



# Installation and Operation Instructions for Vent-Free Gas Log Sets\*

Models: VL18, VL21 and VL24 (Natural Gas)  
VL18LP, VL21LP and VL24LP (Propane)



Decorative Gas Appliances for  
Installation in Solid-Fuel Burning Fireplaces.

Tested and listed to  
ANSI Z21.11.2b-2004, Unvented Heaters, and  
Z21.60b-2004; CGA 2.26b-2004

## WARNING

If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, injury, or loss of life.

— Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

### — WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

### INSTALLER PLEASE NOTE:

**DO NOT** begin installation of this gas logset until all instructions have been read and understood.

## ATTENTION

Installation and service must be performed by a qualified agency, individual, firm, corporation, or company, experienced in the installation, repair, and servicing of this type of gas appliance. Do not modify, alter or tamper with any part of this heater, control, or logs.

This appliance may be installed in an after-market, permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

\*These logsets are not for exterior use.

## WARNING

### CARBON MONOXIDE POISONING MAY LEAD TO DEATH

When used without fresh air, vent-free log sets may give off carbon monoxide, an odorless, poisonous gas.

Some people - pregnant women, people with heart or lung disease, anemia, or persons under the influence of alcohol, and persons at high altitudes are more affected by carbon monoxide than others.

Early signs of carbon monoxide poisoning resemble the flu - headache, dizziness, and/or nausea. If you have these signs, the heater may not be installed or working properly. **GET FRESH AIR AT ONCE!** Have the heater serviced before using it again.

**INSTALLER:** Leave this manual with the appliance.  
**CONSUMER:** Retain this manual for future reference.

# General Information

**In order to assure a safe and effective installation, only a qualified service person who is familiar with the building codes and installation techniques appropriate to your area may install and service this appliance.**

The Logsets have been designed and tested to operate safely when installed according to the installation instructions contained in this manual. Read all instructions before starting the installation.

**In the Commonwealth of Massachusetts, all gas fitting and installation of this heater shall only be done by a licensed gas fitter or licensed plumber.**

- This appliance is for supplemental heating only. It should not be used as the primary heat source for a dwelling.
- The vent-free gas logset must be installed **only** in a fireplace constructed of noncombustible material.
- The logset should be inspected before use and at least annually thereafter. More frequent cleaning may be necessary because of excessive lint from carpeting or bedding material.
- In the United States, the installation and operation must conform to local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, latest edition, CSA-B149 Installation Code, and with the National Electrical Code, ANSI/NFPA70 (latest edition).
- The gas logset and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 p.s.i.g. (3.5 kPa). The gas logset must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 p.s.i.g. (3.5 kPa).
- Do not, under any circumstances, burn solid fuel (wood, paper, coal) in the fireplace where you have installed your logset. Do not use it for cooking. Put nothing on top of the logs.
- The logset **must** be compatible with its fuel. Natural gas requires different hardware than propane. Never attempt to use natural gas with a propane logset or vice versa.
- For a propane burning logset, the supply tank must include a high to low gas pressure regulator. The tank **must** be outdoors. Do not, under any circumstances, locate supply tanks inside any structure.
- The fireplace **must** include a screen made of chain mesh or a similar material. You must keep the screen closed at all times during the operation of the logset; it will protect you in the event of an explosion.
- **WARNING:** If the fireplace contains glass doors, they **must** remain open at all times during the operation of the logset, allowing combustion air to circulate.
- In order to avoid any possible gas leaks, apply pipe joint compound to all non-flared threaded connections involved in this installation. For propane, the joint compound must be resistant to the corrosive action of propane.
- To check for leaks, always use a soapy water solution or a sniffer. **Never** test by using an open flame.
- The area around the gas logset **must** be free of all combustible materials, especially gasoline or other highly flammable, vapor producing liquids.

- Due to high temperatures, locate this logset away from both high traffic areas and furniture and draperies.
- Children and adults alike should be aware of the high surface temperatures; to avoid the risk of burns or ignition of clothing they should stay away.
- Do not touch any part of the logset other than the controls while it is operating or immediately after you turn it off.
- Supervise young children and pets carefully when they are in the room where the logset is operating.
- Do not place clothing or other flammable material on or near the logset.
- Make sure that any safety screen or guard, removed during servicing, has been replaced before you use the logset.
- Do not, under any circumstances, install the logset in any bedroom, bathroom, other small, enclosed room, mobile home or recreational vehicle.
- Do not install the logset in a drafty area or use it with any aftermarket blower system that may cause drafting and consequently alter the flame pattern.
- It is imperative that you keep clear all burner areas, control compartments and passageways for circulating air.
- Do not move the logset in any way that might dislodge the logs from their fixed positions. If you bump the logset check to see if you have dislodged anything.
- Vent-free logsets require additional fresh air. You may supply additional air with any combination of: opening windows or doors; or by operating a central furnace blower or exhaust fan.
- Provide adequate clearances around air openings into the combustion chamber and adequate accessibility clearance for servicing and proper operation. **NEVER** obstruct the front opening of the fireplace.

## WARNING

**This appliance is for installation in a masonry fireplace with a working flue, a U.L.-127 listed manufactured solid-fuel burning fireplace or in a CFM Corporation vent free fireplace.**

## NOTICE

This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to pages 5 and 6.

This appliance operates as an unvented domestic room heater when fitted to a masonry or factory-built woodburning fireplace with the flue damper closed, or as a decorative appliance when the flue damper is fully open. It must not be used for any other purpose and must be fitted in a masonry or factory-built fireplace or ventless firebox enclosure.

Avoid propane tank dropping below 25% full. This will help keep soot from occurring.

# Installation Requirements

The fireplace must meet the minimum dimensions listed below. (Fig. 1) Do not install the logset if the fireplace does not meet these minimums.

Logset	Gas	Min. Fireplace Dimensions				Inlet Supply Pressure (w.c.)		Manifold Pressure	Min. Input BTU/hr	Max. Input BTU/hr	Air Shutter Setting
		Front Width	Rear Width	Overall Depth	Overall Height	Min.	Max.				
		Cop. SIT									
18" VL18	Natural	21"	16½"	13½"	17"	5.0	10.5	3.5	15,000	24,000	.188" Open
21" VL21		21"	18½"	13½"	17"	5.0	10.5	3.5	18,000	32,000	.250" Open
24" VL24		25"	18½"	13½"	17"	5.0	10.5	3.5	18,000	35,000	.375" Open
18" VL18LP	Propane	21"	16½"	13½"	17"	11.0	14.0	8.5	15,000	24,000	Full Open
21" VL21LP		21"	18½"	13½"	17"	11.0	14.0	8.5	18,000	32,000	Full Open
24" VL24LP		25"	18½"	13½"	17"	11.0	14.0	8.5	18,000	35,000	Full Open

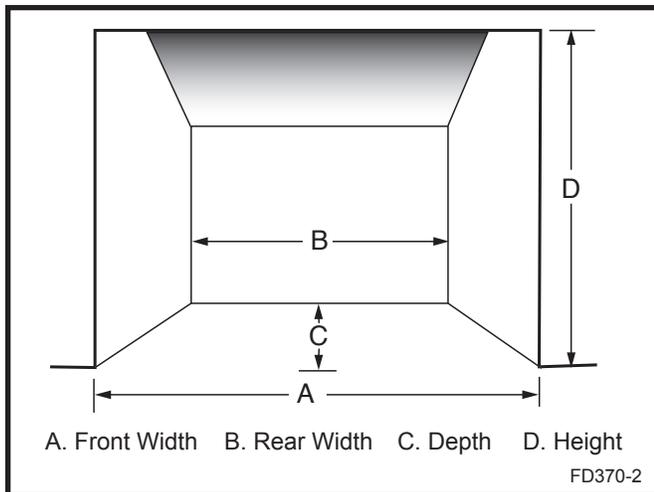


Fig. 1 Minimum fireplace dimensions.

## Pressure Test Points

Copreci Valve: 1/8" N.P.T. plugged tapping is provided on the outlet side of the gas control for a test manifold pressure.

SIT Valve: Inlet and manifold taps are provided on the right side of the valve.

