

AS 2419.1:2021



Fire hydrant installations

Part 1: System design, installation and commissioning



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AS 2419.1:2021

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- Insurance Council of Australia
- International Copper Association Australia
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Part 1: System design, installation and commissioning

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Preface

This Standard was prepared by the Standards Australia Committee FP-009, Fire Hydrant Installations, to supersede AS 2419.1:2017.

A list of all parts in the AS 2419 series can be found in the Standards Australia online catalogue.

The objective of this Standard is to specify the minimum requirements for the design, installation, and commissioning of fire hydrant systems which —

- (a) will facilitate the efficient extinguishment of fire within the boundaries of the site;
- (b) can be used to minimize fire spread within or between one building or site and another;
- (c) can be used by trained firefighting personnel; and
- (d) have inlet and outlet connections that are used with the local fire brigade's firefighting equipment.

The major changes in this edition are as follows:

- (i) Restructure of the document and content to improve its use and readability.
- (ii) Limit the scope to buildings having an effective height not more than 135 m to Class 7b or 8 buildings having a total volume not more than 108 000 m², and to buildings that do not include automatic racked storage systems.
- (iii) Include informative appendices to clarify the intent of sections and clauses.
- (iv) Include new technologies and industry best practices to enable competitive and cost-effective design and water conservation.
- (v) Divide the previous [Section 8](#) (Pipework and valves) into two sections.
- (vi) Acknowledge the benefits of installed sprinkler systems to control the development and spread of fire.
- (vii) Introduce a range of requirements for high-rise buildings based on internationally applied Standards.

Notes or footnotes to tables or figures that are expressed in mandatory terms are deemed to be requirements of this document.

Notes to clauses in this document are informative only and do not include requirements.

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

Contents

Preface	ii
Introduction	ix
Section 1 Scope and general	1
1.1 Scope.....	1
1.2 Normative references.....	1
1.3 Terms and definitions.....	4
Section 2 System performance and design	12
2.1 General.....	12
2.2 System performance.....	12
2.2.1 Classification of fire hydrants.....	12
2.2.2 External fire hydrants.....	12
2.2.3 Internal fire hydrants.....	13
2.2.4 Feed, attack, and attack/feed fire hydrants.....	13
2.2.5 Number of fire hydrant outlets required to flow simultaneously.....	14
2.2.6 Pressure and flow.....	15
2.2.7 Multiple firefighting systems.....	17
2.2.8 Class 7a carparks.....	17
2.2.9 Gravity break tanks.....	17
2.2.10 Feed fire hydrants.....	17
2.2.11 Attack fire hydrants.....	18
2.2.12 On-site pumps.....	19
2.2.13 On-site tanks and pumps.....	19
2.2.14 Fire brigade booster assembly.....	20
2.2.15 Half-duty fire hydrant pumps.....	20
2.2.16 Full-duty fire hydrant pumps.....	20
2.3 Hydraulic design parameters.....	21
2.3.1 General.....	21
2.3.2 Design pressures.....	21
2.3.3 Design velocity.....	21
2.3.4 Hydraulic loss — Backflow prevention and metering.....	21
2.3.5 Hydraulic loss — Pipes, valves, and fittings.....	21
2.3.6 Ring main design.....	21
2.3.7 Fire brigade boost pressure.....	21
Section 3 Hydrant classification, location, and coverage	23
3.1 General.....	23
3.2 Fire hydrants.....	23
3.2.1 Classification.....	23
3.2.2 Features, accessibility, and clearances.....	23
3.3 Hardstands.....	25
3.4 Location of fire hydrants.....	25
3.5 External fire hydrants.....	25
3.5.1 General.....	25
3.5.2 Street hydrants.....	26
3.5.3 Location.....	27
3.5.4 Fire brigade booster assembly — Feed fire hydrants.....	28
3.5.5 Protection of fire hydrants.....	29
3.6 Internal fire hydrants.....	30
3.6.1 General.....	30
3.6.2 Location.....	30
3.6.3 Additional internal fire hydrants.....	31
3.7 Fire compartments.....	31
3.8 Rooftop plant rooms.....	31
3.9 Open yard protection.....	31

