

# **Buyer's Guide**

## **Natural Gas Hearth Products**





If you want an instant, warming fire in your fireplace without the hassle of chopping and carrying wood and cleaning out ashes, you should consider natural gas hearth products. They come in a wide range of sizes and styles, so it's easy to find one that is right for your family's needs.

This publication will help you choose a natural gas hearth product that will give you warmth and beauty for many years to come.

### **Table Of Contents**

Introduction	1
Steps for Selecting Gas Fireplace Products	
Venting	1
Controls	2
Energy Use	2
Types of Natural Gas Fireplace Equipment	2
• Gas Logs	3
• Gas Fireplace Inserts	3
• Gas Fireplaces	4
• Gas Stoves	4
• Specialty Products	5
Installation	5
Use and Maintenance	5

## Introduction

Natural gas fireplaces, stoves, fireplace inserts and gas log sets burn more cleanly than wood fireplaces. This means no ash build-up, no creosote in chimneys and no sparks or flying embers that could burn holes in carpet or furniture. Natural gas hearth products are so clean, in fact, that they can be used anytime in areas of the country that have "no burn" regulations for wood fireplaces and stoves to reduce air pollution.

Gas hearth equipment can warm the home in two ways: radiant heat and convection heat. Convection takes advantage of warm air's tendency to rise -- the warm air warms surfaces as it moves through a room.

Radiant heating doesn't warm air. Like the sun's rays, it warms objects in its direct path. The heated objects -- like people or walls -- can also give off radiant heat to cooler materials. Conventional fireplaces, for example, give off radiant heat, while central "forced-air" furnaces use convection heating.

Many natural gas hearth products are classified as "decorative" gas appliances. That means that they are basically used for appearance, although they can provide radiant heat to the room they are in. Other gas fireplaces and stoves are classified as wall heaters or space heaters. They have added technology, such as a heat exchanger and blower fan, to heat and move air through the room or home. If you want your natural gas fireplace to be a significant source of heating in your home, be sure you choose one that is designed to do that job.

Natural gas fireplaces are the exception to the rule that gas equipment should always burn with a clean blue flame. Special technology developed for fireplaces lets the gas burn with a yellow flame that looks more like a wood fire, and is almost as clean and efficient as the traditional blue flame.

## Venting

As with all natural gas equipment, the gas burner in hearth products produces some combustion byproducts, primarily water vapor and carbon dioxide, the same elements we exhale when we breathe. So with some gas fireplace equipment, venting is required. Other, very high-efficiency equipment may not require outside venting.

Note: Some state and local building codes do not allow unvented gas equipment to be used. Check with your hearth products dealer or your local building code officials before purchasing unvented gas equipment.

With products that require venting, there are many possibilities. If you are installing gas equipment in an existing fireplace, you can use the chimney that's already there to vent combustion byproducts. If you choose a new self-contained gas fireplace, it can be vented through the roof, using a traditional chimney or metal vent pipe, or it can be vented directly through a side wall to the outdoors. These "direct vent" fireplaces give you many options for installing the equipment -- in corners, against walls, under windows, in between rooms or virtually anywhere else your imagination leads you. You can find mantels and "surrounds" to complement your decor, or you can let the fireplace set the style for your room. And if you prefer the look of a wood-burning stove, you can find a gas stove that closely resembles one.

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## Controls

A variety of controls are available for natural gas fireplace equipment. Most use a simple, continuously burning pilot light to ignite the flames. To start a fire, you turn a valve, flip a wall switch or use a remote control. Also available are spark ignitions that require no electricity, electronic ignitions and units controlled by a thermostat. Some gas fireplace equipment has several temperature levels so that you can "fine-tune" your comfort.

## Energy Use

In terms of energy consumption, natural gas fireplace equipment is rated by the amount of British thermal units (Btu) used in an hour (Btu/hr). The larger the number, the more fuel is used and the more heat it will create. Most vented gas log sets and fireplaces are in the 20,000 to 60,000 Btu/hour range. Unvented products have an upper limit of 40,000 Btu/hour.

Residential natural gas prices are usually stated in units called "therms." One therm equals 100,000 Btu. So if your gas log set burns at the rate of 25,000 Btu/hr, and a therm of gas (100,000 Btu) costs 69 cents (the national average for 1999, according to the U.S. Department of Energy), it would cost about 17 cents to use your gas fireplace for one hour.

## Steps for Selecting Gas Fireplace Products

1. Consider whether you want a "decorative" or space heating model. The fireplaces with additional heating capability are usually more expensive because they have additional technology.
2. Decide where you want to place your natural gas hearth product. Then read the descriptions below to determine what kind of equipment is best for you.
3. Check out your venting options and your local building code requirements for venting natural gas fireplace equipment.
4. Compare purchase and installation prices and operating costs.
5. Be sure the models you are considering are design-certified by a nationally recognized laboratory that tests to national standards.
6. Have your new natural gas fireplace equipment installed by a professional.