**Proposition 65 Warning:** Fuels used in gas, wood-burning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.  
California Health & Safety Code Sec. 25249.6

## Odor During Operation

Neither natural gas nor propane gas give off an odor when burned. The nature of a vent free combustion system, however, is such that odors may occasionally be produced during heater operation when impurities exist in the immediate area. Cleaning solutions, paint, solvents, cigarette smoke, candles, adhesives, new carpet or textiles, etc., all can create fumes. These fumes may mix with combustion air and can create odor. Such odors will disappear over time, however, the condition can be alleviated by opening a window or otherwise providing additional ventilation to the area.

## High Elevations

Input ratings are shown in BTU per hour and are certified without deration from elevations up to 4,500 feet (1,370 m) above sea level.

Nuisance outages may occur at altitudes above 4,500 feet (1,370 m) if dirt, dust, lint and/or cobwebs are allowed to accumulate on burner and/or ODS pilot. Monthly inspection and cleaning is recommended for altitudes above 4,500 feet (1,370 m)

For elevations above 4,500 feet (1,370m) in USA, installations must be in accordance with the current ANSI Z223.1/NFPA 54 and/or local codes having jurisdiction.

In Canada, please consult provincial and/or local authorities having jurisdiction for installations at elevations above 4,500 feet (1,370 m)

## Planning

Planning the installation is an important first step. It will save time and money later in the actual installation. In planning the installation, consider:

- Where the heater will be located.
- All components needed to complete the installation.
- DO NOT use this heater in bedrooms, bathrooms, mobile homes or in recreational vehicles.
- Installation and repair should be done by a qualified service person.
- DO NOT use this heater if any part has been under water. Immediately call a qualified technician to inspect the appliance and replace any part of the control system and any gas control which has been under water.
- When used as an unvented heater, always ensure that there is adequate ventilation from the room where the appliance is operating. This appliance is equipped with an ODS (oxygen depletion sensor) pilot light safety system designed to shut off the appliance if enough fresh air is not available.

THIS APPLIANCE MUST NOT BE USED WITH GLASS DOORS IN CLOSED POSITION.

Keep the burner and control compartment clean. See installation and operating instructions supplied with the heater.

**WARNING:** DURING MANUFACTURING, FABRICATING AND SHIPPING, VARIOUS COMPONENTS OF THIS APPLIANCE ARE TREATED WITH CERTAIN OILS, FILMS OR BONDING AGENTS. THESE CHEMICALS ARE NOT HARMFUL, BUT MAY PRODUCE ANNOYING SMOKE AND SMELLS AS THEY ARE BURNED OFF DURING THE INITIAL OPERATION OF THE APPLIANCE, POSSIBLY CAUSING HEADACHES OR EYE OR LUNG IRRITATION. THIS IS A NORMAL AND TEMPORARY OCCURRENCE. THE INITIAL BREAK-IN OPERATION SHOULD LAST 2-3 HOURS WITH THE BURNER AT ITS HIGHEST SETTING. PROVIDE MAXIMUM VENTILATION BY OPENING WINDOWS, DOORS AND THE CHIMNEY FLUE TO ALLOW ODORS TO DISSIPATE. ANY ODORS REMAINING AFTER THIS INITIAL BREAK-IN WILL BE SLIGHT AND WILL DISAPPEAR WITH CONTINUED USE.

State or local codes may only allow operation of this appliance in vented configurations. Check your state or local codes. If unvented room heaters are not permitted, the fireplace vent damper must be locked at the minimum vent area required by local codes or by the National Fuel Gas Code (ANSI Z223.1/NFPA 54, latest edition) and CSA-B149.1 Installation Codes for Gas Burning Appliances.

When installed as a Decorative Gas Appliance for installation in a solid-fuel burning fireplace, a minimum permanent free opening of 29 square inches must be maintained with a fixed damper stop provided with the appliance. Minimum flue size for this appliance is 29 square inches.

## Installation Precautions

1. This vent-free gas appliance and its components have been tested and will operate safely when installed in accordance with this Installation Manual. Read all instructions **before** starting the installation, and follow these instructions carefully **during** installation to maximize the appliance's benefit and safety. Failure to follow them will void your warranty and may present a fire hazard.

2. After opening the carton, refer to Replacement Parts illustration on Page 17, and remove the various parts.

Report to your dealer if any parts were damaged in shipment.

**The CFM Corporation warranty will be voided by, and CFM Corporation disclaims any responsibility for, the following actions:**

- Installation of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by CFM Corporation.
- Improper positioning of the gas logs.
- Installation and/or use of any component part or accessory not manufactured or approved by CFM Corporation, notwithstanding any independent testing laboratory or other third-party approval of such component part or accessory.

**Any such action may create a possible fire hazard.**

Consult your local building codes.

## WARNING

**Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information, consult a qualified installer, service agency or the gas supplier.**

**This heater shall not be installed in a confined space unless provisions are provided for adequate combustion and ventilation air.**

# Installation Requirements

## Fresh Air Requirements for Combustion and Ventilation

### WARNING

**This heater must have fresh air for proper operation. If it does not, poor fuel combustion could result. Read the following instructions to ensure proper fresh air supply for this and other fuel-burning appliances in your home.**

Modern construction standards have resulted in homes that are highly energy-efficient and that allow little heat loss. Your home needs to breathe, however, and all fuel-burning appliances need fresh air to function properly and safely. Exhaust fans, clothes dryers, fireplaces and other fuel burning appliances use the air inside the building. If the available fresh air supply is insufficient to meet the demands of these appliances, problems can result.

The vent-free logsets have specific fresh air requirements. You must determine that these requirements will be met within the space where the appliance will be installed. The following information will help you ensure that adequate fresh air is available for the heater to function properly.

### Provide for Adequate Ventilation

Any space within a home can be classified in these categories:

- 1) Unusually tight construction
- 2) Confined space
- 3) Unconfined space

First, determine which classification defines the intended installation space.

### Unusually Tight Construction

You must provide additional fresh air if the space falls into this classification. Unusually Tight Construction is defined as construction wherein:

- a. Walls and ceilings exposed to the outside atmosphere have a continuous water vapor barrier with a rating of one perm or less, with openings gasketed or sealed, and
- b. weather stripping has been added on openable windows and doors and
- c. caulking or sealants are applied to areas such as joints around windows and door frames, between sole plates and floors, between wall and ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines and at all other openings.

If your home meets all of the above criteria, you must provide additional fresh air for the appliance as detailed on Page 6.

If your home does not meet the above criteria, follow the procedure below.

### Determine If You Have a Confined or Unconfined Space

Use the following formula to determine if you have a confined or unconfined space.

Space is defined as the room in which you will install the heater, plus any adjoining rooms with doorless passageways or ventilation grilles between the rooms.

The National Fuel Gas Code defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 BTU per hour input rating (4.8m<sup>3</sup> per Kw) of the aggregate (total) input rating of all appliances installed in that space and an unconfined space as a space whose volume is not less than 50 cubic feet per 1,000 BTU per hour (4.8m<sup>3</sup> per Kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the unconfined space.

1. Determine the volume of space (length x width x height). Include adjoining rooms connected by doorless passageways or ventilating grilles.

**Example:** A room that is 18' x 12' x 8' has a volume of 1728 cubic feet. An adjoining open kitchen that is 10' x 12' x 8' has a volume of 960 cubic feet. An adjoining open dining room is 12' x 12' x 8' with a volume of 1152 cubic feet. The total volume is 3840 feet.

2. Divide the volume of space by 50 cubic feet. The result is the maximum BTU/hour the space can support.

**Example:** 3840 cubic feet divided by 50 = 76.8 or 76,800 BTU/hour.

3. Add the BTU/hour ratings of all fuel-burning appliances installed in the same space, including the following:

Gas Water Heater	Gas Furnace
Gas Fireplace Logs	Vent-free Gas Heater
Vented Gas Heater*	Other Gas Appliances*

\*Do not include Direct-vent appliances as these use outdoor air for combustion and vent to the outdoors.

Example:

Gas Range	55,000 BTU/hour
Vent-free Logset	<u>+25,000 BTU/hour</u>
Total	80,000 BTU/hour

4. Compare the maximum BTU/hour rating the space can support with the total BTU/hour used by the appliances.

**Example:** 76,800 BTU/hour the space can support  
80,000 BTU/hour used by appliances

In this example, the maximum BTU/hour that the space can support is less than the total used by the appliances. The space is considered to be **Confined Space**.

Additional air must be provided to meet the requirements of the vent-free gas log set.

The installation and the provisions for combustion and ventilation air must conform with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the CSA-B149 Installation Code (Series).

