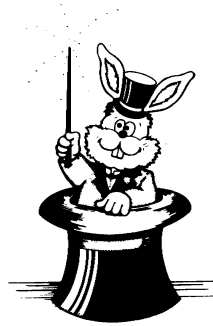


GAS LOG INFORMATION

**MAGIC SWEEP™
CORPORATION**
"The Home Heat Experts"
Chimney Cleaning & Repairs
Furnace & Air Duct Cleaning



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Note To Readers of the PDF format document

This pamphlet was originally designed as an 5 1/2" X 8 1/2" booklet where two pages printed on a standard 8 1/2" X 11" sheet. This PDF version prints one 5 1/2" X 8 1/2" page on a standard sheet.

Gas Log Information Booklet

This booklet has been prepared by the staff of the Magic Sweep Fireplace Shop to provide you with accurate and concise information about gas logs. Hopefully, this information will assist you in making a more informed buying decision. Currently, there are two major types of gas logs: Vented and Vent-Free. Detailed information about each one follows:

Vented Gas Logs

Vented gas logs offer the aesthetic beauty of a wood burning fire with the convenience of gas! The heat output from vented gas logs is slightly better than the heat output from a regular wood fire in the same fireplace. This is because the logs are made from a dense refractory material that radiates heat after it warms up. Vented gas logs closely resemble the look of a wood fire without the ash, dust or wood chips and you won't have to run out to the wood pile in the cold.

Vented gas logs primarily produce a yellow flame which is attractive and natural. However, these yellow flames are not as hot or efficient as a typical blue gas flame. Yellow flames also contain soot and the use of vented gas logs does not eliminate the need for chimney cleaning. Since vented gas logs produce soot, a little smoke and possibly carbon monoxide (just like a real wood fire) your fireplace damper must be fully open when using your vented gas logs. Additionally, since vented gas logs produce soot the use of blowers is not recommended as we have seen many cases where soot was blown into the house by the blower. Manufacturers require that the damper be blocked open and the city inspector checks this during the inspection. Since the damper is always open, glass fireplace enclosures are recommended for fireplaces with vented gas logs. Glass doors should always be fully open when the gas logs are burned.

Vented gas logs should only be installed in operable wood burning fireplaces. If your fireplace doesn't draw well when burning wood there is no guarantee that it will work with a gas log. In short, a gas log is not a cure-all for an ailing fireplace. When installing gas logs in a factory-built fireplace check to see that the fireplace is approved for

the installation of vented gas logs (most are).

In summary, purchase vented gas logs for convenience, for their beauty and realistic look, and for that warm feeling we all love! Don't purchase vented gas logs for a secondary heat source as you will likely be disappointed.

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 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 grooves 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.

Other Considerations

Safety Pilots - All gas logs should be equipped with a safety pilot control. The safety pilot maintains a pilot light and prevents gas flow to the main burner if the pilot is not lit. We will not install a gas log without a safety pilot. When comparing gas logs prices make sure the quoted price includes the safety pilot control. If you are buying from a reputable fireplace dealer this should not be a concern. However, some of the hardware and discount stores are selling gas logs without the safety pilot. Local inspectors will not approve the installation of a gas log unless it is equipped with a safety pilot.

Remote Controls - Many gas appliances are available with remote controls as an option. They usually add between \$100.00 to \$200.00 to the cost of the appliance. Remote controls will also increase service and repair costs in the field. Our experience is that the electronic components of a remote control are too sensitive to be installed in the fireplace due to the heat. Unless you have a strong need for a remote, we recommend against them.

Installation and Inspection - Gas logs should only be installed by qualified gas installers. Homeowners may install the gas logs if they have the appropriate experience and tools. All gas log installations require an inspection by the city inspector, even when the gas line is already installed into the fireplace. The cost of the inspection runs from \$30.00 to \$60.00 depending on the city. Only certified gas contractors or the homeowner may obtain a permit for the installation. If an installer requests that you obtain the permit they are probably not qualified to make the installation. The Magic Sweep Corporation is a Virginia licensed Class A Mechanical and Gas Contractor and a member of the Qualified Gas Contractor's Association. Almost all gas log installations require a pressure test. This test is performed after installing the gas line and before

connecting to the gas supply or logset. In other words, the gas line is run from either the propane tank or gas meter into the fireplace. It is not connected to the supply or the logset. The line is then capped and filled with air pressure to test for leaks. Leaks will be indicated by a drop in pressure on the pressure gauge. The pressure test is done at approximately 15 PSI depending on the city. By comparison, the working pressure of a natural gas installation is 1/4 PSI and approximately 1/2 PSI for propane. If the logset is connected to the line during the pressure test the safety pilot will be damaged. Most gas log installations will require three days of your time. On the first day we install the gas line and log set and then apply air pressure to the gas line. On the second day, the city inspector will check the overall installation and the pressure test. Then we must come back on the third day and make the final connection to the gas supply and show you how to operate the gas log. There are exceptions - If the gas line has already been installed into the fireplace we simply connect the logset and have a final inspection done. In this case the installation will only involve two days (one for installation and one for inspection).

