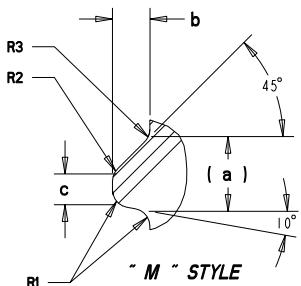
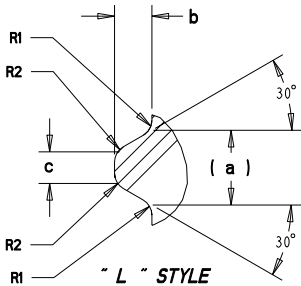
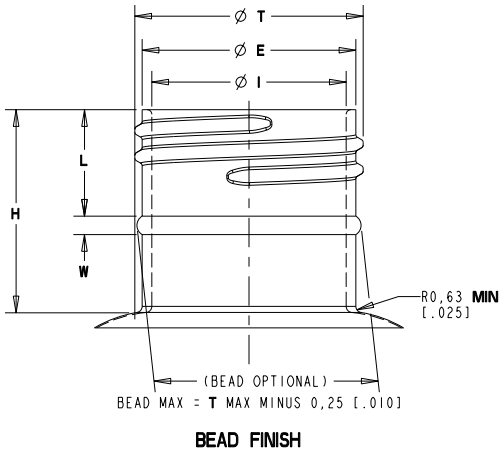
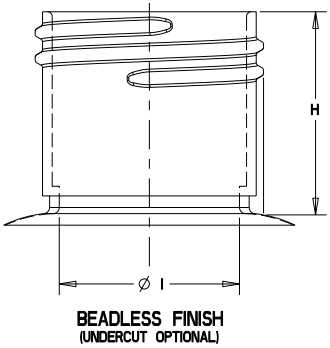


FINISH REV	DATE	DESCRIPTION	BY
000	76/07/04	ORIGINAL SP415 SPECIFICATION	JM
001	99/03/10	SPECIFICATION CONVERTED TO STANDARDIZED FORMAT	JM



L STYLE GENERAL PURPOSE THREAD (Plastic or Metal Closures)					
THDS/IN	( a )	b	c	R1	R2
6	2,39 [.094]	1,19 [.047]	1,02 [.040]	0,50 [.020]	0,50 [.020]
8	2,13 [.084]	1,07 [.042]	0,91 [.036]	0,50 [.020]	0,50 [.020]
12	1,14 [.045]	0,75 [.030]	0,28 [.011]	0,38 [.015]	0,13 [.005]

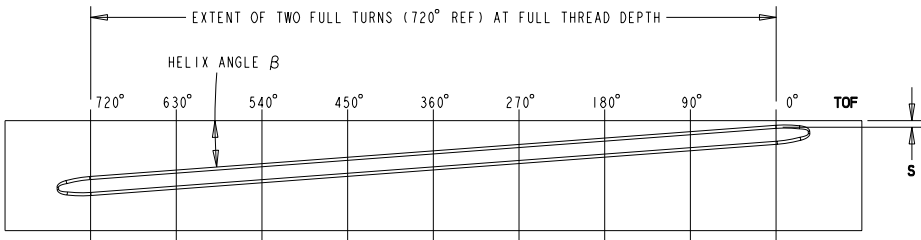
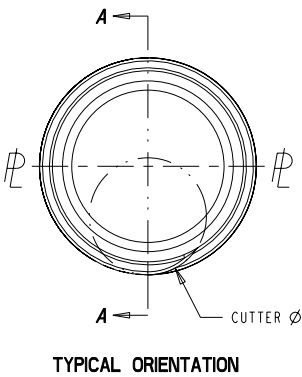
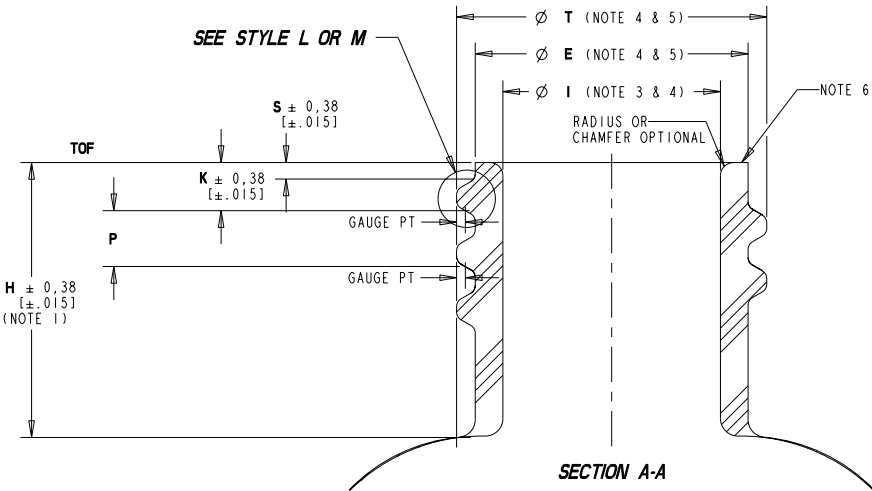
M STYLE MODIFIED BUTTRESS THREAD (Plastic Closures)						
THDS/IN	( a )	b	c	R1	R2	R3
6	2,39 [.094]	1,19 [.047]	0,99 [.039]	0,25 [.010]	0,75 [.030]	0,75 [.030]
8	2,13 [.084]	1,07 [.042]	0,89 [.035]	0,25 [.010]	0,75 [.030]	0,75 [.030]
12	1,30 [.051]	0,75 [.030]	0,41 [.016]	0,25 [.010]	0,20 [.008]	0,50 [.020]