## Types Of Gas Fireplace Equipment

There are four basic types of natural gas hearth equipment:

- gas logs for existing fireplaces
- inserts for existing fireplaces
- complete fireplace units
- stoves

Here's an explanation of each:

## Gas Logs

If your home already has a fireplace, you can add gas logs to it. Gas logs are made of ceramic material and are designed to look like different kinds of wood logs, including pine, oak, birch or even driftwood. Log sizes range from 12 to 60 inches, and different sets have different numbers of logs. Some sets come molded all in one piece; other sets allow you to arrange some of the logs the way you want.

Gas log sets are assembled in a grate and have a gas burner underneath. The burner is covered and surrounded by realistic looking ashes and embers made of volcanic rock and fibrous materials. Like all gas hearth products, the flames in a gas log set are colorful and lively, and provide radiant heat to the room.

Gas logs come with a variety of controls. They can have a standing pilot light and be turned on with a manual valve, with a wall switch or with a remote control that uses a spark ignition system. All ignition methods provide instant gas flames.

With basic gas log sets installed in an existing fireplace, the chimney is used for venting. When these gas log sets are used, building codes usually require that the damper in the fireplace be opened permanently. Thus glass doors are recommended for gas log sets to keep heat in the room when the fireplace isn't being used. (A damper is a metal flap at the top of the firebox that must be opened before a fire is started. In a wood-burning fireplace, the damper is closed when the fire is out to keep warm air in the house from going up the chimney.)

Unvented gas logs can operate with the damper closed. This equipment includes an oxygen depletion sensor that will shut off the supply of gas if the oxygen in the room falls below a specified level.

A combination of the vented and unvented gas logs is also now available. These "partial-vent" log sets require that the damper in the fireplace be only 10 percent open. This keeps most of the heat in the room, while letting combustion byproducts escape. While neither the partial-vent logs or the unvented logs are as realistic looking as the vented logs, they do offer more heating value.

Some manufacturers' products are certified for use with or without venting. Check with your hearth products dealer for information about local codes.

As with any natural gas hearth product, the purchase and installation costs will vary with the type of equipment and the location of the gas supply in your home. Overall, however, gas logs are usually the least expensive natural gas hearth product.

## Gas Fireplace Inserts

Another option for an existing fireplace is a gas fireplace insert. These complete units not only look pretty, but can upgrade an inefficient wood fireplace into a good source of extra heat.

An insert is composed of a set of gas logs built into a steel or cast-iron box, usually with a fan or blower to

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move heat into the room. Inserts can fit into almost any existing fireplace and come in a wide array of styles and sizes. Vented models come in an airtight metal cabinet with sealed glass doors. They sometimes require a chimney liner to ensure proper venting. Some models have a two-pipe system -- one brings in air for the burner, the other sends out the combustion byproducts. Unvented models do not require sealed glass doors - all of the heat produced goes into the room. All units can be controlled by a switch, remote control or thermostat.

Purchase price and installation for inserts vary, depending on the style and installation requirements. If necessary, you can add adjustable panels or "surrounds" to fill in any space between the insert and the original fireplace.

### **Gas Fireplaces**

Gas fireplaces are complete, prefabricated units that come in a huge variety of sizes and styles, including see-through, three-sided and traditional fireplace configurations. The size of the firebox -- the interior where the fire burns -- varies from 32 to 45 inches in width. The fireplace can be placed along inside or outside walls, under windows, as a peninsula between rooms, in bookcases and media centers, in corners or wherever else you'd like a fireplace. These units can be vented up through the roof or through a side wall, or can be unvented. Some models use a fan or blower to help move the combustion byproducts outdoors or to circulate warm air from the fire into the room. Because no masonry work is needed, natural gas fireplaces are economical to install.

All gas fireplaces feature realistic gas logs with burning flames and some can be used as supplemental heat. Gas fireplaces that are classified as "decorative" appliances are generally low-efficiency units that are designed primarily for their appearance and the radiant heat they provide to a room. They usually don't have efficiency ratings.

Fireplaces that are classified as space heaters are given efficiency ratings like furnaces and other types of space heaters. The standard is the Annual Fuel Utilization Efficiency or AFUE rating. The AFUE for a fireplace takes into consideration the energy used while the fireplace is operating, any energy lost in start-up and shut down, and any fuel used in a standing pilot light. AFUEs for vented gas fireplaces or gas stoves are in the 70 to 80 percent range.

These units contain a heat exchanger -- a metal box used to transfer heat from the burner to the air to be circulated -- and a blower or fan to move the warmed air through the room, usually through a decorative grill on the front of the fireplace.

### **Gas Stoves**

Gas stoves are good substitutes for more polluting wood-burning stoves. These free-standing units come in traditional and contemporary styles and are available in vented and unvented models. They offer realistic flames, good heating capacity, high efficiency and attractive appearance.

