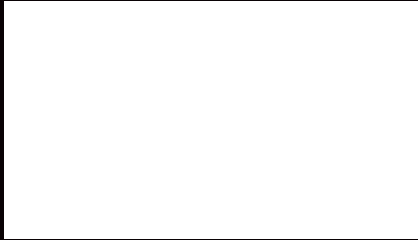


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Radial Ball Bearings

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Radial Ball Bearings





PEER Vision

PEER is a dynamic and customer focused bearing manufacturer delivering valued solutions to a global market...

- Valued bearing solutions for agricultural, electrical, fluid, HVAC, lawn & garden, material handling and transmission industries
- Global application engineering support
- TS-16949 certified manufacturing facilities
- Dedicated research and development center
- Testing capabilities include: fatigue life, noise/vibration, mud slurry and salt spray testing
- Flexible manufacturing to allow for low to high volume production
- Customer service excellence



PEER's World-Wide Manufacturing Facilities



PEER Ball Bearing Factory, Xinchang, Zhejiang, China



PEER Tapered Bearing Factory, Changshan, Zhejiang, China

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Mission Statement

In order to be the most reliable supplier to our customers, PEER intends to meet all of their quality and delivery requirements. We realize that a quality product provides the critical foundation for our relationship with our valued customers. PEER will expect the same level of cooperation from our suppliers.

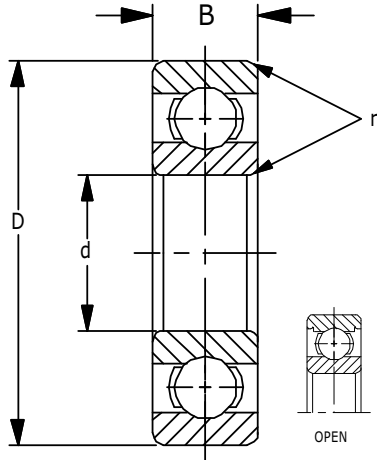


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R SERIES



The PEER R series, starting with the 1/4 inch bore, is available up to 1 1/2 inches. The Conrad construction of the R series enables these bearings to take a thrust load as well as a radial load. The well designed ball complement and selection of retainers permit use of this series in high speed motor applications. This series is produced open, shielded or sealed. Shield and sealed bearings are made slightly wider as shown in the dimension table. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance with applications ranging from C2 -C0-C3-C4 fits.

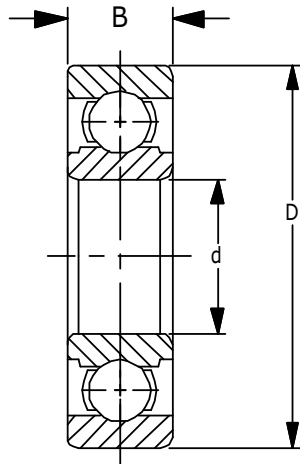
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width - B		* fillet radius r	Basic Load Ratings lbf N		Weight lb Kg	Limiting speed (rpm)		
					Open inch	Sealed/ Shielded inch		Dynamic Cr	Static Cor		oil	grease	
R2	1/8	.0003	3/8	.00030	.1562	.1562	.0050	.144	50	0.003	58,000	49,000	
R2A	.1250	.0003	.3750	.00030	.1719	.1719	.0050	.641	222	0.001	51,000	42,000	
R3	3/16	.0003	.5000	.00030	.1562	.1960	.0050	258	89	0.001	48,000	41,000	
R3A	.1875	.0003	.5000	.00030	.1960	.1960	.0050	1,148	396	0.003	48,000	41,000	
R4	1/4	.0003	5/8	.00030	.1960	.1960	.0050	295	110	0.006	48,000	41,000	
R4A	.2500	.0003	.6250	.00035	.2188	.2812	.0050	1,312	492	0.003	48,000	41,000	
R6	3/8	.0003	7/8	.00035	.2188	.2812	.0050	295	110	0.005	48,000	41,000	
R8	.3750	.0003	.8750	.00035	.2500	.3125	.0050	1,312	489	0.002	48,000	41,000	
R10	1/2	.0003	1 1/8	.00035	.2500	.3125	.0050	295	110	0.005	48,000	41,000	
R12	.5000	.0003	1.1250	.00035	.2500	.3125	.0050	1,312	489	0.002	48,000	41,000	
R14	3/4	.0004	1 3/8	.00045	.2812	.3438	.0050	362	150	0.010	43,000	36,000	
R16	.7500	.0004	1.6250	.00045	.3125	.4375	.0050	1,601	667	0.002	43,000	36,000	
R18	1	.0004	2	.00050	.3750	.5000	.0050	527	199	0.020	40,000	34,000	
R20	1 1/4	.0005	2 1/4	.00050	.3750	.5000	.0050	2,340	885	0.009	40,000	34,000	
R22	1 3/8	.0005	2 1/2	.00050	.4375	.5625	.0050	754	317	0.024	37,000	31,000	
R24	1 1/2	.0005	2 3/8	.00050	.4375	.5625	.0050	3,350	1,410	0.011	37,000	31,000	
	1.5000	.0005	2.6250	.00050	.4375	.5625	.0050	1,150	540	0.039	30,000	26,000	
								5,116	2,402	0.018	30,000	26,000	
								.012	1340	728	0.081	24,000	20,000
								.31	5,961	3,238	0.037	24,000	20,000
								.012	2110	1120	0.104	21,000	18,000
								.31	9,386	4,982	0.047	21,000	18,000
								.012	2270	1310	0.157	18,000	15,000
								.31	10,098	5,827	0.071	18,000	15,000
								.012	2270	1310	0.187	16,000	14,000
								.31	10,098	5,827	0.085	16,000	14,000
								.012	2980	1860	0.198	15,000	13,000
								.31	13,256	8,274	0.090	15,000	13,000
								.012	2980	1860	0.209	14,000	12,000
								.31	13,256	8,274	0.095	14,000	12,000
								.012	3590	2320	0.232	12,500	11,000
								.31	15,970	10,320	0.105	12,500	11,000
								.012	3770	2590	0.309	11,500	10,000
								.31	16,770	11,521	0.140	11,500	10,000

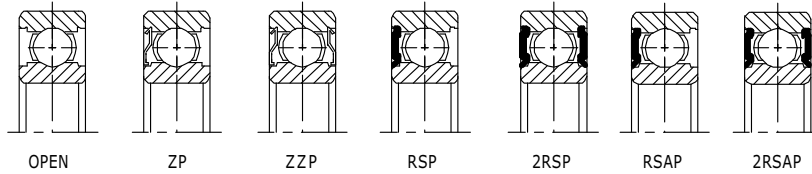
*Maximum fillet which corner radius of bearing will clear.



600 SERIES



The 600 extra small metric series is produced in bore sizes ranging from 4mm to 9mm. These bearings are designed to take adequate radial and thrust loads in proportion to small shaft sizes. This series may be ordered open, shielded, with contact seals, or non-contact seals. Stainless steel 440C, 600 Series bearings are available upon request.

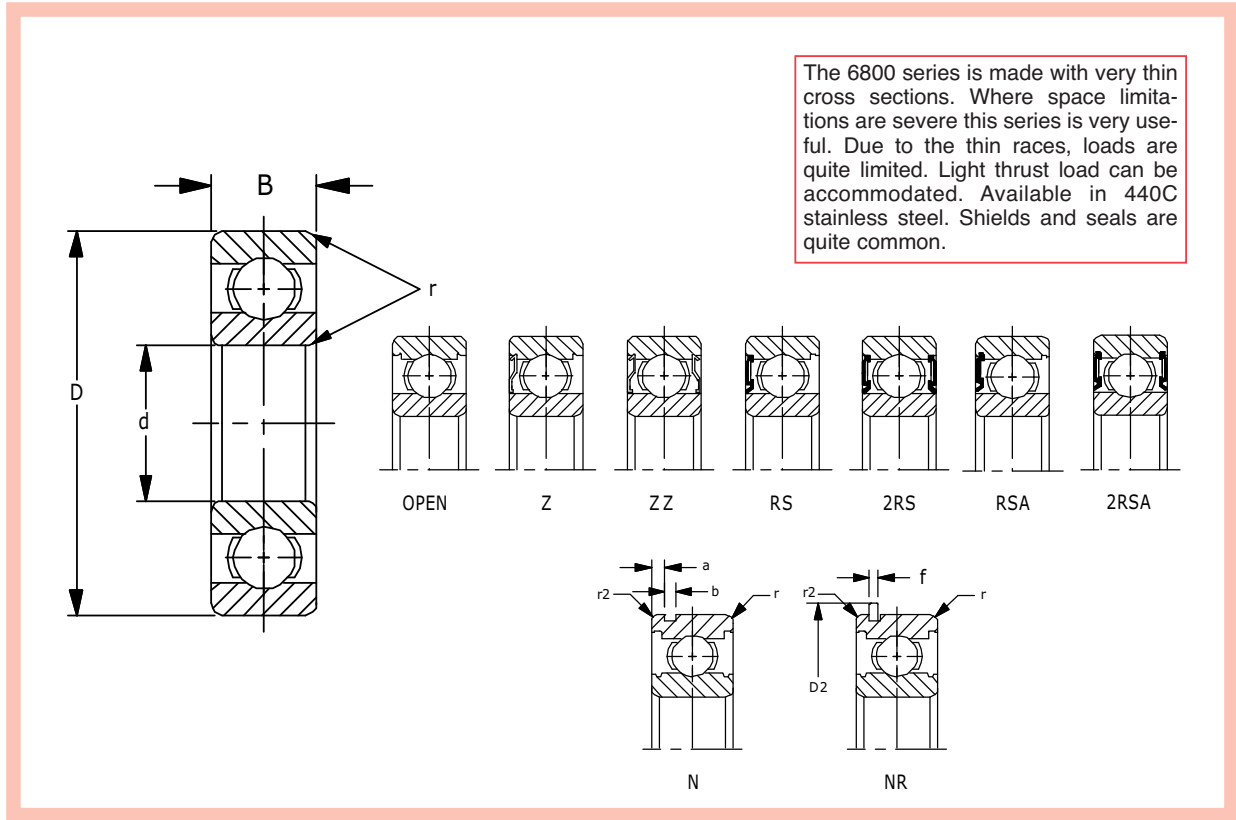


Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
								Dynamic Cr	Static Cor		oil	grease
624	.1575	.0003	.5118	.0003	.1969	.0047	.012	295	110	.007	49,000	42,000
	4	.008	13	.008	5	.120	.3	1,312	489	.003		
634	.1575	.0003	.6299	.0003	.1969	.0047	.012	395	153	.011	44,000	37,000
	4	.008	16	.008	5	.120	.3	1,757	681	.005		
625	.1969	.0003	.6299	.0003	.1969	.0047	.012	395	153	.010	44,000	37,000
	5	.008	16	.008	5	.120	.3	1,757	681	.005		
635	.1969	.0003	.7480	.0003	.2362	.0047	.012	527	199	.018	40,000	34,000
	5	.008	19	.009	6	.120	.3	2,390	885	.008		
606	.2362	.0003	.6693	.0003	.2362	.0047	.012	509	195	.013	42,000	35,000
	6	.008	17	.009	6	.120	.3	2,260	867	.006		
626	.2362	.0003	.7480	.0003	.2362	.0047	.012	527	200	.018	40,000	34,000
	6	.008	19	.009	6	.120	.3	2,310	890	.008		
626-4	.2500	.0003	.7480	.0003	.2362	.0047	.012	525	200	.022	40,000	34,000
	6.35	.008	19	.009	6	.120	.3	2,335	890	.010		
607	.2756	.0003	.7480	.0003	.2362	.0047	.012	505	205	.018	40,000	34,000
	7	.008	19	.009	6	.120	.3	2,246	912	.008		
627	.2756	.0003	.8661	.0003	.2756	.0047	.012	750	315	.029	37,000	32,000
	7	.008	22	.009	7	.120	.3	3,336	1,401	.013		
627-4	.2500	.0003	.8661	.0003	.2756	.0047	.012	750	315	.031	36,000	30,000
	6.35	.008	22	.009	7	.120	.3	3,336	1,401	.014		
608	.3150	.0003	.8661	.0003	.2756	.0047	.012	750	315	.026	40,000	34,000
	8	.008	22	.009	7	.120	.3	3,336	1,401	.012		
608-3123	.3123	.0003	.8661	.0003	.2756	.0047	.012	750	315	.031	40,000	34,000
	7.932	.008	22	.009	7	.120	.3	3,336	1,401	.014		
608-3125	.3125	.0003	.8661	.0003	.2756	.0047	.012	750	315	.031	40,000	34,000
	7.9375	.008	22	.009	7	.120	.3	3,336	1,401	.014		
608-3126	.3126	.0003	.8661	.0003	.2756	.0047	.012	750	315	.031	40,000	34,000
	7.940	.008	22	.009	7	.120	.3	3,336	1,401	.014		
609	.3543	.0003	.9449	.0003	.2756	.0047	.012	765	325	.033	36,000	31,000
	9	.008	24	.009	7	.120	.3	3,402	1,445	.015		
629	.3543	.0003	1.0236	.0003	.3150	.0047	.012	1,030	440	.044	35,000	30,000
	9	.008	26	.009	8	.120	.3	4,582	1,970	.020		

*Maximum fillet which corner radius of bearing will clear.

6800 SERIES



The 6800 series is made with very thin cross sections. Where space limitations are severe this series is very useful. Due to the thin races, loads are quite limited. Light thrust load can be accommodated. Available in 440C stainless steel. Shields and seals are quite common.

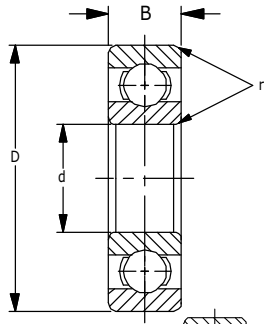
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r2	D2 Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6800	.3937	.0003	.7480	.0004	.1969	.0047	.012						410	208	.011	38,000	32,000
	10	.008	19	.009	5	.120	.3						1,830	925	.005		
6801	.4724	.0003	.8268	.0004	.1969	.0047	.012						432	233	.011	35,000	29,000
	12	.008	21	.009	5	.120	.3						1,920	1,040	.005		
6802	.5906	.0003	.9449	.0004	.1969	.0047	.012						466	282	.020	31,000	26,000
	15	.008	24	.009	5	.120	.3						2,080	1,254	.009		
6803	.6693	.0003	1.0236	.0004	.1969	.0047	.012						591	353	.020	28,000	24,000
	17	.008	26	.009	5	.120	.3						2,630	1,570	.009		
6804	.7874	.0004	1.2598	.0005	.2756	.0047	.012	.012	1.370	.033	.051	.037	900	554	.040	25,000	21,000
	20	.010	32	.011	7	.120	.3	.3	34.8	.85	1.3	.95	4,000	2,464	.018		
6805	.9843	.0004	1.4567	.0005	.2756	.0047	.012	.012	1.567	.033	.051	.037	1012	708	.051	21,000	18,000
	25	.010	37	.011	7	.120	.3	.3	39.8	.85	1.3	.95	4,500	3,150	.023		
6806	1.1811	.0004	1.6535	.0005	.2756	.0047	.012	.012	1.764	.033	.051	.037	1,060	821	.051	18,000	15,000
	30	.010	42	.011	7	.120	.3	.3	44.8	.85	1.3	.95	4,700	3,650	.023		
6807	1.3780	.0005	1.8504	.0005	.2756	.0047	.012	.012	1.961	.033	.051	.037	1,100	922	.060	16,000	13,000
	35	.012	47	.011	7	.120	.3	.3	49.8	.85	1.3	.95	4,900	4,100	.027		
6808	1.5748	.0005	2.0472	.0005	.2756	.0047	.012	.012	2.157	.033	.051	.037	1,140	990	.071	14,000	12,000
	40	.012	52	.013	7	.120	.3	.3	54.8	.85	1.3	.95	5,100	4,400	.032		
6809	1.7717	.0005	2.2835	.0005	.2756	.0047	.012	.012	2.394	.033	.051	.037	1,203	1,181	.079	12,000	11,000
	45	.012	58	.013	7	.120	.3	.3	60.8	.85	1.3	.95	5,400	5,300	.036		
6810	1.9685	.0005	2.5591	.0005	.2756	.0047	.012	.012	2.669	.033	.051	.037	1,480	1,400	.110	11,000	9,600
	50	.012	65	.013	7	.120	.3	.3	67.8	.85	1.3	.95	6,600	6,200	.050		

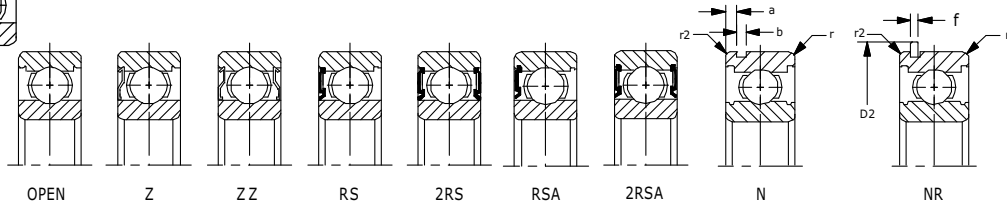
*Maximum fillet which corner radius of bearing will clear.



6800 SERIES (continued)



The 6800 series is made with very thin cross sections. Where space limitations are severe this series is very useful. Due to the thin races, loads are quite limited. Light thrust load can be accommodated. Available in 440C stainless steel. Shields and seals are quite common.

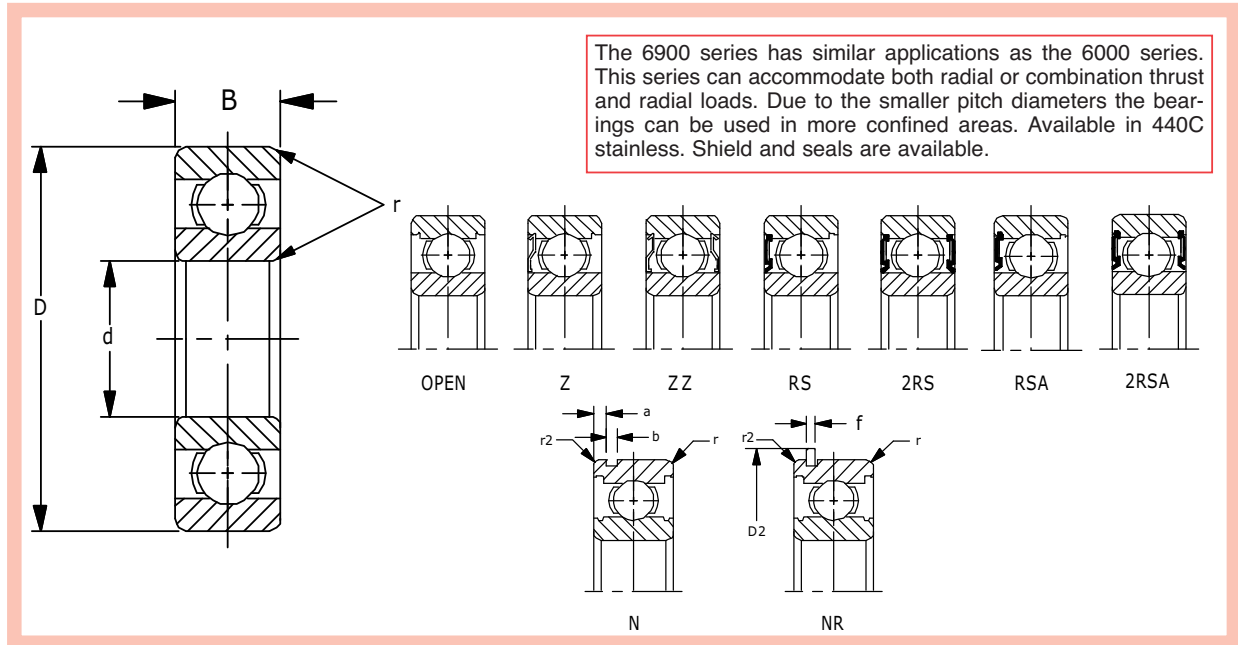


Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6811	2.1654	.0006	2.8346	.0005	.3543	.0059	.012	.012	2.945	.033	.067	.037	1,980	1,902	.181	10,000	8,700
	55	.015	72	.013	9	.150	.3	.3	74.8	.85	1.7	.95	8,800	8,500	.082		
6812	2.3622	.0006	3.0709	.0005	.3937	.0059	.012	.012	3.256	.044	.067	.051	2,587	2,460	.220	9,400	8,000
	60	.015	78	.013	10	.150	.3	.3	82.7	1.12	1.7	1.3	11,500	10,900	.100		
6813	2.5591	.0006	3.3465	.0006	.3937	.0059	.024	.020	3.520	.044	.067	.051	2,680	2,722	.280	8,700	7,400
	65	.015	85	.015	10	.150	.6	.5	89.4	1.12	1.7	1.3	12,000	12,100	.127		
6814	2.7559	.0006	3.5433	.0006	.3937	.0059	.024	.020	3.717	.044	.067	.051	2,710	2,860	.291	8,100	6,900
	70	.015	90	.015	10	.150	.6	.5	94.4	1.12	1.7	1.3	12,100	12,700	.132		
6815	2.9528	.0006	3.7402	.0006	.3937	.0059	.024	.020	3.913	.044	.067	.051	2,820	3,127	.320	7,600	6,400
	75	.015	95	.015	10	.150	.6	.5	99.4	1.12	1.7	1.3	12,500	13,900	.145		
6816	3.1496	.0006	3.9370	.0006	.3937	.0059	.024	.020	4.110	.044	.067	.051	2,857	3,262	.340	7,100	6,000
	80	.015	100	.015	10	.150	.6	.5	104.4	1.12	1.7	1.3	12,700	14,500	.154		
6817	3.3465	.0008	4.3307	.0006	.5118	.0079	.039	.020	4.555	.044	.083	.051	4,200	4,500	.560	6,700	5,700
	85	.020	110	.015	13	.200	1.0	.5	115.7	1.12	2.1	1.3	18,700	20,000	.254		
6818	3.5433	.0008	4.5276	.0006	.5118	.0079	.039	.020	4.752	.044	.083	.051	4,270	4,725	.591	6,300	5,400
	90	.020	115	.015	13	.200	1.0	.5	120.7	1.12	2.1	1.3	19,000	21,000	.268		
6819	3.7402	.0008	4.7244	.0006	.5118	.0079	.039	.020	4.949	.044	.083	.051	4,330	4,950	.631	5,900	5,000
	95	.020	120	.015	13	.200	1.0	.5	125.7	1.12	2.1	1.3	19,200	22,000	.286		
6820	3.9370	.0008	4.9213	.0007	.5118	.0079	.039	.020	5.146	.044	.083	.051	4,400	5,175	.659	5,600	4,800
	100	.020	125	.018	13	.200	1.0	.5	130.7	1.12	2.1	1.3	19,500	23,000	.299		
6822	4.3307	.0008	5.5118	.0007	.6299	.0079	.039	.020	5.736	.067	.098	.075	6,322	7,312	1.096	5,100	4,300
	110	.020	140	.018	16	.200	1.0	.5	145.7	1.7	2.5	1.9	28,100	32,500	.497		
6824	4.7244	.0008	5.9055	.0007	.6299	.0079	.039	.020	6.130	.067	.098	.075	6,502	7,987	1.184	4,700	4,000
	120	.020	150	.018	16	.200	1.0	.5	155.7	1.7	2.5	1.9	28,900	35,500	.537		
6826	5.1181	.0010	6.4961	.0010	.7087	.0098	.043	.020	6.752	.067	.130	.075	8,325	9,900	1.671	4,300	3,700
	130	.025	165	.025	18	.250	1.1	.5	171.5	1.7	3.3	1.9	37,000	44,000	.758		
6828	5.5118	.0010	6.8898	.0010	.7087	.0098	.043	.020	7.146	.067	.130	.075	8,662	10,800	1.834	4,000	3,400
	140	.025	175	.025	18	.250	1.1	.5	181.5	1.7	3.3	1.9	38,500	48,000	.832		
6830	5.9055	.0010	7.4803	.0012	.7874	.0098	.043	.020	7.736	.067	.130	.075	10,700	13,162	2.535	3,700	3,100
	150	.025	190	.030	20	.250	1.1	.5	196.5	1.7	3.3	1.9	47,500	58,500	1.150		
6832	6.2992	.0010	7.8740	.0012	.7874	.0098	.043	.020	8.130	.067	.130	.075	10,900	13,725	2.712	3,400	2,900
	160	.025	200	.030	20	.250	1.1	.5	206.5	1.7	3.3	1.9	48,500	61,000	1.230		
6834	6.6929	.0010	8.4646	.0012	.8661	.0098	.043						13,500	16,875	4.109	3,200	2,700
	170	.025	215	.030	22	.250	1.1						60,500	75,000	1.864		
6836	7.0866	.0010	8.8583	.0012	.8661	.0098	.043						13,600	17,662	4.381	3,000	2,600
	180	.025	225	.030	22	.250	1.1						60,498	78,500	1.987		

*Maximum fillet which corner radius of bearing will clear.

6900 SERIES



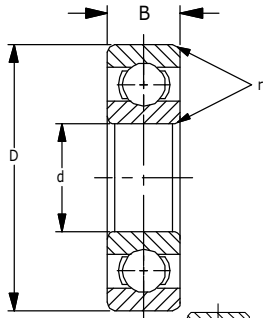
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6900	.3937	.0003	.8661	.0004	.2362	.0047	.012	.012	.976	.028	.041	.031	607	285	.020	36,000	30,000
	10	.008	22	.009	6	.120	.3	.3	24.8	.7	1.05	.8	2,700	1,270	.009		
6901	.4724	.0003	.9449	.0004	.2362	.0047	.012	.012	1.055	.028	.041	.031	650	330	.022	32,000	27,000
	12	.008	24	.009	6	.120	.3	.3	26.8	.7	1.05	.8	2,891	1,468	.010		
6902	.5906	.0003	1.1024	.0004	.2756	.0047	.012	.012	1.213	.033	.051	.037	970	979	.031	28,000	24,000
	15	.008	28	.009	7	.120	.3	.3	30.8	.85	1.3	.95	4,315	4,350	.014		
6903	.6693	.0003	1.1811	.0004	.2756	.0047	.012	.012	1.291	.033	.051	.037	1,050	580	.040	26,000	22,000
	17	.008	30	.009	7	.120	.3	.3	32.8	.85	1.3	.95	4,671	2,579	.018		
6904	.7874	.0004	1.4567	.0005	.3543	.0047	.012	.012	1.567	.033	.067	.037	1,440	832	.079	23,000	19,000
	20	.010	37	.011	9	.120	.3	.3	39.8	.85	1.7	.95	6,400	3,700	.036		
6905	.9843	.0004	1.6535	.0005	.3543	.0047	.012	.012	1.764	.033	.067	.037	1,586	1,023	.090	19,000	16,000
	25	.010	42	.011	9	.120	.3	.3	44.8	.85	1.7	.95	7,050	4,550	.041		
6906	1.1811	.0004	1.8504	.0005	.3543	.0047	.012	.012	1.961	.033	.067	.037	1,631	1,130	.115	17,000	14,000
	30	.010	47	.011	9	.120	.3	.3	49.8	.85	1.7	.95	7,250	5,026	.052		
6907	1.3780	.0005	2.1654	.0005	.3937	.0047	.024	.020	2.276	.033	.067	.037	2,511	1,670	.165	15,000	12,000
	35	.012	55	.013	10	.120	.6	.5	57.8	.85	1.7	.95	11,165	7,429	.075		
6908	1.5748	.0005	2.4409	.0005	.4724	.0047	.024	.020	2.551	.033	.067	.037	3,252	2,300	.247	13,000	11,000
	40	.012	62	.013	12	.120	.6	.5	64.8	.85	1.7	.95	14,457	10,231	.112		
6909	1.7717	.0005	2.6772	.0005	.4724	.0047	.024	.020	2.787	.033	.067	.037	3,403	2,532	.278	12,000	9,800
	45	.012	68	.013	12	.120	.6	.5	70.8	.85	1.7	.95	15,125	11,254	.126		
6910	1.9685	.0005	2.8346	.0005	.4724	.0047	.024	.020	2.945	.033	.067	.037	3,500	2,750	.290	11,000	8,900
	50	.012	72	.013	12	.120	.6	.5	74.8	.85	1.7	.95	15,569	12,233	.132		
6911	2.1654	.0006	3.1496	.0005	.5118	.0059	.039	.020	3.323	.044	.083	.051	3,602	2,992	.417	9,600	8,200
	55	.015	80	.013	13	.150	1.0	.5	84.4	1.12	2.1	1.3	16,012	13,300	.189		
6912	2.3622	.0006	3.3465	.0006	.5118	.0059	.039	.020	3.520	.044	.083	.051	4,360	3,650	.423	8,900	7,600
	60	.015	85	.015	13	.150	1.0	.5	89.4	1.12	2.1	1.3	19,395	16,300	.192		
6913	2.5591	.0006	3.5433	.0006	.5118	.0059	.039	.020	3.717	.044	.083	.051	3,915	3,622	.481	8,200	7,000
	65	.015	90	.015	13	.150	1.0	.5	94.4	1.12	2.1	1.3	17,400	16,100	.218		

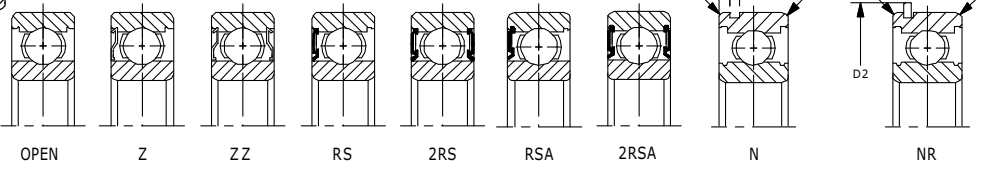
*Maximum fillet which corner radius of bearing will clear.



6900 SERIES (continued)



The 6900 series has similar applications as the 6000 series. This series can accommodate both radial or combination thrust and radial loads. Due to the smaller pitch diameters the bearings can be used in more confined areas. Available in 440C stainless. Shield and seals are available.

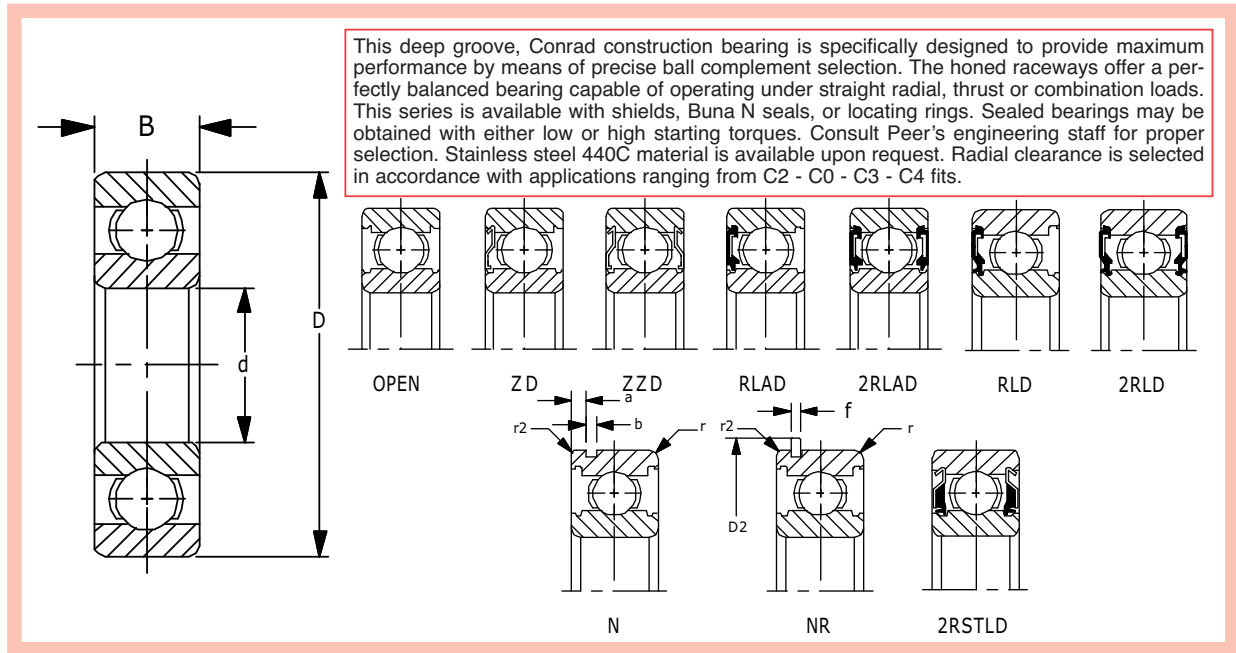


Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6914	2.7559 70	.0006 .015	3.9370 100	.0006 .015	.6299 16	.0059 .150	.039 1.0	.020 .5	4.110 104.4	.044 1.12	.098 2.5	.051 1.3	5,354 23,796	4,770 21,200	.769 .349	7,700	6,500
6915	2.9528 75	.0006 .015	4.1339 105	.0006 .015	.6299 16	.0059 .150	.039 1.0	.020 .5	4.358 110.7	.044 1.12	.098 2.5	.051 1.3	5,504 24,464	5,060 22,509	.789 .358	7,400	6,100
6916	3.1496 80	.0006 .015	4.3307 110	.0006 .015	.6299 16	.0059 .150	.039 1.0	.020 .5	4.555 115.7	.044 1.12	.098 2.5	.051 1.3	5,625 25,000	5,390 23,977	.862 .391	6,700	5,700
6917	3.3465 85	.0008 .020	4.7244 120	.0006 .015	.7087 18	.0079 .200	.043 1.1	.020 .5	4.949 125.7	.044 1.12	.130 3.3	.051 1.3	7,200 32,000	6,660 29,600	1.213 .550	6,300	5,400
6918	3.5433 90	.0008 .020	4.9213 125	.0007 .018	.7087 18	.0079 .200	.043 1.1	.020 .5	5.146 130.71	.044 1.12	.130 3.3	.051 1.3	7,425 33,000	7,105 31,580	1.290 .585	6,000	5,100
6919	3.7402 95	.0008 .020	5.1181 130	.0007 .018	.7087 18	.0079 .200	.043 1.1	.020 .5	5.343 135.7	.044 1.12	.130 3.3	.051 1.3	7,555 33,582	7,555 33,582	1.325 .601	5,700	4,800
6920	3.9370 100	.0008 .020	5.5118 140	.0007 .018	.7874 20	.0079 .200	.043 1.1	.020 .5	5.736 145.7	.067 1.7	.130 3.3	.075 1.9	9,675 43,000	9,450 42,000	1.825 .828	5,300	4,500
6921	4.1339 105	.0008 .020	5.7087 145	.0007 .018	.7874 20	.0079 .200	.043 1.1	.020 .5	5.933 150.7	.067 1.7	.130 3.3	.075 1.9	9,562 42,500	9,460 42,082	1.887 .856	5,300	4,300
6922	4.3307 110	.0008 .020	5.9055 150	.0007 .018	.7874 20	.0079 .200	.043 1.1	.020 .5	6.130 155.7	.067 1.7	.130 3.3	.075 1.9	9,807 43,590	10,000 44,500	1.969 .893	5,000	4,300
6924	4.7244 120	.0008 .020	6.4961 165	.0010 .025	.8661 22	.0079 .200	.043 1.1	.020 .5	6.752 171.5	.067 1.7	.146 3.7	.075 1.9	11,925 53,000	12,209 54,265	2.619 1.188	4,400	3,800
6926	5.1181 130	.0010 .025	7.0866 180	.0010 .025	.9449 24	.0098 .250	.059 1.5	.020 .5	7.342 186.5	.067 1.7	.146 3.7	.075 1.9	14,625 65,000	15,187 67,500	3.461 1.570	4,100	3,500
6928	5.5118 140	.0010 .025	7.4803 190	.0012 .030	.9449 24	.0098 .250	.059 1.5	.020 .5	7.736 196.5	.067 1.7	.146 3.7	.075 1.9	14,962 66,500	16,100 72,000	3.682 1.670	3,800	3,200
6930	5.9055 150	.0010 .025	8.2677 210	.0012 .030	1.1024 28	.0098 .250	.079 2.0						19,000 85,000	20,362 90,500	6.636 3.010	3,500	3,000
6932	6.2992 160	.0010 .025	8.6614 220	.0012 .030	1.1024 28	.0098 .250	.079 2.0						19,575 87,000	21,600 96,000	5.975 2.710	3,300	2,800
6934	6.6929 170	.0010 .025	9.0551 230	.0012 .030	1.1024 28	.0098 .250	.079 2.0						19,350 86,000	21,825 97,000	7.275 3.300	3,100	2,600
6936	7.0866 180	.0010 .025	9.8425 250	.0012 .030	1.2992 33	.0098 .250	.079 2.0						26,752 119,000	28,800 128,114	9.171 4.160	2,900	2,400
6938	7.4803 190	.0012 .030	1.2362 260	.0014 .035	1.2992 33	.0118 .300	.079 2.0						25,425 113,000	28,575 127,000	11.420 5.180	2,700	2,300
6940	7.8740 200	.0012 .030	11.0236 280	.0014 .035	1.4961 38	.0118 .300	.083 2.10						32,100 157,000	37,800 168,000	16.050 7.280	2,600	2,200

*Maximum fillet which corner radius of bearing will clear.

