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Mission Statement

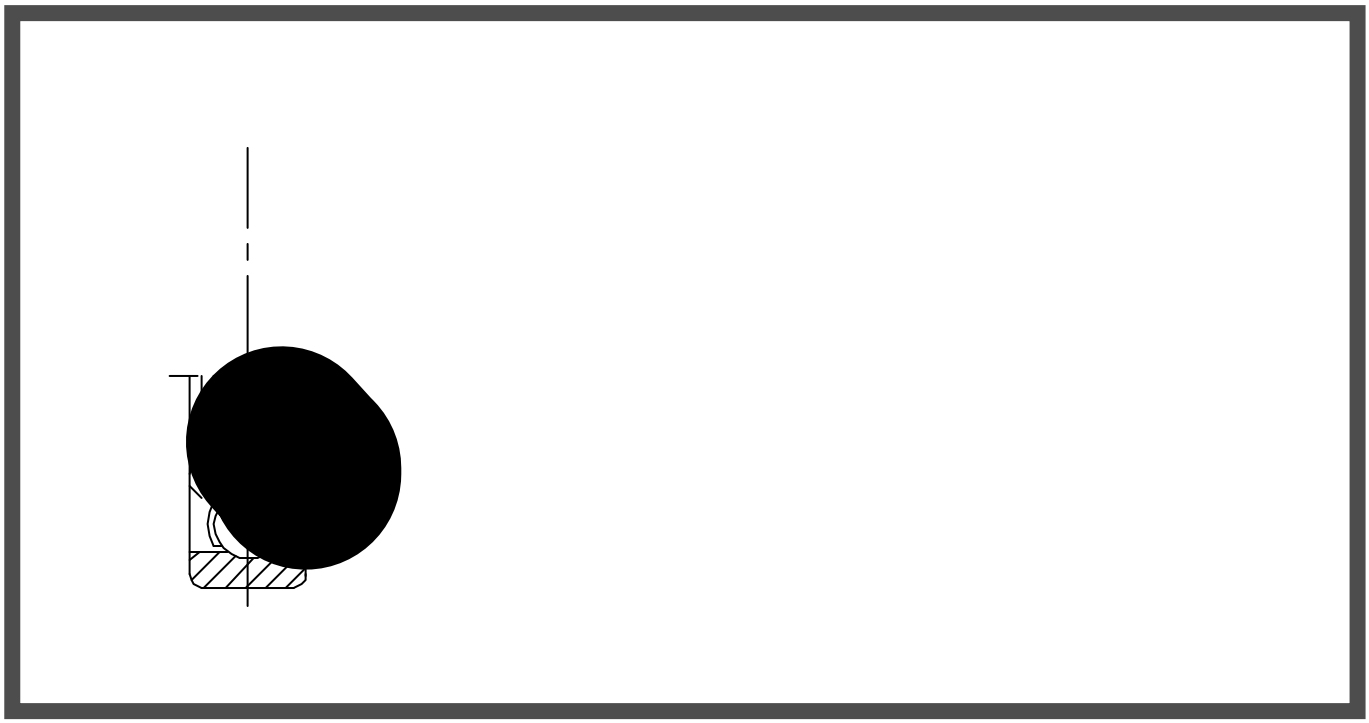
In order to be the most reliable supplier to our customers, PEER intends to meet all of their quality and delivery requirements. We realize that a quality product provides the critical foundation for our relationship with our valued customers. PEER will expect the same level of cooperation from our suppliers.

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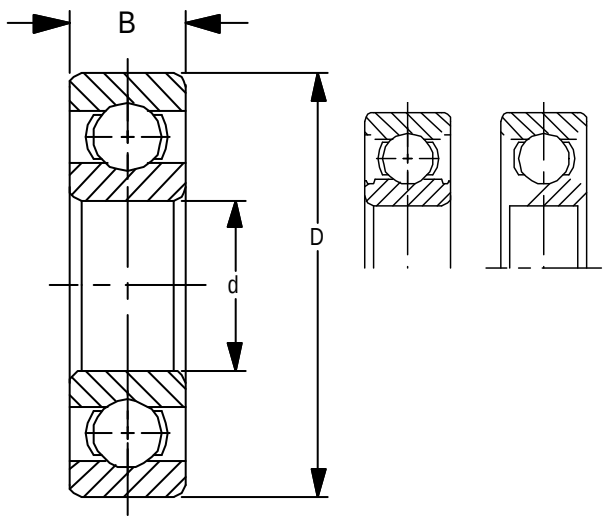
6811	2.1654	.0006	2.8346	.0005	.3543	.0059	.012	.012	2.945	.033	.067	.037	1,980	1,902	.181	10,000	8,7									
	55	.015	72	.013	9	.150	.3	.3	74.8	.85	1.7	.95	8,800	8,500	.082											
6812	2.3622	.0006	3.0709	.0005	.3937	.0059	.012	.012	3.256	.044	.067	.051	2,587	2,460	.220	9,400	8,0									
	60	.015	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	7,4									
	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	6,9									
	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	6,4									
	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	6,0									
	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	5,7									
	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	5,4									
	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	5,0									
	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	4,8									
	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	4,3									
	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	4,0									
	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	3,7									
	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	3,4									
	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	3,1									
	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	2,9									
	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	1.1170	.025	215																	



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	r2	snap ring dimensions D2 Max	f Max	snap ring groove dimensions a Max	b Min	Basic Load Ratings lbf N Dynamic Cr	Static Cor	Weight lb Kg	Limiting speed of Open Bearing (rpm) oil	grease
[illegible]	.3937	.0003	.8661	.0004	.2362	.0047	.012		.012	.976	.028	.041	.031		607	285	.020 36
	10	.008	22	.009	6	.120	.3	.3	24.8		.7	1.05	.8	2,700	1,270	.009	
	[illegible]	.0003	.9449	.0004	.2362	.0047	.012	.012	1.055	.028	.041	.031	650		330	.022	32,000 27
	[illegible]	.008	24	.009	6	.120	.3	.3	26.8		.7	1.05	.8	2,891	1,468	.010	
	[illegible]		1.1024	.0004	.2756	.0047	.012	.012	1.213	.033	.051	.037		970	979	.031	2
	[illegible]		28	.009	7	.120	.3	.3	30.8		.85	1.3	.95	4,315	4,350	.014	
	[illegible]		[illegible]11	.0004	.2756	.0047	.012	.012	1.291	.033	.051	.037	1,050		580	.040	2
	[illegible]		[illegible]	.009	7	.120	.3	.3	32.8		.85	1.3	.95	4,671	2,579	.018	
	[illegible]		[illegible]	.0005	.3543	.0047	.012	.012	1.567	.033	.067	.037	1,440		832	.079	2
	[illegible]		[illegible]		9	.120	.3	.3	39.8		.85	1.7	.95	6,400	3,700	.036	
	[illegible]		[illegible]		.3543	.0047	.012	.012	1.764	.033	.067	.037	1,586		1,023	.090	
	[illegible]		[illegible]		9	.120	.3	.3	44.8		.85	1.7	.95	7,050	4,550	.041	
	[illegible]		[illegible]		[illegible]3543	.0047	.012	.012	1.961	.033	.067	.037	1,631		1,130	.115	
	[illegible]		[illegible]		[illegible]	.120	.3	.3	49.8		.85	1.7	.95	7,250	5,026	.052	
	[illegible]		[illegible]		[illegible]	.0047	.024	.020	2.276	.033	.067	.037	2,511		1,670	.165	
	[illegible]		[illegible]		[illegible]	.120	.6	.5	57.8		.85	1.7	.95	11,165	7,429	.075	
	[illegible]		[illegible]		[illegible]	.0047	.024	.020	2.551	.033	.067	.037	3,252		2,300	.247	
	[illegible]		[illegible]		[illegible]	[illegible]	.6	.5	64.8		.85	1.7	.95	14,457	10,231	.112	
	[illegible]		[illegible]		[illegible]	[illegible]047	.024	.020	2.787	.033	.067	.037	3,403		2,532	.278	
	[illegible]		[illegible]		[illegible]	[illegible]	.6	.5	70.8		.85	1.7	.95	15,125	11,254	.126	
	[illegible]		[illegible]		[illegible]	[illegible]	.024	.020	2.945	.033	.067	.037	3,500		2,750	.290	
	[illegible]		[illegible]		[illegible]	[illegible]	.6	.5	74.8		.85	1.7	.95	15,569	12,233	.132	
	[illegible]		[illegible]		[illegible]	[illegible]	.039	.020	3.323	.044	.083	.051	3,602		2,992	.417	
	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	.5	84.4	1.12	2.1	1.3	16,012		13,300	.189	
	[illegible]		[illegible]		[illegible]	[illegible]	.039	.020	3.520	.044	.083	.051	4,360		3,650	.423	
	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	.5	89.4	1.12	2.1	1.3	19,395		16,300	.192	
	[illegible]		[illegible]		[illegible]	[illegible]	039	.020	3.717	.044	.083	.051	3,915		3,622	.481	
	[illegible]		[illegible]		[illegible]	[illegible]	.5	94.4		1.12	2.1	1.3	17,400		16,100	.218	

6914	2.7559	.0006	3.9370	.0006	.6299	.0059	.039	.020	4.110	.044	.098	.051	5,354	4,770	.769	7,700	6,50
	70	.015	100	.015	16	.150	1.0	.5	104.4	1.12	2.5	1.3	23,796	21,200	.349		
6915	2.9528	.0006	4.1339	.0006	.6299	.0059	.039	.020	4.358	.044	.098	.051	5,504	5,060	.789	7,400	6,10
	75	.015	105	.015	16	.150	1.0	.5	110.7	1.12	2.5	1.3	24,464	22,509	.358		
6916	3.1496	.0006	4.3307	.0006	.6299	.0059	.039	.020	4.555	.044	.098	.051	5,625	5,390	.862	6,700	5,70
	80	.015	110	.015	16	.150	1.0	.5	115.7	1.12	2.5	1.3	25,000	23,977	.391		
6917	3.3465	.0008	4.7244	.0006	.7087	.0079	.043	.020	4.949	.044	.130	.051	7,200	6,660	1.213	6,300	5,40
	85	.020	120	.015	18	.200	1.1	.5	125.7	1.12	3.3	1.3	32,000	29,600	.550		
6918	3.5433	.0008	4.9213	.0007	.7087	.0079	.043	.020	5.146	.044	.130	.051	7,425	7,105	1.290	6,000	5,10
	90	.020	125	.018	18	.200	1.1	.5	130.71	1.12	3.3	1.3	33,000	3426(0005(.018-3809(33,07020 27			
	90	.020	120	.315	18	.200	1.1	.5	125.7								



