
**Fire protection — Automatic sprinkler
systems —**

**Part 1:
Requirements and test methods for
sprinklers**

*Protection contre l'incendie — Systèmes d'extinction automatiques du
type sprinkler —*

Partie 1: Prescriptions et méthodes d'essai des sprinklers



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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 21, *Equipment for fire protection and fire fighting*, Subcommittee SC 5, *Fixed firefighting systems using water*.

This third edition cancels and replaces the second edition (ISO 6182-1:2004), of which it constitutes a minor revision.

ISO 6182 consists of the following parts, under the general title *Fire protection — Automatic sprinkler systems*:

- *Part 1: Requirements and test methods for sprinklers*
- *Part 2: Requirements and test methods for wet alarm valves, retard chambers and water motor alarms*
- *Part 3: Requirements and test methods for dry pipe valves*
- *Part 4: Requirements and test methods for quick-opening devices*
- *Part 5: Requirements and test methods for deluge valves*
- *Part 6: Requirements and test methods for check valves*
- *Part 7: Requirements and test methods for early suppression fast response (ESFR) sprinklers*
- *Part 8: Requirements and test methods for pre-action dry alarm valves*
- *Part 9: Requirements and test methods for water mist nozzles*
- *Part 10: Requirements and test methods for domestic sprinklers*
- *Part 11: Requirements and test methods for pipe hangers*
- *Part 12: Requirements and test methods for grooved-end components for steel pipe systems*

Fire protection — Automatic sprinkler systems —

Part 1: Requirements and test methods for sprinklers

1 Scope

This part of ISO 6182 specifies performance and marking requirements and test methods for conventional, spray, flat spray, and sidewall sprinklers. It is not applicable to sprinklers having multiple orifices.

NOTE The requirements for early suppression fast response (ESFR) sprinklers are in ISO 6182-7; the requirements for domestic sprinklers are in ISO 6182-10; and the requirements for extended coverage (EC) sprinklers are under development.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7-1:1994, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 49, *Malleable cast iron fittings threaded to ISO 7-1*

ISO 65, *Carbon steel tubes suitable for screwing in accordance with ISO 7-1*

3 Terms and definitions

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

3.1 General

3.1.1

assembly load

force exerted on the sprinkler body excluding hydrostatic pressure

3.1.2

average design strength

glass bulb supplier's specified and assured lowest average axial design strength of any batch of 50 bulbs

3.1.3

design load

force exerted on the release element at the service load of the sprinkler

3.1.4

housing assembly/escutcheon

ornamental or protective component(s) around the hole from which the sprinkler penetrates the plane of the ceiling or the wall

Note 1 to entry: See [Figure 1](#).

Note 2 to entry: For the purposes of this part of ISO 6182, housing applies to recessed and concealed sprinklers.