SELECTION

DODGE®

Setscrew Ball Bearings

Recommended Torque													
◆ Setscrews					D-LOK			Mounting Bolts					
		Recommended Torque						Metal Housings		EZ-KLEEN Housed Bearings			
Setscrew Size	Key Hex Across Flats	Standard Ball Bearing Insert		Corrosion Resistant Stainless Steel	Cap Screw Size	Recom. Torque	EZ-KLEEN Recom. Torque	Bolt Size	Recom. Dry Torque (Grade 2)	2-Bolt PB, 2 & 4 Bolt Fig. and Flg. Brackets		Tapped Base PB	
		Min	Max							Bolt Size	Torque ①	Bolt Size	Torque ②
(in.)	(in.)	(in-lbs.)	(in.-lbs.)	(in.-lbs.)	(in.)	(in.0lbs.)	(in.-lbs.)	(in.)	(in.0lbs.)	(in.)	(in.-lbs.)	(in.)	(in.lbs.)
#10	3/32	28	33	25	#8-32	58	46	3/8-16	240	3/8-16	225	3/8-16	175
1/4	1/8	66	80	60	#10-32	90	72	7/16-14	384	7/16-14	350	7/16-14	350
5/16	5/32	126	156	117	1/4-28	180	144	1/2-13	600	1/2-13	500	1/2-13	400
3/8	3/16	228	275	206	5/16-24	400	320	5/8-11	1200	9/16-12	650		
7/16	7/32	342	428	321	3/8-24	750	600	3/4-10	1950	5/8-11	1000		
								7/8-9	2890				
(mm)	(mm)	(N-m)	(N-m)	(N-m)	(mm)	(N-m)	(N-m)	(mm)	(N-m)	(mm)	(N-m)	①Torque for Austenitic (18-8) Stainless ②Max. torque values published. Do not exceed	
M5	2.5	3.2	3.7	2.8	M4	585	4.68	M10	29	M8	15		
M6	3	6.2	7.7	5.8	M5	10.75	8.6	M12	50	M10	25		
M8	4	14.2	17.8	13.4	M6	20.5	16.4	M16	124	M12	50		
M10	5	26	31	23	M8	45	36	M20	238	M14	75		
M12	6	46	57	43				M22	322	M18	125		

Lubrication

High Speed Operation - In the higher speed ranges, too much grease will cause over-heating. The amount of grease that the bearing will take for a particular high speed application can only be determined by experience. If excess grease in the bearing causes overheating, it will be necessary to remove grease fitting to permit excess grease to escape. The bearing has been greased at the factory and is ready to run. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to a large amount at infrequent intervals.

◆ **Note:** Dodge does not recommend the use of oils or locking agents on setscrew threads. However, if utilized, the minimum installation torque values should be followed.

Lubrication Guide
Use a No. 2 Lithium complex base grease or equivalent*

Hours Run per Day	Suggested Lubrication Period in Weeks							
	1 to 250 RPM	251 to 500 RPM	501 to 750 RPM	751 to 1000 RPM	1001 to 1500 RPM	1501 to 2000 RPM	2001 to 2500 RPM	2501 to 3000 RPM
8	12	12	10	7	5	4	3	2
16	12	7	5	4	2	2	1	1
24	10	5	3	2	1	1	1	1

* For EZ-KLEEN series bearings, use an aluminum complex base grease.

Lubrication recommendations are intended for standard products applied in general operating conditions. For modified products, high temperature applications, and other anomalous applications contact product engineering at 864-284-5700.

Note: Bearing analysis program "BEST" is available on www.ptwizard.com

Setscrew Ball Bearings

DODGE mounted ball bearings are primarily designed for radial loading. However, they have the capacity to carry thrust loads and combined radial/thrust loads. The maximum recommended load which can be applied is limited by various components in the system, such as bearing, housing, shaft attachments, speed and life requirements. DODGE mounted ball bearings have been applied successfully when these limits have been exceeded under controlled operating conditions. Contact DODGE Engineering for applications which exceed these recommendations.

Select a bearing from the Selection Chart that has a radial load rating at the operating speed equal to or greater than the calculated Equivalent Radial load for a desired L_{10} life. This simple method is all that is required for the majority of general applications and provides for occasional average shock loads.

L_{10} Hours Life-is the life which may be expected for at least 90% of a given group of bearings operating under identical conditions.