Maintenance - All gas appliances should be inspected and serviced annually and gas logs are no exception. The chimney for vented gas logs should be inspected as well. Look for our spring mailing for special discounts on annual service. The maintenance of ventfree gas appliances is especially important. If the burner or orifice is fouled with dust or dirt it will cause the burner to soot. Since the appliance is not vented to the outdoors you could end up with a house full of soot (and possibly carbon monoxide).

Propane Tanks - For propane installations we obtain a 100 pound tank from Bowden Gas Company and deliver it to the jobsite. If the customer already has a propane supplier we can connect to the existing tank. A 100 pound tank stands upright and is 48" tall and 18" in diameter. We generally set the tank on blocks so this raises it to 54". Exception - Putting tank on existing patio. The propane tank must be accessible for service, either within 75 feet of the street so it may be filled with a hose or where it can be reached with a handtruck and exchanged. In addition, the tank may not be located where there are any openings to the home below the top of the tank and within three feet. This includes doors, windows, and crawl

space doors or vents. In addition, the tank may not be located within 10 feet of an electrical source, such as air conditioner, heat pump, or VEPCO meter. If the customer is using a lot of gas the propane company will install an additional or larger tank. Propane tanks are the property of the supplier, and propane companies will not fill another company's tank.

Gas Lines - We install galvanized pipe as the fuel line. This is cut and threaded on-site. The gas line may be run in crawl spaces, in the attic, underground, or along the outside of the home. In the firebox, we use a short length of copper tubing or a flexible connector from the gas line to the logset.

CO Detectors - For safety's sake, we recommend a CO Detector for all homes with a gas appliance.

Woodstoves - Gas logs are not intended for installation in woodstoves and Magic Sweep will not do this.

Useful Phone Numbers

Magic Sweep - Phone	523-2400
Magic Sweep - Fax	523-2130
Virginia Natural Gas	466-5550
Commonwealth Gas Company	800-543-8911
Bowden Gas Company	466-9192

Approximate Operating Cost

The cost of gas log operation is affected by the BTU input of the appliance and the amount of time the appliance is operated. The chart below will give you an idea of approximate cost of operation. Please keep in mind that the price of gas will vary so the chart below may not always be accurate.

COST (PER HOUR) TO OPERATE GAS LOGS

BTU RATING	NATURAL	PROPANE	HRS/TANK
20000	\$0.14	\$0.32	108
30000	\$0.21	\$0.49	72
40000	\$0.28	\$0.65	54
50000	\$0.35	\$0.81	43
60000	\$0.42	\$0.97	36
70000	\$0.49	\$1.13	31
80000	\$0.56	\$1.30	27
90000	\$0.63	\$1.46	24

One Stop Shopping

Magic Sweep offers a vast selection of gas logs and other fireplace equipment. We are also fully qualified to install and service all products we sell. Consider the advantage of dealing with a company that can handle all aspects of the job. You will always know who to call when service is required and you will never be “put in the middle” between the company that sold you the logs and the company that installed them for you.

YOUR FIREPLACE INFORMATION

Masonry _____ Factory-Built _____

Width _____ Height _____ Depth _____

Manufacturer if Factory-Built _____

Model Number if Factory-Built _____

Mantle Height above Fireplace Opening _____

Mantle Depth (Projection from wall) _____

Gas Line & Gas Log Installation with existing gas service

1. Obtain permit from city
2. Install gas line to fireplace with shut-off valve in floor or wall. Usually the gas line needs to go all the way back to the meter to insure adequate sizing, but in some cases may tie into an existing gas line.
3. Pressurize the gas line with air pressure to insure it is gas-tight.
4. Install gas log set in fireplace.
5. Call for city inspection. Inspector will check pressure test, installation of gas line and installation of gas logs.
6. After inspection is approved, return to hook-up gas line to gas meter.
7. Light logset.
8. Instruct customer on operation of logset.

Gas Line & Gas Log Installation with new gas service

1. Homeowner requests new gas service from gas company.
2. Have gas company mark gas meter location. Obviously, the closer the meter is to the fireplace the cheaper the installation will be, however, consideration should be given to future appliances as well.
3. Gas company installs gas line from street to house and installs meter.
4. Obtain city permit.
5. Contractor installs gas line to fireplace with shut-off valve in floor or wall.
6. Pressurize the gas line with air pressure to insure it is gas-tight.
7. Install gas log set in fireplace.
8. Call for city inspection. Inspector will check pressure test, installation of gas line and installation of gas logs.
9. After inspection is approved, return to hook-up gas line to gas meter.
10. Light logset.
11. Instruct customer on operation of logset.

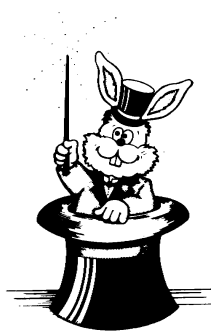
Propane Installation

1. Magic Sweep will obtain propane tank from Bowden Gas Company and set tank in desired location for installation.
2. Obtain city permit.
3. Install gas line from propane tank to fireplace with valve in floor or wall.
4. Pressurize the gas line with air pressure to insure it is gas-tight.
5. Install gas log set in fireplace.
6. Call for city inspection. Inspector will check pressure test, installation of gas line and installation of gas logs.
7. After inspection is approved, return to hook-up gas line to gas meter.
8. Light logset.
9. Instruct customer on operation of logset.

Note: Propane tank will be full on initial installation. Bowden Gas Company will be the supplier for future fill-ups.

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