

DEPARTMENT OF COMMERCE

Gas Installations

All gas fitting work must be carried out in accordance with the requirements of the *Gas Standards Act 1972* and supporting regulations, which are the:

- Gas Standards (Gas fitting and Consumer Gas Installations) Regulations 1999; and
- Gas Standards (Gas Supply and System Safety) Regulations 2000.

This section of EnergySafety's website contains information on interpretations of specific code/standard requirements.

Note: With the gazettal of the amendment of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 in the Government Gazette of 18 January 2011, there was an update to the list of industry codes and standards in schedule 7. Reference to the Australian Standard, AS 5601: Gas installations, was deleted and AS/NZS 5601: Gas installations, inserted. Regulation 32(4) of the regulations now allows a six month transitional provision from the date of gazettal, with this period elapsing on 19 July 2011.

After this date, the following interpretations of specific code/standard requirements; are amended and re-issued. The previous interpretations of specific code/standard requirements applied to gas installations completed during the transitional period under AS 5601: Gas installations, are now amended and re-issued and after 19 July 2011 must be in compliance with the requirements of AS/NZS 5601.

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Interpretations of specific code/standard requirements

Gas operatives and industry representatives may request EnergySafety to provide an interpretation of a specific requirement of a Standard that is listed in a Schedule to the Regulations.

Request for interpretations should be submitted using a 'Request for interpretation of code/standard requirements' form.

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Gas Interpretation Number 05/01

Issue
1. May 'Philmac' olive type fittings be used above the ground or underground? 2. May Milne type compression fittings be used underground?

Relevant Code/Standard/Regulation		
Regulation/Standard	Regulation/Section/Clause number	Sub-Section/clause heading and contents
AS/NZS 5601.1 - 2010	4.3	Consumer piping restrictions (e)(i) Non-metallic fittings; shall not be used above ground. When used underground the assembled joints must be designed and installed so as to prevent 'pull out' during service.
	4.4	(c) Prohibited types of joints and fittings The following fitting shall not be used; a single plastic/rubber olive type fitting other than in a permanent joint.
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	401	Fitting lines and fittings (1) A fitting line or fitting on a consumers gas installation that is to operate at a pressure of 200kPa or less must comply with AS/NZS 5601.

Interpretation
1. No, 'Philmac' olive type fittings are not to be used above the ground or underground with the exception for the use of this type of fitting for the underground connection directly downstream of the meter/ regulator manifold, beneath the gas meter box. A variation was issued under Regulation 32(3)(a) in December 1999 (refer to Gas Focus No. 17, May 2000). 2. No, 'Milne' type fittings that are not designed to prevent 'pull-out' may not be used.

Limitations
Only fittings designed and installed to prevent 'pull-out' during service may be used. Plastic/rubber olive type fittings do not adequately prevent pull out during service.

Date of Issue: First issued July 2005; amended and re-issued July 2011.

Gas Interpretation Number 05/02

Issue
What is the separation from a consumer's gas pipe to PVC insulated electrical cables or wires and PVC electrical conduits (installed above ground)?

Relevant Code/Standard/Regulation		
Regulation/Code/Standard	Regulation/Section/Clause number	Sub-Section/clause heading and contents
AS/NZS 5601 - 2010	5.3.4	Separation from above ground electrical conduit, wire, cable or earthing electrode The separation shall be at least 25mm between any consumer piping and any above ground: (a) metal electrical conduit; (b) metal armoured or metal-sheathed electrical wire or cable; or (c) electrical earthing electrode.

Interpretation
A 25mm clearance is required from all plastic and metallic electrical conduits and plastic sheathed wires and cables.

Limitations
Although the examples given in Clause 5.3.4 of AS/NZS 5601-2010 only refer to metal armoured and metal sheathed wire or cables, the heading clearly states "Separation from above ground electrical conduit, wire, cable or earthing electrode".

Date of Issue: First issued July 2005; amended and re-issued July 2011.

Gas Interpretation Number 05/03

Issue
What type of wall or fence is considered a durable structure for attaching consumer piping and appliances?

