



SELECTION

Selection of DODGE E-Z KLEEN Polymer and Stainless Steel Housed Ball Bearings

DODGE E-Z KLEEN 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 as listed in this catalog and the instruction manual that accompanies each bearing. DODGE E-Z KLEEN 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 Table 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 – The life which may be expected for at least 90% of a given group of bearings operating under identical conditions.

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 maximum thrust load value of $C/10$ is recommended as a guide for general applications and will give adequate L_{10} life. If the thrust load exceeds this limit, it is advisable to use auxiliary thrust carrying devices, such as a shaft shoulder, snap ring, or a thrust collar. 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 shear 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 RPMs not listed use the following equation:

$$L_{10} = \left(\frac{C}{P}\right)^3 \times \left(\frac{16667}{n}\right)$$

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. Use X (radial factor) and Y (thrust factor) from Table 1 to 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.

$$P = XF_R + YF_A$$

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_0 = Basic static capacity (Selection Table)

To find X and Y, first calculate F_A/C_0 to determine e. Calculate F_A/F_R and compare to e to determine the X and Y factors to use from Table 1.

Shaft Tolerances

Normal Shaft Size Inches	Recommended Shaft Tolerances SC & D-LOK Products (Inches)	Recommended Shaft Tolerances GRIP TIGHT Ball Bearings (Inches)
Up to 1-1/2"	+0.000 -0.0005	+0.000 -0.002
Over 1-1/2 to 2"	+0.000 -0.0010	+0.000 -0.003

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

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Table 1

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	
		$F_A/F_R \leq e$		$F_A/F_R > e$	
		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 an aluminum complex based, H1 Food Grade 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 tightening 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.

Substitute all known values into the Equivalent Radial Load equation. The Equivalent Radial Load (P) thus determined can be used in the L10 life formula or compared to the allowable Equivalent Radial Load rating desired in the expanded rating chart to select a bearing (Selection Table).

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

NOTE: Bearing analysis program “BEST” is available on www.ptwizard.com

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Recommended Torque													
Setscrew Size	Key Hex Across Flats	Setscrews			D-LOK			Mounting Bolts					
		◆ Recommended Torque			Cap Screw Size	Recom. Torque	EZ-KLEEN Recom. Torque	Metal Housings		EZ-KLEEN Housed Bearings			
		Standard Ball Bearing Insert		Corrosion Resistant Stainless Steel				Bolt Size	Recom. Dry Torque (Grade 2)	2-Bolt PB, 2 & 4 Bolt Fig. and Fig. Brackets		Tapped Base PB	
		Min	Max							Bolt Size	Torque ①	Bolt Size	Torque ②
(in.)	(in.)	(in.-lbs.)	(in.-lbs.)	(in.-lbs.)	(in.)	(in.Olbs.)	(in.-lbs.)	(in.)	(in.Olbs.)	(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)	① Torque for Austenitic (18-8) Stainless	
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 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.

