

Use of Patio Heaters with Integral LPG Cylinders in Public Buildings

There is confusion by some users about the use of portable gas appliances using LP Gas. These appliances are commonly known as patio heaters and are used for heating outdoor areas of public buildings.

Patio heaters have become very popular as designs have improved. However, they are designed for outdoor use only and are not approved for use indoors. Approval to install or use patio heaters in a public building must be obtained from local government (see under heading Legislative Requirements).

Patio heaters must never be used inside a building.



A typical patio heater

Potential Hazards Associated with Patio Heaters

The use of any portable gas appliance introduces a potential hazard. The principal hazards associated with patio heaters in public buildings are:

- Risk of explosion in the event of a gas leak.
- Respiratory related health effects caused by the combustion pollutants.
- Risk of burns to patrons in the event that a heater is overturned or incorrectly located.
- Risk of fire if located too close to flammable materials.
- Obstruction of egress paths if located in inappropriate places.

Health Related Issues

The principal combustion pollutants released in the burning process may be carbon monoxide, nitrogen dioxide and sulphur dioxide.

Carbon monoxide is particularly dangerous as it is colourless and has no odour. It reduces the blood's ability to carry oxygen resulting in death. Its effects are not usually recognised until it is too late to take action.

Nitrogen dioxide causes irritation of the respiratory tract and shortness of breath.

Sulphur dioxide may cause eye, nose and respiratory tract irritation. It poses a significant risk to people with asthma and respiratory problems.

Legislative Requirements

Gas Regulations

Legislation on the proper use of these gas appliances is administered by the Department of Consumer Protection and Employment's Energy Safety Division. The regulatory and technical requirements are contained in –

- Gas Standards (Gasfitting and Consumers Gas Installations) Regulations 1999.
- AS 5601/AG 601 – 2002 Gas Installations.
- AS/NZS 1596 – 2003 Storage and Handling of LP Gas.

Health (Public Buildings) Regulations 1992

Regulation 22 requires local government to approve the installation of open heating appliances in public buildings. The use of patio heaters, therefore, requires local government approval.

To install a gas heater inside an approved public building or use a patio heater on the premises of an approved public building a Health (Public Buildings) Regulations 2001 Form 1 “Application to Construct, Extend or Alter a Public Building” must be lodged with the relevant local government.

Local Government Act – Miscellaneous Provisions

Local government has a duty of care to address any health and/or safety issues that may present a hazard to the community. The Local Government Act – Miscellaneous Provisions provides local government with a head of power to achieve this. As far as patio heaters are concerned local governments they have a duty of care to ensure that they are used properly in public places that may or may not be classed as an approved public building.

Guidelines for purchase and installation of patio heaters

These guidelines are provided to assist building operators and local governments to ascertain the safe use of these appliances.

- Only gas appliances marked with the Australian Gas Association AGA badge can be used. The installation and operation of the gas heater must comply with the manufacturer's instructions.



- Patio heaters are only suitable for outdoor use. Any one of the following configurations complies with the definition of outdoor spaces:
 - An area with walls on all sides, but with no overhead cover.
 - An area within a partial enclosure that includes an overhead cover and no more than two sidewalls. These sidewalls may be parallel, or at right angles to each other.
- An area within a partial enclosure that includes an overhead cover and three side walls, as long as 30 percent or more of the walls forming the partial enclosure is open and unrestricted

A covered verandah or outdoor area with moveable or operable walls such as wooden shutters or plastic sheeting is an enclosed place when the shutters are closed.

- Patio heaters must be stable and many units require ballast.
- In high-risk areas used for entertainment and social gatherings, the heaters should be fixed to the floor and have protective guardrails.
- Heaters must not be placed in egress/paths or areas likely to create a hazard.
- Basic safety precautions must be complied with:
 - Do not operate appliances before reading instruction booklet.
 - Do not operate indoors.
 - Do not operate in unventilated areas
 - Do not operate in enclosed areas
 - Do not operate with panels, covers or guards removed.
 - Do not store chemicals or flammable materials near appliances.
 - Do not spray aerosols near appliances.
 - Do not place articles on or against appliances.
- Operating instructions must be clearly displayed.
- Employees handling patio heaters should receive instructions on safe operation and placement.