6000 SERIES



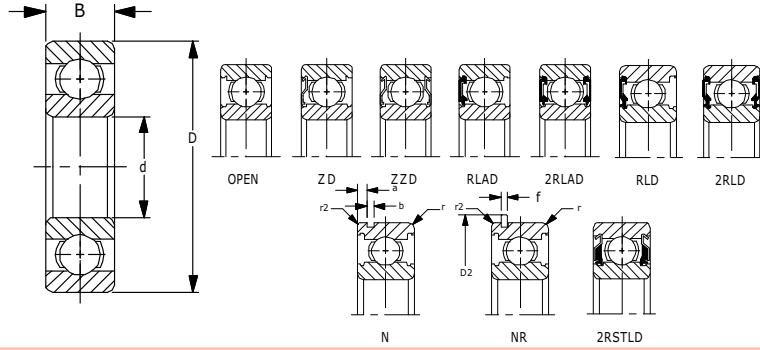
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm) oil grease	
							r	r2	D2 Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6000	.3937	.0003	1.0236	.0004	.3150	.0047	.012	.012	1.130	.028	.068	.031	1,030	440	.042	34,000	29,000
	10	.008	26	.009	8	.120	.3	.3	28.7	.7	1.73	.8	4,550	1,970	.019		
	12	.008	28	.009	8	.120	.3	.3	30.7	.85	1.73	.95	5,116	2,390	.021		
6002	.5906	.0003	1.2598	.0004	.3543	.0047	.012	.012	1.445	.044	.081	.053	1,260	635	.066	26,000	22,000
	15	.008	32	.011	9	.120	.3	.3	36.7	1.12	2.06	1.35	5,605	2,825	.030		
6003	.6693	.0003	1.3780	.0004	.3937	.0047	.012	.012	1.563	.044	.081	.053	1,530	755	.086	24,000	20,000
	17	.008	35	.011	10	.120	.3	.3	39.7	1.12	2.06	1.35	6,806	3,359	.039		
6004	.7874	.0004	1.6535	.0004	.4724	.0047	.024	.020	1.823	.044	.081	.053	2,110	1,136	.152	21,000	18,000
	20	.010	42	.011	12	.120	.6	.5	46.3	1.12	2.06	1.35	9,400	5,050	.069		
60/22	.8661	.0004	1.7323	.0004	.4724	.0047	.024	.020	1.902	.044	.081	.053	2,110	1,136	.163	20,000	17,000
	22	.010	44	.011	12	.120	.6	.5	48.3	1.12	2.06	1.35	9,400	5,050	.074		
6005	.9843	.0004	1.8504	.0004	.4724	.0047	.024	.020	2.075	.044	.081	.053	2,272	1,320	.176	18,000	15,000
	25	.010	47	.011	12	.120	.6	.5	52.7	1.12	2.06	1.35	10,100	5,850	.080		
60/28	1.1024	.0004	2.2835	.0005	.6299	.0047	.024	.020	2.280	.044	.081	.053	2,800	1,660	.216	16,000	14,000
	28	.010	52	.013	12	.120	.6	.5	57.9	1.12	2.06	1.35	12,500	7,400	.098		
6006	1.1811	.0004	2.1654	.0005	.5118	.0047	.039	.020	2.390	.044	.082	.053	2,970	1,860	.256	15,000	13,000
	30	.010	55	.013	13	.120	1.0	.5	60.7	1.12	2.08	1.35	13,212	8,300	.116		
60/32	1.2598	.0005	2.2835	.0005	.5118	.0047	.039	.020	2.508	.044	.082	.053	3,400	2,050	.284	15,000	12,000
	32	.012	58	.013	13	.120	1.0	.5	63.7	1.12	2.08	1.35	15,100	9,150	.129		
6007	1.3780	.0005	2.4409	.0005	.5512	.0047	.039	.020	2.665	.067	.082	.075	3,600	2,315	.342	14,000	12,000
	35	.012	62	.013	14	.120	1.0	.5	67.7	1.7	2.08	1.9	16,014	10,298	.155		
6008	1.5748	.0005	2.6772	.0005	.5906	.0047	.039	.020	2.937	.067	.098	.075	3,750	2,600	.419	12,000	10,000
	40	.012	68	.013	15	.120	1.0	.5	74.6	1.7	2.49	1.9	16,800	11,500	.190		
6009	1.7717	.0005	2.9528	.0005	.6299	.0047	.039	.020	3.213	.067	.098	.075	4,725	3,420	.522	11,000	9,200
	45	.012	75	.013	16	.120	1.0	.5	81.6	1.7	2.49	1.9	21,000	15,200	.237		
6010	1.9685	.0005	3.1496	.0005	.6299	.0047	.039	.020	3.409	.067	.098	.075	4,900	3,735	.575	9,800	8,400
	50	.012	80	.013	16	.120	1.0	.5	86.6	1.7	2.49	1.9	21,797	16,600	.261		

*Maximum fillet which corner radius of bearing will clear.



6000 SERIES (continued)



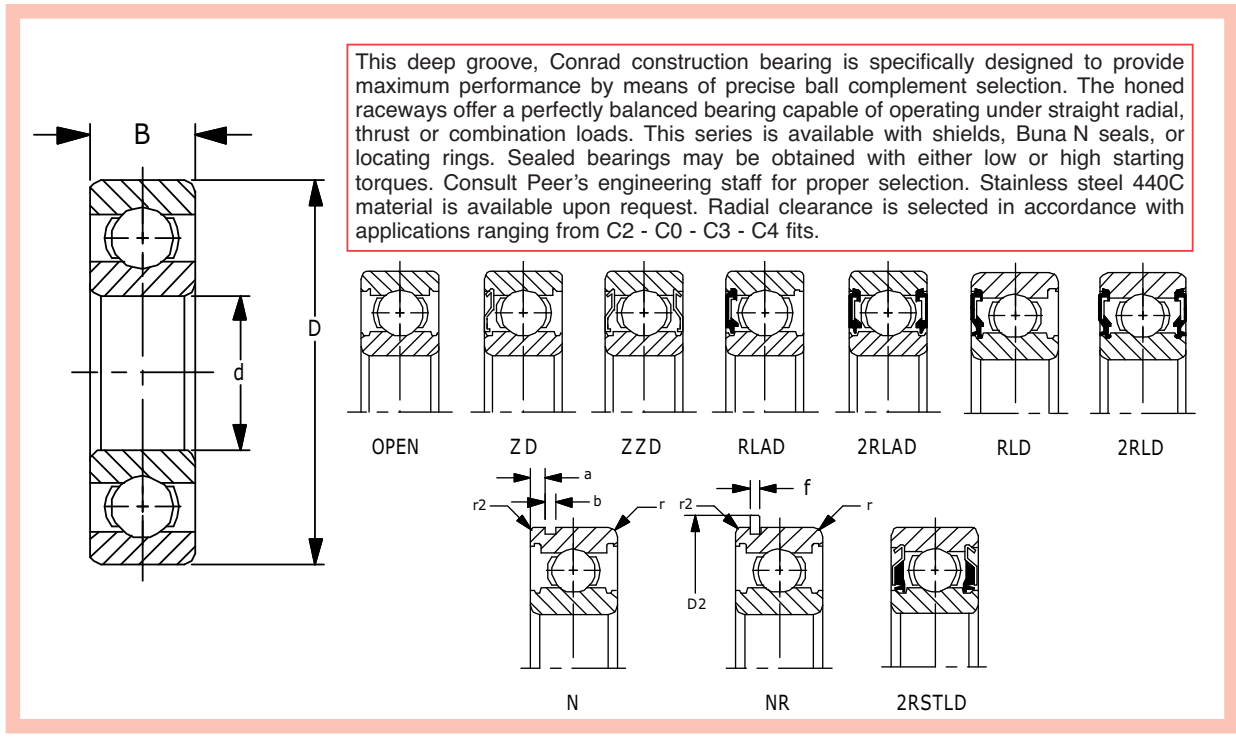
This deep groove, Conrad construction bearing is specifically designed to provide maximum performance by means of precise ball complement selection. The honed raceways offer a perfectly balanced bearing capable of operating under straight radial, thrust or combination loads. This series is available with shields, Buna N seals, or locating rings. Sealed bearings may be obtained with either low or high starting torques. Consult Peer's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance with applications ranging from C2 - C0 - C3 - C4 fits.

Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r2	D2 Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6011	2.1654	.0006	3.5433	.0006	.7087	.0059	.043	.020	3.799	.097	.113	.106	6,350	4,770	.855	9,000	7,700
	55	.015	90	.015	18	.150	1.1	.5	96.5	2.46	2.87	2.7	28,300	21,200	.388		
6012	2.3622	.0006	3.7402	.0006	.7087	.0059	.043	.020	4.000	.097	.113	.106	6,637	5,220	.913	8,300	7,000
	60	.015	95	.015	18	.150	1.1	.5	101.6	2.46	2.87	2.7	29,500	23,200	.414		
6013	2.5591	.0006	3.9370	.0006	.7087	.0059	.043	.020	4.193	.097	.113	.106	6,850	5,670	.968	7,700	6,500
	65	.015	100	.015	18	.150	1.1	.5	106.5	2.46	2.87	2.7	30,500	25,200	.439		
6014	2.7559	.0006	4.3307	.0006	.7874	.0059	.043	.020	4.591	.097	.113	.106	8,550	6,975	1.340	7,100	6,100
	70	.015	110	.015	20	.150	1.1	.5	116.6	2.46	2.87	2.7	38,000	31,000	.608		
6015	2.9528	.0006	4.5276	.0006	.7874	.0059	.043	.020	4.787	.097	.113	.106	8,890	7,537	1.431	6,700	5,700
	75	.015	115	.015	20	.150	1.1	.5	121.6	2.46	2.87	2.7	39,500	33,500	.649		
6016	3.1496	.0005	4.9213	.0007	.8661	.0059	.043	.020	5.303	.111	.113	.122	10,700	9,000	1.922	6,200	5,300
	80	.015	125	.018	22	.150	1.1	.5	134.7	2.82	2.87	3.1	47,500	40,000	.872		
6017	3.3465	.0008	5.1181	.0007	.8661	.0079	.043	.020	5.500	.111	.113	.122	11,137	9,675	2.024	5,900	5,000
	85	.020	130	.018	22	.200	1.1	.5	139.7	2.82	2.87	3.1	49,500	43,000	.918		
6018	3.5433	.0008	5.5118	.0007	.9449	.0079	.059	.020	5.894	.111	.146	.122	13,050	11,250	2.624	5,600	4,700
	90	.020	140	.018	24	.200	1.5	.5	149.7	2.82	3.71	3.1	58,000	50,000	1.190		
6019	3.7402	.0008	5.7087	.0007	.9449	.0079	.059	.020	6.091	.111	.146	.122	13,600	12,150	2.712	5,300	4,500
	95	.020	145	.018	24	.200	1.5	.5	154.7	2.82	3.71	3.1	60,500	54,000	1.230		
6020	3.9370	.0008	5.9055	.0007	.9449	.0079	.059	.020	6.287	.111	.146	.122	13,500	12,150	2.844	5,000	4,200
	100	.020	150	.018	24	.200	1.5	.5	159.7	2.82	3.71	3.1	60,000	54,000	1.290		
6021	4.1339	.0008	6.2992	.0010	1.0236	.0079	.079	.020	6.681	.111	.146	.122	16,300	14,8050	3.510	4,700	4,000
	105	.020	160	.025	26	.200	2.0	.5	169.7	2.82	3.71	3.1	72,500	66,000	1.592		
6022	4.3307	.0008	6.6929	.0010	1.1024	.0079	.079	.020	7.201	.122	.146	.138	19,125	16,400	4.321	4,500	3,800
	110	.020	170	.025	28	.200	2.0	.5	182.9	3.1	3.71	3.5	85,000	73,000	1.960		
6024	4.7244	.0008	7.0866	.0010	1.1024	.0079	.079	.020	7.594	.122	.146	.138	19,800	18,000	4.586	4,100	3,500
	120	.020	180	.025	28	.200	2.0	.5	192.9	3.1	3.71	3.5	88,000	80,000	2.080		
6026	5.1181	.0010	7.8740	.0012	1.2992	.0098	.079	.020	8.382	.122	.224	.138	23,850	22,700	7.187	3,800	3,200
	130	.025	200	.030	33	.250	2.0	.5	212.9	3.1	5.69	3.5	106,000	101,000	3.260		
6028	5.5118	.0010	8.2677	.0012	1.2992	.0098	.079	.020	8.776	.122	.224	.138	24,750	24,525	7.672	3,500	3,000
	140	.025	210	.030	33	.250	2.0	.5	222.9	3.1	5.69	3.5	110,000	109,000	3.480		
6030	5.9055	.0010	8.8583	.0012	1.3780	.0098	.083	.020	9.362	.122	.224	.138	28,350	28,350	9.348	3,200	2,800
	150	.025	225	.030	35	.250	2.1	.5	237.8	3.1	5.69	3.5	126,000	126,000	4.240		
6032	6.2992	.0010	9.4488	.0012	1.4961	.0098	.083	.020	9.957	.122	.224	.138	32,175	32,400	11.354	3,000	2,600
	160	.025	240	.030	38	.250	2.1	.5	252.9	3.1	5.69	3.5	143,000	144,000	5.150		
6034	6.6929	.0010	10.2362	.0014	1.6535	.0098	.083						37,800	38,700	15.190	2,800	2,400
	170	.025	260	.035	42	.250	2.1						168,000	172,000	6.890		
6036	7.0866	.0010	11.0236	.0014	1.8110	.0098	.083						42,500	44,775	19.400	2,700	2,300
	180	.025	280	.035	46	.250	2.1						189,000	199,000	8.800		
6038	7.4803	.0012	11.4173	.0014	1.8110	.0118	.083						44,325	48,375	20.701	2,500	2,100
	190	.030	290	.035	46	.300	2.1						197,000	215,000	9.390		
6040	7.8740	.0012	12.2047	.0014	2.0079	.0118	.083						49,050	54,675	26.455	2,400	2,000
	200	.030	310	.035	51	.300	2.1						218,000	243,000	12.000		

*Maximum fillet which corner radius of bearing will clear.

6200 SERIES



This deep groove, Conrad construction bearing is specifically designed to provide maximum performance by means of precise ball complement selection. The honed raceways offer a perfectly balanced bearing capable of operating under straight radial, thrust or combination loads. This series is available with shields, Buna N seals, or locating rings. Sealed bearings may be obtained with either low or high starting torques. Consult Peer's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance with applications ranging from C2 - C0 - C3 - C4 fits.

Units: Inches
Metric

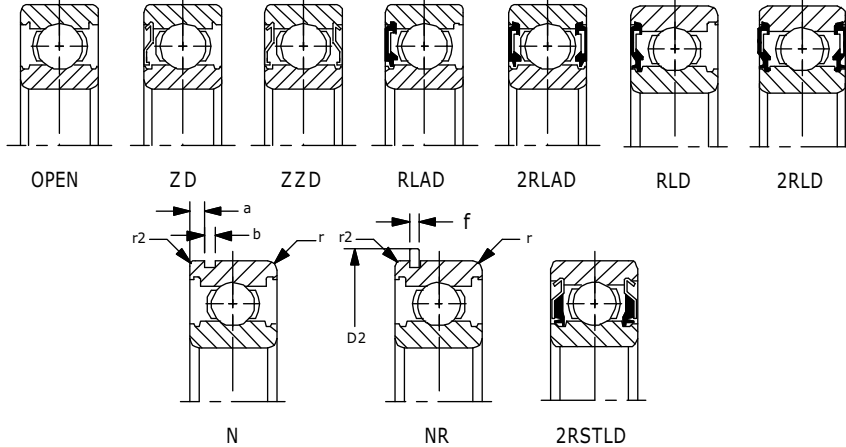
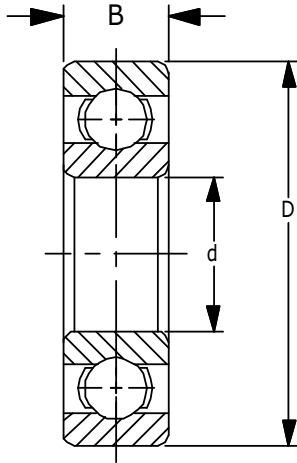
Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r2	D2 Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6200	.3937	.0003	1.1811	.0004	.3543	.0047	.024	.020	1.366	.044	.081	.053	1,150	540	.071	30,000	25,000
	10	.008	30	.009	9	.120	.6	.5	34.7	1.12	2.06	1.35	5,100	2,390	.032		
	12	.008	32	.011	10	.120	.6	.5	36.7	1.12	2.06	1.35	6,800	3,050	.037		
6201-8	.5000	.0003	1.2598	.0005	.3937	.0047	.024	.020	1.445	.044	.081	.053	1,530	680	.082	26,000	22,000
	12.7	.008	32	.011	10	.120	.6	.5	36.7	1.12	2.06	1.35	6,800	3,050	.037		
6201-13mm	.5118	.0003	1.2598	.0005	.3937	.0047	.024	.020	1.445	.044	.081	.053	1,530	680	.090	26,000	22,000
	13	.008	32	.011	10	.120	.6	.5	36.7	1.12	2.06	1.35	6,800	3,050	.041		
6202	.5906	.0003	1.3780	.0005	.4331	.0047	.024	.020	1.563	.044	.081	.053	1,740	839	.110	26,000	20,000
6202-10	15	.008	35	.011	11	.120	.6	.5	39.7	1.12	2.06	1.35	7,740	3,732	.050		
	.6250	.0003	1.3780	.0005	.4331	.0047	.024	.020	1.563	.044	.081	.053	1,740	839	.110	26,000	20,000
	15.875	.008	35	.011	11	.120	.6	.5	39.7	1.12	2.06	1.35	7,740	3,732	.050		
99502H	.6250	.0003	1.375	.0005	.4331	.0047	.024	.020	1.563	.044	.081	.053	1,740	839	.110	26,000	20,000
499502H	15.875	.008	34.93	.011	11	.120	.6	.5	39.7	1.12	2.06	1.35	7,740	3,732	.050		
	.6250	.0003	1.375	.0005	.4331	.0047	.024	.020	1.563	.044	.081	.053	1,740	839	.110	26,000	20,000
	15.875	.008	34.93	.011	11	.120	.6	.5	39.7	1.12	2.06	1.35	7,740	3,732	.050		
6202-16mm	.6299	.0003	1.3780	.0005	.4331	.0047	.024	.020	1.563	.044	.081	.053	1,740	839	.110	26,000	20,000
	16	.008	35	.011	11	.120	.6	.5	39.7	1.12	2.06	1.35	7,740	3,732	.050		
	.6693	.0003	1.5748	.0005	.4724	.0047	.024	.020	1.756	.044	.081	.053	2,160	1,080	.150	21,000	18,000
6203	17	.008	40	.011	12	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.068		
	.3750	.0003	1.5748	.0005	.4724	.0047	.024	.020	1.756	.044	.081	.053	2,160	1,080	.150	21,000	18,000
	9.525	.008	40	.011	12	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.068		
6203-8	.5000	.0003	1.5748	.0005	.4724	.0047	.024	.020	1.756	.044	.081	.053	2,150	1,080	.150	21,000	18,000
	12.7	.008	40	.011	12	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.068		
	.6250	.0003	1.5748	.0005	.4724	.0047	.024	.020	1.756	.044	.081	.053	2,150	1,080	.150	21,000	18,000
6203-10	15.875	.008	40	.011	12	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.068		
	.6299	.0003	1.5748	.0005	.4724	.0047	.024	.020	1.756	.044	.081	.053	2,150	1,080	.150	21,000	18,000
	16	.008	40	.011	12	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.068		

*Maximum fillet which corner radius of bearing will clear.



6200 SERIES (continued)

This deep groove, Conrad construction bearing is specifically designed to provide maximum performance by means of precise ball complement selection. The honed raceways offer a perfectly balanced bearing capable of operating under straight radial, thrust or combination loads. This series is available with shields, Buna N seals, or locating rings. Sealed bearings may be obtained with either low or high starting torques. Consult Peer's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance with applications ranging from C2 - C0 - C3 - C4 fits.

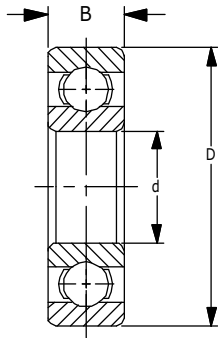


Units: Inches Metric

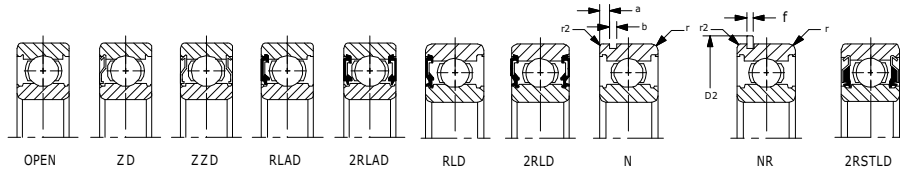
Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6203-12	.7500	.0003	1.5748	.0005	.4724	.0047	.024	.020	1.756	.044	.081	.053	2,150	1,080	.150	21,000	18,000
	19.05	.008	40	.011	12	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.068		
6204	.7874	.0004	1.8504	.0005	.5512	.0047	.039	.020	2.075	.044	.097	.053	2,880	1,480	.236	18,000	16,000
	20	.010	47	.011	14	.120	1.0	.5	52.7	1.12	2.46	1.35	12,811	6,580	.107		
6204-12	.7500	.0004	1.8504	.0005	.5512	.0047	.039	.020	2.075	.044	.097	.053	2,880	1,480	.236	18,000	16,000
	19.05	.010	47	.011	14	.120	1.0	.5	52.7	1.12	2.46	1.35	12,811	6,580	.107		
6204-14	.8750	.0004	1.8504	.0005	.5512	.0047	.039	.020	2.075	.044	.097	.053	2,880	1,480	.236	18,000	16,000
	22.225	.010	47	.011	14	.120	1.0	.5	52.7	1.12	2.46	1.35	12,811	6,580	.107		
Z9504-2RST	.7504	.0004	1.7805	.0005	.6100	.0047	.039	.020					2,880	1,480	.249	18,000	16,000
	19.016	.010	45.22	.011	15.49	.120	1.0	.5					12,811	6,580	.113		
62/22	.8661	.0004	1.9685	.0005	.5512	.0047	.059	.020	2.193	.044	.097	.053	2,900	1,530	.262	17,000	14,000
	22	.010	50	.011	14	.120	1.0	.5	55.7	1.12	2.46	1.35	12,900	6,806	.119		
6205	.9843	.0004	2.0472	.0005	.5906	.0047	.039	.020	2.280	.044	.097	.053	3,150	1,770	.284	15,000	13,000
	25	.010	52	.013	15	.120	1.0	.5	57.9	1.12	2.46	1.35	14,000	7,850	.129		
6205-14	.8750	.0004	2.0472	.0005	.5906	.0047	.039	.020	2.280	.044	.097	.053	3,150	1,770	.284	15,000	13,000
	22.225	.010	52	.013	15	.120	1.0	.5	57.9	1.12	2.46	1.35	14,000	7,850	.129		
6205-16	1.0000	.0004	2.0472	.0005	.5906	.0047	.039	.020	2.280	.044	.097	.053	3,150	1,770	.291	15,000	13,000
	25.4	.010	52	.013	15	.120	1.0	.5	57.9	1.12	2.46	1.35	14,000	7,850	.132		
62/28	1.1024	.0004	2.2835	.0005	.6299	.0047	.059	.020	2.508	.044	.097	.053	4,027	2,190	.386	14,000	12,000
	28	.010	58	.013	16	.120	1.5	.5	63.7	1.12	2.46	1.35	17,900	9,750	.175		
6206	1.1811	.0004	2.4409	.0005	.6299	.0047	.039	.020	2.665	.067	.129	.075	4,400	2,540	.262	13,000	11,000
	30	.010	62	.013	16	.120	1.0	.5	67.7	1.7	3.28	1.9	19,500	11,300	.119		
62/32	1.2598	.0005	2.5591	.0005	.6693	.0047	.059	.020	2.783	.067	.129	.075	4,657	2,600	.498	12,000	11,000
	32	.012	65	.013	17	.120	1.5	.5	70.7	1.7	3.28	1.9	20,700	11,600	.226		
6207	1.3780	.0005	2.8346	.0005	.6693	.0047	.043	.020	3.094	.067	.129	.075	5,782	3,442	.626	11,000	9,300
	35	.012	72	.013	17	.120	1.1	.5	78.6	1.7	3.28	1.9	25,700	15,300	.284		
6208	1.5748	.0005	3.1496	.0005	.7087	.0047	.043	.020	3.409	.067	.129	.075	6,550	4,000	.807	10,000	8,700
	40	.012	80	.013	18	.120	1.1	.5	86.6	1.7	3.28	1.9	29,100	17,900	.366		
6209	1.7717	.0005	3.3465	.0006	.7480	.0047	.043	.020	3.606	.067	.129	.075	7,350	4,580	.939	9,200	7,800
	45	.012	85	.015	19	.120	1.1	.5	91.6	1.7	3.28	1.9	32,700	20,400	.426		

*Maximum fillet which corner radius of bearing will clear.

6200 SERIES (continued)



This deep groove, Conrad construction bearing is specifically designed to provide maximum performance by means of precise ball complement selection. The honed raceways offer a perfectly balanced bearing capable of operating under straight radial, thrust or combination loads. This series is available with shields, Buna N seals, or locating rings. Sealed bearings may be obtained with either low or high starting torques. Consult Peer's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance with applications ranging from C2 - C0 - C3 - C4 fits.



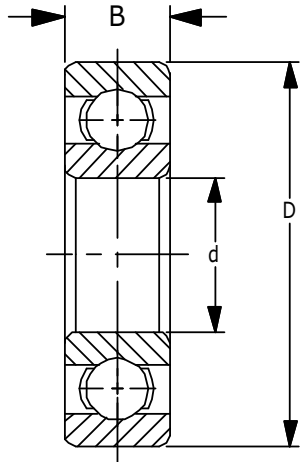
Units: Inches Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm) oil grease	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6210	1.9685	.0005	3.5433	.0006	.7874	.0047	.043	.020	3.799	.097	.129	.106	7,875	5,220	1.012	8,300	7,100
	50	.012	90	.015	20	.120	1.1	.5	96.5	2.46	3.28	2.7	35,000	23,200	.459		
6211	2.1654	.0006	3.9370	.0006	.8268	.0059	.059	.020	4.193	.097	.129	.106	9,800	6,580	1.365	7,600	6,400
	55	.015	100	.015	21	.150	1.5	.5	106.5	2.46	3.28	2.7	43,500	29,300	.619		
6212	2.3622	.0006	4.3307	.0006	.8661	.0059	.059	.020	4.591	.097	.129	.106	11,800	8,100	1.720	7,000	6,000
	60	.015	110	.015	22	.150	1.5	.5	116.6	2.46	3.28	2.7	52,500	36,000	.780		
6213	2.5591	.0006	4.7244	.0006	.9055	.0059	.059	.020	5.106	.111	.160	.122	12,937	9,037	2.220	6,500	5,500
	65	.015	120	.015	23	.150	1.5	.5	129.7	2.82	4.06	3.1	57,500	40,000	1.007		
6214	2.7559	.0006	4.9213	.0007	.9449	.0059	.059	.020	5.303	.111	.160	.122	13,950	9,900	2.410	6,000	5,100
	70	.015	125	.018	24	.150	1.5	.5	134.7	2.82	4.06	3.1	62,000	44,000	1.093		
6215	2.9528	.0006	4.1181	.0007	.9843	.0059	.059	.020	5.500	.111	.160	.122	14,900	11,100	2.620	5,600	4,800
	75	.015	130	.018	25	.150	1.5	.5	139.7	2.82	4.06	3.1	66,000	49,500	1.190		
6216	3.1496	.0006	5.5118	.0007	1.0236	.0059	.079	.020	5.894	.111	.193	.122	16,300	11,925	3.130	5,300	4,500
	80	.015	140	.018	26	.150	2.0	.5	149.7	2.82	4.9	3.1	72,500	53,000	1.420		
6217	3.3465	.0008	5.9055	.0007	1.1024	.0079	.079	.020	6.287	.111	.193	.122	18,787	14,400	3.880	5,000	4,200
	85	.020	150	.018	28	.200	2.0	.5	159.7	2.82	4.9	3.1	83,500	64,000	1.760		
6218	3.5433	.0008	6.2992	.0010	1.1811	.0079	.079	.020	6.681	.111	.193	.122	21,000	16,100	4.800	4,700	4,000
	90	.020	160	.025	30	.200	2.0	.5	167.7	2.82	4.9	3.1	96,000	71,500	2.180		
6219	3.7402	.0008	6.6929	.0010	1.2598	.0079	.083	.020	7.201	.122	.224	.138	24,525	18,450	5.820	4,400	3,700
	95	.020	170	.025	32	.200	2.1	.5	182.9	3.1	5.69	3.5	109,000	82,000	2.640		
6220	3.9370	.0008	7.0866	.0010	1.3386	.0079	.083	.020	7.594	.122	.224	.138	27,500	20,900	7.200	4,200	3,500
	100	.020	180	.025	4	.200	2.1	.5	192.9	3.1	5.69	3.5	122,000	93,000	3.266		
6221	4.1339	.0008	7.4803	.0012	1.4173	.0079	.083	.020	7.988	.122	.224	.138	29,900	23,500	8.350	4,000	3,400
	105	.020	190	.030	36	.200	2.1	.5	202.9	3.1	5.69	3.5	133,000	105,000	3.790		
6222	4.3307	.0008	7.8740	.0012	1.4961	.0079	.083	.020	8.382	.122	.224	.138	32,400	26,325	9.810	3,800	3,200
	110	.020	200	.030	38	.200	2.1	.5	212.9	3.1	5.69	3.5	144,500	117,000	4.450		
6224	4.7244	.0008	7.4646	.0012	1.5748	.0079	.083	.020	34,875				29,475	11.660	3,400	2,900	
	120	.020	215	.030	40	.200	2.1		155,000				131,000	5.290			
6226	5.1181	.0010	9.0551	.0012	1.5748	.0098	.118		37,575				32,850	13.140	3,100	2,700	
	130	.025	230	.030	40	.250	3.0		167,000				146,000	5.960			
6228	5.5118	.0010	9.8425	.0012	1.6535	.0098	.118		37,350				33,500	16.900	2,900	2,500	
	140	.025	250	.030	42	.250	3.0		166,000				149,750	7.566			
6230	5.9055	.0010	1.6299	.0014	1.7717	.0098	.118		39,600				37,500	22.050	2,700	2,300	
	150	.025	270	.035	45	.250	3.0		175,600				150,000	10.002			
6232	6.2992	.0010	11.4173	.0014	1.8898	.0098	.118		41,625				42,800	28.200	2,500	2,100	
	160	.025	290	.035	48	.250	3.0		185,000				186,000	12.800			
6234	6.6929	.0010	12.2047	.0014	2.0472	.0098	.157		47,700				50,400	34.800	2,400	2,000	
	170	.025	310	.035	52	.250	4.0		212,000				224,000	15.785			
6236	7.0866	.0010	12.5984	.0016	2.0472	.0098	.157		51,075				54,225	34.800	2,200	1,900	
	180	.025	320	.040	52	.250	4.0		227,000				241,000	15.785			
6238	7.4803	.0012	13.3858	.0016	2.1654	.0118	.157		57,335				63,450	49.170	2,100	1,800	
	190	.030	340	.040	55	.300	4.0		255,000				282,000	22.303			

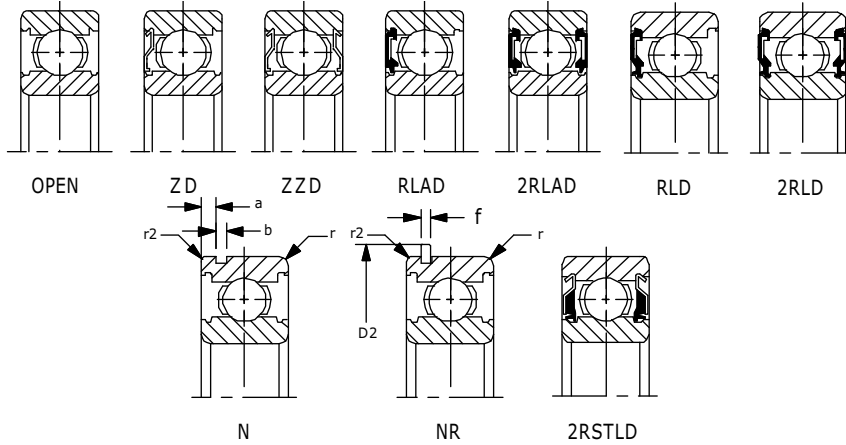
*Maximum fillet which corner radius of bearing will clear.



6300 SERIES



Similar in function to the 6200 series. Produced with larger ball complement enabling the bearing to withstand greater radial and thrust for a given bore size. This series is available with shields, Buna N seals, or locating rings. Sealed bearings may be obtained with either low or high starting torques. Consult Peer's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance with applications ranging from C2 - C0 - C3 - C4 fits.

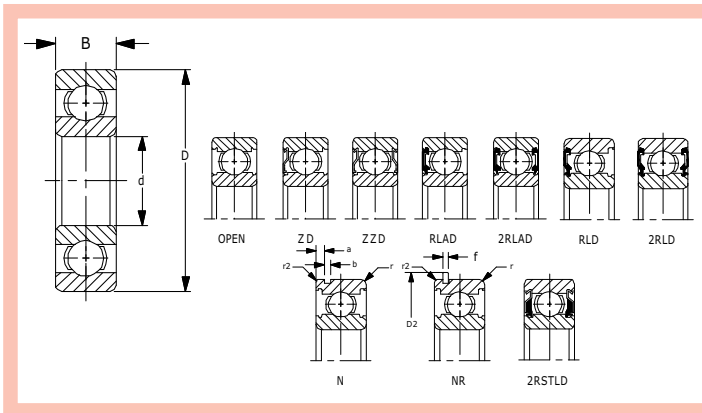


Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6300	.3937	.0003	1.3780	.0005	.4331	.0047	.024	.020	1.563	.044	.081	.053	1,845	785	.110	27,000	23,000
	10	.008	35	.011	11	.120	.6	.5	39.7	1.12	2.06	1.35	8,200	3,500	.050		
6301	.4724	.0003	1.4567	.0005	.4724	.0047	.039	.020	1.626	.044	.081	.053	2,180	940	.132	24,000	20,000
	12	.008	37	.011	12	.120	1.0	.5	41.3	1.12	2.06	1.35	9,700	4,200	.056		
6302	.5906	.0003	1.6535	.0005	.5118	.0047	.039	.020	1.823	.044	.081	.053	2,570	1,220	.150	21,000	17,000
	15	.008	42	.011	13	.120	1.0	.5	46.3	1.12	2.06	1.35	11,400	5,450	.068		
6303	.6693	.0003	1.8504	.0005	.5512	.0047	.039	.020	2.075	.044	.097	.053	3,060	1,470	.249	19,000	16,000
	17	.008	47	.011	14	.120	1.0	.5	52.7	1.12	2.46	1.35	13,600	6,650	.113		
6304	.7874	.0004	1.0472	.0005	.5906	.0047	.043	.020	2.280	.044	.097	.053	3,600	1,770	.319	17,000	14,000
	20	.010	52	.013	15	.120	1.1	.5	57.9	1.12	2.46	1.35	15,900	7,900	.145		
63/22	.8661	.0004	2.2047	.0005	.6299	.0047	.043	.020	2.429	.044	.097	.053	4,140	2,080	.394	15,000	13,000
	22	.010	56	.013	16	.120	1.1	.5	61.7	1.12	2.46	1.35	18,400	9,250	.179		
6305	.9843	.0004	2.4409	.0005	.6693	.0047	.043	.020	2.665	.067	.129	.075	4,750	2,460	.518	14,000	12,000
	25	.010	62	.013	17	.120	1.1	.5	67.7	1.7	3.28	1.9	21,200	11,200	.235		
63/28	1.1024	.0004	2.6772	.0005	.7087	.0047	.043	.020	2.937	.067	.129	.075	6,000	3,150	.633	13,000	11,000
	28	.010	68	.013	18	.120	1.1	.5	74.6	1.7	3.28	1.9	26,700	14,000	.287		
6306	1.1811	.0004	2.8346	.0005	.7480	.0047	.043	.020	3.094	.067	.129	.075	6,000	3,375	.760	12,000	10,000
	30	.010	72	.013	19	.120	1.1	.5	78.6	1.7	3.28	1.9	26,700	15,000	.345		
63/32	1.2598	.0005	2.9528	.0005	.7874	.0047	.043	.020	3.213	.067	.129	.075	6,727	3,825	.857	11,000	9,500
	32	.012	75	.013	20	.120	1.1	.5	81.6	1.7	3.28	1.9	29,900	17,000	.389		
6307	1.3780	.0005	3.1496	.0005	.8268	.0047	.059	.020	3.409	.067	.129	.075	7,537	4,320	1.030	10,000	8,800
	35	.012	80	.013	21	.120	1.5	.5	86.6	1.7	3.28	1.9	33,500	19,200	.464		
6308	1.5748	.0005	3.5433	.0006	.9055	.0047	.059	.020	3.799	.097	.129	.106	9,112	5,400	1.410	9,200	7,800
	40	.012	90	.015	23	.120	1.5	.5	96.5	2.46	3.28	2.7	40,500	24,000	.640		
6309	1.7717	.0005	3.9370	.0006	.9843	.0047	.059	.020	4.193	.097	.129	.106	11,925	7,200	1.82	8,200	7,000
	45	.012	100	.015	25	.120	1.5	.5	106.5	2.46	3.28	2.7	53,000	32,000	.829		

*Maximum fillet which corner radius of bearing will clear.

6300 SERIES (continued)



Similar in function to the 6200 series. Produced with larger ball complement enabling the bearing to withstand greater radial and thrust for a given bore size. This series is available with shields, Buna N seals, or locating rings. Sealed bearings may be obtained with either low or high starting torques. Consult Peer's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance with applications ranging from C2 - C0 - C3 - C4 fits.

