

Adequate clearances, ventilation, and fluing for decorative log flame effect gas fires

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When a Type 1 or Type 2 Decorative log fire is installed, there is a requirement for ventilation to be provided **directly** to outside, no less than the equivalent size (or cross sectional area) of the flue cowl.

A Type 1 decorative (flame effect) log fire is an appliance (grate insert type) that sits into an open fireplace originally designed for solid fuel and is constructed of masonry. The chimney must have a minimum cross sectional area of at least 40 000mm² (i.e., 200mm x 200mm, or approximately 230mm in diameter). See note below under ventilation.

A Type 2 decorative (flame effect) fire is generally a grate insert (type 1) appliance located in a specifically constructed fire-box or housing with no glass front. The box / housing can either be installed into a conventional brick fireplace in order to increase its efficiency, or as part of a replica fireplace or chimneybreast / mantel constructed to the manufacturer's instructions, often from studwork and plasterboard.

Ventilation

AS/NZS 5601.1:2022 Clause 6.10.9.5. Type 1 and 2 decorative flame effect log-fires require ventilation. Ventilation must be provided with a combined free ventilation area not less than the equivalent cross-sectional area of the flue cowl for each decorative flame effect fire. Where a cowl is not fitted to a chimney for a Type 1 decorative flame effect fire the ventilation opening area needs to be in accordance with clause 6.4.5.3 or 40 000mm² (whichever is greater). *Flueless heater vents are ideal for this purpose.* The vent(s) can be located, unobtrusively, at low level in the room.

Air can be sourced from outside - straight through a wall, or a vent may be installed so that it is connected indirectly at low level, i.e., via a cavity wall space that is well ventilated from outside. Air supplied into the room from a well-ventilated underfloor space is also acceptable.

Flue

The fitting of an approved gas flue cowl to a masonry chimney into which a Type1 decorative flame effect fire is installed is optional, unless specifically required by the appliance manufacturer. If fitted, the flue cowl shall be of 225 mm nominal diameter or less if otherwise specified by the appliance manufacturer.

Where a type 2 decorative flame effect fire is installed, a flue cowl of same nominal diameter as the flue shall be fitted.

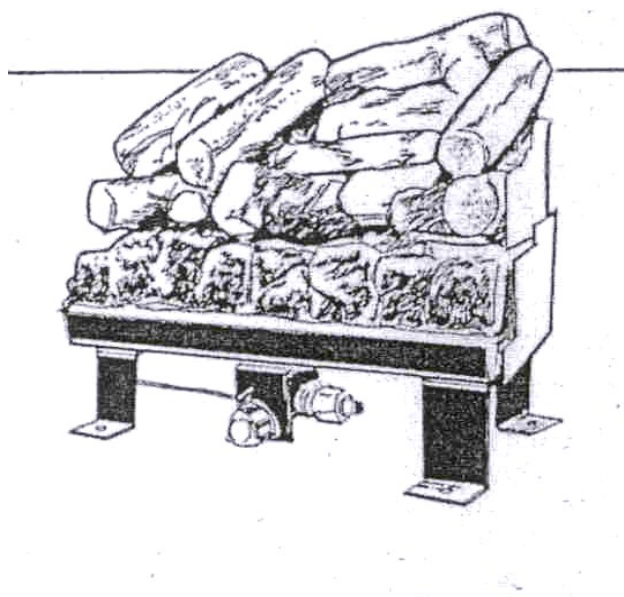
Note any dampers that were installed in existing masonry / cast iron fireplace must be removed completely or permanently fixed in the fully open position.

Clearances

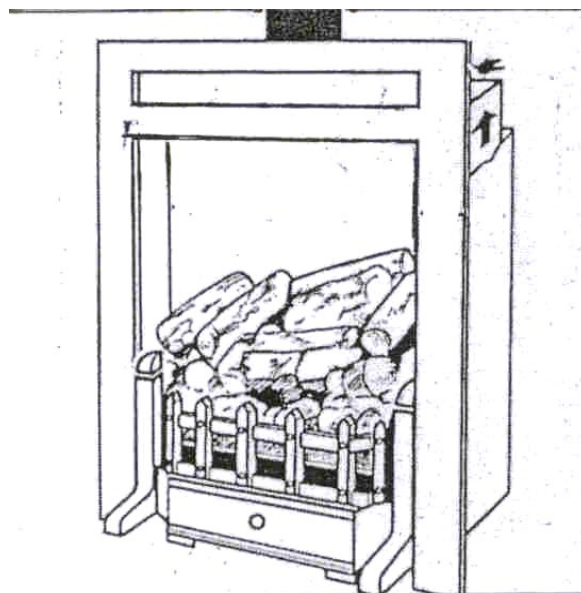
It is essential, if a replica fireplace is constructed from combustible materials, that clearances between hot surfaces on the appliance and the replica fireplace are maintained. 'Zero clearance' enclosures are available for this type of installation and they incorporate air gaps and insulation. The flue and cowl size must be equivalent to that supplied or recommended by the manufacturer.

Do not confuse Type 1 and Type 2 Decorative flame effect log fires with Gas Space Heaters, fitted with artificial logs or coals. These heating appliances have an enclosed conventionally built combustion chamber and incorporate a draft diverter and flue spigot (are more efficient than 'effect' appliances) and usually, but not always are fan assisted. For example, Masport, Ambience and the Rinnai Royale style of appliances.

For the Standard requirements for decorative log fires, read the relevant clauses under 6.10.9 AS/NZS 5601.1:2022.



Type 1 grate insert installation



Type 2 fire box installation

Contact the Office of the Technical Regulator for more information

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**Government of
South Australia**