SLOVENSKI STANDARD
SIST EN 3-8:2021

01-oktober-2021

Nadomešča:
SIST EN 3-8:2007
SIST EN 3-8:2007/AC:2008

Prenosni gasilniki - 8. del: Zahteve za konstrukcijo, odpornost proti tlaku in mehanski preskusi za gasilnike z največjim dovoljenim tlakom, enakim ali nižjim od 30 bar, ki ustrezajo zahtevam EN 3-7

Portable fire extinguishers - Part 8: Requirements for the construction, pressure resistance and mechanical tests for extinguishers with a maximum allowable pressure equal to or lower than 30 bar, which comply with the requirements of EN 3-7

Tragbare Feuerlöscher - Teil 8: Anforderungen an die konstruktive Ausführung, Druckfestigkeit und mechanischen Prüfungen für tragbare Feuerlöscher mit einem Höchstdruck kleiner gleich 30 bar, welche die Anforderungen aus EN 3-7 erfüllen

Extincteurs d'incendie portatifs - Partie 8 : Exigences pour la construction, la résistance à la pression et les essais mécaniques pour extincteurs dont la pression maximale admissible est inférieure ou égale à 30 bar et qui sont conformes aux exigences de l'EN 3-7

Ta slovenski standard je istoveten z: **EN 3-8:2021**

ICS:

13.220.10	Gašenje požara	Fire-fighting

SIST EN 3-8:2021 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 3-8

August 2021

ICS 13.220.20

Supersedes EN 3-8:2006

English Version

Portable fire extinguishers - Part 8: Requirements for the construction, pressure resistance and mechanical tests for extinguishers with a maximum allowable pressure equal to or lower than 30 bar, which comply with the requirements of EN 3-7

Extincteurs d'incendie portatifs - Partie 8 : Exigences pour la construction, la résistance à la pression et les essais mécaniques pour extincteurs dont la pression maximale admissible est inférieure ou égale à 30 bar et qui sont conformes aux exigences de l'EN 3-7

Tragbare Feuerlöscher - Teil 8: Anforderungen an die konstruktive Ausführung, Druckfestigkeit und mechanischen Prüfungen für tragbare Feuerlöscher mit einem Höchstdruck kleiner gleich 30 bar, welche die Anforderungen aus EN 3-7 erfüllen

This European Standard was approved by CEN on 11 July 2021.

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.

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 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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

Ref. No. EN 3-8:2021 E

Contents

Page

European foreword

This document (EN 3-8:2021) has been prepared by Technical Committee CEN/TC 70 “Manual means of fire fighting equipment”, the secretariat of which is held by AFNOR.

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 February 2022, and conflicting national standards shall be withdrawn at the latest by February 2022.

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 3-8:2006.

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 2014/68/EU, see informative Annex ZA, which is an integral part of this document.

This document is included in a series of documents covering:

a) classification of fires (EN 2);

b) mobile fire extinguishers (series EN 1866).

EN 3 consists of the following parts, under the general title “Portable fire extinguishers”.

— Part 7: Characteristics, performance requirements and test methods;

— Part 8: Requirements for the construction; pressure resistance and mechanical tests for extinguishers with a maximum allowable pressure equal to or lower than 30 bar, which comply with the requirements of EN 3-7.

— Part 9: Additional requirements to EN 3-7 for pressure resistance of CO_2 extinguishers.

NOTE The title of EN3-9 will upon revision be amended to read: “Part 9 - Requirements for the Assembly, Construction and Pressure Resistance of CO2 extinguishers which comply with the requirements of EN3-7.”

— Part 10: Provisions for evaluating the conformity of a portable fire extinguisher to EN 3-7.

List of major changes:

The following sections have been revised:

— title;

— scope;

— materials;

— design;

— permanent joining;

— relationship with the ESR's;

— relationship and titles to EN 3 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.

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, Turkey and the United Kingdom.

Introduction

This document is a product standard.

This document is of relevance, in particular, to the following stakeholder groups representing the market players with regard to pressure equipment safety:

— pressure equipment manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance, etc.)

— pressure equipment users/employers (small, medium and large enterprises);

— service providers, e.g., for maintenance (small, medium and large enterprises);

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

1 Scope

This document specifies, as far as the pressure risk is concerned, the rules of design, type testing, fabrication and inspection control of portable fire extinguishers with a metallic body which comply with the requirements of EN 3-7:2004+A1:2007.

This part of EN 3 applies to portable fire extinguishers of which the maximum allowable pressure *PS* is lower than or equal to 30 bar and containing non-explosive, non-flammable, non-toxic and non-oxidising fluids.