Units: Inches
Metric

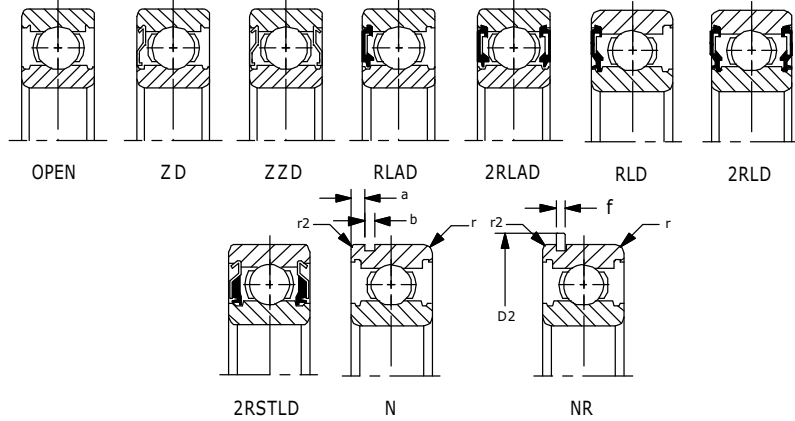
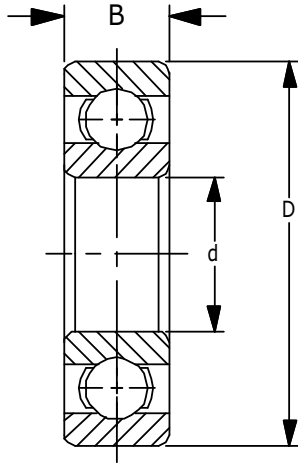
Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r2	D2 Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6310	1.9685	.0005	4.3307	.0006	1.0630	.0047	.079	.020	4.591	.097	.129	.106	13,950	8,600	2.470	7,500	6,400
	50	.012	110	.015	27	.120	2.0	.5	116.6	2.46	3.28	2.7	62,000	38,500	1.120		
6311	2.1654	.0006	4.7244	.0006	1.1417	.0059	.079	.020	5.106	.111	.160	.122	16,100	10,125	3.070	6,800	5,800
	55	.015	120	.015	29	.150	2.0	.5	129.7	2.82	4.06	3.1	71,500	45,000	1.393		
6312	2.3622	.0006	5.1181	.0007	1.2205	.0059	.079	.020	5.500	.111	.160	.122	18,450	11,700	3.810	6,300	5,400
	60	.015	130	.018	31	.150	2.1	.5	139.7	2.82	4.06	3.1	82,000	52,000	1.728		
6313	2.5591	.0006	5.5118	.0007	1.2992	.0059	.079	.020	5.894	.111	.193	.122	20,800	13,500	4.700	5,800	4,900
	65	.015	140	.018	33	.150	2.1	.5	149.7	2.82	4.9	3.1	92,500	60,000	2.110		
6314	2.7559	.0006	5.9055	.0007	1.3780	.0059	.079	.020	6.287	.111	.193	.122	23,400	15,300	5.720	5,400	4,600
	70	.015	150	.018	35	.150	2.1	.5	159.7	2.82	4.9	3.1	104,000	68,000	2.595		
6315	2.9528	.0006	6.2992	.0010	1.4567	.0059	.079	.020	6.681	.111	.193	.122	25,425	17,325	8.37	5,000	4,300
	75	.015	160	.025	37	.150	2.1	.5	169.7	2.82	4.9	3.1	113,000	77,000	3.80		
6316	3.1496	.0006	6.6929	.0010	1.5354	.0059	.079	.020	7.201	.122	.224	.138	27,675	19,460	8.130	4,700	4,000
	80	.015	170	.025	39	.150	2.1	.5	182.9	3.1	5.69	3.5	123,000	86,500	3.688		
6317	3.3465	.0008	7.0866	.0012	1.6142	.0079	.118	.020	7.594	.122	.224	.138	29,925	21,825	9.73	4,500	3,800
	85	.020	180	.025	41	.200	3.0	.5	192.9	3.1	5.69	3.5	133,000	97,000	4.28		
6318	3.5433	.0008	7.4803	.0012	1.6929	.0079	.118	.020	7.988	.122	.224	.138	32,175	24,075	11.000	4,200	3,600
	90	.020	190	.030	43	.200	3.0	.5	202.9	3.1	5.69	3.5	143,000	107,000	4.990		
6319	3.7402	.0008	7.8740	.0012	1.7717	.0079	.118	.020	8.382	.122	.224	.138	34,425	26,775	12.800	3,900	3,300
	95	.020	200	.030	45	.200	3.0	.5	212.9	3.1	5.69	3.5	153,000	119,000	5.806		
6320	3.9370	.0008	8.4646	.0012	1.8504	.0079	.118	.020	8.786	.122	.224	.138	38,925	31,725	15.52	3,700	3,200
	100	.020	215	.030	47	.200	3.0	.5	173.00				141,000	7.04			
6321	4.1339	.0008	8.8583	.0012	1.9291	.0079	.118	.020	9.180	.122	.224	.138	41,400	34,650	18.300	3,600	3,000
	105	.020	225	.030	49	.200	3.0	.5	184.00				154,000	8.09			
6322	4.3307	.0008	9.4488	.0012	1.9685	.0079	.118	.020					46,125	40,275	20.9	3,400	2,900
	110	.020	240	.030	50	.200	3.0	.5	205.000				180,160	9.51			
6324	4.7244	.0008	10.2362	.0014	2.1654	.0079	.118	.020					46,575	41,625	27.56	3,100	2,600
	120	.020	260	.035	55	.200	3.0	.5	207,000				185,000	12.53			
6326	5.1181	.0010	11.0236	.0014	2.2835	.0098	.157	.020					51,525	48,150	33.700	2,800	2,400
	130	.025	280	.035	58	.250	4.0	.5	229,000				214,000	15.286			
6328	5.5118	.0010	11.8110	.0014	2.4409	.0098	.157	.020					56,925	55,350	40.800	2,600	2,200
	140	.025	300	.035	62	.250	4.0	.5	253,000				246,000	18.507			
6330	5.9055	.0010	12.5984	.0016	2.5591	.0098	.157	.020					61,500	63,900	50.05	2,400	2,100
	150	.025	320	.040	65	.120	4.0	.5	274,000				284,000	22.70			
6332	6.2992	.0010	13.3858	.0016	2.6772	.0098	.157	.020					62,550	64,575	57.77	2,300	1,900
	160	.025	340	.040	68	.120	4.0	.5	278,000				287,000	26.2			
6334	6.6929	.0010	14.1732	.0016	2.8346	.0098	.157	.020					73,125	79,875	80.7	2,100	1,800
	170	.025	360	.040	72	.120	4.0	.5	325,000				355,000	36.6			
6336	7.0866	.0012	14.9606	.0016	2.9528	.0098	.157	.020					79,875	91,150	95.63	2,000	1,700
	180	.025	380	.040	75	.120	4.0	.5	355,000				4075,000	8.10			
6338	7.4803	.0012	15.7480	.0016	3.0709	.0118	.197	.020					79,875	93,375	109.6	1,900	1,600
	190	.030	400	.040	78	.300	5.0	.5	355,000				415,000	49.7			
6340	7.8740	.0012	16.5354	.0018	3.1496	.0118	.197	.020					92,250	112,500	122.000	1,800	1,500
	200	.030	420	.045	80	.300	5.0	.5	410,000				500,000	55.339			

*Maximum fillet which corner radius of bearing will clear.



6400 SERIES

Similar to the 6200 and 6300 series offering various options such as shields, seals and locating rings. Manufactured with a larger ball size enabling the user to significantly increase the load using basically the same shaft parameters.

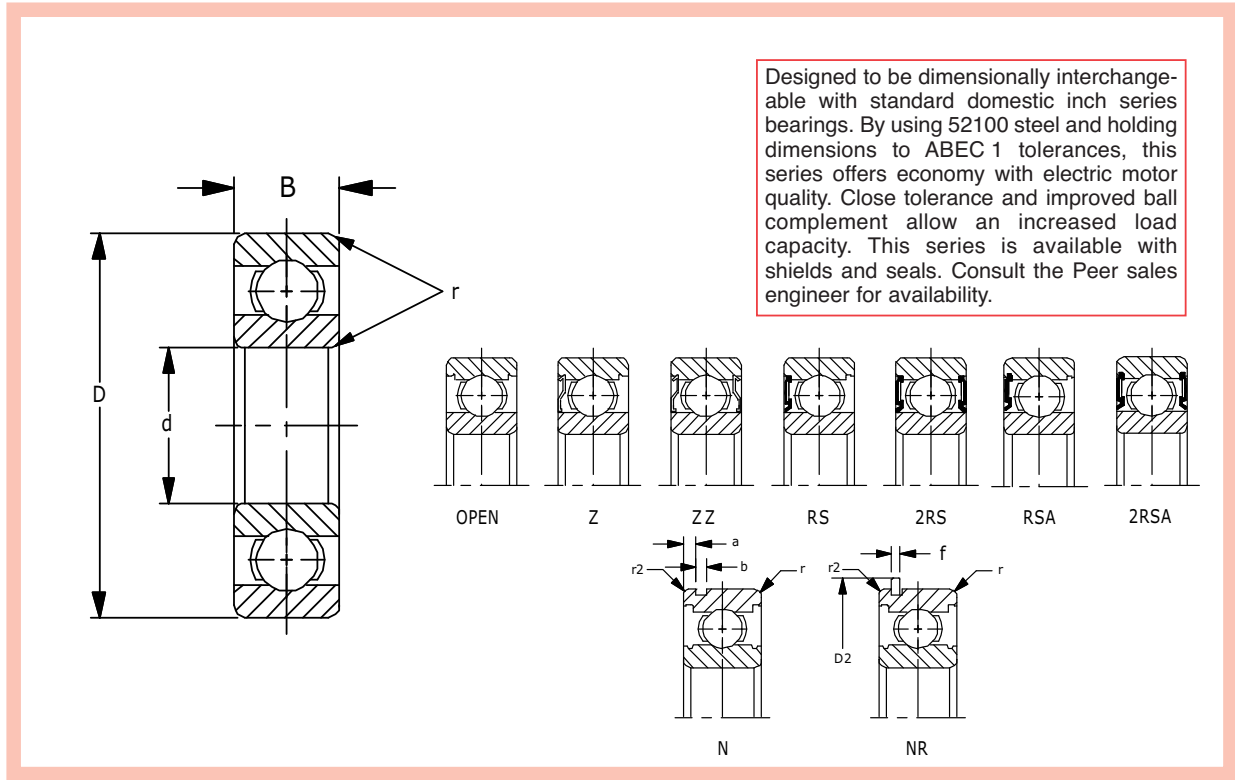


Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
6403	.6693	.0003	2.4409	.0005	.6693	.0047	.043	.020	2.665	.067	.129	.075	5,300	2,500	.600	16,000	14,000
	17	.008	62	.013	17	.120	1.1	.5	67.7	1.7	3.28	1.9	23,574	11,120	.272		
6404	.7874	.0004	2.8346	.0005	.7874	.0047	.043	.020	3.091	.067	.129	.075	6,950	3,350	.900	14,000	12,000
	20	.010	72	.013	19	.120	1.1	.5	78.5	1.7	3.28	1.9	30,913	14,902	.408		
6405	.9843	.0004	3.1496	.0005	.8268	.0047	.059	.020	3.406	.067	.129	.075	8,150	4,300	1.220	12,000	10,000
	25	.010	80	.013	21	.120	1.5	.5	86.5	1.7	3.28	1.9	36,251	19,128	.553		
6406	1.1811	.0004	3.5433	.0006	.9055	.0047	.059	.020	3.800	.097	.129	.106	9,750	5,350	1.640	10,000	8,800
	30	.010	90	.015	23	.120	1.5	.5	96.5	2.46	3.28	2.7	43,368	23,796	.744		
6407	1.3780	.0005	3.9370	.0006	.9842	.0047	.059	.020	4.1933	.097	.129	.106	12,200	6,950	2.160	9,100	7,800
	35	.012	100	.015	25	.120	1.5	.5	106.5	2.46	3.28	2.7	54,270	30,913	.980		
6408	1.5748	.0005	4.3307	.0006	1.0630	.0047	.079	.020	4.57	.097	.129	.106	14,300	8,200	2.800	8,200	7,000
	40	.012	110	.015	27	.120	2.0	.5	116.5	2.46	3.28	2.7	63,612	36,477	1.270		
6409	1.7717	.0005	4.7244	.0006	1.1417	.0047	.079	.020	5.102	.111	.160	.122	17,300	10,200	3.480	7,400	6,300
	45	.012	120	.015	29	.120	2.0	.5	129.6	2.82	4.06	3.1	79,950	45,369	1.579		
6410	1.9685	.0005	5.1181	.0007	1.2205	.0047	.083	.020	5.496	.111	.160	.122	19,600	11,600	4.340	6,700	5,700
	50	.012	130	.018	31	.120	2.1	.5	139.6	2.82	4.06	3.1	87,180	51,596	1.970		
6411	2.1654	.0006	5.5118	.0007	1.2992	.0059	.083	.020	5.894	.111	.193	.122	22,400	14,000	5.250	6,100	5,200
	55	.015	140	.018	33	.150	2.1	.5	149.7	2.82	4.9	3.1	99,635	62,272	2.381		
6412	2.3622	.0006	5.9055	.0007	1.3780	.0059	.083	.020	6.287	.111	.193	.122	24,500	15,600	6.370	5,700	4,800
	60	.015	150	.018	35	.150	2.1	.5	159.7	2.82	4.9	3.1	108,976	69,388	2.890		
6413	2.5591	.0006	6.2992	.0010	1.4567	.0059	.083	.020	6.677	.122	.193	.122	26,500	17,600	7.580	5,200	4,400
	65	.015	160	.020	37	.150	2.1	.5	169.6	2.82	4.9	3.1	117,872	78,284	3.440		
6414	2.7559	.0006	7.0866	.0010	1.6535	.0059	.118	.020	7.594	.122	.224	.138	32,000	23,200	10.300	4,800	4,100
	70	.015	180	.020	42	.150	3.0	.5	192.9	3.1	5.69	3.5	142,349	103,193	4.672		
6415	2.9528	.0006	7.4803	.0012	1.7717	.0059	.118	.020	7.984	.122	.224	.138	34,500	25,500	15.000	4,500	3,800
	75	.015	190	.030	45	.150	3.0	.5	202.8	3.1	5.69	3.5	153,456	113,434	6.804		
6416	3.1496	.0006	7.8740	.0012	1.8898	.0059	.118	.020	8.382	.122	.224	.138	36,500	28,000	17.800	4,200	3,500
	80	.015	200	.030	48	.150	3.0	.5	212.9	3.1	5.69	3.5	162,367	124,544	8.074		
6417	3.3465	.0008	8.2677	.0012	2.0472	.0079	.157	.020	8.776	.122	.224	.138	39,000	30,500	21.000	4,000	3,400
	85	.020	210	.030	52	.200	4.0	.5	222.9	3.1	5.69	3.5	173,472	135,664	9.526		
6418	3.5433	.0008	8.8583	.0012	2.1260	.0079	.157	.020	9.362	.122	.224	.138	44,000	36,500	25.000	3,800	3,200
	90	.020	225	.030	54	.200	4.0	.5	237.8	3.1	5.69	3.5	195,712	162,352	11.340		

*Maximum fillet which corner radius of bearing will clear.

1600 SERIES



Units: Inches
Metric

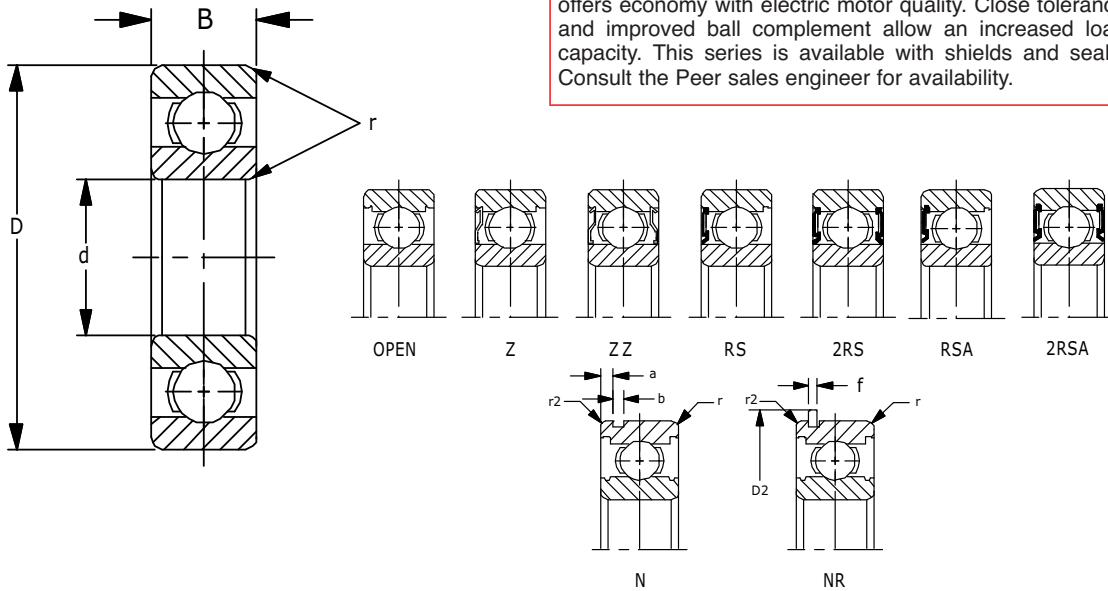
Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width (inch) (B)	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings	
								Dynamic Cr	Static Cor
1601	3/16	.0010	1 1/16	.0005	1/4	.0050	.012	490	168
	.1875		.6875		‡.2500			2,180	748
1602	1/4	.0005	1 1/16	.0005	1/4	.0050	.012	545	196
	.2500		.6875		‡.2500			2,424	872
1603	5/16	.0005	7/8	.0005	9/32	.0050	.012	825	317
	.3125		.8750		‡.2812			3,670	1,411
1604	3/8	.0005	7/8	.0005	9/32	.0050	.015	825	317
	.3750		.8750		‡.2812			3,670	1,411
1605	5/16	.0005	29/32	.0005	5/16	.0050	.012	835	326
1606	.3125	.0005	.9062	.0005	.3125	.0050	.015	3,714	1,449
	3/8		29/32		5/16			835	326
1607	.3750	.0008	.9062	.0005	.3125	.0050	.015	3,714	1,449
	7/16		29/32		5/16			835	326
1614	.4375	.0005	.9062	.0005	.3125	.0050	.025	3,714	1,449
	3/8		1 1/8		3/8			1265	538
1615	.3750	.0005	1.1250	.0005	.3750	.0050	.025	5,627	2,392
	7/16		1 1/8		3/8			1265	538
1616	.4375	.0005	1.1250	.0005	.3750	.0050	.025	5,627	2,392
	1/2		1 1/8		3/8			1265	538
1620	.5000	.0005	1.1250	.0005	.3750	.0050	.025	5,627	2,392
	7/16		1 3/8		7/16			1890	836
1621	.4375	.0005	1.3750	.0005	.4375	.0050	.025	8,407	3,716
	1/2		1 3/8		7/16			1890	836
	.5000		1.3750		.4375			8,407	3,716

*Maximum fillet which corner radius of bearing will clear. †Width 5/16 for RS and 2RS types. ‡Width 11/32 for RS and 2RS types.



1600 SERIES (continued)

Designed to be dimensionally interchangeable with standard domestic inch series bearings. By using 52100 steel and holding dimensions to ABEC 1 tolerances, this series offers economy with electric motor quality. Close tolerance and improved ball complement allow an increased load capacity. This series is available with shields and seals. Consult the Peer sales engineer for availability.

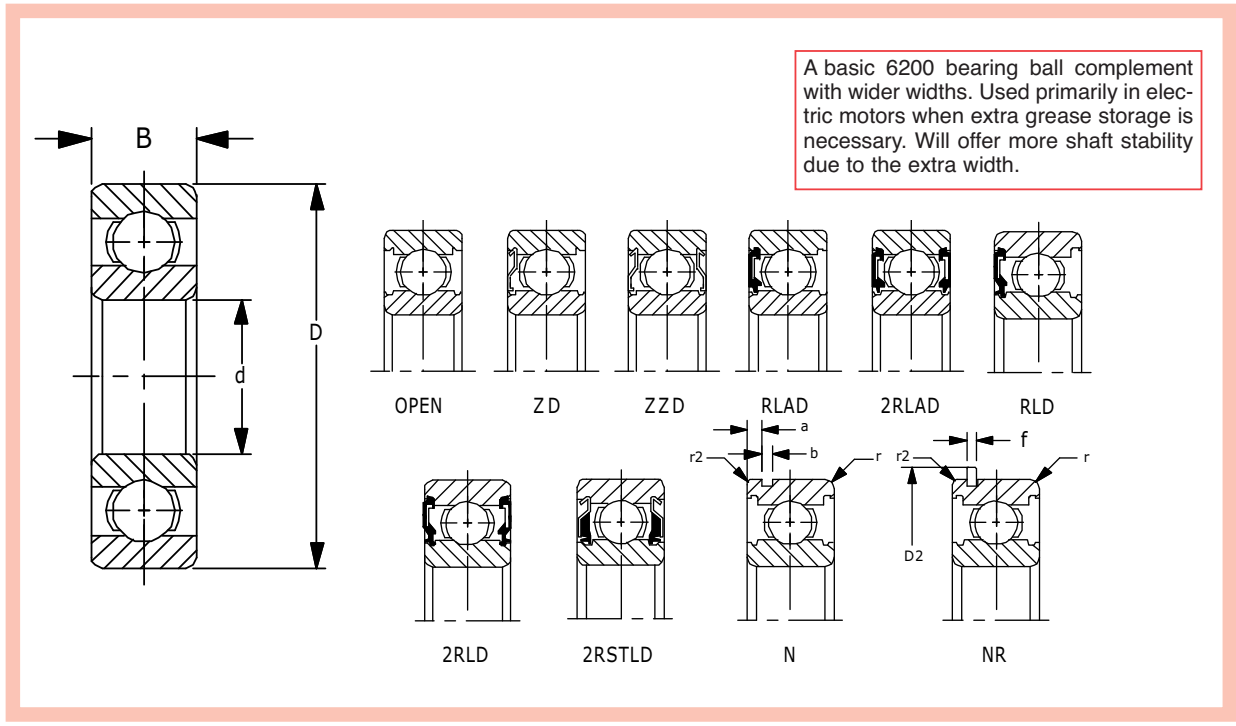


Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width (inch)	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings	
								Dynamic Cr	Static Cor
1622	9/16	.0005	1 3/8	.0005	7/16	.0050	.025	1890	836
	.5625		1.3750		.4375			8,407	3,716
1623	5/8	.0005	1 3/8	.0005	7/16	.0050	.025	1890	836
	.6250		1.3750		.4375			8,407	3,716
1628	5/8	.0005	1 3/8	.0005	1/2	.0050	.025	2600	1010
	.6250		1.6250		.5000			11,564	4,492
1630	3/4	.0005	1 3/8	.0005	1/2	.0050	.025	2320	1117
	.7500		1.6250		.5000			10,320	4,966
1633	5/8	.0005	1 3/4	.0005	1/2	.0050	.025	2325	1142
	.6250		1.7500		.5000			10,343	5,079
1635	3/4	.0005	1 3/4	.0005	1/2	.0050	.025	2325	1142
	.7500		1.7500		.5000			10,343	5,079
1638	3/4	.0005	2	.0006	9/16	.0047	.035	2485	1338
	.7500		2.0000		.5625			11,054	5,952
1640	7/8	.0005	2	.0006	9/16	.0047	.035	2485	1338
	.8750		2.0000		.5625			11,054	5,952
1641	1	.0005	2	.0006	9/16	.0047	.035	3465	1752
	1.0000		2.0000		.5625			15,414	7,794
1652	1 1/8	.0005	2 1/2	.0006	5/8	.0047	.035	3955	2300
	1.1250		2.5000		.6250			17,593	10,231
1654	1 1/4	.0005	2 1/2	.0006	5/8	.0047	.035	3955	2300
	1.2500		2.5000		.6250			17,593	10,231
1657	1 1/4	.0005	2 3/16	.0006	1 1/16	.0047	.035	390	2317
	1.2500		2.5625		.6875			17,571	10,305
1658	1 5/16	.0005	2 3/16	.0006	1 1/16	.0047	.035	3950	2317
	1.3125		2.5625		.6875			17,571	10,305

*Maximum fillet which corner radius of bearing will clear.

W6200 CARTRIDGE SERIES



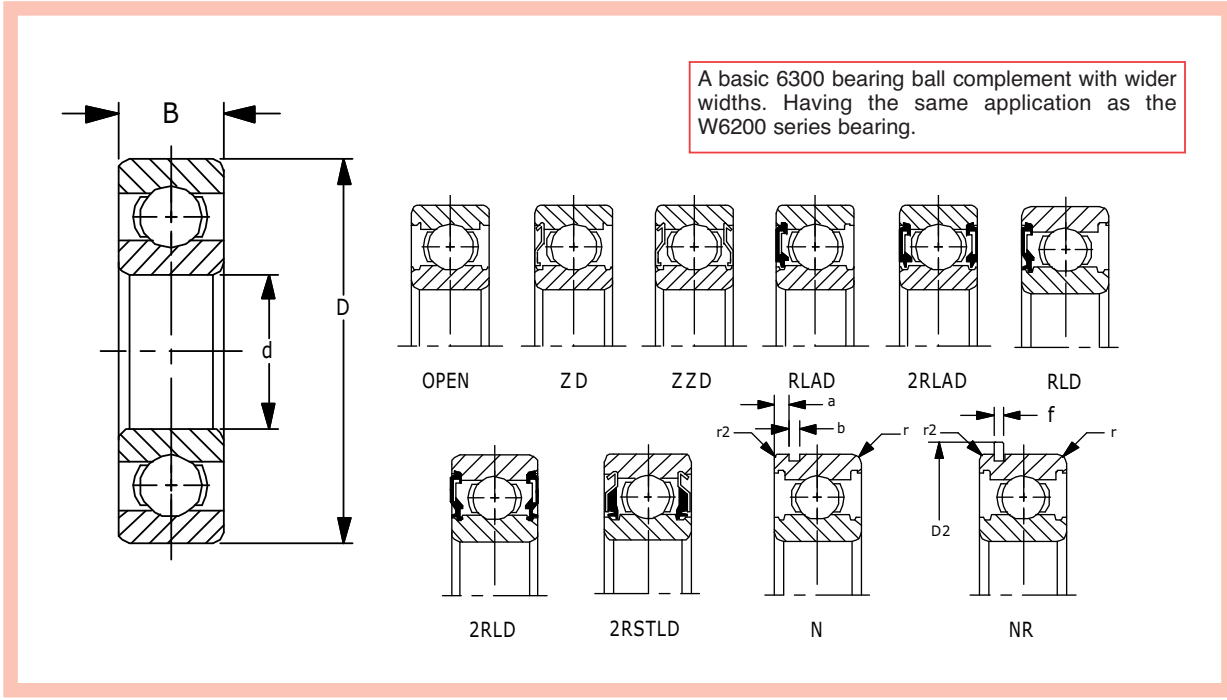
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic Cr	Static Cor		oil	grease
W6200	.3937	.0003	1.1811	.0004	.562	.0047	.024	.020	1.366	.044	.081	.053	1,150	540	.100	30,000	25,000
	10	.008	30	.009	14.27	.120	.6	.5	34.7	1.12	2.06	1.35	5,100	2,390	.045		
W6201	.4724	.0003	1.2598	.0005	.625	.0047	.024	.020	1.445	.044	.081	.053	1,530	680	.120	26,000	22,000
	12	.008	32	.011	15.58	.120	.6	.5	36.7	1.12	2.06	1.35	6,800	3,054	.054		
W6202	.5906	.0003	1.3780	.0005	.625	.0047	.024	.020	1.563	.044	.081	.053	1,740	839	.150	26,000	20,000
	15	.008	35	.011	15.58	.120	.6	.5	39.7	1.12	2.06	1.35	7,740	3,732	.068		
W6203	.6693	.0003	1.5748	.0005	.688	.0047	.024	.020	1.756	.044	.081	.053	2,160	1,080	.220	21,000	18,000
	17	.008	40	.011	17.48	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.100		
W6204	.7874	.0004	1.8504	.0005	.812	.0047	.039	.020	2.075	.044	.097	.053	2,880	1,480	.340	18,000	16,000
	20	.010	47	.011	20.62	.120	1.0	.5	52.7	1.12	2.46	1.35	12,811	6,580	.154		
W6205	.9743	.0004	2.0472	.0005	.812	.0047	.039	.020	2.280	.044	.097	.053	3,150	1,770	.390	15,000	13,000
	25	.010	52	.013	20.62	.120	1.0	.5	57.9	1.12	2.46	1.35	14,000	7,850	.177		
W6206	1.1811	.0004	2.4409	.0005	.938	.0047	.039	.020	2.665	.067	.129	.075	4,400	2,540	.630	13,000	11,000
	30	.010	62	.013	23.83	.120	1.0	.5	67.7	1.7	3.28	1.9	19,500	11,300	.286		
W6207	1.3780	.0005	2.8346	.0005	1.062	.0047	.043	.020	3.094	.067	.129	.075	5,782	3,442	.960	11,000	9,300
	35	.012	72	.013	26.97	.120	1.1	.5	78.6	1.7	3.28	1.9	25,700	15,300	.435		
W6208	1.5748	.0005	3.1496	.0005	1.188	.0047	.043	.020	3.409	.067	.129	.075	6,550	4,000	1.280	10,000	8,700
	40	.012	80	.013	30.18	.120	1.1	.5	86.6	1.7	3.28	1.9	29,100	17,900	.581		
W6209	1.7717	.0005	3.3465	.0006	1.188	.0047	.043	.020	3.606	.067	.129	.075	7,350	4,580	1.370	9,200	7,800
	45	.012	85	.015	30.1	.120	1.1	.5	91.6	1.7	3.28	1.9	32,700	20,400	.621		
W6210	1.9685	.0005	3.5433	.0006	1.188	.0047	.043	.020	3.799	.097	.129	.106	7,875	5,220	1.450	8,300	7,100
	50	.012	90	.015	30.18	.120	1.1	.5	96.5	2.46	3.28	2.7	35,000	23,200	.658		
W6211	2.1654	.0006	3.9370	.0006	1.311	.0059	.059	.020	4.193	.097	.129	.106	9,800	6,580	2.040	7,600	6,400
	55	.015	100	.015	33.30	.150	1.5	.5	106.5	2.46	3.28	2.7	43,500	29,300	.925		
W6212	2.3622	.0006	4.3307	.0006	1.437	.0059	.098	.020	4.591	.097	.129	.106	11,800	8,100	2.800	7,000	6,000
	60	.015	110	.015	36.50	.150	2.5	.5	116.6	2.46	3.28	2.7	52,500	36,000	1.270		

*Maximum fillet which corner radius of bearing will clear.



W6300 CARTRIDGE SERIES

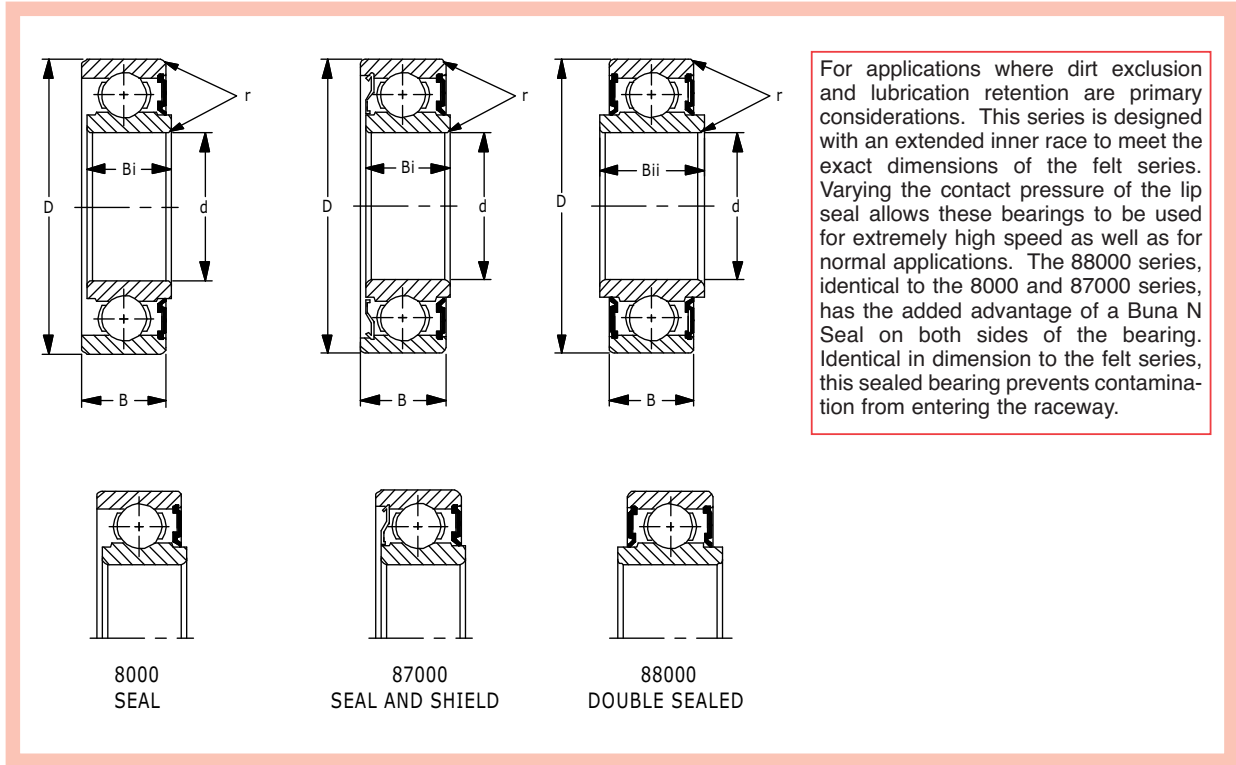


Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
							r	r2	D2	f	a	b	Dynamic Cr	Static Cor		oil	grease
W6302	.5906	.0003	1.6535	.0005	.748	.0047	.039	.020	1.823	.044	.081	.053	2,570	1,220	.280	21,000	17,000
	15	.008	42	.011	19.00	.120	1.0	.5	46.3	1.12	2.06	1.35	11,400	5,450	.127		
W6303	.6693	.0003	1.8504	.0005	.875	.0047	.039	.020	2.075	.044	.097	.053	3,060	1,470	.320	19,000	16,000
	17	.008	47	.011	22.22	.120	1.0	.5	52.7	1.12	2.46	1.35	13,600	6,650	.145		
W6304	.7874	.0004	1.0472	.0005	.8750	.0047	.043	.020	2.280	.044	.097	.053	3,600	1,770	.480	17,000	14,000
	20	.010	52	.013	22.22	.120	1.1	.5	57.9	1.12	2.46	1.35	15,900	7,900	.218		
W6305	.9843	.0004	2.4409	.0005	1.000	.0047	.043	.020	2.665	.067	.129	.075	4,750	2,460	.780	14,000	12,000
	25	.010	62	.013	25.40	.120	1.1	.5	67.7	1.7	3.28	1.9	21,200	11,200	.354		
W6306	1.1811	.0004	2.8346	.0005	1.188	.0047	.043	.020	3.094	.067	.129	.075	6,000	3,375	1.130	12,000	10,000
	30	.010	72	.013	30.18	.120	1.1	.5	78.6	1.7	3.28	1.9	26,700	15,000	.513		
W6307	1.3780	.0005	3.1496	.0005	1.375	.0047	.059	.020	3.409	.067	.129	.075	7,537	4,320	1.640	10,000	8,800
	35	.012	80	.013	34.92	.120	1.5	.5	86.6	1.7	3.28	1.9	33,500	19,200	.744		
W6308	1.5748	.0005	3.5433	.0006	1.438	.0047	.059	.020	3.799	.097	.129	.106	9,112	5,400	2.060	9,200	7,800
	40	.012	90	.015	36.53	.120	1.5	.5	96.5	2.46	3.28	2.7	40,500	24,000	.937		
W6309	1.7717	.0005	3.9370	.0006	1.562	.0047	.059	.020	4.193	.097	.129	.106	11,925	7,200	3.000	8,200	7,000
	45	.012	100	.015	39.67	.120	1.5	.5	106.5	2.46	3.28	2.7	53,000	32,000	1.361		
W6310	1.9685	.0005	4.3307	.0006	1.750	.0047	.079	.020	4.591	.097	.129	.106	13,950	8,600	3.750	7,500	6,400
	50	.012	110	.015	44.45	.120	2.0	.5	116.6	2.46	3.28	2.7	62,000	38,500	1.701		
W6311	2.1654	.0006	4.7244	.0006	1.938	.0059	.079	.020	5.106	.111	.160	.122	16,100	10,125	5.120	6,800	5,800
	55	.015	120	.015	49.23	.150	2.0	.5	129.7	2.82	4.06	3.1	71,500	45,000	2.322		
W6312	2.3622	.0006	5.1181	.0007	2.125	.0059	.079	.020	5.500	.111	.160	.122	18,450	11,700	6.500	6,300	5,400
	60	.015	130	.018	53.98	.150	2.1	.5	139.7	2.82	4.06	3.1	82,000	52,000	2.948		
W6313	2.5591	.0006	5.5118	.0007	2.312	.0059	.079	.020	5.894	.111	.193	.122	20,800	13,500	8.170	5,800	4,900
	65	.015	140	.018	58.72	.150	2.1	.5	149.7	2.82	4.9	3.1	92,500	60,000	3.706		
W6314	2.7559	.0006	5.9055	.0007	2.500	.0059	.079	.020	6.287	.111	.193	.122	23,400	15,300	10.500	5,400	4,600
	70	.015	150	.018	63.50	.150	2.1	.5	159.7	2.82	4.9	3.1	104,000	68,000	4.763		
W6315	2.9528	.0006	6.2992	.0010	2.688	.0059	.079	.020	6.681	.111	.193	.122	25,425	17,325	12.800	5,000	4,300
	75	.015	160	.025	68.28	.150	2.1	.5	169.7	2.82	4.9	3.1	113,000	77,000	5.806		

*Maximum fillet which corner radius of bearing will clear.

8000, 87000 & 88000 SERIES



For applications where dirt exclusion and lubrication retention are primary considerations. This series is designed with an extended inner race to meet the exact dimensions of the felt series. Varying the contact pressure of the lip seal allows these bearings to be used for extremely high speed as well as for normal applications. The 88000 series, identical to the 8000 and 87000 series, has the added advantage of a Buna N Seal on both sides of the bearing. Identical in dimension to the felt series, this sealed bearing prevents contamination from entering the raceway.

8000
SEAL

87000
SEAL AND SHIELD

88000
DOUBLE SEALED

Units: Inches
Metric

Part Number	Bore d	OD D	Outer Ring Width B		Inner Ring Width Bi		Overall Width	Fillet Radius		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbs N		Weight lbs Kg		
			B	B _i	B _i	B _i		r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic C	Static Cor	8000	87000	88000
8035 87035 88035	.1969 5	.7480 19	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.012 .3							525 2,335	199 885	.022 .010	.023 .010	.026 .012
8036 87036 88036	.2362 6	.7480 19	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.012 .3	.008 .2	.878 22.3	.028 .7	.068 1.73	.031 .8	.068 1.73	525 2,335	199 885	.024 .011	.025 .011	.027 .012
8006 87006 88006	.2362 6	.9449 24	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.012 .3	.012 .3	1.102 28	.028 .7	.068 1.73	.031 .8	.068 1.73	750 3,336	315 1,401	.046 .021	.048 .022	.055 .025
8037 87037 88037	.2756 7	.8661 22	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.012 .3	.012 .3	1.024 26	.028 .7	.068 1.73	.031 .8	.068 1.73	750 3,336	315 1,401	.037 .017	.039 .018	.043 .020
8007 87007 88007	.2756 7	.9449 24	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.012 .3	.012 .3	1.102 28	.028 .7	.068 1.73	.031 .8	.068 1.73	900 4,003	355 1,579	.045 .020	.047 .021	.051 .023
8038 87038 88038	.3150 8	.8661 22	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.012 .3	.012 .3	1.024 26	.028 .7	.068 1.73	.031 .8	.068 1.73	750 3,336	315 1,401	.036 .016	.038 .017	.040 .018
8008 87008 88008	.3150 8	.9449 24	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.012 .3	.012 .3	1.102 28	.028 .7	.068 1.73	.031 .8	.068 1.73	900 4,003	355 1,579	.043 .022	.044 .020	.048 .022
8039 87039 88039	.3543 9	1.0236 26	.3150 8	.3860 9.804	.4970 12.624	.4063 10.319	.025 .6	.012 .3	1.181 30	.028 .7	.068 1.73	.031 .8	.068 1.73	1,030 4,581	440 1,957	.051 .023	.053 .024	.057 .026
8009 87009 88009	.3543 9	1.1811 30	.3543 9	.4800 12.192	.6457 16.401	.5000 12.700	.025 .6	.020 .5	1.437 36.5	.044 1.12	.081 2.06	.053 1.35	1,150 5,115	540 2,402	.078 .035	.095 .043	.105 .048	
8500 87500 88500	.3937 10	1.1811 30	.3543 9	.4800 12.192	.6457 16.401	.5000 12.700	.025 .6	.020 .5	1.366 34.7	.044 1.12	.081 2.06	.053 1.35	1,150 5,115	540 2,402	.075 .034	.077 .035	.091 .041	
8011 87011 88011	.4331 11	1.2598 32	.3937 10	.4800 12.192	.6063 15.400	.5000 12.700	.025 .6	.020 .5	1.445 36.7	.044 1.12	.081 2.06	.053 1.35	1,370 6,094	615 2,736	.099 .045	.101 .046	.104 .047	
8501 87501 88501	.4724 12	1.2598 32	.3937 10	.4800 12.192	.6063 15.400	.5000 12.700	.025 .6	.020 .5	1.445 36.7	.044 1.12	.081 2.06	.053 1.35	1,370 6,094	615 2,736	.095 .043	.097 .044	.099 .045	

*Maximum fillet which corner radius of bearing will clear.



