SRI LANKA STANDARD 601:PART 1:1983
UDC 666.17

SPECIFICATION FOR
GLASS CONTAINER FINISHES
PART 1 — THREADED FINISHES

BUREAU OF CEYLON STANDARDS

SPECIFICATION FOR GLASS CONTAINER FINISHES

PART 1 : THREADED FINISHES

SLS 601:Part 1:1983

Gr. 8

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SRI LANKA STANDARD

SPECIFICATION FOR GLASS CONTAINER FINISHES

PART 1 : THREADED FINISHES

FOREWORD

This Sri Lanka Standard specification was authorized for adoption and publication by the Council of the Bureau of Ceylon Standards on 1983-01-17, after the draft, finalized by the Drafting Committee on Glass Products, had been approved by the Mechanical Engineering Divisional Committee.

This part is one of a series of standards on glass container finishes. Other parts covering Crown finish, Omnia finish, Lug finish and Aluminium foil cap type finish are being issued. A complete list of such standards may be obtained from the Bureau of Ceylon Standards.

All standard values given in this specification are in SI units.

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with CS 102. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this specification, the assistance obtained from the publications of the International Organization for Standardization, the British Standards Institution and the Indian Standards Institution is gratefully acknowledged.

1 SCOPE

This part of the specification prescribes the design and dimensions of the following threaded bottle neck finishes:

a) Shallow continuous thread finishes (see Fig. 1);

b) Tall continuous thread finishes (see Fig. 2);

c) Roll on thread pilferproof finishes (see Fig. 3);

d) Roll on thread non-pilferproof finishes (see Fig. 4); and

e) Securo finish (see Fig. 5).

2 REFERENCES

BS 1918 Part 1:1978 Continuous thread finish

CS 102 Presentation of numerical values

3 DEFINITIONS

For the purpose of this specification, the following definitions shall apply :

3.1 finish : The top part of the neck of a bottle made to suit the closure.

3.2 sealing surface : The portion of the finish which makes contact with the liner of the closure.

4 FINISH , DESIGN AND DIMENSIONS

4.1 Shallow and tall continuous thread finishes

The design and dimensions of the shallow continuous thread finishes shall be as given in Figure 1 and Table 1, and those of the tall continuous thread finishes shall be as given in Figure 2 and Table 2.

4.2 Roll seal closure finishes

4.2.1 The design and dimensions of the roll on thread pilferproof glass finishes (ROPP) shall be as given in Figure 3 and Table 3, and those of the roll on thread non-pilferproof glass finishes shall be as given in Figure 4 and Table 4.

4.2.2 The design and dimensions of the securo glass finish shall be as given in Figure 5.

NOTES

1 All essential dimensions may be ascertained by any appropriate form of measurement except that the minimum T dimension (see Figure 1 to Figure 5) shall be measured by a Parnaby gauge as specified in **BS 1918:Part 1.**

2 Untoleranced dimensions are for mould making purposes only.

4.3 Sealing surface

The sealing surface may be flat or radial and shall conform to the dimensions shown in Figure 1 to Figure 5. It shall be essentially regular and smooth.