A confined space may be ventilated in two ways:

**A.** Open or provide at least two ventilating grilles to an adjoining unconfined space. (Fig. 2)

Each of the two grilles must provide an opening of at least 50 square inches, with all opening dimensions being at least 3". One grille must be within 12" of the ceiling; the other within 12" of the floor. (If the total exceeds 100,000 BTU/hour, additional grilles will be needed.)

**B.** Vent the room directly to the outdoors. (Provide one square inch of opening for each 4,000 BTU/hour)

For further information on ventilation guidelines and sizing specifications, follow the National Fuel Gas Code/NFPA 54/ANSI Z223.1, Section 5.3.

If the total BTU/hour used by the appliances is less than the maximum BTU/hr the space can support, the room meets the **Unconfined Space** criteria and no further ventilation is needed.

### WARNING

This heater shall not be installed in a confined space or unusually tight construction unless provisions are made for adequate combustion and ventilation air.

### WARNING

If the area in which the heater may be operated is smaller than that defined as an unconfined space, or if the building is of unusually tight construction, provide adequate combustion and ventilation air by one of the methods described in the National Fuel Gas Code, ANSI Z223.1/NFPA 54, 1992 Sections 5.3, or applicable codes.

**WARNING:** Before installing the gas logset in a solid-fuel burning fireplace, the chimney flue and firebox must be cleaned of soot, creosote and loose paint by a qualified chimney cleaner.

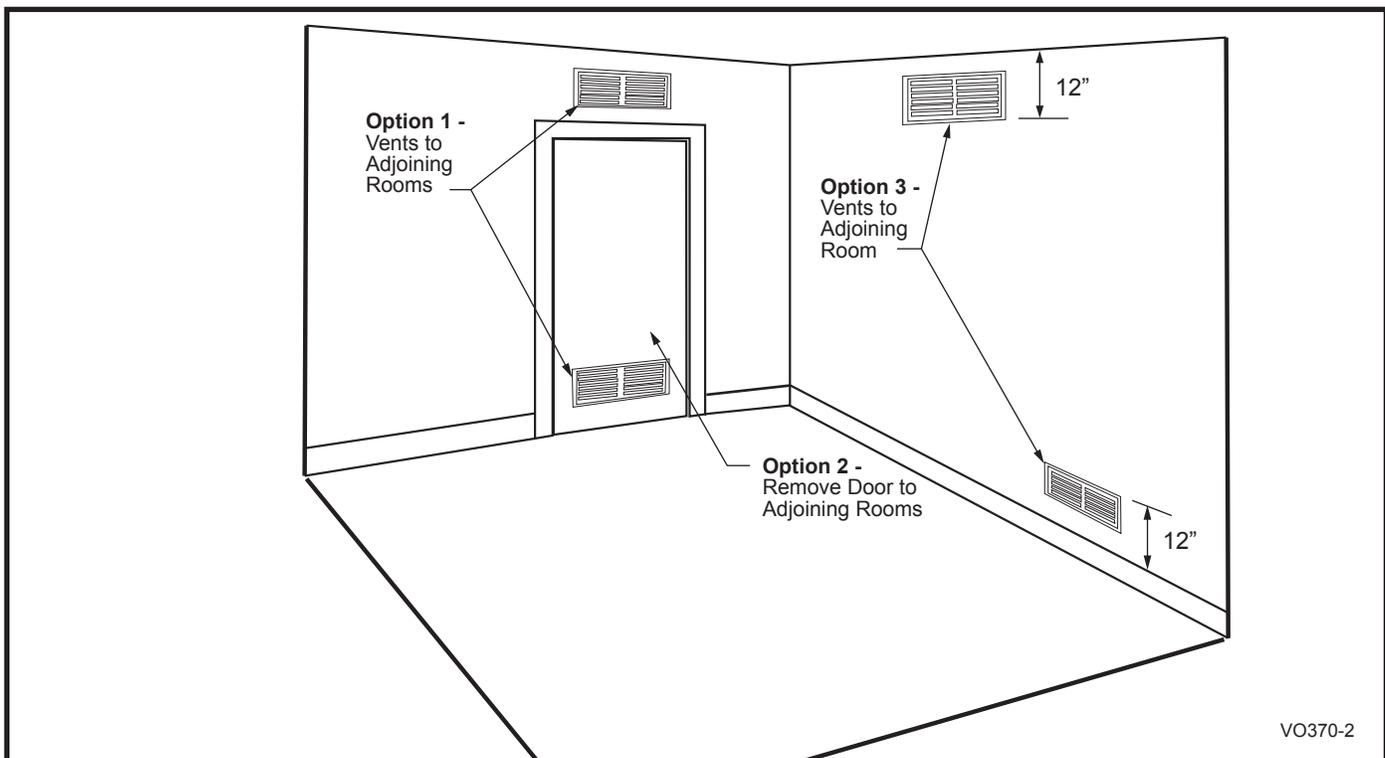


Fig. 2 Ventilaton options for confined spaces.

**WARNING:** Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.

**WARNING:** Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this gas logset.

Do not burn solid fuels in a fireplace where an unvented gas room heater or logset is installed.

Any outside air ducts and/or ashdumps in the fireplace must be permanently closed at time of appliance installation.

## Installation Instructions

### Preparing the Fireplace

#### Gas Line Preparation

Before connecting the appliance, turn off all gas appliances. Close the main gas valve at the gas meter or appliances. Close the main gas valve at the gas meter or LP tank. Make certain there is good ventilation where the installation will be made. Installation should comply with all applicable building codes and ANSI Z223.1/ NFPA 54, latest edition. Use LP gas-resistant pipe compound to seal threaded joints.

#### Installation to Existing Gas Line

There should be a manual ON/OFF valve within easy reach of the appliance. If not, before installation of the appliance make certain a valve is installed. There may be a second valve on the line close to the point where the fireplace line branches off the main gas supply line. During installation, make certain this valve is OFF.

#### Manufactured Fireplace Preparation

Refer to the manufacturer's fireplace installation manual for the specific method of running the gas line into the fireplace. The following method is typical of most manufactured fireplaces.

Insert a 1/2" gas pipe through the gas line tube provided by the manufacturer, from outside the fireplace, as marked by the manufacturer. An ON/OFF valve should be placed within easy reach of the appliance. After the gas supply is installed, reinstall the insulation removed from the gas line tube, and pack it around the pipe, to prevent cold air entry and to protect the gas line. (Fig. 3)

**NOTE:** The gas pipe should not come into contact with any wood structure until it has reached a point at least one (1) inch away from the fireplace side. (Fig. 3)

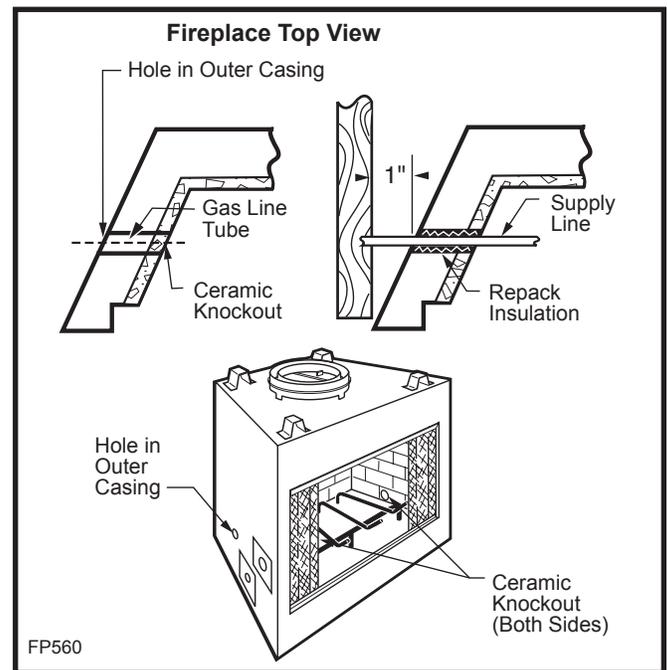


Fig. 3 Gas line installation - factory-built fireplaces.

### Masonry Fireplace Installation Preparation

A 1/2 inch gas supply line must be supplied to the firebox. In most cases, this will require drilling a gas line access hole through the masonry wall. The gas supply line should then be sealed in the access hole with mortar. The gas supply line should also have a valve within easy reach of the appliance. Use only N.P.T. black iron gas line. (Do not use cast-iron pipe.)

