SLOVENSKI STANDARD
oSIST prEN 13142:2018

01-oktober-2018

Prezračevanje stavb - Sestavni deli/izdelki za prezračevanje stanovanjskih stavb - Zahtevane in nezahtevane lastnosti

Ventilation for buildings - Components/products for residential ventilation - Required and optional performance characteristics

Lüftung von Gebäuden - Bauteile/Produkte für die Lüftung von Wohnungen - Geforderte und frei wählbare Leistungskenngrössen

Ventilation des bâtiments - Composants/produits pour la ventilation des logements - Caractéristiques de performances exigées et optionnelles

Ta slovenski standard je istoveten z: **prEN 13142**

ICS:

91.140.30	Prezračevalni in klimatski sistemi	Ventilation and air-conditioning systems

oSIST prEN 13142:2018 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 13142

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ICS 91.140.30

Will supersede EN 13142:2013

English Version

Ventilation for buildings - Components/products for residential ventilation - Required and optional performance characteristics

Ventilation des bâtiments - Composants/produits pour la ventilation des logements - Caractéristiques de performances exigées et optionnelles

Lüftung von Gebäuden - Bauteile/Produkte für die Lüftung von Wohnungen - Geforderte und frei wählbare Leistungskenngrössen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 156.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Ref. No. prEN 13142:2018 E

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European foreword

This document (prEN 13142:2018) has been prepared by Technical Committee CEN/TC 156 “Ventilation for buildings”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 13142:2013.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For relationship with EU Directive, see informative Annex ZA and Annex ZB, which are integral parts of this document.

In addition to a number of editorial revisions, the following main changes have been made with respect to EN 13142:2013:

— a new Annex ZA considering EU 1253/2014 and a new Annex ZB considering EU 1254/2014 have been added;

— aspects of outdoor and indoor mixing have been added in 5.1;

— unidirectional ventilation units have been added in 5.6 and fans used in residential ventilation units have been removed. Clear reference to prEN 13141-4 to specify the aspects of eco-design regulation for UVU has been added in 5.6;

— 5.8 has been updated with classification aspects for energy and acoustics;

— 5.9 has been updated with link to prEN 13141-7:

  — data input, declaration, leakage in 5.9.4.2, energy in 5.9.6;

  — nominal temperature performance factor, NTPF, has been deleted;

  — classification of humidity ratio has been reviewed;

  — acoustic classification at reference volume flow;

— 5.10 has been updated with link to prEN 13141-8:

  — air flow sensitivity classification;

  — classification of humidity ratio has been reviewed;

  — nominal temperature performance factor, NTPF, has been deleted;

— Annex A has been split into a normative part Annex A and informative part Annex B;

— a new informative Annex E about filter clogging compensation has been added;

— a new informative Annex F for extended SEC calculations for defrosting aspects has been added;

— a new informative Annex G for extended SEC calculation considering infiltration has been added;

— a new informative Annex H for SEC examples has been added;

— a new Annex ZA and a new Annex ZB for eco-design aspects have been added.

Introduction

A combination of components and/or products is required to provide ventilation. These components/products interact to achieve a renewal of the air in a dwelling.

There are many possible arrangements of balanced ventilation units with heat exchanger intended for a single family dwelling (prEN 13141-7) or a single room (prEN 13141-8). Additionally all kinds of units might have a heat exchanger, a heat pump or both.

It is important to consider each product not only individually but also as part of the whole system: for example from the outdoor canopy of an externally mounted air transfer device to the roof outlet terminal at the end of an exhaust duct. To enable good design it is essential that certain performance characteristics for each product are available in a simple and comparable form.

This European Standard defines also a classification for balanced ventilation units which may be used for the determination of minimum and optional product characteristic in national building regulations and standards.

The structure of this document is based on the type of products that are given in Table 1. Table 1 gives the type of information needed for each type of products.

