Ventilation for buildings - Ductwork - Strength and leakage of circular sheet metal ducts

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 12237:2003 sisaldab Euroopa standardi EN 12237:2003 ingliskeelset teksti. Käesolev dokument on jõustatud 14.08.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 12237:2003 consists of the English text of the European standard EN 12237:2003. This document is endorsed on 14.08.2003 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies requirements and test methods for strength and air leakage of circular ductwork used in air conditioning and ventilation systems in buildings. The standard is intended to establish the mechanical strength and leakage required to verify the fitness for the intended service as installed ductwork	**Scope:** This European Standard specifies requirements and test methods for strength and air leakage of circular ductwork used in air conditioning and ventilation systems in buildings. The standard is intended to establish the mechanical strength and leakage required to verify the fitness for the intended service as installed ductwork

ICS 91.140.30

Võtmesõnad: air distribution, circular form, classifications, operating requirements, sheet material, sheets, specification (approval), specifications, strength of materials, suspending (hanging), testing, thermal environment systems, tightness, ventilation, ventilation ducts

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12237

April 2003

ICS 91.140; 91.140.30

English version

Ventilation for buildings - Ductwork - Strength and leakage of circular sheet metal ducts

Ventilation des bâtiments - Réseau de conduits - Résistance et étanchéité des conduits circulaires en tôle

Lüftung von Gebäuden - Luftleitungen - Festigkeit und Dichtheit von Luftleitungen mit rundem Querschnitt aus Blech

This European Standard was approved by CEN on 18 December 2002.

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 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 Management Centre has the same status as the official versions.

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

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Contents

Foreword

This document (EN 12237:2003) has been prepared by Technical Committee CEN /TC 156 "Ventilation for buildings", the secretariat of which is held by BSI.

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 October 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

Annex A is informative.

The standard is one of a series of standards for ductwork used for ventilation and air conditioning of buildings for human occupancy. The position of this standard in the field of mechanical building services is shown in Figure 1.

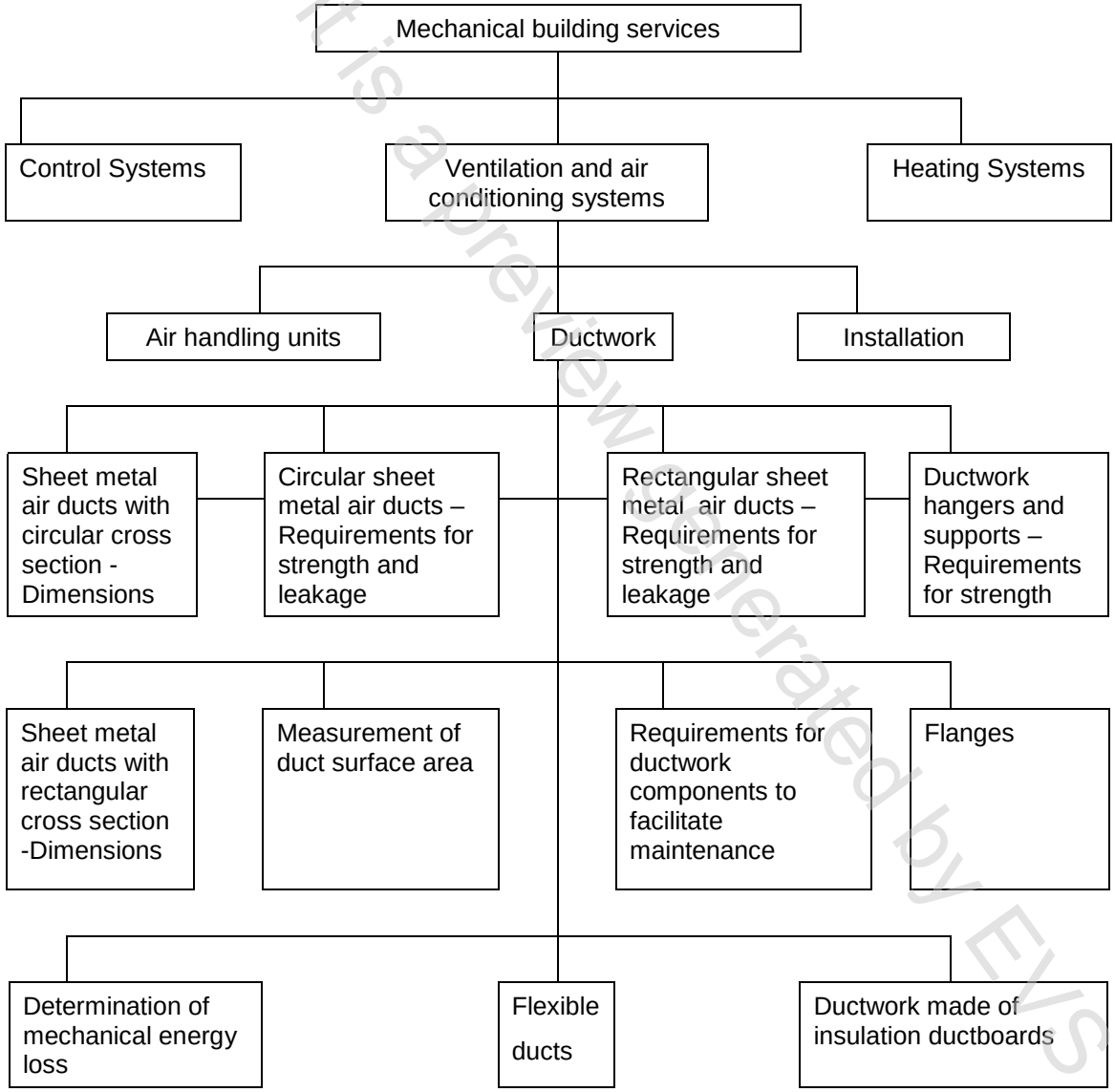

Figure 1 – Position of EN 12237 in the field of mechanical building services

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies requirements and test methods for strength and air leakage of circular ductwork used in air conditioning and ventilation systems in buildings.

The standard is intended to establish the mechanical strength and leakage required to verify the fitness for the intended service as installed ductwork.

The standard is intended for testing specific installations as well as product series in general under in-situ or laboratory conditions. The requirements and methods are applicable also to rectangular ductwork in respect of air leakage.

A recommended procedure, if the permitted air leakage rate is exceeded when testing a specific installation, is given in informative annex A.

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, 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 (including amendments).

CR 12792:1997, *Ventilation for buildings – Symbols and terminology.*

prEN 14239:2001, *Ventilation for buildings – Ductwork – Measurement of ductwork surface area.*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this European Standard the terms and definitions given in CR 12792:1997 apply.

3.1.1
duct surface area A_j
surface area of the ductwork under test

[see prEN 14239:2001]

3.1.2
total joint length L
actual total length of the periphery of the installation joints included in the test section of the ductwork

3.1.3
test pressure p_{test}
static air pressure difference between the pressure within the ductwork to be tested and the pressure of the surrounding air