Clean the fireplace and chimney (if used) of any ashes, soot, creosote or obstructions. This will minimize any smell from the fireplace. We recommend cleaning by a chimney sweep.

#### Flue Damper Preparation

The vented fireplace damper should be fully opened when operating the appliance as a vented log set. A damper stop clamp with set screw is provided as a means to prevent full closure of the fireplace damper blade. The clamp is designed to prevent accidental closure of the damper when in use. If the damper stop cannot be installed, a permanent damper stop that will keep the damper open a minimum of 1 1/2" should be installed.

## Damper Stop Installation

When installing a decorative gas appliance in a fireplace, some local codes require a damper stop be added so the damper will not close completely. The CFM Corporation damper stop is designed so the damper can be locked in the closed position, and still allow a vent for the pilot gasses.

This damper stop is designed to work on all CFM Corporation BR, BC, TF, TL, SR and SC series fireplaces.

### Installation Instructions

Open damper. The damper must be open to attach the damper stop.

Locate the damper locking bracket. From inside the fireplace locate the damper locking bracket on the left side of combustion dome. (Fig. 4)

Align the two slots on either side of the cutout on the damper stop with the two small holes on the angled portion of the damper locking bracket. Attach the damper stop with the screws provided. (Fig. 5)

**NOTE:** Some of the early units may not have the holes in the end of the damper locking bracket. If this is the case use the damper stop as a template to drill two (2) 1/8" holes in the damper locking bracket to mount the damper stop.

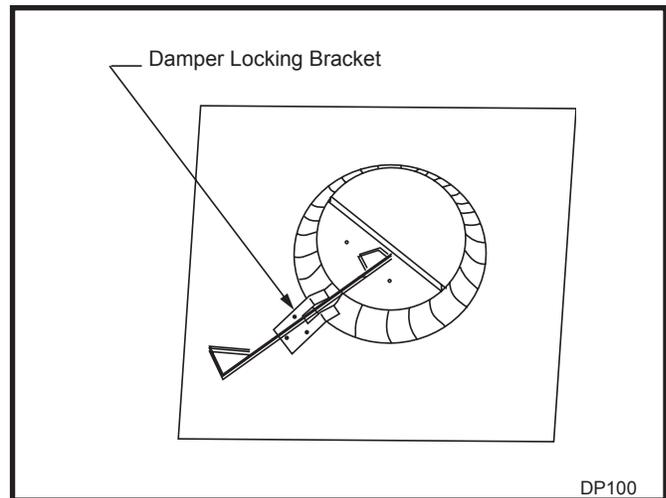


Fig. 4 Locate damper locking bracket.

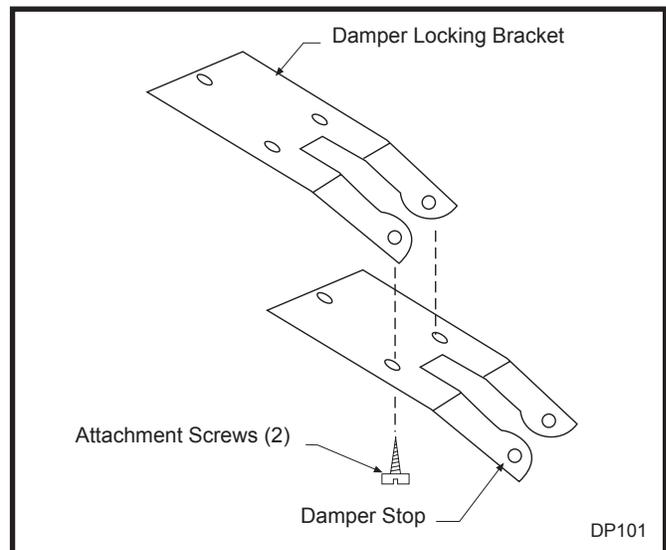


Fig. 5 Attach damper stop.

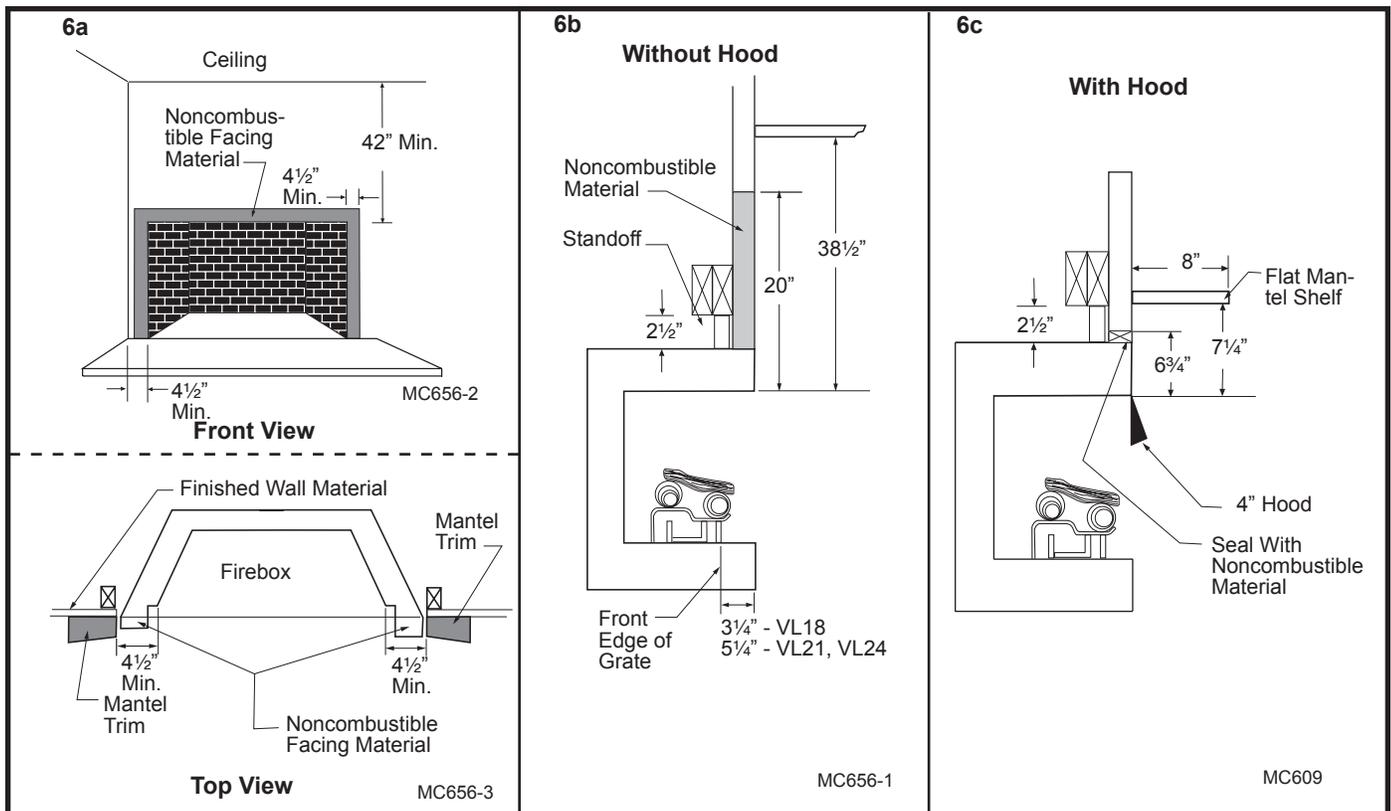


Fig. 6 Mantel clearances.

### Burner Assembly Location

Centrally locate the unit in the fireplace, far enough back into the firebox to accomplish adequate draft (if use as a vented appliance is planned). Ensure the front grate feet sit inside the front edge of the fireplace a minimum of 3¼". (Fig. 6b)

### Gas Line Connection

Check the gas type. Use only the gas type indicated on the appliance rating plate. If the gas listed on the plate is not the type of gas supplied, DO NOT INSTALL the logset. Contact your dealer for the proper model.

Always use an external regulator for all LP appliances, to reduce the supply tank pressure to a maximum of 14" w.c. This is in addition to the regulator fitted to the heater.

**CONNECTION TO AN UNREGULATED LP TANK CAN CAUSE AN EXPLOSION**

The normal gas connection is made at the right side (facing unit). If a left-side connection is desired, the connecting pipes may be directed under or behind the rear of the appliance, to terminate at the right hand side for connection to the inlet of the appliance.

Connect the appliance to the gas line using fittings and aluminum tubing provided.