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	r_2	snap ring dimensions D_2 Max	f Max	snap ring groove dimensions a Max	b Min	Basic Load Ratings lbf Dynamic Cr	Static Cor	N Dynamic Cr	Static Cor	Weight lb	Kg	Limiting speed of Open Bearing (rpm) oil	grease
6000	.3937	.0003	1.0236	.0004	.3150	.0047	.012	.012	1.130	.028	.068	.031	1,030	440	4,580	1,960	.042	19	30,000	18,000
	10	.008	26	.009	8	.120	.3	.3	28.7	.7	1.73	.8								
6001	.4724	.0003	1.1024	.0004	.3150	.0047	.012	.012	1.209	.083	.068	.037	1,150	540	5,116	2,390	.046	21	26,000	15,000
	12	.008	28	.009	8	.120	.3	.3	30.7	.85	1.73	.95								
6002	.5906	.0003	1.2598	.0004	.3543	.0047	.012	.012	1.445	.044	.081	.053	1,260	635	5,605	2,825	.066	30	22,000	13,000
	15	.008	32	.011	9	.120	.3	.3	36.7	1.12	2.06	1.35								
6003	.6693	.0003	1.3780	.0004	.3937	.0047	.012	.012	1.563	.044	.081	.053	1,530	755	6,806	3,359	.086	39	19,000	11,000
	17	.008	35	.011	10	.120	.3	.3	39.7	1.12	2.06	1.35								
6004	.7874	.0004	1.6535	.0004	.4724	.0047	.024	.020	1.823	.044	.081	.053	2,110	1,136	9,400	5,050	.152	69	17,000	9,500
	20	.010	42	.011	12	.120	.6	.5	46.3	1.12	2.06	1.35								
60/22	.8661	.0004	1.7323	.0004	.4724	.0047	.024	.020	1.902	.044	.081	.053	2,110	1,136	9,400	5,050	.163	74	16,000	9,000
	22	.010	44	.011	12	.120	.6	.5	48.3	1.12	2.06	1.35								
6005	.9843	.0004	1.8504	.0004	.4724	.0047	.024	.020	2.075	.044	.081	.053	2,272	1,320	10,100	5,850	.176	80	14,000	8,500
	25	.010	47	.011	12	.120	.6	.5	52.7	1.12	2.06	1.35								
60/28	1.1024	.0004	2.2835	.0005	.6299	.0047	.024	.020	2.280	.044	.081	.053	2,800	1,660	12,500	7,400	.216	98	13,000	8,000
	28	.010	52	.013	12	.120	.6	.5	57.9	1.12	2.06	1.35								
6006	1.1811	.0004	2.1654	.0005	.5118	.0047	.039	.020	2.390	.044	.082	.053	2,970	1,860	13,212	8,300	.256	116	12,000	7,500
	30	.010	55	.013	13	.120	1.0	.5	60.7	1.12	2.08	1.35								
60/32	1.2598	.0005	2.2835	.0005	.5118	.0047	.039	.020	2.508	.044	.082	.053	3,400	2,050	15,100	9,150	.284	129	11,000	7,000
	32	.012	58	.013	13	.120	1.0	.5	63.7	1.12	2.08	1.35								
6007	1.3780	.0005	2.4409	.0005	.5512	.0047	.039	.020	2.665	.067	.082	.075	3,600	2,315	16,014	10,298	.342	155	10,000	6,300
	35	.012	62	.013	14	.120	1.0	.5	67.7	1.7	2.08	1.9								
6008	1.5748	.0005	2.6772	.0005	.5906	.0047	.039	.020	2.937	.067	.098	.075	3,750	2,600	16,800	11,500	.419	190	9,500	6,000
	40	.012	68	.013	15	.120	1.0	.5	74.6	1.7	2.49	1.9								
6009	1.7717	.0005	2.9528	.0005	.6299	.0047	.039	.020	3.213	.067	.098	.075	4,725	3,420	21,000	15,200	.522	237	8,500	5,300
	45	.012	75	.013	16	.120	1.0	.5	81.6	1.7	2.49	1.9								
6010	1.9685	.0005	3.1496	.0005	.6299	.0047	.039	.020	3.409	.067	.098	.075	4,900	3,735	21,797	16,600	.575	261	8,000	5,000
	50	.012	80	.013	16	.120	1.0	.5	86.6	1.7	2.49	1.9								

*Maximum fillet which corner radius of bearing will clear.



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	r2	snap ring dimensions D2 Max	f Max	snap ring groove dimensions a Max	b Min	Basic Load Ratings lbf / N Dynamic Cr	Static Cor	Weight lb / Kg	Limiting speed of Open Bearing (rpm) oil	grease	
6200	.3937	.0003	1.1811	.0004	.3543	.0047	.024		.020	1.366	.044	.081	.053	1,150		540	.071	3
	10	.008	30	.009	9	.120	.6		.5	34.7	1.12	2.06	1.35	5,100		2,390	.032	
6201	.4724	.0003	1.2598	.0005	.3937	.0047	.024		.020	1.445	.044	.081	.053	1,530		680	.082	2
	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	2
	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	2
	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	2
	15	.008	35	.011	11	.120	.6		.5	39.7	1.12	2.06	1.35	7,740		3,732	.050	
6202-10	.6250	.0003	1.3780	.0005	.4331	.0047	.024		.020	1.563	.044	.081	.053	1,740		839	.110	2
	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	2
	15.875	.008	34.93	.011	11	120	.6		.5	39.7	1.12	2.06	1.35	7,740		3,732	.050	
499502H	.6250	.0003	1.375	.0005	.4331	.0047	.024		.020	1.563	.044	.081	.053	1,740		839	.110	2
	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	2
	16	.008	35	.011	11	.120	.6		.5	39.7	1.12	2.06	1.35	7,740		3,732	.050	
6203	.6693	.0003	1.5748	.0005	.4724	.0047	.024		.020	1.756	.044	.081	.053	2,160		1,080	.150	2
	17	.008	40	.011	12	.120	.6		.5	44.6	1.12	2.06	1.35	9,600		4,800	.068	
6203-6	.3750	.0003	1.5748	.0005	.4724	.0047	.024		.020	1.756	.044	.081	.053	2,160		1,080	.150	2
	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	2
	12.7	.008	40	.011	12	.120	.6		.5	44.6	1.12	2.06	1.35	9,600		4,800	.068	
6203-10	.6250	.0003	1.5748	.0005	.4724	.0047	.024		.020	1.756	.044	.081	.053	2,150		1,080	.150	2
	15.875	.008	40	.011	12	.120	.6		.5	44.6	1.12	2.06	1.35	9,600		4,800	.068	
6203-16mm	.6299	.0003	1.5748	.0005	.4724	.0047	.024		.020	1.756	.044	.081	.053	2,150		1,080	.150	2
	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.

6203-12	.7500	.0003	1.5748	.0005	.4724	.0047	.024	.020	1.756	.044	.081	.053	2,150	1,080	.150	21,000	18,00
	19.05	.008	40	.011	12	.120	.6	.5	44.6	1.12	2.06	1.35	9,600	4,800	.068		
6204	.7874GS2 g40 -212.8 [(.75005(18,000)]TJ /CS0 cs 120)-2 -17532 -1.285 0.542286 034(1.35 [(E96 7 106.6875 3 cm 0T 0 0 0 1 7 [(356 786 03081)8425 -1.2872c45 -1/GS2																



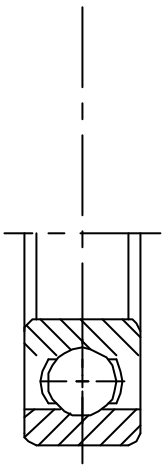
6300 SERIES

6300	.3937	.0003	1.3780	.0005	.4331	.0047	.024	.020	1.563	.044	.081	.053	1,845	785	.110	27,000	23,00
	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	20,00
	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	17,0
	15	.008	42	.011	13	.120	1.0	.5	46.3	1.12	2.06	1.35	11,400	5,450	.068		
6303	.6693 /GS2 gs /T1_3 1 Tf 7208 841847(.0005)-2403(.0155)-2639(.0047)-2545(4039)-2295(6020)-2448(1.06)7-271385044 5044972984(.053)-3200(2,0006-3007(6,22																

6310	1.9685	.0005	4.3307	.0006	1.0630	.0047	.079	.020	4.591	.097	.129	.106	13,950	8,600	2.470					
	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			
	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					
	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					
	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					
	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					
	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					
	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					
	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					
	90	.020	190	.030	43	.200	3.0	.5	3d4 Td [(65-3238(.20 1 sce0-2985(3.5)-31999(113 000)-2596(77,000)-1814(3.8											

							* fillet radii				snap ring groove dimensions		Basic Load Ratings lbf N					
							r	r_2			a Max	b Min	Dynam(1o70 7 107.04 0 7Mj 0cQ q 2 (g17(Dynam(1oCr020)60(C					
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	.7480	.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	7,80	
	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	6,30	
	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	5,70	
	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	5,20	
	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	4,80	
	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	4,40	
	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	4,10	
	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	3,80	
	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	3,50	
	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	3,40	
	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	3,20	
	90	.020	225	.030	54	.200	4.0	.5	237.8	3.1	5.69	3.5	195,712	162,352	11.340			

1601	3/16 .1875	.0010	11/16 .6875	.0005	1/4 .2500	.0050	.012	490 2,180	168 748
1602	1/4 .2500	.0005	11/16 .6875	.0005	1/4 .2500	.0050	.012	545 2,424	196 872
1603	5/16 .3125	.0005	7/8 .8750	.0005	9/32 .2812	.0050	.012	825 3,670	317 1,411



$ EDVLF EHDULQJ EDOO FL
ZLWK ZLGHU ZLGWKV 8VHG SU
WULF PRWRUV ZKHQ H[WUD JU
QHFHVVDU\ :LOO RIIHU PRUH
GXH WR WKH H[WUD ZLGWK

Units: Inches
Metric

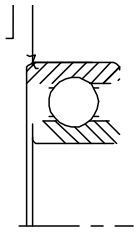
Part Number	Bore d	Tolerance +.0000 to minus	OD D	Tolerance +.0000 to minus	Width B	Tolerance +.0000 to minus	* fillet radii r	r2	snap ring dimensions D2 Max	f Max	snap ring groove dimensions a Max	b Min	Basic Load Ratings lbf / N Dynamic Cr	Static Cor	Weight lb / Kg	Limiting speed of Open Bearing (rpm) oil	grease
W6200	.3937	.0003	1.1811	.0004	.562	.0047	.024	.020	1.366	.044	.081	.053	1,150	540	.100	30,00
	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	26,00
	12	.008	32	.011	15.58	.120	.6	.5	36.7	1.12	2.06	1.35	6,800	3,050	.054	
W6202	.5906	.0003	1.3780	.0005	.625	.0047	.024	.020	1.563	.044	.081	.053	1,740	839	.150	26,00
	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	21,00
	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	18,00
	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	15,00
	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	13,0
	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	11,0
	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	10,0
	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
	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	7,1
	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	7,6
	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	7,0
	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.

DQG OXEULFDWLRQ UHW
FRQVLGHUDWLRQV 7KLV
ZLWK DQ H[WHQGHG LQQH
H[DFW GLPHQVLRQV RI
9DU\LQJ WKH FRQWDFW S
VHDO DOORZV WKHVH EH
IRU H[WUHPHO\ KLJK VSH
QRUPDO DSSOLFDWLRQV
LGHQWLFDO WR WKH
KDV WKH DGGHG DGYDQW
6HDO RQ ERWK VLGHV
,GHQWLFDO LQ GLPHQVLR
WKLV VHDOHG EHDULQJ S
WLRQ IURP HQWHULQJ WK

Snap hichgro

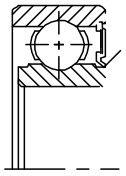
*Maximum fillet which corner radius of bearing will clear.



