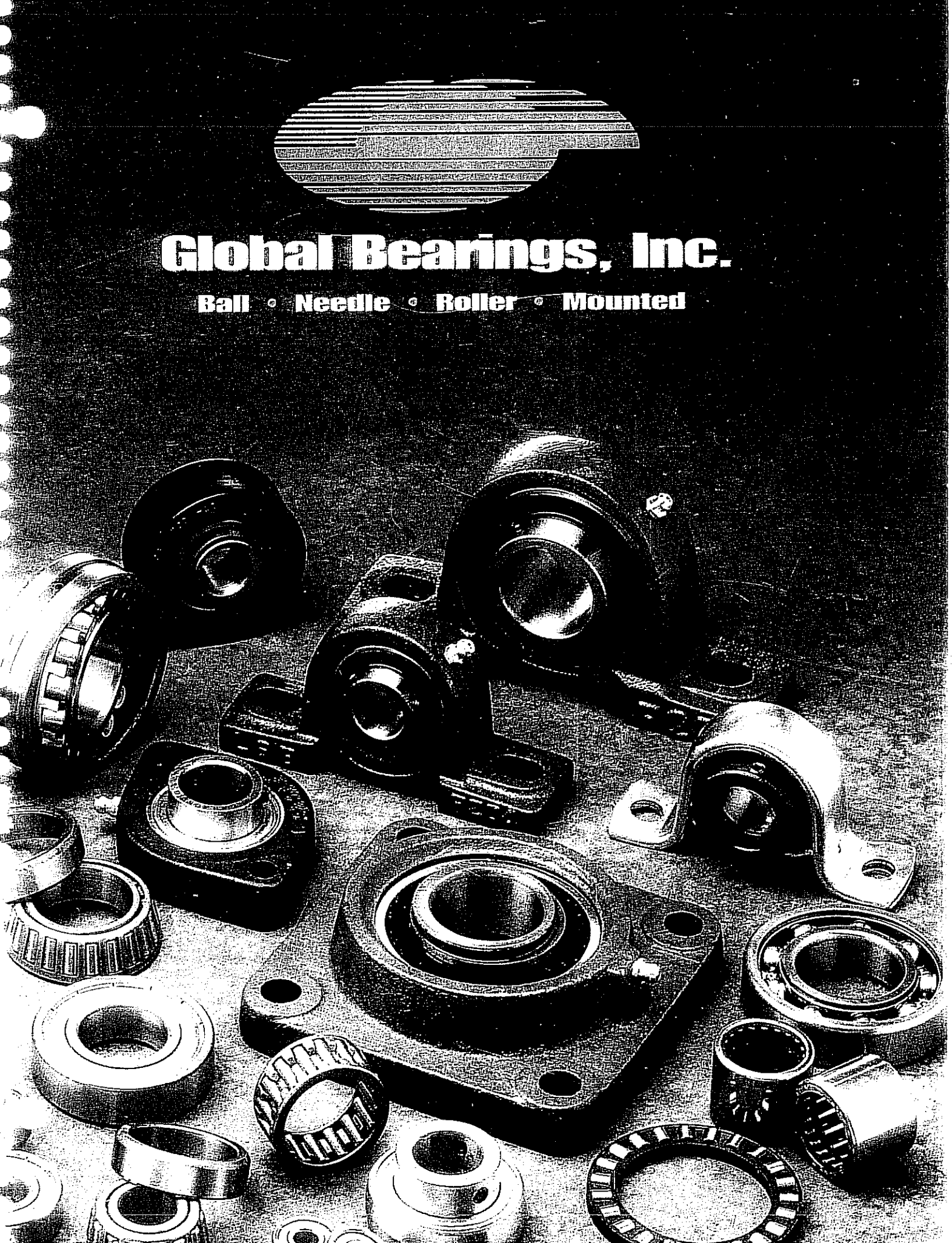
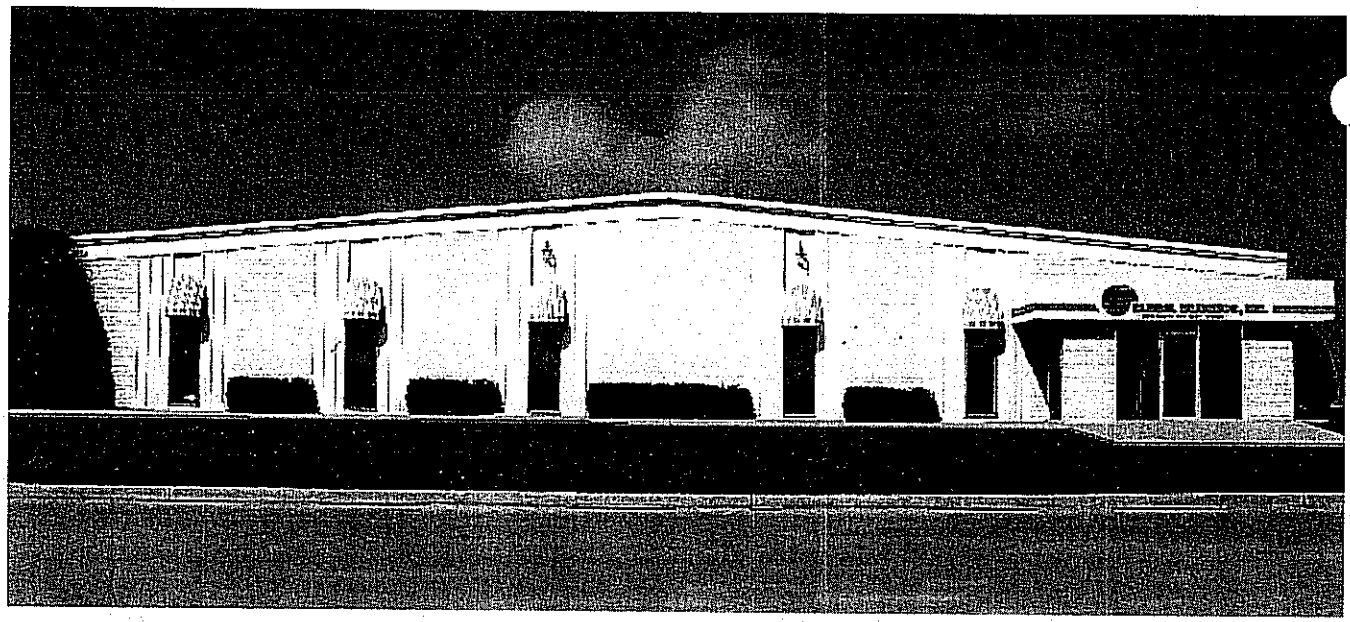
Global Bearings, Inc.

Ball • Needle • Roller • Mounted





Corporate Headquarters
–Tulsa, Oklahoma

GLOBAL BEARINGS, INC. – *the best value in America*

For more than 45 years, Global Bearings has been supplying manufacturers with the highest quality bearings sold in the United States at the lowest prices and today our ball, needle, roller and mounted bearings can be found in virtually every type of application within U.S. industry.

GLOBAL brand bearings are produced to exacting standards, using the most technically advanced equipment and one of the most stringent quality control programs in the industry. Every phase of our production and post–production process, from material selection to the final bearing analysis at our state–of–the–art testing laboratory in Oklahoma, has been carefully structured to continually monitor accuracy and eliminate inconsistency. Very few bearing companies can offer this level of quality assurance, and none of them can do it at our price.

Global Bearings also maintains one of the most accurate delivery records in the industry. For more than four decades our company has supplied bearings to some of the largest and most demanding manufacturers in the country, with an exceptional on–time delivery rate close to 99%. Our customers simply do not have to worry about receiving their shipments on time.

When you combine our exceptional quality, competitive pricing and reliable delivery, it's not surprising that manufacturers consider Global Bearings to be *the best value in America*. Call today to find out how Global Bearings can improve your bearing supply.

GLOBAL BEARINGS, INC.
3818 South 79th East Avenue
Tulsa, Oklahoma
Phone: (918) 664–8902
Fax: (918) 664–5850
www.globalbearings.com

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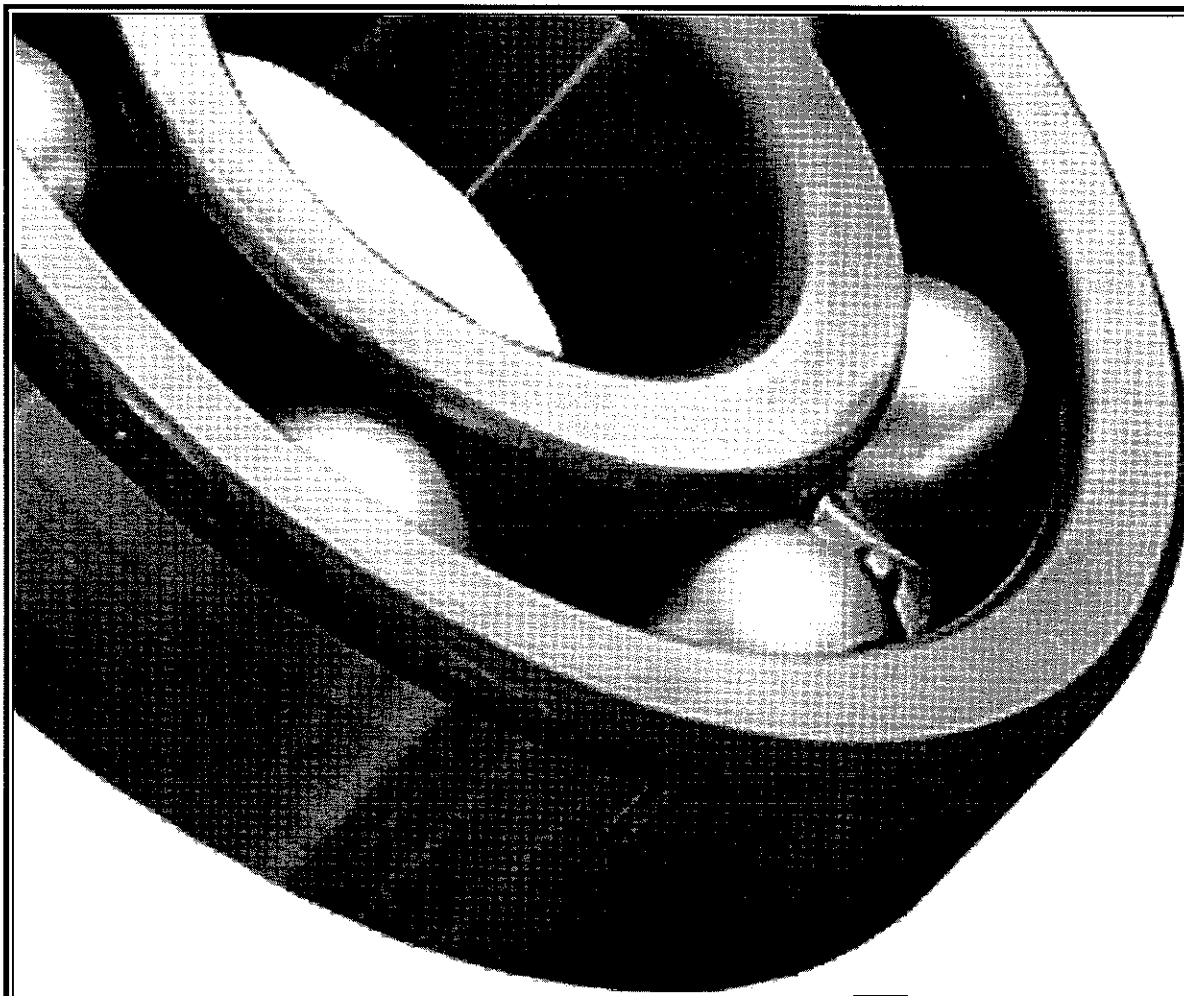

GLOBAL BALL BEARINGS

are manufactured using the finest raw materials, the most technically advanced machinery and the most extensive quality control procedures in the industry. Every phase of our production and postproduction process, from material selection to the final bearing analysis at our state–of–the–art testing laboratory in Oklahoma, has been carefully structured to continually monitor accuracy and eliminate inconsistency. Very few bearings can offer this level of quality assurance, and none of them can do it at our price.

Call today to find out how Global Bearings can improve your bearing supply.

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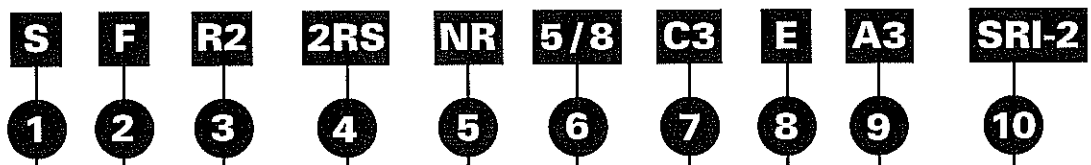
Global Bearings, Inc. 3818 South 79th East Ave Tulsa, OK 74145 Phone: (918) 664-8902 Fax: (918) 664-5850

Ball Bearing Numbering System

Global Bearing's numbering system utilizes a basic bearing number to indicate the appropriate bearing series, and a complementary set of prefix and suffix designations which allow a complete description of any bearing configuration.



Material Codes (1)

Blank	52100 Chrome Steel
S	440 C Stainless Steel

Ring / OD Modification Codes (2)

F	Flanged Outer Ring
W	Extended Inner Ring
FW	Flanged Outer/Extended Inner Rings

Basic Bearing Number Codes (3)

See pages 2 through 17

Shield / Closure Codes (4)

Blank	Open Bearing
Z	Single Shield
ZZ	Double Shields
RS	Single Seal
2RS	Double Seals
PS	Single Polyacrylic Seal
2PS	Double Polyacrylic Seals
TS	Single Teflon Seal
2TS	Double Teflon Seals
V	Seals used are Non-Contact Type

Snap Ring Codes (5)

N	Groove without Ring
NR	Groove with Ring

ID Modification Codes (6)

1/2	1/2 inch Bore
13	13 mm Bore
5/8	5/8 inch Bore
16	16 mm Bore
3/4	3/4 inch Bore
7/8	7/8 inch Bore

Lubrication Codes (10)

AF2	Aeroshell Fluid 12
AKC	Exxon Andok C
AK260	Exxon Andok 260
ALV2	Shell Alvania #2
ALV3	Shell Alvania #3
ASF	Shell Aeroshell 7A
B325	Exxon Beacon 325
DC44	Dow Corning #44
DOLR	Shell Dolium R
K240B	Dupont Krytox-240AB
K240C	Dupont Krytox-240AC
POLEM	Exxon Polyrex EM
PS2	Multemp PS2
SM3	Supermil-3171
SRI-2	Chevron SRI #2
U500	Texaco Unitemp 500

ABEC Tolerance Codes (9)

***Blank**	ABEC 1
A3	ABEC 3
A5	ABEC 5
A7	ABEC 7
A9	ABEC 9

Noise Level Codes (8)

Blank	Standard
E	Electric Motor Quality

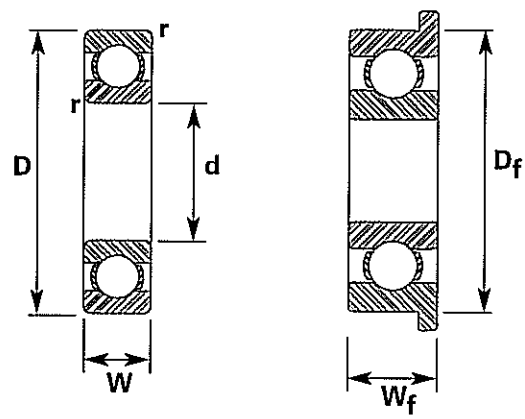
Internal Clearance Codes (7)

Blank	Standard
C2	Tight
C3	Loose
C4	Extra Loose

Micro Miniature & Instrument Bearings

600 Series
F600 Series

See page 92 for material and sealing options.



Bore Diameter: 1 to 9mm

Dimensions: mm

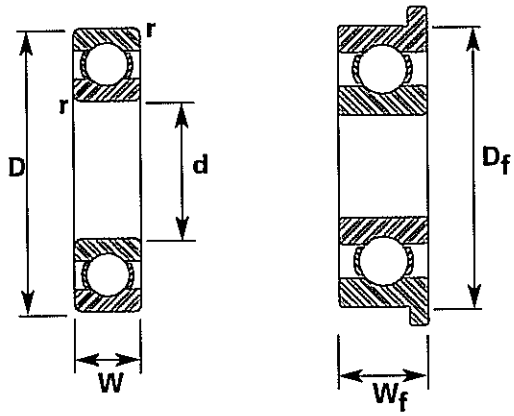
	Global Bearing Number	Bore d	Outer Diameter D	Width Open	Width Shielded	Flange Dimensions D_f	Flange Dimensions Open W_f	Radius r	Basic Load Rating (lbs.) Dynamic C	Basic Load Rating (lbs.) Static C_o	Weight (lbs.) Open
MICRO MINIATURES	681	1	3	1	1.5	3.8	0.45	0.15	14	4	*
	691	1	4	1.6	2.3	5	0.6	0.2	24	9	*
	681.5	1.5	4	1.2	2	5	0.4	0.2	20	7	*
	691.5	1.5	5	2	2.6	6.5	0.6	0.3	42	15	*
	601.5	1.5	6	2.5	3	7.5	0.6	0.3	57	22	*
	682	2	5	1.5	2.3	6.1	0.5	0.2	29	11	*
	692	2	6	2.3	3.	7.5	0.6	0.3	55	22	*
	602	2	7	2.8	3.5	8.5	0.7	0.3	66	29	0.001
	682.5	2.5	6	1.8	2.6	7.1	0.5	0.3	35	14	*
	692.5	2.5	7	2.5	3.5	8.5	0.7	0.3	66	29	*
	602.5	2.5	8	2.8	4	9.5	0.7	0.3	97	40	0.001
	683	3	7	2	3	8.1	0.5	0.3	35	13	*
	693	3	8	3	4	9.5	0.7	0.3	64	24	*
	603	3	9	3	5	10.5	0.7	0.3	99	42	0.002
INSTRUMENT BEARINGS	623	3	10	4	4	11.5	1	0.3	110	48	0.003
	633	3	13	5	5	—	—	0.5	224	108	0.005
	684	4	9	2.5	4	10.3	0.6	0.3	81	37	0.001
	694	4	11	4	4	12.5	1	0.3	123	57	0.004
	604	4	12	4	4	13.5	1	0.4	167	77	0.005
	624	4	13	5	5	15	1	0.4	224	108	0.007
	634	4	16	5	5	—	—	0.3	300	140	0.011
	685	5	11	3	5	12.5	0.8	0.3	123	57	0.003
	695	5	13	4	4	15	1	0.4	187	90	0.005
	605	5	14	5	5	16	1	0.4	229	110	0.007
	625	5	16	5	5	18	1	0.3	300	140	0.010
	635	5	19	6	6	—	—	0.3	400	190	0.017
	686	6	13	3.5	5	15	1.0	0.3	187	90	0.004
	696	6	15	5	5	17	1.2	0.4	231	110	0.009
	606	6	17	6	6	19	1.2	0.5	339	163	0.013
	626	6	19	6	6	22	1.5	0.5	400	190	0.017
	687	7	14	3.5	5	16	1	0.3	202	103	0.004
	687	7	17	5	5	19	1.2	0.3	235	120	*
	607	7	19	6	6	—	—	0.3	385	180	0.018
	627	7	22	7	7	—	—	0.3	580	290	0.024
	688	8	16	4	5	18	1	0.3	235	120	0.007
	698	8	19	6	6	22	1.5	0.3	285	145	*
	608	8	22	7	7	25	1.5	0.3	580	290	0.024
	628	8	24	8	8	—	—	0.3	690	350	0.026
	689	9	17	4	5	19	1	0.3	229	128	0.013
	699	9	20	6	6	—	—	0.3	310	160	*
	609	9	24	7	7	—	—	0.3	580	280	0.026
	629	9	26	8	8	—	—	0.6	790	400	0.040

NOTE: Flange widths may be wider for shielded bearings

* Weight is less than .001 lbs.

Micro Miniature & Instrument Bearings

R Series (Inch)



See page 92 for material and sealing options.

Bore Diameter: 1/25" to 1 1/2"

Dimensions: inches

	Global Bearing Number	Bore d frac	Bore d in.	Outer Diameter D frac	Outer Diameter D in.	Width W Inch Open	Width W Inch Shield	Width W_i Inch Open	Width W_i Inch Shield	Flange Dimensions Open D_f	Flange Dimensions Open W_f	Rad. r inch	Basic Load Rating (lbs.) Dynamic C	Basic Load Rating (lbs.) Static C_o	Wt. (lbs.) Open
MICRO MINIATURES	R09	1/25	0.0400	1/8	0.1250	0.0469	—	—	—	—	—	0.004	11	3	*
	R0	3/64	0.0469	5/32	0.1562	0.0625	0.0937	0.0937	0.1250	0.203	0.013	0.004	15	6	*
	R1	—	0.0550	3/16	0.1875	0.0781	0.1094	0.1094	0.1406	0.234	0.023	0.004	26	10	*
	R1-4	5/64	0.0781	1/4	0.2500	0.0937	0.1406	0.1250	0.1719	0.296	0.023	0.004	35	13	*
	R133	3/32	0.0937	3/16	0.1875	0.0625	0.0937	0.0937	0.1250	0.234	0.018	0.004	22	8	*
	R1-5	3/32	0.0937	5/16	0.3125	0.1094	0.1406	0.1406	0.1719	0.359	0.023	0.006	64	24	0.001
INSTRUMENT BEARINGS	R144	1/8	0.1250	1/4	0.2500	0.0937	0.1094	0.1250	0.1406	0.296	0.023	0.004	35	13	*
	R2-5	1/8	0.1250	5/16	0.3125	0.1094	0.1406	0.1406	0.1719	0.359	0.023	0.004	64	24	0.002
	R2-6	1/8	0.1250	3/8	0.3750	0.1094	0.1406	0.1406	0.1719	0.422	0.023	0.006	73	29	0.002
	R2	1/8	0.1250	3/8	0.3750	0.1562	0.1562	0.1875	0.1875	0.440	0.030	0.012	73	29	0.003
	R2A	1/8	0.1250	1/2	0.5000	0.1719	0.1719	—	—	—	—	0.012	73	29	0.007
	R155	5/32	0.1562	5/16	0.3125	0.1094	0.1250	0.1406	0.1562	0.359	0.023	0.004	42	18	0.001
	R156	3/16	0.1875	5/16	0.3125	0.1094	0.1250	0.1406	0.1562	0.359	0.023	0.004	42	18	0.001
	R166	3/16	0.1875	3/8	0.3750	0.1250	0.1250	0.1562	0.1562	0.422	0.023	0.004	81	33	0.002
	R3	3/16	0.1875	1/2	0.5000	0.1562	0.1960	0.2272	0.2272	0.565	0.042	0.012	147	64	0.005
	R3A	3/16	0.1875	1/2	0.5000	0.1960	0.1960	—	—	—	—	0.012	147	64	0.006
	R168	1/4	0.2500	3/8	0.3750	0.1250	0.1250	0.1562	0.1562	0.422	0.023	0.004	42	20	0.001
	R188	1/4	0.2500	1/2	0.5000	0.1250	0.1875	0.1562	0.2188	0.547	0.023	0.006	123	55	0.004
	R4	1/4	0.2500	5/8	0.6250	0.1960	0.1960	0.2272	0.2272	0.690	0.042	0.012	167	77	0.010
	R4A	1/4	0.2500	3/4	0.7500	0.2188	0.2812	—	—	—	—	0.016	403	198	0.017
	R6	3/8	0.3750	7/8	0.8750	0.2188	0.2812	—	—	0.969	0.062	0.016	575	304	0.024
	R8	1/2	0.5000	1 1/8	1.1250	0.2500	0.3125	—	—	0.225	0.062	0.016	880	505	0.039
	R10	5/8	0.6250	1 3/8	1.3750	0.2182	0.3438	—	—	—	—	0.031	1036	624	0.081
	R12	3/4	0.7500	1 5/8	1.6250	0.3125	0.4375	—	—	—	—	0.031	1630	1000	0.104
	R14	7/8	0.8750	1 7/8	1.8750	0.3750	0.5000	—	—	—	—	0.031	1740	1111	0.157
	R16	1	1.0000	2	2.0000	0.3750	0.5000	—	—	—	—	0.031	1850	1222	0.187
	R18	1 1/8	1.1250	2 1/8	2.1250	0.3750	0.5000	—	—	—	—	0.031	2150	1407	0.198
	R20	1 1/4	1.2500	2 1/4	2.2500	0.3750	0.5000	—	—	—	—	0.031	2420	1690	0.209
	R22	1 3/8	1.3750	2 1/2	2.2500	0.4375	0.5625	—	—	—	—	0.031	2755	1910	0.232
	R24	1 1/2	1.5000	2 5/8	2.6250	0.4375	0.5625	—	—	—	—	0.031	2906	2085	0.309

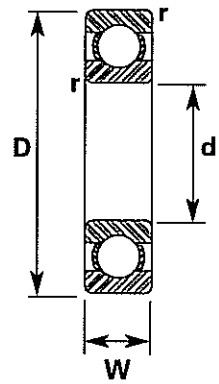
NOTE: Flange widths may be wider for shielded bearings

* Weight is less than .001 lbs.

Single Row Radial Ball Bearings

1600 Series (Inch)

See page 92 for material and sealing options.



Bore Diameter: $^{3}/_{16}$" to $1\,^{5}/_{16}$"

Dimensions: inches

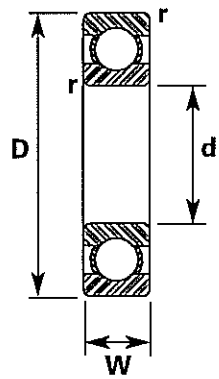
Global Bearing Number	Bore d		Outer Diameter D		Width W		Radius r	Basic Load Rating (lbs.)		Wt. (lbs.)
								Dynamic	Static	
	fraction	inch	fraction	inch	fraction	inch	inch	C	C_o	
1601	$^{3}/_{16}$	0.1875	$^{11}/_{16}$	0.6875	* $^{1}/_{4}$	0.2500	0.012	340	163	0.015
1602	$^{1}/_{4}$	0.2500	$^{11}/_{16}$	0.6875	* $^{1}/_{4}$	0.2500	0.012	340	163	0.013
1603	$^{5}/_{16}$	0.3125	$^{7}/_{8}$	0.8750	* * $^{9}/_{32}$	0.2812	0.012	573	302	0.024
1604	$^{3}/_{8}$	0.3750	$^{7}/_{8}$	0.8750	* * $^{9}/_{32}$	0.2812	0.015	573	302	0.032
1605	$^{5}/_{16}$	0.3125	$^{29}/_{32}$	0.9062	$^{5}/_{16}$	0.3125	0.012	573	302	0.026
1606	$^{3}/_{8}$	0.3750	$^{29}/_{32}$	0.9062	$^{5}/_{16}$	0.3125	0.015	573	302	0.030
1607	$^{7}/_{16}$	0.4375	$^{29}/_{32}$	0.9062	$^{5}/_{16}$	0.3125	0.015	800	436	0.035
1614	$^{3}/_{8}$	0.3750	$1\,^{1}/_{8}$	1.1250	$^{3}/_{8}$	0.3750	0.025	882	505	0.077
1615	$^{7}/_{16}$	0.4375	$1\,^{1}/_{8}$	1.1250	$^{3}/_{8}$	0.3750	0.025	882	505	0.071
1616	$^{1}/_{2}$	0.5000	$1\,^{1}/_{8}$	1.1250	$^{3}/_{8}$	0.3750	0.025	882	505	0.066
1620	$^{7}/_{16}$	0.4375	$1\,^{3}/_{8}$	1.3750	$^{7}/_{16}$	0.4375	0.025	1323	781	0.110
1621	$^{1}/_{2}$	0.5000	$1\,^{3}/_{8}$	1.3750	$^{7}/_{16}$	0.4375	0.025	1323	781	0.106
1622	$^{9}/_{16}$	0.5625	$1\,^{3}/_{8}$	1.3750	$^{7}/_{16}$	0.4375	0.025	1323	781	0.101
1623	$^{5}/_{8}$	0.6250	$1\,^{3}/_{8}$	1.3750	$^{7}/_{16}$	0.4375	0.025	1323	781	0.088
1628	$^{5}/_{8}$	0.6250	$1\,^{5}/_{8}$	1.6250	$^{1}/_{2}$	0.5000	0.025	1627	1001	0.159
1630	$^{3}/_{4}$	0.7500	$1\,^{5}/_{8}$	1.6250	$^{1}/_{2}$	0.5000	0.025	1627	1001	0.143
1633	$^{5}/_{8}$	0.6250	$1\,^{3}/_{4}$	1.7500	$^{1}/_{2}$	0.5000	0.025	1627	1001	0.203
1635	$^{3}/_{4}$	0.7500	$1\,^{3}/_{4}$	1.7500	$^{1}/_{2}$	0.5000	0.025	1627	1001	0.187
1638	$^{3}/_{4}$	0.7500	2	2.0000	$^{9}/_{16}$	0.5625	0.035	2426	1563	0.265
1640	$^{7}/_{8}$	0.8750	2	2.0000	$^{9}/_{16}$	0.5625	0.035	2426	1563	0.247
1641	1	1.0000	2	2.0000	$^{9}/_{16}$	0.5625	0.035	2426	1563	0.221
1652	$1\,^{1}/_{8}$	1.1250	$2\,^{1}/_{2}$	2.5000	$^{5}/_{8}$	0.6250	0.035	2880	1890	0.463
1654	$1\,^{1}/_{4}$	1.2500	$2\,^{1}/_{2}$	2.5000	$^{5}/_{8}$	0.6250	0.035	2880	1890	0.419
1657	$1\,^{1}/_{4}$	1.2500	$2\,^{9}/_{16}$	2.5625	$^{11}/_{16}$	0.6875	0.035	3369	2251	0.474
1658	$1\,^{5}/_{16}$	1.3125	$2\,^{9}/_{16}$	2.5625	$^{11}/_{16}$	0.6875	0.035	3369	2251	0.441

* Width Sealed = $^{5}/_{16}$"

* * Width Sealed = $^{11}/_{32}$"

Single Row Radial Ball Bearings

6900 Series



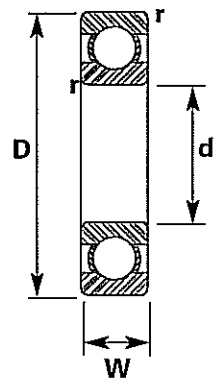
See page 92 for material and sealing options.

Bore Diameter: 10 to 75 mm

Global Bearing Number	Bore d		Outer Diameter D		Width W		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
									Dynamic	Static	
	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	
6900	10	0.3937	22	0.8661	6	0.2362	0.5	0.020	465	258	0.020
6901	12	0.4724	24	0.9449	6	0.2362	0.5	0.020	500	291	0.024
6902	15	0.5906	28	1.1024	7	0.2756	0.5	0.020	705	415	0.035
6903	17	0.6693	30	1.1811	7	0.2756	0.5	0.020	805	510	0.040
6904	20	0.7874	37	1.4567	9	0.3543	0.5	0.020	1100	725	0.079
6905	25	0.9843	42	1.6535	9	0.3543	0.5	0.020	1220	870	0.093
6906	30	1.1811	47	1.8504	9	0.3543	0.5	0.020	1250	945	0.106
6907	35	1.3780	55	2.1654	10	0.3937	1	0.039	1930	1430	0.163
6908	40	1.5748	62	2.4409	12	0.4724	1	0.039	2100	1680	0.243
6909	45	1.7717	68	2.6772	12	0.4724	1	0.039	2610	2120	0.282
6910	50	1.9685	72	2.8346	12	0.4724	1	0.039	2700	2290	0.291
6911	55	2.1654	80	3.1496	13	0.5118	1.5	0.059	2760	2460	0.397
6912	60	2.3622	85	3.3465	13	0.5118	1.5	0.059	2830	2620	0.425
6913	65	2.5591	90	3.5433	13	0.5118	1.5	0.059	3000	2940	0.454
6914	70	2.7559	100	3.9370	16	0.6299	1.5	0.059	4100	3900	0.736
6915	75	2.9528	105	4.1339	16	0.6299	1.5	0.059	4200	4150	0.778

Single Row Radial Ball Bearings

6000 Extra Light Series



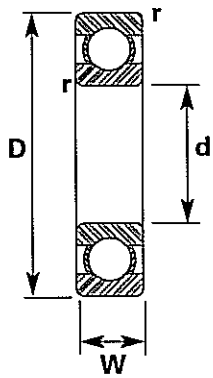
See page 92 for material and sealing options.

Bore Diameter: 10 to 180 mm

Global Bearing Number	Bore d		Outer Diameter D		Width W		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
									Dynamic	Static	
	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	
6000	10	0.3937	26	1.0236	8	0.3150	0.5	0.020	791	438	0.042
6001	12	0.4724	28	1.1024	8	0.3125	0.5	0.020	884	501	0.049
6002	15	0.5906	32	1.2598	9	0.3543	0.5	0.020	967	564	0.066
6003	17	0.6693	35	1.3780	10	0.3937	0.5	0.020	1039	627	0.086
6004	20	0.7874	42	1.6535	12	0.4727	1	0.039	1623	1005	0.152
6005	25	0.9843	47	1.8504	12	0.4727	1	0.039	1816	1169	0.176
6006	30	1.1811	55	2.1654	13	0.5118	1.5	0.059	2286	1553	0.256
6007	35	1.3780	62	2.4409	14	0.5512	1.5	0.059	2801	1947	0.342
6008	40	1.5748	68	2.6772	15	0.5906	1.5	0.059	2943	2124	0.423
6009	45	1.7717	75	2.9528	16	0.6299	1.5	0.059	3642	2689	0.540
6010	50	1.9685	80	3.1496	16	0.6299	1.5	0.059	3808	2911	0.575
6011	55	2.1654	90	3.5433	18	0.7087	1.5	0.059	4602	3595	0.849
6012	60	2.3622	95	3.7402	18	0.7087	2	0.079	3476	4350	0.915
6013	65	2.5591	100	3.9370	18	0.7087	2	0.079	5544	4438	0.959
6014	70	2.7559	110	4.3307	20	0.7874	2	0.079	6672	5440	1.33
6015	75	2.9528	115	4.5276	20	0.7874	2	0.079	6944	5861	1.41
6016	80	3.1496	125	4.9213	22	0.8661	2	0.079	8170	7050	1.87
6017	85	3.3465	130	5.1181	22	0.8661	2	0.079	8772	7587	1.96
6018	90	3.5433	140	5.5118	24	0.9449	2.5	0.098	10026	8806	2.56
6019	95	3.7402	145	5.7087	24	0.9449	2.5	0.098	9990	8806	2.67
6020	100	3.9370	150	5.9055	24	0.9449	2.5	0.098	11142	9910	2.76
6021	105	4.1339	160	6.2992	26	1.0236	3	0.118	12430	11189	3.51
6022	110	4.3307	170	6.6929	28	1.1024	3	0.118	14150	12902	4.32
6024	120	4.7244	180	7.0866	28	1.1024	3	0.118	15157	13974	4.56
6026	130	5.1181	200	7.8740	33	1.2992	3	0.118	18162	17072	6.97
6028	140	5.5118	210	8.2677	33	1.2992	3	0.118	20107	19122	7.39
6030	150	5.9055	225	8.8583	35	1.3780	3.5	0.138	22764	21950	8.99
6032	160	6.2992	240	9.4488	38	1.4961	3.5	0.138	24794	24196	11.10
6034	170	6.6929	260	10.2362	42	1.6535	3.5	0.138	29414	30351	17.50
6036	180	7.0866	280	11.0236	46	1.8110	3.5	0.138	32620	35223	22.70

Single Row Radial Ball Bearings

6200 Light Series



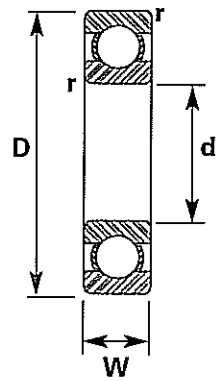
See page 92 for material and sealing options.

Bore Diameter: 10 to150 mm

Basic Bearing No.	Bore d		Outer Diameter D		Width W		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
									Dynamic	Static	
	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	
6200	10	0.3937	30	1.1811	9	0.3543	1	0.039	884	501	0.071
6201	12	0.4724	32	1.2598	10	0.3937	1	0.039	1178	688	0.082
6201 1/2	12.7	0.5000	32	1.2598	10	0.3937	1	0.039	1050	595	0.082
6201-13	13	0.5118	32	1.2598	10	0.3937	1	0.039	1050	595	0.082
6202	15	0.5906	35	1.3780	11	0.4331	1	0.039	1320	785	0.099
6202 1/2	12.7	0.5000	35	1.3780	11	0.4331	1	0.039	1340	775	0.110
6202 5/8	15.875	0.6250	35	1.3780	11	0.4331	1	0.039	1340	775	0.090
6202-16	16	0.6299	35	1.3780	11	0.4331	1	0.039	1340	775	0.090
6203	17	0.6693	40	1.5748	12	0.4724	1	0.039	1655	1007	0.143
6203-15	15	0.5906	40	1.5748	12	0.4724	1	0.039	1660	985	0.148
6203 5/8	15.875	0.6250	40	1.5748	12	0.4724	1	0.039	1600	985	0.150
6203-16	16	0.6299	40	1.5748	12	0.4724	1	0.039	1660	985	0.150
6203 3/4	19.04	0.7500	40	1.5748	12	0.4724	1	0.039	1660	985	0.140
6204	20	0.7874	47	1.8504	14	0.5512	1.5	0.059	2221	1394	0.234
6204 3/4	19.05	0.7500	47	1.8504	14	0.5512	1.5	0.059	2200	1390	0.236
6204 7/8	22.225	0.8750	47	1.8504	14	0.5512	1.5	0.059	2200	1390	0.230
6205	25	0.9843	52	2.0472	15	0.5906	1.5	0.059	2423	1569	0.282
6205-1	25.4	1.0000	52	2.0472	15	0.5906	1.5	0.059	2400	1560	0.280
6206	30	1.8111	62	2.4409	16	0.6299	1.5	0.059	3363	2257	0.439
6207	35	1.3780	72	2.8346	17	0.6693	2	0.079	4435	3073	0.635
6208	40	1.5748	80	3.1496	18	0.7087	2	0.079	5105	3583	0.807
6209	45	1.7717	85	3.3465	19	0.7480	2	0.079	5476	3981	0.897
6210	50	1.9685	90	3.5433	20	0.7874	2	0.079	6065	4460	1.020
6211	55	2.1654	100	3.9370	21	0.8268	2.5	0.098	7497	5645	1.340
6212	60	2.3662	110	4.3307	22	0.8661	2.5	0.098	8257	6290	1.730
6213	65	2.5591	120	4.7244	23	0.9055	2.5	0.098	9894	7684	2.180
6214	70	2.7559	125	4.9213	24	0.9449	2.5	0.098	10512	8451	2.360
6215	75	2.9528	130	5.1181	25	0.9843	2.5	0.098	11427	9276	2.600
6216	80	3.1496	140	5.5118	26	1.0236	3	0.118	12371	10137	3.090
6217	85	3.3465	150	5.9055	28	1.1024	3	0.118	14383	11978	3.950
6218	90	3.5433	160	6.2992	30	1.1811	3	0.118	16598	13660	4.740
6219	95	3.7402	170	6.6929	32	1.2598	3.5	0.138	19068	18616	5.780
6220	100	3.9370	180	7.0866	34	1.3386	3.5	0.138	21119	17841	6.920
6221	105	4.1339	190	7.4803	36	1.4173	3.5	0.138	22989	20141	8.160
6222	110	4.3307	200	7.8740	38	1.4961	3.5	0.138	24904	22578	9.610
6224	120	4.7244	215	8.4646	40	1.5748	3.5	0.138	26860	25156	11.400
6226	130	5.1181	230	9.0551	40	1.5748	4	0.157	28528	27672	12.800
6228	140	5.5118	250	9.8425	42	1.6535	4	0.157	30970	31147	16.500
6230	150	5.9055	270	10.6299	45	1.7717	4	0.157	35133	37260	20.700

Single Row Radial Ball Bearings

6300 Medium Series



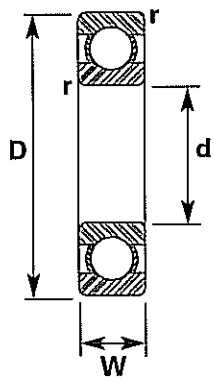
See page 92 for material and sealing options.

Bore Diameter: 10 to150 mm

Global Bearing Number	Bore d		Outer Diameter D		Width W		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
									Dynamic	Static	
	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	
6300	10	0.3937	35	1.3780	11	0.4331	1	0.039	1322	780	0.117
6301	12	0.4724	37	1.4567	12	0.4724	1.5	0.059	1475	884	0.132
6302	15	0.5906	42	1.6535	13	0.5118	1.5	0.059	1976	1221	0.181
6303	17	0.6693	47	1.8504	14	0.5512	1.5	0.059	2347	1475	0.254
6304	20	0.7874	52	2.0472	15	0.5906	2	0.079	2756	1756	0.317
6305	25	0.9843	62	2.4409	17	0.6693	2	0.079	3869	2561	0.511
6306	30	1.1811	72	2.8346	19	0.7480	2	0.079	4669	3186	0.763
6307	35	1.3780	80	3.1496	21	0.8268	2.5	0.098	5769	4029	1.01
6308	40	1.5748	90	3.5433	23	0.9055	2.5	0.098	7048	5031	1.40
6309	45	1.7717	100	3.9370	25	0.9843	2.5	0.098	9143	6744	1.84
6310	60	1.9685	110	4.3307	27	1.0630	3	0.118	10699	8028	2.36
6311	55	2.1654	120	4.7244	29	1.1417	3	0.118	12603	9422	3.02
6312	60	2.3622	130	5.1181	31	1.2205	3.5	0.138	14138	10928	3.75
6313	65	2.5591	140	5.5118	33	1.2992	3.5	0.138	16233	12742	4.59
6314	70	2.7559	150	5.9055	35	1.3780	3.5	0.138	18008	14271	5.56
6315	75	2.9526	160	6.2992	37	1.4567	3.5	0.138	19617	16112	6.66
6316	80	3.1496	170	6.6929	39	1.5354	3.5	0.138	21260	18064	7.91
6317	85	3.3465	180	7.0866	41	1.6142	4	0.157	22944	20125	9.33
6318	90	3.5433	190	7.4803	43	1.6929	4	0.157	24913	24390	10.8
6319	95	3.7402	200	7.8740	45	1.7717	4	0.157	27094	25572	12.5
6320	100	3.9370	215	8.4646	47	1.8504	4	0.157	29951	29490	15.4
6321	105	4.1339	225	8.8583	49	1.9291	4	0.157	31768	32112	17.7
6322	110	4.3307	240	9.4488	50	1.9685	4	0.157	35446	37687	21
6324	120	4.7244	260	10.2362	55	2.1654	4	0.157	39360	43707	27.3
6326	130	5.1181	280	11.0236	58	2.2835	5	0.197	43824	50966	33.3
6328	140	5.5118	300	11.8110	62	2.4409	5	0.197	47522	57088	40.3
6330	150	5.9055	320	12.5984	65	2.5591	5	0.197	49815	60712	57.8

Single Row Radial Ball Bearings

6400 Heavy Series



See page 92 for material and sealing options.

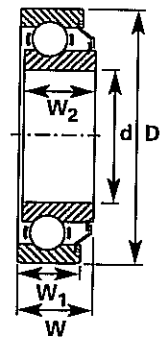
Bore Diameter: 20 to 90 mm

Global Bearing Number	Bore d		Outer Diameter D		Width W		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
									Dynamic	Static	
	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	
6404	20	0.7874	72	2.8346	19	0.7480	1	0.039	5353	3775	0.90
6405	25	0.9843	80	3.1496	21	0.8268	1.5	0.059	6389	4795	1.19
6406	30	1.1811	90	3.5433	23	0.9055	1.5	0.059	8185	6020	1.59
6407	35	1.3780	100	3.9370	25	0.9843	1.5	0.059	9595	7066	2.06
6408	40	1.5748	110	4.3307	27	1.0630	2	0.079	11011	8244	2.69
6409	45	1.7717	120	4.7244	29	1.1417	2	0.079	13374	10263	3.41
6410	50	1.9685	130	5.1181	31	1.2205	2	0.079	15952	12713	4.20
6411	55	2.1654	140	5.5118	33	1.2992	2	0.079	17400	14098	5.13
6412	60	2.3622	150	5.9055	35	1.3780	2	0.079	18857	15804	6.22
6413	65	2.5591	160	6.2992	37	1.4567	2	0.079	20417	17609	7.44
6414	70	2.7559	180	7.0866	42	1.6535	2.5	0.098	24106	22375	11
6415	75	2.9528	190	7.4803	45	1.7717	2.5	0.098	26568	25804	13.10
6416	80	3.1496	200	7.8740	48	1.8898	2.5	0.098	28209	28074	15.30
6417	85	3.3465	210	8.2677	52	2.0472	3	0.118	30226	30970	18.80
6418	90	3.5433	225	8.8583	54	2.1260	3	0.118	33265	35560	25.40

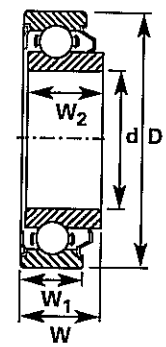
Single Row Radial Ball Bearings

8000 Series (Single Felt Seal)
87000 Series (Single Felt Seal & Shield)
88000 Series (Double Felt Seal)

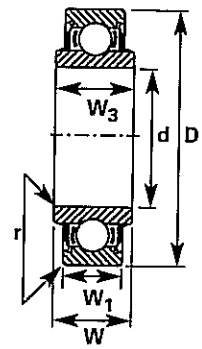
See page 92 for material and sealing options.



8000 Series



87000 Series



88000 Series

Bore Diameter: 5 to 55 mm

Global Bearing Number			Bore d		Outer Diameter D		Width					
							W		W_1		W_2	
8000	87000	88000	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
8035	87035	88035	5	0.1969	19	0.7480	10.319	0.4063	8	0.3150	9.804	0.3860
8036	87036	88036	6	0.2362	19	0.7480	10.319	0.4063	8	0.3150	9.804	0.3860
8006	87006	88006	6	0.2362	24	0.9449	10.319	0.4063	8	0.3150	9.804	0.3860
8037	87037	88037	7	0.2756	22	0.8661	10.319	0.4063	8	0.3150	9.804	0.3860
8007	87007	88007	7	0.2756	24	0.9449	10.319	0.4063	8	0.3150	9.804	0.3860
8038	87038	88038	8	0.3150	22	0.8661	10.319	0.4063	8	0.3150	9.804	0.3860
8008	87008	88008	8	0.3150	24	0.9449	10.319	0.4063	8	0.3150	9.804	0.3860
8039	87039	88039	9	0.3543	26	1.0236	10.319	0.4063	8	0.3150	9.804	0.3860
8009	87009	88009	9	0.3543	30	1.1811	12.700	0.5000	9	0.3543	12.192	0.4800
8500	87500	88500	10	0.3937	30	1.1811	12.700	0.5000	9	0.3543	12.192	0.4800
8011	87011	88011	11	0.4331	32	1.2598	12.700	0.5000	10	0.3937	12.192	0.4800
8501	87501	88501	12	0.4724	32	1.2598	12.700	0.5000	10	0.3937	12.192	0.4800
8013	87013	88013	13	0.5118	32	1.2598	12.700	0.5000	10	0.3937	12.192	0.4800
8014	87014	88014	14	0.5512	35	1.3780	12.700	0.5000	11	0.4331	12.192	0.4800
8502	87502	88502	15	0.5906	35	1.3780	12.700	0.5000	11	0.4331	12.192	0.4800
8016	87016	88016	16	0.6299	35	1.3780	12.700	0.5000	11	0.4331	12.192	0.4800
8602	87602	88602	15	0.5906	42	1.6535	15	0.5906	13	0.5118	14	0.5512
8503	87503	88503	17	0.6693	40	1.5748	14.288	0.5625	12	0.4724	13.665	0.5380
8603	87603	88603	17	0.6693	47	1.8504	16	0.6299	14	0.5512	15	0.5906
8504	87504	88504	20	0.7874	47	1.8504	15.875	0.6250	14	0.5512	15.240	0.6000
8604	87604	88604	20	0.7874	52	2.0472	19	0.7480	15	0.5906	18	0.7087
8505	87505	88505	25	0.9843	52	2.0472	15.875	0.6250	15	0.5906	15.240	0.6000
8605	87605	88605	25	0.9843	62	2.4409	21	0.8268	17	0.6693	21	0.8268
8026	87026	88026	26	1.0236	52	2.0472	15.875	0.6250	15	0.5906	15.240	0.6000
8506	87506	88506	30	1.1811	62	2.4409	20	0.7874	16	0.6299	19	0.7480
8606	87606	88606	30	1.1811	72	2.8346	23	0.9055	19	0.7480	23	0.9055
8507	87507	88507	35	1.3780	72	2.8346	21	0.8268	17	0.6693	20	0.7874
8607	87607	88607	35	1.3780	80	3.1496	25	0.9843	21	0.8268	25	0.9843
8508	87508	88508	40	1.5748	80	3.1496	24	0.9449	21	0.8268	24	0.9449
8608	87608	88608	40	1.5748	90	3.5433	27	1.0630	23	0.9055	27	0.0630
8509	87509	88509	45	1.7717	85	3.3465	24	0.9449	21	0.8268	24	0.9449
8609	87609	88609	45	1.7717	100	3.9370	30	1.1811	25	0.9843	30	1.1811
8510	87510	88510	50	1.9685	90	3.5433	26	1.0236	22	0.8661	26	1.0236
8511	87511	88511	55	2.1654	100	3.9370	27	1.0630	23	0.9055	27	1.0630

Single Row Radial Ball Bearings

8000 Series (Single Felt Seal)
87000 Series (Single Felt Seal & Shield)
88000 Series (Double Felt Seal)

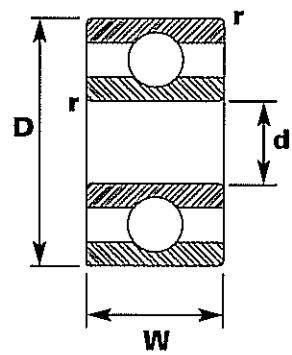
These bearings are equipped with single felt or double felt seals or a combination of a single felt seal with a metallic shield member. They are also available with the standard width bearing rings or as the "WC" (Wide Cup outer ring) variation.

Width W_3		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)		
				Dynamic	Static			
mm	inch	mm	inch	C	C_o	8000	87000	88000
12.624	0.4970	0.3	0.012	405	191	0.022	0.023	0.026
12.624	0.4970	0.3	0.012	405	191	0.024	0.025	0.027
12.624	0.4970	0.3	0.012	690	355	0.046	0.048	0.055
12.624	0.4970	0.3	0.012	580	289	0.037	0.039	0.043
12.624	0.4970	0.3	0.012	690	355	0.045	0.047	0.051
12.624	0.4970	0.3	0.012	580	289	0.036	0.038	0.040
12.624	0.4970	0.3	0.012	690	355	0.043	0.044	0.048
12.624	0.4970	0.6	0.025	790	410	0.051	0.053	0.057
16.401	0.6457	0.6	0.025	885	505	0.078	0.095	0.105
16.401	0.6457	0.6	0.025	885	505	0.075	0.077	0.091
15.400	0.6063	0.6	0.025	1050	595	0.099	0.101	0.104
15.400	0.6063	0.6	0.025	1050	595	0.095	0.097	0.099
15.400	0.6063	0.6	0.025	1050	595	0.091	0.093	0.095
14.399	0.5669	0.6	0.025	1340	775	0.111	0.115	0.125
14.399	0.5669	0.6	0.025	1340	775	0.106	0.108	0.119
14.399	0.5669	0.6	0.025	1340	775	0.101	0.105	0.114
17.000	0.6693	1.0	0.040	1980	1200	0.188	0.193	0.210
16.601	0.6536	0.6	0.025	1660	985	0.150	0.154	0.166
18.000	0.7087	1.0	0.040	2340	1450	0.254	0.257	0.279
17.750	0.6988	1.0	0.040	2220	1410	0.232	0.237	0.259
23.000	0.9055	1.0	0.040	2760	1730	0.345	0.352	0.398
16.749	0.6594	1.0	0.040	2430	1610	0.287	0.292	0.304
25.000	0.9843	1.0	0.040	3650	2370	0.590	0.600	0.650
16.749	0.6594	1.0	0.040	2430	1610	0.277	0.282	0.294
24.000	0.9449	1.0	0.040	3350	2320	0.495	0.506	0.571
27.000	1.0630	1.0	0.040	4600	3150	0.860	0.890	0.970
25.000	0.9843	1.0	0.040	4450	3150	0.695	0.708	0.765
29.000	1.1417	1.5	0.060	5750	4050	1.100	1.120	1.200
27.000	1.0630	1.0	0.040	5050	3650	1.030	1.070	1.180
31.000	1.2205	1.5	0.060	7050	5050	1.530	1.560	1.650
27.000	1.0630	1.0	0.040	5650	4150	1.190	1.200	1.220
35.000	1.3780	1.5	0.060	9150	6800	1.960	2.010	2.190
30.000	1.1811	1.0	0.040	6050	4650	1.270	1.300	1.400
31.000	1.2205	1.5	0.060	7500	5850	1.600	1.640	1.78

Single Row Radial Ball Bearings

W6200 Light Series
W6300 Medium Series
(Cartridge Type)

See page 92 for material and sealing options.



Bore Diameter: 10 to 50 mm

Global Bearing Number	Bore d		Outer Diameter D		Width W			Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
	mm	inch	mm	inch	mm	fraction	inch	mm	inch	Dynamic C	Static C_o	
W6200	10	0.3937	30	1.1811	14.3	9/16	0.5625	1	0.039	935	510	0.10
W6201	12	0.4724	32	1.2598	15.9	5/8	0.6250	1	0.039	1050	595	0.12
W6202	15	0.5906	35	1.3780	15.9	5/8	0.6250	1	0.039	1340	775	0.15
W6203	17	0.6693	40	1.5748	17.5	11/16	0.6890	1	0.039	1660	985	0.22
W6204	20	0.7874	47	1.8504	20.6	13/16	0.8110	1.5	0.059	2220	1440	0.33
W6205	25	0.9843	52	2.0472	20.6	13/16	0.8110	1.5	0.059	2430	1610	0.39
W6206	30	1.1811	62	2.4409	23.8	15/16	0.9370	1.5	0.059	3350	2320	0.62
W6207	35	1.3780	72	2.8346	27	1 1/16	1.0630	2	0.079	4450	3150	0.99
W6208	40	1.5748	80	3.1496	30.2	1 3/16	1.1890	2	0.079	5050	3650	1.38
W6209	45	1.7717	85	3.3465	30.2	1 3/16	1.1890	2	0.079	5650	4150	1.47
W6210	50	1.9687	90	3.5433	30.2	1 3/16	1.1890	2	0.079	6050	4650	1.69

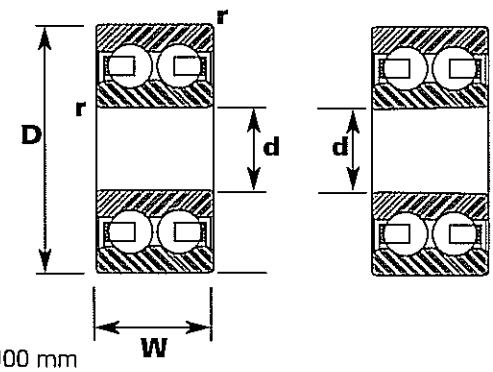
Bore Diameter: 10 to 50 mm

W6302	15	0.5906	42	1.6535	19	3/4	0.7500	1.5	0.059	1960	1180	0.34
W6303	17	0.6693	47	1.8504	22.2	7/8	0.8750	1.5	0.059	2345	1430	0.42
W6304	20	0.7874	52	2.0472	22.2	7/8	0.8750	2	0.079	2750	1715	0.46
W6305	25	0.9843	62	2.4409	25.4	1	1	2	0.079	3650	2370	0.77
W6306	30	1.1811	72	2.8346	30.2	1 3/16	1.1790	2.5	0.098	4600	3150	1.21
W6307	35	1.3780	80	3.1496	34.9	1 3/8	1.3740	2.5	0.098	5750	4050	1.56
W6308	40	1.5748	90	3.5433	36.5	1 7/16	1.4370	2.5	0.098	7050	5050	2.22
W6309	45	1.7717	100	3.9370	39.7	1 9/16	1.5630	2.5	0.098	9150	6800	2.88
W6310	50	1.9687	110	4.3307	44.4	1 3/4	1.7480	3	0.118	10700	8100	3.75

NOTE: Cartridge bearings are generally stocked as double sealed (-2RS)

Double Row Self Aligning Ball Bearings

1200 Light Series
1300 Medium Series



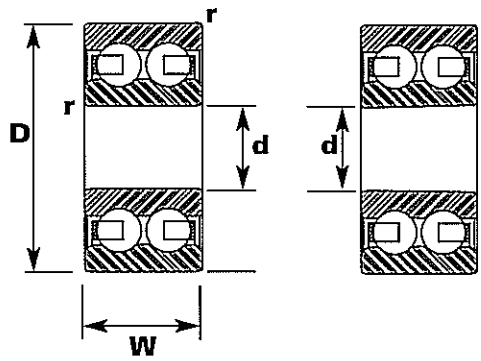
Suffix "K" denotes tapered bore.

Bore Diameter: 10 to 100 mm

Global Bearing Number		Bore d		Outer Diameter D		Width W		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
										Dynamic	Static	
1200 1300	1200K 1300K	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	
1200	1200K	10	0.3937	30	1.1811	9	0.3543	1	0.039	960	300	0.075
1201	1201K	12	0.4724	32	1.2598	10	0.3937	1	0.039	1030	330	0.088
1202	1202K	15	0.5906	35	1.3780	11	0.4331	1	0.039	1320	450	0.108
1203	1203K	17	0.6693	40	1.5748	12	0.4724	1	0.039	1400	545	0.161
1204	1204K	20	0.7874	47	1.8504	14	0.5512	1.5	0.059	1740	715	0.265
1205	1205K	25	0.9843	52	2.0472	15	0.5906	1.5	0.059	2090	890	0.311
1206	1206K	30	1.1811	62	2.4409	16	0.6299	1.5	0.059	2700	1270	0.485
1207	1207K	35	1.3780	72	2.8346	17	0.6693	2	0.079	2730	1430	0.712
1208	1208K	40	1.5748	82	3.1496	18	0.7087	2	0.079	3350	1830	0.919
1209	1209K	45	1.7717	85	3.3465	19	0.7480	2	0.079	3800	2060	1.030
1210	1210K	50	1.9685	90	3.5433	20	0.7874	2	0.079	3950	2290	1.160
1211	1211K	55	2.1654	100	3.9370	21	0.8268	2.5	0.098	4650	2830	1.550
1212	1212K	60	2.3622	110	4.3307	22	0.8661	2.5	0.098	5200	3300	1.980
1213	1213K	65	2.5591	120	4.7244	23	0.9055	2.5	0.098	5350	3600	2.540
1214	1214K	70	2.7559	125	4.9213	24	0.6449	2.5	0.098	6000	3950	2.780
1215	1215K	75	2.9528	130	5.1181	25	0.9843	2.5	0.098	6700	4500	3
1216	1216K	80	3.1496	140	5.5118	26	1.0236	3	0.118	6900	4900	3.680
1217	1217K	85	3.3465	150	5.9055	28	1.1024	3	0.118	8500	5950	4.560
1218	1218K	90	3.5433	160	6.2992	30	1.1811	3	0.118	9850	6700	5.560
1219	1219K	95	3.7402	170	6.6929	32	1.2598	3.5	0.138	11000	7750	6.830
1220	1220K	100	3.9370	180	7.0866	34	1.3386	3.5	0.138	12000	8500	8.160
1300	1300K	10	0.3937	35	1.3780	11	0.4331	0.6	0.024	1279	419	0.128
1301	1301K	12	0.4724	37	1.4567	12	0.4724	1	0.039	1709	531	0.148
1302	1302K	15	0.5906	42	1.6535	13	0.5118	1.5	0.059	1797	591	0.207
1303	1303K	17	0.6693	47	1.8504	14	0.5512	1.5	0.059	2138	827	0.287
1304	1304K	20	0.7874	52	2.0472	15	0.5906	2	0.079	2138	904	0.359
1305	1305K	25	0.9843	62	2.4409	17	0.6693	2	0.079	3100	1340	0.567
1306	1306K	30	1.1811	72	2.8346	19	0.7480	2	0.079	3700	1710	0.853
1307	1307K	35	1.3780	80	3.1496	21	0.8268	2.5	0.098	4350	2150	1.120
1308	1308K	40	1.5748	90	3.5433	23	0.9055	2.5	0.098	5100	2660	1.580
1309	1309K	45	1.7717	100	3.9370	25	0.9843	2.5	0.098	660	3500	2.110
1310	1310K	50	1.9685	110	4.3307	27	1.0630	3	0.118	7500	3850	2.670
1311	1311K	55	2.1654	120	4.7244	29	1.1417	3	0.118	8900	4900	3.480
1312	1312K	60	2.3622	130	5.1181	31	1.2205	3.5	0.138	9900	5750	4.320
1313	1313K	65	2.5591	140	5.5118	33	1.2992	3.5	0.138	10700	6350	5.400
1314	1314K	70	2.7559	150	5.9055	35	1.3780	3.5	0.138	12900	7650	6.600
1315	1315K	75	2.9528	160	6.2992	37	1.4567	3.5	0.138	13700	8300	7.850
1316	1316K	80	3.1496	170	6.6929	39	1.5354	3.5	0.138	15300	9150	9.220
1317	1317K	85	3.3465	180	7.0866	41	1.6142	4	0.157	16900	10500	11
1318	1318K	90	3.5433	190	7.4803	43	1.6929	4	0.157	20100	1220	12.800
1319	1319K	95	3.7402	200	7.8740	45	1.7717	4	0.157	22800	14000	14.700
1320	1320K	100	3.9370	215	8.4646	47	1.8504	4	0.157	24800	15700	18.300

Double Row Self Aligning Ball Bearings

2200 Light Series
2300 Medium Series
(Wide Type)

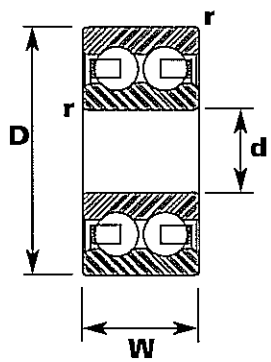


Bore Diameter: 10 to 100 mm

Global Bearing Number		Bore d		Outer Diameter D		Width W		Radius r		Basic Load Rating (lbs.)		Weight (lbs.)	
		mm	inch	mm	inch	mm	inch	mm	inch	Dynamic C	Static C_o	2200 2300	2200K 2300K
2200	2200K	10	0.3937	30	1.1811	14	0.5512	1	0.039	1168	337	0.104	0.098
2201	2201K	12	0.4724	32	1.2598	14	0.5512	1	0.039	1323	432	0.117	0.113
2202	2202K	15	0.5906	35	1.3780	14	0.5512	1	0.039	1323	483	0.132	0.127
2203	2203K	17	0.6693	40	1.5748	16	0.6299	1	0.039	1742	617	0.194	0.188
2204	2204K	20	0.7874	47	1.8504	18	0.7087	1.5	0.059	2160	871	0.309	0.300
2205	2205K	25	0.9843	52	2.0472	18	0.7087	1.5	0.059	2130	940	0.359	0.348
2206	2206K	30	1.1811	62	2.4409	20	0.7874	1.5	0.059	2630	1240	0.573	0.560
2207	2207K	35	1.3780	72	2.8346	23	0.9055	2	0.079	3700	1800	0.868	0.873
2208	2208K	40	1.5748	82	3.1496	23	0.9055	2	0.079	3850	2040	1.11	1.09
2209	2209K	45	1.7717	85	3.3465	23	0.9055	2	0.079	4000	2280	1.20	1.18
2210	2210K	50	1.9685	90	3.5433	23	0.9055	2	0.079	4000	2400	1.30	1.27
2211	2211K	55	2.1654	100	3.9370	25	0.9843	2.5	0.098	4600	2810	1.79	1.75
2212	2212K	60	2.3622	110	4.3307	28	1.1024	2.5	0.098	5850	3550	2.40	2.36
2213	2213K	65	2.5591	120	4.7244	31	1.2205	2.5	0.098	7500	4600	3.22	3.15
2214	2214K	70	2.7559	125	4.9213	31	1.2205	2.5	0.098	7600	4850	3.35	—
2215	2215K	75	2.9528	130	5.1181	31	1.2205	2.5	0.098	7650	5050	3.57	3.48
2216	2216K	80	3.1496	140	5.5118	33	1.2992	3	0.118	8400	5650	4.43	4.34
2217	2217K	85	3.3465	150	5.9055	36	1.4173	3	0.118	10100	6700	5.56	5.42
2218	2218K	90	3.5433	160	6.2992	40	1.5748	3	0.118	12100	8100	7.50	7.34
2219	2219K	95	3.7402	170	6.6929	43	1.6929	3.5	0.138	14400	9650	9.04	8.82
2220	2220K	100	3.9370	180	7.0866	46	1.8110	3.5	0.138	16300	10800	11.0	10.7
2300	2300K	10	0.3937	35	1.3780	17	0.6693	1	0.039	1620	492	0.183	0.180
2301	2301K	12	0.4724	37	1.4567	17	0.6693	1.5	0.059	2017	639	0.201	0.195
2302	2302K	15	0.5906	42	1.6535	17	0.6693	1.5	0.059	2072	728	0.251	0.245
2303	2303K	17	0.6693	47	1.8504	19	0.7480	1.5	0.059	2557	893	0.348	0.340
2304	2304K	20	0.7874	52	2.0472	21	0.8268	2	0.079	2998	1102	0.461	0.452
2305	2305K	25	0.9843	62	2.4409	24	0.9449	2	0.079	4200	1720	0.739	0.721
2306	2306K	30	1.1811	72	2.8346	27	1.0630	2	0.079	5450	2290	1.10	1.08
2307	2307K	35	1.3780	80	3.1496	31	1.2205	2.5	0.098	6800	2940	1.49	1.45
2308	2308K	40	1.5748	90	3.5433	33	1.2992	2.5	0.098	7750	3550	2.04	1.99
2309	2309K	45	1.7717	100	3.9370	36	1.4173	2.5	0.098	9350	4400	2.71	2.65
2310	2310K	50	1.9685	110	4.3307	40	1.5748	3	0.118	11100	5350	3.62	3.53
2311	2311K	55	2.1654	120	4.7244	43	1.6929	3	0.118	13000	6350	4.63	4.52
2312	2312K	60	2.3622	130	5.1181	46	1.8110	3.5	0.138	15000	7450	5.73	5.58
2313	2313K	65	2.5591	140	5.5118	48	1.8898	3.5	0.138	16600	8700	7.12	6.94
2314	2314K	70	2.7559	150	5.9055	51	2.0079	3.5	0.138	18900	10000	8.60	—
2315	2315K	75	2.9528	160	6.2992	55	2.1654	3.5	0.138	21300	11400	10.4	10.2
2316	2316K	80	3.1496	170	6.6929	58	2.2835	3.5	0.138	22200	12100	13.4	13.1
2317	2317K	85	3.3465	180	7.0866	60	2.3622	4	0.157	24300	13700	15.4	15.2
2318	2318K	90	3.5433	190	7.4803	64	2.5197	4	0.157	26300	15400	18.6	18.2
2319	2319K	95	3.7402	200	7.8740	67	2.6378	4	0.157	28500	17200	21.6	21.1
2320	2320K	100	3.9370	215	8.4646	73	2.8740	4	0.157	33000	21100	27.3	26.7

Double Row Ball Bearings

3200 Maximum Capacity Series
3300 Maximum Capacity Series

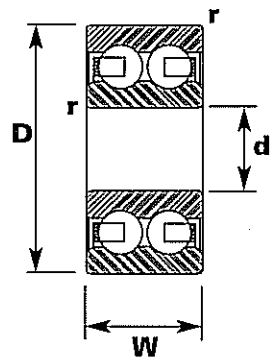


Bore Diameter: 15 to 50 mm

Global Bearing Number	Bore d		Outer Diameter D		Width W				Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
					W		Shields & Seals				Dynamic	Static	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	
3202	15	0.5906	35	1.3780	15.9	0.626	19	0.748	1	0.039	2270	1770	0.152
3203	14	0.6693	40	1.5748	17.5	0.689	20.6	0.811	1	0.039	2890	2310	0.218
3204	20	0.7874	47	1.8504	20.6	0.811	23.8	0.937	1.5	0.059	3550	2920	0.366
3205	25	0.9843	52	2.0472	20.6	0.811	23.8	0.937	1.5	0.059	3950	3400	0.403
3206	30	1.1811	62	2.4409	23.8	0.937	27	1.063	1.5	0.059	5650	5100	0.668
3207	35	1.3780	72	2.8346	27	1.063	30.2	1.189	2	0.079	7650	7100	0.010
3208	40	1.5748	80	3.1496	30.2	1.189	33.3	1.311	2	0.079	8300	8150	1.380
3209	45	1.7717	85	3.3465	30.2	1.189	33.3	1.311	2	0.079	9450	9400	1.490
3210	50	1.9685	90	3.5433	30.2	1.189	36.5	1.437	2	0.079	10700	10800	1.540
3303	17	1.6693	47	1.8504	22.2	0.874	25.4	1	1.5	0.059	3550	2920	0.408
3304	20	1.7874	52	2.0472	22.2	0.874	25.4	1	2	0.079	4300	3600	0.487
3305	25	1.9843	62	2.4409	25.4	1	28.6	1.126	2	0.079	6000	5200	0.780
3306	30	1.1811	72	2.8346	30.2	1.189	33.3	1.311	2	0.079	7900	7050	1.230
3307	35	1.3780	80	3.1496	34.9	1.374	36.1	1.500	2.5	0.098	10100	9250	1.670
3308	40	1.5748	90	3.5433	36.5	1.437	39.7	1.563	2.5	0.098	11100	10800	2.270

Double Row Ball Bearings

5200 Series
W5200 Series
(Non Filling Slot Type)



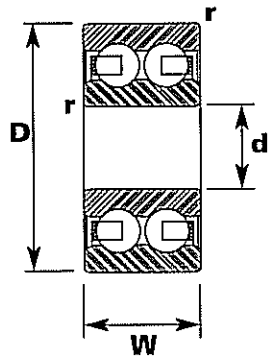
Bore Diameter: 10 to 90 mm

Global Bearing Number	Bore d		Outer Diameter D		Width W			Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
	mm	inch	mm	inch	mm	fraction	inch	mm	inch	Dynamic C	Static C_o	
5200	10	0.3937	30	1.1811	14.3	9/16	0.5630	0.8	0.032	1150	750	0.13
5201	12	0.4724	32	1.2598	15.9	5/8	0.6260	0.8	0.032	1580	1030	0.16
5202	15	0.5906	35	1.3780	15.9	5/8	0.6260	1	0.039	1635	1110	0.18
5203	17	0.6693	40	1.5748	17.5	11/16	0.6890	1	0.039	2085	1450	0.20
5204	20	0.7874	47	1.8504	20.6	13/16	0.8110	1.5	0.059	3060	2325	0.34
W5204	20	0.7874	47	1.8504	23.8	15/16	0.9375	1.5	0.059	3060	2325	0.36
5205	25	0.9843	52	2.0472	20.6	13/16	0.8110	1.5	0.059	3550	2710	0.42
W5205	25	0.9843	52	2.0472	23.8	15/16	0.9375	1.5	0.059	3550	2710	0.45
5206	30	1.1811	62	2.4409	23.8	15/16	0.9375	1.5	0.059	4690	3885	0.64
W5206	30	1.1811	62	2.4409	27	1 1/16	1.0630	1.5	0.059	4690	3885	0.74
5207	35	1.3780	72	2.8346	27	1 1/16	1.0630	2	0.079	6410	5505	0.95
W5207	35	1.3780	72	2.8346	30.2	1 3/16	1.1890	2	0.079	6410	5505	1.21
5208	40	1.5748	80	3.1496	30.2	1 3/16	1.1890	2	0.079	7330	6370	1.26
5209	45	1.7717	85	3.3465	30.2	1 3/16	1.1890	2	0.079	7890	6860	1.37
5210	50	1.9685	90	3.5433	30.2	1 3/16	1.1890	2	0.079	8680	7550	1.48
5211	55	2.1654	100	3.9370	33.3	1 5/16	1.3110	2.5	0.098	9850	9250	2.17
5212	60	2.3622	110	4.3307	36.5	1 7/16	1.4370	2.5	0.098	12000	11500	2.80
5213	65	2.5591	120	4.7244	38.1	1 1/2	1.5000	2.5	0.098	13200	12600	3.46
5214	70	2.7559	125	4.9213	39.7	1 9/16	1.5630	2.5	0.098	14400	14100	3.97
5215	75	2.9528	130	5.1181	41.3	1 5/8	1.6260	2.5	0.098	15600	15500	4.20
5216	80	3.1496	140	5.5118	44.4	1 3/4	1.7480	3	0.118	19100	18300	5.50
5217	85	3.3465	150	5.9055	49.2	1 15/16	1.9375	3	0.118	19700	19500	6.75
5218	90	3.5433	160	6.2992	52.4	2 1/16	2.0630	3	0.118	22600	22100	8.90

NOTE: 5211 through 5218 are only available as open or NR types.

