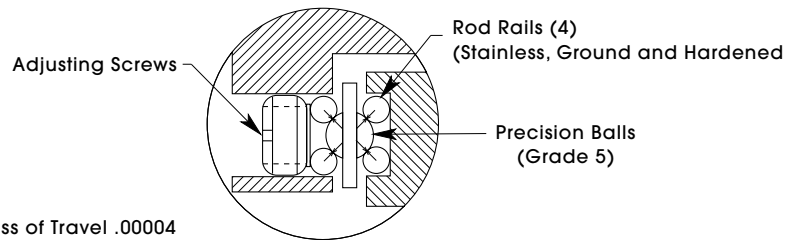
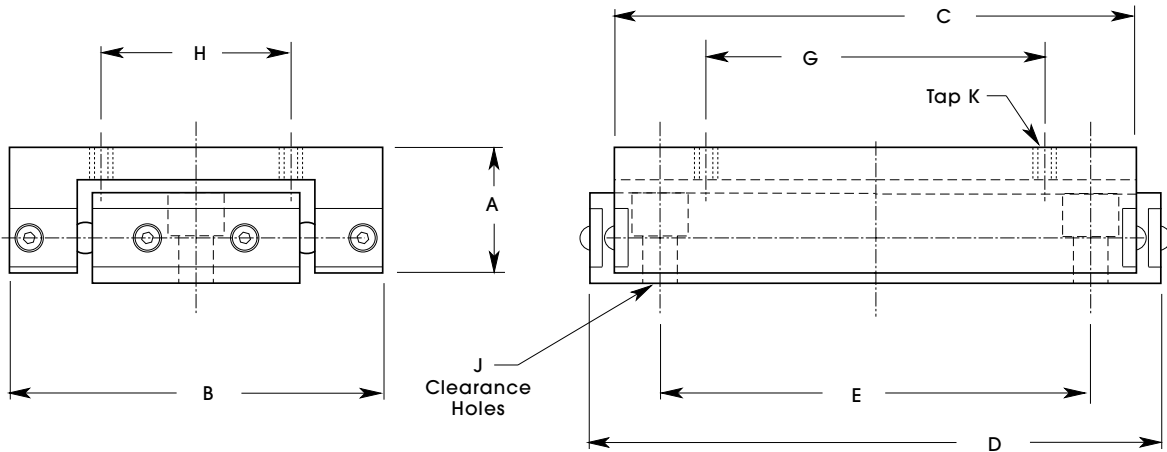
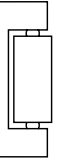


# LINEAR BALL SLIDES

Ultra Precision  
Aluminum Black Anodized

- Linear Ball Slides are Designed for Light to Medium Loads.
- Slides Run with Grade 5 Precision Balls that Roll Along Rod Rails.

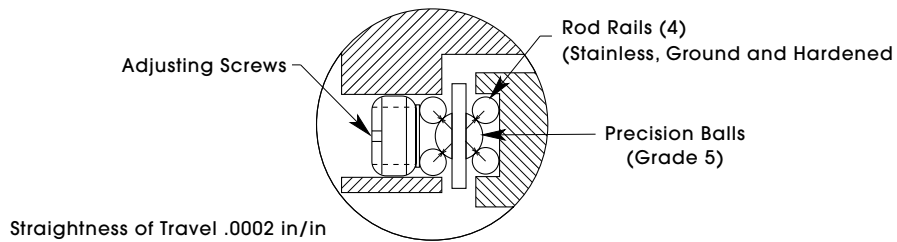
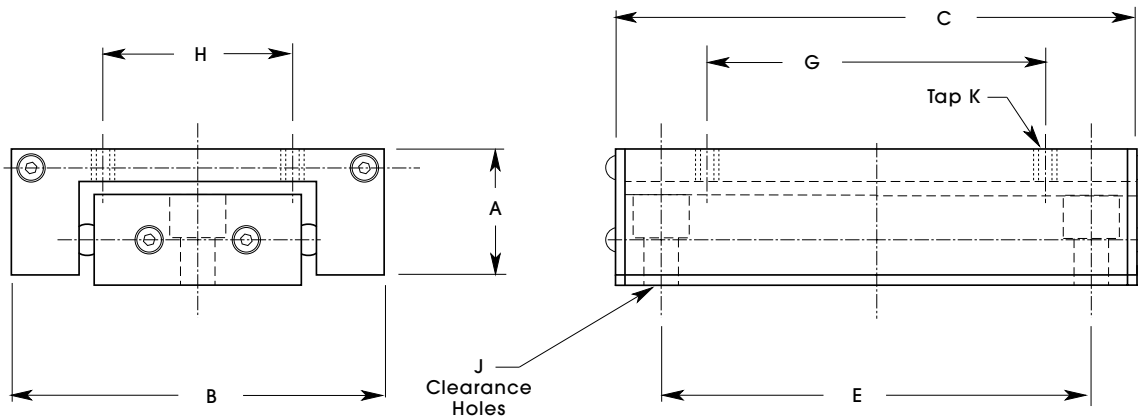
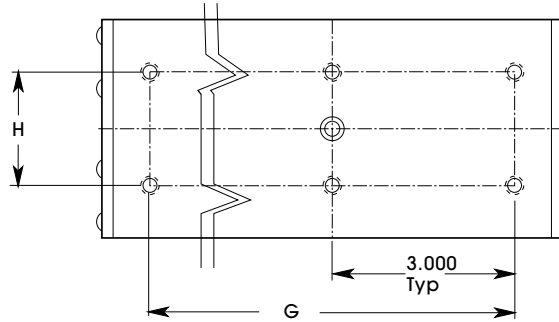


A	B	C	D	E	G	H	J	K	RATED LOAD (Lbs)	TRAVEL	CATALOG NUMBER
.500	1.00	1.00	1.25	.750	.625	⌀	#4	#4-40	.8	0.5	SEBSPL-.500
		1.75	2.00	1.500	1.375				15	1.0	SEBSPL-1.000
		2.50	2.75	2.250	2.125				25	1.5	SEBSPL-1.500
		3.25	3.50	3.000	2.875				30	2.0	SEBSPL-2.000
.750	1.75	2.00	2.25	1.625	1.375	.875	#6	#6-32	25	1.0	SECSPL-1.000
		2.75	3.00	2.250	2.125				30	1.5	SECSPL-1.500
		3.25	3.50	2.750	2.625				35	2.0	SECSPL-2.000
		4.00	4.25	3.500	3.375				40	3.0	SECSPL-3.000
1.000	2.62	2.62	2.62	2.125	2.125	1.250	#10	#10-32	80	1.0	SEDSPL-1.000
		4.00	4.37	3.375	3.000				100	2.0	SEDSPL-2.000
		5.00	5.37	4.375	4.000				110	3.0	SECSPL-3.000
		6.00	6.37	5.375	5.000				125	4.0	SEDSPL-4.000
1.375	3.50	8.00	8.37	7.375	7.000	2.000	#10	#10-32	180	5.0	SEDSPL-5.000
		4.00	4.50	2.500	2.000				130	2.0	SEJSPL-2.000
		5.75	6.25	4.250	3.750				180	3.0	SEJSPL-3.000
		8.00	8.50	6.500	6.000				220	5.0	SEJSPL-5.000
2.000	5.75	10.25	10.75	8.750	8.250	4.000	1/4	#1/4-20	280	6.5	SEJSPL-6.500
		14.00	14.50	12.500	12.000				375	9.5	SEJSPL-9.000
		8.25	8.75	6.250	6.250				300	5.0	SEKSPL-5.000
		12.00	12.50	10.000	10.000				420	7.0	SEKSPL-7.000
		15.000	15.50	13.000	13.000			520	10.0	SEKSPL-10.000	

# LINEAR BALL SLIDES

Standard Precision  
Aluminum Black Anodized

- Linear Ball Slides are Designed for Light to Medium Loads.
- Slides Run with Grade 5 Precision Balls that Roll Along Rod Rails.



# LINEAR BALL SLIDES

Standard Precision  
Aluminum Black Anodized

- Linear Ball Slides are Designed for Light to Medium Loads.
- Slides Run with Grade 5 Precision Balls that Roll Along Rod Rails.

