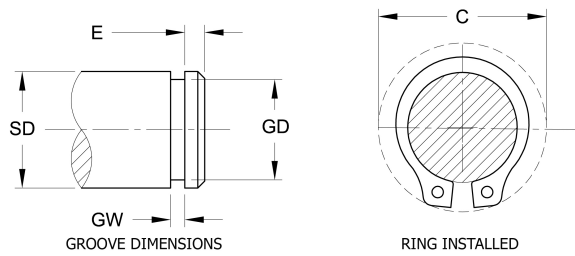


S&M Series XB External Basic Ring	SHAFT DIAMETER			RING DIMENSIONS																	
	DEC. EQUIV. INCH	FRAC. EQUIV. INCH	MM	FREE DIAMETER		THICKNESS		LARGE SECTION		SMALL SECTION		LUG		HOLE DIAMETER							
				SD	TOL.	T	TOL.	L	TOL.	S	TOL.	U	TOL.	H	TOL.						
XB0012	.125	1/8	3.18	.112	+ .002 - .004	.010	+/- .001	.018	+/- .0015	.011	+/- .0015	.046	+/- .002	.026	+ .010 - .002						
XB0015	.156	5/32	3.97	.142		.010	.026	.016		.054		.026									
XB0018	.188	3/16	4.76	.168		.015	.025	.016		.050		.025									
XB0019	.197		5.00	.179		.015	.026	.016		.056		.026									
XB0021	.219	7/32	5.56	.196		.015	.028	.017		.056		.026									
XB0023	.236	15/64	6.00	.215		.015	.030	.019		.056		.026									
XB0025	.250	1/4	6.35	.225		.025	.035	.025		.080		.041									
XB0027	.276		7.00	.250		.025	.035	.024		.081		.041									
XB0028	.281	9/32	7.14	.256		.025	.038	.0255		.080		.041									
XB0031	.312	5/16	7.94	.281		.025	.040	.026		.087		.041									
XB0034	.344	11/32	8.73	.309	.025	.042	.0265	.087	.041												
XB0035	.354		9.00	.320	.025	.046	.029	.087	.041												
XB0037	.375	3/8	9.53	.338	+ .002 - .005	.025	+/- .003	.050	+/- .003	.0305	+/- .003	.088	+/- .003	.041	+ .010 - .002						
XB0039	.394		10.00	.354		.025		.052		.031		.087		.041							
XB0040	.406	13/32	10.32	.366		.025		.054		.033		.087		.041							
XB0043	.438	7/16	11.11	.395		.025		.055		.033		.088		.041							
XB0046	.469	15/32	11.91	.428		.025		.060		.035		.088		.041							
XB0050	.500	1/2	12.70	.461		.035		.065		.040		.108		.047							
XB0055	.551		14.00	.509		.035		.053		.036		.108		.047							
XB0056	.562	9/16	14.29	.521		.035		.072		.041		.108		.047							
XB0059	.594	19/32	15.08	.550		.035		.076		.043		.109		.047							
XB0062	.625	5/8	15.88	.579		.035		+/- .002		.080		.110		.047							
XB0066	.669		17.00	.621	.035	.082	.043		.110	.047											
XB0068	.688	11/16	17.07	.635	+ .005 - .010	.042	+/- .004		.084	+/- .004	.048	+/- .004	.136	+/- .004	.052	+ .015 - .002					
XB0075	.750	3/4	19.05	.693		.042			.092		.051		.136		.052						
XB0078	.781	25/32	19.84	.722		.042			.094		.052		.136		.052						
XB0081	.812	13/16	20.64	.751		.042			.096		.054		.136		.052						
XB0087	.875	7/8	22.23	.810		.042			.104		.057		.137		.052						
XB0093	.938	15/16	23.81	.867		.042			.110		.063		.166		.078						
XB0098	.984	63/64	25.00	.910		.042			.114		.0645		.167		+/- .004		.078	+ .015 - .002			
XB0100	1.000	1	25.40	.925		.042			.116		.065		.167				.078				
XB0102	1.023		26.00	.946		.042		.118	.066		.168		.078								
XB0106	1.062	1 1/16	26.99	.982		+ .010 - .015		.050	+/- .005		.122		+/- .005				.069		+/- .005	.181	+ .015 - .002
XB0112	1.125	1 1/8	28.58	1.041	.050		.128	.071		.182	.078										
XB0118	1.188	1 3/16	30.16	1.098	.050		.132	.072		.182	.078										
XB0125	1.250	1 1/4	31.75	1.156	+ .010 - .015		.050	+/- .006		.140	+/- .006	.076		+/- .006		.183	+ .015 - .002				
XB0131	1.312	1 5/16	33.34	1.214			.050			.146		.0765				.183				.078	
XB0137	1.375	1 3/8	34.93	1.272			.050			.152		.082				.184				.078	
XB0143	1.438	1 7/16	36.51	1.333			.050			.160		.086				.184				.078	