For an L_{10} hours life other than those listed in the Selection Chart, multiply the equivalent Radial load by one of the following factors. For 50,000 L_{10} hours life, use a factor of 1.18 and for 80,000, use 1.39. Then select a bearing from the bold face (30,000) L_{10} ratings only in the Selection Chart that has a rating equal to or greater than this value.

Heavy Service-For heavy shock loads, frequent shock loads or severe vibrations, add up to 50% (according to severity of conditions) to the Equivalent Radial Load to obtain a Modified Equivalent Radial Load. Consult Application Engineering for additional selection assistance.

A thrust load value of C/10 is recommended as a guide for general applications and will give adequate L_{10} life. Where substantial radial load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices, such as sheer bars, are advisable for side or end-loading of pillow blocks and radial loads for flange units.

To determine the L_{10} hours life for loads and RPM's not listed use the following equation:

$$L_{10} = \left(\frac{C}{P}\right)^3 \times \frac{16{,}667}{N}$$

Where:

L_{10} = Life, hours

C = Dynamic Capacity, lbs. or N

P = Equivalent Radial Load, lbs. or N

N = Revolutions per minute

When the load on a ball bearing is solely a radial load with no thrust (axial) load, the Equivalent Radial Load (P) is equal to the actual radial load. However, when a thrust (axial) load is applied, the radial and thrust loads applied must be converted into an Equivalent Radial Load. The use of the X (radial factor) and Y (thrust factor) from Table 1 convert the actual applied thrust and radial loads to an Equivalent Radial Load which has the same effect on the life of a bearing as a radial load of this magnitude.

$P = (X \times F_R) + (Y \times F_A)$

Where:
P = Equivalent Radial Load, lbs.
F_R = Radial load, lbs.
F_A = Thrust load, lbs.
e = Thrust load to radial load factor (Table 1)
X = Radial load factor (Table 1)
Y = Thrust factor (Table 1)
C_O = Basic static capacity

To find X and Y, first calculate F_A/C_O to determine e. Calculate F_A/F_R and compare to e to determine the X and Y factors to use from Table 1.

Substitute all known values into the Equivalent Radial Load equation. The Equivalent Radial loads (P) thus determined can be used in the L_{10} life formula or compared to the allowable Equivalent Radial Load rating desired in the expanded rating chart to select a bearing (Table 2).

If calculated value of P is less than F_R, use $P=F_R$.

F_A / C_0	e	Radial/Thrust Factors			
		If F_A/F_R is equal to or less than e		If F_A/F_R is greater than e	
		$F_A/F_R <= e$		$F_A/F_R > e$	
		X	Y	X	Y
0.014	0.19	1	0	0.56	2.30
0.021	0.21	1	0	0.56	2.15
0.028	0.22	1	0	0.56	1.99
0.042	0.24	1	0	0.56	1.85
0.056	0.26	1	0	0.56	1.71
0.070	0.27	1	0	0.56	1.63
0.084	0.28	1	0	0.56	1.55
0.110	0.30	1	0	0.56	1.45
0.170	0.34	1	0	0.56	1.31
0.280	0.38	1	0	0.56	1.15
0.420	0.42	1	0	0.56	1.04
0.560	0.44	1	0	0.56	1.00

Lubrication-DODGE Ball Bearings are lubricated at the factory and are ready to run. The bearings are initially lubricated with lithium complex based grease and should be relubricated with the same or some equivalent. For high speeds, high loads, extreme temperatures and other abnormal operating conditions, special greases may be required. Contact DODGE Application Engineering for recommendations on these types of applications.

Misalignment-DODGE Ball Bearings are designed to allow a maximum of ±2° static misalignment. These bearings are not suitable for dynamic misalignment. To ensure good alignment, mounting surfaces must be checked for flatness and must lie in the same plane. When tightening base bolts, each bolt should be alternately tightened in incremental torque values until full torque is achieved to prevent the angular shifting of the pillow block that occurs when one bolt is tightened to its full torque. Shimming may be required to minimize misalignment.

