



BSI Standards Publication

Ventilation for buildings — Air handling units — Mechanical performance

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National foreword

This British Standard is the UK implementation of EN 1886:2025. It supersedes BS EN 1886:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee RHE/2, Ventilation for buildings, heating and hot water services.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Ventilation for buildings - Air handling units - Mechanical performance

Ventilation des bâtiments - Centrales de traitement d'air - Performances mécaniques

Lüftung von Gebäuden - Zentrale raumlufttechnische Geräte - Mechanische Eigenschaften und Messverfahren

This European Standard was approved by CEN on 21 April 2025.

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This document (EN 1886:2025) 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of an identical text or by endorsement, at the latest by December 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1886:2007.

The main changes with respect to the previous edition EN 1886:2007 are:

- a model box definition suitable for air handling unit ranges that are only manufactured using a single casing without intermediary casing joint has been included;
- for the mechanical strength of the casing, pressure classes have been introduced with the requirement that the test pressure class be declared. In addition, the testing procedure has been clarified;
- for the casing leakage, the test pressure is changed to 400 Pa and -400 Pa to be in line with legal requirements. In addition, reference to the relevant standard for filters has been updated and test procedures clarified;
- for the filter bypass leakage, the filter is blanked off by means of a blanking plate and the option of using a foil to cover the filter has been deleted;
- for the thermal performance of the casing, a classification of the thermal transmittance is introduced with classes T1 to T5 becoming new classes U1 to U3 and with the requirement that the casing materials be declared. In addition, the testing procedure is more detailed and clearer;
- for the acoustic performance, the specification of the test setup and execution is more detailed and clearer;
- a new Annex B (normative) with requirements for the content of the test report is added;
- a new Annex E (informative) provides a method for measuring the casing related internal leakage;
- a new Annex F (informative) provides AHU design advice for fire and mechanical safety.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

This document provides test methods, classifications and requirements for air handling units (AHU) including mechanical strength, air leakage, thermal insulation and acoustic insulation properties of the casing.

This document also includes an Annex F with recommendations for fire protection and mechanical safety for AHUs. It is the intention of CEN/TC 156 that these sections will be later moved to a new standard.

The performance of AHU components is specified in EN 13053.

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This document specifies laboratory test methods, test requirements and classifications for the casings of non-residential air handling units (AHU). For the leakage tests, a method for on-site testing is also included.

The test methods and requirements are applicable to both model boxes and real units, except for the thermal and acoustic performance of the casing.

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

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

This document is not applicable for fan-coil units and similar products.

The filter bypass test specified in this document is not applicable to high efficiency particulate air (HEPA) filter installations.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13053, *Ventilation for buildings — Air handling units — Rating and performance for units, components and sections*

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

EN ISO 3743-1, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for small movable sources in reverberant fields — Part 1: Comparison method for a hard-walled test room (ISO 3743-1)*

EN ISO 3744:2010, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744:2010)*

EN ISO 9614 (all parts), *Acoustics — Determination of sound power levels of noise sources using sound intensity (ISO 9614 all parts)*

EN ISO 11546-2:2009, *Acoustics — Determination of sound insulation performances of enclosures — Part 2: Measurements in situ (for acceptance and verification purposes) (ISO 11546-2:1995)*

ISO 12001, *Acoustics — Noise emitted by machinery and equipment — Rules for the drafting and presentation of a noise test code*