

SVENSK STANDARD

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Värmeisoleringsprodukter för isolering av installationer – Bestämning av dimensioner, rätvinklighet och rakhet hos förformad rörisolering

**Thermal insulating products for building equipment and
industrial installations – Determination of dimensions,
squareness and linearity of preformed pipe insulation**

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Denna standard ersätter SS-EN 13467, utgåva 1.

The European Standard EN 13467:2018 has the status of a Swedish Standard. This document contains the official version of EN 13467:2018.

This standard supersedes the Swedish Standard SS-EN 13467, edition 1.

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Denna standard är framtagen av kommittén för Material och konstruktioner, SIS/TK 189/AG 01.

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EUROPEAN STANDARD

EN 13467

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2018

ICS 91.100.60

Supersedes EN 13467:2001

English Version

Thermal insulating products for building equipment and industrial installations - Determination of dimensions, squareness and linearity of preformed pipe insulation

Produits isolants thermiques pour l'équipement du bâtiment et les installations industrielles - Détermination des dimensions, de l'équerrage et de la linéarité des coquilles isolantes préformées

Wärmedämmstoffe für die Haustechnik und für betriebstechnische Anlagen - Bestimmung der Maße, der Rechtwinkligkeit und der Linearität von vorgeformten Rohrdämmstoffen

This European Standard was approved by CEN on 13 November 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 13467:2018) has been prepared by Technical Committee CEN/TC 88 “Thermal insulation materials and products”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13467:2001.

This European Standard is one of a series of standards which specify test methods for determining dimensions and properties of thermal insulating materials and products. It supports a series of product standards for thermal insulating materials and products which derive from the Regulation (EU) No 305/2011 of the European parliament and of the council of 9 March 2011 laying down harmonized conditions for the marketing of construction products (Construction Product Regulation) through the consideration of the basic requirements.

The main technical changes that have been made in this new edition of EN 13467 are the following:

- a) the term circular segment chord has been included in the standard;
- b) a new Figure 2 was added;
- c) Table 1 has been adjusted;
- d) the document has been editorially revised.

This European Standard has been prepared for products used to insulate building equipment and industrial installations, but it may also be applied to products used in other areas.

This European test standard is one of the following group of inter-related standards on test methods for determining dimensions and properties of thermal insulation materials and products, all of which fall within the scope of CEN/TC 88:

- EN 13467, *Thermal insulating products for building equipment and industrial Installations — Determination of dimensions, squareness and linearity of preformed pipe insulation*
- EN 13468; *Thermal insulating products for building equipment and industrial Installations — Determination of trace quantities of water soluble chloride, fluoride, silicate and sodium ions and pH*
- EN 13469; *Thermal insulating products for building equipment and industrial Installations — Determination of water vapour transmission properties of preformed pipe insulation*
- EN 13470, *Thermal insulating products for building equipment and industrial Installations — Determination of the apparent density of preformed pipe insulation*
- EN 13471, *Thermal insulating products for building equipment and industrial Installations — Determination of the coefficient of thermal expansion*

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- EN 13472, *Thermal insulating products for building equipment and industrial Installations — Determination of short term water absorption by partial immersion of preformed pipe insulation*
- EN 14706, *Thermal insulating products for building equipment and industrial Installations — Determination of maximum service temperature*
- EN 14707, *Thermal insulating products for building equipment and industrial Installations — Determination of maximum service temperature for preformed pipe insulation*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the equipment and procedures for determining the dimensions, squareness and linearity of preformed pipe insulation, supplied in one piece, half sections or segments. It is applicable to thermal insulating products.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

Note 1 to entry: Please also see Figures 1, 2 and 5.

3.1

circumference

C

circular length of the outer surface of the pipe insulation

3.2

outside diameter

D_o

linear distance between two opposite points on the outside surface of the pipe insulation measured across the centre

3.3

inside diameter

D_i

linear distance between two opposite points on the inside surface of the pipe insulation measured across the centre

3.4

length

l

linear dimension measured perpendicularly to the circumference of the pipe insulation

3.5

thickness

d

thickness of the insulation product measured perpendicularly between the outside and the inside surface of the pipe insulation

3.6

thickness uniformity

Δd

variation measured on thickness d , expressed as the difference between the two extremes of the measurements of thickness d

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3.7 deviation from squareness

v
 maximum distance between a product, at its end, from a line which just touches the product and which is perpendicular to its major axis

Note 1 to entry: See Figure 5.

