

Technical Solution Sheet 92.03

92: Gasfitting (Natural Gas Type A Installation)

Commercial Catering Equipment, Residential Cooking Appliances – Non- combustible Walls, Stainless Steel or Glass Feature Walls and Gas Safety Shut off Valves

AIM

The aim of this technical solution is to clarify the requirements for combustible materials in close proximity to commercial catering equipment, and for stainless steel or glass feature walls near gas cookers in residential premises. This technical solution also provides detailed requirements for gas safety shut off valves connected to fire extinguishing systems.

Additional reference material: Information Sheets numbers: 6, 15 & 16 are available from Energysafe Victoria (ESV).

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".

Is the wall behind that commercial catering equipment non-combustible?

REMINDER: DON'T BE FOOLED BY THE INSTALLATION OF STAINLESS STEEL OR TILES.

INTRODUCTION

From time to time, serious incidents have occurred where a fire has started in a wall behind commercial catering equipment. In such incidents the equipment was usually located directly against a wall thought by the installer to be non-combustible because it was tiled or covered with stainless steel. Over time, heat passing through the tiles or the stainless steel has caused framing material within the wall to ignite.

Walls that appear to be non-combustible and those covered with ceramic tiles or sheet metal must be checked to ensure that they are not constructed internally or externally from combustible materials. In the case of commercial catering equipment, covering a combustible wall surface, such as plasterboard, with ceramic tiles or sheet metal will not provide adequate heat protection.

In a situation where the wall has already been constructed it may be necessary to refer to the structural drawings to determine the framing and backing materials used.

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HEALTH REGULATIONS IMPORTANT REMINDER!

Always check that the installation of commercial catering equipment will comply with local health authority regulations and their requirements.

CLEARANCE TO A COMBUSTIBLE SURFACE

Commercial catering equipment must never be installed directly against a combustible wall unless the appliance installation instructions clearly allow it. Always check the instructions and the clearance requirements of [AS/NZS 5601.1](#).

Some catering equipment manufacturers require an air gap be maintained at the rear of an appliance for cooling purposes. Relevant details given in the appliance installation instructions regarding such air gaps must be observed. The airflow must not be obstructed.

It may be necessary to fit a spacer between the appliance and the wall to ensure the air gap is maintained at all times. Never remove a spacer fitted by the appliance manufacturer.

COMBUSTIBLE SURFACES - TEMPERATURE LIMITATION

[AS/NZS 5601.1](#) contains overriding clauses that limit the temperature of any nearby combustible surface. Clause 6.2.5 states: "A gas appliance shall be installed such that the surface temperature of any nearby *combustible surface* will not exceed 65°C above ambient."

PROTECTION OF COMBUSTIBLE MATERIALS

Walls containing or constructed from combustible materials can, if necessary, be protected.

One method is to use a fire resistant material that complies with the requirements of [AS/NZS 5601.1](#).

An outer covering of ceramic tiles or sheet metal (such as stainless steel) can then be applied to comply with local health authority regulations and requirements (see Figure 1).

Note:

Where tiles are chosen, it may be necessary to lay them on ceramic tile sheeting because tile adhesive may not adhere to fire-resistant board. The tile sheeting is additional to, not instead of, fire resistant board.

STAINLESS STEEL OR GLASS FEATURE WALLS NEAR GAS COOKERS

The following information applies only to cooking appliances in residential premises; it does not apply to commercial premises. Special care needs to be taken when stainless steel or toughened glass is to be used as a wall covering near a gas cooking appliance.

Provided the clearance from the nearest burner to the stainless steel or glass wall is 200 mm or greater the installation will be deemed acceptable.

Where the clearance is less than 200 mm, then:

1. For stainless steel:
 - i. the wall must not contain combustible materials;
 - or
 - ii. the surface of the wall is to be protected as per [AS/NZS 5601.1](#), Clause 6.10.1.2 & Table C1 in Appendix C.
2. For toughened glass:
 - i. If the glass is to be fixed to a combustible surface, that surface is to be protected as per [AS/NZS 5601.1](#), Clause 6.10.1.2 & Table C1 in Appendix C.

