AS/NZS 5601.1:2022
Gas installations
Part 1: General installations

Amendment No. 2

Revised text amendment

Publishing and Approval Dates

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Summary

This Amendment applies to the following elements:

- Global changes
- Clauses 1.1.1, 1.2, 1.3, 1.4, 2.1.4, 2.1.5, 2.2.4.8, 2.2.5.3, 5.2.4, 5.2.10, 5.2.11, 5.3.1, 5.9.1, 5.11.1.4, 5.11.1.5, 6.2.2, 6.2.4, 6.7.6, 6.9.3, 6.10.1.1, 6.10.1.7, 6.10.1.9, 6.10.2.7, 6.10.9.5, 6.10.19, C.2, F.2, F.3.1, N.1 and Q.1
- Figures 5.2.12(a) and L.1.2.2
- Tables 4.2, 4.8.1, F.54, F.68 and F.69
- Appendix A
- Bibliography

Amendment Details

AS/NZS 5601.1:2022 is amended as follows. The amendments should be inserted in the locations as instructed.

Element		Instruction/New text
Global change	1	*Delete* "AS/NZS 2492" and *replace* with "AS 2492" in all instances.
	2	*Delete* "AS/NZS 2537.5" and *replace* with "AS 2537.5" in all instances.
	3	*Delete* "AS/NZS 60079.10.1" and *replace* with "AS/NZS IEC 60079.10.1" in all instances.
Cl 1.1.1		*Delete* clause text and *replace* with the following: This Standard specifies performance-based requirements and means of conformance for the design, installation and commissioning of *gas installations* that are associated with the use or intended use of *natural gas*, *LP Gas*, or biomethane. In addition, the performance-based requirements in Section 2 may be applied to hydrogen, hydrogen blended with natural gas or LP Gas, renewable LP Gas, LP Gas blended with dimethyl ether (DME) and biogas to supply an appliance. See Notes 3 and 4. NOTE 1: In Australia, AS 4564 includes requirements for general purpose natural gas including biogas, and AS 4670 includes requirements for LP Gas. NOTE 2: In New Zealand, NZS 5442 includes requirements for reticulated natural gas and NZS 5435 includes requirements for LP Gas.

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Element		Instruction/New text
		NOTE 3: Hydrogen blended natural gas and biomethane that conforms to AS 4564 in Australia and NZS 5442 in New Zealand is considered natural gas in the context of this document.
		NOTE 4: Renewable LP Gas and LP Gas blended with dimethyl ether (DME) that conforms to AS 4670 in Australia and NZS 5435 in New Zealand are considered LP Gas in the context of this document.
Cl 1.2	1	*Delete* "AS 4551, *Domestic gas cooking appliances*".
	2	*Delete* "AS 4629, *Automatic shut off valves and vent valves"* and *replace* with the following:
		AS 4629:2005, *Automatic shut off valves and vent valves*
		AS 4629.1, *Automatically operated valves for use with gas, Part 1: Shut-off valves*
		AS 4629.2, *Automatically operated valves for use with gas, Part 2: Vent valves*
	3	*Delete* "AS/NZS 1869" and *replace* with "AS 1869 (all parts)".
	4	At end of clause, *add* the following:
		EN 15266, *Stainless steel pliable corrugated tubing kits in buildings for gas with an operating pressure up to 0,5 bar*
		DIN 30652-1, *Excess flow valves – Part 1: Excess flow valves for gas installation*
Cl 1.3	1	Entry 1.3.57.4, *delete* term "**gas appliance regulator**" and *replace* with "**appliance regulator**".
	2	Entry 1.3.98, *delete "*a *gas appliance"* and *replace* with "an *appliance*".
	3	After entry 1.3.127, *add* the following definitions:
		1.3.128
		down-draught system
		down-draught extraction system
		ventilation system intended for installation adjacent to household cooking ranges, hobs and similar cooking appliances that draws contaminated air into an internal exhaust duct
		1.3.129
		overhead radiant heater
		space heater installed at a high level and designed to provide an effective output mainly of radiation below the level of the heater
		1.3.130
		overhead radiant tube heater
		overhead radiant heater that employs a heated tube as the radiant element
		1.3.131
		patio heater
		space heater incorporating a dome mounted above the radiant element and designed to provide an effective output mainly of radiation below the level of the dome
		Note 1 to entry: A dome is a component fitted above the radiant element of an appliance, other than a radiant tube heater, for the reflection of heat. The dome may also protect the burner/radiant element from the effects of rain.
Cl 1.4		After the warning, *add* the following:
		NOTE 1: In Australia, for work health and safety requirements in each jurisdiction refer to https://www.safeworkaustralia.gov.au/.
		NOTE 2: In New Zealand, for work health and safety information refer to https://www.worksafe.govt.nz/.
Cl 2.1.4		*Delete* Clause 2.1.4.
Cl 2.2.1.1A (new)		After Clause 2.2.1, *add* the following:

