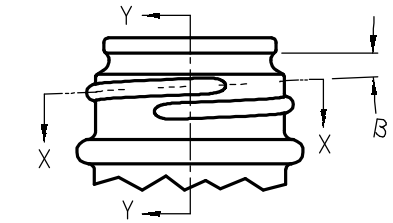


SECTION Y-Y



SECTION X-X

START AND END OF
THREAD TO CONFORM
TO CUTTER RADIUS

SECTION X-X

SIZE	T	E	H	S	I MIN.	R MAX.	R ₁	R ₂	N	Z FLAT	G	Δ	B	CUT DIA.	T.P.I.
18	0.694 ±.010	0.610 ±.010	0.467 ^{+0.008} / _{-.007}	0.164 ±.008	0.286	0.042	0.031	0.031	0.525 ±.010	0.031	0.156	0.070	3° 30'	0.375	8
20	0.773 ±.010	0.689 ±.010	0.483 ^{+0.008} / _{-.007}	0.164 ±.008	0.365	0.042	0.031	0.031	0.604 ±.010	0.031	0.156	0.070	3° 7'	0.375	8
22	0.852 ±.010	0.768 ±.010	0.483 ^{+0.008} / _{-.007}	0.164 ±.008	0.437	0.042	0.031	0.031	0.683 ±.010	0.031	0.156	0.070	2° 49'	0.375	8
24	0.930 ±.010	0.846 ±.010	0.514 ^{+0.008} / _{-.007}	0.196 ±.008	0.516	0.042	0.031	0.031	0.761 ±.010	0.031	0.188	0.070	2° 34'	0.375	8
28	1.076 ^{+0.012} / _{-.013}	0.982 ^{+0.012} / _{-.013}	0.530 ^{+0.008} / _{-.007}	0.211 ^{+0.008} / _{-.007}	0.614	0.063	0.047	0.063	0.897 ±.010	0.047	0.203	0.070	2° 15'	0.500	8
30	1.115 ^{+0.012} / _{-.013}	1.021 ^{+0.012} / _{-.013}	0.533 ±.010	0.211 ^{+0.008} / _{-.007}	0.653	0.063	0.047	0.063	0.936 ±.010	0.047	0.203	0.070	2° 8'	0.500	8
33	1.253 ^{+0.012} / _{-.013}	1.159 ^{+0.012} / _{-.013}	0.548 ±.010	0.226 ^{+0.008} / _{-.007}	0.770	0.078	0.047	0.063	1.059 ^{+0.013} / _{-.012}	0.047	0.219	0.080	1° 53'	0.500	8
35	1.347 ^{+0.017} / _{-.018}	1.253 ^{+0.017} / _{-.018}	0.548 ±.010	0.226 ^{+0.008} / _{-.007}	0.830	0.078	0.047	0.063	1.150 ^{+0.013} / _{-.012}	0.047	0.219	0.080	1° 45'	0.500	8
38	1.459 ^{+0.017} / _{-.018}	1.365 ^{+0.017} / _{-.018}	0.599 ±.010	0.277 ±.010	0.937	0.078	0.047	0.063	1.262 ^{+0.013} / _{-.012}	0.047	0.266	0.080	1° 37'	0.500	8
43	1.637 ^{+0.017} / _{-.018}	1.543 ^{+0.017} / _{-.018}	0.599 ±.010	0.277 ±.010	1.109	0.078	0.047	0.063	1.440 ^{+0.013} / _{-.012}	0.047	0.266	0.080	1° 26'	0.500	8
48	1.853 ^{+0.017} / _{-.018}	1.759 ^{+0.017} / _{-.018}	0.599 ±.010	0.291 ±.010	1.320	0.078	0.047	0.063	1.656 ^{+0.013} / _{-.012}	0.047	0.266	0.080	1° 16'	0.500	8
63	2.441 ±.020	2.347 ±.020	0.604 ±.015	0.291 ±.010	1.930	0.078	0.047	0.063	2.247 ^{+0.013} / _{-.012}	0.047	0.266	0.080	0° 57'	0.500	8

1. 'H' DIMENSION REPRESENTS DISTANCE FROM TOP OF FINISH DOWN TO POINT WHERE LINE TANGENT TO 'T' INTERSECTS TOP OF BEAD. WHEN FINISH IS MADE WITHOUT BEAD, 'H' DIMENSION IS MEASURED TO SHOULDER AND ITS PLUS TOLERANCE IS INCREASED BY .025.