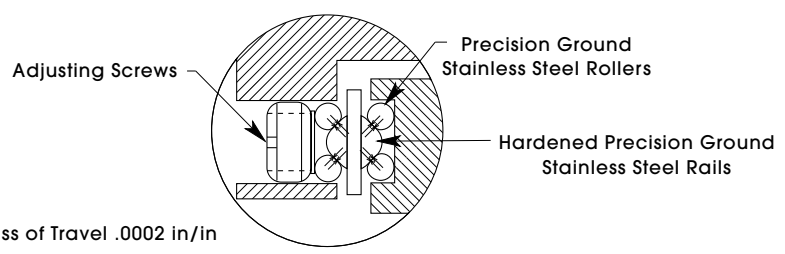
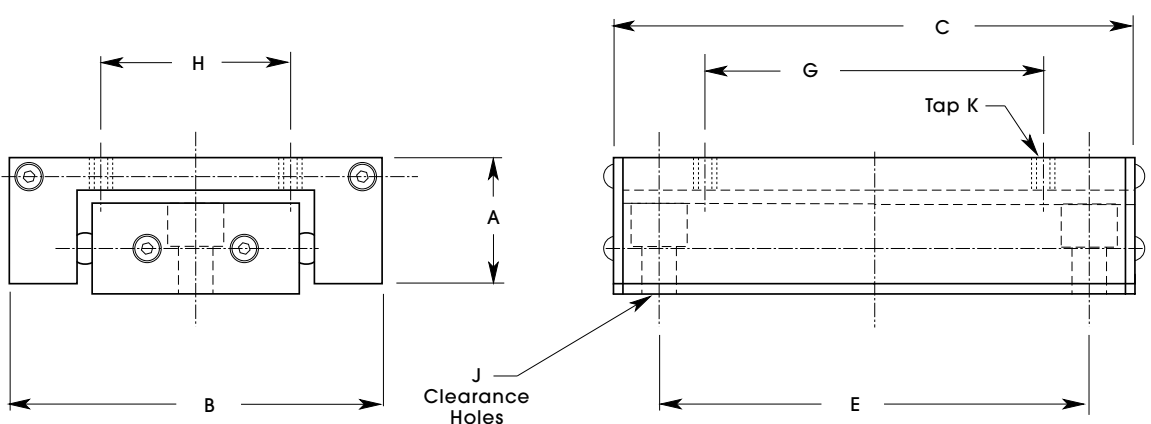
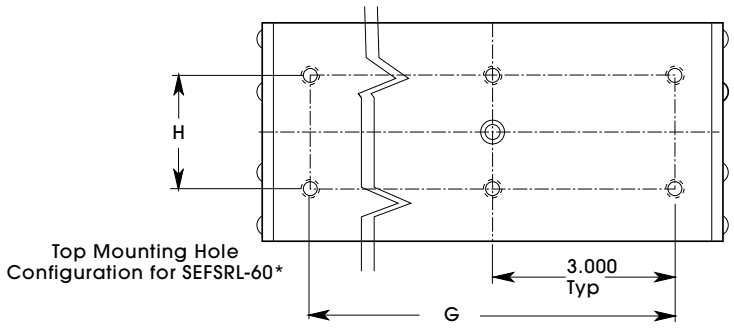


A	B	C	E	G	H	J	K	RATED LOAD (Lbs)	TRAVEL	CATALOG NUMBER			
.23	.38	.75	.375	.375	.156	#2-56	#2-56	1.5	0.5	SEGSBL-.500			
		1.25	.875	.875				1.5	1.0	SEGSBL-1.000			
		1.75	1.375	1.375				1.5	1.5	SEGSBL-1.500			
0.32	0.56	1.12	0.750	0.625	0.218	#2	#2-56	4	0.5	SEASBL-.500			
		2.00	1.375	1.625				8	1.0	SEASBL-1.000			
		3.00	2.375	2.625				12	2.0	SEASBL-2.000			
		4.00	3.375	3.625				14	3.0	SEASBL-3.000			
		5.00	3.500	4.625				16	4.0	SEASBL-4.000			
		6.00	4.500	5.625				18	5.0	SEASBL-5.000			
0.40	0.75	1.06	0.750	0.625	0.375	#4	#4-40	5	0.5	SEESBL-.500			
		2.06	1.375	1.625				9	1.0	SEESBL-1.000			
		3.06	2.375	2.625				12	2.0	SEESBL-2.000			
		4.06	3.375	3.625				14	3.0	SEESBL-3.000			
		5.06	3.500	4.625				16	4.0	SEESBL-4.000			
6.06	4.500	5.625	18	5.0	SEESBL-5.000								
0.50	1.00	1.56	1.250	1.250	0.437	#4	#6-32	10	0.5	SEBSBL-.500			
		2.56	2.250	2.250				15	1.0	SEBSBL-1.000			
		3.06	2.750	2.750				20	1.5	SEBSBL-1.500			
		3.56	3.250	3.250				25	2.0	SEBSBL-2.000			
		4.56	4.250	4.250				30	3.0	SEBSBL-3.000			
		5.56	5.250	5.250				35	4.0	SEBSBL-4.000			
		6.56	6.250	6.250				40	5.0	SEBSBL-5.000			
0.53	1.06	1.56	1.125	1.250	0.437	#6	#6-32	10	0.75	SEFSBL-.750			
		2.56	2.125	2.250				15	1.5	SEFSBL-1.500			
		3.56	3.125	3.250				20	2.0	SEFSBL-2.000			
		4.56	3.250	4.000				25	3.0	SEFSBL-3.000			
		6.00	4.000	5.500				30	4.0	SEFSBL-4.000			
		8.00	5.000	7.500				35	6.0	SEFSBL-6.000			
		10.00	7.000	9.500				40	8.0	SEFSBL-8.000			
062	1.50	2.00	1.500	1.375	0.625	#6	#6-32	15	1.0	SEHSBL-1.000			
		3.00	2.500	2.375				20	2.0	SEHSBL-2.000			
		4.00	3.500	3.375				25	3.0	SEHSBL-3.000			
		5.00	3.500	4.375				30	3.5	SEHSBL-3.500			
		6.00	4.000	5.375				35	4.0	SEHSBL-4.000			
		8.00	5.000	7.375				45	6.0	SEHSBL-6.000			
		10.00	7.000	9.375				55	8.0	SEHSBL-8.000			
075	1.75	2.00	1.625	1.375	0.875	#6	#6-32	25	1.0	SECSBL-1.000			
		2.75	2.250	2.125				30	1.5	SECSBL-1.500			
		3.25	2.750	2.625				35	2.0	SECSBL-2.000			
		4.00	3.500	3.375				40	3.0	SECSBL-3.000			
		5.00	4.500	4.375				45	4.0	SECSBL-4.000			
		7.00	6.500	6.375				55	6.0	SECSBL-6.000			
1.00	2.62	2.62	2.125	2.125	1.250	#10	#10-32	70	1.0	SEDSBL-1.000			
		4.00	3.375	3.000				90	2.0	SEDSBL-2.000			
		5.00	4.375	4.000				110	3.0	SEDSBL-3.000			
		6.00	5.375	5.000				130	4.0	SEDSBL-4.000			
		8.00	7.375	7.000				180	5.0	SEDSBL-5.000			
		9.00	7.000	6.000				120	6.0	SEDSBL-6.000			
		12.00	10.000	9.000			130	9.0	SEDSBL-9.000				
		15.00	13.000	12.000			145	12.0	SEDSBL-12.000				
		18.00	16.000	15.000			160	15.0	SEDSBL-15.000				
		21.00	19.000	18.000			170	18.0	SEDSBL-18.000				
		24.00	22.000	21.000			150	21.0	SEDSBL-21.000				
		27.00	25.000	24.000			120	24.0	SEDSBL-24.000				
										1/4-20			

# LINEAR BALL SLIDES

Standard Precision  
Aluminum Black Anodized

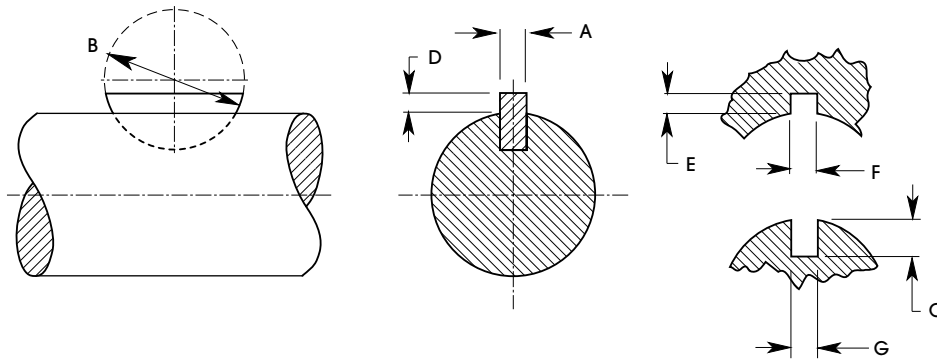
- Linear Ball Slides are Designed for Light to Medium Loads.
- Slides Run with Grade 5 Precision Balls that Roll Along Rod Rails.