Shaft Tolerances		
Normal Shaft Size Inches	Commercial Shaft Tolerances Inches	Recommended Shaft Tolerances Setscrew Ball Bearings Inches
Up to 1-1/2"	+0.000 -0.002	+0.0000 -0.0005
Over 1-1/2" to 2-1/2"	+0.000 -0.003	+0.0000 -0.0010
Over 2-1/2" to 4"	+0.000 -0.004	+0.0000 -0.0010

Note: Bearing analysis program "BEST" is available on www.ptwizard.com

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SELECTION

Setscrew Ball Bearing Inch

Table 2: Easy Selection Table For Ball Bearing Mounted Units

Ring Size	Shaft Size SC, VSC, SL, CC	Shaft Size SCM	Dynamic Capacity C, Lbs.	Static Capacity Co, Lbs.	L_{10} LIFE HOURS	Allowable Equivalent Radial Load Rating (Lbs.) At Various RPM* 50	150	250	500	750	1000	1500	1750	2000
203	1/2 5/8		2158	1079	20000	550	380	320	255	225	205	175	170	160
					30000	**480**	**335**	**280**	**225**	**195**	**175**	**155**	**145**	**140**
					40000	440	305	255	205	175	160	140	135	130
					60000	380	265	225	175	155	140	125	115	110
					100000	320	225	190	150	130	120	105	100	95
204	1/2 5/8 3/4 13/16		2899	1482	20000	740	515	435	345	300	275	240	225	215
					30000	**645**	**450**	**380**	**300**	**260**	**240**	**210**	**200**	**190**
					40000	590	410	345	275	240	215	190	180	170
					60000	515	355	300	240	210	190	165	155	150
					100000	435	300	255	200	175	160	140	130	125
205	7/8 15/16 1		3146	1769	20000	805	560	470	375	325	295	260	245	235
					30000	**705**	**485**	**410**	**325**	**285**	**260**	**225**	**215**	**205**
					40000	640	445	375	295	260	235	205	195	185
					60000	560	385	325	260	225	205	180	170	165
					100000	470	325	275	220	190	175	150	145	135
206	1-1/16 1-1/8 1-3/16 1-1/4	1	4368	2538	20000	1115	775	655	520	455	410	360	340	325
					30000	**975**	**675**	**570**	**455**	**395**	**360**	**315**	**300**	**285**
					40000	885	615	520	410	360	325	285	270	260
					60000	775	535	455	360	315	285	250	235	225
					100000	655	455	380	305	265	240	210	200	190
207	1-1/4 1-5/16 1-3/8 1-7/16	1-3/16 1-1/4	5759	3461	20000	1475	1020	860	685	595	545	475	450	430
					30000	**1285**	**890**	**755**	**595**	**520**	**475**	**415**	**395**	**375**
					40000	1170	810	685	545	475	430	375	355	340
					60000	1020	710	595	475	415	375	330	310	300
					100000	860	595	505	400	350	315	275	265	250
208	1-1/2 1-5/8	1-7/16 1 -1/2**	7332	4475	20000	1875	1300	1095	870	760	690	605	575	550
					30000	**1640**	**1135**	**960**	**760**	**665**	**605**	**525**	**500**	**480**
					40000	1490	1030	870	690	605	550	480	455	435
					60000	1300	900	760	605	525	480	420	400	380
					100000	1095	760	640	510	445	405	355	335	320