3.10	Marinas	32
3.11	Method of measurement and limitations	32
3.11.1	General	32
3.11.2	Doorways	33
3.11.3	Obstructions	34
3.11.4	Measurements from a fire brigade pumping appliance	34
Section 4	Water sources and supply	35
4.1	Water sources	35
4.1.1	General	35
4.1.2	Adequacy of water sources	35
4.1.3	Water quality	35
4.2	Water supply	36
4.2.1	Primary water supply requirements	36
4.2.2	Primary water supply options	36
4.2.3	Multiple firefighting systems	37
4.2.4	Recycling	37
4.2.5	Secondary water supply requirements	37
4.2.6	On-site water storage tanks	37
4.2.7	Water supply pressure	39
4.2.8	Arrangement of water supplies	40
4.3	Connections to water sources or supplies	41
4.3.1	Connection to a reticulated water supply	41
4.3.2	Connection to on-site private water supplies	42
4.3.3	Connection to water storage tanks	42
4.3.4	Connection to sea, river, lake or dam water	43
4.4	Fixed suction connection	43
Section 5	Water storage tanks	44
5.1	General	44
5.2	Tank construction	44
5.2.1	General	44
5.2.2	Concrete tanks	44
5.2.3	Steel tanks	44
5.3	Tank accessories	45
5.3.1	Fire brigade suction connections	45
5.3.2	Suction lines	46
5.3.3	Tank fill time	47
Section 6	Pumpsets	48
6.1	General	48
6.2	When a pumpset is required	48
6.2.1	Half-duty fire hydrant pumpsets	48
6.2.2	Full-duty fire hydrant pumpsets	48
6.2.3	Pressure maintenance pumps	48
6.2.4	Secondary water supply pumps	48
6.3	Pumpset design criteria	49
6.3.1	Half-duty fire hydrant pumpsets	49
6.3.2	Full-duty fire hydrant pumpsets	49
6.3.3	Jockey pumps	49
6.3.4	Secondary water supply pumpsets	49
6.4	Fire hydrant pumpsets	49
6.4.1	Pumpset configurations	49
6.4.2	One pump — Buildings having an effective height not more than 25 m	50
6.5	Full-duty fire hydrant pumpsets	50
6.6	Secondary water supply pumpsets	51
6.7	Fixed on-site pumpsets in parallel with the fire brigade booster assembly	51
6.8	Fixed on-site pumpsets in series with the fire brigade booster assembly	52
6.8.1	Connection requirements	52
6.8.2	Additional requirements	52

6.9	Pump control — Fire hydrant pumps.....	52
6.9.1	Primary starting arrangements.....	52
6.9.2	Secondary starting arrangements.....	53
6.10	Electric driver isolating switches.....	53
6.11	Pump room or enclosure.....	53
6.11.1	General.....	53
6.11.2	Internal pump rooms.....	53
6.11.3	External pump rooms or enclosures.....	54
Section 7	Fire brigade booster assembly.....	56
7.1	General.....	56
7.2	When a fire brigade booster assembly is required.....	56
7.3	Location.....	56
7.3.1	Position.....	56
7.3.2	Visual alarm device.....	57
7.3.3	Accessibility, clearance, and protection.....	57
7.3.4	Multiple buildings on-site.....	58
7.4	Types of fire brigade booster assemblies.....	58
7.5	Fire brigade booster assembly design and arrangement.....	58
7.5.1	General.....	58
7.5.2	Number of booster connection inlets required.....	59
7.5.3	H-pattern fire brigade booster assembly.....	59
7.5.4	In-line fire brigade booster assembly.....	62
7.5.5	I-pattern fire brigade booster assembly.....	63
7.5.6	Tank model fire brigade booster assembly.....	64
7.5.7	Tank suction fire brigade booster assembly.....	65
7.6	Protection of fire brigade booster assemblies.....	68
7.6.1	Sprinkler-protected buildings.....	68
7.6.2	Non-sprinkler-protected buildings — Passive protection requirements.....	68
7.6.3	Non-sprinkler-protected buildings — Passive and active protection requirements.....	69
Section 8	Pipework design and installation.....	70
8.1	General.....	70
8.2	Ground conditions.....	70
8.3	Fire mains.....	70
8.4	External pipework.....	70
8.5	Internal pipework.....	71
8.5.1	General.....	71
8.5.2	Copper pipe.....	71
8.6	Ring main.....	71
8.6.1	General.....	71
8.6.2	Design criteria.....	72
8.7	Isolating valves.....	72
8.7.1	General.....	72
8.7.2	Location.....	72
8.8	Interconnections.....	73
8.9	System monitoring.....	73
8.9.1	General.....	73
8.9.2	Class A monitoring devices.....	73
8.9.3	Class B monitoring devices.....	74
8.9.4	Monitoring devices required.....	74
8.9.5	Components to be monitored.....	74
8.10	Test facility.....	74
8.10.1	General.....	74
8.10.2	Permanent test facility.....	75
8.10.3	Permanent test facility drainage.....	75
8.10.4	Reduced-capacity tank test facility.....	75
8.11	Fire hose reel service isolating valves.....	76