A	B	C	E	G	H	J K	RATED LOAD (Lbs)	TRAVEL	CATALOG NUMBER
.32	.56	1.06	.750	.625	0.218	#2-56	32	.50	SEASRL-.500
		2.06	1.375	1.625			56	1.00	SEASRL-1.000
		3.06	2.375	2.625			68	2.00	SEASRL-2.000
0.40	0.75	1.06	.750	.625	0.375	#4-40	50	.50	SEBSRL-.500
		2.06	1.375	1.625			80	1.00	SEBSRL-1.000
		3.06	2.375	2.625			100	2.00	SEBSRL-2.000
0.53	1.06	2.56	2.125	2.250	0.437	#6-32	135	1.50	SECSRL-1.500
		3.56	3.125	3.250			225	2.00	SECSRL-2.000
		4.56	3.250	4.000			265	3.00	SECSRL-3.000
0.62	1.50	2.00	1.500	1.375	0.625	#6-32	135	1.00	SEDSRL-1.000
		3.00	1.500	1.375			135	1.00	SEDSRL-2.000
		4.00	3.500	3.375			180	3.00	SEDSRL-3.000
		6.00	4.000	5.375			310	4.00	SEDSRL-4.000
0.75	1.75	2.00	1.625	1.375	0.875	#6-32	180	1.00	SEESRL-1.000
		3.25	2.750	2.625			210	2.00	SEESRL-2.000
		4.00	3.500	3.375			240	3.00	SEESRL-3.000
		6.00	4.000	5.500			310	4.00	SEESRL-4.000
1.00	2.62	2.62	1.875	1.625	1.250	#10-32	330	1.50	SEFSRL-1.500
		4.00	3.375	3.000			420	2.00	SEFSRL-2.000
		5.00	4.375	4.000			450	3.00	SEFSRL-3.000
		6.00	5.375	5.000			500	4.00	SEFSRL-4.000
		9.00	7.000	3.000			705	6.00	SEFSRL-6.000

# WOODRUFF KEYS

303 Stainless  
ANSI B17.2-1967, R 1978

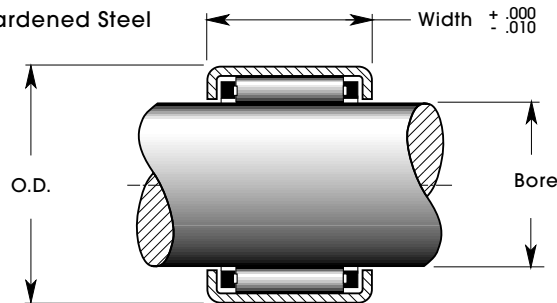


ANSI KEY No. (REF)	KEY SIZE		C + .005	D + .010	E + .005	F + .002	G + .0015	CATALOG NUMBER
	A + .001	B - .010						
202	.0625	.250	.0728	.0262	.0372	.0635	.0615	SEK-1
202.5	.0625	.312	.1038	.0262	.0372	.0635	.0615	SEK-2
302.5	.0938	.312	.0882	.0419	.0529	.0948	.0928	SEK-3
203	.0625	.375	.1358	.0262	.0372	.0635	.0615	SEK-4
303	.0938	.375	.1202	.0419	.0529	.0948	.0928	SEK-5
403	.1250	.375	.1045	.0575	.0685	.1260	.1240	SEK-6
204	.0625	.500	.1668	.0262	.0372	.0635	.0615	SEK-7
304	.0938	.500	.1511	.0419	.0529	.0948	.0928	SEK-8
404	.1250	.500	.1355	.0575	.0685	.1260	.1240	SEK-9
305	.0938	.625	.1981	.0419	.0529	.0948	.0928	SEK-10
405	.1250	.625	.1825	.0575	.0685	.1260	.1240	SEK-11
505	.1563	.625	.1669	.0731	.0841	.1573	.1553	SEK-12

# NEEDLE BEARINGS

High Velocity  
Demanding Loads  
Very Low Friction

**Material:**  
Roller Cup — Case Hardened Steel  
Needle Rollers — 521200 Hardened  
Bearing Cage — Low Hardened Steel



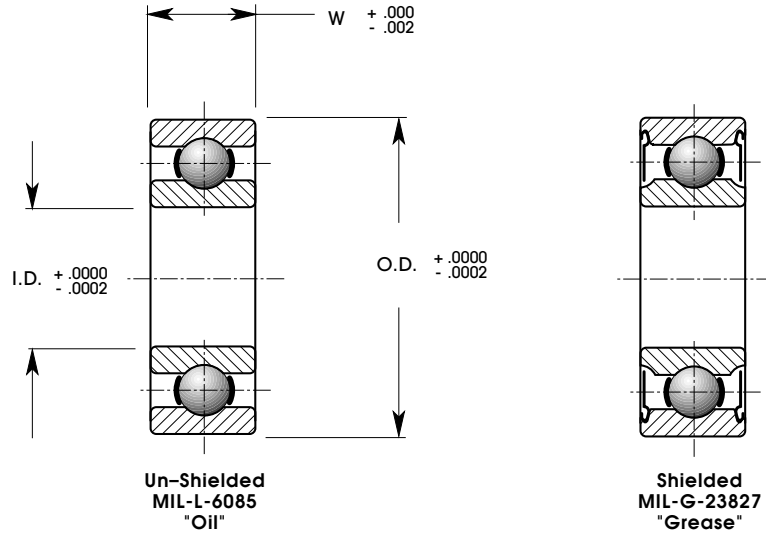
\* Plastic Bearing Cage

BORE	BEARING O.D.	HOUSING BORE DIAMETER	BEARING WIDTH	MAXIMUM SPEED RPM	DYNAMIC (lbs)	STATIC (lbs)	SHAFT DIAMETER	CATALOG NUMBER
1/8	.2500	.2500 - .2505	.250	70,000	161	80	.1250 - .1247	SE42BRN*
3/16	.3438	.3432 - .3437	.250	70,000	335	185	.1875 - .1872	SE43BRN*
3/16	.3438	.3432 - .3437	.375	70,000	540	345	.1875 - .1872	SE63BRN*
1/4	.4375	.4370 - .4380	.250	55,000	315	162	.2500 - .2495	SE44BRN
1/4	.4375	.4370 - .4380	.438	55,000	800	540	.2500 - .2495	SE74BRN
5/16	.5000	.4995 - .5005	.312	44,000	570	350	.3125 - .3120	SE55BRN
5/16	.5000	.4995 - .5005	.562	44,000	1,160	880	.3125 - .3120	SE95BRN
3/8	.5625	.5620 - .5630	.312	37,000	600	380	.3750 - .3745	SE56BRN
3/8	.5625	.5620 - .5630	.625	37,000	1,440	1,180	.3750 - .3745	SE016BRN
1/2	.6875	.6870 - .6880	.375	27,000	900	670	.5000 - .4995	SE68BRN
1/2	.6875	.6870 - .6880	.750	27,000	1,930	1,780	.5000 - .4995	SE218BRN
5/8	.8125	.8120 - .8130	.438	22,000	1,290	1,140	.6250 - .6245	SE701BRN
5/8	.8125	.8120 - .8130	.750	22,000	2,360	2,410	.6250 - .6245	SE2101BRN
3/4	1.0000	.9995 - 1.0005	.375	18,000	1,390	1,030	.7500 - .7495	SE621BRN
3/4	1.0000	.9995 - 1.0005	.750	18,000	3,000	2,750	.7500 - .7495	SE2121BRN
1	1.2500	1.2495 - 1.2505	.500	14,000	2,180	2,060	1.000 - .9995	SE861BRN
1	1.2500	1.2495 - 1.2505	1.000	14,000	4,650	5,200	1.000 - .9995	SE6161BRN