Stove sizes vary, with some units being only 17 inches deep. They are available in durable cast iron or steel and come in a range of decorator colors. They use an internal fan to produce convection heat and their metal cabinets and glass windows provide radiant heat. Some units have fans with variable speeds to keep the heat output even.

The heat output of gas stoves can be adjusted by turning the burner up or down, by linking the unit to a thermostat or by using a remote control. And because of their metal structure, gas stoves still provide some warmth even after the burner is turned off.

### **Specialty Products**

Many manufacturers have introduced specialty products that can be used with fireplace equipment or outdoors. They include gas log-lighters, burning coal baskets, cast-iron firebacks, and outdoor fireplaces and campfires.

- Gas log lighters are used in an existing fireplace to light wood fires. They eliminate the need for kindling, paper or other fire starter. The gas log lighter burns until the wood fire starts and is then turned off.
- Burning coal baskets are replicas of 19th century European and early-American coal-burning fireplaces. They are excellent accessories for historic or period homes.
- Cast-iron firebacks are placed in the back of a fireplace to reflect heat for a more efficient, radiant fire. This product may be used with wood or gas fireplaces.
- Outdoor fireplaces and campfires fueled by natural gas are gaining popularity. An optional blower fan is available on some models.

**NOTE: ALL NATURAL GAS FIREPLACE EQUIPMENT SHOULD BE INSTALLED BY A PROFESSIONAL TECHNICIAN.**

To find a qualified contractor, call your local natural gas utility and ask for a list of names. If that service is not available, ask your neighbors or friends for recommendations, or look in the phone book under "Hearth or Fireplace Products."

Ask contractors for references and names of other customers, or check with the Better Business Bureau. Ask if the contractor is bonded, licensed and insured.

Your contractor should obtain all necessary permits; comply with local codes and regulations; be familiar with venting options; and follow up to make sure you are satisfied with the installation.

### **Use and Maintenance**

- Read the manufacturer's instructions and always follow them.
- Never burn wood, paper, artificial logs or any other material in a gas hearth product.
- Have a hearth products professional inspect your gas fireplace equipment regularly.
- Do not store flammable vapors or liquids in the vicinity of any gas appliance.
- Do not cook food in a gas hearth appliance.
- Keep fireplace remote controls away from children and pets.
- Turn off the standing pilot light during the off-season, to save energy.
- Before relighting the pilot, clean the firebox and the logs. Follow the manufacturer's instructions.

## Fireplace Manufacturers & Web Sites



Desa International	<a href="http://www.desaint.com">www.desaint.com</a>
Earth Stove	<a href="http://www.nbma.com">www.nbma.com</a>
Empire Comfort Systems	<a href="http://www.hearth.com/empire">www.hearth.com/empire</a>
Fire + Plus	
Fireplace Manufacturers Inc.	<a href="http://www.fmionline.com">www.fmionline.com</a>
GTI Gas Technologies	
HearthStone SoapStone Stoves	<a href="http://www.hearth.com/hearthstone">www.hearth.com/hearthstone</a>
Heat-n-Glo	<a href="http://www.heatnglo.com">www.heatnglo.com</a>
Heatech	<a href="http://www.hearth.com/heatech">www.hearth.com/heatech</a>
Heatmaster	<a href="http://www.heatmaster.com">www.heatmaster.com</a>
Jotul North America	<a href="http://www.hearth.com/jotul">www.hearth.com/jotul</a>
Lennox	<a href="http://www.davelennox.com">www.davelennox.com</a>
Louisville Tin & Stove	<a href="http://www.cozyheaters.com">www.cozyheaters.com</a>
Majestic Vermont Castings	<a href="http://www.majesticproducts.com">www.majesticproducts.com</a>
Malm	
Marco Fireplaces	
Martin Industries	<a href="http://www.martinindustries.com">www.martinindustries.com</a>
Monessen Hearth Systems	
Montigo	
Napolean Fireplaces	
Orrville Products	
Perfection-Schwank	<a href="http://www.psheat.com">www.psheat.com</a>
R.H. Peterson	<a href="http://www.rhpeterson.com">www.rhpeterson.com</a>

Portland-Willamette

[www.portwill.com](http://www.portwill.com)

Pyro Industries

[www.whitfield.com](http://www.whitfield.com)

Rasmussen Iron Works

[www.riwinc.com](http://www.riwinc.com)

Readybuilt Products

[www.readybuilt.com](http://www.readybuilt.com)

Rinnai

[www.rinnaiamerica.com](http://www.rinnaiamerica.com)

Superior Fireplace

[www.superiorfireplace.com](http://www.superiorfireplace.com)

Temco Fireplace Products

[www.temcofireplaces.com](http://www.temcofireplaces.com)

Travis Industries

[www.hearth.com/travis/travis.html](http://www.hearth.com/travis/travis.html)

Avalon

Fireplace Xtrodinair

Lopi

Valor

[www.valorflame.com](http://www.valorflame.com)