8000, 87000 & 88000 SERIES (continued)

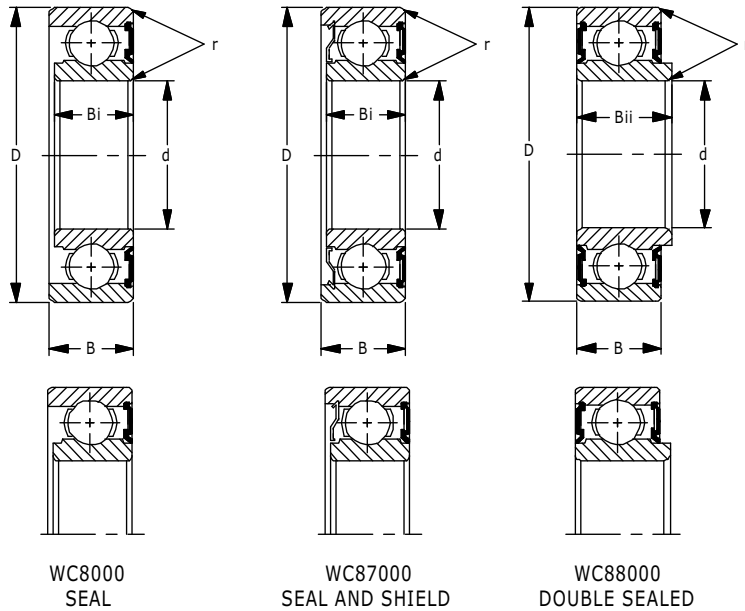
The basic 6300 series ball complement with two Buna N seals. Extended inner rings make this series perfectly interchangeable with the standard 8600, 87600 and 88600 felt series. By increasing contact pressure, the 6300 series can be used for rugged farm applications as well as for electric motors. Consult the Peer sales engineer for your specific requirements.

Units: Inches
Metric

Part Number	Bore d	OD D	Outer Ring Width B	Inner Ring Width		Overall Width	Fillet Radius		snap ring dimensions		snap ring groove dimensions		Basic Load Ratings lbs N		Weight lbs Kg		
				B _i	B _{ii}		r	r ₂	D ₂ Max	f Max	a Max	b Min	Dynamic C	Static Cor	8000	87000	88000
8013 87013 88013	.5118	1.2598	.3937	.4800	.6063	.5000	.025	.020	1.445	.044	.081	.053	1,370	615	.091	.093	.095
	13	32	10	12.624	15.400	12.700	.6	.50	36.7	1.12	2.06	1.35	6,094	2,736	.041	.042	.043
8014 87014 88014	.5512	1.3780	.4331	.4800	.5669	.5000	.025	.020	1.563	.044	.081	.053	1,740	805	.111	.115	.125
	14	35	11	12.624	14.399	12.700	.6	.50	39.7	1.12	2.06	1.35	7,740	3,581	.050	.052	.057
8502 87502 88502	.5906	1.3780	.4331	.4800	.5669	.5000	.025	.020	1.563	.044	.081	.053	1,740	805	.106	.108	.119
	15	35	11	12.624	14.399	12.700	.6	.50	39.7	1.12	2.06	1.35	7,740	3,581	.048	.049	.054
8016 87016 88016	.6299	1.3780	.4331	.4800	.5669	.5000	.025	.020	1.563	.044	.081	.053	1,740	805	.101	.105	.114
	16	35	11	12.624	14.399	12.700	.6	.50	39.7	1.12	2.06	1.35	7,740	3,581	.046	.048	.052
8602 87602 88602	.5906	1.6535	.5118	.5512	.6693	.5906	.040	.020	1.823	.044	.081	.053	2,570	1,220	.188	.193	.210
	15	42	13	14.000	17.000	15.000	1.0	.50	46.3	1.12	2.06	1.35	11,451	5,427	.085	.088	.095
8503 87503 88503	.6693	1.5748	.4724	.5380	.6536	.6525	.025	.020	1.756	.044	.081	.053	2,160	1,030	.150	.154	.166
	17	40	12	13.665	16.601	14.288	.6	.50	44.6	1.12	2.06	1.35	9,608	4,581	.068	.070	.075
8603 87603 88603	.6693	1.8504	.5512	.5906	.7087	.6299	.040	.020	2.075	.044	.097	.053	3,050	1,470	.254	.257	.279
	17	47	14	15.000	18.000	16.000	1.0	.50	52.7	1.12	2.46	1.35	13,566	6,539	.115	.117	.127
8504 87504 88504	.7874	1.8504	.5512	.6000	.6988	.6250	.040	.020	2.075	.044	.097	.053	2,890	1,500	.232	.237	.259
	20	47	14	15.240	17.750	15.875	1.0	.50	52.7	1.12	2.46	1.35	12,855	6,672	.105	.108	.118
8604 87604 88604	.7874	2.0472	.5906	.7087	.9055	.7480	.040	.020	2.280	.044	.097	.053	3,600	1,770	.345	.352	.398
	20	52	15	18.000	23.000	19.000	1.0	.50	52.7	1.12	2.46	1.35	16,013	7,873	.157	.160	.181
8505 87505 88505	.9843	2.0472	.5906	.6000	.6594	.6250	.040	.020	2.280	.044	.097	.053	3,150	1,770	.287	.292	.304
	25	52	15	15.240	16.749	15.875	1.0	.50	57.9	1.12	2.46	1.35	14,011	7,873	.130	.133	.138
8605 87605 88605	.9843	2.4409	.6693	.8268	.9843	.8268	.040	.020	2.665	.067	.129	.075	4,750	2,460	.590	.600	.650
	25	62	17	21.000	25.000	21.000	1.0	.50	67.7	1.7	3.28	1.39	21,128	10,942	.268	.272	.295
8026 87026 88026	1.0236	2.0472	.5906	.6000	.6594	.6250	.040	.020	2.280	.044	.097	.053	3,150	1,770	.277	.282	.294
	26	52	15	15.240	16.749	15.875	1.0	.50	57.9	1.12	2.46	1.35	14,011	7,873	.126	.128	.133
8506 87506 88506	1.1811	2.4409	.6299	.7480	.9449	.7874	.040	.020	2.665	.067	.129	.075	4,400	2,540	.495	.506	.571
	30	62	16	19.000	24.000	20.000	1.0	.50	67.7	1.7	3.28	1.9	19,571	11,298	.225	.230	.259
8606 87606 88606	1.1811	2.8346	.7480	.9055	1.0630	.9055	.040	.020	3.094	.067	.129	.075	6,000	3,400	.860	.890	.970
	30	72	19	23.000	27.000	23.000	1.0	.50	78.5	1.7	3.28	1.9	26,688	15,123	.390	.404	.440
8507 87507 88070	1.3780	2.8346	.6993	.7874	.9843	.8268	.040	.020	3.094	.067	.129	.075	5,750	3,450	.695	.708	.765
	35	72	17	20.000	25.000	21.000	1.0	.50	78.6	1.7	3.28	1.9	25,576	15,346	.316	.321	.347
8607 87607 88607	1.3780	3.1496	.8268	.9843	1.1417	.9843	.060	.020	3.409	.067	.129	.075	7,500	4,300	1.10	1.12	1.20
	35	80	21	25.000	29.000	25.000	1.5	.50	86.6	1.7	3.28	1.9	33,360	19,126	.499	.508	.545
8508 87508 88508	1.5748	3.1496	.8268	.9449	1.0630	.9449	.040	.020	3.409	.067	.129	.075	6,550	4,000	1.03	1.07	1.18
	40	80	21	24.000	27.000	24.000	1.0	.50	86.6	1.7	3.28	1.9	29,134	17,792	.468	.486	.536
8608 87608 88608	1.5748	3.5433	.9055	1.0630	1.2205	1.0630	.060	.020	3.799	.097	.129	.106	9,150	5,400	1.53	1.56	1.65
	40	90	23	27.000	31.000	27.000	1.5	.50	96.5	2.46	3.28	2.7	40,699	24,019	.695	.708	.749
8509 87509 88509	1.7717	3.3465	.8268	.9449	1.0630	.9449	.040	.020	3.606	.067	.129	.075	7,350	4,600	1.19	1.20	1.22
	45	85	21	24.000	27.000	24.000	1.0	.50	91.6	1.70	3.28	1.90	32,693	20,461	.540	.545	.554
8609 87609 88609	1.7717	3.9370	.9843	1.1811	1.3780	1.1811	.060	.020	4.193	.097	.129	.106	11,900	7,200	1.96	2.01	2.19
	45	100	25	30.000	35.000	30.000	1.5	.50	106.5	2.46	3.28	2.7	52,931	32,026	.890	.913	.994
8510 87510 88510	1.9685	3.5433	.8661	1.0236	1.1811	1.0236	.040	.020	3.799	.097	.129	.106	7,900	5,200	1.27	1.30	1.40
	50	90	22	26.000	30.000	26.000	1.0	.50	96.5	2.46	3.28	2.7	35,139	23,130	.577	.590	.636
8511 87511 88511	2.1654	3.9370	.9055	1.0630	1.2205	1.0630	.060	.020	4.193	.097	.129	.106	9,750	6,550	1.60	1.64	1.78
	55	100	23	27.000	31.000	27.000	1.5	.50	106.5	2.46	3.28	2.7	43,368	29,134	.726	.745	.808
8512 87512 88512	2.3622	4.3307	.9843	1.1417	1.2992	1.1417	.060	.020	4.591	.097	.129	.106	11,800	8,150	2.11	2.10	2.34
	60	110	25	29.000	33.000	29.000	1.5	.50	116.6	2.46	3.28	2.7	52,486	36,251	.958	.953	1.062
8513 87513 88513	2.5591	4.7244	1.0236	1.2205	1.4173	1.2205	.060	.020	5.106	.111	.160	.122	12,900	9,000	2.79	2.80	3.05
	65	120	26	31.000	36.000	31.000	1.5	.50	129.7	2.82	4.06	3.1	57,379	40,032	1.267	.013	1.385
8514 87514	2.7559	4.9213	1.1024	1.2992	1.4961	1.2992	.060	.020	5.303	.111	.160	.122	14,000	9,400	3.00	3.08	
	70	125	28	33.000	38.000	33.000	1.5	.50	134.7	2.82	4.06	3.1	62,272	44,035	1.362	1.398	

*Maximum fillet which corner radius of bearing will clear.

WC8000, WC87000 & WC88000 SERIES



This series is made with contact Buna N Seals to meet the exact dimensions of the side cup WC felt series. The wider outer race offers greater contact with the housing, helping to reduce creeping and distortion of the housing bore. The Buna N Seal makes possible the advantage of variable lip pressure, used in higher speed applications. Specially designed for use in soft metal housings such as aluminum and magnesium. The wide outer ring series, with Buna N Seals on both sides, excludes dirt effectively under even the dirtiest conditions. In addition, the wide outer ring makes this series operable in a softer metal housing. Dirt exclusion is well controlled by the contact by the contact pressure of the Buna N Seal.

WC8000
SEAL

WC87000
SEAL AND SHIELD

WC88000
DOUBLE SEALED

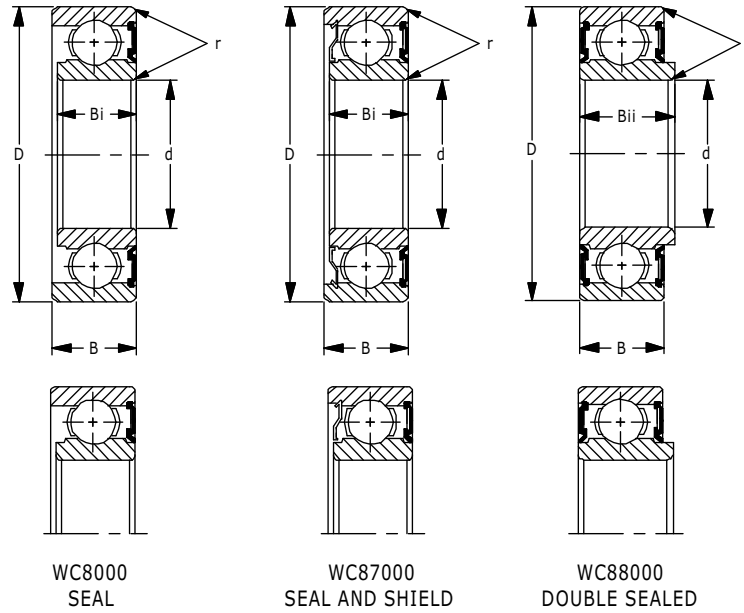
Units: Inches Metric

Part Number	Bore d	OD D	Outer Ring Width B	Inner Ring Width		Fillet radius r (min)	Basic Load Ratings lbf N		Weight lbs WC8000	Weight lbs Kg WC87000	Weight lbs WC88000
				Bi	Bii		Dynamic Cr	Static Co			
WC8006 WC87006 WC88006	.2362 6	.9499 24	.4063 10.319	.3860 9.804	.4970 12.624	.012 .3	750 3,336	315 1,401	.060 .027	.060 .027	.060 .027
WC8007 WC87007 WC88007	.2756 7	.9449 24	.4063 10.319	.3860 9.804	.4970 12.624	.012 .3	900 4,003	355 1,579	.051 .023	.051 .023	.051 .023
WC8008 WC87008 WC88008	.3150 8	.9449 24	.4063 10.319	.3860 9.804	.4970 12.624	.012 .3	900 4,003	355 1,579	.050 .023	.050 .023	.050 .023
WC8009 WC87009 WC88009	.3543 9	1.1811 30	.5000 12.700	.4800 12.192	.6457 16.401	.025 .6	1150 5,115	540 2,402	.105 .048	.105 .048	.110 .050
WC8011 WC87011 WC88011	.4331 11	1.2598 32	.5000 12.700	.4800 12.192	.6063 15.400	.025 .6	1370 6,094	615 1,401	.110 .050	.110 .050	.100 .045
WC8013 WC87013 WC88013	.5118 13	1.2598 32	.5000 12.700	.4800 12.192	.6063 15.400	.025 .6	1370 6,094	615 1,401	.100 .045	.100 .045	.100 .045
WC8014 WC87014 WC88014	.5512 14	1.3780 35	.5000 12.700	.4800 12.192	.5669 14.399	.025 .6	1740 7,740	805 3,581	.110 .050	.110 .050	.125 .057
WC8016 WC87016 WC88016	.6299 16	1.3780 35	.5000 12.700	.4800 12.192	.5669 14.399	.025 .6	1740 7,740	805 3,581	.114 .052	.114 .052	.120 .054
WC8026 WC87026 WC88026	1.0236 26	2.0472 52	.6250 15.875	.6000 15.240	.6594 16.749	.040 1.0	3150 14,011	1770 7,873	.289 .131	.289 .131	.289 .131
WC8035 WC87035 WC88035	.1969 5	.7480 19	.4063 10.319	.3860 9.804	.4970 12.624	.012 .3	525 2,335	199 885	.026 .012	.026 .012	.030 .014
WC8036 WC87036 WC88036	.2362 6	.7480 19	.4063 10.319	.3860 9.804	.4970 12.624	.012 .3	525 2,335	199 885	.027 .013	.027 .013	.030 .014
WC8037 WC87037 WC88037	.2756 7	.8661 22	.4063 10.319	.3860 9.804	.4970 12.624	.012 .3	750 3,336	315 1,401	.043 .020	.043 .020	.043 .028
WC8038 WC87038 WC88038	.3150 8	.8661 22	.4063 10.319	.3860 9.804	.4970 12.624	.012 .3	750 3,336	315 1,401	.040 .018	.040 .018	.040 .018
WC8039 WC87039 WC88039	.3543 9	1.0236 26	.4063 10.319	.3860 9.804	.4970 12.624	.025 .6	1030 4,581	440 1,959	.06 .027	.06 .027	.06 .027
WC8500 WC87500 WC88500	.3937 10	1.1811 30	.5000 12.700	.4800 12.192	.6457 16.401	.025 .6	1150 5,150	540 2,402	.09 .041	.09 .041	.09 .041

*Maximum fillet which corner radius of bearing will clear.



WC8000, WC87000 & WC88000 SERIES (continued)

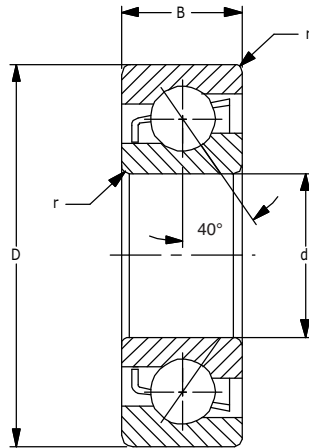


Units: Inches Metric

Part Number	Bore d	OD D	Outer Ring Width B	Inner Ring Width		Fillet radius r (min)	Basic Load Ratings lbf N		Weight lbs WC8000	Weight lbs WC87000	Weight lbs WC88000
				Bi	Bii		Dynamic Cr	Static Cor			
WC8501 WC87501 WC88501	.4724 12	1.2598 32	.5000 12.700	.4800 12.192	.6063 15.400	.025 .6	1370 6,094	615 2,736	.100 .045	.100 .045	.100 .045
WC8502 WC87502 WC88502	.5906 15	1.3780 35	.5000 12.700	.4800 12.192	.5669 14.399	.025 .6	1740 7,740	805 3,581	.120 .054	.120 .054	.119 .054
WC8503 WC87503 WC88503	.6693 17	1.5748 40	.5625 14.288	.5380 13.665	.6536 16.601	.025 .6	2160 9,608	1030 4,851	.170 .077	.170 .077	.170 .077
WC8504 WC87504 WC88504	.7874 20	1.8504 47	.6250 15.875	.6000 15.240	.6988 17.750	.040 1.0	2890 12,855	1500 6,672	.260 .118	.260 .118	.259 .117
WC8505 WC87505 WC88505	.9843 25	2.0472 52	.6250 15.875	.6000 15.240	.6594 16.749	.040 1.0	3150 14,011	1770 7,873	.304 .138	.304 .138	.304 .138
WC8506 WC87506 WC88506	1.1811 30	2.4409 62	.7874 20.000	.7480 19.000	.9449 24.000	.040 1.0	4400 19,571	2540 11,298	.543 .246	.543 .246	.523 .237
WC8507 WC87507 WC88507	1.3780 35	2.8346 72	.8268 21.000	.7874 20.000	.9843 25.000	.040 1.0	5750 25,576	3450 15,346	.765 .347	.765 .347	.749 .340
WC8508 WC87508 WC88508	1.5748 40	3.1496 80	.9449 24.000	.9449 24.000	1.0630 27.000	.040 1.0	6550 29,134	4000 17,792	1.18 .739	1.18 .739	1.180 .535
WC8509 WC87509 WC88509	1.7717 45	3.3465 85	.9449 24.000	.9449 24.000	1.0630 27.000	.040 1.0	7350 32,693	4600 20,461			1.220 .553
WC8510 WC87510 WC88510	1.9685 50	3.5433 90	1.0236 26.000	1.0236 26.000	1.1811 30.000	.040 1.0	7900 35,139	5200 23,130	1.260 .572	1.260 .572	1.300 .590
WC8511 WC87511 WC88511	2.1654 55	3.9370 100	1.0630 27.000	1.0630 27.000	1.2205 31.000	.060 1.5	9750 43,358	6550 29,134	1.630 .739	1.630 .739	1.660 .753

*Maximum fillet which corner radius of bearing will clear.

7200 ANGULAR CONTACT SERIES



40°
CONTACT ANGLE

The 7200 series is a light duty series used in applications that call for thrust or combination thrust and radial loads. Standard production is made with 40° contact angle. This series is available with various contact angles. Consult your Peer sales engineer to discuss your exact requirements. Retainers can be made of various materials: bronze, brass or non-metallic. Duplex pairing is available upon request.

A=30° Contact Angle
B=40° Contact Angle
C=15° Contact Angle

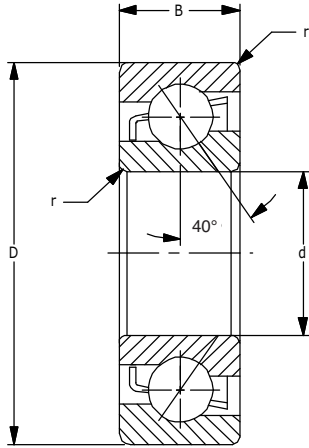
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings lbF N		Weight lb Kg
								Dynamic Cr	Static Cor	
7200	.3937	.0003	1.1811	.0005	.3543	.0047	.024	1,220	615	.064
	10	.008	30	.011	9	.120	.6	5,426	2,735	.029
7201	.4724	.0003	1.2598	.0005	.3937	.0047	.024	1,676	843	.077
	12	.008	32	.011	10	.120	.6	7,450	3,750	.034
7202	.5906	.0003	1.3780	.0005	.4331	.0047	.024	2,040	1,060	.110
	15	.008	35	.011	11	.120	.6	9,073	4,714	.050
7203	.6693	.0003	1.5748	.0005	.4724	.0047	.024	2,690	1,690	.140
	17	.008	40	.011	12	.120	.6	11,965	6,627	.064
7204	.7874	.0004	1.8504	.0005	.5512	.0047	.039	3,250	1,890	.250
	20	.010	47	.011	14	.120	1.0	14,456	8,406	.113
7205	.9843	.0004	2.0472	.0005	.5906	.0047	.039	3,650	2,320	.290
	25	.010	52	.011	15	.120	1.0	16,235	10,319	.132
7206	1.1811	.0004	2.4409	.0005	.6299	.0047	.039	5,050	3,350	.425
	30	.010	62	.011	16	.120	1.0	22,462	14,900	.193
7207	1.3780	.0005	2.8346	.0005	.6693	.0047	.039	6,700	4,500	.660
	35	.012	72	.011	17	.120	1.0	29,800	20,016	.299
7208	1.5748	.0005	3.1496	.0005	.7087	.0047	.039	7,950	5,650	.783
	40	.012	80	.011	18	.120	1.0	35,361	25,130	.355
7209	1.7717	.0005	3.3465	.0006	.7480	.0047	.039	8,900	6,450	.940
	45	.012	85	.015	19	.120	1.0	39,587	28,689	.426
7210	1.9685	.0005	3.5433	.0006	.7874	.0047	.039	9,300	7,050	1.000
	50	.012	90	.015	20	.120	1.0	41,366	31,358	.454
7211	2.1654	.0006	3.9370	.0006	.8268	.0059	.059	11,500	8,900	1.340
	55	.015	100	.015	21	.150	1.5	51,152	39,587	.608
7212	2.3622	.0006	4.3307	.0006	.8661	.0059	.059	13,900	11,000	1.79
	60	.015	110	.015	22	.150	1.5	61,827	48,928	.815
7213	2.5591	.0006	4.7244	.0006	.9055	.00659	.059	15,800	13,000	2.220
	65	.015	120	.015	23	.150	1.5	70,278	57,824	1.007
7214	2.7559	.0006	4.9213	.0007	.9449	.0059	.059	17,200	14,300	2.410
	70	.015	125	.018	24	.150	1.5	76,505	63,606	1.093

*Maximum fillet which corner radius of bearing will clear.



7200 ANGULAR CONTACT SERIES (continued)



40°
CONTACT ANGLE

The 7200 series is a light duty series used in applications that call for thrust or combination thrust and radial loads. Standard production is made with 40° contact angle. This series is available with various contact angles. Consult your Peer sales engineer to discuss your exact requirements. Retainers can be made of various materials: bronze, brass or non-metallic. Duplex pairing is available upon request.

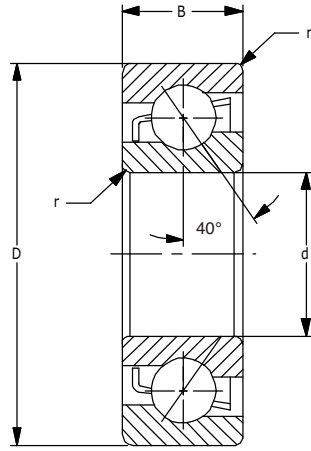
A=30° Contact Angle
B=40° Contact Angle
C=15° Contact Angle

Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings lbf N		Weight lb Kg
								Dynamic Cr	Static Cor	
7215	2.9528	.0006	4.1181	.0007	.9843	.0059	.059	17,800	15,400	2.590
	.75	.015	.130	.018	.25	.150	1.5	79,174	68,499	1.175
7216	3.1496	.0006	5.5118	.0007	1.0236	.0059	.079	20,000	17,100	3.130
	.80	.015	.140	.018	.26	.150	2.0	88,960	76,060	1.420
7217	3.3465	.0008	5.9055	.0007	1.1024	.0079	.079	22,400	19,900	3.940
	.85	.020	.150	.018	.28	.200	2.0	99,635	88,515	1.787
7218	3.5433	.0008	6.2992	.0010	1.1811	.0079	.079	26,500	23,200	5.000
	.90	.020	.160	.025	.30	.200	2.0	117,872	103,193	2.268
7219	3.7402	.0008	6.6929	.0010	1.2598	.0079	.079	30,000	26,500	5.900
	.95	.020	.170	.025	.32	.200	2.0	133,440	117,872	2.676
7220	3.9370	.0008	7.0866	.0010	1.3386	.0079	.079	32,500	28,200	7.200
	1.00	.020	.180	.025	.34	.200	2.0	144,560	125,433	3.266
7221	4.1339	.0008	7.4803	.0012	1.4173	.0079	.079	35,000	32,000	8.470
	1.05	.020	.190	.030	.36	.200	2.0	155,680	142,336	3.842
7222	4.3307	.0008	7.8740	.0012	1.4961	.0079	.079	38,000	35,500	1.200
	1.10	.020	.200	.030	.38	.200	2.0	169,024	157,904	4.627
7224	4.7244	.0008	7.4646	.0012	1.5748	.0079	.079	41,000	40,000	13.8
	1.20	.020	.215	.030	.40	.200	2.0	182,368	177,920	6.26
7226	5.1181	.0010	9.0551	.0012	1.5748	.0098	.098	44,000	44,500	15.65
	1.30	.025	.230	.030	.40	.250	2.5	195,712	197,936	7.10
7228	5.5118	.0010	9.8425	.0012	1.6535	.0098	.098	45,500	48,500	19.71
	1.40	.025	.250	.030	.42	.250	2.5	202,384	215,728	8.94
7230	5.9055	.0010	1.6299	.0014	1.7717	.0098	.098	52,000	58,000	24.69
	1.50	.025	.270	.035	.45	.250	2.5	231,296	257,984	11.2
7232	6.2992	.0010	11.4173	.0014	1.8898	.0098	.098	59,175	69,000	31.500
	1.60	.025	.290	.035	.48	.250	2.5	263,000	306,912	14.288
7234	6.6929	.0010	12.2047	.0014	2.0472	.0098	.118	66,375	81,000	38.600
	1.70	.025	.310	.035	.52	.250	3.0	295,000	360,000	17.509
7236	7.0866	.0012	12.5984	.0016	2.0472	.0098	.118	68,625	86,625	4.300
	1.80	.030	.320	.040	.52	.250	3.0	305,000	385,000	18.280
7238	7.4803	.0012	13.3858	.0016	2.1654	.0118	.118	70,875	92,250	5.700
	1.90	.030	.340	.040	.55	.300	3.0	315,000	410,000	22.998

*Maximum fillet which corner radius of bearing will clear.

7300 ANGULAR CONTACT SERIES



40°
CONTACT ANGLE

The 7300 series is a light duty series used in applications that call for thrust or combination thrust and radial loads. Standard production is made with 40° contact angle. This series is available with various contact angles. Consult your Peer sales engineer to discuss your exact requirements. Retainers can be made of various materials: bronze, brass or non-metallic. Duplex pairing is available upon request.

A=30° Contact Angle
B=40° Contact Angle
C=15° Contact Angle

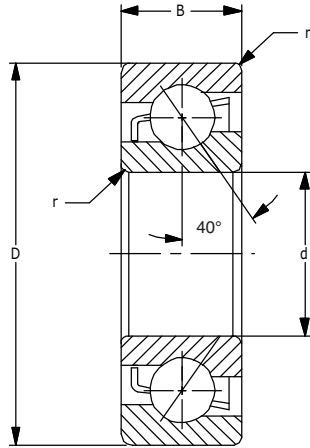
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radius r	Basic Load Ratings		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
								Dynamic Cr	Static Cor		oil	grease
7300	.3937	.0003	1.3780	.0005	.4331	.0047	.039	2,280	1,100	.120	24,000	18,000
	10	.008	35	.011	11	.120	1.0	10,141	4,892	.054		
7301	.4724	.0003	1.4567	.0005	.4724	.0047	.039	2,510	1,180	.136	21,000	15,000
	12	.008	37	.011	12	.120	1.0	11,164	5,248	.062		
7302	.5906	.0003	1.6535	.0005	.5118	.0047	.039	3,000	1,620	.189	18,000	14,000
	15	.008	42	.011	13	.120	1.0	13,344	7,205	.086		
7303	.6693	.0003	1.8504	.0005	.5512	.0047	.039	3,600	1,940	.260	16,000	12,000
	17	.008	47	.011	14	.120	1.0	16,000	8,629	.118		
7304	.7874	.0004	2.0472	.0005	.5906	.0047	.039	4,200	2,340	.340	15,000	10,500
	20	.010	52	.011	15	.120	1.0	18,683	10,4008	.154		
7305	.9843	.0004	2.4409	.0005	.6693	.0047	.039	5,950	3,550	.550	12,000	9,000
	25	.010	62	.011	17	.120	1.0	26,465	15,790	.249		
7306	1.1811	.0004	2.8346	.0005	.7480	.0047	.039	7,550	5,000	.800	10,500	8,000
	30	.010	72	.011	19	.120	1.0	33,582	22,240	.363		
7307	1.3780	.0005	3.1496	.0005	.8268	.0047	.059	9,000	5,900	1.030	9,000	6,900
	35	.012	80	.011	21	.120	1.5	40,036	26,243	.467		
7308	1.5748	.0005	3.5433	.0005	.9055	.0047	.059	11,000	7,400	1.410	8,000	6,000
	40	.012	90	.011	23	.120	1.5	48,928	32,915	.640		
7309	1.7717	.0005	3.9370	.0005	.9843	.0047	.059	14,300	9,800	1.880	7,300	5,500
	45	.012	100	.011	25	.120	1.5	63,606	43,590	.853		
7310	1.9685	.0005	4.3307	.0006	1.0630	.0047	.079	16,700	11,700	2.470	6,500	5,000
	50	.012	110	.015	27	.120	2.0	74,281	52,046	1.120		
7311	2.1654	.0006	4.7244	.0006	1.1417	.0059	.079	19,300	13,900	3.100	5,900	4,500
	55	.015	120	.015	29	.150	2.0	85,846	61,827	1.45		
7312	2.3622	.0006	5.1181	.0007	1.2205	.0059	.079	22,000	16,100	3.810	5,500	4,000
	60	.015	130	.018	31	.150	2.0	97,856	71,612	1.728		
7313	2.5591	.0006	5.5118	.0007	1.2992	.0059	.079	25,000	18,400	4.700	5,000	3,800
	65	.015	140	.018	33	.150	2.0	111,000	81,843	2.132		
7314	2.7559	.0006	5.9055	.0007	1.3780	.0059	.079	28,000	21,000	5.720	4,700	3,500
	70	.015	150	.018	35	.150	2.0	124,544	93,416	2.595		

*Maximum fillet which corner radius of bearing will clear.



7300 ANGULAR CONTACT SERIES (continued)



The 7300 series is a light duty series used in applications that call for thrust or combination thrust and radial loads. Standard production is made with 40° contact angle. This series is available with various contact angles. Consult your Peer sales engineer to discuss your exact requirements. Retainers can be made of various materials: bronze, brass or non-metallic. Duplex pairing is available upon request.

A=30° Contact Angle
B=40° Contact Angle
C=15° Contact Angle

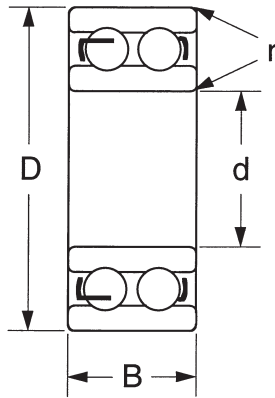
40°
CONTACT ANGLE

Units: Inches
Metric

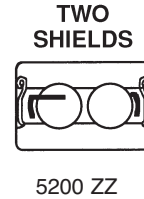
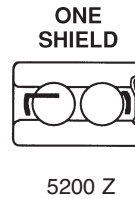
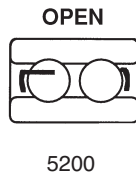
Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radius r	Basic Load Ratings		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
								Dynamic Cr	Static Cor		oil	grease
7315	2.9528	.0006	6.2992	.0010	1.4567	.0059	.079	30,500	23,800	6.840	4,300	3,300
	.75	.015	160	.025	37	.150	2.0	134,664	105,862	3.103		
7316	3.1496	.0006	6.6929	.0010	1.5354	.0059	.079	33,000	26,700	8.130	4,100	3,000
	.80	.015	170	.025	39	.150	2.0	146,784	118,761	3.688		
7317	3.3465	.0008	7.0866	.0012	1.6142	.0079	.098	35,500	29,800	9.530	3,800	2,900
	.85	.020	180	.030	41	.200	2.5	157,904	132,550	4.323		
7318	3.5433	.0008	7.4803	.0012	1.6929	.0079	.098	38,500	33,000	11.39	3,600	2,700
	.90	.020	190	.030	43	.200	2.5	171,248	146,784	5.17		
7319	3.7402	.0008	7.8740	.0012	1.7717	.0079	.098	41,000	36,500	13.18	3,350	2,600
	.95	.020	200	.030	45	.200	2.5	182,368	162,352	5.98		
7320	3.9370	.0008	8.4646	.0012	1.8504	.0079	.098	46,400	43,500	15.900	3,200	2,400
	1.00	.020	215	.030	47	.200	2.5	206,832	193,488	7.212		
7321	4.1339	.0008	8.8583	.0012	1.9291	.0079	.098	49,500	47,500	20.79	3,000	2,300
	1.05	.020	225	.030	49	.200	2.5	220,176	211,280	9.43		
7322	4.3307	.0008	9.4488	.0012	1.9685	.0079	.098	52,000	50,500	24.69	2,900	2,200
	1.10	.020	240	.030	50	.200	2.5	231,296	224,624	11.2		
7324	4.7244	.0008	1.2362	.0014	2.1654	.0079	.098	55,500	56,500	31.75	2,650	2,000
	1.20	.020	260	.035	55	.200	2.5	246,864	251,312	14.4		
7326	5.1181	.0010	11.0236	.0014	2.2835	.0098	.118	61,500	66,000	33.8	2,500	1,850
	1.30	.025	280	.035	58	.250	3.0	273,552	293,568	17.6		
7328	5.5118	.0010	11.8110	.0016	2.4409	.0098	.118	67,500	75,500	47.6	2,250	1,700
	1.40	.025	300	.040	62	.250	3.0	300,240	355,824	21.6		
7330	5.9055	.0010	1.5984	.0016	2.5591	.0098	.119	74,000	86,000	57.10	2,100	1,600
	1.50	.025	320	.040	65	.250	3.0	329,152	382,528	25.9		
7332	6.2992	.0010	13.3858	.0016	2.6772	.0098	.119	78,000	95,000	67.9	1,920	1,450
	1.60	.025	340	.040	68	.250	3.0	346,975	422,560	30.8		
7334	6.6929	.0010	14.1732	.0016	2.8/346	.0098	.120	87,500	109,000	77.00	1,850	1,350
	1.70	.025	360	.040	72	.250	3.0	389,200	484,832	35.000		
7336	7.0866	.0012	14.9606	.0016	2.9528	.0098	.120	92,000	120,000	93.9	1,700	1,300
	1.80	.030	380	.040	75	.250	3.0	409,216	533,8760	42.6		
7338	7.4803	.0012	15.7480	.0016	3.0709	.0098	.157	96,500	131,000	104.07	1,600	1,200
	1.90	.030	400	.040	78	.250	4.0	429,232	582,688	47.2		
7340	7.8740	.0012	16.5354	.0016	3.1496	.0098	.157	101,000	137,000	121.9	1,500	1,100
	2.00	.030	420	.040	80	.250	4.0	449,248	609,376	55.3		

*Maximum fillet which corner radius of bearing will clear.

5200 SERIES



This series is used in instances of heavy radial loads, combined radial and thrust loads, and two directional loads. The non-filling slot allows high RPM. In addition, the angle of contact converges outside the bearing, offering increased resistance to overturning moments. Loading groove construction types are available upon request. Consult Peer sales engineer for availability.