# BALL BEARINGS PRECISION

Non – Flange  
 Bores 3/64" thru 1/2"  
 Shielded • Un-Shielded

**Material:**  
 440C Stainless Steel

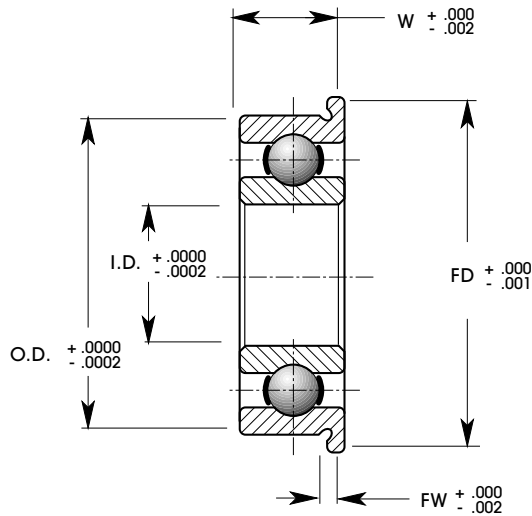


I.D.	O.D.	W	SHIELDED	DYNAMIC LOAD(lbs.)	STATIC LOAD(lbs.)	CATALOG NUMBER	
						ABEC-3	ABEC-7
.0469	.1562	.0625	N	17	6	BBP-37	BBP-9
		.0937	Y			BBP-38	BBP-10
.0550	.1875	.0781	N	26	9	BBP-39	BBP-11
		.1094	Y			BBP-40	BBP-12
.0781	.2500	.0937	N	36	14	BBP-41	BBP-13
		.1406	Y			BBP-42	BBP-14
.0937	.3125	.1094	N	60	24	BBP-43	BBP-1
		.1406	Y			BBP-44	BBP-2
.1250	.2500	.0937	N	33	13	BBP-45	BBP-3
		.1094	Y			BBP-46	BBP-4
	.3125	N	60	24	BBP-47	BBP-5	
.1406	Y	BBP-48			BBP-6		
.1562	.3750	.1562	N	68	28	BBP-49	BBP-15
		.1562	Y			BBP-50	BBP-16
.1562	.3125	.1094	N	33	14	BBP-51	BBP-17
		.1250	Y			BBP-52	BBP-18
.1875	.3125	.1094	N	33	14	BBP-53	BBP-7
		.1250	Y			BBP-54	BBP-8
	.3750	N	76	33	BBP-55	BBP-19	
.1250	Y	BBP-56			BBP-20		
.2500	.500	.1562	N	141	67	BBP-57	BBP-21
		.1960	Y			BBP-58	BBP-22
	.3750	N	37	17	BBP-59	BBP-23	
.1250	Y	BBP-60			BBP-24		
.2500	.5000	.1250	N	114	57	BBP-61	BBP-25
		.1875	Y			BBP-62	BBP-26
	.6250	N	158	78	BBP-63	BBP-27	
.1960	Y	BBP-64			BBP-28		
.3125	.5000	.1562	N	56	31	BBP-65	BBP-29
		.1562	Y			BBP-66	BBP-30
.3750	.8750	.2188	N	356	176	BBP-67	BBP-31
		.2812	Y			BBP-68	BBP-32
.5000	.8750	.2188	N	203	114	BBP-69	BBP-33
		.2812	Y			BBP-70	BBP-34
	1.1250	N	827	464	BBP-71	BBP-35	
.3125	Y	BBP-72			BBP-36		

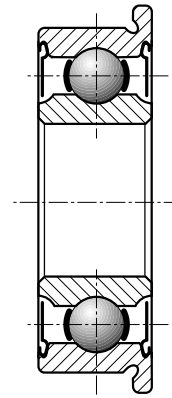
# PRECISION BALL BEARINGS

Flange  
Bores 3/64" thru 1/2"  
Shielded • Un-Shielded

Material:  
440C Stainless Steel



Un-Shielded  
MIL-L-6085  
"Oil"



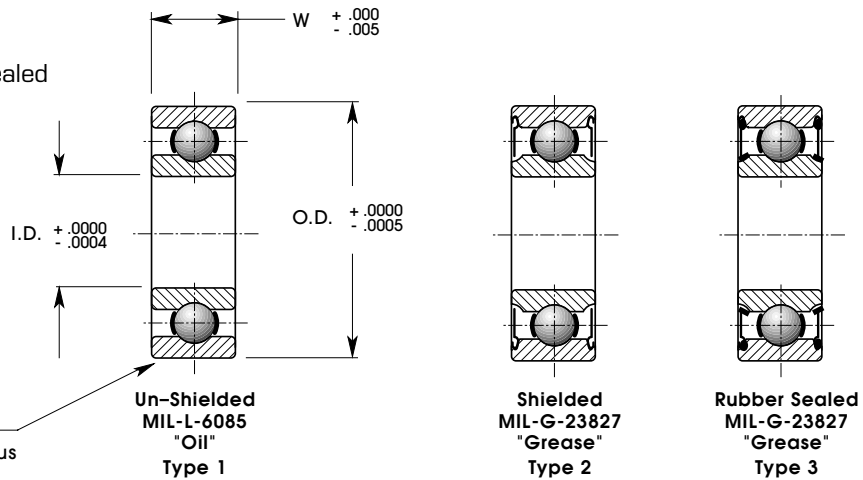
Shielded  
MIL-G-23827  
"Grease"

I.D.	O.D.	W	FD	SHIELDED	FW	DYNAMIC LOAD(lbs.)	STATIC LOAD(lbs.)	CATALOG NUMBER	
								ABEC-3	ABEC-7
.0469	.1562	.0625	.203	N	.013	17	6	BBF 42	BBF 17
		.0937		Y	.031			BBF 43	BBF 18
.0550	.1875	.0781	.234	N	.023	26	9	BBF 44	BBF 19
		.1094		Y	.031			BBF 45	BBF 20
.0781	.2500	.0937	.296	N	.023	36	14	BBF 46	BBF 21
		.1406		Y	.031			BBF 47	BBF 22
.0937	.3125	.1094	.359	N	.023	60	24	BBF 48	BBF 9
		.1406		Y	.031			BBF 49	BBF 10
.1250	.2500	.0937	.296	N	.023	33	13	BBF 50	BBF 11
		.1094		Y	.031			BBF 51	BBF 12
	.3125	.1094	.359	N	.023	60	24	BBF 52	BBF 13
.3750	.1406	Y		.031	BBF 53			BBF 14	
.1562	.3125	.1562	.440	N	.030	68	28	BBF 54	BBF 23
		.1250		Y	.030			BBF 55	BBF 24
.1875	.3125	.1094	.359	N	.023	33	14	BBF 56	BBF 25
		.1250		Y	.036			BBF 57	BBF 26
	.3750	.1094	.422	N	.023	76	33	BBF 58	BBF 15
.5000	.1250	Y		.031	BBF 59			BBF 16	
.2500	.3750	.1250	.422	N	.023	37	17	BBF 60	BBF 27
		.1250		Y	.036			BBF 61	BBF 28
	.5000	.1562	.547	N	.042	141	67	BBF 62	BBF 29
.6250	.1960	Y		.042	BBF 63			BBF 30	
.3125	.5000	.1250	.422	N	.023	37	17	BBF 64	BBF 31
		.1250		Y	.036			BBF 65	BBF 32
	.6250	.1250	.547	N	.023	114	57	BBF 66	BBF 33
.1960	.1875	Y		.045	BBF 67			BBF 34	
.3750	.8750	.2812	.969	N	.062	356	176	BBF 68	BBF 35
		.2812		Y	.062			BBF 69	BBF 36
.5000	1.1250	.1562	1.225	N	.031	827	464	BBF 70	BBF 37
		.1562		Y	.031			BBF 71	BBF 38
.3750	.8750	.2812	.969	N	.062	356	176	BBF 72	BBF 39
		.2812		Y	.062			BBF 73	BBF 40
.5000	1.1250	.3125	1.225	Y		827	464	BBF 74	BBF 41

# BALL BEARINGS

Non - Flange  
 Bores 1/8" thru 1-1/4"  
 Shielded • Un-Shielded • Rubber Sealed

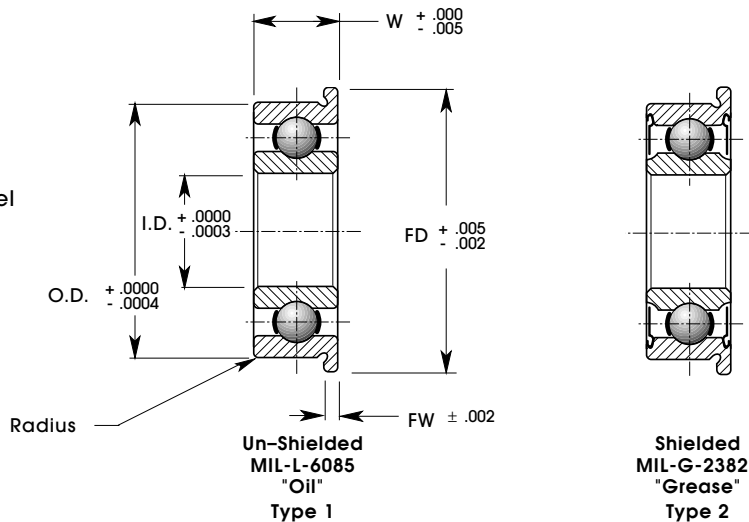
**Material:**  
 52100 Chrome Steel  
 Single Row  
 ABEC 1