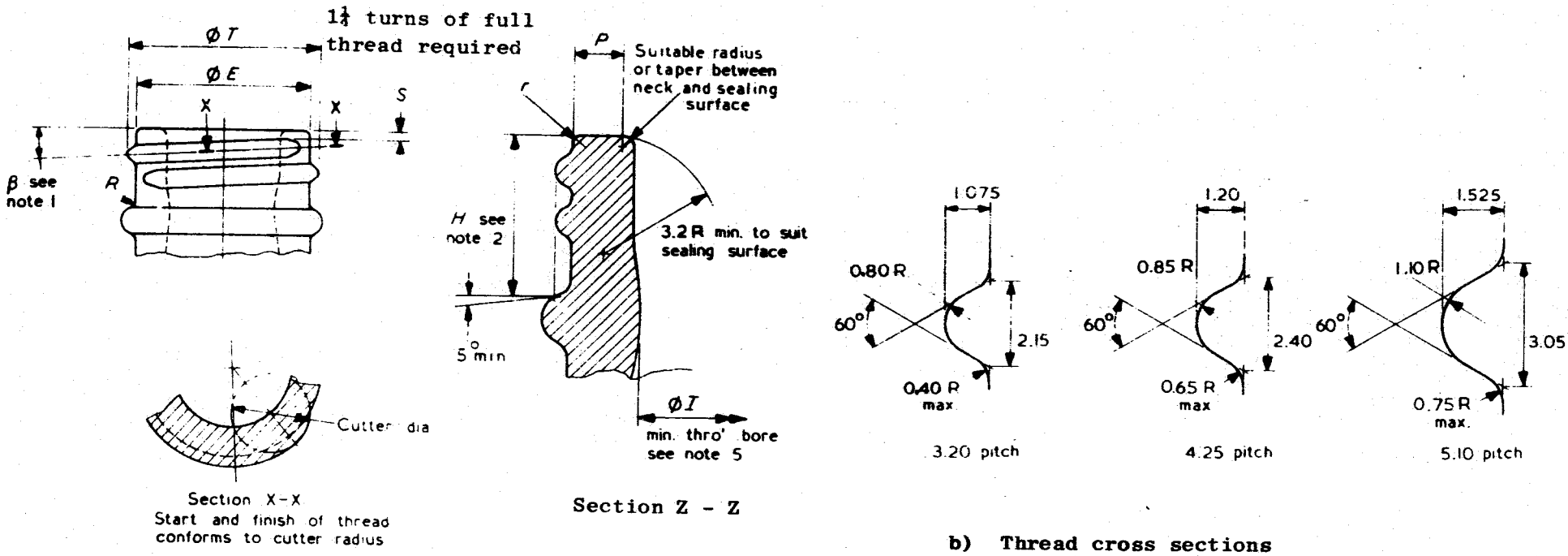


FIGURE 1 - Shallow continuous thread finishes

NOTES

1 β = *helix angle or angle of fixture to cutter.*

$$Tan\ \beta = \frac{Pitch}{\pi (mean\ between\ mean\ T\ and\ mean\ E)}$$

2 H dimension represents distance from top of finish down to a point where line tangent to T intersects top of bead or shoulder.

3 All essential dimensions may be ascertained by any appropriate form of measurement except the T diameter, which should be assessed by a Parnaby gauge.