Double Row Ball Bearings

5300 Series
W5300 Series
(Non–Filling Slot)

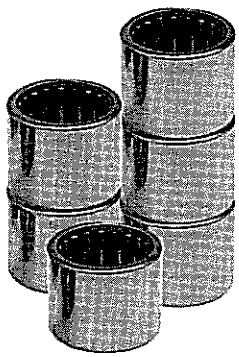


Bore Diameter: 10 to 80 mm

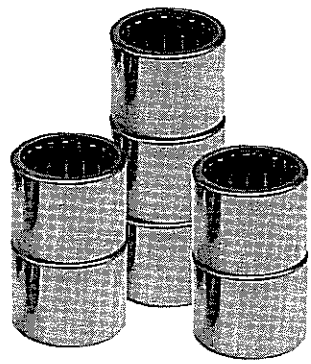
Global Bearing Number	Bore d		Outer Diameter D		Width W			Radius r		Basic Load Rating (lbs.)		Weight (lbs.)
	mm	inch	mm	inch	mm	fraction	inch	mm	inch	Dynamic C	Static C_o	
5300	10	0.3937	35	1.3780	19	3/4	0.7500	.6	0.024	1731	1224	0.22
5301	12	0.4724	37	1.4567	19	3/4	0.7500	1.1	0.043	1996	1389	0.23
5302	15	0.5906	42	1.6535	19	3/4	0.7500	1.5	0.059	2480	1710	0.38
5303	17	0.6693	47	1.8504	22.2	7/8	0.8740	1.5	0.059	3395	2580	0.49
5304	20	0.7874	52	2.0472	22.2	7/8	0.8750	2	0.079	3440	2615	0.51
W5304	20	0.7874	52	2.0472	25.4	1	1	2	0.079	3440	2615	0.54
5305	25	0.9843	62	2.4409	25.4	1	1	2	0.079	4550	3765	0.75
W5305	25	0.9843	62	2.4409	29.6	1 1/8	1.1250	2	0.079	4550	3765	0.89
5306	30	1.1811	72	2.8346	30.2	1 3/16	1.1890	2	0.079	7050	5795	1.13
W5306	30	1.1811	72	2.8346	33.3	1 5/16	1.3125	2	0.079	7050	5795	1.41
5307	35	1.3780	80	3.1496	34.9	1 3/8	1.3740	2.5	0.098	8815	7495	1.74
W5307	35	1.3780	80	3.1496	38.1	1 1/2	1.5000	2.5	0.098	8815	7495	1.89
5308	40	1.5748	90	3.5433	36.5	1 7/16	1.4370	2.5	0.098	10800	9365	2.32
5309	45	1.7717	100	3.9370	39.7	1 9/16	1.5630	2.5	0.098	12500	11000	3.10
5310	50	1.9685	110	4.3307	44.4	1 3/4	1.7480	3	0.118	14800	13200	4
5311	55	2.1654	120	4.7244	49.2	1 15/16	1.9370	3	0.118	18400	16800	5.11
5312	60	2.3622	130	5.1181	54	2 1/8	2.1260	3.5	0.138	21000	19500	6.72
5313	65	2.5591	140	5.5118	58.7	2 5/16	2.3110	3.5	0.138	24600	22900	8.60
5314	70	2.7559	150	5.9055	63.5	2 1/2	2.5000	3.5	0.138	27700	26000	10.80
5315	75	2.9528	160	6.2992	68.3	2 11/16	2.6890	3.5	0.138	30200	29400	12.10
5316	80	3.1496	170	6.6929	68.3	2 11/16	2.6890	3.5	0.138	32700	32900	15

NOTE: 5211 through 5218 are only available as open or NR types.

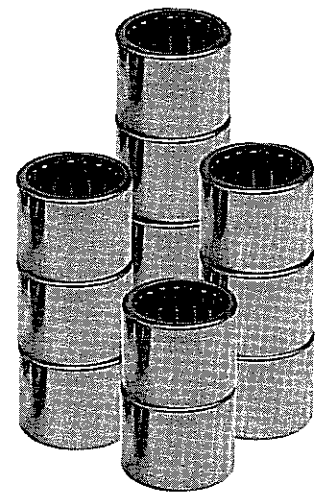
HOW MANY QUALITY NEEDLE BEARINGS CAN YOU BUY FOR $50?



Torrington – 6



INA – 7



Global – 12

With no sacrifice in quality, Global Needle Bearings are typically priced 30% to 50% less than our competition. This is why many of the largest and most demanding manufacturers in the country are switching to Global Bearings. You simply can't buy higher quality drawn cup, thrust or clutch bearings for less.

Call today to find out how Global Bearings can improve your bearing supply.

Global Bearings, Inc.

Ball • Needle • Roller • Mounted

Global Bearings, Inc. 3818 South 79th East Ave Tulsa, OK 74145 Phone: (918) 664-8902 Fax: (918) 664-5850

Needle Bearing Numbering System

Global Bearing's numbering system utilizes a basic bearing number to indicate the appropriate bearing series, and a complementary set of prefix and suffix designations which allow a complete description of any bearing configuration.

Drawn Cup Bearings

Inch Nominal Dimensions

Prefixes
- **B** full complement of mechanically retained needle rollers
- **G** extra precision
- **H** heavy series
- **J** cage
- **M** closed series
- **T** one seal
- **TT** two seals

Suffixes: limited availability
- **F** plastic cage
- **GF** grease fitting, closed end
- **OH** oil hole
- **OHE** oil hole in closed end

with M prefix
signifies closed end inch nominal dimensions

MJH – 18 16 1 – OH

Bore
16 = $^{16}/_{16} = 1$ "
18 = $^{18}/_{16} = 1\,^{1}/_{8}$ "
with HK prefix, 20 = 20 mm

Width
12 = $^{12}/_{16} = ^{3}/_{4}$ "
16 = $^{16}/_{16} = 1\,^{1}/_{8}$ "
with HK prefix, 20 = 20 mm

Inner Rings

(with 4-digit number for drawn cup bearings only)

Prefixes
- **IR** plastic cage
- **IRA** oil hole in closed end

Suffixes: limited availability
- **L** 0.005" width tolerance
- **OH** oil hole

IR – 14 16 – OH

Bore
16 = $^{16}/_{16} = 1$ "
18 = $^{18}/_{16} = 1\,^{1}/_{8}$ "
with HK prefix, 20 = 20mm

Width
12 = $^{12}/_{16} = ^{3}/_{4}$ "
16 = $^{16}/_{16} = 1\,^{1}/_{8}$ "
with HK prefix, 20 = 20 mm

Drawn Cup Roller Clutches

Inch Series
- **RC** regular clutch, single roller per integral spring
- **RC-FS** regular clutch, single roller per stainless steel spring
- **RCB** regular clutch and bearing assembly, single roller per integral spring
- **RCB-FS** regular clutch and bearing assembly, single roller per stainless steel spring

RC 10 14 10

Bore
10 = $^{10}/_{16} = ^{5}/_{8}$ "

Outside Diameter
14 = $^{14}/_{16} = ^{7}/_{8}$ "

Width
10 = $^{10}/_{16} = ^{5}/_{8}$ "

Bore, in millimeters

FCL 10 – K

Metric Series
- **FCS** regular clutch, single roller per stainless steel spring
- **FC** regular clutch, multi-roller per stainless steel spring
- **FCL-K** light series clutch, single roller per stainless steel spring
- **FCSB** regular clutch and bearing assembly, single roller per stainless steel spring
- **FCB** regular clutch and bearing assembly, multi-roller per stainless steel spring
- **FCBL-K** light series clutch and bearing assembly, single roller per stainless steel spring

Thrust Bearings

NT cage assembly

Bore
20 = 20 mm
16 = $^{16}/_{16} = 1$ "

F NT A 20 35

F Metric Designation

Cage Design
- **A** needle roller
- **C** needle roller
- **H** cylindrical roller

Outside Diameter
35 = 35 mm
25 = $^{25}/_{16} = 1\,^{9}/_{16}$ "

Thrust Washers

- **TR** thrust washer, inch
- **AS** thrust washer, metric

Bore
16 = $^{16}/_{16} = 1$ "
10 = $^{10}/_{16} = ^{5}/_{8}$ "
20 = 20 mm

TR B 10 18

Outside Diameter
35 = 35 mm
25 = $^{25}/_{16} = 1\,^{9}/_{16}$ "

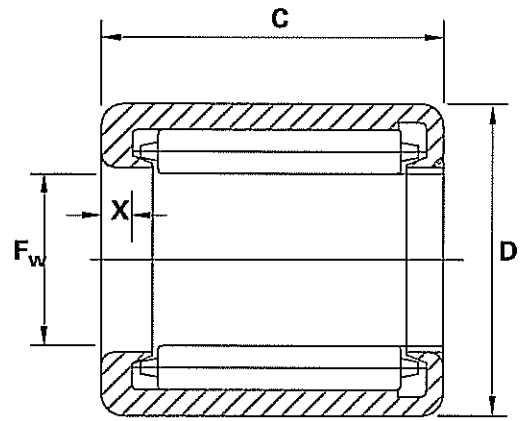
- **A, B, C etc.** washer thickness, inch
- **I & J** bore piloted washers
- **ID, JD** outside diameter piloted washers

Drawn Cup Needle Roller Bearings

Full Complement Bearings

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.



B type

BEARING DIMENSIONS						MECHANICALLY RETAINED ROLLERS						BEARING MOUNTING			
F_w Bore		D Outside Diameter		C Width		Bearing Designation		Load Ratings		Limiting Speed Full Complement Bearings	X End Thickness		Inch Mounting		
								Basic Dynamic C_r	Basic Static C_o				Shaft Raceway Diameter		Housing Bore
(nominal)		(nominal)		+0.000 −0.010	+0.00 −0.25	open end	closed end	ISO 281	ISO 76		(max.)		inches		inches
inch	mm	inch	mm	inch	mm			lbf	lbf	rpm	inch	mm	min. max.		min. max.
1/4	6.35	7/16	11.11	0.250	6.35	B-44	M-441	566	531	10000	0.08	2.0	0.2500	0.2495	0.4370 0.4380
1/4	6.35	7/16	11.11	0.312	7.92	B-45	M-451	768	786	10000	0.08	2.0	0.2500	0.2495	0.4370 0.4380
1/4	6.35	7/16	11.11	0.438	11.13	B-47	M-471	1210	1410	10000	0.08	2.0	0.2500	0.2495	0.4370 0.4380
0.28	7	0.43	11	0.354	9	—	—	—	—	—	—	—	0.2756	0.2752	0.4322 0.4329
5/16	7.94	1/2	12.70	0.312	7.92	B-55	M-551	883	985	8300	0.08	2.0	0.3125	0.3120	0.4995 0.5005
5/16	7.94	1/2	12.70	0.375	9.52	B-56	—	1140	1370	8300	—	—	0.3125	0.3120	0.4995 0.5005
5/16	7.94	1/2	12.70	0.438	11.13	B-57	M-571	1390	1770	8300	0.08	2.0	0.3125	0.3120	0.4995 0.5005
5/16	7.94	1/2	12.70	0.562	14.27	B-59	—	1850	2550	8300	—	—	0.3125	0.3120	0.4995 0.5005
5/16	7.94	9/16	14.29	0.438	11.13	BH-57	—	1530	1590	11000	—	—	0.3125	0.3120	0.5620 0.5630
5/16	7.94	9/16	14.29	0.562	14.27	BH-59	—	2080	2340	11000	—	—	0.3125	0.3120	0.5620 0.5630
0.31	8	0.47	12	0.315	8	—	—	—	—	—	—	—	0.3150	0.3146	0.4715 0.4722
0.31	8	0.47	12	0.394	10	—	—	—	—	—	—	—	0.3150	0.3146	0.4715 0.4722
0.35	9	0.51	13	0.394	10	—	—	—	—	—	—	—	0.3543	0.3539	0.5109 0.5116
0.35	9	0.51	13	0.472	12	—	—	—	—	—	—	—	0.3543	0.3539	0.5109 0.5116
3/8	9.52	9/16	14.29	0.312	7.92	B-65	M-651	984	1180	7100	0.08	2.0	0.3750	0.3745	0.5620 0.5630
3/8	9.52	9/16	14.29	0.375	9.52	B-66	M-661	1280	1650	7100	0.08	2.0	0.3750	0.3745	0.5620 0.5630
3/8	9.52	9/16	14.29	0.438	11.13	B-67	—	1550	2120	7100	—	—	0.3750	0.3745	0.5620 0.5630
3/8	9.52	9/16	14.29	0.500	12.70	B-68	M-681	1810	2590	7100	0.08	2.0	0.3750	0.3745	0.5620 0.5630
3/8	9.52	9/16	14.29	0.562	14.27	B-69	—	2070	3070	7100	—	—	0.3750	0.3745	0.5620 0.5630
3/8	9.52	9/16	14.29	0.625	15.88	B-610	M-6101	2310	3530	7100	0.08	2.0	0.3750	0.3745	0.5620 0.5630
3/8	9.52	5/8	15.88	0.500	12.70	BH-68	—	2050	2380	9400	—	—	0.3750	0.3745	0.6245 0.6255
0.39	10	0.55	14	0.394	10	—	—	—	—	—	—	—	0.3937	0.3933	0.5503 0.5510
0.39	10	0.55	14	0.472	12	—	—	—	—	—	—	—	0.3937	0.3933	0.5503 0.5510
0.39	10	0.55	14	0.591	15	—	—	—	—	—	—	—	0.3937	0.3933	0.5503 0.5510

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N

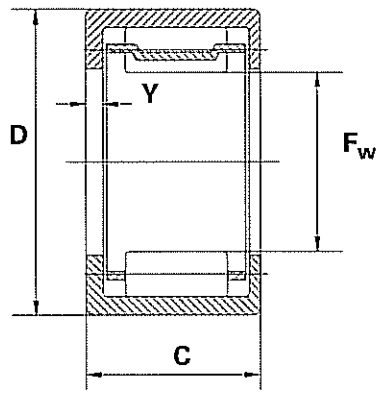
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speed is based on oiled bearings.

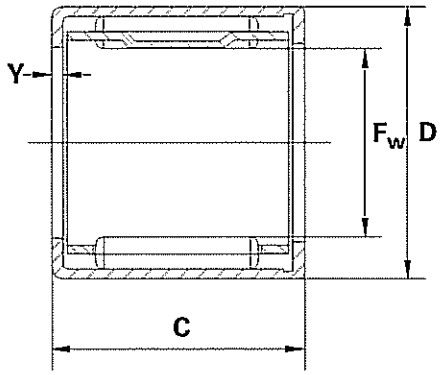
For greased bearings, the limiting speed is generally a little lower.

Drawn Cup Needle Roller Bearings

Caged Bearings



HK type



J type

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.

BEARING MOUNTING				*CAGE RETAINED ROLLERS*						
Metric Mounting				**Bearing Designation**		**Load Ratings**		**Limiting Speed Caged Bearings**	**Y End Thickness**	
Shaft Raceway Diameter		**Housing Bore**				**Basic Dynamic C_r**	**Basic Static C_o**			
millimeters		millimeters		open end	closed end	ISO 281	ISO 76		(max.)	
min.	max.	min.	max.			lbf	lbf	rpm	inch	mm
—	—	—	—	—	—	—	—	—	—	—
6.350	6.337	11.100	11.125	**J-45**	MJ-451	397	331	57000	0.04	1.0
6.350	6.337	11.100	11.125	**J-47**	MJ-471	648	617	57000	0.04	1.0
7.000	6.991	10.977	10.995	**HK-0709**	—	660	686	50000	—	—
7.938	7.925	12.687	12.712	**J-55**	—	431	383	44000	—	—
7.938	7.925	12.687	12.712	—	—	—	—	—	—	—
7.938	7.925	12.687	12.712	**J-57**	MJ-571	767	805	44000	0.04	1.0
7.938	7.925	12.687	12.712	—	—	—	—	—	—	—
7.938	7.925	14.275	14.300	**JH-57**	MJH-571	954	849	47000	0.04	1.0
7.938	7.925	14.275	14.300	—	—	—	—	—	—	—
8.000	7.991	11.977	11.995	**HK-0808**	BK-0808	593	615	43000	0.06	1.6
8.000	7.991	11.977	11.995	**HK-0810**	BK-0810	808	915	43000	0.06	1.6
9.000	8.991	12.977	12.995	**HK-0910**	—	936	1140	38000	—	—
9.000	8.991	12.977	12.995	**HK-0912**	BK-0912	1164	1500	38000	0.06	1.6
9.525	9.512	14.275	14.300	**J-65**	MJ-651	491	474	36000	0.04	1.0
—	—	—	—	—	—	—	—	—	—	—
9.525	9.512	14.275	14.300	—	—	—	—	—	—	—
9.525	9.512	14.275	14.300	**J-58**	—	1030	1240	36000	—	—
9.525	9.512	14.275	14.300	—	—	—	—	—	—	—
9.525	9.512	14.275	14.300	—	—	—	—	—	—	—
9.525	9.512	15.862	15.887	**JH-68**	—	1350	1370	38000	—	—
10.000	9.991	13.977	13.995	**HK-1010**	—	982	1240	34000	—	—
10.000	9.991	13.977	13.995	**HK-1012**	—	1210	1630	34000	—	—
10.000	9.991	13.977	13.995	**HK-1015**	—	1530	2210	34000	—	—

Mounting dimensions are based on the inner ring rotating and the outer ring being stationary relative to the load. The housing should be of high strength material.

Drawn cup bearings of nominal inch and metric dimensions with one closed end, which are not tabulated, may be made available upon request.

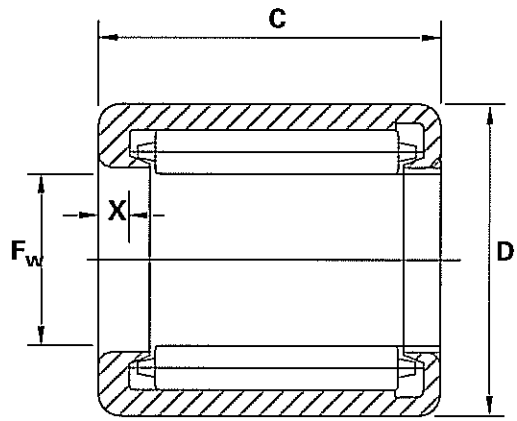
Caged drawn cup bearings of nominal inch and metric dimensions, with an engineered polymer cage, may be made available upon request.

Drawn Cup Needle Roller Bearings

Full Complement Bearings

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.



B type

BEARING DIMENSIONS						MECHANICALLY RETAINED ROLLERS						BEARING MOUNTING			
F_w Bore		D Outside Diameter		C Width		Bearing Designation		Load Ratings		Limiting Speed Full Complement Bearings	X End Thickness		Inch Mounting		
								Basic Dynamic C_r	Basic Static C_o				Shaft Raceway Diameter		Housing Bore
(nominal)		(nominal)		+0.000 -0.010	+0.00 -0.25	open end	closed end	ISO 281	ISO 76		(max.)		inches		inches
inch	mm	inch	mm	inch	mm			lbf	lbf	rpm	inch	mm	min.	max.	min.	max.
7/16	11.11	5/8	15.88	0.375	9.52	B-76	—	1390	1930	6300	—	—	0.4375	0.4370	0.6245	0.6255
7/16	11.11	5/8	15.88	0.438	11.13	B-77	—	1700	2480	6300	—	—	0.4375	0.4370	0.6245	0.6255
7/16	11.11	5/8	15.88	0.500	12.70	B-78	M-781	1980	3030	6300	0.08	2.0	0.4375	0.4370	0.6245	0.6255
7/16	11.11	5/8	15.88	0.625	15.88	B-710	—	2520	4130	6300	—	—	0.4375	0.4370	0.6245	0.6255
7/16	11.11	11/16	17.46	0.500	12.70	BH-78	—	2260	2780	6300	—	—	0.4375	0.4370	0.6870	0.6880
0.47	12	0.63	16	0.394	10	—	—	—	—	—	—	—	0.4724	0.4720	0.6290	0.6297
0.47	12	0.71	18	0.472	12	—	—	—	—	—	—	—	0.4724	0.4720	0.7078	0.7085
1/2	12.70	11/16	17.46	0.312	7.92	B-85	—	1160	1580	5500	—	—	0.5000	0.4995	0.6870	0.6880
1/2	12.70	11/16	17.46	0.375	9.52	B-86	M-861	1500	2200	5500	0.08	2.0	0.5000	0.4995	0.6870	0.6880
1/2	12.70	11/16	17.46	0.438	11.13	B-87	M-871	1830	2840	5500	0.08	2.0	0.5000	0.4995	0.6870	0.6880
1/2	12.70	11/16	17.46	0.500	12.70	B-88	M-881	2130	3460	5500	0.08	2.0	0.5000	0.4995	0.6870	0.6880
1/2	12.70	11/16	17.46	0.625	15.88	B-810	M-8101	2720	4720	5500	0.08	2.0	0.5000	0.4995	0.6870	0.6880
1/2	12.70	11/16	17.46	0.750	19.05	B-812	M-8121	3260	5980	5500	0.08	2.0	0.5000	0.4995	0.6870	0.6880
1/2	12.70	3/4	19.05	0.438	11.13	BH-87	—	2060	2550	7500	—	—	0.5000	0.4995	0.7495	0.7505
1/2	12.70	3/4	19.05	0.500	12.70	BH-88	—	2450	3180	7500	—	—	0.5000	0.4995	0.7495	0.7505
1/2	12.70	3/4	19.05	0.625	15.88	BH-810	—	3180	4440	7500	—	—	0.5000	0.4995	0.7495	0.7505
1/2	12.70	3/4	19.05	0.750	19.05	BH-812	—	3850	5690	7500	—	—	0.5000	0.4995	0.7495	0.7505
0.51	13	0.75	19	0.472	12	—	—	—	—	—	—	—	0.5118	0.5114	0.7469	0.7477
0.55	14	0.79	20	0.472	12	—	—	—	—	—	—	—	0.5512	0.5508	0.7863	0.7871
9/16	14.29	3/4	19.05	0.312	7.92	B-95	M-951	1240	1780	5000	0.08	2.0	0.5625	0.5620	0.7495	0.7505
9/16	14.29	3/4	19.05	0.375	9.52	B-96	—	1600	2480	5000	—	—	0.5625	0.5620	0.7495	0.7505
9/16	14.29	3/4	19.05	0.438	11.13	B-97	—	1950	3190	5000	—	—	0.5625	0.5620	0.7495	0.7505
9/16	14.29	3/4	19.05	0.500	12.70	B-98	—	2280	3900	5000	—	—	0.5625	0.5620	0.7495	0.7505
9/16	14.29	3/4	19.05	0.625	15.88	B-910	—	2900	5310	5000	—	—	0.5625	0.5620	0.7495	0.7505
9/16	14.29	3/4	19.05	0.750	19.05	B-912	M-9121	3480	6730	5000	0.08	2.0	0.5625	0.5620	0.7495	0.7505
9/16	14.29	13/16	20.64	0.500	12.70	BH-98	—	2630	3580	6800	—	—	0.5625	0.5620	0.8120	0.8130
9/16	14.29	13/16	20.64	0.625	15.88	BH-910	—	3400	5000	6800	—	—	0.5625	0.5620	0.8120	0.8130
9/16	14.29	13/16	20.64	0.750	19.05	BH-912	—	4130	6410	6800	—	—	0.5625	0.5620	0.8120	0.8130
0.59	15	0.83	21	0.472	12	—	—	—	—	—	—	—	0.5906	0.5902	0.8257	0.8265
0.59	15	0.83	21	0.630	16	—	—	—	—	—	—	—	0.5906	0.5902	0.8257	0.8265
5/8	15.88	13/16	20.64	0.312	7.92	B-105	—	1310	1980	4500	—	—	0.6250	0.6245	0.8120	0.8130
5/8	15.88	13/16	20.64	0.438	11.13	B-107	M-1071	2070	3550	4500	0.08	2.0	0.6250	0.6245	0.8120	0.8130
5/8	15.88	13/16	20.64	0.500	12.70	B-108	M-1081	2410	4330	4500	0.08	2.0	0.6250	0.6245	0.8120	0.8130
5/8	15.88	13/16	20.64	0.625	15.88	B-1010	—	3070	5900	4500	—	—	0.6250	0.6245	0.8120	0.8130
5/8	15.88	13/16	20.64	0.750	19.05	B-1012	M-10121	3690	7480	4500	0.08	2.0	0.6250	0.6245	0.8120	0.8130

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N

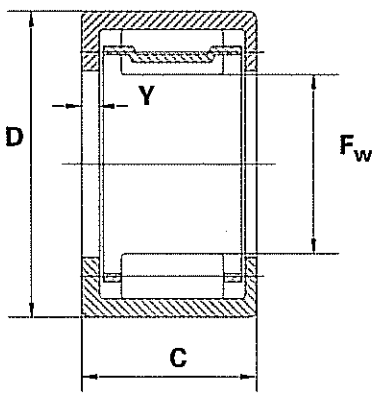
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speed is based on oiled bearings.

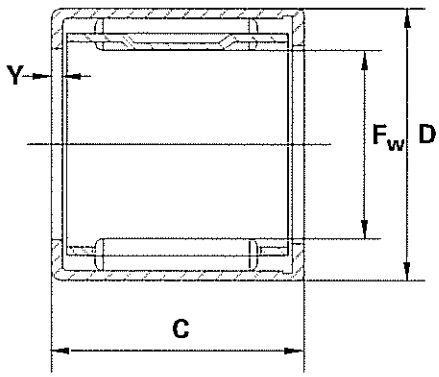
For greased bearings, the limiting speed is generally a little lower.

Drawn Cup Needle Roller Bearings

Caged Bearings



HK type



J type

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.

BEARING MOUNTING				CAGE RETAINED ROLLERS						
Metric Mounting				Bearing Designation		Load Ratings		Limiting Speed Caged Bearings	Y End Thickness	
Shaft Raceway Diameter millimeters		Housing Bore millimeters		open end	closed end	Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76		(max.)	
min.	max.	min.	max.			lbf	lbf	rpm	inch	mm
11.112	11.099	15.862	15.887	—	—	—	—	—	—	—
11.112	11.099	15.862	15.887	—	—	—	—	—	—	—
11.112	11.099	15.862	15.887	J-78	MJ-781	1210	1580	30000	0.04	1.0
11.112	11.099	15.862	15.887	—	—	—	—	—	—	—
11.112	11.099	17.450	17.475	JH-78	—	1450	1510	38000	—	—
12.000	11.989	15.977	15.995	HK-1210	BK-1210	1110	1370	28000	0.06	1.6
12.000	11.989	17.977	17.995	HK-1212	BK-1212	1350	1640	28000	0.11	2.7
12.700	12.687	17.450	17.475	J-85	MJ-851	621	697	26000	0.04	1.0
12.700	12.687	17.450	17.475	J-86	MJ-861	906	1130	26000	0.04	1.0
12.700	12.687	17.450	17.475	—	—	—	—	—	—	—
12.700	12.687	17.450	17.475	J-88	MJ-881	1250	1710	26000	0.04	1.0
12.700	12.687	17.450	17.475	—	—	—	—	—	—	—
12.700	12.687	17.450	17.475	J-812	—	2060	3240	26000	—	—
12.700	12.687	19.037	19.062	JH-87	—	1310	1400	27000	—	—
12.700	12.687	19.037	19.062	JH-88	MJH-881	1590	1800	27000	0.04	1.0
12.700	12.687	19.037	19.062	—	—	—	—	—	—	—
12.700	12.687	19.037	19.062	JH-812	—	2530	3250	27000	—	—
13.000	12.989	18.972	18.993	HK-1312	BK-1312	1410	1770	26000	0.11	2.7
14.000	13.989	19.972	19.993	HK-1412	—	1470	1910	24000	—	—
14.288	14.275	19.037	19.062	—	—	—	—	—	—	—
14.288	14.275	19.037	19.062	—	—	—	—	—	—	—
14.288	14.275	19.037	19.062	J-97	—	1040	1400	23000	—	—
14.288	14.275	19.037	19.062	J-98	—	1230	1730	23000	—	—
14.288	14.275	19.037	19.062	J-910	—	1630	2490	23000	—	—
14.288	14.275	19.037	19.062	—	—	—	—	—	—	—
14.288	14.275	20.625	20.650	—	—	—	—	—	—	—
14.288	14.275	20.625	20.650	—	—	—	—	—	—	—
14.288	14.275	20.625	20.650	—	—	—	—	—	—	—
15.000	14.989	20.972	20.993	HK-1512	BK-1512	1530	2050	22000	0.11	2.7
15.000	14.989	20.972	20.993	HK-1516	BK-1516	2180	3230	22000	0.11	2.7
15.875	15.862	20.625	20.650	—	—	—	—	—	—	—
15.875	15.862	20.625	20.650	—	—	—	—	—	—	—
15.875	15.862	20.625	20.650	J-108	—	1330	1970	21000	—	—
15.875	15.862	20.625	20.650	J-1010	MJ-10101	1760	2830	21000	0.04	1.0
15.785	15.862	20.625	20.650	J-1012	MJ-10121	2540	4570	21000	0.04	1.0

Mounting dimensions are based on the inner ring rotating and the outer ring being stationary relative to the load. The housing should be of high strength material.

Drawn cup bearings of nominal inch and metric dimensions with one closed end, which are not tabulated, may be made available upon request.

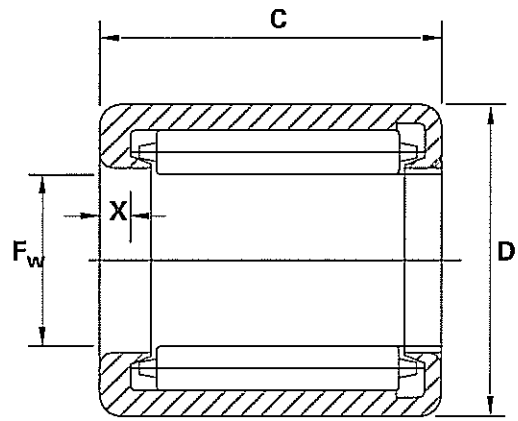
Caged drawn cup bearings of nominal inch and metric dimensions, with an engineered polymer cage, may be made available upon request.

Drawn Cup Needle Roller Bearings

Full Complement Bearings

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.



B type

BEARING DIMENSIONS						MECHANICALLY RETAINED ROLLERS							BEARING MOUNTING			
F_w Bore (nominal)		D Outside Diameter (nominal)		C Width +0.000 -0.010	+0.00 -0.25	Bearing Designation		Load Ratings Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76	Limiting Speed Full Complement Bearings	X End Thickness (max.)		Inch Mounting Shaft Raceway Diameter inches		Housing Bore inches	
						open end	closed end	lbf	lbf	rpm			min.	max.	min.	max.
Inch	mm	Inch	mm	inch	mm						Inch	mm				
5/8	15.88	7/8	22.22	0.500	12.70	BH-108	MH-1081	2790	3980	6200	0.09	2.3	0.6250	0.6245	0.8745	0.8755
5/8	15.88	7/8	22.22	0.625	15.88	BH-1010	—	3620	5530	6200	—	—	0.6250	0.6245	0.8745	0.8755
5/8	15.88	7/8	22.22	0.750	19.05	BH-1012	—	4390	7130	6200	—	—	0.6250	0.6245	0.8745	0.8755
5/8	15.88	7/8	22.22	1.000	25.40	BH-1016	—	5830	10300	6200	—	—	0.6250	0.6245	0.8745	0.8755
0.63	16	0.87	22	0.472	12	—	—	—	—	—	—	—	0.6299	0.6295	0.8650	0.8658
0.63	16	0.87	22	0.630	16	—	—	—	—	—	—	—	0.6299	0.6295	0.8650	0.8658
0.67	17	0.91	23	0.472	12	—	—	—	—	—	—	—	0.6693	0.6689	0.9044	0.9052
11/16	17.46	7/8	22.22	0.375	9.52	B-116	—	1790	3030	4200	—	—	0.6875	0.6870	0.8745	0.8755
11/16	17.46	7/8	22.22	0.500	12.70	B-118	—	2540	4770	4200	—	—	0.6875	0.6870	0.8745	0.8755
11/16	17.46	7/8	22.22	0.625	15.88	B-1110	M-11101	3230	6500	4200	0.08	2.0	0.6875	0.6870	0.8745	0.8755
11/16	17.46	7/8	22.22	0.750	19.05	B-1112	M-11121	3880	8230	4200	0.08	2.0	0.6875	0.6870	0.8745	0.8755
11/16	17.46	15/16	23.81	0.438	11.13	BH-117	—	2480	3510	5700	—	—	0.6875	0.6870	0.9370	0.9380
11/16	17.46	15/16	23.81	0.625	15.88	BH-1110	MH-11101	3820	6110	5700	0.09	2.3	0.6875	0.6870	0.9370	0.9380
11/16	17.46	15/16	23.81	0.750	19.05	BH-1112	—	4640	7840	5700	—	—	0.6875	0.6870	0.9370	0.9380
0.71	18	0.94	24	0.472	12	—	—	—	—	—	—	—	0.7087	0.7083	0.9438	0.9446
0.71	18	0.94	24	0.630	16	—	—	—	—	—	—	—	0.7087	0.7083	0.9438	0.9446
3/4	19.05	1	25.40	0.375	9.52	B-126	—	2100	2900	5500	—	—	0.7500	0.7495	0.9995	1.0005
3/4	19.05	1	25.40	0.500	12.70	B-128	M-1281	3100	4790	5500	0.09	2.3	0.7500	0.7495	0.9995	1.0005
3/4	19.05	1	25.40	0.625	15.88	B-1210	M-12101	4010	6670	5500	0.09	2.3	0.7500	0.7495	0.9995	1.0005
3/4	19.05	1	25.40	0.750	19.05	B-1212	M-12121	4870	8560	5500	0.09	2.3	0.7500	0.7495	0.9995	1.0005
0.79	20	1.02	26	0.472	12	—	—	—	—	—	—	—	0.7874	0.7869	1.0225	1.0233
0.79	20	1.02	26	0.630	16	—	—	—	—	—	—	—	0.7874	0.7869	1.0225	1.0233
0.79	20	1.02	26	0.787	20	—	—	—	—	—	—	—	0.7874	0.7869	1.0225	1.0233
13/16	20.64	1 1/16	26.99	0.375	9.52	B-136	—	2190	3140	5200	—	—	0.8125	0.8120	1.0620	1.0630
13/16	20.64	1 1/16	26.99	0.500	12.70	B-138	M-1381	3240	5190	5200	0.09	2.3	0.8125	0.8120	1.0620	1.0630
13/16	20.64	1 1/16	26.99	0.875	22.22	B-1314	—	5940	11300	5200	—	—	0.8125	0.8120	1.0620	1.0630
13/16	20.64	1 1/16	26.99	1.000	25.40	B-1316	M-13161	6760	13400	5200	0.09	2.3	0.8125	0.8120	1.0620	1.0630
13/16	20.64	1 1/8	28.58	0.625	15.88	BH-1310	—	4320	6510	6200	—	—	0.8125	0.8120	1.1245	1.1255
13/16	20.64	1 1/8	28.58	0.750	19.05	BH-1312	—	5340	8550	6200	—	—	0.8125	0.8120	1.1245	1.1255
0.87	22	1.1	28	0.472	12	—	—	—	—	—	—	—	0.8661	0.8656	1.1013	1.1021
0.87	22	1.1	28	0.630	16	—	—	—	—	—	—	—	0.8661	0.8656	1.1013	1.1021
0.87	22	1.1	28	0.787	20	—	—	—	—	—	—	—	0.8661	0.8656	1.1013	1.1021

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N

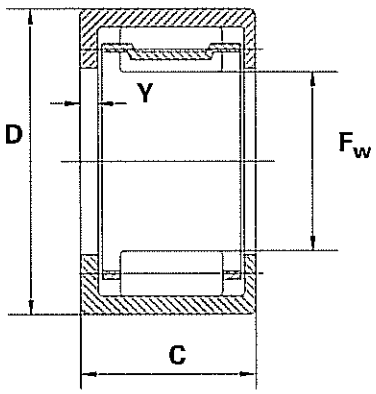
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speed is based on oiled bearings.

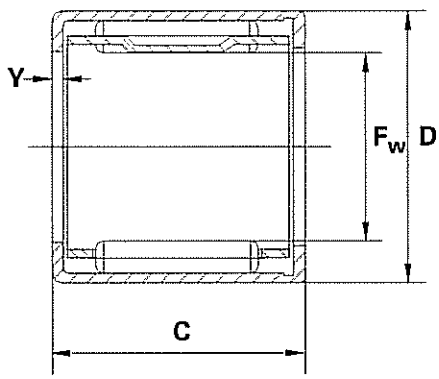
For greased bearings, the limiting speed is generally a little lower.

Drawn Cup Needle Roller Bearings

Caged Bearings



HK type



J type

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.

BEARING MOUNTING				*CAGE RETAINED ROLLERS*						
Metric Mounting				**Bearing Designation**		**Load Ratings**		**Limiting Speed Caged Bearings**	**Y End Thickness**	
Shaft Raceway Diameter millimeters		**Housing Bore** millimeters				**Basic Dynamic C_r** ISO 281	**Basic Static C_o** ISO 76		(max.)	
min.	max.	min.	max.	open end	closed end	lbf	lbf	rpm	inch	mm
15.875	15.862	22.212	22.237	—	—	—	—	—	—	—
15.875	15.862	22.212	22.237	**JH-1010**	—	2370	3180	21000	—	—
15.875	15.862	22.212	22.237	—	—	—	—	—	—	—
15.875	15.862	22.212	22.237	**JH-1016**	—	4050	6330	21000	—	—
16.000	15.989	21.972	21.993	**HK-1612**	—	1590	2180	21000	—	—
16.000	15.989	21.972	21.993	**HK-1616**	—	2260	3450	21000	—	—
17.000	16.989	22.972	22.993	**HK-1712**	—	1660	2350	20000	—	—
17.462	17.449	22.212	22.237	—	—	—	—	—	—	—
17.462	17.449	22.212	22.237	—	—	—	—	—	—	—
17.462	17.449	22.212	22.237	—	—	—	—	—	—	—
17.462	17.449	22.212	22.237	**J-1112**	—	2500	4610	19000	—	—
17.462	17.449	23.800	23.825	—	—	—	—	—	—	—
17.462	17.449	23.800	23.825	**JH-1110**	—	2470	3430	19000	—	—
17.462	17.449	23.800	23.825	**JH-1112**	—	3300	5000	19000	—	—
18.000	17.989	23.972	23.993	**HK-1812**	—	1720	2500	18000	—	—
18.000	17.989	23.972	23.993	**HK-1816**	—	2620	4290	18000	—	—
19.050	19.037	25.387	25.412	**J-126**	—	1340	1600	18000	—	—
19.050	19.037	25.387	25.412	**J-128**	—	2040	2760	18000	—	—
19.050	19.037	25.387	25.412	**J-1210**	**MJ-12101**	2560	3690	18000	0.04	1.0
19.050	19.037	25.387	25.412	**J-1212**	**MJ-12121**	3180	4880	18000	0.04	1.0
20.000	19.987	25.972	25.993	**HK-2012**	—	1830	2810	16000	—	—
20.000	19.987	25.972	25.993	**HK-2016**	—	2530	4240	16000	—	—
20.000	19.987	25.972	25.993	**HK-2020**	—	3170	5680	16000	—	—
20.638	20.625	26.975	27.000	—	—	—	—	—	—	—
20.638	20.625	26.975	27.000	—	—	—	—	—	—	—
20.638	20.625	26.975	27.000	—	—	—	—	—	—	—
20.638	20.625	26.975	27.000	—	—	—	—	—	—	—
20.638	20.625	28.562	28.587	—	—	—	—	—	—	—
20.638	20.625	28.562	28.587	**JH-1312**	—	3810	5460	16000	—	—
22.000	21.987	27.972	27.993	**HK-2212**	—	2010	3250	15000	—	—
22.000	21.987	27.972	27.993	**HK-2216**	—	2680	4710	15000	—	—
22.000	21.987	27.972	22.993	**HK-2220**	—	3130	5730	15000	—	—

Mounting dimensions are based on the inner ring rotating and the outer ring being stationary relative to the load. The housing should be of high strength material.

Drawn cup bearings of nominal inch and metric dimensions with one closed end, which are not tabulated, may be made available upon request.

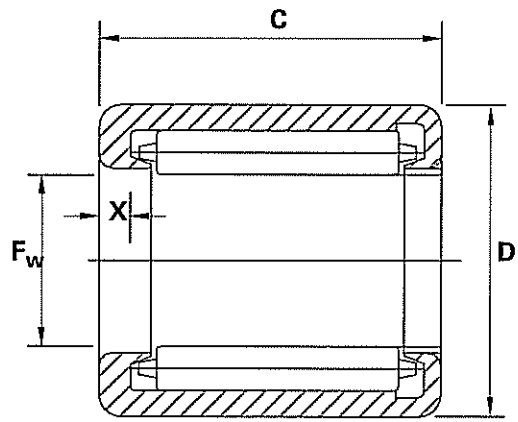
Caged drawn cup bearings of nominal inch and metric dimensions, with an engineered polymer cage, may be made available upon request.

Drawn Cup Needle Roller Bearings

Full Complement Bearings

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.



B type

BEARING DIMENSIONS						MECHANICALLY RETAINED ROLLERS						BEARING MOUNTING			
F_w Bore		D Outside Diameter		C Width		Bearing Designation		Load Ratings		Limiting Speed	X End Thickness		Inch Mounting		
								Basic Dynamic C_r	Basic Static C_o	Full Complement Bearings			Shaft Raceway Diameter		Housing Bore
(nominal)		(nominal)		+0.000 -0.010	+0.00 -0.25	open end	closed end	ISO 281	ISO 76		(max.)		inches		inches
inch	mm	inch	mm	inch	mm			lbf	lbf	rpm	inch	mm	min.	max.	min.	max.
7/8	22.22	1 1/8	28.58	0.375	9.52	B-146	—	2280	3380	4800	—	—	0.8750	0.8745	1.1245	1.1255
7/8	22.22	1 1/8	28.58	0.500	12.70	B-148	—	3370	5590	4800	—	—	0.8750	0.8745	1.1245	1.1255
7/8	22.22	1 1/8	28.58	0.750	19.05	B-1412	M-14121	5300	9990	4800	0.09	2.3	0.8750	0.8745	1.1245	1.1255
7/8	22.22	1 1/8	28.58	1.000	25.40	B-1416	M-14161	7040	14400	4800	0.09	2.3	0.8750	0.8745	1.1245	1.1255
7/8	22.22	1 1/8	28.58	1.125	28.58	B-1418	—	7860	16600	4800	—	—	0.8750	0.8745	1.1245	1.1255
7/8	22.22	1 3/16	30.16	0.625	15.88	BH-1410	—	4470	7030	5880	—	—	0.8750	0.8745	1.1870	1.1880
7/8	22.22	1 3/16	30.16	0.750	19.05	BH-1412	—	5530	9230	5880	—	—	0.8750	0.8745	1.1870	1.1880
7/8	22.22	1 3/16	30.16	1.000	25.40	BH-1416	—	7480	13600	5880	—	—	0.8750	0.8745	1.1870	1.1880
15/16	23.81	1 3/16	30.16	0.500	12.70	B-158	—	3500	5990	4500	—	—	0.9375	0.9370	1.1870	1.1880
15/16	23.81	1 3/16	30.16	1.000	25.40	B-1516	M-15161	7300	15400	4500	0.09	2.3	0.9375	0.9370	1.1870	1.1880
0.98	25	1.26	32	0.472	12	—	—	—	—	—	—	—	0.9843	0.9838	1.2585	1.2595
0.98	25	1.26	32	0.630	16	—	—	—	—	—	—	—	0.9843	0.9838	1.2585	1.2595
0.98	25	1.26	32	0.787	20	—	—	—	—	—	—	—	0.9843	0.9838	1.2585	1.2595
0.98	25	1.26	32	1.024	26	—	—	—	—	—	—	—	0.9842	0.9837	1.2585	1.2595
1	25.40	1 1/4	31.75	0.375	9.52	B-166	—	2450	3870	4300	—	—	1.0000	0.9995	1.2495	1.2505
1	25.40	1 1/4	31.75	0.438	11.13	B-167	—	3050	5120	4300	—	—	1.0000	0.9995	1.2495	1.2505
1	25.40	1 1/4	31.75	0.500	12.70	B-168	—	3620	6390	4300	—	—	1.0000	0.9995	1.2495	1.2505
1	25.40	1 1/4	31.75	0.625	15.88	B-1610	—	4690	8910	4300	—	—	1.0000	0.9995	1.2495	1.2505
1	25.40	1 1/4	31.75	0.750	19.05	B-1612	M-16121	5690	11400	4300	0.09	2.3	1.0000	0.9995	1.2495	1.2505
1	25.40	1 1/4	31.75	1.000	25.40	B-1616	M-16161	7560	16500	4300	0.09	2.3	1.0000	0.9995	1.2495	1.2505
1	25.40	1 5/16	33.34	0.500	12.70	BH-168	MH-1681	3600	5500	5200	0.11	2.8	1.0000	0.9995	1.3120	1.3130
1	25.40	1 5/16	33.34	0.625	15.88	BH-1610	—	4830	8020	5200	—	—	1.0000	0.9995	1.3120	1.3130
1	25.40	1 5/16	33.34	0.750	19.05	BH-1612	MH-16121	5970	10500	5200	0.11	2.8	1.0000	0.9995	1.3120	1.3130
1	25.40	1 5/16	33.34	1.000	25.40	BH-1616	MH-16161	8090	15600	5200	0.11	2.8	1.0000	0.9995	1.3120	1.3130
1	25.40	1 5/16	33.34	1.250	31.75	BH-1620	—	10100	20600	5200	—	—	1.0000	0.9995	1.3120	1.3130
1	25.40	1 5/16	33.34	1.500	38.10	BH-1624	—	11900	25600	5200	—	—	1.0000	0.9995	1.3120	1.3130
1 1/16	26.99	1 5/16	33.34	0.625	15.88	B-1710	—	4840	9470	4000	—	—	1.0625	1.0620	1.3120	1.3130
1.10	28	1.38	35	0.630	16	—	—	—	—	—	—	—	1.1024	1.1019	1.3767	1.3777
1.10	28	1.38	35	0.787	20	—	—	—	—	—	—	—	1.1024	1.1019	1.3767	1.3777
1 1/8	28.58	1 3/8	34.92	0.375	9.52	B-186	—	2610	4350	3800	—	—	1.1250	1.1245	1.3745	1.3755
1 1/8	28.58	1 3/8	34.92	0.500	12.70	B-188	—	3850	7190	3800	—	—	1.1250	1.1245	1.3745	1.3755
1 1/8	28.58	1 3/8	34.92	0.750	19.05	B-1812	—	6060	12900	3800	—	—	1.1250	1.1245	1.3745	1.3755
1 1/8	28.58	1 3/8	34.92	1.000	25.40	B-1816	M-18161	8050	18500	3800	0.09	2.3	1.1250	1.1245	1.3745	1.3755
1 1/8	28.58	1 1/2	38.10	0.750	19.05	BH-1812	—	6920	11500	5500	—	—	1.1250	1.1245	1.4995	1.5005
1 1/8	28.58	1 1/2	38.10	1.000	25.40	BH-1816	—	9420	17100	5500	—	—	1.1250	1.1245	1.4995	1.5005
1 1/8	28.58	1 1/2	38.10	1.125	28.58	—	—	—	—	—	—	—	1.1250	1.1245	1.4995	1.5005
1 1/8	28.58	1 1/2	38.10	1.250	31.75	BH-1820	—	11800	22900	5500	—	—	1.1250	1.1245	1.4995	1.5005

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N

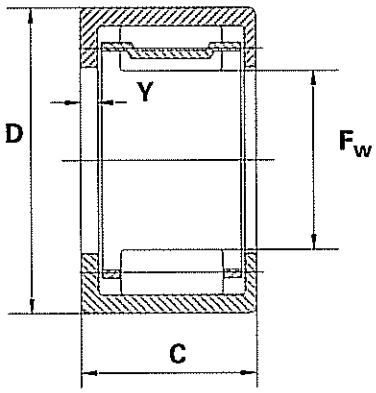
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speed is based on oiled bearings.

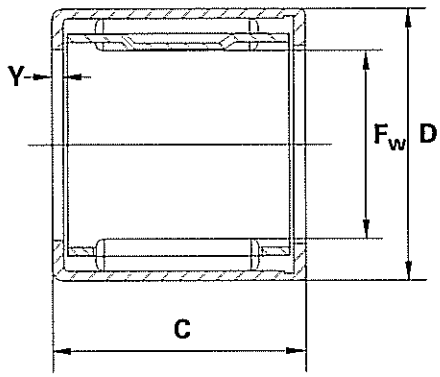
For greased bearings, the limiting speed is generally a little lower.

Drawn Cup Needle Roller Bearings

Caged Bearings



HK type



J type

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.

BEARING MOUNTING				CAGE RETAINED ROLLERS						
Metric Mounting				Bearing Designation		Load Ratings		Limiting Speed Caged Bearings	Y End Thickness	
Shaft Raceway Diameter millimeters		Housing Bore millimeters		open end	closed end	Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76		(max.)	
min.	max.	min.	max.			lbf	lbf	rpm	inch	mm
22.225	22.212	28.562	28.587	J-146	—	1480	1910	15000	—	—
22.225	22.212	28.562	28.587	J-148	—	2250	3270	15000	—	—
22.225	22.212	28.562	28.587	J-1412	MJ-14121	3530	5830	15000	0.04	1.0
22.225	22.212	28.562	28.587	J-1416	MJ-14161	4850	8780	15000	0.04	1.0
22.225	22.212	28.562	28.587	—	—	—	—	—	—	—
22.225	22.212	30.150	30.175	—	—	—	—	—	—	—
22.225	22.212	30.150	30.175	JH-1412	—	3710	5450	15000	—	—
22.225	22.212	30.150	30.175	JH-1416	—	5160	8330	15000	—	—
23.812	23.799	30.150	30.175	—	—	—	—	—	—	—
23.812	23.799	30.150	30.175	—	—	—	—	—	—	—
25.000	24.987	31.967	31.992	HK-2512	—	2270	3410	13000	—	—
25.000	24.987	31.967	31.992	HK-2516	—	3240	5390	13000	—	—
25.000	24.987	31.967	31.992	HK-2520	—	4250	7620	13000	—	—
25.000	24.987	31.967	31.992	HK-2526	BK-2526	5280	10100	13000	0.11	2.7
25.400	25.387	31.737	31.762	—	—	—	—	—	—	—
25.400	25.387	31.737	31.762	—	—	—	—	—	—	—
25.400	25.387	31.737	31.762	—	—	—	—	—	—	—
25.400	25.387	31.737	31.762	—	—	—	—	—	—	—
25.400	25.387	31.737	31.762	J-1612	—	3720	6500	13000	—	—
25.400	25.387	31.737	31.762	J-1616	—	5110	9780	13000	—	—
25.400	25.387	33.325	33.350	—	—	—	—	—	—	—
25.400	25.387	33.325	33.350	—	—	—	—	—	—	—
25.400	25.387	33.325	33.350	JH-1612	MJH-16121	4190	6570	13000	0.05	1.3
25.400	25.387	33.325	33.350	JH-1616	MJH-16161	5610	9570	13000	0.05	1.3
25.400	25.387	33.325	33.350	—	—	—	—	—	—	—
25.400	25.387	33.325	33.350	—	—	—	—	—	—	—
26.988	26.975	33.325	33.350	—	—	—	—	—	—	—
28.000	27.987	34.967	34.992	HK-2816	—	3300	5690	12000	—	—
28.000	27.987	34.967	34.992	HK-2820	—	4310	8040	12000	—	—
28.575	28.562	34.912	34.937	—	—	—	—	—	—	—
28.575	28.562	34.912	34.937	J-188	—	2460	3960	11000	—	—
28.575	28.562	34.912	34.937	J-1812	—	3890	7160	11000	—	—
28.575	28.562	34.912	34.937	J-1816	—	5350	10800	11000	—	—
28.575	28.562	38.112	38.112	JH-1812	—	4810	7120	12000	—	—
28.575	28.562	38.112	38.112	JH-1816	MJH-18161	6810	11100	12000	0.05	1.3
28.575	28.562	38.112	38.112	JH-1818	—	7460	12500	12000	—	—
28.575	28.562	38.112	38.112	—	—	—	—	—	—	—

Mounting dimensions are based on the inner ring rotating and the outer ring being stationary relative to the load. The housing should be of high strength material.

Drawn cup bearings of nominal inch and metric dimensions with one closed end, which are not tabulated, may be made available upon request.

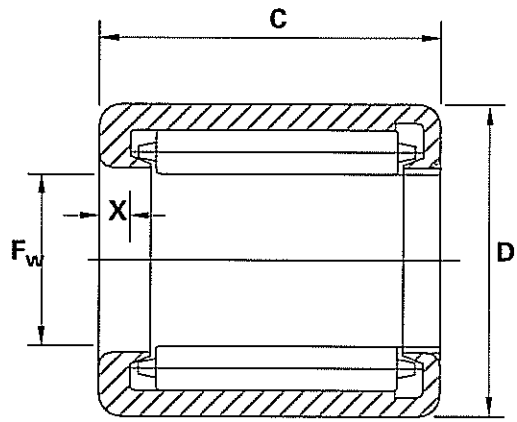
Caged drawn cup bearings of nominal inch and metric dimensions, with an engineered polymer cage, may be made available upon request.

Drawn Cup Needle Roller Bearings

Full Complement Bearings

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.



B type

BEARING DIMENSIONS						MECHANICALLY RETAINED ROLLERS							BEARING MOUNTING			
F_w Bore		D Outside Diameter		C Width		Bearing Designation		Load Ratings		Limiting Speed Full Complement Bearings	X End Thickness		Inch Mounting			
								Basic Dynamic C_r	Basic Static C_o				Shaft Raceway Diameter		Housing Bore	
(nominal)		(nominal)		+0.000 -0.010	+0.00 -0.25	open end	closed end	ISO 281	ISO 76		(max.)		inches		inches	
inch	mm	inch	mm	inch	mm			lbf	lbf	rpm	inch	mm	min.	max.	min.	max.
1.18	30	1.46	37	0.472	12	—	—	—	—	—	—	—	1.1811	1.1806	1.4554	1.4564
1.18	30	1.46	37	0.787	20	—	—	—	—	—	—	—	1.1811	1.1806	1.4554	1.4564
1.18	30	1.46	37	1.024	26	—	—	—	—	—	—	—	1.1811	1.1806	1.4554	1.4564
1 3/16	30.16	1 1/2	38.10	1.000	25.40	B-1916	—	8860	18500	4400	—	—	1.1875	1.1870	1.4995	1.5005
1 1/4	31.75	1 1/2	38.10	0.500	12.70	B-208	—	4080	7990	3500	—	—	1.2500	1.2495	1.4995	1.5005
1 1/4	31.75	1 1/2	38.10	0.625	15.88	B-2010	—	5280	11100	3500	—	—	1.2500	1.2495	1.4995	1.5005
1 1/4	31.75	1 1/2	38.10	0.750	19.05	B-2012	—	6410	14300	3500	—	—	1.2500	1.2495	1.4995	1.5005
1 1/4	31.75	1 1/2	38.10	1.000	25.40	B-2016	M-20161	8510	20600	3500	0.09	2.3	1.2500	1.2495	1.4995	1.5005
1 1/4	31.75	1 1/2	38.10	1.250	31.75	B-2020	M-20201	10500	26900	3500	0.09	2.3	1.2500	1.2495	1.4995	1.5005
1 1/4	31.75	1 5/8	41.28	0.500	12.70	BH-208	—	4200	6320	5000	—	—	1.2500	1.2495	1.6245	1.6255
1 1/4	31.75	1 5/8	41.28	0.750	19.05	BH-2012	—	7250	12700	5000	—	—	1.2500	1.2495	1.6245	1.6255
1 1/4	31.75	1 5/8	41.28	1.000	25.40	BH-2016	MH-20161	9910	19000	5000	0.12	3.0	1.2500	1.2495	1.6245	1.6255
1 1/4	31.75	1 5/8	41.28	1.250	31.75	BH-2020	MH-20201	12400	25400	5000	0.12	3.0	1.2500	1.2495	1.6245	1.6255
1 5/16	33.34	1 5/8	41.28	0.500	12.70	B-218	—	4180	7220	4000	—	—	1.3125	1.3120	1.6245	1.6255
1 5/16	33.34	1 5/8	41.28	0.625	15.88	B-2110	—	5600	10500	4000	—	—	1.3125	1.3120	1.6245	1.6255
1 5/16	33.34	1 5/8	41.28	1.250	31.75	B-2120	—	11700	27200	4000	—	—	1.3125	1.3120	1.6245	1.6255
1 3/8	34.92	1 5/8	41.28	0.500	12.70	B-228	—	4280	8790	3200	—	—	1.3750	1.3745	1.6245	1.6255
1 3/8	34.92	1 5/8	41.28	0.750	19.05	B-2212	—	6730	15700	3200	—	—	1.3750	1.3745	1.6245	1.6255
1 3/8	34.92	1 5/8	41.28	1.000	25.40	B-2216	—	8950	22700	3200	—	—	1.3750	1.3745	1.6245	1.6255
1 3/8	34.92	1 5/8	41.28	1.250	31.75	B-2220	—	11000	29600	3200	—	—	1.3750	1.3745	1.6245	1.6255
1 3/8	34.92	1 3/4	44.45	0.625	15.88	BH-2210	—	6240	10600	4700	—	—	1.3750	1.3745	1.7495	1.7505
1 3/8	34.92	1 3/4	44.45	0.750	19.05	BH-2212	—	7770	14100	4700	—	—	1.3750	1.3745	1.7495	1.7505
1 3/8	34.92	1 3/4	44.45	1.000	25.40	BH-2216	—	10600	20900	4700	—	—	1.3750	1.3745	1.7495	1.7505
1 3/8	34.92	1 3/4	44.45	1.250	31.75	BH-2220	—	13200	28000	4700	—	—	1.3750	1.3745	1.7495	1.7505
1.38	35	1.65	42	0.472	12	—	—	—	—	—	—	—	1.3779	1.3774	1.6522	1.6532
1.38	35	1.65	42	0.630	16	—	—	—	—	—	—	—	1.3780	1.3774	1.6522	1.6532
1.38	35	1.65	42	0.787	20	—	—	—	—	—	—	—	1.3780	1.3774	1.6522	1.6532
1 1/2	38.10	1 7/8	47.62	0.500	12.70	B-248	—	4780	7830	4300	—	—	1.5000	1.4995	1.8745	1.8755
1 1/2	38.10	1 7/8	47.62	0.625	15.88	B-2410	—	6500	11600	4300	—	—	1.5000	1.4995	1.8745	1.8755
1 1/2	38.10	1 7/8	47.62	0.750	19.05	B-2412	—	8090	15400	4300	—	—	1.5000	1.4995	1.8745	1.8755
1 1/2	38.10	1 7/8	47.62	0.875	22.22	B-2414	—	9590	19200	4300	—	—	1.5000	1.4995	1.8745	1.8755
1 1/2	38.10	1 7/8	47.62	1.000	25.40	B-2416	M-24161	11000	22800	4300	0.12	3.0	1.5000	1.4995	1.8745	1.8755
1 1/2	38.10	1 7/8	47.62	1.250	31.75	B-2420	M-24201	13800	30500	4300	0.12	3.0	1.5000	1.4995	1.8745	1.8755
1.57	40	1.85	47	0.472	12	—	—	—	—	—	—	—	1.5748	1.5742	1.8491	1.8501
1.57	40	1.85	47	0.630	16	—	—	—	—	—	—	—	1.5748	1.5742	1.8491	1.8501
1.57	40	1.85	47	0.787	20	—	—	—	—	—	—	—	1.5748	1.5742	1.8491	1.8501

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N

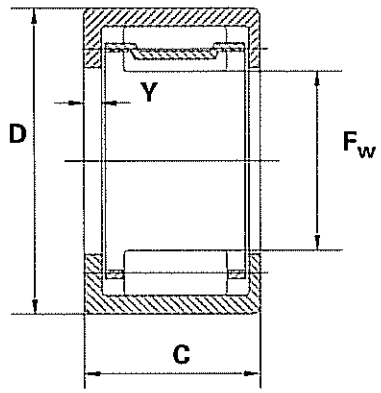
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speed is based on oiled bearings.