209	1-5/8 1-11/16 1-3/4	1-1/2	7891	4906	20000	2020	1400	1180	935	820	745	650	615	590
					30000	**1765**	**1225**	**1030**	**820**	**715**	**650**	**570**	**540**	**515**
					40000	1600	1110	935	745	650	590	515	490	470
					60000	1400	970	820	650	570	515	450	430	410
					100000	1180	820	690	550	480	435	380	360	345
210	1-15/16 2	1-11/16 1-3/4	7891	5213	20000	2020	1400	1180	935	820	745	650	615	590
					30000	**1765**	**1225**	**1030**	**820**	**715**	**650**	**570**	**540**	**515**
					40000	1600	1110	935	745	650	590	515	490	470
					60000	1400	970	820	650	570	515	450	430	410
					100000	1180	820	690	550	480	435	380	360	345
211	2 2-3/16 2-1/4	1-15/16 2	9755	6588	20000	2491	1727	1457	1156	1010	918	802	761	729
					30000	**2176**	**1509**	**1272**	**1010**	**882**	**802**	**700**	**665**	**636**
					40000	1977	1371	1156	918	802	728	636	604	578
					60000	1727	1197	1010	802	700	636	556	528	505
					100000	1457	1010	852	676	591	537	469	445	426
212	2-1/4 2-7/16	2-3/16 2-1/4	11791	8100	20000	3015	2090	1765	1400	1225	1110	970	925	880
					30000	**2635**	**1825**	**1540**	**1225**	**1070**	**970**	**880**	**805**	**770**
					40000	2395	1660	1400	1110	970	880	770	730	700
					60000	2090	1450	1225	970	850	770	675	640	610
					100000	1765	1225	1030	820	715	650	570	540	515
214	2 11/16	2-7/16 2-1/2	13995	9838	20000	3580	2480	2095	1660	1450	1320	1155	1095	1045
					30000	**3125**	**2170**	**1830**	**1450**	**1270**	**1155**	**1005**	**955**	**915**
					40000	2840	1970	1660	1320	1155	1045	915	870	830
					60000	2480	1720	1450	1155	1005	915	800	760	725
					100000	2095	1450	1225	970	850	770	675	640	615
215	2-15/16	2-11/16	14872	11108	20000	3805	2640	2225	1765	1545	1400	1225	1165	1115
					30000	**3325**	**2305**	**1945**	**1545**	**1350**	**1225**	**1070**	**1015**	**975**
					40000	3020	2095	1765	1400	1225	1115	975	925	885
					60000	2640	1830	1545	1225	1070	975	850	805	770
					100000	2225	1545	1300	1035	905	820	715	680	650
216		2-15/16 3	17407	13102	20000	4450	3085	2605	2065	1805	1640	1435	1360	1300
					30000	**3890**	**2695**	**2275**	**1805**	**1580**	**1435**	**1250**	**1190**	**1140**
					40000	3535	2450	2065	1640	1435	1300	1140	1080	1035
					60000	3085	2140	1805	1435	1250	1140	995	945	905
					100000	2605	1805	1525	1210	1055	960	840	795	760
218		3-7/16 3-1/2	21451	16641	20000	5485	3805	3210	2550	2225	2025	1765	1680	1605
					30000	**4795**	**3325**	**2805**	**2225**	**1945**	**1765**	**1545**	**1465**	**1405**
					40000	4355	3020	2550	2025	1765	1605	1405	1335	1276
					60000	3805	2640	2225	1765	1545	1405	1225	1165	1115
					100000	3210	2225	1880	1490	1300	1185	1035	980	940