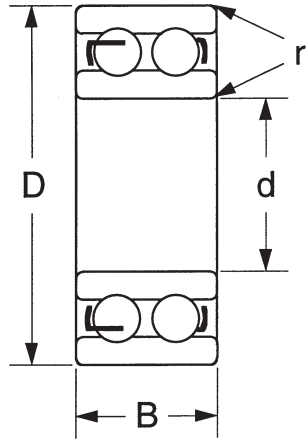
Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
								Dynamic Cr	Static Cor		oil	grease
5200	.3937	.0003	1.1811	.0004	.5625	.0047	.024	1,608	877	.12	19,000	14,000
	10	.008	30	.009	14.287	.120	.6	7,150	3,900	.054		
5201	.4724	.0003	1.2598	.0005	.6250	.0047	.024	2,430	1,305	.125	17,000	13,000
	12	.008	32	.011	15.875	.120	.6	10,500	5,800	.057		
5202	.5906	.0003	1.3780	.0005	.6250	.0047	.024	2,632	1,586	.141	15,000	11,000
	15	.008	35	.011	15.875	.120	.6	11,700	7,050	.064		
5203	.6693	.0003	1.5748	.0005	.6875	.0047	.024	3,285	2,0306	.211	13,000	9,900
	17	.008	40	.011	17.463	.120	.6	14,600	9,050	.096		
5204	.7874	.0004	1.8504	.0005	.8125	.0047	.039	4,410	2,790	.337	12,000	8,800
	20	.010	47	.011	20.638	.120	1.0	19,600	12,400	.153		
5205	.9843	.0004	2.0472	.0005	.8125	.0047	.039	4,792	3,307	.385	9,800	7,300
	25	.010	52	.011	20.638	.120	1.0	21,300	14,700	.175		
5206	1.1811	.0004	2.4409	.0005	.9375	.0047	.039	6,660	4,747	.629	8,400	6,300
	30	.010	62	.011	23.813	.120	1.0	29,600	21,100	.285		
5207	1.3780	.0005	2.8346	.0005	1.0625	.0047	.039	8,775	6,457	.959	7,400	5,500
	35	.012	72	.011	26.988	.120	1.0	39,000	28,700	.435		
5208	1.5748	.0005	3.1496	.0005	1.1875	.0047	.039	9,900	7,537	1.298	6,600	4,900
	40	.012	80	.011	30.163	.120	1.0	44,000	33,500	.589		
5209	1.7717	.0005	3.3465	.0006	1.1875	.0047	.039	11,137	8,550	1.408	5,900	4,400
	45	.012	85	.015	30.163	.120	1.0	49,500	38,000	.639		
5210	1.9685	.0005	3.5433	.0006	1.1875	.0047	.039	11,925	9,787	1.515	5,300	4,000
	50	.012	90	.015	30.163	.120	1.0	53,000	43,500	.687		
5211	2.1654	.0006	3.9370	.0006	1.3125	.0047	.059	12,600	11,025	2.169	4,900	3,600
	55	.015	100	.015	33.338	.120	1.5	56,000	49,000	.984		
5212	2.3622	.0006	4.3307	.0006	1.4375	.0047	.059	15,505	13,950	2.794	4,500	3,400
	60	.015	110	.015	36.513	.120	1.5	69,000	62,000	1.267		
5213	2.5591	.0006	4.7244	.0006	1.5000	.0047	.059	17,202	15,525	3.454	4,200	3,100
	65	.015	120	.015	38.100	.120	1.5	76,500	69,000	1.567		
5214	2.7559	.0006	4.9213	.0007	1.5625	.0047	.059	21,150	18,450	3.960	3,900	2,900
	70	.015	125	.018	39.688	.120	1.5	94,000	82,000	1.796		
5215	2.9528	.0006	5.1181	.0007	1.6250	.0047	.059	21,037	18,675	1.180	3,600	2,700
	75	.015	130	.018	41.275	.120	1.5	93,500	83,000	1.896		
5216	3.1496	.0006	5.5118	.0007	1.7500	.0047	.079	22,275	20,925	5.258	3,400	2,500
	80	.015	140	.018	44.45	.120	2.0	99,000	93,000	2.385		
5217	3.3465	.0006	5.9055	.0007	1.9375	.0059	.079	26,100	24,750	6.732	3,200	2,400
	85	.015	150	.018	49.213	.015	2.0	116,000	110,000	3.054		

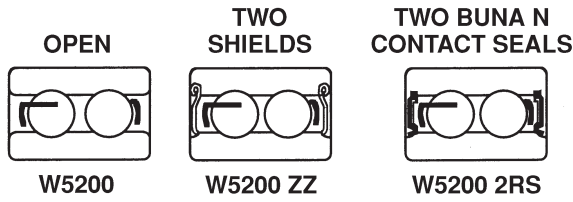
*Maximum fillet which corner radius of bearing will clear.



W5200/W5300 SERIES



The same construction and ball compliment as the 5200 series. Made with a slightly larger width as a replacement for other manufacturers.

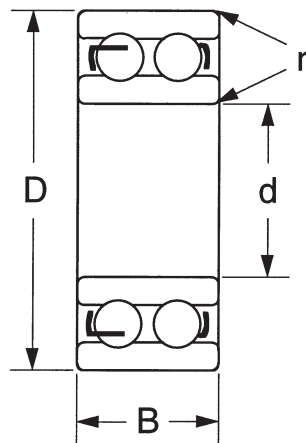


Units: Inches
Metric

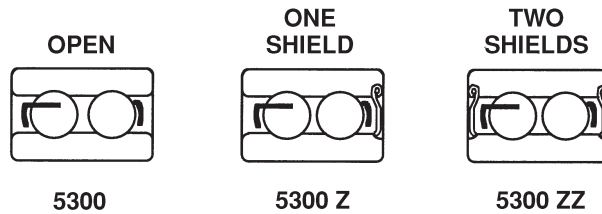
Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings lbf N		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
								Dynamic Cr	Static Cor		oil	grease
W5201	.4724	.0003	1.2598	.0005	.6875	.0050	.024	2,430	1,305	.162	16,150	12,350
	12	.008	32	.011	17.463		.6	10,500	5,800	.073		
W5202	.5906	.0003	1.378	.0005	.7500	.0050	.024	2,632	1,586	.171	14,250	10,450
	15	.008	35	.011	19.050		.6	11,700	7,050	.077		
W5203	.6693	.0003	1.5748	.0005	.8125	.0050	.024	3,285	2,036	.242	12,350	9,405
	17	.008	40	.011	20.638		.6	14,600	9,050	.110		
W5204	.7874	.0004	1.8504	.0005	.9375	.0050	.039	4,410	2,790	.401	11,400	8,400
	20	.010	47	.011	23.813		1.0	19,600	12,400	.182		
W5205	.9843	.0004	2.0472	.0005	.9375	.0050	.039	4,792	3,307	.441	9,310	7,000
	25	.010	52	.011	23.813		1.0	21,300	14,700	.200		
W5206	1.1811	.0004	2.4409	.0005	1.0625	.0050	.039	6,660	4,747	.711	8,400	6,000
	30	.010	62	.011	26.988		1.0	29,600	21,100	.323		
W5207	1.13780	.0005	2.8346	.0005	1.1890	.0050	.079	8,500	6,250	1.21	7,400	5,500
	35	.011	72	.011	30.2		2.0	37,812	27,803	.549		
W5304	.7874	.0004	2.0472	.0005	1.000	.0050	.079	4,650	2,850	.54	12,000	9,000
	20	.010	52	.011	25.4		2.0	20,685	12,678	.245		
W5305	.9843	.0004	2.4409	.0005	1.1250	.0050	.079	6,850	4,600	.89	10,000	8,000
	25	.010	62	.011	29.6		2.0	30,472	20,463	.404		
W5306	1.1811	.0004	2.8346	.0005	1.3125	.0050	.079	8,900	6,200	1.41	8,000	6,000
	30	.010	72	.011	33.3		2.0	39,591	27,580	.640		
W5307	1.3780	.0005	3.14796	.0005	1.500	.0050	.098	11,100	7,850	1.89	6,000	5,000
	35	.011	80	.011	38.1		2.5	49,378	34,920	.858		

*Maximum fillet which corner radius of bearing will clear.

5300 SERIES



This series is manufactured with the same ID and OD as the 6300 bearings. By utilizing double row construction, the 5300 series is used with heavy radial, combined radial and thrust, or where there are two directional loads. The non-filling slot allows these bearings to be used at high RPM. They are available with shields and seals. Loading groove maximum construction types are manufactured upon request. Consult Peer sales engineer for availability.



Units: Inches
Metric

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii r	Basic Load Ratings		Weight lb Kg	Limiting speed of Open Bearing (rpm)	
								Dynamic Cr	Static Cor		oil	grease
5302	.5906	.0003	1.6535	.0005	.7500	.0047	.039	3,960	2,295	.250	15,000	10,000
	15	.008	42	.011	19.050	.120	1.0	17,600	10,200	.113		
5303	.6693	.0003	1.8504	.0005	.8750	.0047	.039	4,725	2,835	.330	14,000	10,000
	17	.008	47	.011	22.225	.120	1.0	21,000	12,600	.150		
5304	.7874	.0004	2.0472	.0005	.8750	.0047	.039	5,530	3,370	.500	12,000	9,000
	20	.010	52	.011	22.225	.120	1.0	24,600	15,000	.227		
5305	.9843	.0004	2.4409	.0005	1.0000	.0047	.039	7,320	4,650	.750	10,000	8,000
	25	.010	62	.011	25.400	.120	1.0	32,500	20,700	.340		
5306	1.1811	.0004	2.8346	.0005	1.1875	.0047	.039	9,112	6,322	1.100	8,000	6,000
	30	.010	72	.011	30.163	.120	1.0	40,500	28,100	.499		
5307	1.3780	.0005	3.1496	.0005	1.3750	.0047	.059	11,475	8,100	1.700	6,000	5,000
	35	.012	80	.011	34.925	.120	1.5	51,000	36,000	.771		
5308	1.5748	.0005	3.5433	.0006	1.4375	.0047	.059	12,712	9,225	2.200	6,000	5,000
	40	.012	90	.015	36.513	.120	1.5	56,500	41,000	.998		
5309	1.7717	.0005	3.937	.0006	1.5625	.0047	.059	15,412	11,475	3.120	6,000	5,000
	45	.012	100	.015	39.688	.120	1.5	68,500	51,000	1.415		
5310	1.9685	.0005	4.3309	.0006	1.7500	.0047	.079	18,337	13,837	4.250	5,000	4,000
	50	.012	110	.015	44.450	.120	2.0	81,500	61,500	1.928		
5311	2.1654	.0006	4.7244	.0006	1.9375	.0059	.079	21,375	16,425	5.110	5,000	4,000
	55	.015	120	.015	49.213	.150	2.0	95,000	73,000	2.318		
5312	2.3622	.0006	4.1181	.0007	2.1250	.0059	.079	28,100	22,162	7.000	4,000	3,000
	60	.015	130	.018	53.975	.150	2.0	125,000	98,500	3.175		
5313	2.5591	.0006	5.5118	.0007	2.3125	.0059	.079	31,950	25,425	8.500	4,000	3,000
	65	.015	140	.018	58.738	.150	2.0	142,000	113,000	3.856		
5314	2.7559	.0006	5.9066	.0007	2.5000	.0059	.079	35,775	28,800	1.500	3,800	2,800
	70	.015	150	.018	63.500	.150	2.0	159,000	128,000	4.763		
5315	2.9528	.0006	6.2992	.0010	2.6875	.0059	.079	37,800	31,500	11.000	3,600	2,600
	75	.015	160	.025	68.263	.150	2.0	168,149	140,125	4.990		
5316	3.1496	.0006	6.6929	.0010	2.6875	.0059	.079	45,200	53,100	14.500	3,500	2,400
	80	.015	170	.025	68.263	.150	2.0	201,068	236,210	6.577		

*Maximum fillet which corner radius of bearing will clear.



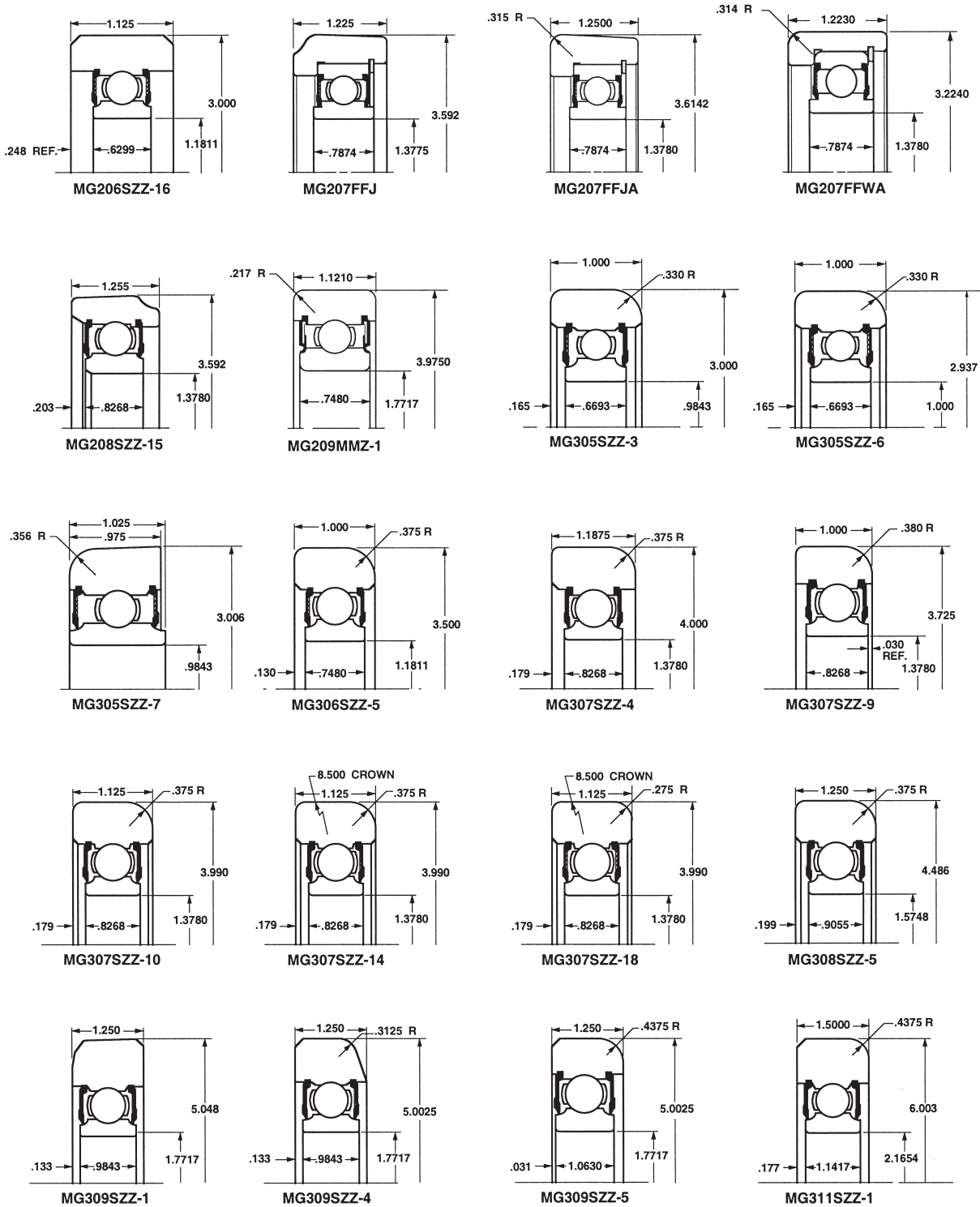
MAST GUIDE SERIES

Specially designed bearings to handle mast movements of industrial trucks. This series will handle heavy radial and shock loads. Thick outer rings permit heavy OD loading. Specially designed seals allow the bearings to operate in adverse environments.

PEER Bearing No.	MRC Interchange	BCA Interchange	Hoover/NSK Interchange
MG206FFA		MG206FFA	
MG206SZZ-16	206-SZZ-16		
MG207FFJ		MG207FFJ	
MG207FFJA		MG207FFJA	
MG207FFWA		MG207FFWA	
MG208FFA		MG208FFA	
MG208SZZ-15	208-SZZ-15	MG207FFH	
MG209MZZ-1	209-MZZ1	MG209-MZZ1	
MG305SZZ-3	305-SZZ-3	MG305DD	X421RS
MG305SZZ-6	305-SZZ-6	MG305DDA	
MG305SZZ-7	305-SZZ-7		
MG306SZZ-5	306-SZZ-5	MG306DD	X555
MG307SZZ-4	307-SZZ-4	MG307FFA	
MG307SZZ-9	307-SZZ-9	MG307FFK	X549RS
MG307SZZ-10	307-SZZ-10	MG307FF(FFH)	X376RS
MG307SZZ-14	307-SZZ-14		
MG307SZZ-18	307-SZZ-18		
MG308SZZ-5	308-SZZ-5	MG307FFP	
MG309SZZ-1	309-SZZ-1	MG308FFA	
MG309SZZ-4	309-SZZ-4		X469
MG309SZZ-5	309-SZZ-5		X501RS
MG311SZZ-1	311-SZZ-1		

*Special sizes available upon request

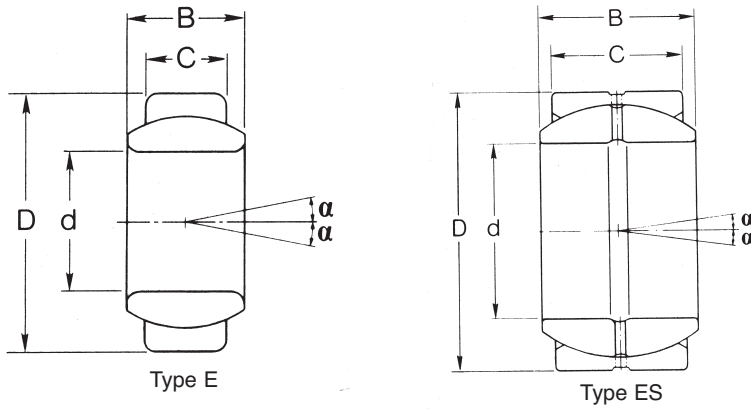
MAST GUIDE SERIES





SPHERICAL PLAIN BEARINGS

GE SERIES



Spherical plain bearings are designed as open bearings or with seals to aid in dirt exclusion. Spherical plain bearings are used in severe misalignment conditions. Additional applications include oscillation, tilting and similar conditions where high rotation speeds are not required. Made in inch and metric dimensions.

INCH SERIES

Units: Inches
Metric

Designation Without Seals	Designation With Seals	d in. mm	D in. mm	B in. mm	B ₁ in. mm	Tilt Angle Degrees	Designation Without Seals	Designation With Seals	d in. mm	D in. mm	B in. mm	B ₁ in. mm	Tilt Angle Degrees
GEZ 008 ES	—	.5 12.700	.875 22.225	.437 11.10	.375 9.525	6	GEZ 208 ES	GEZ 208 ES-2RS	2.5 63.500	3.9375 100.013	2.187 55.55	1.875 47.625	6
GEZ 010 ES	—	.625 15.875	1.0625 26.988	.547 13.894	.469 11.913	6	GEZ 212 ES	GEZ 212 ES-2RS	2.75 69.850	4.375 111.125	2.406 61.112	2.062 52.375	6
GEZ 012 ES	—	.75 19.050	1.25 31.750	.656 16.662	.562 14.275	6	GEZ 300 ES	GEZ 300 ES-2RS	3 76.200	4.75 120.650	2.625 66.675	2.25 57.15	6
GEZ 014 ES	—	.875 22.225	1.4375 36.513	.756 19.431	.656 16.662	6	GEZ 304 ES	GEZ 304 ES-2RS	3.25 82.550	5.125 130.175	2.844 72.238	2.437 61.900	6
GEZ 100 ES	GEZ 100 ES02RS	1 25.400	1.625 41.275	.875 22.225	.75 19.05	6	GEZ 308 ES	GEZ 308 ES-2RS	3.5 88.900	.5 139.700	3.062 77.775	2.625 66.675	6
GEZ 104 ES	—	1.25 31.750	2 50.800	1.093 27.762	.937 23.80	6	GEZ 312 ES	GEZ 312 ES-2RS	3.75 95.250	5.875 149.225	3.281 83.337	2.812 71.425	6
GEZ 106 ES	—	1.375 34.925	2.1875 55.563	1.187 30.15	1.031 26.187	6	GEZ 400 ES	GEZ 400 ES-2RS	4 101.600	6.25 158.750	3.5 88.900	3 76.200	6
GEZ 108 ES	GEZ 108 ES-2RS	1.5 38.100	2.4375 61.913	1.312 33.325	1.125 28.575	6	GEZ 408 ES	GEZ 408 ES-2RS	4.5 114.300	7 177.800	3.937 100.000	3.375 85.725	6
GEZ 112 ES	GEZ 112 ES-2RS	1.75 44.450	2.8125 71.438	1.531 38.887	1.312 33.325	6	GEZ 500 ES	GEZ 500 ES-2RS	5 127.000	7.75 196.850	4.375 111.125	3.75 95.250	6
GEZ 200 ES	GEZ 200 ES-2RS	2 50.800	3.1875 80.963	1.751 44.45	1.5 38.10	6	GEZ 600 ES	GEZ 600 ES-2RS	6 152.400	8.75 222.250	4.75 120.650	4.125 104.775	5
GEZ 204 ES	GEZ 204 ES-2RS	2.25 57.150	3.5625 90.488	1.969 50.013	1.687 42.85	6							

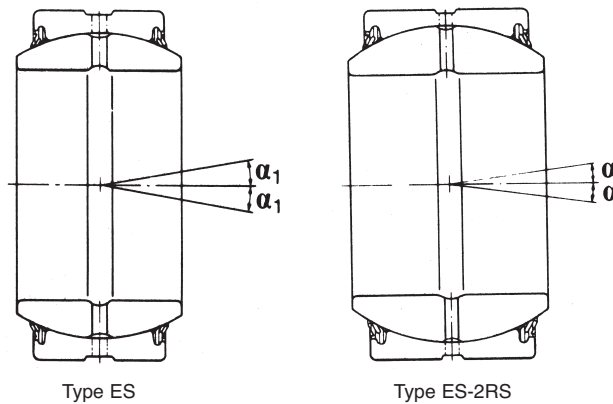
METRIC SERIES

Designation Without Seals	Designation With Seals	d mm in.	D mm in.	B mm in.	B ₁ mm in.	Tilt Angle Degrees	Designation Without Seals	Designation With Seals	d mm in.	D mm in.	B mm in.	B ₁ mm in.	Tilt Angle Degrees
GE 4 E	—	4 .1575	12 .4724	5 .1969	3 .1181	16	GE 12 E	—	12 .4724	22 .8661	10 .3937	7 .4331	11
GE 5 E	—	5 .1969	14 9.3556	6 .2362	4 .1575	13	GE 15 ES	GE 15 ES-2RS	15 .5906	26 1.0236	12 .3048	9 .3543	8/5
GE 6 E	—	6 .2362	14 .03556	6 .2362	4 .1575	13	GE 17 ES	GE 17 ES-2RS	17 .6693	30 1.1811	14 .5512	10 .3937	10/7
GE 8 E	—	8 .3150	16 .6299	8 .3150	5 .1969	15	GE 20 ES	GE 20 ES-2RS	20 .7874	35 1.3780	16 .6299	12 .4724	9/6
GE 10 E	—	10 .3937	19 .7480	9 .3543	6 .2362	12	—	GEH 20 ES-2RS	20 1.6535	42 .9843	25 .6299	16 .6299	15

*Maximum fillet which corner radius of bearing will clear.

SPHERICAL PLAIN BEARINGS

GE SERIES (continued)



Spherical plain bearings are designed as open bearings or with seals to aid in dirt exclusion. Spherical plain bearings are used in severe misalignment conditions. Additional applications include oscillation, tilting and similar conditions where high rotation speeds are not required. Made in inch and metric dimensions.

Type ES

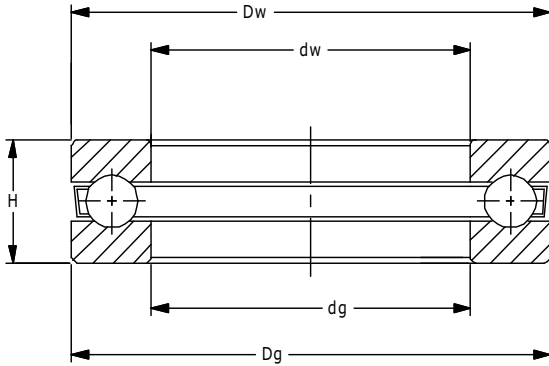
Type ES-2RS

Designation		Units:											
Without Seals	With Seals	d	D	B	B ₁	Tilt Angle	Without Seals	With Seals	d	D	B	B ₁	Tilt Angle
		mm	mm	mm	mm	Degrees			mm	mm	mm	mm	Degrees
		in.	in.	in.	in.				in.	in.	in.	in.	
GE 25 ES	GE 25 ES-2RS	25	42	20	16	7/4	GE 90 ES	GE 90 ES-2RS	90	130	60	50	5/3
—	GEH 25 ES-2RS	.9843	1.6535	.7874	.6299	14	GEH 90 ES	GEH 90 ES-2RS	3.5436	5.1182	2.3625	1.9688	15/14
GE 30 ES	GE 30 ES-2RS	30	47	22	18	6/4	GE 100 ES	GE 100 ES-2RS	100	150	85	55	7/5
—	GEH 30 ES-2RS	1.1812	1.8504	8.6614	.7087	16	—	GEH 100 ES-2RS	3.9373	5.9056	3.3464	2.1654	12
GE 35 ES	GE 35 ES-2RS	35	55	25	20	6/4	GE 110 ES	GE 100 ES-2RS	110	160	70	55	6/4
—	GEH 35 ES-2RS	1.3781	2.1653	.9843	.7874	15	—	GEH 100 ES-2RS	4.3310	6.2993	2.7562	2.1654	11
GE 40 ES	GE 40 ES-2RS	40	62	28	22	7/4	GE 120 ES	GE 120 ES-2RS	120	180	100	70	6/4
—	GEH 40 ES-2RS	1.5750	2.4409	1.3781	.8661	14	GEH 120 ES	—	4.7247	7.0867	3.9373	2.7562	16
GE 45 ES	GE 45 ES-2RS	45	68	32	25	7/4	GE 140 ES	GE 140 ES-2RS	140	210	90	70	7/5
—	GEH 45 ES-2RS	1.7719	2.6772	1.2398	.9843	13	GE 160 ES	GE 160 ES-2RS	160	230	105	80	8/6
GE 50 ES	GE 50 ES-2RS	50	75	35	28	6/4	GE 180 ES	GE 180 ES-2RS	180	260	105	80	6/4
—	GEH 50 ES-2RS	1.9688	2.9528	1.6929	1.1024	16	GE 200 ES	—	7.0869	10.2363	4.1339	3.1499	7
GE 60 ES	GE 60 ES-2RS	60	90	44	36	6/3	GE 220 ES	—	7.8743	11.4174	5.1182	3.9373	8
—	GEH 60 ES-2RS	2.3625	3.5433	1.7323	1.4173	15	GE 240 ES	—	8.6617	12.5985	5.3151	3.9373	8
GE 70 ES	GE 70 ES-2RS	70	105	63	40	6/4	GE 260 ES	—	9.4491	13.3859	5.5121	3.9373	7
GEH 70 ES	GEH 70 ES-2RS	2.7562	4.1339	2.4803	1.5750	16/14	GE 280 ES	—	10.2365	14.5670	6.1025	4.3310	6
GE 80 ES	GE 80 ES-2RS	80	120	55	45	6/4	GE 300 ES	—	11.0239	15.7481	6.2994	4.7247	7
—	GEH 80 ES-2RS	3.1499	4.7245	2.1654	1.7719	13	—	—	11.8113	16.9292	6.6931	4.7247	
			5.1182	2.9528	1.9688								

*Maximum fillet which corner radius of bearing will clear.



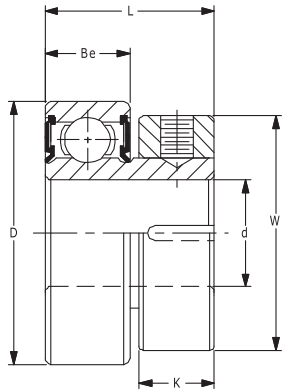
THRUST BEARINGS



Thrust ball bearings single direction. Thrust ball bearings are available in both the single and double direction designs. Either one can take high axial load but no radial load. Besides the conventional design with flat supporting surfaces, the standard includes thrust ball bearings made with spherical housing washers and seating rings.

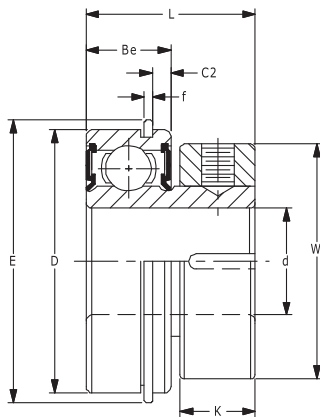
Part Number	Dimensions (Metric)					Approx. Wgt. (lbs.)	Interchange			
	dw	dg	Dw	Dg	H		FAG SKF (Eur.)	RHP SNR	RIV	
51100	10	11	24	24	9	0.05	51100	51100	ELP	10
51101	12	13	26	26	9	0.05	51101	51101	ELP	12
51102	15	16	28	28	9	0.06	51102	51102	ELP	15
51103	17	18	30	30	9	0.07	51103	51103	ELP	17
51104	20	21	35	35	10	0.09	51104	51104	ELP	20
51105	25	26	42	42	11	0.13	51105	51105	ELP	25
51106	30	32	47	47	11	0.14	51106	51106	ELP	30
51107 X	35	37	52	52	12	0.20	51107 X	51107 X	ELPn	35
51107	35	37	53	53	12	0.22	51107	51107	ELP	35
51108	40	42	60	60	13	0.26	51108	51108	ELP	40
51109	45	47	65	65	14	0.31	51109	51109	ELP	45
51110	50	52	70	70	14	0.34	51110	51110	ELP	50
51111	55	57	78	78	16	0.48	51111	51111	ELP	55
51112	60	62	85	85	17	0.62	51112	51112	ELP	60
51113	65	67	90	90	18	0.71	51113	51113	ELP	65
51114	70	72	95	95	18	0.77	51114	51114	ELP	70
51115	75	77	100	100	19	0.86	51115	51115	ELP	75
51116	80	82	105	105	19	0.90	51116	-	ELP	80
51117	85	87	110	110	19	0.93	51117	-	ELP	85
51118	90	92	120	120	22	1.41	51118	-	ELP	90
51120	100	102	135	135	25	2.06	51120	-	ELP	100
51122	110	112	145	145	25	2.25	51122	-	ELP	110
51124	120	122	155	155	25	2.43	51124	-	ELP	120
51126	130	132	170	170	30	3.62	51126	-	ELP	130
51128	140	142	178	180	31	4.56	51128	-	ELP	140
51130	150	152	188	190	31	4.81	51130	-	ELP	150
51132	160	162	198	200	31	4.92	51132	-	ELP	160
51134	170	172	213	215	34	6.53	51134	-	ELP	170
51136	180	183	222	225	34	7.67	51136	-	ELP	180
51138	190	193	237	240	37	8.95	51138	-	ELP	190
51140	200	203	247	250	37	9.35	51140	-	ELP	200
51144	220	223	267	270	37	10.20	51144	-	ELP	220
51148	240	243	297	300	45	16.60	51148	-	ELP	240
51152	260	263	317	320	45	17.90	51152	-	ELP	260
51156	280	283	347	350	53	26.90	51156	-	ELP	280
51160	300	304	376	380	62	38.60	51160	-	ELP	300
51164	320	324	396	400	63	41.70	51164	-	ELP	320
51168	340	344	416	420	64	44.80	51168	-	ELP	340
51172	360	364	436	440	65	48.10	51172	-	ELP	360
51176	380	384	456	460	65	50.71	51176	-	-	-
51180	400	404	476	480	65	52.91	51180	-	-	-
51184	420	424	495	500	65	55.70	51184	-	-	-
51188	440	444	535	540	80	90.60	51188	-	-	-
51192	460	464	555	560	80	94.00	51192	-	-	-
51196	480	484	575	580	80	97.90	51196	-	-	-
511/500	500	505	595	600	80	101.70	511/500	-	-	-

COLLAR BEARINGS/FLANGETTE SERIES



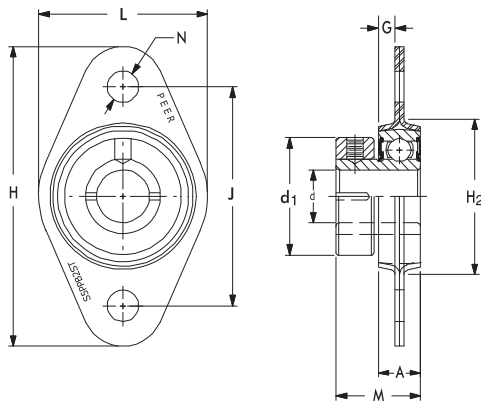
Collar Bearings Clamp Type Standard Type

Part Number	d +.0005 - .0000	D +.0000 - .0004	Be +.000 - .005	L +.000 - .005	K	W
S1PP7-4	.1875	.6250	.1960	.4219	3/16"	9/16"
S1PP7-3	.2500	.6250	.1960	.4219	3/16"	9/16"
S3PP16	.3125	.8750	.2812	.5625	1/4"	25/32"
S3PP4	.3750	.8750	.2812	.5625	1/4"	25/32"
S5PP2	.5000	1.1250	.3125	.6250	9/32"	29/32"



"G" Type: Snap Ring Mounted on Outer Diameter

Part Number	d +.0005 - .0000	D +.0000 - .0004	Be +.000 - .005	L +.000 - .005	K	W	C ₂	f
S1PPG7-4	.1875	.6250	.1960	.4219	3/16"	9/16"	.070	.026
S1PPG7-3	.2500	.6250	.1960	.4219	3/16"	9/16"	.070	.026
S3PPG16	.3125	.8750	.2812	.5625	1/4"	25/32"	.090	.026
S3PPG4	.3750	.8750	.2812	.5625	1/4"	25/32"	.090	.026
S5PPG2	.5000	1.1250	.3125	.6250	9/32"	29/32"	.090	.031



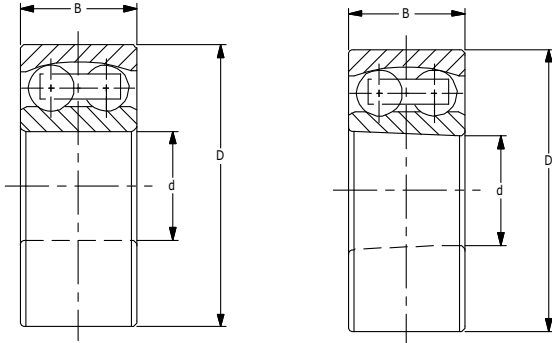
Flangette Series

1. Bearing material 52100 Chrome steel
2. House material pressed steel
3. Bearings meet ABEC 1 tolerances except bore
4. Bearing double sealed

Part Number	d +.0005 - .0000	L	J	N	M	G	d ₁	A	H ₂	H
S1PPB73ST	.2500	7/8"	1 7/32"	7/32"	.43	.079	9/16"	7/23"	25/32"	1.78125
S3PPB15ST	.3125	1 3/16	1 17/32	7/32	.562	.107	25/32	9/32	1 3/32	2 3/32
S3PPB5ST	.3750	1 3/16	1 17/32	7/32	.562	.107	25/32	9/32	1 3/32	2 3/32
S5PPB2ST	.5000	1 7/16	1 25/32	7/32	.625	.120	29/32	5/16	1 9/32	2 11/32



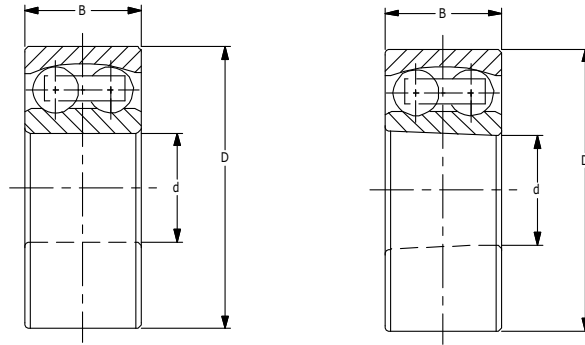
1200, 1200K, 1300 & 1300K SERIES



The self-aligning ball bearing is one of the double row type with a spherical raceway in the outer ring. This gives the bearing self-aligning properties and allows it to compensate for misalignment, shaft deflections and housing deformation. Self-aligning ball bearings are available with cylindrical or tapered bore 1:12.

Part Number	Bore		Outer Diameter		Width		Radius		Basic Load Rating lbs.		Weight lbs.	
	d		D		B		r		Dynamic	Static		
	mm	in.	mm	in.	mm	in.	mm	in.	C	Cor		
1200	1200K	10	.3937	30	1.1811	9	.3543	1	.039	1230	268	0.075
1201	1201K	12	.4724	32	1.2598	10	.3937	1	.039	1260	286	0.088
1202	1202K	15	.5906	35	1.3780	11	.4331	1	.039	1680	395	0.108
1203	1203K	17	.6693	40	1.5748	12	.4724	1	.039	1770	450	0.161
1204	1204K	20	.7874	47	1.8504	14	.5512	1.5	.059	2230	585	0.265
1205	1205K	25	.9843	52	2.0472	15	.5906	1.5	.059	2720	740	0.311
1206	1206K	30	1.1811	62	2.4409	16	.6299	1.5	.059	3500	1050	0.485
1207	1207K	35	1.3780	72	2.8346	17	.6693	2	.079	3550	1150	0.712
1208	1208K	40	1.5748	80	3.1496	18	.7087	2	.079	4350	1470	0.919
1209	1209K	45	1.7717	85	3.3565	19	.7480	2	.079	4900	1650	1.03
1210	1210K	50	1.9685	90	3.5433	20	.7874	2	.079	5100	1820	1.16
1211	1211K	55	2.1654	100	3.9370	21	.8268	2.5	.098	6000	2250	1.55
1212	1212K	60	2.3622	110	4.3307	22	.8661	2.5	.098	6800	2590	1.98
1213	1213K	65	2.5591	120	4.7244	23	.9055	2.5	.098	6950	2820	2.54
1214	1214K	70	2.7559	125	4.9213	24	.9449	2.5	.098	7800	3100	2.78
1215	1215K	75	2.9528	130	4.1181	25	.9843	2.5	.098	8750	3550	3.00
1216	1216K	80	3.1496	140	5.5118	26	1.0236	3	.118	8950	3800	3.68
1217	1217K	85	3.3465	150	5.9055	28	1.1024	3	.118	11000	4650	4.56
1218	1218K	90	3.5433	160	6.2992	30	1.1811	3	.118	12800	5300	5.56
1219	1219K	95	3.7402	170	6.6929	32	1.2598	3.5	.138	14300	6100	6.83
1220	1220K	100	3.9370	180	7.0866	34	1.3386	3.5	.138	15500	6700	8.16
1300	1300K	10	.3937	35	1.3780	11	.4331	0.6	.024	1630	365	0.128
1301	1301K	12	.4724	37	1.4567	12	.4724	1	.039	2130	485	0.148
1302	1302K	15	.5906	42	1.6535	13	.5118	1.5	.059	2150	515	0.207
1303	1303K	17	.6693	47	1.8504	14	.5512	1.5	.059	2820	715	0.287
1304	1304K	20	.7874	52	2.0472	15	.5906	2	.079	2790	750	0.359
1305	1305K	25	.9843	62	2.4409	17	.6693	2	.079	4050	1130	0.567
1306	1306K	30	1.1811	72	2.8346	19	.7480	2	.079	4800	1420	0.853
1307	1307K	35	1.3780	80	3.1496	21	.8268	2.5	.098	5650	1770	1.12
1308	1308K	40	1.5748	90	3.5433	23	.9055	2.5	.098	6650	2180	1.58
1309	1309K	45	1.7717	100	3.9370	25	.9843	2.5	.098	8550	2860	2.11
1310	1310K	50	1.9685	110	4.3307	27	1.0630	3	.118	9750	3150	2.67
1311	1311K	55	2.1654	120	4.7244	29	1.1417	3	.118	11600	4000	3.48
1312	1312K	60	2.3622	130	5.1181	31	1.2205	3.5	.138	12900	4700	4.32
1313	1313K	65	2.5591	140	5.5118	33	1.2992	3.5	.138	13900	5150	5.40
1314	1314K	70	2.7559	150	5.9055	35	1.3780	3.5	.138	16700	6250	6.60
1315	1315K	75	2.9528	160	6.2992	37	1.4567	3.5	.138	17800	6750	7.85
1316	1316K	80	3.1496	170	6.6929	39	1.5354	3.5	.138	19900	7450	9.22
1317	1317K	85	3.3465	180	7.0866	41	1.6142	4	.157	22000	8500	11.00
1318	1318K	90	3.5433	190	7.4803	43	1.6929	4	.157	26100	10000	12.80
1319	1319K	95	3.7402	200	7.8740	45	1.7717	4	.157	29600	11400	14.70
1320	1320K	100	3.9370	215	8.4646	47	1.8504	4	.157	32000	12900	18.30

2200, 2200K, 2300 & 2300K SERIES

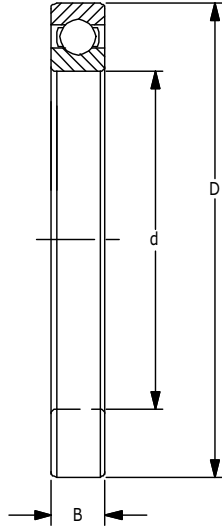


The self-aligning ball bearing is one of the double row type with a spherical raceway in the outer ring. This gives the bearing self-aligning properties and allows it to compensate for misalignment, shaft deflections and housing deformation. Self-aligning ball bearings are available with cylindrical or tapered bore 1:12.