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EASY SELECTION

E-Z KLEEN SC and DL

Ring Size	Shaft Size		Dynamic Capacity C _d , lbs.	Static Capacity C ₀ , lbs.	L ₁₀ Life - Hours	Allowable Equivalent Radial Load Rating (lbs.) at Various RPM*											
	SC	SCM				50	150	250	500	750	1000	1250	1500	1600	1750	2000	2250
204	1/2 5/8 3/4 13/16 20mm		2899	1482	20000	741	513	433	344	300	273	253	238	233	226	217	208
					30000	647	449	378	300	262	238	221	208	204	198	189	182
					40000	588	408	344	273	238	217	201	189	185	180	172	165
					60000	513	356	300	238	208	189	176	165	162	157	150	144
					100000	433	300	253	201	176	160	148	139	136	132	127	122
205	7/8 15/16 1 25mm		3146	1769	20000	804	557	470	373	326	296	275	259	253	246	235	226
					30000	702	487	411	326	285	259	240	226	221	215	205	197
					40000	638	442	373	296	259	235	218	205	201	195	187	179
					60000	557	386	326	259	226	205	191	179	176	170	163	157
					100000	470	326	275	218	191	173	161	151	148	144	137	132
206	1-1/16 1-1/8 1-3/16 1-1/4 30mm	1 25mm	4368	2538	20000	1116	774	652	518	452	411	382	359	351	341	326	314
					30000	975	676	570	452	395	359	333	314	307	298	285	274
					40000	886	614	518	411	359	326	303	285	279	271	259	249
					60000	774	536	452	359	314	285	265	249	244	237	226	217
					100000	652	452	382	303	265	240	223	210	206	199	191	183
207	1-1/4 1-5/16 1-3/8 1-7/16 35mm	1-3/16 1-1/4 30mm	5759	3461	20000	1471	1020	860	683	596	542	503	473	463	450	430	414
					30000	1285	891	752	596	521	473	439	414	405	393	376	361
					40000	1168	810	683	542	473	430	399	376	368	357	341	328
					60000	1020	707	596	473	414	376	349	328	321	312	298	287
					100000	860	596	503	399	349	317	294	277	271	263	252	242
208	1-1/2 1-5/8 40mm	1-7/16 1-1/2▲ 35mm	7332	4475	20000	1873	1299	1095	869	759	690	641	603	590	573	548	527
					30000	1636	1134	957	759	663	603	560	527	515	500	478	460
					40000	1487	1031	869	690	603	548	508	478	468	454	435	418
					60000	1299	900	759	603	527	478	444	418	409	397	380	365
					100000	1095	759	641	508	444	403	375	352	345	335	320	308
209	1-5/8 1-11/16 1-3/4 45mm	1-1/2 40mm	7891	4906	20000	2016	1398	1179	936	817	743	689	649	635	616	589	567
					30000	1761	1221	1030	817	714	649	602	567	555	538	515	495
					40000	1600	1109	936	743	649	589	547	515	504	489	468	450
					60000	1398	969	817	649	567	515	478	450	440	427	409	393
					100000	1179	817	689	547	478	434	403	379	371	360	345	331
210	1-15/16 2 50mm	1-11/16 1-3/4 45mm	7891	5213	20000	2016	1398	1179	936	817	743	689	649	635	616	589	567
					30000	1761	1221	1030	817	714	649	602	567	555	538	515	495
					40000	1600	1109	936	743	649	589	547	515	504	489	468	450
					60000	1398	969	817	649	567	515	478	450	440	427	409	393
					100000	1179	817	689	547	478	434	403	379	371	360	345	331

* 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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EASY SELECTION



E-Z KLEEN SC and DL (continued)

