

AS/NZS5601.1:2013 Gas installations

Part 1: General installations

Comparison 2010 – 2013

Background

Standards are living documents that must reflect progress and innovation within the scope of the relative industry. To maintain currency and relevance, they must undergo periodic review.

Australian Standards are developed and revised by Standards Australia. To assist with this process, committees are formed by Standards Australia that includes representatives from stakeholders within relevant industries.

The committee responsible for AS/NZS5601 Part 1 and 2 is AG-006. The organisations represented on the committee are listed in the opening pages of the standard and include gas appliance/equipment manufacturers, gas companies and technical regulators.

In Queensland, the current Australian Standard for gas fitting in domestic, commercial and industrial situations is the AS/NZS5601.1:2010 Gas Installations Part 1: General Installations. This standard was recently revised and republished on 16 September 2013.

Queensland legislation is being amended to make the 2013 publication the preferred standard for gas fitting in Queensland from 1 July 2014.

This document and proposed trade presentations are being provided by the Department of Natural Resources and Mines to assist the gas industry with the implementation of the new standard.

Availability

Publishing rights for the standards are held by SAI Global. Standards are available from the SAI Global online store (<http://infostore.saiglobal.com/store/>) or you may be able to purchase printed and DVD versions from your local gas equipment supplier.

Summary

The latest version of AS/NZS5601.1:2013 now includes a 'contents' listing at the start of each section, and the index at the back has been reintroduced. A number of definitions have been reworded and new definitions added to clarify the meaning of some clauses.

Below is an outline of the main differences within the body of the standard, but it is not comprehensive, and is provided as a guide only. After 1 July 2014 during the design, installation, alteration or certifying of gas systems within the scope of AS/NZS5601:2013 Part 1 reference must be made to the 2013 version.

Section 1 – Scope and general

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
Clause		Comment	Clause		Comment / change
N/A		No reference to Normative references	1.4	Normative References	The normative documents referenced are listed in Appendix A, and in some cases may need to be consulted during the application of this standard
N/A		Definition of accessible required clarification	1.8.1.1	Definition – <i>Readily accessible</i>	A new definition “readily accessible” has been introduced which requires access without the use of a tool
N/A		No definition for fan assisted appliance	1.8.2.6	Definition – <i>Fan assisted appliance</i>	The increase in appliance design required additional definition
N/A		No definition for flued appliance	1.8.2.7	Definition – <i>Flued appliance</i>	Inclusion of definition due to references in clauses
N/A		No definition for Croxed Joint	1.8.20	Definition – <i>Croxed Joint</i>	Inclusion of definition due to references in clauses
N/A		No definition for Exhaust Fan	1.8.30	Definition – <i>Exhaust Fan</i>	Inclusion of definition due to references in clauses

AS/NZS5601.1:2010 Gas installations		AS/NZS5601.1:2013 Gas installations		
N/A	No definition for Chimney	1.8.40.2	Definition – <i>Chimney</i>	Inclusion of definition due to references in clauses
N/A	No definition for Free area / free ventilation area	1.8.44	Definition – <i>Free area / free ventilation area</i>	Inclusion of definition due to references in clauses
N/A	No definition for a Griller	1.8.55	Definition – <i>Griller</i>	Inclusion of definition due to references in clauses
N/A	No definition for Limited flexibility connector	1.8.67	Definition – <i>Limited Flexibility Connector</i>	Inclusion of definition due to references in clauses
N/A	No definition for Manufacturers specifications/ instructions/ recommendation	1.8.71	Definition – <i>Manufacturer s specifications / instructions/ recommenda tion</i>	Inclusion of definition due to references in clauses
N/A	No definition for Toughened Safety Glass	1.8.111	Definition – <i>Toughened Safety Glass</i>	Inclusion of definition due to references in clauses
N/A	No definition for Vapour Barrier	1.8.114	Definition – <i>Vapour Barrier</i>	Inclusion of definition due to references in clauses

Section 2 – Performance-based design and other essential requirements

Section 2 is not a means of compliance. The wording of a number of clauses has been reviewed to provide clarity. Specific considerations are required when applying the requirements of this section. Designers and installers should contact the Petroleum and Gas Inspectorate before any design or installation is undertaken under these clauses.

Section 3 – Means of compliance – General requirements and safe work practices

A number of references to International and Australian testing/manufacturing standards have been updated. Wording has been edited to provide clarity of requirements in some clauses.

Section 4 – Means of compliance – Definition: Materials, fittings and components

In addition to the changes outlined below, a number of references to International and Australian testing/manufacturing standards have been updated. Wording has been edited to provide clarity of requirements.

Table 4.1 has been reviewed to reference current international and Australian standards where required. In a number of cases the use and limiting conditions have been edited.