Part Number		Bore		Outer Diameter		Width		Radius		Basic Load Rating lbs.		Weight lbs.	
		d		D		B		r		Dynamic	Static	2200	2200K
		mm	in.	mm	in.	mm	in.	mm	in.	C	Cor	2300	2300K
2200	2200K	10	.3937	30	1.1811	14	.5512	1	.039	1640	360	0.104	0.098
2201	2201K	12	.4724	32	1.2598	14	.5512	1	.039	1710	390	0.117	0.113
2202	2202K	15	.5906	35	1.3780	14	.5512	1	.039	1780	415	0.132	0.127
2203	2203K	17	.6693	40	1.5748	16	.6299	1	.039	2200	545	0.194	0.118
2204	2204K	20	.7874	47	1.8504	18	.7087	1.5	.059	2830	745	0.309	0.300
2205	2205K	25	.9843	52	2.0472	18	.7087	1.5	.059	2760	775	0.359	0.348
2206	2206K	30	1.1811	62	2.4409	20	.7874	1.5	.059	3400	1020	0.573	0.560
2207	2207K	35	1.3780	72	2.8346	23	.9055	2	.079	4850	1480	0.888	0.873
2208	2208K	40	1.5748	80	3.1496	23	.9055	2	.079	5000	1650	1.11	1.09
2209	2209K	45	1.7717	85	3.3565	23	.9055	2	.079	5200	1830	1.20	1.18
2210	2210K	50	1.9685	90	3.5433	23	.9055	2	.079	5200	1900	1.30	1.27
2211	2211K	55	2.1654	100	3.9370	25	.9843	2.5	.098	5920	2220	1.79	1.75
2212	2212K	60	2.3622	110	4.3307	28	1.1024	2.5	.098	7650	2840	2.40	2.36
2213	2213K	65	2.5591	120	4.7244	31	1.2205	2.5	.098	9750	3700	3.22	3.15
2214	2214K	70	2.7559	125	4.9213	31	1.2205	2.5	.098	9850	3850	3.35	-
2215	2215K	75	2.9528	130	4.1181	31	1.2205	2.5	.098	9950	4000	3.57	3.48
2216	2216K	80	3.1496	140	5.5118	33	1.2992	3	.118	10900	4450	4.43	4.34
2217	2217K	85	3.3465	150	5.9055	36	1.4173	3	.118	13100	4300	5.56	5.42
2218	2218K	90	3.5433	160	6.2992	40	1.5748	3	.118	15800	6450	7.50	7.34
2219	2219K	95	3.7402	170	6.6929	43	1.6929	3.5	.138	18700	7750	9.04	8.82
2220	2220K	100	3.9370	180	7.0866	46	1.8110	3.5	.138	21100	8650	11.0	10.70
2300	2300K	10	.3937	35	1.3780	17	.6693	1	.039	2270	485	0.183	0.180
2301	2301K	12	.4724	37	1.4567	17	.6693	1.5	.059	2640	610	0.201	0.195
2302	2302K	15	.5906	42	1.6535	17	.6693	1.5	.059	2700	650	0.251	0.245
2303	2303K	17	.6693	47	1.8504	19	.7480	1.5	.059	3250	800	0.348	0.340
2304	2304K	20	.7874	52	2.0472	21	.8268	2	.079	4050	1060	0.461	0.452
2305	2305K	25	.9843	62	2.4409	24	.9449	2	.079	5500	1480	0.739	0.721
2306	2306K	30	1.1811	72	2.8346	27	1.0630	2	.079	7050	1970	1.10	1.08
2307	2307K	35	1.3780	80	3.1496	31	1.2205	2.5	.098	8850	2530	1.49	1.45
2308	2308K	40	1.5748	90	3.5433	33	1.2992	2.5	.098	10100	3050	2.04	1.99
2309	2309K	45	1.7717	100	3.9370	36	1.4173	2.5	.098	12200	3750	2.71	2.65
2310	2310K	50	1.9685	110	4.3307	40	1.5748	3	.118	14500	4550	3.62	3.53
2311	2311K	55	2.1654	120	4.7244	43	1.6929	3	.118	16900	5400	4.63	4.52
2312	2312K	60	2.3622	130	5.1181	46	1.8110	3.5	.138	19600	6350	5.73	5.58
2313	2313K	65	2.5591	140	5.5118	48	1.8898	3.5	.138	21600	7300	7.12	6.94
2314	2314K	70	2.7559	150	5.9055	51	2.0079	3.5	.138	24600	8450	8.60	-
2315	2315K	75	2.9528	160	6.2992	55	2.1654	3.5	.138	27700	9650	10.4	10.20
2316	2316K	80	3.1496	170	6.6929	58	2.2835	3.5	.138	28800	10200	13.4	13.10
2317	2317K	85	3.3465	180	7.0866	60	2.3622	4	.157	31500	11500	15.4	15.20
2318	2318K	90	3.5433	190	7.4803	64	2.5197	4	.157	34000	12900	18.6	18.20
2319	2319K	95	3.7402	200	7.8740	67	2.6378	4	.157	37000	14500	21.6	21.10
2320	2320K	100	3.9370	215	8.4646	73	2.8740	4	.157	43000	17800	27.3	26.70



16000 SERIES DEEP GROOVE BALL

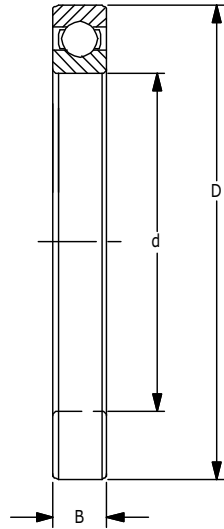


This deep groove, Conrad construction bearing is specifically designed to provide maximum performance by means of precise ball complement selection. The honed raceways offer a perfectly balanced bearing capable of operating under straight radial, thrust or combination loads. Consult PEER's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance to applications ranging from C2-C0-C3-C4 fits.

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	Basic Load Ratings lbf N		Weight lbs	Limiting Speed of Open Bearing (rpm)	
							Dynamic Cr	Static Cor		Oil	Grease
* **16100	.3937	0.0003	1.1024	0.0005	.3150	0.0050	1,030	440	0.03	34,000	29,000
16001	10 .4724	0.0003	28 1.1024	0.0005	8 .3150	0.0050	4582 1168	1957 548	0.0136	30000	26000
* **16101	12 .4724	0.0003	28 1.1811	0.0005	7 .3150	0.0050	5099 1150	2392 540	0.019	30000	26000
*16002	12 .5906	0.0003	30 1.3150	0.0005	8 .3150	0.0050	5116 1260	2402 635	0.0136	26000	22000
*16003	15 .6693	0.0003	32 1.3150	0.0005	8 .3150	0.0050	5605 1530	2825 755	0.0272	24000	20000
*16004	17 .7874	0.0004	35 1.3150	0.0005	8 .3150	0.0050	6806 2110	3359 1140	0.0317	21000	18000
16005	20 .9843	0.0004	42 1.3150	0.0005	8 .3150	0.0050	9386 2660	5071 1320	0.0498	18000	15000
16006	25 1.1811	0.0004	47 1.3543	0.0005	8 .3543	0.0050	10053 2970	5872 1860	0.0635	15000	13000
16007	30 1.3780	0.0005	55 1.3543	0.0005	9 .3543	0.0050	13212 3600	8274 2315	0.0861	14000	12000
16008	35 1.5748	0.0005	62 1.3543	0.0005	9 .3543	0.0050	16014 3750	10298 2600	0.1134	12000	10000
16009	40 1.7717	0.0005	68 1.3543	0.0005	9 .3937	0.0050	16681 4700	11566 3400	0.1270	11000	9200
16010	45 1.9685	0.0005	75 1.3937	0.0005	10 .3937	0.0050	20907 4900	15125 3750	0.1723	9800	8400
16011	50 2.1654	0.0006	80 1.4331	0.0006	10 .4331	0.0060	21797 6350	16681 4800	0.1814	9000	7700
16012	55 2.3622	0.0006	90 1.4331	0.0006	11 .4331	0.0060	28247 6610	21352 5200	0.2630	8300	7000
16013	60 2.7559	0.0006	95 1.4331	0.0006	11 .4331	0.0060	29404 6850	23132 5650	0.2812	7700	6500
16014	65 2.7559	0.0006	100 1.5118	0.0006	11 .5118	0.0060	30472 8550	25133 6950	0.2993	7100	6100
	70		110		13		38034	30916	0.4354		

* Sizes also available with two shields (ZZ). Width Dimensions - No Change
 ** Sizes also available with two seals (2RS). Width Dimensions - No Change

16000 SERIES DEEP GROOVE BALL (continued)

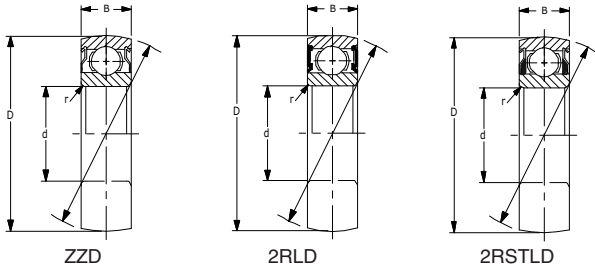


This deep groove, Conrad construction bearing is specifically designed to provide maximum performance by means of precise ball complement selection. The honed raceways offer a perfectly balanced bearing capable of operating under straight radial, thrust or combination loads. Consult PEER's engineering staff for proper selection. Stainless steel 440C material is available upon request. Radial clearance is selected in accordance to applications ranging from C2-C0-C3-C4 fits.

Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	Basic Load Ratings lbf N		Weight lbs	Limiting Speed of Open Bearing (rpm)	
							Dynamic Cr	Static Cor		Oil	Grease
16015	2.9528	0.0006	115	0.0006	.5118	0.0060	8890	7550	1.01	6700	5700
	75						39456	33585			
16016	3.1496	0.0006	125	0.0007	.5512	0.0060	10700	8950	1.31	6200	5300
	80						47598	39813			
16017	3.3465	0.0006	130	0.0007	.5512	0.0080	11100	9700	1.38	5900	5000
	85						49377	43149			
16018	3.5433	0.0006	140	0.0007	.6299	0.0080	13100	11200	1.87	5600	4700
	90						58274	49822			
16019	3.7402	0.0006	145	0.0007	.6299	0.0080	13600	12100	1.95	5300	4500
16020	3.9370	0.0006	150	0.0007	.6299	0.0080	60498	53826	0.8845	5000	4200
	100						13500	12200			
16021	4.1339	0.0006	160	0.0010	.7087	0.0080	60053	54270	0.9072	4700	4000
	105						16300	14800			
16022	4.3307	0.0006	170	0.0010	.7480	0.0080	72509	65836	1.1975	4500	3800
	110						18400	16400			
16024	4.7244	0.0006	180	0.0010	.7480	0.0080	81851	72954	1.4560	4100	3500
	120						19100	17800			
16026	5.1181	0.0009	200	0.0012	.8661	0.0100	84964	79181	1.7962	3800	3200
	130						23800	22700			
16028	5.5118	0.0009	210	0.0012	.8661	0.0100	105872	100979	2.6853	3500	3000
	140						24700	24400			
16030	5.9055	0.0009	225	0.0012	.9449	0.0100	109875	108541	2.8531	3200	2800
	150						28200	28200			
16032	6.2992	0.0009	240	0.0012	.9843	0.0100	125445	125445	3.5743	3000	2600
	160						3200	32500			
16034	6.6929	0.0009	260	0.0014	1.1024	0.0100	142349	144573	4.3092	2800	2400
	170						3800	38500			
16036	7.0866	0.0009	280	0.0014	1.2205	0.0100	169039	171263	5.7607	2700	2300
	180						42500	44500			
16038	7.4803	0.0010	290	0.0014	1.2205	0.0120	189057	197954	7.5751	2500	2100
	190						44000	48500			
16040	7.8740	0.0010	310	0.0014	1.3386	0.0120	195730	215747	7.8926	2400	2000
	200						49000	54500			
			310		34		217972	242438	10.0699		



SPHERICAL O.D. "22" SERIES

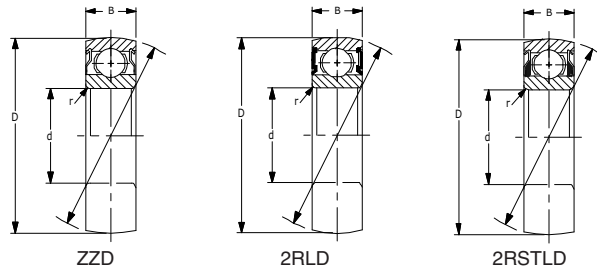


Standard Conrad series with spherical (rounded) O.D. to allow for self-aligning.

Units: Inches
Metric

Part Number	Bore d		Outer Diameter D		Width B		Radius r			Basic Load Rating		Weight lbs.
	TOL. +0/±0		TOL. +0/±0		TOL. +0/±0		rs min	max radial	max axial	Dynamic C	N. Static Cor	
	Nominal	Minus Shown	Nominal	Minus Shown	Nominal	Minus Shown						
6202-ZZ-22	0.5906	.0003	1.3780	.0050	.4331	.0050	.0236	.0394	.0787	1730	850	.10
6202-2RS-22	15.000	.0008	35.000	.013	11.000	.127	.600	1.000	2.000	7695	3780	.10
6202-2RST-22	0.5906	.0003	1.3780	.0050	.4331	.0050	.0236	.0394	.0787	1730	850	.10
6202-2RST-22	15.000	.0008	35.000	.013	11.000	.127	.600	1.000	2.000	7695	3780	.10
6203-ZZ-22	.6693	.0003	1.5748	.0050	.4724	.0050	.0236	.0394	.0787	2160	1000	.14
6203-2RS-22	17.000	.0008	40.000	.013	12.000	.127	.600	1.000	2.000	9608	4448	.14
6203-2RST-22	.6693	.0003	1.5748	.0050	.4724	.0050	.0236	.0394	.0787	2160	1000	.14
6203-2RST-22	17.000	.0008	40.000	.013	12.000	.127	.600	1.000	2.000	9608	4448	.14
6204-ZZ-22	.7874	.0004	1.8504	.0050	.5512	.0050	.0394	.0591	.1181	2900	1410	.23
6204-2RS-22	20.000	.010	47.000	.013	14.000	.127	1.000	1.500	3.000	12899	6271	.23
6204-2RST-22	.7874	.0004	1.8504	.0050	.5512	.0050	.0394	.0591	.1181	2900	1410	.23
6204-2RST-22	20.000	.010	47.000	.013	14.000	.127	1.000	1.500	3.000	12899	6271	.23
6205-ZZ-22	.9843	.0004	2.0472	.0050	.5906	.0050	.0394	.0591	.1181	3150	1610	.28
6205-2RS-22	25.000	.010	52.000	.013	15.000	.127	1.000	1.500	3.000	14011	7161	.28
6205-2RST-22	.9843	.0004	2.0472	.0050	.5906	.0050	.0394	.0591	.1181	3150	1610	.28
6205-2RST-22	25.000	.010	52.000	.013	15.000	.127	1.000	1.500	3.000	14011	7161	.28
6206-ZZ-22	1.1811	.0004	2.4409	.0050	.6299	.0050	.0394	.0591	.1181	4370	2320	.43
6206-2RS-22	30.000	.010	62.000	.013	16.000	.127	1.000	1.500	3.000	19438	10319	.43
6206-2RST-22	1.1811	.0004	2.4409	.0050	.6299	.0050	.0394	.0591	.1181	4370	2320	.43
6206-2RST-22	30.000	.010	62.000	.013	16.000	.127	1.000	1.500	3.000	19438	10319	.43
6207-ZZ-22	1.378	.0050	2.8346	.0050	.6693	.0050	.0433	.0787	.1378	5770	3150	.64
6207-2RS-22	35.000	.013	72.000	.013	17.000	.127	1.100	2.000	3.500	25666	14011	.64
6207-2RST-22	1.378	.0050	2.8346	.0050	.6693	.0050	.0433	.0787	.1378	5770	3150	.64
6207-2RST-22	35.000	.013	72.000	.013	17.000	.127	1.100	2.000	3.500	25666	14011	.64
6208-ZZ-22	1.5748	.0050	3.1496	.0050	.7087	.0050	.0433	.0787	.1378	7340	3650	.82
6208-2RS-22	40.000	.013	80.000	.013	18.000	.127	1.100	2.000	3.500	32649	16236	.82
6208-2RST-22	1.5748	.0050	3.1496	.0050	.7087	.0050	.0433	.0787	.1378	7340	3650	.82
6208-2RST-22	40.000	.013	80.000	.013	18.000	.127	1.100	2.000	3.500	32649	16236	.82
6209-ZZ-22	1.7717	.0050	3.3465	.0060	.7480	.0050	.0433	.0787	.1378	7350	4150	.90
6209-2RS-22	45.000	.013	85.000	.015	19.000	.127	1.100	2.000	3.500	32694	18460	.90
6209-2RST-22	1.7717	.0050	3.3465	.0060	.7480	.0050	.0433	.0787	.1378	7350	4150	.90
6209-2RST-22	45.000	.013	85.000	.015	19.000	.127	1.100	2.000	3.500	32694	18460	.90

SPHERICAL O.D. "22" SERIES (continued)



Standard Conrad series with spherical (rounded) O.D. to allow for self-aligning.

Units: Inches
Metric

Part Number	Bore d TOL. +0/to		Outer Diameter D TOL. +0/to		Width B TOL. +0/to		Radius r			Basic Load Rating		Weight lbs.
	Nominal	Minus Shown	Nominal	Minus Shown	Nominal	Minus Shown	rs min	max radial	max axial	lbf Dynamic C	N. Static Cor	
6210-ZZ-22	1.9685	.0050	3.5433	.0060	.7874	.0050	.0433	.0787	.1378	7880	4650	1.01
6210-2RS-22	1.9685	.0050	3.5433	.0060	.7874	.0050	.0433	.0787	.1378	7880	4650	1.01
6210-2RST-22	1.9685	.0050	3.5433	.0060	.7874	.0050	.0433	.0787	.1378	7880	4650	1.01
6305-ZZ-22	.9843	.0004	2.4409	.0050	.6693	.0050	.0433	.0787	.1378	5000	2600	.52
6305-2RS-22	.9843	.0004	2.4409	.0050	.6693	.0050	.0433	.0787	.1378	5000	2600	.52
6305-2RST-22	.9843	.0004	2.4409	.0050	.6693	.0050	.0433	.0787	.1378	5000	2600	.52
6306-ZZ-22	1.1811	.0004	2.8346	.0050	.7480	.0050	.0433	.0787	.1378	6550	3650	.78
6306-2RS-22	1.1811	.0004	2.8346	.0050	.7480	.0050	.0433	.0787	.1378	6550	3650	.78
6306-2RST-22	1.1811	.0004	2.8346	.0050	.7480	.0050	.0433	.0787	.1378	6550	3650	.78
6307-ZZ-22	1.3780	.0005	3.1496	.0050	.8268	.0050	.0591	.0906	.1575	7500	4300	1.02
6307-2RS-22	1.3780	.0005	3.1496	.0050	.8268	.0050	.0591	.0906	.1575	7500	4300	1.02
6307-2RST-22	1.3780	.0005	3.1496	.0050	.8268	.0050	.0591	.0906	.1575	7500	4300	1.02
6308-ZZ-22	1.5748	.0005	3.5433	.0060	.9055	.0050	.0591	.0906	.1575	9650	5600	1.41
6308-2RS-22	1.5748	.0005	3.5433	.0060	.9055	.0050	.0591	.0906	.1575	9650	5600	1.41
6308-2RST-22	1.5748	.0005	3.5433	.0060	.9055	.0050	.0591	.0906	.1575	9650	5600	1.41
6309-ZZ-22	1.7717	.0005	3.9370	.0060	.9843	.0050	.0591	40.0906	.1575	12000	7100	1.89
6309-2RS-22	1.7717	.0005	3.9370	.0060	.9843	.0050	.0591	.0906	.1575	12000	7100	1.89
6309-2RST-22	1.7717	.0005	3.9370	.0060	.9843	.0050	.0591	.0906	.1575	12000	7100	1.89
6310-ZZ-22	1.9685	.0005	4.3307	.0060	1.0630	.0050	.0787	.1181	.1772	14000	8500	2.45
6310-2RS-22	1.9685	.0005	4.3307	.0060	1.0630	.0050	.0787	.1181	.1772	14000	8500	2.45
6310-2RST-22	1.9685	.0005	4.3307	.0060	1.0630	.0050	.0787	.1181	.1772	14000	8500	2.45



PRECISION RADIAL BALL BEARINGS

The most popular type of bearing in use today is the single row deep groove radial ball bearing. The basic function of a radial ball bearing is to transmit rotational motion without the loss of energy. To accomplish this, anti-friction bearings are generally composed of two SAE 52100 hardened steel rings separated by the balls and spaced by a retainer. The deep superfinished raceways make these bearings suitable for radial loads or a combination of radial and moderate thrust loads in either direction. This type of design combines high operating speeds and super precision tolerances.

RETAINER

The retainer used in this type of bearing evenly spaces the balls around the bearing circumference and allows them to rotate properly within the assembly. It is typically manufactured with pressed crimped steel, pressed riveted steel, molded nylon, or phenolic materials. Based on the application requirements, the appropriate retainer material can be chosen.

CLOSURES

In an effort to eliminate contaminants from entering the rotating parts, the basic bearing can be enclosed with either metal shields or steel reinforced rubber type seals. A combination of either is available and various seal materials can be used depending upon the application. Table 1 describes the seal and shield nomenclature for the most commonly used closures.

LUBRICATION

Lubrication is used in bearings to eliminate metal to metal contact and prevent premature wear of bearing components. Bearings are filled with either a lubricating grease or oil and assembled with closures. Table 22 lists commonly used greases.

RADIAL INTERNAL CLEARANCE

Radial internal clearance is defined as the internal space between the balls and rings of radial deep groove ball bearings. It is determined by design applications depending upon the temperature situations present, the amount of press fit, the bearing misalignment, noise level and speeds required.

TOLERANCE CLASS

The various tolerances and formulae used by the bearing industry today (through the efforts of the American Bearing Manufacturers Association, ABMA, and the International Standards Organization, ISO) have become nearly standard practice in bearing production. Therefore, except in isolated instances, bearing boundary dimensions and tolerances are interchangeable throughout the world.

MATERIAL

Precision anti-friction bearings are most commonly made of SAE 52100 chromium steel. This reference is to a carbon alloy steel containing approximately 1% carbon, 1.5% chromium and lesser amounts of manganese, silicon and in some instances, molybdenum. Modern methods of steel manufacturing combined with up to date heat treatment technology have greatly reduced the non-metallic inclusions. Materials are constantly being checked against Standard ASTM A295 in accordance to the Jernkontoret chart. Quenching temperatures are closely monitored to maintain a martensitic structure with the minimum amount of retained austenite. Stainless steel materials are available for many sizes. Contact your PEER Sales Engineer for availability.

LIFE AND LOAD RATINGS

The life of a bearing is determined by the number of bearing revolutions (or hours at some given constant speed) counted until there is evidence of fatigue in one of the rings or in any of the rolling elements. However, individual bearings which seem identical and operate in a group under identical conditions may not last the same length of time. In this case, rating life is determined by the number of revolutions (or hours at a given constant speed) that 90% of the group of bearings complete or exceed before the first evidence of fatigue.



TABLE 1 - SYMBOL IDENTIFICATION FOR CLOSURE DESIGN

Consult PEER sales engineering to determine the exact torque and design requirements for your specific application.

Material	PEER Symbol	Type of Lip	PEER Symbol	Torque	PEER Symbol	Type of Landing Groove	PEER Symbol
BUNA (nitrile)	R	Single	S	None	A	Notch	D
HYCAR (polyacrylic)	HR	Double	L	Low	B	UG	None
VITON (fluorelastomer)	VR	Triple	T	Standard	None	W/L	W
METAL PROTECTED SEAL	RST			High	C	Step UG	P
METAL SHIELD	Z						

BEARING TOLERANCES AND PRECISION

To ensure dimensional accuracy in measurable forms, all PEER bearings are manufactured according to the ABMA established classes. These are currently listed as ABEC-1, 3, 5 and 7 for ball bearings. All standard production PEER bearings are manufactured to a minimum of ABEC-1 tolerances. The higher the ABEC number, the higher the precision class.

ABEC-1 and 3 specify inner ring tolerances for Δ_{dmp} , V_{dp} , V_{dmp} , K_{ia} , ΔB_s , V_{Bs} . And outer ring tolerances of ΔD_{mp} , V_{Dp} , V_{Dmp} , K_{ea} , Δc_s , V_{Cs} . See Tables 2 through 5.

ABEC-5 specifies tolerances for the same characteristics as classes 1 and 3 with the addition of S_d and S_{ia} for the inner ring and S_D and S_{ea} for the outer ring.

See "Tolerance Definitions" for an explanation of these symbols.

TOLERANCE DEFINITIONS

ABMA Std. 20-1996

Bore Diameter

d	Nominal bore diameter
d_s	Single bore diameter
Δ_{ds}	$=d_s - d$ Deviation of a single bore diameter from nominal dimension
d_{spmax}	Single plane maximum
d_{spmin}	Single plane minimum bore diameter
d_{mp}	$= \frac{d_{spmax} + d_{spmin}}{2}$ Single plane mean bore diameter
Δ_{dmp}	$=d_{mp} - d$ Single plane mean bore diameter deviation
V_{dp}	$=d_{spmax} - d_{spmin}$ Bore diameter variation in a single radial plane
V_{dmp}	$=d_{mpmax} - d_{mpmin}$ Means bore diameter variation; difference between maximum and minimum mean diameter

Outside Diameter

D	Nominal outside diameter
-----	--------------------------

D_s	Single outside diameter
Δ_{Ds}	$=D_s - D$ Deviation of a single outside diameter from nominal dimensions
D_{spmax}	Single plane maximum outside diameter
D_{spmin}	Single plane minimum diameter
D_{mp}	$= \frac{D_{spmax} + D_{spmin}}{2}$ Single plane means outside diameter
Δ_{Dmp}	$=D_{mp} - D$ Single plane means outside diameter deviation
V_{Dp}	$=D_{spmax} - D_{spmin}$ Outside diameter variation in a single radial plane
V_{Dmp}	$=D_{mpmax} - D_{mpmin}$ Means outside diameter variation; difference between maximum and minimum mean outside diameter

Width

B	Nominal inner ring width
C	Nominal outer ring width
B_s, C_s	Single ring width (inner, outer ring)
Δ_{Bs}, Δ_{Cs}	$=B_s - B, C_s - C$ Deviation of a single ring width (inner, outer ring) from nominal
V_{Bs}, V_{Cs}	$=B_{smax} - B_{smin}, C_{smax} - C_{smin}$ Variation of inner and outer ring width

Running Accuracy

K_{ia}	Inner ring radial runout of assembled bearing
K_{ea}	Outer ring radial runout of assembled bearing
S_d	Inner ring face runout to bore
S_D	Outer ring outside diameter surface runout to face
S_{ia}	Inner ring face runout to raceway of assembled bearing
S_{ea}	Outer ring face runout to raceway of assembled bearing



TOLERANCES OF RADIAL BALL BEARINGS

TABLE 2
PRECISION CLASS ABEC-1 — Metric

Inner Ring Unit um (.001mm)

d mm		Δ_{dmp}		V_{dp}			V_{dmp}	K_{Ia}	Δ_{Bs}		V_{Bs}
				diameter series							
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max
0.6	2.5	0	-8	10	8	6	6	10	0	-40	12
2.5	10	0	-8	10	8	6	6	10	0	-120	15
10	18	0	-8	10	8	6	6	10	0	-120	20
18	30	0	-10	13	10	8	8	13	0	-120	20
30	50	0	-12	15	12	9	9	15	0	-120	20
50	80	0	-15	19	19	11	11	20	0	-150	25
80	120	0	-20	25	25	15	15	25	0	-200	25
120	180	0	-25	31	31	19	19	30	0	-250	30
180	250	0	-30	38	38	23	23	40	0	-300	30
250	315	0	-35	44	44	26	26	50	0	-350	35
315	400	0	-40	50	50	30	30	60	0	-400	40
400	500	0	-45	56	56	34	34	65	0	-450	50

Outer Ring Unit um (.001mm)

D mm		Δ_{Dmp}		V_{Dp}				V_{Dmp}	K_{ea}	Δ_{Cs}		V_{Cs}
				Open Bearings			Capped Bearings					
				diameter series								
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max	
2.5	6	0	-8	10	8	6	10	6	15	Identical to Δ_{Bs} and V_{Bs} of inner ring of the same bearing		
6	18	0	-8	10	8	6	10	6	15			
18	30	0	-9	12	9	7	12	7	15			
30	50	0	-11	14	11	8	16	8	20			
50	80	0	-13	16	13	10	20	10	25			
80	120	0	-15	19	19	11	26	11	35			
120	150	0	-18	23	23	14	30	14	40			
150	180	0	-25	31	31	19	38	19	45			
180	250	0	-30	38	38	23	23	23	50			
250	315	0	-35	44	44	26	26	26	60			
315	400	0	-40	50	50	30	30	30	70			
400	500	0	-45	56	56	34	34	34	80			



TOLERANCES OF RADIAL BALL BEARINGS

TABLE 3
PRECISION CLASS ABEC-1 — Inch

Inner Ring Unit .0001"

d mm		Δ_{dmp}		V_{dp}			V_{dmp}	K_{ia}	Δ_{Bs}		V_{Bs}
				diameter series							
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max
0.6	2.5	0	-3	4	3	2.5	2.5	4	0	-16	4.5
2.5	10	0	-3	4	3	2.5	2.5	4	0	-47	6
10	18	0	-3	4	3	2.5	2.5	4	0	-47	8
18	30	0	-4	5	4	3	3	5	0	-47	8
30	50	0	-4.5	6	4.5	3.5	3.5	6	0	-47	8
50	80	0	-6	7.5	7.5	4.5	4.5	8	0	-59	10
80	120	0	-8	10	10	6	6	10	0	-79	10
120	180	0	-10	12	12	7.5	7.5	12	0	-98	12
180	250	0	-12	15	15	9	9	16	0	-118	12
250	315	0	-14	17	17	10	10	20	0	-138	14
315	400	0	-16	20	20	12	12	24	0	-157	16
400	500	0	-18	22	22	13	13	26	0	-177	20

Outer Ring Unit .0001"

D mm		Δ_{Dmp}		V_{Dp}				V_{Dmp}	K_{ea}	Δ_{Cs}		V_{Cs}
				Open Bearings diameter series			Capped Bearings					
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	2,3,4 max	max	max	high	low	max
2.5	6	0	-3	4	3	2.5	4	2.5	6	Identical to Δ_{Bs} and V_{Bs} of inner ring of the same bearing		
6	18	0	-3	4	3	2.5	4	2.5	6			
18	30	0	-3.5	4.5	3.5	3	4.5	3	6			
30	50	0	-4.5	5.5	4.5	3	6.5	3	8			
50	80	0	-5	6.5	5	4	8	4	10			
80	120	0	-6	7.5	7.5	4.5	10	4.5	14			
120	150	0	-7	9	9	5.5	12	5.5	16			
150	180	0	-10	12	12	7.5	15	7.5	18			
180	250	0	-12	15	15	9	—	9	20			
250	315	0	-14	17	17	10	—	10	24			
315	400	0	-16	20	20	12	—	12	28			
400	500	0	-18	22	22	13	—	13	31			



TOLERANCES OF RADIAL BALL BEARINGS

TABLE 4
PRECISION CLASS ABEC-3 — Metric

Inner Ring

unit μm (.001 mm)

d mm		Δ_{dmp}		V_{dp}			V_{dmp}	K_{ia}	Δ_{Bs}		V_{Bs}
				diameter series							
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max
0.6	2.5	0	-7	9	7	5	5	5	0	-40	12
2.5	10	0	-7	9	7	5	5	6	0	-120	15
10	18	0	-7	9	7	5	5	7	0	-120	20
18	30	0	-8	10	8	6	6	8	0	-120	20
30	50	0	-10	13	10	8	8	10	0	-120	20
50	80	0	-12	15	15	9	9	10	0	-150	25
80	120	0	-15	19	19	11	11	13	0	-200	25
120	180	0	-18	23	23	14	14	18	0	-250	30
180	250	0	-22	28	28	17	17	20	0	-300	30
250	315	0	-25	31	31	19	19	25	0	-350	35
315	400	0	-30	38	38	23	23	30	0	-400	40
400	500	0	-35	44	44	26	26	35	0	-450	45

Outer Ring

unit μm (.001 mm)

D mm		Δ_{Dmp}		V_{Dp}				V_{Dmp}	K_{ea}	Δ_{Cs}		V_{Cs}
				Open Bearings			Capped					
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	0,1,2,3,4 max	max	max	high	low	max
2.5	6	0	-7	9	7	5	9	5	8	Identical to Δ_{Bs} and V_{Bs} of inner ring of the same bearing		
6	18	0	-7	9	7	5	9	5	8			
18	30	0	-8	10	8	6	10	6	9			
30	50	0	-9	11	9	7	13	7	10			
50	80	0	-11	14	11	8	16	8	13			
80	120	0	-13	16	16	10	20	10	18			
120	150	0	-15	19	19	11	25	11	20			
150	180	0	-18	23	23	14	30	14	23			
180	250	0	-20	25	25	15	—	15	25			
250	315	0	-25	31	31	19	—	19	30			
315	400	0	-28	35	35	21	—	21	35			
400	500	0	-33	41	41	25	—	25	40			

TOLERANCES OF RADIAL BALL BEARINGS

TABLE 5
PRECISION CLASS ABEC-3 — Inch

Inner Ring Unit .0001"

d mm		Δ_{dmp}		V_{dp}			V_{dmp}	K_{ia}	Δ_{Bs}		V_{Bs}
				diameter series					high	low	
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max
0.6	2.5	0	-3	3.5	3	2	2	2	0	-16	4.5
2.5	10	0	-3	3.5	3	2	2	2.5	0	-47	6
10	18	0	-3	3.5	3	2	2	3	0	-47	8
18	30	0	-3	4	3	2.5	2.5	3	0	-47	8
30	50	0	-4	5	4	3	3	4	0	-47	8
50	80	0	-4.5	6	6	3.5	3.5	4	0	-59	10
80	120	0	-6	7.5	7.5	4.5	4.5	5	0	-79	10
120	180	0	-7	9	9	5.5	5.5	7	0	-98	12
180	250	0	-8.5	11	11	6.5	6.5	8	0	-118	12
250	315	0	-10	12	12	7.5	7.5	10	0	-138	14
315	400	0	-12	15	15	9	9	12	0	-157	16
400	500	0	-14	17	17	10	10	14	0	-177	18

Outer Ring Unit .0001"

D mm		Δ_{Dmp}		V_{Dp}				V_{Dmp}	K_{ea}	Δ_{Cs}		V_{Cs}
				Open Bearings			Capped Bearings			high	low	
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max		0,1,2,3,4 max	max	max	high	low
2.5	6	0	-3	3.5	3	2	3.5	2	3	Identical to Δ_{Bs} and V_{Bs} of inner ring of the same bearing		
6	18	0	-3	3.5	3	2	3.5	2	3			
18	30	0	-3	4	3	2.5	4	2.5	3.5			
30	50	0	-3.5	4.5	3.5	3	5	3	4			
50	80	0	-4.5	5.5	4.5	3	6.5	3	5			
80	120	0	-5	6.5	6.5	4	8	4	7			
120	150	0	-6	7.5	7.5	4.5	10	4.5	8			
150	180	0	-7	9	9	5.5	12	5.5	9			
180	250	0	-8	10	10	6		6	10			
250	315	0	-10	12	12	7.5		7.5	12			
315	400	0	-11	14	14	8.5		8.5	14			
400	500	0	-13	16	16	10		10	16			



TOLERANCES OF RADIAL BALL BEARINGS

TABLE 6
PRECISION CLASS ABEC-5 — Metric

Inner Ring Unit um (.001 mm)

d mm		Δ_{dmp}		V _{dp}		V _{dmp}	K _{ia}	S _d	S _{ia}	Δ_{Bs}		V _{Bs}
				diameter series								
over	incl.	high	low	7,8,9 max	0,1,2,3,4 max	max	max	max	max	high	low	max
0.6	2.5	0	-5	5	4	3	4	7	7	0	-40	5
2.5	10	0	-5	5	4	3	4	7	7	0	-40	5
10	18	0	-5	5	4	3	4	7	7	0	-80	5
18	30	0	-6	6	5	3	4	8	8	0	-120	5
30	50	0	-8	8	6	4	5	8	8	0	-120	5
50	80	0	-9	9	7	5	5	8	8	0	-150	6
80	120	0	-10	10	8	5	6	9	9	0	-200	7
120	180	0	-13	13	10	7	8	10	10	0	-250	8
180	250	0	-15	15	12	8	10	11	13	0	-300	10
250	315	0	-18	18	14	9	13	13	15	0	-350	13
315	400	0	-23	23	18	12	15	15	20	0	-400	15

Outer Ring Unitum (.001 mm)

D mm		Δ_{Dmp}		V _{Dp}		V _{Dmp}	K _{ea}	S _D	S _{ea}	Δ_{Cs}		V _{Cs}	
				diameter series									
over	incl.	high	low	7,8,9 max	0,1,2,3,4 max	max	max	max	max	high	low	max	
2.5	6	0	-5	5	4	3	5	8	8	Identical to Δ_{Bs} of inner ring of the same bearing		5	
6	18	0	-5	5	4	3	5	8	8				5
18	30	0	-6	6	5	3	6	8	8				5
30	50	0	-7	7	5	4	7	8	8				5
50	80	0	-9	9	7	5	8	8	10				6
80	120	0	-10	10	8	5	10	9	11				8
120	150	0	-11	11	8	6	11	10	13				8
150	180	0	-13	13	10	7	13	10	14				8
180	250	0	-15	15	11	8	15	11	15				10
250	315	0	-18	18	14	9	18	13	18				11
315	400	0	-20	20	15	10	20	13	20			13	
400	500	0	-23	23	17	12	23	15	23			15	



TOLERANCES OF RADIAL BALL BEARINGS

TABLE 7
PRECISION CLASS ABEC-5 — Inch

Inner Ring

Unit .0001"

d mm		Δ_{dmp}		V_{dp}		V_{dmp}	K_{ia}	S_d	S_{ia}	Δ_{Bs}		V_{Bs}
				diameter series								
over	incl.	high	low	7,8,9 max	0,1,2,3,4 max	max	max	max	max	high	low	max
0.6	2.5	0	-2	2	1.5	1	1.5	3	3	0	-16	2
2.5	10	0	-2	2	1.5	1	1.5	3	3	0	-16	2
10	18	0	-2	2	1.5	1	1.5	3	3	0	-31	2
18	30	0	-2.5	2.5	2	1	1.5	3	3	0	-47	2
30	50	0	-3	3	2.5	1.5	2	3	3	0	-47	2
50	80	0	-3.5	3.5	3	2	2	3	3	0	-59	2.5
80	120	0	-4	4	3	2	2.5	3.5	3.5	0	-79	3
120	180	0	-5	5	4	3	3	4	4	0	-98	3
180	250	0	-6	6	4.5	3	4	4.5	5	0	-118	4
250	315	0	-7	7	5.5	3.5	5	5	6	0	-138	5
315	400	0	-9	9	7	4.5	6	6	8	0	-157	6

Outer Ring

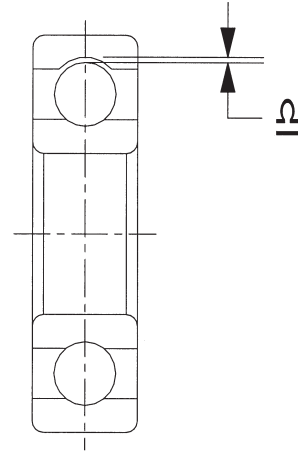
Unit .0001"

D mm		Δ_{Dmp}		V_{Dp}		V_{Dmp}	K_{ea}	S_D	S_{ea}	Δ_{Cs}		V_{Cs}
				diameter series								
over	incl.	high	low	7,8,9 max	0,1,2,3,4 max	max	max	max	max	high	low	max
2.5	6	0	-2	2	1.5	1	2	3	3	Identical to Δ_{Bs} of inner ring of the same bearing		2
6	18	0	-2	2	1.5	1	2	3	3		2	
18	30	0	-2.5	2.5	2	1	2.5	3	3		2	
30	50	0	-3	3	2	1.5	3	3	3		2	
50	80	0	-3.5	3.5	3	2	3	3	4		2.5	
80	120	0	-4	4	3	2	4	3.5	4.5		3	
120	150	0	-4.5	4.5	3	2.5	4.5	4	5		3	
150	180	0	-5	5	4	3	5	4	5.5		3	
180	250	0	-6	6	4.5	3	6	4.5	6		4	
250	315	0	-7	7	5.5	3.5	7	5	7		4.5	
315	400	0	-8	8	6	4	8	5	8	5		
400	500	0	-9	9	6.5	4.5	9	6	9	6		

INTERNAL RADIAL CLEARANCE

Internal clearance between balls and raceways in ball bearings permits interference fits on the bearing rings without causing radial preload, allows unequal thermal expansion of inner and outer rings to occur without unduly affecting bearing operation, and accommodates slight misalignment of the bearing mounting. Proper internal clearance is particularly important for bearings operating at high speeds.