I.D.	O.D.	W	R	TYPE	DYNAMIC LOAD (lbs.)	STATIC	CATALOG NUMBER
							ABEC-1
.1250	.3750	.156	.005	1	71	29	SE11B-1
				2			SE11B-2
				3			SE11B-3
.1875	.5000	.156	.012	1	139	60	SE11B-4
				2			SE11B-5
				3			SE11B-6
.2500	.6250	.196	.012	1	159	71	SE11B-7
				2			SE11B-8
				3			SE11B-9
.3750	.8750	.218	.016	1	451	219	SE11B-10
				2			SE11B-11
				3			SE11B-12
.5000	1.1250	.250	.016	1	880	500	SE11B-13
				2			SE11B-14
				3			SE11B-15
.6250	1.3750	.343	.031	2	1175	710	SE11B-16
				1			SE11B-17
.7500	1.6250	.437	.031	2	1630	1073	SE11B-17
				1			SE11B-18
1.0000	2.0000	.500	.031	2	2015	1408	SE11B-18
1.2500	2.2500	.375	.031	1	1940	1582	SE11B-19

Flange  
 Bores 1/8" thru 3/8"  
 Shielded • Un-Shielded

**Material:**  
 52100 Chrome Steel  
 Single Row  
 ABEC 1



I.D.	O.D.	W	FD	TYPE	FW	DYNAMIC LOAD (lbs.)	STATIC LOAD (lbs.)	CATALOG NUMBER
								ABEC-1
.1250	.3750	.156	.440	1	.030	71	29	SE31B-1
				2				SE31B-2
.1875	.5000	.156	.565	1	.042	139	60	SE31B-3
				2				SE31B-4
.2500	.6250	.196	.690	1	.042	159	71	SE31B-5
				2				SE31B-6
.3750	.8750	.281	.969	1	.062	451	219	SE31B-7
				2				SE31B-8

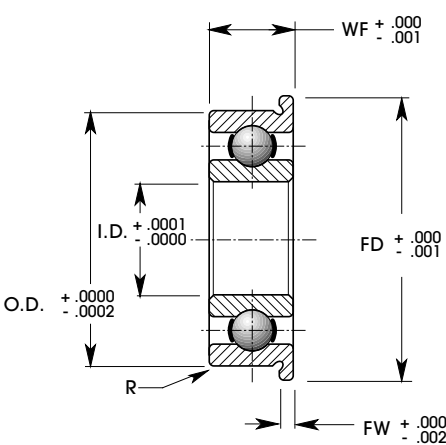
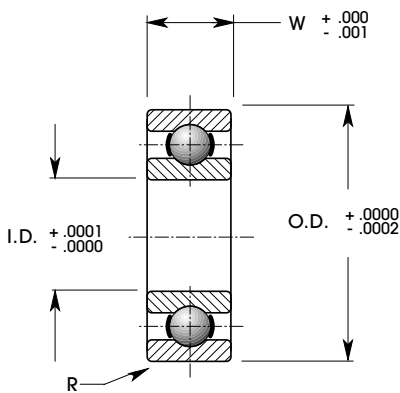
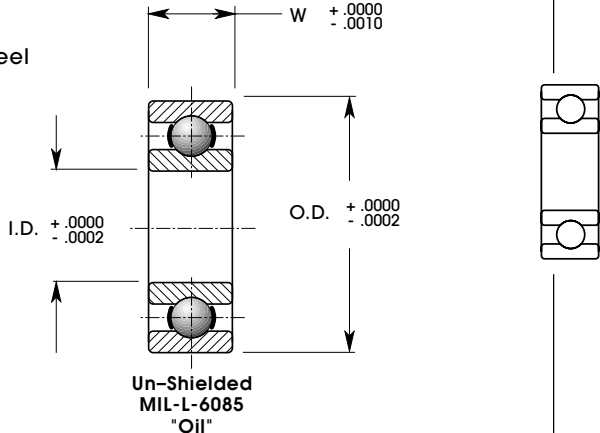


# BALL BEARINGS

Non Flange  
Bores 1/8" thru 3/4"  
Un-Shielded

**Material:**  
440 Stainless Steel  
ABEC 5

I.D.	O.D.	W	DYNAMIC LOAD (lbs)	STATIC LOAD (lbs)	CATALOG NUMBER
.1250	.3125	.1094	62	24	SE01B-1
.1875	.3750	.1250	79	33	SE01B-2
.2500	.5000	.1250	128	55	SE01B-3
.3125	.5000	.1562	95	47	SE01B-4
.3750	.6250	.1562	95	49	SE01B-5
.5000	.7500	.1562	111	66	SE01B-6
.6250	.8750	1.562	114	75	SE01B-7
.7500	1.0000	1.562	126	92	SE01B-8



## ULTRA PRECISION

Non Flange • Flange  
Bores 1/8" thru 1/4"  
Un-Shielded

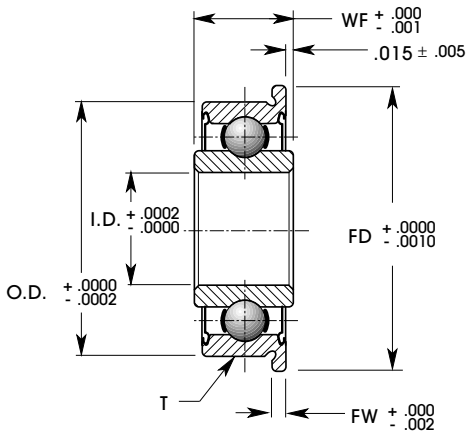
**Material:**  
440 Stainless Steel

O.D.	W	WF	FD	FW	ULTRA PRECISION SHAFT SIZE	I.D.	CORNER RADIUS TO CLEAR R	CATALOG NUMBER	
								FLANGE	NON FLANGE
.6250	.1960	.1960	.690	.042	.24975	.2498	.012	UBF 1	UB 2
.5000	.1562	.1960	.565	.042	.18725	.1873	.012	UBF 3	UB 4
.3750	.1562	.1562	.440	.030	.12475	.1248	.012	UBF 5	UB 6
.2500	.0937	.0937	.296	.023	.12475	.1248	.005	UBF 7	UB 8

## TAPERED

Flange  
Bores 1/8" thru 5/16"  
Shielded

**Material:**  
440 Stainless Steel  
ABEC 7



SHAFT SIZE	I.D.	O.D.	W	FD	E	DYNAMIC LOAD (lbs)	STATIC LOAD (lbs)	TAPER T'/FT	CATALOG NUMBER
1/8	.1250	.3757	.189	.4380	.037	69	16	.075	SE2B-1
3/16	.1875	.5632	.251	.6250	.042	198	51	.068	SE2B-2
1/4	.2500	.6257	.251	.6875	.042	233	68	.068	SE2B-3
5/16	.3125	.6882	.251	.7500	.042	240	72	.068	SE2B-4

## Precision Instrument Bearings

### Ball Bearing Interchangeability at a Fraction of the Cost

Drawing on the experience of the design engineers of the electronic industry, SECS, Inc has designed, manufactured and is now in a position to deliver from stock a complete line of Miniature Precision Bronze Bearings.

In the past it became necessary to use ball bearings in countless applications—not because of the critical requirements in actual rotating performance but mainly for reasons of close tolerances.

The bronze bearings listed on the following pages are interchangeable with ball bearings in many design applications and the incorporation of these bearings results in tremendous cost reduction.

#### Design Advantages

1. Interchangeable with standard miniature ball bearings.
2. Available in a full range of sizes, both flanged and sleeve types.
3. Vacuum-impregnated with instrument oil, per MIL-L-6085A, completely self-lubricating. (Also available without oil, if desired).
4. Low coefficient of friction.
6. Precision made of sintered bronze per MIL-B-5687, Type I, Comp. A with 4 % Molybdenum Disulfide added at sintering. (Also available without Molybdenum Disulfide on special order).
7. Use of series 416 hardened stainless steel shafts is recommended for superior performance and life of bearings.
8. Bearings are priced at one-third the cost of most miniature ball bearings.

