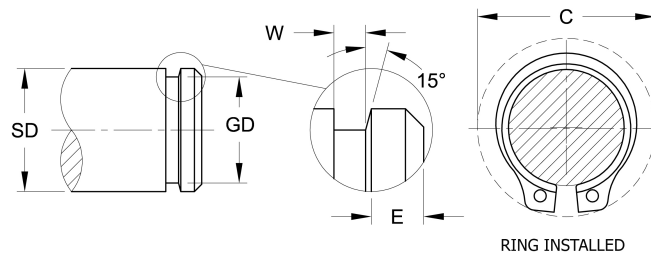


S&M Series XBV External Basic Beveled Ring	SHAFT DIAMETER			RING DIMENSIONS											
	ASME-B18-27-4NA12 MIL-R-21248 MS-16630	DEC. EQUIV. INCH	FRAC. EQUIV. INCH	MM	FREE DIAMETER		THICKNESS		LARGE SECTION		SMALL SECTION		LUG		HOLE DIAMETER
RING NUMBER	SD	SD	SD	FD	TOL.	T	TOL.	L	TOL.	S	TOL.	U	TOL.	H	TOL.
XBV0100	1.000	1	25.4	.925	+ .005	.042		.116	+/- .005	.065	+/- .005	.167		.078	
XBV0102	1.023		26.0	.946	- .010	.042		.118		.066		.168		.078	
XBV0106	1.062	1 1/16	27.0	.982		.050		.122		.069		.181		.078	
XBV0112	1.125	1 1/8	28.6	1.041		.050		.128		.071		.182		.078	
XBV0118	1.188	1 3/16	30.2	1.098		.050	+/- .002	.132		.072		.182		.078	
XBV0125	1.250	1 1/4	31.7	1.156	+ .010	.050		.140		.076		.183		.078	
XBV0131	1.312	1 5/16	33.3	1.214	- .015	.050		.146		.0765		.183		.078	
XBV0137	1.375	1 3/8	34.9	1.272		.050		.152		.082		.184		.078	
XBV0143	1.438	1 7/16	36.5	1.333		.050		.160		.086		.184		.078	
XBV0150	1.500	1 1/2	38.1	1.387		.050		.168		.091		.214	+/- .004	.120	
XBV0156	1.562	1 9/16	39.7	1.446		.062		.172	+/- .006	.093	+/- .006	.235		.125	
XBV0162	1.625	1 5/8	41.3	1.503		.062		.180		.097		.235		.125	
XBV0168	1.688	1 11/16	42.9	1.560		.062		.184		.099		.235		.125	
XBV0175	1.750	1 3/4	44.4	1.618		.062		.188		.101		.237		.125	
XBV0177	1.772		45.0	1.637	+ .013	.062		.190		.102		.237		.125	
XBV0181	1.812	1 13/16	46.0	1.675	- .020	.062		.192		.102		.238		.125	
XBV0187	1.875	1 7/8	47.6	1.735		.062		.196		.104		.239		.125	+ .015
XBV0196	1.969	1 31/32	50.0	1.819		.062		.200		.106		.245		.125	- .002
XBV0200	2.000	2	50.8	1.850		.062		.204		.108		.239		.125	
XBV0206	2.062	2 1/16	52.4	1.906		.078		.208		.111		.266		.125	
XBV0212	2.125	2 1/8	54.0	1.964		.078		.212		.113		.266		.125	
XBV0215	2.156	2 5/32	54.8	1.993		.078	+/- .003	.212		.113		.266		.125	
XBV0225	2.250	2 1/4	57.1	2.081	+ .015	.078		.220		.116		.267		.125	
XBV0231	2.312	2 5/16	58.7	2.139	- .025	.078		.222		.118		.267		.125	
XBV0237	2.375	2 3/8	60.3	2.197		.078		.224		.119		.267		.125	
XBV0243	2.438	2 7/16	61.9	2.255		.078		.228		.120		.268		.125	
XBV0250	2.500	2 1/2	63.5	2.313		.078		.232	+/- .007	.122	+/- .007	.268	+/- .005	.125	
XBV0255	2.559		65.0	2.377		.078		.238		.125		.268		.125	
XBV0262	2.625	2 5/8	66.7	2.428		.078		.242		.127		.268		.125	
XBV0268	2.688	2 11/16	68.3	2.485		.078		.246		.129		.268		.125	
XBV0275	2.750	2 3/4	69.8	2.543	+ .020	.093		.248		.131		.310		.125	
XBV0287	2.875	2 7/8	73.0	2.659	- .030	.093		.256		.133		.308		.125	
XBV0293	2.938	2 15/16	74.6	2.717		.093		.260		.136		.308		.125	
XBV0300	3.000	3	76.2	2.775		.093		.264		.138		.308		.125	
XBV0306	3.062	3 1/16	77.8	2.832		.093		.252		.131		.298		.125	
XBV0312	3.125	3 1/8	79.4	2.892		.093		.272		.141		.308		.125	
XBV0315	3.156	3 5/32	80.2	2.920		.093		.274		.143		.308		.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 .002".