Units: Inches Metric

Part Number		OD D	Outer Ring Width B	Inner Ring Width Bi	Bii	Fillet radius r (min)	Basic Load Ratings lbf / N Dynamic Cr	Static Cor	Weight lbs WC8000		Weight lbs WC88000	
WC8006	WC87006	WC88	.2362	.9499	.4063	.3860	.4970	.012	750	315	.060	.060	.060	
			6	24	10.319	9.804	12.624	.3	3,336	1,401	.027	.027	.027	
WC8007	WC87007	WC88	.2756	.9449	.4063	.3860	.4970	.012	900	355	.051	.051	.051	
			7	24	10.319	9.804	12.624	.3	4,003	1,579	.023	.023	.023	
WC8008	WC87008	WC88	.3150	.9449	.4063	.3860	.4970	.012	900	355	.050	.050	.050	
			8	24	10.319	9.804	12.624	.3	4,003	1,579	.023	.023	.023	
WC8009	WC87009	WC88	.3543	1.1811	.5000	.4800	.6457	.025	1150	540	.105	.105	.110	
			9	30	12.700	12.192	16.401	.6	5,115		2,402	.048	.048	.050
WC8011	WC87011	WC88	.4331	1.2598	.5000	.4800	.6063	.025	1370	615	.110	.110	.100	
			11	32	12.700	12.192	15.400	.6	6,094	1,401	.050	.050	.045	
WC8013	WC87013	WC88	.5118	1.2598	.5000	.4800	.6063	.025	1370	615	.100	.100	.100	
			13	32	12.700	12.192	15.400	.6	6,094	1,401	.045	.045	.045	
WC8014	WC87014	WC88	.5512	1.3780	.5000	.4800	.5669	.025	1740	805	.110	.110	.125	
			14	35	12.700	12.192	14.399	.6	7,740	3,581	.050	.050	.057	
WC8016	WC87016	WC88	.6299	1.3780	.5000	.4800	.5669	.025	1740	805	.114	.114	.120	
			16	35	12.700	12.192	14.399	.6	7,740	3.581	.052	.052	.054	
WC8026	WC87026	WC88	1.0236	2.0472	.6250	.6000	.6594	.040	3150	1770	.289	.289	.289	
			26	52	15.875	15.240	16.749	1.0	14,011	7,873	.131	.131	.131	
WC8035	WC87035	WC88	.1969	.7480	.4063	.3860	.4970	.012	525	199	.026	.026	.030	
			5	19	10.319	9.804	12.624	.3	2,335	885	.012	.012	.014	
WC8036	WC87036	WC88	.2362	.7480	.4063	.3860	.4970	.012	525	199	.027	.027	.030	
			6	19	10.319	9.804	12.624	.3	2,335	885	.013	.013	.014	
WC8037	WC87037	WC88	.2756	.8661	.4063	.3860	.4970	.012	750	315	.043	.043	.043	
			7	22	10.319	9.804	12.624	.3	3,336	1,401	.020	.020	.028	
WC8038	WC87038	WC88	.3150	.8661	.4063	.3860	.4970	.012	750	315	.040	.040	.040	
			8	22	10.319	9.804	12.624	.3	3,336	1,401	.018	.018	.018	
WC8039	WC87039	WC88	.3543	1.0236	.4063	.3860	.4970	.025	1030	440	.06	.06	.06	
			9	26	10.319	9.804	12.624	.6	4,581	1,959	.027	.027	.027	
WC8500	WC87500	WC88	.3937	1.1811	.5000	.4800	.6457	.025	1150	540	.09	.09	.09	
			10	30	12.700	12.192	16.401	.6	5,150	2,402	.041	.041	.041	

*Maximum fillet which corner radius of bearing will clear.



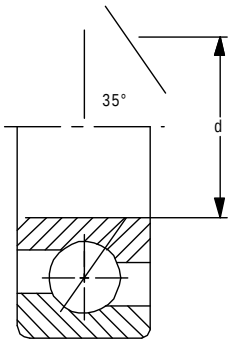
Units: Inches Metric

Part Number													
WC8501	WC87501	WC88	.4724	1.2598	.5000	.4800	.6063	.025	1370	615	.100	.100	.100	
			12	32	12.700	12.192	15.400	.6	6,094	2,736	.045	.045	.045	
WC8502	WC87502	WC88	.5906	1.3780	.5000	.4800	.5669	.025	1740	805	.120	.120	.119	
			15	35	12.700	12.192	14.399	.6	7,740	3,581	.054	.054	.054	
WC8503	WC87503	WC88	.6693	1.5748	.5625	.5380	.6536	.025	2160	1030	.170	.170	.170	
			17	40	14.288	13.665	16.601	.6	9,608	4,851	.077	.077	.077	
WC8504	WC87504	WC88	.7874	1.8504	.6250	.6000	.6988	.040	2890	1500	.260	.260	.259	
			20	47	15.875	15.240	17.750	1.0	12,855	6,672	.118	.118	.117	
WC8505	WC87505	WC88	.9843	2.0472	.6250	.6000	.6594	.040	3150	1770	.304	.304	.304	
			25	52	15.875	15.240	16.749	1.0	14,011	7,873	.138	.138	.138	
WC8506	WC87506	WC88	1.1811	2.4409	.7874	.7480	.9449	.040	4400	2540	.543	.543	.523	
			30	62	20.000	19.000	24.000	1.0	19,571	11,298	.246	.246	.237	
WC8507	WC87507	WC88	1.3780	2.8346	.8268	.7874	.9843	.040	5750	3450	.765	.765	.749	
			35	72	21.000	20.000	25.000	1.0	25,576	15,346	.347	.347	.340	
WC8508	WC87508	WC88	1.5748	3.1496	.9449	.9449	1.0630		.040	6550	4000	1.18	1.18	1.180
			40	80	24.000	24.000	27.000	1.0	29,134	17,792		.535		
WC8509	WC87509	WC88	1.7717	3.3465	.9449	.9449	1.0630		.040	7350	4600	1.220		
			45	85	24.000	24.000	27.000	1.0	32,693	20,461		.553		
WC8510	WC87510	WC88	1.9685	3.5433	1.0236	1.0236	1.1811		.040	7900	5200	1.260	1.260	1.300
			50	90	26.000	26.000	30.000	1.0	35,139	23,130	.572	.572	.590	
WC8511	WC87511	WC88	2.1654	3.9370	1.0630	1.0630	1.2205		.060	9750	6550	1.630	1.630	1.660
			55	100	27.000	27.000	31.000	1.5	43,358	29,134	.739	.739	.753	

*Maximum fillet which corner radius of bearing will clear.

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			

7200 ANGULAR CONTACT SERIES (continued)



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 Dynamic Cr	Basic Load Ratings lbf N Static Cor	Weight lb Kg
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
	100	.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
	105	.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
	110	.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
	120	.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
	130	.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
	140	.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
	150	.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
	160	.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
	170	.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
	180	.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
	190	.030	340	.040	55	.300	3.0	315,000	410,000	22.998

*Maximum fillet which corner radius of bearing will clear.

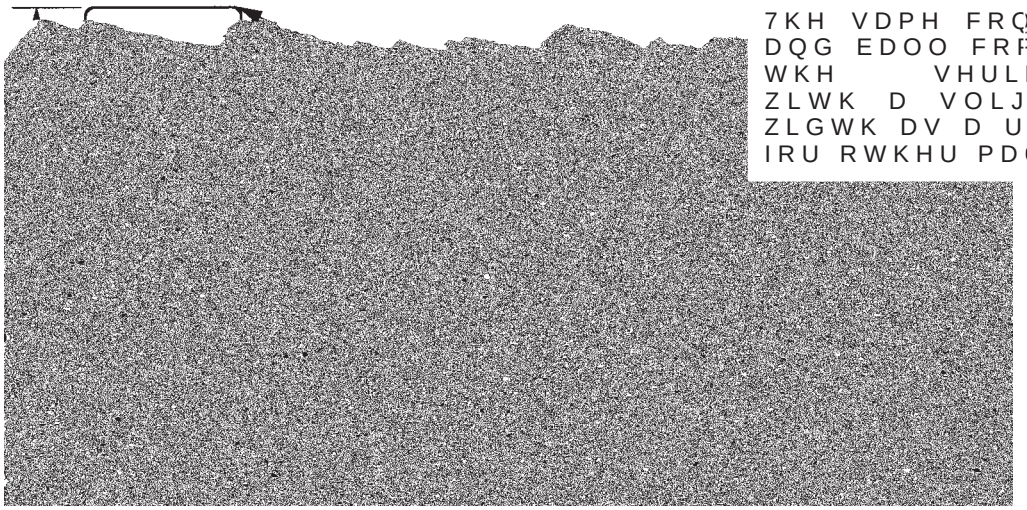


Units: Inches
Metric

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 lbf / N Dynamic Cr	Basic Load Ratings lbf / N Static Cor	Weight lb Kg	Limiting speed of Open Bearing (rpm) oil	Limiting speed of Open Bearing (rpm) grease	
7300	.3937	.0003	1.3780	.0005	.4331	.0047	.039	2,280	1,100	.120	24,000	1	
	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	1	
	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	1	
	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	1	
	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	1	
	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	
	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	
	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	
3.1454333670(.0005	0553572	(.0047)-47.212	(.0059)-32000	01,1603364	.0	14,760.800	227.496,920	.008 800.000	3340,0	22,640			

*Maximum fillet which corner radius of bearing will clear.

7315												



7KH VDPH FRQVWUXFWLRQ DQG EDOO FRPSOLPHQW DV WKH VHULHV 0DGH ZLWK D VOLJKWO\ ODUJHU ZLGWK DV D UHSODFHPHQW IRU RWKHU PDQXIDFWXUHUV

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

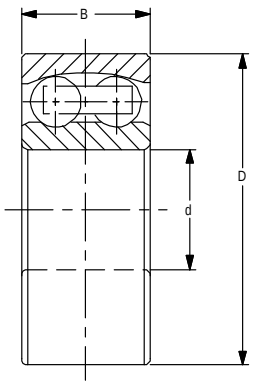
*Maximum fillet which corner radius of bearing will clear.

