



# SELECTION

## Eccentric SXV Collar

Recommended Torque													
Setscrews					D-LOK			Mounting Bolts					
Setscrew Size	Key Hex Across Flats	◆ 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.-lbs.)	(in.-lbs.)	(in.)	(in.-lbs.)	(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  ② Max. 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](http://www.ptwizard.com)

FEATURES/BENEFITS PAGE B9-2	HOW TO ORDER/NOMENCLATURE PAGE B7-5	SELECTION/DIMENSIONS PAGE B9-6	ACCESSORIES PAGE B9-36
--------------------------------	--	-----------------------------------	---------------------------



# SELECTION

## Eccentric Collar Ball Bearings - Inch and Metric

Table 2: Easy Selection Table For Ball Bearing Mounted Units

RING SIZE	SHAFT SIZE SXV, mm	DYNAMIC CAPACITY (lbs)	STATIC CAPACITY Co (lbs)	L <sub>10</sub> LIFE, HOURS	ALLOWABLE EQUIVALENT RADIAL LOAD RATING (LBS.) AT VARIOUS RPM*							
					50	150	250	500	750	1000	1500	1750
203	1/2 5/8 17mm	2,158	1079	20,000	550	380	320	255	225	205	175	170
				<b>30,000</b>	480	335	280	225	195	175	155	145
				40,000	440	305	255	205	175	160	140	135
				60,000	380	265	225	175	155	140	125	115
				100,000	320	225	190	150	130	120	105	100
204	3/4 20mm	2,899	1482	20,000	740	515	435	345	300	275	240	225
				<b>30,000</b>	645	450	380	300	260	240	210	200
				40,000	590	410	345	275	240	215	190	180
				60,000	515	355	300	240	210	190	165	155
				100,000	435	300	255	200	175	160	140	130
205	7/8 15/16 1 25mm	3,146	1769	20,000	805	560	470	375	325	295	260	245
				<b>30,000</b>	705	485	410	325	285	260	225	215
				40,000	640	445	375	295	260	235	205	195
				60,000	560	385	325	260	225	205	180	170
				100,000	470	325	275	220	190	175	150	145
206	1-1/16 1-1/8 1-3/16 1-1/4 30mm	4,368	2538	20,000	1115	775	655	520	455	410	360	340
				<b>30,000</b>	975	675	570	455	395	360	315	300
				40,000	885	615	520	410	360	325	285	270
				60,000	775	535	455	360	315	285	250	235
				100,000	655	455	380	305	265	240	210	200
207	1-1/4 1-5/16 1-3/8 1-7/16 35mm	5,759	3461	20,000	1475	1020	860	685	595	545	475	450
				<b>30,000</b>	1285	890	755	595	520	475	415	395
				40,000	1170	810	685	545	475	430	375	355
				60,000	1020	710	595	475	415	375	330	310
				100,000	860	595	505	400	350	315	275	265
208	1-1/2 40mm	7,332	4475	20,000	1875	1300	1095	870	760	690	605	575
				<b>30,000</b>	1640	1135	960	760	665	605	525	500
				40,000	1490	1030	870	690	605	550	480	455
				60,000	1300	900	760	605	525	480	420	400
				100,000	1095	760	640	510	445	405	355	335
209	1-5/8 1-11/16 1-3/4 45mm	7,891	4906	20,000	2020	1400	1180	935	820	745	650	615
				<b>30,000</b>	1765	1225	1030	820	715	650	570	540
				40,000	1600	1110	935	745	650	590	515	490
				60,000	1400	970	820	650	570	515	450	430
				100,000	1180	820	690	550	480	435	380	360
210	1-15/16 2 50mm	7,891	5213	20,000	2020	1400	1180	935	820	745	650	615
				<b>30,000</b>	1765	1225	1030	820	715	650	570	540
				40,000	1600	1110	935	745	650	590	515	490
				60,000	1400	970	820	650	570	515	450	430
				100,000	1180	820	690	550	480	435	380	360
211	2-3/16 55mm	9,755	6588	20,000	2491	1727	1457	1156	1010	918	802	761
				<b>30,000</b>	2176	1509	1272	1010	882	802	700	665
				40,000	1977	1371	1156	918	802	728	636	604
				60,000	1727	1197	1010	802	700	636	556	528
				100,000	1457	1010	852	676	591	537	469	445
212	2-1/4 2-7/16	11,791	8100	20,000	3015	2090	1765	1400	1225	1110	970	925
				<b>30,000</b>	2635	1825	1540	1225	1070	970	880	805
				40,000	2395	1660	1400	1110	970	880	770	730
				60,000	2090	1450	1225	970	850	770	675	640
				100,000	1765	1225	1030	820	715	650	570	540
215	2-15/16	14,872	11108	20,000	3805	2640	225	1765	1545	1400	1225	1165
				<b>30,000</b>	3325	2305	1945	1545	1350	1225	1070	1015
				40,000	3020	2095	1765	1400	1225	1115	975	925
				60,000	2640	1830	1545	1225	1070	975	850	805
				100,000	2225	1545	1300	1035	905	820	715	680