AS/NZS5601.1:2010 Gas installations		AS/NZS5601.1:2013 Gas installations		
Clause	Comment	Clause		Comment / change
4.6 and Table 4.2	Material between LP Gas cylinder valve and inlet to first regulator	4.6	Material between LP Gas cylinder valve and inlet to first regulator	The information and requirements previously identified in clause 4.6 and Table 4.2 are not within the scope of AS/NZS5601, but is in the 'informative' Appendix J. AS1596 the storage and handling of LP Gas should be referenced for the appropriate requirements.

Section 5 – Means of Compliance – Installing consumer piping

AS/NZS5601.1:2010 Gas installations	AS/NZS5601.1:2013 Gas installations
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AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
Clause		Comment	Clause		Comment / change
5.1.2	Prohibition of earthing through consumer piping	No requirement for clearance from earth stake	5.1.2	Prohibition of earthing through consumer piping	Inclusion of two additional Notes to give reference points
5.1.12	Identification of pipe work	Editorial changes	5.1.12.1 and 5.11.2	Identification of pipe work and Marking	In addition to editorials there is now a requirement to identify consumer piping that runs within a sleeve.
5.2.12	Provision of emergency valve	Existing clause did not reflect industry practice	5.2.12	Provision of emergency valve	Requirement of clause edited and reworded to reflect industry practise and desired safety outcome
5.2.13	Proprietary multilayer piping	Industry confusion over requirement	5.2.13	Proprietary multilayer piping	Requirement of clause edited and reworded to provide clarity
5.3.4	Separation from above ground electrical equipment	Industry not clear on applicable voltages	5.3.4	Separation from above ground electrical equipment low and extra low voltage equipment	Clause title revised to clarify applies to low voltages, and additional note references AS2067 for high voltage
5.3.11	Piping in the ground beneath a building	No reference to table 4.1	5.3.11	Piping in the ground beneath a building	Clause revised to reference table 4.1

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
5.3.17	Protection of multilayer piping	No reference to identification if wrapped or sleeved	5.3.17	Protection of multilayer piping	Now includes the requirement to identify the pipe if the protection conceals the pipe
5.2.5	Hose assemblies	Hose length restricted to 1.5m	5.2.5	Hose assemblies	There is no restriction on hose length however the hose must be as short as practicable for its intended application to restrict kinking and damage to the hose
5.8	Support of consumer piping	Existing clause only relevant up to 200mm diameter	5.8	Support of consumer piping	Note included to advise for diameters in excess of 200mm see AS4041
5.10.1	Quick-connect device installed outside above ground	Existing clause did not specify requirement for restraint when using a hose assembly	5.10.1	Quick-connect device installed outside above ground	Clause now includes requirement to provide a means of securing a safety chain or wire within 50mm
5.11.13	Protection of gas supply system from low pressure where a gas pressure raising device or a gas engine is installed	Industry confusion over location and function	5.11.13	Protection of gas supply system from low pressure where a gas pressure raising device or a gas engine is installed	Clause revised to clarify location and function of low pressure switch

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
5.11.4	Pressure test points	Industry confusion over pressure gauge satisfying this clause	5.11.4	Pressure test points	Clause revised to reflect that where permanent pressure gauge fitted, additional test point required
5.11.5.7	Discharge from breather vents	Clause is unclear about how to calculate the maximum breather vent diameter	5.11.5.7	Non-domestic applications	Clause revised and includes formula to calculate maximum breather vent size if room volume and pressure known
5.11.5.7	Discharge from breather vents	Clause did not differentiate between non-domestic and domestic applications	5.11.5.7.2	Domestic applications	Clause now limits breather vent size, shall not exceed 0.7mm in class 1 and 2 buildings
5.11.9	Vent terminal locations	Industry request for clarification	5.11.9	Vent terminal locations	Two additional notes to clarify this requirement does not apply to the breather vent of a consumer piping regulator and only applies up to operating pressures of 200Kpa

Section 6 – Means of Compliance – Installing gas appliances

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
Clause		Comment	Clause		Comment / change
6.2.8	Electrical requirements	Clarification requested	6.2.8.1	Electrical requirements general	Revised and reworded to provide clarification

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
			6.2.8.2	Electrical requirements for Australian use only	Clause 6.2.8 separated into two to provide clarification
6.2.14	Gas appliance restraint where a hose assembly is used	Clarification requested	6.2.14	Gas appliance restraint where a hose assembly is used	Reference to clause 5.9.7 for method of hose connection, additional Note for strength of restraint to be adequate
6.3.1	Adverse effect of air movement systems	Clarification required, resulting from fatalities	6.3.1	Adverse effect of air movement systems	Inclusion of a extensive Note regarding extraction fans etc, reference to new Appendix R
6.3.8	Installation in a cupboard	Editorial	6.3.8	Installation in a cupboard	Format change to represent 'notice'
6.3.10	Installation in a garage	Editorial	6.3.10	Installation in a garage	Format change to represent 'notice'
6.3.11	Appliance in a roof space	Clarification requested to include ancillary equipment	6.3.11	Appliance in a roof space	Additional note to identify requirement applies to ancillary equipment
6.4	Air supply to gas appliances	Clarification requested on the varying applications of this clause	6.4	Air supply to gas appliances	Note included to clarify specific appliance ventilation requirements
6.4.4	Air requirements for gas appliances	Revision of entire clause required due to changes in building design	6.4.4	Air requirements for gas appliances	This clause has undergone significant review and a number of changes have been made.