Relevant Code/Standard/Regulation		
Regulation/Code/Standard	Regulation/Section/Clause number	Sub-Section/clause heading and contents
AS/NZS 5601.1 - 2010	5.3.1	<p>Location of consumer piping, prohibited locations</p> <p>Consumer piping shall not be installed in any of the following locations:</p> <p>(a) Attached to a fence.</p> <p>NOTE 2: A brick wall used as a fence is generally deemed suitable.</p>
	6.2.10	<p>Gas appliance support</p> <p>An appliance shall be supported on or secured to a durable structure that is appropriate for the use and location of the appliance.</p> <p>NOTE: A fence is not normally considered a durable structure, however a brick wall used as a fence is generally deemed suitable.</p>

Interpretation
A brick wall or fence is considered a 'permanent durable structure' and is therefore deemed suitable for attaching an appliance and/or consumer piping.
Other materials used to construct walls such as limestone, concrete and reconstituted limestone are also considered to be permanent durable structures and may also be utilised. However, if attaching copper piping to a limestone wall, appropriately secured standoff clips are required, to prevent corrosion.

Limitations
Fences constructed of materials such as wood, corrugated asbestos / cement sheeting and sheet metal are not deemed as durable structures for the purpose of attaching consumer piping and appliances.

Date of Issue: First issued July 2005; amended and re-issued July 2011.

Gas Interpretation Number 05/04

Issue
<p>Wall mounted water heating appliances [EBFs (external balanced flue) and continuous flow types] are being installed at heights that are deemed to be inaccessible for normal operation and servicing.</p> <p>What is the maximum height for a water heater above ground level on a single residential premise, where the premise is double or triple storey?</p>

Relevant Code/Standard/Regulation		
Regulation/Code/Standard number	Regulation/Section/Clause number	Sub-Section/clause heading and contents
AS/NZS 5601.1 - 2010	1.6.1	Accessible Access can be gained without hazard or undue difficulty for inspection, repair, renewal or operational purposes.
	6.3.3	Appliance to be accessible Gas appliances shall be installed only in accessible locations and with sufficient clearances to allow access to, and removal of, all serviceable components. NOTE: Removal of a panel or door to give access to a control compartment is acceptable.
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	503(1)	Avoidance of hazards An appliance, cylinder, flue, fitting line or other apparatus must not, by its construction, use or positioning, constitute a hazard

Interpretation
<p>Appliances may be installed up to a maximum height of 2.5 metres from ground level to the bottom of the appliance. This will allow for access to be gained from an average sized stepladder for installation, inspection and servicing and for operational purposes.</p>

Limitations
<p>Clause 6.3.3 of AS/NZS 5601-2010 requires appliances to be installed in accessible locations. Clause 1.6.1 of the Standard defines accessible as: "Access can be gained without hazard or undue difficulty for inspection, repair, renewal or operational purposes."</p>

Date of Issue: First issued January 2006; amended and re-issued July 2011

Gas Interpretation Number 05/05

Issue
Can flexible hose assemblies be used to connect flued and non-portable appliances?

Relevant Code/Standard/Regulation		
Regulation/Code/Standard number	Regulation/Section/Clause number	Sub-Section/clause heading and contents
AS/NZS 5601.1 - 2010	5.9.4(d)	Hose assembly – Prohibited installation methods A hose assembly shall not pass through the panel or casing of the appliance unless the appliance is specifically manufactured to avoid damage to the hose assembly.
	5.9.5	Hose assembly – Operating conditions A hose assembly shall not be installed where, under normal operating conditions, it will be: (a) exposed to a temperature exceeding the maximum recommended by the hose manufacturer; (b) subject to stain, abrasion, kinking or permanent deformation; or (c) subject to damage by vermin.
	6.10.1.9	Connecting a freestanding cooking appliance using a hose assembly – High level connection
	6.1.1.10	Under cooker connection A freestanding cooking appliance having an under cooker connection point shall not be connected to that point using a hose assembly.
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	20(1)(b)	Installation of an appliance, apparatus or part An appliance to be installed in accordance with any instructions or recommendations of the manufacturer.
	503	Avoidance of hazards An appliance, cylinder, flue, fitting line or other apparatus must not by its construction, use or positioning, constitute a hazard.

Interpretation

A manufacturer's installation instructions must specify the use of a flexible hose assembly for this type of connection. If the instructions do not specify a means of connection, the appliance must be connected with copper tube and the appropriate fittings. The only exception is for freestanding upright stoves that have a connection point at the rear of the appliance and do not have specific instructions or labelling prohibiting the use of flexible hoses.