- NOTES:
- DIMENSION **H** IS MEASURED FROM THE TOP OF FINISH [TOF] TO THE POINT WHERE DIAMETER **T**, EXTENDED PARALLEL TO THE CENTERLINE, INTERSECTS THE SHOULDER.
  - CONTOUR OF BEAD, UNDERCUT OR SHOULDER IS OPTIONAL. IF BEAD IS USED, BEAD DIA. AND **L MIN** MUST BE MAINTAINED
  - UNLESS OTHERWISE SPECIFIED, **I MIN** APPLIES TO THE FULL LENGTH OF THE OPENING.
  - CONCENTRICITY OF **I MIN** WITH RESPECT TO DIAMETERS **T** AND **E** IS NOT INCLUDED. **I MIN** IS SPECIFIED FOR FILLER TUBE ONLY.
  - T** AND **E** DIMENSIONS ARE THE AVERAGE OF TWO MEASUREMENTS TAKEN 90° APART. THE LIMITS OF OVALITY WILL BE DETERMINED BY THE CONTAINER SUPPLIER AND CONTAINER CUSTOMER, AS NECESSARY.
  - CONSIDERATION MUST BE GIVEN TO THE TOP OF FINISH WIDTH FOR THE SEALING SYSTEM BEING USED.
  - FINISH TO BE SPECIFIED AS FOLLOWS: THREAD STYLE, FINISH IDENTIFICATION AND DRAWING NUMBER. EXAMPLE: M28SP415
  - REFER TO DRAWING #1168216 FOR VOLUNTARY STANDARD PET FINISH DIMENSION NOMENCLATURE.

#### CONDITIONS OF USE AND LEGAL DISCLAIMER

THESE STANDARDS ARE VOLUNTARY. PRIOR TO USE, YOU SHOULD FIRST DETERMINE WHETHER THE USE OF THESE STANDARDS IS APPROPRIATE IN YOUR PARTICULAR APPLICATION. YOU, THE USER, ASSUME ALL RESPONSIBILITY FOR THE USE AND INTERPRETATION OF THESE STANDARDS. NO REPRESENTATIONS ARE MADE AS TO THE CURRENCY OF THESE STANDARDS OR THE CONFORMITY OF ANY PRODUCT TO THEM. YOU, THE USER, AGREE TO INDEMNIFY AND SAVE HARMLESS THE ISBT AND HUSKY INJECTION MOLDING SYSTEMS LTD., THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS FROM ANY AND ALL LOSSES, CLAIMS, OR DAMAGES RESULTING FROM THEIR USE INCLUDING INJURY OR DEATH OF ANY PERSON OR DAMAGE TO ANY PROPERTY OF WHATSOEVER NATURE.

