

**Paiksed tulekustutussüsteemid.
Gaaskustutussüsteemide komponendid. Osa 7:
CO₂ süsteemide pihustid. Nõuded ja
katsemeetodid**

Fixed firefighting systems - Components for gas
extinguishing systems - Part 7: Requirements and
test methods for nozzles for CO₂ systems

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 12094-7:2001 sisaldab Euroopa standardi EN 12094-7:2000 ingliskeelset teksti.

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English version

Fixed firefighting systems - Components for gas extinguishing systems - Part 7: Requirements and test methods for nozzles for CO₂ systems

Installations fixes de lutte contre l'incendie - Eléments constitutifs des installations d'extinction à gaz - Partie 7: Exigences et méthodes d'essai pour les diffuseurs de systèmes à CO₂

Ortsfeste Brandbekämpfungsanlagen - Bauteile für Löschanlagen mit gasförmigen Löschmitteln - Teil 7: Anforderungen und Prüfverfahren für Düsen für CO₂-Anlagen

This European Standard was approved by CEN on 18 November 2000.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This European Standard 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of an identical text or by endorsement, at the latest by June 2001, and conflicting national standards shall be withdrawn at the latest by September 2002.

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 89/106/EEC.

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

This part of EN 12094 is one of a number of European Standards prepared by CEN/TC 191 covering components for gas extinguishing systems.

They are included in a series of European Standards planned to cover:

- gas extinguishing systems (EN 12094)
- sprinkler systems (EN 12239 and EN 12845)
- powder systems (EN 12416)
- explosion protection systems (EN 26184)
- foam systems (EN 13565)
- hose systems (EN 671)
- smoke and heat control systems (EN 12101)
- water spray systems

The following parts of this European Standard are planned:

- Part 1: Requirements and test methods for electrical automatic control and delay devices
- Part 2: Requirements and test methods for non-electrical automatic control and delay devices
- Part 3: Requirements and test methods for manual triggering and stop devices
- Part 4: Requirements and test methods for high- pressure container valve assemblies and actuators
- Part 5: Requirements and test methods for selector valves and actuators for CO₂ systems
- Part 6: Requirements and test methods for non-electrical disable devices for CO₂ systems
- Part 7: Requirements and test methods for nozzles for CO₂ systems
- Part 8: Requirements and test methods for flexible connectors for CO₂ systems
- Part 9: Requirements and test methods for special fire detectors
- Part 10: Requirements and test methods for pressure gauges and pressure switches
- Part 11: Requirements and test methods for weighing devices
- Part 12: Requirements and test methods for alarm devices
- Part 13: Requirements and test methods for check valves and non-return valves
- Part 16: Requirements and test methods for odorizing devices for CO₂ low pressure systems
- Part 17: Requirements and test methods for pipe hangers
- Part 20: Requirements and test methods for compatibility of components

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

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

All pressure data in this European Standard are given as gauge pressures in bar, unless otherwise stated.

NOTE 1 bar = 10^5 N m^{-2} = 100 kPa.

1 Scope

This European Standard specifies requirements and test methods for nozzles which introduce the extinguishing agent into a CO₂ protected zone.

The design of the nozzles will influence discharge rate and thus the pressure drop in the piping network. The extinguishing agent normally arrives at the nozzle in two-phase flow form (liquid-gaseous mixture). It expands into the protected volume to form a gas or a gas-and-dry-ice mixture depending on the nozzle type.

This standard should only be used as guidance for testing nozzles which work on different principles.

2 Normative references

This European Standard incorporates by dated or undated references, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

ISO 7-1

Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designation

ISO 228-1

Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation

3 Terms and definitions

For the purposes of this European Standard the following terms and definitions apply.

3.1

cross section

total area of all smallest geometrical single areas

3.2

distribution characteristics

volume in which CO₂ is distributed uniformly from a nozzle

3.3

filter

a component to prevent blockage of nozzles

3.4

flow rate

mass flow of CO₂ against time

3.5

functional reliability

ability of function under different working conditions