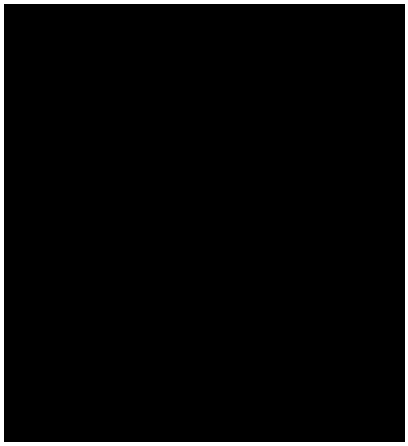
6SHFLDOO\ GHVLJQHG EHDULQ
KDQGOH PDVW PRYHPHQWV RI LQ
WULDO WUXFNV 7KLV VHULHV ZL
KHDY\ UDGLDO DQG VKRFN OI
7KLFN RXWHU ULQJV SHUPLW KH
ORDGLQJ 6SHFLDOC\ GHVLJQHG
DOORZ WKH EHDULQJV WR RSH
DGYHUVH HQYLURQPHQWV

PEER Bearing No.	MRC Interchange	BCA Interchange
0*))$		0*))$
0* 6==	6==	
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0*))-$		0*))-$
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0* 6==	6==	

Part Number										
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



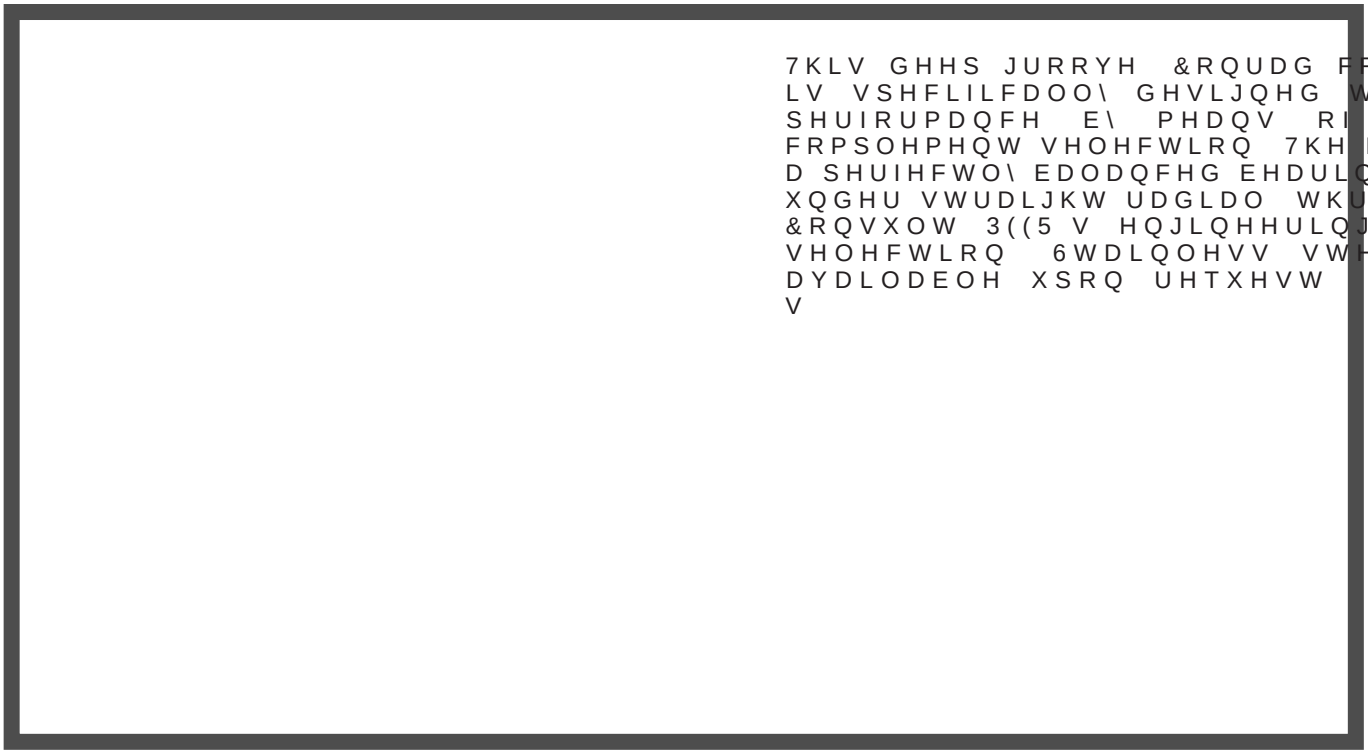


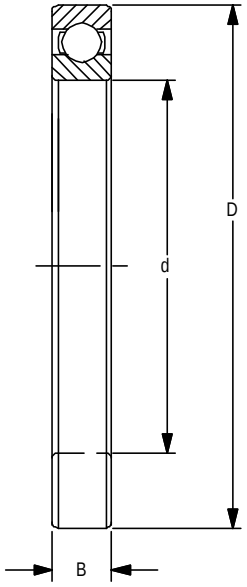


7KH VHOI DOLJQLQJ EDOO EHDULQJ LV GRXEOH URZ W\SH ZLWK D VSKHULFDO WKH RXWHU ULQJ 7KLV JLYHV WKH VHOI DOLJQLQJ SURSHUWLHV DQG DO FRPSHQVDWH IRU PLVDOLJQPHQW GHIOHFWLRQV DQG KRXVLQJ GHIRU 6HOI DOLJQLQJ EDOO EHDULQJV DUH DY F\OLQGULFDO RU WDSHUHG ERUH

Part Number		Bore d		Outer Diameter D		Width B		Radius r		Basic Load Rating lbs. Dynamic C	Static Cor	Weight lbs.
		mm	in.	mm	in.	mm	in.	mm	in.			
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

		Bore d		Outer Diameter D		Width B		Radius r		Basic Load Rating lbs. Dynamic	Static	Weight lbs.	
		mm	in.	mm	in.	mm	in.	mm	in.	C	Cor	2200 2300	2200K 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


7KLV GHHS JURRYH &RQUDG FRQVWUXFW
LV VSHFLILFDOO\ GHVLJQHG WR SURYL
SHUIRUPDQFH E\ PHDQV RI SUHFLVH
FRPSOHPHQW VHOHFWLRQ 7KH KRQHG UD
D SHUIHFWO\ EDODQFHG EHDULQJ FDSDEO
XQGHU VWUDLJKW UDGLDO WKUXVW RU F
&RQVXOW 3((5 V HQJLQHHULQJ VWDII I
VHOHFWLRQ 6WDLQOHVV VWHHO &
DYDLODEOH XSRQ UHTXHVW 5DGLDO F
V



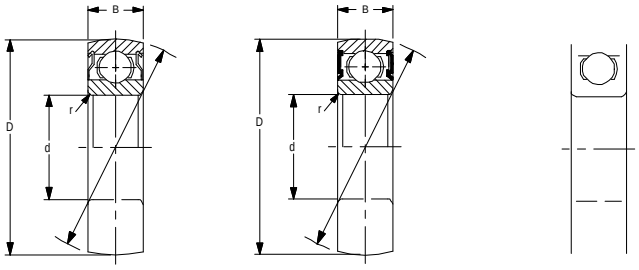
7KLV GHHS JURRYH &RQUDG FRQV
LV VSHFLILFDOO\ GHVLJQHG WR S
SHUIRUPDQFH E\ PHDQV RI SU
FRPSOHPHQW VHOHFWLRQ 7KH KRQ
D SHUIHFWO\ EDODQFHG EHDULQJ FI
XQGHU VWUDLJKW UDGLDO WKUXVW
&RQVXOW 3((5 V HQJLQHHULQJ VW
VHOHFWLRQ 6WDLQOHVV VWHHO
DYDLODEOH XSRQ UHTXHVW 5DG
VHOHFWHG LQ DFFRUGDQFH WR DS
IURP & & & & ILWV

Part Number												
16015	2.9528	0.0006		0.0006	.5118	0.0060	8890	7550		1.01	6700	5700
	75		115		13		39456	33585		0.4581		
16016	3.1496	0.0006		0.0007	.5512	0.0060	10700	8950		1.31	6200	5300
	80		125		14		47598	39813		0.5942		
16017	3.3465	0.0006		0.0007	.5512	0.0080	11100	9700		1.38	5900	5000
	85		130		14		49377	43149		0.6259		
16018	3.5433	0.0006		0.0007	.6299	0.0080	13100	11200		1.87	5600	4700
	90		140		16		58274	49822		0.8482		
16019	3.7402	0.0006		0.0007	.6299	0.0080	13600	12100		1.95	5300	4500
	95		145		16		60498	53826		0.8845		
16020	3.9370	0.0006		0.0007	.6299	0.0080	13500	12200	2	5000	4200	
	100		150		16		60053	54270		0.9072		
16021	4.1339	0.0006		0.0010	.7087	0.0080	16300	14800		2.64	4700	4000
	105		160		18		72509	65836		1.1975		
16022	4.3307	0.0006		0.0010	.7480	0.0080	18400	16400		3.21	4500	3800
	110		170		19		81851	72954		1.4560		
16024	4.7244	0.0006		0.0010	.7480	0.0080	19100	17800		3.96	4100	3500
	120		180		19		84964	79181		1.7962		
16026	5.1181	0.0009		0.0012	.8661	0.0100	23800	22700		5.92	3800	3200
	130		200		22		105872	100979		2.6853		
16028	5.5118	0.0009		0.0012	.8661	0.0100	24700	24400		6.29	3500	3000
	140		210		22		109875	108541		2.8531		
16030	5.9055	0.0009		0.0012	.9449	0.0100	28200	28200		7.88	3200	2800
	150		225		24		125445	125445		3.5743		
16032	6.2992	0.0009		0.0012	.9843	0.0100	3200	32500		9.5	3000	2600
	160		240		25		142349	144573		4.3092		
16034	6.6929	0.0009		0.0014	1.1024	0.0100	3800	38500		12.7	2800	2400
	170		260		28		169039	171263		5.7607		
16036	7.0866	0.0009		0.0014	1.2205	0.0100	42500	44500		16.7	2700	2300
	180		280		31		189057	197954		7.5751		
16038	7.4803	0.0010		0.0014	1.2205	0.0120	44000	48500		17.4	2500	2100
	190		290		31		195730	215747		7.8926		
16040	7.8740	0.0010		0.0014	1.3386	0.0120	49000	54500		22.2	2400	2000
	200		310		34		217972	242438		10.0699		