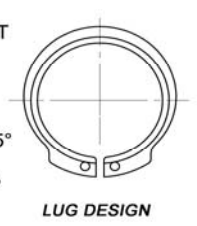
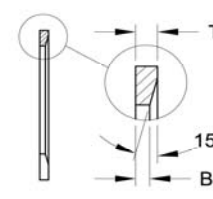
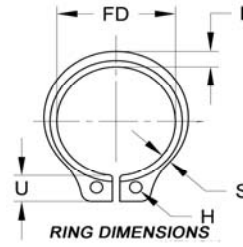
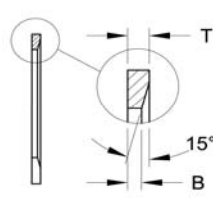
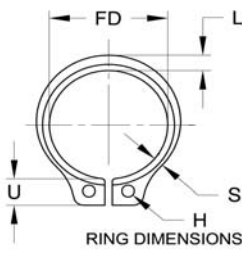
BEVELED EDGE THICKNESS		APPROX. WT. PER 1000 RINGS (Lbs.)	ROCKWELL HARDNESS (CARBON STEEL W/O PLATING)	Static Thrust Load (Lbs.) Sharp Corner Abutment		RING CLEARANCE	GROOVE DIMENSIONS				EDGE MARGIN	S&M Series XBV External Basic Beveled Ring	
				RING	GROOVE		DIAMETER		WIDTH			ASME-B18-27-4NA12 MIL-R-21248 MS-16630	
B	TOL.			TR	TG**	*C	GD	TOL.	GW	TOL.	E	RING NUMBER	
.034	+/- .001	3.6	30N 66-71	4950	1200	1.38	.930	+ .000 - .003	.037	+ .001 - .000	.052	XBV0100	
.033		3.9	30N 66-71	5050	1300	1.40	.951	.004	.036		.054	XBV0102	
.041		4.8	C 47-52	6200	1300	1.47	.992	+ .000 - .004	.044		.052	XBV0106	
.041		5.1	C 47-52	6600	1450	1.52	1.051		.044		.055	XBV0112	
.041		5.6	C 47-52	7000	1650	1.57	1.108		.044		.060	XBV0118	
.040		5.9	C 47-52	7350	1850	1.65	1.166		.043		.063	XBV0125	
.039		6.8	C 47-52	7750	2000	1.71	1.224	.005	.042		.066	XBV0131	
.039		7.2	C 47-52	8100	2250	1.76	1.282	+ .000 - .005 .005	.042		.069	XBV0137	
.039		8.1	C 47-52	8500	2450	1.83	1.343		.042		.070	XBV0143	
.038		9.0	C 47-52	8800	2700	1.95	1.397		.041		.076	XBV0150	
.049		12.4	C 47-52	11400	2900	2.05	1.459		.053		.076	XBV0156	
.049		13.2	C 47-52	11850	3100	2.13	1.516		.053		.081	XBV0162	
.048		14.8	C 47-52	12350	3400	2.20	1.573		+ .000 - .005		.052	.085	XBV0168
.048		15.3	C 47-52	12800	3650	2.26	1.631				.052	.088	XBV0175
.048		15.4	C 47-52	12950	3750	2.28	1.650				.052	.090	XBV0177
.048		16.2	C 47-52	13250	3950	2.33	1.688				.052	.093	XBV0181
.048		17.3	C 47-52	13700	4200	2.39	1.748		.052		.094	XBV0187	
.047		18.0	C 47-52	14350	4700	2.48	1.832	.051	.102		XBV0196		
.047		19.0	C 47-52	14600	4800	2.49	1.863	.051	.102		XBV0200		
.062		+/- .0015	25.0	C 47-52	18950	5100	2.62	1.921	+ .000 - .006 .006		.067	+ .0015 - .000	.105
.062	26.1		C 47-52	19500	5450	2.68	1.979	.067		.109	XBV0212		
.062	26.3		C 47-52	19800	5600	2.71	2.008	.067		.111	XBV0215		
.061	27.7		C 47-52	20700	6100	2.80	2.096	.066		.115	XBV0225		
.060	28.0		C 47-52	21200	6300	2.87	2.154	.065		.118	XBV0231		
.060	29.2		C 47-52	21800	6800	2.94	2.212	.065		.121	XBV0237		
.060	29.5		C 47-52	22400	7100	3.00	2.270	.065		.126	XBV0243		
.059	29.7		C 47-52	23000	7500	3.04	2.328	.064		.129	XBV0250		
.059	33.9		C 47-52	23500	7300	3.10	2.397	.064		.121	XBV0255		
.059	35.0		C 47-52	24100	8200	3.17	2.448	.064		.132	XBV0262		
.059	36.0	C 47-52	24700	8600	3.24	2.505	.064	.136	XBV0268				
.073	+/- .002	47.0	C 47-52	30100	9000	3.37	2.563	.006	.079	- .000	.139	XBV0275	
.072		48.5	C 47-52	31500	9900	3.48	2.679		.078		.147	XBV0287	
.072		50.0	C 47-52	32200	10300	3.55	2.737		.078		.150	XBV0293	
.071		52.0	C 47-52	32900	10700	3.59	2.795		.077		.153	XBV0300	
.071		47.0	C 47-52	33500	11200	3.64	2.852		.077		.157	XBV0306	
.070		58.0	C 47-52	34300	11700	3.73	2.912		.076		.159	XBV0312	
.070		59.0	C 47-52	34600	11900	3.75	2.940		.076		.162	XBV0315	

