

SVENSK STANDARD

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Brand och räddning – Automatiska boendesprinkler – Utförande, installation och underhåll

Fixed firefighting systems – Automatic residential sprinkler systems – Design, installation and maintenance



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Denna standard är framtagen av kommittén för Fasta släckmedel, Sprinkler och Gasläcksystem, SIS/TK 360/AG 03.

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EUROPEAN STANDARD

EN 16925

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2018

ICS 13.220.20

English Version

Fixed firefighting systems - Automatic residential sprinkler systems - Design, installation and maintenance

Installations fixes de lutte contre l'incendie - Systèmes
d'extinction automatiques du type sprinkleur
résidentiel - Conception, installation et maintenance

Ortsfeste Brandbekämpfungsanlagen - Automatische
Sprinkleranlagen für Wohnbereiche - Planung,
Installation und Instandhaltung

This European Standard was approved by CEN on 24 September 2018.

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.

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COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 16925:2018) 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of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by September 2020.

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.

Annexes A to E are normative. Annexes F to J are informative.

This standard is part of a series of standards which includes the following:

- EN 12259 (all parts), *Fixed firefighting systems – Components for sprinkler and water spray systems*;
- EN 12845, *Fixed firefighting systems – Automatic sprinkler systems*;
- prEN 14972 (all parts), *Fixed firefighting systems – Water mist systems*;
- EN 12094 (all parts), *Fixed firefighting systems – Components for gas extinguishing systems*;
- EN 15004 (all parts), *Fixed firefighting systems – Gas extinguishing systems*;
- EN 12416 (all parts), *Fixed firefighting systems – Powder systems*;
- ISO 6184 (all parts), *Fixed firefighting systems – Explosion protection systems*;
- EN 13565 (all parts), *Fixed firefighting systems – Foam systems*;
- EN 671 (all parts), *Fixed firefighting systems – Hose systems*;
- EN 12101 (all parts), *Smoke and heat control systems*.

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

SS-EN 16925:2018 (E)**Introduction**

Sprinkler systems have demonstrated their value in protecting life and property in industrial and commercial applications for over 100 years. The recognition that the largest number of deaths from fire occur in the home has led to the introduction of sprinkler systems specifically designed for residential occupancies.

A correctly designed and installed residential sprinkler system can detect and control a fire at an early stage of development and activate a fire alarm. Operation of the system rapidly reduces the rate of production of heat and smoke, allowing more time for occupants to escape to safety or be rescued.

Sprinklers operate at predetermined temperatures to discharge water over the area below. Only the sprinklers near the fire, which are individually heated above their operating temperature, will operate. The flow of water initiates a fire alarm signal to draw attention to the operation of the system. The operating temperature is generally selected to suit ambient temperature conditions.

It is essential that residential sprinkler systems are properly maintained and regularly tested to ensure correct operation in case of fire.

It should not be assumed that the provision of a residential sprinkler system eliminates the need for other means of detecting and fighting fires and it is important to consider the fire precautions in the occupancy as a whole. Structural fire resistance, escape routes, smoke alarms, fire alarm systems, provision of portable extinguishers, training and information all need consideration.

It is assumed that the building design and construction will be in accordance with local building codes and national requirements. If the residential sprinkler system is to be used to compensate for other fire protection measures, such as walls or doors, building authorities may require the installation of a system with additional measures to enhance performance and/or reliability.

Only a competent person should undertake the design, installation, inspection, testing and maintenance of residential sprinkler systems. This standard does not necessarily cover all local or national legislative requirements, which may take precedence over this standard.

1 Scope

This document specifies requirements and gives recommendations for the design, installation, water supplies and backflow prevention, commissioning, maintenance and testing of fixed residential fire sprinkler systems in buildings for residential occupancies.

This document is intended for use by those concerned with purchasing, designing, installing, testing, inspecting, approving, operating and maintaining automatic residential sprinkler systems, in order that such equipment will function as intended throughout its life.

This document identifies construction details of buildings which are the minimum necessary for satisfactory performance of residential sprinkler systems complying with this standard.

This document applies to any addition, extension, repair or other modification to the residential sprinkler system.

This document does not cover situations such as arson where fires of a malicious intent may be started in multiple locations simultaneously.

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 54 (all parts), *Fire detection and fire alarm systems*

EN 1057, *Copper and copper alloys — Seamless, round copper tubes for water and gas in sanitary and heating applications*

EN 10205, *Cold reduced tinmill products — Blackplate*

EN 10216-1, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 1: Non-alloy steel tubes with specified room temperature properties*

EN 10217-1, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 1: Non-alloy steel tubes with specified room temperature properties*

EN 10255, *Non-Alloy steel tubes suitable for welding and threading — Technical delivery conditions*

EN 12259-1, *Fixed firefighting systems — Components for sprinkler and water spray systems — Part 1: Sprinklers*

EN 12259-5, *Fixed firefighting systems — Components for sprinkler and water spray systems — Part 5: Water flow detectors*

prEN 12259-14, *Fixed firefighting systems — Components for sprinkler and water spray systems — Part 14: Sprinklers for residential applications*

EN 12845, *Fixed firefighting systems — Automatic sprinkler systems — Design, installation and maintenance*

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

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