

Technical Solution Sheet 92.02

92: Gasfitting (Natural Gas Type A Installation)

Connection of Commercial Catering Equipment

AIM

The aim of this technical solution is to provide guidance for the connection of commercial catering equipment, and for the selection and installation of outdoor gas heating.

Source: Energysafe Victoria Information Sheets numbers 11 and 18

PLUMBING REGULATIONS 2008

In general terms, gasfitting work is regulated by Part 12A of the *Building Act 1993* as outlined in the *Plumbing Regulations 2008*. Gas appliance installations are required to comply with *AS/NZS 5601.1:2013 Gas installations Part 1: General installations* with the standard containing a section on, "Installing appliances".

CONNECTION OF COMMERCIAL CATERING EQUIPMENT

INTRODUCTION

Commercial catering equipment must be installed to the requirements of *AS/NZS 5601.1*. New appliances must be certified to *AS 4563: Commercial Catering Gas Equipment*. Environmental health officers of the local council will also have special requirements that must be checked before commencing the installation.

HEALTH AUTHORITY REQUIREMENTS

The local Health Authorities require required the appliances to be:

- Sealed against the rear wall;
- Fixed clear of the wall; or

- Connected by a fully flexible hose assembly to enable cleaning around the appliance.

HOSE ASSEMBLIES

Hose assemblies (also known as fully flexible hoses) are permitted but must be used as a complete assembly.

AS/NZS 5601.1 gives general requirements which apply to the connection of appliances by hose assembly but there is no specific reference to commercial catering equipment.

A hose assembly must not be used as a restraint for an appliance. An appliance fitted with wheels and a hose assembly must have means to prevent stress on the hose due to appliance movement.

Each hose assembly must be certified to *AS/NZS 1869: Hose and hose assemblies for liquefied petroleum gases (LP Gas) natural gas and town gas* and be suitable for the application.

The hose assembly must be sized for the maximum gas consumption of the appliance.

PROHIBITED INSTALLATION METHODS

A hose assembly must not pass through:

- a) from one room to another through a doorway fitted with a closable door;
- b) a wall, portable partition, ceiling or floor;
- c) a fixed partition, unless the hole is made large enough to allow the hose and its

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- d) attachments to pass through without damage; or
- e) the panel or casing of the appliance, unless the appliance has provision to avoid damage to the hose.

CONNECTING TO A MOBILE APPLIANCE

Mobile appliances are appliances fitted with wheels that are designed to be easily moved by one person.

Clause 5.9.7 of [AS/NZS 5601.1](#) requires a hose assembly used to connect a mobile appliance to:

- a) be connected permanently to the appliance and have a manual shut-off valve and union fitted at the inlet end of the hose assembly; or
- b) be connected permanently to the appliance and have a quick-connect device which automatically shuts-off the gas supply when disconnected; or
- c) where a quick-connect device which automatically shuts off the gas supply when disconnected is located at the appliance end of the hose assembly, have a manual shut-off valve at the inlet end of the hose assembly.

LENGTH OF AND ARRANGEMENT OF HOSE ASSEMBLIES

A hose assembly should be long enough to allow access for disconnection or cleaning but not exceed 3m in length, and short enough to prevent it touching the floor, becoming damaged or hazardous.

Strain on the hose assembly and its connections must be avoided. The preferred method of installation is for the hose to hang freely in a 'U' shape (see Figure 1). The minimum permitted hanging radius is 12 x hose ID.

Operating conditions

Care must be taken to avoid high temperature locations, hot surfaces, trapping or kinking and placing the hose assembly under stress or strain.

Appliance restraint

Commercial catering equipment connected by hose assembly must be restrained to prevent stress being applied to the hose connections when the appliance is moved.

The accepted method of restraint is by chain or wire anchored one end and fixed at the other end within 50 mm of the connection points in a way that will allow it to be detached.

The chain or wire must not exceed 80% of the length of the hose assembly.

CONNECTING APPLIANCES NOT DESIGNED TO BE MOVED

The manufacturer's installation instructions should be read to determine the recommended method of connection.

As a general rule, appliances which are not designed to be moved should be connected by rigid pipe or limited flexibility connection (semi-rigid pipe) and fixed to prevent movement.