Ring Size	Shaft Size		Dynamic Capacity C, lbs.	Static Capacity Co, lbs.	L ₁₀ Life - Hours	Allowable Equivalent Radial Load Rating (lbs.) at Various RPM*											
	SC	SCM				2500	2750	3000	3250	3500	3600	4000	4500	5000	5250	5500	6000
204	1/2 5/8 3/4 13/16 20mm		2899	1482	20000	201	195	189	184	180	178	172	165	160	157	155	150
					30000	176	170	165	161	157	155	150	144	139	137	135	131
					40000	160	155	150	146	143	141	136	131	127	125	123	119
					60000	139	135	131	128	125	123	119	115	111	109	107	104
					100000	118	114	111	108	105	104	101	97	93	92	90	88
205	7/8 15/16 1 25mm		3146	1769	20000	218	211	205	200	195	193	187	179	173	170	168	163
					30000	191	185	179	175	170	169	163	157	151	149	147	142
					40000	173	168	163	159	155	153	148	142	137	135	133	129
					60000	151	147	142	139	135	134	129	124	120	118	116	113
					100000	128	124	120	117	114	113	109	105	101	100	98	95
206	1-1/16 1-1/8 1-3/16 1-1/4 30mm	1 25mm	4368	2538	20000	303	293	285	278	271	268	259	249	240	237		
					30000	265	256	249	242	237	234	226	217	210	207		
					40000	240	233	226	220	215	213	206	198	191	188		
					60000	210	203	198	192	188	186	180	173	167	164		
					100000	177	172	167	162	158	157	151	146	141	138		
207	1-1/4 1-5/16 1-3/8 1-7/16 35mm	1-3/16 1-1/4 30mm	5759	3461	20000	399	387	376	366	357	354	341	328				
					30000	349	338	328	320	312	309	298	287				
					40000	317	307	298	290	283	281	271	261				
					60000	277	268	261	254	247	245	237	228				
					100000	234	226	220	214	209	207	200	192				
208	1-1/2 1-5/8 40mm	1-7/16 1-1/2▲ 35mm	7332	4475	20000	508	492	478	466	454	450	435					
					30000	444	430	418	407	397	393	380					
					40000	403	391	380	370	361	357	345					
					60000	352	341	332	323	315	312	301					
					100000	297	288	280	272	266	263	254					
209	1-5/8 1-11/16 1-3/4 45mm	1-1/2 40mm	7891	4906	20000	547	530	515	501	489	485	468					
					30000	478	463	450	438	427	423	409					
					40000	434	421	409	398	388	385	371					
					60000	379	367	357	348	339	336	324					
					100000	320	310	301	293	286	283	274					
210	1-15/16 2 50mm	1-11/16 1-3/4 45mm	7891	5213	20000	547	530	515	501	489	485						
					30000	478	463	450	438	427	423						
					40000	434	421	409	398	388	385						
					60000	379	367	357	348	339	336						
					100000	320	310	301	293	286	283						

* 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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EASY SELECTION

E-Z KLEEN GT

Ring Size	Shaft Size		Dynamic Capacity C, lbs.	Static Capacity C ₀ , lbs.	Allowable Equivalent Radial Load Rating (lbs.) at Various RPM*							
	GT	GTM			L ₁₀ Life - Hours	50	150	250	500	750	1000	1500
204	3/4 20mm		2899	1482	20000	741	513	433	344	300	273	238
					30000	647	449	378	300	262	238	208
					40000	588	408	344	273	238	217	189
					60000	513	356	300	238	208	189	165
					100000	433	300	253	201	176	160	139
205	7/8 15/16 1 25mm	3/4	3146	1769	20000	804	557	470	373	326	296	259
					30000	702	487	411	326	285	259	226
					40000	638	442	373	296	259	235	205
					60000	557	386	326	259	226	205	179
					100000	470	326	275	218	191	173	151
206	1-1/8 1-3/16 1-1/4 30mm	1 25mm	4368	2538	20000	1116	774	652	518	452	411	359
					30000	975	676	570	452	395	359	314
					40000	886	614	518	411	359	326	285
					60000	774	536	452	359	314	285	249
					100000	652	452	382	303	265	240	210
207	1-1/4 1-3/8 1-7/16 35mm	1-3/16 1-1/4 30mm	5759	3461	20000	1471	1020	860	683	596	542	473
					30000	1285	891	752	596	521	473	414
					40000	1168	810	683	542	473	430	376
					60000	1020	707	596	473	414	376	328
					100000	860	596	503	399	349	317	277
208	1-1/2 40mm	1-7/16 1-1/2▲ 35mm	7332	4475	20000	1873	1299	1095	869	759	690	603
					30000	1636	1134	957	759	663	603	527
					40000	1487	1031	869	690	603	548	478
					60000	1299	900	759	603	527	478	418
					100000	1095	759	641	508	444	403	352
209	1-5/8 1-11/16 1-3/4 45mm	1-1/2 40mm	7891	4906	20000	2016	1398	1179	936	817	743	649
					30000	1761	1221	1030	817	714	649	567
					40000	1600	1109	936	743	649	589	515
					60000	1398	969	817	649	567	515	450
					100000	1179	817	689	547	478	434	379
210	1-15/16 2 50mm	1-11/16 1-3/4 45mm	7891	5213	20000	2016	1398	1179	936	817	743	649
					30000	1761	1221	1030	817	714	649	567
					40000	1600	1109	936	743	649	589	515
					60000	1398	969	817	649	567	515	450
					100000	1179	817	689	547	478	434	379