Installation: rings should not be over-expanded during installation. If groove has been machined to recommended diameter, play between the ring and groove after installation indicates the ring has been expanded excessively; this may lead to application failure. *C=Ring clearance diameter after ring is applied into groove.
 For plated, phosphate-coated, and stainless steel rings, the maximum ring thickness will not exceed the minimum groove width (GW) minus .0002".



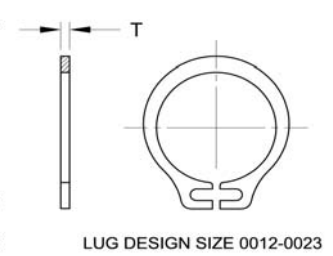
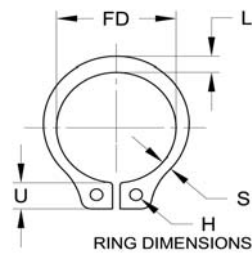
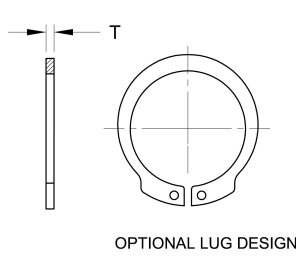
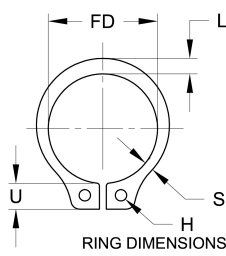
APPROX. WT. PER 1000 RINGS (Lbs.)	ROCKWELL HARDNESS (CARBON STEEL W/O PLATING)	Static Thrust Load (Lbs.) Sharp Corner Abutment		RING CLEARANCE	GROOVE DIMENSIONS				EDGE MARGIN	S&M Series XB External Basic Ring
		RING	GROOVE		DIAMETER		WIDTH			ASME-B18-27-1NA1 MIL-R-21248 MS-16624
					TR	TG**	*C	GD		
.02	15N 77.0-82.0	105	35	.22	.117	+/- .0015 .0015	.012	+ .002 - .000	.012	XB0012
.04	15N 77.0-82.0	135	50	.27	.146		.012		.015	XB0015
.06	15N 77.0-82.0	240	75	.30	.175		.018		.018	XB0018
.07	15N 77.0-82.0	255	85	.32	.185		.018		.018	XB0019
.08	15N 77.0-82.0	280	105	.33	.205		.018		.021	XB0021
.09	15N 77.0-82.0	305	120	.36	.222	.018	.021	XB0023		
.22	30N 69.5-73.0	585	175	.45	.230	+/- .002 .002	.029	+ .003 - .000	.030	XB0025
.23	30N 69.5-73.0	650	195	.48	.255		.029		.031	XB0027
.25	30N 69.5-73.0	660	195	.49	.261		.029		.030	XB0028
.28	30N 69.5-73.0	735	240	.54	.290		.029		.033	XB0031
.31	30N 69.5-73.0	810	265	.57	.321		.029		.033	XB0034