Close the valve knob on the appliance, turn the main gas supply valve "ON" and carefully check all gas connections for leaks, with a soapy water solution or a sniffer.

### DO NOT TEST FOR LEAKS WITH AN OPEN FLAME.

On completing your gas line connection, a small amount of air will be in the gas lines. When first lighting the pilot, it will take a few minutes for the lines to purge themselves of air. Once the purging is complete, the pilot and burner will light and operate as indicated in this manual. Subsequent lightings of the appliance will not require purging.

**During initial purging and subsequent lightings, never allow the gas valve control knob to remain depressed in the 'PILOT' position without lighting the pilot with a match or piezo ignitor.**

Check the inlet pressure to the appliance, to ensure that it is as shown in the table on page 3. The minimum is for the purpose of input adjustment.

The pressure is controlled by the regulator and should be checked at the pressure test point located in the control valve body. Access to the pressure test point is obtained by removing all logs.

The pressure should be checked with the appliance burning and the control set on 'HIGH'.

The pressure is preset and locked to avoid tampering. If the pressure is not as specified, replace the valve. See Replacement Parts, page 17.

After measuring the pressure, replace the test point plug, ensure there are no leaks, then place the logs in their specified positions.

**There is a possibility of odor fade in LP. Never install an LP appliance or service line below grade without a gas detector.**

### Positioning the Logs

The logs must be positioned on the grate and locating pins as shown in Figures 7-9.

Gas logs must be properly positioned or the appliance will not function properly and may result in soot accumulation on the inside of the firebox and/or gas logs. Make sure there is no flame impingement on the logs which could result in excessive carbon monoxide emissions.

**WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.**

Carefully position the logs as shown in Figures 7-9. Make sure each bottom log engages the locator pins on the grate and top logs are properly positioned in notches on top of the bottom logs.

**Make sure there is no flame impingement on the cross logs which could result in excessive carbon monoxide emissions.**

**The optional volcanic rock may be applied to the hearth around the burner assembly.**

**Never place any other material on the burner.**

### Fireplace Screen

The fireplace screen must be in place when the appliance is operating, and unless other provisions for combustion air are made, the screen must have openings for the introduction of combustion air.

## Clearances

(Refer to Fig. 6, Page 9)

To ensure the safe installation into a masonry or factory built fireplace, the following instructions must be carefully observed.

- 1. Sidewall Clearances:** The clearance from the inside of the front opening of the fireplace to any combustible wall or mantel should not be less than 4½". (Fig. 6a)
- 2. Ceiling Clearances:** The ceiling height should not be less than 42" from the top of the fireplace opening. (Fig. 6a)
- 3. Mantel Clearances:**

#### WITHOUT HOOD

If no hood is installed then there must be noncombustible material from the top front opening of the fireplace to a height of at least 20" and the full width of the fireplace. A combustible flat mantel shelf can be no closer than 38½" from the top front of the opening of the fireplace. (Fig. 6b)

#### WITH HOOD

If a hood is installed there must be noncombustible material from the top front opening of the fireplace to a height of 6¾" and the full width of the fireplace. A combustible flat mantel shelf and breastplate may be installed. (Fig. 6c)

Failure to use a noncombustible material above the opening as specified in these instructions may cause damage to the materials used or cause a fire hazard.

- 4. Grate Clearances:** The minimum clearance between the front legs of the grate and front edge of the fireplace is 3¼". (Fig. 6b)

**NOTE:** Combustible mantels, surrounds and cabinets should be finished with materials that can withstand 250°F.

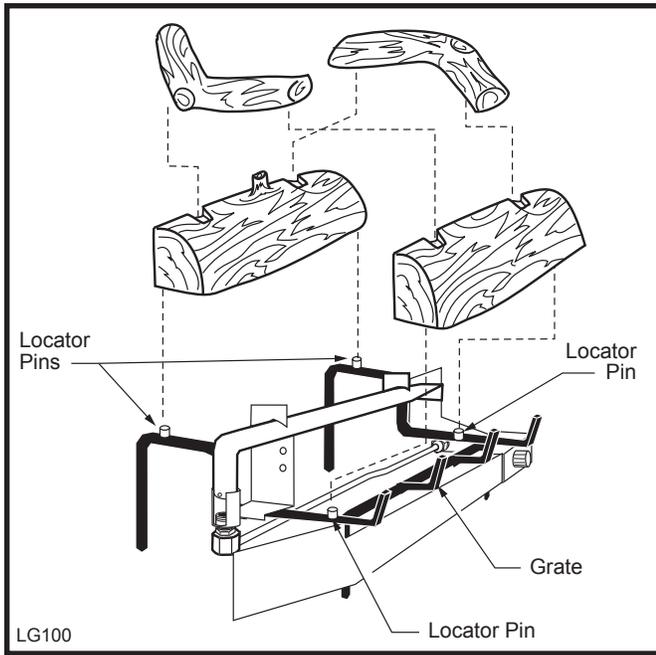


Fig. 7 VL18 log placement.

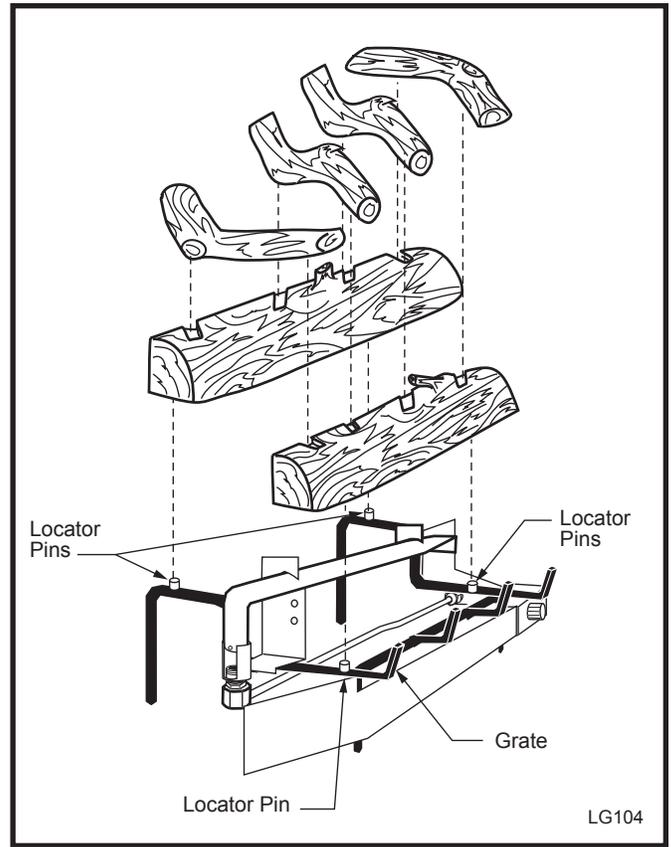


Fig. 9 VL24 log placement.

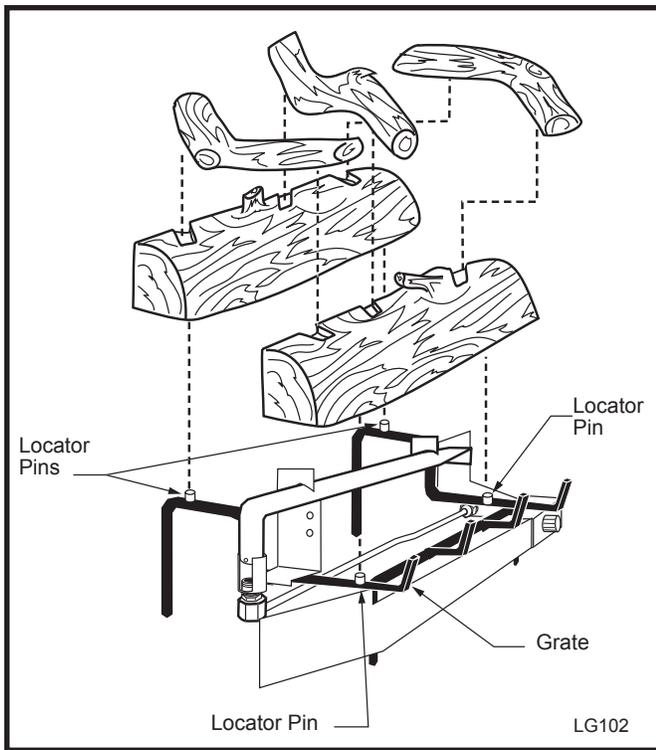


Fig. 8 VL21 log placement.