This document also applies to the marking of metallic propellant gas cartridges (see Annex E).

This document does not apply to carbon dioxide fire extinguishers.

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 3-7:2004+A1:2007, *Portable fire extinguishers — Part 7: Characteristics, performance requirements and test methods*

EN 10204:2004,[1] *Metallic products — Types of inspection documents*

EN 13134:2000, *Brazing — Procedure approval*

EN ISO 4892-2:2013, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps (ISO 4892-2:2013)*

EN ISO 9017:2018, *Destructive tests on welds in metallic materials — Fracture test (ISO 9017:2017)*

EN ISO 13585:2012, *Brazing — Qualification test of brazers and brazing operators (ISO 13585:2012)*

EN ISO 14555:2017, *Welding — Arc stud welding of metallic materials (ISO 14555:2017)*

EN ISO 14732:2013, *Welding personnel — Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials (ISO 14732:2013)*

EN ISO 15614-1:2017,[2] *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys (ISO 15614-1:2017)*

EN ISO 15614-2:2005, *Specification and qualification of welding procedures for metallic materials - Welding procedure test — Part 2: Arc welding of aluminium and its alloys (ISO 15614-2:2005)*

EN ISO 15614-11:2002, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 11: Electron and laser beam welding (ISO 15614-11:2002)*

EN ISO 15614-12:2014, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 12: Spot, seam and projection welding (ISO 15614-12:2014)*

---

[1] This standard is also applicable to non-metallic products (see EN 10204:2004, 1.2).

[2] As impacted by EN ISO 15614-1:2017/A1:2019.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1
pressure at maximum operating temperature
pressure experimentally measured
$P\ (T_{max})$
pressure measured in the extinguisher after stabilisation during at least 24 h at maximum operating temperature (T_{max}); for cartridge operated extinguishers, the maximum pressure is the maximum pressure recorded for 0,5 s during a period of three minutes, excluding the first second after release of the propellant gas

3.2
maximum allowable pressure
maximum declared pressure
PS
maximum pressure for which the equipment is designed, as specified by the manufacturer and which is in any case greater than or equal to $P\ (T_{max})$

Note 1 to entry: The value of *PS* for components should be equal to or greater than the value of *PS* for the extinguisher assembly.

3.3
bursting pressure
P_r
maximum pressure measured during a bursting test

3.4
portable fire extinguisher assembly
assembly of parts to comprise the pressure retaining part of a fire extinguisher which can include a extinguisher body, operating device, filling cap, closure, a propellant gas cartridge, hose and other components under pressure, if fitted

3.5
maximum operating temperature
T_{max}
maximum operating temperature declared by the manufacturer equal to or less than TS_{max}

3.6
minimum operating temperature
T_{min}
minimum operating temperature declared by the manufacturer equal to or higher than TS_{min}

3.7
portable fire extinguisher
fire extinguisher which is designed to be carried and operated by hand and which in working order has a mass of not more than 20 kg

3.8
propellant gas cartridge
refillable or non-refillable pressure receptacle made of metal, containing a propellant gas

3.9
fittings
pressure accessories which include operating devices, filling caps and hose assemblies

3.10
allowable temperature
TS
maximum / minimum temperatures for which the equipment is designed as declared by the manufacturer

4 Symbols and abbreviations

For the purposes of this document, the following symbols and abbreviations apply.

PS	Maximum allowable pressure, in bar
PT	Test pressure ≥ 1,43 x *PS* in bar
P_r	Bursting pressure (measured) ≥ 2,7 x *PS,* in bar
D	Nominal external diameter of the extinguisher body, or the largest external value of the perpendicular section to the axis, in mm
D_B	Diameter of the mandrel used during the crushing test, in mm
$P\ (T_{max})$	Pressure at maximum operating temperature, in bar
T_{max}	Maximum operating temperature declared by the manufacturer, in °C
T_{min}	Minimum operating temperature declared by the manufacturer, in °C
S	Minimum wall thickness declared by the manufacturer, in mm
TS_{min}	Minimum allowable temperature, in °C
TS_{max}	Maximum allowable temperature, in °C

5 Design

5.1 Design parameters

The following parameters shall be declared by the manufacturer:

— *PS* of the extinguisher;

— *PT* of the extinguisher;

— material characteristics;

— specification of manufacturing process;

— extinguishing media and propellant;

— temperature range (see Table B.2). The allowable temperature range declared for the extinguisher body shall be TS_{min} to TS_{max};