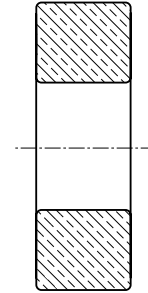
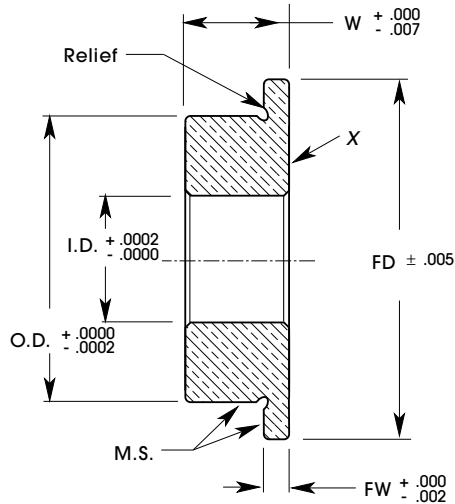
#### Characteristics

1. Hardness (Rockwell No) ..... H45
2. Coefficient of Friction (Break-away) ..... 0.07
3. Coefficient of Thermal Expansion, per °F ( $\times 10^{-6}$ ) ..... 10.5
4. Tensile Strength (psi) ..... 16,000
5. Compressive Strength (psi) ..... 18,000

For normal applications, MINIATURE BRONZE BEARINGS may be installed with a shouldering plug. The recommended housing fit is (D  $-0.0003$ )  $+0.0002, 0000$ . This results in a maximum close-in of  $.0002$  reduction in the I.D. after being pressed into the housing. With this recommended housing fit, hand pressure will suffice for inserting the bearing. The recommended shaft size for normal applications is (B  $-0.0005$ )  $+0.0000, -0.0002$

# PRECISION MINIATURE BRONZE BEARINGS

Flange • Non Flange  
Bores 1/8" thru 3/4"



Runout of Bore to M.S. within .0002 T.I.R.  
Runout of x Surface to Bore within .0002

I.D.	O.D.	W	FD	FW	LOAD SPEED RATING	CATALOG NUMBER
.0469	.1563	.0625	.203	.013	12,000	OB 30
.0550	.1876	.0780	.234	.023	15,000	OB 31
.0550	.1876	.0780	.234	.031	15,000	OB 32
.0783	.2501	.0937	.296	.023	18,000	OB 33
.0783	.2501	.0937	.296	.031	18,000	OB 34
.0939	.1876	.0625	.234	.018	12,000	OB 35
.0939	.1876	.0625	.234	.031	12,000	OB 36
.0939	.3126	.1094	.359	.023	21,000	OB 37
.0939	.3126	.1094	.359	.031	21,000	OB 38
.1252	.2501	.0937	.296	.023	18,000	OB 39
.1252	.2501	.0937	.296	.031	18,000	OB 40
.1252	.3126	.1094	.359	.023	21,000	OB 41
.1252	.3126	.1094	.359	.031	21,000	OB 42
.1252	.3751	.1094	.422	.023	21,000	OB 43
.1252	.3751	.1094	.422	.031	21,000	OB 44
.1252	.3751	.1562	.440	.031	30,000	OB 45
.1564	.3126	.1094	.359	.023	21,000	OB 46
.1564	.3126	.1094	.359	.036	21,000	OB 47
.1877	.3126	.1094	.359	.023	21,000	OB 48
.1877	.3126	.1094	.359	.036	21,000	OB 49
.1877	.3751	.1094	.422	.031	21,000	OB 50
.1877	.3751	.1094	.422	.031	21,000	OB 51
.1877	.5001	.1562	.565	.042	30,000	OB 52
.1877	.5001	.1960	.565	.042	37,000	OB 53
.2502	.3751	.1094	.422	.023	21,000	OB 54
.2502	.3751	.1094	.422	.036	21,000	OB 55
.2502	.3751	.1250	.422	.023	24,000	OB 56
.2502	.5001	.1250	.547	.023	24,000	OB 57
.2502	.6251	.1960	.690	.042	37,000	OB 58

I.D.	O.D.	W	LOAD SPEED RATING *	CATALOG NUMBER
.0250	.1000	.0312	5,000	OB 60
.0400	.1250	.0469	8,000	OB 61
.0469	.1563	.0625	12,000	OB 62
.0550	.1876	.0780	15,000	OB 63
.0783	.2501	.0937	18,000	OB 64
.0939	.1876	.0625	12,000	OB 65
.0939	.3126	.1094	21,000	OB 66
.1252	.2188	.0937	18,000	OB 67
.1252	.2501	.0937	18,000	OB 68
.1252	.2501	.1094	21,000	OB 69
.1252	.3126	.1094	21,000	OB 70
.1252	.3751	.1094	21,000	OB 71
.1252	.3751	.1562	30,000	OB 72
.1564	.3126	.1094	21,000	OB 73
.1877	.3126	.1094	21,000	OB 74
.1877	.3751	.1250	24,000	OB 75
.1877	.5001	.1562	30,000	OB 76
.1877	.5001	.1960	37,000	OB 77
.2502	.3751	.1250	24,000	OB 78
.2502	.5001	.1250	24,000	OB 79
.2502	.6251	.1960	37,000	OB 80
.3127	.5001	.1562	30,000	OB 81

\* **LOAD SPEED RATING.** The ratings shown are based on a K of 50,000 which is generally accepted for normal self-lubricating Bronze Bearing usage. The Load-Speed Rating may be used to quickly determine the allowable bearing load for any size bearing and any value of shaft RPM. For example:

Bearing size selected: 127-55

Load-Speed Rating: 18,000 (from table)

Shaft Speed: 3,000 RPM

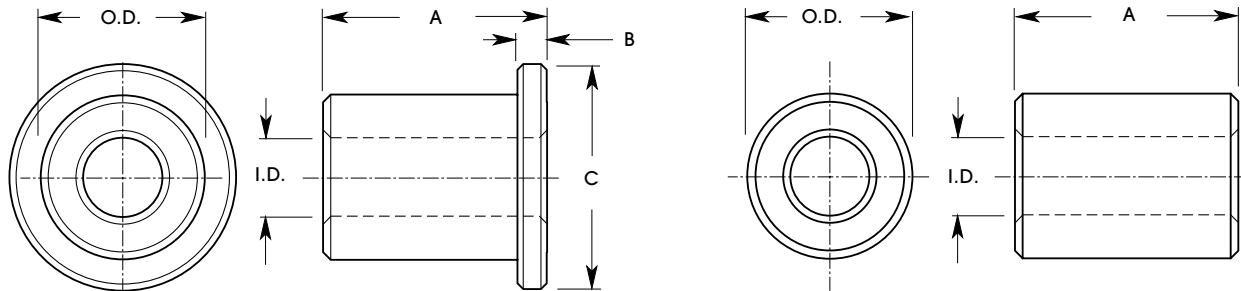
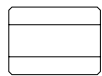
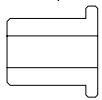
Then allowable bearing load =

$$\frac{\text{Load-Speed Rating}}{\text{Shaft Speed}} = \frac{18,000}{3,000} = 6 \text{ lbs.}$$

The maximum shaft speed recommended for normal applications of MINIBRONZE bearings is 10,000 RPM. At low shaft speeds, shearing and deflecting loads on the shaft (rather than radial loads on the bearings) become the limiting factors in calculating maximum driving torque.

