

Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 1: Externally and internally mounted air transfer devices

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13141-1:2004 sisaldab Euroopa standardi EN 13141-1:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.05.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13141-1:2004 consists of the English text of the European standard EN 13141-1:2004.</p> <p>This document is endorsed on 18.05.2004 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>
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<p>Käsitlusala: This European Standard specifies laboratory methods for testing externally and internally mounted air transfer devices operating under pressure differences.</p>	<p>Scope: This European Standard specifies laboratory methods for testing externally and internally mounted air transfer devices operating under pressure differences.</p>
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ICS 91.140.30

Võtmesõnad:

ICS 91.140.30

English version

**Ventilation for buildings - Performance testing of
components/products for residential ventilation - Part 1:
Externally and internally mounted air transfer devices**

Ventilation des bâtiments - Essais des performances des
composants/produits pour la ventilation des logements -
Partie 1: Dispositifs de transfert d'air montés en extérieur et
en intérieur

Lüftung von Gebäuden - Leistungsprüfungen von
Bauteilen/Produkten für die Lüftung von Wohnungen - Teil
1: Außenwand- und Überströmluftdurchlässe

This European Standard was approved by CEN on 22 October 2003.

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.

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 Central Secretariat has the same status as the official versions.

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Contents

	page
Foreword	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Performance testing of aerodynamic characteristics	7
4.1 Flowrate/pressure	7
4.2 Non-reverse flow ability	13
4.3 Air tightness when closed (for closeable externally mounted air transfer device)	13
4.4 Geometrical free area	13
4.5 Air diffusion in the occupied zone	14
5 Performance testing of sound insulation	17
6 Performance testing of water tightness	18
6.1 Principle	18
6.2 Test installation and conditions	18
6.3 Test procedure	18
6.4 Test report	18
Annex A (informative) Method for calculation of the equivalent area	19
Bibliography	20

Foreword

This document (EN 13141-1:2004) 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 July 2004, and conflicting national standards shall be withdrawn at the latest by July 2004.

This standard is one of a series of standards on residential ventilation. The performance characteristics of the components/products for residential ventilation are given in EN 13142.

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

Annex A is informative.

This document includes a bibliography.