Table 1 — Type of information for products

Product	Declaration	Classification	Codification
Externally mounted air transfer devices	X	—	—
Internally mounted air transfer devices	X	—	—
Exhaust and supply air terminal devices	X	—	—
Range hoods	X	—	—
Exhaust or supply unidirectional ventilation units in residential ventilation systems	X	X	X
Cowls and roof outlet terminals	X	—	—
Unidirectional exhaust ventilation system packages	X	—	—
Ducted mechanical bidirectional ventilation units (including heat recovery)	X	X	X
Non-ducted bidirectional ventilation units (including heat recovery)	X	X	X
Unidirectional positive input ventilation uníts	x	—	—

This European Standard is one of a series of standard on residential ventilation. It is referring to the performance testing of the components/products for residential ventilation.

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

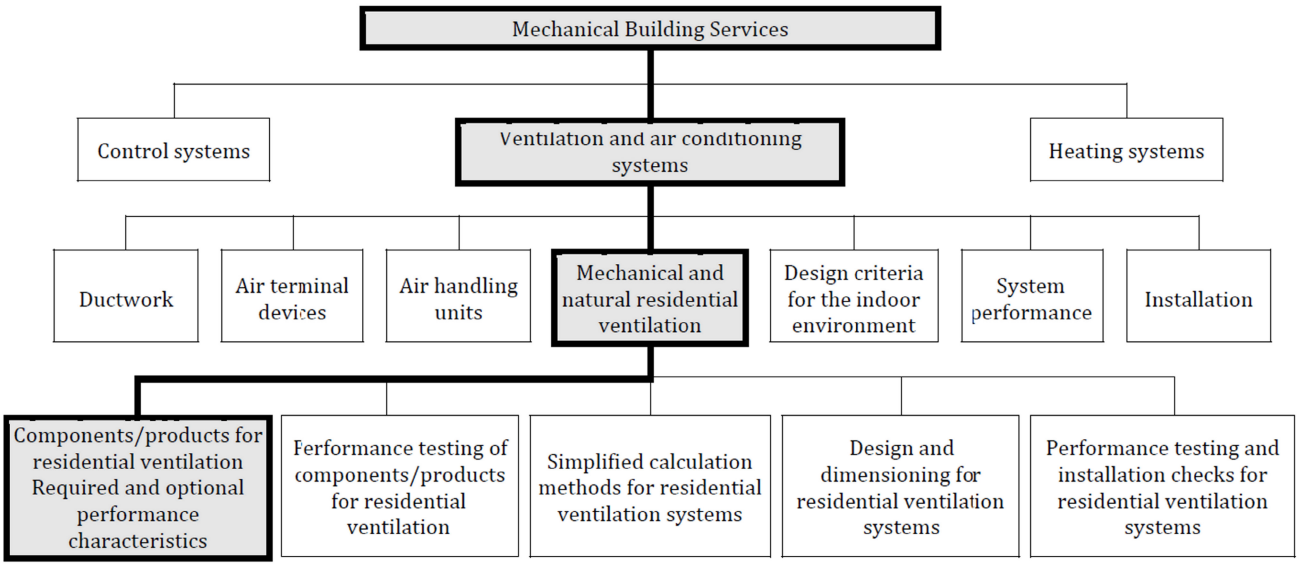

Figure 1 — Position of EN 13142 in the field of the mechanical building services

EN 13142:2013 has been revised to include new requirements according to Ecodesign requirements for ventilation units given in EU Commission Regulation No EU 1253/2014 and No EU 1254/2014.

1 Scope

This document specifies and classifies the component/product performance characteristics which may be necessary for the design, rating and dimensioning, placing on the market of residential ventilation products and systems to provide the predetermined performance, comfort conditions of temperature, air velocity, humidity, hygiene and sound in the occupied zone.

It defines those performance characteristics (mandatory or optional) which shall be determined, measured and presented according to relevant test methods. It provides a classification scheme which leads to a full definition of product properties based on test methods described in various EN Standards and gives an overview of the test standards. Distinction between mandatory and optional requirement is left to each European and national regulations.