GENERAL TOLERANCES	DIMENSIONS SHOWN ARE FINISHED PLASTIC SIZES		DESCRIPTION	THIS DRAWING IS MAINTAINED BY <b>HUSKY</b> INJECTION MOLDING SYSTEMS LTD. WEBSITE: WWW.THREADSPECS.COM CONTACT FOR SUPPORT: E-MAIL: THREADS@HUSKY.ON.CA V-MAIL: CANADA 905-951-5000 EXT. 3552
	METRIC MILLIMETRES	[IMPERIAL] [INCHES]		
	X,X ±0,3	[.XX ±0.01]		
	X,XX ±0,13	[.XXX ±0.005]		
	X° ±2° X°X' ±0°15'			
			SP-415 VOLUNTARY STANDARD	FINISH No SP415
			DWN J.MAY DATE 99/03/10	DRAWING No 1165381-1



**THREAD DEVELOPMENT** - A MINIMUM OF TWO FULL TURNS (720°) OF FULL DEPTH THREAD SHALL BE MAINTAINED  
SHOWN FROM OUTSIDE OF FINISH - RIGHT HAND THREAD

SP-415 FINISH FOR PLASTIC BOTTLES														
mm	T (NOTE 4 & 5)	E (NOTE 4 & 5)	I (NOTE 3 & 4)	H ± 0,38 [±.015] (NOTE 1)	K ± 0,38 [±.015]		P	S ± 0,38 [±.015]	L (NOTE 2 )	W (NOTE 2 )	GAUGE PT	HELIX ANGLE β	CUTTER ∅	THD'S PER INCH
	MEAN	MEAN	MIN	MEAN	L STYLE	M STYLE	MEAN	MEAN	MIN	MAX				
13	12,90 ± 0,15 [.508 ±.006]	11,38 ± 0,15 [.448 ±.006]	5,54 [.218]	11,48 [.452]	1,85 [.073]	2,16 [.085]	2,11 [.083]	0,94 [.037]	7,77 [.306]	1,14 [.045]	0,38 [.015]	3°11'	9,53 [.375]	12
15	14,61 ± 0,15 [.575 ±.006]	13,08 ± 0,15 [.515 ±.006]	6,55 [.258]	14,15 [.557]	1,85 [.073]	2,16 [.085]	2,11 [.083]	0,94 [.037]	8,84 [.348]	1,14 [.045]	0,38 [.015]	2°48'	9,53 [.375]	12
18	17,68 ± 0,20 [.696 ±.008]	15,54 ± 0,20 [.612 ±.008]	8,26 [.325]	15,67 [.617]	2,74 [.108]	2,97 [.117]	3,18 [.125]	0,94 [.037]	10,90 [.429]	2,13 [.084]	0,50 [.020]	3°30'	9,53 [.375]	8
20	19,69 ± 0,20 [.775 ±.008]	17,55 ± 0,20 [.691 ±.008]	10,26 [.404]	18,85 [.742]	2,74 [.108]	2,97 [.117]	3,18 [.125]	0,94 [.037]	11,58 [.456]	2,13 [.084]	0,50 [.020]	3°07'	9,53 [.375]	8
22	21,69 ± 0,20 [.854 ±.008]	19,56 ± 0,20 [.770 ±.008]	12,27 [.483]	21,26 [.837]	2,74 [.108]	2,97 [.117]	3,18 [.125]	0,94 [.037]	13,87 [.546]	2,13 [.084]	0,50 [.020]	2°49'	9,53 [.375]	8
24	23,67 ± 0,20 [.932 ±.008]	21,54 ± 0,20 [.848 ±.008]	13,11 [.516]	24,31 [.957]	2,97 [.117]	3,20 [.126]	3,18 [.125]	1,17 [.046]	14,25 [.561]	2,13 [.084]	0,50 [.020]	2°34'	9,53 [.375]	8
28	27,38 ± 0,25 [1.078 ±.010]	24,99 ± 0,25 [.984 ±.010]	15,60 [.614]	27,48 [1.082]	3,23 [.127]	3,45 [.136]	4,24 [.167]	1,17 [.046]	16,64 [.655]	2,39 [.094]	0,60 [.024]	2°57'	12,70 [.500]	6
33	31,83 ± 0,30 [1.253 ±.012]	29,44 ± 0,30 [1.159 ±.012]	20,09 [.791]	32,36 [1.274]	3,23 [.127]	3,45 [.136]	4,24 [.167]	1,17 [.046]	19,61 [.772]	2,39 [.094]	0,60 [.024]	2°31'	12,70 [.500]	6