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



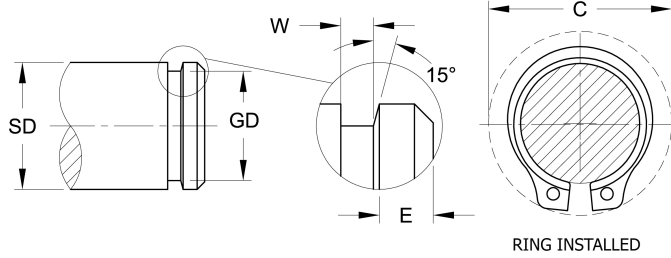
RING DIMENSIONS

RING DIMENSIONS

LUG DESIGN

S&M Series XBV External Basic Beveled Ring	SHAFT DIAMETER			RING DIMENSIONS											
	ASME-B18-27-4NA12 MIL-R-21248 MS-16630	DEC. EQUIV. INCH	FRAC. EQUIV. INCH	MM	FREE DIAMETER		THICKNESS		LARGE SECTION		SMALL SECTION		LUG		HOLE DIAMETER
RING NUMBER	SD	SD	SD	FD	TOL.	T	TOL.	L	TOL.	S	TOL.	U	TOL.	H	TOL.
XBV0325	3.250	3 1/4	82.5	3.006		.093		.280		.145		.308		.125	
XBV0334	3.346	3 11/32	85.0	3.092		.093		.286		.147		.308		.125	
XBV0350	3.500	3 1/2	88.9	3.237		.109		.285		.148		.328		.125	
XBV0354	3.543		90.0	3.277		.109		.288	+/- .008	.149	+/- .008	.328	+/- .005	.125	
XBV0362	3.625	3 5/8	92.1	3.352		.109	+/- .003	.296		.153		.328		.125	+ .015
XBV0368	3.688	3 11/16	93.7	3.410	+ .020	.109		.302		.156		.330		.125	- .002
XBV0375	3.750	3 3/4	95.2	3.468	- .030	.109		.310		.160		.332		.125	
XBV0387	3.875	3 7/8	98.4	3.584		.109		.318		.163		.330		.125	
XBV0393	3.938	3 15/16	100.0	3.642		.109		.318		.163		.342		.125	
XBV0400	4.000	4	101.6	3.700		.109		.318		.163		.352		.125	
XBV0425	4.250	4 1/4	108.0	3.989		.109		.318		.176		.395		.125	
XBV0437	4.375	4 3/8	111.1	4.106		.109		.318		.181		.395		.125	
XBV0450	4.500	4 1/2	114.3	4.223		.109		.285		.128		.404		.125	
XBV0475	4.750	4 3/4	120.6	4.458		.109		.303		.136		.429		.125	
XBV0500	5.000	5	127.0	4.692		.109		.360	+/- .010	.194	+/- .010	.450	+/- .008	.156	
XBV0525	5.250	5 1/4	133.3	4.927		.125		.372		.211		.472		.156	
XBV0550	5.500	5 1/2	139.7	5.162	+ .020	.125	+/- .004	.390		.209		.497		.156	
XBV0575	5.750	5 3/4	146.0	5.396	- .040	.125		.408		.220		.518		.156	
XBV0600	6.000	6	152.4	5.631		.125		.381		.171		.540		.156	
XBV0625	6.250	6 1/4	158.7	5.866		.156		.396		.176		.561		.156	
XBV0650	6.500	6 1/2	165.1	6.100	+ .020	.156		.438		.236		.586		.156	+ .020
XBV0675	6.750	6 3/4	171.4	6.335	- .050	.156		.456		.246		.608		.187	- .005
XBV0700	7.000	7	177.8	6.570		.156		.474		.256		.629		.187	
XBV0750	7.500	7 1/2	190.5	7.039		.187	+/- .005	.507	+/- .015	.269	+/- .015	.676	+/- .012	.187	
XBV0800	8.000	8	203.2	7.508		.187		.540		.287		.722		.187	
XBV0850	8.500	8 1/2	215.9	7.977	+ .020	.187		.573		.305		.766		.187	
XBV0900	9.000	9	228.6	8.445	- .060	.187		.609		.324		.812		.187	
XBV0950	9.500	9 1/2	241.3	8.915		.187		.642		.347		.854		.187	
XBV1000	10.000	10	254.0	9.385		.187		.675		.357		.900		.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".