\* Slight interference fit required when operating in the shaded area

Note: Bearing analysis program "BEST" is available on [www.ptwizard.com](http://www.ptwizard.com)

FEATURES/BENEFITS PAGE B9-2	HOW TO ORDER/NOMENCLATURE PAGE B7-5	SELECTION/DIMENSIONS PAGE B9-6	ACCESSORIES PAGE B9-36
--------------------------------	--	-----------------------------------	---------------------------

Eccentric Collar Ball Bearings  
Setscrew VSC Ball Bearing  
Eccentric SXV Collar Ball Bearing  
Take-Up Frames  
Engineering  
Part Number Index  
Keyword Index



## Eccentric Collar Ball Bearings - Inch and Metric

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

RING SIZE	SHAFT SIZE SXR, SXV, SLX	DYNAMIC CAPACITY C (lbs)	STATIC CAPACITY Co (lbs)	L <sub>10</sub> LIFE, HOURS	ALLOWABLE EQUIVALENT RADIAL LOAD RATING (LBS.) AT VARIOUS RPM*									
					2000	2500	3000	3500	4000	4500	5000	5500	6500	7500
203	1/2 5/8 17mm	2,158	1079	20,000	160	150	140	135	130	125	120	115	110	105
				30,000	140	130	125	115	110	105	100	95	90	
				40,000	130	120	110	105	100	95	90	85	80	
				60,000	110	105	95	90	85	80	75	70		
				100,000	95	85	80	80	75	70	70	65	60	
204	3/4 20mm	2,899	1482	20,000	215	200	190	180	170	165	160	155	145	140
				30,000	190	175	165	155	150	145	140	135	130	
				40,000	170	160	150	145	135	130	125	125	115	
				60,000	150	140	130	125	120	115	110	105	100	
				100,000	125	115	110	105	100	90	95	90	85	
205	7/8 15/16 1 25mm	3,146	1769	20,000	235	220	205	195	185	180	175	170	160	150
				30,000	205	190	180	170	165	155	150	145	140	
				40,000	185	175	165	155	150	140	135	135	125	
				60,000	165	150	140	135	130	125	120	115	110	
				100,000	135	125	120	115	110	105	100	100	95	
206	1-1/16 1-1/8 1-3/16 1-1/4 30mm	4,368	2538	20,000	325	305	285	270	260	250	240	235	220	
				30,000	285	265	250	235	225	220	210	205	195	
				40,000	260	240	225	215	205	200	190	185	175	
				60,000	225	210	200	190	180	175	165	160	155	
				100,000	190	175	165	160	150	145	140	135	130	
207	1-1/4 1-5/16 1-3/8 1-7/16 35mm	5,759	3461	20,000	430	400	375	355	340	330	315	305		
				30,000	375	350	330	310	300	285	275	270		
				40,000	340	315	300	285	275	260	250	245		
				60,000	300	275	260	250	235	230	220	215		
				100,000	250	235	220	210	200	190	185	180		
208	1-1/2 40mm	7,332	4475	20,000	550	510	480	455	435	420	405			
				30,000	480	445	420	400	380	365	355			
				40,000	435	405	380	360	345	330	320			
				60,000	380	355	330	315	300	290	280			
				100,000	320	300	280	265	255	245	235			
209	1-5/8 1-11/16 1-3/4 45mm	7,891	4906	20,000	590	550	515	490	470	450	435			
				30,000	515	480	450	430	410	395	380			
				40,000	470	435	410	390	370	360	345			
				60,000	410	380	360	340	325	310	300			
				100,000	345	320	300	285	275	265	255			
210	1-15/16 2 50mm	7,891	5213	20,000	590	550	515	490	470	450				
				30,000	515	480	450	430	410	395				
				40,000	470	435	410	390	370	360				
				60,000	410	380	360	340	325	310				
				100,000	345	320	300	285	275	265				
211	2-3/16 55mm	9,755	6588	20,000	729	676	636	604	578					
				30,000	636	591	556	528	505					
				40,000	578	537	505	480	459					
				60,000	505	469	441	419	401					
				100,000	426	395	372	353	338					
212	2-1/4 2-7/16	11,791	8100	20,000	880	820	770	730						
				30,000	770	715	675	640						
				40,000	700	650	610	580						
				60,000	610	570	535	510						
				100,000	515	480	450	430						
215	2-15/16	14,872	11108	20,000	1115	1035	975							
				30,000	975	905	850							
				40,000	885	820	770							
				60,000	770	715	675							
				100,000	650	605	570							

\* Slight interference fit required when operating to the right of the heavy line

Note: Bearing analysis program "BEST" is available on [www.ptwizard.com](http://www.ptwizard.com)

FEATURES/BENEFITS PAGE B9-2	HOW TO ORDER/NOMENCLATURE PAGE B7-5	SELECTION/DIMENSIONS PAGE B9-6	ACCESSORIES PAGE B9-36
--------------------------------	--	-----------------------------------	---------------------------