# Lighting and Operating Instructions

## FOR YOUR SAFETY READ BEFORE LIGHTING

**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This heater has a pilot which must be lit manually. When lighting the pilot follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the heater area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

### WHAT TO DO IF YOU SMELL GAS

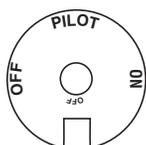
- Do not try to light any fireplace
  - Do not touch any electric switch
  - Do not use any phone in your building
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- C. If you cannot reach your gas supplier, call the Fire Department
  - D. Do not use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been under water.

## Lighting Instructions

1. **STOP!** Read the safety information above.
2. Turn off all electrical power to the fireplace.
3. For MN/MP/TN/TP appliances ONLY, go on to Step 4. For RN/RP appliances turn the On/Off switch to "OFF" position or set thermostat to lowest level.
4. Open control access panel.
5. Push in gas control knob slightly and turn clockwise  to "OFF".



Euro SIT



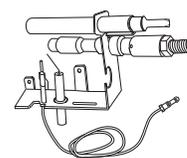
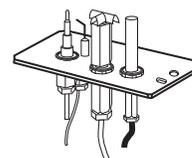
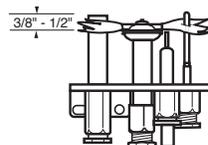
SIT NOVA



Honeywell

6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you do not smell gas, go to the next step.
7. Remove glass door before lighting pilot. (See Glass Frame Removal section).
8. Visibly locate pilot by the main burner.
9. Turn knob on gas control counterclockwise  to "PILOT".

10. Push the control knob all the way in and hold. Immediately light the pilot by repeatedly depressing the piezo spark ignitor until a flame appears. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 8.



- If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
  - If after several tries, the pilot will not stay lit, turn the gas control knob to "OFF" and call your service technician or gas supplier.
11. Replace glass door.
  12. Turn gas control knob to "ON" position.
  13. For RN/RP appliances turn the On/Off switch to "ON" position or set thermostat to desired setting.
  14. Turn on all electrical power to the fireplace.

## To Turn Off Gas To Heater

1. Turn the On/Off switch to Off position or set the thermostat to lowest setting.
2. Turn off all electric power to the fireplace if service is to be performed.
3. Open control access panel.
4. Push in gas control knob slightly and turn clockwise  to "OFF". Do not force.
5. Close control access panel.

## When Used as a Heating Appliance

1. This appliance is equipped with a modulating valve which provides variable control of heat output, from approximately 15,000 or 18,000 BTU/hr at the full counterclockwise LOW position, to 24,000, 32,000 or 35,000 BTU/hr at the HIGH position, depending on your appliance. See page 3 for output of your appliance.
2. When used as an unvented heater, maximum benefit will result when the fireplace flue damper is fully closed.
3. **NOTE:** For your safety, the appliance is equipped with an oxygen depletion sensor. This device senses the level of oxygen in the atmosphere and switches off the gas supply in case the level of oxygen falls below a safe level.
4. The appliance may be used as a heating appliance only if unvented heating appliances are permitted by local, state and city codes. In locations that do not allow unvented heaters, the chimney must have a permanent chimney opening of not less than 29 square inches.

## Maintenance and Safeguards

Keep the control compartment, logs and burner area around the logs clean by vacuuming or brushing at least twice a year.

### **THE LOGS CAN GET VERY HOT. HANDLE ONLY WHEN COOL.**

Always turn off gas to the pilot before cleaning. For relighting, refer to the lighting instructions.

The appliance and venting system (if used) should be inspected before initial use and at least annually by a qualified field service person.

Always keep the appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.

Never obstruct the flow of combustion and ventilation air. Keep the front of the appliance clear of all obstacles and materials.

Leave clearance of at least 36" from the front of the fireplace.

Although your gas logs are very realistic in appearance, the fireplace must not be used for burning any solid fuels.

To avoid irreparable damage to the appliance or personal injury, matches, paper, garbage or any other material must not be placed or thrown on top of the logs or into the flames.

To avoid personal injury, do not touch hot surfaces when the appliance is operating. Touch only the valve control knob. Avoid contact with the grate feet or prongs, or any other part which may be very hot.

Always ensure that the fireplace screen is closed when the appliance is operating.

Any safety screen or guard removed for servicing the appliance must be replaced before operating the appliance.

Close supervision is necessary when the appliance is being operated near children.

The appliance is intended for use as a gas heater mounted in a vented or unvented fireplace as described in the installation sections of these instructions. It should not be used for any other purpose.

## Inspecting the Venting System

A vented fireplace venting system is designed and constructed to develop a positive flow adequate to remove flue gasses to the outside atmosphere. See vented fireplace installation instructions.

Any foreign objects in the venting system, except those designed specifically for the venting system, may cause spillage of the flue gasses into the room. In extreme situations, carbon monoxide poisoning or suffocation may occur.

Periodic examination and cleaning of the venting system of the solid-fuel burning fireplace must be done frequently by the home owner or a qualified agency.

## VL System Maintenance

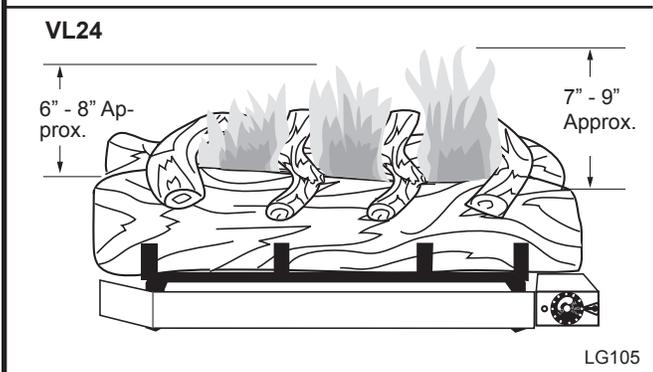
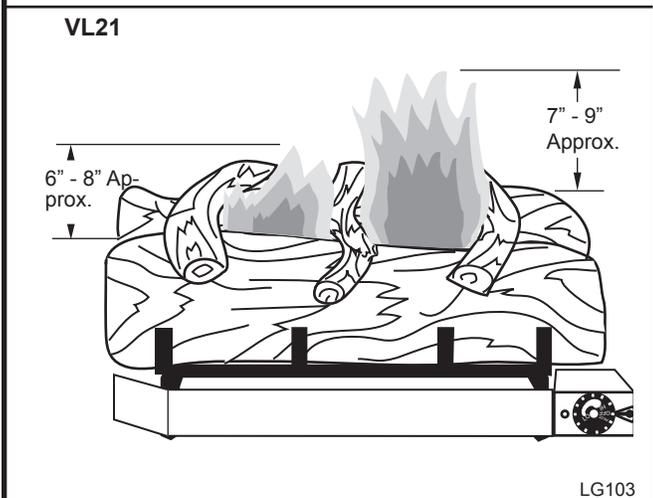
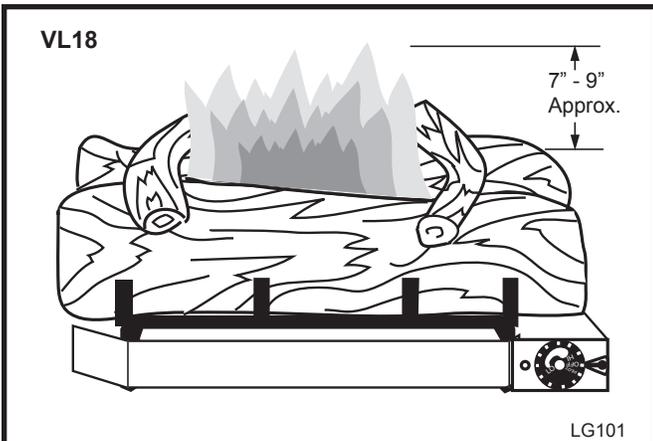
The VL burner/control systems consist of:

- Chassis
- Gas Orifice
- Grate Assembly
- VL18 - four (4) decorative gas logs  
VL21 - five (5) decorative gas logs  
VL24 - six (6) decorative gas logs
- Gas Valve Assembly
- Pressure Regulator