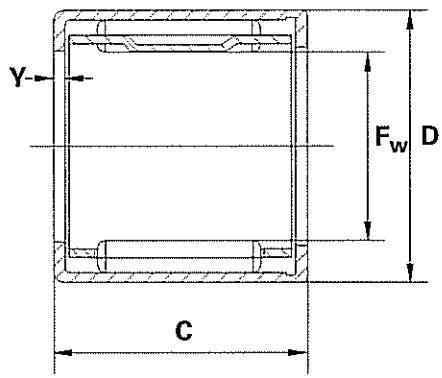
For greased bearings, the limiting speed is generally a little lower.

Drawn Cup Needle Roller Bearings

Caged Bearings



HK type



J type

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are inches for nominal inch bearings and in millimeters for nominal metric bearings.

BEARING MOUNTING				*CAGE RETAINED ROLLERS*						
Metric Mounting				**Bearing Designation**		**Load Ratings**		**Limiting Speed Caged Bearings**	**Y End Thickness**	
Shaft Raceway Diameter millimeters		**Housing Bore millimeters**				**Basic Dynamic C_r**	**Basic Static C_o**			
				open end	**closed end**	**ISO 281**	**ISO 76**		**(max.)**	
min.	max.	min.	max.			lbf	lbf	rpm	inch	mm
30.000	29.987	36.967	36.992	**HK-3012**	—	2500	4100	11000	—	—
30.000	29.987	36.967	36.992	**HK-3020**	—	4680	9140	11000	—	—
30.000	29.987	36.967	36.992	**HK-3026**	—	5640	11600	11000	—	—
30.162	30.149	38.087	38.112	—	—	—	—	—	—	—
31.750	31.737	38.087	38.112	—	—	—	—	—	—	—
31.750	31.737	38.087	38.112	—	—	—	—	—	—	—
31.750	31.737	38.087	38.112	—	—	—	—	—	—	—
31.750	31.737	38.087	38.112	**J-2016**	**MJ-20161**	5900	12700	10 000	—	—
31.750	31.737	38.087	38.112	—	—	—	—	—	—	—
31.750	31.737	41.262	41.287	—	—	—	—	—	—	—
31.750	31.737	41.262	41.287	**JH-2012**	—	4960	7710	10000	—	—
31.750	31.737	41.262	41.287	**JH-2016**	—	6970	11900	10000	—	—
31.750	31.737	41.262	41.287	**JH-2020**	—	8730	15900	10000	—	—
33.338	33.325	41.262	41.287	—	—	—	—	—	—	—
33.338	33.325	41.262	41.287	—	—	—	—	—	—	—
33.338	33.325	41.262	41.287	—	—	—	—	—	—	—
34.925	34.912	41.262	41.287	**J-228**	—	2870	5170	9200	—	—
34.925	34.912	41.262	41.287	**J-2212**	—	4670	9690	9200	—	—
34.925	34.912	41.262	41.287	—	—	—	—	—	—	—
34.925	34.912	41.262	41.287	—	—	—	—	—	—	—
34.925	34.912	44.437	44.462	—	—	—	—	—	—	—
34.925	34.912	44.437	44.462	**JH-2212**	—	5410	8740	9400	—	—
34.925	34.912	44.437	44.462	**JH-2216**	**MJH-22161**	7510	13300	9400	0.05	1.3
34.925	34.912	44.437	44.462	—	—	—	—	—	—	—
35.000	34.987	41.967	41.992	**HK-3512**	—	2790	4950	9100	—	—
35.000	34.987	41.967	41.992	**HK-3516**	—	3600	6840	9100	—	—
35.000	34.987	41.967	41.992	**HK-3520**	—	5070	10700	9100	—	—
38.100	38.087	47.612	47.637	—	—	—	—	—	—	—
38.100	38.087	47.612	47.637	—	—	—	—	—	—	—
38.100	38.087	47.612	47.637	**J-2412**	—	5830	9970	8600	—	—
38.100	38.087	47.612	47.637	—	—	—	—	—	—	—
38.100	38.087	47.612	47.637	**J-2416**	—	8080	15100	8600	—	—
38.100	38.087	47.612	47.637	**J-2420**	—	10200	20300	8600	—	—
40.000	39.984	46.967	46.992	**HK-4012**	—	2800	5170	7900	—	—
40.000	39.984	46.967	46.992	**HK-4016**	—	3910	7960	7900	—	—
40.000	39.984	46.967	46.992	**HK-2020**	—	5190	11500	7900	—	—

Mounting dimensions are based on the inner ring rotating and the outer ring being stationary relative to the load. The housing should be of high strength material.

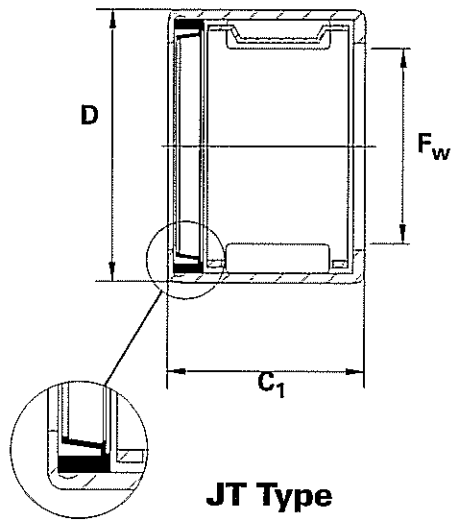
Drawn cup bearings of nominal inch and metric dimensions with one closed end, which are not tabulated, may be made available upon request.

Caged drawn cup bearings of nominal inch and metric dimensions, with an engineered polymer cage, may be made available upon request.

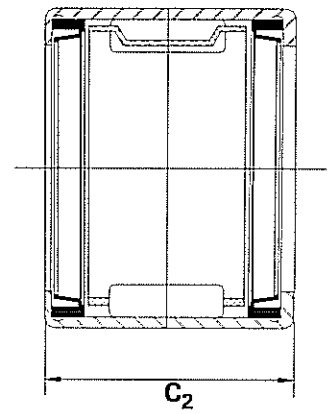
Drawn Cup Needle Roller Bearings

Sealed Drawn Cup Bearings

Check for availability. Not all bearings are in production.



JT Type



JTT Type

BEARING DESIGNATION AND WIDTH									
F_w Bore (nominal)		D Outside Diameter (nominal)		Bearings with one seal			Bearings with two seals		
				Bearing Designation	C_1 Width		Bearing Designation	C_2 Width	
				Open End	+0.000 -0.010	+0.00 -0.25		+0.000 -0.010	+0.00 -0.25
Inch	mm	Inch	mm		Inch	mm		Inch	mm
5/16	7.94	1/2	12.70	JT-56	0.375	9.52	JTT-57	0.438	11.13
5/16	7.94	1/2	12.70	—	—	—	JTT-59	0.562	14.27
3/8	9.52	9/16	14.29	JT-66	0.375	9.52	JTT-67	0.438	11.13
3/8	9.52	9/16	14.29	JT-69	0.562	14.27	—	—	—
1/2	12.70	11/16	17.46	JT-86	0.375	9.52	JTT-87	0.438	11.13
1/2	12.70	11/16	17.46	JT-89	0.562	14.27	JTT-810	0.625	15.88
1/2	12.70	11/16	17.46	—	—	—	JTT-814	0.875	22.22
9/16	14.29	3/4	19.05	JT-99	0.562	14.27	JTT-910	0.625	15.88
9/16	14.29	3/4	19.05	—	—	—	JTT-912	0.750	19.05
5/8	15.88	13/16	20.64	JT-109	0.562	14.27	JTT-1010	0.625	15.88
5/8	15.88	13/16	20.64	—	—	—	JTT-1012	0.750	19.05
5/8	15.88	13/16	20.64	—	—	—	JTT-1014	0.875	22.22
11/16	17.46	7/8	22.22	—	—	—	JTT-1114	0.875	22.22
3/4	19.05	1	25.40	JT-129	0.562	14.27	JTT-1210	0.625	15.88
3/4	19.05	1	25.40	JT-1211	0.688	17.48	—	—	—
3/4	19.05	1	25.40	JT-1213	0.812	20.62	JTT-1214	0.875	22.22
7/8	22.22	1 1/8	28.58	JT-149	0.562	14.27	JTT-1410	0.625	15.88
7/8	22.22	1 1/8	28.58	JT-1417	1.062	26.97	—	—	—
1	25.40	1 1/4	31.75	JT-1613	0.812	20.62	JTT-1614	0.875	22.22
1 1/8	28.58	1 3/8	34.92	JT-1813	0.812	20.62	JTT-1814	0.875	22.22
1 1/4	31.75	1 1/2	38.10	JT-2013	0.812	20.62	—	—	—
1 1/4	31.75	1 1/2	38.10	—	—	—	JTT-2018	1.125	28.58
1 1/2	38.10	1 7/8	47.62	JT-2421	1.312	33.34	—	—	—

Drawn cup bearings of nominal inch and metric dimensions, with one seal and one end closed, may be made available upon request.

Drawn cup bearings of nominal metric dimensions, with one or two seals, may be made available upon request.

Sealed Drawn Cup Bearings

GENERAL NOTES

Sealed drawn cup needle bearings are pre-packed with a general purpose ball and roller bearing grease unless other wise specified.

Lip contact seals limit the bearing operating temperature between –25F and +225 F (-30 C and +110 C). If the operating temperature must be outside of the above range or if the seals are exposed to unusual fluids, olease consult Global Bearings. Limiting speed is based on a shaft ntact speed of 2000 fpm (610 m/min.) For outer ring ro tion, reduce the listed limiting speed by one half.

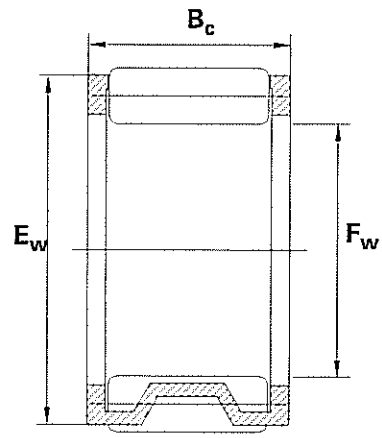
BEARING LOAD RATING					BEARING MOUNTING DIMENSIONS							
Bearing Designation		Load Ratings		Limiting Speed	Inch Mounting				Metric Mounting			
					S Shaft Raceway Diameter		H Housing Bore		S Shaft Raceway Diameter		H Housing Bore	
one seal	two seals	Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76		inches		inches		millimeters		millimeters	
		lbf	lbf	rpm	min.	max.	min.	max.	min.	max.	min.	max.
JT-56	JTT-57	431	383	24000	0.3125	0.3120	0.4995	0.5005	7.938	7.925	12.687	12.712
—	JTT-59	767	805	24000	0.3125	0.3120	0.4995	0.5005	7.938	7.925	12.687	12.712
JT-66	JTT-67	491	474	20000	0.3750	0.3745	0.5620	0.5630	9.525	9.512	14.275	14.300
JT-69	—	1030	1240	20000	0.3750	0.3745	0.5620	0.5630	9.525	9.512	14.275	14.300
JT-86	JTT-87	621	697	15000	0.5000	0.4995	0.6870	0.6880	12.700	12.687	17.450	17.475
JT-89	JTT-810	1250	1710	15000	0.5000	0.4995	0.6870	0.6880	12.700	12.687	17.450	17.475
—	JTT-814	2060	3240	15000	0.5000	0.4995	0.6870	0.6880	12.700	12.687	17.450	17.475
JT-99	JTT-910	1230	1730	14000	0.5625	0.5620	0.7495	0.7505	14.288	14.275	19.037	19.062
—	JTT-912	1630	2490	14000	0.5625	0.5620	0.7495	0.7505	14.288	14.275	19.037	19.062
JT-109	JTT-1010	1330	1970	12000	0.6250	0.6245	0.8120	0.8130	15.875	15.862	20.625	20.650
—	JTT-1012	1760	2830	12000	0.6250	0.6245	0.8120	0.8130	15.875	15.862	20.625	20.650
—	JTT-1014	2540	4570	12000	0.6250	0.6245	0.8120	0.8130	15.875	15.862	20.625	20.650
—	JTT-1114	2500	4610	11000	0.6875	0.6870	0.8745	0.8755	17.462	17.449	22.212	22.237
JT-129	JTT-1210	2040	2760	10000	0.7500	0.7495	0.9995	1.0005	19.050	19.037	25.387	25.412
JT-1211	—	2560	3690	10000	0.7500	0.7495	0.9995	1.0005	19.050	19.037	25.387	25.412
JT-1213	JTT-1214	3180	4880	10000	0.7500	0.7495	0.9995	1.0005	19.050	19.037	25.387	25.412
JT-149	JTT-1410	2250	3270	8700	0.8750	0.8745	1.1245	1.1255	22.225	22.212	28.562	28.587
JT-1417	—	4850	8780	8700	0.8750	0.8745	1.1245	1.1255	22.225	22.212	28.562	28.587
JT-1613	JTT-1614	3720	6500	7600	1.0000	0.9995	1.2495	1.2505	25.400	25.387	31.737	31.762
JT-1813	JTT-1814	3890	7160	6800	1.1250	1.1245	1.3745	1.3755	28.575	28.562	34.912	34.937
JT-2013	—	4060	7820	6100	1.2500	1.2495	1.4995	1.5005	31.750	31.737	38.087	38.112
—	JTT-2018	5900	12700	6100	1.2500	1.2495	1.4995	1.5005	31.750	31.737	38.087	38.112
JT-2421	—	10200	20300	5100	1.5000	1.4995	1.8745	1.8755	38.100	38.087	47.612	47.637

Mounting dimensions are based on the inner ring rotating and the outer ring being stationary relative to the load. The housing should be of high strength material.

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF
See page 108 for mounting procedure.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Radial Needle Roller and Cage Assemblies

Type WJC



Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.

DIMENSIONS AND LOAD RATINGS – INCH SERIES										BEARING MOUNTING			
F_w Bore (nominal)		E_w Outside Diameter (nominal)		Assembly Designation	B_c Width		Load Ratings Basic Dynamic C_r ISO 281	Load Ratings Basic Static C_o ISO 76	Limiting Speed	Inch Mounting Shaft Raceway Diameter inches		Inch Mounting Housing Bore inches	
					+0.000 -0.015	+0,00 -0,38							
inch	mm	inch	mm		inch	mm	lbf	lbf	rpm	min.	max.	min.	max.
0.16	4	0.28	7	—	—	—	—	—	—	0.1575	0.1573	0.2758	0.2761
0.2	5	0.31	8	—	—	—	—	—	—	0.1969	0.1967	0.3152	0.3155
0.2	5	0.31	8	—	—	—	—	—	—	0.1969	0.1967	0.3152	0.3155
0.2	5	0.35	9	—	—	—	—	—	—	0.1969	0.1967	0.3545	0.3549
0.24	6	0.35	9	—	—	—	—	—	—	0.2362	0.236	0.3545	0.3549
0.28	7	0.39	10	—	—	—	—	—	—	0.2756	0.2754	0.3939	0.3943
0.31	8	0.43	11	—	—	—	—	—	—	0.315	0.3147	0.4333	0.4337
0.35	9	0.47	12	—	—	—	—	—	—	0.3543	0.3541	0.4727	0.4731
0.35	9	0.47	12	—	—	—	—	—	—	0.3543	0.3541	0.4727	0.4731
3/8	9.52	1/2	12.70	**WJC-060806**	0.375	9.52	826	840	48000	0.3750	0.3748	0.5002	0.5006
0.39	10	0.51	13	—	—	—	—	—	—	0.3937	0.3935	0.512	0.5125
0.39	10	0.55	14	—	—	—	—	—	—	0.3937	0.3935	0.5514	0.5519
0.39	10	0.63	16	—	—	—	—	—	—	0.3937	0.3935	0.6302	0.6306
0.43	11	0.55	14	—	—	—	—	—	—	0.4331	0.4328	0.5514	0.5519
0.47	12	0.59	15	—	—	—	—	—	—	0.4724	0.4721	0.5908	0.5912
0.47	12	0.59	15	—	—	—	—	—	—	0.4724	0.4721	0.5908	0.5912
0.47	12	0.59	15	—	—	—	—	—	—	0.4724	0.4721	0.5908	0.5912
0.47	12	0.63	16	—	—	—	—	—	—	0.4724	0.4721	0.6302	0.6306
1/2	12.70	5/8	15.88	**WJC-081008**	0.500	12.70	1370	1740	35000	0.5000	0.4997	0.6252	0.6256
0.51	13	0.67	17	—	—	—	—	—	—	0.5118	0.5115	0.6302	0.6306
0.55	14	0.71	18	—	—	—	—	—	—	0.5512	0.5509	0.7089	0.7093
0.55	14	0.71	18	—	—	—	—	—	—	0.5512	0.5509	0.7089	0.7093
0.55	14	0.75	19	—	—	—	—	—	—	0.5512	0.5509	0.7483	0.7488
0.55	14	0.79	20	—	—	—	—	—	—	0.5512	0.5509	0.7877	0.7882
9/16	14.29	11/16	17.46	**WJC-091108**	0.500	12.70	1490	2020	31000	0.5625	0.5622	0.6877	0.6881
0.59	15	0.71	18	—	—	—	—	—	—	0.5906	0.5902	0.7089	0.7093
0.59	15	0.71	18	—	—	—	—	—	—	0.5906	0.5902	0.7089	0.7093
0.59	15	0.75	19	—	—	—	—	—	—	0.5906	0.5902	0.7483	0.7488
0.59	15	0.75	19	—	—	—	—	—	—	0.5906	0.5902	0.7483	0.7488
0.59	15	0.75	19	—	—	—	—	—	—	0.5906	0.5902	0.7483	0.7488
0.59	15	0.83	21	—	—	—	—	—	—	0.5906	0.5902	0.827	0.8276

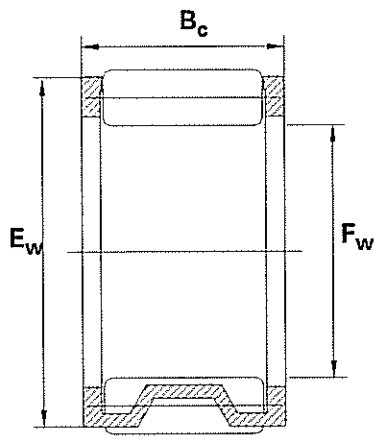
Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF
See page 108 for mounting procedure.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

Minimum axial clearance should be 0.008 inches or 0.2 mm.

Radial Needle Roller and Cage Assemblies

Type K



Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and millimeters for nominal metric bearings.

BEARING MOUNTING				DIMENSIONS AND LOAD RATINGS – METRIC SERIES					
Metric Mounting				Assembly Designation	B_c Width		Load Ratings		Limiting Speed
Shaft Raceway Diameter millimeters		Housing Bore millimeters			+0.000 -0.015	+0,00 -0,38	Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76	
min.	max.	min.	max.		inch	mm	lbf	lbf	rpm
4.000	3.995	7.005	7.014	K4x7x7TN	0.276	7	411	298	75000
5.000	4.995	8.005	8.014	K5x8x8TN	0.315	8	491	384	75000
5.000	4.995	8.005	8.014	K5x8x10TN	0.394	10	684	591	75000
5.000	4.995	9.005	9.014	K5x9x13TN	0.512	13	965	797	75000
6.000	5.995	9.005	9.014	K6x9x8	0.315	8	718	652	75000
7.000	6.994	10.005	10.014	K7x10x8TN	0.315	8	616	547	67000
8.000	7.994	11.005	11.017	K8x11x10	0.394	10	1030	1100	58000
9.000	8.994	12.006	12.017	K9x12x10	0.394	10	961	1040	51000
9.000	8.994	12.006	12.017	K9x12x13	0.512	13	1250	1460	51000
9.525	9.520	12.705	12.715	—	—	—	—	—	—
10.000	9.994	13.006	13.017	K10x13x10TN	0.394	10	965	1070	45000
10.000	9.994	14.006	14.017	K10x14x10	0.394	10	1380	1420	47000
10.000	9.994	16.006	16.017	K10x16x12	0.472	12	1920	1720	49000
11.000	10.992	14.006	14.017	K11x14x10	0.394	10	1070	1260	41000
12.000	11.992	15.006	15.017	K12x15x9	0.354	9	1070	1290	37000
12.000	11.992	15.006	15.017	K12x15x10	0.394	10	1320	1690	37000
12.000	11.992	15.006	15.017	K12x15x13	0.512	13	1530	2030	37000
12.000	11.992	16.006	16.017	K12x16x13	0.512	13	1680	1910	38000
12.700	12.692	15.880	15.890	—	—	—	—	—	—
13.000	12.992	17.006	17.017	K13x17x10	0.394	10	1620	1870	35000
14.000	13.992	18.006	18.017	K14x18x8	0.315	8	1210	1310	32000
14.000	13.992	18.006	18.017	K14x18x10	0.394	10	1610	1890	32000
14.000	13.992	19.007	19.020	K14x19x13	0.512	13	2320	2620	33000
14.000	13.992	20.007	20.020	K14x20x12	0.472	12	2400	2450	34000
14.286	14.280	17.468	17.478	—	—	—	—	—	—
15.000	14.992	18.006	18.017	K15x18x14TN	0.551	14	1780	2670	29000
15.000	14.992	18.006	18.017	K15x18x17	0.669	17	1820	2710	29000
15.000	14.992	19.007	19.020	K15x19x10	0.394	10	1770	2180	30000
15.000	14.992	19.007	19.020	K15x19x13	0.512	13	2170	2830	30000
15.000	14.992	19.007	19.020	K15x19x17	0.669	17	2780	3880	30000
15.000	14.992	21.007	20.020	K15x21x21	0.827	21	4090	4920	31000

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF
See page 108 for mounting procedure.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

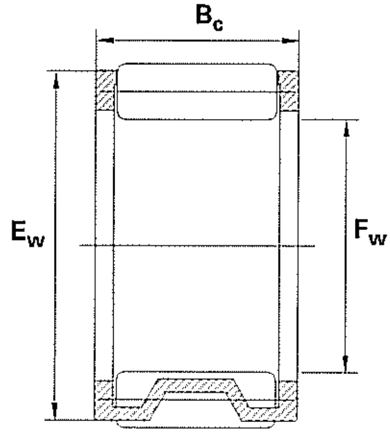
Minimum axial clearance should be 0.008 inches or 0.2 mm.

Radial Needle Roller and Cage Assemblies

Type WJ and WJC

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.



DIMENSIONS AND LOAD RATINGS – INCH SERIES										BEARING MOUNTING			
F_w Bore (nominal)		E_w Outside Diameter (nominal)		Assembly Designation	B_c Width		Load Ratings: Basic Dynamic C_r	Load Ratings: Basic Static C_o	Limiting Speed	Inch Mounting: Shaft Raceway Diameter inches		Inch Mounting: Housing Bore inches	
					+0.000 -0.015	+0.00 -0.38	ISO 281	ISO 76					
inch	mm	inch	mm		inch	mm	lbf	lbf	rpm	min.	max.	min.	max.
5/8	15.88	3/4	19.05	WJC-101208	0.500	12.70	1540	2170	27000	0.6250	0.6247	0.7503	0.7508
5/8	15.88	7/8	22.22	WJ-101410	0.625	15.88	3400	3830	29400	0.6250	0.6247	0.8753	0.8758
5/8	15.88	7/8	22.22	WJ-101414	0.875	22.22	4680	5780	29400	0.6250	0.6247	0.8753	0.8758
0.63	16.00	0.79	20.00	–	–	–	–	–	–	0.6299	0.6296	0.7877	0.7882
0.63	16.00	0.79	20.00	–	–	–	–	–	–	0.6299	0.6296	0.7877	0.7882
0.63	16.00	0.79	20.00	–	–	–	–	–	–	0.6299	0.6296	0.7877	0.7882
0.63	16.00	0.79	20.00	–	–	–	–	–	–	0.6299	0.6296	0.7877	0.7882
0.63	16.00	0.79	20.00	–	–	–	–	–	–	0.6299	0.6296	0.7877	0.7882
0.63	16.00	0.94	24.00	–	–	–	–	–	–	0.6299	0.6296	0.9452	0.9457
0.67	17.00	0.83	21.00	–	–	–	–	–	–	0.6693	0.669	0.827	0.8276
0.67	17.00	0.83	21.00	–	–	–	–	–	–	0.6693	0.669	0.827	0.8276
0.67	17.00	0.87	22.00	–	–	–	–	–	–	0.6693	0.669	0.8664	0.8669
0.71	18.00	0.87	22.00	–	–	–	–	–	–	0.7087	0.7083	0.8664	0.8669
0.71	18.00	0.87	22.00	–	–	–	–	–	–	0.7087	0.7083	0.8664	0.8669
0.71	18.00	0.94	24.00	–	–	–	–	–	–	0.7087	0.7083	0.9452	0.9457
0.71	18.00	0.98	25.00	–	–	–	–	–	–	0.7087	0.7083	0.9845	0.985
0.75	19.00	0.94	24.00	–	–	–	–	–	–	0.748	0.7477	0.9452	0.9457
3/4	19.05	1	25.40	WJ-121616	1.000	25.40	5920	8180	24000	0.7500	0.7496	1.0003	1.0008
0.79	20.00	0.94	24.00	–	–	–	–	–	–	0.7874	0.787	0.9452	0.9457
0.79	20.00	0.94	24.00	–	–	–	–	–	–	0.7874	0.787	0.9452	0.9457
0.79	20.00	1.02	26.00	–	–	–	–	–	–	0.7874	0.787	1.0239	1.0244
0.79	20.00	1.02	26.00	–	–	–	–	–	–	0.7874	0.787	1.0239	1.0244
0.79	20.00	1.02	26.00	–	–	–	–	–	–	0.7874	0.787	1.0239	1.0244
0.79	20.00	1.1	28.00	–	–	–	–	–	–	0.7874	0.787	1.1026	1.1031
0.87	22.00	1.02	26.00	–	–	–	–	–	–	0.8661	0.8658	1.0239	1.0244
0.87	22.00	1.02	26.00	–	–	–	–	–	–	0.8661	0.8658	1.0239	1.0244
0.87	22.00	1.18	30.00	–	–	–	–	–	–	0.8661	0.8658	1.1814	1.1819
0.87	22.00	1.26	32.00	–	–	–	–	–	–	0.8661	0.8658	1.2602	1.2608
7/8	22.22	1 1/8	28.58	WJ-141816	1.000	25.40	6450	9540	20200	0.8750	0.8746	1.1253	1.1258

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

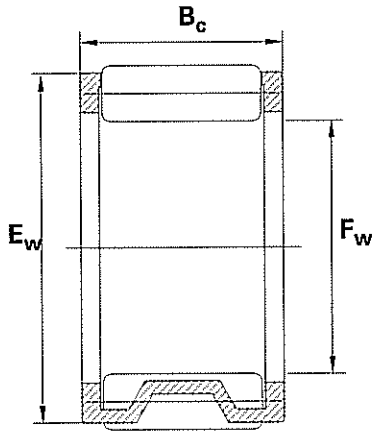
Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

Minimum axial clearance should be 0.008 inches or 0.2 mm.

Radial Needle Roller and Cage Assemblies

Type K



Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and millimeters for nominal metric bearings.

BEARING MOUNTING				DIMENSIONS AND LOAD RATINGS – METRIC SERIES					
Metric Mounting				Assembly Designation	B_c Width		Load Ratings		Limiting Speed
Shaft Raceway Diameter		Housing Bore			+0.000 -0.015	+0,00 -0,38	Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76	
millimeters		millimeters							
min.	max.	min.	max.		inch	mm	lbf	lbf	rpm
15.875	15.867	19.058	19.071	—	—	—	—	—	—
15.875	15.867	22.233	22.246	—	—	—	—	—	—
15.875	15.867	22.233	22.246	—	—	—	—	—	—
16.000	15.992	20.007	20.020	**K16x20x10**	0.394	10	1760	2200	28000
16.000	15.992	20.007	20.020	**K16x20x13**	0.512	13	2260	3040	28000
16.000	15.992	20.007	20.020	**K16x20x14**	0.551	14	2430	3320	28000
16.000	15.992	20.007	20.020	**K16x20x17**	0.669	17	2680	3770	28000
16.000	15.992	20.007	20.020	**K16x20x20**	0.787	20	3020	4380	28000
16.000	15.992	24.007	24.020	**K16x24x20**	0.787	20	4580	4880	30000
17.000	16.992	21.007	21.020	**K17x21x20**	0.394	10	1830	2350	26000
17.000	16.992	21.007	21.020	**K17x21x13**	0.512	13	2350	3250	26000
17.000	16.992	22.007	22.020	**K17x22x20**	0.787	20	3860	5300	27000
18.000	17.992	22.007	22.020	**K18x22x10**	0.394	10	1890	2500	24000
18.000	17.992	22.007	22.020	**K18x22x14**	0.551	14	2610	3780	24000
18.000	17.992	24.007	24.020	**K18x24x12**	0.472	12	2690	3010	25000
18.000	17.992	25.007	25.020	**K18x25x22**	0.866	22	5280	6500	26000
19.000	18.991	24.007	24.020	**K19x24x17**	0.669	17	3790	5350	24000
19.050	19.040	25.408	25.421	—	—	—	—	—	—
20.000	19.991	24.007	24.020	**K20x24x10**	0.394	10	2020	2810	22000
20.000	19.991	24.007	24.020	**K20x24x14**	0.551	14	2780	4250	22000
20.000	19.991	26.007	26.020	**K20x26x12**	0.472	12	2970	3520	23000
20.000	19.991	26.007	26.020	**K20x26x17**	0.669	17	4460	5950	23000
20.000	19.991	26.007	26.020	**K20x26x20**	0.787	20	4610	6180	23000
20.000	19.991	28.007	28.020	**K20x28x20**	0.787	20	5590	6610	23000
22.000	21.991	26.007	26.020	**K22x26x10**	0.394	10	2210	3250	20000
22.000	21.991	26.007	26.020	**K22x26x13**	0.512	13	2650	4110	20000
22.000	21.991	30.007	30.020	**K22x30x20**	0.787	20	5550	6700	21000
22.000	21.991	32.009	32.025	**K22x32x30**	1.181	30	9460	11600	22000
22.225	22.215	28.583	28.596	—	—	—	—	—	—

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

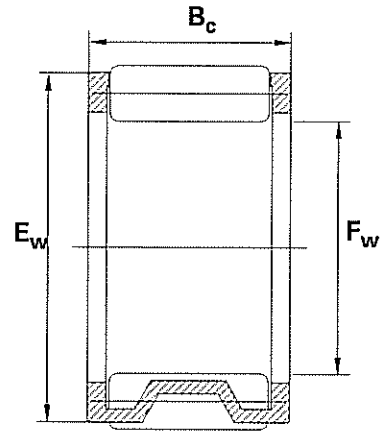
Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

Minimum axial clearance should be 0.008 inches or 0.2 mm.

Radial Needle Roller and Cage Assemblies

Type WJ



Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.

DIMENSIONS AND LOAD RATINGS – INCH SERIES										BEARING MOUNTING			
F_w Bore (nominal)		E_w Outside Diameter (nominal)		Assembly Designation	B_c Width +0.000 -0.015	+0,00 -0,38	Load Ratings Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76	Limiting Speed	Inch Mounting Shaft Raceway Diameter inches		Housing Bore inches	
inch	mm	inch	mm		inch	mm	lbf	lbf	rpm	min.	max.	min.	max.
0.94	24	1.10	28	—	—	—	—	—	—	0.9449	0.9445	1.1026	1.1031
0.94	24	1.10	28	—	—	—	—	—	—	0.9449	0.9445	1.1026	1.1031
0.98	25	1.14	29	—	—	—	—	—	—	0.9843	0.9839	1.142	1.1425
0.98	25	1.18	30	—	—	—	—	—	—	0.9843	0.9839	1.1814	1.1819
0.98	25	1.18	30	—	—	—	—	—	—	0.9843	0.9839	1.1814	1.1819
0.98	25	1.18	30	—	—	—	—	—	—	0.9843	0.9839	1.1814	1.1819
0.98	25	1.18	30	—	—	—	—	—	—	0.9843	0.9839	1.1814	1.1819
0.98	25	1.22	31	—	—	—	—	—	—	0.9843	0.9839	1.2208	1.2215
0.98	25	1.26	32	—	—	—	—	—	—	0.9843	0.9839	1.2602	1.2608
0.98	25	1.30	33	—	—	—	—	—	—	0.9843	0.9839	1.2996	1.3002
0.98	25	1.30	33	—	—	—	—	—	—	0.9843	0.9839	1.2996	1.3002
0.98	25	1.38	35	—	—	—	—	—	—	0.9843	0.9839	1.3783	1.3789
0.98	25	1.38	35	—	—	—	—	—	—	0.9843	0.9839	1.3783	1.3789
1	25.40	1 5/16	33.34	**WJ-162112**	0.750	19,05	6150	8060	18000	1.0000	0.9996	1.3129	1.3135
1	25.40	1 5/16	33.34	**WJ-162116**	1.000	25,40	8110	11500	18000	1.0000	0.9996	1.3129	1.3135
1	25.40	1 5/16	33.34	**WJ-162120**	1.250	31,75	9910	14900	18000	1.0000	0.9996	1.3129	1.3135
1.02	26	1.18	30	—	—	—	—	—	—	1.0236	1.0233	1.1814	1.1819
1 1/8	26.58	1 1/2	38.10	**WJ-182416**	1.000	25,40	9350	12600	16000	1.1250	1.1246	1.5004	1.5010
1 1/8	26.58	1 1/2	38.10	**WJ-182420**	1.250	31,75	11500	16500	16000	1.1250	1.1246	1.5004	1.5010

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
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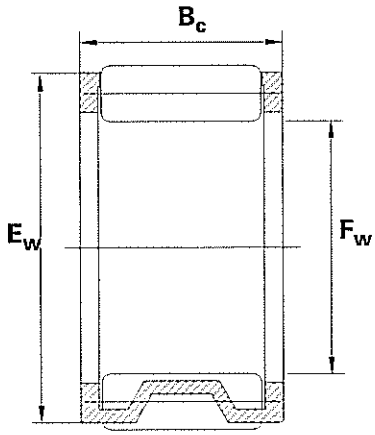
Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

Minimum axial clearance should be .008 inches or 0.2 mm.

Radial Needle Roller and Cage Assemblies

Type K



Check for availability.

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BEARING MOUNTING				DIMENSIONS AND LOAD RATINGS – METRIC SERIES					
Metric Mounting				Assembly Designation	B_c Width		Load Ratings		Limiting Speed
Shaft Raceway Diameter millimeters		Housing Bore millimeters			+0.000 -0.015	+0,00 -0,38	Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76	
min.	max.	min.	max.		inch	mm	lbf	lbf	rpm
24.000	23.991	28.007	28.020	**K24x28x10**	0.394	10	2180	3280	18000
24.000	23.991	28.007	28.020	**K24x28x13**	0.512	13	2800	4540	18000
25.000	24.991	29.007	29.020	**K25x29x13**	0.512	13	2870	4750	17000
25.000	24.991	30.007	30.020	**K25x30x13**	0.512	13	3320	4910	17000
25.000	24.991	30.007	30.020	**K25x30x18**	0.709	18	4670	7620	17000
25.000	24.991	30.007	30.020	**K25x30x20**	0.787	20	4960	8220	17000
25.000	24.991	30.007	30.020	**K25x30x24**	0.945	24	5620	9620	17000
25.000	24.991	31.009	31.025	**K25x31x17**	0.669	17	4480	6350	18000
25.000	24.991	32.009	32.025	**K25x32x16**	0.630	16	4520	5790	18000
25.000	24.991	33.009	33.025	**K25x33x20**	0.787	20	6380	9290	18000
25.000	24.991	33.009	33.025	**K25x33x25**	0.984	25	7470	10100	18000
25.000	24.991	35.009	35.025	**K25x35x25**	0.984	25	8550	10500	19000
25.000	24.991	35.009	35.025	**K25x35x30**	1.181	30	10100	13000	19000
25.400	25.390	33.348	33.363	—	—	—	—	—	—
25.400	25.390	33.348	33.363	—	—	—	—	—	—
25.400	25.390	33.348	33.363	—	—	—	—	—	—
26.000	25.991	30.007	30.020	**K26x30x13**	0.512	13	2770	4590	16000
28.575	28.565	38.110	38.125	—	—	—	—	—	—
28.575	28.565	38.110	38.125	—	—	—	—	—	—

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
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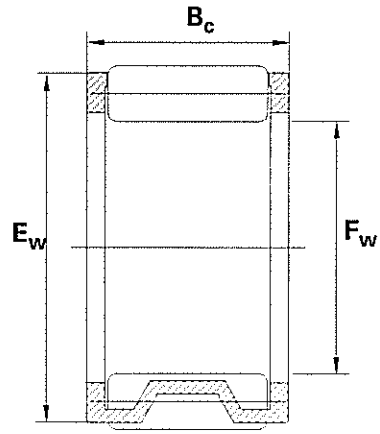
Radial Needle Roller and Cage Assemblies

Type WJ



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DIMENSIONS AND LOAD RATINGS – INCH SERIES										BEARING MOUNTING			
F_w Bore (nominal)		E_w Outside Diameter (nominal)		Assembly Designation	B_c Width +0.000 -0.015	+0,00 -0,38	Load Ratings Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76	Limiting Speed	Inch Mounting Shaft Raceway Diameter inches		Housing Bore inches	
inch	mm	inch	mm		inch	mm	lbf	lbf	rpm	min.	max.	min.	max.
1.18	30	1.38	35	–	–	–	–	–	–	1.1811	1.1807	1.3783	1.3789
1.18	30	1.38	35	–	–	–	–	–	–	1.1811	1.1807	1.3783	1.3789
1.18	30	1.38	35	–	–	–	–	–	–	1.1811	1.1807	1.3783	1.3789
1.18	30	1.57	40	–	–	–	–	–	–	1.1811	1.1807	1.5752	1.5758
1.18	30	1.65	42	–	–	–	–	–	–	1.1811	1.1807	1.6539	1.6545
1 1/4	31.75	1 5/8	41.28	**WJ-202612**	0.750	19.05	7320	9490	14000	1.2500	1.2496	1.6254	1.6260
1 1/4	31.75	1 5/8	41.28	**WJ-202616**	1.000	25.40	9730	13700	14000	1.2500	1.2496	1.6254	1.6260
1 1/4	31.75	1 5/8	41.28	**WJ-202620**	1.250	31.75	12000	17900	14000	1.2500	1.2496	1.6254	1.6260
1 1/4	31.75	1 5/8	41.28	**WJ-202624**	1.500	38.10	14100	22100	14000	1.2500	1.2496	1.6254	1.6260
1.26	32	1.42	36	–	–	–	–	–	–	1.2598	1.2594	1.4177	1.4183
1.26	32	1.46	37	–	–	–	–	–	–	1.2598	1.2594	1.457	1.4577
1.26	32	1.46	37	–	–	–	–	–	–	1.2598	1.2594	1.457	1.4577
1.26	32	1.50	38	–	–	–	–	–	–	1.2598	1.2594	1.4964	1.497
1.26	32	1.54	39	–	–	–	–	–	–	1.2598	1.2594	1.5358	1.5364
1.26	32	1.54	39	–	–	–	–	–	–	1.2598	1.2594	1.5358	1.5364
1 3/8	34.92	1 3/4	44.45	**WJ-222816**	1.000	25.40	10100	14700	13000	1.3750	1.3746	1.7504	1.7510
1 3/8	34.92	1 3/4	44.45	**WJ-222820**	1.250	31.75	12400	19200	13000	1.3750	1.3746	1.7504	1.7510
1.38	35	1.57	40	–	–	–	–	–	–	1.378	1.3775	1.5752	1.5758
1.38	35	1.65	42	–	–	–	–	–	–	1.378	1.3775	1.6539	1.6545
1.38	35	1.65	42	–	–	–	–	–	–	1.378	1.3775	1.6539	1.6545
1.38	35	1.65	42	–	–	–	–	–	–	1.378	1.3775	1.6539	1.6545
1.46	37	1.65	42	–	–	–	–	–	–	1.1467	1.4563	1.6539	1.6545
1.50	38	1.81	46	–	–	–	–	–	–	1.4961	1.4956	1.8114	1.812
1.50	38	1.97	50	–	–	–	–	–	–	1.4961	1.4956	1.9689	1.9695
1 1/2	38.10	1 7/8	47.62	**WJ-243016**	1.000	25.40	10400	15700	12000	1.5000	1.4996	1.8754	1.8760
1 1/2	38.10	1 7/8	47.62	**WJ-243020**	1.250	31.75	12800	20600	12000	1.5000	1.4996	1.8754	1.8760
1 1/2	38.10	1 7/8	47.62	**WJ-243024**	1.500	38.10	15100	25400	12000	1.5000	1.4996	1.8754	1.8760

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
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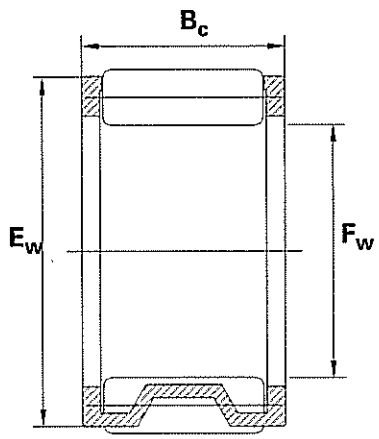
Radial Needle Roller and Cage Assemblies

Type K



Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and millimeters for nominal metric bearings.

BEARING MOUNTING — Metric Mounting				DIMENSIONS AND LOAD RATINGS – METRIC SERIES					
Shaft Raceway Diameter		Housing Bore		Assembly Designation	B_c Width		Load Ratings		Limiting Speed
							Basic Dynamic C_r	Basic Static C_o	
millimeters		millimeters			+0.000 -0.015	+0,00 -0,38	ISO 281	ISO 76	
min.	max.	min.	max.		inch	mm	lbf	lbf	rpm
30.000	29.991	35.009	35.025	**K30x35x17**	0.669	17	4600	7890	14000
30.000	29.991	35.009	35.025	**K30x35x20**	0.787	20	5330	9530	14000
30.000	29.991	35.009	35.025	**K30x35x23**	0.906	23	6030	11200	14000
30.000	29.991	40.009	40.025	**K30x40x30**	1.181	30	11100	15400	15000
30.000	29.991	42.009	40.025	**K30x42x30**	1.181	30	12300	15600	16000
31.750	31.740	41.285	41.300	—	—	—	—	—	—
31.750	31.740	41.285	41.300	—	—	—	—	—	—
31.750	31.740	41.285	41.300	—	—	—	—	—	—
31.750	31.740	41.285	41.300	—	—	—	—	—	—
32.000	31.989	36.009	36.025	**K32x36x15**	0.591	15	2620	4550	13000
32.000	31.989	37.009	37.025	**K32x37x13**	0.512	13	3470	5610	13000
32.000	31.989	37.009	37.025	**K32x37x17**	0.669	17	4550	7930	13000
32.000	31.989	38.009	38.025	**K32x38x26**	1.024	26	7520	13300	14000
32.000	31.989	39.009	39.025	**K32x39x16**	0.630	16	5240	7530	14000
32.000	31.989	39.009	39.025	**K32x39x18**	0.709	18	5870	8720	14000
34.925	34.915	44.460	44.475	—	—	—	—	—	—
34.925	34.915	44.460	44.475	—	—	—	—	—	—
35.000	34.989	40.009	40.025	**K35x40x13**	0.512	13	3690	6240	12000
35.000	34.989	42.009	42.025	**K35x42x16**	0.630	16	5570	8390	12000
35.000	34.989	42.009	42.025	**K35x42x18**	0.709	18	6240	9720	12000
35.000	34.989	42.009	42.025	**K35x42x30**	1.181	30	9150	15900	12000
37.000	36.989	42.009	42.025	**K37x42x13**	0.512	13	3860	6750	11000
38.000	37.989	46.009	46.025	**K38x46x32**	1.260	32	12500	22200	12000
38.000	37.989	50.009	50.025	**K38x50x33**	1.299	33	15400	22200	12000
38.100	38.090	47.635	47.650	—	—	—	—	—	—
38.100	38.090	47.635	47.650	—	—	—	—	—	—
38.100	38.090	47.635	47.650	—	—	—	—	—	—

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

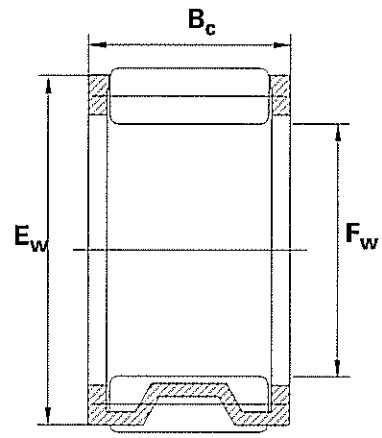
Minimum axial clearance should be .008 inches or 0.2 mm.

Radial Needle Roller and Cage Assemblies

Type WJ

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.



DIMENSIONS AND LOAD RATINGS – INCH SERIES										BEARING MOUNTING			
F_w Bore (nominal)		E_w Outside Diameter (nominal)		Assembly Designation	B_c Width		Load Ratings Basic Dynamic C_r ISO 281	Load Ratings Basic Static C_o ISO 76	Limiting Speed	Inch Mounting Shaft Raceway Diameter inches		Inch Mounting Housing Bore inches	
					+0.000 -0.015	+0,00 -0,38							
Inch	mm	Inch	mm		inch	mm	lbf	lbf	rpm	min.	max.	min.	max.
1.57	40	1.77	45	—	—	—	—	—	—	1.5748	1.5744	1.7720	1.7726
1.57	40	1.77	45	—	—	—	—	—	—	1.5748	1.5744	1.7720	1.7726
1.57	40	1.85	47	—	—	—	—	—	—	1.5748	1.5744	1.8507	1.8513
1.57	40	1.89	48	—	—	—	—	—	—	1.5748	1.5744	1.8901	1.8907
1.57	40	1.89	48	—	—	—	—	—	—	1.5748	1.5744	1.8901	1.8907
1.65	42	1.97	50	—	—	—	—	—	—	1.6535	1.6531	1.9689	1.9695
1 3/4	44.45	2 1/8	53.98	**WJ-283412**	0.750	19.05	8630	12900	9900	1.7500	1.7496	2.1254	2.1261
1 3/4	44.45	2 1/8	53.98	**WJ-283416**	1.000	25.40	11500	18700	9900	1.7500	1.7496	2.1254	2.1261
1 3/4	44.45	2 1/8	53.98	**WJ-283424**	1.500	38.10	16600	30100	9900	1.7500	1.7496	2.1254	2.1261
1.77	45	1.97	50	—	—	—	—	—	—	1.7717	1.7712	1.9689	1.9695
1.77	45	2.09	53	—	—	—	—	—	—	1.7717	1.7712	2.087	2.0878
1.77	45	2.36	60	—	—	—	—	—	—	1.7717	1.7712	2.3626	2.3633
1.85	47	2.05	52	—	—	—	—	—	—	1.8504	1.85	2.0476	2.0484
1.85	47	2.17	55	—	—	—	—	—	—	1.8504	1.85	2.1657	2.1665
1.89	48	2.09	53	—	—	—	—	—	—	1.8898	1.8893	2.087	2.0878
1.93	49	2.56	65	—	—	—	—	—	—	1.9291	1.9287	2.5594	2.5602
1.97	50	2.17	55	—	—	—	—	—	—	1.9685	1.9681	2.1657	2.1665
1.97	50	2.17	55	—	—	—	—	—	—	1.9685	1.9681	2.1657	2.1665
1.97	50	2.20	56	—	—	—	—	—	—	1.9685	1.9681	2.2051	2.2059
1.97	50	2.28	58	—	—	—	—	—	—	1.9685	1.9681	2.2839	2.2846
1.97	50	2.28	58	—	—	—	—	—	—	1.9685	1.9681	2.2839	2.2846
2	50.80	2 3/8	60.32	**WJ-323812**	0.750	19.05	9350	15000	8600	2.0000	1.9995	2.3754	2.3761
2	50.80	2 3/8	60.32	**WJ-323816**	1.000	25.40	12400	21600	8600	2.0000	1.9995	2.3754	2.3761
2	50.80	2 3/8	60.32	**WJ-323820**	1.250	31.75	15300	28200	8600	2.0000	1.9995	2.3754	2.3761
2	50.80	2 3/8	60.32	**WJ-323824**	1.500	38.10	18000	34800	8600	2.0000	1.9995	2.3754	2.3761
2.05	52	2.36	60	—	—	—	—	—	—	2.0472	2.0467	2.3626	2.3633
2 1/16	52.39	2 7/16	61.91	**WJ-333916**	1.000	25.40	12800	22500	8300	2.0625	2.0620	2.4379	2.4386
2 1/8	53.98	2 1/2	63.50	**WJ-344016**	1.000	25.40	11600	20100	8000	2.1250	2.1245	2.5004	2.5011
2 1/8	53.98	2 1/2	63.50	**WJ-344020**	1.250	31.75	14600	27000	8000	2.1250	2.1245	2.5004	2.5011
2 1/8	53.98	2 1/2	63.50	**WJ-344024**	1.500	38.10	17400	34000	8000	2.1250	2.1245	2.5004	2.5011

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

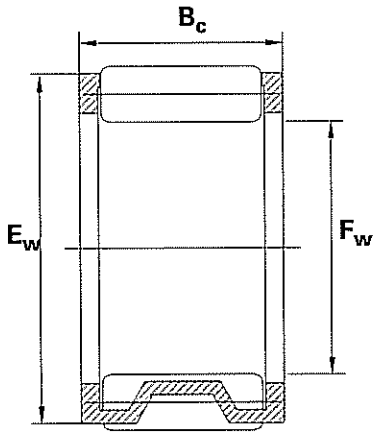
Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

Minimum axial clearance should be .008 inches or 0.2 mm.

Radial Needle Roller and Cage Assemblies

Type K



Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and millimeters for nominal metric bearings.

BEARING MOUNTING				DIMENSIONS AND LOAD RATINGS – METRIC SERIES					
Metric Mounting				Assembly Designation	B_c Width		Load Ratings		Limiting Speed
Shaft Raceway Diameter millimeters		Housing Bore millimeters			+0.000 -0.015	+0,00 -0,38	Basic Dynamic C_r ISO 281	Basic Static C_o ISO 76	
min.	max.	min.	max.		Inch	mm	lbf	lbf	rpm
40.000	39.989	45.009	45.025	K40x45x17	0.669	17	5420	10700	11000
40.000	39.989	45.009	45.025	K40x45x21	1.063	21	5290	10300	11000
40.000	39.989	47.009	47.025	K40x47x18	0.709	18	6370	10400	11000
40.000	39.989	48.009	48.025	K40x48x20	0.787	20	8050	12800	11000
40.000	39.989	48.009	48.025	K40x48x35	1.378	35	12900	23600	11000
42.000	41.989	50.009	50.025	K42x50x20	0.787	20	7990	12900	10000
44.450	44.440	53.985	54.003	—	—	—	—	—	—
44.450	44.440	53.985	54.003	—	—	—	—	—	—
44.450	44.440	53.985	54.003	—	—	—	—	—	—
45.000	44.989	50.009	50.025	K45x50x17	0.669	17	5670	11800	9400
45.000	44.989	53.010	53.029	K45x53x20	0.787	20	8170	13500	9600
45.000	44.989	60.010	60.029	K45x60x45	1.772	45	24400	36200	10000
47.000	46.989	52.010	52.029	K47x52x17	0.669	17	5500	11500	8900
47.000	46.989	55.010	55.029	K47x55x28	1.102	28	11100	20300	9200
48.000	47.989	53.010	53.029	K48x53x17	0.669	17	5830	12500	8700
49.000	48.989	65.010	65.029	K49x65x38	1.496	38	22600	32200	9300
50.000	49.989	55.010	55.029	K50x55x20	0.787	20	6840	15600	8400
50.000	49.989	55.010	55.029	K50x55x30	1.181	30	8630	20900	8400
50.000	49.989	56.010	56.029	K50x56x23	0.905	23	8050	16800	8500
50.000	49.989	58.010	58.029	K50x58x20	0.787	20	8800	15400	8600
50.000	49.989	58.010	58.029	K50x58x25	0.984	25	10500	19400	8600
50.800	50.787	60.335	60.353	—	—	—	—	—	—
50.800	50.787	60.335	60.353	—	—	—	—	—	—
50.800	50.787	60.335	60.353	—	—	—	—	—	—
50.800	50.787	60.335	60.353	—	—	—	—	—	—
52.000	51.987	60.010	60.029	K52x60x24	0.945	24	10700	20000	8200
52.388	52.375	61.923	61.941	—	—	—	—	—	—
53.975	53.962	63.510	63.528	—	—	—	—	—	—
53.975	53.962	63.510	63.528	—	—	—	—	—	—
53.975	53.962	63.510	63.528	—	—	—	—	—	—

Load Ratings are based on a minimum raceway hardness of 58 HRC or equivalent.
Load Ratings are given in pounds-force: 1 lbf = 0.45kgf = 4.448N
Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF • HF

Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Mounting – The recommended shaft and housing bore diameters listed above are essential to the proper application of the needle roller and cage assemblies. Proper mounting requires that all surfaces adjacent to the assemblies must have a hardness equivalent to 58 HRC, minimum. The raceway with the lower hardness determines the ability of the assembly to carry the load.

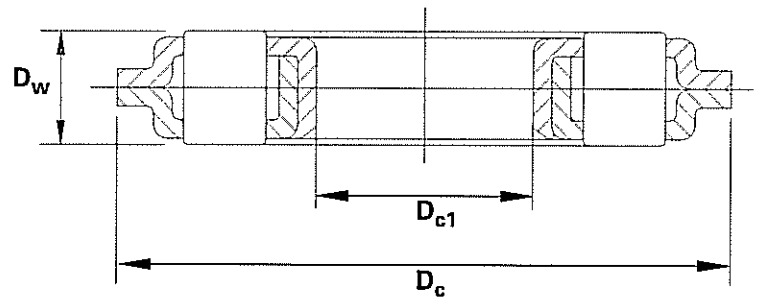
Minimum axial clearance should be .008 inches or 0.2 mm.

Thrust Bearings

Thrust Needle Roller and Cage Assemblies

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.



ASSEMBLY DIMENSIONS AND LOAD RATINGS

D_{c1} Bore (nominal)		D_c O.D. (nominal)		Assembly Designation	D_w Roller Diameter (nominal)		Raceway Contact I.D. (nominal)		Raceway Contact O.D. (nominal)		Load Ratings		Limiting Speed
											Basic Dynamic C_a	Basic Static C_{oa} ISO 76	
inch	mm	inch	mm		inch	mm	inch	mm	inch	mm	lbf	lbf	
0.236	5	0.748	19	FNT-619	0.0787	2	0.31	8.0	0.71	18.0	1270	3120	23000
0.250	6.35	0.687	17.45	NTA-411	0.0781	1.984	0.34	8.6	0.58	14.7	925	2060	28000
0.312	7.92	0.750	19.05	NTA-512	0.0781	1.984	0.40	10.2	0.64	16.3	1050	2510	25000
0.315	8	0.827	21	FNT-821	0.0787	2	0.39	10.0	0.79	20.0	1430	3810	21000
0.375	9.52	0.812	20.62	NTA-613	0.0781	1.984	0.46	11.7	0.71	18.0	1090	2740	23000
0.394	10	0.945	24	FNT-1024	0.0787	2	0.47	12.0	0.91	23.0	1720	5080	18000
0.472	12	1.024	26	FNT-1226	0.0787	2	0.55	14.0	0.98	25.0	1870	5860	17000
0.500	12.70	0.937	23.80	NTA-815	0.0781	1.984	0.59	15.0	0.83	21.1	1290	3660	19000
0.562	14.27	1.000	25.40	NTA-916	0.0781	1.984	0.65	16.5	0.89	22.6	1390	4110	18000
0.591	15	1.102	26	FNT-1528	0.0787	2	0.67	17.0	1.06	27.0	1900	6230	16000
0.625	15.88	1.125	28.58	NTA-1018	0.0781	1.984	0.71	18.0	1.02	25.9	1590	5070	16000
0.669	17	1.181	30	FNT-1730	0.0787	2	0.75	19.0	1.14	29.0	2010	6920	14000

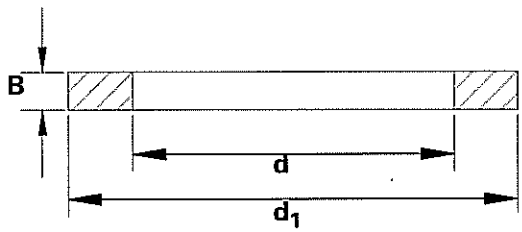
Required Basic Dynamic Load Rating (C_a) = Applied Load • SF • LF • HF

Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

The Basic Dynamic Load Rating, C_a, is to be used in load-life calculations taking into consideration the application guidelines and limitations given in this catalog. Applications involving dynamic loads approaching this rating should be referred to the Global Bearings Sales Office before final selection is made. Load ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Thrust Bearings

Thrust Washers



Dimensions for bore and o.d. of thrust needle roller and cage assemblies and thrust washers are nominal.

Thrust washers are burnished for at least one-quarter of the bore area with the remainder a rough breakaway finish. The o.d. of the washers will be as blanked. Due to distortion in the hardening, the thinner washers may be out of flat in the free state but can be expected to flatten under load.

THRUST WASHER DIMENSIONS										PILOTING DIMENSIONS					
Thrust Washer Designation	d Bore (nominal)		d_1 O.D. (nominal)		B Washer Thickness min.	B Washer Thickness max.			Matching Assembly Designation	Shaft Pilot Diameter* min.	Shaft Pilot Diameter* max.			Diameter to Clear Washer O.D. ≠	
	inch	mm	inch	mm	inch	inch	mm	mm		inch	inch	mm	mm	inch	mm
AS-619	0.236	6	0.748	19	0.037	0.041	0.95	1.05	FNT-619	0.234	0.236	5.95	6.00	0.787	20.00
TRA-411	0.250	6.35	0.687	17.45	0.030	0.032	0.76	0.81	NTA-411	0.247	0.250	6.27	6.35	0.719	18.26
TRB-411	0.250	6.35	0.687	17.45	0.060	0.063	1.52	1.60	NTA-411	0.247	0.250	6.27	6.35	0.719	18.26
TRC-411	0.250	6.35	0.687	17.45	0.092	0.095	2.34	2.42	NTA-411	0.247	0.250	6.27	6.35	0.719	18.26
TRA-512	0.312	7.92	0.750	19.05	0.030	0.032	0.76	0.81	NTA-512	0.309	0.312	7.84	7.92	0.781	19.84
TRB-512	0.312	7.92	0.750	19.05	0.060	0.063	1.52	1.60	NTA-512	0.309	0.312	7.84	7.92	0.781	19.84
AS-821	0.315	8	0.827	21	0.037	0.041	0.95	1.05	FNT-821	0.313	0.315	7.94	8.00	0.866	22.00
TRA-613	0.375	9.52	0.812	20.62	0.030	0.032	0.76	0.81	NTA-613	0.372	0.375	9.44	9.52	0.844	21.44
TRB-613	0.375	9.52	0.812	20.62	0.060	0.063	1.52	1.60	NTA-613	0.372	0.375	9.44	9.52	0.844	21.44
TRC-613	0.375	9.52	0.812	20.62	0.092	0.095	2.34	2.42	NTA-613	0.372	0.375	9.44	9.52	0.844	21.44
AS-1024	0.394	10	0.945	24	0.037	0.041	0.95	1.05	FNT-1024	0.392	0.394	9.94	10.00	0.984	25.00
AS-1226	0.472	12	1.024	26	0.037	0.041	0.95	1.05	FNT-1226	0.469	0.472	11.93	12.00	1.063	27.00
TRA-815	0.500	12.70	0.937	23.80	0.030	0.032	0.76	0.81	NTA-815	0.497	0.500	12.62	12.70	0.969	24.61
TRB-815	0.500	12.70	0.937	23.80	0.060	0.063	1.52	1.60	NTA-815	0.497	0.500	12.62	12.70	0.969	24.61
TRC-815	0.500	12.70	0.937	23.80	0.092	0.095	2.34	2.42	NTA-815	0.497	0.500	12.62	12.70	0.969	24.61
TRA-916	0.562	14.27	1.000	25.40	0.030	0.032	0.76	0.81	NTA-916	0.559	0.562	14.19	14.27	1.031	26.19
TRB-916	0.562	14.27	1.000	25.40	0.060	0.063	1.52	1.60	NTA-916	0.559	0.562	14.19	14.27	1.031	26.19
TRC-916	0.562	14.27	1.000	25.40	0.092	0.095	2.34	2.42	NTA-916	0.559	0.562	14.19	14.27	1.031	26.19
AS-1528	0.591	15	1.102	28	0.037	0.041	0.95	1.05	FNT-1528	0.588	0.591	14.93	15.00	1.142	29.00
TRA-1018	0.625	15.88	1.125	28.58	0.030	0.032	0.76	0.81	NTA-1018	0.622	0.625	15.80	15.88	1.156	29.36
TRB-1018	0.625	15.88	1.125	28.58	0.060	0.063	1.52	1.60	NTA-1018	0.622	0.625	15.80	15.88	1.156	29.36
TRC-1018	0.625	15.88	1.125	28.58	0.092	0.095	2.34	2.42	NTA-1018	0.622	0.625	15.80	15.88	1.156	29.36
TRD-1018	0.625	15.88	1.125	28.58	0.123	0.126	3.12	3.20	NTA-1018	0.622	0.625	15.80	15.88	1.156	29.36
TRE-1018	0.625	15.88	1.125	28.58	0.154	0.157	3.91	3.99	NTA-1018	0.622	0.625	15.80	15.88	1.156	29.36
AS-1730	0.669	17	1.181	30	0.037	0.041	0.95	1.05	FNT-1730	0.666	0.669	16.93	17.00	1.220	31.00

Consult Global Bearings Sales Office for recommendations when an application requires o.d. pilotings.

* When a shaft below the minimum recommended diameter is consult Global Bearings Sales Office.

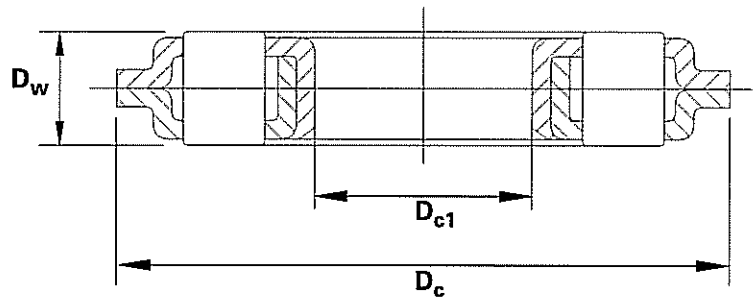
≠ If the shaft and the housing adjacent to the bearing o.d. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.

Thrust Bearings

Thrust Needle Roller and Cage Assemblies

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.



ASSEMBLY DIMENSIONS AND LOAD RATINGS

D_{c1} Bore (nominal)		D_c O.D. (nominal)		Assembly Designation	D_w Roller Diameter (nominal)		Raceway Contact I.D. (nominal)		Raceway Contact O.D. (nominal)		Load Ratings Basic Dynamic C_a	Load Ratings Basic Static C_{oa} ISO 76	Limiting Speed
inch	mm	inch	mm		inch	mm	inch	mm	inch	mm	lbf	lbf	
0.750	19.05	1.250	31.75	NTA-1220	0.0781	1.984	0.84	21.3	1.14	29.0	1770	6090	14000
0.787	20	1.378	35	FNTA-2035	0.0787	2	0.87	22.0	1.34	34.0	2600	10200	13000
0.875	22.22	1.437	36.50	NTA-1423	0.0781	1.984	0.96	24.4	1.33	33.8	2350	9210	12000
0.875	22.22	1.687	42.85	NTC-1427	0.0781	1.984	1.02	25.9	1.57	39.9	3430	15500	10000
0.984	25	1.654	42	FNT-2542	0.0787	2	1.06	27.0	1.61	41.0	3470	15600	10000
1.000	25.40	1.562	39.67	NTA-1625	0.0781	1.984	1.09	27.7	1.45	36.8	2420	9870	11000
1.125	28.58	1.750	44.45	NTA-1828	0.0781	1.984	1.21	30.7	1.64	41.7	3040	13700	9800
1.181	30	1.850	47	FNTA-3047	0.0787	2	1.26	32.0	1.81	46.0	3560	16900	9100
1.250	31.75	1.937	49.20	NTA-2031	0.0781	1.984	1.34	34.0	1.82	46.2	3690	18200	8800

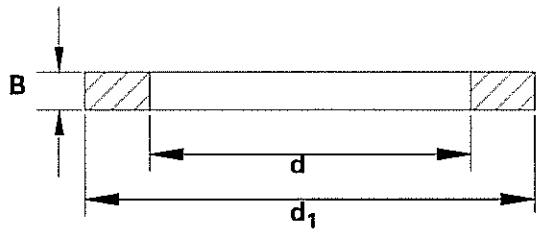
Required Basic Dynamic Load Rating (C_a) = Applied Load • SF • LF • HF

Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

The Basic Dynamic Load Rating, C_a, is to be used in load-life calculations taking into consideration the application guidelines and limitations given in this catalog. Applications involving dynamic loads approaching this rating should be referred to the Global Bearings Sales Office before final selection is made. Load ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Thrust Bearings

Thrust Washers



Dimensions for bore and o.d. of thrust needle roller and cage assemblies and thrust washers are nominal.

Thrust washers are burnished for at least one-quarter of the bore area with the remainder a rough breakaway finish. The o.d. of the washers will be as blanked. Due to distortion in the hardening, the thinner washers may be out of flat in the free state but can be expected to flatten under load.

