

**Ehitiste ventilatsioon.
Õhukäitlusseadmed. Mehaanilised
tööomadused**

Ventilation for buildings - Air handling units -
Mechanical performance

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1886:2000 sisaldab Euroopa standardi EN 1886:1998 ingliskeelset teksti.	This Estonian standard EVS-EN 1886:2000 consists of the English text of the European standard EN 1886:1998.
Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

Käsitlusala: Käesolev standard määrab kindlaks testimismeetodid, -nõuded ja klassifikatsiooni õhu sissepuhke- ja/või väljatõmbeseadmete kohta, mis ventilatsioonikanalite kaudu mõjuvad kas ehitise osas või kogu ehitises. Käesolev standard ei ole kohaldatav: a) seadmetele, mis teenindavad ehitises piiratud ala, nagu kohalikud ventilaatorid; b) elamute ventilatsiooniseadmetele; c) seadmetele, mis tekitavad ventilatsiooniõhku põhiliselt tootmisprotsessi jaoks.	Scope:
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ICS 91.140.30

Võtmesõnad: akustiline isolatsioon, ehitised, klassifikatsioonid, mehaaniline tugevus, ohutus, soojusülekanne, testimine, tulekaitse, ventilatsioon, õhu konditsioneerimine, õhu käitlemise seadmed, õhufiltrid

ICS 91.140.30

Descriptors: Ventilation, air handling units, performance, testing.

English version

Ventilation for buildings
Air handling units
Mechanical performance

Ventilation des bâtiments – Caissons
de traitement d'air – Performance
mécanique

Lüftung von Gebäuden – Zentrale
raumlufttechnische Geräte –
Mechanische Eigenschaften und
Meßverfahren

This European Standard was approved by CEN on 1998-03-26.

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

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Foreword

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

The standard is a part of a series of standards for air handling units used for ventilation and air conditioning of buildings for human occupancy. It considers the mechanical performance of an air handling unit as a whole and will be supported by a standard for sections and components. The position of this standard in the whole field of standards for mechanical building services is illustrated in figure 1.

No existing European standard is superseded.