4 Contour of bead is optional

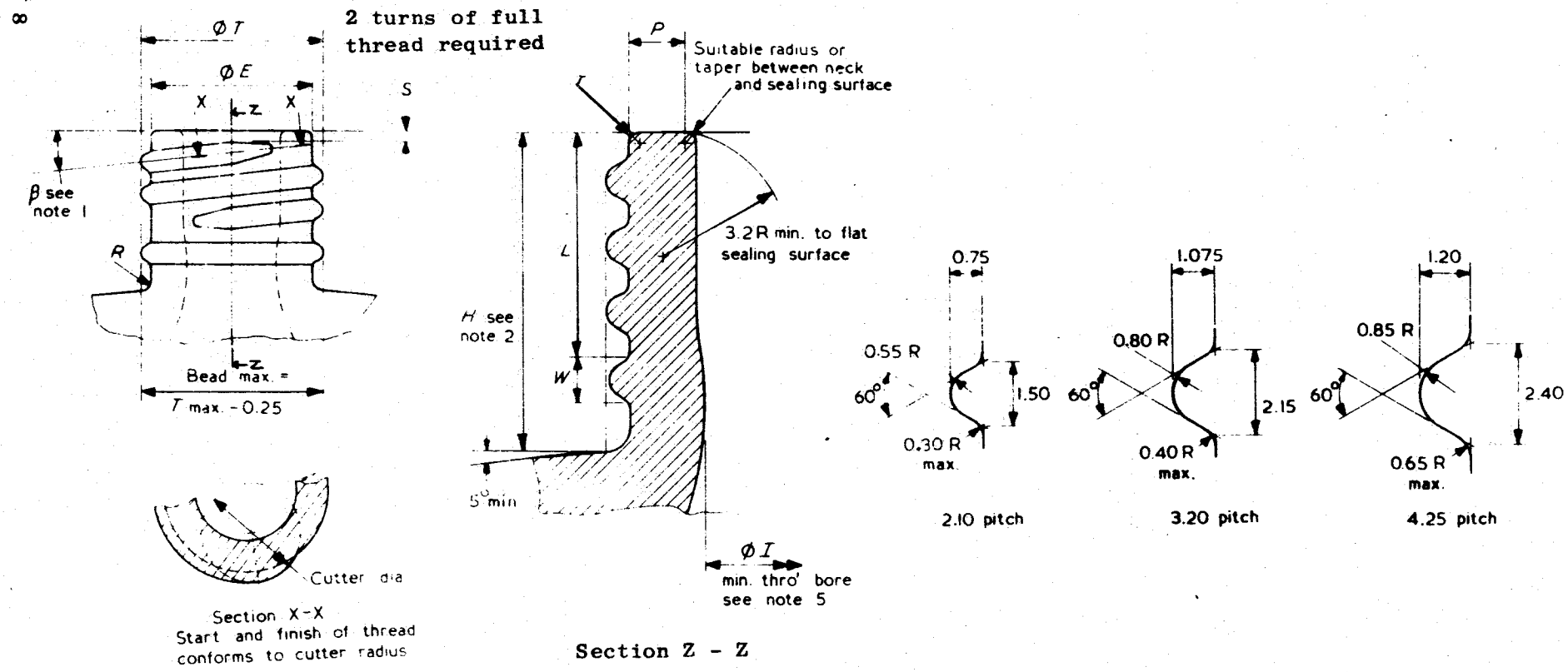
5 Not suitable for calculating insert dimensions.

TABLE 1 - Shallow continuous thread finishes

(All dimensions in millimetres)

No. or size	T		E		H		I	R	S		P	r	β	Cutter Diameter	Pitch
	Max	Min	Max	Min	Max	Min	Min	Max	Max	Min	Min	Max	Angle		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
18	17.90	17.40	15.75	15.25	9.3	8.8	8.3	1.1	1.6	0.8	1.50	0.6	3°30'	9.5	3.20
20	19.90	19.40	17.75	17.25	9.3	8.8	10.3	1.1	1.6	0.8	1.50	0.6	3° 7'	9.5	3.20
22	21.90	21.40	19.75	19.25	9.3	8.8	12.3	1.1	1.6	0.8	1.60	0.7	2°49'	9.5	3.20
24	23.90	23.40	21.75	21.25	10.1	9.6	13.1	1.1	1.6	0.8	1.60	0.7	2°34'	9.5	3.20
28	27.65	27.00	25.25	24.60	10.1	9.6	15.6	1.2	1.6	0.8	1.60	0.7	2°57'	12.7	4.25
30	28.65	28.00	26.25	25.60	10.1	9.6	16.6	1.2	1.6	0.8	1.70	0.8	2°51'	12.7	4.25
33	32.15	31.50	29.75	29.10	10.1	9.6	20.0	1.2	1.6	0.8	1.70	0.8	2°31'	12.7	4.25
38	37.45	36.55	35.05	34.15	10.1	9.6	25.0	1.2	1.6	0.8	1.70	0.8	2° 9'	12.7	4.25
40	40.10	39.20	37.70	36.80	10.1	9.6		1.2	1.6	0.8	1.70	0.8	2° 1'	12.7	4.25
43	41.95	41.05	39.55	38.65	10.1	9.6		1.2	1.6	0.8	1.70	0.8	1°55'	12.7	4.25
48	47.45	46.55	45.05	44.15	10.1	9.6		1.2	1.6	0.8	1.70	0.8	1°41'	12.7	4.25
51	49.95	49.05	47.55	46.65	10.4	9.6		1.2	1.6	0.8	1.70	0.8	1°36'	12.7	4.25
53	52.45	51.55	50.05	49.15	10.4	9.6		1.2	1.6	0.8	1.70	0.8	1°31'	12.7	4.25
58	56.45	55.55	54.05	53.15	10.4	9.6		1.2	1.6	0.8	2.00	0.9	1°25'	12.7	4.25
60	59.45	58.55	57.05	56.15	10.4	9.6		1.2	1.6	0.8	2.00	0.9	1°20'	12.7	4.25
63	62.45	61.55	60.05	59.15	10.4	9.6		1.2	1.6	0.8	2.00	0.9	1°16'	12.7	4.25
66	65.45	64.55	63.05	62.15	10.4	9.6		1.2	1.6	0.8	2.00	0.9	1°14'	12.7	4.25
70	69.45	68.55	67.05	66.15	10.4	9.6		1.2	1.6	0.8	2.00	0.9	1° 8'	12.7	4.25
77	77.10	76.05	74.05	73.00	12.4	11.6		1.6	2.0	1.2	2.00	0.9	1°14'	12.7	5.10
83	83.00	82.00	79.95	78.95	12.4	11.6		1.6	2.0	1.2	2.00	0.9	1° 9'	12.7	5.10
89	89.20	88.20	86.15	85.15	13.6	12.8		1.6	2.0	1.2	2.20	0.9	1° 4'	12.7	5.10
100	100.00	99.00	96.95	95.95	15.2	14.4		1.6	2.0	1.2	2.20	0.9	0°56'	12.7	5.10
120	120.00	119.00	116.95	115.95	17.4	16.6		1.6	2.0	1.2	2.20	0.9	0°47'	12.7	5.10