# BRONZE BEARINGS OIL-LESS

Flange • Non – Flange  
 Bores 1/8" thru 1/2"  
 MIL-B-5687a



Flanged

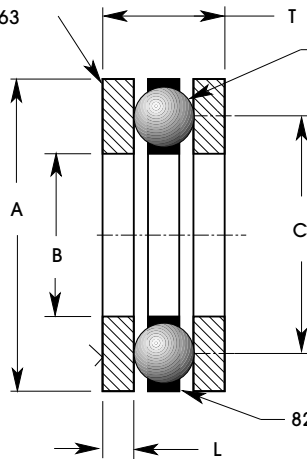
Plain

SHAFT SIZE	+ .001 - .000 I.D.	+ .000 - .001 O.D.	± .005 A	FLANGE ONLY		CATALOG NUMBER	
				C ± .005	B ± .003	PLAIN	FLANGE
1/8	.126	.252	.125	.375	.047	OB 12 OB 13 OB 14 OB 82	OB 1
			.250				OB 2
			.375				OB 3
			.500				----
1/8	.126	.315	.250	.375	.047	----	OB 104
			.250			OB 105	
3/16	.188	.314	.125	.375	.047	OB 83 OB 15 OB 16 OB 17 OB 18 OB 84	OB 106
			.250				OB 4
			.375				OB 5
			.500				OB 6
			.625				OB 7
			.750				----
1/4	.251	.377	.250	.562	.047	OB 19 OB 20 OB 21 OB 22	OB 8
			.375				OB 9
			.500				OB 10
			.625	.500	.062	OB 85	OB 11
			.750				OB 107
5/16	.313	.439	.250	.562	.062	OB 86 OB 87 OB 88 OB 89 OB 90 OB 91	OB 108
			.375				OB 109
			.500				OB 110
			.625				OB 111
			.750				OB 112
			1.000				----
3/8	.376	.502	.250	.625	.062	OB 92 OB 93 OB 94 OB 95 OB 96	OB 113
			.375				OB 114
			.500				OB 115
			.625				OB 116
			.750	.687	.093	OB 97	OB 117
			1.000				OB 118
1/2	.501	.627	.375	.875	.062	OB 98 OB 99 OB 100 OB 101 OB 102 OB 103	OB 119
			.500				OB 120
			.625				OB 121
			.750				OB 122
			1.000				OB 123
			1.250				----

# THRUST BEARINGS

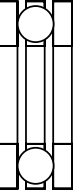
Stainless Steel • Carbon Steel  
Bores 1/8" thru 1-1/4"

Thrust Washers  
410 SS RC 38-44  
or  
C1075 St. RC 60-63

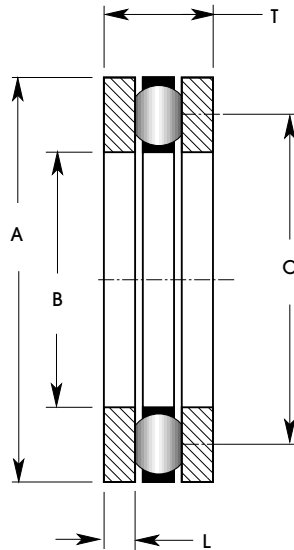


Hardened 440C Stainless  
or  
Carbon Steel Balls

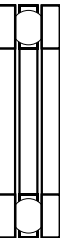
8200 Nylon Ball Retainer



B +.005 -.000	A +.000 -.005	C	T	L ± .002	NUMBER OF BALLS	STAINLESS STEEL LOAD RATING-LBS AT 15 RPM	CARBON STEEL LOAD RATING-LBS AT 15 RPM	CATALOG NUMBER/MATL	
								STAINLESS	CARBON
.128	.434	9/32	.195	.051	6	63	89	SE5BS-1	SE5BC-1
.190	.497	11/32	.195	.051	7	73	104	SE5BS-2	SE5BC-2
.253	.559	13/32	.195	.051	8	83	119	SE5BS-3	SE5BC-3
.315	.622	15/32	.195	.051	9	94	134	SE5BS-4	SE5BC-4
.378	.809	19/32	.249	.062	6	104	149	SE5BS-5	SE5BC-5
.503	.934	23/32	.249	.062	8	139	198	SE5BS-6	SE5BC-6
.628	1.122	7/8	.342	.093	6	170	243	SE5BS-7	SE5BC-7
.753	1.247	1	.342	.093	8	255	322	SE5BS-8	SE5BC-8
1.003	1.622	1-5/16	.437	.125	10	347	496	SE5BS-9	SE5BC-9
1.253	1.872	1-9/16	.437	.125	14	486	694	SE5BS-10	SE5BC-10



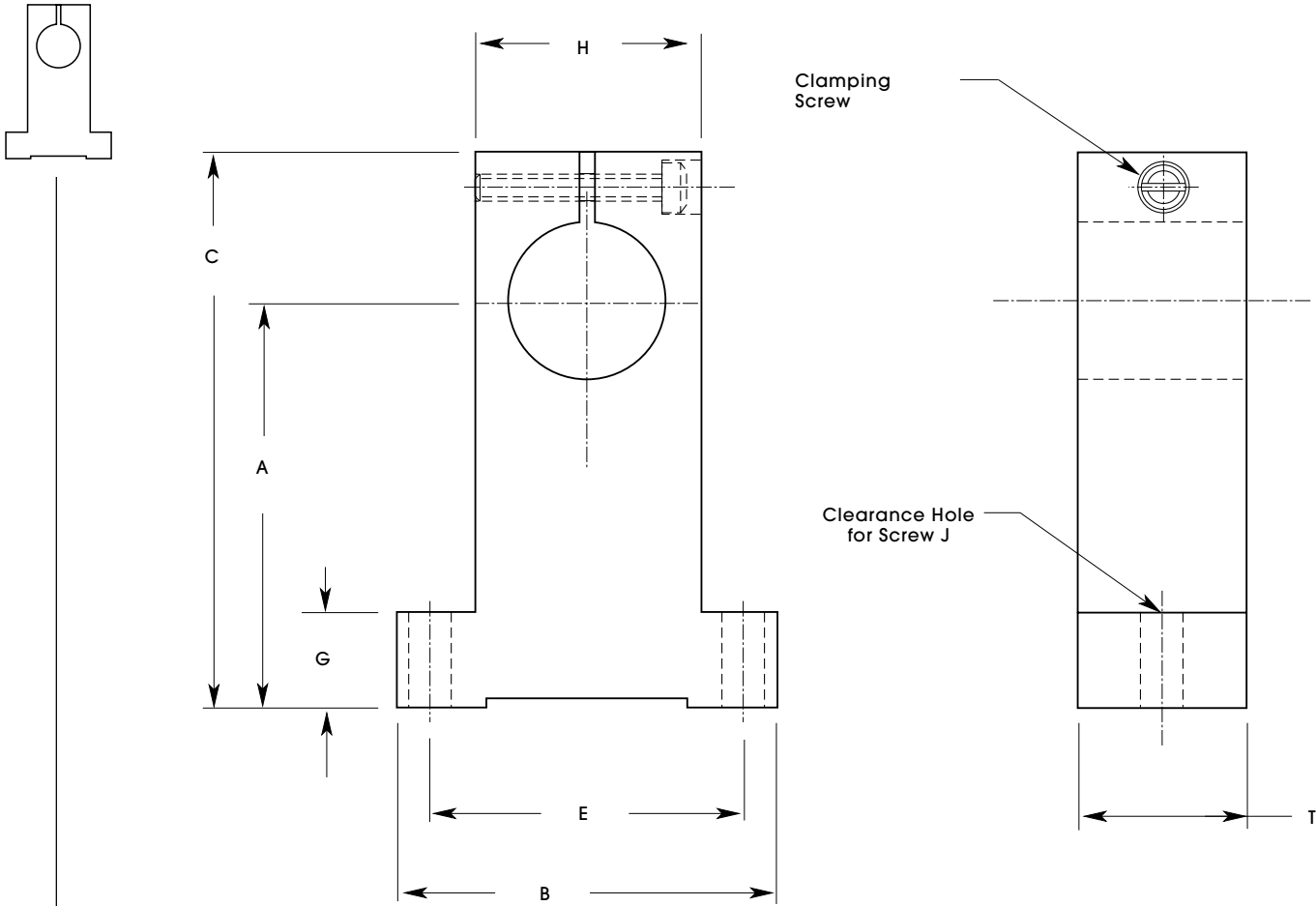
Material:  
Rollers — 52100 Chrome Steel  
Cage — 1008 Carbon Steel  
Washers — 1074 Steel



B +.005 -.000	A +.000 -.020	C	T	L +.000 -.003	LOAD RATING DYNAMIC-LBS	CATALOG NUMBER
.252	.677	.45	.142	.032	1,100	SE5RB-1
.377	.802	.58	.142	.032	1,300	SE5RB-2
.502	.927	.71	.142	.032	1,550	SE5RB-3
.627	1.115	.87	.268	.095	1,750	SE5RB-4
.752	1.240	.99	.268	.095	1,950	SE5RB-5
.877	1.427	1.14	.330	.126	2,480	SE5RB-6
1.002	1.552	1.27	.330	.126	2,700	SE5RB-7
1.252	1.927	1.58	.330	.126	3,850	SE5RB-8