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

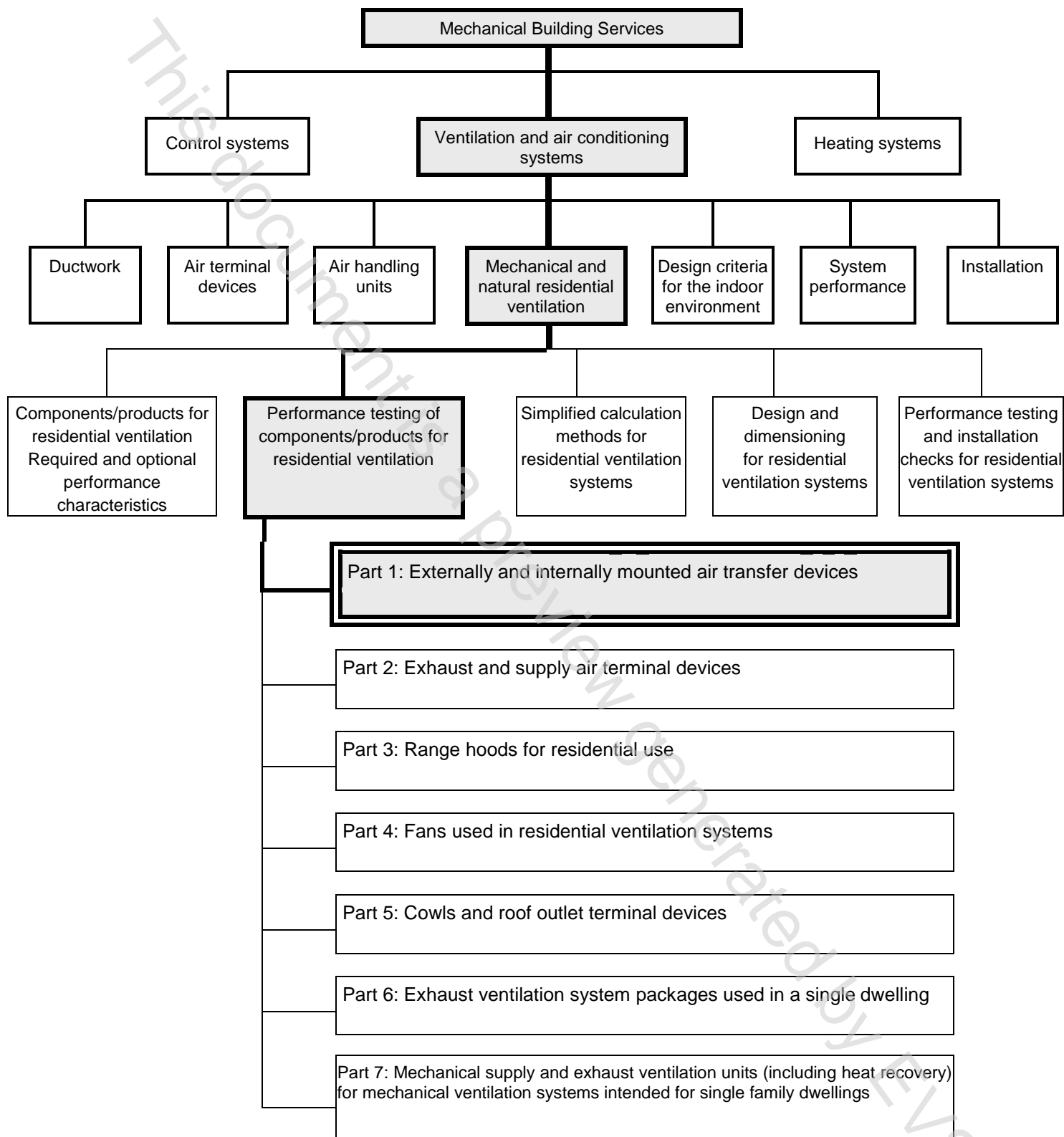


Figure 1 - Position of EN 13141-1 in the field of mechanical building services

1 Scope

This European Standard specifies laboratory methods for testing externally and internally mounted air transfer devices operating under pressure differences.

It applies to devices located between two spaces (between one room and outside, or between two rooms) of the following types:

- devices with fixed opening(s);
- devices with manually adjustable opening(s);
- devices with pressure difference controlled opening(s);
- window openings specifically designed to act as an air transfer device.

It describes tests intended to characterise the following:

- flow rate/pressure;
- non-reverse flow ability;
- 'air tightness when closed' (for closeable externally mounted air transfer device);
- geometrical free area;
- air diffusion in the occupied zone;
- sound insulation;
- water tightness.

This standard does not apply to evaluation of:

- air filtration;
- condensation risk;
- noise production.

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)

EN 1027, *Windows and Doors – Watertightness – Test method.*

EN 12238, *Ventilation for buildings – Air terminal devices – Aerodynamic testing and rating for mixed flow application.*

EN 12792, *Ventilation for buildings – Symbols, terminology and graphical symbols.*

EN 13182, *Ventilation for buildings – Instrumentation requirements for air velocity measurements in ventilated spaces.*

EN 20140, *Acoustics – Measurement of sound insulation in buildings and of building element*.

ISO 5221, *Air distribution and air diffusion – Rules to methods of measuring air flow rate in an air handling duct*.

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 12792 together with the following apply.

3.1

externally mounted air transfer device

device designed to allow the passage of air through the building envelope with the minimum ingress of rain, snow, foreign bodies, etc.

3.2

internally mounted air transfer device

device designed to allow the passage of air between two internal spaces

3.3

fixed device

device without any moving part intended to control the air flow rate

3.4

manually adjustable device

device whose moving parts are controlled by the user

3.5

pressure difference controlled device

device whose moving parts are controlled according to the pressure difference - across it

3.6

static pressure difference(Δp)

static pressure difference between the upstream and the downstream part of the tested device (in Pa)

3.7

flow rate/pressure characteristic

relationship between the flow rate through a device and the pressure difference across it

3.8

non-reverse flow ability

ability of an air transfer device to prevent the air flow to reverse when the pressure difference Δp across it is inverted

3.9

occupied zone (for laboratory purpose)

zone of the test room limited to 1,8 m above floor level 0,5 m from any wall and 0,1 m from floor

3.10

water tightness

ability of an externally mounted air transfer device to resist water penetration

NOTE It is observed in the conventional conditions of test defined in this standard.

3.11

water penetration

penetration of water that would continuously or repeatedly wet parts of a building or components not designed to be wetted