6WDQGDUG &RQUDG VHULHV ZLWK
URXQGHG 2 ' WR DOORZ IRU VHOI D

Units: 5.7528 Inches .7528
Metric

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



6WDQGDUG &RQUDG VHULHV
URXQGHG 2 ' WR DOORZ IRU V

Units: Inches
Metric

Part Number	Bore d TOL. +0/to Nominal	Minus Shown	Outer Diameter D TOL. +0/to Nominal	Minus Shown	Width B TOL. +0/to Nominal	Minus Shown	Radius r rs min	max radial	max axial	Basic Load Rating lbf Dynamic C	N. Static Cor	Weight lbs.	
6210-ZZ-22	1.9685	.0050	3.5433	.0060	.7874	.0050	.0433	.0787	.1378	7880	4650		1
	50.000	.013	90.000	.015	20.000	.127	1.100	2.00	3.500	35051	20684		
6210-2RS-2	1.9685	.0050	3.5433	.0060	.7874	.0050	.0433	.0787	.1378	7880	4650		1
	50.000	.013	90.000	.015	20.000	.127	1.100	2.00	3.500	35051	20684		
6210-2RST-2	1.9685	.0050	3.5433	.0060	.7874	.0050	.0433	.0787	.1378	7880	4650		1
	50.000	.013	90.000	.015	20.000	.127	1.100	2.00	3.500	35051	20684		
6305-ZZ-22	.9843	.0004	2.4409	.0050	.6693	.0050	.0433	.0787	.1378	5000	2600		.
	25.000	.010	62.000	.013	17.000	.127	1.100	2.00	3.500	22241	11565		
6305-2RS-2	.9843	.0004	2.4409	.0050	.6693	.0050	.0433	.0787	.1378	5000	2600		.
	25.000	.010	62.000	.013	17.000	.127	1.100	2.00	3.500	22241	11565		
6305-2RST-2	.9843	.0004	2.4409	.0050	.6693	.0050	.0433	.0787	.1378	5000	2600		.
	25.000	.010	62.000	.013	17.000	.127	1.100	2.00	3.500	22241	11565		
6306-ZZ-22	1.1811	.0004	2.8346	.0050	.7480	.0050	.0433	.0787	.1378	6550	3650		.
	30.000	.010	72.000	.013	19.000	.127	1.100	2.00	3.500	29135	16236		
6306-2RS-2	1.1811	.0004	2.8346	.0050	.7480	.0050	.0433	.0787	.1378	6550	3650		.
	30.000	.010	72.000	.013	19.000	.127	1.100	2.00	3.500	29135	16236		
6306-2RST-2	1.1811	.0004	2.8346	.0050	.7480	.0050	.0433	.0787	.1378	6550	3650		.
	30.000	.010	72.000	.013	19.000	.127	1.100	2.00	3.500	29135	16236		
6307-ZZ-22	1.3780	.0005	3.1496	.0050	.8268	.0050	.0591	.0906	.1575	7500	4300		1
	35.00	.013	80.000	.013	21.000	.127	1.500	2.30	4.000	33361	19127		
6307-2RS-2	1.3780	.0005	3.1496	.0050	.8268	.0050	.0591	.0906	.1575	7500	4300		1
	35.00	.013	80.000	.013	21.000	.127	1.500	2.30	4.000	33361	19127		
6307-2RST-2	1.3780	.0005	3.1496	.0050	.8268	.0050	.0591	.0906	.1575	7500	4300		1
	35.00	.013	80.000	.013	21.000	.127	1.500	2.30	4.000	33361	19127		
6308-ZZ-22	1.5748	.0005	3.5433	.0060	.9055	.0050	.0591	.0906	.1575	9650	5600		1
	40.000	.013	90.000	.015	23.000	.127	1.500	2.30	4.000	42925	24910		
6308-2RS-2	1.5748	.0005	3.5433	.0060	.9055	.0050	.0591	.0906	.1575	9650	5600		1
	40.000	.013	90.000	.015	23.000	.127	1.500	2.30	4.000	42925	24910		
6308-2RST-2	1.5748	.0005	3.5433	.0060	.9055	.0050	.0591	.0906	.1575	9650	5600		1
	40.000	.013	90.000	.015	23.000	.127	1.500	2.30	4.000	42925	24910		
6309-ZZ-22	1.7717	.0005	3.9370	.0060	.9843	.0050	.0591	40.0906	.1575	12000	7100		
	45.000	.013	100.000	.015	25.000	.127	1.500	2.30	4.000	53378	31582		
6309-2RS-2	1.7717	.0005	3.9370	.0060	.9843	.0050	.0591	.0906	.1575	12000	7100		1
	45.000	.013	100.000	.015	25.000	.127	1.500	2.30	4.000	53378	31582		
6309-2RST-2	1.7717	.0005	3.9370	.0060	.9843	.0050	.0591	.0906	.1575	12000	7100		1
	45.000	.013	100.000	.015	25.000	.127	1.500	2.30	4.000	53378	31582		
6310-ZZ-22	1.9685	.0005	4.3307	.0060	1.0630	.0050	.0787	.1181	.1772	14000	8500		
	50.000	.013	110.000	.015	27.000	.127	2.00	3.000	4.500	62275	37809		
6310-2RS-2	1.9685	.0005	4.3307	.0060	1.0630	.0050	.0787	.1181	.1772	14000	8500		
	50.000	.013	110.000	.015	27.000	.127	2.00	3.000	4.500	62275	37809		
6310-2RST-2	1.9685	.0005	4.3307	.0060	1.0630	.0050	.0787	.1181	.1772	14000	8500		
	50.000	.013	110.000	.015	27.000	.127	2.00	3.000	4.500	62275	37809		

7KH PRVW SRSXODU W\SH RI EHDULQJ LQ XVH WRGD\ LV WKH VL
7KH EDVLF IXQFWLRQ RI D UDGLDO EDOO EHDULQJ LV WR WUDQV
7R DFFRPSOLVK WKLV DQWL IULFWLRQ EHDULQJV DUH JHQHUDO
VWHHO ULQJV VHSDUDWHG E\ WKH EDOOV DQG VSDFHG E\ D UHW
WKHVH EHDULQJV VXLWDEOH IRU UDGLDO ORDGV RU D FRPELQDW
GLUHFWLRQ 7KLV W\SH RI GHVLJQ FRPELQHV KLJK RSHUDWLQJ

RETAINER

7KH UHWDLQHU XVHG LQ WKLV W\SH RI EHDULQJ HYHQO\ VSDFHV
DQG DOORZV WKHP WR URWDWH SURSHUO\ ZLWKLQ WKH DVVHPE
FULPSHG VWHHO SUHVVHG ULYHWHG VWHHO PROGHG Q\ORQ R
UHTXLUHPHQWV WKH DSSURSULDWH UHWDLQHU PDWHULDO FDQ

CLOSURES

,Q DQ HIIRUW WR HOLPLQDWH FRQWDPLQDQWV IURP HQWHULQJ
HQFORVHG ZLWK HLWKHU PHWDO VKLHOGV RU VWHHO UHLQIRUF
DYDLODEOH DQG YDULRXV VHDO PDWHULDOV FDQ EH XVHG GHSH
WKH VHDO DQG VKLHOG QRPHQFODWXUH IRU WKH PRVW FRPPRQ

LUBRICATION

/XEULFDWLRQ LV XVHG LQ EHDULQJV WR HOLPLQDWH PHWDO WR
EHDULQJ FRPSRQHQWV %HDULQJV DUH ILOOHG ZLWK HLWKHU D
FORVXUHV 7DEOH OLVWV FRPPRQO\ XVHG JUHDVHV

5DGLDO LQWHUQDO FOHDUDQFH LV GHILQHG DV WKH LQWHUQDO
GHHS JURRYH EDOO EHDULQJV ,W LV GHWHUPLQHG E\ GHVLJQ
VLWXDWLRQV SUHVHQW WKH DPRXQW RI SUHVV ILW WKH EHDU

7KH YDULRXV WROHUDQFHV DQG IRUPXODH XVHG E\ WKH EHDUL
$PHULFDQ %HDULQJ 0DQXIDFWXUHUV $VVRFLDWLRQ $%0$ DQG
,62 KDYH EHFRPH QHDUO\ VWDQGDUG SUDFWLFH LQ EHDULQJ SU
LQVWDQFHV EHDULQJ ERXQGDU\ GLPHQVLRQV DQG WROHUDQFH

3UHFLVLRQ DQWL IULFWLRQ EHDULQJV DUH PRVW FRPPRQO\ PDG
7KLV UHIHUHQFH LV WR D FDUERQ DOOR\ VWHHO FRQWDLQLQJ D
OHVVHU DPRXQWV RI PDQJDQHVH VLOLFRQ DQG LQ VRPH LQVWD
VWHHO PDQXIDFWXULQJ FRPELQHG ZLWK XS WR GDWH KHDW WU
QRQ PHWDOOLF LQFOXVLRQV 0DWHULDOV DUH FRQVWDQWO\ EH
DFFRUGDQFH WR WKH -HUQNRQWRUHW FKDUW 4XHQFKLQJ WHP
PDUWHQVLWLF VWUXFWXUH ZLWK WKH PLQLPXP DPRXQW RI UHW
DYDLODEOH IRU PDQ\ VL]HV &RQWDFW \RXU 3((5 6DOHV (QJLQH

7KH OLIH RI D EHDULQJ LV GHWHUPLQHG E\ WKH QXPEHU RI EHD
FRQVWDQW VSHHG FRXQWHG XQWLO WKHUH LV HYLGHQFH RI ID
HOHPHQWV +RZHYHU LQGLYLGXDO EHDULQJV ZKLFK VHHP LGH
FRQGLWLRQV PD\ QRW ODVW WKH VDPH OHQJWK RI WLPH ,Q WH
UHYROXWLRQV RU KRXUV DW D JLYHQ FRQVWDQW VSHHG WKDW
EHIRUH WKH ILUVW HYLGHQFH RI IDWLJXH

&RQVXOW 3((5 VDOHV HQJLQHHULQJ WR GHWHUPLQH WKH H[DFW WRUTXH D
VSHFLILF DSSOLFDWLRQ

Material	PEER Symbol	Type of Lip	PEER Symbol	Torque	PEER Symbol	Type of Landing Groove	PEER Symbol
%81$ QLWULOH	5	6LQJOH	6	1RQH	$	1RWFK	'
+<&$5 SRO\DFU\OLF	+5	'RXEOH	/	/RZ	%	8*	1RQH
9,721 IOXRUHODVWRPHU	79	1 SOH	7	6WDQGDUG	1RQH	: /	:
0(7$/ 3527(&7(' 6($/	567			+LJK	&	6WHS 8*	3
0(7$/ 6+,(/'	=						

7R HQVXUH GLPHQVLRQDO
IRUPV DOO 3((5 EHDULQ
DFFRUGLQJ WR WKH $%0$ HV
DUH FXUUHQWO\ OLVWHG DV
EHDULQJV $OO VWDQGDUG
DUH PDQXIDFWXUHG WR$%
WROHUDQFHV 7KH KLJKHU
WKH SUHFLVLRQ FODVV

$%(& DQG VSHFLI\ LQQH
•GPS 9GS 9GPS .LD •%V
WROHUDQFHV RI •'PS 9'S 9
6HH 7DEOHV WKURXJK

$%(& VSHFLILHV WROHU
FKDUDFWHULVWLFV DV FODV
RI 6G DQG 6LD IRU WKH LQQ
WKH RXWHU ULQJ

6HH ³7ROHUDQFH 'HILQLWLR
WKHVH V\PEROV

TOLERANCE DEFINITIONS

$%0$ 6WG

Bore Diameter

G 1RPLQDO ERUH GLDPHW

Bore Diameter

TABLE 2
PRECISION CLASS ABEC-1 Ñ Metric

Inner Ring — Unit um (.001 mm)

d mm		D_{dmp}		V_{dp} diameter series			V_{dmp}	K_{ia}	D_{Bs}		V_{Bs}
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max

Outer Ring — Unit um (.001 mm)

D mm		D_{Dmp}		V_{Dp} Open Bearings diameter series			Capped Bearings	V_{Dmp}	K_{ea}	D_{Cs}		V_{Cs}
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	2,3,4 max	max	max	high	low	max

, G H Q W D F D O F X O D W R
9 % v R I L Q Q H U U L Q J R I
W K H V D P H E H D U L Q J

TABLE 3

PRECISION CLASS ABEC-1 Ñ Inch

Inner Ring

Unit .0001"

d mm		D_{dmp}		V_{dp} diameter series			V_{dmp}	K_{ia}	D_{Bs}		V_{Bs}
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max