THRUST WASHER DIMENSIONS										PILOTING DIMENSIONS					
Thrust Washer Designation	d Bore (nominal)		d_1 O.D. (nominal)		B Washer Thickness min.	B Washer Thickness max.			Matching Assembly Designation	Shaft Pilot Diameter* min.	Shaft Pilot Diameter* max.			Diameter to Clear Washer O.D. ≠	
	inch	mm	inch	mm	inch	inch	mm	mm		inch	inch	mm	mm	inch	mm
TRA-1220	0.750	19.05	1.250	31.75	0.030	0.032	0.76	0.81	NTA-1220	0.747	0.750	18.97	19.05	1.281	32.54
TRB-1220	0.750	19.05	1.250	31.75	0.060	0.063	1.52	1.60	NTA-1220	0.747	0.750	18.97	19.05	1.281	32.54
TRC-1220	0.750	19.05	1.250	31.75	0.092	0.095	2.34	2.42	NTA-1220	0.747	0.750	18.97	19.05	1.281	32.54
TRD-1220	0.750	19.05	1.250	31.75	0.123	0.126	3.12	3.20	NTA-1220	0.747	0.750	18.97	19.05	1.281	32.54
TRE-1220	0.750	19.05	1.250	31.75	0.154	0.157	3.91	3.99	NTA-1220	0.747	0.750	18.97	19.05	1.281	32.54
AS-2035	0.787	20.00	1.378	35.00	0.037	0.041	0.95	1.05	FNTA-2035	0.784	0.787	19.92	20.00	1.417	36.00
TRA-1423	0.875	22.22	1.437	36.50	0.030	0.032	0.76	0.81	NTA-1423	0.872	0.875	22.14	22.22	1.469	37.31
TRB-1423	0.875	22.22	1.437	36.50	0.060	0.063	1.52	1.60	NTA-1423	0.872	0.875	22.14	22.22	1.469	37.31
TRC-1423	0.875	22.22	1.437	36.50	0.092	0.095	2.34	2.42	NTA-1423	0.872	0.875	22.14	22.22	1.469	37.31
TRD-1423	0.875	22.22	1.437	36.50	0.123	0.126	3.12	3.20	NTA-1423	0.872	0.875	22.14	22.22	1.469	37.31
TRB-1427	0.875	22.22	1.687	42.85	0.030	0.063	1.52	1.60	NTC-1427	0.872	0.875	22.14	22.22	1.719	43.66
TRC-1427	0.875	22.22	1.687	42.85	0.060	0.095	2.34	2.42	NTC-1427	0.872	0.875	22.14	22.22	1.719	43.66
TRD-1427	0.875	22.22	1.687	42.85	0.092	0.126	3.12	3.20	NTC-1427	0.872	0.875	22.14	22.22	1.719	43.66
AS-2542	0.984	25.00	1.654	42.00	0.037	0.041	0.95	1.05	FNT-2542	0.981	0.984	24.92	25.00	1.693	43.00
TRA-1625	1.000	25.40	1.562	39.67	0.030	0.032	0.76	0.81	NTA-1625	0.997	1.000	25.32	25.40	1.594	40.49
TRB-1625	1.000	25.40	1.562	39.67	0.060	0.063	1.52	1.60	NTA-1625	0.997	1.000	25.32	25.40	1.594	40.49
TRC-1625	1.000	25.40	1.562	39.67	0.092	0.095	2.34	2.42	NTA-1625	0.997	1.000	25.32	25.40	1.594	40.49
TRD-1625	1.000	25.40	1.562	39.67	0.123	0.126	3.12	3.20	NTA-1625	0.997	1.000	25.32	25.40	1.594	40.49
TRE-1625	1.000	25.40	1.562	39.67	0.154	0.157	3.91	3.99	NTA-1625	0.997	1.000	25.32	25.40	1.594	40.49
TRA-1828	1.125	28.58	1.750	44.45	0.030	0.032	0.76	0.81	NTA-1828	1.122	1.125	28.50	28.58	1.781	45.24
TRB-1828	1.125	28.58	1.750	44.45	0.060	0.063	1.52	1.60	NTA-1828	1.122	1.125	28.50	28.58	1.781	45.24
TRC-1828	1.125	28.58	1.750	44.45	0.092	0.095	2.34	2.42	NTA-1828	1.122	1.125	28.50	28.58	1.781	45.24
TRD-1828	1.125	28.58	1.750	44.45	0.123	0.126	3.12	3.20	NTA-1828	1.122	1.125	28.50	28.58	1.781	45.24
AS-3047	1.181	30.00	1.850	47.00	0.037	0.041	0.95	1.05	FNTA-3047	1.178	1.181	29.92	30.00	1.890	48.00
TRA-2031	1.250	31.75	1.937	49.20	0.030	0.032	0.76	0.81	NTA-2031	1.247	1.250	31.67	31.75	1.969	50.01
TRB-2031	1.250	31.75	1.937	49.20	0.060	0.063	1.52	1.60	NTA-2031	1.247	1.250	31.67	31.75	1.969	50.01
TRC-2031	1.250	31.75	1.937	49.20	0.092	0.095	2.34	2.42	NTA-2031	1.247	1.250	31.67	31.75	1.969	50.01
TRD-2031	1.250	31.75	1.937	49.20	0.123	0.126	3.12	3.20	NTA-2031	1.247	1.250	31.67	31.75	1.969	50.01
TRF-2031	1.250	31.75	1.937	49.20	0.185	0.188	4.70	4.78	NTA-2031	1.247	1.250	31.67	31.75	1.969	50.01

Consult Global Bearings Sales Office for recommendations when an application requires o.d. pilotings.

* When a shaft below the minimum recommended diameter is consult Global Bearings Sales Office.

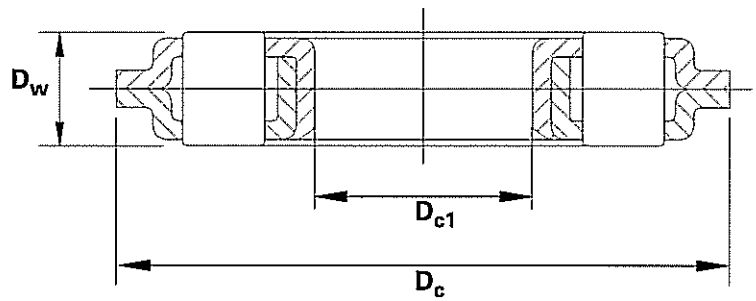
≠ If the shaft and the housing adjacent to the bearing o.d. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.

Thrust Bearings

Thrust Needle Roller and Cage Assemblies

Check for availability.

Inch-metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.



ASSEMBLY DIMENSIONS AND LOAD RATINGS												
D_{c1} Bore (nominal)		D_c O.D. (nominal)		Assembly Designation	D_w Roller Diameter (nominal)		Raceway Contact I.D. (nominal)		Raceway Contact O.D. (nominal)		Load Ratings Basic Dynamic C_a	Load Ratings Basic Static C_{oa} ISO 76	Limiting Speed
inch	mm	inch	mm		inch	mm	inch	mm	inch	mm	lbf	lbf	
1.375	34,92	2.062	52.37	NTA-2233	0.0781	1.984	1.46	37.1	1.95	49.5	3910	20100	8200
1.378	35	2.047	52	FNT-3552	0.0787	2	1.46	37.0	2.01	51.0	4160	21600	8000
1.500	38,10	2.187	55.55	NTA-2435	0.0781	1.984	1.59	40.4	2.07	52.6	4250	23000	7700
1.575	40	2.362	60	FNT-4060	0.1181	3	1.69	43	2.24	57	6000	27200	7200
1.750	44,45	2.500	63.50	NTA-2840	0.0781	1.984	1.84	46.7	2.32	58.9	4640	26900	6900
1.772	45	2.559	65	FNT-4565	0.1181	3	1.85	47.0	2.48	63.0	7150	35200	6500
1.968	50	2.756	70	FNT-5070	0.1181	3	2.05	52.0	2.68	68.0	7430	38000	6000
2.000	50,80	2.750	69.85	NTA-3244	0.0781	1.984	2.09	53.1	2.57	65.3	4400	25900	6200
2.125	53,98	2.875	73.02	NTA-3446	0.0781	1.984	2.22	56.4	2.70	68.6	4470	26900	5900
2.165	55	3.071	78	FNT-5578	0.1181	3	2.24	57.0	2.99	76.0	9360	52900	5300
2.250	57,15	3.000	76.20	NTA-3648	0.0781	1.984	2.34	59.4	2.82	71.6	4540	27800	5700

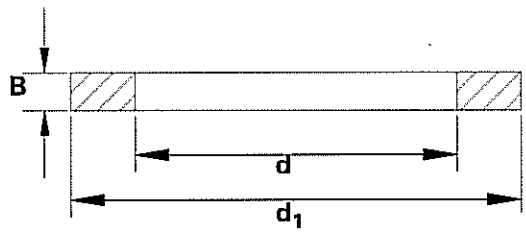
Required Basic Dynamic Load Rating (C_a) = Applied Load • SF • LF • HF

Limiting speeds listed on this page are based on adequate oil lubrication.
Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

The Basic Dynamic Load Rating, C_a, is to be used in load-life calculations taking into consideration the application guidelines and limitations given in this catalog. Applications involving dynamic loads approaching this rating should be referred to the Global Bearings Sales Office before final selection is made. Load ratings are based on a minimum raceway hardness of 58 HRC or equivalent.

Thrust Bearings

Thrust Washers



Dimensions for bore and o.d. of thrust needle roller and cage assemblies and thrust washers are nominal.

Thrust washers are burnished for at least one-quarter of the bore area with the remainder a rough breakaway finish. The o.d. of the washers will be as blanked. Due to distortion in the hardening, the thinner washers may be out of flat in the free state but can be expected to flatten under load.

THRUST WASHER DIMENSIONS										PILOTING DIMENSIONS					
Thrust Washer Designation	d Bore (nominal)		d_1 O.D. (nominal)		B Washer Thickness min.	B Washer Thickness max.	B Washer Thickness min.	B Washer Thickness max.	Matching Assembly Designation	Shaft Pilot Diameter* min.	Shaft Pilot Diameter* max.	Shaft Pilot Diameter* min.	Shaft Pilot Diameter* max.	Diameter to Clear Washer O.D.	
	inch	mm	inch	mm	inch	inch	mm	mm		inch	inch	mm	mm	inch	mm
TRA-2233	1.375	34.92	2.062	52.37	0.030	0.032	0.76	0.81	NTA-2233	1.372	1.375	34.84	34.92	2.094	53.19
TRB-2233	1.375	34.92	2.062	52.37	0.060	0.063	1.52	1.60	NTA-2233	1.372	1.375	34.84	34.92	2.094	53.19
TRC-2233	1.375	34.92	2.062	52.37	0.092	0.095	2.34	2.42	NTA-2233	1.372	1.375	34.84	34.92	2.094	53.19
TRD-2233	1.375	34.92	2.062	52.37	0.123	0.126	3.12	3.20	NTA-2233	1.372	1.375	34.84	34.92	2.094	53.19
TRE-2233	1.375	34.92	2.062	52.37	0.154	0.157	3.91	3.99	NTA-2233	1.372	1.375	34.84	34.92	2.094	53.19
TRF-2233	1.375	34.92	2.062	52.37	0.185	0.188	4.70	4.78	NTA-2233	1.372	1.375	34.84	34.92	2.094	53.19
AS-3552	1.378	35	2.047	52	0.037	0.041	0.95	1.05	FNT-3552	1.374	1.378	34.90	35	2.087	53
TRA-2435	1.500	38.10	2.187	55.55	0.030	0.032	0.76	0.81	NTA-2435	1.497	1.500	38.02	38.10	2.219	56.36
TRB-2435	1.500	38.10	2.187	55.55	0.060	0.063	1.52	1.60	NTA-2435	1.497	1.500	38.02	38.10	2.219	56.36
TRC-2435	1.500	38.10	2.187	55.55	0.092	0.095	2.34	2.42	NTA-2435	1.497	1.500	38.02	38.10	2.219	56.36
TRD-2435	1.500	38.10	2.187	55.55	0.123	0.126	3.12	3.20	NTA-2435	1.497	1.500	38.02	38.10	2.219	56.36
TRF-2435	1.500	38.10	2.187	55.55	0.185	0.188	4.70	4.78	NTA-2435	1.497	1.500	38.02	38.10	2.219	56.36
AS-4060	1.575	40	2.362	60	0.037	0.041	0.95	1.05	FNT-4060	1.571	1.575	39.90	40	2.402	61
TRA-2840	1.750	44.45	2.500	63.50	0.030	0.032	0.76	0.81	NTA-2840	1.747	1.750	44.37	44.45	2.531	64.29
TRB-2840	1.750	44.45	2.500	63.50	0.060	0.063	1.52	1.60	NTA-2840	1.747	1.750	44.37	44.45	2.531	64.29
TRC-2840	1.750	44.45	2.500	63.50	0.092	0.095	2.34	2.42	NTA-2840	1.747	1.750	44.37	44.45	2.531	64.29
TRD-2840	1.750	44.45	2.500	63.50	0.123	0.126	3.12	3.20	NTA-2840	1.747	1.750	44.37	44.45	2.531	64.29
TRF-2840	1.750	44.45	2.500	63.50	0.185	0.188	4.70	4.78	NTA-2840	1.747	1.750	44.37	44.45	2.531	64.29
AS-4565	1.772	45	2.559	65	0.037	0.041	0.95	1.05	FNT-4565	1.768	1.772	44.90	45	2.598	66
AS-5070	1.968	50	2.756	70	0.037	0.041	0.95	1.05	FNT-5070	1.965	1.969	49.90	50	2.795	71
TRA-3244	2.000	50.80	2.750	69.85	0.030	0.032	0.76	0.81	NTA-3244	1.997	2.000	50.72	50.80	2.781	70.64
TRB-3244	2.000	50.80	2.750	69.85	0.060	0.063	1.52	1.60	NTA-3244	1.997	2.000	50.72	50.80	2.781	70.64
TRC-3244	2.000	50.80	2.750	69.85	0.092	0.095	2.34	2.42	NTA-3244	1.997	2.000	50.72	50.80	2.781	70.64
TRD-3244	2.000	50.80	2.750	69.85	0.123	0.126	3.12	3.20	NTA-3244	1.997	2.000	50.72	50.80	2.781	70.64
TRF-3244	2.000	50.80	2.750	69.85	0.185	0.188	4.70	4.78	NTA-3244	1.997	2.000	50.72	50.80	2.781	70.64
TRA-3446	2.125	53.98	2.875	73.02	0.030	0.032	0.76	0.81	NTA-3446	2.122	2.125	53.90	53.98	2.906	73.81
TRB-3446	2.125	53.98	2.875	73.02	0.060	0.063	1.52	1.60	NTA-3446	2.122	2.125	53.90	53.98	2.906	73.81
TRC-3446	2.125	53.98	2.875	73.02	0.092	0.095	2.34	2.42	NTA-3446	2.122	2.125	53.90	53.98	2.906	73.81
TRD-3446	2.125	53.98	2.875	73.02	0.123	0.188	3.12	3.20	NTA-3446	2.122	2.125	53.90	53.98	2.906	73.81
AS-5578	2.165	55	3.071	78	0.037	0.041	0.95	1.05	FNT-5578	2.160	2.165	54.88	55	3.110	79
TRA-3648	2.250	57.15	3.000	76.20	0.030	0.032	0.76	0.81	NTA-3648	2.247	2.250	57.07	57.15	3.031	76.99
TRB-3648	2.250	57.15	3.000	76.20	0.060	0.063	1.52	1.60	NTA-3648	2.247	2.250	57.07	57.15	3.031	76.99
TRC-3648	2.250	57.15	3.000	76.20	0.092	0.095	2.34	2.42	NTA-3648	2.247	2.250	57.07	57.15	3.031	76.99
TRD-3648	2.250	57.15	3.000	76.20	0.123	0.126	3.12	3.20	NTA-3648	2.247	2.250	57.07	57.15	3.031	76.99
TRF-3648	2.250	57.15	3.000	76.20	0.185	0.188	4.70	4.78	NTA-3648	2.247	2.250	57.07	57.15	3.031	76.99

Consult Global Bearings Sales Office for recommendations when an application requires o.d. pilotings.

* When a shaft below the minimum recommended diameter is consult Global Bearings Sales Office.

If the shaft and the housing adjacent to the bearing o.d. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.

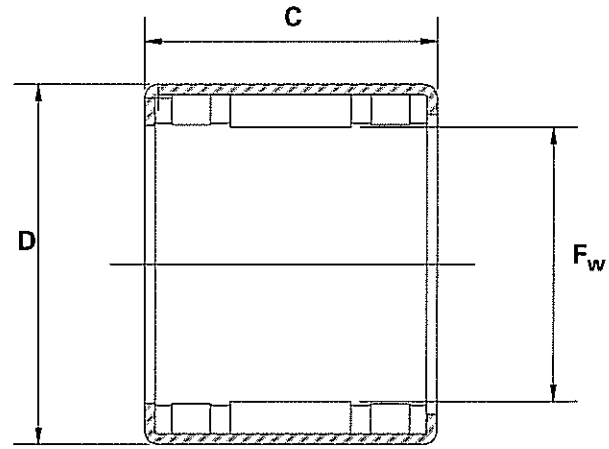
Drawn Cup Roller Clutches

Before ordering any clutch, check for availability.

Nominal dimensions with rounded conversions are shown below. Shaft raceway and housing bore diameters necessary for proper mounting and operation are listed on the opposite page.

Type FC, FCS, FCL-K and RC-FS clutches have stainless steel springs inserted in the molded cage to position the rollers for instantaneous lockup.

Type RC clutches have springs integrally molded with the cage to position the rollers for instantaneous lockup



DIMENSIONS AND RATINGS

F_w Bore (nominal)		D O.D. (nominal)		C Width		Clutch Designation		Torque Rating λ	Minimum O.D. of Steel Housing for Rated Torque		Overrun Limiting Speed
				+0.000 -0.010	+0,00 -0,25	with Stainless Steel Springs	with Integral Springs				
inch	mm	inch	mm	inch	mm			lbf-in.	inch	mm	rpm
1/8	3.18	9/32	7.14	0.250	6.35	—	RC-02	2.86	0.44	11	50000
0.16	4	0.31	8	0.236	6	FC-4-K	—	2.78	0.44	11	50000
0.24	6	0.39	10	0.472	12	FCS-6	—	18.60	0.55	14	39300
1/4	6.35	7/16	11.11	0.500	12.70	—	RC-040708	17.20	0.62	16	38000
0.31	8	0.47	12	0.472	12	FCL-8-K	—	28.70	0.67	17	28700
0.31	8	0.55	14	0.472	12	FC-8	—	35.80	0.79	20	30500
3/8	9.52	5/8	15.88	0.500	12.70	RC-061008-FS*	RC-061008	45.40	0.88	22	25300
0.39	10	0.55	14	0.472	12	FCL-10-K	—	39.10	0.77	20	22700
0.39	10	0.63	16	0.472	12	FC-10	—	50.40	0.98	25	23700
0.47	12	0.71	18	0.630	16	FC-12	—	118	1.10	27	19300
1/2	12.70	3/4	19.05	0.500	12.70	RC-081208-FS*	RC-081208	73.60	1.10	28	18700
5/8	15.88	7/8	22.22	0.625	15.88	RC-101410-FS*	RC-101410	143	1.20	30	14700
0.63	16	0.87	22	0.630	16	FC-16	—	182	1.20	31	14000
3/4	19.05	1	25.40	0.625	15.88	RC-121610-FS*	RC-121610	196	1.40	36	11300
0.79	20	1.02	26	0.630	16	FC-20	—	274	1.50	38	10700
0.98	25	1.26	32	0.787	20	FC-25	—	605	1.80	46	8670
1	25.40	15/16	33.34	0.625	15.88	RC-162110-FS*	RC-162110	412	1.90	48	8670
1.18	30	1.46	37	0.787	20	FC-30	—	845	2.0	51	7330

* Suffix "–FS" is not always stamped on the clutch cup. Type RC-FS with stainless steel springs is always readily identified by RED clutch cage.

λ Torque Ratings are given in pound force inches: 1 lbf • in = 0.113 N • m = 0.0115 kgf • m

Drawn Cup Roller Clutches

Proper inspection requires installation of the clutch in a ring gauge and then checking the bore with the appropriate plug gauges.

Types FC, FCS and FCL-K clutch series are manufactured to metric dimensions. Inch dimensions shown are for the convenience of the designer. The controlling dimensions are in millimeters.

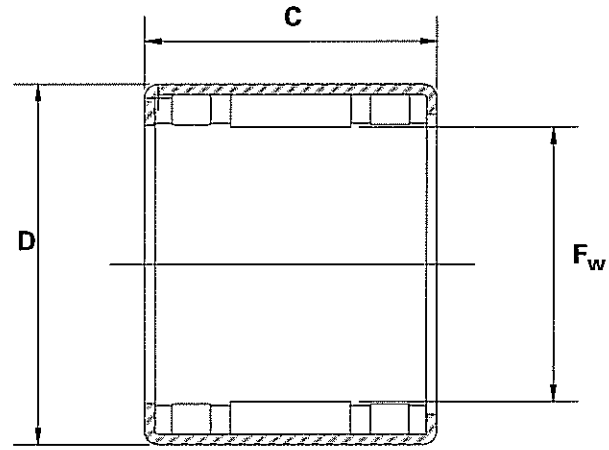
Types RC and RC-FS clutch series are manufactured to inch dimensions. Metric dimensions shown are for the convenience of the designer. The controlling dimensions are in inches.

When applying these clutches, it is important that separate bearings be used adjacent to the clutches to carry radial loads and assure concentricity between the shaft and the housing.

GAUGING							MOUNTING							
Ring gauge		Clutch Locking Plug		Clutch Overrun Plug		Clutch Designation	Inch Mounting				Metric Mounting			
							Shaft Raceway Diameter		Housing Bore		Shaft Raceway Diameter		Housing Bore	
							Inches		Inches		millimeters		millimeters	
inch	mm	inch	mm	inch	mm	with Stainless Steel Springs / with Integral Springs	min.	max.	min.	max.	min.	max.	min.	max.
0.28170	7.1552	0.12440	3.1598	0.12580	3.1953	— / HS-02	0.1250	0.1247	0.2812	0.2817	3.175	3.167	7.142	7.155
0.31433	7.9840	0.15669	3.9800	0.15764	4.0040	HF-4-K / —	0.1575	0.1572	0.3142	0.3148	4.000	3.992	7.981	7.996
0.39307	9.9840	0.23543	5.9800	0.23638	6.0040	HFS-6 / —	0.2362	0.2359	0.3930	0.3935	6.000	5.992	9.981	9.996
0.43800	11.1252	0.24950	6.3373	0.25130	6.3830	— / HS-040708	0.2500	0.2495	0.4370	0.4380	6.350	6.337	11.100	11.125
0.47165	11.9800	0.31402	7.9760	0.31516	8.0050	HF-8-K / —	0.3150	0.3146	0.4715	0.4722	8.000	7.991	11.997	11.995
0.55039	13.9800	0.31402	7.9760	0.31516	8.0050	HF-8 / —	0.3150	0.3146	0.5503	0.5510	8.000	7.991	13.997	13.995
0.62550	15.8877	0.37450	9.5123	0.37630	9.5580	FS-061008-FS* / HS-061008	0.3750	0.3745	0.6245	0.6255	9.525	9.512	15.862	15.887
0.55039	13.9800	0.39276	9.9760	0.39390	10.0050	HF-10-K / —	0.3937	0.3933	0.5503	0.5510	10.000	9.991	13.997	13.995
0.62913	15.9800	0.39276	9.9760	0.39390	10.0050	HF-10 / —	0.3937	0.3933	0.6290	0.6297	10.000	9.991	15.997	15.995
0.70787	17.9800	0.47142	11.9740	0.47268	12.0060	HF-12 / —	0.4724	0.4720	0.7078	0.7085	12.000	11.989	17.997	17.995
0.75050	19.0627	0.49950	12.6873	0.50130	12.7330	FS-081208-FS* / HS-081208	0.5000	0.4995	0.7495	0.7505	12.700	12.687	19.037	19.062
0.87550	22.2377	0.62450	15.8623	0.62630	15.9080	FS-101410-FS* / HS-101410	0.6250	0.8745	0.8745	0.8755	15.875	15.862	22.212	22.237
0.86520	21.9760	0.62882	15.9720	0.63016	16.0060	HF-16 / —	0.6299	0.8650	0.8650	0.8659	16.000	15.989	21.972	21.993
0.99950	25.3873	0.74850	19.0119	0.75030	19.0576	FS-121610-FS* / HS-121610	0.7500	0.9995	0.9995	1.0005	19.050	19.037	25.387	25.412
1.02268	25.9760	0.78622	19.9700	0.78768	20.0070	HF-20 / —	0.7874	1.0255	1.0255	1.0233	20.000	19.987	25.972	25.992
1.25874	31.9720	0.98295	24.9670	0.98453	25.0070	HF-25 / —	0.9843	1.2585	1.2585	1.2595	25.000	24.987	31.967	31.992
1.31200	33.3248	0.99850	25.3619	1.00030	25.4076	FS-162110-FS* / HS-162110	1.0000	1.3120	1.3120	1.3130	25.400	25.387	33.325	33.350
1.45559	36.9720	1.17980	29.9670	1.18138	30.0070	HF-30 / —	1.1811	1.4554	1.4554	1.4564	30.000	29.987	36.967	36.992

Drawn Cup Roller Clutches

Type DC Roller Clutches and Bearing Assemblies



Before ordering any clutch, check for availability.

Nominal dimensions with rounded conversions are shown below. Shaft raceway and housing bore diameters necessary for proper mounting and operation are listed on the opposite page.

Type FCB, FCBL-K and RCB-FS clutch and bearing assemblies have stainless steel springs inserted in the molded cage to position the rollers for instantaneous lockup.

Type RCB clutch and bearing assemblies have springs integrally molded with the cage to position the rollers for instantaneous lockup.

DIMENSIONS AND RATINGS												
F_w Bore (nominal)		D O.D. (nominal)		C Width +0.000 -0.010	+0,00 -0,25	Clutch Designation with Stainless Steel Springs	with Integral Springs	Torque Rating +	Minimum O.D. of Steel Housing for Rated Torque		Bearing Basic Dynamic Load Rating* C_r ISO 281	Bearing Working Load (max.)	Overrun Limiting Speed
inch	mm	inch	mm	inch	mm			lbf-in.	inch	mm	lbf	lbf	rpm
0.31	8	0.47	12	0.866	22	FCBL-8K	—	29	0.67	17	717	344	28700
0.31	8	0.55	14	0.787	20	FCB-8	—	35.8	0.79	20	742	322	30500
3/8	9.52	5/8	15.88	0.875	22.22	RCB-061014-FS*	RCB-061014	45.4	0.99	22	1160	566	25300
0.39	10	0.63	16	0.787	20	FCB-10	—	50.4	0.98	25	861	388	23700
0.47	12	0.71	18	1.024	26	FCB-12	—	118	1.1	28	1210	634	19300
1/2	12.70	3/4	19.05	0.875	22.22	RCB-081214-FS*	RCB-081214	73.6	1.1	28	1400	720	18700
5/8	15.88	7/8	22.22	1.000	25.40	RCB-101416-FS*	RCB-101416	143	1.2	30	1560	914	14700
0.63	16	0.87	22	1.024	26	FCB-16	—	182	1.2	30	1300	742	14000
3/4	19.05	1	25.40	1.000	25.40	RCB-121616-FS*	RCB-121616	196	1.4	36	1740	1030	11300
0.79	20	1.02	26	1.024	26	FCB-20	—	274	1.5	38	1610	974	10700
0.98	25	1.26	32	1.181	30	FCB-25	—	605	1.8	46	2170	1350	8670
1	25.40	1 9/32	33.34	1.063	27	RCB-162117-FS*	RCB-162117	412	1.9	48	3060	1890	8670
1.18	30	1 13/16	37	1.181	30	FCB-30	—	845	2.0	51	2210	1510	7330

* Suffix "–FS" is not always stamped on the clutch cup. Type RC-FS with stainless steel springs is always readily identified by the RED clutch cage.

Torque Ratings are given in pound force inches: 1 lbf • in = 0.113 N • m = 0.0115 kgf • m

* Bearing load ratings are given in pounds-force: 1 lbf = 0.454 kgf = 4.448 N. For single roller path use one-half the listed rating.

Required Basic Dynamic Load Rating (C_r) = Applied Load • SF • LF

Limiting speed is based on oiled bearings.
For greased bearings, the limiting speed is generally a little lower.

Type DC Roller Clutches and Bearing Assemblies

Proper inspection requires installation of the clutch in a ring gauge and then checking the bore with the appropriate plug gauges.

Types FC, FCS and FCL-K clutch series are manufactured to metric dimensions. Inch dimensions shown are for the convenience of the designer. The controlling dimensions are in millimeters.

Types RC and RC-FS clutch series are manufactured to inch dimensions. Metric dimensions shown are for the convenience of the designer. The controlling dimensions are in inches.

When applying these clutches, it is important that separate bearings be used adjacent to the clutches to carry radial loads and assure concentricity between the shaft and the housing.

GAUGING								Clutch Designation		MOUNTING							
Ring gauge		Clutch Locking Plug		Clutch Overrun and Bearing Go Plug		Bearing No Go Plug				Inch Mounting				Metric Mounting			
								with Stainless Steel Springs	with Integral Springs	Shaft Raceway Diameter		Housing Bore		Shaft Raceway Diameter		Housing Bore	
Inches		Inches		Inches		Inches				Inches		Inches		millimeters		millimeters	
Inch	mm	Inch	mm	Inch	mm	Inch	mm			min.	max.	min.	max.	min.	max.	min.	max.
0.47165	11.9800	0.31402	7.9760	0.31516	8.0050	0.31626	8.0330	HFL-8K	—	0.3150	0.3146	0.4715	0.4722	8.000	7.991	11.977	11.995
0.55039	13.9800	0.31402	7.9760	0.31516	8.0050	0.31626	8.0330	HFL-8	—	0.3150	0.3146	0.5503	0.5510	8.000	7.991	13.977	13.995
0.6255	15.8877	0.37450	9.5123	0.37610	9.5529	0.37750	9.5885	HFL-061014-FS*	FCBL-061014	0.3750	0.3745	0.6245	0.6255	9.525	9.512	15.862	15.888
0.62913	15.9800	0.39276	9.9760	0.39390	10.0050	0.39500	10.0330	HFL-10	—	0.3937	0.3933	0.6290	0.6297	10.000	9.991	15.977	15.995
0.70787	17.9800	0.47142	11.9740	0.47268	12.0060	0.47386	12.0360	HFL-12	—	0.4724	0.4720	0.7076	0.7085	12.000	11.989	17.977	17.995
0.7505	19.0627	0.49950	12.6873	0.50110	12.7279	0.50250	12.7635	HFL-081214-FS*	FCBL-081214	0.5000	0.4995	0.7495	0.7505	12.700	12.687	19.037	19.062
0.8755	22.2377	0.62450	15.8623	0.62610	15.9089	0.62750	15.9385	HFL-101416-FS*	FCBL-101416	0.6250	0.6246	0.8745	0.8755	15.875	15.862	22.212	22.237
0.8652	21.9760	0.62882	15.9720	0.63016	16.0060	0.63134	16.0360	HFL-16	—	0.6299	0.6295	0.8650	0.8659	16.000	15.989	21.972	21.993
0.9995	25.3873	0.74850	19.0119	0.75010	19.0525	0.75150	19.0881	HFL-121616-FS*	FCBL-121616	0.7500	0.7495	0.9995	1.0005	19.050	19.037	25.387	25.412
1.02268	25.9760	0.78622	19.9700	0.78768	20.0070	0.78909	20.0430	HFL-20	—	0.7874	0.7869	1.0225	1.0233	20.000	19.987	25.972	25.992
1.25874	31.9720	0.98925	24.9670	0.98453	25.0070	0.98594	25.0430	HFL-25	—	0.9843	0.9838	1.2585	1.2595	25.000	24.987	31.967	31.992
1.312	33.3248	0.99850	25.3619	1.00010	25.4025	1.00150	25.4381	HFL-162117-FS*	FCBL-162117	1.0000	0.9995	1.3120	1.3130	25.400	25.387	33.325	33.350
1.45559	36.9720	1.17980	29.9670	1.18138	30.0070	1.18280	30.0430	HFL-30	—	1.1811	1.1806	1.4554	1.4564	30.000	29.987	36.967	36.992

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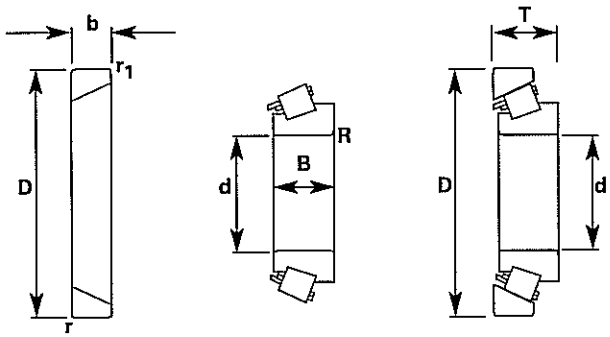
Tapered Roller Bearings

Metric Series

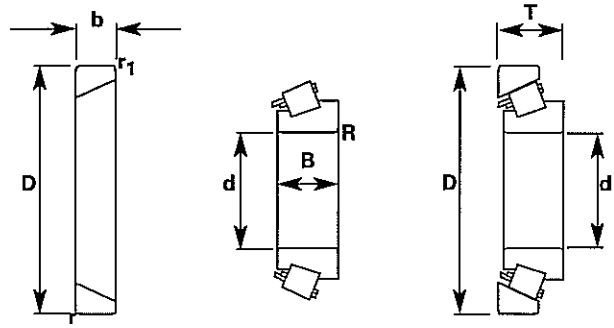


Cup **Cone** **Roller Bearing Assembly**

Global Bearing Number	Bore d		O.D. D		Cone Width B		Cup Width b		Assembled Width T		Radius R		Radius r_1		Radius r		Basic Load Ratings Dynamic C	Basic Load Ratings Static C_o	Weight (lbs.)
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	(lbs.)	(lbs.)	
30204	20	0.7874	47	1.8504	14	0.5512	12	0.4724	15.25	0.600	1.0	0.039	0.30	0.012	1.0	0.039	5620	5840	0.276
30250	25	0.9843	52	2.0472	15	0.5906	13	0.5118	16.25	0.640	1.0	0.039	0.30	0.012	1.0	0.039	6680	7500	0.337
30206	30	1.1811	62	2.4409	16	0.6299	14	0.5512	17.25	0.679	1.0	0.039	0.30	0.012	1.0	0.039	9090	10000	0.507
30207	35	1.3780	72	2.8346	17	0.6693	15	0.5906	18.25	0.719	1.5	0.059	0.060	0.024	1.5	0.059	10400	11400	0.716
30208	40	1.5748	80	3.1496	18	0.7087	16	0.6299	19.75	0.778	1.5	0.059	0.060	0.024	1.5	0.059	12300	13600	0.926
30210	50	1.9685	90	3.5433	20	0.7874	17	0.6693	21.75	0.856	1.5	0.059	0.060	0.024	1.5	0.059	15800	19600	1.19
30215	75	2.9528	130	5.1181	25	0.9843	22	0.8661	27.25	1.073	2.0	0.079	0.060	0.024	1.5	0.059	28700	36900	2.93
32206	30	1.1811	62	2.4409	20	0.7874	17	0.6693	21.25	0.837	1.0	0.039	0.030	0.012	1.0	0.039	11000	9100	0.631
32207	35	1.3780	72	2.8346	23	0.9050	19	0.7480	24.25	0.955	1.5	0.059	0.060	0.024	1.5	0.059	14400	17100	0.948
32208	40	1.5748	80	3.1496	23	0.9055	19	0.7480	24.75	0.974	1.5	0.059	0.060	0.024	1.5	0.059	15900	13100	1.16
32209	45	1.7717	85	3.3465	23	0.9055	19	0.7480	24.75	0.974	1.5	0.059	0.060	0.024	1.5	0.059	16500	20300	1.27
32211	55	2.1654	100	3.9370	25	0.9843	21	0.8628	26.75	1.053	2.0	0.079	0.060	0.024	1.5	0.059	22800	28700	1.85
30302	15	0.5906	42	1.6535	13	0.5118	11	0.4331	14.25	0.561	1.0	0.039	0.030	0.012	1.0	0.039	4650	3000	0.207
30303	17	0.6693	47	1.8504	14	0.5512	12	0.4724	15.25	0.600	1.0	0.039	0.030	0.012	1.0	0.039	5620	5110	0.287
30306	30	1.1811	72	2.8346	19	0.7480	16	0.6299	20.75	0.817	1.5	0.059	0.060	0.024	1.5	0.039	11900	11900	0.849
32304	20	0.7874	52	2.0472	21	0.8268	18	0.7087	22.25	0.876	1.5	0.059	0.060	0.024	1.5	0.059	9810	10200	0.487
32305	25	0.9843	62	2.4409	24	0.9449	20	0.7874	25.25	0.994	1.5	0.059	0.060	0.024	1.5	0.059	10800	13600	0.774
32306	30	1.1811	72	2.8346	27	1.0630	23	0.9055	28.75	1.132	1.5	0.059	0.060	0.024	1.5	0.059	17100	19200	1.17
32307	35	1.3780	80	3.1496	31	1.2205	25	0.9843	32.75	1.289	1.5	0.059	0.060	0.024	1.5	0.059	21100	24600	1.61
32308	40	1.5748	90	3.5433	33	1.2992	27	1.0630	35.25	1.388	1.5	0.059	0.060	0.024	1.5	0.059	25600	31600	2.18
32310	50	1.9685	110	4.3307	40	1.5748	33	1.2992	42.25	1.663	2.0	0.079	0.060	0.024	2.0	0.079	39100	50100	3.86
32311	55	2.1654	120	4.7244	43	1.6929	35	1.3780	45.5	1.791	2.0	0.079	0.060	0.024	2.0	0.079	44700	57300	4.93

Tapered Roller Bearings

Inch Series



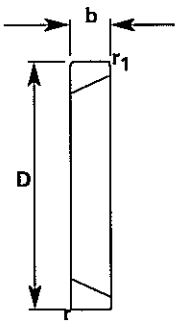
Cup **Cone** **Roller Bearing Assembly**

Cone Number	d in. (mm)	B in. (mm)	Max. shaft fillet radius R in. (mm)	Cup Number	D in. (mm)	b in. (mm)	Max. Hsg. fillet radius r in. (mm)	T in. (mm)	Basic Load Ratings Dynamic C (lbs.)	Basic Load Ratings Static C_o (lbs.)
A6067	0.669 (16.993)	0.4391 (11.1530)	0.03 (0.80)	A6157	1.5745 (39.9920)	0.375 (9.525)	0.05 (1.30)	0.473 (12.014)	3360	3530
A6075	0.750 (19.050)	0.4391 (11.1530)	0.04 (1.00)	A6157	1.5745 (39.992)	0.375 (9.525)	0.05 (1.30)	0.473 (12.014)	3360	3530
A6075	0.750 (19.050)	0.4391 (11.1530)	0.04 (1.00)	A6162	1.625 (41.275)	0.3437 (8.7300)	0.05 (1.30)	0.4687 (11.9050)	3360	3530
567	2.870 (73.020)	1.424 (36.170)	0.14 (3.50)	563	5.000 (127.000)	1.125 (28.575)	0.13 (3.30)	1.4375 (36.5120)	33000	31500
663	3.250 (82.550)	1.625 (41.275)	0.14 (3.50)	652	6.000 (152.400)	1.250 (31.750)	0.13 (3.30)	1.625 (41.275)	41500	41000
663	3.250 (82.550)	1.625 (41.275)	0.14 (3.50)	653	5.750 (146.050)	1.250 (31.750)	0.13 (3.30)	1.625 (41.275)	41500	41000
683	3.750 (95.250)	1.625 (41.275)	0.14 (3.50)	672	6.625 (168.275)	1.1875 (30.1620)	0.13 (3.30)	1.625 (41.275)	45000	47000
02475	1.250 (31.750)	0.875 (22.225)	0.14 (3.50)	02420	2.6875 (68.2620)	0.6875 (17.4620)	0.06 (1.50)	0.875 (22.225)	11500	9450
02476	1.250 (31.750)	0.875 (22.225)	0.03 (0.80)	02420	2.6875 (68.2620)	0.6875 (17.4620)	0.06 (1.50)	0.875 (22.225)	11500	9450
05062	0.620 (15.875)	0.5662 (14.3810)	0.06 (1.50)	05185	1.8504 (47.0000)	0.4375 (11.1120)	0.05 (1.30)	0.5662 (14.3810)	4750	3400
05079*	0.7869 (19.9870)	0.5662 (14.3810)	0.06 (1.50)	05185	1.8504 (47.0000)	0.4375 (11.1120)	0.05 (1.30)	0.5662 (14.3810)	4750	3400
07087	0.875 (22.225)	0.5614 (14.2600)	0.05 (1.30)	07196	1.9687 (50.0050)	0.375 (9.525)	0.04 (1.00)	0.5313 (13.4950)	5200	3850
07093	0.875 (22.225)	0.5614 (14.2600)	0.05 (1.30)	07196	1.9687 (50.0050)	0.375 (9.525)	0.04 (1.00)	0.5313 (13.4950)	5200	3850
07093	0.9375 (23.8120)	0.5614 (14.2600)	0.06 (1.50)	07210X	2.000 (50.800)	0.500 (12.700)	0.06 (1.50)	0.591 (15.011)	5200	3850
07098	0.9835 (24.8910)	0.5614 (14.2600)	0.06 (1.50)	07196	1.9687 (50.0050)	0.375 (9.525)	0.04 (1.00)	0.5313 (13.4950)	5200	3850
07100	1.000 (25.400)	0.5614 (14.2600)	0.04 (1.00)	07196	1.9687 (50.0050)	0.375 (9.525)	0.04 (1.00)	0.5313 (13.4950)	5200	3850
09074	0.750 (19.050)	0.848 (21.539)	0.06 (1.50)	09195	1.938 (49.225)	0.5625 (14.2880)	0.05 (1.30)	0.7813 (19.8450)	7700	5650
09078	0.750 (19.050)	0.848 (21.539)	0.05 (1.30)	09195	1.938 (49.225)	0.5625 (14.2880)	0.05 (1.30)	0.7813 (19.8450)	7700	5650
09067	0.750 (19.050)	0.750 (19.050)	0.05 (1.30)	09195	1.938 (49.225)	0.5625 (14.2880)	0.06 (1.50)	0.835 (21.209)	7700	5650

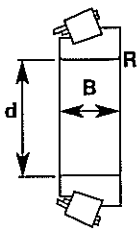
* For standard class *only*, the maximum metric size is a whole millimeter value.

Tapered Roller Bearings

Inch Series



Cup



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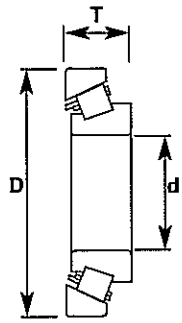


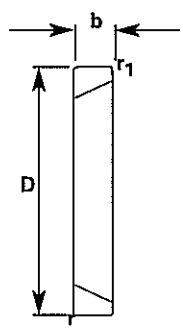
Roller Bearing Assembly

Cone Number	d in. (mm)	B in. (mm)	Max. shaft fillet radius R in. (mm)	Cup Number	D in. (mm)	b in. (mm)	Max. Hsg. fillet radius r in. (mm)	T in. (mm)	Basic Load Ratings Dynamic C (lbs.)	Basic Load Ratings Static C_o (lbs.)
14118	1.1811 (30.0000)	0.756 (19.202)	0.03 (0.80)	14282	2.8345 (71.9960)	0.5918 (15.0320)	0.06 (1.50)	0.7481 (19.0020)	9700	8050
14124	1.250 (31.750)	0.771 (19.583)	0.03 (0.80)	14276	2.717 (69.012)	0.625 (15.875)	0.05 (1.30)	0.7813 (19.8450)	9700	8050
14124	1.250 (31.750)	0.771 (19.583)	0.03 (0.80)	14283	2.838 (72.085)	0.725 (18.415)	0.09 (2.30)	0.8813 (22.3850)	9700	8050
14125A	1.250 (31.750)	0.771 (19.583)	0.14 (3.50)	14276	2.717 (69.012)	0.625 (15.875)	0.05 (1.30)	0.7813 (19.8450)	9700	8050
14130	1.3125 (33.3380)	0.771 (19.583)	0.14 (3.50)	14276	2.717 (69.012)	0.625 (15.875)	0.50 (1.30)	0.7813 (19.8450)	9700	8050
14136A *	1.375 (34.925)	1.052 (26.721)	0.03 (0.80)	14276	2.717 (69.012)	0.625 (15.875)	0.50 (1.30)	1.0623 (26.9820)	9700	8050
15100	1.000 (25.400)	0.8125 (20.6380)	0.14 (3.50)	15243	2.4375 (61.9120)	0.5625 (14.2880)	0.08 (2.00)	0.750 (19.050)	9400	7600
15100	1.000 (25.400)	0.8125 (20.6380)	0.14 (3.50)	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.750 (19.050)	9400	7600
15101	1.000 (25.400)	0.8125 (20.6380)	0.03 (0.80)	15243	2.4375 (61.9120)	0.5625 (14.2880)	0.08 (2.00)	0.750 (19.050)	9400	7600
15101	1.000 (25.400)	0.8125 (20.6380)	0.03 (0.80)	15244	2.4490 (62.0000)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15101	1.000 (25.400)	0.8125 (20.6380)	0.03 (0.80)	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.750 (19.050)	9400	7600
15101	1.000 (25.400)	0.8125 (20.6380)	0.03 (0.80)	15250	2.500 (63.500)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15102	1.000 (25.400)	0.8125 (20.6380)	0.06 (1.50)	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.750 (19.050)	9400	7600
15116	1.1855 (30.1120)	0.8125 (20.6380)	0.03 (0.80)	15243	2.4375 (61.9120)	0.5625 (14.2880)	0.08 (2.00)	0.750 (19.050)	9400	7600
15116	1.1855 (30.1120)	0.8125 (20.6380)	0.03 (0.80)	15244	2.4409 (62.0000)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15116	1.1855 (30.1120)	0.8125 (20.6380)	0.03 (0.80)	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.750 (19.050)	9400	7600
15116	1.1855 (30.1120)	0.8125 (20.6380)	0.03 (0.80)	15250	2.500 (63.500)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15117	1.1805 (29.9850)	0.8125 (20.6380)	0.05 (1.30)	15243	2.4375 (61.9120)	0.5625 (14.2880)	0.08 (2.00)	0.750 (19.050)	9400	7600
15117	1.1805 (29.9850)	0.8125 (20.6380)	0.05 (1.30)	15244	2.4409 (62.0000)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15117	1.1806 (29.9850)	0.8125 (20.6380)	0.05 (1.30)	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.750 (19.050)	9400	7600
15117	1.1805 (29.9850)	0.8125 (20.6380)	0.05 (1.30)	15250	2.500 (63.500)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600

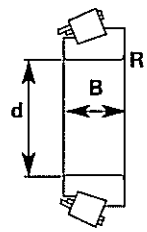
*Extended shoulder on back face.

Tapered Roller Bearings

Inch Series



Cup



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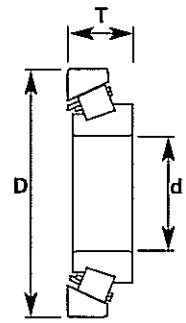


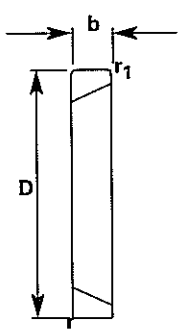
Roller Bearing Assembly

Cone Number	d in. (mm)	B in. (mm)	Max. shaft fillet radius R in. (mm)	Cup Number	D in. (mm)	b in. (mm)	Max. Hsg. fillet radius r in. (mm)	T in. (mm)	Basic Load Ratings Dynamic C (lbs.)	Basic Load Ratings Static C_o (lbs.)
15123	1.250 (31.750)	0.750 (19.050)	SPCL	15243	2.4375 (61.9120)	0.5625 (14.2880)	0.08 (2.00)	0.750 (19.050)	9400	7600
15123	1.250 (31.750)	0.750 (19.050)	SPCL	15244	2.4409 (62.0000)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15123	1.250 (31.750)	0.750 (19.050)	SPCL	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.715 (18.161)	9400	7600
15123	1.250 (31.750)	0.750 (19.050)	SPCL	15250	2.500 (63.500)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15125	1.250 (31.750)	0.8125 (20.6380)	0.14 (3.50)	15243	2.4375 (61.9120)	0.5625 (14.2880)	0.08 (2.00)	0.750 (19.050)	9400	7600
15125	1.250 (31.750)	0.8125 (20.6380)	0.14 (3.50)	15244	2.4409 (62.0000)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15125	1.250 (31.750)	0.8125 (20.6380)	0.14 (3.50)	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.750 (19.050)	9400	7600
15125	1.250 (31.750)	0.8125 (20.6380)	0.14 (3.50)	15250	2.500 (63.500)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15126	1.250 (31.750)	0.8125 (20.6380)	0.03 (0.80)	15243	2.4375 (61.9120)	0.5625 (14.2880)	0.08 (2.00)	0.750 (19.050)	9400	7600
15126	1.250 (31.750)	0.8125 (20.6380)	0.03 (0.80)	15244	2.4409 (62.0000)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
15126	1.250 (31.750)	0.8125 (20.6380)	0.03 (0.80)	15245	2.4409 (62.0000)	0.5625 (14.2880)	0.05 (1.30)	0.750 (19.050)	9400	7600
15126	1.250 (31.750)	0.8125 (20.6380)	0.03 (0.80)	15250	2.500 (63.500)	0.625 (15.875)	0.05 (1.30)	0.8125 (20.6380)	9400	7600
25580	1.750 (44.450)	1.000 (25.400)	0.14 (3.50)	25520	3.265 (82.931)	0.750 (19.050)	0.03 (0.80)	0.9375 (23.8120)	154000	13700
25590	1.796 (45.618)	1.000 (25.400)	0.14 (3.50)	25520	3.265 (82.931)	0.750 (19.050)	0.03 (0.80)	0.9375 (23.8120)	154000	13700
31597	1.4375 (36.5120)	1.125 (28.575)	0.14 (3.50)	31520	3.000 (76.200)	0.9375 (23.8120)	0.13 (3.30)	1.1563 (29.3700)	16300	13800

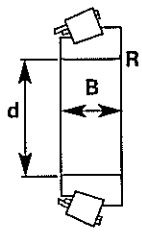
* For standard class *only*, the maximum metric size is a whole millimeter value.

Tapered Roller Bearings

Inch Series



Cup



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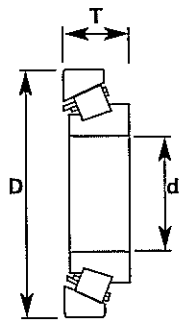


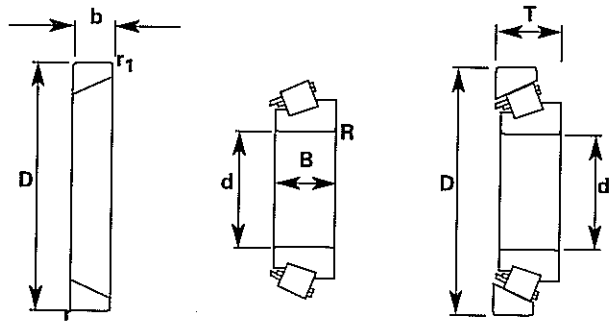
Roller Bearing Assembly

Cone Number	d in. (mm)	B in. (mm)	Max. shaft fillet radius R in. (mm)	Cup Number	D in. (mm)	b in. (mm)	Max. Hsg. fillet radius r in. (mm)	T in. (mm)	Basic Load Ratings	
									Dynamic C (lbs.)	Static C_o (lbs.)
30306	1.1811 (30.0000)	0.748 (19.000)	0.06 (1.50)	30306	2.8346 (72.0000)	0.6299 (16.0000)	0.06 (1.50)	0.8169 (20.7500)	11900	11900
30307	1.378 (35.000)	0.8268 (21.0000)	0.08 (2.00)	30307	3.1496 (80.0000)	0.7087 (18.0000)	0.06 (1.50)	0.8957 (22.7500)	14700	15500
30310	1.9685 (50.0000)	1.063 (27.000)	0.10 (2.50)	30310	4.3307 (110.0000)	0.9055 (23.0000)	0.08 (2.00)	1.1516 (29.2500)	27100	31600
30317	3.3465 (85.0000)	1.6142 (41.0000)	0.16 (4.00)	30317	7.0866 (180.0000)	1.3386 (34.0000)	0.06 (1.50)	1.752 (44.500)	72200	79400
L44643	1.000 (25.400)	0.580 (14.732)	0.05 (1.30)	L44610	1.980 (50.292)	0.420 (10.668)	0.05 (1.30)	0.560 (14.224)	5520	6430
L44649*	1.0625 (26.9880)	0.580 (14.732)	0.14 (3.50)	L44610	1.980 (50.292)	0.420 (10.668)	0.05 (1.30)	0.560 (14.224)	5520	6430
L45449	1.1417 (29.0000)	0.580 (14.732)	0.14 (3.50)	L45410	1.980 (50.292)	0.420 (10.668)	0.05 (1.30)	0.560 (14.224)	5730	7530
L68149*	1.3775 (34.9880)	0.660 (16.764)	SPCL	L68110	2.328 (59.131)	0.470 (11.938)	0.05 (1.30)	0.625 (15.875)	7830	10500
L68149*	1.3775 (34.9880)	0.660 (16.764)	SPCL	L68111*	2.3612 (59.9740)	0.470 (11.938)	0.05 (1.30)	0.625 (15.875)	7080	9500
LM11749	0.6875 (17.4620)	0.575 (14.605)	0.05 (1.30)	LM11710	1.570 (39.878)	0.420 (10.668)	0.05 (1.30)	0.545 (13.843)	4730	4810
LM11949	0.750 (19.050)	0.655 (13.637)	0.05 (1.30)	LM11910	1.781 (45.237)	0.475 (12.065)	0.05 (1.30)	0.610 (15.494)	5730	5960
LM12749*	0.8656 (21.9860)	0.655 (13.637)	0.05 (1.30)	LM12710*	1.781 (45.237)	0.475 (12.065)	0.05 (1.30)	0.610 (15.494)	11000	13600
LM12749*	0.8656 (21.9860)	0.655 (13.637)	0.05 (1.30)	LM12711*	1.810 (45.974)	0.475 (12.065)	0.05 (1.30)	0.610 (15.494)	11000	13600
LM29748	1.500 (38.100)	0.720 (18.288)	SPCL	LM29710	2.5625 (65.0880)	0.550 (13.970)	0.05 (1.30)	0.710 (18.034)	8400	7450
LM48548	1.375 (34.924)	0.720 (18.288)	SPCL	LM48510	2.5625 (65.088)	0.550 (13.970)	0.05 (1.30)	0.710 (18.034)	9620	11900
LM67048	1.2500 (31.750)	0.660 (16.764)	SPCL	LM67010	2.3280 (5.9131)	0.465 (11.811)	0.05 (1.30)	0.625 (15.875)	7080	8580
LM102949	1.7812 (45.2420)	0.780 (19.812)	0.14 (3.50)	LM102910	2.891 (73.431)	0.620 (15.748)	0.03 (0.80)	0.770 (19.558)	10600	10000
LM104949	2.000 (50.800)	0.870 (22.225)	0.14 (3.50)	LM104911	3.250 (82.550)	0.650 (16.510)	0.05 (1.30)	0.850 (21.590)	14100	13000

* For standard class *only*, the maximum metric size is a whole millimeter value.

Tapered Roller Bearings

Inch Series

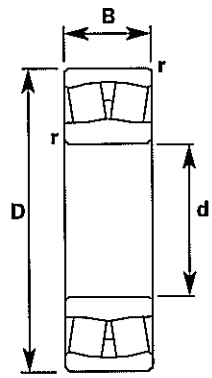


Cup **Cone** **Roller Bearing Assembly**

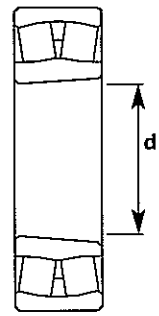
Cone Number	d in. (mm)	B in. (mm)	Max. shaft fillet radius R in. (mm)	Cup Number	D in. (mm)	b in. (mm)	Max. Hsg. fillet radius r in. (mm)	T in. (mm)	Basic Load Ratings	
									Dynamic C (lbs.)	Static C_o (lbs.)
LM501349	1.625 (41.275)	0.780 (19.812)	0.14 (3.50)	LM501310	2.981 (73.431)	0.580 (14.732)	0.03 (0.80)	0.770 (19.558)	11300	9650
LM501349	1.6250 (41.2750)	0.780 (19.812)	0.14 (3.50)	LM501314	2.981 (73.431)	0.6537 (16.6040)	0.03 (0.80)	0.8437 (21.4300)	11300	9650
M86649	1.1875 (30.1620)	0.8438 (21.4330)	0.06 (1.50)	M86610	2.5312 (64.2920)	0.6563 (16.6700)	0.06 (1.50)	0.8438 (21.4330)	10400	9050
M88048	1.3125 (33.3380)	0.875 (22.225)	0.03 (0.80)	M88010	2.6875 (68.2620)	0.6875 (17.4620)	0.06 (1.50)	0.875 (22.225)	11400	9950
M12649	0.8437 (21.4300)	0.720 (18.288)	0.05 (1.30)	M12610	1.9687 (50.0050)	0.550 (13.970)	0.05 (1.30)	0.690 (17.526)	7600	5600
HM88649	1.375 (34.925)	1.000 (25.400)	0.09 (2.30)	HM88610	2.8438 (72.2330)	0.7812 (19.8420)	0.09 (2.30)	1.000 (25.400)	14600	13500
HM212046	2.500 (63.500)	1.510 (38.354)	0.14 (3.50)	HM212011	4.8125 (122.2380)	1.170 (29.718)	0.13 (3.30)	1.500 (38.100)	38000	34500
HM218248*	3.5423 (89.9740)	1.5748 (40.000)	0.28 (7.00)	HM218210*	5.7874 (147.0000)	1.2795 (32.5000)	0.14 (3.50)	1.5748 (40.0000)	46000	47000
HM516448	3.2500 (82.550)	1.5625 (39.688)	0.27 (6.80)	HM516410	5.250 (133.350)	1.2813 (32.5450)	0.13 (3.30)	1.5625 (39.6880)	36000	41500
HM518445	3.500 (88.900)	1.5625 (39.6880)	0.25 (6.40)	HM518410	6.000 (152.400)	1.1875 (30.1630)	0.13 (3.30)	1.5625 (39.6880)	51000	50600
HM212049	2.625 (66.675)	1.510 (38.354)	0.14 (3.50)	HM212010	4.8125 (122.238)	1.17 (29.718)	0.06 (0.013)	1.500 (38.100)	38000	34500
HM516449C	3.250 (82.550)	1.5625 (39.6880)	0.14 (3.50)	HM416410	5.250 (133.350)	1.2813 (32.5450)	0.13 (3.30)	1.5625 (39.6880)	36000	41500
JL69349	1.4961 (38.0000)	0.6693 (17.0000)	0.14 (3.50)	JL69310	2.4803 (63.0000)	0.5313 (13.4950)	0.05 (1.30)	0.6693 (17.0000)	7500	6850

Spherical Roller Bearings

Series 222



Cylindrical bore



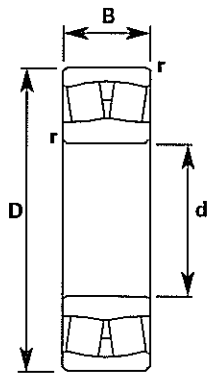
Tapered bore

Global Bearing Number		Bore d		Outer Diameter D		Width B		Radius r		Basic Load Ratings (lbs.)		Weight (lbs.)	
		mm	inch	mm	inch	mm	inch	mm	inch	Dynamic C	Static C_o	222	222K
22205	22205K	25	0.9843	52	2.042	18	0.7087	1.5	0.059	6950	4800	0.40	0.39
22206	22206K	30	1.1811	62	2.4409	20	0.7874	1.5	0.059	9500	6700	0.62	0.60
22207	22207K	35	1.3780	72	2.8346	23	0.9055	2.0	0.079	12200	9150	0.95	0.93
22208	22208K	40	1.5748	80	3.1496	23	0.9055	2.0	0.079	17800	19900	1.21	1.19
22209	22209K	45	1.7717	85	3.3465	23	0.9055	2.0	0.079	18600	21400	1.32	1.30
22210	22210K	50	1.9685	90	3.5433	23	0.9055	2.0	0.079	19300	23000	1.44	1.41
22211	22211K	55	2.1654	100	3.9370	25	0.9843	2.5	0.098	21000	24700	1.92	1.88
22212	22212K	60	2.3622	110	4.3307	28	1.1024	2.5	0.098	25700	33000	2.65	2.60
22213	22213K	65	2.5591	120	4.7244	31	1.2205	2.5	0.098	32000	40500	3.42	3.35
22214	22214K	70	2.7559	125	4.9213	31	1.2205	2.5	0.098	34500	45000	3.64	3.57
22215	22215K	75	2.9528	130	5.1181	31	1.2205	2.5	0.098	37000	50000	3.86	3.77
22216	22216K	80	3.1496	140	5.5118	33	1.2992	3.0	0.118	40500	53500	4.76	4.67
22217	22217K	85	3.3465	150	5.9055	36	1.4173	3.0	0.118	46500	61500	6.06	5.93
22218	22218K	90	3.5433	160	6.2992	40	1.5748	3.0	0.118	57500	77500	7.83	7.67
22219	22219K	95	3.7402	170	6.6929	43	1.6929	3.5	0.138	65500	86500	9.26	9.06
22220	22220K	100	3.9370	180	7.0866	46	1.8110	3.5	0.138	70000	92500	11.40	11.10
22222	22222K	110	4.3307	200	7.8740	53	2.0866	3.5	0.138	92500	128000	16.30	16.00
22224	22224K	120	4.7244	215	8.4646	58	2.2835	3.5	0.138	109000	158000	20.30	19.90
22226	22226K	130	5.1181	230	9.0551	64	2.5197	4.0	0.157	127000	176000	25.10	24.50
22228	22228K	140	5.5118	250	9.8425	68	2.6772	4.0	0.157	153000	218000	32.00	31.10
22230	22230K	150	5.9055	270	10.6299	73	2.8740	4.0	0.157	174000	262000	40.80	39.90
22232	22232K	160	6.2992	290	11.4173	80	3.1496	4.0	0.157	195000	290000	51.20	50.00
22234	22234K	170	6.6929	310	12.2047	86	3.3858	5.0	0.197	225000	340000	63.90	62.60
22236	22236K	180	7.0866	320	12.5984	86	3.3858	5.0	0.197	233000	360000	66.60	65.00
22238	22238K	190	7.4803	340	13.3858	92	3.6220	5.0	0.197	260000	410000	81.60	79.80
22240	22240K	200	7.8740	360	14.1732	98	3.8583	5.0	0.197	295000	450000	98.10	95.90
22244	22244K	220	8.6614	400	15.7480	108	4.2520	5.0	0.197	350000	545000	136.00	133.00
22248	22248K	240	9.4488	440	17.3228	120	4.7244	5.0	0.197	430000	680000	183.00	179.00
22252	22252K	260	10.2362	480	18.8976	130	5.1181	6.0	0.236	500000	805000	240.00	236.00
22256	22256K	280	11.0236	500	19.6850	130	5.1181	6.0	0.236	520000	855000	249.00	245.00
22260	22260K	300	11.8110	540	21.2598	140	5.5118	6.0	0.236	600000	975000	315.00	309.00
22264	22264K	320	12.5984	580	22.8346	150	5.9055	6.0	0.236	695000	1140000	386.00	377.00

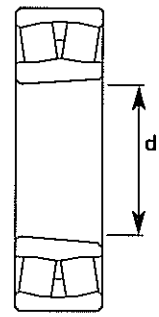
NOTE: Oil lube hole is optional for all sizes and is designated with the suffix "W33" (e.g., 22232W33).
Suffix "M" denotes brass or bronze retainer.
Suffix "K" denotes tapered bore.

Spherical Roller Bearings

Series 223



Cylindrical bore



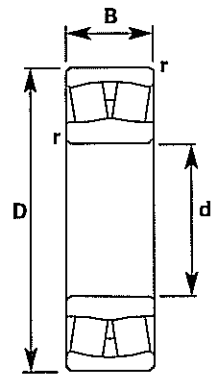
Tapered bore

Global Bearing Number	Bore d		Outer Diameter D		Width B		Radius r		Basic Load Ratings (lbs.)		Weight (lbs.)	
	mm	inch	mm	inch	mm	inch	mm	inch	Dynamic C	Static C_o	223	223K
22308 22308K	40	1.5748	90	3.5433	33	1.2992	2.5	0.098	27200	28800	22.27	2.23
22309 22309K	45	1.7717	100	3.9370	36	1.4173	2.5	0.098	33000	37500	3.09	3.02
22310 22310K	50	1.9685	110	4.3307	40	1.5748	3.0	0.118	42000	47500	4.19	4.10
22311 22311K	55	2.1654	120	4.7244	43	1.6929	3.0	0.118	46000	52500	5.29	5.18
22312 22312K	60	2.3622	130	5.1181	46	1.8110	3.5	0.138	53000	60500	6.61	6.46
22313 22313K	65	2.5591	140	5.5118	48	1.8898	3.5	0.138	59500	71000	7.94	7.76
22314 22314K	70	2.7559	150	5.9055	51	2.0079	3.5	0.138	72500	85000	9.59	9.39
22315 22315K	75	2.9528	160	6.2992	55	2.1654	3.5	0.138	14000	92000	11.90	11.60
22316 22316K	80	3.1496	170	6.6929	58	2.2835	3.5	0.138	86000	105000	14.00	13.70
22317 22317K	85	3.3465	180	7.0866	60	2.3622	4.0	0.157	93500	115000	16.30	16.00
22318 22318K	90	3.5433	190	7.4803	64	2.5197	4.0	0.157	107000	132000	19.40	19.00
22319 22319K	95	3.7402	200	7.8740	67	2.6378	4.0	0.157	112000	138000	22.70	22.30
22320 22320K	100	3.9370	215	8.4646	73	2.8740	4.0	0.157	136000	169000	28.70	28.00
22322 22322K	110	4.3307	240	9.4488	80	3.1496	4.0	0.157	167000	209000	39.90	39.00
22324 22324K	120	4.7244	260	10.2362	86	3.3858	4.0	0.157	118000	258000	48.70	47.60
22326 22326K	130	5.1181	280	11.0236	93	3.6614	5.0	0.197	221000	282000	62.80	61.50
22328 22328K	140	5.5118	300	11.8110	102	4.0157	5.0	0.197	250000	320000	78.50	76.70
22330 22330K	150	5.9055	320	12.5984	108	4.2520	5.0	0.197	281000	385000	93.70	91.70
22332 22332K	160	6.2992	340	13.3858	114	4.4882	5.0	0.197	315000	440000	113.00	110.00
22334 22334K	170	6.6929	360	14.1732	120	4.7244	5.0	0.197	340000	480000	131.00	128.00
22336 22336K	180	7.0866	380	14.9606	126	4.9606	5.0	0.197	385000	565000	154.00	151.00
22338 22338K	190	7.4803	400	15.7480	132	5.1969	6.0	0.236	415000	615000	179.00	175.00
22340 22340K	200	7.8740	420	16.5354	138	5.4331	6.0	0.236	460000	680000	206.00	202.00
22344 22344K	220	8.6614	460	18.1102	145	5.7087	6.0	0.236	530000	790000	269.00	265.00
22348 22348K	240	9.4488	500	19.6850	155	6.1024	6.0	0.236	605000	910000	340.00	333.00
22352 22352K	260	10.2362	540	21.2598	165	6.4961	8.0	0.315	695000	1060000	423.00	414.00
22356 22356K	280	11.0236	580	22.8346	175	6.8898	8.0	0.315	790000	1200000	516.00	507.00

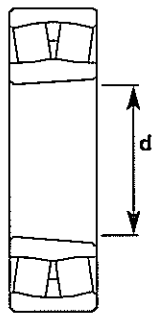
NOTE: Oil lube hole is optional for all sizes and is designated with the suffix "W33" (e.g., 22232W33).
Suffix "M" denotes brass or bronze retainer.
Suffix "K" denotes tapered bore.

