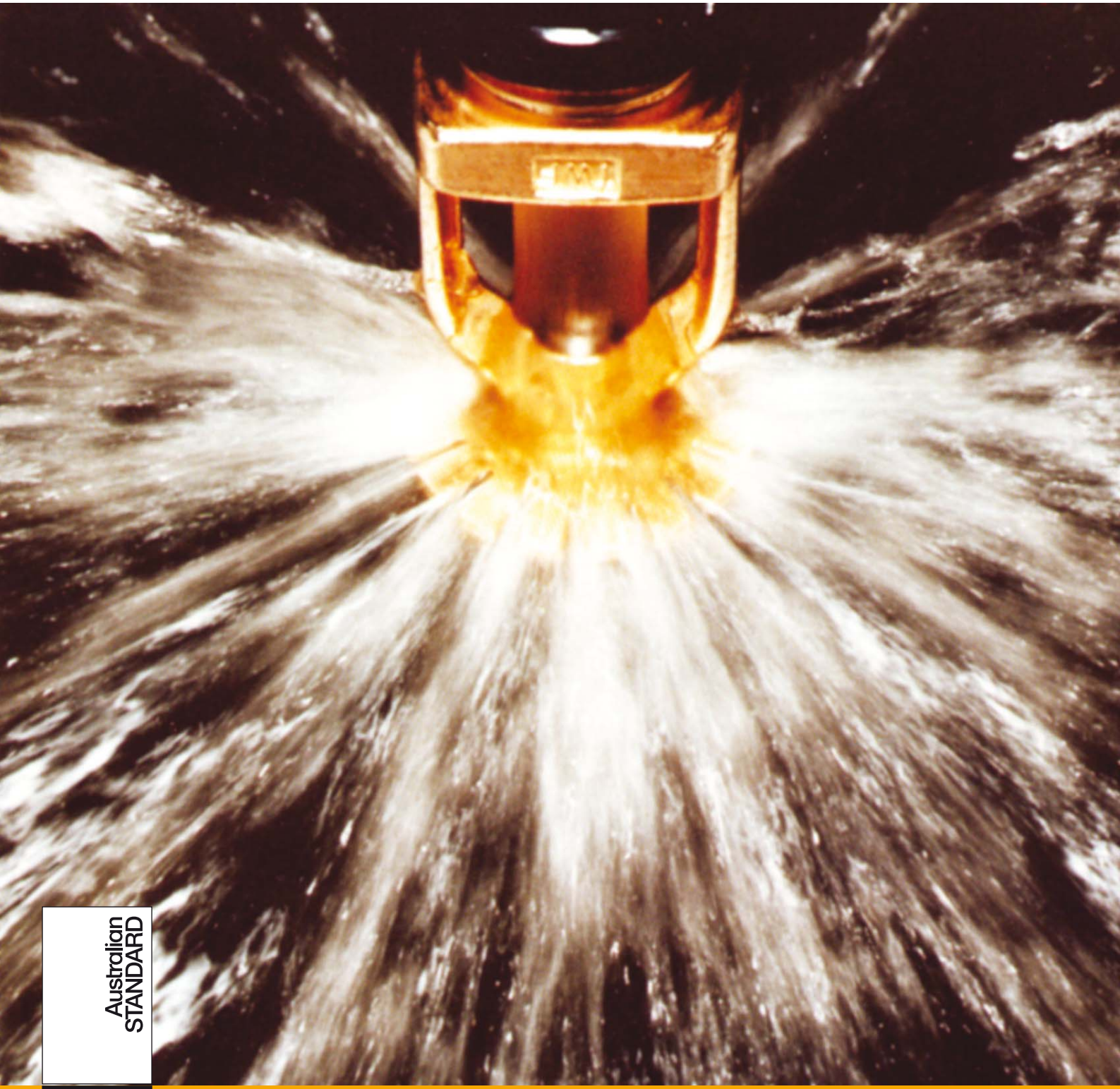
STANDARDS Australia

AS 2118.2—2010

Automatic fire sprinkler systems

Part 2: Drencher systems



Australian STANDARD

AS

Drencher systems

This Australian Standard® was prepared by Committee FP-004, Automatic Fire Sprinkler Systems. It was approved on behalf of the Council of Standards Australia on 10 June 2010. This Standard was published on 20 August 2010.