Å

TABLE 4

PRECISION CLASS ABEC-3 Ñ Metric

Inner Ring — unit um (.001 mm)

d mm		D_{dmp}		V_{dp} diameter series			V_{dmp}	K_{ia}	D_{Bs}		V_{Bs}
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max

Outer Ring — unit um (.001 mm)

D mm		D_{Dmp}		V_{Dp} Open Bearings diameter series			Capped Bearings	V_{Dmp}	K_{ea}	D_{Cs}		V_{Cs}
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
							±					
							± ± ±					

, G H Q W D F D Q G W R 9

TABLE 5

PRECISION CLASS ABEC-3 Ñ Inch

Inner Ring — Unit .0001"

d mm		D_{dmp}		V_{dp} diameter series			V_{dmp}	K_{ia}	D_{Bs}		V_{Bs}
over	incl.	high	low	7,8,9 max	0,1 max	2,3,4 max	max	max	high	low	max

Outer Ring — Unit .0001"

D mm		D_{Dmp}		V_{Dp} Open Bearings diameter series			Capped Bearings	V_{Dmp}	K_{ea}	D_{Cs}		V_{Cs}
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

, G H Q W D F D Q W R
9 V R I L Q Q H U U L Q J R I
W K H V D P H E H D U L Q J

TABLE 6

PRECISION CLASS ABEC-5 Ñ Metric

Inner Ring

Unit um (.001 mm)

d mm		D_{dmp}		V_{dp} diameter series		V_{dmp}	K_{ia}	S_d	S_{ia}	D_{Bs}		V_{Bs}
over	incl.	high	low	7,8,9 max	0,1,2,3,4 max	max	max	max	max	high	low	max

Outer Ring

Unit um (.001 mm)

D mm		D_{Dmp}		V_{Dp} diameter series		V_{Dmp}	K_{ea}	S_D	S_{ea}	D_{Cs}		V_{Cs}
over	incl.	high	low	7,8,9 max	0,1,2,3,4 max	max	max	max	max	high	low	max

, G H Q W D F D O W R
R I L Q Q H U U L Q J R I
W K H V D P H E H D U L Q J

,QWHUQDO FOHDUDQFH EHWZHHQ EDOOV DQG UDFHZD\V LQ EDOO EHDULQJV
SHUPLWV LQWHUIHUHQFH ILWV RQ WKH EHDULQJ ULQJV ZLWKRXW FDXVLQJ
UDGLDO SUHORDG DOORZV XQHTXDO WKHUPDO H[SDQVLRQ RI LQQHU DQG
RXWHU ULQJV WR RFFXU ZLWKRXW XQGXO\ DIIHFWLQJ EHDULQJ RSHUDWLRQ
DQG DFFRPPRGDWHV VOLJKW PLVDOLJQPHQW RI WKH EHDULQJ PRXQWLQJ

d mm		C2		C0 (Normal)		C3		C4	
over	incl.	min.	max.	min.	max.	min.	max.	min.	max
				]					

TABLE 10
SELECTION OF SHAFT FIT

0HWULF

Part I ÐDESIGN & OPERATING CONDITIONS			BALL BEARINGS		
Rotational Conditions	Inner Ring Axial Displaceability	Radial Loading	Bore d mm Over	Bore d mm Inc.	Shaft Fit
,QQHU 5LQJ 5RWDWLQJ UHODWLYH WR ORDG GLUHFWLRQ RU ,QGHWHUPLQDWH /RDG 'LUHFWLRQ		/LJKW		$OO	K M
		1RUPDO		$OO	M N
		+HDY\		$OO	N P
,QQHU 5LQJ 6WDWLRQDU\ RU UHODWLYH WR ORDG GLUHFWLRQ	,QQHU 5LQJ PXVW EH DEOH WR PRYH D[LDOO\ GXULQJ RSHUDWLRQ	/LJKW 1RUPDO +HDY\	$OO 6L]HV		J
	,QQHU 5LQJ QHHG QRW EH DEOH WR PRYH D[LDOO\ GXULQJ RSHUDWLRQ	/LJKW 1RUPDO +HDY\	$OO 6L]HV		K
3XUH 7KUXVW $[LDO /RDG			$OO 6L]HV		M

TABLE 11

,QFK

Part II ÐDESIGN & OPERATING CONDITIONS			BALL BEARINGS		
Rotational Conditions	Inner Ring Axial Displaceability	Radial Loading	Bore d inches Over	Bore d inches Inc.	Shaft Fit
,QQHU 5LQJ 5RWDWLQJ UHODWLYH WR ORDG GLUHFWLRQ RU ,QGHWHUPLQDWH /RDG 'LUHFWLRQ		/LJKW		$OO	K M
		1RUPDO		$OO	M N
		+HDY\		$OO	N P
,QQHU 5LQJ 6WDWLRQDU\ RU UHODWLYH WR ORDG GLUHFWLRQ	,QQHU 5LQJ PXVW EH DEOH WR PRYH D[LDOO\ GXULQJ RSHUDWLRQ	/LJKW 1RUPDO +HDY\	$OO 6L]HV		J
	,QQHU 5LQJ QHHG QRW EH DEOH WR PRYH D[LDOO\ GXULQJ RSHUDWLRQ	/LJKW 1RUPDO +HDY\	$OO 6L]HV		K
3XUH 7KUXVW $[LDO /RDG			$OO 6L]HV		M

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

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		0	+9	4T												
	6	-8	+4	17T												
6		0	+12	6T												
	10	-8	+6	20T												
10		0	+15	7T												
	18	-8	+7	23T												
18		0	+17	8T												
	30	-10	+8	27T												
30		0	+20	9T	+25	9T										
	50	-12	+9	32T	+9	37T										
50		0	+24	11T	+30	11T	+39	20T								
	80	-15`	+11	39T	+11	45T	+20	54T								
80		0	+28	13T	+35	13T	+45	23T	+59	37T						
	120	-20	+13	48T	+13	55T	+23	65T	+37	79T						
120		0	+33	15T	+40	15T	+52	27T	+68	43T	+90	65T				
	180	-25	+15	58T	+15	65T	+27	77T	+43	93T	+65	115T				
180		0	+37	17T	+46	17T	+60	31T	+79	50T	+106	77T				
	200	-30	+17	67T	+17	76T	+31	90T	+50	109T	+77	136T				
200		0	+37	17T	+46	17T	+60	31T	+79	50T	+109	80T	+126	80T		
	225	-30	+17	67T	+17	76T	+31	90T	+50	109T	+80	139T	+80	156T		
225		0	+37	17T	+46	17T	+60	31T	+79	50T	+113	84T	+130	84T		
	250	-30	+17	67T	+17	76T	+31	90T	+50	109T	+84	143T	+84	160T		
250		0	+43	20T	+52	20T	+66	34T	+88	56T	+126	94T	+146	94T		
	280	-35	+20	78T	+20	87T	+34	101T	+56	123T	+94	161T	+94	181T		
280		0	+43	20T	+52	20T	+66	34T	+88	56T	+130	+130	280	280		

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-gs 0 0 m 445.821 0 l S Q BT /T1_3 1 Tf

TABLE 13 Ñ SHAFT FITS (INCH)

'LPHQVLRQV LQ LQFKHV
' HYLDWLRQV DQG)LWV LQ LQ

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		

/ ORRVH 7 WLJKW

TOLERANCE CLASSIFICATIONS

d			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														

TABLE 14 Ñ SELECTION OF HOUSING FIT

DESIGN & OPERATING CONDITIONS				
Rotational Conditions	Loading	Other Conditions	Outer Ring Axial Displaceability	HOUSING FIT
2XWHU 5LQJ 6WDWLRQDU\ UHODWLYH WR 1RUPDO ORDG GLUHFWLRQ	/LJKW RU +HDY\	+HDW LQSXW WKURXJK VKDIW	2XWHU ULQJ	*
		+RXVLQJ VSOLW D[LDOO\	HDVLO\ D[LDOO\ GLVSODFHDEOH	+
		+RXVLQJ QRW VSOLW D[LDOO\		+
	6KRFN ZLWK WHPSRUDU\ FRPSOHWH XQORDGLQJ		7UDQVLWLRQDO 5DQJH	-
,QGHWHUPLQDWH /RDG 'LUHFWLRQ	/LJKW RU +HDY\	6SOLW +RXVLQJ QRW UHFRPPHQGHG		.
	+HDY\ VKRFN			0
2XWHU 5LQJ 5RWDWLQJ UHODWLYH WR ORDG GLUHFWLRQ	/LJKW RU +HDY\			1
	+HDY\	7KLQ ZDOO KRXVLQJ QRW VSOLW	2XWHU ULQJ QRW HDVLO\ D[LDOO\ GLVSODFHDEOH	3

Deviation

PART 2 Ð TOLERANCE CLASSIFICATIONS

D			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	Resultant
0.3937		0	+6	16L	+2	12L	0	14L	0	10L	0	7L	-2	5L	-3	7L	-4	4L	
	0.7087	-3	+13	6L	+9	2L	+11	0	+7	0	+4	0	+2	2T	+4	3T	+1	4T	
0.7087		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	
	1.1811	-3.5	+16	8L	+11	3L	+13	0	+8	0	+5	0	+3	2T	+5	4T	+1	4T	
1.1811		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	
	1.9685	-4.5	+20	10L	+13	4L	+15	0	+10	0	+6	0	+4	2T	+6	4T	+1	5T	
1.9685		0	+12	29L	+4	21L	0	23L	0	17L	0	12L	-2	10L	-5	12L	-6	7L	
	3.1496	-5	+24	12L	+16	4L	+18	0	+12	0	+7	0	+5	2T	+7	5T	+2	6T	
3.1496		0	+14	34L	+5	25L	0	27L	0	20L	0	15L	-2	12L	-5	15L	-7	8L	
	4.7244	-6	+28	14L	+19	5L	+21	0	+14	0	+9	0	+6	2T	+9	5T	+2	7T	
4.7244		0	+17	40L	+6	28L	0	32L	0	23L	0	17L	-3	14L	-6	23L		27L	23L 27L23L

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&KRRVH D 3((5 EHDULQJ WR EH XVHG IRU DQ DSSOLFDWLRQ RQ WKH ED
ORDGV WR EH FDUULHG LWV RSHUDWLRQ VSHHG DQG WKH UHTXLUHPH

Example 1: Determining L_{10h} Life:

$ EHDULQJ LV RSHUDWLQJ DW 530 ZLWK D UDGLDO ORDG)U RI C)URP SDJH ZH NQRZ WKDW D EHDULQJ KDV D G\QDPLF ORDG UDWLQJ 7KHUHIRUH

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

Example 2: Selecting a bearing

$ EHDULQJ LV UHTXLUHG WR UXQ DW D VSHHG RI 1 530 XQGHU D FRQ DFKLHYH D EDVLF UDWLQJ OLIH RI /10h RXUV :KDW &U LV UHTXLUHG"

$$Cr = P\sqrt[3]{\frac{L_{10} \times n}{16{,}667}} = 674\sqrt[3]{\frac{15000 \times 2{,}000}{16{,}667}} = 8{,}200 \text{ Lbf.}$$

Example 3: Finding Maximum Load:

$ EHDULQJ PXVW DFKLHYH D /10h RI RXUV ZKLOH RSHUDWLQJ DW 530 :KDW ORDG 3 WKLV EHDULQJ FDQ EH VXEMHFWHG WR"

2.2) The Life Calculation under combined Axial and Radial Load

,Q FDVHV RI FRPELQHG UDGLDO DQG D[LDO ORDGLQJ LW LV QHFHVVDU\ W ORDG 3 7KLV LV GHILQHG DV D K\SRWKHWLFDO ORDG FRQVWDQW LQ PDJ EHDULQJ ZKLFK ZRXOG KDYH WKH VDPH LQIOXHQFH RQ WKH EHDULQJ OLIH VXEMHFWHG $VVXPLQJ FRQVWDQW ORDG LW LV 3 [)U <)D ZKHUH)U DQG UHVSHFWLYHO\ WKH UDGLDO DQG D[LDO ORDGV [DQG \ YDU\ GHSHQGLQJ RQ WKH

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

F_a	F_a	F_a

(TXLYDOHQW '\QDPLF 5DGLDQ) /RDG 3 ;)
3R)U)D ZKHQ)D)U !