Spherical Roller Bearings

Series 230



Cylindrical bore



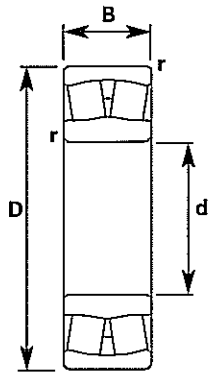
Tapered bore

Global Bearing Number	Bore d		Outer Diameter D		Width B		Radius r		Basic Load Ratings (lbs.)		Weight (lbs.)	
									Dynamic	Static		
	mm	inch	mm	inch	mm	inch	mm	inch	C	C_o	230	230K
23022 23022K	110	4.3307	170	6.6929	45	1.7717	3.0	0.118	63500	102000	8.60	—
23024 23024K	120	4.7244	180	7.0866	46	1.8110	3.0	0.118	66500	111000	9.46	9.17
23026 23026K	130	5.1181	200	7.8740	52	2.0472	3.0	0.118	84500	139000	13.70	13.40
23028 23028K	140	5.5118	210	8.2677	53	2.0866	3.0	0.118	90500	150000	14.80	14.40
23030 23030K	150	5.9055	225	8.8583	56	2.2047	3.5	0.138	100000	174000	17.90	17.40
23032 23032K	160	6.2992	240	9.4488	60	2.3622	3.5	0.138	114000	199000	21.90	21.30
23034 23034K	170	6.6929	260	10.2362	67	2.6378	3.5	0.138	141000	242000	29.50	28.70
23036 23036K	180	7.0866	280	11.0236	74	2.9134	3.5	0.138	166000	291000	38.80	37.70
23038 23038K	190	7.4803	290	11.4173	75	2.9528	3.5	0.138	170000	305000	41.00	39.70
23040 23040K	200	7.8740	310	12.2047	82	3.2283	3.5	0.138	205000	365000	52.50	50.90
23044 23044K	220	8.6614	340	13.3858	90	3.5433	4.0	0.157	238000	430000	69.00	67.00
23048 23048K	240	9.4488	360	14.1732	92	3.6220	4.0	0.157	255000	480000	75.90	73.60
23052 23052K	260	10.2362	400	15.7480	104	4.0945	5.0	0.197	320000	570000	110.00	107.00
23056 23056K	280	11.0236	420	16.5354	106	4.1732	5.0	0.197	340000	655000	119.00	115.00
23060 23060K	300	11.8110	460	18.1102	118	4.6457	5.0	0.197	425000	800000	164.00	159.00
23064 23064K	320	12.5984	480	18.8976	121	4.7638	5.0	0.197	440000	870000	177.00	171.00
23068 23068K	340	13.3858	520	20.4724	133	5.2362	6.0	0.236	505000	990000	236.00	229.00
23072 23072K	360	14.1732	540	21.2598	134	5.2756	6.0	0.236	535000	1060000	249.00	243.00
23076 23076K	380	14.9606	560	22.0472	135	5.3150	6.0	0.236	550000	1201000	265.00	256.00
23080 23080K	400	15.7480	600	23.6220	148	5.8268	6.0	0.236	655000	1320000	337.00	326.00
23084 23084K	420	16.5354	620	24.4094	150	5.9055	6.0	0.236	680000	1400000	357.00	346.00
23088 23088K	440	17.3228	650	25.5906	157	6.1811	8.0	0.315	735000	1540100	410.00	397.00
23092 23092K	460	18.1102	680	26.7717	163	6.4173	8.0	0.315	805000	1680000	467.00	454.00
23096 23096K	480	18.8976	700	27.5591	165	6.4961	8.0	0.315	835000	1770000	490.00	474.00
230/500 230/500K	500	19.6850	720	28.3465	167	6.5748	8.0	0.315	535000	1260100	512.00	496.00
230/530 230/530K	530	20.8661	780	30.7087	185	7.2835	8.0	0.315	985000	2110000	690.00	—
230/560 230/560K	560	22.0472	820	32.2835	195	7.6772	8.0	0.315	1080000	2360000	796.00	—
230/600 230/600K	600	23.6220	870	34.2520	200	7.8740	8.0	0.315	1160000	2640000	904.00	—
230/630 230/630K	630	24.8031	920	36.2205	212	8.3465	10.0	0.394	1320000	2920000	1080.00	—
230/670 230/670K	670	26.3780	980	38.5827	230	9.0551	10.0	0.394	1470000	3300000	1340.00	—
230/710 230/710K	710	27.9528	1030	40.5512	236	9.2913	10.0	0.394	1610000	3650000	1490.00	—
230/750 230/750K	750	29.5276	1090	42.9134	250	9.8425	10.0	0.394	1840000	4100000	1760.00	—

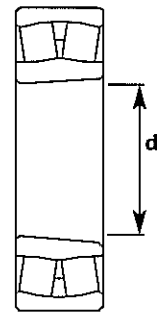
NOTE: Oil lube hole is optional for all sizes and is designated with the suffix "W33" (e.g., 22232W33).
Suffix "M" denotes brass or bronze retainer.
Suffix "K" denotes tapered bore.

Spherical Roller Bearings

Series 231



Cylindrical bore



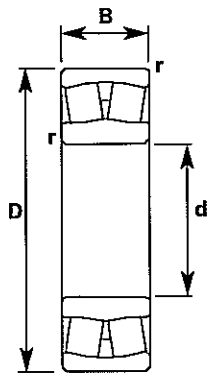
Tapered bore

Global Bearing Number	Bore d		Outer Diameter D		Width B		Radius r		Basic Load Ratings (lbs.)		Weight (lbs.)	
	mm	inch	mm	inch	mm	inch	mm	inch	Dynamic C	Static C_o	231	231K
23122 23122K	110	4.3307	180	7.0866	56	2.2047	3.0	0.118	83000	131000	12.90	12.50
23124 23124K	120	4.7244	200	7.8740	62	2.4409	3.0	0.118	102000	158000	17.90	17.40
23126 23126K	130	5.1181	210	8.2677	64	2.5197	3.0	0.118	111000	179000	19.60	19.00
23128 23128K	140	5.5118	225	8.8583	68	2.6772	3.5	0.138	121000	201000	23.60	22.90
23130 23130K	150	5.9055	250	9.8425	80	3.1496	3.5	0.138	165000	268000	36.20	35.10
23132 23132K	160	6.2992	270	10.6299	86	3.3858	3.5	0.138	189000	310000	45.90	44.50
23134 23134K	170	6.6929	280	11.0236	88	3.4646	3.5	0.138	199000	335000	49.20	47.60
23136 23136K	180	7.0866	300	11.8110	96	3.7795	4.0	0.157	232000	390000	62.40	60.40
23138 23138K	190	7.4803	320	12.5984	104	4.0945	4.0	0.157	268000	455000	77.80	75.40
23140 23140K	200	7.8740	340	13.3858	112	4.4094	4.0	0.157	305000	510000	95.70	92.80
23144 23144K	220	8.6614	370	14.5669	120	4.7244	5.0	0.197	350000	610000	120.00	116.00
23148 23148K	240	9.4488	400	15.7480	128	5.0394	5.0	0.197	390000	690000	148.00	144.00
23152 23152K	260	10.2362	440	17.3228	144	5.6693	5.0	0.197	470000	845000	205.00	199.00
23156 23156K	280	11.0236	460	18.1102	146	5.7480	6.0	0.236	505000	930000	219.00	213.00
23164 23164K	320	12.5984	540	21.2598	176	6.9291	6.0	0.236	700000	1300000	375.00	364.00
23168 23168K	340	13.3858	580	22.8364	190	7.4803	6.0	0.236	810000	1480000	474.00	461.00
23172 23172K	360	14.1732	600	23.6220	192	7.5591	6.0	0.236	845000	1580000	501.00	485.00
23176 23176K	380	14.9606	620	24.4094	194	7.6378	6.0	0.236	880000	1690000	527.00	512.00
23180 23180K	400	15.7480	650	25.5906	200	78740	8.0	0.315	940000	1810000	593.00	576.00
23184 23184K	420	16.5354	700	27.5991	224	8.8189	8.0	0.315	1150000	2200000	796.00	772.00
23188 23188K	440	17.3228	720	28.3465	226	8.8976	8.0	0.315	1170000	2260000	829.00	803.00
23192 23192K	460	18.1102	760	29.9213	240	9.4488	10.0	0.394	1290000	2560000	986.00	955.00
23196 23196K	480	18.8976	790	31.1024	248	9.7638	10.0	0.394	1410000	2810000	1100.00	1070.00
231/500231/500K	500	19.6850	830	32.6772	264	10.3937	10.0	0.394	1540000	3050000	1300.00	1260.00
231/530231/530K	530	20.8661	870	34.2520	272	10.7087	10.0	0.394	1570000	3200000	1460.00	—
231/600231/600K	600	23.6220	980	38.5827	300	11.8110	10.0	0.394	2030000	4150000	2030.00	—
231/630231/600K	630	24.8031	1030	40.5512	315	12.4016	10.0	0.394	2150000	4450000	2360.00	—
231/670231/670K	670	26.3780	1090	42.9134	336	13.2283	10.0	0.394	2530000	5300000	2800.00	—
231/710231/710K	710	27.9528	1150	45.2756	345	13.5827	12.0	0.472	2620000	2620000	3180.00	—

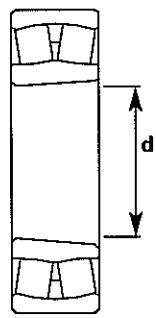
NOTE: Oil lube hole is optional for all sizes and is designated with the suffix "W33" (e.g., 22232W33).
Suffix "M" denotes brass or bronze retainer.
Suffix "K" denotes tapered bore.

Spherical Roller Bearings

Series 232



Cylindrical bore



Tapered bore

Global Bearing Number	Bore d		Outer Diameter D		Width B		Radius r		Basic Load Ratings (lbs.)		Weight (lbs.)	
	mm	inch	mm	inch	mm	inch	mm	inch	Dynamic C	Static C_o	230	230K
23218 23218K	90	3.5433	160	6.2992	52.4	2.0630	3.0	0.118	71500	103000	9.97	9.53
23220 23220K	100	3.9370	180	7.0866	60.3	2.3740	3.5	0.138	91000	130000	14.70	14.00
23222 23222K	110	4.3307	200	7.8740	69.8	2.7480	3.5	0.138	115000	171000	22.50	21.70
23224 23224K	120	4.7244	215	8.4646	76	2.9921	3.5	0.138	132000	198000	27.10	26.20
23226 23226K	130	5.1181	230	9.0551	80	3.1496	4.0	0.157	154000	239000	32.20	31.10
23228 23228K	140	5.5118	250	9.8425	88	3.4646	4.0	0.157	250000	320000	42.30	41.00
23230 23230K	150	5.9055	270	10.6299	96	3.7795	4.0	0.157	210000	330000	54.20	52.70
23232 23232K	160	6.2992	290	11.4173	104	4.0945	4.0	0.157	315000	440000	68.40	66.40
23234 23234K	170	6.6929	310	12.2047	110	4.3307	5.0	0.197	264000	440000	83.10	80.90
23236 23236K	180	7.0866	320	12.5984	112	4.4094	5.0	0.197	284000	465000	87.80	85.10
23238 23238K	190	7.4803	340	13.3858	120	3.7244	5.0	0.197	320000	530000	107.00	104.00
23240 23240K	200	7.8740	360	14.1732	128	5.0394	5.0	0.197	365000	595000	129.00	125.00
23244 23244K	220	8.6614	400	15.7480	144	5.6693	5.0	0.197	440000	730000	181.00	175.00
23248 23248K	240	9.4488	440	17.3228	160	6.2992	5.0	0.197	535000	900000	245.00	238.00
23252 23252K	260	10.2362	480	18.8976	174	6.8504	6.0	0.236	620000	160000	317.00	309.00
23256 23256K	280	11.0236	500	19.6850	176	6.9291	6.0	0.236	660000	1160000	340.00	331.00
23260 23260K	300	11.8110	540	21.2598	192	7.5591	6.0	0.236	775000	1350000	437.00	423.00
23264 23264K	320	12.5984	580	22.8346	208	8.1890	6.0	0.236	890000	1560000	547.00	531.00
23268 23268K	340	13.3858	620	24.4094	224	8.8189	8.0	0.315	990000	1760000	679.00	657.00
23272 23272K	360	14.1732	650	25.5906	232	9.1339	8.0	0.315	1090000	1950000	767.00	741.00
23276 23276K	380	14.9606	680	26.7717	240	9.4488	8.0	0.315	1170000	2170000	862.00	831.00
23280 23280K	400	15.7480	720	28.9213	256	10.0787	8.0	0.315	1330000	2420000	1030.00	1000.00
23284 23284K	420	16.5354	760	29.9213	272	10.7087	10.0	0.394	1450000	2660000	1230.00	1190.00
23288 23288K	440	17.3228	790	31.1024	280	11.0236	10.0	0.394	1530000	2850000	1360.00	1310.00
23292 23292K	460	18.1102	830	32.6772	296	11.6535	10.0	0.394	1730000	3200000	1590.00	1540.00
23296 23296K	480	18.8976	870	34.2520	310	12.2047	10.0	0.394	1880000	3550000	1840.00	1780.00
232/500 232/500K	500	19.6850	920	36.2205	336	13.2283	10.0	0.394	2120000	4000000	2250.00	2190.00

NOTE: Oil lube hole is optional for all sizes and is designated with the suffix "W33" (e.g., 22232W33).
Suffix "M" denotes brass or bronze retainer.
Suffix "K" denotes tapered bore.

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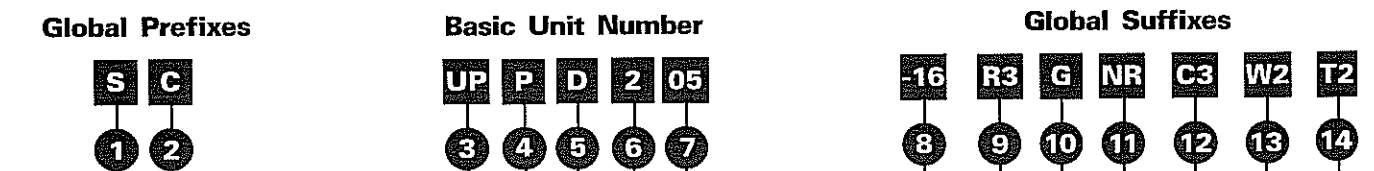
Global Bearing's numbering system utilizes a basic unit number to indicate the appropriate bearing, housing, and dimensions of a specific mounted unit. A complementary set of prefix and suffix descriptions allows the user to configure a mounted unit to fit a specific application.



Bearing Material (1)

Blank	52100 chrome steel
S	440 Stainless steel

Bearing OD Modification (2)

Blank	Spherical OD for inserts
C	Cylindrical OD for inserts

Bearing insert type (3)

HC	Eccentric locking collar (wide inner ring)
SA	Eccentric locking collar (flush inner ring)
SB	Set screw type (flush inner ring)
SER	Insert with snap ring (cylindrical outer ring)
UC	Set screw type (wide inner ring)

Basic Housing Type or Configuration (4)

AK	Pillow block (low center height)
C	Cylindrical cartridge units
F	Four-bolt square flanged housing (narrow series)
FX	Four-bolt square piloted housing (wide series)
FC	Four-bolt square round housing (wide series) also known as flange cartridge units
FH or FA	Other specialized units where space is restricted
FL	Two-bolt flanged cast iron housing
FTN	Two bolt flanged cast iron housing with overall narrower height
HB	Hanger Units
LIP	Pillow block, narrow cast iron housing series
P	Pillow block (high center height)
PA	Pillow block with tapped base
PF	Three-bolt flanged cast iron housing
PFFR	Four bolt flange pressed steel housing
PFL	Two-bolt pressed steel housing
PFR	Three bolt flanged pressed steel housing
PFT	Three or four-bolt pressed steel round housing
PP	Pillow block, pressed steel housing
PR	Rubber mounted pillow block
PSD	Pillow block (narrow ductile iron housing series)
T	Take-up units

Housing Material (5)

Blank	G3000 Grade Cast Iron for Cast Housing or low carbon steel for stamped or pressed housing
D	Ductile iron for cast housing
G	Molded plastic housings, e.g., glass-filled polyester engineering plastic
M	Malleable cast iron
NP	Nickel-plated
P	Low Carbon Steel for stamped or pressed housing
S	440 Stainless steel
Z	Zinc-plated pressed steel housing

Basic Ball Bearing Series (6)

2	Series 200 light duty (ref 6200 series ball bearing)
X	Series X medium duty (between 6200 and 6300 series)
3	Series 300 heavy duty (ref. 6200 series ball bearing)

Cage (Retainer) (14)

Blank	Pressed steel cage
T2	Nylon cage, typically uses glass-reinforced Nylon 66

Set screw method (13)

Blank	Knurled cup point set screw
W1	Cone-pointed set screw
W2	Ball-pointed set screw
W3	Cup point set screw

Internal radial clearance (12)

Blank	C/O as the standard clearance
C2	Tight fit
C3	Loose fit
C4	Extra loose
C5	Extremely loose

Snap ring (11)

Blank	No groove, no snap ring
N	Groove without snap ring
NR	Groove with snap ring

Re-lubrication (10)

Blank	Re-lubrication is non-standard as SB & SA type inserts. Add "G" here if re-lubrication feature is required
N	Non-relube housing
G	Relubrication groove and/or holes

Relubricatable inserts supplied with universal type lubrication feature, e.g., will fit housings grooved on either sides.

Seal Configuration (9)

AR	Armor type seal, single lip land riding seal with trash guard
R3	Triple lip type armor seal
UC	Single lip with flinger (Flinger seal)
AELS	Single lip contour riding seal with trash guard
Blank	Standard centrifugal type seal

Shaft Size in Inch Dimension (8)

Add the following integers, as examples, to denote inch bore sizes in a fraction of 16, 8½, 10⅝, 12¾, 14⅞, 16-1, 17-1 1/16, 18-1 ½, 19-1 3/16, 20-1¼

Shaft Size in Metric Dimensions (7)

As there is only one metric bore size per basic bearing series, no shaft size specification is necessary.

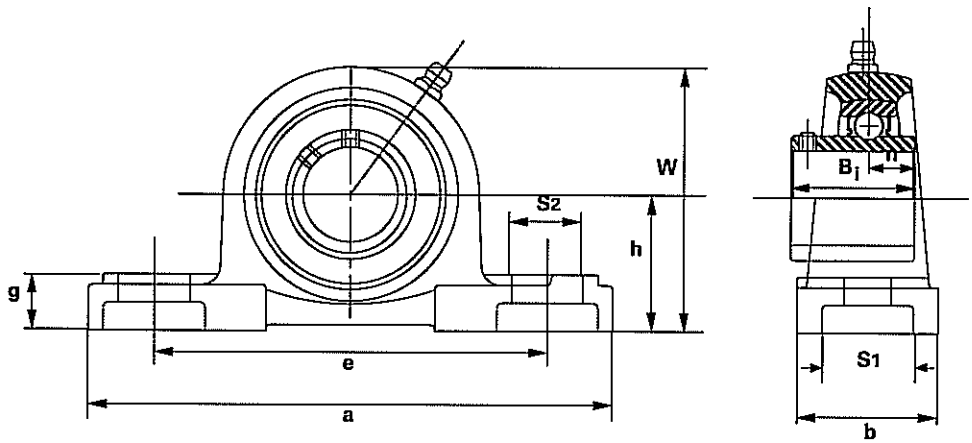
01	12mm
02	15mm
03	17mm
04	and above x5mm

The 200 and 300 series inserts have the same number and diameter of balls as their counterpart standard bearings in the 6200 and 6300 single row, deep groove, radial ball bearing series.

Pillow Blocks – Set Screw Type – Standard Center Height

UCP 200 Series

UCP200 Series has the standard base to center height. Relubrication feature is standard. UC type bearing features dual set screw locking, wide inner ring, slinger seal design, and anti-rotation device.

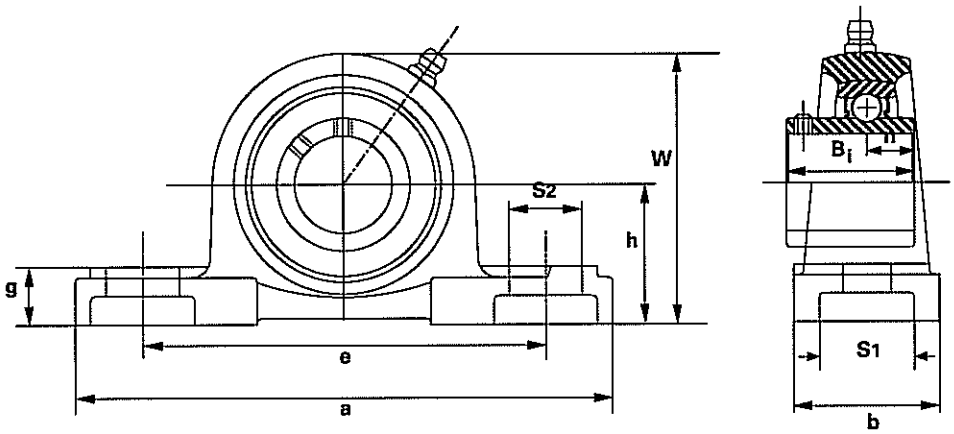


Shaft Dia.		Basic	Dimensions – Inches (mm)										Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	h	a	e	b	S2	S1	g	w	Bi	n	Size	kg	lbs	No.	No.
12 15 17	1/2 5/8	UCP201-8 202-10 UCP201 202 203	1 3/16 (30.2)	5 (127.0)	3 3/4 (95.3)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	15/32	2 3/8	122.0 (31.0)	0.720	3/8	0.78	1.72 (1.39)	UC201-8 202-10 UC201 202 203	P203
20	3/4	UCP204-12 UCP204	1 5/16 (33.5)	5 (127.0)	3 3/4 (95.3)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (12.7)	2 17/32	1.220 (31.0)	0.720	3/8	0.66	1.46 (1.46)	UC204-12 UC204	P204
25	7/8 15/16 1	UCP205-14 205-15 205-16 UCP205	1 7/16 (36.5)	5 1/2 (139.7)	4 1/8 (104.8)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (12.7)	2 25/32 (70.6)	1.338 (34.0)	0.563 (14.3)	3/8	0.86	1.90 (1.76)	UC205-14 205-15 205-16 UC205	P205
30	1 1/16 1 1/8 1 3/16 1 1/4	UCP206-17 206-18 206-19 206-20 UCP206	1 11/16 (42.9)	6 1/2 (165.1)	4 3/4 (120.7)	1 7/8 (47.6)	13/16 (20.6)	21/32 (16.7)	19/32 (15.1)	3 5/16 (94.1)	1.500 (38.1)	0.626 (15.9)	1/2	1.41	3.11 (2.76)	UC206-17 206-18 206-19 206-20 UC206	P206
35	1 1/4 1 5/16 1 3/8 1 7/16	UCP207-20 207-21 207-22 207-23 UCP207	1 7/8 (46.7)	6 9/16 (166.7)	5 (127.0)	1 7/8 (46.6)	13/16 (20.6)	21/32 (16.7)	5/8 (15.9)	3 21/32 (92.9)	1.689 (42.9)	0.689 (17.5)	1/2	1.66	3.66 (3.46)	UC207-20 207-21 207-22 207-23 UC207	P207
40	1 1/2 1 9/16	UCP208-24 208-25 UCP208	1 15/16 (49.2)	7 1/4 (184.2)	5 13/32 (137.3)	2 1/8 (53.9)	13/16 (20.6)	21/32 (16.7)	21/32 (16.7)	3 27/32 (97.6)	1.937 (49.2)	0.746 (19.0)	1/2	2.12	4.67 (4.41)	UC208-24 208-25 UC208	P208
45	1 5/8 1 11/16 1 3/4	UCP209-26 209-27 209-28 UCP209	2 1/8 (54)	7 15/32 (189.7)	5 3/4 (146.1)	2 1/8 (53.9)	13/16 (20.6)	21/32 (16.7)	21/32 (16.7)	4 3/16 (106.4)	1.937 (49.2)	0.748 (19.0)	1/2	2.40	5.29 (5.16)	UC209-26 209-27 209-28 UC209	P209
50	1 7/8 1 15/16	UCP210-30 210-31 UCP210	2 1/4 (57.2)	8 1/8 (206.4)	6 1/4 (158.8)	2 3/8 (60.3)	7/8 (22.2)	25/32 (19.8)	3/4 (19)	4 7/16 (112.7)	2.031 (51.6)	0.748 (19.0)	5/8	2.94	6.48 (6.00)	UC210-30 210-31 UC210	P210
55	2 2 1/8 2 3/16	UCP211-32 211-34 211-35 UCP211	2 1/2 (63.5)	8 5/8 (219.1)	6 23/32 (170.7)	2 3/8 (60.3)	7/8 (22.2)	25/32 (19.8)	3/4 (19)	4 29/32 (124.6)	2.189 (55.6)	0.874 (22.2)	5/8	3.66	8.07 (7.25)	UC211-32 211-34 211-35 UC211	P211
60	2 1/4 2 5/16 2 7/16	UCP212-36 212-38 212-39 UCP212	2 3/4 (69.9)	9 1/2 (241.3)	7 1/4 (184.2)	2 3/4 (69.9)	1 (25.4)	25/32 (19.8)	7/8 (22.2)	5 7/16 (138.1)	2.563 (65.1)	1.000 (25.4)	5/8	5.15	11.3 (10.19)	UC212-36 212-38 212-39 UC212	P212
65	2 1/2	UCP213-40 UCP213	3 (76.2)	10 7/16 (265.1)	8 (203.2)	2 3/4	1 3/16 (30.2)	1 (25.4)	1 (25.4)	5 29/32 (150.0)	2.563 (65.1)	1.000 (25.4)	3/4	6.10	13.4 (12.10)	UC213-40 UC213	P213
70	2 3/4	UCP214-44 UCP214	3 1/8 (79.4)	10 15/32 (265.9)	8 9/32 (210.3)	2 27/32 (72.2)	1 3/16 (30.2)	1 (25.4)	1 3/32	6 5/32 (156.4)	2.937 (74.6)	1.189 (30.2)	3/4	6.90	15.2 (16.07)	UC214-44 UC214	P214
75	2 15/16 3	UCP215-47 215-48 UCP215	3 1/4 (82.9)	10 13/16 (274.6)	8 17/32 (216.7)	2 29/32 (73.8)	1 3/16 (30.2)	1 (25.4)	1 3/32	6 3/8 (161.9)	3.063 (77.8)	1.311 (33.3)	3/4	7.85	17.3 (17.5)	UC215-47 215-48 UC215	P215

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Pillow Blocks – Set Screw Type – Low Center Height

UCAK200 Series



UCAK200 Series has a lower base to center height than the UCP series.

Relubrication feature is standard. UC type bearing features dual set screw locking, wide inner ring, slinger seal design, and anti-rotation device.

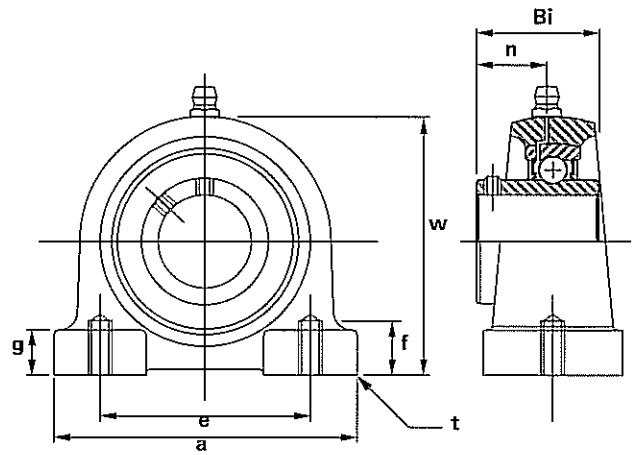
Shaft Dia.		Basic	Dimensions – Inches (mm)										Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	h	a	e	b	S2	S1	g	w	Bi	n	Size	kg	lbs	No.	No.
12 15 17	1/2 5/8 3/4	UCAK201-8 202-10 UCAK201 202 203 204	1 1/4 (31.2)	5 1/4 (133.4)	3 7/8 (98.4)	1 5/8 (41.3)	9/16 (14.2)	7/16 (11.1)	9/16 (14.3)	2 1/2 (64.3)	122.0 (31.0)	0.720 (18.3)	3/8	0.85	1.87 (1.6)	UC201-8 202-10 UC201 202 203 UC204	AK204
20	7/8 15/16 1	UCAK205-14 205-15 205-16 UCAK205	1 5/16 (33.3)	5 1/2 (139.7)	4 1/8 (104.8)	1 3/4 (44.5)	9/16 (14.3)	7/16 (11.1)	5/8 (15.9)	2 11/16 (68.3)	1.338 (34.0)	0.563 (14.3)	3/8	1.00	2.20 (2.1)	UC205-14 205-15 205-16 UC205	AK205
25	1 1/16 1 1/8 1 3/16 1 1/4	UCAK206-17 206-18 206-19 206-20 UCAK206	1 9/16 (39.7)	6 5/16 (173.6)	4 3/4 (120.7)	1 7/8 (47.6)	3/4 (19.05)	9/16 (14.3)	11/16 (17.5)	3 5/32 (80.2)	1.500 (38.1)	0.626 (15.9)	1/2	1.40	3.09 (2.9)	UC206-17 206-18 206-19 206-20 UC206	AK206
30	1 1/4 1 5/16 1 3/8 1 7/16	UCAK207-20 207-21 207-22 207-23 UCAK207	1 13/16 (46)	6 9/16 (166.7)	5 (127.0)	1 7/8 (46.6)	3/4 (19.05)	9/16 (14.3)	3/4 (19.1)	3 5/8 (92.1)	1.689 (42.9)	0.689 (17.5)	1/2	1.77	3.90 (3.8)	UC207-20 207-21 207-22 207-23 UC207	AK207
35	1 1/2 1 9/16	UCAK208-24 208-25 UCAK208	1 15/16 (49.2)	7 1/8 (181)	5 1/2 (139.7)	2 1/8 (54)	3/4 (19.05)	9/16 (14.3)	3/4 (19.1)	3 15/16 (100)	1.937 (49.2)	0.748 (19.0)	1/2	2.11	4.65 (4.9)	UC208-24 208-25 UC208	AK208
40	1 5/8 1 11/16 1 3/4	UCAK209-26 209-27 209-28 UCAK209	2 1/16 (52.4)	7 1/2 (190.5)	5 3/4 (146.1)	2 1/8 (54)	3/4 (19.05)	9/16 (14.3)	13/16 (20.6)	4 13/16 (122.2)	1.937 (49.2)	0.748 (19.0)	1/2	2.47	5.47 (6.2)	UC209-26 209-27 209-28 UC209	AK209
45	1 7/8 1 15/16	UCAK210-30 210-31 UCAK210	2 3/16 (55.6)	8 (203.2)	6 1/4 (158.8)	2 1/4 (57.2)	3/4 (19.05)	9/16 (14.3)	7/8 (22.2)	4 7/16 (12.7)	2.031 (51.6)	0.748 (19.0)	1/2	2.43	5.29 (5.16)	UC210-30 210-31 UC210	AK210
50	2 2 1/8 2 3/16	UCAK211-32 211-34 211-35 UCAK211	2 7/16 (61.9)	9 1/8 (231.8)	7 1/8 (180.9)	2 3/8 (60.3)	15/16 (23.8)	11/16 (17.5)	1 (25.4)	4 29/32 (124.6)	2.189 (55.6)	0.874 (22.2)	5/8	3.97	6.46 (6.8)	UC211-32 211-34 211-35 UC211	AK211
55	2 1/4 2 3/8 2 7/16	UCAK212-36 212-38 212-39 UCAK212	2 11/16 (68.3)	9 1/2 (241.3)	7 1/2 (190.5)	2 1/2 (64.3)	15/16 (23.8)	11/16 (17.5)	1 1/8 (28.6)	5 3/8 (136.5)	2.563 (65.1)	1.000 (25.4)	5/8	5.01	11.0 (11.7)	UC212-36 212-38 212-39 UC212	AK212
60 75	2 15/16 3	UCAK215-47 215-48 UCAK215	3 5/16 (84.1)	12 (304.8)	9 1/2 (241.3)	3 1/4 (82.6)	1 1/4 (31.2)	7/8 (21.2)	1 1/2 (38.1)	6 17/32 (165.9)	3.063 (77.8)	1.311 (33.3)	3/4	8.50	18.7	UC215-47 215-48 UC215	AK215

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Tapped Base – Pillow Blocks – Set Screw Type

UCPA 200 Series

UCPA200 Series pillow blocks are designed for applications in restricted areas. Tapped base can be fitted with bolts from underneath the base. Relubrication feature is standard. UC type bearing features dual set screw locking, wide inner ring, slinger seal design, and anti-rotation device.

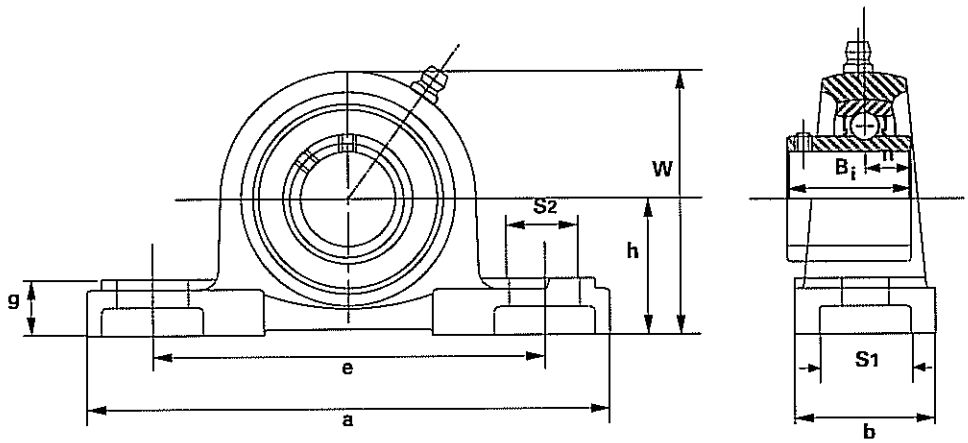


Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) h	a	e	b	g	w	f	t	Bi	n	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8 3/4	UCPA201-8 202-10 204-12	1 3/16 (30.2)	3 (76.2)	2 3/64 (51.9)	1 9/16 (39.7)	7/16 (11.1)	2 7/16 (61.9)	19/32 (15.1)	W 3/8 (9.5)	122.0 (31.0)	0.500 (12.7)	0.70	1.54 (1.02)	UC201-8 202-10 204-12	PA204
7/8 15/16 1	UCPA205-14 205-15 205-16	1 7/16 (36.5)	3 5/16 (84.1)	2 13/64 (55.9)	1 25/32 (45.2)	15/32 (11.9)	2 27/32 (72.2)	19/32 (15.1)	W 3/8 (9.5)	1.338 (34.0)	0.563 (14.3)	0.81	1.79 (1.37)	UC205-14 205-15 205-16	PA205
1 7/16 1 1/8 1 3/16 1 1/4	UCPA206-17 206-18 206-19 206-20	1 11/16 (42.8)	3 11/16 (93.7)	2 19/32 (65.9)	1 31/32 (50.0)	15/32 (11.9)	3 5/16 (84.1)	23/32 (18.3)	W 1/2 (12.7)	1.500 (38.1)	0.626 (15.9)	1.25	2.76 (2.32)	UC206-17 206-18 206-19 206-20	PA206
1 1/4 1 5/16 1 3/8 1 7/16	UCPA207-20 207-21 207-22 207-23	1 7/8 (47.6)	4 11/32 (110.3)	3 5/32 (80.2)	2 5/32 (54.8)	1/2 (12.7)	3 3/4 (95.3)	25/32 (19.8)	W 1/2 (12.7)	1.689 (42.9)	0.689 (17.5)	1.70	3.75 (3.03)	UC207-20 207-21 207-22 207-23	PA207
1 1/2 1 9/16	UCPA208-24 208-25	1 15/16 (49.2)	4 9/16 (115.9)	3 5/16 (84.1)	2 9/32 (57.9)	1/2 (12.7)	3 15/16 (100.0)	25/32 (19.8)	W 1/2 (12.7)	1.937 (49.2)	0.748 (19.0)	2.00	4.41 (3.60)	UC208-24 208-25	PA208
1 5/8 1 11/16 1 3/4	UCPA209-26 209-27 209-28	2 9/64 (54.4)	4 23/32 (119.8)	3 35/64 (90.1)	2 3/8 (60.3)	1/2 (12.7)	4 1/4 (107.9)	1 (25.4)	W 1/2 (12.7)	1.937 (49.2)	0.748 (19.0)	2.30	5.07 (4.68)	UC209-26 209-27 209-28	PA209
1 7/8 1 15/16	UCPA210-30 210-31	2 1/4 (57.2)	5 1/8 (130.2)	3 45/64 (94.1)	2 17/32 (64.3)	9/16 (14.3)	4 9/16 (115.9)	1 (25.4)	W 5/8 (15.9)	2.031 (51.6)	0.748 (19.0)	2.90	6.39 (5.57)	UC210-30 210-31	PA210

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Pillow Blocks – Set Screw Type – Medium Duty Series

UCPX00 Series



UCPX00 Series has a greater load capacity than the UCP series. Relubrication feature is standard. UCX type bearing features dual set screw locking, wide inner ring, slinger seal design, and anti-rotation device.

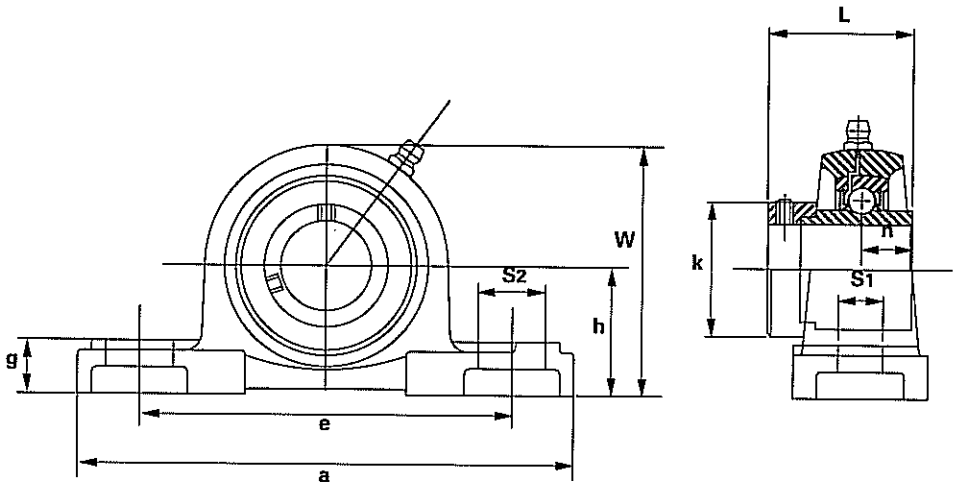
Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) h	a	e	b	S2	S1	g	w	Bi	n	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
7/8 15/16 1	UCPX05-14 X05-15 X05-16	1 3/4 (44.5)	6 1/4 (158.8)	4 11/16 (119.1)	2 (50.8)	1 (25.4)	21/32 (16.7)	5/8 (15.9)	3 3/8 (85.7)	1.500 (38.1)	0.626 (15.9)	1/2	1.60	3.53 (3.46)	UCX05-14 X05-15 X05-16	PX05
1 1/8 1 3/16 1 1/4	UCPX06-18 X06-19 X06-20	1 7/8 (47.6)	6 7/8 (174.6)	5 (127.0)	2 1/4 (57.2)	1 (25.4)	21/32 (16.7)	21/32 (16.7)	3 11/16 (93.7)	1.689 (42.9)	0.689 (17.5)	1/2	2.14	4.72 (4.59)	UCX06-18 X06-19 X06-20	PX06
1 1/4 1 5/16 1 3/8 1 7/16	UCPX07-20 X07-21 X07-22 X07-23	2 1/8 (54)	8 (203.2)	5 21/32 (143.7)	2 1/4 (57.2)	1 3/16 (30.2)	21/32 (16.7)	3/4 (19.0)	4 1/8 (104.8)	1.937 (49.2)	0.748 (19.0)	1/2	2.85	6.28 (6.13)	UCX07-20 X07-21 X07-22 X07-23	PX07
1 1/2 1 9/16	UCPX08-24 X08-25	2 5/16 (54.7)	8 3/4 (222.3)	6 5/32 (156.4)	2 5/8 (66.7)	1 1/4 (31.8)	25/32 (19.8)	13/16 (20.6)	4 1/2 (114.3)	1.937 (49.2)	0.748 (19.0)	5/8	3.71	8.18 (7.96)	UCX08-24 X08-25	PX08
1 5/8 1 11/16 1 3/4	UCPX09-26 X09-27 X09-28	2 15/16 (58.7)	8 3/4 (222.3)	6 5/32 (156.4)	2 5/8 (66.7)	1 5/16 (33.3)	25/32 (19.8)	13/16 (20.6)	4 9/16 (115.9)	2.031 (51.6)	0.748 (19.0)	5/8	3.65	8.05 (7.91)	UCX09-26 X09-27 X09-28	PX09
1 7/8 1 15/16 2	UCPX10-30 X10-31 X10-32	2 1/2 (63.5)	9 1/2 (241.3)	6 23/32	2 7/8 (73.0)	1 13/32 (35.7)	25/32 (19.8)	7/8 (22.2)	4 31/32 (126.2)	2.189 (55.6)	0.748 (19.0)	5/8	4.49	9.90 (10.65)	UCX10-30 X10-31 X10-32	PX10
2 1/8 2 3/16 2 1/4	UCPX11-34 X11-35 X11-36	2 3/4 (69.9)	10 1/4 (260.4)	7 1/4 (184.2)	3 1/8 (79.4)	1 13/32 (35.7)	1 (25.4)	1 3/32 (27.8)	5 15/32 (138.9)	2.563 (65.1)	1.000 (25.4)	3/4	6.25	13.80 (14.18)	UCX11-34 X11-35 X11-36	PX11
2 3/8 2 7/16	UCPX12-38 X12-39	3 (76.2)	11 1/4 (285.8)	8 (203.2)	3 9/32 (93.3)	1 9/16 (39.7)	1 (25.4)	1 3/32 (27.8)	5 31/32 (151.6)	2.563 (65.1)	1.000 (25.4)	3/4	7.52	16.60 (17.20)	UCX12-38 X12-39	PX12
2 1/2	UCPX13-40	3 (76.20)	11 1/4 (285.8)	8 (203.2)	3 9/32 (83.3)	1 9/16 (39.7)	1 (25.4)	1 3/32 (27.8)	6 3/32 (154.8)	2.937 (74.6)	1.189 (30.2)	3/4	8.20	18.10 (18.08)	UCX13-40	PX13
2 3/4	UCPX14-44	3 1/2 (88.9)	13 (330.2)	9 1/32 (229.4)	3 1/2 (88.9)	1 31/32 (50.0)	1 1/16 (26.9)	1 1/4 (31.8)	6 7/8	3.063 (77.8)	1.311 (33.3)	7/8	10.60	23.40 (22.18)	UCX14-44	PX14
2 15/16 3	UCPX15-47 X15-48	3 1/2 (88.9)	13 (330.2)	9 1/32 (229.4)	3 1/2 (88.9)	1 31/32 (50.0)	1 1/16 (26.9)	1 1/4 (31.8)	6 7/8 (174.6)	3.252 (82.6)	1.311 (33.3)	7/8	12.30	27.10 (27.12)	UCX15-47 X15-48	PX15

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Pillow Blocks – Eccentric Locking Collar Type – Standard Center Height

HCP200 Series

HCP200 Series has the standard base to center height. Relubrication feature is standard. HC type bearing features wide inner ring, slinger seal design, and eccentric locking collar.

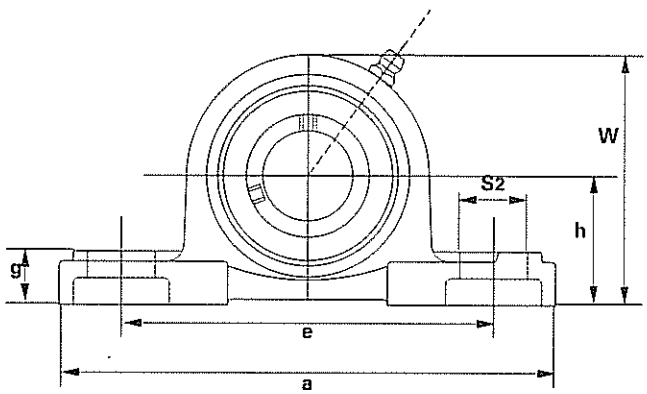


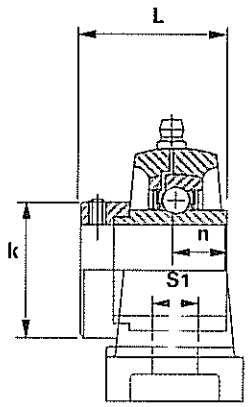
Shaft Dia.		Basic	Dimensions – Inches (mm)											Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	h	a	e	b	S2	S1	g	w	L	n	k	Size	kg	lbs	No.	No.
20	5/8 3/4	HCP202-10 HCP204-12 HCP204	1 5/16 (33.3)	5 (127.0)	3 3/4 (95.3)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (64.3)	2 17/32 (43.5)	1.720 (17.0)	0.673 (31.2)	1 1/4	3/8	0.70	1.54 (1.55)	HC202-10 HC204-12 HC204	P204
25	7/8 15/16 1	HCP205-14 205-15 205-16 HCP205	1 7/16 (36.5)	5 1/2 (139.76)	4 1/8 (104.8)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (12.7)	2 25/32 (70.6)	1.748 (44.3)	0.688 (178.4)	1 1/2 (38.1)	3/8	0.88	1.94 (1.76)	HC205-14 205-15 205-16 HC205	P205
30	1 1/16 1 1/8 1 3/16 1 1/4	HCP206-17 206-18 206-19 206-20 HCP206	1 11/16 (42.9)	6 1/2 (165.1)	4 3/4 (120.7)	1 7/16 (36.5)	13/16 (20.6)	21/32 (16.6)	19/32 (15.1)	3 5/16 (84.1)	1.905 (48.3)	0.720 (18.2)	1 3/4 (44.5)	1/2	1.46	3.22 (2.76)	HC206-17 206-18 206-19 206-20 HC206	P206
35	1 1/4 1 5/16 1 3/8 1 7/16	HCP207-20 207-21 207-22 207-23 HCP207	1 7/8 (47.6)	6 9/16 (166.7)	5 (127.0)	1 7/8 (47.6)	13/16 (20.6)	21/32 (16.6)	5/8 (15.9)	3 21/32 (92.9)	2.016 (51.1)	0.742 (18.8)	2 3/16 (55.6)	1/2	1.74	3.84 (3.46)	HC207-20 207-21 207-22 207-23 HC207	P207
40	1 1/4 1 9/16	HCP208-24 208-25 HCP208	1 15/16 (49.2)	7 1/4 (184.2)	5 13/32 (156.4)	2 1/8 (53.9)	13/16 (20.6)	21/32 (16.6)	21/32 (16.7)	3 27/32 (97.6)	2.220 (56.3)	0.844 (21.4)	2 3/8 (60.3)	1/2	2.25	4.96 (4.41)	HC208-24 208-25 HC208	P208
45	1 5/8 1 11/16 1 3/4	HCP209-26 209-27 209-28 HCP209	2 1/8 (54)	7 15/32 (189.7)	5 3/4 (146.1)	2 1/8 (53.9)	13/16 (20.6)	21/32 (16.6)	21/32 (16.7)	4 3/16 (106.4)	2.220 (56.3)	0.844 (21.4)	2 1/2 (64.3)	1/2	2.53	5.58 (5.16)	HC209-26 209-27 209-28 HC209	P209
50	1 7/8 1 15/16	HCP210-30 210-31 HCP210	2 1/4 (57.2)	8 1/8 (206.4)	6 1/4 (158.8)	2 3/8 (60.3)	7/8 (22.2)	25/32 (19.8)	3/4 (19.1)	4 7/16 (112.7)	2.468 (62.7)	0.969 (24.6)	2 3/4 (69.9)	5/8	3.14	6.92 (6.00)	HC210-30 210-31 HC210	P210
55	2 2 1/8 2 3/16	HCP211-32 211-34 211-35 HCP211	2 1/2 (63.5)	8 5/8 (219.1)	6 23/32 (170.7)	2 3/8 (60.3)	7/8 (22.2)	25/32 (19.8)	3/4 (19.1)	4 29/32 (124.6)	2.814 (71.4)	1.049 (27.7)	3 (76.2)	5/8	3.95	8.71 (7.25)	HC211-32 211-34 211-35 HC211	P211
60	2 1/4 2 5/8 2 7/16	HCP212-36 212-38 212-39 HCP212	2 3/4 (69.9)	9 1/2 (241.3)	7 1/4 (184.2)	2 3/4 (69.9)	1 (25.4)	25/32 (19.8)	7/8 (22.2)	5 7/16 (138.1)	3.062 (77.8)	1.219 (30.9)	3 5/16 (84.1)	3/8	5.50	12.1 (10.34)	HC212-36 212-38 212-39 HC212	P212
	2 15/16 3	HCP215-47 215-48	3 1/4 (82.6)	10 13/16 (274.6)	8 17/32 (216.7)	2 29/32 (73.8)	1 3/16 (30.2)	1 (25.4)	1 3/32 (27.8)	6 3/8 (161.9)	3.374 (85.7)	1.469 (37.3)	4 1/32 (102.4)	3/4	9.02	19.9 (17.40)	HC215-47 215-48	P215

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Pillow Blocks – Eccentric Locking Collar Type – Low Center Height

HCAK200 Series





HCAK200 Series has a lower base to center height than the HCP series. Relubrication feature is standard. HC type bearing features wide inner ring, slinger seal design, and eccentric locking collar.

Shaft Dia.		Basic	Dimensions (inch)											Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	h	a	e	b	S2	S1	g	w	L	n	k	Size	kg	lbs	No.	No.
20	3/4	HCAK204-12 HCAK204	1 1/4 (32)	5 1/4 (133.4)	3 7/8 (98.4)	1 5/8 (56.8)	9/16 (14.3)	7/16 (11.1)	9/16 (14.3)	2 1/2 (63.5)	1.720 (43.5)	0.673 (17.0)	1 1/4 (31.2)	3/8	0.89	1.96 (1.6)	HC204-12 HC204	AK204
25	7/8 15/16 1	HCAK205-14 205-15 205-16 HCAK205	1 5/16 (33.3)	5 1/2 (139.7)	4 1/8 (104.8)	1 3/4 (44.5)	9/16 (14.3)	7/16 (11.1)	5/8 (15.9)	2 11/16 (68.3)	1.748 (44.3)	0.688 (17.4)	1 1/2 (38.1)	3/8	1.02	2.25 (2.1)	HC205-14 205-15 205-16 HC205	AK205
30	1 1/16 1 1/8 1 3/16 1 1/4	HCAK206-17 206-18 206-19 206-20 HCAK206	1 9/16 (39.7)	6 5/16 (160.3)	4 3/4 (120.7)	1 7/8 (47.6)	3/4 (19)	9/16 (14.3)	11/16 (17.5)	3 5/32 (80.2)	1.905 (48.3)	0.720 (18.2)	1 3/4 (44.5)	1/2	1.45	3.20 (2.9)	HC206-17 206-18 206-19 206-20 HC206	AK206
35	1 1/4 1 5/16 1 3/8 1 7/16	HCAK207-20 207-21 207-22 207-23 HCAK207	1 13/16 (46)	6 5/8 (168.7)	5 (127.0)	1 7/8 (47.6)	3/4 (19)	9/16 (14.3)	3/4 (19.1)	3 15/16 (100)	2.016 (51.1)	0.742 (18.8)	2 3/16 (55.6)	1/2	1.85	4.08 (4.2)	HC207-20 207-21 207-22 207-23 HC207	AK207
40	1 1/2 1 9/16	HCAK208-24 208-25 HCAK208	1 15/16 (49.2)	7 1/8 (180.9)	5 1/2 (139.7)	2 1/8 (53.9)	3/4 (19)	9/16 (14.3)	3/4 (19.1)	3 15/16 (100)	2.220 (56.3)	0.844 (21.4)	2 3/8 (60.3)	1/2	2.24	4.94 (4.9)	HC208-24 208-25 HC208	AK208
45	1 5/8 1 11/16 1 3/4	HCAK209-26 209-27 209-28 HCAK209	2 1/16 (52.4)	7 1/2 (190.5)	5 3/4 (152.0)	2 1/8 (54)	3/4 (19)	9/16 (14.3)	13/16 (20.6)	4 13/16 (122.2)	2.220 (56.3)	0.844 (21.4)	2 1/2 (64.3)	1/2	2.60	5.73 (6.2)	HC209-26 209-27 209-28 HC209	AK209
50	1 7/8 1 15/16	HCAK210-30 210-31 HCAK210	2 3/16 (55.6)	8 (203.2)	6 1/4 (158.8)	2 1/4 (57.2)	3/4 (19)	9/16 (14.3)	7/8 (22.2)	4 7/16 (112.7)	2.468 (62.7)	0.969 (24.6)	2 3/4 (69.9)	1/2	3.13	6.90 (6.8)	HC210-30 210-31 HC210	AK210
55	2 2 1/8 2 3/16	HCAK211-32 211-34 211-35 HCAK211	2 7/16 (61.9)	9 1/8 (231.8)	7 1/8 (180.9)	2 3/8 (60.3)	15/16 (23.8)	11/16 (17.5)	1 (25.4)	4 29/32 (124.6)	2.814 (71.4)	1.049 (27.7)	3 (76.2)	5/8	4.26	9.39 (11.7)	HC211-32 211-34 211-35 HC211	AK211
60	2 1/4 2 3/8 2 7/16	HCAK212-36 212-38 212-39 HCAK212	2 11/16 (68.3)	9 1/2 (241.3)	7 1/2 (190.5)	2 1/2 (163.5)	15/16 (23.8)	11/16 (17.5)	1 1/8 (28.6)	5 3/8 (136.5)	3.062 (77.8)	1.219 (30.9)	3 5/16 (84.1)	5/8	6.35	11.8 (11.7)	HC212-36 212-38 212-39 HC212	AK212
	2 15/16 3	HCAK215-47 215-48	3 5/16 (84.1)	12 (304.8)	9 1/2 (241.3)	3 1/4 (82.6)	1 1/4 (31.8)	7/8 (165.9)	1 1/2 (85.7)	6 17/32 (37.3)	3.374 (85.7)	1.469	4 1/32	3/4	9.02	19.9	HC215-47 215-48	AK215

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Global Bearings, Inc.

Pillow Blocks – Set Screw Type – Light Duty Inserts

SBP200 & SBAK200 Series

SBP

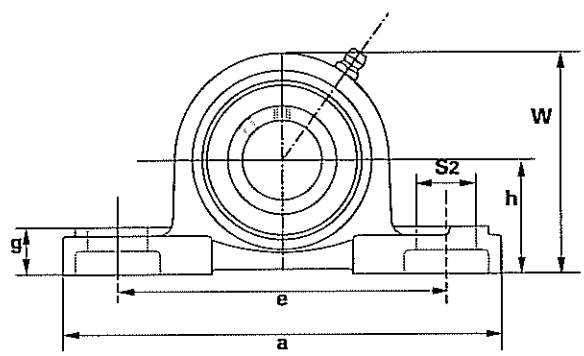
Cast iron unit. Non-relubricable units available.

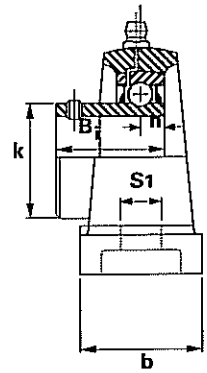
SB type bearing features flush inner ring, dual set screw locking, and tight riding full cover metal shroud seals.

SBAK

Cast iron unit with a lower base to center height dimension than the SBP series. Non-lubricable units available.

SB type bearing features flush inner ring, dual set screw locking, and tight riding full cover metal shroud seals.





SBP200 Series

High Center Height

Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) h	a	e	b	S_2	S_1	g	w	Bi	n	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8	SBP201-8 SBP202-10	1 1/4 (31.1)	4 15/16 (125.4)	3 3/4 (95.3)	1 1/2 (38.1)	5/8 (15.9)	31/64 (12.3)	1/2 (12.7)	2 1/4 (57.2)	0.867 (22)	0.229 (5.8)	3/8	0.54 0.54	1.29 1.32	SB201-8G SB202-10G	P203
3/4	SBP204-12	1 5/16 (33.3)	5 (127)	3 3/4 (95.3)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (12.7)	2 17/32 (64.3)	0.984 (25)	0.275 (7.0)	3/8	0.63	1.39	SB204-12G	P204
15/16 1	SBP205-14 205-15 205-16	1 7/16 (36.51)	5 1/2 (139.7)	4 1/8 (104.8)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (12.7)	2 25/32 (70.6)	1.062 (27.0)	0.295 (7.5)	3/8	0.83	1.83	SB205-14G 205-15G 205-16G	P205
1 1/16 1 1/8 1 3/16 1 1/4	SBP206-17 206-18 206-19 206-20	1 11/16 (42.86)	6 1/2 (165.1)	4 3/4 (120.7)	1 7/8 (47.6)	13/16 (20.6)	21/32 (16.7)	19/32 (15.1)	3 5/16 (84.1)	1.181 (30.0)	0.315 (8.0)	1/2	1.34	2.95	SB206-17G 206-18G 206-19G 206-20G	P206
1 1/4 1 5/16 1 3/8 1 7/16	SBP207-20 207-21 207-22 207-23	1 7/8 (47.63)	6 9/16 (166.7)	5 (127.0)	1 7/8 (47.6)	13/16 (20.6)	21/32 (16.7)	5/8 (15.9)	3 21/32 (92.9)	1.259 (32.0)	0.335 (8.5)	1/2	1.57	3.46	SB207-20G 207-21G 207-22G 207-23G	P207
1 1/2	SBP208-24	1 15/16 (49.21)	7 1/4 (184.2)	5 13/32 (137.3)	2 1/8 (53.9)	13/16 (20.6)	21/32 (16.7)	21/32 (16.7)	3 27/32 (97.6)	1.338 (34.0)	0.354 (9.0)	1/2	2.04	4.50	SB208-24G	P208

SBAK200 Series

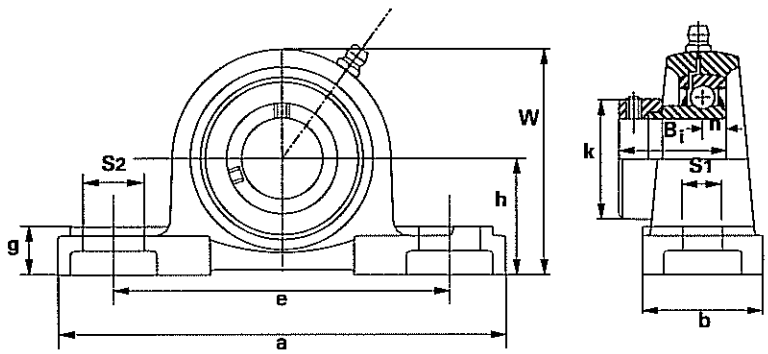
Low Center Height

Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) h	a	e	b	S_2	S_1	g	w	Bi	n	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
3/4	SBAK204-12	1 1/4 (35.75)	5 1/4 (133.4)	3 7/8 (98.4)	1 5/8 (41.3)	9/16 (14.3)	7/16 (11.1)	9/16 (14.3)	2 1/2 (63.5)	0.984 (25)	0.275 (7.0)	3/8	0.82	1.81	SB204-12G	AK204
7/8 15/16 1	SBAK205-14 205-15 205-16	1 5/16 (33.34)	5 1/2 (139.7)	4 1/8 (104.8)	1 3/4 (44.5)	9/16 (14.3)	7/16 (11.1)	5/8 (15.9)	2 11/16 (64.3)	1.062 (27.0)	0.295 (7.5)	3/8	0.97	2.14	SB205-14G 205-15G 205-16G	AK205
1 1/16 1 1/8 1 3/16 1 1/4	SBAK206-17 206-18 206-19 206-20	1 9/16 (39.69)	6 5/16 (160.3)	4 3/4 (120.7)	1 7/8 (47.6)	3/4 (19.0)	9/16 (14.3)	11/16 (17.5)	3 5/32 (80.2)	1.181 (30.0)	0.315 (8.0)	1/2	1.33	2.93	SB206-17G 206-18G 206-19G 206-20G	AK206
1 1/4 1 5/16 1 3/8 1 7/16	SBAK207-20 207-21 207-22 207-23	1 13/16 (46.04)	6 9/16 (166.7)	5 (127.0)	1 7/8 (47.6)	3/4 (19.0)	9/16 (14.3)	3/4 (19.1)	3 5/8 (92.1)	1.259 (32.0)	0.335 (8.5)	1/2	1.68	3.70	SB207-20G 207-21G 207-22G 207-23G	AK207
1 1/2	SBAK208-24	1 15/16 (9.21)	7 1/8 (18.1)	5 1/2 (139.7)	2 1/8 (53.9)	3/4 (19.0)	9/16 (14.3)	3/4 (19.1)	3 15/16 (100)	1.338 (34.0)	0.354 (9.0)	1/2	2.03	4.50	SB208-24G	AK208

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Pillow Blocks – Eccentric Locking Collar Type – Light Duty Inserts

SAP200 & SAAK200 Series



SAP

Cast iron unit. Non-relubricable units available.

SA type bearing features flush inner ring, tight riding full cover metal shroud seals, and eccentric locking collar.

SAAK

Cast iron unit with a lower base to center height dimension than the SAP series. Non-relubricable units available.

SA type bearing features flush inner ring, tight riding full cover metal shroud seals, and eccentric locking collar.

SAP200 Series

High Center Height

Shaft Dia.	Basic	Dimensions – Inches (mm)											Bolt	Unit Weight		Bearing	Housing
inch	Unit No.	h	a	e	b	S2	S1	g	w	L	n	k	Size	kg	lbs	No.	No.
1/2	SAP201-8	1 1/4 (31.2)	4 15/16 (125.4)	3 3/4 (95.3)	1 1/2 (38.1)	5/8 (15.9)	1/2 (12.7)	17/32 (12.3)	2 17/32 (64.3)	1.128 (28.7)	0.232 (6.0)	1 1/8 (28.6)	3/8	0.57	1.39	SA201-8G	P201
5/8	SAP202-10									1.155 (29.3)		1 1/4 (31.2)		0.58	1.44	SA202-10G	
3/4	SAP204-12	1 5/16 (33.33)	5 (127)	3 3/4 (95.3)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (12.7)	2 11/32 (59.5)	1.218 (31.0)	0.295 (7.5)	1 1/4 (32.0)	3/8	0.65	1.43	SA204-12G	P204
7/8 15/16 1	SAP205-14 205-15 205-16	1 7/16 (36.51)	5 1/2 (139.7)	4 1/8 (104.8)	1 1/2 (38.1)	3/4 (19.0)	1/2 (12.7)	1/2 (12.7)	2 25/32 (70.6)	1.218 (31.0)	0.295 (7.5)	1 1/2 (38.1)	3/8	0.85	1.87	SA205-14G 205-15G 205-16G	P205
1 1/16 1 1/8 1 3/16 1 1/4	SAP206-17 206-18 206-19 206-20	1 11/16 (42.86)	6 1/2 (165.1)	4 3/4 (120.7)	1 7/8 (47.6)	13/16 (20.6)	21/32 (16.7)	19/32 (15.1)	3 5/16 (84.1)	1.406 (35.7)	0.354 (9.0)	1 3/4 (44.5)	1/2	1.40	3.09	SA206-17G 206-18G 206-19G 206-20G	P206
1 1/4 1 5/16 1 3/8 1 7/16	SAP207-20 207-21 207-22 207-23	1 7/8 (47.63)	6 9/16 (166.7)	5 (127.0)	1 7/8 (47.6)	13/16 (20.6)	21/32 (16.7)	5/8 (15.9)	3 21/32 (92.9)	1.531 (38.9)	0.374 (9.5)	2 3/16 (55.6)	1/2	1.68	3.70	SA207-20G 207-21G 207-22G 207-23G	P207
1 1/2	SAP208-24	1 15/16 (44.21)	7 1/4 (184.2)	5 13/32 (137.3)	2 1/8 (53.9)	13/16 (20.6)	21/32 (16.7)	21/32 (16.7)	3 27/32 (97.6)	1.719 (43.7)	0.433 (11)	2 3/8 (60.4)	1/2	2.12	4.67	SA208-24G	P208

SAAK200 Series

Low Center Height

Shaft Dia.	Basic	Dimensions – Inches (mm)											Bolt	Unit Weight		Bearing	Housing
inch	Unit No.	h	a	e	b	S2	S1	g	w	L	n	k	Size	kg	lbs	No.	No.
3/4	SAAK204-12	1 1/4 (31.2)	5 1/4 (133.4)	3 7/8 (98.4)	1 5/8 (41.3)	9/16 (14.3)	7/16 (11.1)	9/16 (14.3)	2 1/2 (63.5)	1.218 (31.0)	0.295 (7.5)	1 1/4 (28.6)	3/8	0.84	1.85	SA204-12G	AK204
7/8 15/16 1	SAAK205-14 205-15 205-16	1 5/16 (33.34)	5 1/2 (139.7)	4 1/8 (104.8)	1 3/4 (44.5)	9/16 (14.3)	7/16 (11.1)	5/8 (15.9)	2 11/16 (68.3)	1.218 (31.0)	0.295 (7.5)	1 1/2 (38.1)	3/8	0.99	2.18	SA205-14G 205-15G 205-16G	AK205
1 1/16 1 1/8 1 3/16 1 1/4	SAAK206-17 206-18 206-19 206-20	1 9/16 (39.69)	6 5/16 (160.3)	4 3/4 (120.7)	1 7/8 (47.6)	3/4 (19.0)	9/16 (14.3)	11/16 (17.5)	3 5/32 (80.2)	1.406 (35.7)	0.354 (8.0)	1 3/4 (44.5)	1/2	1.39	3.06	SA206-17G 206-18G 206-19G 206-20G	AK206
1 1/4 1 5/16 1 3/8 1 7/16	SAAK207-20 207-21 207-22 207-23	1 13/16 (46.04)	6 9/16 (166.7)	5 (127.0)	1 7/8 (47.6)	3/4 (19.0)	9/16 (14.3)	3/4 (19.1)	3 5/8 (92.1)	1.531 (38.9)	0.374 (9.5)	2 3/16 (55.6)	1/2	1.79	3.95	SA207-20G 207-21G 207-22G 207-23G	AK207
1 1/2	SAAK208-24	1 15/16 (49.21)	7 1/8 (181)	5 1/2 (139.7)	2 1/8 (53.9)	3/4 (19.0)	9/16 (14.3)	3/4 (19.0)	3 15/16 (100)	1.719 (43.7)	0.433 (11)	2 3/8 (60.3)	1/2	2.11	4.65	SA208-24G	AK208

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Global Bearings, Inc.