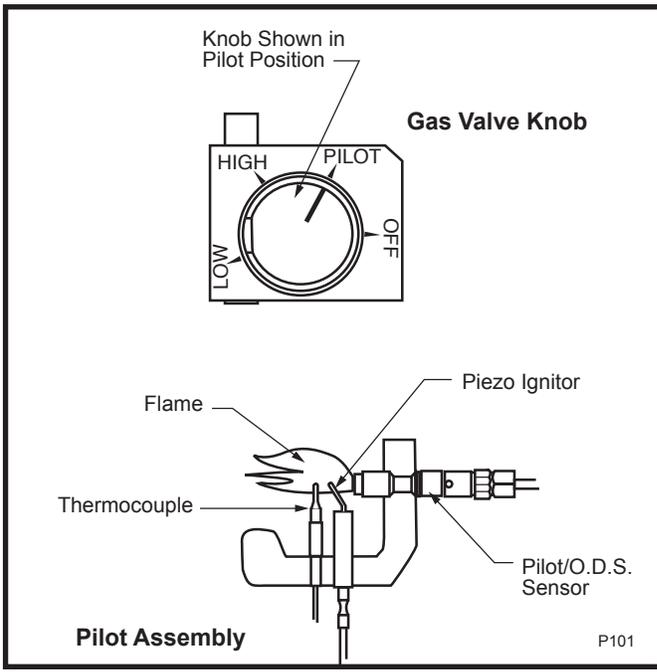
Most of these components require only occasional checkup and cleaning. Some may require adjustment. If repair is required, it should be performed by a qualified technician.

In order to properly clean the burner and pilot assembly, turn off the gas to the unit, remove the logs exposing the burner and pilot assembly. Clean all foreign materials from top of burner. Check to make sure that burner parts are clean. Visually inspect pilot. Brush or blow away any dust or lint accumulations.

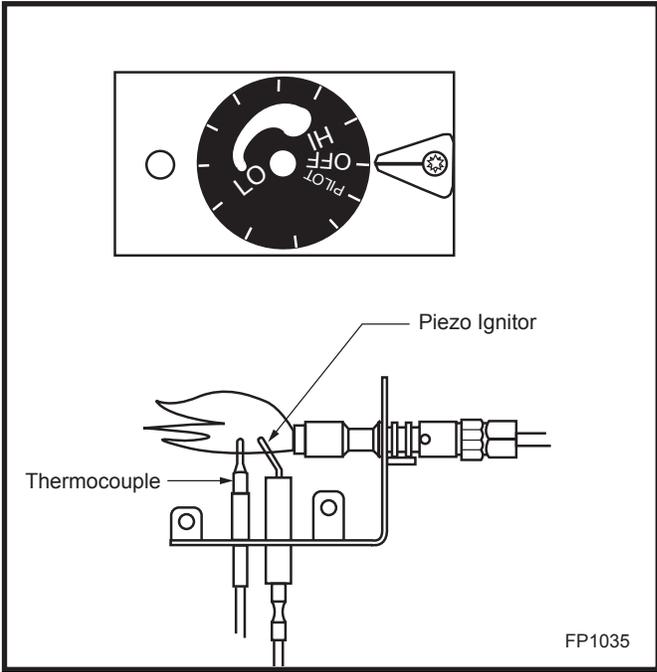
To obtain proper operation, it is imperative that the pilot and main burner flame characteristics are steady, not lifting or floating. Refer to Figure 10 for proper main burner flame appearance and Figure 11 or 12 for proper pilot flame appearance.



**Fig. 13** Typical flame patterns.



**Fig. 14** Typical view of pilot burner flame.

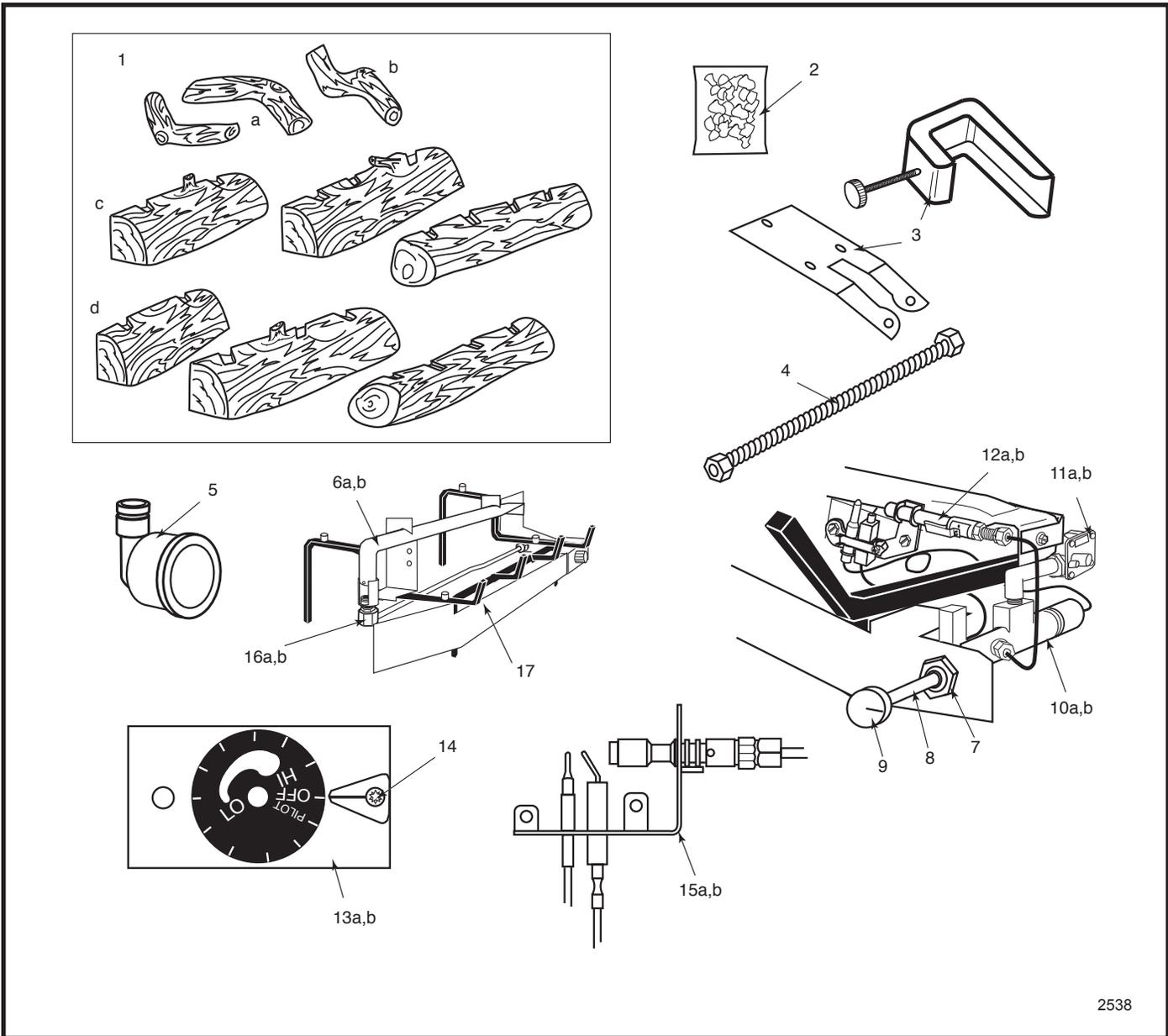


**Fig. 15** Correct SIT valve pilot flame.

# Troubleshooting

With proper installation and maintenance, your new Gas Appliance should provide years of trouble-free service. If you do experience a problem, **this guide will assist a CERTIFIED SERVICE PERSON in the diagnosis of problems and the corrective action to be taken.**

Symptom	Possible Causes	Corrective Action
Pilot will not light with piezo ignitor or match	<p>A. Main shutoff valve closed</p> <p>B. Air in the gas line</p> <p>C. Pilot orifice plugged, not allowing gas to flow</p> <p>D. No gas supply to the fireplace</p>	<p>Make sure the shutoff valve located on the gas supply line is open</p> <p>Light a match, turn valve knob to "PILOT" position and depress. Keep match near pilot burner until it lights</p> <p>Replace the burner assembly</p> <p>Check plumbing to see if gas fireplace has been hooked up to the gas supply line</p> <p>Propane tank empty</p>
Pilot will not stay lit after carefully following lighting instructions	<p>A. Defective thermocouple</p> <p>B. Thermocouple fitting not tight in valve</p> <p>C. Weak pilot flame</p> <p>D. Defective valve</p> <p>E. Not enough oxygen in the room <b>(DANGER!)</b></p>	<p>Replace burner assembly</p> <p>Carefully tighten fitting</p> <p>Pilot flame must engulf thermocouple. Clean and/or adjust pilot for maximum flame impingement on thermocouple. (Fig. 14, 15)</p> <p>Replace burner assembly</p> <p>Open door and get fresh air <b>at once!</b></p>
No gas to main burner with pilot flame burning and valve turned to "high - low" range	<p>A. Plugged main burner orifice</p> <p>B. Defective valve</p>	<p>Replace burner assembly</p> <p>Replace burner assembly</p>



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CFM Corporation reserves the right to make changes in design, materials, specifications, prices and discontinue colors and products at any time, without notice.