: K H U H 3F R Q V W D Q W PDLQDXGW HRVU W

3 F R Q V W D Q W PDLQDXGW HRVU W

3_Q F R Q V W D Q WQ PDLQDXGW HRVU W

2.4 Static Load Rating

, Q FDVHV ZKHQ WKH EHDULQJV DUH WR URWDWH DW UHODWLYHO\ VORZ VSH
H[SRVHG WR VKRFN WKH EDVLF VWDWLF ORDG UDWLQJ &RU PXVW EH WDN

3. Adjusted Rating Life Calculations

%HDULQJ IDWLJXH OLIH FDQ EH DGMXVWHG XVLQJ GIRUSHUHDWLQJ FRQGLWLRQV WKU

/KQD [DD [D

2LO LV WKH EDVLF OXEULFDQW IRU EDOO EHDULQJV 3UHYLRXVO\ PRV
7RGD\ KRZHYHU V\QWKHWLF RLOV VXFK DV GLHVWHUV VLOLFRQH DQ
EHFDXVH RI LPSURYHPHQWV LQ SURSHUWLHV &RPSDUHG WR SHWURO
ORZ WHPSHUDWXUH SURSHUWLHV ORZHU YRODWLOLW\ DQG EHWWHU
IOXRURFDUERQ FRPSRXQGV SRVVHVV DQ HYHQ ORZHU YRODWLOLW\ DQ
9LUWXDOO\ DOO RLOV FRQWDLQ DGGLWLYHV WKDW OLPLW FKHPLFDO F
SK\VLFDO SURSHUWLHV DQWLIRDP HWF

Grease

*UHDVH LV DQ RLO WR ZKLFK D WKLFNHQHU KDV EHHQ DGGHG WR SUH
LQYLWXDWLRQV ZKHUH IUHTXHQW UHSOHQLVKPHQW RI WKH OXEULFDQW
PHQWLRQHG LQ WKH QH[W VHFWLRQ FDQ EH XVHG DV JUHDVH EDVHV W
DQG WKLFNHQHUV 7KH RSHUDWLYH SURSHUWLHV RI JUHDVH GHSHQG
HTXDO WKH XVH RI JUHDVH UDWKHU WKDQ RLO Y€À
HTXDO WKH E WKH 0

6LOLFRQH SURGXFWV DUH XVHIXO RYHU D ZLGH WHPSHUDWXUH UDQJH
SHWURROHXP W\SHV DQG RWKHU V\QWKHWLFV ,W KDV EHFRPH FXVWRPDU\
LQ UHFHQW \HDUV WR GHUDWH WKH G\QDPLF ORDG UDWLQJ &U RI D EHDU
VLOLFRQH SURGXFW LV XVHG 6RPH VLOLFRQH 7KH UHDVRQ IRU WKLV YDULDQFH YHU\ HDVLO\ EH ZHOO XQGHUVWRRG
YDFXXP DSSOLFDWLRQV DERYH WKLV SUHVVXUH

2LOV DQG JUHDVHV RI WKLV W\SH KDYH IRXQG ZLGH XVH ZKHUH KLJK WHPS
YDSRU SUHVVXUH DUH UHTXLUHG 7KLV VSHFLDOW\ OXEULFDQW GRHV QR
RU GLHVWHU SURGXFW +RZHYHU LW GRHV KDYH EHWWHU ILOP VWUHQJWK

*UHDVH packing WR DSSUR[LPDWHO\ RI D EDOO EHDULQJ¶V IUHH YROXPH LV 3((
OXEULFDWLRQ ,Q VRPH LQVWDQFHV FXVWRPHUV KDYH UHTXHVWHG WKDW
,W FDXVHV VKHDULQJ KHDW EXLOGXS DQG GHWHULRUDWLRQ WKURXJK FRQ
EHDULQJ IDLOXUH

:KHQ SHWURROHXP RU V\QWKHWLF HVWHU RLOV DUH XVHG WKH OLPLWLQJ V
GHVLJQ RU WKH FHQWULIXJDO EDOO ORDGV UDWKHU WKDQ E\ WKH OXEULF

/XEULFDQWV FDQ EH GHVLJQDWHG E\ WKH FXVWRPHU WR PHHW D SDUWLFX
ZLGHO\ XVHG JUHDVHV DQG VRPH RI WKHLU PRVW LPSRUWDQW FKDUDFWHU
DSSOLFDEOH WR EOO EHDULQJV DUH UHDGLO\ DYDLODEOH DW 3((5