.35	30N 69.5-73.0	830	295	.58	.330		.029		.036	XB0035
.38	30N 69.5-73.0	880	315	.60	.352		.029		.036	XB0037
.40	30N 69.5-73.0	925	330	.62	.369		.029		.037	XB0039
.43	30N 69.5-73.0	950	345	.63	.382		.029		.036	XB0040
.50	30N 69.5-73.0	1030	400	.66	.412		.029		.039	XB0043
.55	30N 69.5-73.0	1100	430	.69	.443	.029	.039	XB0046		
.90	30N 67.5-71.0	1650	560	.77	.468	+/- .002 .004	.039	+ .003 - .000	.048	XB0050
.89	30N 67.5-71.0	1810	620	.81	.519		.039		.048	XB0055
1.10	30N 67.5-71.0	1850	640	.83	.530		.039		.048	XB0056
1.18	30N 67.5-71.0	1960	720	.86	.559		.039		.052	XB0059
1.25	30N 67.5-71.0	2000	800	.90	.588		.039		.055	XB0062
1.37	30N 67.5-71.0	2200	950	.994	.629	.039	.060	XB0066		
1.81	30N 67.5-71.0	3400	1000	1.01	.646	+/- .003 .004	.046	+ .003-- .000	.063	XB0068
2.12	30N 67.5-71.0	3700	1200	1.09	.704		.046		.069	XB0075
2.25	30N 67.5-71.0	3800	1300	1.12	.733		.046		.072	XB0078
2.45	30N 67.5-71.0	4000	1400	1.15	.762		.046		.075	XB0081
2.72	C 49-53	4300	1600	1.22	.821		+/- .003 .004		.046	+ .003-- .000
3.20	C 49-53	4600	1800	1.34	.882	.046		.084	XB0093	
3.42	C 49-53	4800	2000	1.40	.926	.046		.087	XB0098	
3.55	C 49-53	4900	2100	1.41	.940	.046		.090	XB0100	
3.76	C 49-53	5000	2200	1.43	.961	.046		.093	XB0102	
4.65	C 48-52	6200	2400	1.49	.998	+/- .004 .004	.056	+/- .004- .000	.096	XB0106
5.12	C 48-52	6600	2600	1.56	1.059		.056		.099	XB0112
5.55	C 48-52	6900	2900	1.62	1.118		.056		.105	XB0118
6.10	C 48-52	7300	3200	1.69	1.176		.056		.111	XB0125
6.65	C 48-52	7700	3700	1.75	1.232		.056		.120	XB0131
7.15	C 48-52	8000	4000	1.81	1.291		.056		.126	XB0137
7.86	C 48-52	8400	4400	1.88	1.350		.056		.132	XB0143

