



## Automatic fire sprinkler systems

Part 4: Sprinkler protection for accommodation buildings not exceeding four storeys in height



This Australian Standard® was prepared by Committee FP-004, Automatic Fire Sprinklers. It was approved on behalf of the Council of Standards Australia on 2 April 2012. This Standard was published on 22 May 2012.

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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
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  - 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 07420.

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<sup>®</sup>

**Automatic fire sprinkler systems**

**Part 4: Sprinkler protection for  
accommodation buildings not  
exceeding four storeys in height**

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## PREFACE

This Standard was prepared by the Standards Australia Technical Committee FP-004, Automatic Fire Sprinklers, to supersede AS 2118.4—1995, *Automatic fire sprinkler systems, Part 4: Residential*.

Sprinkler Standards consist of two groups: Systems (AS 2118 series) and Components (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
2118.3	Part 3: Deluge systems
2118.4	Part 4: Sprinkler protection for accommodation buildings not exceeding four storeys in height (this Standard)
2118.5	Part 5: Home fire sprinkler systems
2118.6	Part 6: Combined sprinkler and hydrant
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—Alarm valves (dry)
4118.1.8	Part 1.8: Components—Pressure-reducing valves
4118.2.1	Part 2.1: Piping—General

Changes to the previous (1995) edition of this Standard include the following:

- The water supply section has been expanded.
- A minimum design flow is specified.
- Design criteria for ancillary areas have been revised.
- Detailed sprinkler spacing and positioning requirements are included particularly related to obstructions, heat sources and sloped ceilings.
- Acceptance testing (commissioning) requirements are detailed.

Wall wetting sprinklers (drenchers) cannot be incorporated in sprinkler systems covered by this Standard. The requirements for such systems are addressed in AS 2118.2.

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.

The use of Notes in this Standard is of an advisory nature only. They provide explanations and guidance on recommended design consideration or technical procedures, as well as an informative cross-reference to other documents or publications.

*This Standard incorporates a commentary on some of the clauses. The commentary directly follows the relevant Clause shown in italics font-type and enclosed in a panel. The commentary is for information only and does not need to be followed for compliance with the Standard. Commentaries on clauses explain the purpose of a Clause and give, in some cases, background information.*

The designations accompanying Figure captions follow the Clause number to which the Figure relates, that is, they are not sequential.

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## FOREWORD

This Standard provides criteria for automatic fire sprinkler protection in low-rise (four storeys or less) Class 2, Class 3 and Class 9C aged care buildings as defined in the Building Code of Australia (BCA).

The purpose of the Standard is to provide design, installation and acceptance testing (commissioning) criteria for sprinkler systems to aid in the detection and control of fires in accommodation buildings.

A sprinkler system designed and installed in accordance with this Standard is expected to prevent flashover (total involvement) in the room or area of fire origin, and to improve the chance for occupants to escape or be evacuated.

In preparing this Standard, the Committee considered the US National Fire Protection Association (NFPA) publication 13R, *Standard for the Installation of Sprinkler Systems in Residential Occupancies up to Four Stories in Height*, and the assistance gained from this source is acknowledged.

## STANDARDS AUSTRALIA

**Australian Standard**  
**Automatic fire sprinkler systems****Part 4: Sprinkler protection for accommodation buildings not exceeding four storeys in height**

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard specifies minimum criteria for the design, installation and acceptance testing of automatic fire sprinkler systems in accommodation buildings containing not more than four storeys.

*C1.1 The installation of smoke alarms or a smoke detection system forms an integral part of a life safety package for accommodation buildings. The BCA should be referred to for the requirements covering smoke alarms and smoke detection systems for these buildings.*

**1.2 APPLICATION**

This Standard is intended to provide a degree of protection for occupants of low-rise accommodation buildings (four storeys or less). The Building Code of Australia (BCA) references this Standard for use in Class 2 buildings, Class 3 buildings or Class 9C, aged care buildings, as applicable, see note to follow.

NOTE: To assist in applying this Standard, the following classification of buildings has been extracted from the BCA. Users are directed to the BCA to ensure this information is up to date.

- (a) Class 2: a building containing two or more sole-occupancy units each being a separate dwelling.
- (b) Class 3: a residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living for a number of unrelated persons, including—
  - (i) a boarding-house, guest house, hostel, lodging-house or backpackers accommodation;
  - (ii) a residential part of a hotel or motel;
  - (iii) a residential part of a school;
  - (iv) accommodation for the aged, children or people with disabilities;
  - (v) a residential part of a health-care building which accommodates members of staff; or
  - (vi) a residential part of a detention centre.
- (c) Class 9C: a building of a public nature; an aged care building.