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Interested committees:

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Introduction

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Submission of Comments

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 6182-2

Fire protection — Automatic sprinkler systems —

Part 2: Requirements and test methods for sprinkler system alarm valves, check valves, water motor alarms, retard devices and accelerators

*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*

ICS: 13.220.20

This document is circulated as received from the committee secretariat.

ISO/TC 21/SC 5

Secretariat: **ANSI**

Voting begins on:
2024-03-11

Voting terminates on:
2024-06-03

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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).

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This document was prepared by Technical Committee ISO/TC21, 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 6182-2:2012), which has been technically revised to include requirements of the following parts of ISO 6182 which are now withdrawn:

Standard	Title
ISO 6182-2	Requirements and test methods for wet alarm valves, retard chambers and water motor alarms
ISO 6182-3	Requirements and test methods for dry pipe valves
ISO 6182-4	Requirements and test methods for quick opening devices
ISO 6182-5	Requirements and test methods for deluge valves
ISO 6182-6	Requirements and test methods for check valves
ISO 6182-8	Requirements and test methods for preaction dry alarm valves

A list of all parts in the ISO6182 series can be found on the ISO website.

Fire protection — Automatic sprinkler systems —

Part 2:

Requirements and test methods for sprinkler system alarm valves, check valves, water motor alarms, retard devices and accelerators

1 Scope

This part of ISO 6182 specifies performance, requirements, methods of test and marking requirements for the following equipment for use in automatic fire protection systems

- Wet alarm valves
- Retard chambers
- Water motor alarms
- Dry pipe valves
- Accelerators
- Deluge valves
- Preaction valves
- Check valves

Performance and test requirements for trim valves for alarm valves are not covered by this part of ISO 6182.

The requirements for pressure reducing valves and fire pump relief valves are provided by ISO 6182 Part 16 and Part 17.

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 898-1:2013, *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 898-2:2022, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes*

3 Terms and definitions

3.1

accelerator

device which hastens the operation of a dry pipe valve using mechanical means other than by reducing installation pipework pressure. For the purposes of this part of ISO 6182, the term accelerator refers to an accelerator and any (internal or external) antiflooding device.

Note 1 to entry: See also [3.3](#).

3.2

alarm Device

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

3.3

anti-flooding device

device intended to prohibit excessive water or other foreign matter from entering any relevant part or parts of the accelerator where this might prevent subsequent operation.

3.4

anti-reseat latch

mechanism that prevents the sealing assembly from returning to its closed position after operation.

3.5

automatic drain

normally open device that automatically drains water from and 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.

3.6

auxiliary pressure

pressure acting against an auxiliary diaphragm or piston, taken from either the service pressure or an external source.

3.7

check valve

valve that permits flow into a pipe system, prevents reverse flow.

3.8

clapper

type of sealing assembly, which includes rotational movement.

Note 1 to entry: See also [3.29](#).

3.9

clapper-type valve

type of valve utilising a clapper as the main sealing element which prevents flow from the system to the supply side of the valve.

3.10

compensator

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

3.11

corrosion-resistant material

bronze, brass, nickel-copper alloys such as UNS N04400, austenitic stainless steel, or equivalent metallic or plastic material conforming with the requirements of this document.

3.12**deluge system**

automatic fire protection system using a deluge valve which is operated by an auxiliary means to admit water into a system of open sprinklers or nozzles

3.13**deluge valve**

automatic water-supply control valve intended to be operated by an auxiliary means to admit water into a system of open piping for a deluge system, or system of closed piping for a preaction system. The auxiliary means of operating a deluge valve can be mechanical, electrical, hydraulic, pneumatic, thermal, manual or a combination of these.

3.13.1**hydraulically operated deluge valve**

deluge valve that is maintained in the set position by service hydraulic pressure acting against a diaphragm or piston that holds the sealing assembly closed.

Note 1 to entry: A change in pressure against the diaphragm or piston allows the valve to open. The pressure is changed by operation of a manual control, an electrical device such as solenoid valve, or hydraulically, thermally, or pneumatically operated device.

3.13.1.1**Pressure loss operated deluge valve**

type of hydraulically operated deluge valve in which the valve is released from the set position by reducing the pressure acting against an auxiliary diaphragm or piston.

3.13.1.2**Supply pressure operated deluge valve**

type of hydraulically operated deluge valve that is maintained in the set position by a spring or other means and is hydraulically operated by the application of service pressure to an auxiliary diaphragm or piston.

3.14**differential**

ratio of service pressure to system air pressure (expressed as gauge pressure) at the trip point.

Note 1 to entry: See also [3.36](#).

3.15**differential type valve**

type of valve in which air pressure in the system acts directly and/or indirectly on the sealing assembly to maintain it in the closed position.

Note 1 to entry: The air seat of the sealing assembly is of equal or larger diameter than the diameter of the water seat of the sealing assembly, with the two separated by an intermediate chamber maintained at atmospheric pressure.

3.16**dry pipe system**

automatic fire sprinkler system in which the piping contains air or nitrogen under pressure, the release of which allows water from a water supply to discharge through the system.

3.17**dry pipe valve**

valve that controls the flow of water into a dry pipe sprinkler system and incorporates provision for actuation of an alarm under specified conditions

3.18**holding chamber**

chamber pressurized with system air pressure which actuates an accelerator upon a sufficient rate of loss of system air pressure.

3.19**intermediate chamber**

that part of a valve which separates the air and/or water sealing assembly seating surfaces and is at atmospheric pressure when the valve is in the ready condition.

3.20**mechanical-type valve**

type of valve in which the air pressure in the system acts on the sealing assembly and linking mechanism to maintain it in the closed position.

3.21**minimum opening pressure**

the minimum pressure when water begins to pass through the valve.

3.22**non-interlock preaction system**

automatic fire sprinkler system in which water is admitted to the system upon either activation of a supplemental detection system or loss of system pressure in combination with failure of the detection system.

3.23**preaction system**

automatic fire sprinkler system using a deluge valve that is operated by an auxiliary means to admit water into a system of automatic sprinklers or other automatic spraying devices.

3.24**preaction valve**

preaction valve or valve combination which holds air in a closed sprinkler system and which is opened by combination of sprinkler release and/or release system activation.

3.24.1**Preaction valve Type A – Non-Interlocked**

A valve assembly which, under normal operating conditions, opens when EITHER the release system or a sprinkler operates

3.24.2**Preaction valve Type B1 – Single-Interlocked with fail safe**

A valve assembly which under normal operating conditions opens ONLY on the activation of a release system. Type B1 valves operate as a dry system should the release system fail.

3.24.3**Preaction valve Type B2 – Single-Interlocked without fail safe**

A valve assembly which under normal operating conditions, opens ONLY on the activation of a release system. Type B2 valves can only be manually operated should the release system fail.

3.24.4**Preaction valve Type C1 – Double-Interlocked with fail safe**

A valve assembly which under normal operating conditions opens when BOTH the release system and a sprinkler have operated. Type C1 valves operate as a dry system should the release system fail.

3.24.5**Preaction valve Type C2 – Double-Interlocked without fail safe**

A valve assembly which under normal operating conditions opens when BOTH the release system and a sprinkler have operated. Type C2 valves will not operate as a dry system and can only be manually operated should the release system fail

3.25**rated working pressure**

maximum service pressure at which a valve or device intended to operate.