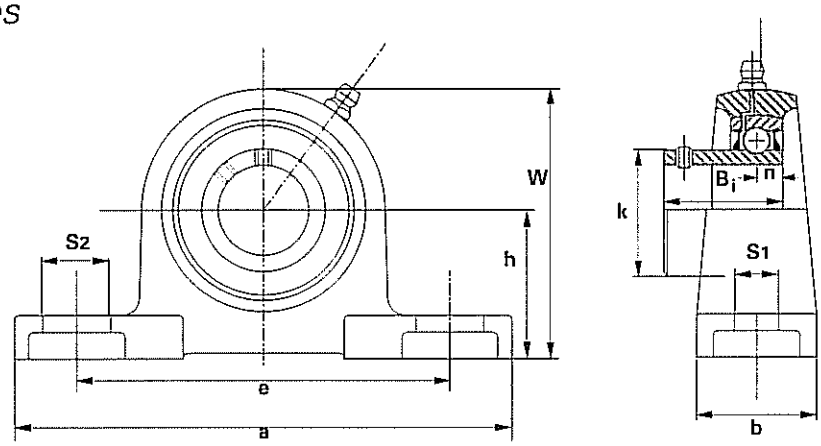
Pillow Blocks – Flush Cast Iron Housing Series – Light Duty Inserts

SBLP200 & SALP200 Series

Cast iron unit. Relubrication feature available by adding suffix "G" to part number.

SB bearings have dual set screw locking, flush inner ring, and full cover metal shroud seals.

SA bearings have eccentric locking collar, flush inner ring, and full metal shroud seals.



SBLP200 Series

* See "L" for width with locking collar.

Set Screw Type

Shaft Dia.	Basic	Dimensions – Inches (mm)										Bolt	Unit Weight		Bearing	Housing
inch	Unit No.	h	a	e	b	S2	S1	g	w	Bi	n	Size	kg	lbs	No.	No.
1/2 5/8	SBLP201-8 202-10	1 3/16 (30.2)	4 1/2 (114.3)	3 7/16 (87.3)	1 (25.4)	5/8 (15.9)	7/16 (11.1)	15/32 (11.9)	2 1/4 (57.2)	0.666 (22.0)	0.239 (6.0)	3/8	0.38	0.84	SB201-8 202-10	LP203
3/4	SBLP204-12	1 5/16 (33.34)	4 29/32 (124.6)	3 13/16 (96.8)	1 1/16 (26.9)	5/8 (15.9)	7/16 (11.1)	1/2 (12.7)	2 9/16 (65.1)	0.984 (25.0)	0.275 (7.0)	3/8	0.47	1.03 (0.92)	SB204-12	LP204
7/8 15/16 1	SBLP205-14 205-15 205-16	1 7/16 (36.51)	5 1/8 (130.2)	3 13/16 (100.0)	1 5/32 (29.4)	5/8 (15.9)	7/16 (11.1)	1/2 (12.7)	2 25/32 (70.6)	1.062 (27.0)	0.295 (7.5)	3/8	0.58	1.28 (1.40)	SB205-14 205-15 205-16	LP205
1 1/8 1 3/16 1 1/4	SBLP206-18 206-19 206-20	1 11/16 (42.86)	6 5/32 (156.4)	4 23/32 (119.9)	1 5/16 (33.3)	13/16 (20.6)	7/16 (11.1)	9/16 (14.3)	3 3/32 (83.3)	1.181 (30.0)	0.315 (8.0)	1/2	0.68	1.50 (2.18)	SB206-18 206-19 206-20	LP206
1 5/16 1 3/8 1 7/16 1 1/2	SBLP207-20 207-21 207-22 207-23	1 7/8 (47.63)	6 1/2 (165.1)	5 (127.0)	1 3/8 (34.9)	13/16 (20.6)	9/16 (14.3)	5/8 (15.9)	3 23/32 (92.9)	1.259 (32.0)	0.335 (8.5)	1/2	0.94	2.07 (2.63)	SB207-20 207-21 207-22 207-23	LP207
1 1/2	SBLP208-24	2 (50.80)	7 1/4 (184.2)	5 1/2 (139.7)	1 5/32 (29.4)	7/8 (22.2)	9/16 (14.3)	23/32 (18.3)	4 1/32 (102.4)	1.338 (34.0)	0.354 (9.0)	1/2	1.80	3.96	SB208-24	LP208

SALP200 Series

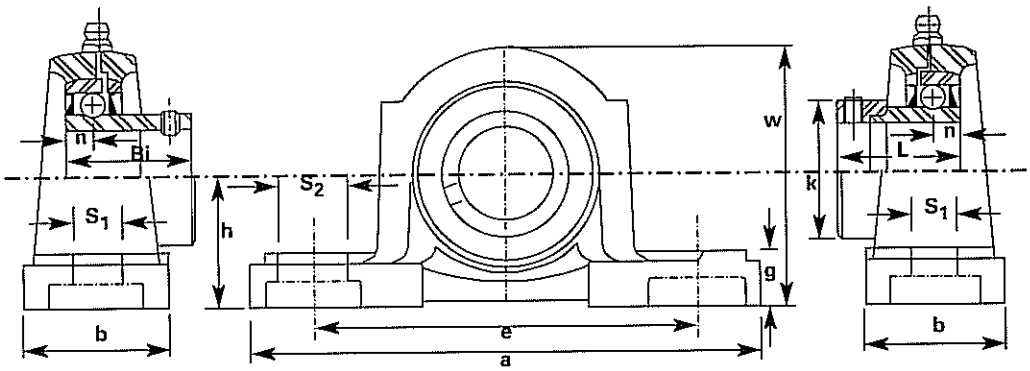
Eccentric Locking Collar Type

Shaft Dia.	Basic	Dimensions – Inches (mm)											Bolt	Unit Weight		Bearing	Housing
inch	Unit No.	h	a	e	b	S2	S1	g	w	L	n	k	Size	kg	lbs	No.	No.
1/2 5/8	SALP201-8 202-10	1 3/16 (30.2)	4 1/2 (114.3)	3 7/16 (87.3)	1 (25.4)	5/8 (15.9)	7/16 (11.1)	15/32 (11.9)	2 1/4 (57.2)	1.125 (28.6)	0.256 (6.5)	1 1/8 (28.6)	3/8	0.41	0.90	SA201-8 202-10	LP203
3/4	SALP204-12	1 5/16 (33.34)	4 29/32 (124.6)	3 3/16 (96.8)	1 1/16 (26.9)	5/8 (15.9)	7/16 (11.1)	1/2 (12.7)	2 9/16 (65.1)	1.218 (31.0)	0.295 (7.0)	1 1/4 (32.0)	3/8	0.53	1.17 (1.06)	SA204-12	LP204
7/8 15/16 1	SALP205-14 205-15 205-16	1 7/16 (36.51)	5 1/8 (130.2)	3 15/16 (100.0)	1 5/32 (29.4)	5/8 (15.9)	7/16 (11.1)	1/2 (12.7)	2 25/32 (70.6)	1.218 (31.0)	0.295 (7.5)	1 1/2 (38.1)	3/8	0.63	1.39 (1.36)	SA205-14 205-15 205-16	LP205
1 1/8 1 3/16 1 1/4	SALP206-18 206-19 206-20	1 11/16 (42.86)	6 5/32 (115.4)	4 27/32 (119.9)	1 5/16 (33.3)	13/16 (20.6)	7/16 (11.1)	9/16 (14.3)	3 5/32 (83.3)	1.406 (35.7)	0.354 (9.0)	1 3/4 (44.5)	1/2	0.76	1.67 (2.17)	SA206-18 206-19 206-20	LP206
1 1/4 1 5/16 1 3/8 1 7/16	SALP207-20 207-21 207-22 207-23	1 7/8 (47.63)	6 1/2 (165.1)	5 (128.0)	1 3/8 (34.9)	13/16 (20.6)	9/16 (14.3)	5/8 (15.9)	3 23/32 (92.9)	1.531 (38.9)	0.374 (9.5)	2 3/16 (55.6)	1/2	1.10	2.42 (2.79)	SA207-20 207-21 207-22 207-23	LP207
1 1/2	SALP208-24	2 (50.80)	7 1/4 (184.2)	5 1/2 (139.7)	1 15/32 (37.3)	7/8 (22.2)	9/16 (14.3)	23/32 (18.3)	4 1/32 (102.4)	1.719 (43.7)	0.433 (11)	2 3/8 (60.4)	1/2	1.90	4.18 (3.95)	SA208-24	LP208

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Pillow Blocks – Flush Ductile Iron Housing Series – Light Duty Inserts

SBPSD200 & SAPSD200 Series



High tensile strength ductile iron housing. Interchangeable with most domestic styles. Relubrication feature available by adding suffix "G" to part number.

SB bearings have dual set screw locking, flush inner ring, and full cover metal shroud seals.

SAP bearings have eccentric locking collar, flush inner ring, and full cover metal shroud seals.

SBPSD200 Series

Set Screw Type

Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) h	a	e	b	S2	S1	g	w	Bi	n	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8	SBPSD201-8 202-10	1 3/16 (30.16)	4 1/2 (114.3)	3 13/16 (87.3)	1 (25.4)	5/8 (15.9)	7/16 (11.1)	1/4 (6.4)	2 1/8 (54)	0.866 (22.0)	0.236 (6.0)	3/8	0.28	0.62	SB201-8 202-10	PSD203
3/4	SBPSD204-12	1 5/16 (33.34)	4 15/16 (125.4)	3 3/16 (96.8)	1 1/16 (26.9)	5/8 (15.9)	7/16 (11.1)	9/32 (7.1)	2 13/16 (71.4)	0.984 (25.0)	0.275 (7.0)	3/8	0.36	0.79	SB204-12	PSD204
7/8 15/16 1	SBPSD205-14 205-15 205-16	1 7/16 (36.51)	5 1/8 (130.2)	3 15/16 (100.0)	1 1/8 (28.6)	5/8 (15.9)	7/16 (11.1)	9/32 (7.1)	2 21/32 (67.5)	1.062 (27.0)	0.295 (7.5)	3/8	0.48	1.06	SB205-14 205-15 205-16	PSD205
1 1/8 1 3/16 1 1/4	SBPSD206-18 206-19 206-20	1 11/16 (42.86)	6 5/32 (156.4)	4 23/32 (119.8)	1 5/16 (33.3)	13/16 (20.6)	9/16 (14.3)	5/16 (7.9)	3 1/8 (79.4)	1.181 (30.0)	0.315 (8.0)	1/2	0.76	1.68	SB206-18 206-19 206-20	PSD206
1 1/4 1 5/16 1 3/8 1 7/16	SBPSD207-20 207-21 207-22 207-23	1 7/8 (47.63)	6 1/2 (165.1)	5 (127.0)	1 3/8 (34.9)	13/16 (20.6)	9/16 (14.3)	11/32 (8.7)	3 9/16 (90.5)	1.259 (32.0)	0.335 (8.5)	1/2	1.03	2.27	SB207-20 207-21 207-22 207-23	PSD207

SAPSD200 Series

Eccentric Locking Collar Type

Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) h	a	e	b	S2	S1	g	w	L	n	k	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8	SAPSD201-8 202-10	1 3/16 (30.16)	4 1/2 (114.3)	3 7/16 (87.3)	1 (25.4)	5/8 (15.9)	7/16 (11.1)	1/4 (6.4)	2 1/8 (54)	1.125 (28.6)	0.256 (6.5)	1 1/8 (29.0)	3/8	0.31	0.68	SA201-8 202-10	PSD203
3/4	SAPSD204-12	1 5/16 (33.34)	4 15/16 (125.4)	3 3/16 (96.8)	1 1/16 (26.9)	5/8 (15.9)	7/16 (11.1)	9/32 (7.1)	2 13/32 (71.4)	1.218 (30.9)	0.295 (7.5)	1 1/4 (31.8)	3/8	0.38	0.84	SA204-12	PSD204
7/8 15/16 1	SAPSD205-14 205-15 205-16	1 7/16 (36.51)	5 1/8 (130.2)	3 15/16 (100.0)	1 1/8 (28.6)	5/8 (15.9)	7/16 (11.1)	9/32 (7.1)	2 21/32 (67.5)	1.218 (30.9)	0.295 (7.5)	1 1/2 (38.1)	3/8	0.50	1.10	SA205-14 205-15 205-16	PSD205
1 1/8 1 3/16 1 1/4	SAPSD206-18 206-19 206-20	1 11/16 (42.86)	6 5/32 (156.4)	4 23/32 (119.8)	1 5/16 (33.3)	13/16 (20.6)	9/16 (14.3)	5/16 (7.9)	3 1/8 (79.4)	1.406 (35.7)	0.354 (9.0)	1 3/4 (44.5)	1/2	0.82	1.81	SA206-18 206-19 206-20	PSD206
1 1/4 1 5/16 1 3/8 1 7/16	SAPSD207-20 207-21 207-22 207-23	1 7/8 (47.63)	6 1/2 (165.1)	5 (127.0)	1 3/8 (34.9)	13/16 (20.6)	9/16 (14.3)	11/32 (8.7)	3 9/16 (90.5)	1.531 (38.9)	0.374 (9.5)	2 3/16 (55.6)	1/2	1.16	2.56	SA207-20 207-21 207-22 207-23	PSD207

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

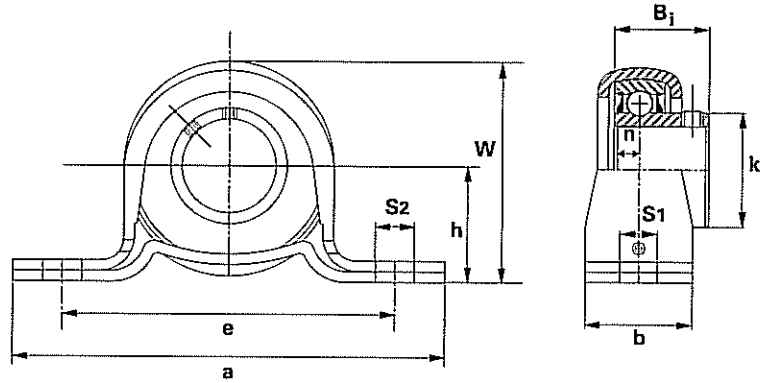
Pillow Blocks – Pressed Steel

SBPP200 & SAPP200 Series

Self-aligning pressed steel housing designed for extra light duty applications. The two piece unit is available with inter-locking (IL) and non-locking (NL) capabilities.

SB bearings have dual set screw locking, flush inner ring, and full cover metal shroud seals.

SA bearings have eccentric locking collar, flush inner ring, and full cover metal shroud seals.



SBPP200

Set Screw Type

See "L" for width with locking collar.

Shaft Dia.		Basic	Dimensions – Inches (mm)										Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	h	a	e	b	S2	S1	g	w	Bi	n	Size	kg	lbs	No.	No.
12 15 17	1/2 5/8	SBPP201-8 202-10 SBPP201 202 203	7/8 (22.22)	3 5/8 (92)	2 11/16 (68)	1 (25)	1/2 (13)	11/32 (9)	0.148 (4)	1 3/4 (44)	0.866 (22.0)	0.2362 (6.0)	15/16	0.17	0.37 (0.37)	SB201-8 202-10 SB201 202 203	PP203
20	3/4	SBPP204-12 SBPP204	1 (25.40)	4 1/8 (105)	3 (76)	1 (25)	1/2 (13)	13/32 (10)	0.148 (4)	2 1/16 (52)	0.985 (25.0)	0.2756 (7.0)	15/16	0.22	0.48 (0.48)	SB204-12 SB204	PP204
25	7/8 15/16 1	SBPP205-14 205-15 205-16 SBPP205	1 1/8 (28.58)	4 19/64 (109)	3 3/8 (86)	1 (25)	7/16 (11)	7/16 (11)	0.127 (3)	2 7/32 (56)	1.063 (27.0)	0.295 (7.5)	3/8	0.31	0.68 (0.68)	SB205-14 205-15 205-16 SB205	PP205
30	1 1/16 1 1/8 1 3/16 1 1/4	SBPP206-17 206-18 206-19 206-20 SBPP206	1 5/16 (33.34)	4 7/8 (124)	3 3/4 (95)	1 1/4 (32)	9/16 (14)	13/32 (10)	0.238 (6)	2 5/8 (67)	1.181 (30.0)	0.315 (8.0)	3/8	0.47	1.04 (1.04)	SB206-17 206-18 206-19 206-20 SB206	PP206
35	1 1/4 1 5/16 1 3/8 1 7/16	SBPP207-20 207-21 207-22 207-23 SBPP207	1 9/16 (39.73)	5 3/4 (146)	4 1/4 (108)	1 1/4 (32)	3/4 (19)	17/32 (13)	0.238 (6)	3 1/8 (79)	1.260 (32.0)	0.335 (8.5)	3/8	0.73	1.61 (1.61)	SB207-20 207-21 207-22 207-23 SB207	PP207

SAPP200

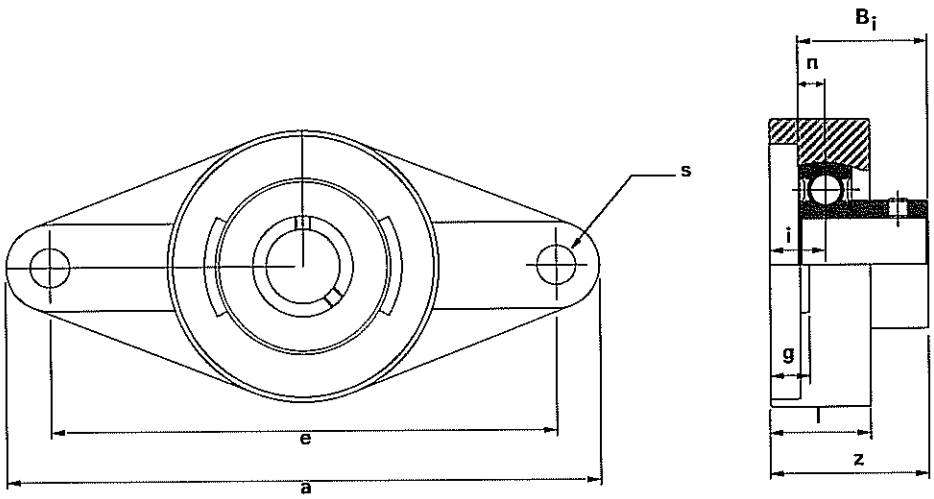
Eccentric Locking Collar Type

Shaft Dia.		Basic	Dimensions – Inches (mm)											Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	h	a	e	b	S2	S1	g	w	L	n	W	Size	kg	lbs	No.	No.
12 15 17	1/2 5/8	SAPP201-8 202-10 SAPP201 202 203	7/8 (22.22)	3 5/8 (92)	2 11/16 (68)	1 (25)	1/2 (13)	11/32 (9)	0.148 (4)	1 3/4 (44)	1.125 (28.6)	0.2362 (6.0)	1 1/8 (28.6)	15/16	0.17	0.37 (0.37)	SA201-8 202-10 SA201 202 203	PP203
20	3/4	SAPP204-12 SAPP204	1 (25.40)	4 1/8 (105)	3 (76)	1 (25)	1/2 (13)	13/32 (10)	0.148 (4)	2 1/16 (53)	1.2205 (31.0)	0.2756 (7.0)	1.260 (32.0)	15/16	0.22	0.48 (0.48)	SA204-12 SA204	PP204
25	7/8 15/16 1	SAPP205-14 205-15 205-16 SAPP205	1 1/8 (28.58)	4 19/64 (109)	3 3/8 (86)	1 (25)	7/16 (11)	7/16 (11)	0.127 (3)	2 7/32 (56)	1.2205 (31.0)	0.295 (7.5)	138.1 (38.1)	3/8	0.31	0.68 (0.68)	SA205-14 205-15 205-16 SA205	PP205
30	1 1/16 1 1/8 1 3/16 1 1/4	SAPP206-17 206-18 206-19 206-20 SAPP206	1 5/16 (33.34)	4 7/8 (124)	3 3/4 (95)	1 1/4 (32)	9/16 (14)	13/32 (10)	0.238 (6)	2 5/8 (67)	1.4063 (35.7)	0.315 (8.0)	1 3/4 (44.5)	3/8	0.47	1.04 (1.04)	SA206-17 206-18 206-19 206-20 SA206	PP206
35	1 1/4 1 5/16 1 3/8 1 7/16	SAPP207-20 207-21 207-22 207-23 SAPP207	1 9/16 (39.69)	5 3/4 (146)	4 1/4 (108)	1 1/4 (32)	3/4 (19)	17/32 (13)	0.238 (6)	3 1/8 (79)	1.5313 (38.9)	0.3345 (8.5)	2.190 (56.6)	3/8	0.73	1.61 (1.61)	SA207-20 207-21 207-22 207-23 SA207	PP207

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

2-Bolt Flange Units

UCFL200 Series



Cast iron two-bolt flange unit. Relubrication feature is standard. UC bearing has dual set screw locking, wide inner ring, slinger seal design, and anti-rotation device.

Shaft Dia.		Basic	Dimensions – Inches (mm)										Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	a	e	i	g	l	s	b	z	Bi	n	Size	kg	lbs	No.	No.
12 15 17 20	1/2 5/8 3/4	UCFL201-8 202-10 204-12 UCFL201 202 203 204	4 7/16 (112.7)	3 35/64 (90)	19/32 (15)	7/16 (11.1)	1 (25.4)	15/32 (12)	2 3/8 (60)	1 5/16 (33.3)	1.2205 (31)	0.500 (12.7)	3/8	0.50	1.10	UC201-8 202-10 204-12 UC201 202 203 204	FL204
25	7/8 15/16 1	UCFL205-14 205-15 205-16 UCFL205	5 1/8 (130.2)	3 57/64 (98.8)	5/8 (16)	1/2 (12.7)	1 1/16 (27)	5/8 (15.9)	2 11/16 (68.3)	1 15/32 (37.3)	1.338 (34)	0.563 (14.3)	1/2	0.70	1.54	UC205-14 205-15 205-16 UC205	FL205
30	1 1/16 1 1/8 1 3/16 1 1/4	UCFL206-17 206-18 206-19 206-20 UCFL206	5 13/16 (147.6)	4 33/64 (117)	45/64 (18)	1/2 (12.7)	1 7/32 (31)	5/8 (15.9)	3 5/32 (80.2)	1 19/32 (40)	1.500 (38.1)	0.626 (15.9)	1/2	0.98	2.16	UC206-17 206-18 206-19 206-20 UC206	FL206
35	1 1/4 1 5/16 1 3/8 1 7/16	UCFL207-20 207-21 207-22 207-23 UCFL207	6 11/32 (161.1)	5 1/8 (130.2)	3/4 (19)	9/16 (14.3)	1 11/32 (34.1)	5/8 (15.9)	3 17/32 (89.7)	1 3/4 (44.5)	1.689 (42.9)	0.689 (17.5)	1/2	1.35	2.98	UC207-20 207-21 207-22 207-23 UC207	FL207
40	1 1/2 1 9/16	UCFL208-24 208-25 UCFL208	6 7/8 (174.6)	5 43/64 (143.7)	53/64 (21)	9/16 (14.3)	1 13/32 (35.7)	5/8 (15.9)	3 15/16 (100)	2 1/64 (51.2)	1.937 (49.2)	0.748 (19)	1/2	1.69	3.73	UC208-24 208-25 UC208	FL208
45	1 5/8 1 11/16 1 3/4	UCFL209-26 209-27 209-28 UCFL209	7 13/32 (188.1)	5 53/64 (148)	55/64 (22)	19/32 (15.1)	1 1/2 (38.1)	3/4 (19)	4 1/4 (108)	2 1/16 (52.4)	1.937 (49.2)	0.748 (19)	5/8	2.04	4.50	UC209-26 209-27 209-28 UC209	FL209
50	1 7/8 1 15/16	UCFL210-30 210-31 UCFL210	7 3/4 (196.9)	6 3/16 (157.2)	55/64 (22)	19/32 (15.1)	1 9/16 (39.7)	3/4 (19)	4 17/32 (115.1)	2 5/32 (54.7)	2.031 (51.6)	0.748 (19)	5/8	2.30	5.07	UC210-30 210-31 UC210	FL210
55	2 2 1/8 2 3/16	UCFL211-32 211-34 211-35 UCFL211	8 13/16 (223.8)	7 1/4 (184.2)	63/64 (25)	23/32 (18.3)	1 11/16 (42.9)	3/4 (19)	5 1/8 (130.2)	2 5/16 (58.7)	2.189 (55.6)	0.874 (22.2)	5/8	3.30	7.28	UC211-32 211-34 211-35 UC211	FL211
60	2 1/4 2 3/8 2 7/16	UCFL212-36 212-38 212-39 UCFL212	9 27/32 (250)	7 61/64 (201.6)	1 9/64 (29)	23/32 (18.3)	1 7/8 (47.6)	29/32 (23)	5 1/2 (139.7)	2 23/32 (68.7)	2.563 (65.1)	1.000 (25.4)	3/4	4.30	9.48	UC212-36 212-38 212-39 UC212	FL212
65	2 1/2	UCFL213-40 UCFL213	10 5/32 (258)	8 17/64 (210)	1 3/16 (30)	25/32 (19.8)	1 31/32 (50)	29/32 (23)	6 3/32 (154.8)	2 3/4 (70)	2.563 (65.1)	1.000 (25.4)	3/4	5.40	11.90	UC213-40 UC213	FL213

Grease fittings can be positioned on two-bolt flange at 90° upon request.
Other sizes may be available.

Global Bearings, Inc.

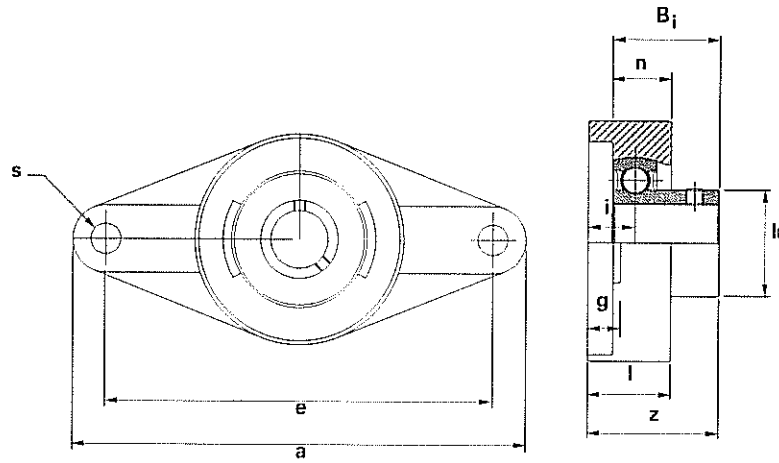
2-Bolt Flange Units – Light Duty Cast Iron Housings

SBLF200 & SALF200 Series

Cast iron unit with round holes for application with minimal mounting space. Relubrication feature available.

SB type bearing has flush inner ring, tight riding full cover metal shroud seals, and dual set screw locking.

SA type bearing has flush inner ring, tight riding full cover metal shroud seals, and eccentric locking collar.



SBLF200 Series

Set Screw Type

See "L" for width with locking collar.

Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) a	e	g	l	s	b	z	Bi	n	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8	SBLF201-8 202-10	3 3/16 (81.0)	2 1/2 (63.5)	3/8 (9.5)	23/32 (18.3)	5/16 (7.9)	2 7/32 (56.4)	1 (25.4)	0.866 (22.0)	0.236 (6.0)	1/4	0.27	0.60	SB201-8 202-10	LF203
3/4	SBLF204-12	3 17/32 (89.7)	2 13/16 (71.4)	7/16 (11.1)	25/32 (19.8)	25/64 (9.9)	2 13/32 (61.1)	1 5/32 (29.4)	0.984 (25.0)	0.275 (7.0)	5/16	0.30	0.66	SB204-12	LF204
7/8 15/16 1	SBLF205-14 205-15 205-16	3 3/4 (95.3)	2 63/64 (75.8)	7/16 (11.1)	25/32 (19.8)	25/64 (9.9)	2 17/32 (64.3)	1 3/16 (30.2)	1.062 (27.0)	0.295 (7.5)	5/16	0.39	0.86	SB205-14 205-15 205-16	LF205
1 1/16 1 1/8 1 3/16 1 1/4	SBLF206-17 206-18 206-19 206-20	4 7/16 (112.7)	3 9/16 (90.5)	15/32 (11.9)	7/8 (22.2)	15/32 (11.9)	3 (76.2)	1 11/32 (34.1)	1.181 (30.0)	0.315 (8.0)	3/8	0.56	1.23	SB206-17 206-18 206-19 206-20	LF206
1 1/4 1 5/16 1 3/8 1 7/16	SBLF207-20 207-21 207-22 207-23	4 13/16 (122.2)	3 15/16 (100.0)	33/64 (13.1)	15/16 (23.8)	15/32 (11.9)	3 1/2 (88.9)	1 7/16 (36.5)	1.259 (32.0)	0.335 (8.5)	3/8	0.77	1.70	SB207-20 207-21 207-22 207-23	LF207

SALF200 Series

Eccentric Locking Collar Type

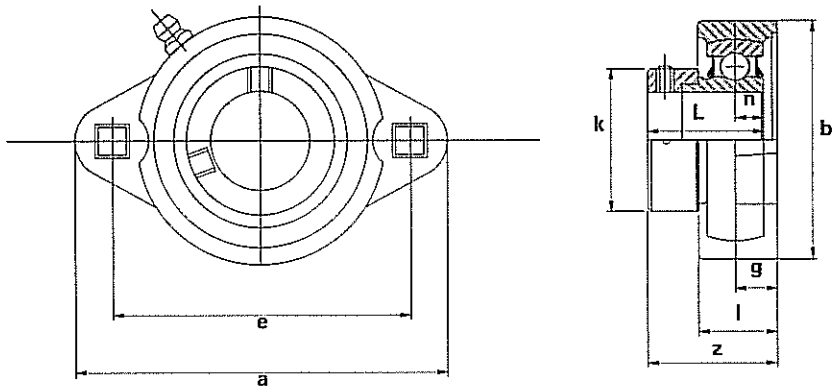
Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) a	e	g	l	s	b	z	L	n	k	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8	SALF201-8 202-10	3 3/16 (81.0)	2 1/2 (63.5)	3/8 (9.5)	23/32 (18.3)	5/16 (7.9)	2 7/32 (56.4)	1 1/4 (32.1)	1.125 (28.6)	0.256 (6.5)	1 1/8 (28.6)	1/4	0.30	0.66 (0.5953)	SA201-8 202-10	LF203
3/4	SALF204-12	3 17/32 (89.7)	2 13/16 (71.4)	7/16 (11.1)	25/32 (19.8)	25/64 (9.9)	2 13/32 (61.1)	1 3/8 (35.1)	1.128 (28.7)	0.295 (7.5)	1 1/4 (31.8)	5/16	0.34	0.75 (6615)	SA204-12	LF204
7/8 15/16 1	SALF205-14 205-15 205-16	3 3/4 (95.3)	2 63/64 (75.8)	7/16 (11.1)	25/32 (19.8)	25/64 (9.9)	2 17/32 (64.3)	1 3/8 (34.6)	1.128 (28.7)	0.295 (7.5)	1 1/2 (38.1)	5/16	0.44	0.97 (0.8599)	SA205-14 205-15 205-16	LF205
1 1/16 1 1/8 1 3/16 1 1/4	SALF206-17 206-18 206-19 206-20	4 7/16 (112.7)	3 9/16 (90.5)	15/32 (11.9)	7/8 (22.2)	15/32 (11.9)	3 (76.2)	1 17/32 (38.9)	1.406 (35.7)	0.354 (8.99)	1 3/4 (44.5)	3/8	0.64	1.41 (1.2439)	SA206-17 206-18 206-19 206-20	LF206
1 1/4 1 5/16 1 3/8 1 7/16	SALF207-20 207-21 207-22 207-23	4 13/16 (122.2)	3 15/16 (100.0)	33/64 (13.1)	15/16 (23.8)	15/32 (11.9)	3 1/2 (88.9)	1 11/16 (47.9)	1.531 (38.9)	0.374 (9.5)	2 7/16 (55.6)	3/8	0.92	2.03 (1.6978)	SA207-20 207-21 207-22 207-23	LF207

To specify relubricatable units, and "G" SUFFIX, (E.G.SBLF205-16G)

Grease fittings can be positioned on 2-bolt flange at 90° upon request.
Other sizes may be available.

2-Bolt Flange Units – Light Duty Ductile Iron Housings

SBFTD200 & SAFTD200 Series



High tensile strength two-bolt ductile units. Made for sturdy flush mount restricted space applications. Relubrication feature available.

SA type bearing has flush inner ring, tight riding full cover metal shroud seals, and eccentric locking collar.

SBFTD200 Series

See "Bi" for width without locking collar.

Set Screw Type

Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) a	e	g	l	s	b	z	Bi	n	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8	SBFTD201-8 202-10	3 1/4 (82.5)	2 9/16 (65)	27/64 (10.9)	23/32 (18.3)	9/32 (7.1)	2 9/32 (55)	1 7/64 (28.1)	0.866 (22.0)	0.236 (6.0)	1/4	0.23	0.51	SB201-8 202-10	PFTD203
3/4	SBFTD204-12	3 11/16 (33.7)	2 13/16 (71.4)	7/16 (11.1)	49/64 (19.4)	11/32 (8.7)	2 33/64 (66.3)	1 13/64 (30.6)	0.984 (25.0)	0.275 (7.0)	5/16	0.27	0.60	SB204-12	PFTD204
7/8 15/16 1	SBFTD205-14 205-15 205-16	3 7/8 (96)	3 (76.7)	7/16 (10)	51/64 (16.7)	11/32 (8.7)	2 23/32 (69)	1 17/64 (32.2)	1.062 (27.0)	0.295 (7.5)	5/16	0.38	0.84	SB205-14 205-15 205-16	PFTD205
1 1/16 1 1/8 1 3/16 1 1/4	SBFTD206-17 206-18 206-19 206-20	4 9/16 (115.9)	3 17/32 (89.7)	1/2 (12.7)	55/64 (21.8)	13/32 (12)	3 13/64 (81.4)	1 13/64 (35.7)	1.181 (30.0)	0.315 (8.0)	3/8	0.54	1.19	SB206-17 206-18 206-19 206-20	PFTD206
1 1/4 1 5/16 1 3/8 1 7/16	SBFTD207-20 207-21 207-22 207-23	4 13/16 (122.2)	3 15/16 (100.0)	1/2 (12.7)	15/16 (23.8)	13/32 (12)	3 33/64 (89.3)	1 17/32 (38.9)	1.181 (32.0)	0.315 (8.5)	3/8	0.71	1.57	SB207-20 207-21 207-22 207-23	PFTD207

SAFTD200 Series

Eccentric Locking Collar Type

Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) a	e	g	l	s	b	z	L	n	k	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
1/2 5/8	SAFTD201-8 202-10	3 3/16 (81.0)	2 9/16 (65)	27/64 (10.7)	23/32 (18.2)	9/32 (7.1)	2 9/32 (53)	1 21/64 (28.3)	1.125 (22.6)	0.256 (6.5)	1 1/8 (28.6)	1/4	0.26	0.57	SA201-8 202-10	PTFD203
3/4	SAFTD204-12	3 11/16 (93.7)	2 13/16 (71.6)	7/16 (11.1)	49/64 (19.4)	11/32 (8.7)	2 33/64 (66.3)	1 7/16 (30.6)	1.218 (31)	0.295 (7.5)	1 1/4 (31.75)	5/16	0.29	0.64	SA204-12	PTFD204
7/8 15/16 1	SAFTD205-14 205-15 205-16	3 7/8 (96)	3 (76.2)	7/16 (11.1)	51/64 (19.8)	11/32 (8.7)	2 23/32 (6.9)	1 27/64 (32.2)	1.218 (31)	0.295 (7.5)	1 1/2 (32.1)	5/16	0.40	0.88	SA205-14 205-15 205-16	PTFD205
1 1/16 1 1/8 1 3/16 1 1/4	SAFTD206-17 206-18 206-19 206-20	4 9/16 (115.9)	3 17/32 (89.7)	1/2 (12.7)	55/64 (21.8)	11/32 (12)	3 13/64 (81.4)	1 41/64 (41.7)	1.406 (35.7)	0.354 (9.0)	1 3/4 (44.5)	3/8	0.60	1.32	SA206-17 206-18 206-19 206-20	PTFD206
1 1/4 1 5/16 1 3/8 1 7/16	SAFTD207-20 207-21 207-22 207-23	4 13/16 (122.2)	3 15/16 (100.0)	1/2 (12.7)	15/16 (23.8)	13/32 (12)	3 33/64 (89.3)	1 51/64 (45.64)	1.531 (38.9)	0.374 (9.5)	2 3/16 (55.6)	3/8	0.84	1.85	SA207-20 207-21 207-22 207-23	PTFD207

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

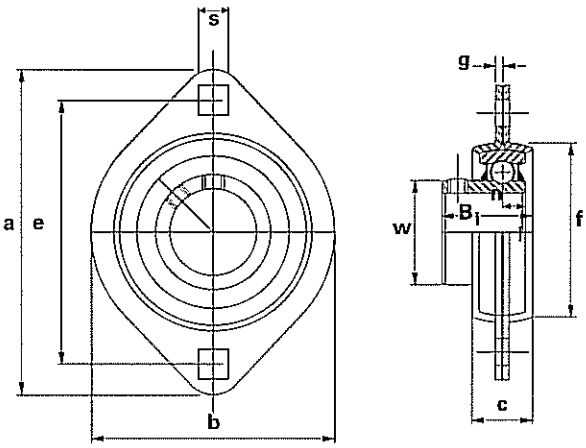
2 Bolt Flange Units – Pressed Steel

SBPFL200 & SAPFL200 Series

Pressed steel housing requiring two self-aligning pieces to match the spherical outer ring of the bearing. Zinc plating available.

SB type bearings have dual set screw locking, flush inner ring tight riding full cover metal shroud seals.

SA bearings have eccentric locking collar, flush inner ring, and tight riding full cover metal shroud seals.



SBPFL200 Series

See "L" for width with locking collar.

Set Screw Type

Shaft Dia.		Basic	Dimensions – Inches (mm)									Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	a	e	g	c	s	b	f	Bi	n	Size	kg	lbs	No.	No.
12 15 17	1/2 5/8	SBPFL201-8 202-10 SBPF201 202 203	3 3/16 (81.0)	2 1/2 (64.0)	0.065 (1.7)	9/16 (14)	9/32 (7)	2 5/16 (59)	1 15/16 (49)	0.866 (22.0)	0.2362 (6.0)	1/4	0.19	0.42 (0.42)	SB201-8 202-10 SB201 202 203	PFL203
20	3/4	SBPF204-12 SBPF204	3 9/16 (90.0)	2 13/16 (71.0)	0.083 (2.1)	5/8 (16)	11/32 (9)	2 5/8 (67)	2 3/16 (56)	0.985 (25.0)	0.2756 (7.0)	5/16	0.24	0.53 (0.53)	SB204-12 SB204	PFL204
25	7/8 15/16 1	SBPF205-14 205-15 205-16 SBPF205	3 3/4 (95)	3 (76.0)	0.083 (2.1)	11/16 (17)	11/32 (9)	2 51/64 (71)	2 3/8 (60)	1.063 (27.0)	0.2955 (7.5)	5/16	0.28	0.62 (0.62)	SB205-14 205-15 205-16 SB205	PFL205
30	1 1/16 1 1/8 1 3/16 1 1/4	SBPF206-17 206-18 206-19 206-20 SBPF206	4 7/16 (113)	3 9/16 (90.0)	0.104 (2.6)	11/16 (17)	13/32 (10)	3 5/16 (84)	2 13/16 (71)	1.181 (30.0)	0.3150 (8.0)	3/8	0.38	0.84 (0.84)	SB206-17 206-18 206-19 206-20 SB206	PFL206
35	1 1/4 1 5/16 1 3/8 1 7/16	SBPF207-20 207-21 207-22 207-23 SBPF207	4 15/16 (125)	3 15/16 (100.0)	0.104 (2.6)	7/8 (22)	13/32 (10)	3 11/16 (94)	3 3/16 (81)	1.260 (32.0)	0.3345 (8.5)	3/8	0.45	0.98 (0.98)	SB207-20 207-21 207-22 207-23 SB207	PFL207

SAPFL200 Series

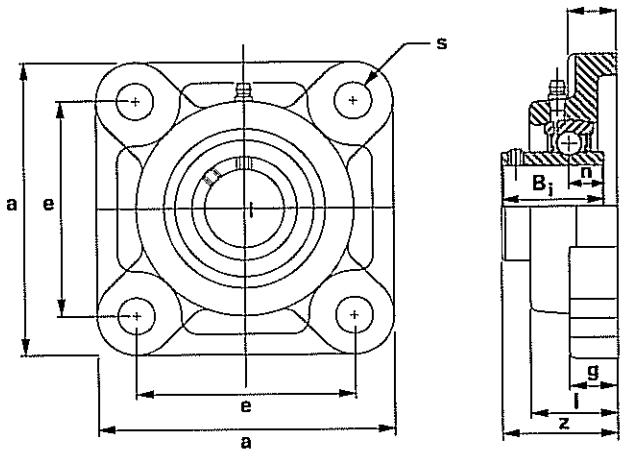
Eccentric Locking Collar Type

Shaft Dia.		Basic	Dimensions – Inches (mm)										Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	a	e	g	c	s	b	f	L	n	W	Size	kg	lbs	No.	No.
12 15 17	1/2 5/8	SAPFL201-8 202-10 SAPFL201 202 203	3 3/16 (81.0)	2 1/2 (64.0)	0.065 (1.7)	9/16 (14)	9/32 (7)	2 5/16 (59)	1 15/16 (49)	1.1250 (28.6)	0.2362 (6.0)	1.125 (28.6)	1/4	0.22	0.49 (0.49)	SA201-8 202-10 SA201 202 203	PFL203
20	3/4	SAPFL204-12 SAPFL204	3 9/16 (90.0)	2 13/16 (71.0)	0.083 (2.1)	5/8 (16)	11/32 (9)	2 5/8 (67)	2 3/16 (56)	1.2205 (31.0)	0.2756 (7.0)	1.260 (32.0)	5/16	0.27	0.59 (0.59)	SA204-12 SA204	PFL204
25	7/8 15/16 1	SAPFL205-14 205-15 205-16 SAPFL205	3 3/4 (95)	3 (76.0)	0.083 (2.1)	11/16 (17)	11/32 (9)	2 51/64 (71)	2 3/8 (60)	1.2205 (31.0)	0.2955 (7.5)	1 1/2 (38.1)	5/16	0.32	0.71 (0.71)	SA205-14 205-15 205-16 SA205	PFL205
30	1 1/16 1 1/8 1 3/16 1 1/4	SAPFL206-17 206-18 206-19 206-20 SAPFL206	4 7/16 (113)	3 9/16 (90.0)	0.104 (2.6)	11/16 (17)	13/32 (10)	3 5/16 (84)	2 13/16 (71)	1.4063 (35.7)	0.3150 (8.0)	1 3/4 (44.5)	3/8	0.41	0.90 (0.90)	SA206-17 206-18 206-19 206-20 SA206	PFL206
35	1 1/4 1 5/16 1 3/8 1 7/16	SAPFL207-20 207-21 207-22 207-23 SAPFL207	4 15/16 (125)	3 15/16 (100.0)	0.104 (2.6)	7/8 (22)	13/32 (10)	3 11/16 (94)	3 13/16 (81)	1.5313 (38.9)	0.3345 (8.5)	2.190 (55.6)	3/8	0.68	1.50 (1.50)	SA207-20 207-21 207-22 207-23 SA207	PFL207

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

4-Bolt Flange Units – Set Screw Type – Light Duty Series

UCF200 Series



Cast iron four bolt flange unit. Relubrication feature is standard. UC bearing has dual set screw locking, wide inner ring, slinger seal design, and anti-rotation device.

Pressed steel housing requiring two self aligning pieces to match the spherical outer ring of the bearing. A two-bolt flange unit with square bolt holes. Zink plating available.

SB type bearing has flush inner ring, tight riding full cover metal shroud seals, and dual set screw locking.

SA type bearing has flush inner ring, tight riding full cover metal shroud seals, and eccentric locking collar.

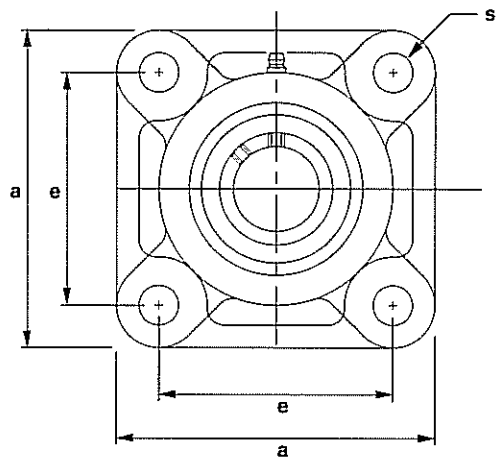
Shaft Dia.		Basic	Dimensions – Inches (mm)									Bolt	Unit Weight		Bearing	Housing
mm	inch	Unit No.	a	e	i	g	l	s	z	Bi	n	Size	kg	lbs	No.	No.
12 15 17 20	1/2 5/8 3/4	UCF201-8 202-10 204-12 UCF201 202 203 UCF204	3 3/8 (85.7)	2 33/64 (63.9)	19/32 (15.1)	15/32 (11.9)	1 (25.4)	15/32 (11.9)	1 5/16 (33.3)	1.220 (31.0)	0.500 (12.7)	3/8	0.65	1.43 (132)	UC201-8 202-10 204-12 UC201 202 203 UC204	F204
25	7/8 15/16 1	UCF205-14 205-15 205-16 UCF205	3 3/4 (95.3)	2 3/4 (69.9)	5/8 (15.9)	9/16 (14.3)	1 1/16 (26.9)	15/32 (11.9)	1 13/32 (35.7)	1.338 (34.0)	0.563 (14.3)	3/8	0.85	1.87 (1.83)	UC205-14 205-15 205-16 UC205	F205
30	1 1/16 1 1/8 1 3/16 1 1/4	UCF206-17 206-18 206-19 206-20 UCF206	4 1/4 (107.9)	3 17/64 (82.9)	45/64 (17.9)	9/16 (14.3)	1 7/32 (30.9)	15/32 (11.9)	1 19/32 (40.5)	1.500 (38.1)	0.626 (15.9)	3/8	1.15	2.54 (2.43)	UC206-17 206-18 206-19 206-20 UC206	F206
35	1 1/4 1 5/16 1 3/8 1 7/16	UCF207-20 207-21 207-22 207-23 UCF207	4 19/32 (116.7)	3 5/8 (92.1)	3/4 (19.1)	5/8 (15.9)	1 11/32 (34.1)	35/64 (13.9)	1 3/4 (44.5)	1.689 (42.9)	0.689 (17.5)	7/16	1.60	3.53 (3.26)	UC207-20 207-21 207-22 207-23 UC207	F207
40	1 1/2 1 9/16	UCF208-24 208-25 UCF208	5 1/8 (130.2)	4 1/64 (101.9)	53/64 (21)	5/8 (15.9)	1 13/32 (35.7)	5/8 (15.9)	2 1/64 (51.2)	1.937 (49.2)	0.748 (19.0)	1/2	2.05	4.52 (4.50)	UC208-24 208-25 UC208	F208
45	1 5/8 1 11/16 1 3/4	UCF209-26 209-27 209-28 UCF209	5 13/32 (137.3)	4 9/64 (105.2)	55/64 (21.8)	23/32 (18.3)	1 1/2 (38.1)	5/8 (15.9)	2 1/16	1.937 (49.2)	0.748 (19.0)	1/2	2.38	5.25 (5.31)	UC209-26 209-27 209-28 UC209	F209
50	1 7/8 1 15/16	UCF210-30 210-31 UCF210	5 5/8 (142.9)	4 3/8 (111.1)	55/64 (21.8)	23/32 (18.3)	1 9/16 (39.7)	5/8 (15.9)	2 5/32 (54.9)	2.031 (51.6)	0.748 (19.0)	1/2	2.50	5.51 (5.47)	UC210-30 210-31 UC210	F210
55	2 2 1/16 2 3/16	UCF211-32 211-34 211-35 UCF211	6 3/8 (161.9)	5 1/8 (130.2)	63/64 (25)	25/32 (19.8)	1 11/16 (42.9)	3/4 (19.1)	2 5/16 (58.7)	2.189 (55.6)	0.874 (22.2)	5/8	3.60	7.94 (7.69)	UC211-32 211-34 211-35 UC211	F211
60	2 1/4 2 5/16 2 7/16	UCF212-36 212-38 212-39 UCF212	6 7/8 (174.6)	5 5/8 (142.9)	1 9/16 (39.7)	25/32 (19.8)	1 7/8 (47.6)	3/4 (19.1)	2 23/32 (69.1)	2.563 (65.1)	1.000 (25.4)	5/8	4.90	10.80 (10.10)	UC212-36 212-38 212-39 UC212	F212
65	2 1/2	UCF213-40 213	7 3/8 (187.3)	5 65/64 (148.8)	1 3/16 (30.2)	25/32 (19.8)	1 31/32 (50.0)	3/4 (19.1)	2 3/4 (69.9)	2.563 (65.1)	1.000 (25.4)	5/8	5.90	13.00 (12.15)	UC213-40 213	F213
70	2 3/4	UCF214-44 UCF214	7 19/32 (192.4)	5 63/64 (152)	1 7/32 (31)	15/64 (6)	2 1/8 (53.9)	3/4 (19.1)	2 31/32 (75.4)	2.937 (74.6)	1.18 (20.2)	5/8	6.30	13.90 (13.51)	UC214-44 UC214	F214
75	2 15/16 3	UCF215-47 215-48 UCF215	7 7/8 (200.0)	6 17/64 (159.1)	1 11/32 (34.1)	15/16 (23.8)	2 7/32 (56.4)	3/4 (19.1)	3 3/32 (78.6)	3.063 (77.8)	1.311 (33.3)	5/8	6.80	15.00 (15.40)	UC215-47 215-48 UC215	F215

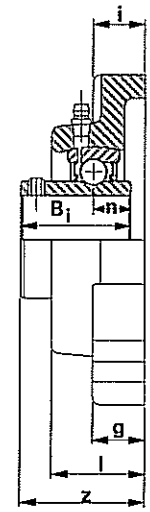
Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

4-Bolt Flange Units – Set Scre Type – Medium Duty

UCFX200 Series

Cast iron four bolt flange unit with a greater load capacity than the UCF series. Relubrication feature is standard. UCX bearing has dual set screw locking, wide inner ring, slinger seal design and anti-rotation device.



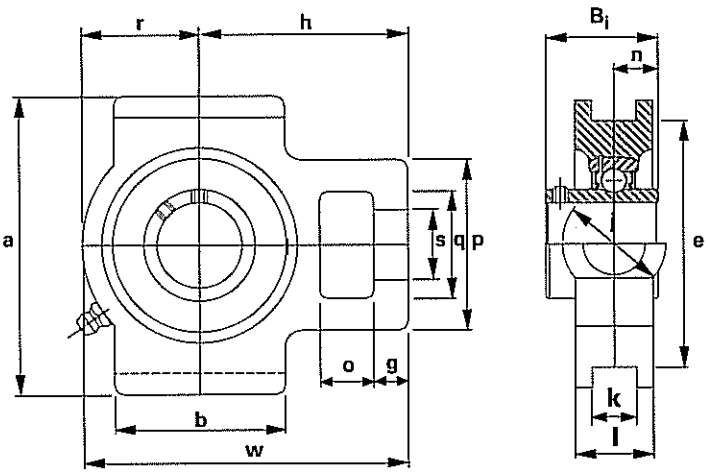


Shaft Dia. inch	Basic Unit No.	Dimensions – Inches (mm) a	e	g	l	s	b	z	Bi	n	Bolt Size	Unit Weight kg	lbs	Bearing No.	Housing No.
7/8 15/16 1	UCFX05-14 X05-15 X05-16	4 1/4 (107.9)	3 17/64 (82.6)	45/64 (18.3)	1/2 (14.3)	1 3/16 (30.9)	15/32 (11.9)	1 19/32 (40.5)	1.500 (38.1)	0.6259 (15.9)	3/8	1.28	2.82 (2.71)	UCX05-14 X05-15 X05-16	FX05
1 1/8 1 3/16 1 1/4	UCFX06-18 X06-19 X06-20	4 19/32 (116.7)	3 5/8 (92.1)	3/4 (19.1)	9/16 (15.1)	1 11/32 (34.1)	5/8 (15.9)	1 3/4 (44.5)	1.6890 (42.9)	0.6890 (17.5)	1/2	1.65	3.64 (3.51)	UCX06-18 X06-19 X06-20	FX06
1 1/4 1 5/16 1 3/8 1 7/16	UCFX07-20 X07-21 X07-22 X07-23	5 1/8 (130.2)	4 1/64 (101.9)	53/64 (21.2)	9/16 (15.1)	1 1/2 (38.1)	5/8 (15.9)	2 1/32 (51.6)	1.9370 (49.2)	0.7480 (19.0)	1/2	2.12	4.67 (4.59)	UCX07-20 X07-21 X07-22 X07-23	FX07
1 1/2 1 9/16	UCFX08-24 X08-25	5 13/32 (137.3)	4 9/64 (105.2)	55/64 (22.2)	9/16 (15.1)	1 9/16 (38.1)	3/4 (19.1)	2 1/16 (52.4)	1.9370 (49.2)	0.7480 (19.0)	5/8	2.15	4.74 (5.14)	UCX08-24 X08-25	FX08
1 5/8 1 11/16 1 3/4	UCFX09-26 X09-27 X09-28	5 5/8 (142.9)	4 3/8 (111.1)	29/32 (23)	9/16 (15.1)	1 9/16 (39.7)	3/4 (19.1)	2 3/16 (54.8)	2.0315 (51.6)	0.7480 (19.0)	5/8	2.59	5.71 (5.89)	UCX09-26 X09-27 X09-28	FX09
1 7/8 1 15/16 2	UCFX10-30 X10-31 X10-32	6 3/8 (161.9)	5 1/8 (130.2)	1 1/32 (26.2)	25/32 (18.3)	1 23/32 (42.9)	3/4 (19.1)	2 11/32 (58.7)	2.1890 (55.6)	0.8740 (22.2)	5/8	3.85	8.49 (8.31)	UCX10-30 X10-31 X10-32	FX10
2 1/8 2 3/16 2 1/4	UCFX11-34 X11-35 X11-36	6 7/8 (174.6)	5 5/8 (142.9)	1 9/64 (29)	25/32 (18.3)	1 15/16 (47.6)	3/4 (19.1)	2 23/32 (69.1)	2.5630 (65.1)	1.000 (25.4)	5/8	5.21	11.5 (10.65)	UCX11-34 X11-35 X11-36	FX11
2 3/8 2 7/16	UCFX12-38 X12-39	7 3/8 (187.3)	5 55/64 (148.8)	1 11/32 (34.1)	13/16 (20.6)	2 5/16 (58.7)	3/4 (19.1)	2 29/32 (73.8)	2.5630 (65.1)	1.000 (25.4)	5/8	5.65	12.5 (12.9)	UCX12-38 X12-39	FX12
2 1/2	UCFX13-40	7 3/8 (187.3)	5 55/64 (148.8)	1 11/32 (34.1)	13/16 (20.6)	2 5/16 (58.7)	3/4 (19.1)	3 3/32 (78.6)	2.9370 (74.6)	1.1890 (30.2)	5/8	6.00	13.2 (13.23)	UCX13-40	FX13
2 3/4	X14-44	7 3/4 (196.9)	5 51/64 (152)	1 29/64 (36.9)	7/8 (22.2)	2 3/8 (60.3)	29/32 (23)	3 7/32 (81.8)	3.0630 (97.8)	1.3110 (33.3)	3/4	7.40	16.3 (16.31)	X14-44	FX14
2 15/16 3	UCFX15-47 X15-48	7 3/4	5 53/64	1 37/64	15/16	2 11/16	29/32 (23.0)	3 17/32	3.2520 (82.16)	1.3110 (33.3)	3/4	8.35	18.4 (10.41)	UCX15-47 X15-48	FX15

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Take Up Unit

UCT 200 Series



Cast Iron unit for conveyor applications where belt tightening and shaft adjustment devices are required. Relubrication feature is standard. Several slot width options available.

UC bearing has dual set screw locking, wide inner ring, slinger seal design, and anti-rotation device.

Shaft Dia.		Basic	Dimensions – Inches (mm)																Unit Weight		Bearing	Housing
mm	inch	Unit No.	o	g	p	q	s	b	k	e	a	w	j	l	r	h	Bi	n	kg	lbs	No.	No.
12 15 17	1/2 5/8 11/16	UCT201-8 202-10 203-11 UCT201 202 203	5/8 (15.9)	13/32 (10.3)	2 (50.8)	1 1/4 (31.8)	3/4 (19.1)	2 (50.8)	17/32 (13.5)	3 (76.2)	3 1/2 (88.9)	3 11/16 (93.7)	1 1/4 (31.8)	13/16 (20.6)	1 5/16 (33.3)	2 13/32 (61.1)	1.220 (31)	0.500 (12.7)	0.82	1.80	UC201-8 202-10 203-11 UC201 202 203	T204
20	3/4	UCT204-12 UCT204	5/8 (15.9)	13/32 (10.3)	2 (50.8)	1 1/4 (31.8)	3/4 (19.1)	2 (50.8)	17/32 (13.5)	3 (76.2)	3 1/2 (88.9)	3 11/16 (93.7)	1 1/4 (31.8)	13/16 (20.6)	1 5/16 (33.3)	2 13/32 (61.1)	1.220 (31)	0.500 (12.7)	0.82	1.81	UC204-12 UC204	T204
25	13/16 7/8 15/16 1	UCT205-13 205-14 205-15 205-16 UCT205	5/8 (15.9)	13/32 (10.3)	2 (50.8)	1 1/4 (31.8)	3/4 (19.1)	2 (50.8)	17/32 (13.5)	3 (76.2)	3 1/2 (88.9)	3 13/16 (92.8)	1 1/4 (31.8)	15/16 (23.8)	1 3/8 (36.9)	2 7/16 (61.9)	1.339 (34)	0.5630 (14.3)	0.85	1.87	UC205-13 205-14 205-15 205-16 UC205	T205
30	1 1/16 1 1/8 1 3/16 1 1/4	UCT206-17 206-18 206-19 206-20 UCT206	5/8 (15.9)	13/32 (10.3)	2 7/32 (56.4)	1 15/32 (37.3)	55/64 (21.8)	2 1/4 (57.2)	17/32 (13.5)	3 1/2 (88.9)	4 1/32 (102.4)	4 7/16 (112.7)	1 15/32 (37.3)	1 1/32 (27.8)	1 11/16 (42.9)	2 3/4 (69.9)	1.500 (38.1)	0.6259 (15.9)	1.30	2.87	UC206-17 206-18 206-19 206-20 UC206	T206
35	1 1/4 1 5/16 1 3/8 1 7/16	UCT207-20 207-21 207-22 207-23 UCT207	5/8 (15.9)	1/2 (12.7)	2 17/32 (64.3)	1 15/32 (37.3)	55/64 (21.8)	2 17/32 (64.3)	17/32 (13.5)	3 1/2 (88.9)	4 1/32 (102.4)	5 3/32 (129.4)	1 15/32 (37.3)	1 3/16 (30.2)	2 (51)	3 1/16 (77.8)	1.689 (42.9)	0.689 (17.5)	1.71	3.77	UC207-20 207-21 207-22 207-23 UC207	T207
40	1 1/2 1 5/16	UCT208-24 208-25 UCT208	3/4 (19.1)	5/8 (15.9)	3 9/32 (83.3)	1 15/16 (49.2)	1 9/64 (29)	3 9/32 (83.3)	11/16 (17.5)	4 1/64 (102)	4 1/2 (114.3)	5 21/32 (143.7)	1 15/16 (49.2)	1 5/16 (33.3)	2 7/32 (56.4)	3 15/32 (88.1)	1.937 (49.2)	0.748 (19)	2.55	5.60	UC208-24 208-25 UC208	T208
45	1 5/8 1 11/16 1 3/4	UCT209-26 209-27 209-28 UCT209	3/4 (19.1)	5/8 (15.9)	3 9/32 (83.3)	1 15/16 (49.2)	1 9/64 (29)	3 9/32 (83.3)	11/16 (17.5)	4 1/64 (102)	4 19/32 (116.7)	5 21/32 (143.7)	1 15/16 (49.2)	1 3/8 (34.9)	2 1/4 (57.2)	3 7/16 (87.3)	1.937 (49.2)	0.748 (19)	2.60	5.71	UC209-26 209-27 209-28 UC209	T209
50	1 13/16 1 7/8 1 15/16	UCT210-29 210-30 210-31 UCT210	3/4 (19.1)	5/8 (15.9)	3 9/32 (83.3)	1 15/16 (49.2)	1 9/64 (29)	3 3/8 (85.7)	11/16 (17.5)	4 1/64 (102)	4 19/32 (116.7)	5 7/8 (149.3)	1 15/16 (49.2)	1 15/32 (37.3)	2 5/16 (58.7)	3 17/32 (89.7)	2.032 (51.6)	0.748 (19)	2.70	5.05	UC210-29 210-30 210-31 UC210	T210
55	2 2 1/16 2 1/8 2 3/16	UCT211-32 211-33 211-33 211-35 UCT211	1 (25.4)	3/4 (19.1)	4 1/32 (102.4)	2 17/32 (64.3)	1 3/8 (34.9)	3 3/4 (95.3)	0.866 (22)	5 1/8 (130.2)	5 3/4 (146.1)	6 23/32 (170.7)	2 17/32 (64.3)	1 1/2 (38.1)	2 9/16 (65.1)	4 3/16 (106.4)	2.189 (55.6)	0.874 (22.2)	4.16	9.15	UC211-32 211-33 211-33 211-35 UC211	T211
60	2 1/4 2 5/16 2 3/8 2 7/16	UCT212-36 212-37 212-38 212-39 UCT212	1 1/2 (38.1)	3/4 (19.1)	4 1/32 (102.4)	2 17/32 (64.3)	1 3/8 (34.9)	4 1/32 (102.4)	0.866 (22)	5 1/8 (130.2)	5 3/4 (146.1)	7 5/8 (193.7)	2 17/32 (64.3)	1 21/32 (42.1)	2 15/16 (74.6)	4 11/16 (119.1)	2.563 (65.1)	1.00 (25.4)	5.07	11.16	UC212-36 212-37 212-38 212-39 UC212	T212
65	2 1/2 2 9/16	UCT213-40 213-41 UCT213	1 1/4 (38.1)	13/16 (20.6)	4 3/8 (111.1)	2 3/4 (69.9)	1 39/64 (40.9)	4 3/4 (120.7)	17/16 (27)	5 15/16 (150.8)	6 9/16 (166.7)	8 13/16 (223.8)	2 3/4 (69.9)	1 23/32 (43.7)	3 7/16 (87.3)	5 13/32 (137.3)	2.563 (65.1)	1.00 (25.4)	7.06	15.54	UC213-40 213-41 UC213	T213
70	2 3/4	UCT214-44 UCT214	1 1/4 (38.1)	13/16 (20.6)	4 3/8 (111.1)	2 3/4 (69.9)	1 39/64 (40.9)	4 3/4 (120.7)	17/16 (27)	5 15/16 (150.8)	6 9/16 (166.7)	8 13/16 (223.8)	2 3/4 (69.9)	1 13/16 (46)	3 7/16 (87.3)	5 13/32 (137.3)	2.937 (74.6)	1.19 (30.2)	7.39	16.25	UC214-44 UC214	T214
75	2 15/16 3	UCT215-47 215-48 UCT215	1 1/4 (38.1)	13/16 (20.6)	4 3/8 (111.1)	2 3/4 (69.9)	1 39/64 (40.9)	4 3/4 (120.7)	17/16 (27)	5 15/16 (150.8)	6 9/16 (166.7)	9 1/8 (235)	2 3/4 (69.9)	1 7/8 (47.6)	3 5/8 (91.1)	5 1/2 (139.7)	3.063 (77.8)	1.31 (33.3)	7.72	16.98	UC215-47 215-48 UC215	T215

Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

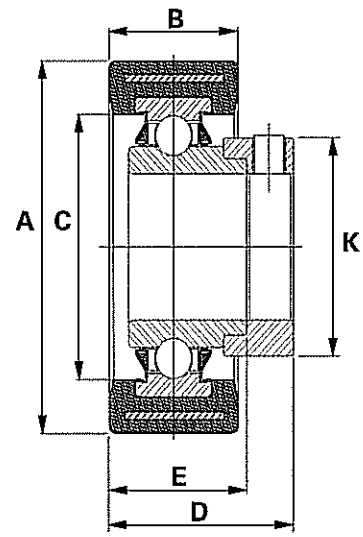
Rubber Mounted Cartridge Unit

CSBRC200 & CSARC200 Series

Rubber cylindrical cartridge with electrically conductive molded rubber. For use in air conditioning equipment, fans, blowers, and other situations where noise and vibration must be kept to a minimum.

