

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 594

CONICAL FITTINGS FOR SYRINGES, NEEDLES
AND OTHER MEDICAL EQUIPMENT

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DEFINITION AND DIMENSIONAL CHARACTERISTICS FOR CONICAL FITTINGS

WITH A 6% AND A 10% TAPER

<https://standards.iteh.ai/catalog/standards/sist/6989335b-4a8e-489f-bc7a-2351840c1483/iso-r-594-1967>

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BRIEF HISTORY

The ISO Recommendation R 594, *Conical Fittings for Syringes, Needles and other Medical Equipment—Definition and Dimensional Characteristics for Conical Fittings with a 6 % and a 10 % Taper*, was drawn up by Technical Committee ISO/TC 84, *Syringes for Medical Use and Needles for Injections*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1957 and led, in 1963, to the adoption of a Draft ISO Recommendation.

In September 1964, this Draft ISO Recommendation (No. 739) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Argentina	Hungary	Sweden
Bulgaria	Ireland	Switzerland
Canada	Israel	Turkey
Chile	Netherlands	U.A.R.
Czechoslovakia	New Zealand	United Kingdom
Denmark	Poland	Yugoslavia
France	Republic of	
Germany	South Africa	
Greece	Spain	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in July 1967, to accept it as an ISO RECOMMENDATION.

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CONICAL FITTINGS FOR SYRINGES, NEEDLES AND OTHER MEDICAL EQUIPMENT

DEFINITION AND DIMENSIONAL CHARACTERISTICS FOR CONICAL FITTINGS WITH A 6% AND A 10% TAPER

INTRODUCTION

This ISO Recommendation gives the definition and description of two conical fittings with 6% and 10% taper for use with certain medical equipment.*

The conical fitting with a 6% taper is to be considered as the *only basic fitting* recommended, ensuring complete interchangeability between syringes and needles.

The conical fitting with a 10% taper has nevertheless been *provisionally* accepted with a view to unifying the different types of fittings based on a 10% conical taper until such time as the conical fitting with a 6% taper is adopted by all the Member Bodies.

1. SCOPE

This ISO Recommendation

- (a) gives the definition and conventional representation of conical fittings for certain apparatus for medical use (syringes, needles, transfusion equipment),*
- (b) and establishes the dimensional characteristics of two conical fittings based on a 6% and 10% taper.

These dimensional characteristics concern conical fittings in glass and metal, and are not applicable to conical fittings made of plastics material.

* The provisions of this ISO Recommendation are only applicable to medical equipment with a conical fitting or component of a conical fitting, male or female, identical with that of syringes or of needles.

2. DEFINITION AND CONVENTIONAL PRESENTATION

A conical fitting consists of a *nozzle* at one end of a constituent and a *conical socket* at the end of another constituent.

Such a fitting may be conventionally represented by the Figure below:

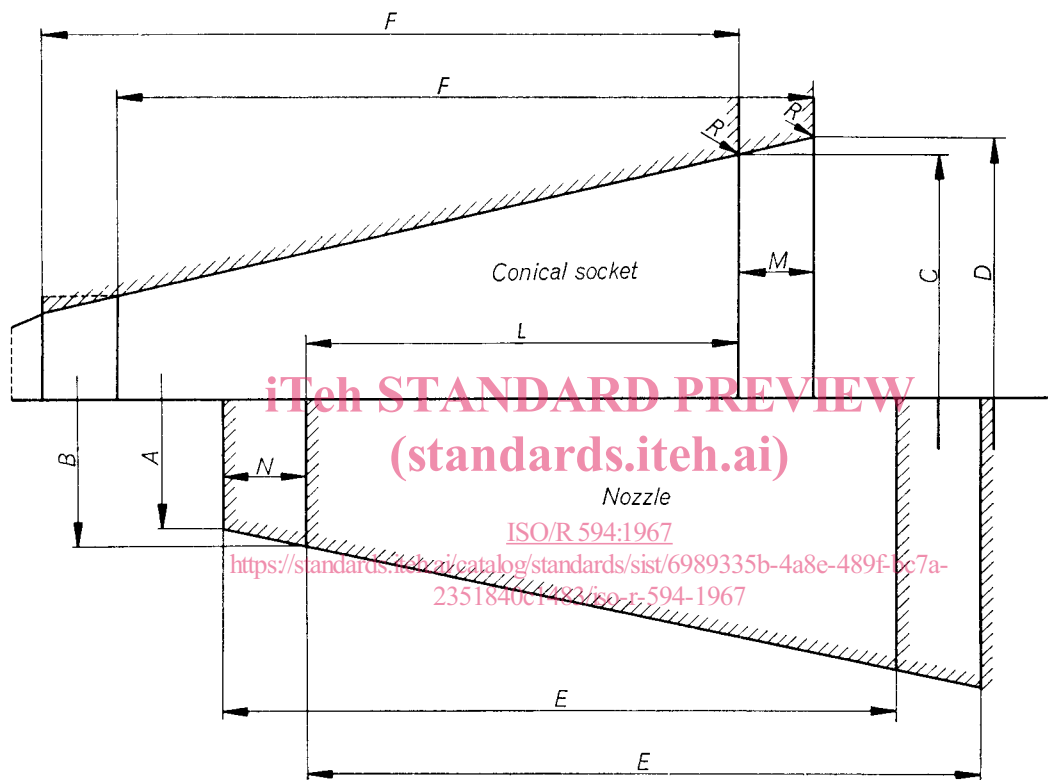


FIGURE. — Conical fittings

3. DIMENSIONAL CHARACTERISTICS

The dimensions of nozzles and conical sockets are given in the Figure, page 6, and in the Table below.

TABLE. — Dimensions of conical fittings

	Refer- ence	Designation	Dimension (mm)	
			Taper	
			6/100	10/100
Basic dimensions	<i>A</i>	Minimum diameter of the end of the nozzle (reference diameter)	3.925	2.690
	<i>B</i>	Maximum diameter at the end of the nozzle	3.970	2.750
	<i>C</i>	Minimum diameter at the opening of the conical socket	4.270	3.300
	<i>D</i>	Maximum diameter at the opening of the conical socket	4.315	3.380
	<i>E</i>	Minimum length of the nozzle	7.500	8.000
	<i>F</i>	Depth of the conical socket	7.500 ⁻⁰ _{+1.000}	7.400 min.
Other dimensions*	<i>L</i>	Minimum penetration	5.000	5.500
	<i>M</i>	Tolerance for penetration	0.750	0.800
	<i>N</i>	Tolerance for penetration	0.750	0.600
	<i>R</i>	Radius of curvature	< 0.5	< 0.5

* Dimensions *L*, *M* and *N* are derived from the basic dimensions.

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