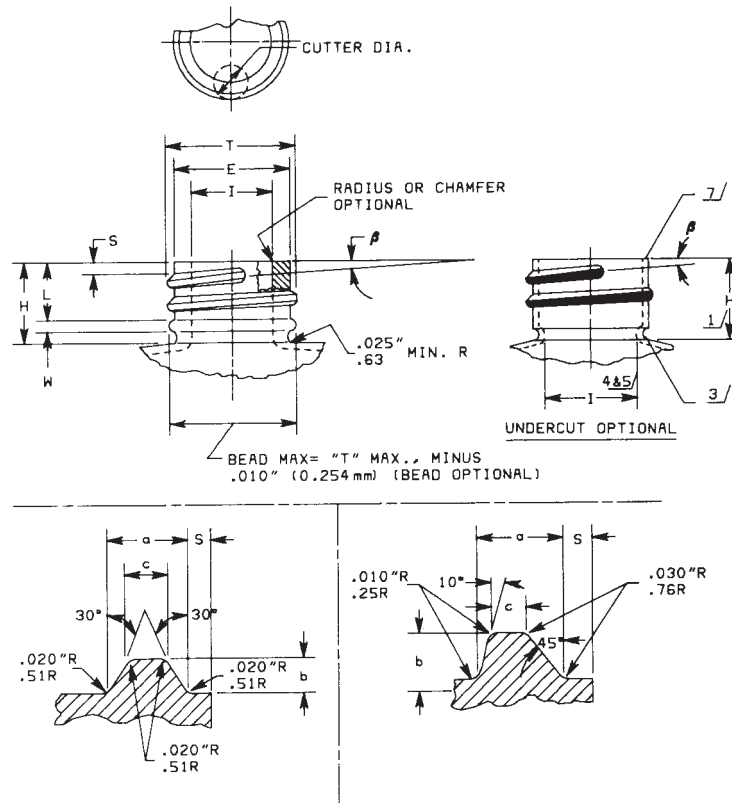


NOTE: DIMENSIONS ARE GIVEN IN INCHES (") & mm



"L" Style All-Purpose Thread (Plastic or Metal Closures)					"M" Style Modified Buttress Thread (Plastic Closures)				
Threads/in.		a	b	c	Threads/in.	a	b	c	
6	in.	0.094	0.047	0.040	6	in.	0.094	0.047	0.039
	mm	2.39	1.19	1.02		mm	2.39	1.19	0.99
8	in.	0.084	0.042	0.036	8	in.	0.084	0.042	0.035
	mm	2.13	1.07	0.91		mm	2.13	1.07	0.89

Example Thread Nomenclature:
 "L" Style: L22SP410
 "M" Style: M22SP410

NOTE 1—Construction of neck from B to D must be held within the shaded area shown.

NOTE 2—A minimum of 1½ turns of thread shall be maintained.

NOTE 3—Unless otherwise specified, I min applies to the full length of the opening.

NOTE 4—Concentricity of I min with respect to diameters T and E is not included. I min is specified for filler tube only.

NOTE 5—T and E dimensions are the average of two measurements across the major and minor axis. The limits of ovality will be determined by the container supplier and container customer, as necessary.

NOTE 6—Consideration must be given to the sealing surface width for the sealing system being used.

NOTE 7—When valve style closures are used with this finish, special consideration must be given to a specific controlled inside diameter. In addition, dimensions indicated with asterisk (*) may be varied to ensure adequate material for finishing the inside diameter.

NOTE 8—Corresponding dimensions and details shown in Table 4.

FIG. 2 SP 410 Finish Thread Cross Sections

which the bottle is setting. Four measurements should be made, each 90° apart and the maximum used as the bottle height.

8.2.2 Using a suitable micrometer or vernier caliper, measure the width and thickness of the bottle.

8.2.2.1 In the case of a rectangular container, use the midpoints of the sides as the measuring points.

TABLE 4 SP-410 Finish for Plastic Bottles

NOTE 1—Top dimension in each column shown in inches. Bottom dimension in each column shown in millimetres.