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Element		Instruction/New text
		2.2.1.1A General Where *gas installations* are designed to the performance requirements of this section, rather than by using the means of conformance under Section 3 to Section 6, the level of safety, convenience and efficiency of operation shall be not less than an installation carried out according to Section 3 to Section 6. Such designs shall be documented and kept for 7 years. NOTE 1: For performance-based designs, some *Technical Regulators* will require to be consulted prior to work commencing. NOTE 2: Written design specification and drawings together with justification for the deviation of the means of conformance may be required by the *Technical Regulator.* NOTE 3: Where the installation is of a complex nature, the *Technical Regulator* may require the design to be verified by a suitably qualified professional engineer. NOTE 4: See Appendix O for a list of symbols used in diagrams of *gas* control systems.
Cl 2.2.4.8		*Delete* clause text and *replace* with the following: Any *appliance* connected to a *common flue* shall not adversely affect the operation of any other *appliance* connected to the *common flue*. *Common flue*s serving *appliances* and industrial equipment that use a fuel other than *gas* shall be designed, constructed and installed to avoid potential hazards created by different fuel types. A *common flue* shall be used only where no appliance connected to that *common flue* is likely to discharge a combustible mixture. For domestic solid fuel burning appliances refer to AS NZS 2918 for flueing requirements. NOTE: Potential hazards created by differing fuels include ignition temperature variations, chemical interaction, dust of liquid cloud infiltration and embers from solid fuels that could ignite purging gas from an appliance.
CL 2.2.5.3		*Delete* clause heading and *replace* with "**Appliance location**".
Tbl 4.2	1	Column 1, row 4, starting with "100", *delete* entire row text and *replace* with the following:

50	Stainless steel pipe, corrugated pliable, conforming to EN 15266	Not permitted for use as final connection to an appliance Not permitted in the ground beneath a building unless plastics coated	Components that terminate with a BSP thread in accordance with the pipe manufacturer's specifications	Not permitted in the ground beneath a building Operating limit of 7 kPa applies where malleable cast iron fittings are used	Mechanical jointing using components in accordance with the pipe manufacturer's specifications	Not permitted in the ground beneath a building In other locations, joints shall be accessible for inspection and renewal. Not to be welded or jointed by any other method

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50 (cont'd)	(cont'd)	(cont'd)	Copper alloy press-fit end connector conforming to EN 15266	Fittings shall have yellow HNBR seals Not to be used for applications where the surface temperature of the pipe connector exceeds 60°C unless the manufacturer's specification warrants higher Not permitted in the ground beneath a building Press-fit end connectors not permitted for use as a final connection to an appliance where the final connection has to be destroyed to disconnect the appliance	Crimped joint shall be formed using method and tools in accordance with the manufacturer's specifications	The Technical Regulator may require the installer to be authorized Brazing, welding or annealing shall be conducted in accordance with the manufacturer's specifications, but shall be not less than 1 m from a joint with non-metallic components Not permitted in the ground beneath a building

Element	**Instruction/New text**
2	Column 1, row 7, starting with "200", *delete* entire row text and *replace* with the following:

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200	Copper tube conforming to AS 1432 Type A or Type B with or without plastics coating applied by the manufacturer For sizes over DN 200, tube shall conform to AS 1572 with copper alloy designation C12200 conforming to AS 2738 and a minimum wall thickness of 2.64 mm	Not permitted beneath a building if in the ground or in a concrete slab unless plastics coated or covered with a proprietary wrapping acceptable to the Technical Regulator, see Clause 5.3.13 Where plastics-coated copper tube is used underground or where adverse environmental conditions exist, all joints and fittings shall be protected and made watertight	Copper alloy flared compression fitting conforming to AS 3688 or conforming to AS D26	Not permitted in the ground beneath a building. Mixing of AS 3688 and AS D26 fitting components not permitted	Flared compression	Not permitted in the ground beneath a building
			Copper alloy brazing capillary fitting conforming to AS 3688		Open flame brazing conforming to EN 14324	Brazing alloy to conform to AS/NZS 1167.1, alloy classification B2 Canary colour -(minimum silver content 1.8 %) or a comparable rod Joints in the ground beneath a building shall be kept to a minimum
			Junctions shall be formed in "hard drawn" tube only	To be formed with appropriate mechanical branch forming tools		
			Socket formed in tube (spigot and socket joining lengths of tube)	To be formed with appropriate tube expanding tool		
			Brazing flange, copper alloy conforming to AS 2129	Not permitted in the ground beneath a building Not to be used for joining pipe lengths unless other joining methods are impracticable Flanges forming a joint shall be of the same size and face type		
			Screwed flange, carbon steel, steel alloy or copper alloy conforming to — AS 2129, or ASME B16.5 Class 150, or EN 1759-1 Class 150 (Class 125 for cast iron valves or regulators)	Not permitted underground Not to be used for joining pipe lengths unless other joining methods are impracticable Flanges forming a joint shall be of the same size and face type	Taper external and taper or parallel internal threads conforming to AS ISO 7.1 or NPT conforming to ASME B1.20.1	Fitting shall be brazed to the pipe, not screwed Up to 7 kPa, maximum permissible size is DN 100 Over 7 kPa, maximum permissible size is DN 80

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200 (cont'd)	(cont'd)	(cont'd)	Composite loose ring socket flange conforming to AS 1432, AS 2129 or ASME B16.5 Class 150 and AS 3688 where appropriate			
			Copper and copper alloy press-fit end connector conforming to AS 3688	Fittings shall have yellow HNBR “O” rings Not to be used for applications where the surface temperature of the pipe connector exceeds 100°C unless the manufacturer’s specification warrants higher Not permitted in the ground beneath a building Press-fit end connectors not permitted for use as a final connection to an appliance where the final connection has to be destroyed to disconnect the appliance	Crimped joint shall be formed using method and tools in accordance with the manufacturer’s specifications	The Technical Regulator may require the installer to be authorized Brazing, welding or annealing shall be conducted in accordance with the manufacturer’s specifications, but shall be not less than 1 m from a joint with non-metallic components Not permitted in the ground beneath a building

Element	Instruction/New Text
3	Column 1, row 13, starting with "70", *delete* entire row text and *replace* with the following:

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70	Polyethylene/ aluminium/ polyethylene (PE/AL/PE), cross-linked polyethylene/ aluminium/ cross-linked polyethylene (PE-X/AL/ PE-X) and polyethylene/ aluminium/ cross-linked polyethylene (PE/AL/PE-X) *multilayer pipe* conforming to AS 4176.8	Not permitted above ground external to a building. Shall terminate at least 1 m from the nearest part of an appliance or some greater distance if required to prevent heat damage from the appliance Ensure conformity to any instructions or warnings are in accordance with the manufacturer's instructions PE/AL/PE and PE/AL/ PE-X shall not be used for applications where the operating temperature exceeds 60 °C PE-X/AL/ PE-X shall not be used for applications where the operating temperature exceeds 80 °C Consumer piping external to the building shall be metallic and extend at least 1 m into the building Consumer piping prior to exiting a wall shall be metallic for at least 1 m	Conforming to AS 4176.8	Same temperature limitations as for pipe Not permitted in the ground beneath a building	Joints shall be formed using method(s) and tool(s) in accordance with the manufacturer's specifications	The Technical Regulator may require the installer to be authorized Consumer piping installed in the ground beneath a building shall be *multilayer pipe* without joints Brazing, welding or annealing shall be conducted in accordance with the manufacturer's specifications, but shall be not less than 1 m from a joint with non-metallic components

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Element **Instruction/New Text**

Tbl 4.8.1 *Delete* table and *replace* with the following:

Component	Standard
Automatic shut-off valves	AS 4629.1[a]
Manual shut-off valves	AS 4617, Type 1 or Type 3
Quick-connect devices	AS 4627
Vent valves	AS 4629.2[b]
Flue cowls	AS 4566
Semi-rigid connectors	AS 4631
Hose assemblies	AS 1869 series
[a] Single class 1 *safety shut-off valves* that meet the requirements of AS 4629:2005 are equivalent.	
[b] *Vent valves* that meet the requirements of AS 4629:2005 are equivalent.	

Element **Instruction/New Text**

Cl 5.2.4 1 First paragraph, *delete* "*gas appliance(s)*" and *replace* with "*appliance(s)*".

2 Second paragraph, *delete* "*gas appliance*" and *replace* with "*appliance*".

Cl 5.2.10 *Delete* Item (i) and *replace* with the following:

(i) a remote class A *safety shut-off valve* that meets the requirements of AS 4629.1 and which isolates *gas* flow when de-energized; or

NOTE: Single class 1 *safety shut-off valves* that meet the requirements of AS 4629:2005 are equivalent.