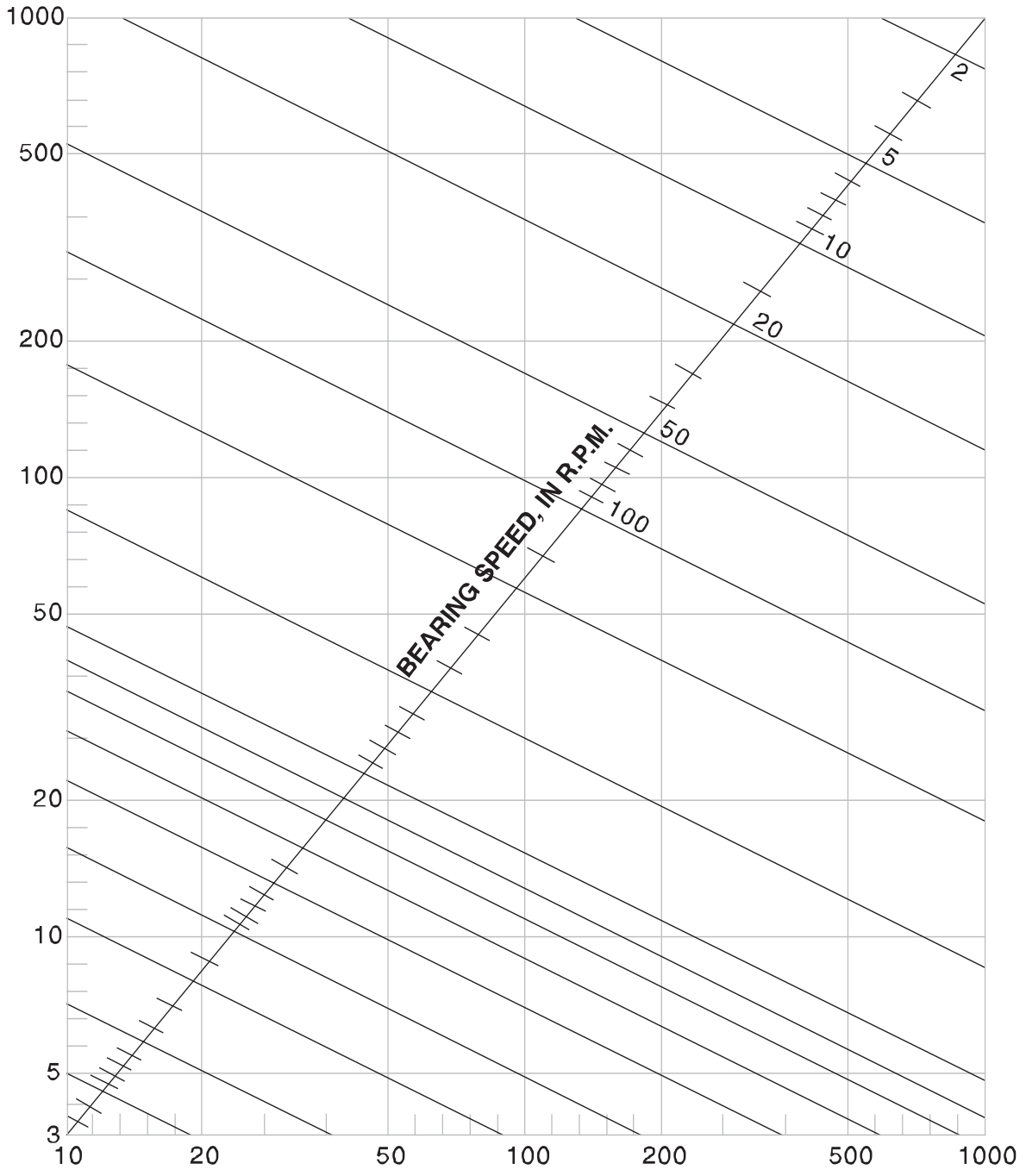

1000
500
200
100
50
20
10
5
3
10
20
50
100
200
500
1000
BEARING SPEED, IN R.P.M.
2
5
10
20
50
100

Table 20

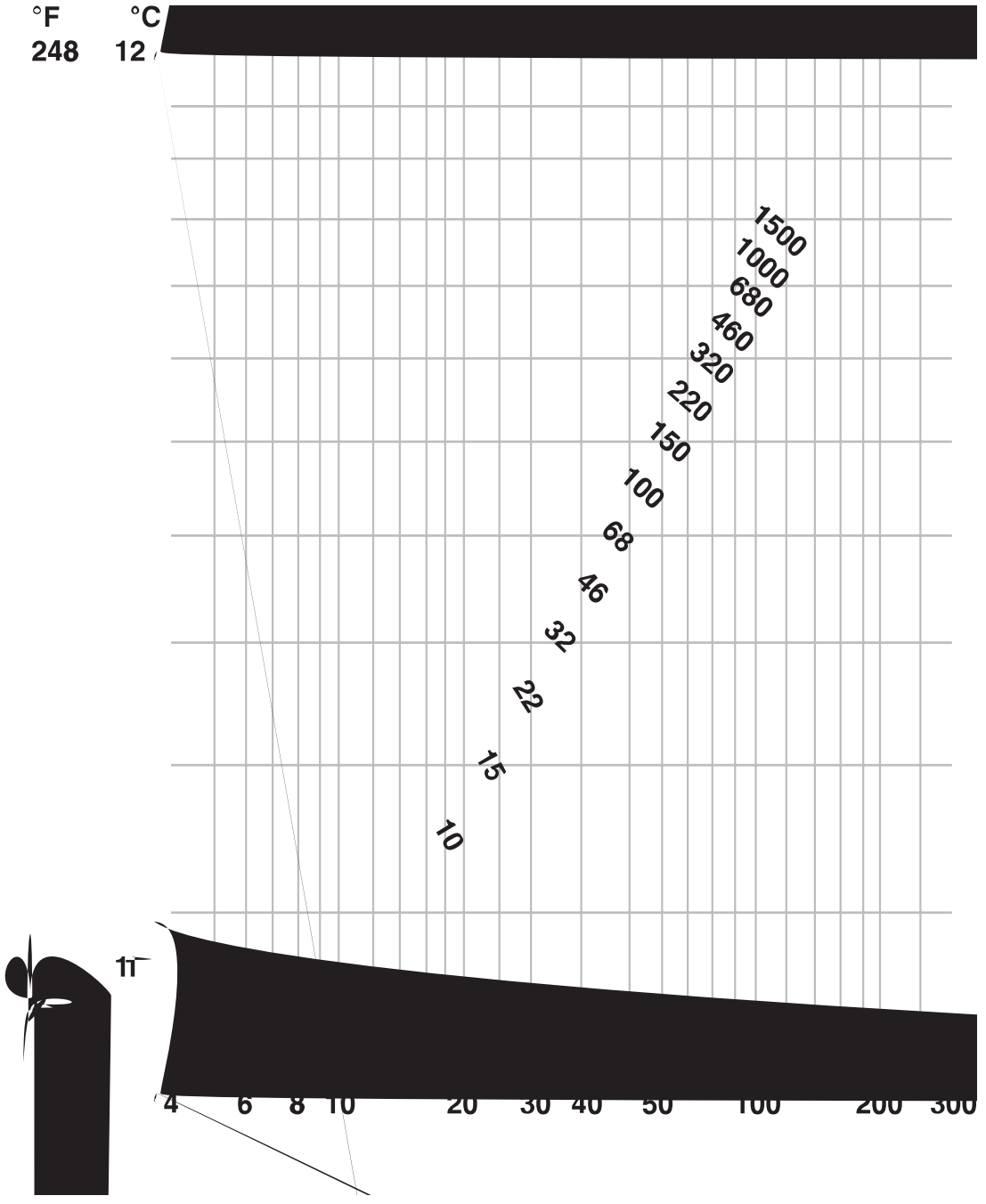

°F
°C
248
12
1500
1000
680
460
320
220
150
100
68
46
32
22
15
10
11
4
6
8
10
20
30
40
50
100
200
300

Table 21

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	Cr•me/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

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

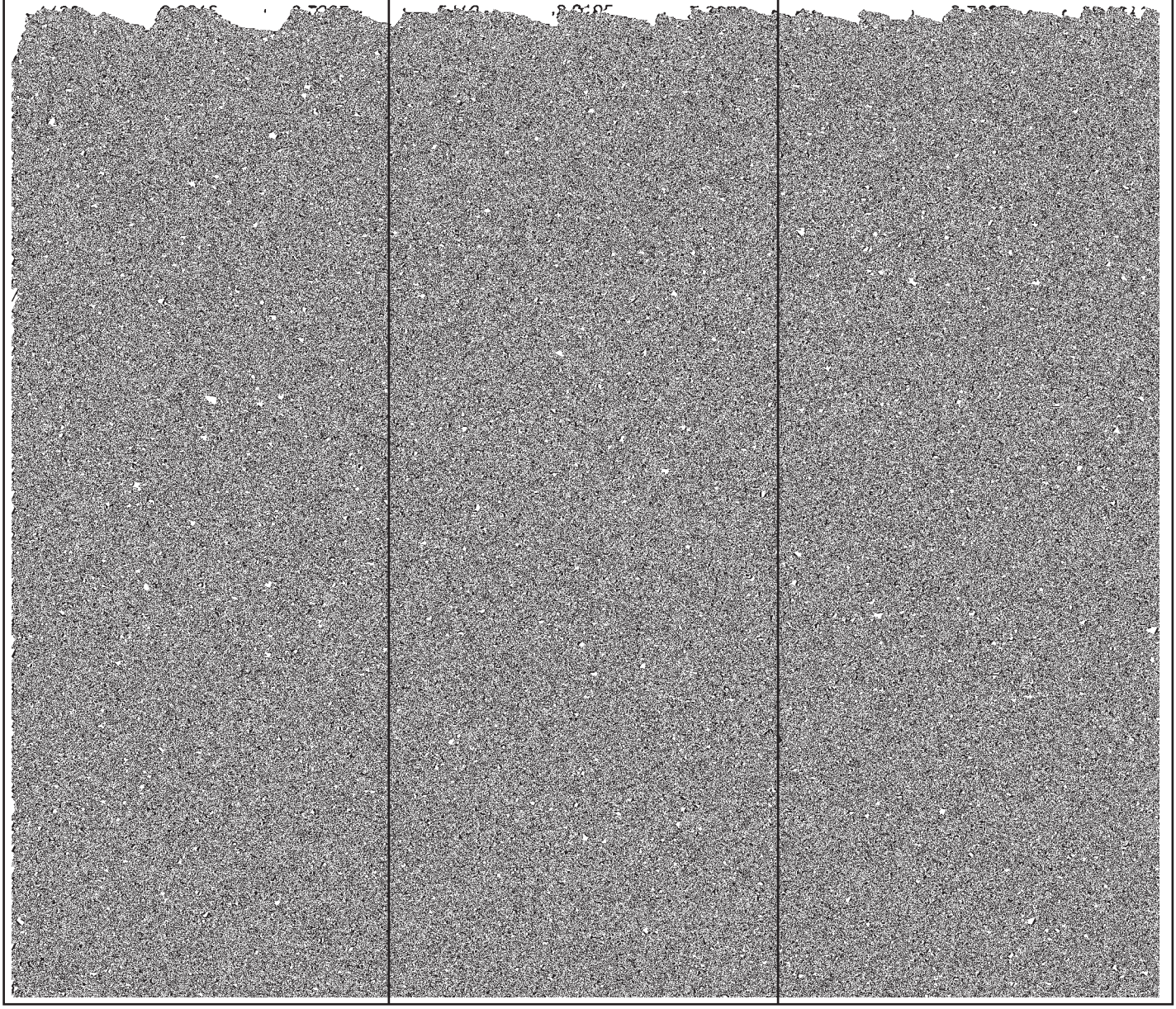
Manufacturer	Nye	Shell	Shell	Shell	Shell	Shell
Product Name	Nyogel 753SC	Aeroshell 5	Aeroshell 7	Aeroshell 17	Alvania RL2	Alvania RL3
Color	Black	Amber	Amber	Light Brown	Amber	Amber
Thickener Type	Carbon Black	Microgel	Microgel	Microgel	Lithium	Lithium
Oil type	Synthetic Ester	Mineral	Synthetic Diester	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.

Inches		0	1	2	3	4	5	6	7	8	9	10	11	12		
Fraction	Decimal		25.400	50.800	76.200	101.600	127.000	152.400	177.800	203.200	228.600	254.000	279.400	304.80		
1/64	0.015625	0.397	25.797	51.197	76.597	101.997	127.397	152.797	178.197	203.597	228.997	254.397	279.797	30		
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	30		
3/64	0.046875	1.191	26.591	51.991	77.391	102.791	128.191	153.591	178.991	204.391	229.791	255.191	280.591	30		
1/16	0.062500	1.588	26.988	52.388	77.788	103.188	128.588	153.988	179.388	204.788	230.188	255.588	280.988	30		
5/64	0.078125	1.984	27.384	52.784	78.184	103.584	128.984	154.384	179.784	205.184	230.584	255.984	281.384	30		
3/32	0.093750	2.381	27.781	53.181	78.581	103.981	129.381	154.781	180.181	205.581	230.981	256.381	281.781	30		
7/64	0.109375	2.778	28.178	53.578	78.978	104.378	129.778	155.178	180.578	205.978	231.378	256.778	282.178	30		
1/8	0.125000	3.175	28.575	53.975	79.375	104.775	130.175	155.575	180.975	206.375	231.775	257.175	282.575	30		
9/64	0.140625	3.572	28.972	54.372	79.772	105.172	130.572	155.972	181.372	206.772	232.172	257.572	282.972	30		
5/32	0.156250	3.969	29.369	54.769	80.169	105.569	130.969	156.369	181.769	207.169	232.569	257.969	283.369	30		
11/64	0.171875	4.366	29.766	55.166	80.566	105.966	131.366	156.766	182.166	207.566	232.966	258.366	283.766	30		
3/16	0.187500	4.762	30.162	55.562	80.963	106.362	131.762	157.162	182.562	207.962	233.362	258.763	284.163	30		
13/64	0.203125	5.159	30.559	55.959	81.359	106.759	132.159	157.559	182.959	208.359	233.759	259.159	284.559	30		
7/32	0.218750	5.556	30.956	56.356	81.756	107.156	132.556	157.956	183.356	208.756	234.156	259.556	284.956	31		
15/64	0.234375	5.953	31.353	56.753	82.153	107.553	132.953	158.353	183.753	209.153	234.553	259.953	285.353	31		
1/4	0.250000	6.350	31.750	57.150	82.550	107.950	133.350	158.750	184.150	209.550	234.950	260.350	285.750	31		
17/64	0.265625	6.747	32.147	57.547	82.947	108.347	133.747	159.147	187.547	209.947	235.347	260.747	286.147	31		
9/32	0.281250	7.144	32.544	57.944	83.344	108.744	134.144	159.544	184.944	210.344	235.744	261.144	286.544	31		
19/64	0.296875	7.541	32.941	58.341	83.741	109.141	134.541	159.941	185.341	210.741	236.141	261.541	286.941	31		
5/16	0.312500	7.938	33.338	58.738	84.138	109.538	134.938	160.338	185.738	211.138	236.538	261.938	287.338	31		
21/64	0.328125	8.334	33.734	59.134	84.534	109.934	135.334	160.734	186.134	211.534	236.934	262.334	287.734	31		
11/32	0.343750	8.731	34.131	59.531	84.931	110.331	135.731	161.131	186.531	211.931	237.331	262.731	288.131	31		
23/64	0.359375	9.128	34.528	59.928	85.328	110.728	136.128	161.528	186.928	212.328	237.728	263.128	288.528	31		
3/8	0.375000	9.525	34.925	60.325	85.725	111.125	136.525	161.925	187.325	212.725	238.125	263.525	288.925	314.3		
25/64	0.390625	9.922	35.332	60.722	86.122	111.522	136.922	162.322	187.722	213.122	238.522	263.922	289.322	31		
13/32	0.406250	10.319	35.719	61.119	86.519	111.919	137.319	162.719	188.119	213.519	238.919	264.319	289.719	31		
27/64	0.421875	10.716	36.116	61.516	86.916	112.316	137.716	163.116	188.516	213.916	239.316	264.716	290.116	31		
7/16	0.437500	11.112	36.513	61.912	87.312	112.712	138.112	163.512	188.913	214.312	239.713	265.113	290.513	31		
29/64	0.453125	11.509	36.909	62.309	87.709	113.109	138.509	163.909	189.309	214.709	240.109	265.509	290.909	31		
15/32	0.468750	11.906	37.306	62.706	88.106	113.506	138.906	164.306	189.706	215.106	240.506	265.906	291.306	31		

/8 6 80.906 .437506 160.7066 80.906 .437506 9437506 160.706

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



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

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