NOT APPLICABLE



a) Finish

b) Thread cross sections

FIGURE 2 - Tall continuous thread finishes

NOTES

1 β = *helix angle or angle of fixture to cutter.*

$$\tan \beta = \frac{\text{Pitch}}{\pi(\text{mean between mean } T \text{ and mean } E)}$$

2 H dimension represents distance from top of finish down to a point where line tangent to T intersects top of bead or shoulder.

3 All essential dimensions may be ascertained by any appropriate form of measurement except the T diameter, which should be assessed by a Parnaby gauge.

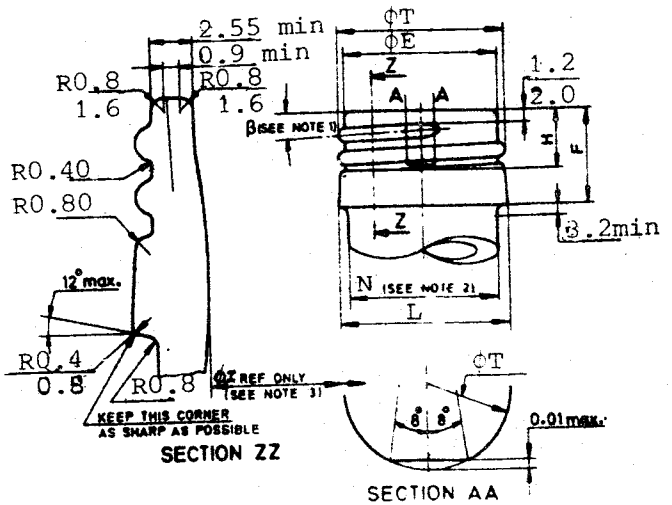
4 Contour of bead is optional provided the diameter and W are adhered to, or the bead may be omitted.

5 Except for sprinkler finishes. Not suitable for calculating insert dimensions.

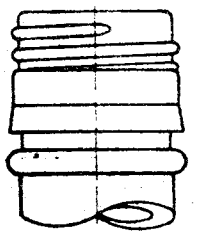
TABLE 2 - Tall continuous thread finishes

(All dimensions in millimetres)

