
**Fire protection — Automatic sprinkler
systems —**

Part 8:
**Requirements and test methods for
pre-action dry alarm valves**

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

Partie 8: Exigences et méthodes d'essai des postes de préalarme sous air



This document is a preview generated by EMS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	4
4.1 Nominal sizes.....	4
4.2 Connections.....	4
4.3 Rated working pressure.....	4
4.4 Body and cover.....	5
4.5 Strength.....	5
4.6 Access for maintenance.....	5
4.7 Components.....	5
4.8 Leakage.....	6
4.9 Non-metallic components (excluding gaskets, diaphragms, seals and other elastomeric parts).....	7
4.10 Sealing assembly elements.....	7
4.11 Clearances.....	7
4.12 Hydraulic friction loss.....	10
4.13 Endurance.....	10
4.14 Operational performance.....	11
4.15 Drains.....	12
4.16 Alarms.....	12
4.17 Valve impairment.....	12
5 Production testing and quality control	13
6 Tests	13
6.1 Samples.....	13
6.2 Spring and diaphragm test.....	13
6.3 Sealing element tests.....	13
6.3.1 Release test.....	13
6.4 Warm-water ageing test for non-metallic components (excluding gaskets, seals and other elastomeric components).....	14
6.5 Air ageing test for non-metallic components (excluding gaskets, seals and other elastomeric components).....	14
6.6 Hydraulic friction loss test.....	15
6.7 Valve leakage and deformation test.....	15
6.7.1 Body leakage test.....	15
6.7.2 Sealing assembly test (below to above sealing assembly).....	15
6.7.3 Sealing assembly test (mechanical type valves).....	15
6.7.4 Leakage test for mechanical type valves (above to below sealing assembly).....	15
6.7.5 Leakage test for differential type valves (above to below sealing assembly).....	16
6.8 Body strength test.....	16
6.9 Operational test.....	16
6.9.1 General.....	16
6.9.2 Pre-action valve operation test — Set-up.....	16
6.9.3 Pre-action valve operation test.....	16
6.9.4 Pre-action dry alarm valve set installation.....	17
6.10 Endurance test.....	19
6.11 Anti-reseating test.....	19
6.12 Quick release.....	20
6.13 Salt mist corrosion test.....	20
7 Marking	21
8 Manufacturer's installation instructions	21

Annex A (normative) Tolerances	22
Annex B (informative) Terms	23
Bibliography	24

This document is a preview generated by EVS

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. 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. 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 of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 21, *Equipment for fire protection and fire fighting*, Subcommittee SC 5, *Fixed firefighting systems using water*.

This second edition cancels and replaces the first edition (ISO 6182-8:2006), which has been technically revised.

The main changes compared to the previous edition are as follows:

- clearances on a reciprocating type clapper has been modified.

A list of all parts in the ISO 6182 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Fire protection — Automatic sprinkler systems —

Part 8:

Requirements and test methods for pre-action dry alarm valves

1 Scope

This document specifies performance requirements, methods of test and marking requirements for pre-action dry alarm valves, valve sets and manufacturers' specified relevant trim used in non-interlock pre-action automatic fire protection systems. Performance and test requirements for other auxiliary components or attachments to pre-action dry valves are not covered by this document.

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.

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.

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 <http://www.electropedia.org/>

3.1

alarm device

mechanical or electrical device to sound an alarm upon operation of the valve

3.2

anti-reseat latch

mechanical device that prevents the sealing assembly from returning to its closed position after operation

3.3

automatic drain valve

normally open device that vents the intermediate chamber of a valve to the atmosphere when the valve is in the ready position, and limits water flow from the chamber after the valve has tripped