Notes:

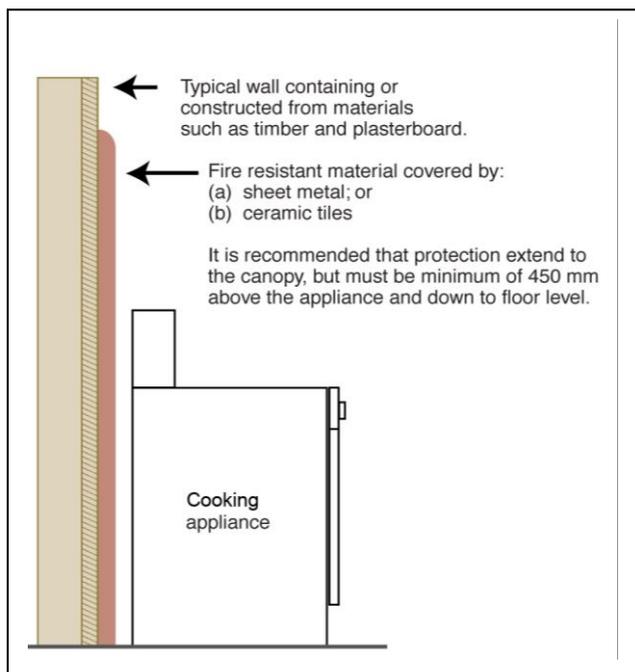
- Adequate protection of the combustible surface can be provided using a fire resistant material that complies with [AS/NZS 5601.1](#), Appendix C.

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- The intent of the Clause will also be met if documentation is provided to the effect that the glass fixing method will ensure that, during normal operation, the temperature of the combustible surface will not exceed 65°C above ambient at the installed clearance. Documentation must be in the form of a letter provided by the glass manufacturer stating that the glass is fit for purpose and accompanied by test results from an accredited testing laboratory stating that the combustible surface has not exceeded 65°C above ambient at the installed clearance during normal operation.
- This requirement does not deal with the failure of the glass due to any 'thermal shock' or loss of 'temper'. The installer must check that the glass is fit for purpose with respect to shattering or cracking. Documentation may be required that the glass is fit for purpose.

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

FIGURE 1 - EXAMPLE OF PROTECTING A COMBUSTIBLE WALL



GAS SAFETY SHUT-OFF VALVES IN FIRE EXTINGUISHING SYSTEMS

Scope and Application

This information sheet sets out the requirements for gas safety shut-off systems which are to be connected to fire extinguishing systems as described in [AS/NZS 5601.1](#), Clause 6.5.1, or other emergency alarm systems. The purpose of a safety shut-off system is to automatically shut-off the gas supply to the premises, or a selected part of the premises such as a commercial kitchen, when the fire extinguishing system or other emergency alarm is activated.

REQUIREMENT

Where a gas supply can be automatically shut off by the activation of a fire protection system or emergency alarm, the safety shut-off system must be of a type which requires pressure proving of the downstream installation prior to the restoration of the gas supply.

SYSTEM DESIGN

Safety shut-off systems may be purchased as a package from a gas control supplier, or individually designed. Components must be certified by a National Association of Testing Authority (NATA) accredited gas appliance tester or otherwise acceptable to Energysafe Victoria.

AREAS NOT READILY ACCESSIBLE

Where there are areas of a building that are not readily accessible, such as private apartments, individual manual shut-off valves are to be installed to ensure isolation prior to supply being restored.

Manual shut-off valves are to be installed in an accessible location adjacent to each selected area or apartment.

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ELECTRICAL CIRCUIT CONNECTION

It is advisable to connect the system to an appropriate circuit so that nuisance shut-offs will be minimised, especially where multiple residential premises such as apartments are involved. Consideration should be given to wiring the system into a sprinkler system pump circuit rather than an alarm circuit.

LOSS OF POWER SUPPLY

Avoid situations where the safety shut-off valve would automatically close on failure of power supply to the premises. Even a power failure of very short duration could result in unnecessary gas shut-off.

LOCATING THE SHUT-OFF VALVE

The location of the automatic shut-off valve should be carefully considered to provide adequate protection without causing unnecessary outage.

REQUIREMENTS FOR SIGNS

Signs indicating the requirements for resetting the system should be clearly displayed. It may be advisable to include contact details of any person or company contracted to restore supply. Where a manual shut-off valve is not clearly visible, a sign should indicate its location.

RESET SWITCH

The reset switch should be key-operated or located in an area not readily accessible to the public.

RESPONSIBILITY FOR RESETTING THE SYSTEM

Responsibility for resetting the system and restoring supply rests with the building owner or occupier. It is not a matter for the gas distribution or retail company. The person restoring supply should be familiar with the extent of the gas installation and ensure that all manually operated appliances are turned off.

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