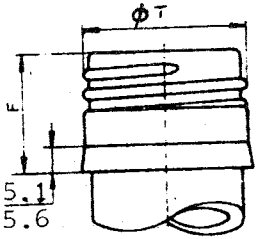
No. or size	T		E		H		I	R	S		L	W	P	r	β	Cutter Dia-meter	Pitch
	Max	Min	Max	Min	Max	Min	Min	Max	Max	Min	Min	Approx	Min	Max	Angle		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
13	13.05	12.65	11.55	11.15	11.6	11.0	5.5	0.8	1.6	0.8	7.4	1.6	1.40	0.6	3°11'	9.5	2.10
14	13.80	13.40	12.30	11.90	13.0	12.4	6.0	0.8	1.6	0.8	8.4	1.6	1.40	0.6	3° 0'	9.5	2.10
15	14.75	14.35	13.25	12.85	14.2	13.6	6.5	0.8	1.6	0.8	8.5	2.0	1.40	0.6	2°48'	9.5	2.10
18	17.90	17.40	15.75	15.25	15.9	15.2	8.3	1.1	1.6	0.8	10.5	2.0	1.50	0.6	3°30'	9.5	3.20
20	19.90	19.40	17.75	17.25	19.0	18.3	10.3	1.1	1.6	0.8	11.2	2.0	1.50	0.6	3° 7'	9.5	3.20
22	21.90	21.40	19.75	19.25	21.4	20.7	12.3	1.1	1.6	0.8	13.5	2.0	1.60	0.7	2°49'	9.5	3.20
24	23.90	23.40	21.75	21.25	24.6	23.8	13.1	1.1	1.6	0.8	13.9	2.0	1.60	0.7	2°34'	9.5	3.20
28	27.65	27.00	25.25	24.60	27.8	27.0	15.6	1.2	1.6	0.8	16.3	2.4	1.60	0.7	2°57'	12.7	4.25
31	30.65	30.00	28.25	27.60	29.4	28.6	17.7	1.2	2.4	1.6	17.9	2.4	1.70	0.8	2°39'	12.7	4.25



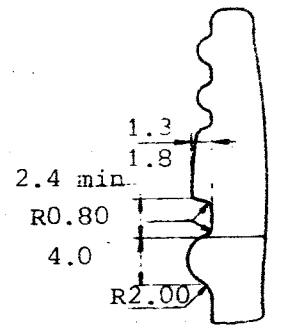
STANDARD AND SHALLOW FINISH WITHOUT TRANSFER RING



ALTERNATIVE DEEP FINISH WITH TRANSFER RING (SEE NOTE 4)



DEEP FINISH WITHOUT TRANSFER RING



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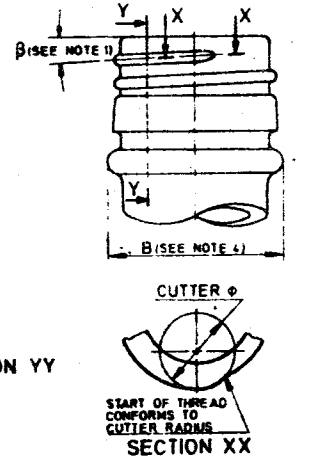
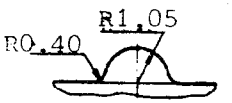


ALTERNATIVE STANDARD AND SHALLOW FINISH WITH TRANSFER RING (SEE NOTE 4)



3.15 PITCH

3.65 PITCH

4.25 PITCH

(All dimensions in millimetres)

FIGURE 3 - Roll on thread pilferproof finishes

NOTES

1 β = *helix angle or angle of fixture to cutter.*

$$\tan \beta = \frac{\text{Pitch}}{\pi(\text{mean between mean } T \text{ and mean } E)}$$