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

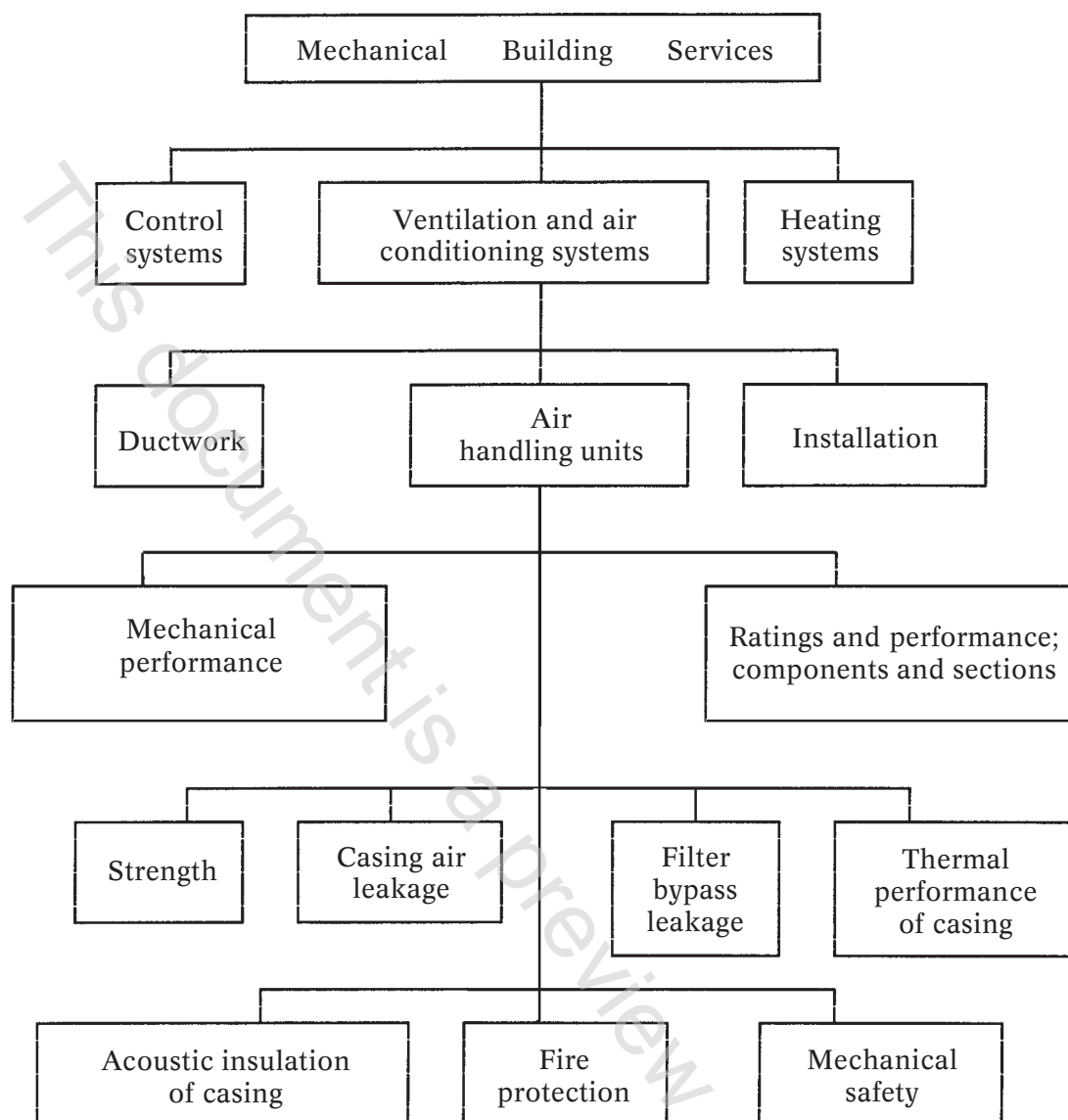


Figure 1: Air handling units. Mechanical performance.
Position in the field of mechanical building services

Introduction

This standard specifies the mechanical performance of an air handling unit as a whole, to be utilized by all involved in ventilation and air conditioning manufacturing, design, installation and maintenance. The functions and characteristics of the individual sections of the unit will be considered in another of the series of standards covering air handling units.

Because of the different requirements due to climatic conditions, to building traditions in the different parts of Europe, and to the specific features of individual applications, most of the requirements are given in the form of classes, which may be specified generally to be used in certain regions, or separately for individual applications. Only parts of the standard have been adopted from existing national or international standards.

Comparison tests for strength, air leakage and thermal performance have been made in Finland, Germany, Netherlands, Switzerland and the United Kingdom.

1 Scope

This standard specifies test methods, test requirements and classifications for air handling units which are supplying and/or exhausting air, via ductwork, for ventilating/conditioning a part or the whole of the building.

This standard is not applicable to the following:

- a) air conditioning units serving a limited area in a building, such as fan coil units;
- b) units for residential buildings;
- c) units producing ventilation air mainly for a manufacturing process.

Except for the thermal and acoustic performance of the casing, the test methods and requirements are applicable to both complete units and any separate sections.

The filter bypass test is not applicable to the testing of high efficiency particulate air filters (HEPA).

NOTE: HEPA filters are recommended to be installed downstream of the air handling unit. Such installations should be leak tested in accordance with the appropriate filter standards.

The test method for the thermal performance of the casing is applicable to the comparison of different constructions, but not to the calculation of thermal losses through the casing or the risk of condensation.

Similarly, the test method for the acoustic performance of the casing is applicable to the comparison of different constructions, but not to the provision of accurate acoustic data for specific units.

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 below. For dated references, any subsequent amendments or revisions to these publications only apply to this European Standard when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

CR 12792:1997

Ventilation for buildings - Symbols and terminology.

prEN 13053	Ventilation for buildings - Air handling units - Ratings and performance for components and sections
EN 292-2	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications.
EN 779	Particulate air filters for general ventilation - Requirements, testing, marking
EN 61310-1	Safety of machinery - Indication, marking and actuating - Part 1: Requirements for visual, auditory and tactile signals
ISO 3744	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering methods in an essentially free field over a reflecting plane
ISO 11546-2	Acoustics - Determination of sound insulation performances of enclosures - Part 2: Measurements in situ (for acceptance and verification purposes)

3 Definitions

For the purposes of this standard the definitions given in CR 12792:1997 apply, together with the following.

3.1 air handling unit: A factory made encased unit serving as a prime mover of a ventilation or air conditioning installation where outdoor air, recirculation air and exhaust air is treated, consisting of a fan section where a filter section and heat exchanger may be connected. In addition the unit may consist of an inlet section with one or more louvres, dampers and valves, a mixing section, heat recovery section, one or more heating and cooling coils, humidifiers, sound attenuators and additional equipment such as controls, measuring sections etc.