* Slight interference fit required when operating on the right of the heavy line or in the shaded area ** Piloted flange only

Note: Bearing analysis program "BEST" is available on www.ptwizard.com

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Setscrew Ball Bearing Inch

Table 2 (continued): Easy Selection Table for Ball Bearing Mounted Units

Ring Size	Shaft Size SC, VSC, SL, CC	Shaft Size SCM	Dynamic Capacity C, Lbs.	Static Capacity Co, Lbs.	L_{10} life hours	Allowable Equivalent Radial Load Rating (Lbs.) At Various RPM* 2500	3000	3500	4000	4500	5000	5500	6500	7500
203	1/2 5/8		2158	1079	20000	150	140	135	130	125	120	115	110	105
					30000	**130**	**125**	**115**	**110**	**105**	**105**	**100**	**95**	**90**
					40000	120	110	105	100	95	95	90	85	80
					60000	105	95	95	90	85	80	80	75	70
					100000	85	80	80	75	70	70	65	65	60
204	1/2 5/8 3/4 13/16		2899	1482	20000	200	190	180	170	165	160	155	145	140
					30000	**175**	**165**	**155**	**150**	**145**	**140**	**135**	**130**	**120**
					40000	160	150	145	135	130	125	125	115	110
					60000	140	130	125	120	115	110	105	100	95
					100000	115	110	105	100	90	95	90	85	80
205	7/8 15/16 1		3146	1769	20000	220	205	195	185	180	175	170	160	150
					30000	**190**	**180**	**170**	**165**	**155**	**150**	**145**	**140**	**130**
					40000	175	165	155	150	140	135	135	125	120
					60000	150	140	135	130	125	120	115	110	105
					100000	125	120	115	110	105	100	100	95	90
206	1-1/16 1-1/8 1-3/16 1-1/4	1	4368	2538	20000	305	285	270	260	250	240	235	200	
					30000	**265**	**250**	**235**	**225**	**220**	**210**	**205**	**195**	
					40000	240	225	215	205	200	190	185	175	
					60000	210	200	190	180	175	165	160	155	
					100000	175	165	160	150	145	140	135	130	
207	1-1/4 1-5/16 1-3/8 1-7/16	1-3/16 1-1/4	5759	3461	20000	400	375	355	340	330	315	305		
					30000	**350**	**330**	**310**	**300**	**285**	**275**	**270**		
					40000	315	300	285	270	260	250	245		
					60000	275	260	250	235	230	220	125		
					100000	235	220	210	200	190	185	180		
208	1-1/2 1-5/8	1-7/16 1 -1/2**	7332	4475	20000	510	480	455	435	420	405			
					30000	**445**	**420**	**400**	**380**	**365**	**355**			
					40000	405	380	360	345	330	320			
					60000	355	330	315	300	290	280			
					100000	300	280	265	255	245	235			
209	1-5/8 1-11/16 1-3/4	1-1/2	7891	4906	20000	550	515	490	470	450	435			
					30000	**480**	**450**	**430**	**410**	**395**	**380**			
					40000	435	410	390	370	360	345			
					60000	380	360	340	325	310	300			
					100000	320	300	285	275	265	255			
210	1-15/16 2	1-11/16 1-3/4	7891	5213	20000	550	515	490	470	450				
					30000	**480**	**450**	**430**	**410**	**395**				
					40000	435	410	390	370	360				
					60000	380	360	340	325	310				
					100000	320	300	285	275	265				
211	2 2-3/16 2-1/4	1-15/16 2	9755	6588	20000	676	636	604	578					
					30000	**591**	**556**	**528**	**505**					
					40000	537	505	480	459					
					60000	469	441	419	401					
					100000	395	372	353	338					
212	2-1/4 2-7/16	2-3/16 2-1/4	11791	8100	20000	820	770	730						
					30000	**715**	**675**	**640**						
					40000	650	610	580						
					60000	570	535	510						
					100000	480	450	430						
214	2 11/16	2-7/16 2-1/2	13995	9838	20000	970	915							
					30000	**850**	**800**							
					40000	770	725							
					60000	675	635							
					100000	570	535							
215	2-15/16	2-11/16	14872	11108	20000	1035	975							
					30000	**905**	**850**							
					40000	820	770							
					60000	715	675							
					100000	605	570							
216		2-15/16 3	17407	13102	20000	1210								
					30000	**1055**								
					40000	960								
					60000	840								
					100000	705								
218		3-7/16 3-1/2	21451	16641	20000									
					30000									
					40000									
					60000									
					100000									

* Slight interference fit required when operating on the right of the heavy line or in the shaded area ** Piloted flange only

