

Information Sheet No 24

VENTILATION AND FLUING REQUIREMENTS

TYPE 1 & TYPE 2 DECORATIVE GAS LOG FIRES

Introduction

A decorative gas log fire is designed to simulate a solid fuel fire, with its primary function lying in the aesthetic effect of flames. There are two types:

Type 1 Decorative gas log fires - without an enclosure and designed to be installed in an existing fireplace with a chimney, which acts as a flue.

Type 2 Decorative gas log fires – supplied with an enclosure and designed to be freestanding with a flue that vents the flue gases outside the building.

Applicable Legislation

- *Gas Act 2000*
 - Section 75 - A person must not knowingly install a decorative gas log fire unless it has been approved by the Director of Gas Safety or an External Authority.
 - Section 78 - A person must not sell a decorative gas log fire unless it has been approved by the Director of Gas Safety or an External Authority.
 - Section 79 - A person must not modify an approved decorative gas log fire.

Prescribed Standards

- Design: AS4558 *Decorative gas log fires and other fuel effect appliances*
- Installation: AS 5601 - *Gas installations*
 - Clause 5.12.13 provides detailed guidance on the installation of decorative gas log fires, including ventilation requirements.

Ventilation Requirements

One or more openings with a combined free ventilation area of not less than the equivalent cross-sectional area of the flue cowl shall be provided for each decorative gas log fire.

The openings may be provided by any one of the following methods, providing that there is a clear unobstructed path to outside air:

- (a) directly through an external wall to outside air (preferred option)
- (b) offset through an external wall to outside air
- (c) into a wall cavity directly ventilated to the outside air
- (d) into an under—floor space directly ventilated to outside air
- (e) into a roof—space directly ventilated to outside air.

Note: The chimney that the appliance is installed in is not to be considered a ventilation opening.

Flue Cowl Required

A chimney or flue used with a decorative gas log fire shall be fitted with a flue cowl which:

- (a) For a Type 1 decorative gas log fire: **is at least 225mm** in diameter or as otherwise specified by the manufacturer
- (b) For a Type 2 decorative gas log fire: is the same nominal diameter as the flue.

Method used to Calculate Ventilation Openings

A Type 1 decorative gas log fire must be installed with a flue cowl of a diameter not less than 225mm.

To work out the ventilation area in cm^2 the following formula is used:

$$a = r^2 \times \pi$$

a = ventilation area in cm^2

r^2 = radius x radius in cm

$\pi = 3.142$

$$\therefore 11.25 \times 11.25 \times 3.142 = 397.65 \text{ cm}^2$$

Therefore, the minimum room ventilation required for Type 1 decorative gas log fires is **398 cm^2** .

If the decorative gas log fire requires a larger flue cowl, or the decorative gas log fire is a Type 2, then the same calculation can be used by substituting the value of the radius in the formula.

Requirement for Fireplace and Chimney for Type 1 Log Fires

The fireplace and chimney for a Type 1 decorative gas log fire shall be non-combustible and the chimney shall have a minimum cross-sectional area of 400 cm^2 . For example, a square section of $20 \text{ cm} \times 20 \text{ cm}$ or a circular section of approximately 23 cm diameter, or as otherwise specified by the manufacturer.

The adequacy and effectiveness of any fireplace or chimney into which a decorative gas log fire is installed shall be checked before and after installation. There shall be no significant spillage of flue gases from the fireplace or flue under stabilized operating conditions.

Notes

1. A smoke candle or other suitable device should be used.
2. Local building standards give requirements for the construction of hearths, chimneys and fireplaces in which these appliances can be installed.

Damper Not Permitted in a Chimney

A damper shall not be fitted in a chimney, flue or on any firebox associated with the installation of a decorative gas log fire. Any damper which is already in existence shall either be removed or permanently fixed in the fully open position.

If further information is required, please contact Gas Standards and Safety on 1300 366 322