Gas Cylinders

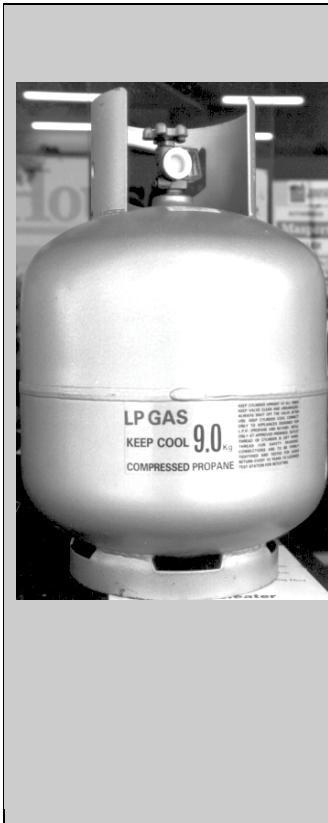
- Gas cylinders must not be replaced whilst the premises is open to the public.
- Gas cylinders must be identified as complying with AS 2470.
- Important points about LP gas cylinders:
 - LP gas cylinders must be inspected and tested at least every 10 years.
 - Filling damaged or out-of-test date cylinders is illegal and can be dangerous.
 - Out-of-test date cylinders cannot be filled until tested and restamped by an approved gas cylinder test station. (Standards Australia operates the approved gas cylinder test station scheme.)
- Turn off gas at the cylinder when not in use.
- Cylinder size must not exceed the design parameters – currently appliances are only designed for 9.5kg cylinders.

Storage of Cylinders

- Spare cylinders must be stored outside.
- Storage must not be close to an ignition source.
- Cylinder valves must be kept closed when not in use.
- Cylinders must be prevented from falling and damage and not be exposed to excessive temperatures.
- No combustible residues or waste material shall be permitted to remain in or around cylinder storage areas.
- Cylinders in a mixed storage area must be separated from any oxidising gases by at least 3 metres.

LP GAS CYLINDER INFORMATION

To determine the **LAST TEST DATE** of any LP Gas cylinder, simply refer to the information stamped on the cylinder foot ring or the valve protection collar.



IMPORTANT INFORMATION RECORDED ON THE LP GAS CYLINDER FOOT RING, VALVE COLLAR; OR DATA PLATE INCLUDES:

- ABC..... OWNERS NAME (OPTIONAL)
- NO. PCI-94-068066..... OWNERS SERIAL No. (OPTIONAL)
- AS 2470-1989..... MANUFACTURING STANDARD
- WA 11714..... STATUTORY APPROVAL NUMBER
- WC 21.6 Kg/21.6Litres... DESIGN WATER CAPACITY (May be Expressed in Kilograms and/or Litres)
- TP 3.3 Mpa..... TEST PRESSURE
- TESTED 12 1995 **LAST TEST DATE - If more than one date, the most recent date applies**
- TARE 9.65 Kg..... MASS WEIGHT
- MADE IN AUSTRALIA.. COUNTRY OF ORIGIN
- STAMPED SYMBOL(S).. UNIQUE TEST STATION MARK(S)
- 1,2,3 OR 4..... SURFACE COATING IDENTIFICATION MARK

NOTE:

There may be variations in the presentation of the information or the information provided but the **LATEST TEST DATE will always be stamped and must be legible.**

Maintenance

A licensed gas fitter must service appliances in accordance with the manufacturer's instructions prior to the start of the first use each year and attach a label or badge stating the date of service and the gas fitter's name and contact details.

LPG Forced Air "Rocket" Heaters

In addition to patio heaters some venues pre warm premises with Rocket Type heaters. Use of these in a public building requires local government approval. They must comply with the Australian Gas Association and exhibit an approval badge.

Use of this type of heater is still being assessed. However, preliminary evidence indicates they are safe provided they are only used before the venue is opened to the public. They must be removed before the public enters and stored externally in a well ventilated area.

Additional Information

The Environmental Health Directorate in consultation with the Department of Consumer and Employment Protection's Energy Safety Division has produced this information.

Additional information can be obtained from:

- Your Local Government Environmental Health Officer;
- The Department of Consumer and Employment Protection's Energy Safety Division: (08) 9422 5200; and
- The Department of Health's Environmental Health Directorate: (08) 9388 4999.