2 Maintain the N dimension for a depth of 3.18 mm min.

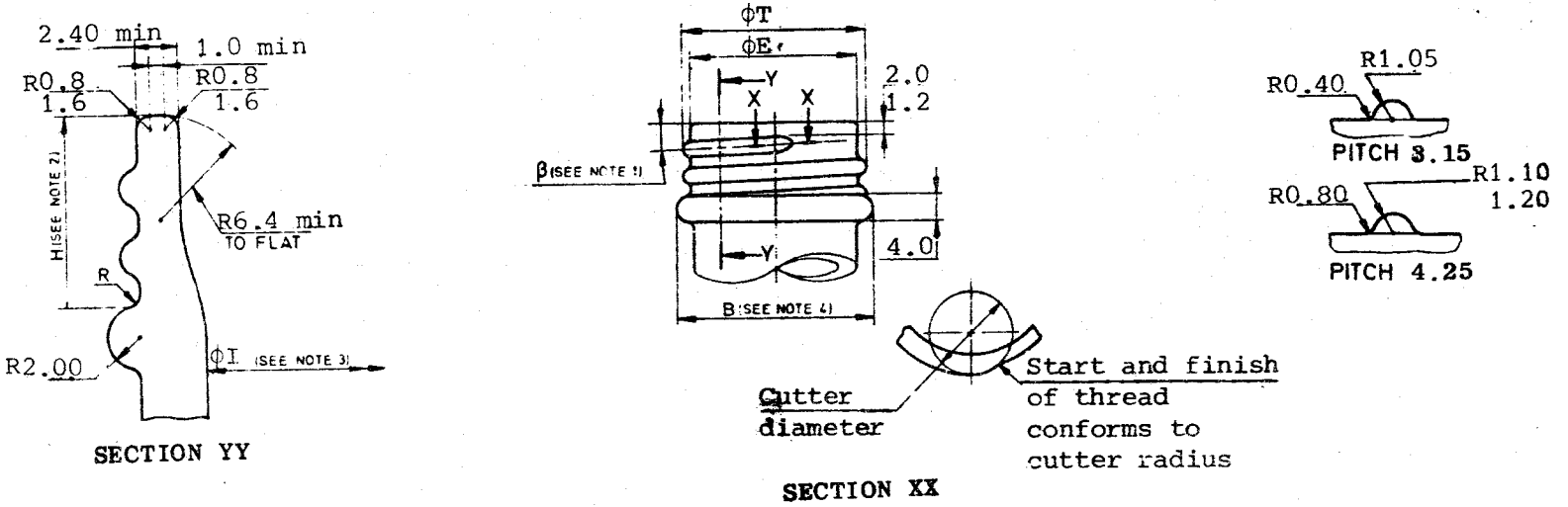
3 I dimension is intended for filling tube clearance and should be confirmed with the glass manufacturer.

4 The choice of any alternative finish involving a transfer ring should be confirmed with the glass manufacturer.

5 All essential dimensions may be ascertained by any appropriate form of measurement except the T diameter which should be assessed by a Parmaby gauge.

TABLE 3 - Roll on thread pilferproof finishes
(All dimensions in millimetres)

No. or size	T		E		H		F		L		B		N	β	Cutter Diameter	Pitch
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
STANDARD FINISH																
22	21.70	21.20	19.55	19.05	8.5	8.1	13.0	12.6	22.2	21.7	24.1	23.5	19.0	2°50'	9.5	3.15
25	24.65	24.15	22.55	22.05	8.5	8.1	14.3	13.9	25.2	24.7	27.2	26.5	22.1	2°29'	9.5	3.15
28	27.40	26.75	25.15	24.55	9.6	9.1	15.7	15.2	28.0	27.4	30.0	29.2	24.9	2°33'	12.7	3.65
31.5	30.55	29.90	28.30	27.65	9.6	9.1	15.7	15.2	31.2	30.5	33.5	32.8	27.9	2°16'	12.7	3.65
46	45.15	44.40	42.90	42.15	9.6	9.1	15.7	15.2	45.8	45.0	48.5	47.5	42.4	1°31'	12.7	3.65
53	52.50	51.50	50.25	49.25	9.6	9.1	15.7	15.2	53.4	52.4	56.1	55.1	49.8	1°18'	12.7	3.65
70	69.50	68.50	66.10	67.10	10.1	9.6	14.9	14.5	70.1	69.4	70.4	71.2	66.8	1°18'	12.7	4.25
SHALLOW FINISH																
38	37.50	36.75	35.35	34.60	8.7	8.3	13.7	13.2	38.1	37.4	40.9	39.9	34.8	1°36'	12.7	3.15
46	45.15	44.40	43.10	42.35	8.7	8.3	13.7	13.2	45.8	45.0	48.5	47.5	42.4	1°20'	12.7	3.15
DEEP FINISH																
31.5	30.55	29.90	28.30	27.65	9.6	9.1	21.6	21.1	31.2	30.5	33.5	32.8	27.9	2°16'	12.7	3.65
EXTRA DEEP FINISH																
30	28.65	28.00	26.50	25.85	8.7	8.3	32.2	31.7	29.3	28.6	32.1	31.4	26.5	2° 4'	12.7	3.15