TG **=Groove wall thrust loads shown are for grooves machined in cold-rolled steel with a tensile yield strength of 45,000 psi.

For shaft material with greater or lesser yield strength, groove wall thrust load increases or decreases proportionally.

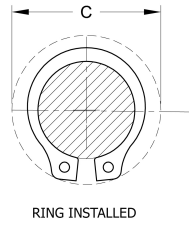
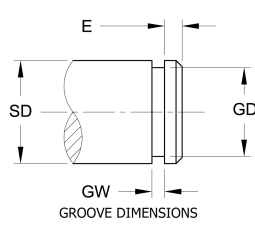
Standard Material= is Carbon Spring Steel (SAE 1060-1090)

Standard finish= Oil-dipped



S&M Series XB External Basic Ring	SHAFT DIAMETER			RING DIMENSIONS											
	DEC. EQUIV. INCH	FRAC. EQUIV. INCH	MM	FREE DIAMETER		THICKNESS		LARGE SECTION		SMALL SECTION		LUG		HOLE DIAMETER	
				FD	TOL.	T	TOL.	L	TOL.	S	TOL.	U	TOL.	H	TOL.
ASME-B18-27-1NA1 MIL-R-21248 MS-16624	SD	SD	SD	FD	TOL.	T	TOL.	L	TOL.	S	TOL.	U	TOL.	H	TOL.
XB0150	1.500	1 1/2	38.10	1.387		.050	+/- .002	.168		.091		.214		.120	
XB0156	1.562	1 9/16	39.69	1.446		.062		.172	+/- .006	.093	+/- .006	.235		.125	
XB0162	1.625	1 5/8	41.28	1.503		.062		.180		.097		.235		.125	
XB0168	1.688	1 11/16	42.86	1.560		.062		.184		.099		.235		.125	
XB0175	1.750	1 3/4	44.45	1.618	+ .013	.062	+/- .003	.188		.101		.237		.125	
XB0177	1.772		45.00	1.637	- .020	.062		.190		.102		.237	+/- .004	.125	
XB0181	1.812	1 13/16	46.04	1.675		.062		.192		.102		.238		.125	
XB0187	1.875	1 7/8	47.63	1.735		.062		.196		.104		.239		.125	
XB0196	1.969	1 31/32	50.00	1.819		.062		.200		.106		.245		.125	
XB0200	2.000	2	50.80	1.850		.062		.204		.108		.239		.125	
XB0206	2.062	2 1/16	52.39	1.906		.078		.208		.111		.266		.125	+ .015
XB0212	2.125	2 1/8	53.98	1.964		.078		.212		.113		.266		.125	- .002
XB0215	2.156	2 5/32	54.77	1.993		.078		.212		.113		.266		.125	
XB0225	2.250	2 1/4	57.15	2.081	+ .015	.078		.220		.116		.267		.125	
XB0231	2.312	2 5/16	58.74	2.139	- .025	.078		.222		.118		.267		.125	
XB0237	2.375	2 3/8	60.33	2.197		.078		.224		.119		.267		.125	
XB0243	2.438	2 7/16	61.91	2.255		.078		.228		.120		.268		.125	
XB0250	2.500	2 1/2	63.50	2.313		.078		.232	+/- .007	.122	+/- .007	.268		.125	
XB0255	2.559		65.00	2.377		.078		.238		.125		.268		.125	
XB0262	2.625	2 5/8	66.68	2.428		.078		.242		.127		.268		.125	
XB0268	2.688	2 11/16	68.26	2.485	+ .020	.078		.246		.129		.268		.125	
XB0275	2.750	2 3/4	69.85	2.543	- .030	.093		.248		.131		.310		.125	
XB0287	2.875	2 7/8	73.03	2.659		.093		.256		.133		.308		.125	
XB0293	2.938	2 15/16	74.61	2.717		.093		.260		.136		.308		.125	
XB0300	3.000	3	76.20	2.775		.093		.264		.138		.308	+/- .005	.125	
XB0306	3.062	3 1/16	77.79	2.832		.093		.252		.131		.298		.125	
XB0312	3.125	3 1/8	79.38	2.892		.093		.272	+/- .008	.141	+/- .008	.308		.125	
XB0315	3.156	3 5/32	80.17	2.920		.093		.274		.143		.308		.125	
XB0325	3.250	3 1/4	82.55	3.006		.093		.280		.145		.308		.125	
XB0334	3.346	3 11/32	85.00	3.092		.093		.286		.147		.308		.125	
XB0343	3.438	3 7/16	87.31	3.179		.093		.292		.148		.308		.125	
XB0350	3.500	3 1/2	88.90	3.237		.109		.285		.148		.328		.125	
XB0354	3.543		90.00	3.277	+ .020	.109		.288	+/- .008	.149	+/- .008	.328	+/- .005	.125	
XB0362	3.625	3 5/8	92.08	3.352	- .030	.109	+/- .003	.296		.153		.328		.125	
XB0368	3.688	3 11/16	93.66	3.410		.109		.302		.156		.330		.125	
XB0375	3.750	3 3/4	95.25	3.468		.109		.310		.160		.332		.125	
XB0387	3.875	3 7/8	98.43	3.584		.109		.318		.163		.330		.125	

Installation: rings should not be over-expanded during installation. If groove has been machined to recommended diameter, play between the ring and groove after installation indicates the ring has been expanded excessively; this may lead to application failure. *C=Ring clearance diameter after ring is applied into groove.
 For plated, phosphate-coated, and stainless steel rings, the maximum ring thickness will not exceed the minimum groove width (GW) minus .0002".