Cl 5.2.11 *Delete* clause text and *replace* with the following:

Where *multilayer pipe* is used as part of *consumer piping,* the following requirements for fire emergency isolation shall apply:

(a) The installation shall be fitted with a system that will shut off the gas supply when the *fire safety system* operates and alerts the building occupants of the fire.

(b) The method of isolation shall be a single class A *safety shut-off valve* that meets the requirements of AS 4629.1 and automatically isolates the gas flow to the building when de-energized. This valve shall —

(i) operate only when an active *fire safety system* operates; and

(ii) be located prior to any *multilayered pipe* and be as close as practicable to the gas supply point to the building, and readily accessible.

NOTE 1: Single class 1 *safety shut-off valves* that meet the requirements of AS 4629:2005 are equivalent.

(c) The system shall provide pressure proving of the downstream installation prior to restoration of the gas supply.

Alternatively, for a Class 1a building in Australia, or detached or multi-unit dwelling in New Zealand, a system or devices shall be provided that automatically shuts off the gas supply if gas tightness is adversely affected. The system or devices which shuts off the gas supply shall be —

(i) in an accessible location prior to any *multilayer pipe* it is designed to protect; and

(ii) sized, located and commissioned in accordance with the manufacturer's instructions to ensure safe and correct operation and avoid nuisance tripping.

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Where multiple devices are required within a building, they shall be in accessible locations and prior to the *multilayer pipe* they are designed to protect.

Excess flow valves shall conform to DIN 30652-1 or an equivalent standard.

Multilayer pipes shall not be installed in buildings where the building design is such that a system or devices to shut off the gas supply cannot be installed. Alternative consumer piping shall be installed in accordance with Clause 4.2.

NOTE 2: *Multilayer piping* has less durability and mechanical strength than metallic piping when subjected to fire.

NOTE 3: In this clause an active *fire safety system* is —

(a) an automatic active system or manually activated system that provides a fire alarm condition used in a building to notify occupants within the building of a fire emergency by the sounding of an alarm throughout all occupied areas, via an emergency warning and intercom system, or via a paging system; and

(b) interlocked to the fire detection control and indicating equipment.

More information is provided in the following documents:

(i) For Australia, refer to AS 1670.1 and AS 2118.

(ii) For New Zealand, refer to NZS 4512, NZS 4515:2009, and NZS 4541 .

NOTE 4: To avoid nuisance trips and unintended interruption to the gas supply to a building, the gas supply should only be shut-off when all the occupants of the building are alerted to the fire incident.

NOTE 5: Local smoke alarms within an apartment that are intended to alert apartment occupants of localized smoke should not shut-off the gas supply to the building.

NOTE 6: Class 1a buildings are defined in the National Construction Code (NCC) (Australia).

NOTE 7: Devices that automatically shut off the gas supply may be activated by methods of sensing pressure loss or excessive gas flow conditions.

NOTE 8: This clause also applies to the alteration of consumer piping using *multilayer pipe* in an existing installation but does not apply to the replacement of an appliance in an existing installation.

NOTE 9: When using a device within a building with mechanical joints (e.g. excess flow valves) see Clause 5.3.8 for piping in a concealed location and Clause 5.3.12 for ventilation in a concealed location.

NOTE 10: The requirements for fire emergency isolation do not apply to *multilayer piping* that is only located below ground external to a building.

Figure 5.2.12(a) *Delete* Figure 5.2.12(a) and *replace* with the following:

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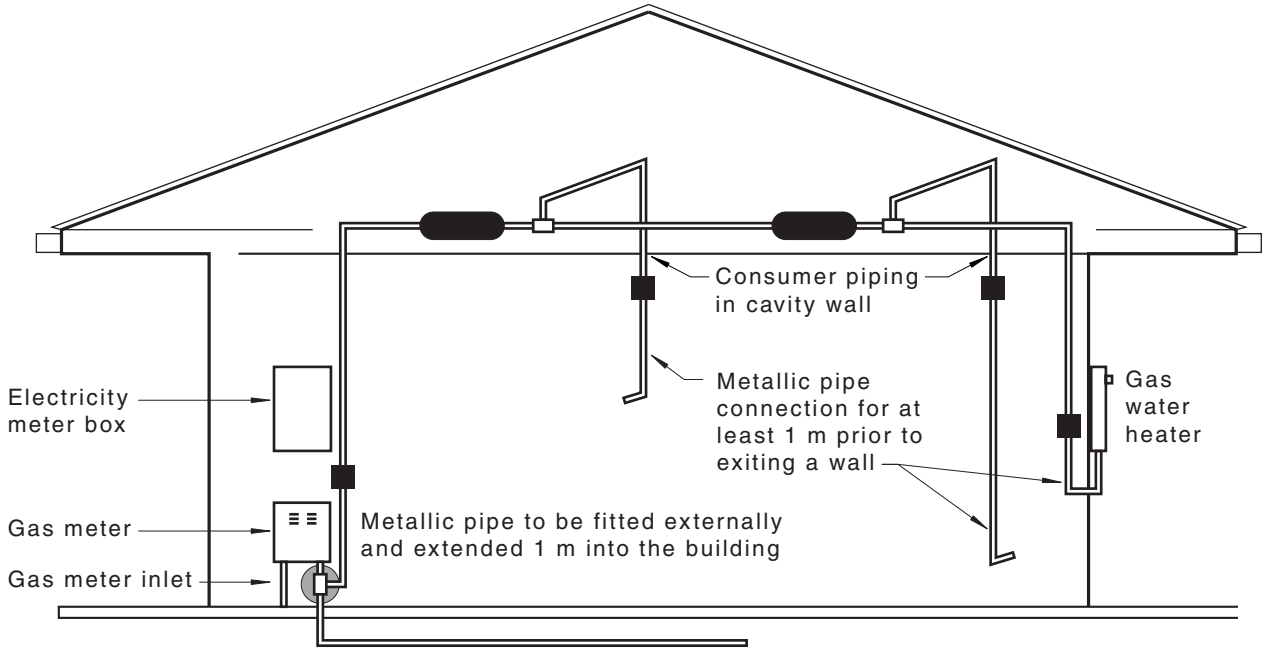

Key

Point of entry into the wall

Reversion fitting (installed only where accessible)

Transition fitting (Refer to Tables 4.2 and 5.3.8) — (permanent joint) inaccessible in cavity wall

Element		Instruction/New Text
Cl 5.3.1		After Item (g), *add* the following: (h) In Australia, internally in a Class 1 building that is not serviced by that consumer piping. (i) In New Zealand, internally in a detached dwelling that is not serviced by that consumer piping.
Cl 5.9.1		*Replace* Item (c) with the following: (c) in Australia, *certified* to the relevant parts of the AS 1869 series.
Cl 5.11.1.4	1	In Item (a), *delete* "*a gas appliance regulator*" and *replace* with "an *appliance regulator*".
	2	In Item (b), *delete "gas appliance regulator*(s)*"* and *replace* with *"appliance regulator*(s)*"*.
Cl 5.11.1.5	1	*Delete* heading and *replace* with "**Where an appliance regulator is not required**".
	2	In clause text, *delete* "a *gas appliance regulator*" and *replace* with "an *appliance regulator*".
Cl 6.2.2		In Item (b), *delete* "*gas appliance*" and *replace* with "*appliance*".
Cl 6.2.4		After Note 2, *add* the following: Flueless space heaters shall not be installed in rooms where a ducted air heater return-air register or a heat transfer system is located. The installation of appliances adjacent to battery systems and battery energy storage systems (BESS) shall be taken into account. Appliances shall not be installed within 600 mm horizontally or within 900 mm vertically above a battery system or BESS. NOTE 3: Refer to AS/NZS 5139 for further information on clearances from appliances to battery systems and BESS.
Cl 6.7.6		*Delete* clause text and *replace* with the following:

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Where more than one *appliance* is connected to a *common flue*, each *appliance* shall have a *flame safeguard system*. No *flue* shall discharge into a *common flue* concurrently carrying *flue gases* from another non-gas appliance except where Clause 2.2.4.8 applies. Additionally, the following applies:

NOTE 1: For industrial applications, see Clause 2.2.4.8.

(a) The *burners* of the *appliances* connected to the *common flue* shall be of the same type such that all are —

(i) *atmospheric burners*;

(ii) *forced draught burners*; or

(iii) *induced draught burners*.

(b) The temperature of the *combustion products* entering the *common flue* shall not at any time exceed that given in Table 6.7.6, or a temperature of 100°C below the lowest ignition temperature of any other *gas* present, whichever is the lesser.

NOTE 2: The requirements of Item (b) above may be satisfied by any one of the following:

(i) Having *draught diverter*s or draught stabilizers in positions such that *combustion product* dilution occurs in the *common flue*.

