STANDARDS Australia

AS 2118.6—2012

Automatic fire sprinkler systems

Part 6: Combined sprinkler and hydrant systems in multistorey buildings

Australian STANDARD

AS

Combined 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 25 July 2012. This Standard was published on 21 September 2012.

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)

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Australian Standard®

Automatic fire sprinkler systems

Part 6: Combined sprinkler and hydrant systems in multistorey buildings

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PREFACE

This Standard was prepared by the Australian members of the Standards Australia Committee FP-004, Automatic Fire Sprinkler Systems, to supersede AS 2118.6—1995, *Automatic fire sprinkler systems*, Part 6: *Combined sprinkler and hydrant systems*.

This edition includes provision for 35 m pressure zones in addition to the 50 m pressure zones introduced in the first (1995) edition. Detailed steps and graphs are included in Appendix G.

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
2118.3	Part 3:	Deluge systems
2118.4	Part 4:	Sprinkler protection for accommodation buildings not exceeding four storeys in height
2118.5	Part 5:	Home fire sprinkler systems
2118.6	Part 6:	Combined sprinklers and hydrant systems in multistorey buildings (this Standard)
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
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

The use of Notes in this Standard are of an advisory nature only to give explanation or guidance to the user of recommended design considerations or technical procedures, or to provide an informative cross-reference to other documents or publications. Notes to clauses in this Standard do not form a mandatory part for compliance with this Standard.

This Standard incorporates commentary on some of the 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.

The terms 'normative' and 'informative' have been used in the appendices of 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.

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FOREWORD

The combined sprinkler and hydrant system for multistorey buildings greater than two storeys in height is based on the principles of a common reticulation system serving both sprinklers and hydrants. It provides an alternative design approach to the conventional separate sprinkler and separate hydrant systems specified under AS 2118.1 and AS 2419.1 respectively. However, a combined sprinkler and hydrant system is a choice; it is not mandatory to install a combined sprinkler and hydrant system in multistorey buildings.

Combined systems are designed and installed for economic reasons as in certain cases, combining sprinklers and hydrants in one system is a demonstrated cost-effective measure.

AS 2118.1 incorporates provisions for combined water supplies and piping serving fire sprinklers and fire hydrants in low-rise manufacturing and storage complexes. Such system arrangements have proved to be cost-effective for buildings of this character.

The combined sprinkler and hydrant system is extended in this Standard, which has to be read in conjunction with AS 2118.1 and AS 2419.1. It specifies dual water supplies and vertical ring main supply piping arranged in pressure zones accommodating both sprinkler and hydrant systems.

In line with AS 2118.1, this edition of AS 2118.6 includes provision for permanent on-site signage of key installation, pumpset and pressure-reducing valve settings to facilitate ongoing maintenance and servicing activities. It also includes provision of typical system schematics, together with floor-specific block plans aimed at facilitating fire fighting operations.

STANDARDS AUSTRALIA

Australian Standard
Automatic fire sprinkler systems

Part 6: Combined sprinkler and hydrant systems in multistorey buildings

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out minimum criteria for the design, installation and commissioning of combined sprinkler and hydrant systems (including fire hose reels where appropriate) in multistorey buildings greater than two storeys in height.

NOTES:

1 The installation of a combined system to this Standard is a choice, it is not mandatory to install a combined sprinkler and hydrant sprinkler system in multistorey buildings.

2 This Standard does not apply to buildings less than three storeys in height, for example, large floor area factories and warehouses where the sprinkler and hydrant systems are normally provided to AS 2118.1 and AS 2419.1 respectively. Such buildings may have an in-ground common fire ring main (see AS 2118.1).

3 This Standard should not be used for sprinkler systems classified as high hazard (see AS 2118.1 and Appendix M).

1.2 OBJECTIVE

1.2.1 Objective of Standard

The objective of this Standard is to provide designers and installers with minimum criteria for the design and installation of systems that combine light and ordinary hazard fire sprinkler systems and hydrant systems in multistorey buildings greater than two storeys in height.

1.2.2 Objective of revision

This Standard is to be referenced in BCA to replace the 1995 edition which will be withdrawn 12 months from the date of publication of this Standard.

1.3 APPLICATION

A combined sprinkler and hydrant system to this Standard shall comply with the design criteria of AS 2419.1 for the hydrant part of the combined system and AS 2118.1 for the sprinkler part of the combined system.

1.4 NORMATIVE REFERENCES

The normative documents referenced in this Standard are listed in Appendix A.