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Smoke and heat control systems - Part 2: Natural smoke and heat exhaust ventilators

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Smoke and heat control systems - Part 2: Natural smoke and heat exhaust ventilators

Systèmes pour le contrôle des fumées et de la chaleur - Partie 2 : Dispositifs d'évacuation naturelle de fumées et de chaleur

Rauch- und Wärmefreihaltung - Teil 2: Natürliche Rauch- und Wärmeabzugsgeräte

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European foreword

This document (EN 12101-2:2017) has been prepared by Technical Committee CEN/TC 191 “Fixed firefighting systems”, 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of an identical text or by endorsement, at the latest by September 2017, and conflicting national standards shall be withdrawn at the latest by December 2018.

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This document supersedes EN 12101-2:2003.

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(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this standard.

This European Standard is one of the parts of the European Standard EN 12101 covering smoke and heat control systems.

This European Standard has the general title *Smoke and heat control systems* and currently consists of the following parts:

— *Part 1: Specification for smoke barriers*;

— *Part 2: Natural smoke and heat exhaust ventilators* [the present document];

— *Part 3: Specification for powered smoke and heat exhaust ventilators*;

— *Part 4: Installed SHEVS systems for smoke and heat ventilation* [Technical Report CEN/TR 12101-4];

— *Part 5: Guidelines on functional recommendations and calculation methods for smoke and heat exhaust ventilation systems* [Technical Report CEN/TR 12101-5];

— *Part 6: Specification for pressure differential systems – Kits*;

— *Part 7: Smoke control sections*;

— *Part 8: Smoke control dampers*;

— *Part 10: Power supplies*.

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

Introduction

In a fire situation, smoke and heat exhaust ventilation systems create and maintain a smoke free layer above the floor by removing smoke. They also serve simultaneously to exhaust hot gases released by a fire in the developing stages. The use of such systems to create smoke-free areas beneath a buoyant layer has become widespread. Their value in assisting in the evacuation of people from buildings and other construction works, reducing fire damage and financial loss by preventing smoke damage, facilitating access for firefighting by improving visibility, reducing roof temperatures and retarding the lateral spread of fire is firmly established. For these benefits to be obtained it is essential that natural smoke and heat exhaust ventilators (referred to in this standard as NSHEV) operate fully and reliably whenever called upon to do so during their installed life. A smoke and heat exhaust ventilation system (referred to in this standard as a SHEVS) is a system of safety equipment intended to perform a positive role in a fire emergency.

1 Scope

This European Standard applies to natural smoke and heat exhaust ventilators (NSHEV) operating as part of smoke and heat exhaust systems (SHEVS), placed on the market. This standard specifies requirements and gives test methods for natural smoke and heat exhaust ventilators which are intended to be installed in smoke and heat control systems in buildings.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 54-5:2017, *Fire detection and fire alarm systems - Part 5: Heat detectors - Point detectors*

EN 54-7, *Fire detection and fire alarm systems - Part 7: Smoke detectors - Point detectors using scattered light, transmitted light or ionization*

EN 1363-1, *Fire resistance tests - Part 1: General Requirements*

EN 12101-10, *Smoke and heat control systems - Part 10: Power supplies*

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

EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 60584-1, *Thermocouples — Part 1: EMF specifications and tolerances (IEC 60584-1)*

EN ISO 1182, *Reaction to fire tests for products - Non-combustibility test (ISO 1182)*

EN ISO 1716, *Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) (ISO 1716)*

EN ISO 11925-2, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2)*