(ii) Providing a device or method that will achieve sufficient *combustion product* dilution in the *common flue*.

(iii) Providing a *temperature limit device* in the *flue* at each *appliance*.

(c) Means to prevent reverse flow in any *appliance* shall be provided.

NOTE 3: The use of a *draught diverter*, *flue* break, or a *flue* damper *interlock*ed with the *appliance* may meet this requirement.

Cl 6.9.3 After the note, *add* the following:

The location of the *flue terminal* of a small gas engine driven appliance that conforms to the requirements of AS/NZS 5263.1.11 shall conform to the requirements in Appendix A.

Cl 6.10.1.1 After Note 5, *add* the following:

(d) *Requirement 4 — Additional requirements for down-draught extraction systems*

Appliances with integral *down-draught extraction systems* shall only be installed if the design conforms to Clauses 6.1.1 or 6.1.2.

Appliances shall only be installed with separate *down-draught extraction systems* if they meet the following requirements:

(i) The *appliance* installation instructions state the *appliance* may be used with the *down-draught extraction system*; and

(ii) The *down-draught extraction system* installation instructions state that the *down-draught extraction system* may be used with the *appliance*.

Cl 6.10.1.7 First sentence, *delete* "or AS 4551".

Cl 6.10.1.9 *Delete* Item (f) and *replace* with the following:

(f) Where a domestic cooker is connected to *consumer piping* using a *hose assembly*, the *hose assembly* shall be *certified* to the relevant parts of the AS 1869 series, Class B or Class D.

Cl 6.10.2.7 *Delete* Item (f) and *replace* with the following:

(f) *Hose assemblies* used shall be *certified* to the relevant parts of the AS 1869 series, Class B or Class D.

Cl 6.10.9.5 *Delete* heading and *replace* with "**Ventilation requirements other than for a room sealed appliance**".

Cl 6.10.19 After Item (d), *add* the following:

NOTE 5: If combustion products cannot be readily dispersed, then a performance-based design solution may be implemented in accordance with Section 2 of this document.

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App A *Delete* Appendix A and *replace* with the following:

Appendix A (normative)

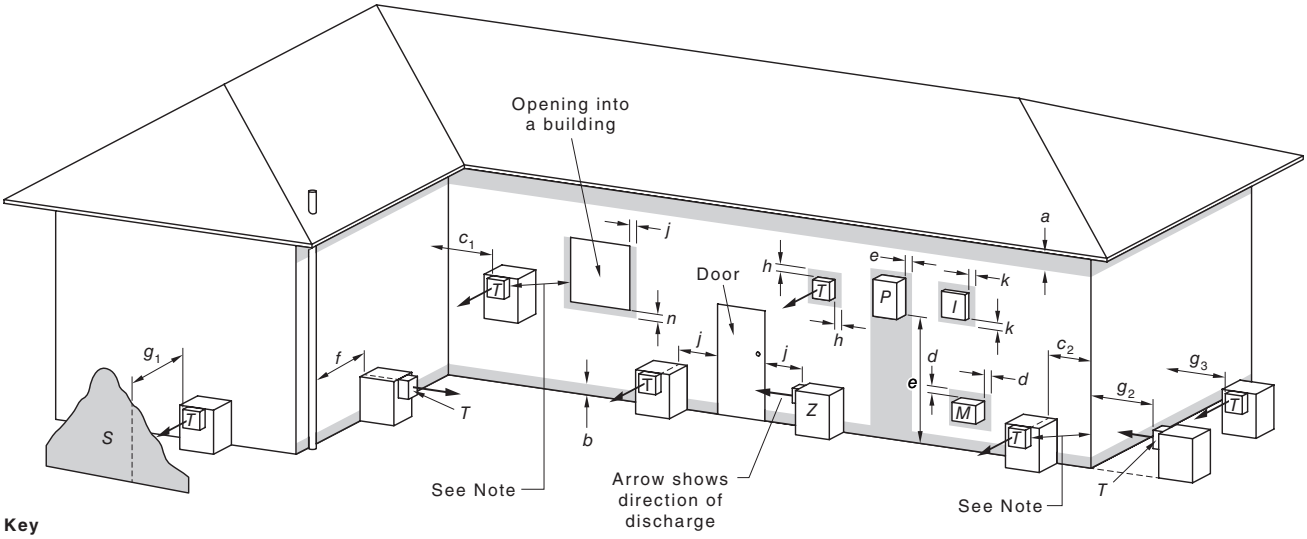
Location of flue terminals for small gas engine driven *appliances*

The *flue terminal* of outdoor and indoor room-sealed engine driven *appliances* with an energy input not exceeding 1 000 MJ/h shall be located to discharge exhaust gases safely in accordance with Figure A.1 and Table A.1.