(All dimensions in millimetres)

FIGURE 4 - Roll on thread non-pilferproof finishes

NOTES

1 β = *Helix angle or angle of fixture to cutter; and* $\tan \beta = \dfrac{Pitch}{\pi(mean\ between\ mean\ T\ and\ mean\ E)}$

2 H dimension represents distance from top of finish down to point where line tangent to T intersects the top of locking ring.

3 I dimension is intended for filling tube clearance and should be confirmed with the glass manufacturer.

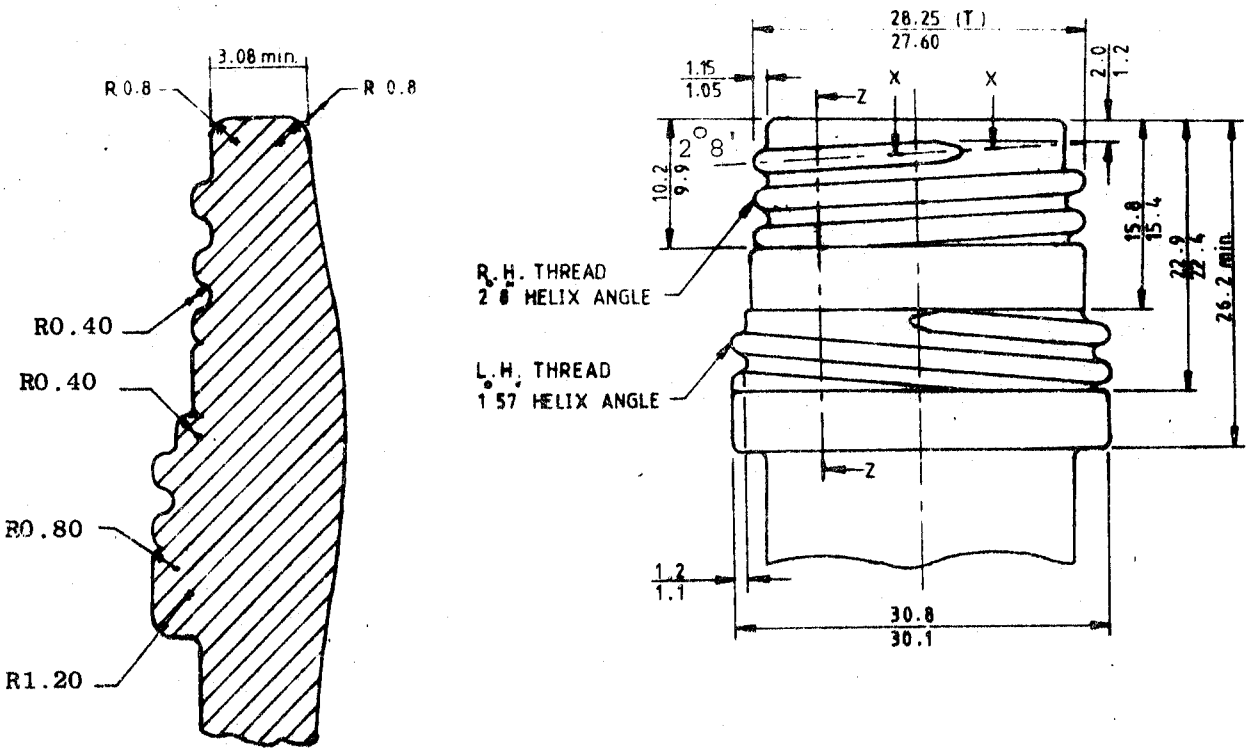
4 The choice of any alternative finish involving a transfer ring should be confirmed with the manufacturer.