USE OF LIMITED FLEXIBILITY CONNECTIONS

Limited flexibility connections' may be used for the final connection only as follows:

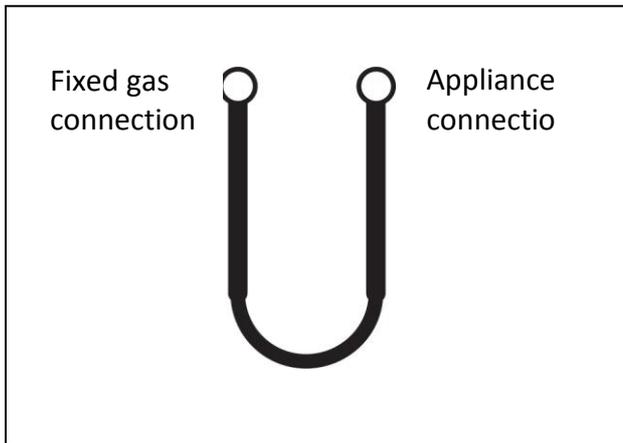
- In accordance with the manufacturers' instructions; and
- Provided the appliance is also fixed to prevent movement

They are not an alternative to a hose assembly. Limited flexibility connections are to comply with [AG 216 - 1998 Approval requirements for limited flexibility connections for gas](#), and be certified.

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Appliances connected in this manner must be secured to minimize movement and to prevent the connection from being used as a hose assembly.

FIGURE 1 - EXAMPLE OF HOSE ASSEMBLY LOOP



FITTING WHEELS OR CASTORS

Fitting wheels or castors to appliances supplied without them should only be done with agreement of the appliance manufacturer. An appliance with wheels or castors must have means fitted to prevent movement of the appliance during operation, such as a wheel-locking system.

HEATERS FOR OUTDOOR USE INCLUDING PUBLIC SPACES

Introduction

Gas heating has become very popular with the rapid expansion of outdoor facilities associated with hotels, restaurants, cafes etc., and there is a growing trend towards portable heaters. Occasionally, heaters are located in public places, including footpaths, and there are some safety concerns ranging from the stability of the heaters to them becoming an obstruction for the disabled.

This information sheet provides guidance for those selecting or installing an outdoor gas heating source. In addition to the gas safety aspects, local councils may have some requirements, including the need for planning approval.

General safety

- Operation or relocation of a mobile heating appliance in a public place by members of the public should not be permitted. Any form of gas heating in a public place should be supervised appropriately.
- The use of portable LP Gas cylinders in public places should be avoided unless properly safeguarded and supervised. Where cylinders are used, they must be located at least 1 metre from a doorway.
- When deciding which type of heater is most appropriate, the likelihood of accidental damage, theft and vandalism should be considered.
- Whether the heater is purchased or hired, it is important to ensure that it has been certified. The certification number is usually on the data plate. Be aware that certification may only cover the actual heater and not any associated mounting frame or fixing method.
- The installation and operating instructions must be followed.

Types of heater

There are three popular ways of providing outdoor heating, these being mobile air heaters, radiant panel heaters and patio heaters.

Mobile air heaters

Although primarily designed for use in industrial premises, mobile air heaters (or 'rocket heaters') are often hired out for heating temporary structures such as marquees. They are normally supplied from 9 kg or 45kg LP Gas cylinders. Care must be taken to ensure that the heater and the cylinder are located safely, and that the flexible hose and its connections are in good condition.

Heaters must be placed well away from combustibles and it is essential that plenty of ventilation is available. As these heaters are floor mounted, particular care must be taken to avoid causing burns to persons, especially where children or the elderly will be present.

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Radiant panel heaters

The preferred method of installation for these heaters is that they be fixed to a non-combustible structure, be at least 2.5 metres from the ground, and have a permanent gas supply, either reticulated or from fixed cylinders.

For temporary or portable use, radiant panel heaters are often fixed to a frame which also holds a 45kg gas cylinder. Such frames should be trolley-mounted for mobility and security. To meet the recommended height requirements, some frames require extending prior to the heater being used. For safety reasons there should always be at least 500mm between the heater and the cylinder.

Wherever possible, portable radiant panel heaters should be placed against a wall so that they do not create a hazard or obstruction.

When selecting a location, check that any combustible materials above the heater, such as canvas awnings, are well clear or adequately protected.

Patio heaters

Most installation aspects applicable to radiant panel heaters apply also to patio heaters. However, because patio heaters provide radiant heat throughout 360°, they need to be located in a more open area.

The preferred method of installation is to securely fix the patio heater by wall or ceiling mounting and connection to a permanent gas supply.

Patio heaters can also be pole-mounted with a weighted base and a 9kg LP Gas cylinder.

It is preferable to secure the base to the ground.

Where a patio heater cannot be permanently fixed, care should be taken to select a location not susceptible to disturbance.

Avoid sloping or unstable surfaces.

Be aware that the stability of unsecured heaters will reduce as the cylinder empties.

For further information please phone the Gas Safety Technical Information line on 1800 652 563.