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
					Reference to when buildings were approved for construction and requirements provided in two clauses
			6.4.4.1.1	(Application) for Australia	Due to differing methods of construction between Australia and New Zealand 6.4.4.1 is now in two parts with 6.4.4.1.1 detailing requirements to be applied in Australia
			Table 6.2	Natural Ventilation for gas appliance	Introduction of a table that provides diagrammatic representation of ventilation scenarios
6.4.4.10	Special requirements for flueless gas appliances	Clarification required and separation of space heaters and others	6.4.5.3.2	Spaces containing only flueless appliances other than flueless space heaters	Clause clarification and introduction of worked examples
		Clarification required and separation of space heaters and others	6.4.5.3.3	Spaces containing both flued and flueless appliances other than flueless space heaters	Clause clarification and introduction of worked examples

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
6.4.4.6	Interlock for mechanical air supply to gas appliances	Clarification requested	6.4.9	Interlock for air supply to gas appliance	Inclusion of proof of 'no-flow' state, damper position proving and note that main burner shutdown only acceptable in non-industrial applications
6.7.4	(Flues) Design requirements	Clarification requested	6.7.4	(Flues) Design requirements	Rewording to provide clarification
6.7.6	Common or combined flues	Additional requirement to prevent reverse flow	6.7.6	Common or combined flues	Inclusion of additional sub-clause referencing requirement to prevent reverse flow in combined flues
6.7.7	Draught diverters	Clarification requested and editorial	6.7.7.1	Flue with draught diverter	Rewording and separation of 6.7.7 to provide clarification
			6.7.7.2	Flue without draught diverter	Rewording and separation of 6.7.7 to provide clarification
6.10.1.1	Clearances around a gas cooking appliance	Appliance design and certification could allow less clearances	6.10.1.1	Clearances around a gas cooking appliance	Inclusion of reference to 'in accordance with the cooking appliance manufacturer's instructions'.

AS/NZS5601.1:2010 Gas installations			AS/NZS5601.1:2013 Gas installations		
Figure 6.3	Required clearances around domestic gas cooking appliances	Editorial and clarification	Figure 6.3	Required clearances around domestic gas cooking appliances	Figure 6.3 Notes and Requirements 1 & 2 edit to provide further clarification
6.10.1.2	Protection of combustible surfaces near a gas cooking appliance	Clarification and editorial	6.10.1.2	Protection of combustible surfaces near a gas cooking appliance	Clause revised and edited and reference made to Appendix C, previously a NZ only Appendix
6.11.4	Commissioning requirements	Clarification on 'Testing of flue'	6.11.4	Commissioning requirements	Reference to newly added clause 'R', "Spillage tests for flued appliances"

Appendices

The appendices have been reviewed and edited to align with other standards. Some informative appendices have been added.

Appendix	Status	Comment
Appendix D Purging	Informative	Additional clause D7, added to provide technical references for large volume installation
Appendix E Testing for gas tightness	Normative	Additional clause E11, added to provide further guidance
Appendix F Sizing consumer piping	Informative	Edited to provide clarification and introduction of F 4 and F6 as reference to appropriate graphs and tables
Appendix G Determination of maximum breather vent orifice size for devices not vented to outside atmosphere	Normative	Revised, edited and introduction of tables to replace nomograms

Appendix	Status	Comment
Appendix J LP Gas cylinder locations	Informative	Materials between LP gas cylinder valve and inlet to first regulator now included as clause J9 (previously clause in main body of standard)
Appendix M Consumer billing meter installations (New Zealand only)	Informative	Introduction of diagram to represent exclusion zone for gas regulators
Appendix O Guidelines for gas appliance commissioning	Informative	Introduction of new appendix to give information in regard to gas appliance commissioning
Appendix P Symbols used in gas control system diagrams	Informative	Introduction of appendix to assist installers when designing and interpretation gas system schematics
Appendix Q Gas Installation Checklist	Informative	Introduction of appendix to assist gas installers when checking compliance of gas installations
Appendix R Spillage tests for flued appliances	Normative	Introduction of appendix to provide details on how to check for spillage of combustion products

For more information, telephone 3199 8027 or email gassafe@dnrm.qld.gov.au or visit www.dnrm.qld.gov.au