5 All essential dimensions may be ascertained by any appropriate form of measurement except the T diameter which should be assessed by a Parnaby gauge.

TABLE 4 - Roll on thread non-pilferproof finishes

(All dimensions in millimetres)

No. or size	T		E		H		B		I	R	β	Cutter Diameter	Pitch
	Max	Min	Max	Min	Max	Min	Max	Min	Min	Max			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
18	17.90	17.40	15.75	15.25	8.8	8.5	19.55	19.05	8.3	0.4	3°30'	9.5	3.15
20	19.90	19.40	17.75	17.25	8.8	8.5	21.55	21.05	10.3	0.4	3° 7'	9.5	3.15
22	21.65	21.15	19.50	19.00	8.8	8.5	23.30	22.80	12.0	0.4	2°51'	9.5	3.15
24	23.90	23.40	21.75	21.25	8.8	8.5	25.55	25.05	13.1	0.4	2°34'	9.5	3.15
25	24.75	24.25	22.35	21.85	11.2	10.6	26.55	26.05	13.7	0.8	3°18'	12.7	4.25
28	27.65	27.00	25.25	24.60	11.2	10.6	29.45	28.80	15.6	0.8	2°57'	12.7	4.25
31.5	30.65	30.00	29.25	28.60	11.2	10.6	32.45	31.80	18.6	0.8	2°38'	12.7	4.25
33	32.15	31.50	30.75	30.10	11.2	10.6	33.95	33.30	20.1	0.8	2°31'	12.7	4.25
35	34.65	33.90	32.25	31.50	11.2	10.6	36.45	35.70	22.2	0.8	2°20'	12.7	4.25
38	37.50	36.75	35.10	34.35	11.2	10.6	39.30	38.55	25.1	0.8	2° 9'	12.7	4.25
43	42.00	41.25	39.60	38.85	11.2	10.6	43.80	43.05	29.6	0.8	1°55'	12.7	4.25
45	44.20	43.30	41.80	40.90	11.2	10.6	46.00	45.10	31.9	0.8	1°49'	12.7	4.25
48	47.50	46.60	45.10	44.20	11.2	10.6	49.30	48.40	35.1	0.8	1°41'	12.7	4.25
53	52.50	51.60	50.10	49.20	11.2	10.6	54.30	53.40	40.1	0.8	1°31'	12.7	4.25
58	56.50	55.50	54.10	53.10	11.2	10.6	58.30	57.30	44.1	0.8	1°25'	12.7	4.25
63	62.50	61.50	60.10	59.10	11.2	10.6	64.30	63.30	50.1	0.8	1°16'	12.7	4.25
70	69.50	68.50	67.10	66.10	11.2	10.6	71.30	70.30	57.1	0.8	1° 8'	12.7	4.25



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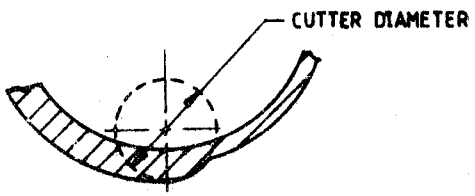
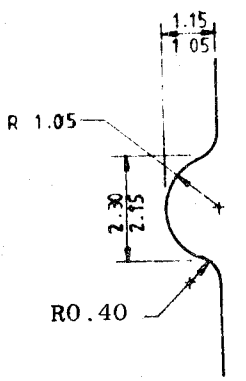


SECTION X-X

NOTE - All essential dimensions may be ascertained by any appropriate form of measurement except the outside diameter (T) which should be assessed by a Parnaby gauge.



3.20 PITCH

(All dimensions in millimetres)

FIGURE 5 - Securo finish

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Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

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SRI LANKA STANDARDS INSTITUTION

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The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

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All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

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