The following are represented on Committee FP-004:

- Association of Consulting Engineers Australia
- Australasian Fire and Emergency Service Authorities Council
- Australian Building Codes Board
- Australian Industry Group
- Australian Institute of Building Surveyors
- Consumers' Federation of Australia
- Department of Defence (Australia)
- Department of Human Services (Victoria)
- Engineers Australia
- Fire Protection Association Australia
- Independent Chairperson
- Insurance Council of Australia
- National Fire Industry Association
- Testing Interests (Australia)

This Standard was issued in draft form for comment as DR 03577.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard®

Automatic fire sprinkler systems

Part 2: Drencher systems

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PREFACE

This Standard was prepared by the Standards Australia Committee FP-004, Automatic Fire Sprinkler Systems, to supersede AS 2118.2—1995, *Automatic fire sprinkler systems—Wall wetting sprinklers (Drenchers).*

The AS 2118 suite of sprinkler Standards has been restructured into two groups: Systems (AS 2118 series) and Component (AS 4118 series). The complete series comprises the following:

AS	
2118	Automatic fire sprinkler systems
2118.1	Part 1: General systems
2118.2	Part 2: Drencher systems (this Standard)
2118.3	Part 3: Deluge systems
2118.4	Part 4: Sprinkler systems for accommodation buildings not exceeding four storeys in height
2118.5	Part 5: Home fire sprinkler systems
2118.6	Part 6: Combined sprinkler and hydrant systems in multistorey buildings
4118	Fire sprinkler systems
4118.1.1	Part 1.1: Components—Sprinklers and sprayers
4118.1.2	Part 1.2: Components—Alarm valves (wet)
4118.1.3	Part 1.3: Components—Water motor alarms
4118.1.4	Part 1.4: Components—Valve monitors
4118.1.5	Part 1.5: Components—Deluge and pre-action valves
4118.1.6	Part 1.6: Components—Stop valves and non-return valves
4118.1.7	Part 1.7: Components—Alarms valves (dry)
4118.1.8	Part 1.8: Components—Pressure-reducing valves
4118.2.1	Part 2.1: Piping—General
AS/NZS	
3500	Plumbing and drainage
3500.1	Part 1 Water services

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

A Note to a clause in this Standard is designed to draw attention to a condition that needs to be considered when applying the clause; for example, a reminder that another Standard needs to be consulted which could conflict with the clause. On the other hand, a Commentary (see panel below) is an explanation as to why the clause was written or developed and is primarily intended to assist with how the clause would be applied in practice.

This Standard incorporates a Commentary on some Clauses. The Commentary directly follows the relevant Clause, is designated by ‘C’ preceding the clause number and is printed in italics in a panel. The Commentary is for information only and does not need to be followed for compliance with the Standard.

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FOREWORD

Fire can spread from one building or a source of fire such as storage (fire source) to a nearby building (fire exposed) if the heat radiated by the source impinges on an unprotected opening infill (e.g. a door or window) of the fire exposed building at sufficient levels to cause failure of the infill and ignition of the contents.

The analogy of fire source and fire exposed buildings may also be applicable to internal areas of buildings such as an atrium and it's bounding walls or where an egress path passes an unprotected opening in the building.

Research on the behaviour of glazing under radiant heat conditions and its ability to protect openings has shown that when water is sprayed onto a glass infill it can reduce the risk of failure and the passage of radiant heat.

The purpose of drencher systems is to provide sufficient water spray upon opening infills, such as windows, to mitigate the effects of radiant heat from nearby exposure fires.

STANDARDS AUSTRALIA

Australian Standard
Automatic fire sprinkler systems

Part 2: Drencher systems

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out requirements for the design, installation and commissioning of drencher systems intended to provide automatic external protection to windows, doors and other openings from exposure to fire.

C1.1 *Drencher systems may be either internal or external; however, this Standard covers external protection of fire exposed building facades only, including the bounding walls of an atrium or where egress paths pass unprotected openings in the building. Radiant heat flux levels are not considered in this Standard.*

Where a fire exposed building is protected by an automatic sprinkler system in accordance with AS 2118.1, protection from a fire source may be achieved by external sprinklers fed from that system.

1.2 OBJECTIVE

The objective of this Standard is to provide system designers and installers with a set of requirements for the design, installation and commissioning of drencher systems in order to provide protection to a building that is exposed to an external fire source or an egress path passing unprotected openings in the building.

1.3 APPLICATION

Drencher systems are intended primarily to protect a fire exposed building that is not sprinkler protected.

This Standard may also be applied to infills that open on to an atrium or where egress paths pass unprotected openings in the building. It does not apply to manually-operated systems.

Where a fire exposed building is protected by sprinklers and protection from a fire source is achieved by external sprinklers fed from the building's sprinkler system designed and installed to AS 2118.1, drencher protection in accordance with this Standard is not required.

1.4 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

AS

1670 Automatic fire detection and alarm systems—System design, installation and commissioning

2118 Automatic fire sprinkler systems
2118.1 Part 1: General requirements