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SELECTION

Setscrew Ball Bearing Inch

Table 2 (continued): Easy Selection Table for Ball Bearing Mounted Units

Ring Size	Shaft Size SC, VSC, SL, CC	Shaft Size SCM	Dynamic Capacity C, N.	Static Capacity Co, N.	L_{10} life hours	Allowable Equivalent Radial Load Rating (N.) At Various RPM* 50	150	250	500	750	1000	1500	1750	2000
203	17mm		9600	4800	20000	2446	1690	1423	1134	1001	912	778	756	712
					30000	2135	1490	1245	1001	867	778	689	645	623
					40000	1957	1357	1134	912	778	712	623	600	578
					60000	1690	1179	1001	778	689	623	556	512	489
					100000	1423	1001	845	667	578	534	467	445	423
204	20mm		12895	6592	20000	3292	2291	1935	1535	1334	1223	1068	1001	956
					30000	2869	2002	1690	1334	1156	1068	934	890	845
					40000	2624	1824	1535	1223	1068	956	845	801	756
					60000	2291	1579	1334	1068	934	845	734	689	667
					100000	1935	1334	1134	890	778	712	623	578	556
205	25mm		13995	7869	20000	3581	2491	2091	1668	1446	1312	1156	1090	1045
					30000	3136	2157	1824	1446	1268	1156	1001	956	912
					40000	2847	1979	1668	1312	1156	1045	912	867	823
					60000	2491	1712	1446	1156	1001	912	801	756	734
					100000	2091	1446	1223	979	845	778	667	645	600
206	30mm	25mm	18993	11,290	20000	4960	3447	2913	2313	2024	1824	1601	1512	1446
					30000	4337	3002	2535	2024	1757	1601	1401	1334	1268
					40000	3936	2736	2313	1824	1601	1446	1268	1201	1156
					60000	3447	2380	2024	1601	1401	1268	1112	1045	1001
					100000	2913	2024	1690	1357	1179	1068	934	890	845
207	35mm	30mm	25628	15,395	20000	6561	4537	3825	3047	2647	2424	2113	2002	1913
					30000	5716	3959	3358	2674	2313	2113	1846	1757	1668
					40000	5204	3603	3047	2424	2113	1913	1668	1579	1512
					60000	4537	3158	2647	2113	1846	1669	1468	1379	1334
					100000	3825	2647	2246	1779	1557	1401	1223	1179	1112
208	40mm	35mm	32627	19,906	20000	8340	5782	4871	3870	3380	3069	2691	2558	2446
					30000	7295	5048	4270	3380	2958	2691	2335	2224	2135
					40000	6628	4581	3870	3069	2691	2446	2135	2024	1935
					60000	5782	4003	3380	2691	2335	2135	1868	1779	1690
					100000	4871	3380	2847	2268	1979	1801	1579	1490	1423
209	45mm	40mm	35115	21,823	20000	8985	6227	5249	4159	3647	3314	2891	2736	2624
					30000	7851	5449	4581	3649	3180	2891	2535	2402	2291
					40000	7117	4937	4159	3314	2891	2624	2291	2180	2091
					60000	6227	4315	3647	2891	2535	2291	2002	1913	1824
					100000	5249	3647	3069	2446	2135	1935	1690	1601	1535
210	50mm	45mm	35115	23,189	20000	8985	6227	5249	4159	3647	3314	2891	2736	2624
					30000	7851	5449	4581	3647	3180	2891	2535	2402	2291
					40000	7117	4937	4159	3314	2891	2624	2291	2180	2091
					60000	6227	4315	3647	2891	2535	2291	2002	1913	1824
					100000	5249	3647	3069	2446	2135	1935	1690	1601	1535
211	55mm	50mm	43394	29,305	20000	11079	7682	6479	5142	4492	4082	3566	3387	3241
					30000	9678	6711	5660	4492	3924	3566	3115	2959	2831
					40000	8793	6097	5142	4082	3566	3240	2830	2688	2572
					60000	7682	5326	4492	3566	3115	2830	2472	2348	2247
					100000	6479	4492	3789	3007	2627	2387	2085	1981	1895
212	60mm	55mm	52470	36,031	20000	13411	9296	7851	6227	5449	4937	4315	4114	3914
					30000	11720	8118	6850	5449	4759	4315	3914	3581	3425
					40000	10653	7384	6227	4937	4315	3914	3425	3247	3114
					60000	9296	6450	5449	4315	3781	3425	3002	2847	2713
					100000	7851	5449	4581	3647	3180	2891	2535	2402	2291
214	70mm	65mm	62278	43,762	20000	15924	11031	9319	7384	6450	5871	5137	4871	4648
					30000	13900	9672	8140	6450	5649	5137	4470	4248	4070
					40000	12632	8763	7384	5871	5137	4648	4070	3870	3692
					60000	11031	7651	6450	5137	4470	4070	3558	3380	3225
					100000	9319	6450	5449	4315	3781	3425	3002	2847	2736
215	75mm	70mm	66180	49,411	20000	16925	11743	9897	7851	6872	6227	5449	5182	4960
					30000	14790	10253	8651	6872	6005	5449	4759	4515	4337
					40000	13433	9319	7851	6227	5449	4960	4337	4114	3936
					60000	11743	8140	6872	5449	4759	4337	3781	3581	3425
					100000	9897	6872	5782	4604	4025	3647	3180	3025	2891
216		75mm	77426	58,281	20000	19794	13722	11587	9185	8029	7295	6383	6049	5782
					30000	17303	11987	10119	8029	7028	6383	5560	5293	5071
					40000	15724	10898	9185	7295	6383	5782	5071	4804	4604
					60000	13722	9519	8029	6393	5560	5071	4426	4203	4025
					100000	11587	8029	6783	5382	4693	4270	3736	3536	3380
218		85mm	95371	74,023	20000	24397	16925	14278	11342	9897	9007	7851	7473	7139
					30000	21328	14790	12477	9897	8651	7851	6872	6516	6249
					40000	19371	13433	11342	9007	7851	7139	6249	5938	5676
					60000	16925	11743	9897	7851	6872	6249	5449	5182	4960
					100000	14278	9897	8362	6628	5782	5271	4604	4359	4181

