

Non-vented / Ventfree Gas Logs

Also referred to as **"unvented"**, **"non-vented"** or **"ventless"**. This type of log burns with a clean, hot blue flame characteristic of other gas appliances (furnace, range, etc.). The ventfree log is intended for those people who wish to supplement their heating system. These logs are generally not as attractive as vented logs, but produce much more heat. The ventfree gas log is so clean burning that the fireplace may be operated with the damper fully closed, forcing all of the heat out into the room. Blower systems may be used with some ventfree logs, when they have been tested for use with the specific model log set. The use of a blower not approved for a particular log set may disrupt the burner flame pattern and cause sooting.

Ventfree gaslogs are limited to a maximum BTU input of 40,000 BTU. All ventfree gaslogs must have an oxygen depletion sensor (ODS) which shuts the gaslogs off when the oxygen level in the room falls to 18% (normal oxygen level is 21%). Most ventfree installations will require use of a hood over the fireplace opening. This is because with a ventfree logset all of the heat is forced out of the fireplace opening and mantles tend to get very hot unless protected by a hood. Each ventfree gas log manufacturer will state the required clearance from the fireplace opening to the mantle or trim above the fireplace. Even when the minimum recommended clearance is met, the mantle may still get warm and require the installation of a hood. Keep an eye on this if you purchase ventfree gas logs.

Most vent-free appliances are not approved for use in bedrooms or bathrooms. When approved, the BTU rating must be limited to 10,000 BTU's for bedroom use and 6,000 BTU's for bathroom use. Ventfree logs may be installed in existing masonry fireplaces or in special ventfree fireboxes that resemble pre-fab fireplaces without a chimney connection. The use of ventfree gas logs in factory built (pre-fab) fireplaces is hotly debated within the hearth products industry. One manufacturer (Heatilator) has stated that they do not want any ventfree gas logs installed in their fireplaces. (We have a copy of this notice in our office if you would like to review it.) There is also a code change pending that would prohibit ventfree gas logs in all factory built fireplaces unless the fireplace has been specifically tested and approved for the use of ventfree gas logs. This is only a pending change at this time and would not be retroactive to existing installations even when it is added to the code. The issue in a nutshell is this: Factory built fireplaces were designed and tested to operate with the damper in the open position, when ventfree gaslogs are installed and the fireplace is operated with the damper in the closed position the temperatures at the top of the fireplace may exceed safe levels. Heatilator's testing of their fireplaces has shown that temperatures do exceed the safe levels established by the test standard when the fireplace is operated with the damper closed.

We are often asked about odor problems associated with ventfree gas logs. Odors may be caused by airborne contaminants or chemicals being drawn into the burner and altered by the combustion process. Odors are not a problem as long as the burner has ample fresh, clean air. If you have a ventfree appliance in your home that is causing an odor problem, it is usually the result of chemicals in the home. Many products "offgas" chemicals such as cleaners, deodorizers, newly finished wood, new carpet, etc. When ventfree gaslogs are operated for the first time they may produce an odor as the logset "cures". This problem will disappear after 4 - 8 hours of operation. The best thing to do is open the fireplace damper or open a window or two.

Another concern with ventfree gaslogs is moisture. A properly operating ventfree appliance will vent only carbon dioxide and water vapor. Carbon dioxide is the same thing humans exhale each time they breathe. The water vapor is generally not a problem during the winter when the

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humidity level is generally low to begin with. However, if you notice moisture accumulation on the interior of walls or windows you need to ventilate the home. This may occur in homes which are fairly airtight if the appliance is operated for an extended period of time.

Log positioning is another concern with ventfree gaslogs. The logs must be positioned as indicated in the owner's manual and this arrangement should not be altered. Most ventfree logs have pins or groves to insure that they are installed in the proper position. The flame should not come in contact with or touch the log. If it does it is likely to cause sooting.

Do not operate ventfree gas logs with the fireplace doors closed. If you do the glass doors are likely to overheat and shatter. Also keep in mind the spark screens installed in front of ventfree logs may become very hot while the appliance is operating.

In summary, ventfree gas logs are economical to operate and provide additional warmth in cool areas. They can also provide a backup heat source in emergencies. Please carefully consider the information we have presented here to insure a ventfree appliance is what you want. If you have additional questions, don't hesitate to ask.

Types of Gas

Gas logs may be fueled by either natural gas or propane. Natural gas installations are preferred for several reasons. First, natural gas is cheaper. It is also cleaner burning and considered by many to be safer. Natural gas is lighter than air, so in the event of a gas leak the natural gas will rise and dissipate quickly in air. Propane, on the other hand is heavier than air and will "pool" or collect in low spots. Natural gas is supplied by public utilities through gas mains. Propane is delivered by private propane companies and stored at the home in tanks. Propane tanks are the property of the propane supplier and propane companies will not fill another company's tank. If desired, propane installations can be set up to use 20 or 40 lb. propane cylinders which the homeowner would be responsible for filling. This is sometimes appropriate for townhomes or condominiums where the propane company would not be able to fill the tank.

Some common terms

BTU - British Thermal Unit, a measure of heat equal to the energy needed to raise one pound of water one degree Fahrenheit. Gas logs are rated by BTU input.

Therm - A measure of heat equal to 100,000 BTU's. **Cubic Foot** - A common measure of natural gas. A cubic foot of natural gas contains approximately 1000 BTU's.

Pound - A common measure of propane gas. One pound of propane contains 21591 BTU's.

Gallon - Also a common measure for propane. One gallon of propane contains 91690 BTU's.