## VL18/21/24 Standard Vent Free Gas Logs

Ref.	Description	VL18	VL21	VL24
1.	Complete Log Set	2242104	3141108	2240104
1a.	Top Side Logs (2)	7398129	7398129	7398129
1b.	Top Center Log	--	7398128	7398128 (2)
1c.	Rear Bottom Log	2242106	3141110	2240106
1d.	Front Bottom Log	2242105	3141109	2240105
2.	Bag of Lava Rock	20000198	20000198	20000198
3.	Damper Stop or Damper Bracket	7540310 3030176	7540310 3030176	7540310 3030176
4.	Flexible Gas Connector	3304176	3304176	3304176
5.	Elbow Fitting 1/2" NPT (F) x 3/8" Flare	7523184	7523184	7523184
6a.	Burner Tube - Natural	20002579	20002582	20002563

## VL18/21/24 Standard Vent Free Gas Logs (continued)

Ref.	Description	VL18	VL21	VL24
6b.	Burner Assembly - LP	20002632	20002629	20002575
	Copreci Valve			
7.	Nut (15mm)	7511168	7511168	7511168
8.	Valve Control Knob Extension	7536237	7536237	7536237
9.	Knob	7536250	7536250	7536250
10a.	Gas Valve - Copreci - Natural	7529132	7529132	7529132
10b.	Gas Valve - Copreci - LP	7529133	7529133	7529133
11a.	Gas Regulator - Natural	7532180	7532180	7532180
11b.	Gas Regulator - LP	7532179	7532179	7532179
12a.	Pilot - Natural	7531132	7531132	7531132
12b.	Pilot - LP	7531133	7531133	7531133
	SIT Valve			
13a.	Gas Valve - SIT - Natural	20001354	20001786	20001786
13b.	Gas Valve - SIT - LP	20001355	20001787	20001787
14.	Piezo Ignitor	52464	52464	52464
15a.	Pilot - Natural	20001356	20001356	20001356
15b.	Pilot - LP	20001357	20001357	20001357
16a.	Manifold Assembly - Natural	20002534	20002535	20002536
16b.	Manifold Assembly - LP	20002588	20002589	20002590
17.	Basket Grate Assembly	20002457	20002583	20002544

Contact the factory for questions concerning prices and policies covering replacement parts. Parts will be shipped at prevailing prices. Normally, all parts can be ordered through your CFM Corporation distributor or dealer.

When ordering replacement parts, always give the following information:

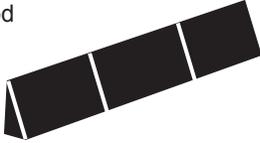
- The model number of the appliance.
- The part number.
- The description of the part. (Refer to Replacement Parts, Page 16)
- The installation date of the appliance.

Should you need additional information, beyond what the dealer can furnish, contact:

CFM Corporation  
 410 Admiral Blvd.  
 Mississauga, Ontario, Canada L5T 2N6  
 Attention: Technical Service.

# Accessories

The following accessories are available from your CFM Corporation dealer. Should you need additional information beyond what your dealer can furnish, contact CFM Corporation, 410 Admiral Blvd. Mississauga, Ontario, Canada L5T 2N6, Attention: Technical Service.

Accessory	Description	Model No.
<p>Hood</p>  <p>AC100</p>	<p>Required to protect wall above fireplace and/or mantel in certain applications</p>	<p>AH3244BK (Black) AH3244PB (Polished Brass)</p>

# LIMITED 2/20 YEAR WARRANTY

## For Majestic Fireplaces Decorative Gas Appliances

CFM Corporation extends the warranties specified in paragraphs A and B below with respect to its Vermont Castings Decorative Gas Appliances (the "Gas Appliance"), including CFM Corporation supplied accessories and components referred to in those paragraphs, subject to the following conditions and limitations:

(1) These warranties are extended only to the Gas Appliance installed in the continental United States, including Alaska, and Canada; only if and so long as the accordance with the installation and operating instructions furnished therewith; and only if and so long as Gas Appliance is not removed from its original installation.

(2). These warranties are limited to only the component parts manufactured and supplied by CFM Corporation. The use of components manufactured by others with the Gas Appliance (except for a listed Type B venting system as defined in the installation instructions) could create serious safety hazard, may result in the denial of certification by recognized national safety agencies, and could be in violation of local building codes.

(3). The Gas Appliance must be operated at all times in accordance with the operating instruction furnished therewith. The Gas Appliance is designed to burn either natural or propane gas only. Burning conventional fireplace fuels such as wood, coal, or any other solid fuel will cause damage to the Gas Appliance, will produce excessive temperatures and will result in a fire hazard.

(4). These warranties are limited to repair, replacement or furnishing a replacement for sale, as specified in Paragraphs A and B, for a part found to CFM Corporation satisfaction, after examination, to be defective in materials or workmanship under normal conditions, use and service.

(5). All obligations with respect to these warranties may be fully discharged by CFM Corporation refunding the wholesale price of a defective part.

(6) Except as otherwise expressly specified in Paragraphs A and B. NONE OF THESE WARRANTIES COVER, AND CFM CORPORATION SHALL NOT BE RESPONSIBLE FOR, ANY CONSTRUCTION, INSTALLATION, LABOR, TRANSPORTATION OR OTHER COSTS OR EXPENSES ARISING FROM A DEFECTIVE PART, ITS REPAIR OR REPLACEMENT OR OTHERWISE, NOR SHALL CFM CORPORATION IN ANY EVENT BE RESPONSIBLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES. EXCEPT TO THE EXTENT PROVIDED BY LAW, THERE ARE NO IMPLIED WARRANTIES WITH RESPECT TO THE GAS APPLIANCE, ITS COMPONENTS AND ACCESSORIES (INCLUDING IMPLIED WARRANTIES OF

MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), ALL OF WHICH ARE HEREBY EXPRESSLY INCLUDED. IN NO EVENT SHALL ANY IMPLIED WARRANTY PRESCRIBED BY LAW (NOTWITHSTANDING THE FOREGOING EXPRESS EXCLUSION) REMAIN IN EFFECT AFTER EXPIRATIONS OF THE WARRANTIES SET FORTH IN PARAGRAPHS A AND B.

**A. Gas Appliances, electrical and manual components, glass panels, all sealants or adhesives and optional accessories** (exclusive of CFM Corporation supplied decorative logs which are covered by a separate warranty under paragraph B below):

Within two years from the date of manufacture of the gas appliance, CFM Corporation will repair, or replace (at our option) a defective part without charge.

**B. Cement or ceramic fiber log components:**

Within two years from the date of manufacture of the gas appliance, CFM Corporation will replace a defective part without charge. Within years three through twenty from the date of manufacture of the gas appliance, CFM Corporation will provide a replacement for a defective part to the homeowner, but assumes no liability for incurred labor cost.

The foregoing warranties gives you specific legal rights and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty may last, so the limitation specified above on the duration of any implied warranty prescribed by law may not apply to you. Similarly, some states do not permit the exclusion or limitation of incidental or consequential damages, so the above exclusion of such damages may not apply to you.

In order to obtain performance of any of the above warranty obligations, write to CFM Corporation at this address:

CFM Corporation  
410 Admiral Blvd  
Mississauga, Ontario Canada L5T 2N6  
Attention: Manager of Warranty Services

Since local building requirements may vary greatly throughout the country, users of CFM Corporation products should determine in advance whether there are any building code restrictions on the use of a specified product. CFM CORPORATION MAKES NO REPRESENTATION OR WARRANTY REGARDING, AND SHALL NOT BE RESPONSIBLE FOR, ANY BUILDING CODE COMPLIANCE. The foregoing warranties give you specific legal rights and you may also have other rights which vary from state to state.

## **CFM Corporation**

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