* Speed limit values reflect quad contact seal

▲ Piloted flange only

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Bearing Reference Guide

ULTRA KLEEN

E-Z KLEEN

Extreme Duty

Setscrew Ball Bearing

GRIP TIGHT

D-LOK Ball Bearing



E-Z KLEEN GT (continued)

Ring Size	Shaft Size		Dynamic Capacity C, lbs.	Static Capacity Co, lbs.	Allowable Equivalent Radial Load Rating (lbs.) at Various RPM*							
	GT	GTM			L ₁₀ Life - Hours	1750	2000	2200	2600	3000	3200	3600
204	3/4 20mm		2899	1482	20000	226	217	210	198	189	185	178
					30000	198	189	183	173	165	162	155
					40000	180	172	166	157	150	147	141
					60000	157	150	145	138	131	128	123
					100000	132	127	123	116	111	108	104
205	7/8 15/16 1 25mm	3/4	3146	1769	20000	246	235	228	215	205	201	193
					30000	215	205	199	188	179	176	169
					40000	195	187	181	171	163	159	153
					60000	170	163	158	149	142	139	134
					100000	144	137	133	126	120	117	113
206	1-1/8 1-3/16 1-1/4 30mm	1 25mm	4368	2538	20000	341	326	316	299	285	279	268
					30000	298	285	276	261	249	244	234
					40000	271	259	251	237	226	221	213
					60000	237	226	219	207	198	193	186
					100000	199	191	185	175	167	163	157
207	1-1/4 1-3/8 1-7/16 35mm	1-3/16 1-1/4 30mm	5759	3461	20000	450	430	417	394	376	368	354
					30000	393	376	364	344	328	321	309
					40000	357	341	331	313	298	292	281
					60000	312	298	289	273	261	255	245
					100000	263	252	244	230	220	215	207
208	1-1/2 40mm	1-7/16 1-1/2▲ 35mm	7332	4475	20000	573	548	531	502	478	468	450
					30000	500	478	463	438	418	409	393
					40000	454	435	421	398	380	372	357
					60000	397	380	368	348	332	325	312
					100000	335	320	310	293	280	274	263
209	1-5/8 1-11/16 1-3/4 45mm	1-1/2 40mm	7891	4906	20000	616	589	571	540	515	504	485
					30000	538	515	499	472	450	440	423
					40000	489	468	453	429	409	400	385
					60000	427	409	396	374	357	349	336
					100000	360	345	334	316	301	295	283
210	1-15/16 2 50mm	1-11/16 1-3/4 45mm	7891	5213	20000	616	589	571	540	515	504	485
					30000	538	515	499	472	450	440	423
					40000	489	468	453	429	409	400	385
					60000	427	409	396	374	357	349	336
					100000	360	345	334	316	301	295	283

* Speed limit values reflect quad contact seal

▲ Piloted flange only

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EASY SELECTION

E-Z KLEEN GT (continued)