mm	T ^A		E ^{A,B}		H ^C		L ^D	S		I ^{E,F}	W	Helix Angle, β	Cutter Diameter	Threads ^G per Inch
	max	min	max	min	max	min	min	max	min	min	max			
18	0.704	0.688	0.620	0.604	0.538	0.508	0.361	0.052	0.022	0.325	0.084	3°30'	0.375	8
	17.88	17.47	15.75	15.34	13.66	12.90	9.17	1.32	0.56	8.25	2.13			
20	0.783	0.767	0.699	0.683	0.569	0.539	0.361	0.052	0.022	0.404	0.084	3°7'	0.375	8
	19.89	19.48	17.75	17.35	14.45	13.69	9.17	1.32	0.56	10.26	2.13			
22	0.862	0.846	0.778	0.762	0.600	0.570	0.376	0.052	0.022	0.483	0.084	2°49'	0.375	8
	21.89	21.49	19.76	19.35	15.24	14.48	9.55	1.32	0.56	12.27	2.13			
24	0.940	0.924	0.856	0.840	0.661	0.631	0.437	0.061	0.031	0.516	0.084	2°34'	0.375	8
	23.88	23.47	21.74	21.34	16.79	16.03	11.10	1.55	0.79	13.11	2.13			
28	1.088	1.068	0.994	0.974	0.723	0.693	0.463	0.061	0.031	0.614	0.094	2°57'	0.500	6
	27.63	27.13	25.25	24.74	18.36	17.60	11.76	1.55	0.79	15.59	2.39			

^A T and E dimensions are the average of two measurements across the major and minor axis. The limits of ovality will be determined by the container supplier and container customer, as necessary.

^B Consideration must be given to the sealing surface width for the sealing system being used.

^C Dimension H is measured from the top of the finish to the point where diameter T, extended parallel to the centerline, intersects the shoulder.

^D Contour of bead, undercut, or shoulder is optional. If bead is used, bead diameter and L min must be maintained.

^E Unless otherwise specified, I min applies to the full length of the opening.

^F Concentricity of I min with respect to diameters T and E is not included. I min is specified for filler tube only.

^G A minimum of 1½ full turns of thread shall be maintained.

TABLE 5 SP-415 Finish for Plastic Bottles

NOTE 1—Top dimension in each column shown in inches. Bottom dimension in each column shown in millimetres.

mm	T ^A		E ^{A,B}		H ^C		L ^D	S		I ^{E,F}	W	Helix Angle, β	Cutter Diameter	Threads ^G per Inch
	max	min	max	min	max	min	min	max	min	min	max			
13	0.514	0.502	0.454	0.442	0.467	0.437	0.306	0.052	0.022	0.218	0.045	3°11'	0.375	12
	13.06	12.75	11.53	11.23	11.86	11.10	7.77	1.32	0.56	5.54	1.14			
15	0.581	0.569	0.521	0.509	0.572	0.542	0.348	0.052	0.022	0.258	0.045	2°48'	0.375	12
	14.76	14.45	13.23	12.93	14.53	13.77	8.84	1.32	0.56	6.55	1.14			
18	0.704	0.688	0.620	0.604	0.632	0.602	0.429	0.052	0.022	0.325	0.084	3°30'	0.375	8
	17.88	17.47	15.75	15.34	16.05	15.29	10.90	1.32	0.56	8.25	2.13			
20	0.783	0.767	0.699	0.683	0.757	0.727	0.456	0.052	0.022	0.404	0.084	3°7'	0.375	8
	19.89	19.48	17.75	17.35	19.23	18.47	11.58	1.32	0.56	10.26	2.13			
22	0.862	0.846	0.778	0.762	0.852	0.822	0.546	0.052	0.022	0.483	0.084	2°49'	0.375	8
	21.89	21.49	19.76	19.35	21.64	20.88	13.87	1.32	0.56	12.27	2.13			
24	0.940	0.924	0.856	0.840	0.972	0.942	0.561	0.061	0.031	0.516	0.084	2°34'	0.375	8
	23.88	23.47	21.74	21.34	24.69	23.93	14.25	1.55	0.79	13.11	2.13			
28	1.088	1.068	0.994	0.974	1.097	1.067	0.655	0.061	0.031	0.614	0.094	2°57'	0.500	6
	27.63	27.13	25.25	24.74	27.86	27.10	16.64	1.55	0.79	15.59	2.39			
33	1.265	1.241	1.171	1.147	1.289	1.259	0.772	0.061	0.031	0.791	0.094	2°31'	0.500	6
	32.13	31.52	29.74	29.13	32.74	31.98	19.61	1.55	0.79	20.09	2.39			

^A T and E dimensions are the average of two measurements across the major and minor axis. The limits of ovality will be determined by the container supplier and container customer, as necessary.

^B Consideration must be given to the sealing surface width for the sealing system being used.

^C Dimension H is measured from the top of the finish to the point where diameter T, extended parallel to the centerline, intersects the shoulder.

^D Contour of bead, undercut, or shoulder is optional. If bead is used, bead diameter and L min must be maintained.

^E Unless otherwise specified, I min applies to the full length of the opening.

^F Concentricity of I min with respect to diameters T and E is not included. I min is specified for filler tube only.

^G A minimum of 2 full turns of thread shall be maintained.