

<b>STN</b>	<b>Stabilné hasiace zariadenia Práškové zariadenia Časť 1: Požiadavky a skúšobné metódy na komponenty</b>	<b>STN EN 12416-1</b>  92 0420
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Fixed firefighting systems - Powder systems - Part 1: Requirements and test methods for components

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/24

Obsahuje: EN 12416-1:2024

Oznámením tejto normy sa ruší  
STN EN 12416-1+A2 (92 0420) z decembra 2007

**139198**

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2024  
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii  
v znení neskorších predpisov.

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 12416-1**

July 2024

ICS 13.220.20

Supersedes EN 12416-1:2001+A2:2007

English Version

**Fixed firefighting systems - Powder systems - Part 1:  
Requirements and test methods for components**

Installations fixes de lutte contre l'incendie - Systèmes  
d'extinction à poudre - Partie 1 : Exigences et  
méthodes d'essai des éléments constitutifs

Ortsfeste Brandbekämpfungsanlagen -  
Pulverlöschanlagen - Teil 1: Anforderungen und  
Prüfverfahren für Bauteile

This European Standard was approved by CEN on 24 June 2024.

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 CEN-CENELEC Management Centre or to any CEN member.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 12416-1:2024) 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of an identical text or by endorsement, at the latest by January 2025, and conflicting national standards shall be withdrawn at the latest by January 2025.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 12416-1:2001+A2:2007.

The main changes compared with EN 12416-1:2001+A2:2007 are as follows:

- revision of the normative references;
- revision of Clause 6;
- revision of Annexes D, F, G and N;
- deletion of the former Annexes H and I;
- extension of the bibliography.

This European Standard has the general title “Fixed firefighting systems — Powder systems” and consists of the following two parts:

- Part 1: Requirements and test methods for components;
- Part 2: Design, construction and maintenance.

This document is included in a series of European Standards planned to cover also:

- a) gas extinguishing components and systems (the EN 12094 series and the EN 15004 series);
- b) sprinkler components and systems (the EN 12259 series and the EN 12845 series);
- c) smoke control systems (the EN 12101 series);
- d) explosion protection systems;
- e) foam systems (the EN 13565 series);
- f) hose systems (the EN 671 series);
- g) water spray systems (CEN/TS 14816);
- h) water mist components and systems (the EN 17450 series and the EN 14972 series).

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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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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## **Introduction**

It has been assumed in the preparation of this document that the execution of its provisions is entrusted to appropriately qualified and experienced people.



**EN 12416-1:2024 (E)****1 Scope**

This document specifies requirements and test methods for materials, construction and performance of components intended for use in powder firefighting systems complying with EN 12416-2:2001+A1:2007.

The components covered are as follows:

- powder containers;
- expellant gas container assemblies;
- pressure regulators and gauges;
- actuators;
- main isolating valves and selector valves;
- nozzles.

The components are suitable for powder firefighting systems for general use in buildings and other construction works. In areas with a risk of explosion, earthquake zones, extreme environmental conditions, e.g. marine, offshore, mining or aircraft additional considerations apply.

This document covers components for use in powder extinguishing systems complying with EN 12416-2:2001+A1:2007. It does not cover, for example, pipes and fittings which are covered by more general standards for which requirements and recommendations are given in EN 12416-2:2001+A1:2007. Nor does it cover fire detectors or electrical control and indicating equipment.

**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 286-1:1998, *Simple unfired pressure vessels designed to contain air or nitrogen — Part 1: Pressure vessels for general purposes*

EN 1964-3, *Transportable gas cylinders — Specification for the design and construction of refillable transportable seamless steel gas cylinders of water capacities from 0,5 litre up to and including 150 litres — Part 3: Cylinders made of seamless stainless steel with an Rm value of less than 1100 MPa*

EN 12094-4, *Fixed firefighting systems — Components for gas extinguishing systems — Part 4: Requirements and test methods for container valve assemblies and their actuators*

EN 12094-5, *Fixed firefighting systems — Components for gas extinguishing systems — Part 5: Requirements and test methods for high and low pressure selector valves and their actuators*

EN 12094-8, *Fixed firefighting systems — Components for gas extinguishing systems — Part 8: Requirements and test methods for connectors*

EN 12094-13, *Fixed firefighting systems — Components for gas extinguishing systems — Part 13: Requirements and test methods for check valves and non-return valves*

EN 12416-2:2001+A1:2007, *Fixed firefighting systems — Powder systems — Part 2: Design, construction and maintenance*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN ISO 4126-1, *Safety devices for protection against excessive pressure — Part 1: Safety valves (ISO 4126-1)*

EN ISO 4126-2, *Safety devices for protection against excessive pressure — Part 2: Bursting disc safety devices (ISO 4126-2)*

EN ISO 9809-1, *Gas cylinders — Design, construction and testing of refillable seamless steel gas cylinders and tubes — Part 1: Quenched and tempered steel cylinders and tubes with tensile strength less than 1 100 MPa (ISO 9809-1)*

EN ISO 9809-2, *Gas cylinders — Design, construction and testing of refillable seamless steel gas cylinders and tubes — Part 2: Quenched and tempered steel cylinders and tubes with tensile strength greater than or equal to 1 100 MPa (ISO 9809-2)*

EN ISO 10297, *Gas cylinders — Cylinder valves — Specification and type testing (ISO 10297)*

EN ISO 17871, *Gas cylinders — Quick-release cylinder valves — Specification and type testing (ISO 17871)*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**