Clause 6.1.1.10 of AS/NZS 5601 - 2010 states that a freestanding cooking appliance having an under cooker connection point shall not be connected to that point using a hose assembly. If the gas fitter or owner wants to use a hose assembly on a stove with an under cooker connection point, the gas fitter must extend a rigid [copper] pipe from the connection point under the cooker and up the back of the stove, terminating downwards. The gas connection point shall also terminate downwards. The hose assembly is then connected to these points hanging in a U-shape (Refer to Clause 6.10.1.9 of AS/NZS 5601 - 2010).

Limitations

Various concerns:

- Incorrectly rated hoses may be used.
- Internal bore of hoses and fittings may be too small, restricting gas flow.
- Hose assemblies may be subject to significant conducted or radiant heat. For example, the connection to a Type 1 or 2 decorative log fire.
- Risk of a consumer attempting to move a flued or non-portable appliance (for cleaning) that may not be properly relocated, thus becoming a hazard.
- Hoses positioned in concealed locations, not accessible for inspection, subject to vermin damage.

Date of Issue: First issued January 2006; amended and re-issued July 2011.

Gas Interpretation Number 09/01

Issue
Can a gas appliance or cylinder be installed near an openable window and at less than the required clearances, when the window is permanently closed?

Relevant Code/Standard/Regulation	
Regulation/Code/Standard number	Regulation/Section/Clause number/heading and contents
AS/NZS 5601.1 - 2010	6.9.3 Location of a flue of a balanced flue appliance, fan-assisted flue appliance, room sealed appliance or an outdoor appliance The location of a flue of a balanced flue appliance, fan-assisted flue appliance, room sealed appliance or an outdoor appliance shall comply with Figure 6.2 (Openable window, minimum clearances J and N).
	Appendix J, clause J5 Clearances around a cylinder Clearances complying with Figure J3 and Figure J4 and at least one (1) metre from readily ignitable material will meet the relevant requirements of this Standard (AS/NZS 5601 - 2010) and AS/NZS 1596 (Openable window, minimum vertical clearance 150mm for exchange cylinder).
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	503(1) Avoidance of hazards An appliance, cylinder, flue, fitting line or other apparatus must not, by its construction, use or positioning, constitute a hazard

Interpretation
Clearances must be maintained from openable windows. Appliances may be installed near a window and at less than the required minimum clearances if the window is permanently closed. Effectively the permanently closed window can be considered as part of the wall for installation, inspection and servicing and for operational purposes.

Limitations
The openable window must be securely fixed in place with a fixture or fitting. A tool must be required to remove the window fixture or fitting. For metallic or aluminium windows, rivets are to be used and for wooden windows non-retractable screws.

Date of Issue: First issued November 2009; amended and re-issued July 2011.

Gas Interpretation Number 09/02

Issue
Can an ignition source of any kind be placed within a hazardous area around a 45kg LP Gas cylinder?

Relevant Code/Standard/Regulation	
Regulation/Code/Standard number	Regulation/Section/Clause number/heading and contents
AS/NZS 5601.1 - 2010	6.2.2.1 Required clearances around a cylinder Clearances around a cylinder shall comply with Appendix J.
	Appendix J, clause J5 Clearances around a cylinder Clearances complying with Figure J3 and Figure J4 and at least one (1) metre from readily ignitable material will meet the relevant requirements of this Standard (AS/NZS 5601 - 2010) and AS/NZS 1596.
Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999	503(1) Avoidance of hazards An appliance, cylinder, flue, fitting line or other apparatus must not, by its construction, use or positioning, constitute a hazard
AS/NZS 3000 - 2007	2.9.2.5 Restricted locations Switchboards shall not be installed in hazardous areas. 7.7.2.4 Electrical equipment Electrical equipment selected for use in hazardous areas shall comply with the appropriate requirements as specified and be installed in accordance with the requirements of AS/NZS 2381.1 or AS/NZS 61241.14 as appropriate.

Interpretation
Ignition sources are to be clear of the hazardous area. This includes, but is not limited to electrical appliances or equipment, switchboards, switches, junction boxes, lighting or outlets; air conditioning units, heat pumps, ventilation fans, outdoor lighting, pool pumps, flares, hot surfaces, mechanical impact sparks and any gas appliances.

Limitations
Appliance or equipment casings containing ignition sources, for example electric motors in air-conditioning split system condensing units, are to be placed outside the hazardous area. Appliance or equipment casings are not to be placed in the hazardous area.

Date of Issue: First issued November 2009; amended and re-issued July 2011.