* Slight interference fit required when operating on the right of the heavy line or in the shaded area

Note: Bearing analysis program "BEST" is available on www.ptwizard.com

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Setscrew Ball Bearing Inch

Table 2 (continued): Easy Selection Table for Ball Bearing Mounted Units

Ring Size	Shaft Size SC, VSC, SL, C	Shaft Size SCM	Dynamic Capacity C, N.	Static Capacity Co, N.	L_{10} Life Hours	Allowable equivalent radial load rating (n.) At various RPM* 2500	3000	3500	4000	4500	5000	5500	6500	7500
203	17mm		9600	4800	20000	667	623	600	578	556	534	512	489	467
					30000	578	556	512	489	467	467	445	423	400
					40000	534	489	467	445	423	423	400	378	356
					60000	467	423	423	400	378	356	358	334	311
					100000	378	356	356	334	311	311	289	289	267
204	20mm		12895	6592	20000	890	845	801	756	734	712	689	645	623
					30000	778	724	689	667	645	623	600	578	534
					40000	712	667	645	600	578	556	556	512	489
					60000	623	578	556	534	512	489	467	445	423
					100000	512	489	467	445	400	423	400	378	356
205	25mm		13995	7869	20000	979	912	867	823	801	778	756	712	667
					30000	845	801	756	734	689	667	645	623	578
					40000	778	734	689	667	623	600	600	556	534
					60000	667	623	600	578	556	534	512	489	467
					100000	556	534	512	489	467	445	445	423	400
206	30mm	25mm	18993	11,290	20000	1357	1268	1201	1156	1112	1068	1045	979	
					30000	1179	1112	1045	1001	979	934	912	867	
					40000	1068	1001	958	912	890	845	823	778	
					60000	934	890	845	801	778	734	712	689	
					100000	778	734	712	667	645	623	600	578	
207	35mm	30mm	25628	15,395	20000	1779	1668	1579	1512	1468	1401	1357		
					30000	1557	1468	1379	1134	1268	1223	1201		
					40000	1401	1334	1268	1201	1156	1112	1090		
					60000	1223	1156	1112	1045	1023	979	956		
					100000	1045	979	934	890	845	823	801		
208	40mm	35mm	32627	19,906	20000	2268	2135	2024	1935	1868	1801			
					30000	1979	1868	1779	1690	1624	1579			
					40000	1801	1690	1601	1535	1468	1423			
					60000	1576	1468	1401	1334	1290	1245			
					100000	1334	1245	1179	1134	1090	1045			
209	45mm	40mm	35115	21,823	20000	2446	2291	2180	2091	2002	1935			
					30000	2135	2002	1913	1824	1757	1690			
					40000	1935	1824	1735	1646	1601	1535			
					60000	1690	1601	1512	1446	1379	1334			
					100000	1423	1334	1268	1223	1179	1134			
210	50mm	45mm	35115	23,189	20000	2446	2291	2180	2091	2002				
					30000	2135	2002	1913	1824	1757				
					40000	1935	1824	1735	1646	1601				
					60000	1690	1601	1512	1446	1379				
					100000	1423	1334	1268	1223	1179				
211	55mm	50mm	43394	29,305	20000	3007	2830	2688	2571					
					30000	2627	2472	2348	2246					
					40000	2387	2246	2134	2041					
					60000	2085	1962	1864	1783					
					100000	1759	1655	1572	1504					
212	60mm	55mm	52470	36,031	20000	3647	3425	3247						
					30000	3180	3002	2847						
					40000	2891	2713	2580						
					60000	2535	2380	2268						
					100000	2135	2002	1913						
214	70mm	65mm	62278	43,762	20000	4315	4070							
					30000	3781	3558							
					40000	3425	3225							
					60000	3002	2824							
					100000	2535	2380							
215	75mm	70mm	66180	49,411	20000	4604	4337							
					30000	4025	3781							
					40000	3647	3425							
					60000	3180	3002							
					100000	2691	2535							
216		75mm	77426	58,281	20000	5382								
					30000	4693								
					40000	4270								
					60000	3736								
					100000	3136								
218		85mm	95371	74,023	20000									
					30000									
					40000									
					60000									
					100000									

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