The symbols in the figure are explained in Table A.1.

The *flue terminal* of a room-sealed engine driven *appliance*, a fan-assisted engine driven *appliance* or the *flue terminal* of an engine driven *appliance* designed for outdoor installation shall not be installed under a covered area, or in a recess.

NOTE: The information in this appendix is based on Appendix AA of AS/NZS 5263.1.11:2020.



NOTE: See Note 1 to Table A.1

Figure A.1 — Location of *flue terminals*

Table A.1 — Location of *flue terminals*

Ref.	Item description	Distance	Conditions
a	Vertically below eaves, balconies or other projections	1 500	≤ 250 MJ/h
		3 000	> 250 MJ/h ≤ 500 MJ/h
		4 500	> 500 MJ/h unless flued above eave or projection
b	From the ground, above a balcony or other surface	300	Unless appliances mix exhaust with cooling air prior to discharge, then no restriction.
c_1	From a return wall	1 000	If direction of discharge not towards a return wall or other structure If direction of discharge towards return wall refer to "g_1" and "g_2"

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Table A.1 *(continued)*

c_2	From an external corner	0	No restriction
d	From a gas meter (M) or the terminal location of a gas regulator relief vent	1 000	If direction of discharge not towards meter or the location of a gas regulator relief vent; otherwise refer to "*h*"
e	From an electricity meter or fuse box (P) Prohibited area extends to ground level Minimum clearance *d* and *e* also apply to combustion air intakes	1 000	If direction of discharge not towards meter or fuse box; otherwise refer to "*h*"
f	From a drain pipe or soil pipe	500	Discharge not to directly impinge on pipe
g_1	From a solid structure that is not a habitable building	1 000	Clearance when direction of discharge toward structure
g_2	From a habitable building	4 500	Clearance when direction of discharge toward a habitable building
g_3	Horizontally from obstruction or a building structure where direction of discharge is parallel to obstruction or building structure	500	Appliances ≤ 500 MJ/h with OEM evidence that fire in enclosure will not ignite combustible structures
		1 500	> 500 MJ/h
h	From any other flue terminal, cowl or combustion air intake	1 500	≤ 250 MJ/h
		3 000	> 250 MJ/h
j	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building including sub-floor ventilation	1 500	Appliances ≤ 250 MJ/h
		4 500	Appliances > 250 MJ/h
k	From a mechanical air inlet, including a spa blower	3 000	Discharge not to be directed towards mechanical air inlet, including a spa blower, unless 1 000 mm above inlet.
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building including sub-floor ventilation	Not to be installed	Vertical discharge flues only
		1 500	Horizontal discharge flues, appliances ≤ 250 MJ/h
		4 500	Horizontal discharge flues, appliances > 250 MJ/h

NOTE 1: Where dimensions *c*, *j* or *k* cannot be achieved, an equivalent horizontal distance measured diagonally from the nearest discharge point of the terminal to the opening may be deemed by the Technical Regulator to conform.

NOTE 2: Structure excludes garden shrubs, trees, other permeable partial obstructions or otherwise in accordance with the manufacturer's instructions.

Element	**Instruction/New Text**
Cl C.2	*Delete* first sentence and *replace* with the following: Materials for the thermal protection of combustibles shall have the properties of either (a) or (b) and, in addition, the properties of (c), (d) and (e):
Cl F.2	In Item (b), *delete* "*gas*".
Cl F.3.1	In Items (a), (b) and (c), *delete* all instances of "*gas appliance*" and *replace* with "*appliance*".
Tbl F.54	*Delete* first header row "For New Zealand Only".
Tbl F.68	In the table title, *delete* "/AS 1464".
Tbl F.69	In the table title, *delete* "/AS 1464".
Fig L.1.2.2	*Delete* Figure L.1.2.2 and *replace* with the following:

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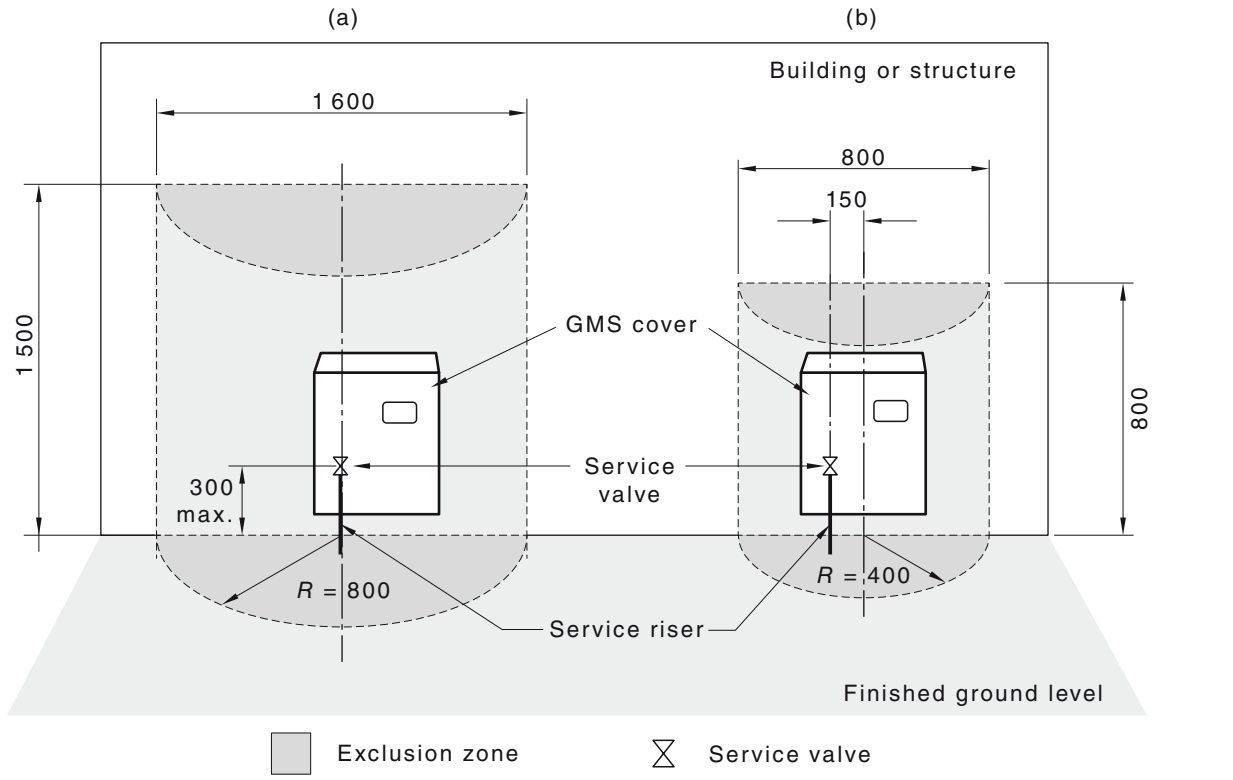
Dimensions in millimetres



(a) A gas meter fitted with a venting regulator **(b) A gas meter with an OPSO regulator**

NOTE 1 : Exclusion zone starts at ground level. For venting regulators, the exclusion zone is centred on the service *riser*. For over-pressure shut-off (OPSO) or non-venting regulators, the exclusion zone is centred 150 mm to the right-hand side of the service *riser*, when viewed looking towards the structure.

NOTE 2 : The service valve is to be installed between 150 mm and 300 mm maximum above finished ground level.

Figure L.1.2.2 — Exclusion zone for gas regulators

Element		Instruction/New Text
Cl N.1		In Item (f), *delete* "*gas appliance regulator*" and *replace* with "*appliance regulator*".
Cl Q.1		Note 2, *delete* "*gas appliances*" and *replace* with "*appliances*".
Biblio	1	*Delete* "AS/NZS 60079.10.1, *Explosive atmospheres, Classification of areas—Explosive gas atmospheres (IEC 60079.10.1: 2008, MOD)"* and *replace* with the following: AS/NZS IEC 60079.10.1, *Explosive atmospheres, Part 10.1: Classification of areas — Explosive gas atmospheres*
	2	After "New Zealand Building Code https://www.building.govt.nz/building-code-compliance/building-code -and-handbooks", *add* the following entries:

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AS 1670.1, *Fire detection, warning, control and intercom systems — System design, installation and commissioning, Part 1: Fire*

AS 2118, *Automatic fire sprinkler systems*

AS/NZS 5139, *Electrical installations — Safety of battery systems for use with power conversion equipment*

AS/NZS 5263.1.11, *Gas appliances, Part 1.11: Small gas engine driven appliances*

NZS 4512, *Fire detection and alarm systems in buildings*

NZS 4515, *Fire sprinkler systems for life safety in sleeping occupancies (up to 2000 square metres)*

NZS 4541, *Automatic fire sprinkler systems*

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