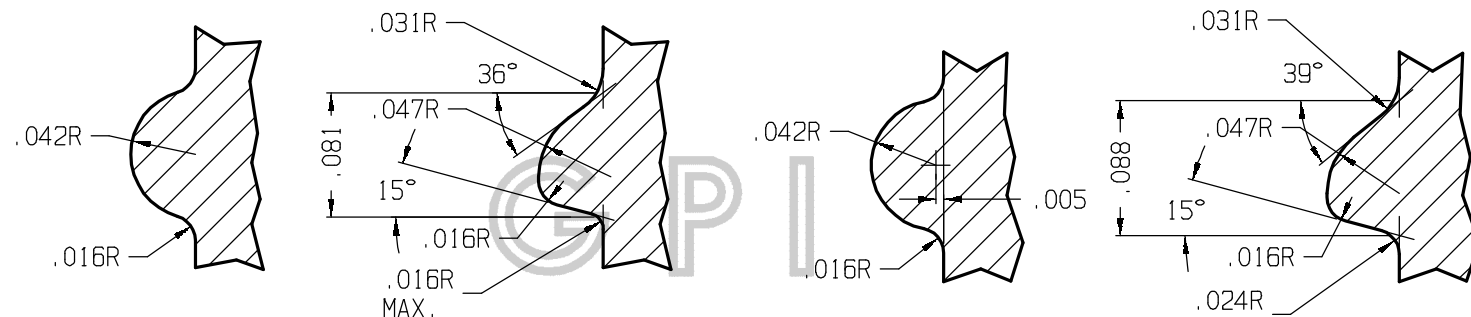
2. B = HELIX ANGLE OR ANGLE OF FIXTURE TO CUTTER.

3. TANGENT B = $\frac{\text{PITCH}}{\pi (\text{MEAN BETWEEN MEAN 'T' AND MEAN 'E'})}$

4. THREAD START TO BE 90° FROM PARTING LINE. A MINIMUM OF ONE TURN OF THREAD SHOULD BE MAINTAINED, WITH FULL PROJECTION EXCEPT WHEN DEPRESSED OR INTERRUPTED AT MOLD SEAMS. REFER TO GLASS FINISH NO. 405 FOR DEPRESSED THREAD DETAIL.

5. CONTOUR OF BEAD OR TRANSFER RING TO BE OPTIONAL PROVIDED TOP OF BEAD CLEARS A 5° MINIMUM DOWNWARD ANGLE.

6. 'I' DIMENSION IS MEASURED THROUGH FULL LENGTH OF FINISH.



SIZES 18 THROUGH 24
(OPTIONAL TYPES)

SIZES 28 THROUGH 63
(OPTIONAL TYPES)

THREAD CROSS SECTIONS

THIS OFFICIAL GLASS PACKAGING INSTITUTE PRINT CONSTITUTES ONE IN A SERIES OF VOLUNTARY STANDARDS INTENDED TO PROVIDE A BASIS FOR ACHIEVING COMPATIBILITY AND INTERCHANGEABILITY BETWEEN MANUFACTURERS AND USERS OF GLASS CONTAINERS AND CLOSURES THEREFOR. THE USER SHOULD BE AWARE THAT OTHER CONTAINER AND CLOSURE DESIGNS MAY DIFFER FROM THIS VOLUNTARY STANDARD, AND IT IS THE USER'S RESPONSIBILITY TO MAKE THE FINAL DETERMINATION AS TO DESIGN AND COMPATIBILITY. GPI ASSUMES NO RESPONSIBILITY FOR EITHER THE USE OF OR INTERPRETATION OF THE STANDARD, FOR IT BEING CURRENT, OR FOR THE DETERMINATION WHETHER ANY PARTICULAR MANUFACTURER'S PRODUCT CONFORMS TO THE STANDARD. THIS DRAWING CONTAINS INFORMATION TAKEN FROM ONE OR MORE PRINTS OF THE GLASS PACKAGING INSTITUTE (GPI). GPI OWNS ALL RIGHT, TITLE AND INTEREST IN THE COPYRIGHTS TO THIS DRAWING AND TO THESE PRINTS. GPI REQUIRES THAT YOU NOT REPRODUCE THIS DRAWING FOR OR DISTRIBUTE THIS DRAWING TO ANY THIRD PARTY WITHOUT GPI'S WRITTEN CONSENT. ANY INQUIRIES OR SUGGESTIONS CONCERNING THIS STANDARD CAN BE ADDRESSED TO THE GLASS PACKAGING INSTITUTE, WASHINGTON D.C. AT WWW.GPI.ORG.

COPYRIGHT © GPI 1995, 1997, 1999, 2001

Edward Grant CHAIRMAN	PRINTED AND DISTRIBUTED AS A VOLUNTARY STANDARD BY GLASS PACKAGING INSTITUTE COMMITTEE ON DESIGN AND SPECIFICATIONS	APPROVED FOR PUBLICATION 6-21-01	SUPERSEDES DWG. NO. 4905
GLASS FINISH NUMBER 490		GPI DWG. NO.	
COMBINATION SNAP AND SCREW CAP FINISH		4906	