Fixed firefighting systems - Components for gas extinguishing systems - Part 8: Requirements and test methods for flexible connectors for CO2 systems

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 12094-8:2001 sisaldab Euroopa standardi EN 12094-8:1998 ingliskeelset teksti. Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 12094-8:2001 consists of the English text of the European standard EN 12094-8:1998. This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies requirements and describes test methods for flexible connectors in firefigthing systems. NOTE: If gases other than CO2 are used in pneumatic pilot lines, this Standard may be used as guidance for flexible connectors in pilot lines.	**Scope:** This European Standard specifies requirements and describes test methods for flexible connectors in firefigthing systems. NOTE: If gases other than CO2 are used in pneumatic pilot lines, this Standard may be used as guidance for flexible connectors in pilot lines.

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Võtmesõnad: bursting strength, carbon dioxide extinguisher, definitions, fire extinguishers, fire safety, flexural strength, installation, marking, pipe fittings, pressure resistance, specifications, stability tests, testing conditions, tests, thermal resistance

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Fixed firefighting systems

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Part 8: Requirements and test methods for flexible connectors for CO_2 systems

Installations fixes de lutte contre l'incendie – Eléments constitutifs pour installations d'extinction à gaz – Partie 8: Exigences et méthodes d'essais pour raccords flexibles pour systèmes à CO_2

Ortsfeste Brandbekämpfungsanlagen – Bauteile für Löschanlagen mit gasförmigen Löschmitteln – Teil 8: Anforderungen und Prüfverfahren für flexible Verbindungen für CO_2-Anlagen

This European Standard was approved by CEN on 1998-02-22.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Contents

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 Standard is part of a series concerned with gas extinguishing system components.

The following European standards are planned to cover:

- gas extinguishing systems (EN 12094)
- sprinkler systems (EN 12259)
- powder systems (EN 12416)
- explosion protection systems (EN 26184)
- foam systems
- hose systems (EN 671)
- smoke and heat control systems (EN 12101)
- water spray systems

EN 12094 "Fixed fire fighting systems - Components for gas extinguishing systems" will consist of the following parts:

- 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 control devices
- Part 4: Requirements and test methods for high- pressure container valves assemblies and actuators
- Part 5: Requirements and test methods for selector valves and actuators for CO_2 systems
- Part 6: Requirements and test methods for disable devices for CO_2 systems
- Part 7: Requirements and test methods for nozzles for CO_2 systems
- Part 8: Requirements and test methods for flexible connectors for CO_2 systems
- Part 9: Requirements and test methods for special fire detectors
- Part 10: Requirements and test methods for pressure switches and switch type pressure gauges
- 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
- Part 14: Requirements and test methods for isolating valves for low pressure containers
- Part 15: Requirements and test methods for pressure relief valves
- Part 16: Requirements and test methods for odorisers
- Part 17: Requirements and test methods for pipe hangers
- Part 18: Requirements and test methods for emergency stop devices
- Part 19: Requirements and test methods for pressure gauges
- Part 20: Requirements and test methods for compatibility of components

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 1998, and conflicting national standards shall be withdrawn at the latest by September 1998.

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.

Product certification: Users of this European Standard are advised to consider the desirability of independent certification of product conformity with this Standard based on testing and continuing surveillance, which may be coupled with assessment of a manufacturer quality systems against the appropriate European standards EN ISO 9001, EN ISO 9002 or EN ISO 9003.

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 describes test methods for flexible connectors used in CO_2 firefighting systems.

NOTE: If gases other than CO_2 are used in pneumatic pilot lines, this Standard may be used as guidance for flexible connectors in pilot lines.

2 Normative references

This European Standard incorporates by dated or undated references, provisions from other publications. This 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.

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 Definitions

For the purposes of this standard the following definitions apply:

3.1 flexible connector: Link between two parts which are subject to relative movement or subject to tolerances.

3.2 high pressure system: System in which the CO_2 is stored at ambient temperature.

NOTE: The absolute pressure of the CO_2 in storage is 58,6 bar at 21°C.

3.3 low pressure system: System in which the CO_2 is stored in bulk at low temperature.

NOTE: The absolute pressure of the CO_2 in storage is 19,6 bar at -20°C.

3.4 type 1 connector: Flexible connector for connecting high pressure CO_2 containers to a manifold.

3.5 type 2 connector: Flexible connector for use in distribution pipework downstream the manifold / selector valve.

3.6 type 3 connector: Flexible connector for use in pneumatic pilot lines.

3.7 working pressure: Pressure at which the component is used in the system.

4 Requirements

4.1 General design

Metal parts of flexible connectors shall be made of stainless steel, copper, copper alloy or corrosion-protected steel (e.g. galvanized).

All materials need to be resistant to media with which they come into contact.

Flexible connectors need to be designed so that the function cannot be adversely affected by ageing or environmental influences.

Non-metallic materials and elastomers need to be selected to be stable and not alter their performance over the working life recommended by the manufacturer.

Flexible connectors shall be specified by the manufacturer for working pressure according to table 1.