Radial clearance may be defined as the average diameter of the outer ring raceway, minus the average diameter of the inner ring raceway, minus twice the ball diameter. Generally, radial clearance is measured on assembled bearings by displacing the outer ring radially with respect to the inner ring under a reversing light gauge load.



Radial Internal Clearance = Ω

TABLE 8
RADIAL INTERNAL CLEARANCE VALUES FOR SINGLE ROW RADIAL DEEP GROOVE BALL BEARINGS
 Clearance values in μm (.001 mm)

d mm		C2		C0 (Normal)		C3		C4	
over	incl.	min.	max.	min.	max.	min.	max.	min.	max.
2.5	6	0	7	2	13	8	23	—	—
6	10	0	7	2	13	8	23	14	29
10	18	0	9	3	18	11	25	18	33
18	24	0	10	5	20	13	28	20	36
24	30	1	11	5	20	13	28	23	41
30	40	1	11	6	20	15	33	28	46
40	50	1	11	6	23	18	36	30	51
50	65	1	15	8	28	23	43	38	61
65	80	1	15	10	30	25	51	46	71
80	100	1	18	12	36	30	58	53	84
100	120	2	20	15	41	36	66	61	97
120	140	2	23	18	48	41	81	71	114
140	160	2	23	18	53	46	91	81	130
160	180	2	25	20	61	53	102	91	147
180	200	2	30	25	71	63	117	107	163

Clearance values in .0001 inch

d mm		C2		C0 (Normal)		C3		C4	
over	incl.	min.	max.	min.	max.	min.	max.	min.	max.
2.5	6	0	3	1	5	3	9	—	—
6	10	0	3	1	5	3	9	6	11
10	18	0	3.5	1	7	5	10	7	13
18	24	0	4	2	8	5	11	8	14
24	30	0.5	4.5	2	8	5	11	9	16
30	40	0.5	4.5	2.5	8	6	13	11	18
40	50	0.5	4.5	2.5	9	7	14	12	20
50	65	0.5	6	3	11	9	17	15	24
65	80	0.5	6	4	12	10	20	18	28
80	100	0.5	7	4.5	14	12	23	21	33
100	120	1	8	6	16	14	26	24	38
120	140	1	9	7	19	16	32	28	45
140	160	1	9	7	21	18	36	32	51
160	180	1	10	8	24	21	40	36	58
180	200	1	12	10	28	25	46	42	64

AXIAL INTERNAL CLEARANCE VALUES FOR DOUBLE ROW ANGULAR CONTACT BALL BEARINGS

TABLE 9

Clearance values in μm (.001 mm)

d mm		C2		C0 (Normal)		C3		C4	
over	incl.	min.	max.	min.	max.	min.	max.	min.	max
6	10	1	11	5	21	12	28	25	45
10	18	1	12	6	23	13	31	27	47
18	24	2	14	7	25	16	34	28	48
24	30	2	15	8	27	18	37	30	50
30	40	2	16	9	29	21	40	33	54
40	50	2	18	11	33	23	44	36	58
50	65	3	22	13	36	26	48	40	63
65	80	3	24	15	40	30	54	46	71
80	100	3	26	18	46	35	63	55	83
100	120	4	30	22	53	42	73	65	96
120	140	4	34	25	59	48	82	74	108

Clearance values in .0001 inch

d mm		C2		C0 (Normal)		C3		C4	
over	incl.	min.	max.	min.	max.	min.	max.	min.	max
6	10	0	4	2	8	5	11	10	18
10	18	0	5	2	9	5	12	11	19
18	24	1	6	3	10	6	13	11	19
24	30	1	6	3	11	7	15	12	20
30	40	1	6	4	11	8	16	13	21
40	50	1	7	4	13	9	17	14	23
50	65	1	9	5	14	10	19	16	25
65	80	1	9	6	16	12	21	18	28
80	100	1	10	7	18	14	25	22	33
100	120	2	12	9	21	17	29	26	38
120	140	2	13	10	23	19	32	29	43



ENGINEERING DATA

**TABLE 10
SELECTION OF SHAFT FIT**

Metric

Part I – DESIGN & OPERATING CONDITIONS			BALL BEARINGS		
Rotational Conditions	Inner Ring Axial Displaceability	Radial Loading	Bore d mm		Shaft Fit
			Over	Inc.	
Inner Ring Rotating (relative to load direction) or Indeterminate Load Direction		Light	0 18	18 All	h5 j6
		Normal	0 18	18 All	j5 k5
		Heavy	18 100	100 All	k5 m5
Inner Ring Stationary (relative to load direction)	Inner Ring must be easily axially displaceable	Light	All Sizes		g6
		Normal			
		Heavy			
	Inner Ring need not be easily axially displaceable	Light	All Sizes		h6
		Normal			
		Heavy			
Pure Thrust (Axial) Load			All Sizes		j6

TABLE 11

Inch

Part II – DESIGN & OPERATING CONDITIONS			BALL BEARINGS		
Rotational Conditions	Inner Ring Axial Displaceability	Radial Loading	Bore d inches		Shaft Fit
			Over	Inc.	
Inner Ring Rotating (relative to load direction) or Indeterminate Load Direction		Light	0 0.71	0.71 All	h5 j6
		Normal	0 0.71	0.71 All	j5 k5
		Heavy	0.71 3.94	3.94 All	k5 m5
Inner Ring Stationary (relative to load direction)	Inner Ring must be easily axially displaceable	Light	All Sizes		g6
		Normal			
		Heavy			
	Inner Ring need not be easily axially displaceable	Light	All Sizes		h6
		Normal			
		Heavy			
Pure Thrust (Axial) Load			All Sizes		j6



TABLE 12 — SHAFT FITS (Metric)

Dimensions in Millimeters
Deviations and Fits in μm (.001 mm)

d			TOLERANCE CLASSIFICATIONS													
			g6		h6		h5		j5		j6		k5		k6	
over	incl.	Deviation	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit
3	6	0 -8	-4 -12	12L 4T	0 -8	8L 8T	0 -5	5L 8T	+3 -2	2L 11T	+6 -2	2L 14T	+6 +1	1T 14T		
6	10	0 -8	-5 -14	14L 3T	0 -9	9L 8T	0 -6	6L 8T	+4 -2	2L 12T	+7 -2	2L 15T	+7 +1	1T 15T		
10	18	0 -8	-6 -17	17L 2T	0 -11	11L 8T	0 -8	8L 8T	+5 -3	3L 13T	+8 -3	3L 16T	+9 +1	1T 17T		
18	30	0 -10	-7 -20	20L 3T	0 -13	13L 10T			+5 -4	4L 15T	+9 -4	4L 19T	+11 +2	2T 21T		
30	50	0 -12	-9 -25	25L 3T	0 -16	16L 12T			+6 -5	5L 18T	+11 -5	5L 23T	+13 +2	2T 25T	+18 +2	2T 30T
50	80	0 -15	-10 -29	29L 5T	0 -19	19L 15T			+6 -7	7L 21T	+12 -7	7L 27T	+15 +2	2T 30T	+21 +2	2T 36T
80	120	0 -20	-12 -34	34L 8T	0 -22	22L 20T			+6 -9	9L 26T	+13 -9	9L 33T	+18 +3	3T 38T	+25 +3	3T 45T
120	180	0 -25	-14 -39	39L 11T	0 -25	25L 25T			+7 -11	11L 32T	+14 -11	11L 39T	+21 +3	3T 46T	+28 +3	3T 53T
180	200	0 -30	-15 -44	44L 15T	0 -29	29L 30T			+7 -13	13L 37T	+16 -13	13L 46T	+24 +4	4T 54T		
200	225	0 -30	-15 -44	44L 15T	0 -29	29L 30T			+7 -13	13L 37T	+16 -13	13L 46T	+24 +4	4T 54T		
225	250	0 -30	-15 -44	44L 15T	0 -29	29L 30T			+7 -13	13L 37T	+16 -13	13L 46T	+24 +4	4T 54T		
250	280	0 -35	-17 -49	49L 18T	0 -32	32L 35T			+7 -16	16L 42T	+16 -16	16L 51T	+27 +4	4T 62T		
280	315	0 -35	-17 -49	49L 18T	0 -32	32L 35T			+7 -16	16L 42T	+16 -16	16L 51T	+27 +4	4T 62T		
315	355	0 -40	-18 -54	54L 22T	0 -36	36L 40T			+7 -18	18L 47T	+18 -18	18L 58T	+29 +4	4T 69T		
355	400	0 -40	-18 -54	54L 22T	0 -36	36L 40T			+7 -18	18L 47T	+18 -18	18L 58T	+29 +4	4T 69T		
400	450	0 -45	-20 -60	60L 25T	0 -40	40L 45T			+7 -20	20L 52T	+20 -20	20L 65T	+32 +5	5T 77T		
450	500	0 -45	-20 -60	60L 25T	0 -40	40L 45T			+7 -20	20L 52T	+20 -20	20L 65T	+32 +5	5T 77T		

L=loose, T=tight

Dimensions in Millimeters
Deviations and Fits in μm (.001 mm)

d			TOLERANCE CLASSIFICATIONS											
			m5		m6		n6		p6		r6		r7	
over	incl.	Deviation	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit
3	6	0 -8	+9 +4	4T 17T										
6	10	0 -8	+12 +6	6T 20T										
10	18	0 -8	+15 +7	7T 23T										
18	30	0 -10	+17 +8	8T 27T										
30	50	0 -12	+20 +9	9T 32T	+25 +9	9T 37T								
50	80	0 -15	+24 +11	11T 39T	+30 +11	11T 45T	+39 +20	20T 54T						
80	120	0 -20	+28 +13	13T 48T	+35 +13	13T 55T	+45 +23	23T 65T	+59 +37	37T 79T				
120	180	0 -25	+33 +15	15T 58T	+40 +15	15T 65T	+52 +27	27T 77T	+68 +43	43T 93T	+90 +65	65T 115T		
180	200	0 -30	+37 +17	17T 67T	+46 +17	17T 76T	+60 +31	31T 90T	+79 +50	50T 109T	+106 +77	77T 136T		
200	225	0 -30	+37 +17	17T 67T	+46 +17	17T 76T	+60 +31	31T 90T	+79 +50	50T 109T	+109 +80	80T 139T	+126 +80	80T 156T
225	250	0 -30	+37 +17	17T 67T	+46 +17	17T 76T	+60 +31	31T 90T	+79 +50	50T 109T	+113 +84	84T 143T	+130 +84	84T 160T
250	280	0 -35	+43 +20	20T 78T	+52 +20	20T 87T	+66 +34	34T 101T	+88 +56	56T 123T	+126 +94	94T 161T	+146 +94	94T 181T
280	315	0 -35	+43 +20	20T 78T	+52 +20	20T 87T	+66 +34	34T 101T	+88 +56	56T 123T	+130 +98	98T 165T	+150 +98	98T 185T
315	355	0 -40	+46 +21	21T 86T	+57 +21	21T 97T	+73 +37	37T 113T	+98 +62	62T 138T	+144 +108	108T 184T	+165 +108	108T 205T
355	400	0 -40	+46 +21	21T 86T			+73 +37	37T 113T	+98 +62	62T 138T	+150 +114	114T 190T	+171 +114	114T 211T
400	450	0 -45	+50 +23	23T 95T			+80 +40	40T 125T	+108 +68	68T 153T	+166 +126	126T 211T	+189 +126	126T 234T
450	500	0 -45	+50 +23	23T 95T			+80 +40	40T 125T	+108 +68	68T 153T	+172 +132	132T 217T	+195 +132	132T 240T

L=loose, T=tight



ENGINEERING DATA

TABLE 13 — SHAFT FITS (INCH)

Dimensions in inches
Deviations and Fits in .0001 inches

d			TOLERANCE CLASSIFICATIONS													
			g6		h6		h5		j5		j6		k5		k6	
over	incl.	Deviation	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit
0.1181		0	-2	5L	0	3L	0	2L	+1	1L	+2	1L	+2	0T		
	0.2362	-3	-5	1T	-3	3T	-2	3T	-1	4T	-1	5T	0	5T		
0.2362		0	-2	6L	0	4L	0	2L	+2	1L	+3	1L	+3	0T		
	0.3937	-3	-6	1T	-4	3T	-2	3T	-1	5T	-1	6T	0	6T		
0.3937		0	-2	7L	0	4L	0	3L	+2	1L	+3	1L	+4	0T		
	0.7087	-3	-7	1T	-4	3T	-3	3T	-1	5T	-1	6T	0	7T		
0.7087		0	-3	8L	0	5L			+2	2L	+4	2L	+4	1T		
	1.1811	-4	-8	1T	-5	4T			-2	6T	-2	8T	+1	8T		
1.1811		0	-4	10L	0	67L			+2	2L	+4	2L	+5	1T	+7	1T
	1.9685	-4.5	-10	0.5T	-6	4.5T			-2	6.5T	-2	8.5T	+1	9.5T	+1	11.5T
1.9685		0	-4	11L	0	7L			+2	3L	+5	3L	+6	1T	+8	1T
	3.1496	-6	-11	2T	-7	6T			-3	8T	-3	11T	+1	12T	+1	14T
3.1496		0	-5	13L	0	9L			+2	4L	+5	4L	+7	1T	+10	1T
	4.7244	-8	-13	3T	-9	8T			-4	10T	-4	13T	+1	15T	+1	18T
4.7244		0	-6	15L	0	10L			+3	4L	+6	4L	+8	1T	+11	1T
	7.0866	-10	-15	4T	-10	10T			-4	13T	-4	16T	+1	18T	+1	21T
7.0866		0	-6	17L	0	11L			+3	5L	+6	5L	+9	2T		
	7.8740	-12	-17	6T	-11	12T			-5	15T	-5	18T	+2	21T		
7.8740		0	-6	17L	0	11L			+3	5L	+6	5L	+9	2T		
	8.8583	-12	-17	6T	-11	12T			-5	15T	-5	18T	+2	21T		
8.8583		0	-6	17L	0	11L			+3	5L	+6	5L	+9	2T		
	9.8425	-12	-17	6T	-11	12T			-5	15T	-5	18T	+2	21T		
9.8425		0	-7	19L	0	13L			+3	6L	+6	6L	+11	2T		
	11.0236	-14	-19	7T	-13	14T			-6	17T	-6	20T	+2	25T		
11.0236		0	-7	19L	0	13L			+3	6L	+6	6L	+11	2T		
	12.4015	-14	-19	7T	-13	14T			-6	17T	-6	20T	+2	25T		
12.4015		0	-7	21L	0	14L			+3	7L	+7	7L	+11	2T		
	13.9763	-16	-21	9T	-14	16T			-7	19T	-6	23T	+2	27T		
13.9763		0	-7	21L	0	14L			+3	7L	+7	7L	+11	2T		
	15.7480	-16	-21	9T	-14	16T			-7	19T	-7	23T	+2	27T		
15.7480		0	-8	24L	0	16L			+3	8L	+8	8L	+13	2T		
	17.7165	-18	-24	10T	-16	18T			-8	21T	-8	26T	+2	31T		
17.7165		0	-8	24L	0	16L			+3	8L	+8	8L	+13	2T		
	19.6850	-18	-24	10T	-16	18T			-8	21T	-8	26T	+2	31T		

L=loose, T=tight



TABLE 13 (Inch continued)

Dimensions in Inches
Deviations and Fits in .0001 Inches

d			TOLERANCE CLASSIFICATIONS											
			m5		m6		n6		p6		r6		r7	
over	incl.	Deviation	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit	Shaft Deviation	Resultant Fit
0.1181		0	+4	2T										
	0.2362	-3	+2	7T										
0.2362		0	+5	2T										
	0.3937	-3	+2	8T										
0.3937		0	+6	3T										
	0.7087	-3	+3	9T										
0.7087		0	+7	3T										
	1.1811	-4	+3	11T										
1.1811		0	+8	4T	+10	4T								
	1.9685	-4.5	+4	12.5T	+4	14.5T								
1.9685		0	+9	4T	+12	4T	+15	8T						
	3.1496	-6	+4	15T	+4	18T	+8	21T						
3.1496		0	+11	5T	+14	5T	+18	9T	+23	15T				
	4.7244	-8	+5	19T	+5	22T	+9	26T	+15	31T				
4.7244		0	+13	6T	+16	6T	+20	11T	+27	17T	+35	26T		
	7.0866	-10	+6	23t	+6	26T	+11	20T	+17	37T	+26	45T		
7.0866		0	+15	7T	+18	7T	+24	12T	+31	20T	+42	30T		
	7.8740	-12	+7	27T	+7	30T	+12	36T	+20	43T	+30	54T		
7.8740		0	+15	7T	+18	7T	+24	12T	+31	20T	+43	31T	+50	31T
	8.8583	-12	+7	27T	+7	30T	+12	36T	+20	43T	+31	55T	+31	62T
8.8583		0	+15	7T	+18	7T	+24	12T	+31	20T	+44	33T	+51	33T
	9.8425	-12	+7	27T	+7	30T	+12	36T	+20	43T	+33	56T	+33	63T
9.8425		0	+17	8T	+20	8T	+26	13T	+35	22T	+50	37T	+57	37T
	11.0236	-14	+8	31T	+8	34T	+13	40T	+22	49T	+37	64T	+37	71T
11.0236		0	+17	8T	+20	8T	+26	13T	+35	22T	+51	39T	+59	39T
	12.4015	-14	+8	31T	+8	34T	+13	40T	+22	49T	+39	65T	+39	73T
12.4015		0	+18	8T	+22	8T	+29	15T	+39	24T	+57	43T	+65	43T
	13.9763	-16	+8	34T	+8	38T	+15	45T	+24	55T	+43	73T	+43	81T
13.9763		0	+18	8T			+29	15T	+39	24T	+59	45T	+67	45T
	15.7480	-16	+8	34T			+15	45T	+24	55T	+45	75T	+45	83T
15.7480		0	+20	9T			+31	16T	+43	27T	+65	50T	+74	50T
	17.7165	-18	+9	38T			+16	49T	+27	61T	+50	83T	+50	92T
17.7165		0	+20	9T			+31	16T	+43	27T	+68	52T	+77	52T
	19.6850	-18	+9	38T			+16	49T	+27	61T	+52	86T	+52	95T

L=loose, T=tight



ENGINEERING DATA

TABLE 14 — SELECTION OF HOUSING FIT

DESIGN & OPERATING CONDITIONS			Outer Ring Axial Displaceability	HOUSING FIT
Rotational Conditions	Loading	Other Conditions		
Outer Ring Stationary (relative to load direction)	Light	Heat input through shaft	Outer ring easily axially displaceable	G7
	Normal or Heavy	Housing split axially		H7
		Housing not split axially		H6
	Shock with temporary complete unloading		Transitional Range	J6
Light		K6		
Indeterminate Load Direction	Normal or Heavy	Split Housing not recommended		M6
	Heavy shock			
Outer Ring Rotating (relative to load direction)	Light	Thin wall housing not split	Outer ring not easily axially displaceable	N6
	Normal or Heavy			P6
	Heavy			



TABLE 15 — HOUSING FITS (Metric)

Dimensions in Millimeters
Deviations and Fits in um (.001 mm)

D			PART 1 – TOLERANCE CLASSIFICATIONS															
			F7		G7		H8		H7		H6		J6		J7		K6	
over	incl.	Deviation	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit
10	18	0 -8	+16 +34	42L 16L	+6 +24	32L 6L	0 +27	35L 0	0 +18	26L 0	0 +11	19L 0	-5 +6	14L 5T	-8 +10	18L 8T	+2 +2	10L 9T
18	30	0 -9	+20 +41	50L 20L	+7 +28	37L 7L	0 +33	42L 0	0 +21	30L 0	0 +13	22L 0	-5 +8	17L 5T	-9 +12	21L 9T	-11 +2	11L 11T
30	50	0 -11	+25 +50	61L 25L	+9 +34	45L 9L	0 +39	50L 0	0 +25	36L 0	0 +16	27L 0	-6 +10	21L 6T	-11 +14	25L 11T	-13 +3	14L 13T
50	80	0 -13	+30 +60	73L 30L	+10 +40	53L 10L	0 +46	59L 0	0 +30	43L 0	0 +19	32L 0	-6 +13	26L 6T	-12 +18	31L 12T	-15 +4	17L 15T
80	120	0 -15	+36 +71	86L 36L	+12 +47	62L 12L	0 +54	69L 0	0 +35	50L 0	0 +22	37L 0	-6 +16	31L 6T	-13 +22	37L 13T	-18 +4	19L 18T
120	150	0 -18	+43 +83	101L 43L	+14 +54	72L 14L	0 +63	81L 0	0 +40	58L 0	0 +25	43L 0	-7 +18	36L 7T	-14 +26	44L 14T	-21 +4	22L 21T
150	180	0 -25	+43 +83	108L 43L	+14 +54	79L 14L	0 +63	88L 0	0 +40	65L 0	0 +25	50L 0	-7 +18	43L 7T	-14 +26	51L 14T	-24 +4	29L 21T
180	250	0 -30	+50 +96	126L 50L	+15 +61	91L 15L	0 +72	102L 0	0 +46	76L 0	0 +29	59L 0	-7 +22	52L 7T	-16 +30	60L 16T	-24 +5	35L 24T
250	315	0 -35	+56 +108	143L 56L	+17 +69	104L 17L	0 +81	116L 0	0 +52	87L 0	0 +32	67L 0	-7 +25	60L 7T	-16 +36	71L 16T	-27 +5	40L 27T
315	400	0 -40	+62 +119	159L 62L	+18 +75	115L 18L	0 +89	129L 0	0 +57	97L 0	0 +36	76L 0	-7 +29	69L 7T	-18 +39	79L 18T	-29 +7	47L 29T
400	500	0 -45	+68 +131	176L 68L	+20 +83	128L 20L	0 +97	142L 0	0 +63	108L 0	0 +40	85L 0	-7 +33	78L 7T	-20 +43	88L 20T	-30 +8	53L 32T

L=loose, T=tight

Dimensions in Millimeters
Deviations and Fits in um (.001 mm)

D			TOLERANCE CLASSIFICATIONS													
			K7		M6		M7		N6		N7		P6		P7	
over	incl.	Deviation	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit
10	18	0 -8	-12 +6	14L 12T	-15 -4	4L 15T	-18 0	8L 18T	-20 -9	1T 20T	-23 -5	3L 23T	-26 -15	7T 26T	-29 -11	3T 29T
18	30	0 -9	-15 +6	15L 15T	-17 -4	5L 17T	-21 0	9L 21T	-24 -11	2T 24T	-28 -7	2L 28T	-31 -18	9T 31T	-35 -14	5T 35T
30	50	0 -11	-18 +7	18L 18T	-20 -4	7L 20T	-25 0	11L 25T	-28 -12	1T 28T	-33 -8	3L 33T	-37 -21	10T 37T	-42 -17	6T 42T
50	80	0 -13	-21 +9	22L 21T	-24 -5	8L 24T	-30 0	13L 30T	-33 -14	1T 33T	-39 -9	4L 39T	-45 -26	13T 45T	-51 -21	8T 51T
80	120	0 -15	-25 +10	25L 25T	-28 -6	9L 28T	-35 0	15L 35T	-38 -16	1T 38T	-45 -10	5L 45T	-52 -30	15T 52T	-59 -24	9T 59T
120	150	0 -18	-28 +12	30L 28T	-33 -8	10L 33T	-40 0	18L 40T	-45 -20	2T 45T	-52 -12	6L 52T	-61 -36	18T 61T	-68 -28	10T 68T
150	180	0 -25	-28 +12	37L 28T	-33 -8	17L 33T	-40 0	25L 40T	-45 -20	5L 45T	-52 -12	13L 52T	-61 -36	11T 61T	-68 -28	3T 68T
180	250	0 -30	-33 +13	43L 33T	-37 -8	22L 37T	-46 0	30L 46T	-51 -22	8L 51T	-60 -14	16L 60T	-70 -41	11T 70T	-79 -33	3T 79T
250	315	0 -35	-36 +16	51L 36T	-41 -9	26L 41T	-52 0	35L 52T	-57 -25	10L 57T	-66 -14	21L 66T	-79 -47	12T 79T	-88 -36	1T 88T
315	400	0 -40	-40 +17	57L 40T	-46 -10	30L 46T	-57 0	40L 57T	-62 -26	14L 62T	-73 -16	24L 73T	-87 -51	11T 87T	-98 -41	1T 98T
400	500	0 -45	-45 +18	63L 45T	-50 -10	35L 50T	-63 0	45L 63T	-67 -27	18L 67T	-80 -17	27L 80T	-95 -55	10T 95T	-108 -45	0 108T

L=loose, T=tight



ENGINEERING DATA

TABLE 16 — HOUSING FITS (Inch)

Dimensions in Inches
Deviations and Fits in .0001 Inches

D			PART 2 – TOLERANCE CLASSIFICATIONS															
			F7		G7		H8		H7		H6		J6		J7		K6	
over	incl.	Deviation	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit
0.3937	0.7087	0	+6	16L	+2	12L	0	14L	0	10L	0	7L	-2	5L	-3	7L	-4	4L
		-3	+13	6L	+9	2L	+11	0	+7	0	+4	0	+2	2T	+4	3T	+1	4T
0.7087	1.1811	0	+8	19.5L	+3	14.5L	0	16.5L	0	11.5L	0	8.5L	-2	6.5L	-4	8.5L	-4	4.5L
		-3.5	+16	8L	+11	3L	+13	0	+8	0	+5	0	+3	2T	+5	4T	+1	4T
1.1811	1.9685	0	+10	24.5L	+4	17.5L	0	19.5L	0	14.5L	0	10.5L	-2	8.5L	-4	10.5L	-5	5.5L
		-4.5	+20	10L	+13	4L	+15	0	+10	0	+6	0	+4	2T	+6	4T	+1	5T
1.9685	3.1496	0	+12	29L	+4	21L	0	23L	0	17L	0	12L	-2	10L	-5	12L	-6	7L
		-5	+24	12L	+16	4L	+18	0	+12	0	+7	0	+5	2T	+7	5T	+2	6T
3.1496	4.7244	0	+14	34L	+5	25L	0	27L	0	20L	0	15L	-2	12L	-5	15L	-7	8L
		-6	+28	14L	+19	5L	+21	0	+14	0	+9	0	+6	2T	+9	5T	+2	7T
4.7244	5.9055	0	+17	40L	+6	28L	0	32L	0	23L	0	17L	-3	14L	-6	17L	-8	9L
		-7	+33	17L	+21	6L	+25	0	+16	0	+10	0	+7	3T	+10	6T	+2	8T
5.9055	7.0866	0	+17	43L	+6	31L	0	35L	0	26L	0	20L	-3	17L	-6	20L	-8	12L
		-10	+33	17L	+21	6L	+25	0	+16	0	+10	0	+7	3T	+10	6T	+2	8T
7.0866	9.8425	0	+20	50L	+6	36L	0	40L	0	30L	0	23L	-3	21L	-6	24L	-9	14L
		-12	+38	20L	+24	6L	+28	0	+18	0	+11	0	+9	3T	+12	6T	+2	9T
9.8425	12.4016	0	+22	57L	+7	41L	0	46L	0	34L	0	27L	-3	24L	-6	28L	-11	16L
		-14	+43	22L	+27	7L	+32	0	+20	0	+13	0	+10	3T	+14	6T	+2	11T
12.4016	15.7480	0	+24	63L	+7	46L	0	51L	0	38L	0	30L	-3	27L	-7	31L	-11	19L
		-16	+47	24L	+30	7L	+35	0	+22	0	+14	0	+11	3T	+15	7T	+2	11T
15.7480	19.6850	0	+27	70L	+8	51L	0	56L	0	43L	0	34L	-3	31L	-8	35L	-13	21L
		-18	+52	27L	+33	8L	+38	0	+25	0	+16	0	+13	3T	+17	8T	+3	13T

L=loose, T=tight

Dimensions in Inches
Deviations and Fits in .0001 Inches

D			TOLERANCE CLASSIFICATIONS													
			K7		M6		M7		N6		N7		P6		P7	
over	incl.	Deviation	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit	Housing Deviation	Resultant Fit
0.3937	0.7087	0	-5	5L	-6	1L	-7	3L	-8	1T	-9	1L	-10	3T	-11	1T
		-3	+2	5T	-2	6T	0	7T	-4	9T	-2	9T	-6	10T	-4	11T
0.7087	1.1811	0	-6	5L	-7	1.5L	-8	3.5L	-9	.05T	-11	0.5L	-12	3.5T	-14	2.5T
		-3.5	+2	6T	-2	7T	0	8T	-4	9T	-3	11T	-7	12T	-6	14T
1.1811	1.9685	0	-7	7.5L	-8	2.5L	-10	4.5L	-11	0.5T	-13	1.5L	-15	3.5T	-17	2.5T
		-4.5	+3	7T	-2	8T	0	10T	-5	11T	-3	13T	-8	15T	-7	17T
1.9685	3.1496	0	-8	9L	-9	3L	-12	5L	-13	1T	-15	1L	-18	5T	-20	3T
		-5	+4	8T	-2	9T	0	12T	-6	13T	-4	15T	-10	18T	-28	20T
3.1496	4.7244	0	-10	10L	-11	4L	-14	6L	-15	0	-18	2L	-20	6T	-23	3T
		-6	+4	10T	-2	11T	0	14T	-6	15T	-4	18T	-12	20T	-9	23T
4.7244	5.9055	0	-11	12L	-13	4L	-16	7L	-18	1T	-20	2L	-24	7T	-27	4T
		-7	+5	11T	-3	13T	0	16T	-8	18T	-5	20T	-14	24T	-11	27T
5.9055	7.0866	0	-11	15L	-13	7L	-16	10L	-18	2L	-20	5L	-24	4T	-27	1T
		-10	+5	11T	-3	13T	0	16T	-8	18T	-5	20T	-14	24T	-11	27T
7.0866	9.8425	0	-13	17L	-15	9L	-19	12L	-20	3L	-24	6L	-28	4T	-31	1T
		-12	+5	13T	-3	15T	0	18T	-9	20T	-6	24T	-16	28T	-13	31T
9.8425	12.4016	0	-14	20L	-16	10L	-20	14L	-22	4L	-26	8L	-31	5T	-35	0
		-14	+6	14T	-4	16T	0	20T	-10	22T	-6	26T	-19	31T	-14	35T
12.4016	15.7480	0	-16	23L	-18	12L	-22	16L	-24	6L	-29	10L	-34	4T	-39	0
		-16	+7	16T	-4	18T	0	22T	-10	24T	-6	29T	-20	34T	-16	39T
15.7480	19.6850	0	-18	25L	-20	14L	-25	18L	-26	7L	-31	11L	-37	4T	-43	0
		-18	+7	18T	-4	20T	0	25T	-11	26T	-7	31T	-22	37T	-18	43T

L=loose, T=tight

LOAD CAPACITY AND LIFE

Choose a PEER bearing to be used for an application on the basis of its load carrying capacity in relation to the loads to be carried, its operation speed and the requirements regarding life and reliability. A numerical value termed BASIC LOAD RATING is used in the calculations to express the load carrying capacity. Values for the dynamic radial load rating (C_r) are shown on the bearing pages.

1) Basic Load Rating

The basic load rating (C_r) is used for calculations involving dynamically stressed bearings, when selecting a bearing which is to rotate under load. It expresses the bearing radial load which will give a basic rating life of 1,000,000 revolutions (33-1/3 R.P.M. for 500 hours).

2) Life

The life of an individual bearing is defined as the number of revolutions which the bearing is capable of enduring before fatigue occurs on one of its raceways or balls.

Dynamic load ratings are based on the life that 90% of a group of identical bearings can be expected to reach or exceed. The majority of PEER bearings attain much longer life than this. The average life is approximately five times the calculated life rating.

2.1) The Life Calculation under Radial Load

The relationship between the basic rating life, the basic dynamic load rating and the bearing load is expressed by the equation:

$$L_{10} = \left(\frac{C_r}{P} \right)^p$$

Where

L_{10} = basic rating life in millions of revolutions

C_r = Basic dynamic radial load rating, Lbf.

P = equivalent dynamic radial bearing load, Lbf.

$p = 3$ for ball bearings

For bearings operating at constant speed a basic catalog life expressed in operating hours uses the equation:

$$L_{10h} = \left(\frac{C_r}{P} \right)^3 \frac{16,667}{n}$$

Where

L_{10h} = basic life in operating hours

n = rotational speed, rpm.

The basic rating life L_{10} or L_{10h} should be used when selecting a bearing size. If the load is constant in magnitude and direction and acts radially on a bearing, then $P=Fr$ and the load may be inserted directly in the life equation.



Example 1: Determining L_{10h} Life:

A 6205 bearing is operating at 700 RPM with a radial load (F_r) of 350 lbf. What is the life (L_{10})?

From page 10 we know that a 6205 bearing has a dynamic load rating (C_r) of 3150 lbf.

Therefore:

$$L_{10} = \left(\frac{C_r}{P}\right)^3 \frac{16,667}{n} = \left(\frac{3150}{350}\right)^3 \frac{16,667}{700} = (729) \frac{16,667}{700} = 17,000 \text{ hours}$$

Example 2: Selecting a bearing

A bearing is required to run at a speed of $N = 2000$ RPM under a constant radial load (F_r) of 674 Lbf and to achieve a basic rating life L_{10h} of 15,000 operating hours. What C_r is required?

$$C_r = P \sqrt[3]{\frac{L_{10} \times n}{16,667}} = 674 \sqrt[3]{\frac{15,000 \times 2,000}{16,667}} = 8,200 \text{ Lbf.}$$

Example 3: Finding Maximum Load:

A 6204 bearing must achieve a L_{10h} of 10,000 hours while operating at 15000 RPM. What is the maximum load (P) this bearing can be subjected to?

$$P = \sqrt[3]{\frac{C_r}{L_{10} \times n}} = \sqrt[3]{\frac{2900}{10,000 \times 1,500}} = \sqrt[3]{\frac{2900}{900}} = \frac{2900}{9.65} = 300 \text{ Lbf.}$$

2.2) The Life Calculation under combined Axial and Radial Load

In cases of combined radial and axial loading, it is necessary to calculate the equivalent dynamic radial bearing load (P). This is defined as a hypothetical load, constant in magnitude and direction, acting radially on the radial bearing, which would have the same influence on the bearing life as the actual loads which the bearing is to be subjected. Assuming constant load, it is $P = xF_r + YF_a$ where F_r and F_a are the radial and axial loads, respectively. The factors x and y vary depending on the $\frac{F_a}{C_{or}}$ and $\frac{F_a}{F_r}$ ratios.

Table 17: Radial and Thrust Factors X and Y for Determining the Equivalent Dynamic Radial Load for ball bearings

$\frac{F_a}{C_{or}}$	e	$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
		X	Y	X	Y
0.014	0.19	1	0	0.56	2.30
0.028	0.22				1.99
0.056	0.26				1.71
0.084	0.28				1.55
0.11	0.30				1.45
0.17	0.34				1.31
0.28	0.38				1.15
0.42	0.42				1.04
0.56	0.44				1.00



Equivalent Dynamic Radial Load = $P = XF_r + YF_a$

$P_o = .6Fr + .5Fa$ when $Fa/Fr > .8$.

