

## **Plahvatusohtliku tolmu eest kaitsvad ventilatsioonisüsteemid**

Dust explosion venting protective systems

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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| <p>Käesolev Eesti standard EVS-EN 14491:2006 sisaldab Euroopa standardi EN 14491:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.05.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 14491:2006 consists of the English text of the European standard EN 14491:2006.</p> <p>This document is endorsed on 29.05.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p> |
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| <p><b>Käsitlusala:</b></p> <p>This European Standard specifies the basic requirements of design for the selection of a dust explosion venting protective system. The standard is one of a series including prEN 14797 Explosion venting devices and prEN 14460 Explosion resistant equipment. The three standards together represent the concept of dust explosion venting.</p> | <p><b>Scope:</b></p> <p>This European Standard specifies the basic requirements of design for the selection of a dust explosion venting protective system. The standard is one of a series including prEN 14797 Explosion venting devices and prEN 14460 Explosion resistant equipment. The three standards together represent the concept of dust explosion venting.</p> |
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**ICS 13.230**

**Võtmesõnad:** definition, definitions, dust, dust explosions, exhaust gases, explosion protection, fire, mathematical calculations, parameters, pressure releases, pressure wave, safety, safety engineering, specification (approval), specifications, testing, waste air, ventiduct

ICS 13.230

English Version

## Dust explosion venting protective systems

Systèmes de protection par évent contre les explosions de  
poussières

Schutzsysteme zur Druckentlastung von Staubexplosionen

This European Standard was approved by CEN on 13 February 2006.

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.

This European Standard exists 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, 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 and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This European Standard (EN 14491:2006) has been prepared by Technical Committee CEN/TC 305 "Potentially explosive atmospheres – Explosion prevention and protection", the secretariat of which is held by DIN.

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 2006, and conflicting national standards shall be withdrawn at the latest by September 2006.

This European Standard 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) 94/9/EC.

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

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 and United Kingdom.

## 1 Scope

This European Standard specifies the basic requirements of design for the selection of a dust explosion venting protective system. The standard is one of a series including prEN 14797 *Explosion venting devices* and prEN 14460 *Explosion resistant equipment*. The three standards together represent the concept of dust explosion venting. To avoid transfer of explosions to other communicating equipment one should also consider applying prEN 15089 *Explosion Isolation Systems*.

This European Standard covers:

- vent sizing to protect an enclosure against the internal pressure effects of a dust explosion;
- flame and pressure effects outside the enclosure;
- recoil forces;
- influence of vent ducts.

This European Standard is not intended to provide design and application rules against effects generated by detonation reactions or runaway exothermic reactions. This European Standard does not cover fire risks arising from either materials processed, used or released by the equipment or materials that make up equipment and buildings. This European Standard does not cover the design, construction, testing and certification of explosion venting devices that are used to achieve explosion venting<sup>1)</sup>.

## 2 Normative references

These following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references the latest edition of the referenced document (including any amendments) applies.

EN 1127-1:1997, *Explosive atmospheres — Explosion prevention and protection — Part 1: Basic concepts and methodology*

EN 13237:2003, *Potentially explosive atmospheres — Terms and definitions for equipment and protective systems intended for use in potentially explosive atmospheres*

## 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1127-1:1997 and EN 13237:2003 and the following apply.

### 3.1

#### **building**

enclosed, roofed space that contains a working environment that may include process plant, offices and personnel, either separately or together, but is not, in itself, an item of process plant

### 3.2

#### **enclosure**

vessel that forms a distinct and identifiable part of a process plant and to which explosion protection by explosion venting can be applied as described in this European Standard

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1) This is covered in the European Standard prEN 14797.