

Fireplace (Gas)



Equipment Description

Natural gas and propane fueled (gas) fireplaces provide warmth and aesthetics without the mess associated with wood, pellets or coal. Gas fireplaces come in three basic configurations: natural vent, direct vent and vent free.

In a natural vent type gas fireplace, the chimney is combined with a double wall pipe, known as a B-vent flue, which runs from the fireplace to the exterior of the home with combustion air drawn from the room. Heat loss can be lessened with purchase of a model containing a fire box inside another box. In this model, room air circulates around the fire box and back into the room for additional heating.

Direct vent fireplaces draw air from outside and return exhaust outdoors via a flue system. An advantage to this type of fireplace is the elimination of the chimney requirement, meaning the fireplace can be vented through a wall behind the fireplace. The tightly sealed nature of the system ensures that inside air is not used, making this type of fireplace highly efficient. The airtight design also works to prevent harmful

emissions from entering the room. Vent-free fireplaces do not use a chimney at all; instead, they vent exhaust into the room. Advantages of vent-free fireplaces are the ease of location and efficiency of operation. However, the primary disadvantage of this type of fireplace is the potential of carbon monoxide (CO) buildup in the air. Excess CO in the air is known to be seriously harmful to health to the point of being fatal if the person affected is not removed to an area with normal oxygen and CO content in the air. To minimize potential for CO buildup, vent-free systems employ an oxygen-detection feature that shuts the fuel gas off when the room's oxygen level falls below 18 percent.

Loss Scenario

Many gas fireplaces use a small blower to move air and improve the heating efficiency of the unit. These blowers are powered by motors that can fail over time.

Size and Carbon Footprint

Natural gas/propane burns cleaner than wood. Therefore, a gas fireplace produces less air pollution than a wood-burning fireplace. Gas fireplaces can range from 12,000 British Thermal Units per hour (BTUH) to 60,000 BTUH. If you ran the fireplace at 50,000 BTUH for 100 hours per year, this would produce approximately 270 pounds of carbon dioxide (CO₂) annually.

Maintenance Tips

- A qualified contractor should perform all installations following the original

equipment manufacturer's (OEM) instructions. The contractor should contact local and state code bodies to determine and adhere to all applicable codes and regulations. It is the responsibility of the homeowner to understand and comply with all applicable federal, state and local codes and regulations.

- Gas fireplaces are clean burning but maintenance is still required and OEM recommendations should be followed. In general, gas fireplaces should be professionally serviced annually to ensure top performance. Maintenance should include the burner, fan, venting, pilot light, thermostat, glass cleaning, and a battery check on the carbon monoxide detector(s).

Loss Prevention Tips

- Follow OEM installation and operation guidelines to reduce the risk of carbon monoxide poisoning and/or potential fire.
- Install both carbon monoxide detectors and fire detectors per OEM recommendations and in compliance with all applicable federal, state and local codes and regulations.
- It is important to have and follow a regular schedule to replace batteries in carbon monoxide detectors and fire detectors.
- Glass doors covering the front of gas fireplaces can reach temperatures in excess of 400°F, and therefore can present a burn hazard.