$P_o = Fr$ when $Fa/Fr \leq .8$.

Example 4: Determining Equivalent Dynamic Radial Load Based on Combined Axial and Radial Load

A 6206 bearing is operating at 1000 rpm with a radial load (Fr) of 500 lbs and an axial load (Fa) of 279 lbs. What is the life (L_{10h})?

Step 1: Determine thrust factors X and Y:

$$\frac{F_a}{C_{or}} = \frac{279 \text{ lbs}}{2540 \text{ lbs}} = .11 \text{ (using table 16, } e = .30)$$

$$\frac{F_a}{F_r} = \frac{279 \text{ lbs}}{500 \text{ lbs}} = .558$$

$$\frac{F_a}{F_r} \geq e$$

Therefore, (using table 16, $X = .56$ $Y = 1.45$)

Step 2: Calculate Equivalent Dynamic Radial Load (P)

$$P = XF_r + YF_a = (.56) 500 \text{ lbs} + (1.45) 279 \text{ lbs} = 685 \text{ lbs}$$

Step 3: Calculate L_{10h}

$$L_{10h} = \left(\frac{C_r}{P}\right)^3 \frac{16,667}{n} = \left(\frac{4400}{685}\right)^3 \frac{16,667}{1000} = 4417 \text{ hrs}$$

2.3 Determining Equivalent Dynamic Load Based on Load Conditions

In applications with a constant speed, where the load grows linearly from a minimum value ($P_{min.}$) to a maximum ($P_{max.}$), then drops back to the minimum value, the average load is:

$$P = \frac{P_{min} + 2P_{max}}{3}$$

Where P = Equivalent dynamic bearing load in lbs.

When a bearing is subjected to variable load and speed conditions, the equivalent constant load P can be calculated by:

$$P = \sqrt[3]{\frac{(P_1^3 \times n_1 \times t_1) + (P_2^3 \times n_2 \times t_2) + \dots + (P_n^3 \times n_n \times t_n)}{(n_1 \times t_1) + (n_2 \times t_2) + \dots + (n_n \times t_n)}}$$

Where P_1 = constant load at n_1 RPM for t_1 minutes

P_2 = constant load at n_2 RPM for t_2 minutes

P_n = constant load at n_n RPM for t_n minutes

When a bearing is subjected to variable load but constant speed, the equivalent constant load P can be calculated by:

$$P = \sqrt[3]{\frac{(P_1^3 \times t_1) + (P_2^3 \times t_2) + (P_n^3 \times t_n)}{100}}$$



Where P_1 = constant load for t_1 minutes
 P_2 = constant load for t_2 minutes
 P_n = constant load for t_n minutes

2.4 Static Load Rating

In cases when the bearings are to rotate at relatively slow speeds, have slow oscillating movements, or are exposed to shock, the basic static load rating (C_{or}) must be taken into consideration.

3. Adjusted Rating Life Calculations

Bearing fatigue life can be adjusted for reliability, material and operating conditions through the following formula:

$$L_{hna} = a_1 \times a_2 \times a_3 \times L_h \text{ (hours)}$$

— a_1 , Life adjustment Factor for Reliability

L_{10} is the life based upon 90% survival of a group of bearings. When the application requires a higher reliability, the a_1 , life adjustment factor can be selected from table 18.

Table 18

Reliability %	L_n	Factor a_1
90	L_{10}	1
95	L_5	0.62
96	L_4	0.53
97	L_3	0.44
98	L_2	0.33
99	L_1	0.21

— a_2 , Life adjustment Factor for Bearing Materials

The a_2 life adjustment factor depends upon the properties and heat treatment of the bearing steel. PEER uses an $a_2 = 1$ for its high quality, vacuum degassed, SAE 52100 steel used in the rings and balls of the bearings.

— a_3 , Life adjustment Factor for Operating Conditions

The a_3 factor is a result of any number of operating factors the end user wishes to consider in the life analysis, including cleanliness of environment, temperature, lubrication and shaft alignment. These factors taken together reflect the a_3 factor.

LUBRICANT TYPES

Oil is the basic lubricant for ball bearings. Previously most lubricating oil was refined from petroleum. Today, however, synthetic oils such as diesters, silicone and fluorocarbon compounds have found acceptance because of improvements in properties. Compared to petroleum base oils, diesters in general give better low temperature properties, lower volatility, and better temperature/viscosity characteristics. Silicones and fluorocarbon compounds possess an even lower volatility and wider temperature/viscosity properties. Virtually all oils contain additives that limit chemical changes, protect the metal from corrosion, and improve physical properties (antifoam, etc.).

Grease

Grease is an oil to which a thickener has been added to prevent oil migration from the lubrication site. It is used in situations where frequent replenishment of the lubricant is undesirable or impossible. All of the oil types mentioned in the next section can be used as grease bases to which are added metallic soaps, synthetic fillers and thickeners. The operative properties of grease depend almost wholly on the base oil. Other factors being equal, the use of grease rather than oil results in higher starting and running torques and can limit the bearing to lower speeds.

OILS AND BASE FLUIDS

Petroleum Lubricants

Petroleum lubricants have excellent load carrying abilities, but are useable only at moderate temperature ranges (-25° to 250° F). Greases that use petroleum oils for bases have a high dN capability. Greases of this type would be recommended for use at moderate temperatures, light to heavy loads, and moderate to high speeds.

Super-Refined Petroleum Lubricants

While these lubricants are usable at higher temperatures than petroleum oils (-65° to 350° F), they still exhibit the same excellent load carrying capacity. This further refinement eliminates unwanted properties, leaving only the desired chemical chains. Additives are introduced to increase the oxidation resistance, etc.

Synthetic Lubricants

The diesters are probably the most common synthetic lubricants. They do not have the film strength capacity of a petroleum product, but do have a wide temperature range (-65° to 350° F) and are oxidation resistant. Synthetic hydrocarbons are finding a greater use in the miniature and instrument ball bearing industry because they have proven to be a superior general purpose lubricant.



Silicone Lubricants

Silicone products are useful over a wide temperature range (-100° to 400° F) but do not have the film strength of petroleum types and other synthetics. It has become customary in the instrument and miniature bearing industry, in recent years to derate the dynamic load rating (Cr) of a bearing to 1/3 of the value shown in this catalog if a silicone product is used. Some silicones have a very low vapor pressure (10^{-6} Torr) and can be used for bearing vacuum applications above this pressure.

Perflourinated Polyether

Oils and greases of this type have found wide use where high temperature stability, chemical inertness, or low vapor pressure (10^{-9} Torr), are required. This specialty lubricant does not have the film strength of a petroleum or diester product. However, it does have better film strength than silicone lubricants.

LUBRICATION METHODS

Grease *packing* to approximately 25% of a ball bearing's free volume is PEER's most common method of lubrication. In some instances, customers have requested that bearings be lubricated 100% full of grease. It causes shearing, heat buildup and deterioration through constant churning which can ultimately result in bearing failure.

OPERATION SPEED

When petroleum or synthetic ester oils are used, the limiting speed is dictated by the ball cage material and design or the centrifugal ball loads rather than by the lubricant.

Lubricant for Commercial and Military Specifications

Lubricants can be designated by the customer to meet a particular specification. We have included a table of widely used greases and some of their most important characteristics. All commercial oil and grease lubricants applicable to ball bearings are readily available at PEER.



LUBRICANT SELECTION

Through years of experience, PEER has simplified the potentially confusing task of selecting the proper lubricant for your ball bearing applications. Although there are hundreds of lubricants available, PEER can assist you in selecting an oil or grease appropriate for any ball bearing's operating parameters. PEER successfully uses the selection method below.

Step 1

Determine the speed of the bearing and calculate the dN value ($dN = \text{bore in mm} \times \text{RPM}$). Select the oil type that will operate within the dN value, refer to table 19.

Step 2

Determine the required minimum operating viscosity V_1 of the lubricating oil, or the base oil of the grease. V_1 is a function of the bearing's pitch diameter D_{pw} ($D_{pw} = \frac{d+D}{2}$ in mm) and its operating speed in RPM, see table 20.

Step 3

Define the temperature range of the application, taking into consideration any factors that will influence the application's temperature, such as environment, adjacent machinery, etc. Determine the minimum viscosity of the lubricating oil, or the base oil of the grease, at 40°C using table 21. The viscosity of the oil at 40°C is a function of V_1 and the maximum temperature of the bearing application.

Step 4

Once you have determined these factors, the lubricant selection has been narrowed to the type of base oil, the operating temperature range, and the minimum oil viscosity at 40°C. Next, determine whether a grease or oil is needed for the application. Then, individual lubricants should be examined to determine their suitability for the application. Refer to the grease table for individual characteristics of the various entries.

SPEED FACTOR

The maximum usable operating speed of a grease lubricant is dependent on the type of oil. The speed factor is a function of the bore of the bearing (d) in millimeters (mm) and the speed of the bearing (N) in revolutions per minute (RPM) where: $dN = d (\text{bearing bore, mm}) \times N (\text{RPM})$.

Table 19. Relationship between lubricants and dN values.

TYPE	dN
Silicone	200,000
Diester	400,000
Petroleum	600,000

Note: Spray mist oil lubricated bearings can operate in excess of these values but proper care and selection is essential.

The preceding selection process encompasses nearly all rotating ball bearing applications. It will eliminate those oils or greases which may be inappropriate. Special environmental conditions (vacuum, radiation, etc.) should be considered separately because they will determine the use of special lubricants.



ENGINEERING DATA

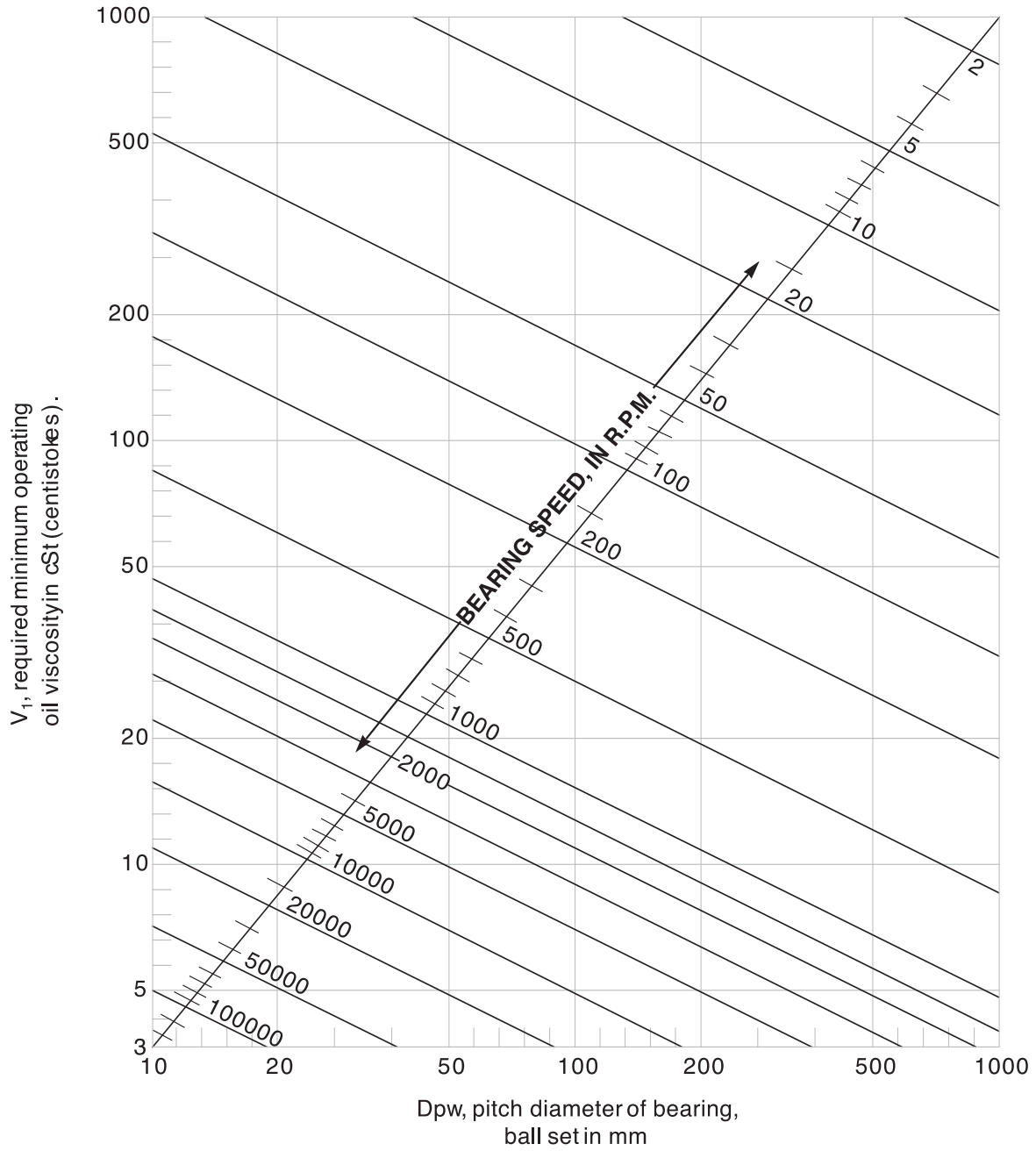


Table 20

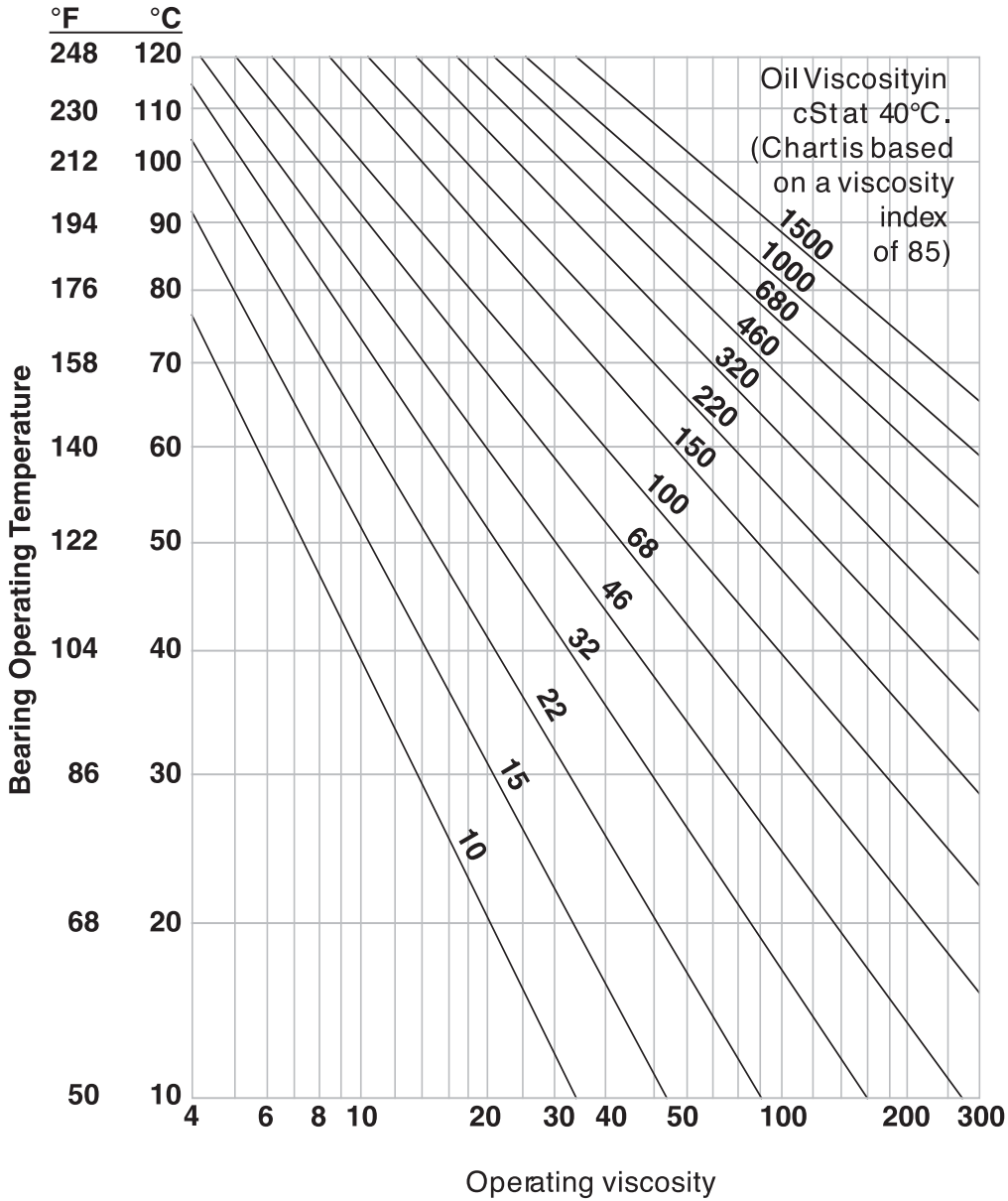


Table 21



ENGINEERING DATA

TABLE 22 - GREASE COMPARISON

Manufacturer	Chevron	Chevron	Chevron	Chevron	Dow Corning	Dow Corning
Product Name	Black Pearl EP #2	FM #2	Ultra-Duty EP #2	SRI #2	41	44 Med.Consistency
Color	Black	Crème/Apricot or white	Red	Green	Black	white
Thickener Type	Polyurea Complex	Polyurea FDA Approved	Lithium-12 Hydroxy-stearate	Polyurea	Carbon Black	Lithium
Oil type	Mineral	Mineral	Mineral	Mineral	Silicone	Silicone
NLGI No.	2	2	2	2	2	2
Base Oil viscosity in cSt @40°C cSt @100°C	154 14	202 19	400 24	116 12	150 28	88 22
Recommended op. Temp. range	-40° / 320°F	-40° / 320°F	23° / 290°F	-20° / 350°F	0° / 550°F	-40° / 400°F
Dropping Point	473°F	550°F	374°F	470°F	+500°F	400°F
PEER Grease Code	L107	L67	L114	L19	L128	L27

Manufacturer	DuPont	Exxon	Exxon	Exxon	Kyodo Yushi	Kyodo Yushi
Product Name	Krytox 240AC	Unirex N2	Unirex N3	Beacon 325	Multemp SB-M	Multemp ET-K
Color	White	Green	Green	Light Tan	Light Brown	Light Brown
Thickener Type	Synthetic	Lithium Complex	Lithium Complex	Lithium	Diurea	Diurea
Oil type	Synthetic	Mineral	Mineral	Synthetic	Synthetic Hydrocarbon	Synthetic
NLGI No.	2	2	3	2	3	1.5
Base Oil viscosity in cSt @40°C cSt @100°C	270 26	115 12.2	115 12.2	12 3	47.6 7.9	95.1 12.8
Recommended op. Temp. range	-30° / 550°F	-40° / 250°F	-40° / 250°F	-65° / 250°F	-40° / 390°F	-40° / 390°F
Dropping Point	617°F	437°F	448°F	356°F	+500°F	450°F
PEER Grease Code	L76	L05	L131	L06	L157	L68



GREASE COMPARISON (continued)

Manufacturer	Kyodo Yushi	Mobil	Mobil	Mobil	Mobil	Nye
Product Name	Multemp SRL	Polyrex EM	Mobilgrease 28	Mobiltemp 1	Mobilith SHC100	Nyogel 670 #3
Color	Light Brown	Blue	Dark Red	Amber	Red	Clear
Thickener Type	Lithium	Polyurea	Clay	Clay	Lithium Complex	Silica
Oil type	Synthetic Ester	Mineral	Synthetic Hydrocarbon/P.A.O.	Mineral	Synthetic P.A.O.	Synthetic Hydrocarbon
NLGI No.	3	2	2	1	2	3
Base Oil viscosity in cSt @40°C cSt @100°C	26.0 5.1	115 12.2	31.8 @38°F 5.9@99°C	460 32	100 14.5	194 22.8
Recommended op. Temp. range	-40° / 300°F	-40° / 350°F	-65° / 350°F	0/ 335°F	-60° / 350°F	-13° / 250°F
Dropping Point	376°F	550°F	+500°F	+500°F	500°F	None
PEER Grease Code	L21	L151	L60	L11	L150	L228

Manufacturer	Nye	Shell	Shell	Shell	Shell	Shell
Product Name	Nyogel 753SC	Aeroshell 5	Aeroshell 7	Aeroshell 17	Alvania RL2	Alvania RL3
Color	Black	Amber	Amber	Light Brown	Amber	Amber
Thickener Type	Carbon Black	Microgel	Microgel	Microgel	Lithium	Lithium
Oil type	Synthetic Ester	Mineral	Synthetic Diester	Mineral/Synthetic Polyester	Mineral	Mineral
NLGI No.	3	2	2	2	2	3
Base Oil viscosity in cSt @40°C cSt @100°C	54 9	520 32	10 3	23 6	98 9.40	98 9.40
Recommended op. Temp. range	-40° / 300°F	-10° / 350°F	-100° / 300°F	-65° / 400°F	-20° / 250°F	-20° / 250°F
Dropping Point	+500°F	+500°F	+500°F	+500°F	385°F	385°F
PEER Grease Code	L169	L40	L42	L79	L15	L16

*Many more greases available consult with your PEER Representative.



ENGINEERING DATA

CONVERSION TABLE

Inch - Millimeter
1 inch = 25.400mm

Inches		0	1	2	3	4	5	6	7	8	9	10	11	12
Fraction	Decimal													
1/64	0.015625	0.397	25.400	50.800	76.200	101.600	127.000	152.400	177.800	203.200	228.600	254.000	279.400	304.800
1/32	0.031250	0.794	26.194	51.594	76.994	102.394	127.794	153.194	178.594	203.994	229.394	254.794	280.194	305.594
3/64	0.046875	1.191	26.991	53.191	79.391	105.591	131.791	157.991	184.191	210.391	236.591	262.791	288.991	315.191
1/16	0.062500	1.588	26.998	53.388	79.788	106.188	132.588	158.988	185.388	211.788	238.188	264.588	290.988	317.388
5/64	0.078125	1.984	27.384	54.184	80.584	106.984	133.384	159.784	186.184	212.584	238.984	265.384	291.784	318.184
3/32	0.093750	2.381	27.781	55.181	81.581	107.981	134.381	160.781	187.181	213.581	240.081	266.481	292.881	319.281
7/64	0.109375	2.778	28.178	56.178	82.578	108.978	135.378	161.778	188.178	214.578	241.078	267.578	293.978	320.378
1/8	0.125000	3.175	28.575	57.175	83.575	109.975	136.375	162.775	189.175	215.575	242.075	268.675	295.075	321.475
9/64	0.140625	3.572	28.972	58.172	84.572	110.972	137.372	163.772	190.172	216.572	243.072	269.772	296.172	322.572
5/32	0.156250	3.969	29.369	59.169	85.569	111.969	138.369	164.769	191.169	217.569	244.069	270.869	297.269	323.669
11/64	0.171875	4.366	29.766	60.166	86.566	112.966	139.366	165.766	192.166	218.566	245.066	271.966	298.366	324.766
3/16	0.187500	4.762	30.162	61.162	87.562	113.962	140.362	166.762	193.162	219.562	246.062	273.062	299.462	325.862
13/64	0.203125	5.159	30.559	62.159	88.559	114.959	141.359	167.759	194.159	220.559	247.059	274.159	300.559	326.959
7/32	0.218750	5.556	30.956	63.156	89.556	115.956	142.356	168.756	195.156	221.556	248.056	275.256	301.656	328.056
15/64	0.234375	5.953	31.353	64.153	90.553	116.953	143.353	169.753	196.153	222.553	249.053	276.353	302.753	329.153
1/4	0.250000	6.350	31.750	65.150	91.550	117.950	144.350	170.750	197.150	223.550	250.050	277.450	303.850	330.250
17/64	0.265625	6.747	32.147	66.147	92.547	118.947	145.347	171.747	198.147	224.547	251.047	278.547	304.947	331.347
9/32	0.281250	7.144	32.544	67.144	93.544	119.944	146.344	172.744	199.144	225.544	252.044	279.644	306.044	332.444
19/64	0.296875	7.541	32.941	68.141	94.541	120.941	147.341	173.741	200.141	226.541	253.041	280.741	307.141	333.541
5/16	0.312500	7.938	33.338	69.138	95.538	121.938	148.338	174.738	201.138	227.538	254.038	281.838	308.238	334.638
21/64	0.328125	8.334	33.734	70.134	96.534	122.934	149.334	175.734	202.134	228.534	255.034	282.934	309.334	335.734
11/32	0.343750	8.731	34.131	71.131	97.531	123.931	150.331	176.731	203.131	229.531	256.031	284.031	310.431	336.831
23/64	0.359375	9.128	34.528	72.128	98.528	124.928	151.328	177.728	204.128	230.528	257.028	285.128	311.528	337.928
3/8	0.375000	9.525	34.925	73.125	99.525	125.925	152.325	178.725	205.125	231.525	258.025	286.225	312.625	339.025
25/64	0.390625	9.922	35.322	74.122	100.522	126.922	153.322	179.722	206.122	232.522	259.022	287.322	313.722	340.122
13/32	0.406250	10.319	35.719	75.119	101.519	127.919	154.319	180.719	207.119	233.519	260.019	288.419	314.819	341.219
27/64	0.421875	10.716	36.116	76.116	102.516	128.916	155.316	181.716	208.116	234.516	261.016	289.516	315.916	342.316
7/16	0.437500	11.112	36.512	77.112	103.512	129.912	156.312	182.712	209.112	235.512	262.012	290.612	317.012	343.412
29/64	0.453125	11.509	36.909	78.109	104.509	130.909	157.309	183.709	210.109	236.509	263.009	291.709	318.109	344.509
15/32	0.468750	11.906	37.306	79.106	105.506	131.906	158.306	184.706	211.106	237.506	264.006	292.806	319.206	345.606
1/2	0.484375	12.303	37.703	80.103	106.503	132.903	159.303	185.703	212.103	238.503	265.003	293.903	320.303	346.703
1/2	0.500000	12.700	38.100	81.100	107.500	133.900	160.300	186.700	213.100	239.500	266.000	295.000	321.400	347.800
33/64	0.515625	13.097	38.497	82.097	108.497	134.897	161.297	187.697	214.097	240.497	267.097	296.097	322.597	348.897
17/32	0.531250	13.494	38.894	83.094	109.494	135.894	162.294	188.694	215.094	241.494	268.094	297.194	323.694	349.994
35/64	0.546875	13.891	39.291	84.091	110.491	136.891	163.291	189.691	216.091	242.491	269.091	298.291	324.791	351.091
9/16	0.562500	14.288	39.688	85.088	111.488	137.888	164.288	190.688	217.088	243.488	270.088	299.388	325.888	352.188
37/64	0.578125	14.684	40.084	86.084	112.484	138.884	165.284	191.684	218.084	244.484	271.084	300.484	326.984	353.284
19/32	0.593750	15.081	40.481	87.081	113.481	139.881	166.281	192.681	219.081	245.481	272.081	301.581	328.081	354.381
39/64	0.609375	15.478	40.878	88.078	114.478	140.878	167.278	193.678	220.078	246.478	273.078	302.678	329.178	355.478
5/8	0.625000	15.875	41.275	89.075	115.475	141.875	168.275	194.675	221.075	247.475	274.075	303.775	330.275	356.575
41/64	0.640625	16.272	41.672	90.072	116.472	142.872	169.272	195.672	222.072	248.472	275.072	304.872	331.372	357.672
21/32	0.656250	16.669	42.069	91.069	117.469	143.869	170.269	196.669	223.069	249.469	276.069	305.969	332.469	358.769
43/64	0.671875	17.066	42.466	92.066	118.466	144.866	171.266	197.666	224.066	250.466	277.066	307.066	333.566	359.866
11/16	0.687500	17.462	42.862	93.062	119.462	145.862	172.262	198.662	225.062	251.462	278.062	308.162	334.662	360.962
45/64	0.703125	17.859	43.259	94.059	120.459	146.859	173.259	199.659	226.059	252.459	279.059	309.259	335.759	362.059
23/32	0.718750	18.256	43.656	95.056	121.456	147.856	174.256	200.656	227.056	253.456	280.056	310.356	336.856	363.156
47/64	0.734375	18.653	44.053	96.053	122.453	148.853	175.253	201.653	228.053	254.453	281.053	311.453	337.953	364.253
3/4	0.750000	19.050	44.450	97.050	123.450	149.850	176.250	202.650	229.050	255.450	282.050	312.550	339.050	365.350
49/64	0.765625	19.447	44.847	98.047	124.447	150.847	177.247	203.647	230.047	256.447	283.047	313.647	340.147	366.447
25/32	0.781250	19.844	45.244	99.044	125.444	151.844	178.244	204.644	231.044	257.444	284.044	314.744	341.244	367.544
51/64	0.796875	20.241	45.641	100.041	126.441	152.841	179.241	205.641	232.041	258.441	285.041	315.841	342.341	368.641
13/16	0.812500	20.638	46.038	101.038	127.438	153.838	180.238	206.638	233.038	259.438	286.038	316.938	343.438	369.738
53/64	0.828125	21.034	46.434	102.034	128.434	154.834	181.234	207.634	234.034	260.434	287.034	318.034	344.534	370.834
27/32	0.843750	21.431	46.831	103.031	129.431	155.831	182.231	208.631	235.031	261.431	288.031	319.131	345.631	371.931
55/64	0.859375	21.828	47.228	104.028	130.428	156.828	183.228	209.628	236.028	262.428	289.028	320.228	346.728	373.028
7/8	0.875000	22.225	47.625	105.025	131.425	157.825	184.225	210.625	237.025	263.425	290.025	321.325	347.825	374.125
57/64	0.890625	22.622	48.022	106.022	132.422	158.822	185.222	211.622	238.022	264.422	291.022	322.422	348.922	375.222
29/32	0.906250	23.019	48.419	107.019	133.419	159.819	186.219	212.619	239.019	265.419	292.019	323.519	350.019	376.319
59/64	0.921875	23.416	48.816	108.016	134.416	160.816	187.216	213.616	240.016	266.416	293.016	324.616	351.116	377.416
15/16	0.937500	23.812	49.212	109.012	135.412	161.812	188.212	214.612	241.012	267.412	294.012	325.712	352.212	378.512
61/64	0.953125	24.209	49.609	110.009	136.409	162.809	189.209	215.609	242.009	268.409	295.009	326.809	353.309	379.609
31/32	0.968750	24.606	50.006	111.006	137.406	163.806	190.206	216.606	243.006	269.406	296.006	327.906	354.406	380.706
63/64	0.984375	25.003	50.403	112.003	138.403	164.803	191.203	217.603	244.003	270.403	297.003	329.003	355.503	381.803

Metric Conversion Table



Fraction	Inch	mm	Fraction	Inch	mm	Fraction	Inch	mm
1/64	0.0156	0.3969		0.2883	7.3228	11/16	0.6875	17.4625
	0.0250	0.6350	19/64	0.2969	7.5406	45/64	0.7031	17.8594
1/32	0.0312	0.7937	5/16	0.3125	7.9375		0.7087	18.0000
	0.0394	1.0000		0.3150	8.0000	23/32	0.7187	18.2562
	0.0400	1.0160	21/64	0.3281	8.3344	47/64	0.7344	18.6532
3/64	0.0469	1.1906	11/32	0.3437	8.7312		0.7435	18.8849
	0.0472	1.2000		0.3543	9.0000		0.7480	19.0000
	0.0550	1.3970	23/64	0.3594	9.1281	3/4	0.7500	19.0500
	0.0591	1.5000	3/8	0.3750	9.5250	49/64	0.7656	19.4469
1/16	0.0625	1.5875	25/64	0.3906	9.9213		0.7717	19.6012
	0.0709	1.8000		0.3937	10.0000	25/32	0.7812	19.8433
5/64	0.0781	1.9844	13/32	0.4062	10.3187		0.7874	20.0000
	0.0787	2.0000		0.4100	10.4140	51/64	0.7969	20.2402
	0.0906	2.3012	27/64	0.4219	10.7156	13/16	0.8125	20.6375
3/32	0.0937	2.3812		0.4250	10.7950		0.8268	21.0000
	0.0984	2.5000		0.4331	11.0000	53/64	0.8281	21.0344
	0.1000	2.5400	7/16	0.4375	11.1125	27/32	0.8437	21.4312
	0.1024	2.6000	29/64	0.4531	11.5094	55/64	0.8594	21.8281
7/64	0.1094	2.7781		0.4600	11.6840		0.8661	22.0000
	0.1100	2.7940	15/32	0.4687	11.9062	7/8	0.8750	22.2250
	0.1102	2.8000		0.4724	12.0000	57/64	0.8906	22.6219
	0.1181	3.0000	31/64	0.4844	12.3031		0.9055	23.0000
1/8	0.1250	3.1750	1/2	0.5000	12.7000	29/32	0.9062	23.0187
	0.1256	3.1902		0.5118	13.0000	59/64	0.9219	23.4156
	0.1378	3.5000	33/64	0.5156	13.0968	15/16	0.9375	23.8125
9/64	0.1406	3.5719	17/32	0.5312	13.4937		0.9449	24.0000
5/32	0.1562	3.9687	35/64	0.5469	13.8906	61/64	0.9531	24.2094
	0.1575	4.0000		0.5512	14.0000	31/32	0.9687	24.6062
11/64	0.1719	4.3656	9/16	0.5625	14.2875		0.9843	25.0000
3/16	0.1875	4.7625	37/64	0.5781	14.6844	63/64	0.9844	25.0031
	0.1892	4.8057		0.5906	15.0000		1.0000	25.4000
	0.1969	5.0000	19/32	0.5937	15.0812		1.0236	26.0000
13/64	0.2031	5.1594	39/64	0.6094	15.4781		1.0415	26.4541
	0.2165	5.4991	5/8	0.6250	15.8750		1.0480	26.6192
7/32	0.2187	5.5562		0.6299	16.0000	1-1/16	1.0625	26.9875
15/64	0.2344	5.9531	41/64	0.6406	16.2719		1.0630	27.0000
	0.2362	6.0000		0.6500	16.5100		1.1025	28.0000
1/4	0.2500	6.3500	21/32	0.6562	16.6687	1-1/8	1.1250	28.5750
17/64	0.2656	6.7469		0.6620	16.8148		1.1417	29.0000
	0.2756	7.0000		0.6693	17.0000		1.1812	30.0000
9/32	0.2812	7.1437	43/64	0.6719	17.0656	1-3/16	1.1875	30.1625
						1-1/4	1.2500	31.7500
						1-1/2	1.5000	38.1000



Temperature Conversion Table

°C	°C/°F	°F	°C	°C/°F	°F	°C	°C/°F	°F	°C	°C/°F	°F
-79	-110	-166	37.7	100	212	204	400	752	371	700	1292
-73	-100	-148	43	110	230	210	410	770	376	710	1310
-68	-90	-130	49	120	248	215	420	788	382	720	1328
-62	-80	-112	54	130	266	221	430	806	387	730	1346
-57	-70	-94	60	140	284	226	440	824	393	740	1364
-51	-60	-76	65	150	302	232	450	842	565	1050	1922
-46	-50	-58	71	160	320	238	460	860	571	1060	1940
-40	-40	-40	76	170	338	243	470	878	576	1070	1958
-34	-30	-22	83	180	356	249	480	896	582	1080	1976
-29	-20	-4	88	190	374	254	490	914	587	1090	1994
-23	-10	14	93	200	392	260	500	932	593	1100	2012
-17.7	0	32	99	210	410	265	510	950	598	1110	2030
-17.2	1	33.8	104	220	428	271	520	968	604	1120	2048
-16.6	2	35.6	110	230	446	276	530	986	609	1130	2066
-16.1	3	37.4	115	240	464	282	540	1004	615	1140	2084
-15.5	4	39.2	121	250	482	288	550	1022	620	1150	2102
-15.0	5	41.0	127	260	500	293	560	1040	626	1160	2120
-14.4	6	42.8	132	270	518	299	570	1058	631	1170	2138
-13.9	7	44.6	138	280	536	304	580	1076	637	1180	2156
-13.3	8	46.4	143	290	554	310	590	1094	642	1190	2174
-12.7	9	48.2	149	300	572	315	600	1112	648	1200	2192
-12.2	10	50.0	154	310	590	321	610	1130	653	1210	2210
-6.6	20	68.0	160	320	608	326	620	1148	659	1220	2228
-1.1	30	86.0	165	330	626	332	630	1166	664	1230	2246
4.4	40	104.0	171	340	644	338	640	1184	670	1240	2264
9.9	50	122.0	177	350	662	343	650	1202	675	1250	2282
15.6	60	140.0	182	360	680	349	660	1220	681	1260	2300
21.0	70	158.0	188	370	698	354	670	1238	686	1270	2318
26.8	80	176.0	193	380	716	360	680	1256	692	1280	2336
32.1	90	194.0	199	390	734	365	690	1274	697	1290	2354

Metric Conversions



MULTIPLY	BY	TO OBTAIN
Celsius Temperature (t_c)	$9/5(t_c)+32=t_f$	Fahrenheit Temperature (t_f)
Centimeter (cm)	.3937	Inch (in)
Centimeter (cm)	10	Millimeter (mm)
Dyne	.00001	Newton (N)
Dyne-Centimeter	.0000001	Newton-meter (N-m)
Fahrenheit Temperature (t_f)	$5/9(t_f)-32=t_c$	Celsius Temperature (t_c)
Foot (ft)	30.48	Centimeter (cm)
Foot (ft)	.3048	Meter (m)
Gallon, U.S. liquid (gal)	3.785412	Liter (l)
Gram (g)	.03527397	Ounce (oz)
Horsepower (hp)	.7456999	Kilowatt (kW)
Horsepower (hp)	745.6999	Watt (W)
Inch (in)	2.540	Centimeter (cm)
Inch (in)	.0254	Meter (m)
Inch (in)	25.4	Millimeter (mm)
Joule (J)	.0009478170	British thermal unit (Btu)
Kilogram (kg)	2.20	Pound (lb)
Kilogram-force (kgf)	9.80665	Newton (N)
Kilometer (km)	.6213712	Mile
Liter (l)	.03531466	Cubic foot (ft ³)
Liter (l)	.001	Cubic meter (m ³)
Liter (l)	.2641720	Gallon, U.S. liquid
Meter (m)	39.37008	Inch (in)
Meter (m)	3.280840	Foot (ft)
Meter (m)	1.0936	Yard (yd)
Micron (μm)	1000	Millimeter (mm)
Micron (μm)	10^6	Meter (m)
Mile	1.609344	Kilometer (km)
Millimeter (mm)	.03937008	Inch (in)
Millimeter (mm)	.003280840	Foot (ft)
Newton (N)	.2248	Pound-force (lbf)
Ounce (oz)	28.3495	Gram (g)
Pound (lb)	.453592	Kilogram (kg)
Pound-force (lbf)	4.448	Newton (N)
Yard (yd)	.9144	Meter (m)



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Notes





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