The codification part in Annex A and the classification part in Clause 4 apply to the following products:

— unidirectional mechanical supply and exhaust residential ventilation units according to prEN 13141-4, EN 13141-6 and EN 13141-11;

— ducted mechanical bidirectional residential ventilation units according to prEN 13141-7;

— non-ducted mechanical bidirectional residential ventilation units according to prEN 13141-8.

This European Standard does not apply to other products such as filters, fire dampers, ducts, control devices and sound attenuators, which may also be incorporated in residential ventilation.

This European Standard specifies in Annex ZA and Annex ZB the requirements of EU 1253/2014 and EU 1254/2014 for residential ventilation units below 1 000 m^3/h air volume flow.

This European Standard does not cover requirements raised by European Directives (e.g. low voltage directive, EMC directive) and other requirements such as corrosion, fire resistance and snow penetration.

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 12792:2003, *Ventilation for buildings — Symbols, terminology and graphical symbols*

EN 13141-1, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 1: Externally and internally mounted air transfer devices*

EN 13141-2, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 2: Exhaust and supply air terminal devices*

EN 13141-3, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 3: Range hoods for residential use without fan*

prEN 13141-4:2018, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 4: Aerodynamic, electrical power and acoustic performance of unidirectional ventilation units*

EN 13141-5, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 5: Cowls and roof outlet terminal devices*

EN 13141-6, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 6: Exhaust ventilation system packages used in a single dwelling*

prEN 13141-7:2018, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 7: Performance testing of mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for single family dwellings*

prEN 13141-8:2018, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 8: Performance testing of non-ducted mechanical supply and exhaust ventilation units (including heat recovery)*

EN 13141-9, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 9: Externally mounted humidity controlled air transfer device*

EN 13141-10, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 10: Humidity controlled extract air terminal device*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 60335-2-31, *Household and similar electrical appliances — Safety — Part 2-31: Particular requirements for range hoods and other cooking fume extractors (IEC 60335-2-31)*

EN 61591, *Household range hoods and other cooking fume extractors — Methods for measuring performance (IEC 61591)*

EN ISO 5801, *Fans — Performance testing using standardized airways (ISO 5801)*

EN ISO 16890 (series), *Air filters for general ventilation (ISO 16890)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12792:2003 and the following apply.

ISO and IEC maintain terminological databases for the use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO online browsing platform: available at http://www.iso.org/obp

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.

[SOURCE: EN 12792:2003, definition 144]

3.2
internally mounted air transfer device
device designed to allow the passage of air between two internal spaces

[SOURCE: EN 12792:2003, definition 232]

3.3
exhaust air terminal device
device through which air leaves the treated space

3.4
supply air terminal device
device through which air enters the treated space

[SOURCE: EN 12792:2003, definition 349 – The second sentence has been removed]

3.5
range hood
cooker hood
device intended to collect contaminated air from above a cooking appliance and either discharge it into the room or remove it from the room

Note 1 to entry: It may or may not incorporate one or more of the following components:

— filter (essential when the contaminated air is discharged into the room);

— fan;

— fire damper;

— non return flow damper.

[SOURCE: EN 12792:2003, definition 85]

3.6
cowl
air terminal device, with or without moving components, which is intended to use the wind to create negative pressures above the roof in order to avoid reverse flow in the duct

[SOURCE: EN 12792:2003, definition 92 – Definition entirely reviewed]

3.7
roof outlet
air terminal device used for mechanical ventilation systems

Note 1 to entry: Roof outlet terminals are not primarily intended to use the wind to create negative pressures above the roof.

[SOURCE: EN 12792:2003, definition 314 – Word "installations" replaced by "systems"]

3.8
ventilation system package
combination of compatible components which are tested, delivered and installed as specified by the manufacturer, to complete a residential ventilation system when sold as a single product

Note 1 to entry: It may exclude minor parts such as tapes, sealants and screws.

Note 2 to entry: This definition applies for single dwelling.