

Electric fireplaces

Electric fireplaces can be installed virtually anywhere because they do not make real flames or fire, which is one reason these units are becoming more and more popular. You do not need to worry about clearances from combustibles, such as drapes or furniture. Electric fireplaces also emit no fumes, and a vent or chimney is not required. The only thing necessary is the space to put it, and an electrical source.

Electric fireplaces are a great choice if the typical amount of space required for a wood or natural gas fireplace isn't available, or for the budget-conscious (electric fireplaces tend to be less expensive overall than conventional fireplaces).

How they work

All electric fireplaces consist of two key components: the heater section, which includes a fan and heating elements, and the electric light flame effect section. The majority of electrical fireplaces have separate switches that allow users to operate them in three different modes: flame effect with no heat, flame effect with heat, and heat only without the flame effect. The heating output of the fireplace is usually controlled by an adjustable built-in thermostat.

Styles

Electric fireplaces come in three standard varieties – standard mantel, free-standing “stove”, and insert type for use in existing wood fireplaces. Most models come with a conventional 120 volt electrical plug-in but some are available for permanent installation in an electrically hardwired version.



Heating capacity

The heating output of an electric fireplace is usually limited to the maximum size that can be served by a standard 15 amp electrical circuit. Typical fireplaces range from a heating element output of 4000 BTU to 4900 BTU or 1175 W to 1440 W. The electric light flame effect consists of either a single or multiple light bulbs or light emitting diodes (LEDs) consuming less than 100 watts depending on the fireplace model and design. For models that can be hardwired, their heating capacity may be higher. Check the manufacturer's information.



A 4900 BTU (1440 W) electric fireplace operating as a heater for 500 hours a year at \$0.06 per kWh will cost approximately \$45 a year to operate. Running the fireplace with only the flame effect for 500 hours a year will cost less than \$5 a year. For comparison, any standard plug-in portable electric heater of similar wattage rating will use the same amount of electricity as the fireplace operating as a heater.

Price and options

Electric fireplaces range in price for a number of reasons including:

- Size and quality of heating element.
- Size of fire box area where the flame effect takes place.
- Mantel construction materials, finish and physical size.
- Additions to mantel including shelves, hidden storage, TV cabinets.
- Realism of the electric light flame effect.
- Additional options such as air purifying system, operable glass doors, wall thermostat, adjustable flame action and brightness, and remote controls.



Installation

The installation can be as simple as setting the fireplace where you want it and plugging it into an existing electrical outlet. Remember that an electric fireplace must be plugged in by itself on a dedicated circuit breaker or fuse. In most homes, however, a licensed electrician will be required to install a new outlet and wiring from a dedicated circuit breaker (or fuse) in the electrical panel. Plugging the fireplace into an electrical outlet that shares one circuit breaker (or fuse) with several other outlets and light fixtures in the home could overload the circuit and trip the circuit breaker, which would be a safety hazard. Before plugging the fireplace into an outlet, it should be confirmed that it is not on the same circuit as any other significant appliances or lights. Consult with a licensed electrician as necessary. Use of an extension cord is not recommended as the cord may overheat and cause a fire. Always follow the fireplace manufacturer's operating instructions.

If the fireplace is the hardwired variety, a new circuit breaker and wiring will be required.

Maintenance

There is minimal maintenance associated with an electric fireplace. From time to time, the light bulbs will require changing when they burn out and the unit will need periodic dusting or vacuuming.

Benefits

There are many benefits to owning an electric fireplace. Some of the benefits depend on the model and features of the fireplace purchased. Benefits may include:

- Convenient flame effect, with or without significant heat production.
- Low operating costs – 100 per cent of input energy is converted to heat.
- Lower maintenance and installation costs (compared to gas or wood-burning fireplaces).
- Portable – take it with you when you move.
- No particulates or emissions produced.
- No carbon monoxide emissions.

Disadvantages

- It is an artificial fire.
- There may be a risk of an electrical fire. Never operate the fireplace unattended.
- You could overload an existing electrical circuit serving other loads and trip the circuit breaker or fuse if a dedicated outlet is not installed.
- Using the fireplace in heater mode will primarily heat only the room in which it is located. If the central furnace thermostat is near this room the furnace won't come on and the rest of the home will become cool. If the central furnace thermostat is far away from the influence of the fireplace heat, the room with the fireplace will overheat when the furnace operates.

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