

## **Ventilation for buildings - Sheet metal air ducts and fittings with circular cross-section - Dimensions**

Ventilation for buildings - Sheet metal air ducts and fittings with circular cross-section - Dimensions

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1506:2001 sisaldab Euroopa standardi EN 1506:1997 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1506:2001 consists of the English text of the European standard EN 1506:1997.</p> <p>This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p><b>Käsitlusala:</b></p> <p>This European Standard specifies dimensions of ducts and duct fittings with circular cross-section. It applies to ductwork used in ventilating and air conditioning systems in buildings, subject to human occupancy. The wall thickness of ducts and fittings is not specified in this standard; strength and leakage are dealt with in prEN 12237.</p> <p>The corresponding Standard for rectangular ducts is EN 1505.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies dimensions of ducts and duct fittings with circular cross-section. It applies to ductwork used in ventilating and air conditioning systems in buildings, subject to human occupancy. The wall thickness of ducts and fittings is not specified in this standard; strength and leakage are dealt with in prEN 12237.</p> <p>The corresponding Standard for rectangular ducts is EN 1505.</p>
--	--

**ICS** 91.140.30

**Võtmesõnad:** accessories, aeraulic pipes, air conditioning, buildings, circular form, definitions, dimensional tolerances, dimensions, metal plates, ventilation

ICS 91.140.30

Descriptors: Buildings, ventilation, air ducts, fittings, dimensions.

**English version**

Ventilation for buildings

**Sheet metal air ducts and fittings with  
circular cross section**

Dimensions

Ventilation des bâtiments – Conduits  
en tôle et accessoires à section  
circulaire – Dimensions

Lüftung von Gebäuden –  
Luftleitungen und Formstücke aus  
Blech mit rundem Querschnitt – Maße

This European Standard was approved by CEN on 1997-10-25.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

## Contents

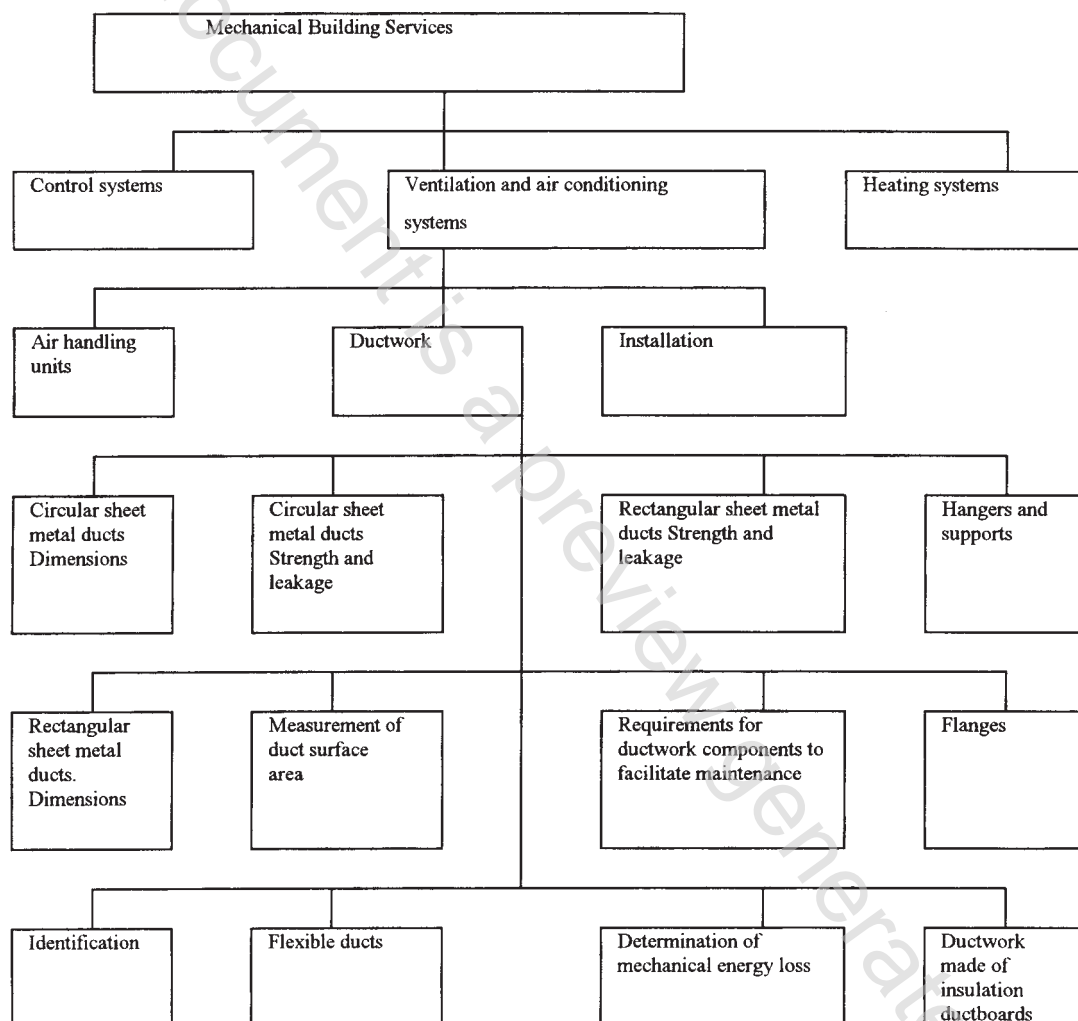
	Page
Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Definitions and symbols	5
4 Dimensions and values for ducts	6
5 Dimensions for fittings	7
6 Tolerances and clearances	14
<b>Annexes</b>	
A (informative) Examples of alternative designs of ends and connectors	16
B (informative) Bibliography	18

## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 156 "Ventilation for buildings", the secretariat of which is held by BSI.

This standard is one of a series of standards for ductwork used for ventilation and air conditioning of buildings for human occupancy, and it has a parallel standard referring to dimensions of rectangular ducts.

The position of this standard in the field of mechanical building services is shown in figure 1.



**Figure 1: Position of EN 1506 in the field of mechanical building services**

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 June 1998, and conflicting national standards shall be withdrawn at the latest by June 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium,

Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## **Introduction**

This standard has been prepared by CEN/TC 156 to specify standardized dimensions and tolerances for ducts and duct fittings with circular cross-section, used in ventilation systems.

Dimensions and tolerances for straight ducts given in this standard are in accordance with ISO 7807: 1983<sup>1)</sup> concerning recommended sizes.

It is intended that the additional sizes (A) which are in use in some countries will be phased out and may be removed from a future edition of the standard.

The dimensions given for duct fittings are based on document EUROVENT 2/4<sup>1)</sup>

---

<sup>1)</sup> See annex B.

## 1 Scope

This European Standard specifies dimensions of ducts and duct fittings with circular cross-section. It applies to ductwork used in ventilating and air conditioning systems in buildings, subject to human occupancy. The wall thickness of ducts and fittings is not specified in this standard; strength and leakage are dealt with in prEN 12237.

The corresponding Standard for rectangular ducts is EN 1505.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. these normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references and subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

CR 12792	Ventilation for buildings - Symbols and terminology
EN 1505	Ventilation for buildings - Sheet metal air ducts and fittings with rectangular cross-section - Dimensions
prEN 12237	Ventilation for buildings - Strength and leakage of sheet metal air ducts with circular cross-section - Requirements and testing

## 3 Definitions and symbols

For the purposes of this standard, the definitions given in European Technical Report CR 12792, together with the following, apply.

**3.1 nominal size ( $d$ ,  $d_1$ ,  $d_2$ ,  $d_3$  and  $d_4$ ):** Reference dimension used for designation, calculation and application of ducts and fittings.

$d$  denotes the inner diameter of ducts and female ends.

$d_1$ ,  $d_2$ ,  $d_3$  and  $d_4$  denote the inner diameters of male ends of fittings.

**3.2 effective length of a fitting ( $l$ ,  $l_1$ , and  $l_3$ ):** Length by which a fitting contributes to the overall length of the air distribution system.