BEVELED EDGE THICKNESS		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 XBV External Basic Beveled Ring ASME-B18-27-4NA12 MIL-R-21248 MS-16630			
				RING	GROOVE		DIAMETER		WIDTH						
B	TOL.			TR	TG**	*C	GD	TOL.	GW	TOL.	E	RING NUMBER			
.070		62.0	C 47-52	35600	12700	3.85	3.026		.076		.168	XBV0325			
.069		64.0	C 47-52	36700	13600	3.94	3.112		.075		.175	XBV0334			
.084	+/- .0025	72.0	C 44-51	44900	14800	4.14	3.257	+ .000	.091	+ .002	.181	XBV0350			
.084		73.0	C 44-51	45500	15200	4.18	3.297		.091		.184	XBV0354			
.083		76.0	C 44-51	46600	16300	4.25	3.372		.090		.189	XBV0362			
.083		80.0	C 44-51	47300	16500	4.31	3.430		-.006		.090	.193	XBV0368		
.082		83.0	C 44-51	48100	17200	4.38	3.488		.006		.089	.196	XBV0375		
.082		88.0	C 44-51	49700	18300	4.47	3.604		.089		.202	XBV0387			
.081		95.0	C 44-51	50600	19000	4.57	3.662		.088		.207	XBV0393			
.081		101.0	C 44-51	51400	19600	4.65	3.720		.088		.210	XBV0400			
.087		112.0	C 44-51	54600	18000	4.98	4.009	.094	-.000		.180	XBV0425			
.087		115.0	C 44-51	56200	19000	5.10	4.126	.094	.186		XBV0437				
.087		101.0	C 44-51	57800	20200	5.25	4.243	.094	.192		XBV0450				
.085		113.0	C 44-51	61000	22700	5.54	4.478	.092	.204		XBV0475				
.084		149.0	C 44-51	64200	25400	5.83	4.712	.091	.216		XBV0500				
.098		+/- .003	190.0	C 44-51	77300	28000	6.12	4.947	+.000		.105	+ .003	.226	XBV0525	
.097			201.0	C 44-51	81000	30800	6.42	5.182	-.007		.104		.238	XBV0550	
.096			199.0	C 44-51	84700	33800	6.70	5.416	.006		.103		.250	XBV0575	
.095	210.0		C 44-51	88300	37000	6.99	5.651	.102	.261	XBV0600					
.124	282.0		C 44-51	114800	40000	7.29	5.886	+ .000	.132	+ .003	.273		XBV0625		
.123	330.0		C 44-51	119400	43500	7.69	6.120		.131		.285		XBV0650		
.122	356.0		C 44-51	124000	47000	7.87	6.355		.130		.295		XBV0675		
.121	388.0		C 44-51	128600	50500	8.16	6.590		.129		.307		XBV0700		
.149	534.0		C 40-47	165200	58000	8.75	7.059		-.008		.158		.330	XBV0750	
.148	628.0		C 40-47	176200	66500	9.33	7.528		.006		.157		-.000	.354	XBV0800
.145	700.0		C 40-47	187200	75000	9.91	7.997		.154		.376		XBV0850		
.144	757.0		C 40-47	198200	86000	10.49	8.465		.153		.400		XBV0900		
.141	820.0		C 40-47	209200	94500	11.06	8.935		.150		.423		XBV0950		
.139	964.0		C 40-47	220200	105000	11.65	9.405		.148		.445		XBV1000		

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