ZZA	4.0	FLW684ZZA	10.3	1.00	144	50
694	4.0	11	4.0	.15	FL694	12.5	1.0	694ZZA	4.0	FL694ZZA	12.5	1.00	161	62
604	4.0	12	4.0	.20	FL604	13.5	1.0	604ZZ	4.0	FL604ZZ	13.5	1.00	218	80
624	4.0	13	5.0	.20	FL624	15.0	1.0	624ZZ	5.0	FL624ZZ	15.0	1.00	295	110
634	4.0	16	5.0	.30	—	—	—	634ZZ	5.0	—	—	—	395	153
675	5.0	8	2.0	.08	FL675	9.2	.6	WA675ZZA	2.5	FLWA675ZZA	9.2	.60	66	32
685	5.0	11	3.0	.15	FL685	12.5	.8	W685ZZA	5.0	FLW685ZZA	12.5	1.00	161	63
695	5.0	13	4.0	.20	FL695	15.0	1.0	695ZZA	4.0	FL695ZZA	15.0	1.00	242	97
605	5.0	14	5.0	.20	FL605	16.0	1.0	605ZZ	5.0	FL605ZZ	16.0	1.00	299	114
625	5.0	16	5.0	.30	FL625	18.0	1.0	625ZZ	5.0	FL625ZZ	18.0	1.00	395	153
635	5.0	19	6.0	.30	—	—	—	635ZZ	6.0	—	—	—	525	199
676	6.0	10	2.5	.10	FL676	11.2	.6	WA676ZZA	3.0	FLWA676ZZA	11.2	.60	119	54
686	6.0	13	3.5	.15	FL686	15.0	1.0	W686ZZA	5.0	FLW686ZZA	15.0	1.10	243	99
696	6.0	15	5.0	.20	FL696	17.0	1.2	696ZZ	5.0	FL696ZZ	17.0	1.20	305	119
606	6.0	17	6.0	.30	FL606	19.0	1.2	606ZZ	6.0	FL606ZZ	19.0	1.20	495	195
626	6.0	19	6.0	.30	FL626	22.0	1.5	626ZZ	6.0	FL626ZZ	22.0	1.50	525	199
677	7.0	11	2.5	.10	FL677	12.2	.6	WA677ZZA	3.0	FLWA677ZZA	12.2	.60	124	60
687	7.0	14	3.5	.15	FL687	16.0	1.0	W687ZZA	5.0	FLW687ZZA	16.0	1.10	264	115
697	7.0	17	5.0	.30	FL697	19.0	1.2	697ZZ	5.0	FL697ZZ	19.0	1.20	360	160
607	7.0	19	6.0	.30	—	—	—	607ZZ	6.0	—	—	—	505	205
627	7.0	22	7.0	.30	—	—	—	627ZZ	7.0	—	—	—	750	315
678	8.0	12	2.5	.10	FL678	13.2	.6	W678ZZA	3.5	FLAW678ZZA	13.6	.80	129	67
688	8.0	16	4.0	.20	FL688	18.0	1.0	W688ZZ	5.0	FLW688ZZ	18.0	1.10	283	131
698	8.0	19	6.0	.30	FL698	22.0	1.5	698ZZ	6.0	FL698ZZ	22.0	1.50	445	194
608	8.0	22	7.0	.30	FL608	25.0	1.5	608ZZ	7.0	FL608ZZ	25.0	1.50	750	315
628	8.0	24	8.0	.30	—	—	—	628ZZ	8.0	—	—	—	900	355
679	9.0	14	3.0	.10	—	—	—	W679ZZA	4.5	—	—	—	207	105
689	9.0	17	4.0	.20	FL689	19.0	1.0	W689ZZ	5.0	FLW689ZZ	19.0	1.10	390	184
699	9.0	20	6.0	.30	—	—	—	699ZZ	6.0	—	—	—	560	245
609	9.0	24	7.0	.30	—	—	—	609ZZ	7.0	—	—	—	765	325
629	9.0	26	8.0	.60	—	—	—	629ZZ	8.0	—	—	—	1030	440

Bearing numbers listed above are for bearings made of high carbon chrome bearing steel; bearings made of stainless steel (equivalent to AISI 440 C) are also available upon request, for which "F" should be prefixed to the bearing numbers.