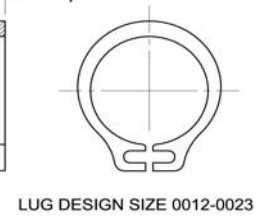
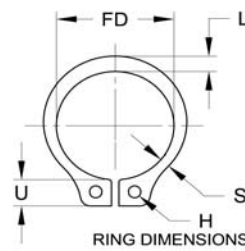
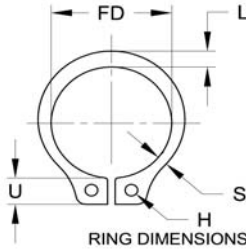
APPROX. WT. PER 1000 RINGS (Lbs.)	ROCKWELL HARDNESS (CARBON STEEL W/O PLATING)	Static Thrust Load (Lbs.) Sharp Corner Abutment		RING CLEARANCE	GROOVE DIMENSIONS				EDGE MARGIN	S&M Series XB External Basic Ring
		RING	GROOVE		DIAMETER		WIDTH			ASME-B18-27-1NA1 MIL-R-21248 MS-16624
		TR	TG**		*C	GD	TOL.	GW		TOL.
8.81	C 48-52	8800	4900	2.00	1.406	+/- .005	.056	+ .004 - .000	.141	XB0150
11.9	C 48-52	11400	5100	2.10	1.468		.068		.141	XB0156
13.0	C 48-52	11800	5500	2.17	1.529		.068		.144	XB0162
14.1	C 48-52	12000	5800	2.23	1.589		.068		.148	XB0168
14.9	C 48-52	12700	6100	2.31	1.650		.068		.150	XB0175
15.1	C 48-52	12900	6300	2.34	1.669		.068		.154	XB0177
15.7	C 48-52	13200	6600	2.38	1.708		.068		.156	XB0181
16.5	C 48-52	13600	7000	2.44	1.769		.068		.159	XB0187
17.3	C 48-52	14300	7700	2.55	1.857		.068		.168	XB0196
18.5	C 48-52	14600	8000	2.57	1.886		.068		.171	XB0200
24.0	C 48-52	18900	8400	2.63	1.946	+/- .006	.086	+/- .005 - .000	.174	XB0206
25.0	C 48-52	19500	9100	2.72	2.003		.086		.183	XB0212
25.5	C 48-52	19800	9400	2.75	2.032		.086		.186	XB0215
26.5	C 48-52	20600	10300	2.86	2.120		.086		.195	XB0225
27.5	C 48-52	21300	10900	2.95	2.178	+/- .006 .006	.086	+ .005 - .000	.201	XB0231
28.5	C 48-52	21800	11400	3.01	2.239		.086		.204	XB0237
29.0	C 48-52	22400	11800	3.07	2.299		.086		.207	XB0243
30.0	C 48-52	22900	12300	3.13	2.360		.086		.210	XB0250
32.8	C 48-52	23500	12600	3.19	2.419		.086		.210	XB0255
34.0	C 48-52	24100	13300	3.25	2.481		.086		.216	XB0262
35.0	C 48-52	24700	13800	3.32	2.541		.086		.219	XB0268
46.0	C 48-52	30100	14300	3.47	2.602		.103		.222	XB0275
47.0	C 48-52	31400	15600	3.59	2.721		.103		.231	XB0287
49.0	C 48-52	32100	16400	3.65	2.779		.103		.237	XB0293
51.0	C 48-52	32800	17100	3.71	2.838	.103	.243	XB0300		
53.0	C 48-52	33500	17700	3.75	2.898	.103	.246	XB0306		
56.0	C 48-52	34200	18500	3.84	2.957	.103	.252	XB0312		
58.0	C 48-52	34500	18900	3.87	2.986	.103	.255	XB0315		
61.0	C 48-52	35600	19900	3.96	3.076	.103	.261	XB0325		
63.0	C 48-52	36600	21200	4.06	3.166	.103	.270	XB0334		
65.0	C 48-52	37600	21800	4.15	3.257	+/- .006 .006	.103	+ .005 - .000	.270	XB0343
71.0	C 47-51	44900	22700	4.27	3.316		.120		.276	XB0350
72.0	C 47-51	45400	23200	4.31	3.357		.120		.279	XB0354
75.0	C 47-51	46500	24300	4.39	3.435		.120		.285	XB0362
78.0	C 47-51	47300	25200	4.45	3.493		.120		.291	XB0368
82.0	C 45-50	48100	26200	4.53	3.552		.120		.297	XB0375
87.0	C 45-50	49700	27600	4.63	3.673		.120		.303	XB0387

TG **=Groove wall thrust loads shown are for grooves machined in cold-rolled steel with a tensile yield strength of 45,000 psi.