CSB-cylindrical type bearings have flush inner ring, tight riding full cover metal shroud seals, and dual set screw locking.

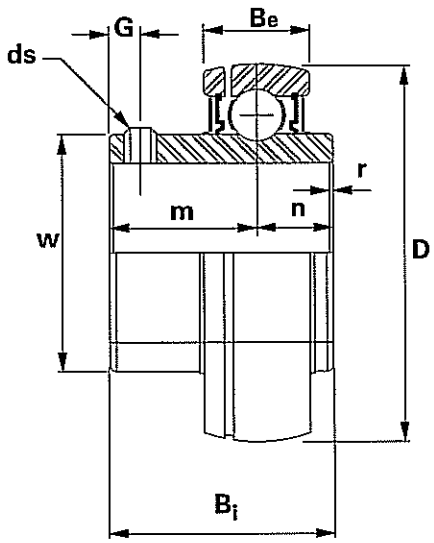
CSA-cylindrical type bearings have flush inner ring, tight riding full cover metal shroud seals, and eccentric looking collar.



Shaft Dia.	Basic Unit No.		Dimensions – Inches (mm)						Bearing No.		Rubber	Weight (lbs)	
inch	Locking Collar Type	Set Screw Type	A	B	C	D	E	K	CSARC	CSBRC	Ring No.	CSARC	CSBRC
1/2	CSARC201-8	CSBRC201-8	2 17/32 (64.3)	1 (25.4)	1 3/8 (34.9)	1 3/8 (34.9)	1 9/64 (29)	1 1/8 (28.6)	CSA201-8 202-10	CSB201-8 202-10	RC-3	0.44	0.35
3/4	CSARC204-12	CSBRC204-12	2 17/32 (64.3)	1 (25.4)	1 9/16 (34.7)	1 27/64 (36.1)	1 7/32 (31)	1 1/4 (31.8)	CSA204-12	CSB204-12	RC-4	0.52	0.48
7/8 15/16 1	CSARC205-14 205-15 205-16	CSBRC205-14 205-15 205-16	2 17/32 (64.3)	1 (25.4)	1 25/32 (45.2)	1 27/64 (36.1)	1 9/32 (32.5)	1 1/2 (38.1)	CS205-14 205-15 205-16	CSB205-14 205-15 205-16	R-5	0.58	0.53

Insert Bearings

UC200 Series



UC 200 type bearing is self-aligning for standard load capacity. Has dual set screw locking, wide inner ring, metal slingers with contact seals, and anti-rotation device. Standard relubrication feature has a drilled hole in groove on the set screw side of bearing.

Shaft Dia.		Basic	Dimensions – Inches (mm)									Unit Weight		Load Rating (lbs.)	
mm	inch	Bearing No.	D	Bi	Be	r	n	m	G	ds	w	kg	lbs	Dynamic	Static
12	1/2	UC201-8	1.8504 (47)	1.2205 (31)	0.629 (16)	0.039 (1)	0.500 (12.7)	0.7205 (18.3)	0.177 (4.5)	#10-32*	1.142	0.20	0.44	2880	1484
	5/8	202-10										0.19	0.42		
	3/4	204-12										0.16	0.35		
15		UC201										0.21	0.46		
17		203										0.19	0.42		
20		204										0.18	0.40		
												0.16	0.35		
	7/8	UC205-14	2.0472 (52)	1.3386 (34)	0.669 (17)	0.059 (1.5)	0.563 (14.3)	0.7756 (19.7)	0.197 (5)	#10-32*	1.339	0.22	0.49	3152	1765
	15/16	205-15										0.20	0.44		
	1	205-16										0.19	0.42		
25		UC205										0.19	0.42		
												0.36	0.79		
	1 1/16	UC206-17	2.4409 (62)	1.500 (38.1)	0.748 (19)	0.059 (1.5)	0.626 (15.9)	0.8740 (22.2)	0.197 (5)	1/4-28**	1.591	0.34	0.75	4375	2542
	1 1/8	206-18										0.32	0.71		
	1 3/16	206-19										0.31	0.66		
	1 1/4	206-20										0.31	0.66		
30		UC206													
	1 1/4	UC207-20	2.8346 (782)	1.6890 (42.9)	0.787 (20)	0.079 (2)	0.689 (17.5)	1.0000 (25.4)	0.236 (6)	1/4-28**	1.866	0.52	1.15	5777	3459
	1 5/16	207-21										0.50	1.10		
	1 3/8	207-22										0.48	1.06		
	1 7/16	207-23										0.46	1.01		
35		UC207										0.46	1.01		
	1 1/2	UC208-24	3.1496 (80)	1.9370 (49.2)	0.827 (21)	0.079 (2)	0.748 (19)	1.1890 (30.2)	0.315 (8)	5/16-24	2.075	0.68	1.50	5787	4042
	1 9/16	208-25										0.64	1.41		
40		UC208										0.63	1.39		
	1 5/8	UC209-26	3.3465 (85)	1.9370 (49.2)	0.866 (22)	0.079 (2)	0.748 (19)	1.1890 (30.2)	0.315 (8)	5/16-24	2.248	0.78	1.72	7357	4598
	1 11/16	209-27										0.74	1.63		
	1 3/4	209-28										0.70	1.54		
45		UC209										0.68	1.50		
	1 7/8	UC210-30	3.5433 (90)	2.0315 (51.6)	0.866 (22)	0.079 (2)	0.748 (19)	1.2835 (32.6)	0.354 (9)	5/16-24	2.465	0.85	1.87	7895	5180
	1 15/16	210-31										0.80	1.76		
50		UC210										0.78	1.72		
	2	UC211-32	3.9370 (100)	2.1890 (55.6)	0.944 (24)	0.098 (2.5)	0.874 (22.2)	1.3150 (33.4)	0.354 (9)	5/16-24	2.766	1.22	2.69	9757	6552
	2 1/8	211-34										1.10	2.43		
	2 3/16	211-35										1.05	2.32		
55		UC211										1.07	2.36		
	2 1/4	UC212-36	4.3307 (110)	2.5630 (65.1)	1.024 (26)	0.098 (2.5)	1.0000 (25.4)	1.5630 (39.7)	0.394 (10)	3/8-24	3.059	1.65	3.64	11798	8093
	2 3/8	212-38										1.49	3.29		
	2 7/16	212-39										1.42	3.13		
60		UC212										1.51	3.33		
65	2 1/2	UC213-40	4.7422 (120)	2.5630 (65.1.)	1.063 (29)	0.098 (2.5)	1.0000 (25.4)	1.5630 (39.7)	0.394 (10)	3/8-24	3.260	1.68	4.15	12880	8917
		UC213										1.80	3.97		
	2 3/4	UC214-44	4.9213 (125)	2.9370 (76.6)	1.142 (29)	0.098 (2.5)	1.189 (30.2)	1.7480 (12)	0.472	3/8-24	3.425	2.07	4.56	13656	9974
70		UC214										2.06	4.54		
	2 15/16	UC215-47	5.1181 (130)	3.0630 (77.8)	1.181 (30)	0.098 (2.5)	1.311 (33.3)	1.7520 (44.5)	0.472 (12)	3/8-24	3.598	2.21	4.87	15149	10897
	3	214-48										2.11	4.65		
75		UC215										2.19	4.83		

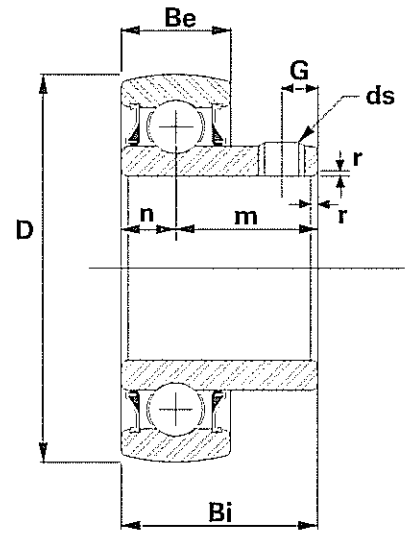
Grease fittings can be positioned on pillow block at 90° upon request.
Other sizes may be available.

Insert Bearings – Set Screw Type – Light Duty Series

SB200 Series

SB 200 type bearing is self-aligning for standard load capacity. Has dual set screw locking, flush inner ring and tight riding full cover metal shroud seals. Relubrication feature, if required, has a drilled hole in groove on set screw side of bearing and additional drilled hole opposite locking side to make it interchangeable with all manufacturers.

CSB type bearing has cylindrical outer race. Other specifications and features same as the SB type.



Shaft Dia.	Basic	Dimensions – Inches (mm)									Unit Weight		Load Rating (lbs.)	
inch	Bearing No.	D	Bi	Be	r	n	m	G	ds	w	kg	lbs	Dynamic	Static
3/4 7/8	SB201-8 202-10	1.5748 (40)	0.866 (22)	0.472 (12)	0.039 (1)	0.236 (6)	0.0630 (16)	0.177 (4.5)	#10-32*	0.968	0.09 0.08	0.20 0.18	2750	1072
15/16	SB204-12	1.8504 (47)	0.984 (25)	0.551 (14)	0.059 (1.5)	0.275 (7)	0.708 (18)	0.177 (4.5)	#10-32*	1.130	0.13	0.29	2880	1484
7/8 15/16 1	SB205-14 205-15 205-16	2.0472 (52)	1.062 (27)	0.591 (15)	0.059 (1.5)	0.295 (7.5)	0.767 (19.5)	0.217 (5.5)	#10-32*	1.327	0.18 0.17 0.16	0.40 0.37 0.35	3152	1765
1 1/16 1 1/8 1 3/16 1 1/4	SB206-17 206-18 206-19 206-20	2.4409 (62)	1.181 (30)	0.630 (16)	0.059 (1.5)	0.315 (8)	0.866 (22)	0.217 (5.5)	1/4-28**	1.567	0.28 0.26 0.25 0.24	0.62 0.57 0.55 0.53	4375	2542
1 1/4 1 5/16 1 3/8 1 7/16	SB207-20 207-21 207-22 207-23	2.8346 (782)	1.259 (32)	0.669 (17)	0.079 (2)	0.335 (8.5)	0.925 (23.5)	0.256 (6.5)	1/4-28**	1.843	0.43 0.41 0.38 0.37	0.95 0.90 0.84 0.82	5777	3459
1 1/2 1 5/16	SB208-24 208-25	3.1496 (80)	1.338 (34)	0.708 (18)	0.079 (2)	0.354 (9)	0.984 (25)	0.276 (7)	5/16-24	2.063	0.60 0.58	1.32 1.28	5787	4042
1 5/8 1 11/16 1 3/4	SB209-26 209-27 209-28	3.3465 (85)	1.621 (41.2)	0.748 (19)	0.079 (2)	0.402 (10.2)	1.219 (31)	0.322 (8.2)	5/16-24	2.263	0.80	1.80	7357	4598
1 7/8 1 15/16	SB210-30 210-31	3.5433 (90)	1.714 (43.5)	0.787 (20)	0.079 (2)	0.430 (10.9)	1.284 (32.6)	0.362 (9.2)	5/16-24	2.456	0.80	1.80	7895	5180
2 2 1/16	SB211-32 211-35	3.9370 (100)	1.783 (45.3)	0.826 (21)	0.098 (2.5)	0.466 (11.8)	1.317 (33.5)	0.385 (9.8)	5/16-24	2.717	1.10	2.40	9757 9752	6552 6601
2 1/4 2 7/16	SB212-36 212-39	4.3307 (110)	2.114 (53.7)	0.866 (22)	0.098 (2.5)	0.586 (14.9)	1.248 (31.7)	0.385 (9.8)	3/8-24	3.031	1.30	2.90	11789	8093

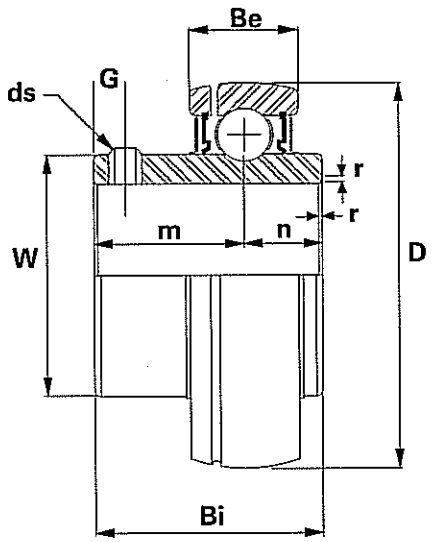
* 1/4-26 Set Screws can be furnished upon request

** 5/16-24 Set Screws can be furnished upon request

Add "G" Suffix for relube type. Grease groove is on set screw side of outer ring as standard.
Metric sizes available upon request.

Insert Bearings – Set Screw Type – Medium Duty Series

UCX00 Series



UCX00 type bearing is self-aligning for medium load capacity needed in heavier applications. Has dual set screw locking, wide inner ring, metal slingers with contact seals and anti-rotation device. Standard relubrication feature has a drilled hole in groove on the set screw side of bearing.

Shaft Dia.	Basic	Dimensions – Inches (mm)									Unit Weight		Load Rating (lbs.)	
inch	Bearing No.	D	Bi	Be	r	n	m	G	ds	w	kg	lbs	Dynamic	Static
7/8 15/16 1	UCX05-14 05-15 05-16	2.4409 (62)	1.500 (38.1)	0.748 (19)	0.059 (1.5)	0.626 (15.9)	0.874 (22.2)	0.197 (5)	1/4-28	1.591	0.37	0.82	4380	2559
1 1/8 1 3/16 1 1/4	UCX06-18 06-19 06-20	2.8346 (72)	1.689 (42.9)	0.787 (20)	0.059 (1.5)	0.689 (17.5)	1.000 (25.4)	0.236 (6)	5/16-24	1.866	0.47	1.04	5781	3483
1 1/4 1 5/16 1 3/8 1 7/16	UCX07-20 07-21 07-22 07-23	3.1496 (80)	1.937 (49.2)	0.827 (21)	0.079 (2)	0.748 (19)	1.189 (30.2)	0.315 (8)	5/16-24	2.075	0.76	1.68	6558	4043
1 1/2 1 9/16	UCX08-24 08-25	3.3465 (85)	1.937 (49.2)	0.866 (22)	0.079 (2)	0.748 (19)	1.189 (30.2)	0.315 (8)	5/16-24	2.248	0.81	1.79	7365	4599
1 5/8 1 11/16 1 3/4	UCX09-26 09-27 09-28	3.5433 (90)	2.031 (51.6)	0.866 (22)	0.079 (2)	0.748 (19)	1.283 (32.6)	0.354 (9)	3/8-24	2.465	0.92	1.03	7895	5178
1 7/8 1 15/16 2	UCX10-30 10-31 10-32	3.9370 (100)	2.189 (55.6)	0.944 (24)	0.079 (2)	0.874 (22.2)	1.315 (33.4)	0.354 (9)	3/8-24	2.776	1.23	2.71	9759	6552
2 1/8 2 3/16 2 1/4	UCX11-34 11-35 11-36	4.3307 (110)	2.563 (65.1)	1.024 (26)	0.098 (2.5)	1.000 (25.4)	1.563 (39.7)	0.394 (10)	3/8-24	3.059	1.74	3.84	11798	8093
2 3/8 2 7/16	UCX12-38 12-39	4.7244 (120)	2.563 (65.1)	1.063 (27)	0.098 (2.5)	1.000 (25.4)	1.563 (39.7)	0.394 (10)	3/8-24	3.260	2.03	4.48	12880	8917
2 1/2	UCX13-40	4.9213 (125)	2.937 (74.6)	1.142 (29)	0.098 (2.5)	1.189 (30.2)	1.748 (44.4)	0.472 (12)	7/16-20	3.425	2.33	5.14	13984	10031
2 3/4	UCX14-44	5.1181 (130)	3.063 (77.8)	1.181 (30)	0.098 (2.5)	1.311 (33.3)	81.752 (46.5)	0.472 (12)	7/16-20	3.598	2.54	5.60	14839	11224
2 15/16 3	UCX15-47 15-48	5.5118 (140)	3.252 (82.60)	1.260 (32)	0.098 (2.5)	1.311 (33.3)	1.941 (49.3)	0.472 (12)	7/16-20	3.878	3.20	7.06	17412	131740

Metric sizes available upon request

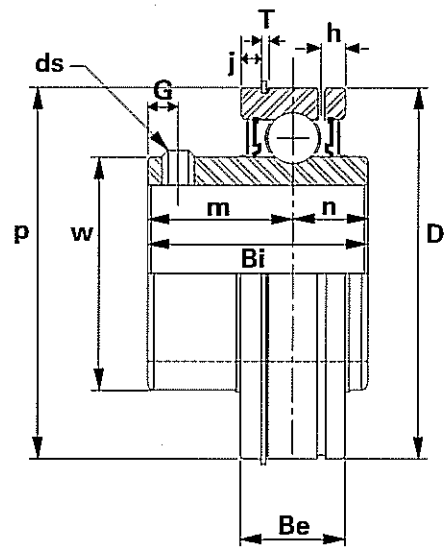
Insert Bearings – Set Screw Type – Snap Ring Series

SER200 Series

The standard SER series is a UC type bearing with a cylindrical outer ring and snap ring on the set screw side used as a retaining device. The SER bearing has dual set screw locking, wide inner ring, metal slingers with contact seals and drilled relubrication hole in the groove opposite the set screw side.

The SER-PSFF bearing is for use in free-spinning applications. The bearing is oil lubricated and has black oxide finish on the inner/outer rings.

The SER-PMKFF has the same features as the SER-PSFF bearings but is lightly grease lubricated.

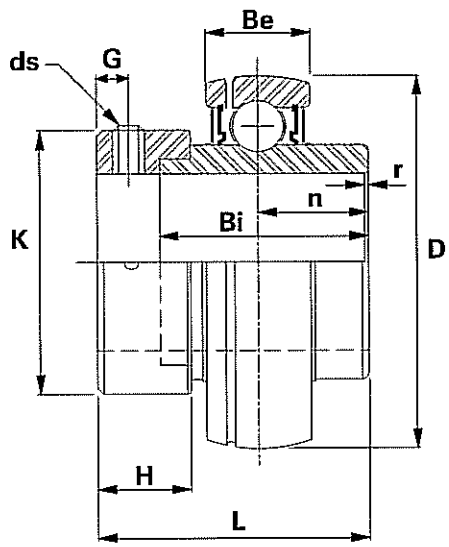


Shaft Dia.	Basic	Dimensions – Inches (mm)												Unit Weight		Load Rating (lbs.)	
inch	Bearing No.	D	Bi	Be	n	m	G	T	h	j	p	ds	w	kg	lbs	Dynamic	Static
1/2 5/8 3/4	SER201-8 202-10 204-12	1.8504 (47)	1.219 (31)	0.625 (16)	0.406 (10)	0.813 (21)	0.177 (4.5)	0.042 (1.1)	0.150 (4)	0.094 (2.3)	2.067 (53)	1/4-28	1.142	0.26 0.24 0.22	0.57 0.53 0.49	2880	1484
7/8 15/16 1	SER205-14 205-15 205-16	2.0472 (52)	1.375 (35)	0.750 (19)	0.515 (13)	0.860 (22)	0.197 (5)	0.042 (1.1)	0.203 (5)	0.094 (2.3)	2.272 (58)	1/4-28	1.339	0.31 0.30 0.28	0.68 0.66 0.62	3152	1765
1 1/16 1 1/8 1 3/16 1 1/4	SER206-17 206-18 206-19 206-20	2.4409 (62)	1.500 (38)	0.875 (22)	0.625 (16)	0.875 (22.2)	0.197 (5)	0.065 (1.6)	0.219 (5.6)	0.125 (3)	2.658 (68)	1/4-28	1.591	0.42 0.40 0.38 0.36	0.93 0.88 0.84 0.79	4375	2542
1 1/4 1 5/16 1 3/8 1 7/16	SER207-20 207-21 207-22 207-23	2.8346 (72)	1.688 (43)	0.937 (24)	0.688 (17)	1.000 (25.4)	0.236 (6)	0.065 (1.6)	0.219 (5.6)	0.125 (3)	3.078 (78)	5/16-24	1.866	0.62 0.59 0.56 0.53	1.37 1.30 1.23 1.17	5777	3459
1 1/2 1 9/16	SER208-24 208-25	3.1496 (80)	1.937 (49)	1.093 (27)	0.750 (19)	1.187 (30)	0.315 (8)	0.065 (1.6)	0.250 (6)	0.125 (3)	3.406 (87)	5/16-24	2.075	0.91 0.88	2.01 1.94	5787	4042
1 5/8 1 11/16 1 3/4	SER209-26 209-27 209-28	3.3465 (85)	1.937 (49)	1.093 (27)	0.750 (19)	1.187 (30)	0.315 (8)	0.065 (1.6)	0.250 (6)	0.125 (3)	3.564 (91)	5/16-24	2.248	1.05 1.00 0.97	2.32 2.21 2.14	7357	4598
1 7/8 1 15/16	SER210-30 210-31	3.5433 (90)	2.032 (51.6)	1.125 (29)	0.750 (19)	1.282 (33)	0.354 (9)	0.095 (2)	0.297 (7.5)	0.125 (3)	3.781 (96)	3/8-24	2.465	1.10 1.05	2.43 2.32	7895	5180
2 2 1/8 2 3/16	SER211-32 211-34 211-35	3.9370 (100)	2.189 (57)	1.187 (30)	0.875 (22)	1.314 (33.3)	0.354 (9)	0.095 (2)	0.297 (7.5)	0.125 (3)	4.187 (106)	3/8-24	2.776	1.36 1.25 1.19	3.00 2.76 2.62	9757	6552
2 1/4 2 3/8 2 7/16	SER212-36 212-38 212-39	4.3307 (110)	2.563 (65)	1.250 (32)	1.000 (25.4)	1.563 (40)	0.394 (10)	0.095 (2)	0.297 (7.5)	0.125 (3)	4.583 (116)	3/8-24	3.059	1.82 1.67 1.59	4.01 3.68 3.51	11798	8093

Metric sizes available upon request

Insert Bearings – Eccentric Locking Collar Type

HC200 Series



HC 200 type bearing is self-aligning for standard load capacity. Has wide inner ring and metal slingers with contact seals. Standard relubrication feature has drilled hole in grove on eccentric locking collar side and drilled oil hole opposite the collar to make it interchangeable with all manufacturers.

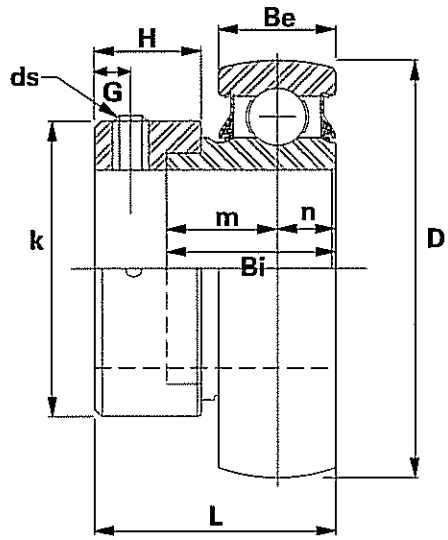
CHC type bearing has cylindrical outer ring. Relubrication feature available. Other specifications and features are same as HC types.

Shaft Dia.		Basic	Dimensions – Inches (mm)										Unit Weight		Load Rating (lbs.)	
mm	inch	Bearing No.	D	L	Bi	Be	r	n	K	H	G	ds	kg	lbs	Dynamic	Static
20	1/2 5/8 3/4	HC201-8 202-10 204-12 HC204	1.8504 (47)	1.720 (43.7)	1.342 (34.1)	0.629 (16)	0.059 (1.5)	0.673 (17.1)	1.260 (32)	0.531 (13.5)	0.188 (4.8)	1/4-28	0.23 0.23 0.20 0.19	0.50 0.50 0.44 0.42	2880	1484
25	7/8 15/16 1	HC205-14 205-15 205-16 HC205	2.0472 (52)	1.748 (44.4)	1.374 (34.9)	0.669 (17)	0.059 (1.5)	0.688 (17.5)	1.500 (38.1)	0.531 (13.5)	0.188 (4.8)	1/4-28	0.26 0.24 0.21 0.22	0.57 0.53 0.46 0.49	3152	1765
30	1 1/16 1 1/8 1 3/16 1 1/4	HC206-17 206-18 206-19 206-20 HC206	2.4409 (62)	1.905 (48.4)	1.437 (36.5)	0.748 (19)	0.059 (1.5)	0.720 (18.3)	1.748 (44.4)	0.625 (15.9)	0.234 (6)	5/16-24	0.42 0.40 0.37 0.35 0.37	0.93 0.88 0.82 0.77 0.82	4375	2542
35	1 1/4 1 5/16 1 3/8 1 7/16	HC207-20 207-21 207-22 207-23 HC207	2.8346 (72)	2.016 (51.2)	1.484 (37.7)	0.787 (20)	0.079 (2)	0.742 (18.8)	2.188 (55.6)	0.688 (17.5)	0.266 (6.8)	5/16-24	0.64 0.61 0.58 0.54 0.58	1.41 1.35 1.28 1.19 1.28	5777	3459
40	1 1/4 1 9/16	HC208-24 208-25 HC208	3.1496 (80)	2.220 (56.4)	1.689 (42.9)	0.862 (21)	0.079 (2)	0.844 (21.4)	2.377 (60.3)	0.719 (18.3)	0.266 (6.8)	5/16-24	0.81 0.77 0.76	1.79 1.70 1.68	5787	4042
45	1 5/8 1 11/16 1 3/4	HC209-26 209-27 209-28 HC209	3.3465 (85)	2.220 (56.4)	1.689 (42.9)	0.866 (22)	0.079 (2)	0.844 (21.4)	2.499 (63.5)	0.719 (18.3)	0.266 (6.8)	5/16-24	0.92 0.87 0.81 0.81	2.03 1.92 1.79 1.79	7357	4598
50	1 7/8 1 15/16	HC210-30 210-31 HC210	3.5433 (90)	2.468 (62.7)	1.937 (49.2)	0.866 (22)	0.079 (2)	0.969 (24.6)	2.751 (69.8)	0.719 (18.2)	0.266 (6.8)	5/16-24	1.06 1.00 0.97	2.34 2.21 2.14	7895	5180
55	2 2 1/8 2 3/16	HC211-32 211-34 211-35 HC211	3.9370 (100)	2.814 (71.4)	2.189 (55.6)	0.944 (24)	0.098 (2.5)	1.091 (27.7)	2.999 (76.2)	0.813 (20.6)	0.313 (8)	3/8-24	1.56 1.49 1.34 1.37	3.44 3.29 2.95 3.02	9757	6552
60	2 1/4 2 3/8 2 7/16	HC212-36 212-38 212-39 HC212	4.3307 (110)	3.062 (77.8)	2.437 (61.9)	1.023 (27)	0.098 (2.5)	1.219 (31)	3.312 (84.1)	0.875 (22.2)	0.313 (8)	3/8-24	2.03 1.86 1.77 1.87	4.48 4.10 3.90 4.12	11798	8093
	2 15/16 3	HC215-47 215-48	5.1181 (130)	3.374 (85.7)	2.937 (74.6)	1.1811 (30)	0.098 (2.5)	1.469 (37.3)	4.016 (102)	0.925 (23.5)	0.355 (8.5)	3/8-24	2.75 2.68	6.07 5.90	15149	10897

Metric sizes available upon request

Insert Bearings – Eccentric Locking Collar Type – Light Duty Series

SA200 Series



Shaft Dia.	Basic	Dimensions – Inches (mm)										Unit Weight		Load Rating (lbs.)	
inch	Bearing No.	D	L	Bi	Be	n	m	K	H	G	ds	kg	lbs	Dynamic	Static
1/2	SA201-8	1.5748	1.125	0.748	0.512	0.256	0.492	1.125	0.531	0.188	1/4-28	0.14	0.31		
5/8	202-10	(49)	(29.6)	(19)	(13)	(6.5)	(12.5)	(28.6)	(13.5)	(6.8)		0.13	0.29	2150	1072
3/4	SA204-12	1.8304 (47)	1.218 (31)	0.843 (21.4)	0.551 (14)	0.295 (7.5)	0.531 (13.5)	1.260 (32)	0.531 (13.5)	0.188 (4.8)	1/4-28	0.15	0.33	2800	1484
7/8	SA205-14											0.21	0.46		
15/16	205-15	2.0472	1.218	0.843	0.591	0.295	0.531	1.500	0.531	0.188	1/4-28	0.19	0.42	3152	1765
1	205-16	(52)	(31)	(21.4)	(15)	(7.5)	(13.5)	(38.1)	(13.5)	(4.8)		0.18	0.40		
1 1/16	SA206-17												0.35	0.77	
1 1/8	206-18											0.33	0.73	4375	2542
1 3/16	206-19	2.4409	1.406	0.937	0.629	0.354	0.583	1.748	0.625	0.234	5/16-24	0.31	0.68		
1 1/4	206-20	(62)	(37.5)	(23.8)	(19)	(9)	(14.8)	(44.4)	(15.9)	(6)		0.29	0.64		
1 1/4	SA207-20											0.56	1.23		
1 5/16	207-21	2.8346	1.531	1.000	0.669	0.374	0.626	2.188	0.688	0.266	5/16-24	0.53	1.17	5777	3459
1 3/8	207-22	(72)	(38.9)	(25.4)	(17)	(9.5)	(15.9)	(55.6)	(17.5)	(6.8)		0.51	1.12		
1 7/16	207-23											0.48	1.06		
1 1/2	SA208-24	3.1496	1.719	1.187	0.708	0.433	0.756	2.377	0.719	0.266	5/16-24	0.68	1.50	5787	4042
1 9/16	208-25	(80)	(43.7)	(30.1)	(18)	(11)	(19.2)	(60.3)	(18.3)	(6.8)		0.62	1.43		
1 5/8	SA209-26											0.76	1.68		
1 11/16	209-27	3.3465	1.719	1.187	0.748	0.433	0.756	2.499	0.719	0.266	5/16-24	0.73	1.61	7357	4598
1 3/4	209-28	(85)	(43.7)	(30.1)	(19)	(11)	(19.2)	(63.5)	(18.3)	(6.8)		0.69	1.52		
1 7/8	SA210-30	3.5433	1.719	1.187	0.787	0.433	0.756	2.751	0.719	0.266	5/16-24	0.83	1.83	7895	5180
1 15/16	210-31	(90)	(43.7)	(30.1)	(20)	(11)	(19.2)	(69.8)	(18.2)	(6.8)		0.79	1.74		
2	SA211-32	3.9370	1.906	1.280	0.945	0.742	0.807	2.999	0.813	0.313	3/8-24	0.96	2.12		
2 1/8	211-34	(100)	(48.4)	(32.5)	(24)	(12)	(20.5)	(76.2)	(20.6)	(8)		0.96	1.92	9757	6552
2 3/16	211-35	4.3307	1.937	1.315	0.945	0.742	0.843	3.311	0.874	0.313	7/16-24	0.87	1.79		
2 1/4	SA212-36	(110)	(49.2)	(33.4)	(24)	(12)	(21.4)	(84.1)	(22.2)	(8)		1.30	2.86	11798	8093
2	212-39											1.09	2.41		

Add "G" Suffix for relube type. Grease groove is on set screw side of outer ring as standard.
Metric sizes available upon request.

Engineering

Global Bearings, Inc.

Rings, Balls and Rollers

Global Bearings' balls, needles and rollers are manufactured from SAE 52100 low–carbon chromium bearing steel 52100 per ASTM A295 for all precision Balls, Needles and Rollers in general applications. Global can also supply bearings manufactured from Carbon Steel, Stainless Steel and Ceramics.

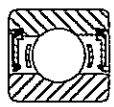
Cages

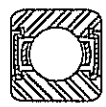
The cage performs two major functions—separation of the balls or rolls, and guidance of these rolling elements into and through the load zone. In addition, the cage also keeps the balls or rollers in an assembly, which is the reason for its alternate name of "retainer." The cage is a critical bearing component; often meaning the difference between success or failure in a severe application.

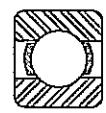
Seals and Shields

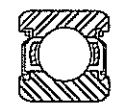
• Ball Bearing Sealing Options

Any combination of shielding, sealing, grooving and / or ring modifications are available upon request. Bearing seals are made of synthetic rubber, hot pressed with phosphatizing steel insert. They have two main functions: 1) to prevent lubricant from leaking out and 2) to prevent dust, water and other contaminants from entering the bearing. Sealing devices for ball bearings fall into two main classifications: contact and non-contact types.


NON–CONTACT


CONTACT


OPEN TYPE


SHIELDED

NON–CONTACT SEAL (2RSV): Non-contact seals utilize a small clearance between the seal and the sealing surface; therefore, there is no wear, and friction is negligible.

CONTACT SEAL (2RS): Contact seals accomplish their sealing action through the constant pressure of a resilient part of the seal on the sealing surface. Contact seals are generally far superior to non-contact seals in sealing efficiency, although their friction torque and temperature rise coefficients are somewhat higher.

OPEN TYPE: Open type bearings are typically lightly-oiled and used in an oil bath application.

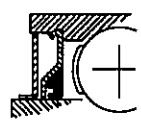
SHIELDS: A Shield is a bearing side cover made of metal and is snugly fixed into the bearing against the outer race. The shield fits snug to the outer race but does not contact the inner race at all. Because the shield does not contact the inner race, the shield does not introduce any bearing rolling friction. The shields can be made of carbon or stainless steel.

CAGES: Cages are normally punch–pressed from brass strips or steel strips, as well as stainless steel strips, as well as stainless steel strips, fiber reinforced phenolic resin, plastics and copper stock, etc.

• Mounted Bearing Sealing Options

Global offers four standard insert bearing closure types.


RST


SRST


SRS


TRP

RST: Shroud seal which consists of a metal shield fixed into the bearing outer race with a slightly larger opening than the bearinginner race. A heavy rubber excluder sealing lip adheres to the shroud and prevents contaminants from entering the bearing cavity.

SRST: Shroud seal with slinger ring includes the standard shroud seal and a metal slinger ring which press fits onto the bearing inner race. This combination is used in severe environments.

SRS: Slinger ring with standard rubber seal is similar to the shroud seal and slinger ring except that the standard seal is rubber encapsulated and the sealing lip is not protected by an attached shroud.

TRP: The Triple Lip seal is used in extremely dirty environments. The three lips offer excellent protection against contaminants.

Global Standard Greases

Manufacturer	Grease Type	Base Oil	Thickener	Operating Range C
Exxon	Beacon325	Diester	Lithium	-60° to 250°
	Ac205	Mineral	Natrium	-15° to 250°
	Andok B	Mineral	Sodium	-20° to 250°
	Andok C	Mineral	Sodium	-20° to 250°
	Andok 260	Mineral	Sodium	-20° to 300°
	Arapen RB300	Mineral	Lithium Calcium	-20° to 210°
	Polyrex EM	Mineral	Poly Urea	-20° to 340°
Chevron	ChevronSRI-2	Mineral	Poly Urea	-20° to 350°
	SRIOEM	Mineral	Poly Urea	-20° to 300°
Shell	Alvania No. 2	Mineral	Lithium	-20° to 275°
	Alvania No. 3	Mineral	Lithium	-30° to 275°
	Alvania RA	Mineral	Lithium	0° to 250°
	Alvania EP2	Mineral	Lithium	-10° to 266°
	Aeroshell No. 5	Mineral	Microgel	-20° to 300°
	Aeroshell No. 7	Diester	Microgel	-100° to 300°
	Aeroshell No. 15A	Silicone	Fluorotelomer	-100° to 500°
	Sunlight 2	Mineral	Lithium	0° to 250°
	Dolium R #2	Synthetic	Poly Urea	-0° to 300°
Kyodo Yushi	Nushilube	Diester	Lithium	-40° to 260°
	Multemp PS2	Diester	Lithium	-60° to 230°
	Multemp SRL	Diester	Lithium	-40° to 300°
	Oneluba	Diester	Lithium	-10° to 230°
	Adrex	Mineral	Lithium	-10° to 250°
	Emalube 1130	Mineral	Poly Urea	-10° to 260°
	Unilube DLI	Mineral	Lithium	-10° to 230°
Dupont	Krytox 240AC	Fluorinated	Fluorotelomer	-30° to 550°
	Krytox 283AC	Fluorinated	Fluorotelomer	-30° to 550°
Mobil Oil	Mobilux2	Mineral	Lithium	-10° to 250°
	Mobilgrease 22	Mineral	Lithium	-60° to 280°
	Mobilgrease 28	Synthetic Hydrocarbon	Bentonite	-65° to 350°
	Mobilplex 47	Mineral		-10° to 250°
NYE	Rheotemp 500	Diester	Sodium	-65° to 350°

Global Bearing's standard grease is Chevron SRI #2. However, many bearing applications require lubricants with special properties or lubricants formulated specifically for certain environments. For assistance with areas requiring special lubricants, contact Global Bearing's Engineering Department.

Internal Clearances

In the manufacture of radial ball bearings, it is standard practice to assemble rings and balls with a specified internal clearance. This characteristic is necessary to absorb the effect of press fitting the bearing and rings at mounting. The total movement of the outer ring when the balls are properly seated in the raceways determines the radial internal clearance.

Radial measurement is accepted as the more significant characteristic because it is more directly related to shaft and housing fits. The radial internal clearance of a radial contact ball bearing can be defined as the average outer ring raceway diameter minus the average inner ring raceway diameter minus twice the ball diameter.

Radial Internal Clearances of Deep Groove Ball Bearings under no load

Tolerances in 0.001 mm

Nominal Bore diameter d(mm)		C2				Normal				C3				C4			
		Manufacturing Limits		Acceptance Limits		Manufacturing Limits		Acceptance Limits		Manufacturing Limits		Acceptance Limits		Manufacturing Limits		Acceptance Limits	
over	incl.	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max
2.5	10	0	6	—	7	4	11	2	13	10	20	8	23	—	—	—	—
10	18	0	8	—	9	5	15	3	18	13	23	11	25	20	30	18	33
18	24	0	9	—	10	7	17	5	20	15	25	13	28	23	33	20	36
24	30	0	10	—	11	8	18	5	20	15	25	13	28	25	38	23	41
30	40	0	10	—	11	8	18	6	20	18	30	15	33	30	43	28	46
40	50	0	10	—	11	8	20	6	23	20	33	18	36	33	48	30	51
50	65	3	13	—	15	10	25	8	28	25	41	23	43	41	58	38	61
65	80	3	13	—	15	13	28	10	30	28	48	25	51	48	69	46	74
80	100	3	15	—	18	15	33	12	36	33	56	30	58	56	81	53	84
100	120	3	18	—	20	18	38	15	41	38	63	36	66	63	94	61	97
120	140	3	20	—	23	20	46	18	48	46	76	41	81	76	109	71	114
140	160	3	20	—	23	20	51	18	53	51	86	46	91	86	124	81	130
160	180	3	23	—	25	23	58	20	61	58	97	53	102	97	140	91	147
180	200	3	28	—	30	28	69	25	71	69	112	63	117	112	157	107	163

Radial Internal Clearances of Deep Groove Ball Bearings under no load

Tolerances in 0.0001"

Nominal Bore diameter d(mm)		C2				Normal				C3				C4			
		Manufacturing Limits		Acceptance Limits		Manufacturing Limits		Acceptance Limits		Manufacturing Limits		Acceptance Limits		Manufacturing Limits		Acceptance Limits	
over	incl.	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max
2.5	10	—	2.5	—	3.0	1.5	4.5	1	5	4	8	3	9	—	—	—	—
10	18	—	3.5	—	3.5	2	6	1	7	5	9	4	10	8	12	7	13
18	24	—	4.0	—	4.0	3	7	2	8	6	10	5	11	9	13	8	14
24	30	—	4	—	4.5	3	7	2	8	6	10	5	11	10	15	9	16
30	40	—	4	—	4.5	3	7	2	8	7	12	6	13	12	17	11	18
40	50	—	4	—	4.5	3	8	2	9	8	13	7	14	13	19	12	20
50	65	1	5	—	6	4	10	3	11	10	16	9	17	16	23	15	24
65	80	1	5	—	6	5	11	4	12	11	19	10	20	19	27	18	28
80	100	1	6	—	7	6	13	5	14	13	22	12	23	22	32	21	33
100	120	1	7	—	8	7	15	6	16	15	25	14	26	25	37	24	38
120	140	1	8	—	9	8	18	7	19	18	30	16	32	30	43	28	45
140	160	1	8	—	9	8	20	7	21	20	34	18	36	34	49	32	51
160	180	1	9	—	10	9	23	8	24	23	38	21	40	38	55	36	58
180	200	1	11	—	12	11	27	10	28	27	44	25	44	44	62	42	84

In single row deep groove ball bearings, radial measured clearances turn out to be larger than the values given above because of the elastic deformation caused by the applied measuring loads. The increase of radial clearance caused by the applied measuring loads is as shown in the following table. As for the increase of C2 clearance, the smaller the value is to apply to cases where the minimum clearance is 0, and the larger value to the maximum clearance.

mm = 0.001
inch = 0.0001

Bore Diameter (d)				Measuring Load		Clearance							
mm		inch				C2		Normal		C3		C4	
over	incl.	over	incl.	Kg	Lbs	mm	in	mm	in	mm	in	mm	in
10	18	0.3937	0.7087	2.5	5.5	3-4	1.2-1.6	4	1.6	4	2.4	4	1.6
18	50	0.7087	1.9685	5.0	11.0	4-5	1.6-2.0	5	2.0	6	1.6	6	2.4

Tolerance Limits

The standard manufacturing tolerance for Global precision radial ball bearings is ABEC 1. Higher precision tolerances are available upon request, up to ABEC 9.

Symbols

d - Bearing bore normal diameter
ds - Single diameter of a bore
dms - Single mean diameter of a bore

$$\frac{dmax + dmin}{2}$$

D - Bearing outside nominal diameter
Ds - Single diameter of an outside surface
Dms - Single mean outer diameter

$$\frac{Dmax + Dmin}{2}$$

W - Basic width of an individual inner ring, and also of and individual outer ring when both rings have the same basic width.
Ws - Single width of an inner ring, and also of an outer ring when both rings have the same basic width.

ABEC 1 Tolerances of Metric and Inch Radial Ball Bearings

Inner Ring

Tolerances in 0.0001 inches

Basic Bore Diameter (d)				Bore Tolerance Limits				Radial Runout	Width Normal Single Bearings	
millimeter		inch		dm		(1)	(1)			
over	including	over	including	low	high	dmin	dmax	max	low	high
2.5	10	0.0984	0.3937	-3	+0	-4	+1	3	-50	+0
10	18	0.3937	0.7087	-3	+0	-4	+1	4	-50	+0
18	30	0.7087	1.1811	-4	+0	-5	+1	5	-50	+0
30	50	1.1811	1.9685	-5	+0	-6	+1	6	-50	+0
50	80	1.9685	3.1496	-6	+0	-8	+2	8	-60	+0
80	120	3.1496	4.7422	-8	+0	-10	+2	10	-80	+0
120	18	4.7244	7.0866	-10	+0	-12	+3	12	-100	+0
180	250	7.0866	9.8425	-12	+0	-15	+3	16	-120	+0
250	315	9.8425	12.4015	-14	+0	-18	+4	20	-140	+0
315	400	12.4015	15.7480	-16	+0	-20	+4	24	-160	+0
400	500	15.7480	19.6850	-18	+0	-23	+5	26	-180	+0
500	630	19.6850	24.8031	-20	+0	-26	+6	28	-200	+0
630	800	24.8031	31.4961	-30	+0	-38	+8	32	-300	+0
800	1000	31.4961	39.3701	-40	+0	-50	+10	35	-400	+0
1000	1250	39.3701	49.2126	-50	+0	—	—	—	-500	+0
1250	1600	49.2126	62.9921	-60	+0	—	—	—	-600	+0
1600	2000	62.9921	78.7402	-80	+0	—	—	—	-800	+0

Outer Ring

Tolerances in 0.0001 inches

Basic Bore Diameter (d)				Outside Diameter Tolerance Limits						Radial Runout	Width Limits
				dm		Open Bearings		Bearings with Shields, Seals or Internal Snap Rings			
millimeter		inch				(2)	(2)	(2)	(2)		
over	including	over	including	low	high	Dmin	Dmax	Dmin	Dmax	max	
6	18	0.2362	0.7087	-3	+0	-4	+1	-5	+2	6	Identical to those of Inner Ring of the same bearing
18	30	0.7087	1.1811	-4	+0	-5	+1	-6	+2	6	
30	50	1.1811	1.9685	-5	+0	-7	+2	-8	+3	8	
50	80	1.9685	3.1496	-5	+0	-7	+2	-9	+4	10	
80	120	3.1496	4.7244	-6	+0	-8	+2	-11	+5	14	
120	150	4.7244	5.9055	-8	+0	-10	+2	-13	+5	16	
150	180	5.9055	7.0866	-10	+0	-13	+3	-16	+6	18	
180	250	7.0866	9.8425	-12	+0	-15	+3	-20	+8	20	
250	315	9.8425	12.4015	-14	+0	-18	+4	-22	+8	24	
315	400	12.4015	15.7480	-16	+0	-20	+4	-25	+9	28	
400	500	15.7480	19.6850	-18	+0	-23	+5	-28	+10	32	
500	630	19.6850	24.8031	-20	+0	-26	+6	-32	+12	40	
630	800	24.8031	31.4961	-30	+0	-38	+8	—	—	47	
800	1000	31.4961	39.3701	-40	+0	-50	+10	—	—	55	
1000	1250	39.3701	49.2126	-50	+0	-62	+12	—	—	64	
1250	1600	49.2126	62.9921	-65	+0	-81	+16	—	—	76	
1600	2000	62.9921	78.7402	-80	+0	-	+20	—	—	90	
2000	2500	78.7402	98.4252	-100	+0	100	—	—	—	—	

1. Dmin and Dmax apply to bearings of metric diameter series 0, 2, 3 and 4; and equivalent inch bearings: In diameter series 0 up to and including d = 140mm. In diameter series 2 up to and including d = 180mm. For larger sizes in series 0 and 2 and all sizes of series 1, 8 and 9, dmin and dmax are not restricted.

2. Dmin and Dmax apply to bearings of metric diameter series 0, 2, 3 and 4; and equivalent inch bearings: In diameter series 0 up to and including D = 80mm. In diameter series 2 up to and including D = 315mm. For larger sizes in series 0 and 2 and all sizes of series 1, 8 and 9, Dmin and Dmax are not restricted.

Full Complement Versus Caged Needle Roller Bearings

Load Rating – size for size, full complement bearings have more rollers. With more rollers contacting the raceway in the load zone, they generally have higher load ratings than caged bearings. This is particularly important under static, slow rotating or oscillating conditions. Both types, however, have far greater capacity in less radial space than other types of rolling element bearings.

Slope Tolerance – Controlled Contour Rollers and the guidance of rollers supplied by the cage make the caged bearings preferable to the full complement bearing in applications where misalignment or shaft deflection is a factor.

Speed – for moderate speeds, both types are satisfactory. The caged bearing, however, permits higher speeds for a given shaft size.

Pre-greased life – the expression refers to the maintenance–free life of a pre-lubricated bearing. It is significantly longer for a caged bearing because: 1) of its greater grease storage capacity, and 2) with less internal friction, it runs cooler.

Coefficient of friction – generally, the power loss in a rolling element bearing is so slight it can be ignored. Occasionally, the coefficient must be known. The coefficient depends on many variables, such as speed, magnitude of load and lubricant viscosity and flow rate.

In a caged bearing, the frictional loss is less than in a full complement bearing because the cage improves roller guidance and reduces rubbing velocities by eliminating roller–to–roller contact.

No accurate method exists for predicting the coefficient of friction of a specific bearing under all conditions of operation. Approximate values for bearing friction under normal loads with oil lubrication have been established by test. From such tests, the coefficients of friction for radial bearings are:

caged needle roller bearings = $15 \cdot 10^{-4}$
full complement needle roller bearings = $25 \cdot 10^{-4}$

where the following formula defines the coefficient of friction:

$$\text{coefficient of friction} = \frac{\text{torque to turn bearing}}{\text{load on bearing} \quad \text{bearing pitch radius}}$$

Cost – because of their lower cost, the various types of Drawn Cup bearings should be considered first for any application.

Shaft Requirements

When the shaft is used as the inner raceway for needle roller bearings the following specifications must be met:

metallurgy – either case hardening or through hardening grades of good bearing quality steel are satisfactory for raceways. Steels which are modified for free machining, such as those high in sulfur content and particularly those containing lead, are seldom satisfactory for raceways.

To realize full bearing capacity, the raceway area must be at least surface hardened with a reasonable core strength. The preferred surface hardness is equivalent to 58 HRC (ref. ASTM, E18).

Shaft raceways for all needle roller bearings, in diameters up to 3.5 inches or 90 mm defined as the distance from the surface, after final grinding, to the 50 HRC hardness level.) For raceways larger than 3.5 inches or 90 mm in diameter the effective case dep h should be 0.050 inch or 1.3 mm.

strength – the shaft must be of sufficient size to keep the operating deflections within the specified limits.

tolerance – the recommended shaft diameter tolerances for each type of needle roller bearing are indicated on the tabular pages.

taper – the taper within the length of the bearing raceway should not exceed 0.0003 inch (0.008 mm), or one–half the diameter tolerance, whichever is smaller.

out–of–roundness – the radial deviation from true circular form of the raceway should not exceed 0.0001 inch (0.0025 mm) for diameters up to and including 1.0 inch (25 mm). For raceways greater than 1.0 inch or 25 mm the allowable radial deviation may be greater than 0.0001 inch (0.0025 mm) by a factor of raceway diameter (in inches) divided by 1.0 or a factor of raceway diameter (in mm) divided by 25.

surface finish – the raceway finish should not exceed 16 microinches aa (arithmetic average) or 0,4 um (on the Ra scale). In addition, the raceway area must be free of nicks, scratches and dents. Oil holes are permissible in the raceway area but care must be taken to blend the edges gently into the raceway. Care must be taken to prevent grind reliefs, fillets, etc., from extending into the raceway area. If the rollers over hang a grind relief or step on the shaft, there will be high stress concentration with resultant early failure.

end chamfer – for most effective assembly of the shaft into a bearing, the end of the shaft should have a large chamfer or rounding. This should help in preventing damage to the roller complement, scratching of the raceway surface and nicking of the shaft end.

sealing surface – in some instances bearings have integral or immediately adjacent seals that operate on the surface ground for the bearing raceway. Here, particular attention should be paid to the pattern of the shaft fin ish. In no instance should there be a "lead", or spiral effect, as often occurs with through feed center less grinding. Such a "lead" may pump lubricant past the seal.

When it is undesirable or impractical to prepare the shaft to be used as a raceway, inner rings are available as listed in the tabular pages. If the shaft is not used directly as a raceway, the following design specifications must be met:

strength – the shaft must be of sufficient size to keep the operating deflections within the specified limits.

tolerance – the recommended shaft diameter tolerances for mounting inner rings are indicated on the tabular pages.

taper and out–of–roundness – the taper and out–of–roundness should not exceed one–half the shaft diameter tolerance.

surface finish – the surface finish should not exceed 125 microinches, aa (arithmetic average) or 3.2 um (on the Ra scale).

locating shoulders or steps – locating shoulders or steps in the shaft must be held to close concentricity with the bearing seat to prevent imbalance and resultant vibrations.

Housing Requirements

Bearings With Outer Rings

For bearings with outer rings, the function of the housing is to locate and support the outer ring. The following specifications must be met:

strength – housings should be designed so that the radial loads which will be placed on the bearings will cause a minimum of deflection or distortion of the housing.

tolerance – the recommended housing bore tolerances for each type of needle roller bearing are indicated on the tabular pages.

taper – the taper within the length of the outer ring should not exceed 0.0005 inch (0.013 mm).

out–of–roundness – the housing bore should be round within one–half the housing bore diameter tolerance.

parallelism – when possible, line bore housings which are common to one shaft to obtain parallelism of the housing bores and the shaft axis.

surface finish – the surface finish of housing bore should not exceed 125 microinches, aa (arithmetic average) or 3.2 um (on the Ra scale).

end chamfer – to permit easy introduction of the bearing into the housing, the end of the housing should have a generous chamfer.

Heavy duty roller bearings can be installed into housings with a transition fit or a clearance fit. The outer ring should be a transition fit in the housing when it rotates relative with the load. The outer ring may be a clearance fit in the housing when it is stationary relative to the load. In either case, locate the bearings by shoulders, or other locating devices, to prevent axial movement.

Since the heavy duty roller bearing does not require an interference fit in the housing to round and size it properly, a split housing may be used if desired. Dowels should be used to maintain proper register of the housing sections.

Drawn cup bearings have a thin case–hardened outer ring which is out–of–round from the hardening operation. For proper mounting it must always be pressed into the housing. Split housing will not round and size a drawn cup bearing. When split housings must be used, the bearing should first be mounted in a cylindrical sleeve.

The housing should be of sufficient tensile strength and section to round and size the bearing. It must be designed for minimum distortion under load. Steel or cast iron housings are preferred. Housing bores in low tensile strength materials such as aluminum, magnesium, phenolics, etc., should be reduced to provide more interference fit. Thin section cast iron and steel housings may also require reduced bores. Consult the Global engineering department for recommendations when working with these lower strength housings.

The housing should be through bored if possible. When shouldered housing bores are unavoidable, the bearing should be located far enough from the shoulder to avoid the danger of crushing the end of the drawn cup during installation.

When the drawn cup bearing is mounted close to the housing face, care should be taken to mount the bearing at least 0.008 inch (0.20 mm) within the housing face to
protect the bearing lip.

Bearings Without Outer Rings

In many cases, such as with gear bores, it is desirable to have the housing bore serve as the outer raceway for caged needle roller assemblies or loose needle roller
complements. In those instances, the following specifications must be met:

strength – the housing must be of sufficient cross section to maintain proper roundness and running clearance under the maximum load.

metallurgical – material selection, hardness and case depth should be consistent with the requirements for inner raceways given in the Shaft Design recommendations.

taper and out–of–roundness – the raceway out–of–roundness and taper should not exceed 0.0003 inch (0.008 mm) or one–half the bore tolerance, whichever is smaller. In addition, the bore diameter must never be smaller at both ends than in the center (sway–back).

surface finish – the raceway surface finish should not exceed 32 microinches, aa (arithmetic average) or 0.8 um (on the Ra scale). In addition, the surface must be free of nicks, dents and scratches.

grind reliefs – care must be exercised to ensure that grind reliefs, fillets, etc., do not extend to the raceway. Oil holes in the raceway area are permissible but the edges must be blended smoothly with the raceway.

Controlled Contour Rollers

Roller bearing life is affected by the distribution of contact stress between roller and raceways. Even when cylindrical rollers are loaded under conditions of ideal alignment, the contact stress is not uniform along the length of the rollers, but rather is concentrated towards the ends. Misalignment causes even greater roller contact stress. The use of Controlled Contour rollers in certain types and sizes of Global Bearings helps reduce stress concentration at the ends of rollers, both under misalignment, and results in more uniform stress distribution and optimum bearing performance.

Thrust Bearing Tolerances

Thickness tolerances for both inch and metric thrust washers appear in the tabular data.

Tolerances for nominal outside and bore diameters of nominal inch thrust assemblies are given in Table 1 and metric thrust assemblies in Tables 2 and 2A.

Inch-metric conversions given in the following tolerance tables are approximate and are for the convenience of the user. The controlling dimensions are in inches for the nominal inch assemblies and washers, and millimeters for nominal metric assemblies and washers.

Needle rollers in **NTA** assemblies are ground and lapped to a total diameter tolerance of -0.0002 inch (-0.0051 mm) from nominal.

Needle rollers in **FNT** and **FNTA** assemblies are ground and lapped to a total diameter tolerance of -0.003 mm (-0.00012 inch) from nominal.

Table 1
Tolerances for bore (D_{c1}) and outside (D_c) diameters of nominal inch (NTA) thrust needle roller and cage assemblies

Needle Roller Diameter Dw (nominal)		Deviations							
		Bore Diameter D_{c1}				Outside Diameter D_c			
		inch		mm (approx)		inch		mm (approx)	
inch	mm	low	high	low	high	high	low	high	low
0.0781	1.984	+0.002	+0.007	+0.05	+0.18	-0.010	-0.020	-0.25	-0.50
0.1250	3.175	+0.002	+0.010	+0.05	+0.25	-0.010	-0.025	-0.25	-0.63

Table 2
Tolerances for o.d. (D_c) of nominal metric (FNT and FNTA) thrust needle roller and cage assemblies

Nominal O.D.				Deviations (c12)			
mm		inch		mm		inch (approx)	
over	incl	over	incl	high	low	high	low
18	30	0.71	1.19	-0.110	-0.320	-0.004	-0.012
30	40	1.19	1.58	-0.120	-0.370	-0.005	-0.015
40	50	1.58	1.97	-0.130	-0.380	-0.005	-0.015
50	65	1.97	2.56	-0.140	-0.440	-0.006	-0.018
65	80	2.56	3.15	-0.150	-0.450	-0.006	-0.018
80	100	3.15	3.94	-0.170	-0.520	-0.007	-0.021
100	120	3.94	4.73	-0.180	-0.530	-0.007	-0.021
120	140	4.73	5.52	-0.200	-0.600	-0.008	-0.024

Table 2A
Tolerances for bore diameter (D_{c1}) of nominal metric (FNT and FNTA) thrust needle roller and cage assemblies

Nominal Bore Diameter				Deviations (E11)			
mm		inch		mm		inch (approx)	
over	incl	over	incl	low	high	low	high
3	6	0.12	0.24	+0.020	+0.095	+0.001	+0.004
6	10	0.24	0.40	+0.025	+0.115	+0.001	+0.005
10	18	0.40	0.71	+0.032	+0.142	+0.001	+0.005
18	30	0.71	1.19	+0.040	+0.170	+0.002	+0.007
30	50	1.19	1.97	+0.050	+0.210	+0.002	+0.008
50	80	1.97	3.15	+0.060	+0.250	+0.002	+0.009
80	120	3.15	4.73	+0.072	+0.292	+0.003	+0.012

Table 3
Tolerances for outside diameter (d_1) of nominal inch (TRA, TRB, etc.) thrust washers

Nominal O.D.				Deviations			
inch		mm		inch		mm (approx)	
over	incl	over	incl	high	low	high	low
0.24	5.25	6.0	133.4	-0.010	-0.030	-0.25	-0.76

Table 3A
Tolerances for bore diameter (d) of nominal inch (TRA, TRB, etc.) thrust washers

Nominal Bore Diameter				Deviations			
inch		mm		inch		mm (approx)	
over	incl	over	incl	low	high	low	high
0.24	2.25	6.0	57.2	+0.002	+0.012	+0.05	+0.30
2.25	5.25	57.2	133.4	+0.002	+0.017	+0.05	+0.43

Table 4
Tolerances for o.d. (d_1) of nominal metric (AS) thrust washers

Nominal O.D.				Deviations (E11)			
mm		inch		mm		inch (approx)	
over	incl	over	incl	high	low	high	low
18	30	0.71	1.19	-0.040	-0.370	-0.002	-0.015
30	50	1.19	1.97	-0.050	-0.440	-0.002	-0.017
50	80	1.97	3.15	-0.060	-0.520	-0.002	-0.020
80	120	3.15	4.73	-0.072	-0.612	-0.003	-0.024
120	180	4.73	7.09	-0.085	-0.715	-0.003	-0.28

Table 4A
Tolerances for bore diameter (d) of nominal metric (AS) thrust washers

Nominal Bore Diameter				Deviations (E12)			
mm		inch		mm		inch (approx)	
over	incl	over	incl	low	high	low	high
3	6	0.12	0.24	+0.020	+0.140	+0.001	+0.006
6	10	0.24	0.40	+0.025	+0.175	+0.001	+0.007
10	18	0.40	0.71	+0.032	+0.212	+0.001	+0.008
18	30	0.71	1.19	+0.040	+0.250	+0.002	+0.010
30	50	1.19	1.97	+0.050	+0.300	+0.002	+0.012
50	80	1.97	3.15	+0.060	+0.360	+0.002	+0.014
80	120	3.15	4.73	+0.072	+0.422	+0.003	+0.017

Drawn Cup Internal Clearances and Fits

Drawn cup bearings are manufactured to a degree of precision that will satisfy the radial clearance requirements of most applications. The total radial clearance of an installed DC bearing results from the build-up of manufacturing tolerances of the housing bore, inner raceway o.d. and the bearing, as well as the minimum radial clearance required for the application.

The drawing illustrates the manufacturing tolerances and the built-in clearances applying to medium size drawn cup bearings in rotating applications when using the recommended tabulated mounting dimensions.

Radial clearance in a mounted bearing may be more closely controlled by reducing the manufacturing tolerances of the housing bore and inner raceway diameter.

Installation Procedures

A drawn cup bearing must be pressed into its housing. An installation tool similar to the one illustrated must be used in conjunction with a standard press.

It is advisable to utilize a positive stop on the press tool to locate the bearing properly in the housing. The assembly tool should have a leader or pilot, as shown, to aid in starting the bearing true in the housing.

The installation tool must be coaxial with the housing bore. The ball detent shown on the drawing is used to assist in aligning the rollers of a full
complement bearing during installation and to hold the bearing on the installation tool.

A 1/64" (0.4 mm) less than housing bore
B 0.008" (0.08 mm) less than shaft diameter
C distance bearing will be inset into housing, minimum of 0.008" (0.2 mm)
D pilot length should be length of bearing less 1/32" (0.8 mm)
E approximately 1/2***D***

Assemble the bearing with the stamped end (the end with identification markings) against the angled shoulder of the pressing tool.

Never hammer the bearing into its housing even in conjunction with the proper assembly mandrel.

Never press the bearing tightly against a shoulder in the housing. If it is necessary to use a shouldered housing, the depth of the housing bored must be sufficient to ensure the housing shoulder fillet, as well as the shoulder face, clears the bearing.

To remove a drawn cup bearing from a through-bored housing, use a tool similar to the installation tool illustrated, but without the stop.

Bearing Bore should be checked with "go" and "no go" plug gauges. The "go" gauge size is the minimum diameter inside the needle rollers. The "no go" gauge size is larger than the maximum diameter inside the needle rollers by the following amounts:

Inch Series — 0.0001 inch
0.0025 millimeters
Metric Series — 0.0020 millimeters
0.00008 inch

* The ring gauge sizes for metric series bearings are in accordance with ISO N6 lower limit.

Inch – metric conversions given are for the convenience of the user. The controlling dimensions are in inches for nominal inch bearings and in millimeters for nominal metric bearings.

Inspection Procedures

Although the bearing cup (outer ring) is accurately drawn from strip steel it may go out of round during heat treatment. When the bearing is pressed into a true round housing or ring gauge of correct size and wall thickness, it becomes round and is sized properly. *For this reason, it is incorrect to inspect an unmounted drawn cup bearing by measuring the o.d.* The correct method for inspecting the bearing size is to:

1. press the bearing into a ring gauge of proper size.
2. plug the bearing bore with the appropriate "go" and "no go" gauges.

Tables 1 and 2 provide the correct ring and plug gauge diameters for inspecting Global drawn cup needle roller bearings. When the letter **H** appears in the bearing column headed "nominal bore diameter," the gauge sizes listed are for the larger section series bearings which include **H** in their bearing designation prefix.