8.12	Pressure management.....	76
8.13	High-rise design criteria.....	76
8.13.1	General.....	76
8.13.2	Bottom-up fire hydrant system design.....	77
8.13.3	Cascade fire hydrant system design.....	77
8.13.4	Pressure-reducing valve station.....	78
Section 9	Pipes, valves and fittings.....	79
9.1	General.....	79
9.2	Pipe, valves and fittings specifications.....	79
9.2.1	Above-ground pipework.....	79
9.2.2	Below-ground pipework.....	79
9.2.3	Additional requirements for steel pipe and fittings.....	80
9.3	Valve specifications.....	81
9.3.1	Fire hydrant valves.....	81
9.3.2	Isolating valves.....	81
9.3.3	Non-return valves.....	82
9.3.4	Backflow prevention devices.....	82
9.4	Fire brigade booster connections.....	82
9.5	Metal pipe joints.....	83
9.5.1	General.....	83
9.5.2	Roll-grooved fittings and couplings.....	83
9.5.3	Shouldered fittings and couplings.....	83
9.5.4	Compression systems.....	83
9.5.5	Gasket seals.....	83
9.5.6	Brazed joints in copper pipework.....	84
9.5.7	Flange joints.....	84
9.6	Plastics pipe joints.....	84
9.7	Pipe marking.....	84
9.7.1	Steel pipe.....	84
9.7.2	Copper pipe.....	85
9.7.3	Stainless steel pipe.....	85
9.7.4	Plastics pipe.....	85
9.8	Corrosion protection.....	85
9.8.1	General.....	85
9.8.2	Polyethylene extruded plastics coating and tape.....	85
9.8.3	Petrolatum tape coating.....	85
9.8.4	Polymeric coating.....	85
9.8.5	Cement mortar lining.....	85
Section 10	Pipe supports.....	86
10.1	General.....	86
10.2	Pipe support design.....	86
10.2.1	General.....	86
10.2.2	Sway support.....	86
10.2.3	Pipe support in seismic areas.....	86
10.3	Materials for pipework support.....	87
10.4	Protection of pipe supports.....	87
10.4.1	Fire rating.....	87
10.4.2	Corrosion protection.....	87
10.4.3	Dissimilar metals.....	87
10.5	Requirements for pipe-support components.....	87
10.5.1	General.....	87
10.5.2	U-bolts used for clamping down.....	88
10.5.3	U-bolts for clamping up and threaded rods for supporting pipework.....	88
10.5.4	U-hangers/saddles (clips).....	88
10.5.5	Saddle brackets and girder or beam clamps.....	89
10.5.6	Pear hangers/pipe bands.....	89
10.5.7	Two-piece bolted clamps.....	89

