
**Fire protection — Automatic
sprinkler systems —**

**Part 2:
Requirements and test methods for
wet alarm valves, retard chambers
and water motor alarms**

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

*Partie 2: Exigences et méthodes d'essai des soupapes d'alarme
hydrauliques, des limiteurs de surpression et des dispositifs d'alarme à
moteur hydraulique*



This document is a preview generated by EVS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	3
4.1 Nominal sizes	3
4.2 Connections	3
4.3 Rated working pressure	3
4.4 Bodies and covers	3
4.5 Strength (see 6.9)	4
4.6 Access for maintenance	4
4.7 Components	4
4.8 Leakage (see 6.8)	5
4.9 Non-metallic components (excluding gaskets, seals and other elastomeric parts) (see 6.4 and 6.5)	5
4.10 Sealing assembly elements (see 6.3)	5
4.11 Clearances	5
4.12 Hydraulic friction loss (see 6.7)	7
4.13 Endurance (see 6.6)	8
4.14 Operational performance (see 6.10)	8
4.15 Drains	9
4.16 Alarms (see 6.10.2)	9
4.17 Retard device (see 6.12)	9
4.18 Water motor alarms (see 6.11)	10
5 Production testing and quality control	11
6 Tests	12
6.1 Samples	12
6.2 Spring and diaphragm test	12
6.3 Sealing element tests (see 4.10)	12
6.4 Warm water aging test for non-metallic components (excluding gaskets and seals and other elastomeric parts) (see 4.9)	14
6.5 Air aging test for non-metallic components (excluding gaskets and seals and other elastomeric parts) (see 4.9)	14
6.6 Endurance test (see 4.13)	15
6.7 Hydraulic friction loss test (see 4.12)	15
6.8 Valve leakage and deformation tests (see 4.8)	15
6.9 Body strength test (see 4.5)	16
6.10 Operational test (see 4.14)	16
6.11 Water motor alarm tests (see 4.16)	17
6.12 Retard chamber tests (see 4.17)	18
6.13 Salt mist corrosion test	18
7 Marking	18
8 Manufacturer's installation instructions	19
Annex A (normative) Tolerances	20

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 6182-2 was prepared by Technical Committee 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 6182-2:2005), which has been technically revised.

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 2:

Requirements and test methods for wet alarm valves, retard chambers and water motor alarms

1 Scope

This part of ISO 6182 specifies performance, requirements, methods of test and marking requirements, for wet alarm valves, retard chambers, water motor alarms and manufacturers' specified relevant trim used in wet pipe automatic fire protection systems.

This part of ISO 6182 is not applicable to performance and test requirements for other auxiliary components or attachments to alarm valves.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread*

ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread*

3 Terms and definitions

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

3.1

alarm device

mechanical or electrical device which sounds an alarm upon operation of the valve

3.2

clapper

type of sealing assembly

NOTE See also 3.13.

3.3

compensator

external or internal device such as an auxiliary valve that minimizes false alarms caused by a small increase of service pressure

3.4

corrosion-resistant material

bronze, brass, Monel metal, austenitic stainless steel, or equivalent metallic or plastic material conforming with the requirements of this part of ISO 6182

NOTE Monel is an example of a suitable product available commercially. This information is given for the convenience of users of this part of ISO 6182 and does not constitute an endorsement by ISO of this product.