Table 2

Metric Series Bearings

nominal bore diameter	dimensions – mm			dimensions – inch		
	ring gauge *	diameter inside needle rollers		ring gauge *	diameter inside needle rollers	
mm		min.	max.		min.	max.
4	7.984	4.010	4.028	0.31433	0.15787	0.15858
5	8.984	5.010	5.028	0.35370	0.19724	0.19795
6	9.984	6.010	6.028	0.39307	0.23661	0.23732
7	10.980	7.013	7.031	0.43228	0.27610	0.27681
8	11.980	8.013	8.031	0.47165	0.31547	0.31618
9	12.980	9.013	9.031	0.51102	0.35484	0.35555
10	13.980	10.013	10.031	0.55039	0.39421	0.39492
12	15.980	12.016	12.034	0.62913	0.47307	0.47378
12	17.980	12.016	12.034	0.70787	0.47307	0.47378
13	18.976	13.016	13.034	0.74709	0.51244	0.51315
14	19.976	14.016	14.034	0.78646	0.55181	0.55252
15	20.976	15.016	15.034	0.82583	0.59118	0.59189
16	21.976	16.016	16.034	0.86520	0.63055	0.63126
17	22.976	17.016	17.034	0.90457	0.66992	0.67063
18	23.976	18.016	18.034	0.94394	0.70929	0.71000
20	25.976	20.020	20.041	1.02268	0.78819	0.78901
22	27.976	22.020	22.041	1.10142	0.86693	0.86776
25	31.972	25.020	25.041	1.25874	0.98504	0.98586
28	34.972	28.020	28.041	1.37685	1.10315	1.10398
30	36.972	30.020	30.041	1.45559	1.18189	1.18272
35	41.972	35.025	35.050	1.65244	1.37894	1.37992
40	46.972	40.025	40.050	1.84929	1.57579	1.57677
45	51.967	45.025	45.050	2.04594	1.77264	1.77362
50	57.967	50.025	50.050	2.28217	1.96949	1.97047
55	62.967	55.030	55.060	2.47902	2.16654	2.16772
64	71.967	64.030	64.060	2.83335	2.52087	2.52205

Table 1

Inch Series Bearings

nominal bore diameter	dimensions – inch			dimensions – mm		
	ring gauge	diameter inside needle rollers		ring gauge	diameter inside needle rollers	
inch		min.	max.		min.	max.
	1/8	0.2505	0.1258	0.1267	6.3627	3.1953	3.2182
	5/32	0.2817	0.1571	0.1580	7.1552	3.9903	4.0132
	3/16	0.3437	0.1883	0.1892	8.7300	4.7828	4.8057
	1/4	0.4380	0.2515	0.2524	11.1252	6.3881	6.4110
	5/16	0.5005	0.3140	0.3149	12.7127	7.9756	7.9985
H	5/16	0.5630	0.3140	0.3149	14.3002	7.9756	7.9985
	3/8	0.5630	0.3765	0.3774	14.3002	9.5631	9.5860
H	3/8	0.6255	0.3765	0.3774	15.8877	9.5631	9.5860
	7/16	0.6255	0.4390	0.4399	15.8877	11.1506	11.1735
H	7/16	0.6880	0.4390	0.4399	17.4752	11.1506	11.1735
	1/2	0.6880	0.5015	0.5024	17.4752	12.7381	12.7610
H	1/2	0.7505	0.5015	0.5024	19.0627	12.7381	12.7610
	9/16	0.7505	0.5640	0.5649	19.0627	14.3256	14.3485
H	9/16	0.8130	0.5640	0.5649	20.6502	14.3256	14.3485
	5/8	0.8130	0.6265	0.6274	20.6502	15.9131	15.9360
H	5/8	0.8755	0.6265	0.6274	22.2377	15.9131	15.9360
	11/16	0.8755	0.6890	0.6899	22.2377	17.5006	17.5235
H	11/16	0.9380	0.6890	0.6899	23.8252	17.5006	17.5235
	3/4	0.9995	0.7505	0.7514	25.3873	19.0627	19.0856
H	3/4	1.0620	0.7505	0.7514	26.9748	19.0627	19.0856
	13/16	1.0620	0.8130	0.8139	26.9748	20.6502	20.6731
H	13/16	1.1245	0.8130	0.8139	28.5623	20.6502	20.6731
	7/8	1.1245	0.8755	0.8764	28.5623	22.2377	22.2606
H	7/8	1.1870	0.8755	0.8764	30.1498	22.2377	22.2606
	15/16	1.1870	0.9380	0.9389	30.1498	23.8252	23.8481
	1	1.2495	1.0005	1.0014	31.7373	25.4127	25.4356
H	1	1.3120	1.0005	1.0014	33.3248	25.4127	25.4356
	1 1/16	1.3120	1.0630	1.0639	33.3248	27.0002	27.0231
	1 1/8	1.3745	1.1255	1.1264	34.9123	28.5877	28.6106
H	1 1/8	1.4995	1.1255	1.1264	38.0873	28.5877	28.6106
	1 3/16	1.4995	1.1880	1.1889	38.0873	30.1752	30.1981
	1 1/4	1.4995	1.2505	1.2514	38.0873	31.7627	31.7856
H	1 1/4	1.6245	1.2505	1.2514	41.2623	31.7627	31.7856
	1 5/16	1.6245	1.3130	1.3140	41.2623	33.3502	33.3756
	1 3/8	1.6245	1.3755	1.3765	41.2623	34.9377	34.9631
H	1 3/8	1.7495	1.3755	1.3765	44.4373	34.9377	34.9631
	1 1/2	1.8745	1.5005	1.5016	47.6123	38.1127	38.1406
	1 5/8	1.9995	1.6255	1.6266	50.7873	41.2877	41.3156
	1 3/4	2.1245	1.7505	1.7517	53.9623	44.4627	44.4932
	1 7/8	2.2495	1.8755	1.8767	57.1373	47.6377	47.6682
	2	2.3745	2.0006	2.0018	60.3123	50.8152	50.8457
H	2 1/16	2.5307	2.0635	2.0649	64.2798	52.4129	52.4485
	2 1/8	2.4995	2.1256	2.1270	63.4873	53.9902	54.0258
	2 1/4	2.6245	2.2506	2.2520	66.6623	57.1652	57.2008
NB	2 1/2	2.8795	2.5006	2.5020	73.1393	63.5152	63.5508
	2 3/8	2.9995	2.6260	2.6274	76.1873	66.7004	66.7360
	2 3/4	3.1245	2.7510	2.7524	79.3623	69.8754	69.9110
NBH	3	3.5045	3.0006	3.0020	89.0143	76.2152	76.2508
	3 1/2	3.9995	3.5010	3.5024	101.5873	88.9254	88.9610
	5 1/20	5.9990	5.5010	5.5029	152.3746	139.7254	139.7737

Needle Bearing Interchange Tables

GLOBAL	TORRINGTON	INA
DRAWN CUP NEEDLE ROLLER BEARINGS		
B–type	B–type	S–type
BH–type	BH–type	SH–type
F–type	F–type	—
FH–type	FH–type	—
FJ–type	FJ–type	HK–type(normal roller)
FJH–type	FJH–type	HK–type(large roller)
FJHV–type	FJHV–type	HK–type(large roller)
FJV–type	FJV–type	HK–type(normal roller)
FY–type	FY–type	—
FYH–type	FYH–type	—
J–type	J–type	SCE–type
JH–type	JH–type	SCH–type
M–type	M–type	CS–type
MF–type	MF–type	—
MFH–type	MFH–type	—
MFJH–type	MFJH–type	BK–type(large roller)
MFS–type	MFS–type	BK–type(normal roller)
MH–type	MH–type	CSH–type
MJ–type	MJ–type	BCE–type
MJH–type	MJH–type	BCH–type
Y–type	Y–type	SN–type
YH–type	YH–type	SNH–type
RADIAL NEEDLE ROLLER AND CAGE ASSEMBLIES		
FWJ–type	FWJ–type	K, KBK, KZK–types
FWJC–type	FWJC–type	K–type
FWJP–type	FWJP–type	K...TN–type
WJ–type	WJ–type	C–type
WJC–type	WJC–type	C–type
WJP–type	WJP–type	—
THRUST BEARINGS AND WASHERS		
FNT–type	FNT–type	AXK–type
FNTA–type	FNTA–type	AXK–type
FTA–type	FTA–type	AS–type
FTRA–type	FTRA–type	AS–type
LS–type	LS–type	LS–type
NTA–type	NTA–type	TC–type
NTH–type	NTH–type	—
TRA–type	TRA–type	TWA–type
TRB–type	TRB–type	TWB–type
TRC–type	TRC–type	TWC–type
TRD–type	TRD–type	TWD–type
TRE–type	TRE–type	—
TRF–type	TRF–type	—
TRI–type	TRI–type	—
TRJ–type	TRJ–type	—
TRID–type	TRID–type	—
TRJD–type	TRJD–type	—

This chart is provided to assist in comparing the interchangeability between various manufacturers. Please note that all manufacturers do not have the same exact casting and bearing dimensions. The chart is to be used as a guide only. Consult your GBI engineer to assist in comparing dimensions critical for specific applications.

Mounted bearing units, commonly known as pillow block and flanged bearings consist of a ball or roller bearing installed within a separate fixture called the housing. The housing provides rigidity and secure positioning for the bearing.

Bearing Housing

Most mounted units are used in applications where there is a radial or a combination of radial and thrust loads in equipment such as augers, conveyors (belt, direct or chain driven), mixers, fans, pulleys, blowers and agricultural and food processing equipment. The bearing housing is generally constructed of cast iron, ductile iron or pressed steel. The high strength ductile iron housing is more suitable for shock load and cold temperatures. The cast steel housing is available for heavier loads. In applications involving lighter loads and limited space, the pressed steel housing is used. If plastic housing or other special mounted units are required, please contact a Global Bearings Sales Representative.

Insert Bearing

Bearings made of SAE 52100 vacuum degassed high chromium steel are manufactured to fit in the specific housing. Although generally sold assembled within the housing, insert bearings can be purchased as a stand alone item. They are available in a full range of sizes and fit an unlimited number of light–to–heavy duty industrial applications. The major types of mounted units featuring radial ball bearing inserts available from Global Bearings include:

- Pillow block units
- Two-bolt flange units
- Four-bolt flange units
- Take-up units
- Hanger units
- Rubber cartridges

- **Extended inner ring locking options**

  Global offers two types of locking methods to secure the bearing to the rotating shaft, the set screw and the eccentric locking collar. The set screw is in the extended inner ring for easy access. The area around each set screw is high frequency annealed to eliminate cracking of the inner ring during installation and operation. The eccentric locking collar insert has a collar that is designed eccentric with the inner ring. The collar locks to the shaft when the shaft is rotated. The eccentric locking collar is recommended to be used in unidirectional applications.

- **Anti-Rotation device for prevention of outer ring rotation**

  Global offers an optional anti-rotation pin for applications where outer ring rotation is a concern. The pin provides a stop to prevent the outer ring of the bearing from rotating within the bearing housing.

Standard Features of Ball Bearing Mounted Units (Continued)

- **Bearing Housings**

  Global offers three housing material options: cast housing, pressed steel housing, and rubber cushions. Cast housings are one-piece construction which provides maximum strength and rigidity. The housing bore is ground to match the OD of the bearing and the mounting surfaces are ground to ensure proper alignment and center height. The most common housing material is cast iron. Cast housings are also offered in ductile iron for added strength, rigidity, and wear. It should be expected that non-critical dimensions of the housing will vary slightly due to the casting process.

  Pressed steel housings are offered in both the flange and pillow block housings. They offer a cost savings over cast or ductile iron in less strenuous applications.

  Rubber cushions are made of electrically conductive rubber, and are offered on Global's cartridge units only.

- **Self-Alignment between bearing and housing bore**

  The outside diameter of the insert bearing is spherically ground to match the corresponding spherical ground surface of the housing bore. This allows the bearing to automatically align itself in the housing when the bearing is subjected to misalignment loads. The outside diameter of the insert bearing and the housing bore are ground to very tight tolerances. This results in a precise fit between the two surfaces. The spherical shape of the bearing and housing make removal and replacement quick and easy.

  Global also offers cylindrical insert bearings. The outside diameter of a cylindrical insert bearing is straight and does not allow for misalignment. These inserts are primarily used when the bearing is pressed into the equipment housing.

Bearing Tolerances

- **Tolerances for Inner Ring of Insert Bearings with Cylindrical Bore**

Unit: 0.001 mm (0.0001 inch)

Nominal Bore Diameter d				Cylindrical Bore						
				Bore Diameter		Width		Width		
Over		Including		dm Deviations		d Deviations		Bi Deviations		Runout
mm	inch	mm	inch	High	Low	High	Low	High	Low	(Max.)
10	0.3937	18	0.7087	+18 (+7)	0	+22 (+9)	-4 (-2)	0	-120 (-47)	10 (4)
18	0.7087	30	1.1811	+21 (+8)	0	+25 (+10)	-4 (-2)	0	-120 (-47)	13 (5)
30	1.1811	50	1.9685	+25 (+10)	0	+30 (+12)	-5 (-2)	0	-120 (-47)	15 (6)
50	1.9685	80	3.1496	+30 (+12)	0	+36 (+14)	-6 (-2)	0	-150 (-59)	20 (8)
80	3.1496	120	4.7244	+35 (+14)	0	+42 (+17)	-7 (-3)	0	-200 (-79)	25 (10)
120	4.7244	180	7.0866	+40 (+16)	0	+48 (+19)	-8 (-3)	0	-250 (-98)	30 (12)

Note: 1. dm is defined as the arithmetical mean of the largest and the smallest diameter obtained by two point measurements.

• Tolerances for Outer Ring

Unit: 0.001 mm (0.0001 inch)

Nominal Outside Diameter D				Dm Deviation		Radial Runout
Over		Including				
mm	inch	mm	inch	High	Low	(Max.)
30	1.1811	50	1.9685	0	-11 (-4)	20 (8)
50	1.9685	80	3.1496	0	-13 (-5)	25 (10)
80	3.1496	120	4.7244	0	-15 (-6)	35 (14)
120	4.7244	150	5.9055	0	-18 (-7)	40 (16)
150	5.9055	180	7.0866	0	-25 (-10)	45 (18)
180	7.0866	250	9.8425	0	-30 (-12)	50 (20)
250	9.8425	315	12.4016	0	-35 (-14)	60 (24)

Note: 1. dm is defined as the arithmetical mean of the largest and the smallest diameter obtained by two point measurements.
2. The low deviation of outside diameter dm does not apply within the distance of 1/4 the width of outer ring from the sides.

• Tolerances for Cast Iron Housings

Unit: 0.001 mm (0.0001 inch)

Nominal Spherical Inside Diameter D1				H7				J7				K7			
Over		Including		D1m Deviations		D1 Deviations		D1m Deviations		D1 Deviations		D1m Deviations		D1 Deviations	
mm	inch	mm	inch	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
30	1.1811	50	1.9685	+25 (+10)	0	+30 (+12)	-5 (-2)	+14 (+6)	-11 (-4)	+19 (+7)	-16 (-6)	+7 (+3)	-18 (-6)	+12 (+5)	-23 (-9)
50	1.9685	80	3.1496	+30 (+12)	0	+36 (+14)	-6 (-2)	+18 (+7)	-12 (-5)	+24 (+9)	-18 (-7)	+9 (+4)	-21 (-8)	+15 (+6)	-27 (-11)
80	3.1496	120	4.7244	+35 (+14)	0	+42 (+17)	-7 (-3)	+22 (+9)	-13 (-5)	+29 (+11)	-20 (-8)	+10 (+4)	-25 (-10)	+17 (+7)	-32 (-13)
120	4.7244	180	7.0866	+40 (+16)	0	+48 (+19)	-8 (-3)	+26 (+10)	-14 (-6)	+34 (+13)	-22 (-9)	+12 (+5)	-28 (-11)	+20 (+8)	-36 (-14)
180	7.0866	250	9.8425	+46 (+18)	0	+55 (+22)	-9 (-4)	+30 (+12)	-16 (-46)	+39 (+15)	-25 (-10)	+13 (+5)	-33 (-13)	+22 (+9)	-42 (-17)
250	9.8425	315	12.402	+52 (+20)	0	+62 (+24)	-10 (-4)	+36 (+14)	-16 (-46)	+46 (+18)	-26 (-10)	+16 (+6)	-36 (-14)	+26 (+10)	-46 (-18)

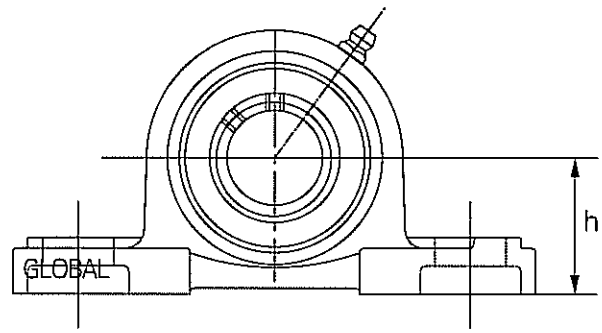
Note: 1. D1m can be determined by the following:

$$D1m = \frac{D1max + D1min}{2}$$

where D1max = maximum measured value of D1
where D1min = minimum measured value of D1
2. Tolerances on spherical inside diameter of housings are classified into H for clearance fit, K for interference fit and J for intermediate fit between H and K.

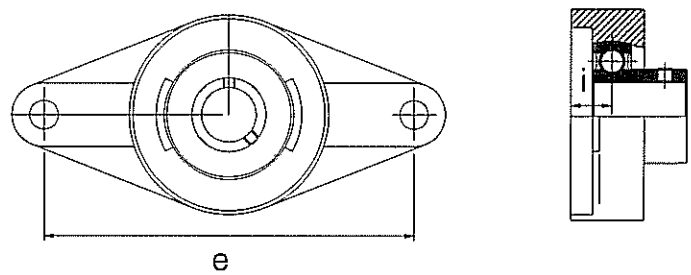
• Tolerances for "h" dimension for Pillow Block Housings

Tolerances for "h" dimension for pillow block housing is +/-0.0060" for any housing sizes up to 210 or X10.



• Tolerances for "e" dimension for Flange Unit Housings

For flange housing sizes up to 210 or X10, tolerances for "e" dimension is 0.024" for a cast housing and 0.020" for a machined housing.



• Tolerances for Machined Back Flange Unit Housings (F)

Unit: 0.001 mm (0.0001 inch)

Housing No.		Machined Tolerance of e	Machined Tolerance of i
F204	—	+/-.4 (+/-	
F205	FX05	157)	
F206	FX06		
F207	FX07		+/-.4 (+/-
F208	FX08		157)
F209	FX09		
F210	FX10		
F211	FX11		

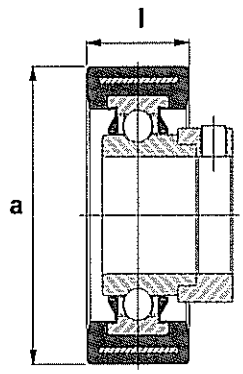
Note: 1. e = bolt holes centerline dimension
2. i = bearing centerline distance from mounting surface

• Tolerances for Cartridge Unit Housings (R)

Unit: 0.0001 inch

Housing No.		Tolerance of I	Radial Runout of outside surface (Max.)	Tolerance of a			
				R200		X200	
				High	Low	High	Low
R204	—	+/-79	79	0	-12		
R205	RX05						
R206	RX06						
R207	RX07					0	-14
R208	RX08			0	-14		
R209	RX09						
R210	RX10					0	-16

Note: 1. a = outside diameter of cartridge housings
2. I = width of cartridge housings

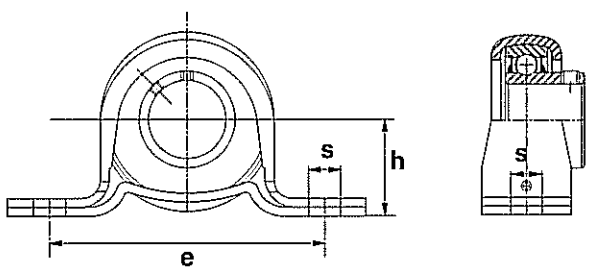


• Tolerances for Pressed Steel Housings

Unit: 0.0001 inch

Housing No.	e	s	h
PP-3Z to PP-9Z	+/-118	+/-79	+/-100
PF-3R to PF-7R			
PFF-7R to PFF-11R			
PFL-3R to PFL-7R			

Note: 1. e = centerline dimension
2. s = bolt hole dimensions
3. h = base to center height

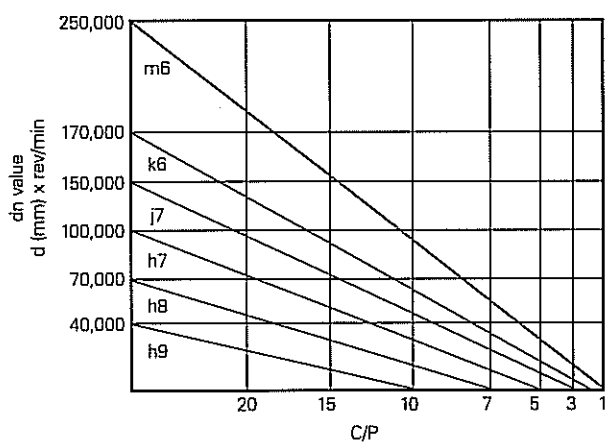


• Suggested Shaft Tolerances for Cylindrical Bore Insert Bearings

Unit: 0.0001 inch

Shaft Diameter				Shaft Tolerance											
Over		Including		h7		h8		h9		j7		k6		m6	
mm	inch	mm	inch	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
10	0.3937	18	0.7087	0	-7	0	-11	0	-17	+5	-2	+5	0	+7	+3
18	0.7087	30	1.1811	0	-8	0	-13	0	-20	+5	-3	+6	+1	+8	+3
30	1.1811	50	1.9685	0	-10	0	-15	0	-24	+6	-4	+7	+1	+10	+4
50	1.9685	80	3.1496	0	-12	0	-18	0	-29	+7	-5	+8	+1	+12	+4
80	3.1496	120	4.7244	0	-14	0	-21	0	-34	+8	-6	+10	+1	+14	+5
120	4.7244	140	5.5118	0	-16	0	-25	0	-39	+9	-7	+11	+1	+16	+6

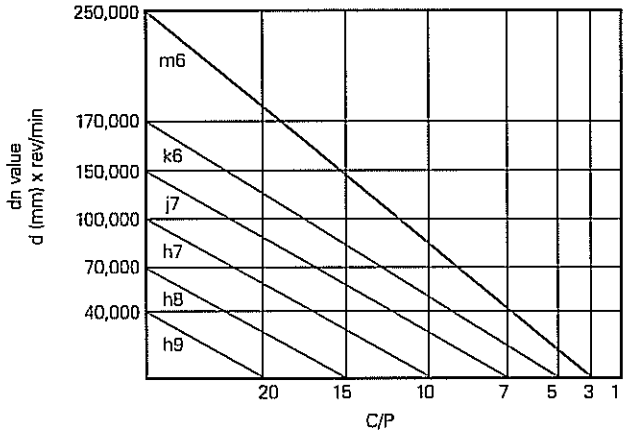
• Suggested Shaft Tolerances for Set Screw Locking Bearing Units



For low speed and/or low load applications, loose fits are adequate. However, for higher speed and/or load applications, tighter fits are suggested.

Note: 1. On the calculation of the dn value, apply the bore dimension of the metric series in the same group.
2. C = bearing radial load rating
3. P = equivalent radial load applied to bearing
4. d = bore in mm
5. n = bearing rpm

• Suggested Shaft Tolerances for Eccentric Locking Collar Bearing Units



Eccentric locking collar shaft tolerance quick reference table.

As in the case of the set screw system, it is usual under normal operating conditions, to fit the inner ring onto the shaft by means of a clearance fit for ease of assembly.

Note:
1. On the calculation of the dn value, apply the bore dimension of the metric series in the same group.
2. C = bearing radial load rating
3. P = equivalent radial load applied to bearing
4. d = bore in mm
5. n = bearing rpm

Unit: 0.0001 inch

Shaft Diameter	Shaft Tolerance
½" to 1 15/16"	Nominal to -10
2" to 3 15/16"	Nominal to -16

Mounting

• Locking the bearing to the shaft

Since the insert bearing is designed with a slip fit onto the shaft, a locking device is needed to hold the bearings securely to the shaft during rotation.

Set Screw Locking Type Bearing: The wide inner ring is extended with two tapped holes located 120° apart for set screws. The holes are annealed for added strength. The set screws are installed and tightened against the shaft to the recommended torque values; see table page 10. Set screws are recommended for bi-directional applications.

Generally the shaft is flattened or recessed for the set screw in applications with heavy loads, alternating movement, or rapid shaft speeds. See Figure 1 and 2 below:

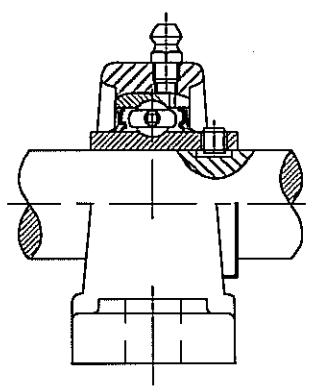


Figure 1

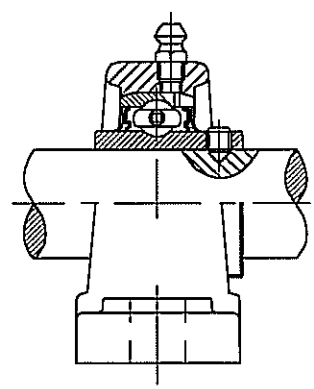


Figure 2

Eccentric Locking Collar: An eccentric locking collar is generally used for unidirectional applications. The outside diameter of the inner ring is machined eccentric to inside diameter of the collar. The collar is placed on the inner ring and as it rotates it tightens against the shaft locking the bearing inner race to the shaft. The set screw is then tightened to the recommended torque; see table page 10.

• Proper Tightening Torque of Set Screws

Bearing No.			Set Screws		Tightening Torque	
			mm	inch	N m	lbf in
UC201-UC203		SB201-SB203	M5 x 0.8	No.10-32UNF	3.16	28
UC204-UC206	UCX05-UCX06	SB204-SB206	M6 x 1	1/4-28UNF	3.4-4	30-35.4
UC207-UC209	UCX07	SB207-SB209	M8 x 1	5/16-24UNF	7.8-8.3	69-73.5
UC210-UC212	UCX08-UCX09	SB210-SB212	M10 x 1.25	3/8-24UNF	16.3-17.2	144-152
UC213	UCX10-UCX13		M12 x 1.25	7/16-20UNF	26.8-27.4	235-243

Bearing Relubrication

• Non-Relubricable Bearings

Global's non-relubricable bearings are pre-lubricated with Shell Alvania #2. The full contact seals on the insert bearings reduce the need for re-lubrication. Under normal conditions these bearings will remain greased throughout the life of the bearing.

• Relubricable Bearings

Global also offers relubricable bearings. These bearings must be periodically greased with 2 to 3 grams of grease to assure long life. The relubication interval is dependent upon the speed, operating temperature and environmental conditions. The following table shows the standard relubrication intervals.

• Relubrication Intervals

dn Value	Environmental Conditions	Temperature °C	Temperature °F	Greasing Interval
40,000 and below	Clean	Up to 65 Over 65	Up to 150 Over 150	6 to 12 months 2 to 6 months
Up to 40,000 40,000 to 70,000	Clean	Up to 65 Over 65	Up to 150 Over 150	2 to 6 months 1 month
Any dn value	Dirty	Up to 65 Over 65	Up to 150 Over 150	1 week to 1 month 1 day to 2 weeks
Any dn value	Very dirty	Any temp	Any temp	1 day to 1 week
Any dn value	Exposed to water splashes	Any temp	Any temp	Every day

Note: d = inner diameter (mm)
n = speed in rpm

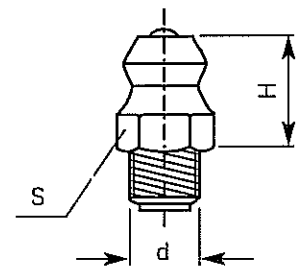
• Recommended Grease Fill

Series	Fill Amount
201-205	2 grams
206-208	3 grams
209-210	5 grams

Take special care when relubricating insert bearings. Over lubrication of the bearing cavity can lead to overheating and premature bearing failure. Please reference this table for recommended volumes.

• Type of Grease Fitting

Global's mounted units are provided with a vertical grease zerk. The zerk is made of bronze or steel located at 45° angle for all sizes up to 210.



• Range of Operating Temperatures

Global's mounted units are provided with the most suitable grease for specified operating temperature as shown in the table below.

Global Code	Manufacturer Trade Name	Recommended Operating Temperature Range °F	Properties				
			Thickening Agent	Base Oil	Water Resistant	Viscosity CST@ 40C	100C
ALV2	Shell Alvania #2	-30 to +230	Lithium	Petroleum	Yes	98	9.4
ALV3	Shell Alvania #3	-35 to +230	Lithium	Petroleum	Yes	98	9.4
K240C	Dupont Krytox 240AC	-30 to +550	Fluoroelomer	Fluorinated	Yes	270	26
SRI-2	Chevron SRI #2	-20 to +350	Polyurea	Petroleum	Yes	110	11

Selection of Ball Bearing Units Based Upon Load Capacity and Life

The insert bearing size is selected for an application according to the required bearing life and reliability under a specific type of load. The load applied to the bearing operating without rotation is defined as static load, while the load applied to the bearing operating under a rotating condition is defined as dynamic load. The load capacity of each bearing is expressed as the basic dynamic load and static load shown in the insert bearing listings of this catalog.

• Basic Load Rating and Life

The basic dynamic load rating (c) is defined as the constant load applied to a bearing with stationary outer ring that the inner ring can endure for a rating life of one million revolutions (10^6 rev.).

The life of an insert bearing is defined as the total number of revolutions which the bearing is capable of enduring before the first evidence of fatigue flaking develops on any one of the rings or balls.

The reliability is the percentage of the bearings of a group of apparently identical bearings operating under identical conditions which can expect to attain or exceed a certain defined life. The reliability of an individual bearing is the probability of the bearing to attain or exceed a defined life.

For a group of apparently identical bearings operating under identical conditions, the basic life rating L_{10} is defined as the total number of revolutions that 90% of the bearings can be expected to complete or exceed. The majority of GBI bearings attain much longer life than this. The median life is approximately five times the calculated life rating.

The basic life rating L_{10} estimation for ball bearings with different speeds and $\frac{C_r}{P_r}$ ratios is shown in page 114.

• Basic Life Rating Calculation

The fatigue rating of deep groove ball bearings is calculated by the following formula:

$$L_{10} = \left(\frac{C}{P}\right)^3$$

or

$$\frac{C}{P} = L_{10}{}^{1/3}$$

Where L_{10} = basic life rating (10^6 r)
C = basic dynamic load rating (N)
P = equivalent dynamic bearing load (N)

The basic dynamic load rating C is a hypothetical constant load with a fixed direction under which the bearing can attain a basic life rating of one million revolutions. For radial bearing, the load refers to the radial load.

The equivalent dynamic bearing load P is a constant load with a fixed direction under which the bearing life is identical to that of the bearing operating under actual load.

For a bearing operating with a constant rotation speed, the basic life rating can be expressed in terms of operating hours:

$$L_{10h} = \left(\frac{10^6}{60_n}\right)^3 \frac{C}{P}$$

or

$$L_{10h} = \frac{10^6}{60_n} L_{10}$$

$$\frac{16666}{n} \left(\frac{C}{P}\right)^3$$

Where L_{10h} = basic life rating (h)
n = bearing operating speed of rotation (r/min)

For easier calculation, 500 hours as base of life rating is taken, and the speed factor fn and the factor fh is introduced:

$$f_n = \left(\frac{33\,1/3}{n}\right)^{1/3}$$

$$f_h = \left(\frac{L_{10h}}{500}\right)^{1/3}$$

In this way, the formula is simplified to:

$$C = \frac{f_n}{f_h} P$$

The values of f_n and f_h can be found in Figure 1 by referring to the operation speed n and the anticipated bearing service life L_{10h}. Then, with the radial load (or the equivalent dynamic bearing load) the basic dynamic load rating can be determined. By this way the bearing size can be determined according to the basic dynamic load rating value in the table.

If the bearing operates under indeterminate loads and rotation speed, the following formula should be applied when calculating the bearing life:

$$P_m = 3\sqrt{1/N \int_0^N P^3 dN}$$

Where P_m = mean equivalent dynamic bearing load (N)
P = equivalent dynamic bearing load (N)
N = total revolution numbers within one load changing cycle (r)

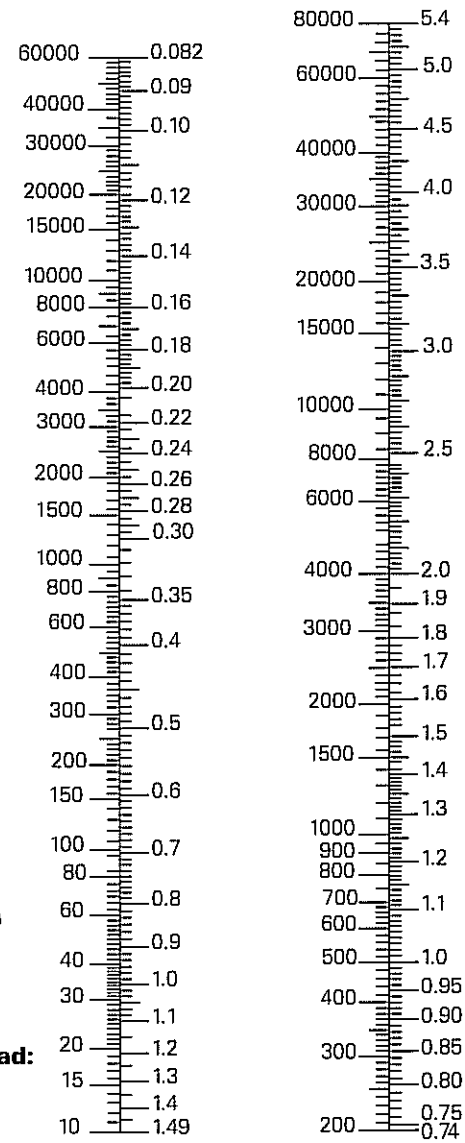


Figure 1

- **Anticipated Bearing Service Life**

When selecting a bearing, one should usually predetermine an appropriate service life according to the relevant machine type, operating conditions and reliability requirement. Generally speaking, the anticipated bearing service life can be determined by referring to the maintenance period of the machine.

- **Calculation Method of Equivalent Dynamic Bearing Load (P)**

The basic equivalent dynamic bearing load is determined under a hypothetical condition. When calculating the bearing life, the actual load has to be converted into equivalent dynamic bearing load that is in conformity with the load condition determining the equivalent dynamic load rating.

- **General equation for calculating the equivalent dynamic bearing load:**

$$P = XF_r + YF_a$$

Where P = equivalent dynamic bearing load (N)
F_r = actual radial load (N)
F_a = actual axial load (N)
X = radial factor
Y = thrust factor

The values of X and Y are determined by the ratio between the applied axial load F and the basic static load rating C_0. The axial load that the spherical outside surface bearings can carry is determined by the mounting method of the bearings on the shafts.

For the locking set screw type or eccentric locking collar type bearings, if flexible shafts are applied and the set screws are tightened to their recommended torque value, the allowable axial load F_a, would be 20% of the radial load F_r.

The values of radial and thrust factors X and Y for spherical outside surface ball bearings can be obtained from the following table:

$\frac{F_a}{C_0}$	$\frac{F_a}{F_r} \leq e$ $P = F_r$		Clearance for group 2			Clearance for normal group			Clearance for group 3		
			$\frac{F_a}{F_r} > e$		e	$\frac{F_a}{F_r} > e$		e	$\frac{F_a}{F_r} > e$		e
	X	Y	X	Y		X	Y		X	Y	
0.025	1	0	0.56	2.0	0.22	0.46	0.75	0.31	0.44	1.42	0.40
0.040	1	0	0.56	1.8	0.24	0.46	0.62	0.33	0.44	1.36	0.42
0.070	1	0	0.56	1.6	0.27	0.46	1.46	0.36	0.44	1.27	0.44
0.130	1	0	0.56	1.4	0.31	0.46	1.30	0.41	0.44	1.16	0.48
0.250	1	0	0.56	1.2	0.37	0.46	1.14	0.46	0.44	1.05	0.53
0.500	1	0	0.56	1.0	0.44	0.46	1.00	0.54	0.44	1.00	0.56

When twist load is applied to the bearings, the equivalent dynamic bearing load is calculated by the following equation:

$$P_m = f_m * P$$

Where P_m = equivalent dynamic bearing load when considering twist load
f_m = twist load factor, which is defined as follows:
when the twist load is minor, fm = 1.5
when the twist load is major, fm = 2.0

When shock load is applied to the bearings, the equivalent dynamic bearing load can be calculated by the following equation:

$$P_d = f_d * P$$

Where P_d = equivalent dynamic bearing load when considering shock load
f_d = shock load factor, which is defined as follows:
when no or minor shock load is applied, fd = 1 ~ 1.2
when adequate shock load is applied, fd = 1.2 ~ 1.8

• Example of bearing size selection

A ball bearing is required to operate at a speed of 1000 rpm under only a radial load of F_r = 3000N, with a basic life rating of at least 20000 hours, select the bearing size.

From the life calculation chart, it can be found that:

f_n = 0.322 (Figure 1 shows about 0.32)

From the required basic life rating (anticipated service life), at least 20000 hours, it can be found that:

f_h = 3.42 (Figure 1 shows about 3.4)

Under only a radial load, I.e.

$P = F_r = 3000(N)$

Therefore,

$$C = \frac{f_h}{f_n} P$$

$$= \frac{3.42}{0.322} \times 3000 = 31863(N)$$

A simplified way to calculate the bearing life can be applied using Figure 2; the life calculation chart.

By connecting n(1000r/min) and the required basic life rating L10h (20000 hours) with a straight line, it can be found that C/P is 10.6. As is known P = Fr = 3000N, thus the required basic dynamic load rating is:

C/P = 10.6

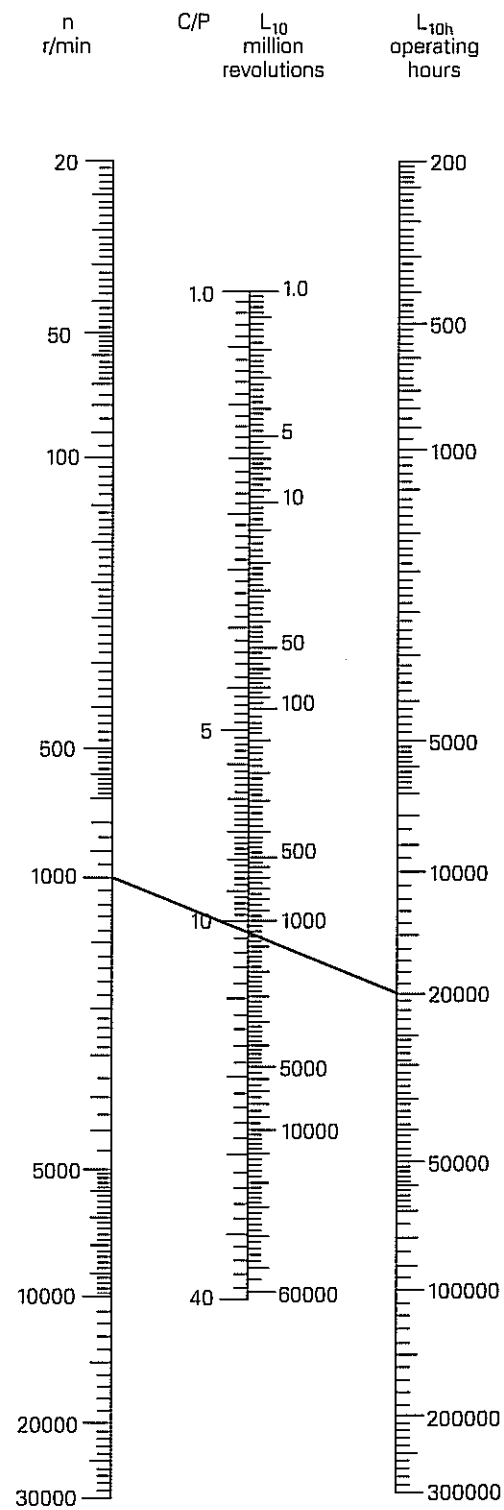
C = 10.P

=10.6 x 3000 = 31800 (N)

In this way, we can select the bearing from the insert bearing tables. Please refer to page 116.

Life calculation chart

Ball bearings



• Adjusted Life Rating Equation

The basic life rating L_{10}, calculated with the bearing life formula, can be applied to determine the life rating of bearings made of ordinary bearing steel (i.e. bearing life with reliability 90%).

Because of machinery products demanding higher reliability and better quality steel, GB/T6391-1995 (equal to ISO281:1990) suggested an adjusted rating life calculation equation, i.e.,

$$L_{na} = a_1 * a_2 * a_3 * L_{10}$$

For the deep groove ball bearings:

$$L_{na} = a_1 * a_2 * a_3 * (C/P)^3$$

Where L_{na} = under specified material and lubrication conditions, bearing life with (100-n)% no breaking probability (i.e. reliability)

a_1 = life adjustment factor for reliability

a_2 = life adjustment factor for materials

a_3 = life adjustment factor for operating conditions

Life Adjustment Factors for Reliability a_1

Reliability%	90	95	96	97	98	99
L_a	L_{10}	L_5	L_4	L_3	L_2	L_1
A_1	1	0.62	0.53	0.44	0.33	0.21

Life Adjustment Factors for Material a_2

Normal Chromium Bearing Steel	$a_2 = 1$
Special Smelted Bearing Steel-Vacuum degassed bearing steel (a_3)	$a_2 > 1$
When material hardness lowered by high frequency tempering	$a_2 < 1$

Life Adjustment Factors for Operating Conditions a_3

When under normal operating conditions, i.e. properly mounted; sufficiently lubricated; without outside matters intrusion	$a_3 = 1$
When under operating temperature, the ball bearing lubricating grease viscosity is lower than 13mm²/s. The bearing operating under lower speed $D_{PW} * N < 10000$(mm*r/min) D_{PW} = pitch circle diameter of rolling element	$a_3 < 1$

Life Estimation for Different Speeds and $\frac{C_r}{P_r}$ Ratios for Insert Bearings

L_{10th} (hours)	Cr / P when speed n = (r/min)															
	50	100	200	300	500	750	900	1000	1500	1800	2000	2500	3000	4000	5000	6000
500	1.14	1.45	1.82	2.08	2.47	2.82	3.00	3.11	3.56	3.78	3.91	4.22	4.48	4.93	5.32	5.65
1000	1.44	1.82	2.29	2.62	3.11	3.56	3.78	3.91	4.48	4.76	4.93	5.31	5.65	6.21	6.70	7.11
1500	1.65	2.08	2.62	3.00	3.56	4.08	4.31	4.48	5.13	5.45	5.65	6.10	6.46	7.11	7.65	8.15
2000	1.82	2.29	2.88	3.30	3.91	4.48	4.76	4.93	5.65	6.00	6.21	6.69	7.11	7.81	8.43	8.96
3000	2.08	2.62	3.30	3.78	4.48	5.13	5.42	5.65	6.46	6.85	7.11	7.66	8.14	8.96	9.65	10.3
5000	2.47	3.11	3.91	4.48	5.32	6.08	6.46	6.70	7.66	8.14	8.43	9.09	9.65	10.6	11.5	12.2
7500	2.82	3.56	4.48	5.13	6.06	6.96	7.37	7.66	8.77	9.32	9.65	10.4	11.1	12.2	13.1	13.9
10000	3.11	3.91	4.93	5.65	6.70	7.66	8.14	8.43	9.65	10.3	10.6	11.4	12.2	13.4	14.5	15.3
15000	3.56	4.48	5.65	6.46	7.66	8.77	9.28	9.65	11.1	11.7	12.2	13.1	13.9	15.3	16.5	17.5
20000	3.91	4.93	6.21	7.11	8.43	9.65	10.3	10.6	12.2	12.9	13.4	14.4	15.3	16.8	18.2	19.3
30000	4.48	5.65	7.11	8.14	9.65	11.1	11.7	12.2	13.9	14.8	15.3	16.5	17.5	19.3	20.8	22.1
40000	4.93	6.21	7.81	8.96	10.6	12.2	12.9	13.4	15.3	16.3	16.8	18.2	19.3	21.2	22.9	24.3
60000	5.65	7.11	8.96	10.3	12.2	13.9	14.8	15.3	17.5	18.6	19.3	20.8	22.1	24.3	26.2	27.8
80000	6.21	7.81	9.83	11.3	13.4	1.3	16.3	16.8	19.3	20.5	21.2	22.9	24.3	26.7	28.8	30.7

Life estimation for UC212 insert bearing with steady radial load F_r = 3250 N at a speed of 1500 r/min.

The dynamic load rating C_r of the insert bearing UC212 from page C-1 is 47800 N.

Since the bearing is not subject to axial load, the equivalent load $P_r = F_r \times f_d$ = 3250 N x 1.2 = 3900 N (When no shocking load or minor shocking load, shocking load factor f_d = 1~ 1.2).

Using the load ratio table, an approximate life can be obtained by locating the nearest $\frac{C_r}{P_r}$ value in the appropriate r/min column.

Therefore, for $\frac{C_r}{P_r} = \frac{47800}{3900} = 12.256$

Under the n = 1500 r/min column, the nearest $\frac{C_r}{P_r}$ value is 12.2 which gives an approximate life of 20000 hours.

Mounted Bearing Interchange Tables

GLOBAL	PEER	DODGE	BROWNING	FAFNIR	FYH	SKF	NTN	SEAL MASTER
PILLOW BLOCK – CAST IRON								
UCP205-16	UCSP205-16	P2BSCI	VPS-216	—	UCP205-16	SY 1 TM	UPC205-100T	NP-16
UPC205-16	HCP205-16	P2BSXR-1	VPE-216	RAS1	NAP205-16	SY 1 WM	UELP205-100T	RP-16E
HCAK205-16	HCLP205-16	P2BSXRB-1	VPLE-216	RAK 1	NAPK205-16	SYH 1 WM	UELPL205-100T	RPL-16E
UCPX205-16	UCPX05-16	P2BSCM-1	VPS-316	—	UPCX05-16	SYM 1 TM	UCPX05-100T	MP-16
SBP205-16G	FHSP205-16G	P2BVSC-1	VPS-116	SAS 1	—	—	—	VP-16
SAP205-16G	FHP205-16G	PS2BSXV-1	VPE-116	VAS 1	—	SY 1 FM	—	VP-16E
SBAK205-16G	FHSLP205-16G	P2BVSCB-1	VPLS-116	—	—	—	—	VPL-16
SAAK205-16G	FHLP205-16G	P2BSXVB-1	VPLE-116	VAK 1	—	SYH1 FM	—	VPL-16E
SBLP205-16	FHSPW205-16	—	—	—	BLP205-16	—	—	—
SAPSD205-16	FHPWC205-16	—	—	—	ALP205-16	—	—	—
PILLOW BLOCK – MALLEABLE IRON								
SBLPM205-16	FHSPW205-16	—	VPS-116M	—	—	—	—	LP-16
SAPSDM205-16	FHPW205-16	—	VPE-116M	—	—	—	—	LP-16E
PILLOW BLOCK – PRESSED STEEL								
SBPP205-16	FHSPPZ205-16-IL	P2BSL-1	—	—	SBPP205-16F	—	ASPP205-100	SSP-16
SAPP205-16	FHSPPZ205-16-IL	P2BSLX-1	—	PB 1	SAPP205-16F	S 1 FM	AELPP205-100	SSO016E
SBPR205-16	FHSPRZ205-16-IL	—	—	—	—	—	ASRPP205-100	LRP-16
SAPR205-16	FHPRZ205-16-IL	—	—	RPB 1	—	SR 1 FM	AELRPP205-100	LRP-16E
FLANGE UNIT – CAST IRON								
UCF205-16	UCF205-16	F4BSC-1	VF4S-216	—	UCF205-16	FY 1 TM	UCF205-100T	SF-16
HCFS205-16	HCFS205-16	F4BSXR-1	VF4E-216	RCJ 1	NANF205-16	FY 1 WM	UELF205-100T	RF-163
UCFX205-16	UCFX05-16	F4BSCM-1	VF4S-316	—	UCFX05-16	FYM 1 TM	UCFX05-100T	MSF-16
SBF205-16G	FHSF205-16G	F4BVSC-1	VF4S-116	SCJ1	—	—	—	VF-16
SAF205-16G	FHF205-16G	F4BSXV-1	VF4E-116	VCJ1	—	—	—	VF-16E
UCFL205-16	UCFT205-16	F2BSC-1	VF2S-216	—	UCFL205-16	FYT 1 TM	UCFL205-100T	SFT-16
HCFL205-16	HCFTS205-16	F2BSXR-1	VF2E-216	FCJT 1	NANFL205-16	FYTM 1 TM	UELFLU205-100T	RFT-16E
SBFL205-16C	FHSFT201-16G	F2BVSC-1	VF2S-116	SCJT 1	—	—	—	VFT-16
SAFL205-16G	FHFT205-16G	F2BSXV-1	VF2E-116	VCJT 1	—	FYT 1 FM	—	VFT-16E
SBLF205-16	FHSLF205-16	—	—	—	BLF205-16	—	—	—
SALF205-16	FHLF205-16	—	—	—	ALF205-16	—	—	—
SBPFL205-16	FHPFR205-16	F3BSLX-1	—	RA1	SAPF205-16	F 1 FM	AELPF205-100	SSF-16E
SAPFL205-16	FHPFLR205-16	F2BSLX-1	—	RAT 1	SAPFL205-16	FT 1 FM	AELPF205-100	SSFT-16E
RUBBER MOUNTED UNIT								
RCSM-16L	RCSM-16L	—	—	RCSM 1	—	R 1 FM	—	—
INSERT BEARINGS								
UC205-16	UC205-16	SC-1	VS-216	—	UC205-16	YAR205-100	UC205-100D1	R-16
HC205-16	HC205-16	SXR-1	VE-216	G1100KLB	NA205-16	YEL205-100	UEL205-100D1	R-16E
SA205-16	FH205-16	SLX-1	—	RA100RRB	SA205-16FP7	YET205-100	AEL205-100	L16-3
SA205-16G	FH205-16G	SXV-1	VE-116	GRA100RRB	SA205-16FP9	YET205-100CW	AEL205-100D1	V-163
CSA205-16	FHR205-16	—	—	RA100R	SAA205-16	YET250-100C	JELS205-100	SL-16E
CSA205-16G	FHR205-16G	—	—	GRA100RR	—	—	AELS205-100	—
SB205-16	FHS205-16	SL-1	—	YA100RRB	SDB205-16KGS	YAT205-100W	AS205-100	L-16
SB205-16G	VSC-1	VS-116	GYA100RRB	SB205-16KPB	YAT205-100	AS205-100D1	V-16	—
CSB205-16	FHSR205-16	CC-1	—	YA100RR	SB205-16	YAT205-100CW	—	SL-16
CSB205-16G	FHSR-205-16G	—	—	—	—	YAT205-100C	ASS250-100	—
SER-16	SER-16	—	—	—	ER205-16	—	UCS205-100DINR	ER-16

This chart is provided to assist in comparing the interchangeability between various manufacturers. Please note that all manufacturers do not have the same exact casting and bearing dimensions. The chart is to be used as a guide only. Consult your GBI engineer to assist in comparing dimensions critical for specific applications. For reference, each unit represents a shaft size of 1 inch (i.e. UC205-16). When a different bore is referenced, the casting in the unit is unique to only a few shaft sizes.

Quick Reference Two Way Mass Conversion Tables for Kilograms (kg)/Pounds (lb.)

The two-way conversion table makes quick conversions simple and accurate. To use the two-way conversion table pick a measurement to begin with, either kg or lb. and move to the center unit column. Go down the column until you reach your unit number. Read in the direction opposite of the initial measurement.

kg	Unit	lb	kg	Unit	lb	kg	Unit	lb
0.454	1	2.205	15.422	34	74.957	30.391	67	147.71
0.907	2	4.409	15.876	35	77.162	30.844	68	149.91
1.361	3	6.614	16.783	36	79.366	31.298	69	152.12
1.814	4	8.818	16.783	37	81.571	31.751	70	154.32
2.268	5	11.023	17.237	38	83.776	32.205	71	156.53
2.722	6	13.228	17.690	39	85.981	32.659	72	158.73
3.175	7	15.432	18.144	40	88.185	33.112	73	160.94
3.629	8	17.637	18.144	41	90.389	33.566	74	163.14
4.082	9	19.842	19.051	42	92.594	34.019	75	165.35
4.536	10	22.046	19.504	43	94.799	34.473	76	167.55
4.990	11	24.251	19.958	44	97.003	34.927	77	169.76
5.443	12	26.455	20.412	45	99.208	35.380	78	171.96
5.897	13	28.660	20.865	46	101.41	35.834	79	174.17
6.350	14	30.865	21.319	47	103.62	36.287	80	176.37
6.804	15	33.069	21.772	48	105.82	36.741	81	178.57
7.257	16	35.274	22.226	49	108.03	37.195	82	180.78
7.711	17	37.479	22.680	50	110.23	37.195	83	182.98
8.165	18	39.683	23.133	51	112.44	38.102	84	185.19
8.618	19	41.888	23.587	52	114.64	38.555	85	187.39
9.072	20	44.092	24.040	53	116.85	39.009	86	189.60
9.525	21	46.297	24.494	54	119.05	39.463	87	191.80
9.979	22	48.502	24.948	55	121.25	39.916	88	194.01
10.433	23	50.706	25.401	56	123.46	40.370	89	196.21
10.886	24	52.911	25.855	57	125.66	40.823	90	198.42
11.340	25	55.116	26.308	58	127.87	41.277	91	200.62
11.793	26	57.320	26.762	59	130.07	41.730	92	202.83
12.247	27	59.525	27.216	60	132.28	42.184	93	205.03
12.701	28	61.729	27.669	61	134.48	42.638	94	207.23
13.154	29	63.934	28.123	62	136.69	43.091	95	209.44
13.608	30	66.139	28.576	63	138.89	43.545	96	211.64
14.061	31	68.343	29.030	64	141.10	43.998	97	213.85
14.515	32	70.548	29.484	65	143.30	44.453	98	216.05
14.969	33	72.752	29.937	66	145.51	44.906	99	218.26

Quick Reference Two Way Force Conversion Tables for Kilograms (kfg)/Pounds (n)

The two-way conversion table makes quick conversions simple and accurate. To use the two-way conversion table pick a measurement to begin with, either kfg or n and move to the center unit column. Go down the column until you reach your unit number. Read in the direction opposite of the initial measurement.

kgf	Unit	N	kgf	Unit	N	kgf	Unit	N
0.1020	1	9.8066	3.4670	34	333.43	6.8321	67	657.04
0.2039	2	19.613	3.5690	35	343.23	6.9341	68	666.85
0.3059	3	29.420	3.6710	36	353.04	7.0361	69	676.66
0.4079	4	39.227	3.7730	37	362.85	7.1380	70	686.46
0.5099	5	49.033	3.8749	38	372.65	7.2400	71	696.27
0.6118	6	58.840	3.9769	39	382.46	7.3420	72	706.08
0.7138	7	68.646	4.0789	40	392.27	7.4440	73	715.88
0.8158	8	78.453	4.1805	41	402.07	7.5459	74	725.69
0.9177	9	88.260	4.2828	42	411.88	7.6479	75	735.50
1.0197	10	98.066	4.3848	43	421.68	7.7499	76	745.30
1.1217	11	107.87	4.4868	44	431.49	7.8518	77	755.11
1.2237	12	117.68	4.5887	45	441.30	7.9538	78	764.92
1.3256	13	127.49	4.6907	46	451.10	8.0558	79	774.72
1.4276	14	137.29	4.7927	47	460.91	8.1578	80	784.53
1.5296	15	147.10	4.8946	48	470.72	8.2597	81	794.34
1.6316	16	156.91	4.9966	49	480.52	8.3617	82	804.14
1.7335	17	166.71	5.0986	50	490.33	8.4637	83	813.95
1.8355	18	176.52	5.2006	51	500.14	8.5656	84	823.76
1.9375	19	186.33	5.3025	52	509.94	8.6676	85	833.56
2.0394	20	196.13	5.4045	53	519.75	8.7696	86	843.37
2.1414	21	205.94	5.5065	54	529.56	8.8716	87	853.18
2.2434	22	215.75	5.6085	55	539.36	8.9735	88	862.98
2.3454	23	225.55	5.7104	56	549.17	9.0755	89	872.79
2.4473	24	235.36	5.8124	57	558.98	9.1775	90	882.60
2.5493	25	245.17	5.9144	58	568.78	9.2794	91	892.40
2.6513	26	254.97	6.0163	59	578.59	9.3814	92	902.21
2.7532	27	264.78	6.1183	60	588.40	9.4834	93	912.02
2.8552	28	274.59	6.2203	61	598.20	9.5854	94	921.82
2.9572	29	284.39	6.3223	62	608.01	9.6873	95	931.63
3.0592	30	294.20	6.4242	63	617.82	9.7893	96	941.44
3.1611	31	304.01	6.5262	64	627.62	9.8913	97	951.24
3.2631	32	313.81	6.6282	65	637.43	9.9932	98	961.05
3.3651	33	323.62	6.7302	66	647.24	10.0952	99	970.86

Dimension Conversion Table – *Millimeters to Inches*

MM	0	10	20	30	40	50	60	70	80	90	100	110
0	0.0000	0.3937	0.7874	1.1811	1.5748	1.9685	2.3622	2.7559	3.1496	3.5433	3.9370	4.3307
1	0.0394	0.4331	0.8268	1.2205	1.6142	2.0079	2.4016	2.7953	3.1890	3.5827	3.9764	4.3701
2	0.0787	0.4724	0.8661	1.2598	1.6535	2.0472	2.4409	2.8346	3.2283	3.6220	4.0157	4.4094
3	0.1181	0.5118	0.9055	1.2992	1.6929	2.0866	2.4803	2.8740	3.2677	3.6614	4.0551	4.4488
4	0.1575	0.5512	0.9449	1.3386	1.7323	2.1260	2.5197	2.9134	3.3071	3.7008	4.0945	4.4882
5	0.1969	0.5906	0.9843	1.3780	1.7717	2.1654	2.5591	2.9528	3.3465	3.7402	4.1339	4.5276
6	0.2362	0.6299	1.0236	1.4173	1.8110	2.2047	2.5984	2.9921	3.3858	3.7795	4.1732	4.5669
7	0.2756	0.6693	1.0630	1.4567	1.8504	2.2441	2.6378	3.0315	3.4252	3.8189	4.2126	4.6063
8	0.3150	0.7087	1.1024	1.4961	1.8898	2.2835	2.6772	3.0709	3.4646	3.8583	4.2520	4.6457
9	0.3543	0.7480	1.1417	1.5354	1.9291	2.3228	2.7165	3.1102	3.5039	3.8976	4.2913	4.6850

1 inch = 2.54 centimeters
1 centimeter = 0.3937 inch
1 pound - 0.4536 kilograms
1 kilograms = 2.20462 pounds
1 ounce = 28.35 grams
1 gram = 0.03527 ounce
1 millimeter = 0.03937 inch
1 micron = 0.001

Dimension Conversion Table – *Inch to Millimeters*

INCH Fractions	INCH Decimals	0"	1"	2"	3"	4"	5"	6"	7"	8"
		0.0000	25.4000	50.8000	76.2000	101.6000	127.0000	152.4000	177.8000	203.2000
1/64	0.0156	0.3969	25.7969	51.1969	76.5969	101.9969	127.3969	152.7969	178.1969	203.5969
1/32	0.0313	0.7938	26.1938	51.5938	76.9938	102.3938	127.7938	153.1938	178.5938	203.9938
3/64	0.0469	1.1906	26.5906	51.9906	77.3906	102.7906	128.1906	153.5906	178.9906	204.3906
1/16	0.0625	1.5875	26.9875	52.3875	77.7875	103.1875	128.5875	153.9875	179.3875	204.7875
5/64	0.0781	1.9844	27.3844	52.7844	78.1844	103.5844	128.9844	154.3844	179.7844	205.1844
3/32	0.0938	2.3813	27.7813	53.1813	78.5813	103.9813	129.3813	154.7813	180.1813	205.5813
7/64	0.1094	2.7781	28.1781	53.5781	78.9781	104.3781	129.7781	155.1781	180.5781	205.9781
1/8	0.1250	3.1750	28.5750	53.9750	79.3750	104.7750	130.1750	155.5750	180.9750	206.3750
9/64	0.1406	3.5719	28.9719	54.3719	79.7719	105.1719	130.5719	155.9719	181.3719	206.7719
5/32	0.1563	3.9688	29.3688	54.7688	80.1688	105.5688	130.9688	156.3688	181.7688	207.1688
11/64	0.1719	4.3656	29.7656	55.1656	80.5656	105.9656	131.3656	156.7656	182.1656	207.5656
3/16	0.1875	4.7625	30.1625	55.5625	80.9625	106.3625	131.7625	157.1625	182.5625	207.9625
13/64	0.2031	5.1594	30.5594	55.9594	81.3594	106.7594	132.1594	157.5594	182.9594	208.3594
7/32	0.2188	5.5563	30.9563	56.3563	81.7563	107.1563	132.5563	157.9563	183.3563	208.7563
15/64	0.2344	5.9531	31.3531	56.7531	82.1531	107.5531	132.9531	158.3531	183.7531	209.1531
1/4	0.2500	6.3500	31.7500	57.1500	82.5500	107.9500	133.3500	158.7500	184.1500	209.5500
17/64	0.2656	6.7469	32.1469	57.5469	82.9469	108.3469	133.7469	159.1469	184.5469	209.9469
9/32	0.2813	7.1438	32.5438	57.9438	83.3438	108.7438	134.1438	159.5438	184.9438	210.3438
19/64	0.2969	7.5406	32.9406	58.3406	83.7406	109.1406	134.5406	159.9406	185.3406	210.7406
5/16	0.3125	7.9375	33.3375	58.7375	84.1375	109.5375	134.9375	160.3375	185.7375	211.1375
21/64	0.3281	8.3344	33.7344	59.1344	84.5344	109.9344	135.3344	160.7344	186.1344	211.5344
11/32	0.3438	8.7313	34.1313	59.5313	84.9313	110.3313	135.7313	161.1313	186.5313	211.9313
23/64	0.3594	9.1281	34.5281	59.9281	85.3281	110.7281	136.1281	161.5281	186.9281	212.3281
3/8	0.3750	9.5250	34.9250	60.3250	85.7250	111.1250	136.5250	161.9250	187.3250	212.7250
25/64	0.3906	9.9219	35.3219	60.7219	86.1219	111.5219	136.9219	162.3219	187.7219	213.1219
13/32	0.4063	10.3188	35.7188	61.1188	86.5188	111.9188	137.3188	162.7188	188.1188	213.5188
27/64	0.4219	10.7156	36.1156	61.5156	86.9156	112.3156	137.7156	163.1156	188.5156	213.9156
7/16	0.4375	11.1125	36.5125	61.9125	87.3125	112.7125	138.1125	163.5125	188.9125	214.3125
29/64	0.4531	11.5094	36.9094	62.3094	87.7094	113.1094	138.5094	163.9094	189.3094	214.7094
15/32	0.4688	11.9063	37.3063	62.7063	88.1063	113.5063	138.9063	164.3063	189.7063	215.1063
31/64	0.4844	12.3031	37.7031	63.1031	88.5031	113.9031	139.3031	164.7031	190.1031	215.5031
1/2	0.5000	12.7000	38.1000	63.5000	88.9000	114.3000	139.7000	165.1000	190.5000	215.9000
33/64	0.5156	13.0969	38.4969	63.8969	89.2969	114.6969	140.0969	165.4969	190.8969	216.2969
17/32	0.5313	13.4938	38.8938	64.2938	89.6938	115.0938	140.4938	165.8938	191.2938	216.6938
35/64	0.5469	13.8906	39.2906	64.6906	90.0906	115.4906	140.8906	166.2906	191.6906	217.0906
9/16	0.5625	14.2875	39.6875	65.0875	90.4875	115.8875	141.2875	166.6875	192.0875	217.4875
37/64	0.5781	14.6844	40.0844	65.4844	90.8844	116.2844	141.6844	167.0844	192.4844	217.8844
19/32	0.5938	15.0813	40.4813	65.8813	91.2813	116.6813	142.0813	167.4813	192.8813	218.2813
39/64	0.6094	15.4781	40.8781	66.2781	91.6781	117.0781	142.4781	167.8781	193.2781	218.6781
5/8	0.6250	15.8750	41.2750	66.6750	92.0750	117.4750	142.8750	168.2750	193.6750	219.0750
41/64	0.6406	16.2719	41.6719	67.0719	92.4719	117.8719	143.2719	168.6719	194.0719	219.4719
21/32	0.6563	16.6688	42.0688	67.4688	92.8688	118.2688	143.6688	169.0688	194.4688	219.8688
43/64	0.6719	17.0656	42.4656	67.8656	93.2656	118.6656	144.0656	169.4656	194.8656	220.2656
11/16	0.6875	17.4625	42.8625	68.2625	93.6625	119.0625	144.4625	169.8625	195.2625	220.6625
45/64	0.7031	17.8594	43.2594	68.6594	94.0594	119.4594	144.8594	170.2594	195.6594	221.0594
23/32	0.7188	18.2563	43.6563	69.0563	94.4563	119.8563	145.2563	170.6563	196.0563	221.4563
47/64	0.7344	18.6531	44.0531	69.4531	94.8531	120.2531	145.6531	171.0531	196.4531	221.8531
3/4	0.7500	19.0500	44.4500	69.8500	95.2500	120.6500	146.0500	171.4500	196.8500	222.2500
49/64	0.7656	19.4469	44.8469	70.2469	95.6469	121.0469	146.4469	171.8469	197.2469	222.6469
25/32	0.7813	19.8438	45.2438	70.6438	96.0438	121.4438	146.8438	172.2438	197.6438	223.0438
51/64	0.7969	20.2406	45.6406	71.0406	96.4406	121.8406	147.2406	172.6406	198.0406	223.4406
13/16	0.8125	20.6375	46.0375	71.4375	96.8375	122.2375	147.6375	173.0375	198.4375	223.8375
53/64	0.8281	21.0344	46.4344	71.8344	97.2344	122.6344	148.0344	173.4344	198.8344	224.2344
27/32	0.8438	21.4313	46.8313	72.2313	97.6313	123.0313	148.4313	173.8313	199.2313	224.6313
55/64	0.8594	21.8281	47.2281	72.6281	98.0281	123.4281	148.8281	174.2281	199.6281	225.0281
7/8	0.8750	22.2250	47.6250	73.0250	98.4250	123.8250	149.2250	174.6250	200.0250	225.4250
57/64	0.8906	22.6219	48.0219	73.4219	98.8219	124.2219	149.6219	175.0219	200.4219	225.8219
29/32	0.9063	23.0188	48.4188	73.8188	99.2188	124.6188	150.0188	175.4188	200.8188	226.2188
59/64	0.9219	23.4156	48.8156	74.2156	99.6156	125.0156	150.4156	175.8156	201.2156	226.6156
15/16	0.9375	23.8125	49.2125	74.6125	100.0125	125.4125	150.8125	176.2125	201.6125	227.0125
61/64	0.9531	24.2094	49.6094	75.0094	100.4094	125.8094	151.2094	176.6094	202.0094	227.4094
31/32	0.9688	24.6063	50.0063	75.4063	100.8063	126.2063	151.6063	177.0063	202.4063	227.8063
63/64	0.9844	25.0031	50.4031	75.8031	101.2031	126.6031	152.0031	177.4031	202.8031	228.2031

Global Bearings, Inc.

Product Warranty

Global Bearings, Incorporated, will replace, free of charge, within one year from date of sale, any bearing which in our judgement has failed because of defective material or workmanship, provided it has been shown to have been properly mounted, adequately lubricated and not subjected to abuse in operation or assembling. Such bearings must be returned to Global Bearings, charges prepaid, and with complete information as to service. Global Bearings assumes no responsibility for contingent or consequential damage in any event. This guarantee is in lieu of all warranties either expressed or implied.

Terms and Conditions of Sale

Prices: Prices are FOB in Tulsa, Oklahoma. Customer assumes all freight charges.

Terms: Net 30. Customer is required to pay entire balance within 30 days from the date of delivery.

Delivery: Shipping and delivery dates are approximations only. As an importer, Global Bearings could experience delays caused by events beyond our control. This may include, without limitation, fire, accidents or casualties, inclement weather, mechanical failure, labor disruptions, government action, failure of shipping facilities or Customer's acts of omissions.

Late Payments: Customers who do not pay within the terms provided will be put on hold and will not be shipped additional items until the delinquent balance has been paid in full. A late payment charge of 2% per month will be charged on all past due invoices. If a Customer fails to make payment in full, that Customer will be responsible for all collection costs incurred by Global Bearings including attorney fees and court costs.

Returns: Customer is responsible for examining all orders upon delivery. Claims for shortages, variances or non–conforming goods must be made in writing within 10 days of the delivery date. Goods delivered as ordered cannot be returned. Customer must call for a return authorization number. A 15% restocking fee will be charged on all refused or returned merchandise other than mis–ships or non–conforming goods.

Cancellations: Purchase order cancellations must be made in writing within 90 days of the scheduled delivery date. Customers who cancel after this time will be charged a reasonable fee for the work performed prior to receipt of the notice of cancellation. These charges may include, without limitation: manufacturing costs, shipping costs, inventory costs, scheduling costs, import taxes, or any direct cost associated with cancellation. Customers will not be charged for any work performed after the receipt of the notice of cancellation.

Customer Obligations: Bearings are ordered specific for each customer. Customers are obligated to take delivery of all of the items on their purchase order within 360 days of the purchase order date. Customers who do not purchase all of the items on their purchase order within 360 days of the purchase order date will be charged an additional inventory fee of 2% per month until the remaining items have been shipped.

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