For shaft material with greater or lesser yield strength, groove wall thrust load increases or decreases proportionally.

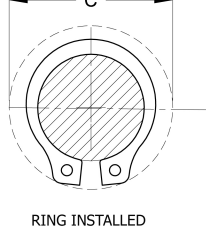
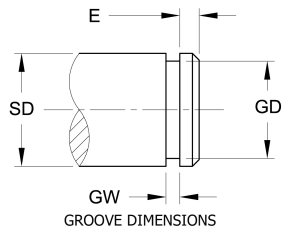
Standard Material= is Carbon Spring Steel (SAE 1060-1090)

Standard finish= Oil-dipped



S&M Series XB External Basic Ring	SHAFT DIAMETER			RING DIMENSIONS												
	DEC. EQUIV. INCH	FRAC. EQUIV. INCH	MM	FREE DIAMETER		THICKNESS		LARGE SECTION		SMALL SECTION		LUG		HOLE DIAMETER		
				FD	TOL.	T	TOL.	L	TOL.	S	TOL.	U	TOL.	H	TOL.	
ASME-B18-27-1NA1 MIL-R-21248 MS-16624																
RING NUMBER	SD	SD	SD	FD	TOL.	T	TOL.	L	TOL.	S	TOL.	U	TOL.	H	TOL.	
XB0393	3.938	3 15/16	100.01	3.642		.109		.318		.163		.342		.125		
XB0400	4.000	4	101.60	3.700		.109		.318		.163		.352		.125		
XB0425	4.250	4 1/4	107.95	3.989		.109		.318		.176		.395		.125		
XB0437	4.375	4 3/8	111.13	4.106		.109		.318		.181		.395		.125	+ .015	
XB0450	4.500	4 1/2	114.30	4.223	+ .020	.109	+/- .003	.285		.128		.404		.125	- .002	
XB0475	4.750	4 3/4	120.65	4.458	- .030	.109		.303		.136		.429		.125		
XB0500	5.000	5	127.00	4.692		.109		.360	+/- .010	.194	+/- .010	.450	+/- .008	.156		
XB0525	5.250	5 1/4	133.35	4.927		.125		.372		.211		.472		.156		
XB0550	5.500	5 1/2	139.70	5.162	+ .020	.125	+/- .004	.390		.209		.497		.156		
XB0575	5.750	5 3/4	146.05	5.396	- .040	.125	- .000	.408		.220		.518		.156		
XB0600	6.000	6	152.40	5.631		.125		.381		.171		.540		.156		
XB0625	6.250	6 1/4	158.75	5.866		.156		.396		.176		.561		.156		
XB0650	6.500	6 1/2	165.10	6.100	+ .020	.156		.438		.236		.586		.156		
XB0675	6.750	6 3/4	171.45	6.335	- .050	.156		.456		.246		.608		.187		
XB0700	7.000	7	177.80	6.570		.156		.474		.256		.530		.187		
XB0725	7.250	7 1/4	184.10	6.775		.187		.490		.267		.660		.187		
XB0750	7.500	7 1/2	190.50	7.009		.187		.507		.277		.676		.187		
XB0775	7.750	7 3/4	196.75	7.243		.187		.523		.285		.660		.187		
XB0800	8.000	8	203.20	7.478		.187		.540		.294		.735		.187		
XB0825	8.250	8 1/4	209.60	7.712	+ .050	.187		.556		.304		.735		.187	+ .020	
XB0850	8.500	8 1/2	215.90	7.947	- .130	.187	+ .008	.573	+/- .015	.314	+/- .015	.735	+/- .012	.187	- .005	
XB0875	8.750	8 3/4	222.30	8.181		.187		.591		.322		.735		.187		
XB0900	9.000	9	228.60	8.415		.187		.609		.333		.735		.187		
XB0925	9.250	9 1/4	234.90	8.650		.187		.625		.341		.735		.187		
XB0950	9.500	9 1/2	241.30	8.885		.187		.642		.350		.735		.187		
XB0975	9.750	9 3/4	247.60	9.120		.187		.658		.358		.735		.187		
XB1000	10.000	10	254.00	9.355		.187		.675		.367		.735		.187		