Ring Size	Shaft Size		Dynamic Capacity C, lbs.	Static Capacity C ₀ , lbs.	Allowable Equivalent Radial Load Rating (lbs.) at Various RPM*							
	GT	GTM			L ₁₀ Life - Hours	3840	4000	4240	4480	4800	5040	5300
204	3/4 20mm		2899	1482	20000	174	172	169	165	162	159	156
					30000	152	150	147	145	141	139	137
					40000	138	136	134	131	128	126	124
					60000	121	119	117	115	112	110	108
					100000	102	101	99	97	95	93	92
205	7/8 15/16 1 25mm	3/4	3146	1769	20000	189	187	183	180	176	173	170
					30000	165	163	160	157	153	151	148
					40000	150	148	145	143	139	137	135
					60000	131	129	127	125	122	120	118
					100000	111	109	107	105	103	101	99
206	1-1/8 1-3/16 1-1/4 30mm	1 25mm	4368	2538	20000	262	259	254	249	244	240	236
					30000	229	226	222	218	213	209	206
					40000	208	206	202	198	193	190	187
					60000	182	180	176	173	169	166	163
					100000	154	151	149	146	143	140	138
207	1-1/4 1-3/8 1-7/16 35mm	1-3/16 1-1/4 30mm	5759	3461	20000	346	341	335	329	321	316	
					30000	302	298	293	287	281	276	
					40000	275	271	266	261	255	251	
					60000	240	237	232	228	223	219	
					100000	202	200	196	192	188	185	
208	1-1/2 40mm	1-7/16 1-1/2▲ 35mm	7332	4475	20000	441	435	426	419			
					30000	385	380	372	366			
					40000	350	345	338	332			
					60000	306	301	296	290			
					100000	258	254	249	245			
209	1-5/8 1-11/16 1-3/4 45mm	1-1/2 40mm	7891	4906	20000	474	468	459				
					30000	414	409	401				
					40000	376	371	364				
					60000	329	324	318				
					100000	277	274	268				
210	1-15/16 2 50mm	1-11/16 1-3/4 45mm	7891	5213	20000	474						
					30000	414						
					40000	376						
					60000	329						
					100000	277						

* Speed limit values reflect quad contact seal

▲ Piloted flange only

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

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ULTRA KLEEN

E-Z KLEEN

Extreme Duty

Setscrew Ball Bearing

GRIP TIGHT

D-LOK Ball Bearing

EASY SELECTION



E-Z KLEEN GT (continued)

Ring Size	Shaft Size		Dynamic Capacity C, lbs.	Static Capacity Co, lbs.	Allowable Equivalent Radial Load Rating (lbs.) at Various RPM*						
	GT	GTM			L ₁₀ Life - Hours	5600	6000	6500	7000	7200	8000
204	3/4 20mm		2899	1482	20000	154	150	146	143	141	136
					30000	134	131	128	125	123	119
					40000	122	119	116	113	112	108
					60000	107	104	101	99	98	95
					100000	90	88	85	83	83	80
205	7/8 15/16 1 25mm	3/4	3146	1769	20000	167	163	159	155	153	
					30000	146	142	139	135	134	
					40000	132	129	126	123	122	
					60000	116	113	110	107	106	
					100000	97	95	93	91	90	
206	1-1/8 1-3/16 1-1/4 30mm	1 25mm	4368	2538	20000	231	226				
					30000	202	198				
					40000	184	180				
					60000	160	157				
					100000	135	132				
207	1-1/4 1-3/8 1-7/16 35mm	1-3/16 1-1/4 30mm	5759	3461	20000						
					30000						
					40000						
					60000						
					100000						
208	1-1/2 40mm	1-7/16 1-1/2▲ 35mm	7332	4475	20000						
					30000						
					40000						
					60000						
					100000						
209	1-5/8 1-11/16 1-3/4 45mm	1-1/2 40mm	7891	4906	20000						
					30000						
					40000						
					60000						
					100000						
210	1-15/16 2 50mm	1-11/16 1-3/4 45mm	7891	5213	20000						
					30000						
					40000						
					60000						
					100000						

* Speed limit values reflect quad contact seal

▲ Piloted flange only

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EASY SELECTION

Table 2 - Easy Selection For E-Z KLEEN Polymer-Housed Sleeve Bearing Mounted Units - Inch

RADIAL LOAD RATINGS (LBS) AT VARIOUS REVOLUTIONS PER MINUTE (RPM)

Series	Shaft Size	Up To 10	25	50	75	100	150	200	250
204	3/4	450	400	375	300	230	175	110	90
205	1	600	550	450	215	235	175	110	90
206	1-3/16 1-1/4	900	800	500	325	250	175	110	90
207	1-1/4 1-7/16	1000	900	600	400	300	175	120	95
208	1-1/2	1400	1200	700	430	320	180	125	95
210	1-15/16	1800	1600	750	450	350	185	130	100

