



**National Standards Authority of Ireland**

**IRISH STANDARD**

**I.S. EN 12237:2003**

ICS 91.140  
91.140.30

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**VENTILATION FOR BUILDINGS - DUCTWORK  
- STRENGTH AND LEAKAGE OF  
CIRCULAR SHEET METAL DUCTS**

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland  
and comes into effect on:  
August 15, 2003*

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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  
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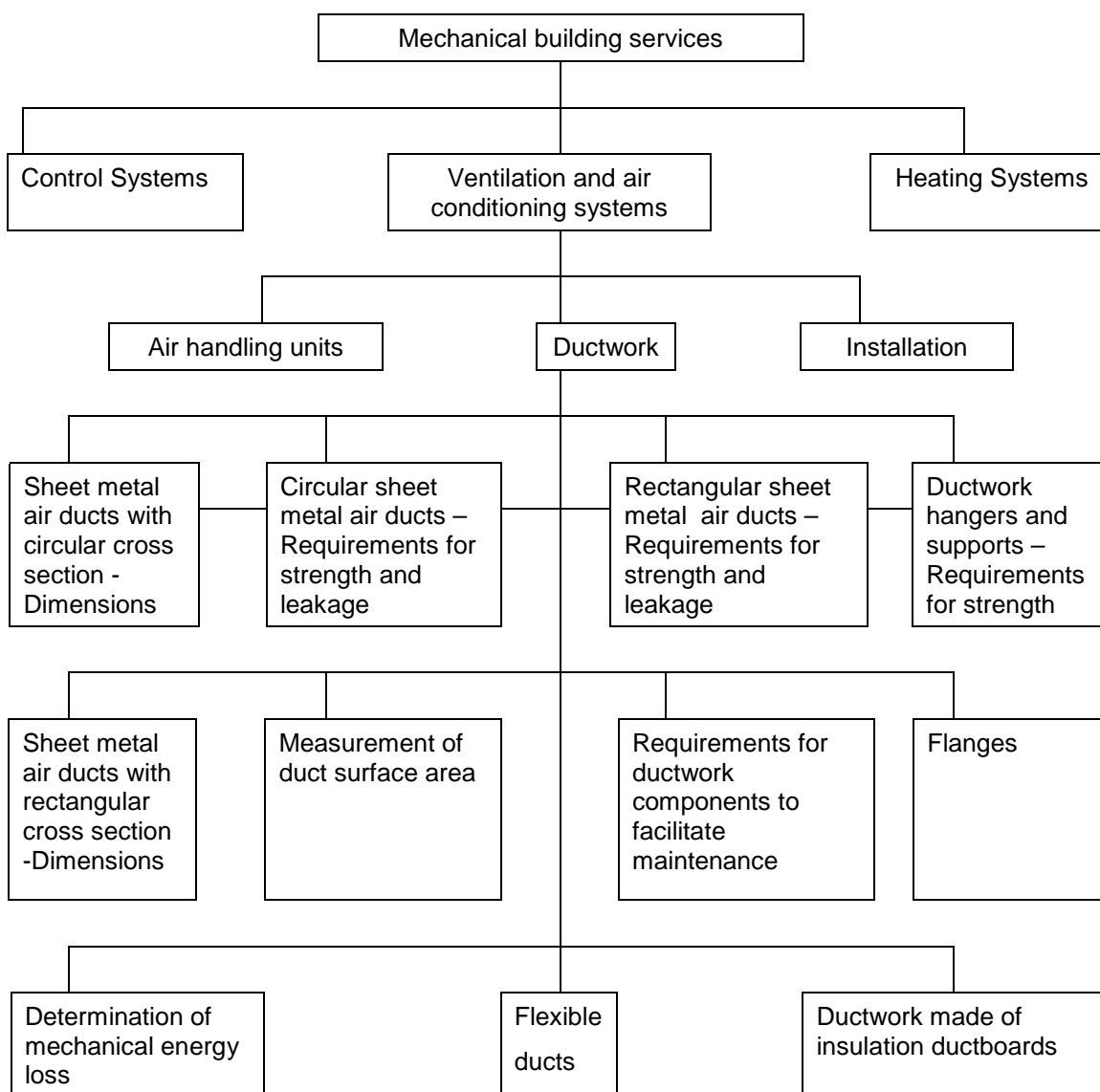
## Foreword

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**

# EN 12237:2003 (E)

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  $A_i$**

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  $p_{\text{test}}$**

static air pressure difference between the pressure within the ductwork to be tested and the pressure of the surrounding air

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