Installation: rings should not be over-expanded during installation. If groove has been machined to recommended diameter, play between the ring and groove after installation indicates the ring has been expanded excessively; this may lead to application failure. *C=Ring clearance diameter after ring is applied into groove. For plated, phosphate-coated, and stainless steel rings, the maximum ring thickness will not exceed the minimum groove width (GW) minus .0002".



APPROX. WT. PER 1000 RINGS (Lbs.)	ROCKWELL HARDNESS (CARBON STEEL W/O PLATING)	Static Thrust Load (Lbs.) Sharp Corner Abutment		RING CLEARANCE	GROOVE DIMENSIONS				EDGE MARGIN	S&M Series XB External Basic Ring
		RING	GROOVE		DIAMETER		WIDTH			ASME-B18-27-1NA1 MIL-R-21248 MS-16624
		TR	TG**		*C	GD	TOL.	GW		TOL.
93.0	C 45-50	50500	28300	4.77	3.734		.120		.306	XB0393
100.0	C 45-50	51300	29400	4.80	3.792		.120		.312	XB0400
112.0	C 45-50	54600	27600	5.09	4.065	+/- .006	.120	+ .005 - .000	.276	XB0425
115.0	C 45-50	56200	28400	5.22	4.190		.120		.276	XB0437
101.0	C 45-50	57800	30200	5.37	4.310		.120		.285	XB0450
113.0	C 45-50	61000	33600	5.67	4.550		.120		.300	XB0475
149.0	C 45-50	64200	37100	5.96	4.790		.120		.315	XB0500
190.0	C 45-50	77300	40800	6.27	5.030	+/- .007	.139	+ .006 - .000	.330	XB0525
202.5	C 45-50	81000	45500	6.57	5.265		.139		.351	XB0550
220.0	C 45-50	84700	49600	6.86	5.505		.139		.366	XB0575
210.0	C 45-50	88300	53800	7.16	5.745	+/- .008	.139	+ .008 - .000	.381	XB0600
282.0	C 45-50	114800	58300	7.46	5.985		.174		.396	XB0625
330.0	C 45-50	119400	62900	7.87	6.225		.174		.411	XB0650
356.0	C 45-50	124000	67700	8.06	6.465		.174		.426	XB0675
371.0	C 45-50	128600	72700	8.15	6.705		.174		.441	XB0700
510	C 45-50	159700	78900	7.85	6.942		.209		.460	XB0725
534	C 45-50	165200	84800	8.96	7.180		.209		.480	XB0750
545	C 45-50	170700	90450	9.20	7.420		.209		.495	XB0775
640	C 45-50	176200	96100	9.60	7.660		.209		.510	XB0800
665	C 45-50	181700	102100	9.85	7.900		.209		.525	XB0825
692	C 45-50	187200	108100	10.10	8.140	.209	.540	XB0850		
712	C 45-50	192700	114450	10.40	8.380	.209	.555	XB0875		
737	C 45-50	198200	120800	10.60	8.620	.209	.570	XB0900		
760	C 45-50	203700	128225	10.85	8.860	.209	.585	XB0925		
785	C 45-50	209200	134200	11.10	9.100	.209	.600	XB0950		
845	C 45-50	214700	142000	11.35	9.338	.209	.618	XB0975		
910	C 45-50	220200	149800	11.60	9.575	.209	.636	XB1000		

TG **=Groove wall thrust loads shown are for grooves machined in cold-rolled steel with a tensile yield strength of 45,000 psi.

For shaft material with greater or lesser yield strength, groove wall thrust load increases or decreases proportionally.

Standard Material= is Carbon Spring Steel (SAE 1060-1090)

Standard finish= Oil-dipped