RADIAL LOAD RATINGS (LBS) AT VARIOUS REVOLUTIONS PER MINUTE (RPM)

Series	Shaft Size	300	350	400	450	500	550	600	650
204	3/4	60	50	45	40	35	25	20	15
205	1	60	50	45	40	35	25	20	15
206	1-3/16 1-1/4	65	60	50	40	35	30	25	20
207	1-1/4 1-7/16	70	65	55	45	40	35	30	
208	1-1/2	70	65	55	45	40	35		
210	1-15/16	80	70	60	50	45			

Continuous operating temperature: -40 to 180° F

NOTE: Bearing analysis program “BEST” is available on www.ptwizard.com

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Table 3 - Easy Selection For E-Z KLEEN Polymer-Housed Sleeve Bearing Mounted Units - Metric

RADIAL LOAD RATINGS (NEWTONS) AT VARIOUS REVOLUTIONS PER MINUTE (RPM)

Series	Shaft Size	Up To 10	25	50	75	100	150	200	250
204	20	2000	1775	1665	1330	1020	775	485	400
205	25	2665	2445	2000	1400	1045	775	485	400
206	30	4000	3555	2220	1445	1110	775	485	400
207	35	4445	4000	2665	1775	1330	775	530	420
208	40	6225	5335	3110	1910	1420	8000	555	420
210	50	8005	7115	3335	2000	1555	820	575	440

RADIAL LOAD RATINGS (NEWTONS) AT VARIOUS REVOLUTIONS PER MINUTE (RPM)

Series	Shaft Size	300	350	400	450	500	550	600	650
204	20	265	220	200	175	155	110	85	65
205	25	265	220	200	175	155	110	85	65
206	30	285	265	220	175	155	130	110	85
207	35	310	285	240	200	175	155	130	
208	40	310	285	240	200	175	155		
210	50	355	310	265	220	200			

Continuous operating temperature: -40 to 180° C

NOTE: Bearing analysis program “BEST” is available on www.ptwizard.com

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EASY SELECTION

Chemical Resistance Chart*

	Housing		Ball Bearing Insert	
	Polymer	Stainless	EZ-KLEEN	ULTRA-KLEEN
A				
Acetic Acid	B	B	A	B
Acetone	B	A	A	B
Ammonium Chloride		B	A	B
Ammonium Hydroxide	D	A		A
Aniline	A	A	B	A
B				
Beer		A	A	
Beet Sugar Liquids		A		
Benzene	B	B	B	B
Bleaching Lye	A			
Brake Fluid	A			
Butane	A	A	A	
Butanol	B	A	A	
Butyl Acetate	A	B	A	
C				
Calcium Chloride	A	B	A	C
Calcium Hydroxide		B	A	
Calcium Hypochlorite	A	D	B	C
Carbon Disulphide	A	B	B	
Carbon Tetrachloride	A	B	A	A
Chloroform	D	A	A	A
Chromic Acid	A	B	A	B
Citric Acid	A	A	A	A
Cresol	D	A		
D				
Detergents	A	A	A	A
Diesel Fuel	A	A	B	

Where: (A) = No Effect - Excellent
 (B) = Minor Effect - Good
 (C) = Moderate Effect - Fair
 (D) = Severe Effect - Not Recommended
 Blank = No Data Available

NOTE: All references assume exposure temperature of 72°F.

* This chemical resistance chart is intended as a guideline. For exposure to high concentrations, prolonged contact, or higher operating temperatures, etc. reliance upon actual application experience is best. Aggressive relubrication intervals may also benefit bearing life. Contact application engineering at 864-284-5700 for assistance.