# SHAFT HANGER

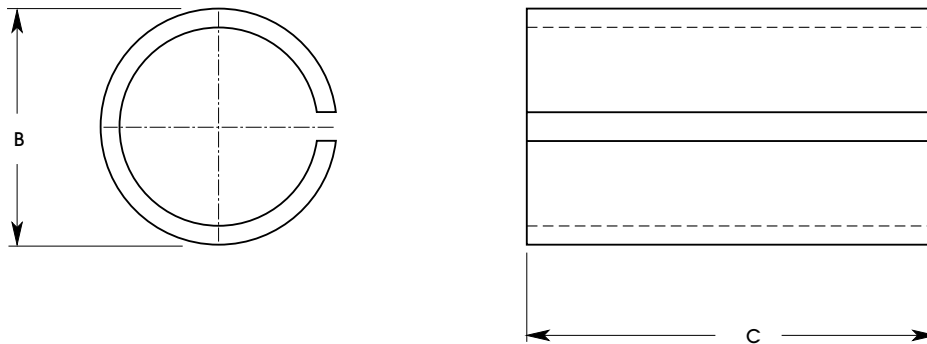
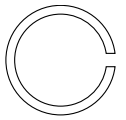
Black Anodized Aluminum  
Shafts 1/4" thru 1"



SHAFT DIA (REF)	$\pm .001$ A	B	C	E	T	G	H	J	CATALOG NUMBER
1/4	.562	1.13	1.13	.875	.38	.187	.63	# 6	SEHML-1
3/8	.687	1.25	1.31	.937	.50	.187	.63	# 8	SEHML-2
1/2	.750	1.50	1.44	1.125	.63	.250	.75	# 10	SEHML-3
3/4	1.062	1.88	1.88	1.500	.88	.500	1.00	1/4	SEHML-4
1	2.125	2.25	3.06	1.750	1.00	.625	1.25	1/4	SEHML-5

# SPLIT BEARING

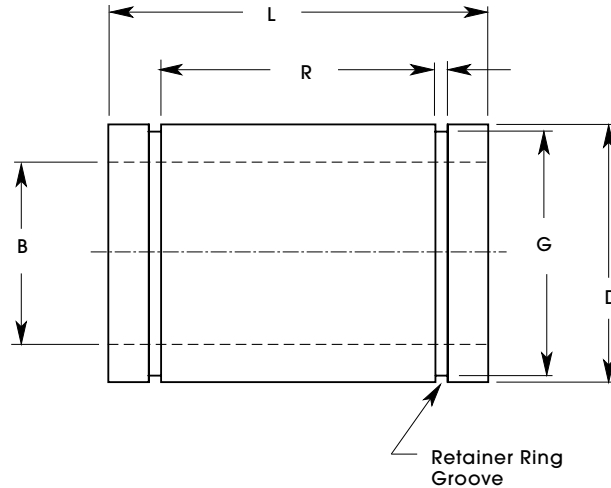
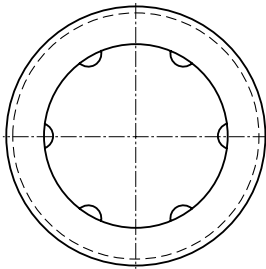
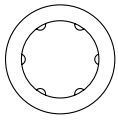
Steel Backed Bronze with Impregnated Teflon  
Bores 1/8" thru 1"



NOMINAL SHAFT SIZE	ACTUAL SHAFT SIZE	NOMINAL O.D. B	HOUSING BORE	C	CATALOG NUMBER
1/8	.1247/.1240	3/16	.1882/.1877	.125 .187	SE41UD-1 SE41UD-2
3/16	.1872/.1865	1/4	.2510/.2504	.187 .250 .375	SE41UD-3 SE41UD-4 SE41UD-5
1/4	.2497/.2488	5/16	.3135/.3129	.250 .375	SE41UD-6 SE41UD-7
5/16	.3122/.3113	3/8	.3760/.3754	.375 .500	SE41UD-8 SE41UD-9
3/8	.3747/.3738	15/32	.4698/.4691	.250 .375 .500 .750	SE41UD-10 SE41UD-11 SE41UD-12 SE41UD-13
1/2	.4997/.4987	19/32	.5948/.5941	.250 .375 .500 .625 .875	SE41UD-14 SE41UD-15 SE41UD-16 SE41UD-17 SE41UD-18
5/8	.6247/.6237	23/32	.7199/.7191	.500 .750	SE41UD-19 SE41UD-20
3/4	.7497/.7485	7/8	.8761/.8753	.375 .500 .625 .750 1.000	SE41UD-21 SE41UD-22 SE41UD-23 SE41UD-24 SE41UD-25
1	.9997/.9985	1-1/8	1.1261/1.1253	.500 1.000	SE41UD-26 SE41UD-27

# LINEAR BALL BEARINGS

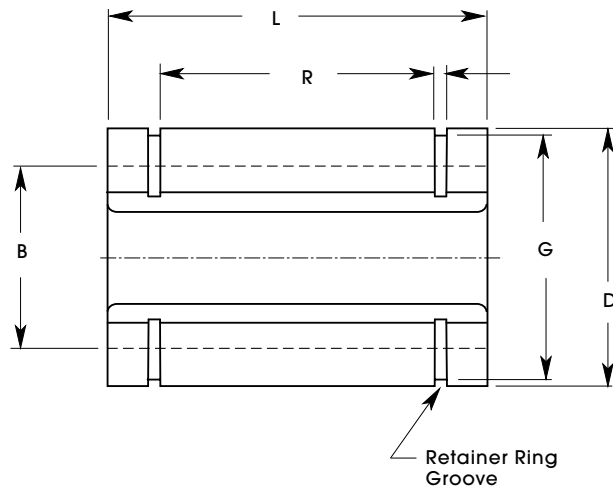
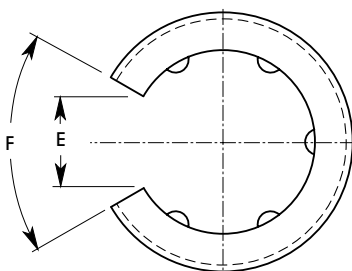
Stainless Steel • Chrome Steel  
Bores 1/4" thru 1"



WORKING BORE B	OUTSIDE DIAMETER D	L	± .015 R	W	G	RATED LOAD (LBS)	RECOMMENDED FITS		CATALOG NUMBER/MATL	
							NORMAL +.0005	PRESS +.0005	STAINLESS	CHROME
.1250 -.0003	.3125 -.0004	.50	.312	.029	.290	7	.3125	.3115	SEBML-125	SEBML-125C
.1875 -.0003	.3750 -.0004	.56	.375	.029	.352	9	.3750	.3740	SEBML-187	SEBML-187C
.2500 -.0005	.5000 -.0004	.75	.437	.039	.468	25	.5000	.4990	SEBML-1	SEBML-1C
.3750 -.0005	.6250 -.0004	.88	.562	.039	.588	51	.6250	.6240	SEBML-2	SEBML-2C
.5000 -.0005	.8750 -.0004	1.25	.875	.046	.821	102	.8750	.8740	SEBML-3	SEBML-3C
.7500 -.0005	1.2500 -.0004	1.63	1.062	.056	1.176	205	1.2500	1.2490	SEBML-4	SEBML-4C
1.0000 -.0005	1.5625 -.0004	2.25	1.625	.068	1.468	385	1.5625	1.5615	SEBML-5	SEBML-5C

# LINEAR BALL BEARINGS OPEN STYLE

Stainless Steel  
Bores 1/2" thru 2"



BORE B (BEFORE ADJUSTMENT)	HOUSING BORE D REF	L	± .015 R	W	G	RATED LOAD (LBS)	MINIMUM SLOT		CATALOG NUMBER
							WIDTH E	ANGLE F	
.5000 ±.0005	.875 +.001	1.25	.875	.046	.821	102	.28	60°	SEDML-3
.7500 ±.0005	1.250 +.001	1.63	1.062	.056	1.176	205	.41	60°	SEDML-4
1.0000 ±.0005	1.562 +.001	2.25	1.625	.068	1.468	385	.56	60°	SEDML-5
1.2500 ±.0005	2.000 +.001	2.63	1.875	.068	1.886	540	.63	50°	SEDML-6
1.5000 ±.0005	2.375 +.001	3.00	2.250	.086	2.239	750	.75	50°	SEDML-7
2.0000 ±.0005	3.000 +.001	4.00	3.000	.103	2.838	1080	1.00	50°	SEDML-8