10.5.8	Welded nut clips and split ring hangers	90
10.5.9	Riser clamps	90
10.5.10	Channel/strut clips	90
10.5.11	Pipe support beams (trapeze bar)	90
10.6	Spacing of supports	91
10.7	Location of supports	92
10.7.1	Horizontal pipework	92
10.7.2	Vertical pipework	92
10.8	Fixing of pipe supports	94
10.8.1	General	94
10.8.2	Fixing to concrete, masonry or steel	94
10.8.3	Fixing to timber	94
10.9	Thrust blocks and anchors	94
10.10	Penetration of pipework through structures	94
Section 11	Ancillary equipment, signage and baseline data	96
11.1	General	96
11.2	Cabinets, enclosures or recesses	96
11.2.1	Fire brigade booster assembly	96
11.2.2	Doors of fire brigade booster assembly cabinets and enclosures	98
11.2.3	Fire hydrant cabinets	98
11.3	Signage	99
11.3.1	Fire brigade booster assembly	99
11.3.2	Attack fire hydrants in fire brigade booster assembly cabinets	100
11.3.3	Large- and small-bore suction connection	100
11.3.4	Notice-of-pressure signs (baseline data)	100
11.3.5	Fire hydrants	101
11.3.6	Water storage tanks and equipment	101
11.3.7	Pumps	102
11.4	Pressure gauges	102
11.4.1	General	102
11.4.2	Location of pressure gauges	103
11.4.3	Pressure schedule (baseline data)	103
11.5	Block plan (baseline data)	104
11.6	Location plan — Additional fire hydrants (baseline data)	109
11.7	Location plan — Street fire hydrants (baseline data)	109
11.8	Pipework identification	109
Section 12	Commissioning	110
12.1	General	110
12.2	Hydrostatic testing — Feed fire hydrant systems	110
12.2.1	All joints accessible	110
12.2.2	All joints not accessible	110
12.3	Hydrostatic testing — Attack fire hydrant systems	110
12.3.1	Buildings having an effective height not more than 50 m	110
12.3.2	Buildings having an effective height more than 50 m	110
12.4	Flow and pressure performance testing	111
12.4.1	Maximum static pressure	111
12.4.2	Unassisted feed, attack or attack/feed fire hydrants	111
12.4.3	Fire brigade booster assemblies	111
12.4.4	Half-duty fire hydrant pumpsets	112
12.4.5	Full-duty fire hydrant pumpsets	112
12.4.6	Jockey pumps	112
12.4.7	Friction loss	112
12.4.8	Multiple firefighting systems	112
12.5	Commissioning and acceptance testing requirements	113
12.6	Inspection	113
12.7	Documentation	113
Appendix A	(informative) Means of demonstrating conformance	115

Appendix B (informative) Fire hydrant system design	123
Appendix C (informative) Fire hydrant system design — large isolated buildings with a total volume more than 108 000 m³ and automatic storage and retrieval systems	126
Appendix D (informative) Fire hydrant system design — Class 2 to 9 buildings having an effective height more than 135 m	134
Appendix E (informative) Special hazard areas	139
Appendix F (informative) Fire brigade operations and equipment — Design considerations for fire hydrant systems	141
Appendix G (informative) Guidance on system performance and design	155
Appendix H (informative) Guidance on fire hydrant location and related provisions	174
Appendix I (informative) Privately owned street fire hydrants	200
Appendix J (informative) Design guidance — Marinas	201
Appendix K (informative) Guidance on water sources and water supply	204
Appendix L (informative) Determination of water system supply pressure	218
Appendix M (informative) Water storage tanks	228
Appendix N (informative) Guidance on pumpset and pipework design	234
Appendix O (informative) Facilities for testing on-site fire hydrant pumps	253
Appendix P (informative) Design guidance — Fire brigade booster assembly	254
Appendix Q (informative) Fire hose couplings used in Australia	266
Appendix R (informative) Corrosion protection	269
Appendix S (normative) Commissioning — Hydrostatic test procedures	271
Appendix T (normative) Commissioning — Flow and pressure performance testing	276
Appendix U (informative) Adjustment for water supply pressure variation	283
Bibliography	286

Introduction

The availability of fire hydrants is essential to fire protection. Fire hydrants are used to control the spread of fire, protect neighbouring properties, extinguish an outbreak of fire, or extinguish a fire controlled by an automatic fire protection system, such as a sprinkler, gaseous or foam system.

Fire hydrants are installed within buildings or sites for use by the fire brigade and other trained firefighting personnel. Fire hydrant systems are only used for firefighting purposes.

The provision of firefighting services across Australia varies greatly between rural and metropolitan areas. Should a fire occur in a large metropolitan area, a vast array of resources and large numbers of personnel can be mobilized if needed. This resource capability is not available, however, in rural and country areas, with many such areas having access to a single pumping appliance and a limited number of personnel. In developing a fire hydrant design, the resources available to the attending fire brigade should be taken into account so that the design developed meets their needs.

In designing a fire hydrant system, external hydrants are provided wherever possible so that the attending fire brigade can enter the building under the protection of a charged hose line. Where internal fire hydrants are required to be installed, consistent and repeating hydrant patterns should be applied across floors so that firefighters can move confidently throughout the building in the knowledge that a fire hydrant can be found where expected. The application of this design approach will enable firefighters to enter buildings under the protection of a charged line of hose and to readily access fire hydrants as firefighters move throughout the building.

The water supply is a fundamental consideration in the design of a fire hydrant installation and may comprise water from more than one source.