



## Textile machinery and accessories – Cones for yarn winding (cross wound) – Half angle of the cone $4^{\circ} 20'$

*Matériel pour l'industrie textile – Cônes pour bobinage croisé – Demi-angle du cône  $4^{\circ} 20'$*

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## FOREWORD

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 111 was developed by Technical Committee ISO/TC 72, *Textile machinery and accessories*, and was circulated to the member bodies in February 1977.

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It has been approved by the member bodies of the following countries :

Belgium	Kenya	South Africa, Rep. of
Czechoslovakia	Korea, Rep. of	Spain
France	Mexico	Switzerland
Germany	Netherlands	United Kingdom
India	Poland	U.S.S.R.
Italy	Romania	Yugoslavia

The member body of the following country expressed disapproval of the document on technical grounds :

Turkey

This International Standard cancels and replaces ISO Recommendation R 111-1959, of which it constitutes a technical revision.

# Textile machinery and accessories – Cones for yarn winding (cross wound) – Half angle of the cone $4^{\circ} 20'$

## iTeh STANDARD PREVIEW (standards.iteh.ai)

### 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the dimensions and the tolerances of cones for yarn winding (cross wound) having a half angle of the cone of  $4^{\circ} 20'$ , as well as the dimensions and tolerances of the gauges for measuring the cone.

d) details of tailing groove and notch for tail (if required);

e) number, size and location of perforation (if required).

The distance between the ends of the cone and edges of the nearest holes, if any, shall be  $16 \pm 0,5$  mm.

### 2 DIMENSIONS AND TOLERANCES

See figures and tables on page 2.

Dimensions which are not specified are left to the discretion of the manufacturer.

The width of wound yarn shall not exceed  $L - 25$  mm.

The deviations from the nominal value  $4^{\circ} 20'$  of the half angle of cone are limited by the tolerances for  $D$ ,  $D_1$  and  $L$  as indicated in the table. They do not influence the practical use of the cones during winding and during further processes.

### 3 MATERIAL

The material may be untreated, impregnated or lacquered paper or suitable plastic.

The following details shall be specified :

- nature of yarn to be wound;
- treatment of surface;
- wall thickness (corresponding to the nature of yarn);

### 4 USE OF THE GAUGE

The inner dimensions of the cone are in accordance with this International Standard if the edge of the larger end of the cone, after it has been placed loosely on the gauge and then pressed home by hand, is between the tolerance marks.

To check the smaller diameter of an open-ended cone additionally, it shall be placed with the smaller end first on the gauge. The edge of the smaller end of the cone must then be between the tolerance marks on the corresponding end of the gauge.

### 5 CHECKING OF THE LENGTH OF THE CONE

To check the tolerances of the length of the cone, a suitable gauge for checking lengths, for example a slide-gauge, has to be used. The conical gauges shown cannot be used for this purpose.

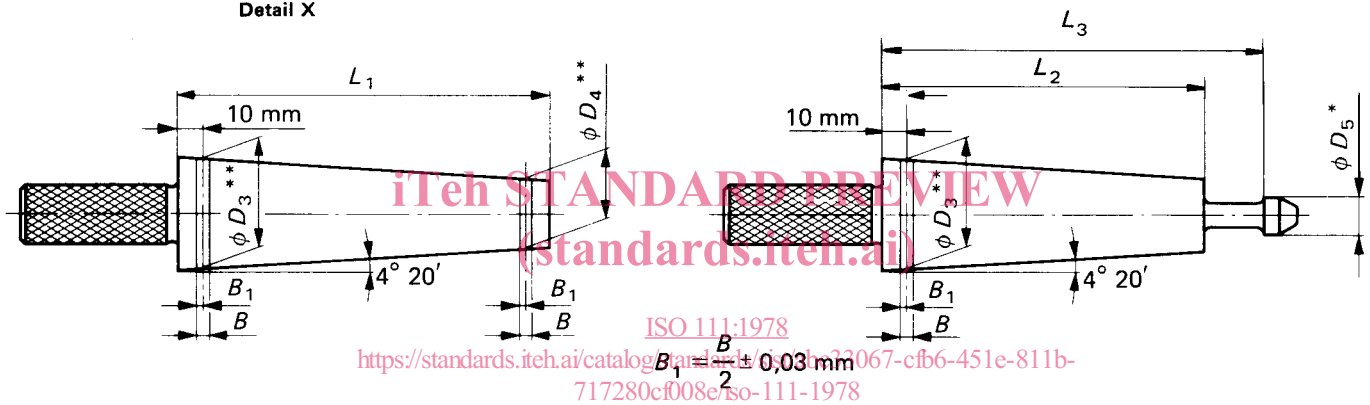
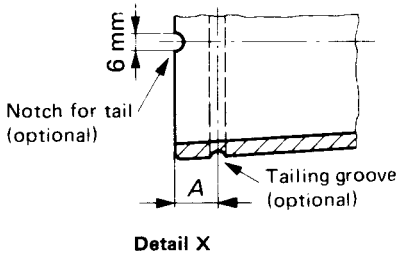
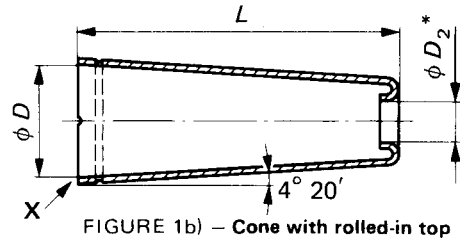
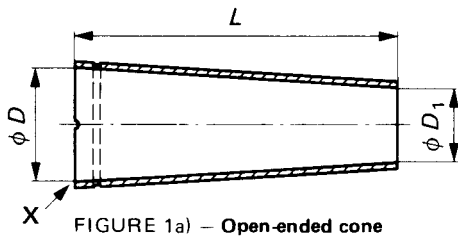


FIGURE 2a) - Gauge for open-ended cones

FIGURE 2b) - Gauge for cones with rolled-in top

TABLE 1 - Cones

Values in millimetres

D	Admiss-ible de-viations	L		D <sub>1</sub>	Admiss-ible de-viations	D <sub>2</sub> *		A
		Admiss-ible de-viations	Admiss-ible de-viations			Admiss-ible de-viations	Admiss-ible de-viations	
55	± 0,25	145	± 1	33	± 0,25	28	± 0,3	8
59		170						
80	± 0,25	200	± 2	49,7	± 0,5	40		
		230		45,1		35		
104	± 0,4	290	± 2,5	60	± 0,4	50	10	

TABLE 2 - Gauges

Values in millimetres

D <sub>3</sub> **	D <sub>4</sub> **	L <sub>1</sub>	D <sub>5</sub> * h9	L <sub>2</sub> max.	L <sub>3</sub> min.	B ± 0,03
55	33	165	27,5	145	161	3,2
59		190		170	186	
80	49,7	220	39,5	200	216	
	45,1	250	34,5	230	246	
104	60	310	49,5	290	306	5,2

\* In certain cases, especially for automatic winding, dimensions D<sub>2</sub> and D<sub>5</sub> have to be agreed upon between the interested parties in relation to the wall thickness.

\*\* The tolerances of the cone diameters of the gauge, measured at any distance from the ends, shall be j<sub>6</sub> (see ISO/R 286, ISO System of limits and fits - Part 1: General, tolerances and deviations, page 23).