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

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Extreme Duty

Setscrew Ball Bearing

GRIP TIGHT

D-LOK Ball Bearing



Chemical Resistance Chart*

	Housing		Ball Bearing Insert	
	Polymer	Stainless	EZ-KLEEN	ULTRA-KLEEN
E				
Ethanol	A	A		A
Ether (diethyl-)	A	A	B	A
Ethyl Acetate	B	B	B	
Ethylene Dichloride	D	B	B	
F				
Ferrous Chloride		D	B	
Formaldehyde		B	B	
Formic Acid	B	B	A	B
Freon 11	A	A	A	
G				
Gasoline	A	A	A	A
Glycerol (Glycerin)	B	A	A	A
Glycol	B			
Grease	A	A	A	A
H				
Heptane	A	A	A	
Hexane	A	A	A	
Hydrochloric Acid (20%)	A	D	B	D
Hydrochloric Acid (100%)	D	D	C	D
Hydrofluoric Acid (20%)	D	D	B	D
Hydrofluoric Acid (100%)	D	D	C	D
Hydrogen Peroxide (10%)	A	C	A	
Hydrogen Peroxide (30%)	B	C	A	
I, K, L				
Iodine		D	B	D
Isopropanol (Isopropyl Alcohol)	B	A	A	
Kerosene	A	A	A	A
Lithium Chloride		A		

Where: (A) = No Effect - Excellent
 (B) = Minor Effect - Good
 (C) = Moderate Effect - Fair
 (D) = Severe Effect - Not Recommended
 Blank = No Data Available

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EASY SELECTION

Chemical Resistance Chart*

	Housing		Ball Bearing Insert	
	Polymer	Stainless	EZ-KLEEN	ULTRA-KLEEN
M				
Methanol	A	A	A	A
Methylene Chloride	D	B	B	
Methyl Ethyl Ketone	A	A	A	
Mineral Oil	A	A	A	A
Motor Oils	A	A	A	A
N				
Nitric Acid (10%)	A	A	A	A
Nitric Acid (20%)	D	A	A	A
Nitric Acid (50%)	D	A	A	A
O				
Oleic Acid	A	A	B	B
Olive Oil	A	A	A	A
P				
Perchloroethylene	A	B	B	
Phenol	B	B	A	
Phosphoric Acid (<40%)	A	B	A	A
Phosphoric Acid (>40%)	A	C	A	B
Potassium Chloride	A	B	A	B
Potassium Dichromate	A	B	B	B
Potassium Hydroxide	D	B	A	B
Potassium Permanganate	A	A	B	B
S				
Silicone	A	B	A	A
Soap Solution	A	A	A	A
Sodium Bicarbonate	A	A	A	A
Sodium Bisulfate		D	B	B
Sodium Bisulfite	A	B	B	B
Sodium Carbonate	A	A	A	B
Sodium Chloride	A	B	A	B
Sodium Hydroxide (20%)	D	A	A	A
Sodium Hydroxide (50%)	D	B	A	

Where: (A) = No Effect - Excellent
 (B) = Minor Effect - Good
 (C) = Moderate Effect - Fair
 (D) = Severe Effect - Not Recommended
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D-LOK Ball Bearing



Chemical Resistance Chart*

	Housing		Ball Bearing Insert	
	Polymer	Stainless	EZ-KLEEN	ULTRA-KLEEN
S (Continued)				
Sodium Hydroxide (80%)	D	C	B	
Sodium Hypochlorite (<20%)	A	C	B	C
Sodium Hypochlorite (100%)	B	D	B	D
Sulfuric Acid (<10%)	A	D	A	C
Sulfuric Acid (10 - 75%)	A	D	B	D
Sulfuric Acid (>75%)	D	D	C	D
T				
Tetrahydrofuran	B	A	A	
Toulene	A	A	A	
Trichlorethylene	B	B	A	
Triethylamine		A	A	
Turpentine	A	A	A	
V, W, X				
Vegetable Oils	A	A	A	A
Water	A	A	A	A
Xylene	A	B	A	

Where: (A) = No Effect - Excellent
 (B) = Minor Effect - Good
 (C) = Moderate Effect - Fair
 (D) = Severe Effect - Not Recommended
 Blank = No Data Available

NOTE: All references assume exposure temperature of 72°F.

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