

SLOVENSKI STANDARD kSIST FprEN 13142:2012

01-september-2012

Prezračevanje stavb - Komponente/izdelki za prezračevanje stanovanj - Zahtevane in nezahtevane karakteristične 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: FprEN 13142

ICS:

91.140.30 Prezračevalni in klimatski

sistemi

Ventilation and air-

conditioning

kSIST FprEN 13142:2012 en,fr,de

kSIST FprEN 13142:2012

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

FINAL DRAFT FprEN 13142

June 2012

ICS 91.140.30

Will supersede EN 13142:2004

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 unique acceptance procedure. 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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.

Warning: This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

FprEN 13142:2012 (E)

Con	tents	Page
Forew	/ord	
Introd	luction	
4		
1	Scope	
2	Normative references	7
3	Terms and definitions	8
4	Performance characteristics for residential ventilation components/products	
4.1	General	
4.2	Externally mounted air transfer devices	10
4.2.1	Aerodynamic characteristics	
4.2.2	Equivalent area	
4.2.3	Free area	
4.2.4	Controls	
4.2.5	Air diffusion	
4.2.6	Acoustic characteristics	
4.2.7	Water penetration	10
4.3	Internally mounted air transfer devices	
4.3.1	Aerodynamic characteristics	
4.3.2	Equivalent area	
4.3.3	Free area	
4.3.4	Acoustic characteristics	
4.4	Exhaust and supply air terminal devices	
4.4.1	Aerodynamic characteristics	
4.4.2	Acoustic characteristics	
4.4.3	Controls	
4.4.4	Air diffusion characteristics	
4.5	Range hoods	
4.5.1	Aerodynamic characteristics	
4.5.2	Acoustic characteristics	
4.5.3	Efficiency of grease absorption	
4.5.4	Effectiveness of odour extraction	
4.5.5	Electrical power	
4.5.6	Controllability	
4.6 4.6	Fans used in residential ventilation systems	
4.6.1	Aerodynamic characteristics	
4.6.2	Acoustic characteristics	
4.6.3	Electrical power	
4.0.5 4.7	Cowls and roof outlet terminals	
4.7.1	Pressure drop	
4.7.1 4.7.2	Free area	
4.7.3	Suction effect	
4.7.4 4.7.4	Acoustic characteristics	
4.7. 4 4.8	Exhaust ventilation system packages used in a single dwelling	
+.0 4.8.1	GeneralGeneral	
4.8.2	Characteristics	
+.0.2 4.9	Mechanical supply and exhaust ventilation units (including heat recovery) for mechanical	
+.J	ventilation systems intended for single family dwellings	
4.9.1	Declaration of Intended Use	
4.9.1 4.9.2	General on classification	
4.9.2 4.9.3	Aerodynamic characteristics	
	Thermal characteristics	
4.9.4	Thermal Characteristics	10

4.9.6	Acoustic characteristics	20
4.10	Un-ducted mechanical supply and exhaust ventilation units (including heat recovery) for	
	mechanical ventilation systems intended for a single room	
4.10.1	Declaration of Intended Use	
4.10.2	General on classification	
4.10.3	Aerodynamic characteristics	
4.10.4	Thermal characteristics	
4.10.5	Energy	
4.10.6	Acoustics	27
5	Manual, cleaning and maintenance	28
5.1	Manual	
5.2	Cleaning and maintenance	28
5.3	Check of maintenance criteria	29
6	Marking, labelling and product information	29
7	Declaration and codification of mechanical supply and exhaust ventilation units	
, 7.1	General	
7.2	Filter	_
7.3	Materials	
7.3.1	Fire resistance	
7.3.2	Hygiene and health	_
Annex	A (informative) Additional check list for declaration and codification for supply and exhaust	
۸.4	unitsFilter bypass leakage (not applicable to filter classes G1 to G4)	
A.1 A.2	Design criteria	
A.2 A.3	Controls	
A.4	Additional equipment	
	• •	
Annex	B (informative) Schematics for classification and codification of balanced units and relevant test standards	
Annov	C (informative) Items to be considered in a national annex	
C.1	Mechanical supply and exhaust ventilation units (including heat recovery) for mechanical	30
C. I	ventilation systems intended for single family dwellings	38
C.1.1	Classification of centralized units SDHR based on tests (EN 13141-7)	JU
C.1.2	Codification of Centralized units SDHR based on declaration and visual inspection	
C.2	Un-ducted mechanical supply and exhaust ventilation units (including heat recovery) for	
-	mechanical ventilation systems intended for a single room	39
C.2.1	Classification of single room units SRHR based on tests (EN 13141-8)	39
C.2.2	Codification of single room units SRHR based on declaration and visual inspection	40
C.3	Parameters for the evaluation of energy saving for units with heat recovery (SDHR)	
C.3.1	General	41
C.3.2	Primary Energy Saving (PES)	41
C.3.3	Ventilation Unit Efficiency (VUE)	
C.3.4	Examples	42
Biblion	ıranhv	44

FprEN 13142:2012 (E)

Foreword

This document (FprEN 13142:2012) 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 Unique Acceptance Procedure.

This document will supersede EN 13142:2004.

In comparison to EN 13142:2004 the following changes have been made:

- references to EN 13141-1 to 10 has been updated;
- reference to humidity controlled air transfer devices (EN 13141-9 and EN 13141-10) has been added;
- unducted mechanical supply and exhaust ventilation units including heat recovery for a single room has been added in 4.10;
- a classification and codification system to ventilation units with heat recovery (single room and single dwelling) has been added in 4.9 and 4.10 and in Annex A;
- declaration of filters and materials used in the units has been added in 7.3;
- an example for a possible national annex has been added in Annex C.

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 (EN 13141-7) or a single room (EN 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 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 — List of the type of products

Product	Declaration	Classification	Codification
Externally mounted air transfer devices	Х	_	_
Internally mounted air transfer devices	Х	_	_
Exhaust and supply air terminal devices	Х	_	_
Range hoods	Х	_	_
Fans in residential ventilation systems	Х	_	_
Cowls and roof outlet terminals	Х	_	_
Exhaust ventilation system packages	Х	_	_
Mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for single family dwellings	х	Х	Х
Un-ducted mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for a single room	X	Х	Х

This standard (EN 13142:2012) 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.

FprEN 13142:2012 (E)

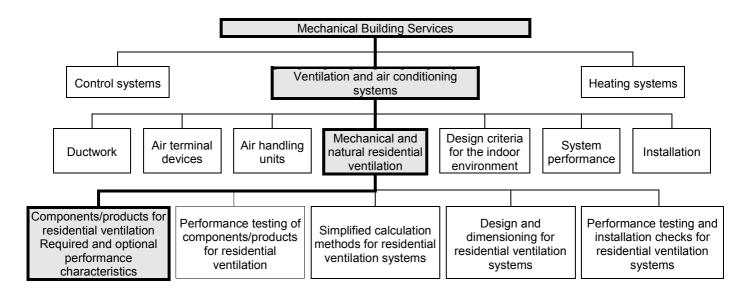


Figure 1 — Position of EN 13142 in the field of the mechanical building services