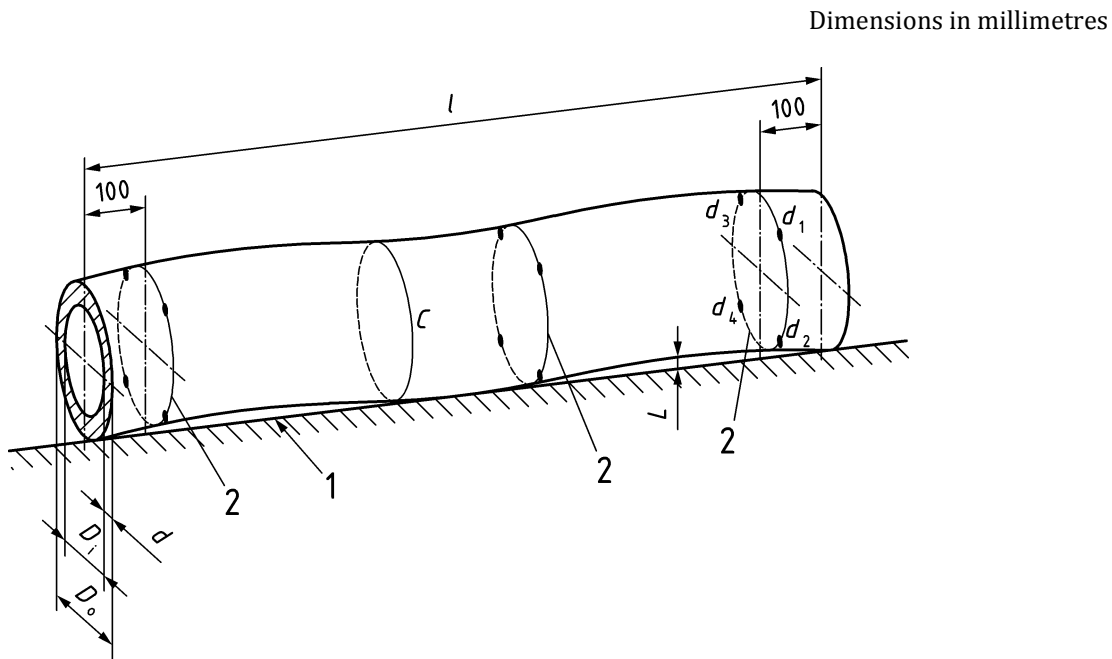
3.8 deviation from linearity

L
 maximum distance between a plane reference surface on which the test specimen rests and the outside surface of the pipe insulation

3.9 circular segment chord

ch
 length of the straight line joining the two end points of the curved surface of an insulation segment

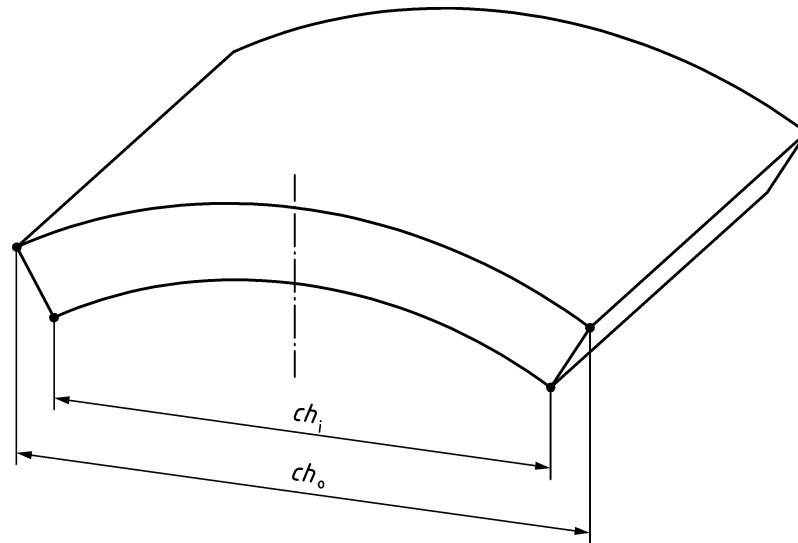
Note 1 to entry: For an insulation product two chords are defined; inner chord, ch_i , for the inner surface and outer chord ch_o for the outer surface (see Figure 2).



Key

1	flat surface	<i>L</i>	deviation from linearity
2	locations for measurements (see 7.2.2.4)	D_i	inside diameter
<i>C</i>	circumference	<i>l</i>	length
D_o	outside diameter	<i>d</i>	thickness
d_1, d_2, d_3, d_4	thickness readings at right angles to each other		

Figure 1 — Illustration of the definitions



Key

ch_i inner chord

ch_o outer chord

Figure 2 — Illustration of the chords of a circular segment

4 Principle

Determination of the dimensions, squareness and linearity of a pipe insulation along or at a right angle to its major axis.

5 Apparatus

5.1 For circumference, outside and inside diameter and thickness:

5.1.1 Metal tape graduated in millimetres for measuring circumference and diameter. The accuracy of reading has to be at least 1 mm for the diameter and at least 3 mm for the circumference.

5.1.2 Metal pipe for supporting the insulation with an outside diameter which ensures no deformation of the product.

5.1.3 Rack for supporting the metal pipe (see 5.1.2).

5.1.4 Thickness gauge, capable of applying a load of minimum $(0,5 \pm 0,05)$ N to a load distributing plate, diameter 50 mm. The load shall be such that no deformation of the product occurs during measurement. The accuracy of reading has to be at least 0,5 mm.

5.1.5 Conical mandrel graduated in 0,5 mm intervals (see Figure 4). The accuracy of reading has to be at least 0,5 mm.

5.1.6 Caliper. The accuracy of reading has to be at least 0,1 mm.

5.2 For length:

5.2.1 Metal tape graduated in millimetres. The accuracy of reading has to be at least 1 mm.