BS EN 14972-17:2025

BSI Standards Publication

Fixed firefighting systems — Water mist systems

Part 17: Test protocol for residential occupancies for automatic nozzle systems

Documents
Document Sharing Hub

Full document details: BS EN 14972-17:2025

National foreword

This British Standard is the UK implementation of EN 14972-17:2025. It supersedes BS 8458:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee FSH/18/5, Watermist systems.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 31173 0

ICS 13.220.01; 13.220.20; 13.220.99

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2025.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS EN 14972-17:2025

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14972-17

July 2025

ICS 13.220.20; 13.220.99

English Version

Fixed firefighting systems - Water mist systems - Part 17: Test protocol for residential occupancies for automatic nozzle systems

Installations fixes de lutte contre l'incendie - Systèmes à brouillard d'eau - Partie 17 : Protocole d'essai des systèmes à buses automatiques pour locaux résidentiels

Ortsfeste Brandbekämpfungsanlagen - Wassernebelsysteme - Teil 17: Prüfprotokoll für Wohnbelegungen für automatische Düsensysteme

This European Standard was approved by CEN on 16 May 2025.

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, Türkiye 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

© 2025 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 14972-17:2025 E

Documents
Document Sharing Hub

Full document details: BS EN 14972-17:2025

Contents

Page

European foreword 3
1 Scope 5
2 Normative references 5
3 Terms and definitions 5
4 General requirements 5
4.1 General 5
4.2 Fire test categories 5
5 Fuel packages 7
5.1 Ignition package 7
5.2 Fuel package 7
5.3 Plywood panels 8
6 Test arrangements 9
7 Fire tests 19
7.1 General 19
7.2 Description of fire tests for ceiling mounted nozzles 19
7.3 Description of fire tests for sidewall mounted nozzles 19
8 Pass/fail criteria 20
9 Test report 20
Bibliography 21

Documents
Document Sharing Hub
Full document details: BS EN 14972-17:2025

European foreword

This document (EN 14972-17:2025) 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 2026, and conflicting national standards shall be withdrawn at the latest by January 2026.

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.

EN 14972, *Fixed firefighting systems — Water mist systems*, consists of the following parts:

— *Part 1: Design, installation, inspection and maintenance;*

— *Part 2: Test protocol for shopping areas for automatic nozzle systems;*

— *Part 3: Test protocol for office, school class rooms and hotel for automatic nozzle systems;*

— *Part 4: Test protocol for non-storage occupancies for automatic nozzle systems;*

— *Part 5: Test protocol for car garages for automatic nozzle systems;*

— *Part 6: Test protocol for false floors and false ceilings for automatic nozzle systems;*

— *Part 7: Test protocol for commercial low hazard occupancies for automatic nozzle systems;*

— *Part 8: Test protocol for machinery in enclosures exceeding 260 m^3 for open nozzle systems;*

— *Part 9: Test protocol for machinery in enclosures not exceeding 260 m^3 for open nozzle systems;*

— *Part 10: Test protocol for atrium protection with sidewall nozzles for open nozzle systems;*

— *Part 11: Test protocol for cable tunnels for open nozzle systems;*

— *Part 12: Test protocol for commercial deep fat cooking fryers for manually activated open nozzle systems;*

— *Part 13: Test protocol for wet benches and other similar processing equipment for open nozzle systems;*

— *Part 14: Test protocol for combustion turbines in enclosures exceeding 260 m^3 for open nozzle systems;*

— *Part 15: Test protocol for combustion turbines in enclosures not exceeding 260 m^3 for open nozzle systems;*

— *Part 16: Test protocol for industrial oil cookers for open nozzle systems;*

— *Part 17: Test protocol for residential occupancies for automatic nozzle systems.*

NOTE This list includes standards that are in preparation and other standards might be added. For current status of published standards refer to www.cencenelec.eu.

AVA Documents
Document Sharing Hub

Full document details: BS EN 14972-17:2025

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, Türkiye and the United Kingdom.

Documents
Document Sharing Hub

Full document details: BS EN 14972-17:2025

1 Scope

This document specifies fire testing requirements for water mist systems used for fire protection of domestic and residential occupancies up to a maximum ceiling height of 5,5 m.

EXAMPLE Examples for residential occupancies are family dwelling/house, bed and breakfast, apartment buildings, blocks of flats, care homes, small hotels or hostels, and residential areas in hotel bedrooms and guest corridors.

NOTE Some countries might have a national annex with guidance on the maximum height of the building, minimum design area and any additional requirements.

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 520:2004+A1:2009, *Gypsum plasterboards — Definitions, requirements and test methods*

EN 14972-1:2020, *Fixed firefighting systems — Water mist systems — Part 1: Design, installation, inspection and maintenance*

ISO 5660-1, *Reaction-to-fire tests — Heat release, smoke production and mass loss rate — Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14972-1 apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 General requirements

4.1 General

Up to a maximum of 5 nozzles used in the fire tests shall be kept for later verification.

The automatic nozzle system shall be a wet pipe water mist system.

The nozzles shall be automatic nozzles.

Sidewall nozzles shall have the thermal release element within 100 mm to 300 mm below the ceiling and in accordance with the installation instructions.

4.2 Fire test categories

Fire tests are specified in Clause 7.

Room testing with the following fire packages: A, B, C and D, shall be carried out for all ceiling mounted nozzle systems.

Room testing with the following fire packages: F1, F2, F3 and G, shall be carried out for all sidewall mounted nozzle systems.

Documents
Document Sharing Hub
Full document details: BS EN 14972-17:2025

Fire tests for open spaces (larger rooms) or taller rooms are optional and shall be carried out only if requested by the manufacturer.

The fire test that shall be carried out for each fire test series is specified in Table 1.

Descriptions for fire tests for ceiling mounted nozzles are given in Table 2, while Table 3 covers fire test descriptions for sidewall mounted nozzles.

Table 1 — Fire test series

Fire test series	Fire tests for ceiling mounted nozzles	Fire tests for sidewall mounted nozzles	Test room ceiling height
Room [a]	A	F1	2,5 m and 3,5 m
	B, C, D	F2, F3, G	2,5 m or 3,5 m
Open space [b]	E [c]	H [c]	2,5 m or 3,5 m
Taller rooms [b]	A, B, C, D, E [c]	F1, F2, F3, G, H [c]	max. 5,5 m
NOTE Some countries might have a national annex with guidance (additional requirements) on the test room ceiling height.			
[a] Mandatory test series. [b] Optional test series. [c] Two tests.			

Table 2 — Description of fire tests for ceiling mounted nozzles

Fire test	Description	Clause
A	Corner test	7.2
B	Between two nozzle test	7.2
C	Beneath a nozzle test	7.2
D	Ventilation test	7.2
E	Open room test	7.2

Table 3 — Description of fire tests for sidewall mounted nozzles

Fire test	Description	Clause
F1, F2	Corner tests	7.3
F3	Between two nozzle test	7.3
G	Ventilation test	7.3
H	Open room test	7.3

Documents
Document Sharing Hub
Full document details: BS EN 14972-17:2025